



GENERAL ASSEMBLY

Outstanding Features - Chemical Injectors

Single and Double Headed Units Available
(one tank furnished with each head)

SPRING-LOADED LID on chemical container seals against contamination yet is easily opened.

CHEMICAL RESERVOIR
Choices available:
5 gallon 430 Stainless Steel
5 gallon 316 Stainless Steel
10 gallon 430 Stainless Steel

TANK GAUGE enables an operator to check the pumping rate of any chemical pump in one minute under actual pumping conditions. This simplified procedure eliminates errors resulting from pump and valve leakage.

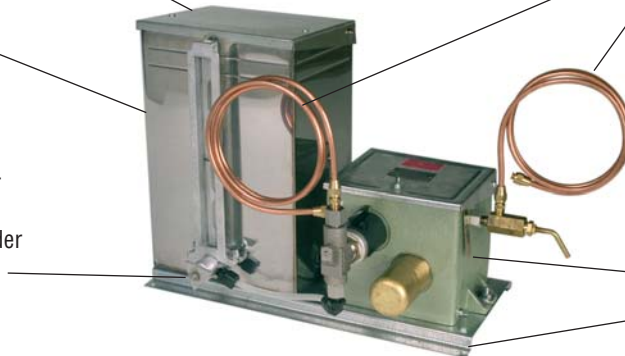
TB-87 1 for 5 gallon SS tank
TB-1285 for 10 gallon SS tank

ACCESSORIES AVAILABLE include power gas line, gas regulator, regulator gauge, inlet needle valve, line checks, fluid discharge line, and necessary fittings

3 SEPARATE VOLUME ADJUSTMENTS for controlling volume range (see page 5)

POWER UNIT is available without tank and base.

HEAVY GALVANIZED STEEL BASE with bolt holes for simple and easy mounting



MODELS AVAILABLE

Type 3700 S is designed for operation of low uniform pressures of 50 psi and less. Unitized with five gallon container and single injector head. Furnished with slight feed only...no fittings.
Shipping Weight: 55 pounds (packed in cardboard carton).

Type 3700 SL is designed for operation of low uniform pressure of 50 psi or less. Unitized with five gallon container and single injector head. Furnished with level gage and the following fittings: five feet of 5/16" copper tubing with 1/4" flared fitting, 1/4" x 1/2" bushing and 1/4" gas control needle valve for connecting gas supply line: five feet of 5/16" copper tubing with 1/4" flared fitting, 1/4" x 1/2" bushing and 1/4" high pressure line check for connecting chemical discharge line. *Shipping Weight 58 pounds.*

Type 3700 SH is designed for operation of high or erratic pressures up to 1500 psi. Unitized with five gallon container and single injector head. Furnished with level gage and same fittings as the 3700 SL, plus a regulator with pressure gauge to reduce supply pressure to pump operating requirements.
Shipping Weight: 62 pounds.

