▲Product: TRACK-TYPE TRACTOR Model: D6R XL TRACK-TYPE TRACTOR JEN Configuration: DGR TRACK-TYPE TRACTOR STD, XL JEN00001-UP (MACHINE) POWERED BY C9 Engine

### **Disassembly and Assembly**

**D6R Track-Type Tractor Power Train** 

Media Number - KENR8565-02 Publication Date -01/02/2014 Date Updated -24/02/2014

i04905904

# **Steering Planetary and Brake - Disassemble**

SMCS - 4132-015

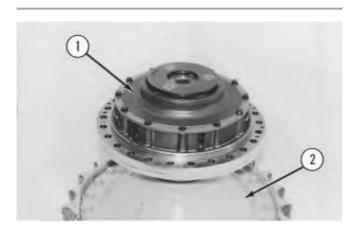
# **Disassembly Procedure**

Required Tools			
Tool	Part Number	Description	
А	138-7575	Link Bracket	3
В	1P-0520	Driver Group	1
С	5B-4274	Forcing Bolt 3/8 - 16 by 3.5 inches	3

Table 1

### **Start By:**

A. Remove the right hand final drive, the planetary group, and the brake. Refer to Disassembly and Assembly, "Final Drive, Steering Planetary, and Brake (Right Side) - Remove".



- 1. Position the final drive, the planetary group, and the brake, as shown.
- 2. Remove the bolts that hold the planetary group and brake (1) to final drive (2). The bolts are on the bottom (not shown).
- 3. Attach Tooling (A) and a suitable lifting device to the planetary group and brake.
- 4. Install Tooling (C) in the final drive hub.
- 5. Tighten the forcing screws evenly in order to remove the planetary group and brake (1) from final drive (2). The weight of planetary group and brake (1) is approximately 136 kg (300 lb).



g00622109



Personal injury can result from parts and/or covers under spring pressure.

Spring force will be released when covers are removed.

Be prepared to hold spring loaded covers as the bolts are loosened.

6. Remove bolts (3). Remove ring gear (4) from housing (5).



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7. Remove friction discs (6) and the brake plates from the housing.

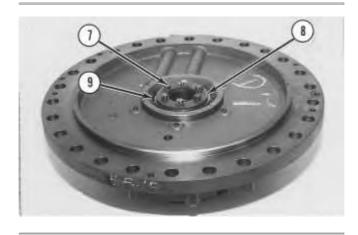


Illustration 4

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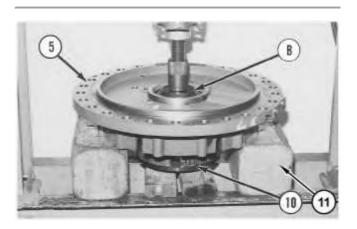


Illustration 5

- 8. Remove bolts (7) and plate (8).
- 9. Position the housing on suitable blocks (11).

**Note:** Do not allow planetary carrier (10) to fall when the carrier is pressed from housing (5).

**Note:** If a shim pack is present between the plate (8) and planetary carrier (10). Reuse the same shim pack during assembly only if reusing the same planetary carrier (10). If a new planetary carrier (10) is being used the shim pack should be discarded.

- 10. Use Tooling (B) and a suitable press to remove planetary carrier (10) from housing (5).
- 11. Remove bearing cone (9) from the housing.

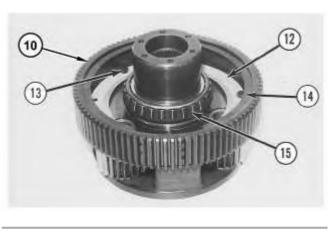


Illustration 6

g01205303

12. Remove ring (14) from planetary carrier (10). Remove bolts (13). Remove slinger (12) from the planetary carrier.

### NOTICE

### The component is destroyed if the component is removed.

13. If necessary, remove bearing cone (15) from planetary carrier (10).



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14. Use a hammer and a punch to push pin(17) in shaft (16).

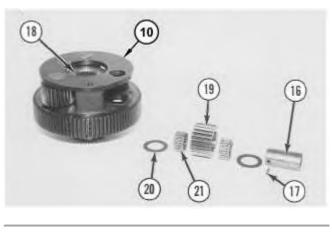


Illustration 8

- 15. Remove shaft (16), planetary gear (19), discs (20), and bearings (21) from planetary carrier (10).
- 16. Remove pin (17) from shaft (16).
- 17. Repeat Steps 14 through 16 for the remaining planetary gears.
- 18. Remove sun gear (18) from planetary carrier (10).



