

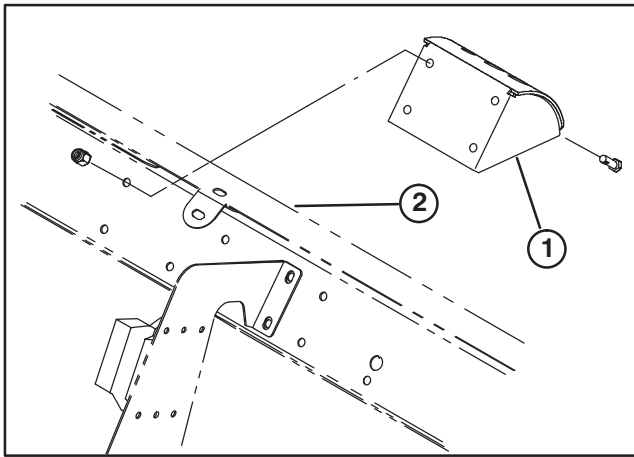
TORO®

MODEL NO. 07404

INSTALLATION INSTRUCTIONS

APU ELECTRIC CLUTCH KIT

1. Unplug wire harness connectors from both head-lights.
2. Remove (15) screws and washers securing front hood to vehicle frame and remove hood.
3. Mount switch bracket to dash panel with (4) 1/4-20 x 5/8" lg. capscrews and locknuts (Fig. 1). There are (3) sets of mounting holes in vehicle dash panel. Use available set, depending on what other optional equipment has been installed.

**Figure 1**

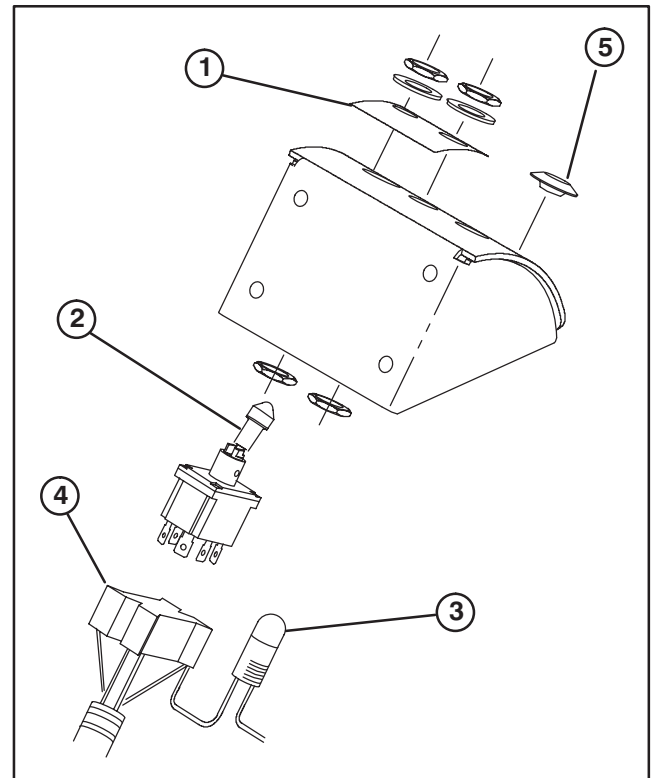
1. Switch bracket
2. Dash panel

NOTE: When installing switch bracket on diesel machines and using left set of mounting holes, glow plug switch must be removed from dash panel and reinstalled in upper left hole in switch bracket.

4. Affix electric clutch decal around upper right and center holes of switch bracket (Fig. 2).
5. Mount electric clutch switch in upper right hand hole of switch bracket with a washer and (2) hex nuts (Fig. 2). Washer to be positioned between top nut and switch bracket.
6. Plug wire harness into the clutch switch (Fig. 2).
7. Remove lens and bulb from wire harness indicator light assembly (Fig. 2).
8. Mount indicator light fixture in center upper hole of switch bracket with a washer and (2) hex nuts (Fig. 2). Washer to be positioned between top nut and switch bracket.
9. Reinstall lens and bulb to indicator light fixture (Fig. 2).

NOTE: Switch, indicator light and decal can be mounted in other switch bracket holes to accommodate installation of other options, but clearance between switch and switch connector must be maintained.

