GENERAL SPECIFICATIONS

Shipping Weight	14.4 metric tons (31,568 lb), includes 10% fuel, 4,600 mm (15' 1") boom, 2,500 mm (8' 2") arm, standard backhoe bucket and standard shoes
Operating Weight	Add weight of full fuel tank and operator
Shipping Weights With Optional Track Shoes	Subtract 210 kg (463 lb) for 500 mm (19.7") shoes
	Add 210 kg (970 lb) for 700 mm (34") shoes
Major Component Weights	Standard Boom 756 kg (1,667 lb)
	Two Piece Boom : 970 kg (2,138 lb)
	2,100 mm (6' 11") Arm 367 kg (809 lb)
	2,500 mm (8' 2") Arm 412 kg (908 lb)
	3,000 mm (9' 10") Arm 450 kg (992 lb)
	Boom Cylinders 122 kg (269 lb) each
	Arm Cylinder 145 kg (320 lb)
	Bucket Cylinder 92 kg (207 lb)
	Counterweight 3,100 kg (6,830 lb)
	Upper Turntable 4,100 kg (9,039 lb)
	Lower - below Swing Bearing LC 5,300 kg (11,685 lb), STD 4,800 kg (10,582 lb)
Digging Forces (At Power Boost):	
Bucket Cylinder	94 KN or 9,600 kg (21,200 lb) - (with either 3,000 mm [9' 10"] or 2,500 mm [8' 2"] or 2,100 mm [6' 11"] arm)
Arm Cylinder	62 KN or 6,300 kg (13,900 lb) with 2,500 mm (8' 5") standard arm
Fuel Tank Capacity	235 liters (62.3 U.S. gal)
Hydraulic System Capacity	131 liters (34.6 U.S. gal)
Hydraulic Reservoir Capacity	93.5 liters (24.7 U.S. gal)
Bucket Heaped Capacity Range	PCSA 0.24 - 0.76 m^3 (0.31 - 0.99 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 (23.5") - standard
	700 mm (28") - optional
	500 mm (19.7") - optional
Ground Pressure Ratings:	
Standard 600 mm (23.6") shoe -	0.40 kg/cm^2 (5.7 psi)
Optional 700 mm (28.0") shoe -	0.34 kg/cm^2 (4.8 psi)
Optional 500 mm (19.7") shoe -	0.43 kg/cm^2 (6.8 psi)
Optional Dozer Blade Sizes	2,490 mm (8' 2") with 500 mm (19.7")
	2,590 mm (8' 6") with 600 mm (23.5")
	2,690 mm (8' 10") with 700 mm (28")
Transport Dimensions	
Overall Shipping Length (standard boom and arm)	7,230 mm (23' 9")
Overall Shipping Width (standard shoes)	2,590 mm (8' 6")

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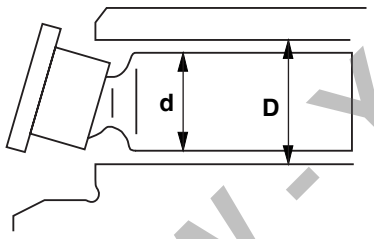
PUMP MAINTENANCE CRITERIA

Worn Part Replacement Criteria

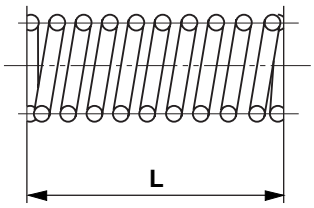
When a part exceeds any of the following criteria, replace of readjust it.

However, when a part is damaged seriously in appearance, replace it without fail.