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# 🛕 WARNING

Personal injury can result from parts and/or covers under spring pressure.

Spring force will be released when covers are removed.

Be prepared to hold spring loaded covers as the bolts are loosened.

- 19. Remove bolts (22) and washers.
- 20. Remove retainer (23) from piston (24).

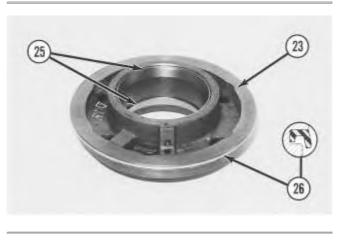


Illustration 10

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21. If necessary, remove bearing cups (25) and seal ring (26) from retainer (23).



g00622156

22. Remove piston (24) and O-ring seal (27) from the housing.

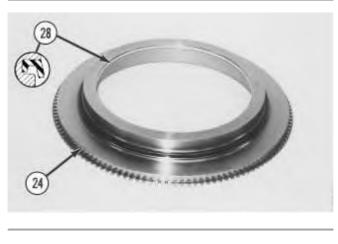


Illustration 12

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23. Remove seal ring (28) from piston (24).

Note: Inspect the O-ring seals. If necessary, replace the O-ring seals.



# 24. Remove spring (29) and ring (30) from housing (5).

Product: TRACK-TYPE TRACTOR
Model: D6R XL TRACK-TYPE TRACTOR JEN
Configuration: D6R TRACK-TYPE TRACTOR STD, XL JEN00001-UP (MACHINE) POWERED BY C9 Engine

### **Disassembly and Assembly**

**D6R Track-Type Tractor Power Train** 

Media Number - KENR8565-02 Publication I

Publication Date -01/02/2014

Date Updated -24/02/2014

i07321002

### **Steering Planetary and Brake - Assemble**

SMCS - 4132-016

# **Assembly Procedure**

Table 1

Required Tools				
Tool Part Number		Description	Qty	
Α	138-7575	Link Bracket	3	
D	6V-6640	Sealant	1	

**Reference:** Refer to Specifications, "Brake and Planetary" in the Service Manual for your machine.



Illustration 1

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Note: Orient the disc spring with the outer edge downward.

1. Install ring (30) and spring (29) in housing (5).

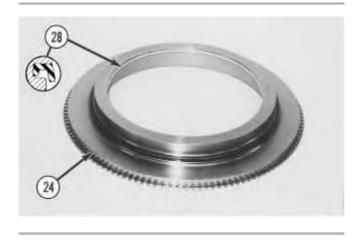


Illustration 2

g00622157

2. Apply clean oil to seal ring (28).

Note: Orient the seal ring with the lip downward. Refer to Illustration 2.

3. Install seal ring (28) in piston (24).

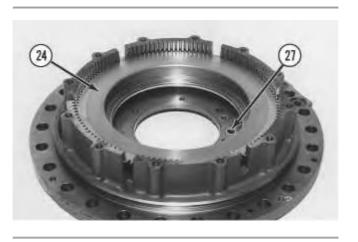
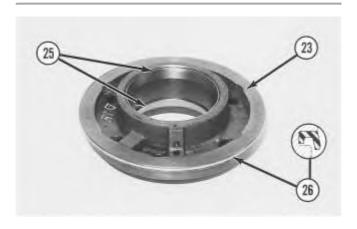


Illustration 3



4. Install piston (24) and O-ring seal (27) in the housing.



- Lower the temperature of bearing cups (25). Install bearing cups (25) in retainer (23).
   Note: Orient the seal ring with the lip downward. Refer to Illustration 4.
- 6. Apply clean oil to seal ring (26). Install seal ring (26) in retainer (23).



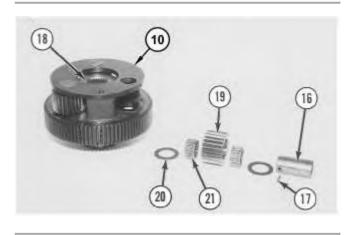
g00622132



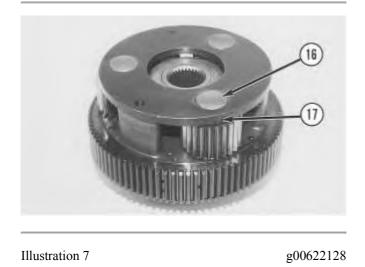
Improper assembly of parts that are spring loaded can cause bodily injury.

To prevent possible injury, follow the established assembly procedure and wear protective equipment.

