

M-Series Self-Propelled Windrower

Unloading and Assembly Instructions (Container Shipments)

147652 Revision A
2016 Model Year
Original Instruction

Featuring the Dual Direction® and Ultra Glide® suspension on the M155 and M205.



1000141

Published in June, 2015

Introduction

This instruction manual describes the unloading, setup, and predelivery requirements for the MacDon M-Series Self-Propelled Windrowers shipped in containers.

Carefully read all the material provided before attempting to unload, assemble, or use the machine.

Retain this instruction for future reference.

Conventions

The following conventions are used in this document: Right- and left-hand are determined from the operator's position. The front of the windrower is the side that faces the crop.

NOTE:

Keep your MacDon publications up-to-date. Download the most current version from our Dealer portal (<https://portal.macdon.com>) (login required).

EC Declaration of Conformity—Windrower Lift Sling

Table 1 EC Declaration of Conformity



EC Declaration of Conformity

MacDon Industries Ltd
680 Moray Street
Winnipeg, Manitoba, Canada R3J 3S3

The person named below declares that:

Machine type: Windrower Lift Sling
Model: Part 163871
Serial Number(s): Not Applicable

fulfills all relevant provisions and essential requirements of the following directives:

Directive	Number	Certification Method
Machinery Directive	2006/42/EC	Self-Certification

Name and address of the person in the European Community authorized to compile the technical construction file:


Johannes Molitor
Schwarzwald Strasse 67
66482 Zweibrucken / Germany
HRB 31002, Amtgericht Zweibrucken

Place of Declaration: Winnipeg, Manitoba, Canada **Name:** Ibrahim Saleh
Date of Declaration: 21 May 2013 **Title:** Director, Product Integrity

1006109

EC Declaration of Conformity—Windrower Assembly Supports

Table 2 EC Declaration of Conformity

	EC Declaration of Conformity							
	MacDon Industries Ltd 680 Moray Street Winnipeg, Manitoba, Canada R3J 3S3							
<i>The person named below declares that:</i>								
	Machine type:	Windrower Assembly Supports						
	Model:	Part 163655						
	Serial Number(s):	<u>Not Applicable</u>						
<i>fulfills all relevant provisions and essential requirements of the following directives:</i>								
<table border="1"><thead><tr><th>Directive</th><th>Number</th><th>Certification Method</th></tr></thead><tbody><tr><td>Machinery Directive</td><td>2006/42/EC</td><td>Self-Certification</td></tr></tbody></table>			Directive	Number	Certification Method	Machinery Directive	2006/42/EC	Self-Certification
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Date of Declaration:	<u>21 May 2013</u>	Title: <u>Director, Product Integrity</u>						

List of Revisions

The following list provides an account of major changes from the previous version of this document.

Summary of Change	Location
Reorganized book so Torque Specifications, Conversion Chart, and Definitions topics are in the "Reference" chapter at the end of the book.	6 Reference, page 353
New caster support bracket created to improve shipping container fit. Updated image and instruction.	3.5 Installing Caster Wheels, page 34

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1 Safety

1.1 Signal Words

Three signal words, *DANGER*, *WARNING*, and *CAUTION*, are used to alert you to hazardous situations. The appropriate signal word for each situation has been selected using the following guidelines:

DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It may also be used to alert against unsafe practices.

CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may be used to alert against unsafe practices.

1.2 General Safety

CAUTION

The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

Protect yourself.

- When assembling, operating, and servicing machinery, wear all the protective clothing and personal safety devices that **could** be necessary for the job at hand. Don't take chances. You may need the following:
 - Hard hat
 - Protective footwear with slip resistant soles
 - Protective glasses or goggles
 - Heavy gloves
 - Wet weather gear
 - Respirator or filter mask
- Be aware that exposure to loud noises can cause hearing impairment or loss. Wear suitable hearing protection devices such as ear muffs or ear plugs to help protect against objectionable or loud noises.

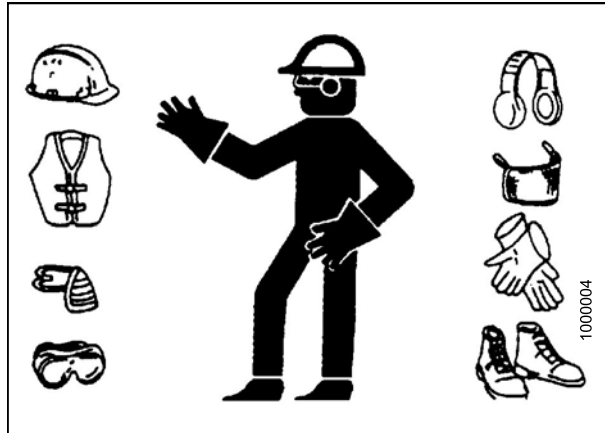


Figure 1.1: Safety Equipment



Figure 1.2: Safety Equipment

- Provide a first aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine. Be sure the fire extinguisher is properly maintained. Be familiar with its proper use.
- Keep young children away from the machinery at all times.
- Be aware that accidents often happen when the Operator is tired or in a hurry. Take the time to consider the safest way. Never ignore the warning signs of fatigue.

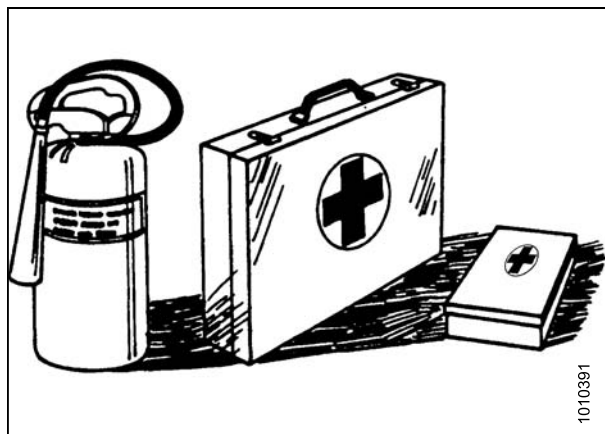


Figure 1.3: Safety Equipment

SAFETY

- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.



Figure 1.4: Safety Around Equipment

- Keep hands, feet, clothing, and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Do **NOT** modify the machine. Non-authorized modifications may impair machine function and/or safety. It may also shorten the machine's life.
- To avoid bodily injury or death from unexpected startup of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.

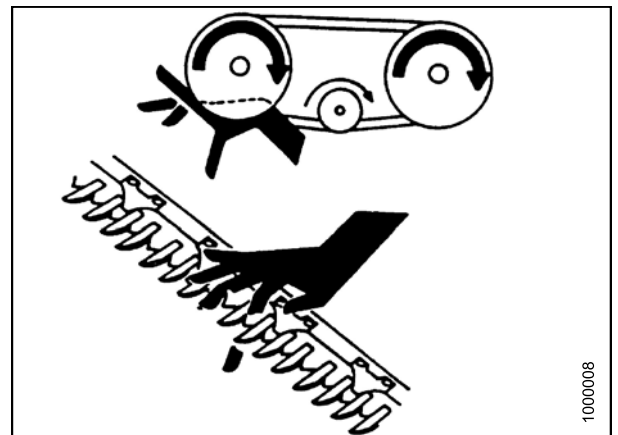


Figure 1.5: Safety Around Equipment

- Keep the service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Keep work area well lit.
- Keep machinery clean. Straw and chaff on a hot engine is a fire hazard. Do **NOT** allow oil or grease to accumulate on service platforms, ladders, or controls. Clean machines before storage.
- Never use gasoline, naphtha, or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.



Figure 1.6: Safety Around Equipment

1.3 Safety Signs

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or become illegible.
- If original parts on which a safety sign was installed are replaced, be sure the repair part also bears the current safety sign.
- Safety signs are available from MacDon Parts.

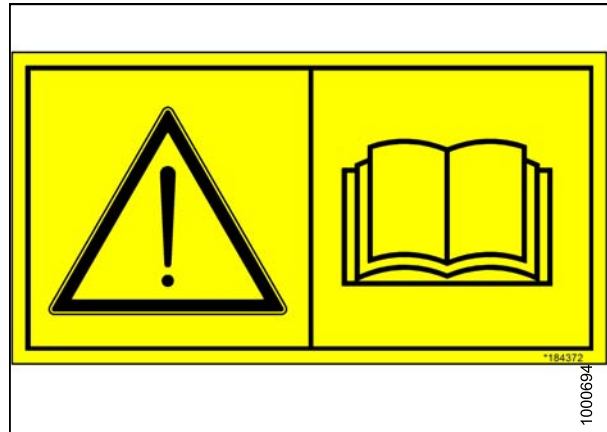


Figure 1.7: Operator's Manual Decal

2 Unloading the Windrower

Perform all procedures in this chapter in the order in which they are listed.

2.1 Unloading Container

CAUTION

To prevent injury to bystanders and avoid striking them with machinery, do NOT allow people to stand in the unloading area.

1. Move trailer into position and block trailer wheels.
2. Lower trailer storage stands.
3. Unlock and open container doors and remove all blocking.
4. Check container floor for nails or other obstructions and remove if necessary.
5. Position platform or ramp at container opening.
6. Attach chain/pull strap to slots in support channels (A).
7. Pull the windrower slowly from the container onto the platform.



Figure 2.1: Windrower Shipping Assembly

2.2 Moving to Assembly Area

The windrower can be moved to the assembly area using either a crane (refer to [2.2.1 Moving to Assembly Area: Crane Method, page 6](#)) or a forklift (refer to [2.2.1 Moving to Assembly Area: Crane Method, page 6](#)).

2.2.1 Moving to Assembly Area: Crane Method

CAUTION

To prevent injury to bystanders and avoid striking them with machinery, do NOT allow people to stand in the unloading area.

CAUTION

Equipment used for unloading must meet or exceed the requirements specified in this section. Using inadequate equipment may result in chain breakage, vehicle tipping, or machine damage.

Lift Sling	
Type	MacDon Part #163871
Maximum Working Load	28,404 lb (12,884 kg)
Chain	
Type	Overhead 1/2 in. lifting quality
Minimum Working Load	7100 lb (3221 kg)
Lifting Vehicle	
Minimum Lifting Capacity	20,000 lb (9072 kg)

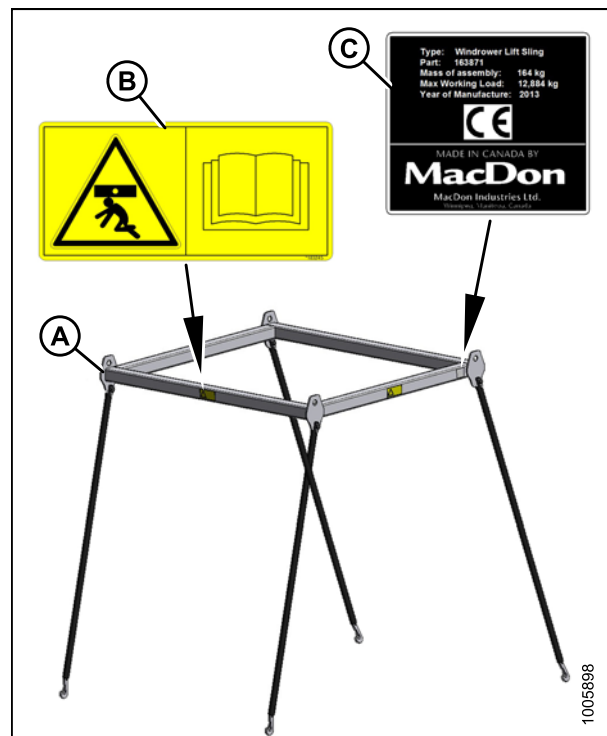


Figure 2.2: Lift Sling

- A - Lift Sling (MD #163871)
- B - Decal (MD #183245) (Four Places)
- C - Decal (MD #183248)

UNLOADING THE WINDROWER

1. Attach chains or cables to the four lifting points on the lift sling (MD #163871), and connect the loop ends to the crane hook.

IMPORTANT:

Use cables or chains with a minimum lifting capacity of 7100 lb (3221 kg).

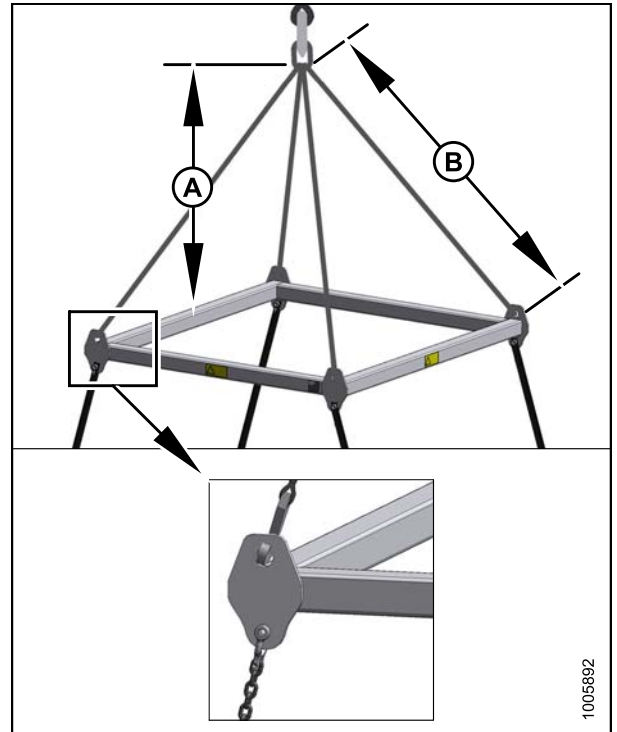


Figure 2.3: Lift Sling

A - 59 in. (1500 mm) Minimum B - 83.5 in. (2120 mm) Typical

2. Attach lift sling (MD #163871) to the four designated lifting points on the windrower shipping frame.

⚠ DANGER

To avoid injury or death from a swinging or falling load, keep all bystanders clear when lifting. Equipment used for lifting must exceed the maximum requirements specified in this section.

3. Lift the windrower off the platform and move to the setup area.



Figure 2.4: Shipping Frame Lifting Points

UNLOADING THE WINDROWER

4. Lower assembly onto 5–6 in. (127–152 mm) blocks as shown.
5. Remove chains from shipping frame.
6. Check for shipping damage and missing parts.

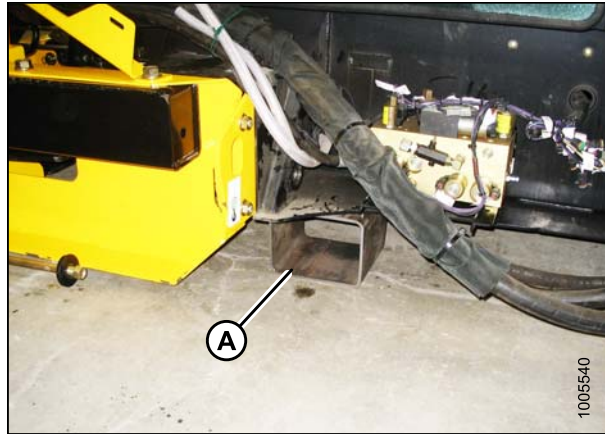


Figure 2.5: Windrower Shipping Assembly on Blocks

2.2.2 Moving to Assembly Area: Forklift Method

CAUTION

To prevent injury to bystanders and avoid striking them with machinery, do NOT allow people to stand in the unloading area.

CAUTION

Equipment used for unloading must meet or exceed the requirements specified in this section. Using inadequate equipment may result in chain breakage, vehicle tipping, or machine damage.

Lifting Vehicle	
Minimum Lifting Capacity ¹	20,000 lb (9072 kg)

IMPORTANT:

Forklifts are normally rated for a load positioned 24 in. (610 mm) forwards from the back end of the forks. To obtain the forklift capacity at 48 in. (1220 mm), check with your forklift distributor.

WARNING

Be sure forks are secure before moving away from load. Stand clear when lifting.

1. Approach the windrower from the hood end and slide the forks underneath the lifting framework.
2. Raise the windrower off the platform and move to the assembly area.



Figure 2.6: Forklift Method Lifting Points

1. At 48 in. (1220 mm) from back end of forks.

UNLOADING THE WINDROWER

3. Lower assembly onto 5–6 in. (127–152 mm) blocks as shown.
4. Check for shipping damage and missing parts.

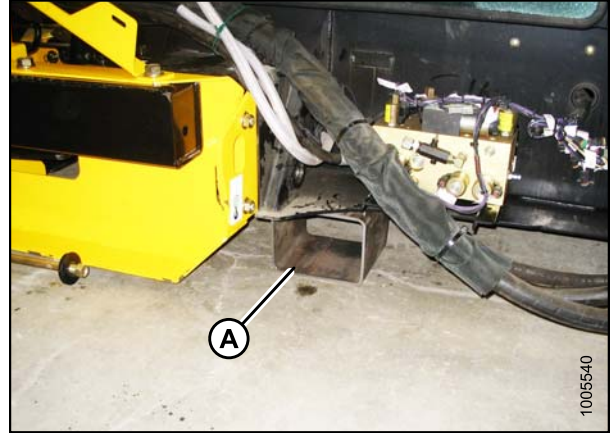


Figure 2.7: Windrower Shipping Assembly on Blocks

2.3 Removing Wheel and Step Assembly

1. Remove shipping wire (A) and bolt securing the hose support to the shipping frame, and remove the hose support.
2. Lay hose support off to the side.



Figure 2.8: Shipping Frame

3. Remove two 3/4 in. x 16.5 in. bolts (A) (one per side) from the front frame beam. Retain for reinstallation.



Figure 2.9: Front Frame Beam

UNLOADING THE WINDROWER

4. Remove the 1 in. (25.4 mm) pin (A) from the center-link.



Figure 2.10: Center-Link

5. Remove the four (two per side) carriage bolts from the rear of the wheel/step assembly.



Figure 2.11: Rear of Wheel/Step Assembly

UNLOADING THE WINDROWER

6. Remove the plastic cable tie (A) and shipping wire (B) securing the hose bundles to the frame.



Figure 2.12: Hose Bundles on Frame



Figure 2.13: Hose Bundles on Frame

UNLOADING THE WINDROWER

7. Attach a chain to the wheel/step assembly (A) and a lifting device and pull away from the shipping assembly.

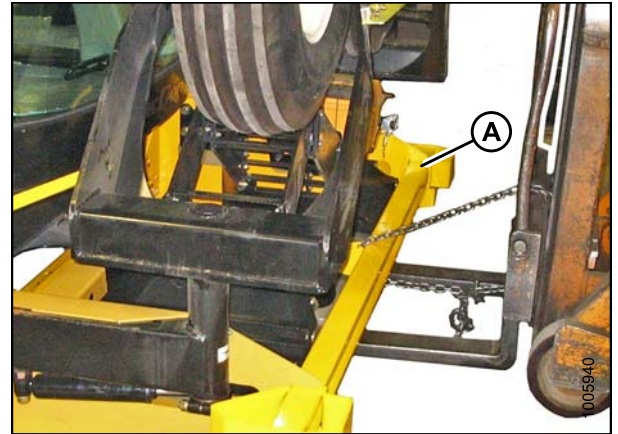


Figure 2.14: Wheel/Step Shipping Assembly

8. Lift center-link (A) until it clears the wheel/step assembly frame (B).

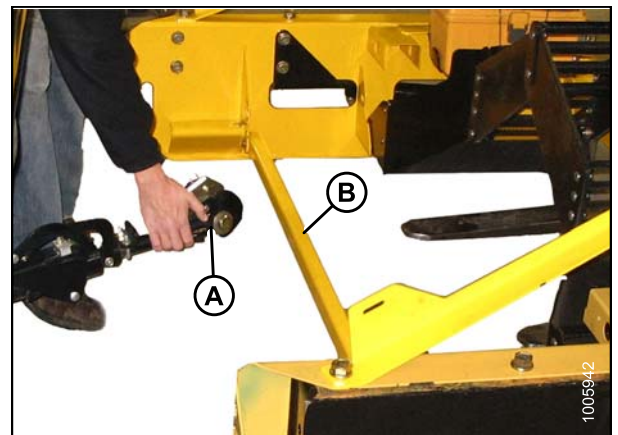


Figure 2.15: Wheel/Step Assembly Frame

9. Install leg bolts, washers, and nuts to secure the lifting plate onto the mainframe.

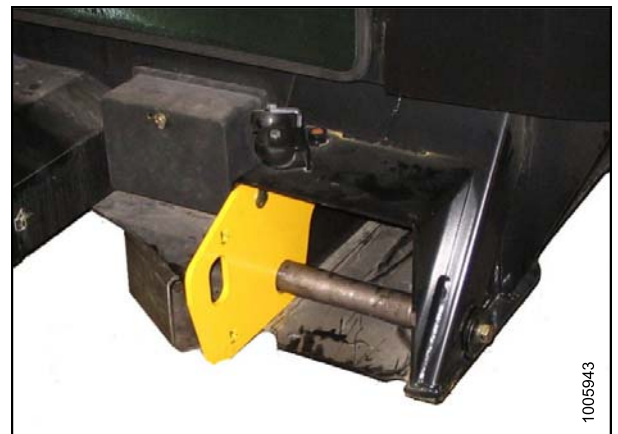


Figure 2.16: Lifting Plate

2.4 Removing Drive Wheels

IMPORTANT:

Remove the drive wheels as a pair from above the hood.

1. Remove the two bolts (A) from the front cross member over the hood.
2. Remove one bolt (A) from the rear of the hood directly under the center of the drive wheel.
3. Attach a lifting device to the lift hooks (A) located in the center of each drive wheel.

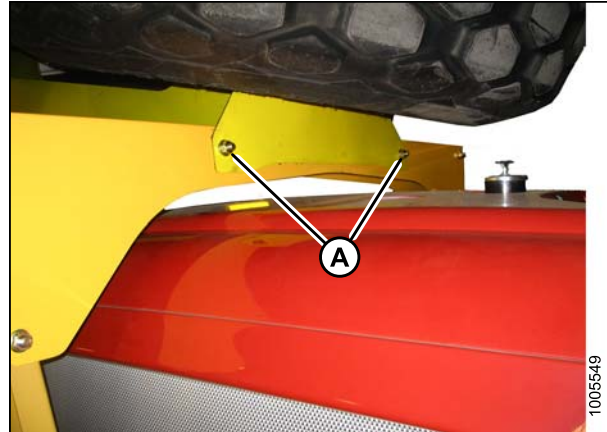


Figure 2.17: Front Cross Member on Hood

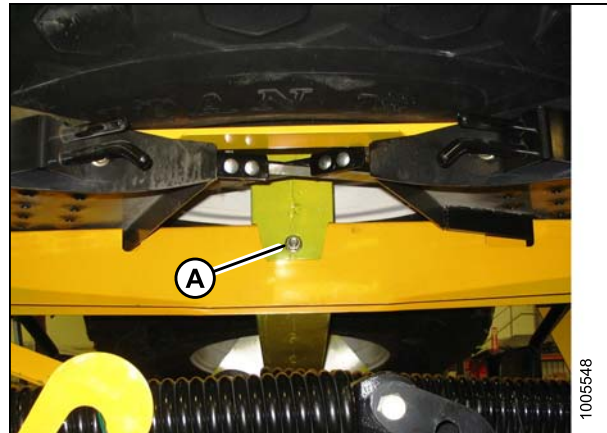


Figure 2.18: Rear of Hood

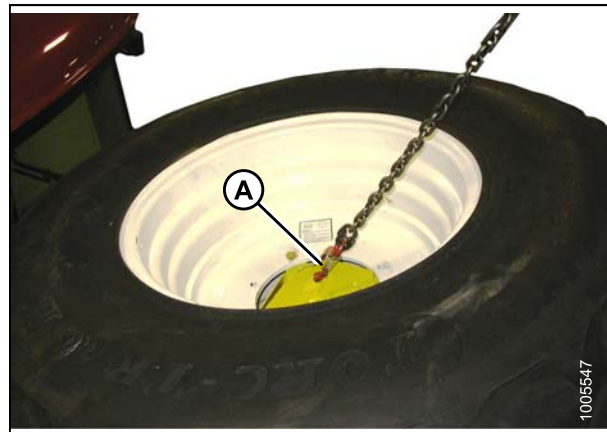


Figure 2.19: Drive Wheel

UNLOADING THE WINDROWER

4. Carefully lift the wheels off the frame.

IMPORTANT:

Ensure the tire is guided away from the cab roof when lifting wheels to prevent damaging the cab. The chain on the forward wheel should be snug, and the chain on the aft wheel should be loose.

5. Set wheels aside for later installation.



Figure 2.20: Wheels on Frame

2.5 Removing Platforms

1. Remove the two support tubes on either side of the hood.
2. Attach two slings and a chain to the platform at the locations shown to prevent damaging the paint.
3. Attach opposite ends of slings and chain to a lifting device with a minimum lifting capacity of 5000 lb (2268 kg) and a lift height of 13 ft. (4 m).

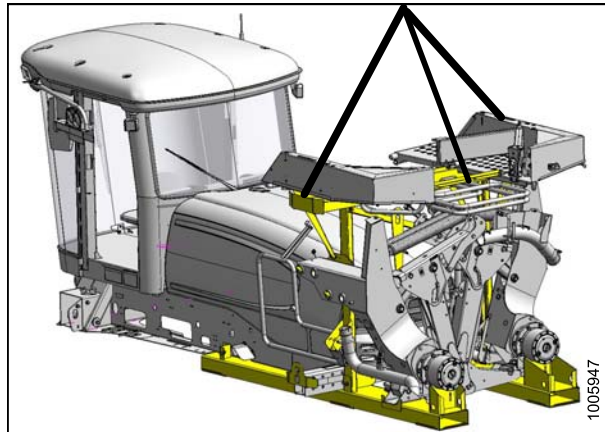


Figure 2.21: Platforms on Hood

4. Remove two 5/8 in. x 5 in. bolts (B) at the top of the vertical supports, and remove two 5/8 in. x 1-1/4 in. bolts (A) attaching the angle braces to the platforms.

NOTE:

The M105 Self-Propelled Windrower is equipped with only one platform.

5. Use care and lift the platform assembly off the frame.

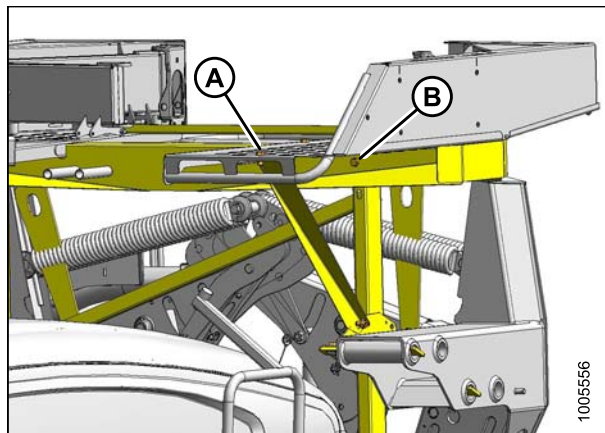


Figure 2.22: Platforms on Hood

6. Back away from the windrower and set the platform assembly on a level surface.
7. Unhook one sling and chain.
8. Lift one end of the platform assembly so it can be inverted and laid down with the base on the floor. Use a piece of cardboard under the platform assembly to protect the paint.

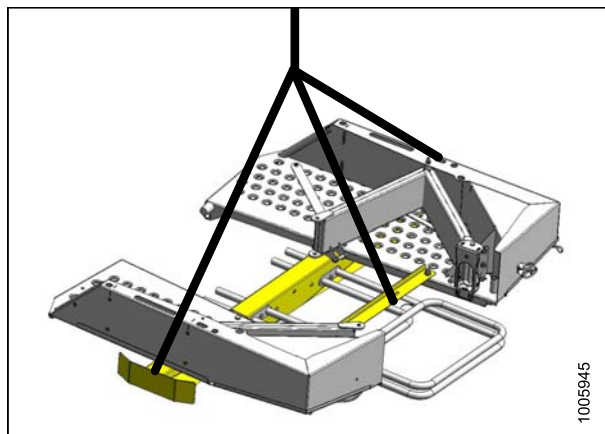


Figure 2.23: Platforms

UNLOADING THE WINDROWER

9. Unhook the remaining sling.

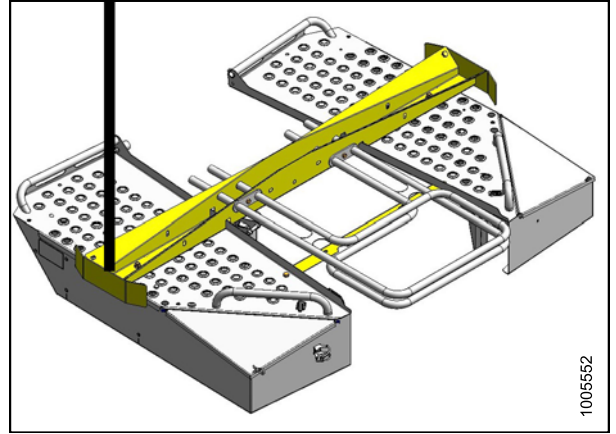


Figure 2.24: Platforms

2.6 Removing Hand Rails and Exhaust Stack

1. Cut the plastic cable ties and move the hose bundle clear of the platform.

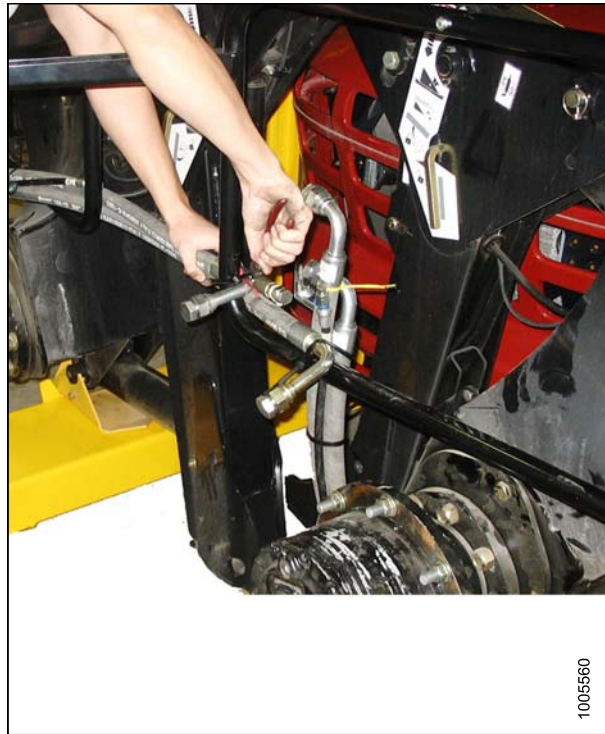


Figure 2.25: Hand Rails and Exhaust Stack Shipping Assembly

2. Remove shipping wire and foam from the exhaust stack (A).
3. Remove nuts (B) from clamp (C), and remove the exhaust stack (A) and clamp from the shipping frame.
4. Reinstall nuts (B) onto clamp (C) and set exhaust stack (A) aside for later installation.
5. Remove the two bolts (D) securing the hand rail (E) to the shipping frame, and remove the hand rail.
6. Repeat for the other hand rail on the opposite side. Retain hardware.
7. Set parts aside for later installation.

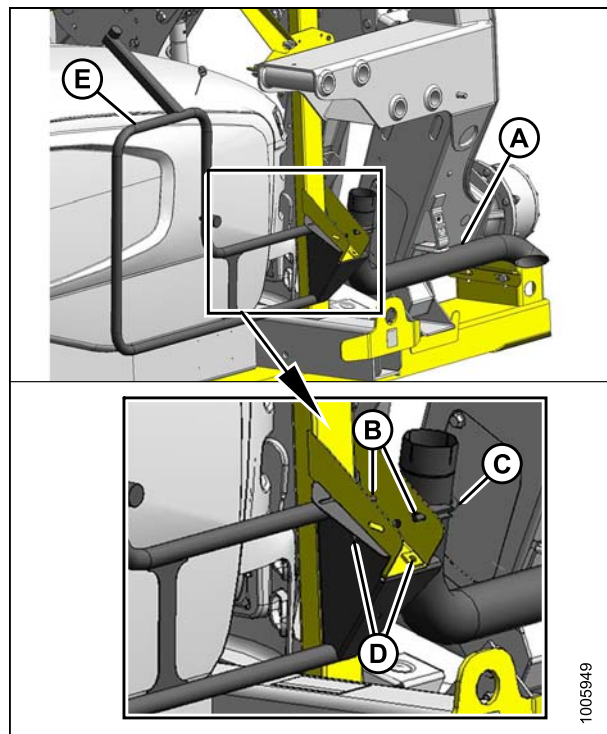


Figure 2.26: Hand Rails and Exhaust Stack Shipping Position

2.7 Removing Leg Assemblies

1. Ensure the lift bar is attached to the leg assembly as shown and the clevis pin is installed with the head on near side.
2. Attach the chain (A) to the lifting bar (B) on the leg assembly, and connect the chain to a lifting device with a minimum lifting capacity of 5000 lb (2268 kg).

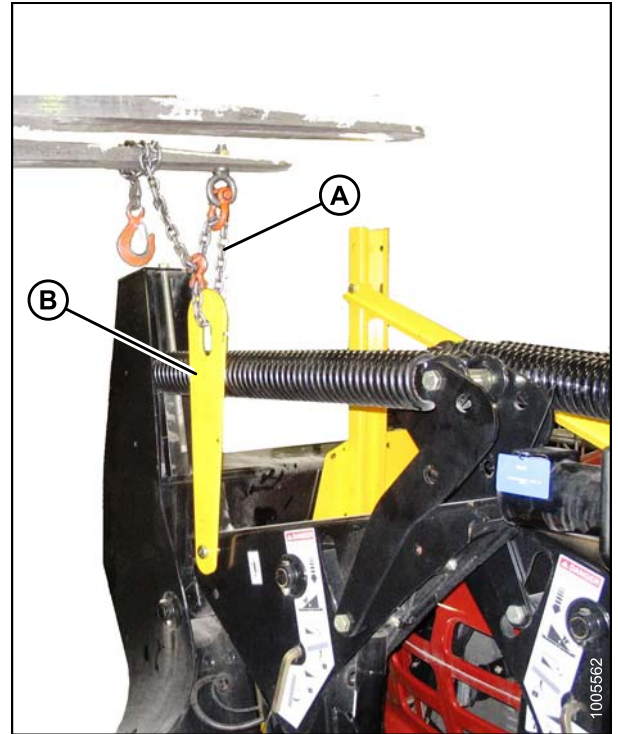


Figure 2.27: Leg Shipping Assembly

3. Remove two bolts (A) from the lower support channel.

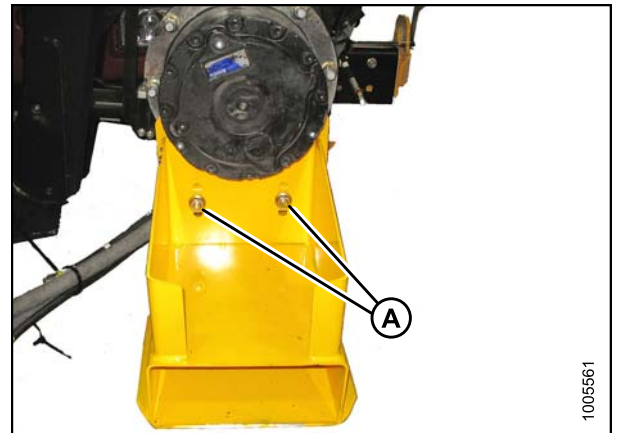


Figure 2.28: Lower Support Channel

UNLOADING THE WINDROWER

4. Remove two bolts (A) from the shipping channel located at the top of the leg.

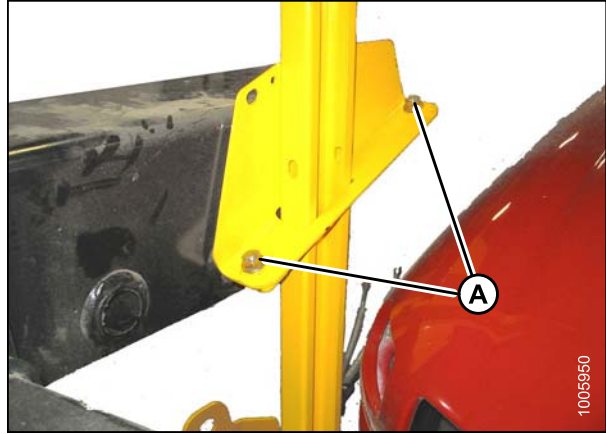


Figure 2.29: Shipping Channel on Leg

5. Remove bars (A) from leg.

NOTE:

Insert cardboard or foam between the leg assembly and the hood to prevent damaging the hood.

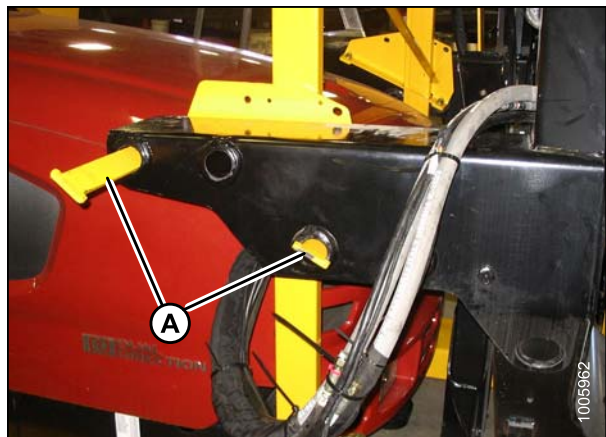


Figure 2.30: Leg Shipping Assembly

UNLOADING THE WINDROWER

6. Lift off the leg assembly (A), and securely set the assembly on level ground as shown (B).
7. Repeat the above steps for the second leg assembly.

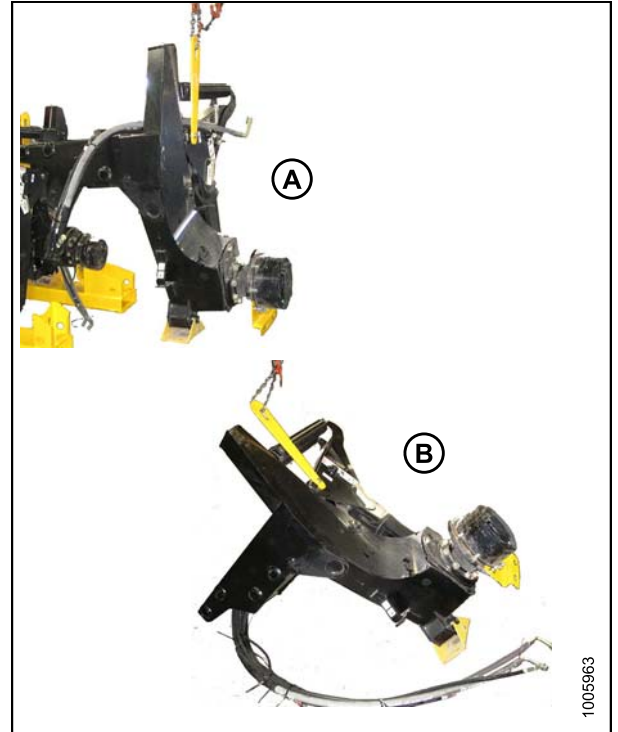


Figure 2.31: Leg Assembly Positioning

2.8 Removing Wheel and Platform Support

1. Remove the cross brace (A) and the two upright supports (B and C) from the frame.



Figure 2.32: Wheel and Platform Support

2. Remove the cross member from above the hood (A).

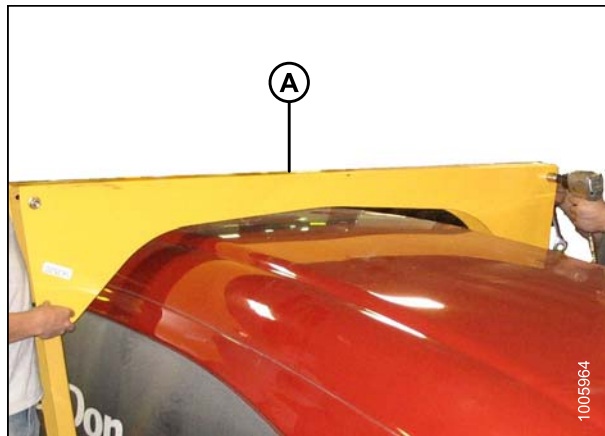


Figure 2.33: Wheel and Platform Support

UNLOADING THE WINDROWER

3. Remove the two uprights (A) on either side of the hood.



Figure 2.34: Wheel and Platform Support

3 Assembling the Windrower

Perform all procedures in this chapter in the order in which they are listed.

3.1 Assembling Support Stand

Special stands for assembling the windrower are available from the factory. If the stands are not available, use an equivalent support system.

IMPORTANT:

The stands must be capable of supporting a 15,000 lb (6800 kg) load.

1. Remove all shipping materials from the stands and set aside the air control valve tripod (D).
2. Arrange forward (A) and rear (B) stands on level ground so the attachment lugs on each stand face each other.
3. Attach four support tubes (C) to the stands as shown, and secure with the hardware provided with the stands.

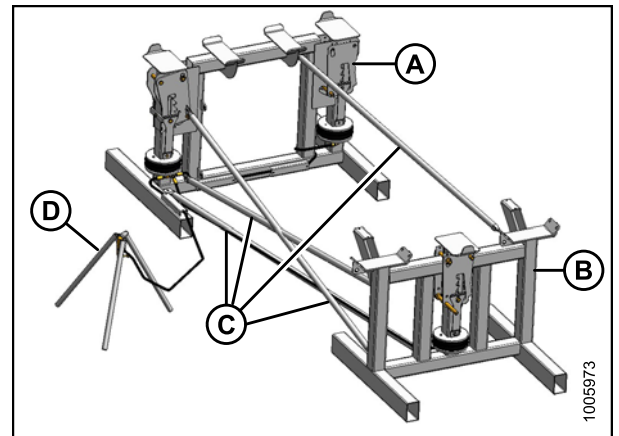


Figure 3.1: Support Stand

4. Set up the air control valve tripod, remove plug (A) from the valve, and install a 100 psi (690 kPa) air line. The stand is now operational and instructions for its use are provided throughout this manual.

WARNING

Use stand only as instructed in this manual. Do NOT use stand for any other purpose. Do NOT pressurize air bags beyond 100 psi (690 kPa).

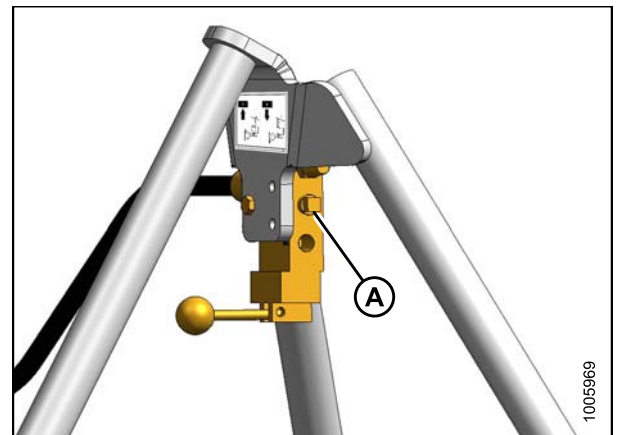


Figure 3.2: Air Control Valve Tripod

3.2 Lifting Windrower onto Stand

The windrower can be lifted onto the support stand using either a crane (refer to [3.2.1 Lifting Windrower onto Stand: Crane Method, page 26](#)) or a forklift (refer to [3.2.2 Lifting Windrower onto Stand: Forklift Method, page 28](#)).

3.2.1 Lifting Windrower onto Stand: Crane Method

CAUTION

To prevent injury to bystanders and avoid striking them with machinery, do NOT allow people to stand in the unloading area.

CAUTION

Equipment used for unloading must meet or exceed the requirements specified in this section. Using inadequate equipment may result in chain breakage, vehicle tipping, or machine damage.

Lift Sling	
Type	MacDon Part #163871
Maximum Working Load	28,404 lb (12,884 kg)
Chain	
Type	Overhead 1/2 in. lifting quality
Minimum Working Load	7100 lb (3221 kg)
Crane Lifting Vehicle	
Minimum Lifting Capacity	20,000 lb (9072 kg)

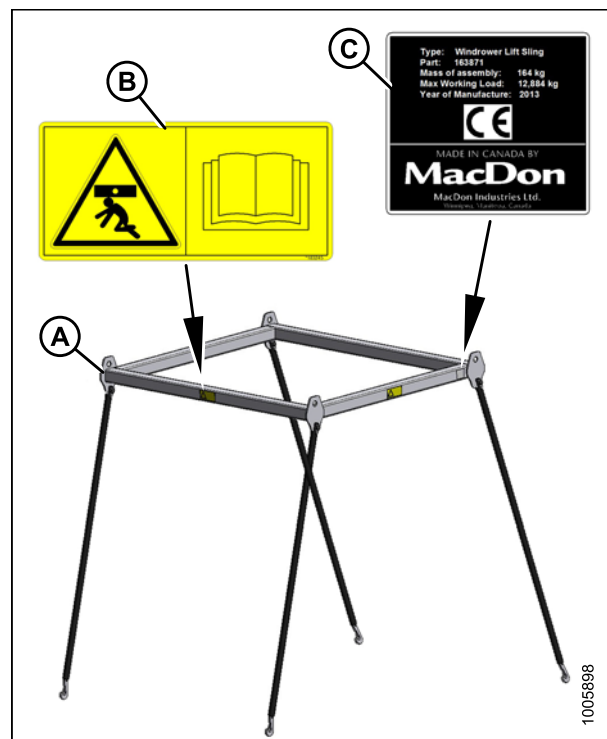


Figure 3.3: Lift Sling

- A - Lift Sling (MD #163871)
- B - Decal (MD #183245) (Four Places)
- C - Decal (MD #183248)

ASSEMBLING THE WINDROWER

1. Attach chains or cables to the four lifting points (A) on the lift sling (MD #163871), and connect the loop ends to the crane hook.

IMPORTANT:

Use cables or chains with a minimum lifting capacity of 7100 lb (3221 kg).

2. Attach the lift sling to the four designated lifting points on the windrower shipping frame as shown.



Figure 3.4: Shipping Frame Lifting Points

⚠ DANGER

To avoid injury or death from a swinging or falling load, keep all bystanders clear when lifting. Equipment used for lifting must exceed the maximum requirements specified in this section.

3. Lift the windrower onto the support stand (A).
4. Remove chains from shipping frame and move lift sling (B) clear of the work area.

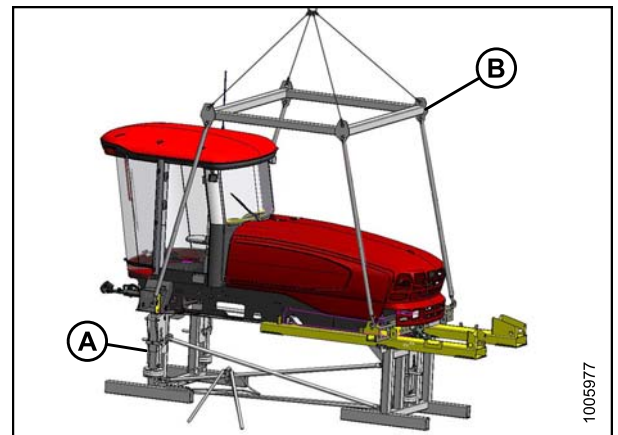


Figure 3.5: Windrower on Support Stand

ASSEMBLING THE WINDROWER

3.2.2 Lifting Windrower onto Stand: Forklift Method

CAUTION

To prevent injury to bystanders and avoid striking them with machinery, do NOT allow people to stand in the unloading area.

CAUTION

Equipment used for unloading must meet or exceed the requirements specified in this section. Using inadequate equipment may result in chain breakage, vehicle tipping, or machine damage.

Lifting Vehicle	
Minimum Lifting Capacity ²	20,000 lb (9072 kg)

IMPORTANT:

Forklifts are normally rated for a load positioned 24 in. (610 mm) forwards from the back end of the forks. To obtain the forklift capacity at 48 in. (1220 mm), check with your forklift distributor.

1. Approach the windrower from the hood end and slide the forks fully into shipping support channels (A).



Figure 3.6: Forklift Method Lifting Points

2. Raise the windrower and lower onto the support stand.
3. Back away forklift.

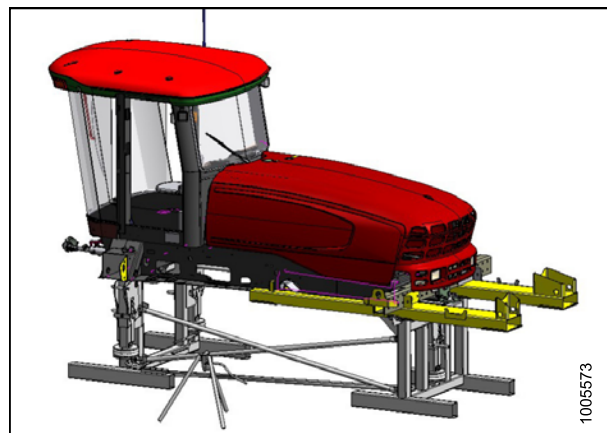


Figure 3.7: Windrower on Support Stand

2. At 48 in. (1220 mm) from back end of forks.

ASSEMBLING THE WINDROWER

3.3 Installing Legs

1. Remove the front leg bolts (A) and pins (B) and set aside for reinstallation. Remove carriage bolt (C) and remove lifting plate (D).

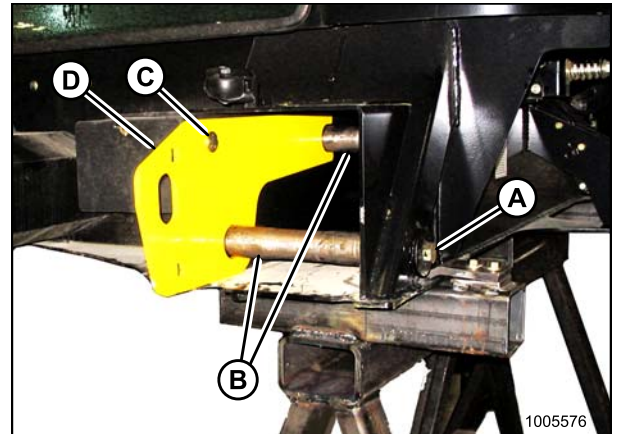


Figure 3.8: Lifting Plate

2. Attach the front leg to a lifting device using lifting bar (A).
3. Position the leg at the frame.

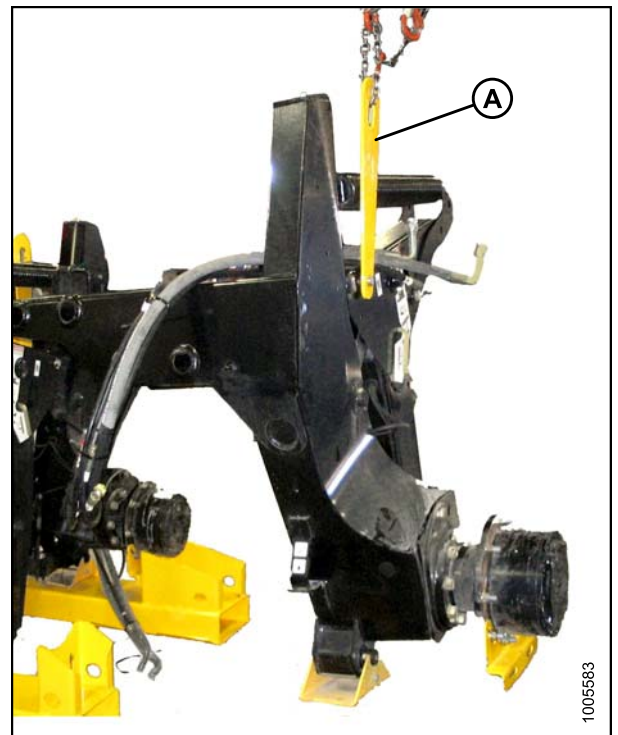


Figure 3.9: Leg Position

ASSEMBLING THE WINDROWER

4. Feed the hydraulic hose bundle (A) into the frame and through the hole (B) at the center of the frame.

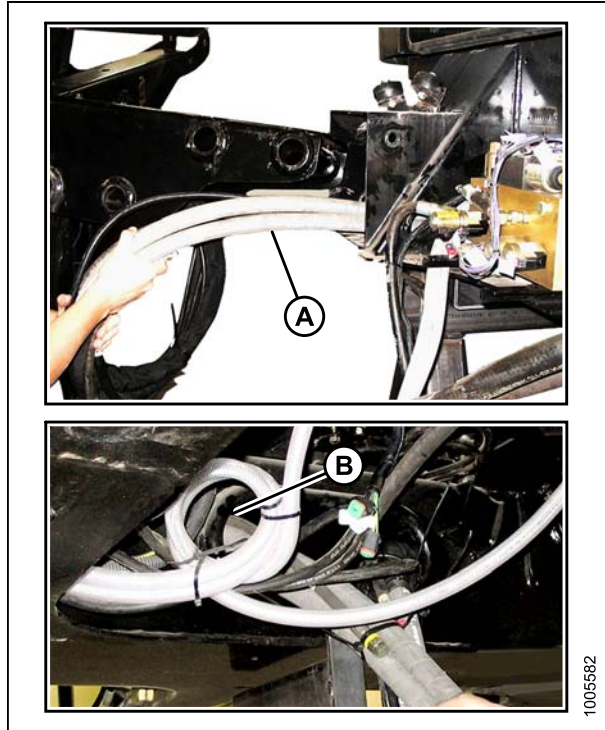


Figure 3.10: Hydraulic Hoses

5. Insert the leg into the frame and line-up the holes in the frame and the leg at the first position (widest tread with one exposed hole [A]).
6. Insert pins and secure with 3/4 in. x 16-1/2 in. long bolts (B), washers, and nuts. Torque to 100 ft·lbf (136 N·m).
7. Repeat for opposite leg.

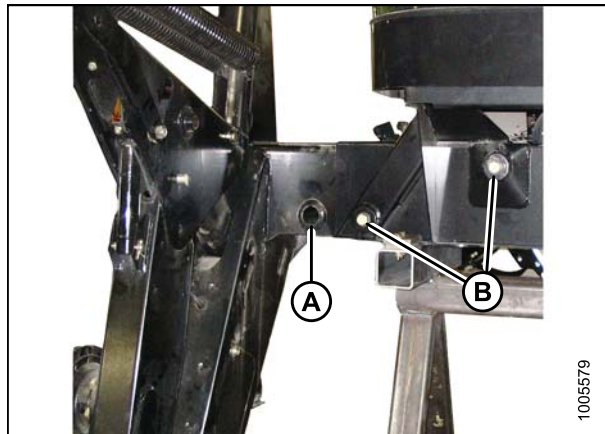


Figure 3.11: Leg Position on Frame

ASSEMBLING THE WINDROWER

8. Use the lifting device to slightly lift the header lift arms, and remove the lifting bars (A) from the legs.
9. Relocate the spring locking pins (B) to the front of the lift arms.

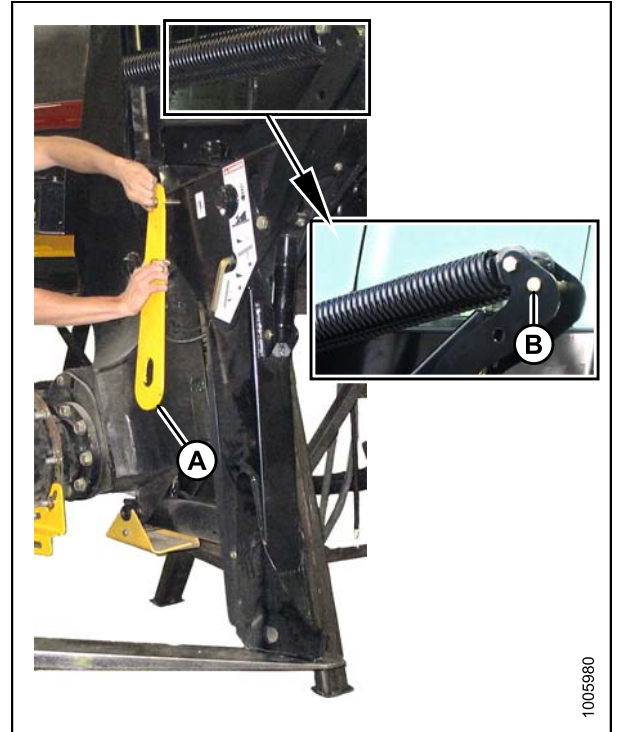


Figure 3.12: Header Lift

1005980

3.4 Installing Drive Wheels

NOTE:

If using the factory stand, proceed to Step 1, page 32; otherwise, skip to Step 5, page 32.

1. Ensure the three (one at rear, two at front) lift locks are activated on the lift mechanism.

NOTE:

Lock is activated when keeper (A) is vertical and latch (B) is free to move back and forth.

2. Pressurize the air bag system (100 psi [689 kPa] air pressure required) and raise the windrower to the maximum height (approximately 7 in. [178 mm]) above the stand.

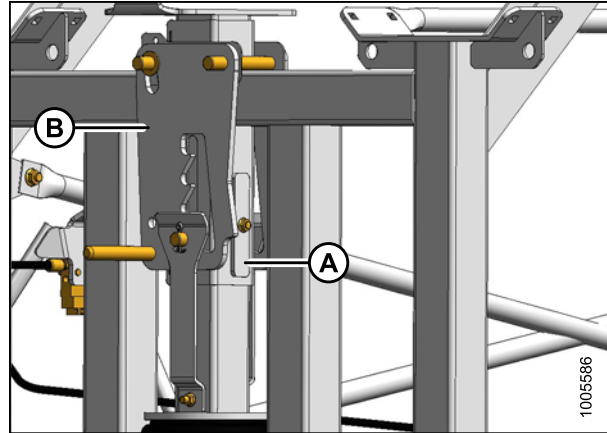


Figure 3.13: Lift Locks

3. Verify that all three locks are engaged before proceeding to the next step.

NOTE:

Lock is engaged when the witness hole (A) above the pin is exposed.

4. Release pressure until the locks support the weight of the windrower.

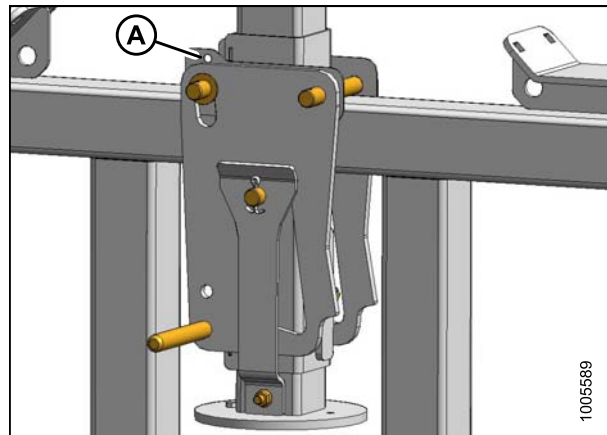


Figure 3.14: Lift Locks

5. Remove shipping support (A) from the drive wheel hub, and remove the wheel lug nuts (B).

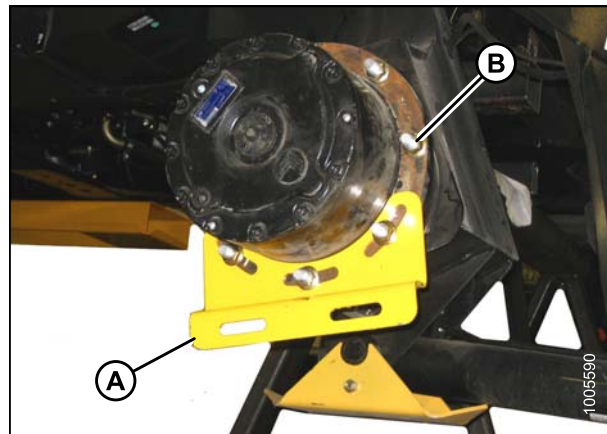


Figure 3.15: Drive Wheel Shipping Support

ASSEMBLING THE WINDROWER

6. Position the wheels against the hubs so the air valves (A) are on the outside and the tire tread points forward.

NOTE:

For turf tires (diamond tread), be sure arrow on sidewall points in forward rotation with windrower in cab-forward orientation.

7. Lift wheel onto hub using a lifting device.
8. Lower lifting device.



Figure 3.16: Wheel Position

9. Line up the holes in the rim with the studs on the wheel drive hub and install wheel nuts (A).

IMPORTANT:

To avoid damage to wheel rims and studs, tighten nuts by hand. Do **NOT** use an impact gun, do **NOT** use lubricant or Never-Seez® compound, and do **NOT** overtighten wheel nuts.

IMPORTANT:

To avoid damage to wheel rims and studs, tighten nuts by hand. Do **NOT** use an impact gun, do **NOT** use lubricant or Never-Seez® compound, and do **NOT** overtighten wheel nuts.

10. Torque drive wheel nuts to 375 ft-lbf (510 N·m) using the tightening sequence shown.
11. Repeat torque procedure every hour until two consecutive checks confirm there is no movement of the nuts.

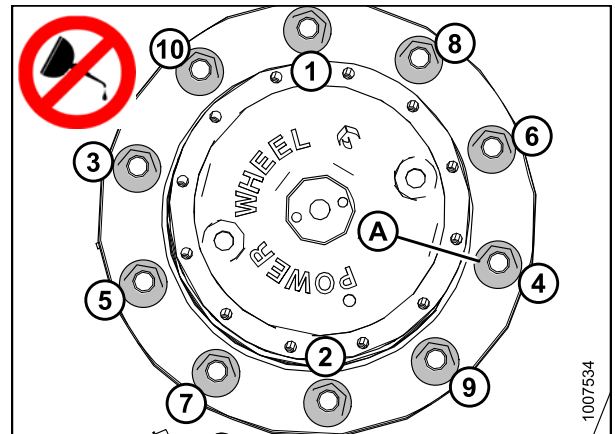


Figure 3.17: Wheel Nuts

3.5 Installing Caster Wheels

1. Remove two guide plates (A) from the ends of the walking beam.

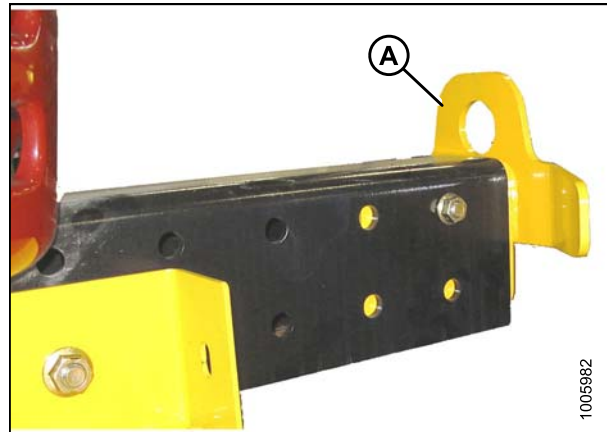


Figure 3.18: Guide Plate on Walking Beam

2. Support the shipping frame channel and remove the bolts attaching the shipping frame to the walking beam and mainframe side rail. Remove the shipping frame.

NOTE:

Shipping frame does not need to be removed if air bag lifting stand is used; however, ensure the bolts are removed prior to moving the windrower off the stand.

3. Repeat for opposite shipping frame channel.

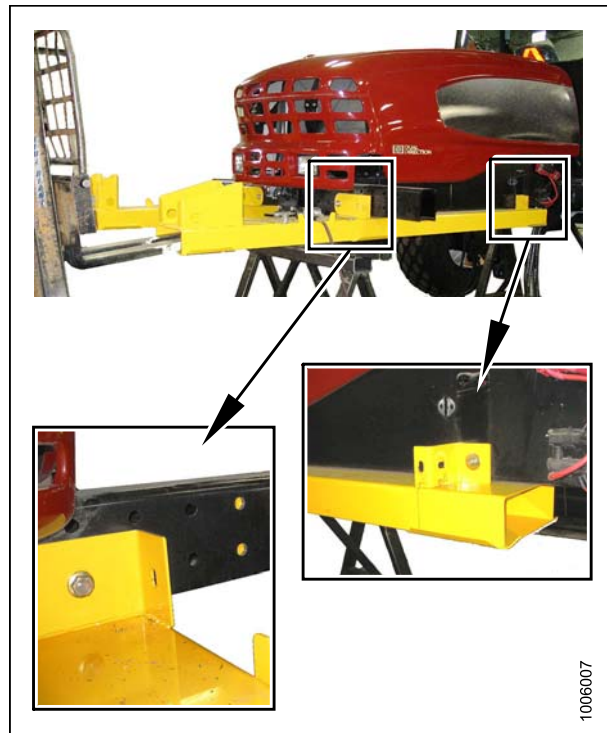


Figure 3.19: Shipping Frame

ASSEMBLING THE WINDROWER

4. Remove tie bar (A) between the two caster wheels.



Figure 3.20: Caster Wheel Shipping Assembly

5. Remove the two caster supports (A) from the caster wheels and frame. Retain bolts for attaching caster to walking beam.

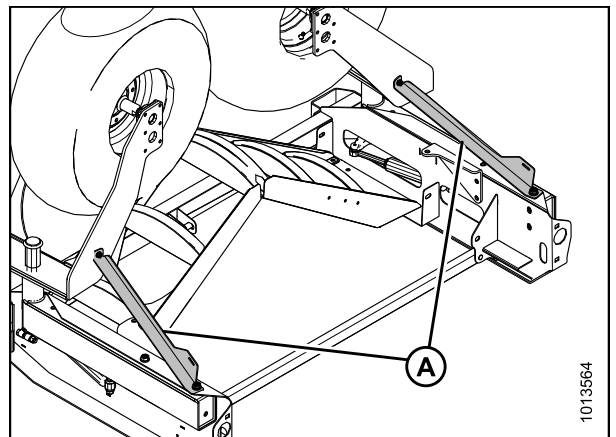


Figure 3.21: Caster Supports

ASSEMBLING THE WINDROWER

6. Attach a chain to the right-hand caster and support caster with lifting device.

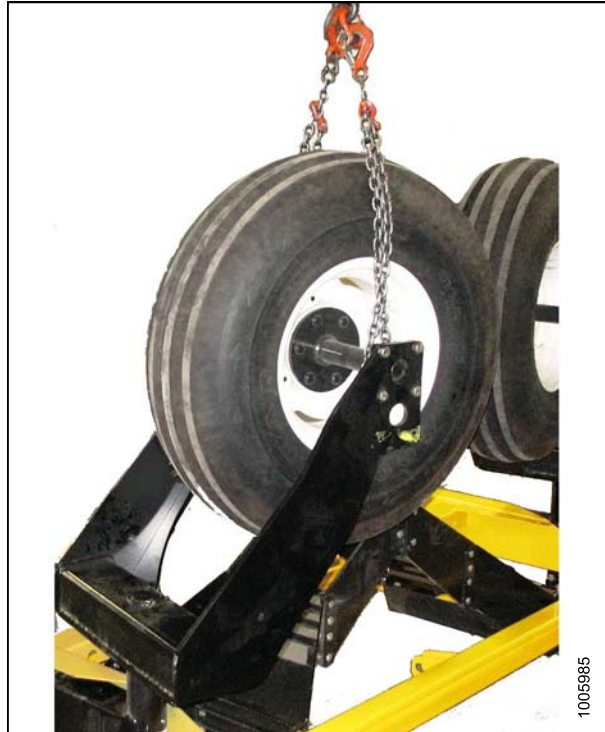


Figure 3.22: Lifting Device on Caster

7. Remove the five remaining bolts (A) securing the caster to the shipping frame. Retain bolts for attaching caster to walking beam.

⚠ CAUTION

Stand clear when lifting, as caster may swing.

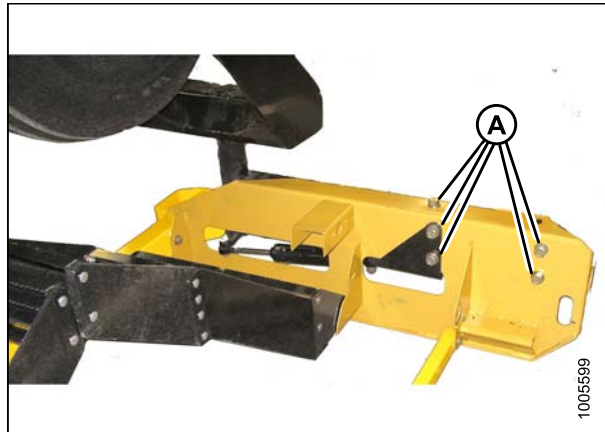


Figure 3.23: Shipping Frame on Caster

ASSEMBLING THE WINDROWER

8. Lift caster assembly off shipping frame and position at end of walking beam (A).
9. Insert right-hand caster extension into walking beam and position for desired tread.



Figure 3.24: Walking Beam

10. Install six 3/4 in. bolts (A) and hardened washers into walking beam and caster beam. Use longer bolts through anti-shimmy bracket (B).
11. Tighten bolts as follows:
 - a. Snug up the two bolts underneath beam.
 - b. Tighten the four back bolts to 330 ft-lbf (447 N·m).
 - c. Tighten bolts underneath beam to 330 ft-lbf (447 N·m).
12. Repeat Steps 7, page 36 through 11, page 37 for left-hand caster.
13. Retighten bolts at five and ten hours of operation.

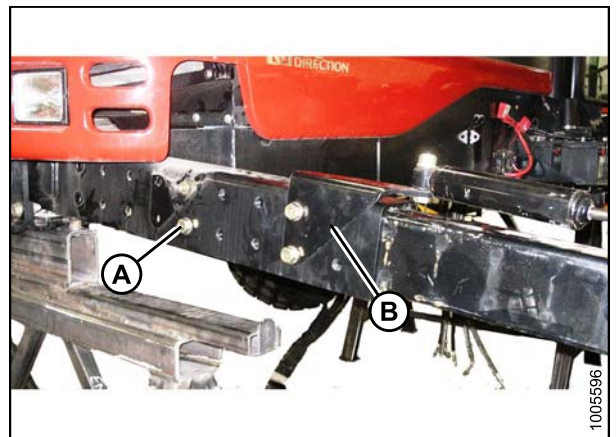


Figure 3.25: Walking Beam

3.6 Installing Hydraulics

The procedure for installing hydraulics is different for each windrower model. Refer to the following procedures according to your specific model:

- [3.6.1 Installing Hydraulics on an M205, page 38](#)
- [3.6.2 Installing Hydraulics on an M155, page 41](#)
- [3.6.3 Installing Hydraulics on an M105, page 51](#)

3.6.1 Installing Hydraulics on an M205

1. Retrieve all capped hoses from inside the frame.
2. Locate the three hoses with capped tees extending from the valve block.
3. Remove caps from fittings with similar colored cable ties and connect hoses (A) to tees. Do **NOT** connect the large case drain hoses from the wheel motors at this time.

NOTE:

Remove caps on tee last to minimize oil loss.

4. Position hoses into frame.
5. Locate the two hoses with capped ends and matching colored ties. A union is connected to one of the hoses.
6. Remove caps and connect the two hoses together. Position hoses in frame.
7. Retrieve the four remaining capped hoses coming out of the frame.

8. Loosen bolts (A) and move valve block to improve access through the hole in the frame in order to insert wrenches and tighten fittings.
9. Remove caps from hoses and matching valve block fittings (B).
10. Make connections using colored plastic cable ties as a guide. Tighten fittings.
11. Reposition valve block and retighten bolts.

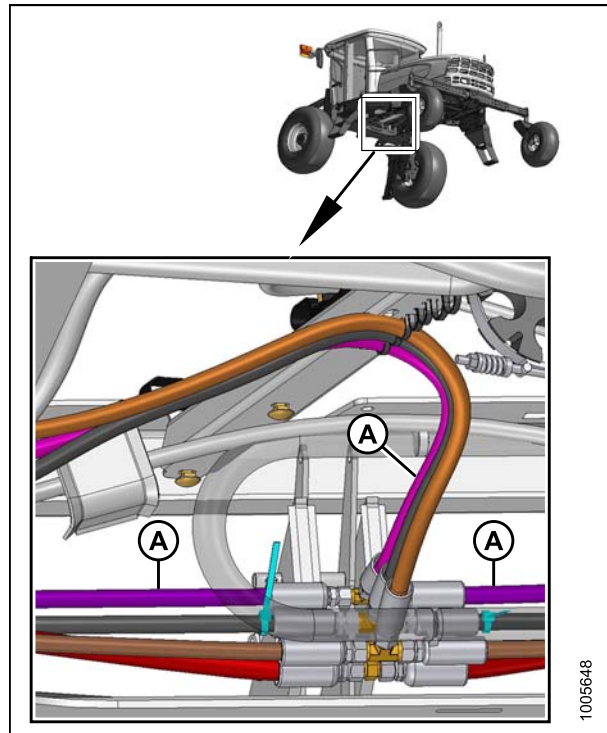


Figure 3.26: Hydraulic Hoses

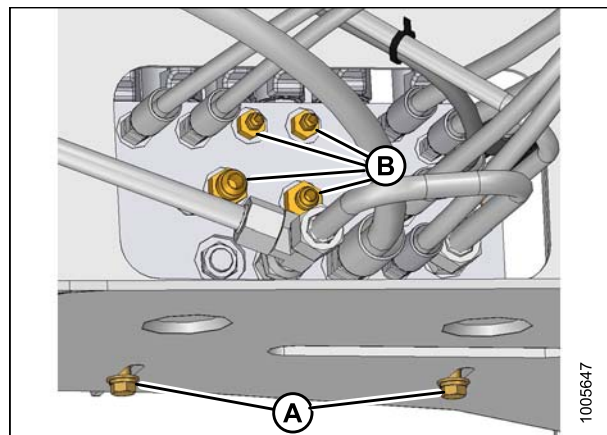


Figure 3.27: Hydraulic Valve and Hoses

ASSEMBLING THE WINDROWER

12. Position the two smaller hoses (MD #111323) (A) and the two larger hoses (MD #111328, MD #111557) (B) against the support as shown, and secure with plastic ties.

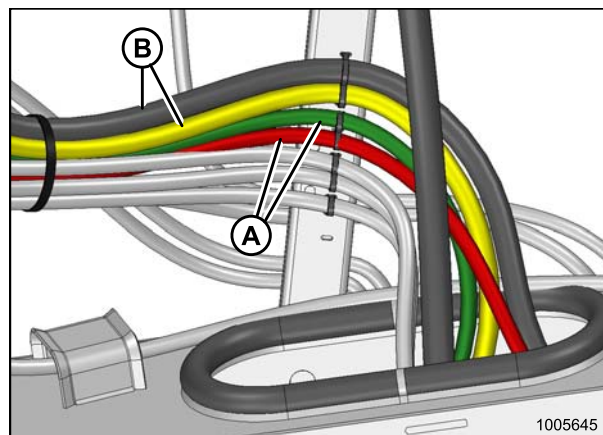


Figure 3.28: Hydraulic Hose Routing

13. Remove clamp (A) from round plastic hose block (case drain hose is preinstalled in block).

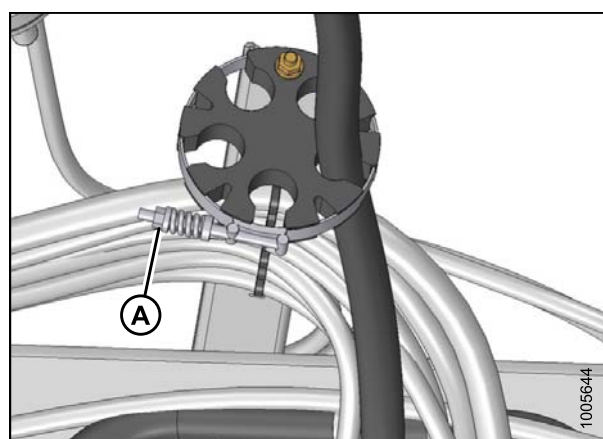


Figure 3.29: Hose Block

NOTE:

Case drain hose (B) is preinstalled in block.

14. Insert two left-hand traction drive hoses (A) into hose block as shown.
15. Insert two right-hand traction drive hoses (C) into hose block as shown.

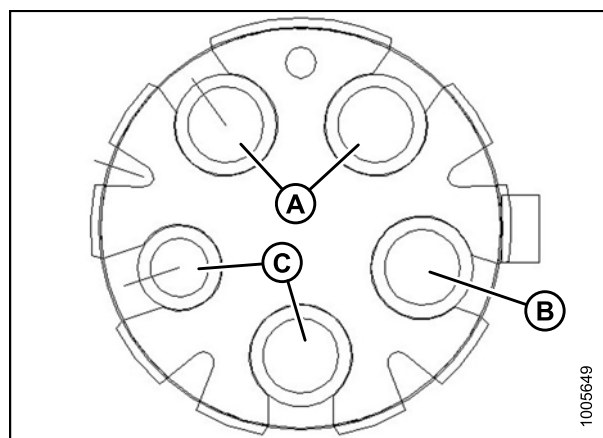


Figure 3.30: Hose Block (View Looking Forward)

ASSEMBLING THE WINDROWER

16. Reinstall clamp (A).

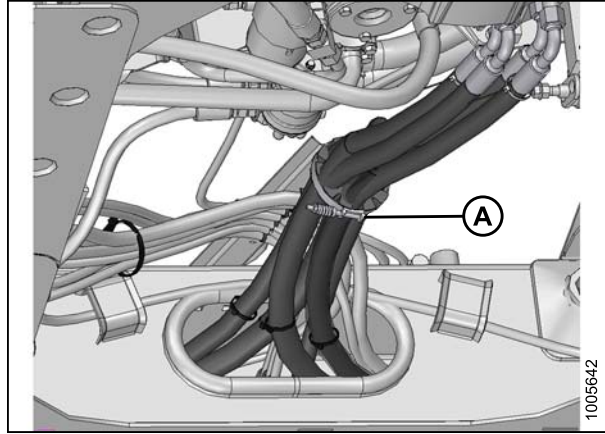


Figure 3.31: Hose Routing

17. Remove caps and attach hoses with short elbows (A) to respective side of pump (either yellow or no tie). Tighten fittings.

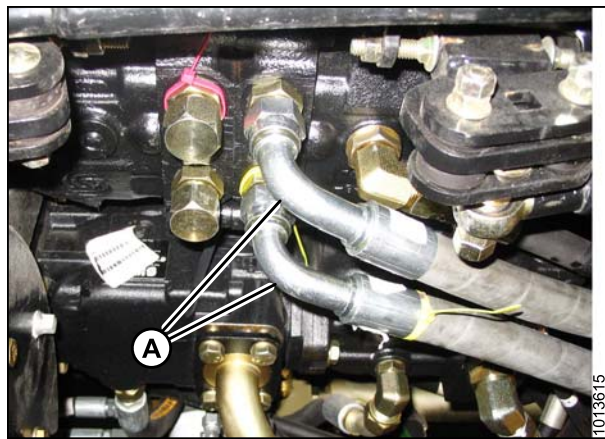


Figure 3.32: Pump

18. Remove caps and attach hoses with long elbows (A) to respective side of pump (either red or no tie). Tighten fittings.

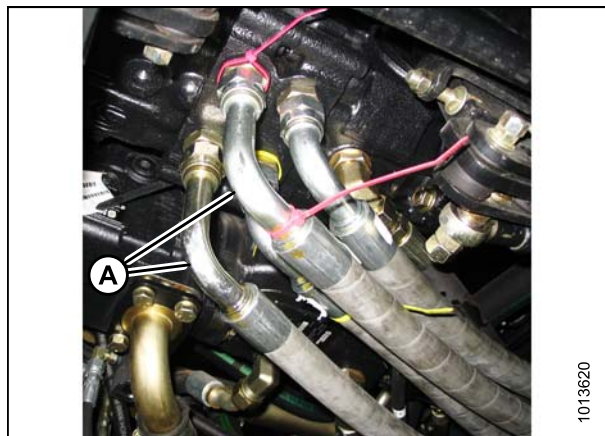


Figure 3.33: Pump

ASSEMBLING THE WINDROWER

19. Retrieve the two motor case drain hoses (MD #111312) at the front frame and the 7/8 in. (22 mm) tee fitting on the hose (C) from the pump.
20. Remove caps from the hoses (B) only.
21. Remove one cap from tee fitting (A), and quickly attach hose (B) to minimize oil spillage.
22. Remove second cap from tee fitting (A), and quickly connect other hose (B).
23. Tighten fittings.
24. Position hoses into frame.

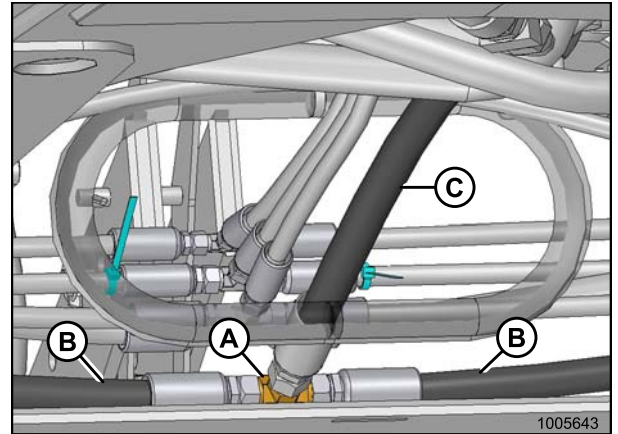


Figure 3.34: Hose Routing

25. Secure hoses with cable ties (A) as required.

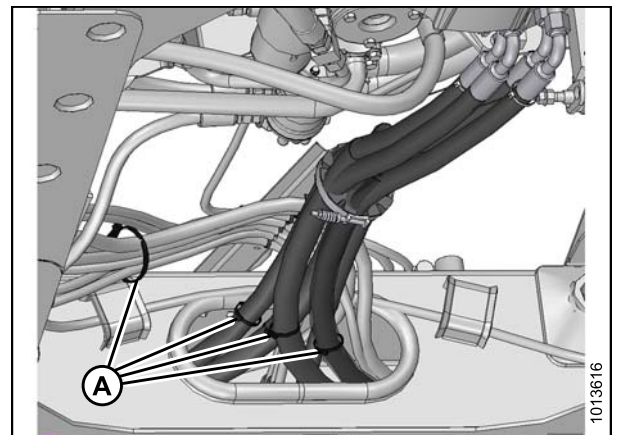


Figure 3.35: Hose Routing

3.6.2 Installing Hydraulics on an M155

1. Locate hose clip (A) under the cab and remove the clip.

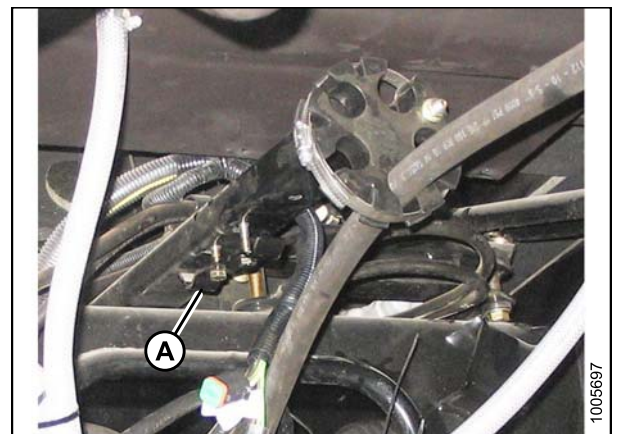


Figure 3.36: Hose Clip

ASSEMBLING THE WINDROWER

2. Position hose (MD #111323 [orange tie]) (D) and hose (MD #111324 [white tie]) (E) with tee under the center of the clip as shown, and loosely install two bolts and nuts.

NOTE:

Part numbers are marked on the hoses (M200 also requires placement of hose (MD #1132A) with tee under clip).

3. Position remaining hoses under clip as shown and tighten bolts.

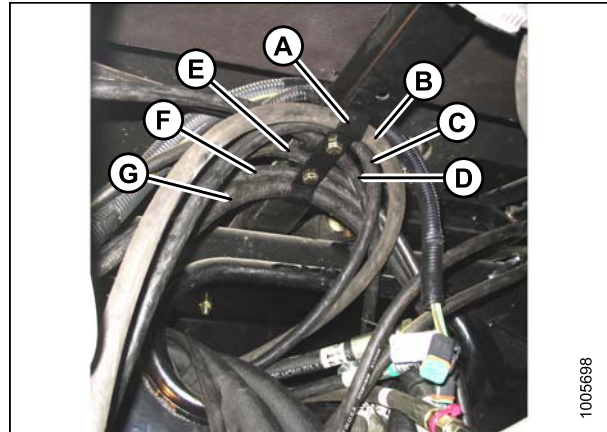


Figure 3.37: Hose Routing (View Looking Forward)

A - Hose Clip
B - Yellow Tie (MD #111557)
C - Blue Tie (MD #111323)
D - Orange Tie (MD #111323)
E - White Tie (MD #111324)
F - Green Tie (MD #111327)
G - White Tie (MD #111328)

4. Locate two hoses (MD #111327 [green ties]) (A) in frame opening and existing tee fitting (green tie) on the hose from the valve block.
5. Remove caps from the hoses (A) only.
6. Remove one cap from tee fitting, and quickly attach hose (A) to minimize oil spillage.
7. Remove second cap from tee fitting, and quickly connect other hose (A).
8. Tighten fittings.
9. Position hoses into frame.

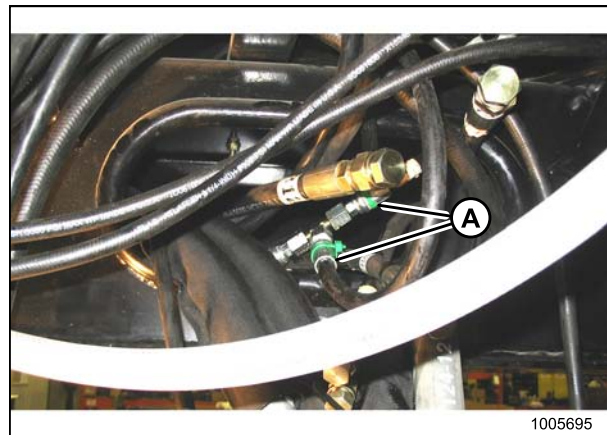


Figure 3.38: Hose Routing

10. Locate two hoses (white ties) inside frame and hose (MD #111324) with existing tee fitting (white tie) (A).
11. Remove caps, make connections, and tighten fittings.
12. Position hoses into frame.

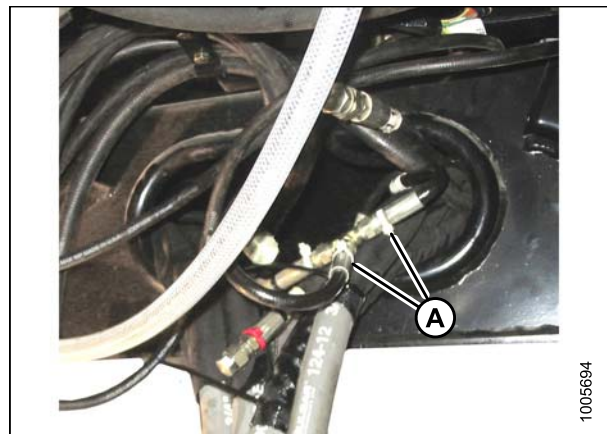


Figure 3.39: Hose Routing

ASSEMBLING THE WINDROWER

13. Locate two hoses (red ties) (A) inside frame.
14. Route right-hand hose behind bundle.
15. Remove caps, make connection, and tighten fitting.
16. Position hoses into frame.

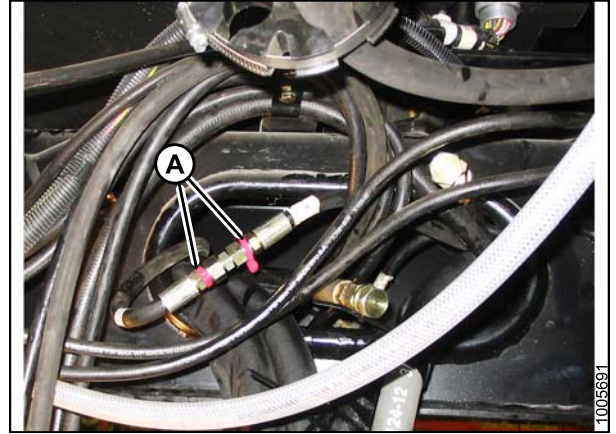


Figure 3.40: Hose Routing

17. Retrieve long hose (MD #119328 [white tie]) (A) and route through the hole in the left-hand frame.

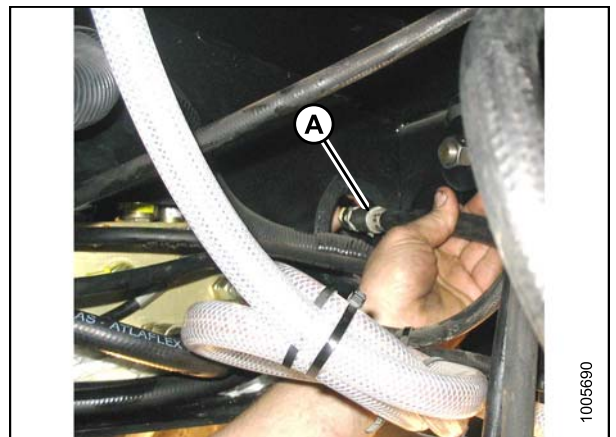


Figure 3.41: Hose Routing

18. Remove caps on hose (A) and valve block fitting (white tie) (B) and make connection. Tighten fitting.

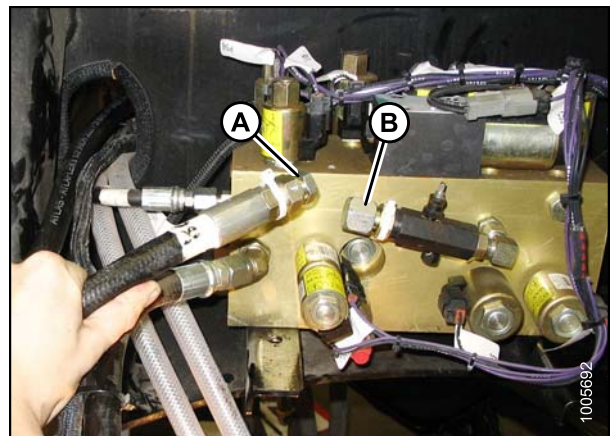


Figure 3.42: Valve Block

ASSEMBLING THE WINDROWER

19. Remove the caps from three fittings (blue [A], orange [B], and yellow [C] ties) on the valve block from the inboard side of the frame.

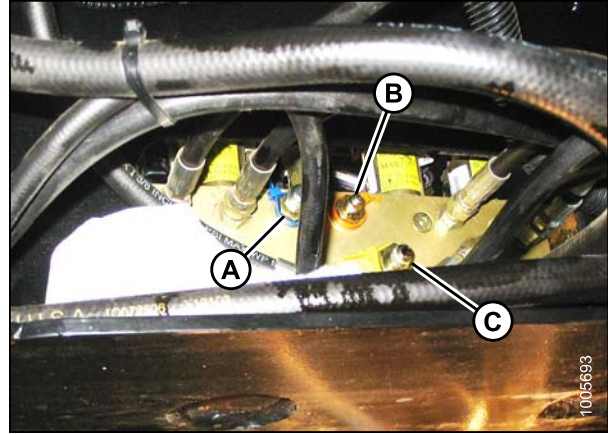


Figure 3.43: Valve Block

20. Loosen bolts (A) and move valve block to improve access through the hole in the frame in order to insert wrenches and tighten fittings.

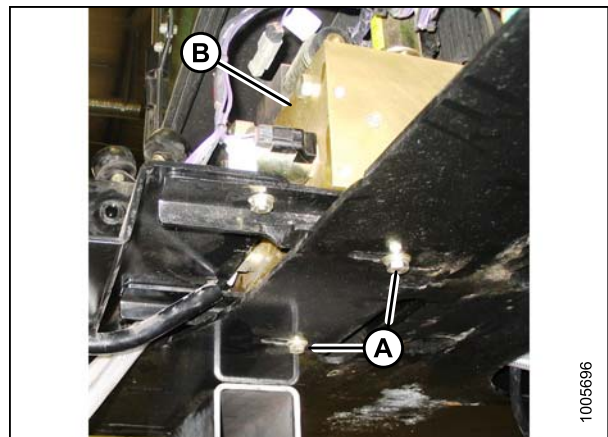


Figure 3.44: Valve Block

21. Retrieve matching hoses (blue [A], orange [B], and yellow [C] ties) and make connections on valve block. Tighten fittings.
22. Reposition valve block and retighten bolts.

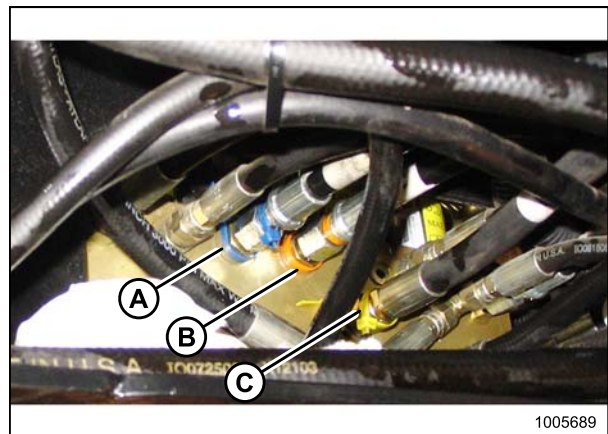


Figure 3.45: Valve Block

ASSEMBLING THE WINDROWER

23. Remove clamp (A) from round plastic hose block (case drain hose is preinstalled in block).

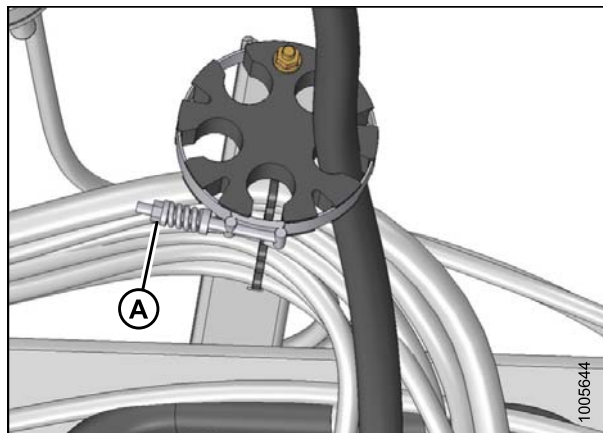


Figure 3.46: Hose Block

NOTE:

Case drain hose (C) is preinstalled in block.

24. Insert two left-hand traction drive hoses (A) into hose block as shown.
25. Insert two right-hand traction drive hoses (B) into hose block as shown.
26. Reinstall clamp.

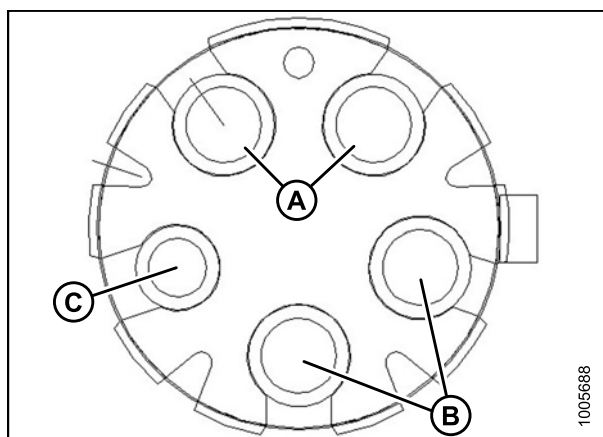


Figure 3.47: Hose Block (View Looking Forward)

27. Remove caps and attach hoses with short elbows (A) to respective side of pump (either yellow or no tie). Tighten fittings.

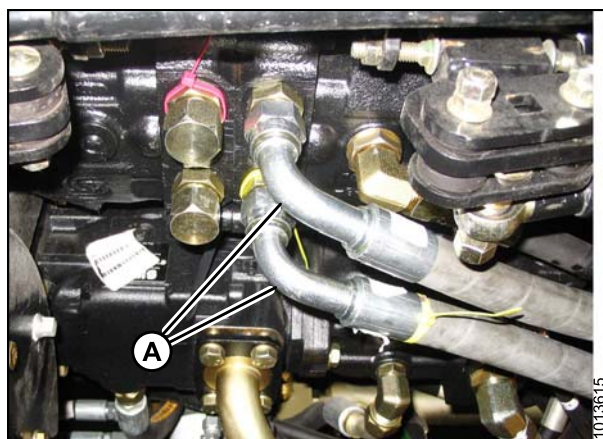


Figure 3.48: Pump

ASSEMBLING THE WINDROWER

28. Remove caps and attach hoses with long elbows (A) to respective side of pump (either red or no tie). Tighten fittings.

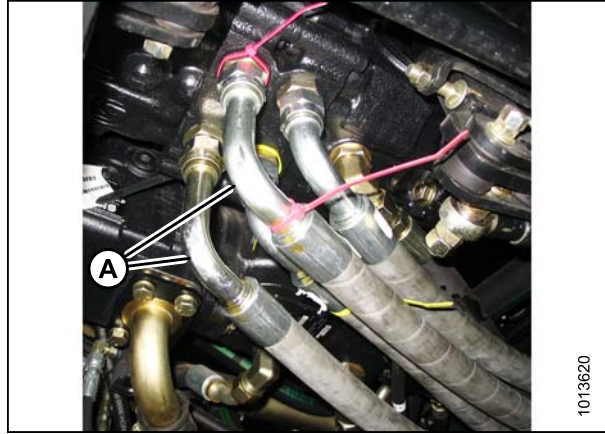


Figure 3.49: Pump

29. Retrieve the two motor case drain hoses (MD #111312) at the front frame and the 7/8 in. tee fitting (B) on the hose from the pump.
30. Remove the caps (A) from the hoses only.

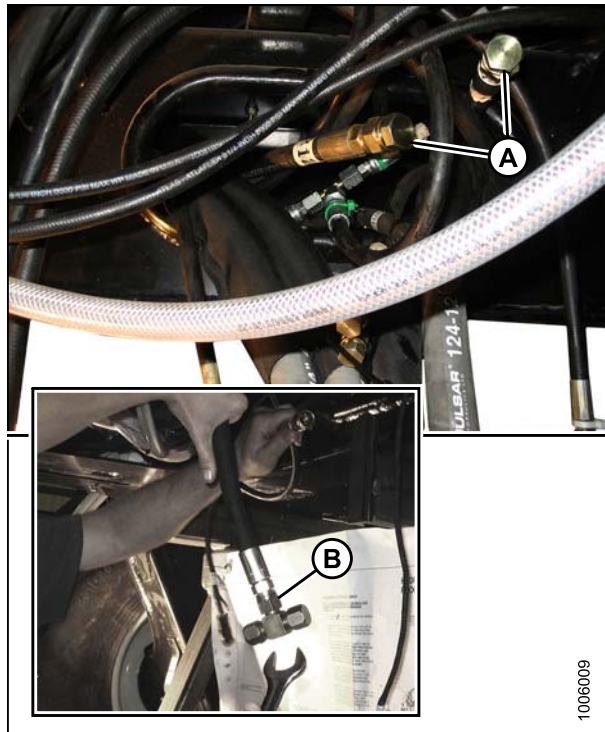


Figure 3.50: Motor Case Drain Hoses

ASSEMBLING THE WINDROWER

31. Remove one cap from tee fitting (A) and quickly attach hose to minimize oil spillage.
32. Remove second cap from tee (A) and quickly connect other hose.
33. Tighten fittings.

