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SAFETY INSTRUCTIONS

⚠ WARNING

AVOID DEATH OR SERIOUS INJURY

Instructions are necessary before operating or servicing machine. Read and understand the Operation and Maintenance Manual and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments repairs or service. Untrained operators and failure to follow instructions can cause death or serious injury.

APPLICABLE MODELS

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

MODEL	SERIAL NUMBER RANGE
DX140LC-3	1001 and Up, 50001 and Up
DX180LC-3	1001 and Up, 50001 and Up
DX225LC-3	1001 and Up, 50001 and Up
DX255LC-3	1001 and Up, 50001 and Up
DX300LC-3	1001 and Up, 50001 and Up
DX340LC-3	1001 and Up, 10001 and Up
DX350LC-3	1001 and Up, 10001 and Up
DX380LC-3	10001 and Up
DX420LC-3	10001 and Up
DX490LC-3	10001 and Up
DX530LC-3	10001 and Up

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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)

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COMPONENT LOCATIONS

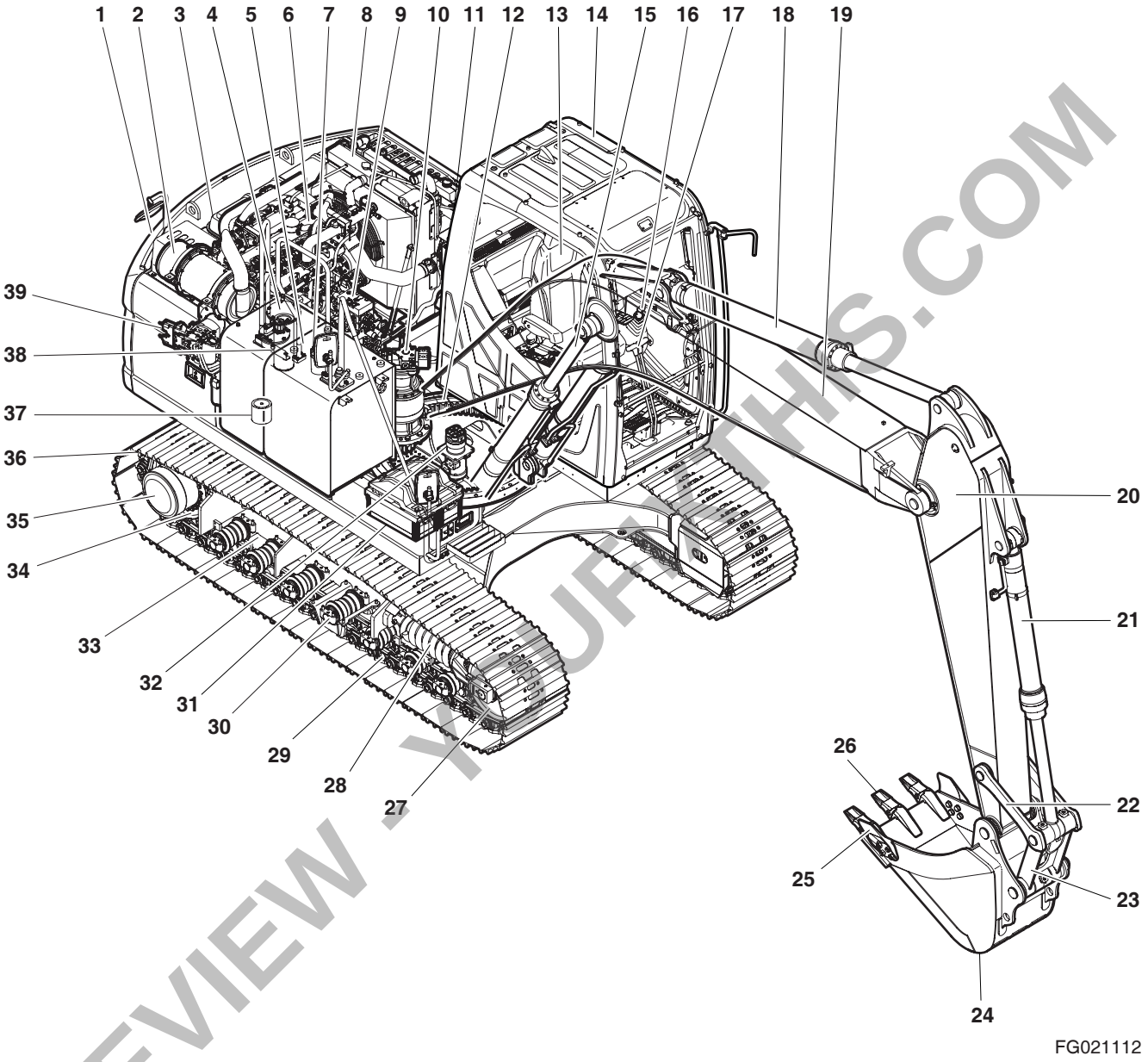


Figure 1

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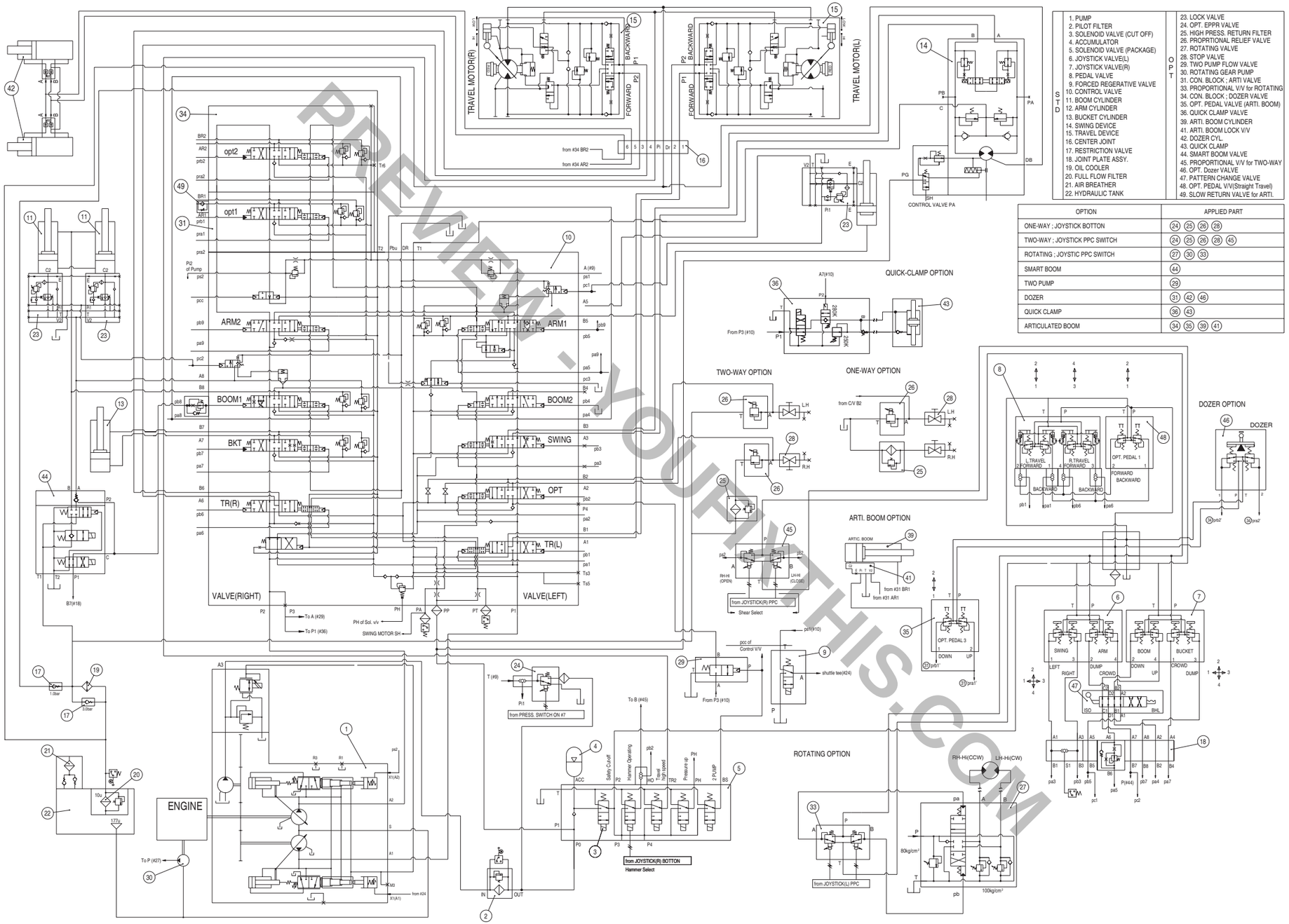
GENERAL SPECIFICATIONS

Shipping Weight	17.6 tons (38,823 lb)
	Includes 10% fuel, 5,200 mm (17' 1") boom, 2,600 mm (8' 6") arm, 0.70 m^3 (0.92 yd^3) backhoe bucket and standard shoes
Operating Weight	Add weight of full fuel tank and operator.
Shipping Weights With Optional Track Shoes	Subtract 228 kg (503 lb) for 500 mm (20") shoes
	Add 370 kg (816 lb) for 700 mm (28") shoes
