

# Performance Indicators

## DESCRIPTION

Trabon Performance Indicators are pressure-sensitive devices that pinpoint excessive pressure in Trabon series progressive lubricating systems. These devices, which are installed in the alternate outlet ports of divider valves, signal a fault either by causing an indicator pin to protrude or by releasing lubricant to the atmosphere.

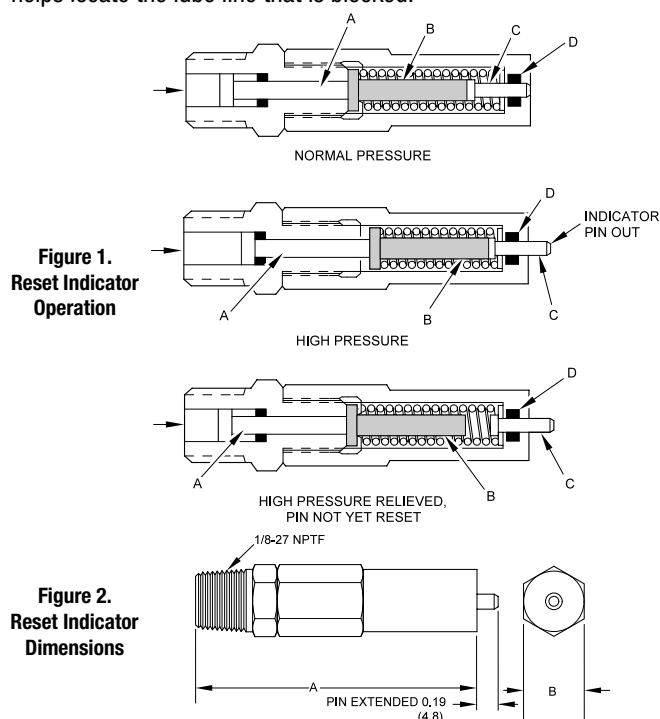
All Performance Indicators respond quickly to protect the lube system and locate lube line blockage. Two of these devices—the Reset Indicator with Memory and the Rupture Indicator—will stop lube system operation when a fault occurs. If, however, lube system operation must continue in spite of a single line being blocked, the Automatic Relief Indicator should be used. Rupture-to-Atmosphere Indicators for Trabon pumps are also included.

It is recommended that some type of Performance Indicator be used to monitor every working outlet of a Trabon Centralized Lubrication System.

## Reset Indicator with Memory

Reset Indicators stop lube system operation when a fault occurs. These devices can be used in either master or secondary divider valves. When a lube line becomes blocked, the resultant high pressure moves pistons (A) and (B) (see Figure 1). This movement compresses the spring and pushes indicator pin (C) through the opening in the cap. The high pressure prevents the affected

divider valve piston from completing its cycle, causing a pressure backup through the divider valve which trips a pressure switch upstream from the valve and shuts off the pump. As high pressure is relieved, the spring expands, resetting the pistons. Indicator pin (C) is held in place by o-ring (D) until it is reset manually. This helps locate the lube line that is blocked.



Pressure (PSI)	1/8" NPTF MJ, MH, MS, MXP	1/8" NPSF w/O-Ring MH, MS, MXP	Nickel Plated 1/8" NPTF MJ, MH, MS, MXP	1/4" NPTF MX only	7/8"-14 SAE w/O-Ring MGO*
250	563231 (509-931-010)	563252 (509-932-590)	— (509-932-210)	563239 (509-932-010)	— (509-932-018)
500	563232 (509-931-020)	563253 (509-932-600)	563246 (509-932-220)	563240 (509-932-020)	Disc. (509-932-028)
750	563233 (509-931-030)	563254 (509-932-610)	— (509-932-230)	563241 (509-932-030)	Disc. (509-932-038)
1000	563234 (509-931-040)	563255 (509-932-620)	563247 (509-932-240)	563242 (509-932-040)	— (509-932-048)
1500	563235 (509-931-050)	563256 (509-932-630)	563248 (509-932-250)	563243 (509-932-050)	564200 (509-932-058)
2000	563236 (509-931-060)	563257 (509-932-640)	— (509-932-260)	563244 (509-932-060)	Disc. (509-932-068)
2500	563237 (509-931-070)	563258 (509-932-650)	563249 (509-932-270)	563245 (509-932-070)	— (509-932-078)
3000	—	563261 (509-932-831)	—	—	—
5000	—	563262 (509-932-832)	—	—	—
<b>Dimensions (See Figure 2)</b>					
A	2.34 (59.5)	2.44 (62.0)	2.34 (59.5)	2.47 (62.7)	2.91 (73.8)**
B	0.50 (12.7)	0.56 (14.3)	0.50 (12.7)	0.56 (14.3)	1.00 (25.4)
					** Used on MGO Reset Indicator built before Feb. 2006.
					2.63 (66.8)***
					*** Used on MGO Reset Indicator built after Feb. 2006.
					1.00 (25.4)
O-Ring	NO	YES	NO	NO	YES

