



SERVICE BULLETIN



SERVICE DEPARTMENT... CHRYSLER-PLYMOUTH DIVISION
CHRYSLER MOTORS CORPORATION

TECHNICAL INFORMATION ON IMPERIAL CHRYSLER PLYMOUTH VALIANT

October 7, 1963

No. 64-7

TO ALL IMPERIAL AND CHRYSLER DEALERS

The enclosed bulletin covers the general information and specifications of the 1964 Chrysler 300K Models.

The information contained in this bulletin supplements the general service information in the 1964 Imperial and Chrysler Service Technical Manual.

This bulletin covers specific data and specifications of the engine, carburetor and adjustments, special intake manifold, camshaft, tappets, rocker levers, and other features exclusive with the 1964 Chrysler 300K Models (Fig. 1).

J. W. Farley
J. W. FARLEY
Manager-Service
CHRYSLER-PLYMOUTH DIVISION

MISCELLANEOUS

DATA AND SPECIFICATIONS

CHRYSLER
ALL 1964
300 K
MODELS

P-3934-C

Service Mgr.	
Shop Foreman	
Technicians	
Parts Mgr.	
Partsmen	

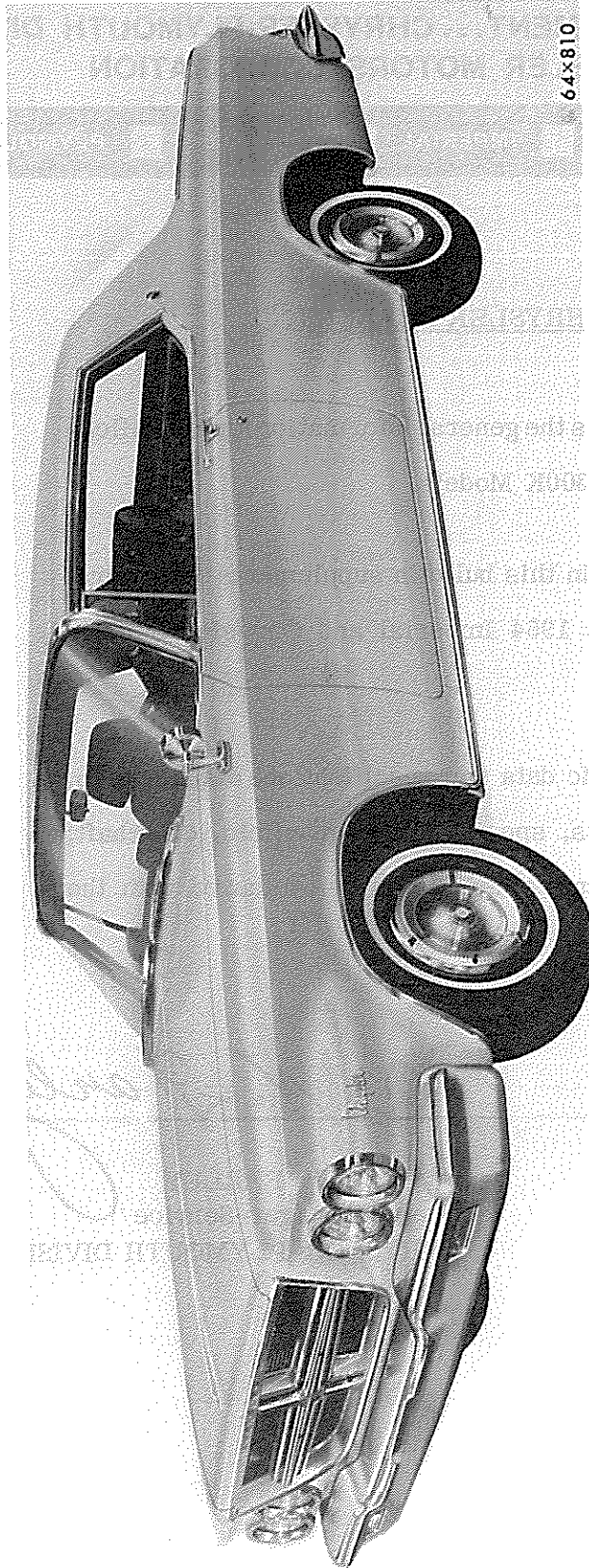


Fig. 1 - C-300K Two Door Hardtop

1964 CHRYSLER 300K

GENERAL DATA AND SPECIFICATIONS

2-DOOR HARDTOP - CONVERTIBLE COUPE

Wheelbase	122.0"
Tread	
Front	61.0"
Rear	59.7"
Length with Bumper	215.3"
Width with Bumper	80.0"
Height	
2-Door Hardtop	55.7"
Convertible Coupe	56.0"
Rear Axle Ratio	
4 Forward Speed Manual Transmission.	3.23
Automatic Transmission.	3.23
Transmission	4 Forward Speed Manual Transmission TorqueFlite Automatic Transmission
Tire Size	8.00 x 14 - 4 Ply *
Fuel System	
Fuel Tank Capacity	23
Carburetor	1 Four Barrel (Firepower 360 Engine) 2 Four Barrel (Firepower 390 Engine)
Engine Crankcase (qt.)	5 (Add 1 qt. when filter is changed)
Engine Displacement	413 cu. in.
Compression Ratio	10.1 to 1 (Firepower 360 Engine) 9.6 to 1 (Firepower 390 Engine)
Recommended Fuel	Premium

* 8.50 x 14 with Firepower 390 engine

GROUP 0 - LUBRICATION AND MAINTENANCE

Passenger car maintenance schedules for Certified Car Care have been compiled to provide maximum protection against all types of driving conditions.

Semi-annual lubrication and maintenance services are prescribed for most of the units and the exception to this is the three months intervals between oil changes not to exceed 4,000 miles. Special recommendations are provided for Trailer Towing.

For all servicing, refer to the 1964 Imperial and Chrysler Service Technical Manual for lubrication and maintenance.

GROUP 1 - ACCESSORIES

Radios

Three types of radios are available (as optional equipment) on the C-300K Models for 1964; a fully transistorized AM radio, a transistorized AM-FM radio and the AM Search-Tune radio. Available (as optional equipment) are the rear seat speaker and fader control and the rear seat radio speaker reverberator. The reverberator is used to produce an echo sound effect in the vehicle similar to that obtained in a concert hall. The reverberator control is located on the instrument panel.

Heaters

The hot water heater (if so equipped) is controlled by five push buttons and a temperature control lever located on the instrument panel.

GROUP 2 - FRONT SUSPENSION

All ball joints, tie rod ends and torsion bars at the front of the rear anchors are effectively sealed against road splash by tightly fitted balloon type flexible seals. The ball joints and tie rod ends are of the semi-permanent lubricated type and should not under normal operating conditions require lubrication before 32,000 miles.

The service procedures are the same as outlined in the 1964 Imperial and Chrysler Service Technical Manual with the following exceptions:

Front Suspension Height

The difference in the height between the floor and the measuring points on each lower control arm (lowest point on the ball joint housing and underside of the housing between the flanges of arm) should be 2 inches. This height must be maintained + or - 1/8 inch with the maximum differential from side to side of 1/8 inch.

GROUP 3 - REAR AXLE

The rear axle ratio is 3.23 for vehicles equipped with a 4 Forward Speed Manual Transmission or a TorqueFlite Transmission.

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual.

Trailer-Towing Service Recommendations

Should the rear axle lubricant become contaminated with water, it should be changed immediately to avoid early axle failure. This will occur whenever the rear axle is submerged in water, such as on a boat launching ramp, where the water will enter the axle housing through the vent hole.

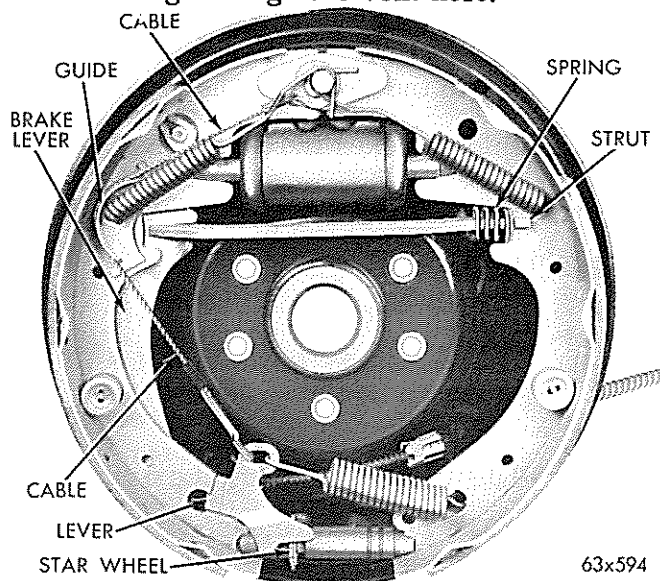


Fig. 2 - Duo Servo Brakes

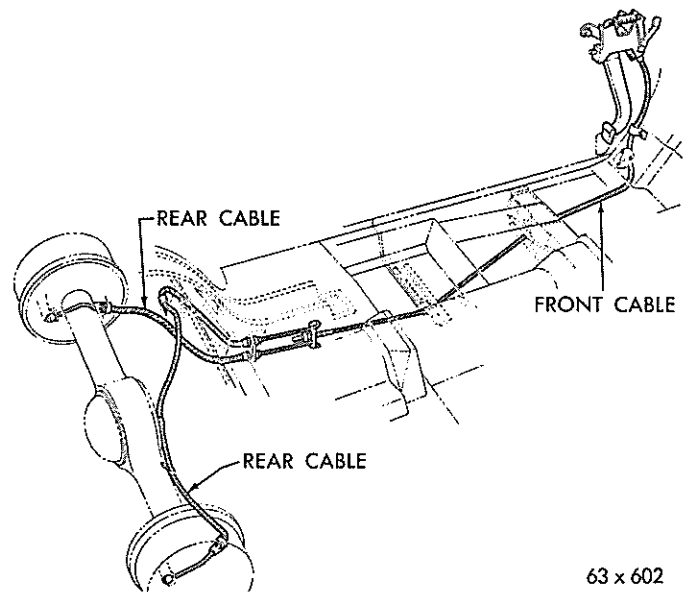


Fig. 3 - Rear Wheel Parking Brakes

GROUP 5 - BRAKES

<u>Specifications</u>	C300K with	C300K with
Car Application	Firepower 390 Engine	Firepower 360 Engine
Piston Displacement	413	413
Type	Duo-Servo Single Anchor	Duo-Servo Single Anchor
Drum Diameter	11 in.	11 in.
Number of Brake Shoes	8	8
Width		
Front	3 in.	3 in.
Rear	3 in.	2 1/2 in.
Brake Lining	Bonded Moulded Asbestos	Bonded Moulded Asbestos
Length & Color Code Markings		
Front Primary	9 1/4" 3 black marks	12 1/8" 1 Black and 1 orange mark
Front Secondary	12 1/8" 2 black and 1 white mark	12 1/8" 2 red marks
Rear Primary	9 1/4" 3 black marks	12 1/8" 1 black and 1 orange mark
Rear Secondary	12 1/8" 2 black and 1 white mark	12 1/8" 2 red marks
Thickness	3/16 in.	3/16 in.
Wheel Cylinders		
Front Wheel Cylinder Bore	1 1/8 in.	1 1/8 in.
Rear Wheel Cylinder Bore	15/16 in.	15/16 in.
Master Cylinder Bore	1 in.	1 in.

Eleven inch Duo-Servo brakes are used in the 300K. The brakes are the self energizing type and a self adjusting mechanism is built into each wheel brake unit, therefore, the brakes need not be serviced to take up wear in the linings. The self adjusting mechanism consists of a cable and linkage device which indexes the star wheel, (Fig. 2) increasing the length of the floating link to maintain the correct shoe-to-drum clearance. The adjuster is designed so that it operates only during reverse stops.

Rear Wheel Parking Brakes

The parking brake system operates on the rear wheel brakes (Fig. 3). A foot pedal mechanism is used to apply the parking brake. The brake is released by a pull-out type knob mounted on the instrument panel.

Remote Power Brake

The remote power brake system for the 300K Models is mounted on brackets under the left front fender, just back of the headlamp housing (Fig. 4). The use of the remote power brake unit enables a low brake pedal height, reduced pedal travel and decreased pedal application effort.

Remote Power Brake Bleeding Procedures

With the engine shut off, exhaust all of the vacuum from the brake booster by applying the pedal several times. Make certain that the master cylinder is full of fluid before starting the bleeding procedure.

- (1) Attach the bleeder tank C-3496 to the master cylinder.

CAUTION: Do not apply more than 25 psi to the bleeder tank.

- (2) Open the inlet bleeder screw of the booster (closest to the master cylinder) (Fig. 4), and permit the fluid to run until free of air bubbles.
- (3) Open the outlet bleeder screw (Fig. 4) and allow the fluid to run until free of bubbles.
- (4) Bleed the wheel brake cylinders in the following sequence: Left front, right rear, right front and left rear. Repeat if necessary and inspect for leaks.

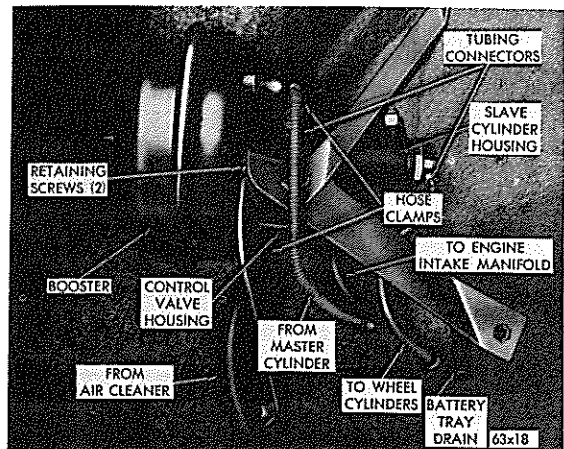


Fig. 4 - Remote Power Brake

GROUP 7 - COOLING SYSTEM

Specifications (All C300K Models)

Capacity	
With Heater	17 qts.
Without Heater	16 qts.
Radiator	
Type	Tube and Spacer
Radiator Pressure Cap	
Type	Pressure Vent
Pressure Setting	12-15 psi (Standard) 15-16 psi (Air Con- ditioning Only)
Transmission Oil Cooler	
Type	Concentric Tube
Location	Radiator Bottom Tank
Fan	
Standard on Firepower 360 engine	4 Blade, 18" Diameter
Standard on Firepower 390 or with Air Conditioning	7 Blade, 18" Diameter
Fluid Fan Drive Type	Silicone fluid filled, - thermal control (Air Con- ditioning Only)
Fan Shroud	
Type (with Air Conditioning)	Full Box
Thermostat	
Type	Pellet
Setting	177 ^o to 183 ^o F.
Water Pump	
Type	Centrifugal Ball Bearing

ACCESSORY BELT DRIVE - SPECIFICATIONS

Torque Method - All Models

Torque (Foot-Pounds) to be applied to Components

Accessory	For Belt in Use	For New Belt
Power Steering Bracket	45	45
Alternator		
with Air Conditioning	40	60
without Air Conditioning	40*	60*
Fan Idler Bracket	35	50

*NOTE: The torque wrench assumes a different position according to the model, when adjusting the belt tension.

Belt Deflection Method-All Models

+ Deflection (Inches) to be Applied at Midpoint of Belt Segment Under a 5 pound Load.

Accessory	For Belt in Use	For New Belt
Power Steering	3/16	3/16
Fan Belt - Idler	1/8	1/16
Alternator - Without A/C*	1/4	1/8
With A/C*	3/8	1/4

*A/C - Air Conditioning

The C-300K is equipped with a tube and spacer type full-flow radiator and a centrifugal ball bearing water pump with a 180° thermostat.

In operation: During cold weather operation when the temperature of the air leaving the radiator is under 150° F., the temperature regulated fan drive rotates at lower speeds. At cruising speeds, the normal fan drive enables the fan to provide adequate cooling (with only 1/3 to 1/2 of the engine output, therefore, lower fan speed causes less fan noise at high road speeds.

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual.

