GENERAL SPECIFICATIONS

Shipping Weight	28.9 metric tons (63,714 lb), includes 10% fuel, boom, 3,100 mm (10' 2") arm, 1,334 mm (4' 5") backhoe bucket and standard shoes
Operating Weight	Add weight of full fuel tank and operator.
Shipping Weights With Optional Track Shoes	Add 600 kg (1,320 lb) for 700 mm (27.6") shoes
	Add 900 kg (1,984 lb) for 800 mm (31.5") shoes
	Add 1,200 kg (4,408 lb) for 850 mm (33.5") shoes
Major Component Weights	Standard Boom 2,330 kg (5,137 lb)
	2,500 mm (8' 2") Arm 900 kg (1,984 lb)
	3,100 mm (10' 2") Arm 1,050 kg (2,315 lb)
	3,750 mm (12' 4") Arm 1,060 kg (2,337 lb)
	Boom Cylinders 260 kg (573 lb) each
	Arm Cylinder 340 kg (750 lb)
	Bucket Cylinder 220 kg (485 lb)
	Counterweight 5,300 kg (11,684 lb)
	Upper Turntable 7,700 kg (16,975 lb)
	Lower - below Swing Bearing 10,660 kg (23,500 lb)
Digging Forces:	
Bucket Cylinder	177 KN or 18,000 kg (39,700 lb) - (with either 3,100 mm [10' 2"] or 2,500 mm [8' 2"] arm)
Arm Cylinder	131 KN or 13,400 kg (29,500 lb) with 3,100 mm (10' 2") standard arm
Fuel Tank Capacity	500 liters (132.1 U.S. gal)
Hydraulic System Capacity	280 liters (74 U.S. gal)
Hydraulic Reservoir Capacity	160 liters (42 U.S. gal)
Bucket Heaped Capacity Range	PCSA 0.80 - 1.75 m^3 (1.05 - 2.29 yd^3)
	IMPORTANT: Refer to the Load Weight, Bucket and Arm Length Compatibility Table for information on which bucket sizes may be used safely with which arm length, for load material weights.
Shoe Type	Triple Grouser
Shoe Width and Optional Sizes	600 mm (23.6") - standard
	700 mm (27.6") - optional
	800 mm (31.5") - optional
	850 mm (33.5") - optional
Ground Pressure Ratings:	
Standard 600 mm (23.6") shoe -	0.56 kg/cm^2 (8.0 psi)
Optional 700 mm (27.6") shoe -	0.49 kg/cm^2 (7.0 psi)
Optional 800 mm (31.5") shoe -	0.43 kg/cm^2 (6.1 psi)
Optional 850 mm (33.5") shoe -	0.41 kg/cm^2 (5.8 psi)
Transport Dimensions	
Overall Shipping Length (standard boom and arm)	10,620 mm (34' 10")
Overall Shipping Width (standard shoes)	3,200 mm (10' 6")

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

REMOVAL

CAUTION

Avoid disassembling cabin if there are strong wind gusts, which could catch large surface area of cabin shell and push it sideways during lift.

1. Park on firm and level ground.
2. Lower front attachment (bucket) to ground.
3. Shut down engine.
4. Set safety lever on "RELEASED" position.
5. Turn starter switch to "I" (ON) position.

WARNING

If engine must be run while performing maintenance, use extreme care. Always have one person in the cabin at all times. Never leave the cabin with the engine running.

6. Fully stroke work levers (joysticks) in all directions to relieve pressure from accumulators.
7. Set safety lever on "LOCK" position.
8. Turn key to "O" (OFF) position and remove from starter switch.
9. Hang maintenance warning tag on controls.
10. Disconnect the battery cable from the negative (-) battery terminal.
11. Prepare cabin shell for removal by disconnecting wiring connectors for:
    A. Cabin interior lighting.
    B. External light wiring.
    C. Radio antenna and connections.
    D. Wiper/washer connections.

NOTE: *Control console wiring harnesses and hydraulic piping lines that pass through the floor of the cabin do not need to be disassembled.*

NOTE: *If unit is equipped with a cabin protective structure (for forestry, or hazardous working conditions), it must be removed.*

