

# 4R Tractor 2 Speed PTO

BLV10385 and BLV10386



**JOHN DEERE**

## INSTALLATION INSTRUCTIONS

LVU27322 11JUN14 (ENGLISH)

4044R, 4052R, and 4066R Tractors

**John Deere Augusta Works**  
**LVU27322 (11JUN14)**

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A John Deere ILLUSTRATION ® Manual

LVU27322-19-11JUN14



## Recognize Safety Information

**⚠ CAUTION:** To prevent bodily injury, machine damage, or component failure:

- ☐ Use proper tools for the job.
- ☐ Do not take shortcuts; follow procedure as listed.
- ☐ Read and heed all **WARNINGS** placed within instructions.

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

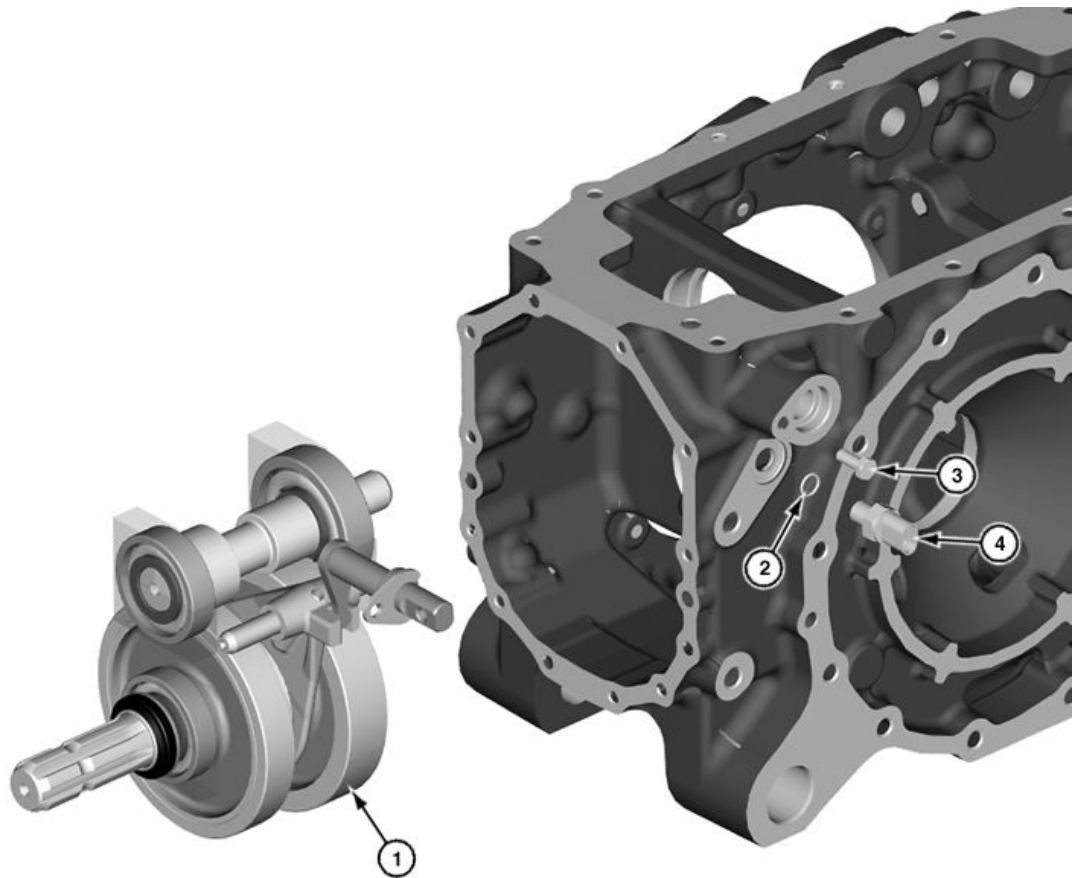
Follow recommended precautions and safe operating practices.



