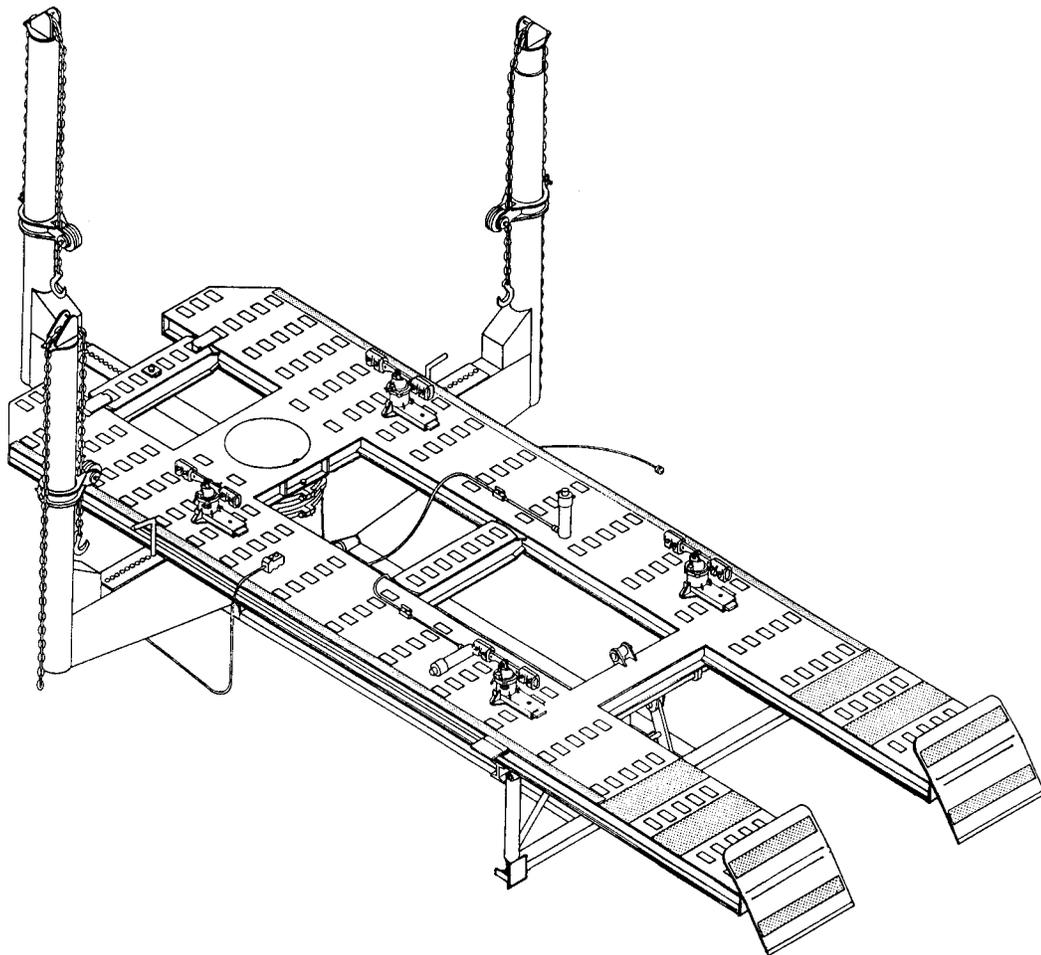


Chief EZ Liner S21



PARTS MANUAL



CHIEF'S LIMITED ONE-YEAR WARRANTY & LIABILITY

Chief Automotive Systems, Inc. warrants for one year from date of installation and/or purchase any of its products which do not perform satisfactorily due to defect caused by faulty material or workmanship. Chief's obligation under this warranty is limited to the repair or replacement of products which are defective and which have not been misused, carelessly handled, or defaced by repair or repairs made or attempted by others.

CHIEF AUTOMOTIVE SYSTEMS, INC. DOES NOT ASSUME RESPONSIBILITY FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM THE OPERATOR'S NEGLIGENCE OR MISUSE OF THIS PRODUCT OR ITS ATTACHMENTS. CHIEF MAKES NO WRITTEN, EXPRESS OR IMPLIED WARRANTY WHATSOEVER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE REGARDING THE EQUIPMENT OR ANY PART OF THE PRODUCT OTHER THAN THE LIMITED ONE-YEAR WARRANTY STATED ABOVE.

Returned merchandise requires a "RETURNED GOODS AUTHORIZATION NUMBER" on the package. Authorization numbers can be obtained by calling or writing the Customer Service Department, Chief Automotive Systems, Inc. No returned merchandise will be accepted without an authorization number. All returned merchandise must be shipped freight prepaid (and may be subject to a 15 percent handling and restocking charge) to:

Chief Automotive Systems, Inc.
Attn: Returned Goods Dept.
1924 E. Fourth St.
P.O. Box 1368
Grand Island, Ne. 68802
308-384-9747

or Your Authorized
Chief Automotive Systems, Inc.
Representative

PARTS INFORMATION

To order replacement parts for a Chief EZ Liner system, contact Chief Automotive Systems, Inc. 800-445-9262. (If outside the United States, contact nearest Chief Automotive Systems, Inc. representative.)

