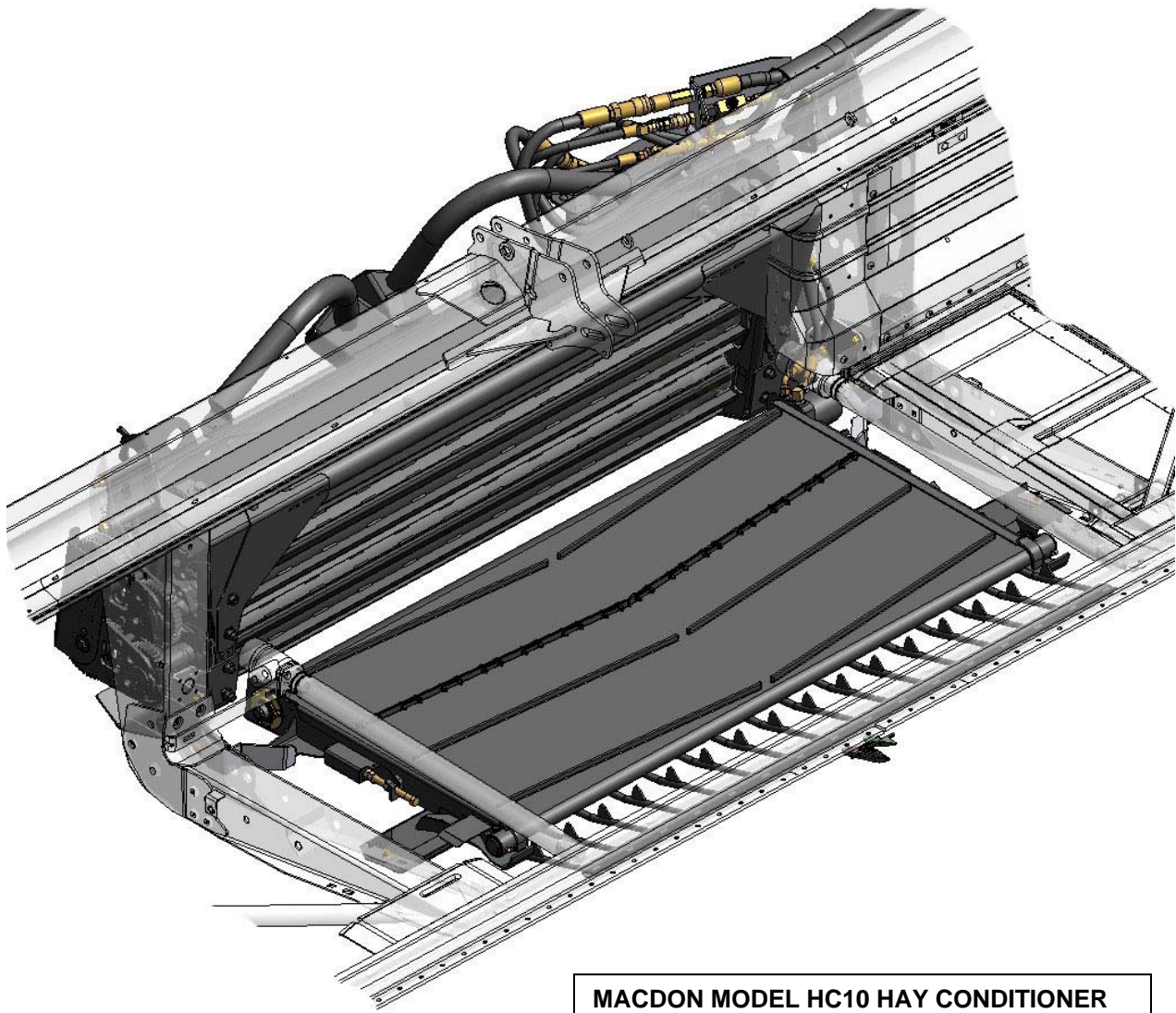


Model HC10 Hay Conditioner for D-Series Draper Headers

SET-UP INSTRUCTION / OPERATOR'S MANUAL / PARTS CATALOG

Part #169254, Revision C

\$15



MACDON MODEL HC10 HAY CONDITIONER

FOREWORD

This manual contains safety information, set-up instructions, operating and maintenance procedures, and parts information for the Model HC10 Hay Conditioner. This hay conditioner, when teamed with an M-Series self-propelled windrower power unit and a D-Series draper header, will cut and lay crop into uniform, fluffy windrows. Conditioning or crimping the cut hay allows moisture release for quicker drying and earlier processing.

CAREFULLY READ ALL THE MATERIAL PROVIDED BEFORE ATTEMPTING TO UNLOAD, ASSEMBLE, OR USE THE MACHINE.

Use this manual as your first source of information about the machine. If you follow the instructions given in this manual, your hay conditioner will work well for many years. Use this manual in conjunction with your M-Series self-propelled windrower and D-Series draper header manuals.

Use the Table of Contents to guide you to specific topics. Review the Table of Contents to familiarize yourself with how the material is organized.

Keep this manual handy for frequent reference and to pass on to new Operators or Owners. Call your Dealer if you need assistance, information, or additional copies of this manual.

RECORD THE SERIAL NUMBER OF THE CONDITIONER IN THE SPACE BELOW.

The serial number plate is located on the rear cover of the conditioner frame as shown below.

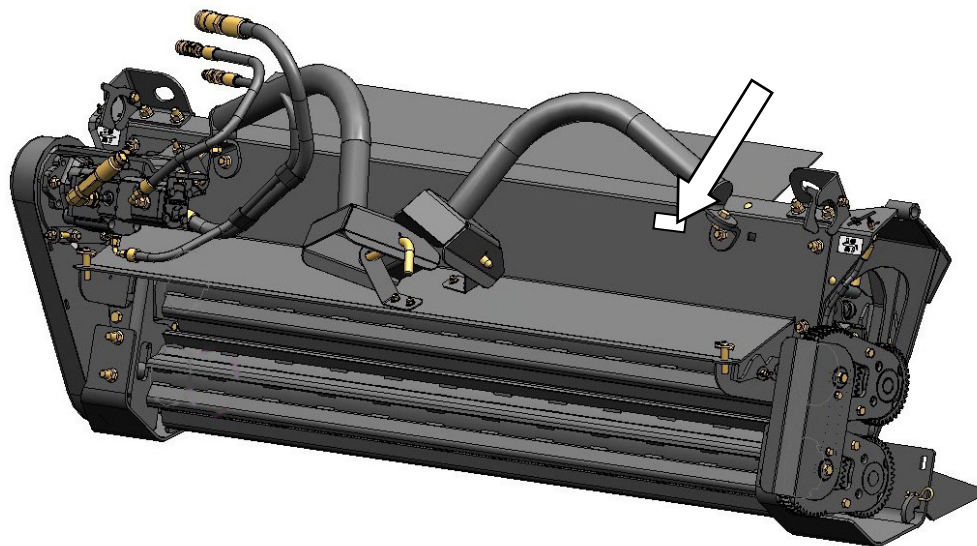


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SECTION G – GENERAL INFORMATION

SECTION G – GENERAL INFORMATION
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SECTION G – GENERAL INFORMATION

1 SAFETY

1.1 SAFETY ALERT SYMBOL



This safety alert symbol indicates important safety messages in this manual and on safety signs on the machine.

This symbol means:

**ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!**

Carefully read and follow the safety message accompanying this symbol.

WHY IS SAFETY IMPORTANT TO YOU?

ACCIDENTS DISABLE AND KILL
ACCIDENTS COST
ACCIDENTS CAN BE AVOIDED

1.2 SIGNAL WORDS

Note the use of the signal words DANGER, WARNING, and CAUTION with safety messages. The appropriate signal word for each message 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 is also used to alert against unsafe practices.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It is also used as a reminder of good safety practices.

SECTION G – GENERAL INFORMATION

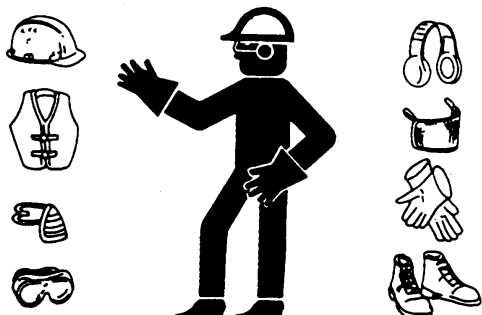
1.3 SAFETY INSTRUCTIONS



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:
 - Hard hat
 - Protective shoes with slip resistant soles
 - Protective glasses or goggles
 - Heavy gloves
 - Wet weather gear
 - Respirator or filter mask
 - Hearing protection

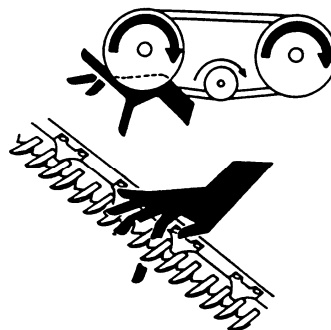
Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs (A) or ear plugs (B) protects against objectionable or loud noises.



- Provide a first-aid kit for use in case of emergencies.



- Keep a fire extinguisher on the machine. Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- 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.
- 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.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.

(continued next page)

SECTION G – GENERAL INFORMATION

- Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.
- Keep the area used for servicing machinery 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.
- Use adequate light for the job at hand.
- Keep machinery clean. 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.



SECTION G – GENERAL INFORMATION

2 RECOMMENDED TORQUES

2.1 GENERAL

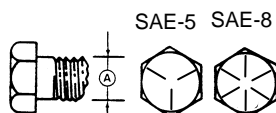
The tables shown below give correct torque values for various bolts and capscrews.

- Tighten all bolts to the torques specified in chart unless otherwise noted throughout this manual.
- Check tightness of bolts periodically, using bolt torque chart as a guide.
- Replace hardware with the same strength bolt.
- Torque figures are valid for non-greased or non-oiled threads and heads unless otherwise specified. Do not grease or oil bolts or capscrews unless specified in this manual. When using locking elements, increase torque values by 5%.

2.2 SAE BOLTS

BOLT DIA. "A"	NC BOLT TORQUE *			
	SAE 5		SAE 8	
	lbf-ft	N·m	lbf-ft	N·m
1/4"	9	12	11	15
5/16"	18	24	25	34
3/8"	32	43	41	56
7/16"	50	68	70	95
1/2"	75	102	105	142
9/16"	110	149	149	202
5/8"	150	203	200	271
3/4"	265	359	365	495
7/8"	420	569	600	813
1"	640	867	890	1,205

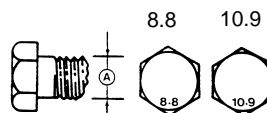
* Torque categories for bolts and cap screws are identified by their head markings.



2.3 METRIC BOLTS

BOLT DIA. "A"	NC BOLT TORQUE *			
	8.8		10.9	
	lbf-ft	N·m	lbf-ft	N·m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M5	4	6	7	9
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M14	103	140	148	200
M16	166	225	229	310
M20	321	435	450	610
M24	553	750	774	1,050
M30	1,103	1,495	1,550	2,100
M36	1,917	2,600	2,710	3,675

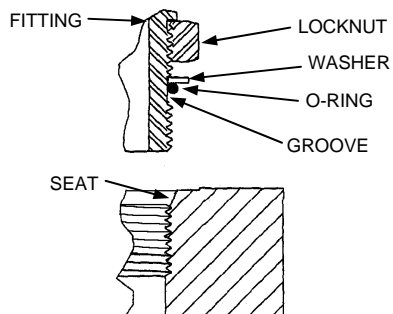
* Torque categories for bolts and cap screws are identified by their head markings.



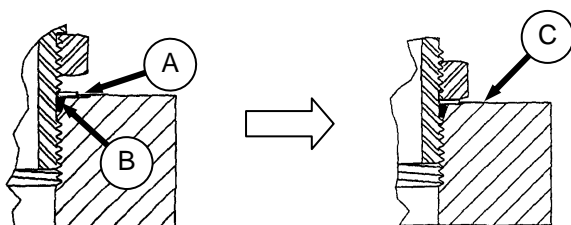
SECTION G – GENERAL INFORMATION

2.4 HYDRAULIC FITTINGS

2.4.1 O-Ring Type



- Inspect O-ring and seat for dirt or obvious defects.
- On angle fittings, back off the lock nut until washer (A) bottoms out at top of groove (B) in fitting.



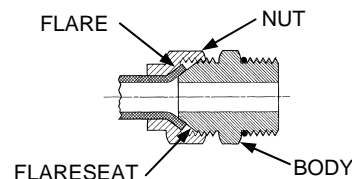
- Hand tighten fitting until back up washer (A) or washer face (if straight fitting) bottoms on part face (C) and O-ring is seated.
- Position angle fittings by unscrewing no more than one turn.

THD SIZE (in.)	NUT SIZE ACROSS FLATS (in.)	TORQUE VALUE*		RECOMMENDED TURNS TO TIGHTEN (AFTER FINGER TIGHTENING)	
		lbf-ft	N-m	Flats	Turns
3/8	1/2	6	8	2	1/3
7/16	9/16	9	12	2	1/3
1/2	5/8	12	16	2	1/3
9/16	11/16	18	24	2	1/3
3/4	7/8	34	46	2	1/3
7/8	1	46	62	1-1/2	1/4
1-1/16	1-1/4	75	102	1	1/6
1-3/16	1-3/8	90	122	1	1/6
1-5/16	1-1/2	105	142	3/4	1/8
1-5/8	1-7/8	140	190	3/4	1/8
1-7/8	2-1/8	160	217	1/2	1/12

* The torque values shown are based on lubricated connections as in reassembly.

- Tighten straight fittings to torque shown.
- Tighten angle fittings to torque shown in the following table while holding body of fitting with a wrench.

2.4.2 Flare Type



- Check flare and flare seat for defects that might cause leakage.
- Align tube with fitting before tightening.
- Lubricate connection and hand tighten swivel nut until snug.
- To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

TUBE SIZE O.D. (in.)	NUT SIZE ACROSS FLATS (in.)	TORQUE VALUE*		RECOMMENDED TURNS TO TIGHTEN (AFTER FINGER TIGHTENING)	
		lbf-ft	N-m	Flats	Turns
3/16	7/16	6	8	1	1/6
1/4	9/16	9	12	1	1/6
5/16	5/8	12	16	1	1/6
3/8	11/16	18	24	1	1/6
1/2	7/8	34	46	1	1/6
5/8	1	46	62	1	1/6
3/4	1-1/4	75	102	3/4	1/8
7/8	1-3/8	90	122	3/4	1/8

* The torque values shown are based on lubricated connections as in reassembly.

SECTION G – GENERAL INFORMATION

3 ENGLISH/METRIC EQUIVALENTS

ENGLISH	FACTOR	SI UNITS (METRIC)
acres	x 0.4047	= hectares (ha)
ft/min	x 0.3048	= meters/min (m/min)
ft/s	x 0.3048	= meters/sec (m/s)
gal (US)	x 3.7854	= liters (L)
US gal/min (gpm)	x 3.7854	= liters/min (L/min)
hp	x 0.7457	= kilowatts (kW)
in. ³	x 16.3871	= cubic centimeters (cm ³ or cc)
lbf	x 4.4482	= Newtons (N)
lbf-ft or ft-lb	x 1.3558	= Newton meters (N·m)
lbf-in. or in-lbf	x 0.1129	= Newton meters (N·m)
mph	x 1.6063	= kilometers/hour (km/h)
oz.	x 29.5735	= milliliters (ml)
pint (US)	x 0.4732	= liters (L)
psi	x 6.8948	= kilopascals (kPa)
psi	x 0.00689	= megapascals (MPa).
qt. (US)	x 0.9464	= liters (L)

SECTION UA – UNLOADING AND ASSEMBLY

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SECTION UA – UNLOADING AND ASSEMBLY

STEP 1. UNLOAD HAY CONDITIONER



CAUTION

To avoid injury to bystanders from being struck by machinery, do not allow persons to stand in unloading area.



CAUTION

Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in vehicle tipping or machine damage.

LIFTING VEHICLE	
MIN. LIFTING CAPACITY *	2,000 LB. (908 KG)
MIN. FORK LENGTH	60 INCHES (1,524 MM)

* At 48 inches (1,220 mm) from back end of forks.

IMPORTANT

Forklifts are normally rated for a load located 24 inches (610 mm) ahead of back end of the forks. To obtain the forklift capacity at 48 inches (1,220 mm), check with your forklift distributor.



WARNING

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

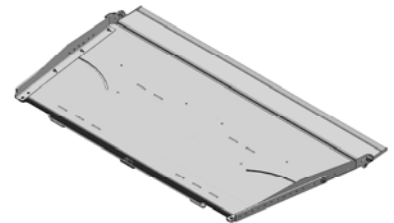
- Remove hauler's tie down straps and chains.
- Use forklift to lift each of the three pallets of hay conditioner components off of the trailer deck.
- Back up until unit clears trailer and slowly lower to 6 inches (150 mm) from ground.
- Take to storage or set-up area.
- Set pallet down securely on level ground.
- Check for shipping damage and missing parts.



HAY CONDITIONER
BUNDLE #4798



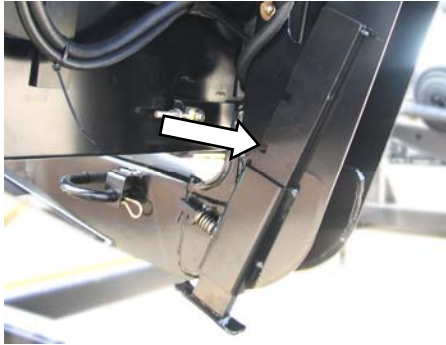
FEED DECK
BUNDLE #4799



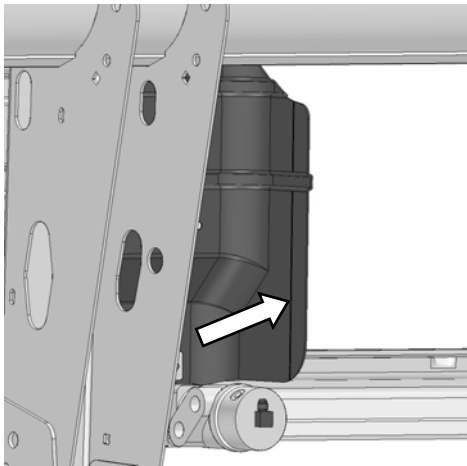
FORMING SHIELD
BUNDLE #4800

SECTION UA – UNLOADING AND ASSEMBLY

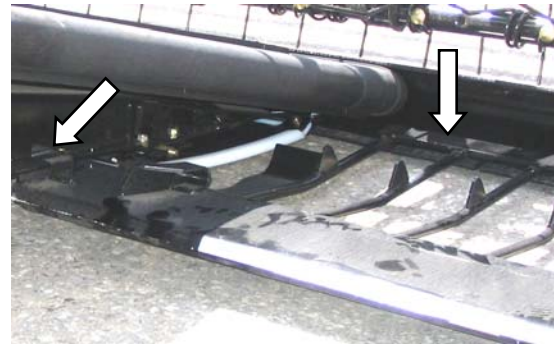
STEP 2. PREPARE THE HEADER



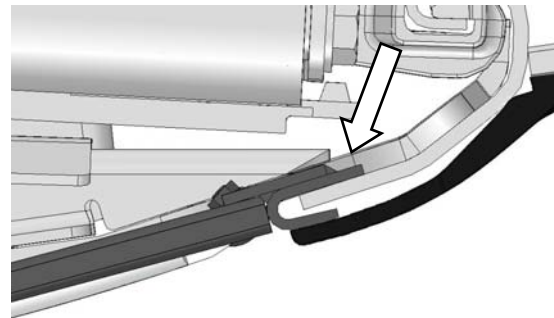
- a. Adjust header stand to mid-position.



- b. Trim poly deflector along creased line on back of poly for proper fit up to conditioner.



- c. Lift rock grate and position the rear tabs so they slide over the header leg flanges.



- d. Position the front lip of rock grate in front of the bottom edge of the cutter bar and slide forward so it engages the cutter bar.
- e. If the header is equipped with cutter bar poly, set the rock grate on top of the poly in front of the cutter bar, then push down and forward to seat the rock grate onto the cutter bar.

STEP 3. INSTALL ROCK GRATE INTO HEADER.



- a. Unpack feed deck/ rock grate bundle.



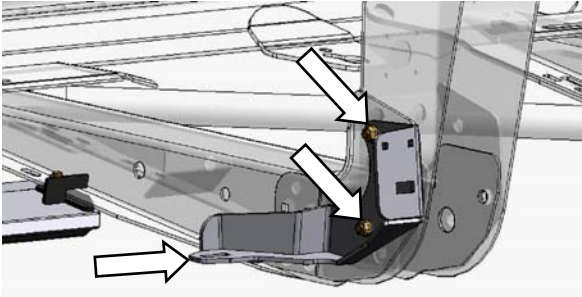
- b. Position rock grate into center area of header.



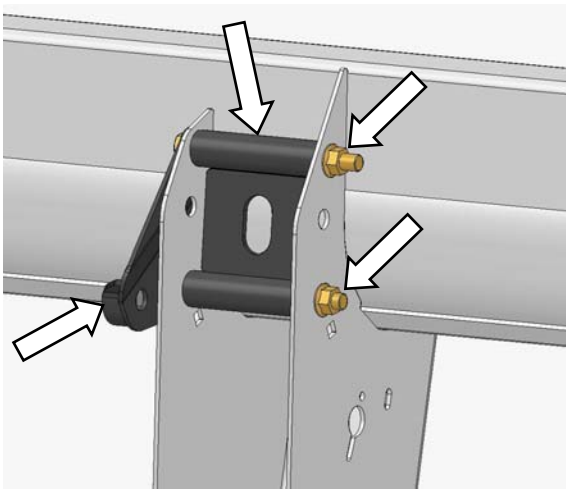
- f. Ensure rock grate is pushed fully forward and secure with two bolts installed from underside. Tighten bolts.

SECTION UA – UNLOADING AND ASSEMBLY

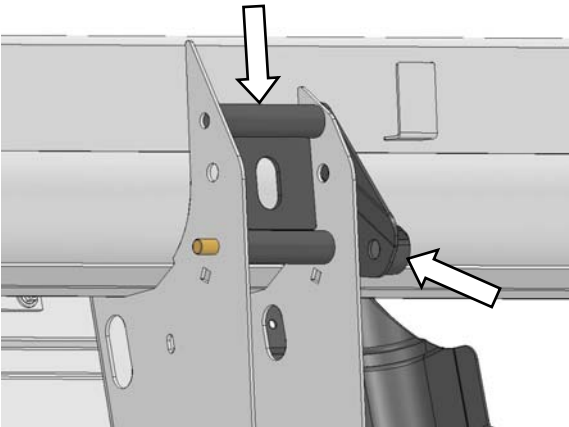
STEP 4. INSTALL DECK BRACKETS



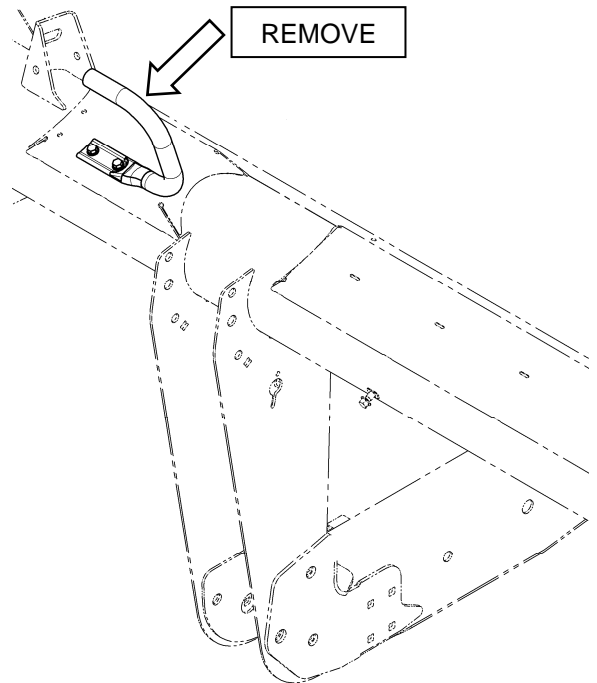
- a. Install the two lower brackets onto the inside of both the center header legs with two bolts and nuts in each bracket.



