

# Chrysler Corp. V8 Engines

5-25

## 1965-73 273", 318", 340", 360" V8 ENGINES

GENERAL SPECIFICATIONS							
Year	Displ. Cu. Ins.	Carburetor	HP at RPM	Torque (Ft. Lbs. at RPM)	Compr. Ratio	Bore	Stroke
1965	273"	2-Bbl.	180@4200	260@1600	8.8-1	3.63"	3.31"
	318"	4-Bbl.	235@5200	280@4000	10.5-1	3.63"	3.31"
		2-Bbl.	230@4400	340@2400	9.0-1	3.91"	3.31"
1966	273"	2-Bbl.	180@4200	260@1600	8.8-1	3.63"	3.31"
	318"	4-Bbl.	235@5200	280@4000	10.5-1	3.63"	3.31"
		4-Bbl.	275@6000	340@2400	10.5-1	3.63"	3.31"
1967	273"	2-Bbl.	180@4200	260@1600	8.8-1	3.63"	3.31"
	318"	4-Bbl.	235@5200	280@4000	10.5-1	3.63"	3.31"
		2-Bbl.	230@4400	340@2400	9.2-1	3.91"	3.31"
1968-69	273"	2-Bbl.	190@4400	260@2000	9.0-1	3.63"	3.31"
	318"	2-Bbl.	230@4400	340@2400	9.2-1	3.91"	3.31"
	340"	4-Bbl.	275@5000	340@3200	10.5-1	4.04"	3.31"
1970	318"	2-Bbl.	230@4400	320@2000	8.8-1	3.91"	3.31"
	340"	4-Bbl.	275@5000	340@3200	10.5-1	4.04"	3.31"
1971	318"	2-Bbl.	230@4400	320@2000	8.6-1	3.91"	3.31"
	340"	4-Bbl.	275@5000	340@3200	10.3-1	4.04"	3.31"
		360"	Triple 2-Bbl.	290@5000	340@3200	10.3-1	4.04"
1972	318"	2-Bbl.	150@4000	260@1600	8.6-1	3.91"	3.31"
	340"	4-Bbl.	240@4800	290@3600	8.5-1	4.04"	3.31"
	360"	2-Bbl.	175@4000	285@2400	8.8-1	4.00"	3.58"
1973	318"	2-Bbl.	150@3600	265@2000	8.6-1	3.91"	3.31"
	340"	2-Bbl.	240@4800	295@3600	8.5-1	4.04"	3.31"
	340"	4-Bbl.	240@4800	295@3600	8.5-1	4.04"	3.31"
	360"	2-Bbl.	170@4000	285@2400	8.4-1	4.00"	3.58"

► **NET HORSEPOWER & TORQUE NOTE** — Horsepower and Torque figures given for 1972 and later are NET. NET Horsepower and Torque represent power at the flywheel when the engine is installed in the vehicle, with wide open throttle and all systems operating such as; air cleaner, exhaust system, water pump, generator, oil pump and air conditioning.

### ENGINE IDENTIFICATION

Engine identification number is stamped on left front of block below cylinder head.

**1965-67** — The second, third and fourth digits designate engine displacement.

**1968-73** — The third, fourth and fifth digits designate engine displacement.

SPECIAL ENGINE MARKS		
Code	Location	Identification
"Maltese Cross"	Engine No. Pad	.001" undersize crankshaft journals.
"R" or "M"	Crankshaft ①	
"B" or "Maltese Cross and X"	Engine No. Pad	.010" undersize crankshaft journals.
"RX" or "MX"	Crankshaft ①	
"A"	Engine No. Pad	.020" oversize cylinder bores.
"♦"	Engine No. Pad	.008" oversize tappet bodies.
"X" or "O/S"	End of Cylinder Head	.005" oversize valve stems.
"LC"	Model Pad	Low Compression
"HP"	Model Pad	High Performance
"SP"	Model Pad	Special Police

① — Milled flat on number eight crankshaft counterweight.

# Chrysler Corp. V8 Engines

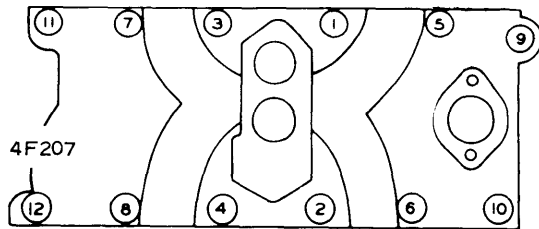
## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

### ENGINE REMOVAL

See Engine Removal at end of ENGINE Section.

