

Tool Instruction QUALITY LEVEL SENSOR REFLASH KIT

4328440R1

Tool Number: QLS-KIT



0000407313

Figure 1. QLS-KIT

Purpose

Tool kit utilized to recalibrate the Diesel Exhaust Fluid Quality Sensor (DQS) / Quality Level Sensor (QLS).

Application(s)

2016 CE Bus, ProStar[®], WorkStar[®], DuraStar[®], PayStar[®], 9900, 1300FBC, HX[™] Series vehicles equipped with 2016 model year Cummins[®] ISX, ISB, or ISL Engines or 2016 model year Navistar[®] N9, N10, or N13 Engines

Application(s) (cont.)



WARNING: To prevent property damage, personal injury, and / or death, read all safety instructions in the “Safety Information” section of the *Engine Service Manual* or *Engine Diagnostic Manual*.



WARNING: To prevent property damage, personal injury, and / or death, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.







WARNING: To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.



CAUTION: To prevent component / vehicle damage, **NEVER** attempt to connect QLS-CABLE banana jack plugs to any other / additional power source. **ONLY** connect these cables to the QLS-SWITCH.

Tool Contents

Table 1

Image	Tool Number	Qty	Description
 <p>0000408721</p>	QLS-CABLE	1	Reflash Cable
 <p>0000407312</p>	QLS-SWITCH	1	Power Switch
 <p>0000407311</p>	QLS-MINI-USB	1	USB Cable
<p>GRAPHIC NOT AVAILABLE</p>	S-20622Y	1	Yellow Paint Pen
 <p>0000160075</p>	4328440R1	1	Tool Instruction

Description



0000407314

Figure 2. QLS-CABLE Reflash Cable – Overview

- | | |
|--|--|
| 1. To approved USB communication interface | 3. To Diesel Exhaust Fluid Quality Sensor / Quality Level Sensor |
| 2. To QLS-SWITCH Power Switch | 4. To vehicle harness |

IMPORTANT: Please reference International® Service PortalSM regarding any possible revisions to this document.

⚠ CAUTION: To prevent component / vehicle damage, NEVER attempt to connect QLS-CABLE banana jack plugs (Figure 2, Item 2) to any other / additional power source. ONLY connect these cables to the QLS-SWITCH.

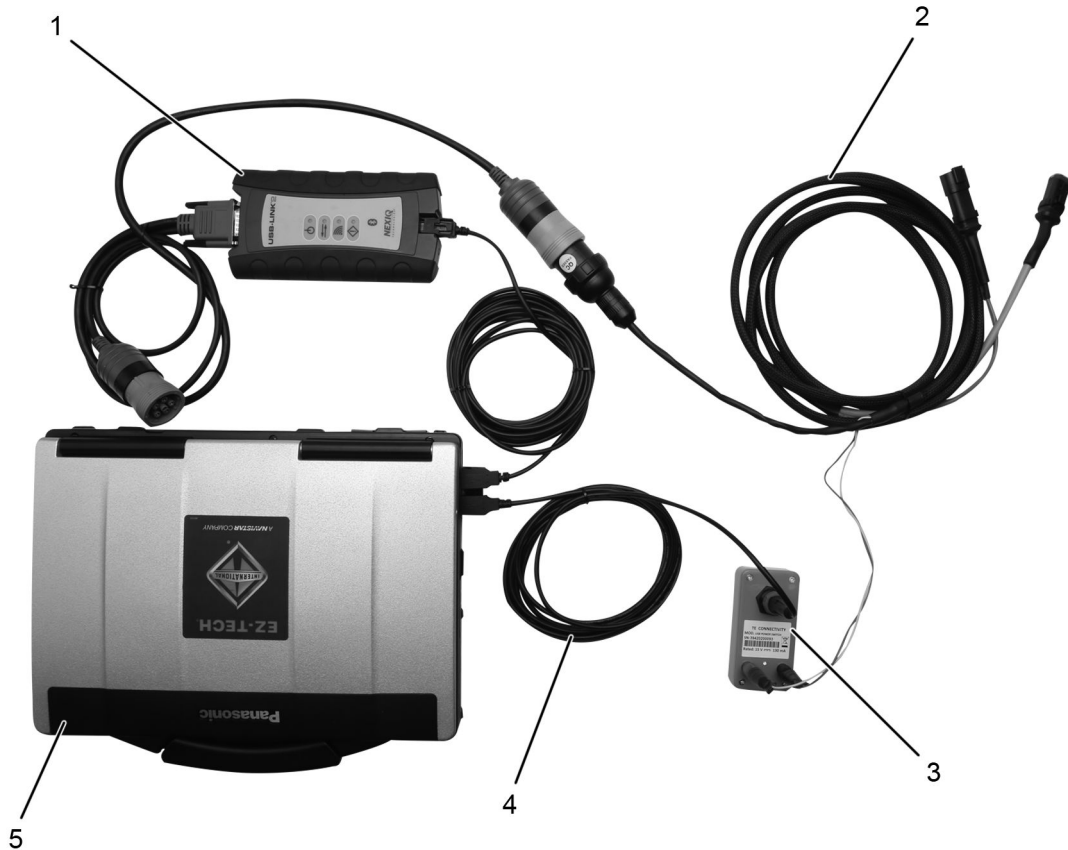
The QLS-CABLE Reflash Cable includes connections for the QLS-SWITCH Power Switch (Figure 2, Item 2), Diesel Exhaust Fluid Quality Sensor / Quality Level Sensor (Figure 2, Item 3), vehicle harness (Figure 2, Item 4), and approved USB communication interface (Figure 2, Item 1).

Procedure

1. Park vehicle on flat surface.

Procedure (cont.)

