

Engine Removal and Replacement

IMPORTANT: Use proper safety procedures when working on the tractor.

1. Open the hood and remove the battery box cover.
2. Remove the negative and positive battery terminal connectors from the battery using a 5/16 socket.
3. Remove both of the side panels from the tractor by raising the latches horizontally and turning the latches 1/4 turn. See figure 1.
4. Loosen all four plastic wing nuts holding the dash panel screen in place.
5. Remove the dash panel screen by pulling it towards the seat.



FIGURE 1.

6. Cut the cable ties securing the headlight wiring harness to the hood assembly. See figure 2.
7. Remove the headlight bayonet mounts from both of the headlights by twisting the sockets 1/4 turn and pulling straight out. See figure 2.

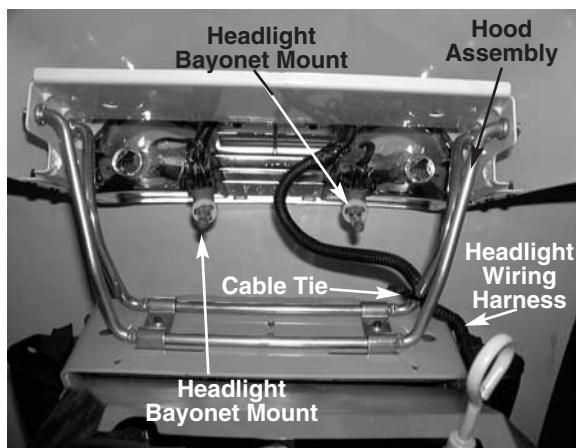


FIGURE 2.

8. Partially close the hood to allow access to the grill fasteners. See figure 3.
9. Squeeze all four grill fasteners and release the grill. See figure 3.
10. Remove the grill and set it aside.
11. Remove all four hood mounting bolts from the muffler assembly brackets using a 1/2" socket. See figure 3.

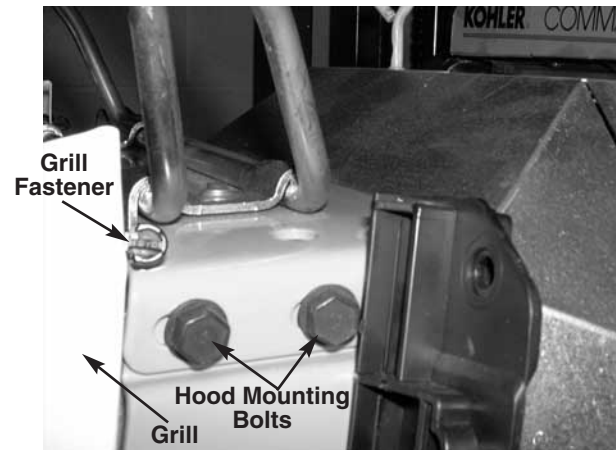


FIGURE 3.

12. Remove all four muffler assembly bracket bolts from the tractor frame using a 1/2" socket. See figure 4.
13. Remove the muffler assembly from the engine.

NOTE: Move the muffler assembly side to side. This will allow the muffler to separate from the exhaust manifolds. See figure 4.

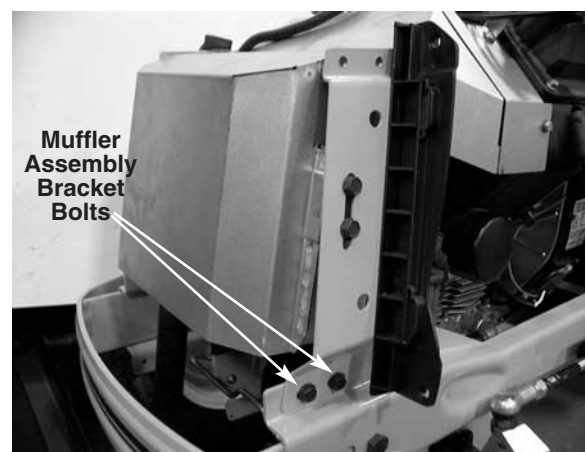


FIGURE 4.

Cub Cadet 3000

14. Remove both the choke and the throttle cables. See figure 5.

NOTE: use a marker and mark the holes and cable alignment before removal.

