

We at Chrysler Motors Corporation feel that an automobile as distinctive as your new Chrysler 300-L deserves this specially-prepared booklet to supplement your 1965 Chrysler Operating Instructions. Please read it carefully so that you will know what is different about your Chrysler 300-L. You will note that complete engine specifications are provided for your benefit.

May we offer our congratulations for selecting this fine automobile.

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

Your new Chrysler 300-L is a very special car. It represents important automotive achievements, 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-L 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-L 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 benefits resulting from engineering progress. This power plant has a special camshaft, unsilenced air cleaner and a dual exhaust system.

This fine engine, with automatic transmission as standard equipment, 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-L.

You are sure to experience the 300-L's very positive "feel of the road", too. It is largely due to its advanced suspension

system and drive line. 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 "L". A newly-designed "constant velocity" universal joint assures you of added comfort resulting from smooth, quiet drive line operation under all conditions. If you desire the ultimate in sports car roadability and cornering, an optional suspension system is available consisting of heavy-duty torsion bars and rear springs, shock absorbers and brakes. 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 "L'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. Tires are the new low-profile type with a tread size increase to 8.55.

Wheelbase and weight have been increased for riding comfort. You and your passengers will appreciate the added interior space in your "L". 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-L'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 with release levers accessible to front and rear seat passengers. The control console may have a

4-speed manual or an automatic 3-speed 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 "L". 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-L is extensively rustproofed and its advanced Acrylic-enamel finish will stay new-looking, with minimum care, for many years.

As you drive your Chrysler 300-L, 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, Michigan, 48231.

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

P. N. Buckminster  
*General Manager*  
CHRYSLER-PLYMOUTH DIVISION

# CHRYSLER 300-L SPECIFICATIONS

## FirePower 360 Engine

### ENGINE

Type	90°V
Number of Cylinders	8
Bore	4.19"
Stroke	3.750"
Compression Pressure with Engine Warm, Spark Plugs Removed, Wide Open Throttle	130-165 psi
Piston Displacement	413 cubic inch
Compression Ratio (premium fuel)	10.1:1
Horsepower	360
Maximum Variation Between Cylinders	25 psi
Firing Order	1-8-4-3-6-5-7-2
Basic Timing	10° B.T.D.C.

### 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)	.005"
Cylinder Bore Taper (maximum allowable)	.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	.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

### 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.....	.0025"
Side Clearance.....	.009 to .017"
Bearings for Service.....	Standard .001, .002, .003, .010, .012" Undersize
Piston Pin Bore Diameter.....	1.0923 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.....	.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"

#### VALVE TIMING

Intake Opens (BTC).....	24°
Intake Closes (ABC).....	64°
Exhaust Opens (BBC).....	64°
Exhaust Closes (ATC).....	24°
Valve Overlap.....	48°
Intake Valve Duration.....	268°
Exhaust Valve Duration.....	268°

#### TIMING CHAIN

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

#### TAPPETS

Type.....	Hydraulic
Clearance in Cylinder Block.....	.0005 to .0018"
Body Diameter.....	.9040 to .9045"
Clearance Between Valve Stem and Rocker Arm Pad (dry lash).....	.060-.210"
Oversize Available for Service.....	.001, .008, .030"

## PISTONS

Type .....	Horizontal Slot w/Steel Struts
Material .....	Aluminum Alloy Tin Coated
Land Clearance .....	.032" to .040"
Clearance at Top of Skirt .....	.0005" to .0015"
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
Top—Compression Chrome .....	1
Middle—Compression Tin .....	1
Oil Steel Rails with Spacer .....	1
Width of Rings	
(Compression) .....	.0775 to .078"
(Oil Each Rail) .....	.025"
Piston Ring Gap (all) .....	.013 to .025"

## RING SIDE CLEARANCE (Service)

(Compression)	
Upper .....	.0015 to .003"
Intermediate .....	.0015 to .003"
(Oil) .....	.001 to .009"

## 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 .....	.016"
Angle of Seat .....	45°
Adjustment .....	None
Lift All Models .....	.430"

## VALVES—Exhaust

Material .....	Nitrogen Treated Manganese Chromium Nickel Steel
Head Diameter .....	1.60"
Stem Diameter .....	.371 to 3.72"



Stem Oversize Available for Service.....	Standard .005, .015, .030"
Stem to Guide Clearance.....	.002 to .004"
Maximum Allowable Before Reconditioning.....	.018
Angle of Seat.....	45°
Adjustment.....	None
Lift All Models.....	.430"

#### VALVE SPRINGS

Number.....	16
Free Length.....	2.34" Intake 2.21" Exhaust
Load when compressed to (valve closed).....	95-105 @ 1 <sup>53</sup> / <sub>64</sub> "
Load when compressed to (valve open).....	187-203 lbs. @ 1 <sup>15</sup> / <sub>32</sub> "
Surge Damper.....	Intake only
Valve Springs I.D.....	1.070"-1.090" Intake 1.010"-1.030" Exhaust
Maximum allowable out of plumb.....	1/16"
Valve Spring Installed Height (spring seat to retainer).....	1 <sup>53</sup> / <sub>64</sub> "-1 <sup>57</sup> / <sub>64</sub> "
Use 1/16" spacer to reduce spring height when over specifications	

#### 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"

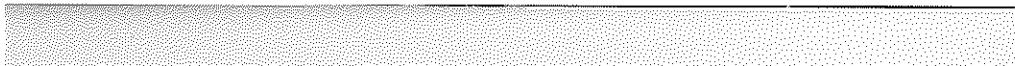
#### ENGINE LUBRICATION

Pump Type.....	Rotor Full Pressure
Capacity (qts.).....	4**
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.

#### OIL PUMP INSPECTION LIMITS FOR REPLACEMENT

Oil Pump Cover (filter base).....	.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
Inner.....	.005" or more
Outer Rotor Clearance.....	.012" or more
Tip Clearance Between Rotors.....	.010" or more

\*\*When filter is replaced, add 1 quart.



CHRYSLER DIVISION



**CHRYSLER**  
MOTORS CORPORATION

