

TRIMLINETM REGULATORS

Table 1 - Specifications

Type Regulator	Single-Stage Regulator (R-76 Series)		Two-Stage Regulator (R-77 Series)		Gas Service	Connection CGA Number		Rated Maximum Delivery Press		Pressure Gauges		psig	Delivery kPa
	Model	Part Number	Model	Part Number		Inlet	Outlet	psig	kPa	Cylinder psig	kPa		
Cylinder	R-76-75-540	998323	R-77-75-540	998336	Oxygen	540	022	75	520	4000	27600	100	690
	R-76-150-540	998324	R-77-150-540	998337				150	1035			200	1380
	--	--	R-77-200-540	998338				200	1380			400	2760
	R-76-15-510	998370	R-77-15-510	998371	Acetylene	510	023	15	103	400	2750	30	207
	R-76-15-300	998328	R-77-15-300	998340									
	R-76-75-510	998331	--	--	L.F.G. ♦ H.P.F.G. ♦	510	023	75	520	4000	27600	100	690
	R-76-75-350	998332	R-77-75-350	998341				75	520			100	690
	--	--	R-77-150-350	998342				150	1035			200	1380
Liquid Cylinder	--	--	R-77-15-580	19057	Inert Gas#	580	032	15	103	4000	27600	30	207
	--	--	R-77-30-580	19590				30	207			50	345
	--	--	R-77-75-580	998343				75	520			100	690
	R-76-150-580	998334	R-77-150-580	998344				150	1035			200	1380
	R-76-500-580	998335	R-77-500-580	998345			●	500	3450			1000	6900
	R-76-CF-320	999149	--	--	Carbon Dioxide Carbon Dioxide Breathing Air Industrial Air	320	032	#	#	4000	27600	‡	‡
	R-76-150-320	19629	--	--				150	1035			150	1040
	R-76-150-346	17153	R-77-150-346	18558				150	1035			200	1380
	--	--	R-77-150-590	998348				150	1035			200	1380
Gaugeless Cylinder	R-76-150-540LC	19777	--	--	Oxygen Inert Gas ♦	540	022	150	1035	--	--	150	1040
	R-76-150-580LC	19777	--	--				150	1035			150	1040
Station †	R-76-150-540G	998325	--	--	Oxygen Acetylene	540	022	150	1035	--	--	--	--
	R-76-15-510G	998329	--	--				15	103			--	--
Station †	R-76-150-024	19151	--	--	Oxygen Acetylene Other FG ♦ Inert Gas ♦ Inert Gas ♦	024	022	150	1035	--	--	200	1380
	R-76-15-025	19152	--	--				15	103			30	207
	R-76-75-025	19153	--	--				75	520			100	690
	R-76-75-034	19155	--	--				75	520			100	690
	R-76-15-034	19154	--	--				15	103			30	207
	--	--	--	--									

♦ L.F.G. - Liquefied Fuel Gas such as FG-2, propane, methylacetylene-propadiene (MPS), propylene-based fuel gases, butane, etc.

H.P.F.G. - High pressure fuel gas such as hydrogen and methane.

Inert Gas - Includes argon, helium, and nitrogen

Other F.G. - Any fuel gas except acetylene.

■ CGA-022 (formerly "B" oxygen) - 9/16-in. —18 RH male connection.

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CGA-024 (formerly "C" oxygen) - 7/8-in. —14 RH female nut.

CGA-025 (formerly "C" fuel gas) - 7/8-in. —14 LH female nut.

CGA-032 (formerly "B" inert gas) - 5/8-in. —18 RH female connection.

CGA-033 (formerly "B" air-water) - 5/8-in. —18 LH female connection.

CGA-034 (formerly "C" inert gas) - 7/8-in. —14 RH male nut.

● 1/4-in. 45° flared tube fitting.

† Maximum Inlet Pressure of Station Regulator: 15 psig (103kPa) for the R-76-15-025 regulator since acetylene pipeline pressure should never exceed 15 psig; 200 psig for all other station regulators

‡ Delivery gauge on R-76-CF-320 is calibrated to read up to 100 ft.³/hr. (47 L/min) with flow through outlet spud, and rated to deliver up to 80 cfh (38 L/min) of carbon dioxide.