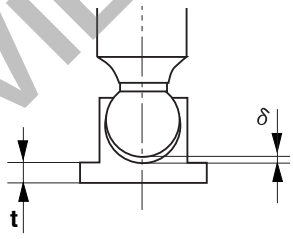
Part name & inspection	Standard Dimension / Recommended replacement vale Pump type K7V63	Countermeasures
Clearance between Piston & cylinder bore (D-d)	0.032 / 0.056	Replace piston or cylinder.
Play between piston & shoe0calking section (δ)	0~0.1 / 0.3	Replace assembly of piston & shoe.
Thickness of shoe (t)	3.9 / 3.7	Replace assembly of piston & shoe.
Free height of cylinder spring (L)	41.1 / 40.3	Replace cylinder spring.
Combined height of set plate & spherical bush (H-h)	17.0 / 15.8	Replace set plate or spherical bush



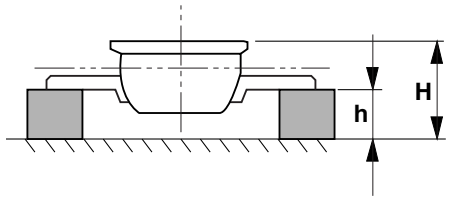
Clearance between piston & cylinder bore (D-d)



Free height of cylinder spring : L



Play between piston & shoe : δ
Thickness of shoe : t



Combined height of set plate & spherical bush : H-h

FG015048

Figure 24

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Assembling Sub Spool

1. Insert the spool assembly into the original place.
2. Insert the spring.
3. Insert the plug [attached with the O-ring, and tighten the plug.

   Torque: 103~113N•m.

Assembling Main Spool

1. Insert the O-ring into the valve housing.
2. Install the short cap] in the straight travel spool.

   Install to other spools.

   Insert the socket head bolt into the short cap, and tighten it.

   Torque: 20~25N•m.
3. As a sub-assembly, insert the spools into their respective (original) holes.
4. Install the long cap in the straight travel spool [10].

   Install the long cap in the other spools.

   Insert the socket head bolt into the long cap, and tighten it.

   Torque: 20~25N•m.

⚠ CAUTION

When inserting the cap, be careful not to allow the O-ring to separate on the contact surface.

Assembling Other Plugs

1. Insert the plug assembly assembled with the O-ring.

   Torque: 205~227N•m.
2. Insert the plug assembly assembled with the O-ring.

   Torque: 73~79N•m.
3. Insert the plug assembly assembled with the O-ring.

   Torque: 13.5~16.5N•m.
4. Insert the plug assembly assembled with the O-ring.

   Torque: 103~113N•m.
5. Insert the plug assembly assembled with the O-ring.

   Torque: 116~128N•m.
6. Insert the plug assembly assembled with the O-ring.

   Torque: 49~59N•m.
7. Insert the plug assembly assembled with the O-ring.

   Torque: 19~22N•m.

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Code	Failure Component	Measuring Points	FMI	Operation when failure occurs	Trouble shooting
E0234	Crank/Cam sensor defect		0	Excess of engine permitted rpm	Operator's training
E0238	Sensor supply circuit 3 defect	1-16	4		
E0271	Fuel pump circuit defect	1-2, 1-32	4	Engine output fall, abnormal operation	Check related circuit, connector and sensor
E0272	Fuel pump circuit defect	1-2, 1-32	3	Engine output fall, abnormal operation	Check related circuit, connector and sensor (ECM)
E0281	Fuel pump defect		7		
E0285	SAE J1939 communication time-out		9		
E0287	SAE J1940 communication time-out		13		
E0319	Present time misrepresentation	1-35, 1-42	2		
E0322	Injector circuit no.1 defect	1-45, 1-53	5	Injector no.1 stop	Check related circuit, connector and sensor
E0323	Injector circuit no.5 defect	1-46, 1-60	5		
E0324	Injector circuit no.3 defect	1-55, 1-52	5		
E0325	Injector circuit no.6 defect	1-57, 1-59	5		
E0331	Injector circuit no.2 defect	1-54, 1-51	5		
E0332	Injector circuit no.4 defect	1-56, 1-58	5		
E0334	Engine coolant temperature defect	1-15, 1-38	2		
E0342	Discordance of electronic compensation code		13		
E0343	ECU internal hardware warning defect		12	Periodic engine output fall	Check related circuit, connector and sensor (ECM)
E0351	Injector power supply defect		12		
E0352	Sensor supply circuit 1 defect	1-33, 1-38	4	Engine output fall	Check related circuit, connector and sensor (ECM)
E0386	Sensor supply circuit 1 defect	1-33, 1-38	3	Engine output fall	Check related circuit, connector and sensor (ECM)
E0415	Engine oil pressure defect		1	Engine protecting function activation	
E0431	Accelerator pedal idle switch defect	1-1, 1-11	2	N/A	Check related circuit, connector and sensor (ECM)
E0432	Accelerator pedal idle switch defect	1-1, 1-11	13		Check related circuit, connector and sensor (ECM)

