



INSTRUCTION BULLETIN

No. 340033
Machine: 800/810
Published: 9-01/01
System: CHASSIS

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in your machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save you the cost of ordering an entire kit.

NOTE: Numbers in parenthesis () are reference numbers for parts listed in Bill of Materials.

Installation Instructions for Kit number 375534

SYNOPSIS / PROBLEM:

This kit contains the parts needed to install/replace the rear wheel support and steering casting on the model 800/810 sweeper. The installation of the parts in this kit will update the machine to current production standards.

Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: Large torque wrench, floor jack and jack stands
(Estimated time to complete: 8 hours)

PARTS REMOVAL:

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, Turn Off Machine And Remove Key.

1. Engage the parking brake, block the front tires.

FOR SAFETY: Block machine tires before jacking machine up. Jack machine up at designated locations only. Block machine up with jack stands.

2. Jack up the rear of machine. Use jack stands to support the machine.

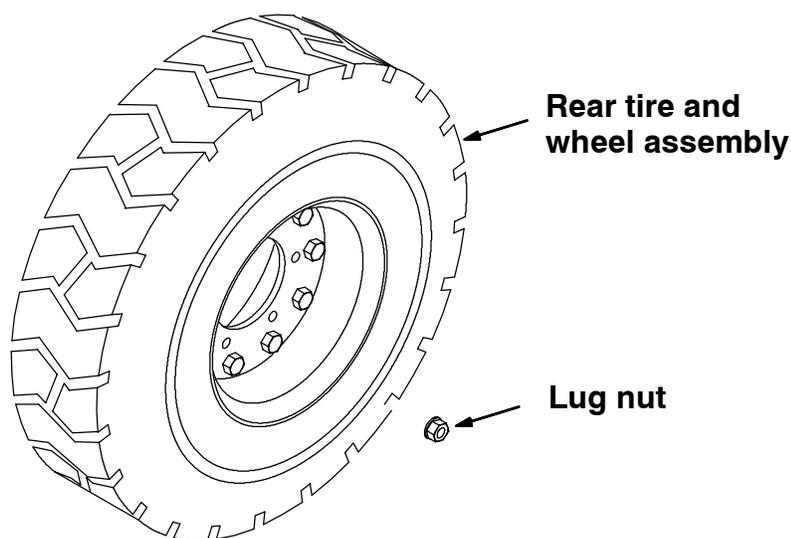


FIG. 1 - Rear Tire And Lug Nut

3. Remove the rear tire and wheel assembly. (Refer to FIG. 1)

4. Turn steering wheel clockwise as far as it will go so the steering cylinder is completely retracted. (Refer to FIG. 3)
5. Disconnect the battery cables from machine.

⚠ WARNING: Always disconnect battery cables from machine before working on or near electrical components.

6. Remove the seat assembly from the machine. (Refer to FIG. 2)

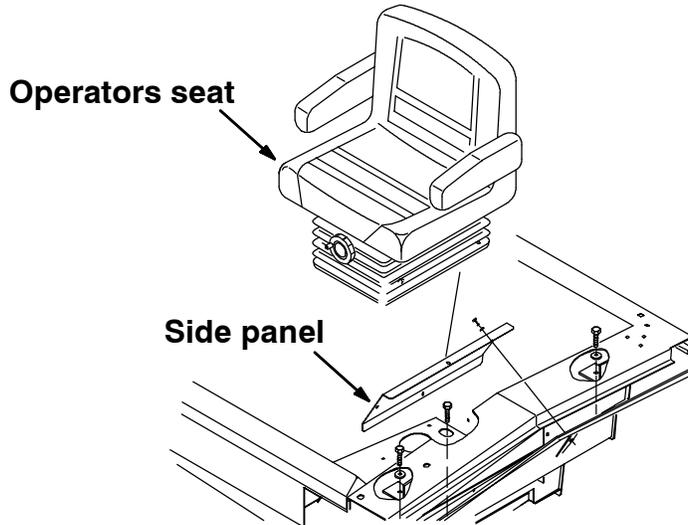


FIG. 2 - Operators Seat And Side Panel

7. Remove the access cover panel from the operator's compartment to gain access to the old steering casting. (Refer to FIG. 2 and 3)
8. Remove the hose clamp, channel, sleeve and hardware from the old steering casting. (Refer to FIG. 3)

