

Product: TRACK-TYPE TRACTOR

Model: D3K LGP TRACK-TYPE TRACTOR LLL

Configuration: D3K XL & LGP Track Type Tractors LLL00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i02715572

Final Drive - Disassemble

SMCS - 4050-015

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-2420	Transmission Repair Stand	1
B	154-6182	Forcing Bolt	1
C	4C-8358	Eyebolt	1
D	138-7575	Link Bracket	3
E	150-1782	Crossblock	1
	1P-0525	Plate	1
	6V-9667	Bolt	2
	8T-3282	Hard Washer	2
	5F-7366	Forcing Screw	1
	5B-0637	Nut	1
F	138-7574	Link Bracket	2

Start By:

- a. Remove the final drive. Refer to Disassembly and Assembly, "Final Drive - Remove".

Note: Mark all components for assembly purposes.

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.

1. Put an alignment mark across the sections of the final drive for assembly purposes. The parts must be reinstalled in the original locations.

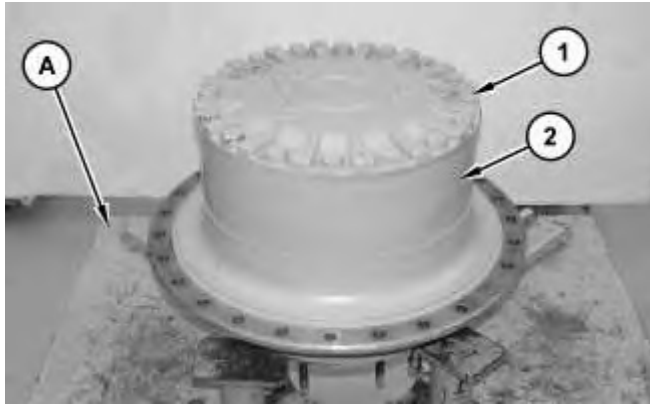


Illustration 1

g01363580

2. Position final drive assembly (2) onto Tooling (A). Remove bolts (1).

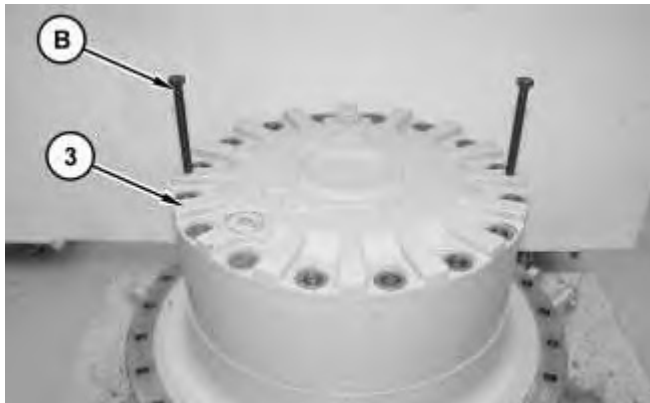
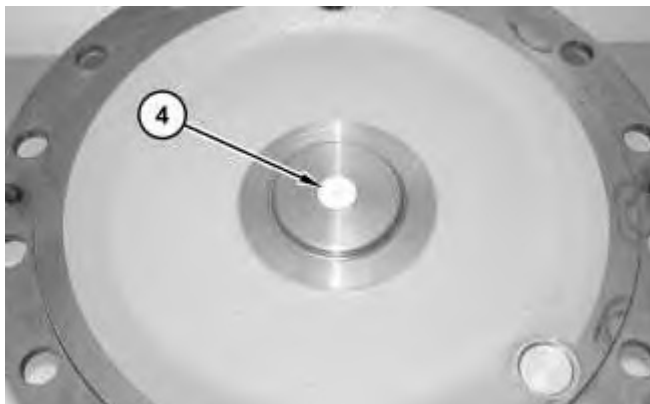


Illustration 2

g01363590

3. Use Tooling (B) in order to remove cover assembly (3).



4. Remove plug (4).

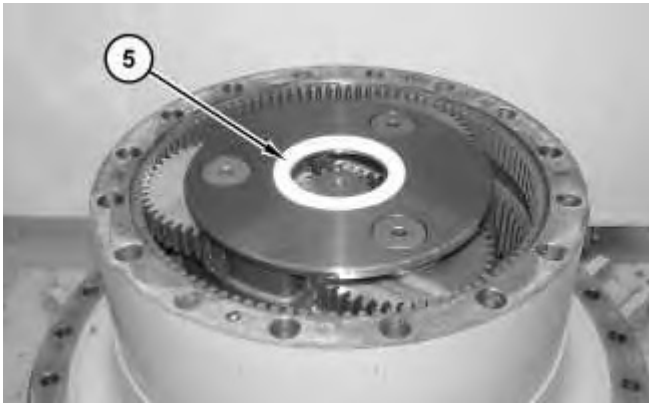


Illustration 4

g01363600

5. Remove spacer (5).

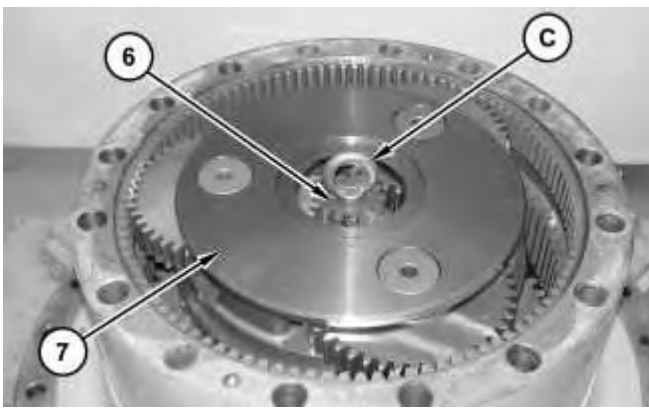


Illustration 5

g01363616

6. Use Tooling (C) in order to remove sun gear (6). Use two people to remove planetary carrier (7). The weight of planetary carrier (7) is approximately 23 kg (50 lb).

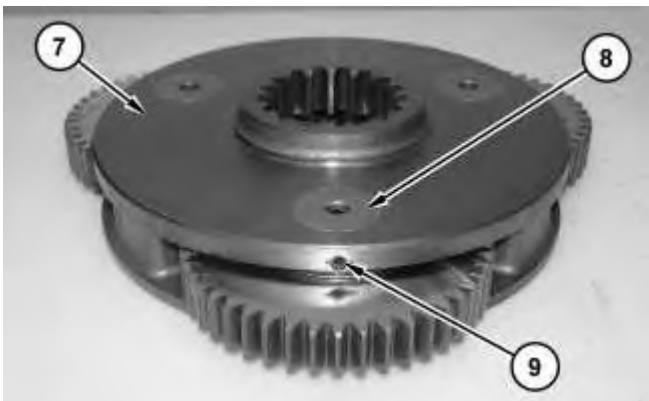


Illustration 6

g01363628

7. Disassemble planetary carrier (7), as follows:

- a. Use a suitable driver to drive spring pin (9) into planetary shaft (8).



