



PRESSURE RELIEF DEVICE TESTING PRESSURES

Part 180.407(J)

| CT Specification | CT MAWP | Minimum opening (SET) pressure PSIG | Maximum opening pressure PSIG | Minimum closing pressure PSIG |
|------------------|---------|-------------------------------------|-------------------------------|-------------------------------|
| 306 | 3.0 | >=3.0 | <=4.4 | >=2.7 |
| 306 | 3.3 | >=3.3 | <=4.4 | >=2.7 |

When the 306 PRD is replaced with a 406 PRD, use the 406 test data below that matches the MAQP of the 306 cargo tank for bench testing that PRD

| | | | | |
|------------|-----|-------------|--------------|------------|
| 406 | 3.0 | >=110% 3.30 | <=138% 4.14 | >=MAWP 3.0 |
| 406 | 3.3 | >=110% 3.63 | <=138% 4.554 | >=MAWP 3.3 |
| 312 | 15 | >=15 | >=110% 16.5 | >=90% 13.5 |
| 307 or 312 | 25 | >=25 | <=110% 27.5 | >=90% 22.5 |
| 307 or 312 | 30 | >=30 | <=110% 33 | >=90% 27 |
| 307 or 312 | 35 | >=35 | <=110% 38.5 | >=90% 31.5 |
| 307 or 312 | 40 | >=40 | <=110% 41.1 | >=90% 36 |
| 307 or 312 | 45 | >=45 | <=110% 49.5 | >=90% 40.5 |
| 307 or 312 | 50 | >=50 | <=110% 55 | >=90% 45 |

When the 307 PRD is replaced with a 407 PRD or a 312 PRD is replaced with a 412 PRD, use the 407/412 test data below that matches the MAWP of the 307 or 312 cargo tank for bench testing that PRD

| | | | | |
|------------|-----|-----------|--------------|-------------|
| 412 | 15 | >=120% 18 | <=132% 19.8 | >=108% 16.2 |
| 407 pr 412 | 25 | >=120% 30 | <=132% 33 | >=108% 27 |
| 407 pr 412 | 30 | >=120% 36 | <=132% 39.6 | >=108% 32.4 |
| 407 pr 412 | 35 | >=120% 42 | <=132% 46.2 | >=108% 37.8 |
| 407 pr 412 | 40 | >=120% 48 | <=132% 52.8 | >=108% 43.2 |
| 407 pr 412 | 45 | >=120% 54 | <=132% 59.4 | >=108% 48.6 |
| 407 pr 412 | 50 | >=120% 60 | <=132% 66 | >=108% 54 |
| 330 or 331 | 165 | >=165 | <=110% 181.5 | >=90% 148.5 |
| 330 or 331 | 250 | >=250 | <=110% 275 | >=90% 225 |
| 330 or 331 | 265 | >=265 | <=110% 291.5 | >=90% 238.5 |
| 338 | 33 | >=33 | <=110% 49.5 | >=90% 29.7 |
| 338 | 56 | >=56 | <=110% 84 | >=90% 50.4 |
| 338 | 70 | >=70 | <=110% 105 | >=90% 63 |
| 338 | 75 | >=75 | <=110% 112.5 | >=90% 67.5 |
| 338 | 143 | >=143 | <=110% 157.3 | >=90% 128.7 |
| 338 | 176 | >=176 | <=110% 193.6 | >=90% 158.4 |

| Flammable and Oxygen | MAWP | Primary min. opening pressure PSIG | Primary Max. opening pressure PSIG | Secondary min. opening pressure PSIG | Secondary max. opening pressure PSIG |
|----------------------|------|------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|
| 338 | 56 | >= 56 | <110% 61.6 | <130% 56 | >=150% 84 |
| 338 | 70 | >= 70 | <110% 77 | <130% 70 | >=150% 105 |
| 338 | 75 | >= 75 | <110% 82.5 | <130% 75 | >=150% 112.5 |
| 338 | 143 | >= 143 | <110% 157.3 | <130% 143 | >=150% 214.5 |
| 338 | 176 | >= 176 | <110% 193.6 | <130% 176 | >=150% 264 |

Remember the closing pressure for the MC 338 PRD is >= 90% of the MAWP

PRESSURE RELIEF DEVICE TESTING PRESSURES

400 Series

406 178.346-3(c) The set pressure of each **primary relief valve** must be not less than **110 percent of the MAWP or 3.3 psig, whichever is greater**, and not more than 138 percent of the MAWP. The valve must **close at no less than the MAWP** and remain closed at lower pressures. Normal vents must be **set to open at not less than 1 psig** and must be designed to prevent loss of lading through the device in case of vehicle upset. Each vacuum relief device must be set to open at no more than 6 ounces vacuum.

Normal vent Open > 1 psig

Vacuum vent Open < 6 oz vacuum

407-412 178.345-10(d) Primary pressure relief system. The **set pressure** of each primary relief valve must be **no less than 120 percent of the MAWP**, and **no more than 132 percent of the MAWP**. The valve must **reclose** at not less than **108 percent of the MAWP** and remain closed at lower pressures.

300 series

306 180.407 (j)

Normal vents shall be set to open at no more than 1.0 psig and all vacuum vents at no more than 6 ounces.

180.407(g)(1)(a) The emergency vent must open no less than the set pressure (MAWP) and no higher than 110% of the MAWP

Normal vent open > 1 psig

Vacuum vent Open < 6 oz vacuum

307/312 180.407(j)

MC 331 180.407(j)

MC 338

173.318(b)(4)(A) Each pressure relief valve in the **primary** relief system must be set-to-discharge at a pressure no higher than 110 percent of the tank's design pressure.

(B) Each pressure relief device in the **secondary** pressure relief system must be designed to commence functioning at a pressure no lower than 130 percent and no higher than 150 percent of the tank's design pressure