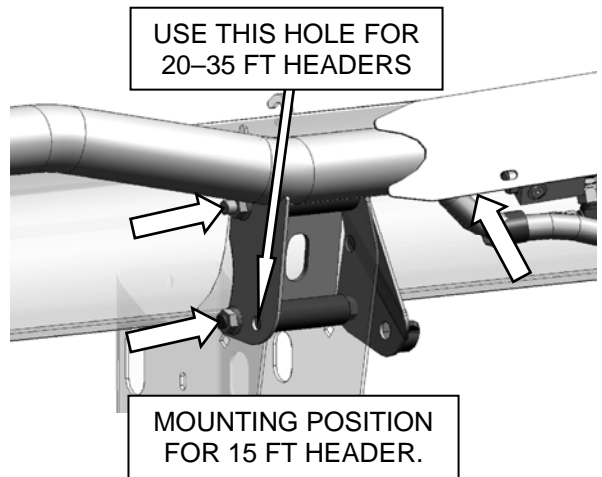
- b. Install RH upper bracket and spacer onto the RH center leg as shown and install nut. **NOTE:** 15 ft. header shown. For headers with sheet metal hose cover, install bolts from the outboard side.
- c. Install other bolt through bracket and spacer and secure with nut.
- d. Tighten both bolts.



- e. Install the LH upper bracket and spacer onto the inboard side of LH center leg as shown.



- f. Near LH center leg, remove hose guide. (15 ft. header shown, for 20 ft. and larger headers, remove this support from its mounting position on sheet metal hose cover.)



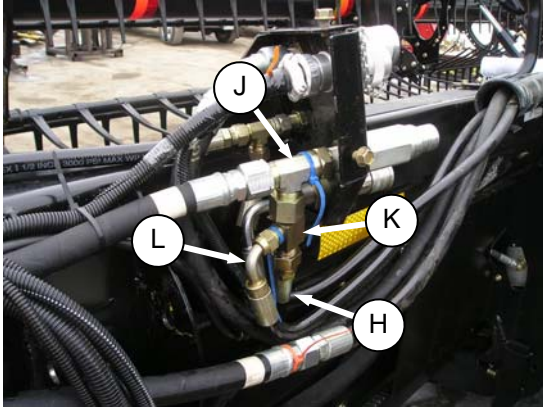
- g. Attach hose assembly onto the LH center leg and install nut on lower bolt. Ensure correct hole is used when attaching hose assembly. **NOTE:** 15 ft. header shown. For headers with sheet metal hose cover, install bolts from the outboard side.
- h. Install other bolt through bracket, spacer, and hose assembly and secure with nut.
- i. Tighten both bolts.

SECTION UA – UNLOADING AND ASSEMBLY

STEP 5. ATTACH HYDRAULICS

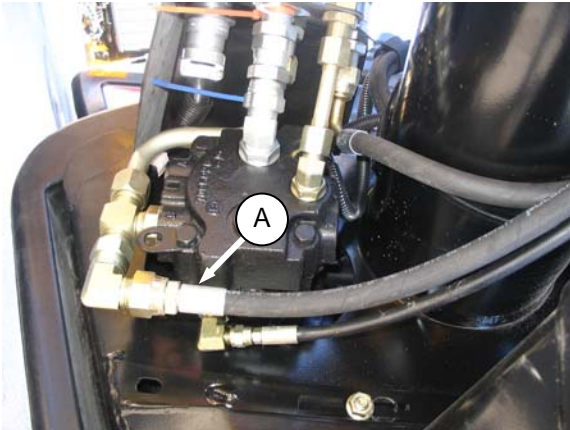
A. ALL HEADERS EXCEPT 15FT.

- a. Remove hose cover on header.

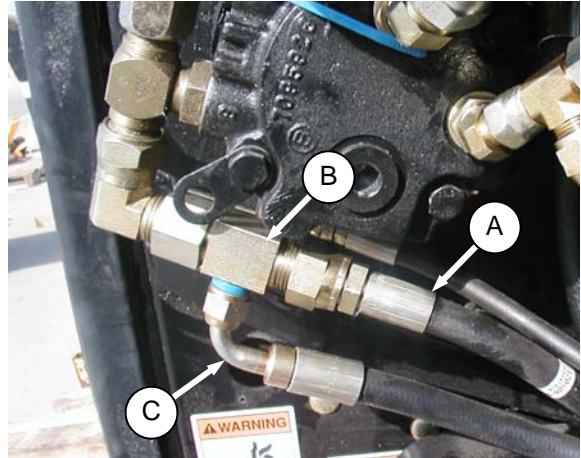


- b. Disconnect the side draper return hose (H) at the main return tee (J).
- c. Install check valve tee (K) on return tee (J) and install cap (MD #108233) on check valve.
- d. Re-connect side draper return hose (H) to new tee-fitting (K).
- e. Bundle hoses with plastic cable ties as required. Ensure hoses clear sharp edges.
- f. Replace hose cover.

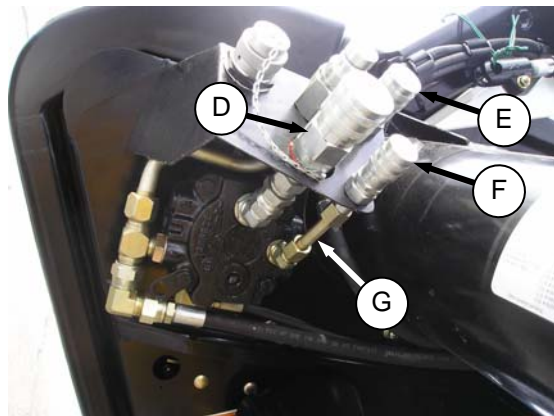
B. 15FT HEADERS



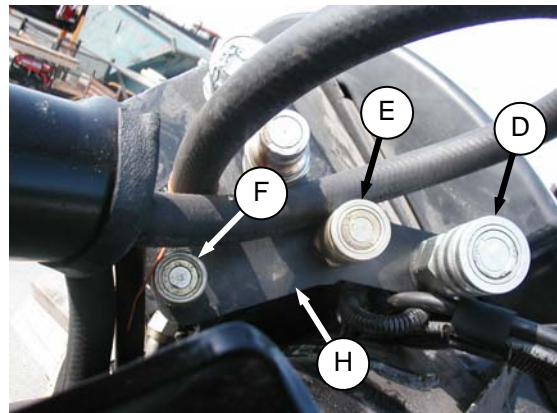
- a. Disconnect return hose (A) at elbow on motor.



- b. Install check valve tee (B) on elbow and re-connect return hose (A) to tee (B).
- c. Connect feed draper return line (C) from the conditioner hose package onto the check valve tee (B).



- d. Remove the knife drive coupler (D), draper drive coupler (E), the case drain coupler (F) and its extension tube (G).

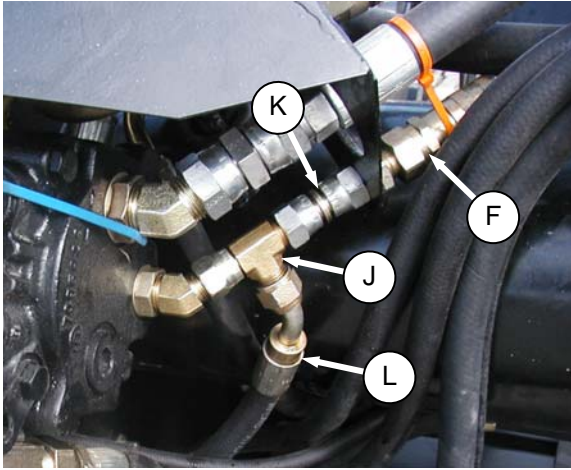


- e. Retrieve coupler bracket (H) from bundle and position the coupler bracket (H) onto housing.

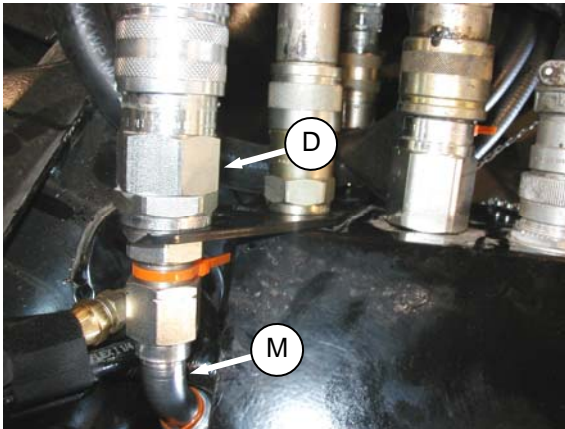
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SECTION UA – UNLOADING AND ASSEMBLY

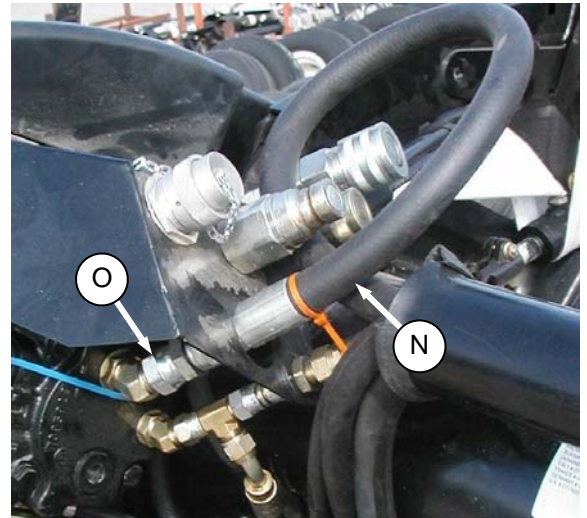
- f. Re-install the draper drive coupler (E) in original location, and install the knife drive coupler (D) onto the end of the new bracket (H).



- g. Install the tee-fitting (J) and union (K) onto motor case drain.
- h. Re-install the case drain coupler (F).
- i. Route the conditioner case drain hose (L) (45° bent tube) behind the motor and connect to the tee fitting (J).



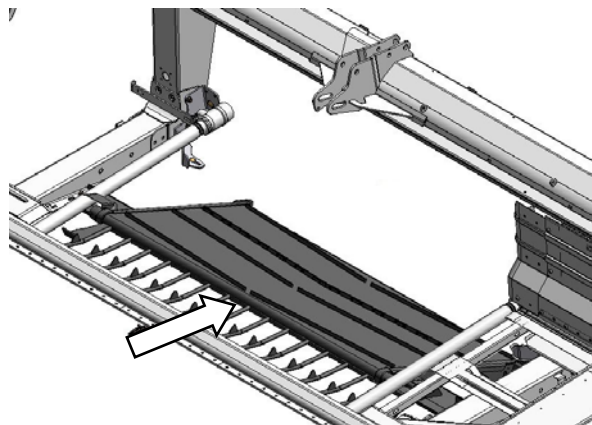
- j. Route the conditioner pressure hose (M) (orange cable tie) behind the motor and attach it to the coupler (D).



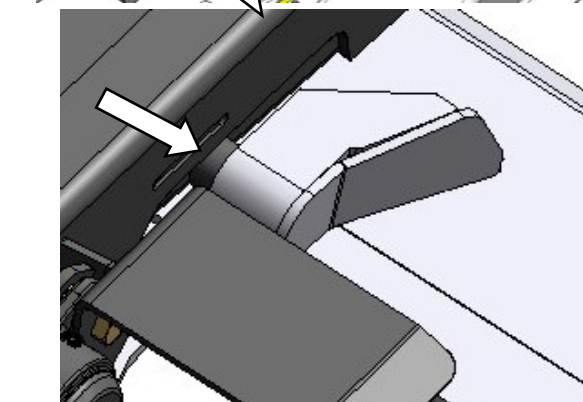
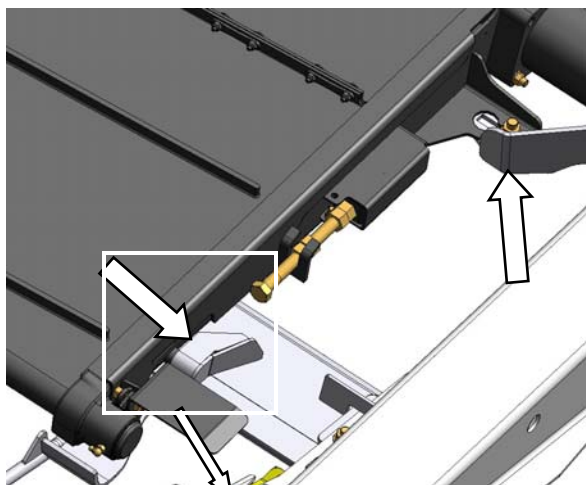
- k. Loop the conditioner return line (N) up over top of the couplers and connect to the pressure port (O) on the motor. Ensure all hoses will be clear of tractor tires.

SECTION UA – UNLOADING AND ASSEMBLY

STEP 6. INSTALL FEED DECK

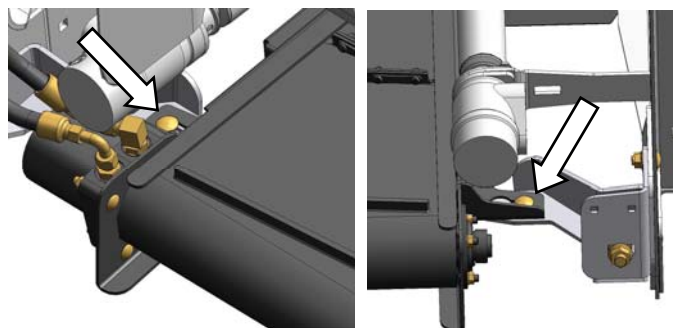


- a. Slide feed deck under header opening from the rear. Deck drive motor faces aft.



- b. Set front of deck onto the rock grate and slide the feed deck forward until the locating pins reach the pockets on the rock grate.

- c. Lift the rear of the feed deck so the mounts on the deck clear the brackets on the leg and slide deck forward until mounting pins are fully positioned inside the pockets.



- d. Install two 1/2 x 1.25 lg. carriage bolts at rear mounting brackets.



- e. Attach the hose bracket to the mounting bracket with two 3/8 x 1.0 lg. carriage bolts.
- f. Adjust header side drapers to overlap feed deck by 2-1/2 to 3 inches (65 to 75 mm). See header operator's manual for procedure.

SECTION UA – UNLOADING AND ASSEMBLY

STEP 7. INSTALL CONDITIONER

A. LIFTING METHOD



CAUTION

Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in vehicle tipping or machine damage.

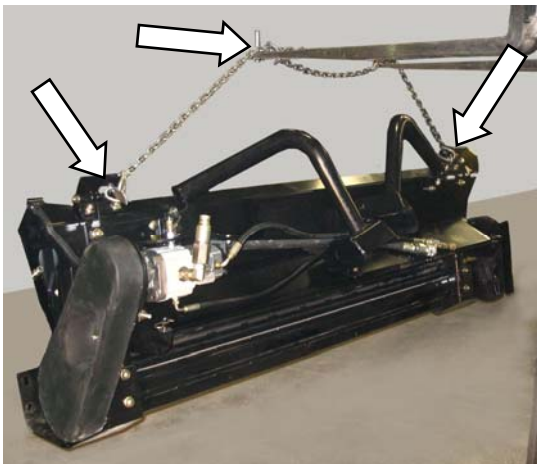
LIFTING VEHICLE	
MIN. LIFTING CAPACITY *	2,000 LB. (908 KG)
MIN. FORK LENGTH	60 INCHES (1,524 MM)

* At 48 inches (1,220 mm) from back end of forks.

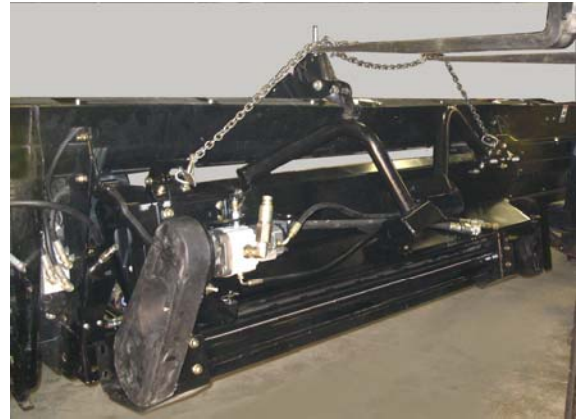
IMPORTANT

Forklifts are normally rated for a load located 24 inches (610 mm) ahead of back end of the forks. To obtain the forklift capacity at 48 inches (1,220 mm), check with your forklift distributor.

CHAIN TYPE	OVERHEAD LIFTING QUALITY (1/2 INCH)
MIN. WORKING LOAD	5,000 LB (2,270 KG)



- Attach chain to lifting brackets on conditioner and secure chain to lifting device.
- Lift conditioner to upright position.
- Remove shipping blocks if present.



- Position conditioner into header opening from the rear.



- Locate the two upper mounting lugs into brackets on the header, and lower the conditioner onto the hanging brackets.
- Ensure the conditioner is seated properly in the brackets and remove the chains.

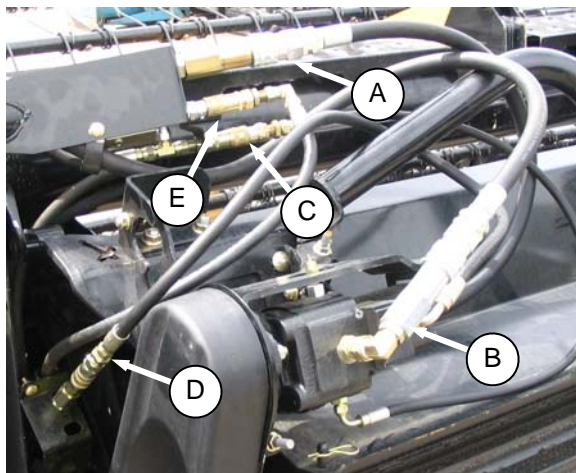


- Install two 5/8 x 1.5 lg. carriage bolts in the lower attachment locations.

(continued next page)

SECTION UA – UNLOADING AND ASSEMBLY

h. Connect the hydraulic hoses as follows:

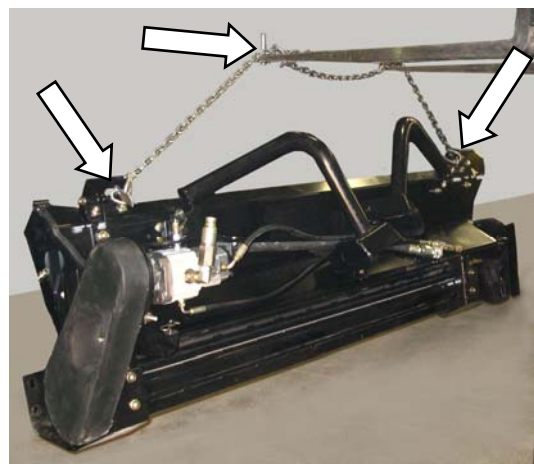


- A Large female quick-disconnect from motor to header (PRESSURE).
- B Large female quick-disconnect from header to motor (RETURN).
- C Small male quick-disconnect from motor to header (CASE DRAIN).
- D Small female quick-disconnect from motor to deck (PRESSURE-DECK).
- E Small female quick-disconnect from deck to header (RETURN-DECK).

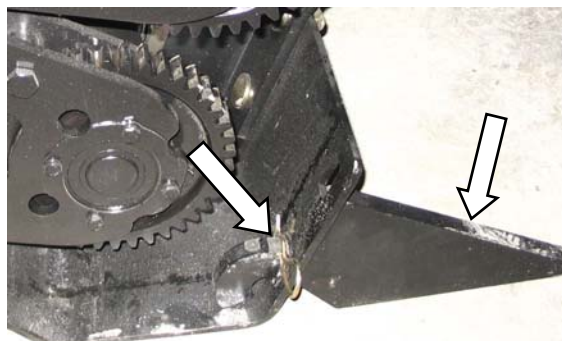
B. TRACTOR METHOD



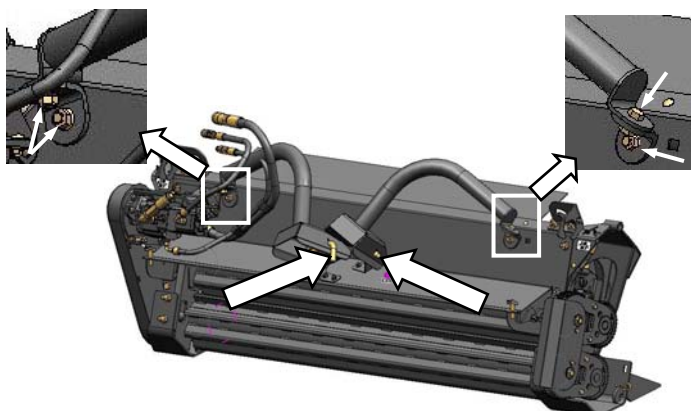
- a. Adjust header stand to mid-position.



- b. Attach chain to lifting brackets on conditioner and secure chain to lifting device.
- c. Lift off of shipping pallet and set conditioner on ground in upright position.



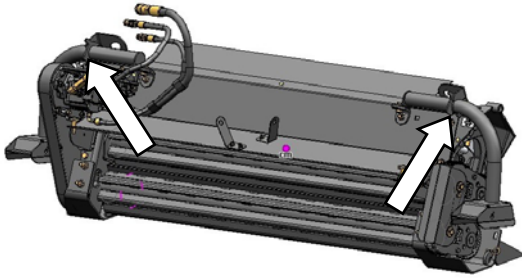
- d. Retrieve stand and hairpin from conditioner bundle #4798 and install stand in slot in base at lower RH end of conditioner. Secure stand with hairpin.
- e. Remove shipping blocks if present.



- f. Hardware at lifting arms has been tightened for shipping. Loosen two bolts per side just enough to allow arms to swing out. See insets above.
- g. Remove L-pins securing lifting arms to conditioner. (Rotate pins to align key-hole slot.)

(continued next page)

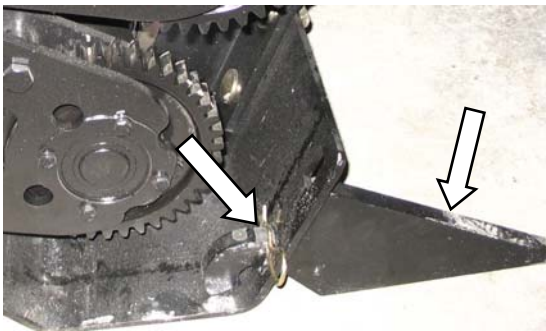
SECTION UA – UNLOADING AND ASSEMBLY



- h. Swing out lift arms and secure in latches.



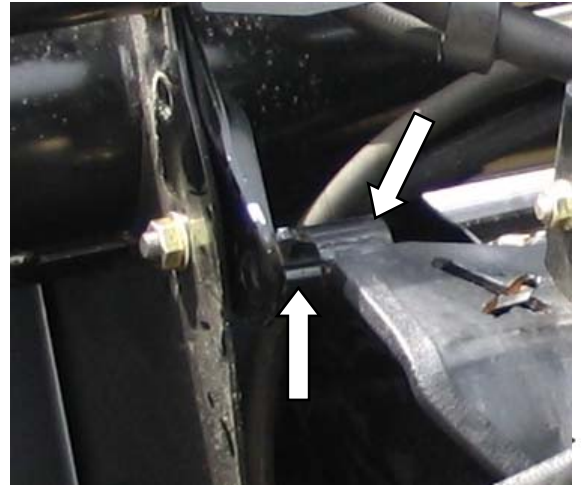
- i. Position the tractor arms in the lift arm pockets and insert the L-pins for safety.



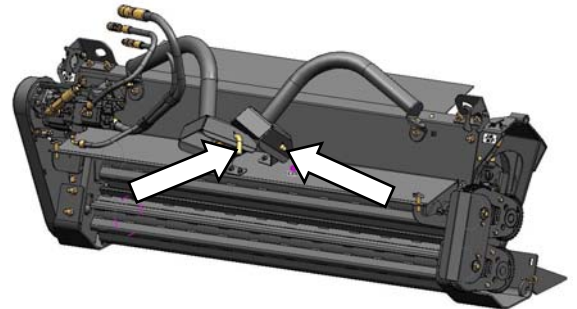
- j. Remove the stand and store with hairpin in tool box.



- k. Lift the conditioner and position into the header opening from the rear.



- l. Locate the two upper mounting lugs into brackets on the header, and lower the conditioner onto the hanging brackets.
m. Ensure the conditioner is seated properly in the brackets and disconnect from tractor.
n. Lift latch to release conditioner lift arm and fold up to storage position on conditioner.



- o. Insert L-pin through arm and bracket on conditioner and lock in place. Repeat for other arm.

