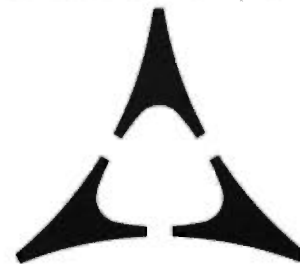


# TECHNICAL SERVICE BULLETIN

# Dodge

**DART  
DODGE  
POLARA  
880**



## SERVICE DEPARTMENT

The information in this bulletin covers the new Dodge 426 Cu. In. Hemispherical Engine.

The engine is available with a 12.5 to 1 compression ration. The following are the horsepower and torque ratings:

Horsepower	425 @ 6000 R.P.M.
Torque (Ft./lbs.)	480 @ 4600 R.P.M.

April 15, 1964

No. D64-53

ENGINE

426 Cu. In.

Hemi-Charger  
Engine

MODELS: 1964  
Dodge 330, 440,  
& Polara

P-1782-C

OF INTEREST TO:

DEALER	
MANAGER	
SERVICE MGR.	
PARTS MGR.	
TECHNICIANS	

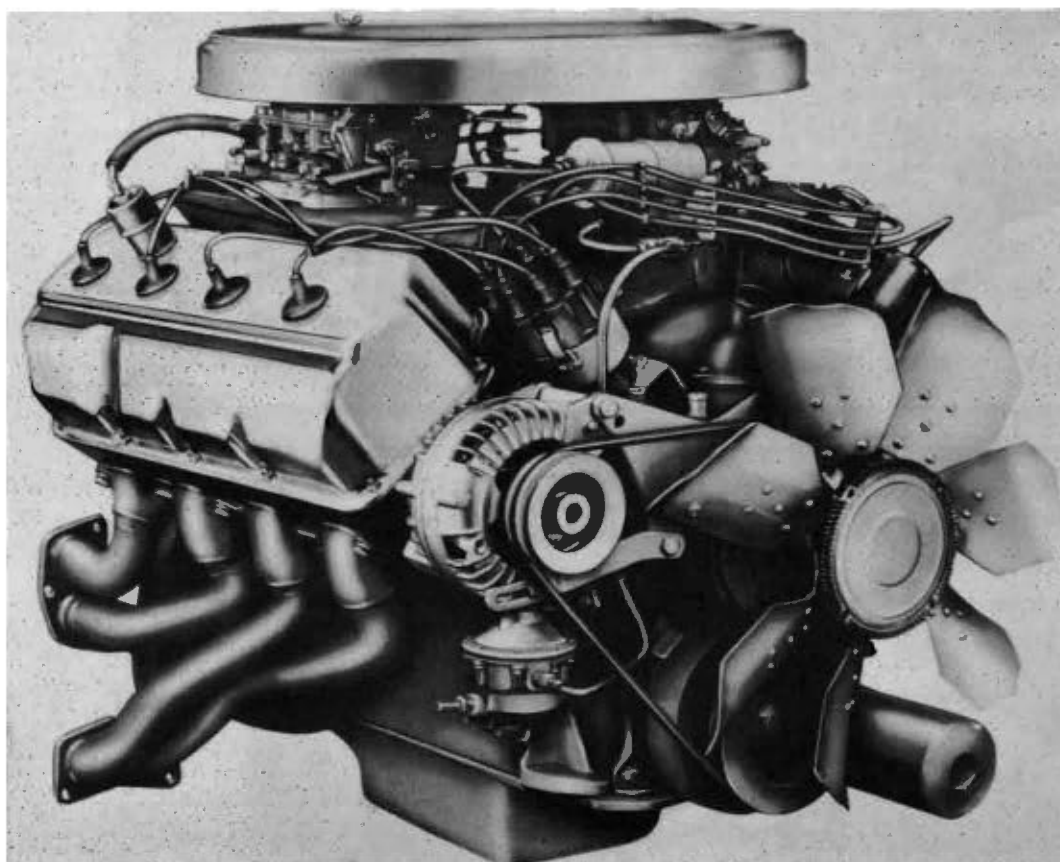


Figure 1 1964 Hemi-Charger Engine

*R. H. Kline*  
R. H. Kline  
Manager-Service  
DODGE DIVISION

The 426 Hemi-Charger is a completely new engine with Hemispherical Combustion Chambers and other new components as follows:

SHORT RAM INTAKE MANIFOLD

A new ram-tuned intake manifold similar to the previous 426 manifold is used. It has no provision for carburetor heat. Intake passages are larger than in previous types because of increased engine breathing requirements. The manifold fits between the rocker covers and also serves as a tappet chamber cover. It is tuned to increase output in the higher speed ranges (above 4000 r.p.m.) and has generous tapered branches. Both primary and secondary bores of the carburetor flanges are bored to 1-11/16" size. Two (2) four barrel carburetors, Model AFB-3816S are used. These incorporate hand choke instead of automatic. A single oval shaped air cleaner surrounds both carburetors.

