PONTIAC
Service Craftsman News

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TAR REMOVER MAY DAMAGE FINISH

USE CARE WHEN CLEANING ACRYLIC LACQUER FINISH

When removing road oils and tar from acrylic lacquer finishes, care must be exercised to use a cleaner that is not harmful to this finish. Ordinary tar and lacquer removers that were developed for cleaning regular lacquer may be harmful to this new finish. Instances have been reported where these commercial cleaners have caused spotting and in some cases dissolving of the acrylic lacquer causing extensive paint damage.

Any cleaner is satisfactory if it is recommended for use on regular lacquer, enamel and acrylic lacquer. Number Seven "Dissolvo" newly developed and marketed by duPont and a new "Prepsol" mixture or their equivalents can be used safely for removing road oils and tars from acrylic lacquer. This same new cleaner is compatible for use on regular line lacquers, enamels or acrylic lacquers and any equivalent product would be as acceptable. When purchasing, make sure that instructions on the container specifically state that the contents can safely be used on acrylics and other finishes.

1956 CARBURETOR TROUBLE DIAGNOSIS

In conformance with many requests, a special section follows which contains pertinent 1956 carburetor information found in the Service Craftsman News since the beginning of the model. Any specifications or adjustments, previously published, which no longer apply have been left out or replaced with current information. If necessary, reference may be made to the original articles listed in parentheses below the headings. Some of the information contained in this article is published for the first time. It will be marked "Not Previously Published" in parentheses below the heading.

CARBURETOR GENERAL

Carburetor Icing

("Stalling Due to Carburetor Icing", November, 1955)

In all cases of carburetor icing check exhaust gas passages in the throttle flange for carbon build up. Clean holes in manifold and manifold surface. Always use new gasket to ensure against leak.

Unloading Procedure

("Carburetor Unloading Procedure", January, 1956)

If an engine fails to start after a reasonable amount of cranking it may be flooded. In this case forcibly depress the accelerator to the floor to open the choke. Hold firmly in this position while cranking; do not pump accelerator at any time. If this procedure does not relieve the flooding it is possible that there is interference between the accelerator pedal and the floor mat at the "hump" above the transmission.

Throttle linkage adjustment should be checked to ascertain that the TV lever stop does not interfere with unloading action at the carburetor with the choke fully on.

A thick floor mat will sometimes prevent full travel of the accelerator pedal thereby interfering with choke unloading.

Unloader Adjustment Procedure

("Carburetor Unloader Adjustment Procedure", May, 1956)

1. Loosen top trunnion nut on intermediate throttle rod and push down rod until it bottoms.

2. With rod in this position tighten nut finger tight plus three full turns. This ensures maximum accelerator pedal travel commensurate with proper clearances at toe board.

3. Remove carburetor air cleaner assembly.

4. Depress accelerator pedal forcibly to floor. (This should be done by person sitting in drivers seat of car to simulate actual driving conditions.) Check to see that accelerator pedal is not hitting "hump" over transmission. Move upper end of pedal to left if necessary by enlarging left hand hole in accelerator pedal bracket, and rotating bracket, counterclockwise.

5. With accelerator pedal depressed as in step 4, bend unloader tang on carburetor to give correct opening between edge of choke valve and air horn. (Individual specifications vary with carburetor being used. Check shop manual for individual specification.)

6. Replace air cleaner assembly.

The above procedure will eliminate variance in linkage, floor mat, pedal location, etc. and should ensure correct unloader action.

Hard Starting of Partially Warmed Up Engine

("Carburetor Choke Setting Changed," March, 1956)

In order to correct a hard starting condition of a partially warmed up engine, the choke setting on Rochester 4-Jet and Carter 4-Barrel has been changed from one notch rich to center index. If the center index setting does not completely eliminate the complaint, it is permissable to go to a one notch lean setting.

Carburetor Flooding

("New Fuel Filter", June, 1955)

A new glass bowl, impregnated fiber element, precipitation type fuel filter is now being installed on all cars in production.

