



Service Repair Manual

Models

D11T CARRY DOZER
TRACK-TYPE TRACTOR

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Product: TRACK-TYPE TRACTOR

Model: D11T TRACK-TYPE TRACTOR JEL

Configuration: D11T TRACK-TYPE TRACTOR JEL00001-UP (MACHINE) POWERED BY C32 Engine

Disassembly and Assembly D11T Track-Type Tractor Power Train

Media Number -KENR5620-00

Publication Date -01/08/2011

Date Updated -26/08/2011

i06671320

Track Roller Frame - Disassemble

SMCS - 4151-015

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	105-3349	Strap	1
B	3S-6224	Electric Hydraulic Pump Gp	1
	6V-3175	Hydraulic Cylinder Gp	1
	4C-9634	Puller Stud	1
	5P-7270	Sleeve	1
	1P-1840	Bearing Puller Adapter	1
	9U-6832	Nut	1
	3H-0467	Puller Washer	1
C	FT-1713	Wedge	1
D	2D-1201	Eyebolt	1

Start By:

- a. Remove the track roller frame or the front track roller frame. Refer to Disassembly and Assembly, "Track Roller Frame - Remove".
 - b. Remove the idlers. Refer to Disassembly and Assembly, "Idlers - Remove".
-

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.

Note: The disassembly procedure for the track roller frame and the front track roller frame is the same procedure. Only the front track roller frame is shown.

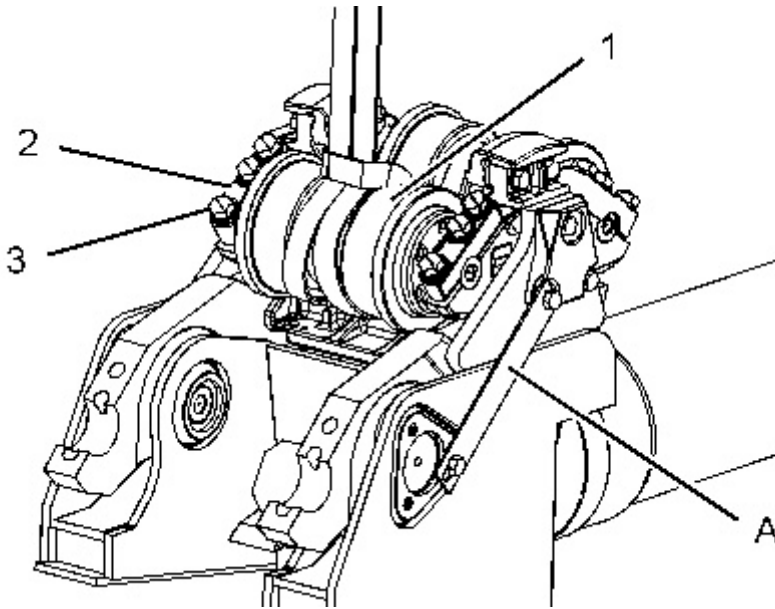


Illustration 1

g01425527

1. Fasten a suitable lifting device to track roller (1).
2. Remove bolts (3) and caps (2) and remove the track roller. The weight of track roller is approximately 179 kg (394 lb).

Note: Special Spirallock threads are used on the minor bogies with caps with 2 bolts. Spirallock threads provide improved bolt retention. Use special Spirallock taps to chase the threads in these holes. The use of standard taps in these holes will eliminate the Spirallock feature. This will cause the bolts to loosen.

3. Remove Tooling (A) from the track roller frame.
-

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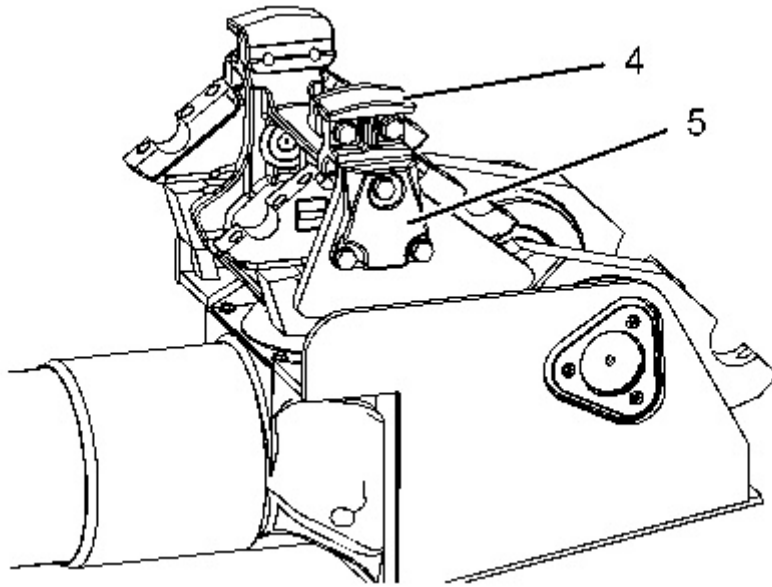


Illustration 2

g01425931

4. Remove guides (4) and covers (5) from both sides of the track roller frame.

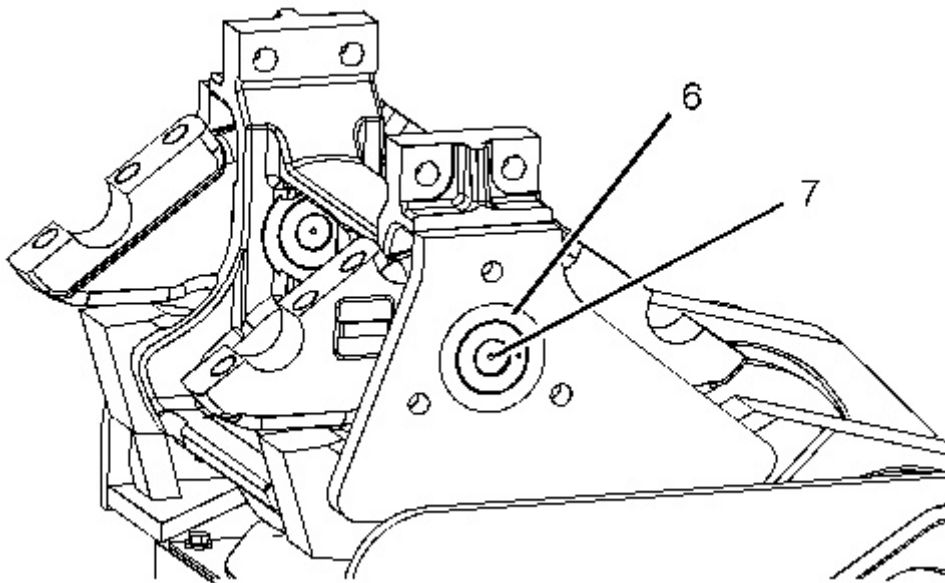


Illustration 3

g01425933

Note: There will be a loss of oil when the stoppers and plug (7) are removed from pin assembly (6).