### INTAKE MANIFOLD INSTALLATION

Coat both sides of manifold side and end gaskets with gasket sealer and install (side gaskets beaded side down,

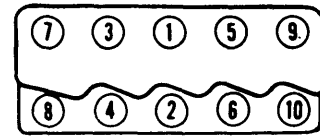


INTAKE MANIFOLD TIGHTENING SEQUENCE

end gaskets interlock with cylinder head gaskets). Place drop of sealer in notch at each end of end gaskets. Install intake manifold and start all bolts, but leave loose. Tighten bolts three times around in sequence shown in diagram, finally reaching torque shown in specification table.

### CYLINDER HEAD INSTALLATION

Coat cylinder head gasket with suitable sealer, then install cylinder head in the usual manner. Tighten head bolts 2 times around to correct torque in sequence shown in diagrams.



CYLINDER HEAD TIGHTENING SEQUENCE

VALVES							
Engine & Valve	Head Diam.	Face Angle	Seat Angle	Seat Width	Stem Diameter	Stem Clearance	Valve Lift ①
273", 318" 1965	Int.	1.780"	45°	45°	.063-.094"	.372-.373"	.001-.003"
	Exh.	1.50"	45°	45°	.047-.063"	.3715"	.002-.004"
1966-69	Int.	1.780"	45°	45°	.063-.094"	.372-.373"	.001-.003"
	Exh.	1.563"	45°	45°	.047-.063"	.3715"	.002-.004"
318" 1970	Int.	1.780"	45°	45°	.060-.085"	.372-.373"	.001-.003"
	Exh.	1.563"	43°	45°	.040-.060"	.371-.372"	.002-.004"
1971-73	Int.	1.780"	45°	45°	.060-.095"	.372-.373"	.001-.003"
	Exh.	1.500"	43°	45°	.040-.060"	.371-.372"	.002-.004"
340" 1968-69	Int.	1.844"	45°	45°	.063-.094"	.372-.373"	.001-.003"
	Exh.	1.563"	45°	45°	.047-.063"	.3715"	.002-.004"
1970	Int.	2.02"	45°	45°	.060-.085"	.3715-.3725"	.0015-.0035"
	Exh.	1.60"	43°	45°	.040-.060"	.3705-.3715"	.0025-.0045"
1971	Int.	2.02"	45°	45°	.060-.085"	.3715-.3725"	.0015-.0035"
	Exh.	1.60"	43°	45°	.040-.060"	.3705-.3715"	.0025-.0045"
1972-73	Int.	1.88"	45°	45°	.060-.085"	.3715-.3725"	.0015-.0035"
	Exh.	1.60"	43°	45°	.040-.060"	.3705-.3715"	.0025-.0045"
360" 1971-73	Int.	1.88"	45°	45°	.060-.085"	.372-.373"	.001-.003"
	Exh.	1.60"	43°	45°	.040-.060"	.371-.372"	.002-.004"

① - See "Valve Lift Table".

### VALVE ARRANGEMENT

All - E-I-I-E-E-I-I-E (Both banks front to rear).

### VALVE GUIDE SERVICING

Guides are integral with cylinder head.

**Wear Check** - Use sleeve Tool (see table below) over valve stem to hold valve at working height. Total movement should not exceed specifications in table below.

**Servicing** - Ream to next oversize with Reamer C-3433 (.005"), C-3430 (.015"), C-3427 (.030").

### VALVE SEAL INSTALLATION

Coat valve stems with oil and insert in cylinder head. Place new seals on all valve stems and over valve guides. Install valve springs, retainers and locks.

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

VALVE GUIDE SPECIFICATIONS			
Year	Tool	Valve Guide Movement	
		Intake	Exhaust
1965-73	C-3973 I & E	.017"	.017"

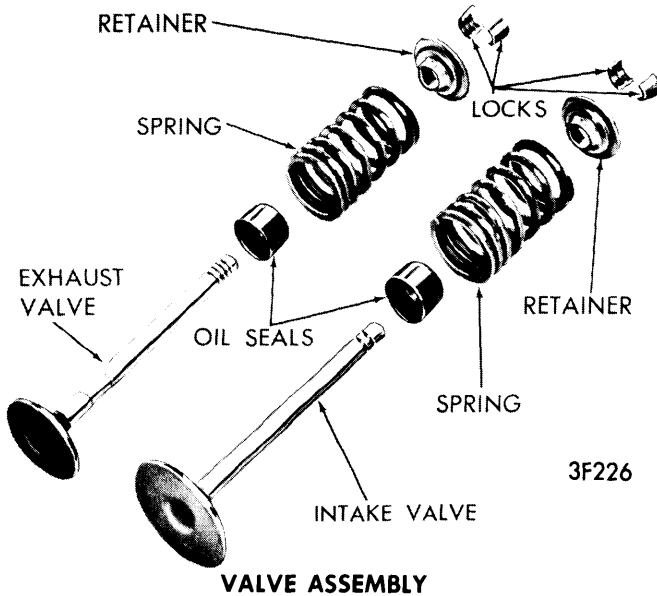
1/16" spacer under spring. If a spacer is installed, measure from top of spacer.

