

Product: WHEEL SCRAPER

Model: 637E WHEEL SCRAPER 7CB

Configuration: 637E Series II Wheel Tractor-Scraper (Coal) 7CB00180-UP (MACHINE) POWERED BY 3306 Engine

## Disassembly and Assembly 631E & 637E TRACTOR POWER TRAIN

Media Number -SEN4143-01

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SEN41430016

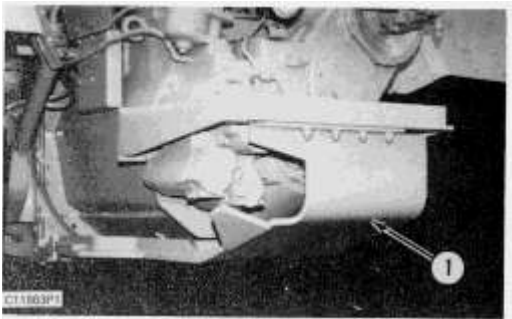
### Transfer Gears

SMCS - 3159-016; 3159-010; 3159-015

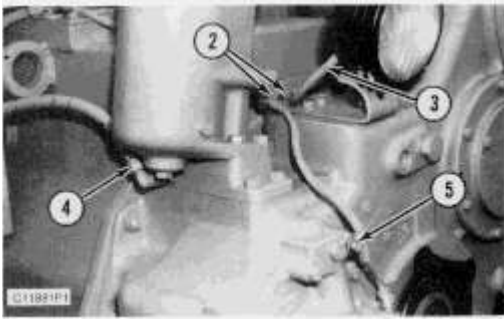
### Remove And Install Transfer Gears

Tools Needed		A
8S9906	Ratchet Puller	1

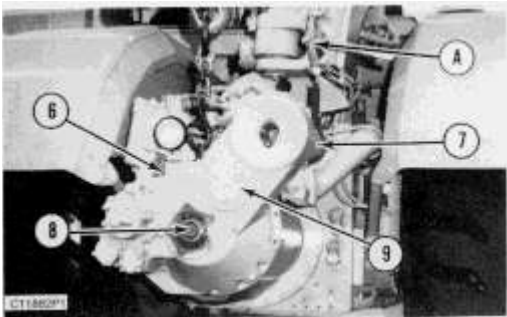
1. Turn the tractor 90° to the scraper.
2. Drain the oil from the transmission.



3. Fasten a hoist, and remove guard assembly (1) from the rear of the transmission. The weight of the guard assembly is 177 kg (390 lb.).
4. Remove the transmission electronic speed sensor. See the topic Remove Transmission Electronic Speed Sensor.
5. Remove the cushion hitch pump from the transfer gear case. See the topic Remove Cushion Hitch Pump in 631E, 637E Tractor-Scraper Vehicle Systems, Disassembly And Assembly module, Form No. SENR4153.



6. Disconnect hose assembly (4) from the transmission oil filter.
7. Disconnect wire (3) from the lamp assembly.
8. Remove bolts (2) and (5), and move the wire harness away from the transfer gear case.



9. Remove transmission electronic speed sensor shaft (8).
10. Remove cover (9). Remove the O-ring seal from the cover.
11. Remove the retaining ring from the gear, behind cover (9). Pull the drive shaft out part way. Fasten a hoist to the drive shaft, and remove it from the transmission and transfer gears. The weight of the drive shaft is 38 kg (84 lb.).
12. Fasten tool (A) to implement and steering pump (7) to support it when the transfer gears are removed.
13. Remove the bolts that hold the implement and steering pump to the transfer gears.
14. Fasten a hoist and a 3/4"-10 NC forged eyebolt to transfer gears (6) as shown.
15. Remove the nuts and bolts that hold the transfer gears to the transmission. Install two 1/2"-13 NC forcing screws in the transfer gear case. Tighten the forcing screws evenly to separate the transfer gears for the transmission. Remove transfer gears (6). The weight of the transfer gears is 235 kg (518 lb.).

