

Transmission Reassembly

1. Assemble the differential gear assembly flat on a work bench and in the correct sequence. See figure 1.

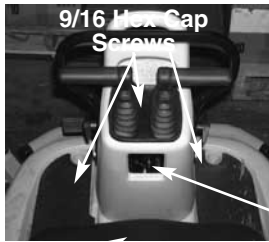


FIGURE 1.

2. Pick up all the components together and place them on the steel differential lock housing.
3. Rotate all four of the thrust miter blocks until they are flush with the top surface of the steel differential lock housing.
4. Place the large spur gear over the differential gear assembly.
5. Rotate the large spur gear until the screw holes line up directly above the screw holes in the steel differential lock housing.
NOTE: At this point, the differential assembly should be complete and ready to be bolted together.
6. Apply thread locker to all four of the hex head cap screws that secure the differential assembly together.
7. Tighten all four hex head cap screws that secure the two differential halves to one another.
NOTE: Torque the hex head cap screws to 220-280 in-lbs.
8. Turn the gear case input side up.
9. Remove the oil seal from the differential lock actuator hole.
10. Turn the gear case input side down.
11. Tap the input pinion gear assembly back into the housing.
12. Turn the gear case input side up.
13. Clean and grease the new "O" ring and the "O" ring passage on the differential housing.
14. Clean and place the spring washer into the inlet cavity.

15. Place the hydrostatic transmission assembly on the differential case.
16. Place the hydrostatic torque bracket on the hydrostatic transmission.
17. Place both of the hydro spacers between the torque bracket and the hydro.
18. Install the 5.5" hex cap screws that secure the torque bracket to the differential case.
NOTE: Torque the screws to 180-200 in-lbs.
19. Put the extension spring back on to the torque bracket.
20. Remove and replace the "O" ring on each end of the pickup tube.
21. Secure the hydro pickup tube to the transmission using both tube clamps.

NOTE: The upper hex cap screw is secured with a 7/16 wrench. The lower hex cap screw is secured with a 3/8 wrench. Torque both screws from 90-110 in-lbs.

22. Turn the gear case input side down.
23. Assemble the output shaft assembly in the correct sequence.

NOTE: The sequence is as follows: Bearing block assembly, two thrust washers, output shaft, 54T bevel gear, thrust washer, needle thrust bearing, thrust washer, shim/s (no set amount of shims), and needle bearing block assembly.

IMPORTANT: The total depth of the needle bearing block, shim/s, inner thrust washer, thrust needle bearing, and outer thrust washer, must measure between 1.153-1.158. This arrangement must be measured out of the differential. If the tolerance is not met, add or remove shim/s until the correct tolerance is achieved. See figure 2.

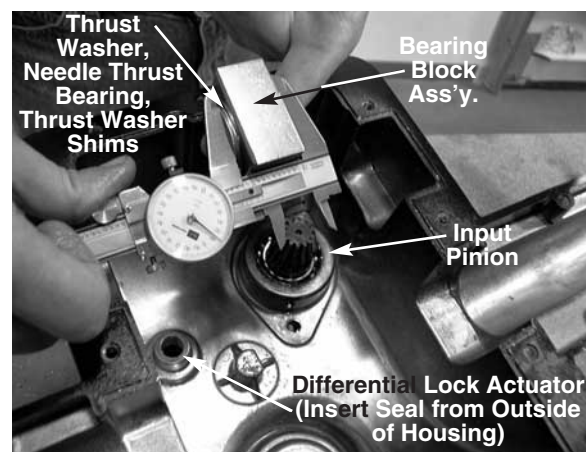


FIGURE 2.

Cub Cadet 3000

24. Install the output shaft assembly. See figure 3.
25. Install the complete internal differential assembly and the differential lock actuator shaft at the same time. See figure 3.

NOTE: Make sure the bearing block assemblies are seated properly. See figure 3.

26. Apply sealant to both inner bearing block assemblies that complete the center of the differential housing.

NOTE: Loctite 5999 or equivalent is recommended for sealant. See figure 3.

