

Received 12-21-89

Price \$ 5.00



GARDNER-DENVER®

13-9-547
2nd Edition

**ELECTRA-SAVER II®
STATIONARY
BASE-MOUNTED
COMPRESSOR**

MODELS

ECHQHF	40 HP	ECHSHF
ECHQJF	50 HP	ECHSJF

Parts List



INDUSTRIAL MACHINERY

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INSTRUCTIONS FOR ORDERING REPAIR PARTS

When ordering parts, specify Compressor **MODEL**, Method of Cooling, **HORSEPOWER** and **SERIAL NUMBER** (see nameplate on unit). Serial Number is also stamped on top of the cylinder flange to the right of the inlet housing.

All orders for Parts should be placed with the nearest Sales and Service Office.

Where NOT specified, quantity of parts required per compressor or unit is one (1); where more than one is required per unit, quantity is indicated in parenthesis. **SPECIFY EXACTLY THE NUMBER OF PARTS REQUIRED.**

DO NOT ORDER BY SETS OR GROUPS.

To determine the Right Hand and Left Hand side of compressor, stand at the motor end and look toward the compressor. Right Hand and Left Hand are indicated in parenthesis following part name, i.e. (RH) & (LH).

PARTS RETURNED

All claims must be made within five days after receipt of goods. If order has been filled correctly, we cannot allow the return of the goods without our consent and then only on a basis of a charge for service and rehandling plus transportation charges.

Transportation charges must be prepaid. If it is necessary to return a part to the factory for duplication or inspection, do not fail to do the following:

1. Write the nearest Sales and Service Office a letter advising what material you wish to return and why.
2. After receiving permission to return the item or items, obtain from the Sales and Service Office the correct forms filled out by that office for the proper return of material.
3. Place a tag in the package showing your name and address.
4. Tag each article in the box or package stating what and how many are returned.
5. Always give the serial number of the machine from which the parts were removed or the invoice number on which the parts were originally shipped.

All parts returned for credit should be handled in the same manner as that for duplication or inspection.

MODELS ECHO_F & ECHS_F
40 & 50 HP Air or Water-Cooled Base-Mounted
ELECTRA-SAVER II® COMPRESSORS
MATRIX/MENU

NOTICE TO CUSTOMER — To find the construction options for your compressor unit, FILL IN THE BALANCE OF LETTERS OR NUMBERS FROM YOUR UNIT NAMEPLATE.

COLUMN NUMBER:

E	C	H	F									
1	2	3	4	5	6	7	8	9	10	11	12	13

FOLLOW THE LINE DOWN AND OVER FROM EACH SPACE THUS FILLED IN TO FIND THE APPROPRIATE CONSTRUCTION WITH WHICH YOUR MACHINE IS EQUIPPED. THE NUMBER "9" IN ANY COLUMN SPACE INDICATES "NOT APPLICABLE". THE NUMBER "8" IN ANY COLUMN SPACE INDICATES SPECIAL DESIGN — REFER TO FACTORY ORDER TICKET.

COLUMNS 1, 2 & 3 — COMPRESSOR TYPE & SIZE

COLUMN 4 — TYPE OF CONSTRUCTION

- Q. Air Cooled Base Mounted
- S. Water Cooled Base Mounted

COLUMN 5 — HORSEPOWER

- H. 40 HP
- J. 50 HP

COLUMN 6 — ENGINEERING SPECIFICATION

COLUMN 7 — PRESSURE & HZ

- | | |
|---------------------|---------------------|
| D. 100 PSIG — 60 HZ | N. 100 PSIG — 50 HZ |
| F. 125 PSIG — 60 HZ | P. 125 PSIG — 50 HZ |
| H. 150 PSIG — 60 HZ | R. 150 PSIG — 50 HZ |

COLUMN 8 — CONTROL TYPE (Constant Speed or PC)

- | | | |
|---------------------------------|---------------------------------|-------------|
| CONSTANT SPEED (Pilot Only): | | PC CONTROL: |
| A. W/Compressor Motor Starter | B. W/Compressor Motor Starter | |
| C. W/O Compressor Motor Starter | D. W/O Compressor Motor Starter | |

COLUMN 9 — CONTROL BOX STARTER (Per HP/Voltage)

- | | |
|------------------|------------------|
| B. 40 HP — 230 V | F. 50 HP — 230 V |
| C. 40 HP — 460 V | G. 50 HP — 460 V |
| D. 40 HP — 575 V | H. 50 HP — 575 V |

Note: 200 V applications
not coded — see Engineering
for Part/BOM No's.

