

M1240 Windrower

**Gearbox Dipstick Kit (MD #271257)
Installation Instructions**

214704 Revision A
Original Instruction

M1240 Windrower



1016391

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Introduction

The Gearbox Dipstick kit (MD #271257) is used to retrofit model year 2018 and prior M1240 Windrowers with a new dipstick and breather assembly to make checking the gearbox oil level easier, especially with a double windrow attachment (DWA) installed. This document explains how to install the Gearbox Dipstick kit.

A list of parts included in the kit is provided in Chapter *2 Parts List, page 5*.

Installation Time

This kit takes approximately 3 hours to install.

Conventions

The following conventions are used in this document:

- Right and left are determined from the operator's position, facing forward with the windrower in cab-forward position.
- Unless otherwise noted, use the standard torque values provided in the windrower operator's manual and technical manual.

NOTE:

Keep your MacDon publications up-to-date. The most current version of this instruction can be downloaded from our Dealer-only site (<https://portal.macdon.com>) (login required).

NOTE:

This document is currently available in English only.

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1 Safety

1.1 Signal Words

Three signal words, **DANGER**, **WARNING**, and **CAUTION**, are used to alert you to hazardous situations. Signal words are selected using the following guidelines:

DANGER

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

WARNING

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

CAUTION

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

1.2 General Safety

CAUTION

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

Protect yourself.