10. Insert snap-in plugs into all unused holes in switch bracket (Fig. 2).

**Figure 2**

1. Clutch decal
2. Clutch switch
3. Indicator light
4. Wire harness
5. Snap-in plug

11. Route wire harness forward to front frame cross member as follows:

A. If switch bracket is mounted in left set of holes in dash panel, route harness to left side of brake pedal return spring and secure to front frame cross member with a cable tie. Harness must not interfere with operation of brake pedal return spring.

B. If switch bracket is mounted in center or right set of holes in dash panel, route harness to right side of frame center plate and secure to front frame cross member with a cable tie.

12. Route harness toward the left, then downward following vehicle wire harness. Secure harness to vehicle wire harness with (2) cable ties.

13. Locate, above brake fluid reservoir, the grey, safety interlock jumper wire connected to vehicle wire harness. Unplug and discard jumper wire.

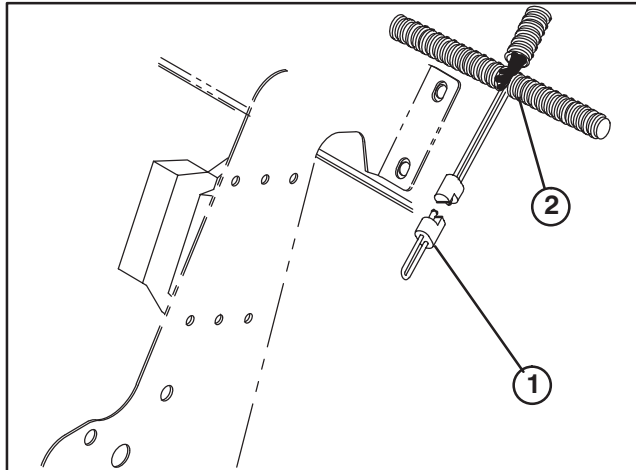


Figure 3

- 1. Jumper wire
- 2. Wire harness

14. Plug safety interlock connector, from clutch kit harness, into vehicle harness where interlock jumper was removed.



CAUTION

The interlock system is for the operator's protection, so do not bypass it. Check operation daily to assure interlock system is operating. If system is malfunctioning repair it before operating.

15. Remove screws securing vehicle fuse block to frame (Fig. 4).

16. Slide new fuse block assembly onto front of existing vehicle fuse block (Fig. 4).

17. Mount both fuse blocks to vehicle frame with fasteners previously remove and (2) new screws and lock-nuts (Fig. 4).

18. Affix electric clutch 20 Amp decal to any unused circuit on vehicle fuse block decal (Fig. 4).

19. Plug new fuse block lead wire into vehicle wire harness and plug electric clutch wire into circuit chosen in step 18.

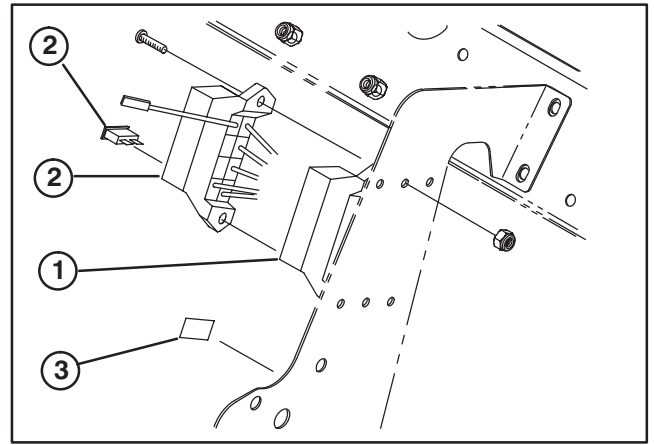


Figure 4

- 1. Vehicle fuse block
- 2. New fuse block
- 3. Decal
- 4. Fuse

20. Remove capscrew and nut securing vehicle ground wires to frame. Resecure ground wire from harness and vehicle wires to frame with capscrew and nut removed.

21. Route wire harness through opening in vehicle floor board and to rear of vehicle following the accelerator cable. Secure wire harness to accelerator cable with (3) cable ties.

