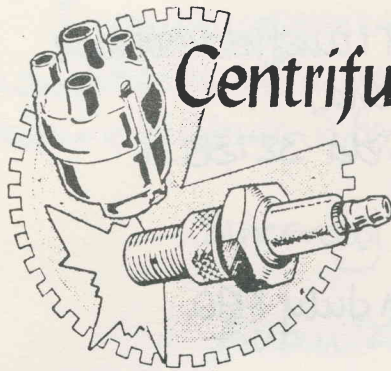


TECH TIPS

The following is a Tech Tip dug up by Bill Graham during his researches.

Thanks again, Bill.



Centrifugal Ignition Control

● Use this guide to overhaul the centrifugal type of automatic advance-retard mechanism

THE fact that the centrifugal type of automatic advance mechanism is concealed in the base of the distributor probably accounts for its frequent neglect. However, it is quite

easy to check whether it is functioning without actually dismantling the unit. It is merely sufficient to remove the distributor cap, when an endeavor should be made to turn the rotor arm in the direction of rotation (see Fig. 1).

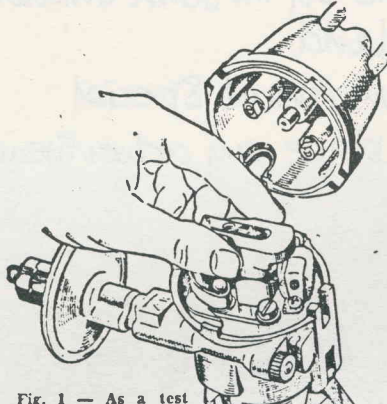


Fig. 1 — As a test for the operation of the automatic control, try to rotate the rotor arm in the normal direction of rotation. The arm should return smartly to its former position on being released.

easy to check whether it is functioning without actually dismantling the unit. It is merely sufficient to remove the distributor cap, when an endeavor should be made to turn the rotor arm in the direction of rotation (see Fig. 1).

HOW TO TEST THE CONTROL

If the system is working correctly the arm will turn through about 15 degrees against the pull of the governor springs. But as soon as it is released the arm should return smartly to its former position. Should there be any appreciable backlash or should no spring action be present (that is to say, should the arm remain in the advanced position, unless returned by hand), then the mechanism definitely needs attention. Again, if the rotor

REMOVING DISTRIBUTOR

If any of these defects is manifest it is advisable to dismantle the unit and thoroughly clean and lubricate it. But before taking the whole unit to pieces it should be removed from the engine. This is usually quite simple to do. The quadrant arm which projects from the base of the distributor body is attached to the engine with a stud or screw. When this screw is removed the distributor can be drawn off.

Where no manual control is fitted the position of the quadrant should be noted before the screw is taken out. There is usually a mark on the engine and a scale on the quadrant. In the case of manual control the quadrant can be moved through a small arc by the control.

There is no need to undo the clip which secures the quadrant arm to the distributor body. In fact, if this be loosened the timing may be disturbed, since the clip prevents the arm from mov-

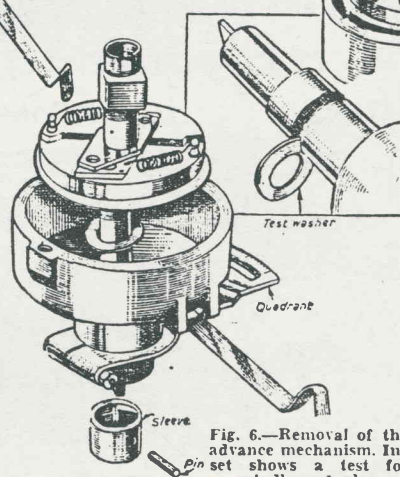


Fig. 6.—Removal of the advance mechanism. Inset shows a test for spindle end play.

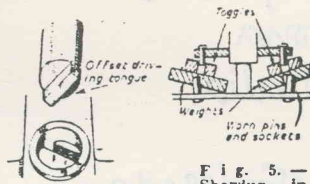


Fig. 2. — Distributor drive through an offset tongue prevents incorrect timing when distributor unit is replaced.

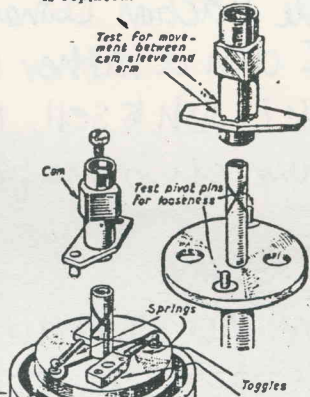


Fig. 4. — Points to be examined when testing the unit for wear.

Fig. 3. — Distributor partly dismantled, showing automatic advance mechanism.

ing in relation to the distributor.

