



Parts Manual

LOAD TRANSFER STATION

Model 40A

cascade[®]
corporation

Cascade is a Registered Trademark of Cascade Corporation.
P.O. Box 360 • Springfield, Ohio 45505 • (513) 322-1199

U

HOW TO USE THIS MANUAL

Introduction

This manual illustrates service replacement parts for the standard production Cascade Load Transfer Station.

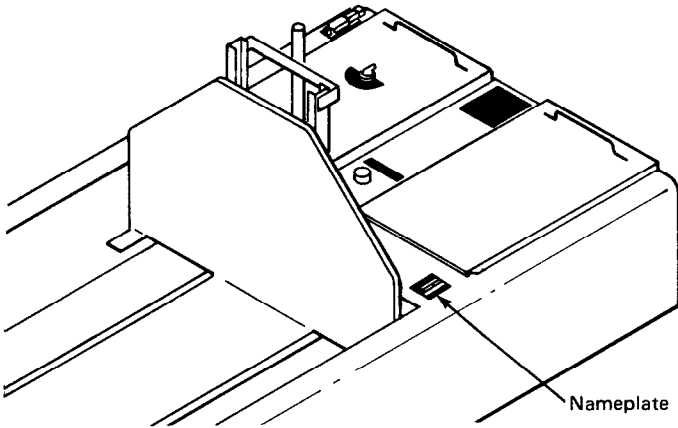
The parts manuals for stations designed by the Application Engineering Department have an A.E.D. designation on the cover of the manual.

This standard manual is not interchangeable with an A.E.D. Manual since it does not reflect the special engineering of an A.E.D. station.

To locate a service replacement part follow the steps below.

1. Locate Nameplate

The nameplate is attached to the top of the frame near the hydraulic access panel. If the nameplate is missing, all necessary information is stamped into the frame at the same location.



2. Note the Serial Number and Additional Equipment

Record the complete Serial Number and the six-digit numbers of the Additional Equipment stamped on the nameplate. See the example.

3. Refer to Serial Number Index

Locate your Serial Number in the Serial Number Index on the following page.

IMPORTANT: DO NOT USE THIS MANUAL TO ORDER PARTS FOR AN A.E.D. STATION. Contact Cascade Corporation to obtain the correct parts manual. You must supply the serial number and all additional equipment numbers to order the correct manual.


4. Ordering

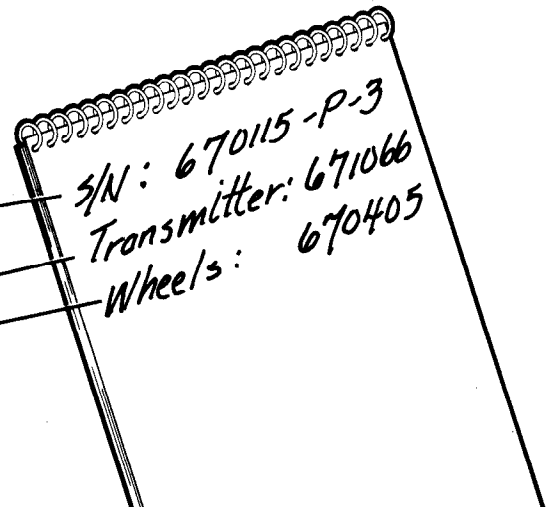
To order Service Replacement Parts Please contact:

Parts Depot
Cascade Corporation
2501 Sheridan Ave.
Springfield, Ohio 45505
Telephone: (513) 322-1199
Telex: 205413

5. For Your Convenience

... we have supplied a parts ordering log located on the last page. Use this log as a permanent record of parts ordered from this manual

		cascade LOAD TRANSFER STATION	
SERIAL NUMBER	670115-P-3	WEIGHT	LBS
CATALOG NUMBER	40A-LT-01N		
ADDITIONAL EQUIPMENT	671066-Transmitter		
ADDITIONAL EQUIPMENT	670405-Wheels		
ADDITIONAL EQUIPMENT			
LOAD CAPACITY	PALLET SIZE		
4000 POUNDS	<input type="text" value="48"/> STRINGER x <input type="text" value="40"/> DECKBOARD		
FOR SERVICE AND PARTS LITERATURE CONTACT cascade corporation 503/666-1511 PORTLAND, OREGON, U.S.A.			



Serial Number Index

Serial Number	Model	Frame Group Page	Inner Carriage Group Page	Inner Cylinder Page	Carriage Cylinder Page	Lift Cylinder Page	Hydraulic Supply Group Page	Hydraulic Tank Assembly Page	Valve Assembly Page	Electrical Panel Assembly Page	Electrical Group Page	Limit Switch Page
670115	40A	1	2	3	4	5	6	7	8	9	10	11
670116	40A	1	2	3	4	5	6	7	8	9	10	11
670117	40A	1	2	3	4	5	6	7	8	9	10	11
670118	40A	1	2	3	4	5	6	7	8	9	10	11
671111	40A	1	2	3	4	5	6	7	8	9	10	11
671112	40A	1	2	3	4	5	6	7	8	9	10	11
671113	40A	1	2	3	4	5	6	7	8	9	10	11
671114	40A	1	2	3	4	5	6	7	8	9	10	11

IMPORTANT:

If any of your additional equipment numbers are 300,000 numbers (example: 392017), then the station is specially engineered. DO NOT USE THIS MANUAL TO ORDER A.E.D. PARTS. Contact Cascade Corporation to obtain the correct parts manual. Please supply the serial number and all additional equipment numbers to order the correct parts manual.

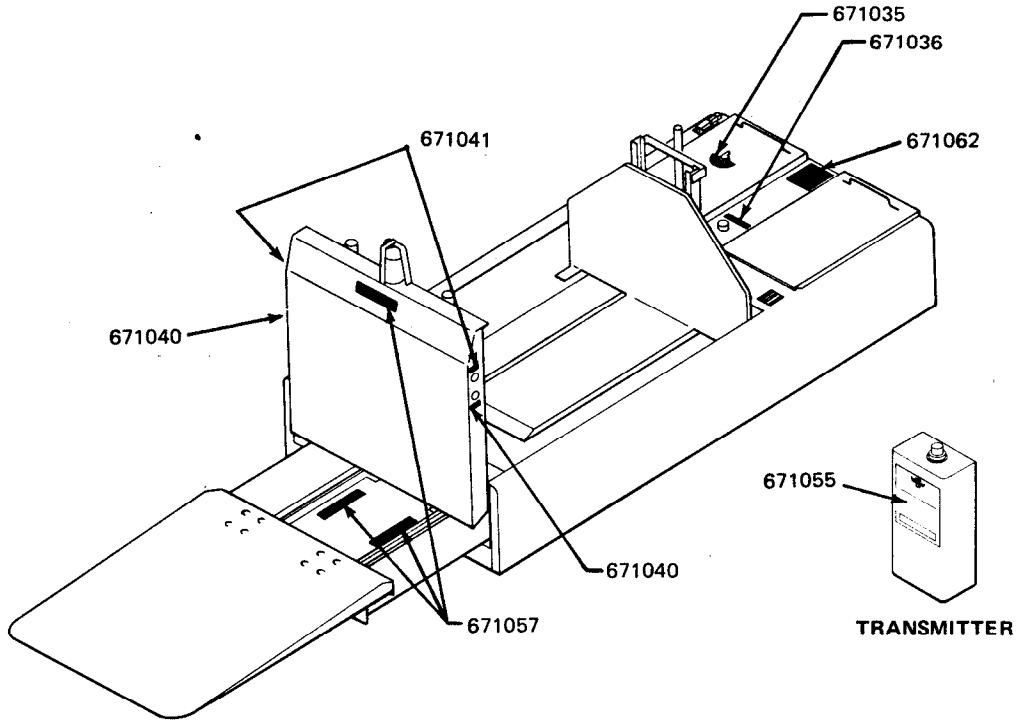
To order parts or service manuals contact:

Technical Publications Dept.
 Cascade Corporation
 2201 N.E. 201
 Portland, Oregon 97230
 Telephone: 1-800-547-5266
 or
 503-666-1511

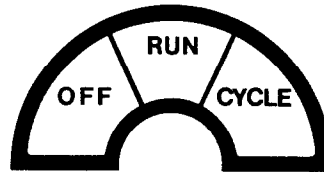
Additional Equipment Index

Part Number	Description	Page
670208	Manual Controls	10
670405	Wheels	12
670898	Spares Group	iii
671066	Transmitter	12
671074	Bracket	12
671083	Floor Assembly	12

Safety Decals



QTY.	PART NO.	DESCRIPTION
3	671057	Warning Decal



QTY.	PART NO.	DESCRIPTION
1	671035	Mode Decal



QTY.	PART NO.	DESCRIPTION
2	671041	Stop Decal

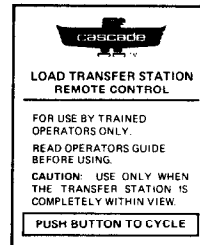


(Manual Control Option)