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



Figure 1.1: Safety Equipment



Figure 1.2: Safety Equipment

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

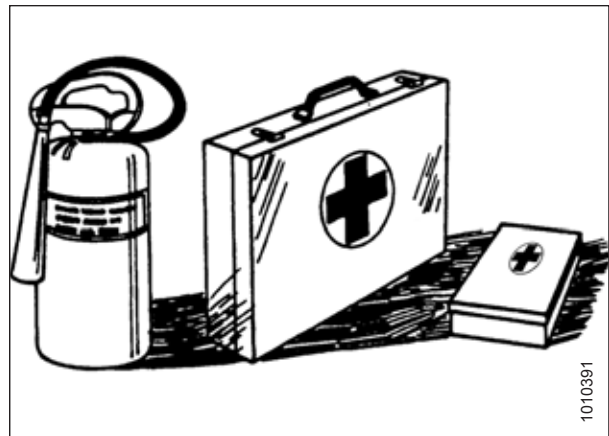


Figure 1.3: Safety Equipment

SAFETY

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



Figure 1.4: Safety around Equipment

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

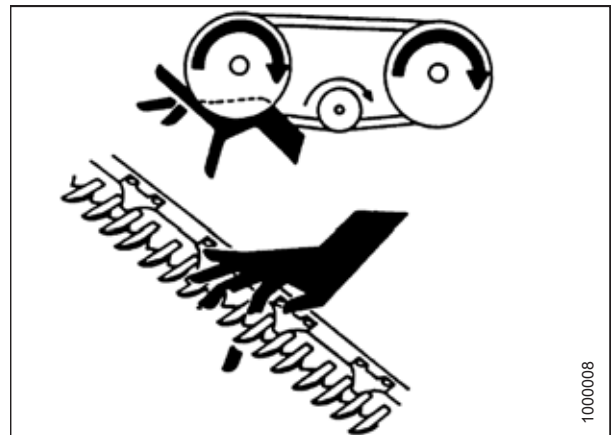


Figure 1.5: Safety around Equipment

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



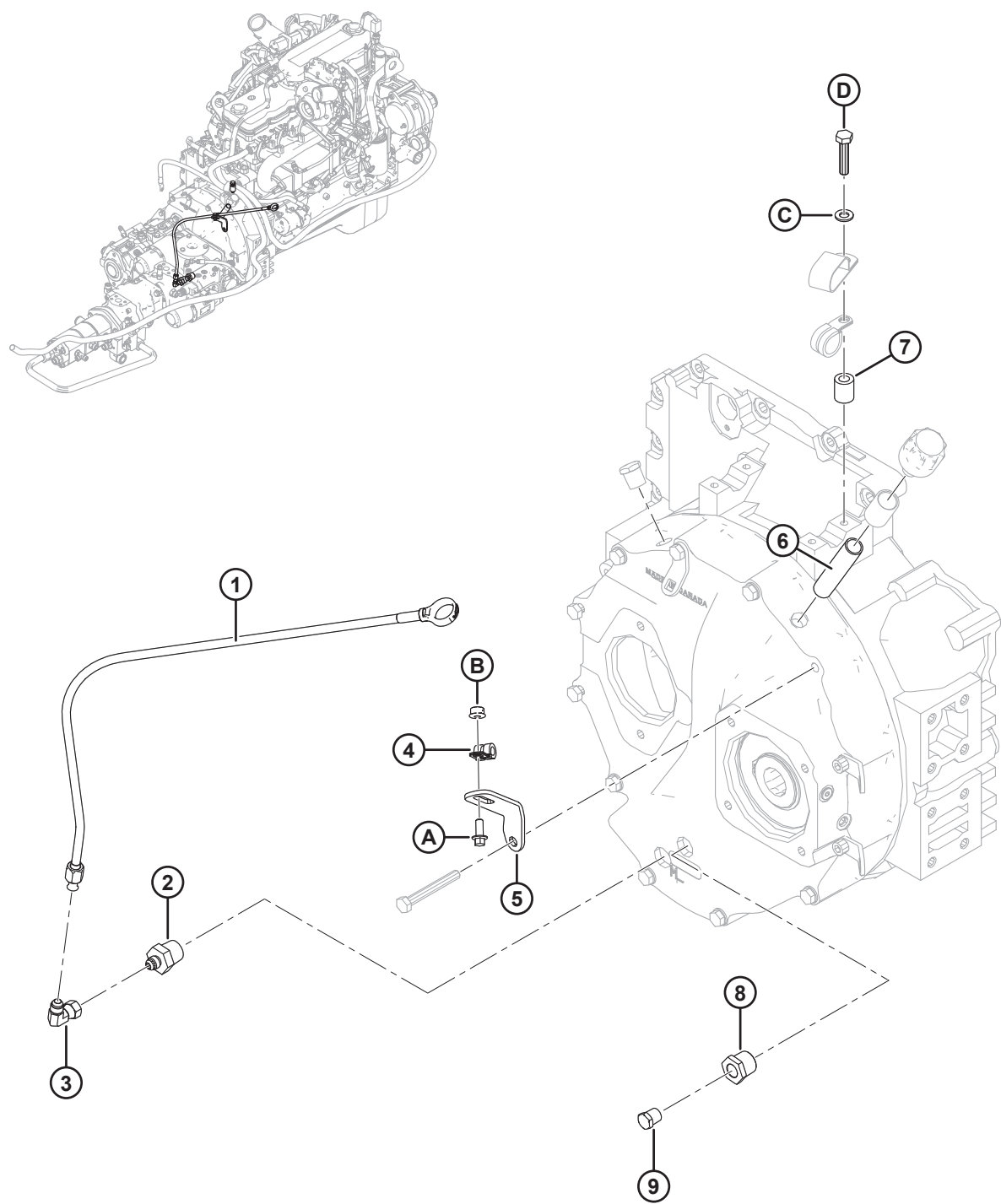
Figure 1.6: Safety around Equipment

2 Parts List

The following parts are included in this kit:

