McNeilus

Information Bulletin

Speed Limiter Software Update on Zero Radius Side Loaders

Date: October 27, 2025
Bulletin Name: ZR-IB-018-A
Model: Zero Radius 48
Model Year: 2025
Units Affected: ZR 3.0
Models NOT Supported: ZR 1.0 or ZR 2.0
Revision A update: Clarified content

Purpose

McNeilus Truck and Manufacturing, Inc. offers these instructions for the Zero Radius (ZR) 3.0 speed limiter software update. This document covers *some* configurations.

Models NOT supported:

- ZR 1.0
- ZR 2.0

Engines NOT supported:

- Detroit Diesel
- International Engines

Minimum required McNeilus software versions:

- Body BCM – 1.0.0-12-0a03f59929
- IFM 2.8” – v0.3.0-6-g41883a6
- Deepsea – v0.3.0-5-g1e91835 j
- IFM 5” – v0.3.0-2-gb465ee8
- IFM 7” Orange – v0.3.0-4-gb68b21a
- IFM 7” Blue - v0.3.0-4-gb68b21a

Please review all aspects of this communication carefully. If you have any questions or concerns about these product update actions, contact your McNeilus refuse vehicle service network at 1-888-686-7278.

SAFETY NOTICE

Perform your company’s Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

SAFETY NOTICE

Use appropriate Personal Protective Equipment (PPE) as required by your company.

Tools and Equipment Required

Technician to supply

- Software must be installed by a McNeilus-authorized technician.

- Cummins Insite for programming Cummins engines
- Tech Tool for programming Mack engines
- Davie Software for programming Paccar engines
- McNeilus Service Tool for programming the body-side BCM
  - 1506030 – CABLE, KVASER LEAF LIGHT V2
  - 1506029 – CABLE, PROGRAMMING
- IFM Maintenance Tool for programming the 2.8” IFM display
  - 1477561 – ADAPTER, INTERFACE, CAN/RS232-USB
  - 1477562 – WIRE HARNESS, CAN FOX ADAPTER
- DSE Service Tool for programming the Deepsea displays
  - 1687081 – WIRE HARNESS, MCNEILUS PROGRAMMING, DISPLAY
  - 1687305 – CABLE, PEAK, CAN, USB, DB9
- To program the IFM 5” display, the IFM 7” orange display, or the IFM 7” blue display
  - 1695632 – CABLE, PROGRAMMING, IFM DISPLAY
  - USB jump drive – 8G or smaller and formatted to FAT32

Procedure

1. Chock wheels and engage the service brake.

⚠ WARNING

Crush Hazard. Because of the need to test the throttle, the vehicle cannot be in complete lockout/tagout. Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the vehicle. Failure to comply may result in serious personal injury or death.

2. Check the functionality of the throttle.
   - With the truck in neutral and the parking brake set, push the foot throttle to determine if the engine revs up.
     - If **YES**, proceed with loading the software (BCM) and then follow the steps outlined below.
     - If **NO**, any throttle verification in the following steps will have to be verified while driving the vehicle in gear. Proceed with loading the software (BCM) and then follow the steps outlined below. Verification of the throttle functionality will come in later steps.
3. Load the software (BCM).
4. Flash the display.
5. Set the McNeilus parameters on display per the desired OEM configuration listed below (see “Parameter and Wiring check per OEM Configuration” on page 4).
6. Set the speed limiter to **Force ON** (under software options 1).
7. Push the foot throttle with the engine running to determine if the throttle is disabled.

8. If the engine revs, the throttle is not disabled. Continue with the following checks until the throttle is disabled. Once the throttle is disabled, the procedure continues at Step 9.
   A. Check errors menu for active output under MCD3 Speed limiter
   B. Visually verify wiring
      1. Make sure the J10 wire (WHITE flying lead wire) in the cab harness is connected to position 7 of the ROPT170.
         - It is Pin 3 on Mack diesel engine
      2. If the speed limiter is not connected, verify in the OEM configurations below to determine if you need a + or – signal.
         - If the OEM requires a + signal, the only wiring requirement is to connect the J10 wire from the cab harness to the ROPT170 position 7 (it is pin 3 on Mack diesel engine).
         - If the OEM requires a – signal, locate MC250 near the BCM and swap J10+ & J10-.
           – Move J10+ from pin 17 to pin 19 (MC250).
           – Move J10- from pin 19 to pin 17 (MC250).
           – Then connect the J10 wire to the ROPT170 position 7 (Mack diesel pin 3).
   C. Use a multimeter to validate that the + or – signal (based on OEM requirements) is being received to the ROPT170 connector.
   D. Check OEM parameters per the desired OEM configuration listed below (see “Parameter and Wiring check per OEM Configuration” on page 4).
9. Once the throttle has been verified to be disabled, with the speed limiter set to **Force ON**, set the speed limiter to **Disabled** and once again use the foot throttle to check if the engine revs up.
   - Special Note: On an **Autocar** chassis, if the engine does not rev up, then check for a jumper labeled **THROTTLE** in the OEM harness.
     – The jumper is located inside the left frame rail just below the fan shroud.
     – The jumper is a 2-pin WeatherPack connector with a short ~4” wire going from pin A to pin B. **NOTE:** There is a second jumper located directly next to the throttle jumper for the fan.
     – Remove the wire from the jumper and reinstall the connector.
     – Other chassis OEMs do not have this jumper issue.

10. Once the throttle has been verified to be inoperable with the speed limiter set to **Force ON**, and the engine does indeed rev up when the speed limiter is set to **Disabled**, then set the Speed Limiter to **Enable**.