QTY.	PART NO.	DESCRIPTION
2	671040	Cycle Decal



QTY.	PART NO.	DESCRIPTION
1	671036	Change Oil Decal



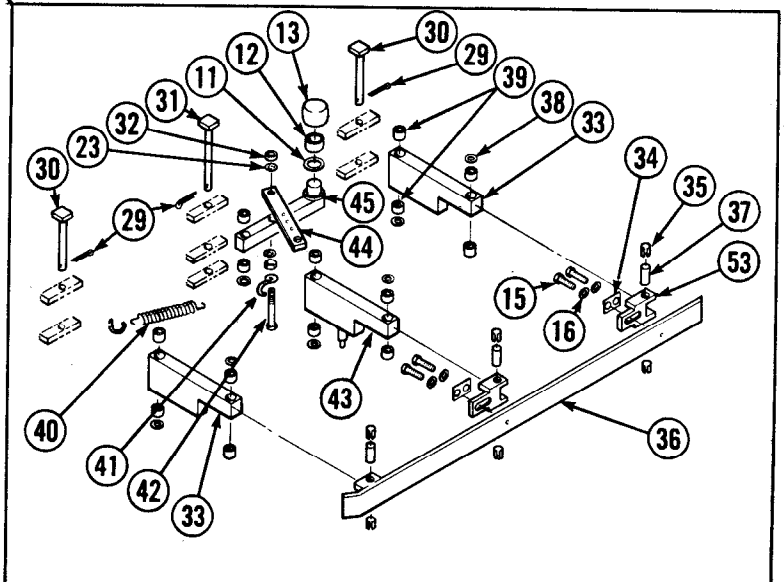
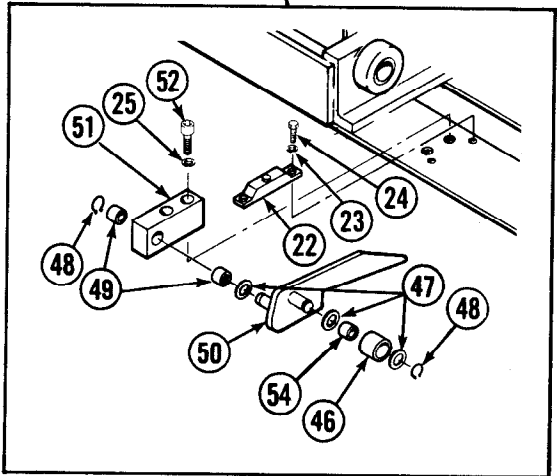
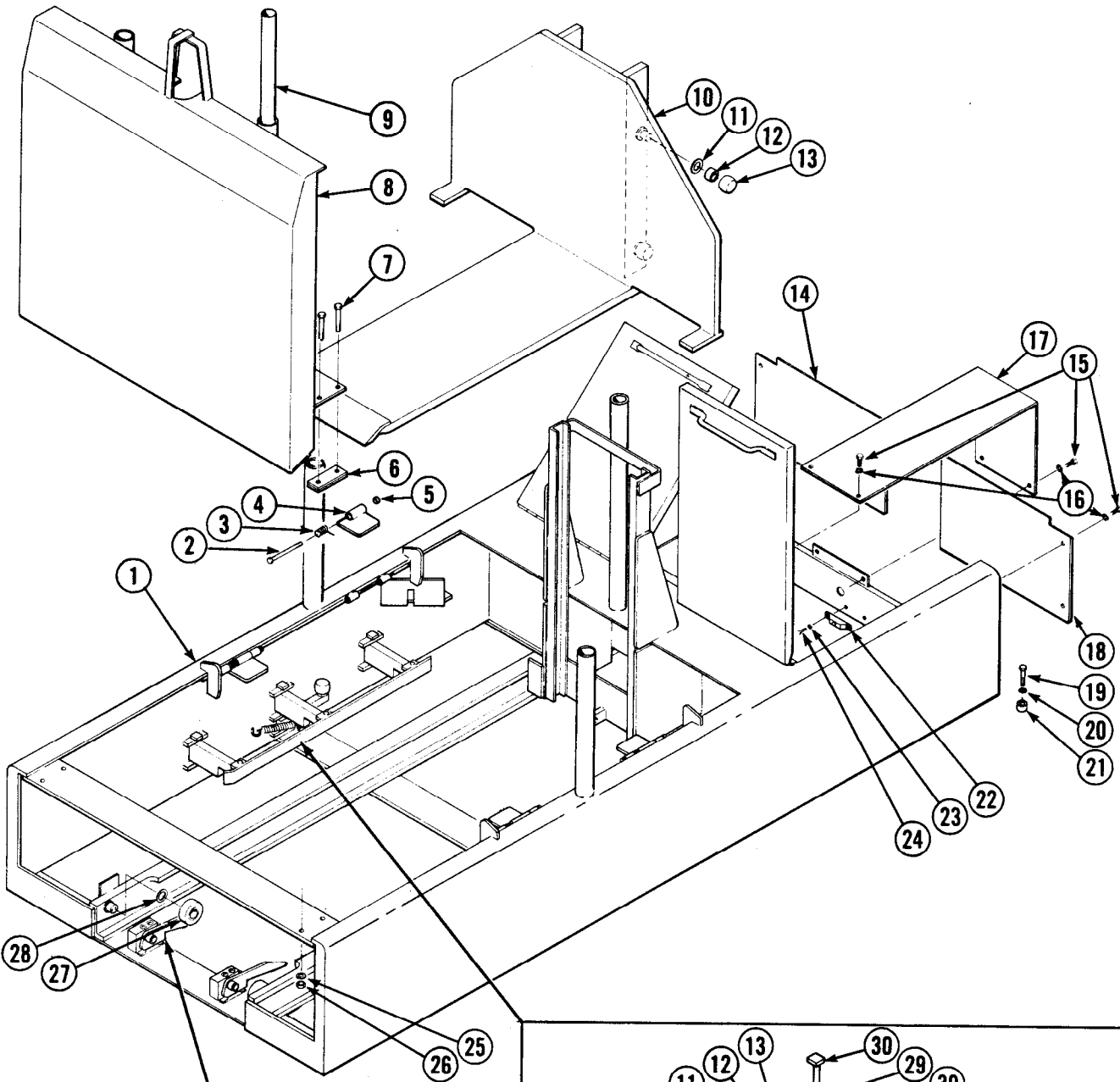
QTY.	PART NO.	DESCRIPTION
1	671055	Transmitter Decal

Spare Parts Group

QTY.	PART NO.	DESCRIPTION	WHERE USED
1	670913	Cylinder Service Kit	All Cylinders
1	670189	Hose	
1	670199	Tube Assembly	
1	670300	Tube Assembly	
1	670301	Tube Assembly	Inner Carriage Group
1	670374	Block	
1	660050	Roller	
1	661549	Roller	
1	666737	Roller	
1	666740	Bushing	
4	670351	Bushing	
2	668252	Washer	
2	3130	Retaining Ring	
4	670377	Shim	
2	670380	Pin Weldment	
2	670386	Spring	Frame Group
1	670391	Pin Weldment	
1	670372	Bumper	
10	670350	Bushing	
5	670459	Washer	
4	6509	Cotter Pin	
2	601350	Pin	
6	670401	Tolerance Ring	
2	670402	Bolt	
3	670591	Fuse - 10 amp	
3	671082	Fuse - 20 amp	
2	670911	Fuse - 2 amp	
1	670595	Fuse - 1 amp	Electrical Panel Assembly
4	670598	Fuse - 1 amp	
3	670423	Heater - 460V	
3	671056	Heater - 230V	
1	670909	Switch	
1	671123	Solenoid Coil	
4	2702	O-Ring	Valve Assembly
1	671125	Seal Kit	
1	670136	Filter	Hydraulic Tank Assembly



