

## TM2360 - 350DLC Excavator Travel Gearbox Remove and Install

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### Travel Gearbox Remove and Install

1. Disconnect track chain. See [Track Chain Repair](#) . (Group 0130.)
  2. Remove sprocket only if replacement is required. See [Sprocket Repair](#) . (Group 0130.)
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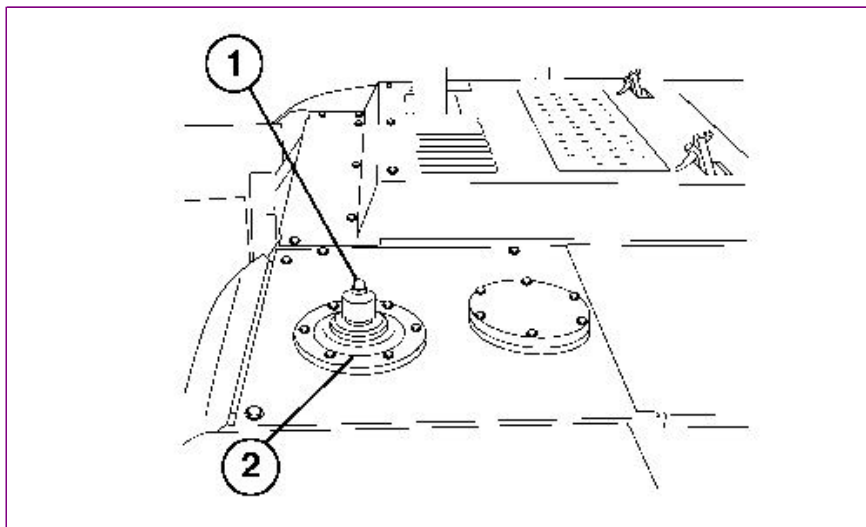
3.

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*High pressure release of oil from pressurized system can cause serious burns or penetrating injury. Relieve pressure by pushing pressure release button (1).*

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T214924-UN: Hydraulic Oil Tank

#### LEGEND:

- 1 - Pressure Release Button
- 2 - Hydraulic Oil Tank Cover

Relieve hydraulic tank pressure, push pressure release button (1).

4. Drain oil from travel gearbox.
  5. Drain oil from hydraulic oil tank or pull vacuum in hydraulic oil tank using vacuum pump. See [Apply Vacuum to Hydraulic Oil Tank](#) . (Group 3360.) The approximate capacity of hydraulic oil tank is 195.0 L (51.5 gal).
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6. T142702B-UN: Travel Gearbox (with sprocket removed)

**LEGEND:**

1 - Cap Screw (24 used)

Disconnect lines. Tag and close all open lines and fittings using caps and plugs.

- 7.



**Heavy component; use appropriate lifting device.**

Item	Measurement	Specification
Travel Gearbox Approximate	Weight	483 kg 1065 lb

Attach appropriate lifting device to travel gearbox using JDG909 Lifting Bracket.

