

Transmission Inspection and Disassembly

1. Inspect the pump adapter to be certain that it is turning the hydraulic input shaft. See figure 1.
2. Inspect the center hex jam nut and flat washer on the pump adapter to be certain that it is not loose. See figure 1.

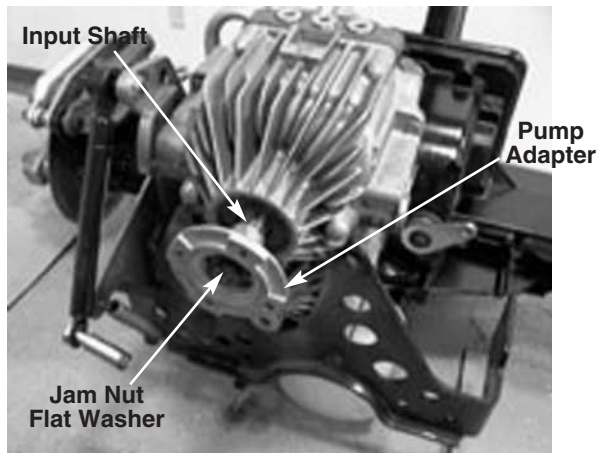


FIGURE 1.

3. Inspect the connection between the hydro arm and the trunnion arm behind the neutral return link. See figure 2.

NOTE: Make sure the flat washer and hex screw are tight on the hydro arm. Also, check the set screw on the hydro arm to be certain it is tight.

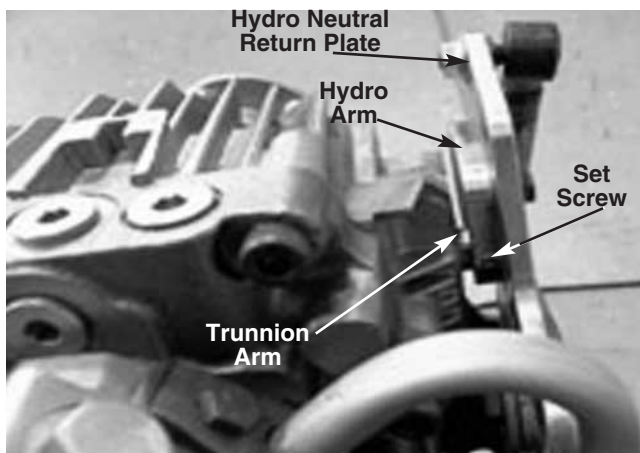


FIGURE 2.

4. Inspect the clearance between the hydro bypass spring plate and the bypass valve on the hydro pump. See figure 3.

NOTE: There should be free play in between the plate and the bypass valve.

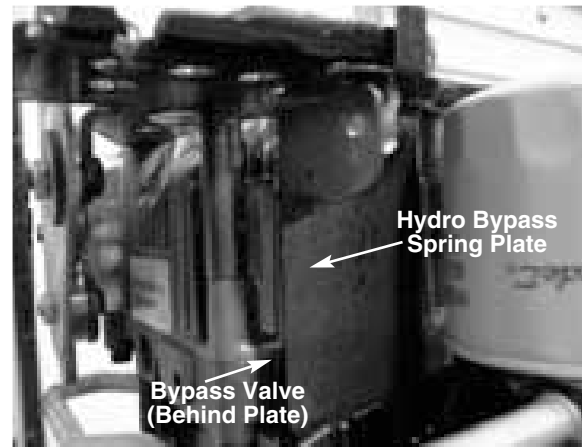


FIGURE 3.

5. Remove the hydro oil filter from the transmission and check for contamination in the filter, filter nipple, and the inlet cavity. See figure 4.

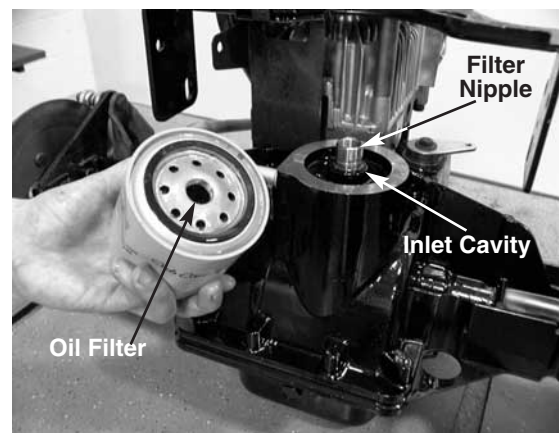


FIGURE 4.

Cub Cadet 3000

6. Remove both clamps from the hydro pickup tube using a 7/16 wrench on the upper hex screw and a 3/8 wrench on the lower hex screw.
7. Remove the hydro pickup tube and inspect the tube for any contamination that would restrict the hydro oil flow. See figure 5.
8. Inspect the "O" ring at each end of the hydro pick-up tube. If damaged, replace. See figure 5.
9. Inspect the output and input ports where the hydro pickup tube clamps on. See figure 5.
10. Remove the extension spring from the torque bracket. See figure 5.