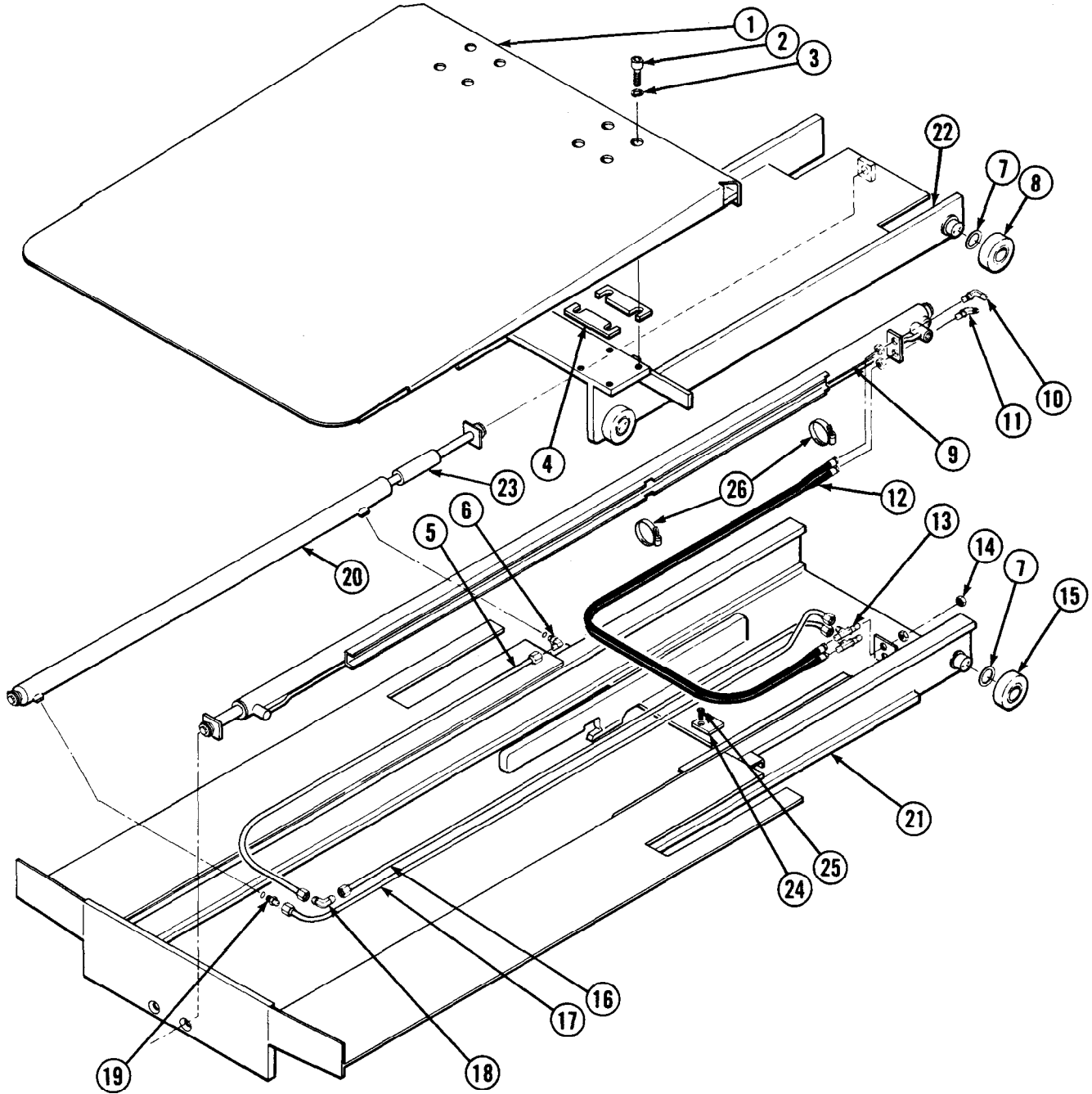
Frame Group



Frame Group

40A							
REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670217	Frame Group	27	2	660050	Roller
1	1	670223	Frame	28	2	631881	Shim
2	4	3673	Capscrew 1/2 NC x 8	29	6	6509	Cotter Pin
3	4	670216	Spring	30	4	670380	Pin
4	4	670211	Pawl - 48 x 40 Pallets	31	2	670391	Pin
	4	670212	Pawl - 44 x 48 Pallets	32	4	5900	Nut 1/4 NC
	4	670213	Pawl - 42 x 42 Pallets	33	4	670379	Link
	4	670290	Pawl - 40 x 48 Pallets	34	4	670464	Plate
5	4	621951	Locknut 1/2 NC	35	12	670401	Tolerance Ring
6	6	670377	Shim	36	2	670383	Bar
7	4	3717	Capscrew 5/8 NC x 3 1/2	37	6	601350	Pin
8	1	670400	Backrest	38	14	670259	Washer
9	5	671061	Pipe	39	28	670350	Bushing
10	1	670360	Lift	40	4	670386	Spring
11	6	629314	Washer	41	2	670460	Hook
12	6	666740	Bushing	42	2	670402	Bolt
13	6	666737	Roller	43	2	670389	Link
14	1	670371	Plate - R.H.	44	2	670393	Bar
15	16	3603	Capscrew 3/8 NC x 1	45	2	670468	Lever
16	16	6288	Lockwasher	46	2	670366	Tire
17	1	670367	Cover	47	6	668252	Washer
18	1	670370	Plate - L.H.	48	4	3130	Retaining Ring
19	1	3791	Bolt 1.0 NC x 4	49	4	639905	Bushing
20	1	6298	Lockwasher	50	2	670362	Lever
21	1	671128	Anchor	51	2	670361	Block
22	3	670372	Bumper	52	4	643550	Capscrew 5/8 NC x 3 GR8
23	10	6286	Lockwasher	53	4	670387	Clevis
24	6	643497	Capscrew 1/4 NC x 5/8 GR8	54	2	638762	Bushing
25	8	6292	Lockwasher				
26	4	5904	Nut 1/2 NC				

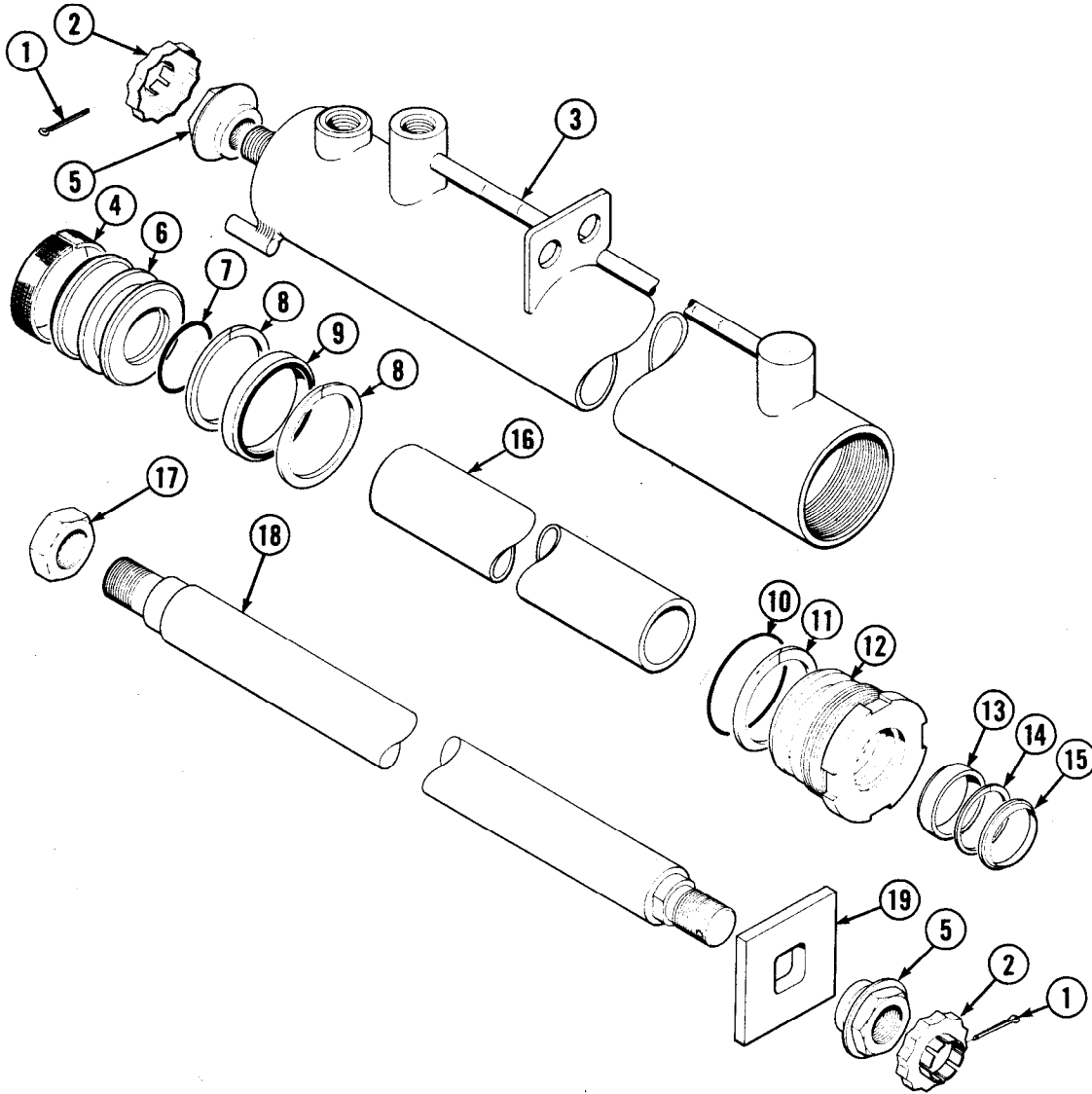
Inner Carriage Group



40A

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670218	Inner Carriage Group	15	2	661549	Roller
1	1	670346	Transfer Plate	16	1	670301	Tube Assembly
2	8	619152	Capscrew 5/8 NC x 2 1/2	17	1	670199	Tube Assembly
3	8	6376	Washer	18	1	2440	Elbow
4	4	670377	Shim	19	1	662187	Connector
5	1	670300	Tube Assembly	20	1	670201	Carriage Cylinder
6	1	651303	Elbow	21	1	670330	Inner Weldment
7	6	631881	Shim	22	1	670323	Carriage
8	4	660050	Roller	23	1	670119	Spacer (for 48 x 40 pallets)
9	1	670200	Inner Cylinder		1	670121	Spacer (for 42 x 42 pallets)
10	1	2454	Elbow	24	1	670374	Block
11	1	2493	Elbow	25	2	640323	Capscrew
12	1	670189	Hose	26	2	644588	Hose Clamp
13	2	670373	Tee				
14	2	2646	Cap				

