2011-2023 Phaser delete / Camshaft Adjuster Installation:

Professional instalation is required.

Refer to Ford Manual for Timing Cover removal. It is always best to start the install process with the crankshaft key facing upwards with #1 cylinder on the compression stroke.

- 1. Remove the Primary Timing Chains from the engine.
- 2. Unbolt the factory Phasers from the camshaft by removing the 3 center bolts (or Single bolt for 2018+ Exhaust)
- 3. Remove the **outer** bolts connecting the phaser assembly from the Gear/sprockets. These are **reverse thread** on 15-17 Models on the **EXHAUST CAMSHAFT**. The **intake Camshafts** phasers bolts are **STD thread**. **DO NOT DISCARD THE REVERSE THREAD BOLTS**, **THEY WILL BE REUSED!!**
- 4. Once the bolts have been removed, dis assemble the phasers 1 at a time so that you are only left with the gears, no other parts will be re-used.
- 5. The MMR exhaust phaser delete/adjuster will slide inside of the factory Exhaust primary gear, be sure to line up the bolt pattern and then install the bolts, these can sometimes be a tight or close tollerance fit. The secondary sprocket will bolt to the back of the MMR phaser delete/adjuster. Hand tighten the bolts until you are ready to degree/adjust the camshafts. Final Bolt torque is 12ft lbs and we suggest loctite on all bolts
- 6. The intake phaser is similar to the exhaust phaser with the exception that it does not have a primary gear attached to it. For the intake phaser delete/adjuster, simply line up the bolt pattern and bolt it to the factory secondary sprocket. Hand tighten the bolts until you are ready to degree/adjust the camshafts. Final Bolt torque is 12ft lbs and we suggest loctite on all bolts

Re-assemble and Time the Engine Per the Factory Ford Manual. **Basic Timing chain installation instructions can be found on the MMR youtube channel.**

You will need to degree your camshafts prior to re-assembling the engine. This process should be done by qualified personel only. Incorrect cam timing will cause bent valves and possible engine damage.