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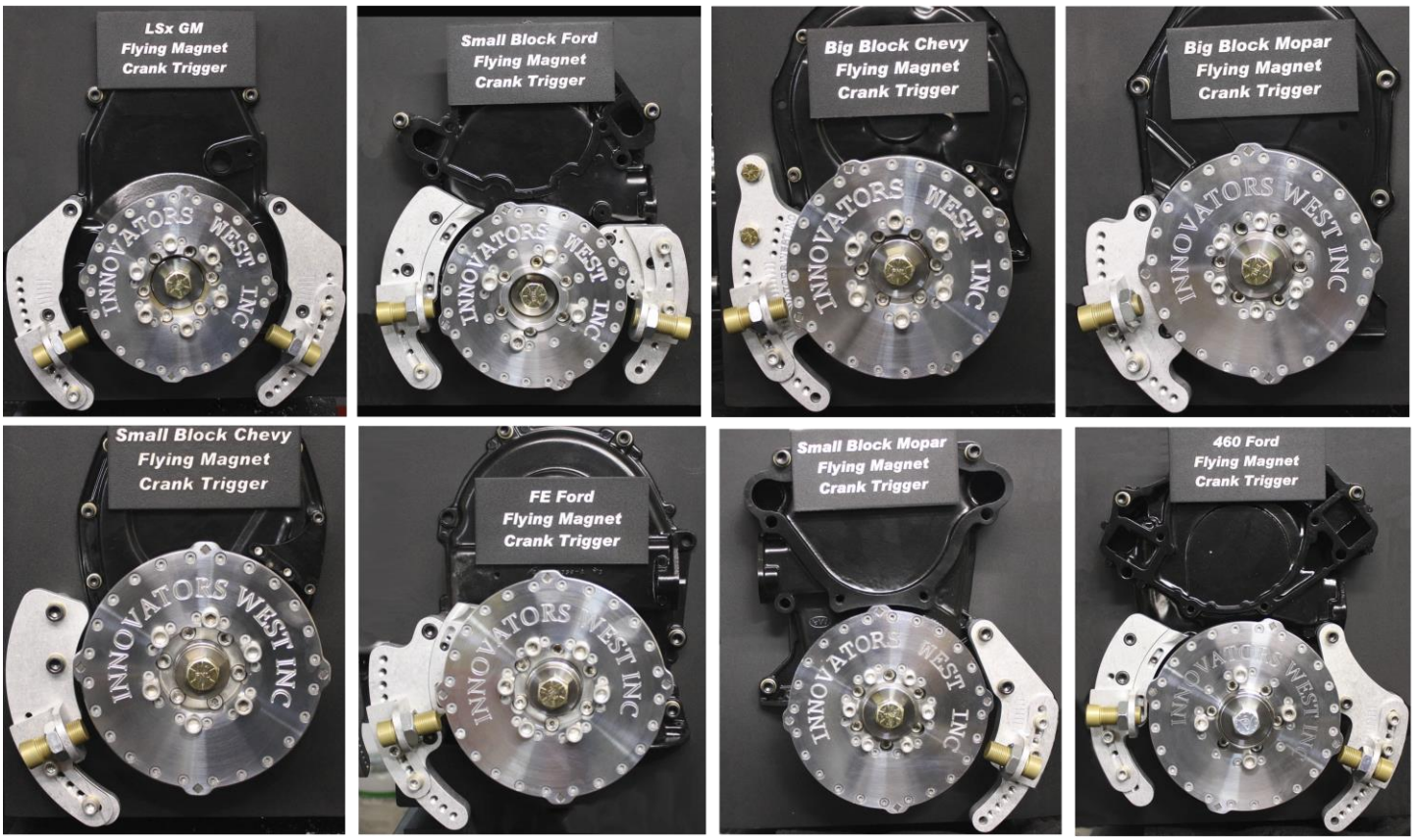
Flying Magnet Crank Trigger
Supplemental Install Instructions



