Dane aktualne na dzień: 12-05-2024 15:55

Link do produktu: https://www.specdiag.pl/doosan-dx140r-dx140lcr-instrukcje-serwisowe-napraw-schematy-podrecznik-serwisowy-p-1736.html

Doosan DX140R / DX140LCR - instrukcje serwisowe, napraw + schematy - podręcznik serwisowy

Cena	**250,00 zł**

Opis produktu

Doosan - instrukcje napraw + schematy - podręcznik warsztatowy
Instrukcje napraw i schematy instalacji do Doosan DX140R oraz Doosan DX140LCR

7. Use a flat tipped punch to drive the spring pin back into the shaft, so that the shaft can be pulled out of the gear housing. Drive back the spring pins on the other two shafts.

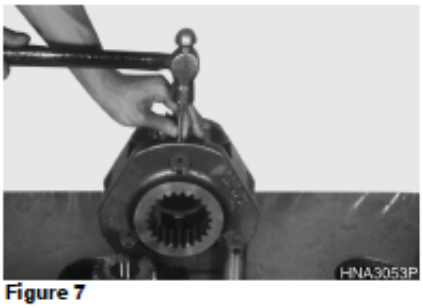


Figure 7

8. Hold the planetary gear and thrust plate with one hand and slide the gear shaft out of the housing. Use this method to remove the two remaining gear shafts, gears, and thrust plates.

   Use the punch to drive the spring pins out of the shafts. Use new spring pins when assembling the gearbox.

Figure 8

9. Sealant has been applied to the joint where the ring gear and the gear case meet. It will be necessary to pry the ring gear from the gear case, to separate the two parts.

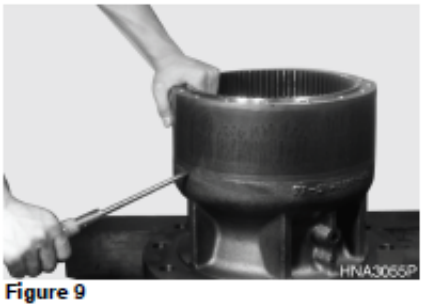


Figure 9

10. Use a screwdriver to pry the snap ring from the output side of the gear case.

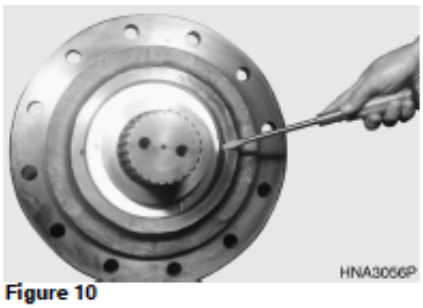


Figure 10

REASSEMBLY OF MOTOR

1. Reassembly of motor

   A. Remove retaining bolts of ring gear, wipe the motor assembly cleanly with cloth, and apply fluid gasket (#1104).

Figure 85

   B. Use hoist to lift the motor, clean reassembled parts, and install retaining ring (ø30, shaft ring, and C type) in the shaft.

