VOL. 7 NO. 3 FEB. 1, 1933

Spring Selling

IT isn't too early to make sure of your Spring selling plans. More Selling Aids will be required this year than ever before. After all, merchandising is simply attracting attention. You must do this through direct mail and then, you must ask them to buy. You know what you have to sell in the way of Spring Specials—your customers do not. You know just how important a Spring tune-up is and how important conditioning the cooling system is for warm weather driving. Don't assume that your customers know these things. It is your job to tell them, and to do this, you need a mailing piece that will be read.

You may have both the time and the ability to develop your own piece and your records and experience may indicate what brings best results in your territory. On the other hand, if you haven't the time to do this, we urge you to accept the mailing pieces developed by the factory and made your own by the addition of your firm name and address and your own prices. We are sending out a sample of three pieces for your consideration. First is the "Spring" piece, second is one on "Lubrication" and the third is one on "Brake Work." Order blanks will be supplied and in ordering you will give us the correct imprint and the prices which you wish to use in your locality. It is not too often to mail out pieces at sixty-day intervals. You may order all three and specify the date you wish them mailed to you from the factory.

An optional plan will enable you to obtain the art work and style of the factory piece and develop your own text. Under this plan you may purchase the mailing piece completely printed on the front side and printed on the inside simply across the top and across the bottom. In this case the factory text will be completely left out and you may have any text you wish printed in. If you wish to do this, send us your text and we will quote you a price before going ahead. Be sure and state quantity.

The factory service mailing pieces printed complete with text, your firm name and your prices are three cents each. These may be mailed at the 1½c rate, or there is a special rate for "bulk" mailing. We suggest that you see your local postmaster about this.

Do not put off ordering your Spring piece and so that you may give your attention to other important work, we suggest that you get this mailing program off your mind by sending in your orders promptly. You will find order blanks and samples of each piece with General Letter No. 507.

"EVERY OWNER A SALESMAN"

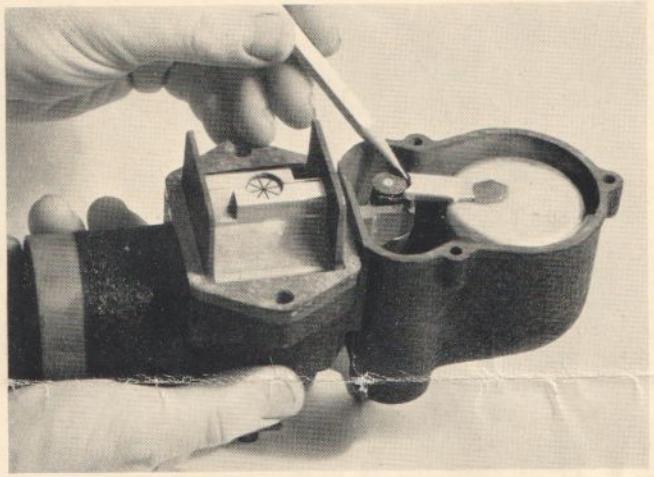
Tenth Series Service Film

The Service Film which introduces the new line of cars will be found of value for use in either Sales or Service Meetings. The film is treated from a service angle and shows many cutaway views and mechanical details. Additional films will be supplied on the detail construction and servicing of separate units.

An illustrated printed lecture is supplied with each film which will give those holding the meeting the correct information on the new cars as each detail is illustrated on the screen.

The Engineering Specifications, as supplied with this issue of the SERVICE LETTER, will supply the answers to many questions which will very likely be asked in the meeting. The film and lecture are $3.00.

Carburetor Needle Valve Operation



The illustration shows the needle valve operating mechanism of the Detroit Lubricator carburetor.

In some cases insufficient clearance was provided between the collar at the top of the needle valve, and the stamped arm which fastens to the float, with the result that the arm stuck againt the collar and provided the free movement of the valve. This might cause the motor to flood or run out of gasoline, depending upon the position at which the needle valve stuck.