GROUP 8 - ELECTRICAL SYSTEM

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual with the following exceptions:

Specifications - Ignition System

Vehicle Model	VC2-300 K with FirePower 390 Engine	VC2-300 K with FirePower 360 Engine
Engine Displacement	413 cubic inch	413 cubic inch
Distributor.	Prestolite Built	Prestolite Built
Identification No.	2444364 1BS-4011D with Tachometer Drive and Double Breaker	2444361 1BS-4011C with Tachometer Drive and Double Breaker
Advance - Automatic (Distributor Degrees at Distributor rpm) .	0° @ 525 to 675 0° to 3° @ 675 4.5° to 6.5° @ 910	0° @ 325 to 475 0° to 4.0° @ 475 4.5° to 6.5° @ 640 9° to 11° @ 2400
Advance - Vacuum (Distributor Degrees at inches of Mercury)	0° @ 6" to 9" 4.5° to 7.5° @ 12" 7.5° to 10.5° @ 14.3"	0° @ 7.2" to 8.9" 4.5° to 7.5° @ 12" 7.5° to 10.5° @ 14.5"
Breaker Point Gap . . . . .	.014" to .019"	.014" to .019"
Dwell Angle.	27° to 32° (one set points) 34° to 40° (both sets points)	27° to 32° (one set points) 34° to 40° (both sets points)
Breaker Arm Spring Tension. .	17 to 21.5 oz.	17 to 21.5 oz.
Condenser Capacity . . . . .	.25 to .285 mfd.	.25 to .285 mfd.
Shaft Side Play . . . . .	.000" to .003"*	.000" to .003"*
Shaft End Play (After Assembly)	.003" to .010"	.003" to .010"
Rotation.	Counter-Clockwise	Counter-Clockwise
Spark Plugs	XJ-10Y Champion	J-10Y Champion
Size	14 MM - 3/8 Reach	14 MM - 3/8 Reach
Gap . . . . .	.035 inch	.035 inch
Firing Order	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Ignition Timing	12-1/2° BTC #	10° BTC **
Coil	Chrysler Prestolite	Chrysler Essex
Identification No.	2444242 200759	2444241 67-160-4
Primary Resistance @ 70-80° F.	1.65 - 1.79 ohms	1.41 - 1.55 ohms
Secondary Resistance @ 70-80° F.	9400 - 11700 ohms	9200 - 10600 ohms
Ballast Resistor.	2095501	
Resistance @ 70-80° F.	0.5-0.6 ohms	
Current Draw (Coil and Ballast Resistor in Circuit)		
Engine Stopped.	3.0 Amperes	
Engine Idling.	1.9 Amperes	

* Service Wear tolerance should not exceed .006 inch.

** Firepower 360 Engine (Standard)

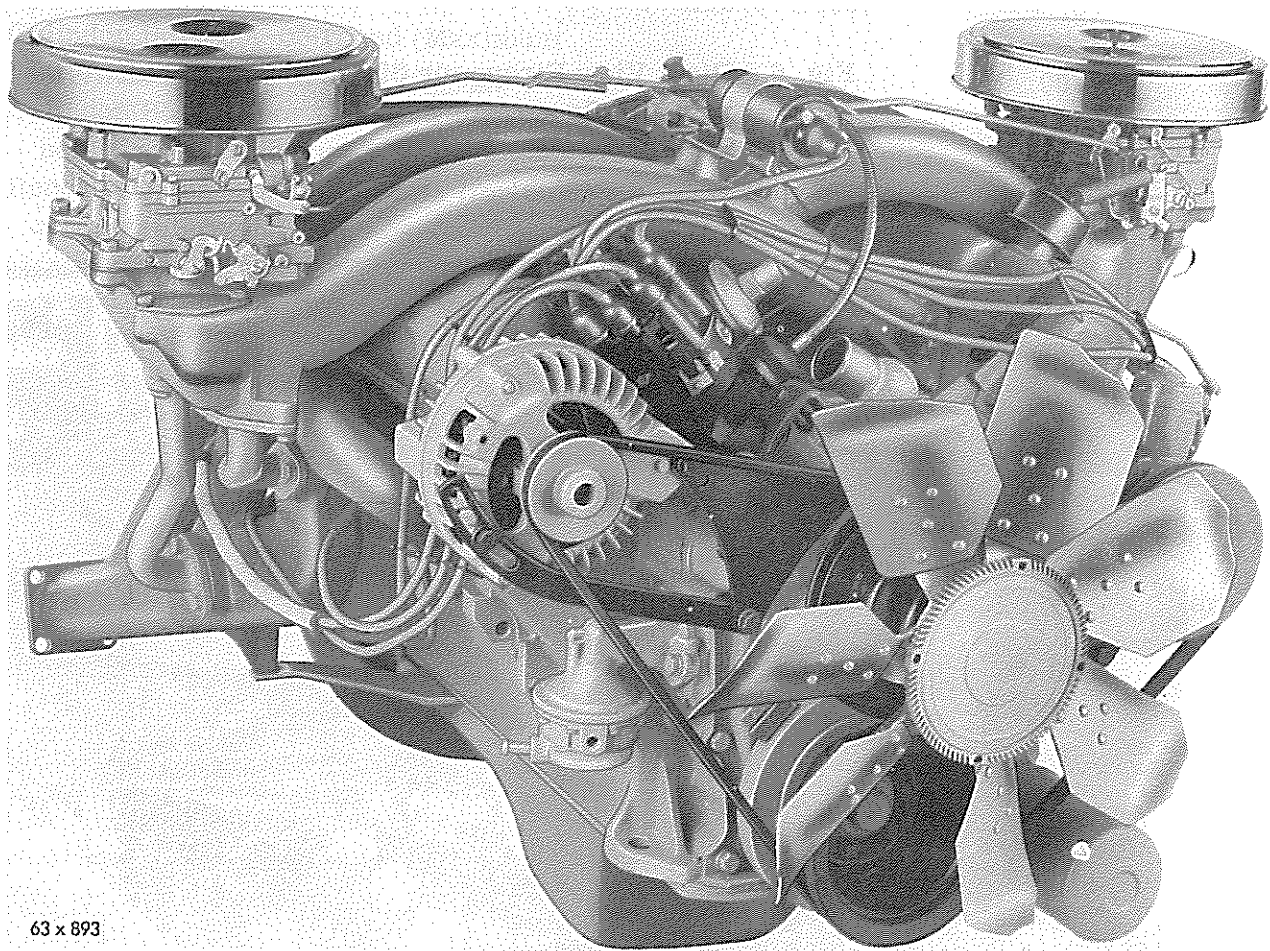
Firepower 390 Engine (Optional)

GROUP 9 - ENGINE

The standard engine for the C-300K is a Firepower 360, having a high performance camshaft and valve springs with surge dampers, hydraulic tappets, a single 4-barrel carburetor, low restriction air cleaner and dual exhausts.

The optional engine for the C-300K is a Firepower 390 (Fig. 5) using a high performance camshaft with mechanical tappets, heavier valve springs and surge dampers, two 4-barrel carburetors, (Fig. 6) ram manifolds, low restriction air cleaners, (Fig. 7) dual exhausts with a balancing tube between the exhaust pipes.

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual with the following exceptions:



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Fig. 5 - FirePower 390 Engine

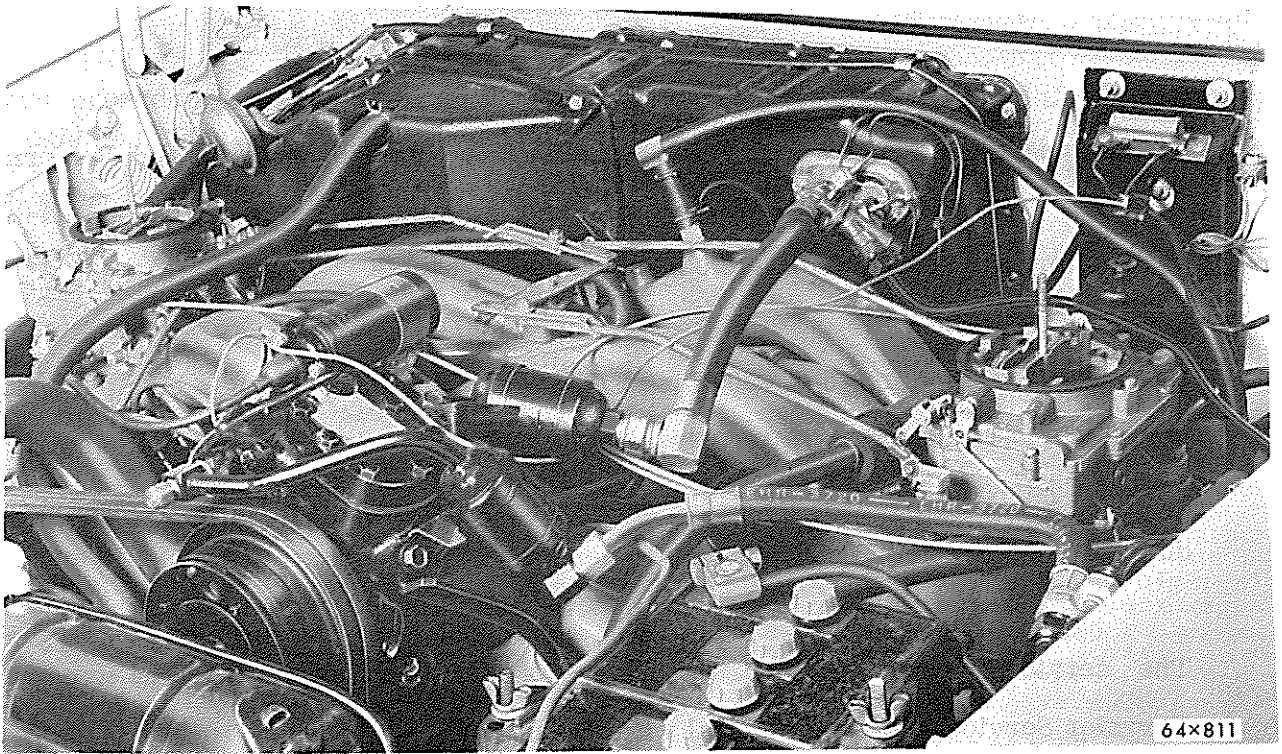


Fig. 6 - Right View Firepower 390 Engine
with Air Conditioning

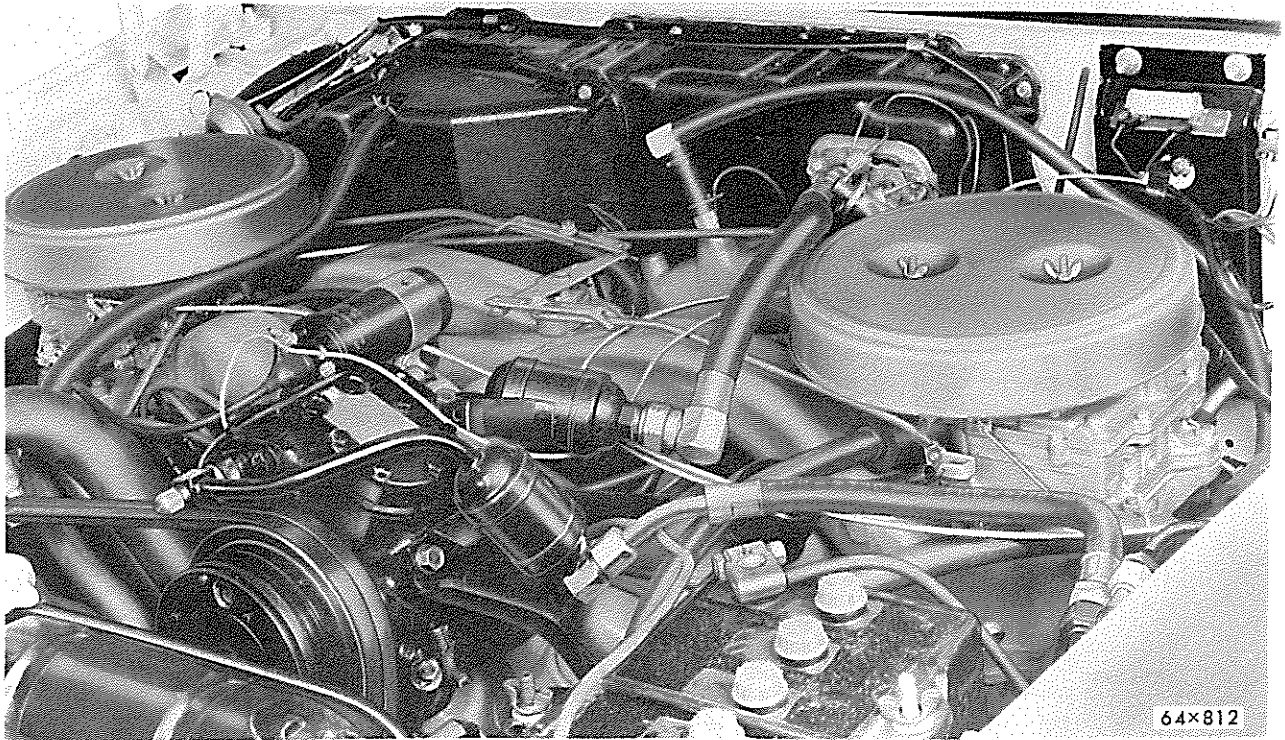


Fig. 7 - FirePower 390 Engine with Carburetor
Air Cleaner Installed and Air Conditioning

ENGINE SPECIFICATIONS

	<u>FirePower</u> <u>390</u>	<u>FirePower</u> <u>360</u>
Type	90° V	90° V
Number of Cylinders	8	8
Bore (413 Cubic Inch Displacement)	4.19 inch	4.19 inch
Stroke	3.750 inch	3.750 inch
Piston Displacement	413 Cubic Inch	413 Cubic Inch
Compression Ratio (Premium Fuel)	9.6 to 1	10.1 to 1
Compression Pressure with Engine warm, spark plugs removed, wide open throttle at a minimum cranking speed of 100 rpms with automatic transmission	130-165 psi	130-165 psi
120 rpms with standard transmission	125-155 psi	125-155 psi
Firing Order	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2

CYLINDER NUMBERING (FRONT TO REAR)

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

CYLINDER BLOCK

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

CRANKSHAFT

Type	Fully Counter-Balanced	Fully Counter-Balanced
Bearings	Steel Backed Babbitt	Steel Backed Babbitt
Journal Diameter	2.7495-2.7505"	2.7495-2.7505"
Crank Pin Diameter	2.374- 2.375"	2.374- 2.375"
Maximum Out-of-Round Permissible . . . . .	.001"	.001"
Number of Main Bearings	5	5
Clearance Desired (Bearing Installed I.D. Minus Journal O.D.) . . . . .	.0005 to .0015"	.0005 to .0015"
Maximum Clearance allowable Before Reconditioning . . . . .	.0025"	.0025"
End Play . . . . .	.002 to .007"	.002 to .007"

ENGINE SPECIFICATIONS - Continued

	<u>FirePower 390</u>	<u>FirePower 360</u>
Thrust Taken By	No. 3 Main Bearing	No. 3 Main Bearing
Finish at Rear Seal Surface	Diagonal Knurling	Diagonal Knurling
Interchangeability of Bearings	Upper Nos. 2, 4, 5 Lower Nos. 1, 2, 4, 5	Upper Nos. 2, 4, 5 Lower Nos. 1, 2, 4, 5
<u>MAIN BEARINGS (Service)</u>		
All available in standard and the following undersizes . . . . .	.001, .002, .003, .010, .012"	.001, .002, .003, .010, .012"
<u>CONNECTING RODS AND BEARINGS</u>		
Type	Drop Forged "1" Beam	Drop Forged "1" Beam
Length (Center to Center).	6.766 to 6.770"	6.766 to 6.770"
Weight (less Bearing Shells)	846 ± 4 GMS	846 ± 4 GMS
Bearings.	Steel Backed Babbitt	Steel Backed Babbitt
Diameter and Length	2.376 x .927"	2.376 x .927"
Clearance Desired (Bearing installed I.D. Minus Journal (O.D.) . . . . .	.0005 to .0015"	.0005 to .0015"
Maximum Allowable Before Reconditioning . . . . .	.0025"	.0025"
Side Clearance . . . . .	.009 to .017"	.009 to .017"
Bearings for Service	Standard .001, .002, .003, .010, .012" Undersize	Standard .001, .002, .003, .010, .012" Undersize
Piston Pin Bore Diameter	1.0925 to 1.0928"	1.0925 to 1.0928"
<u>CAMSHAFT</u>		
Drive	Chain	Chain
Bearings	Steel Backed Babbitt	Steel Backed Babbitt
Number	5	5
Thrust Taken By	Cylinder Block	Cylinder Block
Clearance Desired (Bearing Installed I.D. Minus Journal O.D.) . . . . .	.001 to .003"	.001 to .003"
Maximum Allowable Before Reconditioning . . . . .	.005"	.005"
<u>CAMSHAFT BEARING JOURNALS</u>		
Diameter		
No. 1	1.998-to 1.999"	1.998 to 1.999"
No. 2	1.982 to 1.983"	1.982 to 1.983"
No. 3	1.967 to 1.968"	1.967 to 1.968"
No. 4	1.951 to 1.952"	1.951 to 1.952"
No. 5	1.748 to 1.749"	1.748 to 1.749"
<u>CAMSHAFT BEARINGS</u>		
Diameter (after reaming)		
No. 1	2.000 to 2.001"	2.000 to 2.001"
No. 2	1.984 to 1.985"	1.984 to 1.985"
No. 3	1.969 to 1.970"	1.969 to 1.970"

