

Medium & Heavy Duty Diesel

PERKINS

GENERAL SPECIFICATIONS							
Engine	Cycle	Displ. Cu. Ins.	Compr. Ratio	Bore	Stroke	Firing Order	Inj. Timing ①
6-354	4	354"	16.0:1	3.875"	5.00"	1,5,3,6,2,4	24.0°

① — Unless noted otherwise, all Injection Timing is BTDC.

NORMAL OPERATING SPECIFICATIONS						
Engine	Idle RPM	Max. RPM	Oil Temp.	Oil Press.	Coolant Temp.	Compression Pressure (PSI) @ RPM (Sea Level)
6-354	500-550	3100	.....	25-50	.....	430@375

VALVES & SEATS								
Engine	Head Diameter	Face Angle	Seat Angle	Seat Width	Stem Diameter	Stem Clearance	Valve Seat Insert O.D.	Valve Clearance
6-354								
Int.	45°	45°	.094"	.3725-.3735"	.0015-.0035"	.....	.010"
Exh.	45°	45°	.109"	.3720-.3730"	.0020-.0040"	.....	.010"

VALVE SPRINGS			
Engine	Free Length	Compressed Length	Lbs. @ Comp. Length
6-354			
Inner	1.5625"	13.4-17.4
Outer	1.7800"	38-42

CAMSHAFT			
Engine	Journal Diam.	Clearance	Lobe Lift
6-354			
No.1	1.9965-1.9975"	①.0025-.0055"	.3005-.3035"
No.2	1.9865-1.9875"		
No.3	1.9765-1.9775"		
No.4	1.9665-1.9675"		

① — No. 1 journal only is .0025-.0045".

ROCKER ARMS & VALVE BRIDGES						
Engine	Rocker Shaft O.D.	Rocker Arm I.D.	Rocker Arm Clearance	Bridge Guide O.D.	Bridge I.D.	Bridge Height Above Head
6-354	.7485-.7495"	.7505-.7520"	.0010-.0035"

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CRANKSHAFT & MAIN BEARINGS						
Engine	Journal Diameter	Bearing Clearance	Crankshaft End Play	Thrust Location	Thrust Washer Thickness	Number of Main Bearings
6-354	2.9985-2.9990"	.0025-.0045"	.002-.014"	4	.089-.091"	7

PISTONS, PINS, RINGS						
Engine	PISTONS Clearance	PINS		RINGS		
		Piston Fit	Rod Fit	Rings	End Gap	Side Clearance
6-354	.0059-.0074"	Push Fit	.00075-.00170"	1	.015-.019"	.0019-.0039"
				2	.011-.016"	.0019-.0039"
				3	.011-.016"	.0019-.0039"
				4	.011-.016"	.0025-.0045"
				5	.011-.016"	.0025-.0045"

CYLINDER LINER & BORE			
Engine	Type	Liner Bore	Liner Protrusion
6-354	Dry	3.8770-3.8785"	⊙.030-.035"

CONNECTING RODS & BEARINGS			
Engine	Journal Diameter	Bearing Clearance	Sideplay
6-354	2.4990-2.4995"	.0015-.0030"	.0095-.0130"

⊙ Engine No. 8123411 is flush to .010" below face of block.

OIL PUMP SPECIFICATIONS	
Type	Rotor
Outer Rotor Diameter	2.2530-2.2540"
Rotor Shaft Bore Diameter .....	.6875-.6885"
Rotor Shaft Diameter .....	.6855-.6860"
Shaft Clearance .....	.0015-.0030"
Rotor Depth	2.1250-2.1260"
Clearance Between Inner and Outer Rotors .....	.0040"
Rotor End Clearance .....	.0025"

TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs.
Cylinder Head Nuts⊙	
7/16"	55-60
1/2"	75-80
Main Bearing Cap Bolts	145-150
Connecting Rod Cap Nuts	65-70
Flywheel-to-Crankshaft Bolts	75
Crankshaft End Bolt	250
⊙ - See cylinder head tightening sequence.	