The numbers and drawings in this parts manual represent those parts that an owner might install. For part numbers not listed, contact Chief Automotive Systems, Inc.

NOTE: The tower components identified in this parts manual (page 3) relate to S21 front towers only. For parts information relating to rear towers, refer to Auxiliary Tower Owners Manual (Part No. 693882) for specific information.

When contacting Chief Automotive Systems, Inc. by telephone or mail, provide the following information: name, name of shop, shop telephone number, and shop address. Additional information needed when ordering: description of part(s) and part number(s). Also indicate the EZ Liner Model for which the part is intended.

NOTE: 1) Chief reserves the right to alter product specifications and/or package components without notice.
2) Illustrations shown in this manual may vary slightly from actual product.

 **CAUTION:** Always use Chief authorized parts (or equivalent) with the EZ Liner system. If replacing electrical and hydraulic components, bolts/fasteners and/or chain, make certain the parts meet the following standards (minimum requirements).

Electrical Components

All electrical components must be replaced with Chief authorized parts or their equivalent and be UL approved.

The three-wire power cord and the four-wire remote control switch cord must be 12 gauge minimum in lengths equal to factory installed cords.

Hydraulic Hoses

All hydraulic components must be replaced with Chief authorized parts or their equivalent.

The two-wire braid 1/4 inch (6.3mm) inner diameter hydraulic hoses must have a minimum burst pressure of 20,000 psi (1400 bar) and a minimum working pressure of 5,000 psi (350 bar) (as per SAE Standard 100 R2A). They must be in lengths equal to factory installed hoses.

Bolts/Fasteners

All bolts and fasteners must be replaced with Chief authorized parts or their equivalent and must not be less than Grade 5 (Class 8.8).

Any bolt used in a **pulling clamp** that is frequently tightened must be a Grade 8 (Class 10.9).

All bolt lengths and diameters must be equal to those installed at the factory.

Chain

All **S21 front tower and accessory chains** must be replaced with Chief authorized chain or an equivalent.

Front tower chain must be NACM Grade 80, 1/2 inch (13mm) alloy chain, proof tested to 28,000 pounds (125kN) and have a workload of 14,000 pounds (63kN). It must be in a length and size equal to factory installed chain.

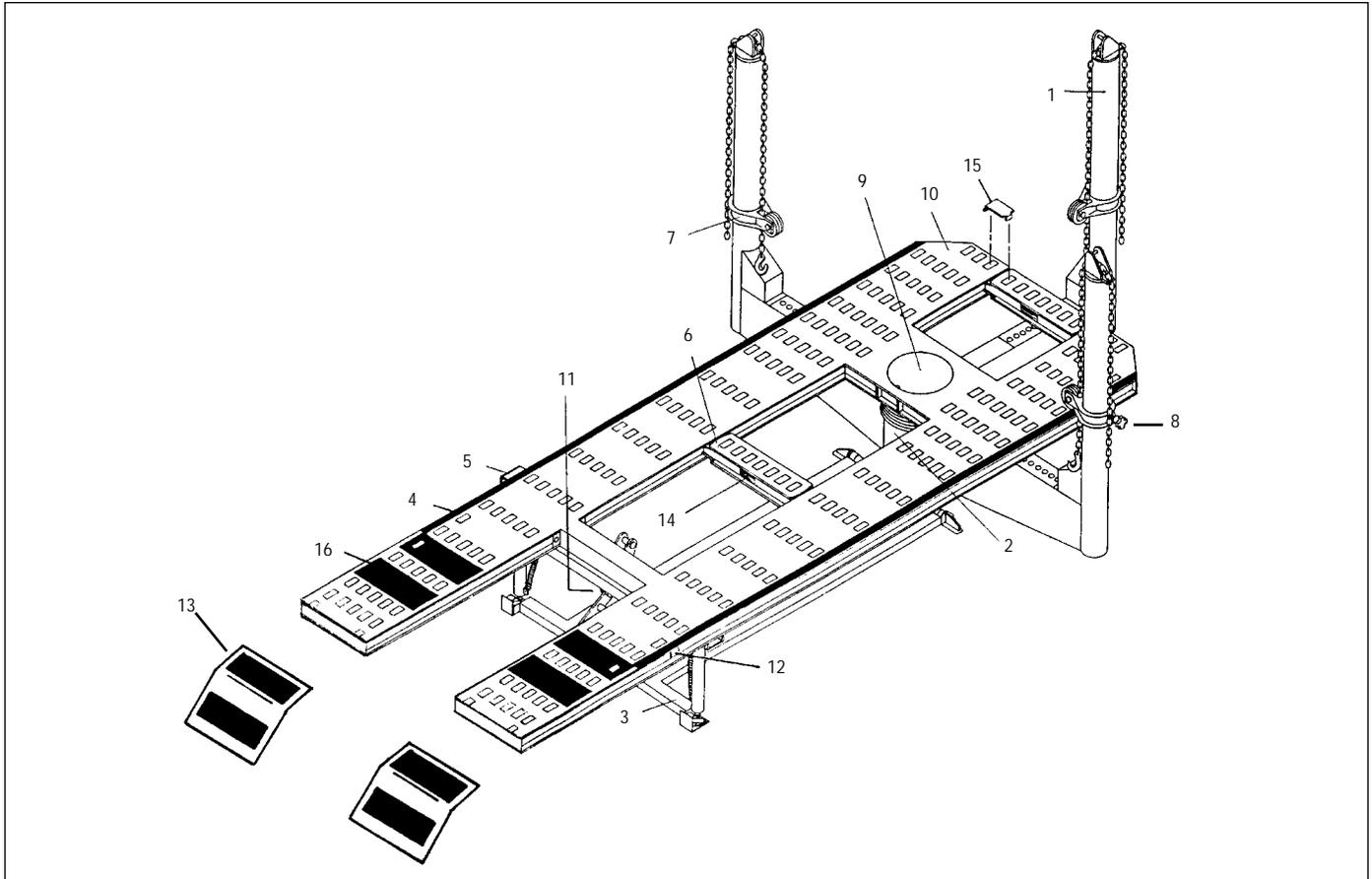
Rear tower chain and all accessory chain must be NACM Grade 80, 3/8 inch (10mm) alloy chain, proof tested to 20,000 pounds (90kN) and have a workload of 10,000 pounds (45kN). It must be in a length and size equal to factory installed chain.