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Parts List



LV20898 —UN—30JUN14

2 Speed PTO Gear Set

Item	Description	Quantity
1	2 Speed PTO Gear Set	1
2	O-Ring	1
3	Cap Screw, M8 x 1.25 x 20	1
4	Neutral Switch	1

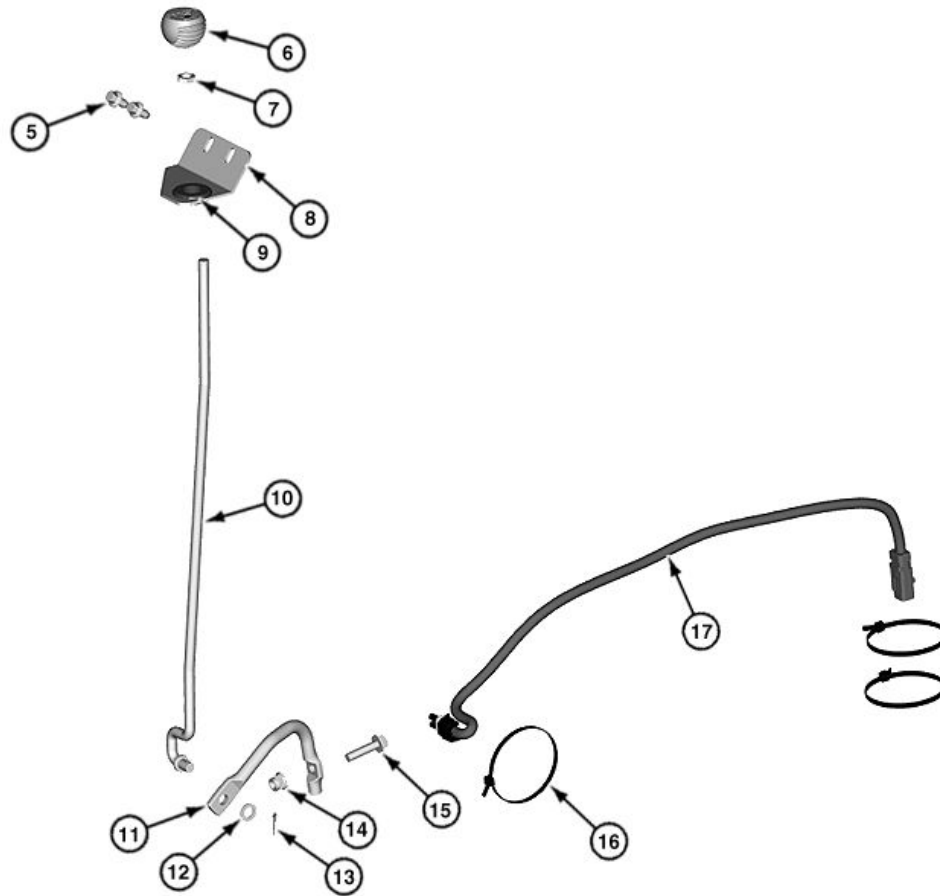
*NOTE: Software (LVU29170) must be ordered through the Software Delivery System prior to installation of this kit.*

*Refer to Tractor Technical Manual for downloading and installing software payload.*

**IMPORTANT: Avoid implement damage. Software Payload must be installed prior to installing 2 speed PTO kit.**

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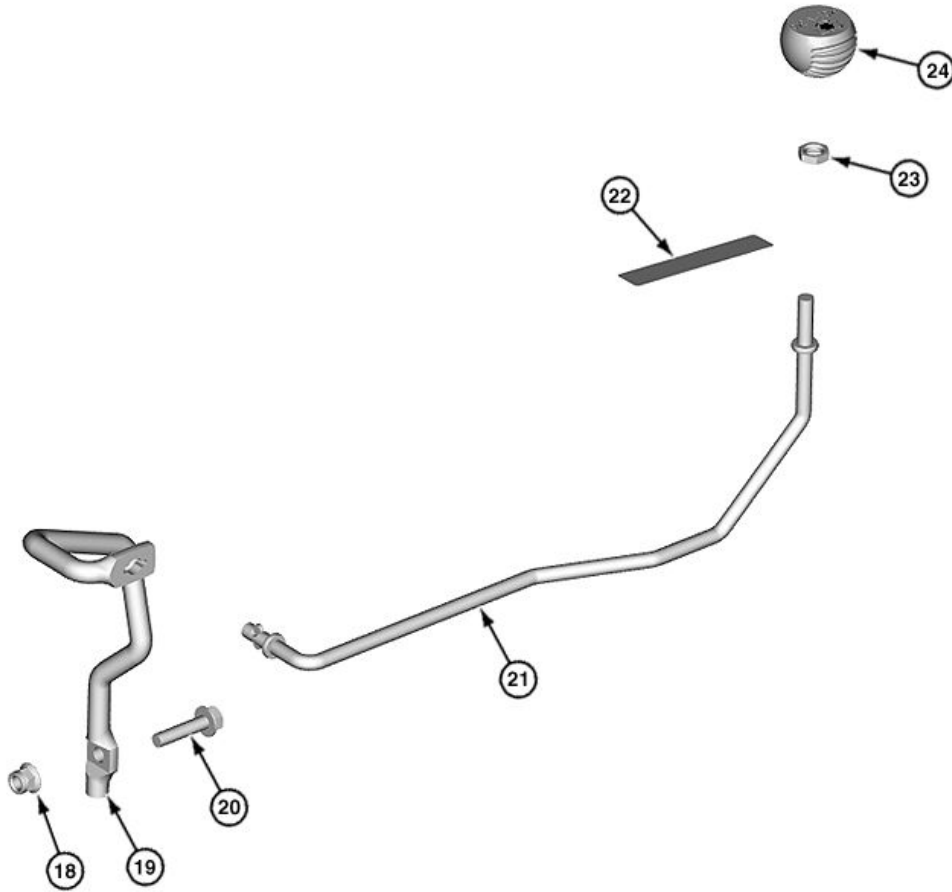
Cab Lever Assembly