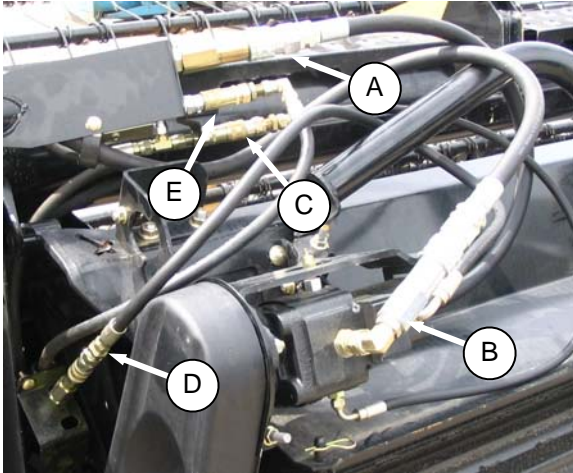


- p. Install two 5/8 x 1.5 lg. carriage bolts in the lower attachment locations. For LH bracket, install bolt with head facing conditioner.

(continued next page)

SECTION UA – UNLOADING AND ASSEMBLY

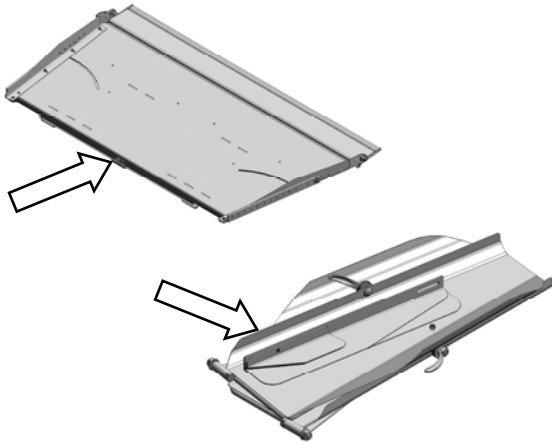
- q. Connect the hydraulic hoses as follows:



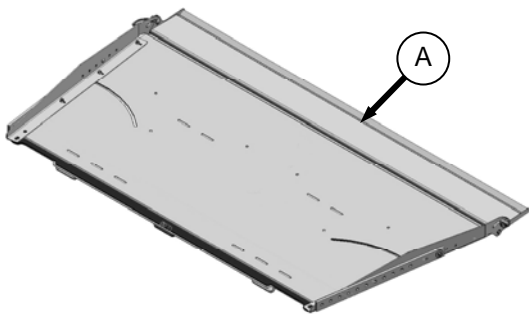
- A Large female quick-disconnect from motor to header (PRESSURE).
- B Large female quick-disconnect from header to motor (RETURN).
- C Small male quick-disconnect from motor to header (CASE DRAIN).
- D Small female quick-disconnect from motor to deck (PRESSURE-DECK).
- E Small female quick-disconnect from deck to header (RETURN-DECK).

SECTION UA – UNLOADING AND ASSEMBLY

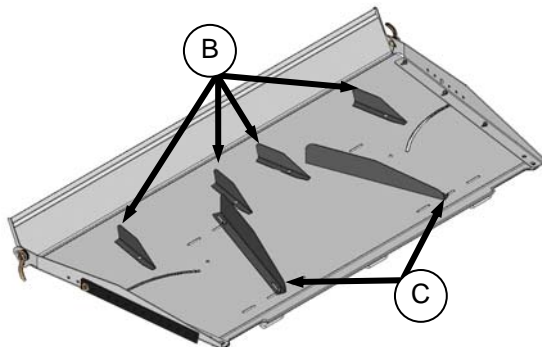
STEP 8. ASSEMBLE FORMING SHIELD



- a. Unpack the forming shield cover, and defectors and fins bundle.



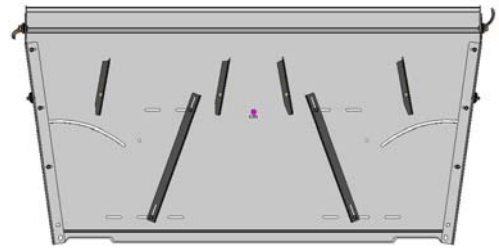
- b. Lay cover (A) upside down (flanges of side supports facing up) on a flat surface.



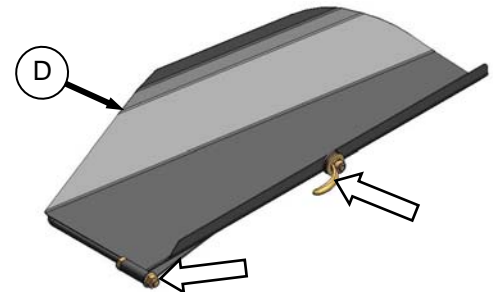
- c. Assemble fins (B) to bottom of shield as shown using hardware provided. The two long fins (C) are handed and should be installed with bolts on outboard side of the fin. Bolts should be installed with nuts against the fins.

NOTE

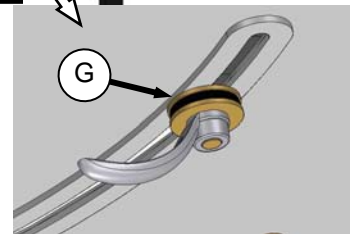
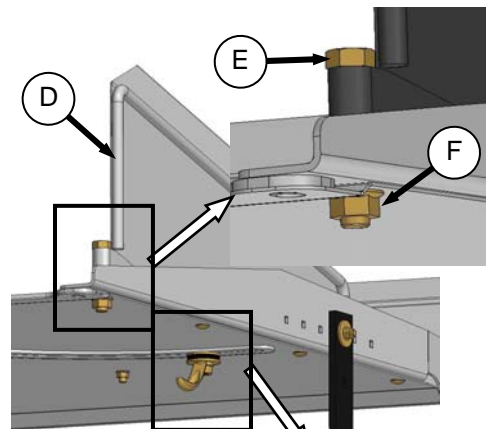
Fins are only effective for windrows greater than 70 inches (1,778 mm) or if satisfactory formation is not achieved. Store for future use if not installed.



- d. Position fins approximately as shown and tighten hardware.



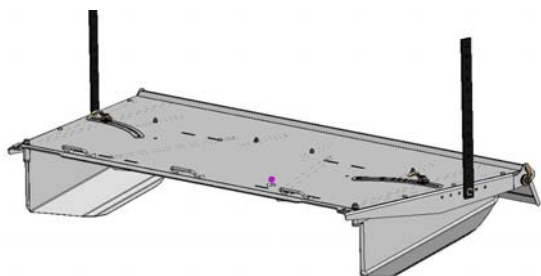
- e. Remove hardware from side deflector (D).
f. Position deflector (D) on cover as shown and install with hex bolt (E) and flange nut (F) removed in previous step.



- g. Tighten flange nut (F) enough to hold defectors (D) in position, but still allow defectors to move.
h. Install bolt, washers and handle nut (G) as shown. Rubber washer must be positioned between metal washers.
i. Tighten handle nut (G) against cover to lock deflector in desired position.
j. Repeat for other deflector.

(continued next page)

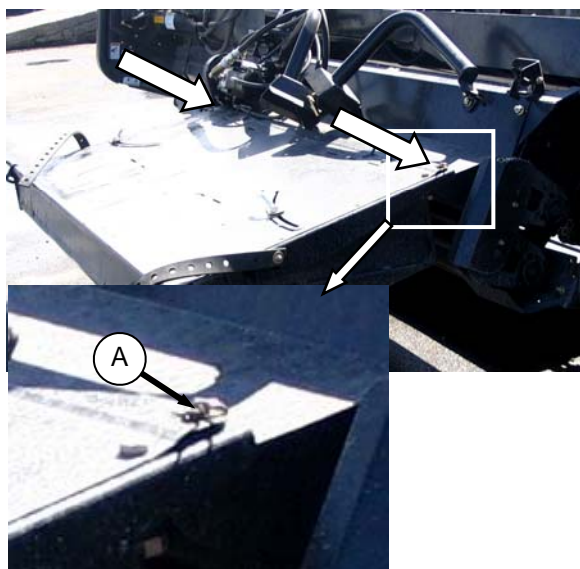
SECTION UA – UNLOADING AND ASSEMBLY



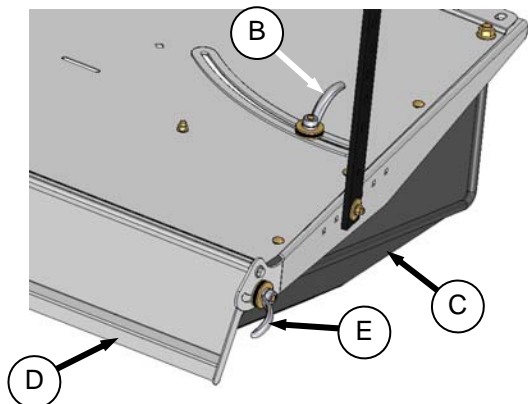
- k. Invert forming shield to installation position as shown.

STEP 9. INSTALL FORMING SHIELD

- a. Position the forward end of the forming shield onto the two pins located on the rear cover of the conditioner.

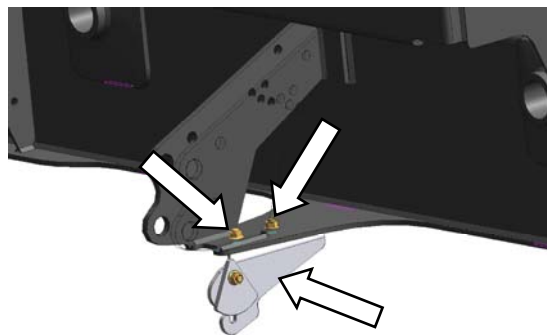


- b. Insert lynch pins (A) to secure forming shield to conditioner.



- c. Set forming shield side deflectors to desired width by loosening handle (B) and moving deflector (C). Tighten handle. Set both deflectors to approximately the same position.

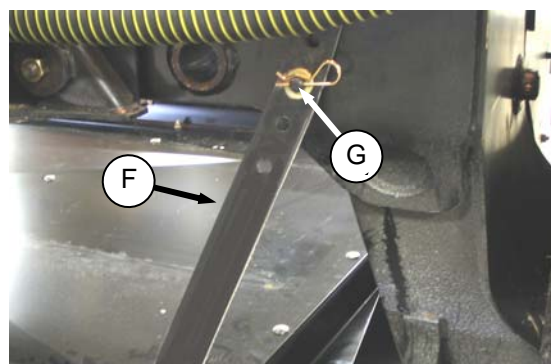
- d. Loosen handles (E) and adjust fluffer shield (D) to middle position. Tighten handles (E).



- e. Install shield transport support on tractor frame with two 3/8 x 1.0 carriage bolts and nuts.

STEP 10. ATTACH HEADER TO TRACTOR

Refer to M-Series self-propelled windrower unloading and assembly instructions or operator's manual for instructions on attaching the header to the M Series windrower.



- a. Lift the aft end of the forming shield and attach straps (F) to pins (G) on tractor frame.
- b. Retrieve washers and hairpins from shipping bundle and install to secure strap. Use the middle hole and adjust height to suit the crop.

SECTION UA – UNLOADING AND ASSEMBLY

STEP 11. LUBRICATE THE CONDITIONER

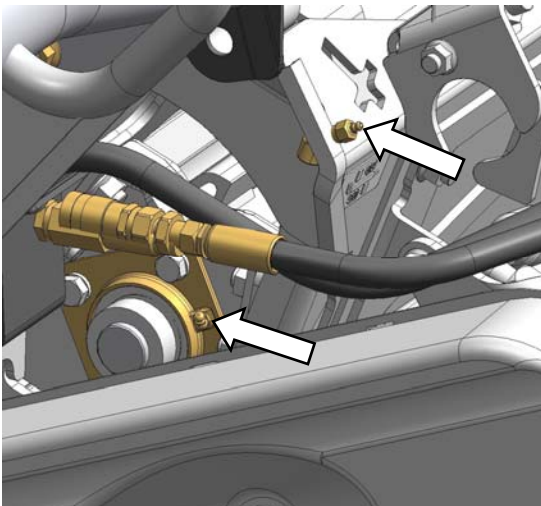
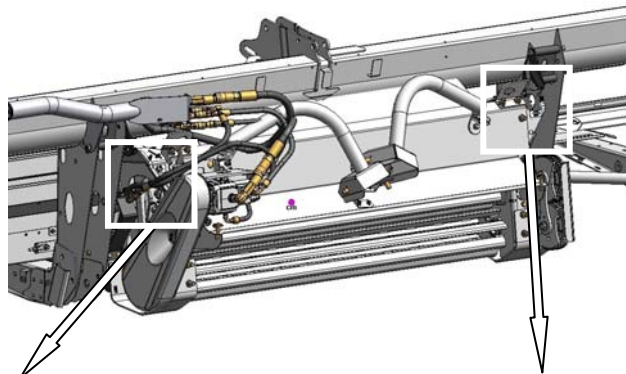


WARNING

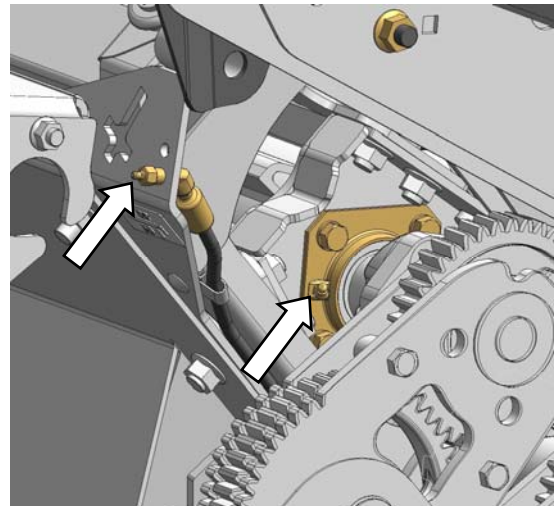
To avoid bodily injury or death from unexpected start-up or fall of raised machine, stop engine, remove key and engage lift cylinder stops before going under machine for any reason.

- Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
- Inject grease through fitting with grease gun until grease purges at bearing housing.
- Leave excess grease on fitting to keep out dirt.
- Replace any loose or broken fittings immediately.
- If fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
- Refer to the illustrations for lubrication points.

High Temp. Extreme Pressure
(EP2) Performance With 1%
Max Molybdenum Disulphide
(NLGI Grade 2).Lithium Base

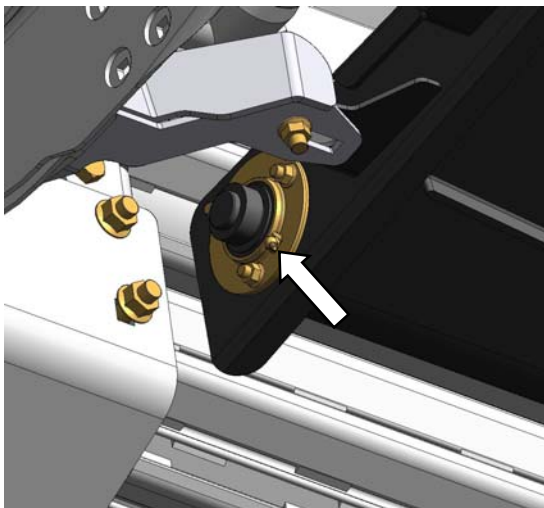


ROLL SHAFT BEARINGS (2 PLCS)



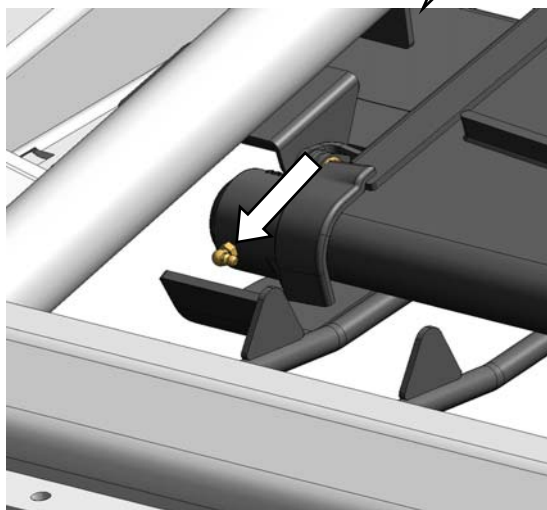
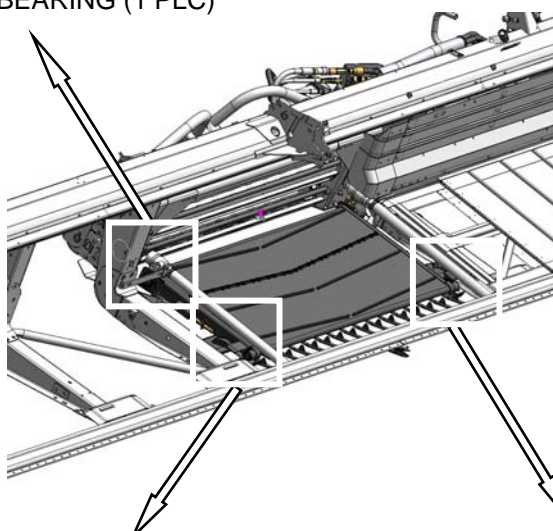
ROLL SHAFT BEARINGS (2 PLCS)

SECTION UA – UNLOADING AND ASSEMBLY

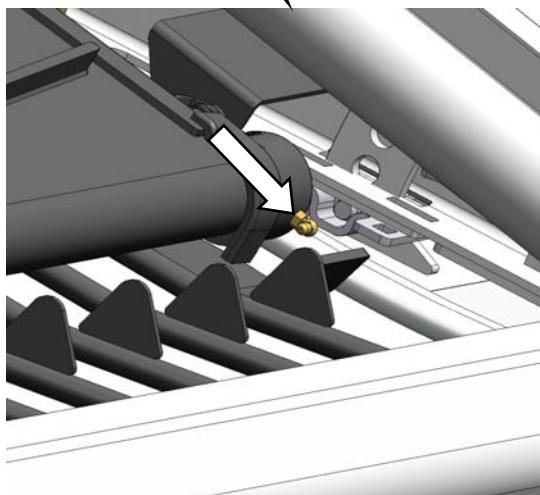


DRIVE ROLLER BEARING (1 PLC)

High Temp. Extreme Pressure
(EP2) Performance With 1%
Max Molybdenum Disulphide
(NLGI Grade 2).Lithium Base



IDLER ROLLER BEARING (1 PLC)



IDLER ROLLER BEARING (1 PLC)

SECTION UA – UNLOADING AND ASSEMBLY

STEP 12. PERFORM PRE-DELIVERY CHECKS

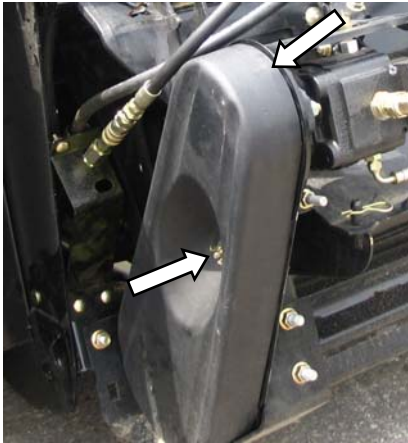


WARNING

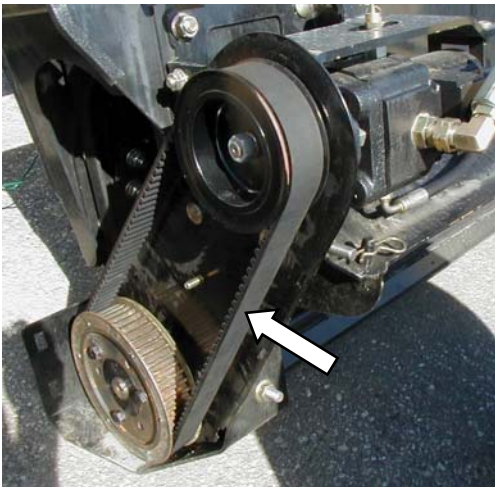
Stop windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

- Perform the final checks and adjustments as listed on the "Pre-Delivery Checklist" (yellow sheet) along with the header final checks and adjustments to ensure the machine is field-ready. Refer to the following pages for detailed instructions as indicated on the checklist.
- The completed checklists should be retained either by the operator or the dealer.

A. ROLL DRIVE BELT TENSION



- Remove wing-nut and washer and remove drive cover.

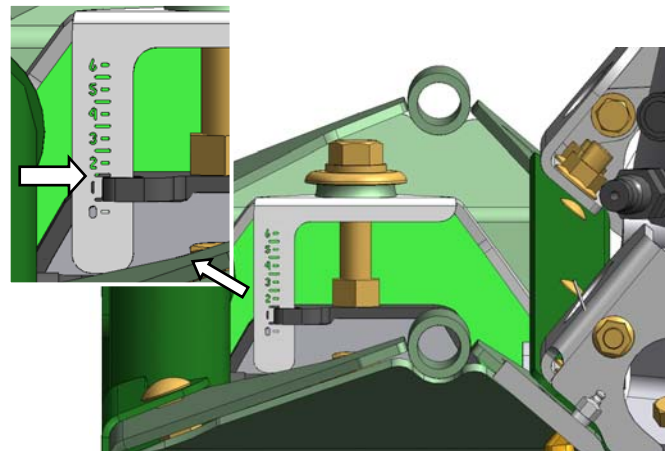
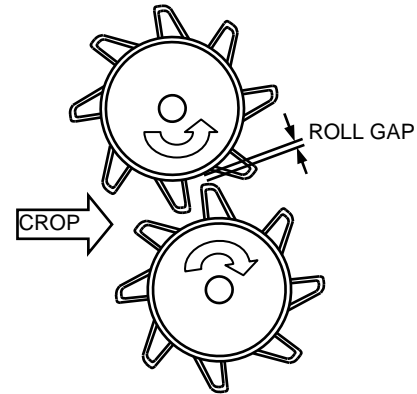


- Belt should deflect 1/4 inch (7 mm) when a force of 8–16 lbf (36–72 N) is applied at the center of the span.

- If belt tension requires adjusting, refer to Section OM, Paragraph 4.7.1 Tension Adjustment.
- Replace cover and secure with washer and wing-nut.

B. CONDITIONER ROLLS

I. ROLL GAP



- Factory setting should be 0.75 in. (20 mm) or at 1.5 line on gauge. Gauge readings should be the same at both ends of the roll.
- If roll gap requires adjusting, refer to Section OM, Paragraph 3.9.2 Roll Gap.

SECTION UA – UNLOADING AND ASSEMBLY

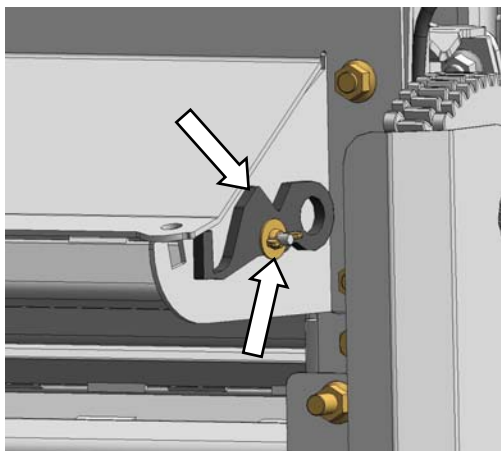
II. ROLL TIMING



DANGER

Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

- a. Lower header to ground, shut down tractor and remove key.



- b. Remove wing-nut, and remove tool from panel at RH end of conditioner.



START POSITION

GAUGE POSITION

- c. From the rear of the conditioner, locate tool at centre of rolls as shown and manually turn rolls to limits of tool. Rolls will engage the tool if timing is correct.
- d. Manually turn rolls to release tool.



WARNING

Remove tool from rolls and return it to storage location before starting machine.

- e. Replace tool on conditioner with washer and wing-nut.
- f. If roll timing requires adjusting, refer to Section OM, Paragraph 4.9.3 Roll Timing.

C. RUN-UP THE CONDITIONER



CAUTION

Never start or move the machine until you are sure all bystanders have cleared the area.



CAUTION

Clear the area of other persons, pets etc. Keep children away from machinery. Walk around the machine to be sure no one is under, on or close to it.



CAUTION

Before investigating an unusual sound or attempting to correct a problem, shut off engine, engage parking brake and remove key.

Refer to the windrower's unloading and assembly instructions or operator's manual for windrower operating instructions.

- a. Start windrower and run the machine operate the conditioner slowly for 5 minutes, watching and listening FROM THE OPERATOR'S SEAT for binding or interfering parts
- b. Run machine for 15 minutes.
- c. Perform the run-up check as listed on the "Pre-Delivery Checklist", (yellow sheet attached to this instruction), and the header run-up check to ensure the machine is field-ready.