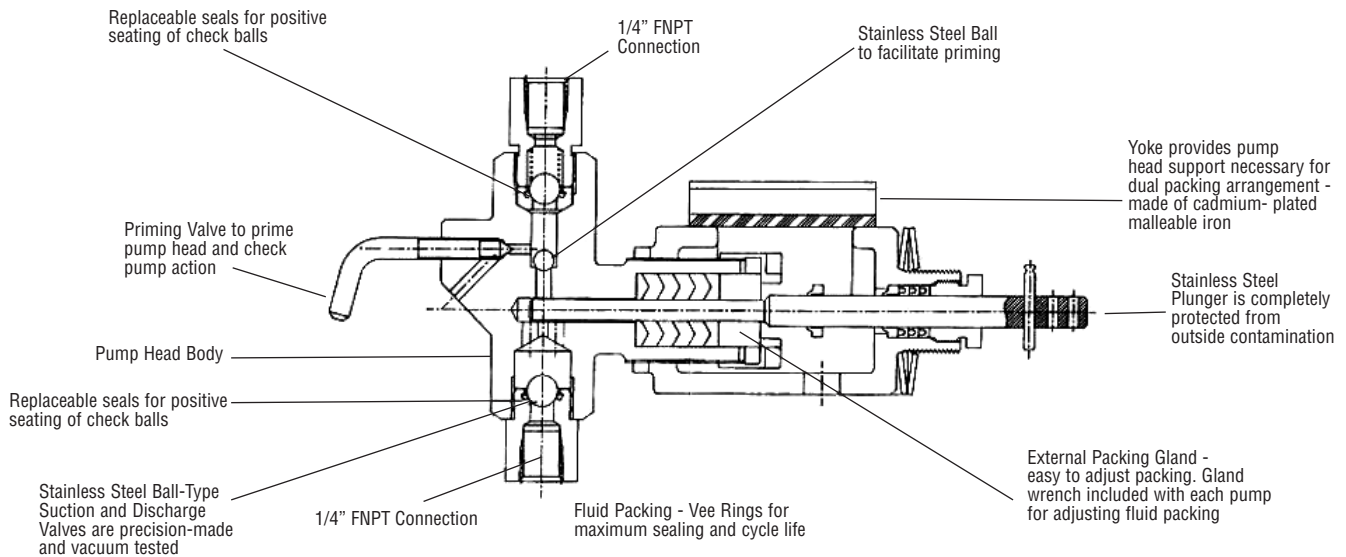
Type 3700 D is designed for operation of low uniform pressures of 50 psi or less. Unitized with two five-gallon containers and double injector heads. Furnished with level gage only... no fittings.
Shipping weight: 72 pounds.

Type 3700 DL is designed for operation of low uniform pressures of 50 psi or less. Unitized with two containers and double injector heads. Furnished with same fittings as Type 3700 SL.
Shipping Weight: 77 pounds.

Type 3700 DH is designed for operation of high or erratic pressures up to 1500 psi. Unitized with two containers and double injector heads. Furnished with same fittings as Type 3700 SH.
Shipping Weight: 81 pounds.



PUMP HEAD



The TXT Pump Head is efficient (horizontal plunger and vertical check valves); virtually trouble-free; easy to maintain stainless steel trim is standard; built-in priming valve to aid in priming and checking pump action; external packing gland; and protective felt wiper to protect plunger from sand, dirt, etc. Available in four different heads to meet your particular need (see page 8).

MODEL DESIGNATION

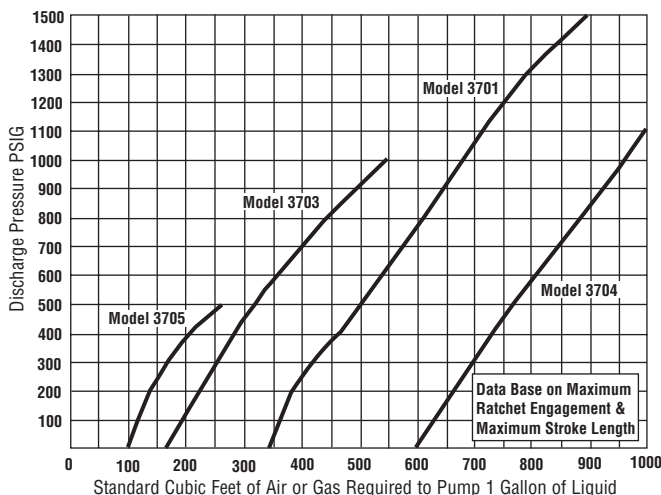
3701 SHP 1/4"

- Always specify plunger size when ordering to insure the correct size is ordered
- Indicates power unit model (without chemical tank). Absence of P indicates chemical injector complete with 5 gallon tank.
- Indicates accessories (H is equipped with regulator, gauge and fittings; Liv equipped with fittings only). Absence of H or L indicates no accessories with unit.
- Indicates number of injector heads (S is a single head, D is a double head unit)
- Indicates plunger size (4 is 3/16", 1 is 1/4", 3 is 3/8", 5 is 1/2") Standard - Ductile Iron Body with stainless steel trim

Choice of Trim Materials:

