

INSTALLATION INSTRUCTIONS

2000 RPM REAR PTO
MFG. NO. 1691010



CAUTION

Use only approved attachments (2000 rpm) with rear PTO.

INSTALL WIRING HARNESS

1. Remove the tunnel cover (A, figure 1) by removing the two rear screws and loosening the two front screws.
2. Open hood and remove the two side panels (B, figure 1) (left panel shown) by removing three screws each side.
3. On earlier models, unhook rubber straps (B, figure 2) and remove the plenum (A). On later models remove wing nut from retaining stud. Grasp center brace on plenum and push towards front of tractor until stud clears hole. Then remove plenum by pulling up.
4. Disconnect the negative cable from the battery, and then the positive cable. Remove battery from tractor.

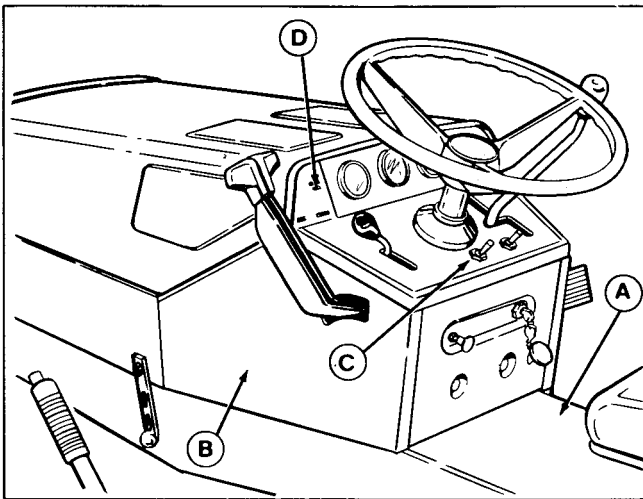


Figure 1.
A. Tunnel Cover
B. Left-Hand Side Panel
C. Rear PTO Switch
D. Rear PTO Light



WARNING

To avoid electrical shock or accidental starting, disconnect the battery before performing this procedure. (See step 4.)

5. Drill a 1/2" hole in the dash for mounting the rear PTO switch. The location (C, figure 1) is centermarked for drilling. It may be necessary to file out the hole. If desired, drill a 3/8" hole and file out to accept switch.
6. Locate the orange wire connected to the front PTO switch. Disconnect this orange wire from the plug (not the switch) and tape the end. Allow it to hang from the switch.