Inner Cylinder

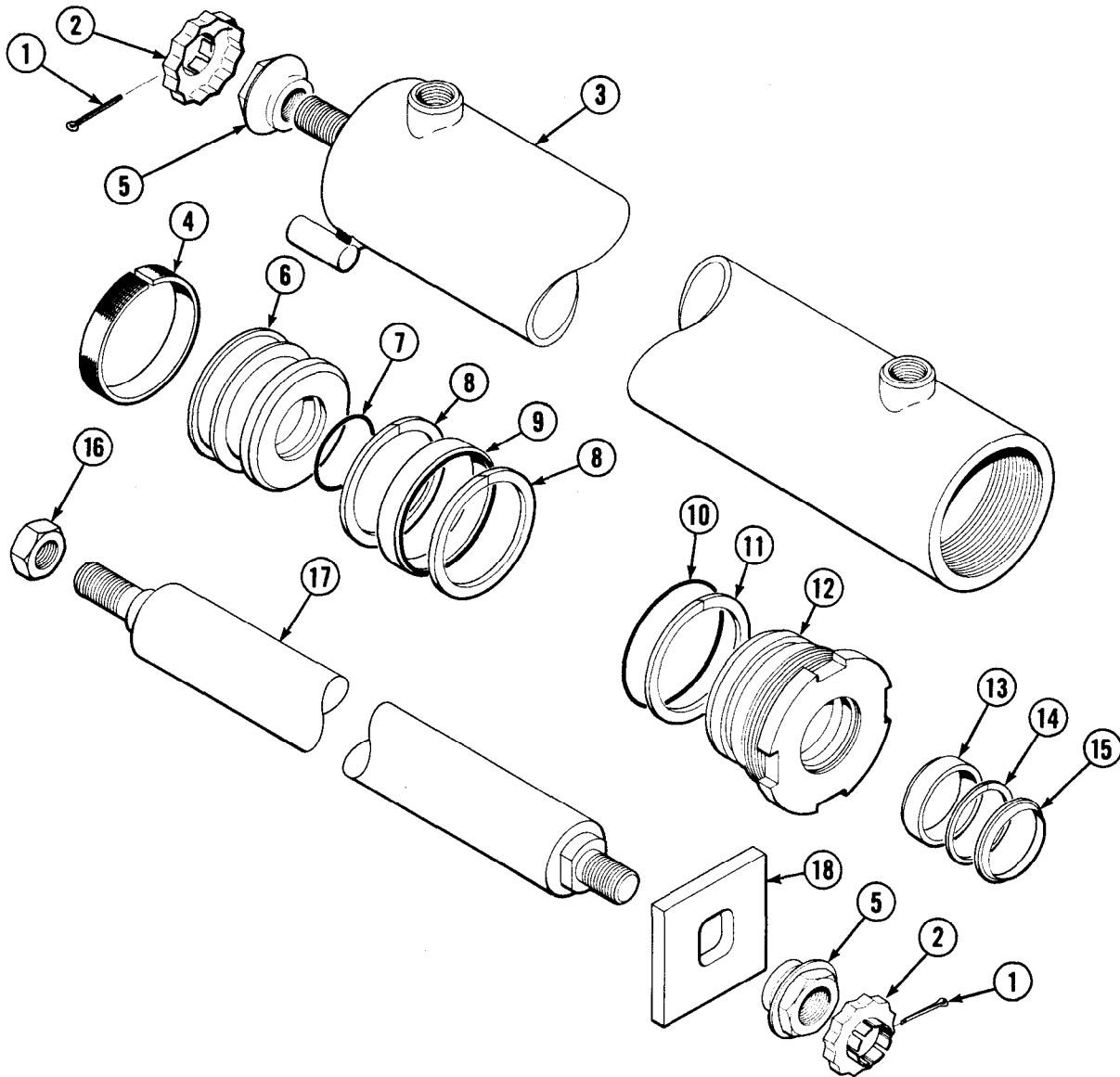


40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
		670200	Inner Cylinder Assembly
1	2	6518	Cotter Pin
• 2	2	667624	Retainer
3	1	670192	Shell
• 4	1	660761	Wear Ring
5	2	667625	Nut
6	1	670891	Piston
• 7	1	2716	O-Ring
• 8	2	638249	Nylon Ring
• 9	1	662454	Seal
• 10	1	2787	O-Ring
• 11	1	615130	Back-Up Ring
12	1	670197	Retainer
• 13	1	662451	Seal
• 14	1	638246	Nylon Ring
• 15	1	628047	Wiper
16	1	670188	Spacer
17	1	667623	Nut
18	1	670191	Rod
19	1	670185	Washer
		670913	Service Kit

•Included in Service Kit 670913.



Carriage Cylinder

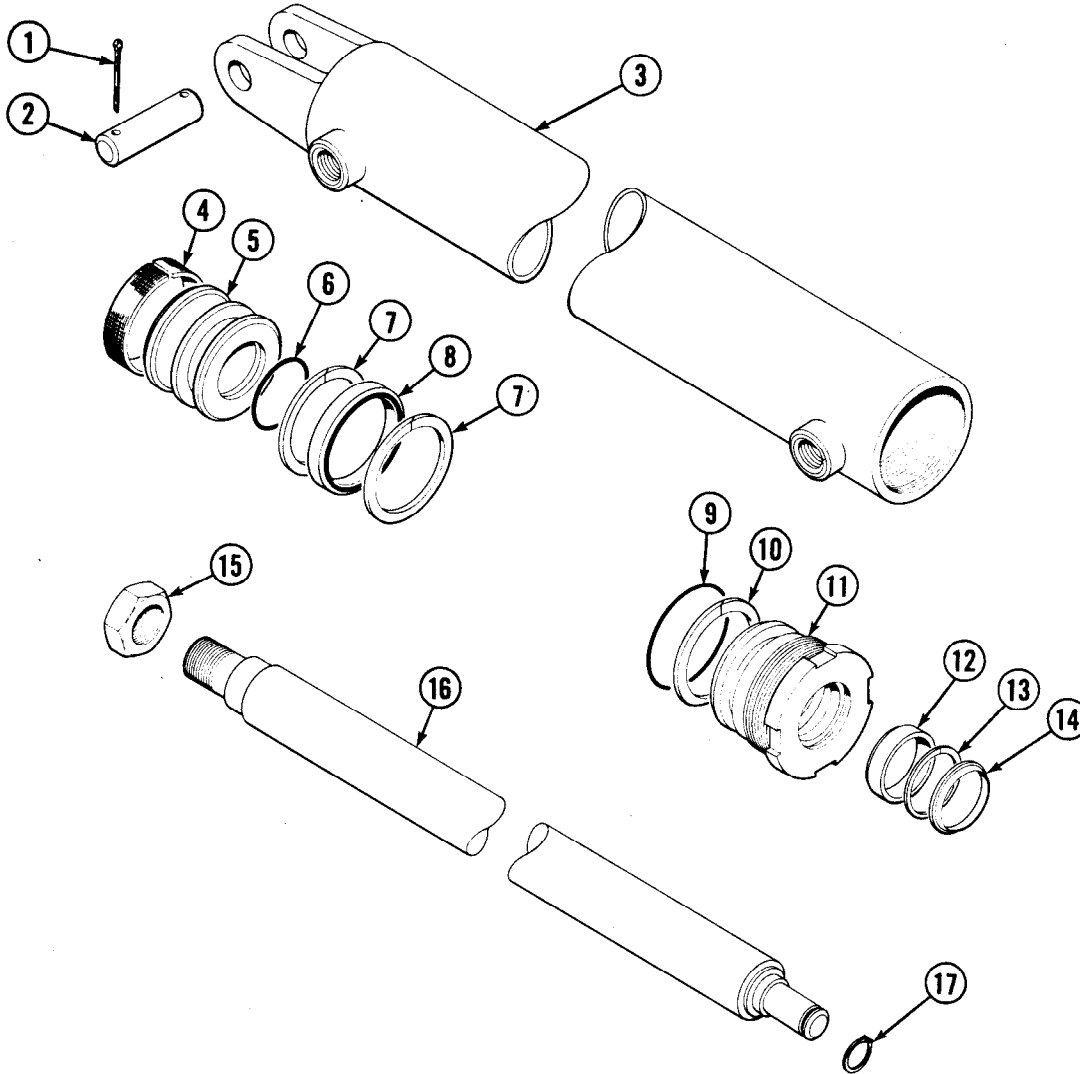


40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
		670201	Carriage Cylinder Assembly
1	2	6518	Cotter Pin
• 2	2	667624	Retainer
3	1	670194	Shell
• 4	1	660761	Wear Ring
5	2	667625	Nut
6	1	670891	Piston
• 7	1	2716	O-Ring
• 8	2	638249	Nylon Ring
• 9	1	662454	Seal
• 10	1	2787	O-Ring
• 11	1	615130	Back-Up Ring
12	1	670197	Retainer
• 13	1	662451	Seal
• 14	1	638246	Nylon Ring
• 15	1	628047	Wiper
16	1	667623	Nut
17	1	670193	Rod
18	1	670185	Washer
		670913	Service Kit

•Included in Service Kit 670913.