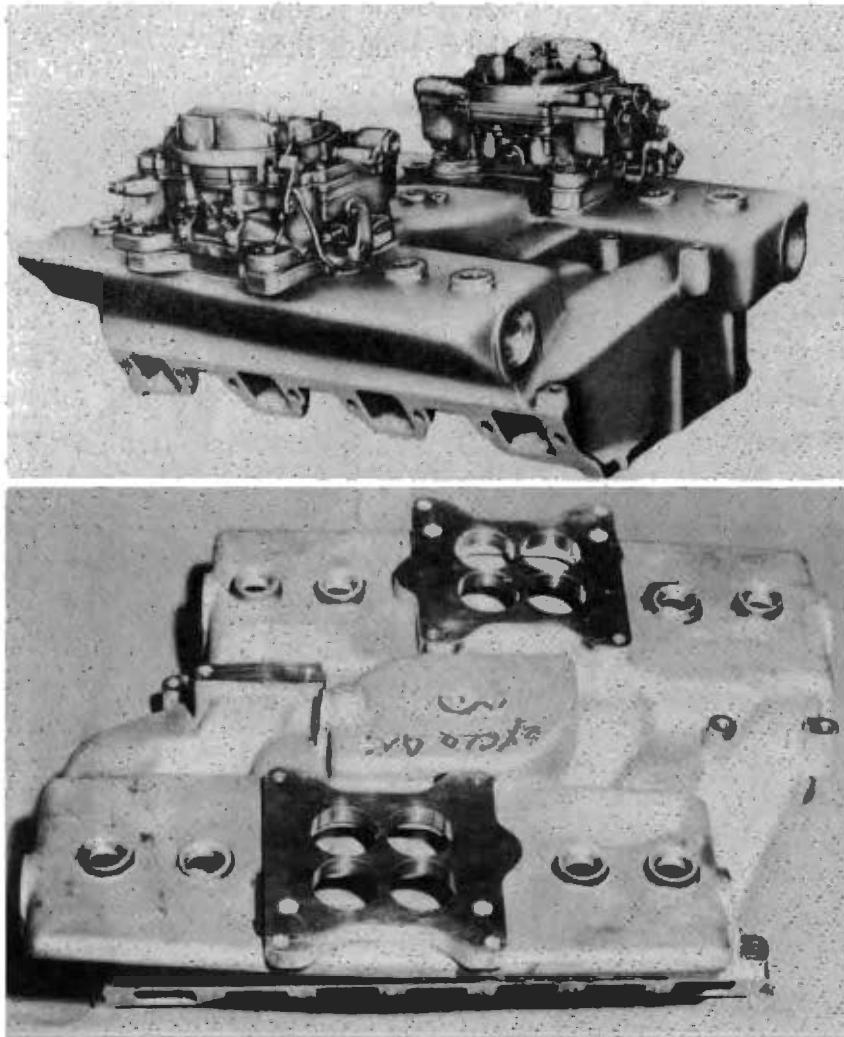


Figure 2. New Intake Manifold and Carburetors

CYLINDER HEADS, VALVES AND OTHER VALVE GEAR

The new Hemispherical chamber cylinder heads are made from cast iron. They incorporate several advancements which contribute toward high volumetric and thermal efficiency.

The Hemispherical chamber and laterally inclined valve arrangement allows bigger valves and better breathing than other designs. In addition, the valve and port locations minimize transfer of engine heat to the incoming fuel air mixture.

Both intake and exhaust valves have larger head diameters. The intake valve head diameter has been increased from 2.08 to 2.25", the exhaust from 1.88 to 1.94".

