

# THE CADILLAC SERVICEMAN

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## PROTECT OWNERS AGAINST THE UNCERTAINTY OF WEATHER

THE uncertainty of the weather during this time of year may inconvenience many a Cadillac owner, if his car is not properly prepared for those seasonal, often extreme, high and low weather fluctuations.

Now is the time for Servicemen to offer timely Fall maintenance suggestions to their customers — time to recommend the services necessary to prepare the owner's car for trouble-free Fall and Winter motoring. Each suggestion and recommendation should be customized to the particular car and owner concerned. The importance of these services should always be thoroughly explained to your customers, to impress them with the necessity of these services, to assure them of top performance during cold weather.

The Fall Service Recommendations should include:

A thorough check of the electrical system for positive, quick starting, including a complete tune-up, and above all, a complete battery check.

An inspection of the fuel system to assure a continuous flow of clean



fuel. Fuel filters and lines should be checked and changed as necessary. Items that deserve special mention are the manifold heat valve and the automatic choke, be certain that they are operating and adjusted correctly.

Flushing the cooling system and installing anti-freeze and Cadillac Inhibitor and Sealer. The cylinder head bolts should be torqued. All hoses should be checked for deterioration, and hose connections inspected for leaks. In addition, make sure Cadillac Windshield Washer Anti-Freeze is installed and that the windshield wiper blades are serviceable.

A check of the heater and defroster making certain that the controls and blower are operating efficiently and checking to see that there are no cold air leaks.

Other special services are required with regard to certain accessory equipment. Examples would be cars equipped with Air Conditioning where the unit should be operated periodically during the Winter as recommended in the June Serviceman, and 1960 and earlier model cars equipped with Air Suspension, where the accumulator tank should be drained regularly and methyl alcohol added to the tank.

There are, of course, other Winter items peculiar to owner driving habits and geographical locations. These are known to the Servicemen concerned and should be brought to the owner's attention. It is also a good practice this time of year to call to the owner's attention the fact that colder weather means a change in the time interval between recommended services. Items such as the battery, coolant, oil level and condition, should now be checked more frequently.

Finally, when recommending any Fall maintenance, complete your service to the customer by suggesting a Cadillac Magic Mirror or Blue Coral treatment to protect his car's finish and chrome.

## STEERING LINKAGE AND SUSPENSION SERVICE RECOMMENDATIONS REVISED

ADDITIONAL experience since the development of the new Cadillac steering linkage and suspension systems, and test results compiled after service recommendations were released, have established that the 1961 steering linkage and suspension spherical joints will not need repacking throughout their service life under normal driving conditions.

The only maintenance normally re-

quired is to inspect the joint seals for physical damage or cracks each time the engine oil is changed. If this inspection is neglected, water and dirt may enter the joint through a leaking seal and cause the joint to squeak or become noisy.

Special repacking lubricant and repacking guns are essential to restore these joints to their factory packed condition when a seal is replaced.

## PROCEDURE RELEASED TO FREE CAMBER ECCENTRIC

SERVICEMEN may encounter difficulty in attempting to loosen the camber eccentric by backing off the stud nut and tapping with a soft mallet as recommended in the Shop Manual.

The eccentric has a shallow internal taper, and is intended to lock onto the ball joint stud tightly enough so that it breaks loose from the more steeply tapered hole in the steering knuckle. In some cases, however, the eccentric comes loose from the stud instead of from the knuckle.

A torch should *not* be used to try to free the eccentric. Instead, loosen the nut *one* turn, and raise the car and let the front wheels drop to the full rebound position. Then, use a blunt chisel under the hex of the eccentric, tapping lightly from all sides to raise the eccentric by a wedging action. If this will not free the eccentric, disconnect the ball joint and drive the eccentric out from below with a suitable punch.

## "O" RING STOPS RATTLE IN PARKING BRAKE ASSEMBLY

**PIR** A RATTLE condition may develop in the parking brake assembly, due to excessive play in the vacuum unit release linkage, on some 1961 cars before approximate Engine No. 019000.

This condition can be corrected by stretching a small "O" ring, Part No. 1453923, or similar ring over the rivet head, as indicated in Fig. 1.

Cars after the above Engine Number will have a spring wave washer added at this location to eliminate any possibility of noise.

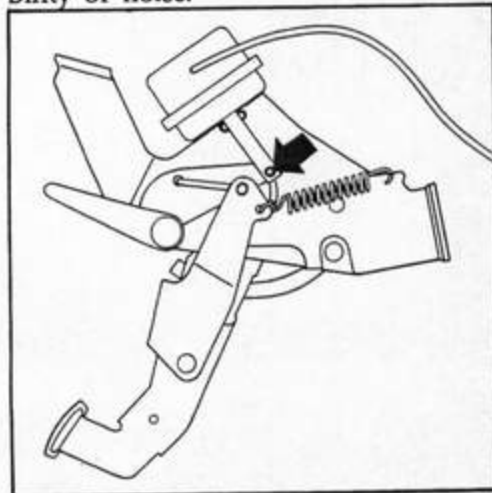


Fig. 1

## REVISED TORQUE-UPPER ARM SHAFT TO FRAME NUTS

At the very start of 1961 production, it was found more satisfactory to install the bolts that hold the upper front suspension arm shaft to the frame with the bolt heads down, rather than up, as originally planned. With this arrangement, the bolt heads contact the frame and the Stover type lock nut tightens against the harder material of the suspension arm shaft.

This production change makes it necessary to change the torque specification on Pages 4-26 and 4-39 of the 1961 Shop Manual from 110-120 foot-pounds to 55-70 foot-pounds, as the drive for tightening is now applied to the nuts rather than to the bolt heads.

When making this change in your Shop Manuals, be sure to cross out the word "bolts", as this new specification applies only when the wrench is used on the nuts. The suspension arm shaft-to-frame nuts should be torqued to 55-70 foot-pounds. This torque should be checked during Pre-Delivery Conditioning.