REGULATORS FOR THE RAILROAD INDUSTRIES:

The following regulators are identical to the models listed above except for the 41/64"—18 RH or LH threaded (ORS) outlet connection (P/N 6211 for oxygen; P/N 10Z29 for acet./fuel gas) used commonly by railroad maintenance shops:

R-77-150-540R - P/N 999835

R-77-15-510R - P/N 999840

ACCESSORIES:

Gauge Guard, P/N 999965 - Tough yellow impact-resistant plastic guard clamps to cap covering and protecting the gauges from any abuse.

Nozzle Spanner Wrench, P/N 5250145 - Fits on wrench handle with 1/2-in. drive for removing and installing valve nozzle 998154.



This booklet contains complete replacement parts information on all regulators listed above. Repair of these regulators should be undertaken only by properly-trained personnel in adequately-equipped repair facilities. This booklet does not provide complete step-by-step disassembly, reassembly, or testing instructions. However, these complete instructions are provided in ESAB's Repair Manual which can be ordered for a nominal fee through ESAB Customer Service Dept., Florence, SC.

All regulators in this group use many parts in common. For other parts, there are variations, depending on inlet or outlet pressure differences, type of gas service, etc. Since in many cases the differences between like parts are not readily apparent, great care should be exercised to keep all repair parts segregated by part number. It is unwise to attempt simultaneous repair of two regulators of different types.

When ordering, supply both description and part number. Do NOT order by part number alone nor by an encircled item number shown in the illustrations. On those encircled items, refer to the appropriate tables for description and proper part number.

Be sure this information reaches the operator.
You can get extra copies through your supplier.

