

Product: WHEEL LOADER

Model: 988 XE WHEEL LOADER E8X

Configuration: 988K XE Wheel Loader E8X00001-UP (MACHINE) POWERED BY C18 Engine

## Disassembly and Assembly 988K XE Wheel Loader Machine Systems

Media Number -M0080216-01

Publication Date -01/07/2018

Date Updated -12/07/2018

i07190710

## Piston Pump (Steering) - Assemble

SMCS - 4306-016-QP; 5070-016-ZH

### Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	437-3776	Fixture As	1
	1U-9129	Adapter Plate	1
	1U-5750	Engine Stand	1
B	4C-8359	Lifting Eye Assembly	2
D	1P-0510	Driver Gp	1
E	-	Loctite 242	-
F	6V-2055	Grease	1

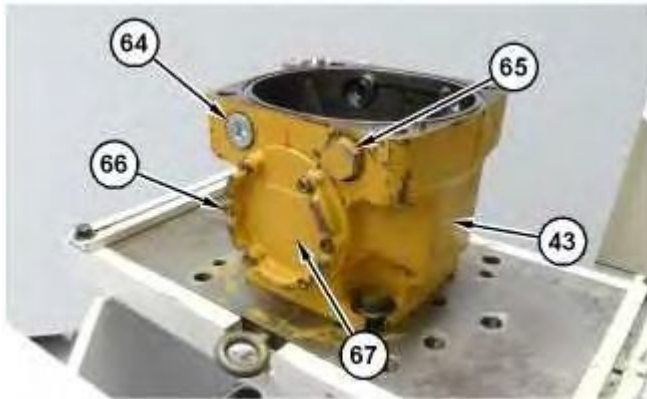


---

Illustration 1

g06248518

1. Install O-ring seal (68) into cover (67).



---

Illustration 2

g06248513

2. Install cover (67) and bolts (66). Tighten bolts (66) to a torque of  $28 \pm 7$  N·m ( $248 \pm 62$  lb in). Install plug (65) and the O-ring seal. Install plug (64) and the O-ring seal.



---

Illustration 3

g06248859

3. Install bearing (63) and retaining ring (62) onto shaft assembly (61).



4. Use a soft faced hammer to install shaft assembly (61) into housing (43).
- 

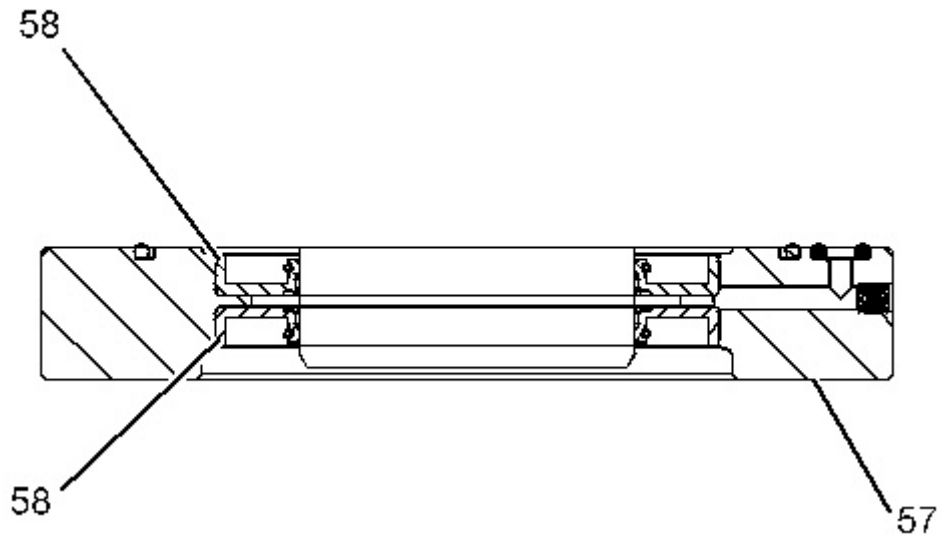


Illustration 5

g06249254



Illustration 6

g06248624

5. Install O-ring seals (60), O-ring seal (59) into seal carrier (57). Use Tooling (D) to install lip seals (58) into seal carrier (57).
-



Illustration 7

g06248862

6. Apply Tooling (E) to bolts (56).
7. Install seal carrier (57) and bolts (56) onto the pump housing. Tighten bolts (56) to a torque of  $28 \pm 7 \text{ N}\cdot\text{m}$  ( $248 \pm 62 \text{ lb in}$ ).

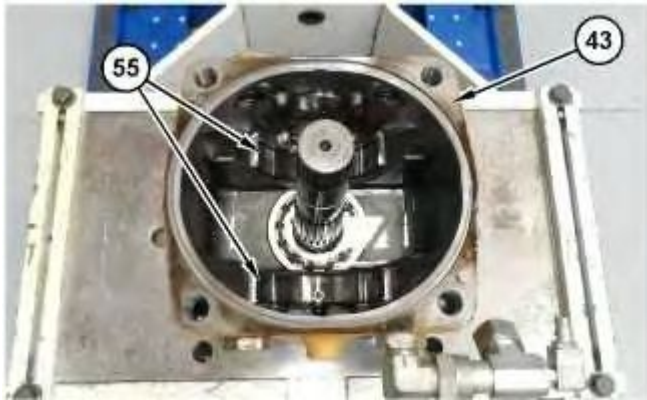


Illustration 8

g06248472

8. Install bearing cradles (55) into housing (43).



Illustration 9

g06248297

9. Install actuators (52), retainers (54), and bolts (53) onto swashplate (50). Tighten bolts (53) to a torque of  $12 \pm 1 \text{ N}\cdot\text{m}$  ( $106 \pm 9 \text{ lb in}$ ).