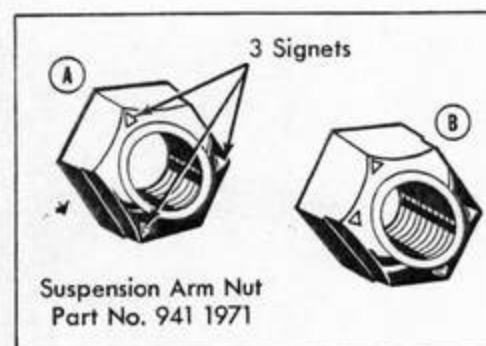


Fig. 2

Servicemen should also check for the correct *type* Stover nuts at this location on cars before Engine No. 007000, by cleaning the top of the nut and counting the small embossed signets on the top edge of the nut. A correct upper suspension arm shaft nut, Part No. 9411971, will have three identifying signets, see "A" Fig. 2. A contrast to this would be the Stover nut "B" with 4 signets as shown in Fig. 2. If a car is encountered with nuts having 4 signets, remove them and install three-signet nuts, Part No. 9411971, tightening them to 55-70 foot-pounds.

## THOROUGH DIAGNOSIS URGED FOR WASHER PUMPS

**PIR** MANY windshield washer pumps are being returned to the factory with the complaint that the pumps are inoperative because the pump plunger is binding and stuck in the "open" position. However, in all of the cases so reported, the plunger was found to be in the normal "stop" position.

This indicates that some other condition existed, that was probably corrected during the assembly and disassembly of the unit. But, most important, it reveals the necessity for a more thorough understanding of the mechanical operation of this unit so that a more accurate diagnosis can be performed.

A careful study of the Mechanical Operation on Page 12-46 of the 1961 Cadillac Shop Manual will help acquaint Servicemen with the operation of the washer unit on 1959-61 cars. In addition, the more common washer problems are outlined in the Diagnosis Chart on Page 12-54.

The following are several inspec-

tions that can be performed to check your diagnosis of an inoperative windshield washer pump.

1. Check to see if any foreign material could be plugging the outlet valves. If this is the case, the pump plunger will remain in the idle or primed position and not discharge. A new valve, Part No. 4906230, can be ordered from the factory Parts Warehouse if this is the case.

2. Check to see if the electrical connector is plugged into the washer assembly prongs. Both prongs must make complete contact with the connector in order for the unit to function. It is possible to plug the connector into the washer assembly and bend one of the prongs, making a bad contact.

The windshield washer pump electrical connections can be checked by connecting a "hot" jumper to one of the prongs at the pump, turning the wiper motor on, and then grounding the other prong momentarily. This will by-pass the washer pump regular electrical circuit and help determine if these circuits are functioning normally.



## MR. R. M. PHILLIPS ANNOUNCES SERVICE FIELD STAFF CHANGES

MR. R. M. PHILLIPS has recently announced the following changes in the Service Field Staff:

Mr. C. C. Wagner, former District Parts and Service Manager of the Detroit District has been appointed to the Pittsburgh Zone as Zone Service Manager, replacing Mr. D. G. Adams who was transferred to the Sales Division.

Mr. R. L. Barter, former Brougham Specialist, has been assigned to the Detroit District as District Parts and Service Manager, replacing Mr. Wagner.

Mr. E. L. Hoffman, former Instructor at the Portland Training Center, has been appointed District Parts and Service Manager for the Portland District, replacing Mr. R. S. Elder.

Mr. H. R. Nesbit, former Instructor at the Cleveland Training Center, has been appointed Service Representative for the Pittsburgh Zone.

Mr. D. K. Miller, who has had extensive experience on the Cadillac retail level, has been assigned as Instructor for the Pittsburgh Zone, and will conduct classes in both the Pittsburgh and the Cleveland Training Centers.



Mr. E. W. Fairweather, former Service Manager of the Brooklyn Sub-Branch has been assigned as Service Representative for the New York Branch, replacing Mr. E. Demarest who has retired.

Mr. R. S. James, who has been associated with automotive retail service

here, as well as overseas, has been appointed Claims Administrator.

Mr. D. F. Van Harlingen, who has been associated with automotive retail service and also has overseas field experience, has been appointed Claims Administrator.

## NEW PINION BEARING OIL SEALS HAVE LONGER LIFE

A NEW improved Pinion Bearing Oil Seal, Part No. 1474609, has been released for Service for all 1941 through 1958 cars, with the exception of 1957 cars with carrier casting No. 1473782 and 1958 cars with carrier casting No. 1473735.

The new seal has a much longer service life and improved sealing qualities. This information was included in the October issue of the Master Parts List Revision along with other model listings and applications.

Each P.I.R. emblem that appears in the "Serviceman" is evidence of the positive effects of Product Information Reporting. Servicemen should take personal credit for these articles.

## VENT CABLE MISADJUSTMENT CAUSES LEAKAGE



IN instances where an early 1961 Cadillac owner complains of cold air on the front passenger's feet, it can usually be attributed to the misadjustment of the right hand fresh air vent bowden cable. If the cable is not adjusted properly, the air outlet door may not close, even though the control lever is moved to the extreme left.

To adjust the cable correctly, proceed as follows:

1. Remove two screws securing upper and lower end of air inlet grille.
2. Slide kick pad forward to disengage rear edge of kick pad from retainer and remove kick pad.
3. Loosen bowden cable clamp retaining screw at air outlet door

and set control lever to the extreme left (closed position). The lever should not butt against casting but should be set with a clearance of approximately  $\frac{1}{8}$ ".

4. With door in fully closed position, and control lever to the left, tighten cable clamp retaining screw, then open and close valve several times to make sure door closes completely.
5. To install, position rear edge of kick pad to retainer.

6. Install screws securing upper and lower end of air inlet grille.

This procedure also applies to the left hand air vent bowden cable.

This condition does not occur on cars equipped with Air Conditioning, as they do not have a fresh air ventilator door assembly.

## 6-WAY SEAT ELECTRICAL HARNESS & CONTROL CABLE ROUTING

ON 1961 cars equipped with six-way seats a small "S" type wire retainer is positioned around the front yellow control cable 3 inches from the transmission, and hooked in the seat frame near the front edge of the motor, to route the control cable away from the rubber coupling on the motor drive cable, see "A"—Fig. 3.

When servicing 1961 cars equipped with six-way seats, be sure this clip is installed to avoid excessive whipping and chafing between the front yellow control cable and the motor drive cable rubber coupling.

An "S" type retainer can easily be fabricated as shown in "B"—Fig. 3 from a short piece of coat hanger or #10 wire, and effectively positioned around the cable and into the hole in the seat frame as shown in "A" Fig. 3.

It is also advisable to check this cable routing whenever inspecting or servicing a late 1960 car equipped with the single motor six-way seat, and install this "S" retainer if necessary.