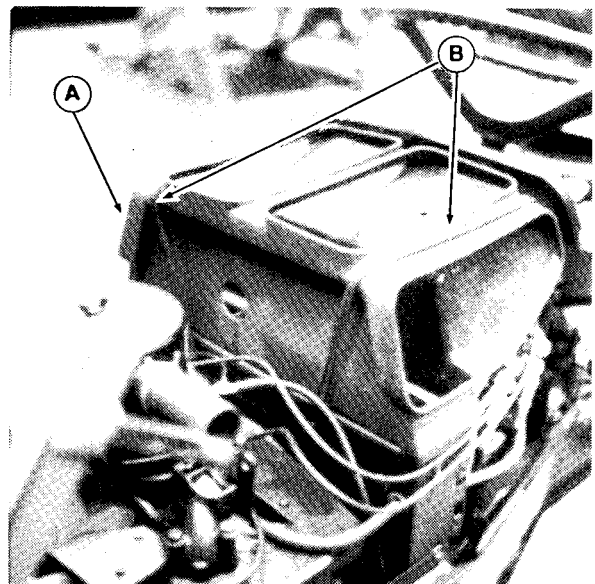


Figure 2.
A. Plenum
B. Straps

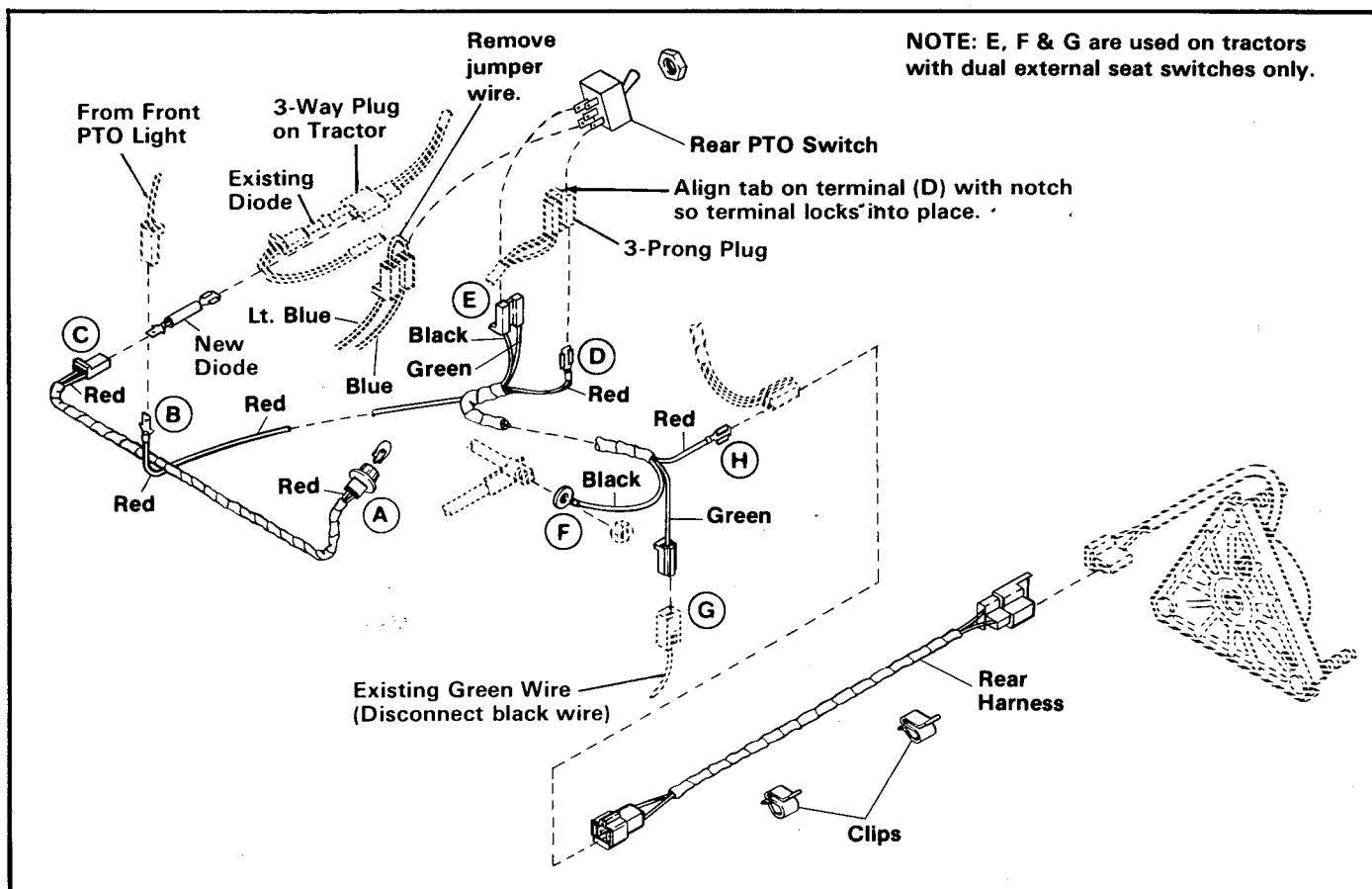


Figure 3.

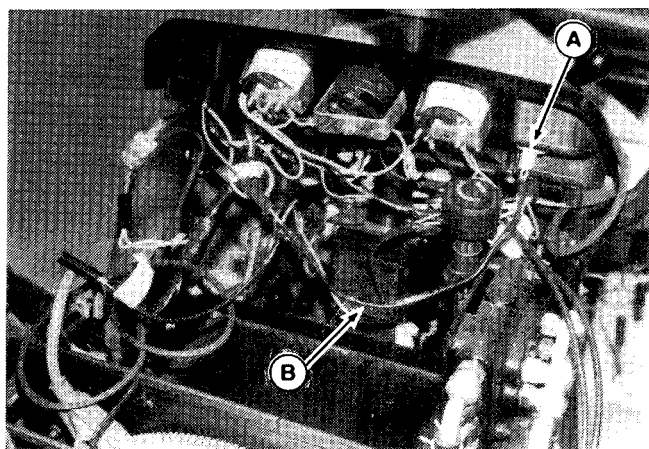


Figure 4.
A. White Receptacle
B. Harness

7. Install bulb into receptacle (A, figure 3) by pushing in. Install receptacle (A, figure 4) into hole by aligning tabs and turning.