 **CAUTION:** DO NOT use EZ Liner S21 rear tower chain (3/8-12 with hook) on EZ Liner S21 front towers.

Labels

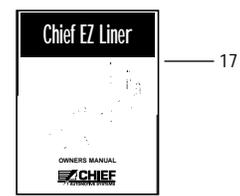
CAUTION, WARNING and OTHER Labels — Replacement labels are available and some labels are also available in some foreign languages. To order, contact Chief Automotive Systems, Inc. 800-445-9262.

S21 EZ LINER

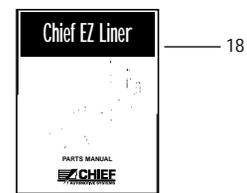


REF.	PART NO.	QTY.	DESCRIPTION
1	600065	3	Tower Assembly
2	610749	1	Pedestal Assembly
3	672261	1	Porta-Frame Assembly
4	620875	2	Anti-Skid Tape, 16 x 2
5	690638	1	Cover Assembly, Rear Lift Valve
6	610773	2	Moveable Crossmember
7	610386	3	Tower Collar Assembly
8	602829	3	Locking Knob, Tower Collar
9	602280	1	Lid, Pump
10	672202	1	Mainframe
11	600030	1	Lift Assembly
12	692140	1	Phone Number Decal
13	698767	2	Loading Ramp
14	692094	2	CAUTION, Crossmember Decal
15	606539	2	Crossmember Lock
16	693425	4	Anti-Skid Tape, 9 x 22
17	683658	1	Owners Manual, EZ Liner S21
18	683659	1	Parts Manual, EZ Liner S21

Owners Manual (EZ Liner S21)



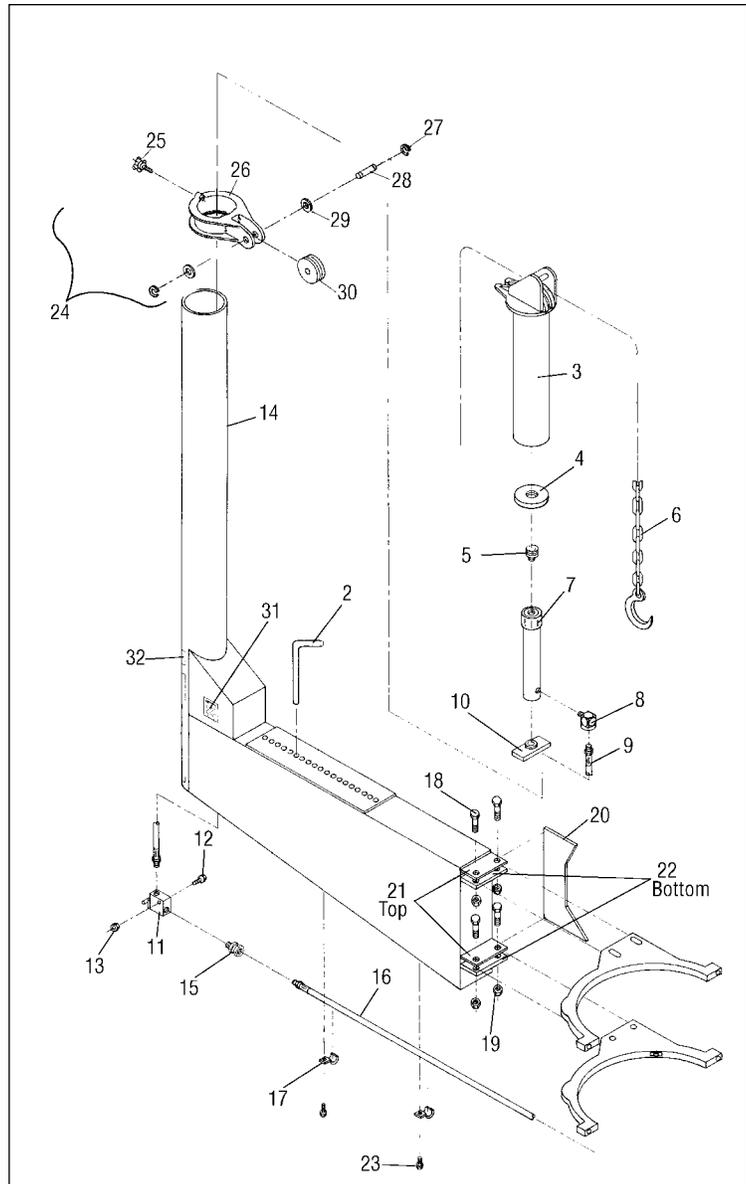
Parts Manual (EZ Liner S21)



