



INSTALLATION INSTRUCTIONS

YH AND YT ADVANCE CURVE CHANGE KIT

READ INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION

Part No. 29014

List of parts:

Each curve kit includes 9 springs:

- | | |
|-------------------------|----------|
| 2 Pink | 2 Orange |
| 2 Grey | 1 Purple |
| 2 Brown | |
| 1 Set of YH Degree Keys | |

GENERAL INFORMATION

This kit allows the modification of the advance curve of any Mallory distributor with the YH or YT advance system. Mallory uses three different mechanical advance systems. Compare the advance system in your distributor with the assembly shown in Figure 4 to determine if you have a YH or YT advance system. The advance can be seen by removing the distributor cap (except for vacuum advance (V.A.) distributors; the mechanical advance system in V.A. distributors can be seen by removing the sight plug or plate on the side of the distributor bowl).

Most Mallory V8 distributors are equipped from the factory with one purple spring and one brown spring. The resulting advance curve can be seen in Figure 1. This curve is a good choice for most performance applications. The optimum advance curve for any particular application depends on many variables. Usually, a mixture of past experience and trial and error are required to determine the best advance curve.

Two Stage Advance Curves:

Figure 1 shows the different two stage advance curves. All two stage curves are obtained by using one purple spring and one other color spring. (DO NOT USE TWO PURPLE SPRINGS: This will cause erratic timing at low RPM). These curves are called two stage because the slope of the curve changes at about 1500 RPM. This is because the purple spring is loose when installed and doesn't become a factor until after about 1500 RPM. Two stage curves are usually preferred for street driven vehicles (especially V8s) because the quicker advance at low RPM provides good throttle response, while the slower advance at mid RPM helps prevent detonation. Full advance is in no later than 3500 RPM for good top end power.

Single Stage Advance Curves:

Any combination of springs which does not include a purple spring will produce a single stage curve. These curves are nearly straight lines. Figure 2 shows the curves obtained by using two springs of the same color while Figure 3 shows curves obtained by pairing springs of different colors.

Single stage curves are popular in 4 and 6 cylinder engines (Many Mallory distributors for 4 and 6 cylinders are supplied from the factory with two orange springs, see Figure 2) and for racing V8s. Mallory V8 distributors whose part numbers end with "05" are supplied from the factory with two pink springs.

In general, single stage curves provide less advance below about 1500 RPM (which is usually unimportant in a high RPM race engine) yet allow full advance as low as 2000 RPM. In a race engine, full advance is usually desirable at the lowest RPM that the engine will see full throttle. However, in a street driven vehicle using pump gas, single stage curves may induce detonation.

Spring Perches:

Each advance spring is connected to a post at one end and a perch at the other end (see Figure 4). The curves in Figures 1, 2, and 3 were obtained by changing the springs only. However, in some instance it may be desirable to bend the spring perches SLIGHTLY in order to change the RPM at which the advance starts. The advance in the distributor must start at an RPM which is at least 100 RPM higher than the idle RPM of the engine. Bending the spring perches to increase spring tension will cause the advance to start at a higher RPM.

For example, if the double grey spring curve of Figure 2 seems desirable but the engine idles at 700 RPM, the spring perches can be bent (to increase tension) so that the advance starts at 800 RPM rather than the 600 RPM shown on the graph.

In a similar fashion, reducing the tension on the springs will cause the advance to begin at a lower RPM.

Bending the perch can be used to move the curve only about 200 or 300 RPM. If more than 300 RPM change is required, use different spring(s). Bending the perches changes the RPM at which the advance starts but does not change the slope of the curve.

If a two stage advance is being used, bend the perch of the NON-purple spring to change the RPM at which the advance starts.

CAUTION: IF THE SPRING PERCHES MUST BE BENT, BEND ONLY SLIGHTLY. FREQUENT BENDING OR EXCESSIVE BENDING MAY FATIGUE THE PERCHES AND CAUSE THEM TO BREAK.