**NOTE:** The following steps are for installation of the transfer gears.

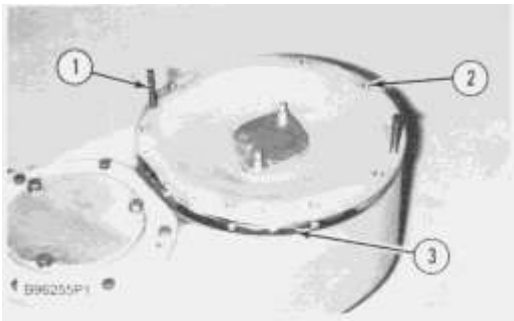
16. Install two 1/2"-13 NC guide bolts in the transmission case.
17. Make sure the O-ring seals are in position on the transmission, transfer gear case and the implement and steering pump. Put clean oil on the O-ring seals.
18. Fasten a hoist and a 3/4"-10 NC forged eyebolt to transfer gears (6).

19. Align the implement and steering pump with the gear in the transfer gears, and install the transfer gears on the transmission.
20. Install the nuts and bolts that hold the transfer gears in place.
21. Install the bolts that hold the implement and steering pump (7) to the transfer gear case. Remove tool (A).
22. Fasten a hoist to the drive shaft, and install the drive shaft in the transmission and transfer gears.
23. Install the retaining ring in the gear to hold the drive shaft in place.
24. Install the O-ring seal and cover (9).
25. Install transmission electronic speed sensor shaft (8).
26. Put the wire harness and clips in position, and install bolts (2) and (5).
27. Connect wire (3) to the lamp assembly.
28. Connect hose assembly (4) to the transmission oil filter base.
29. Install the transmission electronic speed sensor.
30. Install the cushion hitch pump.
31. Fasten a hoist to guard assembly (1), and install it on the rear of the transmission.
32. Fill the transmission with oil to the correct level. See the Maintenance Guide.

## Disassemble Transfer Gears

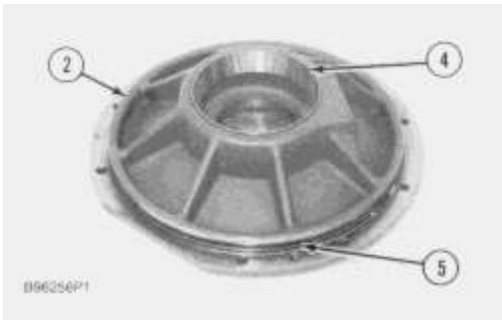
START BY:

- a. remove transfer gears
- b. remove transmission oil filter
- c. remove transmission pump



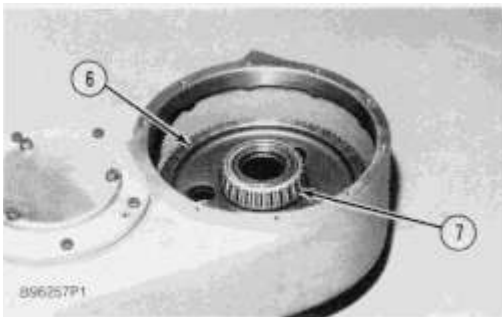
1. Remove the bolts that hold cage assembly (2) to the case assembly. Install two 3/8"-16 NC forcing screws (1) in the cage assembly. Tighten the forcing screws evenly, and remove cage assembly (2).

2. Remove shims (3) from the case assembly.



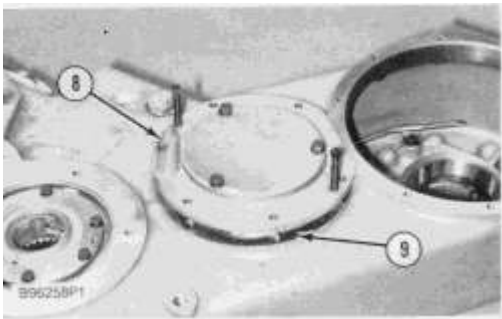
3. Remove O-ring seal (5) from cage assembly (2).