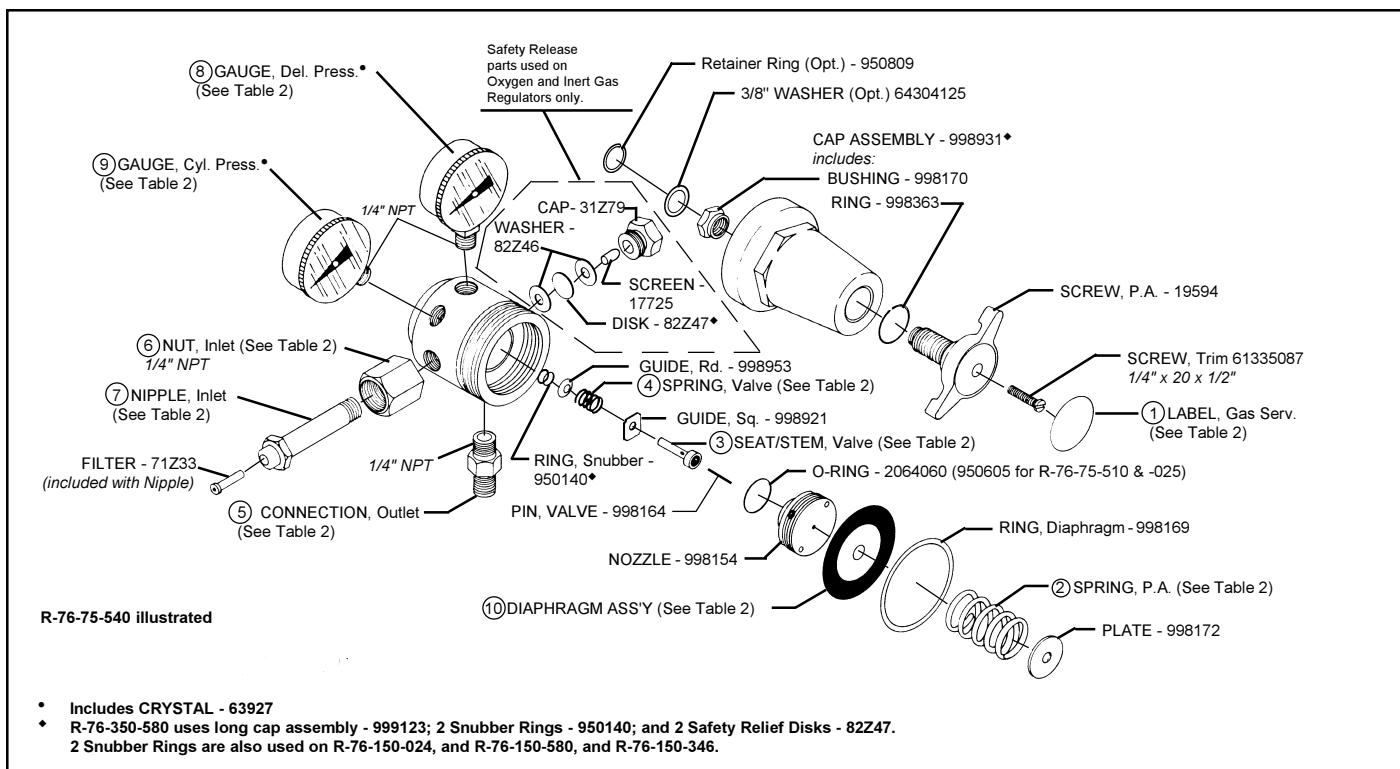


Fig. 1 - Standard Single-Stage Cylinder and Station Regulators

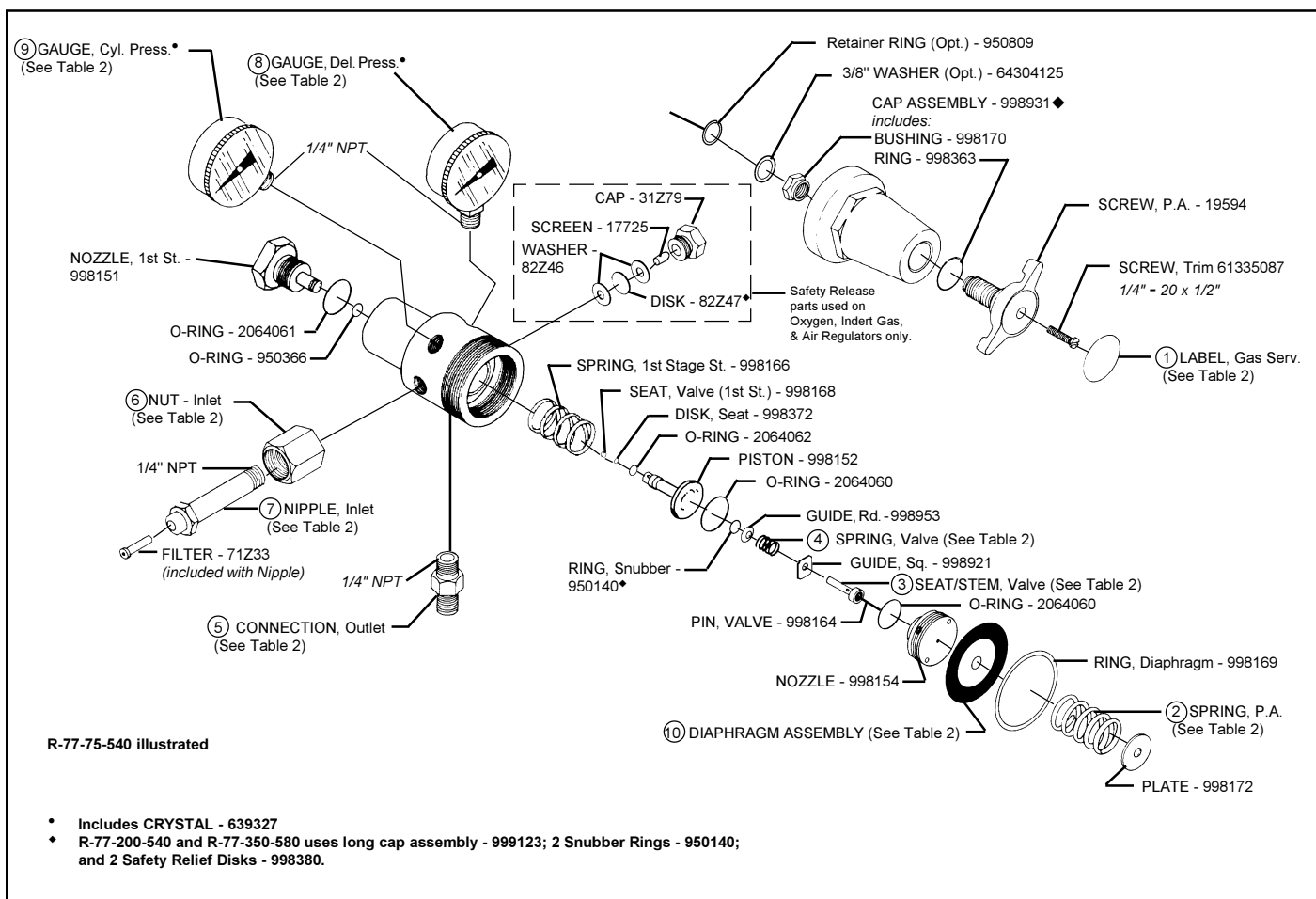


Fig. 2 - Two-Stage Regulators

Table 2 - Standard Single-Stage Cylinder and Station Regulators (See Fig. 1)

Item No.	Description	Oxygen Regulators				Acetylene Regulators			Breath Air Reg.	Industrial Air Reg.
		R-76 & 77 -75-540	R-76 & 77 -150-540	R-77 -200-540	R-76 -150-024	R-76 & 77 -15-510	R-76 & 77 -15-300	R-76 -15-025	R-76-77 -150-346	R-77 -150-590
1	LABEL, Gas Service	953192	953192	953192	953192	953191	953191	953191	953194	953194
2	SPRING, Press.-Adj. *	998106	998107	998108	998107	998104	998104	998104	998107	998107
3	SEAT/STEM, Valve	998153	998153	998153	998853	998852	998852	998852	998852	998852
4	SPRING, Valve *	998952	998952	998952	998952	998963	998963	998963	998963	998963
5	CONNECTION, Outlet	3389	3389	3389	3389	3390	3390	3390	3389	11N16
6	NUT, Inlet	410	410	410	33A22	1369	37Z73	33A23	37Z73	37Z32
7	NIPPLE, Inlet	21519	21519	21519	998387	103Z01	21522	998387	950891	103Z01
8	GAUGE, Del. Press.	999436	999440	999442	999440	999437	999437	999437	999439	999439
9	GAUGE, Cyl. Press.	999446	999446	999446	--	999441	999441	--	999445	999445
