

## Timing Your Model A

Is the ignition timing correct for your Model A? The timing of the ignition system is very important for a good running engine. Years ago, when most Model A's had a basically stock engine with 4.2:1 compression ratio, the ignition timing could be a little off and the engine would still run well. As owners have desired a little more power and the use of higher compression cylinder heads became more prevalent, ignition timing has become more critical. A lot of owners seem to have difficulty with checking and adjusting ignition timing but it is actually a simple process. I like to break it down into 3 easy steps. First gap the points, then position the engine on TDC (Top Dead Center) and finally adjust the position of the distributor cam for correct ignition timing.

### STEP #1

Check and adjust the gap of the points. Remove the distributor cap and rotor and carefully rotate the engine until the points are fully open. This will occur when the point rubbing block is on the high point of the distributor cam. Using a feeler gauge, check the gap of the points and adjust if necessary. The point gap should be between .018 and .022 inches. I like to set new points at .022 and used points at .020. Setting new points a little wider will allow for some initial wear of the rubbing block. You will find it easier to turn the engine with a special designed wrench on the crank ratchet nut than to use a crank as Ford recommends in the Model A Instruction Book (Owner's Manual).

An alternate way to set the points is to use a "Quick Point Gap Setter" which is available from the better Model A Parts Suppliers. When using this tool, it is not necessary to rotate the engine until the points are fully open. This tool has a sleeve that slips over the distributor cam and a special gauge to check the point gap. I have found this tool to be simple to use and accurate.

### Step #2

Position the engine on TDC (Top Dead Center) so #1 piston is at the end of the compression stroke. To do this, remove the timing pin on the front of the cam gear cover and insert the opposite end into the timing pin hole. Slowly rotate the engine while pushing in on the timing pin. As #1 piston approaches the top of the compression stroke, you will feel the timing pin fall into a depression in the timing gear. It may be necessary to back up the engine a little and repeat the operation a second time to be sure #1 piston is exactly at the top of the stroke. Replace the timing pin.

### Step #3

Check to see if the position of the distributor cam is correct. When the engine is set on TDC, #1 piston, and the Spark Control Lever is in the full up position, the points should just be ready to open and the rotor should point toward #1 electrode of the distributor body. To check the position of the distributor cam, use a screw driver to carefully rotate the distributor cam clockwise to take up any backlash in the distributor shaft. The points should now be closed but just ready to open. Rotating the distributor cam just slightly in the counter clockwise direction should open the points. Moving the cam back in the clockwise direction will again allow the points to close. If the points do not open and close correctly, reposition the cam by first loosening the distributor cam screw just enough so the cam can be rotated. Then, replace the rotor and turn the rotor until it lines up with #1 electrode of the distributor body. Remove the rotor and turn the cam counterclockwise until the points are fully open and then slowly turn the cam back clockwise until the points just close. Tighten the cam screw and confirm the adjustment by moving the cam back and forth and watching the points. You can also use a test light or continuity meter to check when the points open and close. Replace the rotor and cap.

Another handy tool available from most parts suppliers is a "Timing Cam Wrench Tool" that simplifies positioning the cam and makes it easier to hold the cam while tightening the cam screw. Just use the easy to follow instructions that come with the wrench. This tool along with the Quick Point Gap Setter will make timing adjustment quick and easy. The procedure to check and adjust ignition timing is also available in the Model A Ford Instruction book (Owner's Manual) and Vol. #1 of the Model A Ford Handbook by Les



Timing Cam Wrench Tool



Quick Point Gap Setter

### Tech Tip

Some replacement timing gears are made with a very shallow recess for the timing pin which makes it difficult to determine when #1 piston is at the top of the compression stroke. If the end of the pin is reshaped to make a more pronounced, sharper radius, it will make it easier to determine when the pin falls into the recess in the timing gear.