CEBM004302

Shop Manual

KOMATSU®

D32E/P-1A
D38E/P-1A
D39E/P-1A

CRAWLER TRACTOR

	D32E/P-1A	- P076093	
SERIAL NUMBERS	D38E/P-1A	- P086239	and UP
	D39E/P-1A	- P096338	

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SPECIFICATIONS

D32E/P-1A

	Model				Unit	D32E-1A	D32P-1A
	Serial Number					P076093	P076093
Weights	Operating weight w/o operator # # Includes blade equipment, ROPS, cab, standard equipment and full capacity of lubricants, coolant and fuel				kg	7190	7810
	Blade equipment				kg	1203	1245
	Ripper equipment				kg	430	---
	Each additional shank				kg		---
Performance	Minimum turning radius				mm		
	Grade ability				degrees	°	°
	Travel speeds	Forward	1st		km/h	3.2	3.2
			2nd		km/h	5.4	5.4
			3rd		km/h	8.9	8.9
		Reverse	1st		km/h	3.9	3.9
			2nd		km/h	6.5	6.5
			3rd		km/h	10.5	10.5
	Drawbar pull				kg	11687	11687
	Ground pressure	381 mm shoe			kg/cm²	0.51	---
		432 mm shoe			kg/cm²		---
		610 mm shoe			kg/cm²	---	0.31
		Swamp shoes			kg/cm²	---	
Dimensions						See Dimensional Drawings	
Engine	General	Model				Komatsu 4D102E-1 Diesel Engine	
		Type				Four stroke cycle, water cooled, emisionized diesel engine	
		No. of cylinders, bore x stroke			mm	4 = 102 x 120	
		Displacement			L	3.9	
	Performance	Rated power			kW	52 @ 2500 RPM	
		Maximum torque			N•m	268 @ 1200 RPM	
		High idle speed				2650 to 2780 RPM	
		Low idle speed				830 to 1030 RPM	
Electrical	Starting motor					12V	
	Alternator					12V @ 62A	
	Batteries				Standard	12V x 1 @ 700 CCA	
					Optional	12V x 1 @ 950 CCA	
Power Train	Torque converter				mm	280 single stage with a 2.16 to 1 stall ratio	
	Transmission					Countershaft type power shift, hydraulically controlled and actuated with 3 speeds in each direction	
	Steering drive					Wet type brake and drive discs hydraulically applied and released	
	Final drive					Spur gear single reduction	

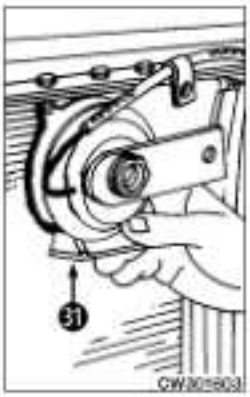
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RIPPER CIRCUIT WEAK OR SLOW	
1. Worn piston packing.	Refer to Piston Packing Test.
2. Internal leak in control valve.	Refer to Piston Packing Test.
MOMENTARY DROP WHEN CIRCUIT ACTIVATED FROM HOLD	
1. Scored or worn load check and/or seat.	Replace.
2. Load check held off its seat.	Clean system. Check for foreign matter.
3. Broken or spent load check spring.	Replace.
OIL OVER HEATING	
1. Excessive feathering of controls.	Review instruction in Operation & Maintenance Manual.
2. Control linkage binding not allowing valve to center.	Repair.
3. Using very light oil in a hot climate.	Use oil per Operation & Maintenance Manual.
4. Dirty return filter in reservoir.	Replace.
5. Oil level to low.	Fill per Operation & Maintenance Manual.
6. Low main relief valve pressure.	Refer to Main Relief Valve Pressure Test.
7. High main relief valve pressure.	Refer to Main Relief Valve Pressure Test.
8. Pump worn or damaged.	Repair or replace.
SHORT LIFE OF PUMP	
1. High main relief valve pressure.	Refer to Main Relief Valve Pressure Test.
2. Aeration or cavitation.	Refer to Noisy Operation/Oil Foaming.
3. Incorrect pump assembly.	Disassemble and correct.

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27. Remove the horn and bracket ㉛ from the main frame.

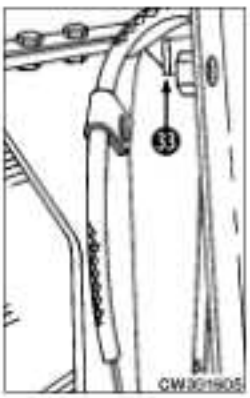
28. Disconnect the wiring lead ㉜ at the horn terminal. 2





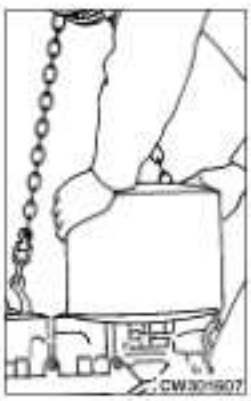
29. Unclip ㉝ the horn harness at the top and bottom corners of the radiator.