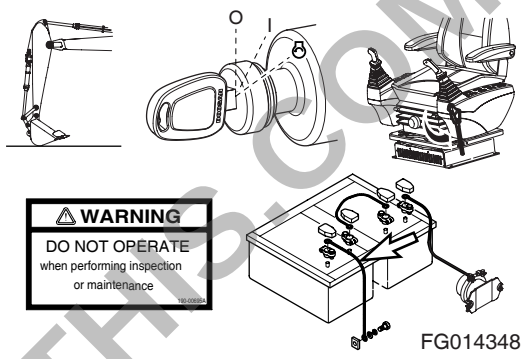
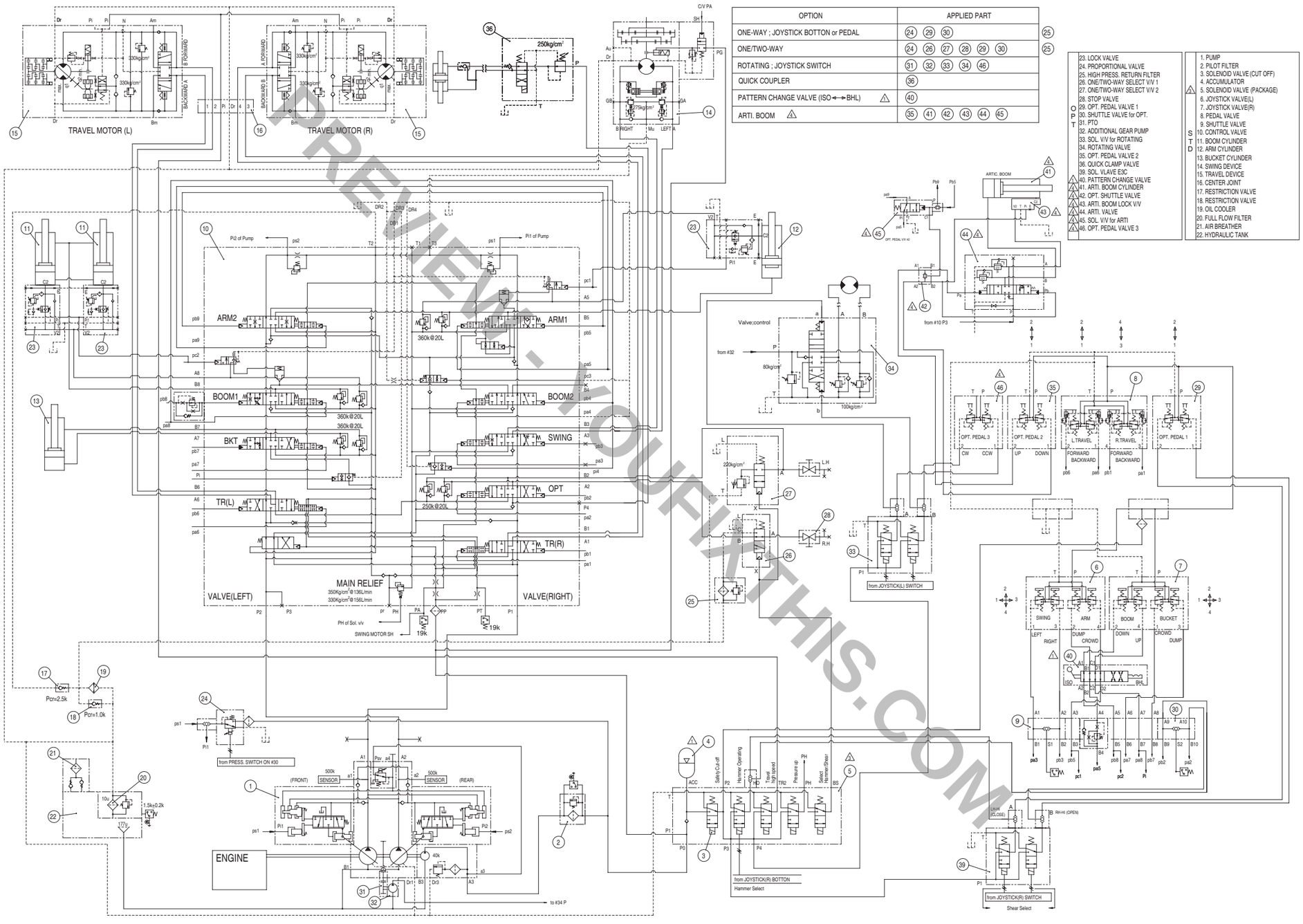


Figure 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

DX300LC



OPTION	APPLIED PART
ONE-WAY ; JOYSTICK BOTTON or PEDAL	(24) (29) (30) (25)
ONE/TWO-WAY	(24) (26) (27) (28) (29) (30) (25)
ROTATING ; JOYSTICK SWITCH	(31) (32) (33) (34) (46)
QUICK COUPLER	(36)
PATTERN CHANGE VALVE (ISO ⇔ BHL) △	(40)
ARTI. BOOM △	(35) (41) (42) (43) (44) (45)

OPT
- 23. LOCK VALVE
- 24. PROPORTIONAL VALVE
- 25. HIGH PRESS. RETURN FILTER
- 26. ONE/TWO-WAY SELECT V/V 1
- 27. ONE/TWO-WAY SELECT V/V 2
- 28. STOP VALVE
- 29. OPT. PEDAL VALVE 1
- 30. SHUTTLE VALVE for OPT.
- 31. PTO
- 32. ADDITIONAL GEAR PUMP
- 33. SOL. V/V for ROTATING
- 34. ROTATING VALVE
- 35. OPT. PEDAL VALVE 2
- 36. QUICK CLAMP VALVE
- 39. SOL. VLAVE E3C
- △ 40. PATTERN CHANGE VALVE
- △ 41. ARTI. BOOM CYLINDER
- △ 42. OPT. SHUTTLE VALVE
- △ 43. ARTI. BOOM LOCK V/V
- △ 44. ARTI. VALVE
- △ 45. SOL. V/V for ARTI
- △ 46. OPT. PEDAL VALVE 3

STD
- 1. PUMP
- 2. PILOT FILTER
- 3. SOLENOID VALVE (CUT OFF)
- 4. ACCUMULATOR
- △ 5. SOLENOID VALVE (PACKAGE)
- 6. JOYSTICK VALVE(L)
- 7. JOYSTICK VALVE(R)
- 8. PEDAL VALVE
- 9. SHUTTLE VALVE
- 10. CONTROL VALVE
- 11. BOOM CYLINDER
- 12. ARM CYLINDER
- 13. BUCKET CYLINDER
- 14. SWING DEVICE
- 15. TRAVEL DEVICE
- 16. CENTER JOINT
- 17. RESTRICTION VALVE
- 18. RESTRICTION VALVE
- 19. OIL COOLER
- 20. FULL FLOW FILTER
- 21. AIR BREATHER
- 22. HYDRAULIC TANK