5. Use a drill and remove the stoppers and plugs (7) from both ends of pin assembly (6).

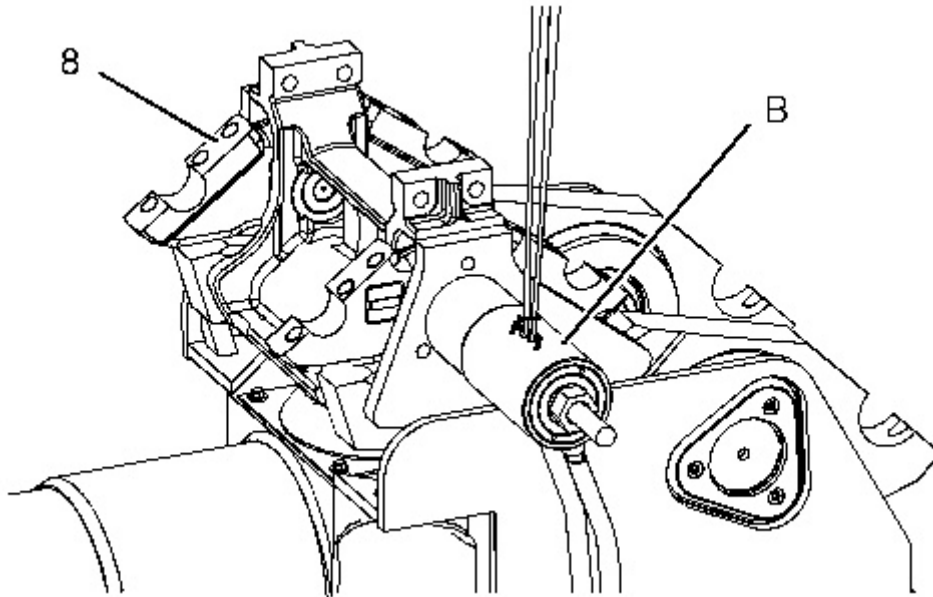


Illustration 4

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6. Put Tooling (B) in position. Fasten a suitable lifting device to Tooling (B). The combined weight of the pin assembly and Tooling (B) is approximately 45 kg (100 lb).
7. Use Tooling (B) to remove the pin assembly that holds minor bogie (8) to the major bogie.



Illustration 5

g00526056

8. Fasten a suitable lifting device to minor bogie (8). Remove minor bogie (8). The weight of minor bogie (8) is approximately 39 kg (86 lb).

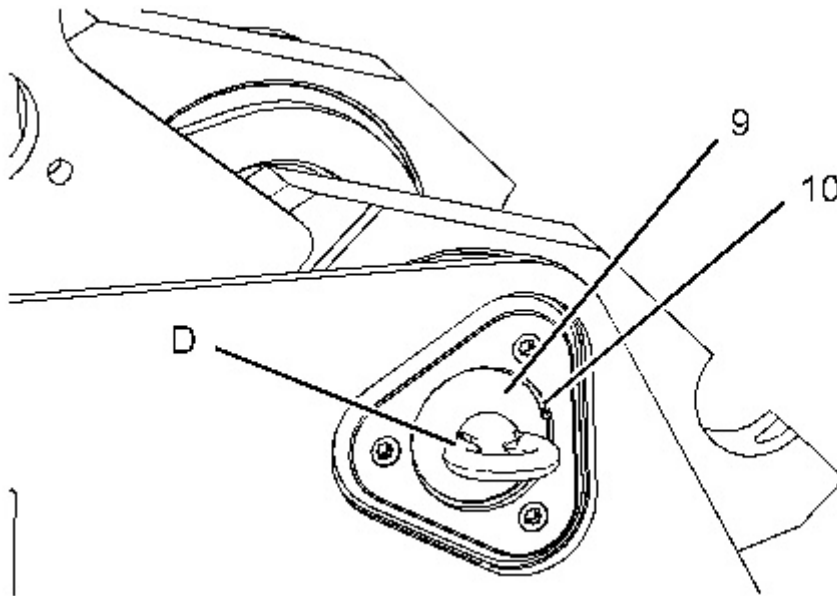


Illustration 6

g01425936

9. Remove retaining ring (10).
10. Install Tooling (D) in plate (9). Remove the plate (9) from the track roller frame.

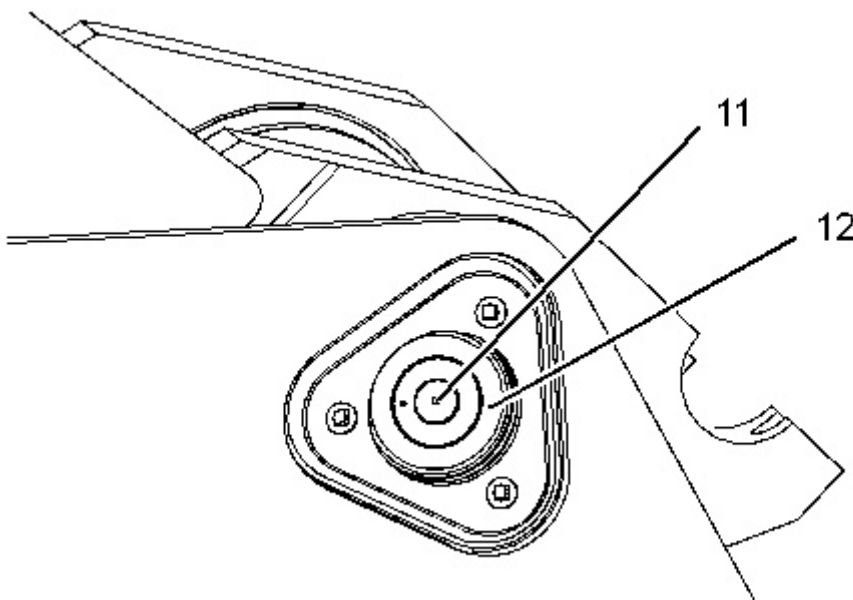


Illustration 7

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Note: There will be a loss of oil when the stoppers and plugs (11) are removed.