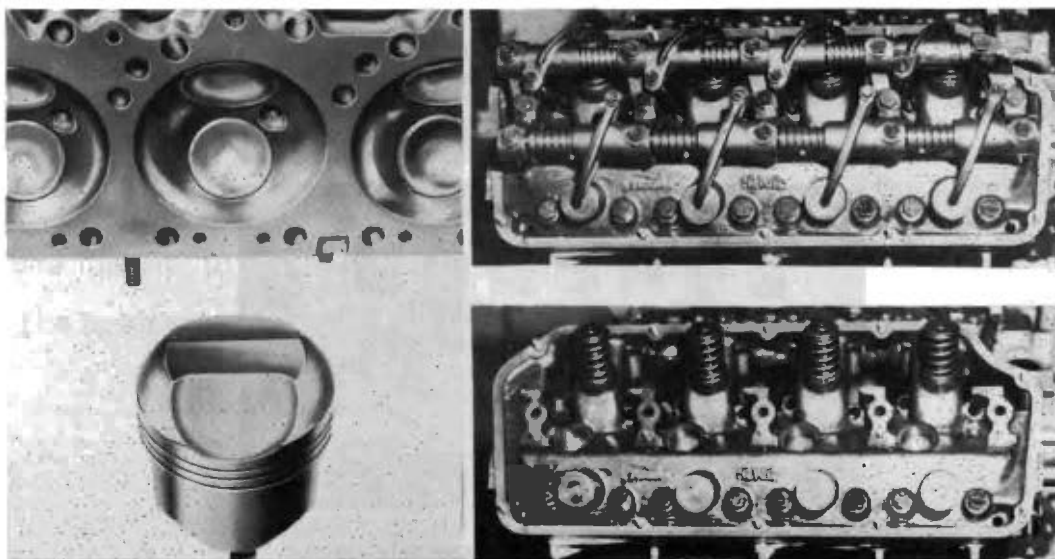


Figure 3. Hemispherical Chamber Cylinder Heads

#### ROCKER ARMS AND OTHER VALVE GEAR

Rocker arms are made from forged steel with wide bushings for load bearing capacity. They incorporate a lash adjusting screw with a lock nut. Dual high-load springs and extra heavy duty retainers are used. The outer spring and damper are used with an inner spring. The push rods are 3/8" diameter steel tubing with .083" wall thickness with hardened inserts at each end. Double rocker shafts are used with the shafts positioned on top of the cylinder heads and held by five "v" shaped malleable iron support brackets.

The camshaft specifications for the new engine are as follows:

520" lift at the valve, intake opening 36° B.T.C.; Closing 84° A.B.C.;  
Exhaust Opening 80° B.B.C.; Closing 40° A.T.C.; Overlap 76°;  
Duration 300° for intake and 300° for exhaust.

The camshaft is ground with a low taper to minimize tappet to cam loading stresses and should be used only with flat face tappets.

The lifters are of the flat face design and are of special material compatible to the camshaft. These lifters have .001" more diametral or side clearance than standard to avoid "hang up" at high speeds which causes valve float.

#### CYLINDER BLOCK

The cylinder block is made from tin-alloyed cast iron and its over-all design includes several structural improvements. Significant design features

are evident in the construction of the cylinder block deck and main bearing webs and caps. On each bank the inner edge of the block deck is extended and reinforced to support four inboard head studs. These are tightened from inside the tappet chamber. See Figure 4.

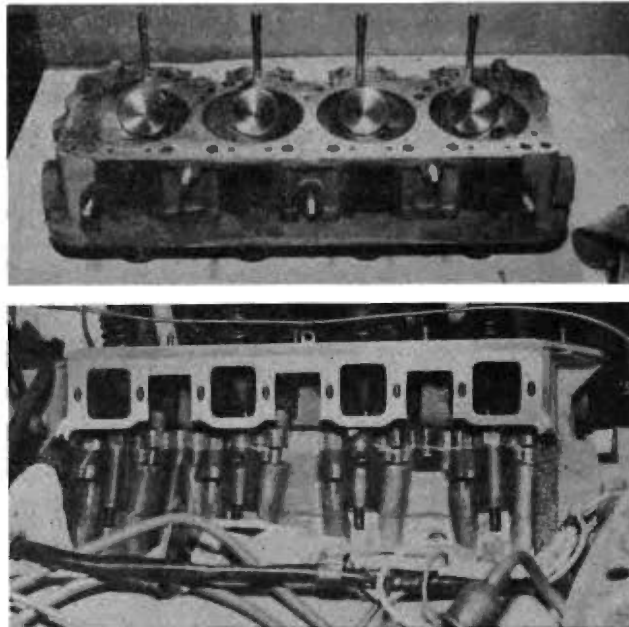


Figure 4. Cylinder Block  
PISTONS

The pistons in the new engine are dome shaped and impact entruded. They are also tin plated for scuff resistance and durability.

The 12.5 to 1 compression ratio pistons offer increased thermal efficiency for higher output and require use of the highest octane gasoline available. These pistons are practical only for limited application.

**NOTE: WIDE OPEN THROTTLE BURSTS WITH THESE PISTONS MUST BE LIMITED TO 15 SECONDS TO PREVENT ENGINE DAMAGE, THEY REQUIRE HIGH CLEARANCE, AND DO NOT HAVE BI-METAL THERMAL CORRECTION. THEY WILL OPERATE NOISIER THAN STANDARD PISTONS, PARTICULARLY WHEN COLD.**

#### PISTON RINGS

Two high strength cast iron compression rings and one oil ring are used. Lower oil control ring is three piece; two chrome-plated rails and a steel expander.

#### CONNECTING RODS

The connecting rods are entirely new and much stronger than earlier type. Center to center distance is greater and the piston pin is a pressed fit into the small end.

#### CRANKSHAFT

The crankshaft has shot peened fillets with hardened journals. Journals are ground to accommodate F-77 tri-metal heavy duty bearings.

### ENGINE OIL PAN

The oil pan has a deeper sump than standard pans for additional oil capacity. Special anti-slosh baffles are included to control oil during acceleration.

### IGNITION DISTRIBUTOR

The ignition distributor has a special cam and dual breaker points which are designed to operate at high engine speeds. It does not have a vacuum advance unit. Metal core ignition cables and cold range spark plugs are used. In addition, a heavy duty transistorized device is incorporated in these engines for increased voltage at the spark plugs.