ENGINE SPECIFICATIONS - Continued

	FirePower 390	FirePower 360
No. 4	1.953 to 1.954"	1.953 to 1.954"
No. 5	1.750 to 1.751"	1.750 to 1.751"
<u>TIMING CHAIN</u>		
Adjustment	None	None
Number of Links	50	50
Pitch . . . . .	.50"	.50"
Width . . . . .	.88"	.88"
<u>TAPPETS</u>		
Type	Mechanical	Hydraulic
Clearance in Cylinder Block . . . . .	.0005 to .0018"	.0005 to .0018"
Body Diameter . . . . .	.9040 to .9045"	.9040 to .9045"
Oversize Available for Service . . . . .	.001, .008"	.001, .008"
Valve Tappet Clearance - (Engine Cold)		
Intake . . . . .	.017"	
Exhaust . . . . .	.028"	
<u>PISTONS</u>		
Type	Horizontal Slot w/Steel Struts	Horizontal Slot w/Steel Struts
Material	Aluminum Alloy Tin Coated	Aluminum Alloy Tin Coated
Land Clearance . . . . .	.032" to .040"	.032" to .040"
Clearance at Top of Skirt . . . . .	.0003" to .0013"	.0003" to .0013"
Weight (Standard Through .040 Oversize)	780 grms.	780 grms.
Piston Length (Overall)	3.96 in.	3.96 in.
Ring Groove Depth		
No. 1 . . . . .	.216 in.	.216 in.
No. 2 . . . . .	.216 in.	.216 in.
No. 3 . . . . .	.206 in.	.206 in.
Pistons for Service	Standard, .005", .020", .040", Oversize	Standard, .005", .020", .040", Oversize
<u>PISTON PINS</u>		
Type	Press Fit In Rod	Press Fit in Rod
Diameter	1.0935 to 1.0937"	1.0935 to 1.0937"
Length	3.555 to 3.575"	3.555 to 3.575"
Clearance in Piston . . . . .	.00045 to .00075"	.00045 to .00075"
Interference in Rod . . . . .	.0007 to .0012"	.0007 to .0012"
Piston Pins for Service	Standard Only	Standard Only
Direction Offset in Piston	Toward Right Side of Engine	Toward Right Side of Engine

PISTONS SPECIFICATIONS - Continued

<u>PISTON RINGS</u>	<u>FirePower 390</u>	<u>FirePower 360</u>
<u>PISTON RINGS</u>		
Number of Rings per Piston	3	3
Compression	2	2
Oil.	1	1
Width of Rings		
(Compression) . . . . .	.0775 to .0780"	.0775 to .0780"
(Oil). . . . .	.1860 to .1865"	.1860 to .1865"
Piston Ring Gap (all) . . . . .	.013 to .025"	.013 to .025"
<u>RING SIDE CLEARANCE</u>		
(Compression)		
Upper . . . . .	.0015 to .0030"	.0015 to .0030"
Intermediate . . . . .	.0015 to .0030"	.0015 to .0030"
(Oil) . . . . .	.0010 to .0030"	.0010 to .0030"
<u>VALVES - Intake</u>		
Material	SAE 1041 Steel	SAE 1041 Steel
Head Diameter	2.08"	2.08"
Stem Diameter . . . . .	.372 to .373"	.372 to .373"
Stem Oversize Available for Service	Standard, .005, .015, .030"	Standard, .005, .015, .030"
Stem to Guide Clearance . . . . .	.001 to .003"	.001 to .003"
Maximum Allowable before Reconditioning .	.004"	.004"
Angle of Seat	45 ^o	45 ^o
Adjustment . . . . .	.017"	.017"
Lift . . . . .	.445"	.430"
<u>VALVES - Exhaust</u>		
Material	Nitrogen Treated Manganese Chrom- ium Nickle Steel	Nitrogen Treated Manganese Chrom- ium Nickle Steel
Head Diameter	1.75"	1.60"
Stem Diameter . . . . .	.371 to .372"	.371 to .372"
Stem Oversize Available for Service	Standard, .005, .015, .030"	Standard, .005, .015, .030"
Stem to Guide Clearance . . . . .	.002 to .004	.002 to .004
Maximum Allowable Before Reconditioning .	.006"	.006"
Angle of Seat	45 ^o	45 ^o
Adjustment . . . . .	.028"	.028"
Lift . . . . .	.451"	.430"

EXHAUST VALVES SPECIFICATIONS - Continued

	<u>FirePower 390</u>	<u>FirePower 360</u>
<u>VALVE SPRINGS</u>		
Number	16	16
Free Length	2.21"	2.21"
Load When Compressed to (Valve Closed)	85-95 lbs. @ 1.860"	95-105 lbs. @ 1.860"
Load When Compressed to (Valve Open)	216-234 lbs. @ 1.43"	187-203 lbs. @ 1.43"
Valve Springs I.D.	1.070 to 1.090"	1.070 to 1.090"
Valve Spring Installed Height (Spring Seat to Retainer)	1.830 to 1.890"	1.830 to 1.890"
Surge Damper	Spiral Type	Spiral Type
<u>VALVE TIMING</u>		
Intake - Opens	18 ^o BTC	24 ^o BTC
Closes	70 ^o ABC	64 ^o ABC
Duration	268 ^o	268 ^o
Exhaust - Opens	66 ^o BBC	64 ^o BBC
Closes	22 ^o ATC	24 ^o ATC
Duration	268 ^o	268 ^o
Valve Opening Overlap	40 ^o	40 ^o
<u>VALVE GUIDES</u>		
Type	Cast In Head	Cast In Head
Guide Bore Diameter . . . . .	.374-.375" Std.	.374-.375" Std.
<u>CYLINDER HEAD</u>		
Number Used	2	2
Combustion Chamber	Wedge Type	Wedge Type
Valve Seat Runout (Maximum) . . . . .	.002"	.002"
Intake Valve Seat Angle	45 ^o	45 ^o
Intake Seat Width . . . . .	.060 to .085"	.060 to .085"
Exhaust Valve Seat Angle	45 ^o	45 ^o
Exhaust Seat Width . . . . .	.040 to .060"	.040 to .060"
Cylinder Head Gasket Compressed (thickness) . . . . .	.022"	.022"
<u>ENGINE LUBRICATION</u>		
Pump Type	Rotor Full Pressure	Rotor Full Pressure
Capacity (qts.)	5 *	5 *
Pump Drive	Camshaft	Camshaft
Operating Pressure at 40 to 50 mph	45 to 65 lbs.	45 to 65 lbs.
Oil Filter Type	Full Flow	Full Flow
Pressure Drop Resulting from Clogged Filter	7 to 9 lbs.	7 to 9 lbs.

* When Filter is Replaced, Add 1 Quart.

VALVE TIMING

FIREPOWER 360 ENGINE

- (1) Turn crankshaft until the No. 6 exhaust valve is closing and the No. 6 intake valve is opening.
- (2) Insert a 1/4 inch spacer between the rocker arm pad and the stem tip of the No. 1 intake valve (second valve on the left bank).
- (3) Install a dial indicator so that the plunger contacts the valve spring retainer as nearly perpendicular as possible.
- (4) Allow the spring load to bleed the tappet down giving in effect a solid tappet. Zero the indicator.
- (5) Turn the crankshaft clockwise (normal running direction) until the intake valve has opened .034 inch. The timing on the timing indicator, located on the chain case cover, should read from 10 degrees BTDC to 2 degrees ATDC. If the reading is not within the specified limits; inspect the timing sprocket index marks, inspect the timing chain for wear, and determine the accuracy of the DC mark on the timing indicator. Turn the crankshaft counter-clockwise until the valve is closed and remove the spacer.

CAUTION: Do not turn the crankshaft any further clockwise, as the valve spring might bottom and result in serious damage.

FIREPOWER 390 ENGINE

- (1) Rotate the crankshaft until the No. 6 exhaust valve is closing and the No. 6 intake valve is opening. Turn the rocker arm adjusting screw down to zero clearance plus 1/2 turn on No. 1 intake valve. Install a dial indicator so that the indicator pointer contacts the retainer as near to the 90^o angle as possible. Adjust the dial indicator to zero.

- (2) Turn the crankshaft clockwise (normal running direction) until the valve has opened .033 inch. The timing pointer should read 10° BTDC to 2° ATDC.
- (3) If the reading is not within the above specified limits: note the sprocket index marks. Inspect the timing chain for wear. Determine the accuracy of the DC mark on the vibration damper.
- (4) Remove the dial indicator, back off the adjusting screw, adjust the valve clearance to specifications .017 inch intake, .028 inch exhaust cold.

Closed Crankcase Ventilation System

The system consists of a ventilation valve installed in the outlet vent on the cylinder head cover, and a tube. The tube is connected between the outlet vent and the lower part of the carburetor throttle body. The function of the valve is to regulate the flow of crankcase ventilation at various throttle positions. The ventilation valve (Fig. 8) offers greater reliability and helps reduce the regular maintenance costs. A spring-loaded plunger inside the orifice of the new valve is kept in constant motion by changes in engine manifold vacuum. This scouring action keeps the orifice free longer of sticky deposits and ensures a more positive flow to the intake manifold.

MOVEMENT OF LOOSE-FITTING PLUNGER
TENDS TO KEEP PORT FREE FROM DEPOSITS

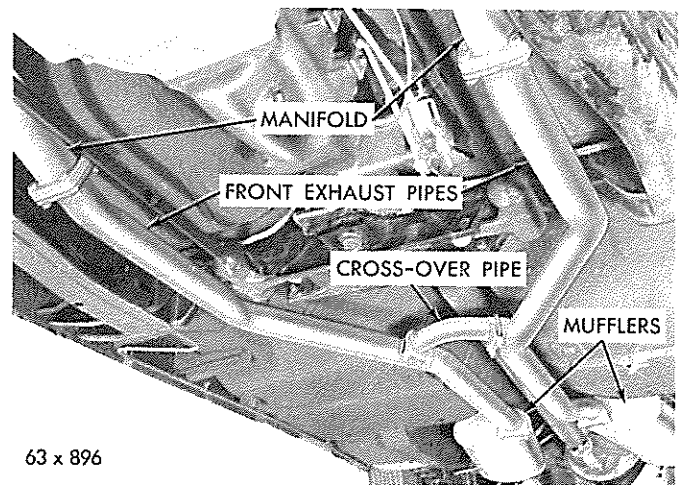
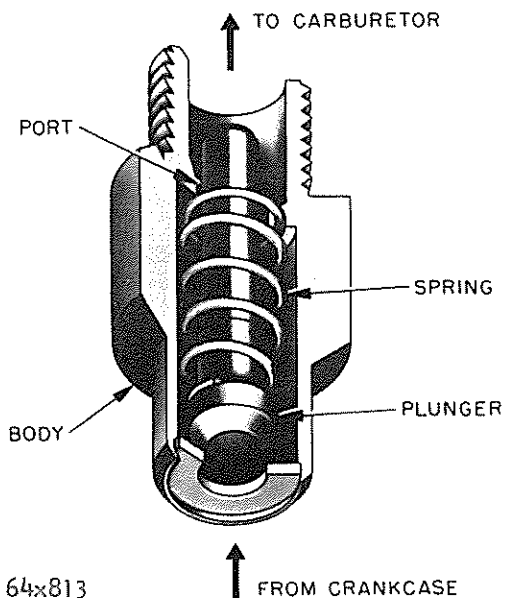


Fig. 8 - Crankcase Ventilator Valve

Fig. 9 - Exhaust System, (Firepower 390 Engine)

GROUP 11 - EXHAUST SYSTEM

A dual exhaust system is used on the Chrysler 300K, the Firepower 360 and the 390 engines. Balancing of the exhaust systems is accomplished by a cross-over pipe placed in the center of the exhaust system on the Firepower 390 Engine, (Fig. 9).

The removal of the access panel from under the front fenders on the Firepower 390 engine, will permit easy removal and installation of the exhaust manifold. The Firepower 360 engine is equipped with a Manifold Heat Control Valve and its purpose is to direct hot exhaust gases to a heat chamber in the intake manifold and pre-heat the fuel-air mixture. By piping exhaust gases directly to the base of the carburetor (Fig. 10) the heat control valve has been eliminated on the Firepower 390 engine.

The service procedures for removing and installing the mufflers, tail pipes and brackets are outlined in the 1964 Imperial and Chrysler Service Technical Manual.

GROUP 14 - FUEL SYSTEM

Two engines are available for the C-300K models; Firepower 360 and an optional Firepower 390 engine.

The Firepower 360 engine has a compression ration of 10.1 to 1 with one 4-barrel carburetor and uses premium fuel.

The optional Firepower 390 engine (Fig. 6) has a compression ration of 9.6 to 1 with two 4-barrel carburetors and also uses premium fuel.

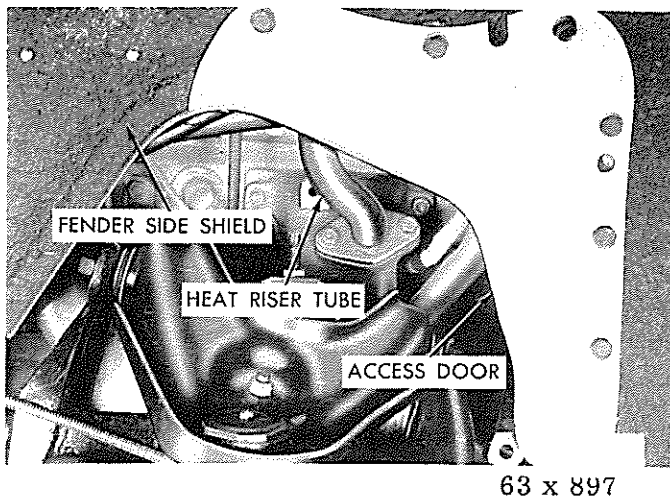


Fig. 10 - Exhaust Heat Riser Tube on FirePower 390 Engine

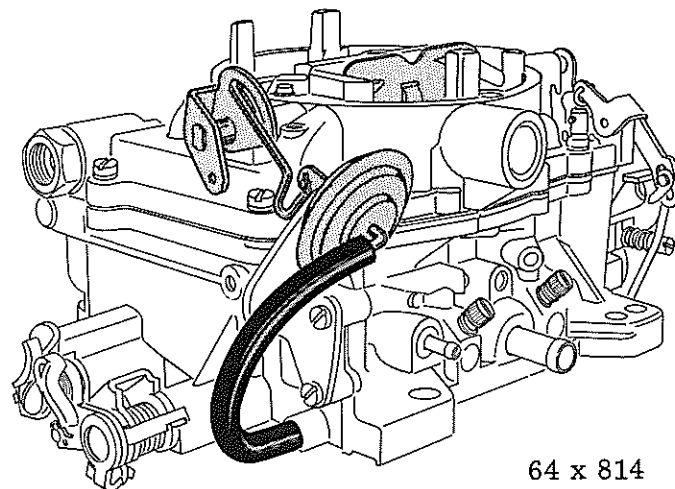


Fig. 11 - AFB Carburetor with Diaphragm Cho Modulator (FirePower 360 Engine)

FUEL SYSTEM - Continued

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Manual with the following exceptions.