### 6-Way Seat Wiring

Some last minute changes before the start of 1961 production were made in the routing of the six-way seat wire harness. Part "C" of Fig. 3 illustrates the latest harness routing, which has been in effect since the start of production. This routing will supersede the one illustrated on Page 15-48 in the 1961 Shop Manual. Please mark this Shop Manual illustration with a reference to "November 1960 Serviceman."

### UPPER SUSPENSION ARM TO SHAFT BOLT TORQUE CHANGE

THE torque specification for the upper front suspension arm to shaft attaching bolts has been changed to 55 foot-pounds for all 1961 cars after Engine No. 002173. On cars before this Engine Number, these bolts should be torqued to 45 foot-pounds, due to the difference in bolt characteristics.

The checking of these important torque specifications should be a part of your Pre-Delivery Conditioning operation. The changes should also be noted on Pages 4-39 of your Shop Manuals, as inaccurate torquing of these bolts will result in premature wear of the bushings and create suspension noise.

Make sure service replacement bolts are of the late type, 1 1/4" in length. They should be torqued to 55 foot-pounds.

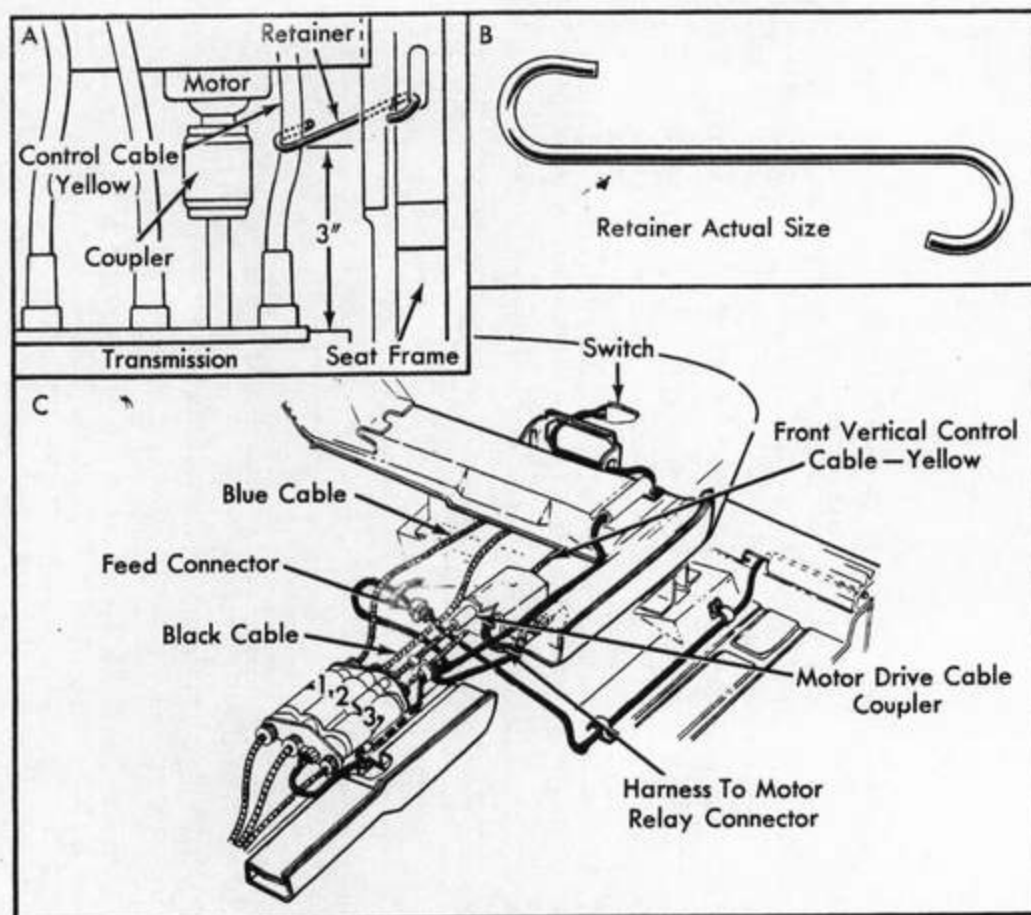


Fig. 3

### SOME ANTENNA LEAD TIPS SHORT OUT INSIDE RADIO

IF the antenna lead is inserted too far into the radio receptacle on some early 1961 cars, the tip of the lead pin may short out against a screw inside the radio that holds the circuit board.

When an early 1961 production car is encountered with a radio that is dead or one that operates intermittently, check for this condition first, by pulling the antenna lead out approximately 1/4", before removing the radio.

If the condition can be corrected by pulling the antenna lead out in this manner, remove the antenna lead from the radio and place a piece of 1/4" rubber hose approximately 1/8" long over the lead pin, Fig. 4; then plug it back into the radio. Hose from the Heater or Air Conditioning vacuum controls can be used.

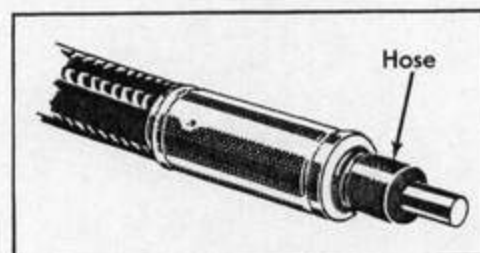


Fig. 4

### UNDERCOATING CAN AFFECT RADIO ANTENNA WARRANTY

MALFUNCTION and corrosion of antenna motor and drive mechanisms will occur if moisture is permitted to accumulate in the assembly. 1959-'60 and '61 units have holes provided at the bottom of the motor and drive housing to permit moisture to drain out.

Special care should be taken when applying undercoating materials to a vehicle to be certain that those drain holes are not obstructed.

Credit for antenna motor and drive assemblies, replaced under the warranty and returned to the factory for inspection, that show evidence of failure resulting from obstruction of the drain holes by undercoating, will not be allowed.

In addition, Servicemen are reminded not to disassemble any antenna motor assembly which has become inoperative. No parts are available to service the internal parts of this unit and any disassembly of this unit automatically voids the warranty.



## FIXED ANCHORS CHANGE BRAKE SHOE ADJUSTMENT

WITH the change to the stationary (fixed) brake anchors at all four wheels in 1961, the only remaining manual brake shoe adjustment is a preliminary star wheel adjustment, which is necessary before driving out of the work stall. The final or actual adjustment of the star wheel is then made automatically by the adjusters by backing up and stopping the car.

