



# 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

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## 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 pig, 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 pig** 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 pig

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 pig 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