SPECIFICATIONS - AFB CARBURETORS

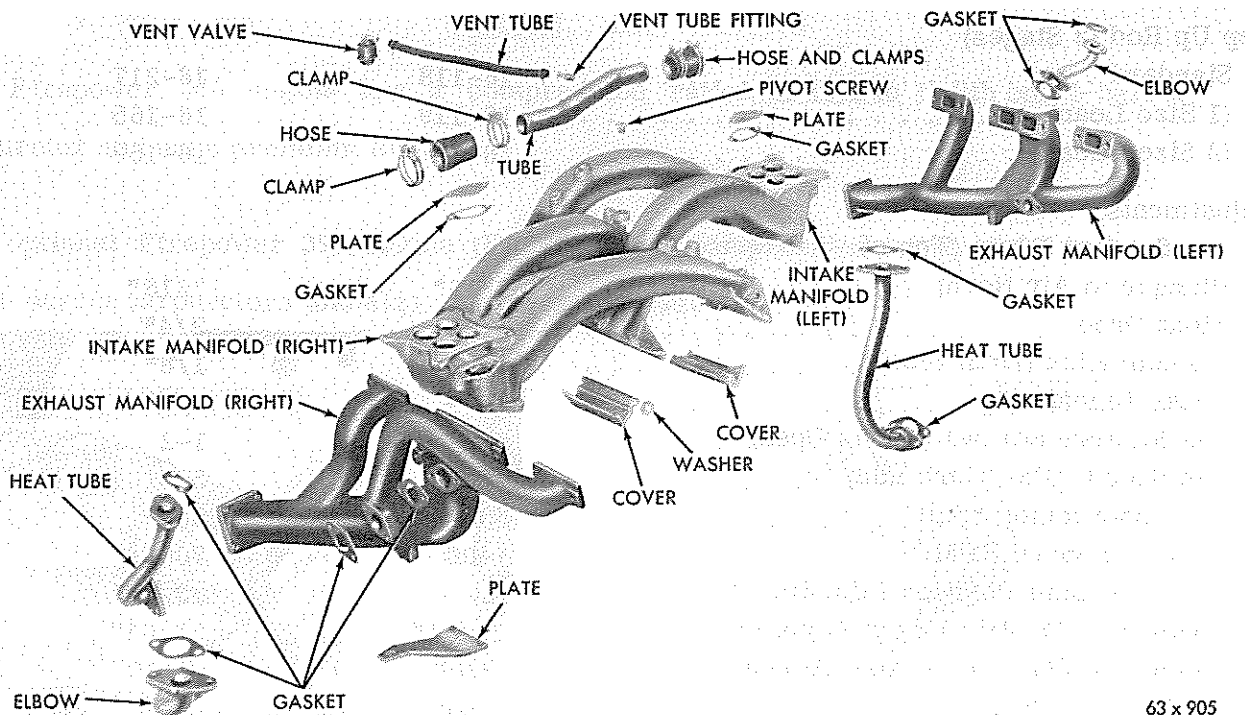
Make:	Carter	Carter
Carburetor Model:	AFB-3505S	AFB-3614S
Car Model Engine Application:	C-300K with Firepower 390 Engine	C-300K with Firepower 360 Engine
Type:	Two 4-Barrel Downdraft	One 4-Barrel Downdraft
Engine Displacement (Cu. In.)	413	413
Bore:		
Primary	1 7/16"	1 7/16"
Secondary	1 11/16"	1 9/16"
Main Venturi:		
Primary	1 3/16"	1 3/16"
Secondary	1 9/16"	1 5/16"
Main Metering Jet . . . . .	.089"	.089"
Main Jet (Secondary): . . . . .	.082"	.067"
Low Speed Jet (Primary)	No. 65-.035"	No. 65-.035"
Step Up Rod (2 Stages)		
Standard	16-118	16-217
(1 Size Lean)	16-119	16-165
(2 Sizes Lean)	16-50	16-159
Adjustments:		
Accelerator Pump (Top of Plunger to Air Horn)	7/16"	7/16"
Float Drop	1/2"	3/4"
Vacuum Kick (Drill Size)	- - -	1/8"
Choke Unloader	- - -	3/8"
Idle Mixture Screws (Turns Open)	1-2	1-2
Idle Speed RPM (Curb Idle)	700	500
Air Conditioning rpm	500	500
Fast Idle Speed RPM	1400	700
Fast Idle Cam Position Adjustment	- - -	13/64"
Secondary Throttle Lever Adjustment	29/64"	21/64"
Secondary Throttle Lockout Adjustment . . . . .	.020"	.020"
Velocity Valve	Free	- - -
Choke:		
Type	Hand	Well
Control	- - -	Thermostatic Coil Spring
Setting	- - -	On Index

FUEL PUMP (Firepower 360 and Firepower 390 Engines)

Make	Carter
Model	M-3672S
Type	Diaphragm
Number of Valves	2
Driven by	Camshaft
Pump Pressure	3 1/2 to 5 psi.

Diaphragm Choke Modulator (Firepower 360 Engine)

The diaphragm choke modulator (Fig. 11) helps to overcome hard-starting due to improper fuel/air mixtures. Since the vacuum operated diaphragm is not exposed to the fuel/air mixture it is inherently free from gummy deposits left behind in the process of gasoline vaporization. This unit replaces the previous internal pull-off piston. In operation, a single external arm attached to the diaphragm rides freely within a slotted choke lever. The result is faster starting because the thermostatic coil spring has complete and unrestrained freedom in closing the choke blade to provide the required starting mixtures. After the engine starts the manifold vacuum enables the diaphragm



63 x 905

Fig. 12 - FirePower 390 Engine Intake and Exhaust Manifolds (Disassembled)

to gradually overcome the coil spring and automatically opens the choke blade to sustain engine operation. The automatic choke saves on maintenance because it requires no special care or regular attention to ensure repeated and reliable engine starting.

INTAKE MANIFOLDS - (Firepower 390 Engine)

Removal (Fig. 12)

- (1) Remove the carburetor air cleaners.
- (2) Disconnect the fuel line between the fuel pump and the left hand carburetor.
- (3) Disconnect the fuel line between the left and right hand carburetor. Disconnect the choke control.
- (4) Disconnect the vacuum line between the right hand carburetor and the distributor.
- (5) Remove the high tension coil wire.
- (6) Disconnect the throttle linkage at both carburetors and the bell crank, to the accelerator shaft.

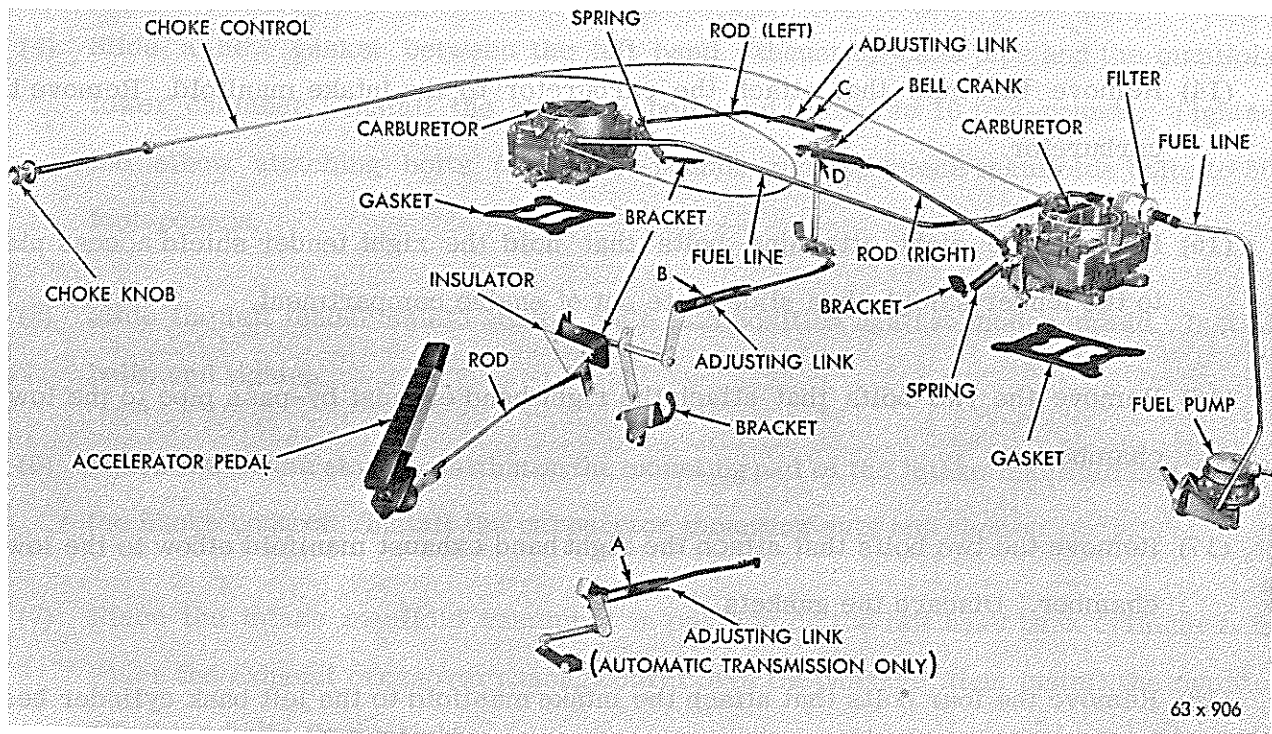


Fig. 13 - Accelerator Pedal Throttle Linkage
(FirePower 390 Engine)

- (7) Loosen the clamps that attach the equalizer tube couplings to the manifolds, and to the equalizer tube. Slide either coupling inward on the tube far enough to clear the manifold tube opening. Lift the equalizer tube, couplings and clamps up and away from the engine.
- (8) Disconnect the power steering hoses (if so equipped) at the pump and secure against the fire wall.
- (9) Remove the air conditioning compressor and brackets, (if so equipped).
- (10) Remove the eight attaching bolts that hold the left fender shield access plate to fender shield, then slide plate out of the engine compartment.
- (11) Remove the two bolts that attach the left hand exhaust manifold elbow to the lower chamber. Discard the gaskets.
- (12) Remove the four bolts that attach the intake manifold to the right bank cylinder head. Remove the exhaust passage crossover cover.
- (13) Lift the intake manifold and carburetor from the engine as an assembly.
- (14) Remove the nuts that attach the carburetor to the intake manifold. Remove the carburetor.
- (15) Remove the eight attaching bolts that hold the right fender shield access plate to the fender shield, then slide plate out of engine compartment.
- (16) Remove the two bolts that attach the right hand exhaust by-pass pipe to the lower chamber.
- (17) Remove the two bolts that attach the right hand exhaust manifold elbow to the lower chamber. Discard the gaskets.
- (18) Remove the four bolts that attach the intake manifold to the left bank cylinder head. Remove the exhaust passage crossover cover.

- (19) Lift the manifold and carburetor from the engine as an assembly.
- (20) Remove the nuts that attach the carburetor to the intake manifold, then disconnect the automatic choke rod from the lever. Remove the carburetor.

Installation (Fig. 12)

When installing the intake manifolds be sure and use new gaskets and be sure all mating surfaces are smooth and clean.

- (1) Place the carburetor in position on the mounting pad of the intake manifold and engage the choke control. Install the carburetor mounting nuts and tighten.
- (2) Place the intake manifold assembly in position on the right hand bank cylinder head. Place the exhaust crossover passage cover over the passage, then install the manifold attaching bolts finger tight.
- (3) Slide a new gasket between the left hand exhaust manifold elbow and the lower chamber of the intake manifold. Install attaching bolts finger tight.
- (4) Slide a new gasket between the left hand exhaust by-pass pipe and the manifold lower chamber. Install the attaching bolts and tighten to 10 foot-pounds. Tighten the elbow attaching bolts to 10 foot-pounds and the intake manifolds bolts to 50 foot-pounds.
- (5) Slide the left fender shield access plate into position against fender shield. Install bolts and tighten.
- (6) Place the carburetor in position on the mounting pad of the intake manifold and connect the choke control. Install the carburetor mounting nuts and tighten.
- (7) Place the intake manifold assembly in position on the left hand bank cylinder head. Place the exhaust crossover passage cover over the passage, then install the manifold attaching bolts finger tight.

- (8) Slide a new gasket between the right hand exhaust manifold elbow and the lower chamber of the intake manifold. Install attaching bolts finger tight.
- (9) Slide a new gasket between the right hand exhaust by-pass pipe and the lower chamber. Install attaching bolts and tighten to 10 foot-pounds. Tighten the elbow attaching bolts to 10 foot-pounds and the intake manifold bolts to 50 foot-pounds.
- (10) Slide the right hand fender shield access plate into position against fender shield. Install bolts and tighten.
- (11) Place the air conditioning compressor and brackets in position (if so equipped) and install attaching bolts. Tighten securely.
- (12) Reconnect the power steering hoses to the pump (if so equipped). (Refer to Power Steering Group 19 for method of bleeding air out of the system.)
- (13) Slide the equalizer tube, clamps and couplings over the manifold tubes. Slide either coupling outward far enough to firmly engage the manifold. Tighten clamps securely.
- (14) Reconnect the throttle linkage at both carburetor and bell crank to accelerator shaft.
- (15) Reinstall the high tension coil wire.
- (16) Reconnect the vacuum line between the carburetor and distributor.
- (17) Reconnect the fuel line between the left and right hand carburetors.
- (18) Reconnect the fuel line between the fuel pump and the left hand carburetor.
- (19) Reinstall the right and left carburetor air cleaners.
- (20) Refill the cooling system to required capacity. (Refer to specifications.)

After the intake manifolds have been installed it is very important that the next procedure of setting the throttle linkage be done in order to obtain peak engine performance.

SETTING THE THROTTLE LINKAGE

As mentioned previously, setting the throttle linkage is a very important step. Various conditions affecting car performance can be encountered, such as loss of performance, no wide open throttle response, delayed shifting of the transmission, no kickdown, delayed up shifts and etc.

Setting the throttle linkage is divided into three parts, namely; Positioning the accelerator shaft, positioning the accelerator pedal, setting the bell crank and synchronizing each carburetor. It is very important that the throttle linkage be set in this order.

Positioning the Accelerator Shaft

To position the accelerator shaft, (if equipped with automatic transmission) refer to Figure 13 then proceed as follows:

- (1) Loosen the adjusting nuts "A" and "B" (accelerator shaft to transmission rod and accelerator shaft to throttle shaft lever rod).

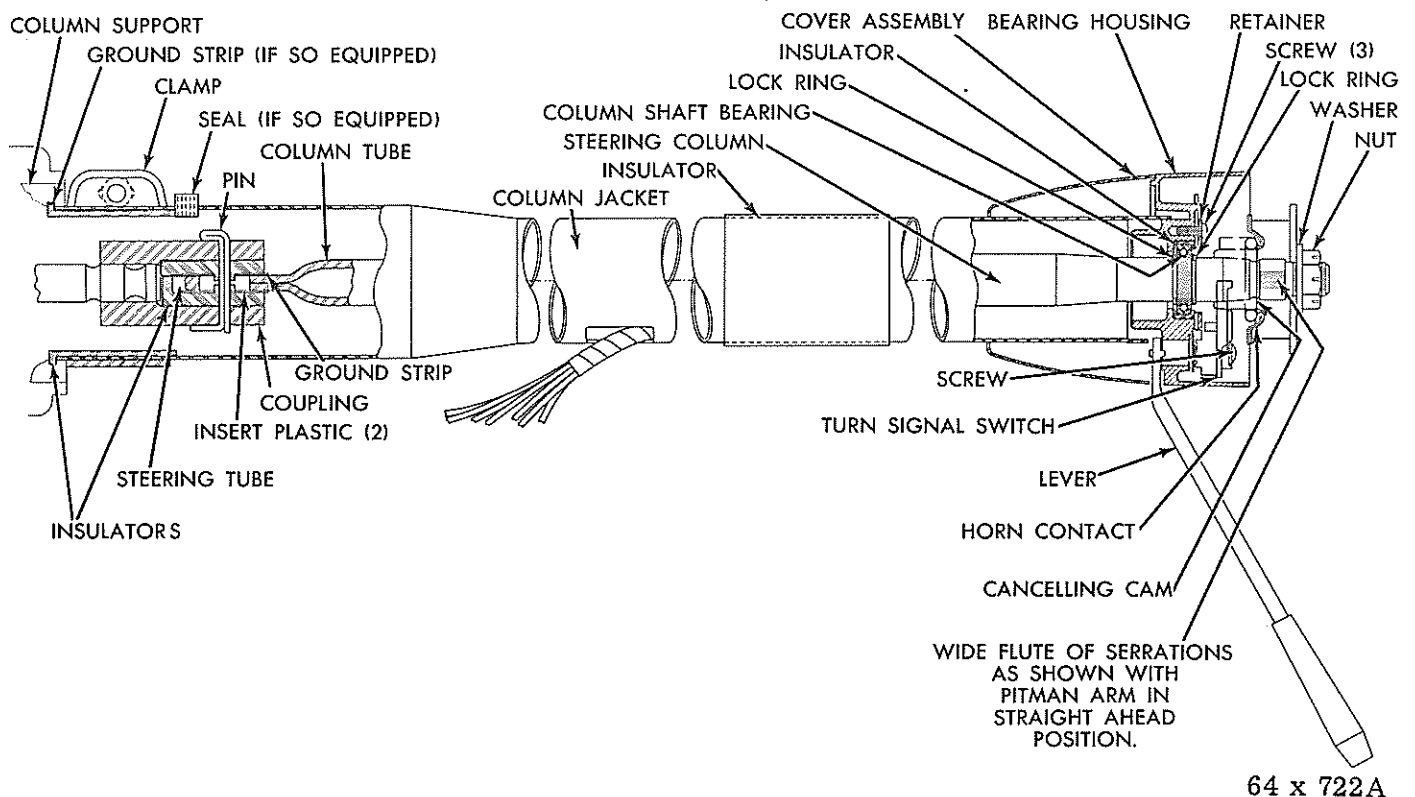


Fig. 14 - Steering Column Cross Section (Except adjustable steering wheel)

- (2) Insert a piece of 3/16 inch welding rod, 10 inches long into the accelerator shaft bracket and through hole in lever.
- (3) Now move the transmission throttle lever forward until it stops. Tighten the locknut "A" securely. This positions the accelerator shaft.