★ Tape a feeder line of sufficient length to the horn harness. From the engine side of the radiator, pull the horn harness through. Remove the feeder line from the harness and position out of the way.

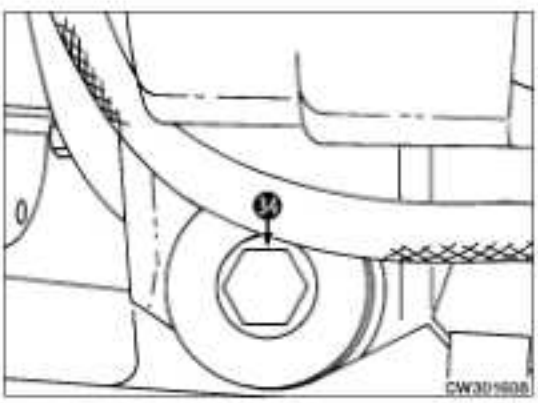




30. Attach a load leveler **D1** with hoist to the engine lifting brackets. Rotate the muffler for additional clearance. 3



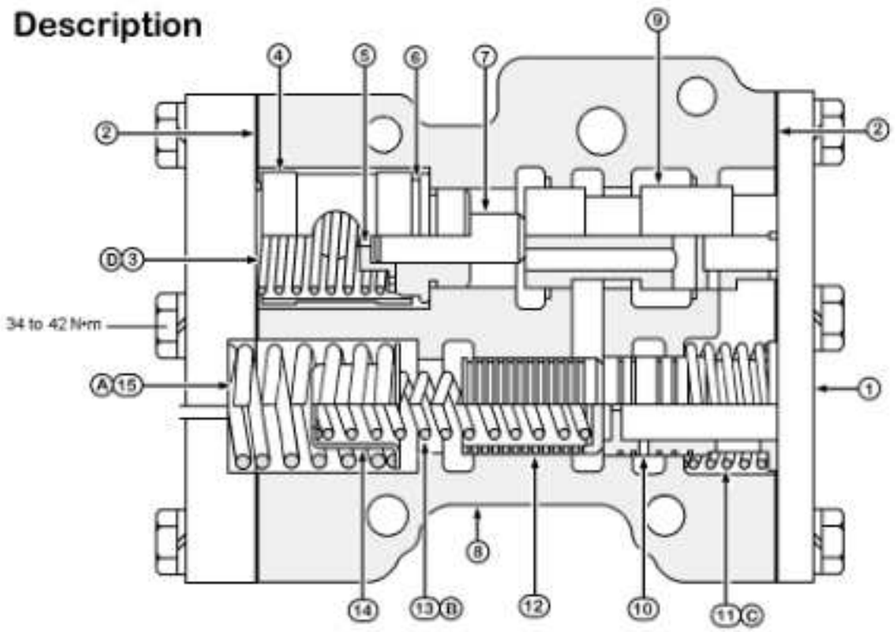
31. Remove the rear engine mounting bolt ㉞ from each side of the machine.



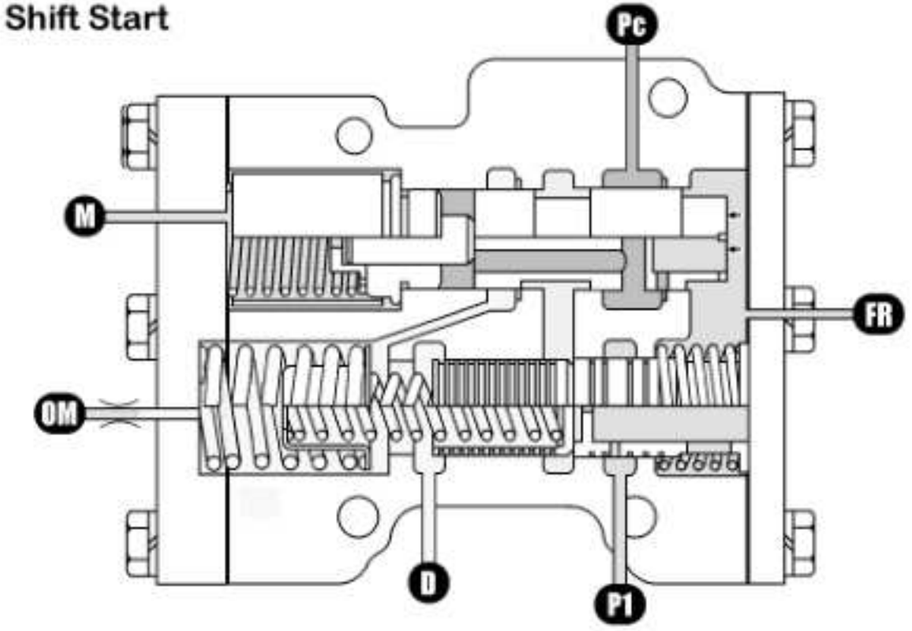
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RATE OF RISE VALVE

