



SULLAIR

C SERIES COMPRESSOR PACKAGE

PARTS MANUAL

Part Number 250042-466
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Effective 10/94

SEMINAR TRAINING

Sullair Seminars are 2-day courses that provide hands-on instruction in the proper operation, maintenance and service of Sullair Refrigeration Compressors. Seminars are presented at regular intervals throughout the year at a dedicated training facility at Sullair's corporate headquarters in Michigan City, Indiana.

Instruction includes discussion of the function and installation of Sullair service parts, troubleshooting of the most common problems, and actual equipment operation. The seminars are recommended for maintenance and service personnel.

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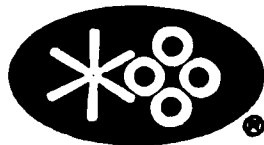
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- Or Write -

Sullair Corporation
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Michigan City, IN 46360
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TABLE OF CONTENTS

Section 1 ILLUSTRATIONS AND PARTS LISTS

PAGE

1	1.1 PROCEDURE FOR ORDERING PARTS
4	1.2 COMPRESSOR PACKAGE COMPONENTS
18	1.3 SINGLE FILTER ASSEMBLY
20	1.4 SINGLE FILTER ASSEMBLY (PRIOR TO DEC., 1984)
22	1.5 DUPLEX FILTER ASSEMBLY
24	1.6 DUAL FILTER ASSEMBLY (PRIOR TO DEC., 1984)
26	1.7 ELECTRICAL CONTROLS (JUNE, 1978 TO CURRENT)
28	1.8 ELECTRICAL CONTROLS (PRIOR TO JUNE, 1978)
30	1.9 ELECTRICAL PANEL WITH A.C. ELECTRICAL VALVE ACTUATOR – A.C. (INSIDE) (AFTER JUNE, 1985)
32	1.10 ELECTRICAL CONTROLS (JUNE, 1978 TO JAN., 1985)
34	1.11 ELECTRICAL CONTROLS (PRIOR TO JUNE, 1978)
36	1.12 SHAFT SEAL ASSEMBLY – TYPE 8
38	1.13 SHAFT SEAL ASSEMBLY – TYPE 9
40	1.14 COUPLING ASSEMBLY – STYLE 1
41	1.14 COUPLING ASSEMBLY – STYLE 2
46	1.15 CAPACITY CONTROL SHAFT SEALS AND VALVE ASSEMBLY
50	1.16 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC PRIOR TO JUNE, 1991
54	1.17 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC AFTER TO JUNE, 1991
58	1.18 ELECTRIC VALVE ACTUATOR ASSEMBLY – DC
62	1.19 ELECTRIC VALVE ACTUATOR MOTOR ASSEMBLY – DC
64	1.20 FIRST GEAR AND SLIP CLUTCH ASSEMBLY (P/N 013501)
66	1.21 LIQUID INJECTION COOLED
70	1.22 SEPARATOR ELEMENTS
72	1.23 OIL PUMP ASSEMBLY – COMPRESSOR MOUNTED

Section 2 CONVERSION KITS

74	2.1 LIQUID INJECTION
74	2.2 DUPLEX FILTER
74	2.3 FILTER (OLD STYLE FILTER CONVERSION)
74	2.4 AUXILIARY OIL PUMP – 3/4HP, 60 HZ
75	2.5 ELECTRIC VALVE ACTUATOR – DC TO AC
75	2.6 BALANCE PISTON PIPING
75	2.7 DUPLEX STRAINER
76	2.8 SERVICE KITS
77	2.9 INSTALLATION OR SERVICE KIT REQUIREMENTS

Section 3 DECAL GROUP

80	3.0 DECAL GROUP
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ILLUSTRATIONS AND PARTS LIST

1.1 PROCEDURE FOR ORDERING PARTS

Parts should be ordered from the nearest Sullair Representative or the Representative from whom the compressor was purchased. If for any reason parts cannot be obtained in this manner, contact the factory directly at the address or phone numbers listed below.

When ordering parts always indicate the **Serial Number** of the compressor. This can be obtained from the Bill of Lading for the compressor or from the Serial Number Plate located on the compressor. Use part numbers listed in Tables when placing your order.

The genuine Sullair service parts listed meet or exceed the demands of this compressor. Use of replacement parts other than those approved by Sullair Corporation may lead to hazardous conditions over which Sullair Corporation has no control. Such conditions include, but are not limited to, bodily injury and compressor failure.

SULLAIR CORPORATION
Subsidiary of Sundstrand Corporation
3700 East Michigan Boulevard
Michigan City, Indiana 46360 U.S.A.
Telephone: 1-800-SULLAIR or
1-219-879-5451
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Michigan City, Indiana 46360 U.S.A.
Telephone: 1-800-SULLAIR or
1-219-879-5451
FAX: (219) 874-1835 (Parts)
FAX: (219) 874-1805 (Service)

ILLUSTRATIONS AND PARTS LIST

TABLE 1

RECOMMENDED SPARE PARTS LIST (For Units Built after June, 1991, Refer to Manual for Packages Built Earlier)

ITEM DESCRIPTION	MIN. REQ.	QTY.	C16L A/B	C20S A/B	C20L A/B	C25SA & MA C25LA	C25SB & MB C25LB	C40L A/B
element, oil filter	X	4	250008-955	250008-955	250008-955	250008-955	250008-955	250008-955
element, oil separator	X	A/R	←		See Fig. 1-19			→
gasket, oil separator element	X	A/R	026427	026427	026427	026427	026427	026427
adhesive, element gasket	X	1	240179	240179	240179	240179	240179	240179
gasket, oil separator cover	X	1	240177	240177	240177	240177	240177	240177
screen, oil strainer 3" y-type	X	1				250038-924		250038-924
gasket, oil strainer cap 3" y-type	X	6				250038-944		250038-944
screen, oil strainer 2" y-type	X	1					250038-922	
gasket, oil strainer cap 2" y-type	X	6					250038-942	
screen, oil strainer 1 1/2" y-type	X	1	250038-921	250038-921	250038-921	*	*	*
gasket, oil strainer cap 1 1/2" y-type	X	6	250038-941	250038-941	250038-941	*	*	*
screen, oil strainer 3/8" y-type	X	1	250038-916	250038-916	250038-916	250038-916	250038-916	250038-916
gasket, oil strainer cap 3/8" y-type	X	6	250038-936	250038-936	250038-936	250038-936	250038-936	250038-936
regulator valve, oil pressure		1	042475	042475	042475	042475	042475	042475
relief valve, oil pressure		1	042476	042476	042476	042476	042476	None
pin, shear compressor oil pump	X	4	024710	024710	024710	024710	024710	None
packing, temperature regulator **	X	1	240710	240710	240710	240710	240710	240710
gasket, oil cooler - water cooled		2	←		See Table #3			→
gasket, oil cooler thermosiphon		2	←		See Table #4			→
switch, oil pressure		1	042464	042464	042464	042464	042464	042464
switch, low suction/high discharge ****	X	1	042465	042465	042465	042465	-----	042465
switch, low suction ***	X	1	047138					→
switch, high discharge ***	X	1	408788					→
switch, low intermediate ***	X	1	042888					→
switch, temperature	X	1	045417	045417	045417	045417	045417	045417
switch, P1/P2	X	1	047607	047607	047607	047607	047607	047607
switch, HSP	X	1	042888	042888	042888	042888	-----	042888

* Requires 1 - 1/2" sizes for thermosiphon packages.

** Liquid Injection only.

*** Booster compressors only.

**** High Stage Only

A/R - As required for package.

ILLUSTRATIONS AND PARTS LIST

TABLE 1
RECOMMENDED SPARE PARTS LIST (continued)

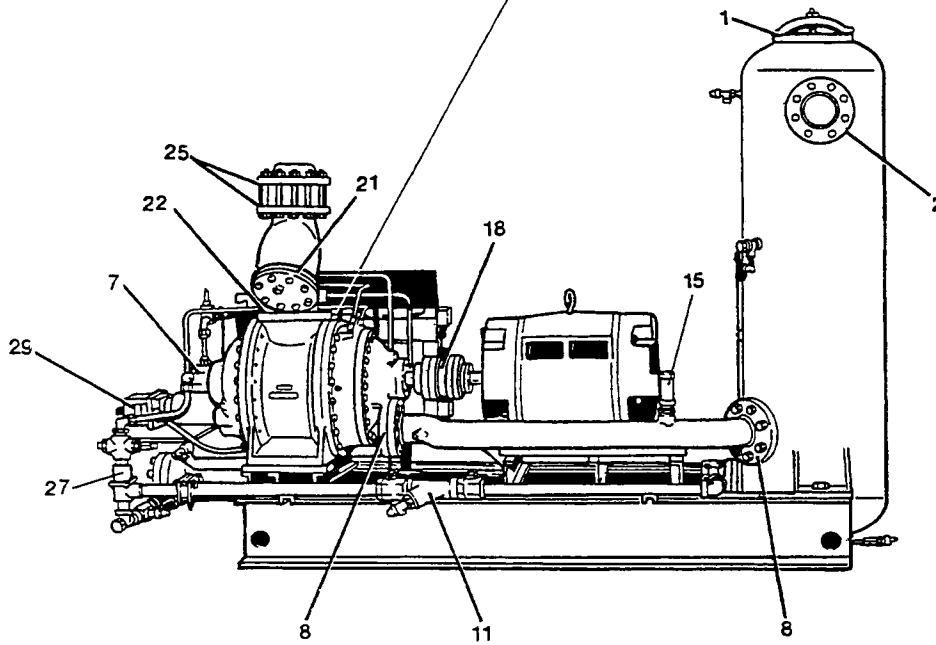
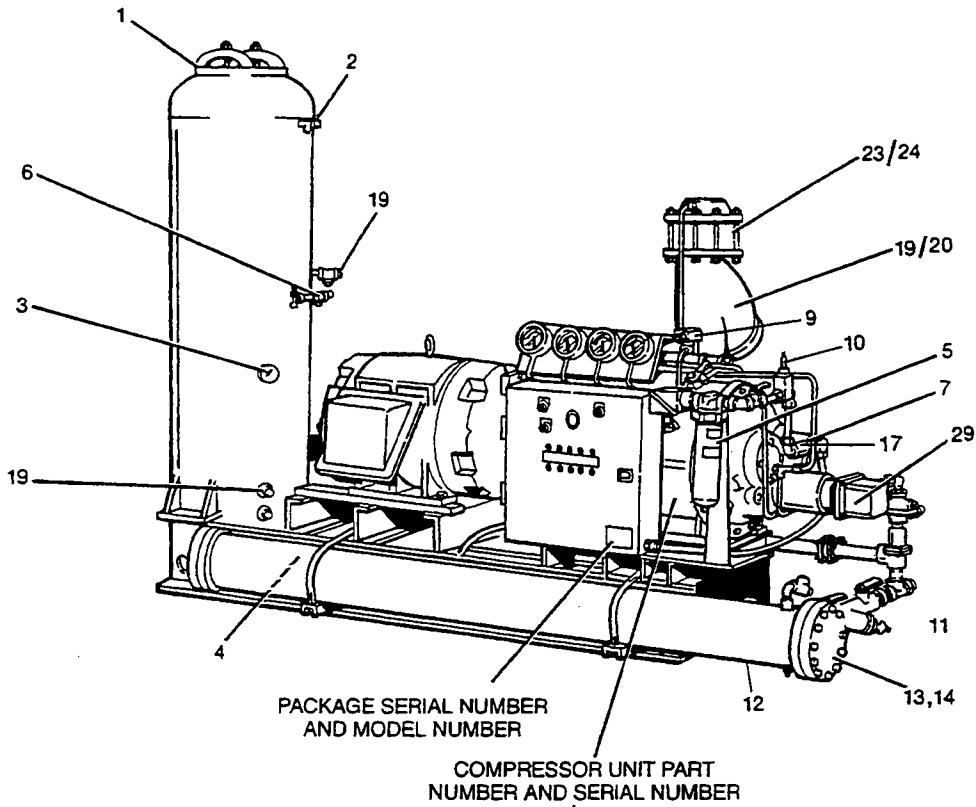
ITEM DESCRIPTION	MIN. REQ.	QTY.	C16L A/B	C20S A/B	C20L A/B	C25SA & MA C25LA	C25SB & MB C25LB	C40L A/B
timer, 3TR		1	047087	047087	047087	047087	047087	047087
timer, 1TR	X	1	046176	046176	046176	046176	046176	046176
resistor, for timer P/N 046176	X	1	047090	047090	047090	047090	047090	047090
lamp, pilot light	X	6	043386	043386	043386	043386	043386	043386
resistor, pilot light		1	044846	044846	044846	044846	044846	044846
lens, red - pilot light		2	043384	043384	043384	043384	043384	043384
lens, green - pilot light		2	043385	043385	043385	043385	043385	043385
gear box, electric valve actuator		1	←		See Table #6			→
brake shoe, electric valve actuator	X	2	250014-504	250014-504	250014-504	250014-504	250014-504	250014-504
capacitor, electric valve actuator		1	←		See Section 1.10			→
motor, electric valve actuator		1	250014-494	250014-494	250014-494	250014-494	250014-494	250014-494
kit, oil pump - compressor 60Hz		1	001095B	001095B	001095B	001095C	001095C	None
kit, oil pump - compressor 50Hz		1	001095C	001095C	001095C	01937-018	01937-018	None
kit, shaft seal - compressor	X	1	001807A	001808A	001808A	001809A	001809A	****

**** Refer to factory for part number.

A/R - As required for package.

Section 1 ILLUSTRATIONS AND PARTS LIST

1.2 COMPRESSOR PACKAGE COMPONENTS



ILLUSTRATIONS AND PARTS LIST

1.2 COMPRESSOR PACKAGE

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
1	gasket, oil separator tank access cover 11" x 15" manway	C16, C20 & C25	240177	1
		C40	240177	3
2	gasket, oil separator tank discharge flange 3" - 300#	C16	044998	1
		C20	044999	1
		C25	045183	1
		C40	045000	1
		C25	045000	1
3	gauge, discharge temperature Prior to June, 1990 6" - 300#	All Models	042468	1
4	heater, oil separator tank - 500 watt with thermostat (without thermostat)	All Models	250001-301	1
4A	thermostat for heater P/N 042412 (not shown)	All Models	042412	1
		All Models	042589	1
		All Models	041327	4
5	oil filter, single assembly complete (See Fig. 1.3)	C16, C20 & C25	250008-954	1
		C40	250008-954	2
		C16, C20 & C25	042463	1
	Prior to December, 1984 (See Fig. 1.4)	C40	042463	2
5B	oil filter, duplex assembly complete (not shown) (See Fig. 1.5)	C16, C20 & C25	250008-953	1
		C40	250008-953	2
		C16, C20 & C25	042463	2
	Prior to December, 1984 (See Fig. 1.16)	C40	042463	4
6A	orifice, .030 (may be drilled larger)	All Models	027935	1
6B	strainer, 3/8"	All Models	See Table 3	
7	oil pump, compressor mounted	C16, C20 & C25	See Fig. 1.21	1
8	gasket, discharge pipe 3" 300#	C16	044998	2
	gasket, discharge pipe 4" 300#	C20	044999	2
	gasket, discharge pipe 6" 300#	C25	045000	2
	gasket, discharge pipe 6" 300#	C40	045000	2
9	relief valve, oil pressure	C16, C20 & C25	042475	1
		C40	None	-
10	regulating valve, oil pressure	All Models	042476	1
11	strainer, oil "Y" line - NPT	See Table 3	See Table 3	-
12	cooler, oil water cooled thermosiphon	See Table 4 See Table 5	See Table 4 See Table 5	- -
13	gasket, oil cooler head	See Tables 4 and 5	See Tables 4 and 5	-
14	head, cooler	See Tables 4 and 5	See Tables 4 and 5	-

ILLUSTRATIONS AND PARTS LIST

1.2 COMPRESSOR PACKAGE (Continued)

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
15	relief valve, discharge pipe	All Booster	250004-384	1
	Prior to June, 1983	All C16 & C20 Booster	044993	1
	Prior to June, 1983	All C25 Booster	043069	1
	300 PSI (2068kPa)	All High Stage	250004-383	1
	Prior to June, 1983	All C16 & C20 High Stage	044993	1
	Prior to June, 1983	All C25 High Stage	043069	1
16	dual relief valves, oil separator (not shown)			
	150 PSI (1034kPa) relief valve	All Booster	250041-565	2
	300 PSI (2068kPa) relief valve	All High Stage	250041-566	2
	1/2" three-way valve	All	409108-003	1
	Prior to July 30, 1991			
	150 PSI (1034kPa) relief valve	All Booster	250008-376	2
	300 PSI (2068kPa) relief valve	All High Stage	250004-385	2
	3/4" three-way valve	All	409108-004	1
	Prior to May, 1984			
	Ammonia			
	150 PSI (1034kPa) relief valve	All Booster	240693	2
	300 PSI (2068kPa) relief valve	All High Stage	044990	2
	shut-off valve	All	409108-003	1
	Freon			
	300 PSI (2068kPa) relief valve	All	046249	2
	shut-off valve	All	409108-003	1
17	check valve, compressor oil pump	All	250016-852	1
	Prior to February, 1986	All	042615	1
18	coupling, compressor to motor	C16L and C20	See Sect. 1.13	1
		C25	See Sect. 1.13	1
		C40L	*	1
	Prior to November, 1982	C16L	240040	1
	Prior to November, 1982	C20	240041	1

* Refer to factory for part number.

ILLUSTRATIONS AND PARTS LIST

1.2 COMPRESSOR PACKAGE (Continued)

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
19	strainer, suction	See Table 2	See Table 2	1
20	screen, suction strainer (not shown)	See Table 2	See Table 2	1
21	gasket, suction strainer screen cover (not shown)	All	*	1
22	gasket, suction adapter flange to compressor (not shown)	All	*	
		C20S	023991	1
	Prior to June, 1991	C25S and C25M	022941	1
	Prior to June, 1991	C25L	045002	1
	Ammonia Only	C40L	248357	1
		C20L	023991	1
	Prior to July, 1978			
23	check valve, suction	See Table 5	See Table 5	1
24	spring, suction check valve (not shown)	See Table 5	See Table 5	1
25	gasket, suction line 5" - 300#	Ammonia		
	6" - 300#	C16L	045183	3
	8" - 300#	C20, C25S and C25M	045000	3
	10" - 150#	C25L	045001	3
	10" - 300#	C40LB	240621-14	3
		C40LA	045002	3
	5" - 300#	C16L	045183	3
	6" - 300#	C20S	045000	3
	8" - 300#	C20L, C25S and C25M	045001	3
	10" - 300#	C25L	045002	3
	12" - 150#	C40LB	240621-15	3
	12" - 300#	C40LA	240620-15	3
	Prior to April, 1982			
	Ammonia and Freon	C16L	045183	3
		C20, C25S and C25M	045000	3
		C25L	045001	3
		C40LB	240621-14	3
		C40LA	045002	3

* Refer to factory for part number.

** Field fabricate gaskets from 1/16" sheet stock Klinger C-5401, or equivalent.

ILLUSTRATIONS AND PARTS LIST

1.2 COMPRESSOR PACKAGE (Continued)

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
26A	oil pump, auxiliary 3/4HP -- Complete (not shown)	All Except C40	045625	1
	pump without motor		240870	1
	motor without pump -- 3/4HP		050484	1
	coupling -- pump to motor		250026--891	1
	spring -- pump relief valve		250033--947	1
	shaft seal -- pump		240317	1
26B	oil pump, full run 5HP -- Complete (not shown)	C40LA	*	1
	pump		249033	1
	motor -- 5HP 3/60/460		040895	1
	coupling -- pump to motor		045836	1
	shaft seal -- pump		046105	1
	coupling guard		224302	1
27	valve, thermostaphon 1 1/2" NPT	All Except C40	250008--915	1
	element, replacement 110 °F	All Except C40	250011--224	1
28	valve, regulating -- water (not shown)	C16L,C20SB & C20LB	044156	1
	2" 2--way	C25SA,C25MA & C25LA	240611	1
	2 1/2" 2--way	C20SA,C20LA & C25SB	044164	1
	2 1/2" 2--way	C25MB & C25LB	044164	1
	element, replacement	C16L,C20SB & C20LB	240154	1
	2" 2--way	C25SA,C25MA & C25LA	240708	1
	2 1/2" 2--way	C20SA,C20LA & C25SB	240173	1
	2 1/2" 2--way	C25MB & C25LB	240173	1
	bulbwell	C16L, C20SB & C20LB	043474	1
	bulbwell	C25SA,C25MA & C25LA	240709	1
	bulbwell	C20SA,C20LA, C25SB	043474	1
29	actuator, electric valve -- complete	C25MB & C25LB		
		See Table 7	See Table 7	1
			*	

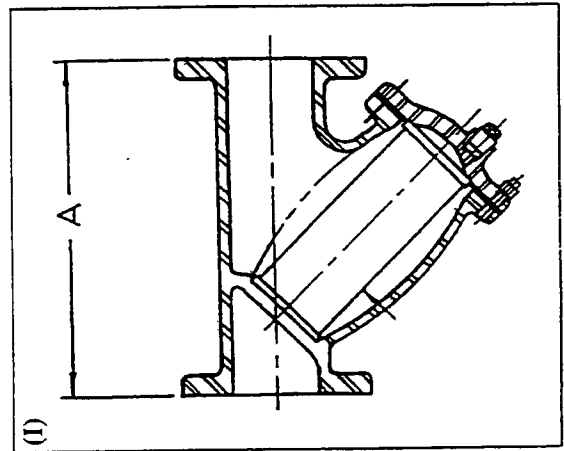
* Refer to factory for part number.

Section 1
ILLUSTRATIONS AND PARTS LIST

TABLE 2 – SUCTION STRAINER REFERENCE (KEY NO. 19)

PACKAGE MODEL NUMBER	STRAINER SIZE (FLANGED)	COMPLETE STRAINER PART NUMBER	SCREEN PART NUMBER	
			CURRENT MODEL (1)	EARLY MODEL (1)
AMMONIA				
C16L	5 inch	044986	240237	240730
C20, C25S, C25M	6 inch	044987	240238	240731
C25L	8 inch	044988	240239	240732
C40LA	10 inch	044989	240240	240733
C40LB	10 inch	045749	240828-10	240825-10
FREON				
C16L	5 inch	044986	240237	240730
C20S	6 inch	044987	240238	240731
C20L, C25S, C25M	8 inch	044988	240239	240732
C25L	10 inch	044989	240240	240733
C40LA	12 inch	*	*	*
C40LB	12 inch	25000-956	240828-11	240825-11

* Refer to factory for part number.