8. Route the harness (B, figure 4) over to right-hand side of tractor in front of steering column. Connect red wire (B, figure 3) to the red wire hanging from the front PTO light..
9. Locate the 3-way plastic plug (A, figure 5) on the tractor. Insert the new diode into the empty hole (B, figure 5) beside the existing diode. Then, connect the double-red wire (C, figure 3) to the new diode.

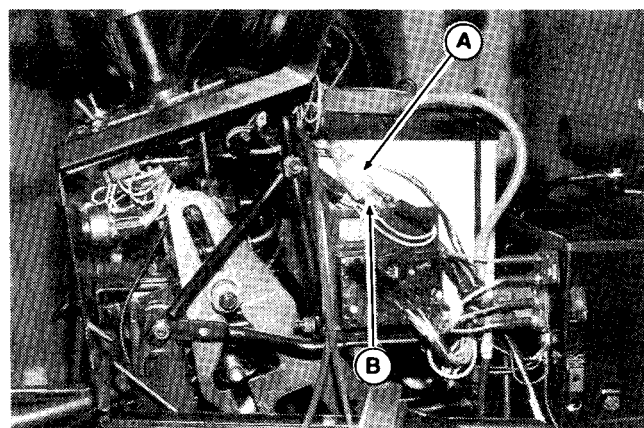


Figure 5. A. Plug B. Insert diode

10. Install rear PTO switch (C, figure 1) as follows. Insert the switch from bottom through dash. (To determine position, you must lift up on toggle to move forward to engaged position). Install nut from top and tighten. After installing, verify that you must pull upward to push switch forward.
11. Route the harness (D & E, figure 3) to rear of steering column and over to the rear PTO switch.
12. Locate the black, 3-prong plug which hangs loose under dash near the rear PTO switch. A green wire is in one prong, double-brown wires in one prong and one prong is empty. Insert the red wire (D, figure 3) into the empty prong; same side as existing wires. Be sure to insert wire (D) with tab same direction as notch in 3-prong plug (notch visible from opposite side). The wire will snap into locked position. Test by trying to pull wire out; you should not be able to pull it out.
13. Connect the 3-prong plug (same plug as in step 12) to the 3-prong side of rear PTO switch.
14. On models equipped with 2 external seat switches, connect the 2-prong plug (E, figure 3) onto the 2-prong side of the rear PTO switch. On models equipped with singular internal seat switch, locate 2-prong plug with jumper wire that hangs loose under dash near the rear PTO switch. A blue wire is in one prong and a light blue wire is in the other prong (see figure 3). Remove the jumper wire and connect this 2-prong plug onto 2-prong side of rear PTO switch.

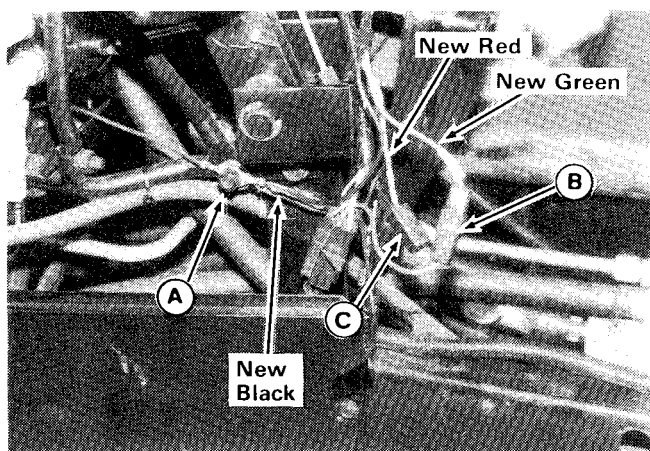


Figure 6.

A. Nut

B. Connect green wire from new harness to existing green wire.

C. Plug, Existing (to Rear Harness)

15. Route the remaining three wires of the harness (F, G, H, figure 3) over to left side of dash (figure 6), behind steering column.

NOTE

The black wires (E, F, figure 3) and green wires (G, figure 3) mentioned in steps 16 & 17 are not required for tractors equipped with internal seat switch (mfg. nos. 1691250 and higher). Black and green wires are required for dual external seat switches.

