Biondo Racing Products Electric Solenoid Shifter (#ESS)

Installation Instructions

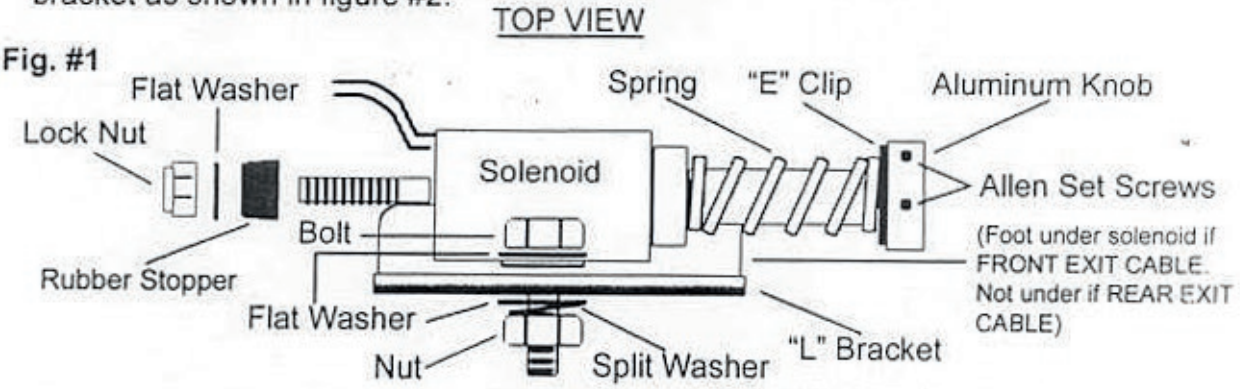
Our electric solenoid shifter (#ESS) is a normally closed solenoid. This means that it needs 12 volts to stay in its "cocked" or "loaded" position. When 12 volts is taken away via an rpm activator switch etc, it releases and will push your shifter into high gear. This is a fail-safe design and will bring you years of reliable service.

We have provided hook-up instructions to some of the more popular shift controllers. We recommend you call the manufacturer of your shift controller if your shift controller is not shown. Be sure you tell them you have a "normally closed" electric solenoid.

---

1) Because shifters vary in size and shape each assembly must be custom tailored to your application. Use these diagrams as a basic guideline. Assemble solenoid to the bracket as shown in figure #2.

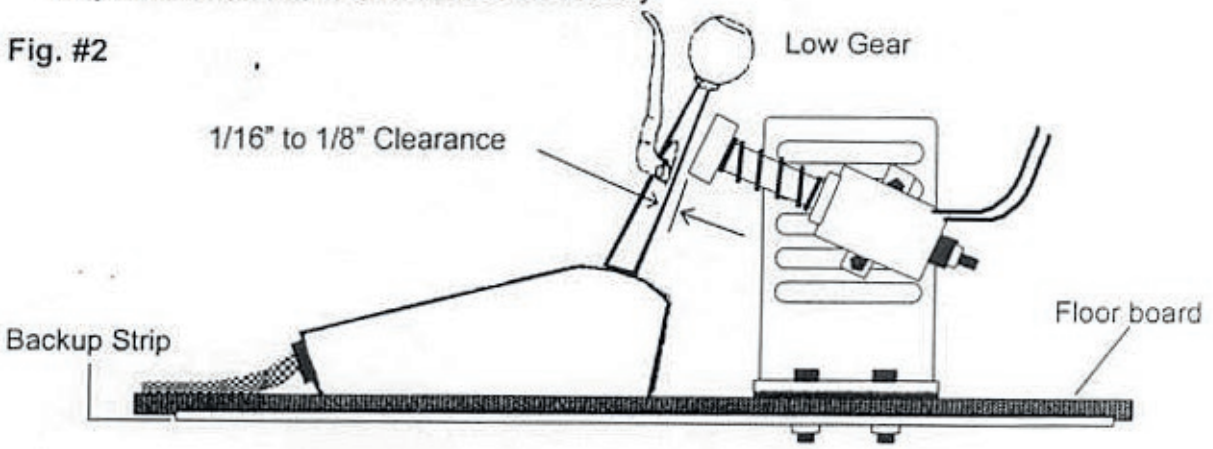
Fig. #1



(Use the same pattern on the bolts, washer, etc.to fasten the L-bracket to the transmission tunnel/floor)

2) Turn on power and pull back the knob of the solenoid until it locks. Put shifter in low gear. Mount bracket and adjust solenoid so it will hit high on the shift handle (as per figure 2). Adjust the clearance as shown. Stroke may be shortened by adjusting the lock nut on the back of the solenoid. It may be good idea to use a backup strip under the floorboards. Also check for .000 - .050 clearance in high gear. Adjust stroke end, or bracket as necessary.