Illustration 10

g06248295

10. Install bearing assemblies (51) onto swashplate (50).

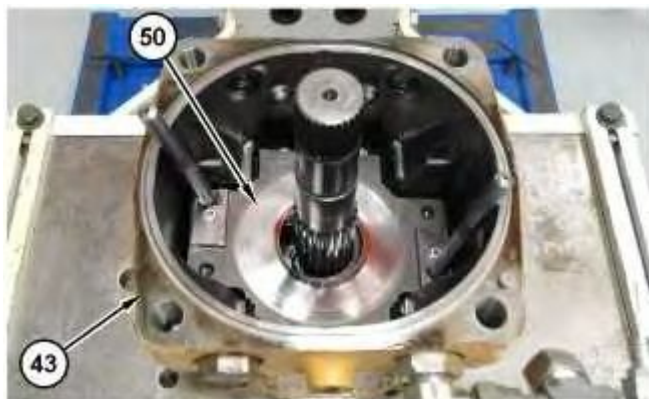


Illustration 11

g06248290

11. Install swashplate (50) into housing (43).

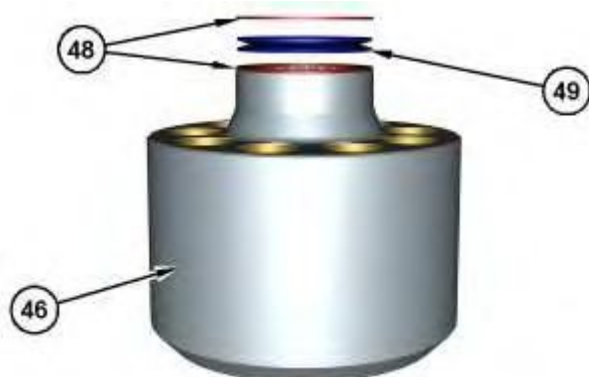


Illustration 12

g06249303

12. Install shims (48) and spring assembly (49) onto barrel (46).



Illustration 13

g06248271

13. Install hold down ball (47) onto barrel (46).



Illustration 14

g06248259

14. Install retainer (45) and pistons (44) onto barrel (46).



Illustration 15

g06248257

15. Install rotating group (42) into housing (43).
16. Install O-ring seal (41) into housing (43). Install control actuator (38), spring (40), and bias actuator (39) into housing (43).

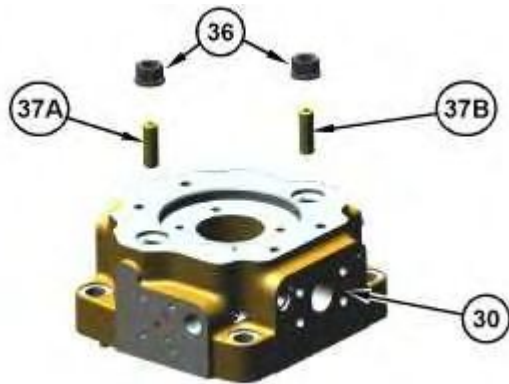


Illustration 16

g06249041

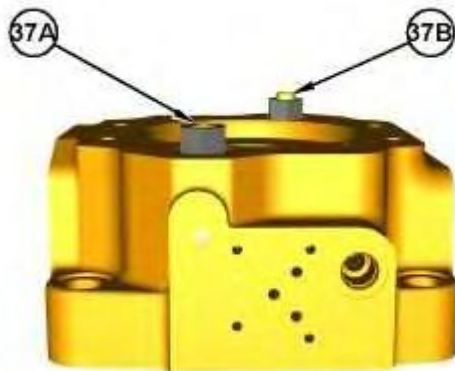


Illustration 17

g06248928

17. Install set screw (37A) and (37B) into head assembly (30). Install set screw (37A) to a depth of  $14.3 \pm 0.2$  mm ( $0.563 \pm 0.008$  inch). Install set screw (37B) to a depth of 18 mm (0.71 inch). Install nuts (36). Tighten nuts (36) to a torque of  $190 \pm 15$  N·m ( $140 \pm 11$  lb ft).



Illustration 18

g06248247

18. Install plug (35) and the O-ring seal into head assembly (30). Install plug (34) and the O-ring seal into head assembly (30).
-



Illustration 19

g06248187

19. Install plug (33) and the O-ring seal into head assembly (30).



Illustration 20

g06248182

20. Install port plate (32) into head assembly (30).



Illustration 21

g06248163





Illustration 22

g06248159

**! WARNING**

**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.**

21. Attach Tooling (B) and a suitable lifting device to head assembly (30). The weight of head assembly (30) is approximately 26 kg (57 lb). Install head assembly (30) onto the pump housing. Install bolts (31). Tighten bolts (31) to a torque of  $460 \pm 60 \text{ N}\cdot\text{m}$  ( $339 \pm 44 \text{ lb ft}$ ).