### EXHAUST MANIFOLDS

New tubular steel exhaust manifold (headers) are used. They are made up of separate lengths of steel tubing welded to cast steel port flanges and are "tuned" to provide maximum cylinder scavenging.

The headers merge into a single outlet on each side of the car.

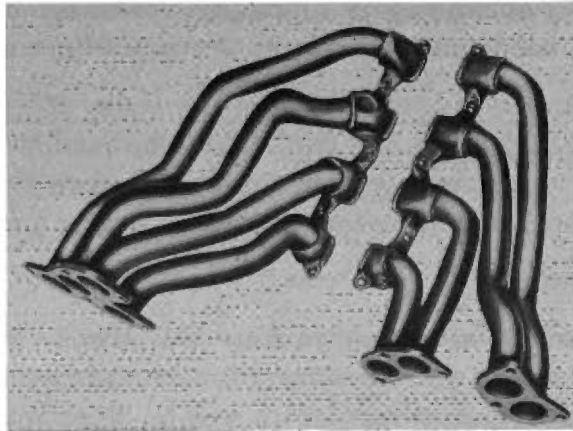


Figure 5. Exhaust Manifold

### CAR FEATURES THAT TEAM WITH NEW ENGINE

The balance of the drive train is tailored for high output of the new engine and include the following features:

#### Clutch and Housing

The pressure plate is 10-1/2" in diameter and made of high strength malleable iron. A new high burst speed clutch disc is used, to operate the clutch a new heavy duty torque shaft is used to handle the heavy clutch pressure plate spring pressure. Clutch housing is cast steel.

#### Automatic Transmission

The standard transmission is a manual shift automatic heavy duty Torque-Flite which is strengthened to stand the power output of the new engine. Special heavy duty friction materials for the front clutch and kickdown band are used. The transmission is also designed for upshift speeds of up to 7000 R.P.M.

#### Manual Transmission

A floor mounted 4 Speed Model A-833 transmission is optional. Ratios are 2.66 1st, 1.91 2nd, 1.39 3rd, 1 to 1 direct and 2.58 in reverse.

2.13      1.43      1.24      1.00

### Propeller Shaft

A heavy duty propeller shaft is used. The shafts are selected for minimum run-out, close balance and incorporate a special high speed front U joint boot.

### Springs, Shock Absorbers and Tires

Special rear springs and heavy duty shock absorbers for optimum wheel control are standard equipment. 900 x 14 tires and 6-1/2 K wheels are optional through MoPar and may be used on the rear only.

### Rear Axle

A 4.56: 1 ratio with "Sure Grip" is standard. A heavy duty pinion bumper assembly is included. Ring gear and pinion sets of 2.93, 3.23, 3.55, 4.10, 4.30, 4.56, 4.89, 5.12 and 5.38 are available from Chrysler Motors Parts Division.

### Sheet Metal

A light weight aluminum front end package is available for more favorable weight distribution consisting of aluminum fenders, dust shields, bumper support brackets, hood and front doors.

**Caution:** Use care to avoid denting the aluminum sheet metal. Do not use a bumper jack to lift car. The aluminum hood has a built in air scoop to direct air into the carburetors through a special air horn and flame arrester, thereby affecting a gain in power output.

### Glass

Cars with light weight aluminum package will also be equipped with plastic material front door and quarter windows. The rear window will be of .080" tempered glass. All window regulators will be eliminated.