To assist in correcting carburetor flooding problems on early production cars, the filter has been released as a service package under part number 854345. It can be installed using one 90° elbow, part number 504500 or 114920.

Using Proper Viscosity Oil in Heavy Duty Air Cleaner

("Heavy Duty Air Cleaner Oil Viscosity", July, 1956)

It is necessary to use only recommended viscosity oils in oil bath air cleaners. The use of an oil lighter than specified will result in oil being drawn into the combustion chamber causing spark plug fouling and poor performance. Improper oil will also contribute to exhaust smudging of the bumper face bar at the exhaust outlet. The same condition will be experienced if the oil level is too high in the air cleaner.

If the average outside air temperatures are above 32° F, the use of SAE 50 viscosity oil is required in the oil bath air cleaner. Average temperatures of below 32° F require the use of SAE 20 W oil.

CARTER 4-BARREL CARBURETOR

Carter 4-Barrel Choke Piston and Vacumeter Spring Changed

("Rochester 4-Jet and Carter 4-Barrel Carburetors Modified", December, 1955)

To improve cold engine operation and eliminate engine stalling after a cold start, the Carter 4-Barrel Carburetor vacumeter piston spring and choke piston have been changed. The new choke piston is the same piston that was used on the 1955 Carter 2268S carburetor and is available for service under part number 7008360. The vacumeter spring is available for service under part number 7009746. All Carter carburetors built with an identification tag of M-5 or later, will contain the new type parts.

In all cases of attempted correction of poor cold engine operation or cold stalling on Carter 4-Barrel carburetors built prior to units with tag number M-5 both the choke piston and the vacumeter spring must be installed.

Carter Model 2364SA Released

("Carter 4-Barrel Carburetor Changed", March 1956)

A new air horn casting and choke housing are now in production on the Carter WCFB 4-Barrel carburetor. The new air horn and choke housing are not individually interchangeable with the earlier type.

Carburetors using the new parts will be known as model 2364SA.

"Cut-Out" on Left Turn

(Correction of Carter 4-Barrel Left Turn "Cut-Out", July, 1956)

The cause of Carter 4-Barrel equipped cars "cutting-out" on turns is leakage of fuel from the carburetor bowl to the choke vacuum passage.

In some instances it is only necessary to tighten the bowl cover attaching screws to eliminate this condition. If this does not correct the complaint, it may be necessary to install a bushing (or standpipe), in the vacuum passage between the bowl cover and bowl. Installation of this bushing assures a more positive seal and prevents fuel leaking into the vacuum passage on left turns. This bushing is released for service under part number 3732788.

ROCHESTER 4-JET CARBURETOR

Rochester 4-Jet Choke Piston Change

("Rochester 4-Jet and Carter 4-Barrel Carburetors Modified", December, 1955)

The Rochester 4-Jet choke piston has been modified to improve cold engine operation and eliminate engine stalling after a cold start. A comparison of the new piston and the earlier type shows that the new piston has only two lands and one hole as compared to three lands and two holes found on the first type.

The new piston is released for service under part number 7009710.

All Rochester carburetors using the new piston will be identified by the letter "F" embossed on the carburetor identification tag.

Stalling During Warm Up

("Correction of Rochester 4-Jet Vacuum Leak", January, 1955)

Engine stalling during warm up on cars equipped with the Rochester 4-Jet carburetor may be due to a leak in the choke piston vacuum passage. A leak in the passage reduces the effect of engine vacuum in opening the choke thereby allowing the engine to "load-up". Investigation of cases of this nature indicates that the usual cause of the condition is a leak at the carburetor throttle body to bowl gasket. The gasket originally used was shaped in such a manner that it could cause a leak between the vacuum passage and one of the secondary throats.

A new gasket is now being used in production to eliminate the possibility of a leak. The new gasket is available under part number 7009762.

To test for a choke vacuum leak, remove the choke housing to manifold pipe and check the vacuum at the choke housing. If vacuum is less than 10 inches, improper choke action will result, and the old gasket should be replaced with the new gasket. The time allowance for this operation is 1.2 hours.