### PUSHROD INSTALLATION

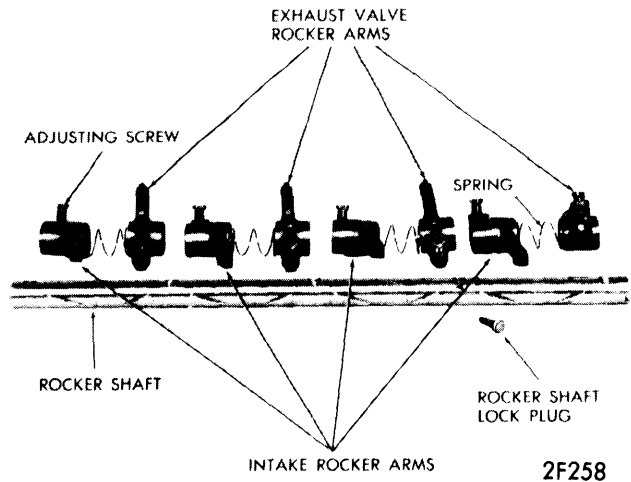
Small diameter end of pushrod must seat in lifter. Large diameter end must contact rocker arm. Improper installation will cause valves to be held open partially.

### ROCKER ARM SHAFT REPLACEMENT

Install rocker arm and shaft assemblies with "NOTCH" on end of rocker shaft pointing to centerline of engine and toward front of engine on left bank and toward rear of engine on right bank, making sure to install long stamped steel retainers in number two and four positions, tighten to 16 ft. lbs. torque. **NOTE: On engines without bolted shaft retainers, it will be necessary to remove cylinder heads for cleaning, inspection or installation of new parts.** To install assembly, slide rocker shaft into bore of strut, engage intake rocker arm. Install remainder of rocker arms in same sequence. Tap in rocker shaft plug. Install plugs in both ends of rocker arm shaft.



VALVE ASSEMBLY



ROCKER ARM ASSEMBLY

VALVE SPRINGS				
Engine	Free Length	PRESSURE (LBS.)		
		Valve Closed	Valve Open	
273" 1965-67 2-Bbl.	1.92"	49-57 @ 1 11/16"	137-150 @ 1 5/16"	
	2.00"	78-88 ① @ 1 11/16"	170-184 ② @ 1 5/16"	
	1968-69	2.00"	78-88 @ 1 11/16"	170-184 @ 1 5/16"
318" 1965-66	1.92"	49-57 @ 1 11/16"	137-150 @ 1 5/16"	
	1967-73	2.00"	78-88 @ 1 11/16"	170-184 @ 1 5/16"
		340" 1968-72	1.94"	80-90 @ 1 11/16"
1973	1.94"	79-89 @ 1 11/16"	201-215 @ 1 5/16"	
360" 1971-73	2.00"	78-88 @ 1 11/16"	170-184 @ 1 5/16"	

- ① - 275 HP, 145-155 @ 1 35/64".
- ② - 275 HP, 308-318 @ 1 3/64".

### VALVE SPRING INSTALLED HEIGHT

Measure spring seat in head to underside of spring retainer. If height exceeds maximum (see specification table), install

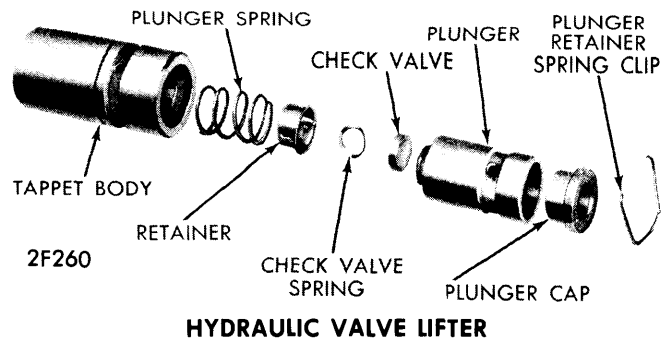
VALVE LIFT				
Engine & Year	Intake	Exhaust		
273" 1965 2-Bbl.	.395"	.405"		
	4-Bbl.	.395"	.425"	
	1966	2-Bbl. (180 HP)	.395"	.405"
		4-Bbl. (235 HP)	.415"	.425"
		4-Bbl. (275 HP)	.495"	.505"
	1967	2-Bbl.	.395"	.405"
4-Bbl.		.390"	.425"	
1968-69	.373"	.399"		
318" 1965-66	.397"	.403"		
	1967-69	.390"	.390"	
	1970-73	.373"	.399"	
340" 1968-69	Synchro-mesh	.445"	.455"	
	Auto. Trans.	.429"	.444"	
	1970-73	.429"	.444"	
360" 1971-73	.410"	.412"		