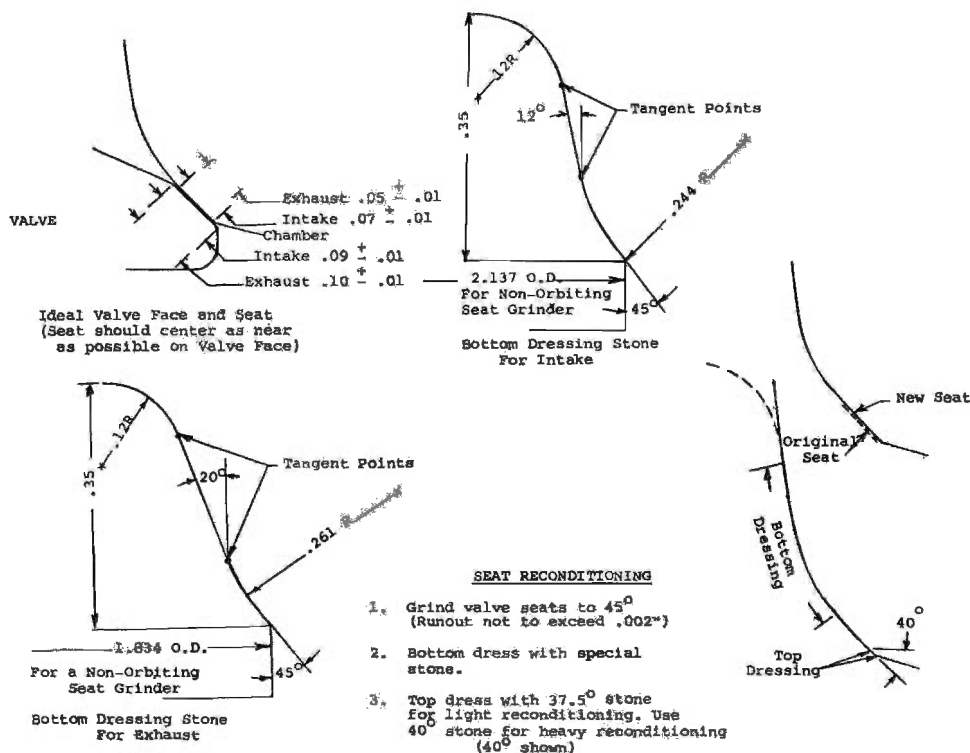


Figure 6. Valve Seat Reconditioning

### GENERAL OPERATING CHARACTERISTICS

As can be expected, this engine has the operating characteristics of a very high output engine and the following should be understood:

1. The long duration camshaft provides maximum high speed output. However, this benefit causes a rough high speed idle.
2. Since there is no heat on the intake manifold, the engine will be slower to warm up and carburetor icing may occur during cool weather (30° F. -55° F.). This problem can be reduced by partially covering the radiator and using a gasoline with anti-icing additives. In winter weather, a rich surging condition, misfiring, and unstable engine operation will be encountered which may be severe and make normal street driving difficult and undesirable.
3. Increasing the amount of lubrication to the valve train and the use of special piston rings will cause higher than normal oil consumption.
4. Since the carburetors are calibrated for maximum power and a high numerical axle ratio is used for good acceleration, the gas mileage will be lower than with a conventional car.
5. The increased piston clearance and mechanical valve gear result in more engine noise.
6. The transistorized ignition system furnished with the car should last longer than standard ignition systems without attention. The spark plugs however should be inspected frequently and replaced when necessary.
7. In this precision engine, keeping the engine oil clean is a must. The oil should be changed frequently.
8. The automatic transmission band adjustment must be checked frequently.

### CAR OPERATION FOR BEST PERFORMANCE

For peak performance while participating in acceleration trials, the following practices are recommended:

1. Spark Plugs  
For street use and short bursts of wide open throttle operation, use Champion N61Y. For extended operation at high power output use Champion N58R or N55R.
2. Ignition System & Valves  
Check valve lash, spark plug condition, and spark timing frequently as the full output of the engine may not be obtained with faulty plugs or tight valve lash even though misfiring or backfiring are not observed. However, excess valve gear noise and valve breakage may result from clearance settings that are too high.
3. Tappet Adjustment  
When adjusting tappets on the 426 cu. in. engine (cold setting) it is very important that the setting is made with each tappet at the lowest point of the cam on the base circle.

The procedure used on standard engines cannot be used because of the overlap and duration with the special camshaft.

The following procedure will assure proper position of the camshaft when making adjustment. An indicator light can be used in the ignition primary circuit to more clearly define the various positions of the crankshaft:

	<u>Intake</u>	<u>Exhaust</u>
A. Adjust ignition timing to TDC. Chalk mark TDC and 180° opposite TDC on the front crankshaft damper	(.028")	(.032")
B. Set crankshaft so No. 1 cylinder is at TDC (Compression Stroke Points Opening)		
Adjust	2 and 7	4 and 8
C. Rotate crankshaft 180° in normal running direction until points open for No. 4 cylinder		
Adjust	1 and 8	3 and 6
D. Rotate crankshaft an additional 180° until points open for No. 6 cylinder		
Adjust	3 and 4	5 and 7
E. Rotate crankshaft an additional 180° until points open for No. 7 cylinder		
Adjust	5 and 6	1 and 2
F. Reset ignition timing to operating specifications and install valve covers.		

4. Engine Operation

Do not run engine over 7000 R.P.M. wide open throttle bursts must be limited to fifteen seconds in duration.

5. Gasoline

Use high octane super premium gasoline, approximately 102 or higher.

6. Intake Manifold installation

When installing manifold, install a stud in the right front and the left rear locations. Also use the two air cleaner studs in the left front and right rear to hold the gaskets in place when lowering the manifold.

The manifold is secured with 2 studs, 4-1/4"-20 - 2-1/2" screws, 6-1/4" -20-2-3/4" screws and 4-1/4" - 20-3" screws. The studs are used in the right front and left rear locations. The shortest screws are used in the four forward holes, the longest are used in the four rearward holes. The six 2-3/4" screws are used in the holes accessible through the carburetor openings. Referring to the diagram below, tighten the screws marked "B" first to 6 ft./lbs., the screws marked "C" next to 4 ft./lbs. Repeat tightening until all screws hold their torque.



C C B B B B C C  
o o o o o o o o  
Intake  
Manifold  
o o o o o o o o  
C C B B B B C C

7. Front Suspension

The front end alignment should be set at the correct specifications. See Service Manual.

8. Brakes

Adjust brakes to eliminate any possible drag.