Crank Trigger Video:
https://www.youtube.com/watch?v=Lj0xgO6loQw

Crank Trigger Note:

- **The sensor is available separately unless purchased as a full #7xxx crank trigger kit**
- **The pickup mount is designed for use with any non-magnetic sensor with 3/4" – 16 threads (i.e. Innovators West, MSD or Holley sensors)**
- **Adapters are available to install a M12 or 3/8" thread sensor into our bracket**

Installation

Crank Trigger Bracket:

The crank trigger sensor bracket mounts off of the passenger or drivers' side of the motor. Remove the factory bolts and install the supplied bracket and hardware. Make sure to use red Loctite on all fasteners as the bolts will tend to loosen under the vibrations of a race motor. If purchasing a standalone bolt on crank trigger wheel, please use the included .300" thick spacers in order to position the sensor over the crank trigger wheel. Should you ever want to integrate the magnets into the damper face, you can remove those spacers to bring the sensor back into alignment with the damper.

Crank Trigger Wheel (Standalone or Integrated):

The crank trigger magnets may be integrated into the harmonic damper or can be bolted onto the damper via a separate trigger wheel. The Innovators West standalone crank trigger wheels have registers to allow the crank trigger wheel to register into the factory sized pulley register on the damper and also has a matching factory register on the front side to make sure that any pulley on the front registers and runs true to the engine. The crank trigger wheels are drilled for multiple positioning options to work with multiple different EFI and carbureted applications.

For 12-magnet crank trigger wheels, you can use a sharp punch to fracture and remove one of the magnets for use in a "12-1" EFI application. Please refer to the EFI manufacturer for instructions on how to select the correct magnet to remove.

Accessory Drive Pulley:

If installing an accessory drive pulley or drive mandrel, first make sure that the pulley or mandrel properly locates on the damper or crank trigger wheel. The pulley or mandrel should engage the register on the face of the damper or crank trigger wheel to ensure that it runs true and does not have any runout or wobble. Once registered, make sure to use bolts that have

full engagement into the harmonic damper. Too short of bolts can lead to thread failure in the damper. Too long of bolts can bottom out and leave the pulley or mandrel loose and cause failure or damage.