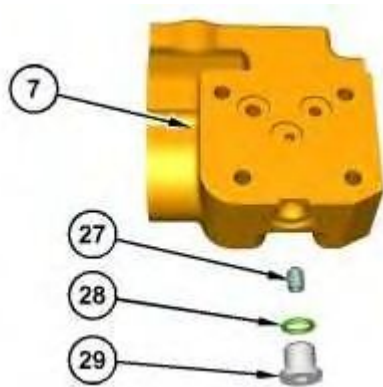


Illustration 23

g06248639

22. Install orifice (27) into pump control (7). Install O-ring seal (28) and plug (29) into pump control (7).



Illustration 24

g06248636

**⚠ WARNING**

**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.**

23. Install retainer (21), spring (22), spring (23), retainer (24), O-ring seal (25), and adapter (26) into pump control (7).
24. Install retainer (15), spring (16), spring (17), retainer (18), O-ring seal (19), and adapter (20) into pump control (7).

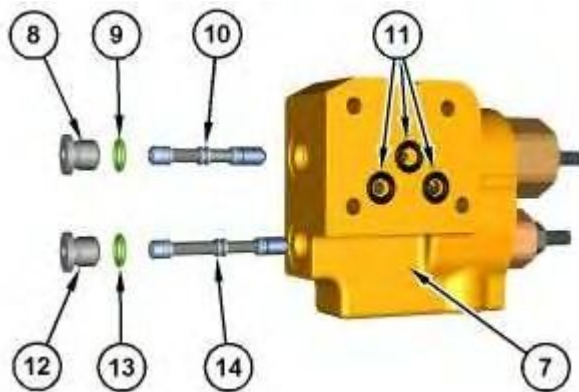


Illustration 25

g06248634

25. Install spool (14), O-ring seal (13), and plug (12) into pump control (7). Install spool (10), O-ring seal (9), and plug (8) into pump control (7). Install O-ring seals (11) into pump control (7).



Illustration 26

g06248097

26. Install pump control (7) and bolts (6). Tighten bolts (6) to a torque of  $12 \pm 3$  N·m ( $106 \pm 27$  lb in).



Illustration 27

g06248082

27. Install O-ring seal (5) onto flange (4).



Illustration 28

g06248079

28. Apply Tooling (E) to bolts (3). Install flange (4) and bolts (3).



---

Illustration 29

g06248087

29. Install coupler (2) and O-ring seal (1) into the flange. Remove the pump from Tooling (A) or suitable fixture.

**End By:**

- a. Install the steering pump.
-

Product: WHEEL LOADER

Model: 988 XE WHEEL LOADER E8X

Configuration: 988K XE Wheel Loader E8X00001-UP (MACHINE) POWERED BY C18 Engine

## Disassembly and Assembly 988K XE Wheel Loader Machine Systems

Media Number -M0080216-01

Publication Date -01/07/2018

Date Updated -12/07/2018

i05431732

# Gear Pump (Secondary Steering) - Remove and Install

SMCS - 4324-010-GT; 4324-010; 5073-010-SST; 5073-010

## Removal Procedure

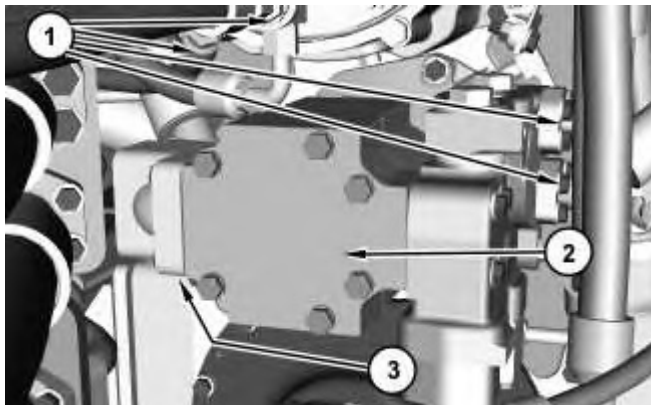


Illustration 1

g03428022

1. Disconnect hose assemblies (1). Remove bolts (3). Use two people to remove gear pump (2).

## Installation Procedure

1. Install gear pump (2) in the reverse order of removal.
-

Product: WHEEL LOADER

Model: 988 XE WHEEL LOADER E8X

Configuration: 988K XE Wheel Loader E8X00001-UP (MACHINE) POWERED BY C18 Engine

## Disassembly and Assembly 988K XE Wheel Loader Machine Systems

Media Number -M0080216-01

Publication Date -01/07/2018

Date Updated -12/07/2018

i05436054

# Gear Pump (Secondary Steering) - Disassemble

SMCS - 4324-015-GT; 5073-015-SST

## Disassembly Procedure

### Start By:

- a. Remove the secondary steering pump.
1. Put alignment marks on the secondary steering pump for assembly purposes.