Fig. #2

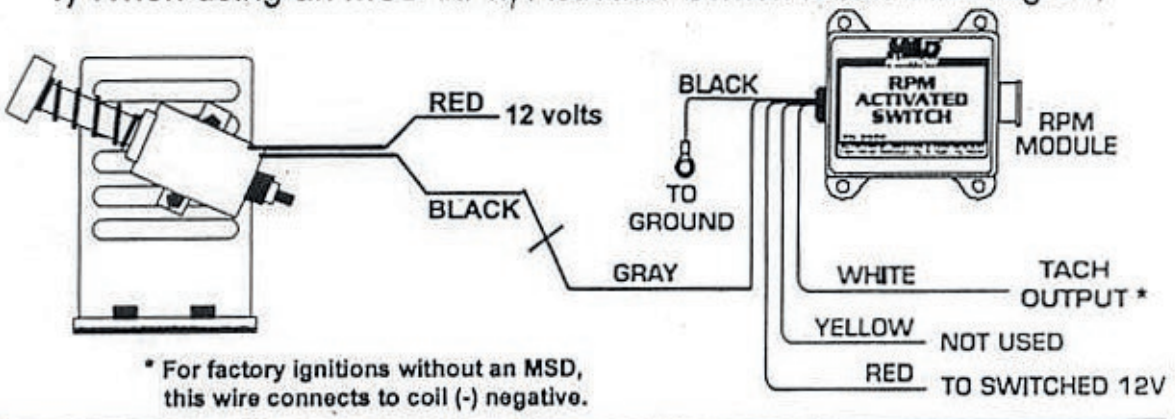


3) Check unit by installing a 3000 chip and check for proper shifter operation.

***The solenoid can reach temperatures up 180 degrees. This is alright, and although it may at times get fairly hot, this solenoid only draws one amp.**