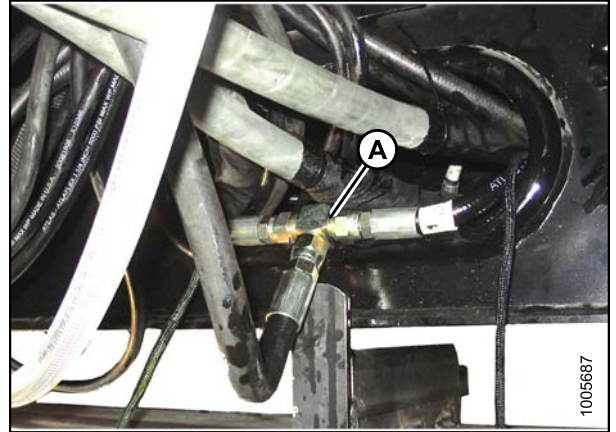


Figure 3.51: Tee Fitting

34. Position hose bundle (A) from the valve blocks on the left-hand side of the frame onto the tire.
35. Note routing of electrical harness.

IMPORTANT:

The electrical harness must be routed on the topside of the hose bundle and on the outside of the hose support to prevent chafing of the electrical wires when the windrower is operating with a header.

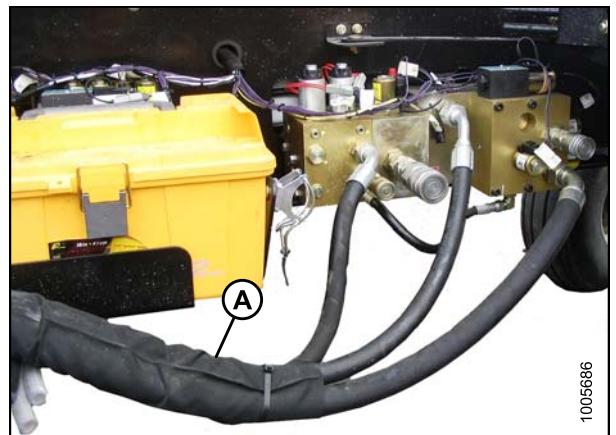


Figure 3.52: Hose Routing

ASSEMBLING THE WINDROWER

36. Undo strap (A), cut plastic cable ties (B), and move harness (C) away from the hose bundle.

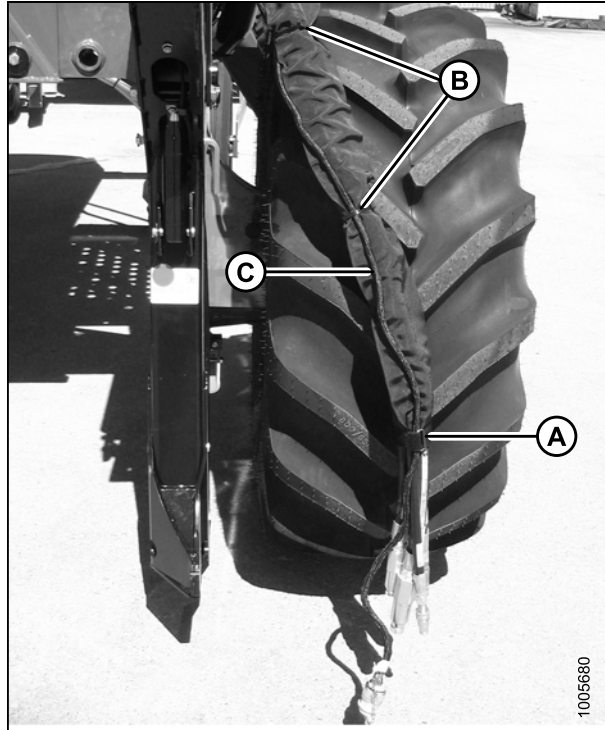


Figure 3.53: Electric Harness and Hose Bundle

37. Route the hose bundle (A) through the hose support and lay on the tire.
38. Route the harness along the outside of the hose support and along the hose bundle to the hose ends.



Figure 3.54: Hose Routing

ASSEMBLING THE WINDROWER

39. Attach harness (A) to hose support with hose clip (B).

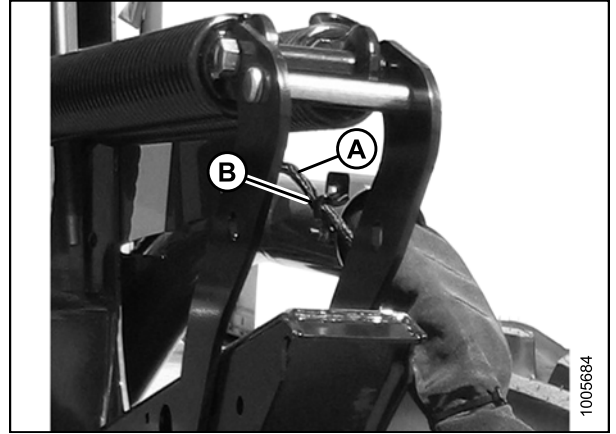


Figure 3.55: Hose Support

40. Secure harness (C) to hose bundle with strap (A) and new plastic cable ties (B). Ensure harness is clear of pinch and friction points.

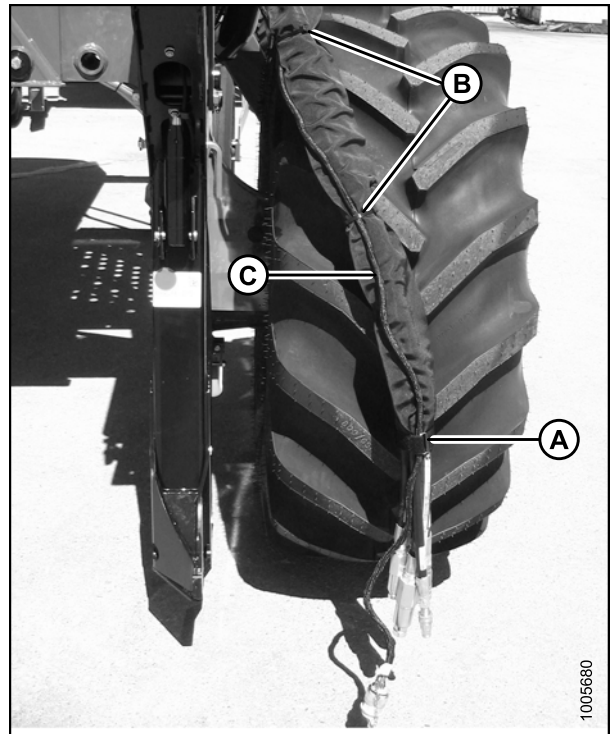


Figure 3.56: Electric Harness and Hose Bundle

ASSEMBLING THE WINDROWER

41. Disengage and rotate hook (A) to fully up position.
42. Position hose bundle (B) over hose support and under hook.

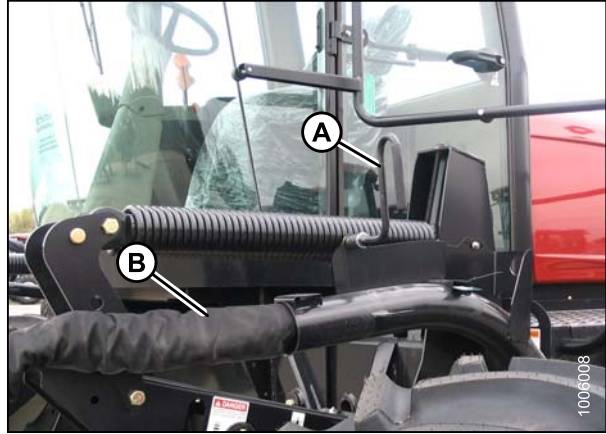


Figure 3.57: Hook Positioning

43. Lower hook (A) and engage in bracket in down position.



Figure 3.58: Hook Positioning

44. Attach the reel hose support tube to the right-hand reel leg with two 3/8 in. x 1.0 in. carriage bolts (A) and nuts.

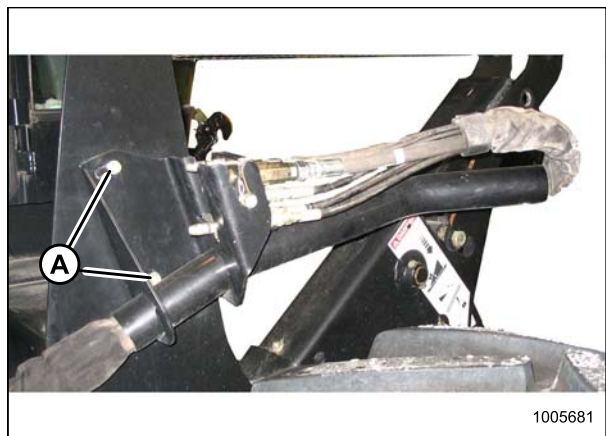


Figure 3.59: Reel Hose Support

3.6.3 Installing Hydraulics on an M105

1. Locate two hoses (MD #111324 [green ties]) (A) in frame opening and existing tee fitting (green tie) on the hose from the valve block.
2. Remove one cap from tee fitting, and quickly attach hose (A) to minimize oil spillage.
3. Remove second cap from tee fitting, and quickly connect other hose (A).
4. Tighten fittings.
5. Position hoses into frame.

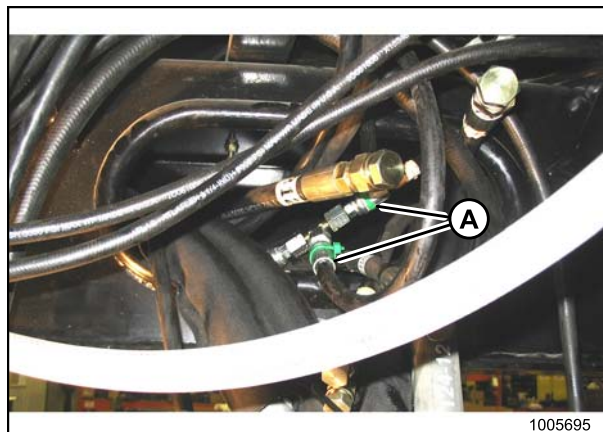


Figure 3.60: Hose Routing

6. Locate two hoses (white ties) inside frame and hose (MD #111324) with existing tee fitting (white tie) (A).
7. Remove caps, make connections, and tighten fittings.
8. Position hoses into frame.

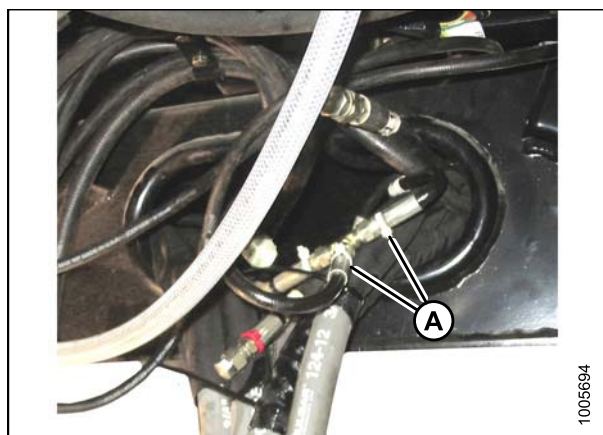


Figure 3.61: Hose Routing

9. Locate two hoses (red ties) (A) inside frame.
10. Route right-hand hose behind bundle.
11. Remove caps, make connection, and tighten fitting.
12. Position hoses into frame.

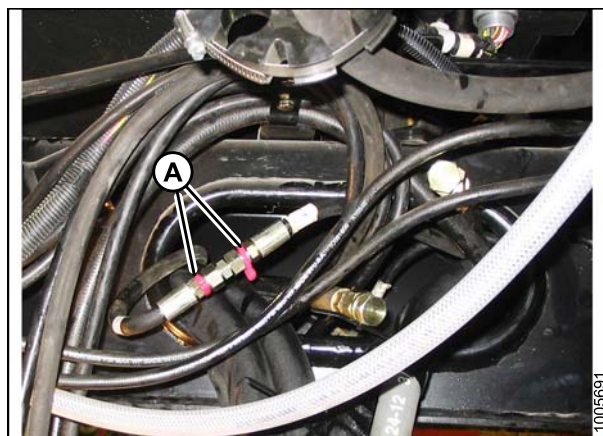


Figure 3.62: Hose Routing

ASSEMBLING THE WINDROWER

13. Retrieve long hose (MD #119328 [white tie]) (A) and route through the hole in the left-hand frame.

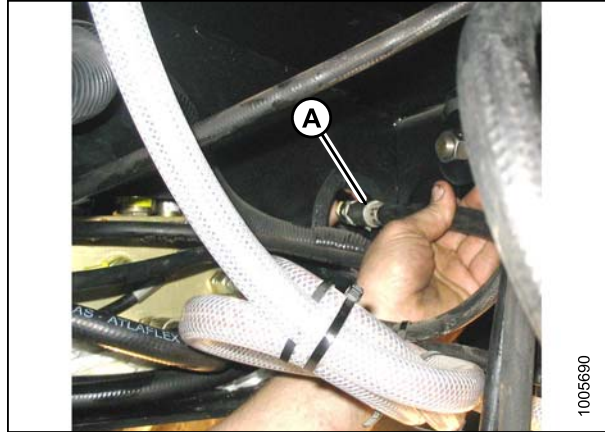


Figure 3.63: Hose Routing

14. Remove caps on hose (A) and valve block fitting (white tie) (B), and make connection. Tighten fitting.

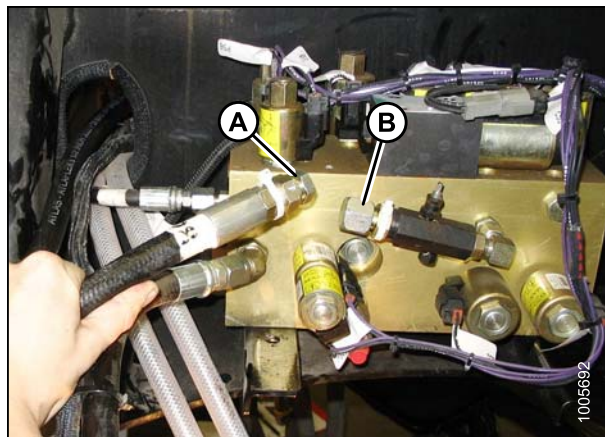


Figure 3.64: Valve Block

15. Remove the cap from the fitting with yellow tie (A) on the valve block from the inboard side of the frame.

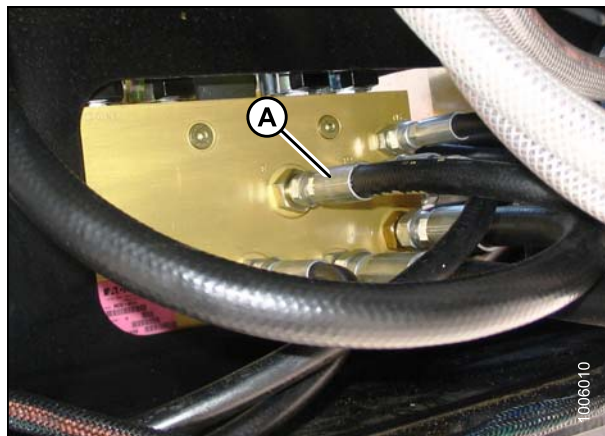


Figure 3.65: Valve Block

ASSEMBLING THE WINDROWER

16. Loosen bolts (A) and move valve block (B) to improve access through the hole in the frame in order to insert wrenches and tighten fittings.
17. Retrieve matching hose and make connection on valve block. Tighten fitting.
18. Reposition valve block and retighten bolts.

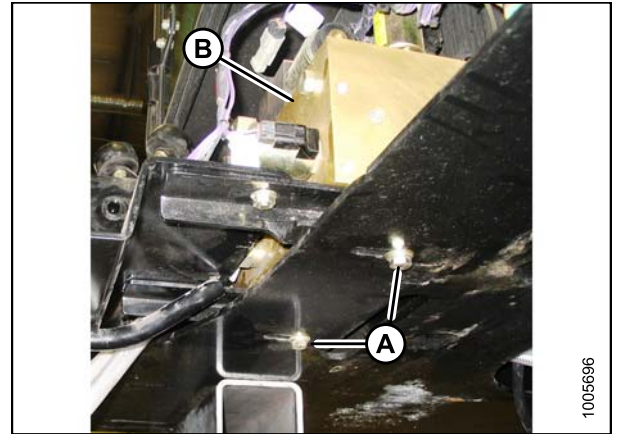


Figure 3.66: Valve Block

19. Connect drive hoses to pump as follows:
 - a. Remove caps and attach hose with yellow tie (A) and hose with green tie (B) to matching fittings on top of pump. Tighten fittings.
 - b. Remove caps and attach hose with red tie (A) and hose with white tie (B) to matching fittings on bottom of pump. Tighten fittings.

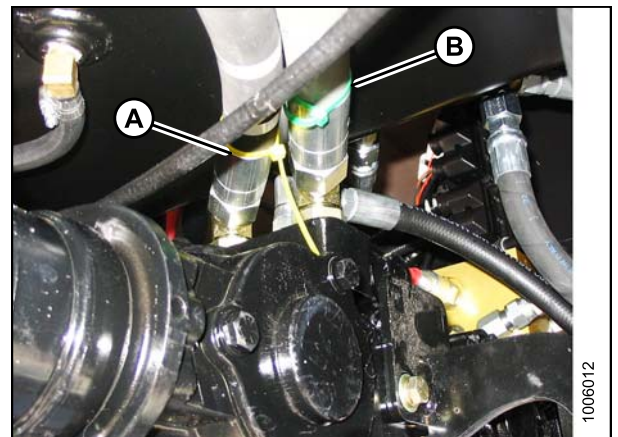


Figure 3.67: Top of Pump

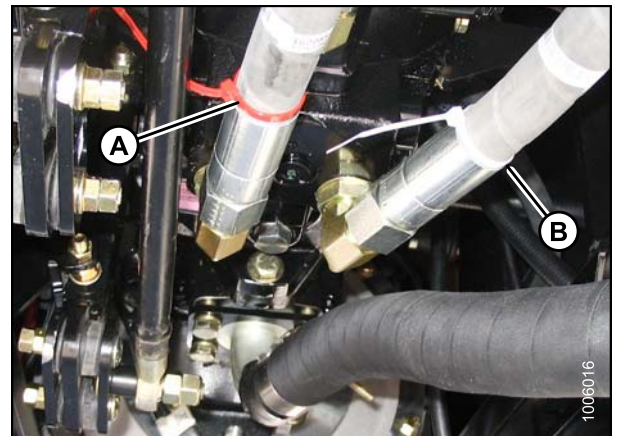


Figure 3.68: Bottom of Pump

ASSEMBLING THE WINDROWER

20. Retrieve the two motor case drain hoses (MD #111312) at the front frame and the 7/8 in. tee fitting (B) on the hose from the pump.
21. Remove the caps (A) from the hoses only.

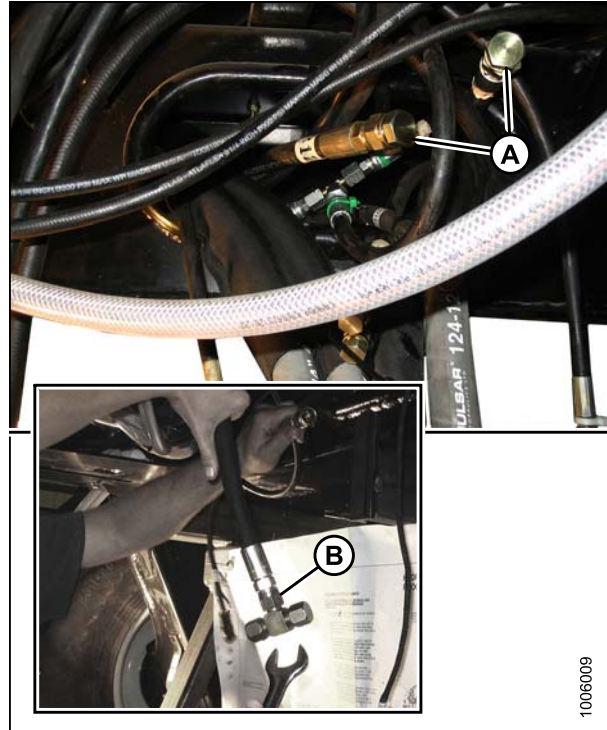


Figure 3.69: Motor Case Drain Hoses

22. Remove one cap from tee fitting (A) and quickly attach hose to minimize oil spillage.
23. Remove second cap from tee fitting (A) and quickly connect other hose.
24. Tighten fittings.

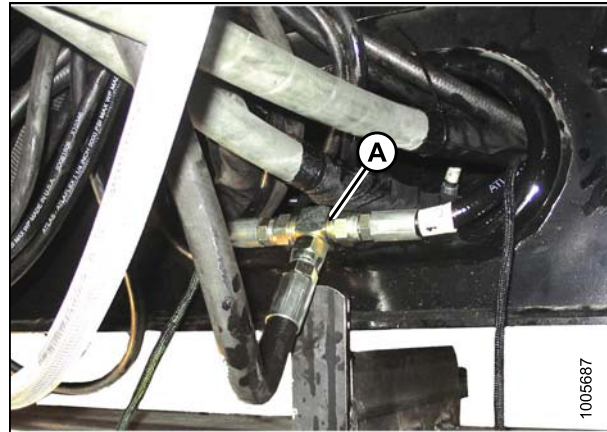


Figure 3.70: Tee Fitting

ASSEMBLING THE WINDROWER

25. Bundle traction drive hoses and secure with two plastic cable ties (A) at 7-3/4 in. (200 mm) intervals from the frame opening.
26. Bundle smaller hoses and secure with two plastic cable ties (B) at 6 in. (150 mm) intervals from the frame opening.

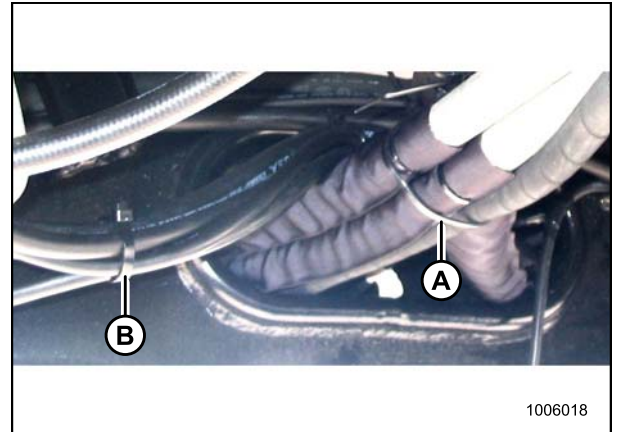


Figure 3.71: Hose Routing

27. Position hose bundle (A) from the valve blocks on the left-hand side of the frame onto the tire.
28. Note routing of electrical harness.

IMPORTANT:

The electrical harness must be routed on the topside of the hose bundle and on the outside of the hose support to prevent chafing of the electrical wires when the windrower is operating with a header.

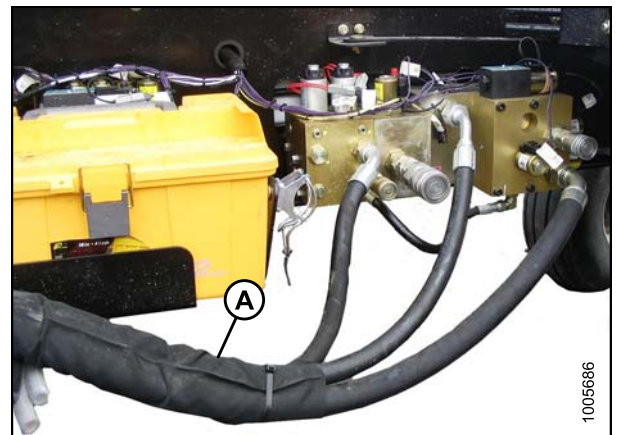


Figure 3.72: Hose Routing

ASSEMBLING THE WINDROWER

29. Undo strap (A), cut plastic cable ties (B), and move harness (C) away from the hose bundle.

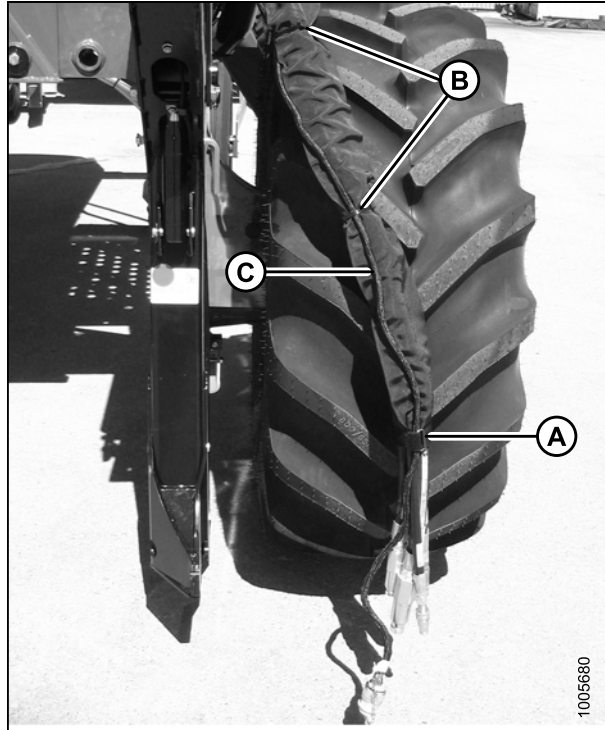


Figure 3.73: Electric Harness and Hose Bundle

30. Route the hose bundle (A) through the hose support and lay on the tire.
31. Route the harness along the outside of the hose support and along the hose bundle to the hose ends.



Figure 3.74: Hose Routing

ASSEMBLING THE WINDROWER

32. Attach harness (A) to hose support with hose clip (B).

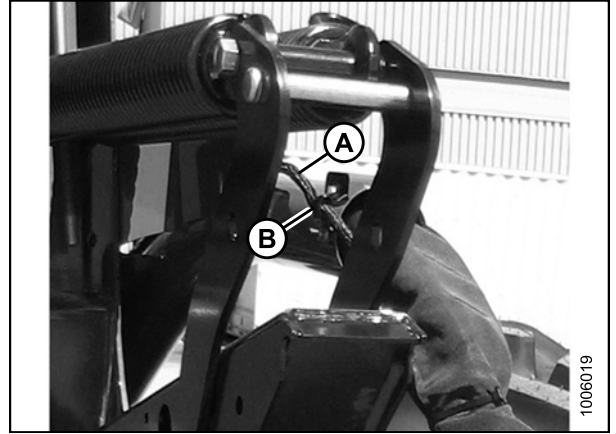


Figure 3.75: Hose Support

33. Secure harness (C) to hose bundle with strap (A) and new plastic cable ties (B). Ensure harness is clear of pinch and friction points.

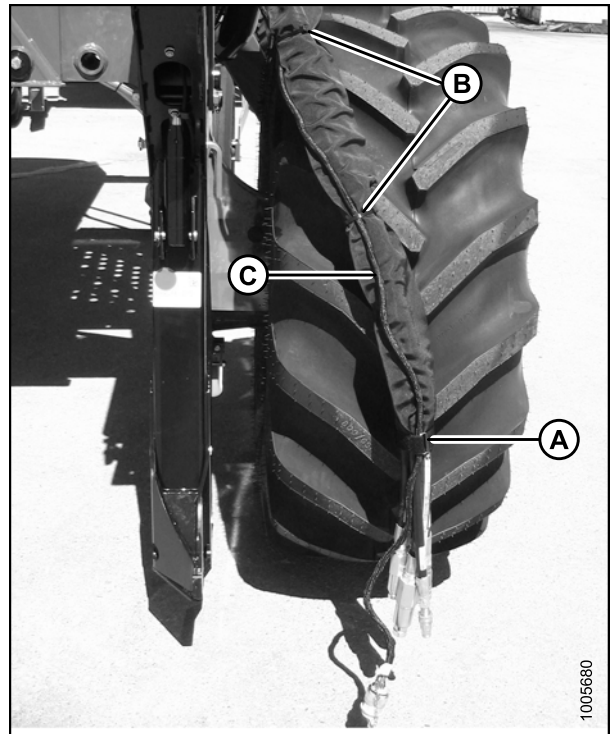


Figure 3.76: Electric Harness and Hose Bundle

ASSEMBLING THE WINDROWER

34. Disengage and rotate hook (A) to fully up position.
35. Position hose bundle (B) over hose support and under hook.

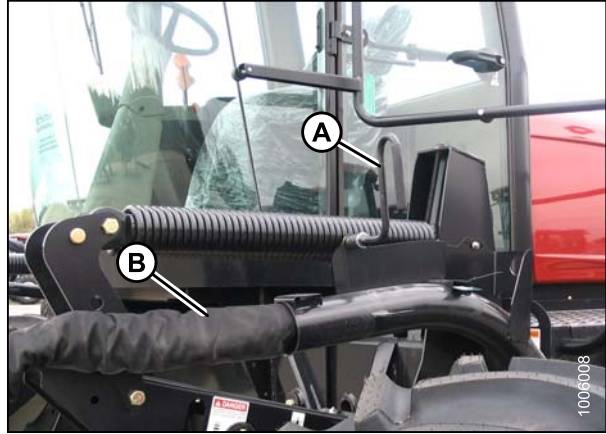


Figure 3.77: Hook Positioning

36. Lower hook (A) and engage in bracket in down position.



Figure 3.78: Hook Positioning

37. Attach the reel hose support tube to the right-hand reel leg with two 3/8 in. x 1.0 in. carriage bolts (A) and nuts.

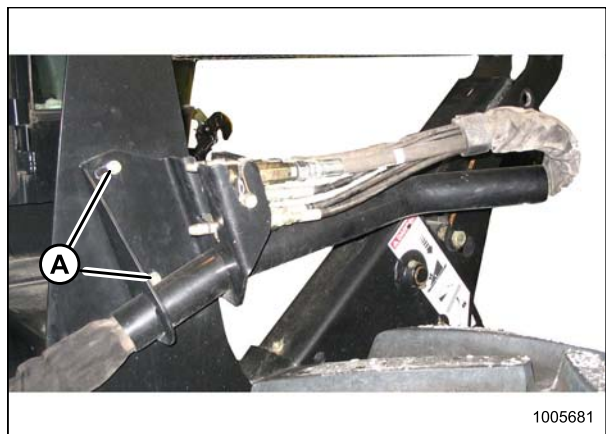


Figure 3.79: Reel Hose Support

3.7 Removing Battery Shipping Shield

NOTE:

This procedure does not apply to the M105.

1. Loosen nut (A) on the battery clamp.
2. Slide shield (B) out from under the battery and discard.
3. Tighten nut (A) on the battery clamp.

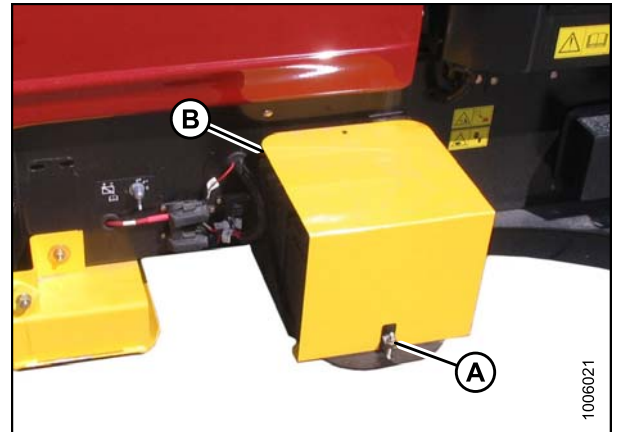


Figure 3.80: Battery Shipping Shield

4. Remove one of the two bolts (A) and nuts, and loosen the other.

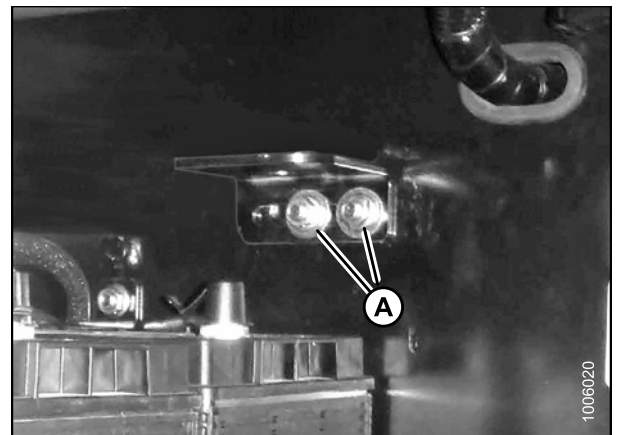


Figure 3.81: Bracket Shipping Position

5. Rotate angle (A) 180°, align holes, and reinstall the bolt (B) and nut. Leave bolts loose.

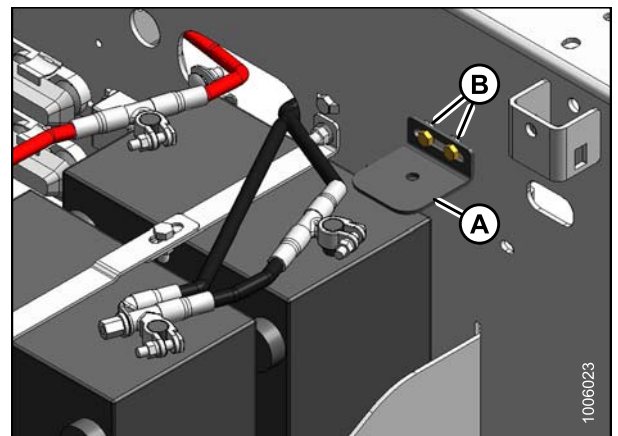


Figure 3.82: Bracket Repositioned

3.8 Unpacking Ignition Keys

1. Remove wing nut (A) from fuse box cover (B) and remove cover.

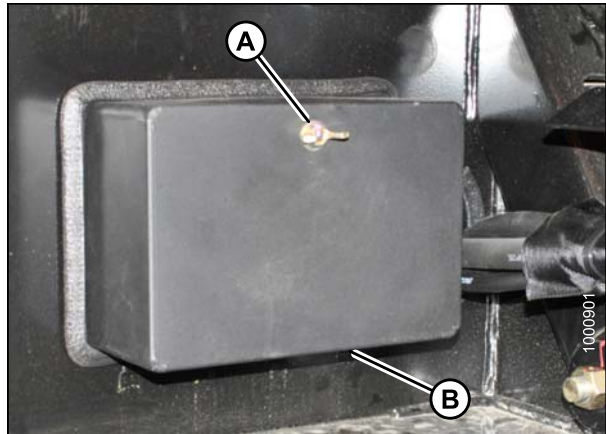


Figure 3.83: Fuse Box

2. Remove tape and keys (A) from inside the cover.
3. Unlock cab doors and place keys on console.
4. Close cab doors.
5. Install fuse box cover (B) and secure with wing nut.

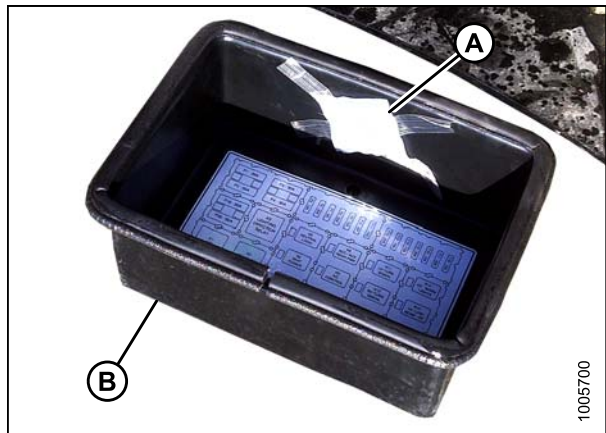


Figure 3.84: Fuse Cover

3.9 Installing Platforms

NOTE:

The M105 has a left-hand platform only, whereas the M155 and M205 have left- and right-hand platforms. The procedure for left-hand installation is shown, right-hand installation is similar.

1. Remove the two 1/2 in. x 3/4 in. bolts (A) securing the rails to the shipping beam, and remove the rails. Retain hardware.
2. Remove the shipping brackets from the platform assembly. Retain hardware.

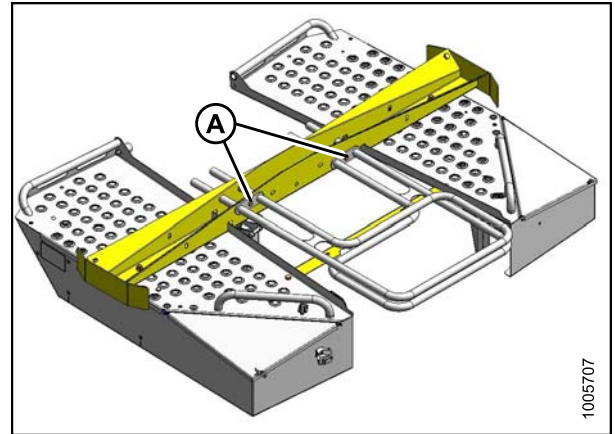


Figure 3.85: M155 and M205 Platform Shipping Assembly

3. Attach one end of a sling to the platform and the other end to a lifting device.

⚠ DANGER

To avoid injury or death from fall or swinging of raised load, keep all bystanders clear when lifting.

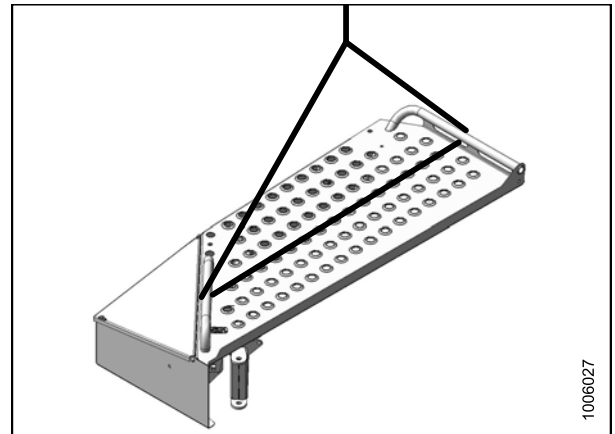


Figure 3.86: Left-Hand Platform

4. Position the platform against the windrower frame.

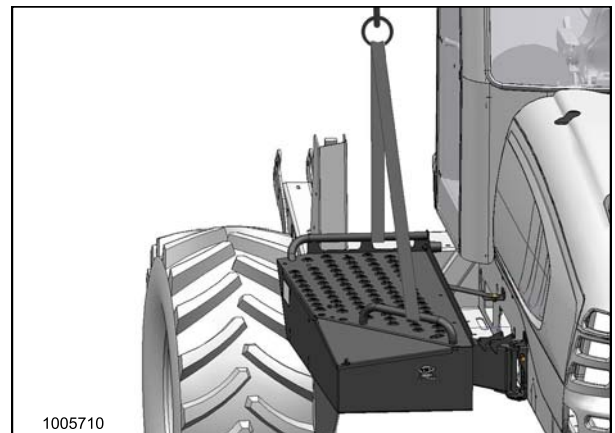


Figure 3.87: Left-Hand Platform

ASSEMBLING THE WINDROWER

5. Attach the main beam of the platform to the side frame using three 1/2 in. x 1-1/4 in. long carriage bolts (A). Ensure the bolt heads face inboard, and tighten just enough to permit adjustment.

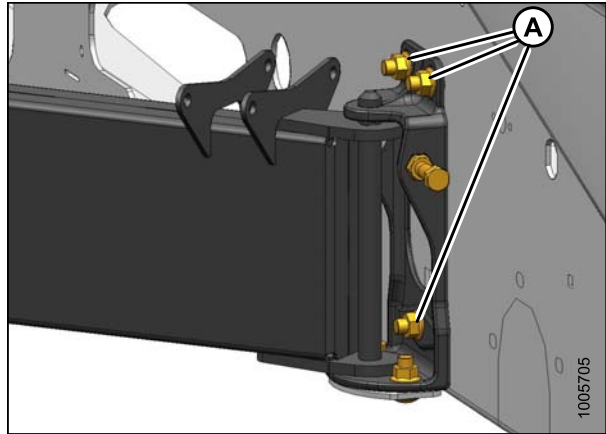


Figure 3.88: Left-Hand Platform – Main Beam

6. Attach the steering arm to the frame with two 3/8 in. x 3/4 in. long carriage bolts and nuts (A). Ensure the bolt heads face inboard, and tighten bolts.
7. Remove sling.

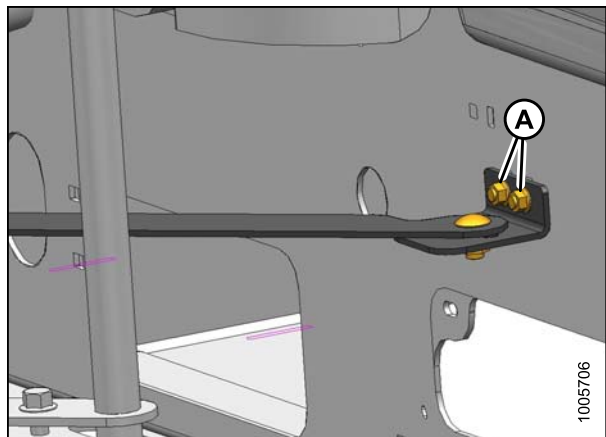


Figure 3.89: Left-Hand Platform – Steering Arm

8. Attach the railings to the platform with 1/2 in. x 3/4 in. locking bolts (A) provided. Tighten bolts to 75 ft-lbf (102 N·m).

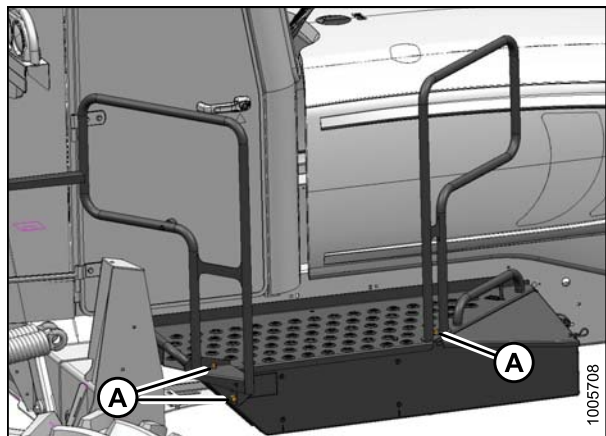


Figure 3.90: Left-Hand Platform – Railings

ASSEMBLING THE WINDROWER

9. Slowly close the platform and check that the vertical rail tubes are parallel with the cab posts when viewing from the rear.

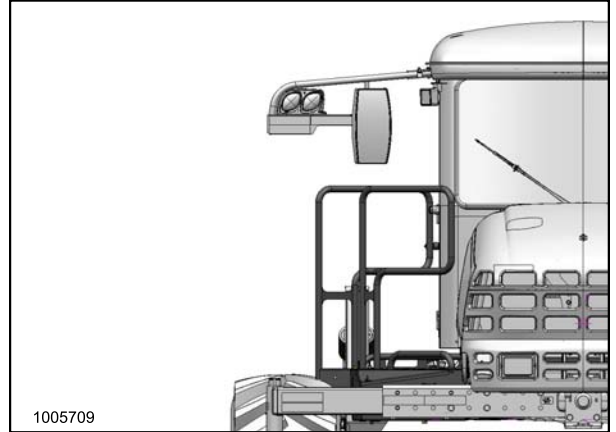


Figure 3.91: Left-Hand Platform

10. Laterally adjust the king pin mounting (A) as required.

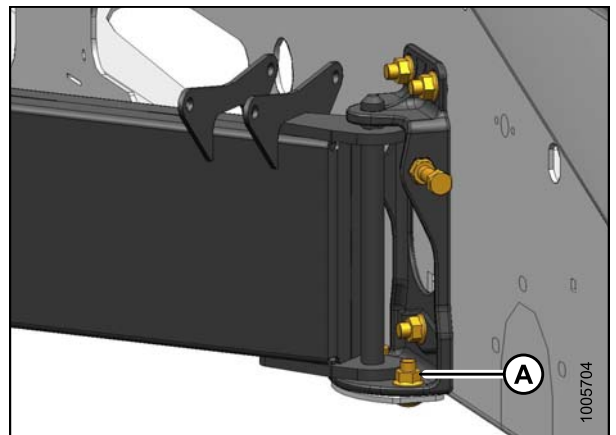


Figure 3.92: Left-Hand Platform – Main Beam

11. Ensure the rubber bumper (A) is contacting the frame.

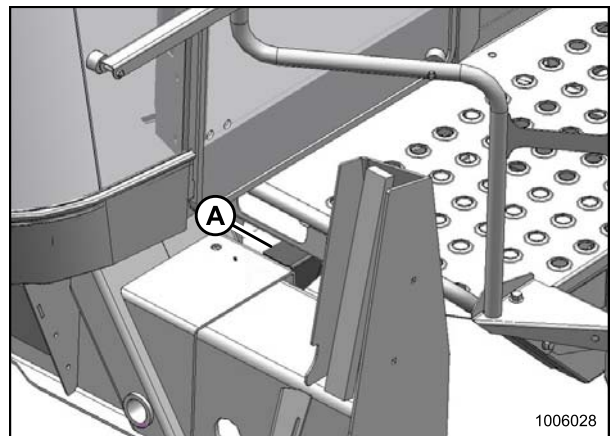


Figure 3.93: Left-Hand Platform – Rubber Bumper

ASSEMBLING THE WINDROWER

12. Ensure the front of the platform is contacting the guide (A).

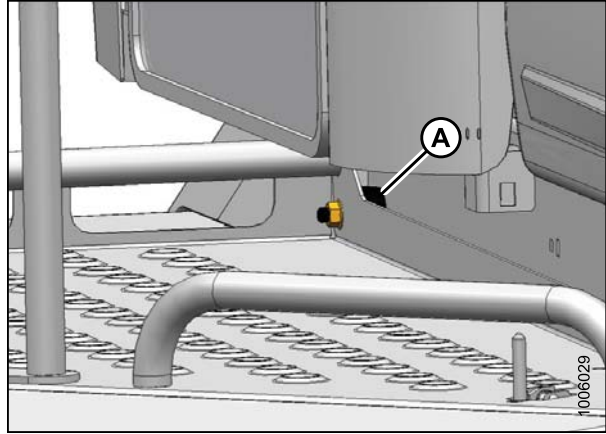


Figure 3.94: Left-Hand Platform – Guide

13. Adjust the platform horizontally with the 1/2 in. x 2-1/4 in. bolt (A) as required.

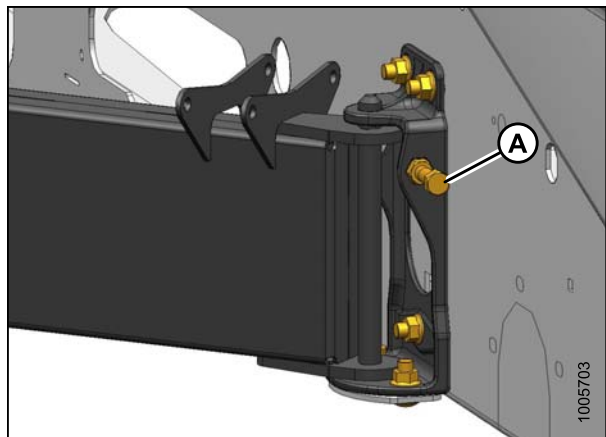


Figure 3.95: Left-Hand Platform – Main Beam

14. Relocate the steering arm (A) into either of the other holes on the bracket (B) if major adjustment is required.
15. Tighten the three main beam attachment bolts to 80 ft-lbf (108 N·m).
16. **M155 and M205 only:** Repeat procedure to install the right-hand platform.

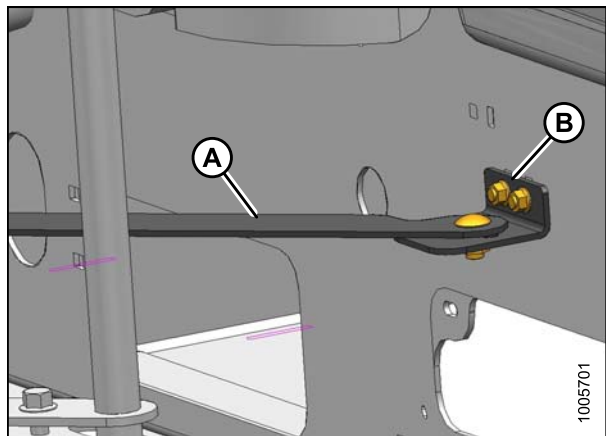


Figure 3.96: Left-Hand Platform – Steering Arm

3.10 Installing Steps

NOTE:

The M105 has a left-hand platform only, whereas the M155 and M205 have left- and right-hand platforms. Procedure for left-hand installation shown—right-hand installation similar.

1. Remove the two existing upper bolts (A).
2. Ensure the two lower bolts (B) are not threaded in fully.

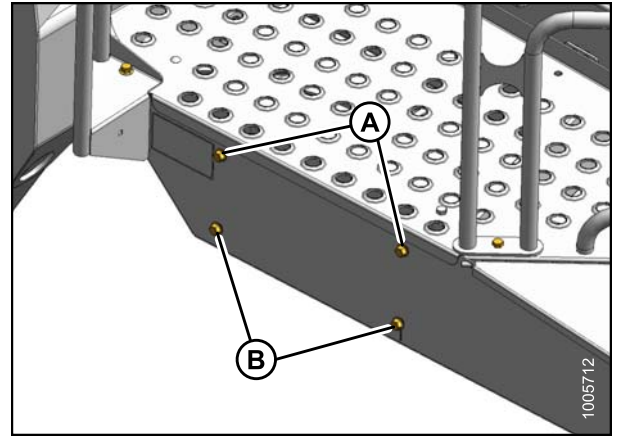


Figure 3.97: Left-Hand Platform

3. Hang step assembly on lower bolts (B) (back off bolts if necessary).
4. Install two bolts (A) in upper holes of step and platform.
5. Torque all bolts to 15 ft-lbf (20 N·m).
6. **M155 and M205 only:** Repeat for opposite step assembly.

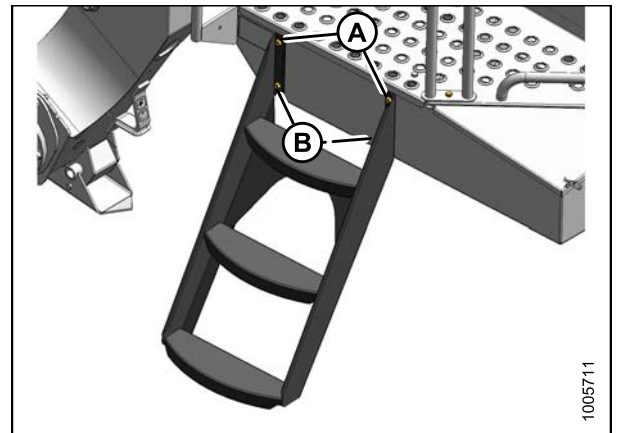


Figure 3.98: Left-Hand Steps Installed

3.11 Installing Exhaust Stack

1. Open the engine compartment hood.
2. Retrieve the exhaust stack (A) and clamp (B) (unpacked in [2.6 Removing Hand Rails and Exhaust Stack, page 18](#)).
3. Loosen the clamp (B) on the exhaust stack (A).

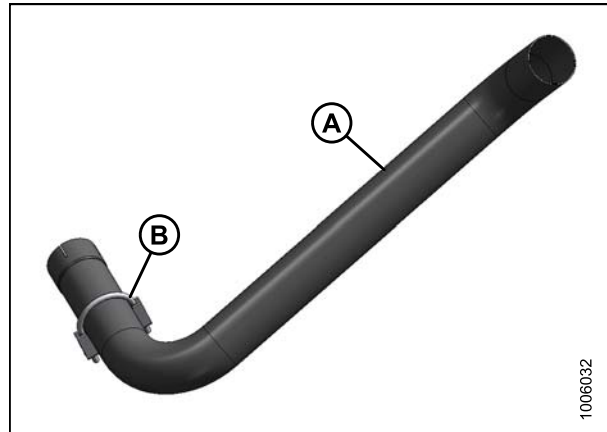


Figure 3.99: Exhaust Stack

4. Remove the covering from the muffler (A), and loosen the clamp (B) on the muffler.

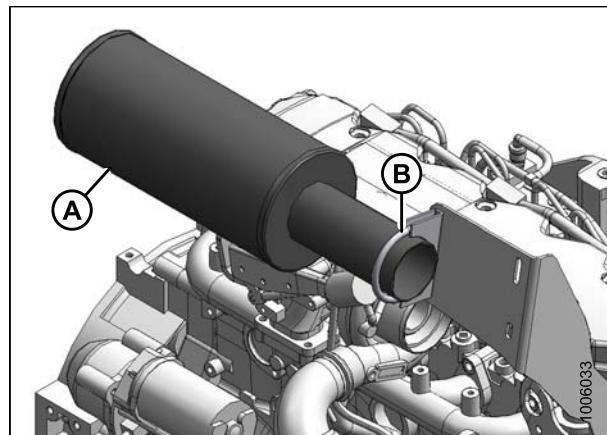


Figure 3.100: Muffler

5. Position the stack (A) into the slot in the exhaust shroud (B), and connect the stack to the muffler.

NOTE:

If the shroud (B) interferes with the stack (A), loosen the wing nut (C) on the shroud and move the shroud so the stack can be installed.

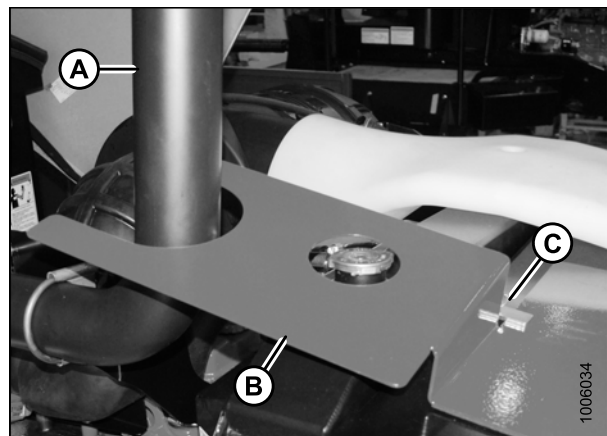


Figure 3.101: Exhaust Shroud

ASSEMBLING THE WINDROWER

6. Tighten both clamps (A) just enough to permit the stack (B) to move.

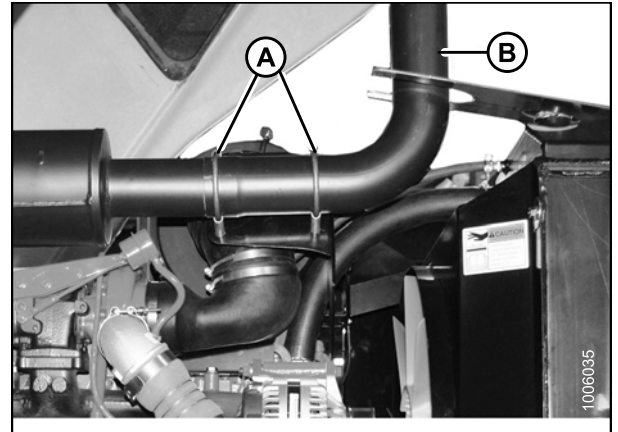


Figure 3.102: Exhaust Stack under Hood

7. Close the hood slowly so the stack (A) enters the hole (B) in the hood. Adjust the position of the stack as required to clear the hole in the hood.

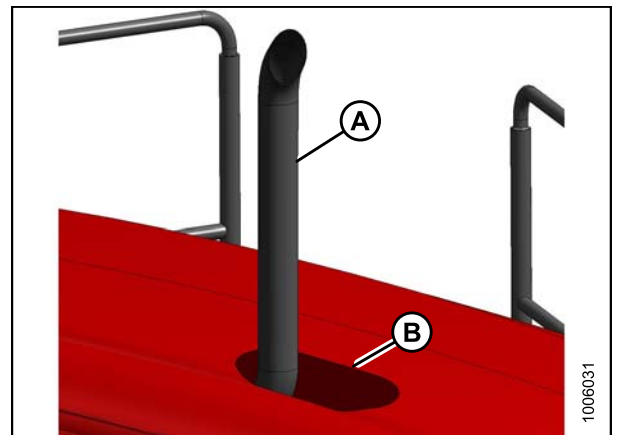


Figure 3.103: Exhaust Stack Installed

8. Raise the hood.
9. Tighten clamps (A).
10. Reposition shroud (B) and tighten wing nut.

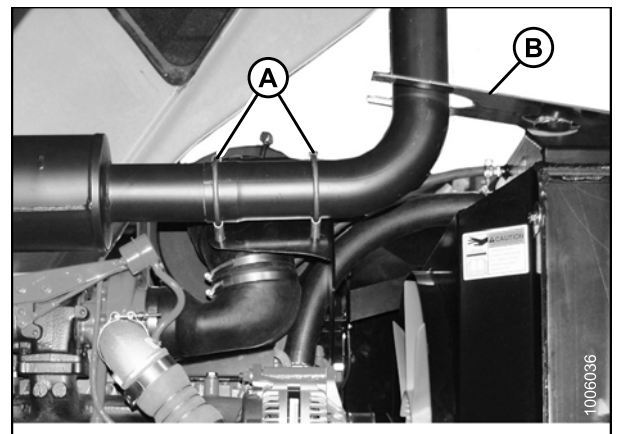


Figure 3.104: Exhaust Stack under Hood

3.12 Positioning Light and Mirror Assemblies

1. Remove the nut and bolt (A) securing the light and mirror assembly in the shipping position.
2. Swing the light and mirror assembly (B) forwards and upwards.

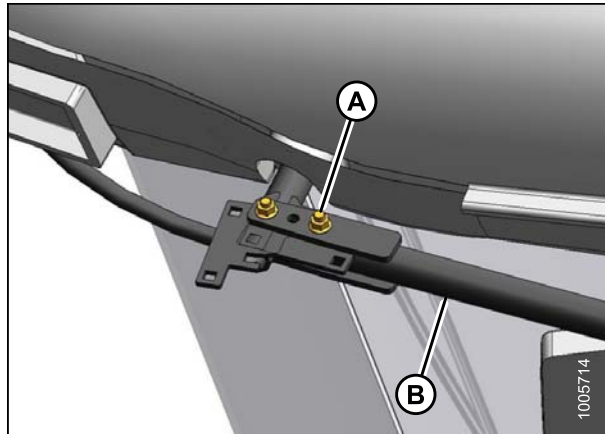


Figure 3.105: Light and Mirror Assembly in Shipping Position

3. Reinstall the bolt (A) and nut in other hole.
4. Repeat for opposite mirror assembly.

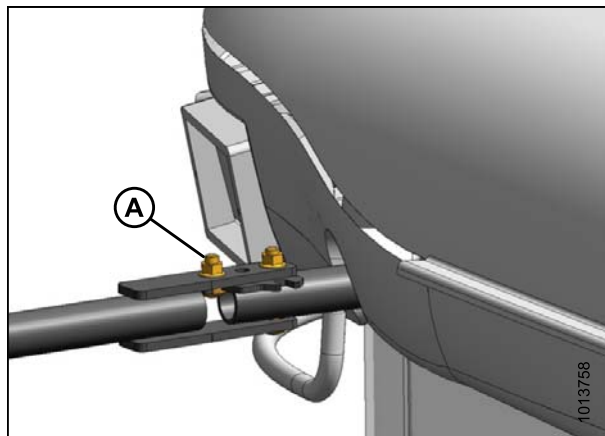


Figure 3.106: Light and Mirror Assembly in Working Position

3.13 Connecting Batteries

The procedure for connecting batteries differs depending on the windrower model. Refer to [3.13.1 Connecting Batteries on an M205 or M155, page 69](#) or [3.13.2 Connecting Batteries on an M105, page 70](#).

3.13.1 Connecting Batteries on an M205 or M155

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Open the right-hand (cab-forward) maintenance platform.
2. Ensure the battery switch (A) is turned to the POWER OFF position (the battery switch is located on the right-hand frame rail beside the batteries).
3. Remove the cable ties securing the battery cables to the battery clamps.

IMPORTANT:

Batteries are negative grounded. Always connect red starter cables to the positive (+) terminals of the batteries and black ground cables to the negative (-) terminals of the batteries. Reversed polarity in the batteries or alternator may result in permanent damage to the electrical system.

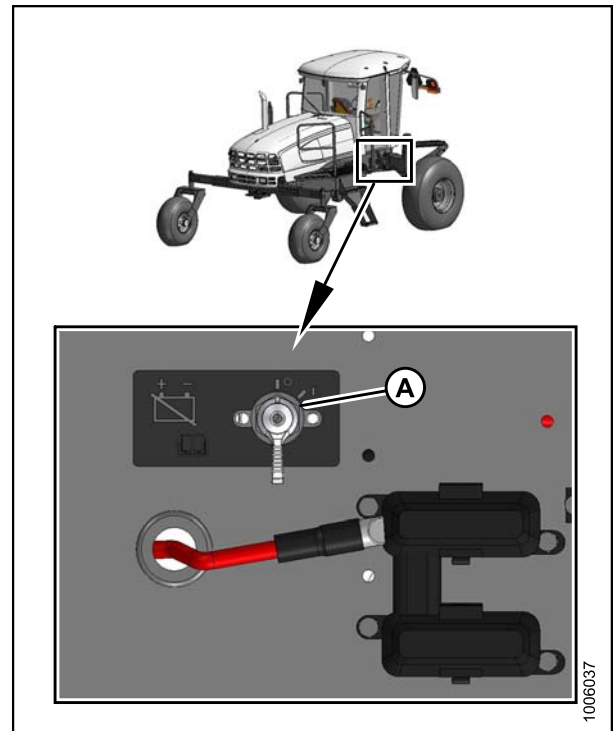


Figure 3.107: Battery Switch

4. Remove the plastic caps from the battery posts.
5. Attach the red positive (+) cable terminals to the positive posts (A) on the batteries and tighten clamps. Reposition plastic covers onto clamps.
6. Attach the black negative (-) cable terminals to the negative posts (B) on the batteries and tighten clamps. Reposition plastic covers onto clamps.
7. Turn the battery switch to the POWER ON position.
8. Move the right-hand (cab-forward) maintenance platform forwards to the closed position.

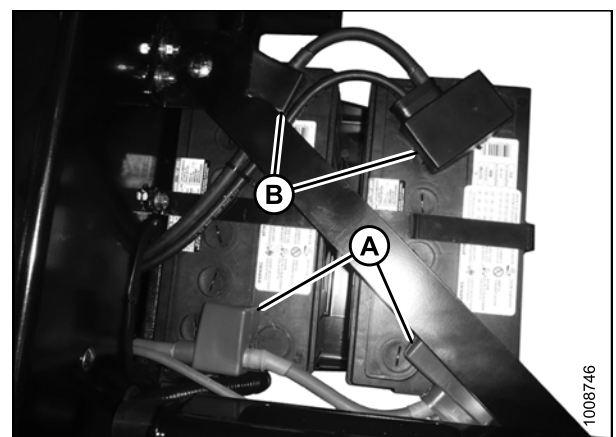


Figure 3.108: Batteries

3.13.2 Connecting Batteries on an M105

⚠ DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Open the engine compartment hood to the highest position. For instructions, refer to the windrower operator's manual or the windrower technical manual.
2. Ensure battery switch (A), located on the battery tray, is switched to POWER OFF position.
3. Remove the cable ties securing the battery clamps and cables to the frame.

IMPORTANT:

Batteries are negative grounded. Always connect red starter cables to the positive (+) terminals of the batteries and black ground cables to the negative (-) terminals of the batteries. Reversed polarity in the batteries or alternator may result in permanent damage to the electrical system.

NOTE:

Ensure that batteries are positioned with the positive posts (C) facing forward.

4. Remove the plastic caps from the battery posts.
5. Attach the red positive (+) cable terminals to the positive posts (A) on the batteries and tighten clamps. Reposition plastic covers onto clamps.
6. Attach the black negative (-) cable terminals to the negative posts (B) on the batteries and tighten clamps. Reposition plastic covers onto clamps.
7. Turn the battery switch to the POWER ON position.
8. Close the engine compartment hood.

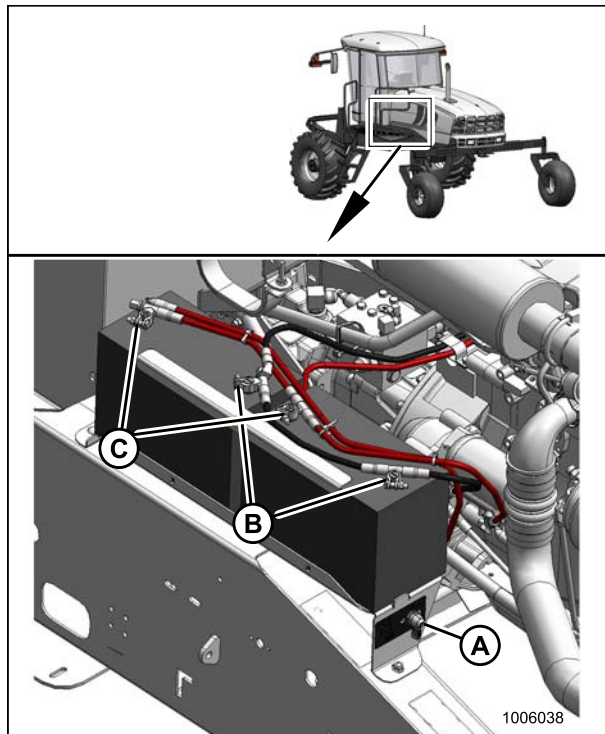


Figure 3.109: Batteries

3.14 Priming Hydraulic System

The procedure for priming the hydraulic system is different for each windrower model. Refer to the following procedures according to your specific model:

- [3.14.1 Priming Hydraulic System on an M205, page 71](#)
- [3.14.2 Priming Hydraulic System on an M155, page 72](#)
- [3.14.3 Priming Hydraulic System on an M105, page 76](#)

3.14.1 Priming Hydraulic System on an M205

1. Open the left-hand (cab-forward) platform.
2. Disconnect the brake engage solenoid plug (P44) (A) at the multifunction block on the left-hand side of the windrower.
3. Open the engine compartment hood to the highest position. For instructions, refer to the windrower operator's manual or the windrower technical manual.

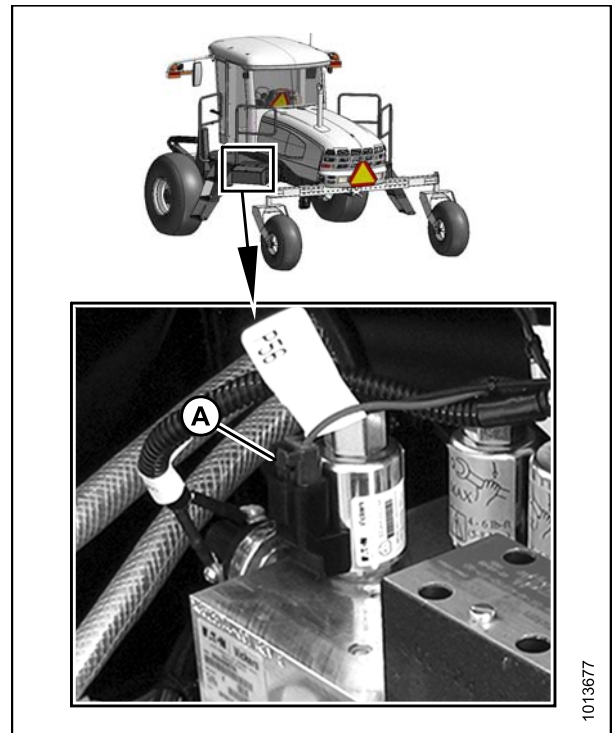


Figure 3.110: Brake Engage Solenoid

ASSEMBLING THE WINDROWER

4. Remove the hex socket screw (A) using a 4 mm hex key, and remove the engine control module (ECM) connector (B) from the engine. This will prevent the engine from starting during cranking.

CAUTION

Check to be sure all bystanders have cleared the area.

5. Prime the system by cranking the engine with the starter for 15 seconds.
6. Reinstall the ECM connector (B) using a hex socket screw (A).
7. Reconnect the brake engage solenoid plug (P44).
8. Check hydraulic oil level in reservoir (add SAE 15W-40 oil if necessary). Refer to [5.5 Checking Hydraulic Oil, page 323](#).
9. Close the left-hand (cab-forward) platform.

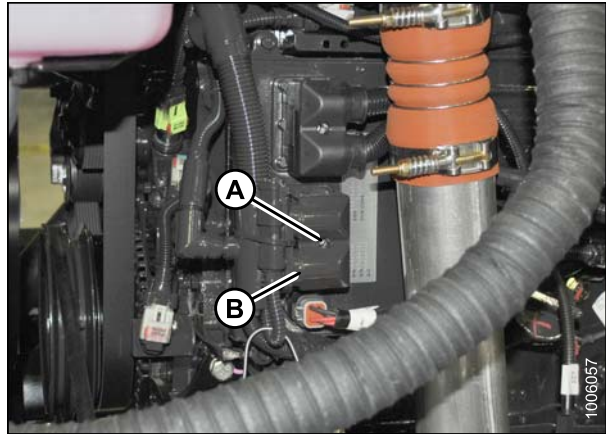


Figure 3.111: ECM Connector

3.14.2 Priming Hydraulic System on an M155

1. Remove the hydraulic oil reservoir filler cap/dipstick (A).
2. Open the engine compartment hood to the highest position. For instructions, refer to the windrower operator's manual or the windrower technical manual.

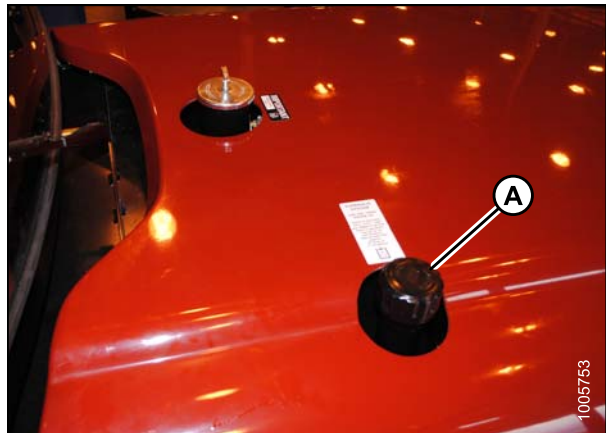


Figure 3.112: Filler Cap/Dipstick

ASSEMBLING THE WINDROWER

3. Locate plug (A) on the side of the header drive pump housing from underneath the machine.
4. Loosen plug (A) to bleed the pump housing. Retighten the plug once oil starts to run out.

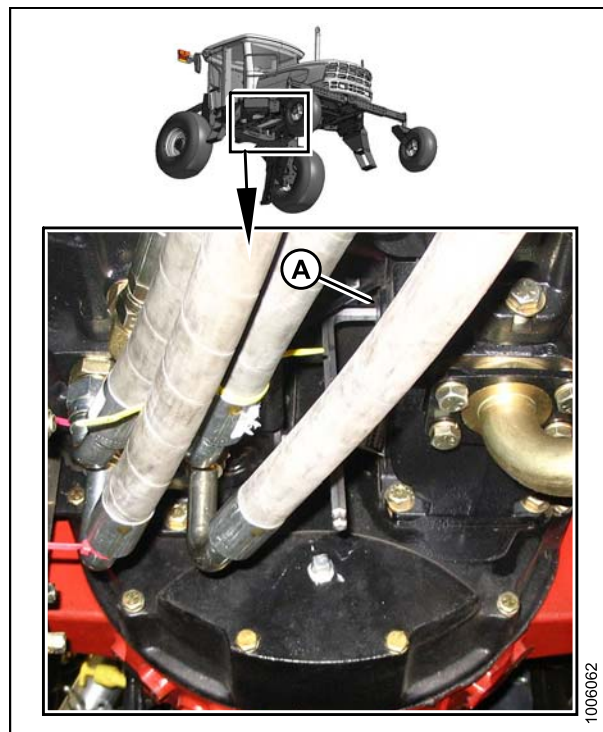


Figure 3.113: Header Drive Pump Housing

5. Locate plug (A) on the top of the header drive pump housing from above the machine.
6. Loosen plug (A) to bleed the pump housing. Retighten the plug once oil starts to run out.

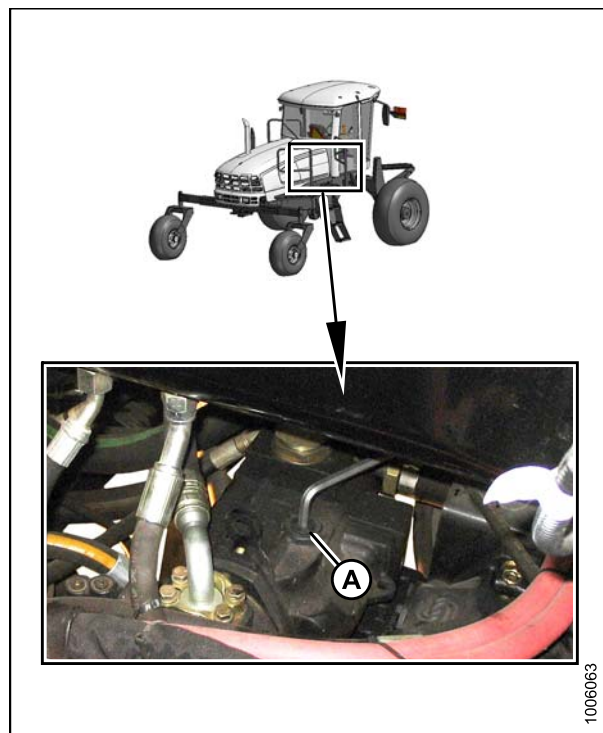


Figure 3.114: Header Drive Pump Housing

ASSEMBLING THE WINDROWER

7. Locate plug (A) on the top of the traction drive pump housing from above the machine.
8. Loosen plug (A) to bleed the pump housing. Retighten the plug once oil starts to run out.
9. Replace the hydraulic oil reservoir filler cap.

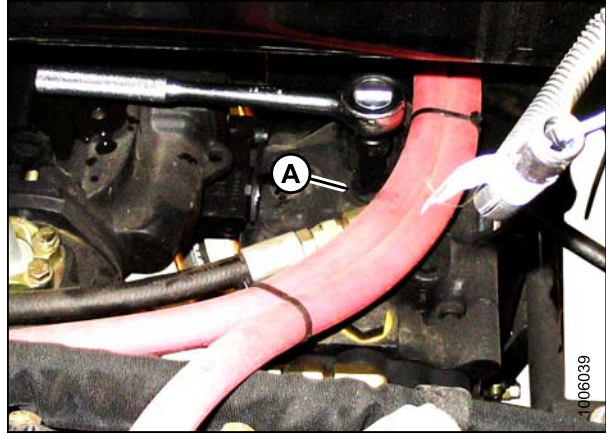


Figure 3.115: Traction Drive Pump Housing

10. Open the left-hand (cab-forward) platform.
11. Disconnect the brake engage solenoid plug (P44) (A) at the multifunction block on the left-hand side of the windrower.

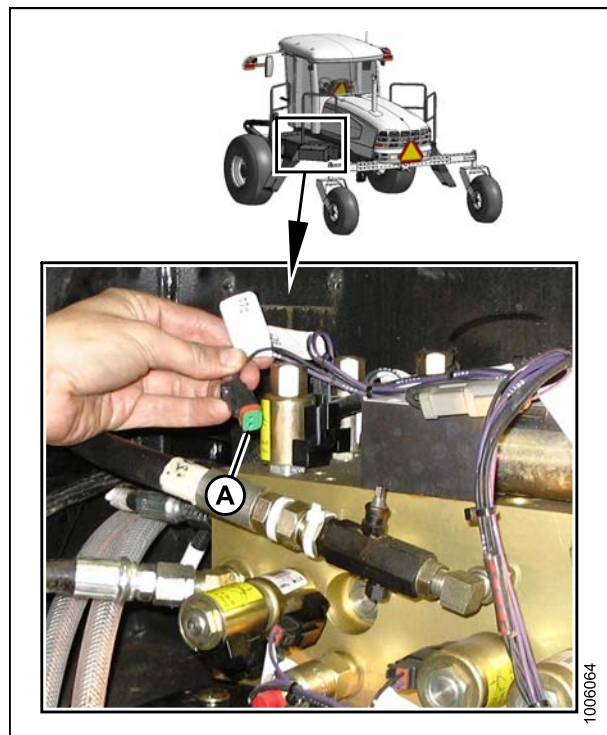


Figure 3.116: Valve Block

ASSEMBLING THE WINDROWER

12. Disconnect the electrical connection (A) at the fuel pump on the right side of the engine.

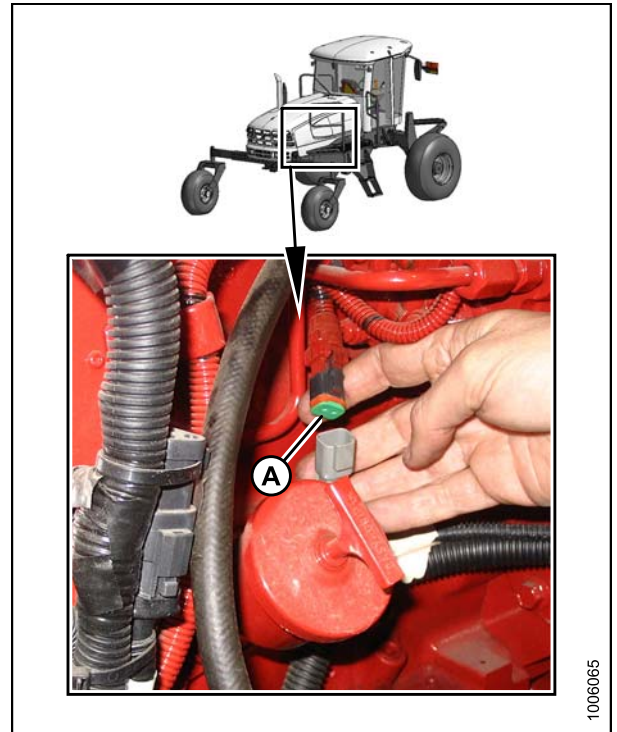


Figure 3.117: Fuel Pump Location

13. Open the maintenance platform on the right-hand (cab-forward) side.
14. Open the circuit breaker/fuse box (A), and remove the engine control module (ECM) ignition fuse (5A) (B).

CAUTION

Check to be sure all bystanders have cleared the area.

15. Prime the system by cranking the engine with the starter for 15 seconds.
16. Reconnect the electrical connection at the fuel pump and at the brake engage solenoid.
17. Reinstall ECM ignition fuse (5A) (B) and the circuit breaker/fuse box (A).
18. Close the engine compartment hood.

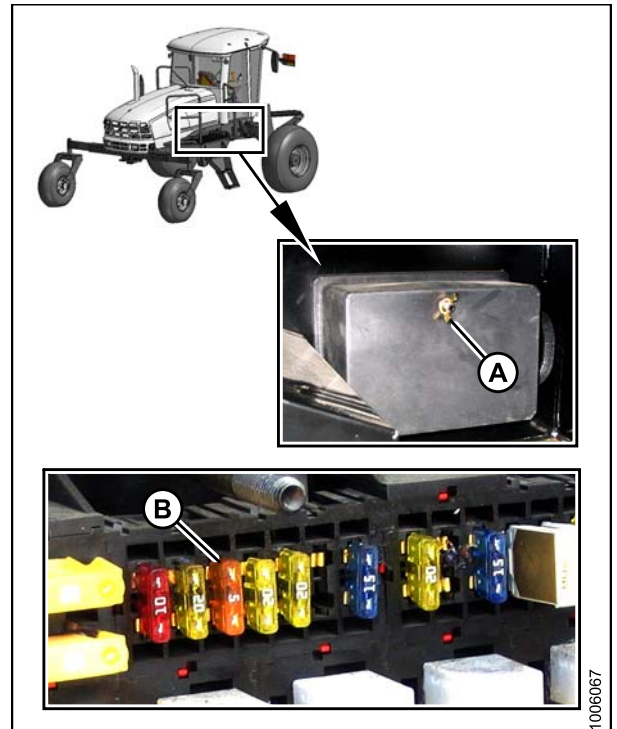


Figure 3.118: Circuit Breaker/Fuse Box

ASSEMBLING THE WINDROWER

19. Check the hydraulic oil level in the reservoir (add SAE 15W-40 oil if necessary). Refer to [5.5 Checking Hydraulic Oil, page 323](#).
20. Close the platforms.

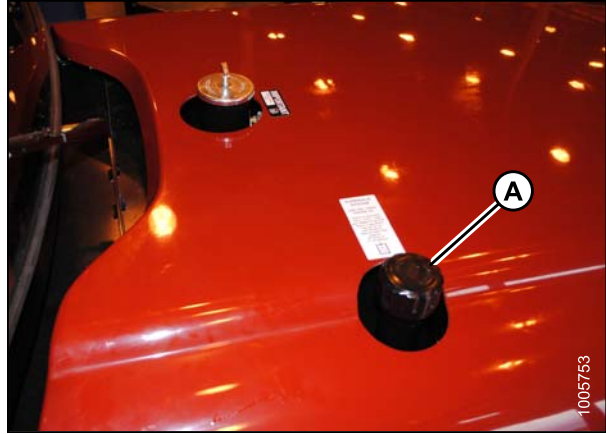


Figure 3.119: Filler Cap/Dipstick

3.14.3 Priming Hydraulic System on an M105

1. Remove the hydraulic oil reservoir filler cap/dipstick (A).
2. Open the engine compartment hood to the highest position. For instructions, refer to the windrower operator's manual or the windrower technical manual.



Figure 3.120: Filler Cap/Dipstick

ASSEMBLING THE WINDROWER

3. Locate plug (A) on the top of the header drive pump housing from above the machine.
4. Loosen plug (A) to bleed the pump housing. Retighten the plug once oil starts to run out.

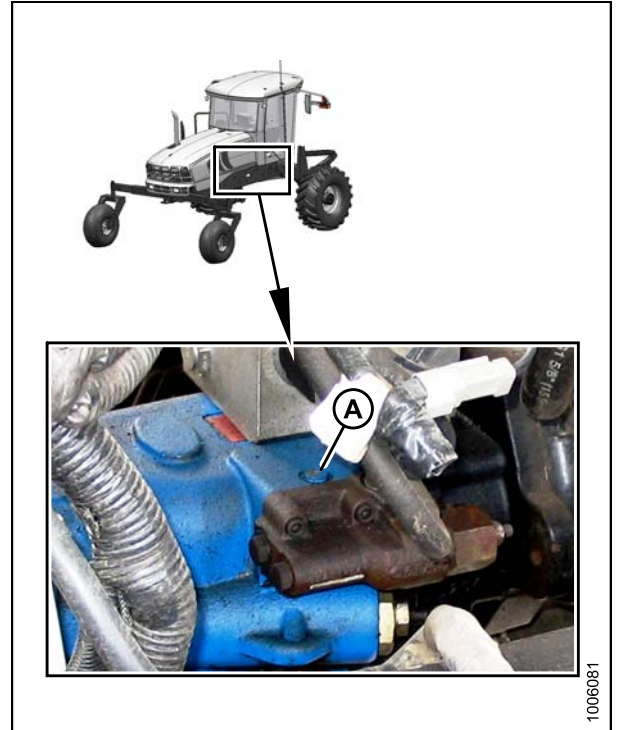


Figure 3.121: Header Drive Pump Housing

5. Locate plug (A) on the top of the traction drive pump housing from above the machine.
6. Loosen plug (A) to bleed the pump housing. Retighten the plug once oil starts to run out.
7. Replace the hydraulic oil reservoir filler cap.

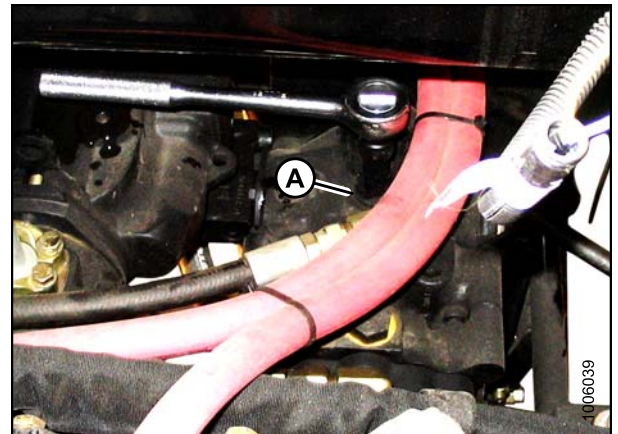


Figure 3.122: Traction Drive Pump Housing

ASSEMBLING THE WINDROWER

8. Open the left-hand (cab-forward) platform.
9. Disconnect the brake engage solenoid plug (PV3) (A) at the valve block on the left-hand side of the windrower.

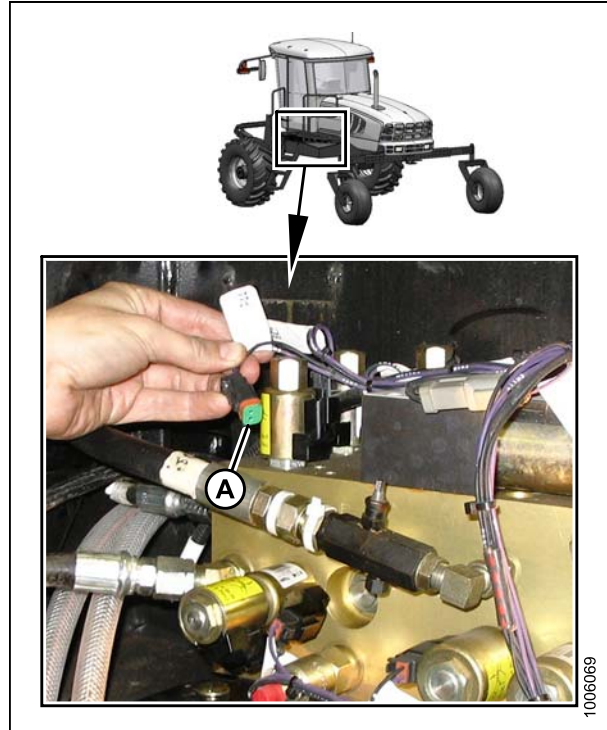


Figure 3.123: Valve Block

10. Disconnect the electrical connection (A) at the fuel pump on the right side of the engine.

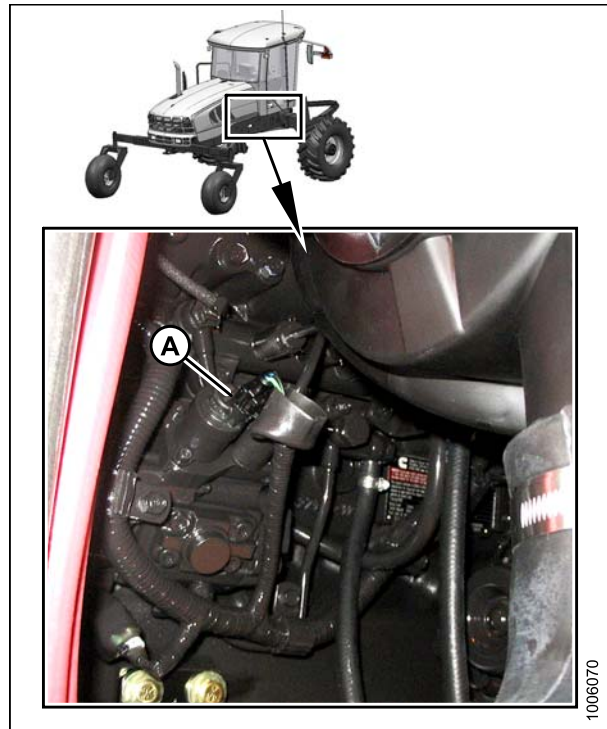


Figure 3.124: Fuel Pump Location

ASSEMBLING THE WINDROWER

11. Open the circuit breaker/fuse box (A), and remove the engine control module (ECM) ignition fuse (5A) (B).

CAUTION

Check to be sure all bystanders have cleared the area.

12. Prime the system by cranking the engine with the starter for 15 seconds.
13. Reconnect the electrical connection at the fuel pump and at the brake engage solenoid.
14. Reinstall ECM ignition fuse (5A) (B) and the circuit breaker/fuse box (A).
15. Close the engine compartment hood.

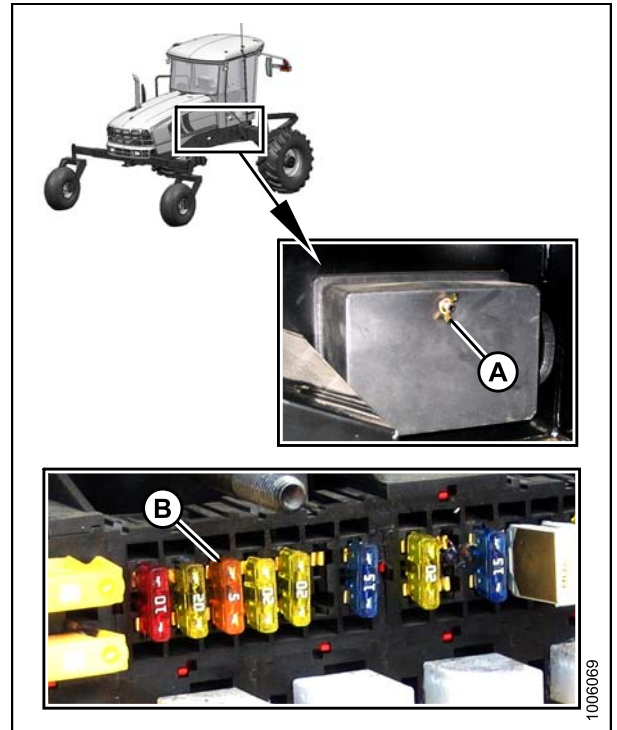


Figure 3.125: Circuit Breaker/Fuse Box

16. Check the hydraulic oil level in the reservoir (add SAE 15W-40 oil if necessary). Refer to [5.5 Checking Hydraulic Oil, page 323](#).
17. Close the left-hand (cab-forward) platform.

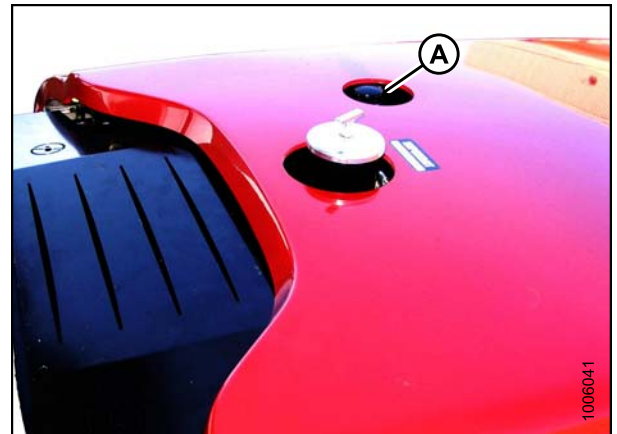


Figure 3.126: Filler Cap/Dipstick

3.15 Starting Engine

1. Ensure there is sufficient fuel for a 15 minute run.
2. **M155/M205 Only:** Ensure lock (A) is engaged at the cab-forward or engine-forward position.



Figure 3.127: Operator Console

3. Move the ground speed lever (GSL) (A) into the N-DETENT position.
4. Turn the steering wheel until it locks.
5. Push header drive switch (B) to the OFF position.

CAUTION

Check to be sure all bystanders have cleared the area.



Figure 3.128: M155/M205 Operator Console



Figure 3.129: M105 Operator Console

ASSEMBLING THE WINDROWER

Normal Start (All Engines):

6. Follow these steps when starting engine in temperatures above 60°F (16°C):

- a. Move throttle fully back to START position (A).
- b. Sound horn (C) three times.

NOTE:

For M155 and M205, horn is located on the headliner.

- c. Turn ignition key (B) to RUN position.

NOTE:

A single loud tone will sound, engine warning lights will illuminate, and the cab display module will display "HEADER DISENGAGED" and "IN PARK".

WARNING

If starter engages with steering wheel unlocked, ground speed lever out of NEUTRAL, or header clutch engaged, do NOT start engine. Refer to the technical manual.

- d. Turn ignition key (B) to START position until engine starts and then release the key. The tone will cease and warning lights will go out.

NOTE:

When starting engine in temperatures below 40°F (5°C), engine will cycle through a period when it appears to labour during engine warm up. The throttle is nonresponsive while engine is in warm up mode. Warm up mode lasts between 30 seconds and 3 minutes depending on the temperature. The throttle will become active after the engine has stabilized and is idling normally.

IMPORTANT:

Do NOT operate engine above 1500 rpm until engine temperature gauge is above 100°F (40°C).

IMPORTANT:

- Do NOT operate starter for longer than 15 seconds at a time.
- If engine does NOT start, wait at least two minutes before trying again.
- After the third 15 second crank attempt, allow the starter motor to cool for 10 minutes before further cranking attempts.
- If engine still does NOT start, refer to Table [3.1 Troubleshooting, page 82](#).



Figure 3.130: M155/M205 Operator Console

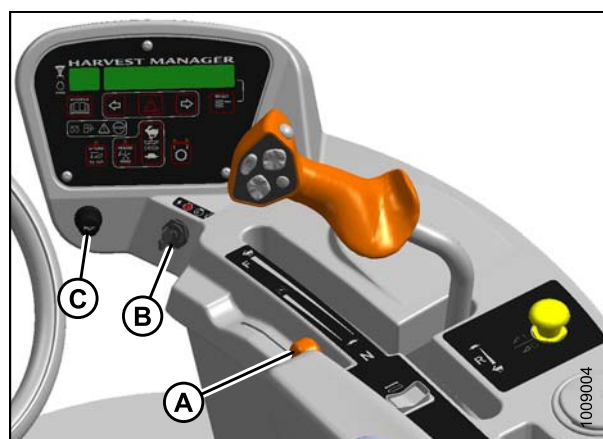


Figure 3.131: M105 Operator Console

ASSEMBLING THE WINDROWER

Table 3.1 Troubleshooting

Problem	Solution
Controls not in NEUTRAL	<ul style="list-style-type: none"> • Move GSL to NEUTRAL • Move steering wheel to locked position • Disengage header clutch
Operator's station not locked	<ul style="list-style-type: none"> • Adjust position of operator's station • Ensure lock is engaged
Neutral interlock misadjusted	<ul style="list-style-type: none"> • Refer to the windrower technical manual
No fuel to engine	<ul style="list-style-type: none"> • Fill empty fuel tank • Replace clogged filter
Old fuel in tank	<ul style="list-style-type: none"> • Drain tank • Refill with fresh fuel
Water, dirt, or air in fuel system	<ul style="list-style-type: none"> • Drain, flush, fill, and prime system
Improper type of fuel	<ul style="list-style-type: none"> • Use proper fuel for operating conditions
Crankcase oil too heavy	<ul style="list-style-type: none"> • Use recommended oil
Low battery output	<ul style="list-style-type: none"> • Test the battery • Check battery electrolyte level
Poor battery connection	<ul style="list-style-type: none"> • Clean and tighten loose connections
Faulty starter	<ul style="list-style-type: none"> • Refer to the windrower technical manual
Wiring shorted, circuit breaker open	<ul style="list-style-type: none"> • Check continuity of wiring and breaker (manually reset)
Faulty injectors	<ul style="list-style-type: none"> • Refer to the windrower technical manual

3.16 Checking Traction Drive

CAUTION

Check to be sure all bystanders have cleared the area.

1. Move the ground speed lever (GSL) (A) out of N-DETENT and slowly move the GSL forwards. Ensure the wheels are rotating in the forward direction and at the same speed.
2. Turn the steering wheel and observe the motion of the drive wheels. Ensure the wheels rotate at different speeds with the slower rotating wheel on the same side of the machine that the steering wheel is turned towards.
3. Turn the steering wheel in the opposite direction and ensure the slower rotating wheel is on the same side of the machine that the steering wheel is turned towards.
4. Move the GSL backwards into reverse. Ensure the wheels are rotating in the reverse direction and at the same speed.
5. Move the GSL forwards into N-DETENT and shut down the engine.



Figure 3.132: M155/M205 Operator Console



Figure 3.133: M105 Operator Console

3.17 Removing Windrower from Stand

The procedure for removing the windrower from the support stand differs depending on whether you are using a factory-built stand or a field-constructed stand. Refer to the following procedures according to for your specific stand:

- [3.17.1 Removing Windrower from Factory Stand, page 84](#)
- [3.17.2 Removing Windrower from Field Stand, page 85](#)

3.17.1 Removing Windrower from Factory Stand

1. Move valve handle (A) upwards to slightly raise the windrower and the take load off the lift locks.

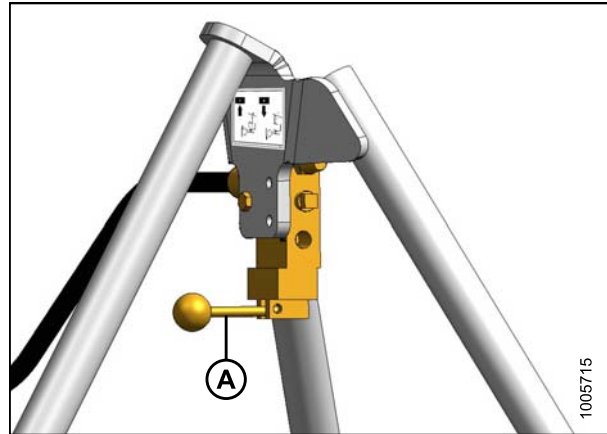


Figure 3.134: Air Control Valve Tripod

2. Release the lift lock mechanisms (three places) and turn keeper to keep the lock in the released position.
3. Move the valve handle downwards to slowly release the pressure from the air bag system and lower the windrower to the ground.

CAUTION

Ensure all three lifts have fully retracted and are clear of the windrower frame before driving windrower ahead.

4. Start the engine and drive the machine straight ahead leaving the shipping support channels supported on the rear support stand.

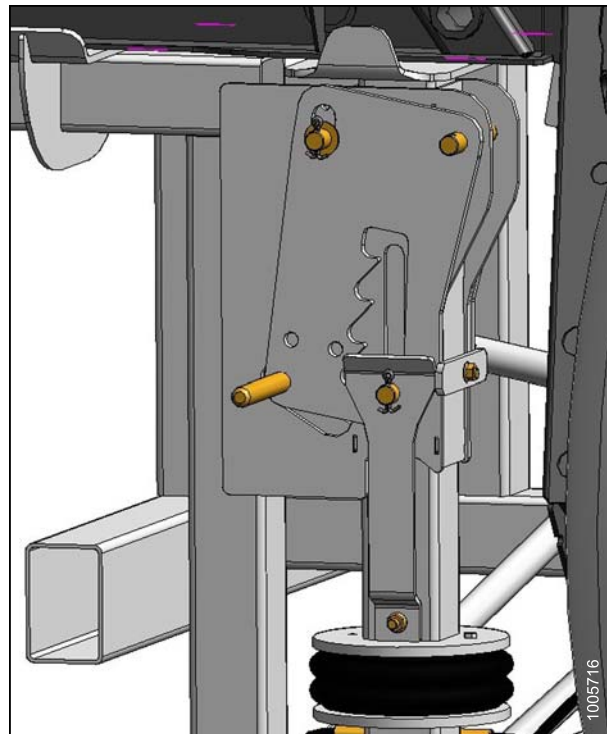


Figure 3.135: Lift System

3.17.2 Removing Windrower from Field Stand

1. Position a jack under the jack point of each drive wheel leg and under the rear hitch.
2. Raise the jacks to take the weight off the stands, and remove the stands.
3. Lower the windrower slowly to the ground, and remove the jacks.