2. Shift transmission to Park or Neutral, and set parking brake.
3. Install wheel chocks.



0000408722

Figure 3. QLS-KIT Connection

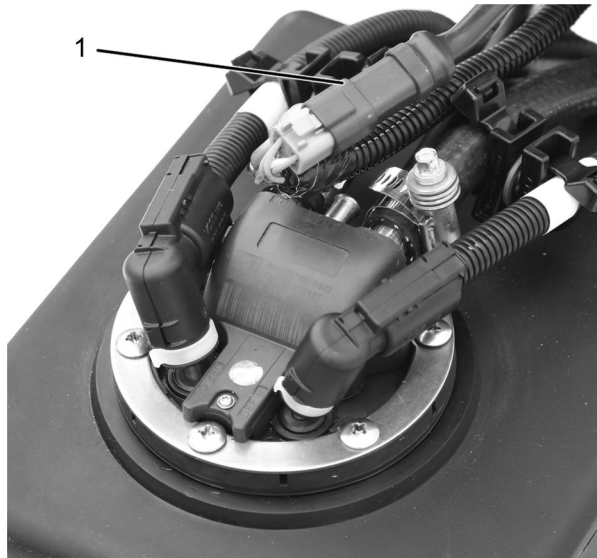
- | | | |
|---|----------------------------|-------------------------------------|
| 1. Approved USB communication interface | 2. QLS-CABLE Reflash Cable | 4. QLS-MINI-USB Cable |
| | 3. QLS-SWITCH Power Switch | 5. EZ-Tech® Electronic Service Tool |

CAUTION: To prevent component / vehicle damage, NEVER attempt to connect QLS-CABLE Reflash Cable banana jack plugs to any other / additional power source. ONLY connect these cables to the QLS-SWITCH Power Switch.

4. Assemble QLS-KIT:
 - A. Connect black banana jack plug from QLS-CABLE Reflash Cable (Figure 3, Item 2) to black output on QLS-SWITCH Power Switch (Figure 3, Item 3).
 - B. Connect red banana jack plug from QLS-CABLE Reflash Cable (Figure 3, Item 2) to red output on QLS-SWITCH Power Switch (Figure 3, Item 3).
 - C. Connect QLS-MINI-USB Cable (Figure 3, Item 4) to QLS-SWITCH Power Switch (Figure 3, Item 3).

Procedure (cont.)

- D. Connect QLS-MINI-USB Cable (Figure 3, Item 4) to EZ-Tech® Electronic Service Tool (Figure 3, Item 5).
- E. Connect approved USB communication interface (Figure 3, Item 1) 9-pin connector to 9-pin connector of QLS-CABLE Reflash Cable (Figure 3, Item 2).
- F. Connect approved USB communication interface (Figure 3, Item 1) USB connector to EZ-Tech® Electronic Service Tool (Figure 3, Item 5).



0000407315

Figure 4. QLS Harness

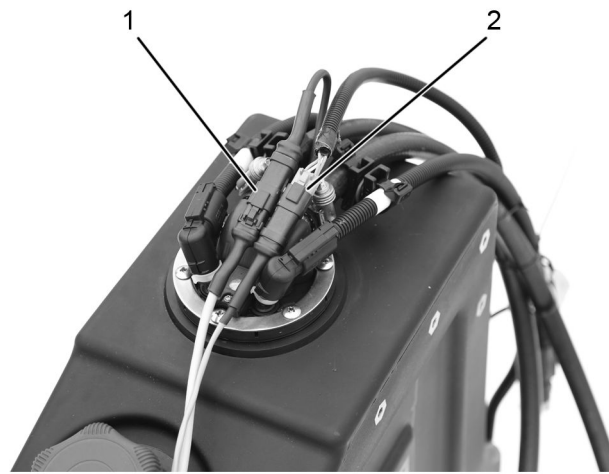
- 1. Harness

NOTE: It may be necessary to access the DQS / QLS harness connector from under the vehicle.

NOTE: It may be necessary to remove the vehicle skirt panel to access the DQS / QLS harness connector.

- 5. Access Diesel Exhaust Fluid Quality Sensor / Quality Level Sensor Quality Level Sensor (QLS).
- 6. If necessary, remove cable wire tie securing QLS harness. Disconnect QLS harness (Figure 4, Item 1) from vehicle harness.

Procedure (cont.)



0000407316

Figure 5. QLS-CABLE Reflash Cable – Vehicle Connection

1. Sensor harness
2. Vehicle harness

7. Connect QLS-CABLE Quality Level Sensor Reflash Cable to sensor harness (Figure 5, Item 1) and vehicle harness (Figure 5, Item 2).
8. Refer to appropriate service bulletin or equivalent for detailed instruction regarding programming procedure.
9. When reprogramming procedure is complete, disconnect QLS-CABLE Reflash Cable from sensor harness (Figure 5, Item 1) and vehicle harness (Figure 5, Item 2).
10. Connect QLS harness (Figure 4, Item 1) to vehicle harness. If necessary, install cable wire tie to secure sensor harness.
11. Disconnect approved USB communication interface (Figure 3, Item 1) 9-pin connector from 9-pin connector of QLS-CABLE Reflash Cable (Figure 3, Item 2).
12. Disconnect approved USB communication interface (Figure 3, Item 1) USB connector from EZ-Tech® Electronic Service Tool (Figure 3, Item 5).
13. Remove wheel chocks.

Contact Information

If you would like to order additional tools or need replacement parts, please refer to the Navistar Service Tool Catalog. If you have questions, concerns, or feedback, please contact Navistar Service Tool Support Center:

- Submit a Service Tool iKNow Case File.
- Phone: 800-365-0088 (toll free).