Standard - Ductile Iron Body with stainless steel trim
 All Stainless Steel Heads - For models with All Stainless Steel and SS is placed after model number (3701 SH-SS).
 Teflon packing • Metal-to-metal seats • Hastelloy ball checks • Viton Seals

AIR/GAS CONSUMPTION



Optional Level & Rate Setting Gauge

(TB-1128 Carbon Steel)
 (TB-1129 Stainless Steel)
 (304SS)

TC-169 Drum Racks -

These racks are constructed of galvanized angle iron to handle a 55-gallon drum. The injector stand is drilled for most TEXSTEAM chemical injectors or pumps. Use of the truck-height rack permits direct, easy loading of the drum. Weight 84 pounds, less pump and drum.





INSTALLATION AND OPERATING INSTRUCTIONS

1. Remove pump from carton and inspect for possible damage in transit from factory. The cardboard carton was designed especially for this pump. If the pump has been damaged in transit, file claim with the carrier.
2. **Bolt holes** are provided for a permanent mounting (see drawing for dimensions on page 6). If more detailed information is required, request TXT Blueprint TC-187.
3. **Install the TA-1497** priming valve (Included with pump, but shipped loose in carton) on the pump head.
4. **Connect the suction line to pump head.**
 - a. If a reservoir is furnished with the pump, the suction line is already connected. Fill the reservoir and open (all the way) the TB-87 1 shut-off assembly. A strainer is furnished as a part of this unit.
 - b. If a power unit model was purchased, a strainer should be piped into the suction line to prevent sand, rust or other particles which will inure the plunger and foul the check valves.
5. **Connect the discharge line** (5/16" tubing will suffice). A check valve should be installed as close to the point of injection as possible. Note the arrow on the check valve indicating the direction of flow. The top connection on the pump head is the outlet and has a 1/4" female pipe thread connection.
6. **Connect the power gas line.**
 - a. First blow power gas line clean to remove any loose rust particles, slag, sand, etc.
 - b. Consider the pressure requirements of the pump. If the gas supply exceeds 50 PSI (consider erratic pressures), the pump should be equipped with a regulator to reduce the gas pressure to 50 PSI or below. The TXT TB-40 regulator is capable of handling upstream pressures to 1500 PSI.
- c. Tie-in the gas line to the TA- 193 needle valve or TA-866 inlet bushing.
7. **Fill the TA-583 box assembly** with enough SAE-30 oil to cover the TA-457 bearing (approximately 6 1/4 pts.) If low ambient temperatures are encountered, a lighter oil such as SAE-10 should be used. Check oil level at regular intervals with TA-946 oil gauge stick.
8. **Adjust for desired volumes** by considering Performance Data (opposite page) and Volume Adjustment (opposite page). If more volume is required the pump head assembly can be changed or converted to a larger plunger size. Or, an additional head can be installed on the opposite side of the TA-583 box assembly by removing the TA-434 guide plug assembly. The TA-883 guide sleeve should also be removed and this can be accomplished with a drift and hammer.
9. **Start the pump** by slowly opening the TA- 193 needle valve. Prime the pump head by opening the TA- 1497 priming valve. After the pump discharges clear fluid without bubbles, close the priming valve for normal operations. At this point make a visual check of the plunger drip. Slowly tighten the gland to prevent excess drippage and waste of chemicals. Do not over-tighten plunger packing. Do not tighten with pressure on head. Keep TA-315 gland wrench handy for future packing adjustment. It may be necessary to readjust the packing the next day. A slight leak during the break-in is beneficial. Sufficient time should be allowed to let the packing "sear-in".

If low volumes are being pumped, the fluid end, the discharge line and all other fittings up to the line check should be thoroughly purged of all air bubbles.

Check pump action by opening TA- 1497 priming valve.

MAINTENANCE INSTRUCTIONS FOR INSPECTION OR REPLACEMENT OF POWER CYLINDER OR PISTON PARTS

(Refer to parts list on page 6)

Shut off the power gas pressure. Unscrew TA-390 cylinder shell. This will expose TA-597 piston assembly and TA-881 piston rod. To replace piston cup TA-867 or tapped washer TA-890, unscrew TA-1211 piston CU retainer. TA-881 piston rod is hex material and is easily removed from TC-28 valve body.