3.18 Installing AM/FM Radio

Windrowers are designed to accept a DIN E style AM/FM radio with a depth (X) of 161 mm and having a 5 mm threaded stud (A) centered on the rear for support. Adjustments are possible if the radio falls outside these parameters.

NOTE:

An approved radio package is available from Radio Engineering Industries (REI) of Omaha, Nebraska.

NOTE:

Configuration for the M105 differs slightly from what is shown, but the installation procedure is the same.

1. Ensure the ignition is turned to the OFF position.
2. Remove radio panel by removing four screws (A).

3. Remove screw and nuts (A) and (C) to remove support (B) from panel. Retain nut (C) and lock washer.

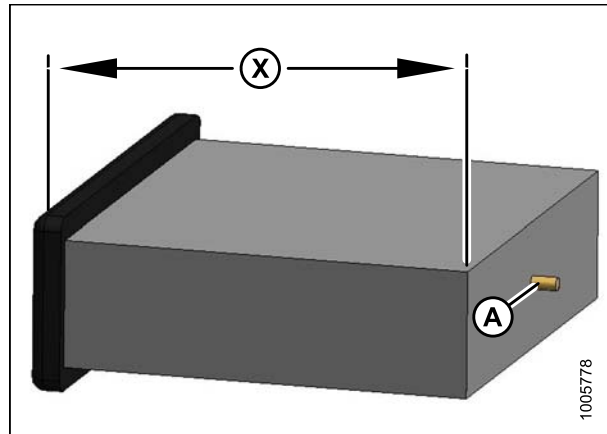


Figure 3.136: Mounting Dimension

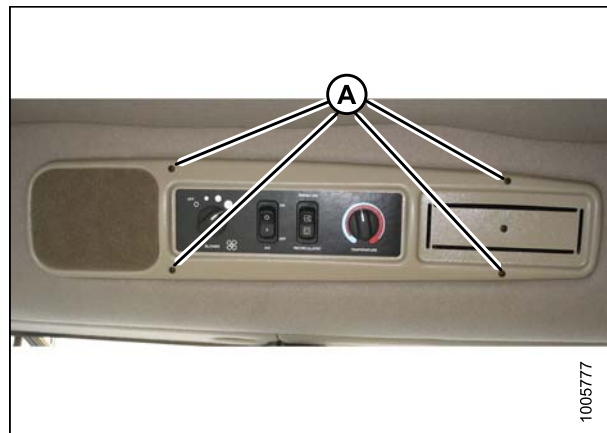


Figure 3.137: Radio Panel

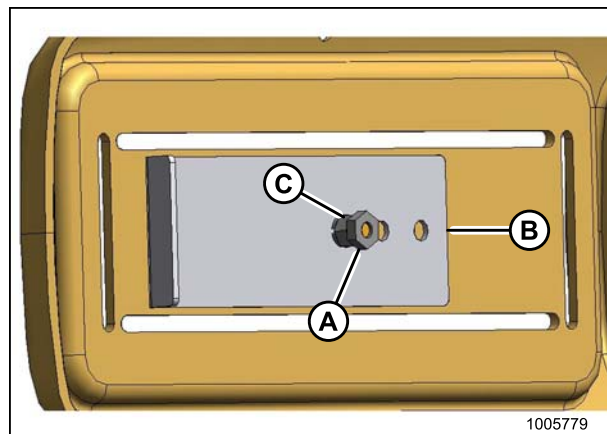


Figure 3.138: Panel Support

ASSEMBLING THE WINDROWER

4. Remove the cutout by cutting the tabs (A) in the panel. Remove sharp edges from the panel.

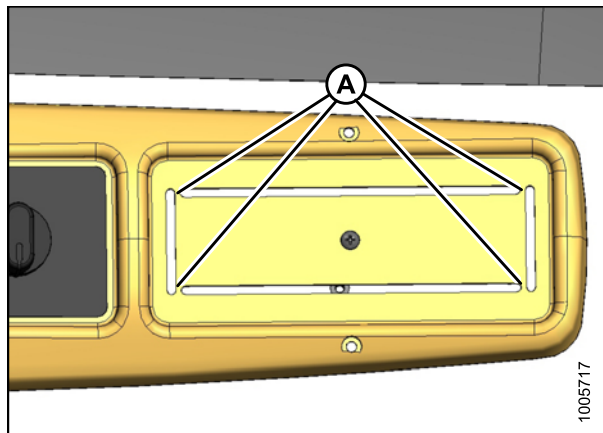


Figure 3.139: Panel

5. Position receptacle (A) (supplied with radio) into opening and secure by bending tabs (B) on receptacle against panel.

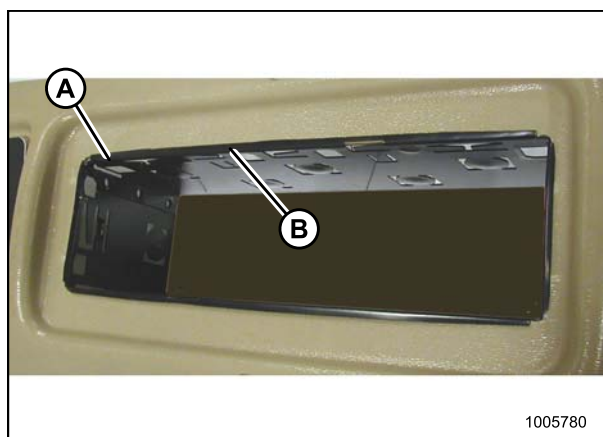


Figure 3.140: Radio Receptacle

6. Insert radio into receptacle and attach radio bezel. Ensure radio locks into position and faceplate (A) is against the panel.



Figure 3.141: Radio Installed

ASSEMBLING THE WINDROWER

7. Ensure the radio has a six-pin connector (Packard #2977042) and a terminal arrangement as shown at right. This enables the radio to connect to the windrower's six-pin radio connector wiring harness.
8. Attach the following two additional wires from the wiring harness to the radio:
 - a. **Circuit 503:** Red live-wire with 1/4 in. female blade terminal provides power for the radio clock/memory if radio is equipped with this feature.
 - b. **Circuit 315:** Black ground-wire attaches to the radio body.
9. Plug antenna cable into radio.

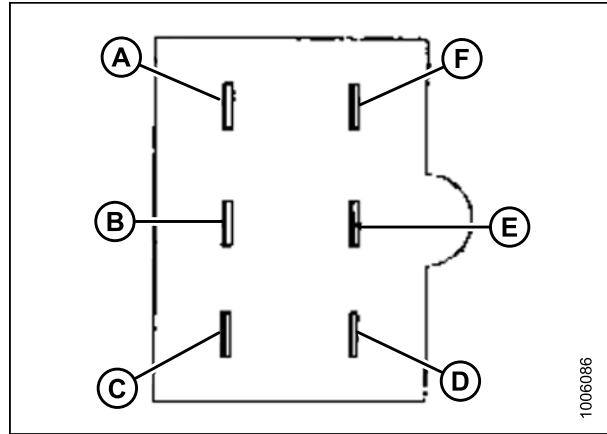


Figure 3.142: Six-Pin Connector Terminal Arrangement

A - Left Speaker Power (+)	B - Left Speaker Ground (-)
C - Radio Ground (-)	D - Right Speaker Ground (-)
E - Right Speaker Power (+)	F - Radio Power (+) (Live when Ignition is ON)

10. Attach stud (supplied with radio) to center rear of radio.
11. Attach support (B) to stud on back of radio chassis with nut (A) and lock washer supplied with the support.

NOTE:

Support can be attached to chassis in multiple locations to allow for proper radio mounting.

12. Install radio panel using original screws.

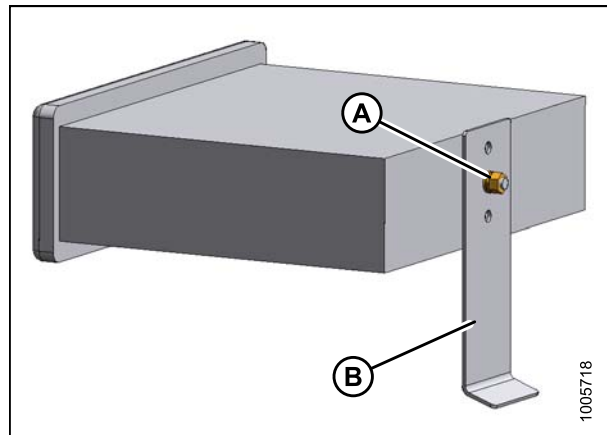


Figure 3.143: Radio and Support

13. Adjust bracket (A) (if necessary) by loosening nuts (B) to allow radio to slide into opening and securely capture support (C).
14. Retrieve antenna from inside cab and remove protective cover from base.

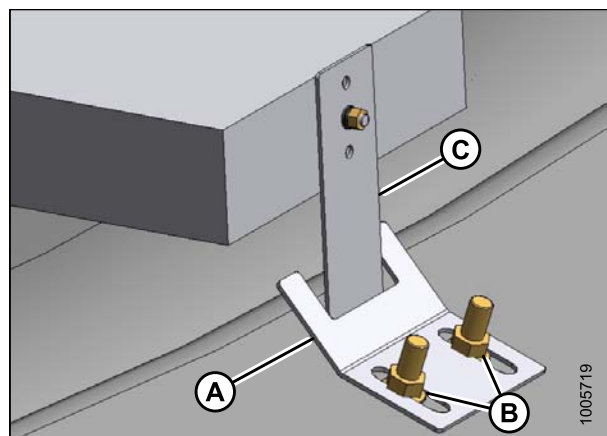


Figure 3.144: Radio and Support

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15. Remove protective cover (A) from antenna mount on cab roof and thread antenna onto base until hand tight.

NOTE:

Store protective cover in cab and reinstall to protect antenna mount if antenna needs to be removed.

16. Turn the ignition key to ACC, switch radio ON, and check operation in accordance with instructions supplied with the radio.
17. Turn the ignition key to the OFF position.

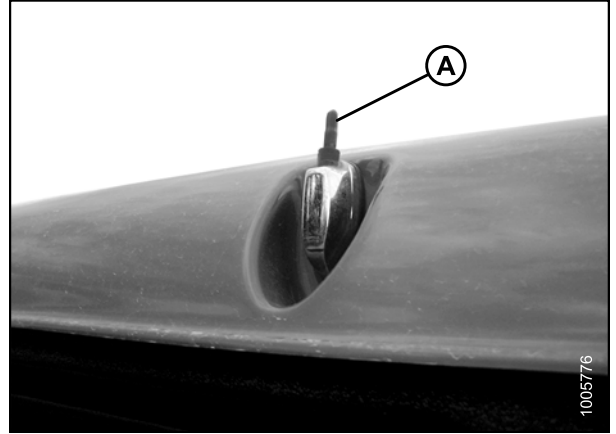


Figure 3.145: Antenna Mount on Cab Roof

3.19 Installing Beacons

1. Retrieve the two beacons from the shipment.
2. Remove the hardware and rubber base from one of the beacons as shown.



Figure 3.146: Beacon Light

3. Feed the connectors from the harness through the center hole in the rubber base.
4. Place the base on the beacon bracket ensuring that the mounting holes in the rubber base line-up with the holes in the bracket.



Figure 3.147: Rubber Beacon Base on Mounting Bracket

5. Connect the orange wire (A) from the harness to the red wire (B) in the beacon.
6. Connect the black wire (C) from the harness to the ground terminal in the beacon.

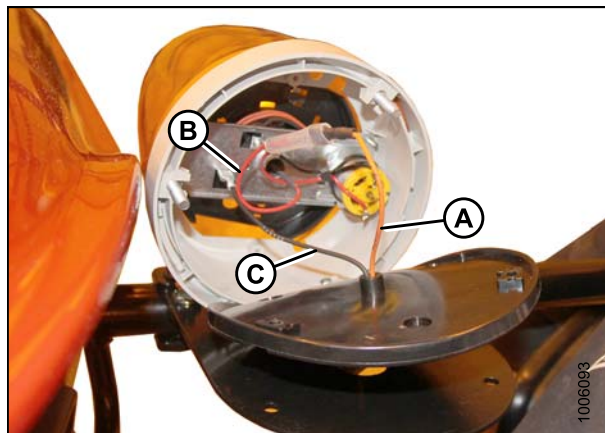


Figure 3.148: Beacon Light Wire Routing

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7. Fit the beacon onto the base making sure the beacon is oriented with the point on the lens facing forward (cab-forward) as shown.



Figure 3.149: Beacon Light Orientation

8. Mount the beacon to the base with the lock washers and nuts (A) supplied with the beacon.
9. Install the second beacon on the opposite side of the cab roof.



Figure 3.150: Beacon Light

3.20 Installing the Slow Moving Vehicle (SMV) Sign

1. Install the SMV sign (A) (shipped inside the cab) onto the windrower in accordance with the instructions supplied with the sign. SMV signs must be visible when travelling on the road.

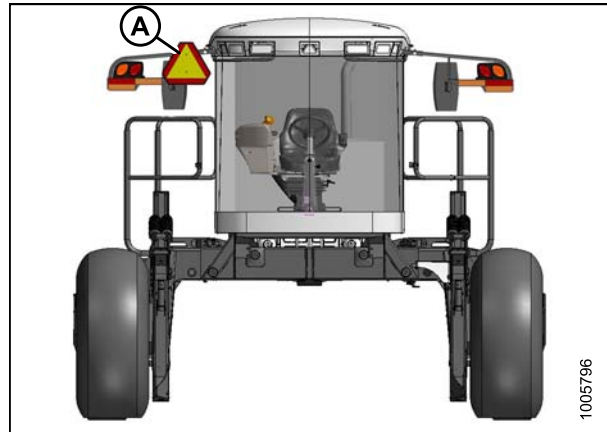


Figure 3.151: Engine-Forward Location

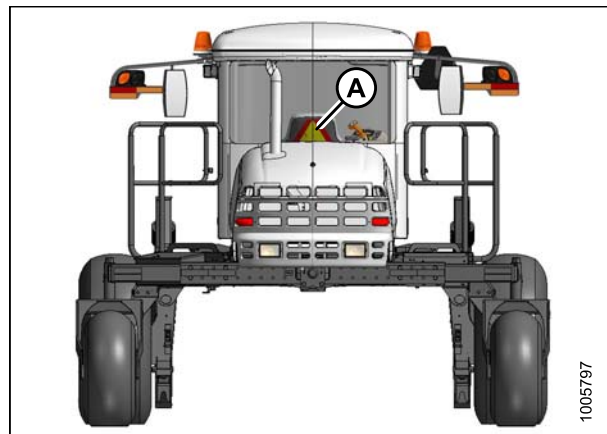


Figure 3.152: Cab-Forward

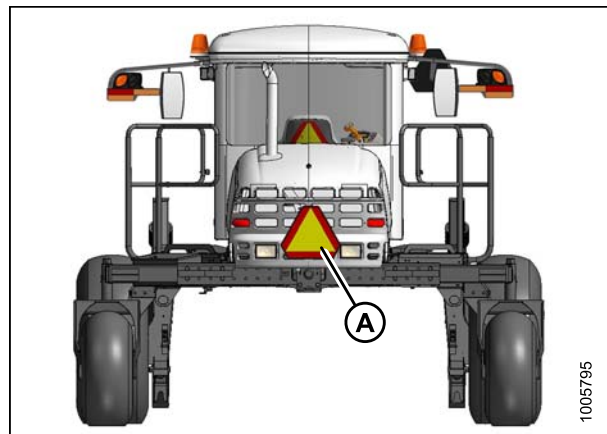


Figure 3.153: Alternate Location (Cab-Forward)

3.21 Attaching Headers

3.21.1 Attaching a D-Series Header

D50, D60, and D65 headers can be attached to an M105, M155, or M205 Self-Propelled Windrower. For attachment procedure, refer to the section for your specific windrower model.

M105 Self-Propelled Windrower

To run a D-Series draper header, the M105 Self-Propelled Windrower needs to be equipped with reel drive, reel lift, and reel fore-aft hydraulics.

Windrowers equipped with D-Series hydraulics have four header drive hoses on the left cab-forward side, and up to five reel drive hoses on the right side.

If necessary, obtain the following kits and install them in accordance with instructions supplied with the kits.

Kit Description	Kit Number
Base Draper Drive kit	MD #B5577

Refer to the following procedures according to the center-link installed on the windrower:

- [Attaching a D-Series Header: Hydraulic Center-Link without Self-Alignment, page 101](#)
- [Attaching a D-Series Header: Mechanical Center-Link, page 107](#)

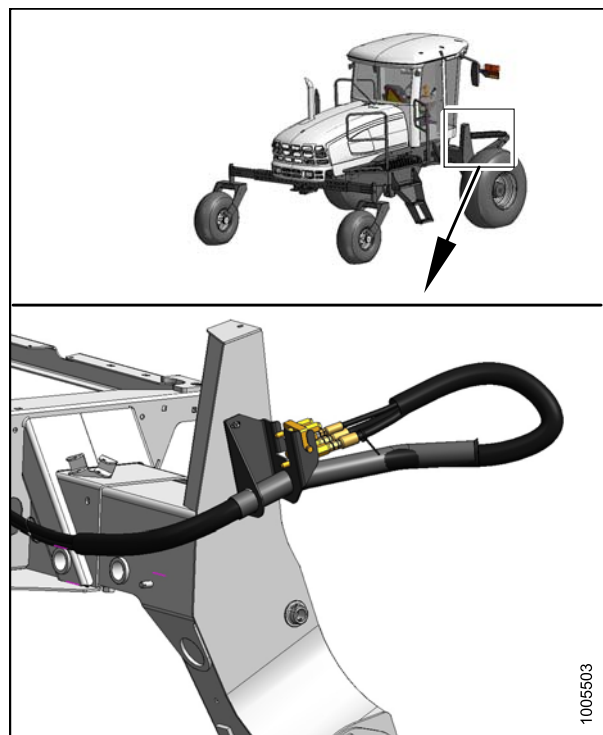


Figure 3.154: M105 Draper Header Reel Hydraulics

ASSEMBLING THE WINDROWER

M155 Self-Propelled Windrower

The M155 Self-Propelled Windrower is factory-equipped to run a D-Series Draper Header.

If installing an HC10 Hay Conditioner, reverser kit MD #B4656 is recommended. If necessary, obtain the recommended kit and install it in accordance with the instructions supplied with the kit.

Refer to the following instructions based on the type of center-link installed on your windrower:

- [Attaching a D-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 96](#)
- [Attaching a D-Series Header: Hydraulic Center-Link without Self-Alignment, page 101](#)
- [Attaching a D-Series Header: Mechanical Center-Link, page 107](#)

M205 Self-Propelled Windrower

To operate a D-Series header, the M205 Self-Propelled Windrower must be equipped with a Draper Drive Basic kit and a Completion kit.

Windrowers equipped with D-Series hydraulics have four header drive hoses on the left cab-forward side and up to five reel drive hoses on the right side.

If necessary, obtain the following kits and install them in accordance with the instructions supplied with the kits.

Kit Description	Kit Number
Base Draper/Auger Drive Kit	MD #B5491
Draper Header Reel Drive Completion Kit	MD #B5496
Hydraulic Couplers Kit	MD #B5497

To attach a D-Series header to an M205, refer to the following:

- [Attaching a D-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 96](#)
- [Attaching a D-Series Header: Hydraulic Center-Link without Self-Alignment, page 101](#)

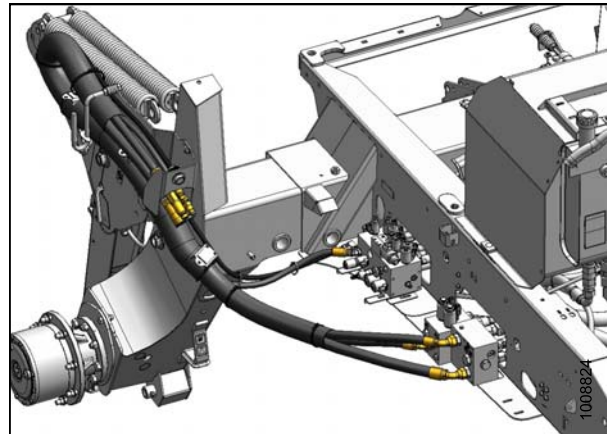


Figure 3.155: M155 Draper Header Hydraulics

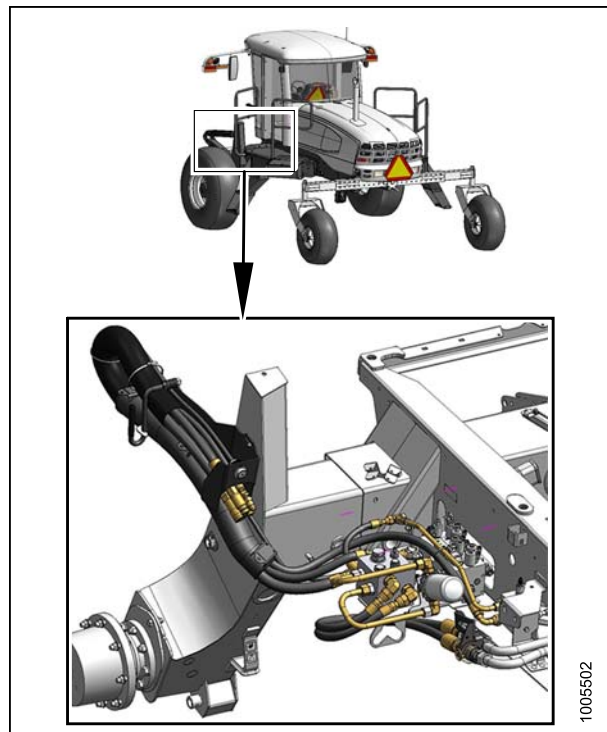


Figure 3.156: M205 Draper Header Drive Hydraulics

ASSEMBLING THE WINDROWER

Attaching Header Boots

Header boots are required to attach a D-Series draper header to the windrower. Attach header boots (supplied with header) to windrower lift linkage if not already installed.

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

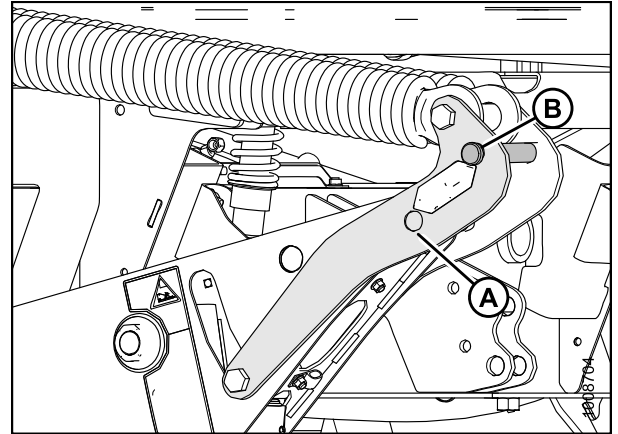


Figure 3.157: Header Float Linkage

1. Remove pin (B) from boot (A).

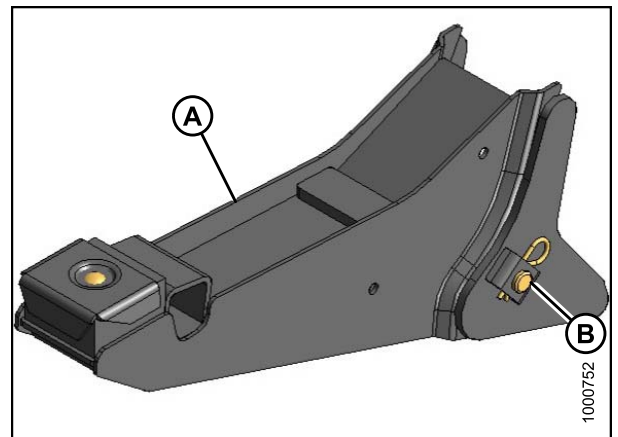


Figure 3.158: Header Boot

2. Position boot (B) onto lift linkage (A) and reinstall pin (C). Pin may be installed from either side of boot.
3. Secure pin (C) with hairpin (D).
4. Repeat for opposite side.

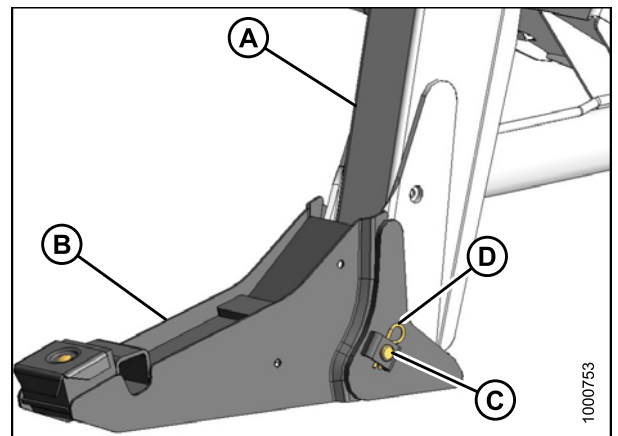


Figure 3.159: Header Boot

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3. Activate the reel up switch (A) on the GSL to raise the center-link until the hook is above the attachment pin on the header.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

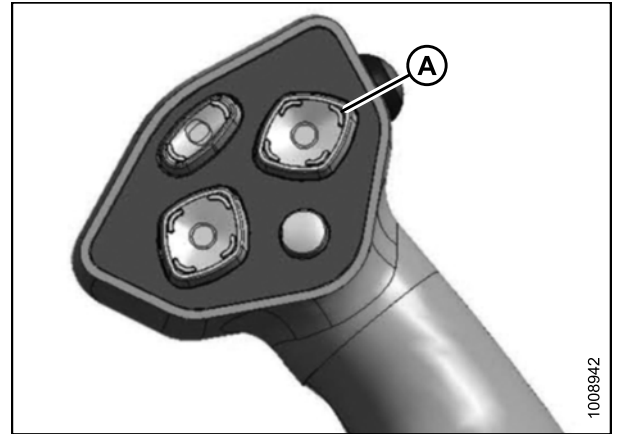


Figure 3.162: GSL

4. Drive the windrower slowly forward until the boots (A) enter the header legs (B). Continue driving slowly forward until lift linkages contact the support plates in the header legs and the header nudges forward.
5. Ensure the lift linkages are properly engaged in the header legs and are contacting the support plates.

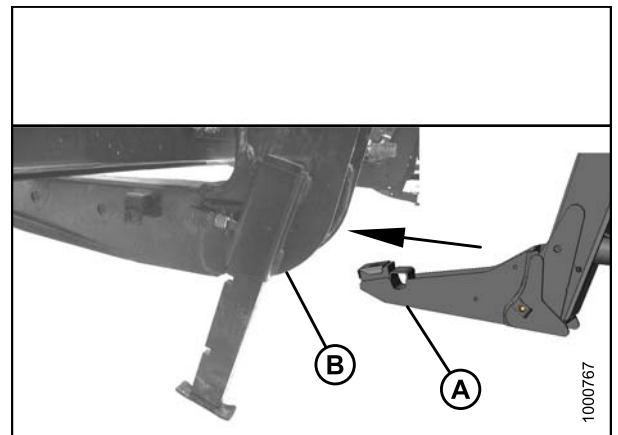


Figure 3.163: Header Leg and Boot

6. Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Reel up (A) to raise the center-link
 - Reel down (B) to lower the center-link
 - Header tilt up (C) to retract the center-link
 - Header tilt down (D) to extend the center-link

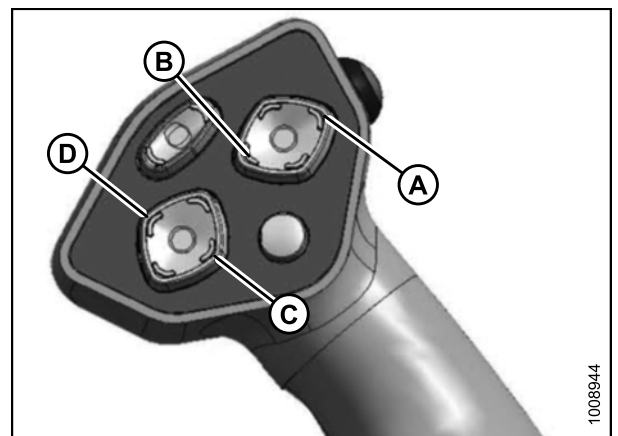


Figure 3.164: GSL

ASSEMBLING THE WINDROWER

- Adjust position of the center-link cylinder (A) with the reel up, reel down, and header tilt switches on the GSL until the hook is above the header attachment pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

- Lower center-link (A) onto the header with the reel down switch on the GSL until it locks into position (hook release [B] is down).
- Check that center-link is locked onto header by pressing the reel up switch on the GSL.

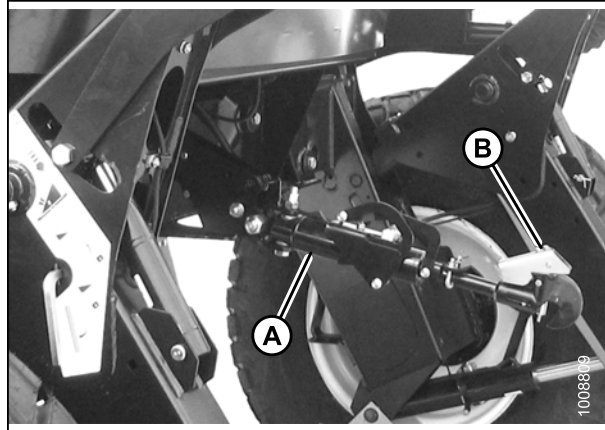


Figure 3.165: Hydraulic Center-Link

CAUTION

Check to be sure all bystanders have cleared the area.

- Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- Press and hold the header up switch until both cylinders stop moving.
- Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.



Figure 3.166: GSL

ASSEMBLING THE WINDROWER

11. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

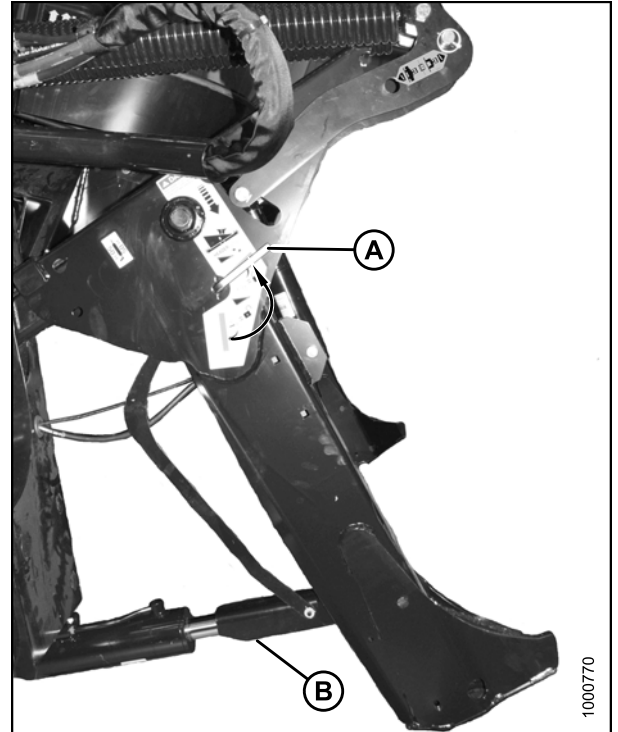


Figure 3.167: Safety Prop

12. Install pin (B) through the header leg (engaging U-bracket in lift linkage) on both sides and secure with hairpin (A).
13. Raise header stand (D) to storage position by pulling spring pin (C) and lifting stand into uppermost position. Release spring pin.

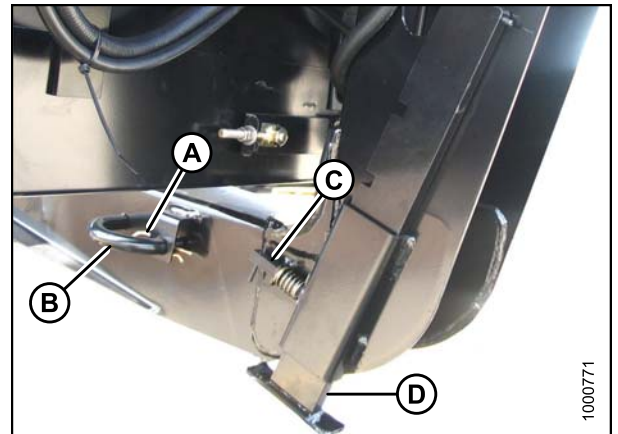


Figure 3.168: Header Leg

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14. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

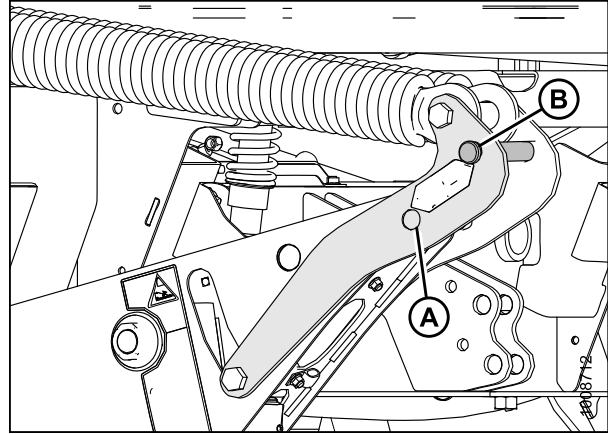


Figure 3.169: Header Float Linkage

15. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
16. Repeat for opposite safety prop.

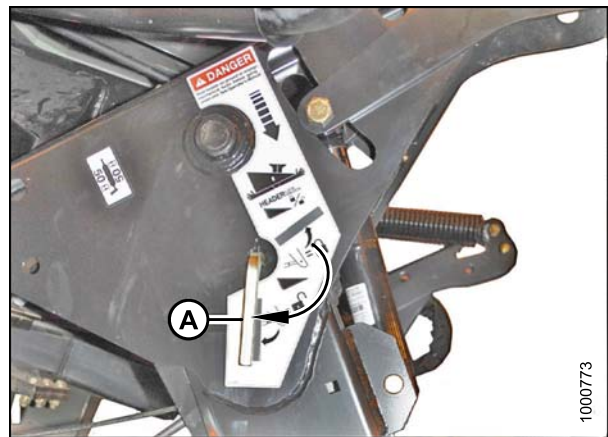


Figure 3.170: Safety Prop

CAUTION

Check to be sure all bystanders have cleared the area.

17. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
18. Stop engine and remove key from ignition.

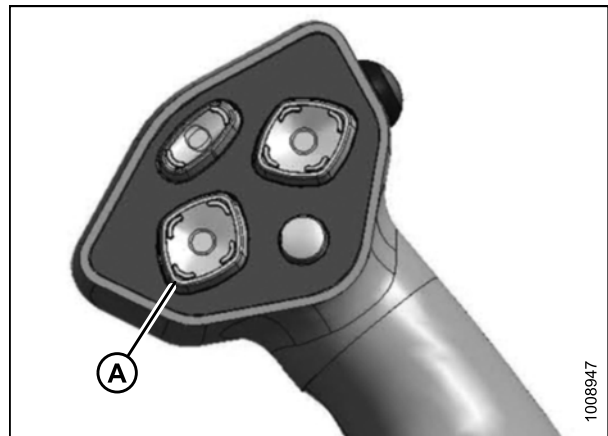


Figure 3.171: GSL

ASSEMBLING THE WINDROWER

19. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the draper header operator's manual.

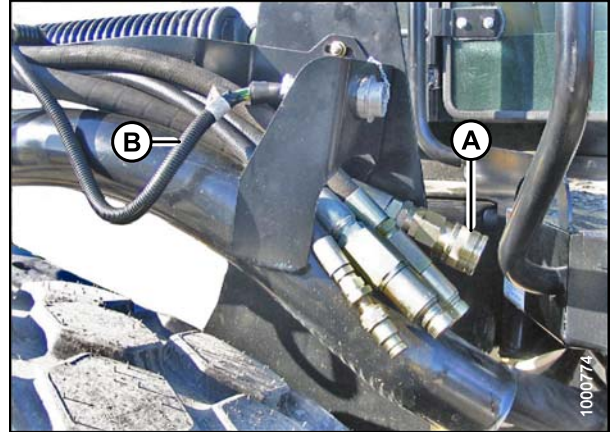


Figure 3.172: Header Drive Hoses and Harness

20. Connect reel hydraulics (A) at right cab-forward side of windrower. Refer to the draper header operator's manual.
21. Start engine and raise and lower the header and the reel a few times to remove trapped air.

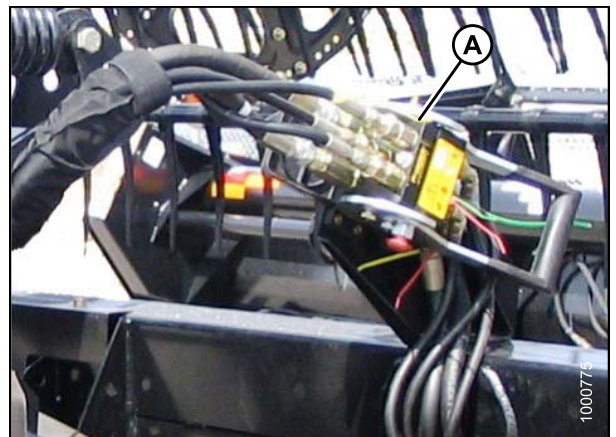


Figure 3.173: Reel Hydraulics

Attaching a D-Series Header: Hydraulic Center-Link without Self-Alignment

NOTE:

Draper header boots must be installed onto the windrower lift linkage before starting this procedure. Refer to [Attaching Header Boots, page 95](#).

⚠ DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

ASSEMBLING THE WINDROWER

1. Remove hairpin (A) from pins (B), and remove pins from both header legs.

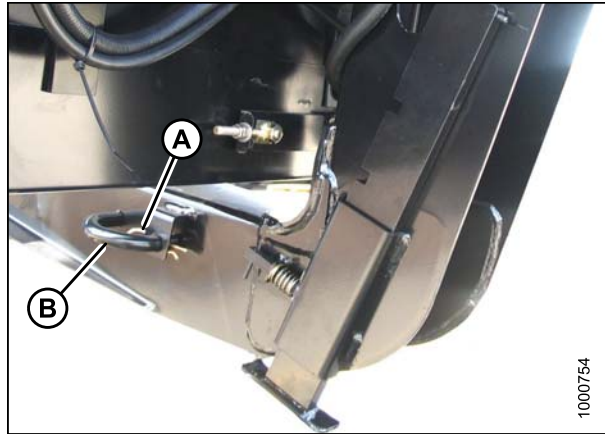


Figure 3.174: Header Leg

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

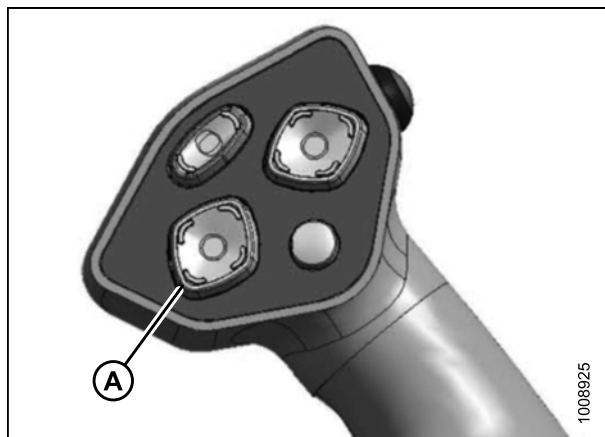


Figure 3.175: GSL

3. Relocate pin (A) in frame linkage as required to raise the center-link (B) until the hook is above the attachment pin on the header.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

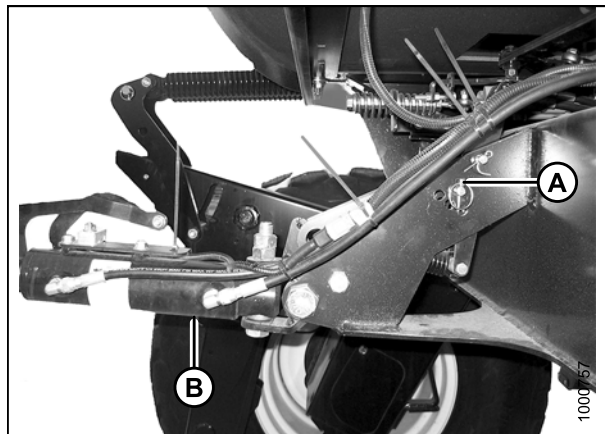


Figure 3.176: Hydraulic Center-Link without Self-Alignment Kit

ASSEMBLING THE WINDROWER

4. Drive the windrower slowly forward until the boots (A) enter the header legs (B). Continue driving slowly forward until lift linkages contact the support plates in the header legs and the header nudges forward.
5. Ensure the lift linkages are properly engaged in the header legs and are contacting the support plates.

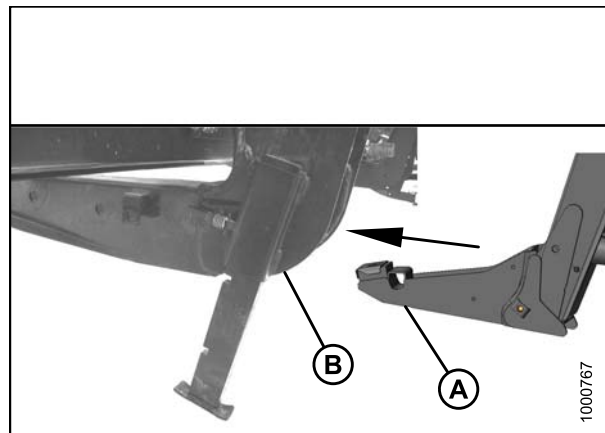


Figure 3.177: Header Leg and Boot

6. Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Header tilt up (A) to retract the center-link
 - Header tilt down (B) to extend the center-link
7. Stop engine and remove key from ignition.

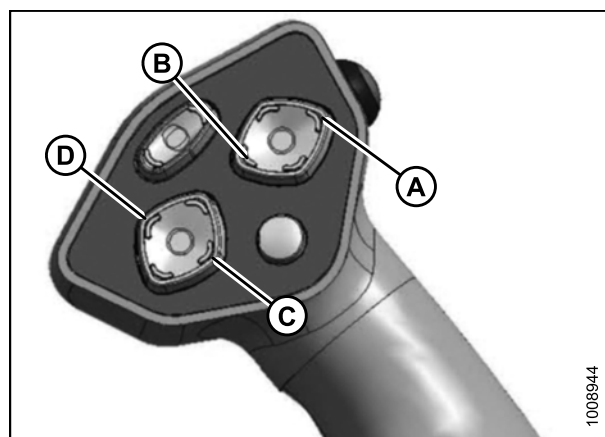


Figure 3.178: GSL

8. Push down on rod end of link cylinder (B) until hook engages and locks onto header pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

9. Check that center-link (A) is locked onto header by pulling upward on rod end (B) of cylinder.

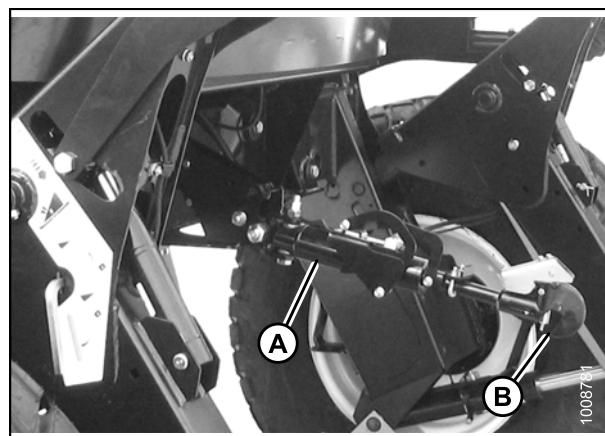


Figure 3.179: Hydraulic Center-Link

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

10. Start the engine.
11. Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- a. Press and hold the header up switch until both cylinders stop moving.
- b. Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.

12. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

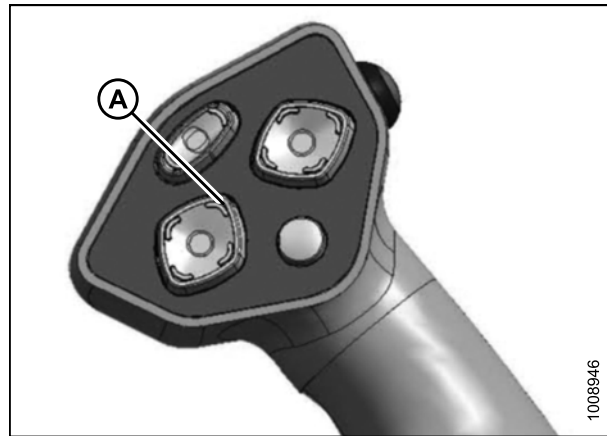


Figure 3.180: GSL

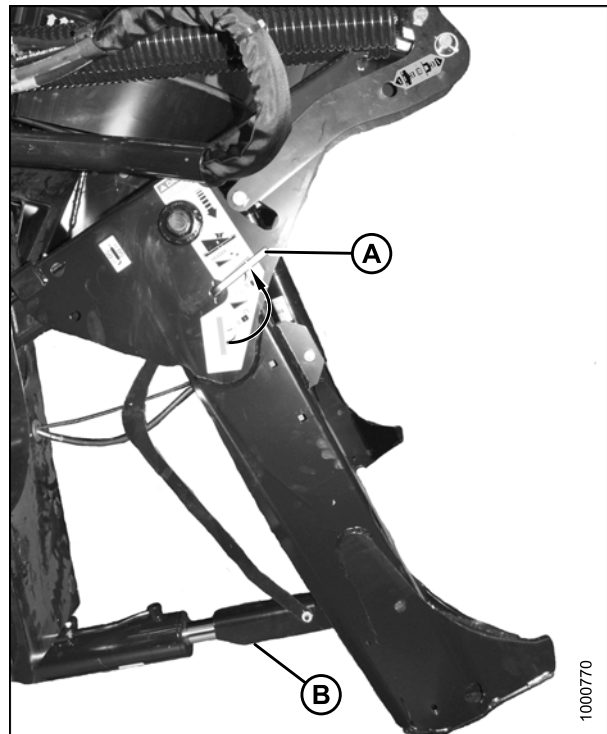


Figure 3.181: Safety Prop

ASSEMBLING THE WINDROWER

13. Install pin (B) through the header leg (engaging U-bracket in lift linkage) on both sides and secure with hairpin (A).
14. Raise header stand (D) to storage position by pulling spring pin (C) and lifting stand into uppermost position. Release spring pin.

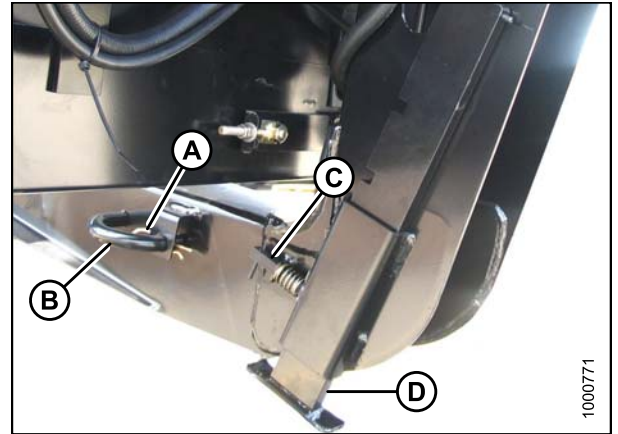


Figure 3.182: Header Leg

15. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

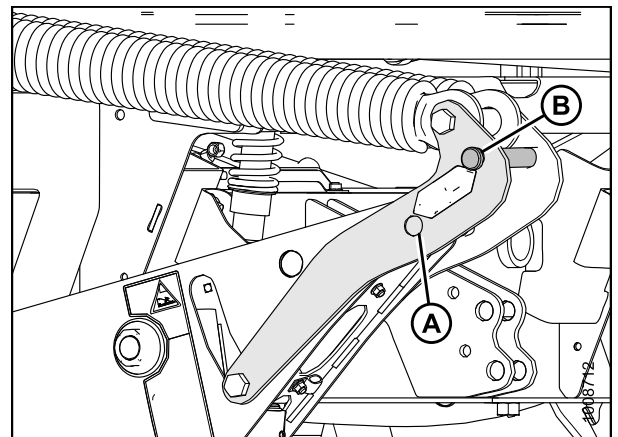


Figure 3.183: Header Float Linkage

16. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
17. Repeat for opposite safety prop.

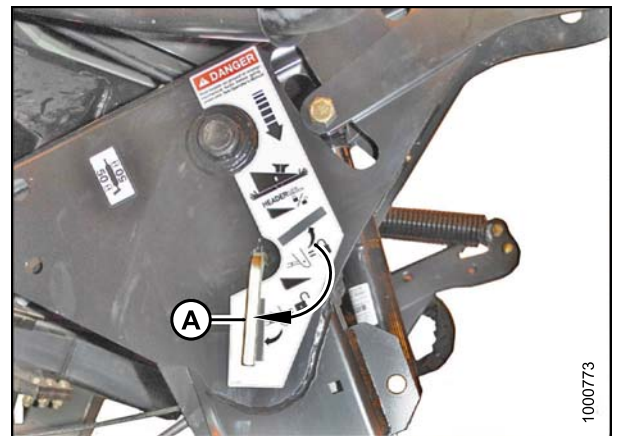


Figure 3.184: Safety Prop

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

18. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
19. Stop engine and remove key from ignition.

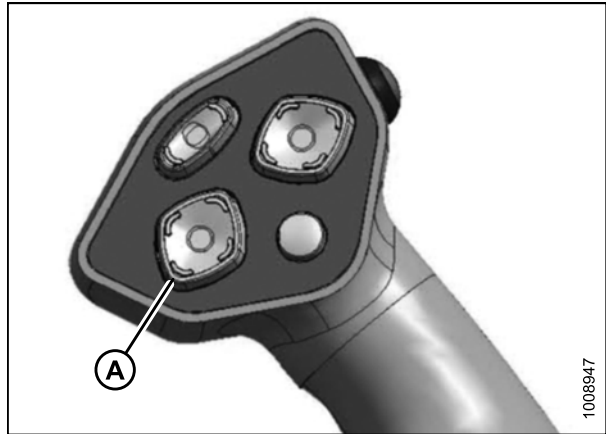


Figure 3.185: GSL

20. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the draper header operator's manual.

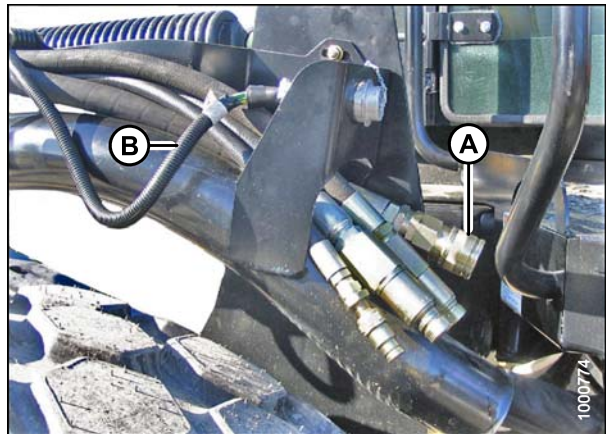


Figure 3.186: Header Drive Hoses and Harness

21. Connect reel hydraulics (A) at right cab-forward side of windrower. Refer to the draper header operator's manual.
22. Start engine and raise and lower the header and the reel a few times to remove trapped air.

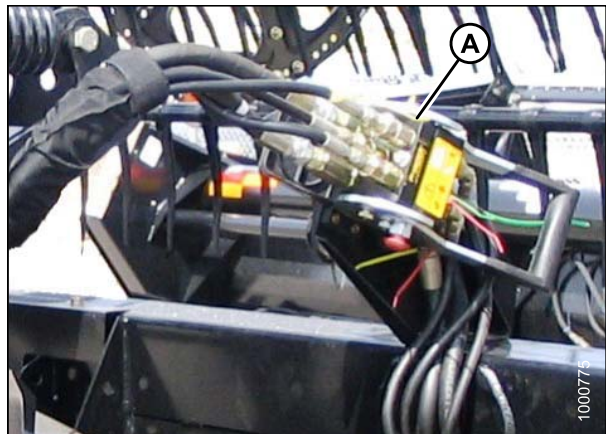


Figure 3.187: Reel Hydraulics

ASSEMBLING THE WINDROWER

Attaching a D-Series Header: Mechanical Center-Link

NOTE:

Draper header boots must be installed onto the windrower lift linkage before starting this procedure. Refer to [Attaching Header Boots, page 95](#).

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (A) from pins (B), and remove pins from both header legs.

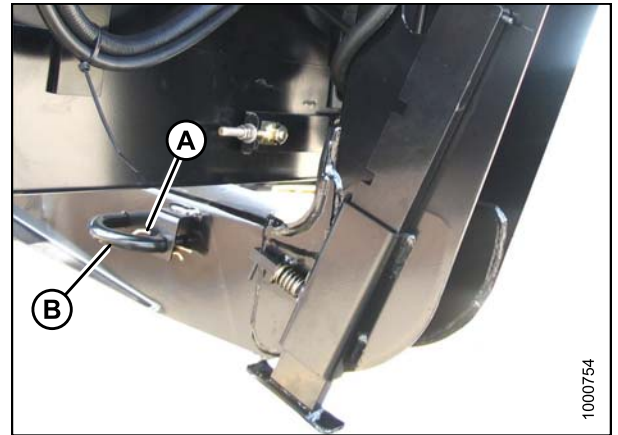


Figure 3.188: Header Leg

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

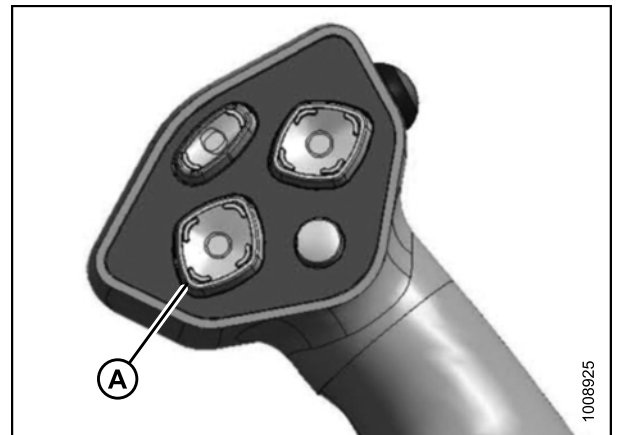


Figure 3.189: GSL

ASSEMBLING THE WINDROWER

3. Drive the windrower slowly forward until the boots (A) enter the header legs (B). Continue driving slowly forward until lift linkages contact the support plates in the header legs and the header nudges forward.
4. Ensure the lift linkages are properly engaged in the header legs and are contacting the support plates.

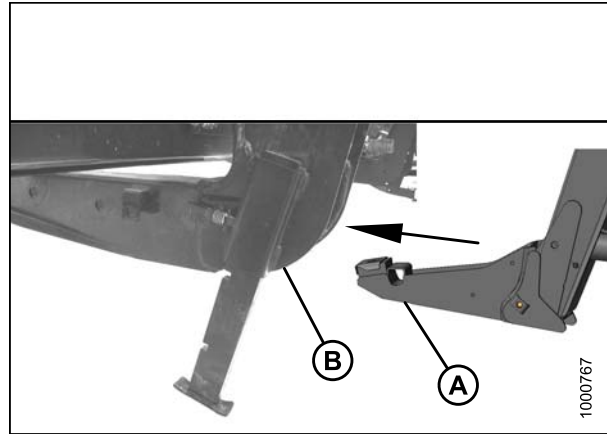


Figure 3.190: Header Leg and Boot

5. Stop engine and remove key from ignition.
6. Loosen nut (A) and rotate barrel (B) to adjust length until the link is aligned with the header bracket.
7. Install clevis pin (C) and secure with cotter pin (D).
8. Adjust length of link to achieve proper header angle by rotating barrel (B). Tighten nut (A) against barrel (a slight tap with a hammer is sufficient).

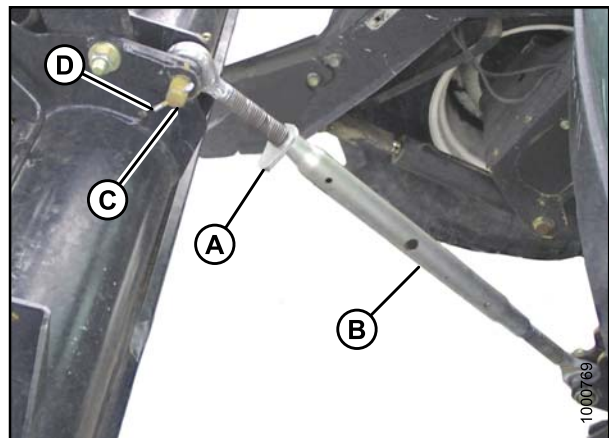


Figure 3.191: Mechanical Center-Link

CAUTION

Check to be sure all bystanders have cleared the area.

9. Start the engine.
10. Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- a. Press and hold the header up switch until both cylinders stop moving.
- b. Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.



Figure 3.192: GSL

ASSEMBLING THE WINDROWER

11. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

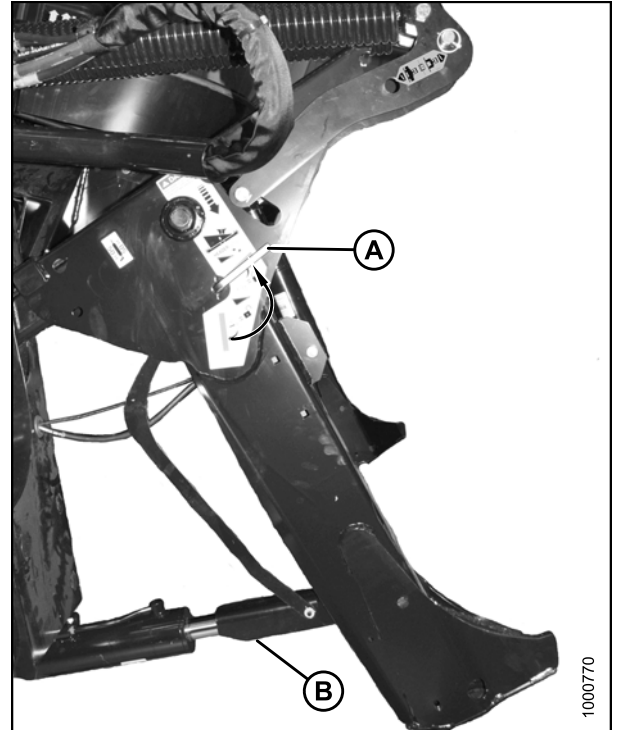


Figure 3.193: Safety Prop

12. Install pin (B) through the header leg (engaging U-bracket in lift linkage) on both sides and secure with hairpin (A).
13. Raise header stand (D) to storage position by pulling spring pin (C) and lifting stand into uppermost position. Release spring pin.

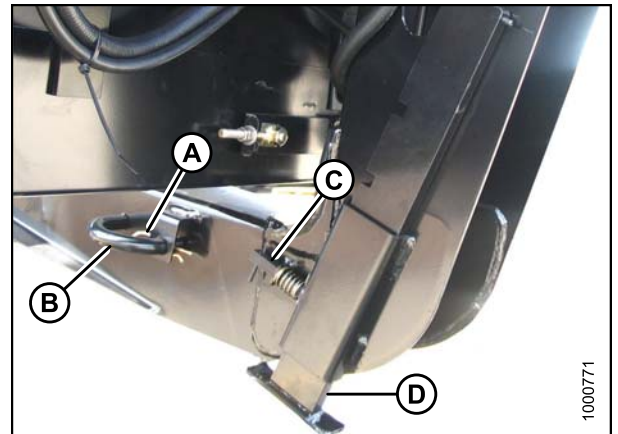


Figure 3.194: Header Leg

ASSEMBLING THE WINDROWER

14. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

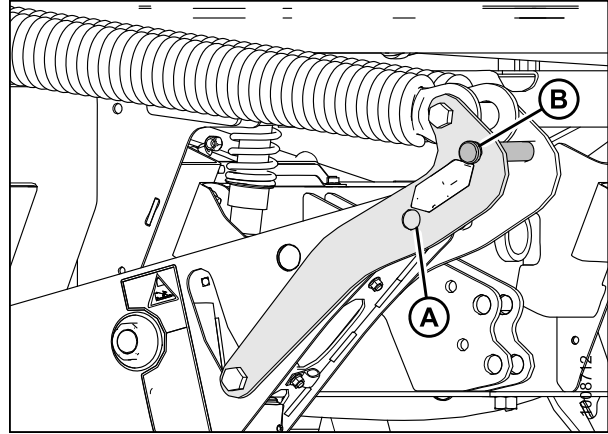


Figure 3.195: Header Float Linkage

15. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
16. Repeat for opposite safety prop.

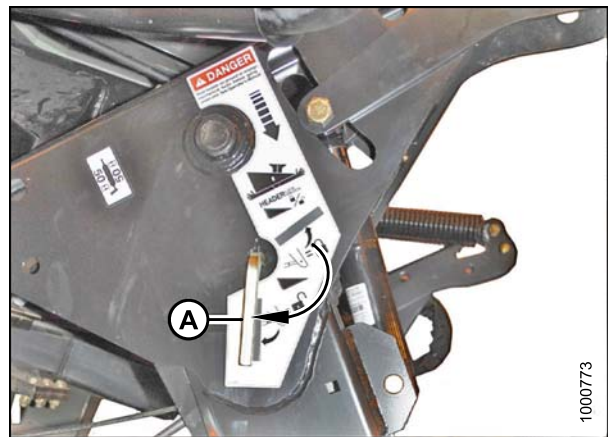


Figure 3.196: Safety Prop

CAUTION

Check to be sure all bystanders have cleared the area.

17. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
18. Stop engine and remove key from ignition.

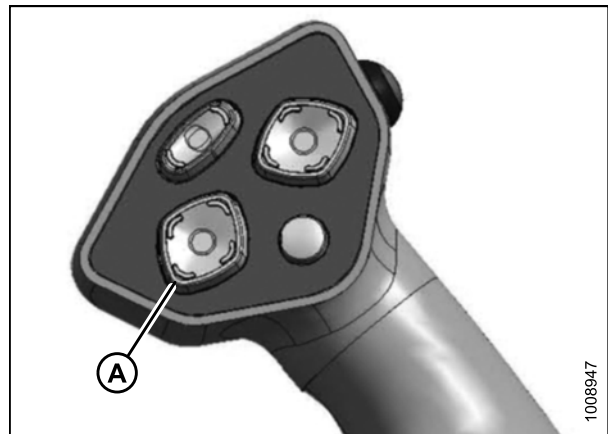


Figure 3.197: GSL

ASSEMBLING THE WINDROWER

19. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the draper header operator's manual.

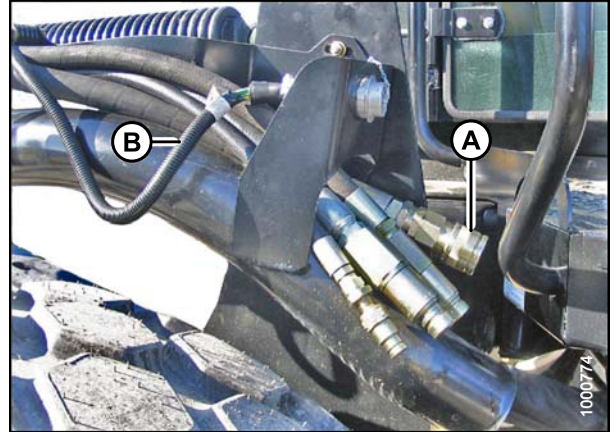


Figure 3.198: Header Drive Hoses and Harness

20. Connect reel hydraulics (A) at right cab-forward side of windrower. Refer to the draper header operator's manual.
21. Start engine and raise and lower the header and the reel a few times to remove trapped air.

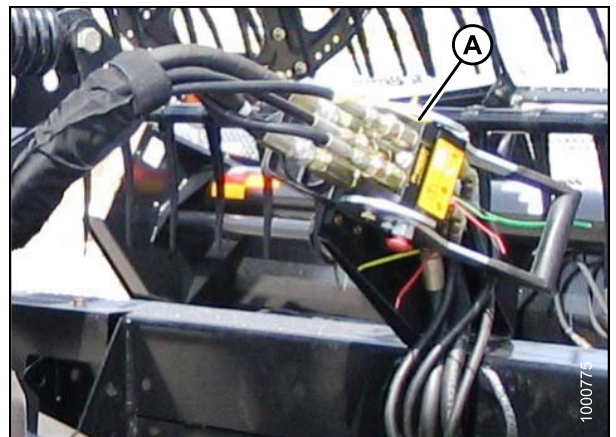


Figure 3.199: Reel Hydraulics

3.21.2 Attaching an A-Series Header

A30-D, A30-S, and A40-D headers can be attached to an M105, M155, or M205 Self-Propelled Windrower. For attachment procedure, refer to the section for your specific windrower model.

M105 Self-Propelled Windrower

The M105 Self-Propelled Windrower is factory-equipped to run an A-Series Auger Header.

Windrowers equipped with A-Series hydraulics have four header drive hoses on the left cab-forward side.

The attachment procedure varies depending on the type of center-link installed on the windrower. Refer to the following instructions based on the type of link installed on your windrower:

- [Attaching an A-Series Header: Hydraulic Center-Link without Self-Alignment, page 118](#)
- [Attaching an A-Series Header: Mechanical Center-Link, page 124](#)



Figure 3.200: M105 A40-D Auger Header

ASSEMBLING THE WINDROWER

M155 Self-Propelled Windrower

The M155 Self-Propelled Windrower is factory-equipped to run an A-Series Auger Header.

Windrowers equipped with A-Series hydraulics have four header-drive hoses on the left-hand side.

The attachment procedure varies depending on the type of center-link installed on the windrower. Refer to the following instructions based on the type of center-link installed on your windrower:

- [Attaching an A-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 113](#)
- [Attaching an A-Series Header: Hydraulic Center-Link without Self-Alignment, page 118](#)
- [Attaching an A-Series Header: Mechanical Center-Link, page 124](#)

M205 Self-Propelled Windrower

To operate an A-Series Auger Header, the M205 Self-Propelled Windrower must be equipped with an Auger Drive Basic kit and a Completion kit.

Windrowers equipped with A-Series hydraulics have four header drive hoses on the left-hand side.

If necessary, obtain the following kits and install them in accordance with the instructions supplied with the kits:

Kit Description	Kit Number
Base Draper/Auger Drive Kit	MD #B5491
Draper Conditioner/Auger Header Reverser Completion Kit	MD #B5492
Hydraulic Coupler Kit	MD #B5497

Refer to the following procedures according to the center-link installed on your windrower:

- [Attaching an A-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 113](#)
- [Attaching an A-Series Header: Hydraulic Center-Link without Self-Alignment, page 118](#)



Figure 3.201: M155 and A40-D Auger Header

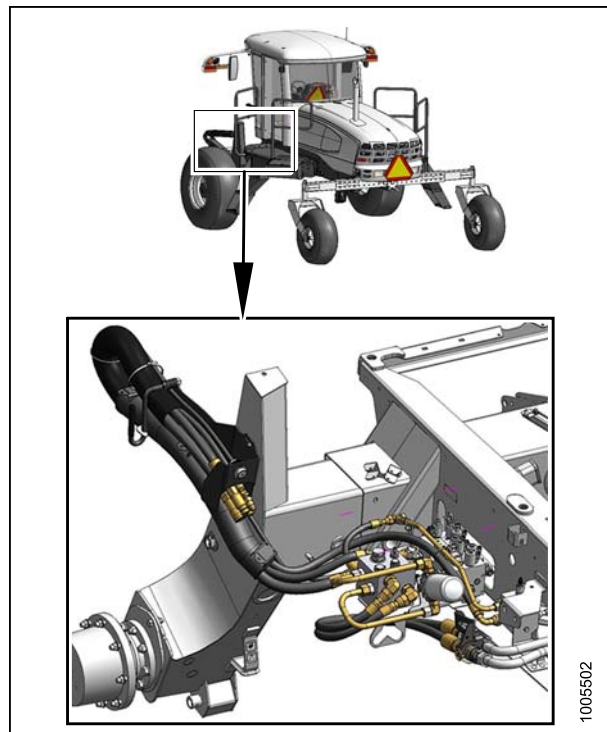


Figure 3.202: M205 Auger Header Drive Hydraulics

ASSEMBLING THE WINDROWER

Attaching an A-Series Header: Hydraulic Center-Link with Optional Self-Alignment

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (A) from clevis pin (B) and remove clevis pin from the header boots (C) on both sides of the header.

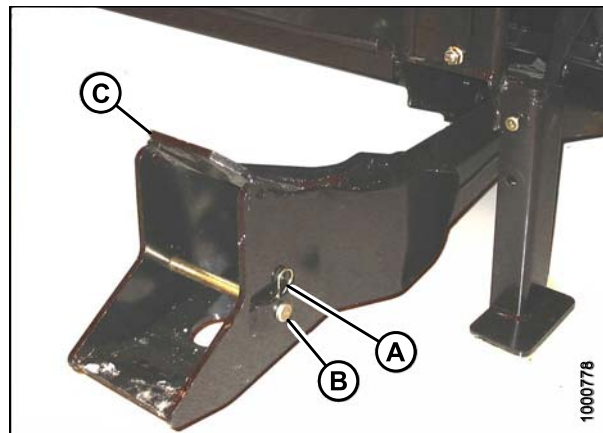


Figure 3.203: Header Boot

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

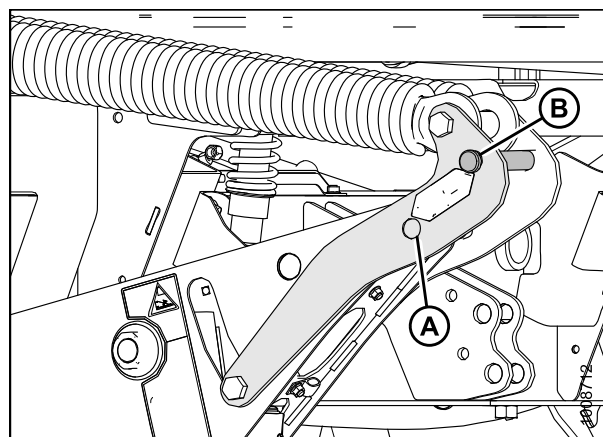


Figure 3.204: Header Float Linkage

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.



Figure 3.205: GSL

ASSEMBLING THE WINDROWER

3. Activate the reel up switch (A) on the GSL to raise the center-link until the hook is above the attachment pin on the header.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

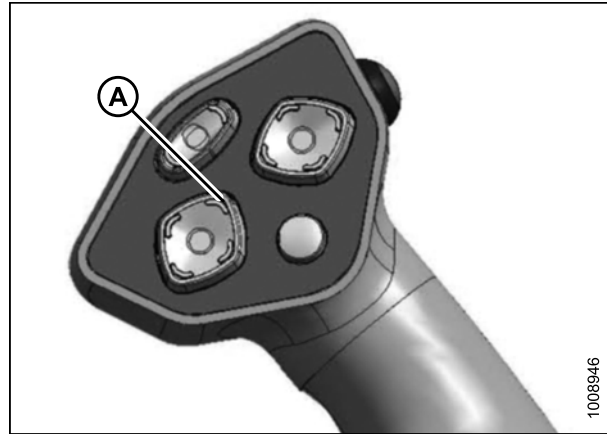


Figure 3.206: GSL

4. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

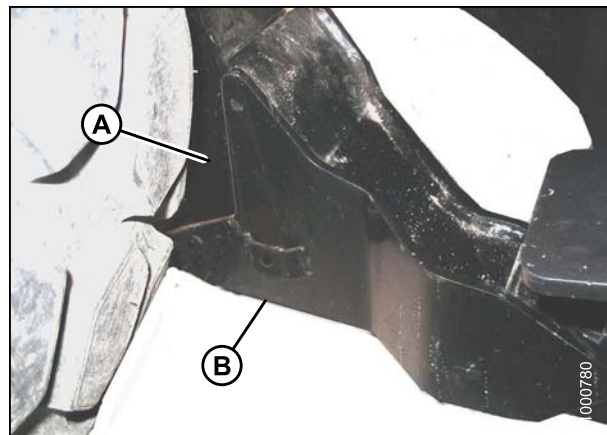


Figure 3.207: Header Boot

5. Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Reel up (A) to raise the center-link
 - Reel down (B) to lower the center-link
 - Header tilt up (C) to retract the center-link
 - Header tilt down (D) to extend the center-link

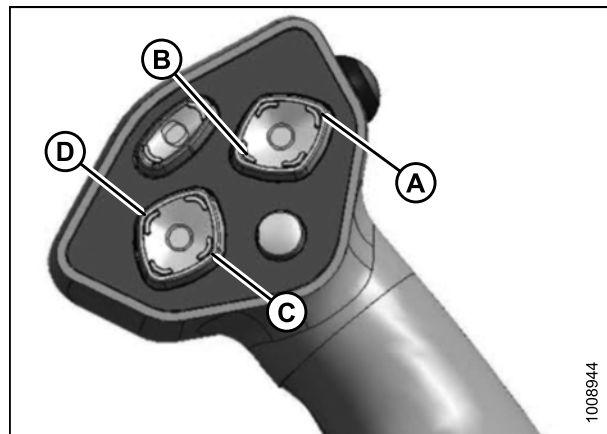


Figure 3.208: GSL

ASSEMBLING THE WINDROWER

- Adjust position of the center-link cylinder (A) with the reel up and reel down switches on the GSL until the hook is positioned above the header attachment pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

- Lower center-link (A) onto the header with reel down switch until it locks into position (hook release [B] is down).
- Check that center-link is locked onto header by pressing the reel up switch on the GSL.

CAUTION

Check to be sure all bystanders have cleared the area.

- Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- Press and hold the header up switch until both cylinders stop moving.
- Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.

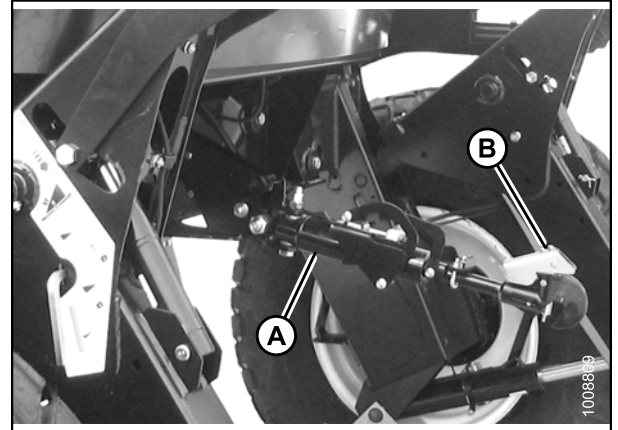


Figure 3.209: Hydraulic Center-Link

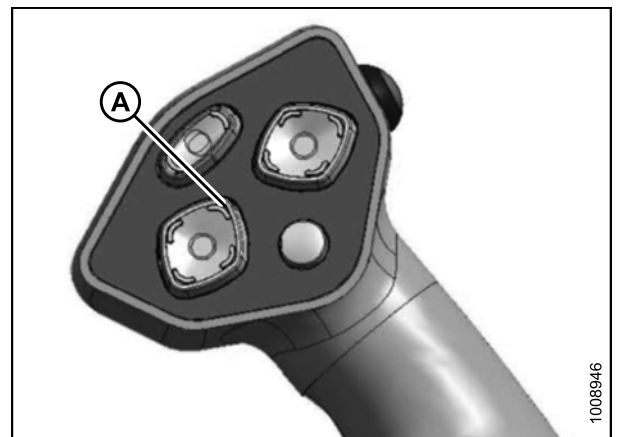


Figure 3.210: GSL

ASSEMBLING THE WINDROWER

10. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

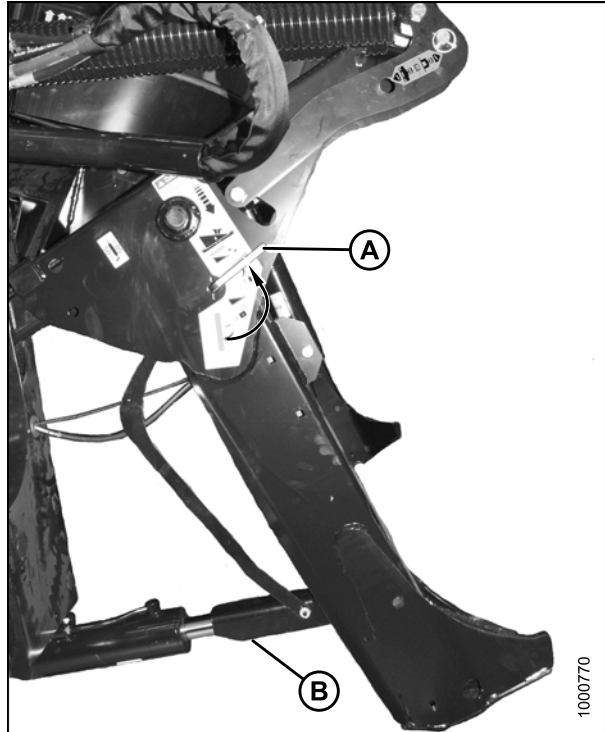


Figure 3.211: Safety Prop

11. Install clevis pin (A) through boot and foot and secure with hairpin. Repeat for opposite boot.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

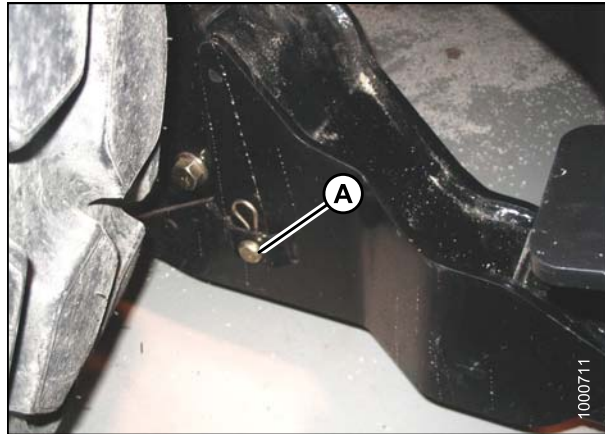


Figure 3.212: Header Boot

ASSEMBLING THE WINDROWER

12. Remove lynch pin from clevis pin (A) in stand (B).
13. Hold stand (B) and remove pin (A).
14. Move stand (B) to storage position by inverting and relocating onto bracket as shown. Reinsert clevis pin (A) and secure with lynch pin.

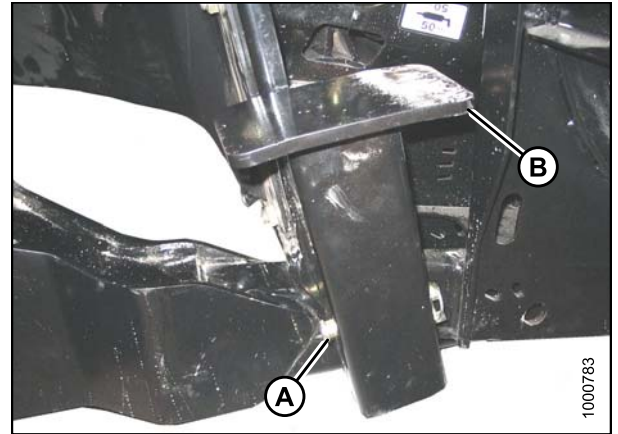


Figure 3.213: Header Stand

15. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

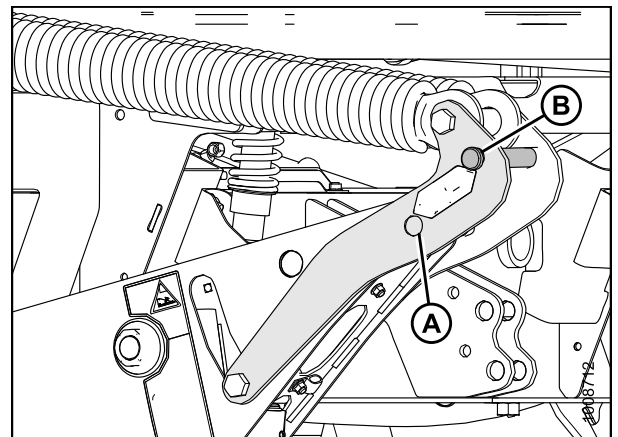


Figure 3.214: Header Float Linkage

16. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
17. Repeat for opposite safety prop.

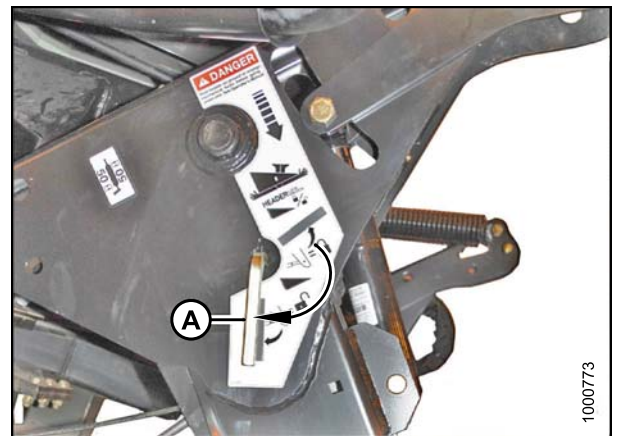


Figure 3.215: Safety Prop

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

18. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
19. Stop engine and remove key from ignition.

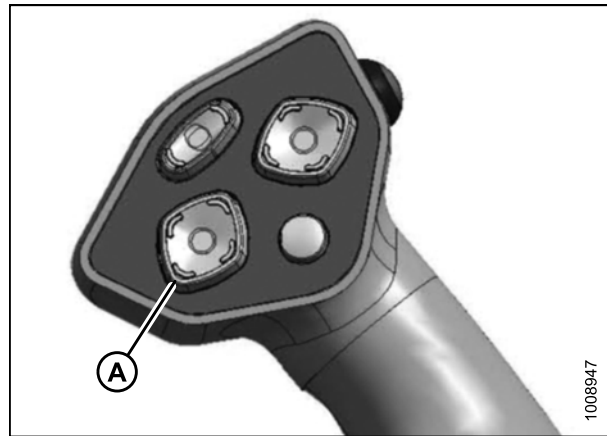


Figure 3.216: GSL

20. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the auger header operator's manual.

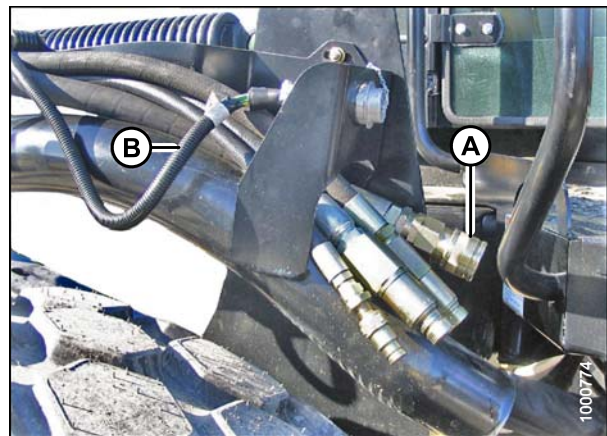


Figure 3.217: Header Drive Hoses and Harness

Attaching an A-Series Header: Hydraulic Center-Link without Self-Alignment

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (A) from clevis pin (B) and remove clevis pin from the header boots (C) on both sides of the header.

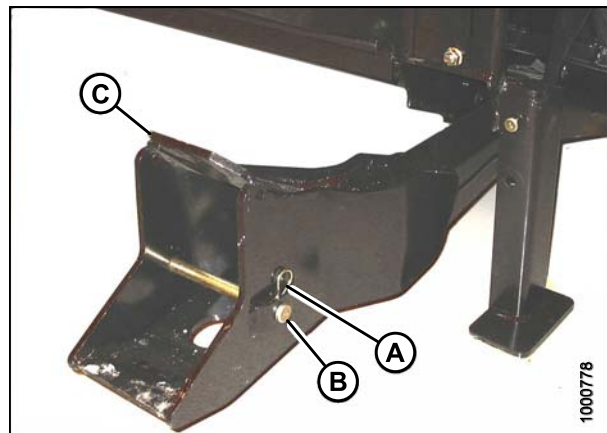


Figure 3.218: Header Boot

ASSEMBLING THE WINDROWER

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

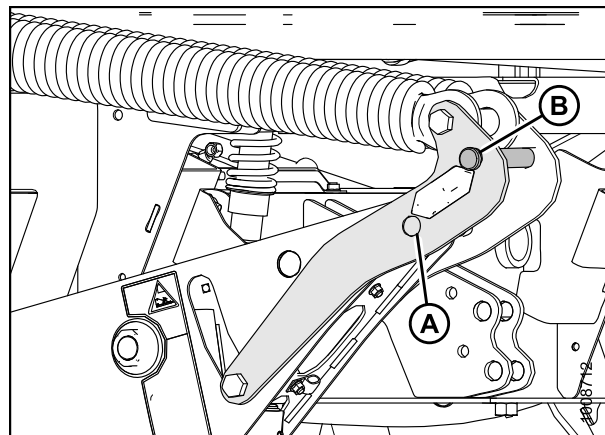


Figure 3.219: Header Float Linkage

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

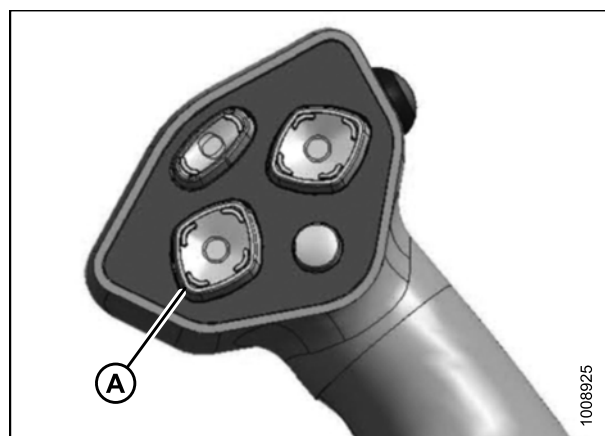


Figure 3.220: GSL

3. Relocate pin (A) in frame linkage as required to raise the center-link (B) until the hook is above the attachment pin on the header.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

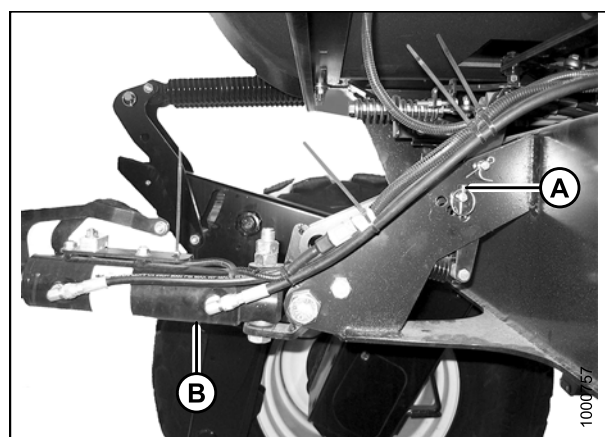


Figure 3.221: Hydraulic Center-Link without Self-Alignment Kit

ASSEMBLING THE WINDROWER

4. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

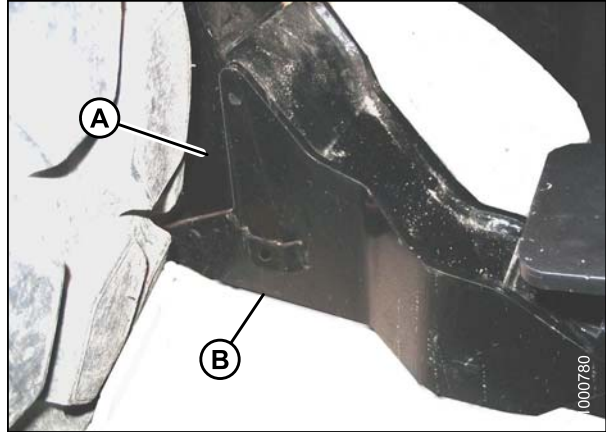


Figure 3.222: Header Boot

5. Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Header tilt up (A) to retract center-link
 - Header tilt down (B) to extend center-link
6. Stop engine and remove key from ignition.

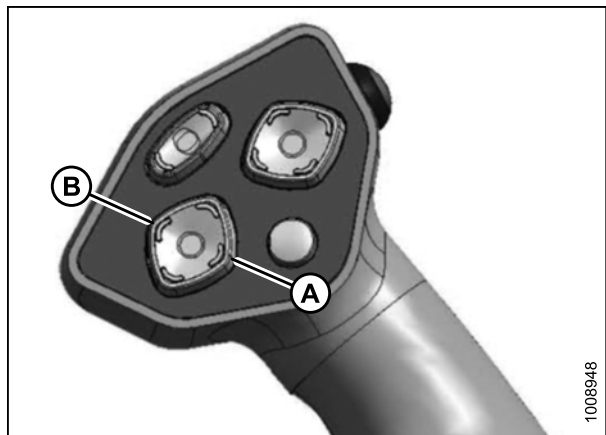


Figure 3.223: GSL

7. Push down on rod end of link cylinder (B) until hook engages and locks onto header pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

8. Check that center-link (A) is locked onto header by pulling upward on rod end (B) of cylinder.

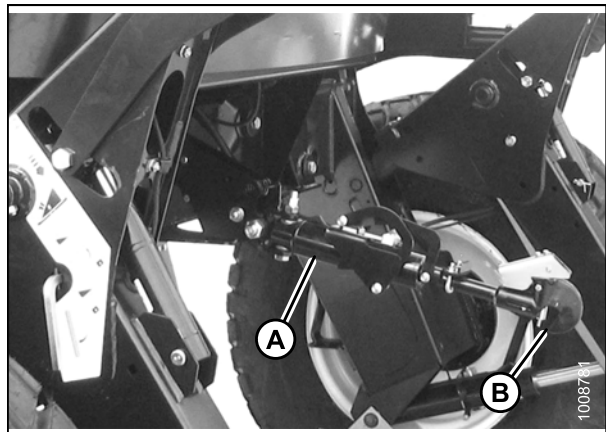


Figure 3.224: Hydraulic Center-Link

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

9. Start the engine.
10. Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- a. Press and hold the header up switch until both cylinders stop moving.
- b. Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.

11. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

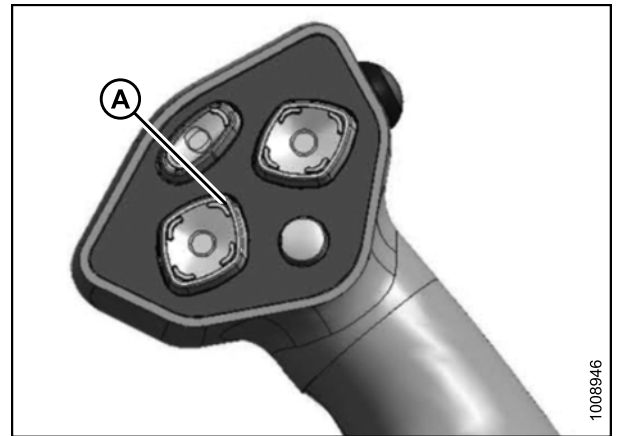


Figure 3.225: GSL

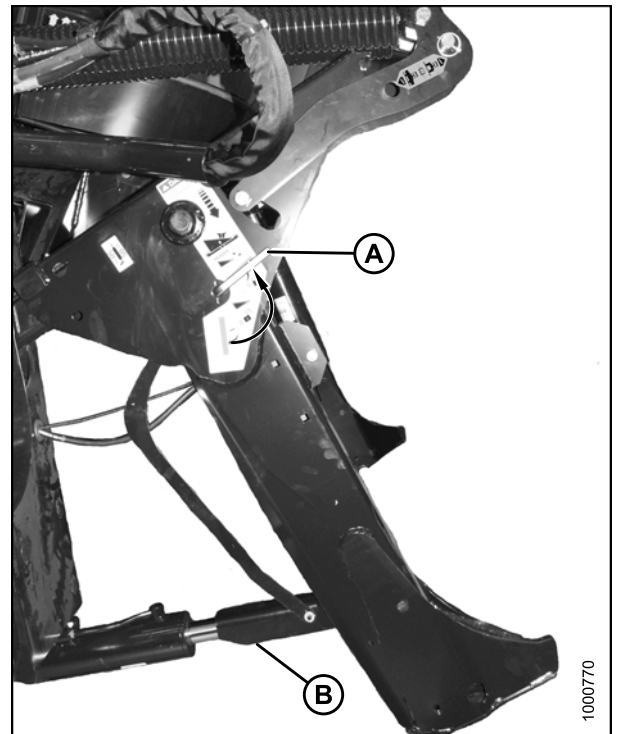


Figure 3.226: Safety Prop

ASSEMBLING THE WINDROWER

12. Install clevis pin (A) through boot and foot and secure with hairpin. Repeat for opposite boot.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

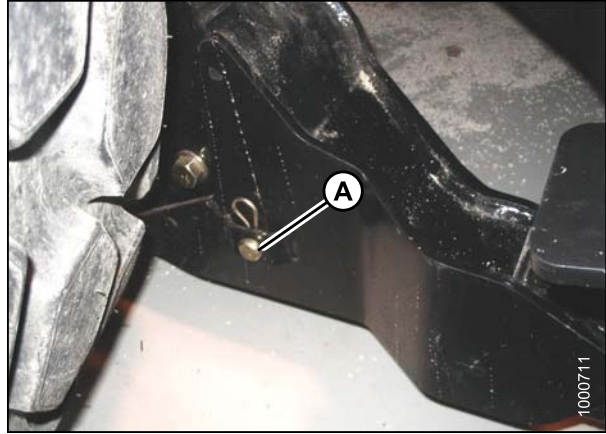


Figure 3.227: Header Boot

13. Remove lynch pin from clevis pin (A) in stand (B).
14. Hold stand (B) and remove pin (A).
15. Move stand (B) to storage position by inverting and relocating onto bracket as shown. Reinsert clevis pin (A) and secure with lynch pin.

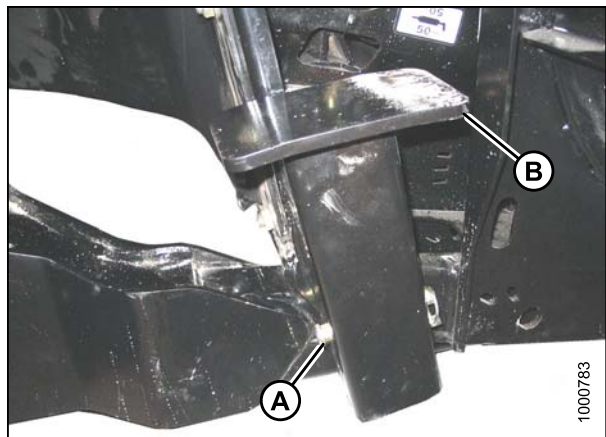


Figure 3.228: Header Stand

16. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

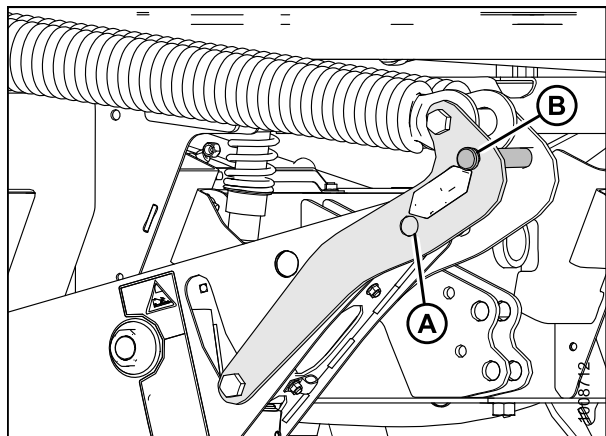


Figure 3.229: Header Float Linkage

ASSEMBLING THE WINDROWER

17. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
18. Repeat for opposite safety prop.

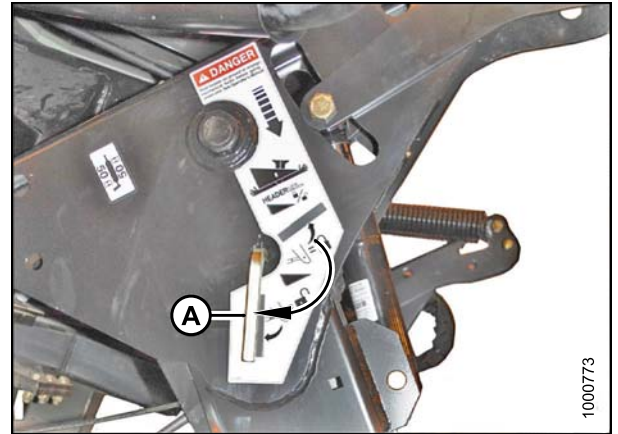


Figure 3.230: Safety Prop

CAUTION

Check to be sure all bystanders have cleared the area.

19. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
20. Stop engine and remove key from ignition.

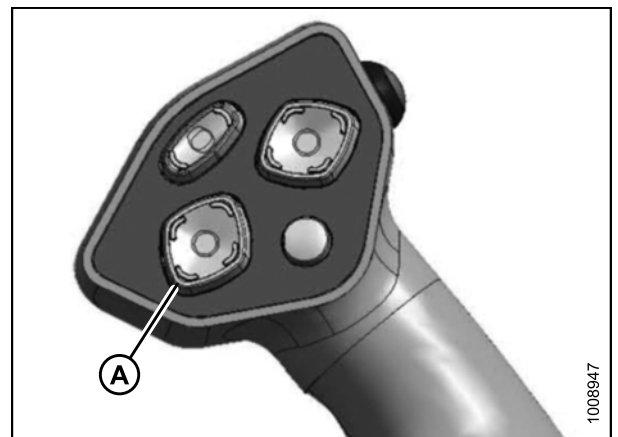


Figure 3.231: GSL

21. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the auger header operator's manual.

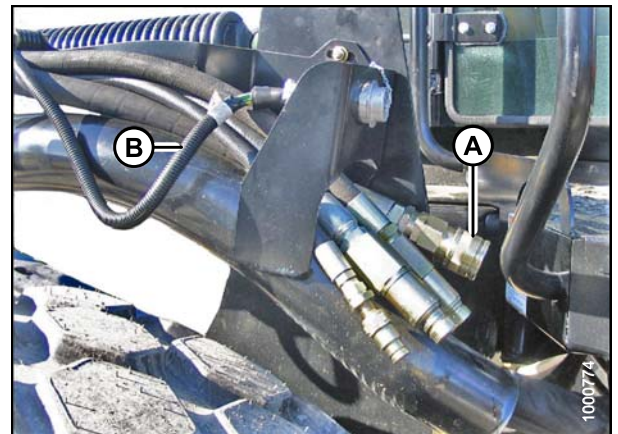


Figure 3.232: Header Drive Hoses and Harness

ASSEMBLING THE WINDROWER

Attaching an A-Series Header: Mechanical Center-Link

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (A) from clevis pin (B) and remove clevis pin from the header boots (C) on both sides of the header.

