

UPDATES TO THE DUAL
DISTRIBUTOR MODIFICATION KIT
INCLUDING NEW PARTS LISTS, A
NEW MODIFICATION AND SOME
CORRECTIONS.

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Some abbreviations used are as follows.

1. ND Nippondenso
2. HI Hitachi
3. MI Mitsubishi
4. GM General Motors
5. HEI High Energy Ignition (GM)

Some noted corrections:

Page 14 diagram. The +W and -G are in error and should be +G and -W. In addition the pickup red or darker wire is usually the + wire. Also the G terminal is the only narrow terminal.

Page 17 diagram. The diagram shows a TOP vu and should show the bottom vu with respect to the tapped holes. The holes should increase in radius counterclockwise not clockwise as shown.

Revised ND-GM HEI "KIT" contents

For the ND dizzy body using the GM HEI control module and ND pickups or equal:
Kit is in two bags and is as follows; (Both bags Marked ND HEI)

Bag 1 of 2

1. New dizzy plate with locating pins installed.
2. 4 red wire clamps.
3. Small sealed dish of heat sink compound.
4. Small tube of Loctite #271.
5. 10 pieces of heat shrink tubing of several sizes.
6. 6 Cable ties of several sizes.
7. Small bag of parts.
 - a. Vacuum advance hole plug with mounting screw
 - b. Four 8-32 x 3/8 screws with captive lock washer and flat washer.
 - c. One new dizzy shaft O-ring 3 x 22 mm.
 - d. Six 1/4 fast on wire connectors.
 - e. Two 3/16 fast on wire connectors

NOTES on above item numbers

#1 note the roll pins may be a tighter fit in the pickups than in the plate but this is not a problem if they come off with the pickup first.

#2 used as needed.

#3 used on GM HEI modules.

#4 used on screws as needed.

#5 note colors do not match manual so use where needed.

#6 use as needed.

#7a use attached screw to mount.

#7b use for pickup mounting.

#7c replace the o-ring on the dizzy shaft.

#7d,e used to wire up the GM HEI modules.

Bag 2 of 2

1. One length of shielded twisted aircraft spec wire.
2. One length of silicon covered fiberglass tubing.

NOTES on above.

#1 Cut as needed for both pickups to GM HEI module wiring. Twisted wire is needed and the shield should be grounded ONLY at the GM module and NOT connected at the Dizzy.

#2. Both cables can be slipped thru the gray 500F rated tubing for appearance. Its best to pull the wire thru by use of a smaller wire attached to the larger wire pair before attaching the fast on terminals and ground etc. Baby powder can help the wires slip thru.

The heat sink compound supplied is old stock and may need mixing the heavy white material with the nearly clear liquid. This may be done prior to opening the capsule. Its important you end up with a uniform thick white paste.

NEWHI-MI "KIT" contents

For the HI dizzy body using the MI pickup/control module.

Kit is in two bags and is as follows; (Both bags Marked HI MI)

Bag 1 of 2

1. New dizzy plate with needed tapped holes.
2. 4 red wire clamps.
3. Small sealed dish of heat sink compound.
4. Small tube of Loctite #271.
5. 10 pieces of heat shrink tubing of several sizes.
6. 6 Cable ties of several sizes.
7. Small bag of parts.
 - a. Vacuum advance hole plug with a mounting screw attached.
 - b. Four 8-32 x 3/2 screws with captive lock washer.
 - c. Four flat washers for the above screws.
 - d. Two sleeve washers. Use one on each module.
 - e. One new dizzy shaft O-ring 3 x 22 mm.
 - f. Two 8-32 x 3/8 screw for the ground connection wires
 - g. Two fast on terminals for the ground wires.
 - h. Four uninsulated 90 deg fast on terminals for the modules.
 - i. 8-32 x 3/4 screw as alternant for 7a above
 - j. 8-32 x 3/8 screw as alternant for 7a above

NOTES on above item numbers

#1 There are extra holes from other use of the supplied plate. The holes stamped "G" are for the needed ground connection to the MI modules.

#2 Used as needed.

#3 Used on MI modules.

#4 Used on screws as needed.

#5 Note colors do not match manual so use where needed.

#6 Use as needed.

#7a Use attached screw to mount, or use the 7e, f as there are several versions of the HI dizzy.

#7b Use for pickup mounting.

#7c The supplied screws do not have attached flat washers use these.

#7d One used on each module to aid in timing of the two modules. Place on the screw nearest the "B" terminal on each module. Be sure it is down to the mounting plate where the hole diameter is slightly smaller on the module.

#7e Replace the o-ring on the dizzy shaft.

#7f Use these with 7g and single conductor wire to provide ground back to the coil.

#7h Use there to wire the modules and use the original soft silicon insulators over the new wiring. There should be two insulators on the original HI dizzy and two on each of the MI dizzys needed for this conversion.

Bag 2 of 2

1. Two lengths of shielded twisted aircraft spec wire.
2. One length of silicon covered fiberglass tubing.
3. Two lengths of #20 aircraft wire for ground lead.

NOTES on above.

#1 Twisted wire is needed and the shield should be grounded ONLY at the coil or the engine but not at both ends.

#2. Both cables (and the ground leads) can be slipped thru the gray 500F rated tubing for appearance. Its best to pull the wire thru by use of a smaller wire attached to the larger wire pair before attaching the fast on terminals and ground etc. Baby powder can help the wires slip thru.

The pickup/control module needs to be heat sinked. This can be done by use of the heat sink compound when mounting to the plate. The bottom of the modules needs to be really flat. To do this get a flat plate and use a piece of sand paper of grit 180 –220 and lightly sand flat until the mounting contact area is bright.

The heat sink compound supplied is old stock and may need mixing the heavy white material with the nearly clear liquid. This may be done prior to opening the capsule. Its important you end up with a uniform thick white paste.

DESIGN NOTE:

The MI reluctor will fit on the HI shaft with some work. The HI shaft needs to be reduced in diameter 0.001” to 0.002”. This can be done using a narrow strip of emery cloth. The important part is the reluctor must be a very light press fit and seat on the shaft flange for the rotor cap to fit properly as well as the vertical spacing on the modules. A few minutes of light sanding and testing worked for me. This mod is very preliminary and a lot is left up to the individual to design.

The MI module is different from both the ND and HI modules as the MI approach is like a electronic points design. The width of the reluctor tab determines the coil power “ON” and power “ON/OFF” is reluctor position controlled and not as in the other cases requiring a speed of passage to trigger. That is to say if power is on and the MI reluctor is aligned with the modules coil current is flowing and this can over heat the coil. Also the coil “ON” or dwell time is not constant as in the GM HEI module but simply a function or the time the reluctor pole takes to pass.

The good part is you get spark from zero rpm on up. The other designs produce spark from approx 400 engine RPM (with 0.005 pole gap). The bad part compared to the GM HEI design is the spark falls off above 4,000rpm or so depending on the coil used and this for a 4 cyl engine.

A major update covering all three designs with detailed info on each design is due very late 2003