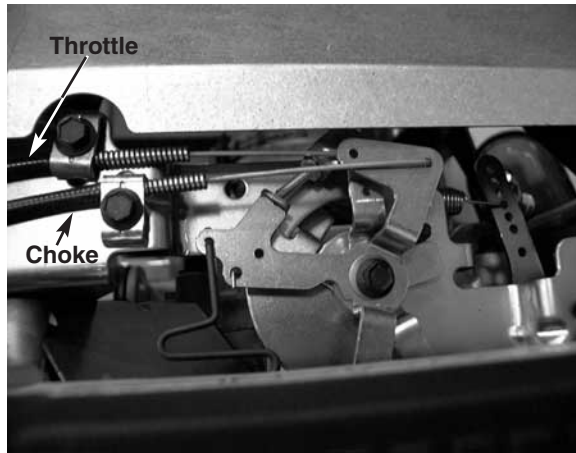


FIGURE 5.

15. Disconnect the vacuum tube from the E-Vac check valve. See figure 6.



FIGURE 6.

16. Disconnect the wiring harness, ground cables, and any sensor connectors from the engine. See figure 7.

NOTE: Visually inspect the engine from all angles to make sure all wires and cables are disconnected from the engine to the frame.

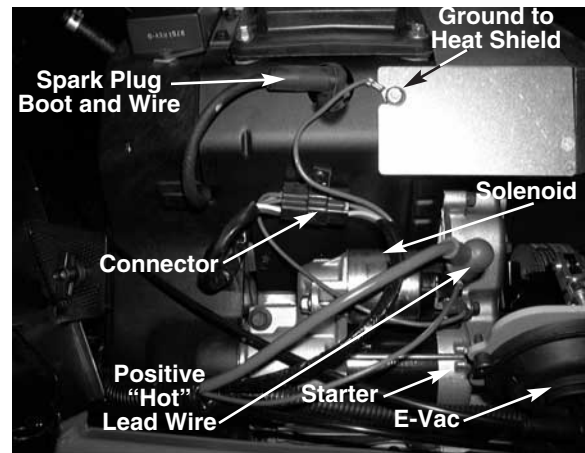


FIGURE 7.

17. Remove the fuel line from the engine.

NOTE: Make sure the fuel line is fully drained and secured in a safe place during engine removal.

18. Remove both of the hex bolts securing the belt guard to the engine using a 13mm socket and extension. See figure 8.

19. Remove the E-vac clip. See figure 8.

NOTE: Push up on the locking clip and slide the pin away from the engagement arm.

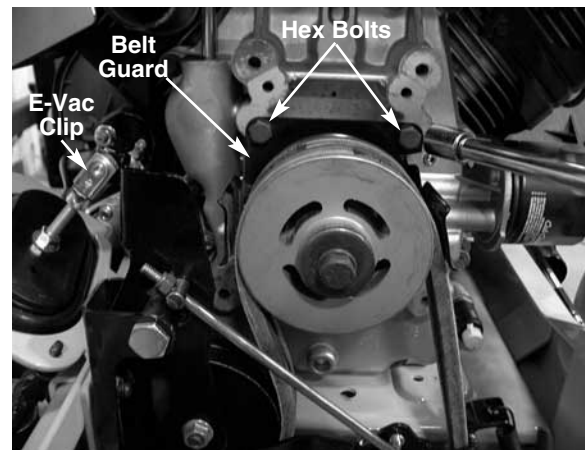


FIGURE 8.

20. Remove the battery from the unit.

NOTE: The battery was removed to give direct access to the drive shaft bolts through the dash panel area.

21. Remove all four of the hex bolts securing the drive shaft to the engine flywheel using a 7/16 socket and extension. See figure 9.

