Appendix D – Distributors

Introduction

Distributors, like carburetors, experienced changes through the years 1962/69. The most visibly obvious changes have already been covered in Volume I under Section H of the individual chapters. Therefore, this Appendix will cover other details not so visible.

Presented on the following pages are the ***Distributor Applications*** table, ***Distributor Appearance and Cam Settings*** table, ***Distributor Replacements*** table, ***Distributor Appearance Code*** table, ***1968/69 Distributor Vacuum Systems***, ***Distributor Advancement Characteristics***, and ***Ignition Wires*** listings.

The ***Distributor Applications*** table is grouped by engine application. The first group is for 221 V8s, followed by 260 V8s and 289 2Vs. The 289 4Vs (regular-fueled, premium-fueled, and high performance) are covered next. The 302 2Vs and 4Vs are at the end.

The ***Appearance and Cam Settings*** table will help describe the physical appearance of the distributor by describing the distributor body, vacuum advancement housing, and internal points arrangement. The cam settings listed apply only to 1965 and later distributors. The earlier distributors used in 1962 through 1964 had single setting distributor cams. With the new 1965 design, two settings were possible. In addition, Ford offered two cams, which allowed for a total of four different settings. These settings determined the maximum allowable centrifugal advance.

The selection of setting for the cam was determined by how the cam was installed. Each 1965 and later cam had two boot-shaped ends. The boot's "in-step" length was different on each allowing a different maximum advancement. The boot which determined the appropriate maximum advancement was the one installed over the vertical tong or "stop." The "stop" was cushioned by a small rubber band installed over it. Maximum advancement settings of 10 and 15 degrees with cam C5AZ-12210-B, or 13 and 18 with cam C5AZ-12210-A, were possible. Since Ford did not always publish the maximum distributor advance, some of the cam settings listed in the charts here are estimates based on the best available information.

The ***1968/69 Distributor Vacuum Systems*** section shows how to connect all the vacuum hoses associated with the new distributor advance/retard vacuum housing and the distributor vacuum control valve. The new advance/retard vacuum housing consisted of two independent diaphragms. The primary diaphragm, located forward on the housing, advanced the ignition timing just like the single diaphragm housing did on 1962/67 distributors. The secondary diaphragm, which used the aft port, controlled ignition timing retardation during periods of closed throttle deceleration and at idle. This action assisted in reducing exhaust system hydrocarbons. The new distributor vacuum control valve switched the vacuum sources for the distributor whenever coolant temperature exceeded 230 degrees Fahrenheit. The purpose was to increase engine speed until the coolant temperature returned to normal.

The final section lists the ***Distributor Advancement Characteristics*** of each distributor, based on the best sources available (shop manuals, Technical Service Bulletins, and cross references). Ford set the characteristics by selection of two small springs and how the springs applied tension against the centrifugal weights. Generally, a lightweight spring controlled advancement off idle and allowed for an initial rapid spark advance. Then at some point (usually around 5 to 6 degrees distributor advance) a second spring (usually heavier, but sometimes not), along with the first, slowed the advancement until the limit of the cam setting (L) was reached. These springs, their adjustments, and the cam limit determined what was called the distributor advancement curve.

Both a table and a graph are provided to give a more complete picture of the upper and lower limits. Keep in mind that the rpm and advancement listed are the distributor's and not the engine's. To determine the engine's corresponding values, both the rpm and advancement must be doubled. For example, suppose the advancement characteristics on a 289 2V with stamped number C4AF-12127-U were to be checked while still installed on the engine. With the distributor vacuum advancement line disconnected and initial advance set at 12 degrees, the engine could be accelerated to 1800 rpm. This corresponds to a distributor rpm of 900. Looking at the Distributor Advancement Characteristics listing, the advance should be between 6 and 6 ¾ degrees on the distributor. This corresponds to 12 to 13 ½ degrees (double) on the engine. Adding