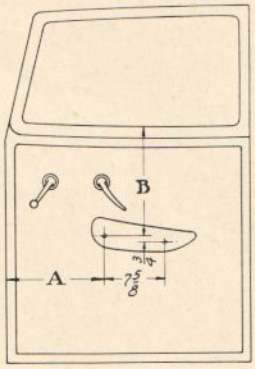
The remedy is to provide clearance between the arm and the collar at the point indicated.

Front Seat Arm Rests

Front seat arm rests are standard equipment on Twin Six bodies, and may be obtained through our Accessory Division for installation on the rest of the line. Order under PA2495 (a pair). Always specify body type and upholstery number.

The illustration shows the method of locating the arm rest for the various body types. The dimensions may vary according to the preferences of the individual customer.

The doors on the 1001 bodies have steel faced lock boards, so that the attachment is made with Parker Kalon screws, while the lock boards in the remainder of the line are of wood, and the attachment is made with conventional wood screws.



BODY MODELS	A	B
608	10 3/8 TO 12 3/8	13 1/4 TO 14 1/4
602 - 603	11 TO 13	13 5/8 TO 14 5/8
637·657·658·618 653·673·654·655 656·613·614·615 616·617·633·634 638·635·636	11 TO 13	11 3/4 TO 12 3/4

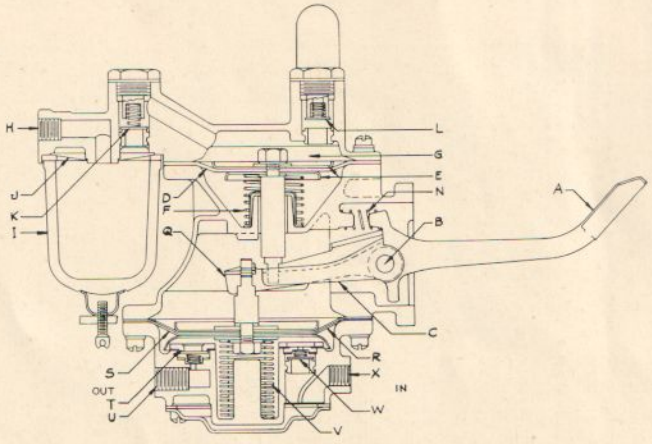
In making the installation on the metal lock board, two No. 29 (.136) holes are drilled, and Parker Kalon screws—piece No. 211205 are used, leaving the heads projecting $\frac{3}{16}$". For all other bodies use wood screws—piece No. 4932.

Place the arm rest in position with the screw heads projecting through the holes in the lock plates attached to the back of the arm rest and slide down into position. The lock plates have key hole shaped slots for this purpose.

When the arm rest is in position it is secured by the small hold-down strap on the under side of the rest. In attaching to the metal board, drill a No. 42 (.0935) hole and secure with Parker Kalon screw piece No. 211206. In attaching the strap to the wooden board, wood screw No. 4995 N. P. is used.

Vacuum Pump, Tenth Series

A description of the operation of the vacuum pump is given. In view of the fact that special fixtures are required for servicing the vacuum section, no instructions for this work will be required as it is intended that these units be serviced by the United Motor Service branches and AC service stations. It is not always advisable to send a customer to outside service stations for work on these accessory items. The best course is to either take the car to the accessory service station itself, or send the unit there for any necessary work. Do not get your customers into the habit of shopping around for various types of service.



