
CHRYSLER
K
THREE HUNDRED

About your
NEW CHRYSLER 300-K

We at Chrysler Motors Corporation feel that an automobile as distinctive as your new Chrysler 300-K deserves this specially-prepared booklet to supplement your 1964 Chrysler Operating Instructions. Please read it carefully so that you will know what is different about your Chrysler 300-K. You will note that complete engine specifications are provided for your convenience for both the optional and the standard engines.

May we offer our congratulations for selecting this fine automobile.

What you'll want to know about your NEW CHRYSLER 300-K

Your new Chrysler 300-K is a very special car. It represents an important automotive achievement, and understanding its uniqueness will increase your pleasure of ownership.

In the past, it has been necessary to choose between a sports car for excellence in performance and handling, and a full-size car for a smooth ride and American-style comfort. But your new 300-K combines the most desirable qualities of both the true sports car and the full-size car.

You have probably already noticed the ability of your 300-K to accelerate quickly—from a standstill—or in passing situations on the open road. Its performance capabilities are an inheritance that goes ten years deep, refined in the cars of Chrysler's famed "letter" series. A team of Chrysler 300's has been a leading contender in sports-car rallies all over the country.

The refinement never ceases. Today's 413 cubic-inch high-compression V-8 supplies numerous examples of Chrysler engineering progress. Newly designed carburetor linkage helps to provide exceptional passing performance. An ignition system with greater resistance to heat and moisture contributes to outstanding dependability. The valve lifter stems have even been chrome plated, a significant detail that will permit you to enjoy quieter engine operation, longer engine life.

This fine engine, with standard automatic transmission, or with the optional 4-speed, floor-shift manual, creates a power team that supplies the feeling of complete mastery of driving you get in your 300-K.

You are sure to experience the 300-K's very positive "feel of the road", too. It is largely due to its advanced suspension system. Front torsion bars, long a feature of the finest sports cars because of the better control and stability they provide, were adapted to the full-size Chrysler in 1957. They allow the soft, smooth ride most discriminating owners prefer, yet also help provide the flat cornering and sure handling you get in your new "K". Handling ease is also enhanced by Chrysler full-time power steering. Only 3½ light turns of the wheel take you from full left to full right.

A gentle touch on the power brake pedal brings you to a smooth, sure halt. The brakes themselves have more effective brake lining area than any other car in Chrysler's class. There are 263.3 square inches to balance your "K's" go-power with stopping power. They are self-adjusting to eliminate the bother of frequent minor service. And their tough, bonded linings contribute to long driving life.

The roominess of your "K" is an advantage you are probably well aware of. It allows stretch-out comfort not possible in small sports cars. And, of course, you have ample big-car luggage space. But its room is only the beginning of your 300-K's comfort and convenience provisions.

There are molded, foam-padded front bucket seats with adjustable, thickly-padded headrests. The passenger's side reclines in five positions. The control console features an automatic transmission shift lever and Performance Indicator that measures manifold vacuum in inches of mercury—correlates with

your engine's output in all operating ranges. And you will recognize other significant touches—notes of luxury in a big car, genuine surprises in a sports car. The convenience and comfort of the long, ample armrests, for example. The helpfulness of the front seat assist handle. Ash trays and cigar lighters both front and rear. Interior door-operated lights, and the deep-pile carpeting.

There is the impressive quietness about your "K". You may have noticed it, even at high speeds and over rough surfaces. It is a product of Chrysler's one-piece Unibody. This all-welded, scientifically engineered structure is exceptionally strong and durable.

And durability is also a feature of your car's individual beauty. The 300-K is extensively rustproofed (7 rust-proofing dips), and its advanced Acrylic-enamel finish will stay new-looking, with minimum care, for many years.

As you drive your Chrysler 300-K, you will discover many other unique and delightful features. We would like your impressions and comments about this full-sized sports car. The desires of owners like yourself are of great assistance to us in planning the still finer cars of tomorrow.