PARTS LIST

Figure 2.1: Parts Included in Kit



1026359

PARTS LIST

Ref	Part Number	Description	Quantity
1	271141	ASSY – DIPSTICK ¹	1
	291964	TUBE – DIPSTICK (SERVICE ONLY)	
	291845	GAUGE – DIPSTICK (SERVICE ONLY)	
2	163923	FITTING – CONNECTOR HYD	1
3	106717	FITTING – ELBOW HYD	1
4	136410	CLAMP – INSULATED 3/8 IN.	1
5	291856	BRACKET – DIPSTICK MOUNT	1
6	5747	FITTING – SHORT NIPPLE 1/2 NPT	1
7	180172	SPACER – 12 MM I.D., 21 MM O.D., 25.4 MM LG	1
8	21145	FITTING – REDUCER BUSHING	1
9	162434	PLUG – HEX HEAD PIPE	1
A	136300	BOLT – HEX FLG HD TFL M8 X 1.25 X 20-8.8-AA3L	1
B	135337	NUT – HEX FLG CTR LOC M8 X 1.25-8-A2L	1
C	184711	WASHER – FLAT REG M10-200HV-AA1J	1
D	135335	BOLT – HEX HD M10 X 1.5 X 45-8.8-A3L	1

1. Includes tube (MD #291964) and gauge (MD #291845).

3 Installation Instructions

To install the Gearbox Dipstick kit (MD #271257), follow these procedures in order.

3.1 Draining Gearbox Lubricant

CAUTION

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

CAUTION

Park on a flat, level surface with the ground speed lever in **PARK** position and the steering wheel in locked position (centered). Wait for the HPT to beep and display a red P symbol to confirm the park brakes have engaged.

NOTE:

Try to time installation of this kit with the machine's next engine oil change.

1. Stop the engine and remove the key.
2. Place a 4 liter (1 US gallon) drain pan under the gearbox.
3. Remove drain plug (A) and allow lubricant to completely finish draining.
4. Inspect the drain plug. Small metal shavings are normal; however, if there are any larger metal pieces inspect gearbox.
5. Install drain plug (A).

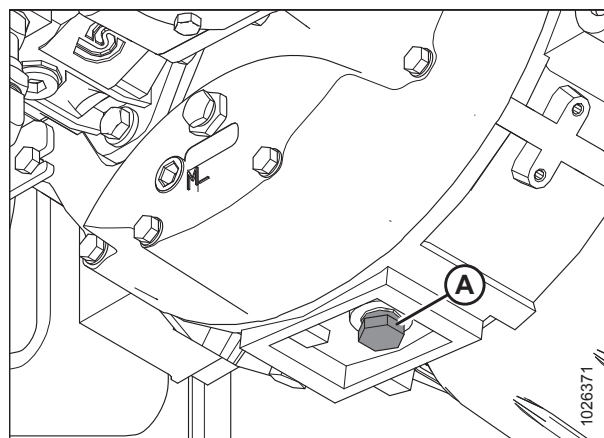


Figure 3.1: Engine Gearbox

3.2 Removing Gearbox Fittings and Hardware

IMPORTANT:

Remove drain plug (A) and ensure there is no gearbox lubricant before removing components. Refer to [3.1 Draining Gearbox Lubricant, page 9](#).

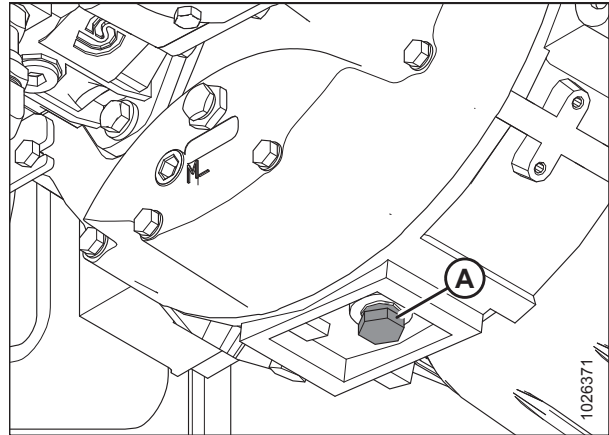


Figure 3.2: Engine Gearbox

NOTE:

Traction drive pump and left pump stack removed from illustration for clarity.

1. Remove internal hex plug (A), hex head plug (B), and reducer bushing fitting (C) from the gearbox cover. Discard parts.