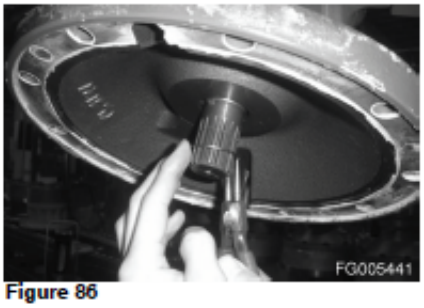


Figure 86

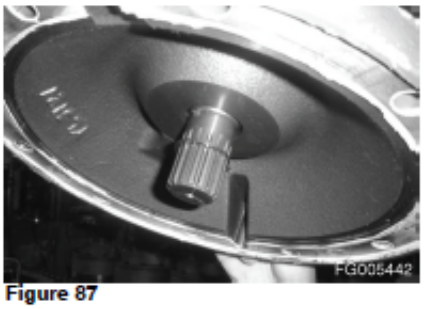


Figure 87

2. Install pin (451).

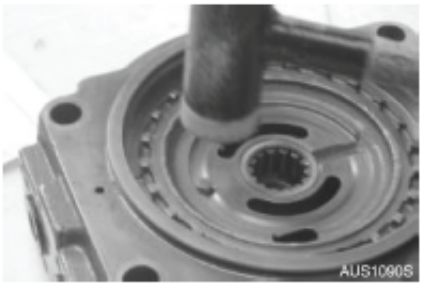


Figure 56

3. Install needle bearing (103) (if assembling it newly) if removed during disassembly.

Figure 57

Assembly of Valve Casing Subassembly

1. Assemble seat (541), steel ball (543), stopper (542), and plug (569).

   NOTE: *Be careful of assembly direction of seat and stopper.*

   NOTE: *Tightening torque for plug (569): 370kgf•cm.*

Figure 58

2. Assemble counterbalance spool (360), washer (361), and counterbalance spring (362).

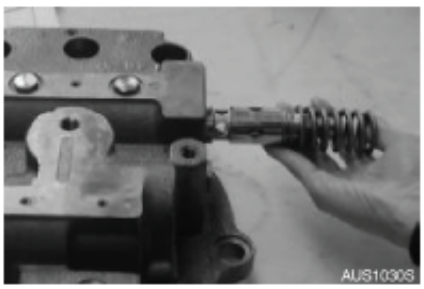


Figure 59

Installation Procedure

NOTE: *Refer to Figure 5 for the installation procedure.*

1. Install spring pin (1) and then insert (2) with bolt (3) into engine flywheel (4).

   NOTE: *Tighten the bolt using the torque Ta value specified in the table.*

2. Install two spring pins (5) and then insert (6) bolt (8) in hub (7).

   NOTE: *Tighten the bolt using the torque Ta value specified in the table.*

3. Install the flywheel cover in the main pump with bolts.

4. Connect hub (7) with pump shaft (9) as referred to as Measure H in Table 1 and attach position with screws (10).

   NOTE: *Tighten the screws using the torque Tb value specified in the table.*

   NOTE: *Apply Loctite #262 to fixing screws (10).*

5. Install element (11) between the engine flywheel (4) and the insert.

6. Install the main pump and hub (7) by gently pushing them with element (11).

7. Bolt down the flywheel cover and the pump housing on the flywheel housing.

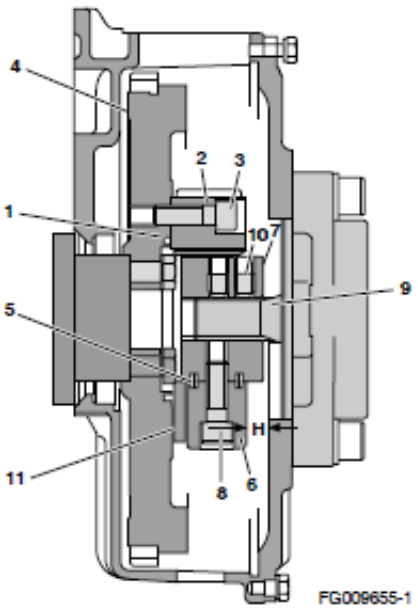


Figure 5

IMPORTANT

Apply the adhesive to bolts (3 and 8) to prevent the loosening of seals. Do not use additional adhesive nor any oil or cleaning solvent. As element (11) cannot resist adhesive, oil, and grease, take care not have it exposed to such materials.

Remove oil and dust on the flywheel cover and the pump shaft before assembly.

Adjust the arrangement allowance between the pump and the engine at below 0.6 mm (0.023 in).

Overload Relief Valve

Operation

1. The overload relief valve is between cylinder port (HP) and low-pressure oil passage (LP). Pressurized oil at cylinder port (HP), flows through an orifice in piston (C), to fill internal cavity (G). Due to the difference in area between (A and B) on which the hydraulic pressure acts, main poppet (D) seats on sleeve (K).

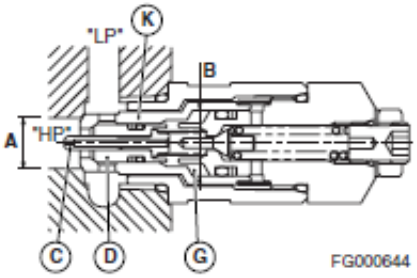


Figure 27

2. When pressure in cylinder port (HP) rises and exceeds the relief valve setting, pilot poppet (E) opens. Pressurized oil then flows through pilot poppet (E) into low-pressure oil passage (LP), passing through hole (H).

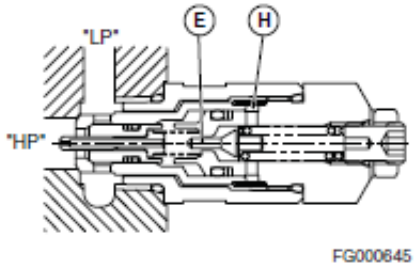


Figure 28

3. As pilot poppet (E) opens, pressurized oil flows through orifice (I) so that pressure on back of piston (C) lowers to move piston (C). As a result, piston (C) seats on pilot poppet (E).

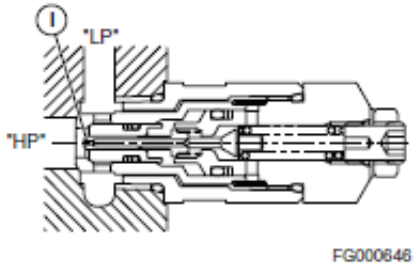


Figure 29

4. Pressurized oil in passage (HP) flows through orifice (F) in piston (C) so that pressure on back of main poppet (D) moves main poppet (D). Pressurized oil then flows into passage (HP) and directly into passage (LP).