Loading During Warm-Up

("New Rochester 4 GC Carburetor Adjustment", March, 1956)

To prevent loading during warm up of the Rochester 4 GC carburetor, the contour of the choke piston link has been changed. This gives increased opening of the choke valve on cold idle.

With the choke valve closed the piston should protrude approximately 1/16" from the cylinder and the piston pin is one-half exposed. On all cases of loading the piston link should be bent to achieve the correct choke piston position.

The checking and setting of the choke piston as described above should be considered in the future as a regular carburetor adjustment and should be performed as such during carburetor overhauls and adjustments. Extreme care should be used to insure that no bind exists in choke system after adjustment.

Choke Rod Adjustment—
1956 and 1957 Rochester 4 GC Carburetor

(Not Previously Published)

A change has been made in the adjustment of the choke rod which includes presetting the idle speed screw. Presetting this screw insures the proper relationship between the fast idle cam and the choke valve.

The adjustment is as follows:

1. Back off idle speed screw several turns.
2. Hold choke valve fully open.
3. Turn idle speed screw in until it just contacts the low speed step of the fast idle cam.
4. Turn idle speed screw in one full turn. This gives an idle speed adjustment of approximately 450 R.P.M.
5. Set the idle speed screw on the second step of the fast idle cam and against the shoulder of the high step.
6. Be certain that choke trip lever is in contact with the choke counterweight lever.

7. For 1957 cars, there should be a 1/16" clearance between top edge of choke valve and dividing wall of air horn. For 1956 cars there should be a .054" clearance (gauge KMO-480-A). Bend choke rod at lower angle if necessary to adjust.

ROCHESTER DUAL 4-JET CARBURETORS

Improved Hot Starting of Extra Horsepower Engines

("Dual 4-Jet Carburetor Changes", March, 1955)

To improve hot starting characteristics of the extra horsepower engine a new throttle body to bowl gasket is now being used in production. The new gasket is released for service under part number 7009256 and should be installed on each carburetor in cases of hard hot starting.

Engine Stalling After Fast Stop

("Dual 4-Jet Carburetor Changes", March, 1956)

Engineering tests have shown that engine stalling after a fast stop can be alleviated by removing the air horn assemblies from both carburetors and drilling out one internal vent in each side with a 1/8" drill. It is important that only the two vents illustrated in the "March News" be drilled, otherwise excessive fuel spilling may result if car is used for racing. This condition has been corrected in production.

Sag on Acceleration

(Not Previously Published)

A new accelerating pump plunger and rod assembly, part number 7010846 has been released for use on Extra Horsepower Engine carburetors. This assembly replaces part number 7009129 currently being used. Its purpose is to correct complaints of a sag in acceleration from a standing start by reducing the initial discharge of fuel from the accelerating pump system.

DELCO DELUXE RADIO CIRCUIT

Delco Deluxe Radio 988623, released for late 1956 production, utilizes printed circuits. Radios containing this circuit started with Serial Number "ON-2". The last Serial Number of the wire connection model 988568 was "LN 2897".

Dealerships who do radio work should make a special point of checking the serial numbers to ascertain whether or not the radio has the printed circuit. If it does, the United Motor Service Manual should be consulted for proper testing procedures.

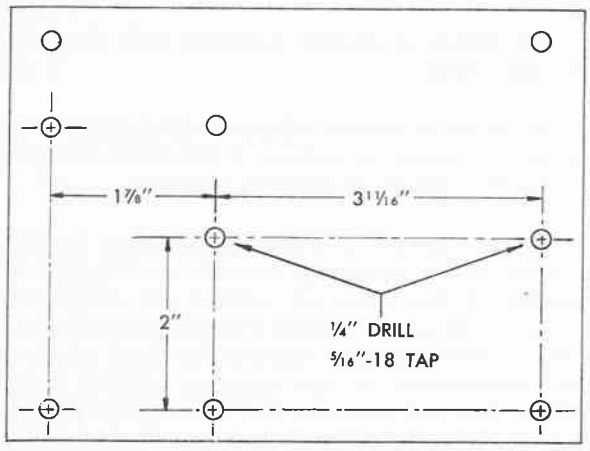

Fig. 1 J-5923, Carburetor Holding Stand Modification

MODIFICATION OF CARBURETOR HOLDING STAND J-5923

The new 1957 Rochester two-barrel carburetors will have a different throttle body. The carburetor holding stand J-5923 must be modified to accommodate usage on off the car repairs.

