

Checking/Adjust [injection Timing](#)

This procedure should be used after an injection pump installation or when injection timing needs to be checked or adjusted. A scan tool must be used to check or adjust injection timing. A static timing mark can be used as a reference. If a static timing mark is not present on the injection pump mounting flange, one can be scribed to further assist in how far the injection pump needs to be rotated.

NOTE: There will be no change in engine performance or vehicle driveability if the [injection timing](#) is advanced during the Time Set procedure. The injection timing must be set to the Injection Timing Specifications. If the injection timing is not set correctly, a possible DTC P0216 may set (see DTC P0216, the Conditions for setting the DTC). Refer to **Diagnostic Tables** . [See: Computers and Control Systems\Testing and Inspection](#)

1. Start the engine.
2. Allow the engine to idle at the normal operating temperature.
3. Install the scan tool.
4. Use the scan tool in order to activate the Time Set (if the Time Set has been activated correctly, Des. Inj. Time on the scan tool will read 0.0 degree).

NOTE: The Act. Inj. Time value on the scan tool will fluctuate. The Average reading should be **3.5 degrees** .

5. The Act. Inj. Time (scan tool display) should be approximately 3.5 degrees. If not, continue to step 6.

NOTE: If the engine stalls during the Time Set activation, slightly (1 mm equals 2 degrees) rotate the injection pump toward the driver side of the vehicle, tighten the flange nuts and repeat the Time Set.

6. If the [injection timing](#) needs to be adjusted, continue. If not, this indicates that the adjustment is complete.
7. With the engine OFF, use the J 41711 in order to loosen the injection pump flange nuts.
8. Use J 29872 in order to slightly rotate the injection pump.
9. Set the Act. Inj. Time to **3.5 degrees** .

NOTE: It is normal for Act. Inj. Time value on the scan tool to fluctuate. The average fluctuation of the Act. Inj. Time should be **3.5 degrees** .

10. Continue to repeat until the average fluctuation of the Act. Inj. time is **3.5 degrees** .
 - If the Act. Inj. Time is above 3.5 degrees, SLIGHTLY (1 mm equals 2 degrees) ROTATE THE INJECTION PUMP TOWARDS THE PASSENGER SIDE OF THE VEHICLE.
 - If the Act. Inj. time is below 3.5 degrees, SLIGHTLY (1 mm equals 2 degrees) ROTATE THE INJECTION PUMP TOWARD THE DRIVER SIDE OF VEHICLE.