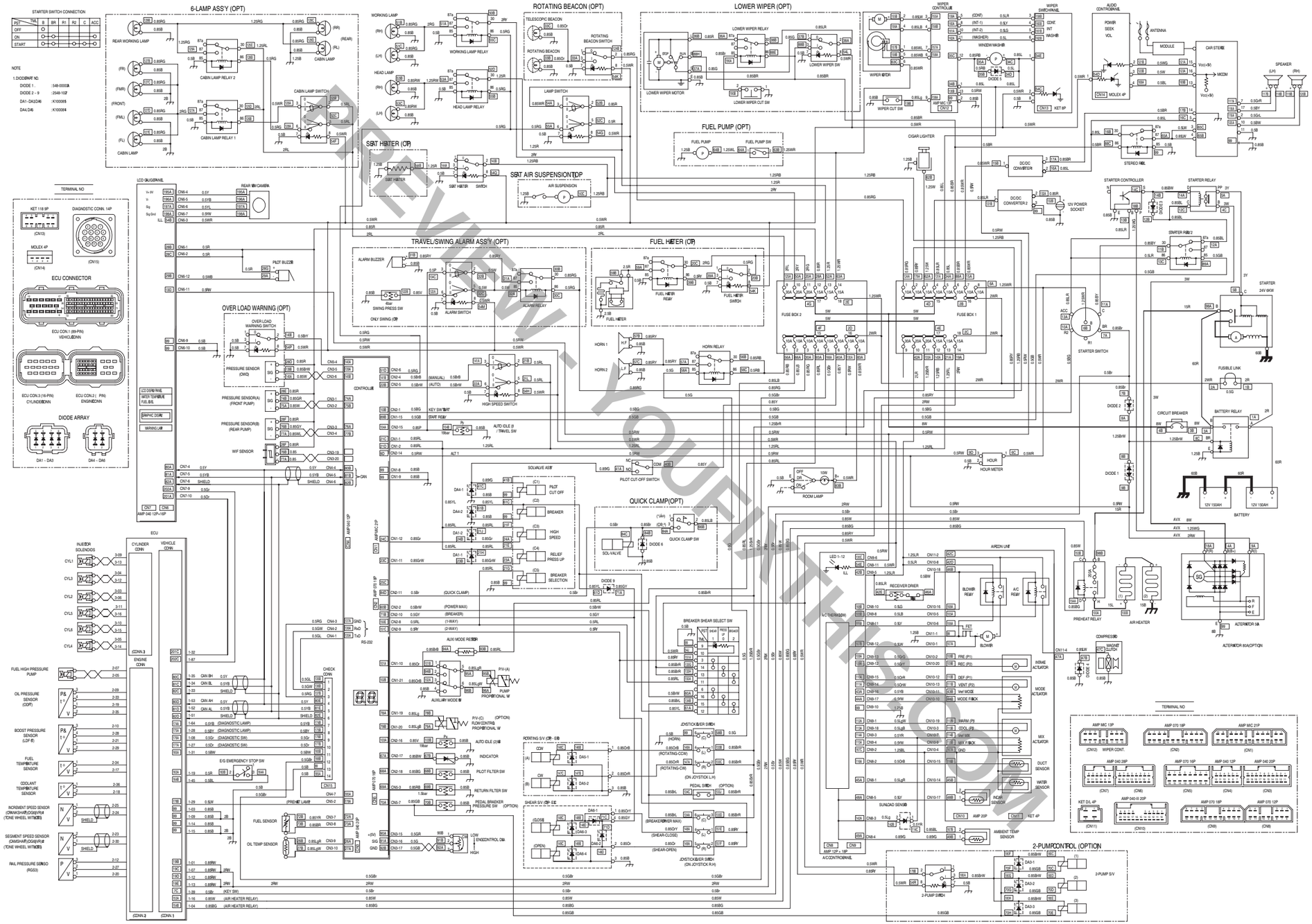
FG014415

Figure 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

DX300/340/350LC



FG014469

Figure 1

Download full manual at youfixthis.com

Reference Number	Description
1	Counterweight
2	Hood
3	Muffler
4	Hydraulic Oil Tank
5	Fuel Tank
6	Engine
7	Fuel Tank Fill Cap
8	Radiator and Oil Cooler
9	Control Valves
10	Swing Motor
11	Precleaner
12	Air Cleaner
13	Swing Bearing
14	Seat
15	Cabin
16	Boom Cylinder
17	Work Lever (Joystick) Controls
18	Arm Cylinder
19	Boom
20	Travel Lever

Reference Number	Description
21	Arm
22	Bucket Cylinder
23	Guide Link
24	Bucket
25	Push Link
26	Tooth Point
27	Side Cutter
28	Idler
29	Track Adjuster
30	Track Guide
31	Battery
32	Lower Roller
33	Center Joint
34	Upper Roller
35	Sprocket
36	Travel Motor
37	Track Link and Shoe
38	Suction Filter
39	Return Filter
40	Pumps

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING – SWING GEARBOX

Problem	Possible Cause	Remedy
Swing motor fails to operate and:		
Three pressure tests at motor, brake or makeup valve show low reading(s).	Swing relief valve defective Brake release valve defective Motor makeup valve defective.	Adjust pressure to recommended range in affected valve. OR Disassemble and clean valve assembly. Replace all valve components that show damage.
All three pressure checks are OK but left travel also fails to run.	Exchange front and rear pump inlet and outlet hoses to test pump function.	If swing and left travel are restored but right travel stops working, replace or repair P1 pump.
All three pressure tests are OK, but machine fails to swing at all.	Brake assembly or motor friction plate failing to release.	Check for binding. Disassemble and repair.
	Pilot (control) pressure low or swing control valve stuck.	Disassemble / Repair pilot pressure swing spool (305) and / or swing control valve.
	Swing motor defective.	Test motor drain rate. Replace / Repair motor.
	Gear train defective.	Refer to "Swing Gear Troubleshooting" procedure.
Swing functions but only at reduced rpm.	Causes listed above could also produce dragging swing, OR hot or wrong oil OR worn-out parts.	Check above list; then replace oil, test motor drain rate and check for "03" reading (e-EPOS self-test).
Left travel speed is also reduced.	Low output at P1 pump or external pilot piping leaks/is clogged.	Clean and repair piping or repair or replace pump P1.
Swing control movement is reversed.	Inlet / outlet piping reversed.	Reset controls or reverse piping.
Machine swings but continues coasting on past stopping point.	Swing control valve spool not centered.	Replace return spring; clean/ repair valve piston and spool.
	Pilot pressure may be outside range.	Disassemble, clean or replace pilot relief valve or pilot valve.
	Swing relief valve may be faulty.	Repair/Replace swing relief valve.
Swing movement is in one direction only.	Check to see that pilot pressure is the same right and left.	If pilot pressure is unequal, clean or repair piping or repair/replace valve.
	Swing control valve spool may be stuck.	Repair/Replace the swing control valve.
	Swing relief valve may be faulty.	Repair/Replace the swing relief valve.
No rotation and:		
Pressure at swing motor inlet increases.	Swing brake not releasing.	Check brake engagement and disengagement; check release pressure.
	Internal damage to gearbox drive train.	Replace broken gears and drive train assemblies.
	Overload.	Reduce load weight.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TORQUE VALUES FOR STANDARD METRIC FASTENERS

