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Dual Mode Launch/Shift Light Operating Instructions

1 YEAR LIMITED WARRANTY ON MANUFACTURE DEFECTS. IN NO EVENT WILL RAPTOR PERFORMANCE OR ANY OF ITS AFFILIATES BE RESPONSIBLE FOR DAMAGES OF ANY NATURE WHATSOEVER RESULTING FROM THIS PRODUCT. NO OTHER CLAIMS ARE MADE ABOUT THIS PRODUCT, EXPLICIT OR IMPLIED.

INSTRUCTIONS FOR INSTALLATION AND SWITCH SETTINGS:

- REMOVE NEGATIVE BATTERY CABLE.
- CONNECT THE BLACK WIRE OF THE SHIFT LIGHT TO A SUITABLE GROUND ON THE VEHICLE CHASSIS.
- CONNECT THE RED WIRE OF THE SHIFT LIGHT TO A **SWITCHED AND FUSED** +12 VOLT SOURCE.
- CONNECT THE GREEN WIRE OF THE SHIFT LIGHT TO THE TACH OUTPUT LEAD OF THE VEHICLE OR THE SWITCHED SIDE OF THE IGNITION COIL (NEGATIVE SIDE). **DO NOT CONNECT TO AFTERMARKET HIGH ENERGY COIL(S)....DAMAGE TO SHIFT LIGHT MAY OCCUR!**
- CONNECT THE WHITE WIRE OF THE SHIFT LIGHT TO THE VEHICLE SPEED SIGNAL (VSS) OUTPUT FROM THE ECU. LEAVING THIS WIRE DIS-CONNECTED WILL CAUSE THE SHIFT LIGHT TO REMAIN IN LAUNCH MODE.
- RESTORE BATTERY CABLE CONNECTION.

PROGRAMMING

PARAMETERS THAT WILL BE SET DURING PROGRAMMING ARE AS FOLLOWS AND IN THE ORDER GIVEN:
1. LAUNCH RPM, 2. LAUNCH LIMITS, 3. PULSES/REV (CYLINDER CONFIGURATION), 4. SHIFT RPM

- PRESS AND HOLD THE PROGRAM BUTTON (*TWO SECONDS*) UNTIL 3 LEDS BEGIN TO FLASH AT A SLOW RATE
- ROTATE THE ROTARY SWITCHES TO THE **DESIRED LAUNCH RPM** (MINIMUM SETTING IS 1100 RPM).
- PRESS THE PROGRAM BUTTON AGAIN UNTIL THE 3 LEDS BEGIN TO FLASH AT A FAST RATE. THIS IS THE **LAUNCH RPM BAND SETTING** (+/- RPM SETTING FOR THE LAUNCH RPM). ROTATE THE RPM X100 ROTARY SWITCH TO SET THE LAUNCH BAND. ****NOTE****: THE LAUNCH RPM BAND CAN BE SET FROM 100 TO 500 RPM. HOWEVER, THE LAUNCH RPM MINUS THE LAUNCH RPM BAND, CANNOT BE BELOW 1000 RPM. EXAMPLE: IF YOUR LAUNCH RPM IS SET TO 1200 RPM, THE MAXIMUM LAUNCH RPM BAND CAN ONLY BE +/- 200 RPM (1200 - 200 = 1000).
- PRESS THE PROGRAM BUTTON AGAIN UNTIL ALL LEDS BEGIN TO FLASH AT A SLOW RATE. THIS IS THE **CYLINDER SELECTION** MODE. ROTATE THE RPM X100 ROTARY SWITCH TO SET THE CYLINDER SELECTION. VALID ENTRIES ARE 1,2,3,4,5,6,8.
- PRESS THE PROGRAM BUTTON ONCE MORE UNTIL ALL 4 LEDS BEGIN TO FLASH AT A FAST RATE. THIS IS THE **SHIFT POINT SETTING**.
- SET DESIRED RPM ACTIVATION POINT USING THE TWO ROTARY SWITCHES AND THEN PRESS THE PROGRAM BUTTON ONE FINAL TIME TO END PROGRAM MODE.

NOTE: IF THE SHIFT LIGHT WILL NOT ADVANCE TO THE NEXT PROGRAM SEQUENCE, MAKE SURE YOU ARE PROGRAMMING A VALID ENTRY (LAUNCH SETTING MINUS LAUNCH BAND CANNOT BE BELOW 1000 RPM, AND CYLINDER SETTING MUST BE 1,2,3,4,5,6 OR 8).

NOTE: THE RPM RANGE CAN BE DOUBLED TO A MAXIMUM OF 19,800 RPM BY DOUBLING THE CYLINDER SELECT SWITCHES FOR YOUR VEHICLE AND SETTING THE RPM TO 1/2 OF THE DESIRED RPM ACTIVATION POINT).