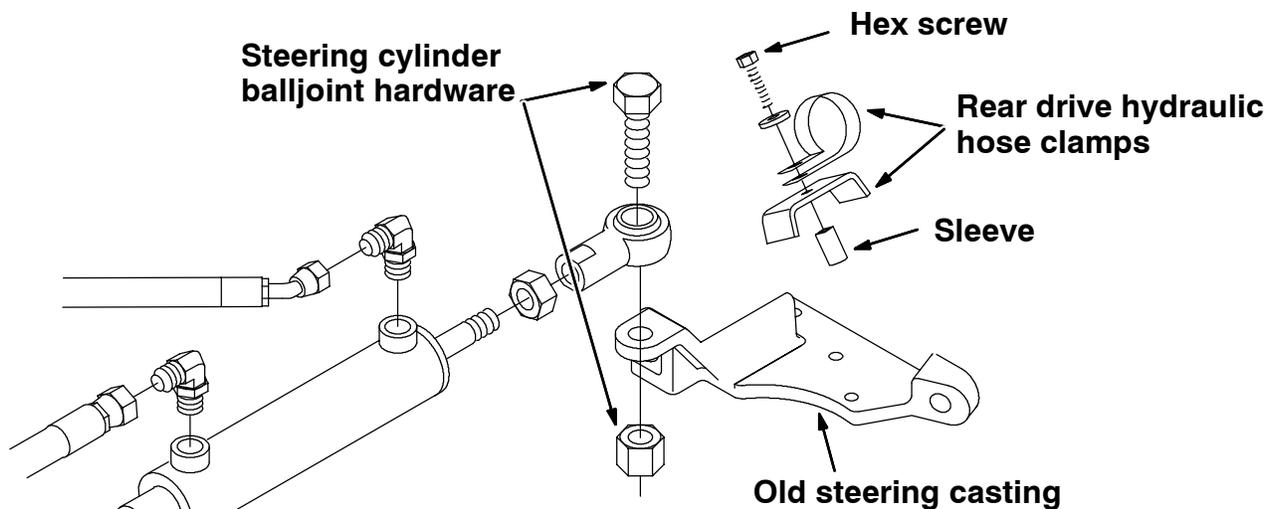


FIG. 3 - Steering Cylinder And Mount Casting

9. Remove the hex screw and nyloc nut holding the steering cylinder ball joint to the rear wheel support. (Refer to FIG. 3)
10. Mark, remove and plug the hydraulic hoses leading to the drive motor. (Refer to FIG. 4)

NOTE: Observe hydraulic cleanliness requirements when opening hydraulic lines.

11. Place a floor jack under the rear wheel support. Raise the rear wheel support until the weight is removed from the support bearings. **Do not lift the machine off the jack stands.**