SIZE (A)	STRAINER	
	CURRENT MODEL	EARLY MODEL
5	18 1/4	19 / 19 1/16
6	20 3/16	21 / 21 1/16
8	25 1/8	23
10	29 1/8	28
12	33 3/4	32 1/2 / 32 5/8

ILLUSTRATIONS AND PARTS LIST

TABLE 3 – OIL STRAINER REFERENCE (KEY NO. 10)

STRAINER SIZE (NPT)	COMPLETE STRAINER PART NUMBER	SCREEN ONLY PART NUMBER	GASKET ONLY PART NUMBER	CAP ONLY PART NUMBER
1/4"	250038-904	250038-915	250038-935	250038-925
3/8" Current Prior to Dec. 1990	250038-906 043325	250038-916 044055	250038-936 044060	250038-926 240004
1/2" Current Prior to Dec. 1990	250038-907 043056	250038-917 044056	250038-937 044060	250038-927 240003
3/4"	250038-908	250038-918	250038-938	250038-928
1" Current Prior to Jan. 1991	250038-909 240278	250038-919 240281	250038-939 240280	250038-929 240279
1 1/4" Current Prior to Jan. 1991	250038-910 049471	250038-920 049473	250038-940 049472	250038-930 N/A
1 1/2" Current Prior to Aug. 1990	250038-911 042473	250038-921 044057	250038-941 044061	250038-931 240002
2" Current Prior to Jan. 1991	250038-912 045459	250038-922 045460	250038-942 045461	250038-932 240001
2 1/2" Current Prior to Jan. 1991	250038-913 250033-813	250038-923 250038-126	250038-943 250038-125	250038-933 250038-124
3" Current Prior to Jan. 1991	250038-914 043071	250038-924 044058	250038-944 044062	250038-934 240000

ILLUSTRATIONS AND PARTS LIST

**TABLE 4 -- WATER-COOLED OIL COOLER REFERENCE TABLE (KEY NO. 12)
(5/8" O.D. STEEL DESIGN ONLY)***

PACKAGE MODEL NUMBER	OIL COOLER PART NUMBER	IN/OUT HEAD GASKET	REVERSING HEAD GASKET	INLET/OUTLET HEAD	REVERSING HEAD	SHELL DIA. 6"
C16LA, C16LB & C20SA	045703	410162-001	043913	410164-001	410165-001	6" X 108"
C20SB & C20LB	045703	410162-001	043913	410164-001	410165-001	6" X 108"
C25SB & C25MB	045703	410162-001	043913	410164-001	410165-001	6" X 108"
C20LA & C25LB	045704	410162-002	240156-002	410164-002	410165-002	8" X 96"
C25SA & C25MA	045705	410162-002	240156-002	410164-002	410165-002	8" X 108"
C25LA	045995	410162-002	240156-002	410164-002	410165-002	8" X 32"
C40LB	**	**	**	**	**	
C40LA	**	**	**	**	**	

PRIOR TO OCTOBER, 1979

PACKAGE MODEL NUMBER	OIL COOLER PART NUMBER	IN/OUT HEAD GASKET	REVERSING HEAD GASKET	INLET/OUTLET HEAD	REVERSING HEAD	SHELL
C16LA, C16LB & C20SA	***	046317	046320	240130	240131	6" X 108"
C20SB & C20LB	***	046317	046320	240130	240131	6" X 108"
C25SB & C25MB	***	046317	046320	240130	240131	6" X 108"
C20LA & C25LB	***	046316	240156	240138	240139	8" X 96"
C25SA & C25MA	***	046316	240156	240138	240139	8" X 108"
C25LA	***	046316	240156	240138	240139	8" X 32"
C40LB	**	**	**	**	**	
C40LA	**	**	**	**	**	

* For other than 5/8" O.D. steel tube oil coolers, consult Sullair Corporation for information about oil cooler part numbers and quantities. Part number is shown on nameplate of oil cooler. If unavailable, obtain cooler O.D., length, and coolant in addition to serial number of package.

** Refer to factory for part number.

*** Cooler must be replaced with current part-numbered models.

ILLUSTRATIONS AND PARTS LIST

TABLE 5 – THERMOSIPHON OIL COOLER REFERENCE TABLE (KEY NO. 12)
(5/8" O.D. STEEL TUBE – LOW FIN DESIGN ONLY)*

PACKAGE MODEL NUMBER	OIL COOLER PART NUMBER	INLET HEAD GASKET	OUTLET HEAD GASKET	INLET HEAD PART NUMBER	OUTLET HEAD PART NUMBER	SHELL
C16LA, C25SB & C25MB	407941	046320	046320	**	**	6" X 108"
C25LB	407941	046320	046320	**	**	6" X 108"
C20LA	407942	240156-001	240156-001	**	**	8" X 108"
C20SA	407943	240156-001	240156-001	250009-532	250009-506	8" X 96"
C16LB, C20SB & C20LB	250028-938	046320	046320	**	**	6" X 96"
C25LA	250029-273	240156-001	240156-001	250009-532	250009-506	8" X 144"
C25SA & C25MA	250041-559	240156-001	240156-001	250009-506	250009-532	8" X 120"
C40LB	**	**	**	**	**	
C40LA	**	**	**	**	**	

* For other than 5/8" O.D. steel tube oil coolers, consult Sullair Corporation for information about oil cooler part numbers and quantities. Part number is shown on nameplate of oil cooler. If unavailable, obtain cooler O.D., length, and coolant in addition to serial number of package.

** Refer to factory for part number.

Section 1
ILLUSTRATIONS AND PARTS LIST

TABLE 6 – SUCTION CHECK VALVE REFERENCE TABLE (KEY NO. 23)

PACKAGE MODEL NUMBER	CHECK VALVE PART NUMBER	SPRING PART NUMBER	GASKET PART NUMBER
AMMONIA			
C16L	250016-158	*	045183
C20, C25S, C25M	250016-159	*	045000
C25L	250016-160	*	045001
C40LB	250014-880	*	240621-14
C40LA	250016-161	*	045002
FREON			
C16L	250016-158	*	045183
C20S	250016-159	*	045000
C20I, C25S, C25M	250016-160	*	045001
C25L	250016-161	*	045002
C40LB	*	*	*
C40LA	*	*	*

PRIOR TO APRIL, 1986

PACKAGE MODEL NUMBER	CHECK VALVE PART NUMBER	SPRING PART NUMBER	GASKET PART NUMBER
AMMONIA			
C16L	407383	*	045183
C20, C25S, C25M	409985-002	*	045000
C25L	044984	024062	045001
C40LB	045745	024062	240621-14
C40LA	044985	024062	045002
FREON			
C16L	407383	*	045183
C20S	409985-002	*	045000
C20I, C25S, C25M	044984	024062	045001
C25L	044985	024062	045002
C40LB	045745	024062	240621-14
C40LA	044985	024062	045002

PRIOR TO JANUARY, 1984

PACKAGE MODEL NUMBER	CHECK VALVE PART NUMBER	SPRING PART NUMBER	GASKET PART NUMBER
AMMONIA & FREON			
C16L	044982	042616	045183
C20, C25S	044983	024732	045000

* Refer to factory for part number.

ILLUSTRATIONS AND PARTS LIST**TABLE 7 – ELECTRIC VALVE ACTUATOR REFERENCE TABLE (KEY NO. 29)**

PACKAGE MODEL NO.	VOLUME RATIO	ELECTRIC VALVE ACTUATOR P/N
C16L	26,37 & 48	250009-325
C20S	26,37 & 48	250009-325
C20L	26,37 & 48	250004-049
C25S	26,37 & 48	250009-325
C25M	26,37 & 48	250009-325
C25L	26,37 & 48	250004-049
C40L	26,37 & 50	250004-049

PRIOR TO JANUARY, 1983

PACKAGE MODEL NO.	VOLUME RATIO	ELECTRIC VALVE ACTUATOR P/N	FIFTH GEAR P/N	NUMBER OF TEETH	FIFTH TO FOURTH GEAR SHAFT NO.
C16L	26,37 & 48	012759C	042301-3	26	022978-2
C20S	26,37 & 48	012759B	023071	32	022978-1
C20L	26,37 & 48	012759D	042301-2	20	022978-3
C25S	26,37 & 48	012759C	042301-3	26	022978-2
C25M	26,37 & 48	012759C	042301-3	26	022978-2
C25L	26 & 37	012759E	042301-1	18	022978-4
C25L	48	012759D	042301-2	20	022978-3
C40L	26 & 37	012759-162	042301-1	18	022978-4
C40L	48	012759E	042301-2	20	022978-3

ILLUSTRATIONS AND PARTS LIST

TABLE 8 – DUPLEX BASKET OIL STRAINER REFERENCE (KEY NO.)

BRAND NAME AND RATING	STRAINER SIZE	COMPLETE STRAINER PART NUMBER		BASKET/SCREEN PART NUMBER	BASKET COVER PART NUMBER	COVER GASKET PART NUMBER
		FLANGED	THREADED (NPT)			
400# PRIOR TO 3/89	1 1/2 inch	240894	240637	241575-001	406839-001	250007-477
	2 inch	240895	240859	241575-002	406839-002	250007-478
	2 1/2 inch	240896	240608	241575-002	406839-002	250007-478
	3 inch	*	*	*	*	*
125# AFTER 3/89	4 inch	*	*	*	*	*
	1 1/2 inch	250035-787	*	250031-564	02250043-655	250031-567
	2 inch	250035-789	*	250031-569	250031-570	250031-572
	2 1/2 inch	250035-791	*	250031-569	250041-549	250031-572
	3 inch	250035-793	*	02250043-649	250041-456	02250043-651
	4 inch	*	*			
250# AFTER 3/89	1 1/2 inch	250035-549	250031-535	250031-564	250031-565	250031-567
	2 inch	250035-790	*	250031-569	250031-570	250031-572
	2 1/2 inch	250031-677	250031-536	250031-569	250031-570	250031-572
	3 inch	250035-794	*	02250043-649	250041-456	02250043-651
	4 inch		*			
300# AFTER 3/89	1 1/2 inch	250035-788	*	250031-564	02250043-655	250031-567
	2 inch	02250043-658	*	250041-569	250041-549	250031-572
	2 1/2 inch	250035-792	250031-536	250031-569	250041-549	250031-572
	3 inch	250041-784	*	02250043-649	02250043-650	02250043-651
	4 inch	250035-795	*	250041-458	250041-459	250041-461

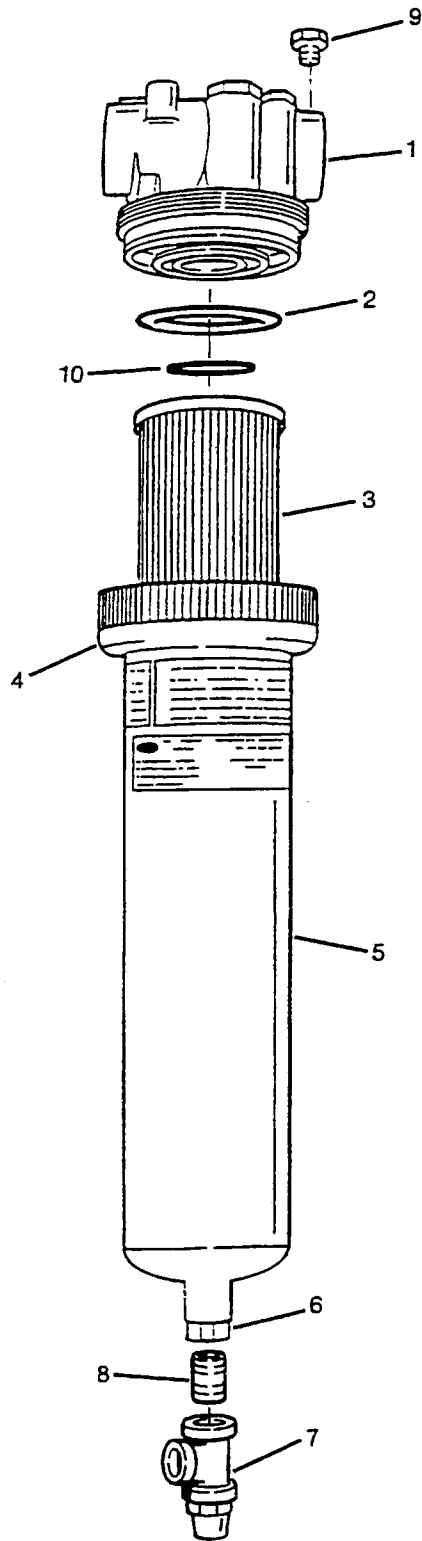
* Refer to factory for part number.

ILLUSTRATIONS AND PARTS LIST

NOTES

Section 1
ILLUSTRATIONS AND PARTS LIST

1.3 SINGLE FILTER ASSEMBLY



Section 1 ILLUSTRATIONS AND PARTS LIST

1.3 SINGLE FILTER ASSEMBLY

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	filter, head (I)	N/A	1
2	o-ring, oil filter canister (I) (II)	826202-153	1
3	element, oil filter (I)	250008-955	1
4	ring, rotolock - oil filter (I)	250033-099	1
5	canister, oil filter (I)	250033-101	1
6	adaptor, oil filter drain $\frac{3}{8}$ " x $\frac{1}{4}$ "	250009-865	1
7	valve, oil filter drain $\frac{1}{4}$ "	044996	1
8	nipple, pipe - oil filter $\frac{1}{4}$ "	822204-000	1
9	adaptor, oil filter pressure port	250009-864	1
10	o-ring, oil filter element (I) (II)	826202-153	1
11	assembly, filter (complete)	250008-954	1

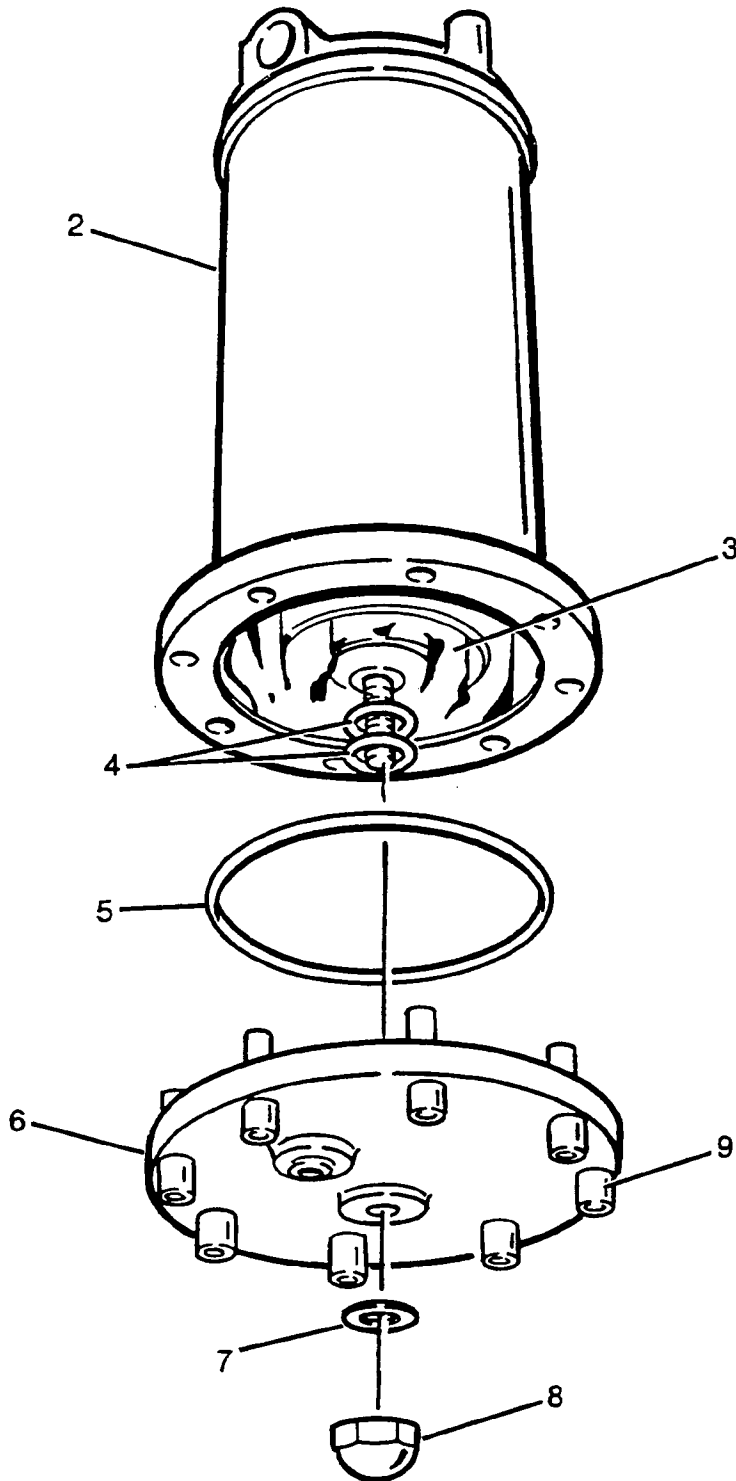
(I) Included within the complete filter assembly. (Key No. 11)

(II) Included with oil filter element (Key No. 3).

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.4 SINGLE FILTER ASSEMBLY (Prior to December, 1984)



ILLUSTRATIONS AND PARTS LIST**1.4 SINGLE FILTER ASSEMBLY (Prior to December, 1984)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	filter assembly (complete) (Key 2-9)	042463	1
2	housing, oil filter	N/A	1
3	cartridge, filter element	042712	1
4	washer, felt (I)	N/A	2
5	o-ring, oil filter (I)	826202-259	1
6	cover, oil filter	N/A	1
7	washer, fiber -- oil filter nut (I)	N/A	1
8	nut, oil filter cover -- cap	N/A	1
9	screw, hex socket head $\frac{5}{16}$ " x $1\frac{1}{4}$ " (II)	828305-125	8

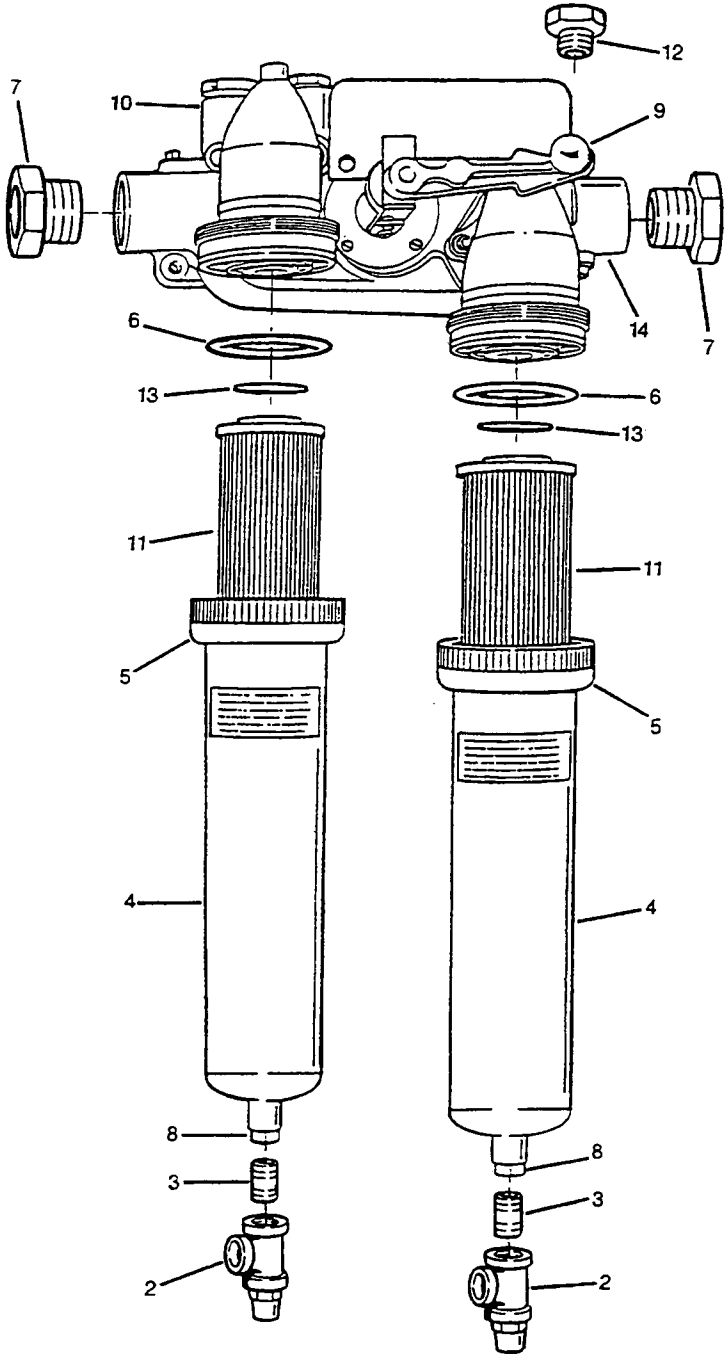
(I) Included within the filter element cartridge (Key No. 3).

(II) Standard hardware item, may be purchased locally.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.5 DUPLEX FILTER ASSEMBLY



ILLUSTRATIONS AND PARTS LIST**1.5 DUPLEX FILTER ASSEMBLY**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	duplex filter assembly (complete)	250008-953	1
2	valve, oil filter drain ¼"	044996	2
3	nipple, pipe oil filter ¼"	822204-000	2
4	canister, oil filter (I)	250033-101	1
5	ring, rotolock - oil filter (I)	250033-099	1
6	o-ring, oil filter canister (I) (II)	826202-153	2
7	adaptor, oil filter	250009-872	2
8	adaptor, oil filter drain ⅜" x ¼"	250009-865	1
9	handle, duplex filter valve (I)	250033-098	1
10	valve, commutator (I)	250033-097	1
11	element, oil filter (I)	250008-955	2
12	adaptor, oil filter pressure	250009-864	1
13	o-ring, oil filter element (I) (II)	826202-153	2
14	valve, oil filter transfer (I)	-----	1

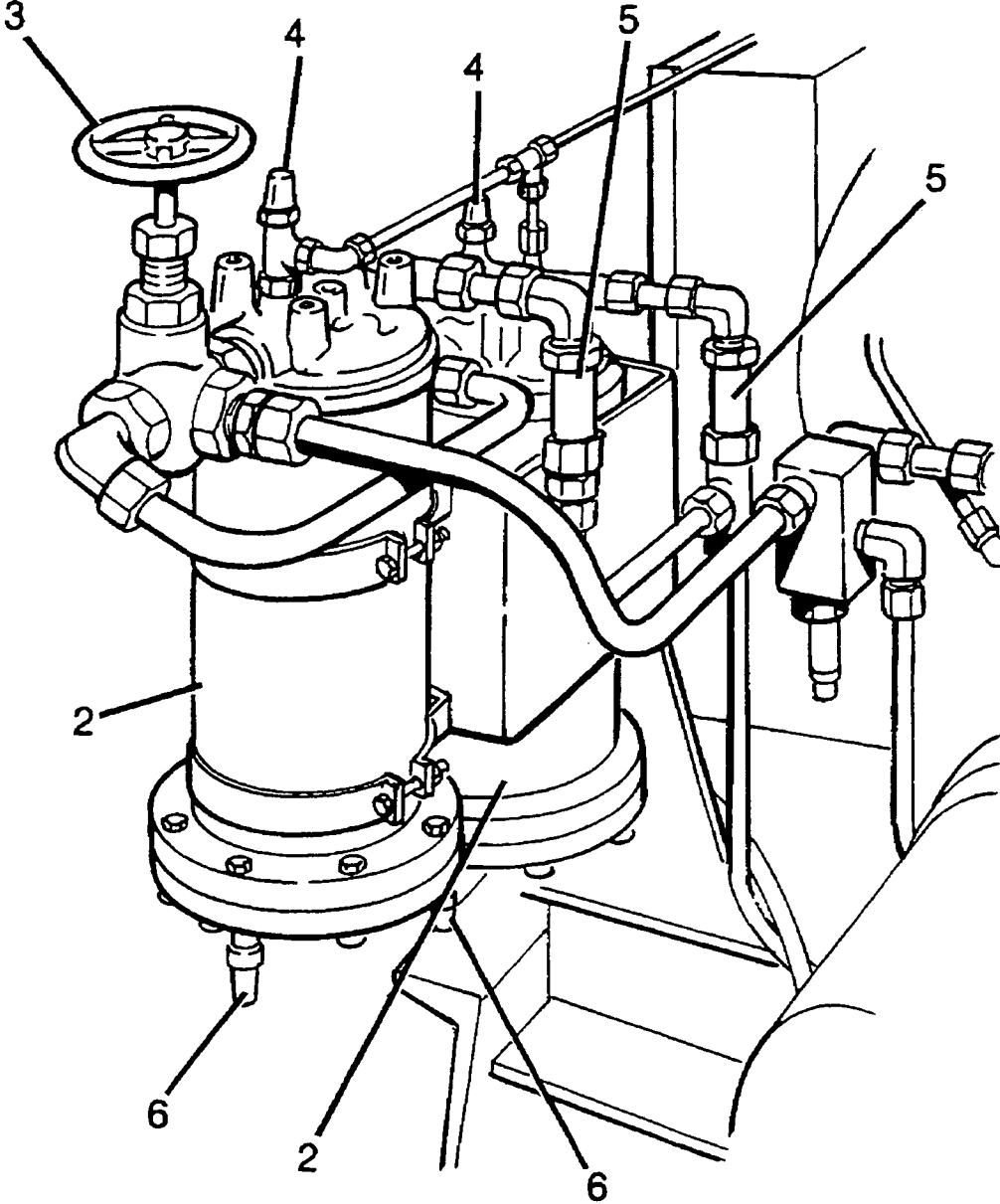
(I) Included within the complete filter assembly (Key No. 1).