4. If necessary, remove cup (4) from the cage assembly.



5. Remove gear (6) from the case assembly.

6. If necessary, remove cones (7) from the gear.



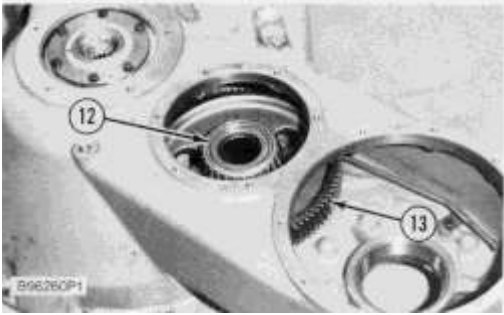
7. Remove the bolts that hold cage (8) to the case assembly. Install two 3/8"-16 NC forcing screws in cage (8). Tighten the forcing screws evenly, and remove the cage.

8. Remove shims (9) from the case assembly.



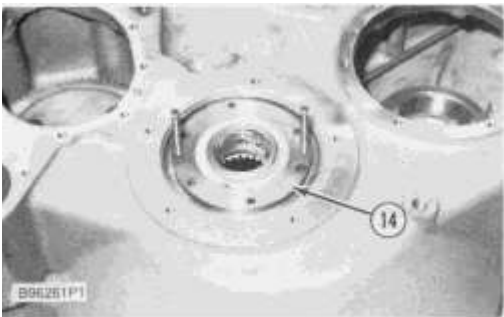
9. Remove O-ring seal (11) from cage (8).

10. If necessary, remove cone (10) from the cage.

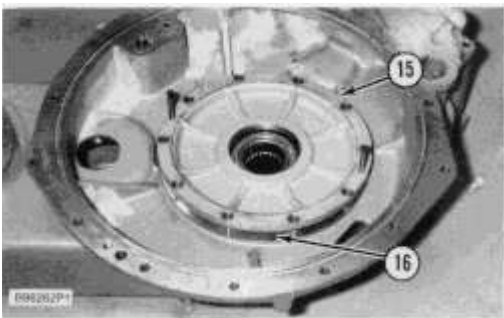


11. Remove gear (13) from the case assembly.

12. If necessary, remove cones (12) from the gear.



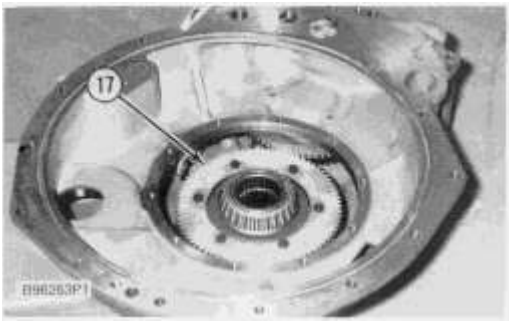
13. Remove the bolts that hold manifold (14) to the case assembly. Install two 3/8"-16 NC forcing screws in the manifold. Tighten the forcing screws evenly, and remove the manifold from the case assembly.



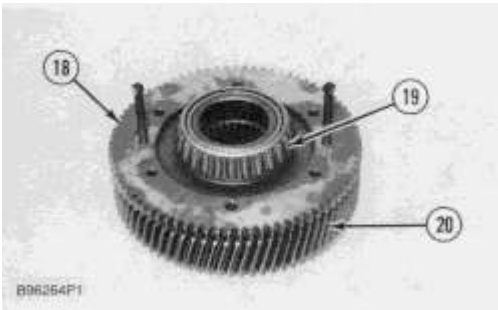
14. Turn the case assembly over. The weight of the case assembly is 200 kg (441 lb.).

15. Remove the bolts that hold cage (15) to the case assembly. Install two 3/8"-16 NC forcing screws in the cage. Tighten the forcing screws evenly, and remove the cage.