	Add 626 kg (1,380 lb) for 800 mm (32") shoes
	Add 876 kg (1,931 lb) for 900 mm (36") shoes
Major Component Weights	Standard Boom 1,136 kg (2,504 lb)
	2,200 mm (7' 3") Arm 536 kg (1,182 lb)
	2,600 mm (8' 6") Arm 554 kg (1,221 lb)
	3,100 mm (10' 2") Arm 645 kg (1,422 lb)
	Boom Cylinders 150 kg (331 lb) each
	Arm Cylinder 210 kg (463 lb)
	Bucket Cylinder 136 kg (300 lb)
	Counterweight 3,000 kg (6,614 lb)
	Upper Structure 5,204 kg (11,473 lb)
	Lower - below Swing Bearing 6,465 kg (14,253 lb)
Digging Forces (At Power Boost, ISO)	
Bucket Cylinder	128 KN or 13,100 kg (28,880 lb) with Mono Boom/Articulated Boom + GP Bucket
Arm Cylinder	91 KN or 9,300 kg (20,503 lb) with 2,600 mm (8' 6") Standard Arm
Fuel Tank Capacity	293 liters (77.4 U.S. gal)
Hydraulic System Capacity	210 liters (55.5 U.S. gal)
Hydraulic Reservoir Capacity	180 liters (47.5 U.S. gal)
Bucket Heaped Capacity Range	SAE 0.38 - 0.93 m^3 (0.49 - 1.22 yd^3) Mono Boom/Articulated Boom
	NOTE: Refer to the Load Weight, Bucket and Arm Length Compatibility Table for information on which bucket sizes are approved for which arm length and workload material weights.
Shoe Type	Triple Grouser
Shoe Width and Optional Sizes	600 mm (24") - standard
	500 mm (20") - optional
	700 mm (28") - optional
	800 mm (32") - optional
	900 mm (36") - optional
Ground Pressure Ratings:	
Standard 600 mm (24") shoe	0.43 kg/cm^2 (6.12 psi)
Optional 500 mm (20") shoe	0.51 kg/cm^2 (7.25 psi)
Optional 700 mm (28") shoe	0.38 kg/cm^2 (5.40 psi)
Optional 800 mm (32") shoe	0.34 kg/cm^2 (4.84 psi)
Optional 900 mm (36") shoe	0.30 kg/cm^2 (4.27 psi)