16. Remove the nut (A, figure 6) and place the round terminal (F, figure 3) onto the threads. Re-install the nut.
17. In the existing tractor harness, on left-hand side (figure 6) disconnect the green wire from the black wire. Connect the green wire (G, figure 3) from new harness to the green wire. This connection is "B" in figure 6. The black wire will hang loose.
18. Locate the plug (C, figure 6) in existing harness that has double black wire in one side. Connect the red wire (H, figure 3) into the plug beside the double black wires. As in step 12, be sure prong on terminal (H) is on same side as notch in plug. It will snap into locked position. Then, connect plug (C, figure 6) to the rear harness from kit.
19. Install two clips (A, figure 7) on underside of the frame and route the rear harness (B) back to the clutch, when installed (see following procedure).

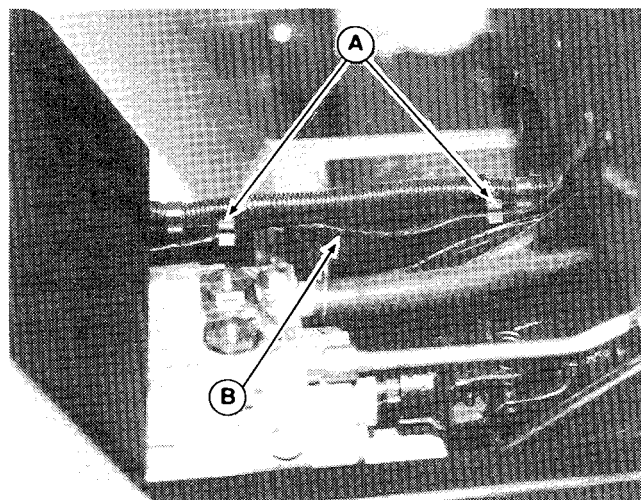


Figure 7.

A. Clip

B. Rear Harness

See "Install Clutch", next page.

INSTALL CLUTCH



CAUTION

The fuel tank should be 1/8 full or less to avoid fuel leakages.

NOTE

If gear box (A, figure 11) is to be installed, it should be installed last. Install 3-point hitch (E, figure 11) over top of gear box.

1. Place the seat in rear-most position and tighten securely.
2. Remove the three bolts (A, figure 8) from each side that secure the fuel tank cover. (Reach under fender.)
3. Raise the seat, tank cover, and tank as shown in figure 8 and wire to steering wheel securely.
4. The strap (B, figure 9) is connected to clutch with flange bolt, washer and nut (washer between nut and strap). Tighten the nut (C, figure 9) snug, so that strap can move in slot (A).