Illustration 7

g01363653

- b. Remove planetary shaft (8) with spring pin (9) from the carrier assembly.
- c. Remove spring pin (9) from planetary shaft (8) with a suitable driver.

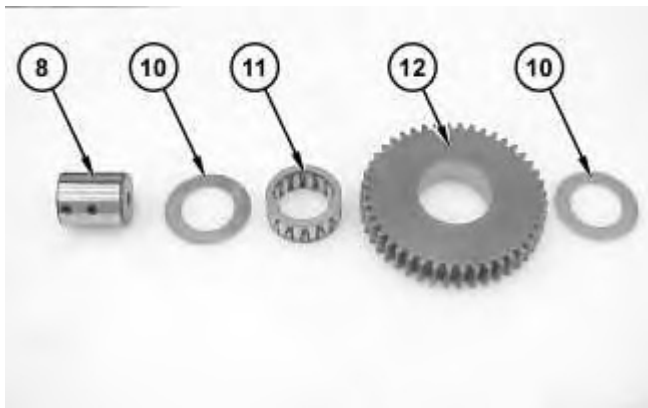


Illustration 8

g01363638

- d. Remove thrust washers (10) and planetary gear (12) from the carrier assembly.
 - e. Remove bearing (11) from the planetary gear (12).
8. Repeat Steps 7.a through 7.e in order to remove the remaining planetary gears from the carrier assembly.
-



Illustration 9

g01363665

9. Remove sun gear (13).

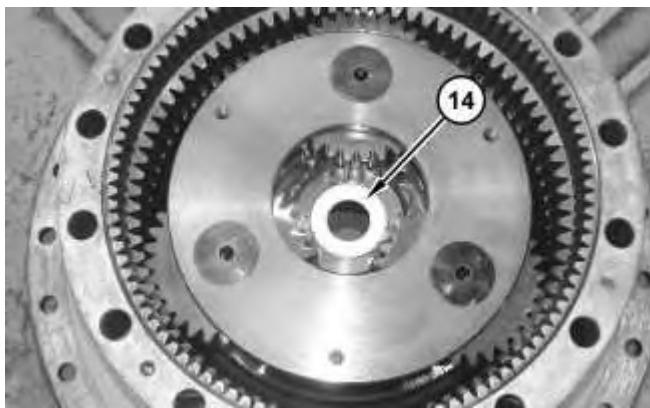


Illustration 10

g01363672

10. Remove spacer (14).

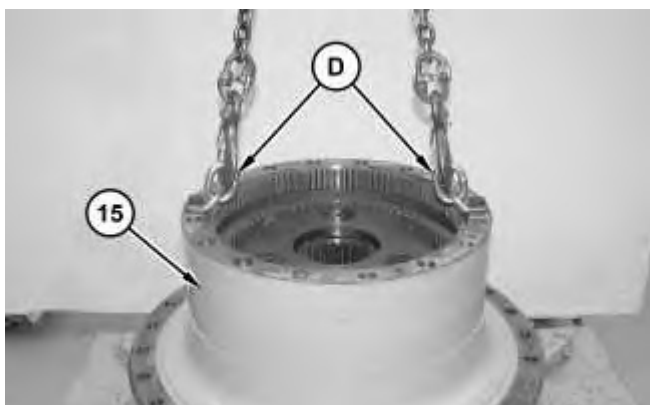


Illustration 11

g01363675

11. Attach Tooling (D) and a suitable lifting device to ring gear (15). The weight of ring gear (15) is approximately 50 kg (110 lb).
12. Remove ring gear (15).

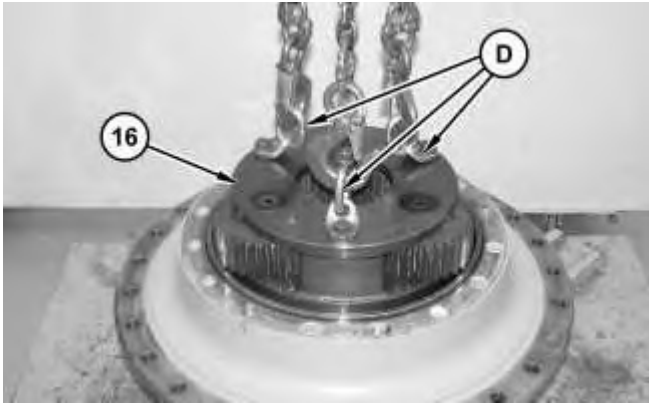


Illustration 12

g01363693

13. Attach Tooling (D) and a suitable lifting device to planetary carrier (16). The weight of planetary carrier (16) is approximately 45 kg (100 lb).
14. Remove planetary carrier (16).

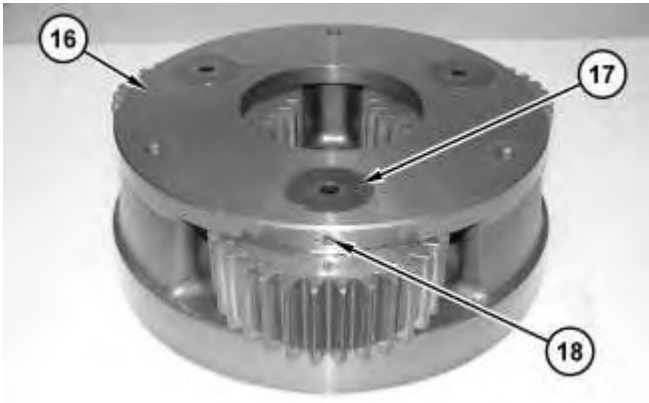


Illustration 13

g01363760

15. Disassemble planetary carrier (16), as follows:
 - a. Use a suitable driver to drive spring pin (18) into planetary shaft (17).



Illustration 14

g01363774

- b. Remove planetary shaft (17) with spring pin (18) from planetary carrier (16).
- c. Remove spring pin (18) from planetary shaft (17) with a suitable driver.