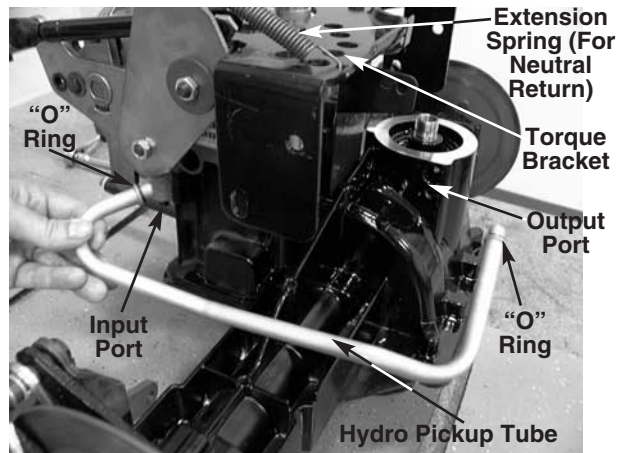


FIGURE 5.

11. Remove all four- 5.5" hex cap screws from the torque bracket using a 1/2" socket. See figure 6.
12. Remove the torque bracket and all four hex cap screws from the hydro transmission assembly by pulling straight up on the torque bracket.

NOTE: The neutral return link comes off with the torque bracket.

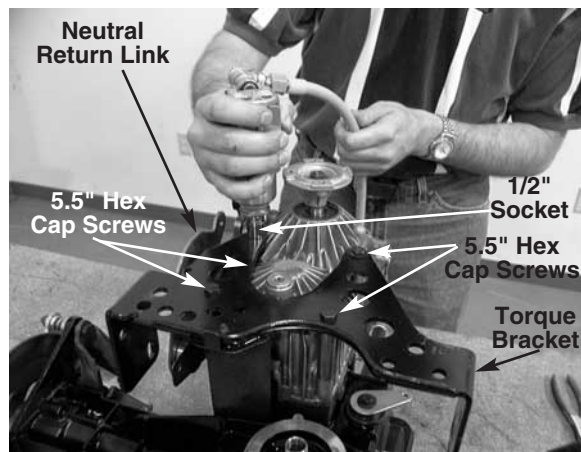


FIGURE 6.

13. Remove the hydrostatic transmission from the differential transmission and inspect the case drain holes on the hydro and the differential. See figure 7.

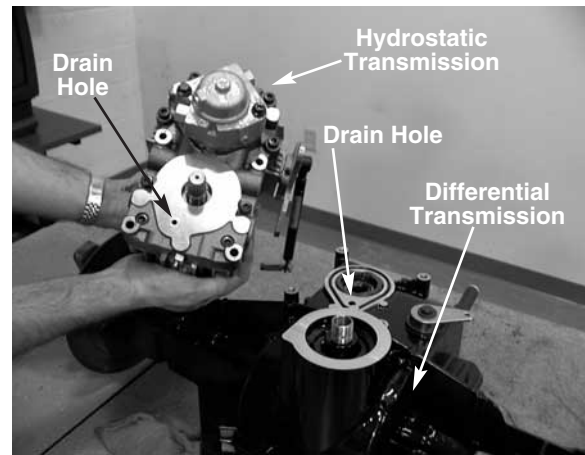


FIGURE 7.

14. Remove the "O" ring from between the hydro and differential. See figure 8.
15. Remove the spring washer from between the hydro and the differential. See figure 8.
16. Pull on the differential lock actuator using a fish scale and see if it locks in with less than 35 pounds of pull. See figure 8.
17. Grasp both hub assemblies. Rotate the hubs in opposite directions, in the forward direction together, and in the reverse direction together, looking for any binding.

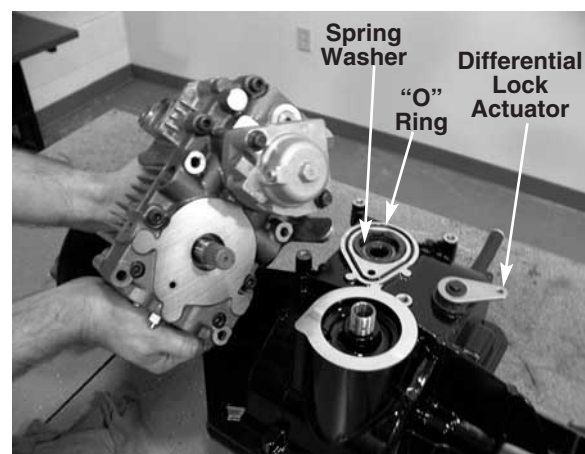


FIGURE 8.