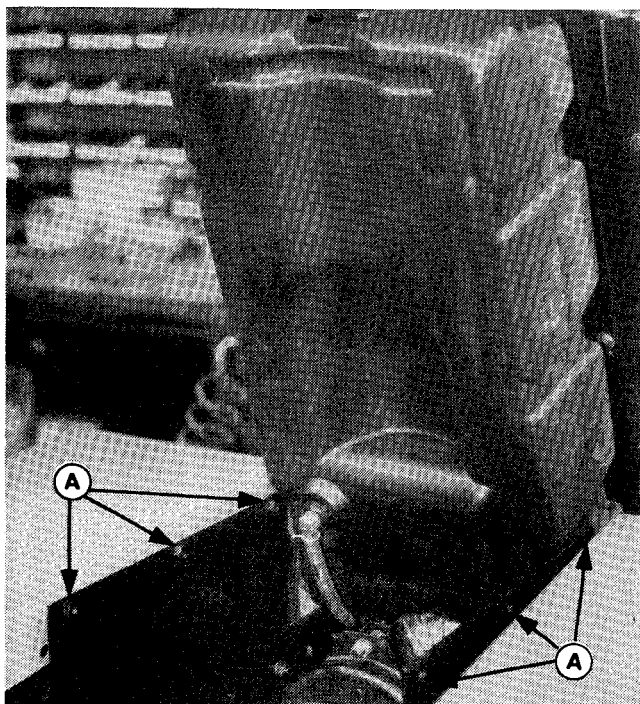


Figure 8.
A. Bolt Location

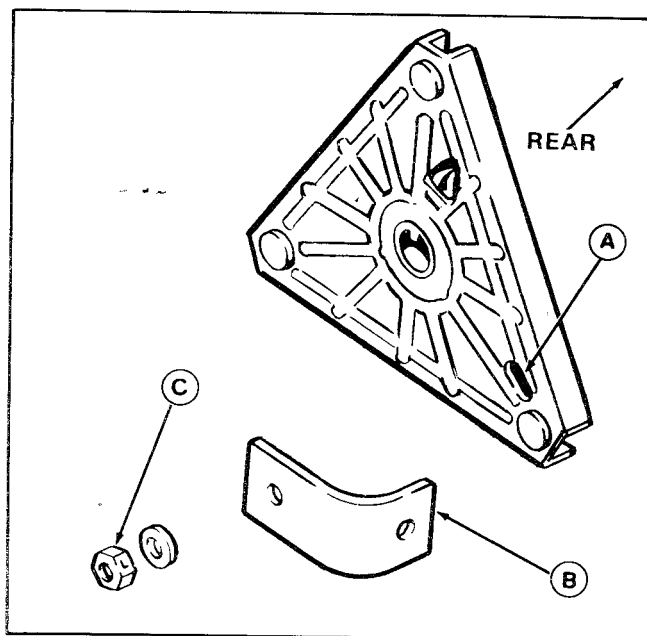


Figure 9.

A. Slot
B. Strap
C. Nut

5. Place the clutch assembly (A, figure 10) into the tractor as shown, sliding shaft onto transmission output shaft. Note position of strap with respect to rear of tractor (B, figure 9).

