HIGH IDLE KIT, DIESEL

Model 091-84-GM1

Note:

This system for use on vehicles with GM 6.5L diesel engine

1995, 1996, 1997, 1998 & 1999 Models

SINCE 1967, DESIGNERS OF INNOVATIVE PRODUCTS

KUSSMAUL ELECTRONICS COMPANY, INC.

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INTRODUCTION:

The 091-84-GM1 system is designed to provide a high idle control for the GM 6.5L diesel. The 091-84-005 ENGINE IDLER module permits a vehicle operator to manually place the engine in high idle in order to obtain more alternator output. When used in conjunction with the 091-84-004 VOLTAGE MONITOR module (optional), the engine will automatically go into high idle when a battery voltage of less than 12.5 volts is detected. The transmission must be in Park/Neutral and the brake pedal not depressed.

DESCRIPTION:

The system is wired as illustrated in figures 1 and 2. The ENGINE IDLER interfaces with the Park/Neutral switch and the brake switch. When high idle is commanded the relay is energized to make the necessary connections to the ECM on the engine. When the VOLTAGE MONITOR is installed, the ENGINE IDLER is automatically commanded to the high idle mode whenever a low battery is detected.

The 091-84-004 VOLTAGE MONITOR contains 3 LED indicators to indicate High, Low or Normal voltage. The High indicator illuminates when the battery voltage is greater than 15.6 volts. The Low indicator illuminates when the battery voltage is less than 12.5 volts. When the voltage is between 12.5 and 15.6 the Normal indicator is lit.

INSTALLATION:

Figures 1 and 2 show installations for the 1995 and 1996 GM/6.5L diesel engines. Install the wiring as shown in either of the figures.

OPERATION:

The High Idle system can be turned on manually or automatically provided that the Park/Neutral and Brake Pedal interlocks are satisfied. Manual operation is initiated by depressing the "On" push-button on the Engine Idler module. Automatic operation is initiated by the Voltage Monitor module when it detects a battery voltage of less than 12.5 volts.

High Idle is disabled under any of the following conditions:

1. Operator depresses the "Off" push-button on the Engine Idler.
2. Operator depresses the brake pedal.
3. Operator places the transmission into drive or reverse.
4. Operator turns off the ignition switch.

TEST PROCEDURE:

1. With the transmission switch in PARK turn the ignition switch to the Accessory position. The LED on the Engine Idler should remain Off.

2. Press the "ON" switch on the Engine Idler. The LED on the Engine Idler should turn ON.

3. Move the transmission to Drive or Reverse. The LED on the Engine Idler should turn OFF.

4. Place the transmission in PARK and press the "ON" switch to turn the LED ON again.

5. Depress the Brake Pedal. This should turn the LED OFF.

NOTE

Steps 1 through 5 are valid only if the battery voltage is greater than 12.5 volts. If less than 12.5 volts, the Voltage Monitor may turn on the High Idle system.