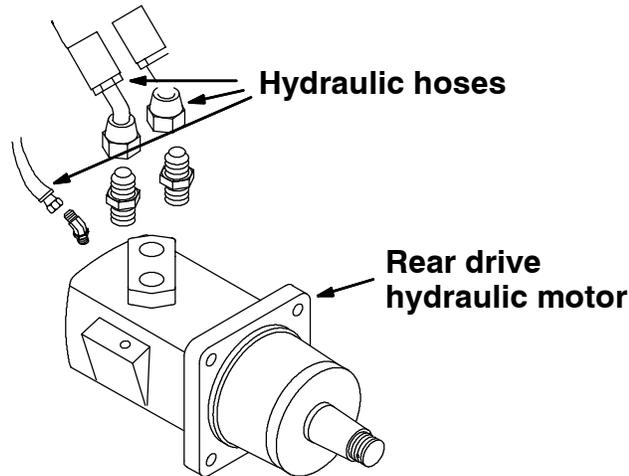


FIG. 4 - Drive Motor Hydraulic Hoses

12. Remove the lock ring retainer by first loosening the retainer's 12 cap screws. Thread three of the cap screws into the three open threaded holes. This will drive the ring retainer off the shaft. After the ring is off the shaft, return the three cap screws to their original threaded holes. (Refer to FIG. 5)
13. Remove and discard the bottom pivot plate bolts and pivot plate. Count the number of threads exposed below the slotted nut on pivot shaft. (Refer to FIG. 6)

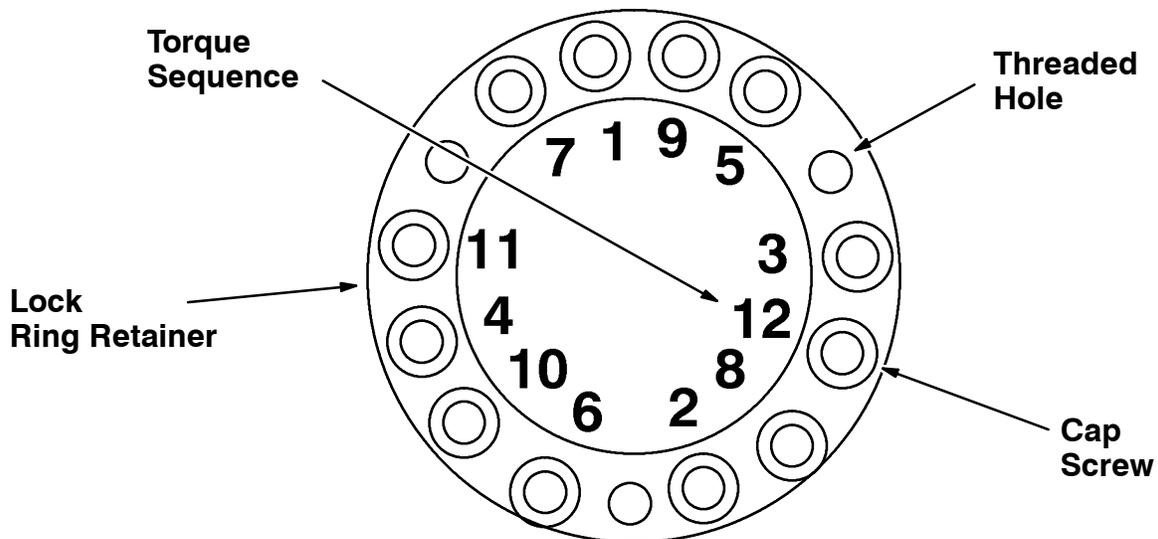


FIG. 5 - Cap Screw Tightening Sequence On Lock Ring Retainer

14. Remove and discard the slotted nut and tabbed lock washer. (Refer to FIG. 6)
15. Remove and discard the washer and bearing cone. (Refer to FIG. 6 and 7)
16. Lower the rear wheel support and remove it from under the machine. (Refer to FIG. 7)
17. Remove the steering stop bolt from the old steering casting and install it on the new steering casting (1) in the same orientation. (Refer to FIG. 14)

18. Remove the cotter pin and slotted nut from the hydraulic drive motor. (Refer to FIG. 8)
19. Remove the drive hub from the drive motor. A wheel puller will need to be used to break the hub free from the motor shaft. (Refer to FIG. 8)