\* Note: MGO assemblies listed consist of adapter 435-702-570, O-Ring 422-240-100 and 1/8" NPSF with O-Ring 509-932-590 thru 650 series reset indicators. Graco part numbers are shown along with Old part numbers in ( ).

Table 1. Reset Indicator with Memory Ordering Data/Dimensions

### Automatic Relief Indicator

These Performance Indicators pinpoint lube line blockage but allow the lube system to continue to supply lubrication to points that are not blocked. They are used primarily in secondary divider valves. The excessive pressure created by line blockage moves a piston, enabling the lubricant to escape through a vent. (See Figure 3.) When the pressure is relieved, the spring resets the piston. Because these devices permit the lube system to keep operating when a lube point is blocked, a separate pressure switch connected to an audible or visual alarm should be used to warn of high pressure.

Pressure (psi)	1/8 in NPTF MJ, MH, MS, MXP	1/8 in NPSF w/O-Ring MH, MS, MXP	1/4 in NPTF MX Only
750 ± 20%	563163 (508-310-075)	563170 (508-310-415)	563156 (508-210-075)
1000 ± 20%	563164 (508-310-100)	563171 (508-310-425)	563157 (508-210-100)
1250 ± 20%	563165 (508-310-125)	563172 (508-310-435)	— —
1500 ± 20%	563166 (508-310-150)	563173 (508-310-445)	563158 (508-210-150)
2000 ± 20%	563167 (508-310-200)	563174 (508-310-455)	563159 (508-210-200)
2500 ± 20%	563168 (508-310-250)	563175 (508-310-465)	563160 (508-210-250)
3000 ± 24%	563169 (508-310-300)	563176 (508-310-475)	563161 (508-210-300)

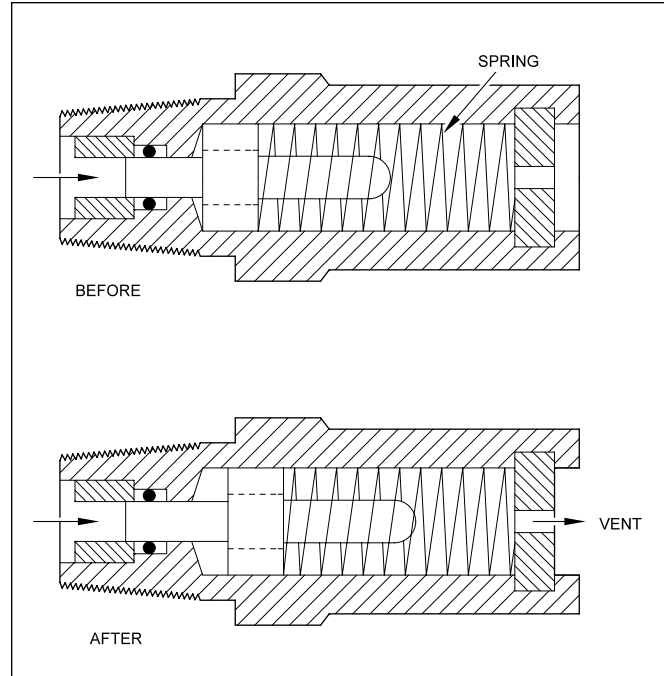
**Table 2. Automatic Relief Indicators**

Automatic Relief Indicators used to be identified by the color of the spring retainer in the end of the indicator. Pressure ratings are now stamped on the body of the indicator. Table 3 is shown for reference and to aid in the selection of replacement indicators.