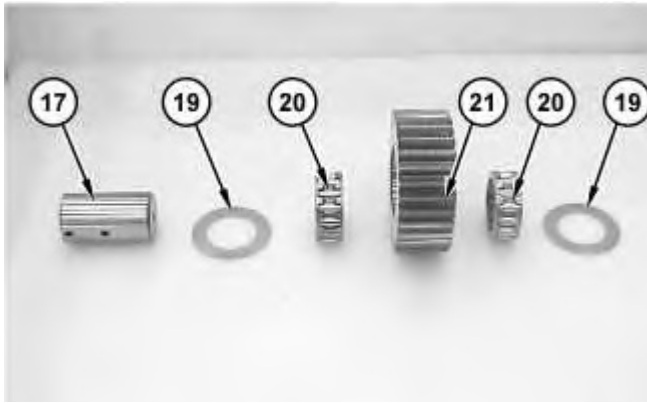


Illustration 15

g01363777

- d. Remove thrust washers (19) and planetary gear (19) from planetary carrier (16).
 - e. Remove bearings (20) from the planetary gear (21).
16. Repeat Steps 15.a through 15.e in order to remove the remaining planetary gears from the carrier assembly.

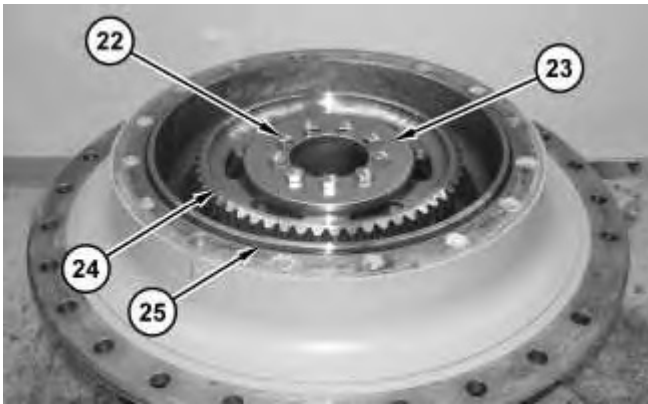


Illustration 16

g01363784

17. Remove bolts (22). Remove retainer (23).
 18. Remove coupling gear (24). Remove O-ring (25) from the housing.
-

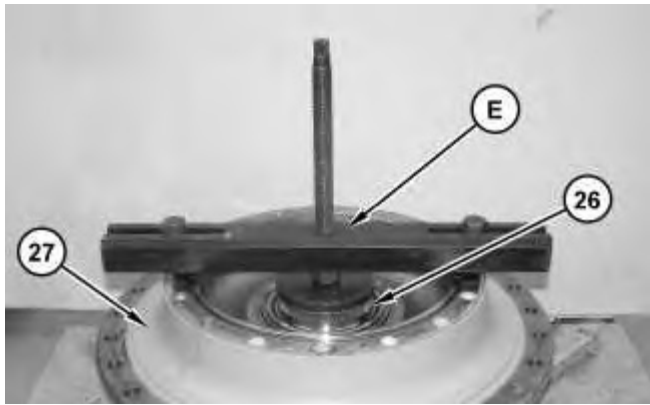


Illustration 17

g01363792

19. Use Tooling (E) in order to separate hub assembly (27) from spindle assembly (26).

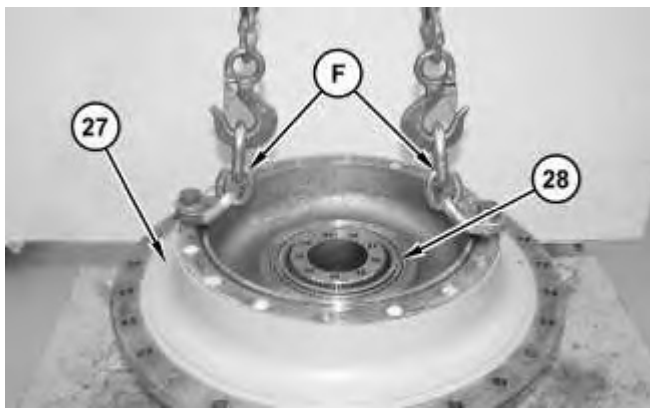


Illustration 18

g01363801

20. Attach Tooling (F) and a suitable lifting device to hub assembly (27). Remove hub assembly (27). The weight of the hub assembly (27) is approximately 113 kg (250 lb).
21. Remove bearing cone (28).

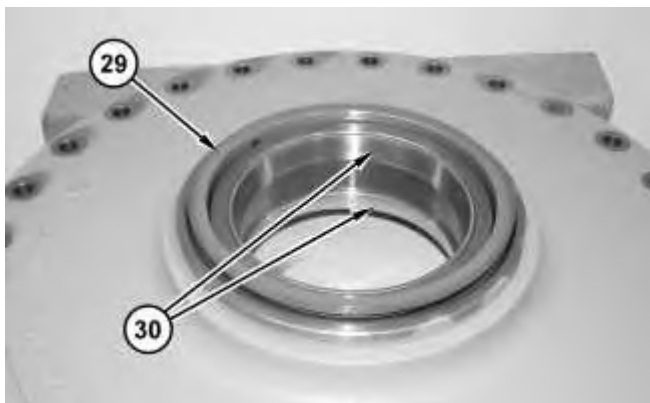


Illustration 19

g01363819

22. Remove Duo-Cone seal (29). Remove bearing cups (30).

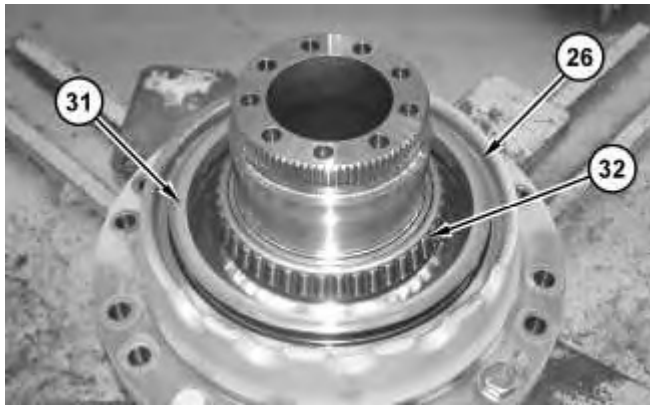


Illustration 20

g01363824

23. Remove Duo-Cone seal (31) from spindle assembly (26). Remove bearing cone (32).

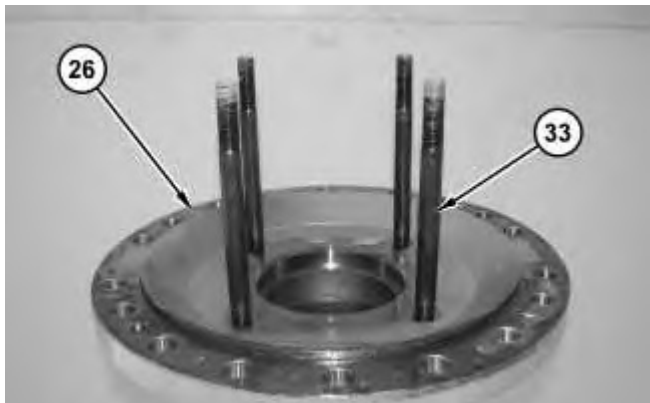


Illustration 21

g01363829

24. Use a suitable lifting device in order to reposition spindle assembly (26). The weight of spindle assembly (26) is approximately 57 kg (125 lb).
25. Remove studs (33).