To Inspect Pump Head Parts

Suction and discharge balls and seats can be inspected or replaced without removing pump head from the power unit. To do this it is necessary to disconnect suction and discharge lines at the head and unscrew TA-1496 top bushing and TB-736 bottom bushing.

To Remove Pump Head From Gear Box

1. Disconnect suction and discharge line.
2. Pull TA-290 pin.
3. Entire fluid head can now be unscrewed from gear box.
4. Loosen gland nut.
5. Pull chemical plunger from head.
6. Remove TA-810 packing nut. This gives access to the yoke packing.

7. Loosen TA-225 lock nut. Yoke can then be unscrewed from fluid head (while unscrewing the yoke the gland nut must also be backed-off). At this point, wiper washer, gland nut and packing gland nut can be removed. This gives access to the main plunger packing.

To Replace the TB-47 Gas Hose

Unscrew the hex nut (attached to hose) from TA- 137 half union. Then unscrew TB-47 hose from TA-866 inlet bushing.

To Inspect or Replace TA-457 Ratchet Bearing

First remove TA-434 guide plug assembly. Then remove the pump head from the gear box (in case of double-headed pumps, both heads should be removed). TA-585 cross head assembly can then be lifted out. TA-457 ratchet bearing and TA-458 washer can now be inspected or replaced by removing TA-433 bearing bolt. TB- 139 ratchet assembly can now be lifted out. TA-948 ratchet control can be disconnected from TA-949 ratchet latch and lifted out. TA-312 cross arm assembly can be slipped from under the TA-793 bushing

and lifted out. TA-455 ratchet pawl, TA-955 pawl spring, TA-576 cotter key and TA-577 washer can now be inspected or replaced. TA-793 bushing can be removed exposing TA-77 ball check spring, TA-579 washer and TB-136 valve disc for inspection.

To Remove TB-107 Switching Valve

Remove both TA-390 cylinder shells. Unscrew both TA-88 1 piston rods (TA-597 piston assemblies may be left on the TA-88 1 piston rod).

At this point TB-107 valve and TA-65 flipper arm assembly can be lifted from gear box. TA-508 flipper spring sub-assembly can be replaced by removing TA-168 cotter pin and TA-170 clevis pin.

To Replace TA-65 Flipper Arm Assembly and Bearing

Remove both TA-166 cap screws and TA-167 washer from the underside of TC-28 valve body. To remove TA-947 bearing insert, loosen TA-107 lock nut. TA-126 valve ball should be inspected and replaced if necessary.

To Remove TB-38 Sight Feed Assembly

Remove TA-322 suction line. Then remove TA-302 strainer bushing assembly and TA-306 gasket from inside TA-664 reservoir. TB-38 sight feed assembly can now be pulled away from TA-664 reservoir assembly.

PRESSURE - VOLUME RANGE CHART

NOTE*- For double-headed units increase maximum volume by two

Plunger Size	Maximum Pressure	Model	Pint per Day Volume	
			Max.	Min.
3/16"	3000#	3704	8	.3
1/4"	1500#	3701	16	.5
3/8"	1000#	3703	40	.5
1/2"	500#	3705	70	1

Cycles Per Min Air Motor	**Ratchet Teeth Engagement	3/16" Plunger			1/4" Plunger		
		Short Stroke	Medium Stroke	Long Stroke	Short Stroke	Medium Stroke	Long Stroke
10	1						
20	1						
40	1						
60	1	.3	.6	1.0	.5	1.0	1.8
80	1	.4	.8	1.3	.7	1.4	2.6
100	1	.5	1.0	1.6	1.0	2.0	3.4