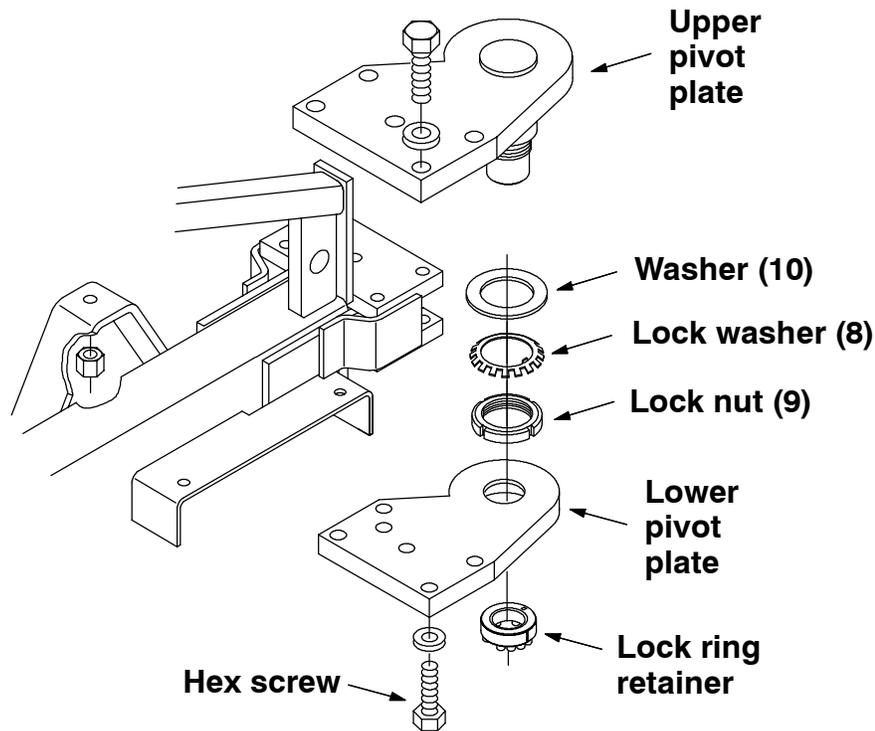


FIG. 6 - Upper And Lower Pivot Plates

20. Remove the four screws holding the drive motor to the rear wheel support. Remove the drive motor. (Refer to FIG. 8)
21. Position the drive motor on the new rear wheel support (2) in the same orientation as it was removed. (Refer to FIG. 8)

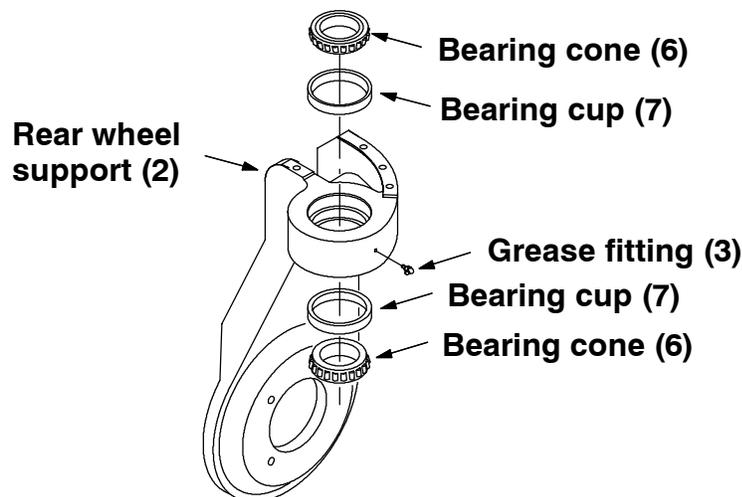


FIG. 7 - Bearing Cones And Cups

22. Install the four socket-head screws and nyloc nuts. Torque nuts to 120 - 157 Nm (89 - 116 ft lb). (Refer to FIG. 8)
23. Place the drive hub on the tapered motor shaft. Tighten slotted nut to 270 - 340 Nm (200 - 250 ft lb). Install the cotter pin. (Refer to FIG. 8)

NOTE: Make sure the square key is in place on the motor shaft before installing the drive hub.