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

**HYDRAULIC LIFTERS**

See illustration for arrangement of parts. To test, remove cap from plunger, submerge upright lifter completely in clean kerosene and allow to fill. Replace cap. Place lifter upright in Lifter Testing Pliers C-3160 and check leakdown. If lifter collapses immediately, disassemble, clean, and test again. If rapid leakdown persists, replace lifter.

**HYDRAULIC LIFTER INSTALLATION NOTE:** Use extreme care in tightening Rocker Shaft Support Bracket Bolts to specifications so lifters have time to bleed down to operating length.

**HYDRAULIC VALVE LIFTER**

PISTONS, PINS, RINGS						
Engine	PISTONS	PINS		RINGS		
	Clearance	Piston Fit	Rod Fit	Rings	End Gap	Side Clearance
<b>ALL</b> 1965	.0005-.0015"	.0000-.0005"	.0000-.0005"	1 & 2 3	.010-.020" .015-.055"	.0015-.0030" .0015-.0030"
<b>273"</b> 1966	.0005-.0015"	.0000-.0005"	.0000-.0005"	1 & 2 3 <sup>①</sup>	.010-.020" .015-.055"	.0015-.0030" .0002-.0050"
<b>318"</b> 1966	.0005-.0015"	.0000-.0005"	.0000-.0005"	1 & 2 3	.010-.020" .010-.020"	.0015-.0030" .0002-.0050"
<b>ALL</b> 1967-70	.0005-.0015"	.0000-.0005"	.0000-.0005"	1 & 2 3	.010-.020" .015-.055"	.0015-.0030" .0002-.0050"
<b>318" &amp; 340"</b> 1971-72 <b>318" &amp; 360"</b> 1973	.0005-.0015"	.0000-.0005"	.0000-.0005"	1 & 2 3	.010-.020" .015-.055"	.0015-.0030" .0002-.0050"
<b>360"</b> 1971-72 <b>340"</b> 1973	.0005-.0015"	.0045-.0075"	②.0007-.0014"	1 & 2 3	.010-.020" .015-.055"	.0015-.0030" .0002-.0050"

① - Cast Iron.    ② - Interference Fit.

**PISTON PIN REPLACEMENT**

On pins that are **NOT** interference fit (see table above), thumb press pins in piston and connecting rod and install piston pin lock rings. On pins with interference fit, lubricate pin bores. Use suitable tool and press pin until pin bottoms on pilot. Both procedures should be followed with piston and pin at room temperature (70°F).

**FITTING PISTONS**

Coat cylinder bore lightly with engine oil and insert piston upside down. With ½ x .0015" feeler gauge inserted between thrust face of piston and cylinder wall, pull to withdraw feeler should be 5-10 lbs.

**PISTON RING INSTALLATION**

Compression rings should be installed with side marked "Top" toward top of piston. Compression rings with step should be installed with step of inner edge up.

**PISTON & ROD INSTALLATION**

Install in cylinder with indent on piston to front of engine. The large chamfer on connecting rod must be toward crankshaft journal fillet. Oil groove in rod and bearing cap must be together.

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

CRANKSHAFT MAIN & CONNECTING ROD BEARINGS							
Engine	MAIN BEARINGS				CONNECTING ROD BEARINGS		
	① Journal Diam.	② Clearance	Thrust Bearing	Crankshaft Endplay	① Journal Diam.	② Clearance	③ Sideplay
273" 1965-69	2.4995-2.5005"	.0005-.0015"	No.3	.002-.007"	2.124-2.125"	.0005-.0015"	.006-.014"
318" - 340" 1965-70	2.4995-2.5005"	.0005-.0015"	No.3	.002-.007"	2.124-2.126"	.0005-.0015" ④	.006-.014"
318" - 340" 1971-73	2.4995-2.5005"	.0005-.0020"	No.3	.002-.007"	⑤	.0005-.0020"	.006-.014"
360" 1971-73	2.8095-2.8105"	.0005-.0020"	No.3	.002-.007"	⑤	.0005-.0020"	.006-.014"

① - Maximum allowance .001".    ③ - Total two rods.    ⑤ - 1972-73 2.124-2.125".  
 ② - Wear Limit .0025".    ④ - 340" Engines .002".