11. Use a suitable drill, and remove the stoppers and plugs (11) from pin assembly (12).

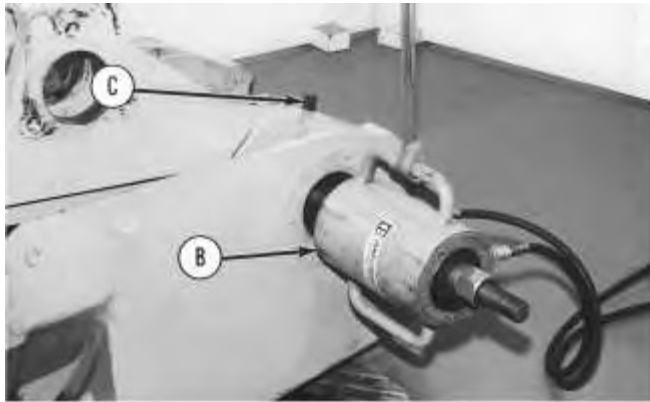


Illustration 8

g00526071

12. Install Tooling (C) between the inside of the track roller frame and the major bogie.
13. Install Tooling (B). Fasten a suitable lifting device to Tooling (B).
14. Use Tooling (B) and remove the pin assemblies that hold the major bogie to the track roller frame.

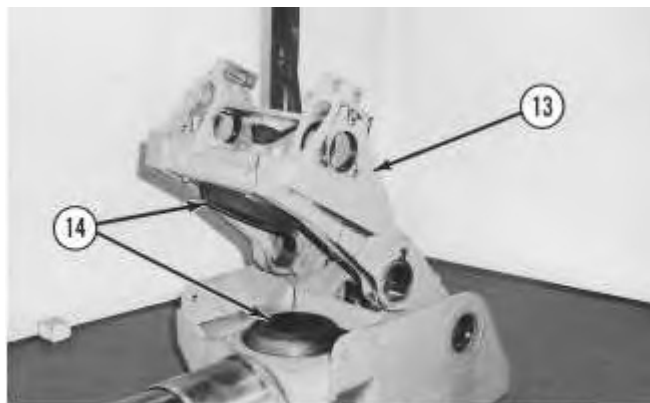


Illustration 9

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15. Fasten a suitable lifting device to major bogie (13). Remove major bogie (13) from the track roller frame. The weight of major bogie (13) is approximately 435 kg (960 lb).
16. Remove pad assemblies (14) from the major bogie and the track roller frame.

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Product: TRACK-TYPE TRACTOR

Model: D11T TRACK-TYPE TRACTOR JEL

Configuration: D11T TRACK-TYPE TRACTOR JEL00001-UP (MACHINE) POWERED BY C32 Engine

Disassembly and Assembly D11T Track-Type Tractor Power Train

Media Number -KENR5620-00

Publication Date -01/08/2011

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i07041863

Track Roller Frame - Assemble

SMCS - 4151-016

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	105-3349	Strap	1
D	3S-6224	Electric Hydraulic Pump Gp	1
	5P-7399	Adapter (Bearing Puller)	1
	6V-3175	Cylinder Gp	1
	5P-9695	Pressure Plate	1
	5P-4776	Tool Stud	3
	1A-1935	Nut	3
	3K-5234	Hard Washer	3
E	5P-3931	Anti-Seize Compound	-
F	1P-7409	Eyebolt	1


WARNING

When you are using hydraulic cylinders and puller studs, always ensure that the rated capacity of the puller stud meets or exceeds the rated capacity of the hydraulic cylinder. If the puller stud does not meet or

exceed the rated capacity of the hydraulic cylinder, a sudden failure of the puller stud could occur. The sudden failure of the puller stud could result in personal injury or death.

NOTICE

Do not use threaded rods that have not been hardened as tooling with hydraulic cylinders. The maximum rated tonnage should be stamped on one end of the puller studs. Do not use threaded rods that have not been stamped with the rated tonnage.

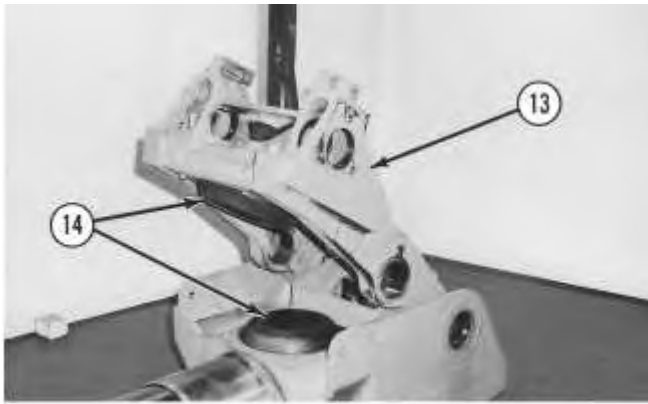


Illustration 1

g00526078

1. Put pad assemblies (14) in position on the major bogie (13) and the track roller frame. Install the bolts that hold the pad assemblies in place.
 2. Fasten a suitable lifting device to major bogie (13). Put the major bogie (13) in position in the track roller frame. The weight of major bogie (13) is approximately 435 kg (960 lb).
-

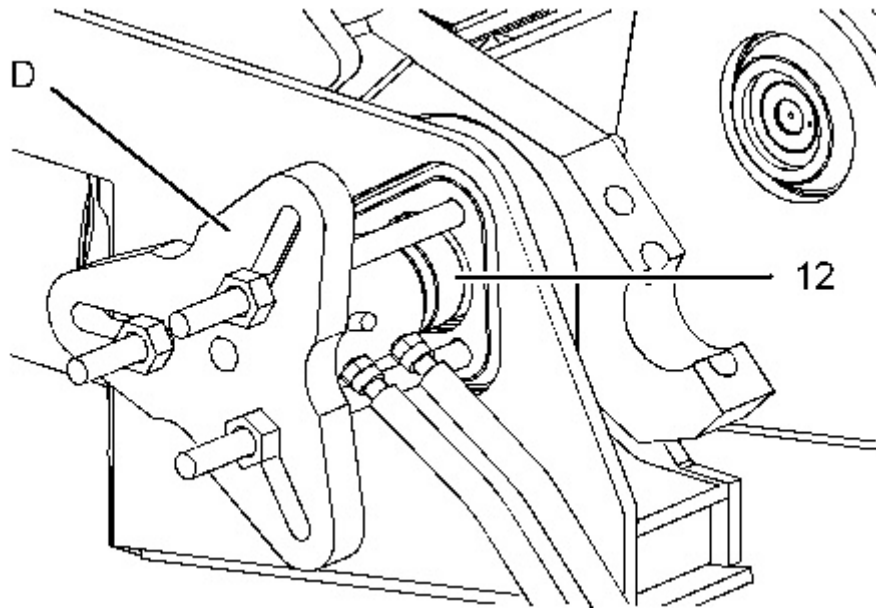


Illustration 2

g01427639

Note: to reuse original pin assemblies (12), the pad assemblies must be filled with 120 ± 3 mL (4.08 ± 0.10 oz) of SAE 90W oil. The rubber stoppers must be installed 3.00 ± 1.00 mm (0.118 ± 0.039 inch) below the surface of the end of the pin assemblies.