24. Install the grease fitting (3) in the threaded hole on the side of the new rear wheel support (2). (Refer to FIG. 7)

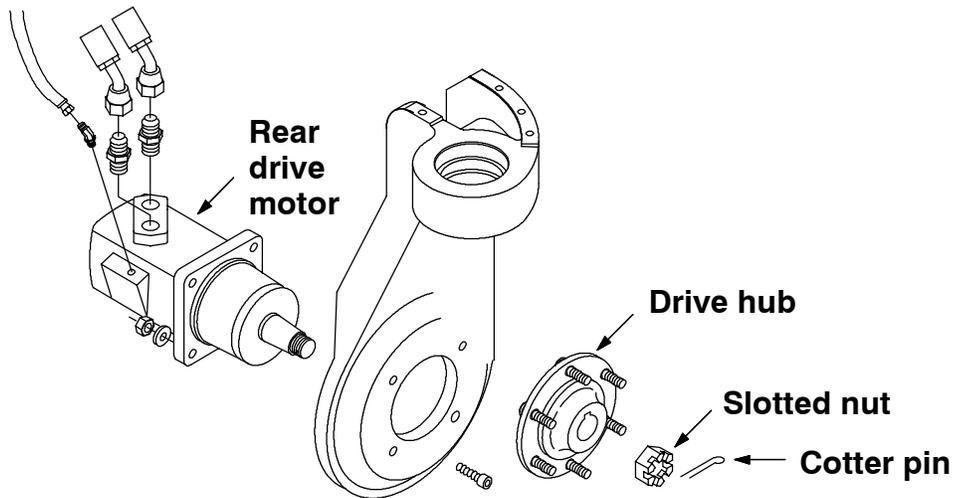


FIG. 8 - Drive Motor And Hub Assembly

25. Install the new bearing cups (7) in the new rear wheel support (2). (Refer to FIG. 7)

NEW PARTS INSTALLATION:

1. The old upper bearing cone is pressed on. A bearing puller must be used to remove it. Removal of the upper bearing mount plate from the machine will make this easier. (Refer to FIG. 6 and 7)
2. Pre-grease the new bearing cone (6) and press it on the shaft. Reinstall the upper bearing mount plate if removed. Tighten the five M20 hex screws to 300 - 390 Nm (220 - 290 ft lb). (Refer to FIG. 6 and 7)

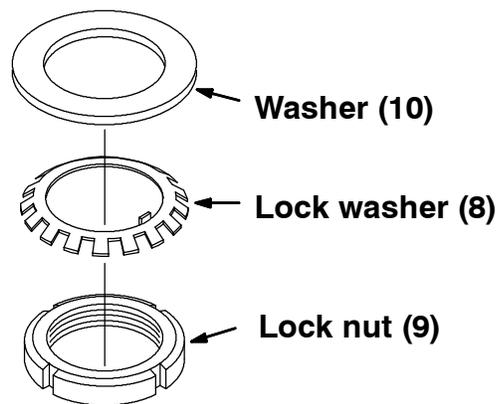


FIG. 9 - Special Washers

3. Place the new rear wheel support (2) under the machine. Raise the housing in position with the floor jack.
4. Pre-grease the second bearing cone (6) and install with a new hardened washer (10), tab lock washer (8), and slotted nut (9). Lubricate the face of the tab lock washer so the locking nut can turn freely. (Refer to FIG. 6 and 7)
5. Torque the slotted nut to 80 ft lbs. Rock the casting back and forth. Re-tighten the slotted nut to 100 ft lbs. Continue to tighten until tabs line up. Bend tabs on washer to lock slotted nut. (Refer to FIG. 9)

6. Reinstall the bottom pivot plate. Only **HAND TIGHTEN** the hex screws at this time. (Refer to FIG. 6)
7. Slide the lock ring retainer into place on the pivot shaft. This will center bottom plate to pivot shaft. Do not tighten at this time. (Refer to FIG. 5 and 6)
8. Hold the lock ring retainer in place while tightening the five M20 hex screws to 300 - 390 Nm (220 - 290 ft lb) on the bottom pivot plate. (Refer to FIG. 5 and 6)