Setup for EFI applications

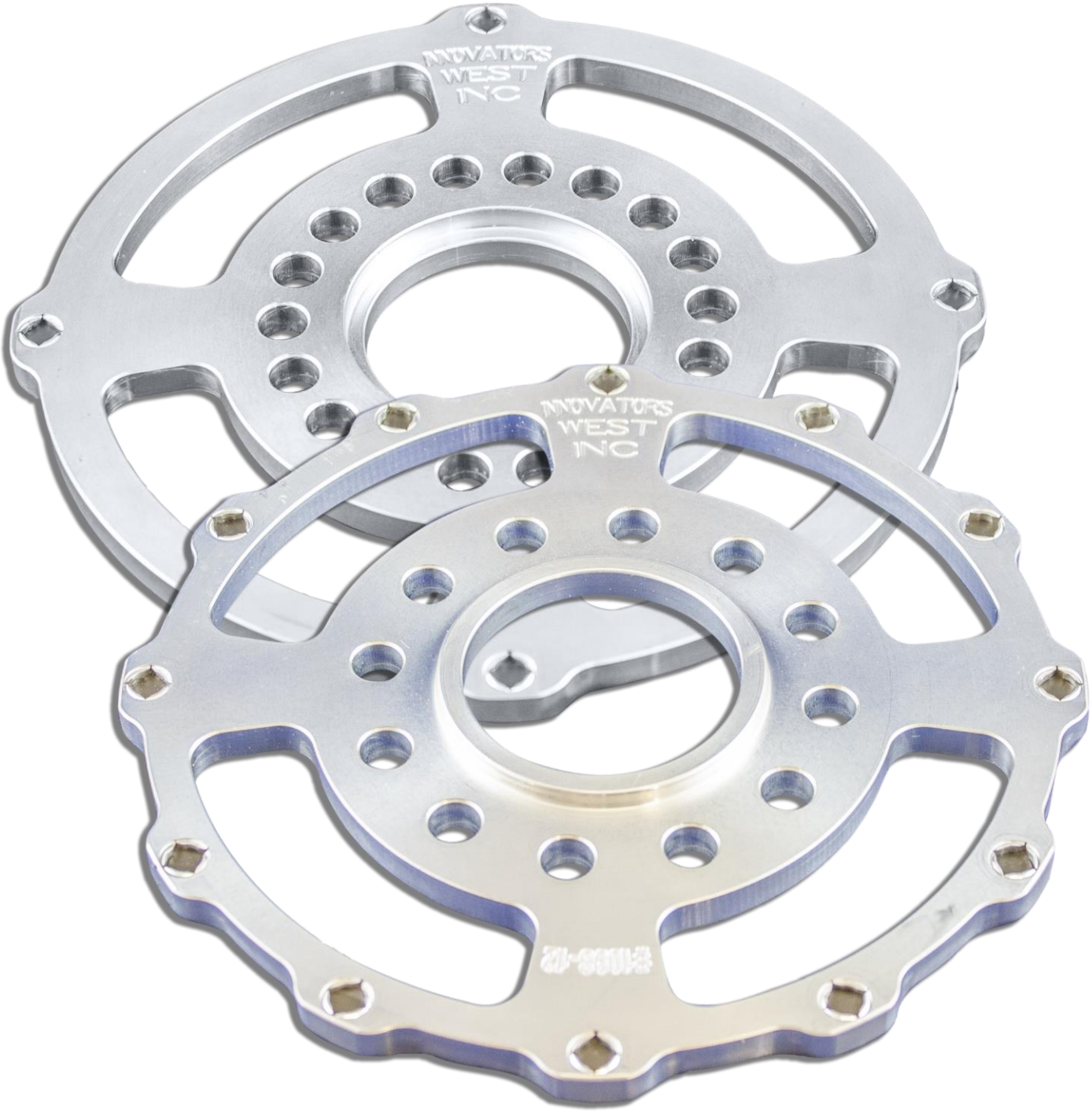
Using a piston stop, rotate the motor over to TDC. Adjust the timing pointer and tighten down the screws to lock it in place. Next, turn the motor over to 50 degrees (see note below) BTDC, number 1 cylinder, compression stroke. In this position, move the crank trigger sensor so that it is centered over the crank trigger magnet. Also make sure that the sensor is centered front to back over the magnet. Lock the sensor bracket in place. You will now need to set the air gap for the sensor. Typical air gap should be between .040" to .080". The low side is deemed by crank flex (possible damage to the sensor if it contacts the magnets) and high side is hard starting to no start. Once set, timing changes will be made within the software provided by the EFI manufacturer.

Note: Different types of engine management systems use different reference points for setting the crank trigger. Generally, the FAST, FAST XFI and BS3 use 50 degrees BTDC. The Accel DFI Gen 7 uses 0 degrees as its reference point. Please consult the EFI manufacturer or your tuner to verify these settings.

Setup for Carbureted applications

Using a piston stop, rotate the motor over to TDC. Next, turn the motor over to XX degrees (see note below) BTDC, number 1 cylinder, compression stroke. In this position, move the crank trigger sensor so that it is centered over the crank trigger magnet. Also make sure that the sensor is centered front to back over the magnet. Lock the sensor bracket in place. You will now need to set the air gap for the sensor. Typical air gap should be between .040" to .080". The low side is deemed by crank flex (possible damage to the sensor if it contacts the magnets) and high side is hard starting to no start.

Note: XX Degrees – This setting will be your timing setting for the motor. If you desire a total of 36 degrees of timing, then you will rotate the motor over to 36 degrees BTDC and at that point you will set your crank trigger sensor. The sensor will be moved in order to make timing changes.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