The holding stand can be used satisfactorily if it is modified according to the dimensions shown in Fig. 1. Two new 1/4" holes must be drilled and tapped with a 5/16"-18 tap in the location as shown.

15 LB. RADIATOR CAP USED IN 1957 AIR CONDITIONED CARS

All 1957 air conditioned equipped cars will use 15 lb. radiator pressure caps instead of the 13 lb. cap used on all other models. This part can be ordered under part number 861042.

1957 ENGINE IDLE SPEED ADJUSTMENT

The hot engine idle speed on 1957 Hydra-Matic equipped cars should be set with the transmission in Drive range. The idle speed specifications are as follows:

	Idle Speed in Drive
All Hydra-Matic Except Air Conditioning	430 - 450 RPM
All Air Conditioning	500 - 520 RPM

NOTE: Idle speed should be set on Air Conditioned Cars with Air Conditioning off.

Synchro-Mesh transmission equipped cars will continue to be adjusted 450 - 470 RPM.

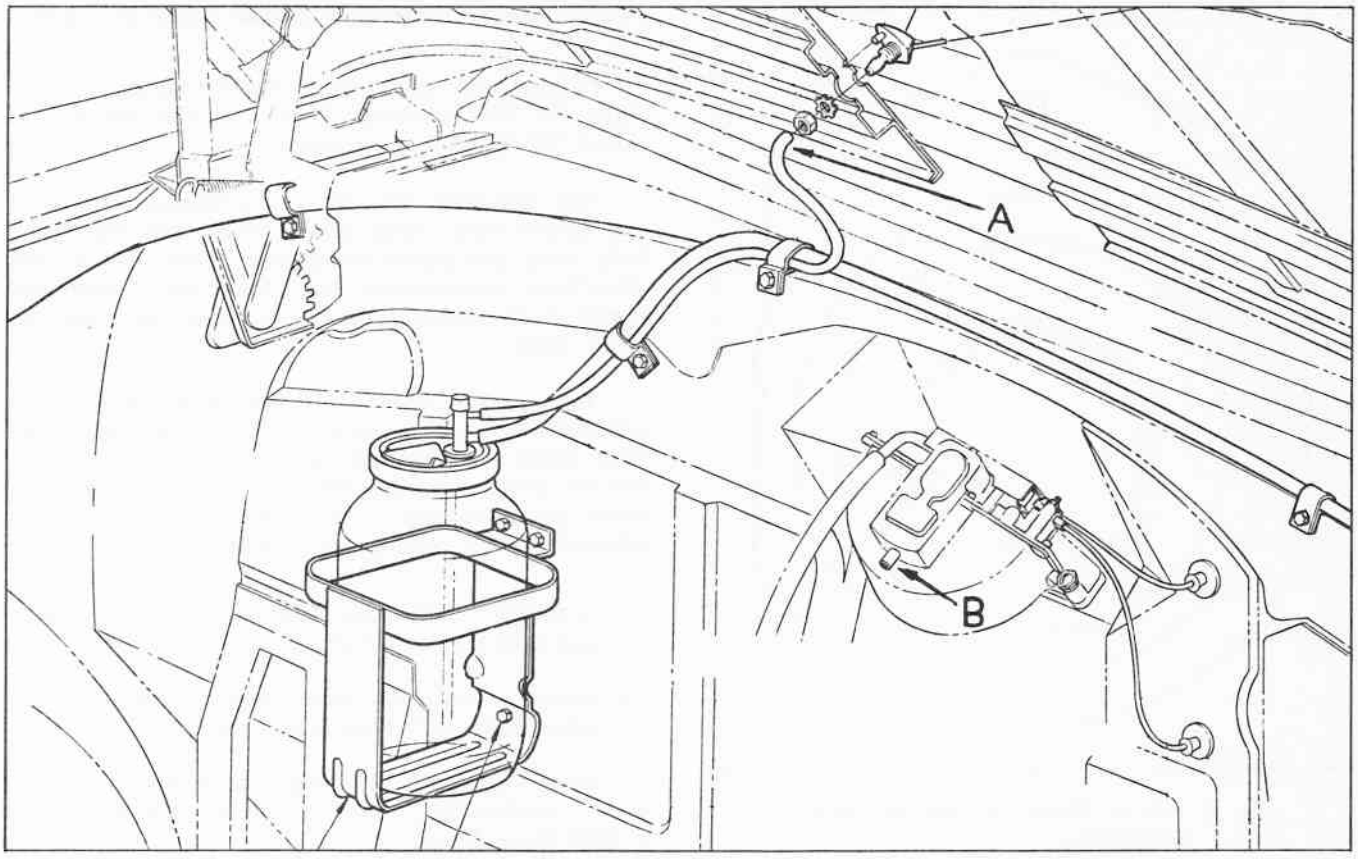

Fig. 2 Correct Installation of Windshield Washer Outlet Hose

WINDSHIELD WASHER OUTLET HOSE INCORRECTLY CONNECTED

Product Information Reports received recently advise of ruptured vacuum pump diaphragms. Our investigation of these cars has shown that the windshield washer outlet hose has been connected in error to the air intake pipe on the bottom of the windshield wiper motor. When the hose is connected in this manner and the windshield wiper is turned on, the water in the washer bottle is drawn into the engine combustion chamber by way of the vacuum pump. In passing through the pump the water causes a rupture of the vacuum pump diaphragm.

Hose "A" (Fig. 2) should be attached to the spray nozzle connection on the underside of the hood. Do not connect it to the air inlet pipe, "B", on the windshield wiper motor.

FRONT SEAT SIDE PANELS

To eliminate the storage and handling of a great number of different colored plastic Front Seat Side Panels, all 1957 model service panels will be released minus the silicon finish which was used on previous models. This will provide a surface which can be painted with Duco lacquer. The panels are to be sprayed with a mixture of lacquer, which matches the interior colors, and an anti-scuff compound to give maximum wear resistance.

Right hand and left hand panels will be packaged individually along with a bottle of the anti-scuff compound and an instruction sheet for painting.

Painting Instructions

1. Wash the surface of the unpainted panel with white gasoline or some other suitable solvent prior to painting.

2. Mix the entire contents of the one ounce bottle of anti-scuff compound (565974) with one-half pint (8 fl. oz.) of uncut lacquer of desired color. (Mix thoroughly).

3. Reduce this mixture to spraying viscosity and spray panel with three separate coats allowing each to dry long enough for proper flowout.

   CAUTION: Avoid excessive finish thickness as this tends to change the appearance of the grain of the panel.