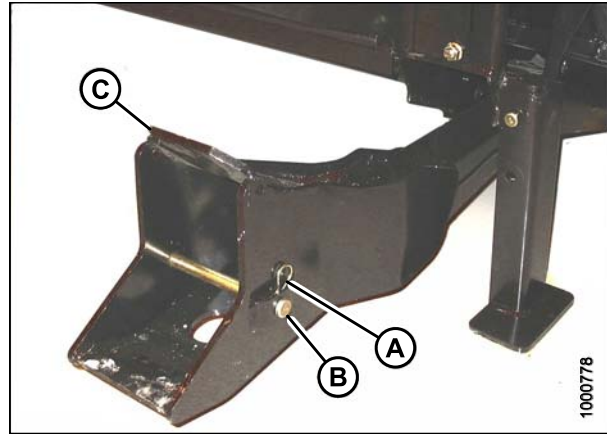


Figure 3.233: Header Boot

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

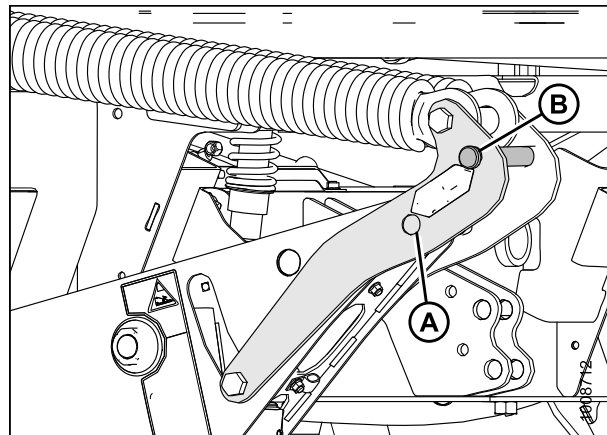


Figure 3.234: Header Float Linkage

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

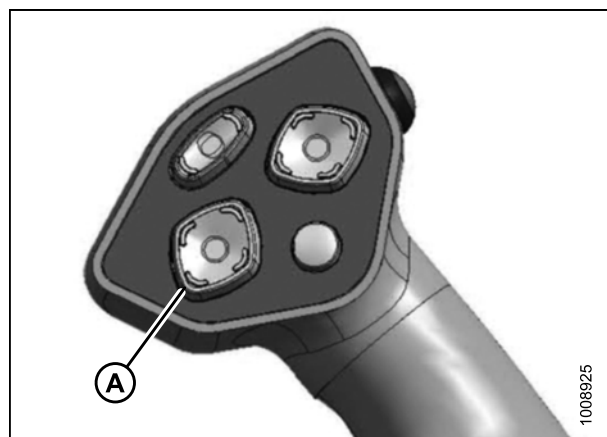


Figure 3.235: GSL

ASSEMBLING THE WINDROWER

3. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

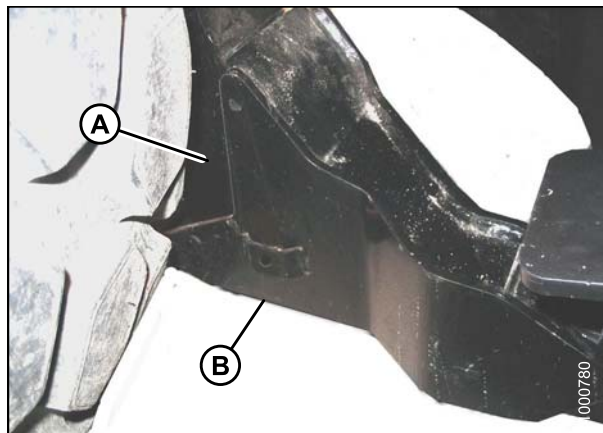


Figure 3.236: Header Boot

4. Stop engine and remove key from ignition.
5. Loosen nut (A) and rotate barrel (B) to adjust length until the link is aligned with the header bracket.
6. Install clevis pin (C) and secure with cotter pin (D).
7. Adjust length of link to achieve proper header angle by rotating barrel (B). Tighten nut (A) against barrel (a slight tap with a hammer is sufficient).

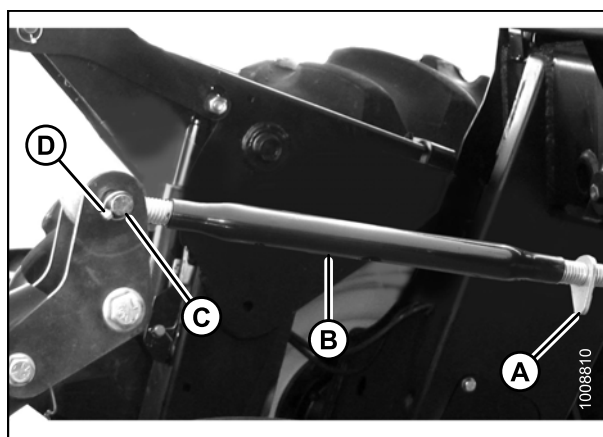


Figure 3.237: Mechanical Center-Link

CAUTION

Check to be sure all bystanders have cleared the area.

8. Start the engine.
9. Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- a. Press and hold the header up switch until both cylinders stop moving.
- b. Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.



Figure 3.238: GSL

ASSEMBLING THE WINDROWER

10. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

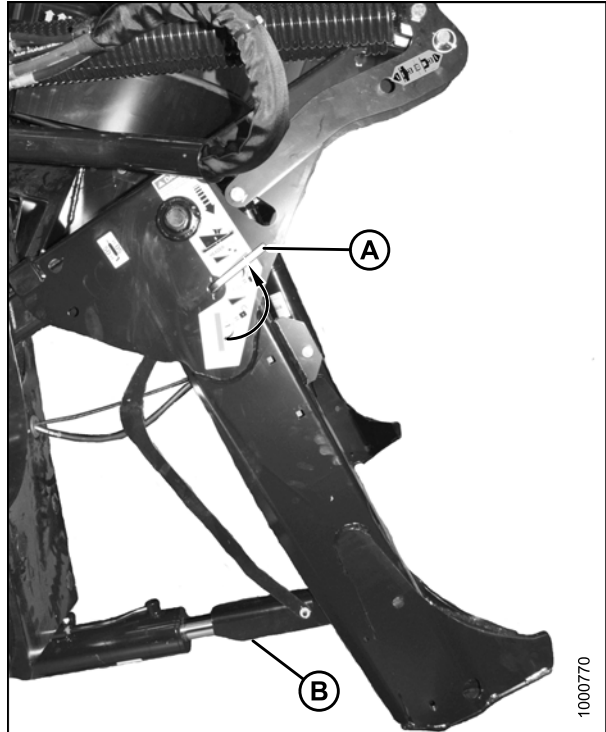


Figure 3.239: Safety Prop

11. Install clevis pin (A) through boot and foot and secure with hairpin. Repeat for opposite boot.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

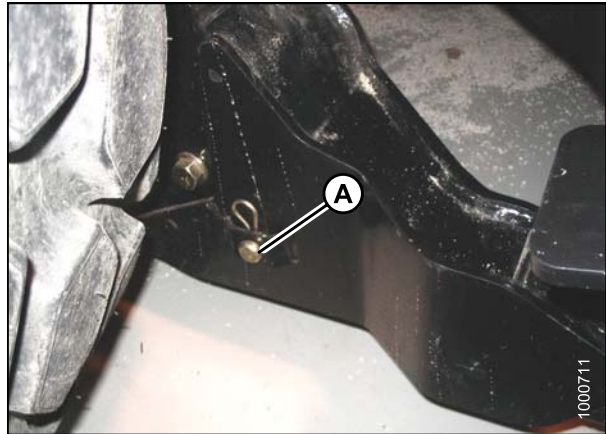


Figure 3.240: Header Boot

ASSEMBLING THE WINDROWER

12. Remove lynch pin from clevis pin (A) in stand (B).
13. Hold stand (B) and remove pin (A).
14. Move stand (B) to storage position by inverting and relocating onto bracket as shown. Reinsert clevis pin (A) and secure with lynch pin.

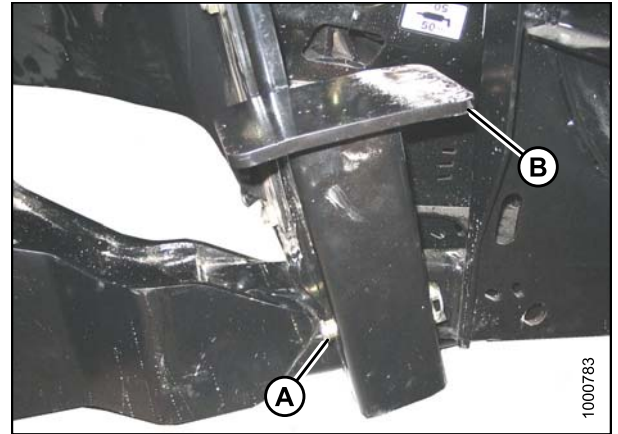


Figure 3.241: Header Stand

15. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

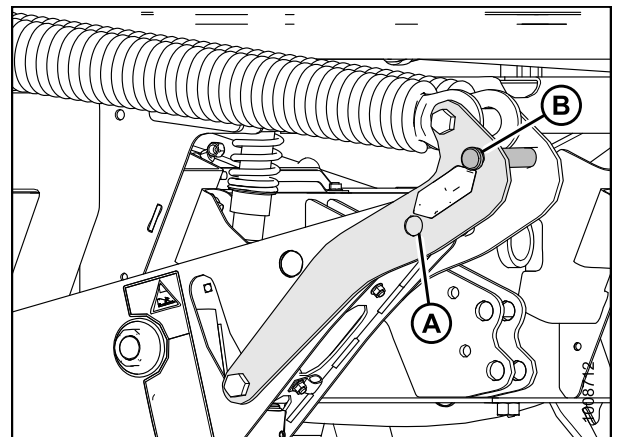


Figure 3.242: Header Float Linkage

16. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
17. Repeat for opposite safety prop.

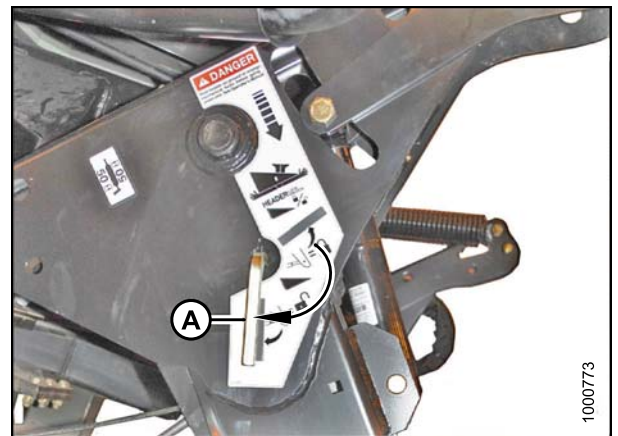


Figure 3.243: Safety Prop

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

18. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
19. Stop engine and remove key from ignition.

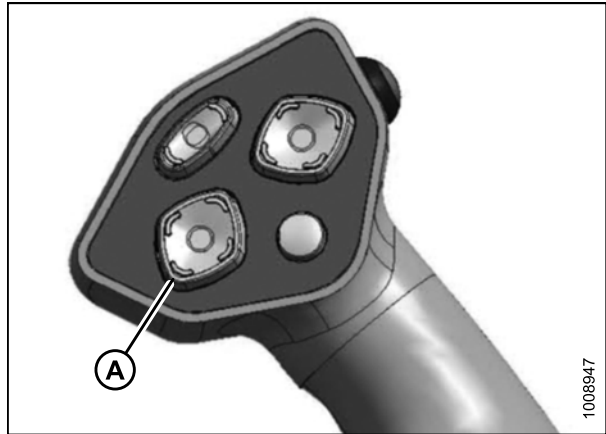


Figure 3.244: GSL

20. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the draper header operator's manual.

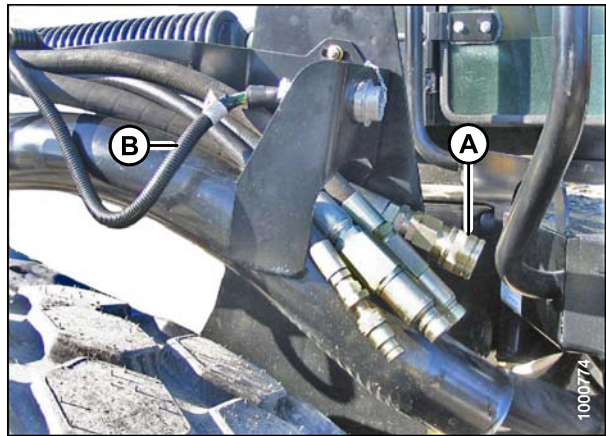


Figure 3.245: Header Drive Hoses and Harness

3.21.3 Attaching an R-Series Header

R-Series Rotary Disc Headers (R80 and R85) can be attached to an M155 or M205 Self-Propelled Windrower. The M105 Self-Propelled Windrower can **NOT** operate an R-Series header. For attachment procedure, refer to the section for your specific windrower model.

M155 Self-Propelled Windrower

The M155 Self-Propelled Windrower can operate 13-foot R80 and R85 Rotary Disc Headers **only**. These headers are shipped without the motor or hoses installed, so a separate motor, hose bundle, and hydraulic valve kit is required to operate the header.

If necessary, obtain the following kits and install them in accordance with the instructions supplied with the kits.

Table 3.2 Rotary Disc Header Bundles

Kit Description	Kit Number
Hydraulic Drive kit	MD #B5510
Hydraulic Valve kit	MD #B4657

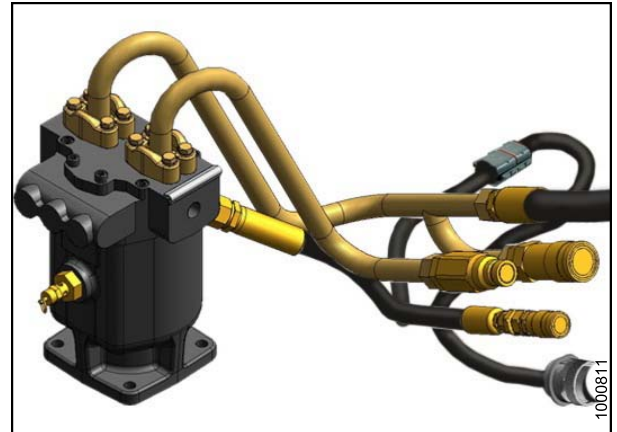


Figure 3.246: M155 Hydraulic Drive Kit (MD #B5510)

Refer to the following instructions based on the type of center-link installed on your windrower:

- [Attaching an R-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 130](#)
- [Attaching an R-Series Header: Hydraulic Center-Link without Self-Alignment, page 135](#)
- [Attaching an R-Series Header: Mechanical Center-Link, page 140](#)

M205 Self-Propelled Windrower

The M205 Self-Propelled Windrower is factory-equipped with hydraulics and connections to run the R-Series Rotary Disc Headers.

The R85 16-foot header is factory-equipped with the hydraulic connections for attachment to the windrower.

The R85 13-foot header and the R80 13- and 16-foot headers are shipped without the motor and hoses installed and the installation of a separate motor and hose bundle is necessary.

If required, obtain Hydraulic Drive kit (MD #B5456) and install it in accordance with the instructions supplied with the kit.

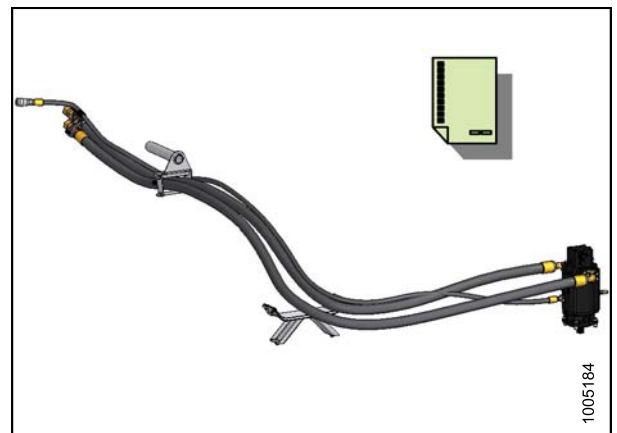


Figure 3.247: M205 Hydraulic Drive Kit (MD #B5456)

Refer to the following instructions based on the type of center-link installed on your windrower:

- [Attaching an R-Series Header: Hydraulic Center-Link with Optional Self-Alignment, page 130](#)
- [Attaching an R-Series Header: Hydraulic Center-Link without Self-Alignment, page 135](#)

ASSEMBLING THE WINDROWER

Attaching an R-Series Header: Hydraulic Center-Link with Optional Self-Alignment

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (B) from clevis pin (A) and remove clevis pin from the header boots (C) on both sides of the header.

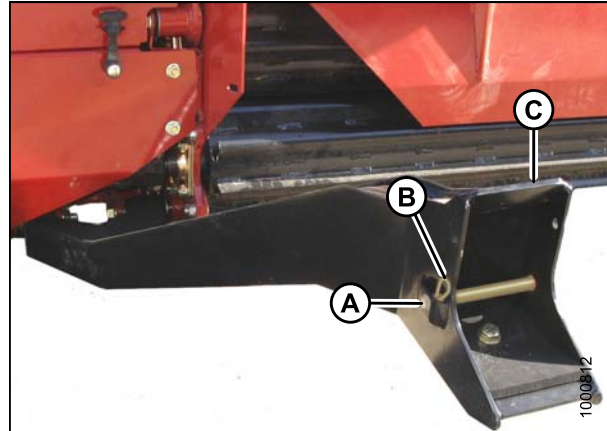


Figure 3.248: Header Boot

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

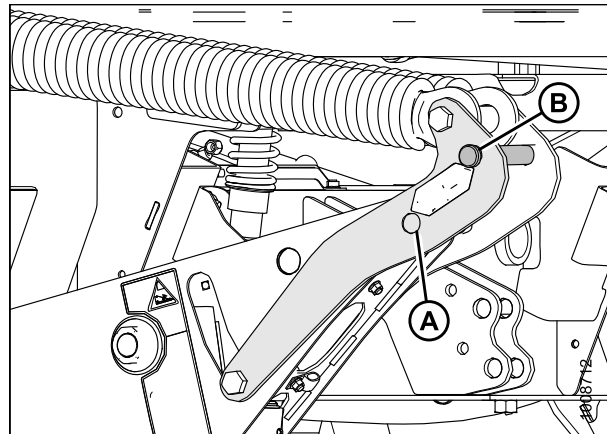


Figure 3.249: Header Float Linkage

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

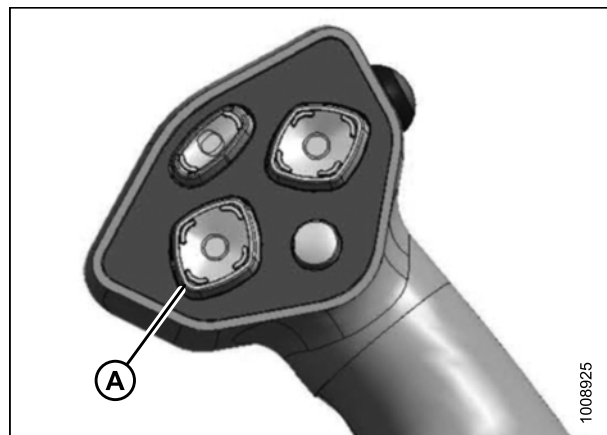


Figure 3.250: GSL

ASSEMBLING THE WINDROWER

3. Activate the reel up switch (A) on the GSL to raise the center-link until the hook is above the attachment pin on the header.

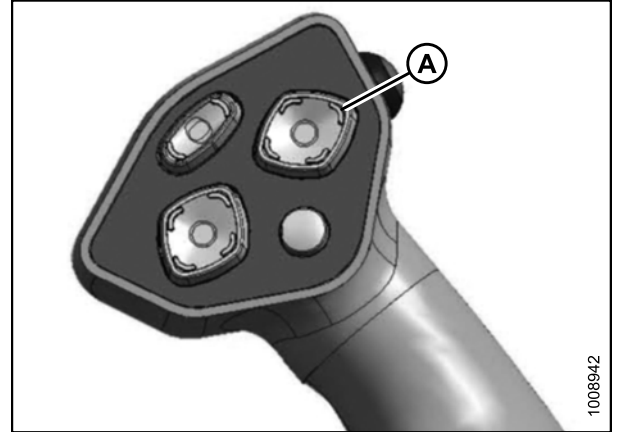


Figure 3.251: GSL

4. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

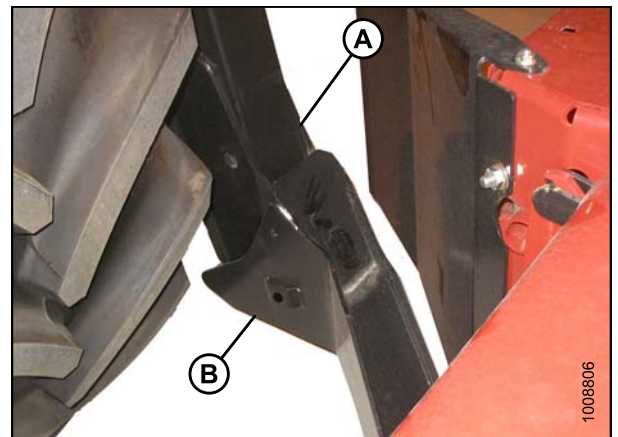


Figure 3.252: Header Boot

5. Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Reel up (A) to raise the center-link
 - Reel down (B) to lower the center-link
 - Header tilt up (C) to retract the center-link
 - Header tilt down (D) to extend the center-link

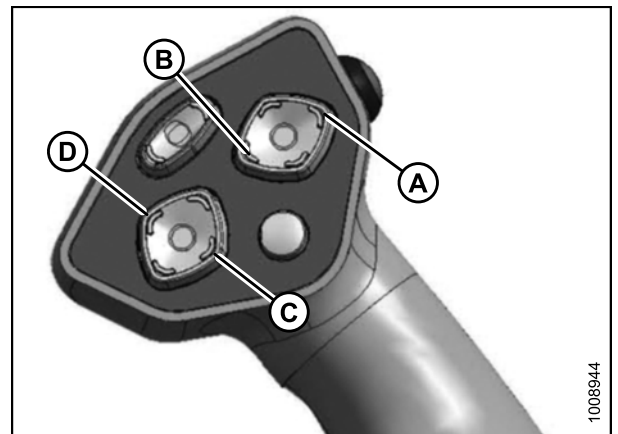


Figure 3.253: GSL

ASSEMBLING THE WINDROWER

- Adjust position of the center-link cylinder (A) with the reel up and reel down switches on the GSL until the hook is positioned above the header attachment pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

- Lower center-link (A) onto the header with reel down switch until it locks into position (hook release [B] is down).
- Check that center-link is locked onto header by pressing the reel up switch on the GSL.

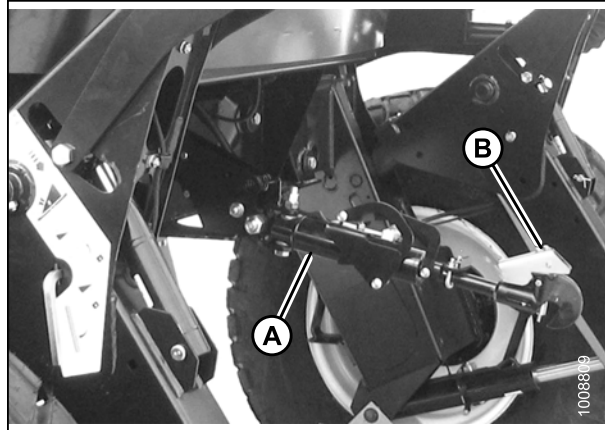


Figure 3.254: Hydraulic Center-Link

CAUTION

Check to be sure all bystanders have cleared the area.

- Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- Press and hold the header up switch until both cylinders stop moving.
- Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.

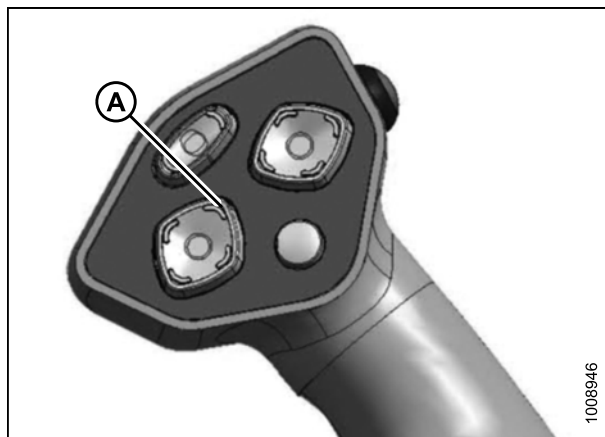


Figure 3.255: GSL

ASSEMBLING THE WINDROWER

10. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

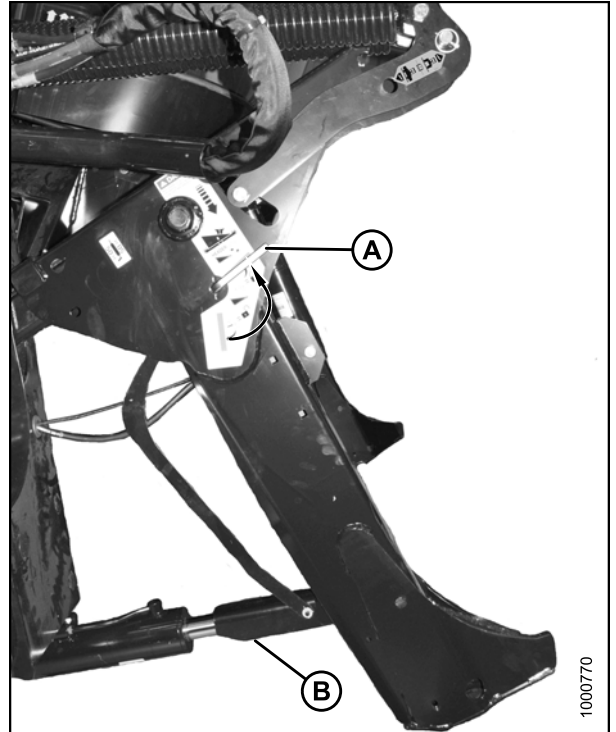


Figure 3.256: Safety Prop

11. Install clevis pin (A) through boot and foot and secure with hairpin (B). Repeat for opposite side.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

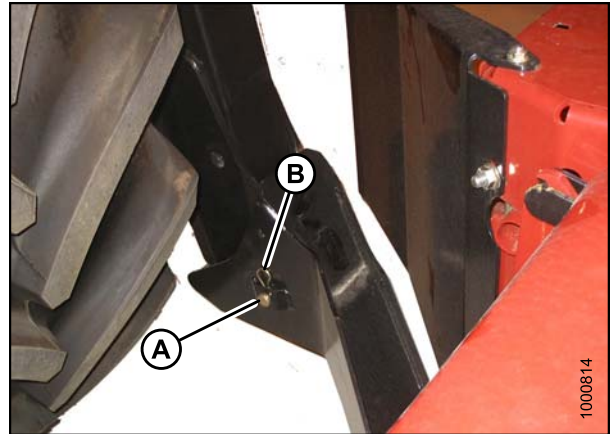


Figure 3.257: Header Boot

ASSEMBLING THE WINDROWER

12. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

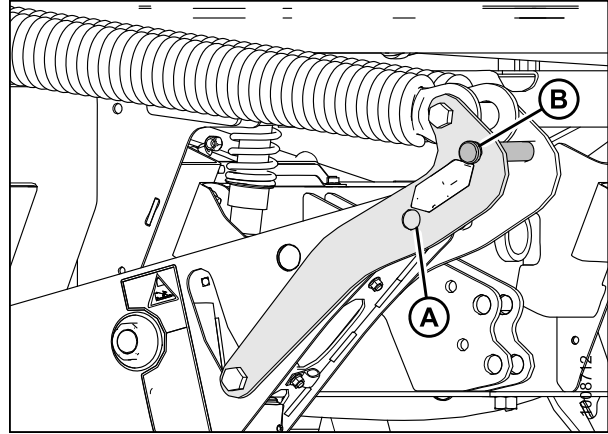


Figure 3.258: Header Float Linkage

13. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
14. Repeat for opposite safety prop.

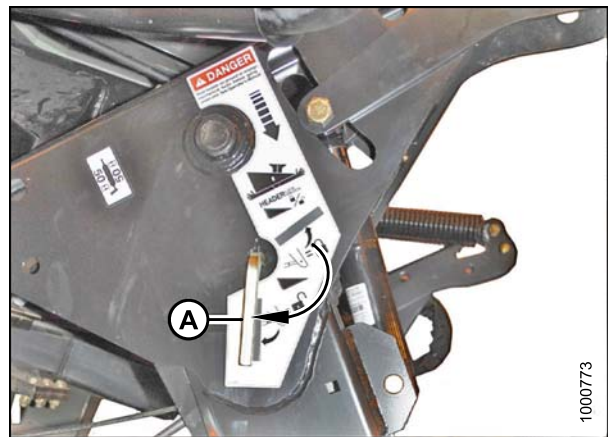


Figure 3.259: Safety Prop

CAUTION

Check to be sure all bystanders have cleared the area.

15. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
16. Stop engine and remove key from ignition.

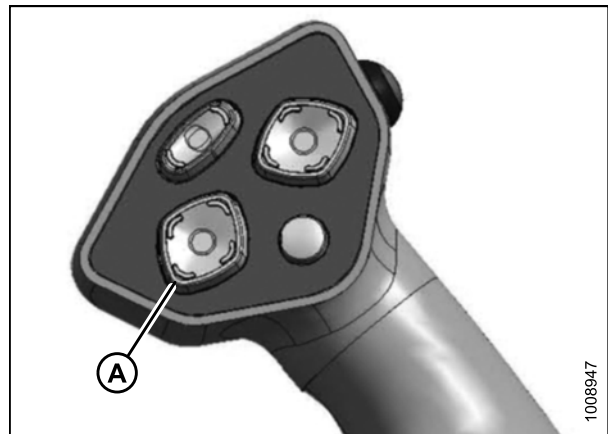


Figure 3.260: GSL

ASSEMBLING THE WINDROWER

17. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the rotary disc header operator's manual.

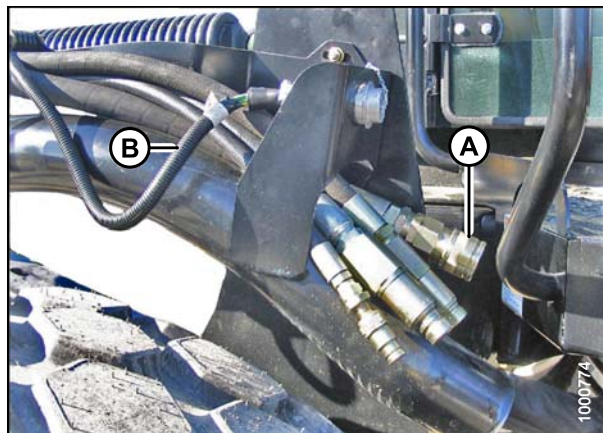


Figure 3.261: Header Drive Hoses and Harness

Attaching an R-Series Header: Hydraulic Center-Link without Self-Alignment

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (B) from clevis pin (A) and remove clevis pin from the header boots (C) on both sides of the header.

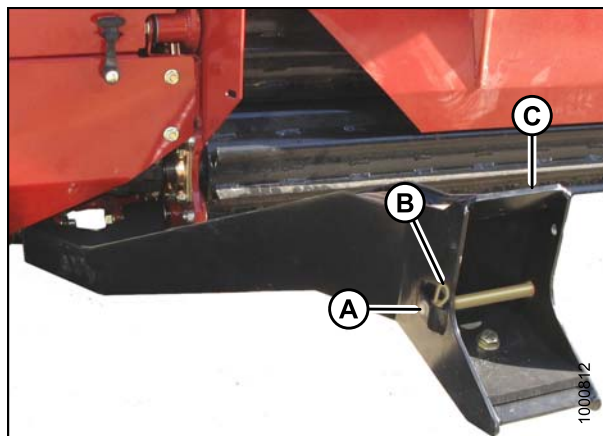


Figure 3.262: Header Boot

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

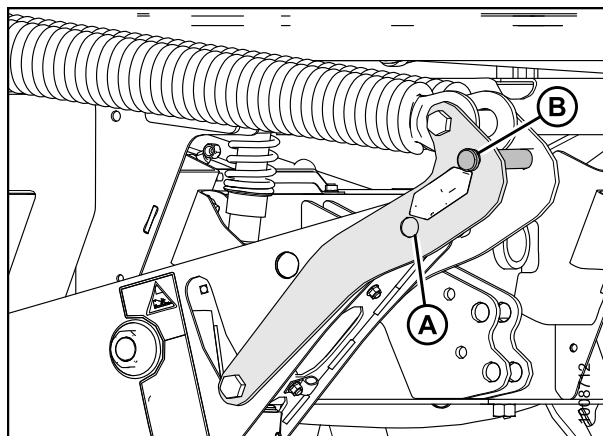


Figure 3.263: Header Float Linkage

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

3. Relocate pin (A) in frame linkage as required to raise the center-link (B) until the hook is above the attachment pin on the header.

IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header for hookup.

4. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

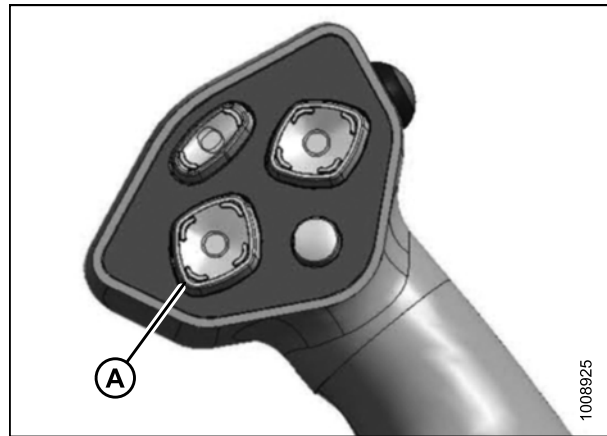


Figure 3.264: GSL

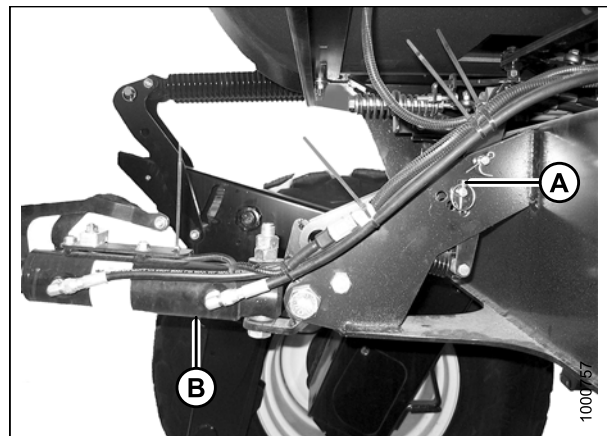


Figure 3.265: Hydraulic Center-Link without Self-Alignment Kit

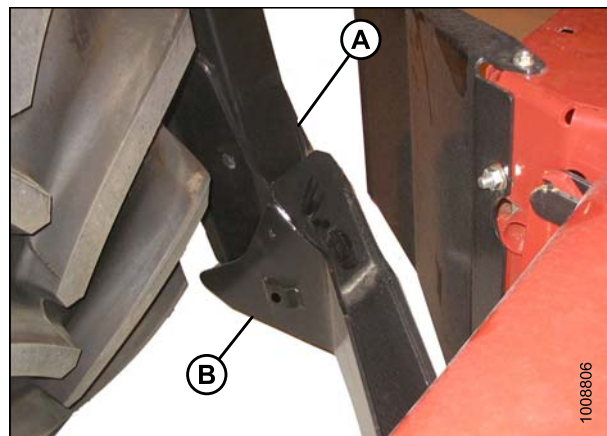


Figure 3.266: Header Boot

ASSEMBLING THE WINDROWER

- Use the following GSL functions to position the center-link hook above the header attachment pin:
 - Header tilt up (A) to retract the center-link
 - Header tilt down (B) to extend the center-link
- Stop engine and remove key from ignition.

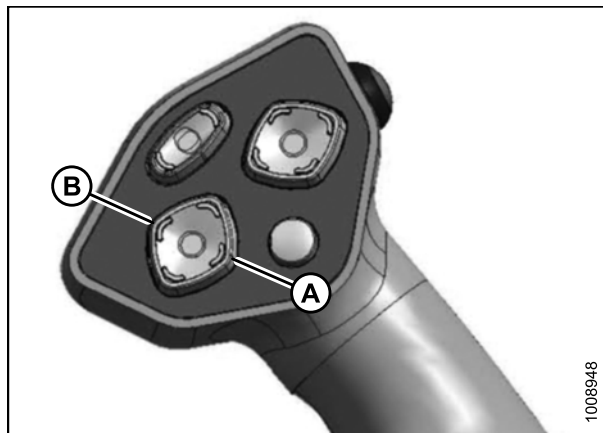


Figure 3.267: GSL

- Push down on rod end of link cylinder (B) until hook engages and locks onto header pin.

IMPORTANT:

Hook release must be down to enable self-locking mechanism. If the release is open (up), manually push it down after hook engages header pin.

- Check that center-link (A) is locked onto header by pulling upward on rod end (B) of cylinder.

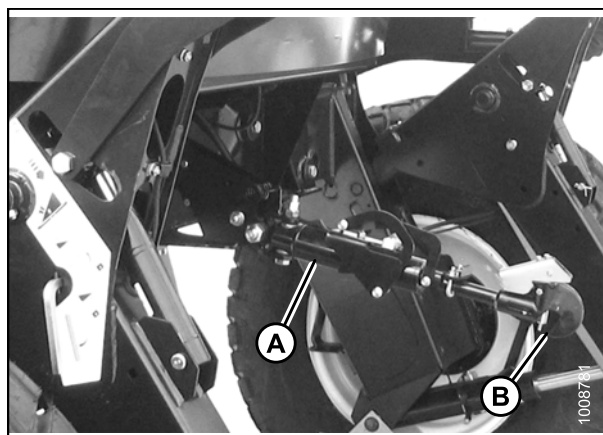


Figure 3.268: Hydraulic Center-Link

CAUTION

Check to be sure all bystanders have cleared the area.

- Start the engine.
- Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- Press and hold the header up switch until both cylinders stop moving.
- Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.



Figure 3.269: GSL

ASSEMBLING THE WINDROWER

11. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

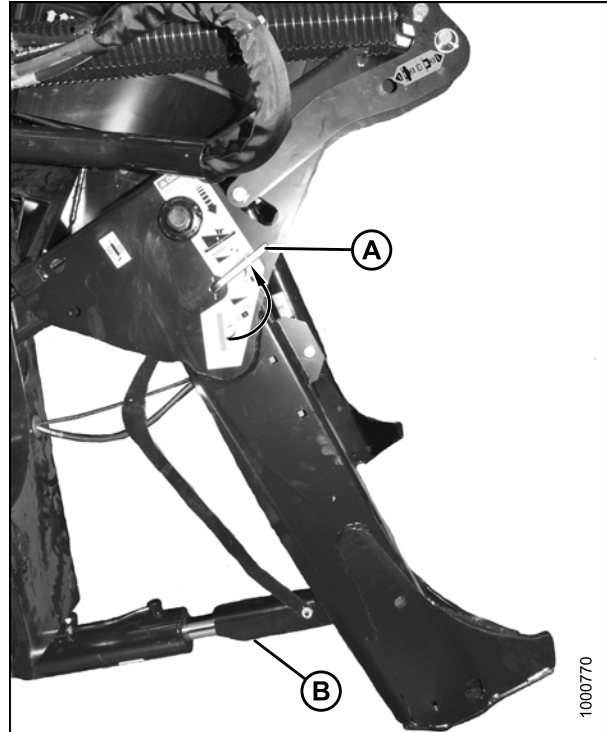


Figure 3.270: Safety Prop

12. Install clevis pin (A) through boot and foot and secure with hairpin (B). Repeat for opposite side.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

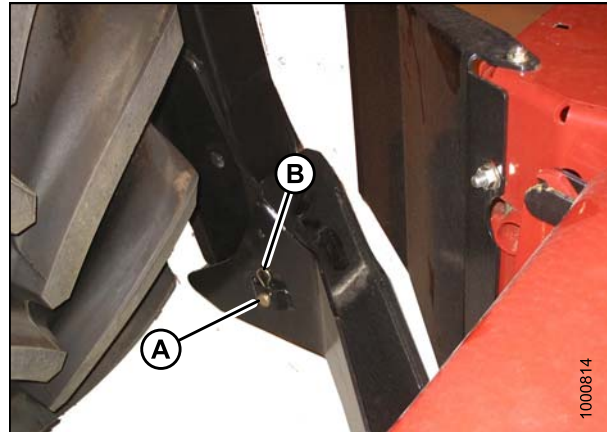


Figure 3.271: Header Boot

ASSEMBLING THE WINDROWER

13. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

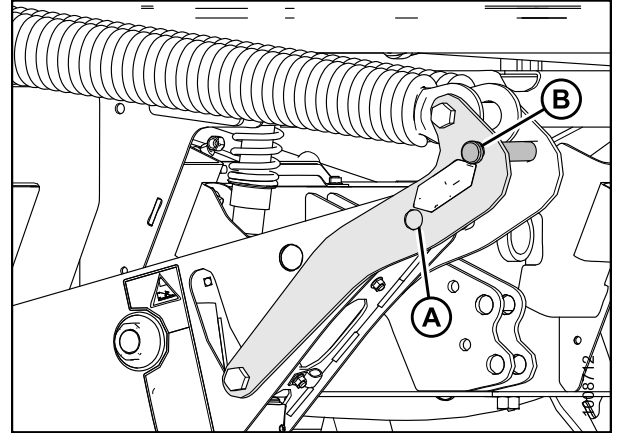


Figure 3.272: Header Float Linkage

14. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
15. Repeat for opposite safety prop.

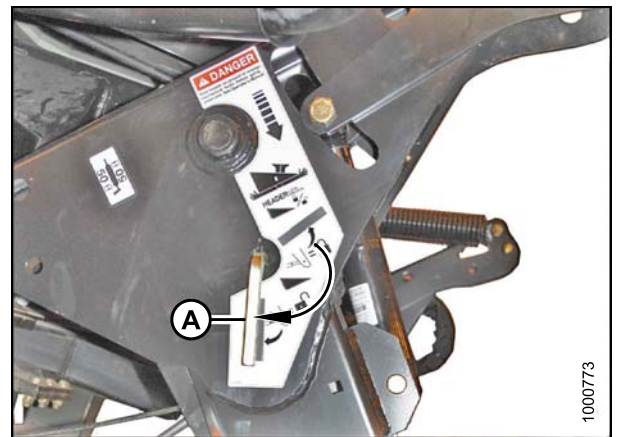


Figure 3.273: Safety Prop

CAUTION

Check to be sure all bystanders have cleared the area.

16. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
17. Stop engine and remove key from ignition.

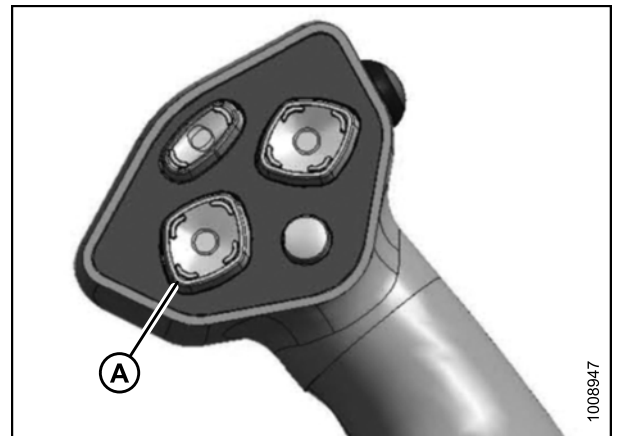


Figure 3.274: GSL

ASSEMBLING THE WINDROWER

18. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the rotary disc header operator's manual.

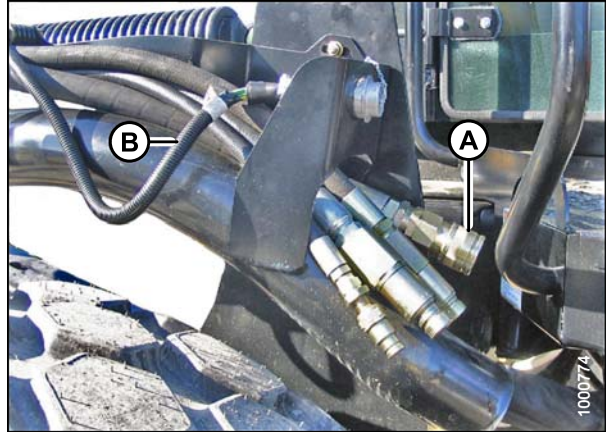


Figure 3.275: Header Drive Hoses and Harness

Attaching an R-Series Header: Mechanical Center-Link

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove hairpin (B) from clevis pin (A) and remove clevis pin from the header boots (C) on both sides of the header.

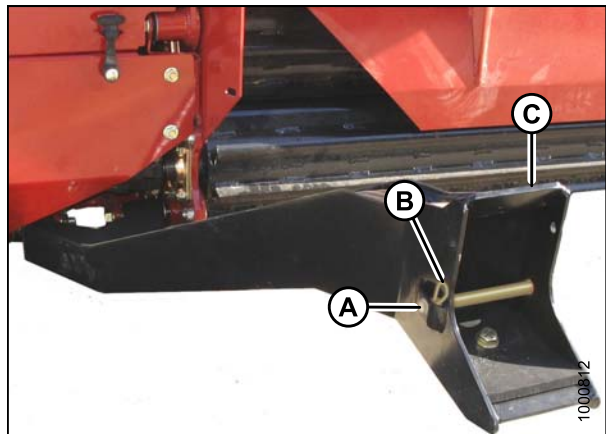


Figure 3.276: Header Boot

CAUTION

To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to the windrower, ensure the float engagement pin is installed in storage position (B) and NOT in engaged position (A).

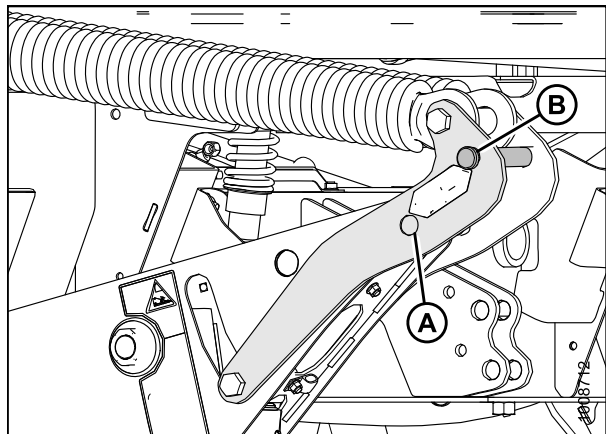


Figure 3.277: Header Float Linkage

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Remove protective cover from exhaust stack prior to starting engine.

2. Start the engine and activate the header down button (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

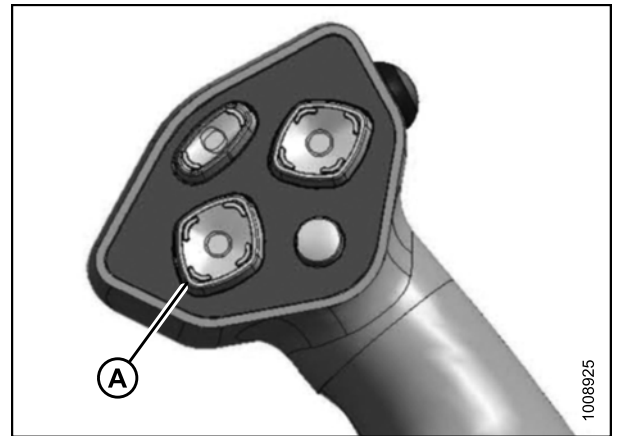


Figure 3.278: GSL

3. Drive the windrower slowly forward until the windrower feet (A) enter the header boots (B). Continue driving slowly forward until the feet engage the boots and the header nudges forward.

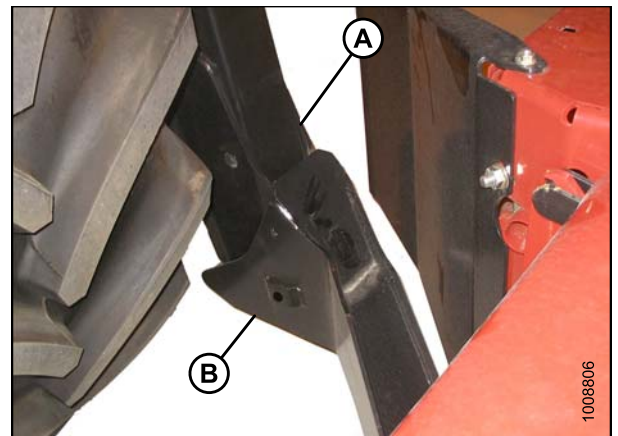


Figure 3.279: Header Boot

4. Stop engine and remove key from ignition.
5. Loosen nut (A) and rotate barrel (B) to adjust length until the link is aligned with the header bracket.
6. Install clevis pin (C) and secure with cotter pin (D).
7. Adjust length of link to achieve proper header angle by rotating barrel (B). Tighten nut (A) against barrel (a slight tap with a hammer is sufficient).

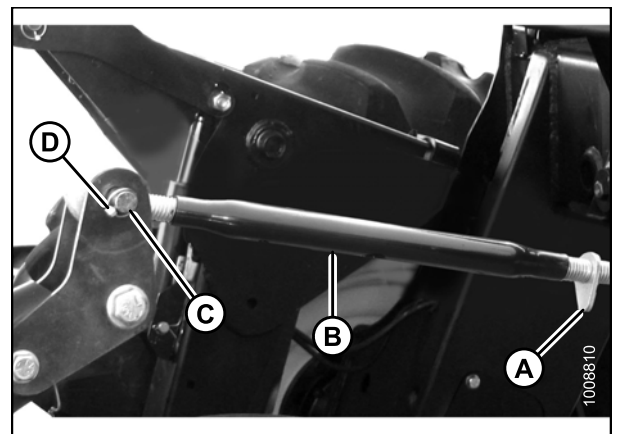


Figure 3.280: Mechanical Center-Link

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

8. Start the engine.
9. Press the header up switch (A) to raise header to maximum height.

NOTE:

If one end of the header does **NOT** fully raise, rephase the lift cylinders as follows:

- a. Press and hold the header up switch until both cylinders stop moving.
- b. Continue to hold the switch for 3–4 seconds. Cylinders are now phased.

NOTE:

It may be necessary to repeat this procedure if there is air in the system.

10. Engage safety props on both lift cylinders as follows:
 - a. Stop engine and remove key from ignition.
 - b. Pull lever (A) and rotate towards the header to release and lower safety prop (B) onto the lift cylinder.
 - c. Repeat for opposite lift cylinder.

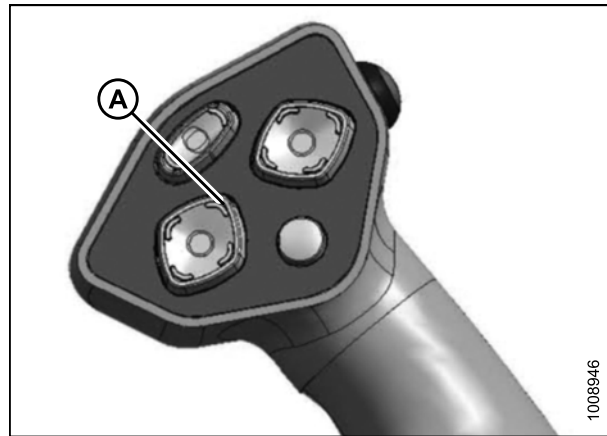


Figure 3.281: GSL

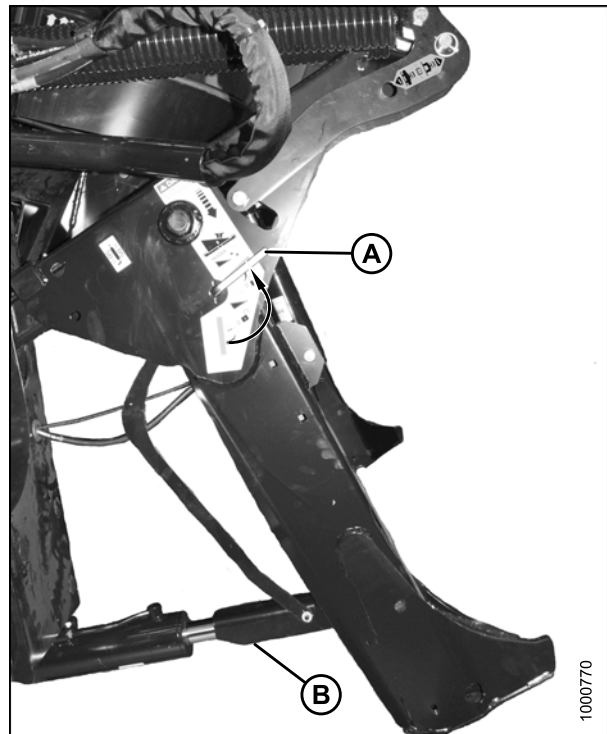


Figure 3.282: Safety Prop

ASSEMBLING THE WINDROWER

11. Install clevis pin (A) through boot and foot and secure with hairpin (B). Repeat for opposite side.

IMPORTANT:

Ensure clevis pin (A) is fully inserted and hairpin is installed behind bracket.

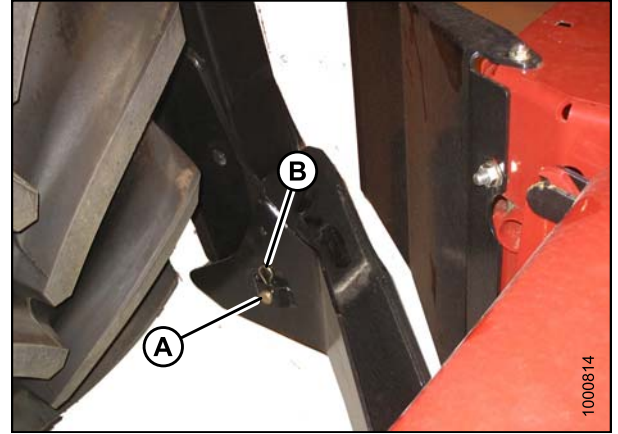


Figure 3.283: Header Boot

12. Remove clevis pin from storage position (B) in linkage and insert into hole (A) to engage float springs. Secure with hairpin.

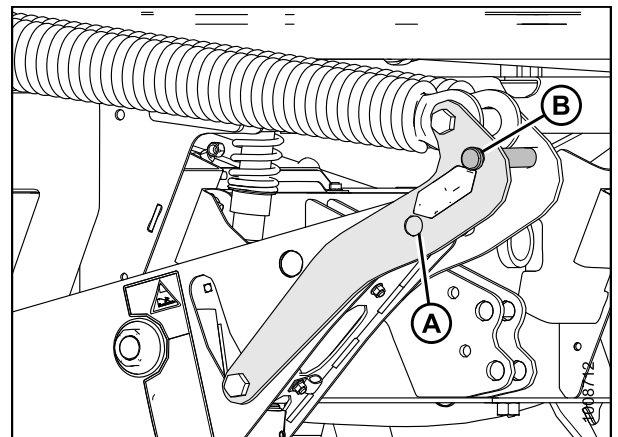


Figure 3.284: Header Float Linkage

13. Disengage safety prop by turning lever (A) downwards to release and lower stop until lever locks into vertical position.
14. Repeat for opposite safety prop.

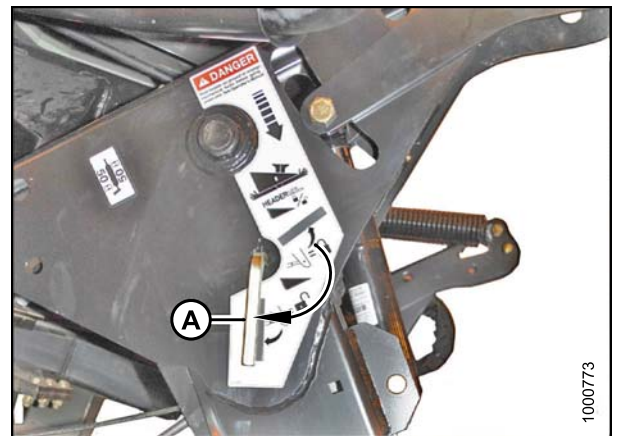


Figure 3.285: Safety Prop

ASSEMBLING THE WINDROWER

CAUTION

Check to be sure all bystanders have cleared the area.

15. Start the engine and activate the header down switch (A) on the GSL to fully lower the header.
16. Stop engine and remove key from ignition.

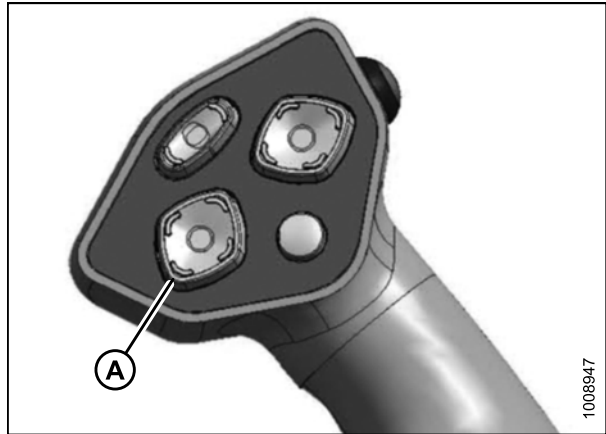


Figure 3.286: GSL

17. Connect header drive hoses (A) and electrical harness (B) to header. Refer to the rotary disc header operator's manual.

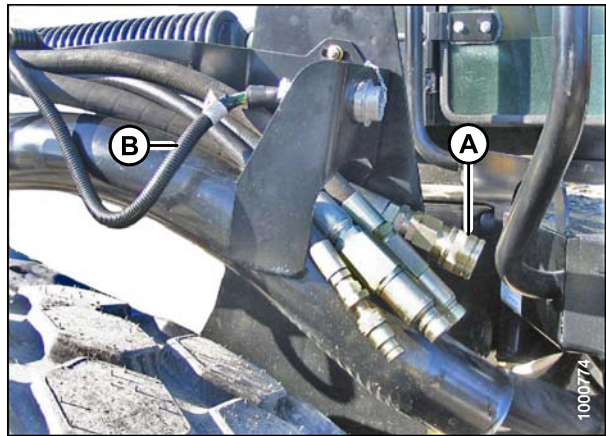


Figure 3.287: Header Drive Hoses and Harness

3.22 Lubricating the Windrower

Table 3.3 Recommended Lubricant

Specification	Description	Use
SAE Multi-Purpose	High temperature, extreme pressure (EP2) performance with 1% max molybdenum disulphide (NLGI Grade 2) lithium base.	As required unless otherwise specified.

3.22.1 Lubrication Procedure

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
2. Inject grease through fitting with grease gun until grease overflows fitting (except where noted).
3. Leave excess grease on fitting to keep out dirt.
4. Replace any loose or broken fittings immediately.
5. Remove and thoroughly clean any fitting that will not take grease. Also clean lubricant passageway. Replace fitting if necessary.

3.22.2 Lubrication Points

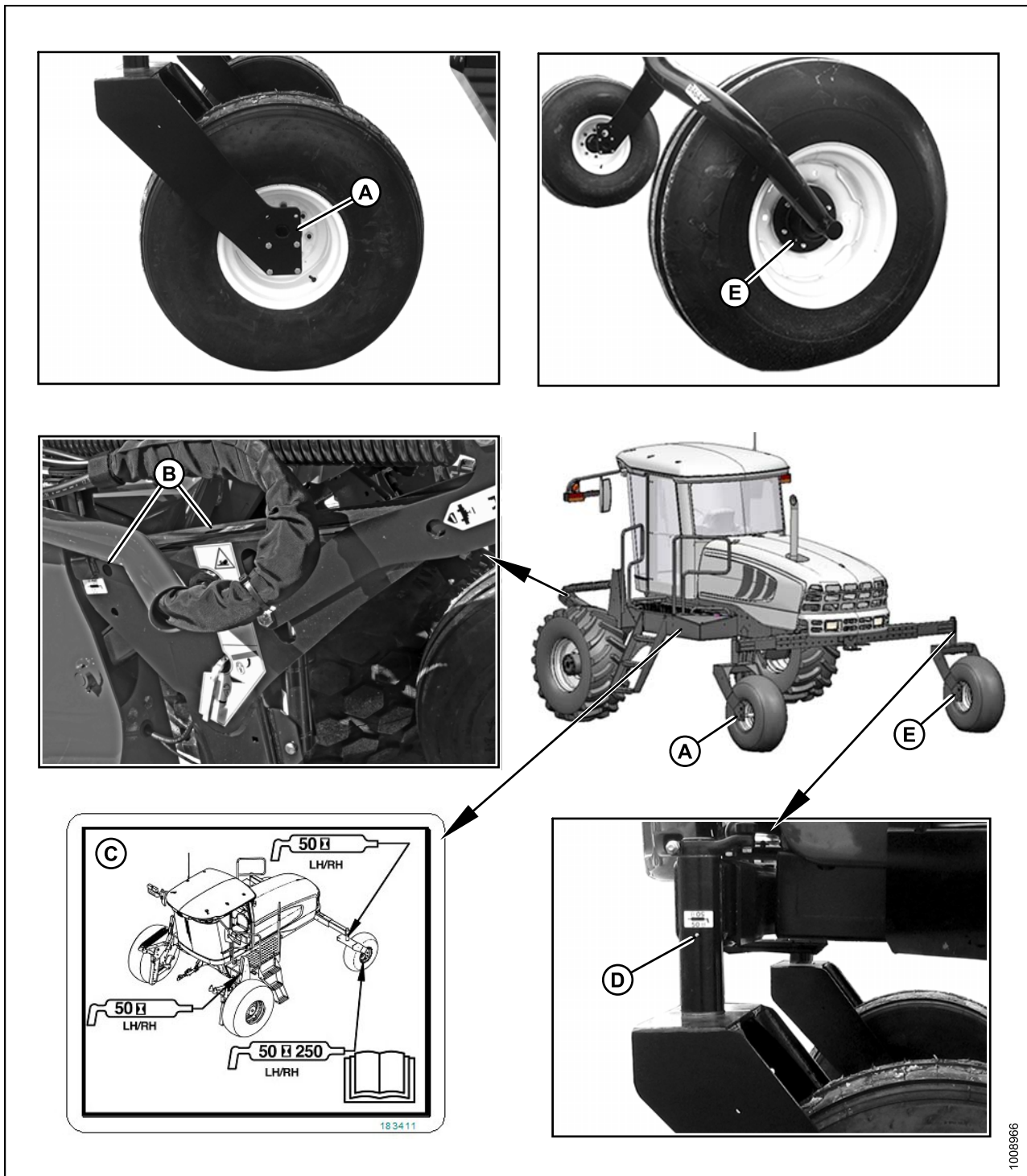


Figure 3.288: Lubrication Points

A - Forked Caster Wheel Bearing (2 Places) (Outer – Both Wheels)

B - Top Link (2 Places) (Both Sides)

C - Lubrication Decal (MD #183411)

D - Caster Pivot (Both Sides)

E - Forked/Formed Caster Wheel Bearing (2 Places) (Inner – Both Wheels) (50 Hrs/250 Hrs)

4 Cab Display Module (CDM)

Although the procedures in this manual are intended to be followed in the order in which they are listed, the sections in the “Cab Display Module (CDM)” chapter can be referred to in any order according to your specific requirements.

4.1 Cab Display Module (CDM) Programming



Figure 4.1: M105 CDM

A - Side Display
D - Menu Item Scroll Forward

B - Main Display
E - Menu Item Scroll Backward

C - Select Switch
F - Program Switch

CAB DISPLAY MODULE (CDM)



Figure 4.2: M155/M205 CDM

A - Side Display

D - Menu Item Scroll Forward

B - Main Display

E - Menu Item Scroll Backward

C - Select Switch

F - Program Switch

Side Display: Displays software revision status.

- Upper Line – C### (CDM)
- Lower Line – MX### (WCM)

Main Display: Displays menu item and selection³.

- Upper Line – Menu Item
- Lower Line – Selection

Select Switch: Places monitor into Program Mode with program switch. Press to accept menu item and advance to next item.

Menu Item Scroll Forward: Displays value under menu item.

- Push to scroll forward
- Hold down for fast scroll⁴

Menu Item Scroll Backward: Displays value under menu item.

- Push to scroll backward
- Hold down for fast scroll⁴

Program Switch: Places monitor into program mode. Press while pressing select switch.

3. The current selection is flashing.

4. Fast scroll applies only when changing KNIFE SPEED, OVERLOAD PRESSURE, and TIRE SIZE.

CAB DISPLAY MODULE (CDM)

NOTE:

The following menus are available when ignition key is set to RUN:

- WINDROWER SETUP
- CAB DISPLAY SETUP
- DIAGNOSTIC MODE

The CALIBRATE SENSORS menu is available only when engine is running.

4.2 Cab Display Options

The display and sound features of the cab display module (CDM) can be adjusted to suit each particular Operator.

NOTE:

The procedures listed in this section are current for cab display module (CDM) software version C315 C417 and windrower control module (WCM) X109M221. The WCM is supplied pre-loaded with the latest released version of the operating software. Any subsequent updates will be made available via internet download from the MacDon web site: macdondealers.com.

NOTE:

Screens may appear differently if running newer or older versions of software, and not all features are available for every machine.

CAB DISPLAY MODULE (CDM)

4.2.1 Setting the Cab Display Language

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.

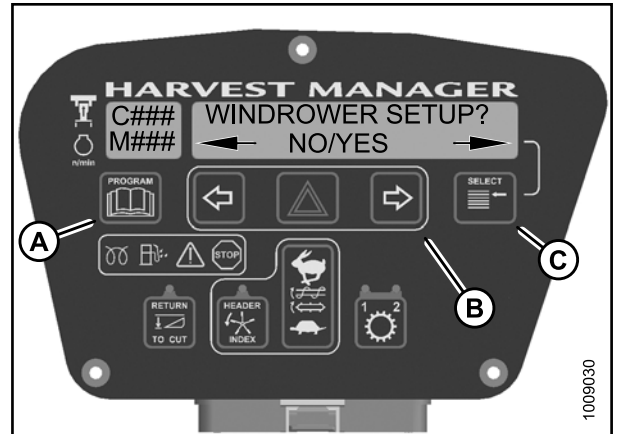


Figure 4.3: M105 CDM Programming Buttons

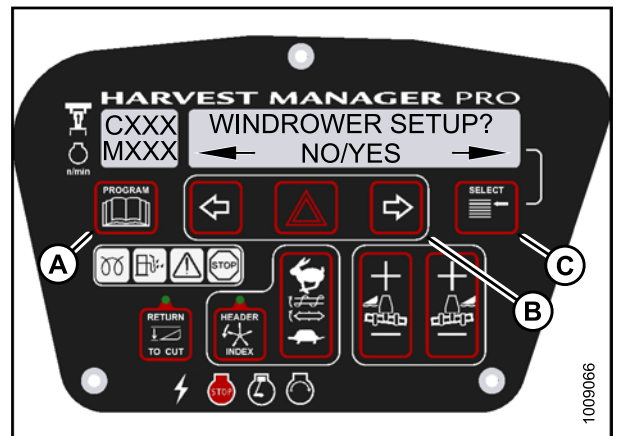


Figure 4.4: M155 CDM Programming Buttons

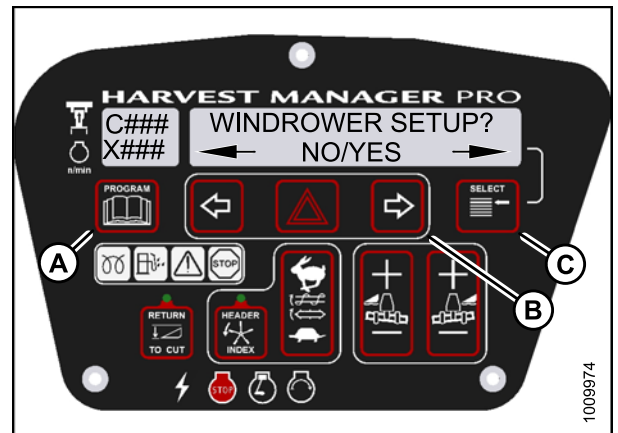


Figure 4.5: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until CAB DISPLAY SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.6: M105 Cab Display Setup

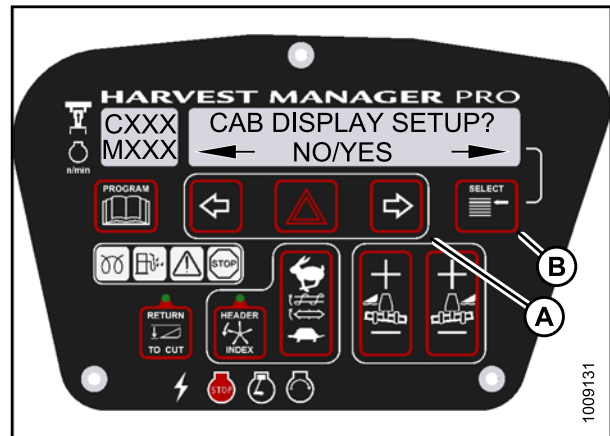


Figure 4.7: M155 Cab Display Setup

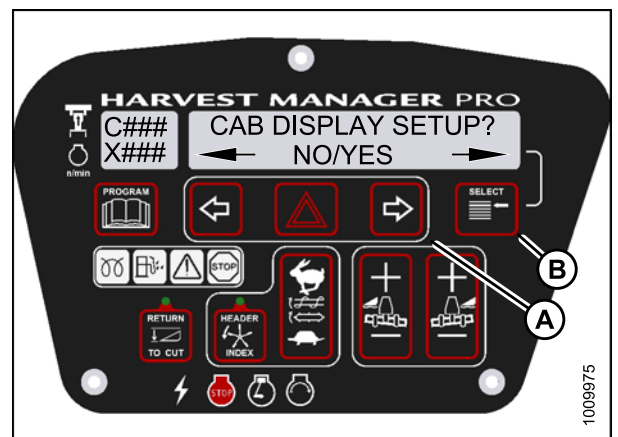


Figure 4.8: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press right (C) arrow select YES. Press SELECT (D).
 - DISPLAY LANGUAGE? is displayed on the upper line.
 - Default language is displayed on the lower line.
5. Press left (B) or right (C) arrow to select preferred language.

NOTE:

English, Russian, and Spanish language options are available on windrowers. Not all options are available on all windrowers.

6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next CAB DISPLAY SETUP? action.

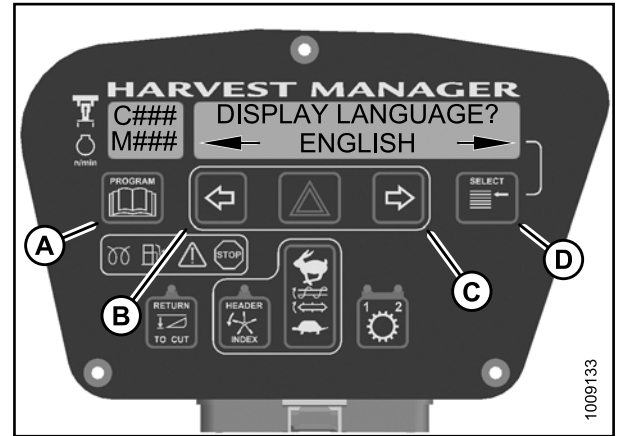


Figure 4.9: M105 Display Language

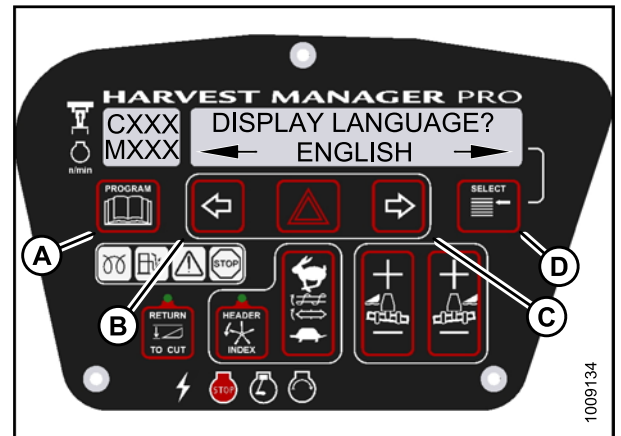


Figure 4.10: M155 Display Language

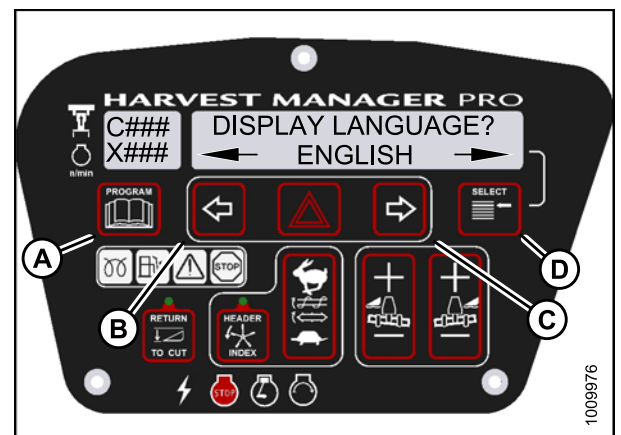


Figure 4.11: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4.2.2 Changing the Windrower Display Units

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.12: M105 CDM Programming Buttons

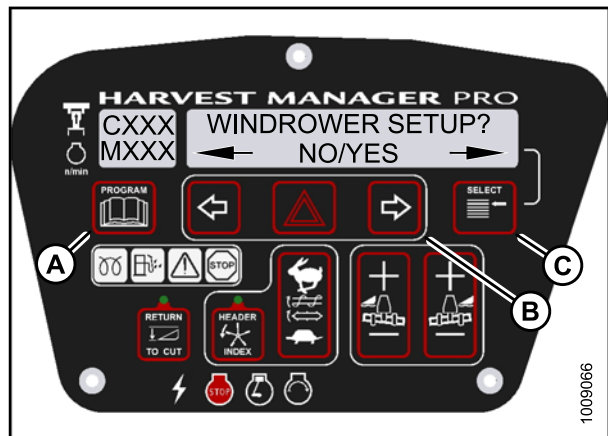


Figure 4.13: M155 CDM Programming Buttons

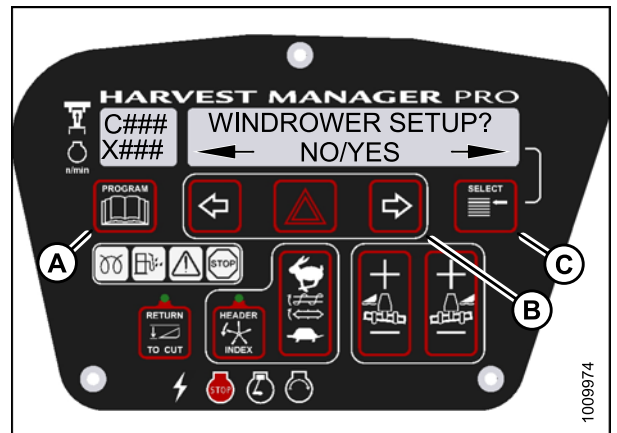


Figure 4.14: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until CAB DISPLAY SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).
 - DISPLAY LANGUAGE? is displayed on the upper line.



Figure 4.15: M105 Cab Display Setup

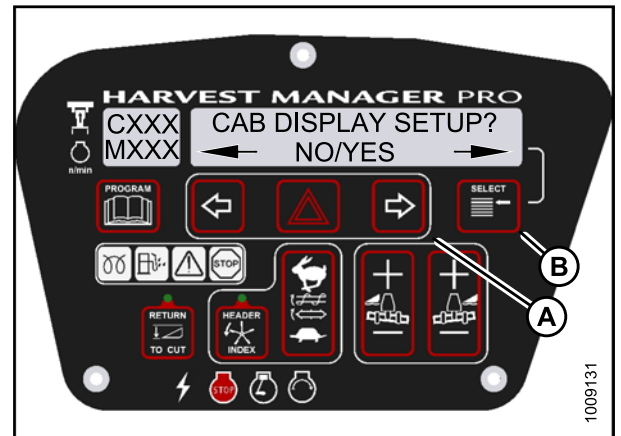


Figure 4.16: M155 Cab Display Setup

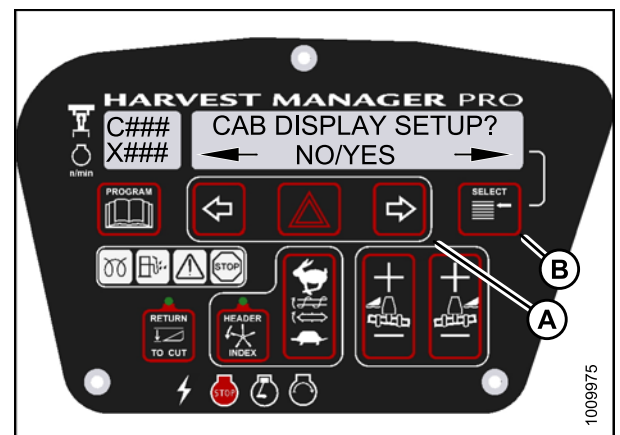


Figure 4.17: M205 Cab Display Setup

CAB DISPLAY MODULE (CDM)

5. Press SELECT (D) until DISPLAY UNITS? is displayed on the upper line.
 - Default setting is displayed on the lower line.
6. Press left (B) or right (C) arrow to select either METRIC or IMPERIAL speed display.
7. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next CAB DISPLAY SETUP? action.



Figure 4.18: M105 Display Units

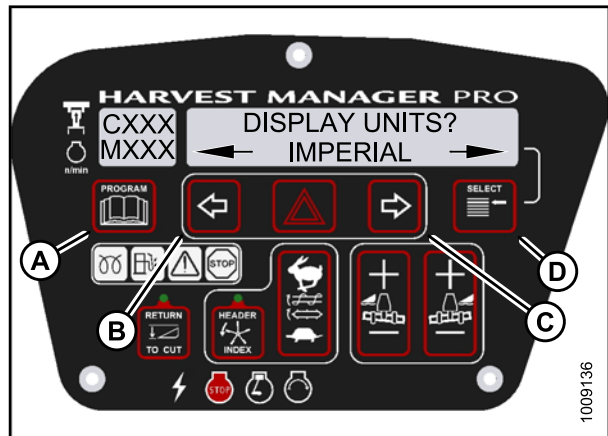


Figure 4.19: M155 Display Units

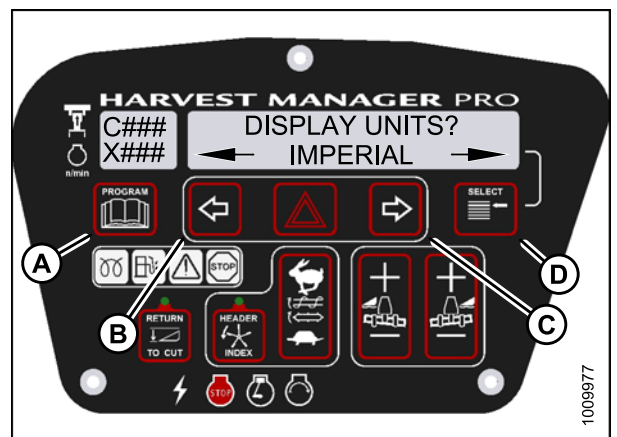


Figure 4.20: M205 Display Units

CAB DISPLAY MODULE (CDM)

4.2.3 Adjusting the Cab Display Buzzer Volume

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.21: M105 CDM Programming Buttons

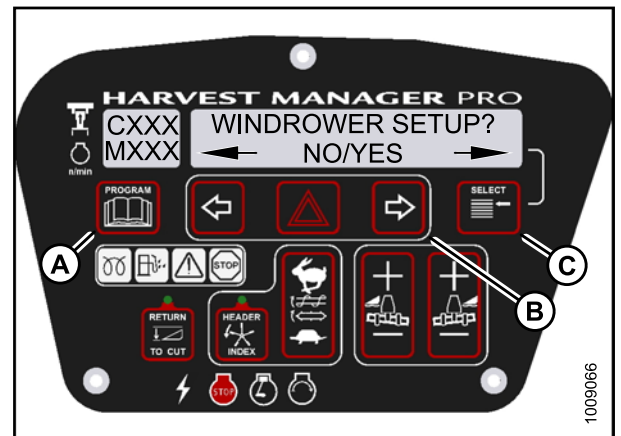


Figure 4.22: M155 CDM Programming Buttons

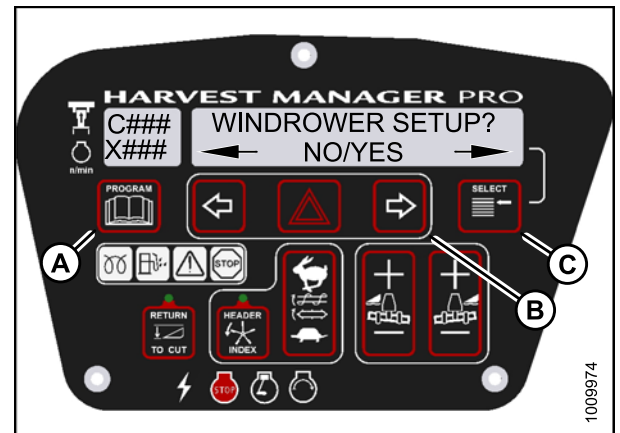


Figure 4.23: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until CAB DISPLAY SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).
 - DISPLAY LANGUAGE? is displayed on the upper line.



Figure 4.24: M105 Cab Display Setup

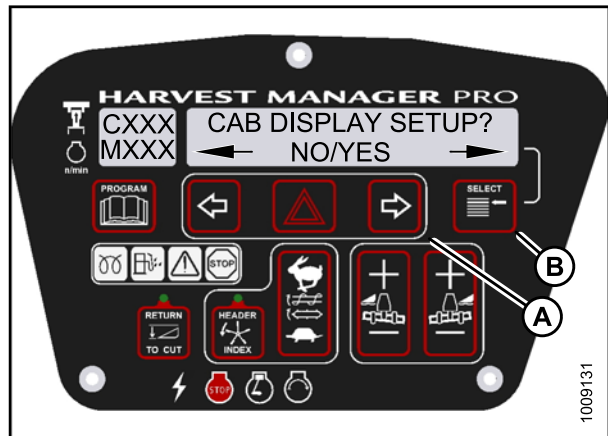


Figure 4.25: M155 Cab Display Setup

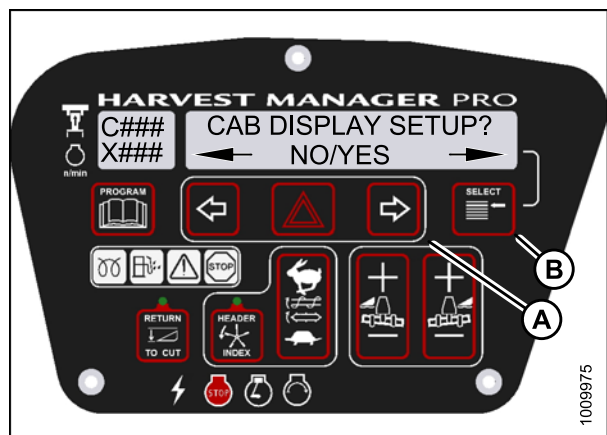


Figure 4.26: M205 Cab Display Setup

CAB DISPLAY MODULE (CDM)

5. Press SELECT (D) until BUZZER VOLUME is displayed on the upper line.
 - Previous setting is displayed on the lower line.
6. Press left (B) or right (C) arrows to adjust buzzer volume.
7. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next CAB DISPLAY SETUP? action.



Figure 4.27: M105 Buzzer Volume

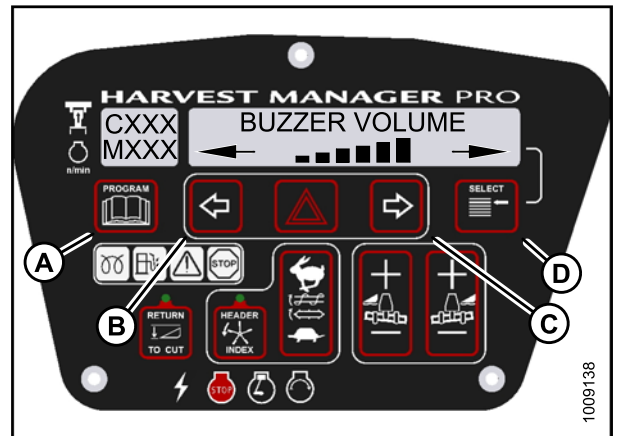


Figure 4.28: M155 Buzzer Volume

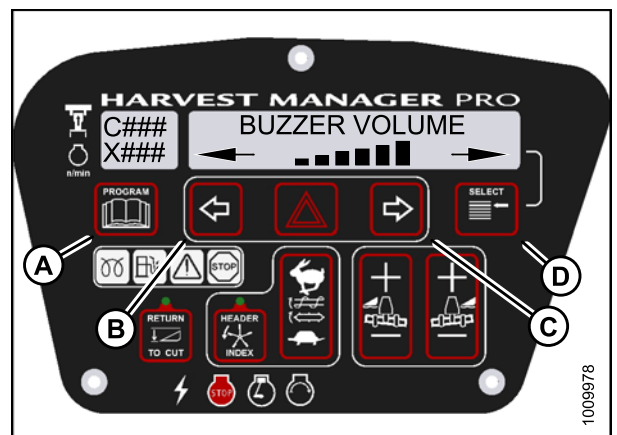


Figure 4.29: M205 Buzzer Volume

CAB DISPLAY MODULE (CDM)

4.2.4 Adjusting the Cab Display Backlighting

The backlighting feature brightens the display screen helping you read the cab display module (CDM) in low light situations.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.30: M105 CDM Programming Buttons

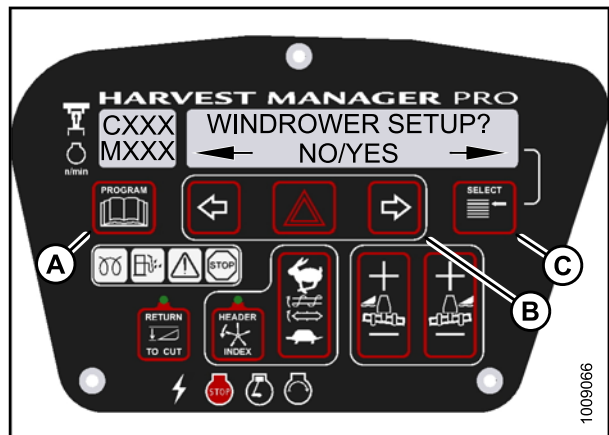


Figure 4.31: M155 CDM Programming Buttons

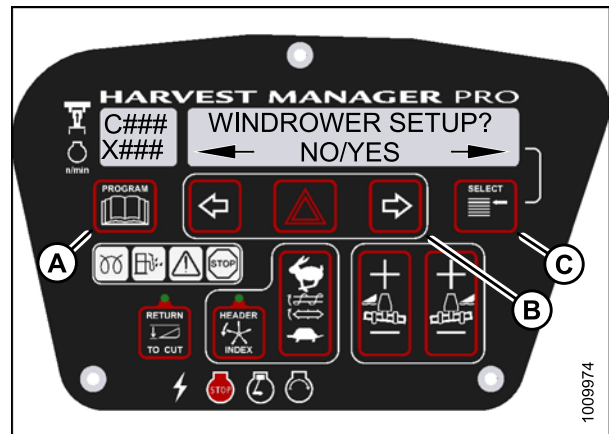


Figure 4.32: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until CAB DISPLAY SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).
 - DISPLAY LANGUAGE? is displayed on the upper line.



Figure 4.33: M105 Cab Display Setup

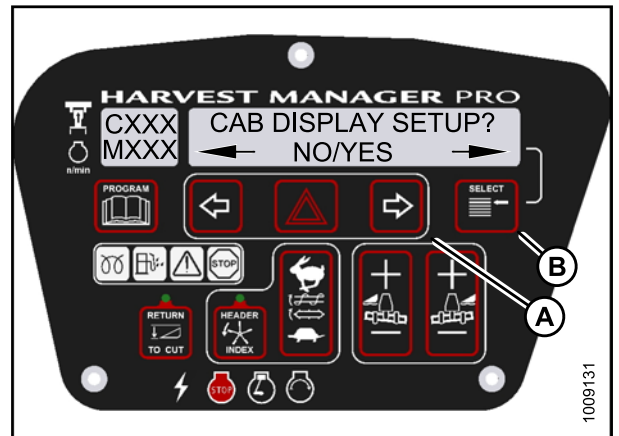


Figure 4.34: M155 Cab Display Setup

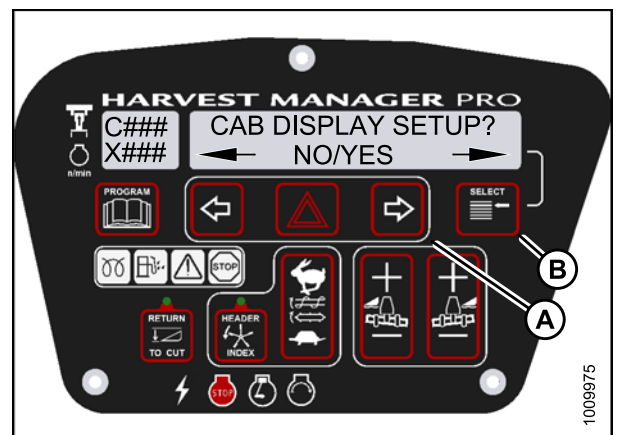


Figure 4.35: M205 Cab Display Setup

CAB DISPLAY MODULE (CDM)

5. Press SELECT (D) until BACKLIGHTING is displayed on the upper line.
 - Default setting is displayed on the lower line.
6. Press left (B) or right (C) arrows to adjust display backlighting.
7. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next CAB DISPLAY SETUP? action.

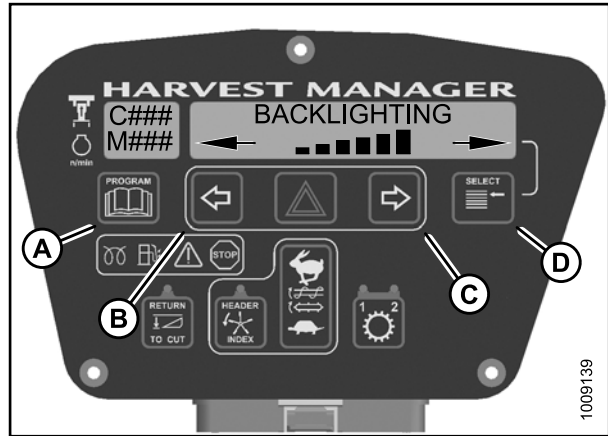


Figure 4.36: M105 Backlighting

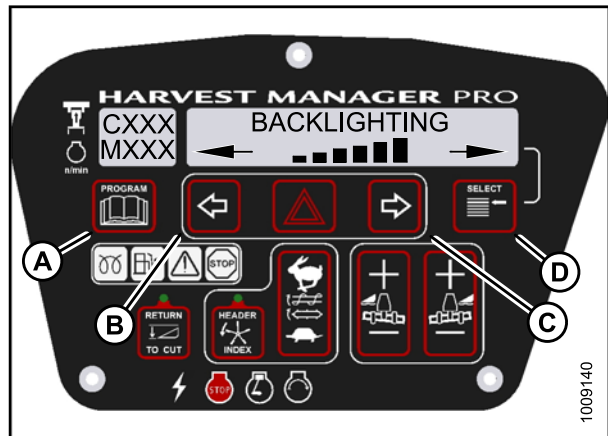


Figure 4.37: M155 Backlighting

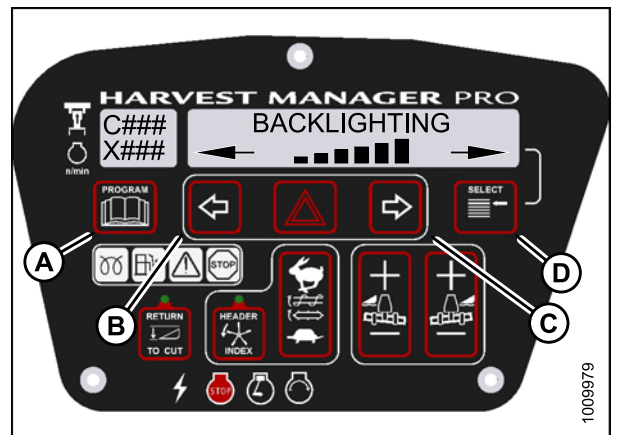


Figure 4.38: M205 Backlighting

CAB DISPLAY MODULE (CDM)

4.2.5 Adjusting the Cab Display Contrast

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.39: M105 CDM Programming Buttons

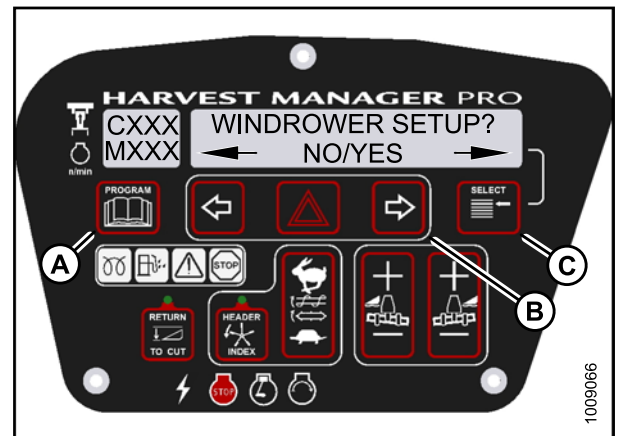


Figure 4.40: M155 CDM Programming Buttons

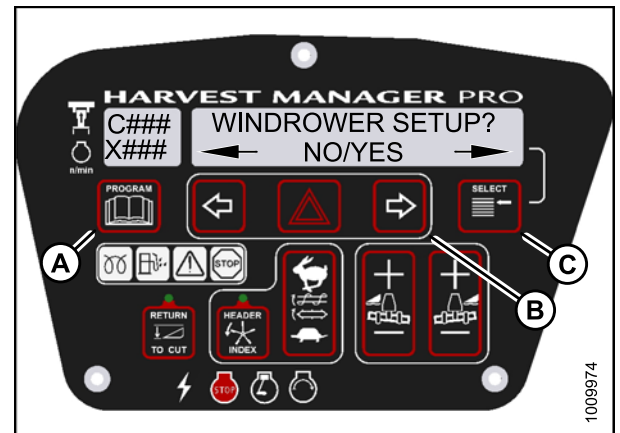


Figure 4.41: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until CAB DISPLAY SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).
 - DISPLAY LANGUAGE? is displayed on the upper line.



Figure 4.42: M105 Cab Display Setup

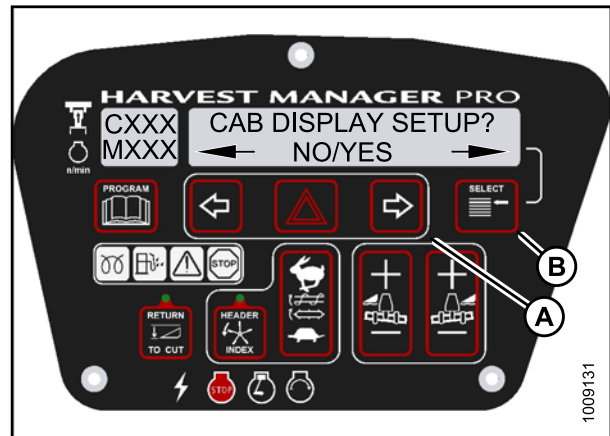


Figure 4.43: M155 Cab Display Setup

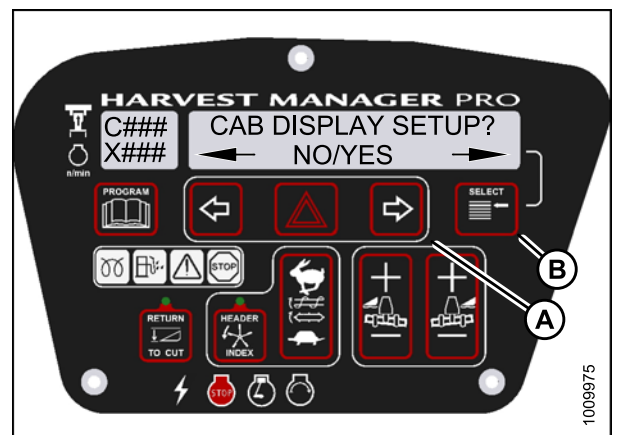


Figure 4.44: M205 Cab Display Setup

CAB DISPLAY MODULE (CDM)

5. Press SELECT (D) until DISPLAY CONTRAST is displayed on the upper line.
 - Default setting is displayed on the lower line.
6. Press left (B) or right (C) arrows to adjust display contrast.
7. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next CAB DISPLAY SETUP? action.



Figure 4.45: M105 Display Contrast

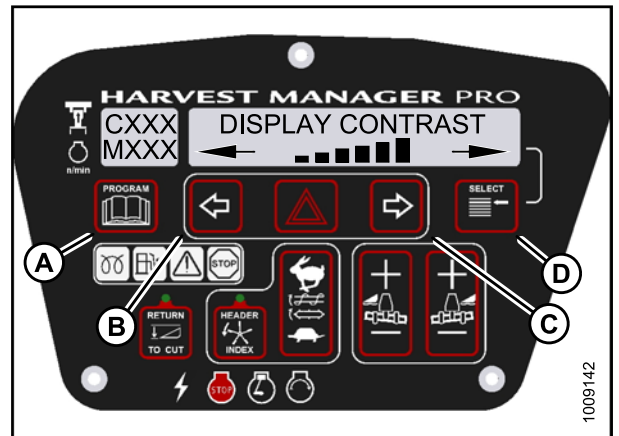


Figure 4.46: M155 Display Contrast

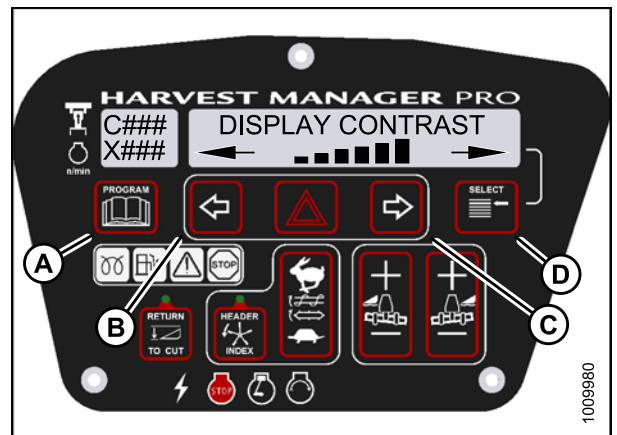


Figure 4.47: M205 Display Contrast

4.3 Calibrating the Header Sensors

Sensor calibration programs the windrower control module (WCM) with settings for the attached header.