6. Start the engine and allow it to warm up with the transmission in PARK mode.

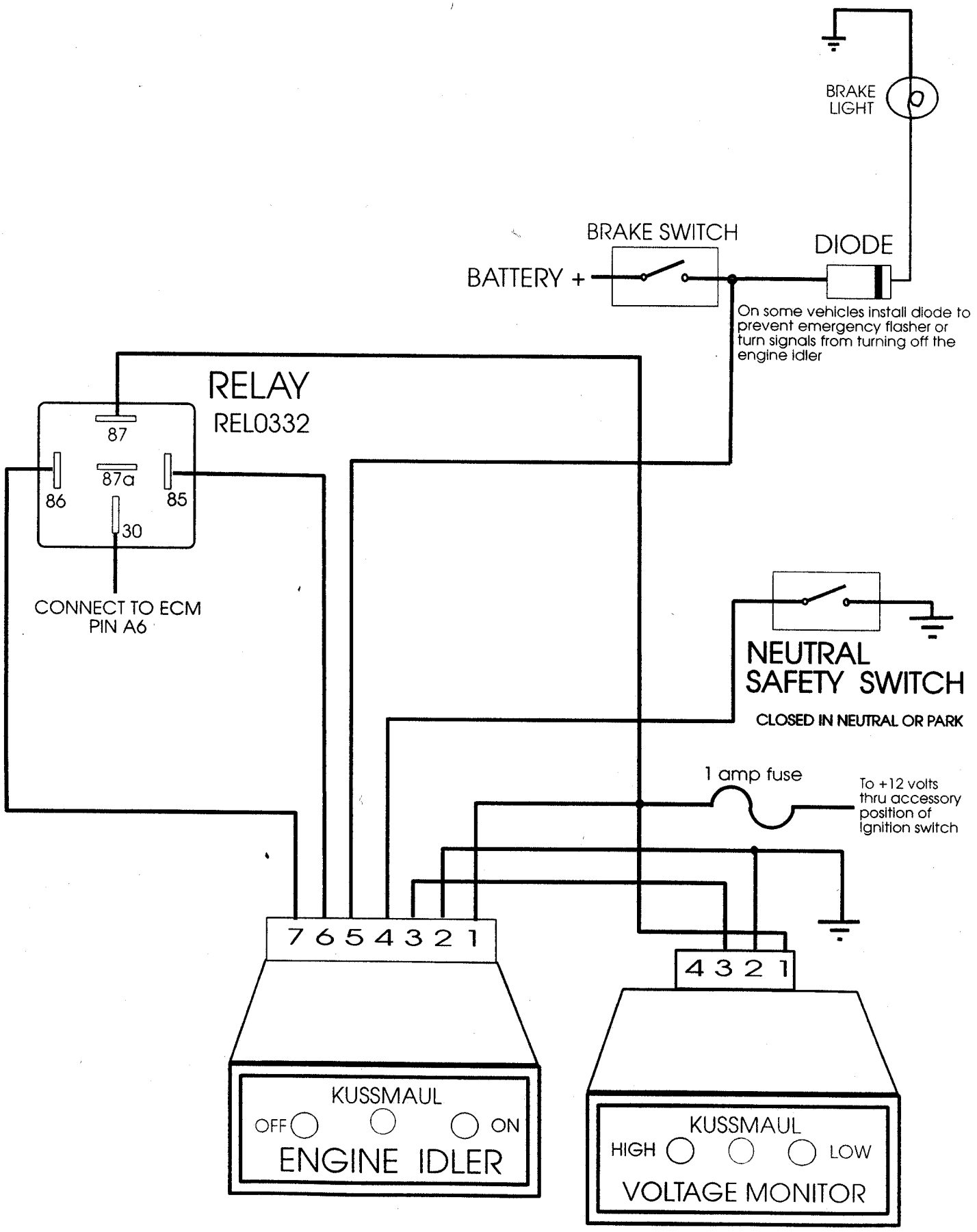
7. Depress the ON switch on the Engine Idler and verify that the engine RPM is the desired amount for the high idle.

8. Load the electrical system by turning on the headlights, area lights or other accessories. Note that when the voltage drops below 12.5 volts, the following occur:

a. The Low indicator on the Voltage Monitor will illuminate.