10	DIAPHRAGM ASS'Y *	999827	999827	999827	999827	998155	998155	998155	998155	998155

Item No.	Description	Fuel Gas Regulators				Inert Gas Regulators				
		R-76 -75-510	R-76 & 77 -75-350	R-77 -150-350	R-76 -75-025	R-77 -75-580	R-76 & 77 -150-580	R-76 & 77 -350-580	R-76 -75-034	R-76 -30-034
1	LABEL, Gas Service	953197	953196	953196	953197	953193	953193	953193	953193	953193
2	SPRING, Press.-Adj.	998106	998106	998107	998106	998106	998107	998109	998106	998104
3	SEAT/STEM, Valve	998852	998852	998852	998852	998852	998852	998852	998852	998852
4	SPRING, Valve	998963	998963	998963	998963	998963	998963	998963	998963	998963
5	CONNECTION, Outlet	3390	3390	3390	3390	74S76	74S76	186W41	74S76	74S76
6	NUT, Inlet	1369	6441	6441	33A23	37Z33	37Z33	37Z33	48N22	48N22
7	NIPPLE, Inlet	103Z01	21592	21592	998387	103Z01	103Z01	103Z01	998387	998387
8	GAUGE, Del. Press.	999434	999438	999438	999438	999435	999439	999443	999435	999505
9	GAUGE, Cyl. Press.	--	999444	999444	--	999445	999445	999445	--	--
10	DIAPHRAGM ASS'Y *	998380	998155	998155	998380	998155	998155	998155	998155	998155

* Valve stem/Seat 998153 (round head), Valve Spring 998952 (no plating), and Diaphragm Assembly 999827 (with baffle plate) were designed for use in oxygen regulators to provide greater operator protection.

