



INSTALLATION INSTRUCTIONS FOR MODEL DRL-400 TWO STAGE REV LIMITER FOR FOUR CYLINDER ENGINES

The Dyna DRL-400 Two Stage Rev Limiter provides a low (launch) rpm limiter to assist the rider in making clean consistent launches for drag racing. The DRL-400 also has an upper rpm limiter function to provide over-rev protection. The DRL-400 is designed to operate with any inductive electronic ignition on four cylinder engines. It cannot be used with capacitive discharge ignitions.

INSTALLATION:

*****IMPORTANT***** With any microprocessor based system such as the DRL-400, you must use carbon core type suppression spark plug wires with a resistance of at least 3000 ohms per foot to reduce radio frequency interference caused by ignition sparks. Use of copper or spiral core wires may cause malfunction of this rev limiter due to severe electrical noise.

- 1) Mount the DRL-400 on the vehicle as far away from the coils and spark plug wires as the wire lengths will allow. Do not lengthen the wires.
- 2) Connect the red wire on the DRL-400 to the +12 volt primary terminal of one coil or any reliable source of switched +12 volts.

*****IMPORTANT***** If you are using an ignition kill, as with an air shifter, check that power to the DRL-400 is not interrupted during the shift kill.

- 3) Connect the black wire on the DRL-400 to ground, preferably an engine case bolt or battery negative terminal.
- 4) Connect the white wire on the DRL-400 to the ignitor (minus) side of one coil and the blue wire on the DRL-400 to the ignitor (minus) side of the other coil.
- 5) Plug the two conductor, red and black extension cable into the mating 2 pin connector on the DRL-400. Connect the other end of this cable to a normally open clutch switch (closed contacts with clutch in, open contacts with clutch out). If a delay box is being used to activate the launch limit, the clutch input may need to be isolated with a relay (see diagram).

ADJUSTMENT:

Both the low limit (launch) and the high limit (over-rev) are adjusted with the 16 position rotary switches on the top of the DRL-400. The low limit is divided into two ranges, 3,000 to 6,750 rpm (lower range) and 7,000 to 10,750 rpm (upper range). These ranges are selected by the RANGE SELECT switch located on the top of the DRL-400. The high limit range is 10,000 to 13,750 rpm. Both range switches are adjustable in 250 rpm increments.

LED INDICATOR:

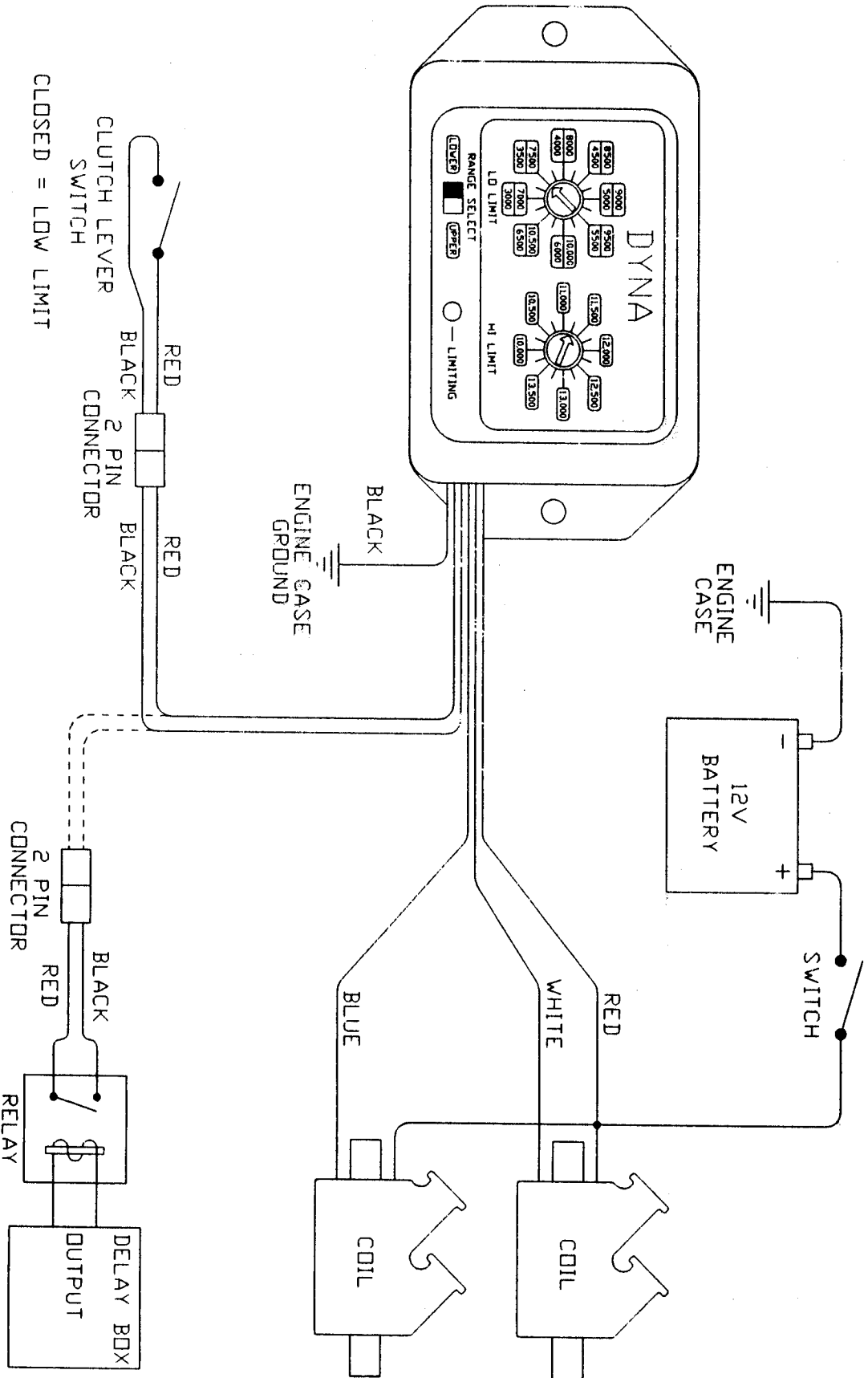
A red LED is located on the top of the DRL-400. This LED has two functions. First, with the power on and the engine NOT running the LED functions as a clutch lever position indicator. The LED should come on when the clutch lever is pulled in (clutch switch closed). This feature can help diagnose faulty or intermittent clutch switch wiring and aid in clutch switch adjustment. Second, with the engine running the LED indicates when the unit is limiting ignition pulses. In this mode the LED should only come on at the rpm indicated by the switch settings. If the led comes on at any other rpm the unit is being false triggered and may cause the engine to miss. The most common cause of false triggering is excessive electrical noise. Be sure that carbon core suppression spark plug wires are used.

USING YOUR DRL-400:

When the clutch lever is pulled in, the launch limit of the DRL-400 should be active. When the clutch lever is released, the high limit should be active. Clean, consistent launches can be attained by using the launch limit to hold the engine rpm at a consistent level while holding the throttle wide open at the starting line. When the clutch lever is released the engine will be allowed to rev freely while the clutch is engaging. This will allow you to launch the same way every time. Experience will help to determine the correct launch rpm for a particular vehicle.

12/94

DRL-400 WIRING DIAGRAM FOR 4-CYLINDER ENGINES



STANDARD CLUTCH CONNECTION

USING A DELAY BOX TO ACTIVATE LOW LIMIT
INSTEAD OF A CLUTCH SWITCH