### OIL PAN REMOVAL

See *Oil Pan Removal* at end of ENGINE Section.

### CRANKSHAFT IDENTIFICATION

A crankshaft that has one or more undersize connecting rod or main bearing journals will be steel-stamped on a milled flat on one of the crankshaft counterweights. The 318", 340" and 360" engines are stamped on number eight counterweight.

### MAIN BEARINGS

**All Engines** - Main bearings may be selectively fitted. It is permissible to use one .001" undersize bearing with one standard bearing shell, or one .002" undersize bearing with one .001" undersize bearing shell. Always use the smaller diameter bearing half as the upper. Do not use an upper bearing half more than .001" smaller than the lower bearing half. **NOTE** - Only one bearing should be selectively fitted while all other main bearing caps are properly tightened.

### REAR MAIN BEARING OIL SEAL

(Crankshaft Removed, 318" & 340")

**Upper Seal** - Use Tool C-3511 and tap seal into position until tool is seated. Cut ends flush with block.

**Lower Seal** - Same procedure as for Upper Seal.

**Side Seals** - Dip side seals in mineral spirits or diesel fuel and install immediately into cap or retainer. Short seal must be on doweled side of cap. **CAUTION** - Seals expand with oil. Failure to pre-oil seals will cause an oil leak.

(Without Removing Crankshaft, All Models)

New split rubber type seals may be replaced without removing crankshaft. New type must be installed as paired upper and lower seals and cannot be used or combined with old type rope seals. Install seals as follows:

**Upper Seal** - Remove upper rope seal by turning suitable tool (Chrysler C-4148) into end of seal and pull seal out with tool, being careful not to mar crankshaft. Oil seal with engine oil. Hold seal (paint stripe to rear) tightly against crankshaft with thumb and rotate crankshaft while sliding seal into groove. Make sure that the sharp edge of the groove in the block does not shave or nick the back of the seal. **Care must be exercised not to damage the sealing lip.**

**Lower Seal** - Install other half of new type seal into the lower seal retainer with paint stripe to rear. Install rear main bearing

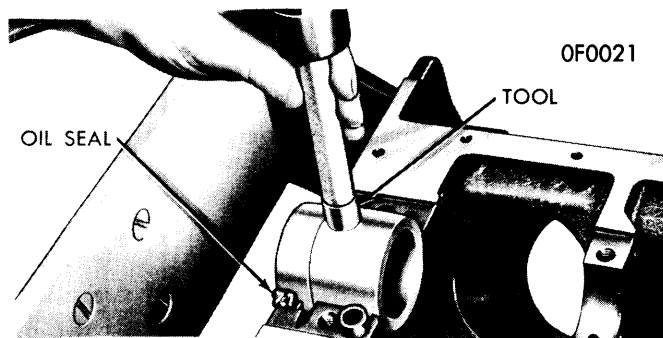
cap, then install lower seal retainer, torquing both units to specification. Do not use sealer or cement on seal ends or lip.

### FRONT COVER SEAL REPLACEMENT

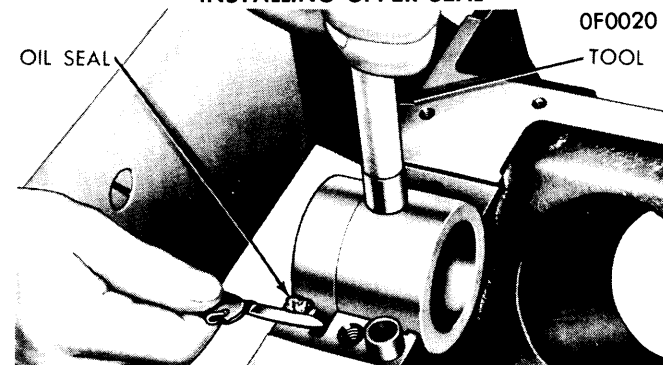
Use Tool C-3506 to replace seal as follows:

**Removal** - With inside of cover up, put puller screw through seal and position puller blocks directly opposite each other under flange of seal retainer. With washer and nut on puller screw, tighten nut so puller blocks distort seal retainer lip. Place sleeve over retainer and place removing and installing plate into sleeve. Place flat washer and nut on puller screw, hold center screw and tighten nut to remove seal.

**Installation** - Insert puller screw through removing and installing plate so thin shoulder faces up. Insert assembly through seal opening in front cover (inside of cover up), and place seal in opening with neoprene part of seal down.