(II) Included with filter element (Key No. 11).

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.6 DUAL FILTER ASSEMBLY (Prior to December, 1984)



ILLUSTRATIONS AND PARTS LIST**1.6 DUAL FILTER ASSEMBLY (Prior to December, 1984)**

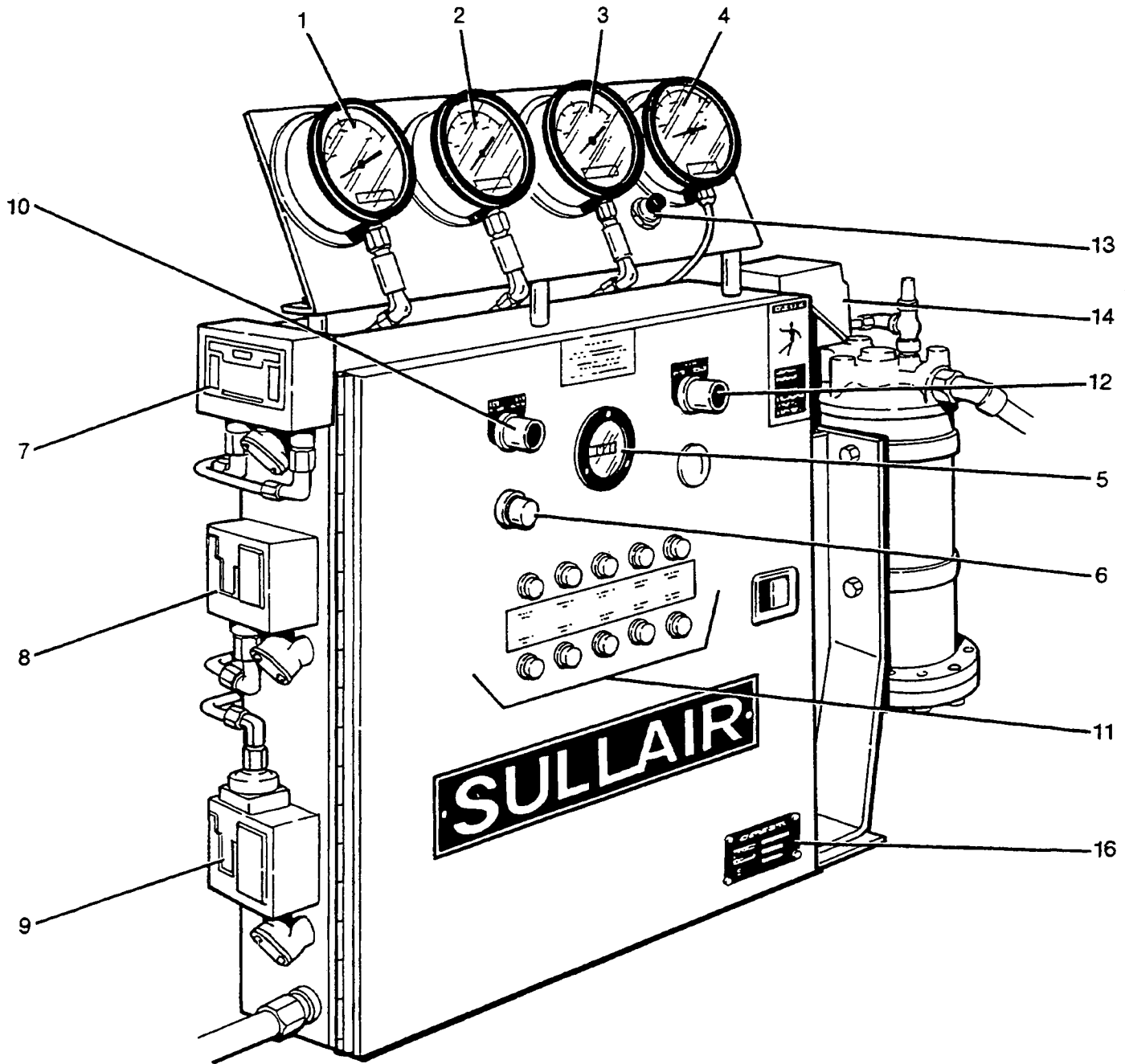
<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	dual filter assembly (complete)	N/A	1
2	filter, oil (Key 2-9, Section 1.3)	042463	2
3	valve, 3-way	043436	1
4	valve, angle seal cap 1/4"	044996	2
5	valve, check 3/4"	042615	2
6	valve, angle seal cap 3/8"	044997	2

See Section 1.4 for internal parts.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.7 ELECTRICAL CONTROLS (From June, 1978 to Current)



Section 1

ILLUSTRATIONS AND PARTS LIST

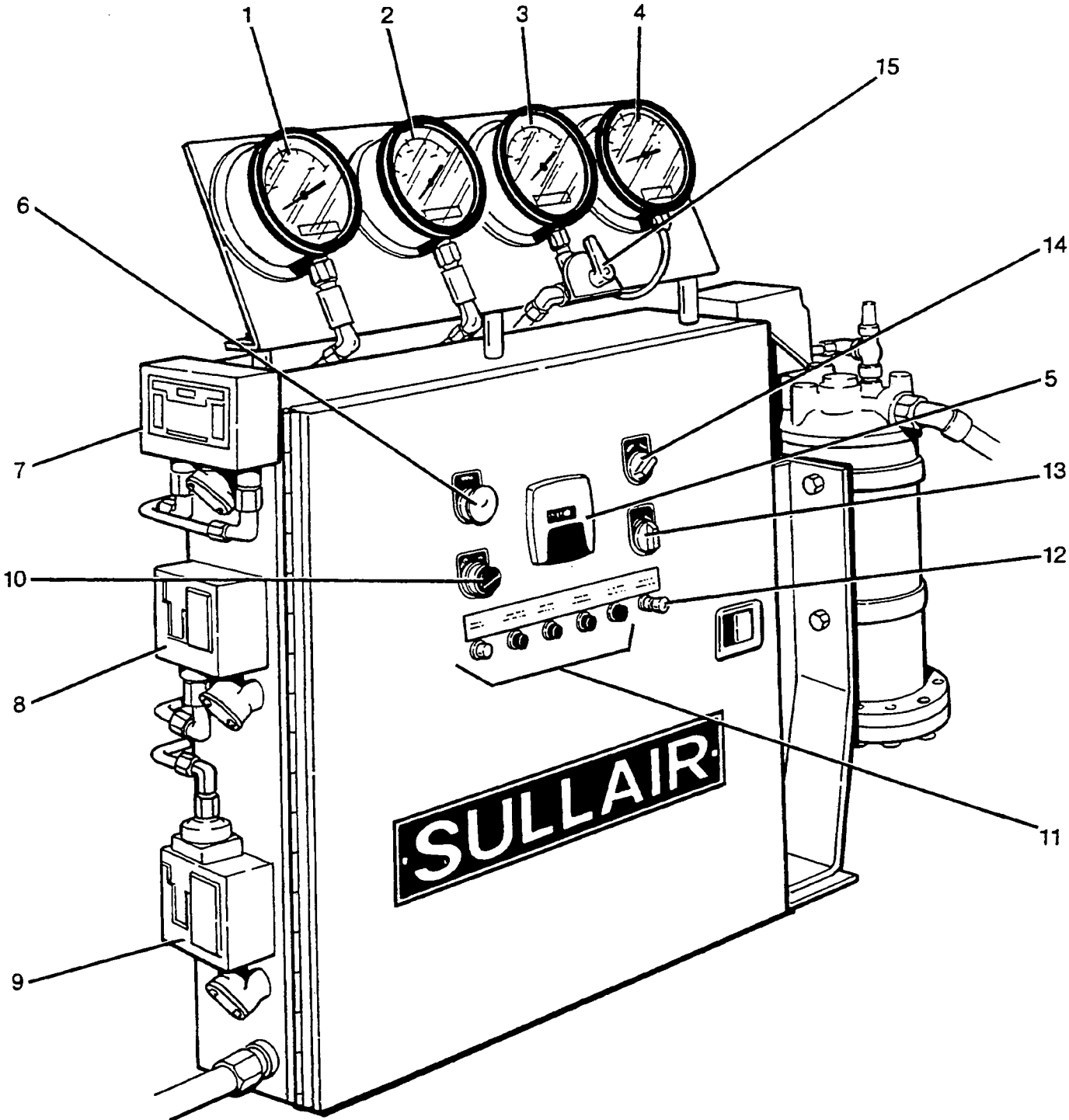
1.7 ELECTRICAL CONTROLS (From June, 1978 to Current)

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	gauge, suction pressure – high stage and booster		
	• 30" vacuum 150 PSI (1034kPa) – NH3 • 30" vacuum 150 PSI (1034kPa) – R22	043556 240032	1 1
2	gauge, discharge pressure – high stage		
	• 30" vacuum 300 PSI (2068kPa) – NH3 • 30" vacuum 300 PSI (2068kPa) – R22	042469 240031	1 1
3	gauge, discharge pressure – booster		
	• 30" vacuum 150 PSI (1034kPa) – NH3 • 30" vacuum 150 PSI (1034kPa) – R22	043556 240032	1 1
4	gauge, oil pressure – high stage		
	• 30" vacuum 300 PSI (2068kPa) – NH3 • 30" vacuum 300 PSI (2068kPa) – R22	042469 240031	1 1
5	gauge, oil pressure – booster		
	• 30" vacuum 150 PSI (1034kPa) – NH3 • 30" vacuum 150 PSI (1034kPa) – R22	043556 240032	1 1
4	gauge, oil temperature – all compressors	042471	1
5	hourmeter, – all machines	02250043–008	1
6	pushbutton, STOP	045494	1
7	switch, HDP and LSP protective manual reset (high discharge, low suction pressure)	042465	1
7A	switch, HDP (not shown) (for boosters only)	408788	1
7B	switch, LSP (not shown) (for boosters only)	047138	1
8	switch, HSP (L.P.) automatic machine START/STOP	042888	1
8A	switch, LIP (not shown) (for boosters only)	042888	1
9	switch, LOP protective (low oil pressure)	042464	1
10	switch, selector "AUTO/MAN" push to START and RESET	047097	1
11	light, pilot – lamp holder	043383	10
	• light, pilot – lamp	043386	10
	• light, pilot – lens (red)	043384	5
	• light, pilot – lens (green)	043385	1
	• light, pilot – lens (amber)	047016	4
12	switch, selector "load/auto/unload"	047088	1
13	pushbutton, valve oil pressure gauge	241239	1
14	switch, P ₁ /P ₂ auto capacity control	047607	1
15	switch, SOP start–up oil pressure w/aux. oil pump option (not shown)	046923	1
16	nameplate	–	–

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.8 ELECTRICAL CONTROLS (Prior to June, 1978)



ILLUSTRATIONS AND PARTS LIST

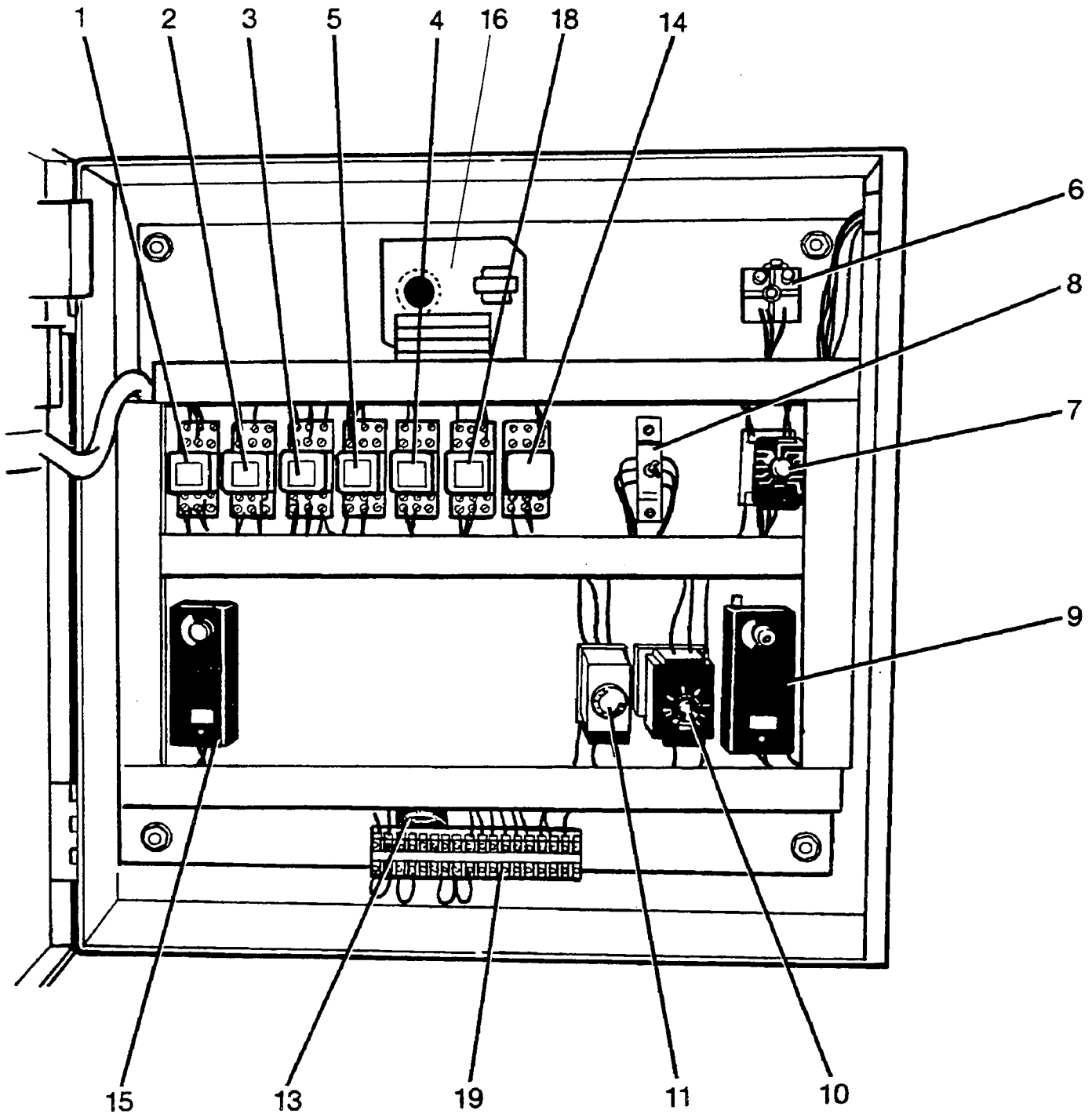
1.8 ELECTRICAL CONTROLS (Prior to June, 1978)

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	gauge, intermediate pressure (all high stage) and evaporating pressure gauge (all booster) – NH3	043556	1
	• 30" vacuum 150 PSI (1034kpa) – R22	240032	1
2	gauge, condensing pressure (all high stage)		
	• 30" vacuum 300 PSI (1034kPa) – NH3	042469	1
	• 30" vacuum 300 PSI (1034kPa) – R22	240031	1
	gauge, intermediate pressure (all booster)		
	• 30" vacuum – 150 PSI 1034kPa) – NH3	043556	1
	• 30" vacuum 300 PSI (1034kPa) – R22	240032	1
3	gauge, oil pressure – high stage		
	• 30" vacuum 300 PSI (2068kPa) – NH3	042469	1
	• 30" vacuum 300 PSI (2068kPa) – R22	240031	1
	gauge, oil pressure – booster		
	• 30" vacuum 150 PSI (1034kPa) – NH3	043556	1
	• 30" vacuum 150 PSI (1034kPa) – R22	240032	1
4	gauge, oil temperature – all compressors	042471	1
5	hourmeter, – all machines	obsolete	1
	• replaced by: kit, replacement – hourmeter	001101	1
6	pushbutton, STOP	045494	1
7	switch, HDP and LSP protective manual reset	042465	1
	• automatic reset (not shown)	043717	1
7A	switch, HDP (Booster) (not shown)	408788	1
7B	switch, LSP (Booster) (not shown)	047138	1
8	switch, HSP (L.P.) START/STOP – automatic machine	042888	1
8A	switch, LIP (Booster) (not shown)	042888	1
9	switch, LOP protective	042464	1
10	switch, selector "hand/auto"		
	• replaced by: kit	250028–661	1
11	light, pilot – lamp holder only	043383	5
	• light, pilot – lamp	043386	5
	• light, pilot – lens (red)	043384	5
	• light, pilot – lens (green)	043385	1
12	pushbutton, RESET	043382	1
13	switch, selector "load/unload"	obsolete	
14	switch, selector "auto/manual"	obsolete	
	Items 13 and 14 replaced by:		
	• switch, selector	047088	1
	• block, contact	047095	1
	• block, contact	047096	1
15	gauge, oil valve pressure – 3–way	obsolete	
	• replaced by: kit, replacement – push valve	001882	1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.9 ELECTRICAL PANEL WITH A.C. ELECTRICAL VALVE ACTUATOR – A.C. (Inside) (After June, 1985)



ILLUSTRATIONS AND PARTS LIST**1.9 ELECTRICAL PANEL WITH A.C. ELECTRICAL VALVE ACTUATOR – A.C. (Inside) (After June, 1985)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	relay, protective circuit control – 1CR	045496	1
2	relay, low oil pressure delay control – 1TRA	045496	1
3	relay, motor start control – 4CR	045496	1
4	relay, unload – 10CR	045496	1
5	relay, low oil pressure – 9CR	045496	1
6	relay, delay timing – 1TR • with resistor ¼" watt	046176 047090	1 1
7	relay, capacity control timing – 3TR	047087	1
8	switch, test	042531	1
9	switch, protective HOT	045417	1
10	timer, anti-cycle (ART)	250023–402	1
11	relay, load limiting timing – 4TR (I)	250023–403	1
12	terminal block and track	041493	14
13	resistor, 12W 2000 Ohm	044846	1
14	relay, maximum position latching – 12CRL	047734	1
15	switch, high discharge temperature protective	045417	1
16	control, liquid solenoid (LDT)	046546	1
17	thermistor, probe for liquid solenoid control (not shown)	046521	1
18	relay, minimum position latching – 11CRL	047734	1

NOTE

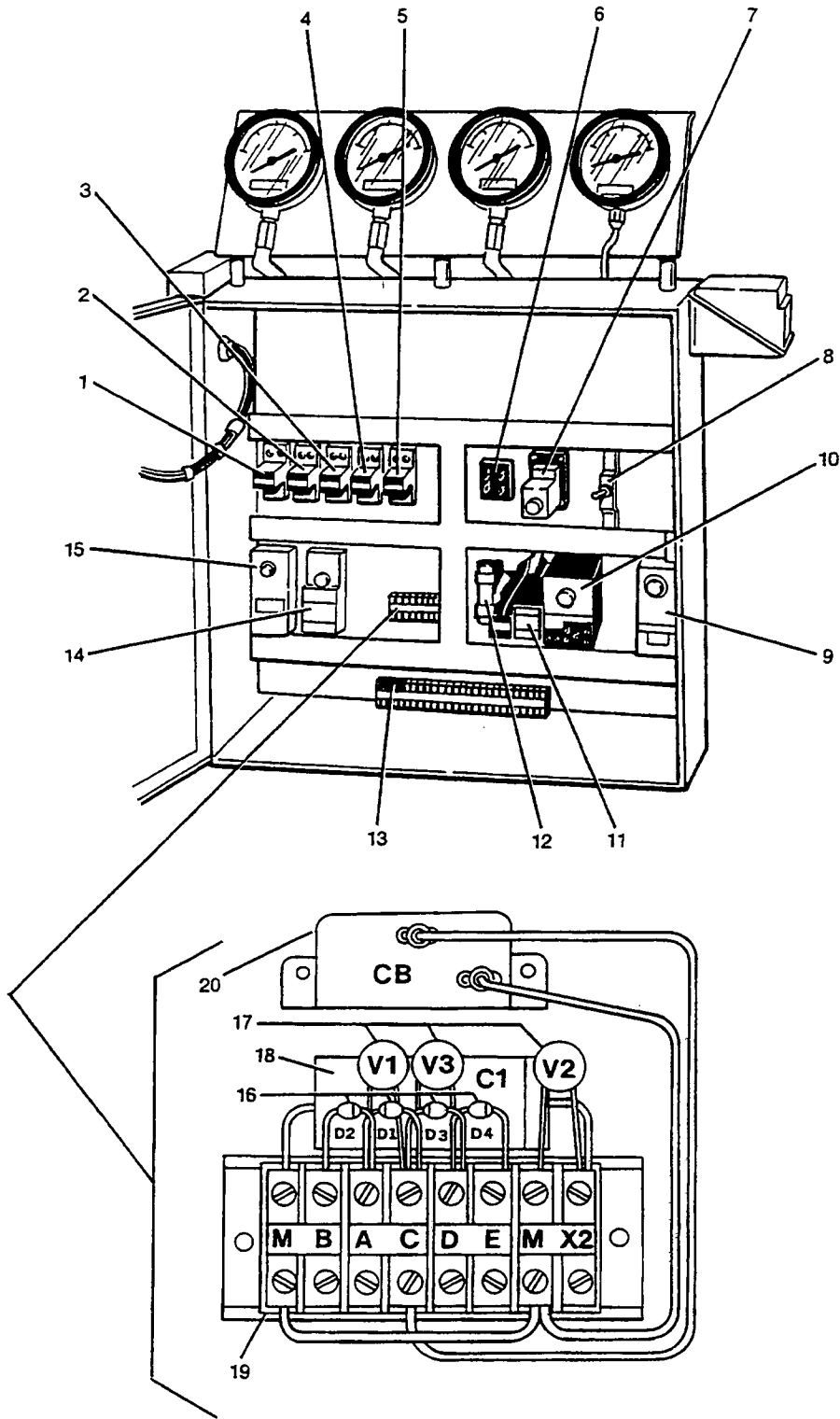
Special ordered compressors may cause variations in components, locations and quantities.

