

May 30, 2019

Mr. Gregory D. Hoenert, Manager
Global Emissions Certification and Compliance
Large Power Systems Division
Caterpillar Inc.
P.O. Box 610
AC 6146
Mossville, Illinois 61552

Dear Mr. Hoenert:

This revised letter responds to Caterpillar/Progress Rail Services request to clarify the original California Air Resources Board (CARB) locomotive verification dated January 11, 2019 for the Tier 4 Progress Rail EMD24 switch locomotive. CARB verifies that the EMD24 switch locomotive achieves U.S. EPA Tier 4 switch locomotive emission levels. This verification is applicable to the four axle EMD24B or six axle EMD24C.

Progress Rail Services, a Caterpillar subsidiary, is the manufacturer of the EMD24 switch locomotive. The EMD24 can be built from an existing locomotive core using a remanufacturing kit or can be built as a freshly manufactured locomotive, each with a Caterpillar 3512C-HD diesel engine, and equipped with a Caterpillar Clean Emissions Module (CEM) after-treatment system. The CEM after-treatment includes urea based selective catalytic reduction, a diesel particulate filter, and diesel oxidation catalyst technology.

The test EMD24 switch locomotive accumulated 3,000 in-use hours operating with Pacific Harbor Line, Inc., which provides rail transportation, maintenance and dispatching services to the Ports of Long Beach and Los Angeles. Southwest Research Institute performed all emission tests during this in-use field demonstration. In addition, Progress Rail Services obtained a U.S. EPA Tier 4 Certificate of Conformity for their remanufacturing kit in March 2017 (Engine family HPGRK58.6F14-009) which includes the engine and after-treatment system. For the most current EPA Certificate of Conformity for the EMD24 locomotive, please see the EPA web site at <https://iaspub.epa.gov/otaqpub/>.

Based on CARB staff evaluation of the application, exhaust emission data, and additional information provided, CARB staff hereby verifies that this locomotive

Mr. Gregory D. Hoenert, Manager
May 30, 2019
Page 2

configuration and technology achieves U.S. EPA Tier 4 switch NOx, PM, CO, and HC exhaust emission levels.

If you have any questions or comments, please contact Ajay Mangat, Manager, Freight Systems Section at (916) 324-2718 or via email at ajay.mangat@arb.ca.gov or Mike Jaczola, Staff Air Pollution Specialist, Freight Systems Section at (916) 324-5607 or via email at michael.jaczola@arb.ca.gov.

Sincerely,



Cari Anderson, Chief
Freight Transport Branch
Transportation and Toxics Division

cc: Dennis Johnson, Director
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