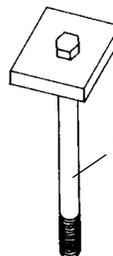
FRONT TOWER ASSEMBLY COMPONENTS

⚠ CAUTION: DO NOT interchange rear tower components with front tower components as pulling capacity of rear towers is less than S21 front towers. Refer to Auxiliary Tower Owners Manual (Part No. 693882) for rear tower parts information.

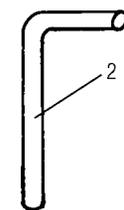
REF.	PART NO.	DESCRIPTION
1	610255	Tie Down Bolt Assembly
2	618708	Tower Lock Pin (S21)
3	610001	Tower Head Assembly
4	601236	Threaded Flange
5	602618	Threaded Adapter
6	602870	Tower Chain W/Hook, 1/2 x 12
7	602378	10 Ton Hydraulic Cylinder, 10" Stroke
8	602546	Elbow, 90°, Female x Male NPTF
9	602520	Hose, 59 x 3/8 NPT Couplings
10	610407	Ram Base, Flange (S21)
11	602810	Tower Valve, 3/8, 90° Elbow
12	629781	Bolt, 1/4-20 NC x 2, Gr. 2, PL, Hex
13	629247	Nut, 1/4-20 NC, Gr. 2, Hex, PL
14	600065	Tower Weldment, Ony
15	602562	Swivel Coupler
16	602538	Hose, 72 x 3/8 NPT Couplings
17	604699	Hose Clamp, 1/2
18	601666	Bolt, 5/8-11 NC x 2-1/4, Gr. 5, PL, HHCS
19	692334	Nut, Hex, Jam, 5/8-11 NC, Gr. 5, Black
20	607339	Tower Leg Gusset
21	604744	Tower Ear (TOP), 5/16 Drilled
22	604752	Tower Ear (BOTTOM), 1/2 Drilled
*	604664	O.T.C. Cylinder Repair Kit, I.D. Blue or Silver
*	604381	O.T.C. Cylinder Repair Kit, I.D. White
*	601560	Templeton, Kenley Cylinder Repair Kit, I.D. Green
*	629992	Enerpac Cylinder Repair Kit, I.D. Silver
23	629116	Self Tapping Screw, 1/4-20 NC x 3/4
24	610386	Tower Collar Assembly (Cast) (Includes Locking Knob)
25	602829	Locking Knob, Tower Collar
26	607161	S21 Collar, Drilled & Tapped
27	693468	Retaining Ring, Heavy Duty, External
28	680747	Pin, Grooved
29	707487	Flat Washer, 1-1/4
30	601201	Roller, 5 x 1/2
31	693345	IMPORTANT Decal (White), To Prevent
32	693337	WARNING Decal (Yellow)
*	629977	Tower Decal (Not Shown)