7. Install retainer (23) on piston (24). Align the oil passage in retainer (23) with the oil passage and the O-ring seal in the housing. Install bolts (22).



- 8. Install sun gear (18) in planetary carrier (10).
- 9. Install bearings (21) in planetary gear (19).
- 10. Install discs (20) and planetary gear (19) in planetary carrier (10). Install shaft (16).



**Note:** If the rubber in pin (17) is damaged, replace pin (17).

- 11. Align the hole in shaft (16) with the hole in planetary carrier (10) and install pin (17). Install pin (17) until the pin is even with the surface of planetary carrier (10).
- 12. Repeat Steps 9 through 11 for the remaining planetary gears.

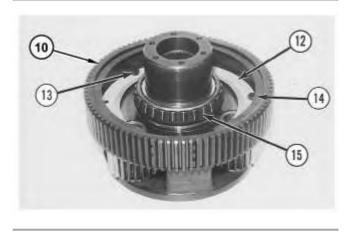


Illustration 8

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**Note:** If bearing cone (15) was removed from planetary carrier (10), a new bearing must be installed.

- 13. Raise the temperature of bearing cone (15). Install the bearing cone on planetary carrier (10).
- 14. Apply Tooling (D) to the flange of slinger (12).
- 15. Install slinger (12) on planetary carrier (10). Install bolts (13) and tighten to a torque of  $25 \pm 6$  N·m (221  $\pm 53$  lb in).

16. Install ring (14) in planetary carrier (10).

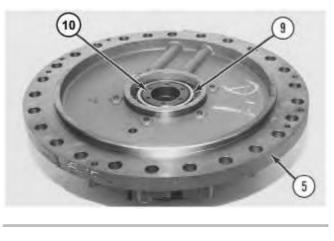


Illustration 9

g01205389

17. Position housing (5) on planetary carrier (10).

**Note:** Install shim pack between plate and planetary carrier (10), only if there was a shim pack originally installed in the differential group and if the same planetary carrier (10) is being reused. shim pack thickness should be 0.31 mm (0.0122 inch).

18. Raise the temperature of bearing cone (9). Install bearing cone (9) on planetary carrier (10).

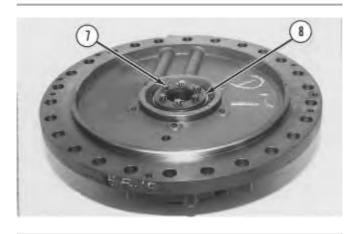


Illustration 10

- 19. Position plate (8) on the planetary carrier.
- 20. Install bolts (7).



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21. Install friction discs (6) and brake plates. Alternate the friction discs and the brake plates.



Illustration 12

g00622109

- 22. Position ring gear (4) on housing (5).
- 23. Install bolts (3). Tighten the bolts to a torque of  $135 \pm 20$  N·m ( $100 \pm 15$  lb ft).

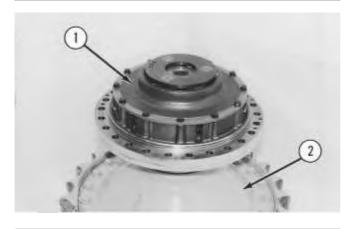


Illustration 13

- 24. Use a suitable lifting device and Tooling (A) to position the planetary group and brake (1) on final drive (2). The weight of the planetary group and brake is approximately 135 kg (300 lb).
- 25. Install the bolts that hold the planetary group and brake on the final drive.

### End By:

•

a. Install the right-hand final drive, the planetary group, and the brake. Refer to Disassembly and Assembly, "Final Drive, Steering Planetary, and Brake (Right Side) - Install"

▲Product: TRACK-TYPE TRACTOR Model: D6R XL TRACK-TYPE TRACTOR JEN Configuration: D6R TRACK-TYPE TRACTOR STD, XL JEN00001-UP (MACHINE) POWERED BY C9 Engine

### **Disassembly and Assembly**

**D6R Track-Type Tractor Power Train** 

Media Number -KENR8565-02

Publication Date -01/02/2014 Date Updated -24/02/2014

i02616812

# Final Drive, Steering Planetary, and Brake (Right Side) -Install

SMCS - 4050-012-RI; 4132-012-RI

# **Installation Procedure**

Table 1				
Required Tools				
Tool	Part Number	Part Description	Qty	
A	8T-3207	Lift Bracket	1	