COLUMN 10 — ENCLOSURE & AIR FILTER

- | | |
|--------------------------------------|--|
| A. Std. Encl. W/Baffles — Std. Fltr. | C. Std. Encl. W/O Baffles — Std. Fltr. |
| B. Std. Encl. W/Baffles — HD Fltr. | D. Std. Encl. W/O Baffles — HD Fltr. |

COLUMN 11 — OIL COOLERS

- E. Air Cooled — Aluminum Core — W/Aftercooler
- F. Air Cooled — Aluminum Core — W/Aftercooler (Ext. Corrosion Resistant)
- I. Fresh Water Cooled — No Aftercooler or Regulator
- K. Fresh Water Cooled — W/Aftercooler — No Regulator
- L. Fresh Water Cooled — W/Aftercooler — 50 HP, 100 PSI, 50 HZ Units Only
- M. Fresh Water Cooled — No Aftercooler — W/Regulator
- O. Fresh Water Cooled — W/Aftercooler & Regulator
- P. Fresh Water Cooled — W/Aftercooler — W/Water Temp. Regulator — 50 HP, 100 PSI, 50 HZ Units Only
- U. Salt Water Cooled — No Aftercooler or Regulator
- V. Salt Water Cooled — W/Aftercooler — No Regulator
- W. Salt Water Cooled — No Aftercooler — W/Regulator
- X. Salt Water Cooled — W/Aftercooler & Regulator

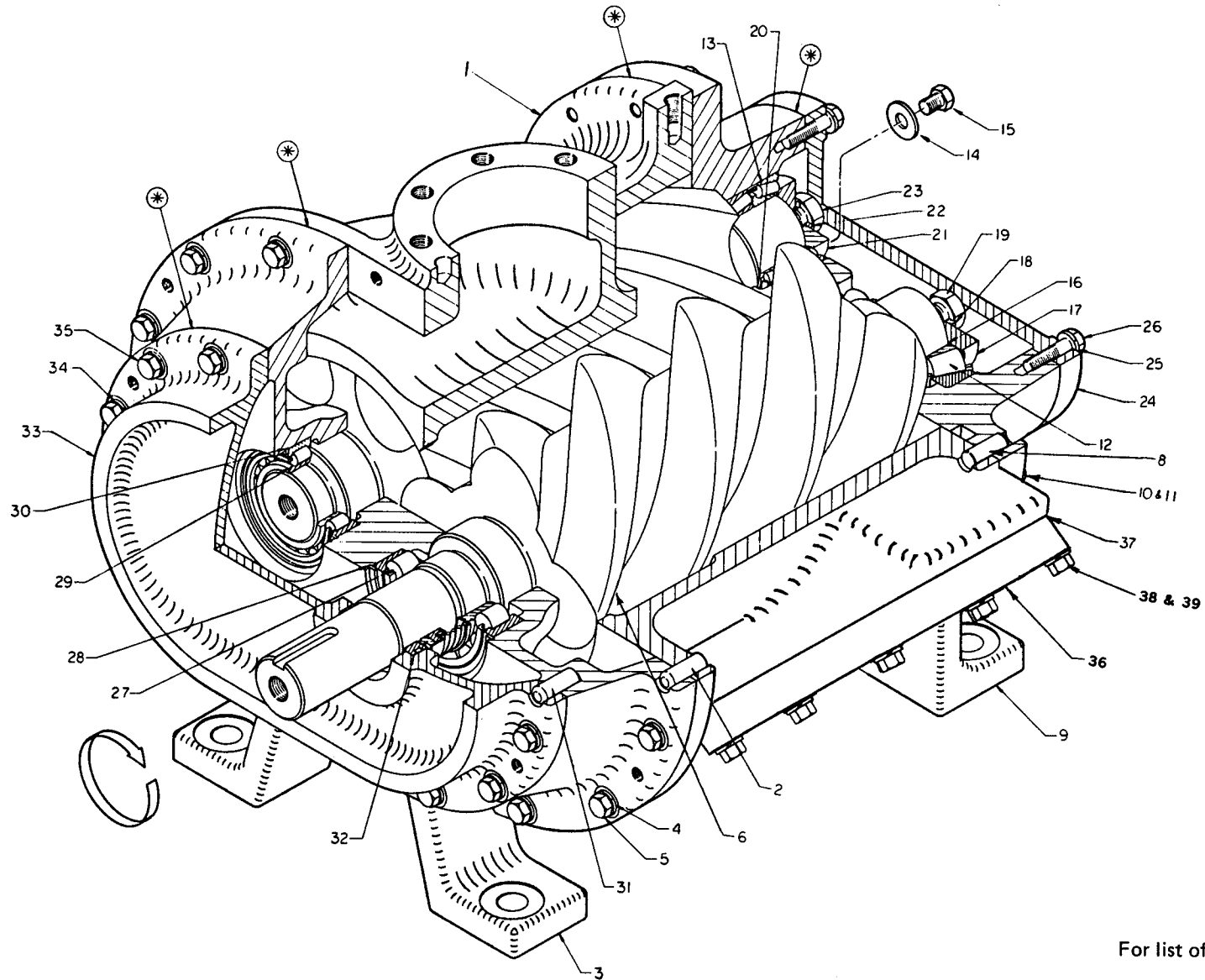
COLUMN 12 — COOLER ELECTRICAL

- T. Magnetic Water Shutoff Valve — Nema 1 — Fresh Water
- U. Magnetic Water Shutoff Valve — Nema 4 — Fresh Water

COLUMN 13 — COMPRESSOR DRIVE MOTOR

- | | |
|------------------------|-------------------------|
| A. 200 V — 60 HZ — ODP | M. 200 V — 60 HZ — TEFC |
| B. 230 V — 60 HZ — ODP | N. 230 V — 60 HZ — TEFC |
| C. 460 V — 60 HZ — ODP | O. 460 V — 60 HZ — TEFC |
| D. 575 V — 60 HZ — ODP | P. 575 V — 60 HZ — TEFC |

BARE COMPRESSOR



For list of parts see page 5.