18. Remove the center hub lock nuts on the hub assemblies using a 1 and 5/16" socket. See figure 9.

NOTE: The torque on the center hub nut is 180-250 ft-lbs.

19. Remove the brake mounting bracket from the differential assembly by rotating the brake disk until the access holes are directly above the hex washer screws. Using a 1/2" socket and extension, remove all three hex washer screws from each side of the differential assembly. See figure 9.
20. Remove the hex cap screw and belleville washer from the differential lock actuator arm using a 7/16 socket. See figure 9.
21. Remove the differential actuator arm and all three flat washers from the differential.

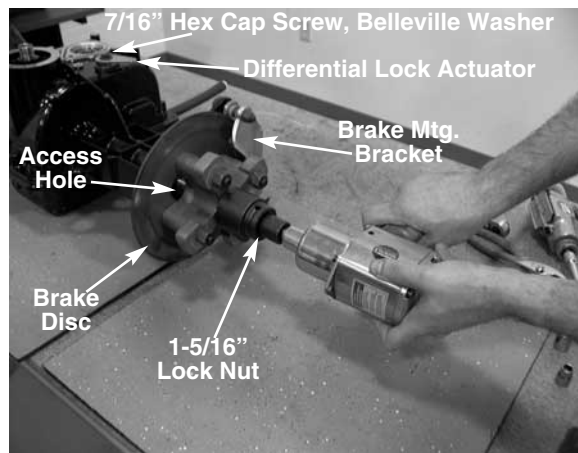


FIGURE 9.

22. Turn the differential over.
23. Remove all the hex washer tapp screws from the rear cover assembly using a 3/8 socket. See figure 10.
- NOTE:** There is a difference in the hardware lengths. The six bolts that pass through the transmission cover blocks are 1.25" long. The remaining hardware is 1" long.
24. Remove and discard the cover assembly gasket.
25. Inspect all the gears in the differential for uneven wear or damaged teeth. See figure 10.
26. Remove the hex washer tapp screws from the transmission plate using a 3/8 socket.

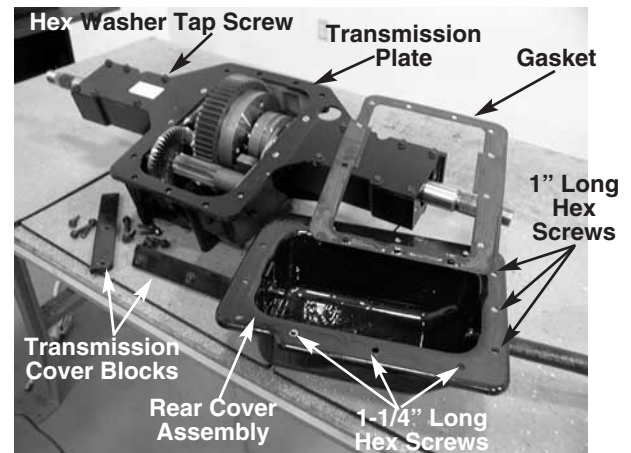


FIGURE 10.

27. Remove the transmission plate.
28. Remove and discard the second transmission plate gasket. See figure 11.

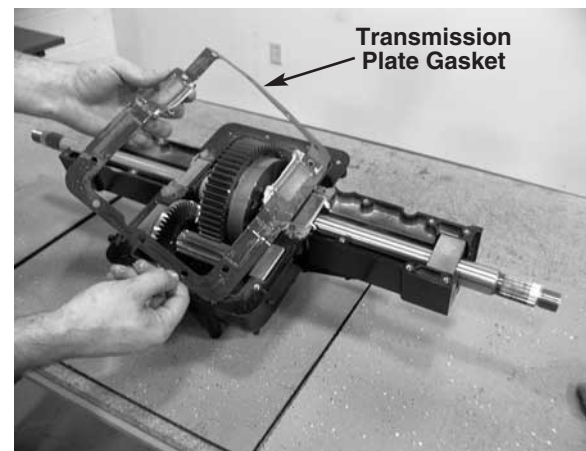


FIGURE 11.

29. Remove the complete differential assembly.
- NOTE:** The differential lock actuator shaft will come out with the differential assembly.
30. Inspect the outer and inner bearing block assemblies for any damage. See figure 12.
31. Inspect the actuator shaft and make certain it is not bent.
- NOTE:** Not all models are equipped with the differential lock out feature. See figure 12.