NOTE: Regulators manufactured in 1980 on a pilot lot production were identified by 4-digits as follows which are identical to those in parenthesis:

R-7601 (R-76-75-540) R-7611 (R-76-15-510-9) R-7621 (R-76-75-510) R-7702 (R-77-150-540) R-7715 (R-77-15-510)
R-7602 (R-76-150-540) R-7615 (R-76-15-510) R-7643 (R-76-350-580) R-7711 (R-77-15-510-9)

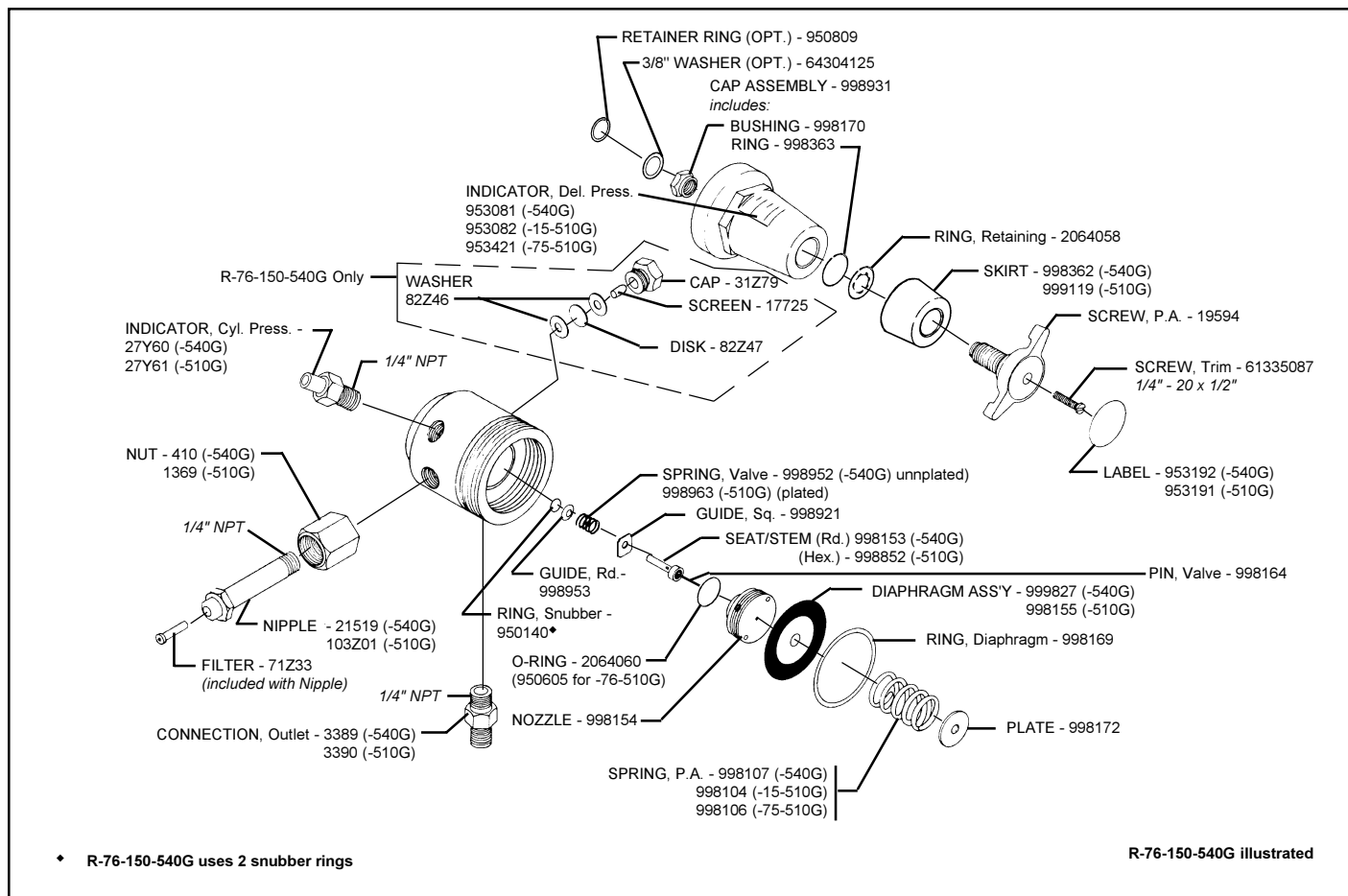


Fig. 3 - R-76-150-540G and R-76-15-510G Gaugeless Single-Stage
R-77-150-540G and R-77-510G Gaugeless Two-Stage Regulators (See Fig. 2 for 1st Stage Parts)