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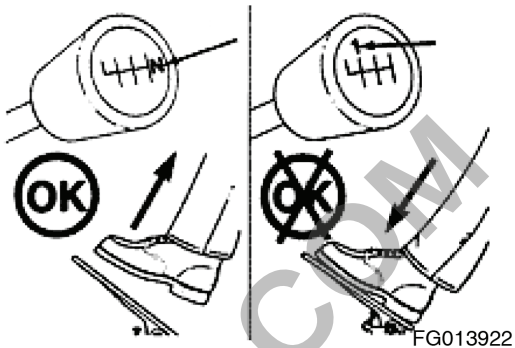
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Normal Starting Procedure

General Information

⚠ WARNING!

Do not depress the accelerator pedal or move the accelerator lever from the idle position while cranking the engine. This can result in engine overspeed and severe damage to the engine.



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Figure 21

⚠ CAUTION!

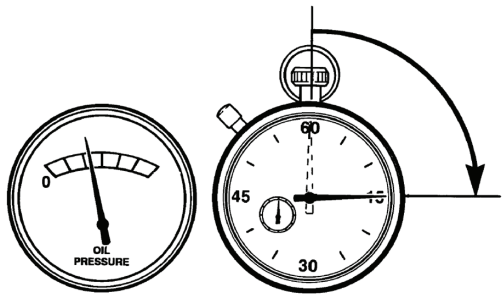
To prevent damage to the starting motor, do not engage the starting motor for more than 30 seconds. Wait 2 minutes between each attempt to start (electrical starting motors only).

NOTE: *Engines equipped with air starting motors require a minimum of 480 kPa (70 PSI).*

- Disengage the driven unit, or if equipped, put the transmission in neutral.
- With the accelerator pedal or lever in the idle position, turn the key switch to the ON position, and wait for the WAIT-TO-START lamp to go out; then, turn the key to the START position.
- If the engine does not start after three attempts, check the fuel supply system. Absence of blue or white exhaust smoke during cranking indicates no fuel is being delivered.

⚠ CAUTION!

The engine must have adequate oil pressure within 15 seconds after starting. If the WARNING lamp indicating low oil pressure has not gone out or there is no oil pressure indicated on a gauge within 15 seconds, shut off the engine immediately to avoid engine damage. The low oil pressure troubleshooting procedure is located in "Troubleshooting Symptoms" on page-195.