E76920

ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.

Ref. No.	Name of Part	Qty. Req. Per Comp.	Models ECH HF & JF 40 HP - 7N** 50 HP - 7D** Part No.	Models ECH HF & JF 40 HP - 7P** 50 HP - 7F** Part No.	Models ECH HF 40 HP - 7D** 50 HP - 7D** Part No.	Models ECH HF 40 HP - 7F** Part No.
	BARE COMPRESSOR.....	1	SSHMBB01	SSHMBB02	SSHMBB03	SSHMBB04
1	CYLINDER.....	1	202SSH002	202SSH002	202SSH002	202SSH002
2	PIN-DOWEL, Inlet Bearing Housing to Cylinder.....	2	62M83	62M83	62M83	62M83
3	HOUSING-BEARING, Inlet End.....	1	200SSH006	200SSH006	200SSH006	200SSH006
4	WASHER-LOCK, Inlet Bearing Housing to Cylinder.....	16	95B3	95B3	95B3	95B3
5	SCREW-HEX CAP, Inlet Bearing Housing to Cylinder.....	16	75A2	75A2	75A2	75A2
6	ROTOR KIT (Main & Secondary Pair).....	1	SSH77081	SSH77082	SSH77083	SSH77084
8	PIN-DOWEL.....	2	62M83	62M83	62M83	62M83
9	HOUSING-BEARING, Discharge End.....	1	202SSH006	202SSH006	202SSH006	202SSH006
+	PLUG-HEX HEAD PIPE, To Discharge Bearing Housing.....	2	64T50	64T50	64T50	64T50
+	PLUG-CSK HEAD PIPE.....	1	64B5	64B5	64B5	64B5
10	SCREW-HEX CAP, Bearing Housing to Cylinder.....	9	75A9	75A9	75A9	75A9
10	SCREW-HEX CAP.....	6	75A2	75A2	75A2	75A2
11	WASHER-LOCK.....	15	95B3	95B3	95B3	95B3
12	BEARING-ROLLER, Discharge End Main Rotor.....	1	12BA91	12BA91	12BA91	12BA91
13	BEARING-ROLLER, Discharge Secondary Rotor (Consists of [2] Bearings & Cup Spacer).....	1	12BA90	12BA90	12BA90	12BA90
14	WASHER-PLAIN, Discharge End Secondary Rotor.....	2	95A3	95A3	95A3	95A3
15	SCREW-HEX CAP, Discharge End Secondary Rotor.....	2	75A5N	75A5N	75A5N	75A5N
16	SHIM SET, Discharge End Main Rotor Bearing.....	1	77H54	77H54	77H54	77H54
17	PLATE-BEARING RETAINER, Disch. End Main Rotor Bearing...	1	200SSM253	200SSM253	200SSM253	200SSM253
19	SCREW-HEX CAP, Discharge End Main Rotor Bearing.....	1	75A29N	75A29N	75A29N	75A29N
20	SHIM SET, Discharge End Secondary Rotor.....	1	77H53	77H53	77H53	77H53
21	PLATE-BEARING RETAINER, Disch. End Secondary Rotor Brg..	1	200SSH253	200SSH253	200SSH253	200SSH253
23	SCREW-HEX CAP, Disch. End Secondary Rotor Bearing.....	1	75A29N	75A29N	75A29N	75A29N
24	PLATE-BEARING COVER, Discharge End.....	1	200SSH315	200SSH315	200SSH315	200SSH315
25	WASHER-LOCK.....	9	95B3	95B3	95B3	95B3
25	GASKET-RING.....	3	25F13	25F13	25F13	25F13
26	SCREW-HEX CAP.....	9	75A7	75A7	75A7	75A7
26	SCREW-HEX CAP.....	3	75A7N	75A7N	75A7N	75A7N
27	BEARING-ROLLER, Inlet End Main Rotor.....	1	12BA130	12BA130	12BA130	12BA130
28	RING-RETAINING, Inlet End Main Rotor.....	1	74D38	74D38	74D38	74D38
29	BEARING-ROLLER, Inlet End Secondary Rotor.....	1	12BA88	12BA88	12BA88	12BA88
30	RING-RETAINING, Inlet End Secondary Rotor.....	1	74D37	74D37	74D37	74D37
31	PIN-DOWEL, Seal Housing to Cylinder.....	2	62M83	62M83	62M83	62M83
32	SEAL-SHAFT, Main Rotor.....	1	60DD98	60DD98	60DD98	60DD98
33	HOUSING-SEAL, Inlet End.....	1	200SSH362	200SSH362	200SSH362	200SSH362
34	WASHER-LOCK, Seal Housing to Cylinder.....	16	95B3	95B3	95B3	95B3
35	SCREW-HEX CAP, Seal Housing to Cylinder.....	16	75A2	75A2	75A2	75A2
36	COVER, Cylinder.....	2	200SSH225	200SSH225	200SSH225	200SSH225
37	GASKET.....	2	201SSH715	201SSH715	201SSH715	201SSH715
+	COVER, Oil Sump.....	1	201SSH225	201SSH225	201SSH225	201SSH225
+	GASKET.....	1	200SSH715	200SSH715	200SSH715	200SSH715
38	SCREW-HEX CAP, Covers to Cylinder.....	28	75A7	75A7	75A7	75A7
39	WASHER-LOCK.....	28	95B3	95B3	95B3	95B3
+	PLUG-SqHd PIPE, Cover Drain.....	3	64AA6	64AA6	64AA6	64AA6
+	PLUG-SqHd PIPE.....	1	64A25	64A25	64A25	64A25
+	PLUG-HEX HEAD PIPE, Bottom of Cylinder.....	1	64T53	64T53	64T53	64T53