It was found that this adjustment can now be made much easier on 1961 cars by simply rotating the star wheel to expand the shoes against the drum until the drum can just be rotated forward with a two-foot bar placed between the studs. Then sighting in the adjuster hole in the drum, disengage the adjuster pawl from the star wheel with a hooked tool, and back off the star wheel 40 notches with a common screwdriver.

A pencil flashlight beamed in the adjuster hole in the drum, held in conjunction with the hook used to hold the pawl, will aid Servicemen in counting the notches.

After a few attempts at the new adjustment, a Serviceman can readily develop a technique where he can accurately pick up two notches with each downward stroke of the screwdriver.

After this preliminary adjustment, the car can be safely backed up and stopped several times to complete the adjustment with the automatic adjusters.

It should be emphasized that *all 40 notches* are required to enable the automatic adjusters to take over. No "custom adjustments" should be made in an attempt to obtain a high pedal by this method. The current notches on star wheels are  $2\frac{1}{2}$  times smaller than the coarser notches on older models, and the 40-notch adjustment would be the approximate equivalent of a 16-notch adjustment on 1959 and earlier model cars.

This new procedure will eliminate the use of a .020" feeler gage in the adjustment, and eliminate using the gage slots in the drums. The slots in the drums will be discontinued in production after approximate Engine No. 006425 except on series 75 cars which went into effect at Engine No. 015254.

## POSITIVE CRANKCASE VENT REQUIRES REGULAR SERVICING

THE Positive Crankcase Ventilator Unit installed on some late 1960 model cars, as well as on 1961 cars being shipped to California, should be serviced periodically to insure continued efficient functioning of the unit.

At every Oil Filter Change, the ventilator valve should be removed and cleaned by soaking it in a carburetor type cleaning solvent. The valve should not be disassembled during this cleaning operation, but merely submerged in the solvent, and the shank end of a  $\frac{3}{32}$ " drill (or .080"-.090" Wire) inserted in the threaded end of the valve to clean the orifice inside the valve. After cleaning, an air hose should be placed against the hose nipple end of the valve, and the valve blown out with air.

In extreme cases of valve clogging, it may be necessary to disassemble the valve to clean it effectively, but only in these cases should the valve be disassembled. If disassembly is necessary, follow the procedure as outlined on Page 9-30 of the 1961 Shop Manual, exercising extreme care not to distort the spring.

In addition, the cleaning of the oil breather cap is even more important on cars equipped with the Positive Crankcase Ventilator. The breather cap must be cleaned at the recommended intervals.

All Servicemen should be familiar with this service procedure, as cars equipped with these units will find their way into all parts of the country.

## SPACER & WASHER ADDED TO HYDRA-MATIC

WHEN overhauling the shift valve body from a 1961 or late 1960 Hydra-Matic transmission, an additional spacer will be noted which is not pictured in the Shop Manual. This spacer fits on the end of the 2-3 shift valve with the rim of the spacer against the large land on the valve, as shown in Fig. 5.

A steel backing washer has also been added between the rear clutch hub and rear unit clutch cover to reduce galling of the bronze thrust washer and reduce wear on the clutch cover. The bronze

thrust washer is positioned next to the rear clutch hub and the steel backing washer is positioned between the bronze washer and the rear unit clutch cover with the flange on the backing washer toward the clutch cover.

Both washers are used on all 1961 and some late 1960 Hydra-Matic transmissions. The washers are included in one service package, Part No. 8619969, and will replace and be completely interchangeable with the single-type bronze washer, and are applicable to all 1956-1961 transmissions.

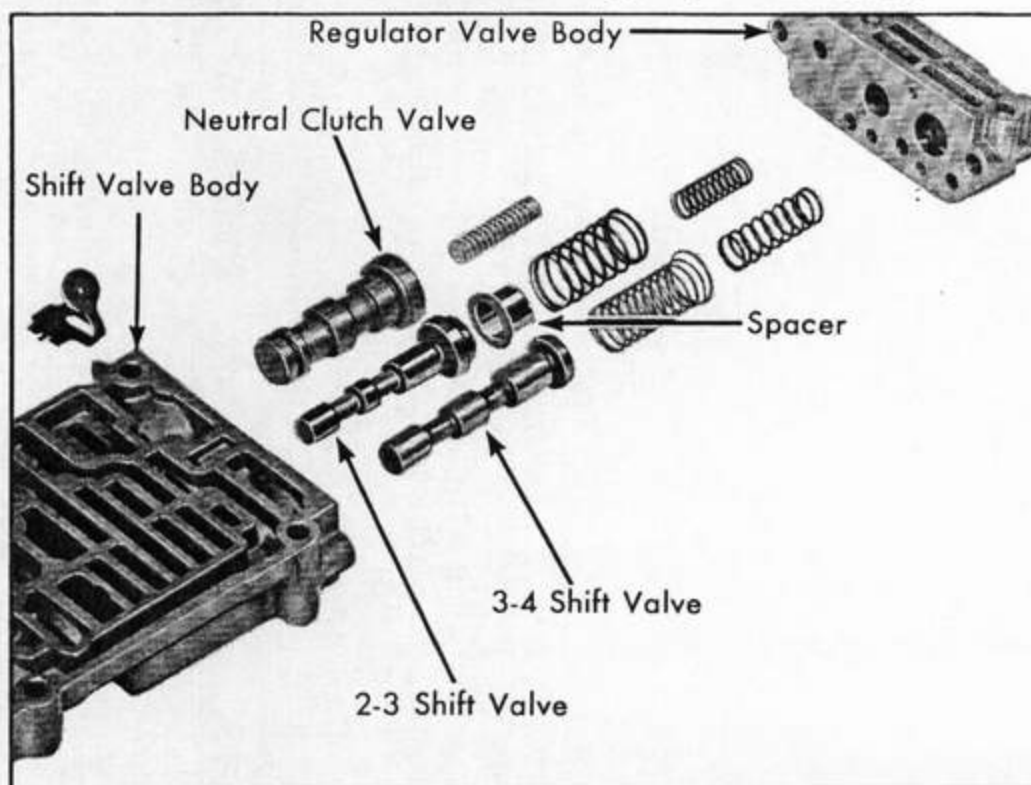


Fig. 5

## INSTALL STRAP TO REPOSITION CRUISE CONTROL CABLES



ON early 1961 cars equipped with Cruise Control, a metal strap was used to hold the two drive cables together to provide a uniform routing between the right fender dust shield and the engine.