9. Tires

Use large tires of high Butyl content on the rear since they give better traction on most surfaces. Increase air pressure in the front tires to reduce rolling resistance. Do not exceed 45 P.S.I.

Additional suggestions which you may wish to consider are:

1. Compression Ratio

The combustion chamber volume and piston-to-block deck height should be at the minimum factory tolerance to get the maximum allowable compression ratio.

2. Carburetor

Carburetors have been calibrated for maximum power. (Leaner mixtures should be used at altitudes above 4000 ft.) Throttle blade angles set for maximum power on the dynamometer and should not be changed (see specifications). Cool air should be routed to the carburetor by whatever means the rules permit.

3. Importance of Tachometer Use

A reliable transistorized tachometer should be used to limit engine speed to optimum shift point of 7000 R.P.M. Excessive engine speed could cause expensive and premature engine failure.

4. Valve Springs

The valve springs should be set to the minimum specified heights (1.83").

5. Assembly Procedure

When the engine is being assembled, all parts must be kept immaculately clean and MoPar Engine Oil Supplement should be used.

6. Fuel Pumps

Three Bendix Electric Fuel Pumps available from Bendix Dealer may be installed in parallel and close to the fuel tank as added protection against high temperature vapor lock.

7. Axle Pinion Bumper

Shim the pinion bumper so that it contacts the floor pan with the car in its ready-to run height. Use Bumper P/N 1857682.

8. Rear Wheels

The optional 6-1/2" wide rear wheels, P/N 2122468 should be used.

DETAILED SPECIFICATIONS

ENGINE

Type . . . . .	90° V
Number of Cylinders . . . . .	8
Bore . . . . .	4.250"
Stroke . . . . .	3.750"
Compression Ratio . . . . .	12.5 to 1
Piston Displacement . . . . .	426 Cu. in.
Engine Output . . . . .	425 h.p. @ 6000 r.p.m.
. . . . .	480 ft./lbs. @ 4600 r.p.m.

COMPRESSION RATIO SPECIFICATIONS

Combustion Chamber Volume . . . . . Min. 170 c.c.; Max. 174 c.c.

(To reduce the volume of the combustion chamber 1 c.c. .0041" must be milled from the head surface. The cylinder head surface finish should be 100 - 120 micro-inches. For each .010" removed from the cylinder head .0085" must be removed from each intake port side of the intake manifold and .0116" from the front and rear stock rail. The holes must also be elongated.)

Distance from top of piston to block deck. . . . . Min. .742"; Max. .767"

Maximum Variation between cylinders . . . . . 25 p.s.i.

CYLINDER NUMBERING

Left Bank . . . . .	1-3-5-7
Right Bank . . . . .	2-4-6-8

CYLINDER BLOCK

Cylinder Bore . . . . .	4.250" - 4.252"
Cylinder Bore Out of Round (Max. Allowable before reconditioning) . . . . .	.005"
Cylinder Bore Taper (Max. Allowable before reconditioning). . . . .	.010"
Reconditioning Working Limits (for taper and out of round) . . . . .	.001"
Cylinder Bore Finish . . . . .	30 to 40 Micro Inches
Tappet Bore Diameter . . . . .	.9050" - .9058"
Distributor Lower Drive Shaft Bushing (Press fit in block) . . . . .	.0005" - .004"
Ream or Burnish to . . . . .	.4865" - .488"
Shaft to Bushing Clearance . . . . .	.0007" - .0027"

INTAKE MANIFOLD

Type . . . . .	Short Ram
Attaching Bolt Torque . . . . .	Refer to Page 7

CRANKSHAFT AND MAIN BEARINGS

Type . . . . .	Forged Counter-Balanced & Short Peened (Hardened Journals)
Bearings . . . . .	Trimetal

CRANKSHAFT AND MAIN BEARINGS (Continued)

Diameter Main Bearing Journal . . . . .	2.7490" - 2.7500"
Diameter Connecting Rod . . . . .	2.373" - 2.374"
Maximum Out of Round Permissible . . . . .	.001"
Number of Main Bearings . . . . .	5
Clearance Desired . . . . .	.002" - .0040"
Max. Clearance Allowable before Reconditioning . . . . .	.0045"
End Play . . . . .	.002" - .0085"
Finish at Rear Seal Surface . . . . .	Diagonal Knurling
Interchangeable Bearings . . . . .	Lower Nos. 1, 2, 4, 5 Lower Nos. 2, 4, 5
Main Bearing Bolt Torque . . . . .	100 ft./lbs.
Main Bearing Tie Bolt Torque . . . . .	45 ft./lbs.