(I) Replaced by kit no. 02250044–491 timer and relay.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.10 ELECTRICAL CONTROLS (From June, 1978 to January, 1985)



ILLUSTRATIONS AND PARTS LIST**1.10 ELECTRICAL CONTROLS (From June, 1978 to January, 1985) (I)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	relay, protective circuit control – 1CR	045496	1
2	relay, low oil pressure delay control – 1TRA	045496	1
3	relay, motor start control – 4CR	045496	1
4	relay, low oil pressure – 9CR	045496	1
5	relay, unloading control – 10CR liquid injection (I)	045496	1
6	relay, delay timing – 1TR • with resistor ¼" watt	046176 047090	1 1
7	relay, capacity control timing – 3TR	047087	1
8	switch, test	042531	1
9	switch, protective HOT	045417	1
10	timer, anti-cycle (ART)	046177	1
11	relay, load limiting timing – 4TR • head, timing – 4TR	045437 046362	1 1
12	fuse, control circuit	046151	1
13	resistor, 12W 2000 Ohm	044846	1
14	switch, low discharge temperature (liquid injection) (I) • probe, (liquid injection (not shown)	046546 046521	1 1
15	switch, protective high discharge temperature	045417	1
16	rectifier, diode (water cooled) • rectifier, diode (liquid injection)	046846 046846	4 2
17	suppressor, varistor arc	046847	3
18	capacitor	047086	1
19	terminal block and track	041493	14
20	breaker, circuit	045042	1

(I) For liquid refrigerant cooling of oil design, see Section 1.20.

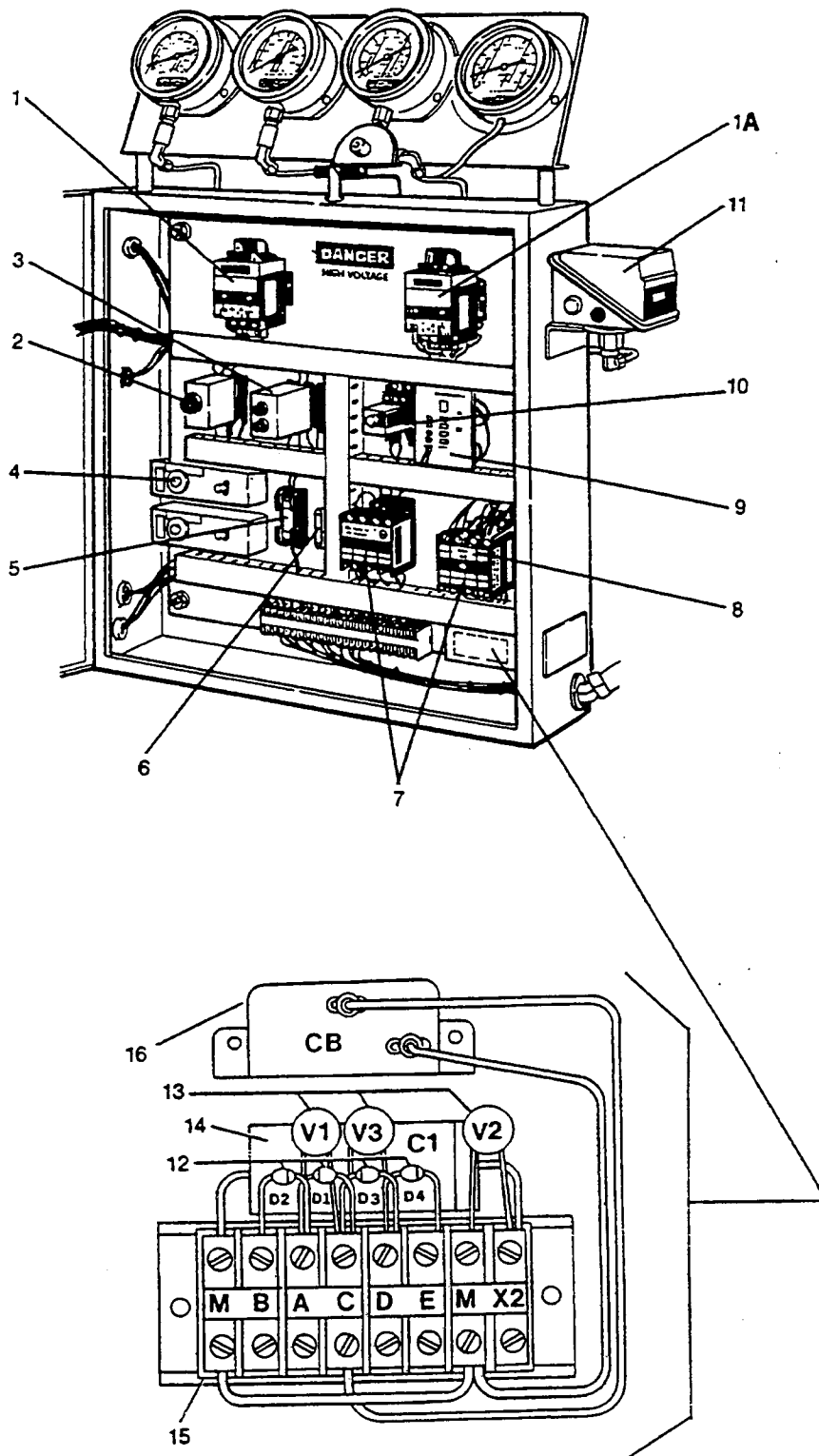
NOTE

Special ordered compressors may cause variations in components, locations and quantities.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.11 ELECTRICAL CONTROLS (Prior to June, 1978)



ILLUSTRATIONS AND PARTS LIST

1.11 ELECTRICAL CONTROLS (Prior to June, 1978) (I)

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	relay, timing anti-recycle timer 0 to 30 minutes – Agastat • relay, timing anti-recycle timer 0 to 30 minutes – Eagle	040836 046177	1 1
1a	relay, timing 4TR 0 to 10 minutes – Old style • replaced by: relay, timing • replaced by: head, timing	obsolete 045437 046362	1 1 1
2	relay, timing 1TR 0 to 10 seconds • relay, timing (socket only) • relay, timing (P/N 047090 resistor required)	043388 046176	1 1
3	relay, timing 3TR dual range • relay, timing (socket only)	047087 043388	1 1
4	switch, temperature – high discharge temperature, protection, high oil temperature, “manual reset” • “auto reset” (not shown)	045417 042589	2 2
5	fuse, control circuit	046151	1
6	resistor, 12 watt 2200 ohm	044846	1
7	relay, control 4-pole (used only on some compressors built before July, 1977) • contacts, normally open/normally closed reversible	042090 042091	1 4
8	deck, top extra 4-pole for control relay	042640	1
9	light, indicator pilot (used on some compressors built before July, 1977)	045503	4
10	relay, control (9CR, 1CR, 4CR, 1TRA) • relay, control (socket only)	045496 045497	4 4
11	switch, pressure automatic capacity control 20” vacuum to 50 PSI (345kPa) 0 to 100 PSIG (689kPa) (all high stage) • microswitch, for P/Ns 043939 and 047607 above diaphragm, for P/Ns 043939 and 043361 above	047607 043939 046178 049325	1 1 1 1
12	rectifier	046846	4
13	varistor	046847	3
14	capacitor	047086	1
15	terminal block and track	041493	4
16	circuit breaker	045042	1

(I) For liquid refrigerant cooling of oil design, see Section 1.20.

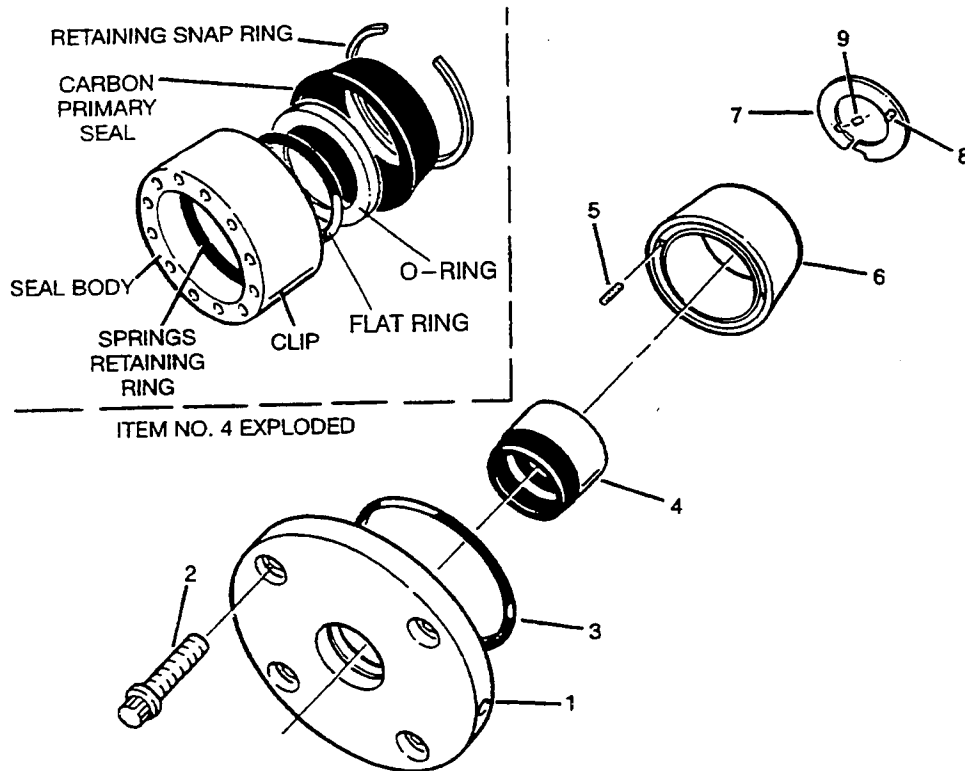
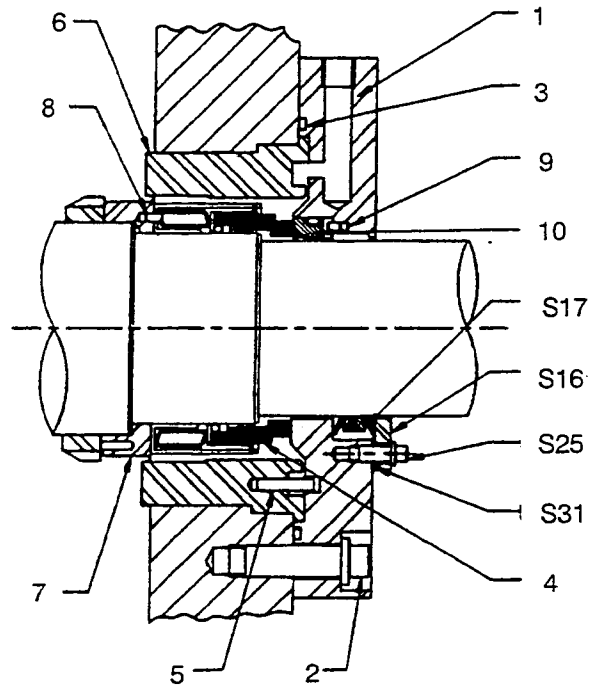
NOTE

Special ordered compressors may cause variations in components, locations and quantities.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.12 SHAFT SEAL ASSEMBLY – TYPE 8



ILLUSTRATIONS AND PARTS LIST

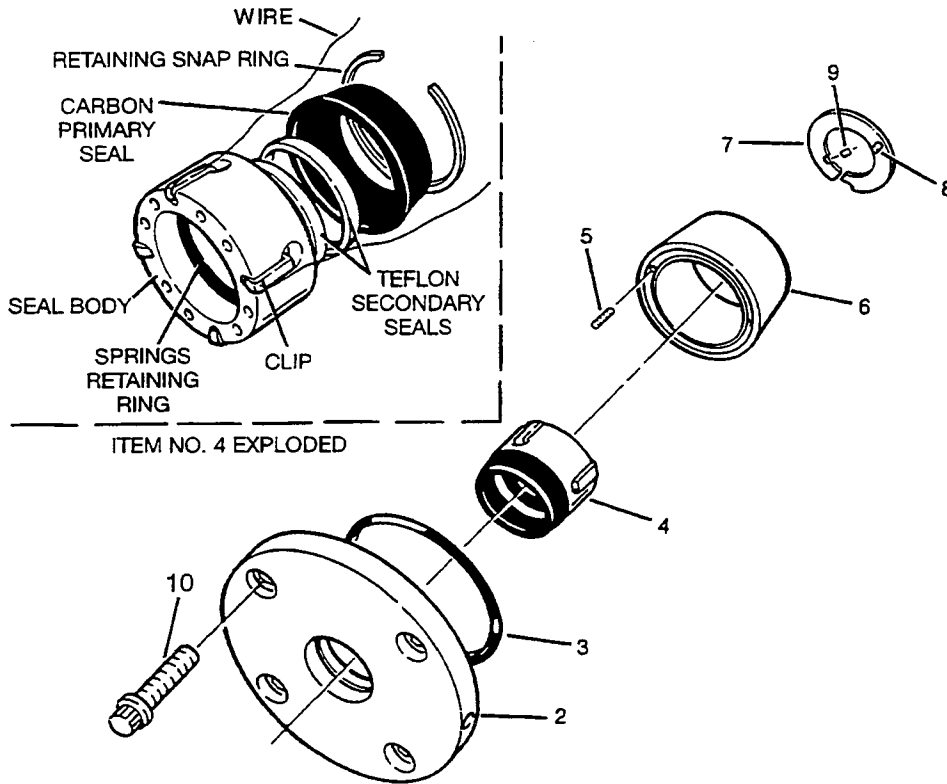
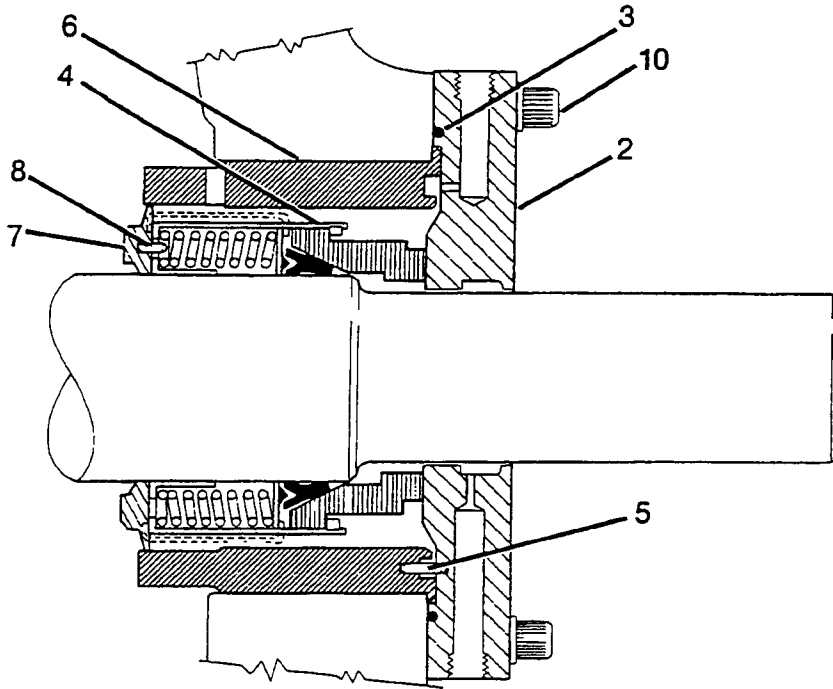
1.12 SHAFT SEAL ASSEMBLY – TYPE 8

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	cover, shaft seal	027900	1
	•cover, shaft seal	022912	1
2	capscrew, ferry head $\frac{1}{2}$ "–13 x $1\frac{3}{4}$ "	828408–175	8
3	o–ring, neoprene $6\frac{1}{2}$ " x $\frac{1}{8}$ "	826202–260	1
	•o–ring, viton $6\frac{1}{2}$ " x $\frac{1}{8}$ "	826502–260	1
4	seal, 3.00 8B1 n/seat neoprene	250026–936	1
	•seal, 3.00 8B1 n/sesat viton	250026–937	1
5	pin, roll unfinished $\frac{3}{16}$ " x $\frac{7}{8}$ "	827403–088	1
6	housing, seal	022935	1
7	disc, oil blkg–seal	250014–083	1
8	pin, roll unfinished $\frac{1}{8}$ " x $\frac{3}{8}$ "	827402–038	1
9	pin, roll unfinished $\frac{1}{8}$ " x $\frac{1}{2}$ "	827402–050	1
10	seal, seat 3.00 tungsten	042376–001	1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.13 SHAFT SEAL ASSEMBLY – TYPE 9



ILLUSTRATIONS AND PARTS LIST**1.13 SHAFT SEAL ASSEMBLY – TYPE 9**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	repair kit, shaft seal (includes Items 2,3,4,5, and 8) • shaft O.D. seal – 2" (C16 package) • shaft O.D. seal – 2½" (C20 package) • shaft O.D. seal – 3" (C25 package)	001807A 001808A 001809A	1 1 1
2	plate, shaft seal cover (I)		
3	o-ring (I)		
4	seal, shaft (I)		
5	pin, roll 3/16" (I)		
6	housing, seal • shaft O.D. seal – 2" (C16 package) • shaft O.D. seal – 2½" (C20 package) • shaft O.D. seal – 3" (C25 package)	023031 024030 022935	1 1 1
7	ring, drive • shaft O.D. seal – 2" (C16 package) • shaft O.D. seal – 2½" (C20 package) • shaft O.D. seal – 3" (C25 package)	023037 024029 022933	1 1 1
8	pin, roll 1/8" (I)		
9	pin, drive • shaft O.D. seal – 2" (C16 package) • shaft O.D. seal – 2½" (C20 package) • shaft O.D. seal – 3" (C25 package)	023041 024019 022936	1 1 1
10	capscrew, ferry head 1/2"–13 (II) • shaft O.D. seal – 2" (C16 package) • shaft O.D. seal – 2½" (C20 package) • shaft O.D. seal – 3" (C25 package)	828408–125 828408–150 828408–150	4 4 4

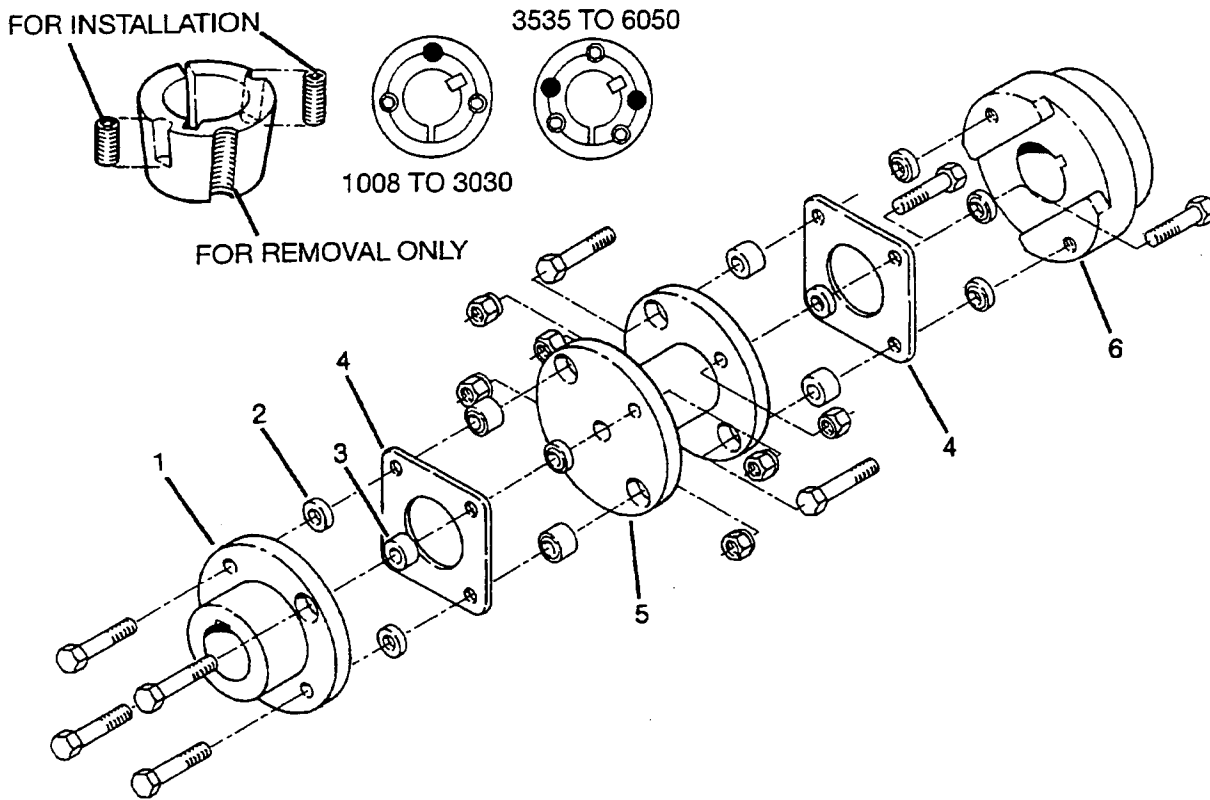
(I) Key numbers 2, 3, 4, 5 and 8 are only sold in repair kit (Key No. 1).