NOTE: *The units for the torque values are kg•m (ft lb).*

Dia. x Pitch (mm)	Grade										
	3.6 (4A)	4.6 (4D)	4.8 (4S)	5.6 (5D)	5.8 (5S)	6.6 (6D)	6.8 (6S)	6.9 (6G)	8.8 (8G)	10.9 (10K)	12.9 (12K)
M5 x Std.	0.15 (1.08)	0.16 (1.15)	0.25 (1.80)	0.22 (1.59)	0.31 (2.24)	0.28 (2.02)	0.43 (3.11)	0.48 (3.47)	0.50 (3.61)	0.75 (5.42)	0.90 (6.50)
M6 x Std.	0.28 (2.02)	0.30 (2.16)	0.45 (3.25)	0.40 (2.89)	0.55 (3.97)	0.47 (3.39)	0.77 (5.56)	0.85 (6.14)	0.90 (6.50)	1.25 (9.04)	1.50 (10.84)
M7 x Std.	0.43 (3.11)	0.46 (3.32)	0.70 (5.06)	0.63 (4.55)	0.83 (6.00)	0.78 (5.64)	1.20 (8.67)	1.30 (9.40)	1.40 (10.12)	1.95 (14.10)	2.35 (16.99)
M8 x Std.	0.70 (5.06)	0.75 (5.42)	1.10 (7.95)	1.00 (7.23)	1.40 (10.12)	1.25 (9.04)	1.90 (13.74)	2.10 (15.18)	2.20 (15.91)	3.10 (22.42)	3.80 (27.48)
M8 x 1	0.73 (5.28)	0.80 (5.78)	1.20 (8.67)	1.00 (7.23)	1.50 (10.84)	1.35 (9.76)	2.10 (15.18)	2.30 (16.63)	2.40 (17.35)	3.35 (24.23)	4.10 (29.65)
M10 x Std.	1.35 (9.76)	1.40 (10.12)	2.20 (15.91)	1.90 (13.74)	2.70 (19.52)	2.35 (19.99)	3.70 (26.76)	4.20 (30.37)	4.40 (31.18)	6.20 (44.84)	7.20 (52.07)
M10 x 1.25	1.50 (10.84)	1.60 (11.57)	2.50 (18.08)	2.10 (15.18)	3.10 (22.42)	2.80 (20.25)	4.30 (31.10)	4.90 (35.44)	5.00 (36.16)	7.00 (50.63)	8.40 (60.75)
M12 x Std.	2.40 (17.35)	2.50 (18.08)	3.70 (26.76)	3.30 (23.86)	4.70 (33.99)	4.20 (30.37)	6.30 (45.56)	7.20 (52.07)	7.50 (54.24)	10.50 (75.94)	12.50 (90.41)
M12 x 1.25	2.55 (18.44)	2.70 (19.52)	4.00 (28.93)	3.50 (25.31)	5.00 (36.16)	4.50 (32.54)	6.80 (49.18)	7.70 (55.69)	8.00 (57.86)	11.20 (81.00)	13.40 (96.92)
M14 x Std.	3.70 (26.76)	3.90 (28.20)	6.00 (13.23)	5.20 (37.61)	7.50 (54.24)	7.00 (50.63)	10.00 (72.33)	11.50 (83.17)	12.00 (86.79)	17.00 (122.96)	20.00 (144.66)
M14 x 1.5	4.10 (29.65)	4.30 (31.10)	6.60 (47.73)	5.70 (41.22)	8.30 (60.03)	7.50 (54.24)	11.10 (80.28)	12.50 (90.41)	13.00 (94.02)	18.50 (11.26)	22.00 (158.12)
M16 x Std.	5.60 (40.50)	6.00 (43.39)	9.00 (65.09)	8.00 (57.86)	11.50 (83.17)	10.50 (75.94)	15.50 (112.11)	17.90 (129.47)	18.50 (133.81)	26.00 (188.05)	31.00 (224.22)
M16 x 1.5	6.20 (44.84)	6.50 (47.01)	9.70 (70.16)	8.60 (62.20)	12.50 (90.41)	11.30 (81.73)	17.00 (122.96)	19.50 (141.04)	20.00 (144.66)	28.00 (202.52)	35.50 (256.77)
M18 x Std.	7.80 (56.41)	8.30 (60.03)	12.50 (90.41)	11.00 (79.56)	16.00 (115.72)	14.50 (104.87)	21.00 (151.89)	27.50 (198.90)	28.50 (206.14)	41.00 (296.55)	43.00 (311.01)
M18 x 1.5	9.10 (65.82)	9.50 (68.71)	14.40 (104.15)	12.50 (90.41)	18.50 (133.81)	16.70 (120.79)	24.50 (177.20)	27.50 (198.90)	28.50 (206.14)	41.00 (296.55)	49.00 (354.41)
M20 x Std.	11.50 (83.17)	12.00 (86.79)	18.00 (130.19)	16.00 (115.72)	22.00 (159.12)	19.00 (137.42)	31.50 (227.83)	35.00 (253.15)	36.00 (260.38)	51.00 (368.88)	60.00 (433.98)
M20 x 1.5	12.80 (92.58)	13.50 (97.64)	20.50 (148.27)	18.00 (130.19)	25.00 (180.82)	22.50 (162.74)	35.00 (253.15)	39.50 (285.70)	41.00 (296.55)	58.00 (419.51)	68.00 (491.84)
M22 x Std.	15.50 (112.11)	16.00 (115.72)	24.50 (177.20)	21.00 (151.89)	30.00 (216.99)	26.00 (188.05)	42.00 (303.78)	46.00 (332.71)	49.00 (354.41)	67.00 (484.61)	75.00 (542.47)
M22 x 1.5	17.00 (122.96)	18.50 (133.81)	28.00 (202.52)	24.00 (173.59)	34.00 (245.92)	29.00 (209.75)	47.00 (339.95)	52.00 (44.76)	56.00 (405.04)	75.00 (542.47)	85.00 (614.80)
M24 x Std.	20.50 (148.27)	21.50 (155.50)	33.00 (238.68)	27.00 (195.29)	40.00 (289.32)	34.00 (245.92)	55.00 (397.81)	58.00 (419.51)	63.00 (455.67)	82.00 (593.10)	92.00 (655.43)
M24 x 2.0	23.00 (166.35)	35.00 (253.15)	37.00 (267.62)	31.00 (224.22)	45.00 (325.48)	38.00 (202.52)	61.00 (441.21)	67.00 (484.61)	74.00 (535.24)	93.00 (672.66)	103.00 (744.99)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SAFETY PRECAUTIONS

⚠ CAUTION!

Follow all safety recommendations and safe shop practices outlined in the front of this manual or those contained within this section.

Always use tools and equipment that are in good working order.

Use lifting and hoisting equipment capable of safely handling load.