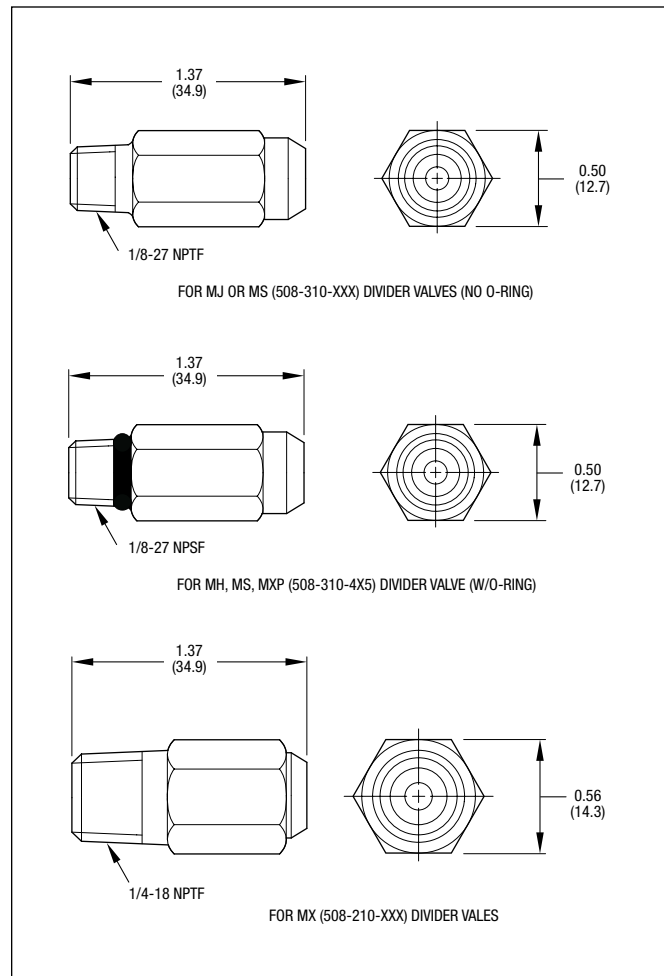
Retainer Color	Pressure Rating
Blue	750
Green	1000
Yellow	1400
Red	1800
Orange	2200
Aluminum	2500
Purple	Consult the Factory

**Table 3. Reference Table**

**Note:** If you are replacing indicators that have a pressure rating that is no longer available, it is recommended that you select available indicators with the next higher pressure rating.



**Figure 3. Automatic Relief Indicator Operation**



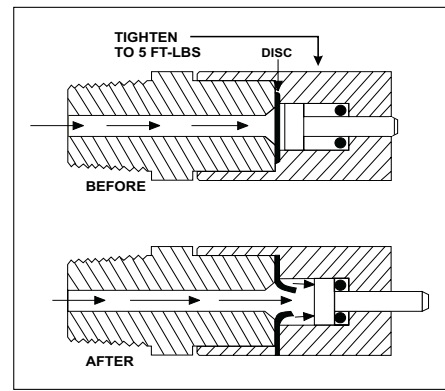
**Figure 4. Automatic Relief Indicator Dimensions**

**Rupture Indicator**

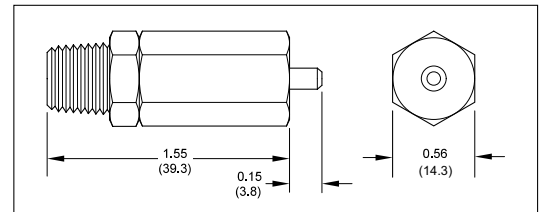
Rupture indicators are used on MH divider valve applications where lube system pressures exceed 2,500 psi. The high pressure from lube line blockage causes a disc to rupture. The lubricant then forces an indicator pin to protrude, locating the blockage. (See Figure 5.) The high pressure backs up through the system and trips a switch to shut the system off. When the fault is corrected, the disc must be replaced and the pin reset manually. See Table 4 for ordering data and Figure 6 for dimensions.

Pressure (psi)	1/8-27 NPTF	1/8-27 NPSF w/O-Ring	Replacement Disc (3/8 in Dia.)	Disc Color
2800 ± 20%	563228 (509-499-620)	563229 (509-499-625)	557422 (509-277-000)	Green
3700 ± 20%	563220 (509-499-100)	563221 (509-499-105)	557423 (509-278-000)	Yellow
4600 ± 20%	564355 (509-499-120)	563222 (509-499-125)	557424 (509-279-000)	Red
5500 ± 20%	563223 (509-499-140)	563224 (509-499-145)	557425 (509-280-000)	Orange
6400 ± 20%	563225 (509-499-160)	563226 (509-499-165)	557427 (509-282-000)	Pink
7300 ± 20%	563227 (509-499-200)	— (509-499-205)	557428 (509-283-000)	Blue
8200 ± 20%	— (509-499-220)	—	557429 (509-284-000)	Purple