(II) Standard hardware item, may be purchased locally.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.14 COUPLING ASSEMBLY – STYLE 1



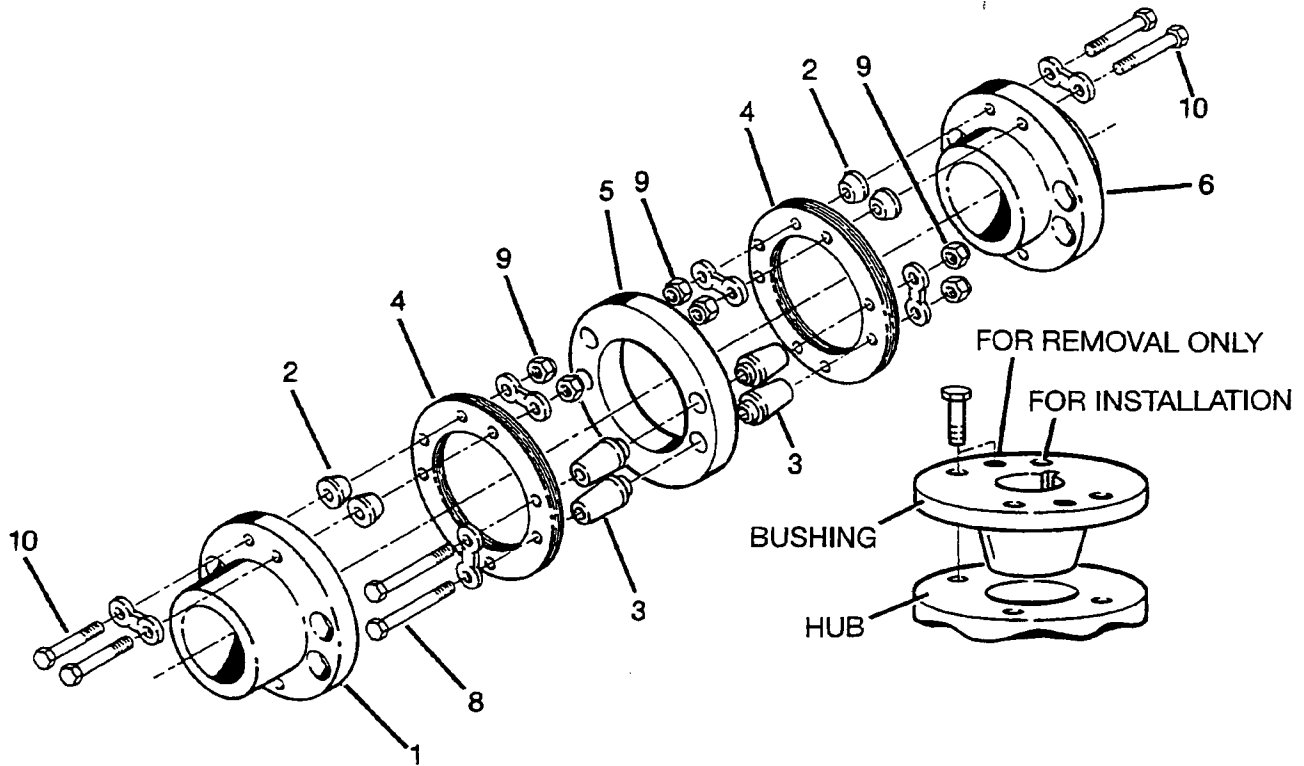
HUB STYLES WILL DIFFER FROM ONE MODEL SERIES TO THE NEXT.
 C16 SERIES HUBS ARE AS ITEM NO. 1 WITH Q.D. TAPERED BUSHINGS.
 C20 SERIES HUBS ARE AS ITEM NO. 1 WITH Q.D. TAPERED BUSHINGS.
 C25 SERIES HUBS ARE AS ITEMS NO. 6. WITH TAPERLOCK BUSHINGS.

QD BUSHING TIGHTENING TORQUES

BUSHING NO.	SCREWS	TORQUE	
		LB.-IN.	Nm
SD	1/4 x 1-7/8	108	12
SK	5/16 x 2	180	20
SF	3/8 x 2	360	41
E	1/2 x 2-3/4	720	81
F	7/16 x 3-5/8	900	102

ILLUSTRATIONS AND PARTS LIST

1.14 COUPLING ASSEMBLY (Cont'd.) – STYLE 2



TAPERLOCK BUSHING TIGHTENING TORQUES

BUSHING NO.	SCREWS	TORQUE	
		lb.-in.	Nm
1008, 1108	¼" Set Screws	55	6
1210, 1215, 1310	⅜" Set Screws	175	20
1610, 1615	⅜" Set Screws	175	20
2012	⅞" Set Screws	280	30
2517, 2525	½" Set Screws	438	50
3020, 3030	⅝" Set Screws	800	90
3535	½" Cap Screws	1000	115

ILLUSTRATIONS AND PARTS LIST

1.14

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	STYLE 1 QD TYPE PART NO.	QTY.	STYLE 1 TAPERLOCK TYPE PART NO.	QTY.	STYLE 2 TAPERLOCK TYPE PART NO.	QTY.
1	Hub, Coupling	C16&C20	250001-537	1	--	--	--	--
		C25	--	--	240100	1	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240105	1	242330	1
		C20	--	--	240099	1	242332	1
		C25	--	--	240100	1	242333	1
2	Washer, Element - Thin	C16&C20	250001-539 **	8	--	--	--	--
		C25	--	--	**	12	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240095 **	10	242335 **	16
		C20	--	--	240096 **	8	242329 **	12
		C25	--	--	240097 **	12	242331 **	12
3	Washer, Element - Thick	C16&C20	250001-540 **	8	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240092 **	6	--	--
		C20	--	--	240093 **	8	--	--
		C25	--	--	240094 **	4	--	--
4	Pack, Flex Element ***	C16&C20	250001-543 **	2	--	--	--	--
		C25	--	--	**	2	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240089 **	2	242326 **	2
		C20	--	--	240090 **	2	242327 **	2
		C25	--	--	240091 **	2	242328 **	2

* For information on C40 coupling, contact Sullair Corporation in Michigan City, Indiana.
 ** Not available as an individual part. Included in flexible element replacement kit.
 *** For replacing flexible elements (Key Number 4), two (2) elements are required.
 Each pack contains thin flexible blades, all of which must be assembled as a pack.

ILLUSTRATIONS AND PARTS LIST

1.14

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	STYLE 1 QD TYPE PART NO.	QTY.	STYLE 1 TAPERLOCK TYPE PART NO.	QTY.	STYLE 2 TAPERLOCK TYPE PART NO.	QTY.
5	Spacer	C16&C20	250001-542	1	--	--	--	--
		C25	--	--	240103	1	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240101	1	242334	1
		C20	--	--	240102	1	242337	1
		C25	--	--	240103	1	242336	1
6	Hub, Coupling	C16&C20	250001-537	1	--	--	--	--
		C25	--	--	240100	1	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240098	1	242338	1
		C20	--	--	240099	1	242332	1
		C25	--	--	240100	1	242339	1
7	Bolt, (flex element to spacer)	C16&C20	--	--	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	**	2	--	--
		C20	--	--	**	4	--	--
		C25	--	--	**	4	--	--
8	Bolt, (flex element to spacer)	C16&C20	250001-538	4	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	**	2	**	8
		C20	--	--	**	4	**	8
		C25	--	--	**	4	**	8

* For information on C40 coupling, contact Sullair Corporation in Michigan City, Indiana.

** Not available as an individual part. Included in flexible element replacement kit.

ILLUSTRATIONS AND PARTS LIST

1.14

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	STYLE 1 QD TYPE PART NO.	QTY.	STYLE 1 TAPERLOCK TYPE PART NO.	QTY.	STYLE 2 TAPERLOCK TYPE PART NO.	QTY.
9	Nut, (flex element to spacer)	C16&C20	250001-541	4	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	**	2	**	8
		C20	--	--	**	4	**	8
		C25	--	--	**	4	**	8
10	Bolt, (hub to flex element)	C16&C20	250001-538	4	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	**	4	**	8
		C20	--	--	**	4	**	4
		C25	--	--	**	4	**	4
11	Nut, (hub to flex element)	C16&C20	250001-541	4	--	--	--	--
		C25	--	--	**	4	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	**	4	**	8
		C20	--	--	**	4	**	4
		C25	--	--	**	4	**	4
12	Coupling, Complete (includes Key Numbers 1 through 11)	C16&C20	408999	1	--	--	--	--
		C25	--	--	02250052-674	1	02250052-675	1
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	240040	1	240040	1
		C20	--	--	240041	1	240041	1
		C25	--	--	046001	1	046001	1

* For information on C40 coupling, contact Sullair Corporation in Michigan City, Indiana.
 ** Not available as an individual part. Included in flexible element replacement kit.

ILLUSTRATIONS AND PARTS LIST

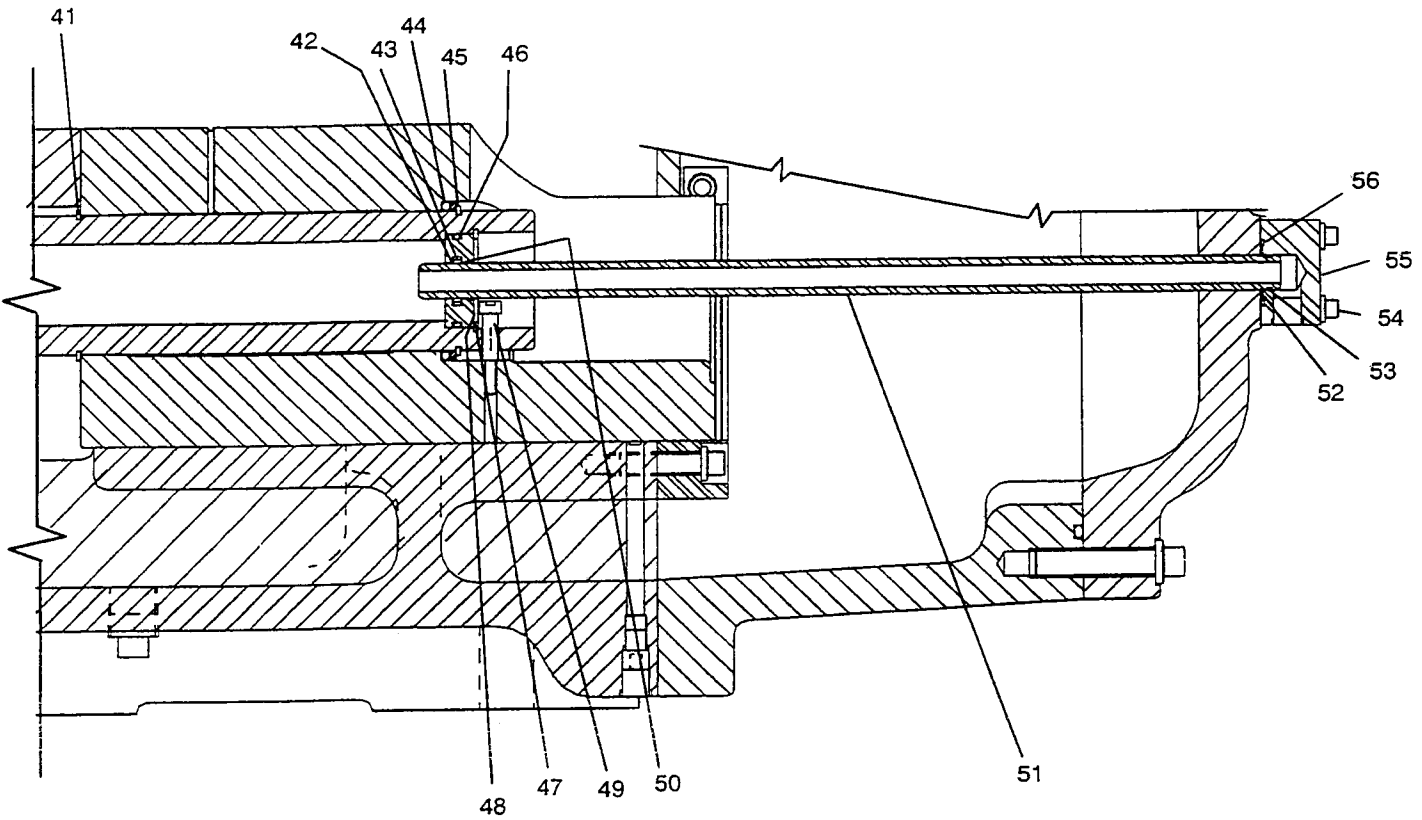
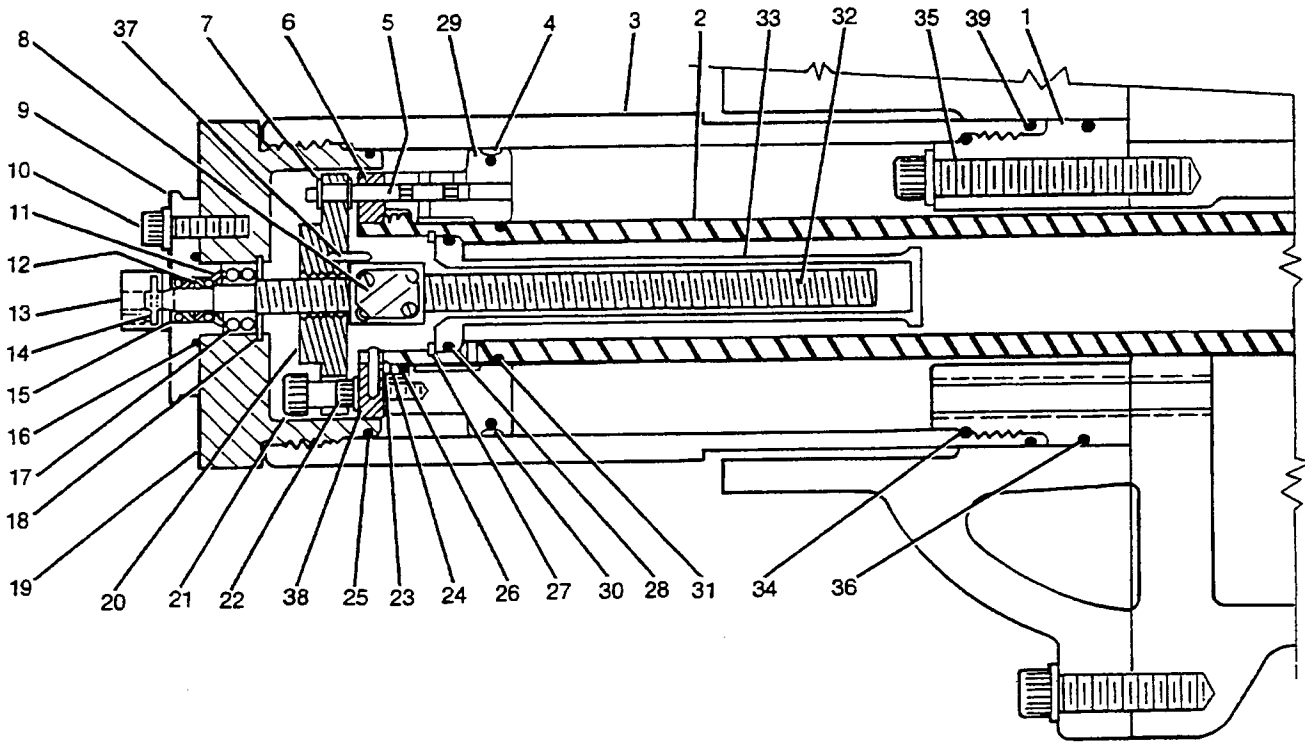
1.14

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	STYLE 1 QD TYPE PART NO.	QTY.	STYLE 1 TAPERLOCK TYPE PART NO.	QTY.	STYLE 2 TAPERLOCK TYPE PART NO.	QTY.
13	Kit, Replacement Flex Element (includes Key Numbers 2,3,4,7,8,9,10&11)	C16&C20	250040-191	1	--	--	--	--
		C25	--	--	****	1	--	--
		C40	--	--	*	--	--	--
	Prior to November, 1981	C16	--	--	001906	1	001903	1
		C20	--	--	001907	1	001904	1
		C25	--	--	001905	1	001902	1

* For information on C40 coupling, contact Sullair Corporation in Michigan City, Indiana.
 **** Refer to factory for part number.

Section 1 ILLUSTRATIONS AND PARTS LIST

1.15 CAPACITY CONTROL SHAFT SEALS AND VALVE ASSEMBLY



ILLUSTRATIONS AND PARTS LIST

1.15 CAPACITY CONTROL SHAFT SEAL AND VALVE ASSEMBLY

KEY NO.	ITEM DESCRIPTION	C16 PKG	QTY.	C20 PKG	QTY.	C25 PKG	QTY.
1	base, cylinder	022747	1	024018	1	022920	1
2	rod, piston -- C16L	022752	1				
	rod, piston -- C20S			023992	1		
	rod, piston -- C20L			024020	1		
	rod, piston -- C25S					022944	1
	rod, piston -- C25M					233220	1
	rod, piston -- C25L					022922	1
3	cylinder, valve	022746	1	024017	1	022919	1
4	ring, slide	042360	1	043181	1	042378	1
5	spool, valve	022751	1	022926	1	022926	1
6	retainer, piston	022755	1	024024	1	022928	1
7	ring, external "e"	042198-25	2	042198-31	2	042198-31	2
8	nut, ball	042273	1	042273	1	042273	1
9	holder, ball screw	234525	1	234525	1	234525	1
10	screw, ferry head cap 3/8" - 16 x 1"	828406-100	3	828406-100	3	828406-100	3
11	ring, support	022939	1	022939	1	022939	1
12	nut, bearing lock	824101-323	1	824101-323	1	824101-323	1
13	coupling, shaft	023856	1	023856	1	023856	1
14	pin, roll 1/8"	827402-100	1	827402-100	1	827402-100	1
15	seal, ball screw shaft	042874	2	042874	2	042874	2
16	O-ring, neoprene 1-5/16" x 1/8"	826202-219	1	826202-219	1	826202-219	1
17	bearing, ball screw	499002-201	1	499002-201	1	499002-201	1
18	ring, retaining internal 1-1/4"	836150-125	1	836150-125	1	836150-125	1
19	cover, cylinder end	023044	1	024021	1	023045	1
20	plate, valve	022750	1	024023	1	022927	1
21	screw, machine shoulder	830505-100	3	830508-125	3	830508-125	3
22	screw, ferry head cap	828405-100	3	828406-100	3	828408-125	3
23	ring, retaining external	836470-200	1	836470-250	1	836470-300	1

ILLUSTRATIONS AND PARTS LIST

1.15 CAPACITY CONTROL SHAFT SEAL AND VALVE ASSEMBLY (Cont'd)

KEY NO.	ITEM DESCRIPTION	C16 PKG	QTY.	C20 PKG	QTY.	C25 PKG	QTY.
24	shim, spacer	022956	1	024028	1	022934	2
25	o-ring, neoprene	826202-240	1	826202-248	1	826202-362	1
26	o-ring, neoprene	826202-226	1	826202-333	1	826202-337	1
27	ring, retaining - internal	836150-168	1	836369-206	1	836369-250	1
28	o-ring, neoprene	826202-221	1	826202-224	1	826202-227	1
29	piston, capacity control	022749	1	024022	1	022925	1
30	o-ring, neoprene	826202-238	1	826202-246	1	826202-258	1
31	o-ring, neoprene	826202-133	1	826202-228	1	826202-232	1
32	screw, ball	250009-204	1	250009-205	1	250009-206	1
33	sleeve, ball screw	011906	1	011915	1	011910	1
34	o-ring, neoprene	826202-240	1	826202-248	1		
35	screw, ferry head cap	828408-400	4	828410-350	4	828410-400	4
36	o-ring, neoprene	826202-244	1	826202-252	1		
37	pin, roll 3/16" x 7/8"	827403-088	1	827403-088	1	827403-088	1
38	pin, roll 1/4" x 3/4"	827404-075	1	827404-075	1	827404-075	1
39	o-ring, neoprene 6-3/4" x 1/8"					826202-261	1
40	kit, ball screw repair (includes items #5, 7, 8, 9, 11, 12, 15, 16, 17, 18, 20, 21, 25, 32 and 37)	001814A	1	001815A	1	001816A	1
41	ring, retaining - external	836470-200	1	836470-250	1	836470-300	1
42	o-ring, neoprene 13/16" x 1/8"	826202-211	1	826202-211	1	826202-211	1
43	o-ring, neoprene	826202-329	1	826202-333	1	826202-337	1
44	spacer	023035	1	024028	1	022934	1
45	ring, retaining - external	836470-200	1	836470-250	1	836470-300	1
46	o-ring, neoprene	826202-221	1	826202-224	1	826202-227	1
47	guide, capacity control oil tube	022757	1	024025	1	022930	1
48	ring, retaining - internal	836150-168	1	836369-206	1	836369-250	1
49	screw, machine shoulder	828304-050	1	830505-075	1	830505-100	1

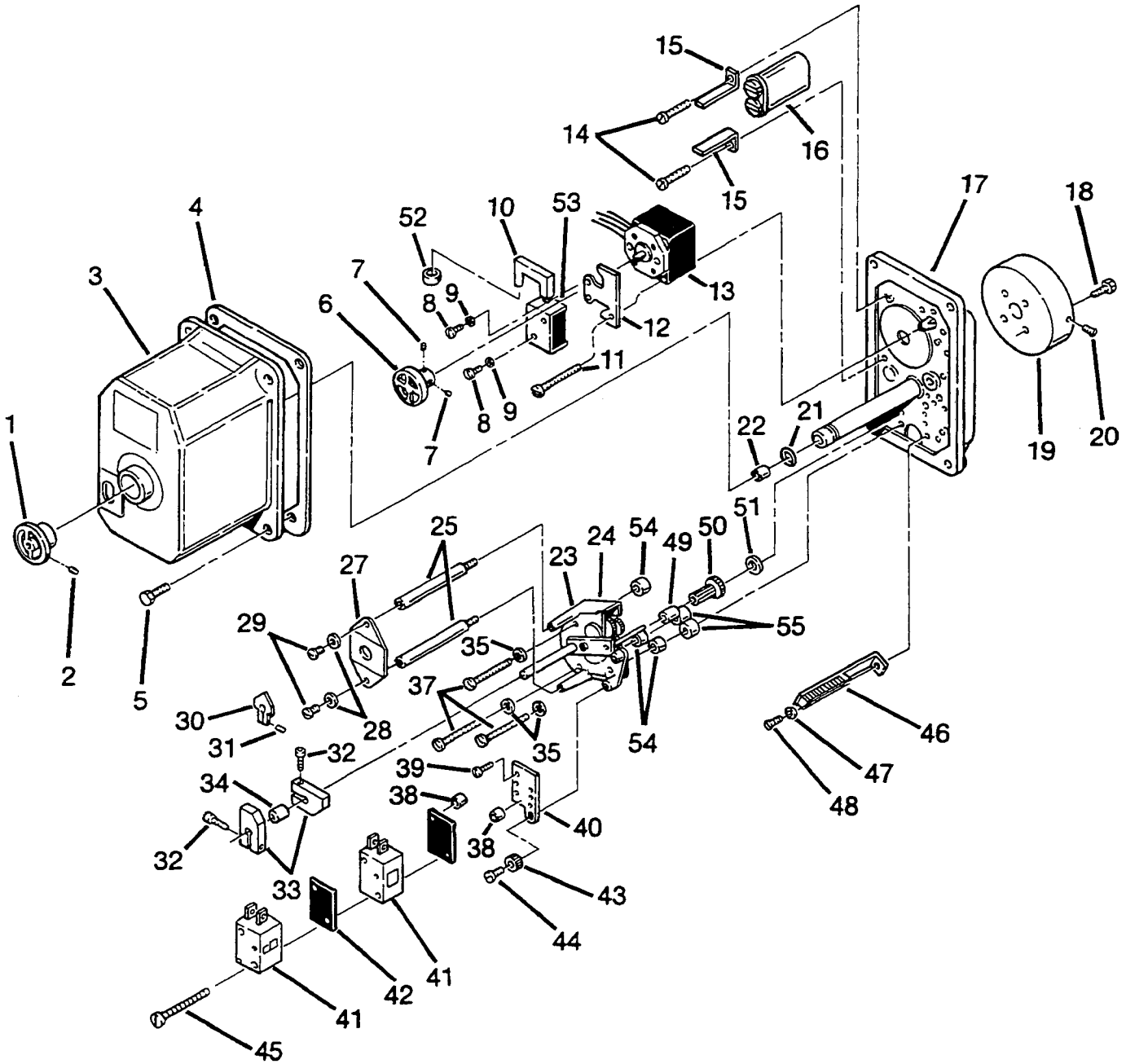
ILLUSTRATIONS AND PARTS LIST

1.15 CAPACITY CONTROL SHAFT SEAL AND VALVE ASSEMBLY (Cont'd)

KEY NO.	ITEM DESCRIPTION	C16 PKG	QTY.	C20 PKG	QTY.	C25 PKG	QTY.
50	ring, clyd 0.75" x .149"	043182	1	043182	1	043182	1
51	tube, oil supply	023993	1	023993	1	023943	1
52	o-ring, neoprene 4--1/4" x 1/8"	826202-124	1	826202-124	1	826202-124	1
53	o-ring, neoprene 5/8" x 1/16"	826202-016	1	826202-016	1	826202-016	1
54	screw, ferry cap 1/2" - 13 x 1 - 1/4"	828406-175	4	828406-175	4	828406-175	4
55	cap, oil tube	023029	1	023029	1	023029	1
56	ring, retaining - external 3/4"	836251-075	1	836251-075	1	836251-075	1