Remember, that ultimately safety is your own personal responsibility.

APPLICABLE MODELS

The contents of this section apply to the following models and serial number ranges.

MODEL	SERIAL NUMBER RANGE
DX300LC	7440 and Up
DX340LC	5980 and Up
DX350LC	5980 and Up
DX420LC	5327 and Up
DX480LC	5221 and Up
DX520LC	5117 and Up

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Table of Contents

Safety

Track Excavator Safety SP000907

Specifications

Specification for DX300LC SP001747

General Maintenance

General Maintenance Procedures SP000016
Standard Torques SP000813

Upper Structure

Cabin SP001737
Counterweight SP001748
Fuel Tank SP001749
Fuel Transfer Pump (Opt) SP000021
Swing Bearing SP001856
Swing Reduction Gear SP001750

Lower Structure and Chassis

Track Assembly SP001741

Engine and Drive Train

Drive Coupling (Main Pump) SP000026

Hydraulics

Hydraulic System Troubleshooting, Testing and Adjustment SP001751
Accumulator SP000028
Center Joint (Swivel) SP001620
Cylinders SP000030

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TYPE 8 PHOSPHATE COATED HARDWARE

This chart provides tightening torque for general purpose applications using original equipment standard hardware as listed in the Parts Manual for the machine involved. **DO NOT SUBSTITUTE**. In most cases, original equipment standard hardware is defined as Type 8, coarse thread bolts and nuts and thru hardened flat washers (Rockwell "C" 38 - 45), all phosphate coated and assembled without supplemental lubrication (as received) condition.

The torques shown below also apply to the following:

1. Phosphate coated bolts used in tapped holes in steel or gray iron.
2. Phosphate coated bolts used with phosphate coated prevailing torque nuts (nuts with distorted threads or plastic inserts).
3. Phosphate coated bolts used with copper plated weld nuts.

Markings on bolt heads or nuts indicate material grade ONLY and are NOT to be used to determine required torque.

Nominal Thread Diameter	Standard Torque ±10%	
	Kilogram Meter (kg•m)	Foot Pounds (ft lb)
1/4"	1.1	8
5/16"	2.2	16
3/8"	3.9	28
7/16"	6.2	45
1/2"	9.7	70
9/16"	13.8	100
5/8"	19.4	140
3/4"	33.2	240
7/8"	53.9	390
1"	80.2	580
1 - 1/8"	113.4	820
1 - 1/4"	160.4	1160
1 - 3/8"	210.2	1520
1 - 1/2"	279.4	2020
1 - 3/4"	347.1	2510
2	522.8	3780

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GENERAL DESCRIPTION

Theory of Operation

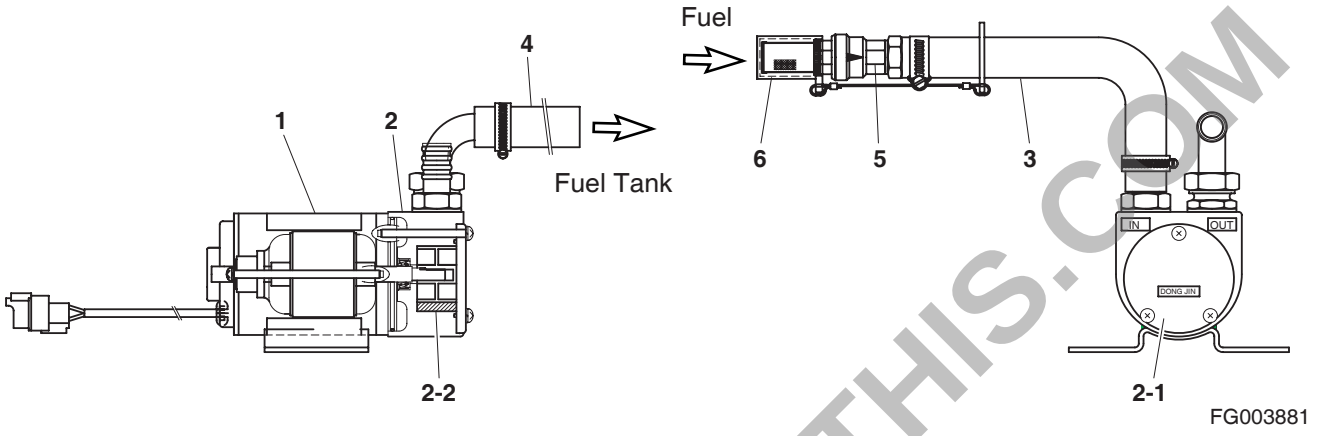


Figure 1

Reference Number	Description
1	Motor
2	Pump
2-1	Pump Cover
2-2	Rotor and Vane

Reference Number	Description
3	Inlet Hose
4	Outlet Hose
5	Check Valve
6	Strainer Cap

The fuel pump consists of a motor, pump, switch, and hose assembly.

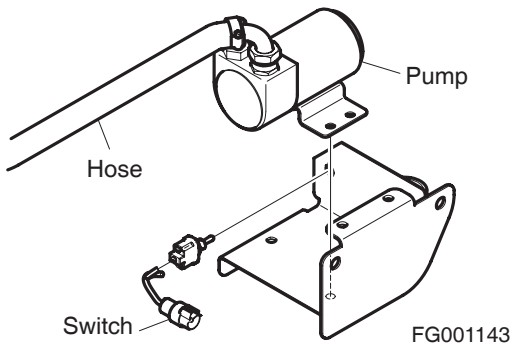


Figure 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6. Remove press-in bolts that were installed to hold ring gear in position.
7. Apply liquid gasket on ring gear.