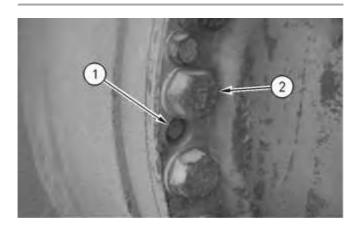
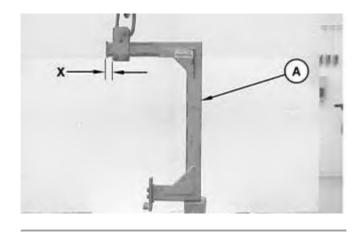


Illustration 1



g01310295



Illustration 3

g00870633

- 1. Install Tooling (A). Adjust Tooling (A) so the hook is 76 mm (3.0 inch) from the end of the bracket. Install the final drive, the steering clutch, and brake (3). The weight of the final drive, the steering clutch, and brake (3) is approximately 590 kg (1300 lb).
- 2. Install bolts (2). Tighten bolts (2) to a torque of  $800 \pm 90$  N·m (590 ± 66 lb ft). Install bolts (1).
- 3. Remove Tooling (A). Install two sprocket segment bolts.

### End By:

- a. Install the axle. Refer to Disassembly and Assembly, "Axle Remove and Install".
- b. Connect the track. Refer to Disassembly and Assembly, "Track Connect".

Product: TRACK-TYPE TRACTOR
Model: D6R XL TRACK-TYPE TRACTOR JEN
Configuration: D6R TRACK-TYPE TRACTOR STD, XL JEN00001-UP (MACHINE) POWERED BY C9 Engine

### **Disassembly and Assembly**

D6R Track-Type Tractor Power Train

Media Number -KENR8565-02

Publication Date -01/02/2014

Date Updated -24/02/2014

i02616829

# **Final Drive - Remove**

SMCS - 4050-011

# **Removal Procedure**

Table 1			
<b>Required Tools</b>			
Tool	ool Part Number Part Description		Qty
А	FT-1952	Axle Removal Tool	1
	8T-3207	Lifting Bracket	1
	5P-8622	Shackle	1
В	2D-4593	5/8 - 11 by 5 1/2 inch	2
	1B-4331	5/8 - 11 inch	2
	2S-5658	Washer	4

### **Start By:**

a. Separate the track. Refer to Disassembly and Assembly, "Track - Separate".

**Note:** The planetary carriers of the final drives can be removed directly from the machine. Refer to Disassembly and Assembly, "Final Drive Planetary Carrier (In Chassis) - Remove".



Without the sun gear in place, the brakes are ineffective. Personal injury or death could result. Provide other means to hold or stop the machine.

### NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting, and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat products.

Dispose of all fluids according to local regulations and mandates.

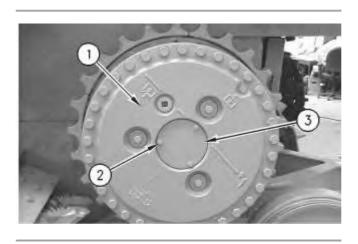
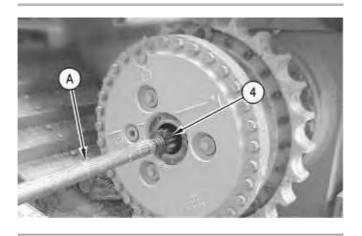


Illustration 1

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1. Remove bolts (2) and cover (3) from final drive (1).



2. Use Tooling (A) to remove axle (4).

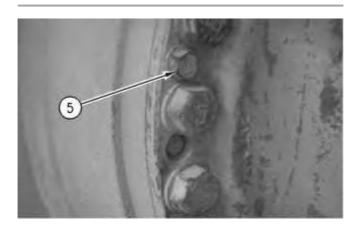


Illustration 3

g00865075

3. Remove two bolts (5).

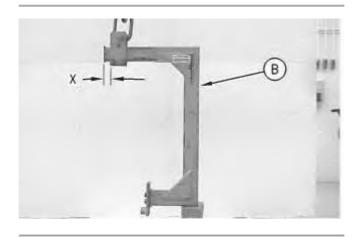


Illustration 4

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4. Adjust the top bracket of Tooling (B) until Dimension (X) is 222.25 mm (8.750 inch).