Cycles Per Min Air Motor	**Ratchet Teeth Engagement	3/8" Plunger			1/2" Plunger		
		Short Stroke	Medium Stroke	Long Stroke	Short Stroke	Medium Stroke	Long Stroke
20	2	.5	.7	1.0	1.0	1.5	2.0
40	1	.8	1.5	3.0	1.2	3.0	5.3
60	1	1.1	2.6	4.5	2.3	5.0	8.2
80	1	1.7	3.7	6.0	3.2	6.7	10.5
100	1	2.3	4.8	7.7	4.3	6.7	14.0

** Multiply Volume by number of ratchet teeth engaged. Maximum number of teeth is 6.

VOLUME ADJUSTMENT

There are three principal adjustments involved in controlling injector volumes on the Series 3700 chemical injector. They are pointed out in the diagram at right under the headings of Adjustments A, B and C.

Adjustment A:

1. Gas valve to control speed or number of strokes per minute of motor.

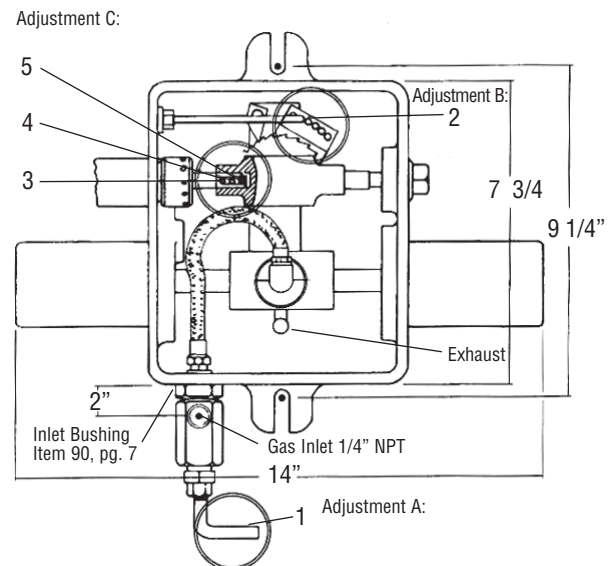
Adjustment B:

2. Ratchet control determines number of teeth drive pawl will engage each stroke of motor. Place ratchet latch TA-949 in hole on left to engage maximum number of teeth to pump maximum volume.

Adjustment C:

3. First position, long stroke (most. volume).
4. Second position medium stroke.
5. Third position, short stroke (least volume).

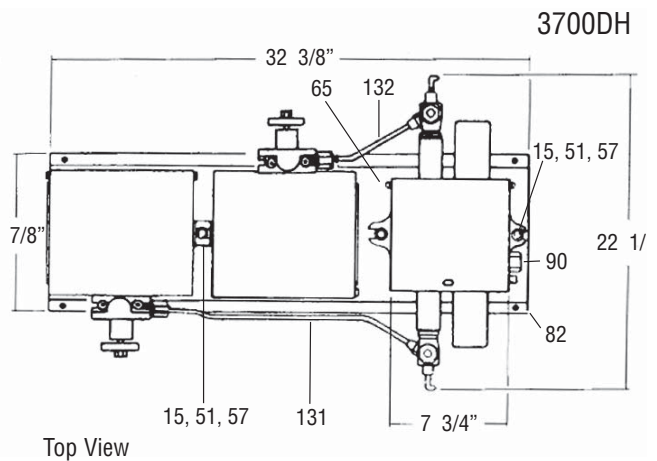
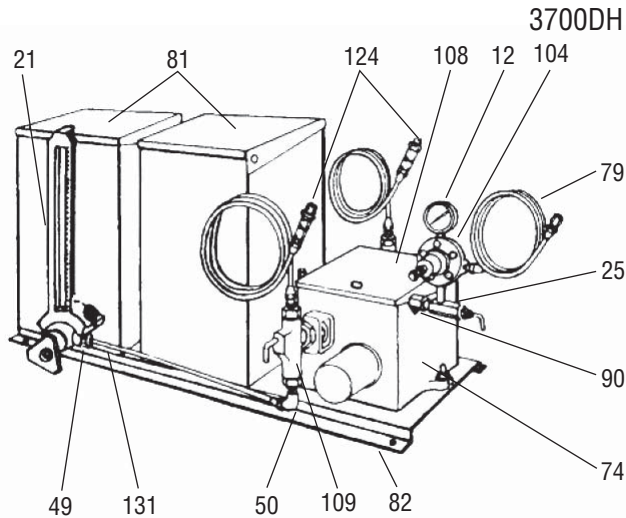
For maximum efficiency at any desired discharge rate, make adjustments in order A-B-C.