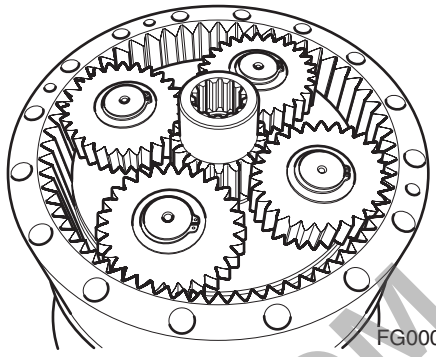


Figure 104

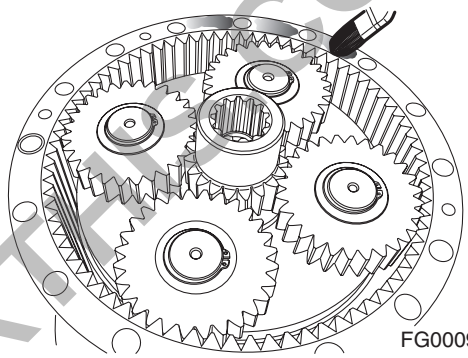


Figure 105

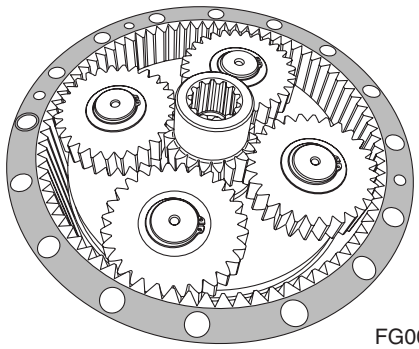


Figure 106

8. Align mounting holes and postion case cover on ring gear.
9. Coat socket head bolts with Loctite and install.

   NOTE: *Torque bolts to 2,700 kg•cm (195 ft lb).*

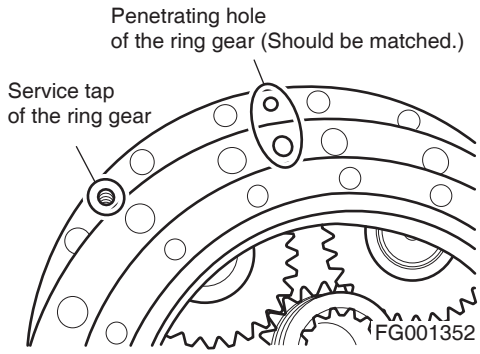


Figure 107

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

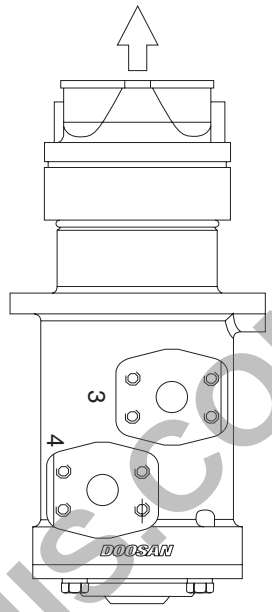
CAUTION

Care should be taken not to make a flaw on the surface of the Shaft when disassembling the Hub of the Shaft assembly.

6. Disassemble the hub from the shaft assembly.

   It can be disassembled easily by fixing the Shaft assembly, tightening at least 2-10mm eye bolts on the Hub, and lifting it with a hoist slowly.

7. If the shaft assembly doesn't separate easily when the thrust plate and retaining ring are removed, use a wooden block and hammer to drive it out of the housing



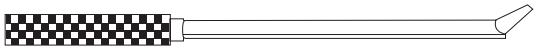
FG013230

Figure 4

8. Separate the Hub into 8ea sliper seals, 1ea O-ring(1BP80), and 1ea Dust seal(LBH80).

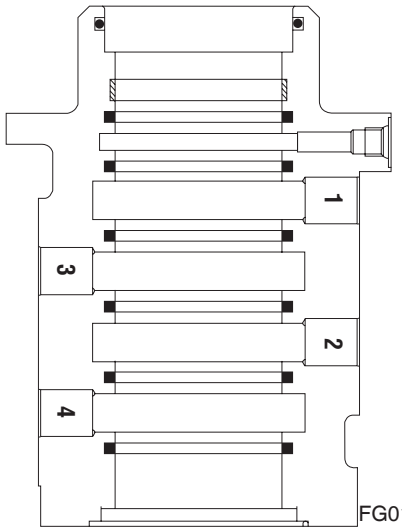
CAUTION

Care should be taken not to damage the inside of the Hub becasuse it is likely to be damaged when disassembling the slipper seal. It may be disassembled more easily with a driver whose tip is bent as shown in the figure below.