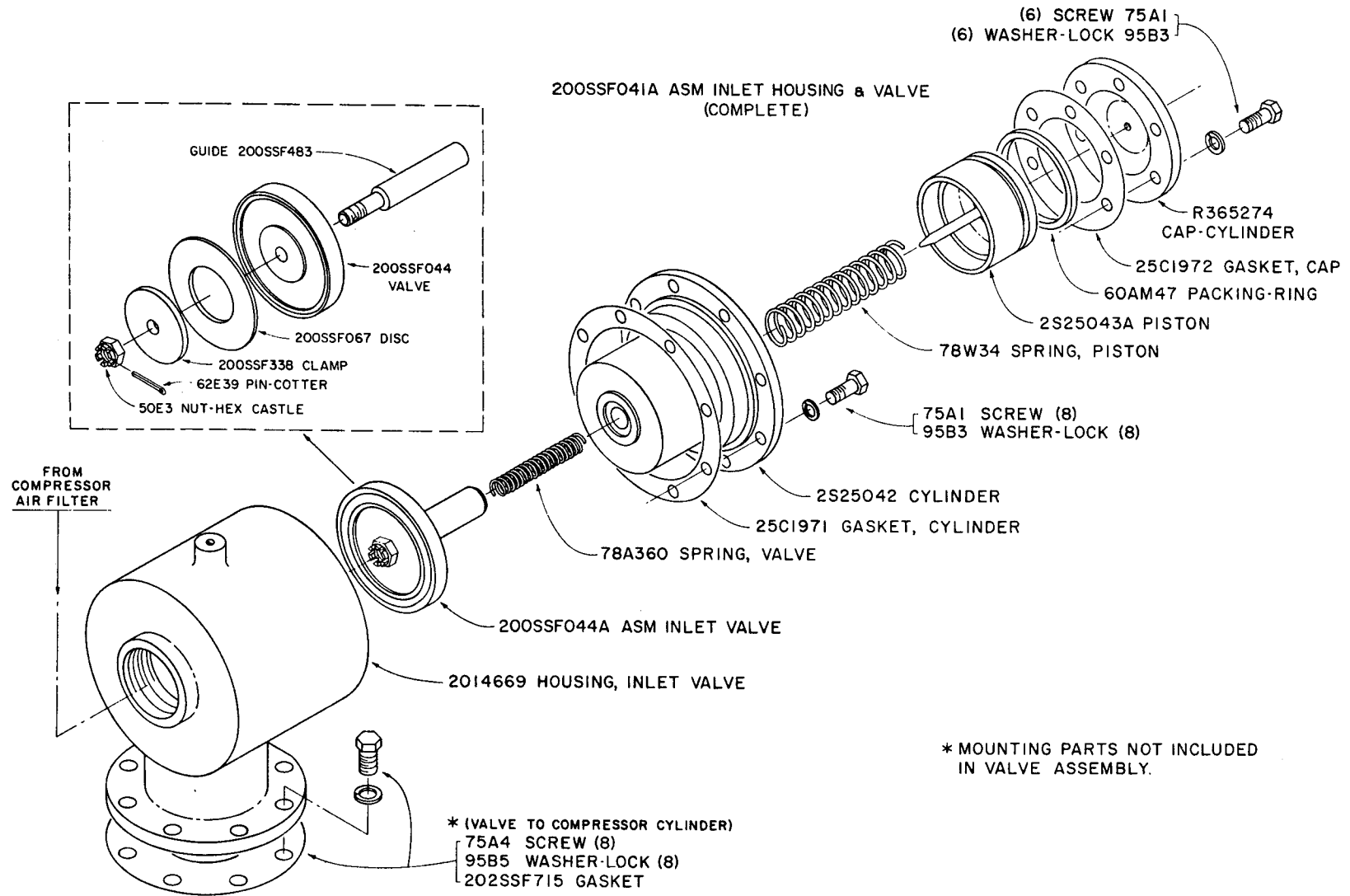
* Joints marked with asterisk sealed with Gardner-Denver® Gasket Eliminator Part No. 25BC22.

** See Matrix/Menu page for Column 7 Designator.

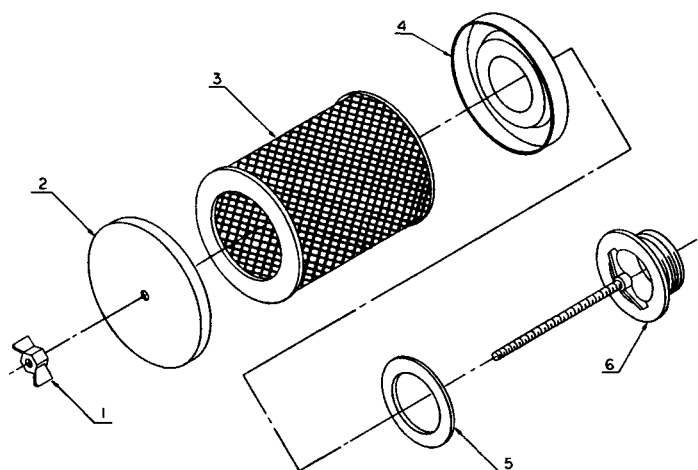
+ Not shown on illustration.