NOTICE

The end of the pin with the Mark X or a hole must be toward the outside of the roller frame. The Mark X or hole must be on the top or bottom on the vertical center line of the bore.

3. Put Tooling (E) on the bores of the major bogie and the track roller frame.
 4. Lower temp of pin assembly (12) and position in the bore.
 5. Install Tooling (D). Use Tooling (D) and install pin assembly (12) in the major bogie.
-

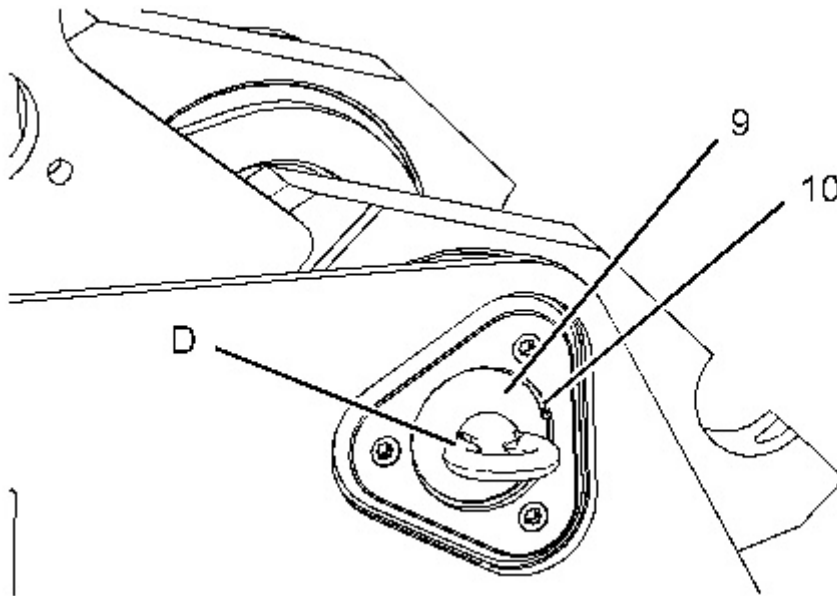


Illustration 3

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6. Install Tooling (F) into plate (9). Install plate (9). Install retaining ring (10) to hold the plate in position.



Illustration 4

g00526056

Note: The minor bogie (8) must be installed with the part number or the words THIS SIDE OUT toward the outside of the major bogie.

7. Put minor bogie (8) in position in the major bogie.
8. Put Tooling (E) on the bores of the minor bogie and the major bogie.

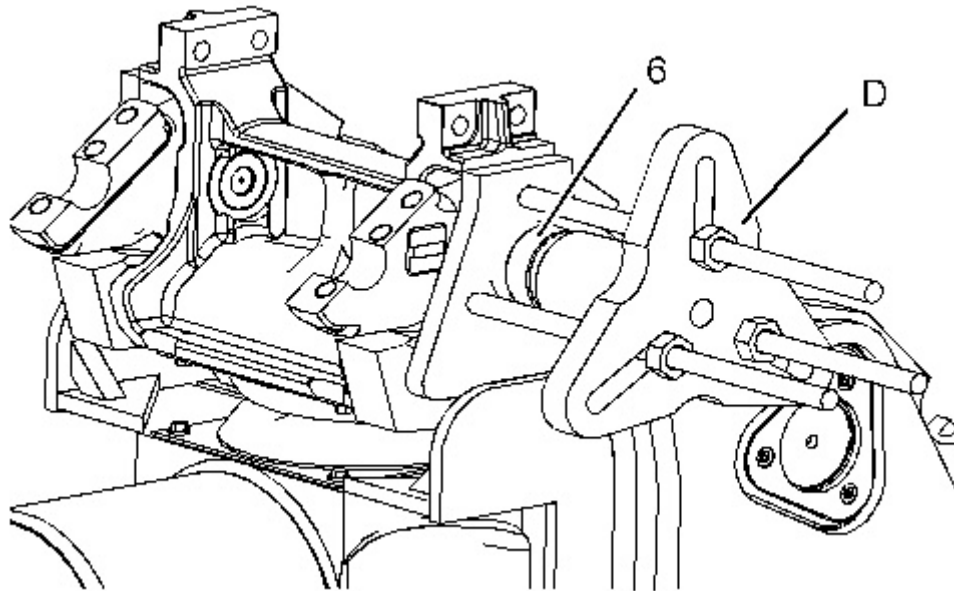


Illustration 5

g01427640

Note: to reuse original pin assemblies (12), the pin assemblies must be filled with 120 ± 3 mL (4.08 ± 0.10 oz) of SAE 90W oil. The rubber stoppers must be installed 3.00 ± 1.00 mm (0.118 ± 0.039 inch) below the surface of the end of the pin assemblies.

NOTICE

The end of the pin with the Mark X must be toward the outside of the roller frame. The Mark X must be on the top or bottom on the vertical centerline of the bore.

9. Lower temp of pin assembly (6), and position in the bore.
 10. Install Tooling (D), as shown. Use Tooling (D) to install pin assembly (6). Install the pin assembly to a depth of 5.0 ± 0.50 mm (0.20 ± 0.02 inch) above the surface of the major bogie.
-

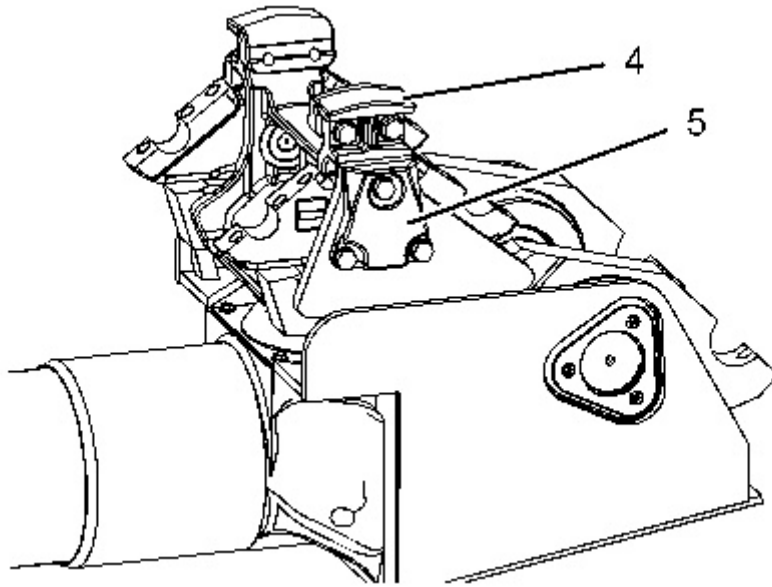


Illustration 6

g01425931

11. Install covers (5).
12. Put guides (4) in position and install the bolts that hold the guides in place. Tighten the bolts to a torque of $1125 \pm 100 \text{ N}\cdot\text{m}$ ($820 \pm 75 \text{ lb ft}$).