D. MANUALS

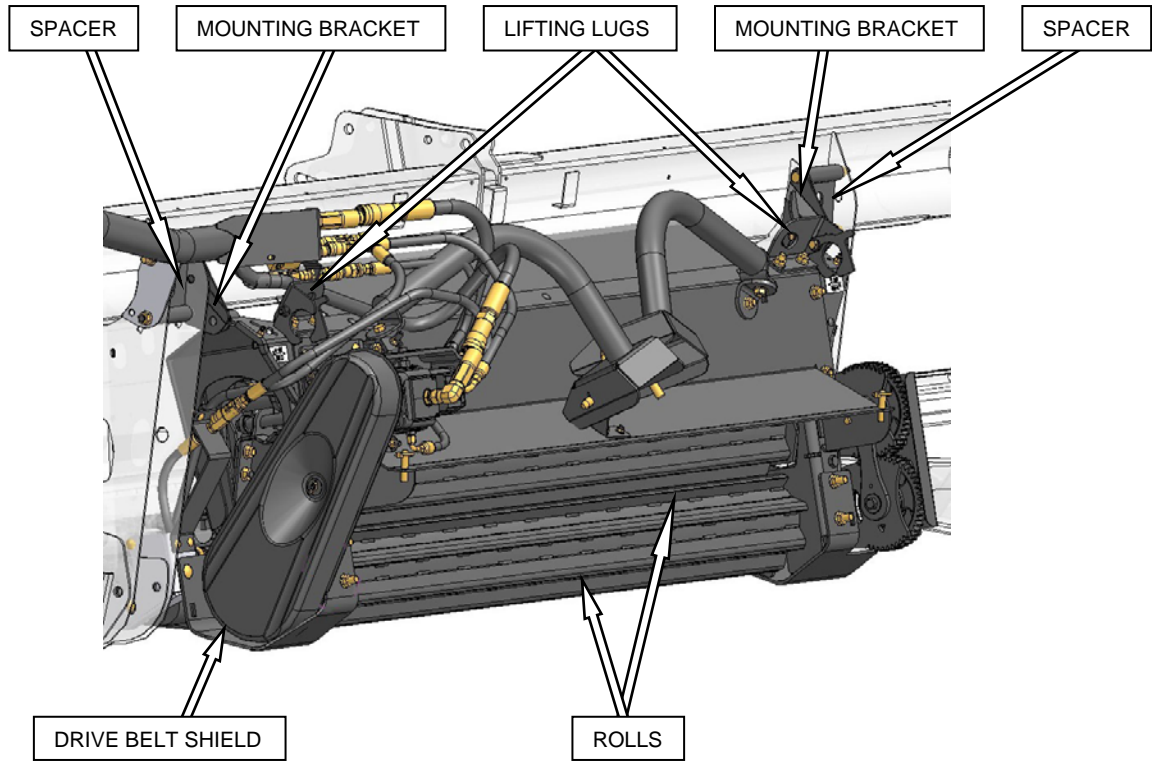
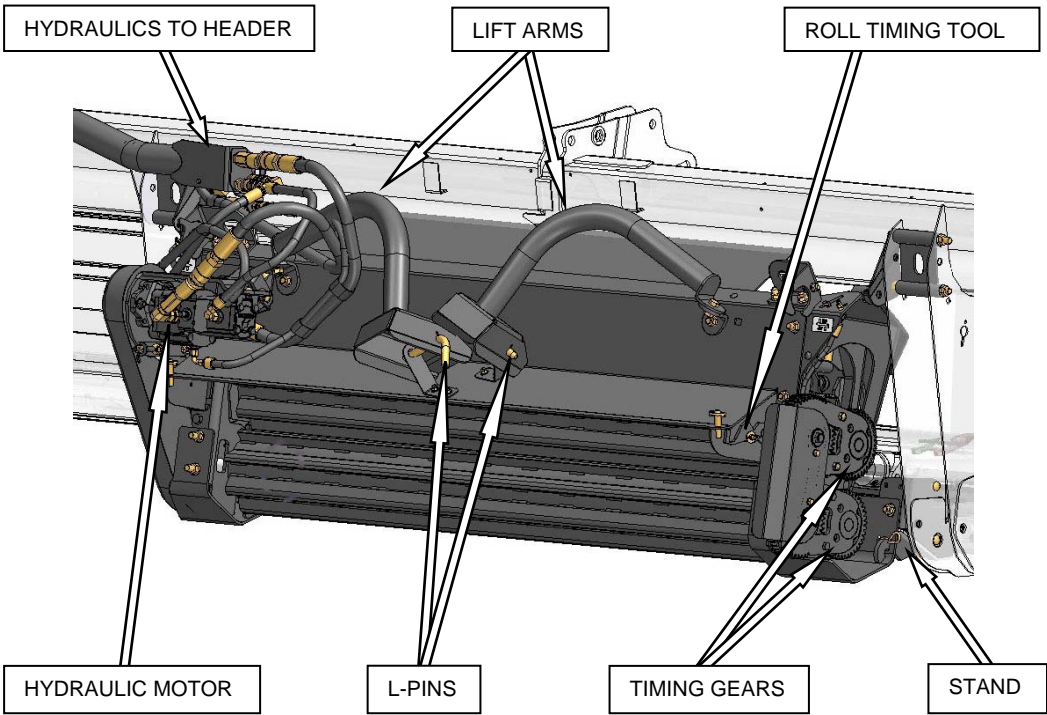
- a. Place this manual (MD #169254) in storage case in the windrower.
- b. The yellow checklist should be retained by either the Dealer or the Operator.

SECTION OM – OPERATOR’S INSTRUCTIONS

Section Contents

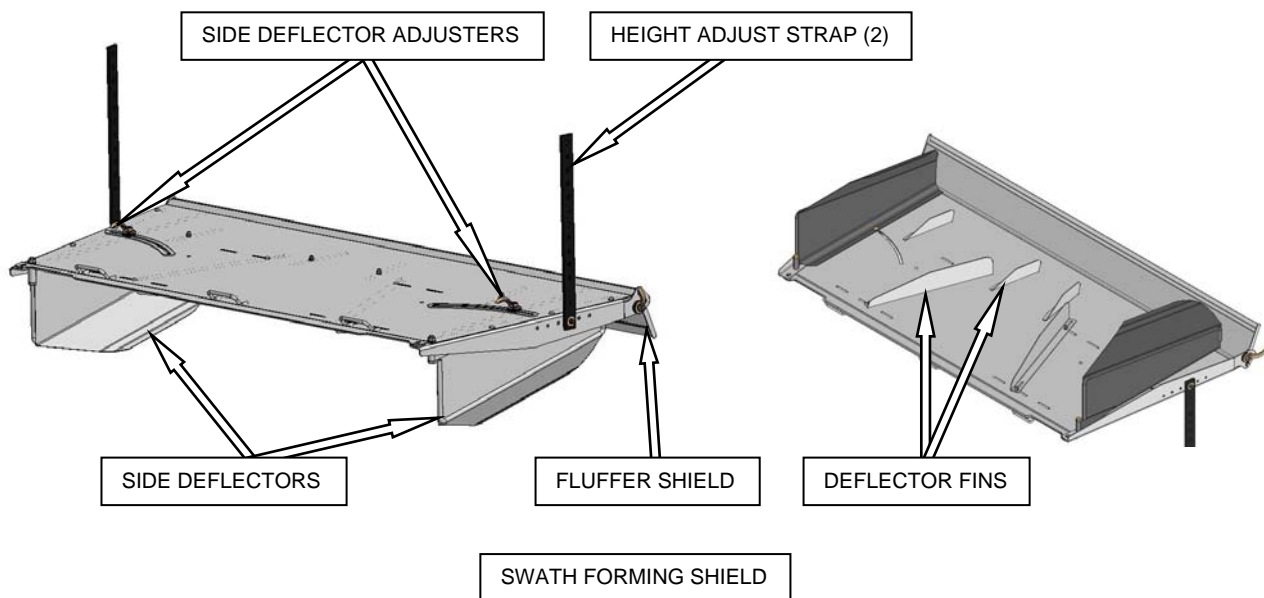
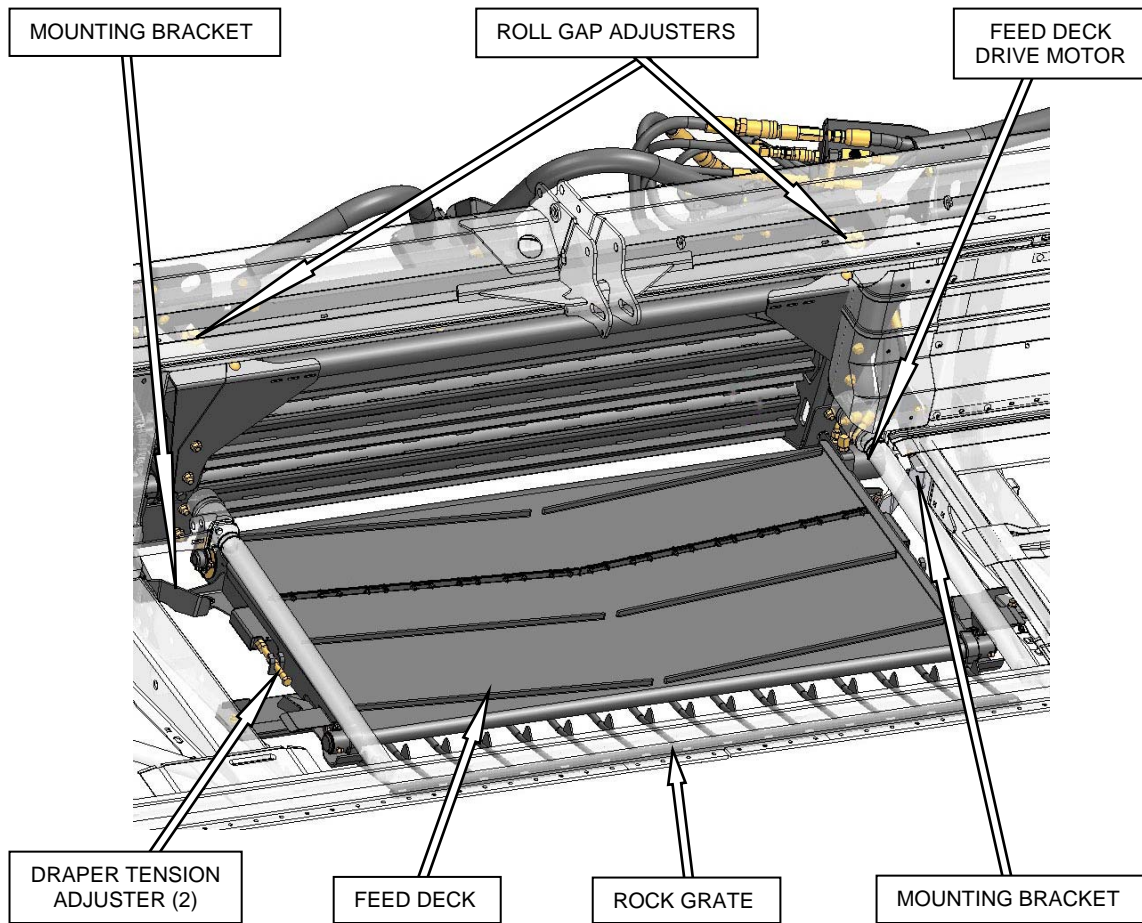
ITEM	DESCRIPTION	PAGE OM-
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1 COMPONENT IDENTIFICATION



SECTION OM – OPERATOR'S MANUAL

COMPONENT IDENTIFICATION *(cont'd)*



SECTION OM – OPERATOR’S MANUAL

2 SPECIFICATIONS

ITEM		SPECIFICATION			
FRAME & STRUCTURE					
Total Weight (estimated)		1,700 lb (770 kg)			
Carrier		MacDon M150, M155, and M200 Self-Propelled Windrowers			
Manual Storage		In Windrower Cab			
DRIVES					
Main Conditioner		3.16 cu in. (51.83 cc) Hydraulic Motor with 1.29 cu in. (21.14 cc) Flow Divider			
Feed Deck		4.0 cu in. (65 cc) Hydraulic Motor with 921 psi Relief			
Connections		Flat Faced Quick Attach Couplers – Connect Under Pressure			
Normal Operating Pressure	Conditioner	2,500-3,000 psi (17.0-20.7 MPa)			
	Feed Deck	600 psi (4.1 MPa)			
CONDITIONER					
Drive		Hydraulic Motor To Belt Driven Roll To Open Timing Gear System			
Roll Type		Intermeshing Steel Bars			
Roll Diameter		9.17 in. (233 mm)/6.63 in. (168.4 mm) OD Tube			
Roll Length		72 in. (1830 mm)			
	Header Size	15 ft	20 ft & 25 ft	30 ft	35 ft
Roll Speed		772-977 rpm	720-874 rpm	695-927 rpm	695-868 rpm
Feed Draper Speed		437-553 fpm	407-495 fpm	393-525 fpm	393-491 fpm
Swath Width		36-102 in. (915-2,540 mm)			
Forming Shields		Header Mounted Tractor Supported Adjustable Forming Shield System			

NOTE: 1. Specifications and design are subject to change without notice or obligation to revise previously sold units.

3 OPERATION

3.1 OWNER/OPERATOR RESPONSIBILITIES



CAUTION

- It is your responsibility to read and understand this manual completely before operating the mower conditioner. Contact your Dealer if an instruction is not clear to you.
- Follow all safety messages in the manual and on safety signs on the machine.
- Remember that YOU are the key to safety. Good safety practices protect you and the people around you.
- Review the manual and all safety related items with all operators annually.
- Be alert for other operators not using recommended procedures or not following safety precautions. Correct these mistakes immediately, before an accident occurs.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- The safety information given in this manual does not replace safety codes, insurance needs, or laws governing your area. Be sure your machine meets the standards set by these regulations.

3.2 OPERATIONAL SAFETY

Follow these safety precautions:



CAUTION

- Follow all safety and operational instructions given in your windrower operator's manual. If you do not have a tractor manual, get one from your dealer and read it thoroughly.
- Never start or move the machine until you are sure all bystanders have cleared the area.
- Stop windrower engine and remove key before adjusting or removing plugged material from the machine. A child or even a pet could engage the drive.
- Check for excessive vibration and unusual noises. If there is any indication of trouble, shut down and inspect the machine. Follow proper shutdown procedure:
 1. Engage windrower brake.
 2. Disengage PTO.
 3. Turn off engine and remove key.
 4. Wait for all movement to stop.
 5. Dismount and close lift cylinder valves before inspecting raised machine.
- Operate only in daylight or good artificial light.

SECTION OM – OPERATOR'S MANUAL

3.3 ATTACHING HAY CONDITIONER

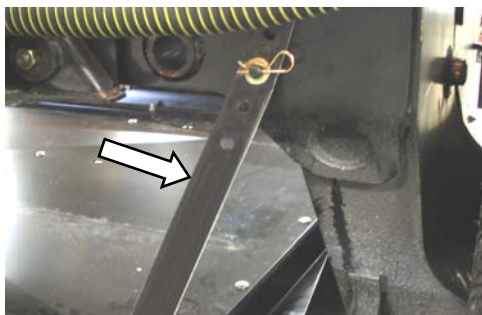
Refer to SECTION UA – UNLOADING AND ASSEMBLY, STEPS 3 to 9 for instructions on installing the HC10 Hay Conditioner and forming shield on your D-Series draper header.

3.4 DETACHING HAY CONDITIONER

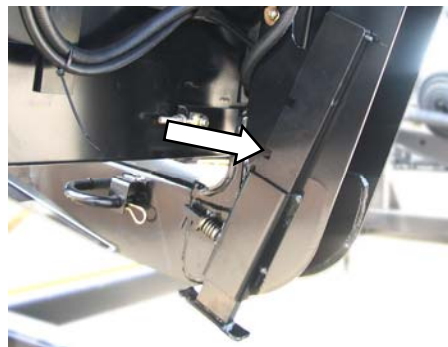


CAUTION

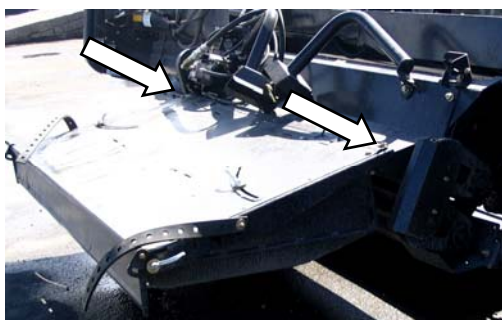
To prevent accidental movement of windrower, shut off engine, engage parking brake, and remove key.



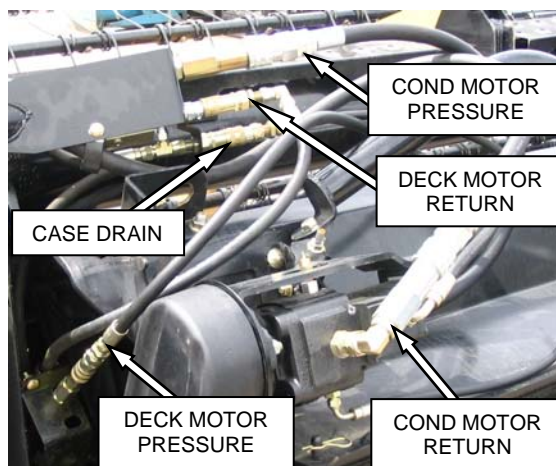
- a. Disconnect straps from tractor frame.



- b. Lower header stand to mid-position.
c. Detach header from windrower. Refer to windrower operator's manual for instructions.



- d. Remove the two lynch pins securing forming shield to header pins and remove the forming shield.

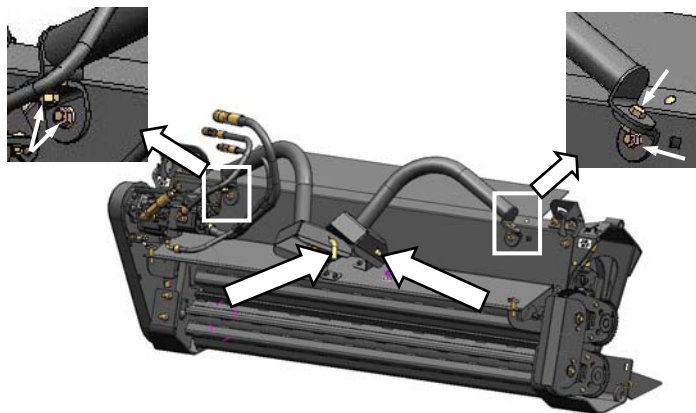


- e. Disconnect the five hydraulic hoses between the conditioner and the header.



- f. Remove the two carriage bolts that attach conditioner to header.

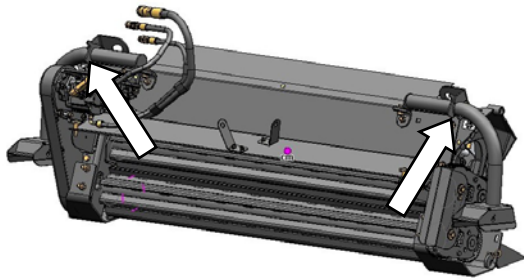
3.4.1 Tractor Method



- a. Hardware at lifting arms has been tightened for shipping. If not done previously, loosen two bolts per side just enough to allow arms to swing out. See insets above
b. Remove L-pins securing lifting arms to conditioner. (Rotate pins to align key-hole slot.)

(continued next page)

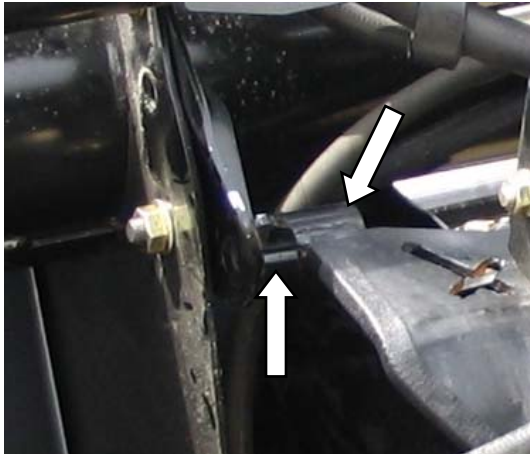
SECTION OM – OPERATOR'S MANUAL



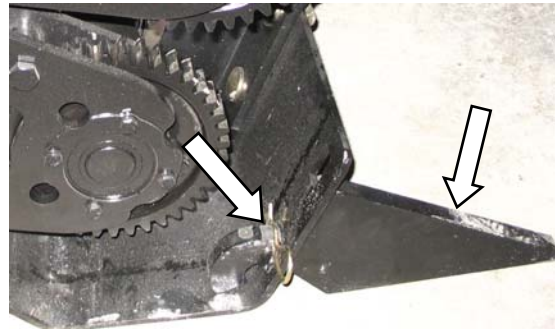
- c. Swing out lift arms and secure in latches.



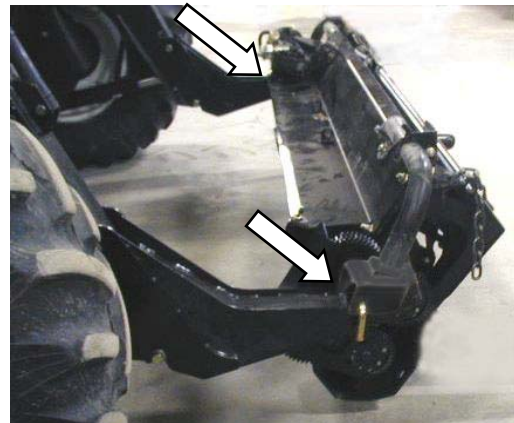
- d. Position the tractor arms in the lift arm pockets and insert the L-pins for safety.



- e. Carefully raise the tractor lift legs until lugs on conditioner clear the u-shaped brackets on header.
f. Slowly back tractor away from header.



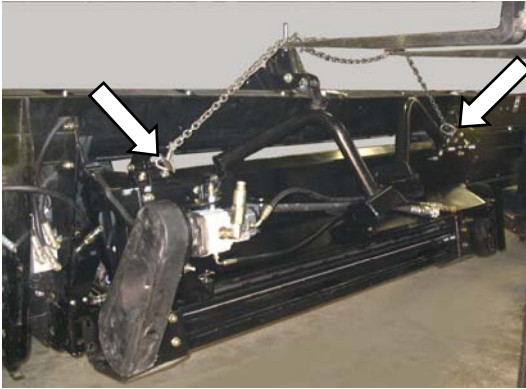
- g. Retrieve stand from tool-box and install in slot at bottom of conditioner base. Secure with hairpin.
h. Lower conditioner to ground.



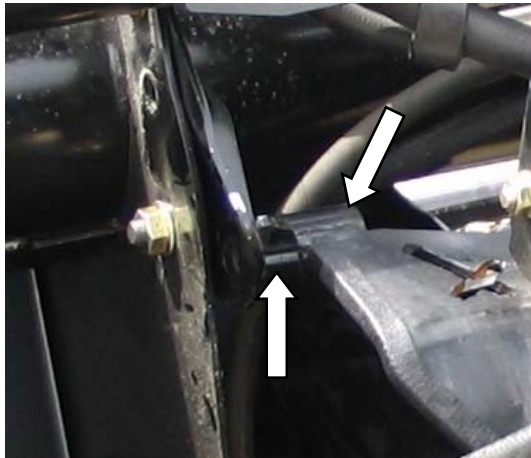
- i. Remove L-pins from lift arms and back tractor away from conditioner.
j. Replace L-pins in conditioner lift arms.

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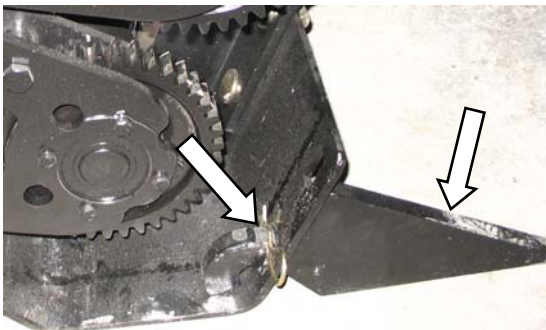
3.4.2 Lifting Method



- a. Attach chain to lifting brackets on conditioner and secure chain to lifting device.



- b. Carefully raise the lifting device until lugs on conditioner clear the u-shaped brackets on header.
- c. Slowly back tractor away from header.