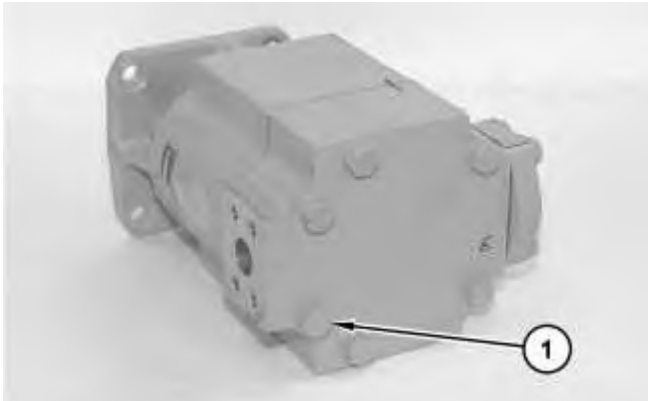


Illustration 1

g03430645

---

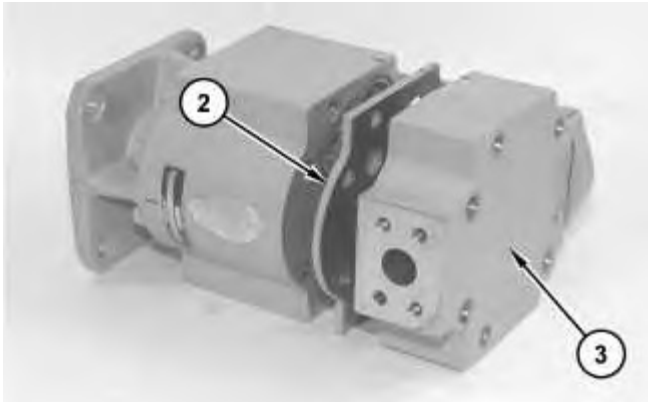


Illustration 2

g03430650

 **WARNING**

**Personal injury can result from being struck by parts propelled by a released spring force.**

**Make sure to wear all necessary protective equipment.**

**Follow the recommended procedure and use all recommended tooling to release the spring force.**

- 
2. Remove bolts (1). Remove body (3) and spacer (2).