4. Allow to dry a minimum of 6 to 8 hours before installing in car.

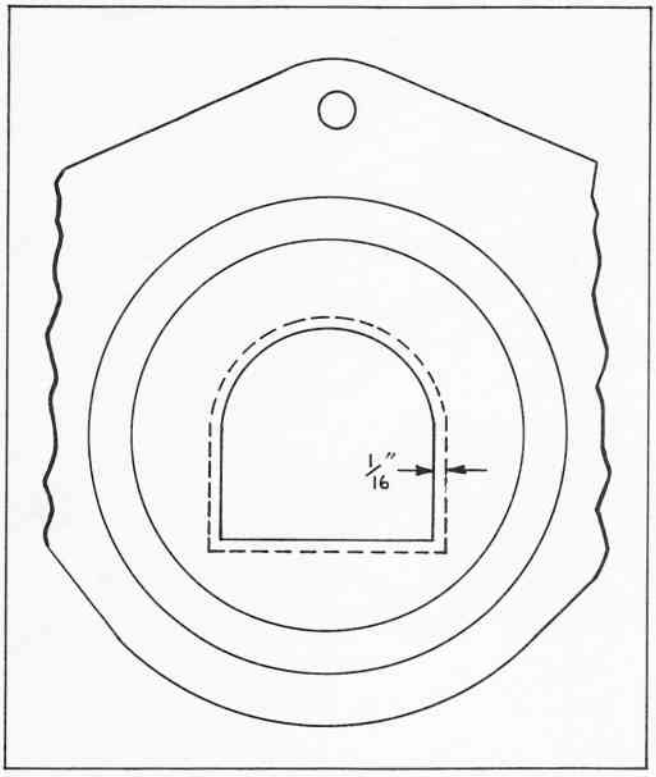

Fig. 3 J-6116, Clutch Unit Holding Fixture Modification

MODIFICATION OF CLUTCH UNIT HOLDING FIXTURE J-6116

The gear ratio of the 1957 Strato-Flight reverse unit has been decreased, resulting in a larger reverse sun gear. The larger sun gear will not fit through the Clutch Unit Holding Fixture J-6116 when mounting the clutch unit in the fixture for disassembly or assembly.

To enable proper mounting of the unit, it is recommended that the hole in the Holding Fixture be enlarged by filing or grinding approximately 1/16", as indicated in Fig. 3.

USE CORRECT TRIM CEMENT TO PREVENT "BLEEDING"

To prevent "Bleeding" of trim attaching cement through imitation leather and genuine leather upholstery, it is necessary to follow these directions:

1. 3M (Minnesota Mining and Manufacturing) Super Weatherstrip Adhesive (Neoprene), or its equivalent, should be used when attaching all leather or imitation leather trim.

2. 3M Trim Cement, or its equivalent, should be used on all Cloth Trim. (This is the cement that was previously recommended for use on all trim.)

TWO TYPES OF TWO-TONING USED IN 1957

Pontiac will make available two styles of two-toning for 1957 models. These combinations will be called "Starlight" and "Accent".

The Starlight Two-Tone combination will have the Lower Body Area of one color with the Upper Body Area and Insert of the other color. The Accent Two-Tone combination will have the Lower and Upper Body Areas of one color with the insert the other color.

Three code letters will designate the two-tone combinations and the paint colors to be used. The first letter signifies the color of the lower body, the second letter signifies the color of the roof, and the third letter signifies the color of the insert. Two examples of the coding appear below:

1. Starlight - AUU will mean Raven Black lower and Sage Blue upper with Sage Blue insert.

2. Accent - AAU will mean Raven Black lower and upper body, with Sage Blue insert.

Solid Color will be designated by use of a triple letter combination. For example, AAA will mean a solid Raven Black.

Pontiac does not furnish a three-tone paint combination.

NEW CONTROL VALVE ASSEMBLY IMPROVES 2-3 SHIFT

Beginning with production transmission P56-199036, a new control valve assembly provides lower 2-3 and 3-4 shift speeds and improved 2-3 shift feel. The changes were made by recalibrating several springs in the clutch and shift valve bodies and by removing the 1/8" check ball at the transition valve.

A service kit, part number 8616966, is available for making this modification in the field. The kit consists of a new 2-3 shift valve outer spring, a new 3-4 shift valve inner spring and a new transition valve spring. In addition to changing these springs when modifying valve bodies in the field, the transition valve check ball (1/8") and the 3-4 shift valve outer spring should be removed and discarded.

The field modification can be summarized as follows:

Clutch Valve Body Assembly

1. Remove Transition Valve Spring (black) and replace with new spring (gray).

2. Remove Transition Check Ball (1/8").

Shift Valve Body Assembly

1. Remove 3-4 Shift Valve Outer Spring and discard.

2. Remove 3-4 Shift Valve Inner Spring (copper) and replace with new spring (black).

3. Remove 2-3 Shift Valve Spring (black) and replace with new 2-3 spring (black-daubed with white paint).

The time allowance for this operation will be a straight time of 1.6 hours.

