



CAUTION: CAREFULLY READ INSTRUCTIONS BEFORE PROCEEDING

OVERVIEW

The auxiliary power supply described in this tech note allows customers using WEGO units on vehicles without a factory ECM to connect a manifold absolute pressure (MAP) sensor that requires +5 volt power. The auxiliary power supply is based on an inexpensive TDK DC/DC converter. Construction requires expertise in soldering and access to appropriate tools.

The TDK DC/DC converter is rated for a maximum input of 18 volts. We do not recommend using this auxiliary power supply on vehicles with 16 volt battery systems as there may not be sufficient safety margin to avoid exceeding this maximum input voltage.

MATERIALS

The TDK DC/DC converter P/N CC1R5-1205SF-E is available from Digi-Key (www.digi-key.com) as their P/N 445-2452. The DC/DC converter is mounted in a small Hammond P/N 1590LLB die cast aluminum housing available as Digi-Key P/N HM948. You will also require a strain relief bushing such as Digi-Key P/N RP462 and 20 AWG stranded tinned copper wire such as General Cable P/N C2040 also available from Digi-Key in various colors. Do not attempt to use heavier gauge or untinned (plain copper) wire.

CONSTRUCTION

Refer to Figures 1 and 2. Drill a hole in the side of the housing for the bushing. Secure the TDK DC/DC converter to the housing. You can use 3M double coated foam tape. Epoxy and other types of glues may not hold well to the metal surfaces. We suggest that you download the TDK data sheet from the Digi-Key website and refer to it for pin orientation and numbering. The wiring diagram in Figure 2 shows the same orientation as the completed assembly shown in Figure 1. Carefully solder the wires using a fine tipped solder iron and rosin core solder.

If the unit will be used in a high vibration race environment, we suggest that you fill the housing with hot melt adhesive after testing to verify proper operation.

Figure 1 – Completed Auxiliary Power Supply



HOOKUP

Refer to Figure 2. You can use this same hookup for any WEGO series unit with an analog input and any standard 1, 2, or 3 bar GM MAP sensor. Connect the ground for the auxiliary power supply to the same location used for the WEGO signal ground (thin black wire). Since the housing is not environmentally sealed, the auxiliary power supply should be mounted in a dry location.

Figure 2 – Typical MAP Sensor Hookup Using Auxiliary Power Supply