Positioning the Accelerator Pedal

- (1) Unsnap the accelerator pedal from shaft rod.
- (2) Turn the threaded end of rod either in or out until a measurement of 114 degrees is obtained between the floor of car and the flat face of the accelerator pedal.
- (3) This measurement can be made with a spirit protractor.
- (4) After correct measurement has been obtained, reconnect rod. Remove pin from accelerator shaft bracket.

Setting the Bellcrank

- (1) Loosen locking nuts "C" and "D" (left and right bank carburetor rods).
- (2) Pivot the ball crank until a 3/16 inch piece of welding rod 3 inches long can be inserted through the bell crank hole and down into the locating hole in the intake manifold.
- (3) Test each carburetor to be sure the choke valves are open; that the fast idle cams are released and that the throttle valves are closed.
- (4) Tighten locking nuts "C" and "D" securely. Remove pin from bell crank.
- (5) Push rearward on the accelerator shaft to throttle shaft lever rod adjusting link, until stop is obtained. Tighten locking nut securely.

Idle Speed and Mixture Adjustment

Connect a tachometer and warm-up the engine to normal operating temperature. Be sure the choke is fully off and that the engine is at curb idle, (transmission in Neutral). Proceed as follows:

- (1) Turn the idle mixture screws from 1 to 2 turns open.
- (2) Set the idle bypass air screws 2 turns open and adjust the idle speed to 700 rpm. or if equipped with air conditioning, 500 rpm. with the compressor ON.

The idle bypass air screw is located at the front of each carburetor body flange, between the two idle mixture screws. Adjust the idle mixture screws on each carburetor for maximum rpm. Repeat on each carburetor.

Before attaching the rod at each carburetor, check the transmission to throttle linkage adjustments, so that the idle position is not disturbed.

NOTE: Accurate carburetor synchronization or balance is extremely important and when performed should be rechecked and rebalanced in the outside ambient temperature after a five mile or more road test. This readjustment will prevent rough engine idle performance and possible engine stalling when the vehicle is returned to the owner.

Fast Idle Adjustment (On Vehicle)

When making fast idle adjustment on the vehicle, each AFB carburetor should be adjusted individually.

- (1) The engine should be at normal operating temperature and have a curb idle speed of 700 rpm. or if equipped with air conditioning, 500 rpm. with the compressor ON.
- (2) Turn air conditioning compressor "OFF" (if so equipped) before proceeding with following adjustments.
- (3) Remove each air cleaner.

- (4) Disconnect each throttle rod at the bellcrank on the intake manifold.
- (5) Open the throttle valves of the left carburetor far enough to allow positioning of the fast idle cam to the fast idle index mark. The right carburetor should remain at the curb idle position.
- (6) Adjust fast idle screw until a fast idle speed of 1400 rpm. is obtained.
- (7) After the desired engine speed has been obtained, open the throttle slightly to allow the fast idle cam to return to the open choke (or off fast idle) position.
- (8) Repeat steps 5, 6 and 7 in setting right carburetor fast idle speed as it is very important at the completion of this step (8), that each carburetor has identical fast idle speeds. There is no specification for engine rpm with both carburetors simultaneously set at the fast idle position.
- (9) Connect both carburetor throttle rods to the bellcrank.

Carburetor Kick-down Throttle Linkage

Higher road speeds and faster vehicle response has led to a change in the carburetor kick-down throttle linkage.

In operation, the secondary barrels come into play much earlier than on previous Models in relation to the position of the throttle blade opening in the primary barrels, therefore, more incoming fuel/air becomes available before the carburetor throttle reaches wide open position. This provision allows the engine to develop maximum power before the transmission shifts into passing gear.

GROUP 16 - PROPELLER SHAFT AND UNIVERSAL JOINTS

A special close tolerance balance propeller shaft is standard equipment on C-300K. The propeller shaft has a ball and trunnion type universal joint at its forward end and a cross and roller type universal joint at the rear. All working parts are sealed against road splash, dust mud and water.

For the service procedures, refer to the 1964 Imperial and Chrysler Service Technical Manual.

GROUP 17 - SPRINGS AND SHOCK ABSORBERS

Springs

The springs are 60 inches in length and have 6 leaves when used with the Firepower 360 engine and 7 leaves are standard with the Firepower 390 engine, optional with the Firepower 360 engine.

The spring "U" bolts and spring shackles should be inspected occasionally to make sure that they are tight, but not binding. No lubrication of any kind should be used on the rear springs or rubber bushings.

Shock Absorbers

The shock absorbers are "Oriflow" double acting hydraulic. Heavy duty shock absorbers are optional with the Firepower 360 engine and standard with the Firepower 390 engine.

All service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual.

GROUP 19 - STEERING

The service procedures for the steering gear and the power steering pump are the same as those outlined in the 1964 Imperial and Chrysler Service Manual with the exception of the power steering gear unit replacement on the Firepower 390 engine and the adjustable steering wheel (Tilt-Wheel) which follows:

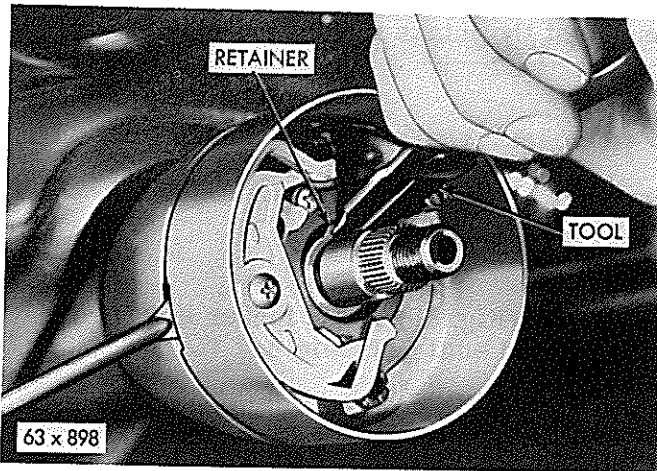
POWER STEERING GEAR UNIT

Removal On Firepower 390 Engine

NOTE: Service procedures for the adjustable steering wheel (Tilt-Wheel), is a separate write-up and follows the procedure of removal and installation of the power steering gear unit in this bulletin.

- (1) Disconnect the negative (ground) cable from the battery.

- (2) Compress and turn the horn button 1/4 turn counterclockwise to release the horn button from the retainer.
- (3) Disconnect the horn wire at the horn blowing switch.
- (4) Remove the three (3) screws and insulators attaching the horn ring and horn blowing switch to the steering column. Remove the horn ring and switch.
- (5) Loosen the steering wheel nut several turns and install the steering wheel puller Tool C-3428A and remove the steering wheel nut and steering wheel.
- (6) Remove the two bolts attaching the steering jacket tube clamp at the instrument panel and remove the clamp.
- (7) Disconnect the directional switch wiring at the multiple connector below the instrument panel.
- (8) Remove the screws attaching the floor plate seal to the floor panel and slide the seal up on the jacket tube.
- (9) Loosen the jacket tube clamp bolt and clamp at the steering gear housing (Fig. 14).
- (10) Remove the retainer snap ring from the groove in the steering tube at the top of the bearing using pliers Tool C-3128 (Fig. 15).
- (11) Reinstall the steering wheel nut on the upper steering tube to protect the threads. Then while pulling up on the jacket tube, tap the steering wheel nut with a fibre hammer. This action will force the bearing from the splines on the steering tube.
- (12) Pry between the jacket tube clamp and the steering gear housing to loosen the jacket tube from the column jacket support rubber insulator boot.
- (13) Slide the jacket tube assembly rearward and off the steering tube.
- (14) Remove the steering column tube coupling pin, two plastic inserts, horn ground strap (Fig. 14) rubber insulator and the steering column tube.



- (15) Remove the rubber insulator boot and the horn ground strap.

NOTE: The worm shaft coupling should not be removed at this time as the coupling will protect the worm shaft splines during removal.

- (16) Remove the left air cleaner.
- (17) Disconnect the crankcase vent hose at the equalizer tube (Fig. 16).
- (18) Disconnect the left throttle rod at the throttle bell crank and at the carburetor.

Fig. 15 - Removing Bearing Retainer

- (19) Disconnect and remove the equalizer tube at the right hand intake manifold.
- (20) Disconnect and remove the gas line from both carburetors.
- (21) Disconnect the manual choke control from the left hand carburetor.
- (22) Disconnect the power steering hoses at the steering gear valve. Fasten the ends of the hoses above the oil level in the pump reservoir. Cap hoses and valve housing fittings.

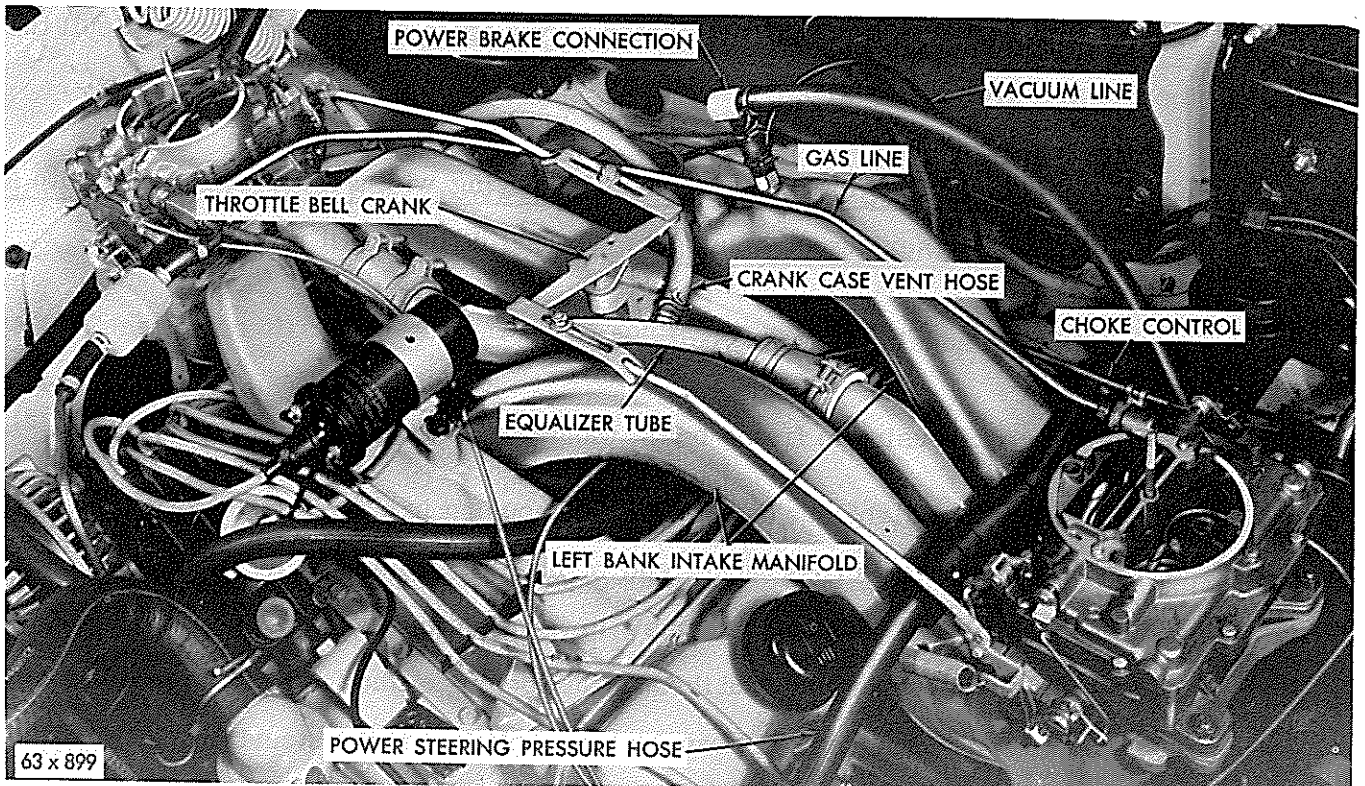


Fig. 16 - FirePower 390 Engine Intake Manifolds
(Air Cleaner Removal)

- (23) Disconnect the power brake and vacuum source at the intake manifold.
- (24) Raise the vehicle.
- (25) Remove the left front wheel.
- (26) Remove the seven bolts attaching the dust shield (Fig. 10) to the fender side-panel and remove the dust shield.
- (27) Remove the manifold heat tubes (two) (Fig. 10) from the intake and exhaust manifolds. Do not damage the gaskets.
- (28) Remove the intake manifold bolts and spacer.
- (29) Carefully remove the left hand bank intake manifold and carburetor as an assembly.
- (30) Remove the cotter key and nut at the center link and disconnect the link from the steering arm.
- (31) Remove the steering arm nut and washer.
- (32) Slide Tool C-3646 upon the steering arm and place the shoe of the puller behind the steering arm. Tightening the tool center screw against the gear shaft will pull the steering arm from the gear shaft.

CAUTION: Do not remove the steering arm by prying with a lever or striking with a hammer as serious steering gear internal damage will result.

- (33) Loosen the gear housing to frame bolts.
- (34) Remove the gear housing to frame bolts, washers, and alignment wedge.
- (35) Raise the lower end of the steering gear housing in a clockwise motion towards the firewall until the cross shaft end of housing and shaft will clear the exhaust manifold, then tilt the complete assembly towards the engine slightly to allow swinging the steering gear assembly out through the opening of the fender side panel (cross shaft end first). This removal can be accomplished if the steering gear is rolled out end over end.

Installing Power Steering Gear Unit

- (1) Enter the steering gear assembly into the engine compartment, position in place and install attaching bolts, flat washers, swivel washers and nuts, tighten finger tight.
- (2) Inspect the steering tube bearing for any damage incurred during removal from the steering tube.
- (3) Install the steering column tube, the two plastic inserts, rubber insulator, horn ground strap and coupling pin (Fig. 14).
- (4) Assemble the horn ground strap (copper) to the jacket tube support rubber insulator boot and install this assembly into the jacket tube.
- (5) Lubricate (powder lubricant) the end of the steering gear column jacket support and insulator boot to facilitate the installation and slide the jacket tube and insulator boot over the steering column tube and down against the shoulder on the jacket tube support. Position the clamp and tighten the clamp bolt securely.

NOTE: There must be at least 1/16 inch clearance between the bottom face of the jacket tube clamp and the column support spanner nut to avoid metal to metal contact.

- (6) Install the jacket tube support bracket clamp at the instrument panel. Tighten the clamp bolts to 50-inch-pounds torque.
- (7) Connect the directional signal wires and the horn wire at the connectors.
- (8) Install the directional switch lever.
- (9) Position the retainer ring against the top of the bearing and place the installing Tool Sleeve C-3879, then a flat washer and the steering wheel nut on the top end of the steering shaft in that order (Fig. 17).

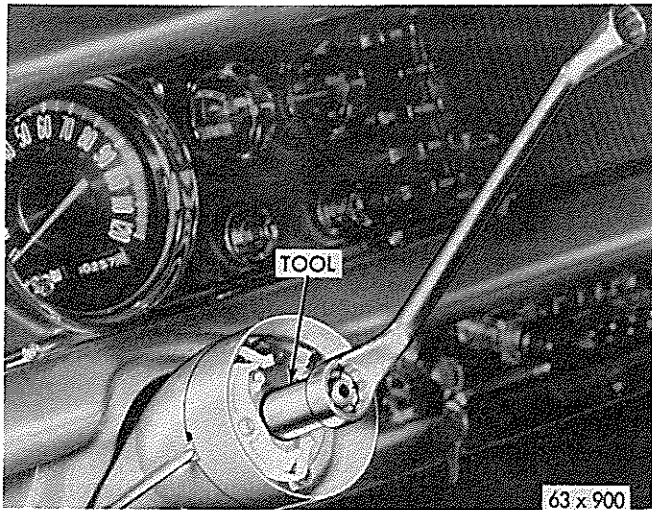


Fig. 17 - Installing the Bearing and Retainer Ring

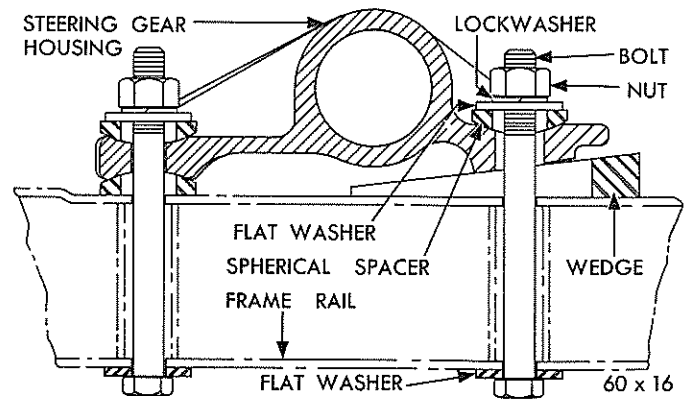


Fig. 18 - Steering Gear Mounting (Cross Section)

- (10) Turn the steering wheel retaining nut to exert pressure on the installing sleeve and upper retainer ring and bearing, this action will press the bearing down onto the knurled section of the steering shaft and against the lower retainer ring and flatten the upper retainer ring so it can enter the groove in the steering shaft. Be sure the retainer ring is firmly seated in the steering shaft groove. This retainer ring places the upper column tube in the proper relation with the worm shaft coupling pin. Remove the steering wheel nut, washer and sleeve tool.
- (11) Install the steering wheel and steering wheel nut, tighten the nut to 24 foot-pounds torque.
- (12) Install the horn blowing switch, horn ring, the insulators and attaching screws. Connect the horn wire.
- (13) Compress and turn the horn button 1/4 turn clockwise to lock the horn button on the retainer.
- (14) Position the floor plate seal on the floor panel and install the attaching screws.
- (15) Raise the vehicle.
- (16) Tighten the front upper and front lower gear housing to the frame attaching bolts to 50-foot-pounds torque.