NEW FRONT UNIT DRIVE TORUS SPACING WASHER USED IN PRODUCTION

A new Front Unit Drive Torus Spacer Washer (referred to as Front Unit Drive Torus Thrust Washer in 1956 Hydra-Matic Shop Manual) is now being used in all 1956 Hydra-Matic Transmissions.

The early type washer is completely interchangeable with the new washer and will continue to be used for service until present supplies are exhausted.

ROCHESTER 4GC SECONDARY THROTTLE VALVE ADJUSTMENT

Several cases of rough hot idle on the Rochester 4 GC carburetor have been traced to a sticking action of the secondary throttle valve. To eliminate this condition a carburetor adjustment has been released which will ensure a positive closing of the secondary throttle valve on idle. This adjustment establishes tension of the secondary lock spring (Fig. 4) against the secondary throttle operating lever, holding the secondary throttle valves closed. The adjustment will apply to all 1956 Rochester 4 GC carburetors as outlined below.

This is an on the car adjustment only. Following is the adjustment procedure:

1. Adjust carburetor idle speed and mixture. (Be sure secondary valves are closed during this adjustment.)

2. Shut off engine and manually close choke valve.

3. Position idle speed screw on the second step of the fast idle cam.

4. Measure clearance between the secondary lock spring and the secondary throttle operating lever. This clearance should be .042". Bend lock spring to adjust.

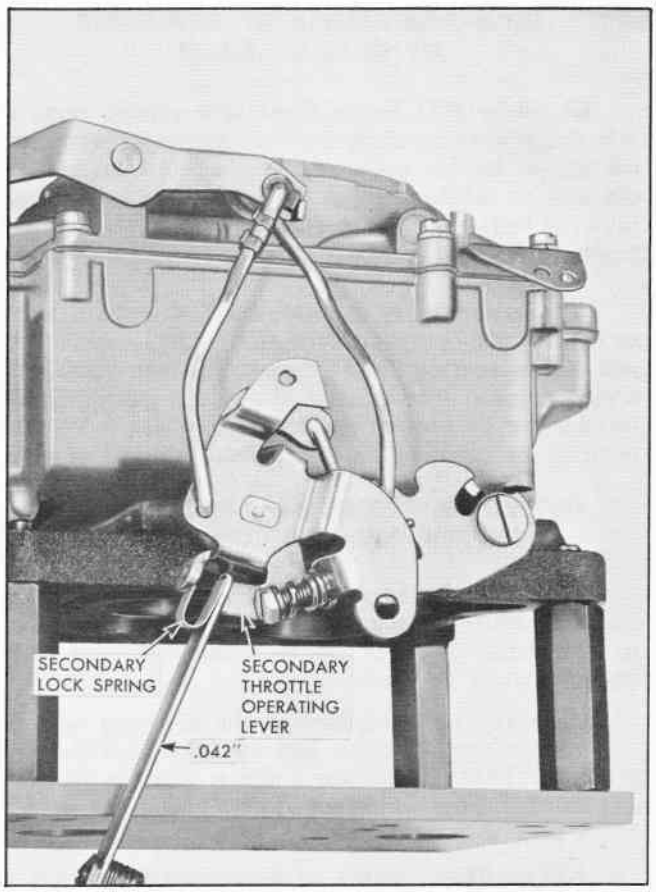

Fig. 4 Measuring Clearance Between Secondary Lock Spring and Secondary Throttle Operating Lever

It is important that this adjustment be made accurately. .042" clearance ensures the proper amount of tension when car is on hot idle. Too much tension (less than .042" clearance) could interfere with the idle speed adjustment. Another possible cause for secondary throttle valve sticking was covered on page 48 of August, 1956 Service Craftsman News.

NEW NEOPRENE WATER PUMP TO CYLINDER HEAD INLET ELBOW HOSE

In all cases of power steering pump oil seal leak, inspect the hose between the water pump and the left hand cylinder head inlet elbow for oil damage. If the hose is damaged, replace with the new neoprene hose, part No. 524631. The neoprene hose is impervious to hydraulic fluid and therefore will not be damaged by fluid which may spill or leak from the power steering pump. It will fit all 1955 and 1956 cars.

