

original manufacturer. This final rule adopts the revisions as proposed.

Hose testing. We proposed, in § 180.413(c)(1), to require leak testing when any pipe, valve, hose, or fitting on a cargo tank is repaired or replaced in a process that does not involve welding. We proposed that the test must be done in accordance with § 180.407(g)(1). As noted by the National Propane Gas Association (NPGA), the proposal did not take into account existing exceptions from hose maintenance requirements for cargo tanks in dedicated compressed gas (except for carbon dioxide) service. In this final rule, we revised the proposal to include exceptions for cargo tanks in dedicated compressed gas (except for carbon dioxide) service, requiring them to be tested in accordance with the new or repaired delivery hose assemblies requirements in § 180.416(f), since any repair or replacement falling under § 180.413(c)(1) would also fall under this section.

Cleaning and purging before repairs. Because persons have suffered severe injuries or death while performing repairs to cargo tanks that were not properly cleaned and purged, we also proposed in § 180.413(a)(2) to clarify and emphasize that the entire CTMV, including void spaces, piping, and vapor recovery systems, must be cleaned and purged before doing repairs, modifications, stretchings, rebarrellings, or mountings on cargo tanks that transport toxic or flammable lading. NPGA suggests that we specify such cleaning and purging would apply only for welded repairs, not for repairs such as replacement of a valve or fitting located downstream of the primary valves or fittings. Replacing a fitting that does not require welding is not a repair as defined in § 180.403 and therefore would not, under this section, require cleaning and purging of the cargo tank. We are adopting our proposal without changes.

NTTC asks us to clarify the terms "cleaned" and "Apurged." This terminology is taken from § 173.29(b)(2)(ii) which discusses conditions that may make a packaging "empty." In this final rule, we added the wording from this paragraph to § 180.413(a)(2) to clarify that all hazardous material must be removed from the cargo tank before repairs are performed.

III. Revisions Applicable to DOT 400-Series Cargo Tanks

In the NPRM, we proposed several revisions to the specifications applicable to the DOT 400-series cargo tanks. These proposals included

revisions to: (1) Structural integrity requirements; (2) manhole marking requirements; (3) road clearance allowances; (4) bottom accident protection; (5) specification plate marking; (6) leak testing alternatives; and (7) weld joints. In addition to these changes, which are described below, we also proposed revisions to the DOT 400-series specifications to make the requirements easier to understand and follow.

A. Structural Integrity Requirements

In the NPRM, we proposed to add structural support members to the list of attachments to which the structural integrity requirements apply for new construction of DOT-400-series CTMVs in § 178.345-3(f). In addition, the proposal included requiring mounting pads for the installation of structural members, attachments and appurtenances.

We received a number of comments on this proposal, with most commenters suggesting that the proposal would impose significant costs on the industry without significantly enhancing safety. Additionally, several commenters note that excessive welding could damage the tank wall, and that there is no indication that lightweight appurtenances account for accident situations that breach the cargo tank wall.

TTMA states that there is no data showing lightweight attachments to be a concern for shell damage, and that " * * * a typical aluminum DOT 406 cargo tank trailer would require over 5,000 inches of additional welding * * * and would increase vehicle weight * * * by approximately 350 lbs." In addition, TTMA cites several safety issues that could result from excessive welding, including creating cavities that could trap hazardous ladings, creating more heat-affected zones, and possible distortion of the cargo tank wall.

We have considered the commenters concerns and are not adding structural support members to the list of attachments to which the structural integrity requirements apply. However, this final rule does include minor editorial clarifications that otherwise do not change the requirements in this section.

B. Manhole Marking

Under § 178.345-5, the HMR currently require manhole covers to be permanently marked with the manufacturer's name, the test pressure, and a certification that the manhole cover meets HMR requirements. This marking enables cargo tank owners, RIs,

and enforcement personnel to verify that the manhole conforms to applicable regulatory requirements. In the NPRM, we proposed to require manhole assemblies to be marked on the outside, where the marking can be seen without opening the manhole cover or fill opening and exposing persons to hazardous materials inside the cargo tank.

Two commenters addressed the topic, the Fertilizer Institute and Farmland Industries, Inc. Both supported the proposal. This final rule adopts the proposal as presented in the NPRM. This requirement will become effective one year after the effective date of this final rule. The revised marking requirements apply to newly manufactured cargo tanks and to replacement manhole assemblies on existing cargo tanks.

C. Road Clearance

In a petition for rulemaking (P-1325), TTMA requested that we lower the minimum road clearance requirements in § 178.345-8 to permit greater flexibility in the design of landing gear, tire carriers, cabinets, and other components near axles. TTMA suggested that such a revision would permit lowering the center of gravity for some CTMVs, which would improve dynamic stability. TTMA stated that it is aware of no situations in which a landing gear failure has punctured a cargo tank.

We agreed with TTMA that reducing the center of gravity for CTMVs would be beneficial. Thus, in the NPRM, we proposed to revise the requirements for minimum road clearance for landing gear within 10 feet of an axle to be no less than 10 inches. We proposed to maintain the current clearance requirements for the middle area between axles. The proposed revision would allow landing gear to be lowered by two inches, but would not compromise clearances in the area of a CTMV most vulnerable to contact with the ground—that is, the area midway between a tractor's rear axle and the CTMV rear suspension.

In its comments on this issue, TTMA suggests that the ten-inch clearance should be measured when there is no lading in the cargo tank. We disagree, because we are identifying the minimum road clearance. This final rule adopts a ten-inch road clearance, and requires it to be calculated when the tank is fully loaded with its maximum lading.

D. MAWP Specification Plate Marking

In a petition for rulemaking (P-1212), TTMA asked us to eliminate the