Item	Description	Quantity
5	Screw, Self-Tapping, M8 x 1.25 x 16	2
6	Knob, 2 Speed PTO	1
7	Nut, Hex M10 x 1.5	1
8	Bracket, Mounting	1
9	Grommet	1
10	Lever, 2 Speed PTO	1
11	Lever, Bellcrank	1
12	Washer, M18	1
13	Cotter Pin	1
14	Lock Nut, M8 x 1.25	1
15	Screw, Hex Flange, M8 x 1.25 x 35	1
16	Plastic Tie	3
17	Jumper Harness	1

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Open Station Lever Assembly

Item	Description	Quantity
18	Lock Nut, M8 x 1.25	1
19	Rod	1
20	Screw, Hex Flange, M8 x 1.25 x 35	1
21	Linkage	1
22	Label, 2 Speed PTO	1
23	Nut, Hex M10 x 1.5	1
24	Knob, 2 Speed PTO	1

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### Parking Safely

1. Stop machine on a level surface.
2. Disengage PTO and stop attachments.
3. Lower attachments to the ground.
4. Lock park brake.
5. Stop engine.
6. Remove key.
7. Wait for engine and all moving parts to stop before you leave the operator station.
8. Close fuel shutoff valve if your machine is equipped.
9. Disconnect the negative (–) battery cable before servicing the machine.

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## Download and Install Software Payload

**IMPORTANT: Avoid implement damage. Software Payload must be installed prior to installing 2 speed PTO kit.**

1. Download the Instrument Cluster Controller (ICC) payload from Service ADVISOR™.

*Service ADVISOR is a trademark of Deere & Company*

2. After payload programming, turn key switch off for 10 seconds.
3. Start engine and engage PTO.
4. Confirm 540E light is on and engine speed is limited to 1900 RPM.

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## 2 Speed PTO Installation

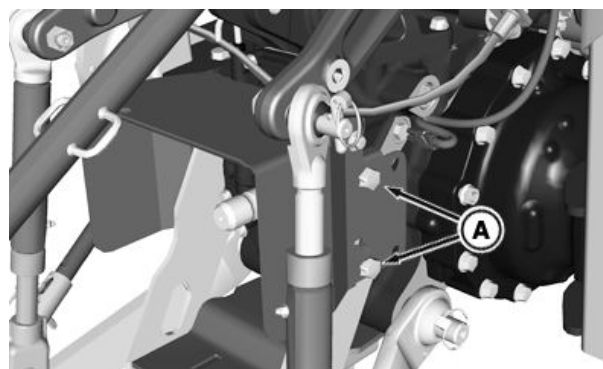
1. Place wheel chocks or wood blocks in front of and behind wheels.

*NOTE: Retain all parts and hardware and return to customer.*

2. Drain transmission-hydraulic oil.

*NOTE: Transmission-hydraulic oil capacity is 44 L (12 gal.). Use an appropriate size container.*

3. If necessary, remove 3-point hitch assembly, drawbar assembly, or any other accessories to gain access to the gear housing cover.
4. Remove two cap screws (A) on each side of rear PTO shield assembly and remove shield.
5. Remove transmission oil dipstick from rear cover.