Product: TRACK-TYPE TRACTOR

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Configuration: D3K XL & LGP Track Type Tractors LLL00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i05371310

Final Drive - Assemble

SMCS - 4050-016

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-2420	Transmission Repair Stand	1
B	8C-8422	Sealant	1
C	4C-8358	Eyebolt	1
D	138-7575	Link Bracket	3
E	138-7574	Link Bracket	2
F	1U-6437	Duo-Cone Seal Installer As	1

Note: Cleanliness is an important factor. Before assembly, thoroughly clean all parts in cleaning fluid. Allow the parts to air dry. Do not use wiping cloths or rags to dry parts. Lint may be deposited on the parts which may cause trouble. Inspect all parts. If any parts are worn or damaged, use new parts for replacement. Dirt and other contaminants can damage the precision component. Perform assembly procedures on a clean work surface. Keep components covered and protected at all times.

Note: Apply a light film of hydraulic oil to all components before assembly.

Note: The rubber seals and all surfaces that make contact with the seals must be clean and dry. After installation of the seals, put clean SAE 30 oil on the contact surfaces of the metal seals.

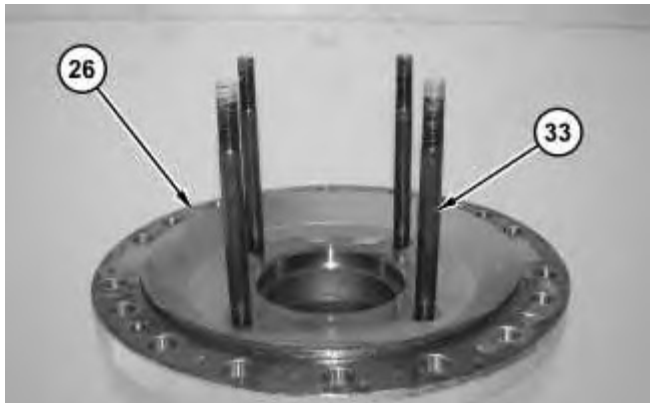


Illustration 1

g01363829

1. Install studs (33) . Tighten studs (33) to a torque of 110 ± 20 N·m (81 ± 15 lb ft).
2. Use a suitable lifting device in order to reposition spindle assembly (26) . The weight of spindle assembly (26) is approximately 57 kg (125 lb).

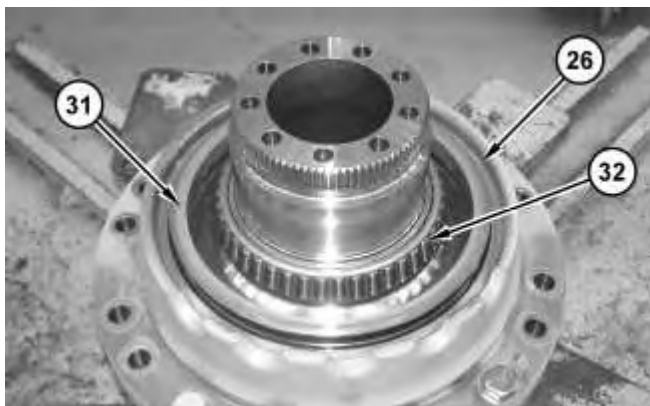


Illustration 2

g01363824

3. Raise the temperature of bearing cone (32) for installation. Install bearing cone (32) .

Note: Do not heat the bearing cone over 120°F. Do not heat the bearing cone for more than eight hours.

4. Use Tooling (F) in order to install Duo-Cone seal (31) onto spindle (26) . Refer to Disassembly and Assembly, "Duo-Cone Conventional Seals - Install".

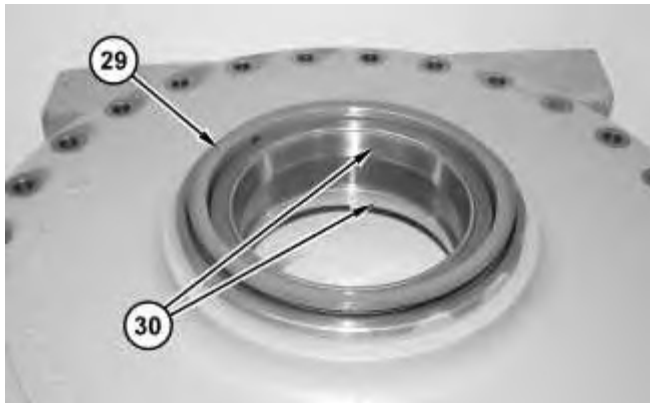


Illustration 3

g01363819

5. Lower the temperature of bearing cup (30) for installation. Install bearing cups (30) .
6. Use Tooling (F) in order to install Duo-Cone seal (29) . Refer to Disassembly and Assembly, "Duo-Cone Conventional Seals - Install".

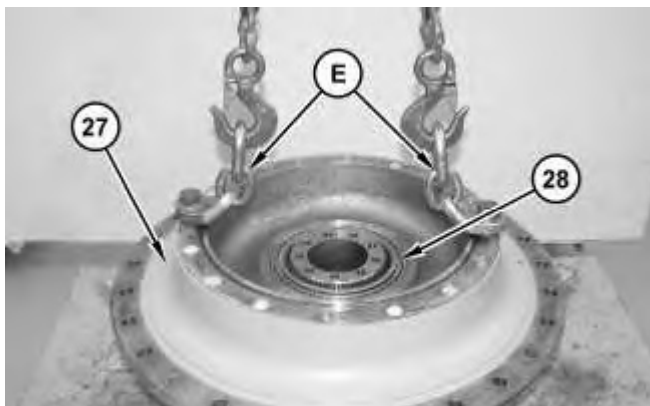


Illustration 4

g01364058

7. Attach Tooling (E) and a suitable lifting device to hub assembly (27) . Install hub assembly (27) . The weight of hub assembly (27) is approximately 113 kg (250 lb).
8. Raise the temperature of bearing cone (28) for installation. Install bearing cone (28) .

Note: Do not heat the bearing cone over 120°F. Do not heat the bearing cone for more than eight hours.

