

6 1980 Medium & Heavy Duty Gas

FORD MOTOR CO.

GENERAL SPECIFICATIONS						
Engine	Net HP At RPM	Torque (Ft. Lbs. at RPM)	Compr. Ratio	Bore	Stroke	Displ. Cu. Ins.
300"	4.00"	3.98"	300"
370" 2V	4.05"	3.59"	370"
370" 4V	4.05"	3.59"	370"
429"	4.36"	3.59"	429"
475"	4.50"	3.75"	475"
477"	4.50"	3.75"	477"
534"	4.50"	4.20"	534"

PISTONS, PINS, RINGS						
Engine	PISTONS	PINS		RINGS		
	Clearance	Piston Fit	Rod Fit	Rings	End Gap	Side Clearance
300"	.0014-.0022"	.0002-.0004"	Press Fit	1	.010-.020"	.0019-.0036"
				2	.010-.020"	.0020-.0040"
				3	.010-.035"	①
370"	.0018-.0039"	.0003-.0006"	Press Fit	1	.010-.022"	.0019-.0039"
				2	.010-.023"	.0020-.0040"
				3	②	.0015-.0030"③
429"	.0019-.0037"	.0003-.0006"	Press Fit	1	.013-.025"	.0019-.0036"
				2	.010-.020"	.0020-.0040"
				3	.013-.028"	.0020-.0035"
475", 477", 534"	.0028-.0034"	.0003-.0005"	.0002-.0004"	1	.018-.028"	.0029-.0046"
				2	.015-.025"	.0029-.0046"
				3	.013-.028"	.0014"-.0031"

- ① - Ring should be snug fit in groove with no visible side play.
- ② - Steel rail type ring, gap not measured.
- ③ - On 370" 2V, ring should be snug fit in groove with no visible side play.

CRANKSHAFT MAIN & CONNECTING ROD BEARINGS							
Engine	MAIN BEARINGS				CONNECTING ROD BEARINGS		
	Journal Diam.	Clearance	Thrust Bearing	Crankshaft End Play	Journal Diam.	Clearance	Side Play
300"	2.3982-2.3990"	.0008-.0015"	No. 3	.004-.008"	2.1228-2.1236"	.0008-.0015"	.006-.013"
370", 429"	2.9994-3.0002"	.0008-.0026"	No. 3	.004-.008"	2.4992-2.5000"	.0008-.0028"	.010-.020"
475", 477", 534"	3.1246-3.1254"	.0019-.0028"	No. 3	.004-.008"	2.7092-2.7100"	.0019-.0037"	.006-.014"

VALVE SPRINGS			
Engine	Free Length	PRESSURE (LBS.)	
		Valve Closed	Valve Open
300"	1.99"	76-84@1.70"	187-207@1.30"
	1.87"	77-85@1.58"	12-202@1.18"
370", 429"	1.97"	76-84@1.72"	218-241@1.26"
	1.97"①	76-84@1.78"	218-241@1.52"
475", 477"	2.02"	73-81@1.70"	171-189@1.28"
	2.02"	73-81@1.70"	171-189@1.28"

CAMSHAFT			
Engine	Journal Diam.	Clearance	Lobe Lift
300"	2.017-2.018"	.001-.003"	.249"
370", 429"	2.1238-2.1348"	.001-.003"	.2526"①
475, 477"			
No. 1	2.474-2.475"	.001-.003"	.2777"
No. 2, 3, 4, 5	2.370-2.371"		
534"			
No. 1	2.474-2.475"	.001-.002"	.2777"
No. 2, 3, 4, 5	2.370-2.371"		

① - 370" 2V is 2.03"

① - Exhaust lobe lift is .265"