22. Secure wire harness to jackshaft support tube with a cable tie (Fig. 5).

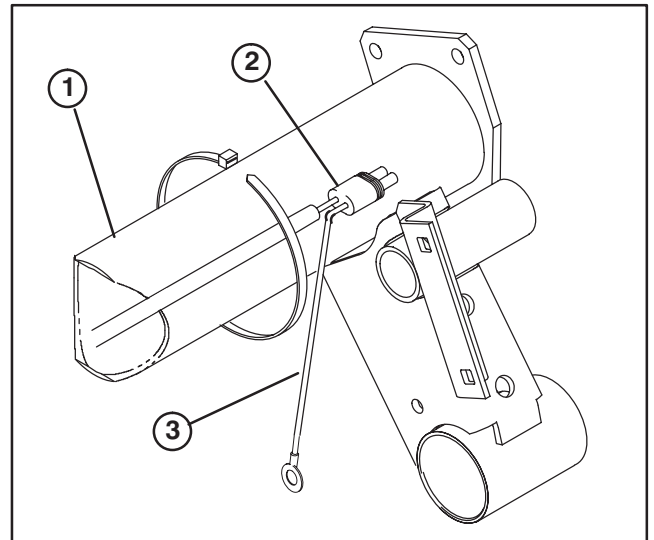


Figure 5

- 1. Jackshaft support tube
- 2. Wire harness
- 3. Ground wire

23. Reinstall hood to frame with fasteners previously removed.

24. Reconnect wire harness connectors to head lights.

25. Place V-belts (matched set included with kit) into groves of clutch pulley (Fig. 6).

26. Apply a coating of grease to pivot shaft and insert shaft into tightener bracket tube of clutch assembly (Fig. 6).

27. Slide shaft through tube and install a cotter pin into shaft at pulley end of tube (Fig. 6).

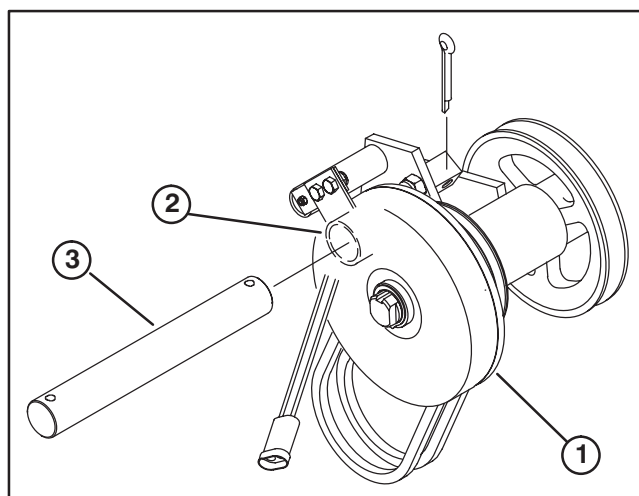


Figure 6

1. Clutch assembly
2. Tightener bracket tube
3. Pivot shaft

28. Push pivot shaft thru tube until clutch end of shaft is flush with clutch end of tube (Fig. 6).

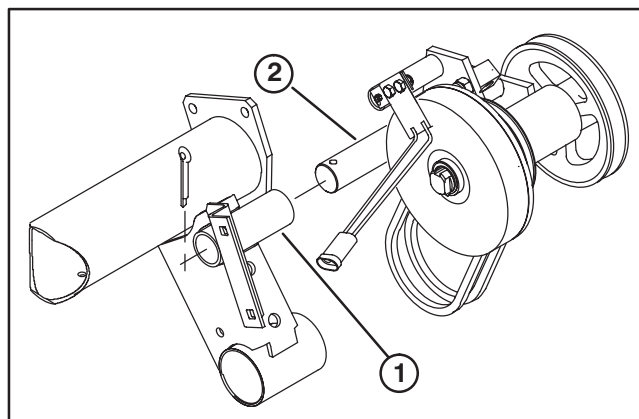


Figure 7

1. Frame mounting tube
2. Pivot shaft

29. Align tightener bracket tube with frame mounting tube and slide pivot shaft through frame mounting tube (Fig. 7). Install cotter pin to other end of shaft.

NOTE: The APU electric clutch is used in conjunction with the Auxiliary Power Unit Kit, model 07041 for the Workman 3200 and model 07402 for the Workman 3300—D. When installing appropriate APU Kit, place V—belts (matched set included with electric clutch kit) into groves of APU pulley.

30. If APU is already installed, pulley and shaft assembly of APU must be removed and reinstalled after belts are mounted.