NOTE:

Cover openings with a shop towel or rag to prevent contamination of the gearbox.

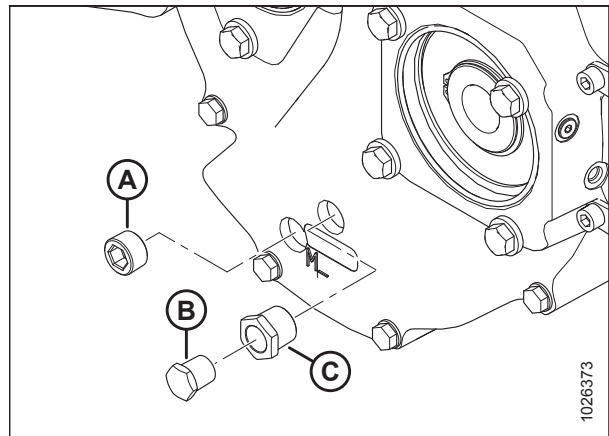


Figure 3.3: Engine Gearbox Components – View from Front

NOTE:

Engine removed from illustration for clarity.

2. Remove breather plug (A), coupling fitting (B), and hex head plug (C) from the gearbox cover. Retain parts for reinstallation.
3. Remove short nipple fitting (D) from the cover, and discard.

NOTE:

Cover openings with a shop towel or rag to prevent contamination of the gearbox.

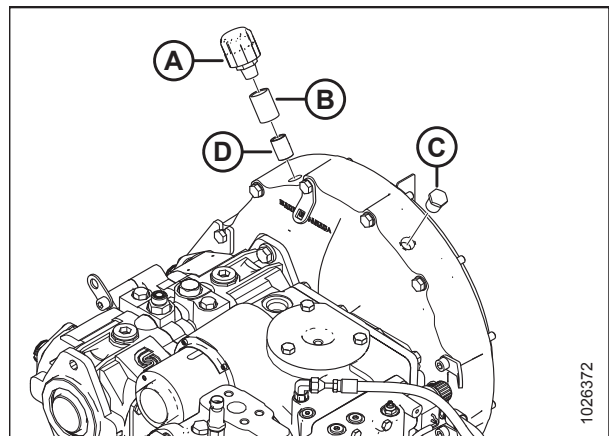


Figure 3.4: Engine Gearbox Components – View from Above

INSTALLATION INSTRUCTIONS

4. Remove hex head bolt (A) and flat washer (B) from the cover. Retain bolt for reinstallation, but discard washer.

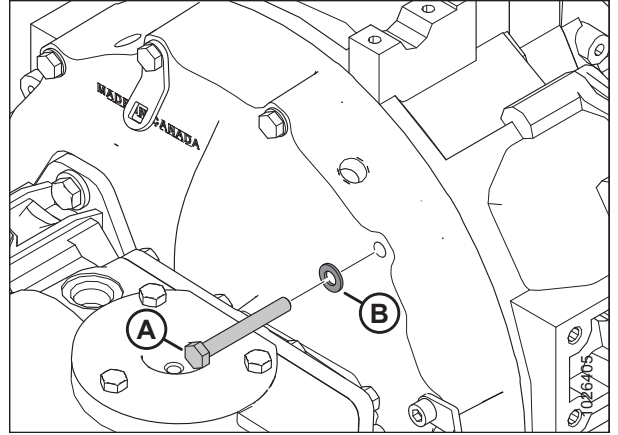


Figure 3.5: Engine Gearbox Components – View from Above

NOTE:

Traction drive pump, left pump stack, and gearbox removed from illustration for clarity.

5. Remove hex flange head bolt (A) securing clamps (B) and (C) to the engine block, and discard.
6. Remove insulated clamps (B) and (C). Retain clamps for reinstallation.