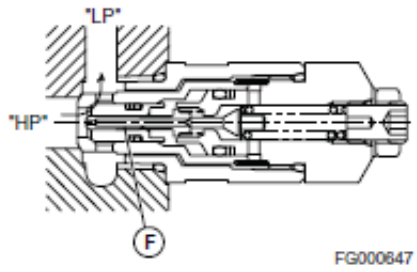
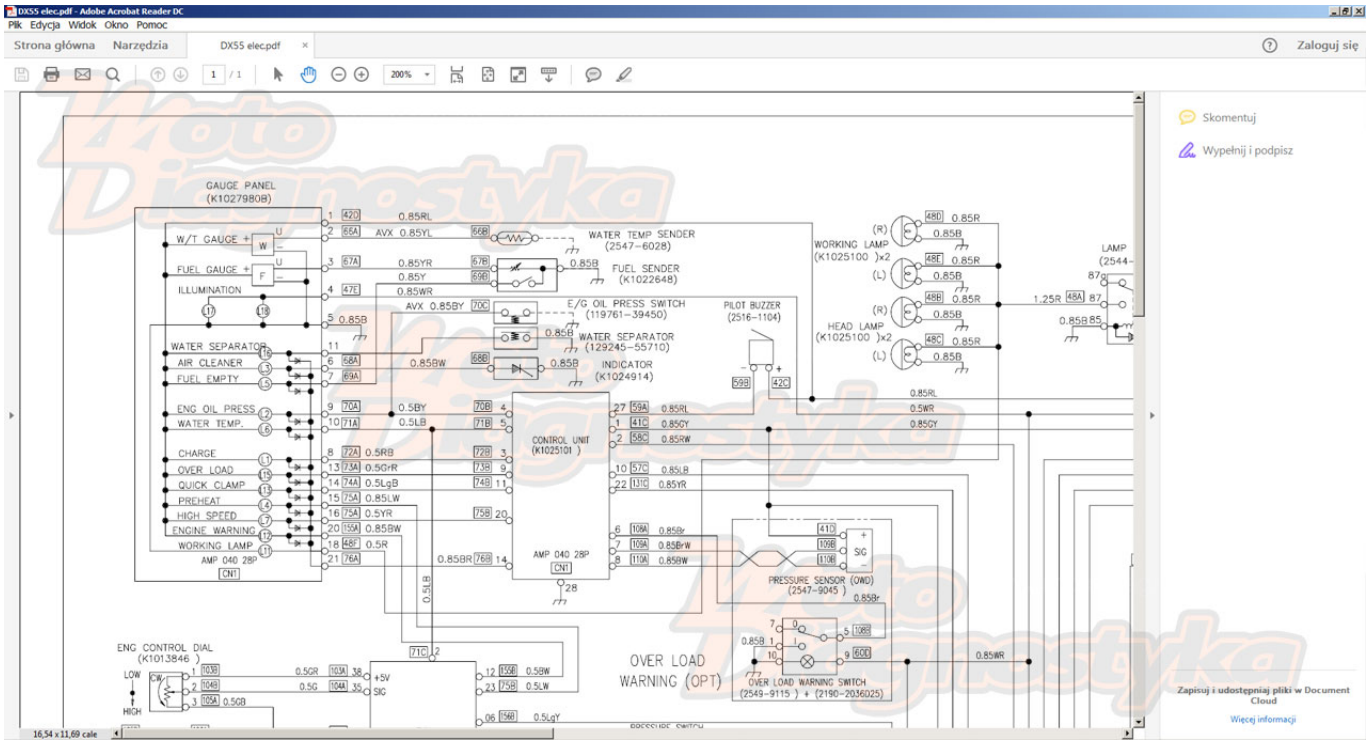


Figure 30

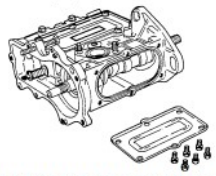


3-1 Disassembly of fuel injection pump

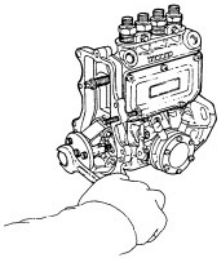
When disassembling the fuel pump, separate the parts for each cylinder and be careful not to get them mixed up. Be especially careful to keep the plunger/plunger barrel, delivery valve/delivery valve seat and other assemblies separate for each cylinder (the parts of each assembly must be kept with that assembly and put back in the same cylinder).

Preparation

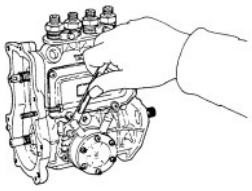
1. Wash off the dirt and grease on the outside of the pump with cleaning oil (kerosene or diesel oil) before disassembly.
2. Perform work in a clean area.
3. Take off the fuel pump bottom cover and remove lubricant oil.
4. Turn the fuel pump upside down to drain fuel oil.

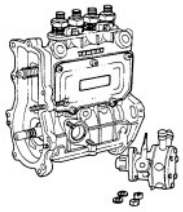


(1) Loosen the nut with a box spanner and take it off, holding it with the hole in the fuel coupling ring or holding the coupling with a vise and take out the governor weight assembly.

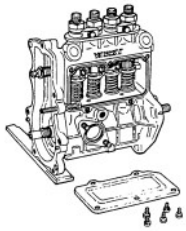


(2) Remove the fuel feed pump.
NOTE: Do not disassemble the fuel feed pump. See instructions for fuel feed pump for details.