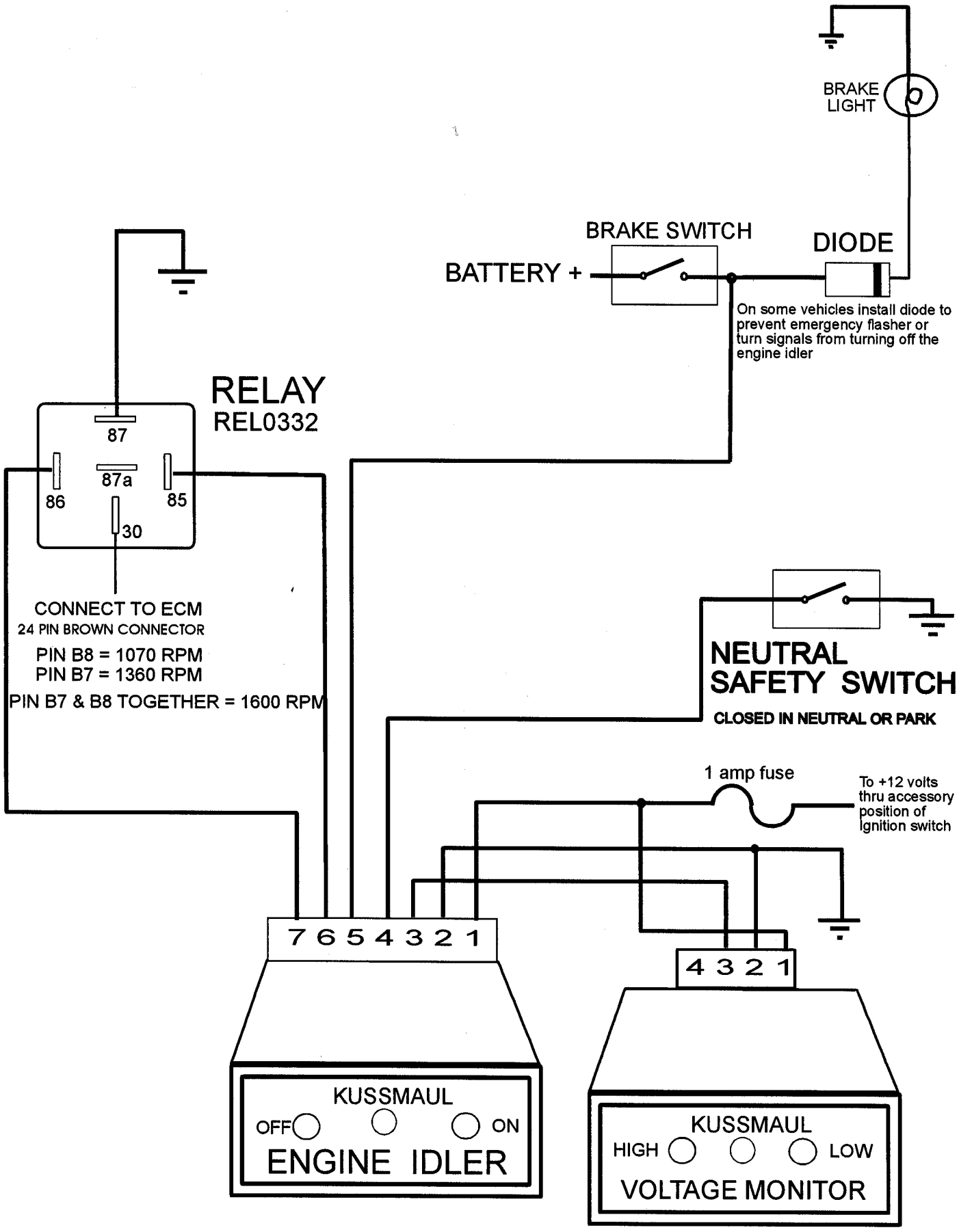
b. The indicator on the Engine Idler will illuminate.

c. The High Idle System will be activated and the engine will be speeded up.



VOLTAGE MONITOR & ENGINE IDLER
INSTALLATION AND WIRING DIAGRAM
FOR 1995 G.M. 6.5L DIESEL

Figure 1



VOLTAGE MONITOR & ENGINE IDLER
INSTALLATION AND WIRING DIAGRAM
FOR 1996, 1997, 1998 & 1999 G.M. 6.5L DIESEL

Figure 2

INSTALLATION RECORD & WARRANTY

Date Installed_____

Installed By_____

Vehicle Identification_____

Vehicle Owner_____

WARRANTY

All products of Kussmaul Electronics Company Inc. are warranted to be free of defects of material or workmanship. Liability is limited to repairing or replacing at our factory, without charge, any material or defects which become apparent in normal use within 3 years from the date the equipment was shipped. Equipment is to be returned, shipping charges prepaid and will be returned, after repair, shipping charges paid.

Kussmaul Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmaul Electronics Company, Inc. products. The purchaser, by the acceptance of the equipment, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or its employees or others.