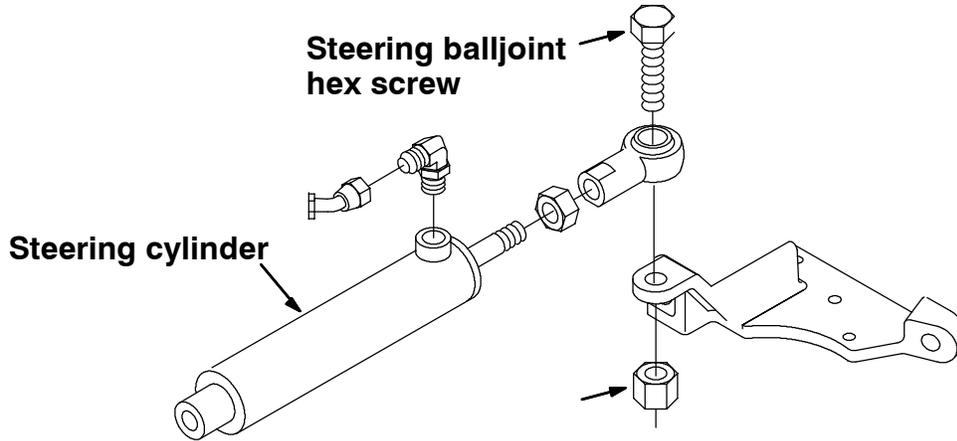


FIG. 10 - Steering Cylinder Mounting Hardware

9. Alternately tighten the cap screws. Torque cap screws to 14 Nm (10 ft lb), then to 28 Nm (20 ft lb), and then to 40 Nm (30 ft lb) in the pattern shown. (Refer to FIG. 5 and 6)
10. Remove the floor jack from under the rear wheel support.
11. Reconnect the hydraulic hoses. (Refer to FIG. 12)

NOTE: Observe hydraulic cleanliness requirements when reconnecting hydraulic lines.

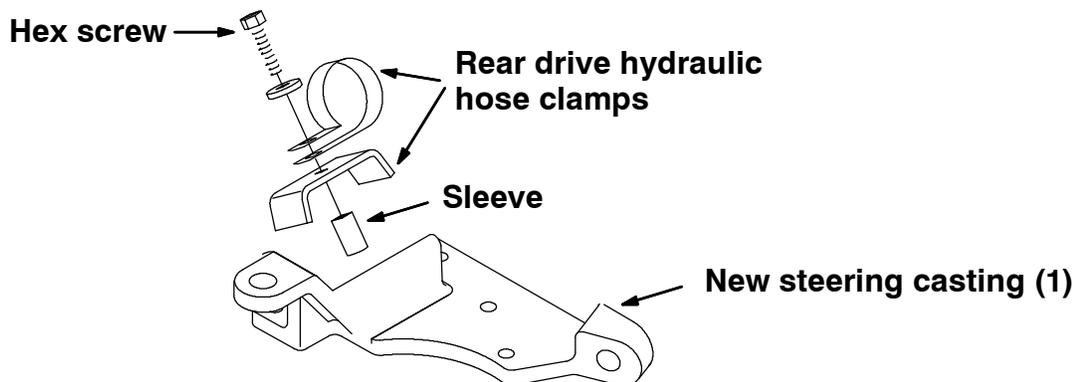


FIG. 11 - Drive Motor Hydraulic Hose Clamp

12. Install the new steering casting (1), hex screws (4), and flat washers (5). Tighten the hardware to 64 - 83 Nm (47 - 61 ft lb). (Refer to FIG. 11 and 14)
13. Install the hydraulic cylinder ball joint on the new steering casting. Torque the hex screw to 290 - 380 Nm (215 - 280 ft lb). (Refer to FIG. 10)
14. Install existing hose clamp, channel and sleeve on the new steering casting with existing hardware. (Refer to FIG. 11)

15. Reinstall the rear tire and wheel assembly. Tighten the six wheel nuts to 122 - 142 Nm (90 - 105 ft lb). Use a crisscross pattern when torquing wheel nuts. (Refer to FIG. 1)
16. Remove the machine jack stands and lower the machine to the floor.