In many cases the drive to the distributor is through a tongue on the end of the spindle and as this tongue is offset it is impossible to replace the spindle in the wrong position (see Fig. 2). On the other hand, where the driving pinion is attached directly to the spindle it will not be possible to retain the timing when the gears are withdrawn.

(Cont. on page 32)

TECH TOPICS

The following Tech Tip is the latter half of the piece published in the last edition. I had inadvertently misplaced it while putting the magazine to bed. My apologies -DW

GOVERNOR WEIGHTS AND SPRINGS

To disclose the governor weights and springs it is necessary to remove the rotor arm by pulling it off its shaft. Next, the two screws which hold the upper half of the distributor body in position must be removed. This part of the distributor can then be lifted off, carrying the contact points, condenser, etc., with it.

In order to release the weights, which are now disclosed, the screw in the top of the rotor spindle, which is revealed when the rotor is removed, should be unscrewed. This will allow the cam with its arm to be slid off the spindle as shown in Fig. 3. Should the sleeve, of which the cam forms part, have become rusted to the spindle it may be necessary to inject penetrating oil and at the same time lever it off the spindle.

Before passing on to the toggles and weights, the cam sleeve with its arm should be examined for play between the sleeve and the arm, as indicated in Fig. 4. The arm is clinched on to the sleeve and sometimes when the unit has been very much neglected it may be found to move slightly from side to side. Naturally, this backlash in the system limits the range of control. Usually the arm can be tightened by supporting it in the vice and making a number of punch marks close to the spindle.

TESTING FOR BACKLASH

The next step is to remove and examine the toggles, springs and governor weights. A certain amount of play in the spindles and pivots is usually to be found, but in cases of extreme neglect the holes in the weights may be so worn that they allow the weights to assume the position shown, somewhat exaggerated, in Fig. 5. It

is advisable to renew the affected parts. However, presuming that the condition of weights and toggles is good they may be set aside while the main spindle is removed from the body of the distributor.

Incidentally, the removal of the spindle will become necessary should the pivot pins which are mounted on the base plate and which carry the weights be loose. Since the pins are riveted in position they can be tight-

can be determined before the spindle is removed by inserting the edge of a washer between the collar on the shaft and the lower end of the distributor bearing, as shown in Fig. 6 (inset). When the correct gauge of washer has been discovered the spindle can be removed from the distributor by knocking out the pin which passes through the collar as depicted in Fig. 7.

SPRING TENSION

Before the spindle is replaced the governor weights, cam, or rotor should be reassembled on the base plate, and the springs tested for tension. This can be done by inserting a thin screwdriver or knife blade between the ends of the weights and levering them apart against the tension of the springs. There should be definite resistance to the outward movement of the weights, but no backlash. If, for instance, the weights can be moved part of the way without resistance it is an indication that the springs have become stretched or soft, and they should be replaced by new ones.

It will be noticed that there are two small holes in each of the toggles to which the spring may be attached, and there is naturally a temptation to try the spring in the second hole since this gives greater spring tension. This should not be used, however, because it will be found to give too much tension and is not intended for that purpose. The correct procedure is to renew the spring.

After the springs have been tested, and if necessary renewed, the whole unit should be carefully reassembled. First of all any rusty patches on the spindle should be rubbed down with fine emery and all the working parts lightly oiled. Finally replace the collar which retains the spindle.

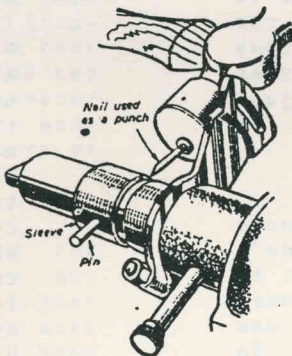


Fig. 7.—Driving out pin which secures driving sleeve on distributor spindle.

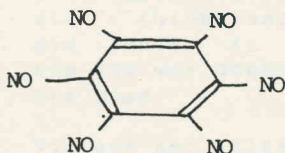
ened by re-riveting them with a small ball-pated hammer.

Up and down play in the spindle is another fault which can be remedied at the same time. Make a test for this before the spindle is removed. If there be more than a few thous. play it should be taken up by sliding washers over the spindle. The correct thickness for the washer or washers

ON YOUR PLATE

Red Capri softtop : NONONO
white on red background. Driven
by what could be surmised as an
unco-operative young lady.

Reminds me of the new
French contraceptive based on
the benzene ring :



- says NO in any
position! Can't get much safer
than that.

Dr. Bill G.

*Who is this bloke "Ben Zene"? I'd
like to know what right he's got to
such information. And to think of the
trouble Ron Lawrence is having with his
aldols - no doubt this "Ben" kicked him
there. Watch the road when you drive, Bill,
or you'll lose the real French connection!*