16. Remove shims (16) from the case assembly.

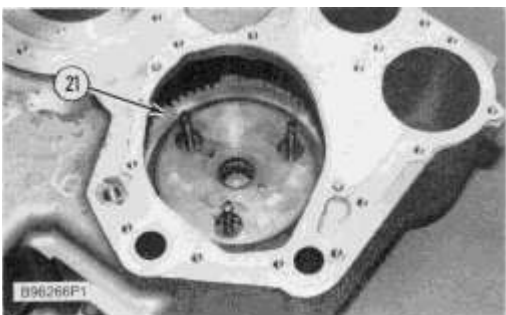
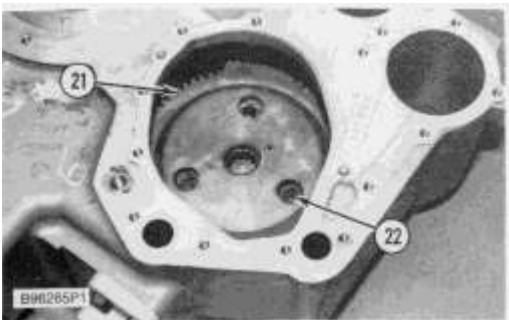


**17.** Remove gear assembly (17) from the case assembly.



**18.** Disassemble gear assembly (17) as follows:

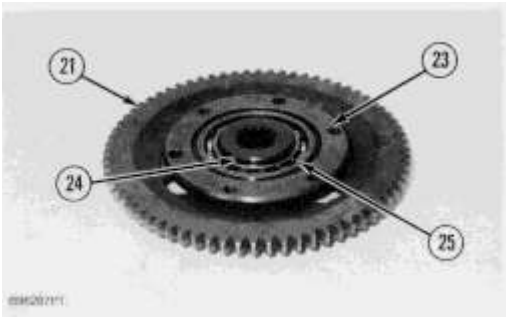
- a.** Remove the bolts that hold gear (18) to gear (20). Install two 3/8"-16 NC forcing screws in gear (18). Tighten the forcing screws evenly, and remove the gear.
- b.** If necessary, remove cones (19) from gear (20).



**19.** Align the holes in gear (21) with bolts (22). Remove bolts (22).

**20.** Align the holes in gear (21) with the forcing screw holes in the cage.

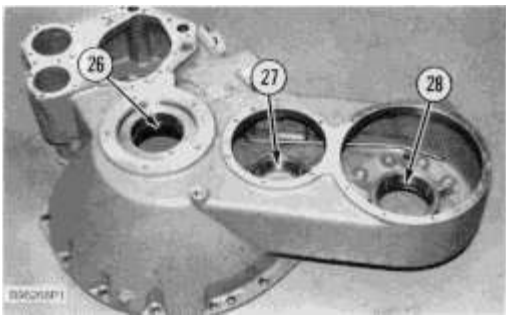
**21.** Install three 3/8"-16 NC forcing screws in the cage. Tighten the forcing screws evenly, and remove the cage and gear (21) as an assembly.



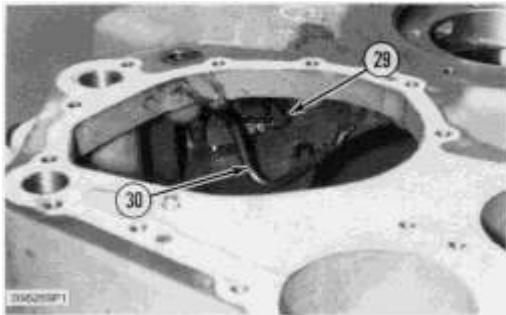
22. Remove ring (24) from gear (21).

23. Install three 3/8"-16 NC forcing screws in cage (23). Tighten the forcing screws evenly, and remove the cage and bearing (25) from the gear.

24. Remove bearing (25) from cage (23).



25. If necessary, remove cups (26), (27) and (28) from the case assembly.



26. Remove tube assemblies (29) and (30) if necessary.

## Assemble Transfer Gears

Tools Needed		A	B
1P520	Driver Group	1	
8S2326	Dial Indicator Test Group		1
5P7264	Indicator Contact Point Group		1

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