March 8, 2016

SERVICE MEMORANDUM

NO: SM1603

MEMO TO: All Blue Bird Dealers

SUBJECT: J1939 500k Datalink (Green Diagnostic Port Connector)

MODELS AFFECTED: Vision, All American, and TX4, with New 2016 Cummins Engine Features (Blue Bird Production Date Begin: 01/18/2016)

The intent of SM1603 is to provide service related information for buses equipped with the new 2016 Cummins ISB and ISL engine features announced in Dealer Memo CK15-06. This change ONLY affects Blue Bird buses with Cummins diesel engines that are EPA/CARB certified on highway built by Cummins on January1, 2016 or later (Blue Bird production date 01/18/2016).

Blue Bird buses equipped with New 2016 Cummins ISB and ISL engine features use 250k and 500k J1939 datalink circuits, and have a **Type 2 (Green Diagnostic Port Connector)**.

Important service notes for Blue Bird buses with the Type 2 (Green Diagnostic Port):

A New Blue Bird service tool adapter (part number 10049528) is required. The adapter will allow you to use existing service tools with the Type 1 (Black Connector) to communicate with modules over the 250K J1939 datalink.

Existing service tools with the Type 1 (Black Connector) will **NOT** physically connect to a bus with a Type 2 (Green Diagnostic Port).

For existing Cummins supplied tool kits with the Type 1 (Black Connector), Cummins has set up a 500k J1939 datalink adapter tool part number 5299126 that connects to the 500k J1939 circuits. Contact your Cummins dealer for tool ordering and application information.
Note: The Cummins adapter tool will NOT work for modules on the 250k J1939 datalink.

New service tools with the Type 2 (Green Connector) will physically connect to a bus with either a Type 1 (Black Diagnostic Port) or Type 2 (Green Diagnostic Port).

Note:
Blue Bird will continue to use the 250k Type 1 (Black Diagnostic Port Connector) for all other engine features (i.e. Propane, CNG, and Export). See Type 1, Type 2 connector details below.

What is 500k datalink?

250k and 500k are the rates at which messages are broadcasted on the CAN (J1939) datalink.

There can only be one baud rate for any datalink.

- If any devices on the datalink are set at different rates, the datalink will crash.

Switching to 500k has several benefits:

- Lower bus loading: i.e.; twice as much traffic can be processed.
- Standard allows for more devices on the datalink.

Starting with engine model year 2016, all EPA/CARB certified on highway engines must use an SAE J1939 500k datalink with a Type 2 connector (Green Diagnostic Port Connector).

Both the current 250k and the new 500k J1939 circuits are required with Cummins 2016 engines. **Note: The 500k J1939 circuits are in pins C and D on the Green Diagnostic Port Connector. Note: The 250k J1939 circuits are in pins H and J on the Green Diagnostic Port Connector.** These buses will have two (2) separate CAN (J1939) datalinks, each datalink has two (2) (EOL) end of line resistors. Currently the 500k J1939 datalink circuits are **ONLY** connected to the new 2016 Cummins ISB and ISL engine features. In the near future Blue Bird will also be adding the Allison transmission to the 500k J1939 datalink circuits. The 500k J1939 circuits are **NOT** connected to any other modules. All ABS modules, Instrument Clusters, IO multiplex modules, Telematics (Blue Bird Connect), and the Eaton transmission, are **ONLY** connected to the 250k J1939 datalink circuits.

Please reference the J1939 wiring schematics and service technical publications applicable to the bus being serviced on the Blue Bird Vantage website. If you require technical assistance or have any service related questions please contact your Blue Bird Field Service Engineer.

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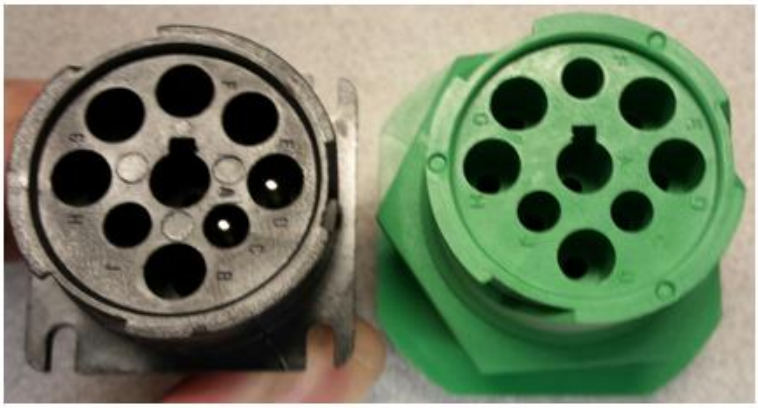

250k Connector **500k Connector**