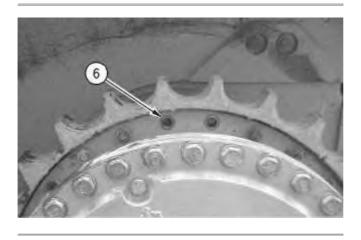


Illustration 5

g00865077

5. Remove two bolts (6) from the sprocket segment.



g00865082

6. Fasten Tooling (B) and a suitable lifting device to the final drive.

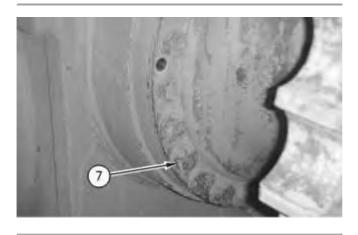


Illustration 7

g00865094

7. Remove bolts (7) that hold the final drive and the brake together.

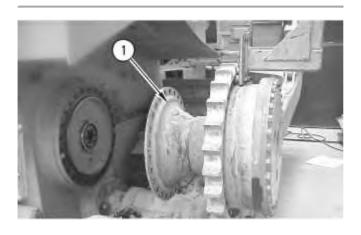


Illustration 8

g00865095

8. Use Tooling (B) to remove final drive (1) from the machine. The weight of final drive (1) is approximately 454 kg (1000 lb).

Product: TRACK-TYPE TRACTOR
Model: D6R XL TRACK-TYPE TRACTOR JEN
Configuration: D6R TRACK-TYPE TRACTOR STD, XL JEN00001-UP (MACHINE) POWERED BY C9 Engine

### **Disassembly and Assembly**

D6R Track-Type Tractor Power Train

Media Number -KENR8565-02

Publication Date -01/02/2014

Date Updated -24/02/2014

i05236991

# **Final Drive - Disassemble**

SMCS - 4050-015

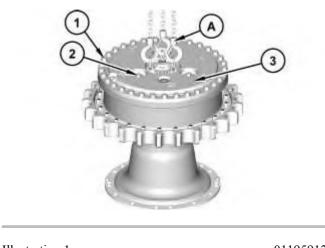
# **Disassembly Procedure**

		Table 1	
Require	Required Tools		
Tool	Part Number	Part Description	Qty
	138-7573	Link Bracket	3
A	1A-2029	Bolt	1
В	1P-510	Driver Group	1
	FT-1934	Beam	1
	6V-3160	Double Acting Cylinder	1
C	6V-9061	Pump Group	1
	1D-4621	Bolt	4
D	138-7574	Link Bracket	2
	2A-1538	Bolt	2

### **Start By:**

A. Remove the final drives. Refer to Disassembly and Assembly, "Final Drive - Remove" for the correct procedure.

**Note:** Cleanliness is an important factor. Before the disassembly procedure, the exterior of the component should be thoroughly cleaned. This will help to prevent dirt from entering the internal mechanism.



g01195912

- 1. Install Tooling (A) and a suitable lifting device to planetary carrier (3).
- 2. Remove bolts (1). Remove planetary carrier (3) and the two O-ring seals from the hub. The weight of planetary carrier (3) is approximately 137 kg (302 lb).
- 3. Remove retainers (2).

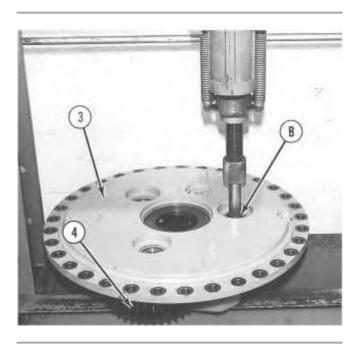
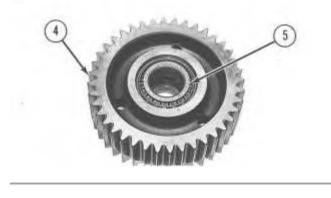


Illustration 2

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- 4. Place support under planetary carrier (3) in order to prevent damage. Use Tooling (B) and a suitable press to remove the planetary gear shafts.
- 5. Remove planetary gears (4) from planetary carrier (3).



g00841091

- 6. Remove bearing cones (5) from gears (4).
- 7. Remove the bearing cups from each side of the gears.

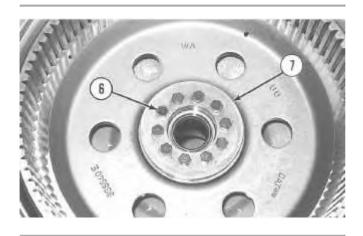


Illustration 4

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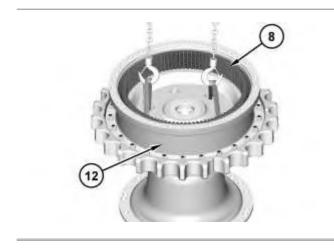


Illustration 5

g01195913

8. Remove bolts (6) and retainer (7).

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