A—Cap Screw (4 used)

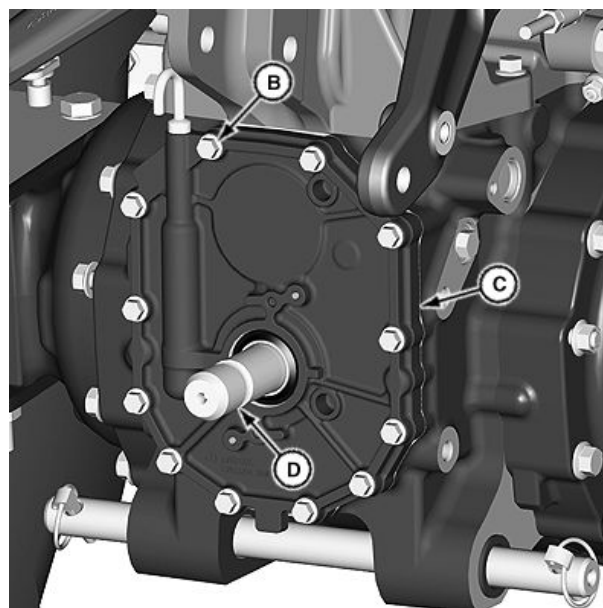
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6. Remove 12 cap screws (B). Gently pry around edges of rear cover (C) to break the seal. Wobble PTO output shaft (D) and pull at the same time to remove rear cover and gear set as one assembly.

B—Cap Screw (12 used)  
C—Rear Cover

D—PTO Output Shaft



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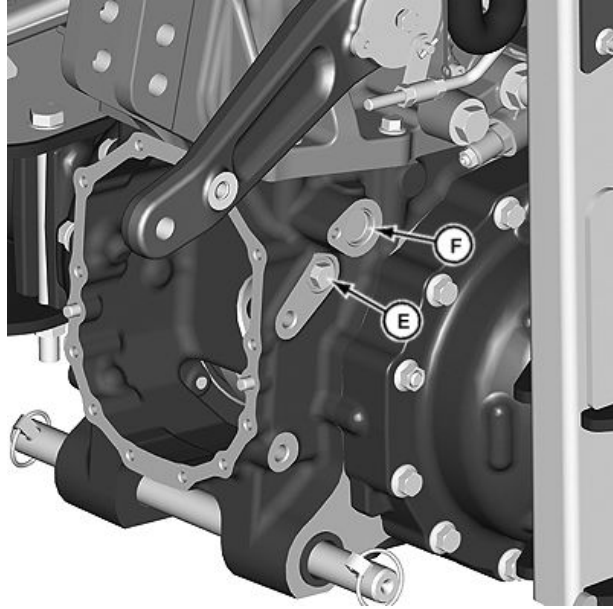
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7. Remove plug with O-ring (E) and sealing cap (F).

E—Plug with O-Ring

F—Sealing Cap



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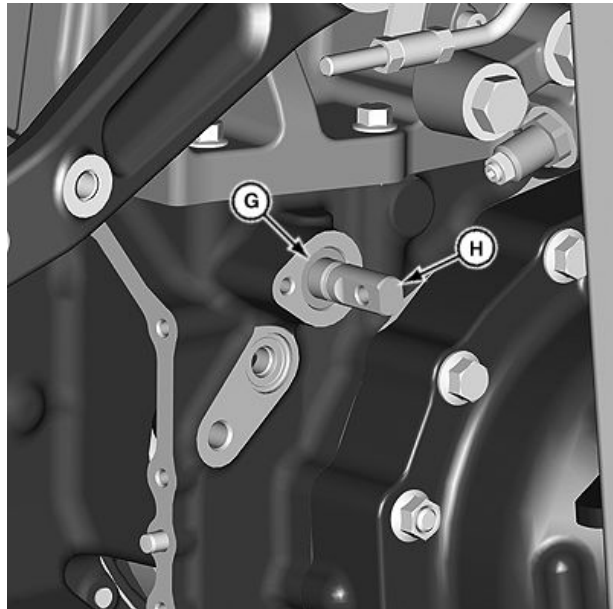
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8. Install seal (G) into differential case.
9. Apply a light coat of grease on the shaft of the shift fork arm (H) and install into differential case.

**NOTE:** Push the shift fork arm until it bottoms out against the differential case. If the fork arm is not properly installed, there will be clearance problems when installing the 2 speed PTO gear set.

G—Seal

H—Shift Fork Arm



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10. Carefully install 2 speed PTO gear set (I) into differential case (J). If needed, use a rubber mallet.