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DX180LC-3



STD	OPT
1. PUMP	23. LOCK VALVE
2. PILOT FILTER	24. OPT. EPPR VALVE
3. SOLENOID VALVE (CUT OFF)	25. HIGH PRESS. RETURN FILTER
4. ACCUMULATOR	26. PROPRTIONAL RELIEF VALVE
5. SOLENOID VALVE (PACKAGE)	27. ROTATING VALVE
6. JOYSTICK VALVE(L)	28. STOP VALVE
7. JOYSTICK VALVE(R)	29. TWO PUMP FLOW VALVE
8. PEDAL VALVE	30. ROTATING GEAR PUMP
9. FORCED REGERATIVE VALVE	31. CON. BLOCK ; ARTI VALVE
10. CONTROL VALVE	33. PROPORTIONAL V/V for ROTATING
11. BOOM CYLINDER	34. CON. BLOCK ; DOZER VALVE
12. ARM CYLINDER	35. OPT. PEDAL VALVE (ARTI. BOOM)
13. BUCKET CYLINDER	36. QUICK CLAMP VALVE
14. SWING DEVICE	39. ARTI. BOOM CYLINDER
15. TRAVEL DEVICE	41. ARTI. BOOM LOCK V/V
16. CENTER JOINT	42. DOZER CYL.
17. RESTRICTION VALVE	43. QUICK CLAMP
18. JOINT PLATE ASSY.	44. SMART BOOM VALVE
19. OIL COOLER	45. PROPORTIONAL V/V for TWO-WAY
20. FULL FLOW FILTER	46. OPT. Dozer VALVE
21. AIR BREATHER	47. PATTERN CHANGE VALVE
22. HYDRAULIC TANK	48. OPT. PEDAL V/V(Straight Travel)
	49. SLOW RETURN VALVE for ARTI.

OPTION	APPLIED PART
ONE-WAY ; JOYSTICK BOTTON	24 25 26 28
TWO-WAY ; JOYSTIC PPC SWITCH	24 25 26 28 45
ROTATING ; JOYSTIC PPC SWITCH	27 30 33
SMART BOOM	44
TWO PUMP	29
DOZER	31 42 46
QUICK CLAMP	36 43
ARTICULATED BOOM	34 35 39 41

FG023162

Figure 1

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DX140LC-3/DX180LC-3/DX225LC-3/DX255LC-3