Please write your comments to Chrysler-Plymouth Division, Chrysler Motors Corporation, P. O. Box 1658, Detroit 31, Michigan.

Congratulations on your choice of the 300-K! May you enjoy many adventuresome and satisfying miles behind its steering wheel.

C. E. Briggs
General Manager
CHRYSLER-PLYMOUTH DIVISION

CHRYSLER 300-K SPECIFICATIONS
FirePower 360 (standard)
and
FirePower 390 (optional)

ENGINE

Type	90°V
Number of Cylinders	8
Bore (413 cubic inch displacement)	4.19″
Stroke	3.750″
Piston Displacement	413 cubic inch
Compression Ratio (premium fuel)	10.1 to 1*
	9.6 to 1**
Compression Pressure with Engine warm, spark plugs removed, wide open throttle at a minimum cranking speed of 100 rpm's with automatic transmission	130-165 psi
120 rpm's with standard transmission	125-155 psi
Maximum variation between cylinders—any one engine with Standard Transmission	20 psi
Automatic Transmission	25 psi
Maximum Brake Horse Power @ Engine r.p.m.'s	360 @ 4600*
	390 @ 4800**
Firing Order	1-8-4-3-6-5-7-2

CYLINDER NUMBERING (front to rear)

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

CYLINDER BLOCK

Cylinder Bore (standard)	4.1870-4.1890
Cylinder Bore out-of-round (maximum allowable before reconditioning)	.005″
Cylinder Bore Taper (maximum allowable before reconditioning)	.010″
Reconditioning Working Limits (for taper and out-of-round)	.001″
Maximum Allowable Oversize (cylinder bores)	.040″
Tappet Bore Diameter	.9050-.9058″
Distributor Lower Drive Shaft Bushing (press fit in cylinder block)	.0005-.0040″
Ream to	.4865-.4880″
Shaft to Bushing Clearance	.0007-.0027″

CRANKSHAFT

Type	Fully Counter-Balanced
Bearings	Steel-Backed Babbitt
Journal Diameter	2.7495 to 2.7505″
Crank Pin Diameter	2.374 to 2.375″
Maximum Out-of-Round Permissible	.001″
Number of Main Bearings	5
Clearance Desired (bearing installed I.D. minus journal O.D.)	.0005 to .0015″
Maximum Clearance Allowable Before Reconditioning	.0025″
End Play	.002 to .007″
Thrust Taken By	No. 3 Main Bearing
Finish at Rear Seal Surface	Diagonal Knurling
Interchangeability of Bearings	Upper Nos. 2, 4, 5
	Lower Nos. 1, 2, 4, 5

*Firepower 360

**Firepower 390

MAIN BEARINGS (service)

All available in standard and the following undersizes	.001", .002", .003", .010", .012"

CONNECTING RODS AND BEARINGS

Type	Drop Forged "I" Beam
Length (center to center)	6.766 to 6.770"
Weight (less bearing shells)	846 ± 4 GMS
Bearings	Steel-Backed Babbitt
Diameter and Length	2.376 x .927"
Clearance Desired (bearing installed I.D. minus journal O.D.)	.0005 to .0015"
Maximum Allowable Before Reconditioning	.0025"
Side Clearance	.009 to .017"
Bearings for Service	Standard .001", .002", .003", .010", .012 Undersize
Piston Pin Bore Diameter	1.0925 to 1.0928"

CAMSHAFT

Drive	Chain
Bearings	Steel-Backed Babbitt
Number	5
Thrust Taken By	Cylinder Block
Clearance Desired (bearing installed I.D. minus journal O.D.)	.001 to .003"
Maximum Allowable Before Reconditioning	.005"

CAMSHAFT BEARING JOURNALS

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

CAMSHAFT BEARINGS

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

TIMING CHAIN

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

TAPPETS

Type	Hydraulic*
	Mechanical**
Clearance in Cylinder Block	.0005 to .0018"
Body Diameter	.9040 to .9045"
Oversize Available for Service	.001 to .008"
Valve Tappet Clearance—(engine cold)**	
Intake	.017"
Exhaust	.028"

