



INSTALLATION INSTRUCTIONS

UNILITE[®] DISTRIBUTOR FOR 1936-69 HARLEY DAVIDSON[®] BIG TWIN MOTORCYCLES

Part No. 556

NOTE: THIS DISTRIBUTOR WILL NOT FIT FLAT HEAD OR SPORTSTER[®] ENGINES.**IMPORTANT**

A 1966-69 HARLEY DAVIDSON[®] DISTRIBUTOR CLAMP (ORIGINAL OR AFTERMARKET) IS REQUIRED TO INSTALL THIS DISTRIBUTOR. BECAUSE THE UNILITE[®] MODULE USED WITH THIS DISTRIBUTOR REQUIRES 7-16 VOLTS, A 12 VOLT ELECTRICAL SYSTEM IS ALSO REQUIRED.

GENERAL INFORMATION

Any coil or combination of coils with a total primary resistance of at least 2.0 ohms can be used with this distributor. We recommend a 2-3 ohm coil for racing and a 3-4 ohm coil for street use. A coil with 4-5 ohms resistance may be used. However, performance may be reduced, even in street applications. NOTE: Check the charging system and make sure that it is producing no more than 16 volts.

We recommend a spark plug gap of .040" when using a 2-3 ohm coil. A gap of .030" is recommended when using a 3-4 ohm coil.

An optional spring kit (PN 29014) is available for this distributor. The kit gives you a choice of 14 different advance curve settings.

INSTALLATION

Step 1

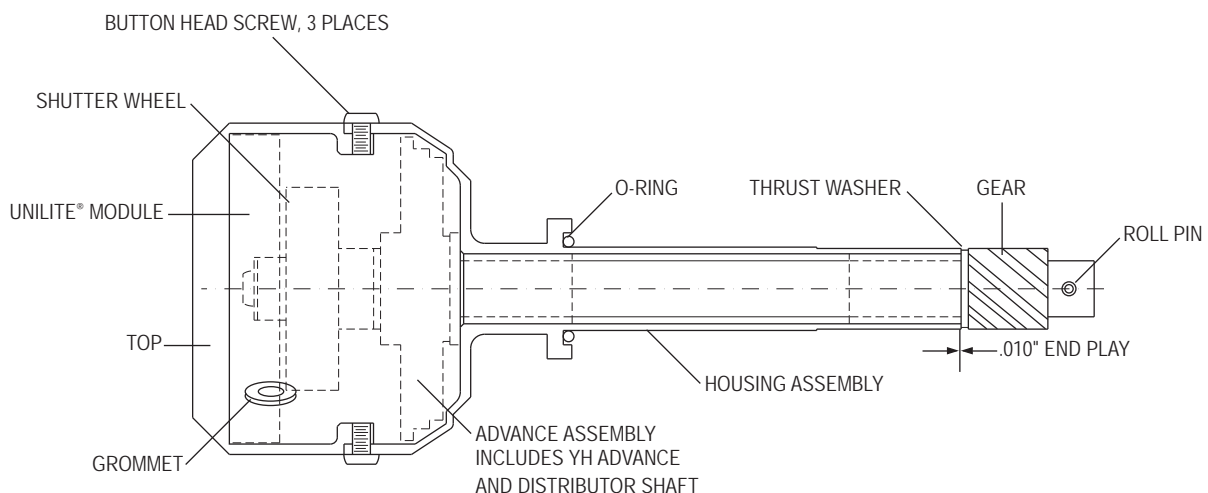
Turn the ignition switch to the off position. With the point distributor still in place and correctly timed, rotate the engine until the points begin to open on the front cylinder lobe. The front cylinder lobe is the narrower of the two.

If the point distributor is not installed, rotate the engine to the beginning of the compression stroke. Locate the timing hole. Continue rotating the engine until the advance mark is visible through the timing hole.

Step 2

Remove the ground cable from the battery. Remove the point wire at the coil. Remove the point distributor.

FIGURE A



Step 3

Remove the top from the Mallory distributor by removing the three screws. Rotate the shaft until the arrow on the shutter wheel points approximately at the arrow on the housing. Install the Mallory distributor in the engine. The slot in the top of the housing will clear the cylinder fins.

Step 4

Install a 1966-69 distributor clamp. Do not tighten the clamp at this time.

Step 5

Turn the shutter wheel by hand to test the advance. The shutter wheel should rotate clockwise about 10 degrees and snap back when released.

Using one hand, rotate the shutter wheel clockwise to the fully advanced position and hold. Using your other hand, rotate the housing until the arrow on the housing lines up with the arrow on the shutter wheel. Tighten the distributor clamp bolt. Timing should now be close enough to start the engine.