MAIN BEARINGS

Crankshaft Bearings in Standard and the following Undersizes . . . . .	Undersize Crankshaft Bearings Not Available for Service
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CONNECTING RODS AND BEARINGS

Type . . . . .	Drop Forged "I" Beam
Length . . . . .	6.861"
Weight (less bearing shells) . . . . .	1068 Grms
Bearings . . . . .	Tri-Metal
Diameter and Length . . . . .	2.376" x .927"
Clearance Desired . . . . .	.0025" - .0035"
Maximum Allowable before Reconditioning . . . . .	.0045"
Side Clearance (2 rods) . . . . .	.009" - .017"
Bearings for Service (Std. Only) . . . . .	Undersize Bearings not Available for Service
Connecting Rod Nut Torque . . . . .	75 ft./lbs. (Using Grease in threads)

CAMSHAFT

Drive . . . . .	Chain
Bearings . . . . .	Steel Backed Babbitt
Number . . . . .	5
Thrust taken by . . . . .	Cylinder Block
Desired Clearance . . . . .	.001" - .003"
Maximum Allowable before Reconditioning . . . . .	.005"

CAMSHAFT BEARING JOURNALS

Diameter	
No. 1 . . . . .	1.998" - 1.999"
No. 2 . . . . .	1.982" - 1.983"
No. 3 . . . . .	1.967" - 1.968"
No. 4 . . . . .	1.951" - 1.952"
No. 5 . . . . .	1.748" - 1.749"

CAMSHAFT BEARINGS

Diameter (after reaming)	
No. 1 . . . . .	2.000" - 2.001"
No. 2 . . . . .	1.984" - 1.985"
No. 3 . . . . .	1.969" - 1.970"
No. 4 . . . . .	1.953" - 1.954"
No. 5 . . . . .	1.750" - 1.751"

TIMING CHAIN (Special Heavy Duty)

Adjustment . . . . .	None
Number of Links . . . . .	50
Pitch . . . . .	.50"
Width . . . . .	.88"

TAPPETS

Type . . . . .	Mechanical (solid)
Clearance (in block) . . . . .	.0015" - .0028"
Body Diameter . . . . .	.9030" - .9035"
Available Oversize . . . . .	Std. .001", .008", .030"
*Valve Tappet Clearance (Engine Cold)	
Intake (Engine Cold) . . . . .	.028"
Exhaust (Engine Cold) . . . . .	.032"

PISTONS

Type . . . . .	Domed Forged Aluminum
Material . . . . .	Extruded Aluminum Alloy Tin Coated
Clearance at Top of Skirt . . . . .	.012" - .013"
Weight . . . . .	852 Grms
Pistons for Service . . . . .	Std. and .005" Oversize

PISTON PINS

Type . . . . .	Press Fit In Rod
Diameter . . . . .	1.0935" - 1.0937"
Length . . . . .	1.340"
Clearance in Piston . . . . .	.0015" - .0020"
Interference in Rod . . . . .	.0010" - .0015"
Piston Pins for Service . . . . .	Standard Only

PISTON RINGS

Number of Rings per Piston . . . . .	3
Compression . . . . .	2
Oil . . . . .	1
Width of Rings	
Compression . . . . .	.062"
Oil . . . . .	.125"
Piston Ring Gap	
Compression . . . . .	.013" - .023"
Oil . . . . .	.015" - .055"

\*Due to the high overlap, duration and lift of the camshaft, special care must be taken to be sure each tappet is on the base circle of its cam lobe when clearance is set.



CYLINDER HEAD (Continued)

Cylinder Head Gasket Compressed (Thickness) . . . . .	.025"
Cylinder Head Bolt Torque . . . . .	70 ft. lbs. *

ENGINE LUBRICATION

Pump Type . . . . .	Rotary Full Pressure
Capacity . . . . .	** 6 qts. (Add 1 qt. with filter change)
Pump Drive . . . . .	Camshaft
Oil Pressure (at Idle) . . . . .	1,000 r.p.m. - 8 p.s.i.
Operating Pressure at 40 to 50 mph. . . . .	45 - 65 p.s.i.
Oil Filter Type . . . . .	Full Flow
Pressure Drop Resulting from Clogged Filter . . . . .	7 - 9 lbs.

OIL PUMP - INSPECTION LIMITS FOR REPLACEMENT

Filter Base Surface . . . . .	.0015" or more
Outer Rotor Length . . . . .	.943" or less
Outer Rotor Diameter . . . . .	2.469" or less
Inner Rotor Length . . . . .	.942" or less
Clearance over Rotor - Outer . . . . .	.004" or more
Clearance over Rotor - Inner . . . . .	.005" or more
Outer Rotor Clearance . . . . .	.012" or more
Tip Clearance between Rotors . . . . .	.010" or more

FUEL PUMP

Pressure . . . . .	6 - 8 p.s.i.
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CARBURETOR

Type . . . . .	Two 4 Bbl. Downdraft
Model. . . . .	AFB-3816S
Throttle Bore	
Primary . . . . .	1-11/16"
Secondary . . . . .	1-11/16"
Main Venturi	
Primary . . . . .	1-7/16"
Secondary . . . . .	1-9/16"
Main Set	
Primary . . . . .	.104" (120-161)
Secondary (Throttle Lever Side) . . . . .	.089" (120-159)
(Choke Lever Side). . . . .	.0945" (120-164)
Step Up Rod (2 Stage)	
Standard . . . . .	.066", .061", .250" Length (16-39)
Adjustments	
Accelerator Pump (Top of Plunger to Air Horn) . . . . .	9/16" (3rd hole from end of lever)

\* Uses special hardened cylinder head bolt washer.