Description



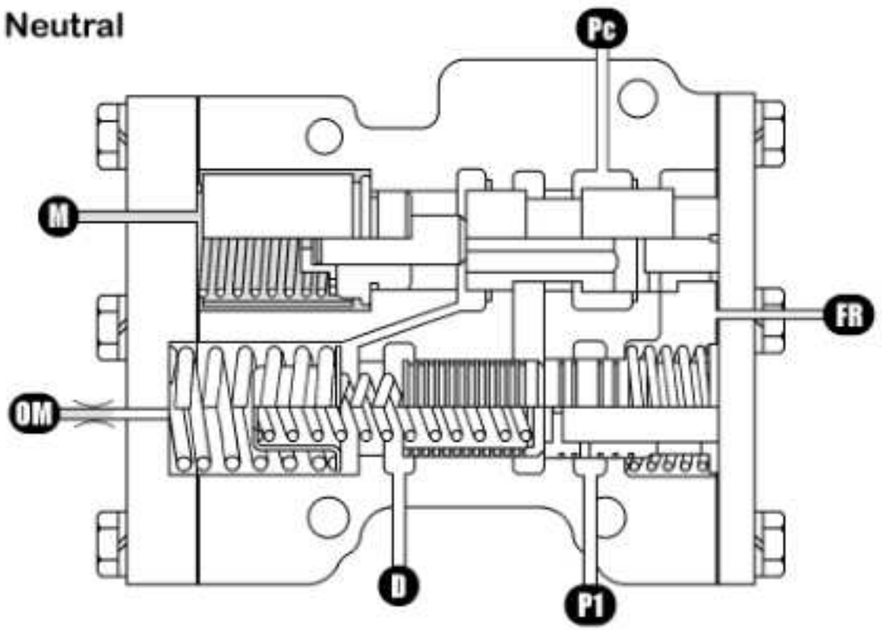
Shift Start



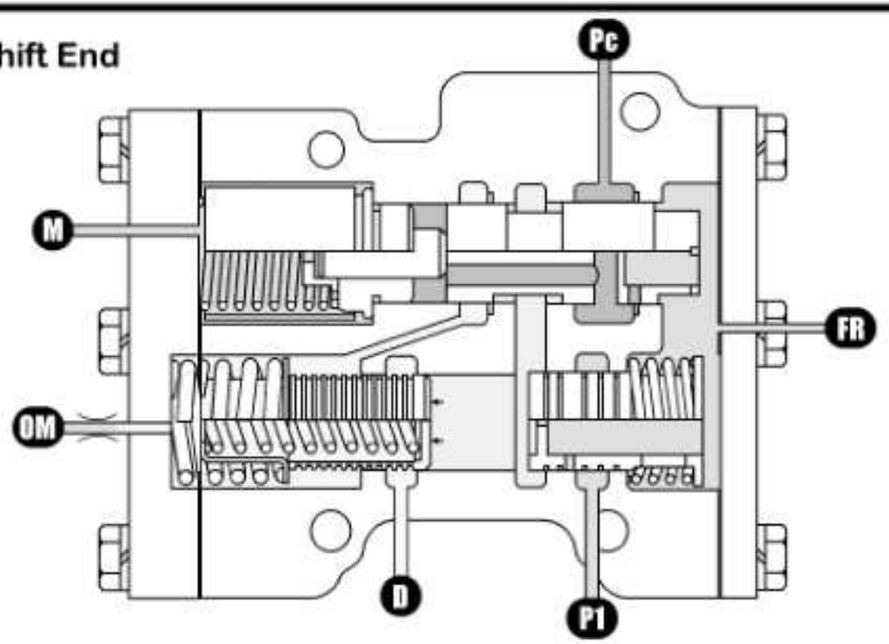
Main Pressure
Range Clutch Pressure
Signal Pressure
Orificed Pressure

Main Oil Pressure
Orificed Main Oil Pressure
Drain Port
Oil Pressure from Short Directional Spool
Oil Pressure to Directional Spool
Oil Pressure to Range Spools

Neutral



Shift End



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