**Specification**

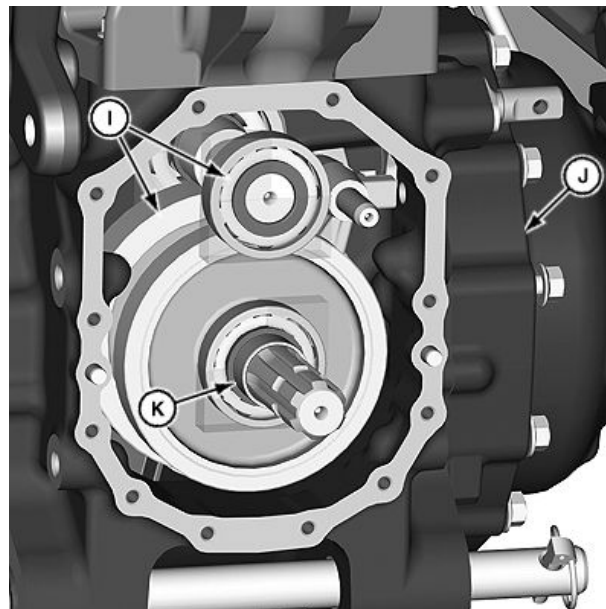
2 Speed PTO Gear

Set—Weight.....11 kg (24 lb.)

**NOTE:** Boxed parts will contain two assembled shafts and shifter components. Use a wood shim to hold gear set in place.

11. Apply a thin coat of Loctite® 277 to inside diameter of the PTO output sleeve (K) and install onto output shaft.

I— 2 Speed PTO Gear Set (Item 1 on Parts List)  
J— Differential Case  
K—PTO Output Sleeve



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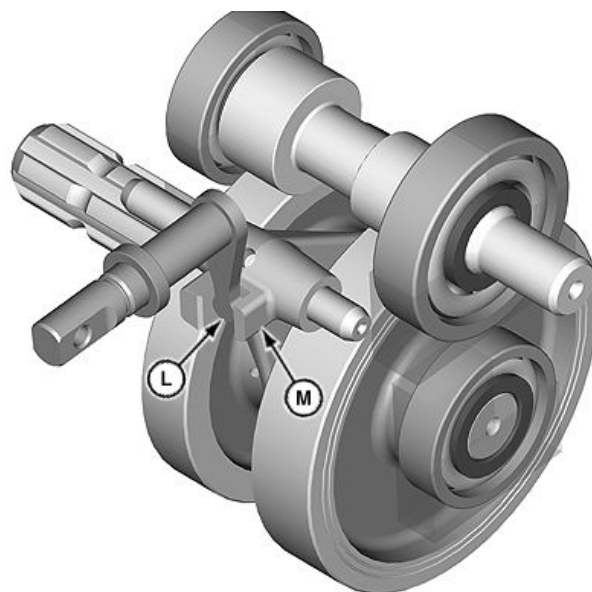
Loctite is a trademark of Henkel Corporation

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12. Align shift fork arm (L) with the shift fork (M) on the PTO output shaft.

L— Shift Fork Arm

M—Shift Fork



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13. Slide locking plate (N) into the groove of the shift fork arm (O) and install cap screw (P). Tighten cap screw to specification.

**Specification**

Locking Plate Cap  
Screw—Torque.....  $27.5 \pm 5.5$  N·m ( $20 \pm 4$  lb.-ft.)

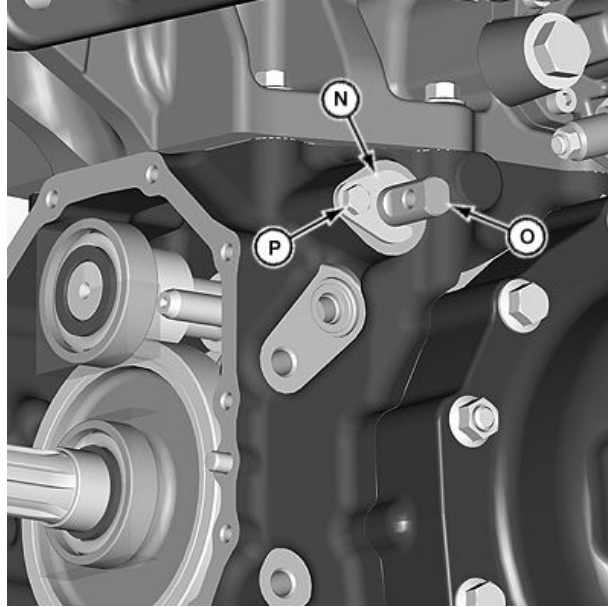
**NOTE:** Position the shift fork arm as needed to install the locking plate. Check that the shift fork assembly is still aligned.

14. Clean the mating surfaces on the differential case and gear cover.

15. Apply Loctite® 515 to differential case.

N—Locking Plate  
O—Shift Fork Arm

P—Cap Screw (Item 3 on Parts List)



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16. Install gear cover (R). Position and align PTO gear set to gear cover.