Lift Cylinder

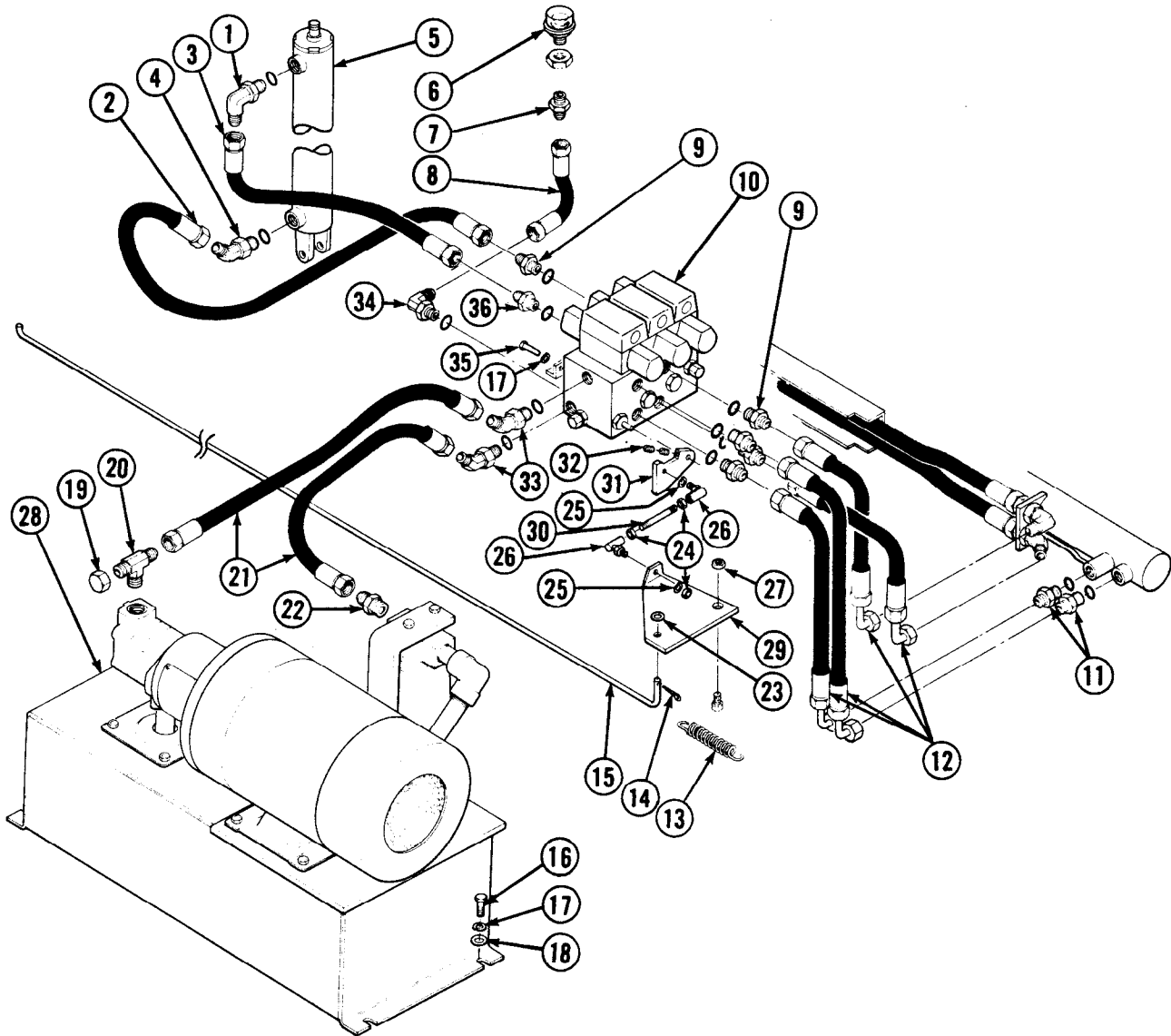


40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
		670202	Lift Cylinder Assembly
1	1	6526	Cotter Pin
2	1	661675	Clevis Pin
3	1	670196	Shell
• 4	1	660761	Wear Ring
5	1	670891	Piston
• 6	1	2716	O-Ring
• 7	2	638249	Nylon Ring
• 8	1	662454	Seal
• 9	1	2787	O-Ring
• 10	1	615130	Back-Up Ring
11	1	670197	Retainer
• 12	1	662451	Seal
• 13	1	638246	Nylon Ring
• 14	1	628047	Wiper
15	1	667623	Nut
16	1	670195	Rod
17	1	670317	Klipring
		670913	Service Kit

• Included in Service Kit 670913.