Section 1 ILLUSTRATIONS AND PARTS LIST

1.16 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (PRIOR TO 6/91)



ILLUSTRATIONS AND PARTS LIST**1.16 ELECTRIC VALVE ACTUATOR ASSEMBLY—AC (PRIOR TO 6/91)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	knob, shaft	250014-493	1
2	setscrew, #10-24 x 1/2"	(I)	1
3	cover, electric valve actuator	-	1
4	cover, gasket	250014-509	1
5	screw, hex cap 1/4" - 20 x 3/4"	(I)	4
6	brake, wheel - motor	250014-503	1
7	setscrew, #6-32 x 1/4"	(I)	2
8	screw, machine round head #6-32 x 3/16"	(I)	2
9	washer, serrated #6	(I)	2
10	arm, brake	250030-673	1
11	screw, hex machine #6-32 x 1 3/4"	(I)	4
12	bracket, brake assembly	250033-054	1
13	motor, electric 120V	250014-494	1
14	screw, machine round head #6-32 x 2"	(I)	2
15	clamp, bracket - capacitor (Prior to 6/91)	250033-060	2
16	capacitor, 9MFD oil filled (Prior to 6/91)	250014-495	1
17	base, electric valve actuator	250014-492	1
18	screw, hex socket head 5/16" - 18 x 5/8"	(I)	1
19	adapter, electric valve actuator to compressor	250004-269	1
20	setscrew, 1/4"-20 x 3/4"	(I)	3
21	o-ring, shaft/cover	250014-510	1
22	spacer, knob	-	1
23	box, gear 30 turn	250014-805	1
24	box, gear 62 turn	250014-806	1
25	spacer, indicator plate	250014-808	2
26	actuator, complete - 30 turn	250009-325	1
	• actuator, complete - 62 turn	250004-049	1
27	plate, indicator	250014-807	
	• decal, indicator - 30 turn	250014-502	1
	• decal, indicator - 62 turn	250014-501	1
28	lockwasher, #6	(I)	2
29	screw, machine round head #6-32 x 1/2"	(I)	2
30	indicator, turn	250031-671	1
31	setscrew, #6-32 x 3/8"	(I)	2
32	screw, machine socket head #4-40 x 1/2"	(I)	2
33	cam, roller switch	250014-508	2

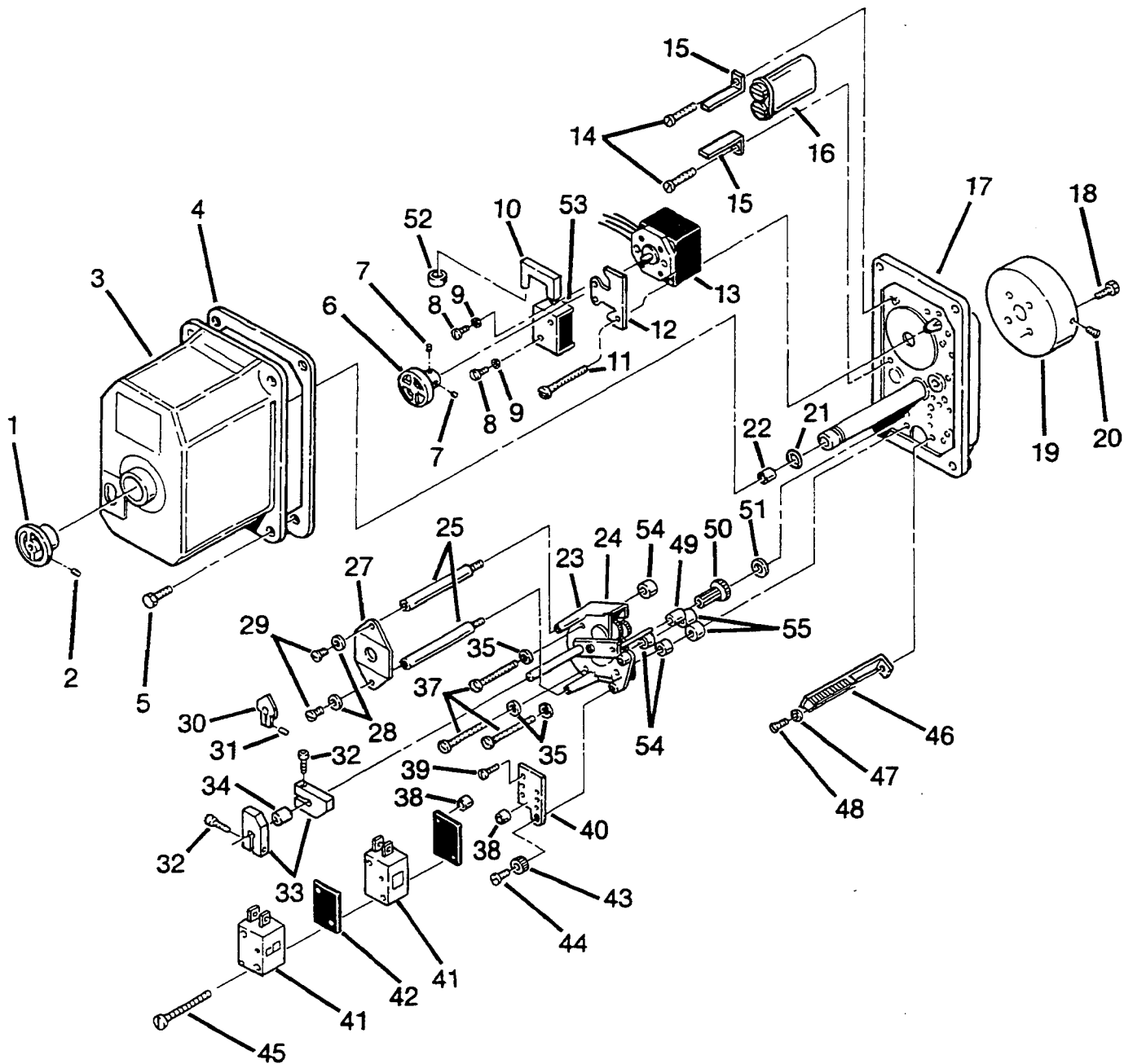
(continued on Page 53)

(I) Standard hardware item, may be purchased locally.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.16 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (PRIOR TO 6/91)



ILLUSTRATIONS AND PARTS LIST

1.16 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (PRIOR TO 6/91) (continued)

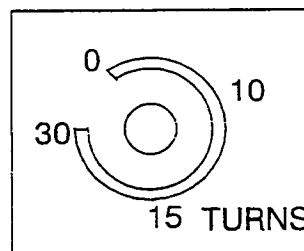
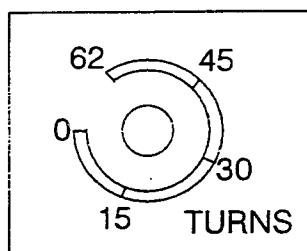
key number	description	part number	quantity
34	spacer, gear box $\frac{5}{32}$ "	250035-845	2
35	lockwasher, #8	(I)	3
36	spacer, gear box $\frac{1}{8}$ "	250035-844	3
37	screw, machine round head #8-32 x $1\frac{7}{16}$ "	(I)	2
38	spacer, switch to plate $\frac{1}{8}$ "	250035-843	2
39	screw, machine round head #4-40 x $\frac{3}{8}$ "	(I)	1
40	plate, switch	250033-057	1
41	switch, roller	250014-230	2
42	insulator, switch	250033-056	2
43	knob, plate adjuster	250033-055	1
44	screw, machine round head #4-40 x $\frac{3}{8}$ "	(I)	1
45	screw, machine round head #4-40 x 1"	(I)	2
46	block, terminal and bracket	250014-496	1
47	lockwasher, #8	(I)	1
48	screw, machine round head #8-32 x $\frac{3}{8}$ "	(I)	1
49	spacer, gear	250035-846	1
50	gear	250035-847	1
51	shim, gear	250035-848	1
52	shoe, brake	250014-504	1
53	solenoid, brake	250014-505	1

(I) Standard hardware item, may be purchased locally.

NOTE: See Figure 1.16B. Standard EVA gear boxes are 30 turns for C16L, C20S, C25S & C25M, and 62 turns for C20L, C25L, and C40L. Earlier compressors and special orders may have varied from above. The correct number of turns can be determined from the decal or the rotation. Rotation of the gear box shaft is opposite the main shaft for 62 turns and the same for 30 turns.

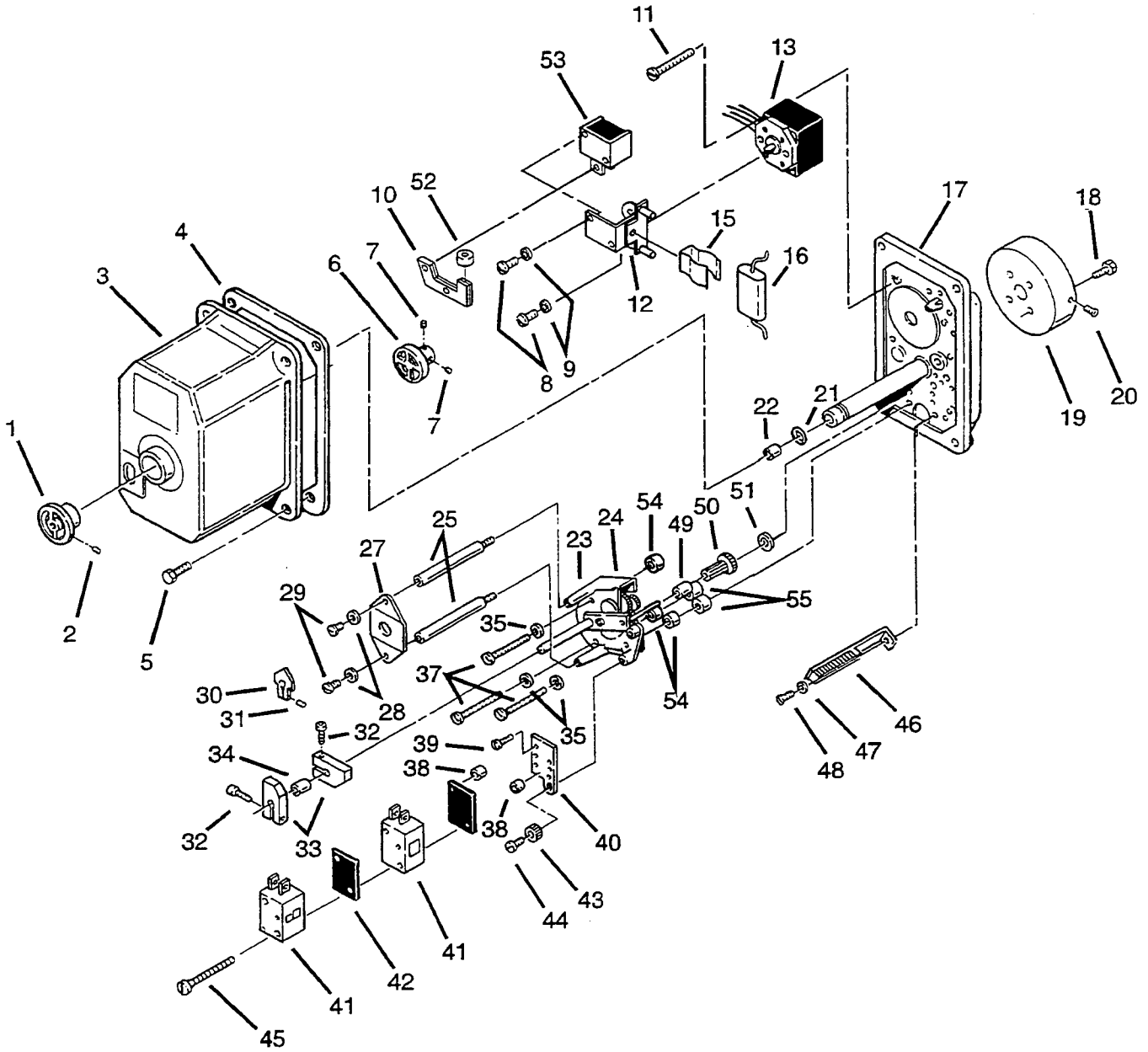
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Figure 1.16B Standard EVA Gear Boxes



Section 1 ILLUSTRATIONS AND PARTS LIST

1.17 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (AFTER 6/91)



Section 1
ILLUSTRATIONS AND PARTS LIST

1.17 ELECTRIC VALVE ACTUATOR ASSEMBLY—AC (AFTER 6/91)

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	knob, shaft	250014-493	1
2	setscrew, #10-24 x 1/2"	(I)	1
3	cover, electric valve actuator	-	1
4	cover, gasket	250014-509	1
5	screw, hex cap 1/4" - 20 x 3/4"	(I)	4
6	brake, wheel - motor	250014-503	1
7	setscrew, #6-32 x 1/4"	(I)	2
8	screw, machine round head #6-32 x 3/16"	(I)	2
9	washer, serrated #6	(I)	2
10	arm, brake	250030-673	1
11	screw, hex machine #6-32 x 1 3/4"	(I)	4
12	bracket, brake assembly	250033-054	1
13	motor, electric 120V	250014-494	1
14	screw, machine round head #6-32 x 2"	(I)	2
15	clamp, bracket - capacitor (Prior to 6/91)	250033-060	2
16	capacitor, 9MFD dry (not shown) (Used after 6/91)	02250046-435	1
17	base, electric valve actuator	250014-492	1
18	screw, hex socket head 5/16" - 18 x 5/8"	(I)	1
19	adapter, electric valve actuator to compressor	250004-269	1
20	setscrew, 1/4" - 20 x 3/4"	(I)	3
21	o-ring, shaft/cover	250014-510	1
22	spacer, knob	-	1
23	box, gear 30 turn	250014-805	1
24	box, gear 62 turn	250014-806	1
25	spacer, indicator plate	250014-808	2
26	actuator, complete - 30 turn	250009-325	1
	•actuator, complete - 62 turn	250004-049	1
27	plate, indicator	250014-807	
	• decal, indicator - 30 turn	250014-502	1
	• decal, indicator - 62 turn	250014-501	1
28	lockwasher, #6	(I)	2
29	screw, machine round head #6-32 x 1/2"	(I)	2
30	indicator, turn	250031-671	1
31	setscrew, #6-32 x 3/8"	(I)	2
32	screw, machine socket head #4-40 x 1/2"	(I)	2
33	cam, roller switch	250014-508	2

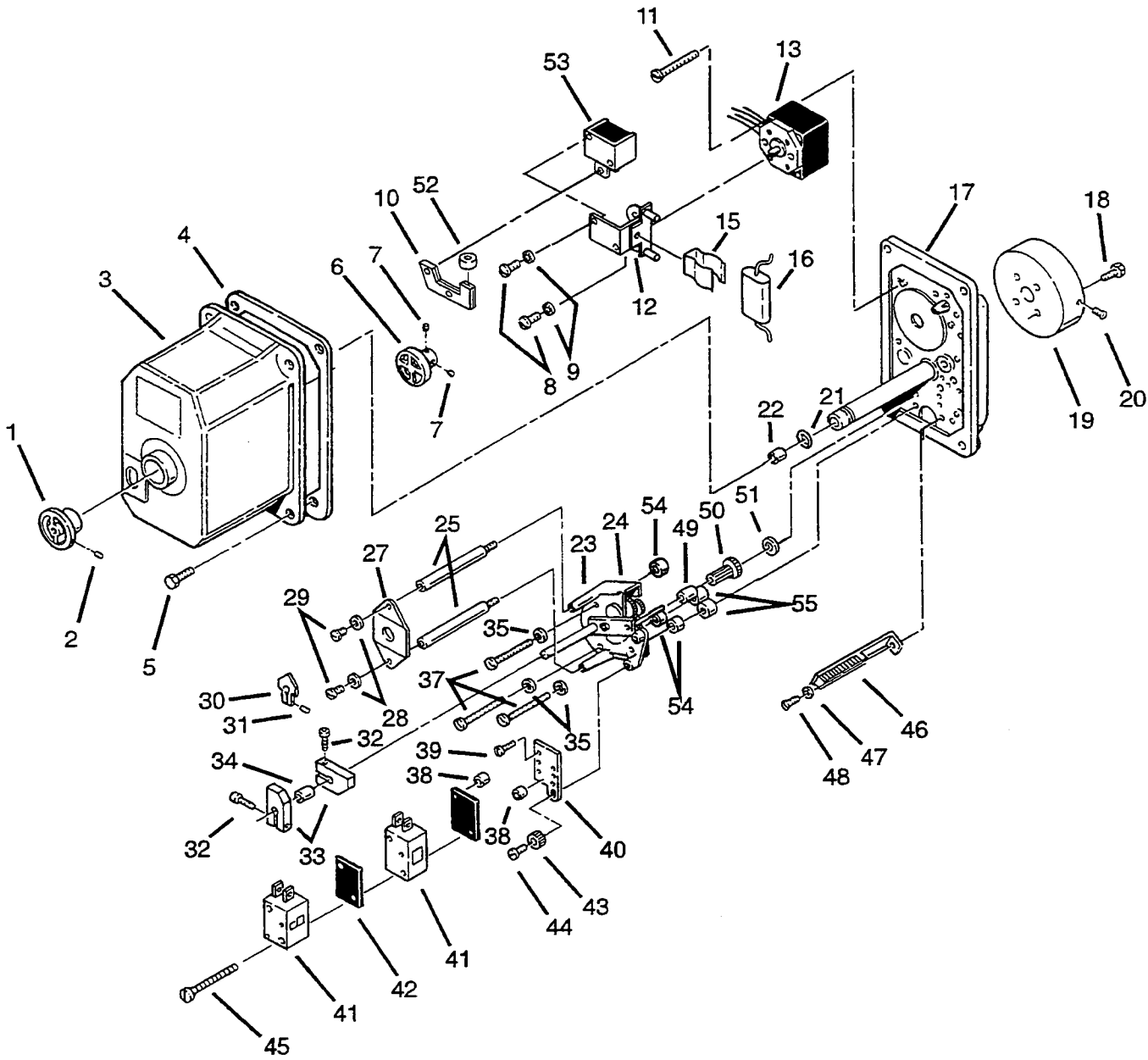
(continued on Page 57)

(I) Standard hardware item, may be purchased locally.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.17 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (AFTER 6/91)



ILLUSTRATIONS AND PARTS LIST

1.17 ELECTRIC VALVE ACTUATOR ASSEMBLY – AC (AFTER 6/91) (continued)

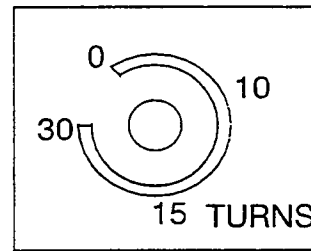
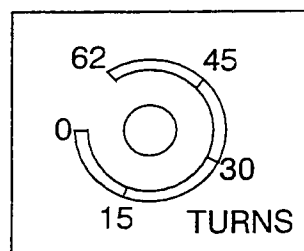
key number	description	part number	quantity
34	spacer, gear box $\frac{5}{32}$ "	250035-845	2
35	lockwasher, #8	(I)	3
36	spacer, gear box $\frac{1}{8}$ "	250035-844	3
37	screw, machine round head #8-32 x $1\frac{1}{16}$ "	(I)	2
38	spacer, switch to plate $\frac{1}{8}$ "	250035-843	2
39	screw, machine round head #4-40 x $\frac{3}{8}$ "	(I)	1
40	plate, switch	250033-057	1
41	switch, roller	250014-230	2
42	insulator, switch	250033-056	2
43	knob, plate adjuster	250033-055	1
44	screw, machine round head #4-40 x $\frac{3}{8}$ "	(I)	1
45	screw, machine round head #4-40 x 1"	(I)	2
46	block, terminal and bracket	250014-496	1
47	lockwasher, #8	(I)	1
48	screw, machine round head #8-32 x $\frac{3}{8}$ "	(I)	1
49	spacer, gear	250035-846	1
50	gear	250035-847	1
51	shim, gear	250035-848	1
52	shoe, brake	250014-504	1
53	solenoid, brake	250014-505	1

(I) Standard hardware item, may be purchased locally.

NOTE: See Figure 1.16B. Standard EVA gear boxes are 30 turns for C16L, C20S, C25S & C25M, and 62 turns for C20L, C25L, and C40L. Earlier compressors and special orders may have varied from above. The correct number of turns can be determined from the decal or the rotation. Rotation of the gear box shaft is opposite the main shaft for 62 turns and the same for 30 turns.