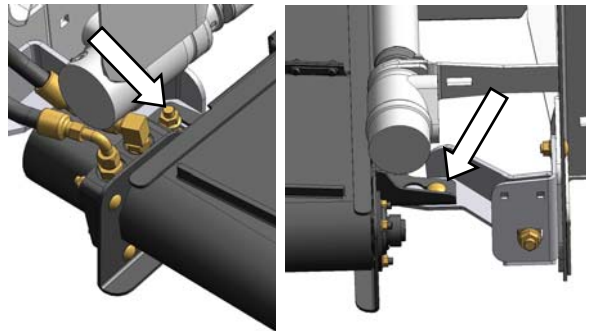


- d. Retrieve stand from tool-box and install in slot at bottom of conditioner base. Secure with hairpin.
- e. Lower conditioner to ground.
- f. Unhook chains.

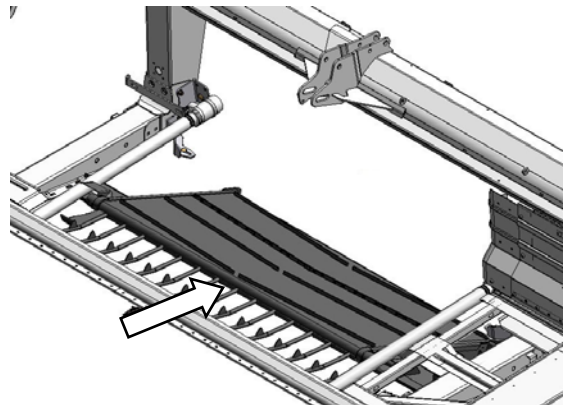
3.5 DETACHING FEED DECK AND ROCK GRATE



- a. Remove the two carriage bolts that attach the hose brace to the header and lay hoses on deck.



- b. Remove the two bolts at the rear of the deck that secure the deck to the header.



- c. Slide deck back slightly until deck mounts clear the header brackets. Lower aft of deck to ground.

(continued next page)

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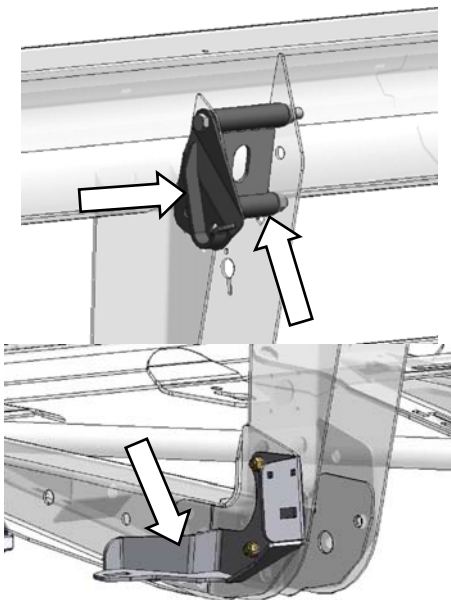
- d. Continue sliding deck back until deck drops free of rock grate. Move deck to storage.



- e. Remove the two bolts attaching rock grate to header legs



- f. Pull rock grate off cutterbar and header legs. Move rock grate to storage.



- g. If necessary, remove the conditioner attachment brackets and spacers from the header legs and store with the feed deck.

3.6 BREAK-IN PERIOD

When operating the hay conditioner for the first time, operate the conditioner slowly for five minutes, watching and listening FROM THE OPERATOR'S SEAT for binding or interfering parts.



CAUTION

Before investigating an unusual sound or attempting to correct a problem, shut off engine, engage parking brake and remove key.

NOTE:

Conditioner will not operate until oil flow fills the lines.

NOTE

Until you become familiar with the sound and feel of your new conditioner, be extra alert and attentive.

- a. Adjust the tension of roll drive belt after a **5 hour** run-in period. Refer to Paragraph 4.7.1, Roll Drive Belt. Continue to check the belt tension periodically for the first 50 hours.
- b. Tighten any loose hardware after the first **5 hours** of operation. Refer to Section G Paragraph 2, Recommended Torques.

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3.7 PRE-SEASON CHECK

Perform the following at the beginning of each operating season:



CAUTION

- Review the Operator's Manual to refresh your memory on safety and operating recommendations.
 - Review all safety signs and other decals on the header and note hazard areas.
 - Be sure all shields and guards are properly installed and secured. Never alter or remove safety equipment.
 - Be sure you understand and have practiced safe use of all controls. Know the capacity and operating characteristics of the machine.
 - Check the first aid kit and fire extinguisher. Know where they are and how to use them.
- a. Adjust tension on drive belt. Refer to Paragraph 4.7.1, Roll Drive Belt.
 - b. Perform all annual maintenance. See Paragraph 4.11, Maintenance Schedule.

3.8 DAILY START UP CHECK

Do the following each day before start-up:



CAUTION

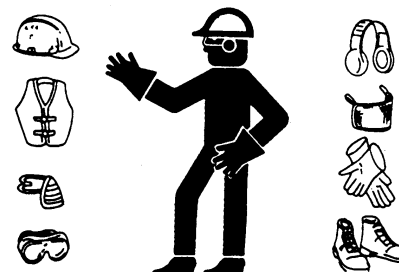
Clear the area of other persons, pets etc. Keep children away from machinery. Walk around the machine to be sure no one is under, on or close to it.

Wear close fitting clothing and protective shoes with slip resistant soles.

Remove foreign objects from the machine and surrounding area.

As well, carry with you any protective clothing and personal safety devices that **COULD** be necessary through the day. Don't take chances.

You may need:



- Hard hat
- Protective glasses or goggles
- Heavy gloves
- Respirator or filter mask
- Wet weather gear
-

Protect against noise. Wear a suitable hearing protective device such as ear muffs or ear plugs to protect against objectionable or uncomfortable loud noises.



- a. Check the machine for leaks or any parts that are missing, broken, or not working correctly.

NOTE:

Use proper procedure when searching for pressurized fluid leaks. Refer to Section 4.5, Hydraulics.

- b. Perform all Daily maintenance. Refer to Section 4.8, Maintenance Schedule.

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3.9 CONDITIONER OPERATION



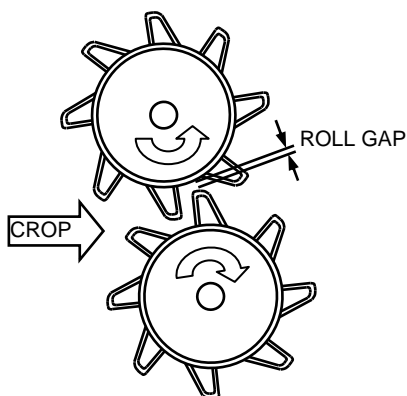
WARNING

- Keep hands and feet away from discharge opening. Keep everyone several hundred feet away from your operation. Never direct the discharge toward anyone. Stones or other foreign objects can be ejected with force.
- To avoid bodily injury or death from unexpected start-up of machine; stop engine, remove key before adjusting rolls.

3.9.1 Roll and Feed Draper Speed

The roll and feed draper speeds change whenever the header knife speed is changed since the drives use the same hydraulic circuit. They cannot be independently adjusted.

3.9.2 Roll Gap



Steel rolls condition the crop by crimping and crushing the stem in several places. This allows moisture release for quicker drying. The degree to which the crop is conditioned as it passes through the rolls is controlled by roll gap. See illustration. The gap is factory set at 0.75 in. (20 mm) or at 1.5 line on gauge. Gauge readings should be the same at both ends of the roll.

Correct conditioning of alfalfa, clover and other legumes is usually indicated when 90% of the stems show cracking, but no more than 5% of the leaves are damaged. Use only enough roll gap to achieve this result.

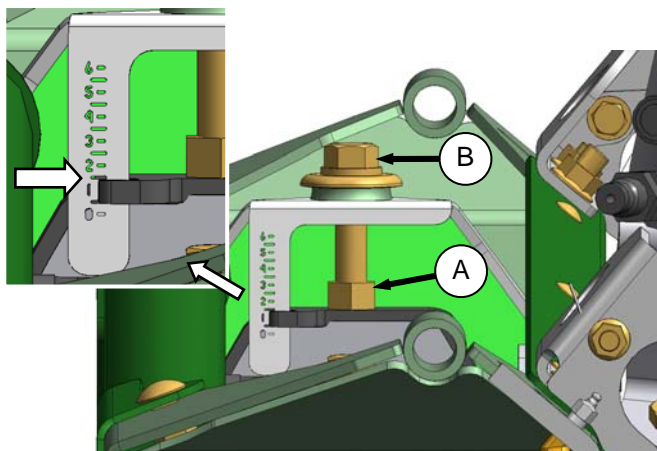
A larger gap (up to 1 inch [25 mm]) may be desirable in thick stemmed cane-type crops; however, too large a gap may cause feeding problems.

Grass type crops may require less gap for proper feeding and conditioning. The intermeshing steel rolls of the hay conditioner crimp the plant stems in several places, allowing moisture release and quicker drying.

- If required, adjust the gap by loosening nut (A) and turning adjuster (B). Retighten nut (A).

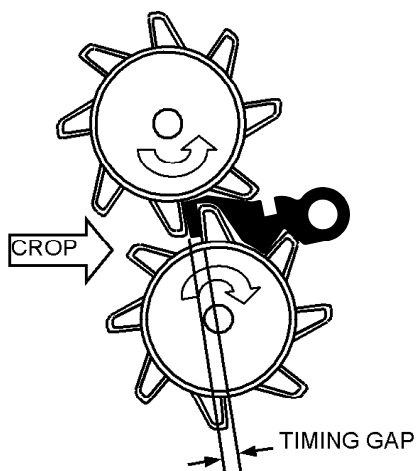
IMPORTANT

When adjusting roll gap, be sure that the gauge reading is the same on both sides of the conditioner roll to achieve consistent intermesh across the rolls.



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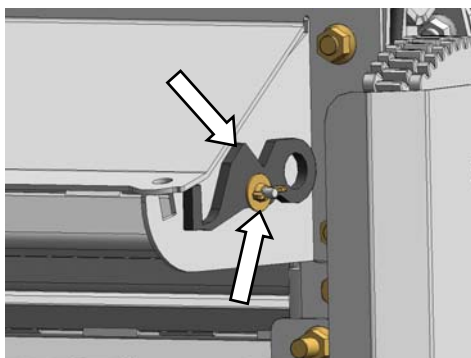
3.9.3 Roll Timing



For proper conditioning, the rolls must be properly timed and aligned with each steel bar on one roll centered between two bars of the other roll as shown. The factory setting should be suitable for most crop conditions.

a. Check roll timing as follows:

1. Lower header to ground, shut down tractor and remove key.



2. Remove wing-nut, and remove tool from panel at RH end of conditioner.



START POSITION

GAUGE POSITION

3. From the rear of the conditioner, locate tool at centre of rolls as shown above right and manually turn rolls to limits of tool. Rolls will engage the tool if timing is correct.

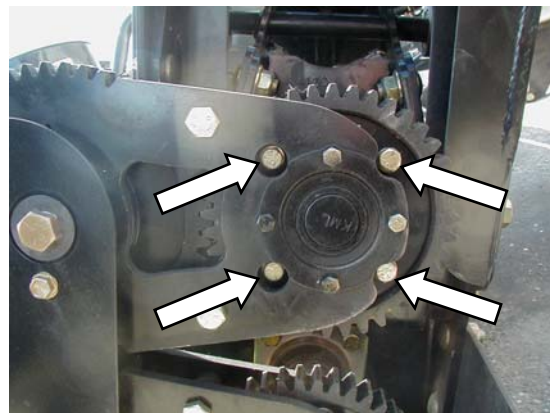
4. Manually turn rolls to release tool.



WARNING

Remove tool from rolls and return it to storage location before starting machine.

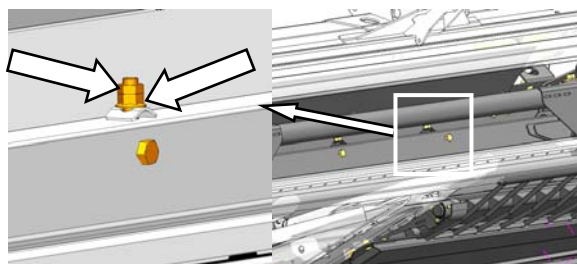
5. Replace tool on conditioner with washer and wing-nut.
- b. If required, adjust roll timing as follows:



1. Loosen the four bolts on one of the small timing gears.
2. Insert tool as described above and allow rolls to adjust to tool.
3. Tighten bolts on timing gear.
4. Return tool to storage position.

3.9.4 Roll Tension

The conditioner roll tension is maintained by two tension springs to provide adequate pressure for correct conditioning of the crop. These springs also allow the rolls to open to allow passage of small solid objects without damage to the rolls. The roll tension has been factory set and should not require adjustment. If adjustment is required, proceed as follows:



- a. Loosen jam nut.
- b. Turn adjusting nut clockwise to increase tension and counterclockwise to decrease tension.
- c. Adjust nuts on both sides equal amounts.
- d. Tighten jam nut.

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3.9.5 Forming Shields



DANGER

Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

The position of the forming shields controls the width and placement of the windrow. The decision on forming shield position (settings between 36 and 92 inches (915 and 2,346 mm)) should be based on the following factors:

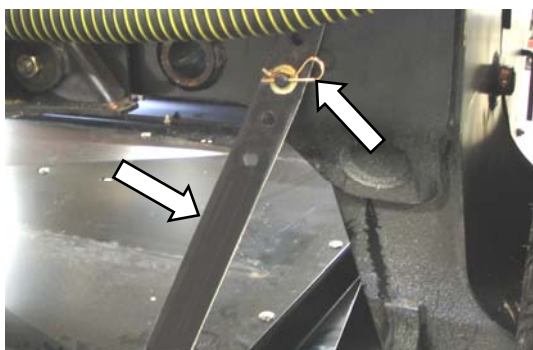
- weather conditions (rain, sun, humidity, wind)
- type and yield of crop
- drying time available
- method of processing (bales, silage, "green-feed")

A wider windrow will generally dry faster and more evenly, resulting in less protein loss. Fast drying is especially important in areas where the weather allows only a few days to cut and bale.

Where weather conditions permit or when drying is not critical, for example, when cutting for silage or "green-feed", a narrower windrow may be preferred for ease of pick-up.

3.9.5.1 Forming Shield Height

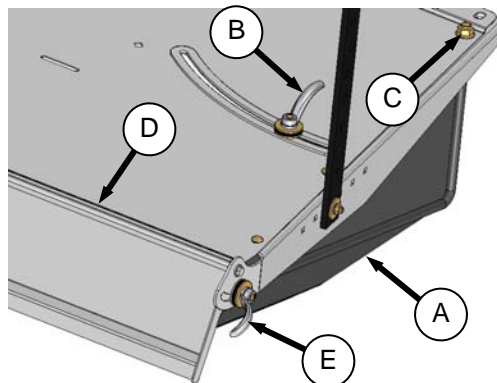
The height of the forming shield affects the shape and consistency of the windrow. A heavy crop will require the forming shield to be set near the highest position and a lighter crop needs the forming shield to be lower. Adjust the forming shield height as follows:



- Remove hairpins securing straps to pins on windrower frame.
- Support aft end of forming shield and relocate straps to the desired hole.
- Secure straps with hairpins.

3.9.5.2 Side Deflectors

The position of the side deflectors controls the width and placement of the windrow.



- Set side deflectors (A) to desired width by loosening handle (B) and moving deflector (A). Tighten handle. Set both deflectors to approximately the same position.

IMPORTANT

To ensure windrow placement is centered with respect to windrower wheels, adjust both side deflectors to the same position. To achieve this setting, adjuster handles must be in the same location on both sides.

- If side deflector attachment is too tight or too loose, tighten or loosen nut (C) as required.

3.9.5.3 Rear Deflector (Fluffer Shield)

The rear deflector (D) slows the crop exiting the conditioner rolls, directs the flow downward, and "fluffs" the material.

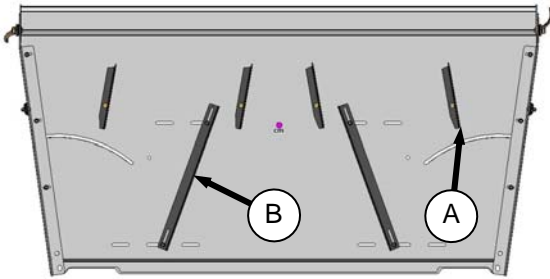
- For more crop control in light material, lower the deflector by pushing down on one side of the deflector and then on the other side. Locking bolts (E) are located at either end of the deflector and may be loosened slightly.
- For heavier crops, raise the deflector by pulling up on one side and then on the other side.

NOTE

For even windrow formation, be sure the deflector is not twisted.

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3.9.5.4 Deflector Fins



Adjustable deflector fins help to provide different swath widths and distribution of crop across the windrow.

Angles for the short fins (A) can be adjusted by loosening mounting bolt(s) and rotating as required. The long fins (B) can be adjusted using the slots in the cover.

Set fins approximately parallel to side deflectors for wide swath and adjust as required for even distribution of crop across full width. For narrow windrow less than 70 inches (1,780 mm) remove fins.

3.9.6 Unplugging the Conditioner

Reverse the header drive. Refer to windrower operator's manual for procedures on reversing the header drive.

3.10 STORAGE

Do the following at the end of each operating season:

- a. Clean the conditioner thoroughly.



CAUTION

Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.

- b. Store in a dry, protected place if possible. If stored outside, always cover conditioner with a waterproof canvas or other protective material.
- c. Repaint all worn or chipped painted surfaces to prevent rust.
- d. Loosen drive belt.
- e. Lubricate the conditioner thoroughly, leaving excess grease on fittings to keep moisture out of bearings. Apply grease to exposed threads, and sliding surfaces of components.
- f. Check for worn components and repair.
- g. Check for broken components and order replacement from your dealer. Attention to these items right away will save time and effort at beginning of next season.
- h. Replace or tighten any missing or loose hardware. Refer to Section G, Paragraph 2, Recommended Torques.

4 MAINTENANCE

The following instructions are provided to assist the operator in the use of the conditioner. Detailed maintenance and service information are contained in the technical manual that is available through your Dealer. A Parts Catalog is included in this manual.

4.1 PREPARATION FOR SERVICING



CAUTION

To avoid personal injury, before servicing conditioner or opening drive covers:

Fully lower the header. If necessary to service in the raised position, always engage lift cylinder stops.

Stop engine and remove key.

Engage park brake.

Wait for all moving parts to stop.

4.2 RECOMMENDED SAFETY PROCEDURES

Park on level surface when possible. Block wheels securely if windrower is parked on an incline.

Follow all recommendations in your windrower operator's manual.

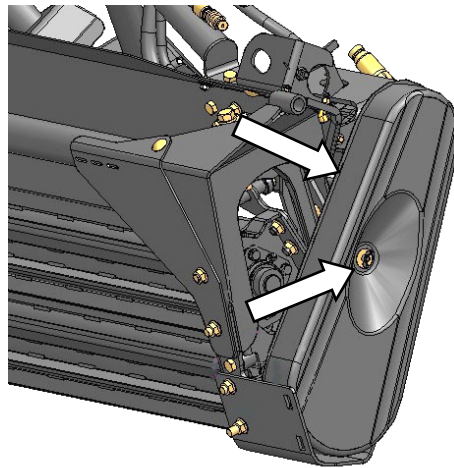
Follow all safety procedures in Section G, Paragraph 1, Safety Instructions.

4.3 DRIVE SHIELDS AND COVERS



CAUTION

- Keep all shields in place. Never alter or remove safety equipment.
- Do not operate machine with shield removed.



- To remove shield, undo wing-nut and remove washer.
- Pull shield off conditioner.
- To install shield, position shield over drive pulleys and secure with washer and wing-nut.

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4.4 LUBRICATING THE HEADER



CAUTION

To avoid personal injury, before servicing header or opening drive covers, follow procedures in Section 4.1, Preparation for Servicing.

4.4.1 Lubricants

LUBRICANT	SPEC	DESCRIPTION	USE
Grease	SAE Multi-Purpose.	High Temp. Extreme Pressure (EP). 0-1% Max Molybdenum Disulphide (NLGI Grade 2). Lithium Complex Base. Base Oil Viscosity of 190-250 CST @ 40C.	As Required Unless Otherwise Specified.

4.4.2 Lubricant Storage

- Your machine can operate at top efficiency only if clean lubricants are used.
- Use clean containers to handle all lubricants.
- Store in an area protected from dust, moisture, and other contaminants.

4.4.3 Greasing Requirements

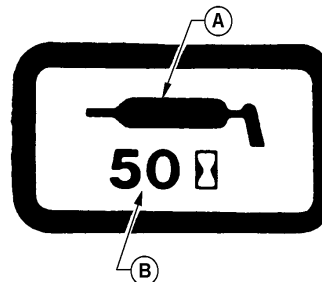
4.4.3.1 Procedure

- Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
- Inject grease through fitting with grease gun until grease overflows fitting, except where noted.
- Leave excess grease on fitting to keep out dirt.
- Replace any loose or broken fittings immediately.
- If fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

4.4.3.2 Lubrication Points

Greasing points that have greasing intervals of 50 hours or less are marked on the machine by decals showing a grease gun (A), and grease interval (B) in hours of operation.

Log hours of operation and use the



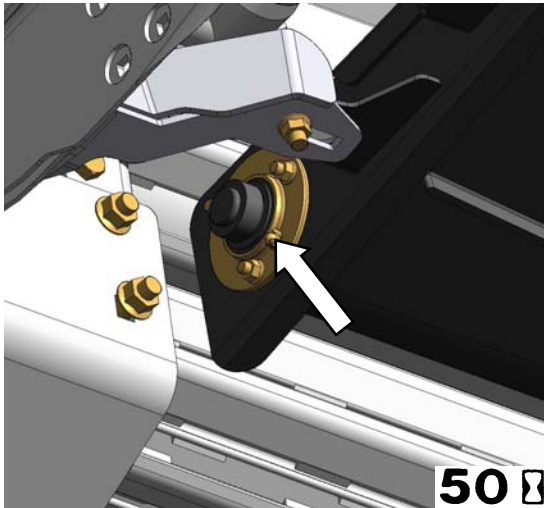
SAMPLE GREASE DECAL

"Maintenance Checklist" provided to keep a record of scheduled maintenance. Refer to Paragraph 4.11, Maintenance Schedule.

Refer to the illustrations on the following pages for identifying the various locations that require lubrication.