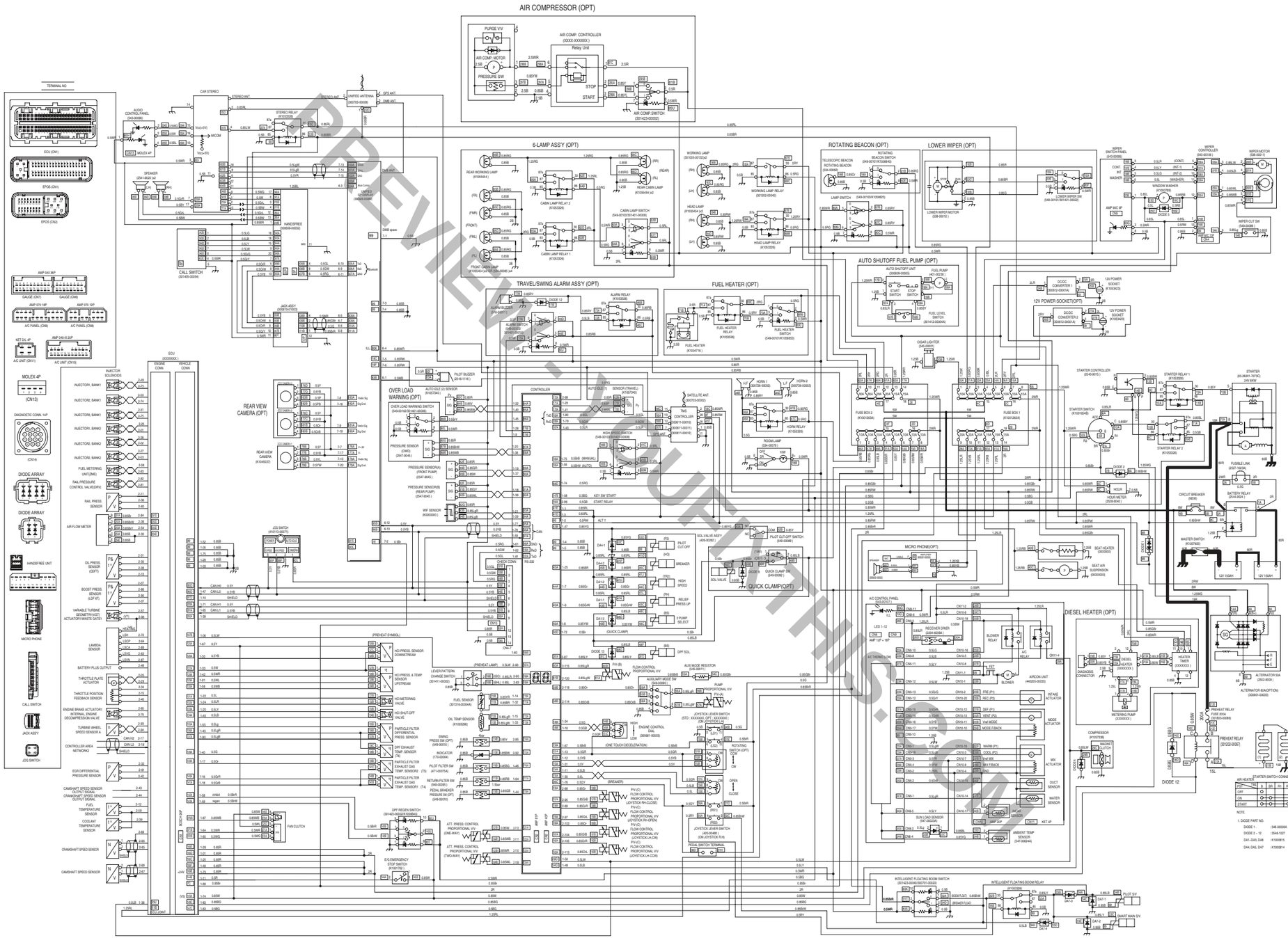


Figure 1

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GP Display Code	GP Display Description	Measuring Point	Correct Value		Remarks	
			Active	Passive		
E520625	Detection of Failed Engine Start	Internal fault			No torque limit	
E520626	Injection Bank	Refer to injector connector			No torque limit	
E520628	MU Hydrocarbon Dosing Valve	1.22, 1.24		R = 15.95 Ω ±5% (at 20°C)	Display code	
E520631	MU Downstream Pressure Sensor	1.56, 1.33	150 kPa (1.5 bar): V = 1.1 V (±20 kPa) 500 kpa (5 bar): V = 2.5 V (±20 kPa) (Supply voltage: 5 ±0.25 V)		Display Code	
E520633	ECU Power Stage Module	Internal fault			No Torque limit	
E520636	MU Upstream Pressure Sensor	1.30, 1.33	150 kPa (1.5 bar): V = 0.881 ±0.07 V 500 kpa (5 bar): V = 2.214 ±0.06 V (Ambient temperature 23 ±5 °C) (Supply voltage: 5 ±0.25 V)		Display code	
E000172	Air Mass Flow Sensor Temperature	2.38, 2.30		20°C: R = 3.511 kΩ ±2.68% 100°C: R = 0.178 kΩ ±2.28%	No torque limit	
E520637	Actuator Relay 0 Error	Internal fault			No torque limit	
E520638	Actuator Relay 1 Error	Internal fault			No torque limit	
E520639	Actuator Relay 2 Error	Internal fault			No torque limit	
E520640	Actuator Relay 3 Error	Internal fault			No torque limit	
E520601	ECU Hardware Chip CY320 Error	Internal fault			No torque limit	
E520641	Monitoring of Complete ROM Test	Internal fault			No torque limit	
E520642	ECU Shut Off Path Error	Internal fault			Torque limit level = 2	
E520643	Monitoring of Overrun	Internal fault			Display code	
E520644	Monitoring of Voltage Supply	1.49, 1.28			Display code	24V level
E520645	ECU Main Relay	1.69			No torque limit	Ignition switch on 24V
E520646	DPF Pressure Sensor Hose Line Check				No torque limit	
E520647	DPF Pressure Sensor Offset Diagnostic				No torque limit	

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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 (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 moving 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 drivetrain.	Replace broken gears and drivetrain assemblies.
	Overload.	Reduce load weight.

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Preservation/Storing Machine

Perform the following if storing excavator for more than one month.

Conditions	Maintenance Required
Cleaning	Pressure wash undercarriage and track assemblies. Inspect for damage or loose or missing parts.
Lubrication	Perform all daily lubrication procedures.
	Apply a coating of light oil to exposed plated metal surfaces, such as hydraulic cylinder rods, etc.
	Apply a coating of light oil to all control linkages and control cylinders (control valve spools, etc.)
Battery	Turn "OFF" the battery disconnect switch.
Cooling System	Inspect coolant recovery tank to make sure that antifreeze level in system is at correct level.
	Every 90 days, use a hydrometer to measure protection level of coolant. Refer to Operation and Maintenance Manual, to determine amount of protection cooling system requires. Add coolant as required.
Hydraulic System	Once a month, start engine and follow procedures in Operation and Maintenance Manual, listed in this manual.

1. Complete the preceding steps.
2. Wash machine and touch up paint finish to avoid rusting.
3. Treat exposed parts with antirust agent, lubricate machine thoroughly and apply grease to unpainted surfaces like lifting and tilting cylinders etc.
4. Fill fuel tank and hydraulic oil tank to "FULL" marks.
5. Cover exhaust pipe (parking outside).
6. Make sure that coolant is at proper concentration for expected lowest temperatures.
7. Park machine on level, firm ground where there is no risk of freezing, landslide or flooding. Avoid parking machine on a slope.

   Keep in mind that theft and burglary risk can be minimized by:

   - Removing starter key when the machine is left unattended.
   - Locking doors and covers after working hours.
   - Turning off electrical current with battery disconnect switch.
   - Park machine where risk of theft, burglary and damage is minimized.
   - Removing valuables from cabin such as cellular phone, computer, radio and bags.

See Operation and Maintenance Manual, for more information.

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REMOVAL

1. Park on firm and level ground.
2. Lower bucket or work tool to ground.
3. Stop engine.
4. Move safety lever to "RELEASED" (UNLOCK) position.
5. Turn starter switch to "I" (ON) position.