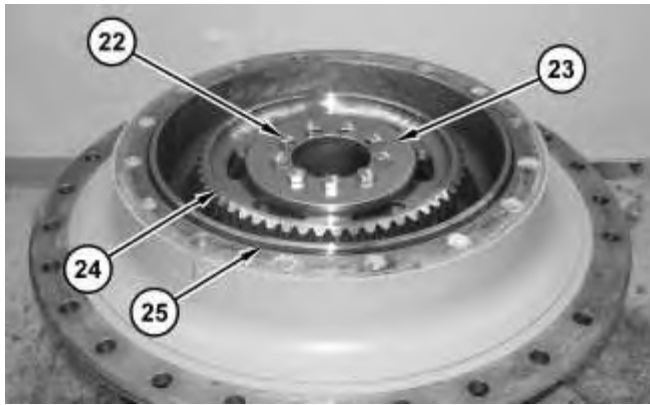


Illustration 5

g01363784

9. Install O-ring seal (25) onto the housing. Remove coupling gear (24) .
10. Install retainer (23) . Install bolts (22) . Tighten bolts (22) to a torque of $120 \pm 20 \text{ N}\cdot\text{m}$ ($89 \pm 15 \text{ lb ft}$).

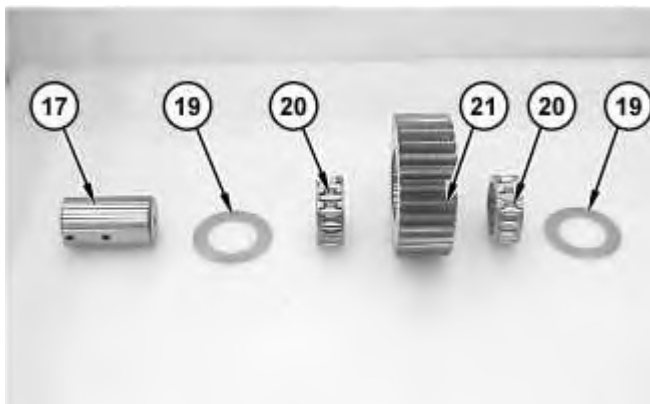


Illustration 6

g01363777

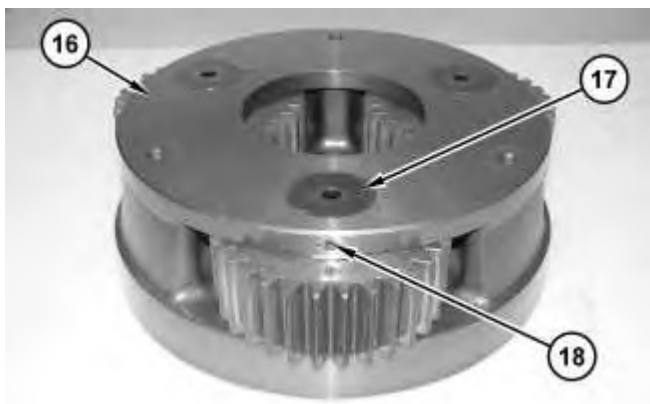


Illustration 7

g01363760

11. Assemble planetary carrier (16) , as follows:
 - a. Install bearings (20) into planetary gear (21) .
 - b. Install thrust washers (19) and planetary gear (21) into the carrier assembly.
 - c. Use a deburring tool in order to remove the metal burr from the openings in the carrier assembly. Install planetary shaft (17) into the carrier assembly.
 - d. Use a suitable driver to drive spring pin (18) into planetary shaft (17) . Stake the hole for spring pin (18) in order to retain spring pin (18) .
12. Repeat Steps 11.a through 11.d for the remaining planetary gears.

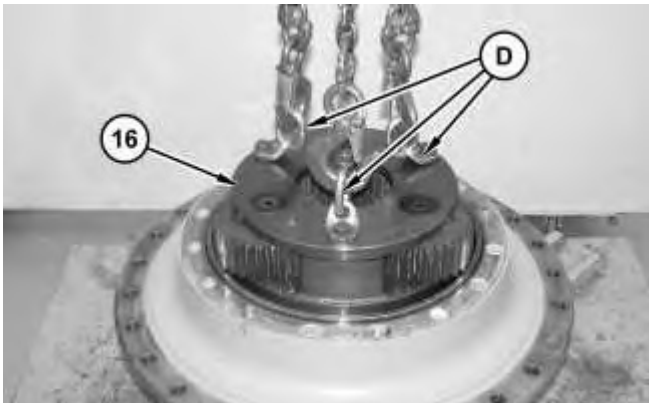


Illustration 8

g01363693

13. Attach Tooling (D) and a suitable lifting device to planetary carrier (16) . The weight of planetary carrier (16) is approximately 45 kg (100 lb).
14. Position planetary carrier (16) onto the spindle.

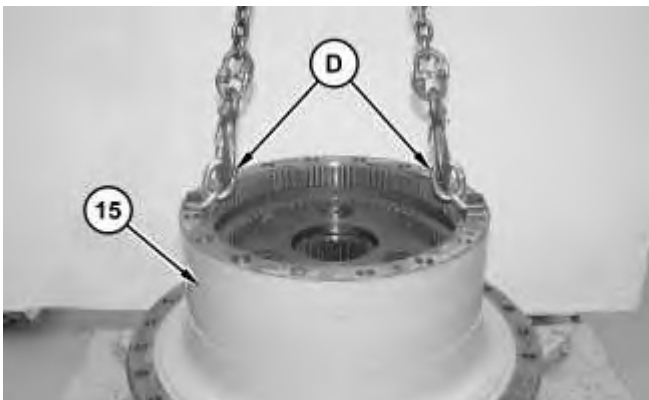


Illustration 9

g01363675

15. Attach Tooling (D) and a suitable lifting device to ring gear (15) . The weight of ring gear (15) is approximately 50 kg (110 lb).
16. Install ring gear (15) .