4.3.1 Calibrating the Header Height Sensor

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
3. Press SELECT (C) until CALIBRATE SENSORS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.

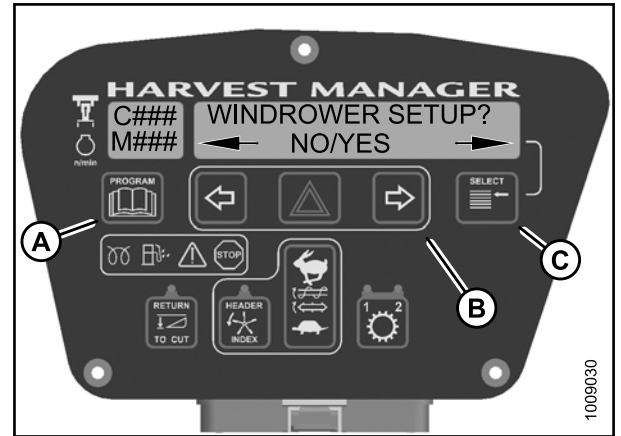


Figure 4.48: M105 CDM Programming Buttons

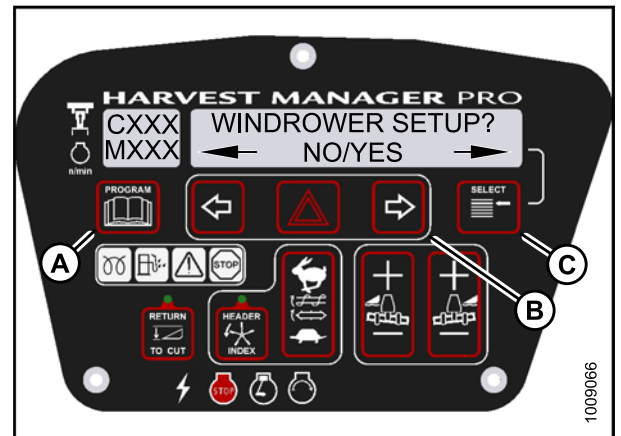


Figure 4.49: M155 CDM Programming Buttons

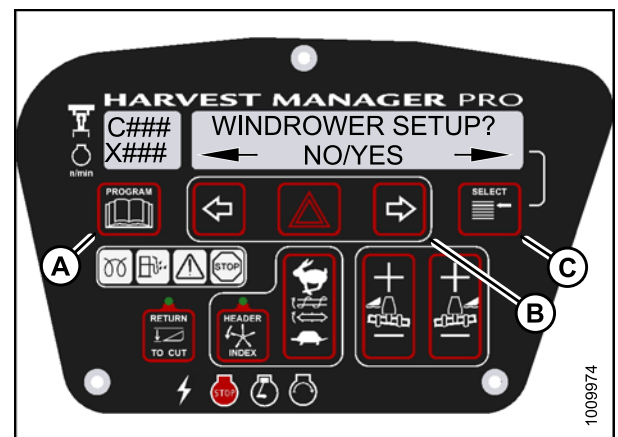


Figure 4.50: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press right (B) arrow to select Yes. Press SELECT (C).
 - TO CALIBRATE SELECT is displayed in upper line.
5. Press left (A) or right (B) arrow until HEADER HEIGHT is displayed on the lower line. Press SELECT (C).
 - CALIBRATING HEIGHT is displayed on the upper line.
 - RAISE HEADER HOLD is displayed on the lower line.



Figure 4.51: M105 Header Height Calibration



Figure 4.52: M155 Header Height Calibration

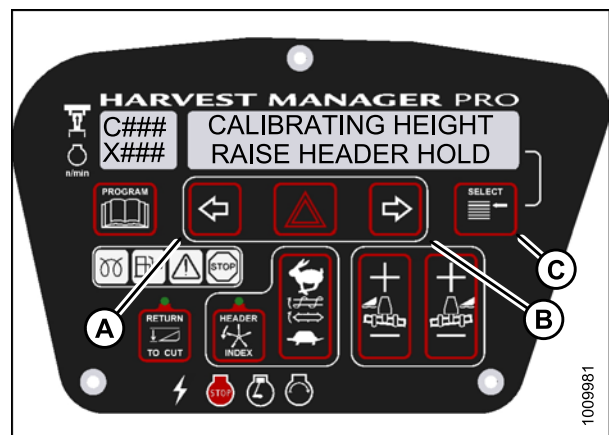


Figure 4.53: M205 Header Height Calibration

⚠ CAUTION

Check to be sure all bystanders have cleared the area.

6. Press and hold the HEADER UP (C) button on the ground speed lever (GSL).
 - CALIBRATING HEIGHT is displayed on the upper line.
 - RAISE HEADER HOLD is displayed on the lower line.

NOTE:

The word HOLD will flash during calibration. RAISE HEADER DONE will display on the lower line once calibration is complete.

7. Release the HEADER UP (C) button.
 - HEIGHT SENSOR CAL is displayed on the upper line.
 - PRESS LOWER HEADER is displayed on the lower line.

8. Press and hold HEADER DOWN (A) button on GSL.

NOTE:

The word HOLD will flash during calibration. HT SENSOR COMPLETE will display on the lower line once calibration is complete.

9. Release HEADER DOWN (A) button.
 - TO CALIBRATE SELECT is displayed on the upper line.
 - HEADER HEIGHT is displayed on the lower line.
10. Press right arrow to select next header sensor calibration or STOP & EXIT. Press SELECT. Refer to [4.3.2 Calibrating the Header Tilt Sensor, page 170](#) or [4.3.3 Calibrating the Header Float Sensors, page 174](#).
11. Press PROGRAM to exit Programming Mode.

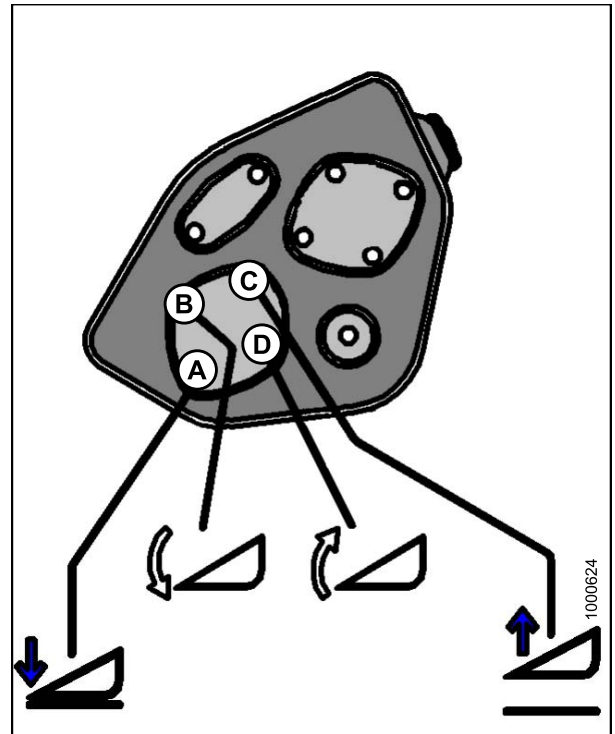


Figure 4.54: Header Height Controls on Ground Speed Lever

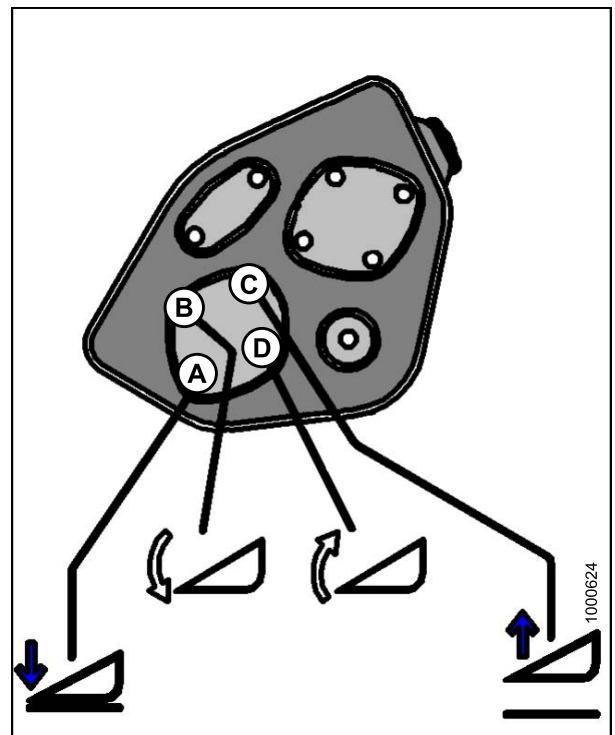


Figure 4.55: Header Height Controls on Ground Speed Lever

4.3.2 Calibrating the Header Tilt Sensor

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- This procedure requires installation of the optional Hydraulic Center-Link (MD #B4650) and MD #B5269 (auxiliary valve).
- Displaying center-link position on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
3. Press SELECT (C) until CALIBRATE SENSORS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.56: M105 CDM Programming Buttons

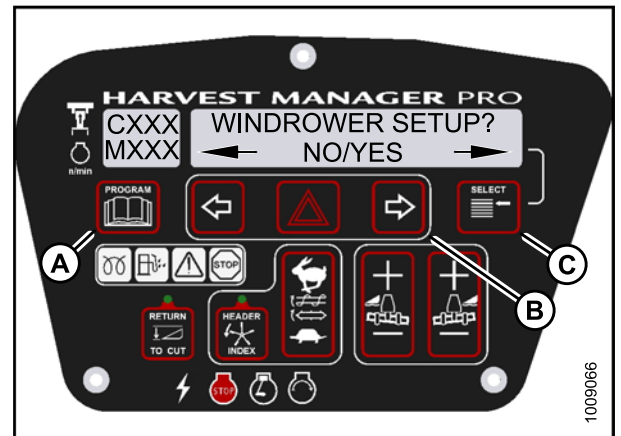


Figure 4.57: M155 CDM Programming Buttons

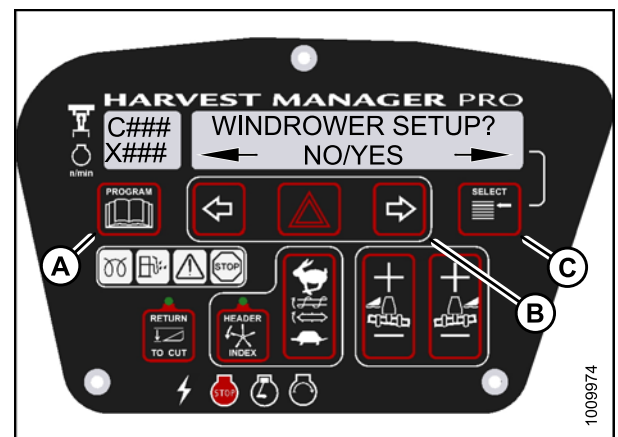


Figure 4.58: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press right (B) arrow to select Yes. Press SELECT (C).
 - TO CALIBRATE SELECT is displayed in upper line
5. Press left (A) or right (B) arrow until HEADER TILT is displayed on the lower line. Press SELECT (C).
 - HDR TILT SENSOR CAL is displayed on the upper line.
 - EXTEND TILT TO START is displayed on the lower line.



Figure 4.59: M105 Header Tilt

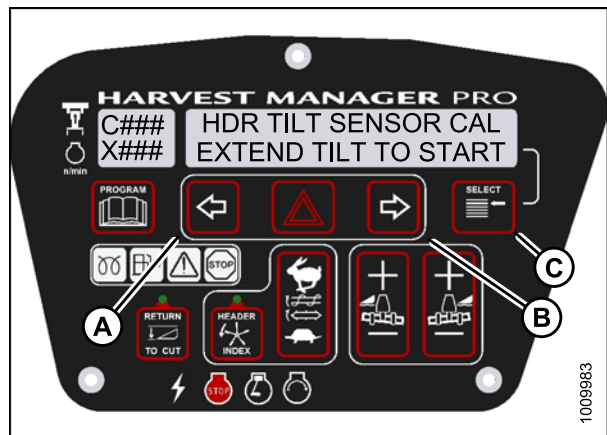


Figure 4.60: M155 Header Tilt

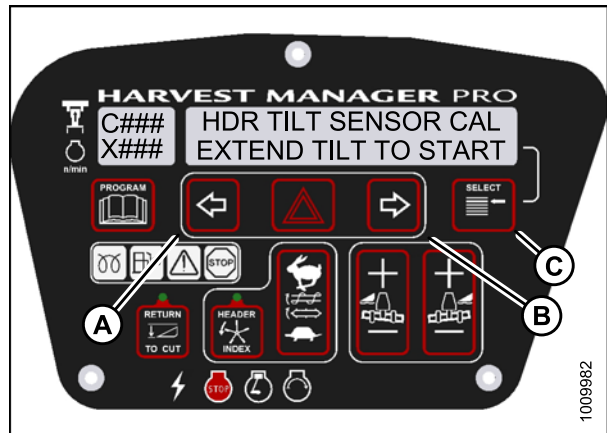


Figure 4.61: M205 Header Tilt

CAUTION

Check to be sure all bystanders have cleared the area.

6. Press and hold the HEADER TILT EXTEND (B) button on the ground speed lever (GSL).
 - CALIBRATING TILT is displayed on the upper line.
 - EXTEND TILT HOLD is displayed on the lower line.

NOTE:

The word HOLD will flash during calibration. HEADER TILT DONE will display on the lower line once calibration is complete.

7. Release the HEADER TILT EXTEND (B) button.
 - HEADER TILT SENSOR CAL is displayed on upper line.
 - PRESS RETRACT TILT is displayed on the lower line.

8. Press and hold HEADER TILT RETRACT (D) button on GSL.
 - CALIBRATING TILT is displayed on the upper line.
 - RETRACT TILT HOLD is displayed on the lower line.

NOTE:

The word HOLD will flash during calibration. HEADER TILT COMPLETE will display on the lower line once calibration is complete.

9. Release HEADER TILT RETRACT (D) button.
 - TO CALIBRATE SELECT is displayed on the upper line.
 - HEADER TILT is displayed on the lower line.
10. Press right arrow to select next header sensor calibration or STOP & EXIT. Press SELECT. Refer to [4.3.1 Calibrating the Header Height Sensor, page 166](#) or [4.3.3 Calibrating the Header Float Sensors, page 174](#).
11. Press PROGRAM to exit Programming Mode.

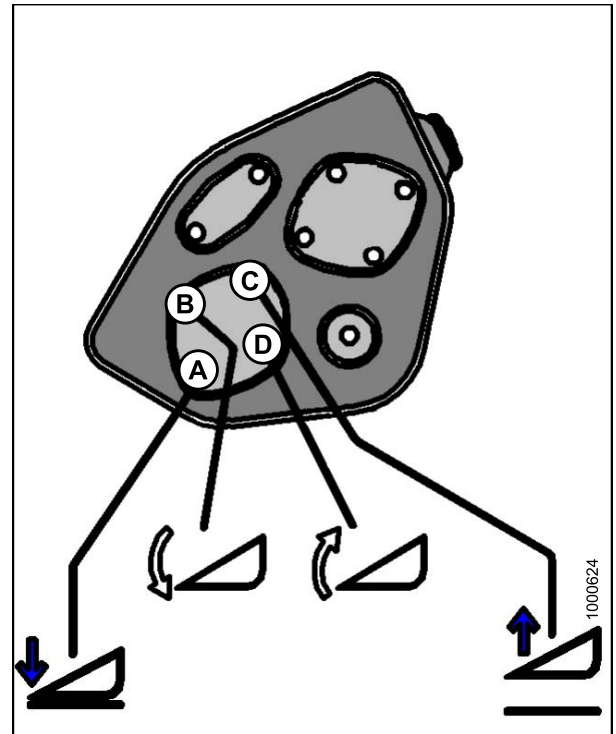


Figure 4.62: Header Tilt Controls on Ground Speed Lever

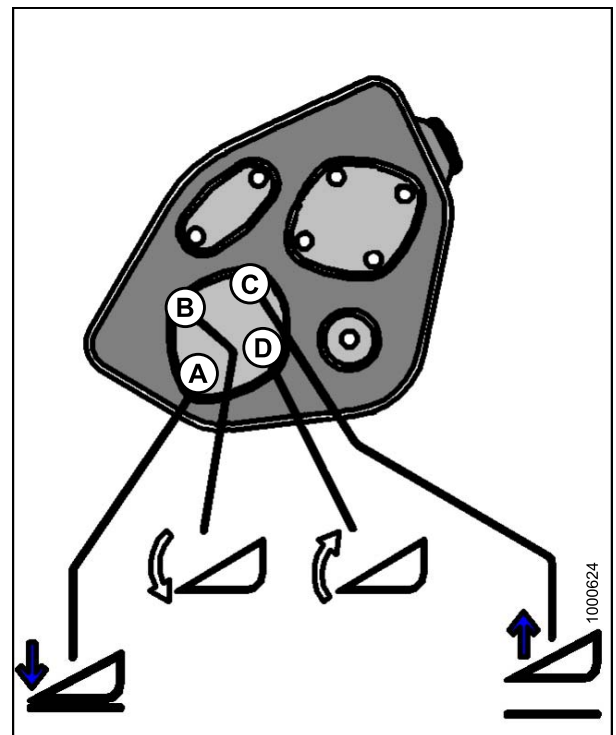


Figure 4.63: Header Tilt Controls on Ground Speed Lever

CAB DISPLAY MODULE (CDM)

4.3.3 Calibrating the Header Float Sensors

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
 - The Operator can use the left or right FLOAT buttons on the cab display module (CDM) to perform this procedure.
1. Turn ignition key to RUN, or start the engine.
 2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 3. Press SELECT (C) until CALIBRATE SENSORS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.

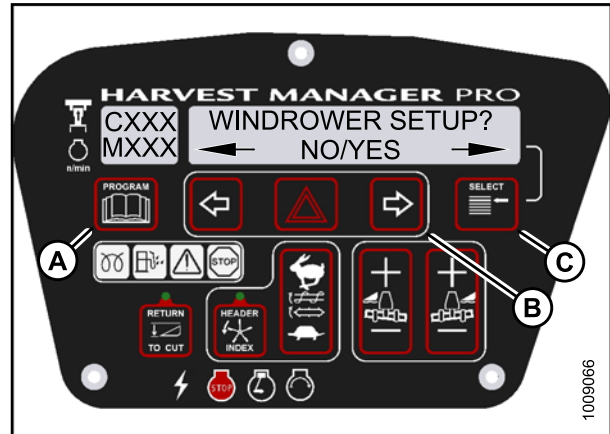


Figure 4.64: M155 CDM Programming Buttons

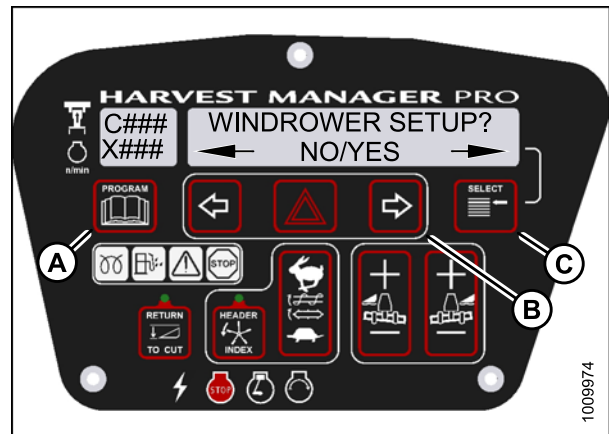


Figure 4.65: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press right (B) arrow to select Yes. Press SELECT (C).
 - TO CALIBRATE SELECT is displayed in upper line.
- Press left (A) or right (B) arrow until HEADER FLOAT is displayed on the lower line. Press SELECT (C).
 - CALIBRATING FLOAT is displayed on the upper line.
 - PRESS FLOAT + TO START is displayed on the lower line.

CAUTION

Check to be sure all bystanders have cleared the area.

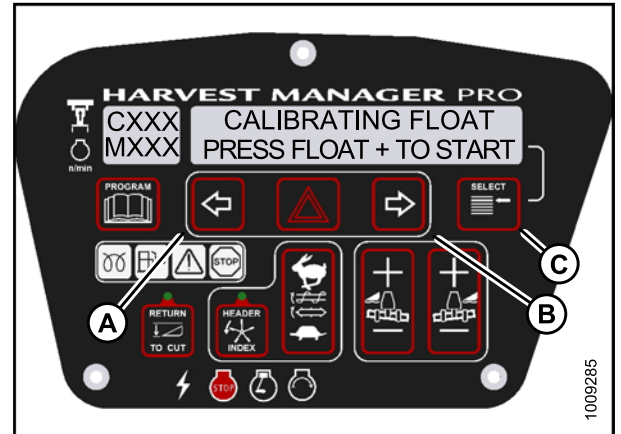


Figure 4.66: M155 Header Float

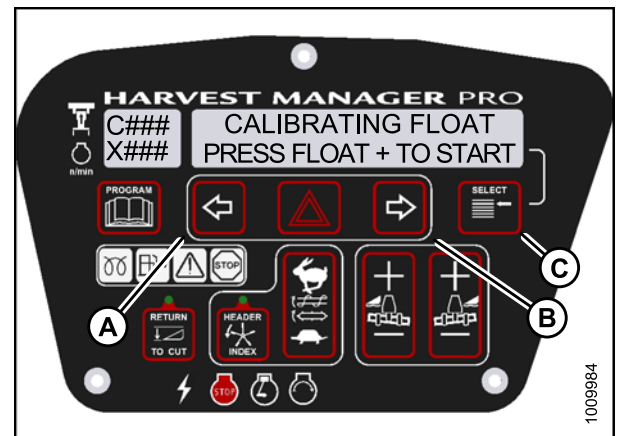


Figure 4.67: M205 Header Float

CAB DISPLAY MODULE (CDM)

6. Press and hold FLOAT + button (A) on the CDM.
 - CALIBRATING FLOAT is displayed on the upper line.
 - FLOAT (+) HOLD is displayed on the lower line.

NOTE:

The word HOLD will flash during calibration.
FLOAT (+) DONE will display on the lower line once calibration is complete.

7. Release the FLOAT + button (A).
 - CALIBRATING FLOAT is displayed on the upper line.
 - FLOAT (-) HOLD is displayed on the lower line.

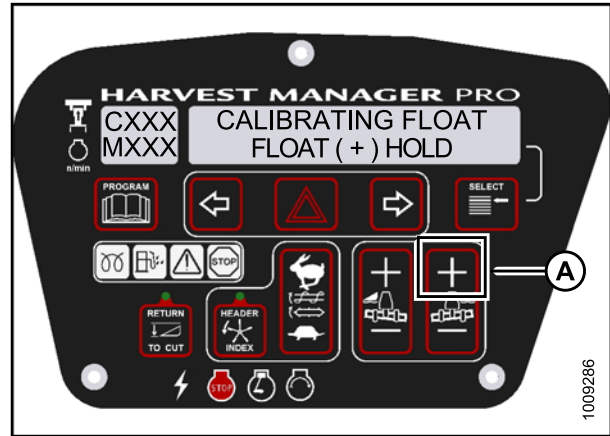


Figure 4.68: M155 Positive Header Float

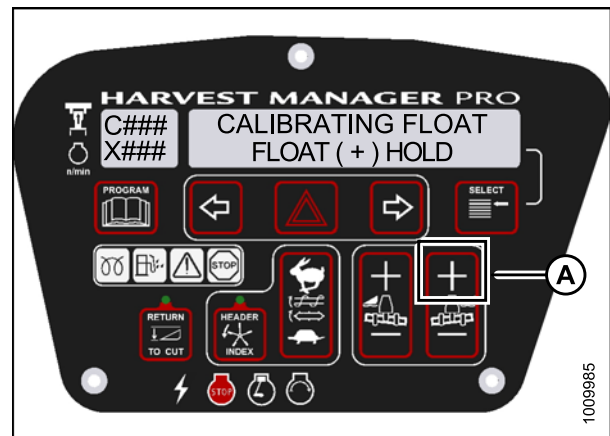


Figure 4.69: M205 Positive Header Float

CAB DISPLAY MODULE (CDM)

8. Press and hold FLOAT - button (A) on CDM.
 - CALIBRATING FLOAT is displayed on the upper line.
 - FLOAT (-) HOLD is displayed on the lower line.

NOTE:

The word HOLD will flash during calibration.
HDR FLOAT COMPLETE will display on the lower line once calibration is complete.

9. Release FLOAT - button (A).
 - TO CALIBRATE SELECT is displayed on the upper line.
 - HEADER FLOAT is displayed on the lower line.



Figure 4.70: M155 Negative Header Float

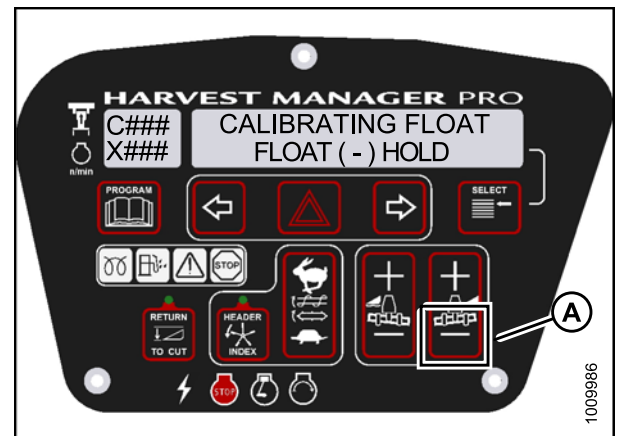


Figure 4.71: M205 Negative Header Float

10. Press right arrow to select next header sensor calibration or STOP & EXIT. Press SELECT
Refer to [4.3.1 Calibrating the Header Height Sensor, page 166](#) or [4.3.2 Calibrating the Header Tilt Sensor, page 170](#).
11. Press PROGRAM to exit Programming Mode.

4.4 Programming the Windrower

The windrower can be programmed to meet changing crop conditions, activate newly added options, indicate a change of header type, or increase the comfort level of the Operator.

4.4.1 Selecting Header Type

The M105 must be programmed when a new header is attached to allow the CDM to adjust its programming accordingly and display the proper information to the Operator; however, the windrower control module (WCM) will automatically read a header ID when a new header is attached to an M155 or M205.

NOTE:

- Displaying draper or A40 header reel or knife speed requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.
- The A30 Header reel speed is not displayed on the CDM.

1. Turn ignition key to RUN, or start the engine. Refer to [3.15 Starting Engine, page 80](#).
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.72: Cab Display Module Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press right (C) arrow to select YES. Press SELECT (D).
 - SELECT HEADER TYPE? is displayed on the upper line.
 - Previously installed header flashes on the lower line.

NOTE:

The default header type is DRAPER.

4. Press left (B) or right (C) arrow to cycle header type on lower line.
Select header type from the following:
 - DRAPER
 - A30 AUGER
 - A40 AUGER

NOTE:

Knife drive pump may require adjustment after changing header type.

5. Press SELECT.
6. Press PROGRAM to exit Programming Mode or press SELECT to proceed to next WINDROWER SETUP action.



Figure 4.73: Header Type

4.4.2 Activating the Hydraulic Center-Link on an M105 and M155

NOTE:

- This procedure requires installation of the optional Hydraulic Center-Link (MD #B4650) and MD #B5269 (auxiliary valve).
- Displaying center-link position on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine. Refer to [3.15 Starting Engine, page 80](#).
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

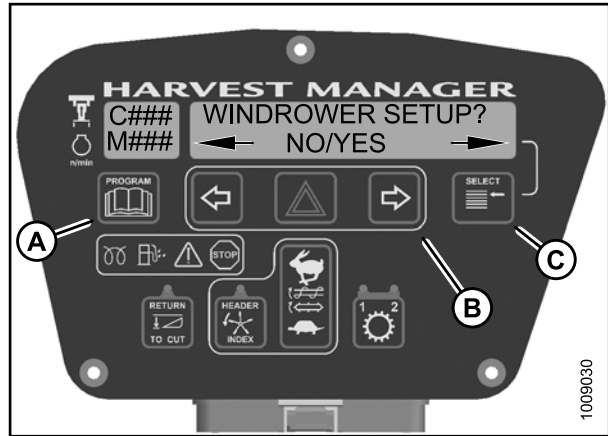


Figure 4.74: M105 CDM Programming Buttons

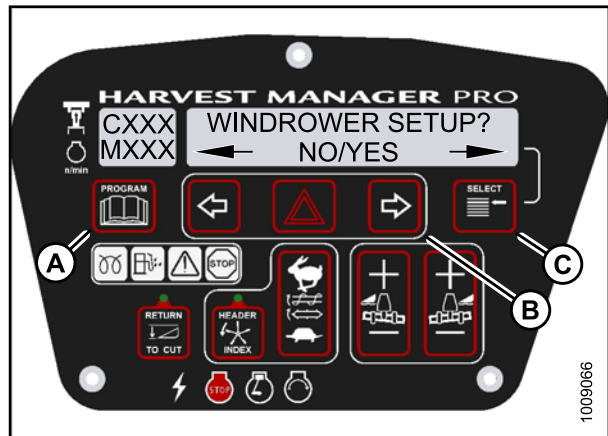


Figure 4.75: M155 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (C) until TILT CYL INSTALLED? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (B) arrow to select YES. Press SELECT (C).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next WINDROWER SETUP action.



Figure 4.76: M105 Hydraulic Center-Link

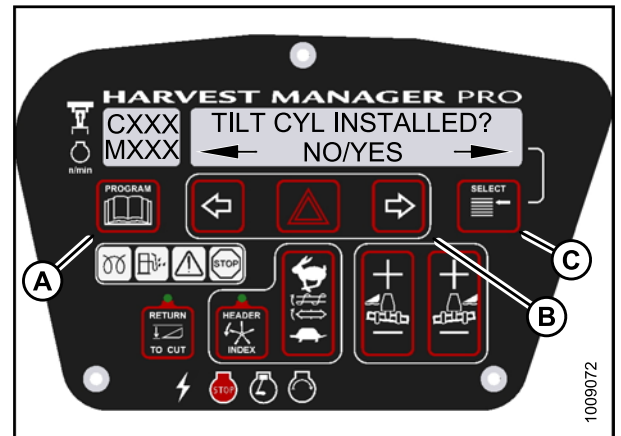


Figure 4.77: M155 Hydraulic Center-Link

4.4.3 Activating the Reel Fore-Aft Function on an M105

NOTE:

Reel fore-aft activation requires installation of the Windrower Optional Hydraulic Fore-Aft Kit (MD #B5577). For more information, refer to the windrower operator's manual or the windrower technical manual.

1. Turn ignition key to RUN, or start the engine. Refer to [3.15 Starting Engine, page 80](#).
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right arrow (B) to select YES. Press SELECT (C).
 - SET HEADER TYPE? is displayed on the upper line.



Figure 4.78: CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (C) until REEL FORE / AFT? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (B) arrow to select YES. Press SELECT (C).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next WINDROWER SETUP action.



Figure 4.79: Reel Fore-Aft

4.4.4 Activating the Rotary Header Drive Hydraulics on an M155

NOTE:

This procedure requires installation of the optional Rotary Header Drive Hydraulics (MD #B5510). For more information, refer to the rotary disc header operator's manual.

1. Turn ignition key to RUN, or start the engine. Refer to [3.15 Starting Engine, page 80](#).
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

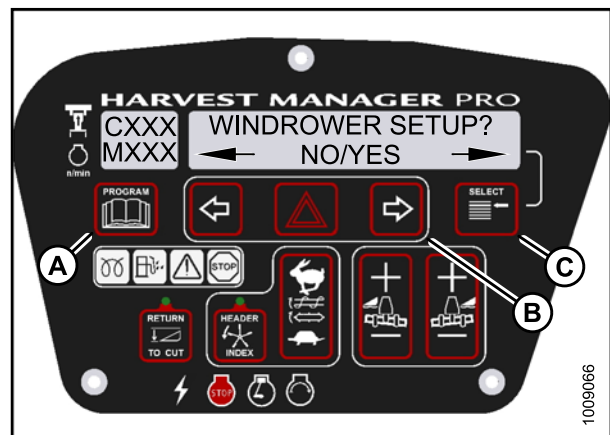


Figure 4.80: CDM Programming Buttons

4. Press SELECT (D) until DISC BLK INSTALLED? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (C) arrow to select YES. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

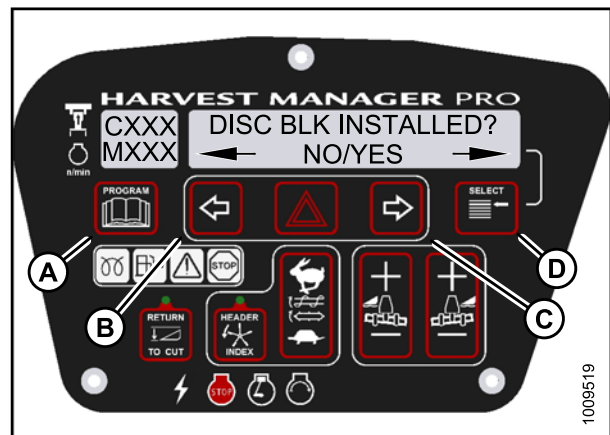


Figure 4.81: Rotary Disc Hydraulics

4.4.5 Setting the Knife Overload Speed

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- The recommended knife overload speed is 75% of knife speed. For more information, refer to [5.11.13 Setting and Adjusting Knife Speed, page 347](#) to determine proper overload speed.
- Displaying knife drive speed on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.
 - SELECT HEADER TYPE? is displayed.



Figure 4.82: M105 CDM Programming Buttons

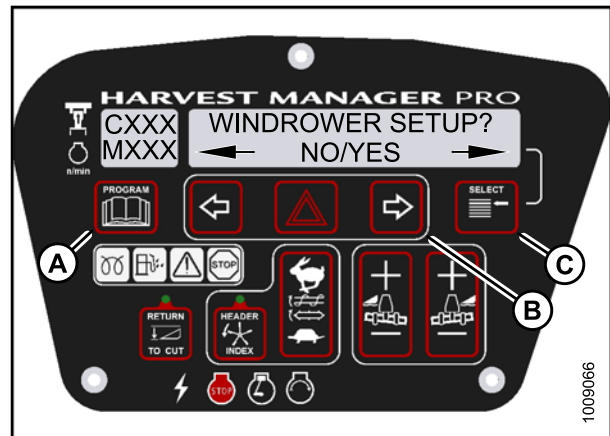


Figure 4.83: M155 CDM Programming Buttons

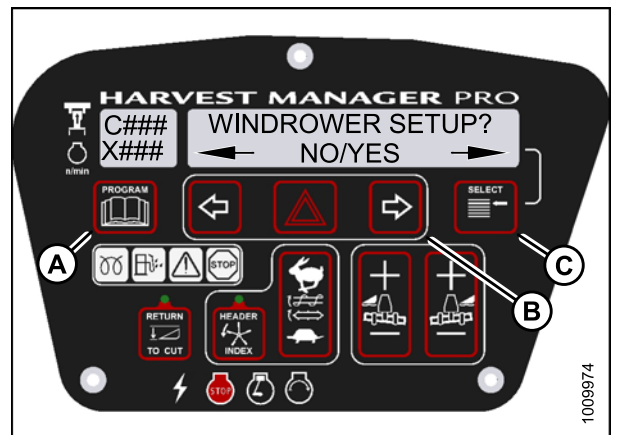


Figure 4.84: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until KNIFE OVERLOAD SPD? is displayed on the upper line.

- Current overload speed is displayed on the lower line.

NOTE:

Default setting is -300 SPM. Range is -500 to -100 SPM. For more information, refer to [5.11.13 Setting and Adjusting Knife Speed, page 347](#) to determine proper overload speed.

- Press left (B) or right (C) arrows to set knife overload speed. Press SELECT (D).
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.85: M105 Knife Overload Speed

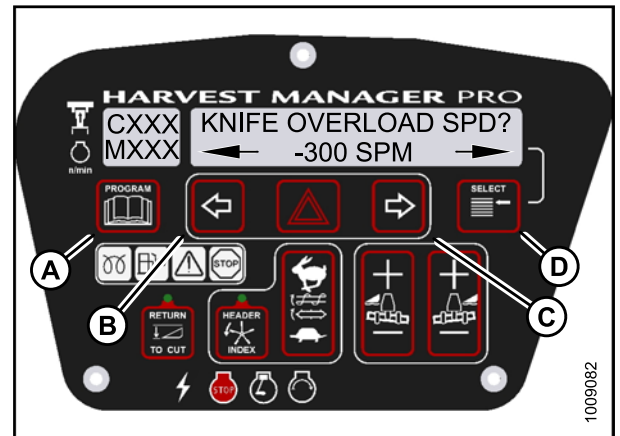


Figure 4.86: M155 Knife Overload Speed

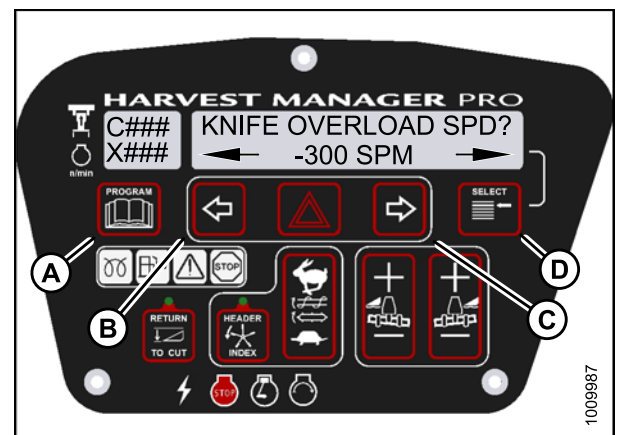


Figure 4.87: M205 Knife Overload Speed

CAB DISPLAY MODULE (CDM)

4.4.6 Setting the Rotary Disc Overload Speed

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
 - The recommended disc overload speed is 75% of disc speed. For more information refer to the rotary disc header operator's manual to determine proper overload speed.
1. Turn ignition key to RUN, or start the engine.
 2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
 3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.

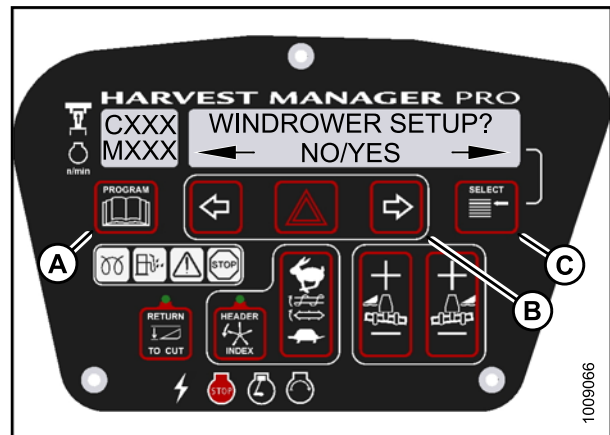


Figure 4.88: M155 CDM Programming Buttons

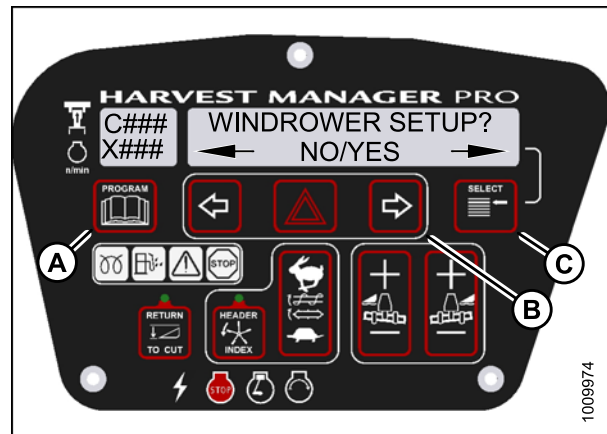


Figure 4.89: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until DISK OVERLOAD SPD? is displayed on the upper line.

- The current overload speed is displayed on the lower line.

NOTE:

Default setting is -300 SPM. Range is -500 to -100 rpm.

- Press left (B) or right (C) arrows to set disc overload speed. Press SELECT (D).
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

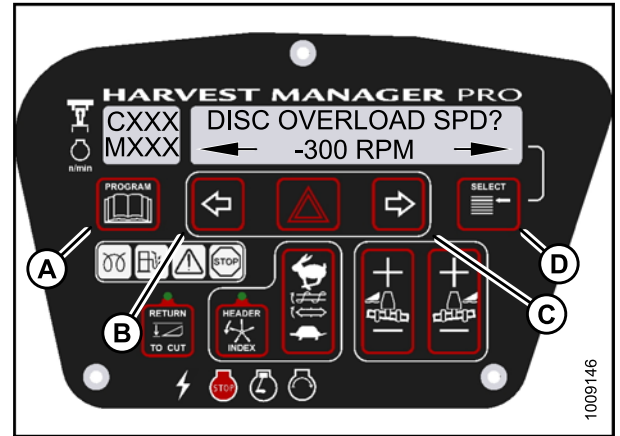


Figure 4.90: M155 Disc Overload Speed

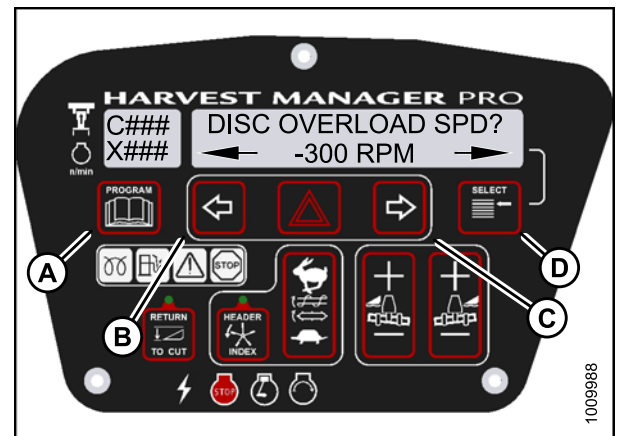


Figure 4.91: M205 Disc Overload Speed

4.4.7 Setting the Header Knife Speed

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- For more information, refer to [5.11.13 Setting and Adjusting Knife Speed, page 347](#) to determine proper knife speed.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.
 - The current knife speed is displayed on the lower line.

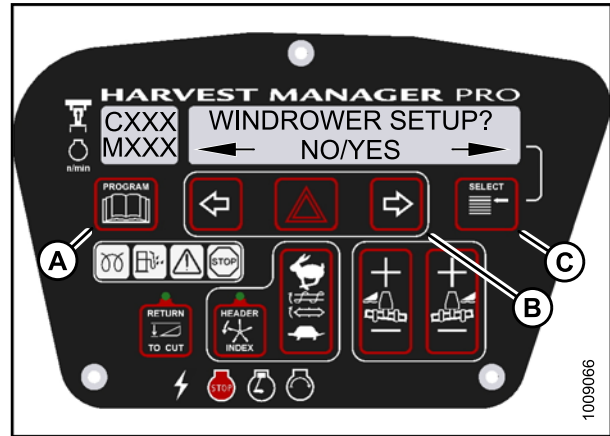


Figure 4.92: M155 CDM Programming Buttons

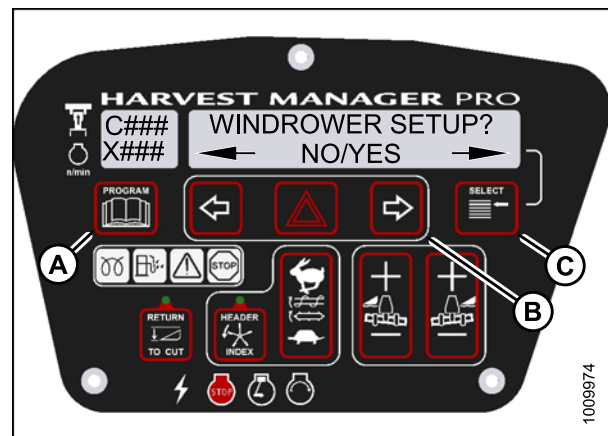


Figure 4.93: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press left (B) or right (C) arrows to select knife speed. Press SELECT (D).
5. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

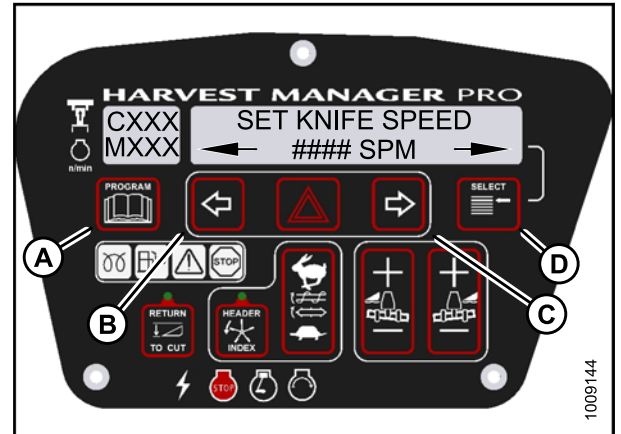


Figure 4.94: M155 Knife Speed

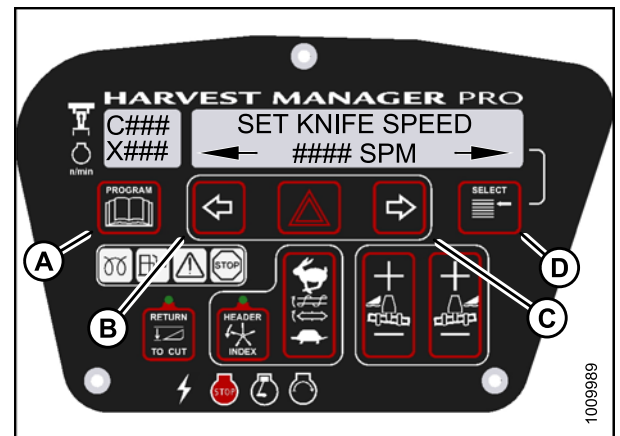


Figure 4.95: M205 Knife Speed

4.4.8 Setting the Hydraulic Overload Pressure

NOTE:

- This procedure requires installation of the optional pressure sensor (MD #B5574). For overload pressure values, refer to pressure sensor installation instructions (MD #169031).
- To enable sensor, refer to [4.7.2 Switching the Installed Header Sensors On or Off, page 252](#).

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.

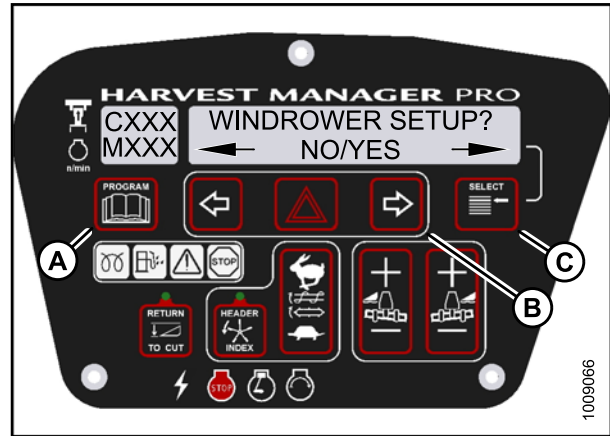


Figure 4.96: M155 CDM Programming Buttons

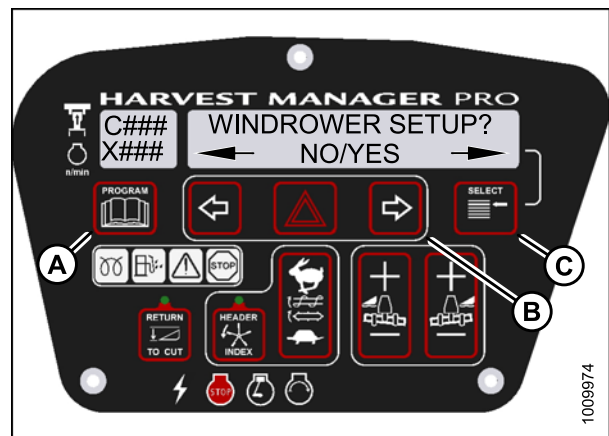


Figure 4.97: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until OVERLOAD PRESSURE? is displayed on the upper line.

- The current overload pressure is displayed on lower line.

NOTE:

Pressure range is 2500–5000 psi (17,237–34,474 kPa).

5. Press left (B) or right (C) arrows to set hydraulic overload pressure. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

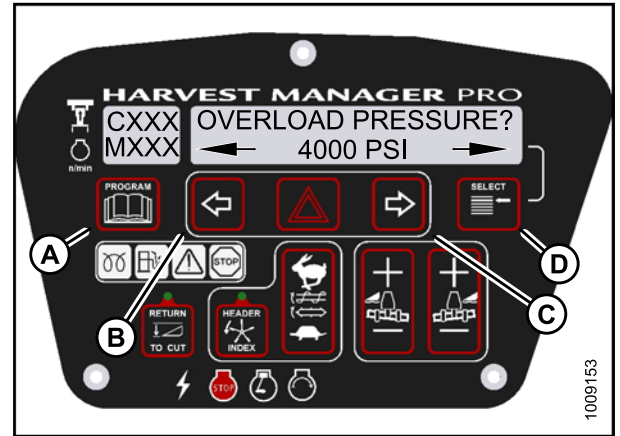


Figure 4.98: M155 Hydraulic Overload Pressure

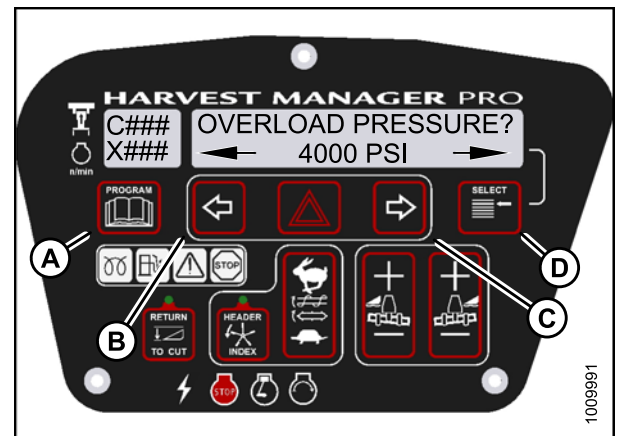


Figure 4.99: M205 Hydraulic Overload Pressure

4.4.9 Setting the Header Index Mode

Header Index feature is not applicable to rotary headers.

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. This menu is suppressed if the A30 Header is attached.
- Displaying reel speed on cab display module (CDM) requires installations of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.



Figure 4.100: M105 CDM Programming Buttons

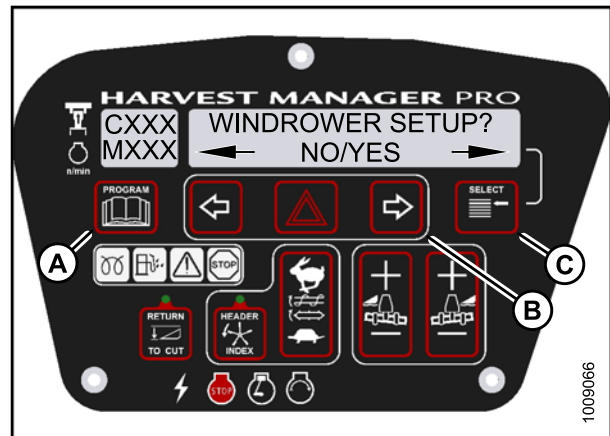


Figure 4.101: M155 CDM Programming Buttons

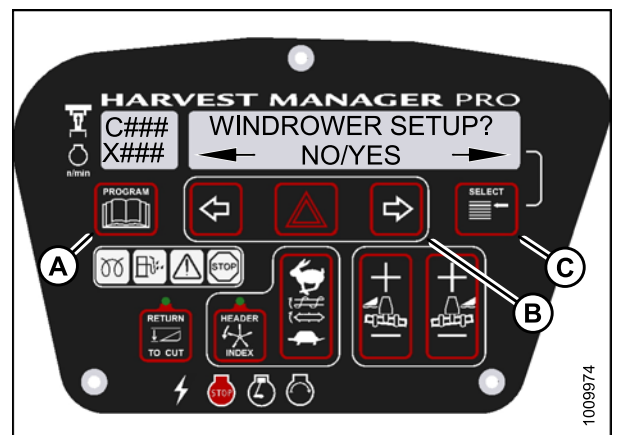


Figure 4.102: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until HEADER INDEX MODE? is displayed on the upper line.
 - REEL & CONVEYOR or REEL ONLY is displayed on the lower line.
5. Press left (B) or right (C) arrows to set header index mode. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

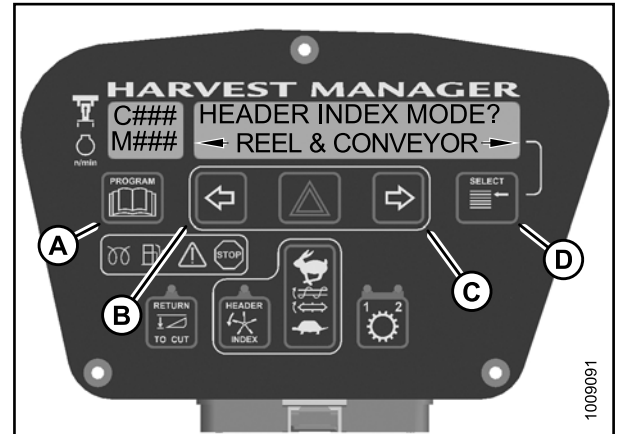


Figure 4.103: M105 Header Index Mode

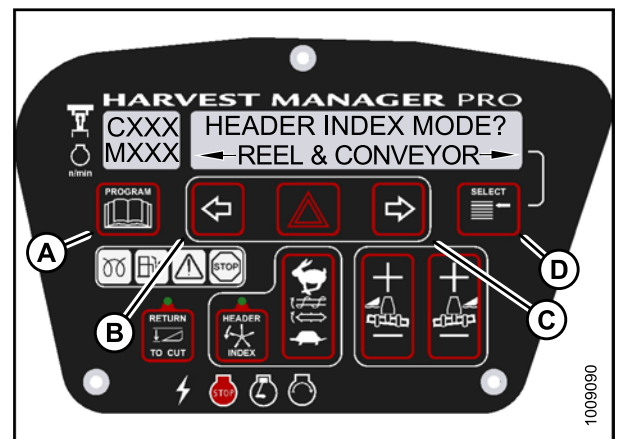


Figure 4.104: M155 Header Index Mode

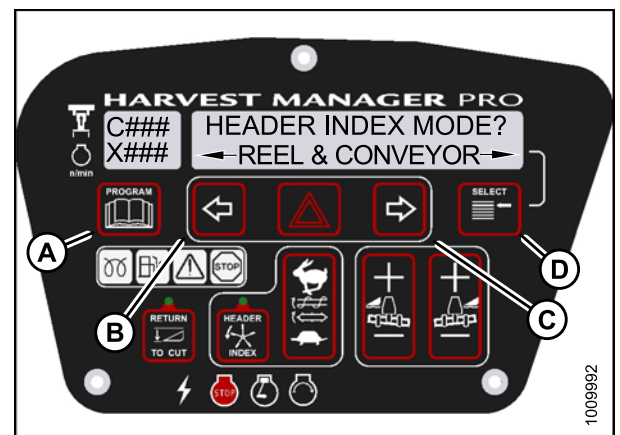


Figure 4.105: M205 Header Index Mode

4.4.10 Setting the Return to Cut Mode

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

NOTE:

The header **MUST** be attached to the windrower to perform this procedure.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.
 - SELECT HEADER TYPE? is displayed.

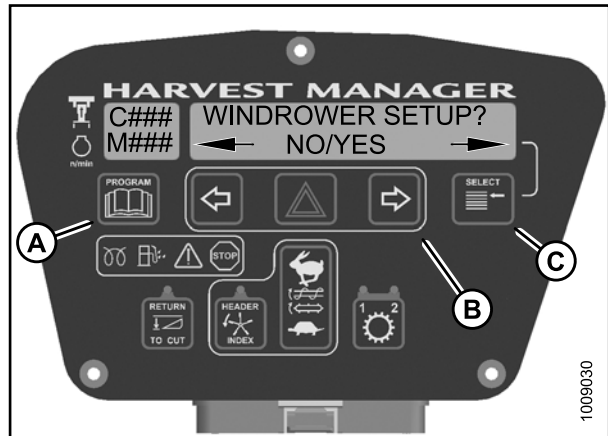


Figure 4.106: M105 CDM Programming Buttons

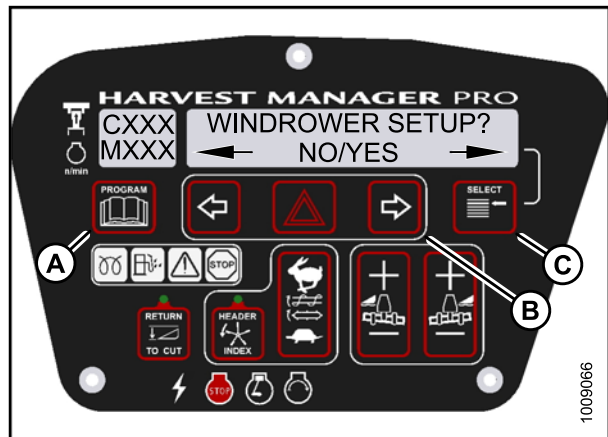


Figure 4.107: M155 CDM Programming Buttons

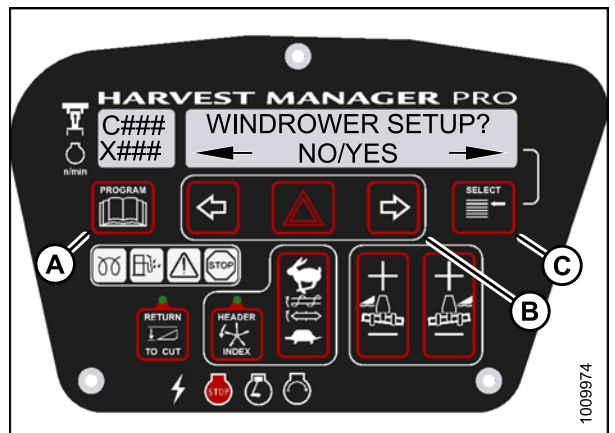


Figure 4.108: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until RETURN TO CUT MODE? is displayed on the upper line.
 - HEIGHT & TILT or HEIGHT ONLY will be displayed on the lower line.

NOTE:

RETURN TO CUT MODE will display HEIGHT ONLY unless the optional expansion module (MD #B4666) is installed. For more information, refer to the windrower operator's manual or the windrower technical manual.

5. Press left (B) or right (C) arrows to select return to cut mode. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.109: M105 Return to Cut Mode

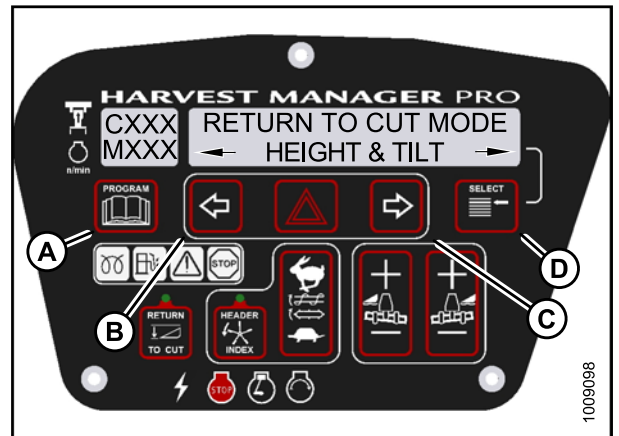


Figure 4.110: M155 Return to Cut Mode

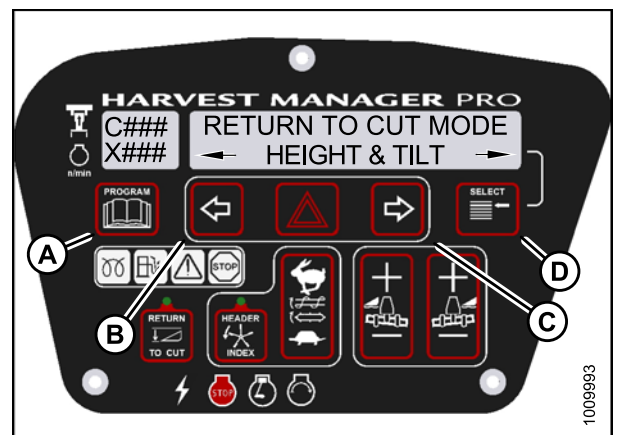


Figure 4.111: M205 Return to Cut Mode

4.4.11 Setting the Header Cut Width

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- Header cut width is less than actual header width to accurately measure number of acres cut.
- Headers send electrical signals to the windrower to produce a header ID; however, the cut width will always default to the smallest header size available for each header type. For example, A-Series Auger Headers comes in 14-, 16-, and 18-foot sizes, but the cut width will automatically default to the smallest 14-foot size and will need to be changed according to your specific header's size.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed.
 - SELECT HEADER TYPE? is displayed.

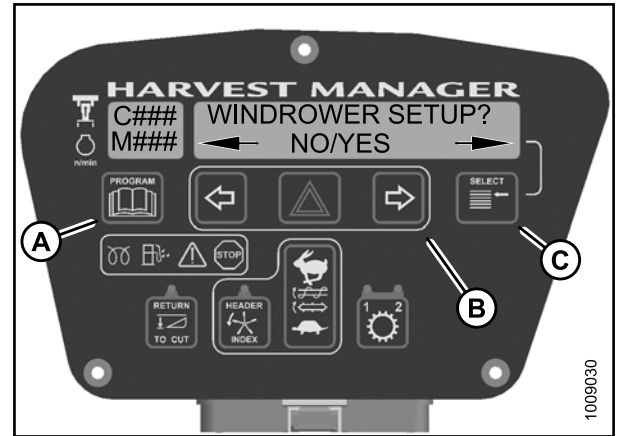


Figure 4.112: M105 CDM Programming Buttons

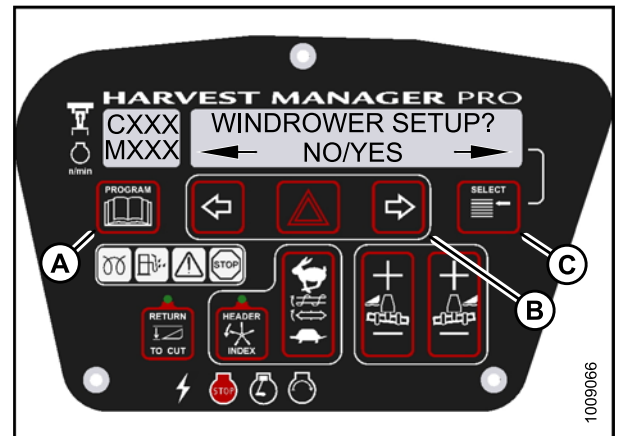


Figure 4.113: M155 CDM Programming Buttons

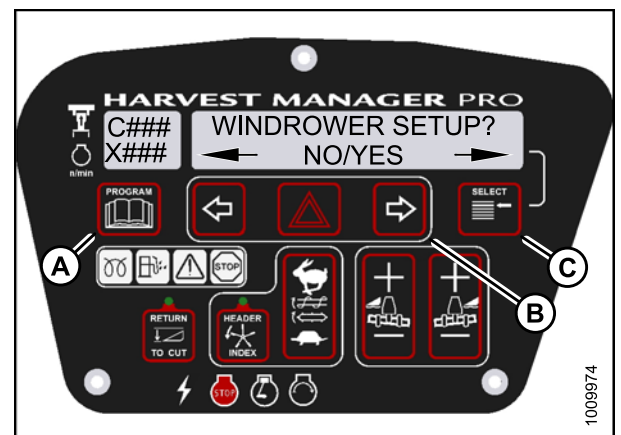


Figure 4.114: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until HEADER CUT WIDTH?HDR CUT WIDTH? #### is displayed on the upper line.
 - Previous cutting width is displayed on the lower line.
5. Press left (B) or right (C) arrows to change the headers cut width. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.115: M105 Header Cut Width

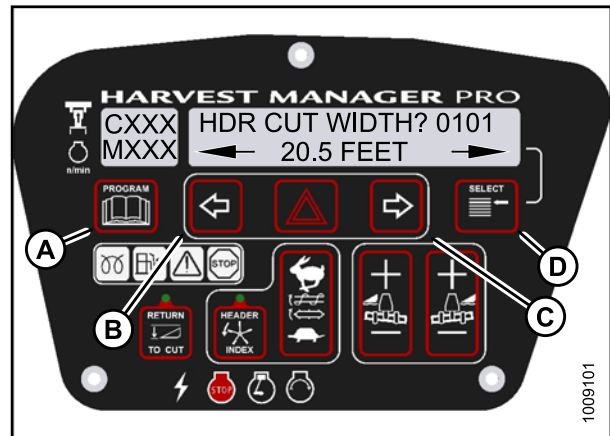


Figure 4.116: M155 Header Cut Width

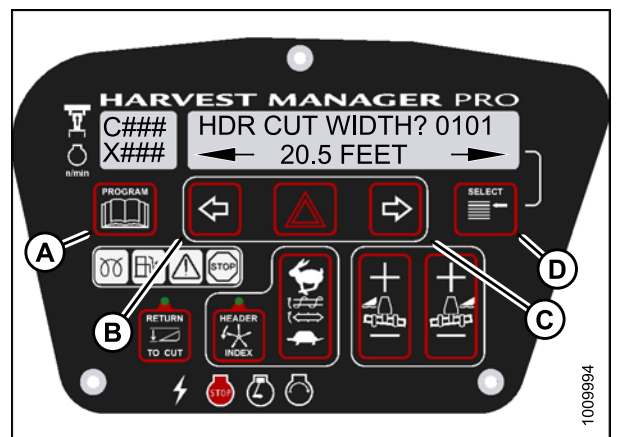


Figure 4.117: M205 Header Cut Width

CAB DISPLAY MODULE (CDM)

4.4.12 Activating the Double Windrower Attachment (DWA)

NOTE:

- Follow this procedure if installing the DWA; however, refer to the DWA manual if you require additional installation instructions.
 - Follow this procedure if installing a drive manifold (MD #139508).
1. Turn ignition key to RUN, or start the engine.
 2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
 3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

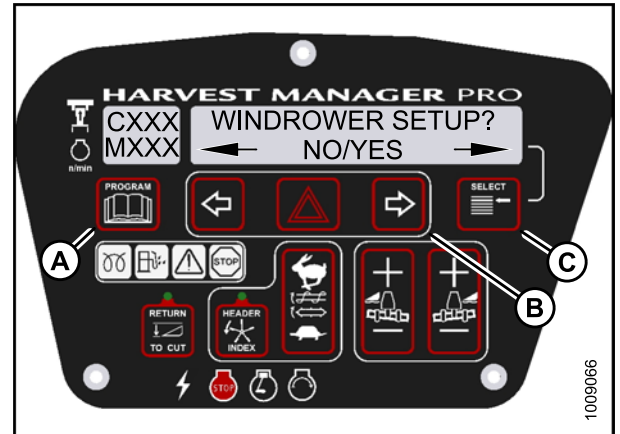


Figure 4.118: M155 CDM Programming Buttons

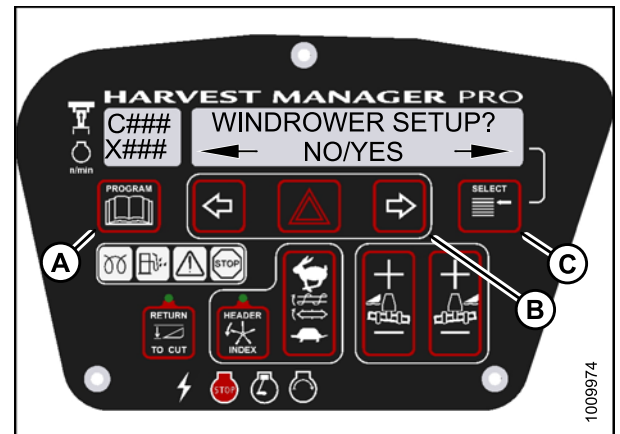


Figure 4.119: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (B) until DWA INSTALLED? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
- Press right (A) arrow to select YES. Press SELECT (B).

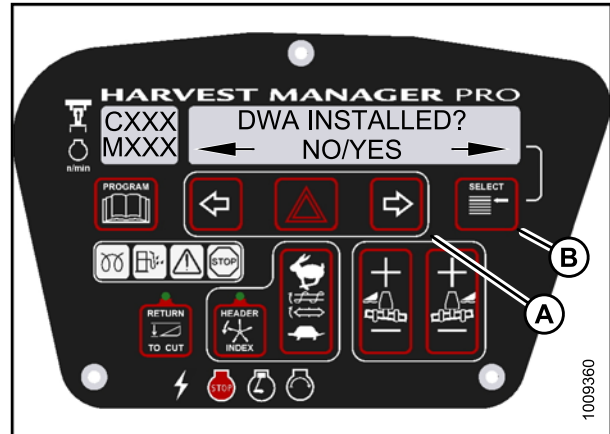


Figure 4.120: M155 DWA Controls

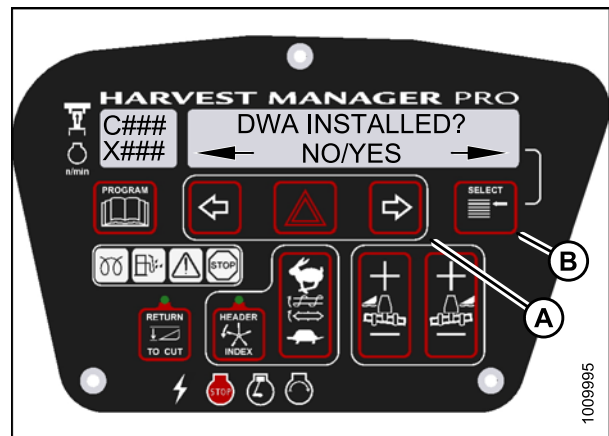


Figure 4.121: M205 DWA Controls

CAB DISPLAY MODULE (CDM)

6. SWAP DWA CONTROLS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.

NOTE:

This step swaps the DWA controls from the console switch to the ground speed lever (GSL) reel fore-aft buttons.

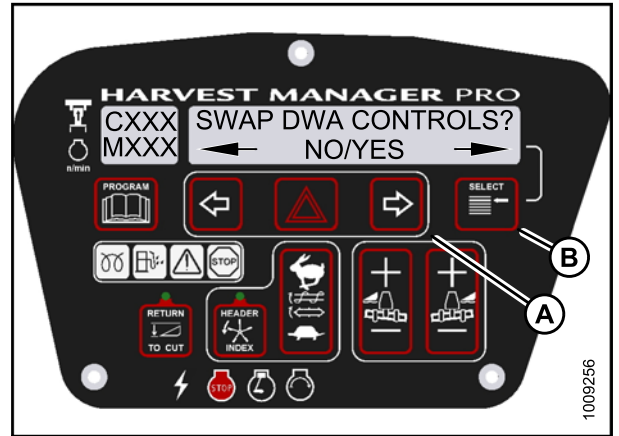


Figure 4.122: M155 DWA Controls

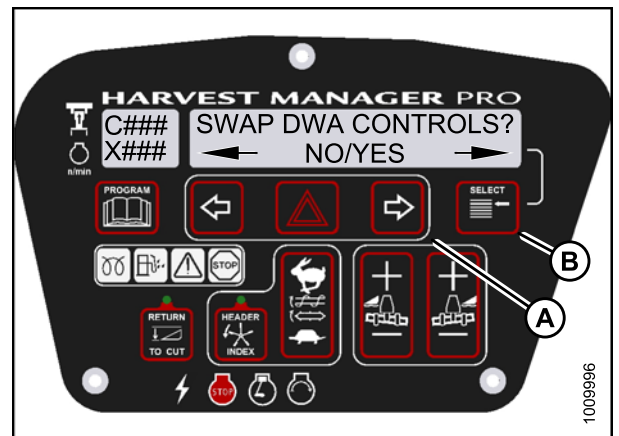


Figure 4.123: M205 DWA Controls

CAB DISPLAY MODULE (CDM)

- Press right (C) arrow to select YES. Press SELECT (D).
- DWA AUTO UP/DOWN ? is displayed on the upper line.
- NO/YES is displayed on the lower line.

NOTE:

If the Operator selects YES, the DWA Auto-Up function will be activated by the GSL Reel Fore-Aft button.

- Press right (C) arrow to select YES. Press SELECT (D).
- Press PROGRAM to exit Programming Mode or press SELECT to proceed to next WINDROWER SETUP action.

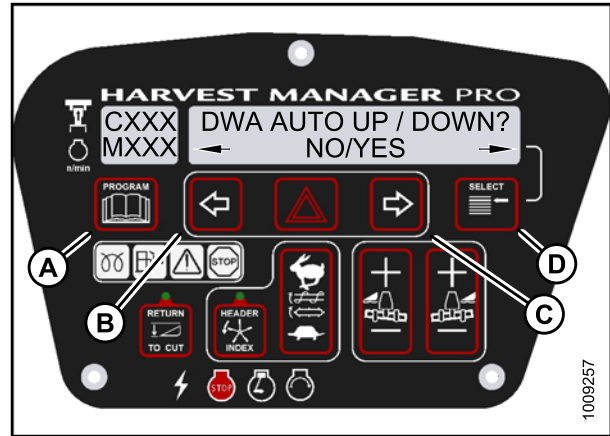


Figure 4.124: M155 DWA Auto Up/Down

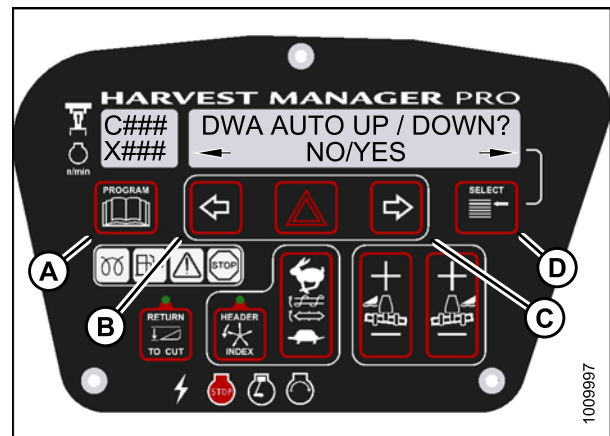


Figure 4.125: M205 DWA Auto Up/Down

4.4.13 Setting the Auto Raise Height

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

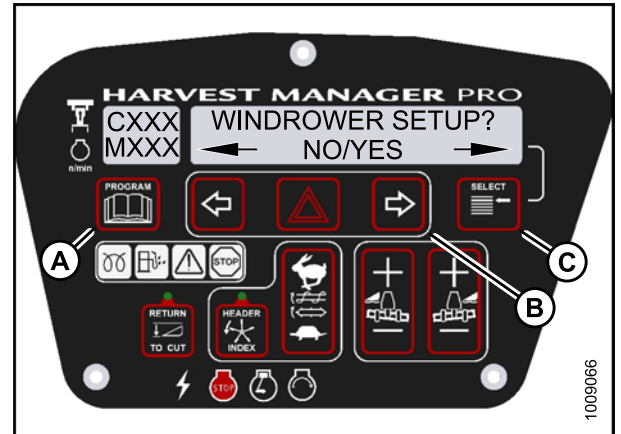


Figure 4.126: M155 CDM Programming Buttons

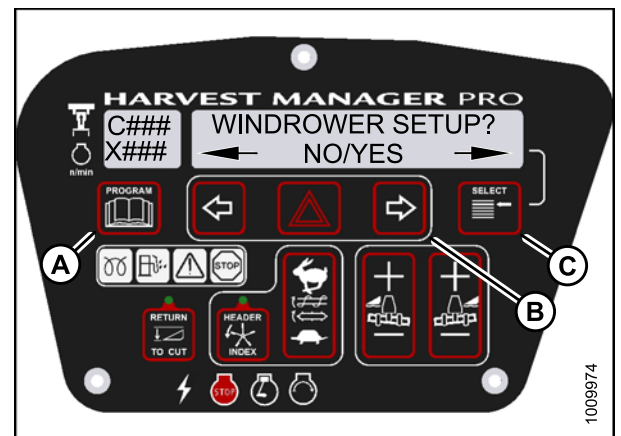


Figure 4.127: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until AUTO RAISE HEIGHT? is displayed on the upper line.

- Last measurement is displayed on the lower line.

NOTE:

The auto raise height ranges from 4.0 (minimum) to 9.5 (maximum), in 0.5 increments. A setting of 10 disables the auto raise function.

5. Press left (B) arrow or right (C) arrow to change auto-raise height.
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

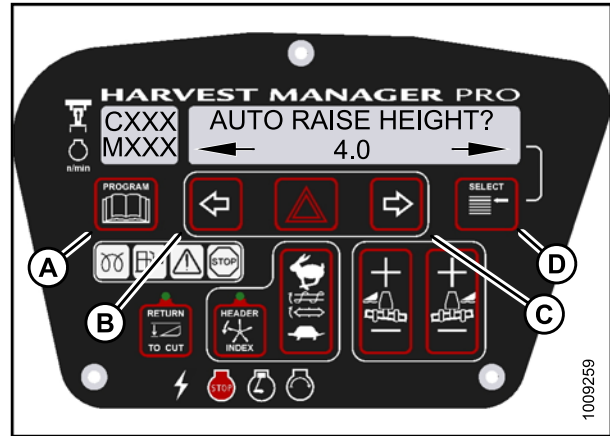


Figure 4.128: M155 Auto Raise Height

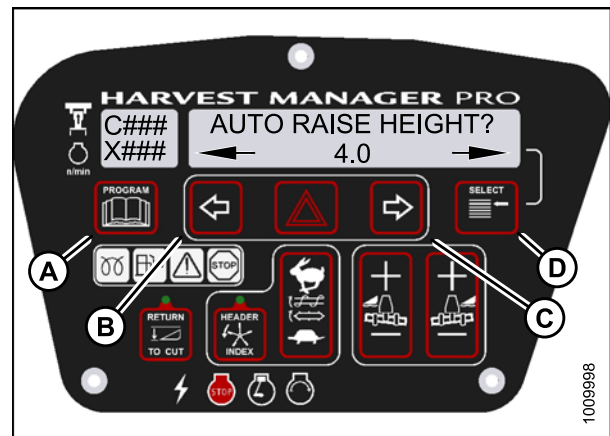


Figure 4.129: M205 Auto Raise Height

4.4.14 Activating the Hay Conditioner

NOTE:

- This procedure is for draper headers only.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

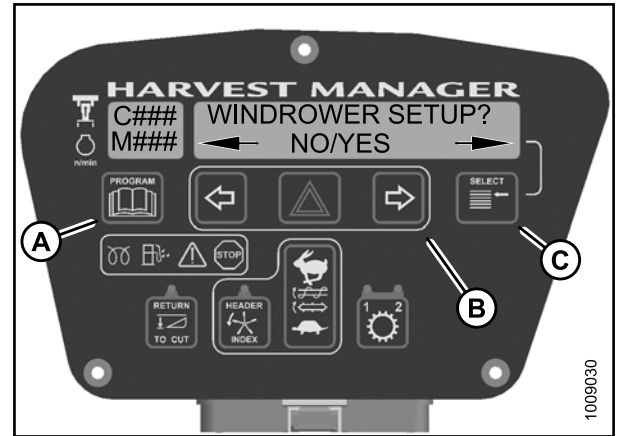


Figure 4.130: M105 CDM Programming Buttons

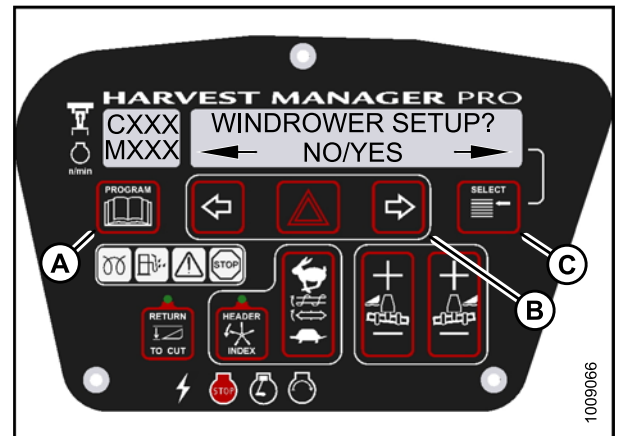


Figure 4.131: M155 CDM Programming Buttons Shown – M205 Similar

CAB DISPLAY MODULE (CDM)

4. Press SELECT (C) until HAY CONDITIONER? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (B) arrow to select YES. Press SELECT (C).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next WINDROWER SETUP action.



Figure 4.132: M105 Hay Conditioner

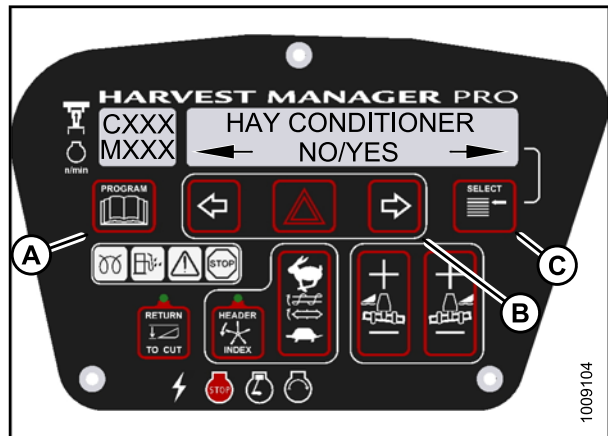


Figure 4.133: M155 Hay Conditioner Shown – M205 Similar

4.4.15 Displaying Reel Speed

NOTE:

- This procedure is for draper and auger headers. It does not apply to rotary disc headers.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on CDM to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

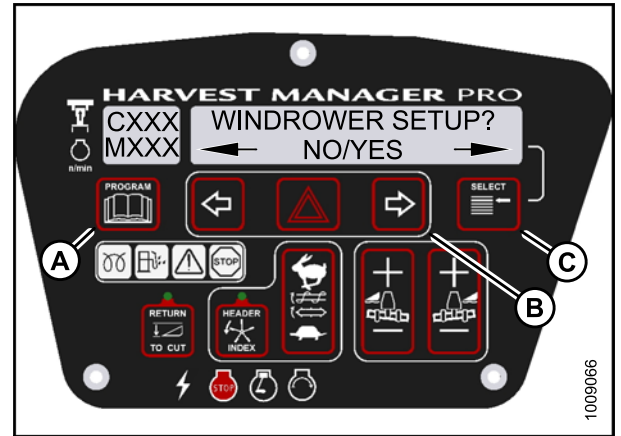


Figure 4.134: M155 CDM Programming Buttons

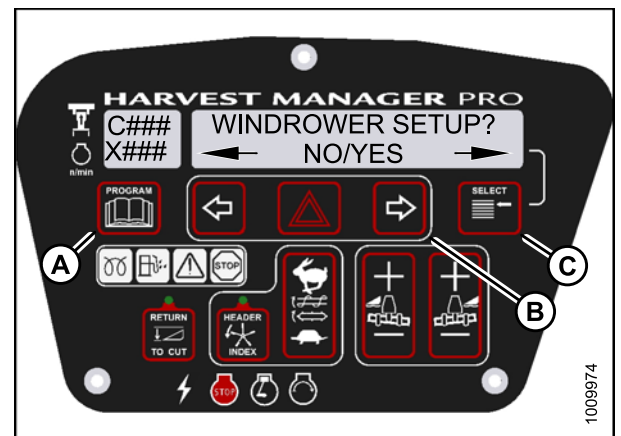


Figure 4.135: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until HEADER REEL SPEED? is displayed on the upper line.
 - RPM/MPH or RPM/KPH is displayed on the lower line.
- Press left (B) or right (C) arrow to select either Imperial or Metric units. Press SELECT (D).
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

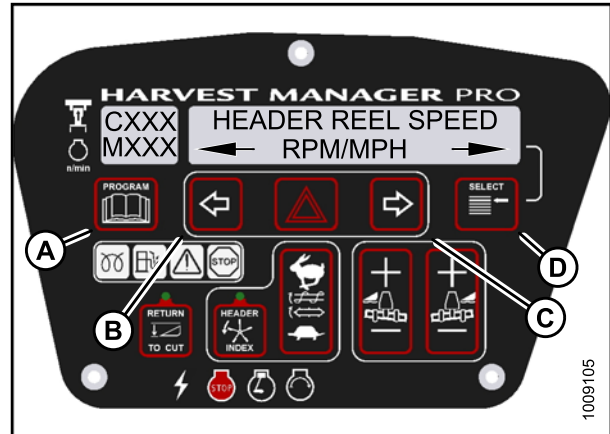


Figure 4.136: M155 Reel Speed Display

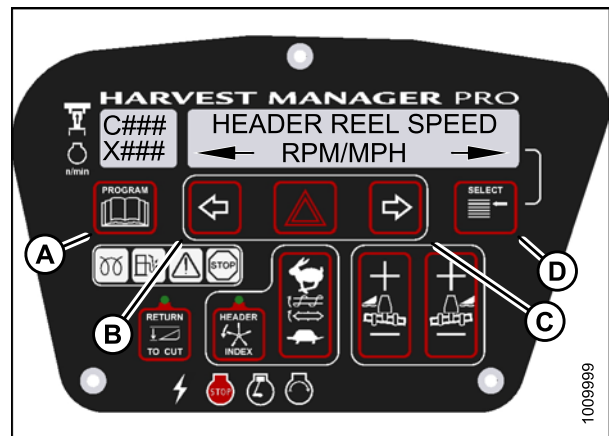


Figure 4.137: M205 Reel Speed Display

4.4.16 Displaying the Speed of the Auger Header Reel

- Turn ignition key to RUN, or start the engine.
- Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
- Press right (B) arrow to select YES. Press SELECT (C).
 - SELECT HEADER TYPE? is displayed on the upper line.

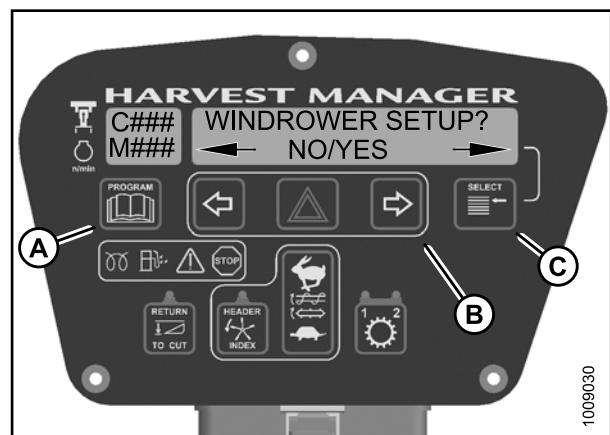


Figure 4.138: CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until AUGER HDR REEL SPD? is displayed on the upper line.
 - RPM/MPH is displayed on the lower line.
5. Press left (B) or right (C) arrow to select either Imperial (mph) or Metric (km/h) units. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.139: Auger Reel Speed

CAB DISPLAY MODULE (CDM)

4.4.17 Setting the Windrower's Tire Size

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.



Figure 4.140: M105 CDM Programming Buttons

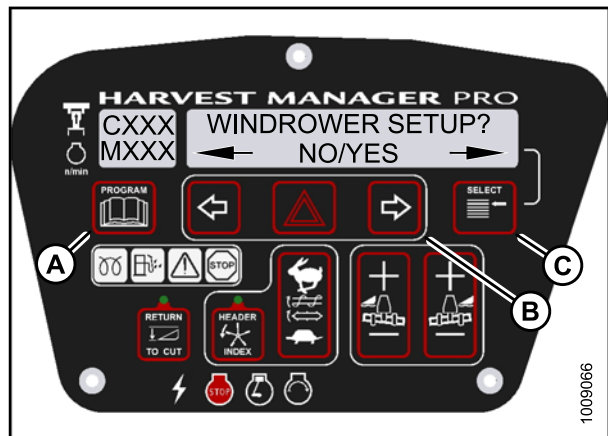


Figure 4.141: M155 CDM Programming Buttons

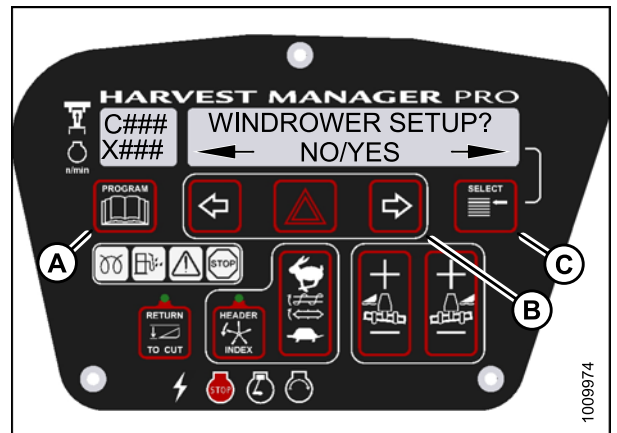


Figure 4.142: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (D) until SET TIRE SIZE? is displayed on the upper line.
 - Currently installed tire size is displayed on the lower line.

NOTE:

The following tire sizes are available:

- 18.4 x 26 TURF
- 18.4 x 26 BAR
- 23.1 x 26 TURF
- 600 – 65 R28

5. Press left (B) or right (C) arrow and select tire size. Press SELECT (D).
6. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

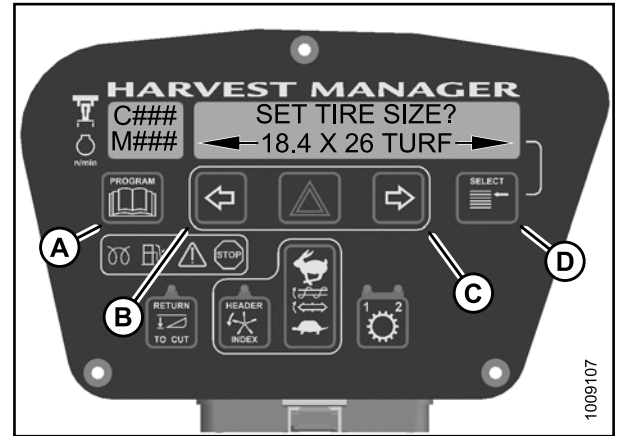


Figure 4.143: M105 Tire Size

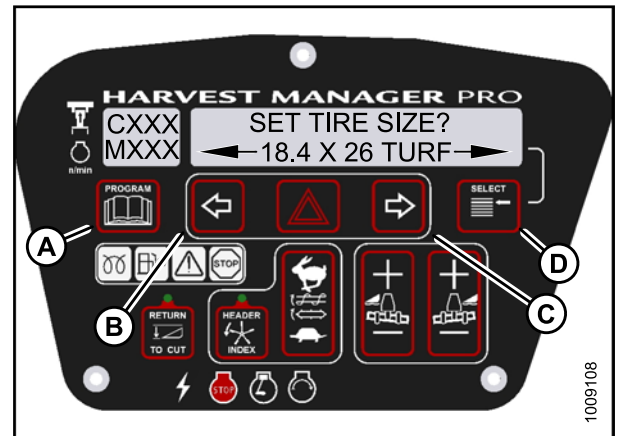


Figure 4.144: M155 Tire Size

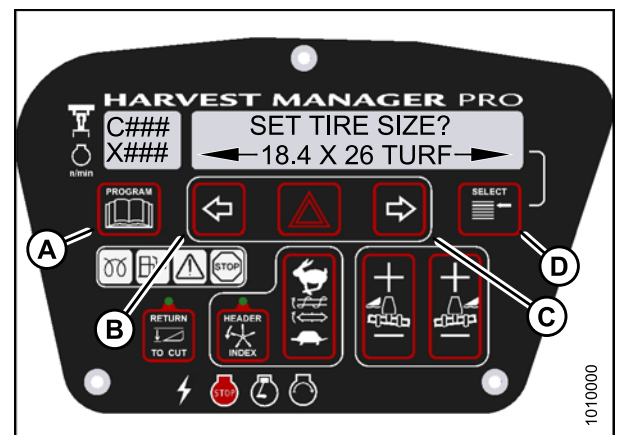


Figure 4.145: M205 Tire Size

4.4.18 Setting the Engine Intermediate Speed Control (ISC) RPM on an M105

The ISC sets the engine speed when the header is engaged.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SELECT HEADER TYPE? is displayed on the upper line.



Figure 4.146: CDM Programming Buttons

4. Press SELECT (C) until SET ENGINE ISC RPM? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (B) arrow to select YES. Press SELECT (C).
 - PRESS HAZARD TO SET is displayed on the upper line.
 - ISC RPM ON is displayed on the lower line.



Figure 4.147: Engine ISC RPM

NOTE:

Previous ISC selection is flashing.

6. Press right (C) arrow to cycle between ON and OFF. Press HAZARD (B) to set.

NOTE:

Choosing ON sets the Engine ISC to 2300 rpm.

7. Press SELECT (D).
 - EXIT ENGINE ISC? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right (C) arrow to select YES. Press SELECT (D).
9. Press PROGRAM (A) to exit Programming Mode.



Figure 4.148: ISC RPM

CAB DISPLAY MODULE (CDM)

4.4.19 Setting the Engine Intermediate Speed Control (ISC) RPM on an M155/M205

NOTE:

The engine **MUST** be running to perform this procedure.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

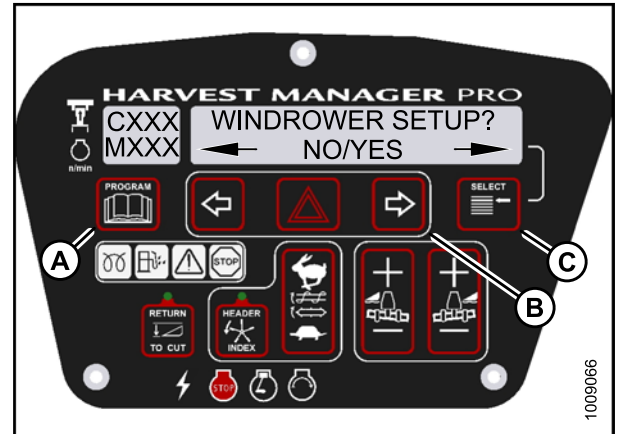


Figure 4.149: M155 CDM Programming Buttons

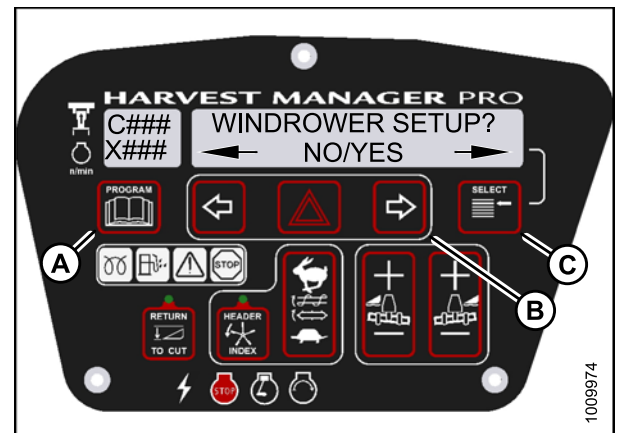


Figure 4.150: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (C) until SET ENGINE ISC RPM? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
- Press right (B) arrow to select YES. Press SELECT (C).
 - PRESS HAZARD TO SET is displayed on the upper line.
 - ISC RPM ##### is displayed on the lower line.

NOTE:

The previously selected ISC rpm will be flashing.

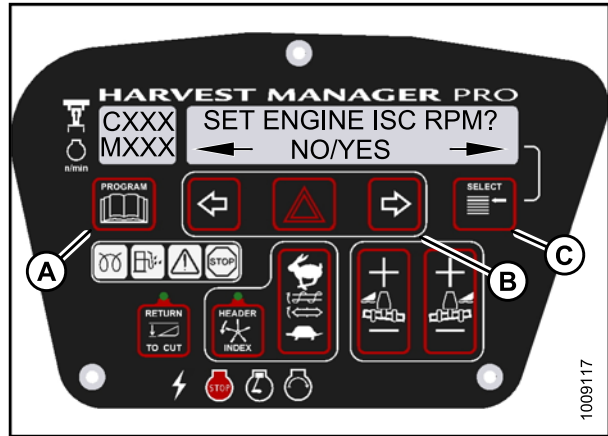


Figure 4.151: M155 Engine ISC RPM

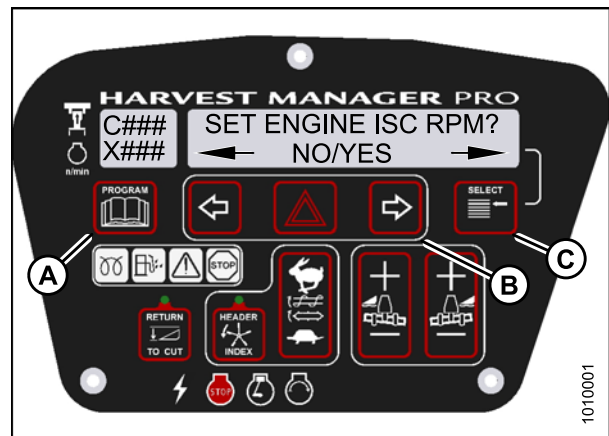


Figure 4.152: M205 Engine ISC RPM

CAB DISPLAY MODULE (CDM)

- Press right (C) arrow to cycle between rpm options.
Press HAZARD (B) to set.
- Press Select (D).
 - EXIT ENGINE ISC? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
- Press right (C) arrow to select YES. Press SELECT (D).
- Press PROGRAM (A) to exit Programming Mode.

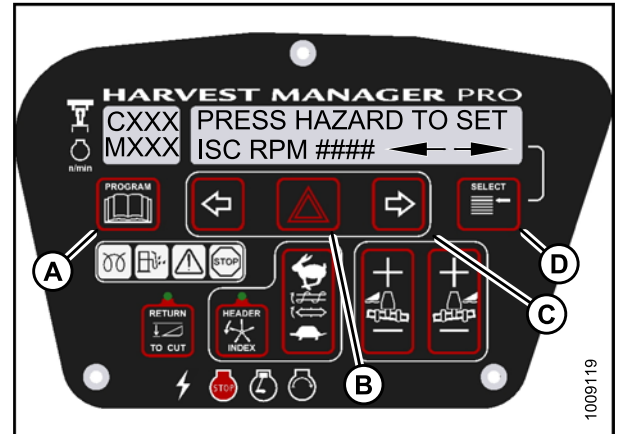


Figure 4.153: M155 ISC RPM

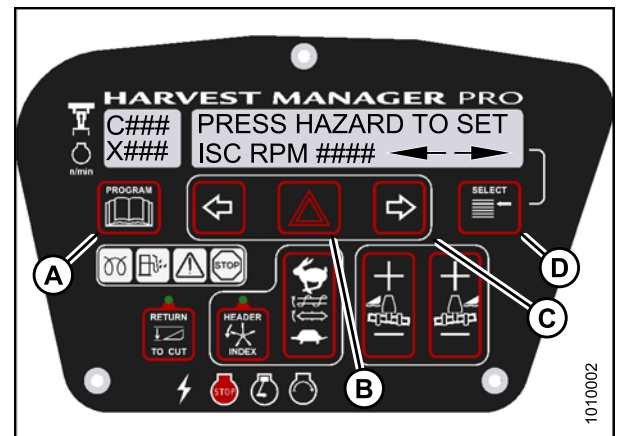


Figure 4.154: M205 ISC RPM

CAB DISPLAY MODULE (CDM)

4.4.20 Clearing Sub-Acres

1. With the key "ON", and the operators station is in cab forward position. Press SELECT until the CDM displays sub-acres on the bottom line. Then press and hold the PROGRAM (A) button on the CDM until the sub-acres are cleared.