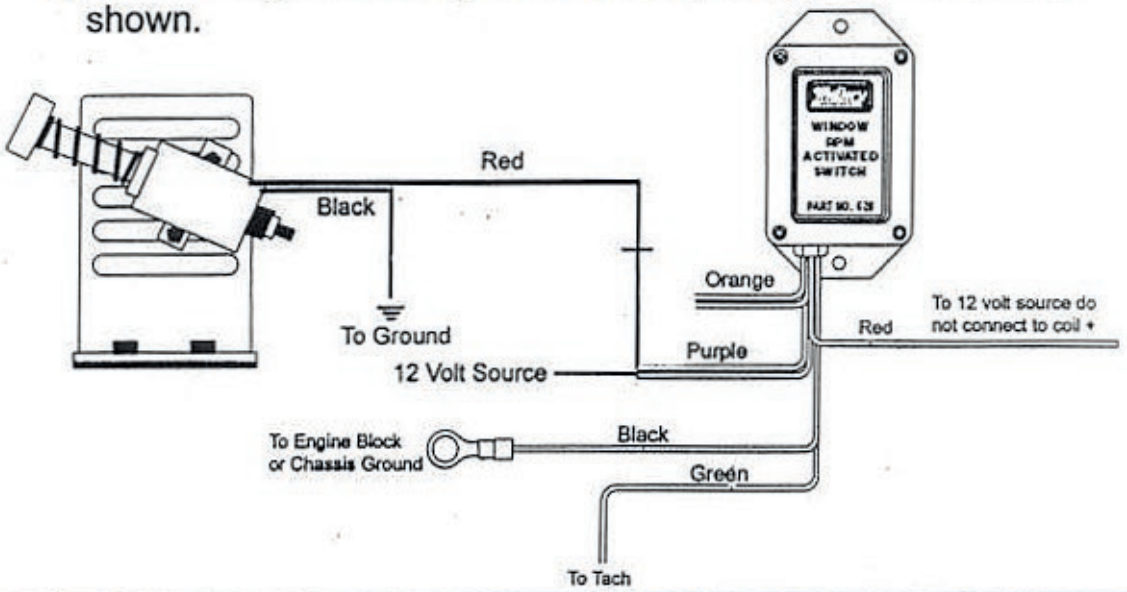
WIRING DIAGRAMS

1) When using an MSD RPM Activator Switch follow this diagram

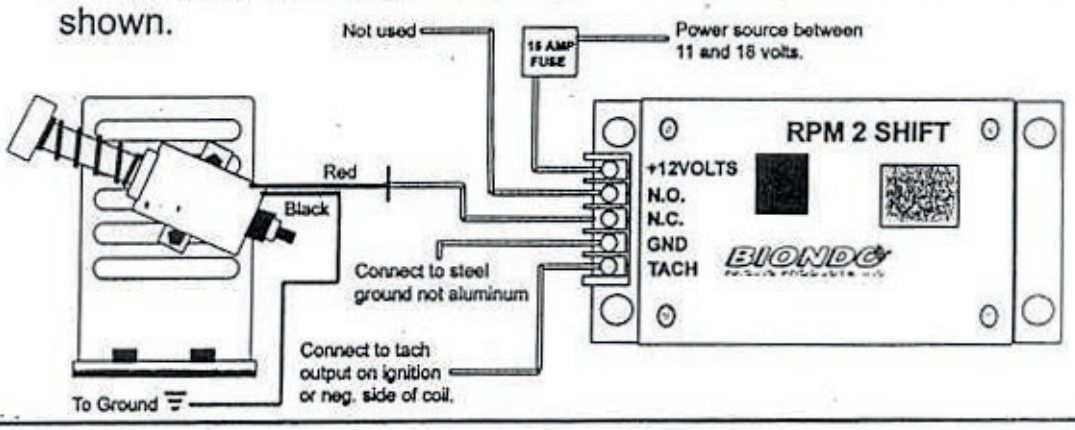


* For factory ignitions without an MSD, this wire connects to coil (-) negative.

2) When using the Mallory RPM Switch (#628), wire shift unit as shown.



3) When using the Biondo Racing RPM 2 Shift , wire shift unit as shown.



4) If you are using a Mega delay box to shift this electric solenoid simply hook the **RED** wire of the solenoid to the "shift" terminal on the delay box and the black wire of the solenoid to the ground. Make sure the delay box is set to the correct shift mode (LO).

WARRANTY

Every unit has been tested prior to shipment, but if failure should occur within 6 months due to faulty equipment, we will repair or replace the defective unit, at Biondo Racing's option, free of charge. And unlike our competition, all parts can be puchased separately.

Biondo Racing Products, INC. shall not be liable for injury, consequential, or other type of damages resulting from use of its products. This warranty is in lieu of all other warranties of merchantability or fitness of use.

MSD IGNITION ADDENDUM

Using the Start Retard and Activating a Retard with the RPM Activated Switch of the 7AL-3

START RETARD

The Start Retard of the 7AL-3 is designed to ease starting on engines with locked timing, high compression and a lot of advance. When activated, the timing is retarded 25°. Some engine combinations benefit from this retard, while others may experience rough starting or starter kickback. If your engine experiences roughness with the start retard engaged, the retard is not necessary.

RETARD WITH THE RPM ACTIVATED SWITCH

The MSD 7AL-3 has both an RPM Activated Switch (RAS) and a Multi-Step Retard. The stages of retard are activated when the corresponding activation wire is *removed* from ground. The RAS can only activate a circuit by *providing a ground path.*

If you want to use the RAS to activate a retard stage of the 7AL-3, an external relay must be used. The MSD Relay, PN 8961, is supplied in the parts bag with the 7AL-3. Figure 12 shows how to connect the relay for this application. RET 1 is grounded through terminals 30 and 87A of the Relay while the relay is off. Terminal 86 receives 12 volts from the ignition terminal and when the desired rpm is activated, a ground path is supplied to terminal 85 which turns the relay On, activating the retard.

Note: Make sure 12 volts is applied to the RAS On/Off terminal.

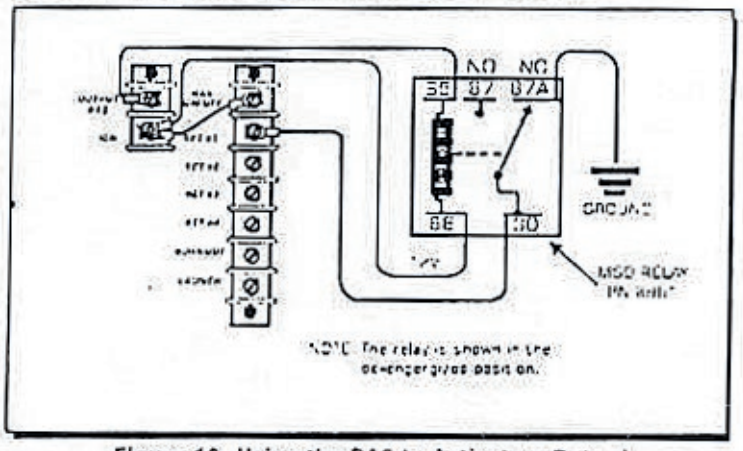


Figure 12 Using the RAS to Activate a Retard.

Also use the same way for a N/C solenoid

MSD DIGITAL 7