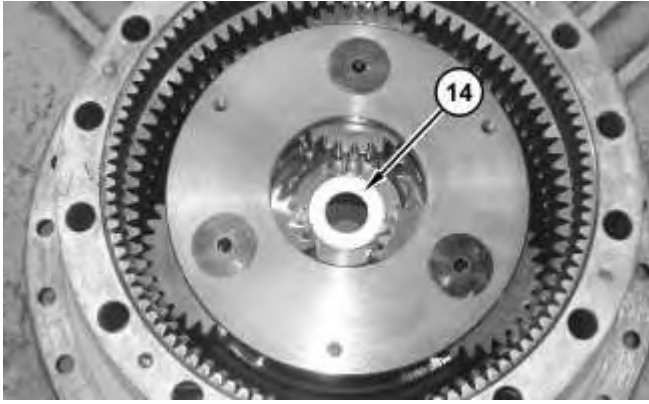


Illustration 10

g01363672

17. Install spacer (14) .



Illustration 11

g01363665

18. Install sun gear (13) .
-

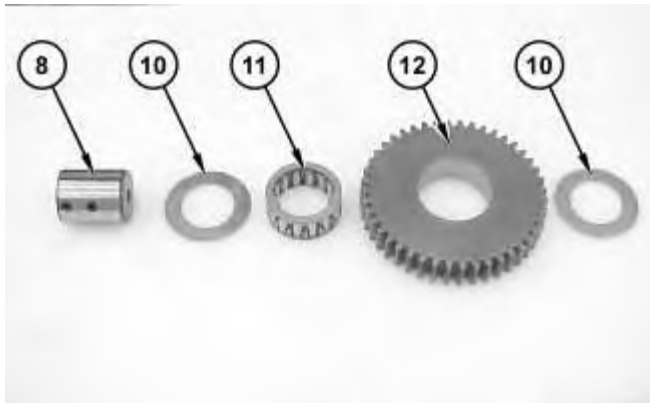


Illustration 12

g01363638

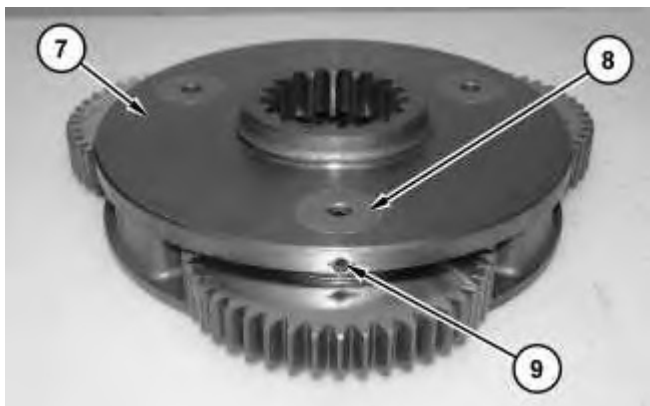


Illustration 13

g01363628

19. Assemble planetary carrier (7) , as follows:

- a. Install bearing (11) into planetary gear (12) .
- b. Install thrust washers (10) and planetary gear (12) into the carrier assembly.
- c. Use a deburring tool in order to remove the metal burr from the openings in the carrier assembly.
- d. Install planetary shaft (8) into the carrier assembly.
- e. Use a suitable driver to drive spring pin (9) into planetary shaft (8) . Stake the hole for spring pin (9) in order to retain spring pin (9) .

20. Repeat Steps 19.a through 19.e for the remaining planetary gears.

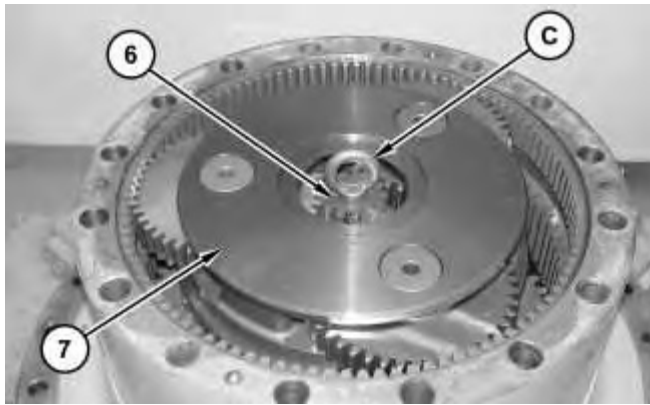


Illustration 14

g01363616

21. Use two people to install planetary carrier (7) . The weight of planetary carrier (7) is approximately 23 kg (50 lb).
22. Use Tooling (C) in order to install sun gear (6) .

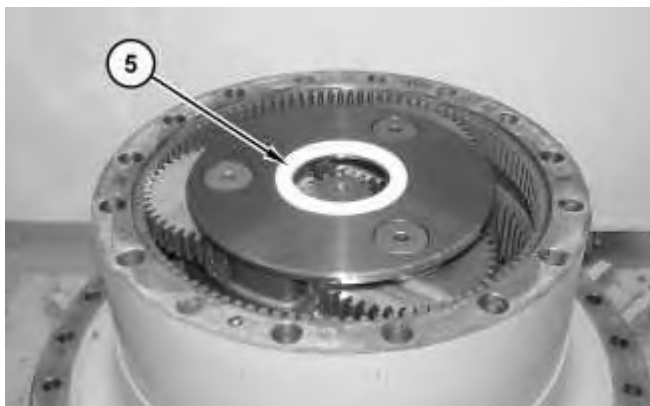
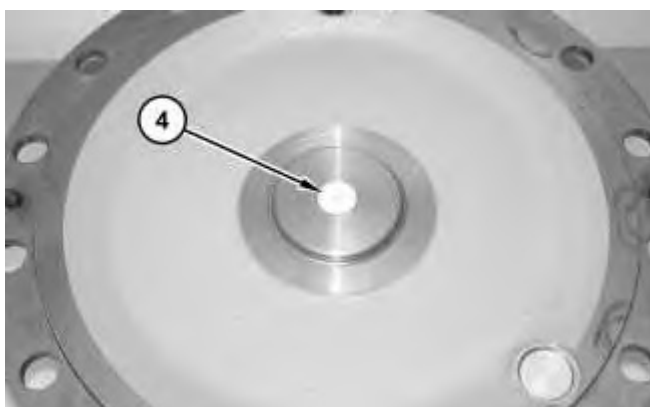


Illustration 15

g01363600

23. Install spacer (5) .



24. Install new plug (4) .

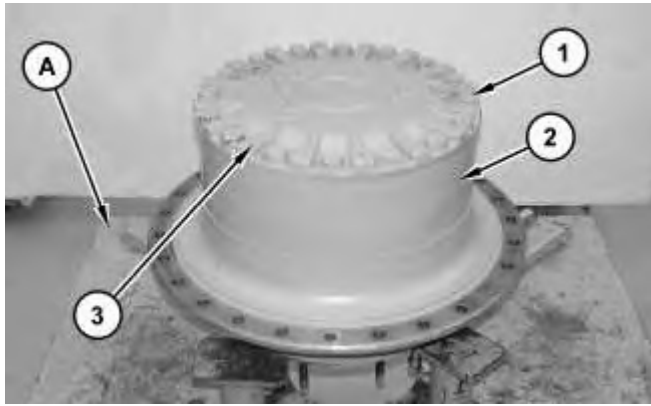


Illustration 17

25. Apply Tooling (B) to the mounting flange of cover assembly (3) prior to installation.
26. Install cover assembly (3) .
27. Install bolts (1) . Tighten bolts (1) to a torque of $530 \pm 70 \text{ N}\cdot\text{m}$ ($391 \pm 52 \text{ lb ft}$).
28. Remove final drive assembly from Tooling (A) .

End By: Install the final drive. Refer to Disassembly and Assembly, "Final Drive - Remove".