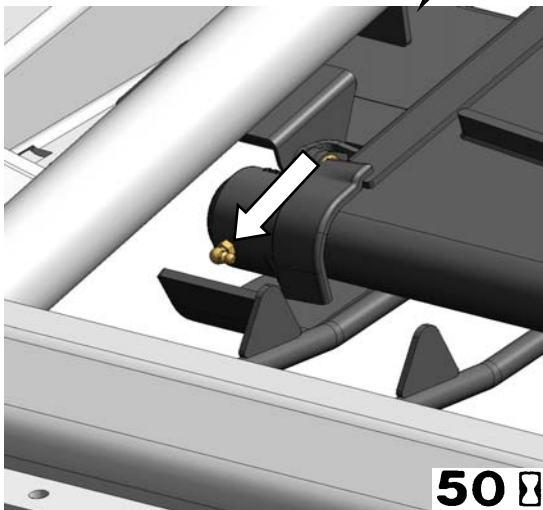
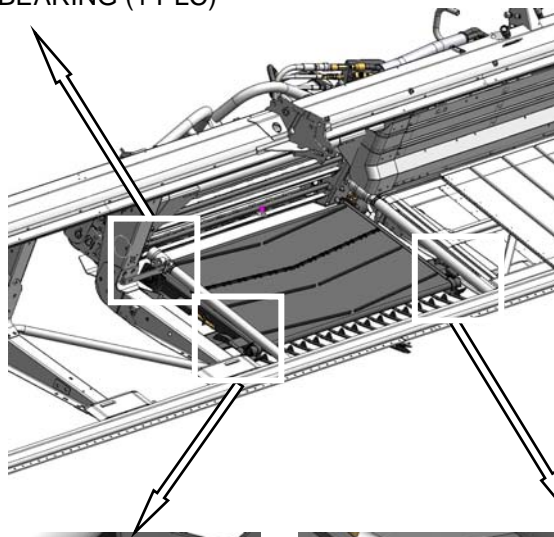
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4.4.3 Greasing (Cont'd)

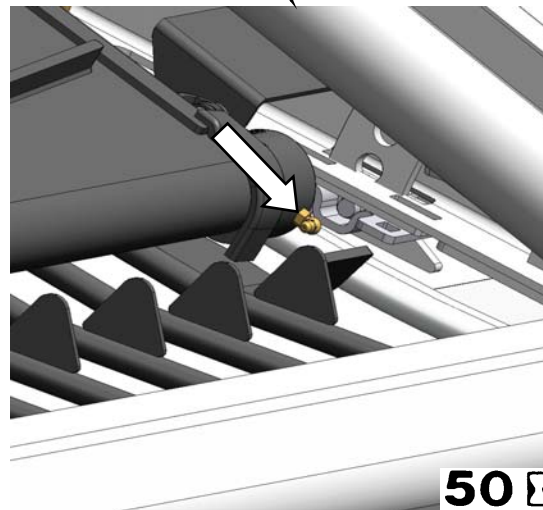


DRIVE ROLLER BEARING (1 PLC)

High Temp. Extreme Pressure
(EP2) Performance With 1%
Max Molybdenum Disulphide
(NLGI Grade 2).Lithium Base



IDLER ROLLER BEARING (1 PLC)

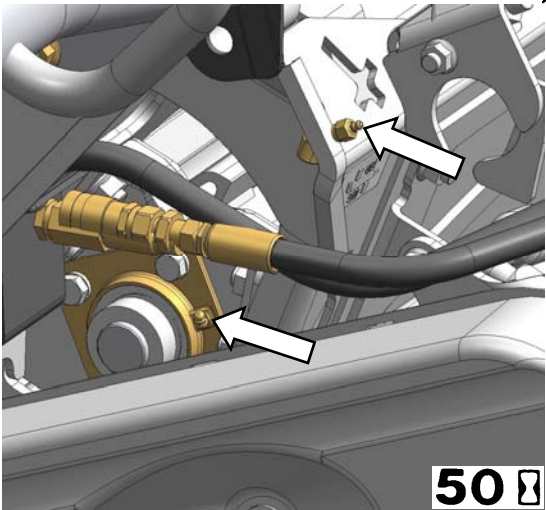
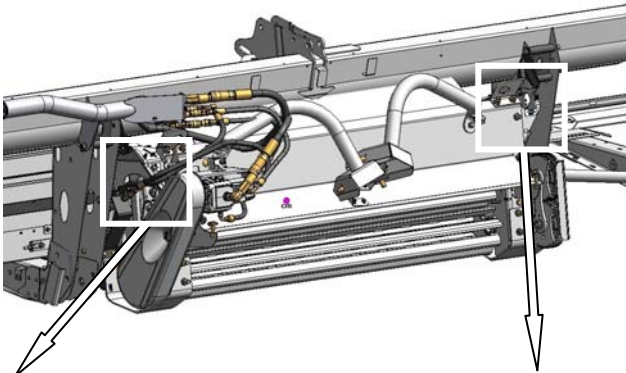



IDLER ROLLER BEARING (1 PLC)

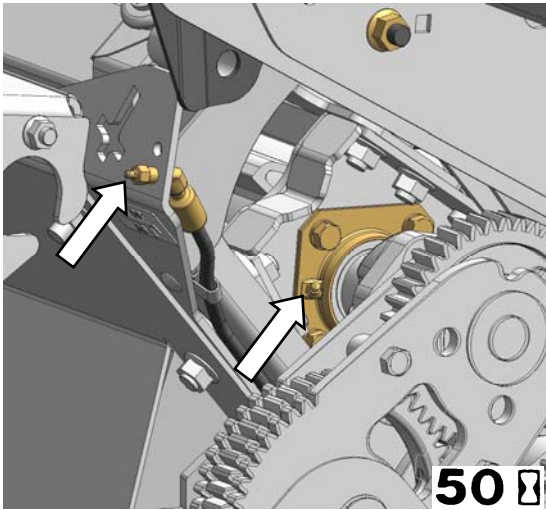
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4.4.3 Greasing (Cont'd)

High Temp. Extreme Pressure
(EP2) Performance With 1%
Max Molybdenum Disulphide
(NLGI Grade 2).Lithium Base



ROLL SHAFT BEARINGS (2 PLCS)



ROLL SHAFT BEARINGS (2 PLCS)

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4.5 HYDRAULICS

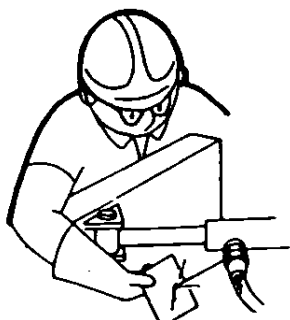
4.5.1 HOSES AND LINES

Check hydraulic hoses and lines daily for signs of leaks.



WARNING

- Avoid high-pressure fluids. Escaping fluid can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure. Keep hands and body away from pin-holes and nozzles which eject fluids under high pressure.
- If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.



- Use a piece of cardboard or paper to search for leaks.

IMPORTANT

Keep hydraulic coupler tips and connectors clean. Dust, dirt, water and foreign material are the major causes of hydraulic system damage. DO NOT attempt to service hydraulic system in the field. Precision fits require WHITE ROOM CARE during overhaul.

4.6 FEED DRAPER

Feed draper tension should be just enough to prevent slipping and keep draper from sagging below cutterbar. Set draper tension as follows:



DANGER

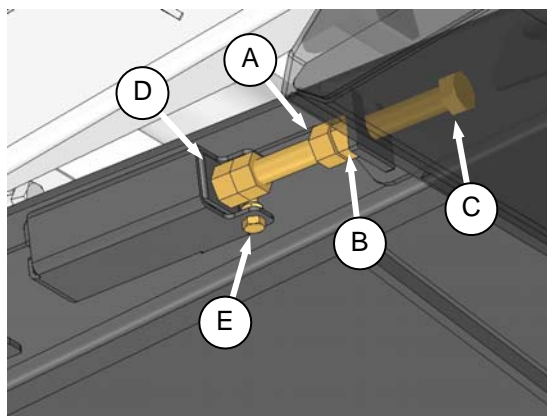
To avoid bodily injury or death from fall of raised machine, always engage lift cylinder stops before going under header for any reason. See your windrower operator's manual for instructions for use of header lift cylinder stops.



CAUTION

Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

- a. Raise header fully, stop engine, and remove key. Engage header lift cylinder stops.
- b. Check that draper guide (rubber track on under-side of draper) is properly engaged in groove of drive roller and that idler roller is between the guides.



- c. Loosen jam nut (A).
- d. Hold nut (B) with a wrench and turn bolt (C) clockwise to increase tension and counterclockwise to decrease tension.
- e. Correct tension is when retainer (D) is flush with spring holder, and bolt (E) is free.
- f. Tighten jam nut (A).
- g. Perform equal adjustment on both sides of draper.

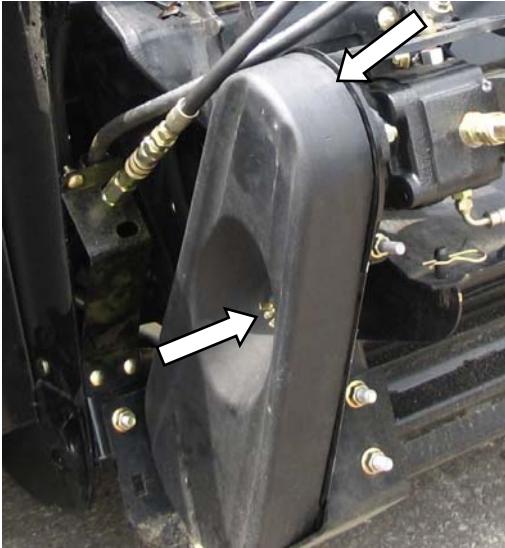
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4.7 ROLL DRIVE BELT



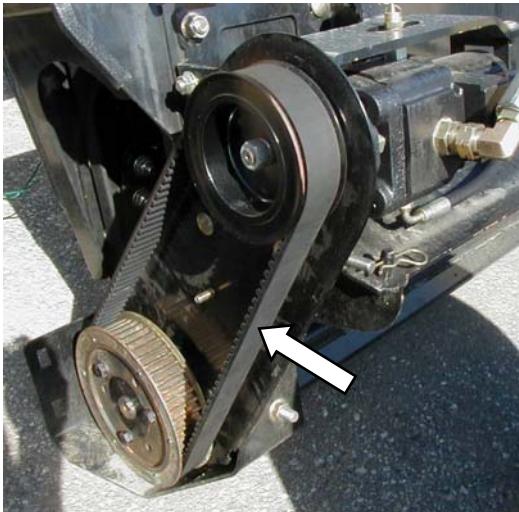
DANGER

Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.



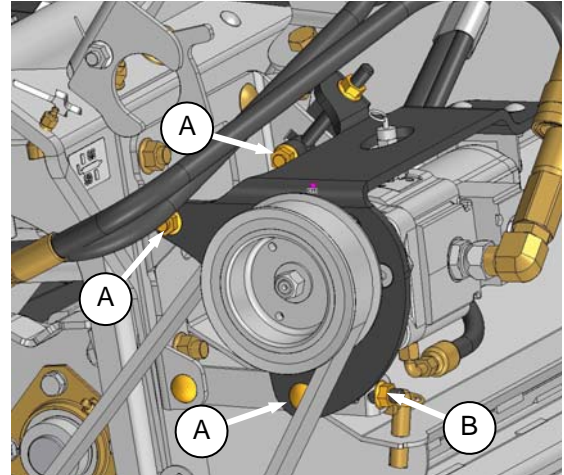
- a. Remove wing-nut and washer and remove drive cover.

4.7.1 Tension Adjustment



- a. Belt should deflect 1/4 inch (7 mm) when a force of 8–16 lbf (36–72 N) is applied at the center of the span.

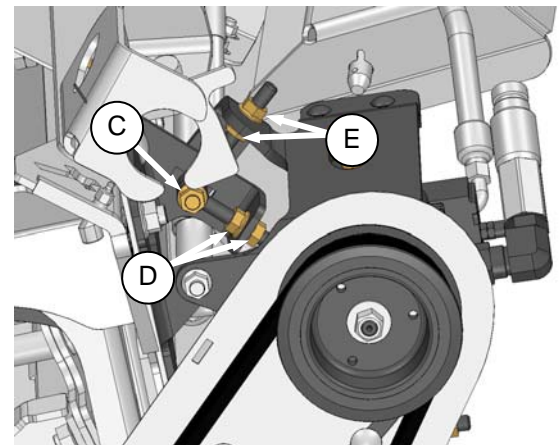
- b. If necessary adjust tension as follows:



1. Loosen three motor mount bolts (A).
2. Turn tensioning nut (B) clockwise to tighten belt and counterclockwise to loosen.
3. Tighten the three motor mount bolts.
4. Re-check the tension.
5. Replace cover and secure with washer and wing-nut.

4.7.2 Pulley Alignment

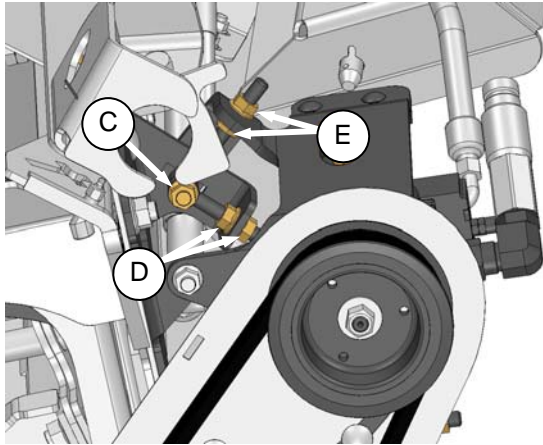
Pulleys should be aligned so that the belt tracks properly. If necessary, adjust as follows:



- a. Loosen nut (C).
- b. Adjust nuts (D) to align the drive pulley horizontally.
- c. Adjust nuts (E) to align the drive pulley vertically.
- d. Tighten nut (C).
- e. Replace cover and secure with washer and wing-nut.

4.7.3 Belt Tracking

Proper tracking of the belt ensures that there is no rubbing of the belt on either pulley. If necessary, adjust as follows:



- a. Check that the pulleys are aligned and adjust as necessary. Refer to previous paragraph.
- b. After running the conditioner, check for evidence of belt rubbing on either pulley. If necessary, adjust tracking as follows:
 1. Loosen nut (C).
 2. If belt is tracking to the outside of the pulley, turn jam nuts (E) clockwise.
 3. If belt is tracking to the inside of the pulley, turn jam nuts (E) counterclockwise.
 4. Tighten nut (C).
 5. Replace cover and secure with washer and wing-nut.

4.7.4 Replace Drive Belt

- a. Loosen belt as described in Paragraph 4.7.1 Tension Adjustment so that belt can be slipped off pulleys.
- b. Install new belt.
- c. Tension belt as described in Paragraph 4.7.1 Tension Adjustment.

NOTE

When installing new belt, never pry belt over pulley. Be sure adjusting device is fully loosened, then tension belt.

- d. Replace cover and secure with washer and wing-nut.
- e. Re-adjust tension of a new belt after a short run-in period, (about 5 hours).

SECTION OM – OPERATOR’S MANUAL

4.8 MAINTENANCE SCHEDULE

The following maintenance schedule is a listing of periodic maintenance procedures, organized by service intervals. Regular maintenance is the best insurance against early wear and untimely breakdowns. Following this schedule will increase machine life. For detailed instructions, refer to the specific headings in this manual. Use the lubricant specified in Paragraph 4.4.1, Lubricants.

Service Intervals: The recommended service intervals are in hours of operation. Where a service interval is given in more than one time frame, e.g., "100 hours or Annually", service the machine at whichever interval is reached first.

IMPORTANT

Recommended intervals are for average conditions. Service the machine more often if operated under adverse conditions (severe dust, extra heavy loads, etc.).



CAUTION

Carefully follow safety messages given under Paragraph 4.1 Preparation for Servicing, and Paragraph 4.2 Recommended Safety Procedures.

INTERVAL	SERVICE
FIRST USE	Refer To Paragraph 3.6 BREAK-IN PERIOD.
10 HOURS OR DAILY	Check Hydraulic Hoses and Lines.
50 HOURS	Grease Roll Shaft Bearings. Grease Feed Deck Drive and Idler Roller Bearings.
100 HOURS OR ANNUALLY *	Check Roll Drive Belt Tension.
END OF SEASON	Refer To Paragraph 3.10 STORAGE.

* IT IS RECOMMENDED THAT ANNUAL MAINTENANCE BE DONE PRIOR TO START OF OPERATING SEASON.

SECTION OM – OPERATOR’S MANUAL

MAINTENANCE RECORD	ACTION:	✓ - Check	⬮ - Lubricate								▲ - Change															
	Hour Meter Reading																									
	Date																									
	Serviced By																									
	FIRST USE	Refer to Paragraph 3.6, BREAK-IN PERIOD for checklist.																								
	10 HOURS OR DAILY	NOTE: A RECORD OF DAILY MAINTENANCE IS NOT NORMALLY REQUIRED BUT IS AT THE OWNER/OPERATOR'S DISCRETION.																								
✓	Hydraulic Hoses & Lines																									
	50 HOURS																									
⬮	Roll Shaft Bearings																									
⬮	Feed Deck Roller Bearings																									
	100 HOURS OR ANNUALLY																									
✓	Roll Drive Belt Tension																									

SECTION OM – OPERATOR’S MANUAL

5 TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION	PARA-GRAPH
Hay Conditioner Rolls Will Not Turn.	Obstruction Or Wad In Conditioner Rolls.	Turn Mechanism In Reverse And Remove Wad.	3.9.6
	Drive Belt Broken.	Replace Drive Belt.	4.7.4
	Drive Belt Too Loose.	Tighten Or Replace Conditioner Drive Belt.	4.7.4
Over-Conditioning Of Crop	Roll Gap Too Small.	Increase Roll Gap.	3.9.2
	Roll Timing Off.	Adjust Roll Timing.	3.9.3
Under-Conditioning Of Crop	Roll Gap Too Large.	Reduce Roll Gap.	3.9.2
	Roll Timing Off.	Adjust Roll Timing.	3.9.3
Windrow Too Wide	Forming Shield Side Deflector Too Far Apart.	Position Deflectors Closer Together.	3.9.5.2
Windrow Too Narrow	Forming Shield Side Deflector Too Close Together.	Position Deflectors Farther Apart.	3.9.5.2
	Deflector Fins Inside Forming Shield Improperly Adjusted.	Adjust Fins.	3.9.5.4
Windrow Uneven	Forming Shield Too Low.	Raise Forming Shield.	3.9.5.1
	Deflector Fins Inside Forming Shield Improperly Adjusted.	Adjust Fins.	3.9.5.4
	Inadequate overlap of side drapers and feed deck.	Adjust overlap	UA Step 6
Windrow Lacks Shape	Forming Shield Too High.	Lower Forming Shield.	3.9.5.1
	Deflector Fins Inside Forming Shield Improperly Adjusted.	Adjust Fins.	3.9.5.4
Feed Draper Not Tracking Properly	Feed Draper Tensioners Improperly Adjusted.	Check Feed Draper Tension And Adjust Accordingly.	4.6
Side Draper Backfeeding	Inadequate overlap of side drapers and feed deck.	Adjust overlap	UA Step 6

SECTION PC – PARTS CATALOG

Section Contents

ITEM	DESCRIPTION	PAGE PC-
1	BASE CONDITIONER	2
1.1	LOWER ROLL & FRAME ASSEMBLY	2
1.2	UPPER ROLL ASSEMBLY	4
1.3	COVER & SUPPORTS	6
1.4	HYDRAULIC MOTOR, MOUNTS & TENSIONER	8
	BELT DRIVE AND SHIELD	10
1.5	HYDRAULIC COMPLETION PACKAGE	12
1.6	GEARS & ROLL COUPLING ASSEMBLY	14
2	FORMING SHIELDS	16
3	FEED DECK AND PAN	18
4	MOUNTING BRACKETS	22
5	NUMERICAL LISTING	24

SECTION PC – PARTS CATALOG

ABBREVIATIONS

LH - Left Hand (determined from operator's position, facing forward.)
RH - Right Hand
I.D. - Inside Diameter
O.D. - Outside Diameter
A/R - As Required (quantity varies)
REF - Reference, part number called up elsewhere in catalog
NC - National Coarse Thread
NF - National Fine Thread
NSS - Not Serviced Separately
OPT - Optional
S.P. - Self-Propelled Header
P.T. - Pull Type Header

NOTE: Common hardware is illustrated and alphabetic references are used to designate description of these items.

When ordering, be sure the complete and proper serial number is given.
Some parts vary with header size; be sure you are ordering the correct part number for your unit.

SERIAL NUMBER BREAKS

The side of the serial number on which the dash (-) appears determines whether the part is used "up to" or "after" the serial number given.

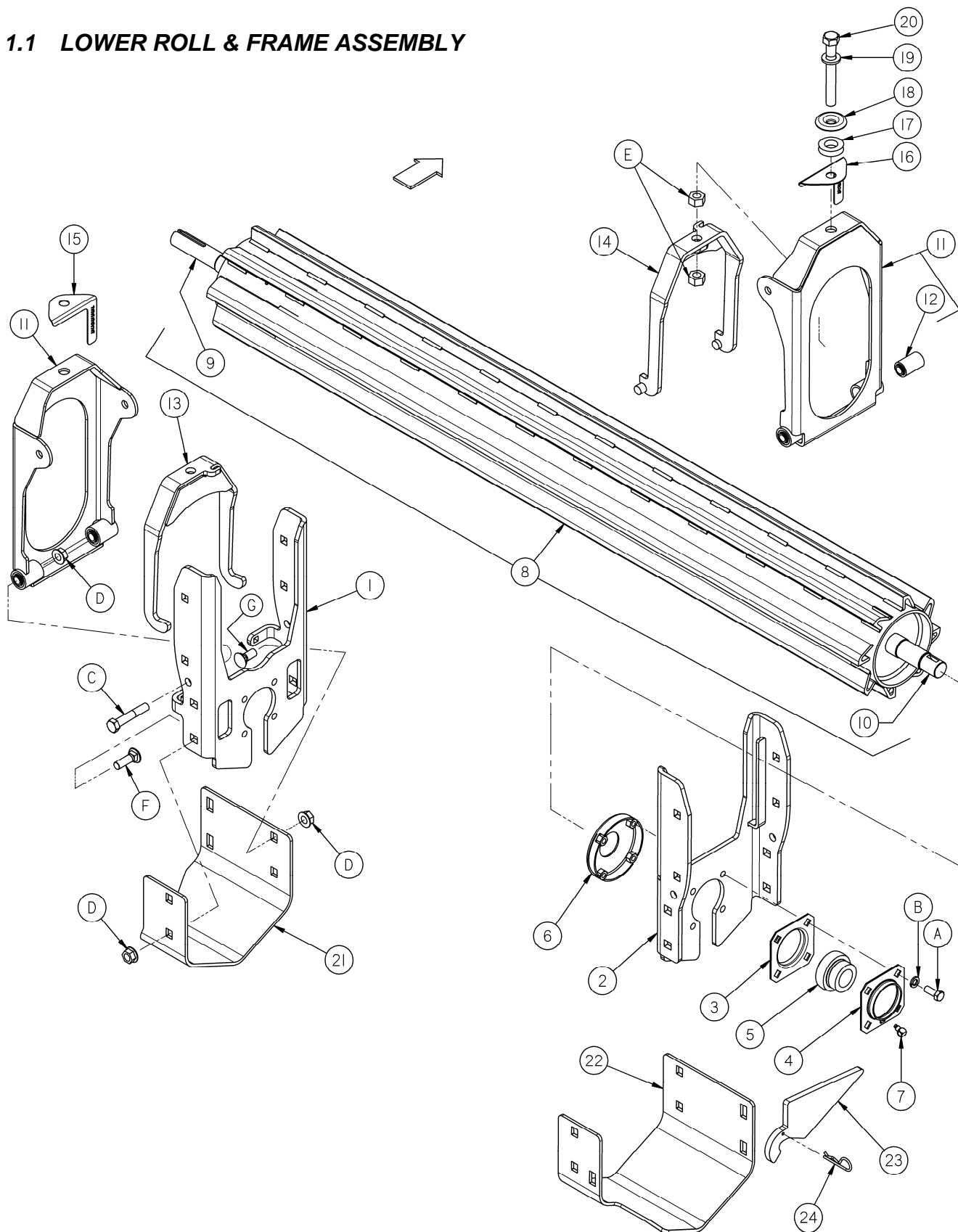
Example: -162249 Used on machines up to and including serial number 166249.
 166250- Used on machines including and after serial number 166250

BOLDED PART NUMBERS INDICATE REVISIONS OR ADDITIONS SINCE LAST MANUAL REVISION.
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SECTION PC – PARTS CATALOG