However, it was found that some cables tend to reposition themselves, especially when strapped together, causing an interference and chafing action at the steering gear flexible coupling.

In order to eliminate any possibility of interference on 1961 cars equipped with Cruise Control, Servicemen should install a plastic type strap, Part No. 1476457, around the two cables and anchor the strap to the right dust shield, approximately 1" above the bottom flange of the shield, where it passes over the frame side bar directly across from the flexible coupling.

The plastic anchor strap, similar to

the ones used to route and position electrical cables, can be easily installed by drilling a  $\frac{1}{4}$ " hole at the specified location, as shown from inside the front wheel shield in Fig. 6. Mark the location from the underhood side, and drill from the under fender side. Then press the strap anchor peg into the hole, route the cables carefully in this area, and lock them in position with the strap.

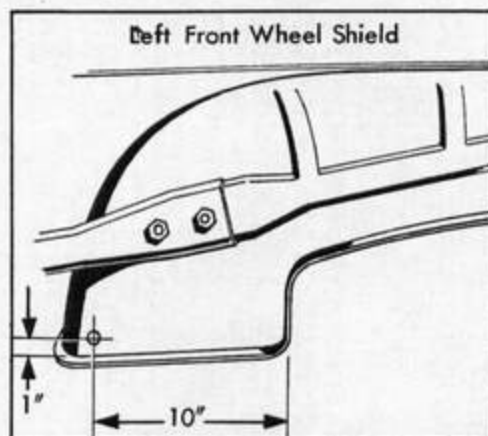


Fig. 6



THE many friends of Mr. R. W. Parsell, District Parts and Service Manager of the Central

Jersey District, will be saddened to learn that Mr. Parsell passed away suddenly on October 17.

Mr. Parsell had been with the Cadillac organization for 35 years. He spent the first ten of these years with the Factory Branch in Chicago, Illinois, holding such positions as shop serviceman, shop inspector, service tester, and salesman.

Mr. Parsell was then appointed to the Factory Service Field Force, and spent much of his time in the North-East as a Service and Parts Representative, and most recently in the New York and New Jersey areas.

## CREAKING NOISE IN FRONT END CAUSED BY TIE STRUT SPACER

THERE have been some reports that the front tie strut spacers are cutting and collapsing into the inner diameter of the retaining washers on the tie-strut where it bolts to the frame front cross member.

This condition can generally be distinguished by a creaking noise in the front suspension, not attributable to ball joints or upper bushings, but caused by the contact between the spacers and the frame. In addition, wheel "thump" resulting from excessive fore-and-aft movement of the front wheel when stopping was also

experienced because of the empty cavity left in the front rubber bushing when the central hub of the rear bushing no longer protrudes through the frame. The front sheet metal has a tendency to "tremble" on bumpy roads due to grounding at the tie-strut bushings in cases where the bushing has collapsed.

When any of the above symptoms are noticed, the rubber bushings assemblies on the tie strut should be removed so that the spacers and retaining washers can be examined for damage and replaced if necessary.

Also make sure the machine thread used on the tie strut on early cars is not excessively rough causing the rear stover nut to lose its self-locking effect.

New stover nuts should always be installed whenever the tie-strut is disassembled at this point. If the new stover nut is thread onto the tie-strut and loses its self-locking qualities on rough threads, it should be replaced with another nut. Threading the first new nut on the tie-strut should clean the threads sufficiently so the end nut can be properly set and torqued.

In addition, torque the  $\frac{3}{4}$  - 16 stover nuts that preload the tie-strut rubber bushing retaining washer to 30-40 foot-pounds instead of the 55-70 foot-pounds previously recommended. This torque change, in addition to a closer inspection of the tie-strut threads, was instituted in production at Engine Number 010483.

Please change your Shop Manual accordingly.

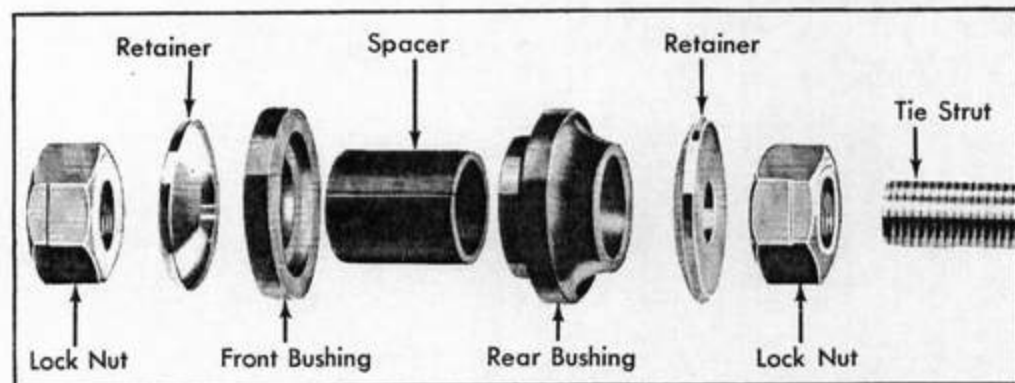


Fig. 7





### Transmission Service

With the industry-wide improvements in Hydra-Matic fluids, time is no longer a factor in the recommendations for Hydra-Matic fluid change. Recommendation for changing transmission fluid should be based entirely on the *mileage* intervals as covered in the Shop Manual.

### 1961 Paint Availability

All suppliers of 1961 Cadillac acrylic lacquer refinish materials presently have a stock of the new colors in their regional warehouses. Local jobbers or suppliers should be encouraged to contact the manufacturer's regional warehouses if the paint is not in stock locally.

### Heater Core Removal

When removing the heater core on 1961 cars, it will be necessary first to remove the inlet duct assembly in order to gain access to the two spring speed nuts on the center mounting studs. These nuts are used to hold the housing in position during assembly. On cars equipped with Air Conditioning, it is possible to get at the two nuts by removing the blower housing. Please make note of this procedure change in your 1961 Shop Manuals.

### Torque Specifications

The torque specifications listed in the 1961 Cadillac Shop Manual for the front backing plate to knuckle bolts have been revised. The torque for the front backing plate to knuckle bolts ( $\frac{1}{2}$ " - 20) is 60-75 foot-pounds, and the front brake anchor to knuckle bolt ( $\frac{9}{16}$ " - 18) is 95-110 foot-pounds.