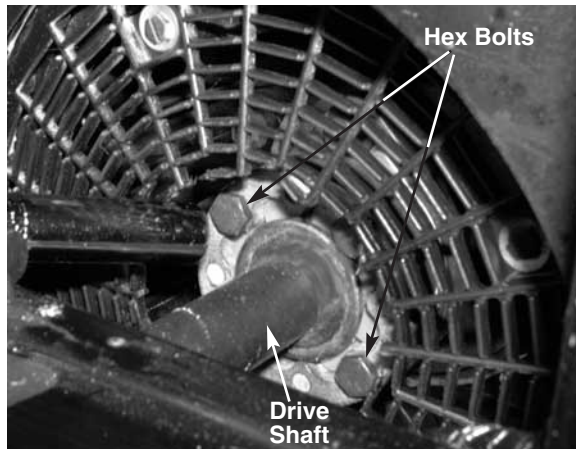


FIGURE 9.

22. Remove the PTO idler arm extension spring. See figure 10.
23. Remove both of the hex bolts and flanged lock nuts securing the PTO idler assembly to the frame using a 9/16 socket and a 9/16 wrench. See figure 10.

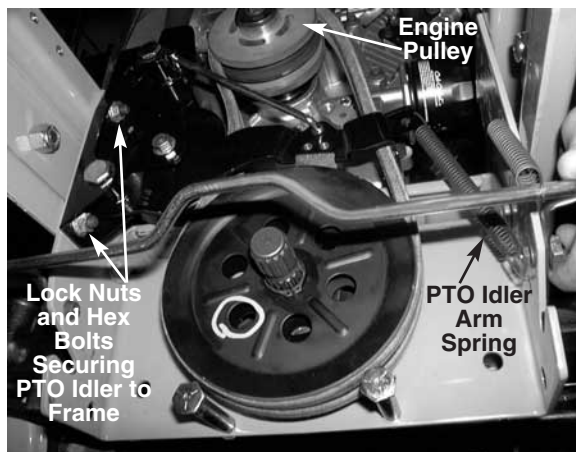


FIGURE 10.

24. Remove the PTO idler assembly from the unit.
25. Remove both of the PTO belts from the engine pulley.
26. Secure the engine from above using the engine brackets. See figure 12.
27. Remove all six of the hex bolts and lock nuts from the engine mounting plate using a 1/2" socket and a 1/2" wrench. See figure 11.

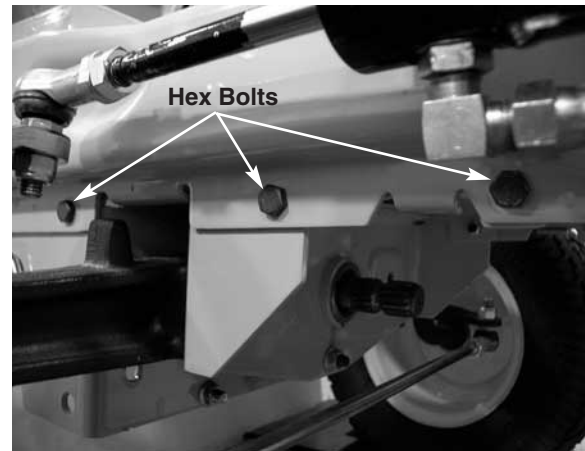


FIGURE 11.

28. Slowly raise the engine and mounting plate from the unit while a helper guides the drive shaft out of the flywheel screen. See figure 12.

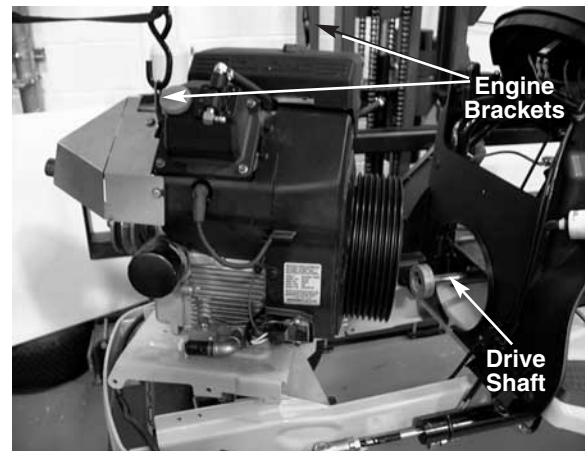


FIGURE 12.

NOTE: Use extreme caution while pulling the drive shaft away from the unit. The drive shaft couplers will come apart if you are not careful.



FIGURE 13.
REINSTALL THE ENGINE IN THE REVERSE ORDER ABOVE.