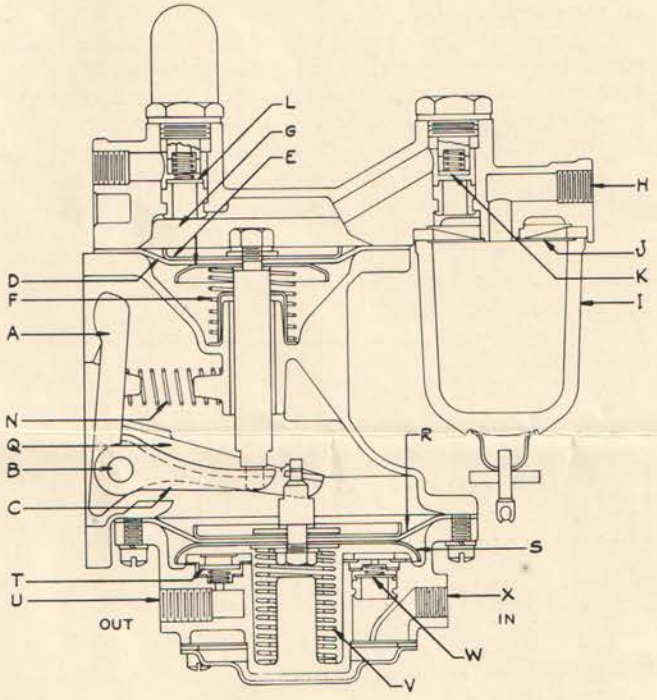
Fuel Section

The rotation of camshaft and eccentric actuates rocker arm (A) pivoted at (B) which pulls link (C) and in turn diaphragm (D) held between metal discs (E) downward

against spring pressure (F) thus creating a vacuum in pump chamber (G).

Fuel from the rear tank will enter at (H) into sediment bowl (I) and through strainer (J) and suction valve (K) into pump chamber (G). On the return stroke, spring pressure (F) pushes diaphragm (D) upward forcing fuel from chamber (G) through pressure valve (L) and outlet to the carburetor.

When the carburetor bowl is filled, the float in the float chamber will shut off the inlet needle valve, thus creating a pressure in pump chamber (G). This pressure will hold diaphragm (D) downward against the spring pressure (F) where it will remain inoperative until the carburetor requires further fuel and the needle valve opens. Spring (N) is merely for the purpose of keeping rocker arm (A) in constant contact with camshaft eccentric to eliminate noise.



Vacuum Section

The rotation of camshaft and eccentric actuates rocker arm (A) pivoted at (B) which pushes link (Q) and in turn diaphragm (R) downward expelling the air in chamber (S) through exhaust valve (T) and out opening (U) to the manifold. On the return stroke of rocker arm (A), spring (V) moves the diaphragm (R) upward, creating a suction in chamber (S) opening intake valve (W) drawing air through the inlet passage (X) from the windshield wiper. When the windshield wiper is not being used, the manifold vacuum holds diaphragm (R) downward against spring pressure (V) so that the diaphragm does not make a complete stroke for every stroke of the rocker arm (A). When the manifold vacuum is greater than the vacuum created by the pump, the air will flow from the windshield wiper through both valves of the pump, and the operation of the wiper will be the same as if the pump were not installed. However, when the intake manifold vacuum is low—that is, when the car is accelerating or operating at high speed—the vacuum created by the pump will be the greater and will operate the wiper.

Connecting Rods, Tenth Series

The babbitt in the Tenth Series connecting rods is only .020 inch thick. This, of course, will make it necessary for all service stations when fitting connecting rod bearings to scrape out as little babbitt as possible.

In taking up connecting rod bearings by filing off the lower cap, make sure not to file off any more than is absolutely necessary. If too much is filed off, it will make it necessary to scrape out an unnecessary amount of babbitt in order to get the bearing free.

We should make it a point never to scrape Tenth Series connecting rods unless it is absolutely necessary.

Changes in Front Door Window

1. Change in regulator mechanism, which operates front section of window, incorporating a stop for the window. Piece No. 211894—left; Piece No. 211895—right.
2. Change in plunger in upper mechanism on front half of window to incorporate pin on end of plunger to keep window from jumping out of socket at top. Piece No. 211409—2 used.
3. Change from fiber to bronze friction washers in lower mechanism on rear section of window to keep from sticking. Piece No. 211433—2 used; Piece No. 212151—2 used.