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VALVES							
Engine & Valve	Head Diam.	Face Angle	Seat Angle	Seat Width	Stem Diameter	Stem Clearance	Valve Lift
300"							
Int.	1.772-1.790"	44°	45°	.060-.080"	.3416-.3423"	.0010-.0027"	.403"
Exh.	1.551-1.569"	44°	45°	.070-.090"	.3416-.3423"	.0010-.0027"	.403"
370" 2V							
Int.	1.779-1.789"	44°	45°	.060-.080"	.3711-.3718"	.0010-.0027"	.4377"
Exh.	1.557-1.567"	44°	45°	.070-.090"	.3701-.3708"	.0020-.0037"	.4809"
370" 4V							
Int.	1.779-1.789"	44°	45°	.060-.080"	.3717-.3718"	.0010-.0027"	.4377"
Exh.	1.557-1.567"	44°	45°	.090-.100"	.3703-.3712"	.0016-.0035"	.4809"
429"							
Int.	2.059-2.069"	44°	45°	.060-.080"	.3711-.3718"	.0010-.0027"	.4377"
Exh.	1.667-1.677"	44°	45°	.093-.108"	.3703-.3712"	.0016-.0035"	.4809"
475", 477"							
Int.	2.015-2.025"	44°	45°	.090-.105"	.4349-.4358"	.0010-.0026"	.4388"
Exh.	1.630-1.640"	44°	45°	.100-.115"	.4335-.4344"	.0024-.0040"	.4388"
534"							
Int.	2.015-2.025"	44°	45°	.090-.105"	.4358-.4359"	.0010-.0026"	.4388"
Exh.	1.630-1.640"	44°	45°	.100-.115"	.4335-.4344"	.0024-.0040"	.4388"

OIL PUMP SPECIFICATIONS

300"

Relief Valve Spring Tension 20.6-22.6lbs @ 2.49"
 Shaft-to-Housing Clearance0015-.0029"
 Relief Valve Clearance0015-.0029"
 Rotor Assembly End Clearance004" Max.
 Outer Race-to-Housing Clearance001-.013"

370 & 429"

Relief Valve Spring Tension 11.1-11.8lbs @ 1.56"
 Shaft-to-Housing Clearance0015-.0030"
 Relief Valve Clearance0015-.0030"
 Rotor Assembly End Clearance004" Max.
 Outer Race-to-Housing Clearance001-.013"

475", 477" & 534"

Relief Valve Spring Tension 10.7-11.9lbs. @ 1.07"
 Shaft-to-Housing Clearance0015-.0030"
 Relief Valve Clearance0015-.0030"
 Rotor Assembly End Clearance004" Max.
 Outer Race-to-Housing Clearance006-.011"

TIGHTENING SPECIFICATIONS

300"

Application	Ft. Lbs.
Cylinder Head Bolts⓪	
Step One	55
Step Two	65
Step Three	70-85
Manifold-to-Cylinder Head	22-32
Intake manifold-to-Exhaust Manifold	28-33
Main Bearing Cap Bolts	60-70
Connecting Rod Cap Nuts	40-45
Vibration Damper	130-150
Flywheel Bolts	75-85

370" & 429"

Application	Ft. Lbs.
Cylinder Head Bolts⓪	
Step One	70-80
Step Two	100-110
Step Three	130-140
Manifold-to-Cylinder Head - Intake	22-32
Manifold-to-Cylinder Head - Exhaust	28-33
Main Bearing Cap Bolts	95-105
Connecting Rod Cap Nuts	45-50
Vibration Damper-to-Crankshaft	150-175
Flywheel Bolts	75-85

475", 477" & 534"

Application	Ft. Lbs.
Cylinder Head Bolts⓪	
Step One	140
Step Two	160
Step Three	180
Manifold-to-Cylinder Head - Intake	25-32
Manifold-to-Cylinder Head - Exhaust	22-32
Main Bearing Cap Bolts	150-165
Connecting Rod Cap Nuts	60-65
Damper-to-Crankshaft	130-175
Flywheel-to-Crankshaft	75-85

⓪ - See cylinder head tightening sequence.

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