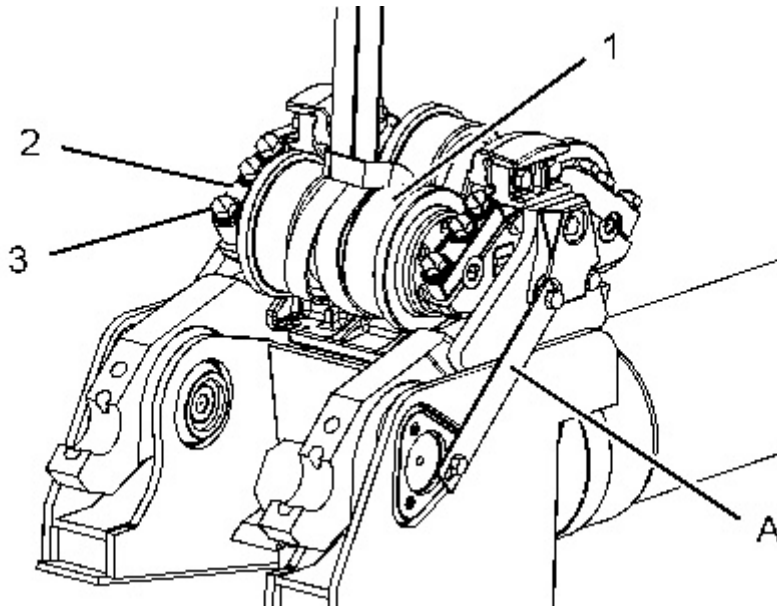


Illustration 7

g01425527

13. Install Tooling (A) on the track roller frame to hold the major bogie in place.

Note: The roller placement from the front of the machine is in the following order: No. 1 single flange, No. 2 single flange, No. 3 double flange, No. 4 double flange, No. 5 double flange, No. 6 double flange, No. 7 single flange, and No. 8 single flange.

14. Fasten a suitable lifting device to track roller (1). Put the track roller in position in the minor bogie. The weight of the track roller (1) is approximately 179 kg (394 lb).

Note: Tighten bolts (3) on the abutment side first.

15. Align the dowels in caps (2) with the holes in the track roller shaft and install caps (2) and bolts (3). Lubricate threads with Tooling (E). Tighten bolts (3) to a torque of $2200 \pm 200 \text{ N}\cdot\text{m}$ ($1620 \pm 150 \text{ lb ft}$).

Note: Special Spirallock threads are used on the minor bogies with caps with 2 bolts. Spirallock threads provide improved bolt retention. Use special Spirallock taps to chase the threads in these holes. The use of standard taps in these holes will eliminate the Spirallock feature. This will cause the bolts to loosen.

End By:

- a. Install the idlers. Refer to Disassembly and Assembly, "Idler - Install".
- b. Install the track roller frame or the front track roller frame. Refer to Disassembly and Assembly, "Track Roller Frame - Install".

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Product: TRACK-TYPE TRACTOR

Model: D11T TRACK-TYPE TRACTOR JEL

Configuration: D11T TRACK-TYPE TRACTOR JEL00001-UP (MACHINE) POWERED BY C32 Engine

Disassembly and Assembly D11T Track-Type Tractor Power Train

Media Number -KENR5620-00

Publication Date -01/08/2011

Date Updated -26/08/2011

i07510299

Track Roller Frame - Install

SMCS - 4151-012

Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	105-3351	Strap	2
	105-3349	Strap	2
C	8S-7620	Base As	1
	396-9840	Cylinder As	1
	8S-7615	Pin	1
	350-7768	Electric Hydraulic Pump Gp (115V)	-
	350-7769	Electric Hydraulic Pump Gp (230V)	-
E	142-8548	Bracket	1
	189-0411	Shackle As	2
	193-5474	Shackle As	1
F	9U-7536	Lift Stand	2
	447-0910	Electric Hydraulic Pump Gp (115V)	-
	447-0911	Electric Hydraulic Pump Gp (230V)	-
G	9S-5563	Pin Driver Cap	1
H	-	Loctite 536	-



Illustration 1

g01414747

1. If bearing (20) was removed from the track roller frame, lower the temperature of the new bearing. Install the bearing until the bearing seats in the counterbore of the track roller frame.



Illustration 2

g01414735

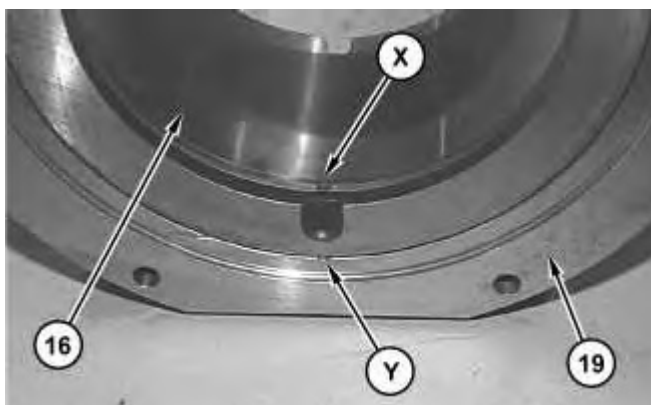


Illustration 3

g01414804

2. Apply Tooling (H) on the bores of retainers (19) and (16).

3. Use a suitable press to install seal assembly (18) in retainer (19) until the seal seats on the seal retainer.
4. Align Notch (X) in retainer (16) with Notch (Y) in retainer (19). Use a suitable press to install retainer (16) in seal assembly (18) until the seal seats on the seal retainer.

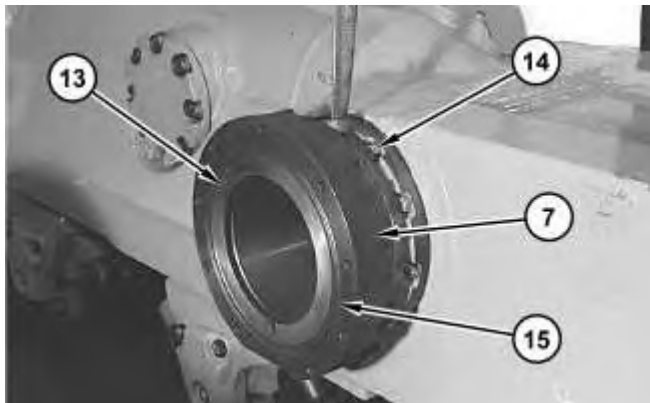


Illustration 4

g01414549

Note: Retainer assembly (7) must be installed with the notches in the seal retainer toward the bottom.