Step 6

Replace the Mallory top and install the three screws to hold it in place. NOTE: The 3 holes in the housing must be aligned with the 3 holes in the top to ensure proper placement of the UNILITE® module. (Tech Tip: Add some Blue Loctite to 3 screws to help prevent them from vibrating loose.)

Step 7

Connect the wires as shown in Figures C and D. Start the engine and check the timing with a timing light. NOTE: when checking the timing, engine RPM must be above 2000 for accurate timing results.

FIGURE B

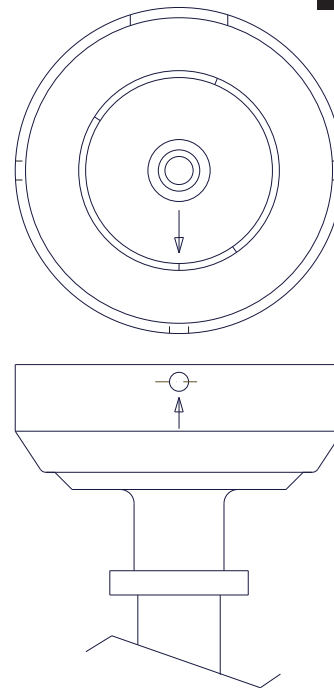


FIGURE C

SINGLE PLUG HEADS

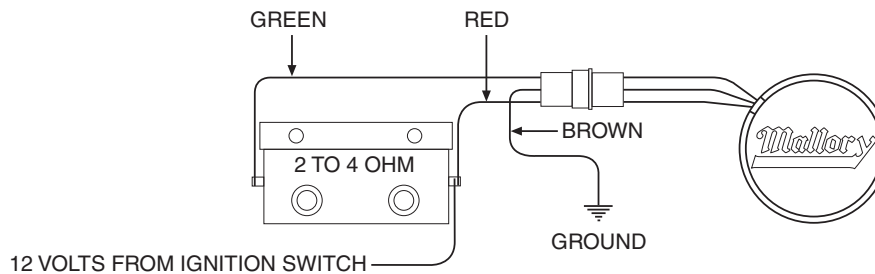
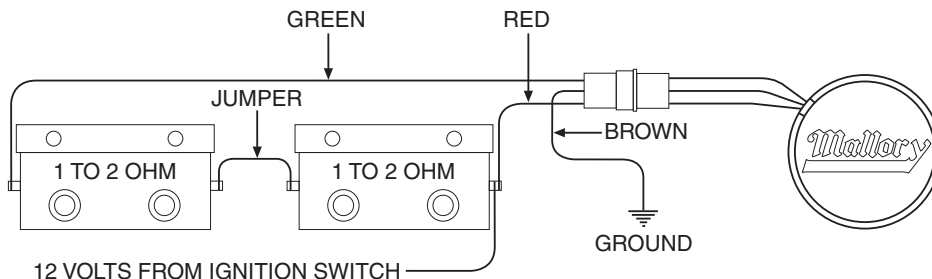


FIGURE D

DUAL PLUG HEADS



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Printed in U.S.A.



TEST PROCEDURE FOR UNILITE® AND E-SPARK® FOR MOTORCYCLES

With the Module wired to the coil like it's ready to run. Take the cap off and position the Module so you can see it. Turn the key on, test voltage on the negative side of the coil, which is where the green wire attaches to the coil.

To do this the Red lead from the voltmeter will go to the Green wire on the coil. The Black wire from the voltmeter will go to ground. Set the voltmeter for 12 volts DC.

With the ignition switch ON you should have about 12 volts. Then take a card or match book and place it in slot of the module to block the photo optics of the module. (See Pictures) The voltage should drop to 1-2 volts. Remember it's an infrared LED you won't see it.

If the test results are as follows the Module will need to be replaced:

- (a) Voltage does not drop to 1-2 volts when optics blocked.
- (b) Voltage always stays below 2 volts, blocked or not.
- (c) Voltage only drops above 2 volts, the higher above 2 volts the weaker the spark.

Possible causes are:

- Faulty charging system: stuck or shorted regulator, bad ground, dead cell or defective battery, defective stator or generator.
- Faulty ignition switch, direct shorts in electrical system.
- Faulty starting system: starter drag.
- Trying to start motor with battery charger hooked up.
- Non-suppression spark plug wires (copper or stainless solid core wires). Spark plug wires must be Spiral Core or Graphite Core suppression wire.
- Welding on the Bike with Module still hooked up (unplug the white connector to the Module before welding).
- Improper coil, use 2-4 ohm coil (check installation instruction).

If you must replace the Module, replace it with Mallory Part # A605.

If after completing the test you still have questions 216-688-8300 ext. 5