Figure 4.155: Cab Display Module/Windrower Control Module (CDM/WCM)



Figure 4.156: Cab Display Module (CDM)

4.5 Activating Cab Display Lock Outs

You can lock some of the header functions controlled by the cab display module (CDM) to prevent accidental changes to header settings. You can use this feature to keep header settings constant when several different operators use the windrower.

NOTE:

FUNCTION LOCKED flashes on CDM when locked header function switch is pressed.

4.5.1 Activating Knife Speed Control Lock Out

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

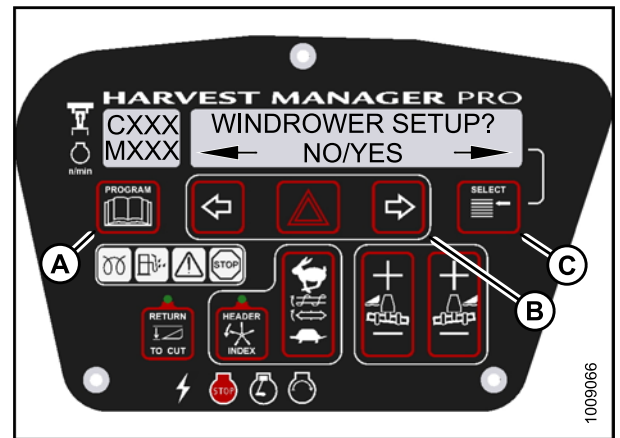


Figure 4.157: M155 CDM Programming Buttons

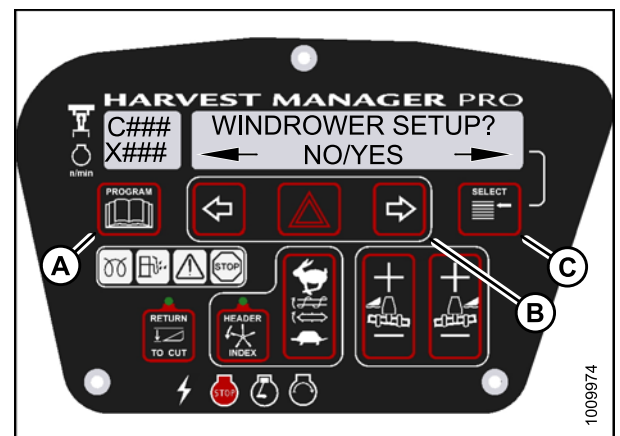


Figure 4.158: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).

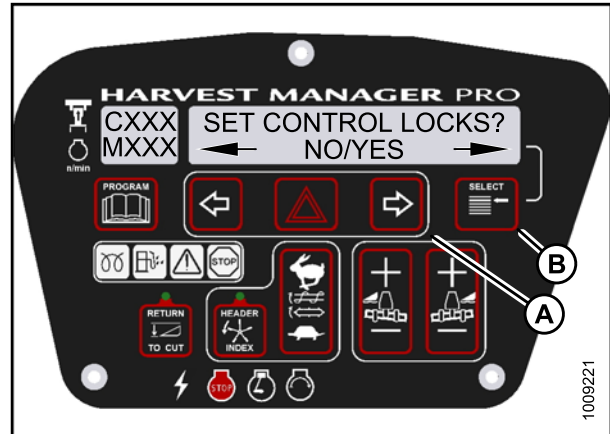


Figure 4.159: M155 Control Locks

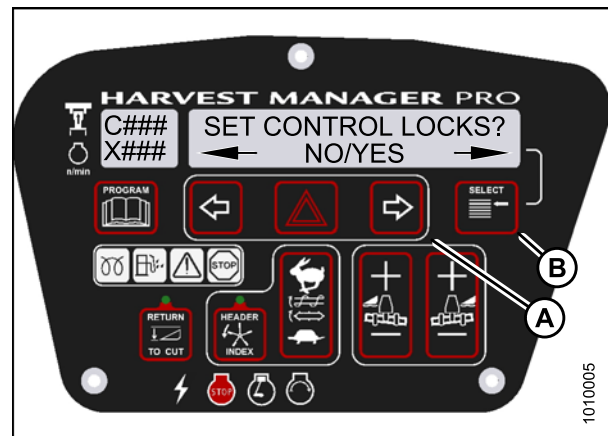


Figure 4.160: M205 Control Locks

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until KNIFE SPEED is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
- Press left arrow (B) to enable KNIFE SPEED control switch, or press right arrow (C) to lock KNIFE SPEED control switch.
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

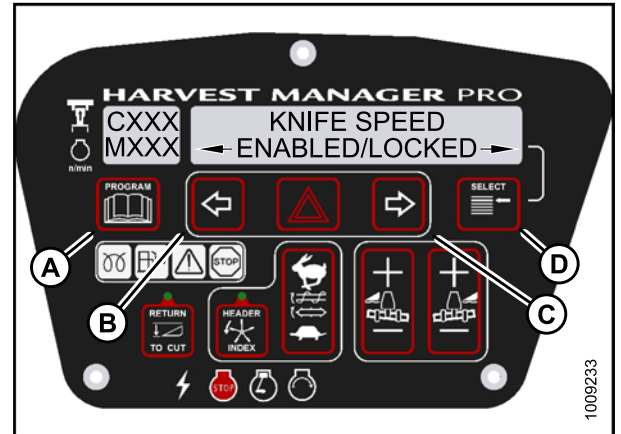


Figure 4.161: M155 Knife Speed Control Lock

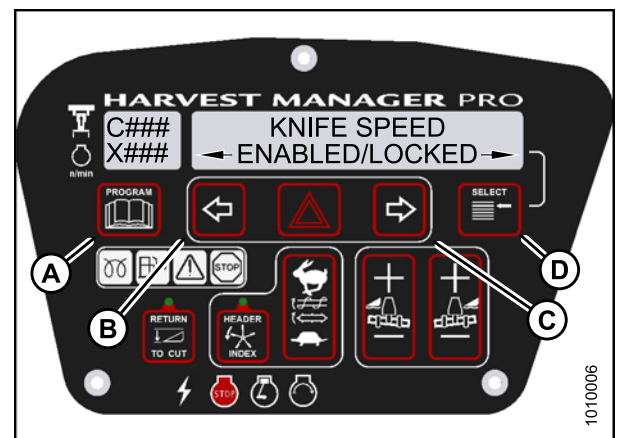


Figure 4.162: M205 Knife Speed Control Lock

4.5.2 Activating Rotary Disc Speed Control Lock Out

NOTE:

- This procedure is for rotary disc headers only.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

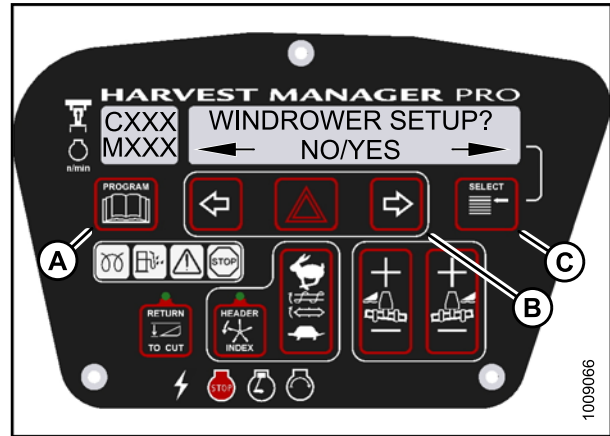


Figure 4.163: M155 CDM Programming Buttons

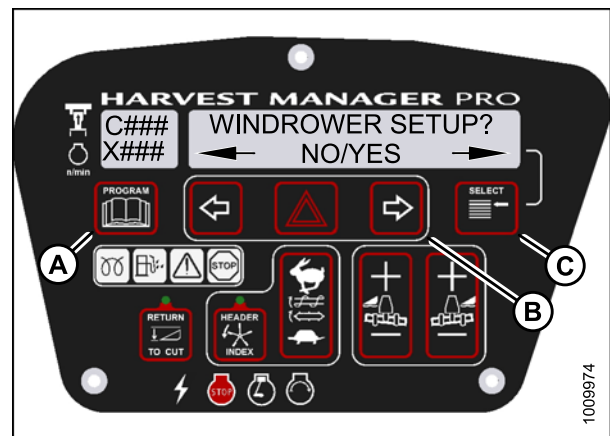


Figure 4.164: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).

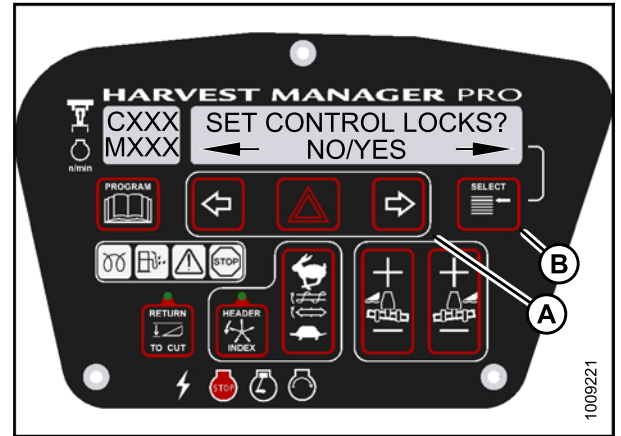


Figure 4.165: M155 Control Locks

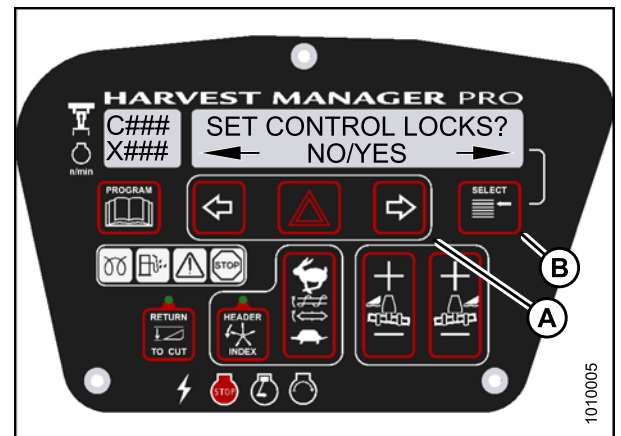


Figure 4.166: M205 Control Locks

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until DISK SPEED is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
- Press left arrow (B) to enable DISK SPEED control switch, or press right arrow (C) to lock DISK SPEED control switch.
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

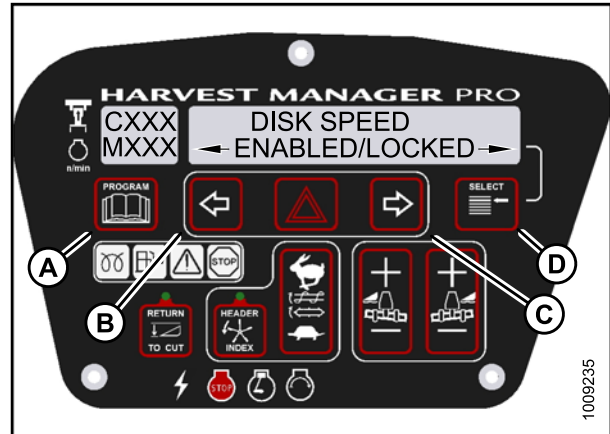


Figure 4.167: M155 Disc Speed Control Lock

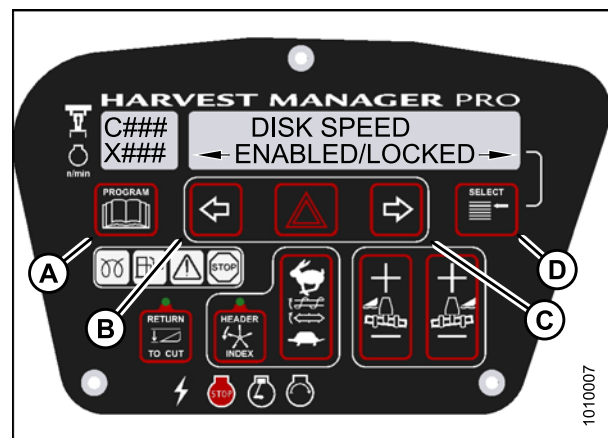


Figure 4.168: M205 Disc Speed Control Lock

4.5.3 Activating the Header Float Control Lock Out

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.

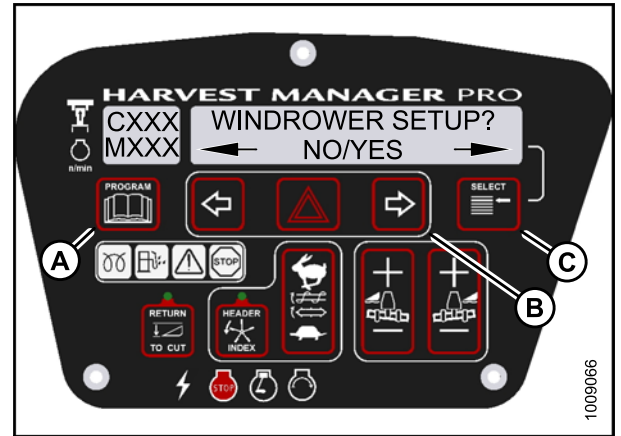


Figure 4.169: M155 CDM Programming Buttons

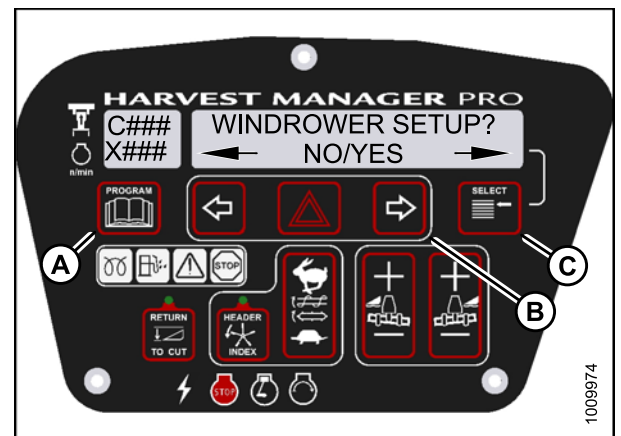


Figure 4.170: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).

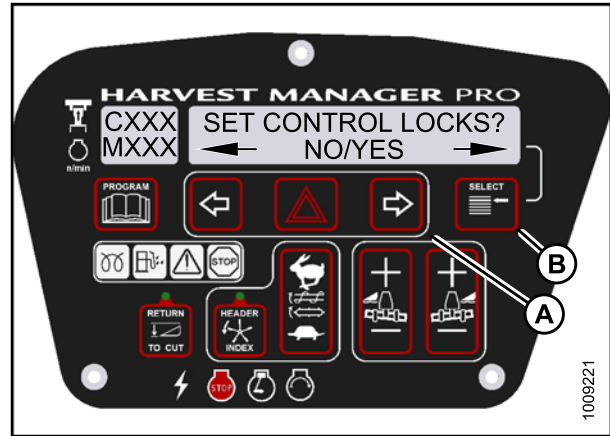


Figure 4.171: M155 Control Locks

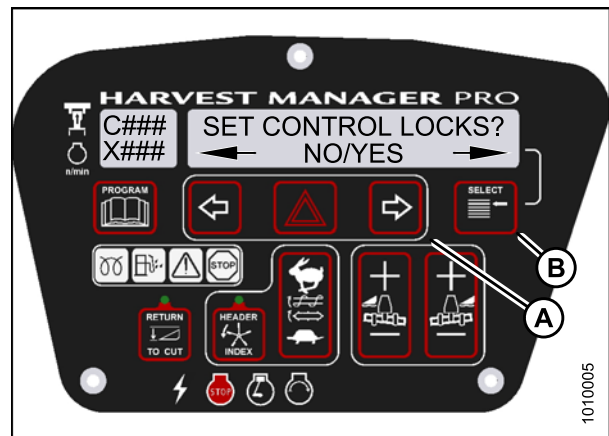


Figure 4.172: M205 Control Locks

CAB DISPLAY MODULE (CDM)

- Press SELECT (D) until HEADER FLOAT is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
- Press left arrow (B) to enable HEADER FLOAT control switch, or press right arrow (C) to lock HEADER FLOAT control switch.
- Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.

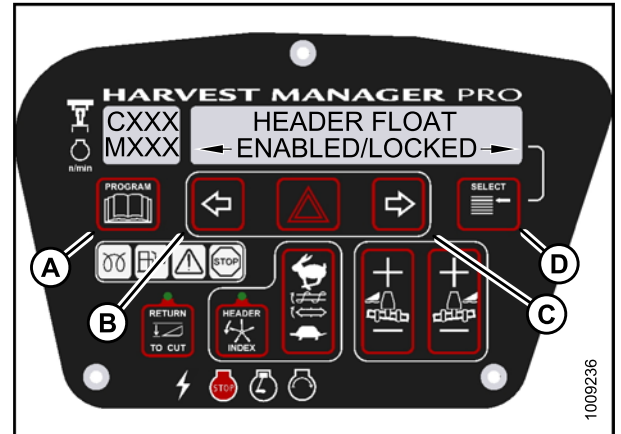


Figure 4.173: M155 Header Float Control Lock

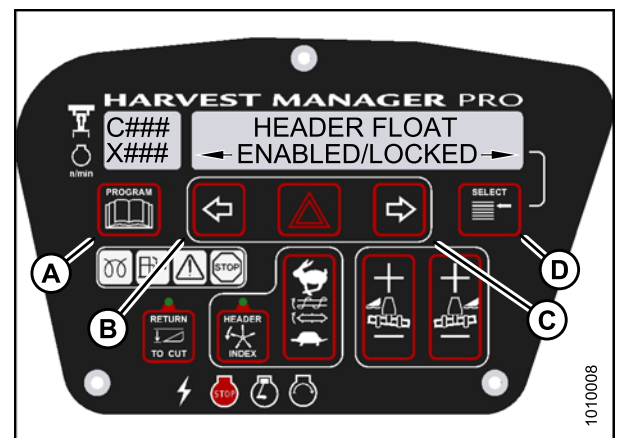


Figure 4.174: M205 Header Float Control Lock

4.5.4 Activating the Draper Speed Control Lock Out

NOTE:

- This procedure is for draper headers only.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.



Figure 4.175: M105 CDM Programming Buttons

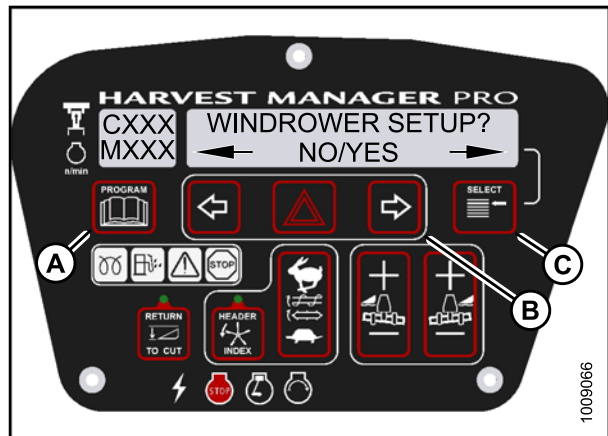


Figure 4.176: M155 CDM Programming Buttons

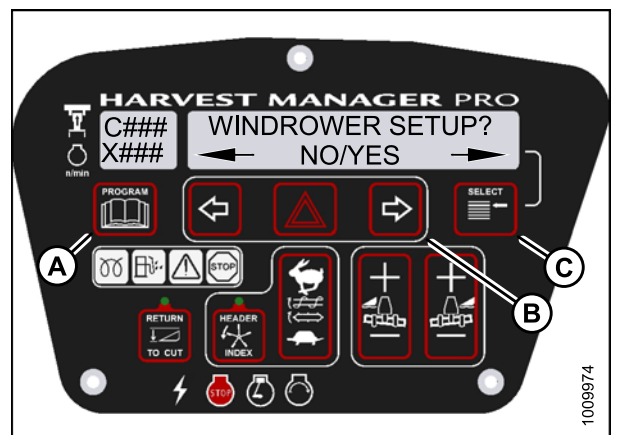


Figure 4.177: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).

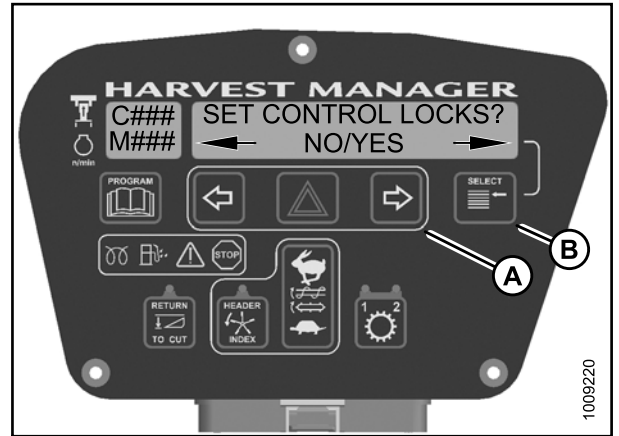


Figure 4.178: M105 Control Locks

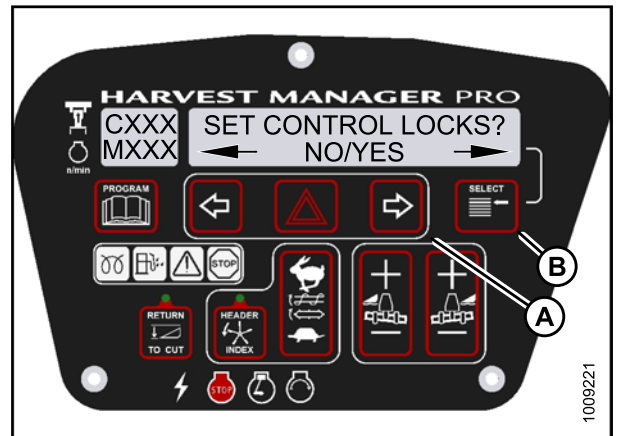


Figure 4.179: M155 Control Locks

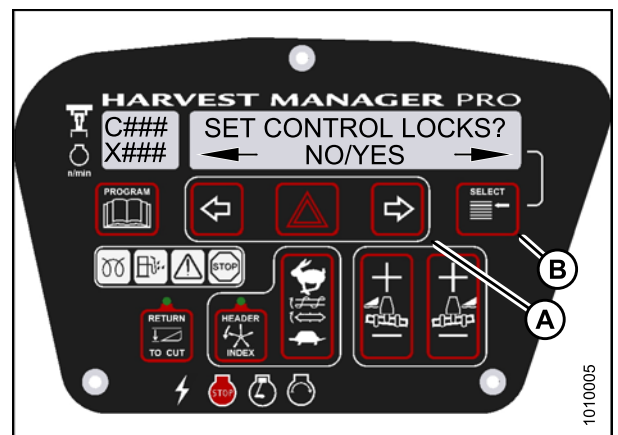


Figure 4.180: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press SELECT (D) until DRAPER SPEED is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
7. Press left arrow (B) to enable DRAPER SPEED control switch, or press right arrow (C) to lock DRAPER SPEED control switch.
8. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.181: M105 Draper Control Lock

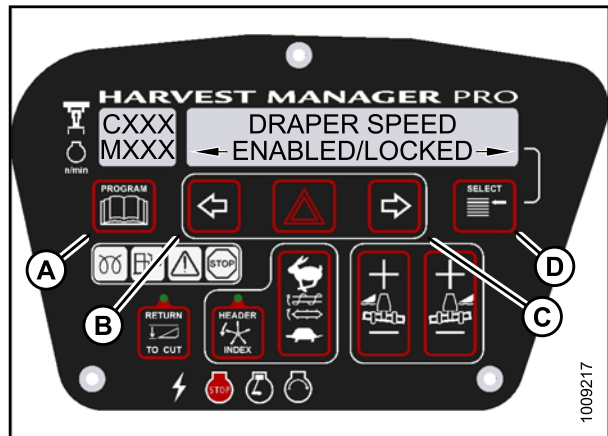


Figure 4.182: M155 Draper Control Lock

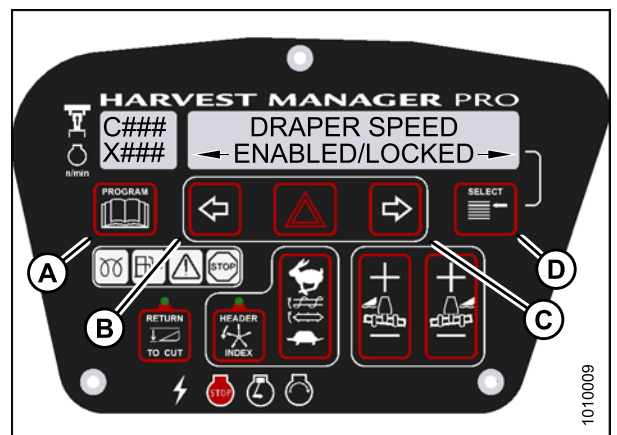


Figure 4.183: M205 Draper Control Lock

4.5.5 Activating the Auger Speed Control Lock Out

NOTE:

- This procedure is for A40-D Headers only.
- An auger header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.



Figure 4.184: M105 CDM Programming Buttons

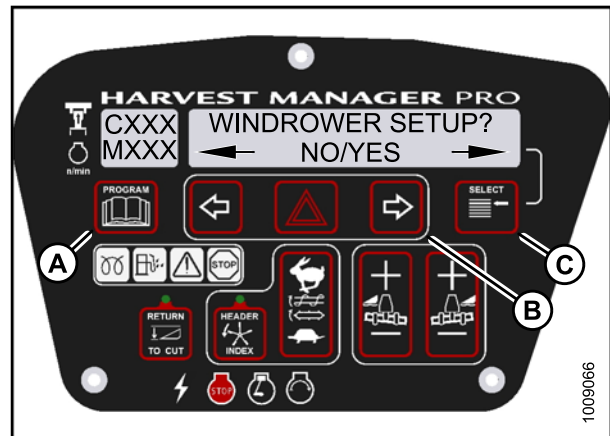


Figure 4.185: M155 CDM Programming Buttons

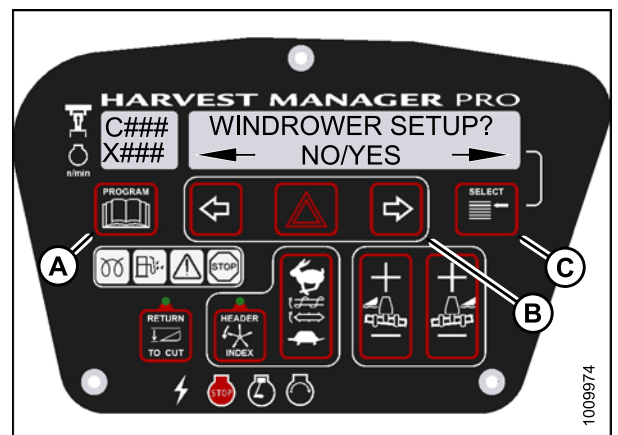


Figure 4.186: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).

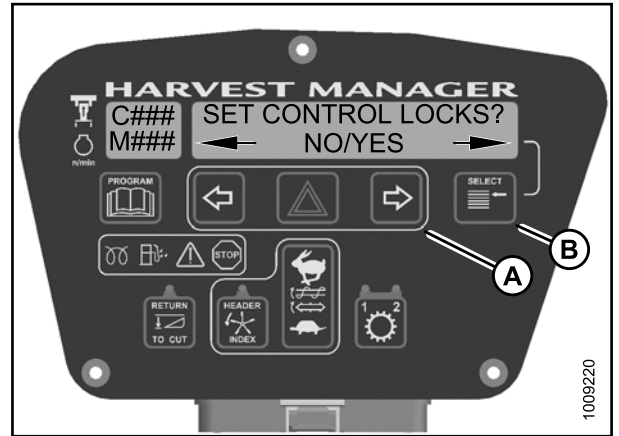


Figure 4.187: M105 Control Locks

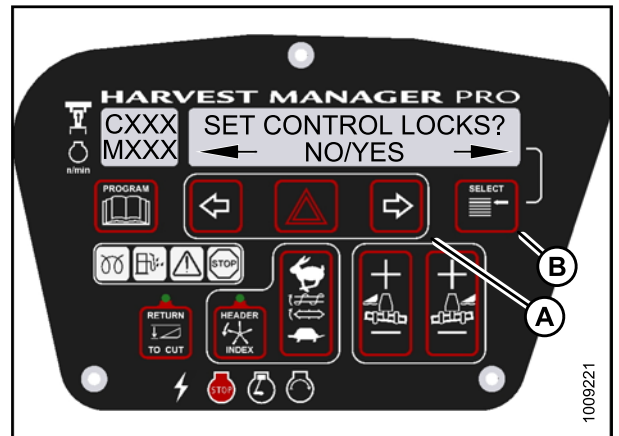


Figure 4.188: M155 Control Locks

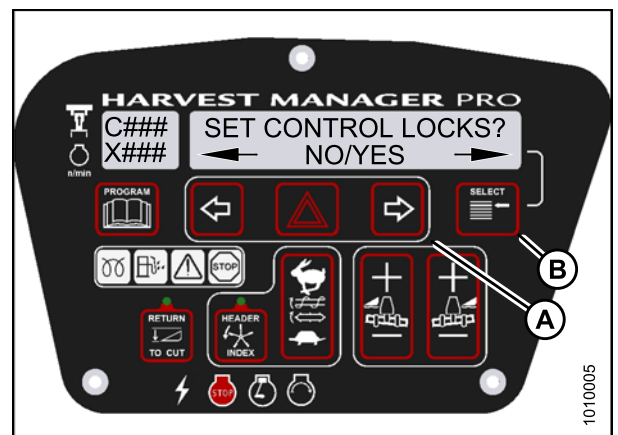


Figure 4.189: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press SELECT (D) until AUGER SPEED is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
7. Press left (B) arrow to enable AUGER SPEED control switch.
Press right (C) arrow to lock AUGER SPEED control switch.
8. Press PROGRAM (A) to exit Programming Mode, or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.190: M105 Auger Control Lock

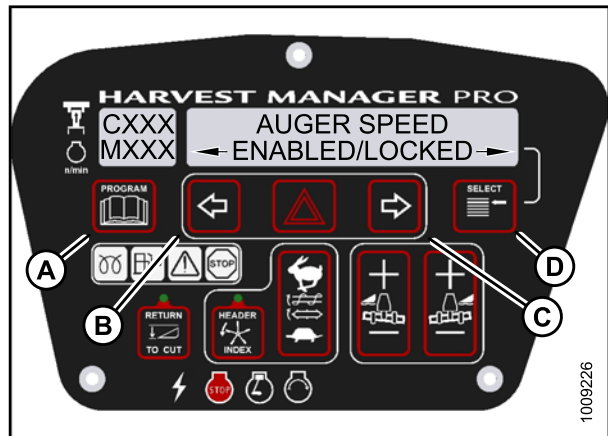


Figure 4.191: M155 Auger Control Lock

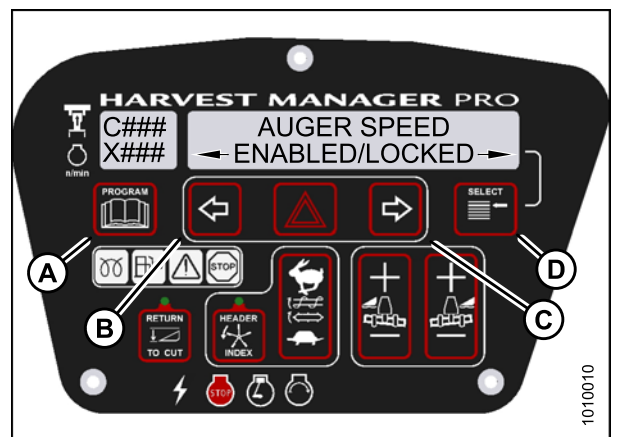


Figure 4.192: M205 Auger Control Lock

4.5.6 Activating the Reel Speed Control Lock Out

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

CAB DISPLAY MODULE (CDM)

NOTE:

Reel Speed Control Lock is displayed with installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

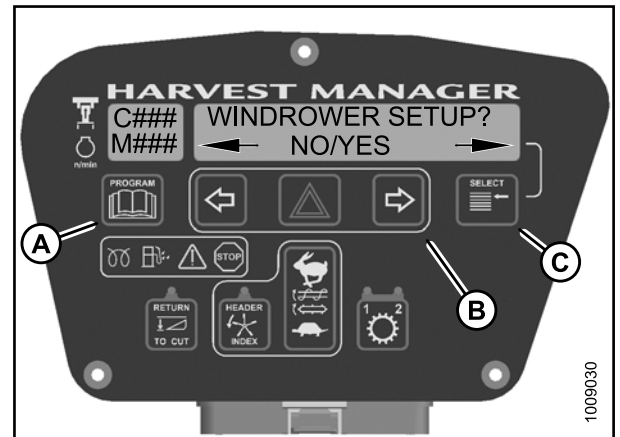


Figure 4.193: M105 CDM Programming Buttons

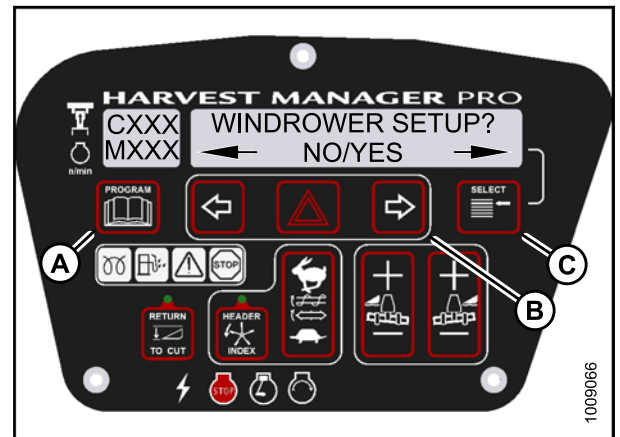


Figure 4.194: M155 CDM Programming Buttons

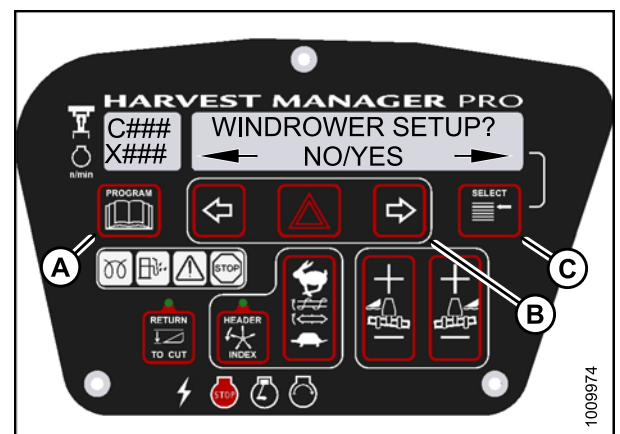


Figure 4.195: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.196: M105 Control Locks

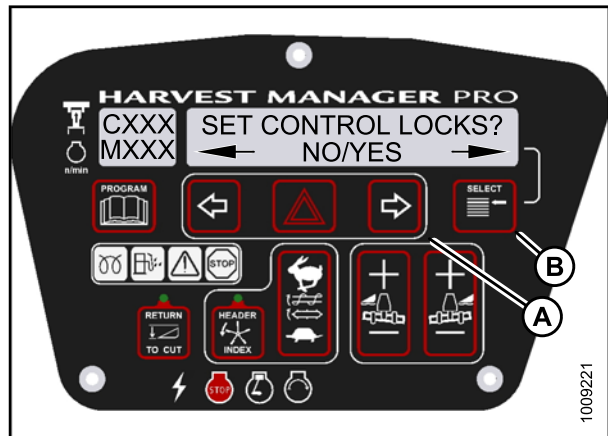


Figure 4.197: M155 Control Locks

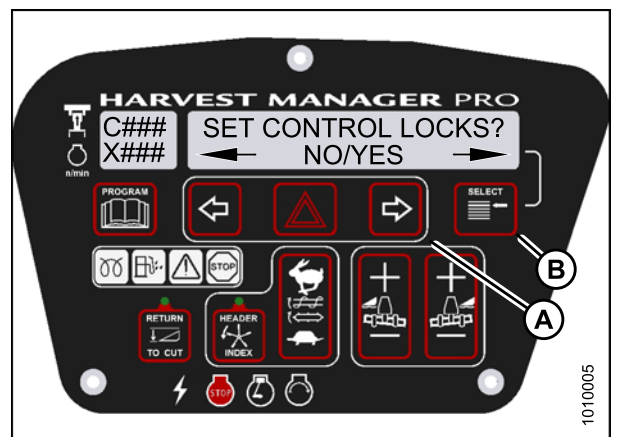


Figure 4.198: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press SELECT (D) until REEL SPEED is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
7. Press left (B) arrow to enable REEL SPEED control switch. Press right (C) arrow to lock REEL SPEED control switch.
8. Press PROGRAM (A) to exit Programming Mode, or press SELECT (D) to proceed to next WINDROWER SETUP action.

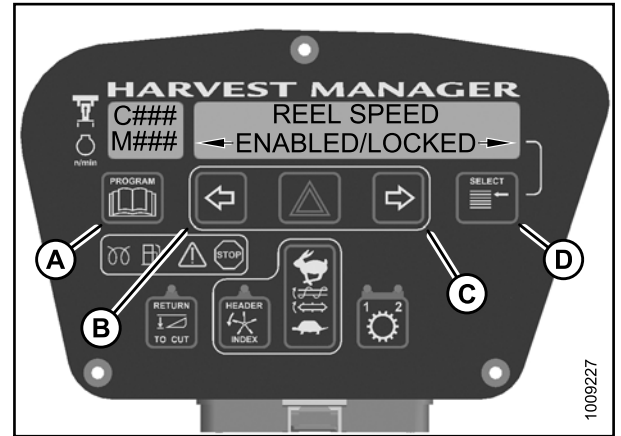


Figure 4.199: M105 Reel Speed Control Lock

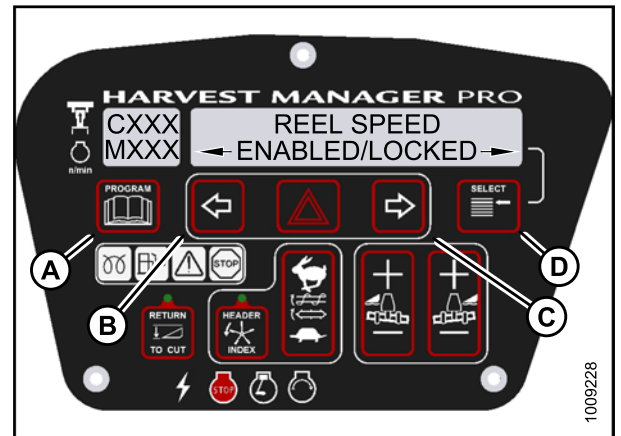


Figure 4.200: M155 Reel Speed Control Lock

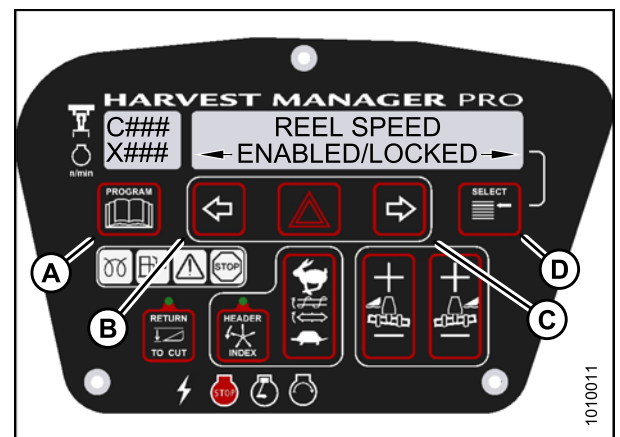


Figure 4.201: M205 Reel Speed Control Lock

4.5.7 Activating the Reel Fore-Aft Control Lock Out

NOTE:

- This procedure is for draper headers only.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- The Reel Fore-Aft option requires installation of the optional Windrower Hydraulic Fore-Aft Kit (MD #B5577). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

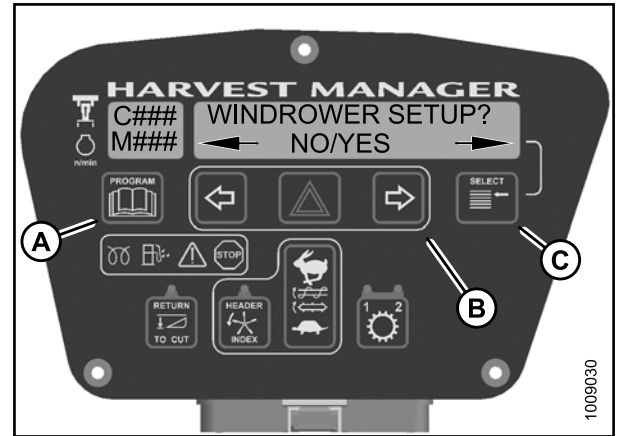


Figure 4.202: M105 CDM Programming Buttons

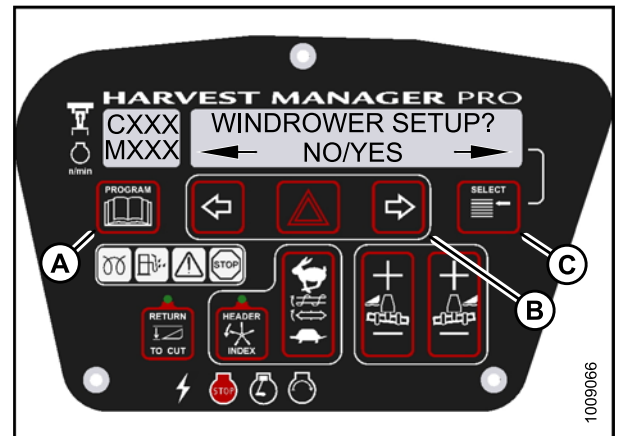


Figure 4.203: M155 CDM Programming Buttons

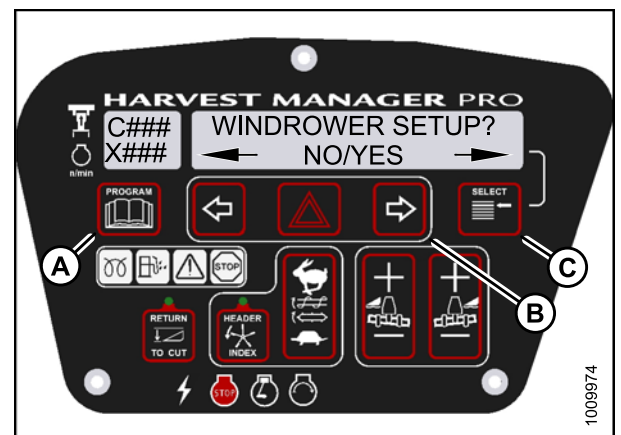


Figure 4.204: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.205: M105 Control Locks

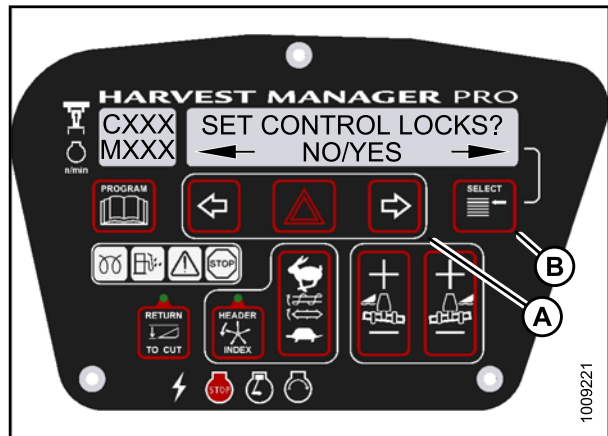


Figure 4.206: M155 Control Locks

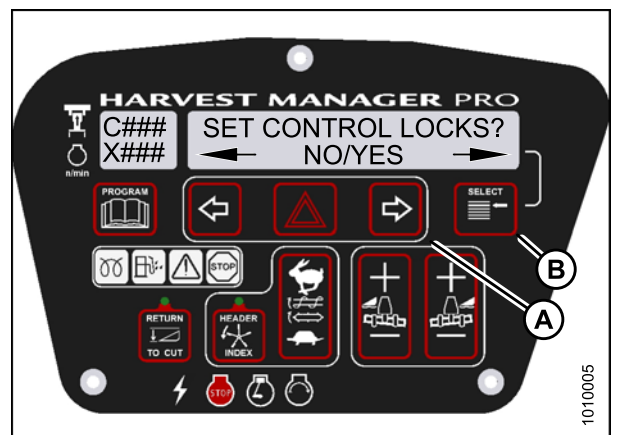


Figure 4.207: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press SELECT (D) until REEL FORE/AFT is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
7. Press left (B) arrow to enable REEL FORE/AFT control switch. Press right (C) arrow to lock REEL FORE/AFT control switch.
8. Press PROGRAM (A) to exit Programming Mode, or press SELECT (D) to proceed to next WINDROWER SETUP action.



Figure 4.208: M105 Reel Fore-Aft Control Lock

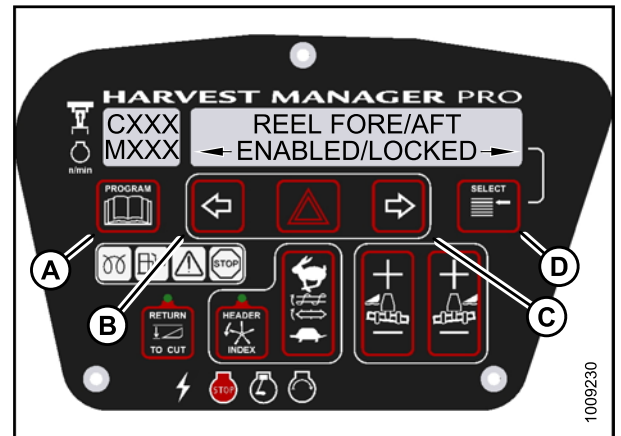


Figure 4.209: M155 Reel Fore-Aft Control Lock

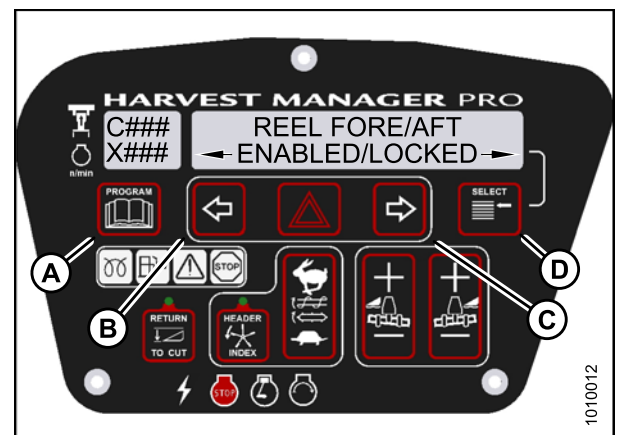


Figure 4.210: M205 Reel Fore-Aft Control Lock

4.5.8 Activating the Header Tilt Control Lock Out

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- This procedure requires installation of the optional hydraulic center-link (MD #B4650) and optional Auxiliary Valve (MD #B5269).
- Displaying center-link position on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

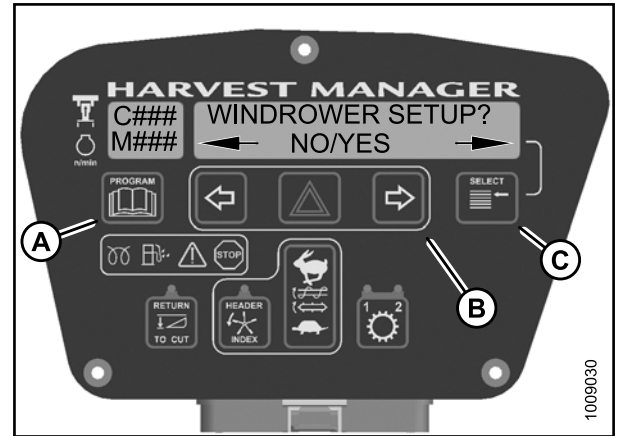


Figure 4.211: M105 CDM Programming Buttons

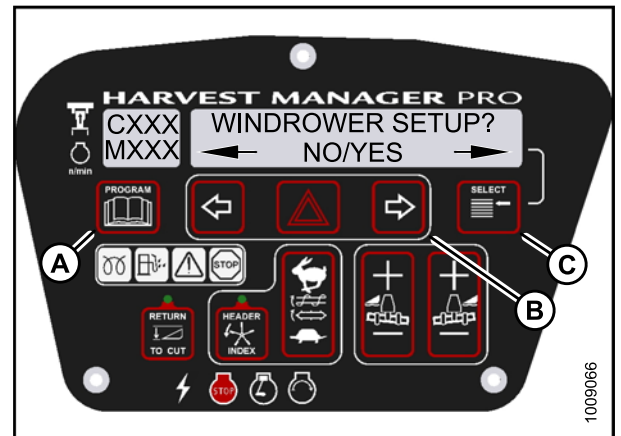


Figure 4.212: M155 CDM Programming Buttons

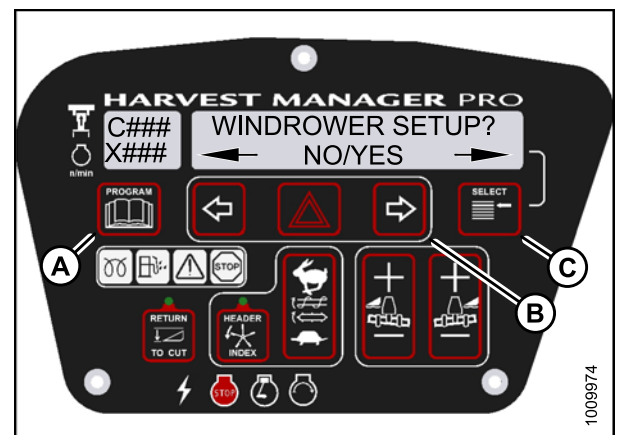


Figure 4.213: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press SELECT (B) until SET CONTROL LOCKS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
5. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.214: M105 Control Locks

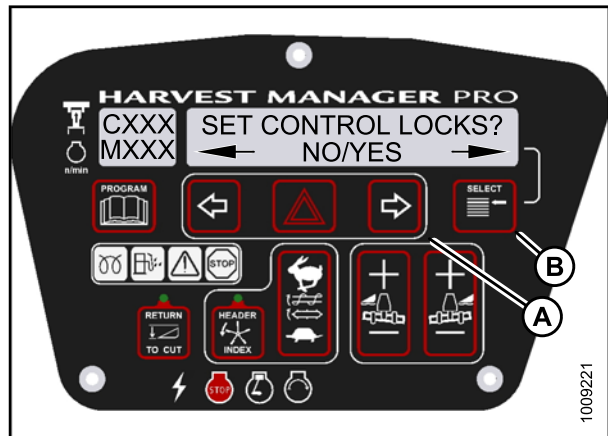


Figure 4.215: M155 Control Locks

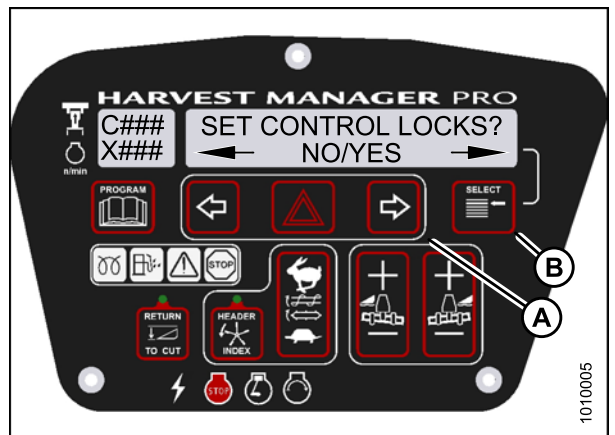


Figure 4.216: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press SELECT (D) until HEADER TILT is displayed on the upper line.
 - ENABLED/LOCKED is displayed on the lower line.
7. Press left (B) arrow to enable HEADER TILT control switch.
Press right (C) arrow to lock HEADER TILT control switch.
8. Press PROGRAM (A) to exit Programming Mode, or press SELECT (D) to proceed to next WINDROWER SETUP action.

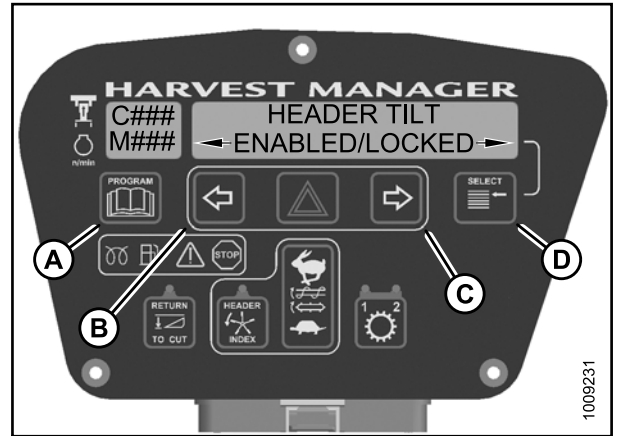


Figure 4.217: M105 Header Tilt Control Lock

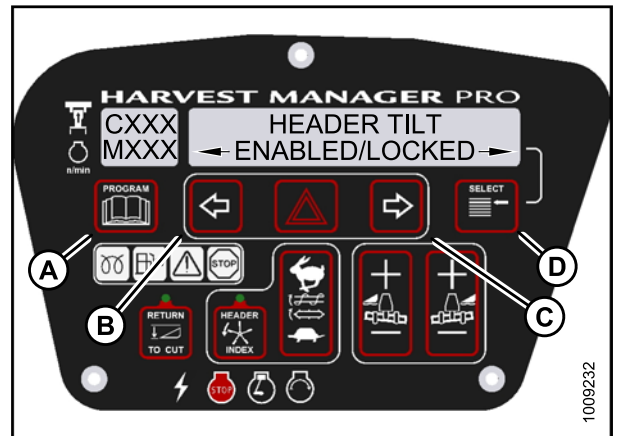


Figure 4.218: M155 Header Tilt Control Lock

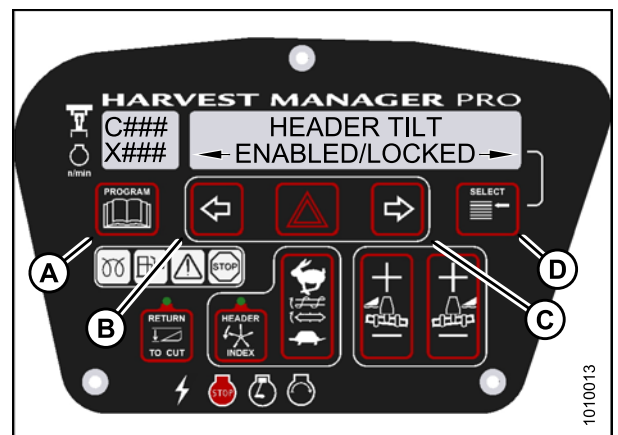


Figure 4.219: M205 Header Tilt Control Lock

4.6 Displaying Activated Cab Display Lock Outs

Displaying the activated control locks allows you to quickly determine which controls are locked on the cab display module (CDM).

NOTE:

- Displaying auger and reel speed control locks requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.
- Displaying reel fore-aft control lock requires installation of the optional Windrower Hydraulic Fore-Aft Kit (MD #B5577). For more information, refer to the windrower operator's manual or the windrower technical manual.
- Displaying header tilt control lock requires installation of the optional Hydraulic Center-Link (MD #B4650) and optional Auxiliary Valve (MD #B5269).

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press right (B) arrow to select YES. Press SELECT (C).
 - SET KNIFE SPEED? is displayed on the upper line.
 - SELECT HEADER TYPE? is displayed on the upper line.

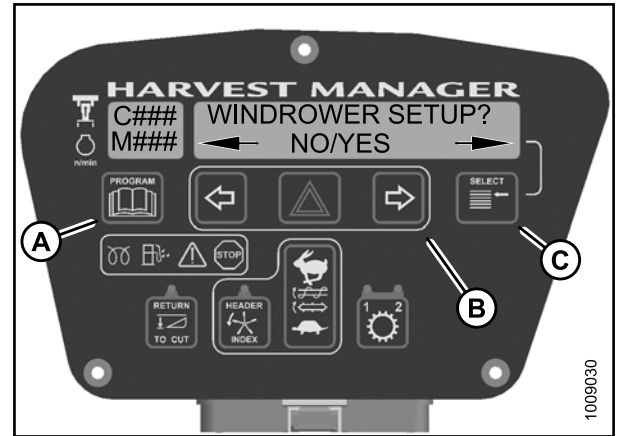


Figure 4.220: M105 CDM Programming Buttons

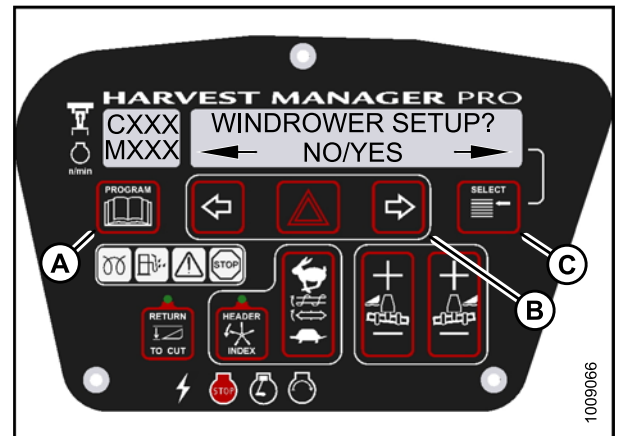


Figure 4.221: M155 CDM Programming Buttons

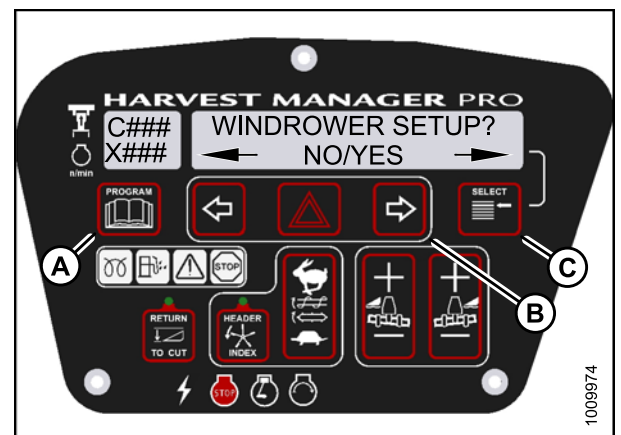


Figure 4.222: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

- Press SELECT (B) until VIEW CONTROL LOCKS? is displayed on the upper line.

- NO/YES is displayed on the lower line.

- Press right (A) arrow to select YES. Press SELECT (B). DRAPER SPEED is displayed on the upper line.

- The control switch status is displayed on the lower line. The hours displayed indicate when a switch was enabled or locked.

HEADER TILT is displayed on the upper line.

- The control switch status is displayed on the lower line. The hours displayed indicate when a switch was enabled or locked.



Figure 4.223: M105 Control Locks

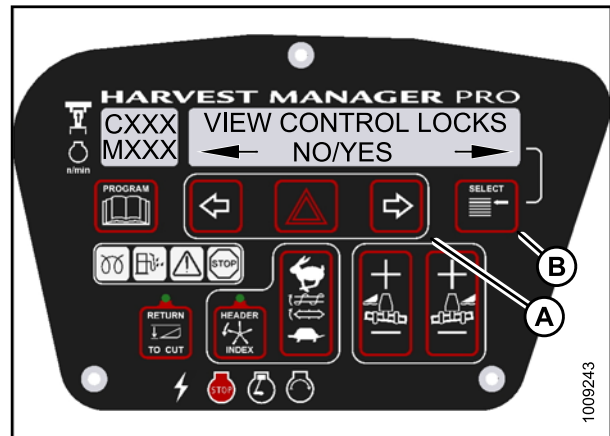


Figure 4.224: M155 Control Locks

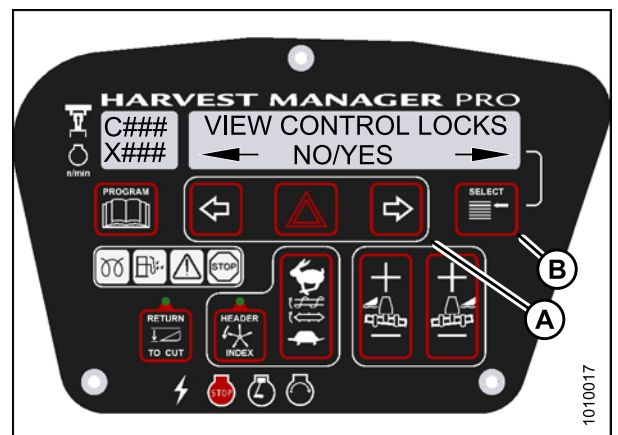


Figure 4.225: M205 Control Locks

CAB DISPLAY MODULE (CDM)

6. Press left (B) or right (C) arrow to cycle between control switch lock outs. The displayed control switches are as follows:
 - HEADER TILT
 - HEADER FLOAT
 - REEL FORE/AFT
 - DRAPER SPEED
 - AUGER SPEED
 - KNIFE SPEED
 - DISK SPEED
 - REEL SPEED

NOTE:

Not all control locks apply to every header.

7. Press SELECT.
 - EXIT VIEW LOCKOUTS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right to select YES.
9. Press PROGRAM to exit Programming Mode or press SELECT to proceed to next WINDROWER SETUP action.



Figure 4.226: M105 Control Locks

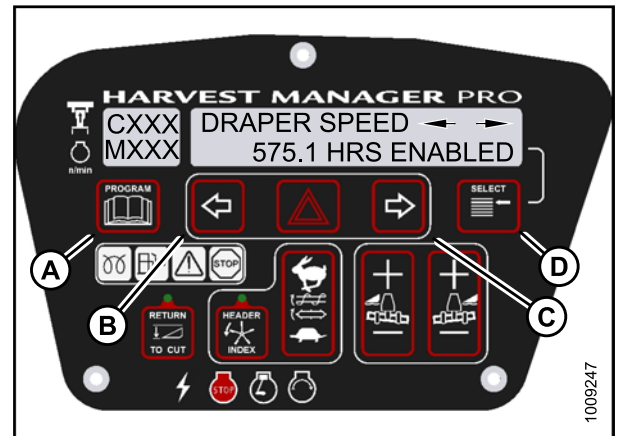


Figure 4.227: M155 Control Locks

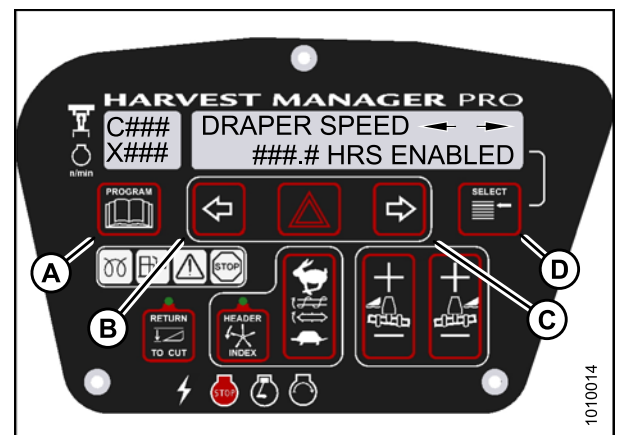


Figure 4.228: M205 Control Locks

4.7 Troubleshooting Windrower Problems

4.7.1 Displaying the Windrower and Engine Error Codes

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

NOTE:

The header **MUST** be attached to the windrower to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode. Press SELECT (C).
 - WINDROWER SETUP? is displayed on the upper line.
3. Press SELECT (C) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.

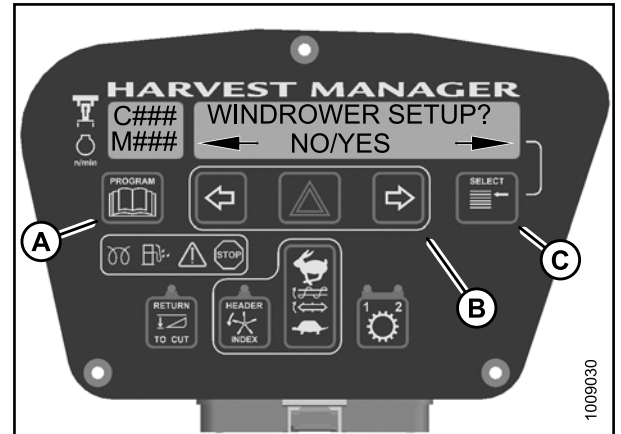


Figure 4.229: M105 CDM Programming Buttons

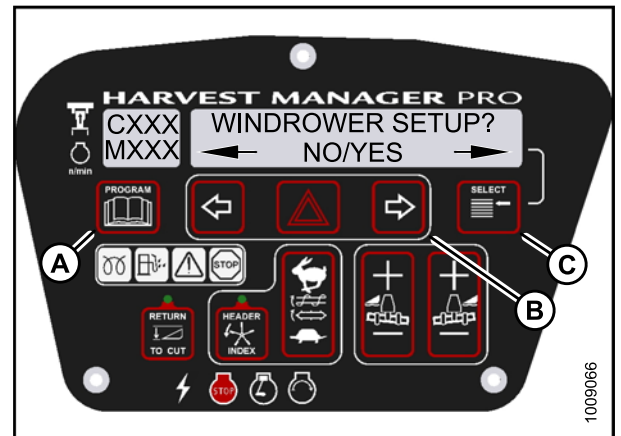


Figure 4.230: M155 CDM Programming Buttons

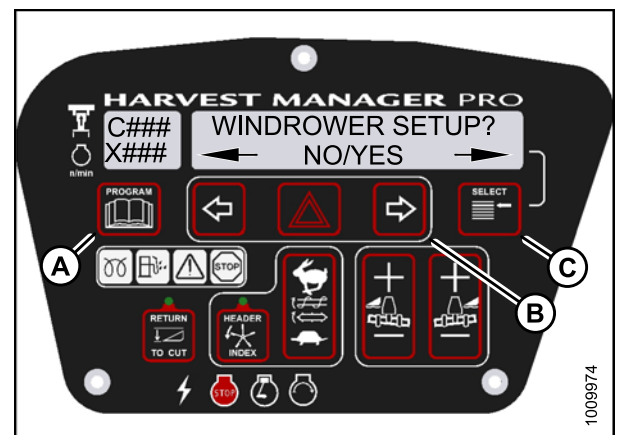


Figure 4.231: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

4. Press right (A) arrow to select Yes. Press SELECT (B).
5. VIEW ERROR CODES? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
- VIEW WINDRWR CODES? is displayed on the upper line.
 - NO/YES is displayed on the lower line.

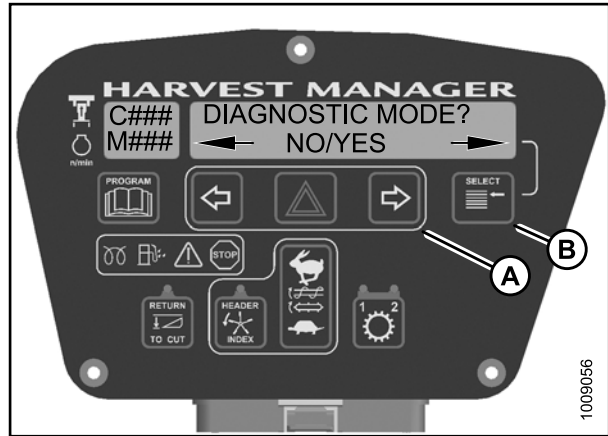


Figure 4.232: M105 Diagnostic Functions

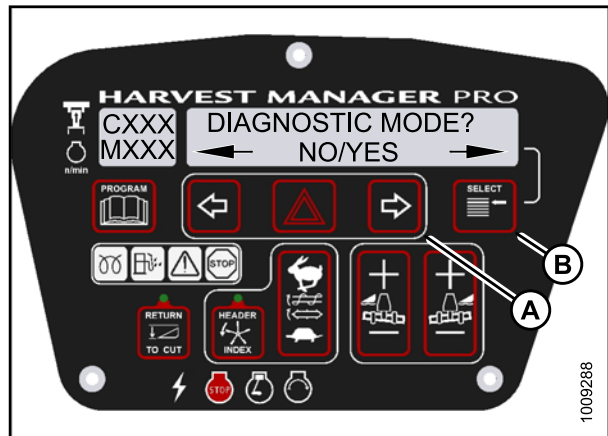


Figure 4.233: M155 Diagnostic Functions

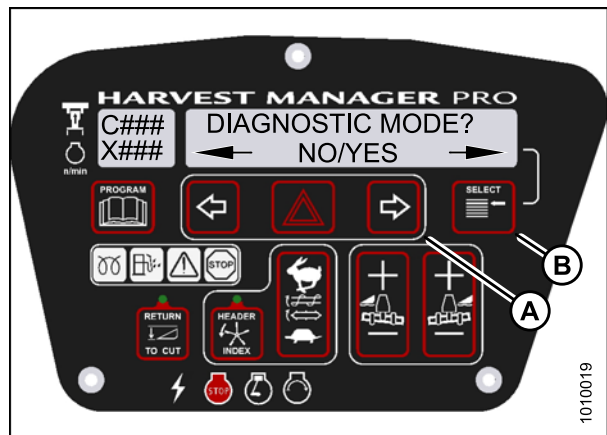


Figure 4.234: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

7. Press right (C) arrow to select YES. Press SELECT (D).
 - The most recent error code will be displayed.
8. Press and left (B) or right (C) arrow to cycle through the last 10 recorded errors until EXIT WINDRWR CODES is displayed.
9. Press right (C) arrow to select YES. Press SELECT (D).
10. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next DIAGNOSTIC MODE.

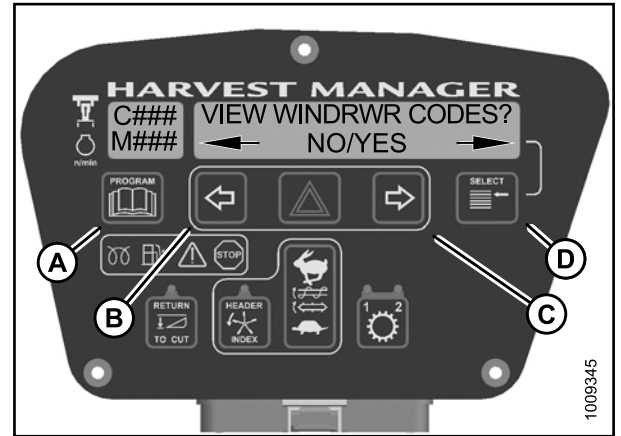


Figure 4.235: M105 Windrower Codes

11. Press right (C) arrow to select YES. Press SELECT (D).
 - The most recent error code will be displayed.
12. Press and left (B) or right (C) arrow to cycle through the last 10 recorded windrower error codes until EXIT WINDROWER CODES is displayed.
13. Press right (C) arrow to select YES. Press SELECT (D).
 - VIEW ENGINE CODES is displayed on the upper line.
 - NO/YES is displayed on the lower line.

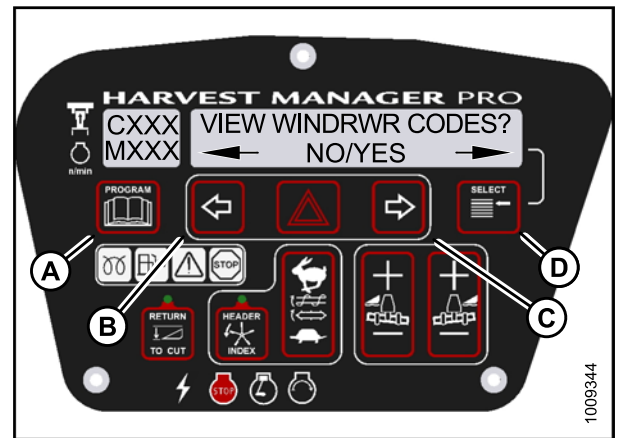


Figure 4.236: M155 Windrower Codes

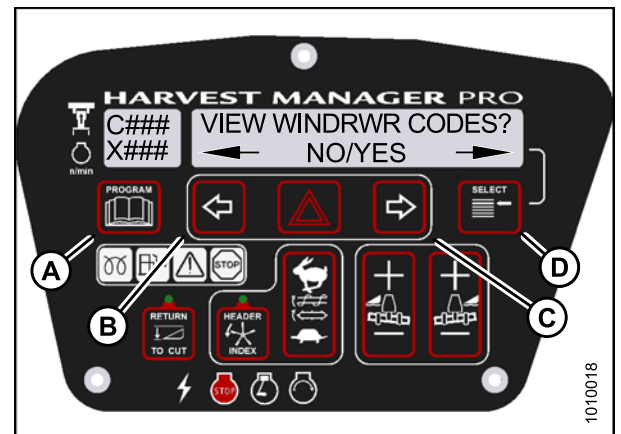


Figure 4.237: M205 Windrower Codes

CAB DISPLAY MODULE (CDM)

14. Press right (C) arrow to select YES. Press SELECT (D).
15. Press and left (B) or right (C) arrow to cycle through the last 10 recorded engine error codes until EXIT ENGINE CODES is displayed.
16. Press right (C) arrow to select YES. Press SELECT (D).
17. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next DIAGNOSTIC MODE.

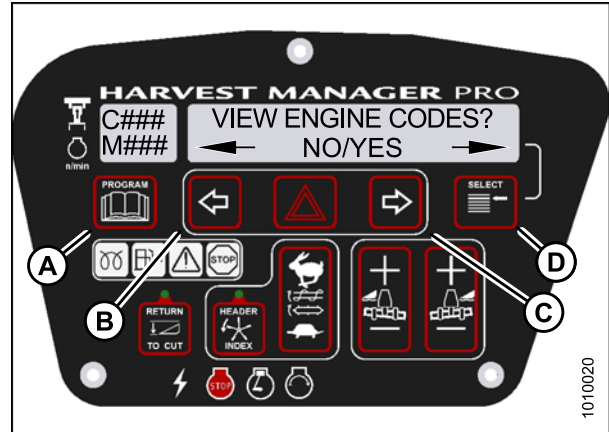


Figure 4.238: M155 Engine Codes

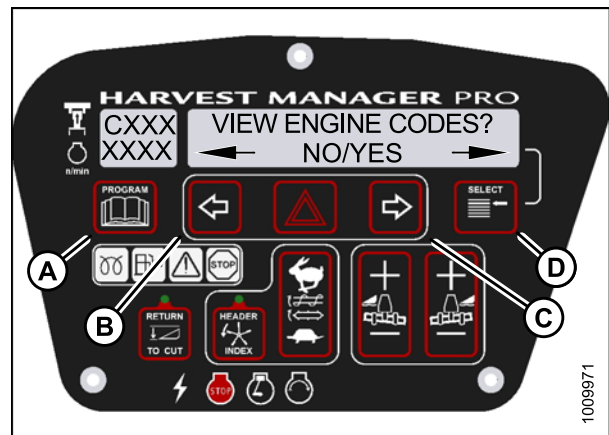


Figure 4.239: M205 Engine Codes

4.7.2 Switching the Installed Header Sensors On or Off

You can selectively enable or disable header sensors in the event of a malfunction or as part of a troubleshooting routine.

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- Displaying knife, reel, and center-link readings require installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.
- Disabled sensors flash the word SENSOR on CDM during regular operation.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
3. Press SELECT (C) until DIAGNOSTIC MODE? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (B) arrow to select Yes. Press SELECT (C).
 - VIEW ERROR CODES? is displayed on the upper line.

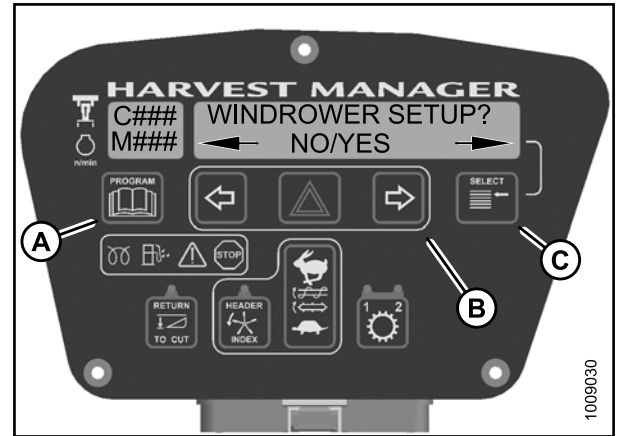


Figure 4.240: M105 CDM Programming Buttons

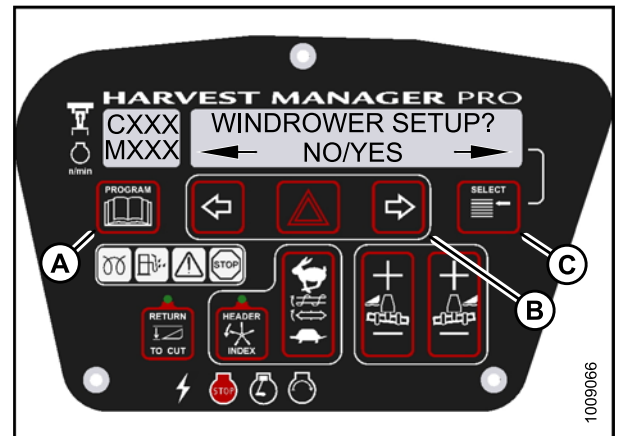


Figure 4.241: M155 CDM Programming Buttons

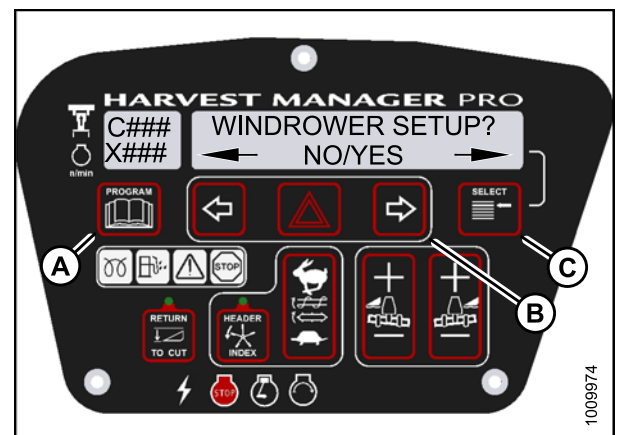


Figure 4.242: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ENTER SENSOR SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select Yes. Press SELECT (B).
 - HEADER HT SENSOR is displayed on the upper line.
 - KNIFE SPEED SENSOR is displayed on the lower line.
 - ENABLE/DISABLE is displayed on the lower line.



Figure 4.243: M105 Diagnostic Functions

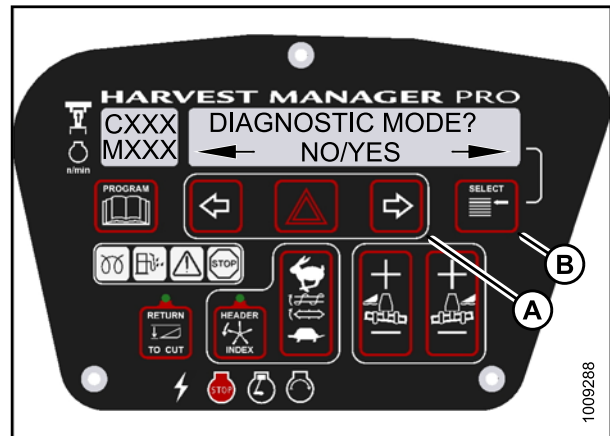


Figure 4.244: M155 Diagnostic Functions

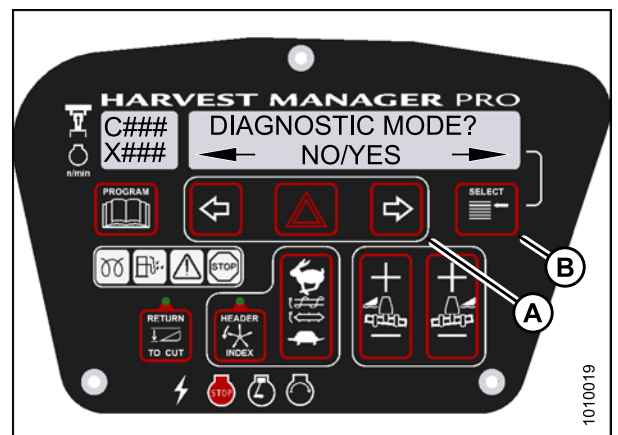


Figure 4.245: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

- Press left (B) arrow to enable a sensor. Press right (C) arrow to disable sensor. Press SELECT (D) to confirm selection and move on to next sensor.

The following sensors are available:

- HEADER HT SENSOR
- HEADER TILT SENSOR
- KNIFE SPEED SENSOR
- REEL SPEED SENSOR
- HEADER FLOAT SENSOR
- OVERLOAD PRESSURE ⁵
- HYD OIL TEMP SENSOR

When sensors have been modified, press SELECT (D) to display the EXIT SENSOR SETUP? selection.



Figure 4.246: M105 Header Sensors

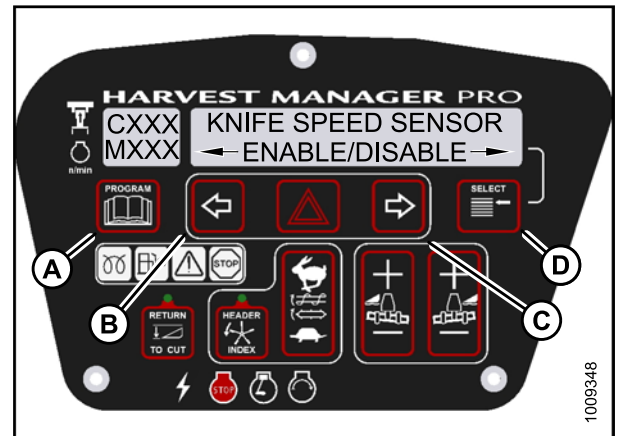


Figure 4.247: M155 Header Sensors

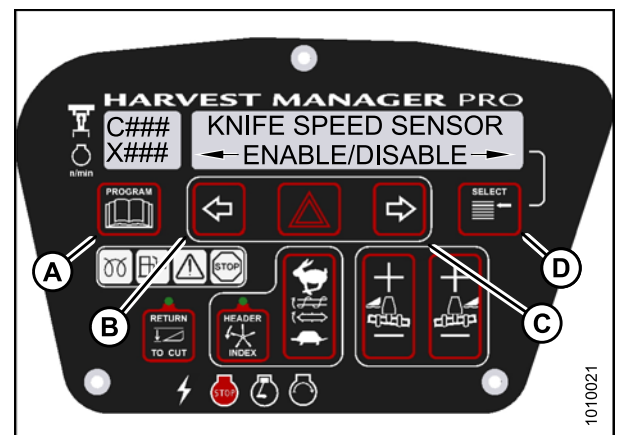


Figure 4.248: M205 Header Sensors

- Press right arrow to select YES. Press SELECT.
- Press PROGRAM to exit Programming Mode or press SELECT to proceed to next DIAGNOSTIC MODE.

- Requires installation of optional pressure sensor (MD #5574).

4.7.3 Displaying Header Sensors Input Signals

You can display individual sensor input signals in the event of a malfunction or as part of a troubleshooting routine.

NOTE:

The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure.
- Displaying knife, reel, and center-link readings require installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.249: M105 CDM Programming Buttons

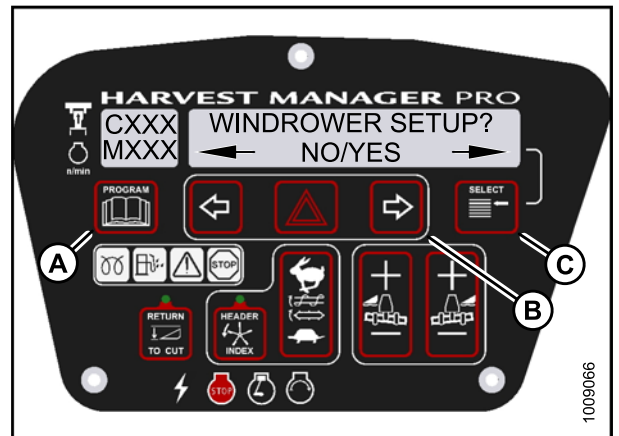


Figure 4.250: M155 CDM Programming Buttons

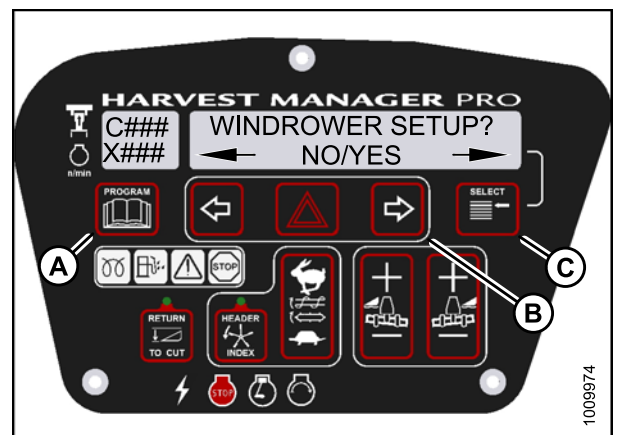


Figure 4.251: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).
 - VIEW ERROR CODES? is displayed on the upper line.
5. Press SELECT (B) until READ SENSOR SETUP? is displayed on the upper line.
 - NO/YES is displayed on the lower line.



Figure 4.252: M105 Diagnostic Functions

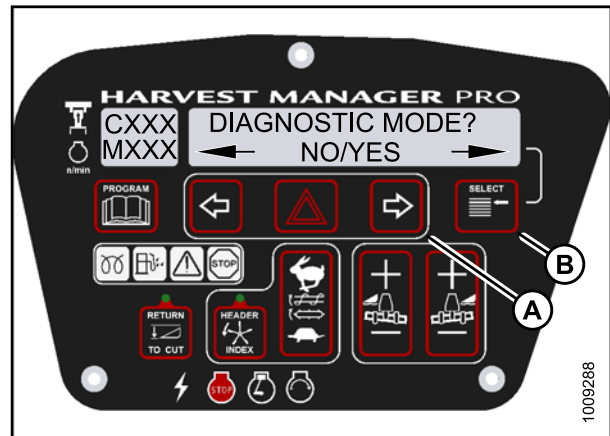


Figure 4.253: M155 Diagnostic Functions

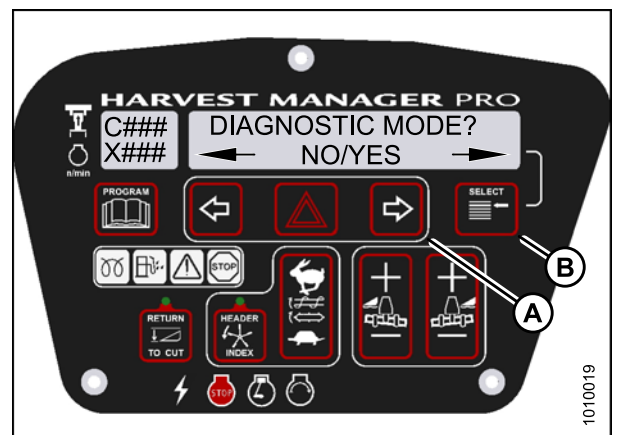


Figure 4.254: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

6. Press right (C) arrow to select Yes. Press SELECT (D).
 - SENSOR INPUT is displayed on the upper line.
 - HDR HEIGHT 1.23 V is displayed on the lower line.
7. Press left (B) or right (C) arrow to cycle between individual sensor readers.
8. Press SELECT (D) to skip to EXIT READ SENSORS? selection.

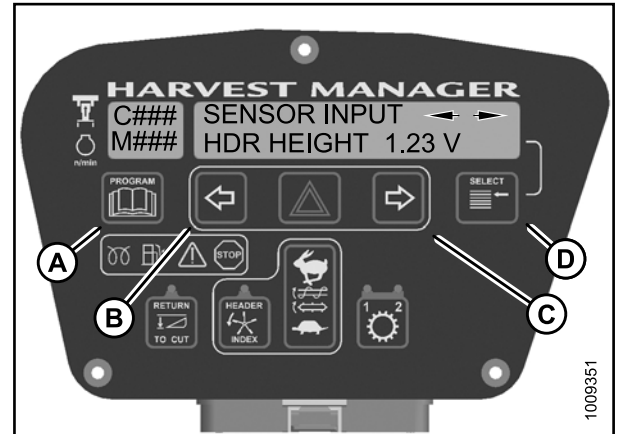


Figure 4.255: M105 Header Sensors

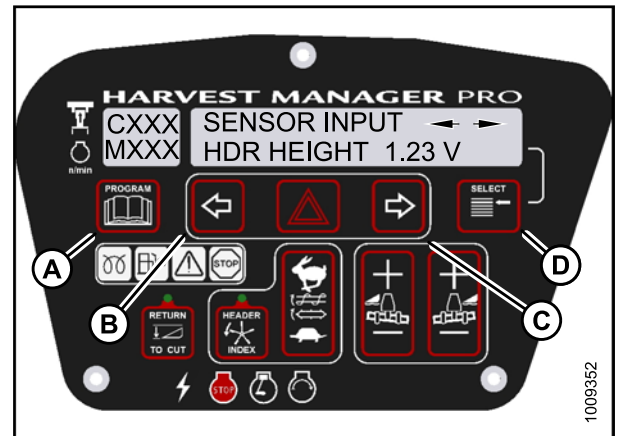


Figure 4.256: M155 Header Sensors

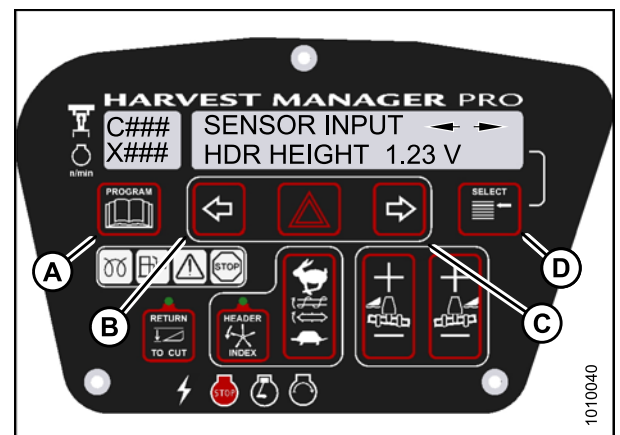


Figure 4.257: M205 Header Sensors

9. Press right arrow to select YES. Press SELECT.
10. Press PROGRAM to exit Programming Mode or press SELECT to proceed to next DIAGNOSTIC MODE.

CAB DISPLAY MODULE (CDM)

4.7.4 Forcing a Header ID

The header must be attached to the windrower to troubleshoot certain issues. If damage has occurred to the header wiring or no header is available, you can force the windrower control module (WCM) to read a header ID. The WCM reverts to reading NO HEADER each time the engine ignition is cycled.

IMPORTANT:

Forcing a Header ID that is different from the attached header can damage the windrower and header. Doing so can lead to vibration, belt failures, and other over-speeding related problems.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.

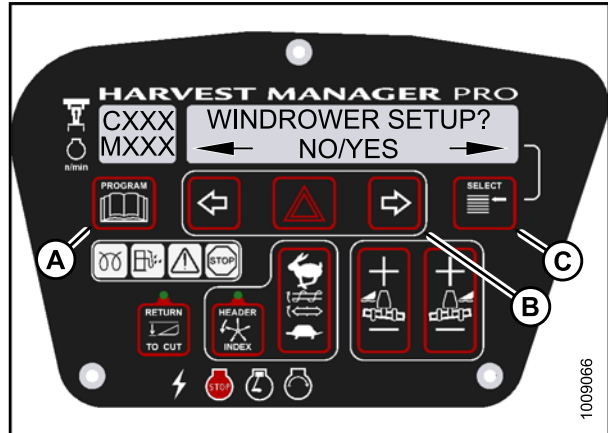


Figure 4.258: M155 CDM Programming Buttons

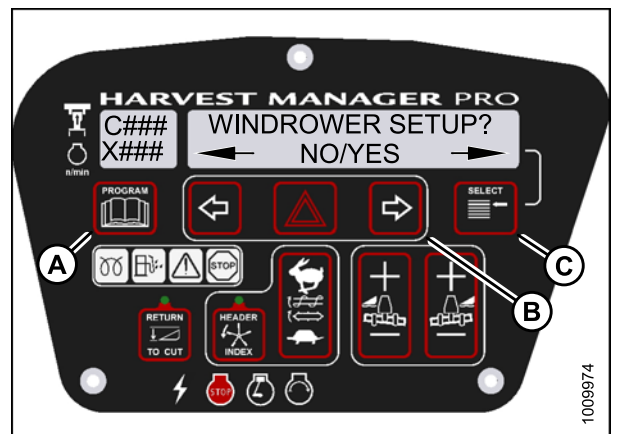


Figure 4.259: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

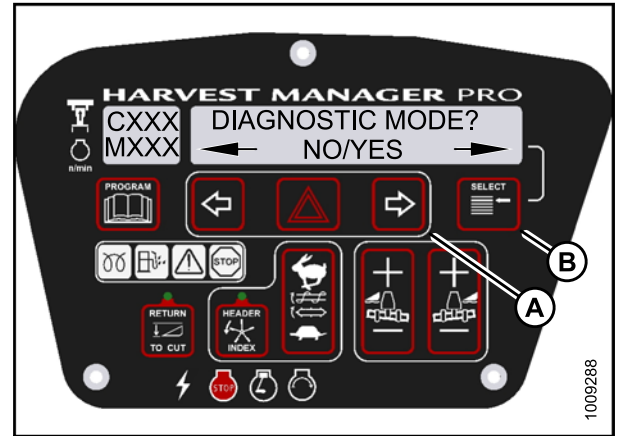


Figure 4.260: M155 Diagnostic Functions

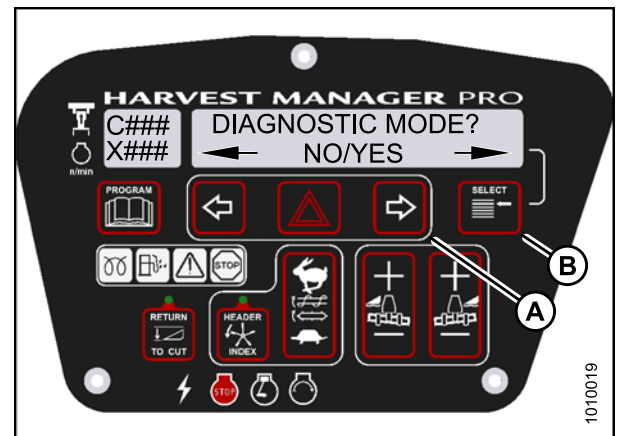


Figure 4.261: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until FORCE HEADER TYPE? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - SELECT HEADER TYPE is displayed on the upper line.
 - DISK HEADER is displayed on the lower line.

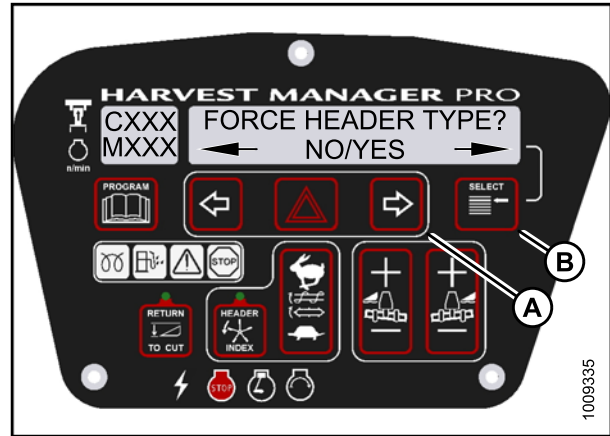


Figure 4.262: M155 Header Type

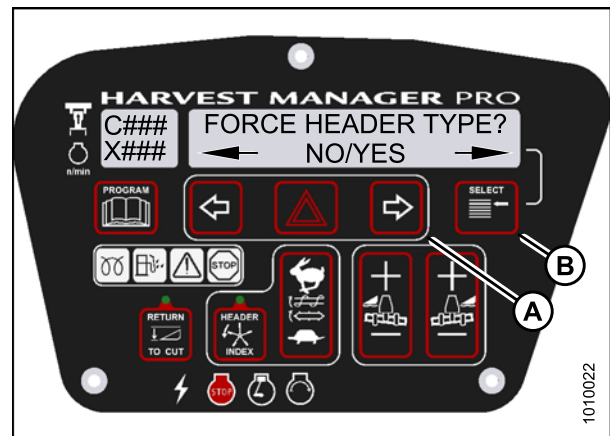


Figure 4.263: M205 Header Type

CAB DISPLAY MODULE (CDM)

7. Press left (A) or right (B) arrow to cycle through list of header types.
8. When desired header type is displayed press SELECT (C).
 - EXIT FORCE HEADER? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
9. Press right arrow (B) to select YES. Press SELECT (C). Proceed to next DIAGNOSTIC MODE or press PROGRAM to exit programming mode.



Figure 4.264: M155 Header Type

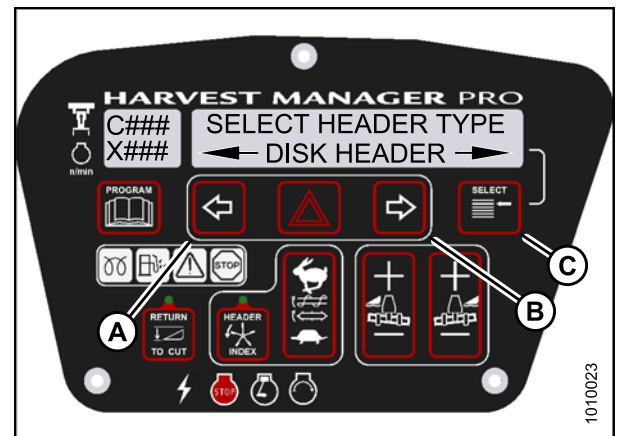


Figure 4.265: M205 Header Type

4.8 Troubleshooting Header Problems

You can test individual parts of the header as part of a troubleshooting routine.

4.8.1 Testing the Header Up/Down Activate Function Using the Cab Display Module (CDM)

NOTE:

- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode. Press SELECT (C).
 - WINDROWER SETUP? is displayed on the upper line.