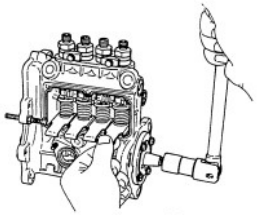


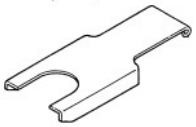


(3) Remove the fuel pump side cover.



(4) Turn the camshaft until the roller guide is at the maximum head, and insert the plunger spring support plate in between the plunger spring washer B (lower side) and fuel pump unit.



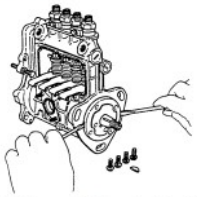


Plunger spring support plate

NOTE: If the camshaft does not turn, put double nuts on the end of the cam shaft or remove the coupling.

(5) Remove the camshaft woodruff key.

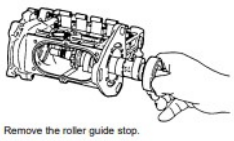
(6) Put a screwdriver in the two grooves on the camshaft bearing holder mounting surface, and pull out the camshaft bearing holder.



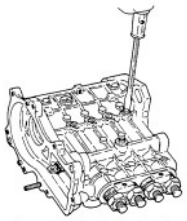
NOTE: 1. Make sure not to damage the oil seal with the threaded part of the camshaft.
2. Be careful not to loose the shims in between the pump and bearing holder.

(7) Turn the fuel pump upside down, move all the roller guides to the plunger side, and then put the pump on its side. Turn the camshaft to a position so that none of the cylinder cams hit the tappets.

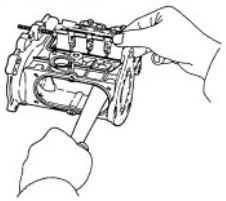
(8) Put a plate against the governor end side of the camshaft and lightly tap it, and pull out the camshaft and drive side bearing.



(9) Remove the roller guide stop.



(10) Use a hammer handle or the like to push up the roller guide from the bottom of the pump, and remove the plunger spring support plate.



NOTE: The plunger spring may make the roller guide and plunger, etc. fly out when the plunger support plate is removed.

2-2 Hydraulic control valve

2-2.1 Remove the control valve.

1) Remove the centering control device on the control valve side of the HST pump.

2) Remove the control linkages on the valve spools.

3) Remove the tube assemblies and hose assemblies.

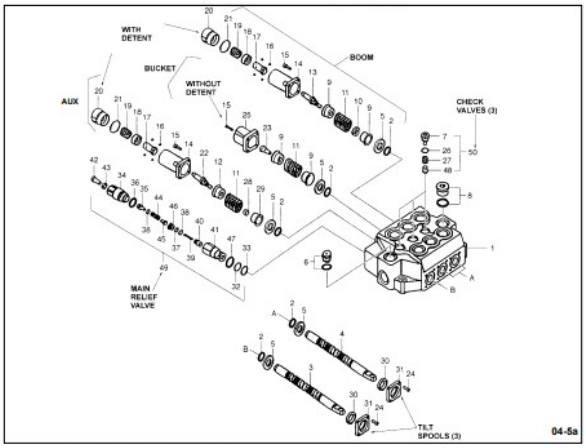
NOTE: It may be easier to break the hard lines loose at the first junction from the control valve, then remove them from the loader along with the control valve.

4) Remove the 3 bolts that mount the control valve to the frame and remove the control valve.

2-2.2 Disassemble and reassemble the control valve.

Refer to the control valve exploded view in your **DSL 601 Parts Manual** and the illustrations below.

Main Relief Valve: Removal and Disassembly



1) Locate the relief valve in the control valve. Remove any dirt and grease in the area before removing.
2) Unscrew the relief valve body assembly from the control valve assembly.
3) Remove and discard o-rings and backup rings. Take care not to nick or scratch the cartridge.
4) Loosen the seal nut and remove the adjustment bolt and seal nut. Loosen and remove the screw kit.
5) Clean the cartridge with a suitable solvent.
6) Inspect the cartridge for damage and replace if necessary.

Main Relief Valve: Assembly and Installation

1) Lubricate all new o-rings and backup rings with clean oil.
2) Assemble the o-ring (43) and the seal nut (45) on the adjustment bolt (46) with the body (44).
3) Assemble the o-ring (37) with the ring (42) and insert into the valve body.
4) Assemble the o-rings (33-31) and the backup ring (32) with the body (34). Insert the ring (35) and the spring (36).
5) Assmble the o-ring (37) and the backup ring (38) with the ring (39) and insert in the body (34).
6) Insert the pin (40), the spring (41) and install the body kit (44) into the body (34) and tighten to 40 N•m (30 ft.-lbs.)
7) Insert the cartridge into the control valve and tighten to 40 N•m (30 ft.-lbs.).
8) Adjust the maximum system pressure setting. (See procedure below in this section 2-3.4.)