17. Install 12 cap screws (Q) and tighten to specification.

**Specification**

Gear Cover Cap  
Screw—Torque.....  $37 \pm 7.4$  N·m ( $27 \pm 5.5$  lb.-ft.)

18. Lubricate o-ring (S) with oil and install onto switch (T).

19. Install sensing switch (T) into differential case and tighten to specification.

**Specification**

Sensing  
Switch—Torque.....  $25 \pm 5$  N·m ( $18.5 \pm 3.7$  lb.-ft.)

20. Lubricate the seal lips with grease and install seal (U) into gear cover.

**NOTE:** The distance from the face of the gear cover to the face of the seal should be  $3.1 \pm 0.4$  mm ( $0.12 \pm 0.015$  in.).

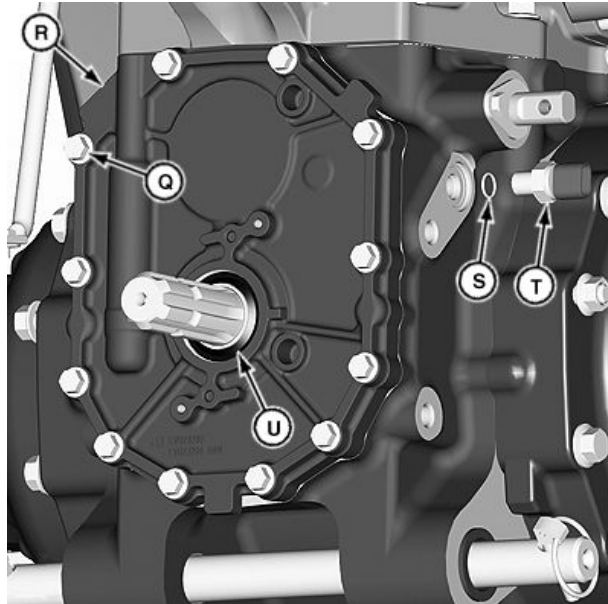
Q—Cap Screw (12 used)

R—Gear Cover

S—O-Ring (Item 2 on Parts List)

T—Sensing Switch (Item 4 on Parts List)