WARNING

AVOID DEATH OR SERIOUS INJURY

If engine must be running 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. To relieve pressure from accumulators, fully stroke work levers in all directions. Movement can occur.
7. Move safety lever to "LOCK" position.
8. Turn key to "O" (OFF) position and remove from starter switch.
9. Install 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 cabin is equipped with additional protective guards over cabin openings, they must be removed.*

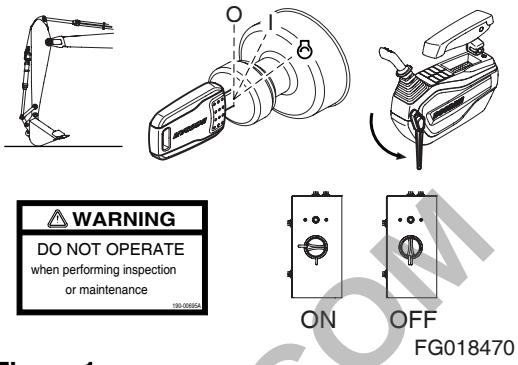


Figure 1

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ELECTRONIC HYDRAULIC CONTROL SYSTEM (EPOS)

Control System Schematic

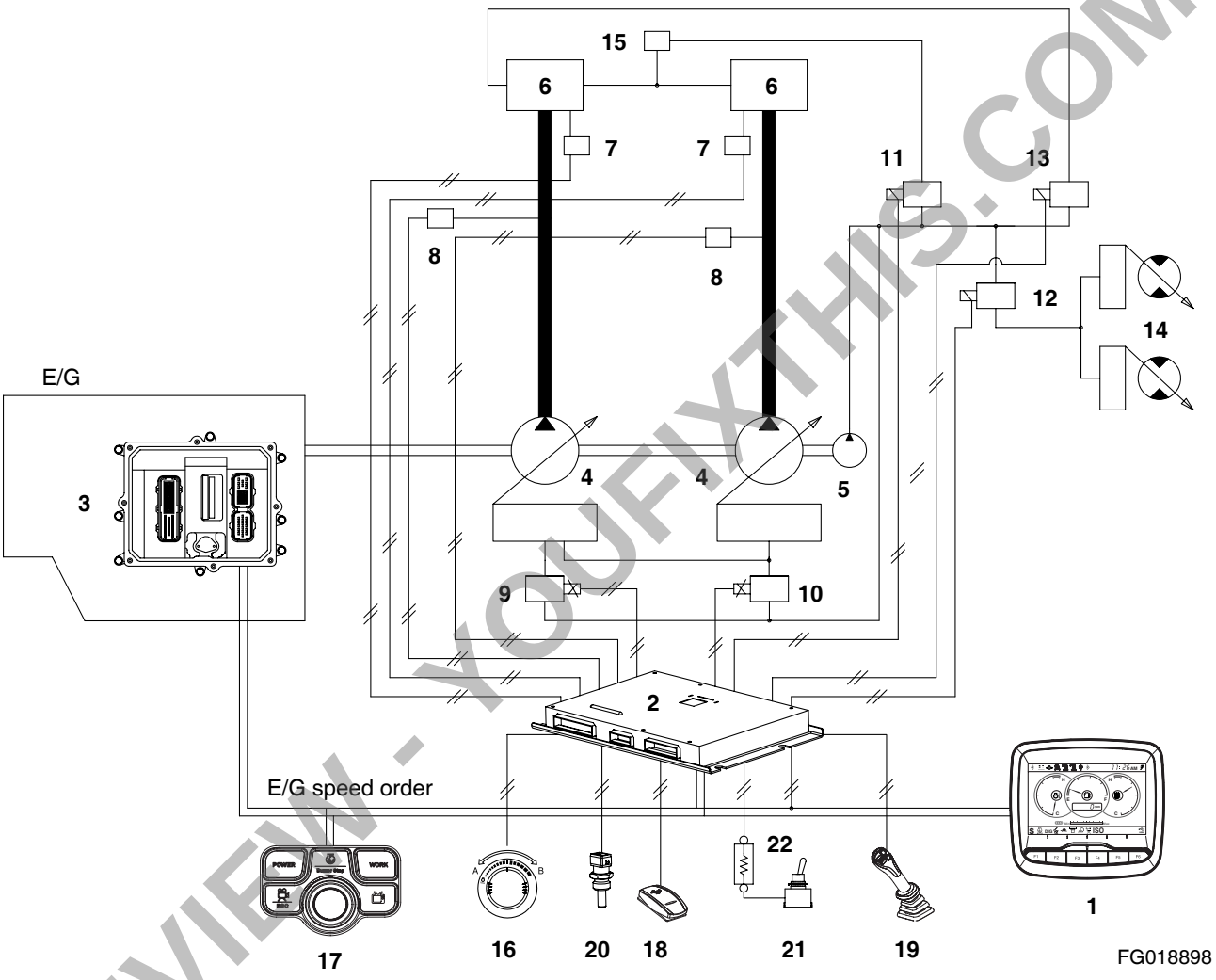


Figure 155

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Swing Device SP002498
Travel Device SP002514
Main Pump SP002531
Gear Pump SP002500
Main Control Valve SP002584
Remote Control Valve (Work Lever / Joystick) SP002395
Travel Control Valve (with Damper) SP002381
Solenoid Valve Assembly SP002406
Breaker EPPR Valve (Option) SP002458
Dozer Valve SP002529
Hydraulic Schematic (DX180LC-3) SP002532

Electrical System

Electrical System SP002337
Electrical Schematic SP002508

Attachments

Boom and Arm SP002533
Bucket SP002506

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- Stay away from areas that might have asbestos particles in air.