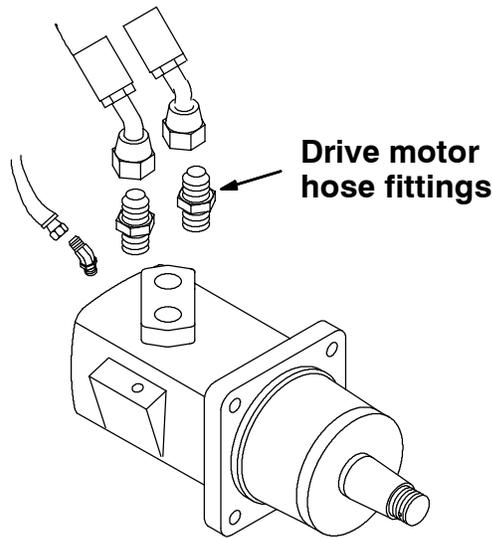


FIG. 12 - Drive Motor Hydraulic Fittings

17. Rock the machine side to side and listen for a clicking sound from the rear wheel support. If you hear the sound, repeat the tightening sequence.
18. Reinstall access cover panel in operator's compartment. (Refer to FIG. 2)

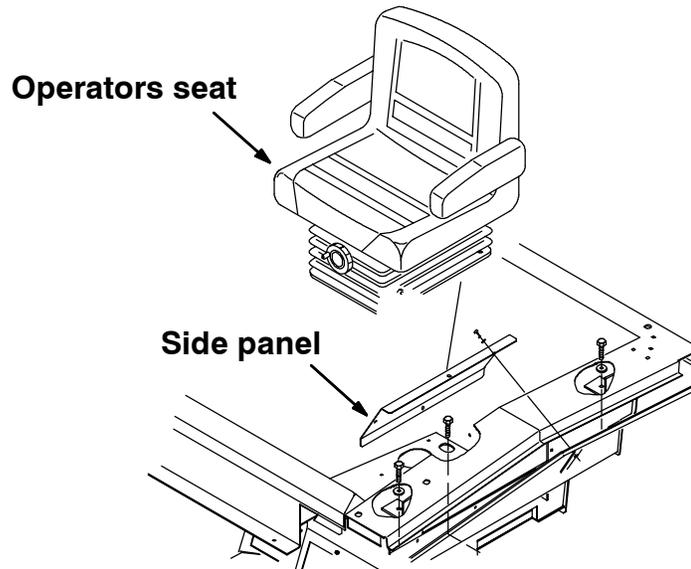


FIG. 13 - Operators Seat And Side Panel

19. Reinstall the seat assembly. (Refer to FIG. 2)
20. Reconnect the battery cables.
21. Operate the machine and check for proper operation of the new rear drive parts.