FG013231

Figure 5

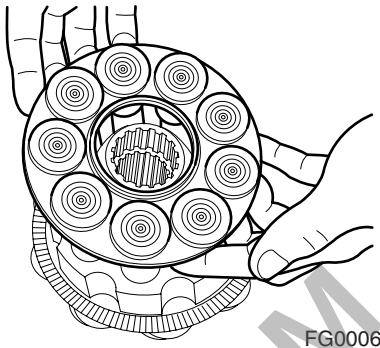


FG013232

Figure 6

PREVIEW - YOUFIXTHIS.COM

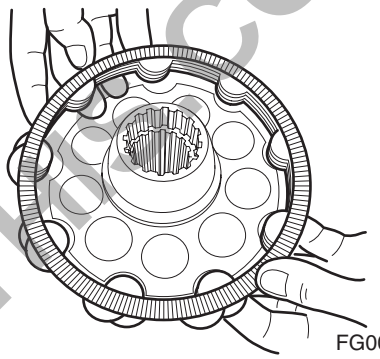
Download full manual at youfixthis.com



FG000697

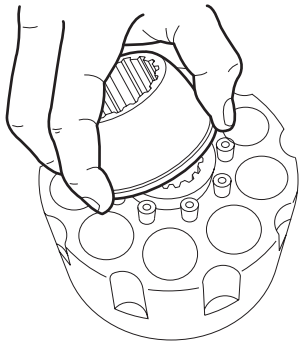
Figure 24

10. Remove friction plate (12), plate (15), ball guide (11), and spring (10) from cylinder block.



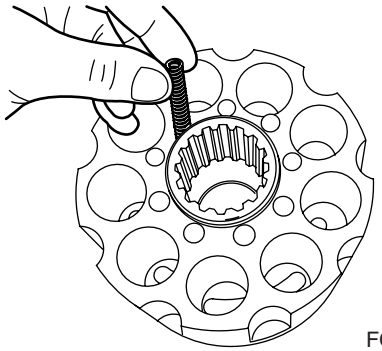
FG000698

Figure 25



FG000699

Figure 26



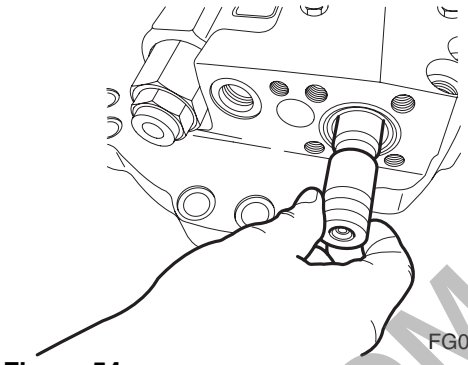
FG000700

Figure 27

PREVIEW - YOUFIXTHIS.COM

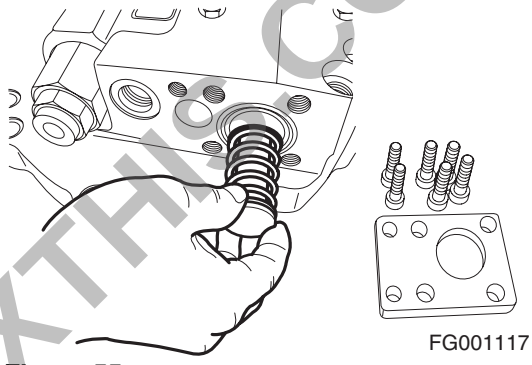
Download full manual at youfixthis.com

7. Insert counterbalance spool (361) and damper check (364) in valve casing.



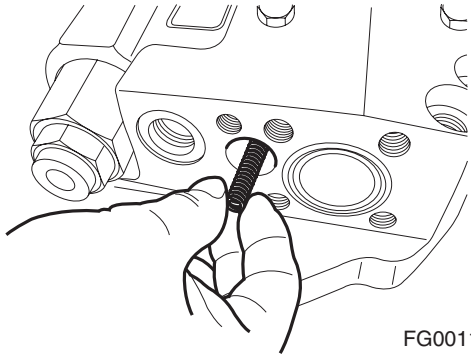
FG001118

Figure 54



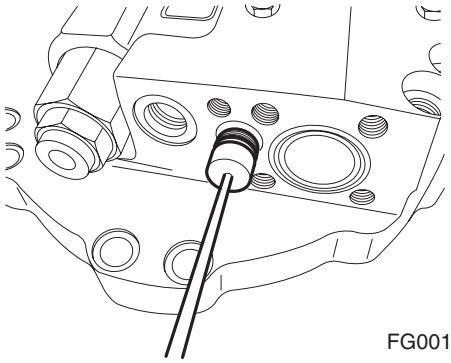
FG001117

Figure 55



FG001120

Figure 56



FG001119

Figure 57

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3. Install retaining ring in groove.

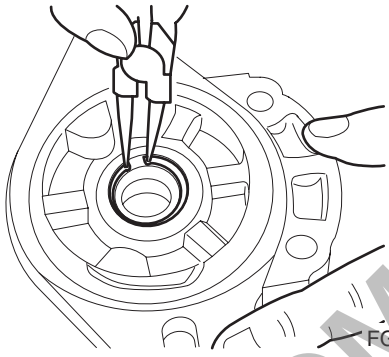


Figure 12

4. Install O-ring on both sides of rear section of body.

   NOTE: *Coat O-rings with grease to hold O-rings in body.*

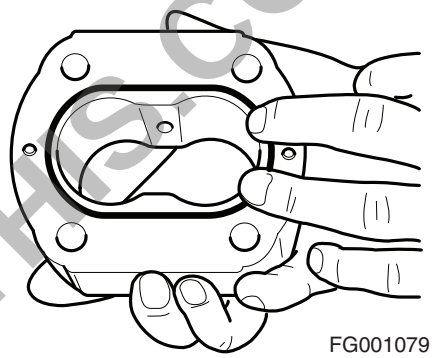


Figure 13

5. Install rear section body on rear cover.

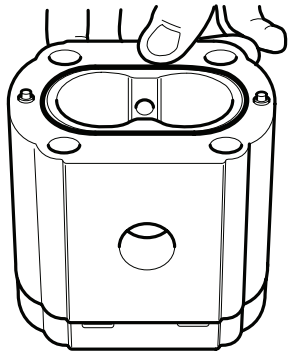


Figure 14

6. Install seals in pressure plate(s) groove. Then install backup ring in groove with seals. Coat seals with grease.

   NOTE: *The front and rear pressure plates and seals and backup rings are the same.*

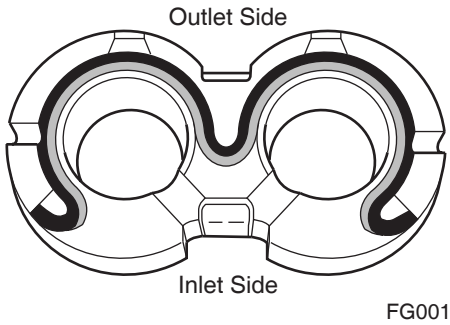


Figure 15

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING, TESTING AND ADJUSTMENT

Troubleshooting

Overall Control Valve

Problem	Possible Cause	Remedy
Spool does not move.	Oil temperature is abnormally increased.	Remove part with resistance of oil leakage within pipeline.
	Pollution of operation oil.	Replace operation oil and wash circuit at same time.
	Overly tighten pipe port joint.	Check Torque.
	Valve housing is skewed in loading.	Loosen and confirm loading bolt.
	Pressure is too high.	Check pressure of pump and cylinder port.
	Spool is bent.	Replace valve assembly.
	Return spring is damaged.	Replace damaged part.
	Spring or cap is not in line.	Loosen cap to release load.
	The temperature distribution in valve is inconsistent.	Warm up entire circuit.
	The valve is clogged by dust.	Remove (flushing) dust.
	The pilot pressure is insufficient.	Check pilot valve and pilot relief pressure.
Load is not maintained.	Oil is leaking from cylinder.	Check chamber part of cylinder.
	Oil is bypassed from spool.	Check groove of spool.
	Oil is leaking from overload relief valve.	Wash valve housing seat part and relief valve seat part.
	Oil is leaking from antidrift valve.	Disintegrate antidrift valve and wash seat part of each part. In event that there is grooves on seat part, replace poppet or wrap poppet and seat part. In event of having malfunction in antidrift valve spool, spool and sleeve make pair that both shall be replaced.
When spool is shifted to up position from neutral, load is dropped.	The load check valve has dust.	Disintegrate check valve and wash.
	The poppet or seat part of check value has groove.	Replace poppet or wrap poppet and seat part.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

