

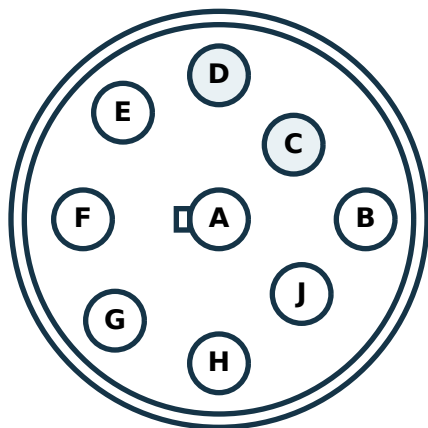
9-PIN DATALINK TEST WORKSHEET

Conventional high-speed CAN on pins C / D | Vehicle-side mating face

Date: _____ Technician: _____ RO: _____

VIN / truck: _____ Complaint: _____

Port: ☐ Black / Type I ☐ Green / Type II Network / baud: _____



FRONT / MATING FACE

Looking into the truck port

A - Battery ground / power negative

B - Battery positive

C - J1939 CAN High (+)

D - J1939 CAN Low (-)

E - Shield, if used (NOT test ground)

F / G - Legacy J1708 or OEM CAN

H / J - OEM-specific; may be another CAN

Drawing orientation follows FRC Figure 7. Rotate to match the molded letters. Wire-entry view is mirrored. Type II keying differs; verify the actual cavity letters.

1. POWERED VOLTAGE TESTS - batteries CONNECTED

Use DC volts, engine OFF. Unplug the scan adapter. Use correct terminal probes; do not spread contacts. A is the black-lead reference, not E. Record battery-post voltage first.

Battery posts: _____ V System: ☐ 12 V ☐ 24 V Ground A verified: ☐

Test / red to black	State and suggested reference	Actual
B to A - supply	Key OFF, then ON. Should track measured battery voltage; use OEM allowable voltage-drop limit.	_____ ☐ OK
C to A - CAN High	Key ON, engine OFF. Typical active DMM average about 2.6-3.0 V; reference only, not universal pass/fail.	_____ ☐ OK
D to A - CAN Low	Key ON, engine OFF. Typical active DMM average about 2.0-2.4 V; reference only, not universal pass/fail.	_____ ☐ OK

Both lines near 2.5 V can indicate a recessive/idle bus. DMM averages cannot prove valid messages. Scope pulse levels are typically H ~3.5 V / L ~1.5 V; do not expect those exact DMM readings.

9-PIN DATALINK TEST WORKSHEET

Conventional high-speed CAN on pins C / D | Vehicle-side mating face

2. RESISTANCE TESTS - batteries DISCONNECTED

Key OFF; allow the OEM shutdown time (Eaton example: 2-3 minutes). Isolate all battery supplies using the OEM procedure, including auxiliary/external sources. Leave network modules and both terminators connected for the baseline C-D test; unplug the scan adapter.

Before switching to ohms, confirm no voltage at B-A, C-A, D-A and C-D. Key OFF alone is not this worksheet's isolation method. Never measure resistance on an energized circuit.

Isolation complete: ☐ Zero-voltage checks complete: ☐ Meter leads: ____ ohms

Test	Suggested reference / limit	Actual
C to D - complete bus	About 60 ohms with two passive 120-ohm terminators. Navistar example: 57-63 ohms; Eaton example: 50-70. Use truck OEM limit.	_____ ☐ OK
C to A / D to A Short-to-ground screen	No universal assembled-network resistance limit. Record both. A low reading needs OEM isolation checks; connected electronics affect results.	_____ ☐ OK

C-A: _____ ohms D-A: _____ ohms OEM limit: _____

3. INTERPRET C-D - these are clues, not parts orders

~60 ohms	Termination paths accessible; an open branch or unpowered module may remain.
~120 ohms	One termination path visible: missing resistor, open path, or changed test setup.
~40 ohms	Possible third 120-ohm terminator; confirm topology before removing anything.
Near 0 / OL	Near 0: possible H-L short. OL: no accessible termination / open / wrong pair.

Do not add a resistor to make a reading look right. Isolated segments, disconnected modules with built-in termination, and electronically switched termination change expected readings.

Findings / repair: _____

Reconnected: ☐ Module communication restored: ☐ Complaint verified: ☐

References (click): FRC Fig. 7 Navistar IK0800080 Eaton FC35 Enovation CAN guide