Note: For Gasket & Shim Kit order Part No. ECH76365.

INLET VALVE & MOUNTING GROUP



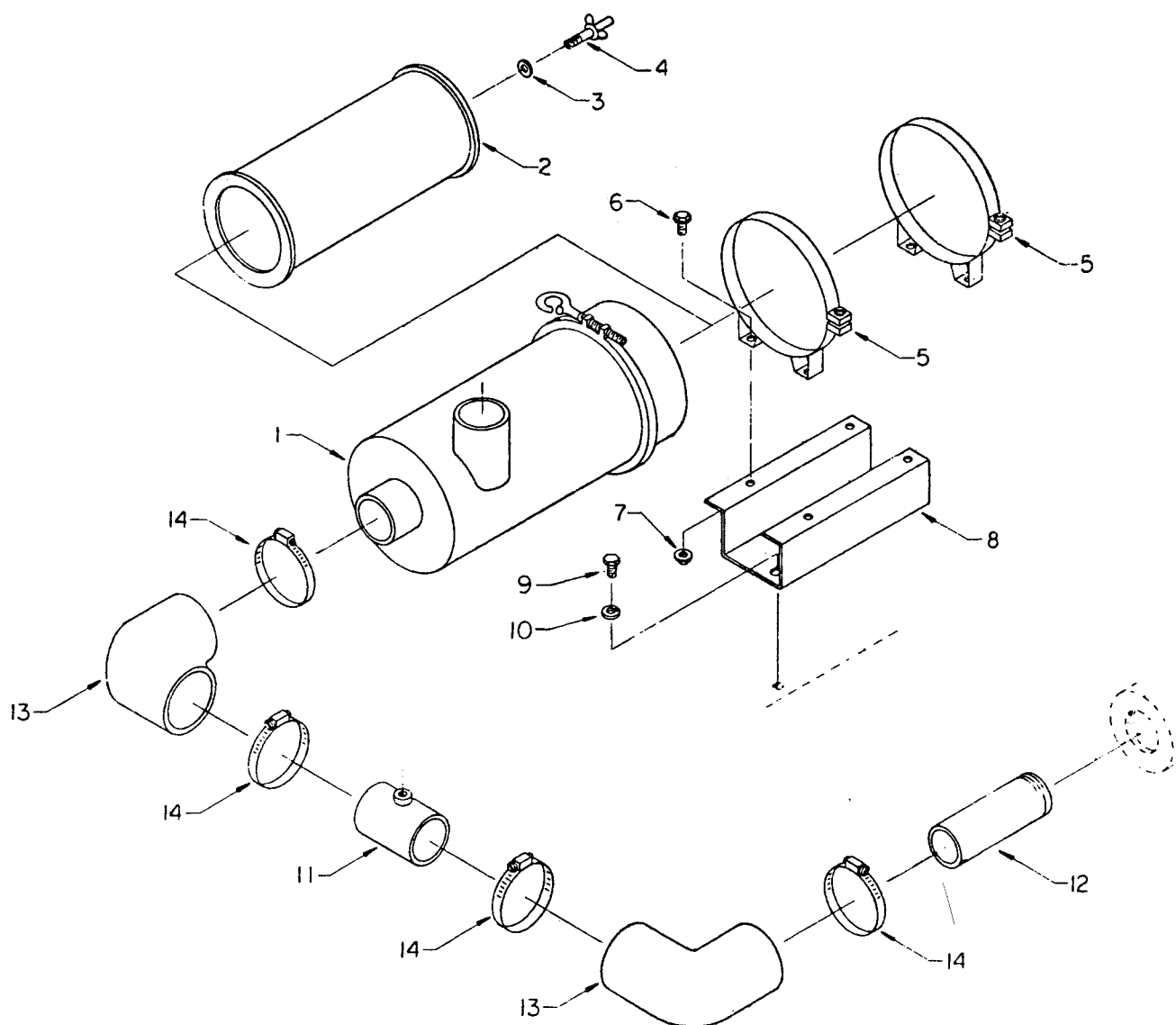
ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.



C76763

Ref. No.	Name of Part	Qty. Req. Per Comp.	Models Column Option 10-A
AIR FILTER GROUP – STANDARD (Nonmetallic)			Part No.
	COMPLETE AIR FILTER, Incl. Ref. No. 1 thru 6	1	5L109
1	NUT-WING	1	2109583
2	TOP	1	2109708
3	ELEMENT	1	2008616
4	PLATE-BASE	1	2109587
5	GASKET	1	2008150
6	BASE & STEM	1	— — —

ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.