**Table 4. Rupture Indicator Ordering Data**



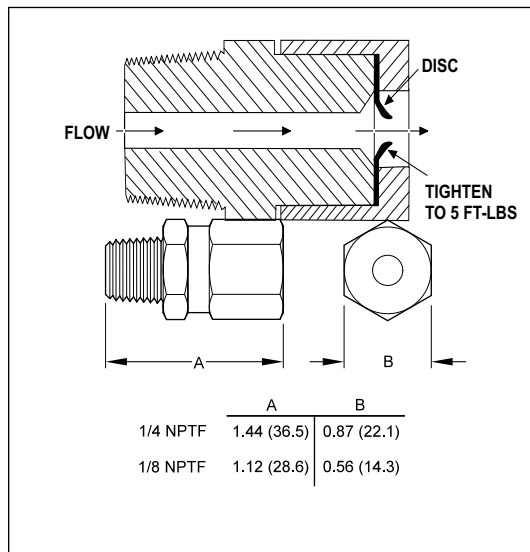
**Figure 5. Rupture Indicator Operation**



**Figure 6. Rupture Indicator Dimensions**

**Rupture-to-Atmosphere Indicator**

These indicators, which are standard on all Graco pumps, provide pump protection and give visual indication of excessive system pressure. The pressure disc ruptures at a predetermined pressure setting, venting lubricant to the atmosphere and relieving the high pressure. (See Figure 7.) See Table 5 for ordering data.



**Figure 7. Rupture-to-Atmosphere Operation/Dimensions**

Pressure (psi*)	Complete Assembly	Replacement	Disc Color	Blowout Disc
<b>1/4 in NPTF Fittings</b>		<b>11/16 in Dia</b>		<b>(QTY = 6)</b>
900	Disc. (509-206-060)	557431 (509-290-000)	Black	Disc. (560-900-250)
1450	563179 (509-206-100)	557433 (509-292-000)	Yellow	563962 (560-900-270)
1750	563182 (509-206-120)	557434 (509-293-000)	Red	563963 (560-900-280)
2050	563183 (509-206-140)	557435 (509-294-000)	Orange	563964 (560-900-290)
2350	563184 (509-206-160)	557436 (509-295-000)	Aluminum	563965 (560-900-300)
2650	— (509-206-180)	557437 (509-296-000)	Pink	Disc. (560-900-310)
2950	563185 (509-206-200)	557438 (509-297-000)	Blue	563966 (560-900-320)
3250	— (509-206-220)	557439 (509-298-000)	Purple	Disc. (560-900-330)
<b>1/8 in NPTF Fittings</b>		<b>3/8 in Dia.</b>		<b>(QTY = 25)</b>
900	— (509-230-060)	555788 (509-276-000)	Black	563952 (560-900-050)
1450	Disc. (509-230-100)	557423 (509-278-000)	Yellow	563954 (560-900-070)
1750	564059 (509-230-120)	557424 (509-279-000)	Red	563955 (560-900-080)
2050	Disc. (509-230-140)	557425 (509-280-000)	Orange	563956 (560-900-090)
2350	563191 (509-230-160)	557426 (509-281-000)	Aluminum	563957 (560-900-100)
2650	Disc. (509-230-180)	557427 (509-282-000)	Pink	563958 (560-900-110)
2950	563192 (509-230-200)	557428 (509-283-000)	Blue	563959 (560-900-120)
3250	563193 (509-230-220)	557429 (509-284-000)	Purple	563960 (560-900-130)
5000	563194 (509-230-350)	557430 (509-285-200)	Brown	563961 (560-900-140)
<b>High Pressure 1/8 in NPTF Fittings</b>		<b>3/8 in Dia.</b>		<b>(QTY = 25)</b>
3700	564479 (509-494-100)	557423 (509-278-000)	Yellow	563954 (560-900-070)
4600	563216 (509-494-120)	557424 (509-279-000)	Red	563955 (560-900-080)
5500	563217 (509-494-140)	557425 (509-280-000)	Orange	563956 (560-900-090)
6400	563218 (509-494-160)	557427 (509-282-000)	Pink	563958 (560-900-110)
7300	563219 (509-494-200)	557428 (509-283-000)	Blue	563959 (560-900-120)
8200	— (509-494-220)	554729 (509-284-000)	Purple	563960 (560-900-130)
9500	— (509-230-500)	— (509-285-000)	Gray	—

\* Disc up to 2350 psi have a tolerance of ± 500 psi. Discs greater than 2350 psi have a tolerance of ± 20%

**Table 5. Rupture-to-Atmosphere Ordering Data**

## Rupture-to-Atmosphere Indicator with Spud Assembly

A spud assembly (see Figure 8) is available to return vented lubricant to the reservoir by way of a tube. See Table 6 for ordering data. A high pressure switch is recommended to provide an audible or visual warning alarm that high system pressure has occurred.