Tie Bolt



Lock Pin

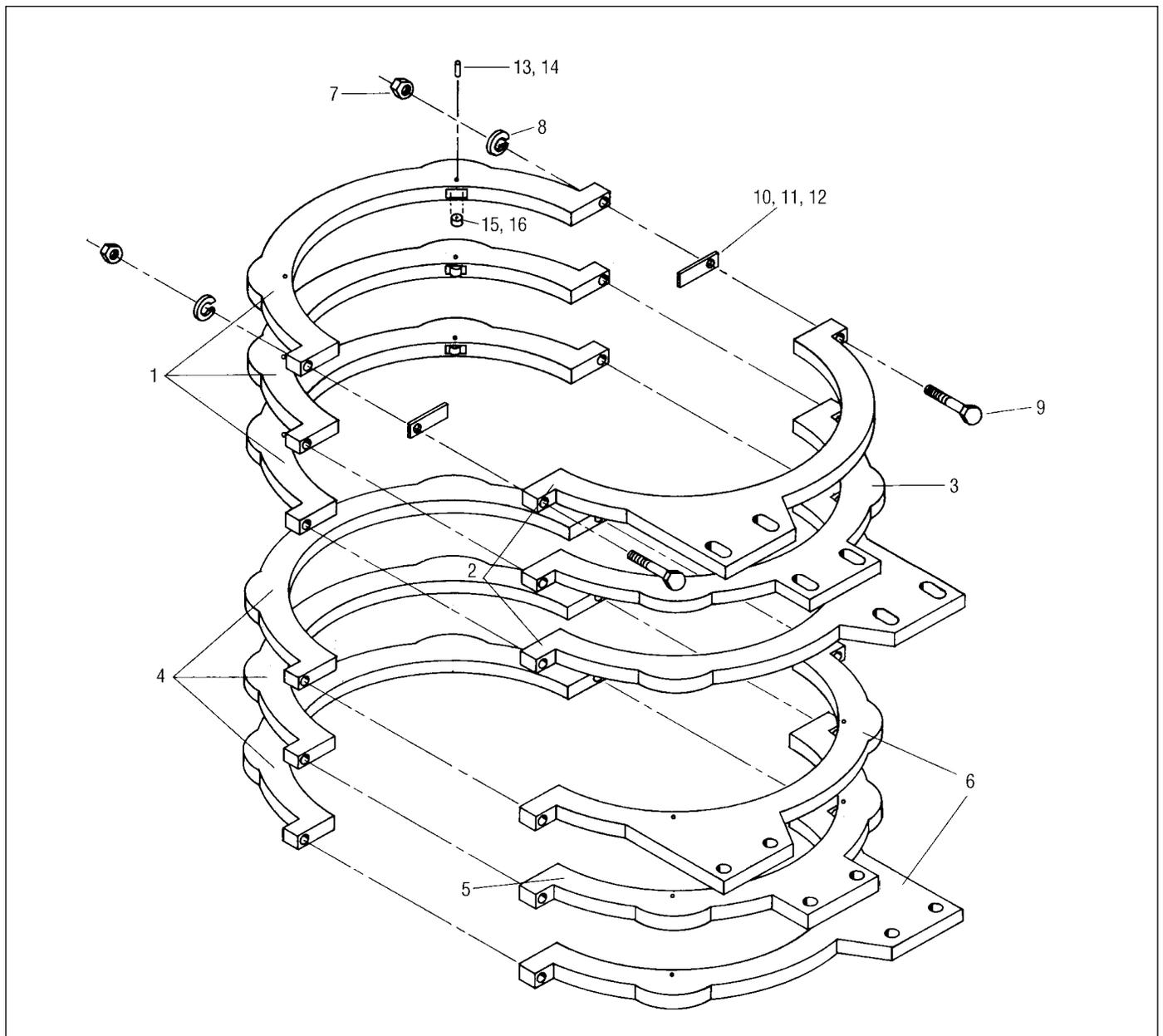


* Not Shown In Illustration

TOWER RING ASSEMBLY COMPONENTS

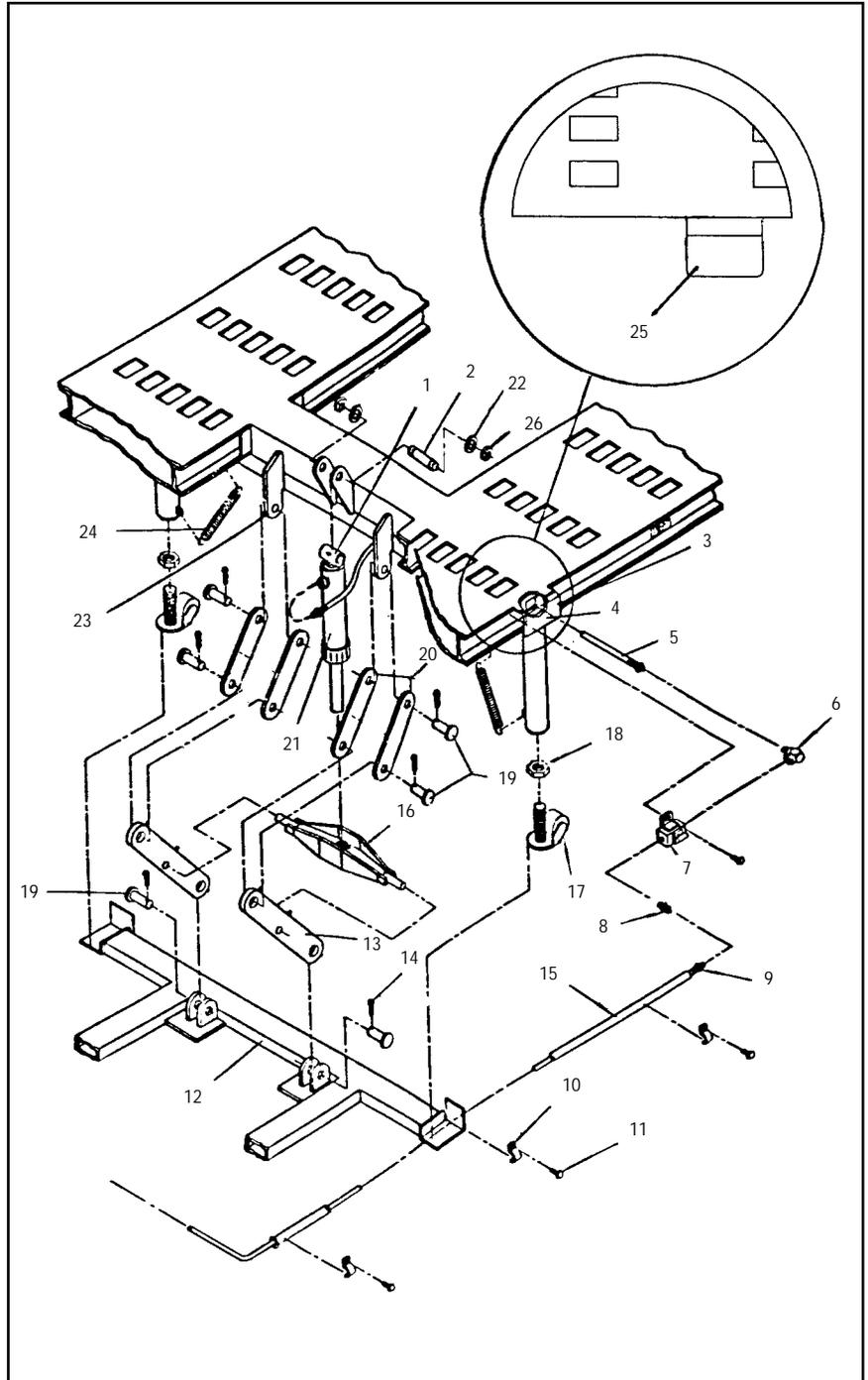
REF.	PART NO.	DESCRIPTION
1	610845	Ring Half, Top, Rear
2	607072	Ring Half, Top, Front, Left/Right
3	607056	Ring Half, Top, Front, Center
4	607064	Ring Half, Bottom, Rear
5	610853	Ring Half, Bottom, Front, Center
6	610861	Ring Half, Bottom, Front, Left/Right
7	629255	Nut, 5/8 - 11 NC, Gr. 5, Hex, Black
8	629263	Lock Washer, 5/8 Lock, Spring, Black

REF.	PART NO.	DESCRIPTION
9	629271	Bolt, 5/8 - 11 NC x 3 1/2, Gr. 5, Bl. HHCS
10	681205	Tower Ring Shim, 16 Ga.
11	681213	Tower Ring Shim, 1/8
12	681221	Tower Ring Shim
13	602001	Dowel Pin (Before 708), 3/8 x 1
14	606109	Dowel Pin Ring (After 708), 5/16 x 1
15	602837	Tower Ring Bearing (Before 708)
16	601770	Tower Ring Bearing (After 708)