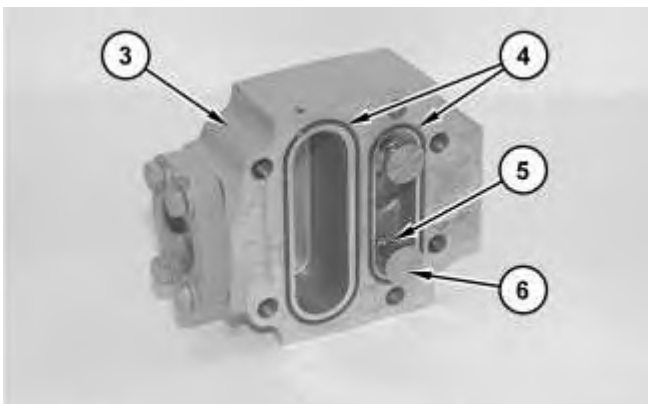


Illustration 3

g03430651

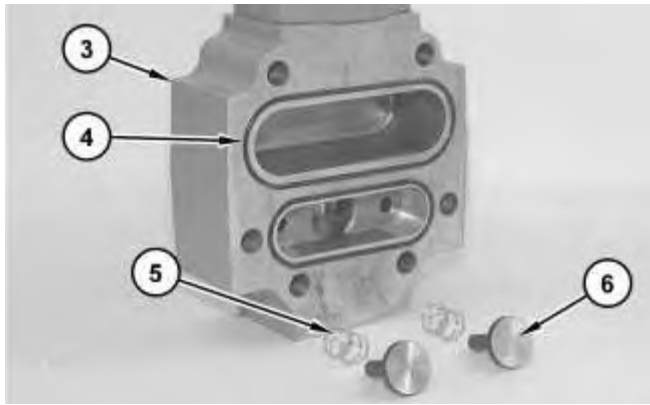


Illustration 4

g03430657

3. Remove O-ring seals (4). Remove pistons (6) and springs (5) from body (3).

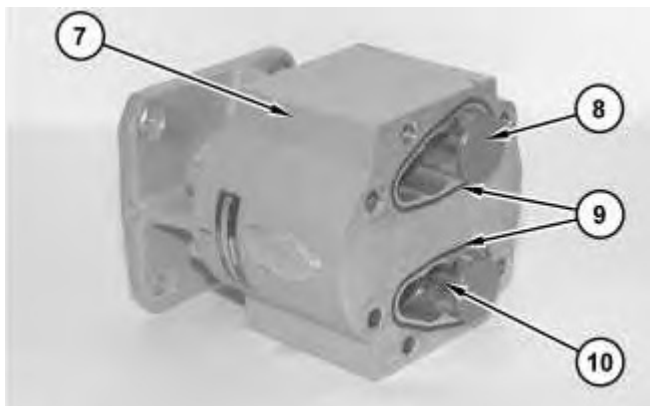


Illustration 5

g03430687

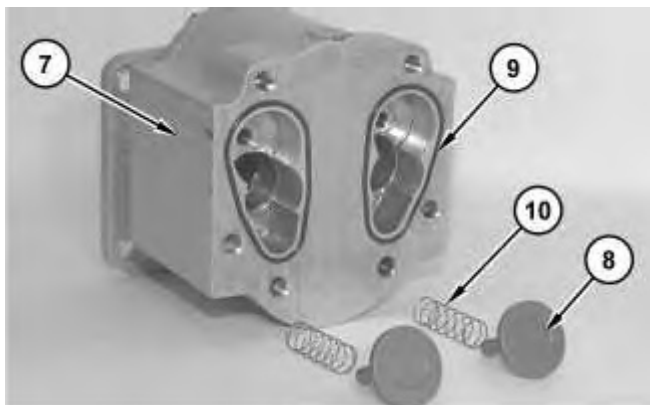


Illustration 6

g03430688

4. Remove O-ring seals (9), pistons (8) and springs (10) from body (7).



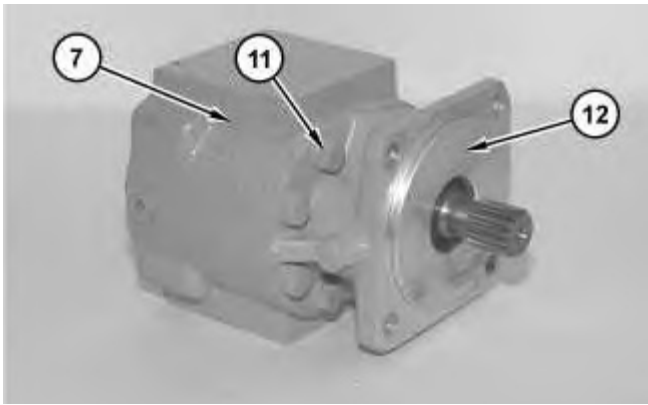


Illustration 7

g03430690

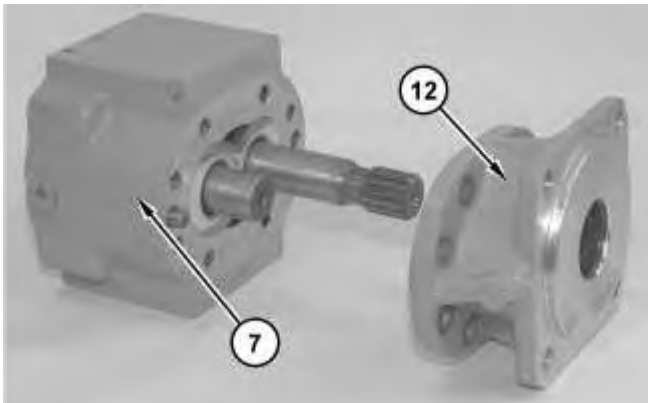


Illustration 8

g03430692

5. Remove the bolts (11) that hold flange assembly (12) to pump body (7). Remove flange assembly (12) from pump body (7).