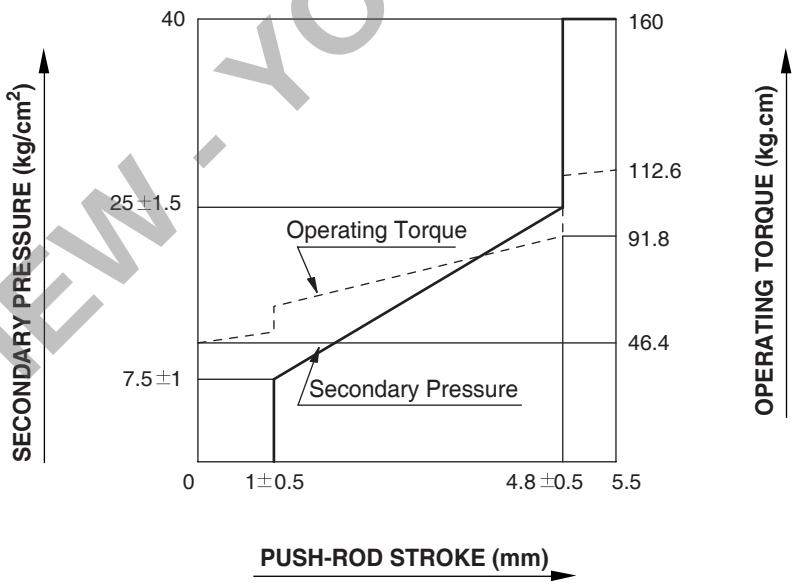
Deceleration Valve

1. In neutral position, the damper spool is pushed to the neutral position by return spring which is seated on the spring seat (and washer. As a result of the damper spool's switching function, the output port is connected to port T and the pressure at the output port and port T is the same.

2. When the cam of the remote control valve is operated and moved from the neutral position to the clockwise direction, the push rod and damper spool of port 1 is moved down within the constraints of washer 1, spring seat, secondary pressure select spring, washer 2 and washer 3. As a result port P and port 1 are connected and oil pressure from the pilot pump flows through port 1, generating pressure.

   When the pressure of port 1 reaches the selected pressure of the secondary pressure select spring, the oil pressure and the spring set pressure will equalize and the output pressure of port 1 is maintained at a constant rate.

   The damper spool in port 2 is in the neutral position, oil returning from the control valve is discharged through port T. In cases where the controls are operated to the maximum position, the push rod makes direct contact with the damper spool forcing port P to make a direct path with the discharge port, permitting the pressure to equalize at these ports.



FG003924

Figure 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Code	Failure Component	Measuring Points	Current Valve		Remarks
			Active	Passive	
E068	Preheat relay (E/G: Highside Power stage 1)	1-13 1-07	V = V_volt	R=40 ± 5 Ω (25°C (77°F))	Voltage is only measured when afterheat function is operating status.
E083	Preheat light (E/G: Lowside Power stage 2)	1-13 1-56	-	-	
E091	CAN - A Line	1-53 1-52	-	R=60 ± 5 Ω (20°C (68°F))	It is a composite resistance of CAN line. This value has to be measured by connected condition of CAN line.
E097	Monitoring of misfire cylinder 1	-	-	-	Injector error Speed signal error of cam shaft speed sensor or crank shaft speed sensor.
E098	Monitoring of misfire cylinder 2	-	-	-	
E099	Monitoring of misfire cylinder 3	-	-	-	
E101	Monitoring of misfire cylinder 4	-	-	-	
E102	Monitoring of misfire cylinder 5	-	-	-	
E103	Monitoring of misfire cylinder 6	-	-	-	
E104	Monitoring of misfire multiple cylinder	-	-	-	
E105	Monitoring of overrun	-	-	-	
E106	Engine speed redundant	-	-	-	

NOTE: *1. Active value: Starter switch has to be turned "ON"*

Measuring points between component and wire harness have to be connected.

2. Passive value: Starter switch has to be turned "OFF"

Measuring points between component and wire harness have to be disconnected.

3. Measuring points are engine controller's points and passive value is each component's value.

4. V_batt: Source power of equipment.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Refrigerant Pressure Check

1. Open all doors and windows.
2. Install manifold gauge set.
3. Start engine and maintain engine speed at 1,800 - 2,000 rpm.

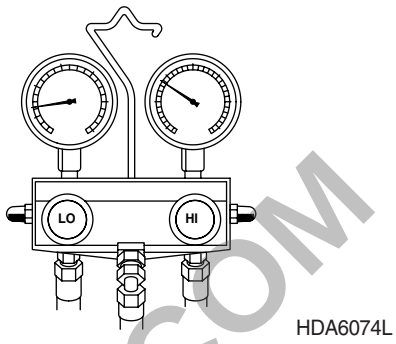


Figure 94

4. Check high / low-pressure of refrigerant.

1	**High-pressure: 8.0 - 10.0 kg/cm^2 (114 - 142 psi)** **Low-pressure: Approximately 1.0 kg/cm^2 (14 psi)**		
Possible Cause: Low Refrigerant Level			
Step	**Inspection Item**		**Remedy**
1	Check for traces of refrigerant oil.	Yes	Reassemble using correct tightening torque.
		No	Go to next step.
2	Using a leak detection device or soapy water check for refrigerant leakage at all major components and joints.	Yes	Repair leaking component.
		No	Recharge system to correct pressure.

2	**High-pressure: Over 23 kg/cm^2 (327 psi)** **Low-pressure: Approximately 2.5 - 3.0 kg/cm^2 (36 - 43 psi)**		
Possible Cause: Overcharge, Frost on condenser			
Step	**Inspection Item**		**Remedy**
1	Check for condenser pin damage or contamination.	Yes	Clean, repair or replace condenser.
		No	Refrigerant overcharge.

3	**High-pressure: Approximately 20 - 25 kg/cm^2 (285 - 356 psi)** **Low-pressure: Approximately 2.5 - 3.5 kg/cm^2 (36 - 50 psi)**
Possible Cause: Air in system.	
1. Recover any remaining refrigerant. 2. Vacuum out system. 3. Recharge system. **NOTE:** *If the system has been exposed to the air for a long period of time, replace the receiver dryer.*	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 854 pages

The full manual includes:

- All 854 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Doosan DX300LC Shop Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual