

INSTALLATION OF THE ROAD SPEED SENSOR/Magnets & Pick-up Coil

WARNING

Never get under any vehicle held up by a jack only. Use jack stands or ramps. Do not use concrete blocks to support a vehicle. The web of a concrete block will not support a vehicle. Always chock the wheels of the vehicle and set the parking brake. Failure to follow safe jacking procedures will endanger your life.

Identify your **Cruise Control System** by matching it to **Figure 1** or **Figure 2** below OR **Figure 3** on page 2. For U.S. vehicles and **Cruise Controls**, use only one (1) Magnet for a Rear Wheel Drive and two (2) Magnets for a Front Wheel Drive Type. For **European** vehicles (calibrated in kilometers/hour) with a **metric Cruise Control** (Reference Part Number 250-1204 or 250-1205), use two (2) Magnets for a Rear Wheel Drive and four (4) Magnets for a Front Wheel Drive.

FIGURE 1: When using Magnet and Pick-up Coil with Cruise Control Module pictured in **Figure 1:**

- 1) Set switches **1 to 10** for your engine and transmission type as shown in the **Owner's Manual**.
- 2) Change switches **3, 4, and 5** as shown in **Figure 1**.
- 3) Use **Black** connector on **Blue** and **Gray** wires from **Pick-up Coil** and plug into mating connector of **Cruise Control Harness**, matching **Gray** to **Gray** and **Blue** to **Black**.

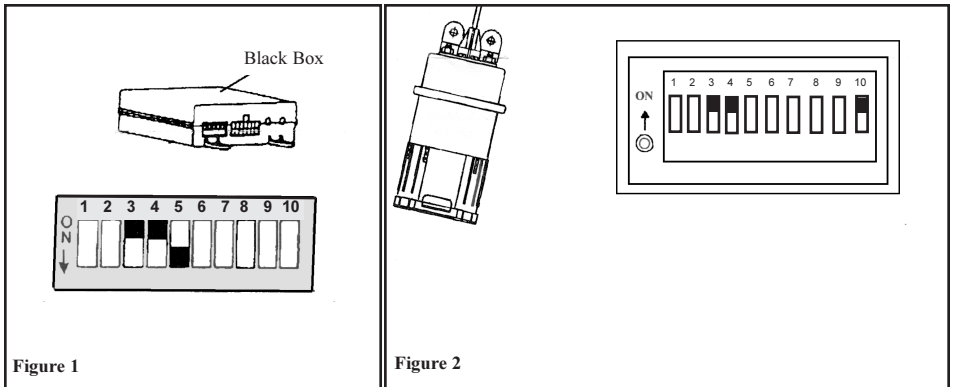


Figure 1

Figure 2

FRONT WHEEL DRIVE
2 MAGNETS (US)
4 MAGNETS (EUROPEAN)

or

REAR WHEEL DRIVE
1 MAGNET (US)
2 MAGNETS (EUROPEAN)

FIGURE 2: When using Magnet and Pick-up Coil with either Cruise Control pictured in **Figure 2:**

- 1) Set switches **1 to 10** for your engine and transmission type as shown in the installation manual.
- 2) Then change switches **3, 4, and 10** as shown in **Figure 2**.
- 3) Use **Black** connector on **Blue** and **Gray** wires from **Pick-up Coil** and plug into mating connector of **Cruise Control Harness**, matching **Gray** to **Gray** and **Blue** to **Black**.