First remove window moulding. There are two methods for fastening moulding in on Tenth Series cars. Some models use the old method of holding moulding in by screws. Other models, the moulding merely snaps into place by two spring loaded plungers at top.

This type is removed by pulling moulding out at top and then lifting off two clips at bottom. Then loosen upholstering on lower half of door about ⅔ down. This will expose the mechanism.

To put in the new regulator, with the stop, remove four screws which hold the forward end of the lock board. You will notice, screwed to the board just below the main body of the regulator, an oval shaped plate cupped in the center and held by two wood screws. You will notice, coming through the plate in the center, a machine screw with a lock nut. Remove the lock nut and the two wood screws holding the plate and lift off the plate.

This machine screw is an adjustment for swinging the lower end of the regulator in and out in order to expose the proper length of shaft to attach the regulator handle. It should be adjusted so that the end of the shaft is 1¼ inches from the lock board after it is assembled. Swing out forward end of lock board and remove two nuts which hold main body of regulator to window frame and lift out regulator. Replace new one, reversing above procedure.

To install new plunger at upper hinge point of forward glass, open about half way; insert screwdriver at upper hinge point and pry down glass frame, pushing out at the same time until spring plunger jumps out of socket. Drill ⅛ inch hole through center of socket to allow pin on end of new plunger to enter. Hole is drilled over-size purposely.

Pull out old plunger and insert new one. This is a spring loaded plunger and the new one, being slightly longer, you will have to push the plunger up as far as possible with a screwdriver and snap upper section of forward window back into place.

To change from fiber to bronze friction washers on the lower mechanism of the rear section of window, merely remove two nuts holding mechanism to frame and take out.

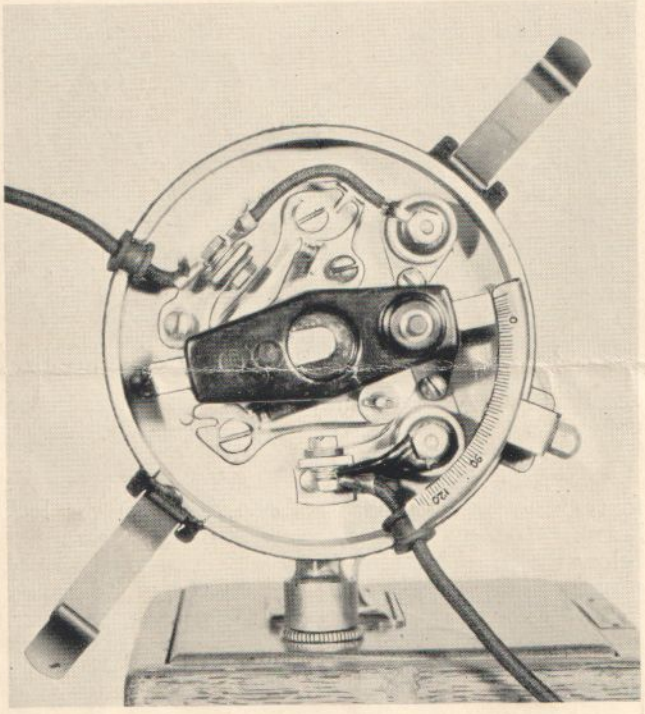
Remove spring tension adjusting nut and lock nut and replace fiber washers with bronze ones, and replace.

There were two types of washers used, one with a stop lug and the other plain.

On the right hand side the washer with the lug goes on top with the lug down, and on the left at the bottom with the lug pointed up. This acts as a stop, keeping the window from being opened beyond the maximum limit.

Screw forward end of lock board back into place, being sure to check distance from lock board to end of regulator operating handle shaft 1¼ inches, and replace upholstery. Be sure and protect upholstery and finished parts while performing this operation to guard against scratching or tearing.