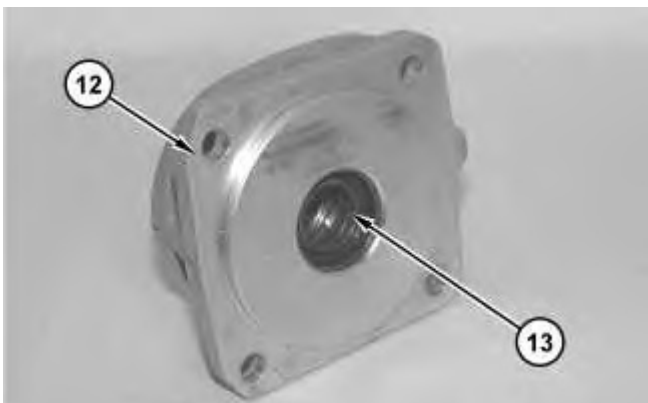


Illustration 9

g03430693

6. Remove lip seals (13) from flange assembly (12).

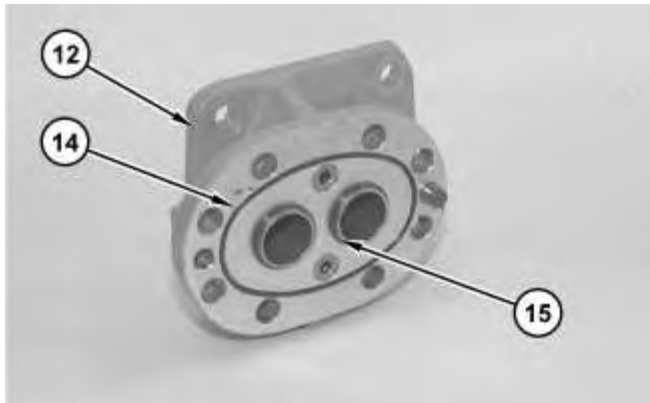


Illustration 10

g03430694

7. Remove O-ring seal (14) and O-ring seals (15) from flange assembly (12).

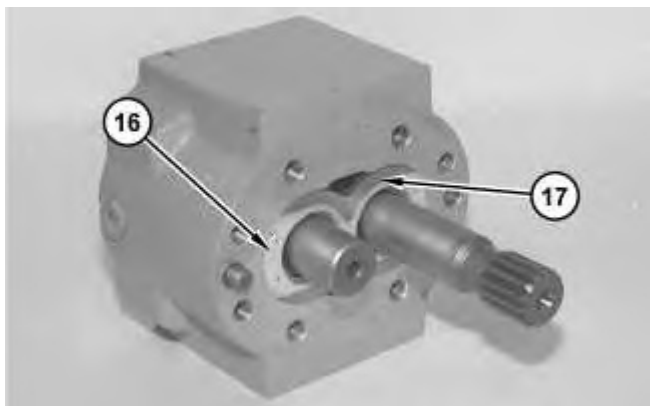


Illustration 11

g03430695

8. Remove seal assembly (16) and retaining plates (17).

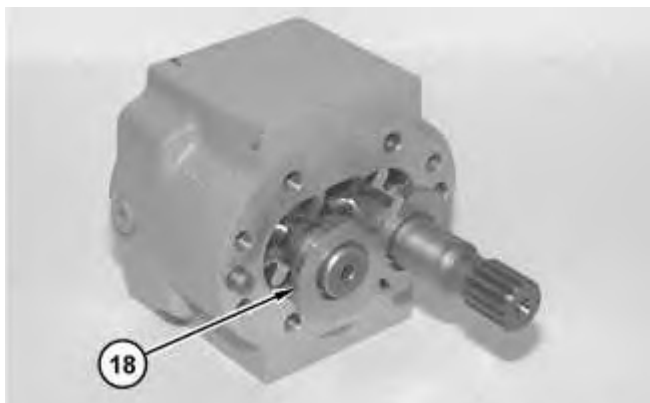


Illustration 12

g03430696

9. Remove front pressure plate (18).

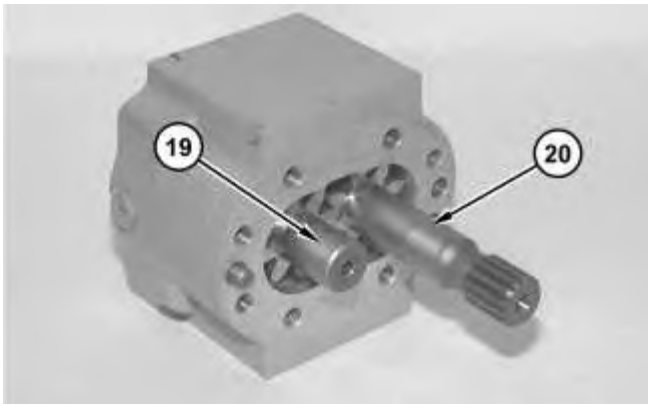


Illustration 13

g03430697

10. Remove gear assemblies (19) and (20).



Illustration 14

g03430698

11. Remove rear pressure plate (21).

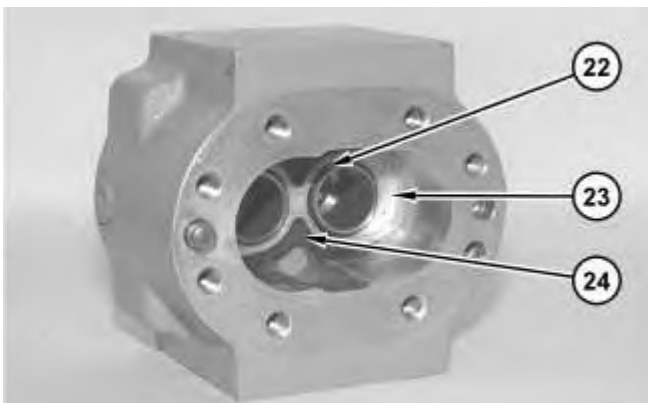


Illustration 15

g03430699

12. Remove seals (22), seal assembly (23), and retaining plates (24).

Product: WHEEL LOADER

Model: 988 XE WHEEL LOADER E8X

Configuration: 988K XE Wheel Loader E8X00001-UP (MACHINE) POWERED BY C18 Engine

## Disassembly and Assembly 988K XE Wheel Loader Machine Systems

Media Number -M0080216-01

Publication Date -01/07/2018

Date Updated -12/07/2018

i05436056

# Gear Pump (Secondary Steering) - Assemble

SMCS - 4324-016-GT; 5073-016-SST

## Specifications

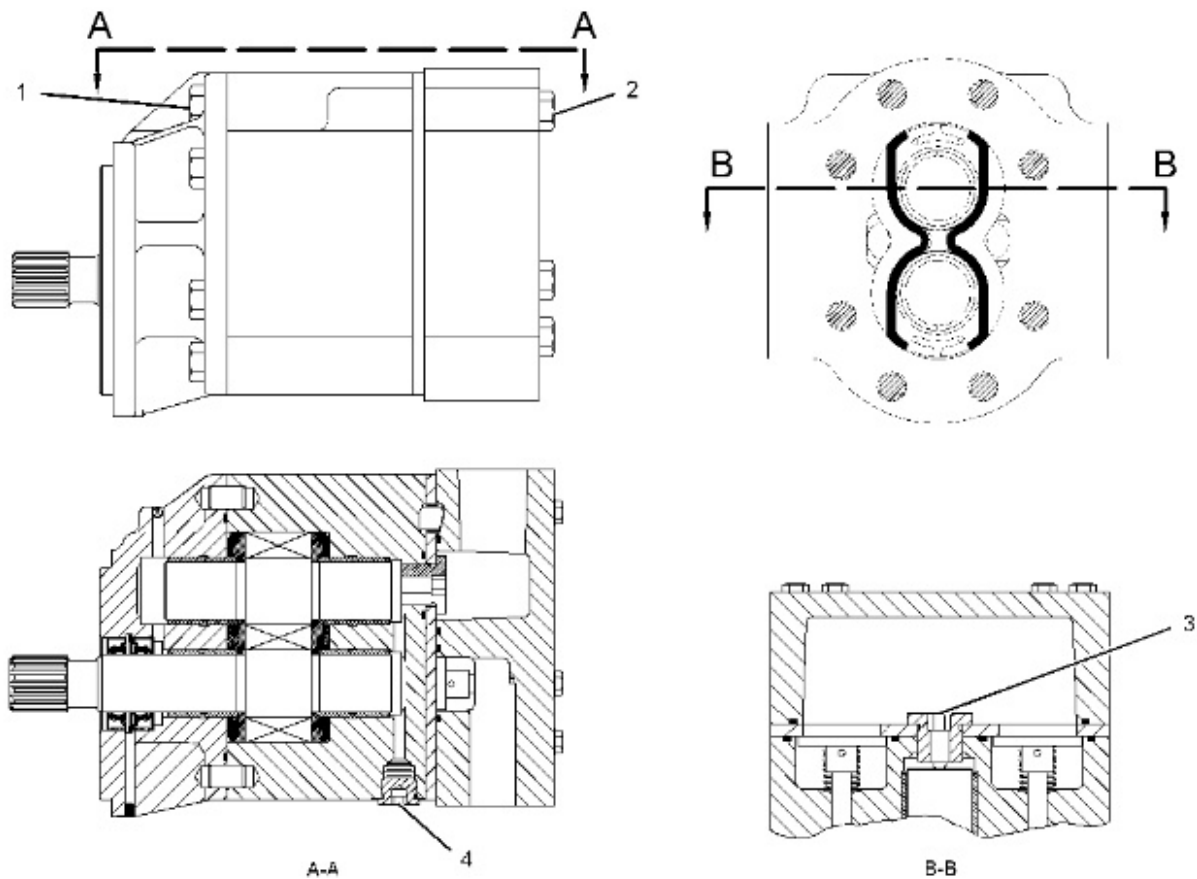