\*\* Check oil level indicator (dip stick) and change if necessary to correspond to correct level. Maintaining proper oil level is necessary during acceleration trials.

CARBURETOR (Continued)

Idle Speed (Engine Hot) . . . . .	1300 to 1500 r.p.m.
Secondary Throttle Lockout Adjustment . . . . .	.020"
Float Setting . . . . .	3/16"
Float Drop . . . . .	3/4"
Idle Mixture (Both screws open) . . . . .	1/2 - 3/4 Turn
Choke . . . . .	Manual

NOTE: Secondary Blades Stop  $5^{\circ} \pm 1^{\circ}$  before Vertical at Wide Open Throttle  
 Primary  $7^{\circ}$  before Vertical

IGNITION SYSTEM

Distributor Assembly . . . . .	Prestolite
Model Number (Prestolite) . . . . .	2444814
Type . . . . .	Short Arm Double Breaker
Advance Automatic Crankshaft Degree	
@Engine R.P.M. . . . .	$0^{\circ}$ @550
. . . . .	$24^{\circ}$ @880
Advance- Vacuum (Distributor Degrees at Inches of Mercury) . . . . .	None
Breaker Point Gap . . . . .	.010" - .013" (Use Dwell Meter for Final Setting)
Dwell Angle	
One Set Points . . . . .	$27^{\circ}$ - $31^{\circ}$
Both Sets Points . . . . .	$34^{\circ}$ - $38^{\circ}$
Breaker Arm Spring Tension . . . . .	24 - 30 oz.
Timing . . . . .	$31^{\circ}$ @3000 R.P.M. (N61Y)
. . . . .	$34^{\circ}$ @3000 R.P.M. (N58R)
**Shaft Side Play (New or Rebuilt) . . . . .	.000" - .003"
Shaft End Play (After Assembly) . . . . .	.003" - .010"
Rotation . . . . .	Counter-Clockwise
Spark Plugs . . . . .	N61Y or N58R
Size . . . . .	14 MM 3/4" Reach
Gap . . . . .	.018" - .022"
Firing Order . . . . .	1-8-4-3-6-5-7-2
Coil . . . . .	Prestolite Transistor
Identification No. . . . .	Prestolite 2444640
Primary Resistance @ $70^{\circ}$ - $80^{\circ}$ F. . . . .	.216 - .264 Ohms
Secondary Resistance @ $70^{\circ}$ - $80^{\circ}$ F. . . . .	14500 - 16500 Ohms
Ballast Resistor	
Resistance @ $70^{\circ}$ - $80^{\circ}$ F. . . . .	.225 - .275 Ohms
Current Draw (Coil & Ballast Resistor in Circuit)	
Engine Stopped . . . . .	8.5 Amps
Engine Idling . . . . .	6.2 Amps

\*\*Service wear tolerance should not exceed .006"

**CLUTCH**

Free Play Adjustment . . . . . 1/2" Min.; 3/4" Max.

**REAR AXLE**

Axle Shaft End Clearance . . . . . 0.13" Min.; .023" Max.

Ratio . . . . . 4.56

**AUTOMATIC TRANSMISSION**

Line Pressure . . . . . 90 p.s.i. @ 1000 - 1100 r.p.m.

**OIL (Engine)** . . . . . Only oils labeled "For Service MS"  
should be used. NOTE: SAE 30 is recommended for acceleration  
Trials.

**FLUID - Automatic** . . . . Use Automatic Transmission Fluid Type "A" Suffix "A"  
**Manual** . . . . . SAE 80 - 90 Gear Oil

**CAPACITIES - Transmission**

Manual 4 Speed . . . . . 7-1/2 pts.

Automatic . . . . . 18 pts.

**BOLT & NUT TORQUE SPECIFICATIONS**

Cylinder Head Bolts . . . . . 70 ft./lbs.

Main Bearing Bolts . . . . . 100 ft./lbs.

Main Bearing Cross Bolts . . . . . 45 ft./lbs.

Connecting Rod Bolts . . . . . 75 ft./lbs.

Intake Manifold . . . . . See Page 7

Torque Converter Plate to Converter Screws . . . . . 65 ft./lbs.

Torque Converter Plate to Crankshaft . . . . . 110 ft./lbs.

**PARTS FOR 426 CU. IN. HEMI-CHARGER ENGINE PACKAGE**

Orders for parts peculiar to Dodge vehicles built for the 426 cu. in. Hemi-Charger Engine should be directed to:

**CHRYSLER MOTORS CORPORATION**  
Center Line Parts Plant  
P. O. Box 300  
Centerline, Michigan

(Phone:  
Jefferson 9-3000  
Extension 7243)