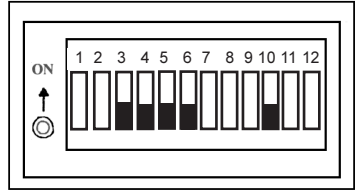
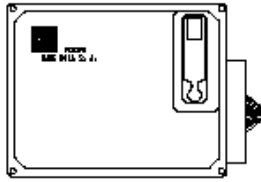


Figure 3

FRONT WHEEL DRIVE

or

REAR WHEEL DRIVE

2 MAGNETS (US)

1 MAGNET (US)

4 MAGNETS (EUROPEAN)

2 MAGNETS (EUROPEAN)

FIGURE 3: When using Magnet and Pick-up Coil with either Cruise Control pictured in Figure 3:

- 1) Set switches **1 to 12** for your engine and transmission type as shown in the installation manual.
- 2) Then change switches **3, 4, 5, and 6(2000 ppm) and 10 (Sine Wave VSS)** as shown in **Figure 3**.
- 3) Use **Black** connector on **Blue** and **Gray** wires from **Pick-up Coil** and plug into mating connector of **Cruise Control Harness**, matching **Gray to Gray** and **Blue to Black**.

For Rear Wheel Drive Vehicles

- (1) Raise and safely support vehicle so you can work right behind transmission. *See Warning*
- (2) Bolt **Road Speed Pick-up Coil** to thinner bracket (or drive shaft guard) using **1-1/2" long bolt** and stamped nut tighten to (20-30 in-lbs Torque). Too much torque will damage the coil wire end of Coil that is against bracket.
- (3) Under vehicle, hold bracket against floor pan on driver's side (no closer than 6" from converter) so Coil bolt head is **3/4" plus or minus 1/4"** from drive shaft and not more than **12"** in back of the front U-Joint. Bend the bracket as needed to make the **Pick-up Coil** point at a spot on the middle of the drive shaft, and mark that spot for Magnet location. While holding the bracket in that position, mark floor pan through two of the bracket holes. Use hole as far apart as possible.
- (4) Drill or punch **two 3/16" holes** in the floor pan. Before drilling, fold carpet inside car back out of the way and make sure drill will not damage anything when it passes through the floor pan.
- (5) Fasten bracket with **two 1/4" x 3/4" long tapping screws**. **Figure 4**

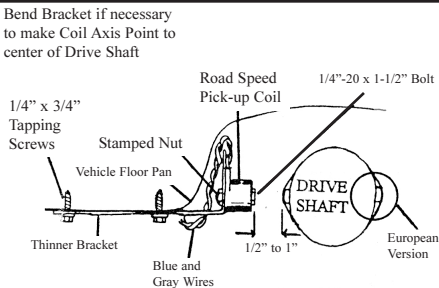


Figure 4

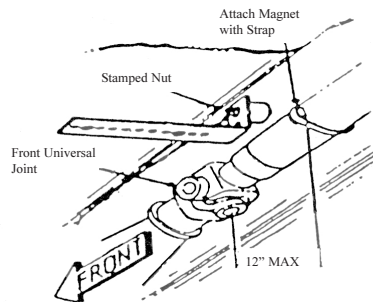


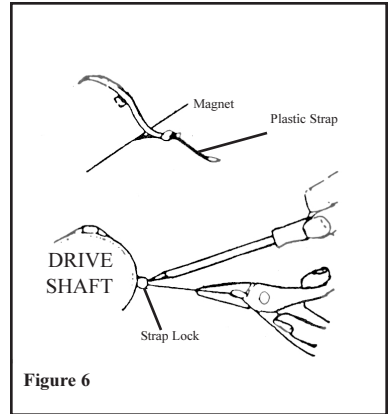
Figure 5

For Rear Wheel Drive Vehicles (continued)

- (6) Place Magnet (2 Magnets 180 degrees apart on European version) on spot marked on the drive shaft. Secure Magnet with long plastic tie strap. Be sure ribbed side of strap is against Magnet and seated between two ribs on Magnet casing. Feed strap end through strap lock and pull strap tight. **Figure 5 on page 2**
- (7) Place blade of screwdriver against strap lock and use pliers to pull on strap end. Use about as much force as would be required to lift 15 pounds. Cut excess strap flush to **1/16"** from lock. **Figure 6**
- (8) Run **Blue** and **Gray** wires from **Coil** along floor pan to area where regulator is mounted. Use wire ties to fasten wires to speedometer cable, frame, tubing, and other parts of vehicle. Plug into road speed input socket on **Cruise Control Module** or **Cruise Control Harness**.