Illustration 1

g03192956

Table 1

## Specification for 150-7585 Gear Pump Gp

Item	Qty	Part	Specification Description
-	-	-	Displacement per revolution is 83 cc (5.1 cubic inch).
1	8	<b>0S-1595 Bolt</b>	Torque to $115 \pm 7$ N·m ( $85 \pm 5$ lb ft).
2	6	<b>1B-2886 Bolt</b>	Torque to $115 \pm 7$ N·m ( $85 \pm 5$ lb ft).
3	1	<b>142-2137 Plug</b>	Torque to $24 \pm 3$ N·m ( $212 \pm 27$ lb in).
4	1	<b>9S-8005 O-Ring Plug</b>	Torque to $284 \pm 40$ N·m ( $209 \pm 30$ lb ft).

## Assembly Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-0510	Driver Group	1

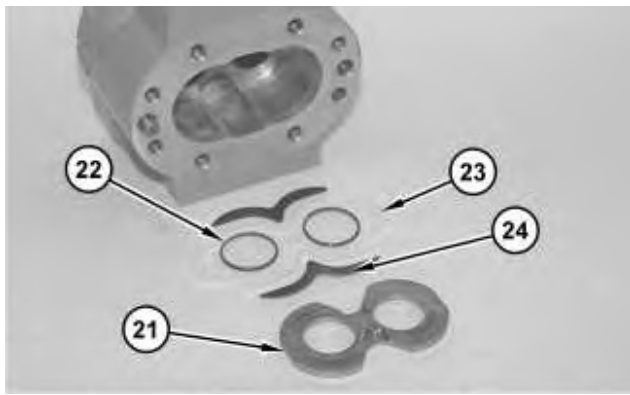


Illustration 2

g03431023

**Note:** Install the corners of the seals toward the rear of the pump body. Install the brass face of the pressure plate toward the gears.

1. Install seals (22), seal assembly (23), retaining plates (24) and rear pressure plate (21).

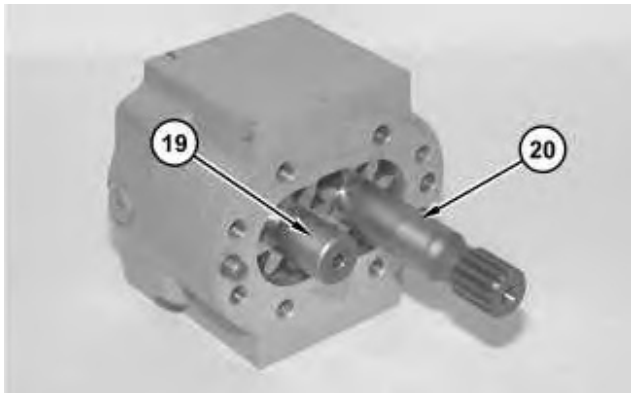


Illustration 3

g03430697

2. Install gear assemblies (19) and (20).

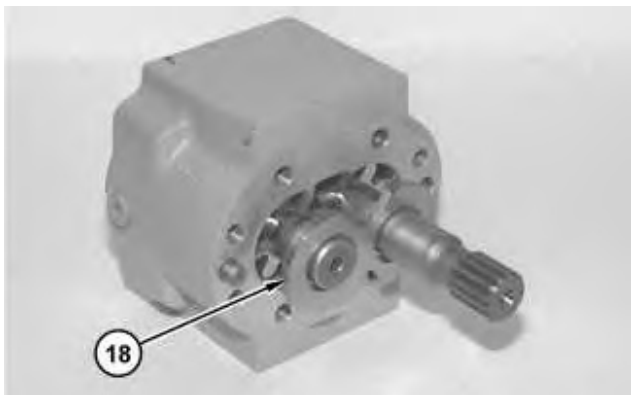


Illustration 4

g03430696

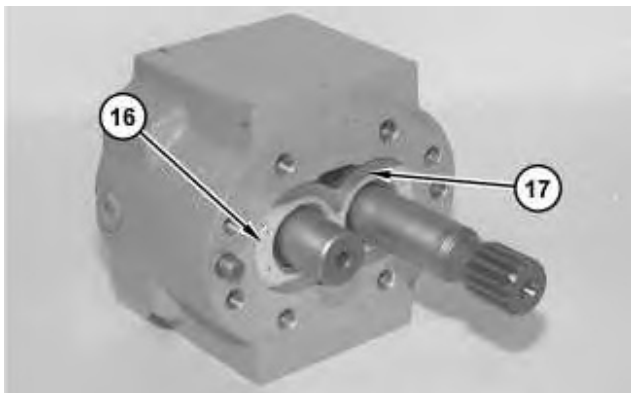


Illustration 5

g03430695

**Note:** Install the brass face of the pressure plate toward the gears. Install the corners of the seals toward the front of the pump body.