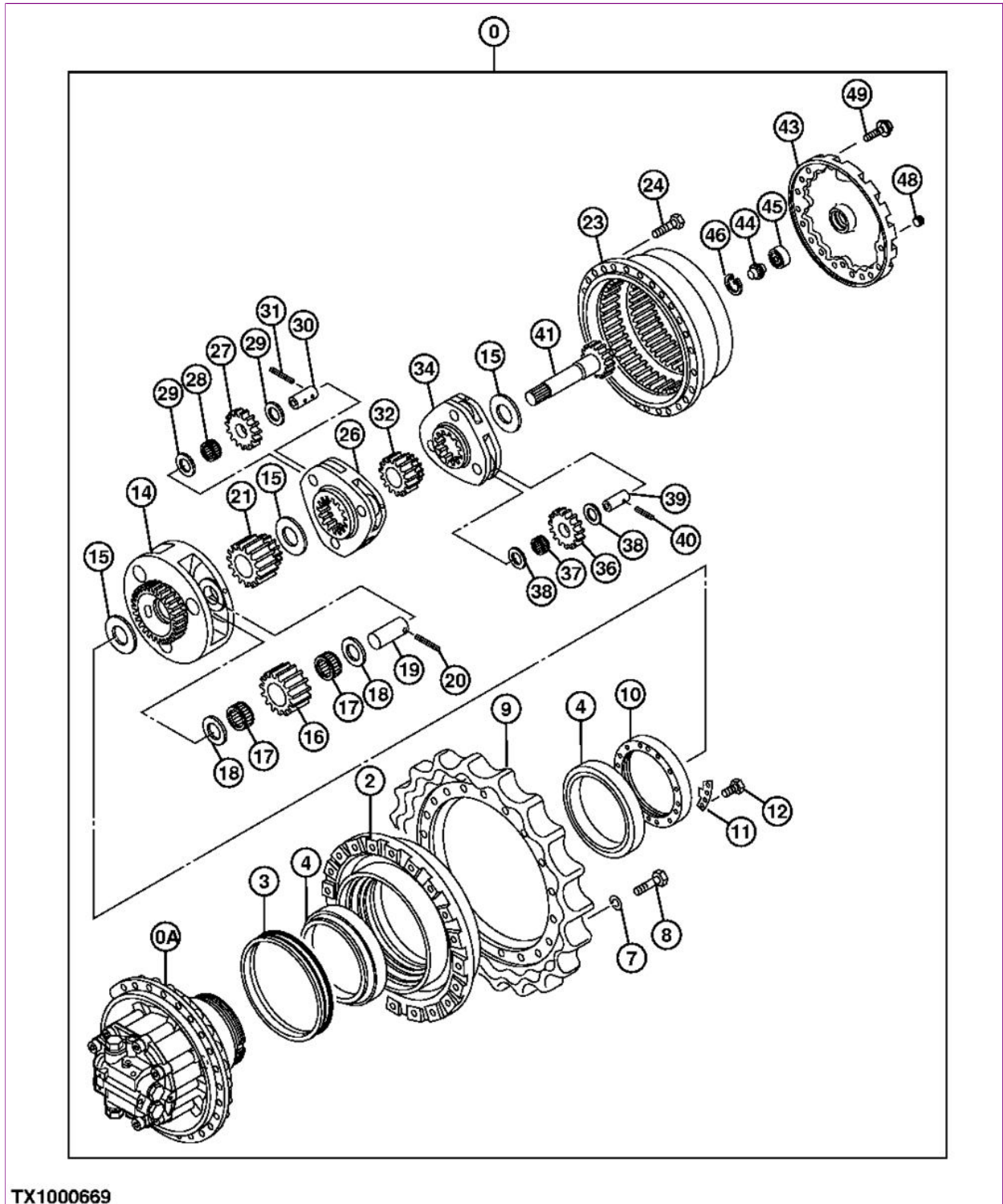
8. Make alignment marks between travel gearbox and undercarriage to aid in installation.
9. Remove cap screws (1). Remove travel gearbox and travel motor.
10. Repair or replace parts as necessary.
11. Align marks made during removal and install gearbox. Tighten cap screws (1).

Item	Measurement	Specification
Gearbox-to-Frame Cap Screw	Torque	630 N·m 460 lb-ft

12. Connect lines. See [Travel System Component Location](#) . (Group 9025-15.)
13. Fill travel gearbox with oil. See [Check Travel Gearbox Oil Level](#) . (Operator's Manual.)
14. Do [Travel Motor and Park Brake Start-Up Procedure](#) . (Group 0260.)

**TM2360 - 350DLC Excavator**  
**Travel Gearbox Disassemble and Assemble**

**Travel Gearbox Disassemble and Assemble**



**TX1000669**

1. TX1000669-UN: 350DLC Travel Gearbox

**LEGEND:**

- 0 - Travel Gearbox Assembly
- 0A - Travel Motor Assembly
- 2 - Drum
- 3 - Seal
- 4 - Tapered Roller Bearing (2 used)
- 7 - Lock Washer
- 8 - Cap Screw (24 used)
- 9 - Chain Sprocket
- 10 - Bearing Nut
- 11 - Lock Plate
- 12 - Cap Screw (2 used)
- 14 - Third Stage Planetary Pinion Carrier
- 15 - Spacer (3 used)

- 16 - Planetary Gear (3 used)
- 17 - Needle Bearing (6 used)
- 18 - Thrust Washer (6 used)
- 19 - Pin (3 used)
- 20 - Spring Pin (3 used)
- 21 - Third Stage Sun Gear
- 23 - Ring Gear
- 24 - Cap Screw (28 used)
- 26 - Second Stage Planetary Pinion Carrier
- 27 - Planetary Gear (3 used)
- 28 - Needle Bearing (3 used)
- 29 - Shim (6 used)
- 30 - Pin (3 used)
- 31 - Spring Pin (3 used)
- 32 - Second Stage Sun Gear
- 34 - First Stage Planetary Pinion Carrier
- 36 - Planetary Gear (3 used)
- 37 - Needle Bearing (3 used)
- 38 - Shim (6 used)
- 39 - Pin (3 used)
- 40 - Spring Pin (3 used)
- 41 - Shaft
- 43 - Cover
- 44 - Pin
- 45 - Ball Bearing
- 46 - Snap Ring
- 48 - Fitting Plug (3 used)
- 49 - Cap Screw (16 used)

Make alignment marks between cover (43), ring gear (23) and drum (2).