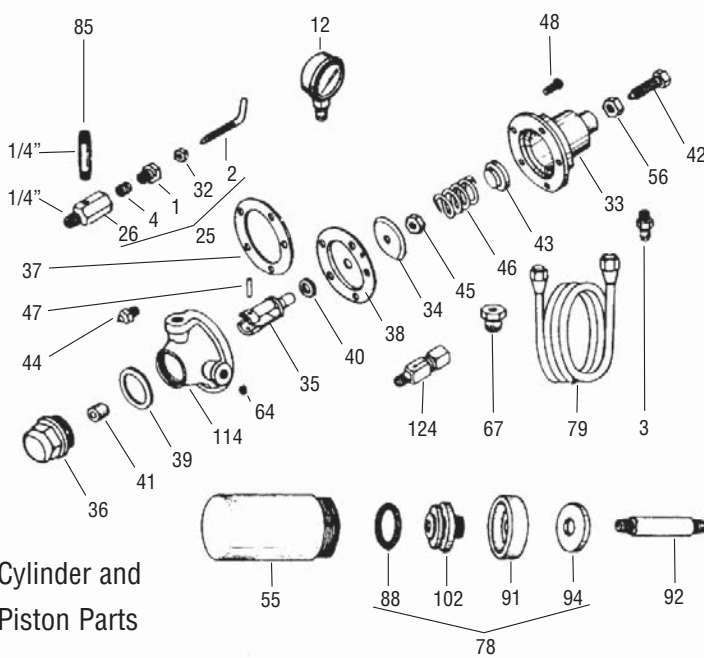


TECHNICAL DATA

Parts List



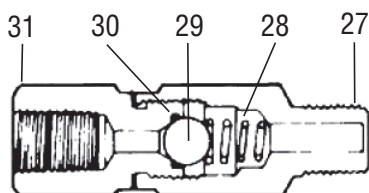
Regulator & Power Gas Piping



Cylinder and Piston Parts

TA-676 Brass

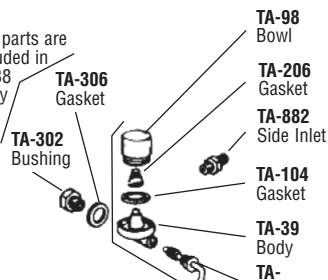
TA-675 303 SS



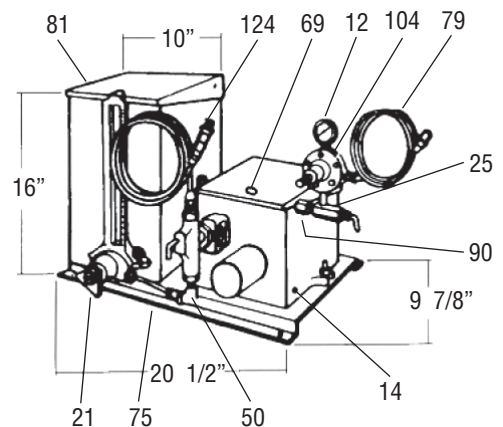
Sight Feed Assembly

(TB-38) Alternate to the gauge, Item 21

NOTE: These 2 parts are not included in the TB-38 assembly

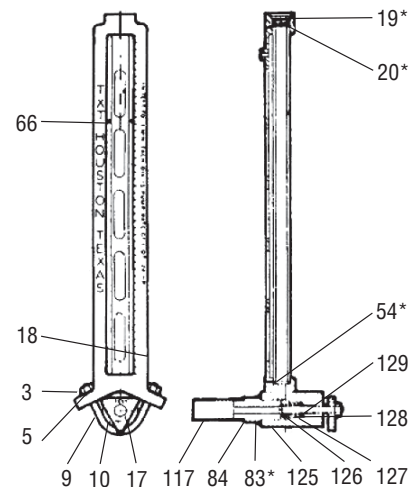


3700SH

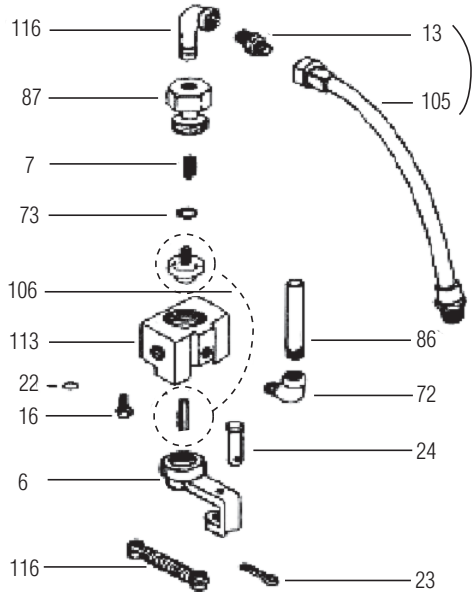


Tank Gauge

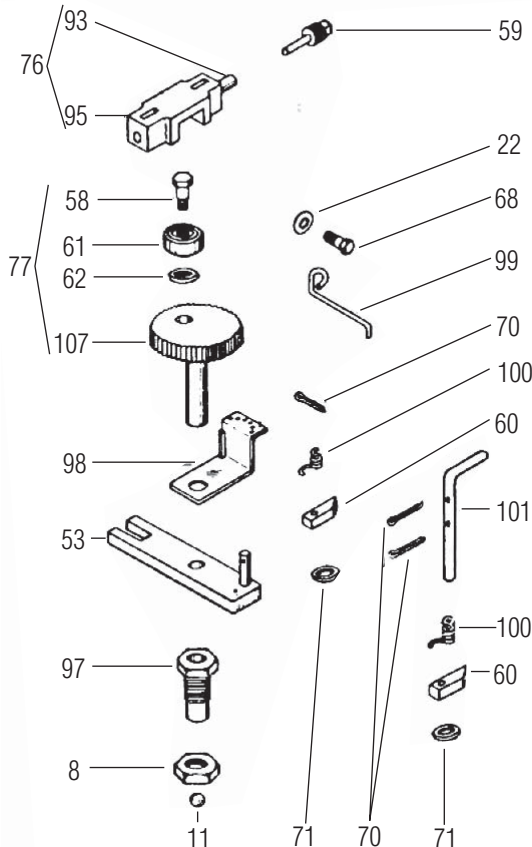
(TB-871) Item #21



Valve Assembly (TB-107)



Ratchet Drive Parts



Item	Part No.	Name
1*	TA-11	Gland Nut
2*	TA-13	Stern
3	TA-882	Half Union
4***	TA-23	Packing
5	TA-577	Washer
6	TA-65	Flipper Arm Assy.
7	TA-77	Spring
8	TA-107	Lock Nut
9	TA-3106	U-Bolt
10	TA-3112	Handle Valve
11**	TA-126	Ball
12	TA-129	Pressure Gauge 0-100 psig
13	TA-137	Half Union
14	TA-138	Drain Plug
15	TA-144	Bolt Nut - 3 Reqd.
16	TA-166	Cap Screw
17	TA-164	Nut
18	TC-393	Frame
19	TA-3100	Spring
20	TA-3101	Flat Washer