Synchronizing Distributors—1001-2-3-4



With this type of distributor a spark occurs every 45 degrees rotation of the distributor shaft. Two separate ignition coils are used which are operated through two separate sets of contact points so arranged that first one set opens and fires one coil. This set then closes and the other set opens firing the other coil. As a result better engine performance is obtained especially at high speed than with the average single coil distributor.

To synchronize distributor type No. 5033450 synchronizing tool ST907 can be used.

One set of contact points is stationary and the other set is mounted on a movable plate. The stationary contact set is adjusted first and the synchronizing is completed by adjustments to the movable set of points.

To set contact opening of the stationary set which is nearest the grease cup on the side of the distributor, turn the distributor shaft until the rubbing block of the breaker arm is on one lobe of the cam. Loosen the screw which holds the stationary contact point bracket and with a screwdriver inserted between the tip of the stationary contact plate and the two prongs of the breaker plate turn it so that the gap is .020". Tighten the lock screw which holds the contact plate and recheck.

Again turn the shaft until the rubbing block of the other contact arm is on a lobe of the cam. Loosen screw which holds this stationary contact plate in position and with a screwdriver turn the contact plate until the gap is .020". Then tighten the lock screw and recheck.

Turn the engine over until the rotor arm is under No. 1 terminal with the stationary contacts just ready to open. Clamp synchronizing tool to the edge of distributor so that the leading edge of the electrode on the rotor aligns with 0° on the scale.

With the synchronizing tool clamped in this position crank the engine until the rotor arm aligns with the 90° on the synchronizing scale.

Loosen two screws which hold the movable contact mounting plate in position and shift the plate so that the contacts are just opening. Tighten screw and crank engine over several times. Recheck contact point breaking with respect to the synchronizing tool.

Check contact gaps and if they have changed, readjust and synchronize both contacts again.

NOTE: When synchronizing a distributor on the engine be sure that all the back lash is out of the drive.

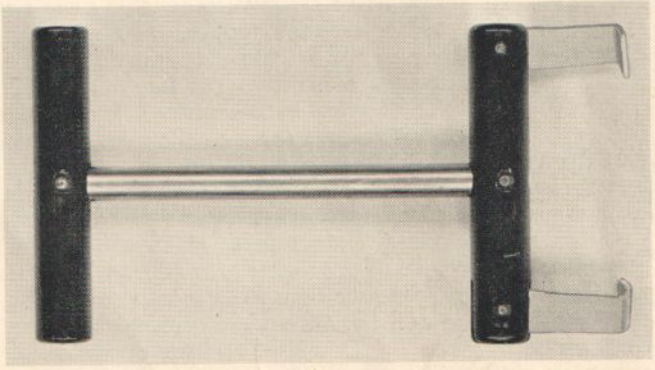
NOTE: For best and most accurate results always use an ammeter or test lamps connected in series with the primary ignition circuit at the distributor. When the light goes out or the ammeter hand returns to zero, the points are open.

The ignition settings for the Tenth Series are as follows:

	1001-2	*1003-4*	*1005-6*
Standard head	9 deg.	9 deg.	7 deg.
L.C. head	14 deg.	14 deg.	.....
H.C. head	7 deg.	4 deg.	.....

Battery Lifter, Tenth Series

You will find some difficulty in removing or replacing the battery on Tenth Series cars with the battery lifter designed for use on the 900. A new set of arms has been designed to be used with the 900 lifter and these are carried under ST-1428 at 45c a pair. A complete new lifter can be purchased under ST-841 at 75c each. A pair of arms is being sent to each distributer who has already ordered a battery lifter under ST-841.



SUGGESTIONS OR QUESTIONS FROM READERS ARE ALWAYS WELCOME. HOW CAN WE MAKE THE SERVICE LETTER OF MORE VALUE TO YOU? *ADDRESS LETTERS—NORM. LULL—EDITOR—PACKARD SERVICE LETTER.*

PRINTED IN U S A