2. Remove cap screws (8) and cover (43).
3. Remove shaft (41) and first stage planetary pinion carrier (34) from ring gear (23).
4. Remove second stage sun gear (32), second stage planetary pinion carrier (26), and third stage sun gear (21) from ring gear (23).
5. 

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**CAUTION:**

*Heavy component; use appropriate lifting device.*

Item	Measurement	Specification
Ring Gear Approximate	Weight	53 kg 117 lb

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Install JT01748 Lifting Brackets to ring gear (23). Remove cap screws (24) and ring gear (23) from drum (2).

6. 

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**CAUTION:**

*Heavy component; use appropriate lifting device.*

Item	Measurement	Specification
Third Stage Planetary Pinion Carrier Assembly Approximate	Weight	61 kg 135 lb

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Remove third stage planetary pinion carrier (14).

7. Remove cap screws (12) and lock plate (11).
8. Remove bearing nut (10) using DFT1305 Travel Gearbox Nut Wrench. [See DFT1305 Travel Gearbox Nut Wrench](#). (Group 9900.)
9. 

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**CAUTION:**

*Heavy component; use appropriate lifting device.*

Item	Measurement	Specification
Drum Approximate	Weight	77 kg 170 lb

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Remove drum (2) using JT01748 Lifting Brackets from hydraulic motor (0A).

10. **IMPORTANT:**  

**Metal face seals can be reused if they are not worn or damaged. A used seal must be kept together as a set because of wear patterns on seal ring face.**

Remove metal face seal (3). See [Metal Face Seals Repair](#). (Group 0130.)

11. **NOTE:**  

*Disassembly of first, second, and third stage planetary pinion carriers are similar. Repeat procedure as required.*

Remove spring pins, pins, thrust plates, needle bearings, and planetary gears.

Clean and inspect parts, replace as necessary. Oil parts with gear oil prior to assembly.

12. **NOTE:**

*Further disassembly is not necessary unless bearing replacement is required. Bearing will be destroyed during removal, replace with new bearing.*

Inspect bearings (4) and races inside housing.

13. Replace parts as necessary.

14.



**CAUTION:**

**DO NOT heat oil over 182°C (260°F). Oil fumes or oil can ignite above 193°C (380°F). Use a thermometer. DO NOT allow a flame or heating element to come in direct contact with the oil. Heat the oil in a well-ventilated area. Plan a safe handling procedure to avoid burns.**

Heat inner bearing cone. Install cone tight against shoulder.

Item	Measurement	Specification
Bearing Cone	Temperature	50—70°C 122—158°F

15. **IMPORTANT:**

**Metal face seal O-rings and seat surfaces for O-rings must be clean, dry, and oil free so O-ring does not slip.**

Thoroughly clean metal face seal O-rings and seat surfaces in travel motor housing, drum, and seal ring using volatile, non-petroleum base solvent and lint-free tissues.

16. **NOTE:**

*A volatile, non-petroleum base solvent or talcum powder can be used as a lubricant. Solvent must not damage the O-ring or leave an oil residue.*

Install O-ring and metal face seal on travel motor housing and drum. Apply equal pressure with fingers at four equally spaced points on seal face. Seal must "pop" down into place so O-ring is tight against seal bore and seal ring is installed squarely.

17. Clean seal ring face. Apply a thin film of clean oil.

18. **IMPORTANT:**

**Install bearing nut with stepped surface towards bearing.**

Apply a thin coat of multi-purpose grease to bearing nut (10). Tighten bearing nut using DFT1305 Travel Gearbox Nut Wrench. [See DFT1305 Travel Gearbox Nut Wrench](#) . (Group 9900.)

Item	Measurement	Specification
Bearing Nut	Torque	800 N·m 590 lb-ft

19. To seat bearings, tap on drum using a plastic hammer. Then turn drum three times to the right and left to seat the bearings.

Repeat steps to ensure bearings are seated properly.

20. **NOTE:**

*If lock plate (11) will not engage with spline of housing tighten bearing nut (10) until lock plate engages.*

Install lock plate (11). Apply PM37421 Thread Lock and Sealer (high strength) to threads of cap screws (12). Tighten cap screws.

Item	Measurement	Specification
Lock Plate-to-Bearing Nut Cap Screw	Torque	88 N·m 65 lb-ft

21. Install planetary gears (16) in third stage planetary pinion carrier (14).

22. **IMPORTANT:**

**There is an identification groove on one side of third stage planetary gear (16). Be sure that this marked side faces the hole for the spring pin.**

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