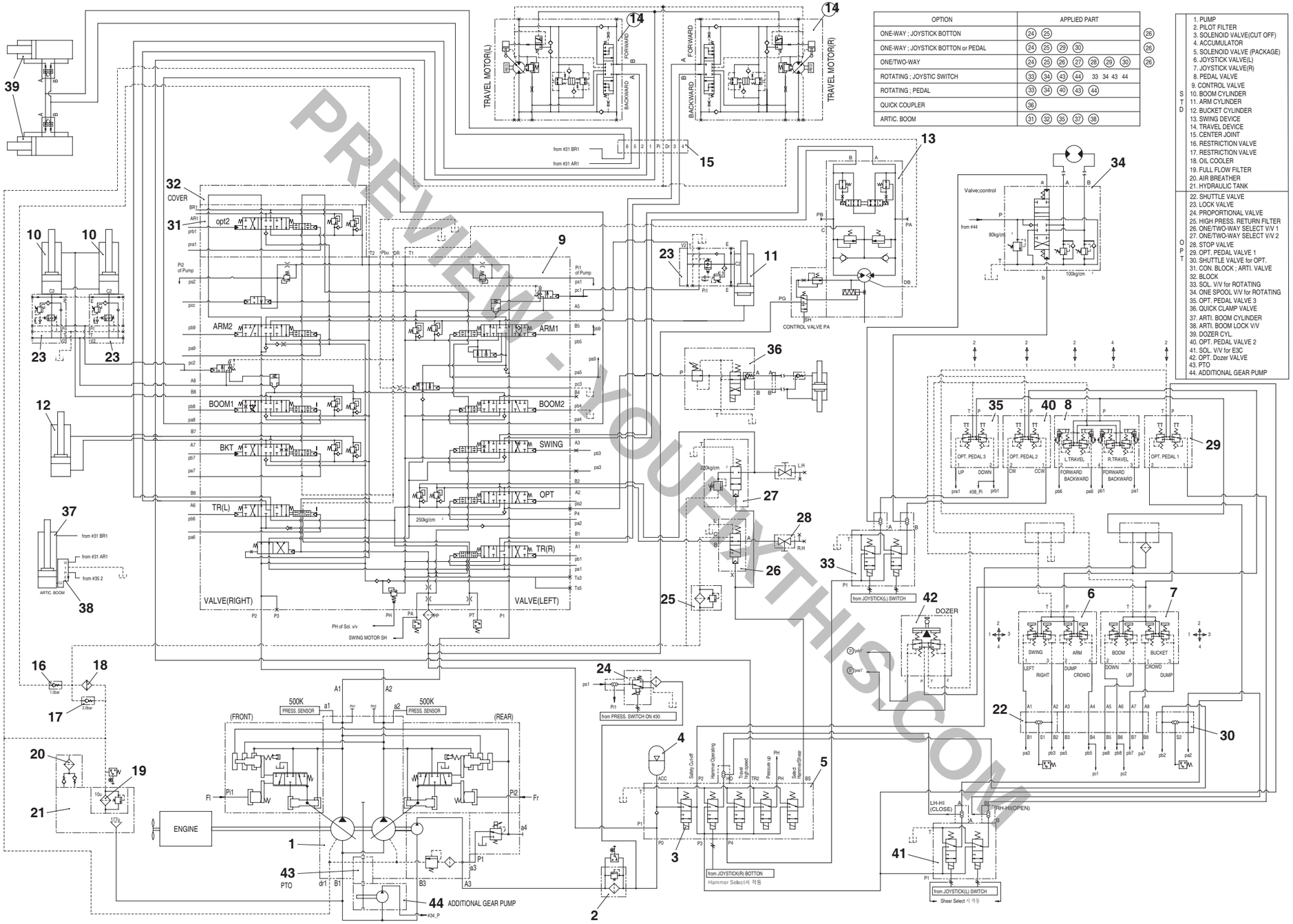
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Figure 22

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OPTION	APPLIED PART
ONE-WAY ; JOYSTICK BOTTON	(24) (25) (26)
ONE-WAY ; JOYSTICK BOTTON or PEDAL	(24) (25) (29) (30) (26)
ONE/TWO-WAY	(24) (25) (26) (27) (28) (29) (30) (26)
ROTATING ; JOYSTIC SWITCH	(33) (34) (43) (44) 33 34 43 44
ROTATING ; PEDAL	(33) (34) (40) (43) (44)
QUICK COUPLER	(36)
ARTIC. BOOM	(31) (32) (35) (37) (38)

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. CONTROL VALVE
10. BOOM CYLINDER
11. ARM CYLINDER
12. BUCKET CYLINDER
13. SWING DEVICE
14. TRAVEL DEVICE
15. CENTER JOINT
16. RESTRICTION VALVE
17. RESTRICTION VALVE
18. OIL COOLER
19. FULL FLOW FILTER
20. AIR BREATHER
21. HYDRAULIC TANK