2. Unscrew two allen-head hex head bolts from front seal cover plate (261). To separate cover plate from rest of assembly, screw 6 mm cap screws into threaded holes tapped into cover. Tighten all four cap screws in a slow, staggered tightening sequence, taking wrench off of each cap screw after just a fraction of a turn and proceeding to next - in regular rotation - until cover drops out.

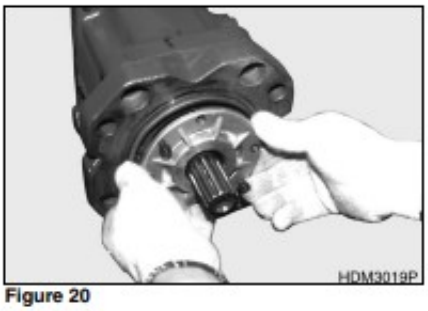


Figure 20

3. Separate pump casing (271) from support plate (251) by tapping lightly with a plastic hammer. Be careful not to damage either mating surface or O-ring (717).

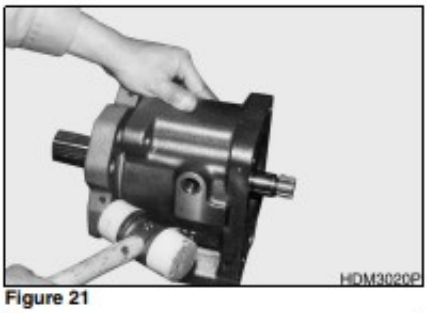


Figure 21

4. Withdraw drive shaft (111 and 113) on opposite sides of center valve block) from swash plate support and pull away valve plates (313 or 314).

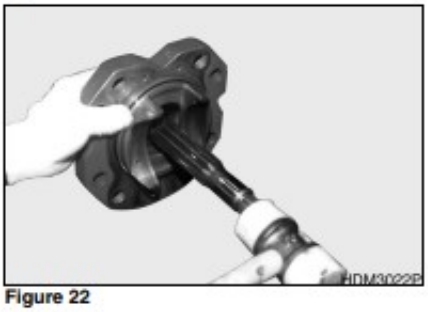


Figure 22

5. Insert drive pinion into axle carrier, heat and install inner bearing race. See Figure 54.

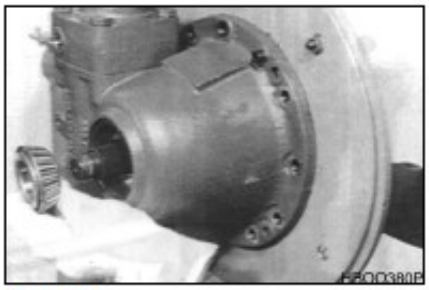


Figure 54

6. Cover outer diameter of shaft seal with sealing compound (Curial T) and install shaft using driver to ensure seal is installed to correct depth. See Figure 55.

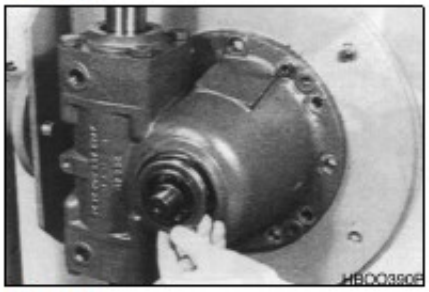


Figure 55

7. Install hex head screws into drive flange and press dust plate over drive flange collar. See Figure 56.

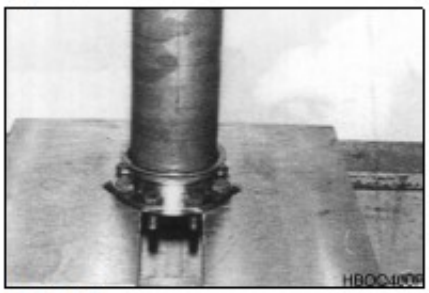


Figure 56

8. Install drive flange. See Figure 57.

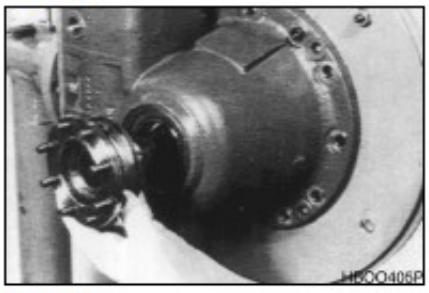
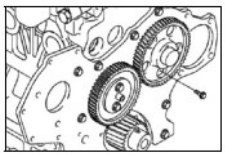
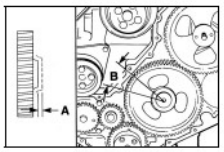


Figure 57

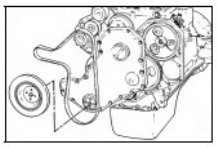


Install the thrust washer capscrews and tighten to 25.5Nm [19 ft-lbs].



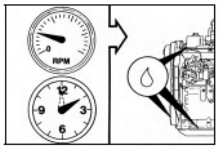
Verify the camshaft has proper back lash and end play.

A = 0.07 to 0.15 mm [0.0027 to 0.0059 in]
B = 0.05 to 0.25 mm [0.002 to 0.0098 inch]



Complete the installation of the removed parts.