Hydraulic Supply Group

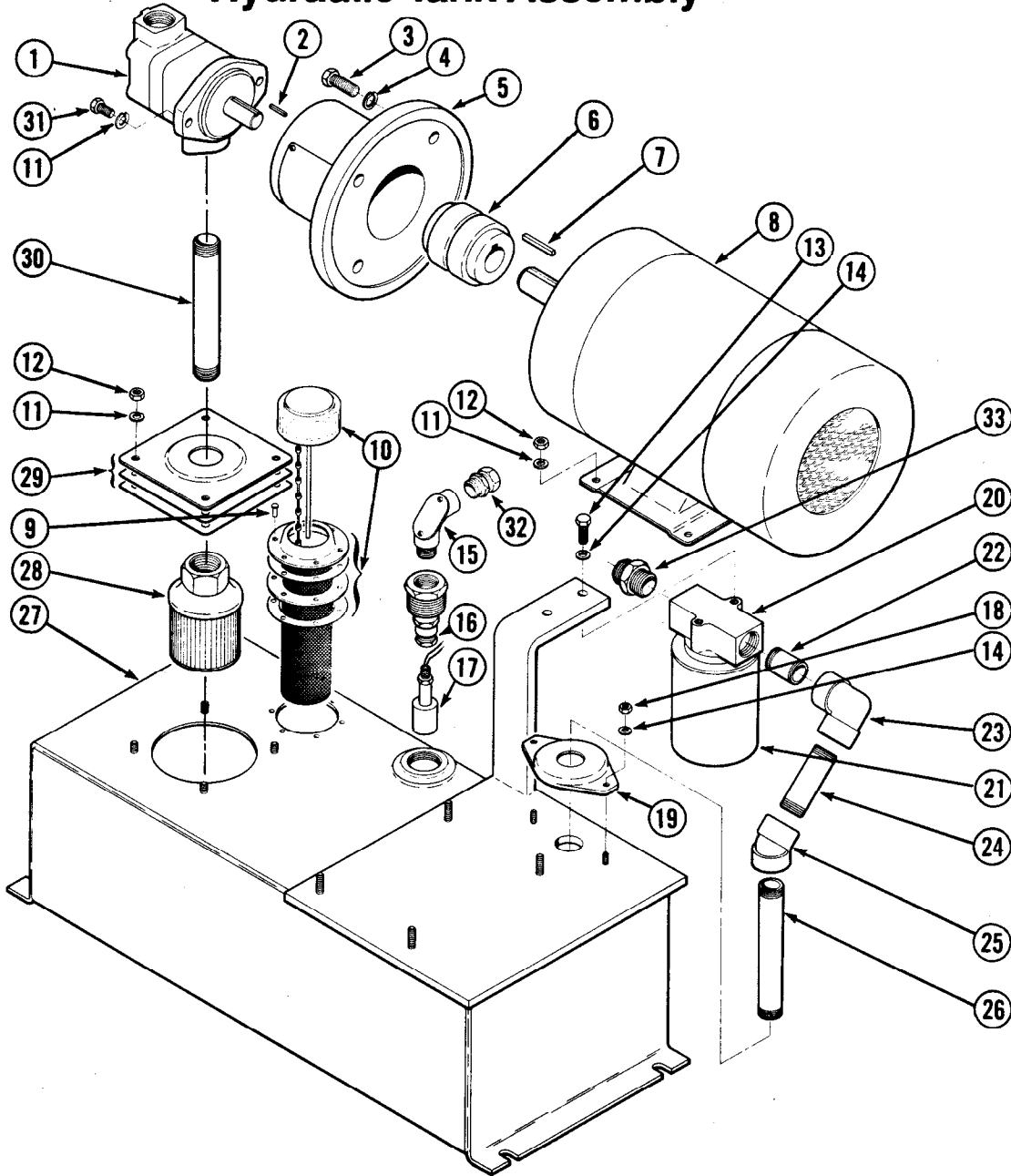


40A

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670206	Hydraulic Supply Group	22	1	2313	Connector
1	1	601676	Elbow	23	1	6205	Washer
2	1	2283	Hose	24	3	670481	Nut #10 NF
3	1	670315	Hose	25	2	6285	Lockwasher
4	1	651303	Elbow	26	2	670456	Ball Joint
5	1	670202	Lift Cylinder	27	1	654790	Nut 5/8 NC
6	1	670318	Indicator	28	1	670094	Tank Assembly
7	1	2302	Connector	29	1	670478	Plate
8	1	670319	Hose	30	1	670482	Rod
9	5	601377	Connector	31	1	670476	Bar
10	1	670320	Check Valve	32	2	5286	Setscrew #10 NF GR8
11	2	662187	Connector	33	2	611303	Elbow
12	4	670322	Hose	34	1	617917	Elbow
13	1	670386	Spring	35	2	3600	Capscrew 3/8NC x 5/8
14	1	6517	Cotter Pin	36	1	611288	Connector
15	1	670477	Rod	37	1	611329	Tee
16	4	3602	Capscrew 3/8 NC 7/8	38	1	670094	Tank Assembly
17	6	6288	Lockwasher				
18	4	6203	Washer				
19	1	2646	Cap				
20	1	601249	Tee				
21	2	2267	Hose				



Hydraulic Tank Assembly

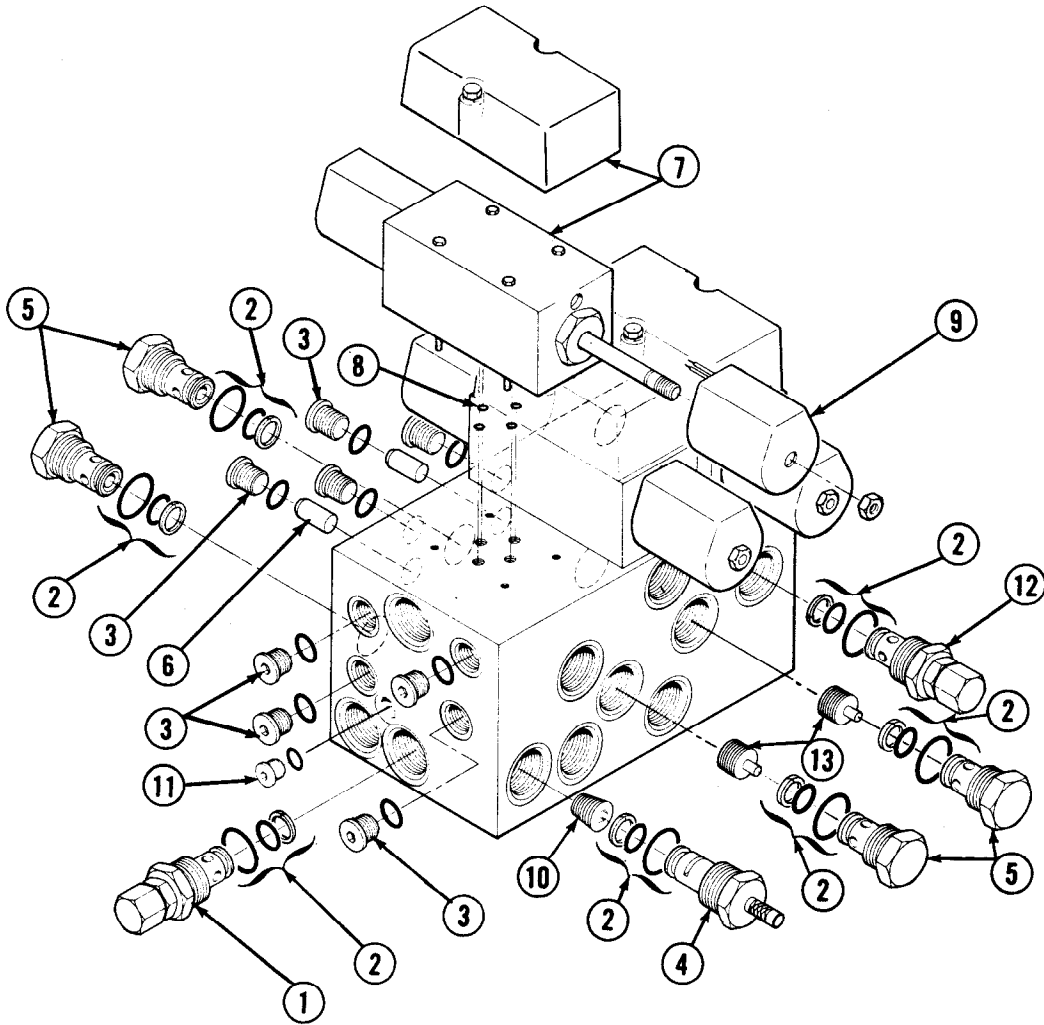


40A

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670094	Hydraulic Tank Assembly	18	2	5900	Nut 1/4NC
1	1	670128	Pump	19	1	670135	Return Flange
2	1	671435	Key	20	1	671251	Filter Assembly
3	4	3654	Capscrew 1/2 NC x 1 1/4	21	1	670136	Filter Element
4	4	6261	Lockwasher	22	1	670134	Pipe
5	1	670129	Bracket - Pump	23	1	6683	Elbow
6	1	670139	Coupling	24	1	670137	Pipe
7	1	671436	Key	25	1	6707	Elbow
8	1	670130	Motor	26	1	670138	Pipe
9	6	670124	Rivet	27	1	670088	Tank
10	1	670131	Filler Breather	28	1	670125	Suction Filter
11	10	6288	Lockwasher	29	1	670126	Suction Flange
12	8	5902	Nut 3/8 NC	30	1	670127	Pipe
13	2	3553	Capscrew 1/4 NC x 3/4	31	2	3604	Capscrew 3/8 NC x 1 1/4
14	4	6286	Lockwasher	32	1	670158	Connector
15	1	670157	Elbow				
16	1	670132	Adapter				
17	1	670133	Switch				