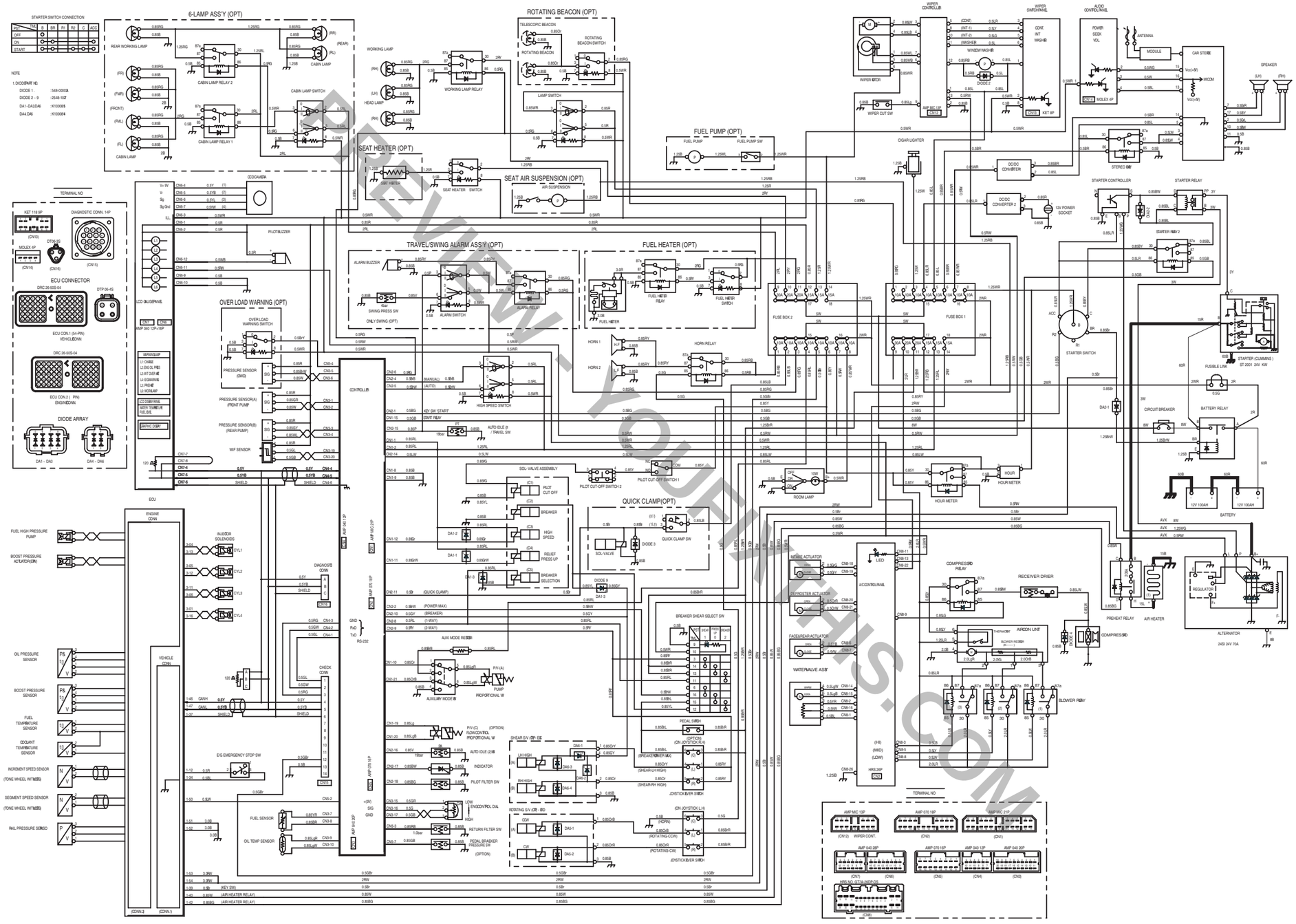
OPT
22. SHUTTLE VALVE
23. LOCK VALVE
24. PROPORTIONAL VALVE
25. HIGH PRESS. RETURN FILTER
26. ONE/TWO-WAY SELECT V/V 1
27. ONE/TWO-WAY SELECT V/V 2
28. STOP VALVE
29. OPT. PEDAL VALVE 1
30. SHUTTLE VALVE for OPT.
31. CON. BLOCK ; ARTI. VALVE
32. BLOCK
33. SOL. V/V for ROTATING
34. ONE SPOOL V/V for ROTATING
35. OPT. PEDAL VALVE 3
36. QUICK CLAMP VALVE
37. ARTI. BOOM CYLINDER
38. ARTI. BOOM LOCK V/V
39. DOZER CYL.
40. OPT. PEDAL VALVE 2
41. SOL. V/V for E3C
42. OPT. Dozer VALVE
43. PTO
44. ADDITIONAL GEAR PUMP

FG015006

Figure 1

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FG015102

Figure 1

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