

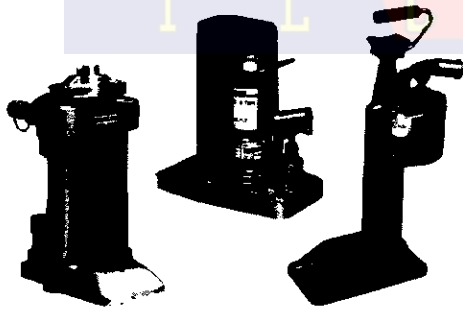
# SIMPLEX.

**PROGRESS  
BY DESIGN**

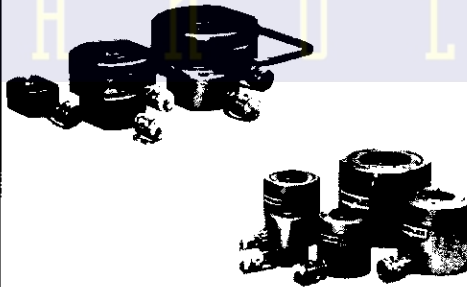
## **REPAIR SHEET FOR THE PA 90 AIR HYDRAULIC PUMP MODEL NUMBER 35300**



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PLEASE CONTACT FACTORY AT NUMBER LISTED BELOW.**



**HYDRAULIC TOE JACKS**



**SPRING & LOAD RETURN  
COMPACT JACKING CYLINDERS**



**SPRING RETURN CYLINDERS**

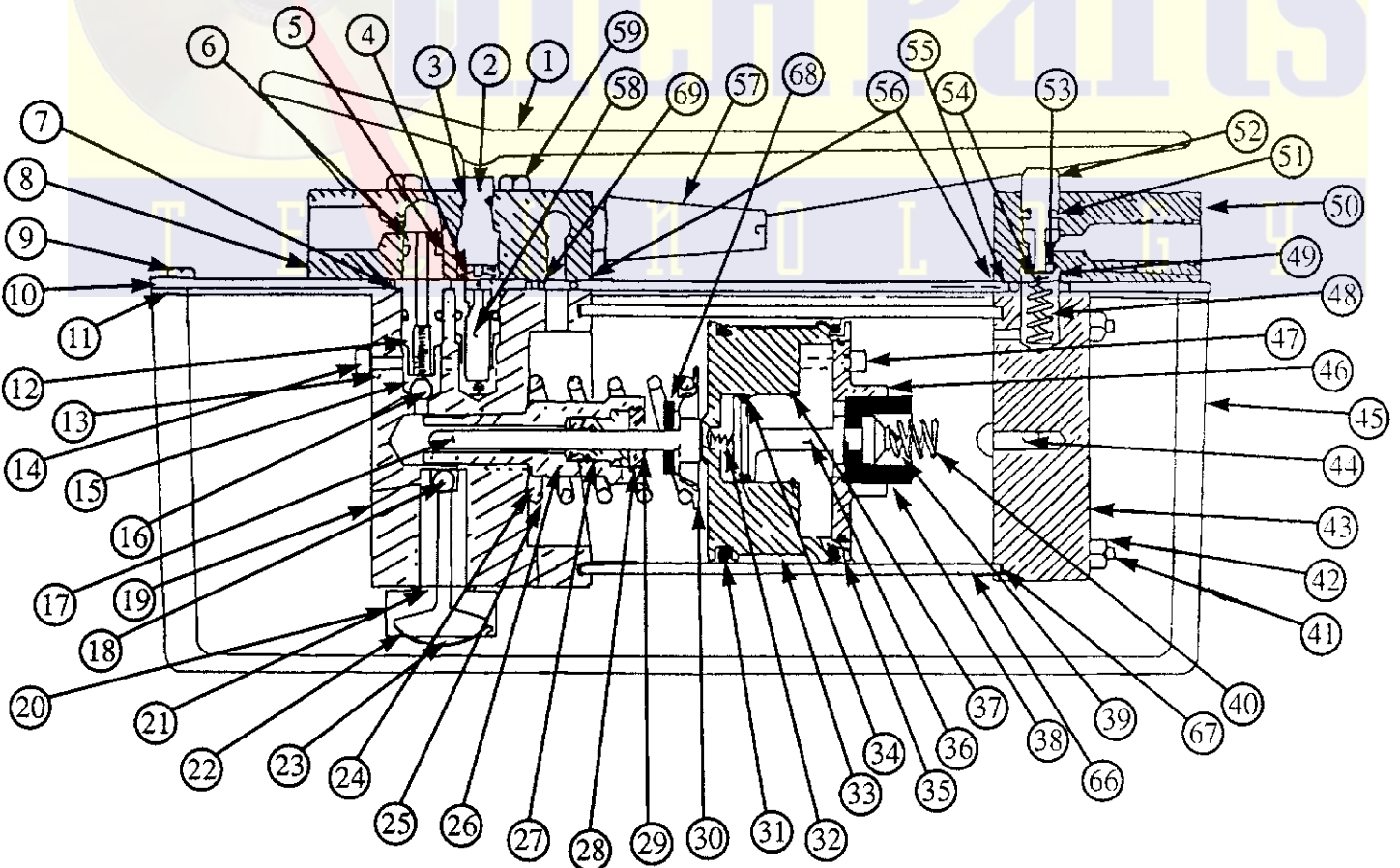
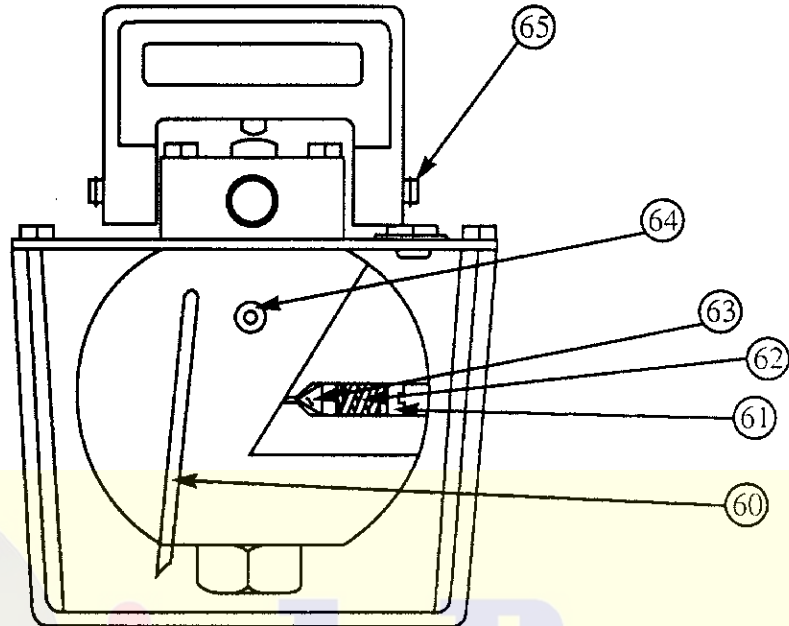
# SIMPLEX®