*Firepower 360

**Firepower 390

PISTONS

Type	Horizontal Slot w/Steel Struts
Material	Aluminum Alloy Tin Coated
Land Clearance	.032 to .040"
Clearance at Top of Skirt	.0003 to .0013"
Weight (standard through .040" oversize)	780 grms.
Piston Length (overall)	3.96"
Ring Groove Depth	
No. 1	.216"
No. 2	.216"
No. 3	.206"
Pistons for Service	Standard, .005", .020", .040", Oversize

PISTON PINS

Type	Press Fit in Rod
Diameter	1.0935 to 1.0937"
Length	3.555 to 3.575"
Clearance in Piston	.00045 to .00075"
Interference in Rod	.0007 to .0012"
Piston Pins for Service	Standard Only
Direction Offset in Piston	Toward Right Side of Engine

PISTON RINGS

Number of Rings per Piston	3
Compression	2
Oil	1
Width of Rings	
(Compression)	.0775 to .0780"
(Oil)	.1860 to .1865"
Piston Ring Gap (all)	.013 to .025"

RING SIDE CLEARANCE

(Compression)	
Upper	.0015 to .0030"
Intermediate	.0015 to .0030"
(Oil)	.0010 to .0030"

VALVES—Intake

Material	SAE 1041 Steel
Head Diameter	2.08"
Stem Diameter	.372 to .373"
Stem Oversizes Available for Service	Standard, .005", .015", .030"
Stem to Guide Clearance	.001 to .003"
Maximum Allowable Before Reconditioning	.004"
Angle of Seat	45°
Adjustment	.017"
Lift	.430"*
	.445"**

VALVES—Exhaust

Material	Nitrogen Treated Manganese Chromium Nickle Steel
Head Diameter	1.60"*
	1.75"**

*Firepower 360

**Firepower 390

Stem Diameter	.371 to .372"
Stem Oversize Available for Service	Standard, .005", .015", .030"
Stem to Guide Clearance	.002 to .004"
Maximum Allowable Before Reconditioning	.006"
Angle of Seat	45°
Adjustment	.028"
Lift	.430"*
	.451"**

VALVE SPRINGS

Number	16
Free Length	2.21"
Load When Compressed to (valve closed)	95-105 lbs. @ 1.860"*
	85-95 lbs. @ 1.860"**
Load When Compressed to (valve open)	187-203 lbs. @ 1.470"*
	216-234 lbs. @ 1.43"**
Valve Springs I.D.	1.070 to 1.090"
Valve Spring Installed Height (spring seat to retainer)	1.830 to 1.890"
Surge Damper	Spiral Type

VALVE TIMING

	**	*
Intake—Opens	18° BTC	24° BTC
Closes	70° ABC	64° ABC
Duration	268°	268°
Exhaust—Opens	66° BBC	64° BBC
Closes	22° ATC	24° ATC
Duration	268°	268°
Valve Opening Overlap	40°	40°

VALVE GUIDES

Type	Cast in Head
Guide Bore Diameter	.374 -.375" Std.

CYLINDER HEAD

Number Used	2
Combustion Chamber	Wedge Type
Valve Seat Runout (maximum)	.002"
Intake Valve Seat Angle	45°
Intake Seat Width	.060 to .085"
Exhaust Valve Seat Angle	45°
Exhaust Seat Width	.040 to .060"
Cylinder Head Gasket Compressed (thickness)	.022"

ENGINE LUBRICATION

Pump Type	Rotor Full Pressure
Capacity (qts.)	5***
Pump Drive	Camshaft
Operating Pressure at 40 to 50 m.p.h.	45 to 65 lbs.
Oil Filter Type	Full Flow
Pressure Drop Resulting from Clogged Filter	7 to 9 lbs.

*Firepower 360

**Firepower 390

***When Filter is Replaced, Add 1 Quart.

81-070-4180 2nd Edition

Litho in U.S.A.