5. Fasten a suitable lifting device to retainer assembly (7). The weight of retainer assembly (7) is approximately 80 kg (175 lb).
6. Install O-ring seal (17). Refer to Illustration 2 for the location of O-ring seal (17). Position retainer assembly (7) on the track roller frame and install bolts (14) that hold retainer assembly (7) to the track roller frame.
7. Lower the temperature of plate (13). Align the notch in plate (13) with the notches in the retainer assemblies. Install plate (13) in retainer assembly (7) until the seal retainer is even with the surface of retainer assembly (7).
8. Install O-ring seal (15) in the groove in retainer assembly (7).

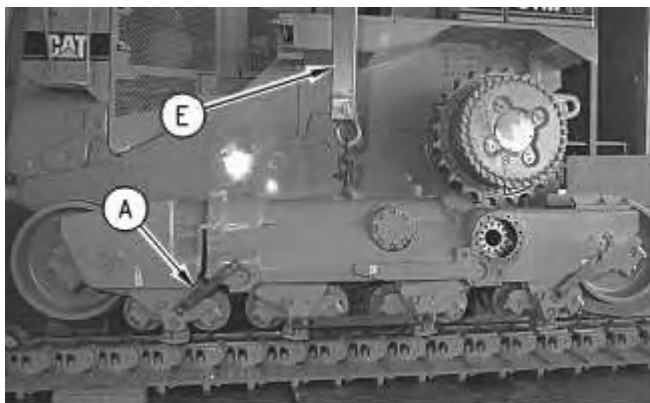


Illustration 5

g00525920

WARNING

Personal injury or death can result from lifting a heavy assembly.

The heavy assembly can fall if using an incorrect hoist to lift the load.

**Be sure the hoist has the correct capacity to lift a heavy assembly.
Approximate weight of the assembly is given below.**

WARNING

Pinch Point

Stay clear of this area!

Serious personal injury may occur.

9. Position Tooling (A) to hold the front track roller frame in position in the rear track roller frame.
10. Attach a suitable lifting device and Tooling (E) to the track roller frame. The weight of the track roller frame is approximately 9979 kg (22000 lb). Use Tooling (E) to install the track roller frame on the equalizer bar.

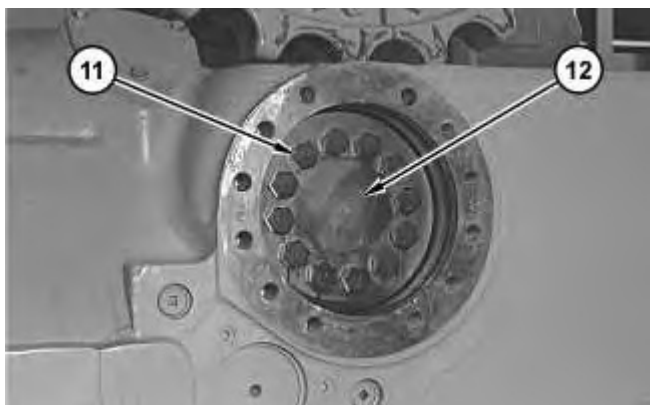


Illustration 6

g01414538

Note: Make sure that you install the thrust washer before you install plate (12),

11. Install the thrust washer and plate (12) on the end of the pivot shaft. Install bolts (11). Tighten bolts (11) to a torque of $1150 \pm 150 \text{ N}\cdot\text{m}$ ($850 \pm 110 \text{ lb ft}$).
-

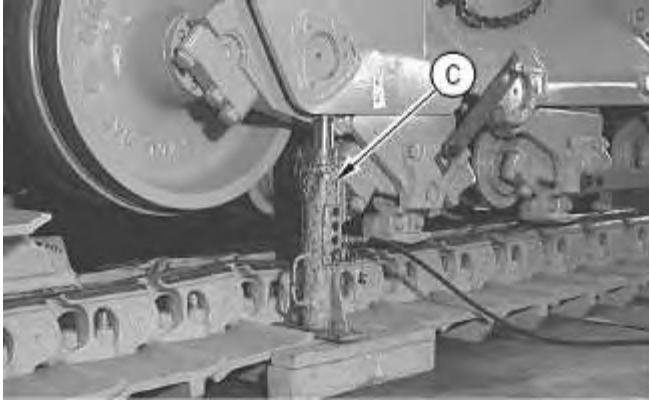


Illustration 7

g00525912

12. Position Tooling (C) under the front track roller frame, as shown. Support the weight of the track roller frame with Tooling (C).
13. Remove Tooling (E) from the track roller frame.

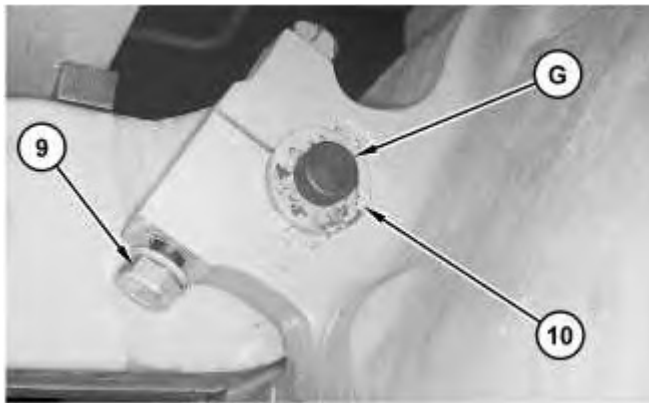


Illustration 8

g01414865

14. Use Tooling (C) to move the track roller frame until pin (12) can be installed.
15. Install Tooling (G) in the end of pin (10) and install pin (10) in the track roller frame.
16. Install bolts (9), the washers, and the nuts.
17. Install the spacer and the retaining ring on the end of pin (10).
18. Use a flat bar to ensure that the front seal (inner ring) is in the neutral position.