**** CARE MUST BE USED WHEN SETTING SWITCHES. THE SLOT CAN BE DAMAGED IF THE CORRECT SCREWDRIVER IS NOT USED. FULLY INSERT BEFORE TURNING.**

- **FOR VEHICLE SPECIFIC INFORMATION (IF AVAILABLE), PLEASE CHECK THE RAPTOR WEBSITE**

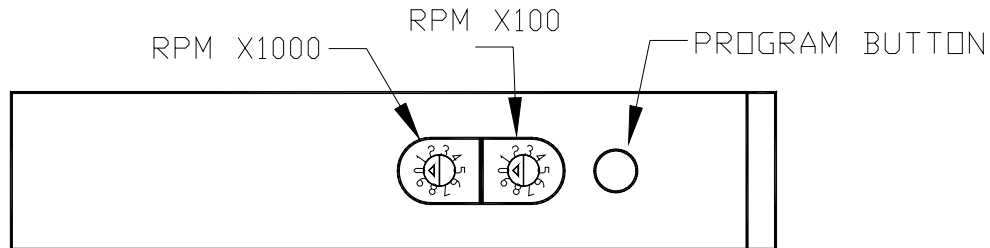


Figure 1

VERIFY MODE (AFTER PROGRAMMING)

VERIFY MODE DISPLAYS ONLY THE PROGRAMMED SHIFT POINT AND CYLINDER SETTING. IT DOES NOT DISPLAY THE LAUNCH AND LAUNCH BAND SINCE THIS IS EASY TO VERIFY BY YOUR TACH BY BRINGING THE RPM UP TO THE PROGRAMMED LAUNCH POINT.

AFTER EXITING PROGRAM MODE, THE SHIFT LIGHT WILL FLASH THE SETTINGS TO YOU:

- **A-** 4 LEDS WILL FLASH THE NUMBER OF TIMES WHICH IS REPRESENTATIVE OF THE SHIFT POINT "RPM X1000 SETTING".
- **B-** THERE WILL BE A PAUSE (NO LEDS ON FOR ABOUT 2 SECONDS).
- **C-** 3 LEDS WILL FLASH THE NUMBER OF TIMES WHICH IS REPRESENTATIVE OF THE SHIFT POINT "RPM X100 SETTING".
- **D-** THERE WILL BE ANOTHER PAUSE (NO LEDS ON FOR ABOUT 2 SECONDS).
- **E-** ALL LEDS WILL FLASH THE NUMBER OF TIMES WHICH IS REPRESENTATIVE OF THE "CYLINDER SETTING", AND FINALLY THE SHIFTLIGHT WILL DO AN LED TEST AND BE READY FOR USE.

ENABLE OR DISABLE THE LAUNCH FEATURE

- THERE MAY BE TIMES WHEN YOU WISH TO DISABLE THE LAUNCH FEATURE SUCH AS NORMAL STREET DRIVING. TO TOGGLE BETWEEN LAUNCH MODE ENABLED OR DISABLED SIMPLY PRESS THE PROGRAM BUTTON TWICE WITHIN A ONE SECOND TIME FRAME.
- IF THE LAUNCH IS BEING ENABLED, THERE WILL BE A QUICK BURST OF FLASHES TO INDICATE THIS.
- IF THE LAUNCH IS BEING DISABLED, THERE WILL BE ONE FLASH TO INDICATE THE LAUNCH MODE IS BEING DE-ACTIVATED.
- THE SHIFT LIGHT WILL REMEMBER THE LAST STATE THE LAUNCH MODE WAS SET FOR AND RETAIN THAT STATE EACH TIME THE KEY IS TURNED OFF THEN ON. SO IF THE SHIFT LIGHT HAD THE LAUNCH DISABLED WHEN THE IGNITION WAS TURNED OFF, IT WILL ALSO BE DISABLED WHEN THE IGNITION IS TURNED BACK ON.

SPECIAL CYLINDER SETTING CONSIDERATIONS:

99-2009 MUSTANGS: SET CYLINDER SELECTION TO "1" (READS OFF 1 OF THE EIGHT COILS).

DODGE VIPER: SET CYLINDER SELECTION TO "2" (READS OFF ONE COIL PACK).

GM "LSX" ENGINES: SET CYLINDER SELECTION TO "4" (READS OFF TACH OUT FROM PCM).

SUZUKI HAYABUSA/GSXR1000: SET CYLINDER SELECTION TO "4" AND PROGRAM RPM BY 1/2 (READS OFF YLW/BLU WIRE AT CLUSTER). THIS ALLOWS HIGHER SETTINGS THAN 9900 RPM.