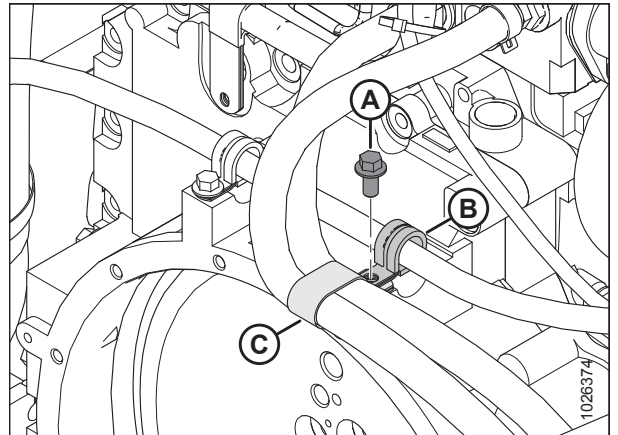


Figure 3.6: Insulated Clamps

3.3 Installing Gearbox Dipstick Parts

NOTE:

Traction drive pump, left pump stack, and gearbox removed from illustration for clarity.

1. Relocate 15/16 inch insulated clamp (A) onto red heater hoses and 7/8 inch insulated clamp (B) onto grid heater cable as shown. Reuse clamps retained in Step 6, [page 11](#).
2. Install clamps (A) and (B) onto spacer (C) (MD #180172) and secure to engine block with flat washer (MD #184711) and hex head bolt (D) (MD #135335). Spacer and hardware provided in the kit. Do **NOT** tighten hardware.

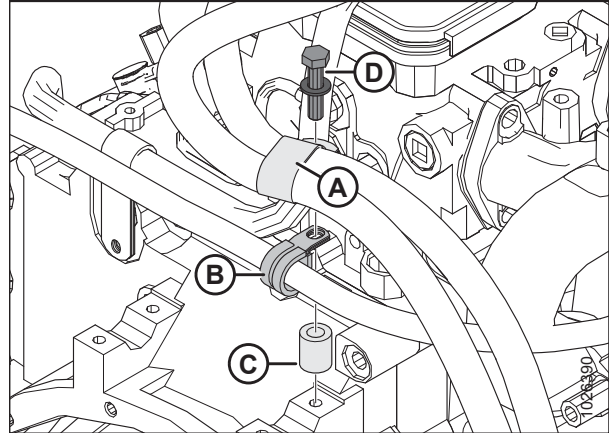


Figure 3.7: Insulated Clamps

NOTE:

Engine removed from illustration for clarity.

3. Apply low-strength hydraulic thread sealant (Loctite® 565 or equivalent) to hex head plug (A), retained in Step 2, [page 10](#), and install plug into gearbox cover as shown.
4. Install new nipple fitting (B) (MD #5747) into gearbox cover as shown. Fitting is provided in the kit.
5. Install coupling fitting (C) and breather plug (D), retained in Step 2, [page 10](#), onto fitting (B) as shown.

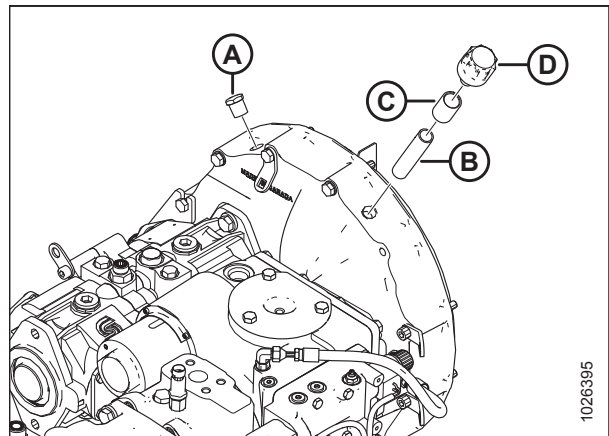


Figure 3.8: Engine Gearbox Components – View from Above

NOTE:

Traction drive pump and left pump stack removed from illustration for clarity.

