

## New Instrument Cluster "Physical" Changes

The following are new instrument cluster physical changes that have been made to support 2013 emission and OBD related changes.

NOTE: Refer to the Blue Bird Drivers Handbook and Service Manual for additional information.



• Malfunction Indicator Lamp "MIL"

The MALFUNCTION INDICATOR LAMP indicates, when illuminated that the OBD system has detected a malfunction that impacts the emission control devices. Color: Yellow

• Aftertreatment Diesel Particulate Filter Lamp "DPF"
The AFTERTREATMENT DIESEL PARTICULATE FILTER lamp indicates, when illuminated or flashing, that the aftertreatment diesel particulate filter requires regeneration. Color: Yellow

• Wait To Start Lamp "WTS"

The WAIT TO START lamp illuminates when the intake air heater needs to warm the intake air prior to starting the engine. Color: White (NOTE: Color is Green on NON 2013 emission cluster)



## New Instrument Cluster "Functional" Changes

The following are new instrument cluster functional changes that have been made to support 2013 emission and OBD related changes.

NOTE: Refer to the Blue Bird Drivers Handbook and Service Manual for additional information.

## Direct Lamp Control Command 1 (DLCC1) Applies To Cummins Engines ONLY

During the cluster self- test all warning lamps will perform a Power on Lamp Test (POLT) by turning on for 2 seconds as soon as possible after the ignition is turned on and turn off for 1 second before any other action is taken. The only exception to this is with 2013 emission engines (ISB13 or ISL13) the DLCC1 message warning lamps will be controlled by the Cummins DLCC module. The DLCC1 warning lamps will NOT perform Power on Lamp Test when ignition is turned on. These lamps are:

- Stop Engine
- Engine Warning
- MIL

Note: If the key switch is cycled off & immediately back on again the DLCC lamps will not self-test with the other warning lamps. This is due to the DLCC module does not go to sleep for a set time period after key off.

## Direct Lamp Control Data 1 (DLCD1) Applies To Cummins Engines ONLY

With 2013 emission engines (ISB13 or ISL13), the cluster must send the DLCD1 message continuously to the engine as a signal to show the status (01 for on and 00 for off) for the following warning lamps.

• Stop Engine Lamp



Engine Warning Lamp



Color: Yellow

• Malfunction Indicator Lamp "MIL" Color: Yellow



• Wait To Start Lamp "WTS" START Color: White

NOTE: Starting the engine without waiting for the "Wait to start" lamp to come "ON" and go "OFF" MAY illuminate the MIL lamp and log engine fault codes. Once "ON" the MIL lamp will NOT go off until after three consecutive trips where the diagnostics runs and passes, or you reset all faults with Cummins Insite. When the MIL lamp is "ON" you will have a continuous alarm "ON" until acknowledge with the lower button on the instrument cluster.