

Permissibility Checklist Addendum

The inspection checks in this addendum are to be used if the MSHA Part 36 Approved Equipment with a Caterpillar 3304PCNA or 3306PCNA engine is operated at the increased maximum allowable total exhaust system backpressure of 60 inches of water. These inspection checks are to be used in conjunction with the vehicle's approved Permissibility Checklists.

Inspection Frequency:

All inspection checks in this addendum should be performed on a **weekly** basis.

All Inspections and Tests Shall be Performed in Fresh Air

Maximum Total Exhaust System Backpressure Check

1. () The total exhaust system backpressure does not exceed **60 inches of water**.
 - a. Remove the total exhaust system backpressure test port plug or disconnect the exhaust filter service indicator gauge hose and flame proof port from the total exhaust backpressure test port located at the outlet of the exhaust manifold and install a pressure measuring device.
 - b. With the engine running at maximum rpm, no load, and with the scrubber water level at normal operating depth, note the exhaust system backpressure.
 - c. If the total exhaust system backpressure exceeds **60 inches of water**, drain and flush the scrubber, service the dpm filter and correct any other problems. Retest the exhaust backpressure to verify that problems have been corrected and the exhaust backpressure is below the maximum total exhaust system backpressure limit.

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2. () The following checks have been performed on the diesel particulate matter (dpm) filter installation:
- a. Verify that the piping from the water scrubber to the dpm filter housing, including the water separator (if equipped), is in good condition with no leaks, open holes or cracks, missing plugs or clamps and that all attaching hardware is in place and tightened.
 - b. Remove and visually inspect the dpm filter for any damage (i.e. holes, missing gaskets, signs of burning) and check that the acceptable part number filter is installed.
 - c. Verify that an exhaust filter service indicator gauge with either a warning tag next to the gauge or a red marking on the gauge specifying the maximum allowable exhaust backpressure before servicing the exhaust system is installed in the operator's compartment. If the gauge is monitoring total exhaust system backpressure using a flame proof port, the maximum exhaust system backpressure limit is **60 inches of water**. If the gauge is monitoring the exhaust backpressure caused by the dpm filter, the maximum backpressure limit is the difference between Caterpillar's maximum allowable exhaust system backpressure of 60 inches of water and the backpressure caused by the exhaust components (e.g., piping, water separator, catalyst, exhaust conditioner, etc.) located between the exhaust manifold and the dpm filter housing. For example, if the exhaust backpressure caused by the exhaust system components upstream from the dpm filter housing is measured at 12 inches of water, the maximum allowable backpressure limit before servicing the dpm filter is 48 inches of water [60-12=48].
 - d. Verify that the service indicator gauge is not damaged. Check at low idle condition. A fluctuating needle indicates the gauge is working.
 - e. With the engine operating at maximum rpm and no load, verify that the exhaust filter service indicator gauge does not indicate an exhaust backpressure greater than the maximum backpressure limit specified on warning tag or gauge marking.

Note: The backpressure measured with the service indicator gauge should be consistent with the backpressure measured with the backpressure measuring device used to perform the maximum total exhaust system backpressure check. If backpressure readings are not similar, inspect ports or plumbing for clogging and/or damage of the on-board dpm filter's service indicator gauge.

3. () If equipped with a flame proof port, remove the flame proof port and perform the following checks:

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- a. For Dry Systems Technologies (DST) flame proof ports: verify that the Model M40-596-01 flame proof port pin is held in place by a retaining ring **OR** that the M30-585-01 flame proof port pin is securely tightened into the body of the flame proof port.
- b. For DBT/Jeffrey Model 518475 or 518510 flame proof ports verify that it is stamped “Jeffrey 518475” or “Jeffrey 518510”, the tamperproof weld is in place and not broken and the mesh is inside the flame proof port housing and in place.

Reinstall the flame proof port by tightly threading it into the exhaust backpressure test port. Reconnect the dpm filter service indicator gauge hose.