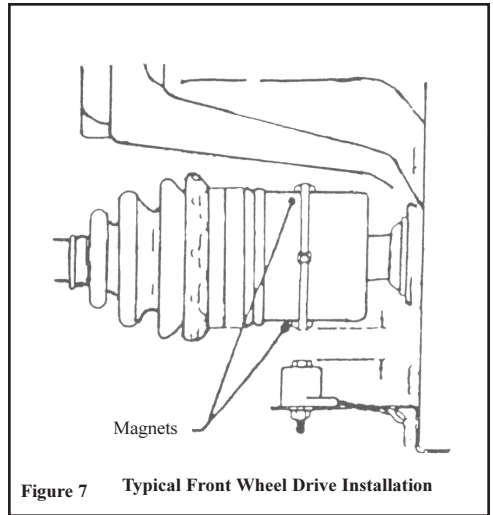
CAUTION: Be sure wires are routed away from exhaust pipes, shift rods, or any other hot or moving parts.

- (9) Now you can lower the vehicle. Continue installation of **Cruise Control** following the instructions in **Owner's Manual**.



For Front Wheel Drive Vehicles

- (1) Raise and safely support vehicle so you can work near the front axle. **See Warning**
- (2) Two Magnets are required on vehicles with Front Wheel Drive (4 Magnets on European version). The Magnets should be installed inboard of the CV joint (covered by a rubber boot). They should be located 180 degrees apart (90 degrees on European version) on the rotating housing of either the left or right axle. Choose the side where the Magnet is not apt to strike the transmission when vehicle is on the ground. **Figure 7**
- (3) Next choose a transmission housing bolt (or a nearby member that can be drilled) for mounting the **Pick-up Coil** bracket. The bracket may be drilled, bent, twisted, shortened or notched so that when the **Road Speed Pick-up Coil** is attached, the Coil bolt head will be **1" plus or minus 1/4"** from the Magnet. The Coil should point approximately to the center of the axle.
- (4) Drill and form bracket as needed, then attach Coil with **1-1/2" long bolt and 1/4" stamped nut**. Wire end of Coil to be against bracket, bolt head to be at other end of Coil. Tighten nut to **(20-30 in-lbs Torque)**. Too much torque will damage the coil wire end of Coil that is against bracket.



For Front Wheel Drive Vehicles (continued)

- (5) Do not install Coil and bracket, but hold that assembly in its installed position. Mark spot on axle housing in line with Coil bolt. Lay bracket aside.
 - (6) Place (1) Magnet on spot marked and place second Magnet 180 degrees (90 degrees on European version) from the first Magnet. (On European version, place each successive Magnet 90 degrees from the last until all (4) Magnets are installed.) For proper function, center of Magnets must pass Coil within the width of the Coil bolt head.
 - (7) Secure Magnets in position with **14" long tie strap**. Strap must have ribbed side against Magnets and must pass between ribs on Magnet casings. Feed strap end through strap lock and pull strap tight. Place blade of screwdriver against strap lock and pull against strap lock. Pull on end of strap with pliers. Use about as much force as would be required to lift 15 pounds. Cut excess strap flush to 1/16" from lock.
 - (8) Mount Coil bracket in position chosen. If cross member is used, drill 3/16" holes and attach with **1/4" tapping screws**. If transmission bolt is used, drill bracket as required and tighten bolt to **(25 ft-lbs Torque)**. Bend bracket over edge of case to prevent turning. Re-check gap between Coil bolt and Magnet.
 - (9) Route **Blue** and **Gray** wires from Coil up to where they can be reached in engine compartment then lower vehicle. Route wire to regulator and plug into road speed input socket on **Cruise Control Module** or **Cruise Control Harness**.
- CAUTION: Be sure wires are routed away from exhaust pipes, shift rods, or any other hot or moving parts.**
- (10) Continue installation of **Cruise Control** following the instructions in **Owner's Manual**.