3. Install front pressure plate (18), retaining plates (17) and seal assembly (16).

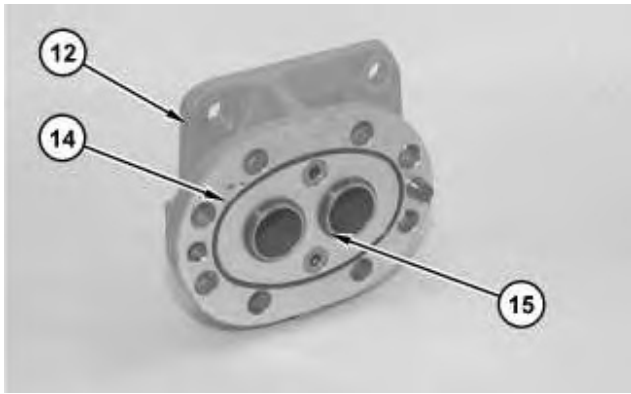


Illustration 6

g03430694

4. Install seals (15) and O-ring seal (14) on flange assembly (12).

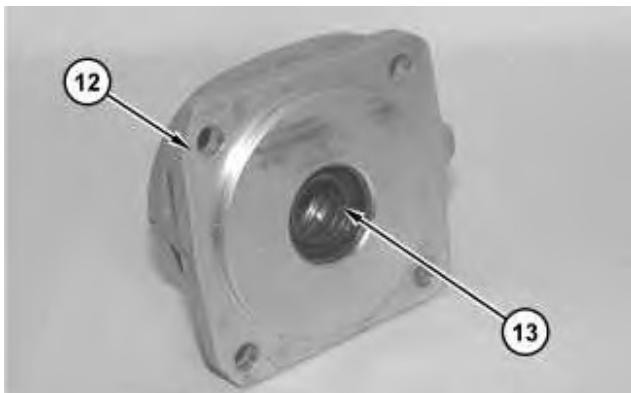


Illustration 7

g03430693

**Note:** Install the back of each lip seal against the back of the other lip seal.

5. Use Tooling (A) in order to install lip seals (13) in flange assembly (12).

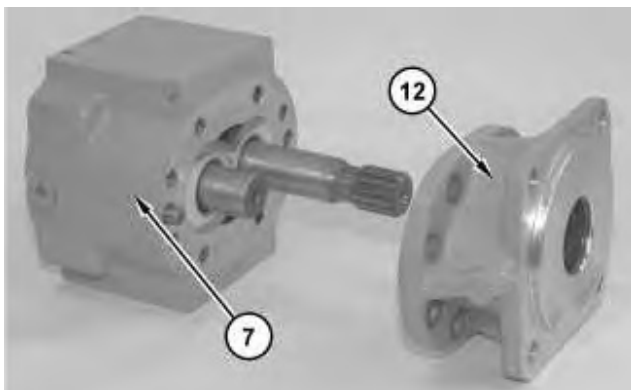


Illustration 8

g03430692

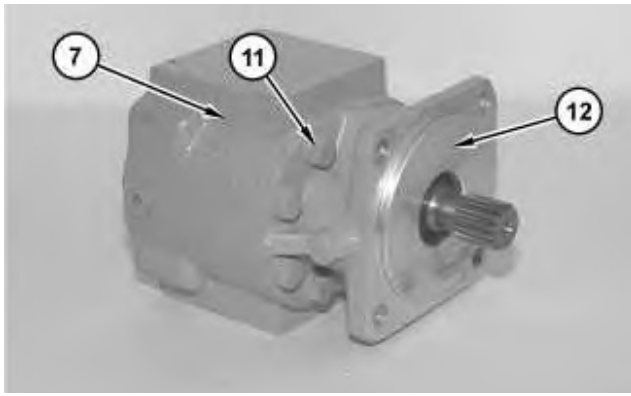


Illustration 9

g03430690

6. Install flange assembly (12) and the bolts (11) that hold flange assembly (12) to pump body (7). Tighten bolts (11) to a torque of  $115 \pm 7 \text{ N}\cdot\text{m}$  ( $85 \pm 5 \text{ lb ft}$ ).
7. Turn the shaft of the pump in order to ensure that the shaft turns freely. The shaft should not bind in any direction.



Illustration 10

g03430687

8. Install O-ring seals (9), pistons (8) and springs (10) on body (7).

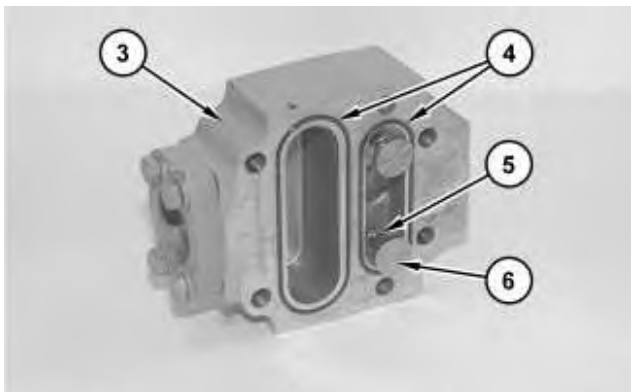


Illustration 11

g03430651

9. Install O-ring seals (4), pistons (6) and springs (5) on body (3).



Thank you so much for reading.  
Please click the “Buy Now!”  
button below to download the  
complete manual.



After you pay.

You can download the most  
perfect and complete manual in  
the world immediately.

Our support email:

[ebooklibonline@outlook.com](mailto:ebooklibonline@outlook.com)