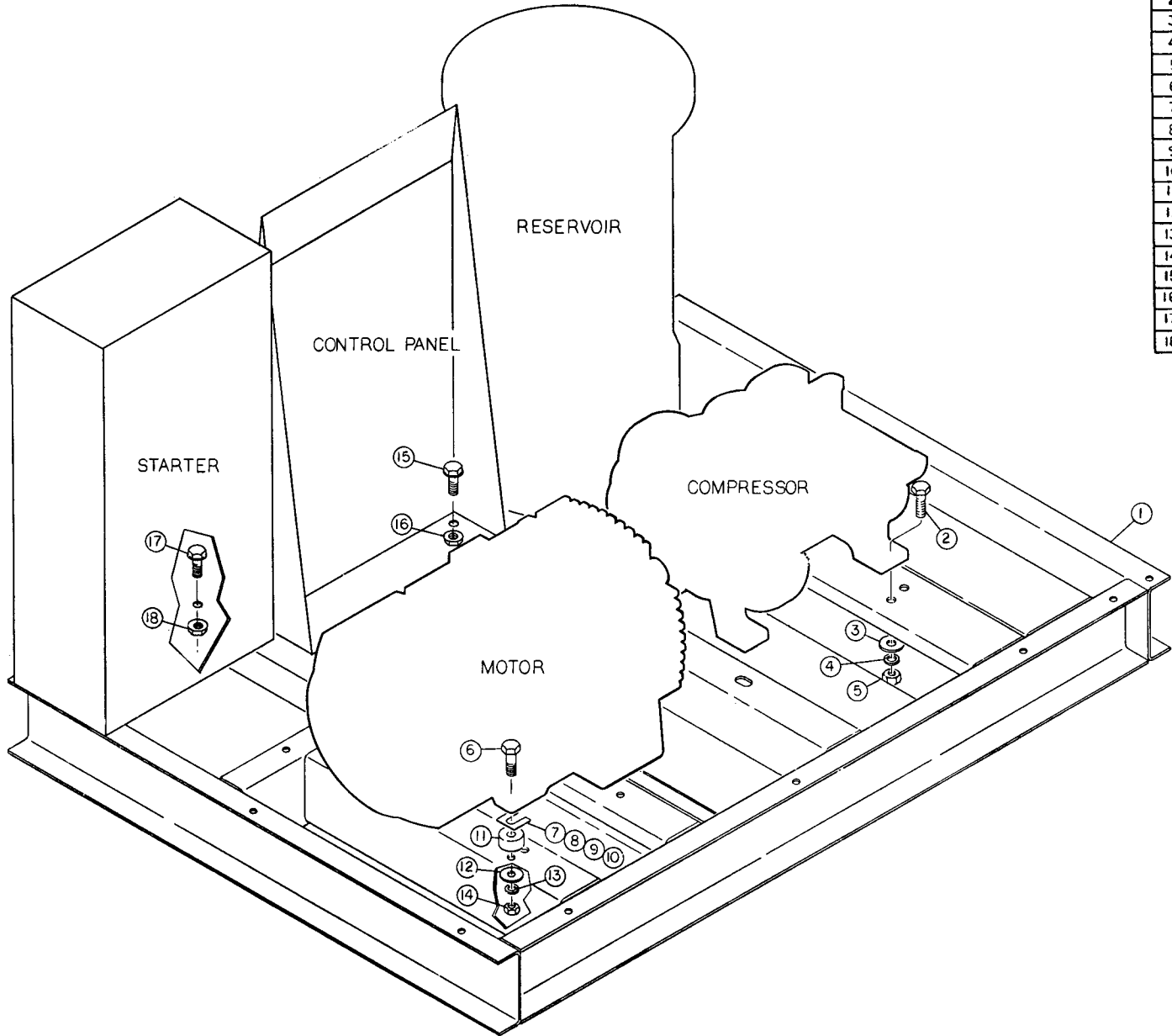


D76598

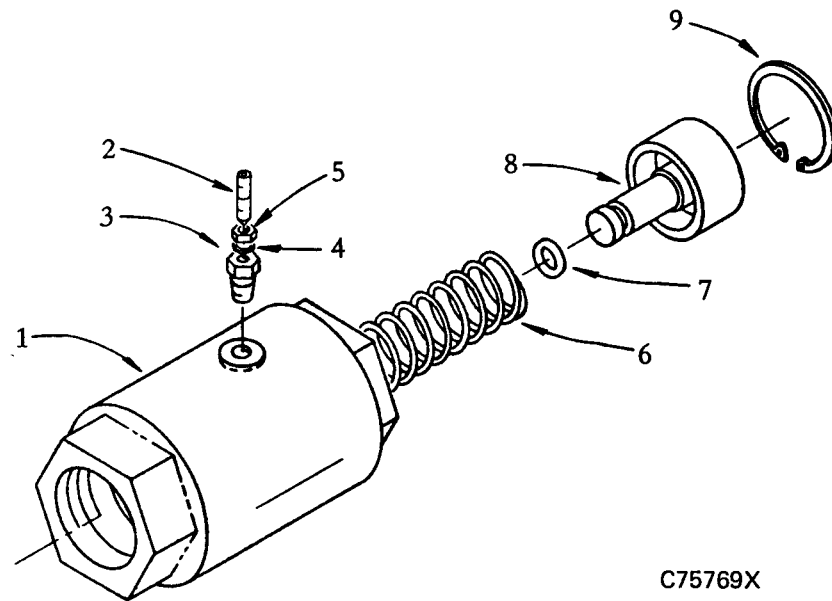
Ref. No.	Name of Part	Qty. Req. Per Comp.	Models Column Option 10-B
HEAVY DUTY AIR FILTER			Part No.
1	FILTER-AIR, Heavy Duty, Includes Ref. No. 2, 3, 4 & 5	1	5B476
2	ASM ELEMENT, Air Filter	1	2010228
3	WASHER-SEAL, Air Filter	1	2010230
4	BOLT-WING, Air Filter	1	2010229
5	BAND-MOUNTING, Filter to Bracket	2	5L30
6	SCREW-FLANGED, Filter to Bracket	4	75LM50
7	NUT-FLANGED, Filter to Bracket	4	50AW4
8	BRACKET, Filter	1	201ECH017
9	SCREW-HEX CAP, Bracket to Compressor	2	75A4
10	WASHER-LOCK, Bracket to Compressor	2	95B5
11	TUBE, Filter	1	200ECH294
12	NIPPLE-PIPE, Filter to Compressor	1	63AJ40X66
13	HOSE-MOLDED	2	29Z108
14	CLAMP-HOSE	4	29B34