Silica Dust Information

WARNING

AVOID DEATH OR SERIOUS INJURY

Avoid exposure to dust containing crystalline silica particles as it can cause serious injury to the lungs (silicosis).

Cutting or drilling concrete containing sand or rock containing quartz can result in exposure to silica dust. Do not exceed Permissible Exposure Limits (PEL) to silica dust as determined by OSHA or other work site rules, laws and regulations. Use a respirator, water spray or other means to control dust. Silica dust can cause lung disease and is known to the state of California to cause cancer.



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Figure 57

Disposal of Hazardous Materials

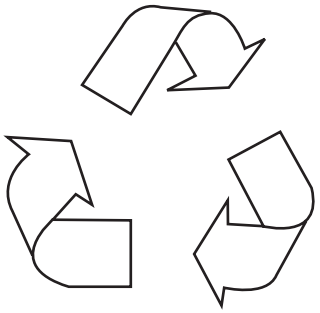
Physical contact with used motor oil or gear oil could create a health risk. Wipe oil from your hands promptly and wash off any remaining residue.

Used motor oil or gear oil is an environmental contaminant and should only be disposed of at approved collection facilities. To prevent pollution of environment, always do the following:

- Never dump waste oil in a sewer system, rivers, etc.
- Always put drained oil from your machine in approved, leak proof containers. Never drain oil directly onto ground.
- Obey appropriate laws and regulations when disposing of harmful materials such as oil, fuel, solvent, filters, and batteries.

Improperly disposing of waste can threaten environment. Potentially harmful fluids must be disposed of according to local regulations.

Use all cleaning solutions with care. Report all necessary repairs.



FG009156

Figure 58

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Tightening Torque Specifications (Metric)

(For coated threads, prelubricated assemblies.)

IMPORTANT

Disassembly, overhaul and replacement of components on the machine, installation of new or replacement parts and/ or other service-related maintenance may require the use of thread or flange sealing assembly compound.

Use the information on this page as a general guide in selecting specific formulas that will meet the particular requirements of individual assembly installations. *DOOSAN* does not specifically approve a specific manufacturer or brand name, but the following table of "Loctite" applications is included for which cross-references to other manufacturer's products should also be widely available.

IMPORTANT

Use primer "T" or "N" for all cold weather assembly of fastener adhesives, with Threadlocker sealers 222, 242/243, 262, 271, 272, or 277.

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Track Assembly

Edition 1

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SAFETY INSTRUCTIONS

WARNING

AVOID DEATH OR SERIOUS INJURY

Instructions are necessary before operating or servicing machine. Read and understand the Operation and Maintenance Manual and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments repairs or service. Untrained operators and failure to follow instructions can cause death or serious injury.

APPLICABLE MODELS

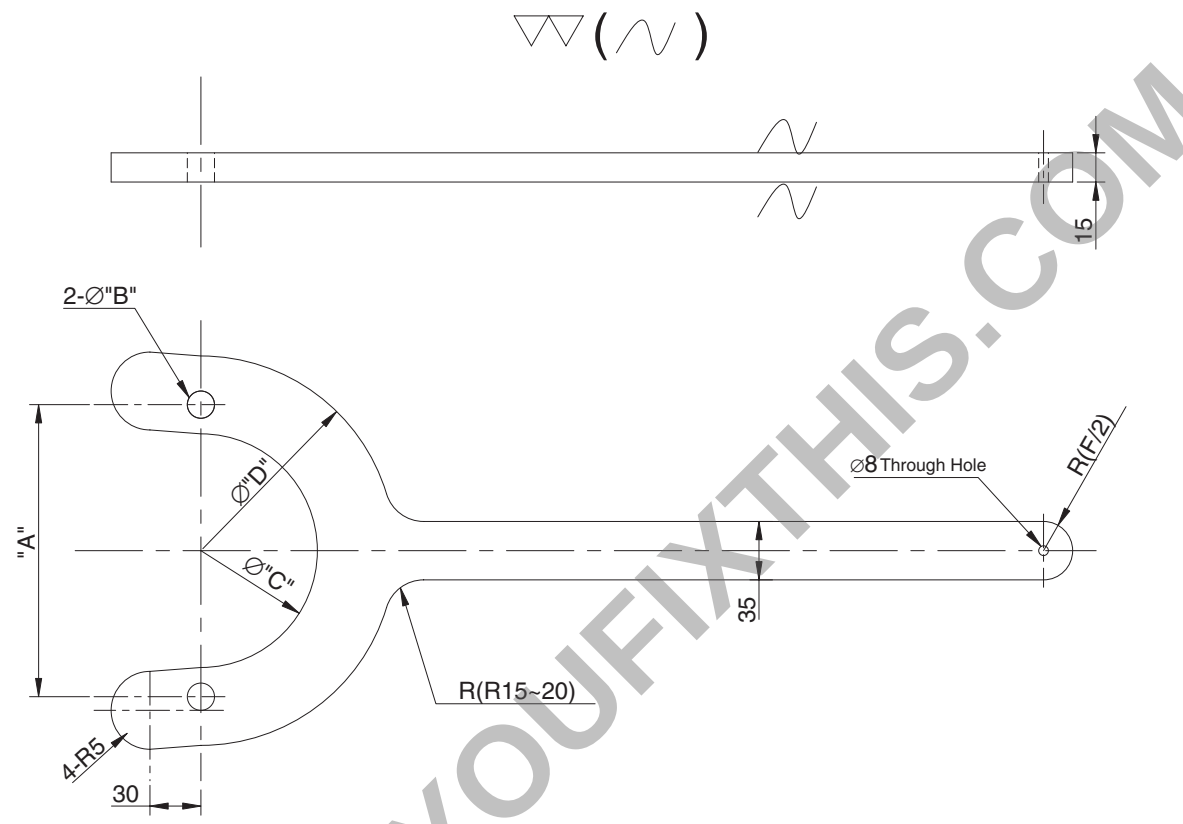
The contents of this section apply to the following models and serial number ranges.