U—Seal

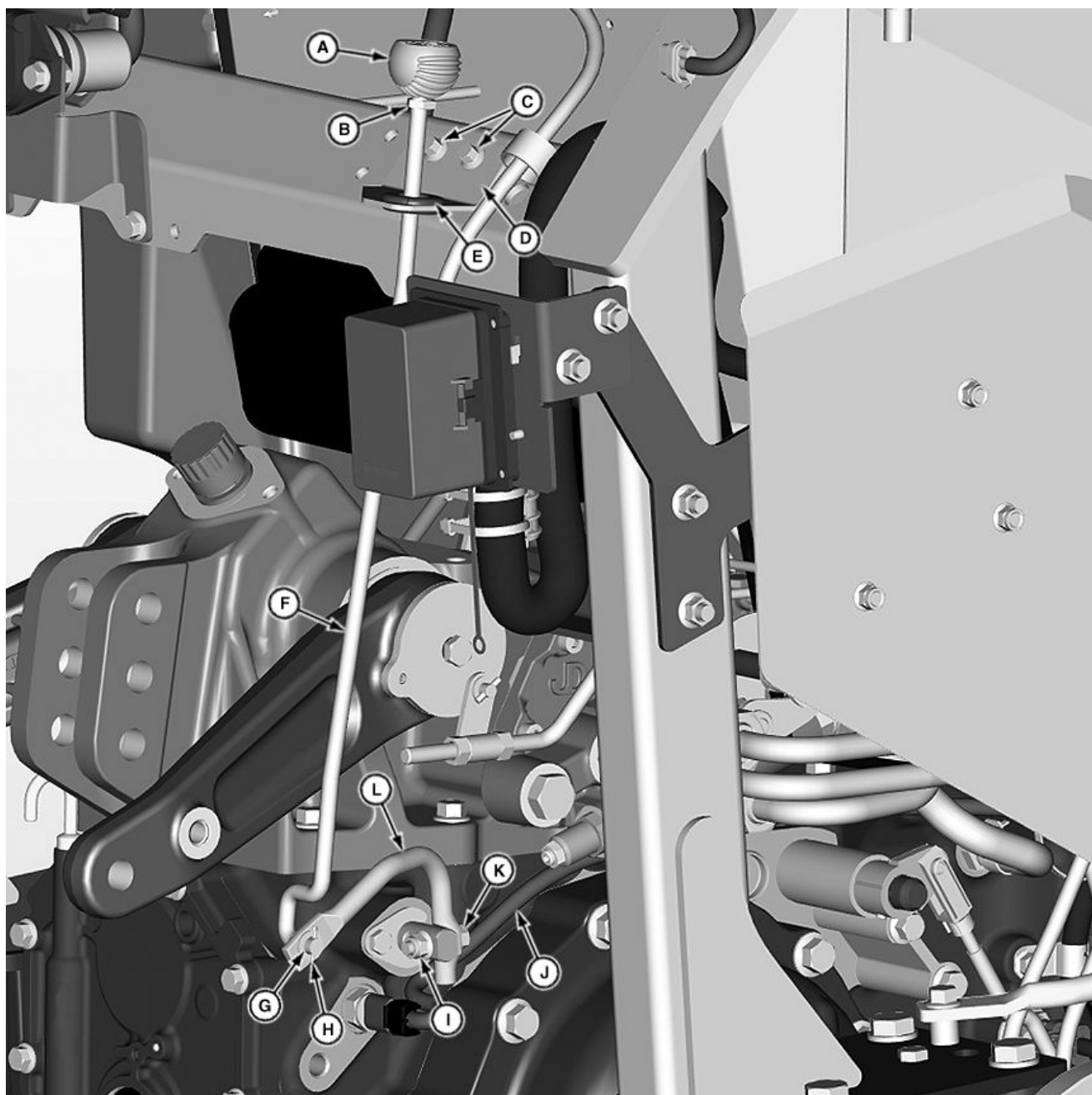


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## Cab Lever Installation



A—Knob (Item 6 on Parts List)  
 B—Nut (Item 7 on Parts List)  
 C—Self-Tapping Screw (2 used)  
 (Item 5 on Parts List)

D—Mounting Bracket (Item 8 on  
 Parts List)  
 E—Grommet (Item 9 on Parts  
 List)  
 F—PTO Linkage (Item 10 on  
 Parts List)

G—Washer (Item 12 on Parts List)  
 H—Cotter Pin (Item 13 on Parts  
 List)  
 I—Lock Nut (Item 14 on Parts  
 List)  
 J—Jumper Harness (Item 17 on  
 Parts List)

K—Screw (Item 15 on Parts List)  
 L—Bellcrank Lever (Item 11 on  
 Parts List)

1. Install grommet (E) into mounting bracket (D).
2. Install mounting bracket to cab using two self-tapping screws (C).
3. Install bellcrank lever (L) to shift fork arm using screw (K) and lock nut (I).

