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Tach Pod w/Cross Adapter

This product is intended to generate a square wave tach pulse using a "pod" circuit that attaches to any FIE or Mallory band-clamp mag drive with the TWO-PINS style drive on the mag drive shaft top. The pod attaches to the drive housing using the standard timing pointer holes, senses the magnets passing inside the drive and a standard signal is generated for use by tachometers, rev limiters, data loggers, RPM switches, etc.

Installation of cross adapter

Remove the magneto generator and band-clamp from the drive. Also remove the timing pointer (if present) and rubber advance lockout drive diamond or advance weights from the drive bowl. Check to be sure both drive pins are straight. Wiggle them with your finger tips to be sure the welds on the pins aren't broken. Position the round aluminum cross adapter over the pins aligning the holes and push down firmly. In most cases, you'll need to use the wooden or plastic end of a hammer handle or such to drive the adapter down on the pins ALL THE WAY until they contact the shoulders. Be sure to use something fairly SOFT to drive the aluminum piece down so the top edges of the female cross pocket are not damaged during installation!

Installation of ALUMINUM cross on magneto

Holding the old mag driver stationary with an adjustable wrench, remove the nut and washer from the bottom of the magneto. Sometimes the old driver will pull right off. Other times, a battery terminal puller or small gear puller is needed to remove it. Inspect the shaft and key. Use the new supplied key if needed. Push the new cross on while watching to ensure the woodruff key doesn't rotate out of the key seat. MAKE SURE the key is in place as you assemble. Place the AN washer over the shaft and tighten the supplied nyloc nut firmly to secure the cross. For best results, always use an **ALUMINUM** cross driver on the magneto, not steel!

Installation of Tach Pod

Use the two supplied #6-32 socket head cap screws and lock-washers to secure the pod to the bowl in place of the timing pointer. **NOTE:** Don't skip the washers! The washers ensure the correct engagement of the two screws. Without them, the screws could rub on moving parts inside. A bit of loc-tite or silicone on the threads is suggested.

Programming your devices

Set your tachometer devices to "4 CYLINDER" operation. Sometimes this is a programmable option, other times you must cut wire loops on the device for 4 cylinder operation. Since this unit utilizes 4 magnets per revolution and the magneto spins at HALF of engine speed, it emulates 4 cylinder operation.

Connections

RED – 12 VDC (9 to 18 volts is acceptable)
BLACK – Ground or battery negative
GREEN – Tach signal out

When connected, the tiny red LED on the side of the tach pod will be illuminated between magnets and as magnets pass the sensor, the LED will turn OFF. At cranking speed, you should see the LED blinking as magnets pass it. At idle speed, the LED will appear to be on all the time.

The circuit will create a square wave pulse output that is approximately whatever the input on the RED wire is. Example: connected to 16VDC, the unit will output a 16VDC square wave pulse. Make sure your input voltage to this unit matches the requirements of the tach device you're connected to.

Troubleshooting: Using a voltmeter set to read 12VDC, connect between BLACK (Ground) and GREEN (Signal out). When the LED is ON, you should get a reading of approximately 12VDC (when the RED wire of the unit is connected to 12V). As the magnets pass and the LED turns OFF your meter should read very close to 0.000.

To test your new tach system, connect your mag drive tach pod as above. Spin the mag drive with a cordless drill (out of the engine and without a magneto on it) while watching your tach device(s) and the LED on the tach pod.

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