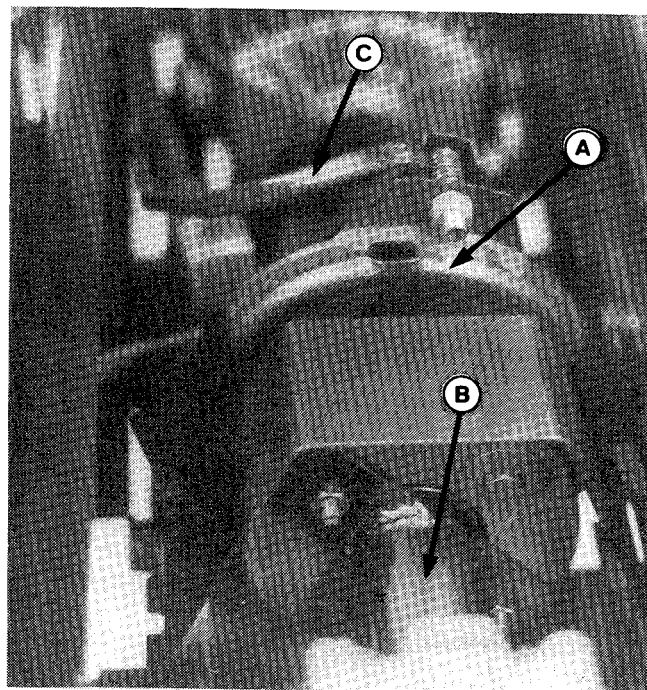


Figure 10.
A. Clutch Assembly
B. Adapter
C. Wiring Harness

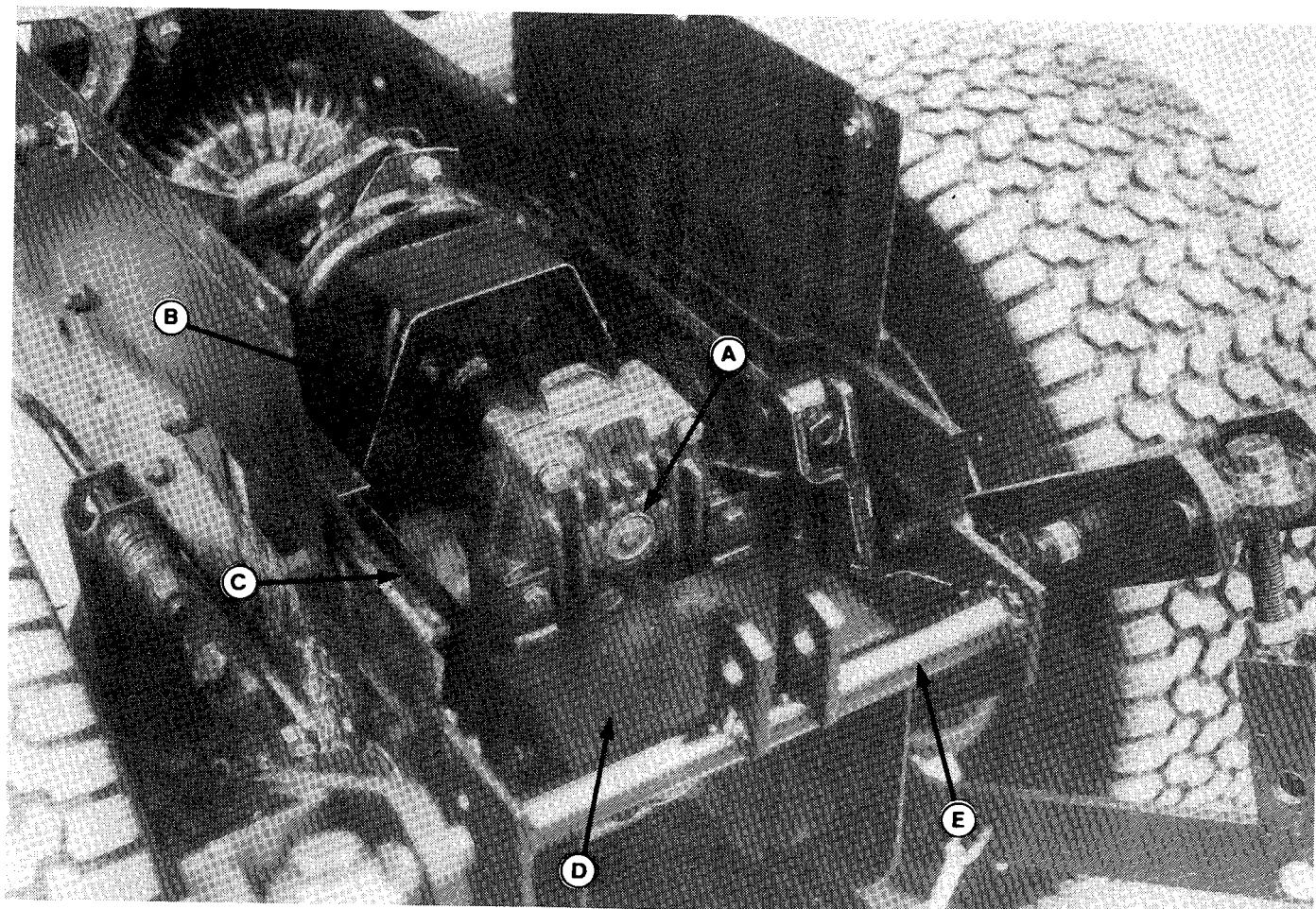
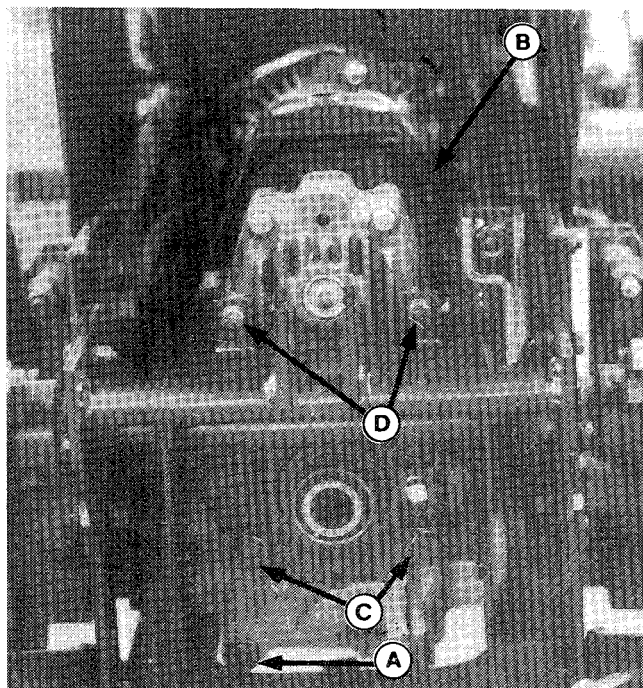


Figure 11.