- (17) Install a wedge over the rear bolt (Fig. 18) between the housing and the frame so that the tapered surfaces match; tap the wedge lightly but firmly into place and tighten the rear mounting bolt to 50 foot-pounds torque.
- (18) With the steering gear centered in its travel and the steering wheel and front wheels in the straight-ahead position, install the steering gear arm, washer and nut. Tighten nut to 120 foot-pounds torque.
- (19) Install the steering center link, nut and cotter pin.
- (20) Lower the vehicle.
- (21) Carefully enter the left bank intake manifold and carburetor assembly into position.

NOTE: Make sure the gasket surfaces are clean.

- (22) Connect the manifold equalizer tube at the right hand manifold.
- (23) Install the manifold spacer, washers, spark plug cableholder and manifold attaching bolts and tighten securely.
- (24) Connect the pressure and return hoses at the steering gear.
- (25) Connect the hose at the crankcase vent.
- (26) Connect the throttle linkage at the throttle bell crank.
- (27) Connect the fuel line at both carburetors.
- (28) Connect the manual choke at the left hand carburetor.
- (29) Connect the power brake and vacuum lines at the intake manifold.
- (30) Raise the vehicle.
- (31) Install the two manifold heat tubes to the exhaust and intake manifolds (Fig. 10).

- (32) Install the dust shield to the fender side panel and tighten the seven bolts securely.
- (33) Install the left front wheel.
- (34) Lower the vehicle. Refill the power steering pump reservoir as necessary.
- (35) Expel all the air from the power steering system by turning the steering wheel several times to the full right and left.
- (36) Connect the negative battery cable to the battery negative post.

STEERING COLUMN WITH ADJUSTABLE STEERING WHEEL

The steering column with adjustable wheel (extra equipment) is available only on models equipped with Automatic Transmission and Power Steering. The adjustable wheel allows the driver to select one of seven steering wheel positions, (Fig. 19). This is accomplished by lifting the releasing lever to the unlocked positions and moving the steering wheel up or down. Releasing the lever, locks the steering wheel into position. It may be necessary to move the steering wheel up or down slightly to allow the lock to catch in the notch in the lock shoe.

Whenever the release lever is held in the unlocked position, two small over-center springs will pull the steering wheel into the maximum up position unless the driver holds the wheel to restrict the upward travel. To move the steering wheel down, lift the releasing lever and supply a slight amount of downward pressure on the steering wheel rim.

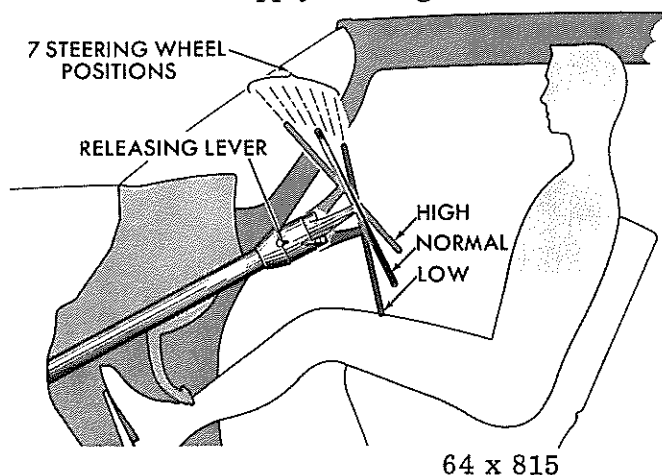


Fig. 19 - Adjustable Steering Wheel

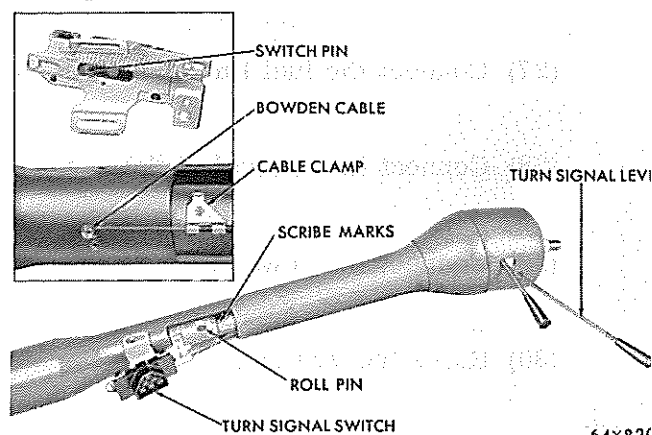


Fig. 20 - Tilt Column Assembly and Turn Signal

The adjustable steering wheel mechanism includes a ball joint unit located directly below the steering wheel hub which allows a vertical movement of five and one-half (5-1/2) inches representing an arc of thirty degrees. The lock positions are spaced five degrees apart.

Removal

- (1) Disconnect the negative battery cable at the battery post.
- (2) Compress and turn the horn button 1/4 turn counterclockwise to release the horn button from the retainer.
- (3) Remove the three screws and insulators attaching the horn ring and horn blowing switch to the steering column and remove the horn ring and switch.
- (4) Place the front wheels in the straight ahead position and steering gear on high point, loosen the steering wheel nut several turns and install the steering wheel puller Tool C-3428A to remove the steering wheel.
- (5) Remove the two bolts attaching the steering jacket tube clamp at the instrument panel and remove the clamp.
- (6) Disconnect the directional switch multiple plug and horn wire at the jacket tube just below the instrument panel.
- (7) Remove the screws attaching the floor plate seal to the floor panel and slide the seal up on the jacket tube.
- (8) Scribe alignment marks on both the upper and lower shafts to ensure proper reassembly and remove the roll pin attaching the steering lower column shaft to the column upper shaft (Fig. 20).
- (9) Loosen the jacket tube clamp bolt and clamp at the steering gear housing.
- (10) Pry between the jacket tube clamp and the steering gear housing to loosen the jacket tube from the column jacket support rubber insulator boot.

- (11) Slide the jacket tube and adjustable wheel unit rearward and off the lower steering tube.

NOTE: Do not lose the horn grounding strip.

Installation

- (1) Assemble the horn ground strap (copper) to the jacket tube support rubber insulator boot and install this assembly into the jacket tube.
- (2) Lubricate (powder lubricant) the end of the steering gear column jacket support and insulator boot to facilitate the installation and slide the jacket tube and insulator boot over the steering lower column tube carefully until the lower boot just starts on the jacket tube support. Align the marks on the upper and lower steering shafts and slide the upper shaft splines into the splines of the hub of the lower shaft while at the same time pushing down on the jacket tube until the jacket tube bottoms on the jacket tube support. Position the clamp and tighten the clamp to it securely.

NOTE: There must be at least 1/16 inch clearance between the bottom face of the jacket tube clamp and the column support spanner nut to avoid metal to metal contact.

- (3) Install the jacket tube support bracket clamp at the instrument panel.
Tighten the clamp bolts to 50-inch pounds torque.
- (4) Make sure alignment marks scribed on the upper and lower shafts are properly aligned, then install the roll pin attaching the upper and lower shafts (Fig. 20).
- (5) Position the floor plate seal on the floor panel and install the attaching screws.
- (6) Connect the directional signal wires and the horn wire at the connectors.
- (7) Install the steering wheel and steering wheel nut to 24 foot-pounds torque.
- (8) Install the horn blowing switch, horn ring, the insulators and attaching screws.
- (9) Compress and turn the horn button 1/4 turn clockwise to lock the horn button on the retainer.

(10) Connect the battery cable to the battery terminal post.

Disassembly

- (1) Remove the two screws attaching the turn signal switch to the jacket column, turn the switch over and remove the cable clamp attaching screw and the coiled end of the Bowden wire from the switch pin. (Fig. 20).
- (2) Place the adjustable wheel in the center (straight) position and remove the turn signal switch lever and the release lever.
- (3) With Tool-SP-3426A weights assembled on puller Tool C-3954, engage the tool under the inside flange of the turn signal cover (Fig. 21) and pull the turn signal cover evenly from the column assembly.
- (4) Note the routing of the horn contact wire to insure proper assembly, then remove the horn contact and wire assembly, carefully threading the wire out through the top of the column assembly (Fig. 22).
- (5) Remove the turn signal actuator yoke detent spring from the retaining pins.
- (6) Remove the turn signal actuator yoke from the tilt actuator housing by disengaging it at the turn signal bell crank socket and at the retaining stud.

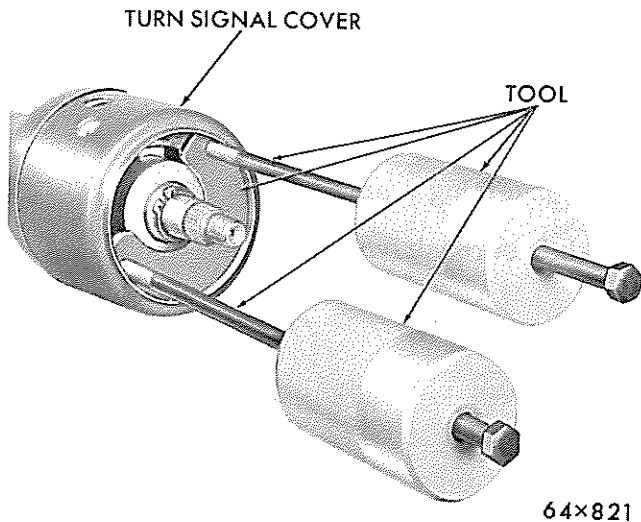


Fig. 21 - Removing the Turn Signal Cover

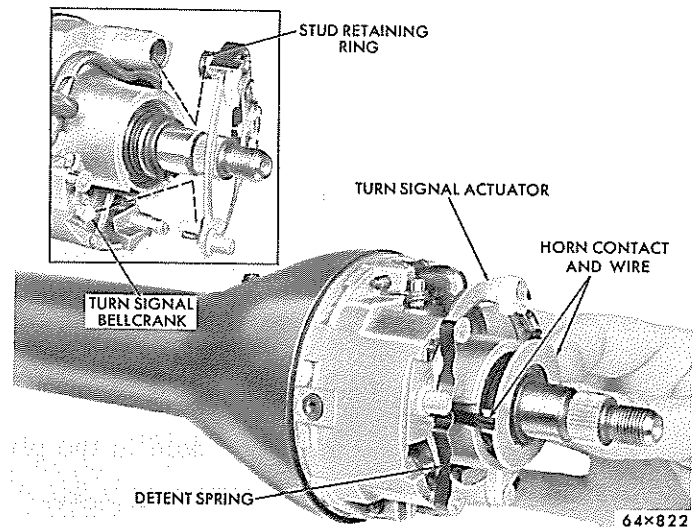


Fig. 22 - Removing or Installing the Horn Contact and Turn Signal Actuator

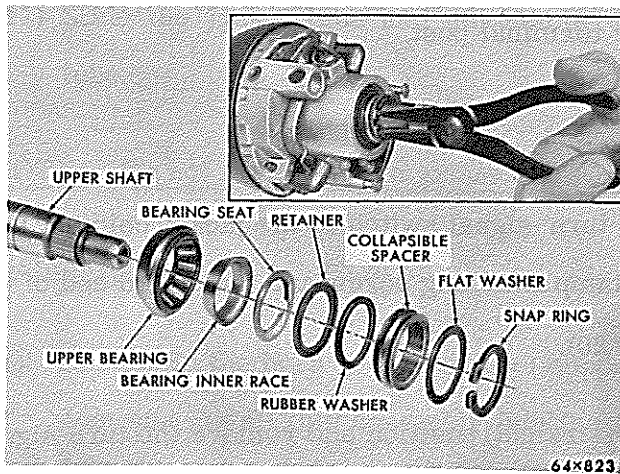


Fig. 23 - Removing Retainer Ring and Sequence of Parts

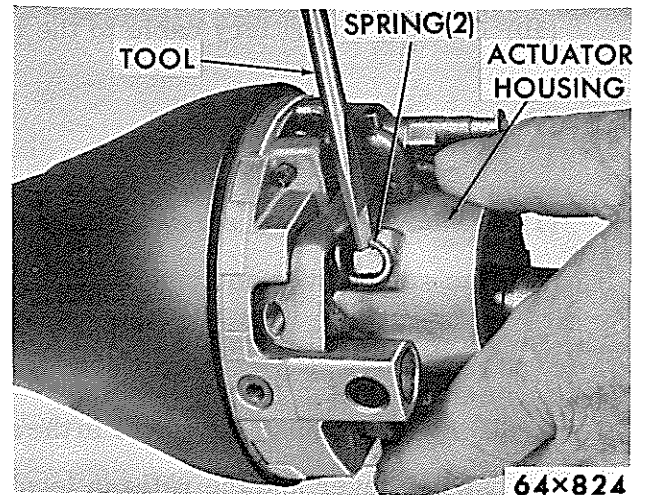


Fig. 24 - Removing the Tilt Return Spring

NOTE: It may be necessary to pry lightly with a screwdriver at the stud to overcome the stud retaining ring tension.

- (7) Remove the upper shaft bearing snap ring with snap ring pliers Tool C-3128 (Fig. 23).
- (8) Remove the flat washer, collapsible spacer, rubber washers, retainer, bearing seat, bearing inner race, and upper steering shaft upper bearing, (Fig. 23).

CAUTION: Do NOT distort the bearing seat by prying.

- (9) Temporarily install the release lever and raise the lever to allow the steering wheel to tilt to the full upward position to reduce the tension on the two return springs.
- (10) Unhook the outer ends of the return springs by inserting a small blade screwdriver through the upper coil and lift up. Use another screwdriver to unhook the spring (Fig. 24).
- (11) Position Tool C-3957 over one of the tilt actuator pivot pins then enter the tool screw into the tapped hole in the pivot pin (Fig. 25).

CAUTION: Do not bottom the screw in the tapped hole in the pivot pin or allow the tool to become cocked on the actuator housing as this would restrict the pin from being pulled out squarely.

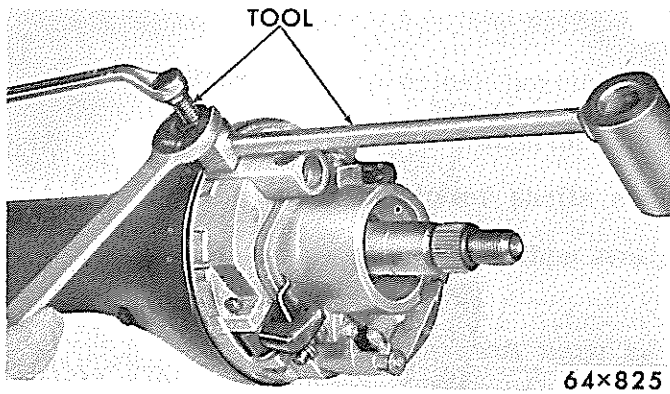


Fig. 25 - Removing the Pivot Pins

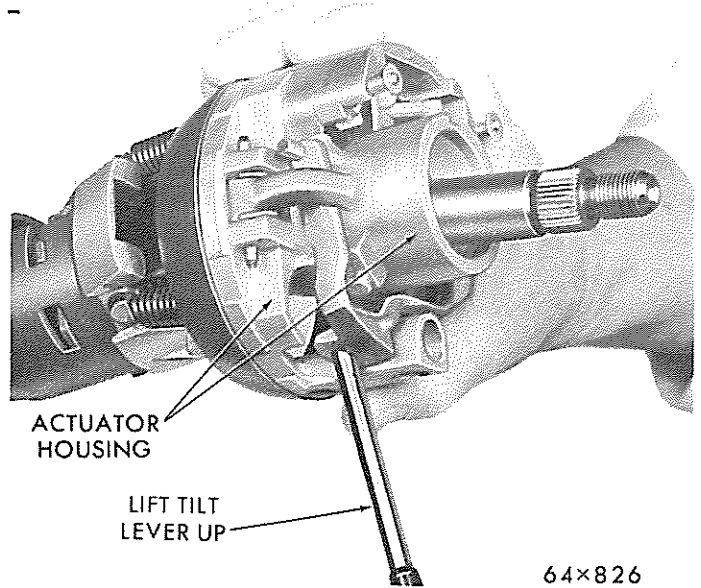


Fig. 26 - Removing or Installing the Actuator Housing

(12) Hold the puller screw from turning and pull the pivot pin from the actuator housing by turning the tool nut in the clockwise direction.