Stock of the former hose can be used on cars without power steering or on the right hand side of cars with power steering.

HIGH-POINT MARK ON UPPER END OF STEERING SHAFT

On early 1957 Power Steering equipped cars, a few units were used having the high-point mark on the upper end of the steering shaft located toward the bottom rather than at the top when the steering is at the high-point (front wheels in the straight ahead position).

If it is necessary to locate the high-point it must be determined by disconnecting the steering connecting rod and measuring "load" through the high-point with a spring scale. The location of the high-point can also be checked by turning the steering wheel to its mid position by counting the turns from stop to stop.

FITTING HARMONIC BALANCER ON CARS EQUIPPED WITH AIR CONDITIONING

Whenever it is necessary to replace the harmonic balancer and/or key as a result of damage at the key or harmonic balancer keyway, the following procedure should be used:

1. Measure the thickness of the new key with a micrometer. If the key measures on the low limit (.187") then use a piece of shim stock to build the key thickness up to .1885" or to permit a slip fit in the keyway of the harmonic balancer.
2. Add or delete shims as necessary to provide a slip fit.
3. If the thickness of the key is such that it does not provide a slit fit (.003" Min.) into the keyway of the harmonic balancer without the use of shims, then carefully file the keyway in the balancer (file both sides of the keyway) to provide a slip fit of the balancer onto the crankshaft and key. CAUTION: DO NOT FILE THE KEY. Since the key must fit in the crankshaft, filing the key would provide too loose a fit in the crankshaft.

NOTE: Before attempting any repair or fit of the key to the harmonic balancer keyway, be sure the key in the crankshaft is properly positioned.

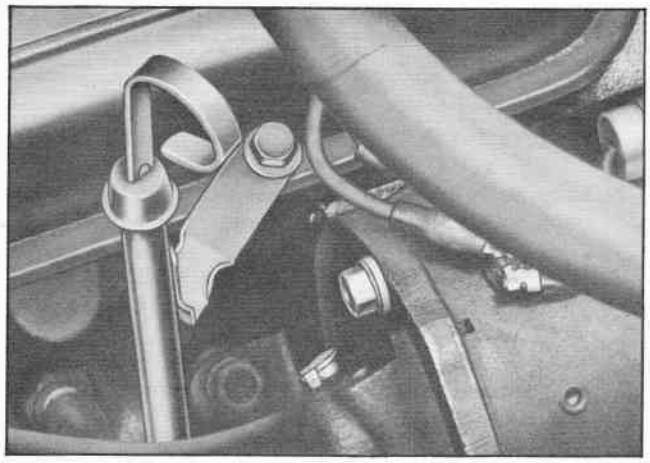

Fig. 5 Dip Stick Installed

DIP STICK MODIFICATION FOR 1956 AIR CONDITIONED CARS

Reports have been received of interference between the air conditioning compressor hoses and the crankcase oil level indicator when the indicator is removed to check engine oil level. Continual removal and replacement of the oil level indicator will eventually break the indicator.

On cars where this condition has occurred the oil level indicator tube assembly may be modified as follows to permit easy removal of the indicator.

1. Procure a piece of sheet metal 1/32" thick, 1-7/8" long, and 5/8" wide.
2. Drill two 3/8" holes 1 1/2" apart.
3. Remove oil level indicator upper tube assembly from engine, attach extension to upper tube assembly with a nut, lock washer, and bolt and replace upper tube assembly and extension.

   NOTE: This extension may be brazed on to the upper tube assembly extension rather than attaching with a bolt, lock washer, and nut.
4. Replace oil level indicator upper tube assembly.

SERVICE MANAGER—IMPORTANT

This News contains important service information on Pontiac cars. Each subject should be cross-referenced in the space provided at the end of each section in the Shop Manual or its Supplement. ***Be sure and cover every point with your entire organization.***

Each service man should sign in the space below after he has read and understands the information in this issue.