27. Place the new differential housing gasket directly above the inner hardware holes. See figure 3.

NOTE: There is a notch in the gasket for proper installation.

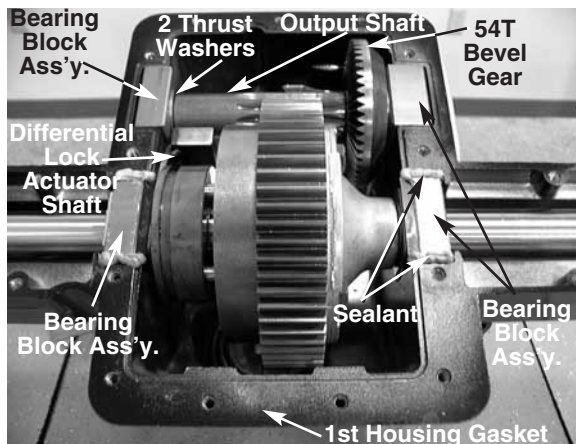


FIGURE 3.

28. Place the steel transmission plate over the differential housing gasket aligning all the hardware holes.
29. Place a new rear cover gasket on top of the transmission plate directly above all the inner hardware holes.
30. Place the rear cover assembly directly over all the inner hardware holes.
31. Place both transmission cover blocks directly on top of the side holes of the rear cover assembly.
NOTE: The transmission cover blocks are rounded on the ends and must face outward. Also, the inner edge is beveled and faces the center of the oil pan. Beveled edge down.
32. Install all six of the 1.25" long hex washer screws through the transmission cover blocks and into the differential housing. Do not tighten at this time.
33. Install all seven of the 1" long hex washer screws in the remaining hardware holes around the rear cover assembly. Do not tighten.

34. Install the remaining twelve- 3/4" hex washer screws that secure the transmission plate to the differential housing. Do not tighten.

35. Torque down the six- 1.25" hex washer screws between 90-110 in-lbs.

NOTE: Tighten these in a star pattern, starting with the upper left hand corner screw.

36. Torque down all of the remaining screws between 90-110 in-lbs.

37. Slide both brake hub assemblies over the axle shaft splines. See figure 4.

38. Line up the brake mounting brackets hardware holes with the differential housing notches. See figure 4.

39. Rotate the brake disk until the access holes are directly over the hardware holes. See figure 4.

40. Install all three hex washer screws through the access holes of the brake disk using a 1/2" socket and extension. See figure 4.

NOTE: Torque the hex washer screws between 180-200 in-lbs.

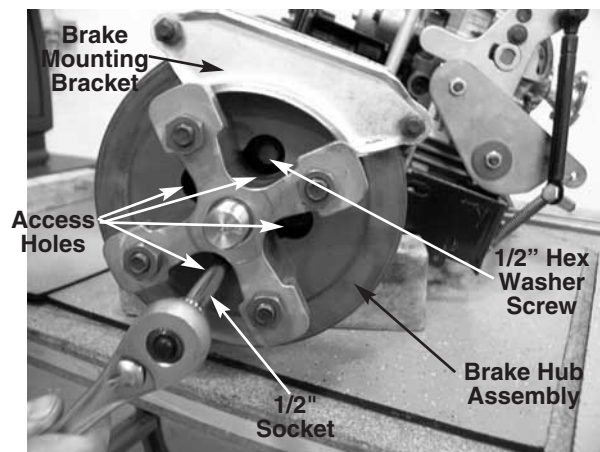


FIGURE 4.

41. Install both of the center hub lock nuts to the hub assemblies using a 1 and 5/16" socket.

NOTE: The torque for the center hub nut is 185-250 ft-lbs.

42. Install the differential lock oil seal by tapping the perimeter of the seal until it is below the top of the housing.

43. Install all three flat washers and the lock actuator arm on to the differential actuator shaft.

44. Secure the differential actuator arm to the shaft with a belleville washer and a hex head cap screw.

NOTE: Torque the screws between 90-110 in-lbs.

45. Install a new oil filter.

46. Install the oil dipstick.