### Guide-Matic Diagnosis

Some 1961 Guide-Matic units may become inoperative due to a poorly grounded amplifier.

A more adequate ground can be obtained by removing one of the mounting screws and its rubber grommet. Replace the rubber grommet with a lock washer, and reinstall the screw.

The mounting screws are accessible through the opening in the left front door hinge pillar.

### Shop Manual Correction

On Page 4-12 of the 1961 Shop Manual, illustrations, Fig. 4-16 and 4-17 are reversed. Please make note of the reversal in your Shop Manuals.



### Diode Installation

The diodes used in the 1959-60 Brougham rear quarter window system can be installed in a reverse direction. Because of this possibility, a wiring diagram should always be used whenever diodes are installed, to be certain they are installed correctly. The symbols stamped on the installed diode should correlate with the symbols on the wiring diagram.

### Battery State of Charge

Some cases of erratic operation of the 1959-60 Brougham rear quarter window system have been found to be due to a battery that is below the specified minimum charge. This system is more sensitive to battery condition than are some other units on the car. It should be remembered that some kinds of shop work can rapidly discharge the car's battery.

### NOVEMBER SERVICE POSTER



### Interior Glass Cleaning

If an oily film is encountered on the inside of the windshield or body glass—one that tends to resist ordinary cleaning methods—it can usually be removed with ease by washing the glass with vinegar. Then, after the oily film is dissolved, wipe the glass carefully with a clean rag to remove all the residue.

### Puller J-8990

When assembling Front Suspension and Steering Linkage Puller J-8990, be sure that the legs of the puller extend below the angled side of the cross bar as shown in Fig. 4-60 in the 1961 Shop Manual.

### 1961 Undercoating

When undercoating 1961 cars, the hex head screws under the front fenders that hold the front turn signal lamp caps should be masked to avoid undercoating the screw, providing for easier bulb replacement.

### Transmission Servicing

When assembling the Servo Accumulator Assembly on 1960 and 1961 cars, the accumulator piston is properly seated in the accumulator body when the top of piston stem is below the face of the accumulator body. The relation of the top of the piston to the face of the accumulator body does not indicate seating of the stem.

### Shock Absorbers

If any cases of "rear wheel hop" or "front seat shake" are encountered on 1961 cars before Engine No. 000200, the code number on the outside of the shock absorbers should be checked first.

The shock absorbers should be marked 8-A or B-60. If not, they should be removed and correct units installed.

### Carburetor Servicing

Whenever a customer complains of carburetion troubles, and his car is equipped with a Positive Crankcase Ventilator Unit, it is advisable first to check the operation of this unit before servicing the carburetor.

## EXHAUST PIPE MAY GROUND ON PARKING BRAKE BELL CRANK

A "BUZZING" noise during heavy acceleration, may be experienced by Servicemen on a few 1961 cars. The noise, which seems to originate in the parking brake assembly, is caused by the exhaust pipe being raised at high engine torque, and grounding lightly against the parking brake bell crank.

This noise should not be confused with the parking brake vacuum unit noise explained on Page 60 of this issue.

This condition is rather hard to diagnose, as the interference cannot be seen when the car is idling or at rest. When it occurs, a vibration can be felt with the fingertips at the parking brake pedal assembly.

There are several possible causes of this condition—the engine may be slightly mispositioned, with the high point at the left engine mount, the exhaust pipe may have a slight deviation in contour causing it to hang slightly high at the bell crank area, or the parking brake pedal to bell crank cable may be too long.

Approximately  $\frac{1}{2}$ " to  $\frac{3}{4}$ " of clearance is needed between the bottom edge of the bell crank and the top of the exhaust pipe. When interference occurs, only an additional  $\frac{1}{8}$ " to  $\frac{1}{4}$ " more than the existing clearance is usually necessary.

When this grounding condition is encountered, sufficient clearance can usually be obtained by flattening the exhaust pipe directly below the bell crank. This can be done quickly and neatly by fabricating a simple tool from a discarded engine connecting rod, two  $\frac{3}{8}$ "x4" bolts and nuts, and a  $\frac{3}{4}$ " or 1" square piece of bar stock, as shown in Fig. 8. The tool can then be clamped around the pipe, positioning the flat bar directly below the bell crank, and tightening the nuts. The pipe should not be flattened more than  $\frac{1}{4}$ ".

If sufficient clearance cannot be obtained by this method, check the position of the engine. Additional clearance can often be gained by repositioning the engine to raise the right front mount and lower the left front mount.

If the interference persists after flattening the exhaust pipe and shifting the engine on a series 60 or 62 car, remove the bell crank to parking brake

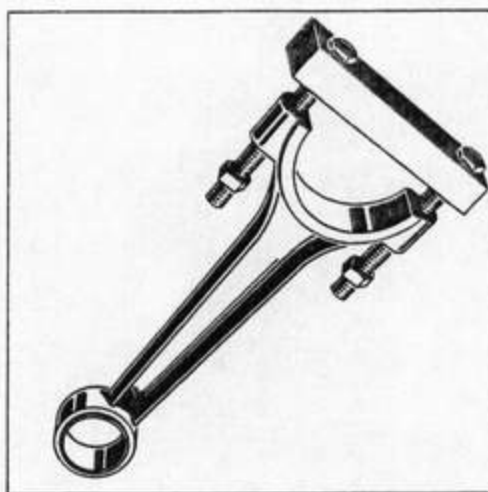


Fig. 8

(front) cable assembly and measure the distance shown in Fig. 9. This cable, Part No. 1475685, should not measure over  $14\frac{1}{8}$ " long. If the cable assembly is over this length, replace the cable.

When the interference remains on series 75 or Commercial cars after performing the above operations, remove and measure the bell crank to parking brake (front) cable assembly as above. If the cable is  $15\frac{3}{4}$ " long, it is an early production unit, Part No. 1472147, and it can be replaced with a  $\frac{3}{8}$ " shorter cable, which is presently used in production on this style car, Part No. 1477399. The longer cable, Part No. 1472147, is still applicable for 1959 and 1960 cars.

### Intermediate Cable Engagement

In addition, from approximate Engine Nos. 010963 to 023100, a flexible type exhaust pipe covering was used on cars in production. The bell crank to parking brake cable on these cars will be  $\frac{3}{4}$ " shorter than the lengths specified above.