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Model: D3K LGP TRACK-TYPE TRACTOR LLL

Configuration: D3K XL & LGP Track Type Tractors LLL00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i02712731

Final Drive - Install

SMCS - 4050-012

Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7575	Link Bracket	1
B	1U-9200	Lever Puller Hoist	1

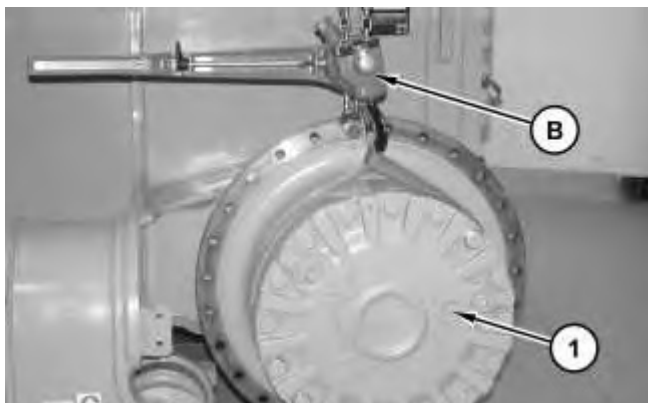


Illustration 1

g01362304

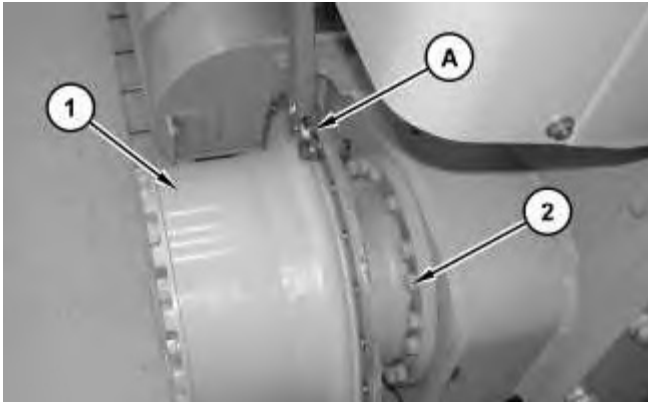


Illustration 2

g01362287

1. Attach Tooling (A), Tooling (B), and a suitable lifting device to final drive assembly (1). The weight of final drive assembly (1) is approximately 363 kg (800 lb).
2. Position final drive assembly (1) and install bolts (2).
3. Remove Tooling (A), Tooling (B), and suitable lifting devices from final drive assembly (1).

End By:

- a. Install the sprocket. Refer to Disassembly and Assembly, "Sprocket - Remove and Install".
 - b. Install the parking brake. Refer to Disassembly and Assembly, "Parking Brake - Install".
-

Product: TRACK-TYPE TRACTOR

Model: D3K LGP TRACK-TYPE TRACTOR LLL

Configuration: D3K XL & LGP Track Type Tractors LLL00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i02828757

Sun Gear (In Chassis) - Remove and Install

SMCS - 4050-010; 4055-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	154-6184	Guide Stud ⁽¹⁾	2
B	4C-8358	Eyebolt	1

⁽¹⁾ Cut to a length of 220 mm (9.0 inch).