Final Verification

⚠ WARNING

Crush Hazard. Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the vehicle. Failure to comply may result in serious personal injury or death.

1. On the IFM display parameters, set “Arm Out Vhcl Spd Intrlck (MPH)” to 1mph.
2. Use the joystick to lower the grabber down to the bottom of the arm, open the grabber, and make sure the arm is all the way in (home position/against body).
3. Start driving the vehicle above 1 mph to ensure the throttle is functional.

4. Stop the vehicle and use the joystick to close the grabber slightly to ensure the “grabber open” proximity switch is not flagged.
5. With the grabber off the “grabber open” proximity switch, attempt to accelerate the vehicle. The throttle should be disabled at any speed faster than 1 mph.
6. The throttle should also be disabled if the “arm in home” proximity switch is not flagged and the vehicle speed is greater than 1 mph.
7. Push the E-STOP button and with the grabber still off the “grabber open” proximity switch, attempt to accelerate the vehicle. The throttle should **NOT** be disabled at any speed.
8. Set “Arm Out Vhcl Spd Intrlck (MPH)” to desired customer value.

Special Notes

- The adapter harness part number 1545952 is used to connect the cab harness to OEM harness. The large 31 pin connector is labeled ROPT1. The ROPT1 (McNeilus side) connects to the ROPT170 (OEM side).
- When connecting the J10 wire to the adapter harness (part number 1545952), connect the J10 wire to the flying lead labeled **101** (WHITE wire). Verify that the 101 wire goes into position 7 of the 31 pin connector.

Parameter and Wiring check per OEM Configuration

Mack Diesel

- OEM Parameters
  - P1TRL
    - PTO 2, Engine Speed Controls, Accelerator Pedal Input Handling, Configuration:
      - Set to 2
  - P1TRJ
    - PTO 2 Road speed limitation, Configuration:
      - 1 = True
      - 2 = 0
  - P1SZE
    - Engine Speed Control Deactivate PTO 2, Transmission NOT in Secured Neutral Condition
      - Set to 0
  - On pre-2022 units
    - DXK
      - Set to GAS PEDAL IGNORE
- Wiring
  - MC250 check to see if “J10+” is in position 17
  - J10 wire into ROPT170 (31 pin connector) position 3 (Throttle interlock) + signal
    - Optional connection directly to VECU position 18
- McNeilus Software Settings
  - Software Options 1
    - Speed limiter **– Enabled**

- Software Options 2
  - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Mack CNG

- OEM Parameters
  - Accelerator Interlock = Enable
    - Switch Setup = Active closed
- Wiring
  - J10 wire into ROPT170 (31 pin connector) position 3 (Throttle interlock) - signal
  - MC250 check to see if “J10 +” is in position 17
- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Mack Granite Diesel

- OEM Parameters
  - P1TRL –
    - PTO 2, Engine Speed Controls, Accelerator Pedal Input Handling, Configuration:
      - Set to 2
  - P1TRJ
    - PTO 2 Road speed limitation, Configuration:
      - 1 = True
      - 2 = 0
  - P1SZE
    - Engine Speed Control Deactivate PTO 2, Transmission NOT in Secured Neutral Condition
      - Set to 0
- Wiring
  - J10 wire into ROPT170 (31 pin connector, back of cab) position 7 (Throttle interlock) + signal
- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Mack Granite CNG

- OEM Parameters
  - Accelerator Interlock = Enable
    - Switch Setup = Active closed
- Wiring
  - J10 wire into ROPT170 (31 pin connector, back of cab) position 7 (Throttle interlock) – signal
  - MC250 check to see of “J10 -” is in position 17
- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Pete/Cummins

- OEM Parameters
  - Accelerator Interlock = Enable
    - Switch Setup = Active closed
- Wiring
  - J10 wire into ROPT170 (31 pin connector) position 7 (Throttle interlock) - signal
  - MC250 check to see of “J10 -” is in position 17
- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Peterbilt/Paccar

- OEM Parameters
  - Enables the application road speed limiter (AA01280)
    - Set to ENABLED
  - Configures polarity of ARSL switch input (AA01281)
    - Set to Closed Circuit Active
  - ARSL Speed limit #1 (AA01282)
    - Set to 0
  - Determines source of ARSL switch signal (AA01284)
    - Set to Hardwired to Chassis Module Primary
    - NOTE: Older units may or may not have this parameter. If they do not have this parameter, disregard as it is not required.

- Wiring
  - J10 wire into ROPT170 (31 pin connector) position 7 (Throttle interlock) - signal
    - Possibly pin 8 (Application Speed limiter)
  - MC250 check to see if “J10 -” is in position 17
  - On a Pete with Paccar engine, if the ROPT170 is missing or does not function correctly, check for a 12 pin Deutsch connector on the street side of the engine with female sockets. If located, use pin 9.
  - If ROPT170 and 12 pin connector are missing, then connect directly to ECU position 5.

- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Autocar

- OEM Parameters
  - Accelerator Interlock = Enable
    - Switch Setup = Active closed

- Wiring
  - J10 wire into ROPT170 (31 pin connector) position 7 (Throttle interlock) - signal
  - MC250 check to see if “J10 -” is in position 17

- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed

Battle

- OEM Parameters
  - Accelerator Interlock = Enable
    - Switch Setup = Active closed

- Wiring
  - J10 wire into ROPT170 (31 pin connector) position 7 (Throttle interlock) - signal
  - MC250 check to see if “J10 -” is in position 17

- McNeilus Software Settings
  - Software Options 1
    - Speed limiter – Enabled
  - Software Options 2
    - Arm Out Vhcl Spd Intrlck (MPH) – Set to desired speed