(13) Slightly lift the release lever to disengage the lock shoes from the lock pins and remove the actuator from the column assembly (Fig. 26).

(14) Remove the upper steering shaft with lower bearing out of the steering column, (Fig. 27). Remove the lower bearing from the shaft and the return springs from the actuator support. Note position of the springs.

(15) Remove the actuator housing support screws (4) then lift the support from the jacket tube. Note the position of the screws. The two short screws are installed in the raised section of the lock plate (Fig. 28).

(16) If necessary to remove the lock plate, release the plate from the notches in the jacket tube, tilt the raised section and remove.

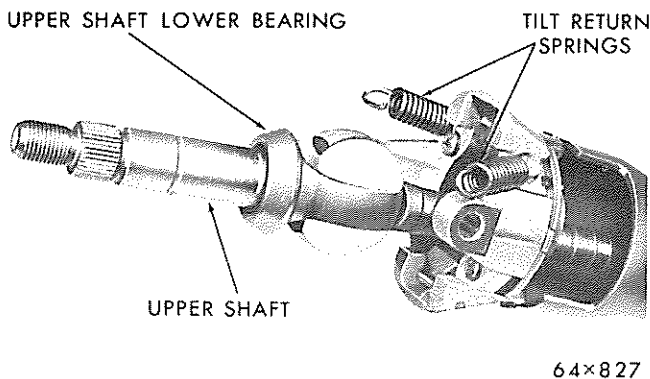


Fig. 27 - Removing or Installing the Steering Shaft Assembly

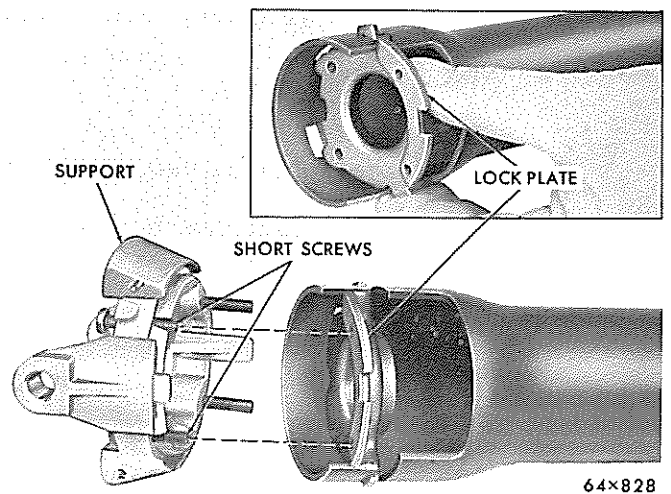


Fig. 28 - Removing or Installing the Actuator Housing Support and Lock Plate

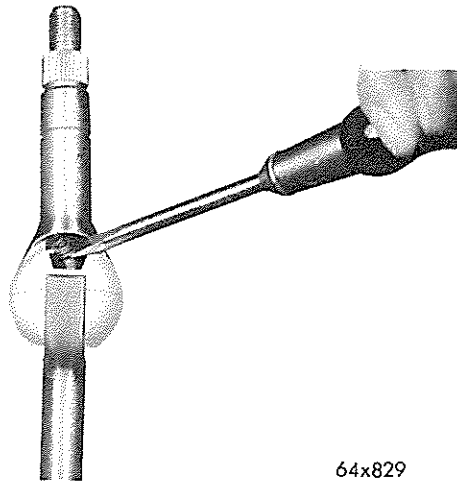


Fig. 29 - Removing or Installing the Spherical Bearing Spring

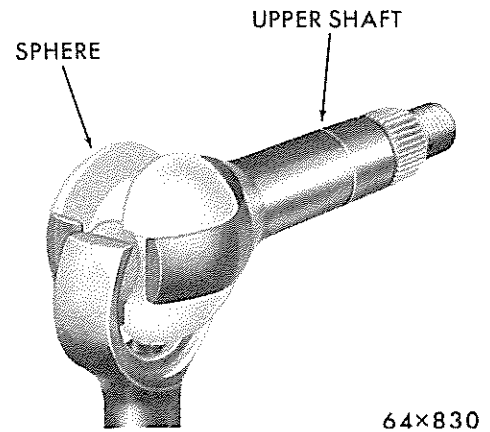


Fig. 30 - Removing the Spherical Bearing and Upper Shaft

STEERING SHAFT

Disassembly

- (1) Clamp the steering shaft in a vise equipped with brass jaws to avoid damaging the shaft and tilt the upper end of the shaft to an angle of approximately 10 degrees and using a narrow blade screwdriver through the coils of the spring to compress the spring enough to remove the spring out of its upper seat (Fig. 29).
- (2) Position the shaft at a greater angle and withdraw the spring from the spherical bearing.
- (3) Position the upper shaft so it is at a 90 degree angle from the centerline of the lower shaft (Fig. 30), and remove the upper shaft and spherical bearing from the lower shaft.
- (4) Rotate the spherical bearings so the flats align with the socket and remove the two halves of the spherical bearing from the upper shaft.

Assembly

- (1) Lubricate the grooves of the spherical bearing halves with ball joint lubricant, then insert the bearing halves in the upper shaft.

- (2) Turn the spherical bearing so that the lower shaft can be installed over the flat areas of the sphere when the shafts are at a 90 degree angle to each other and with the upper and lower shafts and sphere positioned in this manner, install the lower shaft over the sphere, then straighten the shaft.

NOTE: The steering shaft must be assembled so the index mark on the upper shaft is at 12 o'clock when the mark in the groove on the lower shaft is at 9 o'clock, as viewed from the top of the shaft (Fig. 31).

- (3) Tilt the upper shaft slightly and insert one end of the spring into the spring seat in the lower shaft, then with a screw driver blade insert between the coils of the spring, compress the spring and straighten the shaft so that the upper end of the spring can be positioned in the spring seat in the upper shaft. Refer to Fig. 29.

ACTUATOR HOUSING

Disassembly

- (1) Remove the turn signal switch control cable from the turn signal bellcrank by removing the retaining screw at the top of the housing and disconnecting the wire loop from the bellcrank, (Fig. 32). Remove the cable through the top of the actuator housing.

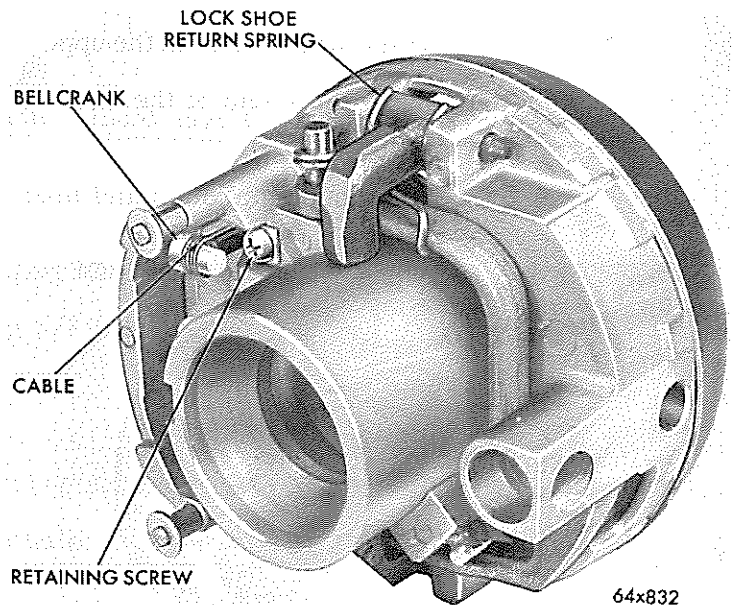
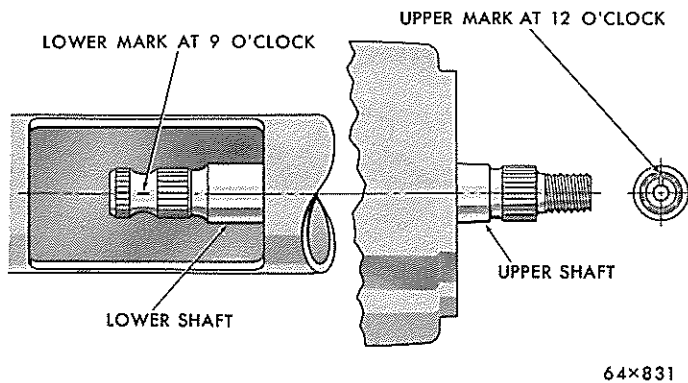


Fig. 31 - Upper and Lower Shaft Alignment

Fig. 32 - Turn Signal Cable Attachment

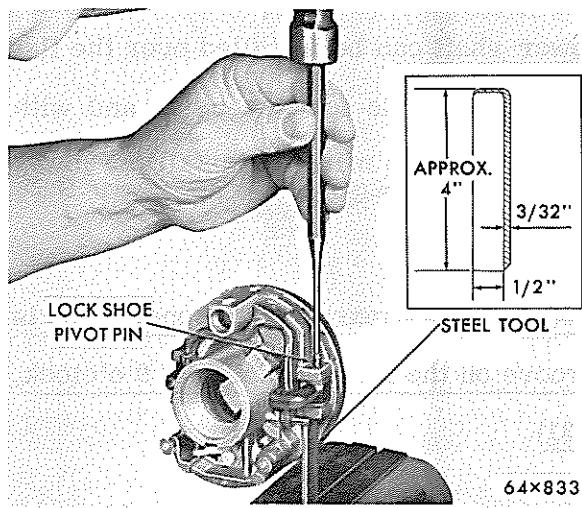


Fig. 33 - Removing the Lock Shoe Pivot and Tool Insert

Assembly

(1) Install the lock shoe return springs on the upper and lower lock shoes as follows:

NOTE: The upper lock shoe has three notches and a rubber bumper, whereas, the lower shoe has four notches and no rubber bumper (Fig. 35).

- a. Place the actuator housing on the bench with the lower side up and the turn signal and tilt lever openings on the right side.
- b. Install the upper shoe in the upper opening of the housing by pushing on the rubber bumper and the end of the shoe.
- c. Turn the housing around and insert the lower shoe as in Step "B".

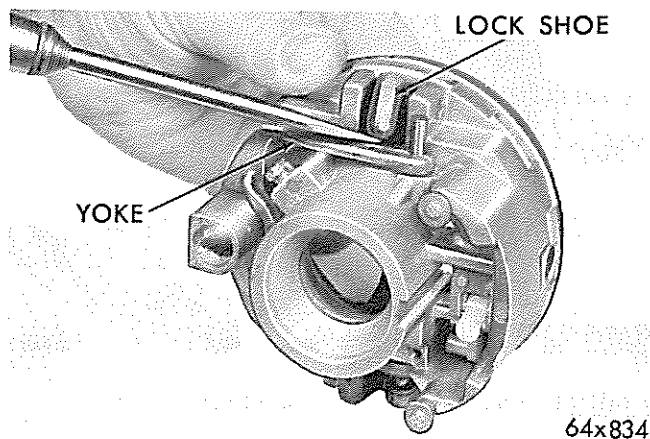


Fig. 34 - Prying Out the Lock Shoes

- (2) Fabricate a support tool of cold roll steel, 3/32"x1/2"x4" as shown in insert (Fig. 33). Back up the lock shoe pivot pin boss in the actuator housing with the above tool, placing the tool inboard of the pivot pins and drive the pivot pins from the actuator housing with an 1/8 inch straight punch.
- (3) Remove the lock shoes and springs by pushing the upper end of the lock shoe through the openings in the actuator housing. This can be facilitated by using a screwdriver and prying the arm of the shoe up and off the tilt actuator yoke (Fig. 34).

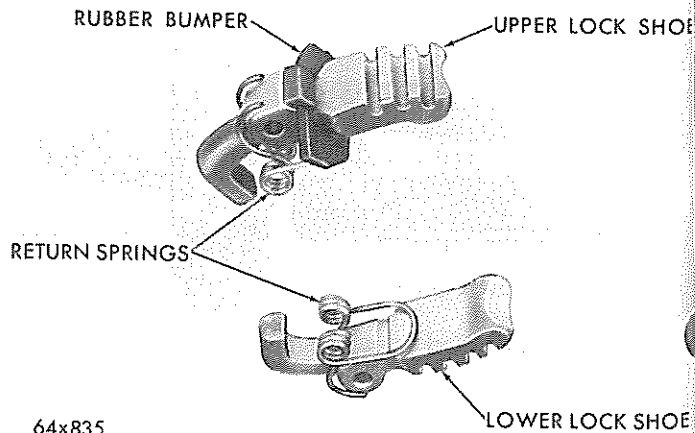


Fig. 35 - Lock Shoes and Springs Arrangement

- d. Install the pivot pins in the actuator and through the lock shoes making certain that the pins are centered.
- (2) From the top of the actuator housing, install the turn signal switch control cable on the plastic bellcrank with the cable loops facing away from the center of the actuator, then install the cable bracket screw.

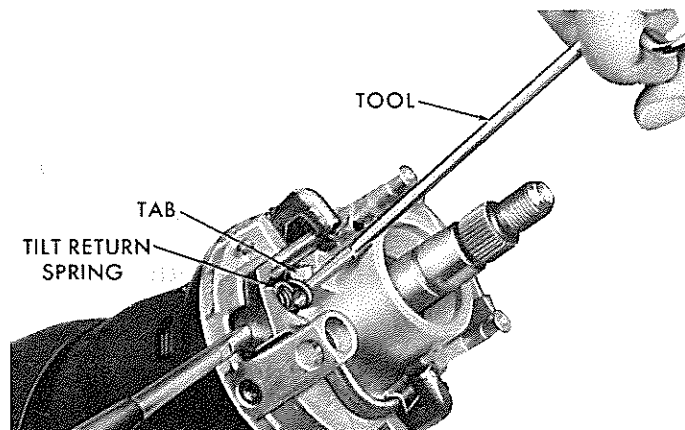
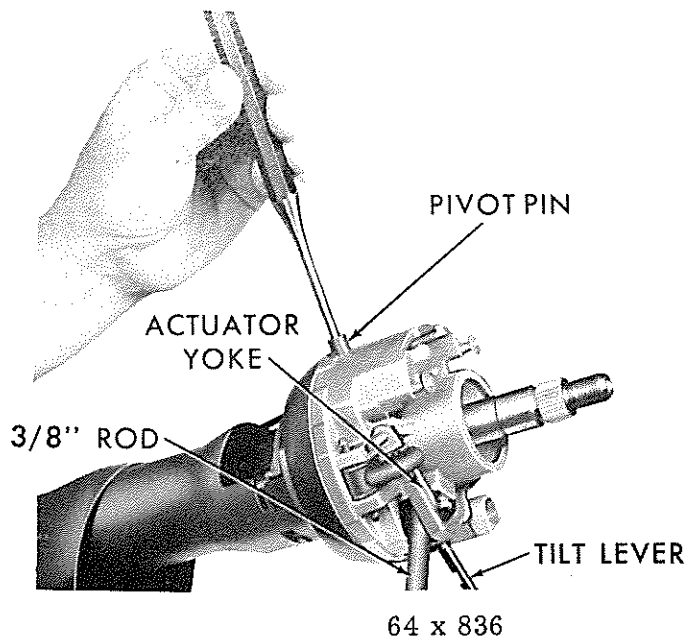
TILT COLUMN

Assembly

- (1) Install the actuator housing lock plate (if removed) by indexing with the openings in the jacket tube and snapping in place (Fig. 28).
- (2) Position the actuator housing support in the jacket tube and aligning the holes in the actuator housing with the holes in the lock plate noting that the two short screws are installed in the raised section of the lock plate (Fig. 28). Tighten the four screws securely.
- (3) Install the upper steering shaft and lower bearing as shown in Figure 27.
- (4) Install the lower ends of the two return springs on the support spring anchors, (Fig. 27).

NOTE: The loops on the upper ends of the springs must have the openings toward the top of the column.

- (5) Install the release lever in the actuator housing and raise the lever "up" and block the actuator yoke in this "up" position with a 3/8 inch rod to prevent the lock shoes from engaging the lock pins, (Fig. 36).
- (6) Install the actuator assembly over the steering shaft while guiding the turn signal cable and horn contact wire through the actuator support and shifter bowl. Do not position the horn contact at this time.