MODEL	SERIAL NUMBER RANGE
DX140LC-3	1001 and Up, 50001 and Up
DX180LC-3	1001 and Up, 50001 and Up

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Piston Jig



ARS4740L

Figure 8

Material SM45C (AISI 1045)

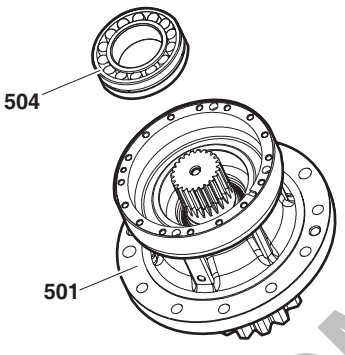
Rockwell Hardened from 22 - 27

Oil Quench

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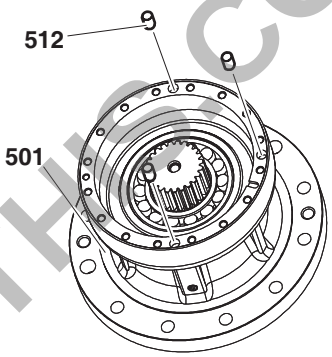
6. Install the taper roller bearing (504) with a using of tool.



FG022466

Figure 69

7. Assemble pins (512) with casing (501).



FG022455

Figure 70

8. Apply sealant evenly to ring gear assembly.

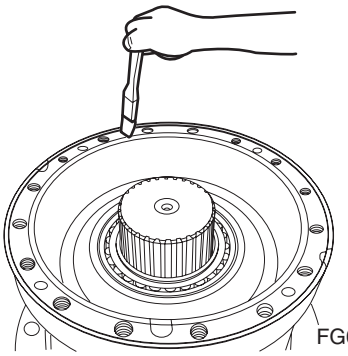
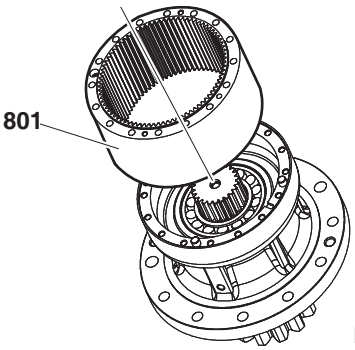

FG022467

Figure 71

9. Lift ring gear (801) with hoist, wipe its mating surface clean with cloth, Match and align holes and attach to casing.



FG022468

Figure 72

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Main Pump

Edition 1

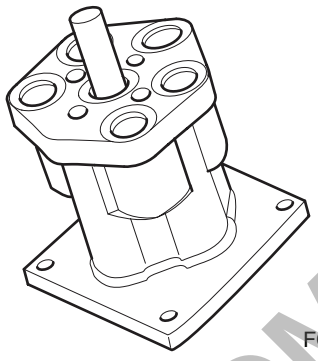
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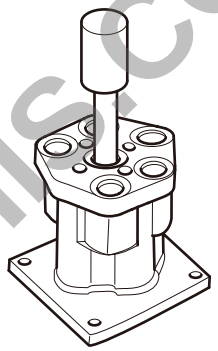
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2. Install bushing (3) into case (1) using jig.



FG013506

Figure 17

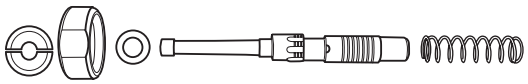


FG013508

Figure 18

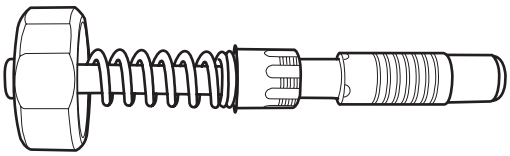
3. Take care when assembling spool kit assemblies (1 and 3, 2 and 4). (They must be assembled in same way).

   The assembly order is; spool (4), shim (5), spring (6), spring seat (7), and stopper (8).



FG013509

Figure 19



FG013503

Figure 20

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DISASSEMBLY AND ASSEMBLY
TOOLS

Part No.	Tool	Specification	Remarks
15	Torque Wrench	L35 mm	150 kg/cm^2
17	L Wrench	10 mm	
18	L Wrench	15 mm	
19	Wrench	8 mm	