- A. Gear Box
- B. Cover
- C. Support
- D. Shield
- E. 3-Point Hitch

6. Add 8 oz. of S.A.E. 90 gear oil to gear box.
7. One of the nuts (J, figure 13) is shipped on each screw thread. Remove the nuts, leaving the washers (P) in place. Position the gear box in the tractor placing adapter (B, figure 10) into screw threads. Then, install one 5/16 nut (J, figure 13) onto each screw and torque to 20 ft. lbs. Then, install another 5/16 nut (J) onto each screw and torque to 20 ft. lbs. These nuts serve as jam nuts.
8. Secure the bottom of the gear box with a 1/2 lockwasher and 1/2-13 x 4 capscrow (L, figure 13). Install two 1/2 lockwashers and two 1/2-13 x 2-1/4 capscrows (E) loosely, at this time. See figure 13.
9. Assemble the cover (I, figure 13) to the supports (A) with four 5/16 x 1/2 self-tapping screws (C). Place the shield (D) onto supports (A) and install with four 5/16 x 1/2 self-tapping screws (C). Position these assembled parts on the tractor. See cover (B, figure 11), support (C) and shield (D).
10. Remove the four capscrows (C & D, figure 12).
11. Then re-install the two capscrows (C, figure 12) with lockwashers (F, figure 13) through lower shield holes and into the transmission. Tighten snug at this time. Place 5/16 x 9/16 spacers (G, figure 13) and 5/16 washers (H) between gear box and shield. Install two 5/16 x 2 capscrows (B, figure 13) and existing lockwashers (Q, figure 13).



12. Connect the wiring harness (C, figure 14).
13. Connect the strap (A, figure 14) to bottom hole in the side of the frame shown. Place washer between strap and 5/16 x 3/4 whizlock screw on the inside of frame. Install 5/16 centerlock nut onto screw from outside frame. With strap tight and clutch vertical (see B, figure 14) tighten strap. (Tighten screw and nut in tractor frame first and then the screw in clutch slot.)
14. Using a grease gun, apply grease at the front fitting (D, figure 14) until grease is visible at front of shaft.
15. Lower the fuel tank, cover, and seat. Make sure fuel tank is fully down and resting on frame.
16. Make sure there is clearance between gas tank and clutch cover. Make sure clutch cover does not touch rubber discs.

Figure 12.