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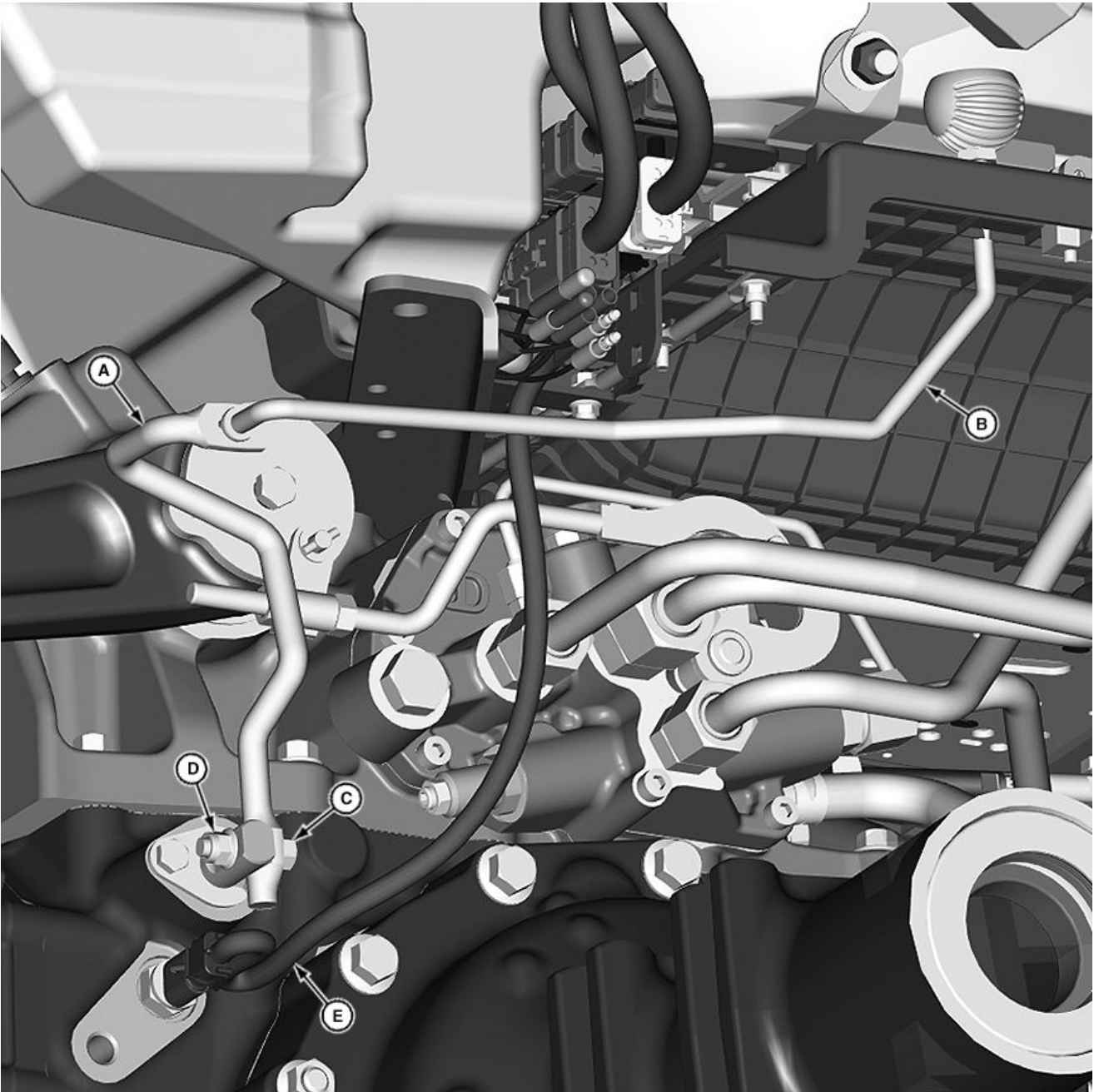
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4. Slide PTO linkage (F) through the grommet and connect to bell crank lever (L) using a washer (G) and cotter pin (H).
5. Install nut (B) on PTO linkage. Thread nut all the way to the bottom.
6. Install PTO knob (A) on PTO linkage (F) and use nut (B) to lock knob into place.
7. Install and connect jumper harness (J) from S04 switch to main harness. See technical manual for detailed schematic, harness, and connector information.
8. Service transmission-hydraulic oil.
9. Perform operation check on PTO.
10. Check for leaks from gear cover.

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## Open Station Lever Installation



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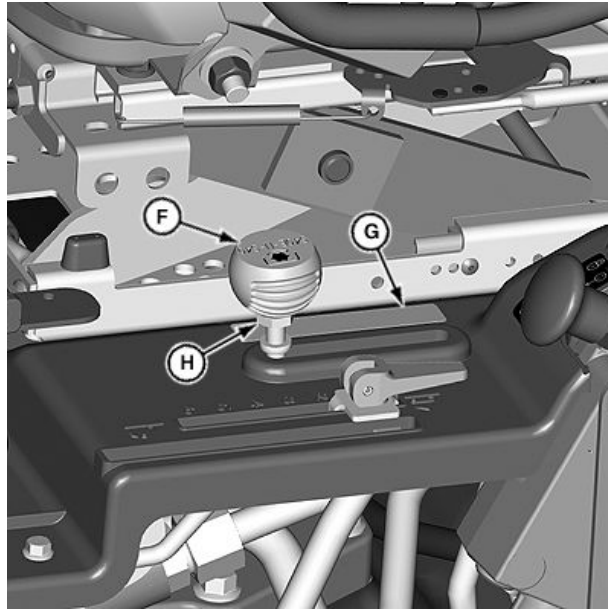
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1. Install linkage (B) from the top of the seat closeout.
2. Connect rod (A) to linkage (B).
3. Connect rod (A) to shift fork arm using screw (C) and lock nut (D).
4. Find S04 connector (E) on the main harness and connect it to PTO switch.
5. Install nut (H) on linkage. Thread nut all the way to the bottom.
6. Install PTO knob (F) on linkage and use nut (H) to lock knob it into place.
7. Install label (G) on seat closeout.
8. Service transmission-hydraulic oil.
9. Perform operation check on PTO.
10. Check for leaks from gear cover.

A—Rod (Item 19 on Parts List)  
 B—Linkage (Item 21 on Parts List)  
 C—Screw (Item 20 on Parts List)  
 D—Lock Nut (Item 18 on Parts List)

E—S04 Harness Connector  
 F—Knob (Item 24 on Parts List)  
 G—Label (Item 22 on Parts List)  
 H—Nut (Item 23 on Parts List)



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