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**PROGRESS  
BY DESIGN**

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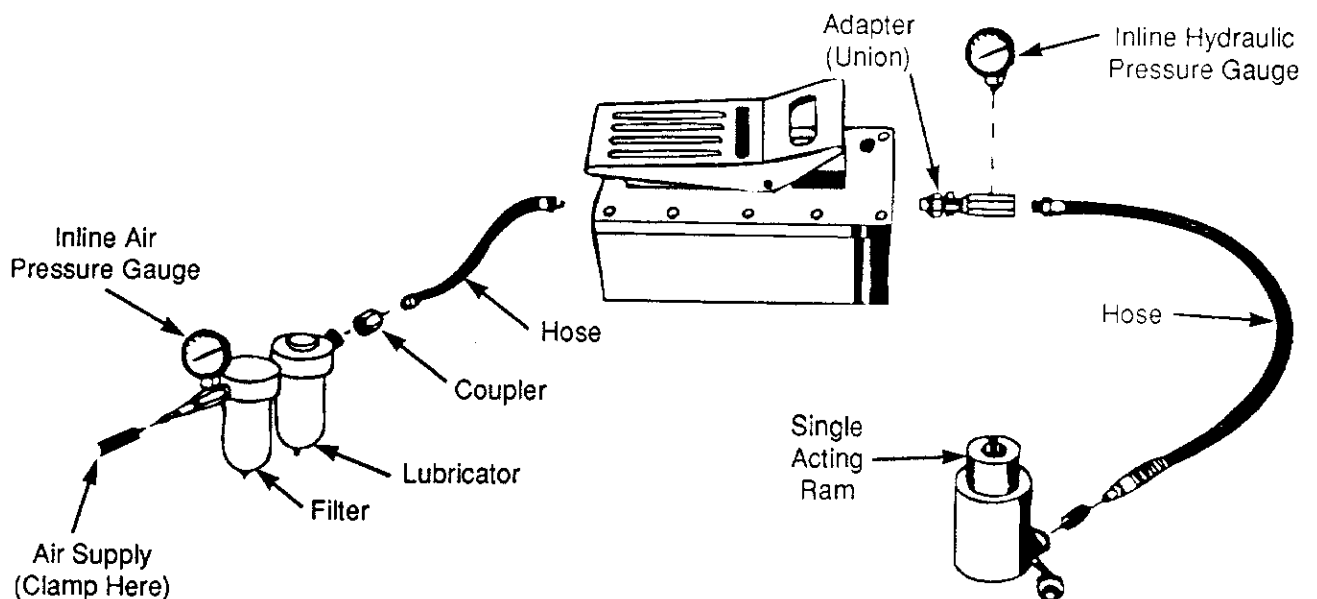
## PA 90 AIR HYDRAULIC PUMP REPAIR PARTS SHEET



ITEM NO.	DESCRIPTION	PART NO.	QTY
1	Foot Pedal	6110001	1
2	Release Button	6110002	1
3	O-Ring*	----	1
4	Spring*	----	1
5	O-Ring*	----	2
6	High Pressure Dowel	6110006	1
7	O-Ring*	----	1
8	Hydraulic Sub Block	6110008	1
9	Bolt	6110009	10
10	Top Plate	6110010	1
11	Cork Gasket*	----	1
12	Delivery Spring*	----	1
13	Copper Washer*	----	1
14	Manufacturer's Plug	6110014	1
15	Spring Cap	6110015	1
16	Delivery Ball*	----	1
17	Hydraulic Piston	6110017	1
18	Suction Valve*	----	1
19	Hydraulic Block	6110019	1
20	Suction Housing	6110020	1
21	Copper Washer*	----	1
22	Circlip	6110022	1
23	Filter	6110023	1
24	Copper Washer*	----	1
25	Spring	6110025	1
26	Pump Housing	6110026	1
27	Seal*	----	1
28	Gland	6110028	1
29	Gland Nut	6110029	1
30	Main Spring Cap	6110030	1
31	Teflon Glide Ring*	----	2
32	Spring*	----	1
33	Air Piston	6110033	1
34	O-Ring*	----	1
35	O-Ring*	----	1

ITEM NO.	DESCRIPTION	PART NO.	QTY
36	Shuttle Valve	6110036	1
37	Circlip	6110037	1
38	Shuttle Seal*	----	1
39	Screw	6110039	1
40	Shuttle Spring*	----	1
41	Draw Bar	6110041	4
42	Nut	6110042	4
43	Main Air Block	6110043	1
44	Spring Locater	6110044	1
45	1.4 litre Reservoir	6110045	1
46	Air Piston Cap	6110046	1
47	Cap Screws	6110047	2
48	Release Spring*	----	1
49	O-Ring Cap	6110049	1
50	Air Sub Block	6110050	1
51	O-Ring*	----	1
52	Air Plunger	6110052	1
53	O-Ring*	----	1
54	Screw	6110054	1
55	O-Ring*	----	1
56	Gaskets*	----	4
57	Silencer	6110057	1
58	Release Assembly	6110058	1
59	Sub Block Bolts	6110059	6
60	Drain Tube	6110060	1
61	ADJ Screw	6110061	1
62	Relief Spring	6110062	1
63	Relief Needle	6110063	1
64	Manufacturers Plug	6110014	1
65	Pivot Pin and Circlips	6110064	1
66	Air Cylinder	6110065	1
67	Air Cylinder Gaskets*	----	2
68	Buffer*	----	1
69	O-Ring*	----	3
70	Seal Kit	6110069	1

\* Included in Seal Kit.