- A. Capscrew
- B. Shield
- C. Capscrews
- D. Capscrews

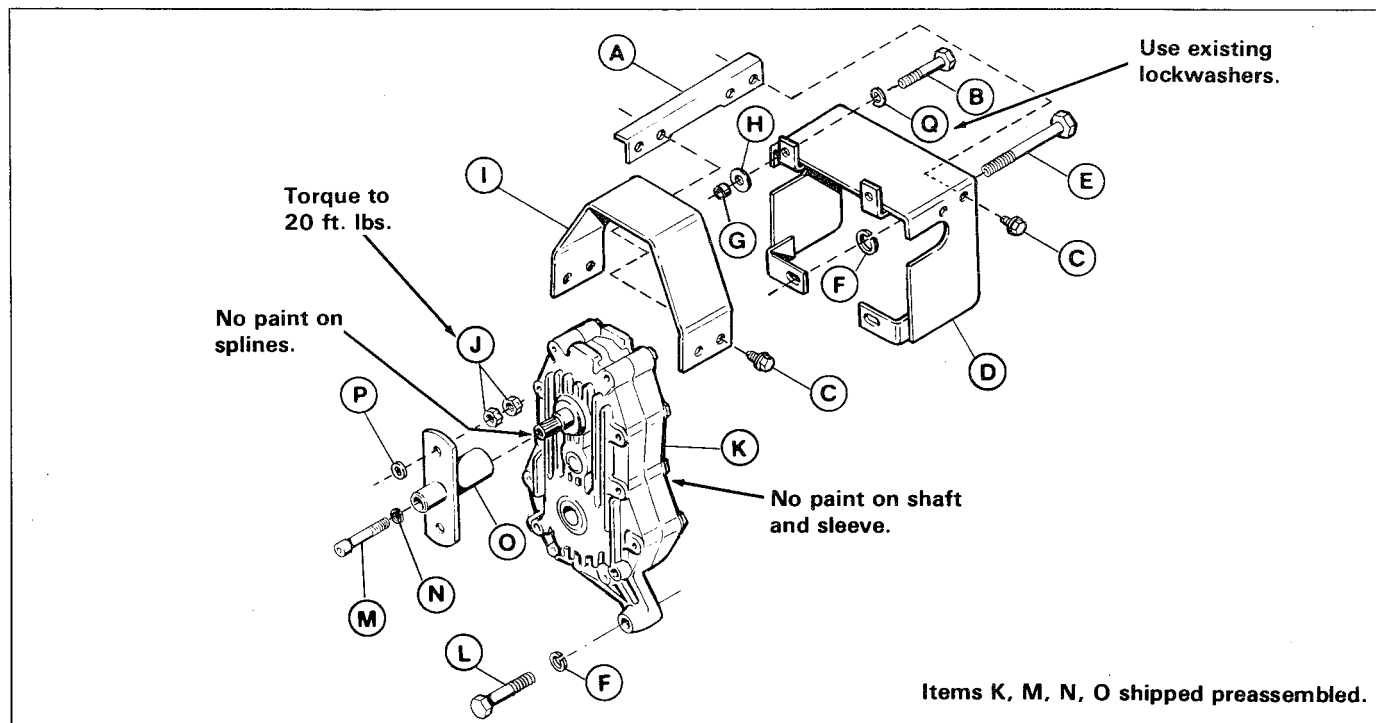


Figure 13.

- A. Support
- B. Capscrew, 5/16-18 x 2
- C. Screw, Self-tapping, 5/16 x 1/2
- D. Shield
- E. Capscrew, 1/2-13 x 2-1/4
- F. Lockwasher, 1/2
- G. Spacer, 5/16 x 9/16
- H. Washer, 5/16 x 7/8

- I. Cover
- J. Nuts, 5/16
- K. Gear Box
- L. Capscrew, 1/2-13 x 4
- M. Capscrew, Socket Head, 5/16-24 x 2-1/4
- N. Lockwasher, 5/16
- O. Adapter
- P. Washer, Plain
- Q. Lockwasher

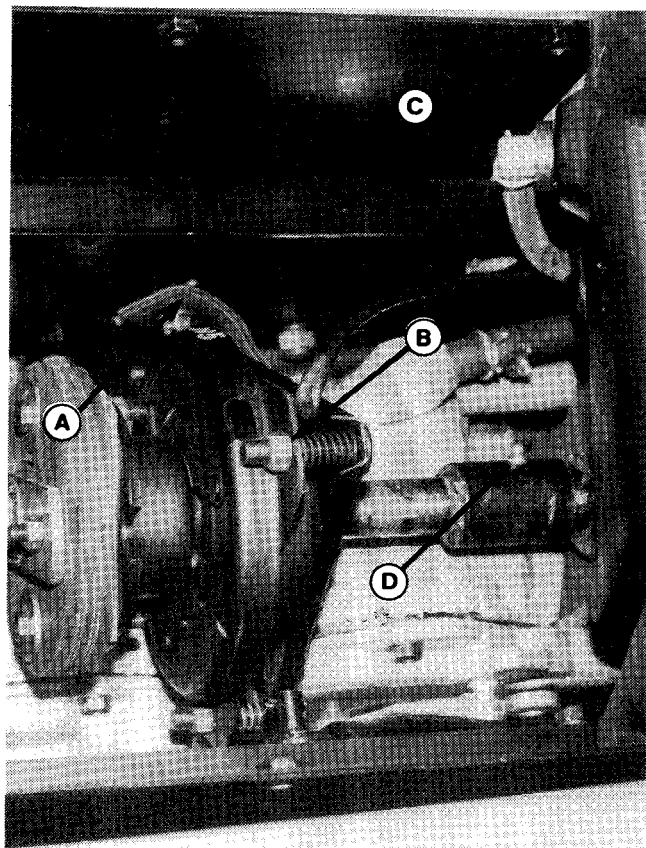


Figure 14.

- A. Strap
- B. Top
- C. Wire
- D. Grease Fitting

17. Install the six screws (A, figure 8).
18. Test operate the clutch. First, connect the battery, positive cable first. Seat yourself in the tractor seat and turn key to RUN. Turn rear PTO switch to ON by pulling up and moving forward. The "Rear PTO" light will go on and you will hear clutch engage (click).
19. Reinstall the tunnel cover and the side panels. See steps 1 and 2 in "Install Wiring Harness."
20. Reposition the plenum and rubber straps or wing nut (see step 3, page 1). Position air intake into plenum.
21. Before first use of clutch, it should be burnished. To do this, start tractor engine and set at full throttle. Turn the rear PTO switch to ON, leave on for 15 seconds, then turn off. Do this ten times to burnish the clutch.

