



GIRARD EQUIPMENT, INC.

Specialty Valve Manufacturers for Tank Trailers since 1952

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MC307 PRESSURE RELIEF VENT TESTING

Girard Equipment, Inc. General Information

The following information is for information only. It is not designed to replace technical bulletins from **TTMA, NTTC, DOT**, association or other regulatory commission.

It is intended for use as a **guide** to vent testing in HM-183. It does not replace the requirements of the Federal Register, Section 49 CFR Part 107 et al, entitled "Requirements for Cargo Tanks". The suggestions contained here are our interpretation of the requirements and, as such, are open to other interpretations. Girard Equipment, Inc. will take no responsibility for deletions or misinterpretations.

The **NTTC** (National Tank Truck Carriers) offers an exceptional guideline to the care and maintenance of tank trailers. The address and phone number is as follows:

National Tank Truck Carriers, Inc.

2200 Mill Road

Alexandria, VA 22314-4677

(703) 838-1960

Fax (703) 684-5753

www.tanktruck.org

Before testing please check the specification data plate before you begin any test to ensure which code applies to that tank trailer.

MC 307 Tank Summary Information

Every tank compartment must have one or more safety relief devices that limit the internal pressures of the tank to 130% of the tanks design pressure. The MC 307 specification trailer employs two main devices to enable the tank to automatically adjust the internal pressures of the tank vessel. The first is a Pressure actuated venting device (see our **Part# MC 307 vents**) is

set to open at no less than the tank design pressure. The venting capacity of this vent can be no less than 12,000 cubic feet per hour, per compartment or 12,000 cubic feet per hour for each 350 square feet of exposed surface area. The overwhelming majority of the MC 307 tanks produced have compartments that need more venting capacity than our 3” vent (**Part# MC 307B**) will allow, so additional venting capacity is needed. Our 3” fusible cap (**Part# 3SF**) supplements the vent and is only needed when the tank vessel is under a considerable amount of pressure in a very short period of time as would occur in a fire or an overturn situation.

Girard MC307 Vents

In order for tank trailers under the MC 307 designation to continue qualifying for its intended use, the venting system must conform to Section 180 of the Federal Registry code.



Guidelines for relief vent testing MC307 Tank Trailers.

External Visual Test

(Performed 1 time a year or every 6 months on MC 307 trailers with full opening heads)

1. During the visual inspection, if the venting appears to be corroded or damaged it must be removed and a bench test must be performed per Section 180.407(d)(3) of the code.
2. Care should be taken when disassembling the vent to protect the vent itself and the mechanic who is performing these procedures.
3. Disassemble the vent and inspect parts.
4. All wearable parts i.e., valve seats; seals & gaskets should be replaced for genuine Girard parts.
5. After the vent is fully repaired it **must** be tested.

For MC307 Vents:

- For the yearly leakage test on the tank, which is required under the code, the vents must remain in place on the tank during the pressure test for leak tightness. We strongly suggest you obtain leak testing guidelines from the NTTC for the correct and safe way to perform this test.

If you suspect the vent is the source of the leak you can do the following to check the vent:

- Remove the vent from the tank.
- Make sure the vent is free from any foreign matter.
- Place the vent on tester (example of a test stand on next page) and proceed to MC 307 vent testing procedures.

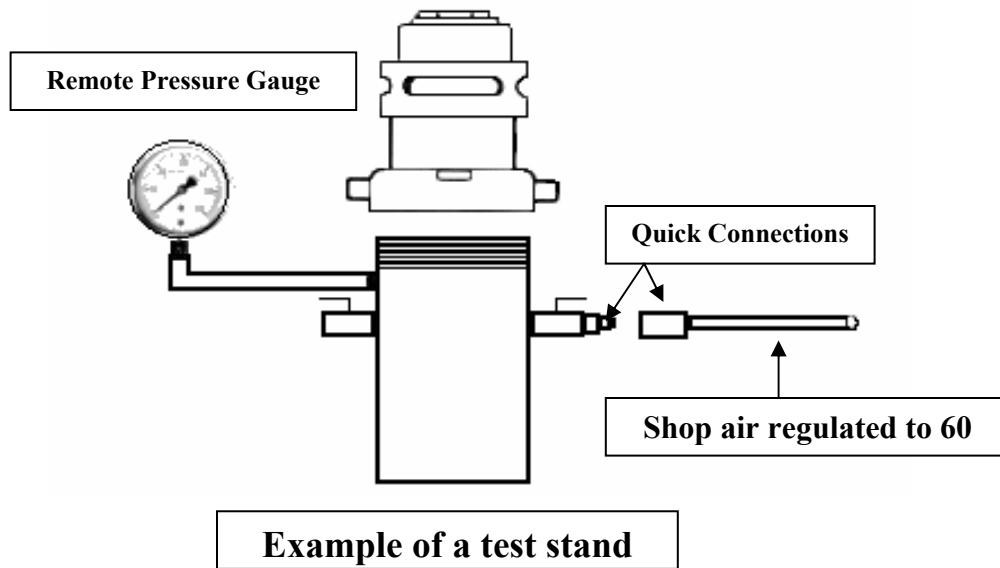
After you have confirmed the pressure relief vent is working properly, return the vent to the tank for the yearly “on the tank” leakage test.

MC 307 Vent testing

1. Close the blow down valve.
2. Slowly open air input valve until needle on the pressure gauge at the rate of the second hand on your watch (approx. 1 pound per second).
3. Place hand around vent seat area to feel any escaping air. Listen for any air escaping and watch air gauge to see when the upward movement stops. When the gauge stops record the pressure, this is your “set to discharge” pressure.
4. Close the inlet air valve and watch gauge. The gauge needle will back down slowly and will stop this will be the “Reset” pressure.

The following chart is provided to show proper “Set to discharge” and “Reset” pressure range.

Tank Design Pressure (Found on the Spec. Data Plate)	“Set to discharge” pressure range	“Reset” pressure range
25	25-27.5	22.5 - 24.7
30	30-32.5	27 - 29.2
35	35-37.5	31.5 - 33.7
40	40-42.5	36 - 38.2



If the vent does not perform within the above ranges, disassemble, clean, replace parts as necessary, and retest.

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