21	TB-871	Tank Ga. - 5 gal. SS tank
	TB-1285	Tank Ga. - 10 gal. SS tank
22	TA-167	Washer
23	TA-168	Cotter Pin
24	TA-170	Clevis Pin
25	TA-193	Needle Valve & Stem Assy.
26*	TA-194	Needle Valve Body
27	TA-677	Outlet Body
28**	TA-391	Spring
29	TA-54	Ball
30	TA-479	O-Ring- Buna-N
31	TA-678	Inlet Body
32*	TA-195	Needle Valve Nut
33	TA-3110	Bonnet
34	TA-3135	Spring Plate
35	TA-208	Valve Seat Yoke
36	TA-209	End Cap
37**	TA-210	Gasket
38**	TA-211	Diaphragm
39**	TA-212	End Cap Gasket
40	TA-213	Nut Gasket
41**	TA-214	Valve Seat Assembly
42	TA-217	Regulator Adj. Screw
43	TA-3133	Spring Disc
44	TA-219	Screw
45	TA-220	Lock Nut
46**	TA-3111	Adjusting Spring
47**	TA-222	Seat Block Pin
48	TA-223	Screw
49	TA-3118	Connector Half & Comp. Nut
50	TA-3116	Elbow & Comp. Nut
51	TA-300	Washer - 3 Reqd.
53	TA-312	Cross Arm Assembly
54	TA-2184	O-Ring
55	TA-390	Cylinder Shell
56	TA-402	Lock Nut
57	TA-425	Lock Washer - 3 Reqd.
58	TA-433	Bearing Bolt
59	TA-434	Guide Plug Assembly
60**	TA-455	Ratchet Pawl
61	TA-457	Ratchet Bearing
62	TA-458	Washer
63**	TA-508	Flipper Spring