BASE MOUNTING GROUP

DET	QTY	PART NO.	NAME
1	1	201ECH285	BASE
2	4	75A47	SCREW-HEX CAP
3	4	95A7	WASHER-PLAIN
4	4	95B7	WASHER-LOCK
5	4	50B7	NUT-HEX
6	4	75A60	SCREW-HEX CAP
7	4	77E11	SHIM
8	4	77E12	SHIM
9	4	77E13	SHIM
10	4	77E14	SHIM
11	4	200ES0144	SPACER
12	4	95A7	WASHER-PLAIN
13	4	95B7	WASHER-LOCK
14	4	50B7	NUT-HEX
15	4	75K48	SCREW-FLANGED
16	4	50AW5	NUT-FLANGED
17	4	75K48	SCREW-FLANGED
18	4	50AW5	NUT-FLANGED

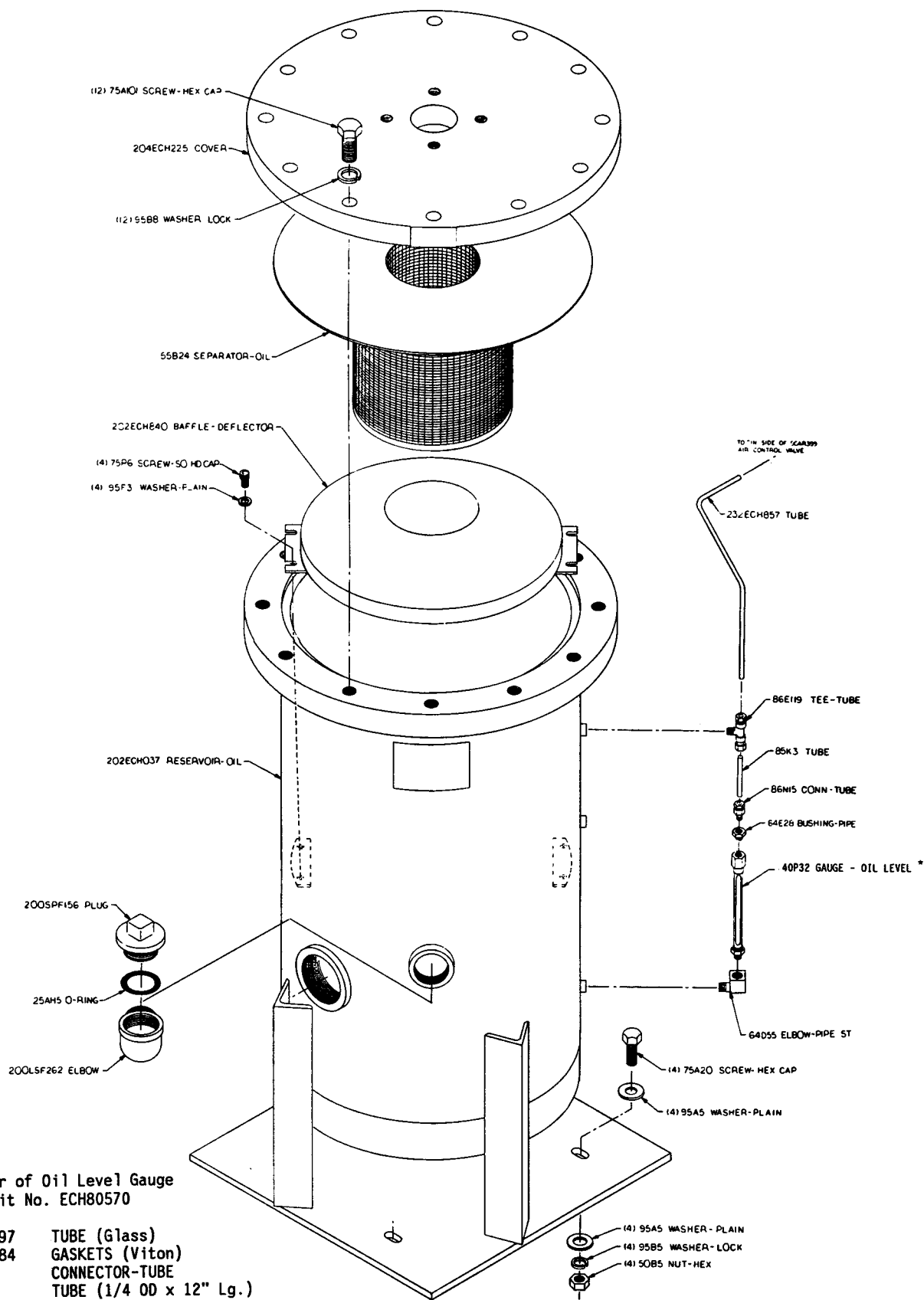


ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.