# AIR HYDRAULIC PUMP

- Before using pump make sure that hose has been fitted correctly using thread sealant. Be careful no to overtighten
- When removing hydraulic or air fittings make sure all pressure has been released.
- Always make sure that hose is prevented from being twisted, bent or kinked as this will severely damage hose and create a danger.
- Never allow hose to come in contact with other liquids.
- Always make sure couplings are clean before connecting.

## PUMP

- Oil level should be within 20 mm from filter plug.
- the relief valve has been factory set and should not be tampered with.
- When refilling with Simplex Hydraulic oil make sure cylinders are fully retracted.

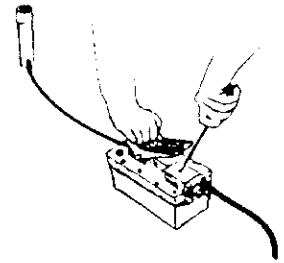
## AIR SUPPLY

- Air supply should be between 100 psi to 125 psi at 20cfm to obtain max. oil delivery and pressure.

**WARNING** Before operating make sure all connections are secure. It is strongly advisable to fit a lubricator fitted with pressure gauge to the air inlet side of the pump.

# TO PURGE AIR FROM PUMP

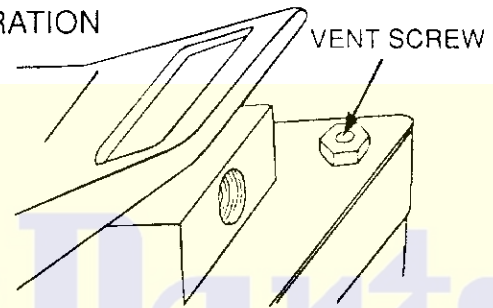
Press foot pedal into release position and at the same time operate air button allow pump to turn over for approximately 30 seconds. Now operate the pump in the normal manner and the cylinder should extend. If pump fails to operate it may be necessary to hold pump in a vertical position with the hose in the down position.



## VENTING THE RESERVOIR

A small screw will be found in the filter plug of the reservoir. This should be removed and discarded this will enable the reservoir to breathe.

### OPERATION



PROBLEM	PROBABLE CAUSE	REMEDY
1) Pump does not reciprocate or stops reciprocating during operation.	A) Broken main spring. #25 B) Broken shuttle spring. #40 C) Sticky shuttle valve. #36 D) Tight air piston.	A) Replace B) Replace C) Replace seal and grease. D) Replace rings.
2) Pump reciprocates but no oil delivery.	A) Low oil level. B) Pump not primed. C) Blocked suction filter. D) Release valve open.	A) Fill B) Prime as per instructions. C) Clean D) Clean or replace.
3) Pump builds pressure but will not hold it.	A) Outlet ball not sealing correctly. #16 B) Release valve not sealing. #58 C) Faulty seals.	A) Replace and reseal. B) Replace C) Check Item #5.
4) Oil leakage through air silencer.	A) Defective seals	A) Item #27-#24-#67-#69-#56-#55
5) Pump continues to run after release of foot pedal.	A) Faulty air seal.	A) Replace item #51-#49
6) Low oil delivery.	A) Low air supply. B) Reservoir not vented. C) Dirty suction filter.	A) 100 to 120 psi 20 cfm. B) Vent reservoir. C) Clean
7) Pump will not build up max. pressure.	A) Check air supply. B) Relief valve. C) Inlet valve. #18 D) Copper washer. #21 E) Release valve.	A) 100 psi is required for max. pressure B) Readjust C) Reseal D) Replace E) Replace