INSTALLING UPPER SEAL



TRIMMING UPPER OIL SEAL

# Chrysler Corp. V8 Engines

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

Place seal installing plate into seal with protective recess toward lip of seal retainer. With flat washer and nut on puller screw, hold screw and tighten nut until neoprene

is tight against face of front cover. *If a .0015" feeler gauge CANNOT be inserted between neoprene and cover, seal is installed correctly.*

CAMSHAFT						
Engine & Year	JOURNAL DIAMETER					Bearing Clearance
	1	2	3	4	5	
All 1965-73	1.998-1.999"	1.982-1.983"	1.967-1.968"	1.951-1.952"	1.5605-1.5615"	.001-.003"

### CAMSHAFT REPLACEMENT

When installing camshaft, use holding Tool C-3509 in place of distributor drive gear and shaft to prevent camshaft from contacting rear welch plug. Leave tool in place until after timing chain and sprockets are installed, then install distributor drive gear.

### CAMSHAFT BEARING REPLACEMENT

► **CAMSHAFT SPROCKET AND TIMING CHAIN LUBRICATION NOTE:** Lower half of No. 1 Bearing is chamfered on left parting line edge which forms path for oil to crankshaft & camshaft sprockets in addition to oil seepage through bearing.

Tool Set C-3132A is available for replacing camshaft bearings. Ensure all oil holes are aligned, and install new rear core plug.

### CAMSHAFT END THRUST

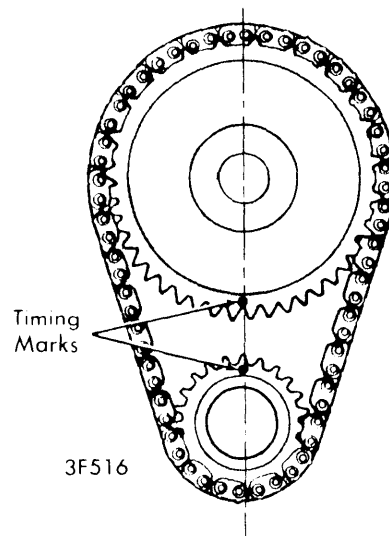
Taken by thrust plate behind camshaft sprocket. Endplay is .002-.006" (wear limit is .010").

### VALVE TIMING CHECK

- **VALVE TIMING NOTE:** Valve timing specifications are with valve train solid.
- 1) Turn crankshaft until No. 6 exhaust valve is closing and No. 6 intake valve is opening. Turn No. 1 intake valve adjusting screw in 1 turn on mechanical tappet engines. On hydraulic lifter engines insert a 1/4" spacer between rocker arm pad and stem tip of No. 1 intake valve. Allow spring load to bleed tappet down.
  - 2) Install dial indicator so plunger contacts valve spring retainer face at a 90° angle, then zero indicator.
  - 3) Turn crankshaft clockwise in normal running direction until No. 1 valve has lifted specified height (see table below). Timing indicator on front cover should read from

10° BTDC to 2° ATDC. **CAUTION** – Do not turn shaft any further clockwise as valve spring might bottom, causing serious damage.

Year	Engine	Lift
1965-67	273"	.028"
1965-66	318"	.041"
1967	318"	.017"
1968-69	273" & 318"	.010"
1968-69	340" (Auto. Trans.)	.030"
1968-69	340" (Synchro-Mesh)	.047"
1970-73	318"	.010"
1970-73	340"	.030"
1970-73	360"	.020"



VALVE TIMING MARKS

## ENGINE OILING

**Crankcase Capacity** – 4 Qts. Add 1 Qt. with filter change.

**Normal Oil Pressure** – 45-65 lbs. @ 2000 RPM for 1965-70; 30-80 lbs. @ 2000 RPM for 1971-73.

**Pressure Regulator Valve** - In oil pump. Not adjustable

**Oil Filter Replacement** – Replace every second oil change. To install, screw filter onto base until gasket contacts base, then tighten 1/2 turn more by hand. Start engine and check for leaks. *Do not overtighten.*

### DISTRIBUTOR DRIVE GEAR & BUSHING REPLACEMENT

**Bushing** - Remove bushing with Tool C-3052. To replace slide new bushing over burnishing end of Tool C-3053 and insert into bore. Drive tool and bushing into position with a soft hammer. As burnisher is pulled through bushing by tightening puller nut, bushing is expanded for tight fit in block and burnished to correct size. *Do not ream bushing.*

**Drive Gear Installation** - Coat shaft and drive gear with engine oil. Install shaft so that, after gear spirals into place and indexes with oil pump shaft, slot in top of

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

### ENGINE OILING (Cont.)

drive gear will point to first intake manifold bolt on left side of engine. **NOTE** - No. 1 cylinder must be on TDC of firing stroke when installing drive gear.