Figure 4.266: M105 CDM Programming Buttons

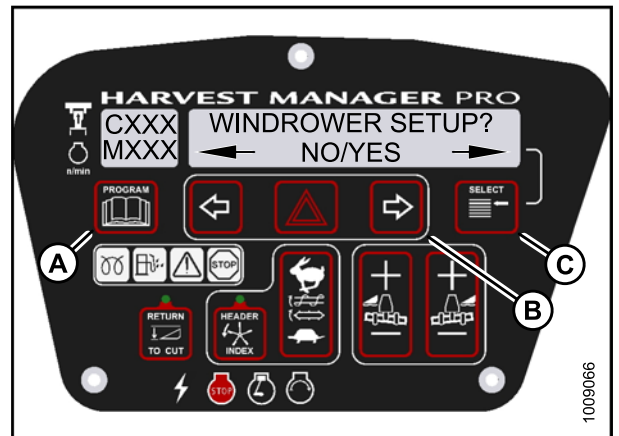


Figure 4.267: M155 CDM Programming Buttons

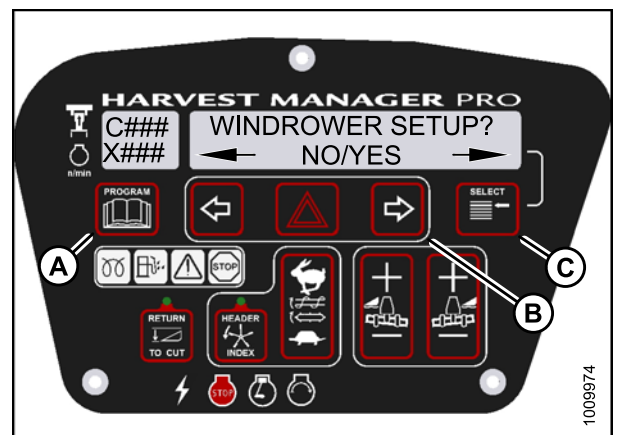


Figure 4.268: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).



Figure 4.269: M105 Diagnostic Functions

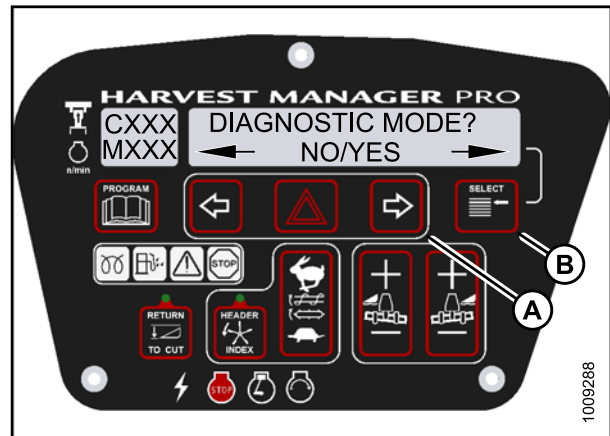


Figure 4.270: M155 Diagnostic Functions

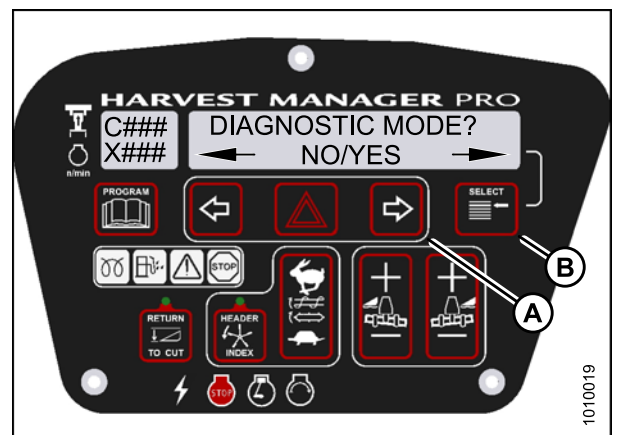


Figure 4.271: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).

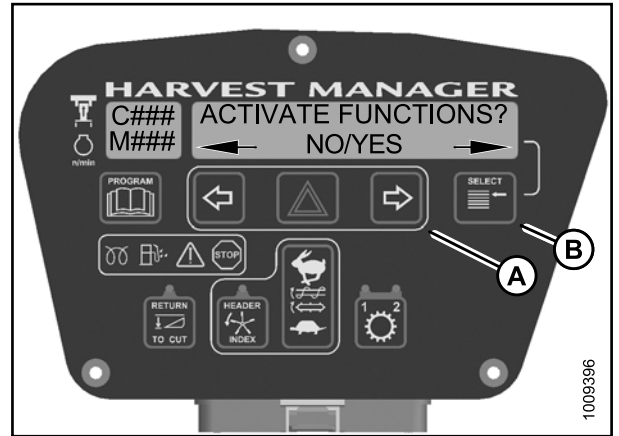


Figure 4.272: M105 Functions

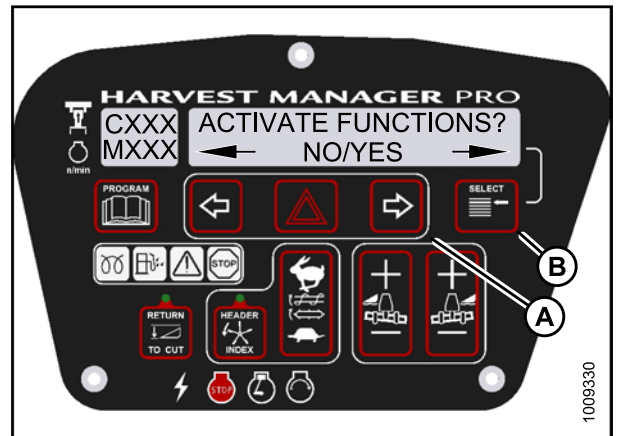


Figure 4.273: M155 Functions

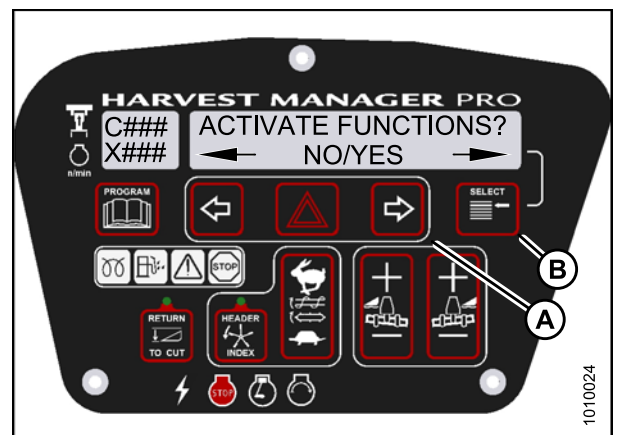


Figure 4.274: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (D) until HEADER DOWN/UP is displayed on the lower line.
8. Press SELECT (D) until ACTIVATE HEADER HT is displayed on the upper line.
 - DOWN/UP is displayed on the lower line.
9. Press and hold left (B) arrow to lower header or, press and hold right (C) arrow to raise header. Verify header is functioning properly.
10. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next ACTIVATE FUNCTION.

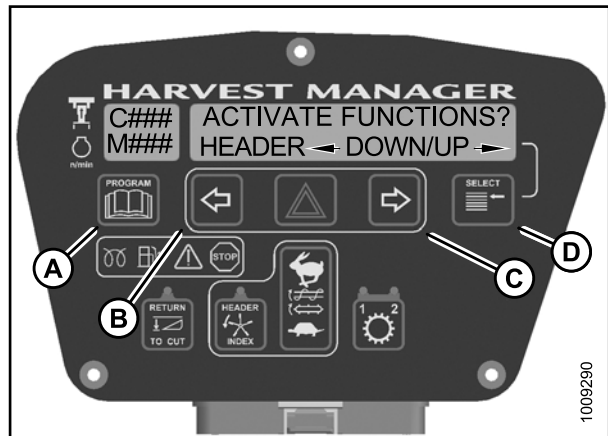


Figure 4.275: M105 Header Height

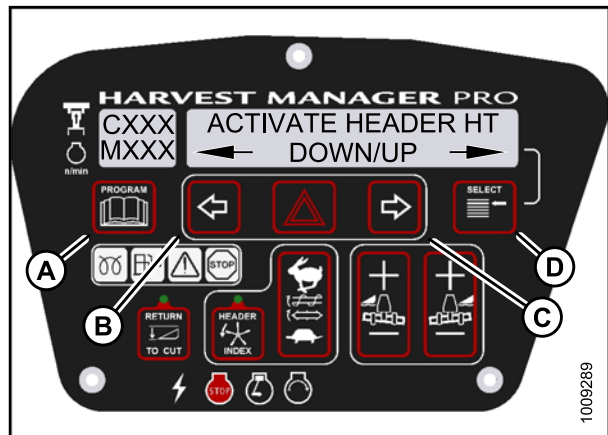


Figure 4.276: M155 Header Height

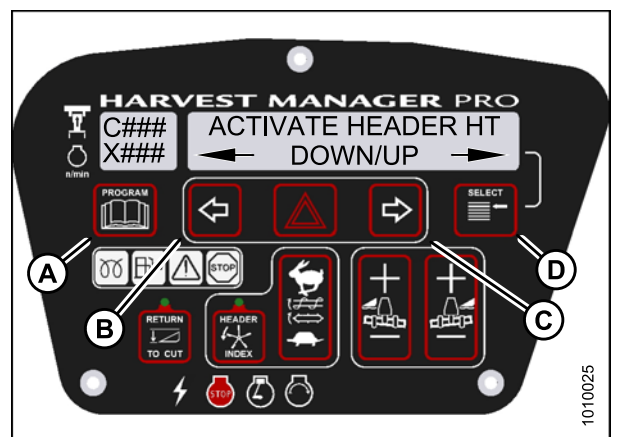


Figure 4.277: M205 Header Height

4.8.2 Testing the Reel Up/Down Activate Function Using the Cab Display Module (CDM)

NOTE:

- This procedure is for draper headers only.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header..

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode. Press SELECT (C).
 - WINDROWER SETUP? is displayed on the upper line.



Figure 4.278: M105 CDM Programming Buttons

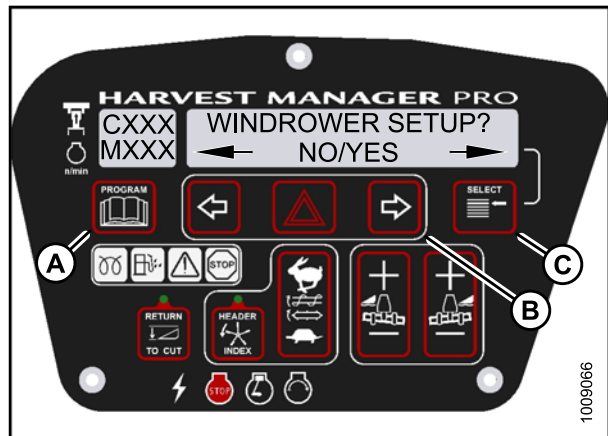


Figure 4.279: M155 CDM Programming Buttons

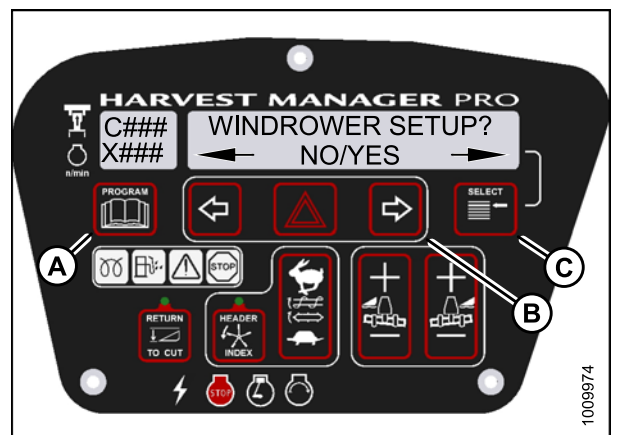


Figure 4.280: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

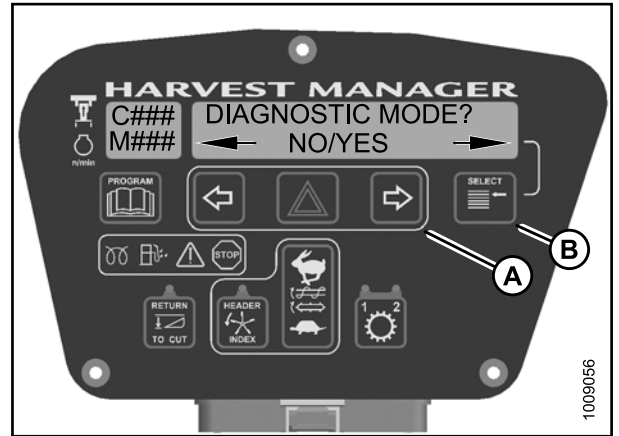


Figure 4.281: M105 Diagnostic Functions

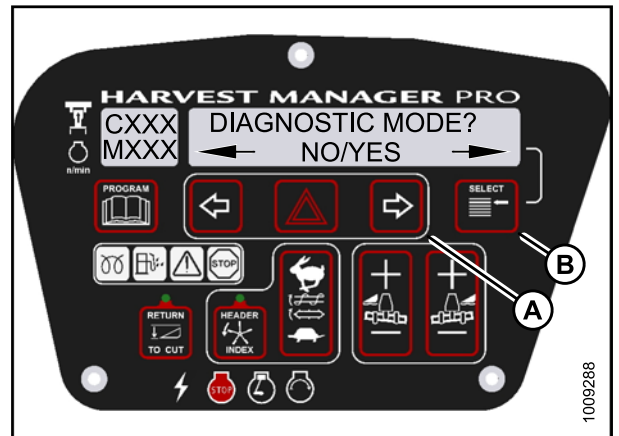


Figure 4.282: M155 Diagnostic Functions

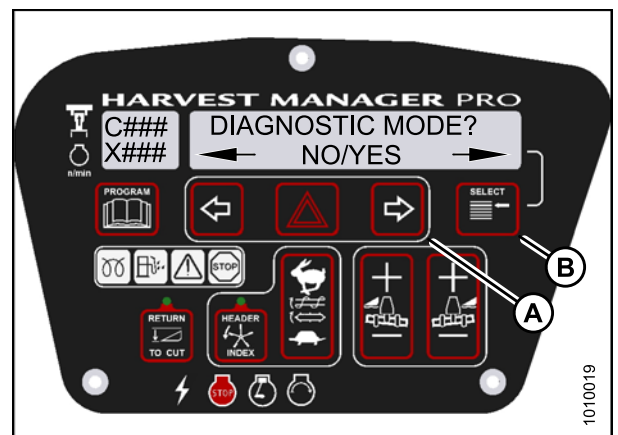


Figure 4.283: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
7. Press SELECT (D) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right (C) arrow to select YES. Press SELECT (D).



Figure 4.284: M105 Functions

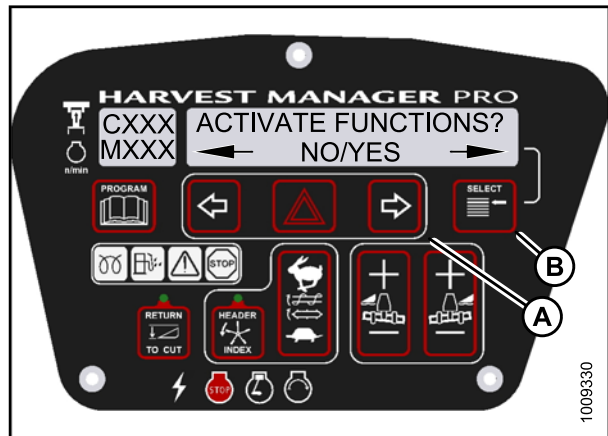


Figure 4.285: M155 Functions

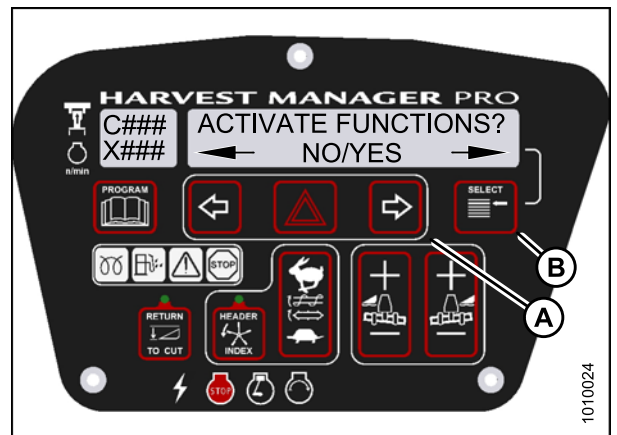


Figure 4.286: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

9. Press SELECT (D) until REEL DOWN/UP is displayed on the lower line.
10. Press SELECT (D) until ACTIVATE REEL HT is displayed on the upper line.
 - DOWN/UP is displayed on the lower line.
11. Press and hold left (B) arrow to **lower** reel. Press and hold right (C) arrow to **raise** reel.
Verify reel is functioning properly.
12. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next ACTIVATE FUNCTION.

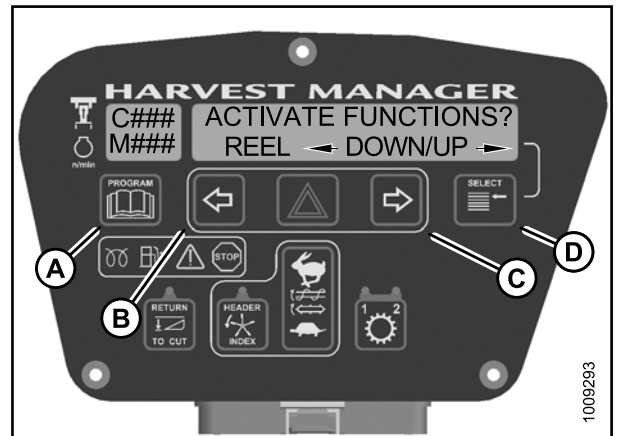


Figure 4.287: M105 Reel Height

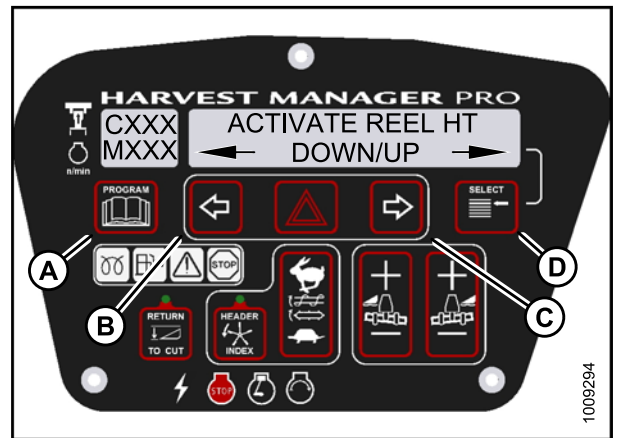


Figure 4.288: M155 Reel Height

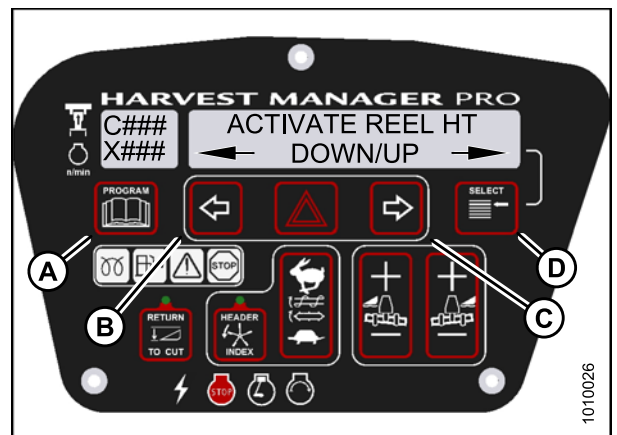


Figure 4.289: M205 Reel Height

4.8.3 Testing the Header Tilt Activate Function Using the Cab Display Module (CDM)

NOTE:

- Displaying center-link position on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.
- The header **MUST** be attached to the windrower to perform this procedure. The cab display module (CDM) automatically adjusts its programming for each header.
- This procedure requires installation of the optional Hydraulic Center-Link (MD #B4650) and optional Auxiliary Valve (MD #B5269).
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.



Figure 4.290: M105 CDM Programming Buttons

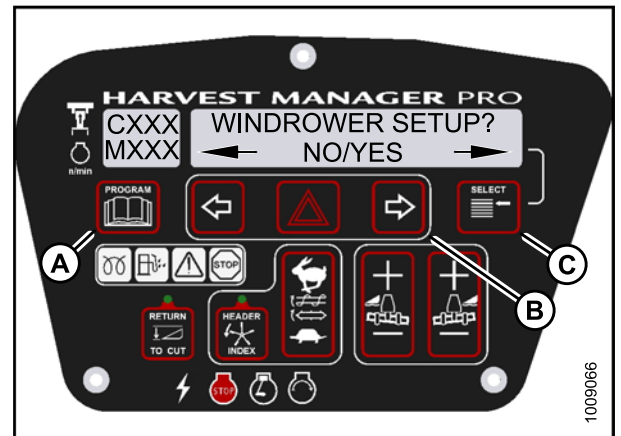


Figure 4.291: M155 CDM Programming Buttons

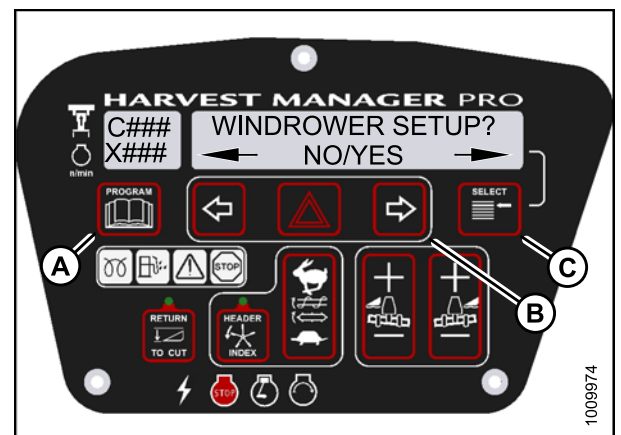


Figure 4.292: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).



Figure 4.293: M105 Diagnostic Functions

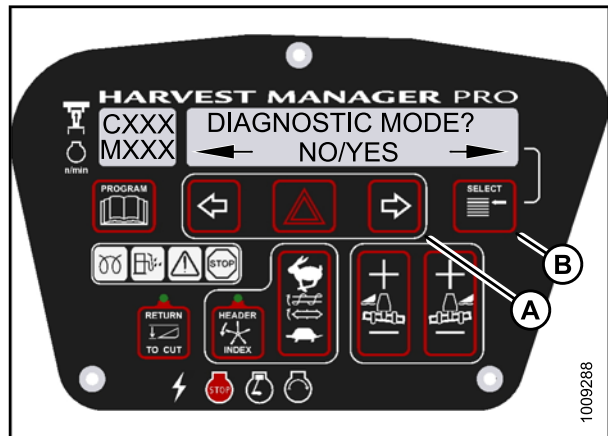


Figure 4.294: M155 Diagnostic Functions

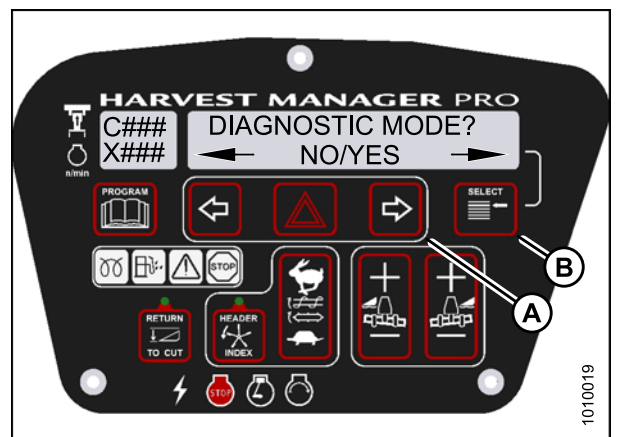


Figure 4.295: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
7. Press SELECT (D) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right (C) arrow to select YES. Press SELECT (D).

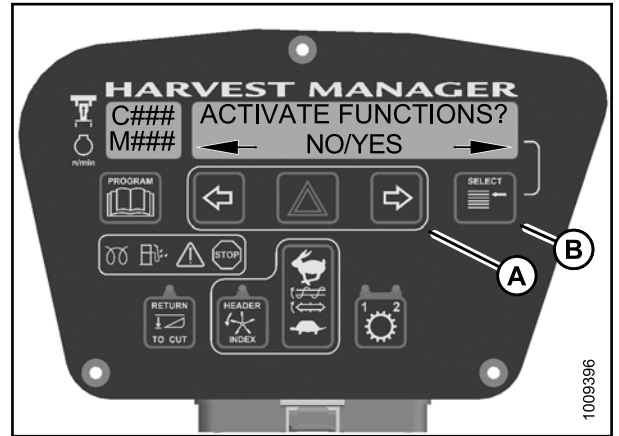


Figure 4.296: M105 Functions

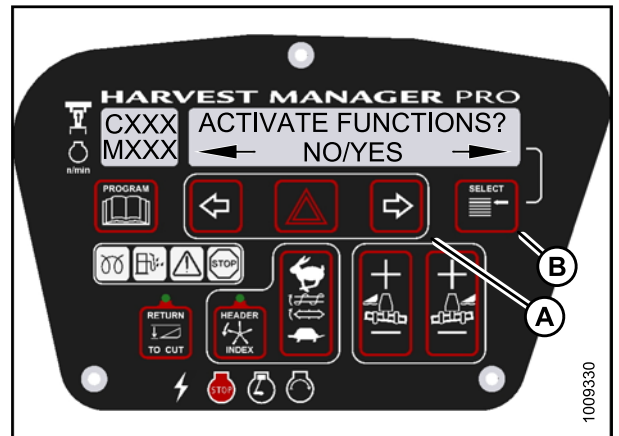


Figure 4.297: M155 Functions

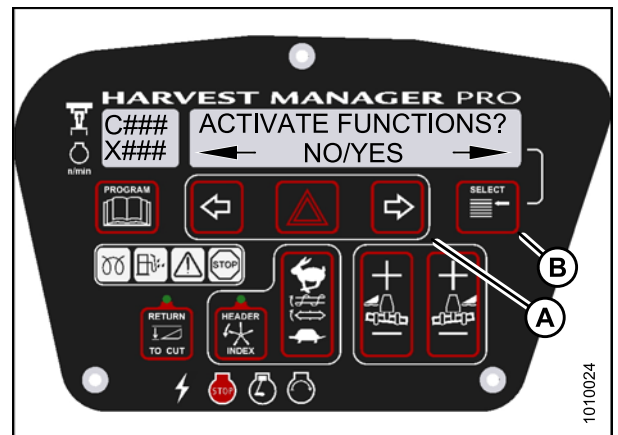


Figure 4.298: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

9. Press SELECT (D) until HDR TILT IN/OUT is displayed on the lower line.
10. Press SELECT (D) until ACTIVATE HDR TILT is displayed on the upper line.
 - IN/OUT is displayed on the lower line.
11. Press and hold left (B) arrow to **decrease** header tilt. Press and hold right (C) arrow to **increase** header tilt. **Verify header is functioning properly.**
12. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next ACTIVATE FUNCTION.

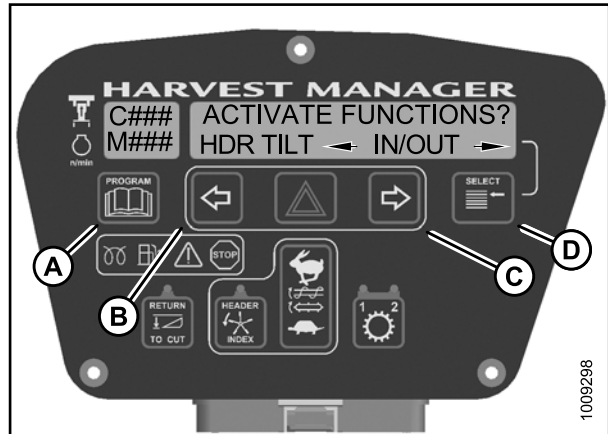


Figure 4.299: M105 Header Tilt Angle

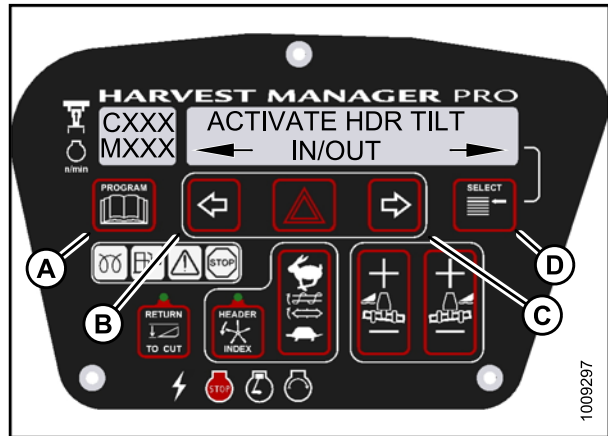


Figure 4.300: M155 Header Tilt Angle

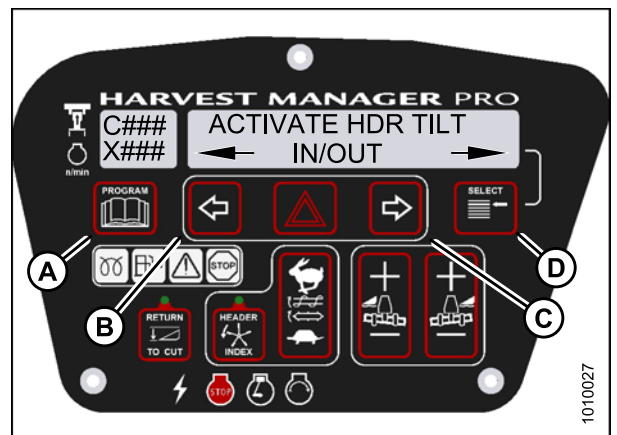


Figure 4.301: M205 Header Tilt Angle

CAB DISPLAY MODULE (CDM)

4.8.4 Testing the Knife Drive Circuit Activate Function Using the Cab Display Module (CDM) on an M105

NOTE:

- The header **MUST** be attached to windrower to perform this procedure.
- The engine **MUST** be running to perform this procedure.
- Displaying knife drive speed on cab display module (CDM) requires installation of the optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.

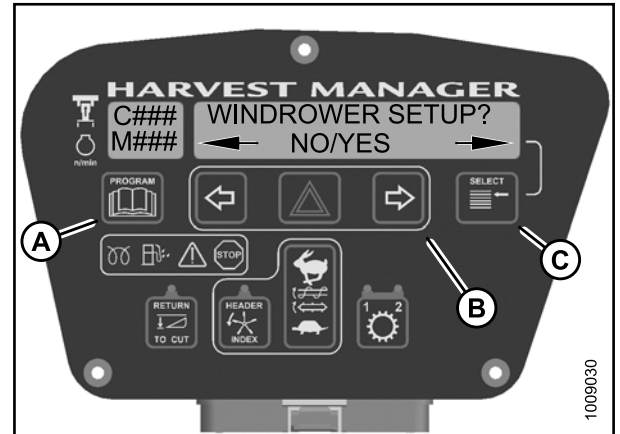


Figure 4.302: CDM Programming Buttons

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).



Figure 4.303: Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.304: Activate Functions

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (C) until KNIFE DRIVE ON is displayed on the lower line.
8. Press and hold right (B) arrow to activate knife drive.
Verify knife is functioning properly.
9. Release right (B) arrow to deactivate knife drive.
10. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next ACTIVATE FUNCTION.



Figure 4.305: Knife Drive

4.8.5 Testing the Draper or Auger Drive Circuit Activate Function Using the Cab Display Module (CDM) on an M105

NOTE:

- The header **MUST** be attached to windrower to perform this procedure.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.

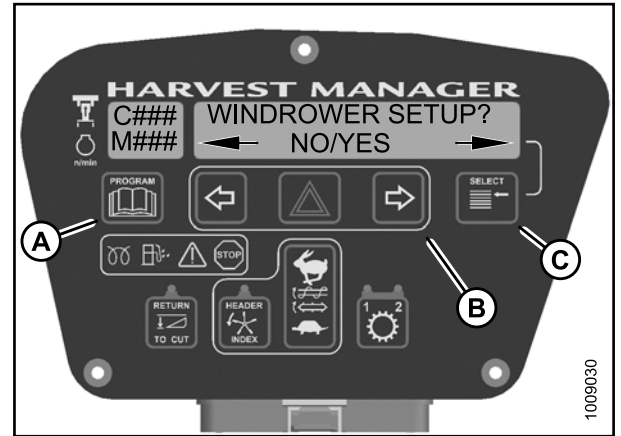


Figure 4.306: CDM Programming Buttons

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select YES. Press SELECT (B).

CAUTION

Check to be sure all bystanders have cleared the area.



Figure 4.307: Diagnostic Functions

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.308: Activate Functions

CAB DISPLAY MODULE (CDM)

7. Press SELECT (C) until DRAPER/AUGER DRIVE ON appears on the lower line.
8. Press and hold right (B) arrow to activate draper/auger. **Verify draper/auger is functioning properly.**
9. Release right (B) arrow to deactivate draper/auger.
10. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next ACTIVATE FUNCTION.



Figure 4.309: Draper/Auger

4.8.6 Testing the Reel Drive Circuit Activate Function Using the Cab Display Module (CDM) on an M105

NOTE:

- The header **MUST** be attached to windrower to perform this procedure.
- The engine **MUST** be running to perform this procedure.
- An A40 or Draper Header is required to perform this procedure.
- Displaying reel speed on cab display module (CDM) requires installation of optional Expansion Module (MD #B4666). For more information, refer to the windrower operator's manual or the windrower technical manual.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.

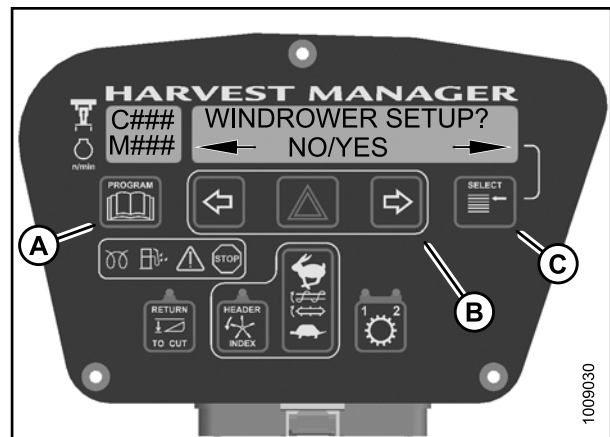


Figure 4.310: CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

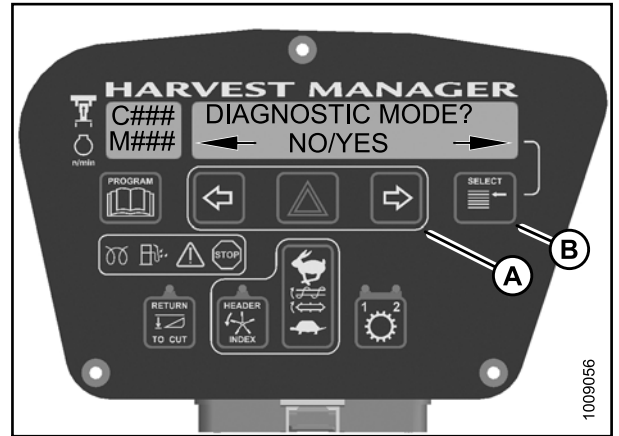


Figure 4.311: Diagnostic Functions

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).



Figure 4.312: Functions

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (C) until REEL DRIVE ON appears on the lower line.
8. Press and hold right (B) arrow to activate reel drive.
Verify reel is functioning properly.
9. Release right (B) arrow to deactivate reel drive.
10. Press PROGRAM (A) to exit Programming Mode or press SELECT (C) to proceed to next ACTIVATE FUNCTION.



Figure 4.313: Reel Drive

4.8.7 Testing the Reel Fore-Aft Activate Function Using the Cab Display Module (CDM)

NOTE:

- The reel fore-aft function requires the completion kit for draper header reel drive (MD #5496).
- The header **MUST** be attached to windrower to perform this procedure.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

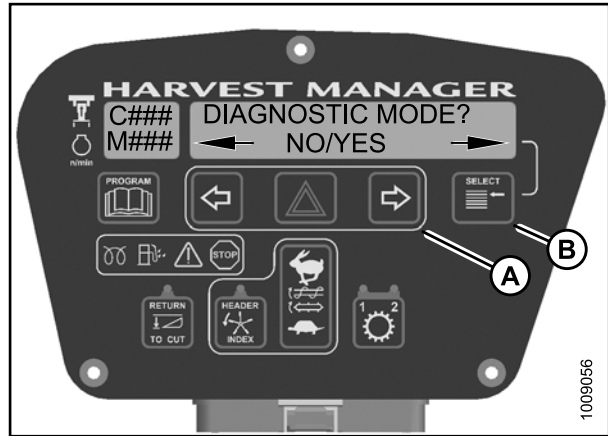


Figure 4.317: M105 Diagnostic Functions

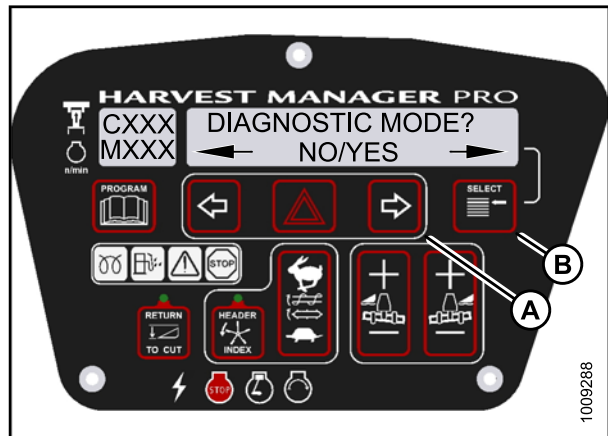


Figure 4.318: M155 Diagnostic Functions

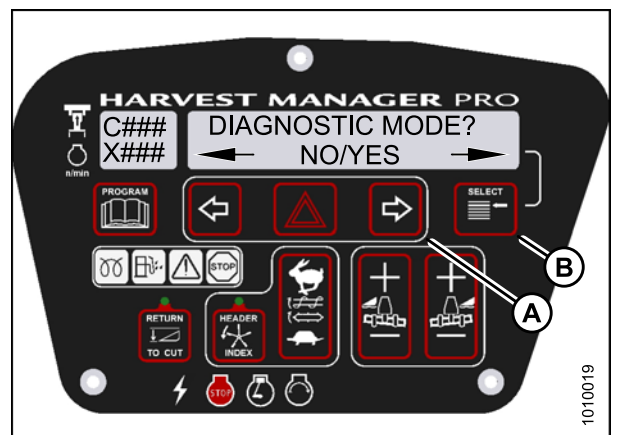


Figure 4.319: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
7. Press SELECT (D) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right (C) arrow to select YES. Press SELECT (D).

CAUTION

Check to be sure all bystanders have cleared the area.

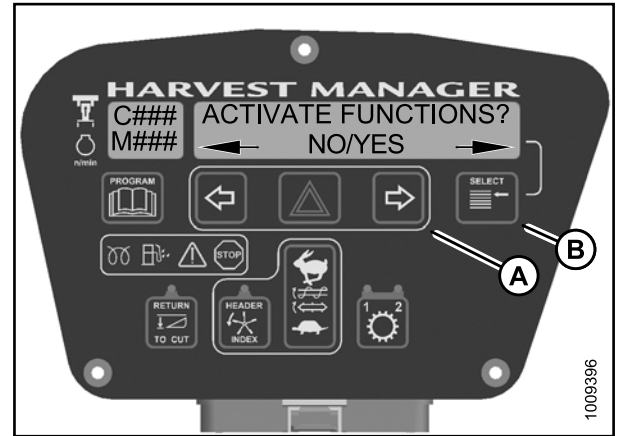


Figure 4.320: M105 Functions

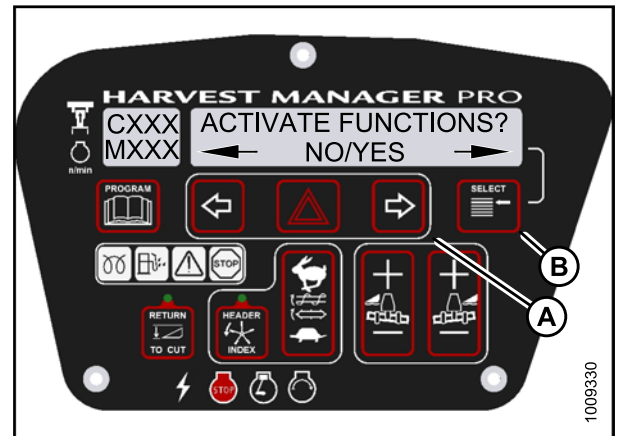


Figure 4.321: M155 Functions

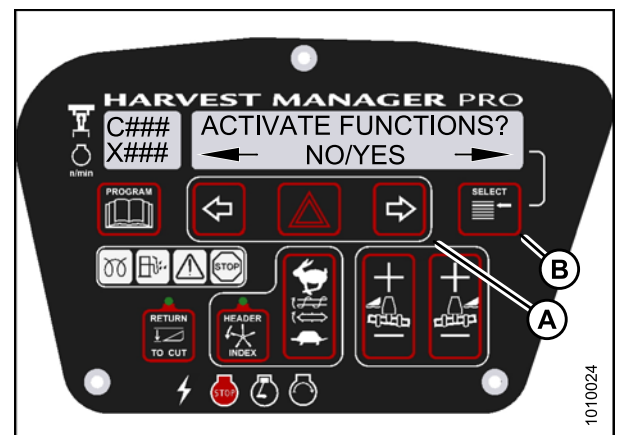


Figure 4.322: M205 Functions

CAB DISPLAY MODULE (CDM)

9. Press SELECT (D) until REEL AFT/FORE is displayed on the lower line.
10. Press and hold left arrow (B) to move reel backward, or press and hold right arrow (C) to move reel forward. Verify reel fore-aft is functioning properly.
11. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next ACTIVATE FUNCTION.



Figure 4.323: M105 Reel Fore-Aft

12. Press SELECT (D) until ACTIVATE REEL F/A is displayed on the upper line.
 - FORE/AFT is displayed on the lower line.
13. Press and hold left (B) arrow to move reel **forward**. Press and hold right (C) arrow to move reel **backward**. **Verify reel fore-aft is functioning properly.**
14. Press PROGRAM (A) to exit Programming Mode or press SELECT (D) to proceed to next ACTIVATE FUNCTION.

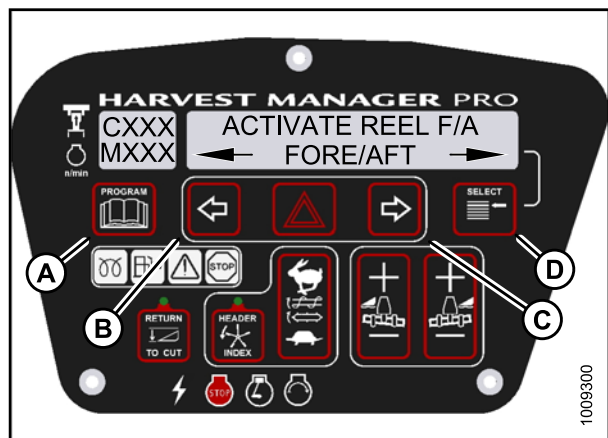


Figure 4.324: M155 Reel Fore-Aft

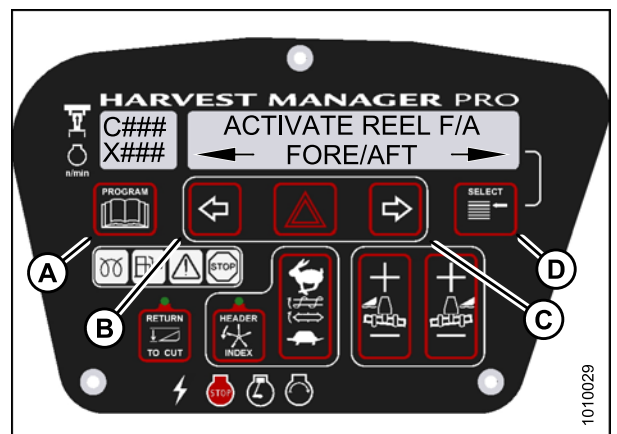


Figure 4.325: M205 Reel Fore-Aft

CAB DISPLAY MODULE (CDM)

4.8.8 Activating the Hydraulic Purge Using the Cab Display Module (CDM)

The hydraulic purge removes air from the hydraulic pump system after it has been repaired or changed.

NOTE:

Engine **MUST** be running to perform this procedure.

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.



Figure 4.326: M105 CDM Programming Buttons

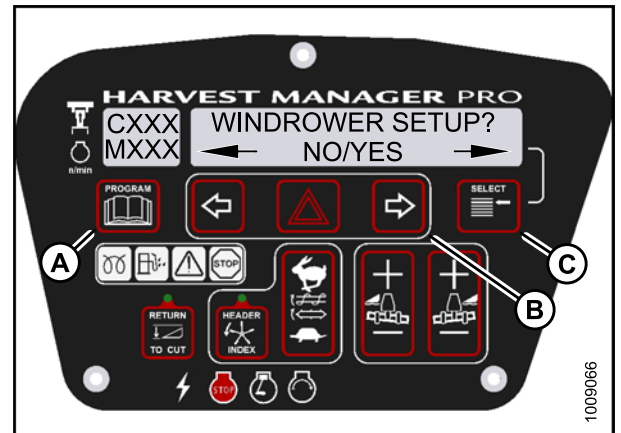


Figure 4.327: M155 CDM Programming Buttons

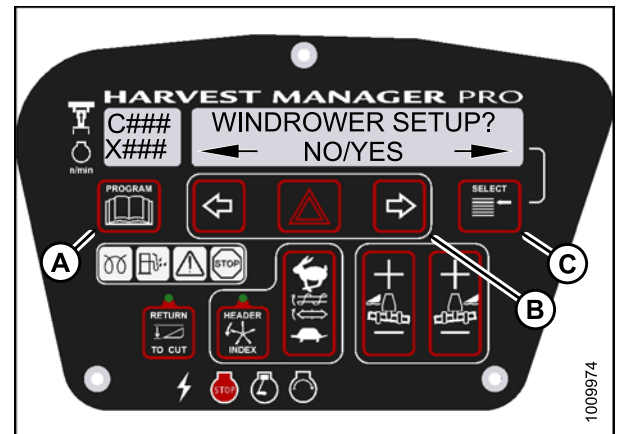


Figure 4.328: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

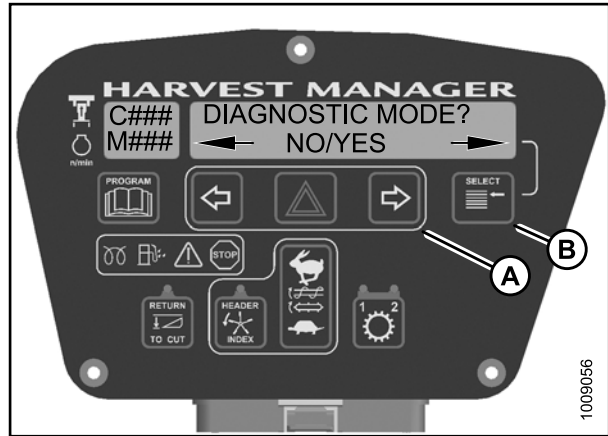


Figure 4.329: M105 Diagnostic Functions

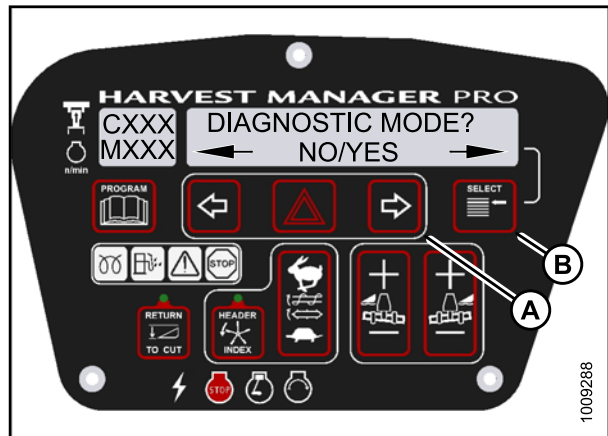


Figure 4.330: M155 Diagnostic Functions

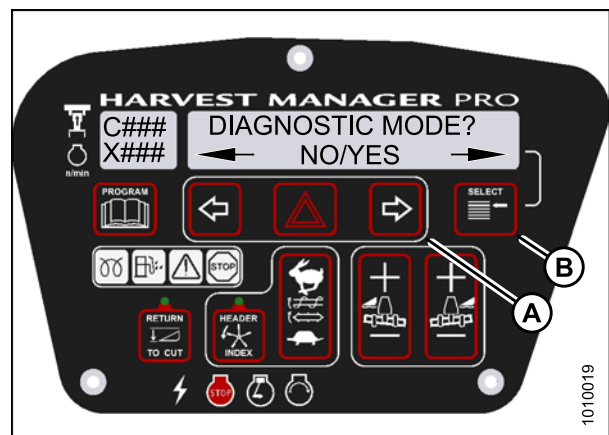


Figure 4.331: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - HEADER DOWN/UP is displayed on the lower line.
 - ACTIVATE HEADER HT is displayed on the upper line.
 - DOWN/UP is displayed on the lower line.



Figure 4.332: M105 Functions

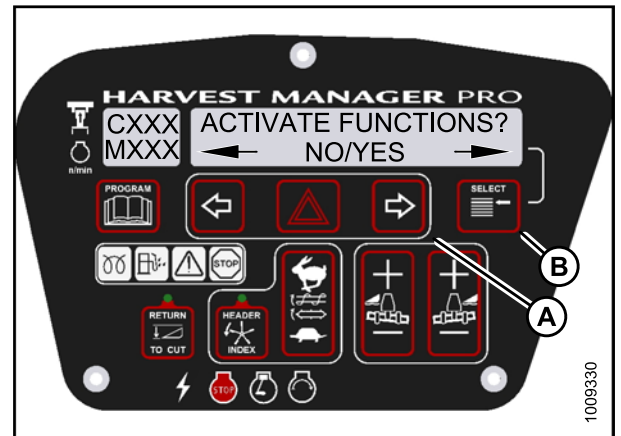


Figure 4.333: M155 Functions

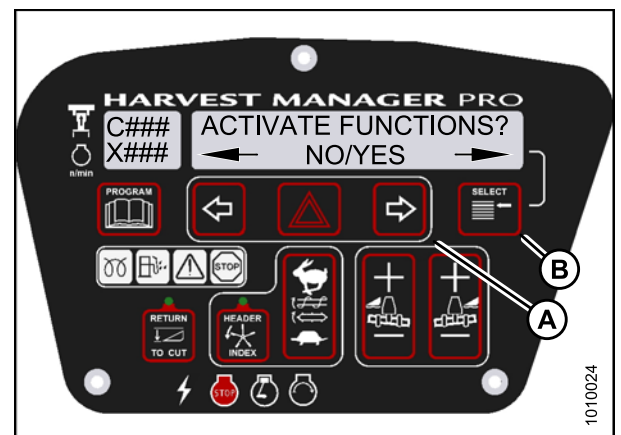


Figure 4.334: M205 Functions

CAB DISPLAY MODULE (CDM)

7. Press SELECT (B) until ACTIVATE HYD PURGE? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
8. Press right (A) arrow to select YES. Press SELECT (B).
 - TO ACTIVATE PURGE is displayed on the upper line.
 - PRESS AND HOLD is displayed on the lower line.

CAUTION

Check to be sure all bystanders have cleared the area.



Figure 4.335: M105 Hydraulic Purge



Figure 4.336: M155 Hydraulic Purge

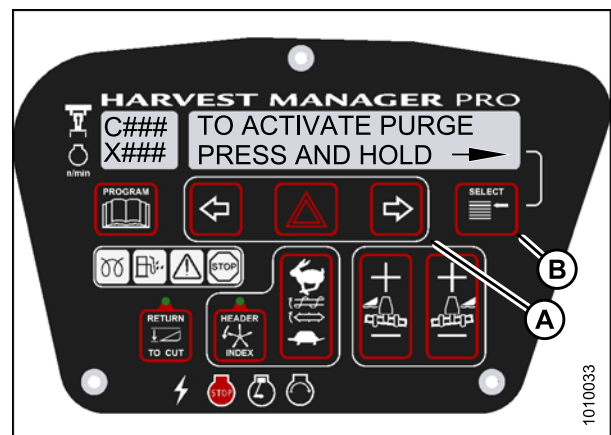


Figure 4.337: M205 Hydraulic Purge

CAB DISPLAY MODULE (CDM)

NOTE:

Holding the right arrow activates a timed purge cycle. The CDM will jump to the exit menu if the arrow is released before the end of the timed cycle.

9. Press and hold right (A) arrow to activate purge cycle.
 - PURGE CYCLE STARTED will display on the upper line.
10. When PURGE CYCLE ENDED is displayed release right (A) arrow.
 - NO EXIT YES is displayed on the lower line.
11. Press right arrow to select YES. Press SELECT.
12. Press PROGRAM to exit Programming Mode or press SELECT to proceed to next ACTIVATE FUNCTION.



Figure 4.338: M105 Hydraulic Purge Cycle



Figure 4.339: M155 Hydraulic Purge Cycle

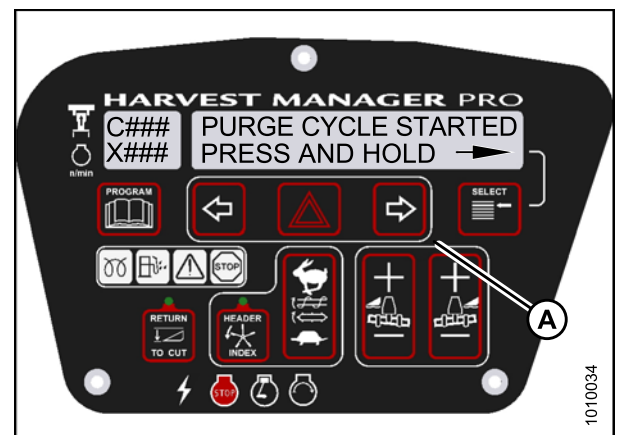


Figure 4.340: M205 Hydraulic Purge Cycle

4.8.9 Testing the Knife Drive Circuit Using the Cab Display Module (CDM)

IMPORTANT:

Do not over-speed a drive for a significant length of time. Doing so can lead to vibration, belt failures, or other over-speeding related problems.

CAB DISPLAY MODULE (CDM)

NOTE:

- The header **MUST** be attached to windrower to follow this procedure.
1. Turn ignition key to RUN, or start the engine.
 2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode. Press SELECT (C).
 - WINDROWER SETUP? is displayed on the upper line.

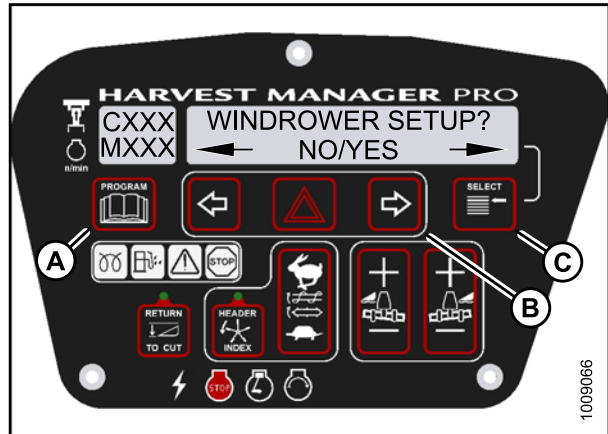


Figure 4.341: M155 CDM Programming Buttons

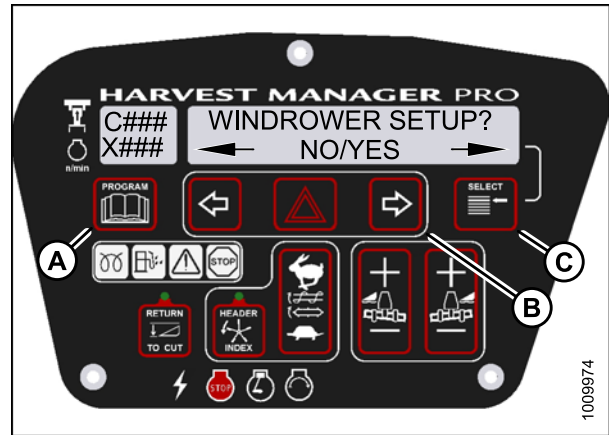


Figure 4.342: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

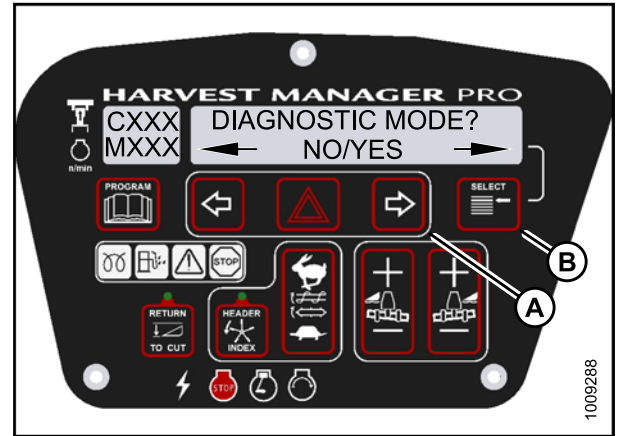


Figure 4.343: M155 Diagnostic Functions

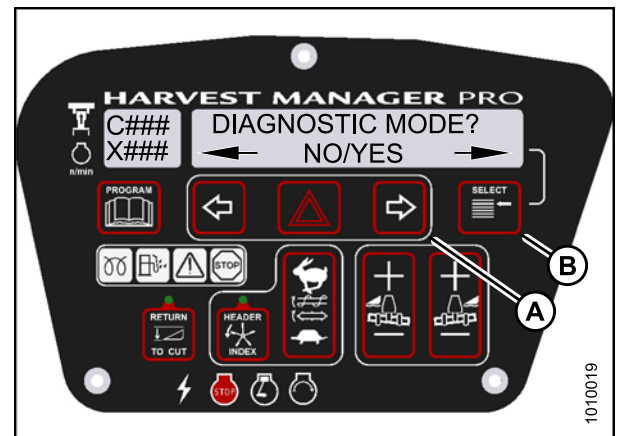


Figure 4.344: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - ACTIVATE HEADER HT is displayed on the upper line.

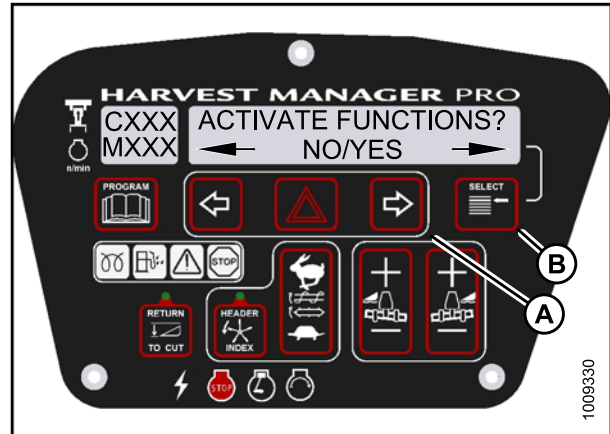


Figure 4.345: M155 Functions

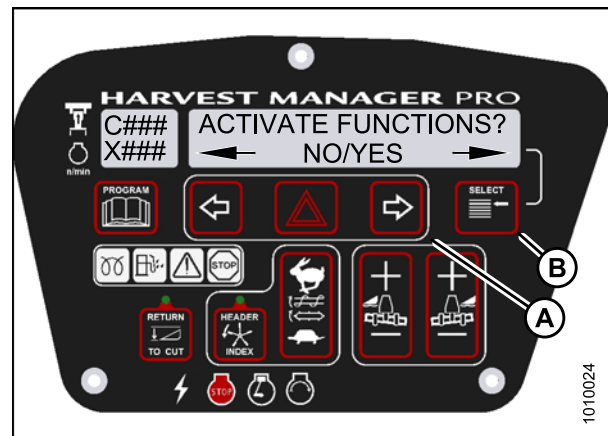


Figure 4.346: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (E) until KNIFE DRIVE SPD XXXX is displayed on the upper line.

IMPORTANT:

Do **NOT** over speed the knife drive.

8. Press and hold HAZARD (C) button.
 - Press left (B) arrow to **decrease** knife speed.
 - Press right (D) arrow to **increase** knife speed.

Verify the knife drive is functioning properly.

9. Release the HAZARD (C) button. The knife will stop.

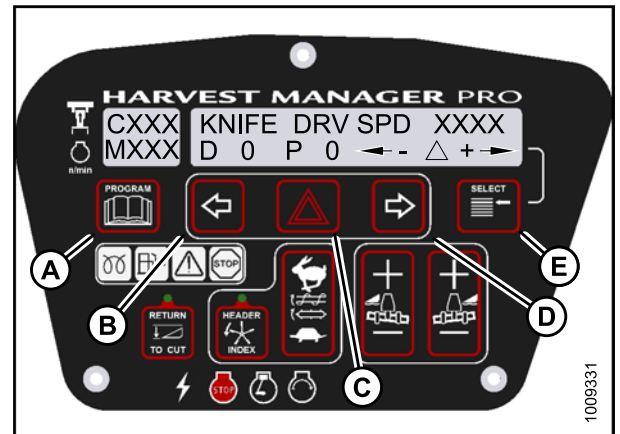


Figure 4.347: M155 Knife Drive

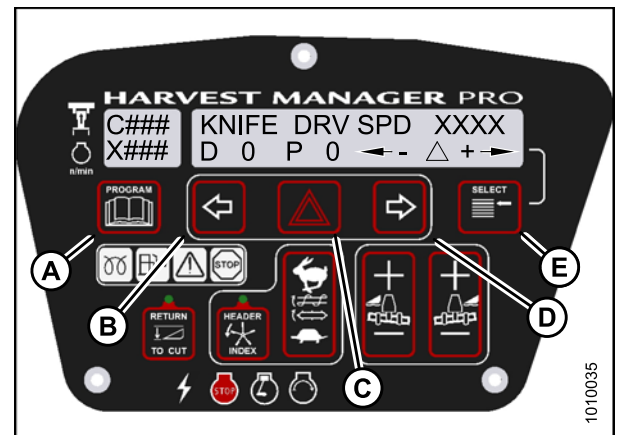


Figure 4.348: M205 Knife Drive

10. Press PROGRAM (A) to exit Programming Mode or press SELECT (E) to proceed to next ACTIVATE FUNCTION.

4.8.10 Testing the Draper Drive Circuit Activate Function Using the Cab Display Module (CDM)

IMPORTANT:

Do not over-speed a drive for a significant length of time. Doing so can lead to vibration, belt failures, or other over-speeding related problems.

NOTE:

- A draper header **MUST** be attached to windrower to follow this procedure.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.

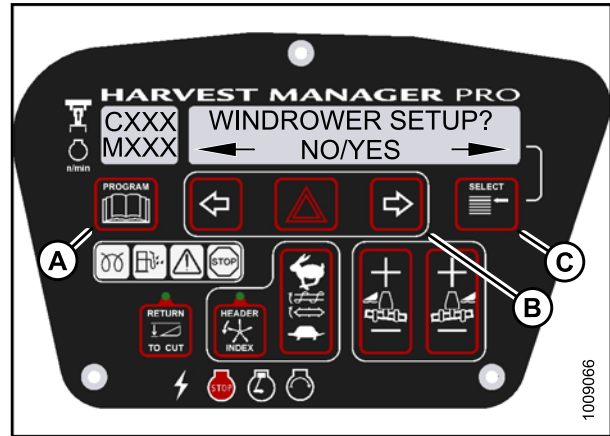


Figure 4.349: M155 CDM Programming Buttons

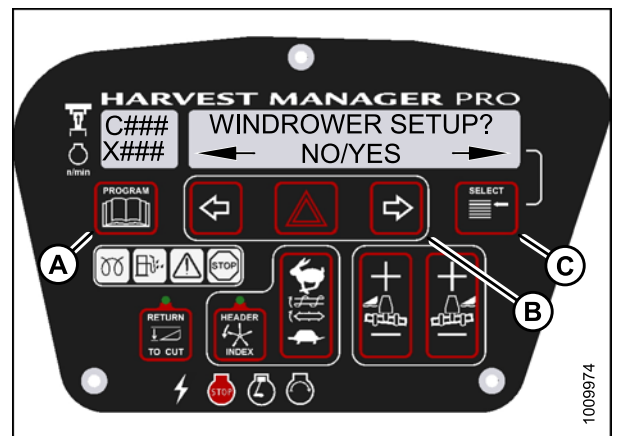


Figure 4.350: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

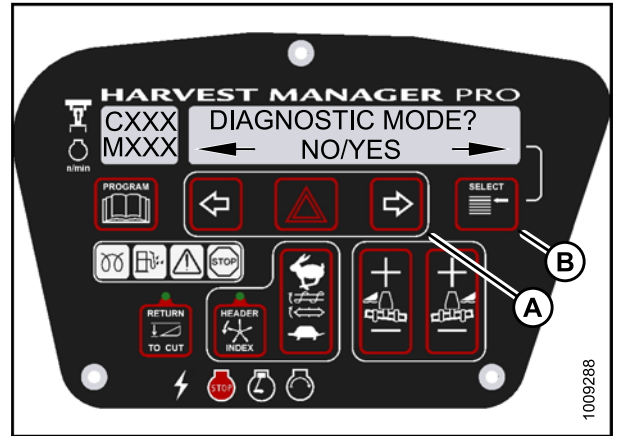


Figure 4.351: M155 Diagnostic Functions

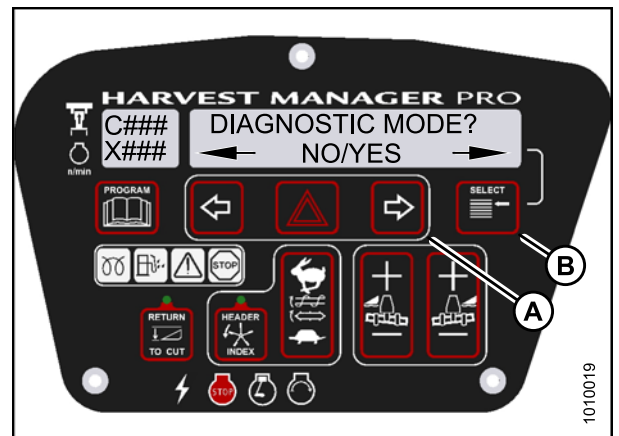


Figure 4.352: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - ACTIVATE HEADER HT is displayed on the upper line.



Figure 4.353: M155 Functions

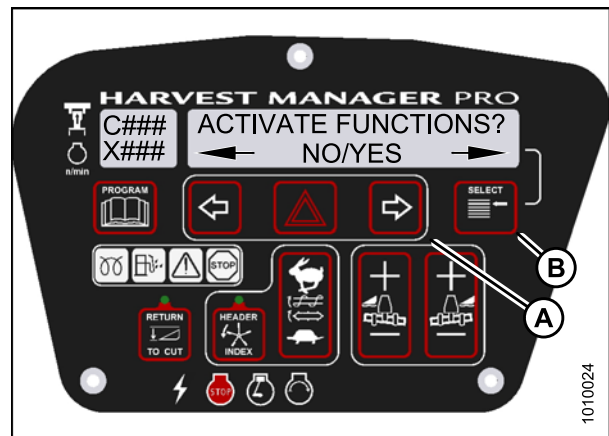


Figure 4.354: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (B) until DRAPER DRV SPD XXXX is displayed on the upper line.

IMPORTANT:

Do **NOT** over speed the drapers.

8. Press and hold HAZARD (C) button.
 - Press left (B) arrow to **decrease** draper speed.
 - Press right (D) arrow to **increase** draper speed.

Verify the draper drive is functioning properly.

9. Release the HAZARD (C) button. The drapers will stop.

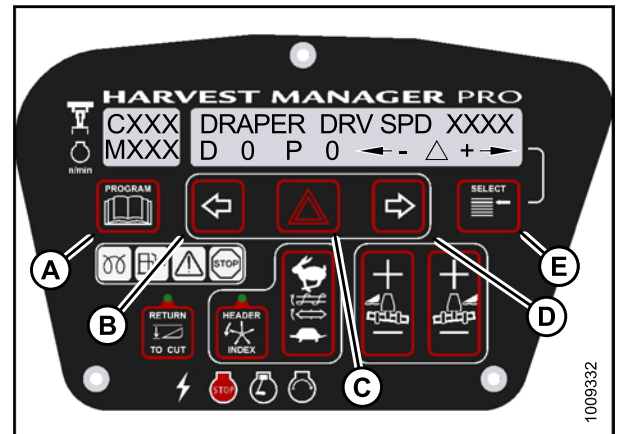


Figure 4.355: M155 Draper Drive

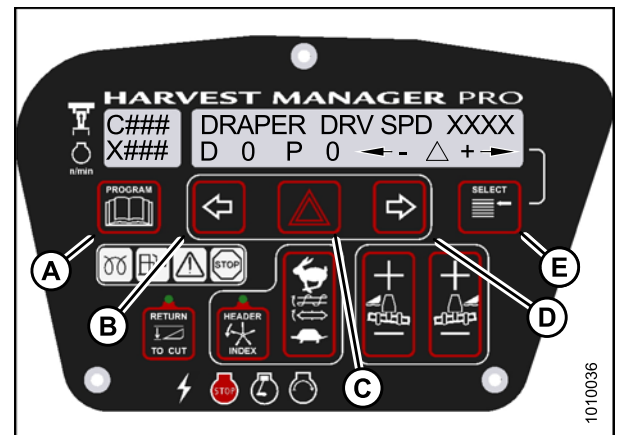


Figure 4.356: M205 Draper Drive

10. Press PROGRAM (A) to exit Programming Mode or press SELECT (E) to proceed to next ACTIVATE FUNCTION.

4.8.11 Testing the Reel Drive Circuit Activate Function Using the Cab Display Module (CDM)

IMPORTANT:

Do not over-speed a drive for a significant length of time. Doing so can lead to vibration, belt failures, or other over-speeding related problems.

NOTE:

- The header **MUST** be attached to windrower to follow this procedure.
- This procedure does not apply to rotary disc headers.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.

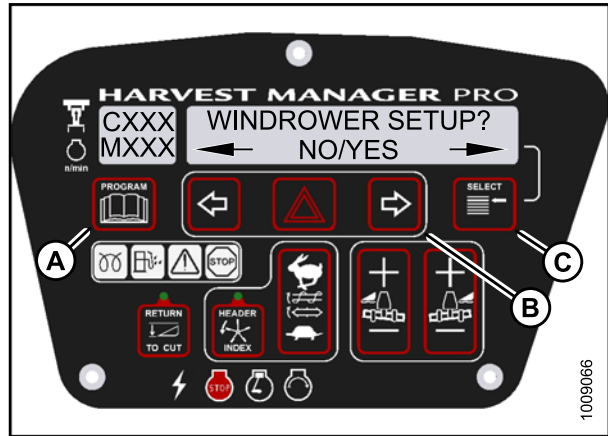


Figure 4.357: M155 CDM Programming Buttons

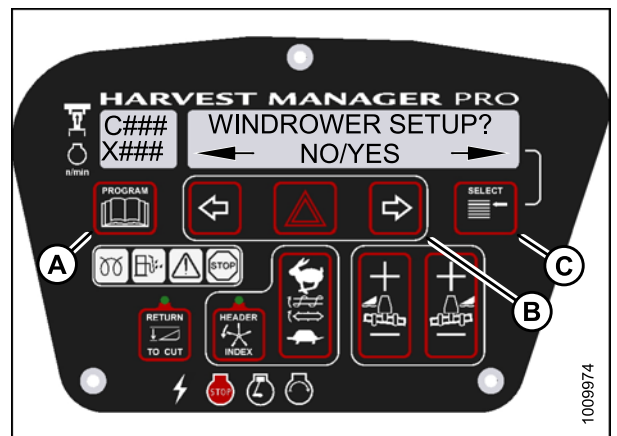


Figure 4.358: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

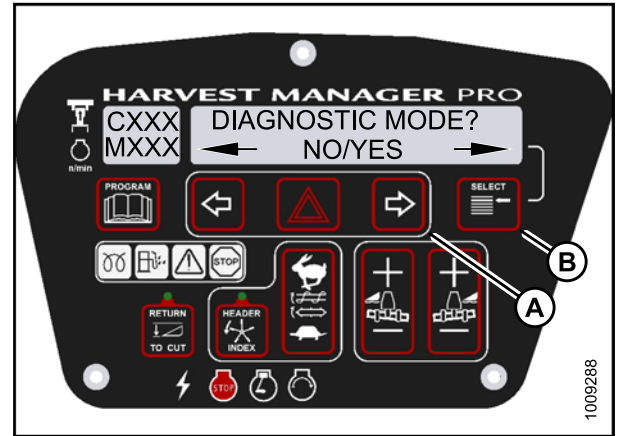


Figure 4.359: M155 Diagnostic Functions

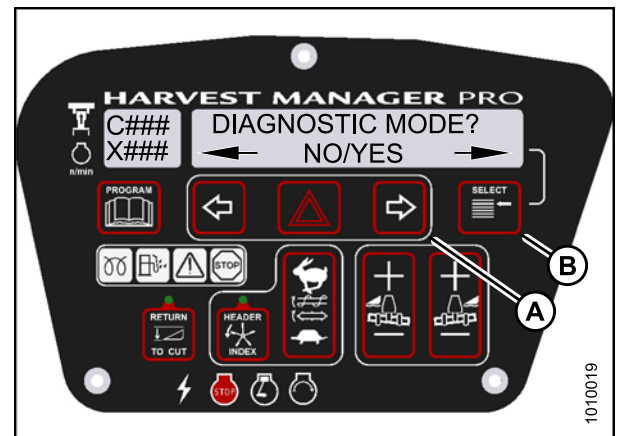


Figure 4.360: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - ACTIVATE HEADER HT is displayed on the upper line.

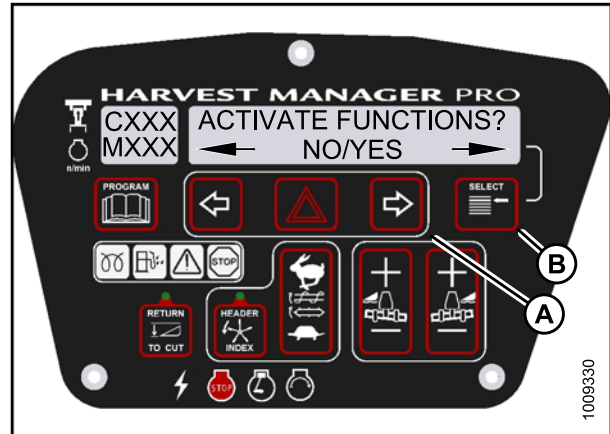


Figure 4.361: M155 Functions

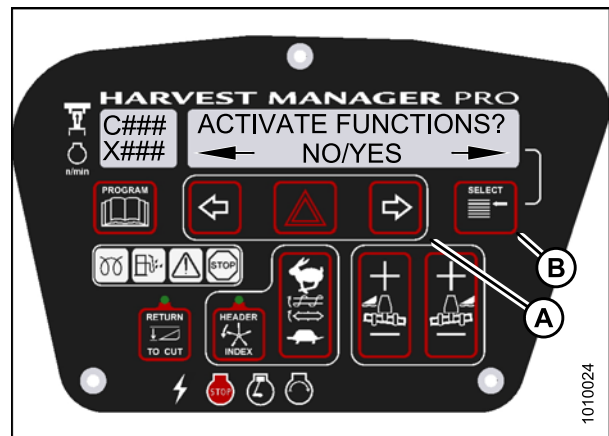


Figure 4.362: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

7. Press SELECT (E) until REEL DRV SPD XXXX is displayed on the upper line.

IMPORTANT:

Do **NOT** over speed the reel.

8. Press and hold HAZARD (C) button.
 - Press left (B) arrow to **decrease** reel speed.
 - Press right (D) arrow to **increase** reel speed.

Verify the reel drive is functioning properly.

9. Release the HAZARD (C) button. The reel will stop.

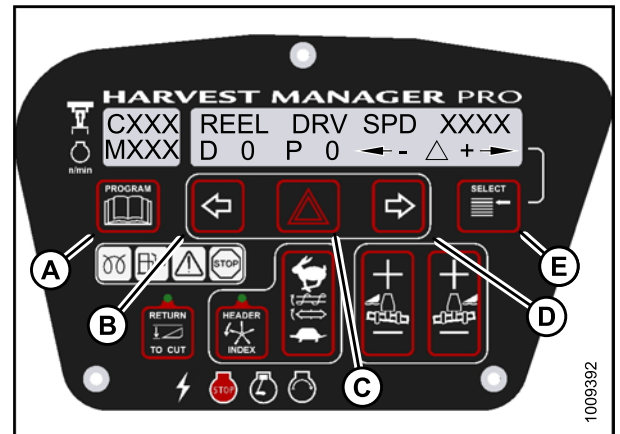


Figure 4.363: M155 Reel Drive

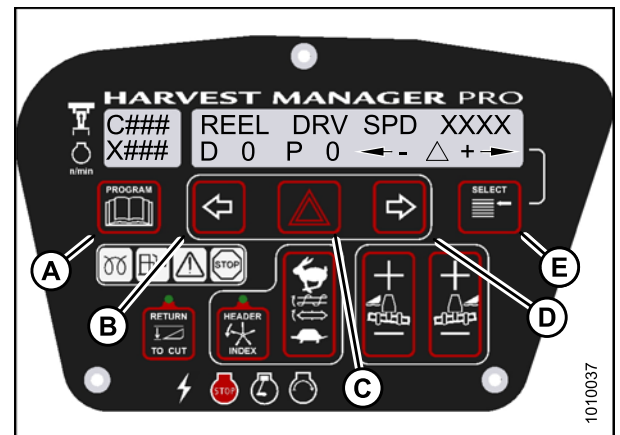


Figure 4.364: M205 Reel Drive

10. Press PROGRAM (A) to exit Programming Mode or press SELECT (E) to proceed to next ACTIVATE FUNCTION.

4.8.12 Testing the Rotary Disc Drive Circuit Activate Function Using the Cab Display Module (CDM)

IMPORTANT:

Do not over-speed a drive for a significant length of time. Doing so can lead to vibration, belt failures, or other over-speeding related problems.

NOTE:

- A rotary disc header **MUST** be attached to windrower to follow this procedure.
- The engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode.
 - WINDROWER SETUP? is displayed on the upper line.

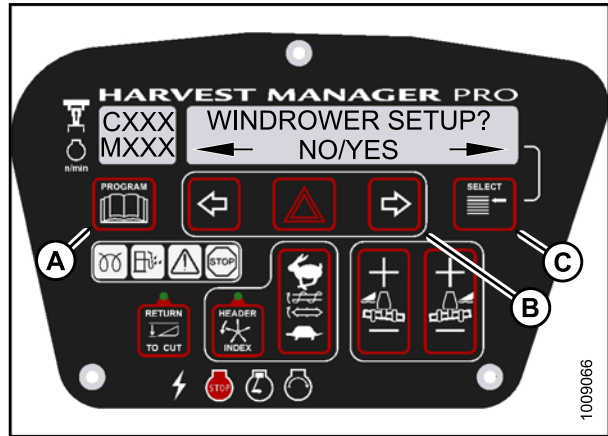


Figure 4.365: M155 CDM Programming Buttons

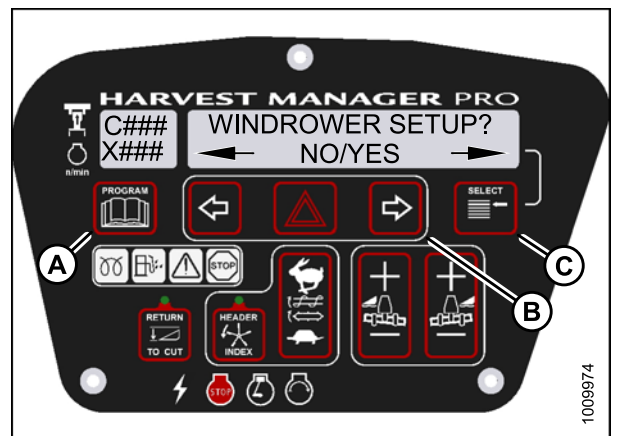


Figure 4.366: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

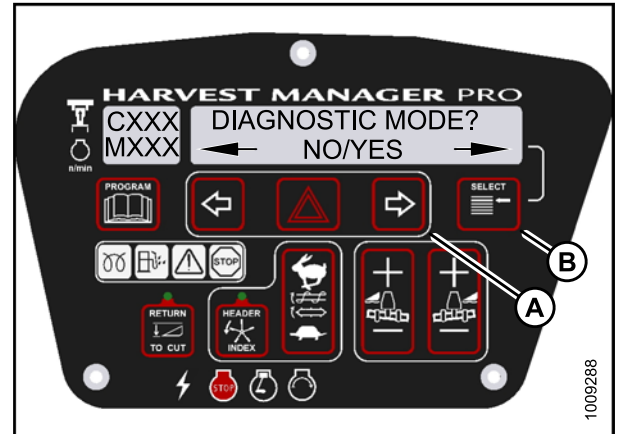


Figure 4.367: M155 Diagnostic Functions

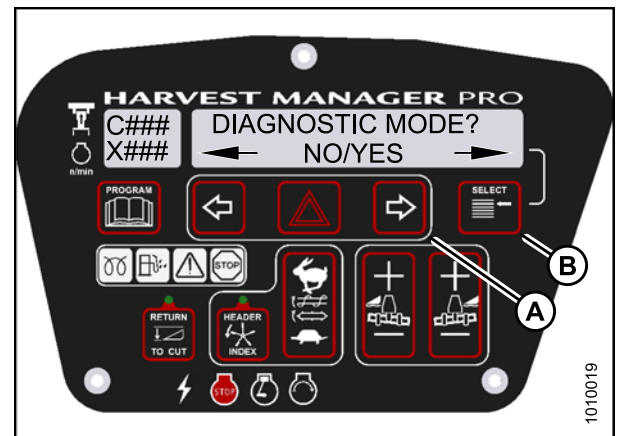


Figure 4.368: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - ACTIVATE HEADER HT is displayed on the upper line.



Figure 4.369: M155 Functions

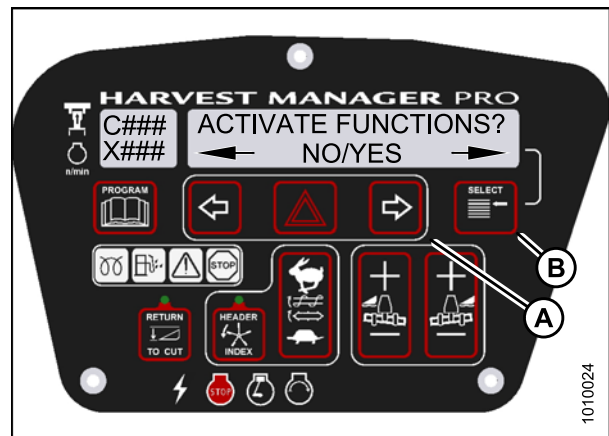


Figure 4.370: M205 Functions

CAB DISPLAY MODULE (CDM)

CAUTION

Check to be sure all bystanders have cleared the area.

- Press SELECT (E) until DISC DRV SPD XXXX is displayed on the upper line.

IMPORTANT:

Do **NOT** over speed the disc drive.

- Press and hold HAZARD (C) button.
 - Press left (B) arrow to **decrease** disc speed.
 - Press right (D) arrow to **increase** disc speed.

Verify the disc drive is functioning properly.

- Release the HAZARD (C) button. The disc drive will stop.

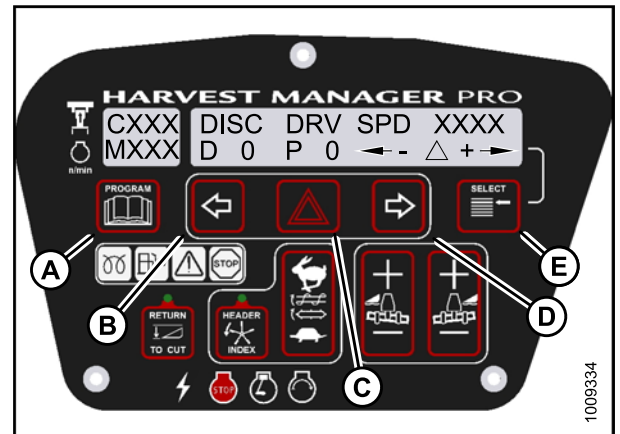


Figure 4.371: M155 Disc Drive

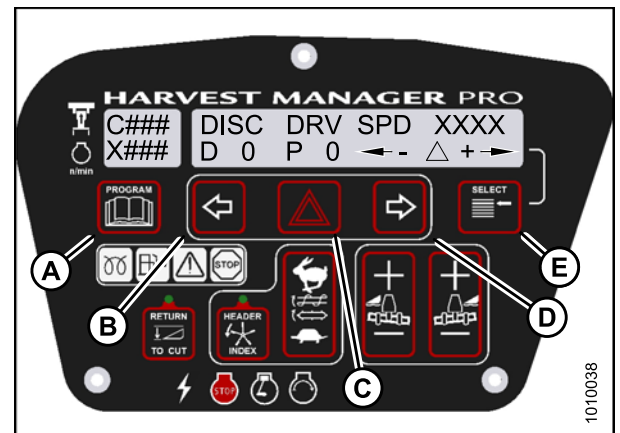


Figure 4.372: M205 Disc Drive

- Press PROGRAM to exit Programming Mode or press SELECT to proceed to next ACTIVATE FUNCTION.

4.8.13 Testing the Double Windrower Attachment (DWA) Drive Activate Function Using the Cab Display Module (CDM)

IMPORTANT:

Do not over-speed a drive for a significant length of time. Doing so can lead to vibration, belt failures, or other over-speeding related problems.

NOTE:

- DWA must be attached to windrower and activated under the WINDROWER SETUP menu. For more information, refer to [4.4.12 Activating the Double Windrower Attachment \(DWA\), page 199](#).
- Engine **MUST** be running to perform this procedure.

CAB DISPLAY MODULE (CDM)

1. Turn ignition key to RUN, or start the engine.
2. Press PROGRAM (A) and SELECT (C) on cab display module (CDM) to enter Programming Mode. Press SELECT (C).
 - WINDROWER SETUP? is displayed on the upper line.

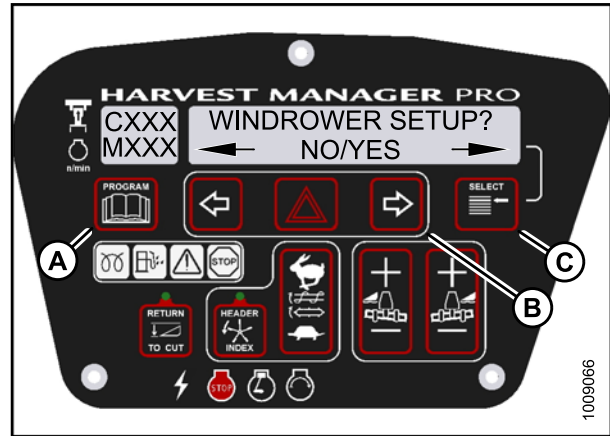


Figure 4.373: M155 CDM Programming Buttons

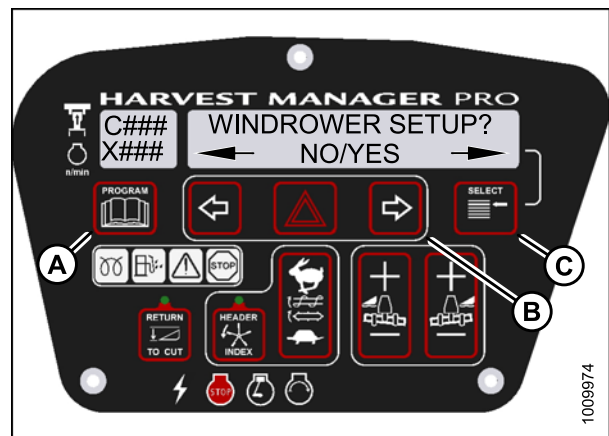


Figure 4.374: M205 CDM Programming Buttons

CAB DISPLAY MODULE (CDM)

3. Press SELECT (B) until DIAGNOSTIC MODE? is displayed in upper line.
 - NO/YES is displayed on the lower line.
4. Press right (A) arrow to select Yes. Press SELECT (B).

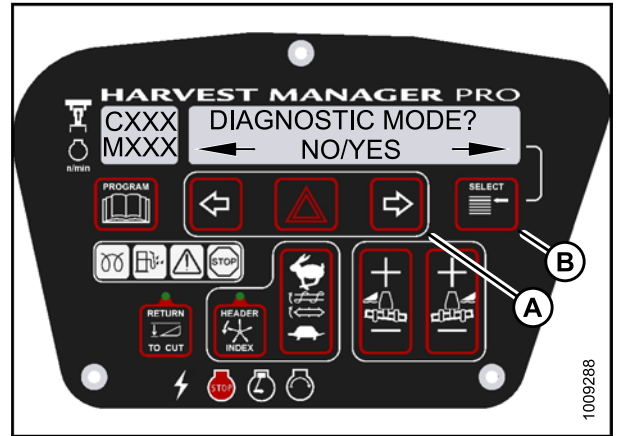


Figure 4.375: M155 Diagnostic Functions

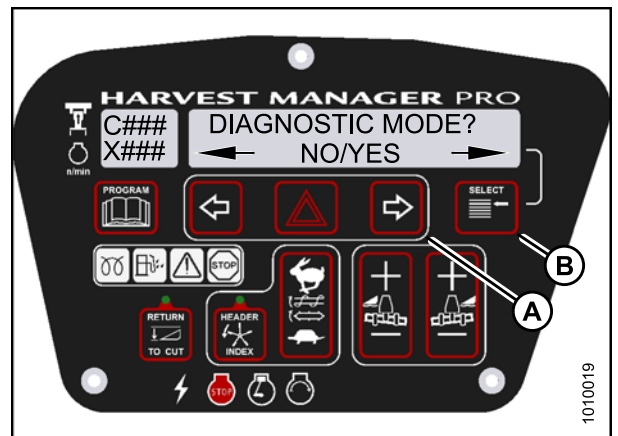


Figure 4.376: M205 Diagnostic Functions

CAB DISPLAY MODULE (CDM)

5. Press SELECT (B) until ACTIVATE FUNCTIONS? is displayed on the upper line.
 - NO/YES is displayed on the lower line.
6. Press right (A) arrow to select YES. Press SELECT (B).
 - ACTIVATE HEADER HT is displayed on the upper line.

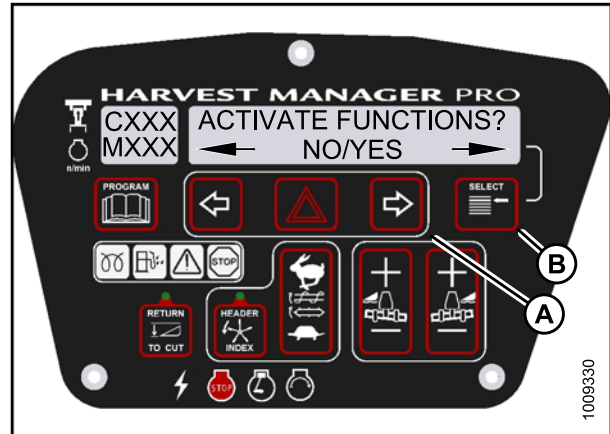


Figure 4.377: M155 Functions

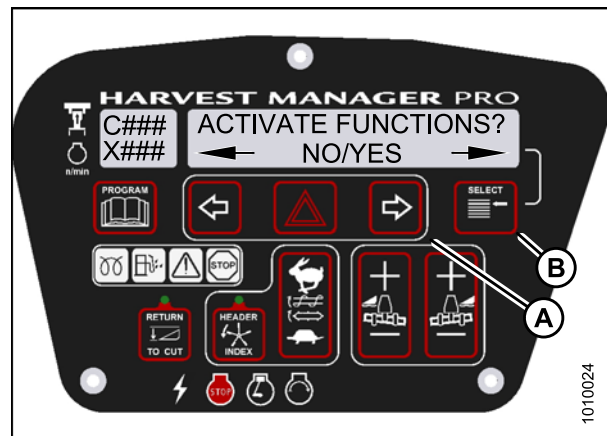


Figure 4.378: M205 Functions

CAB DISPLAY MODULE (CDM)

- Press SELECT (E) until ACTIVATE DWA DRV is displayed on the upper line.

CAUTION

Check to be sure all bystanders have cleared the area.

IMPORTANT:

Do **NOT** over speed the DWA drive.

- Press and hold HAZARD (C) button.
 - Press left (B) arrow to decrease DWA drive speed.
 - Press right (D) arrow to increase DWA drive speed.

Verify the DWA drive is functioning properly.

- Release the HAZARD (C) button. The DWA drive will stop.
- Press PROGRAM (A) to exit Programming Mode or press SELECT (E) to proceed to next ACTIVATE FUNCTION.

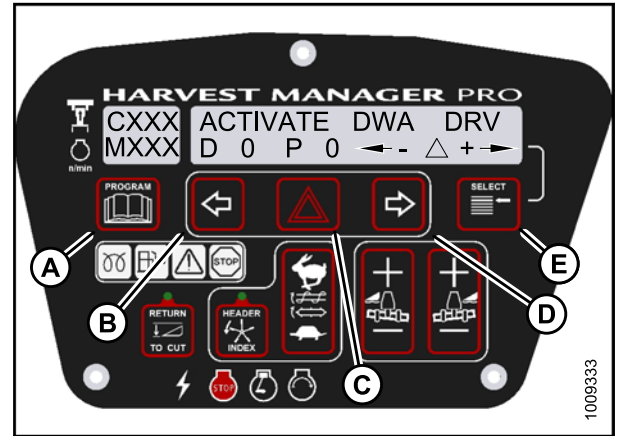


Figure 4.379: M155 DWA Drive

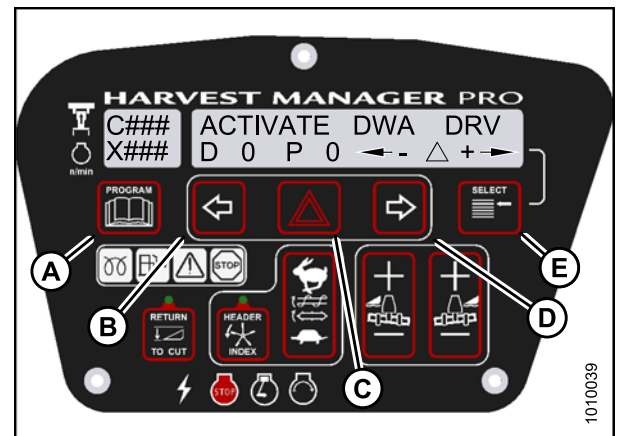


Figure 4.380: M205 DWA Drive

5 Performing Predelivery Checks

Perform all procedures in this chapter in the order in which they are listed.

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

IMPORTANT:

The machine is factory-set and should not require further adjustments; however, perform the following checks to ensure your machine operates at maximum performance. Adjustments should be made only if absolutely necessary and in accordance with the instructions in this manual.

1. Perform the final checks and adjustments listed on the following pages and the **Predelivery Checklist** (yellow sheet attached to this instruction—refer to *Predelivery Checklist, page 369*) to ensure the machine is field-ready.
2. Ensure the Operator or the Dealer retains the completed Predelivery Checklist.

5.1 Recording Serial Numbers

1. Record the windrower and engine serial numbers on the Predelivery Checklist.



Figure 5.1: M105 Serial Number Plate



Figure 5.2: M155/M205 Serial Number Plate



Figure 5.3: Engine Serial Number Plate

5.2 Checking Wheel Drive Lubricant Level

Check the wheel drive lubricant level every 200 hours or annually.

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Park the windrower on level ground.
2. Stop the engine and remove the key.
3. Position windrower so plugs (A) and (B) are horizontally aligned with the center (C) of the hub.
4. Remove plug (A) or (B). The lubricant should be visible through the port or running out slightly.
5. Reinstall plugs and tighten.

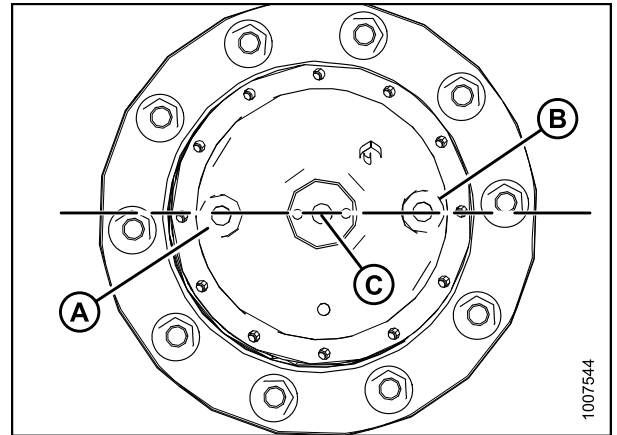


Figure 5.4: Wheel Drive Assembly

5.3 Checking Tire Pressures and Adding Tire Ballast

5.3.1 Checking Tire Pressures

Measure the following tire pressures using a gauge:

- Bar: 32 psi (221 kPa).
- Turf: 20 psi (138 kPa).
- Caster: 10 psi (69 kPa).

5.3.2 Adding Tire Ballast

Adding fluid ballast to the rear caster tires is recommended in order to provide adequate machine stability when using large headers on the windrower.

Machine stability is also affected by different attachments, windrower options, terrains, and operators' driving techniques.

Ballast capability per tire is at a maximum fill of 75% or when the fluid is level with the valve stem when the stem is positioned at the "12 o'clock" position.

Fluid can be added to any level up to maximum fill, but always add an equal amount of fluid on both sides.

Table 5.1 Fluid per Tire

Tire Size	Fluid per Tire at 75% Fill U.S. Gal. (liters)	Total Weight of Both Tires lb (kg) ⁶
7.5 x 16	10 (38)	200 (91)
10 x 16	18 (69)	380 (170)
16.5 x 16.1	41 (158)	830 (377)

6. Weights given are for typical calcium chloride and water mixtures. Weight is reduced by 20% if only water is used (for areas that do not require antifreeze protection).

PERFORMING PREDELIVERY CHECKS

Table 5.2 Recommended Ballast

Header Description		Rec. Tire Size	Recommended Ballast			
			Level Ground		Hills	
Type	Size		Per Tire U.S. Gal. (liters)	Both Tires lb (kg) ⁷	Per Tire U.S. Gal. (liters)	Both Tires lb (kg) ⁷
A-Series (all options)	All	7.5 x 16 10 x 16 16.5 x 16.1	0	0	0	0
D-Series	25 ft. and less		0	0	0	0
	30 ft. single reel or double reel (without conditioner)	7.5 x 16 10 x 16 16.5 x 16.1	18 (69)	380 (170)	30 (115)	630 (288)
	35 ft. single reel					
	30 ft. double reel (with steel fingers and conditioner)	Level ground: 10 x 16 16.5 x 16.1	30 (115)	630 (288)	41 (158)	830 (377)
	35 ft. double reel (5- or 6-bat)	Hills: 16.5 x 16.1				
40 ft.	16.5 x 16.1					
R-Series (all options)	13 ft. and 16 ft.	7.5 x 16 10 x 16 16.5 x 16.1	0	0	0	0

7. If only water is used, increase volume of water by 20% (up to maximum allowable fill per tire) to compensate.

5.4 Checking Engine Air Intake

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Ensure air cleaner cap is firmly attached and latches (A) and clamps (B) are secure.