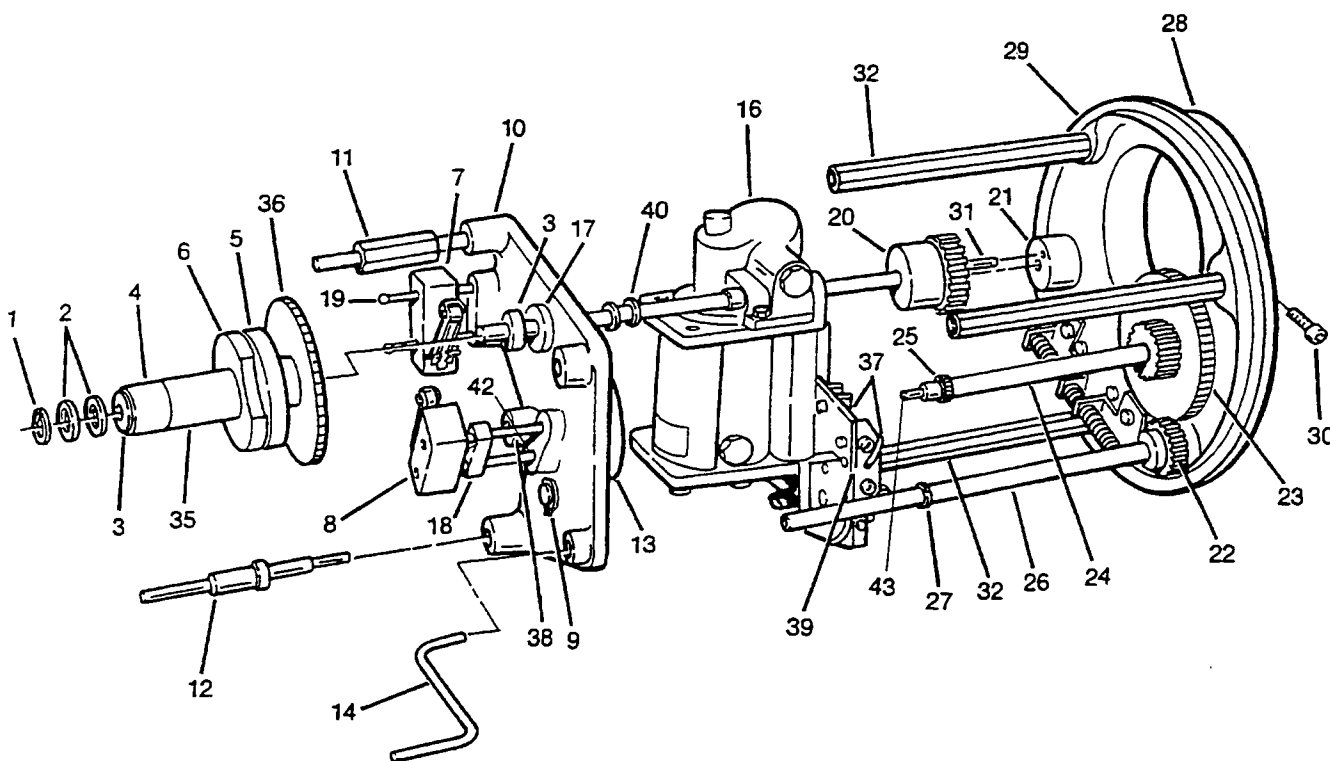
PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Figure 1.17B Standard EVA Gear Boxes



Section 1 ILLUSTRATIONS AND PARTS LIST

1.18 ELECTRIC VALVE ACTUATOR ASSEMBLY – DC



ILLUSTRATIONS AND PARTS LIST

1.18 ELECTRIC VALVE ACTUATOR ASSEMBLY—DC

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	ring, retaining external	836251-031	2
2	washer, flat $\frac{5}{16}$ " I.D. x $\frac{5}{8}$ " O.D. x $\frac{1}{32}$ " thick	023971	3
3	bearing, cam shaft	022980	2
4	decal, capacity	023804	1
5	cam, limit (I)	023370	1
6	cam, limit (I)	023370	1
7	switch, roller DPDT (I)	042305	1
8	switch, roller DPDT (I)	042305	1
9	washer, special	023808	1
10	plate, bearing	022989	1
11	bolt, spacer	023066	2
12	pilot, spacer bolt	023078	1
13	gear, fourth	042300	1
14	crank, hand	026357	1
15	bearing, shaft	022983-2	4
16	motor, electric valve actuator assembly (see Assembly Section Fig. 1-13)	001924	1
17	bearing, motor shaft	022981	2
18	shim, maximum position roller switch mounting	023371	1
19	stud	023800	4
20	clutch, first gear and slip assembly (internal slip clutch parts not shown) (see Assembly Section Fig. 1-14)	013501	1
21	coupling, ball screw to first gear	023856	1
21A	$\frac{1}{8}$ " x 1" roll pin	827402-100	1
22	gear, crank	023071	1
23	gear, second	042298	1
24	shaft, reduction primary	022979	1
25	gear, third	042299	1
26	shaft, crank	012848	1
27	ring, external retaining	836251-037	1
28	support, motor shaft	023051	1
29	cover, o-ring seal (not shown)	826102-169	1
30	capscrew, socket head $\frac{1}{4}$ "-20 UNC x 1"	828304-100	2
31	pin, roll $\frac{3}{16}$ " x $\frac{7}{8}$ "	827403-088	1
32	pin, distance	023142	3

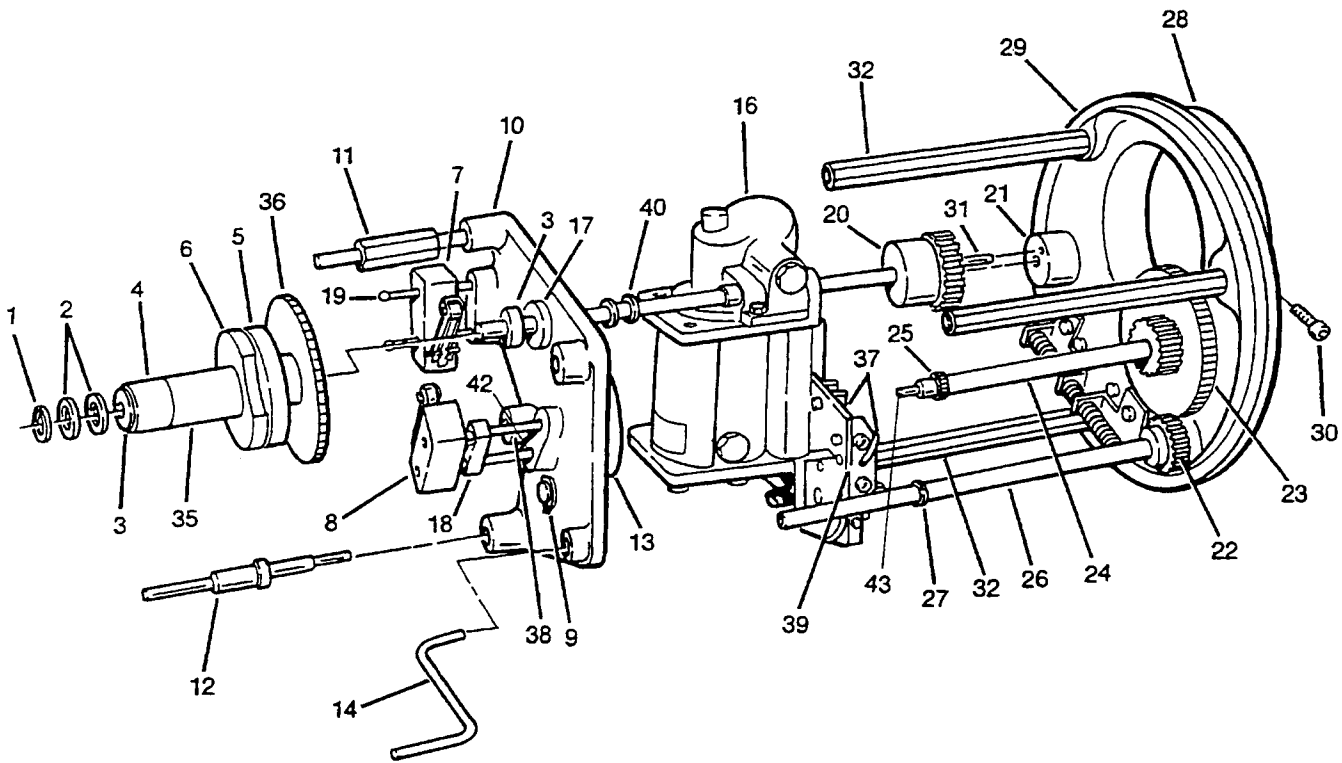
(continued on Page 61)

(I) A third (40%) cam and roller switch is used for multiple machine sequencing, (cam P/N 024902, roller switch P/N 042305).

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.18 ELECTRIC VALVE ACTUATOR ASSEMBLY – DC



ILLUSTRATIONS AND PARTS LIST**1.18 ELECTRIC VALVE ACTUATOR ASSEMBLY – DC (continued)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
33	nut (not shown)	043430	4
34	cover, (not shown)	012207	1
35	camshaft	023389	1
36	gear, sixth	023146	1
37	switch, torque	043429	2
38	shaft, variable ratio fifth gear and fifth to fourth gear shaft. (See Reference Table below for correct gear and shaft for individual compressor packages).		
39	bracket, motor	025363	1
40	screw, ball assembly – C16L (not shown) –	001814A	1
	• screw, ball assembly – C20S and C20L	001815A	1
	• screw, ball assembly – C25S and C25L	001816A	1
41	plate, pivot – fourth gear (not shown)	011864	1
42	bushing, bearing – fifth to fourth gear	022983–1	1
43	bushing, bearing – second to third gear shaft (not shown)	022983–3	1

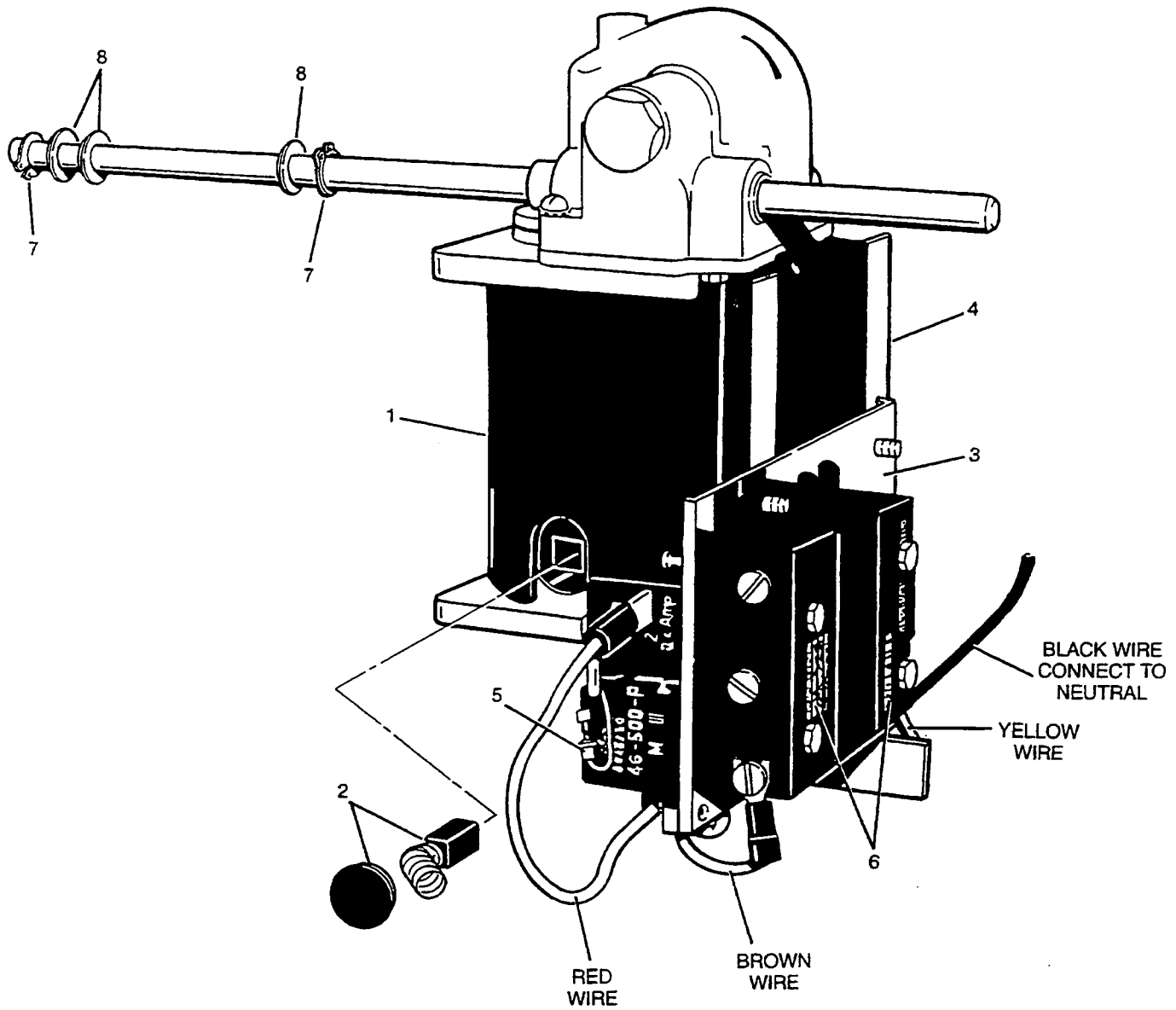
REFERENCE TABLE – KEY NUMBER 38 VARIABLE RATIO FIFTH GEAR AND SHAFT

PACKAGE MODEL	FIFTH GEAR P/N	NUMBER OF TEETH	FIFTH TO FOURTH GEAR SHAFT PART NUMBER
C25L, 26,37	042301–1	18	022978–4
C25L, 48	042301–2	20	022978–3
C20L, 26, 37 and 38	042301–2	20	022978–3
C25S, 26, 37 and 48	042301–3	20	022978–2
C16L, 26, 37 and 48	042301–3	26	022978–2
C20S, 26, 37 and 48	023071	32	022978–1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.19 ELECTRIC VALVE ACTUATOR MOTOR ASSEMBLY – DC



ILLUSTRATIONS AND PARTS LIST**1.19 ELECTRIC VALVE ACTUATOR MOTOR ASSEMBLY – DC**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	motor, electric valve actuator 115VDC	044560	1
2	kit, replacement motor brush (I)	001036	1
3	bracket, motor	012391	1
4	bracket	025363	1
5	breaker, rectifier and circuit assembly (II)	—	—
6	switch, torque	043429	2
7	ring, retaining external	836251–031	2
8	washer, flat $\frac{5}{16}$ " x $\frac{5}{8}$ " o.d. x 0.032 thick	023971	3

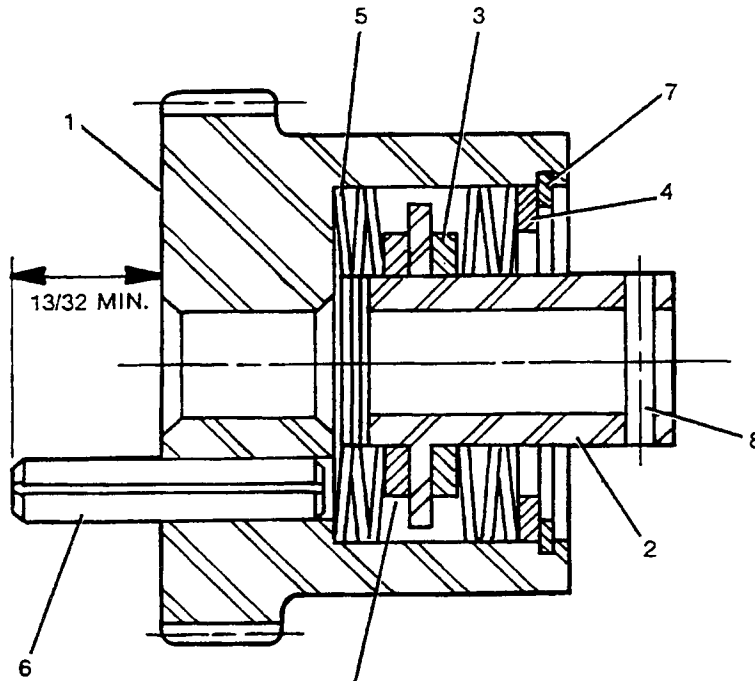
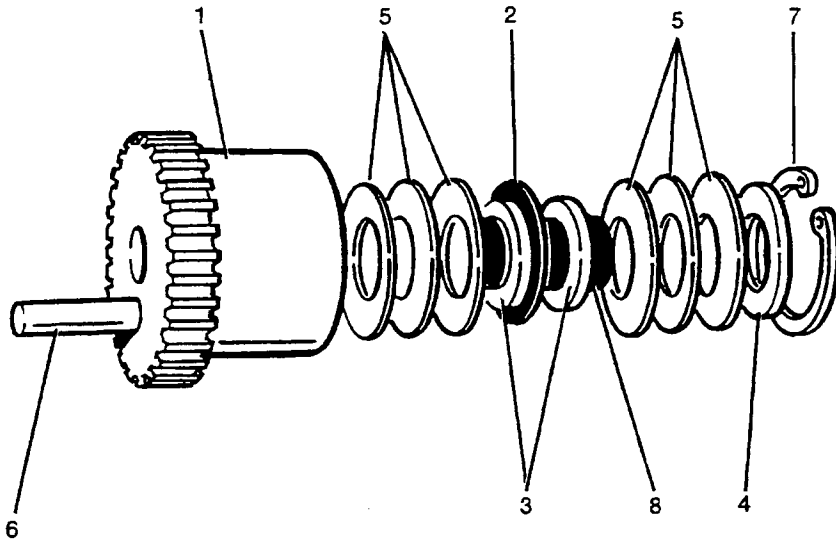
(I) Includes two (2) motor brush assemblies (P/N 045427) and two (2) brush caps (P/N 045428).

(II) This design was used on machines built prior to February 1, 1976. Kit no. 80016–5 is available for field conversion of water–cooled oil cooling to latest DC/EVA design. Kit no. 80016–7 is available for field conversion of refrigerant cooled oil cooling to latest DC/EVA design.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.20 FIRST GEAR AND SLIP CLUTCH ASSEMBLY (P/N 013501)



DOW CORNING MOLYKOTE "G" ®
PASTE TO BE APPLIED
LIBERALLY TO BOTH SURFACES
OF FRICTION DISCS.

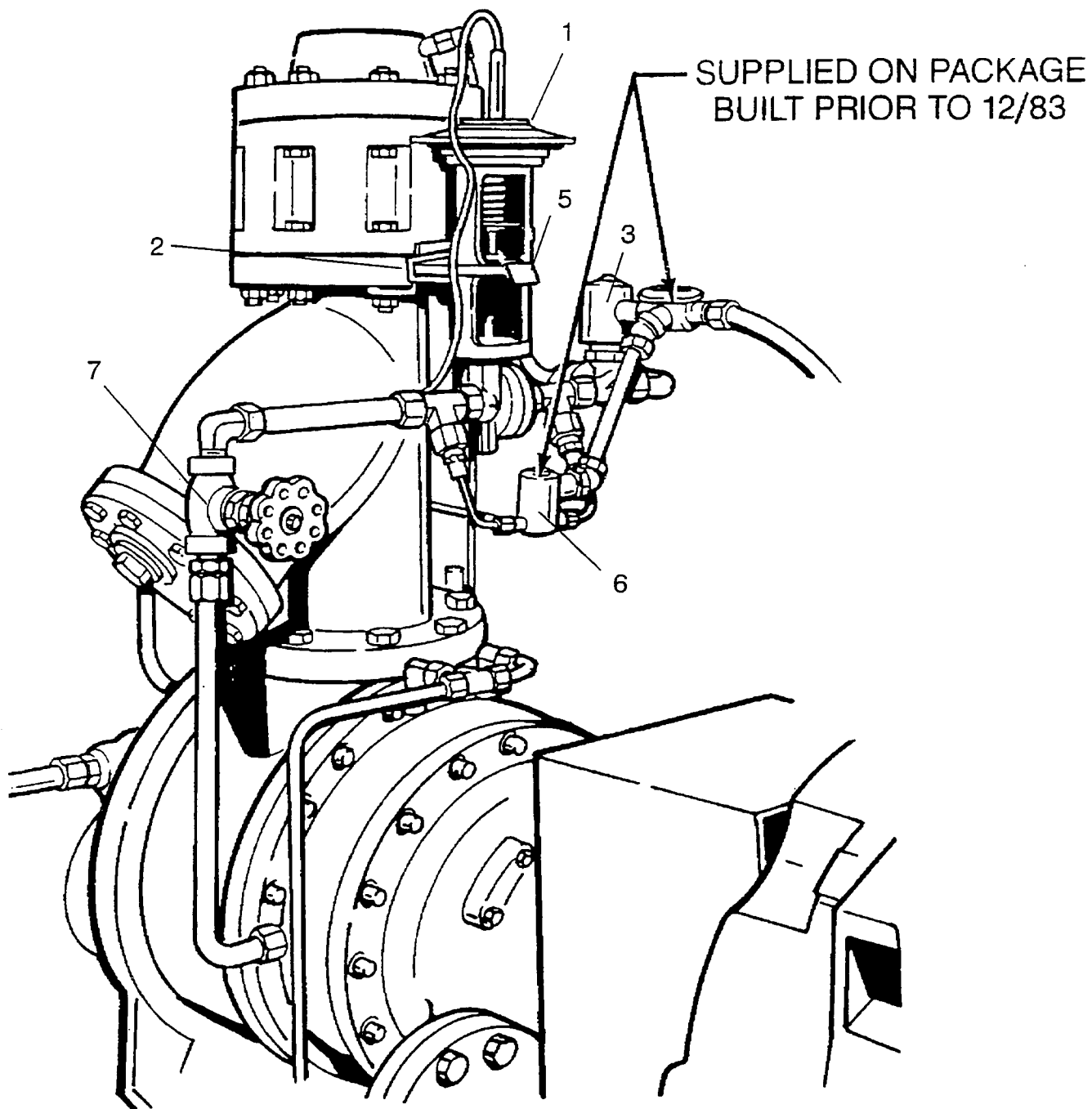
ILLUSTRATIONS AND PARTS LIST**1.20 FIRST GEAR AND SLIP CLUTCH ASSEMBLY (P/N 013501)**

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	gear, first	022955	1
2	coupling	022758	1
3	disc, friction	022759	2
4	shim, coupling friction	042759	1
5	washer, spring	042310	6
6	pin, roll $\frac{3}{16}$ " x $\frac{7}{8}$ "	827403-088	1
7	ring, internal retaining	836150-100	1
8	pin, roll $\frac{3}{32}$ " x $\frac{1}{2}$ "	827401-050	1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1
ILLUSTRATIONS AND PARTS LIST

1.21 LIQUID INJECTION COOLED



ILLUSTRATIONS AND PARTS LIST

1.21 LIQUID INJECTION COOLED

KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
2	bracket, regulator	C16L	220167	1
		C20, C25S & C25M	220168	1
		C40LB	220168	1
		C25L	220169	1
		C40LA	227345	1
3	valve, solenoid with strainer (complete)	C16LB & C20SB	410047-001	1
		C16LA, C20SA & C20L	410047-002	1
		C25 & C40L	410047-002	1
	Replacement Parts:	C16LB & C20SB	240228	1
		C16LA, C20SA & C20L	046185	1
		C25 & C40L	046185	1
	Strainer	C16LB & C20SB	240226	1
		C16LA, C20SA & C20L	046186	1
		C25 & C40L	046186	1
	Strainer Screen	C16LB & C20SB	248014-003	1
		C16LA, C20SA & C20L	248018-002	1
		C25 & C40L	248018-002	1
	Strainer Gasket	C16LB & C20SB	248013-003	1
		C16LA, C20SA & C20L	248016-002	1
		C25 & C40L	248016-002	1
	Strainer Plug (cap)	C16LB & C20SB	248015-003	1
	Strainer Cover	C16LA, C20SA & C20L	248017-002	1
		C25 & C40L	248017-002	1
4	bracket, solenoid valve with strainer (not shown)	C16L	250018-990	1
		C20, C25 & C40L	220172	1
5	clamp, regulator 3 1/2"	ALL	040284	1
6	solenoid, bypass *	ALL	240037	1
		Prior to August, 1983		

* Not supplied after August, 1983; located at refrigerant regulator.