1 BASE CONDITIONER

1.1 LOWER ROLL & FRAME ASSEMBLY



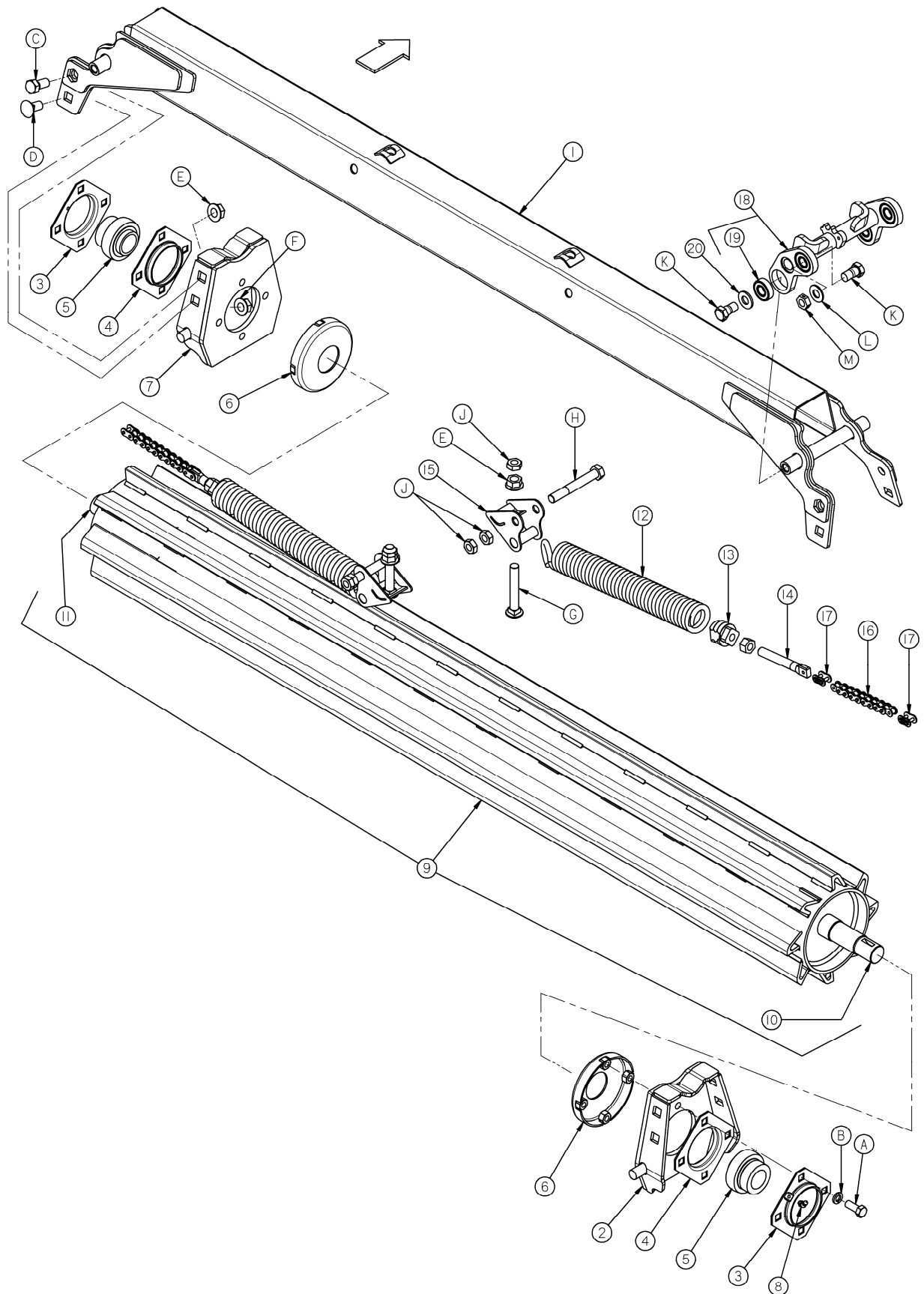
SECTION PC – PARTS CATALOG

LOWER ROLL & FRAME ASSEMBLY (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159117	SUPPORT-LH	1	
2	159118	FRAME-RH LOWER WELDT	1	
3	30576	FLANGE	2	
4	50182	FLANGE	2	
5	30031	BEARING - SPH OD CW COLLAR 1.5 IN BORE.....	2	
6	101173	DISC WELDT	2	
7	50187	FITTING - LUBE 90° ADAPTER, see Note 1 below	2	
8	130445	ROLL-LOWER WELDT	1	
9	130704	SHAFT SPINDLE – L/H LOWER ROLL (WELDED).....	1	
10	130449	SHAFT SPINDLE – R/H LOWER ROLL (WELDED)	1	
11	130476	CHANNEL - PIVOT C/W BUSHINGS	2	
12	13626	BUSHING – RUBBER.....	4	
13	130443	BRACKET- LH ADJUSTER WELDT	1	
14	130336	BRACKET- RH ADJUSTER WELDT	1	
15	130990	GAUGE-LH ROLL OPENING	1	
16	130994	GAUGE-RH,ROLL OPENING	1	
17	47124	WASHER- RUBBER	2	
18	130532	WASHER-FORMED.....	2	
19	21540	WASHER – HARDENED	2	
20	135405	BOLT-HH (MIN THD) 3/4 NC X 6.0 LG GR 5 ZP	2	
21	159404	SKID – LH, CONDITIONER	1	
22	159405	SKID – RH, CONDITIONER	1	
23	159352	SUPPORT	1	
24	13125	PIN – HAIR.....	1	
A	21491	BOLT - HH 1/2 NC X 1.25 LG GR 5 ZP		
B	18638	WASHER - REG. LOCK 1/2 IN. NOM. ID ZP		
C	21406	BOLT - HH 5/8 NC X 3.5 GR 5 ZP		
D	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
E	18593	NUT - HEX 3/4 - 10 UNC GR 5 ZP		
F	18524	BOLT – RHSN, 5/8 NC x 2.0 LG GR 5 ZP		
G	18523	BOLT – RHSN, 5/8 NC x 1.5 LG GR 5 ZP		
NOTES: 1.		See "Cover & Supports" for lube lines.		

SECTION PC – PARTS CATALOG

1.2 UPPER ROLL ASSEMBLY

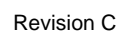


SECTION PC – PARTS CATALOG

UPPER ROLL ASSEMBLY (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	130470	CHANNEL-CROSS WELDT	1	
2	130793	SUPPORT-RH WELDT	1	
3	50182	FLANGE	2	
4	30576	FLANGE	2	
5	30031	BEARING - SPH OD CW COLLAR 1.5 IN BORE.....	2	
6	101173	DISC WELDT	2	
7	130472	SUPPORT-LH WELDT.....	1	
8	21301	FITTING – LUBRICATION	2	
9	159187	ROLL-UPPER WELDMENT.....	1	
10	130449	SPINDLE-R/H (WELDED).....	1	
11	170332	SHAFT-STUB, LH (WELDED)	1	
12	130744	SPRING.....	2	
13	34019	INSERT- MACH	2	
14	130527	STUD-THREADED.....	2	
15	130747	LEVER WELDT	2	
16	130645	CHAIN-#50 WO CONN (9 PITCHES).....	2	
17	6634	LINK-CONNECTOR #50.....	4	
18	130450	TOGGLE ASSEMBLY C/W BEARIINGS	2	
19	50185	BEARING – BALL CYL OD 17 MM BORE.....	8	
20	30441	WASHER – HARDENED	4	
A	21491	BOLT - HH 1/2 NC X 1.25 LG GR 5 ZP		
B	18638	WASHER - REG. LOCK 1/2 IN. NOM. ID ZP		
C	21585	BOLT - HH 5/8 NC X 1.25 LG GR5 ZP		
D	103562	BOLT - RHSN 5/8 NC X 1.25 GR 5 ZP		
E	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
F	18592	NUT - HEX 5/8 - 11 UNC GR 5 ZP		
G	102658	BOLT- RHSN 5/8 NC X 4 TFL GR 5 ZP		
H	21720	BOLT - HH 5/8 NC X 4.5 LG GR5 ZP		
J	21941	NUT- HEX LOCK JAM (DIST THD) 5/8-11 UNC GR 5 ZP		
K	105141	BOLT – LOCKING SHOULDER		
L	18600	WASHER – SAE FLAT, 21/32 ID X 1-5/16 OD ZP		
M	105173	NUT – HEX JAM, CENTER LOCK		

1.3 COVER & SUPPORTS



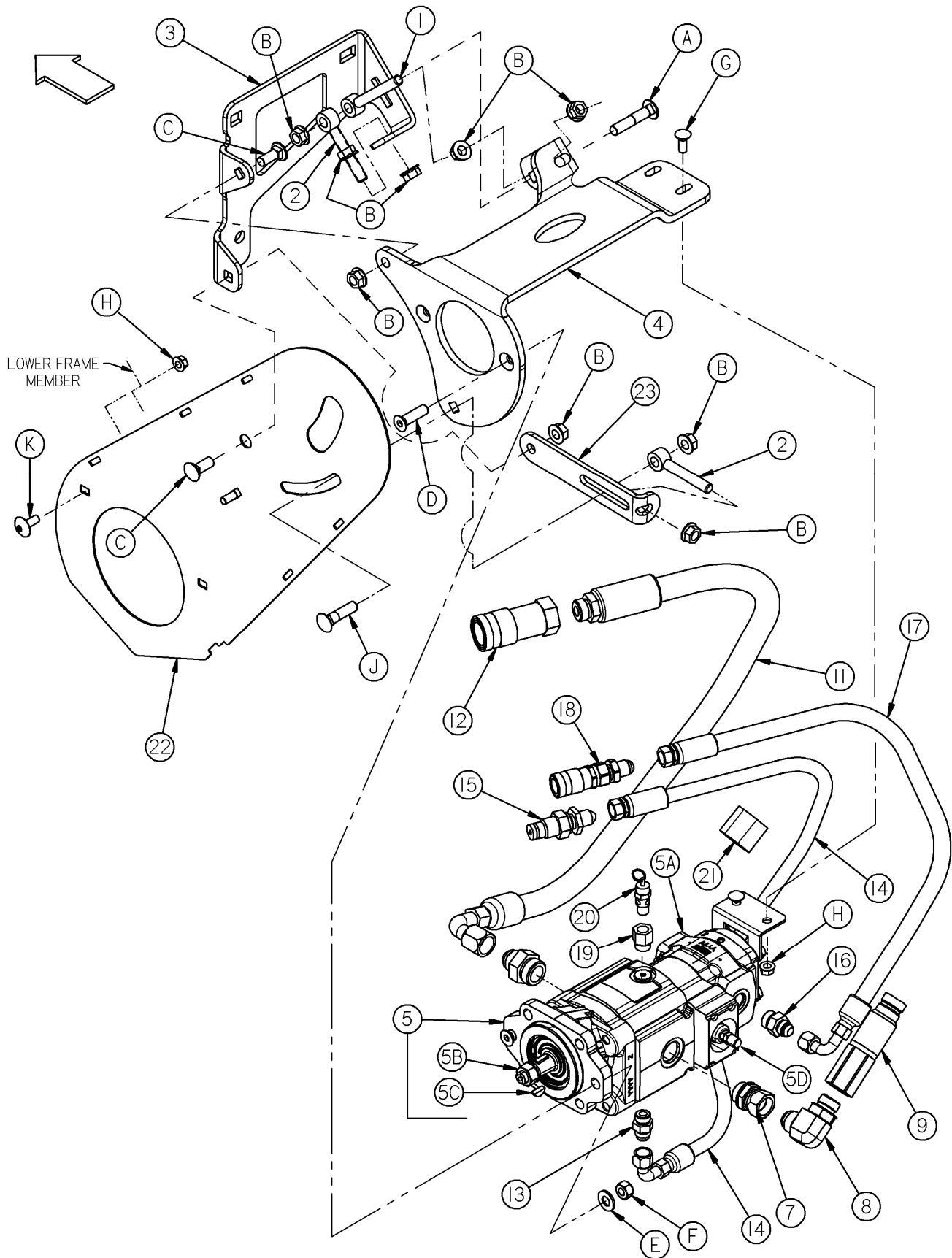
SECTION PC – PARTS CATALOG

COVER & SUPPORTS (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159231	SUPPORT WELDT-LH	1	
2	159582	SUPPORT WELDT – RH	1	
3	159200	COVER-TOP REAR WELDT	1	
4	130496	TUBE-CROSS WELDT	1	
5	159003	LATCH-WELDT LH	1	
6	159001	LATCH.....	2	
7	159020	SPRING-TORSION	1	
8	159005	SPACER-3/4 IN.OD X .120 WALL X 12 LONG, stepped	2	
9	159007	LATCH-WELDT RH.....	1	
10	144505	SPRING-TORSION	1	
11	130757	SUPPORT-HYD MOTOR.....	1	
12	130858	ANGLE	2	
13	159329	SUPPORT-WELDT,LIFT ARM LH	1	
14	159333	SUPPORT-WELDT,LIFT ARM RH	1	
15	144415	ASSY-L-PIN - includes item 16	2	
16	16010	PIN-SPRING 3/16 DIA X 1.0 LG	2	
17	159002	ANGLE	2	
18	102264	PIN - LYNCH 3/16 X 1 9/16 IN.....	2	
19	112871	MOULDING-FRAME (UNIGRIP).....	1	
20	23165	DECAL - 50 HR LUBE.....	2	
21	50188	FITTING - LUBRICATION 1/8 NPT FEMALE	2	
22	115677	FITTING - ELBOW 45° HYD	2	
23	159583	HOSE - GREASE - 1/8" NPT	2	
24	135232	CLAMP - DOUBLE HOSE INSULATED	2	
25	156815	COVER - POLY.....	1	
26	19685	WASHER – FLAT.....	4	
27	150572	PLATE - ROLL TIMING GAUGE.....	1	
A	18524	BOLT - RHSN 5/8 NC X 2.0 LG GR 5 ZP		
B	18523	BOLT - RHSN 5/8 NC X 1.5 GR 5 ZP		
C	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
D	18599	WASHER - SAE FLAT 17/32 ID X 1 1/16 IN OD ZP		
E	18723	BOLT - HH 1/2 NC X 1.5 LG TFL GR 5 ZP		
F	50186	NUT - FLANGE LOCK SM FACE DT 0.500-13UNC GR5		
G	21471	BOLT - RHSN 1/2 NC X 1.25 GR 5 ZP		
H	21585	BOLT - HH 5/8 NC X 1.25 LG GR5 ZP		
J	21863	BOLT-RHSSN 3/8 NC X 0.75 LG GR 5 ZP		
K	30228	NUT - FLANGE DT SMOOTH FACE 0.375-16UNC		
L	21289	NUT-WING TYPE A 3/8 NC ZP		

SECTION PC – PARTS CATALOG

1.4 HYDRAULIC MOTOR, MOUNTS & TENSIONER



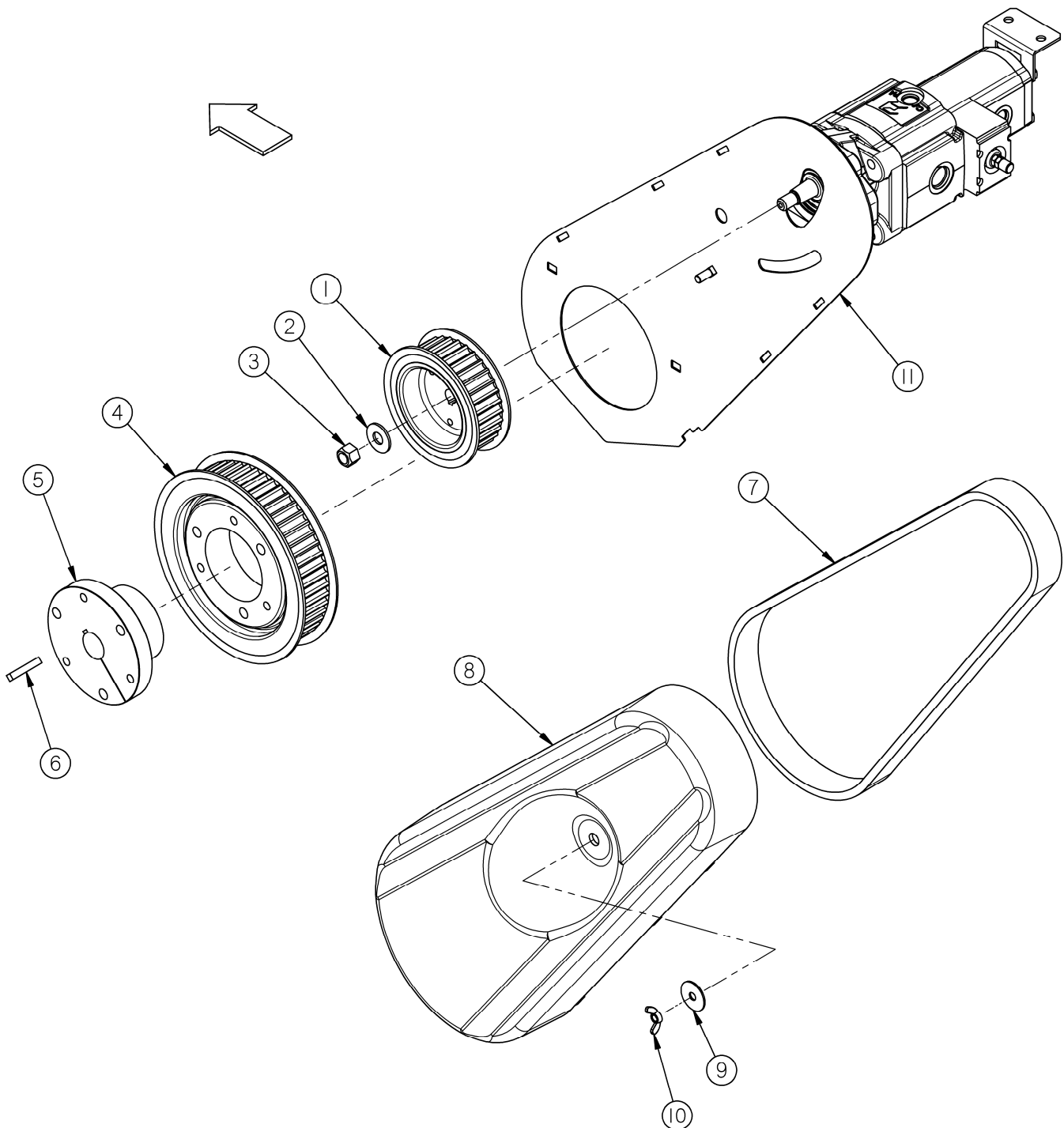
SECTION PC – PARTS CATALOG

HYDRAULIC MOTOR, MOUNTS & TENSIONER (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159452	BOLT WELDT-EYE	1	
2	130765	BOLT WELDT-EYE	2	
3	130757	SUPPORT-HYD MOTOR	1	
4	133965	SUPPORT - CASSAPA MOTOR	1	
5	159648	MOTOR-HYD FLOW DIVIDER, includes items 5A, 5B, 5C, 5D..	1	
	159631	SEAL KIT, for motor		
5A	159645	MOTOR – HYD, GEAR (cast iron body) - PREFERRED		
	159649	MOTOR – HYD, GEAR (aluminum body) – use only if 159645 is unavailable		
5B	159633	NUT – 8mm special		
5C	159535	KEY-WOODRUFF (1/4 X 3/4 NOM.)	1	
5D	159632	VALVE – RELIEF	1	
7	40241	FITTING - ADAPTER HYD CW O-RING	1	
8	30970	FITTING - ELBOW 90° HYD	1	
9	135314	COUPLER - MALE HYD. 3/4 IN. FLAT FACE	1	
	135479	SEAL KIT - 3/4 MALE COUPLER		
10	135483	FITTING - ADAPTER HYD	1	
11	159029	HOSE	1	
12	135565	COUPLER - FEMALE HYD. 3/4 IN. FLAT FACE	1	
	111977	SEAL KIT - 3/4 FEMALE COUPLER		
13	21030	FITTING - CONNECTOR HYD, SAE 8	1	See Note 1
14	159646	HOSE	1	See Note 1
15	135237	COUPLER - MALE HYD. 3/8 IN. FLAT FACE BULKHEAD.....	1	
	111978	SEAL KIT - 3/8 MALE COUPLER		
16	21881	FITTING - ADAPTER HYD	1	
17	159028	HOSE	1	
18	135213	COUPLER - FEMALE HYD. 3/8 FLAT FACE BULKHEAD.....	1	
	135481	SEAL KIT - 3/8 FEMALE COUPLER		
19	159419	FITTING-ADAPTER HYD CW O-RING	1	
20	159635	VALVE-RELIEF	1	
21	135444	FASTENER - CINCH STRAP 6" LG	2	
22	159541	SHIELD WELD'T	1	
23	159634	BAR-TENSIONER.....	1	
A	21489	BOLT - RHSN 1/2 NC X 2.5 LG GR 5 ZP		
B	50186	NUT - FLANGE LOCK SM FACE DT 0.500-13UNC GR5		
C	21471	BOLT - RHSN 1/2 NC X 1.25 GR 5 ZP		
D	137503	BOLT - CSK SOCK. 1/2 NC X 1.75 GR. 5 ZP		
E	18599	WASHER - SAE FLAT 17/32 ID X 1 1/16 IN OD ZP		
F	18697	NUT - HEX LOCK DT .500-13UNC		
G	19965	BOLT - RHSN 3/8 NC X 1.0 GR 5 ZP		
H	30228	NUT - FLANGE DT SMOOTH FACE 0.375-16UNC		
J	21474	BOLT - RHSN 1/2 NC X 2.0 LG GR 5 ZP		
K	135507	SCREW-MACHINE, TRUSS HD TORX, 38NCX1LG		
	NOTE:	1. Order items 13 and 14 together to ensure thread match.		

SECTION PC – PARTS CATALOG

BELT DRIVE AND SHIELD

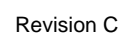


SECTION PC – PARTS CATALOG

BELT DRIVE AND SHIELD (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159430	SPROCKET-P32-14M-40	1	
2	1624	WASHER - SAE FLAT 5/8 ID X 1 15/32 IN OD ZP	1	
3	18714	NUT-HEX LOCK DT 5/8-18 UNF ZP	1	
4	159215	SPROCKET-P52 14M 40.....	1	
5	130880	BUSHING-SPLIT TAPER QD-E-1.375 BORE	1	
6	17194	KEY	1	
7	130706	BELT-HTD 1610-14M-40	1	
8	159168	SHIELD - HT DRIVE	1	
9	14045	WASHER – FLAT	1	
10	21289	NUT-WING TYPE A 3/8 NC ZP	1	
11	REF	See “HYDRAULIC MOTOR, MOUNTS AND TENSIONER”		

1.5 HYDRAULIC COMPLETION PACKAGE



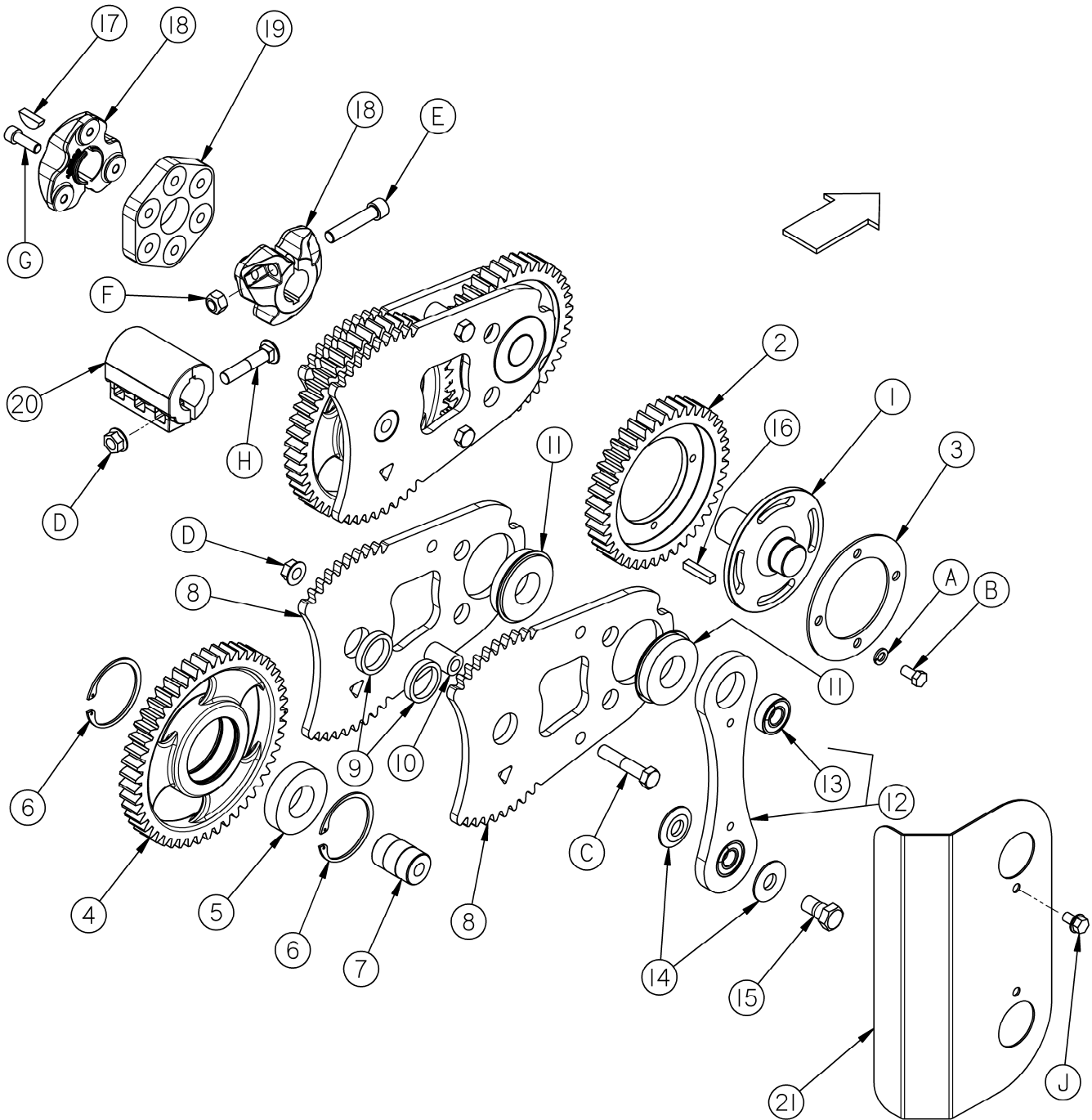
SECTION PC – PARTS CATALOG

HYDRAULIC COMPLETION PACKAGE (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	108268	FITTING - HYD TEE.....	2	
2	159038	VALVE-CHECK.....	1	
3	159158	HOLDER-HOSES.....	1	
4	159032	HOSE	1	
5	159030	HOSE	1	
6	120574	HOSE	1	
7	159159	HOSE	1	
8	135373	FITTING - ADAPTER HYD	1	
9	159358	SUPPORT-COUPLING - 15 FT. HEADER ONLY	1	
10	159417	VALVE-PRESSURE REDUCING	1	
11	135237	COUPLER - MALE HYD. 3/8 IN. FLAT FACE BULKHEAD.....	1	
	111978	SEAL KIT- 3/8 MALE		
12	21030	FITTING - CONNECTOR HYD	1	
13	135213	COUPLING - FEMALE HYD. 3/8 FLAT FACE BULKHEAD	1	
	135481	SEAL KIT - 3/8 FEMALE		
14	135565	COUPLER - FEMALE HYD. 3/4 IN. FLAT FACE	1	
	111977	SEAL KIT - 3/4 FEMALE		
15	21805	FITTING - ELBOW HYD.....	1	
16	159421	PLATE.....	1	
17	135372	FTG - 3/4 " HYD BULKHEAD 37 DEG. FLAIR UNION.....	1	
18	135314	COUPLER - MALE HYD. 3/4 IN. FLAT FACE	1	
	135479	SEAL KIT - 3/4 MALE		
19	135540	FITTING - FEMALE UNION HYD (QTY. 2 FOR 15')	1	
20	109791	MOULDING	1	
21	30971	O – RING.....	1	
22	40704	FASTENER - CABLE TIE ORANGE.....	2	
23	40703	FASTENER - CABLE TIE BLUE	1	
24	135444	FASTENER - CINCH STRAP 6" LG	1	
25	REF	See "HYDRAULIC MOTOR, MOUNTS AND TENSIONER"		
26	REF	See "FEED DECK & PAN"		
27	REF	FITTING - HYD TEE-SPECIAL – See header parts catalog for connecting parts.....	1	
28	REF	FTG - 3/4 " HYD BULKHEAD 37 DEG. FLAIR UNION – See header parts catalog for connecting parts.....	2	
29	REF	FITTING - 1/2" UNION HYDRAULIC – See header parts catalog for connecting parts.....	1	
30	REF	See header parts catalog for connecting parts		