Remember, the total advance is the sum of the distributor advance plus the initial advance. (Initial advance is the advance set at idle by rotating the distributor). Most engines perform well with a total advance somewhere between 34 and 40 degrees. Thus, an engine with 10 degrees initial (set at idle) plus 26 degrees in the distributor would have a total advance of 36 degrees.

Advance Limit tab, YT Only

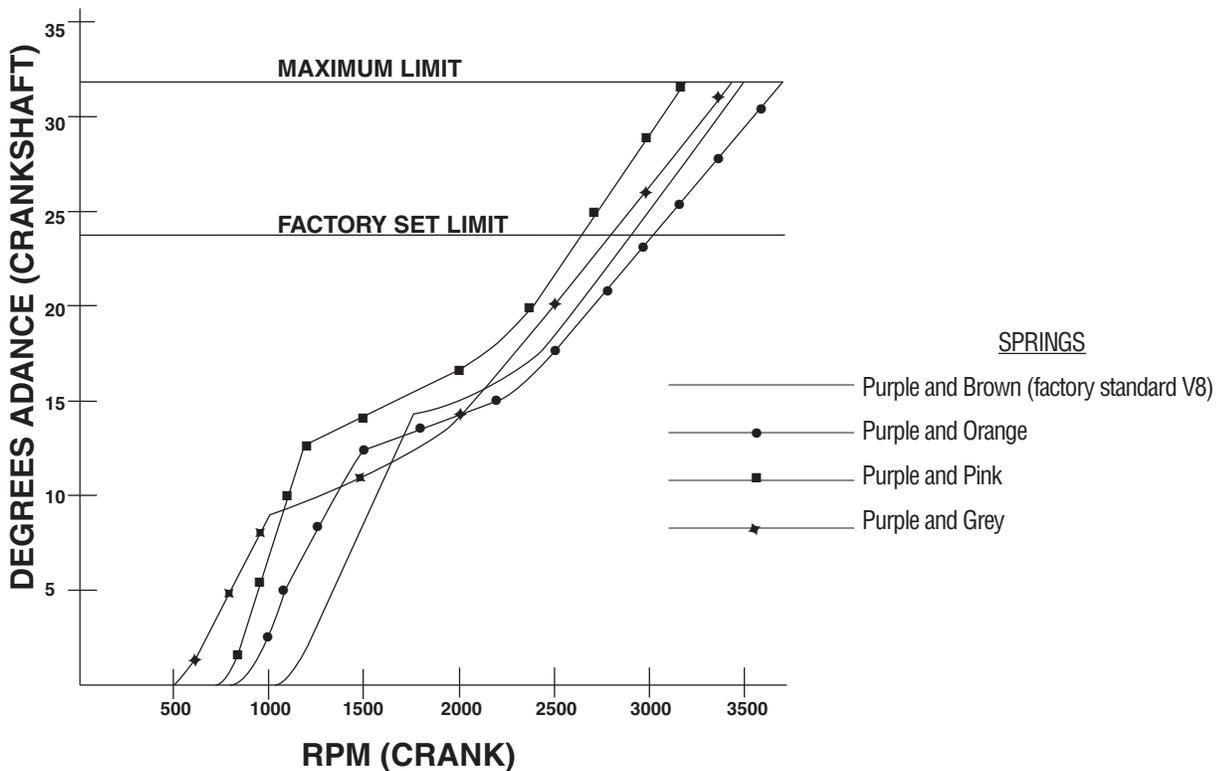
The advance tab (see Figure 4) limits the total amount of advance that the distributor can produce. The advance tab does not affect the shape of the advance curve, but rather limits the advance to a given amount. Most Mallory distributors are set at the factory to limit the advance to 24 degrees. Figure 4 shows how the advance tab can be bent to increase or decrease the advance limit. (Do not attempt to increase the limit over 32 degrees or reduce it to less than 16 degrees).

CAUTION: BENDING THE ADVANCE TAB MORE THAN 3 OR 4 TIMES, OR BENDING IT EXCESSIVELY MAY CAUSE THE TAB TO BREAK.

