

# ENGINE ADJUSTMENTS

**NOTE:** *UNIVERSAL recommends that the following engine adjustments be performed by a competent engine mechanic. The information below is provided to assist the mechanic.*

## IDLE SPEED ADJUSTMENT & TACHOMETER CHECK (New Installation)

### Checking the Idle Speed

Use a photoelectric-type tachometer to check the idle speed.

**NOTE:** *In a new installation having new instrument panels, the tachometer may not always be correctly calibrated to the engine's rpm. This calibration should be checked in all new installations.*

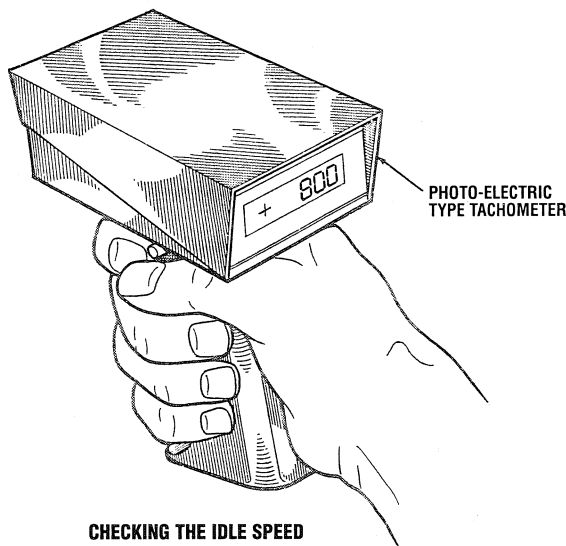
1. Warm up the engine to normal operating temperature. Remove any specks on the crankshaft pulley with a clean cloth and place a piece of suitable reflecting tape on the pulley to facilitate the use of the tachometer.
2. Start and idle the engine.
3. Aim the light of the tachometer onto the reflecting tape to confirm the engine speed. Check the instrument panel tachometer reading. Adjust the tachometer in the panel by using the instrument calibration pod as needed to bring the instrument panel tachometer into the same rpm reading as the engine.
4. Adjust the idle speed if the engine speed is not within the specified value.

### Normal idle speed:

Model M-25XPB: 1000 – 1200 rpm

Model M-35B: 800 – 1000 rpm

Model M-40B: 800 – 1000 rpm



### Adjusting the Idle Speed

1. Loosen the locknut on the idle adjustment bolt on the fuel injection pump.
2. Turn the idle adjustment bolt until the idling speed is within the standard range. The idle speed will increase when the adjusting bolt is turned clockwise and decrease when the bolt is turned counterclockwise.
3. Tighten the locknut.
4. Race the engine several times to ensure the idle speed remains as set.

**NOTE:** *Should the engine rpm be in question, verify the tachometer readings as shown at the instrument panel with a mechanical or strobe-type tachometer at the engine crankshaft.*