6. Apply low-strength hydraulic thread sealant (Loctite® 565 or equivalent) to reducer bushing fitting (A) (MD #21145) provided in the kit, and install fitting into gearbox cover as shown.
7. Install hex head pipe plug (B) (MD #162434) into reducer bushing fitting (A) as shown. Plug provided in the kit.

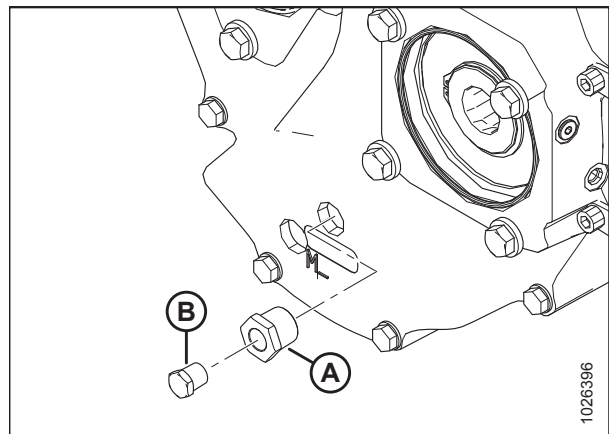


Figure 3.9: Engine Gearbox Components – View from Front

INSTALLATION INSTRUCTIONS

NOTE:

Traction drive pump and left pump stack removed from illustration for clarity.

8. Apply low-strength hydraulic thread sealant (Loctite® 565 or equivalent) to connector fitting (A) (MD #163923) and install fitting into gearbox cover as shown. Fitting provided in the kit.

NOTE:

Apply thread sealant to 3/4-14 NPT side of the connector fitting **ONLY**.

9. Install elbow fitting (B) (MD #106717) and dipstick assembly (C) (MD #271141) into fitting (A) as shown. Fitting and dipstick assembly are provided in the kit. Do **NOT** tighten fittings.
10. Apply high-strength threadlocker (Loctite® 262 or equivalent) to hex head bolt (A), retained in Step 4, [page 11](#), and secure mount bracket (B) (MD #291856) onto gearbox cover as shown. Mount bracket provided in the kit.

NOTE:

The outboard edge of the bracket should be vertical (+/- 1 degree).

11. Torque bolt (A) to 40.5 Nm (30 lbf·ft).

NOTE:

Dipstick mount bracket shown for reference.

12. Install 3/8 inch insulated clamp (A) (MD #136410) onto dipstick assembly (B) as shown. Insulated clamp is provided in the kit.