- Gear cover
- Vibration damper
- Rocker levers and valve cover
- Lift pump



Operate the engine at idle for 5 to 10 minutes and check for leaks and loose parts.

Gear Housing or Gasket – Replacement

Preparatory Step:

- Remove the v-pulley.
- Remove the gear driven accessory drive if the engine is so equipped.

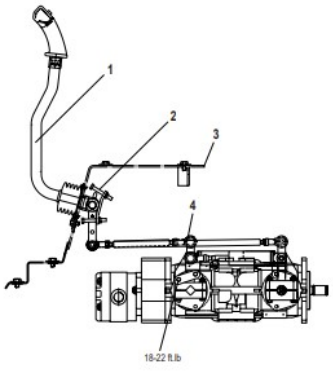
12mm
Remove the gear housing and gasket.

Clean the gasket material from the cylinder block.

12mm
Caution: If a new housing or other than the original housing is installed, the timing pin assembly must be accurately located.

Install a new gasket and gear housing.
Torque Value: 25.5Nm [19 ft-lbs]

Drive Control System



IGAT034I

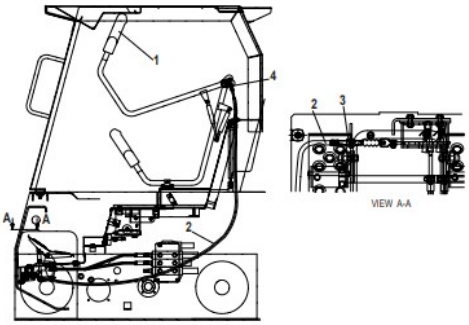
Neutral Adjusting of Linkage

1) Set drive lever (1) should have a perpendicular on the upper plate with the related assemble parts.

2) Adjust rod ass'y (4) to reach the neutral locations of HST control shaft.

3) To get the straight travel, adjust the length of bolts (2) as to contact with the uppler plate (3).

Hydraulic Control System



IGAT035I

Adjustment Procedure

1) Raise the seatbar (1).

2) Adjust cable (2) location by nuts (3) in order to get the pedals should be locked.

3) Assemble the cable (3) on the seat bar (1) using the yoke (4).

4) Check whether pedals can be movable when the seatbar is down.

Preassemble Axle Housim

1. Legend on Figure 124 - Figure 128

Reference Number	Description
1	Axle Housing
2	Bushing (Observe Installation Position)
3	Seal Ring (Observe Installation Position)
4	Bearing Outer Rings (Pivot Bearing)
X	Oil Chamber Side

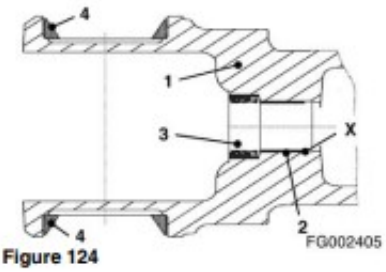


Figure 124

Bushing - lubrication groove outlet installed in 6 o'clock position (referred to the axle mounted in the vehicle).

2. Flush-mount bushing in the axle housing hole, considering the installation position (see detailed sketch).

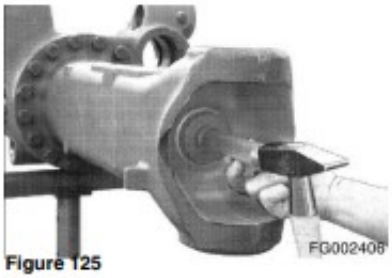


Figure 125

Detailed sketch - 90° offset:

Reference Number	Description
1	Axle Housing
2	Bushing
X	Oil Chamber Side Observe Installation Position of Bushing

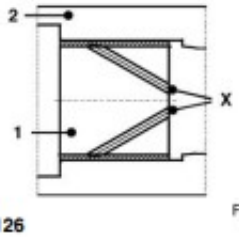


Figure 126

lubrication groove outlet in 6 o'clock position (referred to axle mounted in vehicle).

3. Flush-mount seal ring (item 3 - See Figure 124) into axle housing hole, with seal lip showing to oil chamber.

⚠ CAUTION!

Contact face (outer diameter) of seal ring:

- **Wet it with spirit (assembly aid) if rubber-coated**
- **Apply sealing agent (Loctite no. 574) if made of metal**

Apply grease on seal and dust lip of the seal ring.