With the use of these shorter cables in connection with the flexible covering, there is a possibility that the bell crank to relay lever (intermediate) cable may be too short on some cars to obtain sufficient thread engagement where the cable threads into the clevis

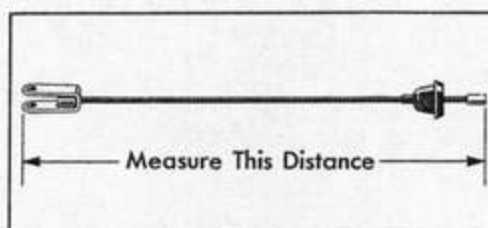


Fig. 9

at the bell crank. During pre-delivery conditioning, on cars between Engine No. 010963 and 014241, the clevis pin should be pulled from the clevis at the bell crank and the clevis removed from the threaded end of the cable. The length of thread that extended into the clevis should then be measured, and adjusted if necessary, according to the following procedure:

1. Check the parking brake system to be sure it is correctly adjusted as outlined on Page 8-9, Note 2 of 1961 Shop Manual.
2. Remove clevis pin from bell crank.
3. Loosen the lock nut at the clevis, but leave it snug against the clevis.
4. Remove clevis from front of intermediate cable and measure distance from the nut to the end of the thread. This distance should be at least  $\frac{3}{8}$ ".
5. If this threaded portion is  $\frac{3}{8}$ " in length, reinstall the clevis; if not, proceed to step 6.
6. When sufficient threads do not extend into the clevis, determine the additional threaded length necessary to obtain the  $\frac{3}{8}$ " measurement (for example, if the distance was  $\frac{1}{4}$ ", an additional  $\frac{1}{8}$ " would be necessary).
7. Then, turn back the clevis lock nut the needed distance, and install the clevis onto the cable, tightening the lock nut (using the example in step 6, you would thread the locknut  $\frac{1}{8}$ " further onto the cable).
8. To compensate for this shortening of the cable, back off the nut on the equalizer rod the same distance you moved the clevis locknut (to complete the above, you would back the nut off  $\frac{1}{8}$ ").
9. Install clevis on bell crank.
10. To facilitate subsequent adjustment on the parking brake on altered cars between Engine No. 010963 and 014241, when using the special adjustment gage made up according to Fig. 8-9 in the 1961 Shop Manual, position the  $15\frac{1}{16}$ " end of the gage behind the relay lever in its released position, and scribe a line on the frame at the rear edge of the gage, to be used as the new reference point instead of the rear end of the slot.



## RADIO AUXILIARY FOOT CONTROL INSTALLATION

The radio auxiliary foot control assembly cannot be installed on early 1961 Cadillac cars by following the procedure outlined for past models.

The variations in radio-to-cowl clearances make it necessary to remove the radio on early cars, in order to insert the radio foot control switch plug into the radio receptacle presently located at the top right-hand corner in the rear of the radio case.

This plug receptacle will be repositioned nearer the bottom of the radio case on 1961 cars in production sometime during the early part of November. This will facilitate the installation of the unit without removing the radio.

When installing radio foot control assemblies, carefully adhere to the new instructions found in the kit. The instructions will cover information as it applies to cars with the receptacle in either location.

## CONFORM FOG LAMP AIMING TO STATE REQUIREMENTS

SERVICEMEN are reminded of the importance of checking headlamp and fog lamp aim on all new cars, as recommended in Item 10 of the 1961 Cadillac New Car Pre-Delivery Conditioning Schedule.

While headlamp aim suitable in most States is set at the factory, and this needs only to be checked to assure that the aim did not shift during shipment of the car, fog lamps are not aimed at the factory, due to variations in different State laws.

Fog lamps must be aimed during New Car Conditioning, to comply with the individual State requirements.

A suggested aiming screen and procedure are included in the 1961 Shop Manual, on page 14-50. After determining the applicable specifications from local authorities, it is suggested that Fig. 14-43 be marked in your copies to show the correct dimensions.

Where permissible by state law, the lighting can be improved over the specifications by raising the beam to a position parallel with the road or where the center of the fog light beam is at the horizontal center of the lamps on your aiming screen.

## USE CARE WHEN CHARGING AIR CONDITIONERS

SOME Servicemen have been charging Air Conditioner systems improperly, not being aware of the damage to the Freon compressor that could result. The following will guide you and help to clear up any confusion on this point.

The foremost precaution in charging the Air Conditioner system is that under no circumstances must Freon reach the compressor in a liquid state. Even at idle speed, flow restrictions would create a destructive hydrostatic lock condition if this occurred.

There are three methods commonly used in charging the Air Conditioner system: The heated drum method, the charging station method, and the inverted drum method. The heated drum method is completely safe. With the Freon drum upright, there is no chance of getting liquid Freon in the compressor.

The second method, charging with the charging station, is also safe because although Freon leaves the charging station in a liquid form, it will not arrive at the compressor as a liquid, because of the length of the lines from the charging station to the compressor, and the position of the charging drum in relation to the compressor.

With the charging drum below the compressor, Freon vaporizing in the hose will be forced upward, ahead of the Freon liquid state, and liquid will

tend to stay down near the charging drum, because of gravity.

The size and length of the hoses are extremely important. The longer the hose, the more heat that will be absorbed by the liquid Freon. The smaller the hose diameter, the faster the Freon will vaporize, due to the smaller amount of Freon at any given point.

Charging of the Air Conditioner system by having a Serviceman stand on scales holding an inverted drum of Freon is absolutely *not* recommended. The use of short hoses in this case will not allow liquid Freon to vaporize fast enough to prevent some of it reaching the compressor in a liquid state. Charging with the liquid container higher than the compressor will cause liquid Freon to run down the hose from the drum to the compressor, while the vaporized Freon stays behind.

It is recognized that a skilled technician may succeed in using this hazardous method without causing immediate trouble; however, use of this method often causes hidden compressor damage, with delayed symptoms of failure.

Returned compressors will be checked for bent or broken connecting rods, or other internal damage that might be caused by liquid charging. Such failures cannot be considered factory responsibility.

## STRIKER IS CAUSE OF GLOVE BOX FALLING OPEN



IF an owner of an early 1961 Cadillac, prior to Engine Number 004463, complains of the glove box door falling open, an effort should be made to correct this condition by adjustment of the striker.

In cases where adjustment fails to correct this condition, a more durable striker, Part Number 1477268, and attaching screw, Part Number 9417414, should be installed.