Pressure (psi)*	Complete Assembly	Replacement Disc (11/16 in Dia.)	Disc Color
1450	563186 (509-220-101)	557433 (509-292-000)	Yellow
1750	563187 (509-220-121)	557434 (509-293-000)	Red
2350	563188 (509-220-161)	557436 (509-295-000)	Aluminum

\*All pressures have a tolerance of  $\pm 500$

**Table 6. Rupture-to-Atmosphere w/Spud Ordering Data**

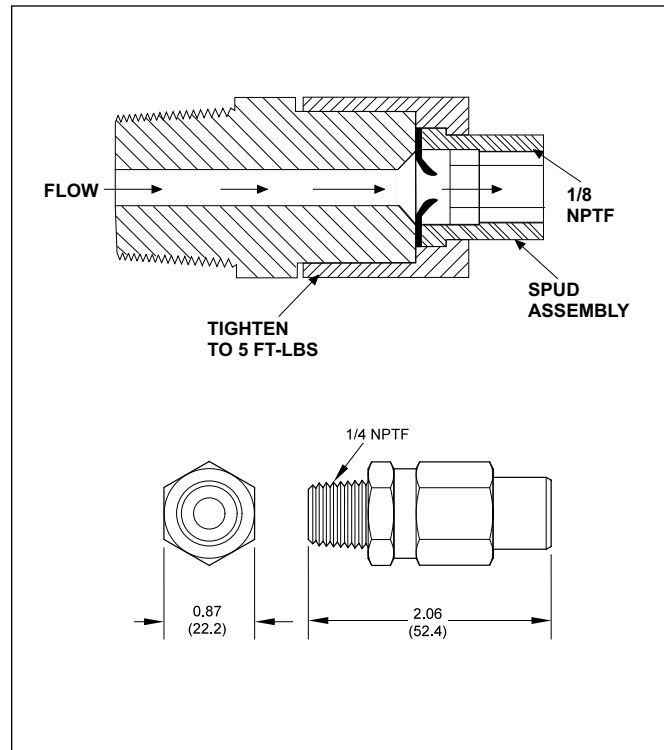
## Rupture Discs (11/16" Dia.)

The following discs (Table 7) are available (shipped loose) or in packaged quantity. They can be used in either type of Rupture-to-Atmosphere Indicator.

Pressure (psi)*	Disc Part No. (Old Part No.)	Color	Qty = 6
900	557431 (509-290-000)	Black	Disc. (560-900-250)
1175	557432 (509-291-000)	Green	-
1450	557433 (509-292-000)	Yellow	563962 (560-900-270)
1750	557434 (509-293-000)	Red	563963 (560-900-280)
2050	557435 (509-294-000)	Orange	563964 (560-900-290)
2350	557436 (509-295-000)	Aluminum	563965 (560-900-300)
2650	557437 (509-296-000)	Pink	Disc. (560-900-310)
2950	557438 (509-297-000)	Blue	563966 (560-900-320)
3250	557439 (509-298-000)	Purple	Disc. (560-900-330)

\*All pressures have a tolerance of  $\pm 500$

**Table 7. Rupture Discs**



**Figure 8. Rupture-to-Atmosphere w/Spud Assembly**

**Look to GRACO, Inc.**  
for all of your  
Centralized Lubrication System needs.

**Products include:**

**DIVIDER VALVES:** for oil and grease...to 7500 PSI...1 to 20 points from a single valve assembly...up to 400 points from a Master/Secondaries circuit...or systems that handle an entire plant.

**PUMPS:** fixed and variable displacement...manual and air, hydraulic, electric motor or mechanically driven.

**TIMERS/AUTOMATIC CONTROLS:** from simple on/off to complete flow and pressure monitoring, either time- or machine-actuated.

**ACCESSORY VALVES:** balancing, check and flow.

**INDICATORS:** performance and broken line.

**ACCESSORIES:** fittings, brackets, clamps, filters and strainers.

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

**Contact us today!**

To receive product information or talk with a Graco representative, call 800-533-9655 or visit us online at [www.graco.com](http://www.graco.com).