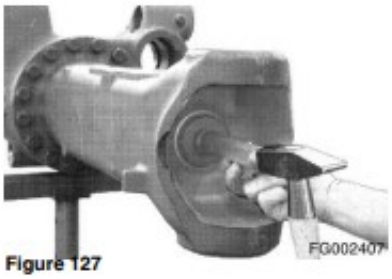


Figure 127

Work Levers (Joysticks) (ISO Style)

⚠ WARNING

Check surrounding area before swinging. When operating a lever while in auto idle, do it carefully, because the engine speed will increase rapidly

NOTE: *When starting work, move joysticks slowly and check movement of swing and front attachment and dozer.*

This equipment is manufactured using the lever configuration described in ISO standards. Do not change valving, hoses, etc., that would change this standard. The boom, arm and bucket movements, and swing direction of work levers (joysticks) are as follows:

Left-hand Work Lever (Joystick) (Figure 47 and Figure 49)

1. Arm dump
2. Arm crowd
3. Left swing
4. Right swing

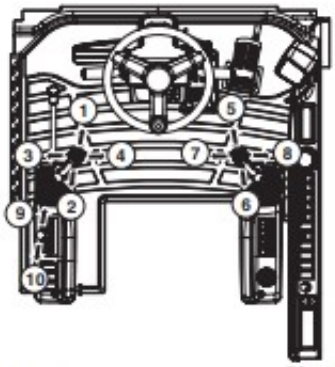
NOTE: *The swing brake is spring applied and hydraulically released. It is always engaged when the work lever (joystick) is in "NEUTRAL" or the engine is shut down.*

NOTE: *The following is not a mechanical malfunction but a proper phenomenon of the excavator. When operating the arm, it may stop momentarily. When the arm is operated, the weight of the arm may cause it to move faster than the amount of oil being supplied. In some cases while swinging or moving, the relief valves may make some noise. This is normal and does not affect the performance of the equipment.*

Right-hand Work Lever (Joystick) (Figure 47 and Figure 49)

5. Boom down
6. Boom up
7. Bucket crowd
8. Bucket dump

NOTE: *Even after stopping the engine, the front can be lowered to the ground by operating joystick. Set safety lever on "UNLOCK" position and turn starter switch "ON".*



FG010599

Figure 47

FG002669

Figure 48

150 HOUR SERVICE

Perform All 10 Hour / Daily and 50 Hour Service Checks

Drain and Refill Transmission Fluid

1. The transmission fluid should be drained and refilled after the first 150 hours of operation and at every 1,000 hours thereafter. (See page 4-47)

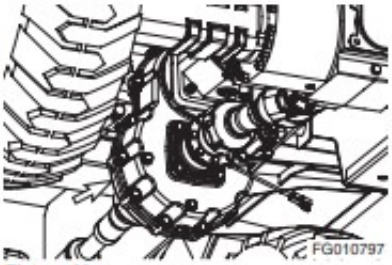


Figure 40

Drain and Refill Hub Reduction Gear Oil

1. The hub reduction gear oil should be drained and refilled after the first 150 hours of operation or rebuild, and every 1,000 hours thereafter. (See page 4-49)

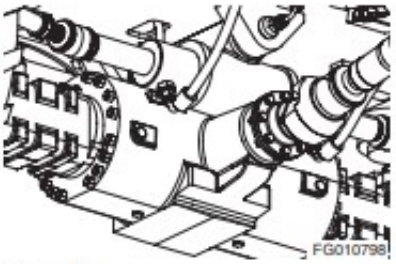


Figure 41

Drain and Refill Front Axle Case Oil

1. The rear axle case oil should be drained and refilled after the first 150 hours of operation or rebuild, and every 1,000 hours thereafter. (See page 4-47)

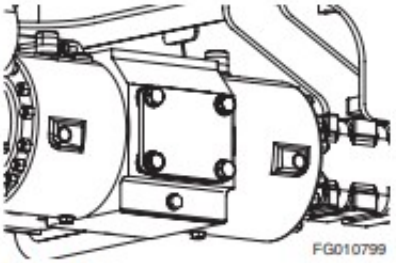


Figure 42

Drain and Refill Rear Axle Case Oil

The rear axle case oil should be drained and refilled after the first 150 hours of operation or rebuild, and every 1,000 hours thereafter. (See page 4-48)

