Assembly Instructions (ALL MODELS) V1.0

Before you begin

- Read all instructions thoroughly.
- Observe all warnings and cautions.
- Use a clean, well-lit worksurface.
- Use caution when handling static sensitive circuit boards.

AA BB CC DD

HH

GGa

ННа

Hardware included

- AA 1) or 2) 5/16" grommet (model dependent)
- BB 2) #8 X ¾ screw
- CC 2) #8 lock washer
- DD 2 #8 X ½" X round spacer
- EE 2) #3 X 5/16" screw
- FF 2) #3 lock washer
- GG 2) #4 X 9/32" nylon screw (exc C6726)
- HH 2) #4 X 3/32 round spacer (exc C6726)
- GGa 2) #4 X 3/8" screw (C6726 only)
- HHa 2) #4 X 5/32 round spacer (C6726 only)
- JJ 2) #4 locknut (C6726 only)
- KK 1) nylon needle shaft bushing
- LL 1) spade terminal to screw lug adapter
- MM 1) tube adhesive
- NN 1) programming tool



STEP 1 - Disassemble speedometer

• Remove needle from speedometer by simultaneously pulling and rotating the needle counterclockwise.

 Remove all other components from speedometer frame except armature (rotating magnet).

Apply light oil to armature bushing (i.e. 3-IN-ONE oil).

STEP 2 - Digital Electronics Installation

- Snap grommet AA into rear of speedometer frame as shown in Figure 1.
- Carefully remove digital speedometer assembly from anti-static bag. Handle boards by edges.
- Rotate motor shaft using fingers fully counterclockwise.
- Thread wires through grommet as shown in Figure 2.
- Fasten Main Board to speedometer frame using two each of BB, CC and DD hardware as shown in Figure 3.
- Fasten Odometer Display Board to frame using two each of EE and FF hardware as shown in Figure 4.

STEP 3 - Dial Plate and Needle Installation

- Remove protective film from odometer display(s).
- Attach dial plate to Display Board using GG and HH. Late model cars using kit C6726 use parts GGa, HHa and JJ.
- Apply a small amount of adhesive MM to needle as shown in Figure 5. Press needle shaft bushing KK onto needle and <u>allow to cure</u>.



Figure 5 Needle

Bushing

Figure 4 Display Board

Figure 5 Needle adhesive

- Caution Do not allow adhesive to get on small end of bushing.
- **GENTLY** press needle and bushing assembly onto stepper motor shaft at the 12 O-clock position. Use care not to damage motor shaft.
- Rotate needle counterclockwise to align with zero (0) MPH mark on dial plate.



Figure 3 Main Board

STEP 4 - Install Speedometer in Dash Cluster Housing

- Feed wires through hole in speedometer housing.
- NOTE Early and Late non-Spyder and non-CORSA models require a hole to be drilled into the rear metal housing to allow the wires to egress. Use the template in Figure 11 below with a center punch to mark the rear of the housing and drill a 5/16" hole into the housing. Snap in grommet AA as shown in Figure 6.



Figure 6 Housing Hole

- Install spade terminal LL onto +12V (positive terminal) of fuel gauge. Plug speedometer positive lead into spade terminal as shown in Figure 7.
- Install speedometer ground wire ring terminal under an existing housing mounting screw.



Figure 7 Fuel Gauge Power Tap

Programming your Vairtrix Digital Speedometer

The Vairtrix digital speedometer uses a pushbutton switch (Figure 8) located on the top of the main circuit board to access a menu system on the odometer display. From the menu, you can change the following parameters:

- Revolutions Per Mile (RPM)
- Initial odometer setting
- Display brightness



Figure 8 Menu Button

The unit must be powered to use the menu system. Connect a 9-volt battery using clip **NN** to power the unit on the bench as shown in Figure 9.

DO NOT REVERSE THE



Figure 9 Bench Programming



Figure 10 Menu

BATTERY LEADS OR DAMAGE TO THE UNIT WILL RESULT!

To navigate the menu, repeatedly press the switch briefly to scroll through the menu items (Short Press). To select an item, press and hold the switch (Long Press). To go back to the previous menu level, select the ← entry.

Revolutions Per Mile (RPM) Alternative Programming Method

- The factory RPM setting (825 RPM early models, 1000 RPM late models) may be changed for different wheel/tire sizes and/or rear differential gearing <u>after</u> the speedometer is installed in the vehicle using the following procedure:
 - For the highest accuracy, ensure tires are properly inflated
 - Locate a safe area of road with known mile markers
 - Stop the vehicle at the first mile marker.
 - Turn the ignition switch off and then back on 8 times. A counter on the display will indicate the number of off/on cycles. After 8 cycles, the odometer will display "SET RPM"
 - Drive to the second mile marker and stop the vehicle.
 After 10 seconds, the new RPM value will be saved.

Drill 5/16" hole

TOP

BOTTOM

Figure 11 Housing Hole Template

To reset the Trip Odometer, turn the ignition switch OFF and back ON 3 times.

Trip Odometer Reset (Spyder and CORSA models with dual display only)