SECTION PC – PARTS CATALOG

1.6 GEARS & ROLL COUPLING ASSEMBLY



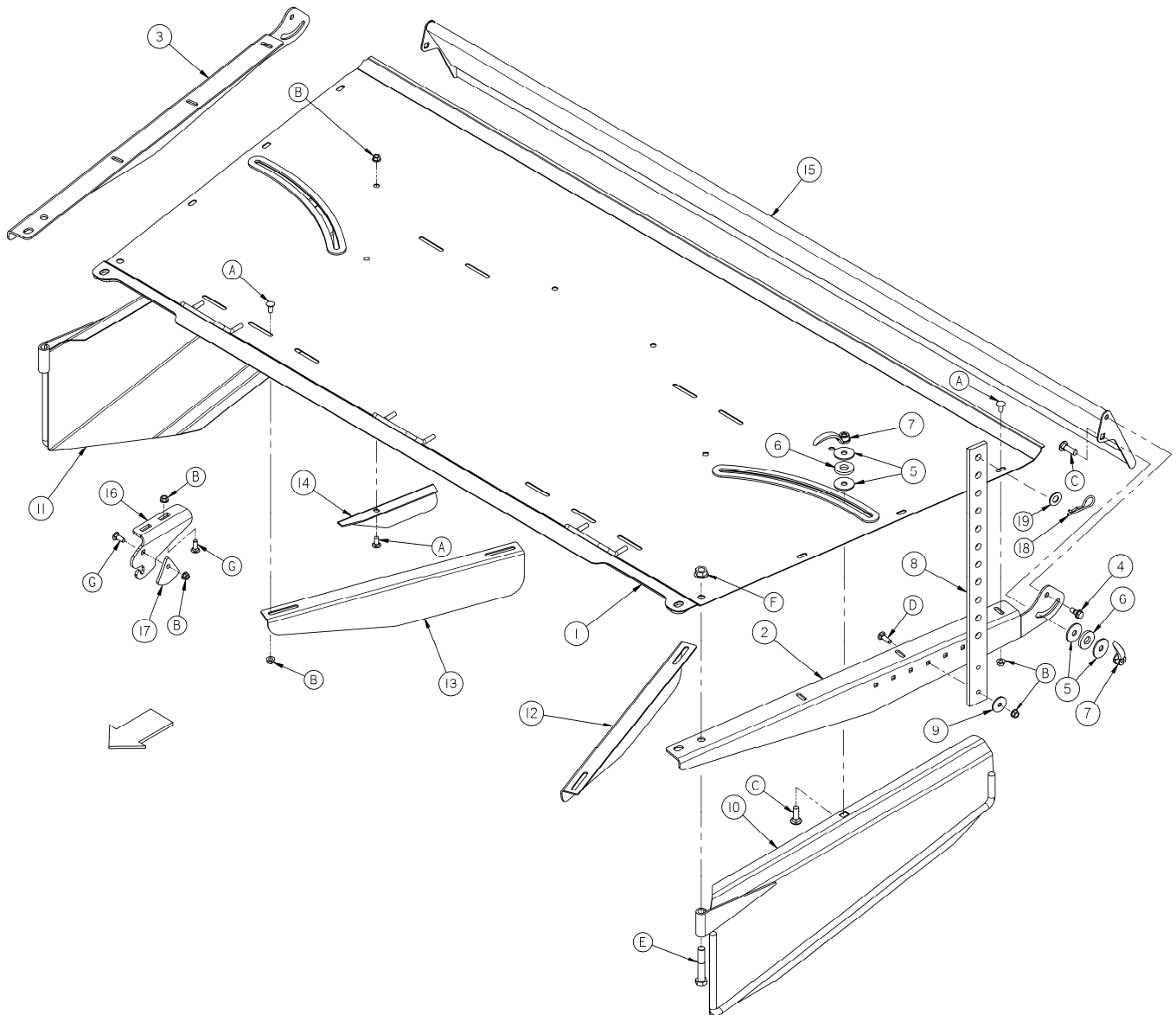
SECTION PC – PARTS CATALOG

GEARS & ROLL COUPLING ASSEMBLY (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159550	HUB-MACHINING	2	
2	130680	GEAR - 40T.....	2	
3	129932	DISK	2	
4	130677	GEAR - 49T.....	2	
5	159474	BEARING - BALL CYL	2	
6	38854	RING - INT RETAINING.....	4	
7	130687	SHAFT- IDLER.....	2	
8	130685	PLATE,SIDE HEAT TREATMENT	4	
9	130689	SPACER.....	4	
10	130694	SPACER.....	4	
11	159478	BEARING - BALL CYL C3 WITH SNAP RING	4	
12	130691	SUB-ASSEMBLY – LINK	2	
13	50185	BEARING - BALL CYL OD 17 MM BORE	4	
14	130688	WASHER-MACHINED 11/16 ID X 1.75 IN OD ZP	8	
15	105141	BOLT - LOCKING SHOULDER	4	
16	26846	KEY – HUB TO COUPLING.....	2	
17	11142	KEY - WOODRUFF (5/16 X 1 1/8 NOM.)	2	
18	130936	COUPLING-FLEX – MACHINING, UPPER ROLL.....	2	
19	130736	DISC-FLEX, UPPER ROLL.....	1	
20	159130	COUPLING- MACHINING, LOWER ROLL.....	1	
21	159218	COVER.....	1	
A	18637	WASHER - REG. LOCK 3/8 IN. NOM. ID ZP		
B	21567	BOLT -HEX HD .375-16UNC X 0.75 LG		
C	21760	BOLT-HH 1/2 NC X 2.5 LG GR 5 ZP		
D	50186	NUT - FLANGE LOCK SM FACE DT 0.500-13UNC GR5		
E	135403	BOLT - SKT HD 1/2 NC X 2.5 LG		
F	18697	NUT - HEX LOCK DT .500-13UNC		
G	135401	BOLT - HEX SOC HD M10 X 1.5 X 30 LG ZP		
H	21489	BOLT - RHSN 1/2 NC X 2.5 LG GR 5 ZP		
J	101898	SCREW - HEX WASH HD THD ROLLING 3/8 NC X 5/8		

SECTION PC – PARTS CATALOG

2 FORMING SHIELDS



SECTION PC – PARTS CATALOG

FORMING SHIELDS (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159204	COVER WELDT	1	
2	159206	SUPPORT - STRUT LH	1	
3	159207	SUPPORT - STRUT RH	1	
4	135001	BOLT - SHOULDER .375-16UNC	2	
5	42592	WASHER – FLAT	8	
6	42045	WASHER – RUBBER	4	
7	149317	HANDLE	4	
8	159294	STRAP – RUBBER	2	
9	16652	WASHER – FLAT	2	
10	159220	DEFLECTOR WELDT, LH	1	
11	130911	DEFLECTOR WELDT, RH	1	
12	130905	DEFLECTOR - FIN LH	1	
13	130906	DEFLECTOR - FIN RH	1	
14	130548	DEFLECTOR-FIN	4	
15	130900	BAFFLE	1	
16	159598	SUPPORT - HANGER (TRACTOR MOUNTED)	1	
17	159325	SUPPORT – KEEPER	1	
18	13125	PIN – HAIR	2	
19	18600	WASHER – FLAT, 21/32 ID X 1 5/16 IN OD ZP	2	
A	21863	BOLT-RHSSN 3/8 NC X 0.75 LG GR 5 ZP		
B	30228	NUT - FLANGE DT SMOOTH FACE 0.375-16UNC		
C	21469	BOLT - RHSN 1/2 NC X 1.5 LG GR 5 ZP		
D	19966	BOLT - RHSN 3/8 NC X 1.25 LG GR 5 ZP		
E	21406	BOLT - HH 5/8 NC X 3.5 GR 5 ZP		
F	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
G	19965	BOLT - RHSN 3/8 NC X 1.0 GR 5 ZP		

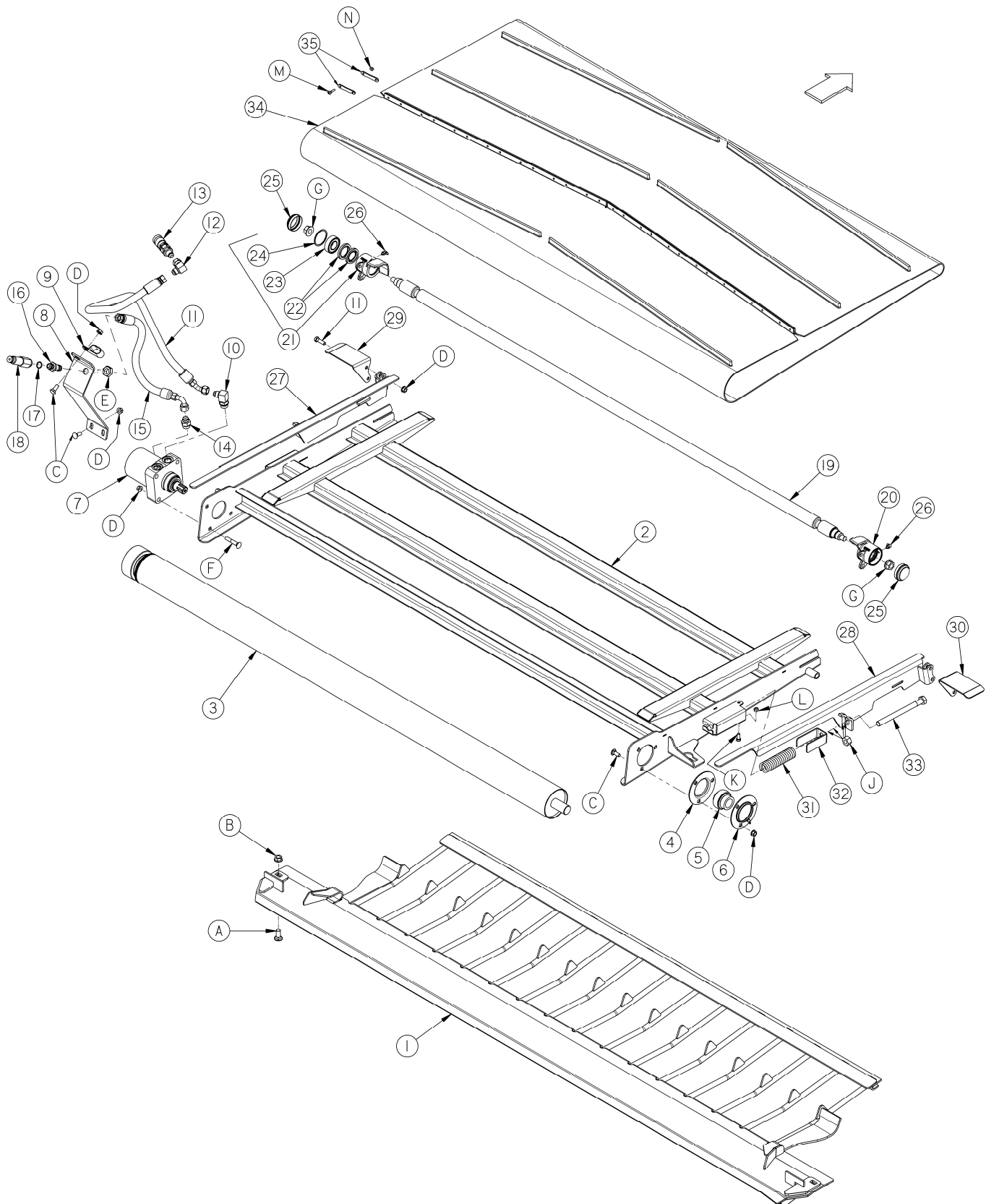
SECTION PC – PARTS CATALOG

FEED DECK AND PAN (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	159432	PAN-FINGER FEED WELDT	1	
2	159399	FRAME, FEED DECK – WELDT	1	
3	133838	ROLLER - DRIVE 4", WELDT.....	1	
4	49306	FLANGE	1	
5	21859	BEARING - SPH OD EXT INNER RACE 1 3/16 BORE	1	
6	30661	FLANGE	1	
7	159197	MOTOR-HYD 4.0 CID (WITH 921 PSI RELIEF).....	1	
	37181	SEAL KIT - FOR MOTOR 159197		
	159606	VALVE - RELIEF, 921 PSI		
8	159183	HOLDER-COUPLING	1	
9	103738	CLAMP-PVC INSULATED 13/16 " TUBE SIZE	1	
10	21801	FITTING - ELBOW 90° HYD	1	
11	130998	HOSE	1	
12	30314	FITTING - ELBOW 90° HYD	1	
13	135213	COUPLING - FEMALE HYD. 3/8 FLAT FACE BULKHEAD	1	
	135481	SEAL KIT - FOR 3/8 FEMALE COUPLER		
14	21881	FITTING - ADAPTER HYD	1	
15	159422	HOSE	1	
16	30819	FTG - 1/2 " HYD UNION	1	
17	44209	O – RING.....	1	
18	135386	COUPLER - MALE HYD. 3/8 IN. FLAT FACE	1	
	111978	SEAL KIT - FOR 3/8 MALE COUPLER		
19	159256	SHAFT-IDLER ROLLER	1	
20	133124	HOUSING ASSY - RH IDLER CUP (includes items 22-24)	1	
21	133126	HOUSING ASSY LH IDLER CUP (includes items 22-24)	1	
22	100862	SEAL – OIL	4	
23	118185	BEARING - BALL CYL, 52 MM O.D., 25 MM I.D.....	2	
24	118011	RING-RETAINING INTERNAL.....	2	
25	133372	CAP, DUST	2	
26	21010	FTG - LUBE 90 DEG 1/4 - 28 TAPER THD.....	2	
27	159383	SUPPORT WELDT- LH	1	
28	159385	SUPPORT WELDT- RH.....	1	
29	159260	GUIDE-LH	1	
30	159264	GUIDE-RH.....	1	
31	133946	SPRING – COMPRESSION	2	
32	130246	RETAINER-SPRING	2	
33	50190	BOLT-HH (MIN THD) 5/8 NC X 7.5 LG GR 5 ZP	2	
34	159393	DRAPER - 1850 WIDE X 2107 LONG.....	1	
35	130283	STRAP-DRAPER CONN	28	
		See hardware listing next page.		

SECTION PC – PARTS CATALOG

FEED DECK AND PAN (Cont'd)



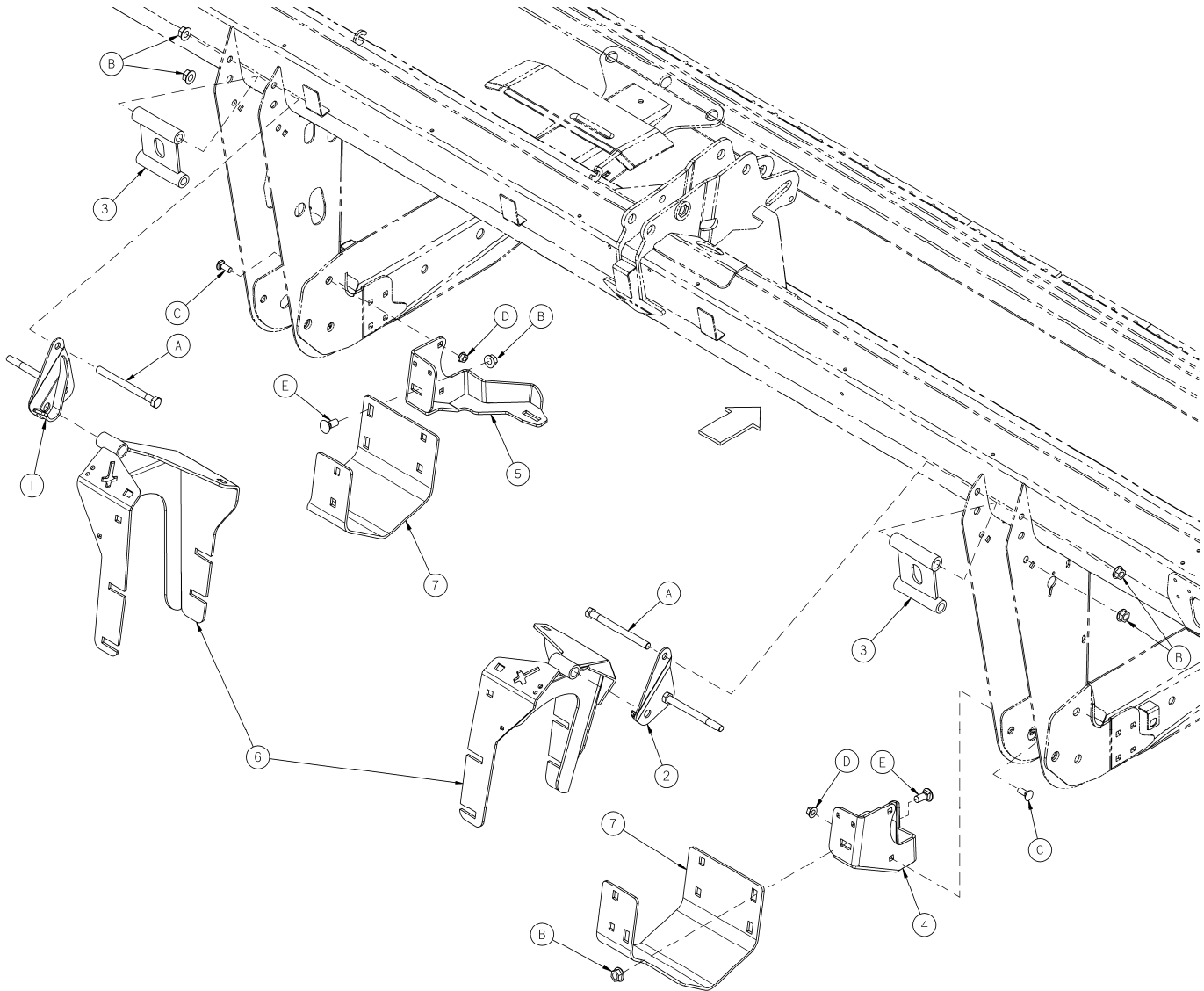
SECTION PC – PARTS CATALOG

FEED DECK AND PAN (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
A	21471	BOLT - RHSN 1/2 NC X 1.25 GR 5 ZP		
B	50186	NUT - FLANGE LOCK SM FACE DT 0.500-13UNC GR5		
C	19965	BOLT - RHSN 3/8 NC X 1.0 GR 5 ZP		
D	30228	NUT - FLANGE DT SMOOTH FACE 0.375-16UNC		
E	7674	NUT- HEX JAM 3/4 -16 UNF GR 5 ZP		
F	21485	BOLT - RHSN 3/8 NC X 2.25 LG GR 5 ZP		
G	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
H	21264	BOLT-HH 3/8 NC X 1.25 LG GR 5 ZP		
J	18592	NUT - HEX 5/8 - 11 UNC GR 5 ZP		
K	21558	BOLT - HEX HD 5/16 NC X 0.75 LG GR 5 ZP		
L	18690	NUT-HEX LOCK DT 5/16-18 UNC ZP		
M	49671	SCREW-BUTTON HD RIB NK; #12-24 NC X 0.920 IN. LG		
N	30669	NUT - CSK CENTER LOCK#12 - 24 NC		

SECTION PC – PARTS CATALOG

4 MOUNTING BRACKETS



SECTION PC – PARTS CATALOG

MOUNTING BRACKETS (Cont'd)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	130802	SUPPORT-LH WELDT	1	
2	130803	SUPPORT-RH WELDT	1	
3	159590	SPACER BRACKET	2	
4	130831	SUPPORT-RH WELDT	1	
5	130817	SUPPORT-LH WELDT	1	
6	REF	SEE "COVER & SUPPORTS"		
7	REF	SEE "LOWER ROLL & FRAME ASSEMBLY"		
A	50190	BOLT-HH (MIN THD) 5/8 NC X 7.5 LG GR 5 ZP		
B	50225	NUT - FLANGE DT SMOOTH FACE .625-11UNC		
C	21471	BOLT - RHSN 1/2 NC X 1.25 GR 5 ZP		
D	50186	NUT - FLANGE LOCK SM FACE DT 0.500-13UNC GR5		
E	18523	BOLT - RHSN 5/8 NC X 1.5 GR 5 ZP		

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NOTES

Hay Conditioner Model HC10 Pre-Delivery Checklist

Perform these checks and adjustments prior to delivery to your customer. Refer to Unloading and Assembly Instructions for adjustment details. The completed checklist should be retained either by the Operator or the Dealer.



CAUTION: Carefully follow the instructions given. Be alert for safety related messages which bring your attention to hazards and unsafe practices.

Conditioner Serial Number: _____

✓	ITEM	PAGE
<input type="checkbox"/>	Check for shipping damage or missing parts. Be sure all shipping dunnage is removed.	—
<input type="checkbox"/>	Check roll drive belt tension.	UA-16
<input type="checkbox"/>	Check conditioner roll gap, timing, and alignment.	UA-16&17
<input type="checkbox"/>	Check rear and side forming shields evenly set to desired position.	UA-13
<input type="checkbox"/>	Grease all bearings.	UA-14
<input type="checkbox"/>	Check roll intermesh hardware is securely tightened.	OM-12
<input type="checkbox"/>	Check hydraulic hose routing.	UA-11
<input type="checkbox"/>	RUN-UP PROCEDURE	UA-17
<input type="checkbox"/>	Check reverse operating mode.	See Tractor Manual
<input type="checkbox"/>	Check hydraulic hose routing for clearance when raising or lowering header.	—
<input type="checkbox"/>	POST RUN-UP CHECKS. STOP ENGINE.	—
<input type="checkbox"/>	Check for hydraulic leaks.	—
<input type="checkbox"/>	Check belt drive for alignment and heated bearings.	OM-20
<input type="checkbox"/>	Check manuals in tractor cab.	UA-17

Date Checked: _____

Checked by: _____