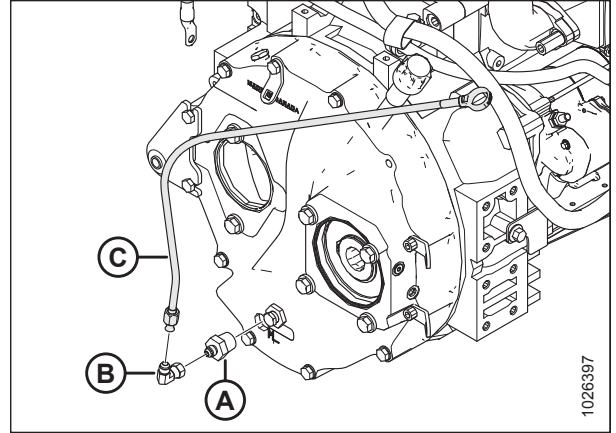


Figure 3.10: Gearbox Dipstick Components – View from Front

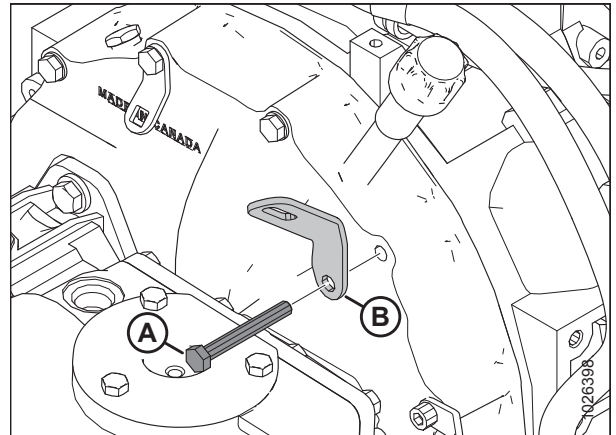


Figure 3.11: Gearbox Dipstick Components – View from Above

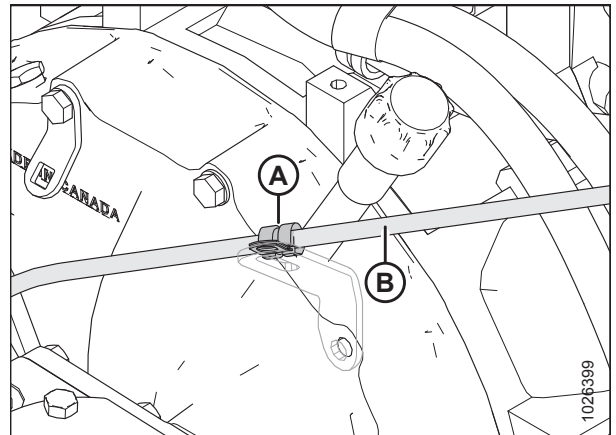


Figure 3.12: Gearbox Dipstick Components – View from Above

INSTALLATION INSTRUCTIONS

13. Secure 3/8 inch insulated clamp (A) onto bracket (B) using hex flange head bolt (C) (MD #136300) and hex flange center lock nut (D) (MD #135337) as shown. Hardware is provided in the kit. Do **NOT** tighten hardware.

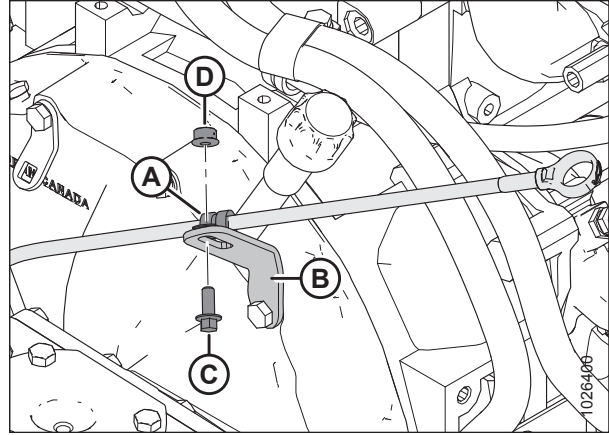


Figure 3.13: Gearbox Dipstick Components – View from Above

14. Ensure the dipstick assembly clears the blue coolant supply hose by 15–25 mm (9/16–1 in.) according to dimension (A) in the illustration at right.

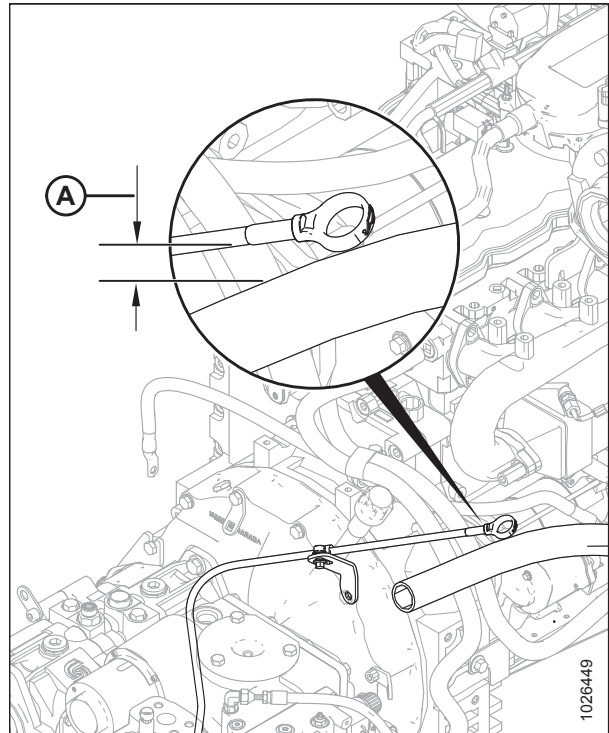


Figure 3.14: Gearbox Dipstick Assembly – View from Above

A - 15–25 mm (9/16–1 in.)