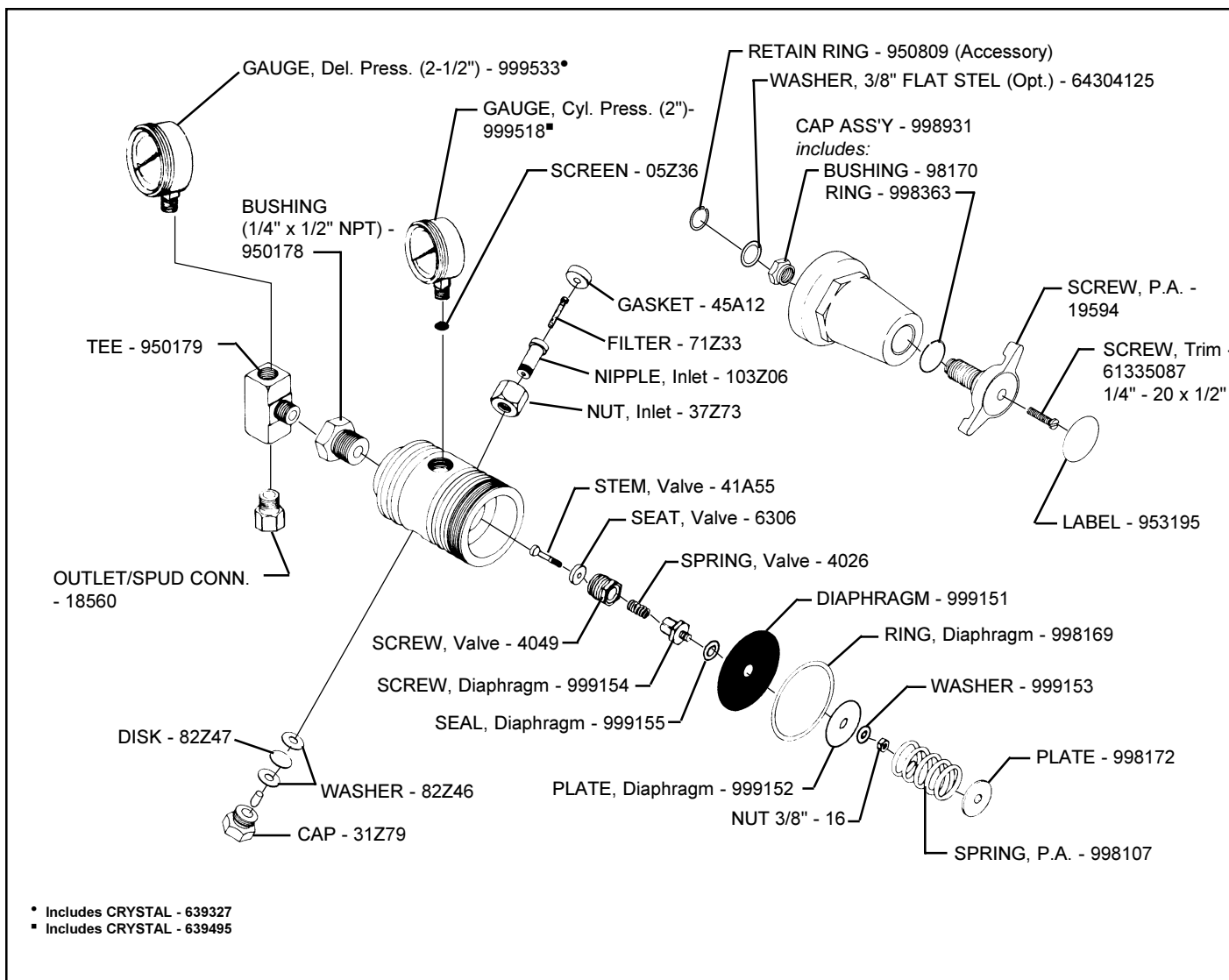


Fig. 4 - R-76-CF-320 CO₂ Regulators Assembly