31. Mount adjustment bracket, clutch bracket spacer and wire harness ground wire to jackshaft support bracket with (2) capscrews, (1) external tooth lockwashers and (2) flange locknuts as shown in figure 8.

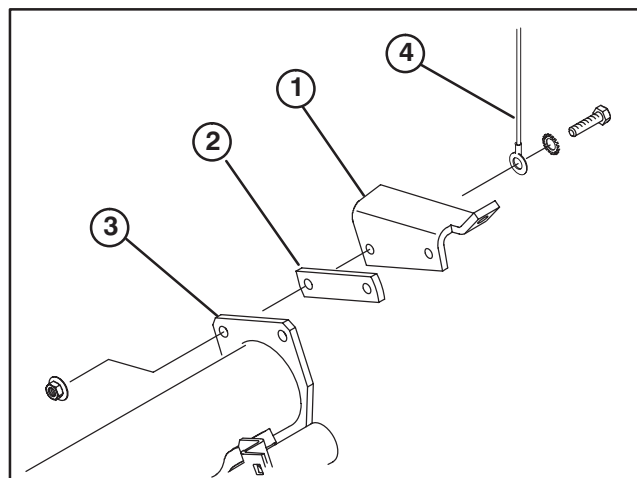


Figure 8

1. Adjustment bracket
2. Clutch bracket spacer
3. Jackshaft support bracket
4. Ground wire

Note: Spacer not required on machines equipped with generator assembly because generator mounting bracket, in same position, acts as a spacer.

32. Insert a flat washer onto tap bolt, then thread tap bolt into adjustment bracket about two inches. Loosely thread a hex nut onto tap bolt (Fig. 9).

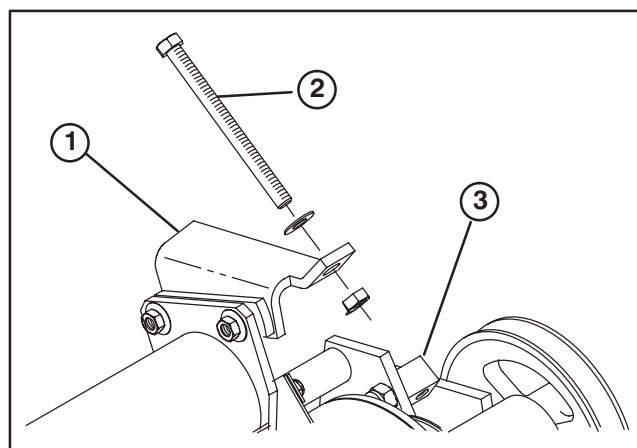


Figure 9

1. Adjustment bracket
2. Tap bolt
3. Bolt guide

33. Pivot clutch and bracket assembly up until tap bolt can be threaded into bolt guide (Fig. 9).

34. Ensure belts are correctly aligned in pulley grooves and tighten tap bolt to tension belts. Each belt should deflect .09 inches, when 7 pounds of force is applied at mid span of pulleys. Lock tap bolt adjustment by tightening nut against bolt guide.

IMPORTANT: Belt tension should be checked after the first 8 hours of operation, and after every 50 hours of operation thereafter. When tensioning belts after operation, each should deflect .09 inches when 5 pounds of force is applied at mid span of pulleys.

NOTE: Belt adjustment may be required more often when used in heavy duty applications.

35. Plug electric clutch connector into wire harness connector.

36. Insert 20 Amp fuse into fuse block at location shown on decal (Fig. 4).

37. The electric clutch must be burnished in order to obtain full horsepower capacity.

To burnish clutch, start vehicle engine and allow it to idle or set hand throttle, if so equipped, to 1500 to 1800 rpm.

With no load on clutch, switch it "ON" and "OFF" a minimum of 30 times.

If clutch will be used in heavy duty applications, switch it "ON" and "OFF" a minimum of 50 times.



CAUTION

Switch clutch off, stop vehicle engine, remove key from ignition and wait for all moving parts to stop before changing clutch belts or performing any maintenance procedures on the clutch assembly.

To verify electric clutch safety interlock operation:

1. Sit on operator's seat and engage parking brake. Move shift lever to NEUTRAL position.
2. Engage electric clutch.
3. Depress clutch pedal and rotate key clockwise to start position.
4. If engine cranks or starts, there is a malfunction in the interlock system that must be repaired before operating vehicle.