64 x 837

Fig. 37 - Installing the Tilt Return Springs

Fig. 36 - Installing the Pivot Pins

- (7) Align the actuator assembly pivot pin holes with the holes in the support assembly, then install the pivot pins using a brass drift (Fig. 36), to fully seat the pins. The steering shaft may have to be slightly raised to have the lock shoes clear the socket.
- (8) Raise the release lever, remove the 3/8 inch rod (tool) and position the upper steering column and actuator to the full "up" position.
- (9) Install the upper ends of the two return springs with Tool C-3956 (Fig. 37).
- (10) Install the turn signal actuator yoke assembly making sure that the ball socket engages the turn signal bellcrank ball.
- (11) Install the upper bearing (rollers facing up), (Fig. 23) bearing inner race, bearing seat (flanged portion "up"), retainer (dish facing up), rubber washer, a new collapsible spacer, and washer.

NOTE: When installing these parts on the shaft, make sure that they do not hang up on the snap ring groove.

- (12) Install the snap ring over the upper sheering shaft and against the collapsible spacer, then place Tool C-3957 over the steering shaft with the small window (cut out) at the bottom of the tool in line with the snap ring opening (Fig. 38).

- (13) Install the steering wheel nut on the tool and upper steering shaft and tighten the nut until the top edge of the window (cut out) in the tool is in line with the upper edge of the snap ring groove. This will compress the collapsible spacer and preload the upper shaft bearings.
- (14) Remove the steering wheel nut and Tool C-3957, making sure the snap ring is seated in the shaft groove.
- (15) Check the steering shaft torque as follows:
 - a. Install the steering wheel nut on the upper shaft.
 - b. Place the steering column assembly in the upright position.
 - c. Check the torque with an inch-pound torque wrench and a 3/4 inch twelve point socket (Fig. 39). The shaft should rotate with the column in the full "up" position and the full "down" position with a maximum reading of 2-1/2 inch pounds torque. If the torque reading is greater than 2-1/2 inch pounds or if there is no torque reading, install a new collapsible spacer and recheck the torque.
 - d. Remove the torque wrench and the steering wheel nut.

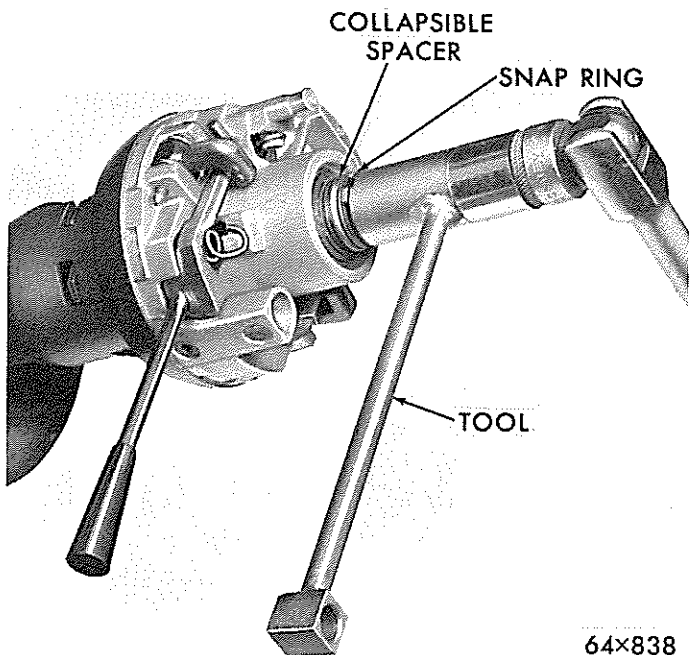


Fig. 38 - Installing the Upper Bearing Retaining Ring

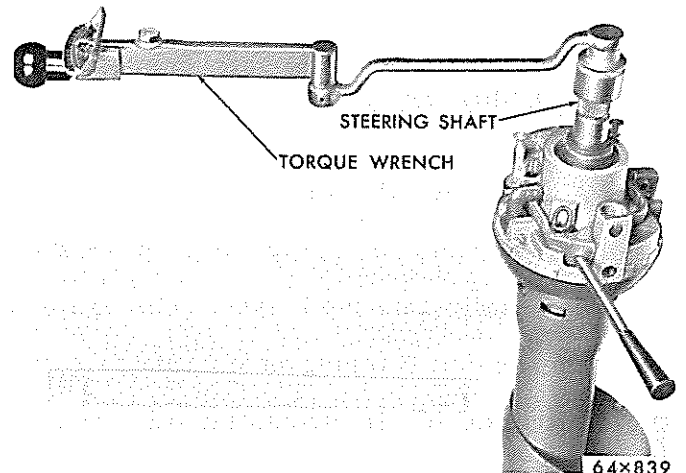


Fig. 39 - Checking the Steering Shaft Torque

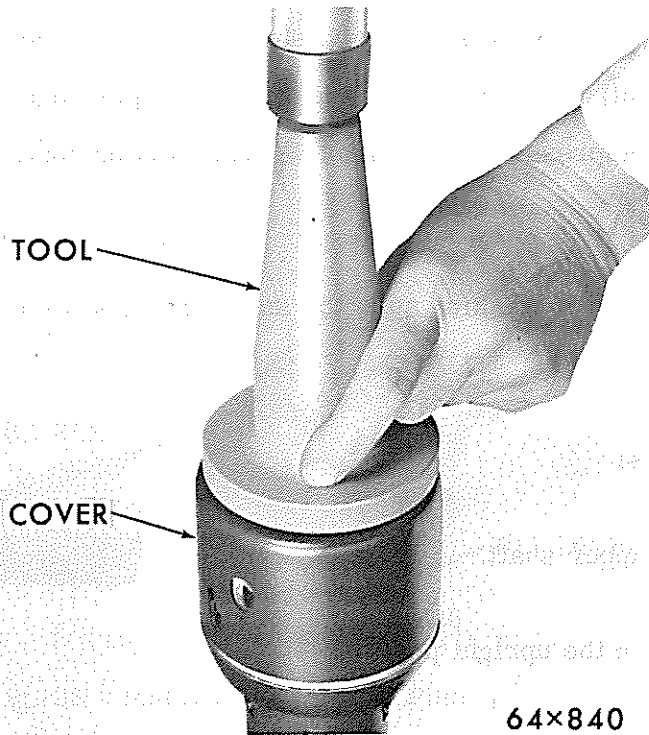


Fig. 40 - Installing the Turn Signal Cover

- (16) Install the horn contact in the actuator housing.
- (17) Position the steering column actuator to the center position and remove the release lever.
- (18) Install the turn signal cover with Tool C-3955 aligning the openings for the release and turn signal levers, and with the small tang on the lower edge of the cover in line with the groove in the actuator housing (Fig. 40).
- (19) Install the turn signal and release levers.
- (20) With the turn signal lever in the neutral position, install the bowden wire on the switch pin and install the cable clamp and attaching screw.
- (21) Position the turn signal switch in the neutral position and install and tighten the attaching screws. Check the operation of the switch in all positions.

GROUP 21 - TRANSMISSION

TORQUEFLITE

New internal transmission improvements contribute to longer wear and fatigue life of the individual parts.

Full Flow Transmission Oil Filter

A full flow oil filter (Fig. 41) enclosed within the TorqueFlite Transmission replaces the externally mounted type. The filter has a dacron-felt filtering medium and provides 100% filtration of all circulating oil. Under normal driving conditions the enclosed oil filter reduces service and maintenance requirements.

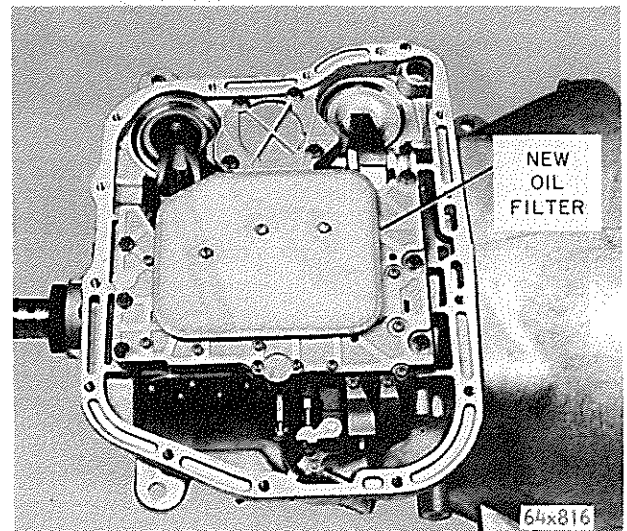


Fig. 41 - Full Flow Transmission Oil Filter

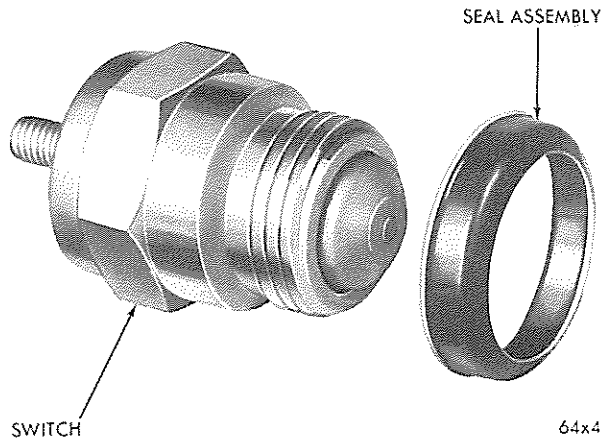


Fig. 42 - Neutral Starting Switch

Gear Selector Console Shift

A console mounted gear selector replaces the conventional gear selector push buttons. The shift selector is gated to permit rapid shifting and each gear position is detented to provide positive gear engagement. The gear positions are marked P-R-N-D-2-1, with P in the most forward position.

When shifted into P (Park) position, the handle engages a roller-type parking sprag that locks the transmission. A gated lock prevents accidental release. The engine can be started with the gear selector in the Park and Neutral positions only.

Center-Contact Neutral Safety Switch

A center contact neutral safety switch (Fig. 42) prevents accidental starting of the engine with the transmission in gear on console and torqueflite transmission equipped vehicles.

The center-contact neutral safety switch is equipped with a large glass-filled nylon insulator with a metal pin-like contact in the center. In order to energize the starter, the pin must make contact with the transmission manual valve lever to complete the necessary electrical circuit. The insulator prevents electrical contact with the center pin until the transmission is in the neutral position or park position.

MANUAL TRANSMISSIONS

4-Forward Speed Manual Transmission

A 4-Forward Speed Manual Transmission (Fig. 43) is available as factory installed

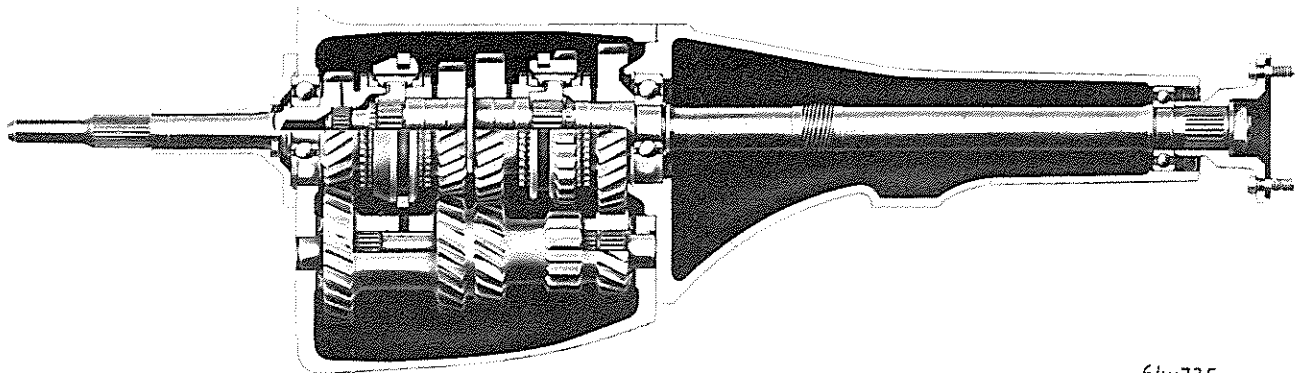


Fig. 43 - 4-Forward Speed Manual Transmission

optional equipment for the C-300K Models equipped with the Firepower 390 engine. The shift linkage and the shift lever is mounted adjacent to the console. The 4-forward speed manual transmission is designed with a 3 1/2 inch center distance between the main and counter shafts to accomodate the torque input. All of the forward gears are fully synchronized. The gear ratios are 2.66 in low, 1.91 in second, 1.39 in third and direct in high. The reverse ratio is 2.58.

GROUP 22 - WHEELS, BEARINGS AND TIRES

The C-300K equipped with the Standard 360 Firepower engine has 8.00 x 14 Super Cushion Tubeless tires. The C-300K equipped with the optional Firepower 390 engine is equipped with 8.50 x 14 Super Cushion Tubeless tires.

The service procedures are the same as those outlined in the Imperial and Chrysler Service Technical Manual.

GROUP 23 - BODY AND SHEET METAL

The Chrysler 300K body consists of a "Unibody" type construction with the body shell and the underbody (frame) welded together into one unit. The "Unibody" is subjected to a seven step corrosion and rust proofing immersion and spraying operation. The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual with the following exceptions:

Convertible Top Sealing

Protection against water seepage through the rear belt line area of the Convertible Models is accomplished by double-sealing the fabric attachments.

A wide laminar strip of sealing compound is applied between the upper deck sheet metal and the overlapping well liner. Polyurethane foam is added between the well liner and the clear vinyl rear window with both liner and window tightly compressed by the moulding retainer ring.

Hood Latching

A separate safety striker bar independent of the primary latch striker bar is incorporated into the hood latching mechanism for the purpose of engaging the safety hook if the primary latch is not engaged. Therefore, double locking protection is provided.

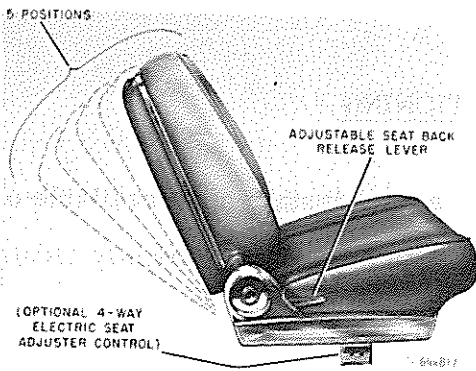


Fig. 44 - Five Position Reclining Seat

Reclining Seats

The front bucket seat, passenger side (Fig. 44) now can be adjusted manually into five different reclining positions covering a 30-degree range of angularity. A convenient lever, placed at the side of the seat facilitates its operation. (Fig. 45). Raising the control lever frees the lock mechanism so that the back can be tilted into any one of the five positions. Releasing the lever locks the seat at the desired angle. Returning the seat back to its normal position is accomplished by raising the lever and relieving back pressure.

Front Seat Headrests

Headrests are provided on both front seats as optional equipment. The headrests consist of a durable leather grain plastic with polyurethane foam padding and are styled to blend with the existing decor, and provide comfort during long trips.

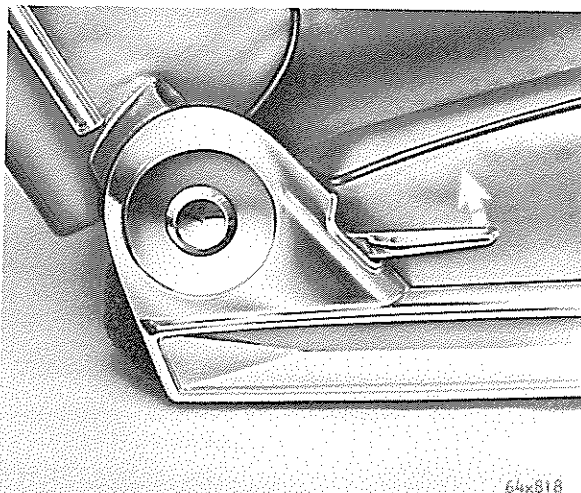


Fig. 45 - Lock and Release Lever for Reclining Seat



Fig. 46 - C-300K Interior View

GROUP 24 - AIR CONDITIONING

A combination air conditioning and heating unit (factory installed) is available on the C-300K Models. It is dash mounted and operates by push buttons conveniently located on the instrument panel (Fig. 46).

On C-300K Models equipped with a Firepower 390 engine, the suction and liquid lines are routed differently and the expansion valve is rotated 144 degrees counterclockwise. Further refinements increase the efficiency of Chrysler Air-Conditioning units that feature the moisture reducing "reheat" principle pioneered by the Chrysler Corporation.

A new cooling air outlet at the right lower side of the dash panel in addition to the one on the left provides better control of the air distribution.

The service procedures are the same as those outlined in the 1964 Imperial and Chrysler Service Technical Manual.