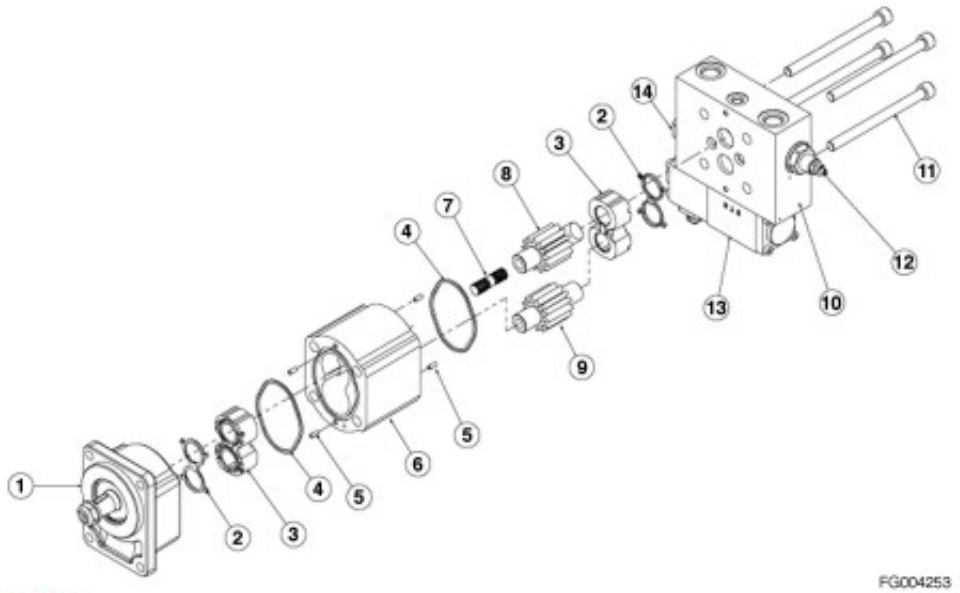


Figure 12

Reference Number	Description	Qty.
1	Front Bearing	1
2	Seal	2
3	Bearing Block	2
4	O-ring	2
5	Dowel Pin	4
6	Gear Housing	1
7	Coupling	1
8	Drive Gear	1

Reference Number	Description	Qty.
9	Idler Gear	1
10	Valve Cover	1
11	Bolt	4
12	Relief Valve Cartridge	1
13	Solenoid Operated Spool Valve	1
14	Check Valve Cartridge	1

6. Press off crown wheel from differential housing.

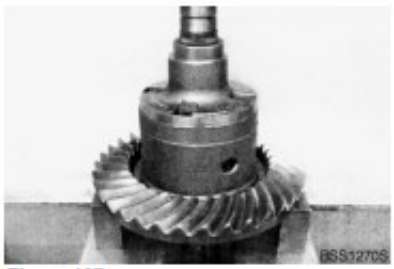


Figure 127

Disassembly of Drive Pinion

1. Heat slotted nut using hot air blower (S).
   (S) Hot air blower 230 V 5870 221 500
   (S) Hot air blower 115 V 5870 221 501
   NOTE: *Slotted nut is locked with Loctite #262.*

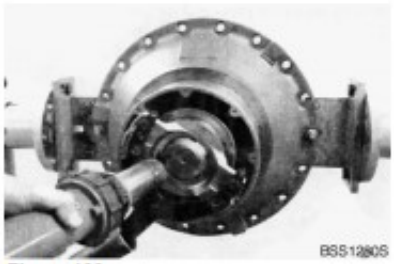


Figure 128

2. Remove slotted nut and washer.
   (S) Slotted nut wrench 5870 401 139
   (S) Fixture 5870 240 002

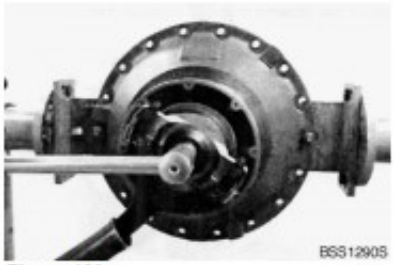


Figure 129

3. Remove input flange from drive pinion.

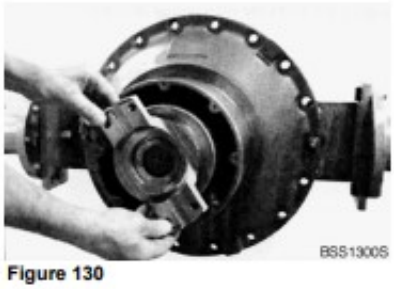
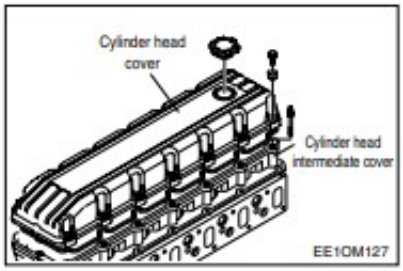


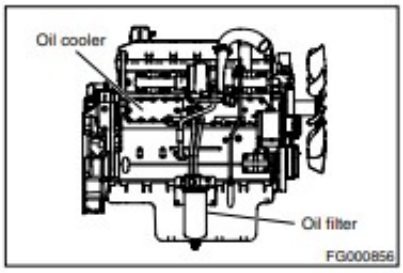
Figure 130

- Refill with new engine oil at the oil filler neck on the head cover and the lubricating oil in accordance with the oil capacity of the engine through oil filler.
- Be careful about the mixing of dust or contaminator during the supplement of oil. Then confirm that oil level gauge indicates the vicinity of its maximum level.
- For a few minutes, operate the engine at idling in order to circulate oil through lubrication system.
- Thereafter shut down the engine. After waiting for about 10 minutes measure the quantity of oil and refill the additional oil if necessary.



4.6.5. Replacement of oil filter cartridge

- At the same times of oil exchanges, replace the oil filter cartridge.



CAUTION:
Don't forget tightening the drain plug after having drained engine oil.

- Loosen the oil filter by turning it counter-clockwise with a filter wrench.
- With a rag wipe clean the fitting face of the filter head and the oil filter cartridge so that new oil filter cartridge can be seated properly.
- Lightly apply oil the O-ring and turn the oil filter until sealing face is fitted against the O-ring. Turn 3/4 ~ 1 turns further with the filter wrench.

CAUTION:
It is strongly advisable to use DOOSAN's genuine oil filter cartridge for replacement

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