ILLUSTRATIONS AND PARTS LIST

1.21 LIQUID INJECTION COOLED

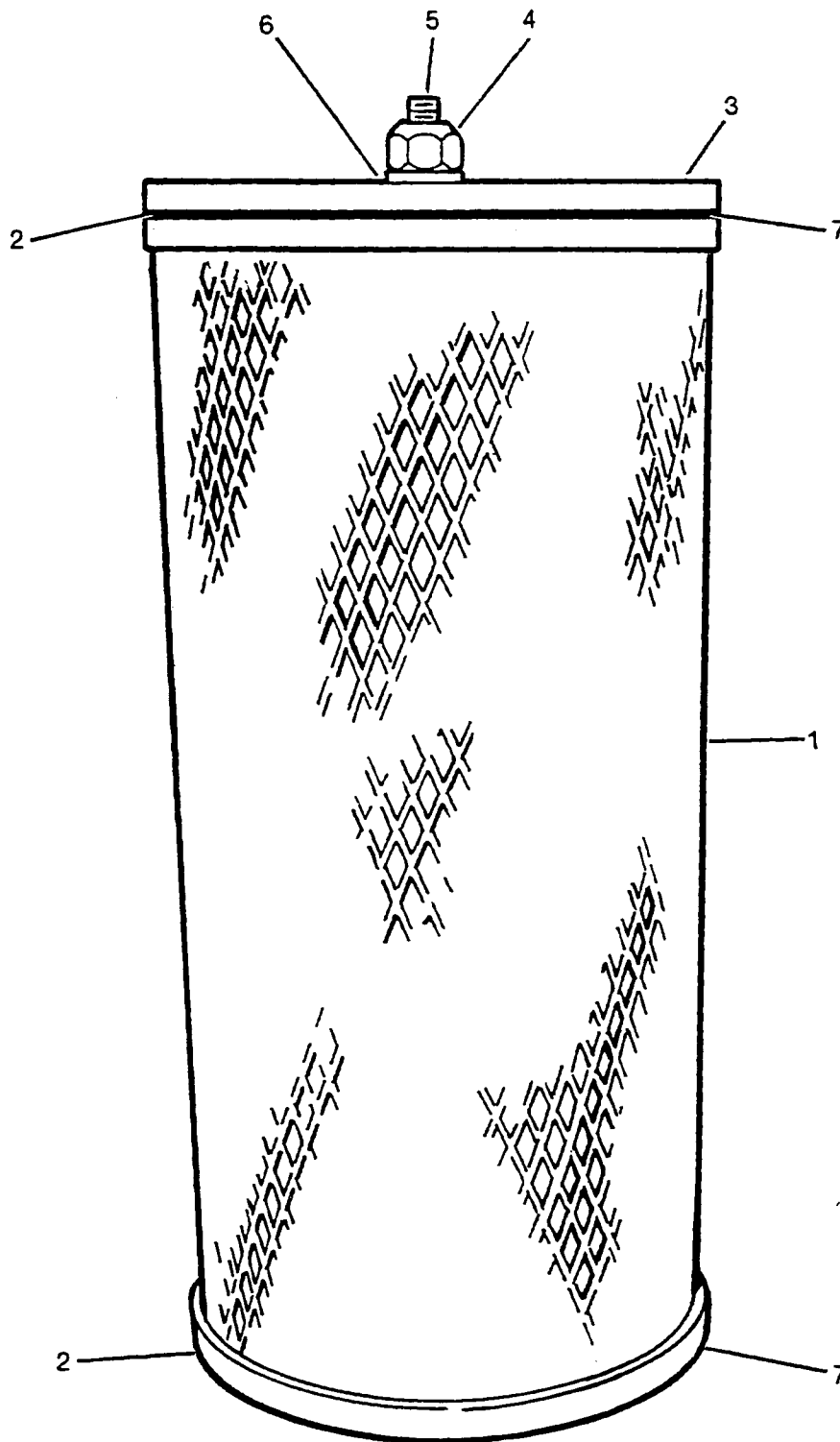
KEY No.	DESCRIPTION	PACKAGE MODEL NUMBER	PART NUMBER	QTY.
7	valve, globe shut-off 1/2"	C16LB & C20SB	045626	1
	valve, globe shut-off 3/4"	C16LA, C20SA & C20L	046116	1
		C25 & C40L	046116	1
8	bulbwell, liquid injection (not shown)**	ALL	240027	1
9	thermistor, liquid injection (not shown)**	ALL	046521	1
10	controller, low discharge temperature (LDT) (not shown)	ALL	046546	1
11	relay, 10CR (not shown)***	ALL	045496	1
12	socket, relay 10CR (not shown)***	ALL	045497	1

** Mounted in discharge pipe (compressor to separator).

*** Not supplied after August, 1983; located in control center.

Section 1
ILLUSTRATIONS AND PARTS LIST

1.22 SEPARATOR ELEMENTS



Section 1 ILLUSTRATIONS AND PARTS LIST

1.22 SEPARATOR ELEMENTS

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	element, gas/oil separator – ammonia • C16LA – 20" • C16LB – 26" • C20SA – 20" • C20SB – 20" • C20LA – 20" • C20LB – 26" • C25SA – 20" • C25MA – 20" • C25SB – 26" • C25SB – 20" • C25MB – 26" • C25MB – 20" • C25LA – 26" • C25LB – 33" • C25LB – 26" • C40LB – 33" • C40LA – 33"	044038 043930 044038 044038 044038 043930 044038 044038 043930 044038 043930 044038 043930 044306 043930 044306 044306	1 1 2 2 2 2 3 3 2 1 2 1 3 2 1 3 6
2	element, gas/oil separator – freon gasket, separator element (I)	(V) 026427	2 per element
3	cover, plate separator element	024371	1 per element
4	nut, ½" – 13 unc (IV)	–	2 per element
5	rod, ½" – 13 unc thread (part of separator tank)	–	1 per element
6	washer, flat ½" (IV)	–	1 per element
7	adhesive, separator element gasket (II)	240179	1
8	nut, coupling ½" – 13 unc (not shown) (III)	045186	1 per element
9	rod, threaded ½" x 6½" (not shown) (III)	835508–065	1 per element

(I) New elements (replacements) have gaskets cemented to both ends.

(II) Use Sullair part no. 240179 adhesive or Loctite® no. 04E or Loctite® no. 404.

(III) Coupling nut and rod are required for 33" elements only.

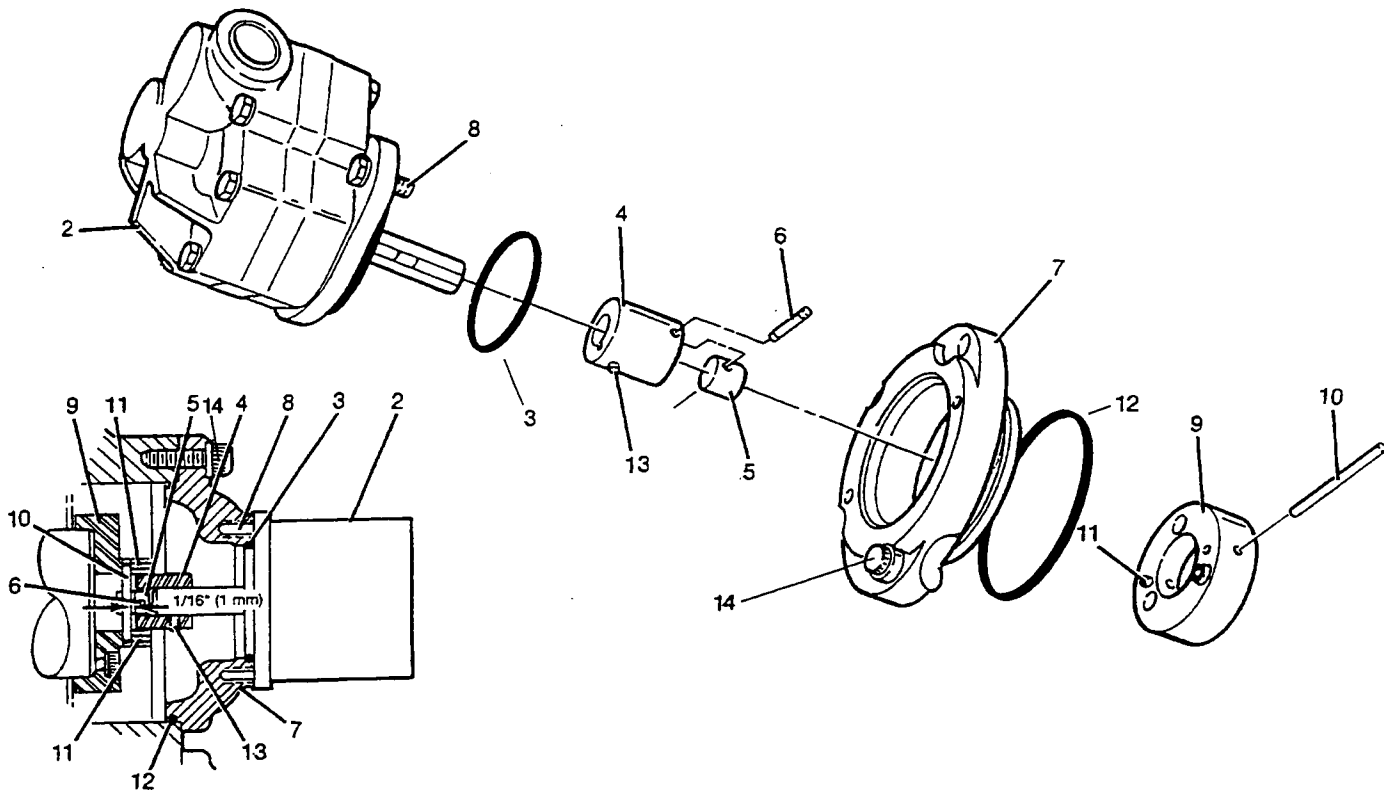
(IV) Standard hardware item. May be purchased locally.

(V) Refer to factory for part number.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 1 ILLUSTRATIONS AND PARTS LIST

1.23 OIL PUMP ASSEMBLY – COMPRESSOR MOUNTED



ILLUSTRATIONS AND PARTS LIST

1.23 OIL PUMP ASSEMBLY – COMPRESSOR–MOUNTED

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	kit, replacement oil pump C25 (includes key no.'s 2,3,4,5 and 6) (I) • kit, replacement oil pump – C25 (Prior to 6/91)	001095C	1
	(includes key no.'s 2,3,4,5 and 6) (II) • kit, replacement oil pump C16 ((III) & C20 (II) (includes key no.'s 2,3,4,5 and 6)	001095B	1
2	pump, oil C16 (III) & C20 (II) • pump, oil C25 (Prior to 6/91) (II) • pump, oil C25 (I)	042390–2 042390–2 042390–3	1 1 1
3	o–ring	826202–236	1
4	hub, drive	023033	1
5	connector	023034	1
6	pin, shear	024710	1
7	adaptor • C16 • C20 • C25	022745 024013 022914	1 1 1
8	capscrew, ferry head $\frac{3}{8}$ "–16 unc x 1" oil pump to adaptor (IV)	828406–100	2
9	disc, drive • C16 • C20 • C25	023032 024027 022932	1 1 1
10	pin, dowel • C16 • C20 and C25	827204–300 827204–250	1 1
11	screw, set • C16 and C25 • C20	832204–031 832204–062	2 2
12	o–ring • C16 • C20 • C25	826202–242 826202–252 826202–260	1 1 1
13	screw, set cup $\frac{1}{4}$ "–20 x $\frac{5}{16}$ " (IV)	832204–031	4
14	capscrew, ferry $\frac{3}{8}$ "–16 x 1" (IV)	828406–100	3

(I) For 2950 RPM motor, use unit pump no. 01856C or kit no. 001937–018 (50 Hertz).

(II) For 2950 RPM motor duty, C20 & C25 (prior to 6/91), use no. 042390–3 or kit no. 001095C (50 Hertz).

(III) For 2950 RPM motor duty, C16 use no. 042390–2 or kit no. 001095B (50 Hertz).

(IV) Standard hardware item. May be purchased locally.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

Section 2
KITS

SECTION 2 CONVERSION KITS

2.1 LIQUID INJECTION

PACKAGE MODEL NUMBER	STANDARD KIT PART NUMBER	QTY.	HIGH TEMPERATURE KIT PART NUMBER
C16LA	001869	1	*
C16LB	001870	1	*
C20SA	001913	1	*
C20SB	001873	1	*
C20LA	001878	1	*
C20LB	001872	1	*
C25SA	001871	1	*
C25SB	001879	1	*
C25MA	001871	1	*
C25MB	001879	1	*
C25LA	001874	1	*
C25LB	001875	1	*
C40LA	001876	1	*
C40LB	001877	1	*

* Refer to factory for part number.

2.2 DUPLEX FILTER

PACKAGE MODEL NUMBER	SINGLE TO DUAL KIT PART NUMBER	QTY.
C16, C20 & C25	250020-274	1
C40	250020-274	2

2.3 FILTER **

PACKAGE MODEL NUMBER	SINGLE KIT PART NUMBER	QTY.	DUAL KIT PART NUMBER	QTY.
C16 ALL	250020-277	1	250020-273	1
C20 ALL	250020-277	1	250020-273	1
C25 ALL	250020-277	1	250020-273	1
C40 ALL	250020-277	2	250020-273	2

2.4 AUXILIARY OIL PUMP – 3/4HP, 60HZ

PACKAGE MODEL NUMBER	PUMP KIT PART NUMBER	QTY.
C16 & C20	001894	1
C25	001893	1
C40	NONE	-

** Old style filter conversion.

SECTION 2 – CONVERSION KITS

2.5 ELECTRIC VALVE ACTUATOR – DC TO AC

PACKAGE MODEL NUMBER	E.V.A. KIT PART NUMBER	QTY.
C16L – ALL	250023–497	1
C20S – ALL	250023–497	1
C20L – 26	250023–498	1
C20L – 37	250023–498	1
C20L – 48	250023–497	1
C25S – ALL	250023–497	1
C25M – ALL	250023–497	1
C25L – ALL	250023–498	1
C40L – ALL	250023–498	1

2.7 DUPLEX STRAINER

PACKAGE MODEL NUMBER	STRAINER KIT PART NUMBER	QTY.
C16L	250030–944	1
C20S	250030–944	1
C20L	250030–944	1
C25SA	250030–945	1
C25SB	250030–944	1
C25MA	250030–945	1
C25MB	250030–944	1
C25LA	250023–945	1
C25LB	250023–944	1
C40LA	*	1
C40LB	250030–945	1

2.6 BALANCE PISTON PIPING

PACKAGE MODEL NUMBER	PIPING KIT PART NUMBER	QTY.
ALL		
With 1/2" Tubing	001915	1
ALL		
With 3/4" Tubing	001916	1

* Refer to factory for part number.

2.8 SERVICE KITS (I)

3.1 MISCELLANEOUS SERVICE KITS

DESCRIPTION	C16 PACKAGE	QTY.	C20 PACKAGE	QTY.	C25 PACKAGE	QTY.
Kit, E.V.A. motor repair – D.C. (Prior to Feb., 1976)	001024	1	001024	1	001024	1
Kit, motor brush replacement – D.C. E.V.A.	001036	1	001036	1	001036	1
Kit, compressor oil pump – 60 Hz (See Fig. 1.24)	001095B	1	001095B	1	001095C (II)	1
Kit, compressor oil pump – 50 Hz (See Fig. 1.24)	001095C	1	001095C	1	001937–018 (II)	1
Kit, hourmeter replacement – 60 Hz (Prior to June, 1978)	001101	1	001101	1	001101	1
Kit, shaft seal repair (See 1.11 in this manual)	001807A	1	001808A	1	001809A	1
Kit, shaft seal and v-ring repair (See 1.11 in this manual)	-----	--	001808B	1	001809B	1
Kit, capacity control ball screw (See 1.15 in this manual)	001814A	1	001815A	1	001816A	1
Kit, compressor outlet cover repair	001830A	1	001831A	1	001832A	1
Kit, steel thrust bearing repair (Prior to June, 1991)	604467–002	1	604468–002	1	604469–002	1
Kit, steel thrust bearing repair (Prior to Jan., 1988)	001833A	1	001834A	1	001835A	1
Kit, capacity control valve repair (See Fig. 1.15)	001838A	1	001839A	1	001840A	1
Kit, valve guide repair	001841A	1	001842A	1	001843A	1
Kit, bearing puller tool	001850	1	001850	1	001850	1
Kit, rotor end play tool – w/indicator	001851A	1	001851B	1	001851C	1
Kit, rotor end play tool – w/o indicator	001851D	1	001851E	1	001851F	1
Kit, compressor suction and discharge pipe replacement						
"Long" (LA or LB) Unit	001863	1	001861	1	001859	1
Kit, compressor suction and discharge pipe replacement						
"Short" (SA or SB) and "Medium" (MA or MB) Unit	-----	--	001862	1	01860	1
Kit, 3-way push valve addition	001882	1	001882	1	001882	1
Kit, compressor standard spare parts	001887A	1	001888A	1	001889A	1
Kit, coupling alignment – w/indicator	001895	1	001895	1	001895	1
Kit, coupling alignment – w/o indicator	001896	1	001896	1	001896	1
Kit, coupling flex element replacement (See Fig 1.12, 1.13 1.14 in this manual for present and prior to dates.)	-----	--	-----	--	-----	--
Kit, E.V.A. rectifier retrofit – water cooled	080016–005	1	080016–005	1	080016–005	1
Kit, E.V.A. rectifier retrofit – liquid cooled	080016–007	1	080016–007	1	080016–007	1

(I) Service kits do not contain standard tools (wrenches, screwdrivers, etc.) which are required to disassemble the compressor
NOTE: All "prior to" dates are approximate.

2.9 INSTALLATION OR SERVICE KIT REQUIREMENTS

The following listings contain the jobs which require more than one service kit to complete the installation of service.

A step by step instruction on how to disassemble and assemble parts is outlined in the service manual with designated numbers referring to numbers on associated illustrations.

The service kits **DO NOT** contain standard tools, wrenches, screwdrivers, etc., which are required to disassemble the compressor.

2.9 INSTALLATION OR SERVICE KIT REQUIREMENTS

2.9 INSTALLATION OR SERVICE KIT REQUIREMENTS

JOB	REQUIRED SERVICE KIT					
	C16 PACKAGE	QTY.	C20 PACKAGE	QTY.	C25 PACKAGE	QTY.
Replacing Thrust Bearing:						
Kit, thrust bearing repair	604467-002		608434-001	1	605803-001	1
Kit, thrust bearing repair (Prior to June, 1991)	604467-002	1	604468-002	1	604469-002	1
Kit, thrust bearing repair (Prior to Jan., 1988)	001833A	1	001834A	1	001835A	1
Kit, compressor outlet cover repair	001830A	1	001831A	1	001832A	1
Kit, shaft seal repair - or -	001807A	1	001808A	1	001809A	1
Kit, shaft seal and v-ring repair	-----	--	001808B	1	001809B	1
Kit, bearing puller tool kit	001850	1	001850	1		
Checking Rotor End Play:						
Kit, rotor end play C20 and C25	-----	--	02250057-556	1	02250057-556	1
Kit, rotor end play tool - w/indicator	001851A	1	(I) 001851B	1	(I) 001851C	1
Kit, rotor end play tool - w/o indicator	001851D	1	(I) 001851E	1	(I) 001851F	1
O-ring - neoprene	826202-242	2	826202-252	2	826202-260	2
Installing Valve Guide:						
Kit, valve guide repair	001841A	1	001842A	1	001843A	1
Kit, compressor outlet cover repair	001830A	1	001831A	1	001832A	1
Kit, shaft seal repair - or -	001807A	1	001808A	1	001809A	1
Kit, shaft seal and v-ring repair	-----	--	001808B	1	001809B	1
Overhauling Capacity Control Valve:						
Kit, capacity control valve repair	001838A	1	001839A	1	001840A	1
Kit, compressor outlet cover repair	001830A	1	001831A	1	001832A	1
Kit, shaft seal repair - or -	001807A	1	001808A	1	001809A	1
Kit, shaft seal and v-ring repair	-----	--	001808B	1	001809B	1
Kit, valve guide repair	001841A	1	001842A	1	001843A	1
Replacing O-Ring's:						
Kit, compressor spare parts - standard	001887A	1	001888A	1	001889A	1

NOTE: All "prior to dates" are approximate.

NOTES

ILLUSTRATIONS AND PARTS LIST

3.0 DECAL GROUP

OIL TEMPERATURE

**OIL PRESSURE
FILTER CHECK**

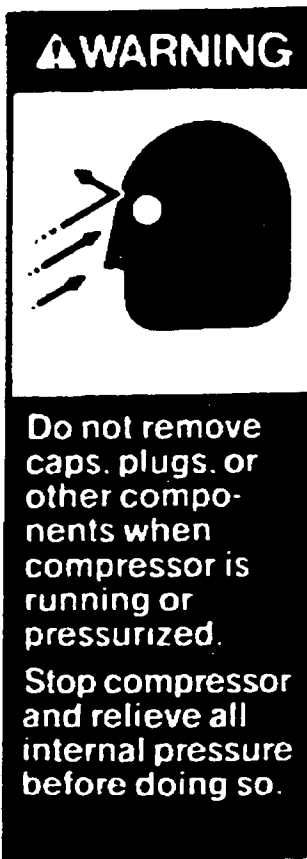
SUCTION PRESSURE

DISCHARGE PRESSURE



Use equipment grounding connector in accordance with the National Electrical Code, and all Federal State, and Local Codes, to help avoid possible ground fault shock hazard.

49832



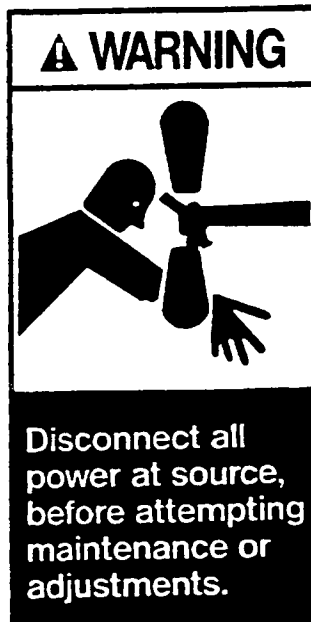
Do not remove caps, plugs, or other components when compressor is running or pressurized. Stop compressor and relieve all internal pressure before doing so.

49835



Lethal Shock hazard inside. Disconnect all power at source before opening or servicing

49850



Disconnect all power at source, before attempting maintenance or adjustments.

49835



Slip hazard. Do not step or stand on this surface.

4101A

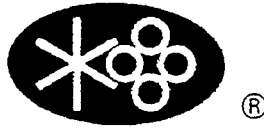
ILLUSTRATIONS AND PARTS LIST

3.0 DECAL GROUP

<i>key number</i>	<i>description</i>	<i>part number</i>	<i>quantity</i>
1	decal, oil temperature	042968	1
2	decal, oil pressure filter check	241317	1
3	decal, suction pressure	250003-228	1
4	decal, discharge pressure	250003-229	1
5	decal, Sullair logo – white (not shown)	Consult Factory	5
6	sign, warning compressor oil fill cap	049685	1
7	sign, danger electrocution	049850	1
8	sign, warning ground fault	049852	1
9	sign, warning – sever fan	049855	1
10	sign, caution – slip hazard	041041	1

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE SERIAL NUMBER OF COMPRESSOR

WORLDWIDE SALES AND SERVICE



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Part No.



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