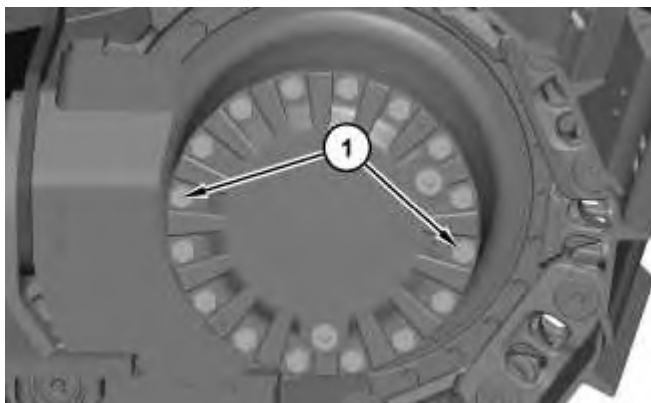


Illustration 1

g01411043

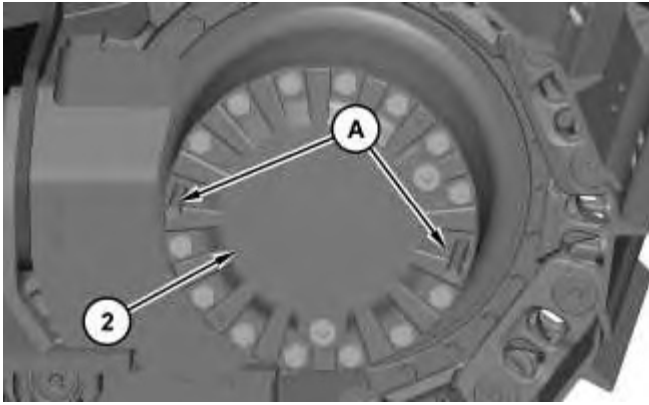


Illustration 2

g01411050

1. Remove bolts (1).
2. Install Tooling (A) in order to support the ring gear. Remove bolts (1) and cover assembly (2).

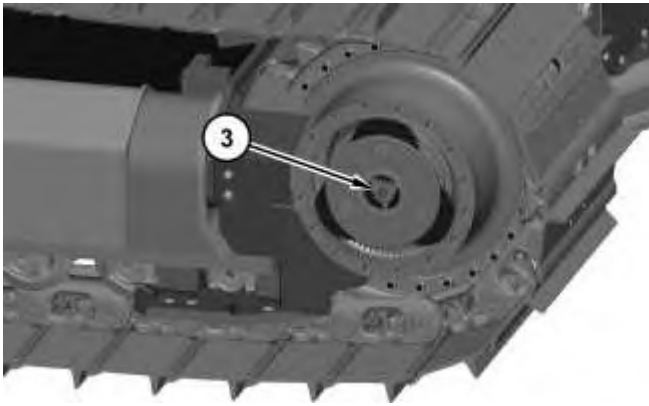


Illustration 3

g01411052

3. Use Tooling (B) in order to remove sun gear (3). Repeat for the opposite side.

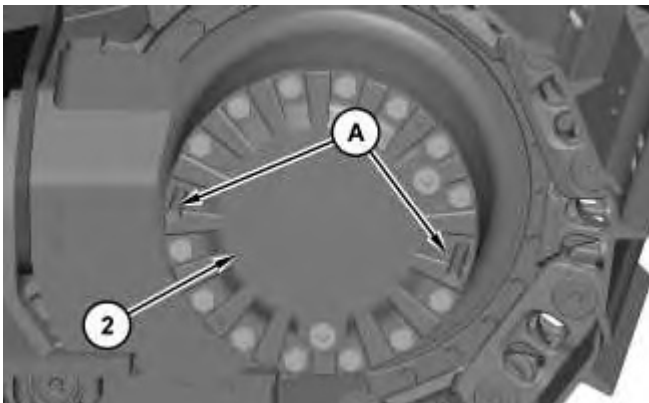


Illustration 4

g01411050

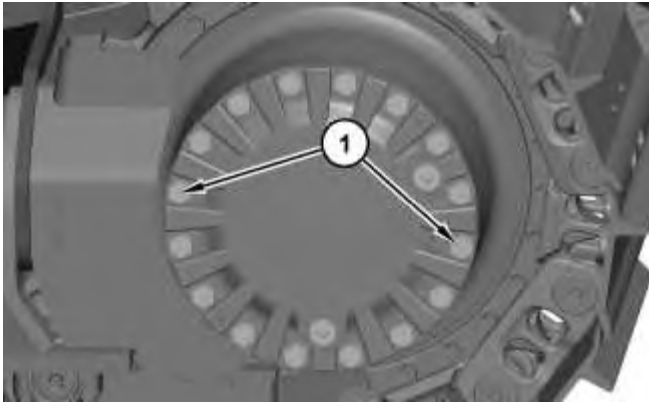


Illustration 5

g01411043

4. Reinstall cover (2), Tooling (A), and bolts (1).
5. Install the cover assembly and the bolts and proceed with the towing of the machine. Refer to Operation and Maintenance Manual, "Towing the Machine".

Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	154-6184	Guide Stud ⁽¹⁾	2
C	8C-8422	Sealant	1

⁽¹⁾ Cut to a length of 220 mm (9.0 inch).

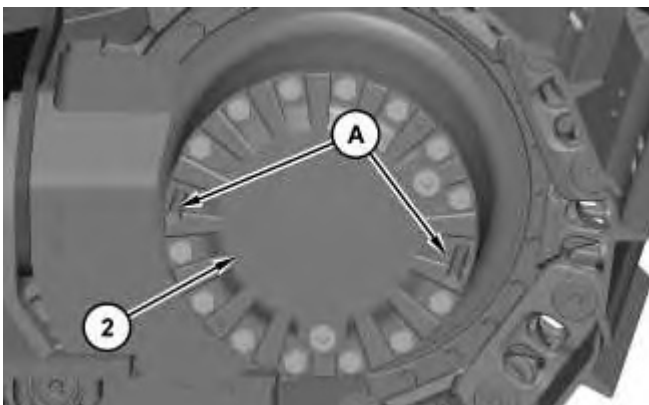


Illustration 6

g01411050

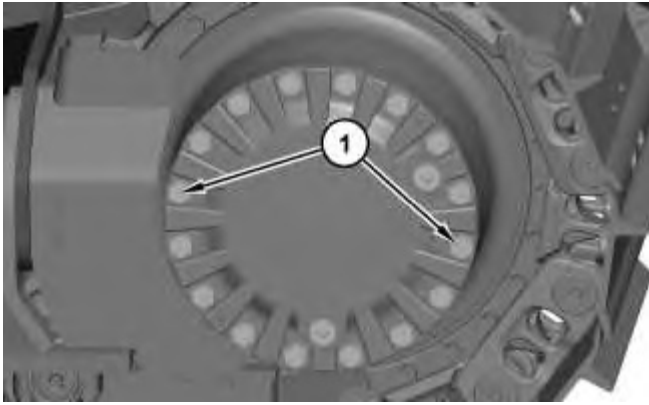


Illustration 7

g01411043

1. Remove bolts (1), Tooling (A), and cover (2).

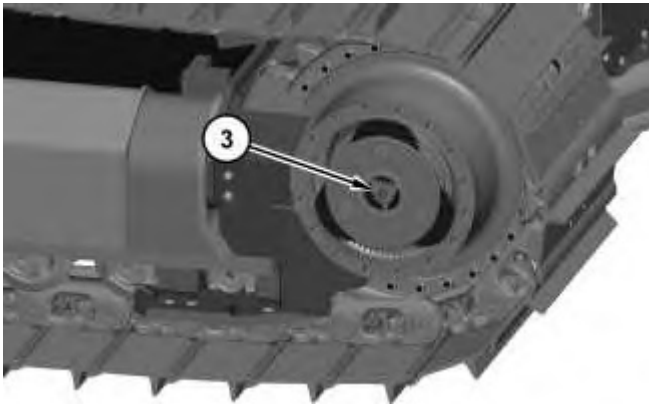


Illustration 8

g01411052

2. Install sun gear (3).

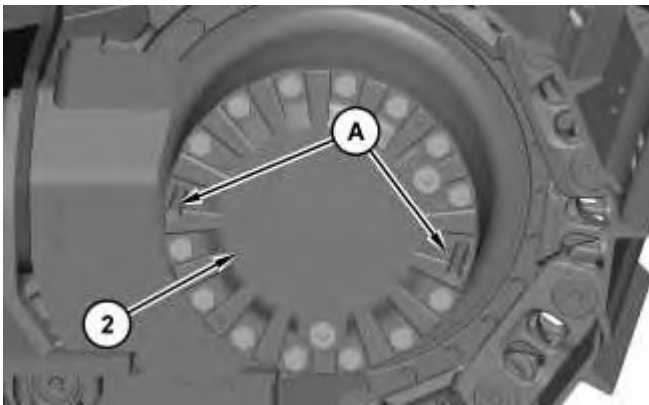


Illustration 9

g01411050

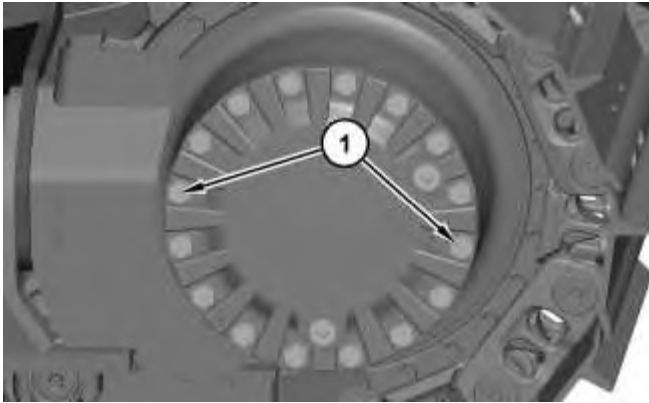


Illustration 10

g01411043

3. Apply Tooling (C) to the mounting flange of cover assembly (2). Install cover assembly (2) and bolts (1). Remove Tooling (A) and install bolts (1). Tighten bolts (1) to a torque of $530 \pm 70 \text{ N}\cdot\text{m}$ ($391 \pm 52 \text{ lb ft}$).
-

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