Advance Adjustment Plate, YH Only

YH advances (see Figure 5) have two adjustment screws in the advance plate. To adjust the advance limit on these assemblies, DO NOT BEND ADVANCE TAB. Rather, loosen the two screws and rotate the advance plate to adjust limit. Re-tighten the screws after adjustment. The amount of advance can be adjusted from 0° to 28°.

FIGURE 1 TWO STAGE ADVANCE CURVES



NOTES: (Figures 1, 2 and 3)

- 1) Curves developed by changing springs only. Spring perches were not bent.
- 2) Purple and brown spring combination is factory standard for most Mallory V8 distributors.
- 3) Exact curve obtained from any combination of springs may vary slightly from those shown above.
- 4) Most Mallory distributors for V8s have a factory set limit of 24° advance.
- 5) Purple springs must not be used in pairs. The purple spring should have slack (unstretched) when installed.
- 6) Curves may be shifted to the right by bending the spring perches to increase spring tension, or to the left by bending for less tension.

Figure 2

**SINGLE STAGE,
MATCHED SPRINGS,
ADVANCE CURVES**

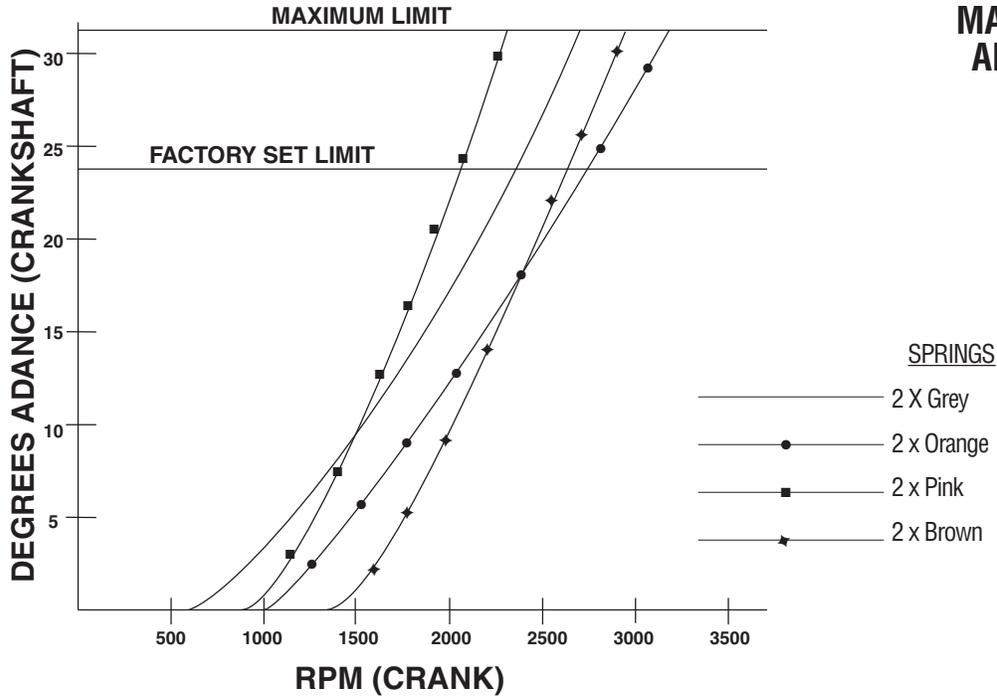


Figure 3

**SINGLE STAGE,
PAIRED SPRINGS,
ADVANCE CURVES**

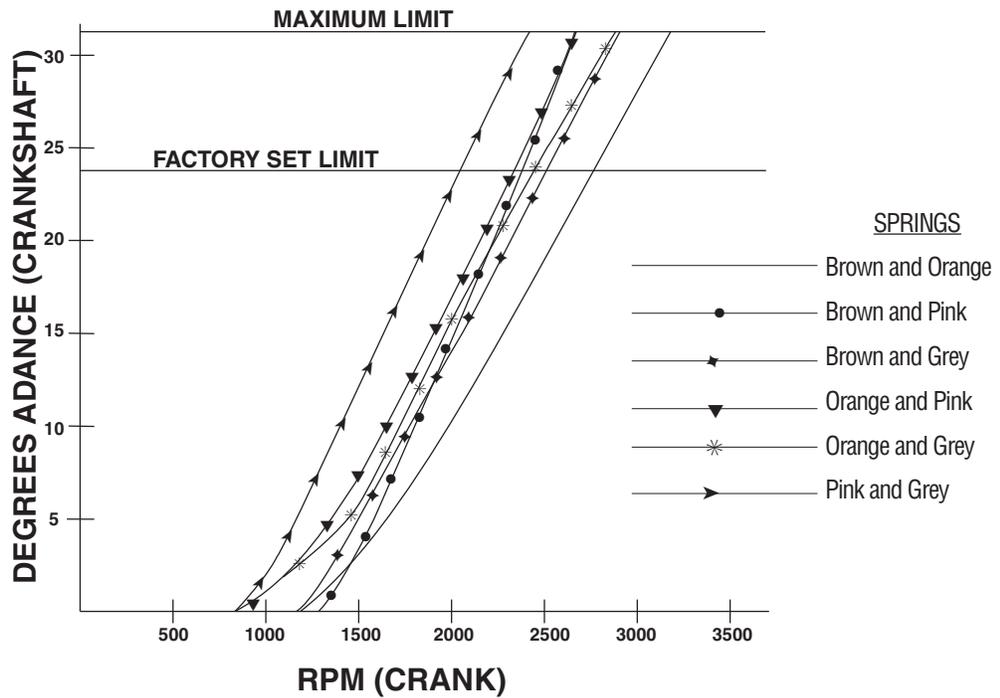


Figure 4

YT ADVANCE ASSEMBLY

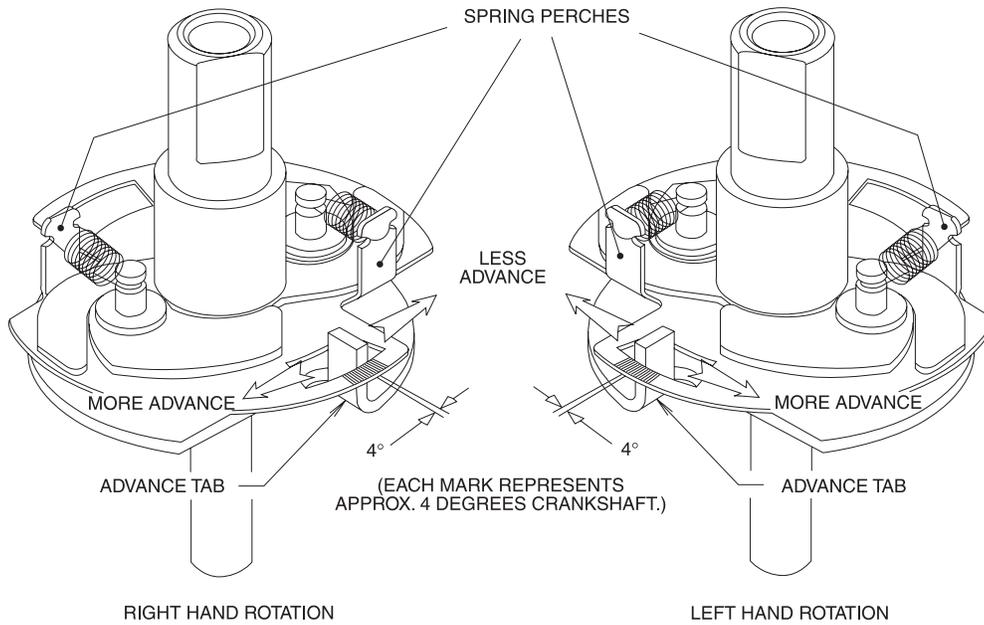


Figure 5

YH ADVANCE ASSEMBLY