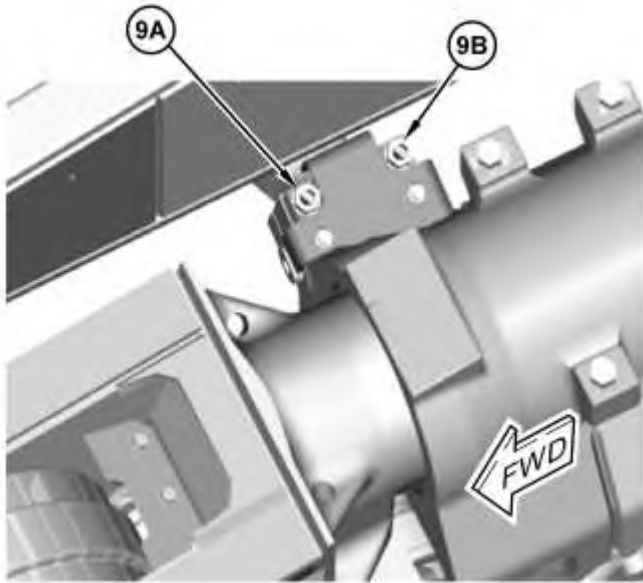


Illustration 9

g03716778

19. Tighten bolt (9A) to a torque of 1800 ± 250 N·m (1328 ± 184 lb ft).
20. Tighten bolt (9B) to a torque of 1800 ± 250 N·m (1328 ± 184 lb ft).
21. Torque bolt (9A) again to a torque of 1800 ± 250 N·m (1328 ± 184 lb ft).
22. Torque bolt (9B) again to a torque of 1800 ± 250 N·m (1328 ± 184 lb ft).
23. Repeat Step 19 through Step 22 for the opposite side of machine.

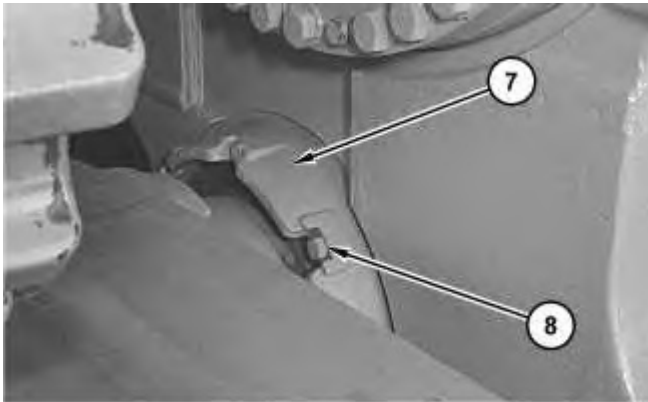


Illustration 10

g01414960

NOTICE

To prevent damage to the pivot shaft seal, do not install the bolts that hold the pivot shaft seal retainer to the main frame case until the equalizer bar has been connected to the track roller frame.

24. Align the holes in retainer assembly (7) with the holes in the main frame case and install bolts (8).
25. Remove Tooling (C) from the front track roller frame.

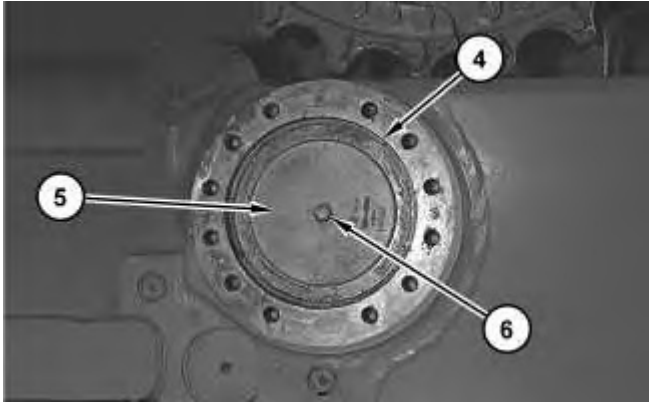


Illustration 11

g01414954

26. The O-ring seal must be in position on the plate (5). Put clean SAE 30W oil on the O-ring seal.
27. Install plate (5) in the track roller frame.
28. Install spiral lock ring (4) to hold the plate in position.
29. Install plug (6) in plate (5).

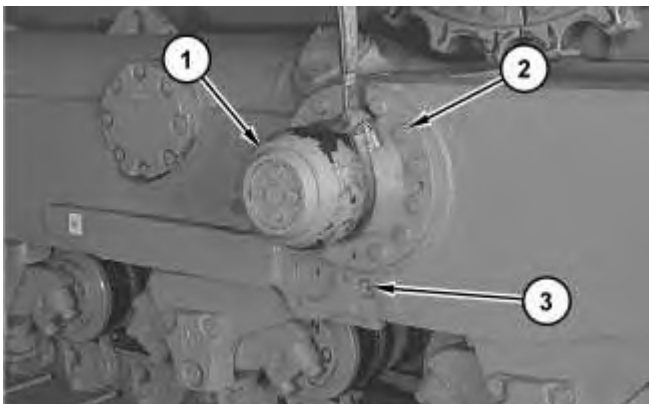


Illustration 12

g01414894

30. Install drain plug (3).
 31. Fasten a suitable lifting device to trunnion (1). The weight of trunnion (1) is approximately 147 kg (325 lb). Position trunnion (1) on the track roller frame and install bolts (2).
-

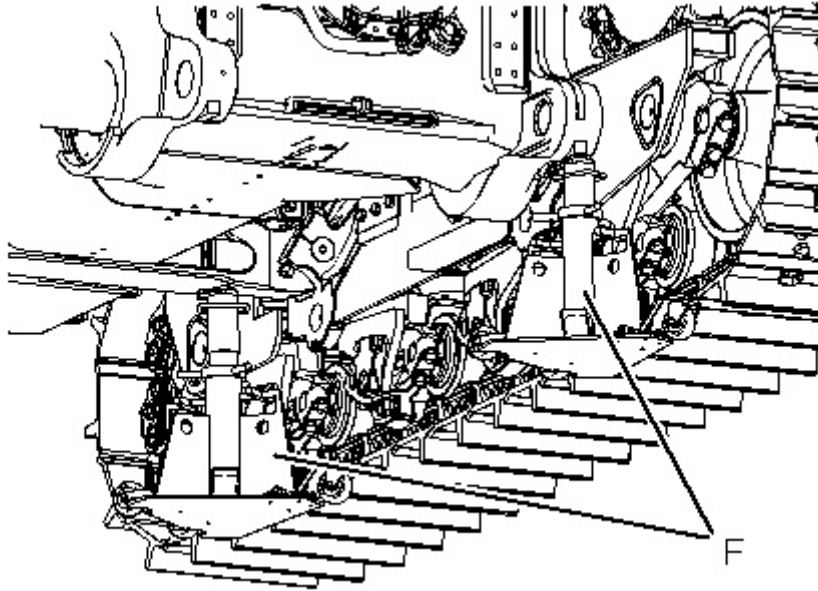


Illustration 13

g01414487

Note: Install Tooling (F) near the outer edge of the case, forward of the ripper pin bore. Improper placement of Tooling (F) could result in damage to the underside of the case.

32. Lower the front of the machine to the ground and remove Tooling (F).
33. Lower the rear of the machine to the ground and remove Tooling (F).