DISASSEMBLY

1. Separate the boot (22).

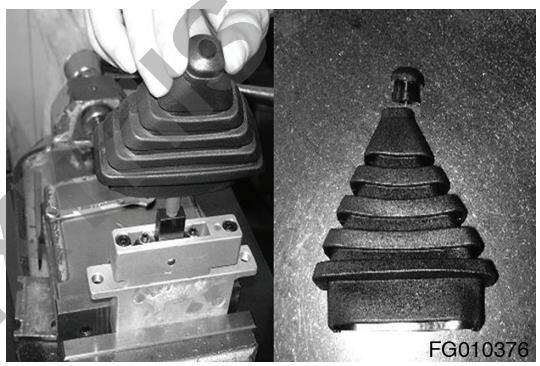


Figure 4

2. Remove pin (17) and separate the lever (20).

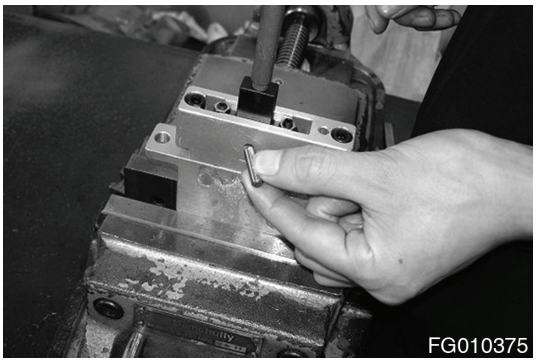


Figure 5

3. Loosen the wrench bolt (15) and separate the cover (14).

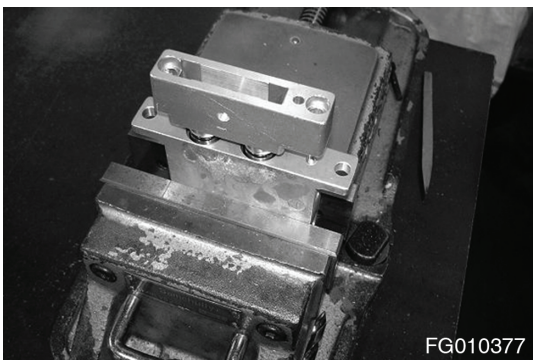


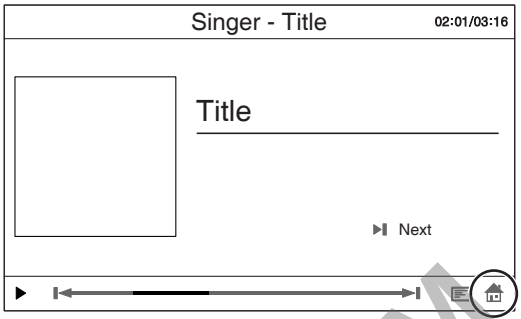
Figure 6

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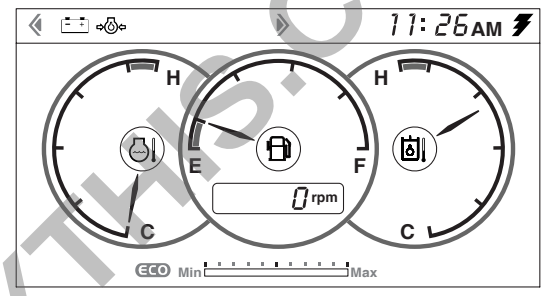
Background MP3 Play

Position the cursor on the Home button and pressing the jog switch, MP3 is played by the initial screen.



FG020130

Figure 77



FG018118

Figure 78

4. GP Configuration

This menu is used to set up password, brightness, default screen and time, and to input service phone number. Turn the jog switch and move the cursor to see an reversed display on the desired menu. Then, click on the jog switch to select the menu.

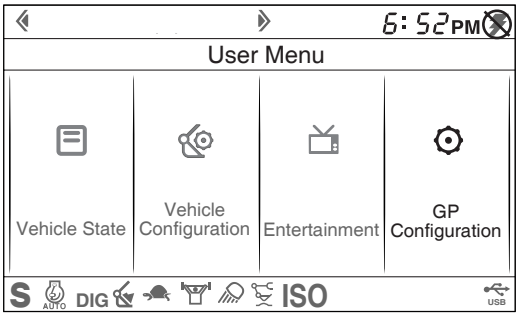
Password Setting ↔ Brightness Setting ↔ Default Screen Setting ↔ Default Power Mode Setting ↔ Time Setting ↔ Service Phone Number Setting ↔ Unit Setting ↔ Language Setting ↔ Notification Setting ↔ Entertainment Use Setting

Press the ESC button to return to previous screen.

A. Password Setting

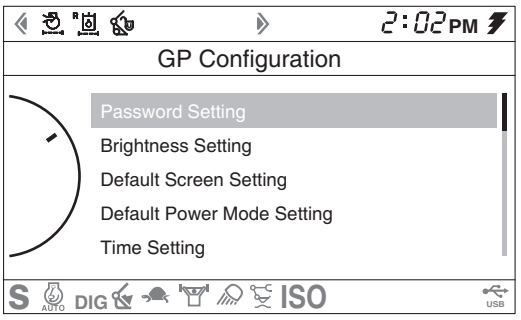
The owner and user password can be set.
(Only the owner password is selected for password setting, when the product is delivered first.)

Machine start-up and function use can be managed, using the password setting function.



FG018521

Figure 79



FG022138

Figure 80

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2. Turn marked knobs at the rear side of the cabin to open the cover.
3. Remove filter attached to the cover and clean the contaminated filter using compressed air.
4. Close the cover, replace the knobs, and secure the cover to the support with butterfly bolts.

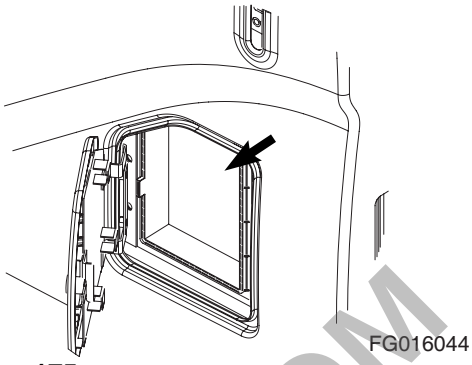


Figure 175

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