INSTALLATION INSTRUCTIONS

15. Ensure all gearbox dipstick components are positioned according to dimensions (A), (B), and (C) in the illustration at right.

NOTE:

The minimum clearance (C) between the traction pump cover plate and the dipstick tube is 3 mm (1/8 in.).

16. Once dipstick assembly is correctly positioned, tighten all fittings and hardware.
17. Fill gearbox with lubricant. Refer to [3.4 Filling Gearbox Lubricant](#), page 16.

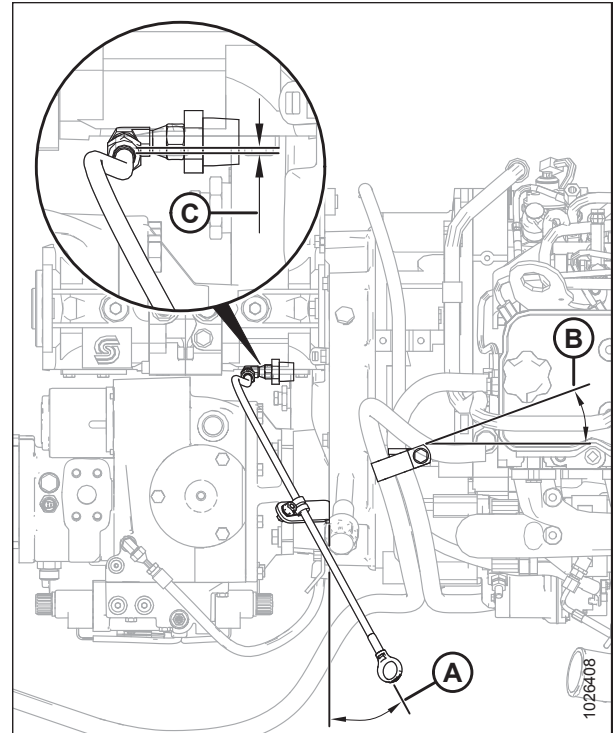


Figure 3.15: Gearbox Dipstick Components – View from Overhead

A - 20–40°

B - 15–25°

C - 3 mm (1/8 in.)

3.4 Filling Gearbox Lubricant

CAUTION

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

IMPORTANT:

For lubricant specifications, refer to the inside back cover of the windrower operator's manual or technical manual.

1. Remove check plug (A).
2. Add lubricant until oil level reaches check plug (A).
3. Apply low-strength hydraulic thread sealant (Loctite® 565 or equivalent) to check plug (A) and replace check plug.
4. Operate the engine at low idle and check for leaks at the check plug (A) and drain plug (B).

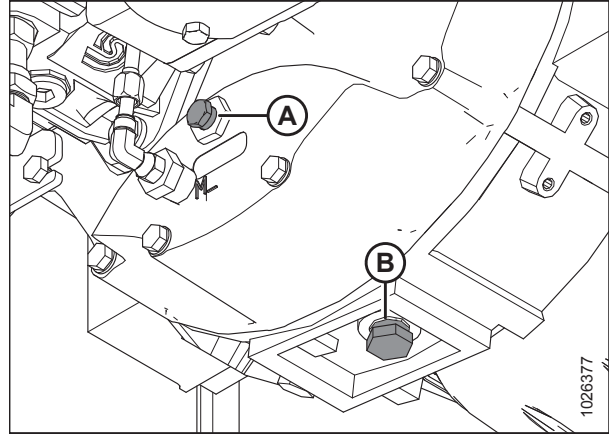


Figure 3.16: Engine Gearbox

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