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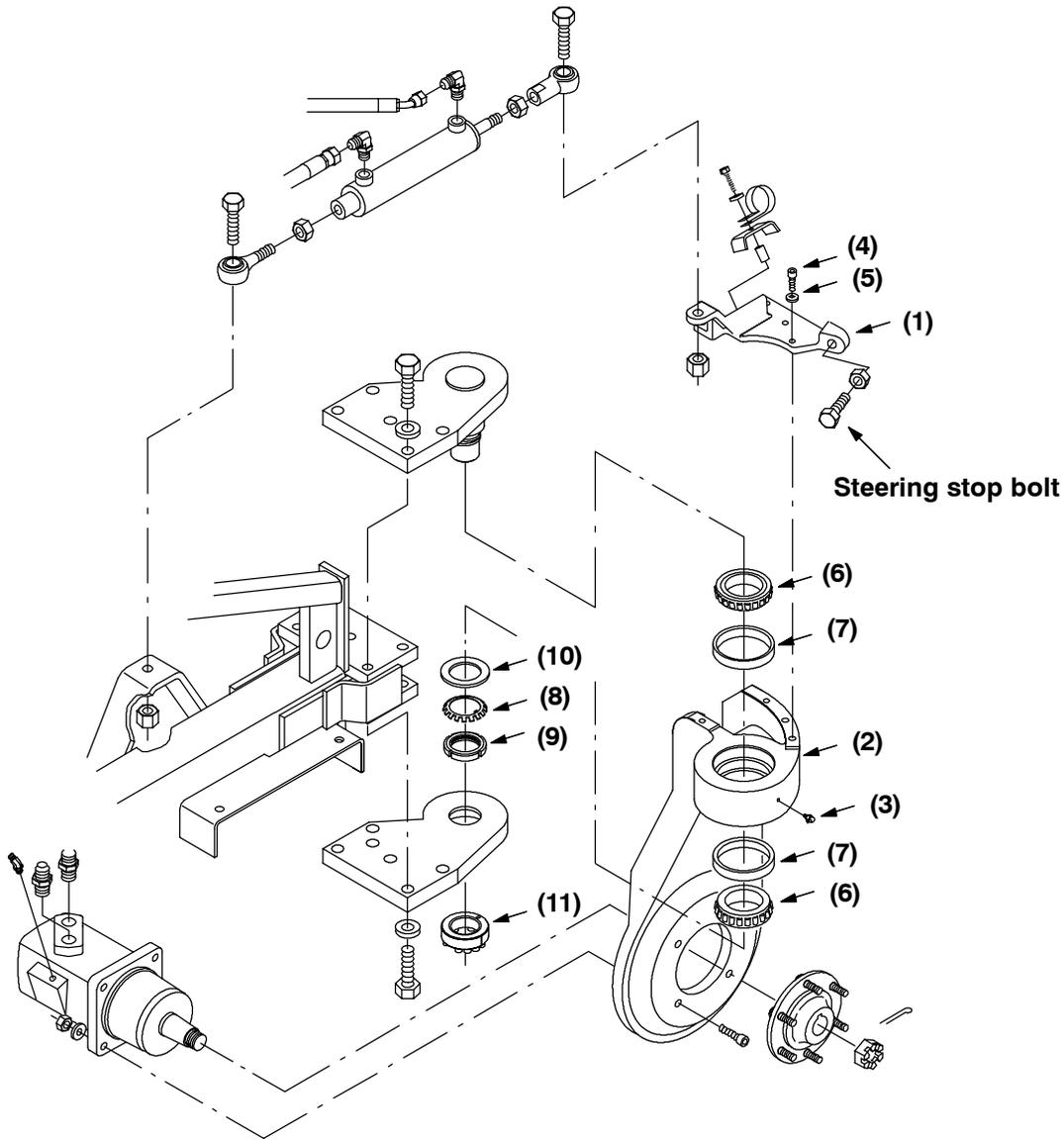


FIG. 14 - Overall Rear Drive And Steering Assembly

BILL OF MATERIALS FOR REAR DRIVE SUPPORT CASTING REPLACEMENT KIT 375534

Ref.	TENNANT Part No.	Description	Qty.
1	375575	Steering casting	1
2	21740	Rear wheel support	1
3	09718	Grease fitting	1
4	375576	M12 x 40mm hex screw	4
5	39346	7/16 inch flat washer	4
6	51341	Bearing cone	2
7	51340	Bearing cup	2
8	369701	Special lock washer	1
9	41073	Special lock nut	1
10	375762	Washer	1
11	63496	Retainer lock ring	1