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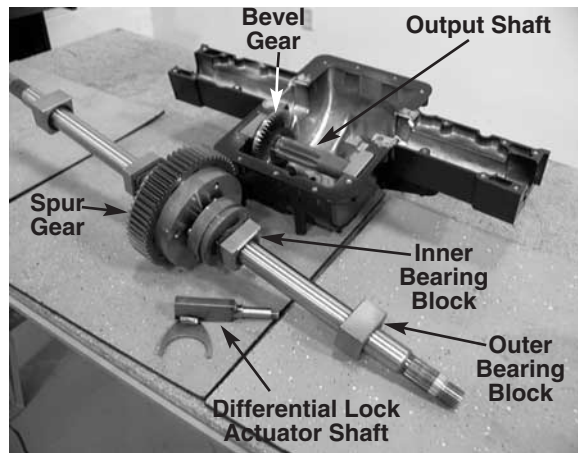


FIGURE 12.

32. Write down the shim orientations for both sides of the output shaft. See figure 13.

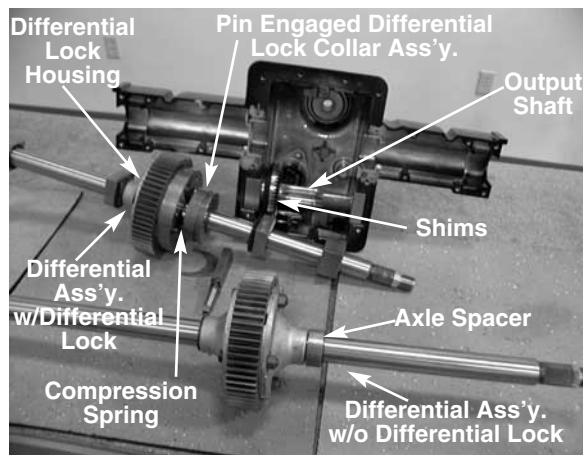


FIGURE 13.

33. Remove the output shaft assembly from the case and inspect for any wear.

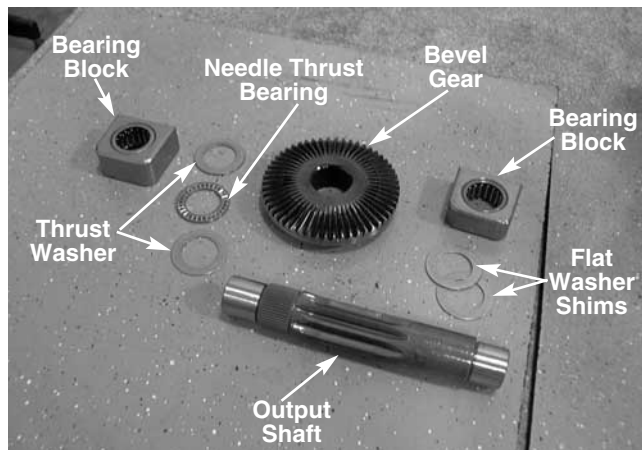


FIGURE 14.

34. Remove the input pinion gear assembly from the case. See figure 15.

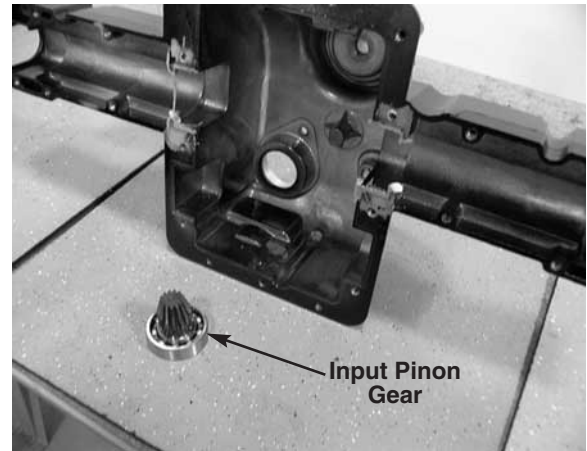


FIGURE 15.

35. Remove the four hex cap screws from the differential housing using a 9/16 socket. See figure 16.
36. Separate the differential assembly.
37. Remove the large spur gear and the differential gears together and lay them on the bench.
38. Grasp the large spur gear and pull it away from the differential gear assembly.

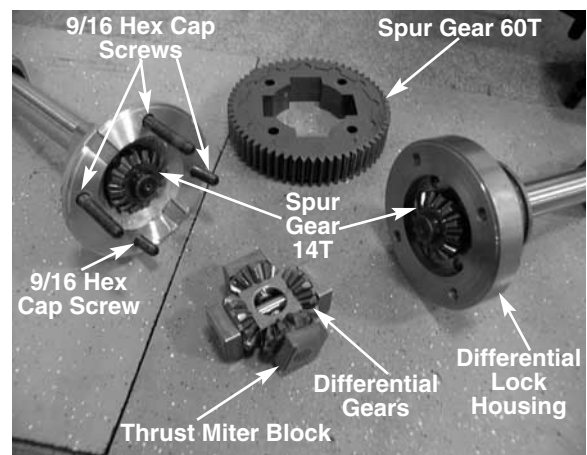


FIGURE 16.

INSPECT ALL COMPONENTS AND PARTS BEFORE REASSEMBLY.