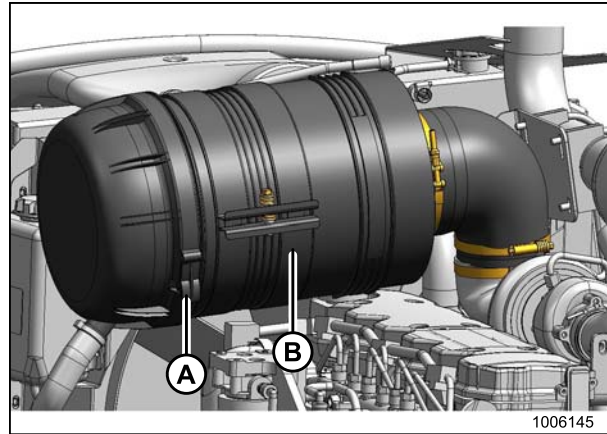


Figure 5.5: M205 Air Intake System

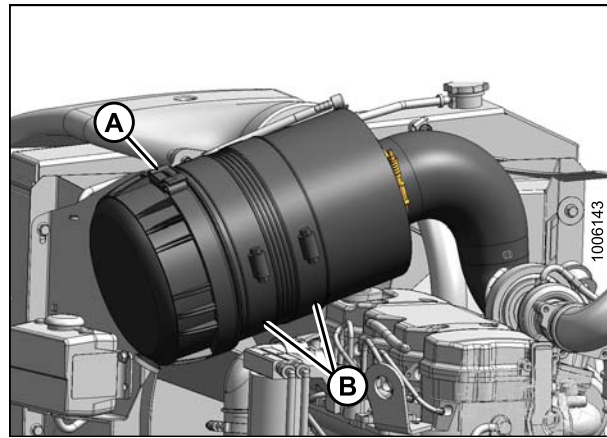


Figure 5.6: M105/M155 Air Intake System

PERFORMING PREDELIVERY CHECKS

- M105 and M155 only:** Check the constant torque spring clamp (A) at the back of the air cleaner. Hold an 0.018 in. (0.46 mm) gauge between the middle coils, tighten the clamp until the gauge is snug, and remove the gauge.

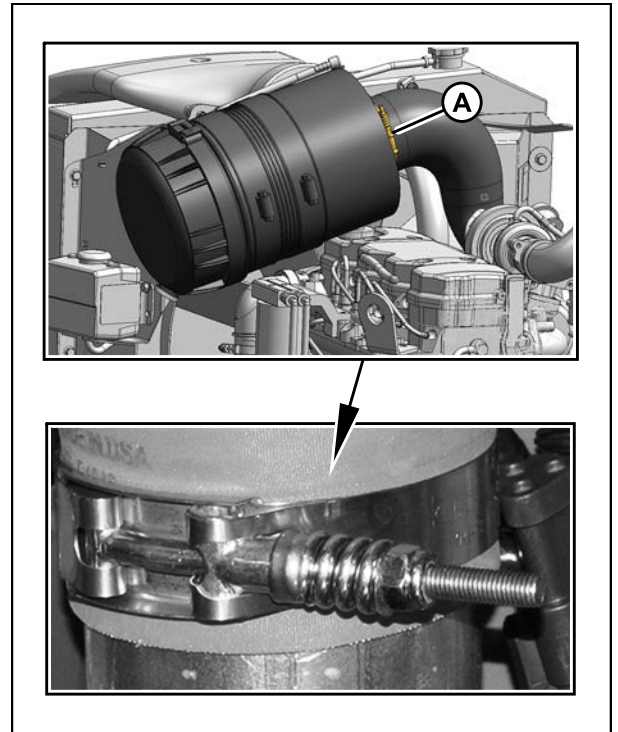


Figure 5.7: M105/M155 Air Intake System

- M205 only:** Check the constant torque clamps (A) on the charge air cooling duct connection at the turbocharger inlet. Tighten constant torque clamps to achieve a gap (B) of 0.157 in. +/- 0.02 in. (4 mm +/- 0.5 mm).

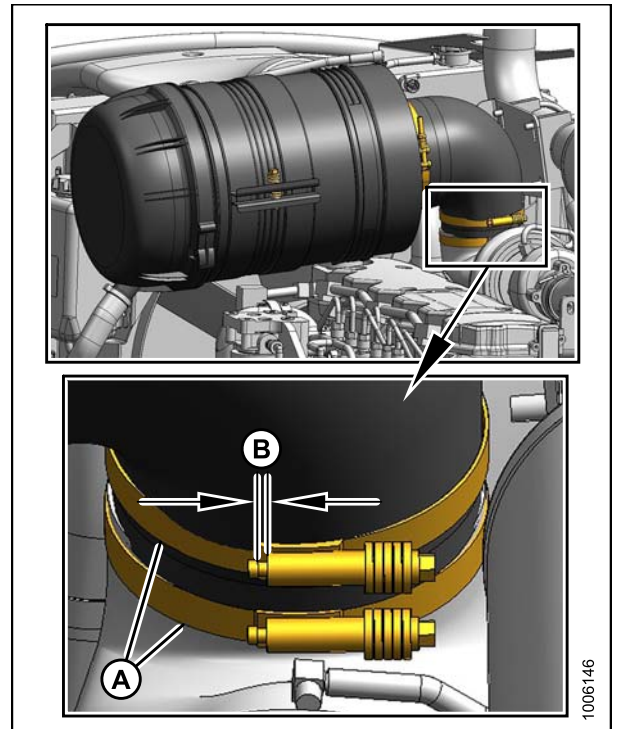


Figure 5.8: M205 Air Intake System

PERFORMING PREDELIVERY CHECKS

4. Check the constant torque clamps (A) on the charge air cooling duct connections at turbocharger outlet and engine air intake. Hold an 0.018 in. (0.46 mm) gauge between the middle coils, tighten the clamp until the gauge is snug, and remove the gauge.

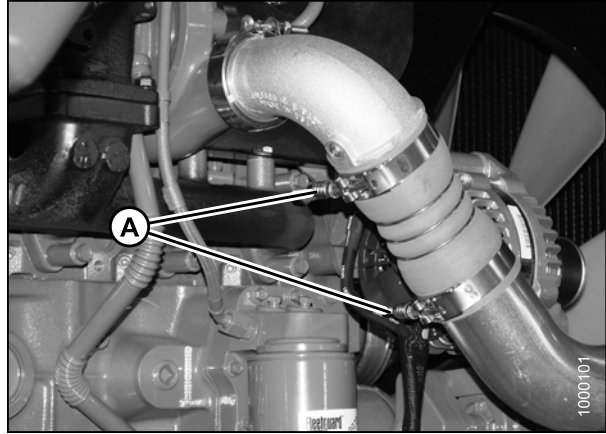


Figure 5.9: M205 Air Intake System

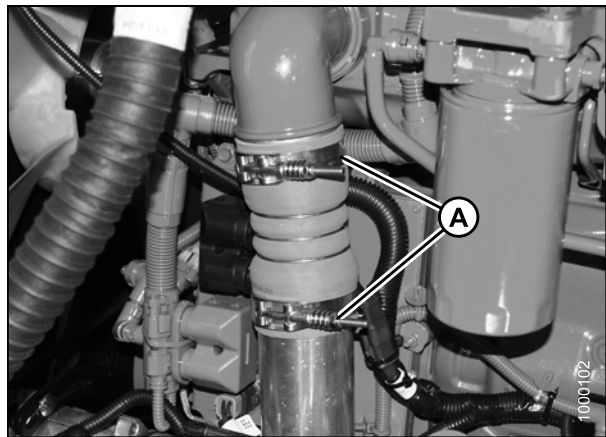


Figure 5.10: M205 Air Intake System

5.5 Checking Hydraulic Oil

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. For **M105**: Clean cap (A) and surrounding area.
2. For **M105**: Turn filler cap (A) counterclockwise to unlock cap and remove dipstick.



Figure 5.11: M105 Engine Hood

3. For **M155 and M205**: Clean cap (A) and surrounding area.
4. For **M155 and M205**: Turn filler cap (A) counterclockwise to unlock cap and remove dipstick.

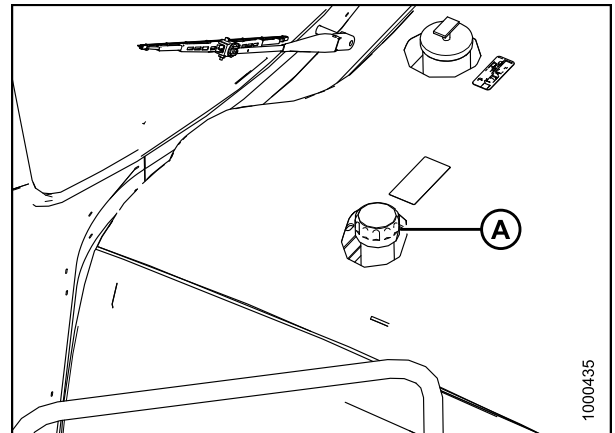


Figure 5.12: M155/M205 Engine Hood

5. Ensure hydraulic oil level is between the low (L) and full (H) marks.
6. Reinstall dipstick and filler cap, and turn clockwise to tighten/lock.

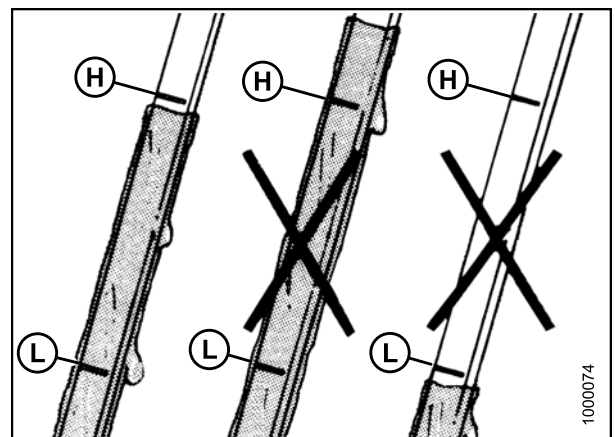


Figure 5.13: Hydraulic Oil Levels

5.6 Checking Fuel Separator

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Place a container under the filter drain (A).
2. Turn drain valve (A) by hand 1-1/2 to 2 turns counterclockwise until fuel begins draining.
3. Drain the filter sump of water and sediment until clear fuel is visible. Clean as necessary.
4. Turn the drain valve (A) by hand 1-1/2 to 2 turns clockwise until tight.
5. Dispose of fluid in container in a safe manner.

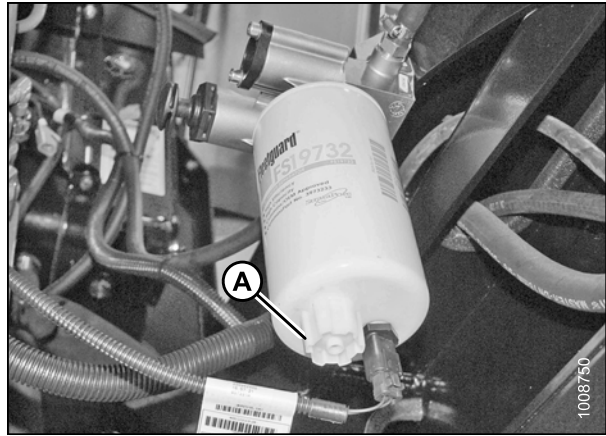


Figure 5.14: Fuel Filter

5.7 Checking Engine Coolant

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Check the coolant level in the coolant recovery tank (A). Tank should be at least half full.
2. Ensure coolant concentration in the radiator is rated for temperatures of -30°F (-34°C).

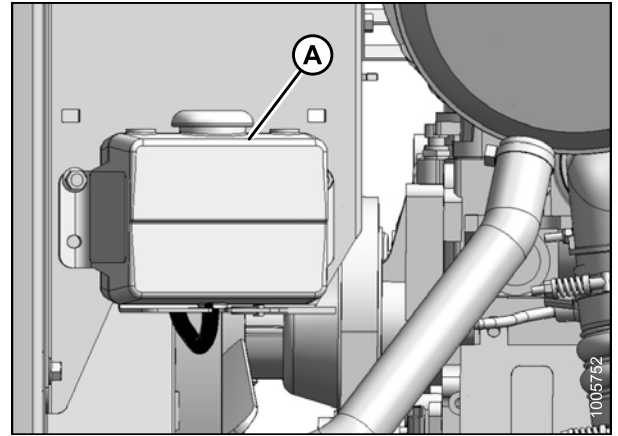


Figure 5.15: M105 Coolant Recovery Tank

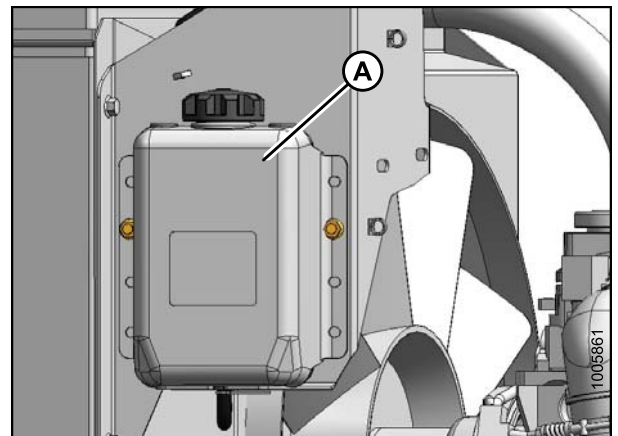


Figure 5.16: M155/M205 Coolant Recovery Tank

5.8 Checking Gearbox Lubricant Level on an M155/M205

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Remove plug (A) and ensure lubricant is visible or slightly running out.
2. Replace plug (A) and tighten.

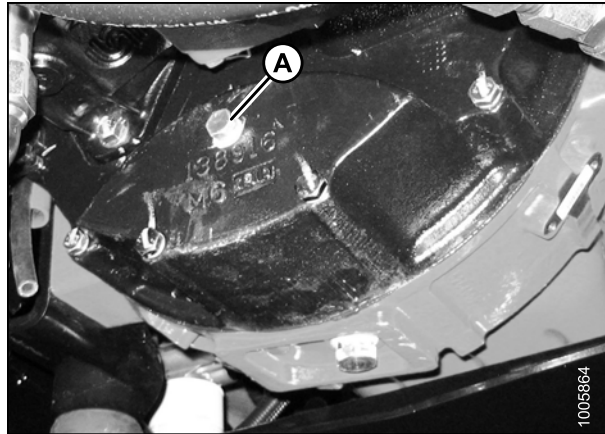


Figure 5.17: Gearbox

5.9 Checking Air Conditioning (A/C) Compressor Belt

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Ensure A/C compressor belt (A) tension is set so a force of 8–12 lbf (35–55 N) is required to deflect the belt 3/16 in. (5 mm) at the mid-span.

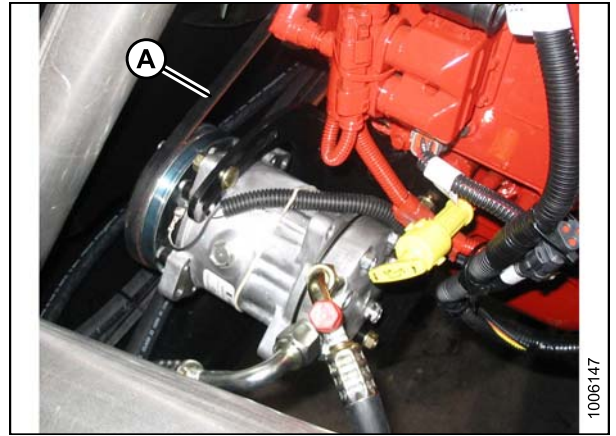


Figure 5.18: A/C Compressor Belt

5.10 Checking Safety System

Ensure the battery disconnect switch is in the POWER ON position. Refer to [5.11 Performing Operational Checks, page 330](#).

A properly functioning system should operate as follows:

- The starter should engage **only** when the ground speed lever (GSL) is in N-DETENT, the steering wheel is locked in the center position, and the header drive switch is in the OFF position. The brake should engage and the machine should NOT move after engine start-up.
- The steering wheel should **NOT** lock with the engine running and the GSL out of N-DETENT.
- The machine should **NOT** move with the engine running and with the steering wheel centered when the GSL is pulled straight out of N-DETENT (not in forward or reverse).

IMPORTANT:

If the safety system does not function as described, refer to the technical manual.

 **DANGER**

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

 **CAUTION**

Check to be sure all bystanders have cleared the area.

Perform the following procedures to ensure the safety system is operating properly:

1. Shut down the engine and engage header drive switch. Try starting the engine and confirm the cab display module (CDM) displays "HEADER ENGAGED" on the upper line and "DISENGAGE HEADER" on the lower line.

IMPORTANT:

If the engine turns over, the safety system requires adjustment. Refer to the technical manual for adjustment procedures.

PERFORMING PREDELIVERY CHECKS

2. Shut down the engine and perform the following safety system checks:

- a. Open engine compartment hood.
- b. Pry the steering interlock away from pintle arms (A) by inserting a wedge or pry bar between one of the interlock channels (B) and pintle arm.
- c. Insert a wooden block approximately 3/4 in. (19 mm) thick between the opposite channel and the pintle arm so the interlock channel is clear of the pintle arm.
- d. Turn the steering wheel off-center and move the GSL to N-DETENT.
- e. Try starting the engine and confirm the CDM flashes "CENTER STEERING" accompanied by a short beep with each flash. The engine should NOT turn over.

IMPORTANT:

If the engine turns over, the safety system requires adjustment. Refer to the technical manual for adjustment procedures.

- f. Remove key from ignition.
- g. Remove wooden block and close hood.

3. Shut down the engine and center the steering wheel. Place the GSL in NEUTRAL but not in N-DETENT. Try starting the engine and confirm the CDM flashes "CENTER STEERING" on the upper line and "PLACE GSL INTO N" on the lower line accompanied by a short beep with each flash. The engine should NOT turn over.

IMPORTANT:

If the engine turns over, the safety system requires adjustment. Refer to the technical manual for adjustment procedures.

4. Shut down the engine and center the steering wheel. Place the GSL in N-DETENT and ensure the operator's station is **NOT** locked. Try starting the engine and confirm that the engine cranks but does NOT start, and the CDM displays "SEAT BASE NOT LOCKED".

IMPORTANT:

If the engine starts, the safety system requires adjustment. Refer to the technical manual for adjustment procedures.

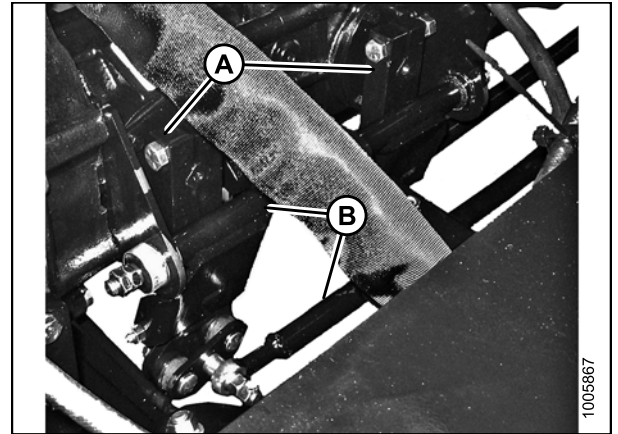


Figure 5.19: Pintle Arms

5.11 Performing Operational Checks

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

M205, M155: The battery disconnect switch (A) is located on the right-hand (cab-forward) frame rail behind the maintenance platform and can be accessed by moving the platform rearwards.

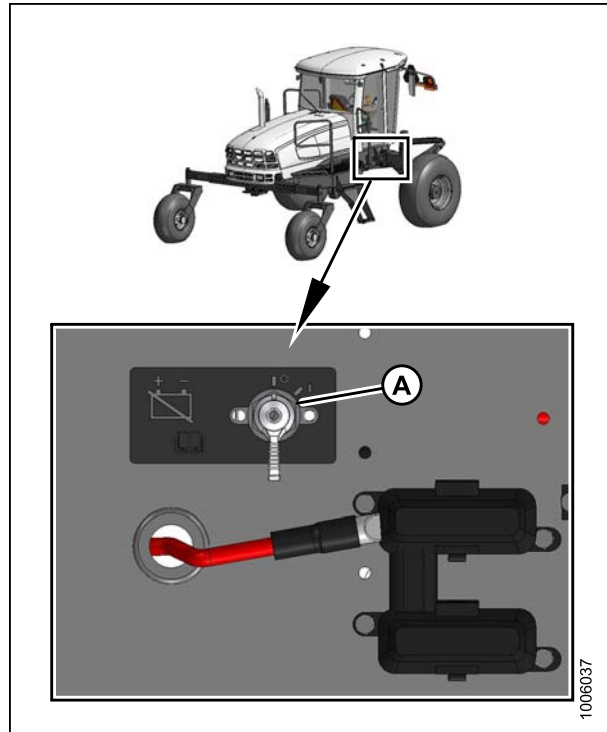


Figure 5.20: Battery Switch

PERFORMING PREDELIVERY CHECKS

M105: The battery disconnect switch (A) is located on the left-hand frame rail on the battery tray and can be accessed by raising the engine compartment hood.

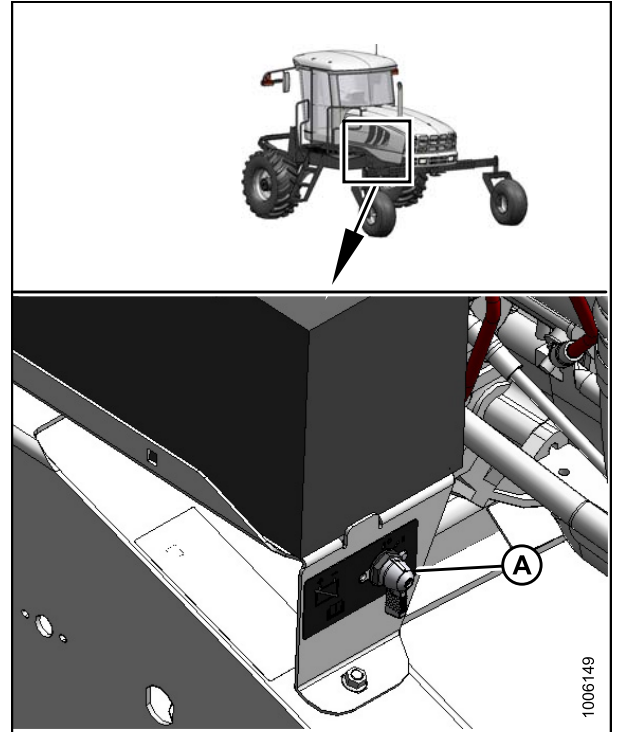


Figure 5.21: M105 Battery Switch

PERFORMING PREDELIVERY CHECKS

5.11.1 Checking Engine Warning Lights

1. Turn ignition key (A) to RUN position. A single loud tone will be audible and the engine warning lights (B) will illuminate.
2. Turn ignition key (A) to OFF position.



Figure 5.22: M155/M205 Operator Console



Figure 5.23: M105 Operator Console

5.11.2 Checking Fuel Level on an M105

1. Turn the ignition key (A) to the RUN position.
2. Check the fuel level by pressing the selector switch (B) on the cab display module (CDM) until the FUEL LEVEL is displayed at (C). If required, add sufficient fuel for a 15 minute run.

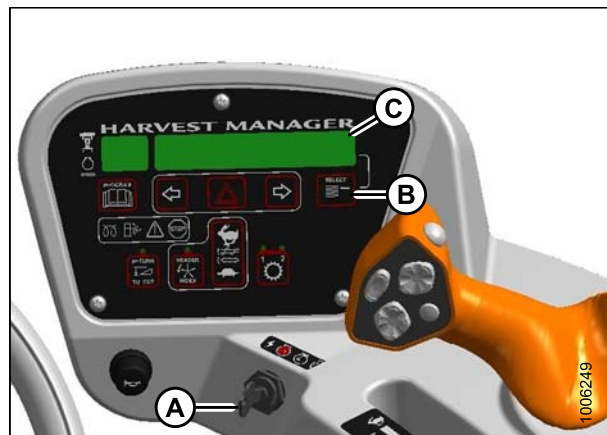


Figure 5.24: CDM

5.11.3 Checking Engine Startup

CAUTION

Check to be sure all bystanders have cleared the area.

1. Start the engine. For instructions, refer to [3.15 Starting Engine, page 80](#).

NOTE:

The brakes should engage and the machine should not move after engine start-up.

2. Ensure the steering wheel is centered. Move ground speed lever (GSL) (A) straight out of N-DETTENT (neither forward nor reverse). The machine should not move.

3. Check that the steering wheel is free to move.

IMPORTANT:

If the machine does not function as described, the system requires adjustment. Refer to the windrower technical manual.



Figure 5.25: M155/M205 Operator Console

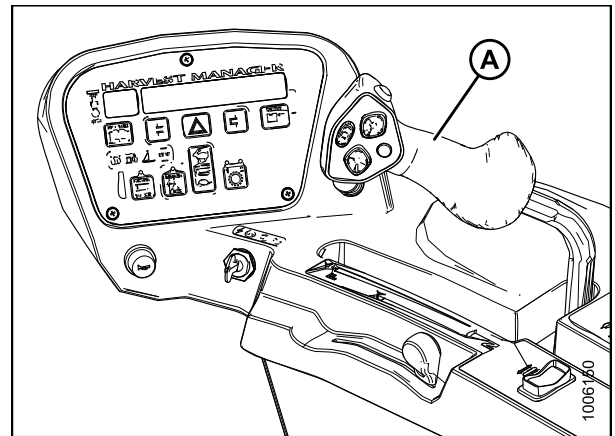


Figure 5.26: M105 Operator Console

5.11.4 Checking Engine Speed

1. Check engine speed on cab display module (CDM) (A).

Table 5.3 Engine Speed

Model	Idle	Maximum rpm (No Load)
M105		2270–2330
M155	1100	2320–2350
M205		2250–2340



Figure 5.27: M105 Cab Display Module (CDM)



Figure 5.28: M155/M205 Cab Display Module (CDM)

5.11.5 Checking Gauges and Cab Display Module (CDM) Display an M155/M205

1. **M205 and M155 only:** Ensure the engine temperature gauge (A) and fuel gauge (B) are working.



Figure 5.29: M155/M205 Temperature and Fuel Gauges

PERFORMING PREDELIVERY CHECKS

2. Ensure the CDM display (A) is working by pushing the SELECT (B) button on the CDM or the SELECT (C) button on the ground speed lever (GSL).

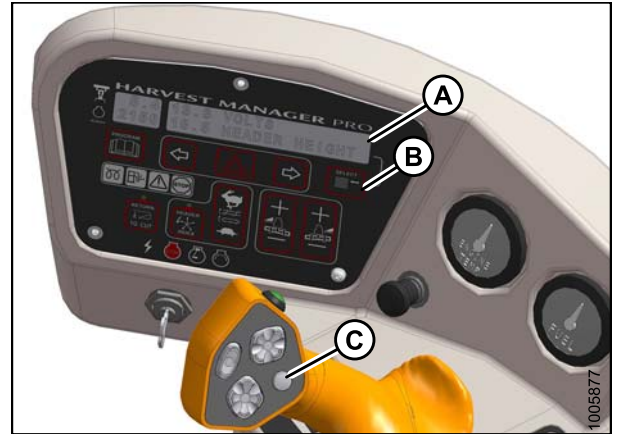


Figure 5.30: M155/M205 CDM



Figure 5.31: M105 CDM

5.11.6 Checking Cab Display Module (CDM) Display on an M105

1. Ensure the CDM display (A) is working by pushing SELECT (B) on CDM, or SELECT button (C) on ground speed lever (GSL).



Figure 5.32: CDM

PERFORMING PREDELIVERY CHECKS

5.11.7 Checking Electrical System

1. Push the SELECT button (C) on the ground speed lever (GSL) or the SELECT button (B) on the cab display module (CDM) until the CDM display (A) displays “VOLTS”. The display indicates the condition of the battery and alternator. Refer to Table 5.4 *Battery and Alternator Condition*, page 336.

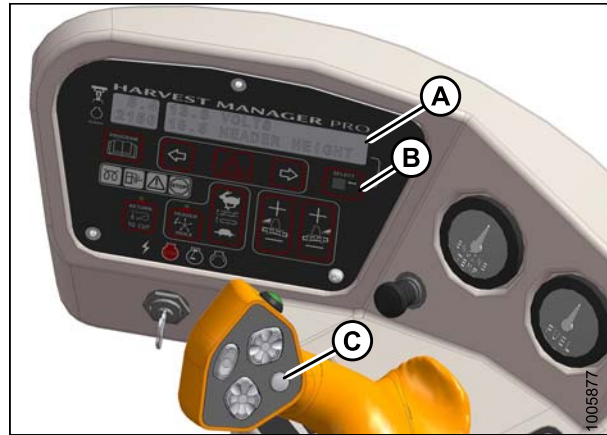


Figure 5.33: M155/M205 Cab Display Module (CDM)



Figure 5.34: M105 Cab Display Module (CDM)

Table 5.4 Battery and Alternator Condition

Ignition	Engine	Reading	Indicated Condition
ON	Running	13.8–15.0	Normal
		>16.0 (see note)	Regulator out of adjustment
	<12.5 (see note)	Alternator not working or Regulator out of adjustment	
	Shut down	12.0	Battery normal

NOTE:

Display flashes voltage reading accompanied by a single loud tone every 30 minutes until condition is fixed.

5.11.8 Checking Operator's Presence System

CAUTION

Check to be sure all bystanders have cleared the area.

1. Start the engine.
2. Place the ground speed lever (GSL) (A) in NEUTRAL and turn the steering wheel until it locks.
3. Engage header drive switch (B).
4. Stand up from the operator's seat. The header should shut off after approximately five seconds. If the header does not shut off, the Operator Presence System requires adjustment. Refer to the technical manual.

NOTE:

To restart the header, move the header drive switch (B) to the OFF position and then back to the ON position.

5. **M155 and M205 Only:** Start the engine and position the GSL (A) in NEUTRAL and in N-DETENT.
 - a. Swivel the operator's station but do **NOT** lock into position.
 - b. Move the GSL out of N-DETENT. The engine should shutdown and the lower display will flash "LOCK SEAT BASE → CENTER STEERING WHEEL → NOT IN NEUTRAL".
 - c. Swivel and lock the operator's station and the display should return to normal.
 - d. If the engine does not shut down, the seat position switches require adjustment. Refer to the technical manual.
6. Start the engine and drive the windrower at a speed **less than** 5 mph (8 km/h):
 - a. Stand up from the operator's seat.
 - b. Ensure the CDM flashes "NO OPERATOR" on the upper line and "ENGINE SHUTDOWN 5...4...3...2...1...0" on the lower line accompanied by a steady tone. When the CDM display reaches "0", the engine will shut down.
 - c. If the engine does not shut down, the Operator Presence System requires adjustment. Refer to the technical manual.
7. Start the engine and drive the windrower at a speed **more than** 5 mph (8 km/h):
 - a. Stand up from the operator's seat.
 - b. The CDM beeps once and displays "NO OPERATOR" on the lower line.
 - c. If the CDM does not beep and display message, the Operator Presence System requires adjustment. Refer to the technical manual.



Figure 5.35: M155/M205 Operator Console

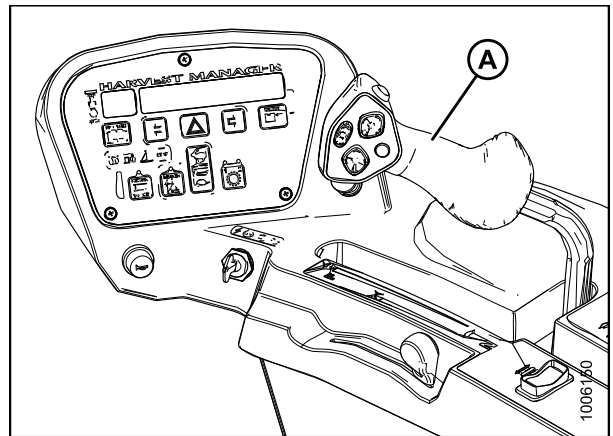


Figure 5.36: M105 Operator Console

5.11.9 Checking Exterior Lights

The procedure for checking the exterior lights differs depending on the windrower model. Refer to [Checking Exterior Lights on an M155/M205, page 339](#) or [Checking Exterior Lights on an M105, page 342](#).

PERFORMING PREDELIVERY CHECKS

Checking Exterior Lights on an M155/M205

1. Rotate the operator's seat to cab-forward mode.
2. Turn field light switch (A) to the ON position and ensure the front field lights (B) and rear swath lights (C) are functioning.

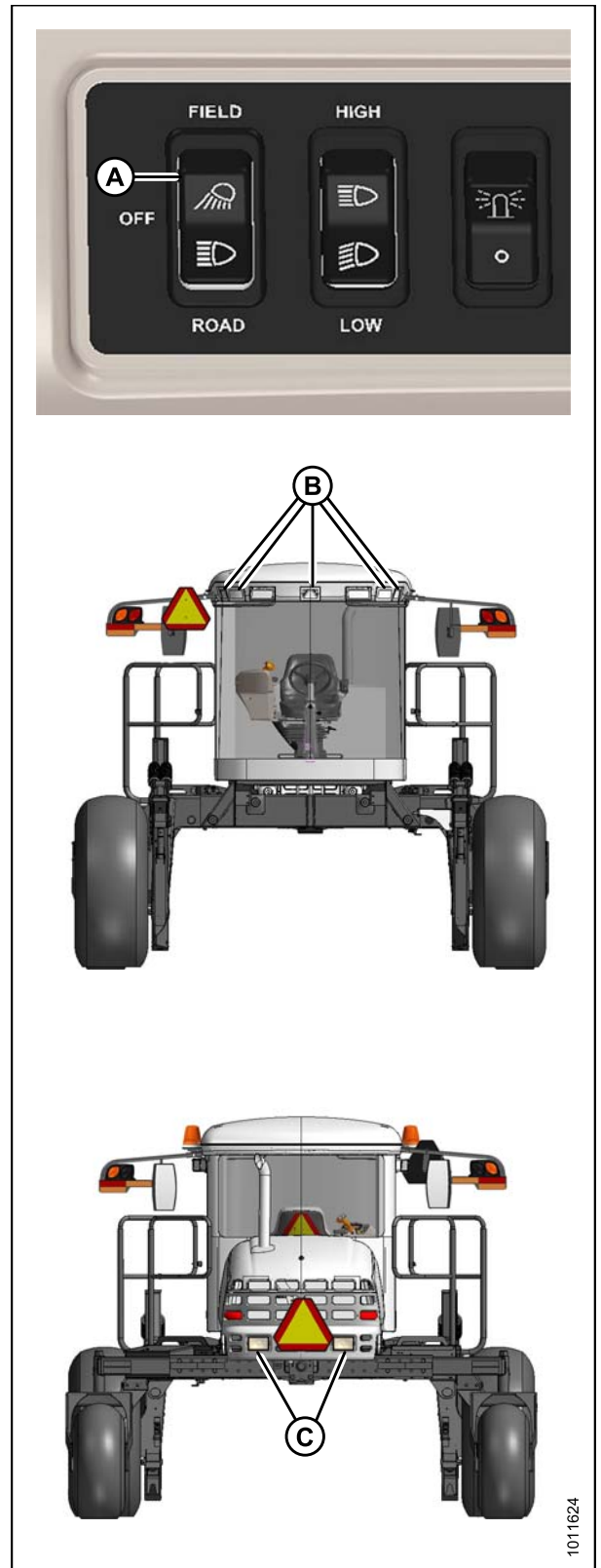


Figure 5.37: M155/M205 Exterior Lights – Cab Forward

PERFORMING PREDELIVERY CHECKS

3. Rotate the operator's seat to cab-forward mode.
4. Turn the road light switch (A) to the ON position and ensure the front road lights (B) and rear red tail/brake lights (C) (if equipped) are functioning.
5. Activate the high/low switch (D) and check lights.
6. Activate the amber turn signal/hazard warning lights (E) using switches on the cab display module (CDM) and check lights.
7. Turn off lights.

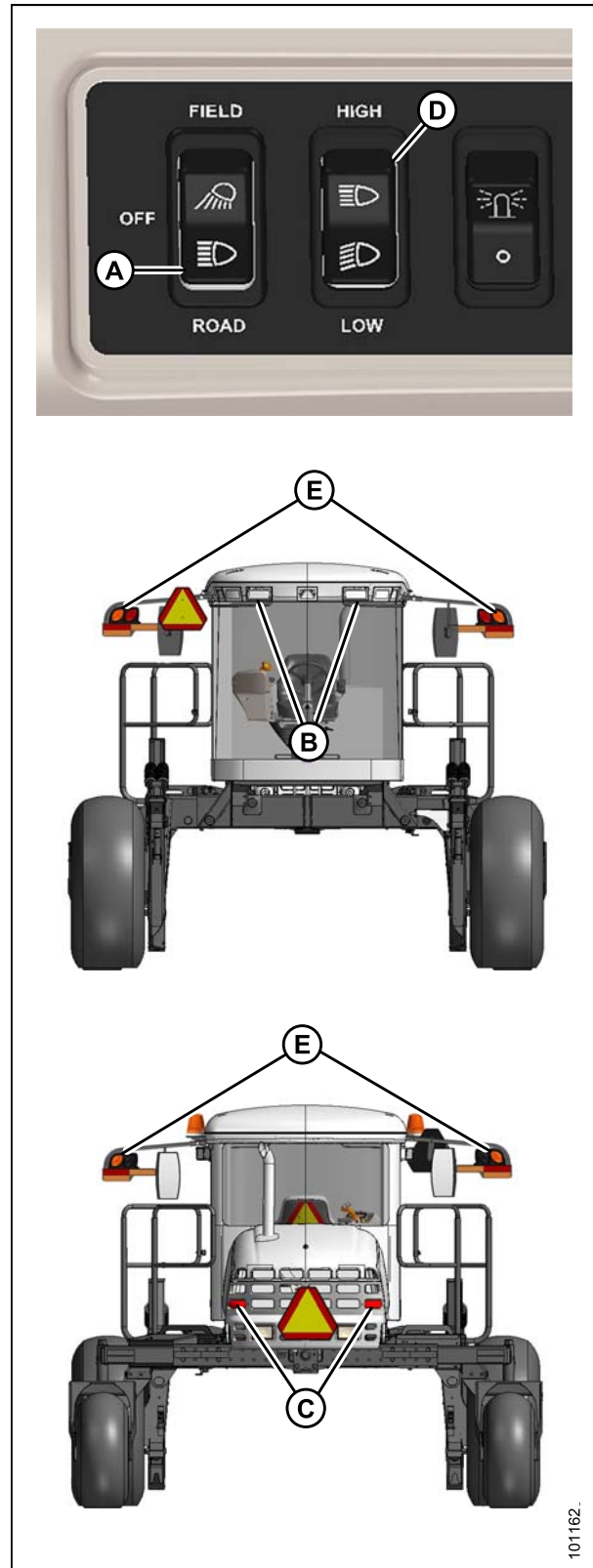


Figure 5.38: M155/M205 Exterior Lights – Cab Forward

PERFORMING PREDELIVERY CHECKS

- Turn beacon switch (A) to the ON position and ensure the amber beacons (B) are functioning.

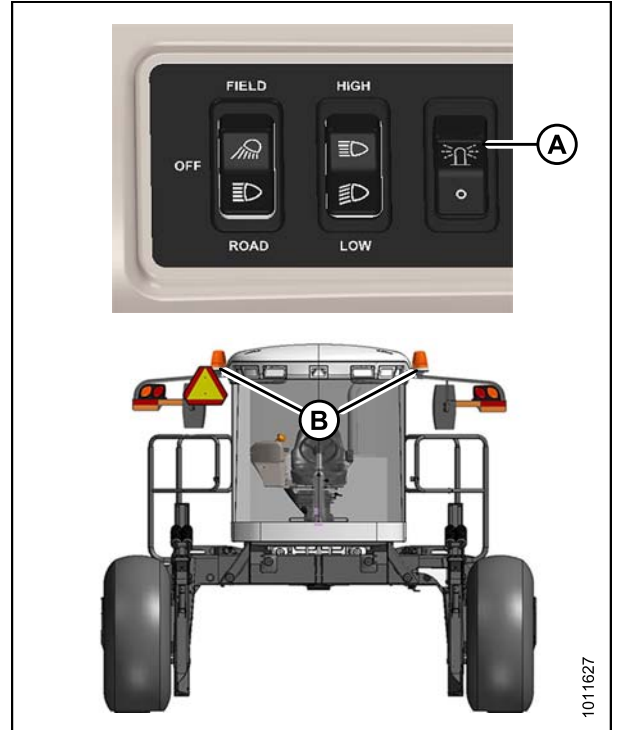


Figure 5.39: M155/M205 Exterior Lights – Beacons

PERFORMING PREDELIVERY CHECKS

Checking Exterior Lights on an M105

1. Turn field light switch (A) to the ON position and ensure the field lights (B) and rear swath lights (C) are functioning.

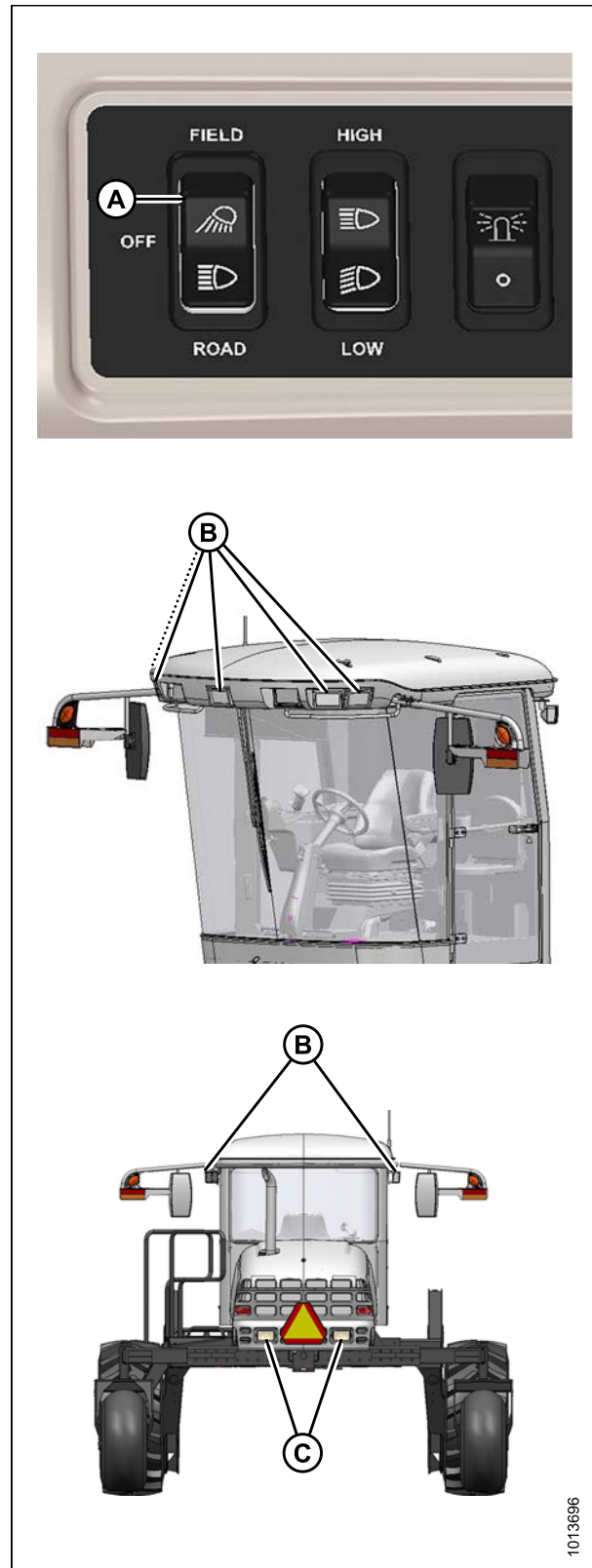


Figure 5.40: M105 Exterior Lights

PERFORMING PREDELIVERY CHECKS

2. Turn the road light switch (A) to the ON position and ensure the front road lights (B) and rear red tail/brake lights (C) (if equipped) are functioning.
3. Activate the high/low switch (D) and check lights.
4. Activate the amber turn signal/hazard warning lights (E) using switches on the cab display module (CDM) and check lights.
5. Turn off lights.

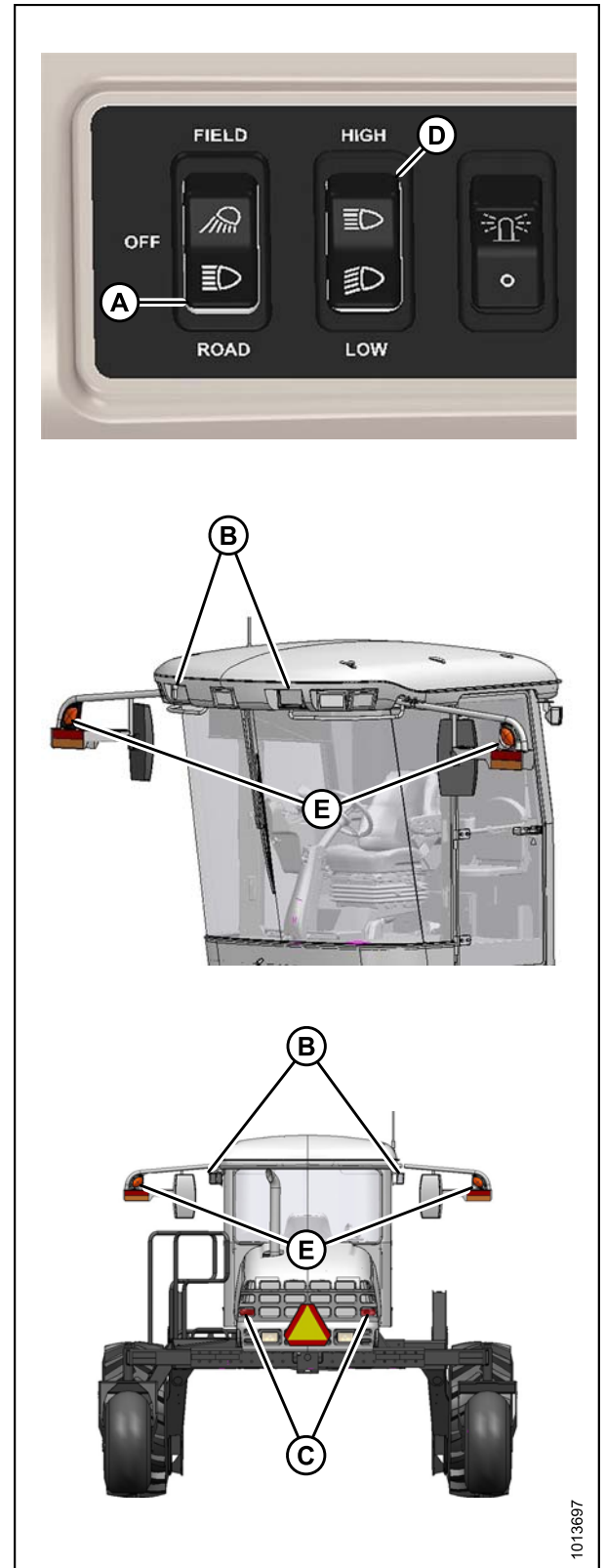


Figure 5.41: M105 Exterior Lights

PERFORMING PREDELIVERY CHECKS

6. Turn beacon switch (A) to the ON position and ensure the amber beacons (B) are functioning.

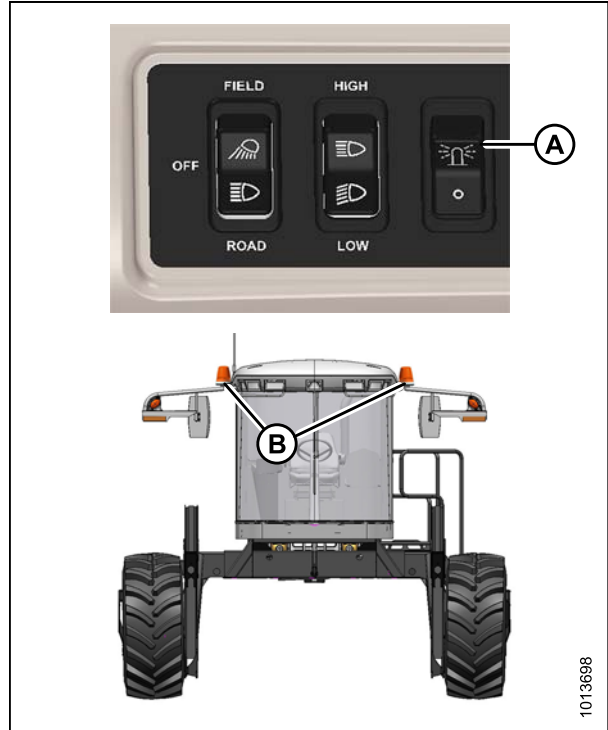


Figure 5.42: M105 Exterior Lights

PERFORMING PREDELIVERY CHECKS

5.11.10 Checking Horn

1. Push horn button (A) and listen for horn.

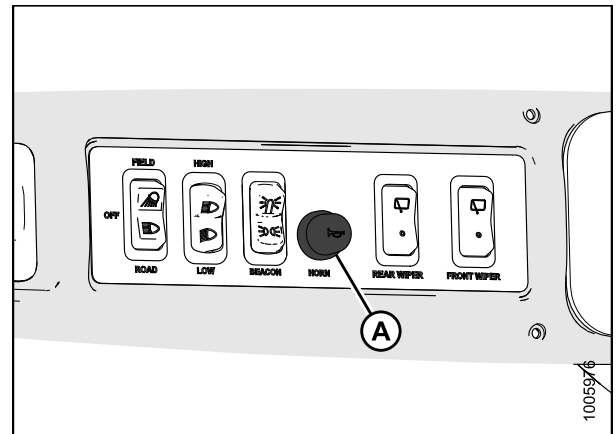


Figure 5.43: M155/M205 Horn Button

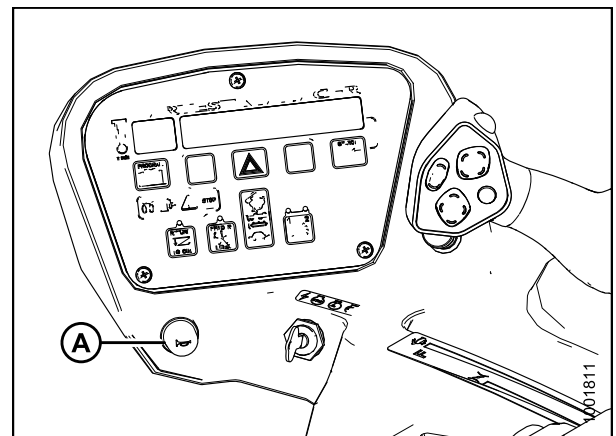


Figure 5.44: M105 Horn Button

5.11.11 Checking Interior Lights

1. Switch road and field lights ON and OFF using switch (A).

NOTE:

Ambient light in roof liner (B) and interior light (C) work only when road or field lights (A) are switched ON.

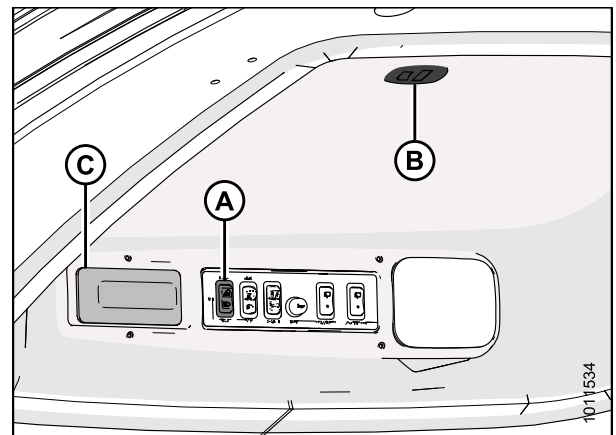


Figure 5.45: Interior Lights

5.11.12 Checking Air Conditioning (A/C) and Heater



Figure 5.46: M155/M205 A/C and Heater Controls

- **Blower switch (A):** Controls blower speed. Switch settings are OFF, LO, MEDIUM, and HI.
- **Air conditioning switch (B):** Controls A/C system. When set to ON, A/C operates if blower switch (A) is switched ON. When set to OFF, the A/C system does not operate.
- **Outside air switch (C):** Controls air source. When set to FRESH AIR, booster fan starts and draws filtered outside air into the cab. When set to RECIRCULATED, booster fan stops and air inside cab is recirculated.
- **Temperature control (D):** Controls cab temperature. Turn knob clockwise to increase temperature, and turn knob counterclockwise to decrease temperature.

IMPORTANT:

To distribute oil throughout the A/C system, perform the following steps after starting a machine that has been stored for more than one week:

1. Start engine and turn blower switch (A) to the first position, turn temperature control (D) to maximum heating, and turn A/C switch (B) to OFF.
2. Turn A/C switch (B) from OFF to ON position for one second, then back to OFF for 5 to 10 seconds. Repeat this step ten times.

PERFORMING PREDELIVERY CHECKS



Figure 5.47: M105 A/C and Heater Controls

- **Temperature control (A):** Controls cab temperature. Turn knob clockwise to increase temperature, and turn knob counterclockwise to decrease temperature.
- **Blower switch (B):** Controls blower speed. Switch settings are OFF, LO, MEDIUM, and HI.
- **Air conditioning switch (C):** Controls A/C system. When set to ON, A/C operates if blower switch (B) is switched ON. When set to OFF, the A/C system does not operate.

IMPORTANT:

To distribute oil throughout the A/C system, perform the following steps after starting a machine that has been stored for more than one week:

3. Start engine and turn blower switch (B) to the first position, turn temperature control (A) to maximum heating, and turn A/C switch (C) to OFF position.
4. Turn A/C switch (C) from OFF to ON position for one second, then back to OFF for 5 to 10 seconds. Repeat this step ten times.

5.11.13 Setting and Adjusting Knife Speed

The knife speed is set by making manual adjustments to the knife drive pump and has been pre-set at the lowest knife rpm. For optimum performance, adjust the knife speed according to the type and size of header you are installing. Refer to Table [5.5 Knife Speed Setting, page 348](#).

NOTE:

Set the knife speed within the ranges specified for each header.

PERFORMING PREDELIVERY CHECKS

Table 5.5 Knife Speed Setting

Header Description		Knife Speed			
Type	Size (ft.)	Minimum		Maximum	
		rpm ⁸	spm ⁹	rpm ⁸	spm ⁹
Draper (Double Knife)	15	750	1500	950	1900
	20 & 25	700	1400	850	1700
	30	600	1200	700	1600
	35	600	1200	650	1400
Draper (Single Knife)	20 & 25	600	1200	750	1500
	30	600	1200	700	1400
	35	550	1100	650	1300
Grass Seed	All	700	1400	975	1950
Auger A40D	All	700	1400	975	1950
Auger A30D	All	775	1550	925	1850
Auger A30S	All	625	1250	775	1550

Setting Knife Speed

CAUTION

Check to be sure all bystanders have cleared the area.

1. Start the engine. Refer to [3.15 Starting Engine, page 80](#).
2. Move the throttle to adjust the engine speed to IDLE.
3. Set the Intermediate Speed Control (ISC) to OFF. Refer to [4 Cab Display Module \(CDM\), page 147](#).
4. Engage the header drive switch (A), and pull up on the black ring at the base of the switch.

NOTE:

A slight delay between activating the header drive switch and achieving operating speed is normal.

5. Run the engine at maximum rpm.

NOTE:

To disengage the header drive, push down the header drive switch (A).

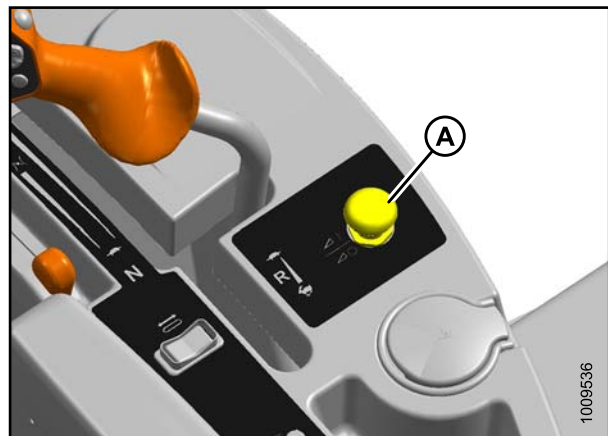


Figure 5.48: Header Drive Switch

8. Speed of knife drive box pulley
9. Strokes per minute of knife (rpm x 2)

PERFORMING PREDELIVERY CHECKS

- Press the selector button (A) on the ground speed lever (GSL) until the CDM (B) displays the knife speed in strokes per minute (spm). This indicates that the optional sensors expansion module (MD #B4666) is installed.

NOTE:

If the knife speed is not displayed, the module is **NOT** installed. Refer to Step 6., page 350.

- Compare the reading to Table .
- Adjust the knife speed if required. Refer to [Adjusting Knife Speed, page 349](#).

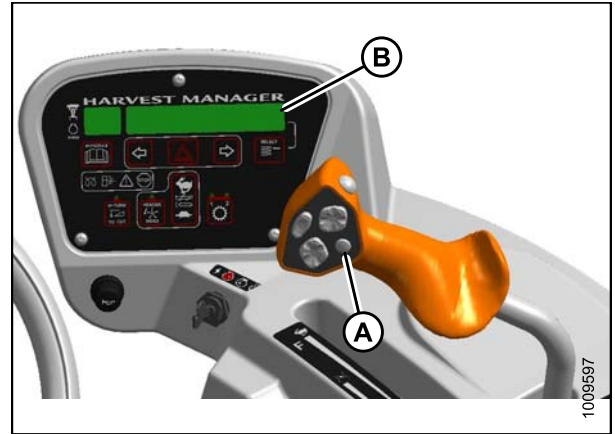


Figure 5.49: M105 Operator Console

Adjusting Knife Speed

DANGER

To avoid bodily injury or death from unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

For windrowers equipped with the optional sensors expansion module (MD #B4666):

- Shut down the engine and open the engine compartment hood.
- Loosen jam nut (A).

NOTE:

Remove the protective cover from adjuster screw (B) if necessary.

- Turn adjuster screw (B) clockwise to decrease knife speed or counterclockwise to increase knife speed.

NOTE:

One turn of adjuster screw (B) will change the knife speed by approximately 116 strokes per minute (spm) or the knife drive box pulley speed by 58 revolutions per minute (rpm).

- Tighten jam nut (A).
- Close the engine compartment hood, start the engine, and recheck the knife speed.

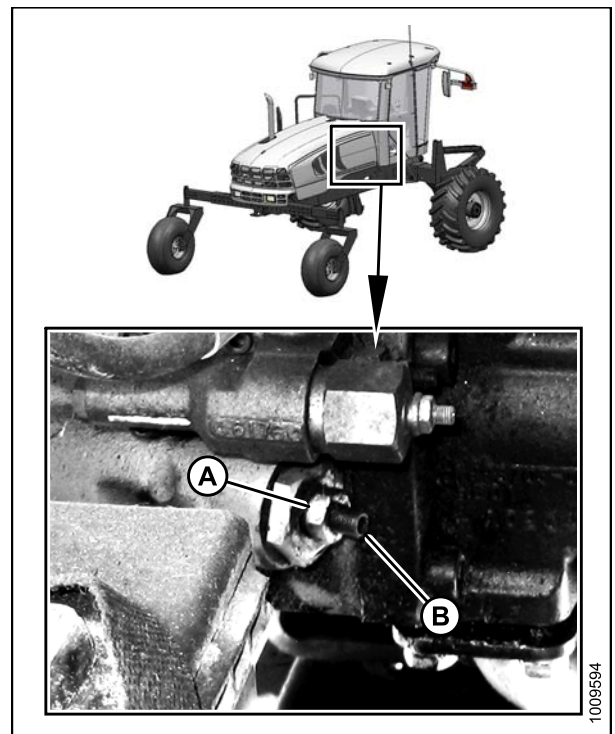


Figure 5.50: Knife Speed Adjuster Screw

PERFORMING PREDELIVERY CHECKS

For windrowers NOT equipped with the optional sensors expansion module (MD #B4666):

6. Check the knife drive box pulley (A) speed with a hand-held tachometer.
7. Multiply the rpm reading by two to obtain the knife speed in strokes per minute (SPM).
8. Compare the reading to Table .
9. Adjust the knife speed if required. Refer to Step 1., [page 349](#) to Step 5., [page 349](#).



Figure 5.51: Knife Drive Box Pulley

PERFORMING PREDELIVERY CHECKS

5.12 Checking Manuals

Manuals are stored in the manual storage case (A) behind the operator's seat.

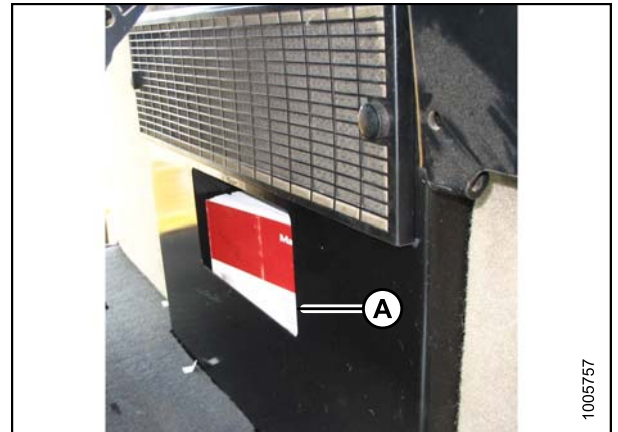


Figure 5.52: M105 Manual Storage Case

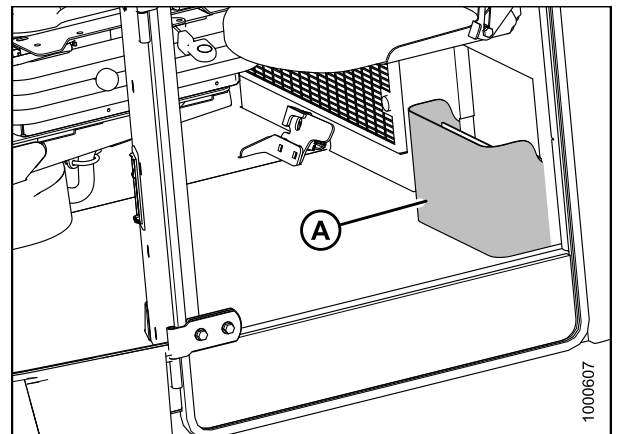


Figure 5.53: M155/M205 Manual Storage Case

1. Ensure the following manuals are included with the windrower:
 - Operator's Manual
 - Parts Catalog
 - Quick Card
 - Engine Manual

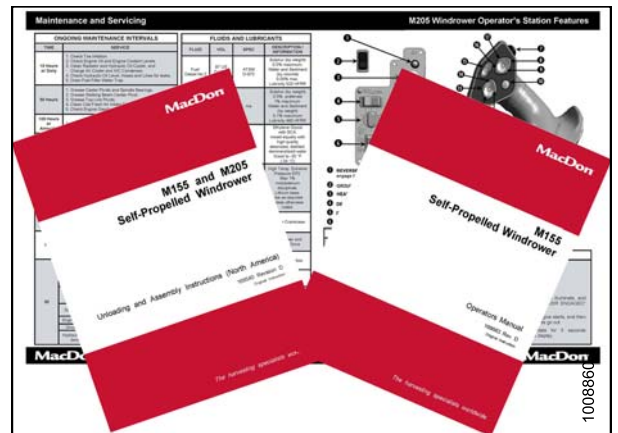


Figure 5.54: Manuals and Quick Card

5.13 Performing Final Steps

1. Remove plastic covering from cab display module (CDM) and seats once all predelivery checks are complete.
2. Locate the bag inside the cab containing the Trimble Display Mount kit and label (GPS completion kit). Install kit in accordance with the included kit instructions or place kit in toolbox for safekeeping.
3. Remove decal (MD #166705) from windshield only **after** machine is delivered to the end user.

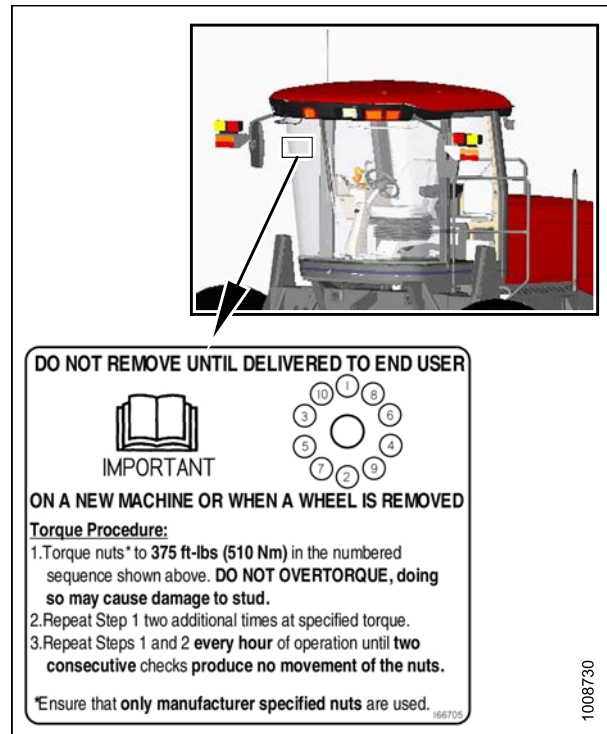


Figure 5.55: Windshield Decal (MD #166705)

6 Reference

6.1 Torque Specifications

The following tables provide the correct torque values for various bolts, cap screws, and hydraulic fittings.

- Tighten all bolts to the torque values specified in the charts (unless otherwise noted throughout this manual).
- Replace hardware with the same strength and grade of bolt.
- Use the torque value tables as a guide and periodically check tightness of bolts.
- Understand torque categories for bolts and cap screws by using their identifying head markings.

6.1.1 SAE Bolt Torque Specifications

Torque values shown in the following tables are valid for non-greased, or non-oiled threads and heads; therefore, do **NOT** grease or oil bolts or cap screws unless otherwise specified in this manual.

Table 6.1 SAE Grade 5 Bolt and Grade 5 Free Spinning Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
1/4-20	*106	*117	11.9	13.2
5/16-18	*218	*241	24.6	27.1
3/8-16	32	36	44	48
7/16-14	52	57	70	77
1/2-13	79	87	106	118
9/16-12	114	126	153	170
5/8-11	157	173	212	234
3/4-10	281	311	380	420
7/8-9	449	496	606	669
1-8	611	676	825	912

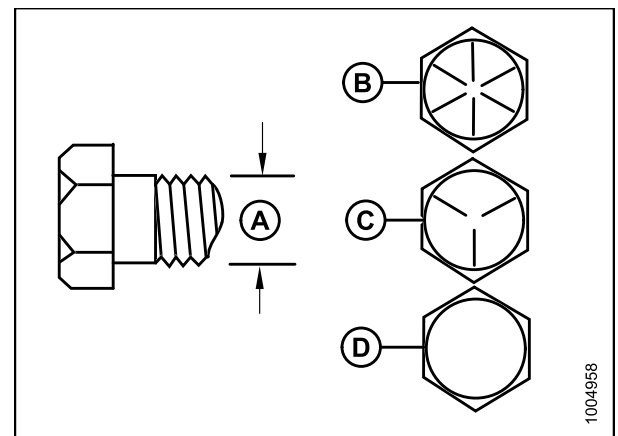


Figure 6.1: Bolt Grades

A - Nominal Size
C - SAE-5

B - SAE-8
D - SAE-2

REFERENCE

Table 6.2 SAE Grade 5 Bolt and Grade F Distorted Thread Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
1/4-20	*72	*80	8.1	9
5/16-18	*149	*164	16.7	18.5
3/8-16	22	24	30	33
7/16-14	35	39	48	53
1/2-13	54	59	73	80
9/16-12	77	86	105	116
5/8-11	107	118	144	160
3/4-10	192	212	259	286
7/8-9	306	338	413	456
1-8	459	507	619	684

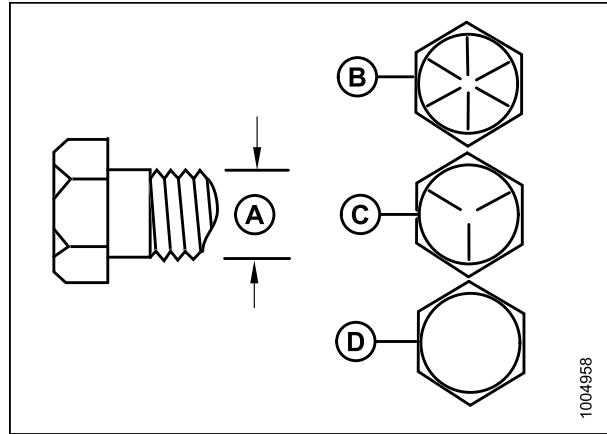


Figure 6.2: Bolt Grades

A - Nominal Size
 B - SAE-8
 C - SAE-5
 D - SAE-2

Table 6.3 SAE Grade 8 Bolt and Grade G Distorted Thread Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
1/4-20	*150	*165	16.8	18.6
5/16-18	18	19	24	26
3/8-16	31	34	42	46
7/16-14	50	55	67	74
1/2-13	76	84	102	113
9/16-12	109	121	148	163
5/8-11	151	167	204	225
3/4-10	268	296	362	400
7/8-9	432	477	583	644
1-8	647	716	874	966

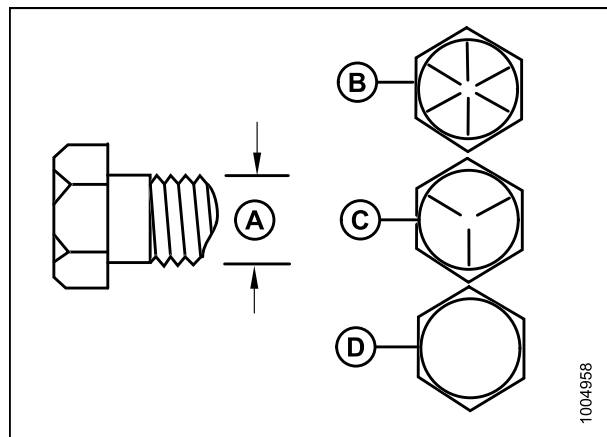


Figure 6.3: Bolt Grades

A - Nominal Size
 B - SAE-8
 C - SAE-5
 D - SAE-2

REFERENCE

Table 6.4 SAE Grade 8 Bolt and Grade 8 Free Spinning Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
1/4-20	*150	*165	16.8	18.6
5/16-18	26	28	35	38
3/8-16	46	50	61	68
7/16-14	73	81	98	109
1/2-13	111	123	150	166
9/16-12	160	177	217	239
5/8-11	221	345	299	330
3/4-10	393	435	531	587
7/8-9	633	700	855	945
1-8	863	954	1165	1288

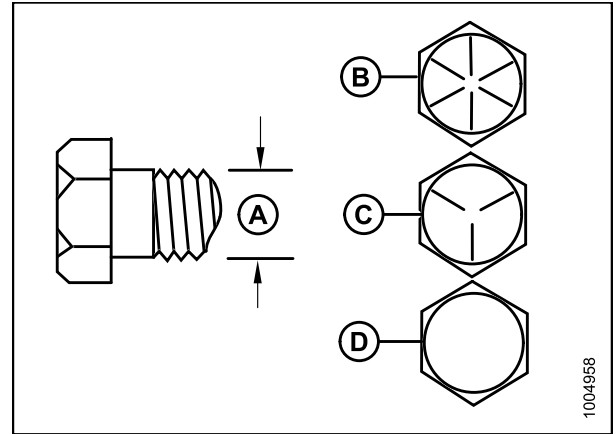


Figure 6.4: Bolt Grades

A - Nominal Size
C - SAE-5

B - SAE-8
D - SAE-2

6.1.2 Metric Bolt Specifications

Table 6.5 Metric Class 8.8 Bolts and Class 9 Free Spinning Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
3-0.5	*13	*14	1.4	1.6
3.5-0.6	*20	*22	2.2	2.5
4-0.7	*29	*32	3.3	3.7
5-0.8	*59	*66	6.7	7.4
6-1.0	*101	*112	11.4	12.6
8-1.25	20	23	28	30
10-1.5	40	45	55	60
12-1.75	70	78	95	105
14-2.0	113	124	152	168
16-2.0	175	193	236	261
20-2.5	341	377	460	509
24-3.0	589	651	796	879

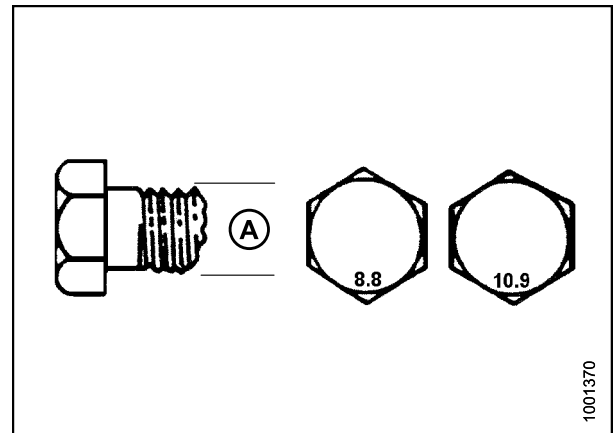


Figure 6.5: Bolt Grades

REFERENCE

Table 6.6 Metric Class 8.8 Bolts and Class 9 Distorted Thread Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
3-0.5	*9	*10	1	1.1
3.5-0.6	*14	*15	1.5	1.7
4-0.7	*20	*22	2.3	2.5
5-0.8	*40	*45	4.5	5
6-1.0	*69	*76	7.7	8.6
8-1.25	*167	*185	18.8	20.8
10-1.5	28	30	37	41
12-1.75	48	53	65	72
14-2.0	77	85	104	115
16-2.0	119	132	161	178
20-2.5	233	257	314	347
24-3.0	402	444	543	600

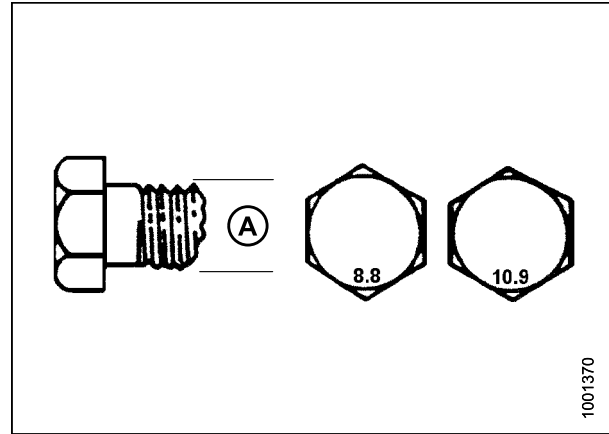


Figure 6.6: Bolt Grades

Table 6.7 Metric Class 10.9 Bolts and Class 10 Free Spinning Nut

Nominal Size (A)	Torque (ft-lbf) (*in-lbf)		Torque (N-m)	
	Min.	Max.	Min.	Max.
3-0.5	*18	*19	1.8	2
3.5-0.6	*27	*30	2.8	3.1
4-0.7	*41	*45	4.2	4.6
5-0.8	*82	*91	8.4	9.3
6-1.0	*140	*154	14.3	15.8
8-1.25	28	31	38	42
10-1.5	56	62	75	83
12-1.75	97	108	132	145
14-2.0	156	172	210	232
16-2.0	242	267	326	360
20-2.5	472	521	637	704
24-3.0	815	901	1101	1217

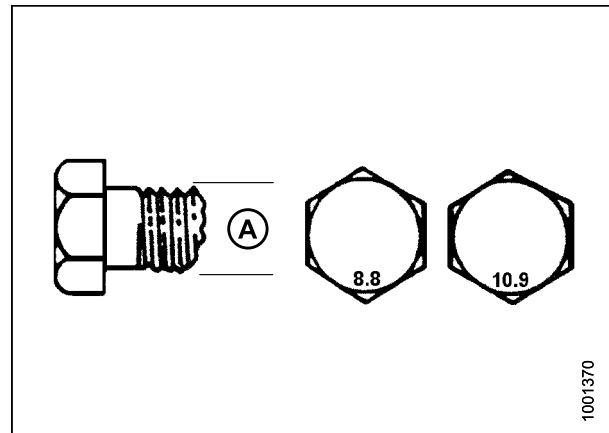


Figure 6.7: Bolt Grades

REFERENCE

Table 6.8 Metric Class 10.9 Bolts and Class 10 Distorted Thread Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
3-0.5	*12	*13	1.3	1.5
3.5-0.6	*19	*21	2.1	2.3
4-0.7	*28	*31	3.1	3.4
5-0.8	*56	*62	6.3	7
6-1.0	*95	*105	10.7	11.8
8-1.25	19	21	26	29
10-1.5	38	42	51	57
12-1.75	66	73	90	99
14-2.0	106	117	143	158
16-2.0	165	182	222	246
20-2.5	322	356	434	480
24-3.0	556	614	750	829

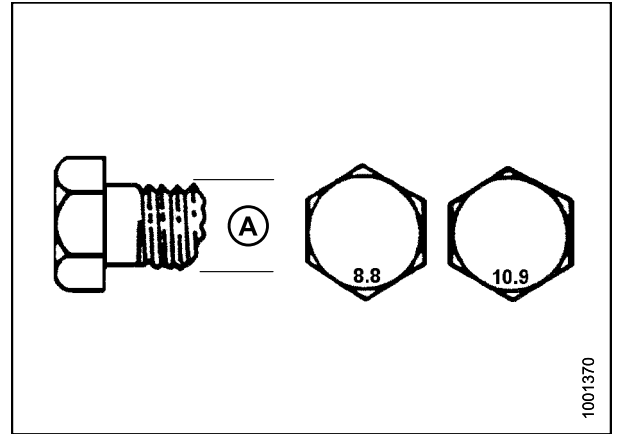


Figure 6.8: Bolt Grades

6.1.3 Metric Bolt Specifications Bolting into Cast Aluminum

Table 6.9 Metric Bolt Bolting into Cast Aluminum

Nominal Size (A)	Bolt Torque			
	8.8 (Cast Aluminum)		10.9 (Cast Aluminum)	
	ft-lbf	N-m	ft-lbf	N-m
M3	–	–	1	–
M4	–	–	2.6	4
M5	–	–	5.5	8
M6	6	9	9	12
M8	14	20	20	28
M10	28	40	40	55
M12	52	70	73	100
M14	–	–	–	–
M16	–	–	–	–

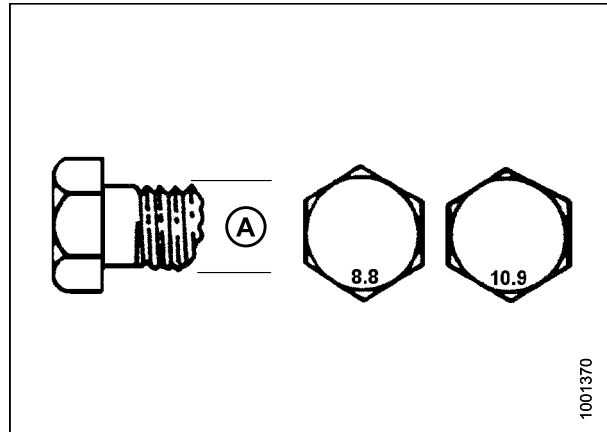


Figure 6.9: Bolt Grades

6.1.4 Flare-Type Hydraulic Fittings

1. Check flare (A) and flare seat (B) for defects that might cause leakage.
2. Align tube (C) with fitting (D) and thread nut (E) onto fitting without lubrication until contact has been made between the flared surfaces.
3. Torque the fitting nut (E) to the specified number of flats from finger tight (FFFT) or to a given torque value in [Table 6.10 Flare-Type Hydraulic Tube Fittings, page 359](#).
4. Use two wrenches to prevent fitting (D) from rotating. Place one wrench on the fitting body (D) and tighten nut (E) with the other wrench to the torque shown.
5. Assess the final condition of the connection.

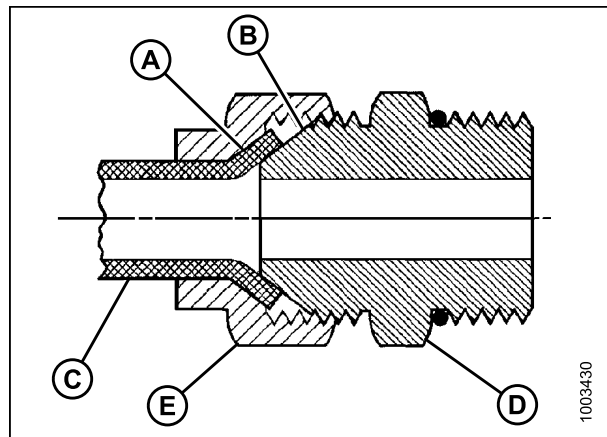


Figure 6.10: Hydraulic Fitting

REFERENCE

Table 6.10 Flare-Type Hydraulic Tube Fittings

SAE Dash Size	Thread Size (in.)	Torque Value ¹⁰		Flats from Finger Tight (FFFT)	
		ft·lbf	N·m	Tube	Swivel Nut or Hose
-2	5/16–24	3–4	4–5	—	—
-3	3/8–24	5–6	7–8	—	—
-4	7/16–20	13–14	18–19	2-1/2	2
-5	1/2–20	14–15	19–21	2	2
-6	9/16–18	22–24	30–33	2	1-1/2
-8	3/4–16	42–46	57–63	2	1-1/2
-10	7/8–14	60–66	81–89	1-1/2	1-1/2
-12	1-1/16–12	83–91	113–124	1-1/2	1-1/4
-14	1-3/16–12	100–110	136–149	1-1/2	1-1/4
-16	1-5/16–12	118–130	160–176	1-1/2	1
-20	1-5/8–12	168–184	228–250	1	1
-24	1-7/8–12	195–215	264–291	1	1
-32	2-1/2–12	265–291	359–395	1	1
-40	3–12	—	—	1	1

10. Torque values shown are based on lubricated connections as in reassembly.

REFERENCE

6.1.5 O-Ring Boss (ORB) Hydraulic Fittings (Adjustable)

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Back off the lock nut (C) as far as possible. Ensure that washer (D) is loose and is pushed toward the lock nut (C) as far as possible.
3. Check that O-ring (A) is **NOT** on the threads and adjust if necessary.
4. Apply hydraulic system oil to the O-ring (A).

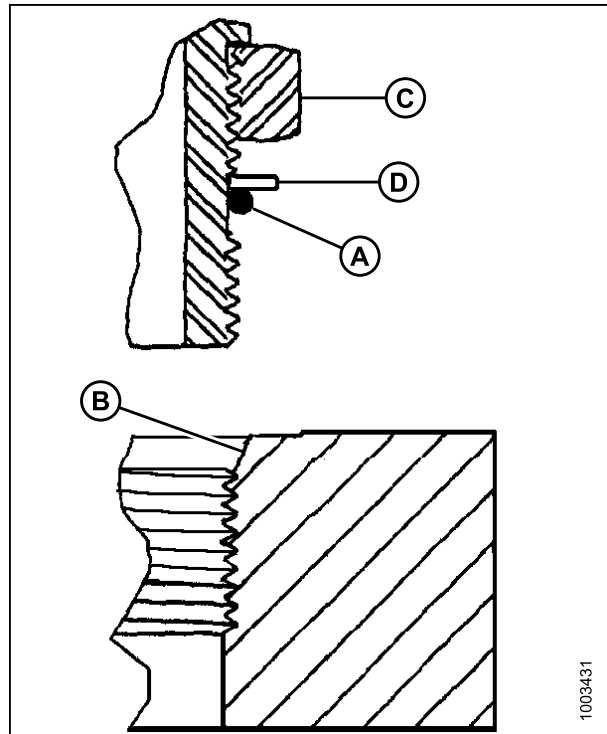


Figure 6.11: Hydraulic Fitting

5. Install fitting (B) into port until back up washer (D) and O-ring (A) contact the part face (E).
6. Position angle fittings by unscrewing no more than one turn.
7. Turn lock nut (C) down to washer (D) and tighten to torque shown. Use two wrenches, one on fitting (B) and the other on lock nut (C).
8. Check the final condition of the fitting.

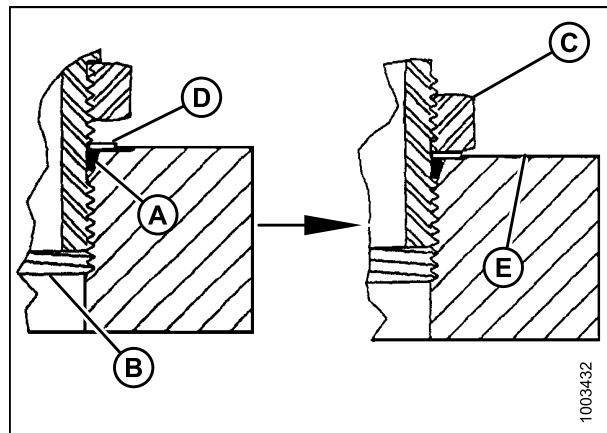


Figure 6.12: Hydraulic Fitting

REFERENCE

Table 6.11 O-Ring Boss (ORB) Hydraulic Fittings (Adjustable)

SAE Dash Size	Thread Size (in.)	Torque Value ¹¹	
		ft·lbf (*in·lbf)	N·m
-2	5/16–24	*53–62	6–7
-3	3/8–24	*106–115	12–13
-4	7/16–20	14–15	19–21
-5	1/2–20	15–24	21–33
-6	9/16–18	19–21	26–29
-8	3/4–16	34–37	46–50
-10	7/8–14	55–60	75–82
-12	1-1/16–12	88–97	120–132
-14	1-3/8–12	113–124	153–168
-16	1-5/16–12	130–142	176–193
-20	1-5/8–12	163–179	221–243
-24	1-7/8–12	199–220	270–298
-32	2-1/2–12	245–269	332–365

11. Torque values shown are based on lubricated connections as in reassembly.

REFERENCE

6.1.6 O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable)

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Check that O-ring (A) is **NOT** on the threads and adjust if necessary.
3. Apply hydraulic system oil to the O-ring.
4. Install fitting (C) into port until fitting is hand tight.
5. Torque fitting (C) according to the values in Table 6.12 *O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable)*, page 362.
6. Check the final condition of the fitting.

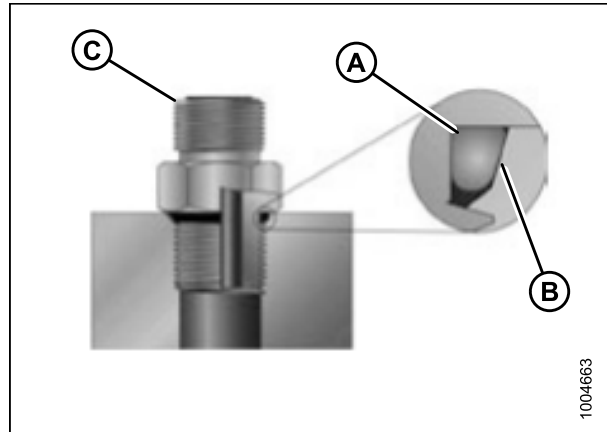


Figure 6.13: Hydraulic Fitting

Table 6.12 O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable)

SAE Dash Size	Thread Size (in.)	Torque Value ¹²	
		ft·lbf (*in·lbf)	N·m
-2	5/16-24	*53-62	6-7
-3	3/8-24	*106-115	12-13
-4	7/16-20	14-15	19-21
-5	1/2-20	15-24	21-33
-6	9/16-18	19-21	26-29
-8	3/4-16	34-37	46-50
-10	7/8-14	55-60	75-82
-12	1-1/16-12	88-97	120-132
-14	1-3/8-12	113-124	153-168
-16	1-5/16-12	130-142	176-193
-20	1-5/8-12	163-179	221-243
-24	1-7/8-12	199-220	270-298
-32	2-1/2-12	245-269	332-365

12. Torque values shown are based on lubricated connections as in reassembly.

REFERENCE

6.1.7 O-Ring Face Seal (ORFS) Hydraulic Fittings

1. Check components to ensure that the sealing surfaces and fitting threads are free of burrs, nicks, scratches, or any foreign material.



Figure 6.14: Hydraulic Fitting

2. Apply hydraulic system oil to the O-ring (B).
3. Align the tube or hose assembly so that the flat face of the sleeve (A) or (C) comes in full contact with O-ring (B).
4. Thread tube or hose nut (D) until hand-tight. The nut should turn freely until it is bottomed out.
5. Torque fittings according to the values in Table [6.13 O-Ring Face Seal \(ORFS\) Hydraulic Fittings, page 364](#).

NOTE:

If applicable, hold the hex on the fitting body (E) to prevent rotation of fitting body and hose when tightening the fitting nut (D).

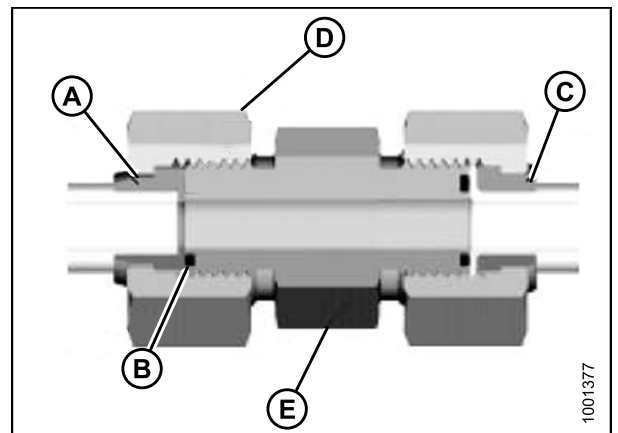


Figure 6.15: Hydraulic Fitting

6. Use three wrenches when assembling unions or joining two hoses together.
7. Check the final condition of the fitting.

REFERENCE

Table 6.13 O-Ring Face Seal (ORFS) Hydraulic Fittings

SAE Dash Size	Thread Size (in.)	Tube O.D. (in.)	Torque Value ¹³	
			ft-lbf	N·m
-3	Note ¹⁴	3/16	–	–
-4	9/16	1/4	18–21	25–28
-5	Note ¹⁴	5/16	–	–
-6	11/16	3/8	29–32	40–44
-8	13/16	1/2	41–45	55–61
-10	1	5/8	59–65	80–88
-12	1-3/16	3/4	85–94	115–127
-14	Note ¹⁴	7/8	–	–
-16	1-7/16	1	111–122	150–165
-20	1-11/16	1-1/4	151–167	205–226
-24	1–2	1-1/2	232–256	315–347
-32	2-1/2	2	376–414	510–561

13. Torque values and angles shown are based on lubricated connection as in reassembly.

14. O-ring face seal type end not defined for this tube size.

REFERENCE

6.2 Conversion Chart

Table 6.14 Conversion Chart

Quantity	Inch-Pound Units		Factor	SI Units (Metric)	
	Unit Name	Abbreviation		Unit Name	Abbreviation
Area	Acres	acres	$\times 0.4047 =$	Hectares	ha
Flow	US gallons per minute	gpm	$\times 3.7854 =$	Liters per minute	L/min
Force	Pounds force	lbf	$\times 4.4482 =$	Newtons	N
Length	Inch	in.	$\times 25.4 =$	Millimeters	mm
	Foot	ft.	$\times 0.305 =$	Meters	m
Power	Horsepower	hp	$\times 0.7457 =$	Kilowatts	kW
Pressure	Pounds per square inch	psi	$\times 6.8948 =$	Kilopascals	kPa
			$\times .00689 =$	Megapascals	MPa
			$\div 14.5038 =$	Bar (Non-SI)	bar
Torque	Pound feet or foot pounds	ft-lbf	$\times 1.3558 =$	Newton meters	N·m
	Pound inches or inch pounds	in-lbf	$\times 0.1129 =$	Newton meters	N·m
Temperature	Degrees Fahrenheit	°F	$(^{\circ}\text{F}-32) \times 0.56 =$	Celsius	°C
Velocity	Feet per minute	ft/min	$\times 0.3048 =$	Meters per minute	m/min
	Feet per second	ft/s	$\times 0.3048 =$	Meters per second	m/s
	Miles per hour	mph	$\times 1.6063 =$	Kilometres per hour	km/h
Volume	US gallons	US gal	$\times 3.7854 =$	Liters	L
	Ounces	oz.	$\times 29.5735 =$	Milliliters	ml
	Cubic inches	in. ³	$\times 16.3871 =$	Cubic centimeters	cm ³ or cc
Weight	Pounds	lbs	$\times 0.4536 =$	Kilograms	kg

REFERENCE

6.3 Definitions

The following terms and acronyms may be used in this manual.

Term	Definition
A-Series header	MacDon auger header
API	American Petroleum Institute
ASTM	American Society of Testing and Materials
Bolt	A headed and externally threaded fastener that is designed to be paired with a nut
Cab-forward	Windrower operation with the Operator and cab facing in the direction of travel
CDM	Cab display module on a self-propelled windrower
Center-link	A hydraulic cylinder or manually adjustable turnbuckle type link between the header and the machine to which it is attached: It is used to change header angle
CGVW	Combined vehicle gross weight
D-Series header	MacDon D50, D60, and D65 rigid draper headers
DWA	Double Windrow Attachment
ECM	Engine control module
Engine-forward	Windrower operation with the Operator and engine facing in the direction of travel
Finger tight	Finger tight is a reference position where sealing surfaces or components are making contact with each other and the fitting has been tightened to a point where the fitting is no longer loose
FFFT	Flats from finger tight
GSL	Ground speed lever
GVW	Gross vehicle weight
Hard joint	A joint made with the use of a fastener where the joining materials are highly incompressible
Header	A machine that cuts and lays crop into a windrow and is attached to a self-propelled windrower
Hex key	A hex key or Allen key (also known by various other synonyms) is a tool of hexagonal cross-section used to drive bolts and screws that have a hexagonal socket in the head (internal-wrenching hexagon drive)
hp	Horsepower
ISC	Intermediate Speed Control
JIC	Joint Industrial Council: A standards body that developed the standard sizing and shape for original 37° flared fitting
Knife	A cutting device which uses a reciprocating cutter (also called a sickle)
n/a	Not applicable
Nut	An internally threaded fastener that is designed to be paired with a bolt
N-DETENT	The slot opposite the NEUTRAL position on operator's console
NPT	National Pipe Thread: A style of fitting used for low pressure port openings Threads on NPT fittings are uniquely tapered for an interference fit

REFERENCE

Term	Definition
ORB	O-ring boss: A style of fitting commonly used in port opening on manifolds, pumps, and motors
ORFS	O-ring face seal: A style of fitting commonly used for connecting hoses and tubes This style of fitting is also commonly called ORS, which stands for O-ring seal
PTO	Power take-off
rpm	Revolutions per minute
R-Series header	MacDon rotary disc header
RoHS (Reduction of Hazardous Substances)	A directive by the European Union to restrict the use of certain hazardous substances (such as hexavalent chromium used in some yellow zinc platings)
SAE	Society of Automotive Engineers
Screw	A headed and externally threaded fastener that threads into preformed threads or forms its own thread in one of the mating parts
Self-Propelled (SP) Windrower	Self-propelled machine consisting of a power unit with a header
Soft joint	A joint made with the use of a fastener where the joining materials are compressible or experience relaxation over a period of time
spm	Strokes per minute
Tractor	Agricultural type tractor
Truck	A four-wheel highway/road vehicle weighing no less than 7500 lbs (3400 kg)
Tension	Axial load placed on a bolt or screw, usually measured in pounds (lb) or Newtons (N)
TFFT	Turns from finger tight
Torque	The product of a force X lever arm length, usually measured in foot-pounds (ft-lbf) or Newton-meters (N·m)
Torque angle	A tightening procedure where the fitting is assembled to a precondition (finger tight) and then the nut is turned further a number of degrees or a number of flats to achieve its final position
Torque-tension	The relationship between the assembly torque applied to a piece of hardware and the axial load it induces in the bolt or screw
UCA	Upper cross auger
Washer	A thin cylinder with a hole or slot located in the center that is to be used as a spacer, load distribution element, or a locking mechanism
Windrower	Power unit of a self-propelled header
WCM	Windrower control module

Predelivery Checklist

Perform these checks and adjustments prior to delivery to your Customer. The completed checklist should be retained by either the Operator or the Dealer.

CAUTION

Carefully follow the instructions given. Be alert for safety related messages that bring your attention to hazards and unsafe practices.

Windrower Serial Number:

Engine Serial Number:

Table 3 M-Series Self-Propelled Windrower Predelivery Checklist – Export

✓	Item	Reference
	Check for shipping damage or missing parts. Be sure all shipping dunnage is removed.	—
	Check for loose hardware. Tighten to required torque.	6 Reference, page 353
	Check tire air pressures and adjust as required.	5.3.1 Checking Tire Pressures, page 318
	Check final drive hub lubricant level.	5.2 Checking Wheel Drive Lubricant Level, page 317
	Check engine coolant level and strength at reserve tank.	5.7 Checking Engine Coolant, page 325
	Check air cleaner and clamps.	5.4 Checking Engine Air Intake, page 320
	Check hydraulic oil level and check for leaks along lines.	5.5 Checking Hydraulic Oil, page 323
	Check fuel separator for water and foreign material. Drain and clean as necessary. Add fuel.	5.6 Checking Fuel Separator, page 324
	Check gear box lubricant level (M155 and M205).	5.8 Checking Gearbox Lubricant Level on an M155/M205, page 326
	Check tension of air conditioning compressor belt.	5.9 Checking Air Conditioning (A/C) Compressor Belt, page 327
	Check that machine is completely lubricated.	3.22 Lubricating the Windrower, page 145
	Check Neutral interlock system.	5.10 Checking Safety System, page 328
	Check engine oil pressure indicator light at cab display module (CDM).	5.11.1 Checking Engine Warning Lights, page 332
	Start engine and run to operating temperature.	5.11.3 Checking Engine Startup, page 333
	Check CDM for operation.	5.11.5 Checking Gauges and Cab Display Module (CDM) Display an M155/M205, page 334
	Check Operator's Presence System.	5.11.8 Checking Operator's Presence System, page 337
	Check alternator charge rate on CDM.	5.11.7 Checking Electrical System, page 336
	Check fuel gauge/indicator for operation.	5.11.5 Checking Gauges and Cab Display Module (CDM) Display an M155/M205, page 334

PREDELIVERY CHECKLIST

✓	Item	Reference
	Check that air conditioning is functioning properly.	5.11.12 Checking Air Conditioning (A/C) and Heater, page 346
	Check that heater is functioning properly.	5.11.12 Checking Air Conditioning (A/C) and Heater, page 346
	Check instrument console gauge lights (M155 and M205).	5.11.5 Checking Gauges and Cab Display Module (CDM) Display an M155/M205, page 334
	Check maximum (no load) engine speed at CDM.	5.11.4 Checking Engine Speed, page 334
	Check that exterior lights are functioning properly.	5.11.9 Checking Exterior Lights, page 338
	Check that interior lights are functioning properly.	5.11.11 Checking Interior Lights, page 345
	Complete the header's Predelivery Checklist.	—
	Check that manuals are in the windrower manual case.	5.12 Checking Manuals, page 351
	Check that plastic coverings from cab interior have been removed.	5.13 Performing Final Steps, page 352

Date Checked:

Checked by:

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