An adjustment shim, Part No. 1477267, is also supplied and available from the Factory Parts Warehouse, along with the striker and attaching screw, to be used if necessary to make closer contact between the glove box door attaching latch and striker.

To eliminate the possibility of glove box doors falling open on future cars, this change was incorporated in production beginning with Engine Number 004463. The two strikers, late type and early type, are shown in Fig. 10.

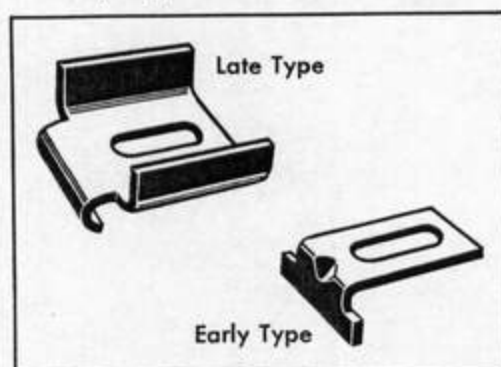


Fig. 10



## Club MEETINGS

### Burbank, California —

The Southern California Parts and Service Manager Club held their monthly meeting at the Burbank Training Center. 78 in attendance.

### Garland, Texas —

The Cadillac Parts and Service Manager's Club of Texas recently held a meeting at which the following new officers were elected:

Mr. B. Rommel of Waco, Texas—President

Mr. H. Lewellen of Fort Worth, Texas—Vice-President

Mr. B. Klein of Dallas, Texas—Secretary-Treasurer.

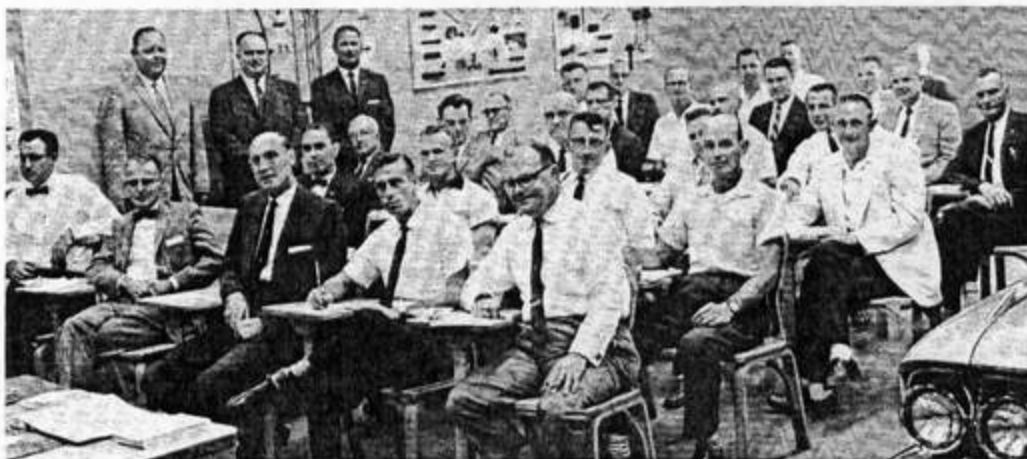
### Hinsdale, Illinois —

Members of the Chicago Dealers Service Manager's Club held their monthly meeting at the General Motors Training Center in Hinsdale, Illinois—41 in attendance.

### Lisle, Illinois—

The Chicago Cadillac Service Managers Club held their annual Golf Outing at the Woodridge Golf Club in Lisle, Illinois. 49 in attendance.

### Atlanta, Georgia—



Members from Distributors and Direct Dealers in the Atlanta District are shown above attending the 1961 Product session recently held at the Atlanta Training Center. The meeting was conducted by Mr. T. W. Allen, District Parts and Service Manager of the Atlantic District and Mr. N. S. Kell, the District's Cadillac Instructor. Mr. H. C. Hey, Cadillac Assistant General Service Manager also participated in the meeting.

### Moorestown, New Jersey—

The Delaware Valley Parts and Service Manager Club held their fall meeting at the General Motors Training Center in Moorestown, New Jersey. A guest speaker, Mr. J. Shaw, of Perfect Circle, discussed Cruise Control, and an open discussion was also held on the Cadillac product, with Fisher Body and Cadillac Instructors available to answer questions. 39 members in attendance.

### Tarrytown, New York —

Two one-day Merchandising meetings were held at the Tarrytown Training Center for Parts and Service Managers of Distributors and Dealers in the New York Zone area. Special presentations were made by Mr. C. Chynoweth, New York Zone Manager, Mr. P. van Buuren, New York Branch General Service Manager, Mr. E. G. Hefke, New York Parts Warehouse Manager, and Mr. J. A. Dunn, Cadillac General Parts and Accessories Manager. Eighty-five dealerships were represented.

### Tarrytown, New York —

The New York Zone Cadillac Service Managers held a special meeting at the General Motors Training Center in Tarrytown, New York—58 in attendance.

## SERVICEMAN RETIRES AFTER 29 YEARS ACTIVE SERVICE



E. DEMAREST

MR. E. "EDDIE" DEMAREST, Wholesale Parts and Service Representative for the New York Branch, has retired after 29 years of active service with Cadillac.

Mr. Demarest first became connected with Cadillac in 1922, working for a distributor in New York. In 1931, he was employed by the New York Factory Branch and held the positions of electrical specialist and service tester before receiving his assignment as New York Branch Wholesale Parts Service Representative.

The many friends Mr. Demarest has made through the years in the field, as well as at the factory, all wish him happiness and good times in the years ahead.



### Akron, Ohio —

Mr. James Grant, Service Director at Dave Towell, Inc. of Akron, Ohio, has actively participated in Career Day Programs held at three high schools in the Summit County area in Ohio. He recently lectured, and personally counseled with an estimated 300 students.

### Gowanda, New York —

Mr. P. Gabel, Service Manager from Gowanda, New York and Mr. D. F. Young, Cadillac District Parts and Service Manager from the Buffalo District recently assisted in the Career Day Program held at the Gowanda Central School in New York.

### Hackensack, New Jersey —

Mr. George Tlumac, Service Manager at W. H. Peters, Inc. of Hackensack, New Jersey, has recently participated in special Career Day Programs at the Bogota High School in Hackensack, New Jersey. Working with the Guidance Counselors of many local high schools, Mr. Tlumac has been able to maintain a steady supply of men and women to keep his Service Department properly staffed.