Item	Part No.	Name
64**	TA-519	Filter Screen
65	TA-528	Cover Rivets - 2 Reqd.
66	TA-2163	O-Ring Buna-N
67	TA-573	Bushing
68	TA-574	Latch Bolt
69	TA-575	Thumb Screw
70	TA-2598	Cotter Pin
71	TA-577	Washer
72	TA-578	Street Elbow
73	TA-579	Washer
74	TD-64	Box Assembly
75**	TB-1584	Base-3700 Single Tank
76	TA-585	Cross Head Assembly
77	TA-586	Ratchet Sub-Assembly
78	TA-597	Piston Assembly
79	TA-608	Copper Tubing w/Fittings
81	TA-664	Reservoir, 5 gal, 430SS
82	TA-665	Base - 3700 Double SS Tanks
83	TA-3199	O-Ring Viton
84	TA-3104	Retainer Nut 303SS
85	TA-674	Nipple
86	TA-761	Exhaust Nipple
87	TA-793	Bushing
88**	TA-808	Cup Spring
90	TA-866	Inlet Bushing
91**	TA-867	Piston Cup
92	TA-881	Piston Rod
93	TA-883	Guide Sleeve
94	TA-890	Tapped Washer
95	TA-939	Cross Head
97	TA-947	Bearing Insert
98	TA-948	Ratchet Control
99	TA-949	Ratchet Latch
100**	TA-955	Pawl Spring
101	TA-956	Check Pawl Stud
102	TA-1211	Cup Retainer (Alum.)
104	TB-40	Pressure Regulator
105**	TB-47	Gas Inlet Hose
106**	TA-4669	Valve Disc & Drive Pin Assy.
107	TB-139	Ratchet Assembly
108	TB-206	Injector Box Cover
109		Inject. Hds.-See pg. 8
113	TC-28	Valve Body
114	TC-29	Regulator Body
116	TA-0578	Street Elbow
117	TA-3103	Strainer
124	TA-676	Line Check Brass
125	TA-3115	Valve Body 303 SS
126	TA-3114	Stem Valve 303 SS
127	TA-3113	Spring 316 SS
128	TA-3328	Washer 303 SS
129	TA-3107	O-Ring Viton
131	TA-3162	Polypropylene Suction Line
132	TA-3163	Polypropylene Suction Line
OPTIONAL PARTS		
81	TA-2057	Reservoir (5 gal. 316SS)
81	TA-1539	Reservoir (10 gal. 430-2B SS)
	TA-675	Stainless Steel Line Check
Following Parts for TA-675 Line Check		
	TA-1296	Outlet Body End
	TA-1297	Inlet Body End
	TA-1574	Washer

* These parts are the needle valve & stem assembly Item #25

** Recommended spare parts

*** Recommended spare part, these parts are the needle valve & stem assembly Item #25