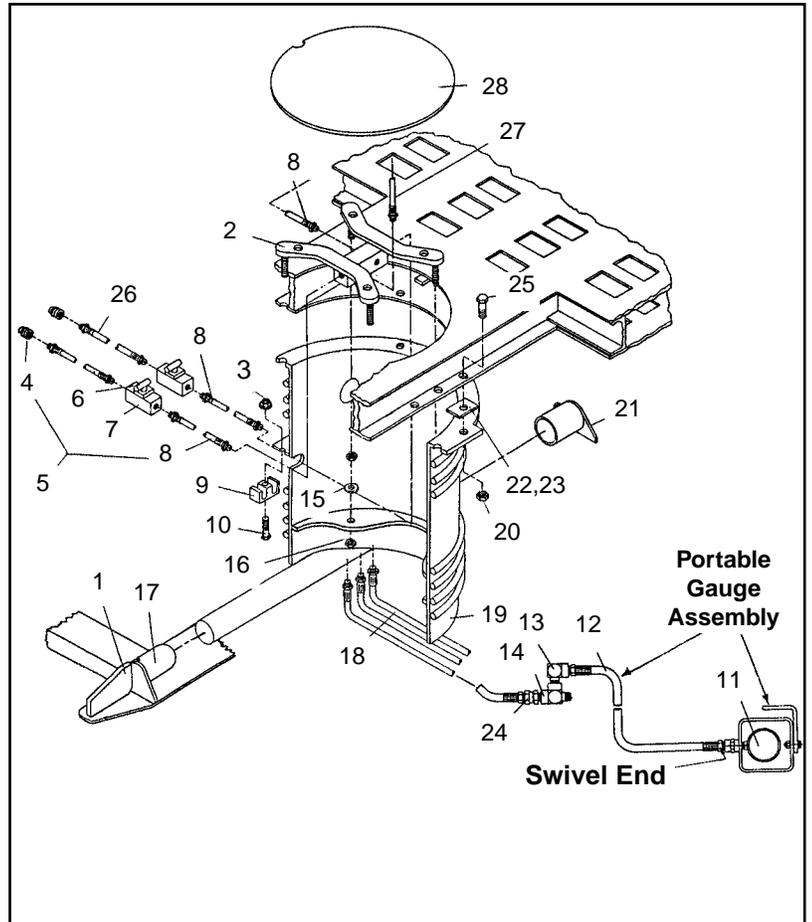
LIFT ASSEMBLY COMPONENTS

REF.	PART NO.	QTY.	DESCRIPTION
1	610124	1	Jack T Assembly
2	770083	1	Grooved Pin, 1.25 x 4.438 Long
3	690638	1	Cover Assembly, Rear Lift Valve
4	692086	1	Label, CAUTION, Lift Valve
5	685100	1	Hose, 49 x 3/8 NPT Couplings
6	602546	1	Elbow, 90 Degrees, Female x Male NPTF
7	610415	1	Valve With Bracket, Lift
8	602562	1	Swivel Coupler
9	602474	1	Hose, 170 x 3/8 NPT Couplings
10	629829	3	Clamp Hose Housing, 1 Inch
11	629116	4	Screw, 1/4-20 NC x 3/4, HH-TEK, Type 1
12	672261	1	Porta Frame Assembly, S21, 1992
13	610722	2	Lift Leg, Bottom
14	618644	6	Cotter Pin, 1/4 x 2
15	603936	1	Conduit, 99 Inch Hose Housing
16	610116	1	Bolster Bar Assembly
17	610677	2	Threaded Rod Assembly, Stiff Leg
18	629095	2	Nut, 1-1/2-6 NC, Hex Jam, Gr. 2, Black
19	610079	6	Lift Leg Pin Assembly, S21
20	603215	4	Lift Leg, Top
21	610520	1	Coupler & Ram Assembly, 10 Ton
22	707487	2	Washer, 1-1/4 I.D. x 1-7/8 O.D. x 14 Ga. Flat, Pl.
23	603928	2	Zerk Fitting, 1/4, Press Fit
24	602570	2	Spring, Stiff Leg, .105 Wire
25	690638	1	Cover Assembly, Rear Lift Valve
26	693468	2	Retaining Ring, Heavy Duty, Ext. Series 5160
N/S	604656	4	Bolt, 1/2-13 NC x 1-1/2, Gr. 5, Pl. Hex
N/S	620736	4	Nut, 1/2-13 NC, Gr. 8, Hex Pl.
N/S	707436	4	Washer, 1/2" Lock, Split, Spring-Lock