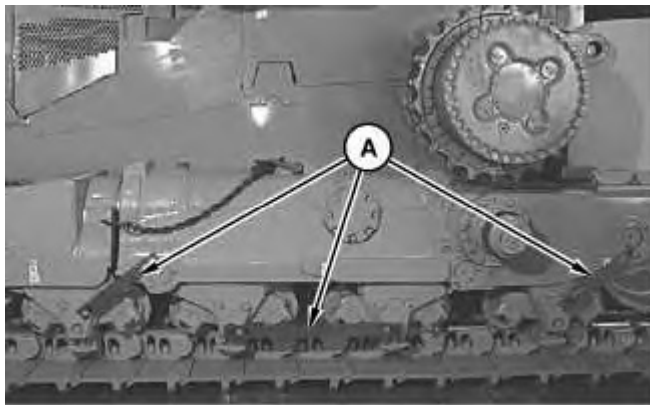


Illustration 14

g01425311

34. Remove Tooling (A) from the track roller frame.
-



Illustration 15

g06343781

35. Fill the pivot shaft compartment with oil to the correct level. Refer to the Operation and Maintenance Manual, "Pivot Shaft Oil Level - Check". Remove plug (21) from both sides to purge the air from both track roller frames. Once all the air is purged from both track roller frames, install plugs (21).

Note: Both track roller frames will need to have the air purged, even if only one track roller frame was removed.

End By:

- a. Connect the track.
- b. Install the bulldozer.

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Product: TRACK-TYPE TRACTOR

Model: D11T TRACK-TYPE TRACTOR JEL

Configuration: D11T TRACK-TYPE TRACTOR JEL00001-UP (MACHINE) POWERED BY C32 Engine

Disassembly and Assembly

D11T Track-Type Tractor Power Train

Media Number -KENR5620-00

Publication Date -01/08/2011

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i04368976

Pivot Shaft - Remove and Install

SMCS - 4153-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7576	Link Bracket	2
B	1U-9200	Lever Puller Hoist	1
C	318-4271	Bearing Puller	1
	9U-6800	Nut	1
	4C-6504	Puller Rod	1
	FT-2729	Sleeve	1
	5P-5201	Double Acting Cylinder	1
	3S-6224	Electric Hydraulic Pump Gp	1

Start By:

- A. Remove the track roller frames. Refer to Disassembly and Assembly, "Track Roller Frame - Remove".
-

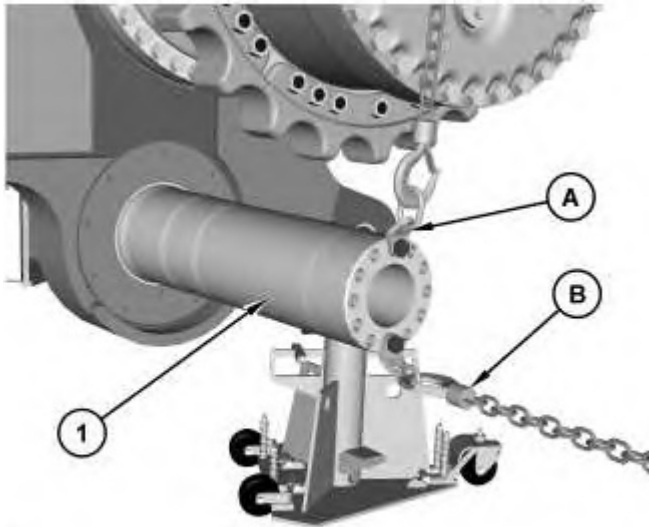


Illustration 1

g01412644

1. Install Tooling (A) on pivot shaft (1) . Fasten a suitable lifting device to the upper link bracket of Tooling (A) .
2. Attach Tooling (B) to the other link bracket of Tooling (A) . Attach the other end of Tooling (B) to a stationary object.

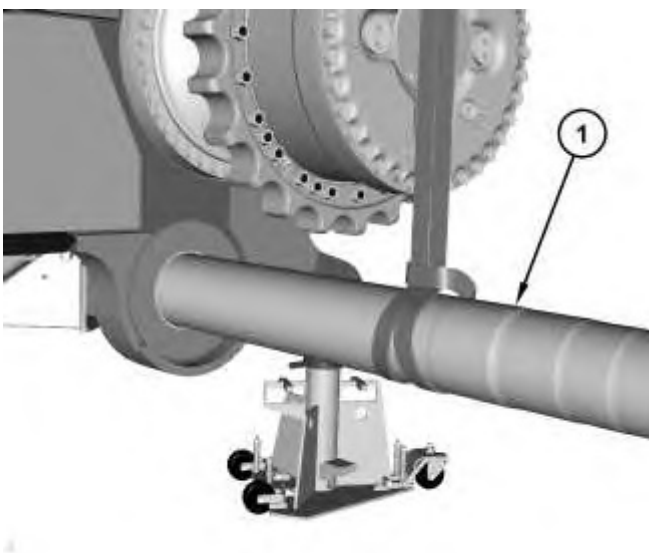


Illustration 2

g01412659

3. Use care when you slide pivot shaft (1) from the machine. Fasten another suitable lifting device to pivot shaft (1) for balance during the removal. The weight of pivot shaft (1) is approximately 966 kg (2130 lb).



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Remove Pivot Shaft Bearing

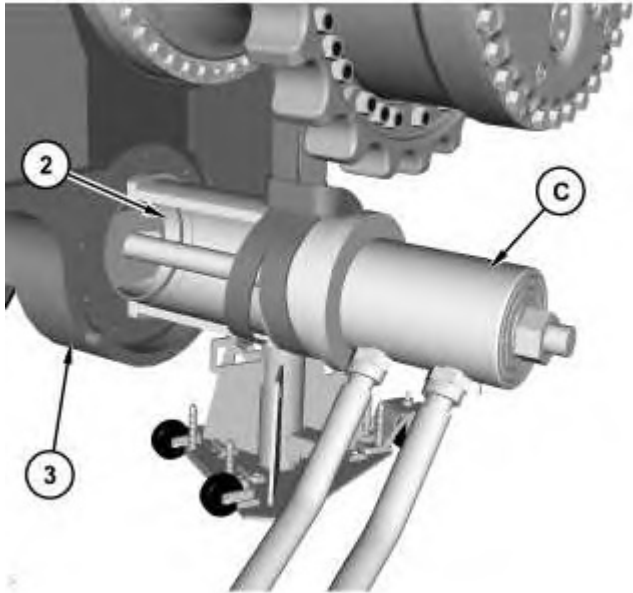


Illustration 3

g01412671

1. Use Tooling (C) to remove pivot shaft bearings (2) from main frame (3) .

Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
D	9U-6702	Puller Rod	1
	9U-6800	Nut	1
	9U-6905	Bearing Puller	1
	8M-9012	Plate	1
	5P-5201	Double Acting Cylinder	1
	3S-6224	Electric Hydraulic Pump Gp	1

Install Pivot Shaft Bearing

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