•Includes Filter Element 670136

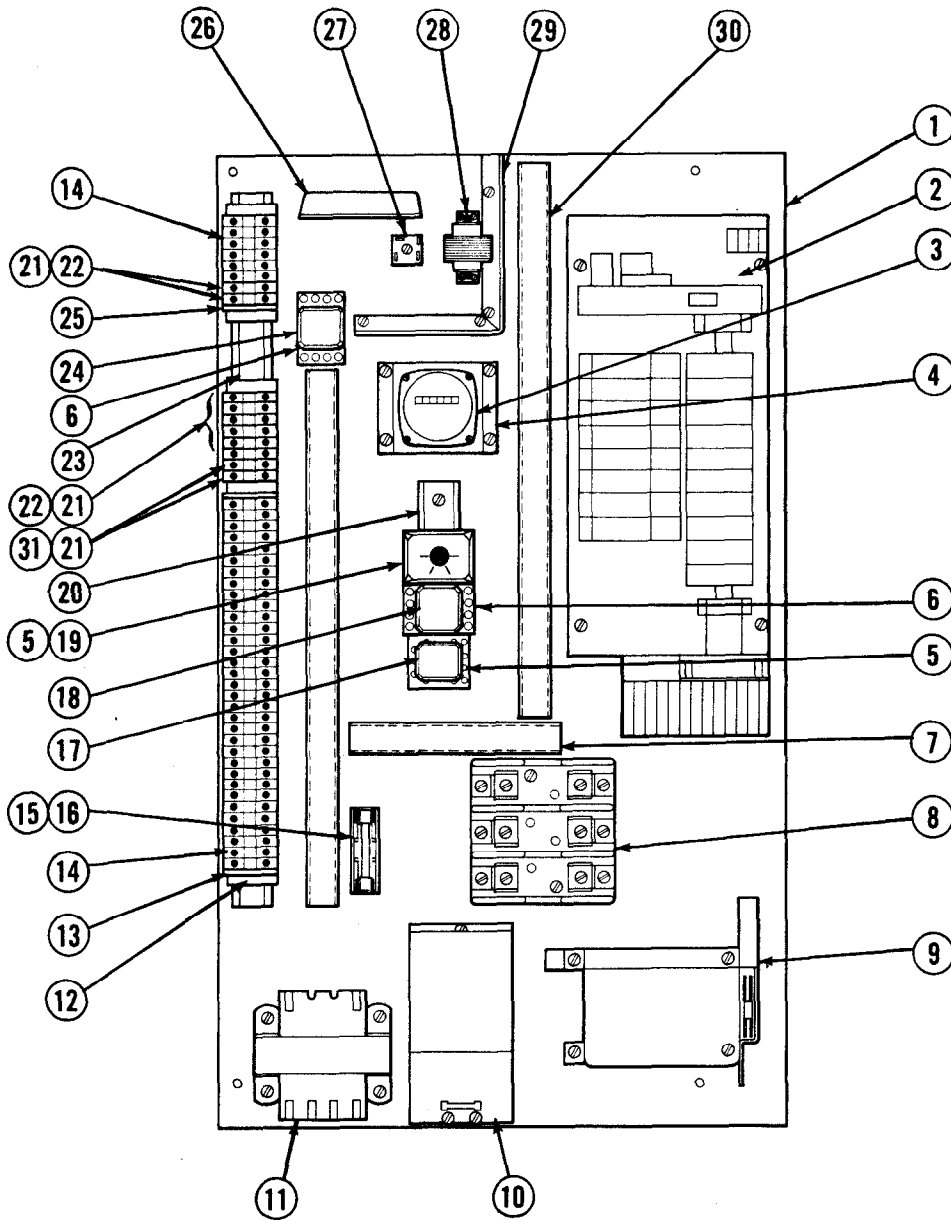
Check Valve



40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
		670320	Check Valve
1	1	671122	Relief Valve
2	7	671125	Seal Kit
3	22	609234	Plug
4	1	671121	Rotary Valve
5	4	671119	Check Valve
6	2	671120	Dowel Pin
7	3	671124	Solenoid Valve
8	12	2702	O-Ring
9	6	671123	Solenoid Coil
10	1	671563	Pipe Plug
11	1	667087	Plug
12	1	671565	Relief Valve
13	2	671564	Piston



Electrical Panel Assembly

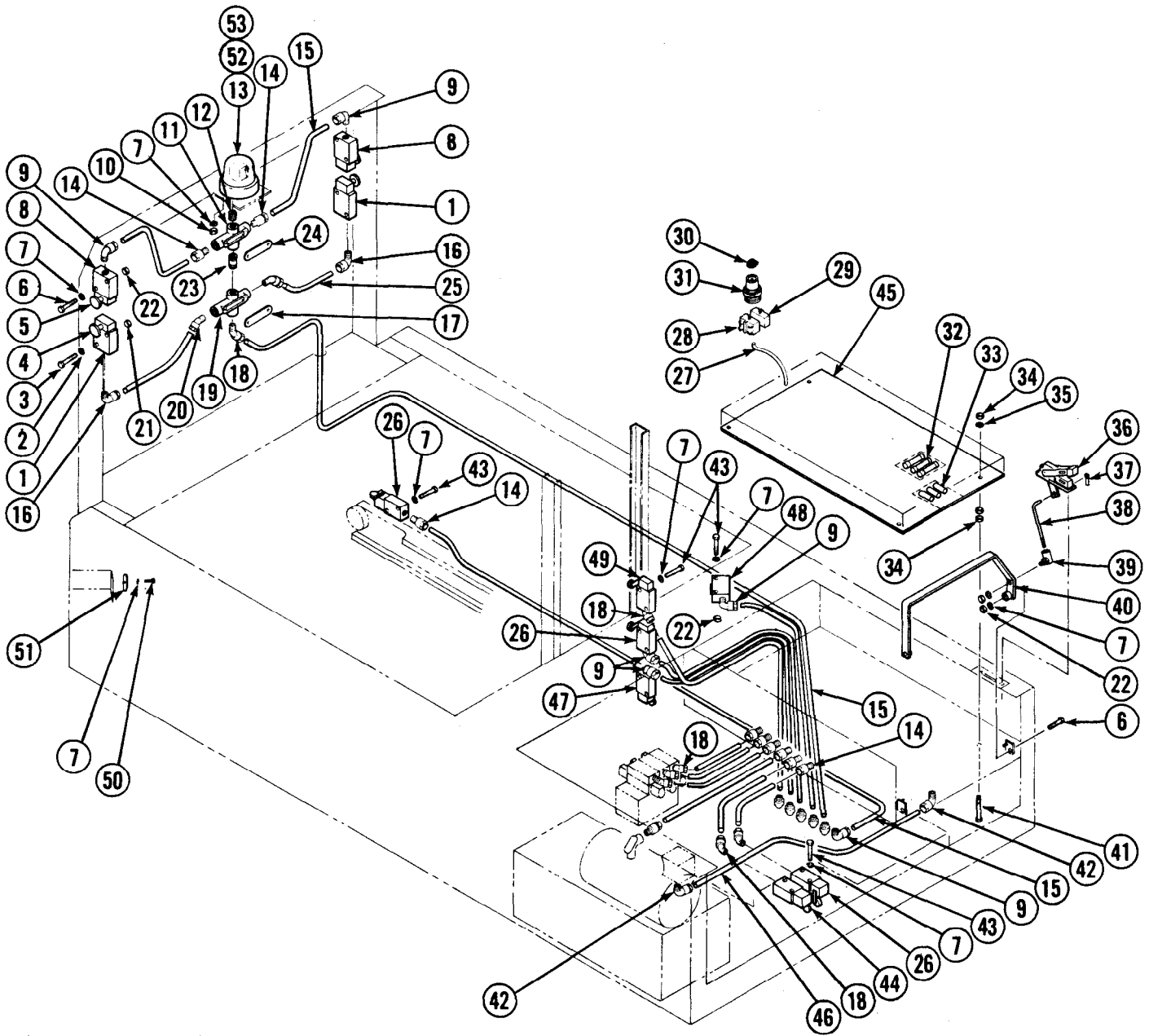


40A

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670604	Electrical Panel Assy.	17	1	670414	Relay
1	1	670588	Subplate	18	1	670596	Relay
2	1	670412	Programmer	19	1	670444	Time Delay Relay
3	1	670446	Hour Meter	20	1	670917	Track
4	1	670589	Bracket	21	10	670597	Fused Terminal Block
5	2	670413	Socket	22	8	670598	Fuse 1 amp - GMA
6	2	670428	Socket	23	1	670599	Rail
7	1	670587	Duct	24	1	670415	Relay
8	1	670590	Fuse Block	25	2	670760	End Cover
9	1	670592	Switch	26	1	670908	Radio Receiver
10	1	670422	Starter	27	1	670600	Rectifier
11	1	670421	Transformer	28	1	670419	Transformer
12	5	670430	End Stop	29	1	670601	Barrier
13	1	670429	End Cover	30	2	670586	Duct
14	39	670427	Terminal Block	31	2	670911	Fuse 2 amp - GMA
15	1	670594	Fuse Block				
16	1	670595	Fuse 1 amp - Class M				