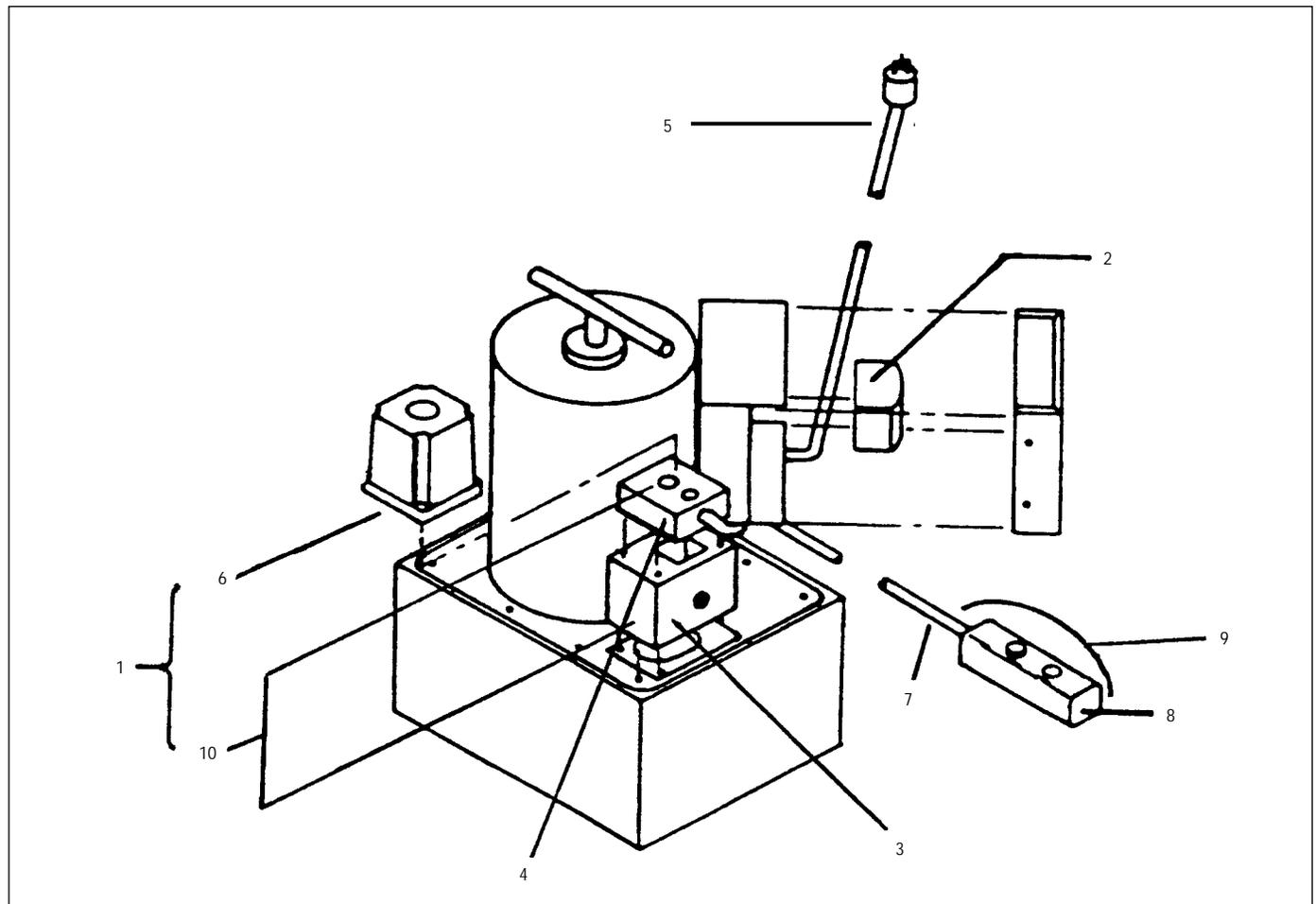
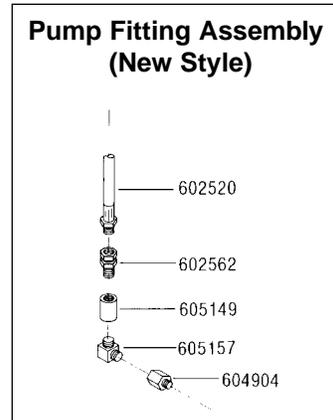
PEDESTAL ASSEMBLY COMPONENTS (NEW)

REF.	PART NO.	QTY.	DESCRIPTION
1	619620	2	Gusset, Extension Foot, Porta-Frame, S21
2	610597	2	Pump Plate Assembly With Block
3	629423	5	Nut, 1/4-20NC, Whiz Flange Lock, Pl.
4	602407	1	Quick Coupler, Male End
5	672270	2	Auxiliary Line Assembly, S21
6	625043	1	Valve Handle, 3/8 Valve
7	602802	1	Valve, Auxiliary Line, 3/8 Straight
8	602474	1	Hose, 170 x 3/8 NPT Couplings
9	705086	1	Double Hose Clamp
10	630643	1	Bolt, 1/4-20NC x 1 1/2, Gr. 2
11	649080	2	Portable Gauge Assembly
12	649286	2	Hose, 18 1/2 x 3/8 M x 3/8 Swivel M
13	602546	2	Elbow, 90 Degree Female x Male, NPT
14	649282	2	Street Tee
15	629909	4	Washer, 1/2 Flat, Series W
16	629722	8	Nut, 1/2-13NC, Hex, Heavy, Black
17	610212	1	Pedestal Foot Assembly, Right, S21
18	609174	3	Hose, 76 x 3/8 NPT Couplings
19	610327	1	Pedestal Assembly Standard / S21
20	629896	8	Nut, 3/4-10NC, Jam, Hex, Gr. 5, Black
21	610554	1	Pedestal Foot Assembly, Left, S21
22	605587	N/A	Pedestal Shiim
23	605579	N/A	Pedestal Shim
24	602562	2	Swivel Coupler
25	629802	8	Bolt, 3/4-10NC x 1 1/4, Gr. 5, Black, Hex
26	602511	2	Hose, 45 x 3/8 NPT Couplings
27	602520	1	Hose, 59 x 3/8 NPT Couplings
28	602280	1	Lid, Pump, S21



O.T.C MODEL PUMP ASSEMBLY COMPONENTS

REF.	PART NO.	DESCRIPTION
	605843	O.T.C. Model
1	605835	Valve Body, Complete OTC
2	605851	Motor Starting Relay, OTC
3	605860	Valve Block, OTC
4	605878	Linkage Block
5	620701	Power Cord, 20', 15 AMP
6	605042	Solenoid
7	620234	Joy Cord Male, 21
8	605018	Square "D" Switch
9	611119	Control Switch Assembly
10	629327	OTC Valve Body W/Linkage Base





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