### ENGINE OILING SYSTEM

Refer to illustration. Force feed type using rotor type pump and full-flow oil filter. Mechanical valve lifters supplied oil from holes in main galleries. Oil supplied to hollow rock-arm assemblies from No. 2 Camshaft Bearing (left side), No. 4 Camshaft Bearing (right side), through

indexed holes in camshaft. Oil enters rocker arm shaft through second rocker arm bracket from front (left side), second bracket from rear (right side), to lubricate rocker arm assembly. Valve assembly is lubricated by oil spray from drilled holes in rocker arms.

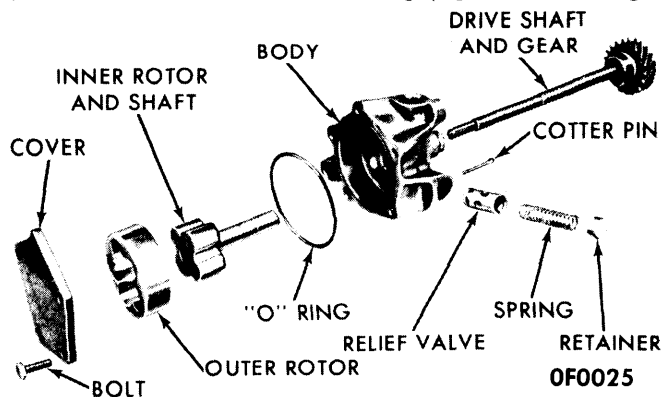
### OIL PUMP

Rotor type mounted on rear main bearing cap. See illustration for arrangement of parts and observe the following:

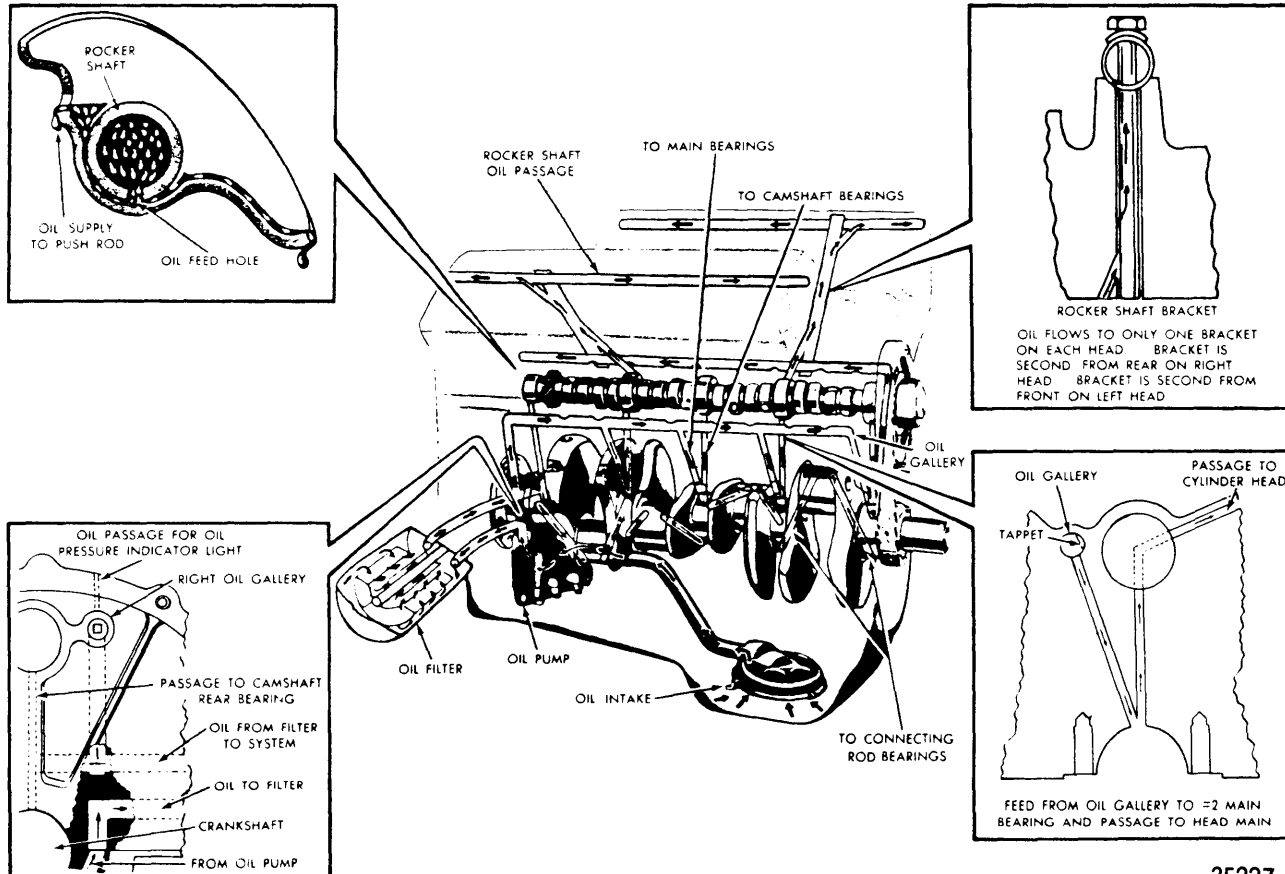
#### Oil Pump Specifications

Cover Surface Wear ①	.....	.0015" Max.
Outer Rotor Length ②	.....	.998" Min.
Outer Rotor Diameter	.....	2.469" Min.
Inner Rotor Length	.....	.825" Min.
Rotor End Clearance ③	.....	
Inner Rotor	.....	.004" Max.
Outer Rotor	.....	.004" Max.
Outer Rotor-to-Body Clearance ④	.....	.012" Max.
Tip Clearance between Rotors	.....	.010" Max.

- ① - At rotor area.
- ② - .825" (1966-72).
- ③ - Between end of rotor and top of pump body.
- ④ - .014" (1970-73).



**OIL PUMP ASSEMBLY**



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### OILING SYSTEM

# Chrysler Corp. V8 Engines

## 1965-73 273", 318", 340", 360" V8 ENGINES (Cont.)

### ENGINE OILING (Cont.)

TIGHTENING SPECIFICATIONS									
Torque (Ft. Lbs.)									
Application	1965	1966	1967	1968	1969	1970	1971	1972	1973
Cylinder Head	85	85	85	85	① 85	① 85	95	95	95
Intake Manifold	② 8	③ 35	35	35	35	35	35	35	35
Exhaust Manifold	④ 15	④ 15	④ 15	④ 15	④ 15	20	20	20	15
Oil Pan	15	15	15	15	15	16	16	17	17
Main Bearing Caps	85	85	85	85	85	85	85	85	85
Crankshaft Pulley	17	17	17	17	17	17	17	15	15
Vibration Damper	135	135	135	135	135	135	135	100	100
Connecting Rod Caps	45	45	45	45	45	45	45	45	50
Camshaft Sprocket	35	35	35	35	35	35	35	35	35
Engine Front Cover	30	30	30	30	30	35	35	35	35
Water Pump	30	30	30	30	30	30	30	35	30
Oil Pump	35	35	30	30	35	35	30	30	30
Oil Pump Cover	8	15	15	8	8	8	8	8	8
Flywheel Housing	50	50	55	55	50	50	55	50	⑤ 30

① - 340" Engine - 95 Ft. Lbs.

② - 318" Engine - 21 Ft. Lbs.

③ - 318" Engine - 40 Ft. Lbs.

④ - 318" & 340" Engine - 30 Ft. Lbs.

⑤ - 7/16" bolts are 50 Ft. Lbs.

#### ENGINE NOTES

► **273" ENGINE ROCKER SHAFT INSTALLATION**

**CAUTION:** Notch on one end of shaft must face inward toward center of engine, and must lie toward rear of engine on right bank and toward front of engine on left bank.

► **273" & 318" ENGINE PUSHRODS & LIFTER INTER-**

**CHANGEABILITY NOTE:** Pushrods used in 1968-72 engines have a 5/16" diameter ball at both ends. The lifters have been changed to allow for this pushrod ball. These new lifters are not interchangeable with previous years. When installing pushrods, be sure they are properly seated in lifter cup.

► **CYLINDER NUMBER & BEARING JOURNAL IDENTIFICATION**

**CAUTION:** Some engines have been built that do not have cylinder number or bearing journal identification numbers stamped on them. Since main bearing caps, connecting rods, and connecting rod caps are not interchangeable, carefully mark all components before removal from engine.

► **CYLINDER NUMBER CAUTION:**

A few engines have been built with the wrong cylinder number stamped on one or more connecting rod or cap assemblies. When removing rod caps, rods, or main bearing caps, check to make sure that the proper number is stamped on the component.

► **OIL PUMP OR DISTRIBUTOR DRIVE SHAFT FAILURE**

**NOTE:** If failure of an oil pump or distributor drive shaft is encountered, check flatness and squareness of oil pump mounting surface on rear main bearing cap. If any lack of uniformity in machined marks appears on the pump mounting surface or if there is any interference of the drive shaft in the pump shaft when assembling, the bearing cap should be milled (do not attempt to correct by hand methods). Replace material removed by milling operation with shim. Extend threads for oil pump mounting screws with bottoming tap. Use 1½" long cap screws instead of original 1¼" screws.