Electrical Group



Electrical Group

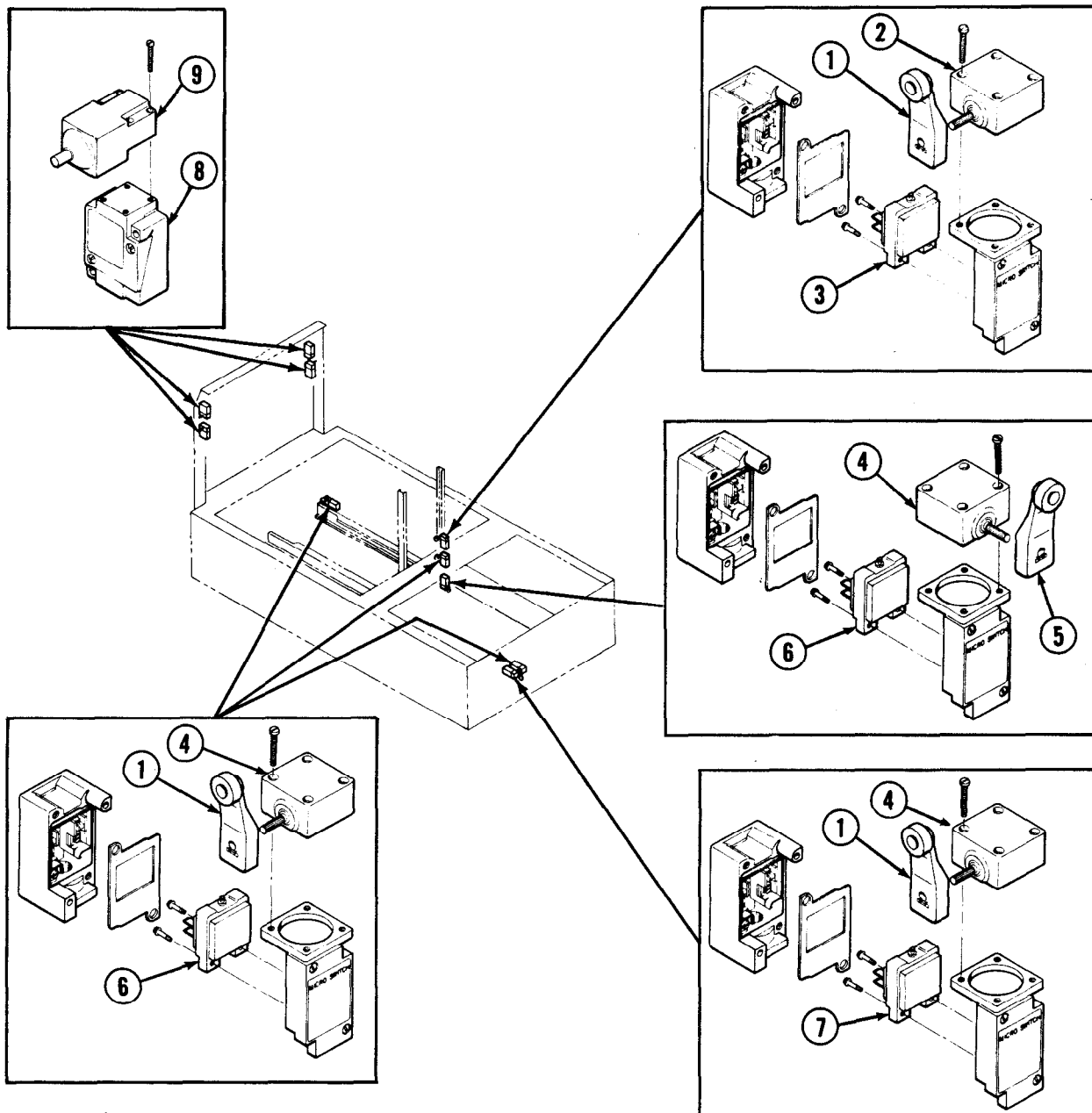
40A

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
		670207	Electrical Group	28	1	670426	Contact
		670208	Manual Control Group	29	1	670435	Contact
◆■ 1	2	670440	Limit Switch	30	1	670436	Knob
■ 2	4	6284	Lockwasher	31	1	670434	Operator
■ 3	4	4433	Capscrew #10 NC x 1 1/2	32	3	671082	Fuse - 230V 20 amp H
■ 4	2	670771	Button - Black		3	670591	Fuse - 460V 10 amp H
5	2	670770	Button - Red	33	3	671056	Heater - 230V S.D. B-25
6	8	4433	Capscrew #10 NC x 1 1/2		3	670423	Heater - 460V S.D. B-10-2
7	29	5985	Nut #10 NC	34	12	5900	Nut 1/4 NC
◆ 8	2	670440	Limit Switch	35	4	6286	Lockwasher
9	11	670451	Connector	36	1	670603	Handle
10	3	670481	Nut #10 NF	37	1	670762	Clip
11	1	670455	Condulet	38	1	670309	Link
12	1	6805	Nipple	39	1	670456	Ball Joint
13	1	670418	Beacon	40	1	670310	Bar
14	9	670158	Connector	41	4	3556	Capscrew 1/4 NC x 1 1/4
15	●	670449	Conduit	42	2	670453	Connector
■16	2	670451	Connector	43	14	670463	Capscrew
■17	1	670461	Cover	44	1	670437	Limit Switch
18	4	670761	Connector	45	1	670604	Electrical Panel Assembly
■19	1	670455	Condulet	46	●	670450	Conduit
■20	2	670761	Connector	◆47	1	670441	Limit Switch
■21	4	5985	Nut #10 NC	48	1	670438	Photo Switch
22	10	5985	Nut #10 NC	◆49	1	670899	Limit Switch
23	1	6805	Nipple	50	1	4428	Capscrew #10 NC x 5/8
24	1	670461	Cover	51	1	670439	Reflector
■25	●	670449	Conduit	52	1	670896	Light Bulb -125V, 25 watt
◆26	3	670442	Limit Switch	53	1	670897	Dome
27	●	666948	Sheath				

- Included in Manual Control Group 670208.
- Length as required.
- ◆ See page 11 for parts breakdown.

NOTE: Motor circuit is wired with 12 Gauge wire, all other wiring is 14 Gauge wire.

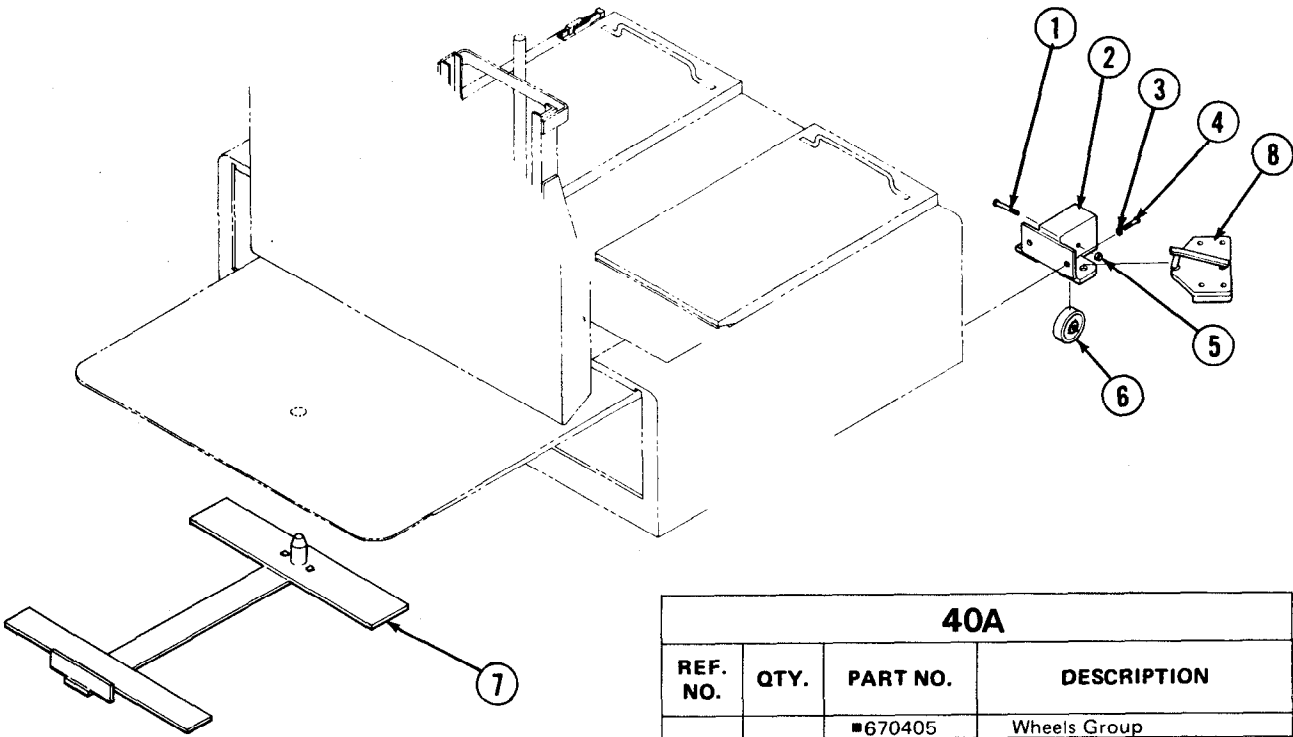
Limit Switches



40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
1	1	670902	Lever
2	1	670914	Operate Head
3	1	670915	Contact Block
4	1	670900	Operate Head
5	1	671108	Lever
6	1	670901	Contact Block
7	1	670903	Contact Block
8	1	670905	Body
9	1	670904	Plunger Head

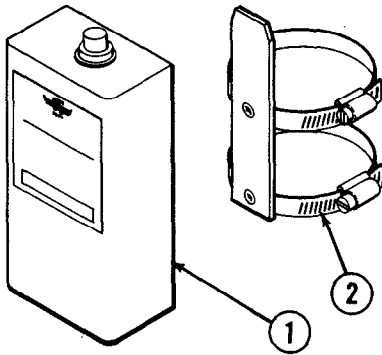
NOTE: All quantities above are one (1) per limit switch.

Mobility Group



40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
		■ 670405	Wheels Group
1	2	3665	Capscrew 1/2 NC x 4
2	2	671087	Bracket
3	4	6294	Lockwasher
4	4	3735	Capscrew 3/4 NC x 1 3/4
5	2	621951	Locknut 1/2 NC
6	2	671088	Wheel
7	1	671100	Towbar
8	•	671083	Floor Assembly

- Includes items 1 through 7 only.
- As required.



40A			
REF. NO.	QTY.	PART NO.	DESCRIPTION
1	1	671066	Transmitter
2	1	671074	Bracket

Note: The transmitter uses a 9 Volt transistor style battery.



NATIONAL
ASSOCIATION
OF SERVICE
MANAGERS