Ref. No.	Name of Part	Qty. Req. Per Comp.	All ECH Models
MINIMUM PRESSURE VALVE			Part No.
	ASM MINIMUM PRESSURE VALVE, Incl. Ref. No. 1 thru 6	1	200SPF527A
1	HOUSING, Valve	1	202SPF182
2	SCREW-ADJUSTING	1	200ESM176
3	ADAPTOR	1	200ESM170
4	GASKET-RING	1	25F39
5	LOCKNUT	1	50AW17
6	SPRING	1	78W13
7	O-RING	1	25AM18
8	VALVE	1	200SPF527
9	RING-RETAINING	1	65W44

OIL RESERVOIR

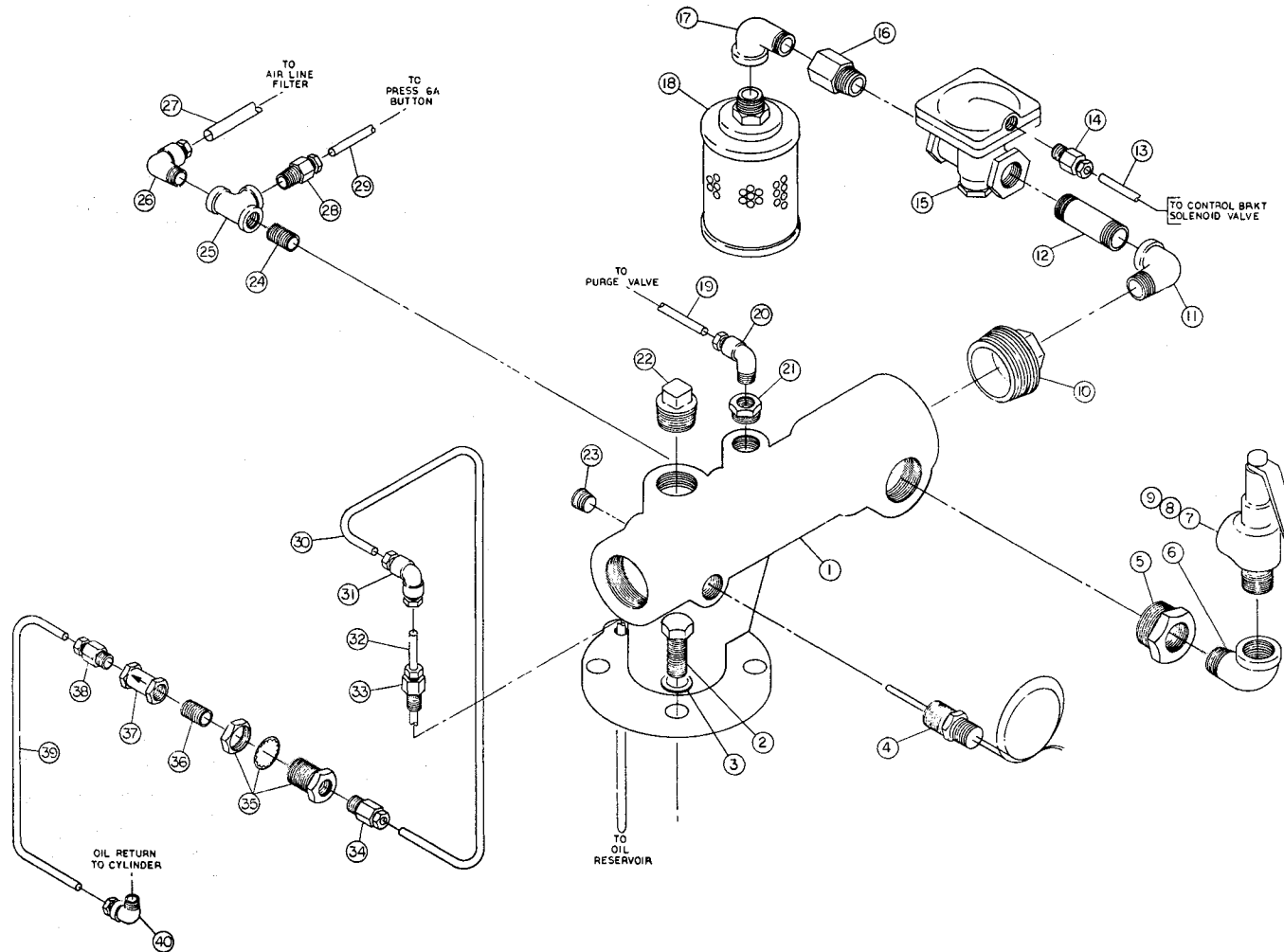


* For repair of Oil Level Gauge
furnish Kit No. ECH80570

- | | | |
|-----|---------|-------------------------|
| (1) | 2116097 | TUBE (Glass) |
| (2) | 2115884 | GASKETS (Viton) |
| (1) | 86N15 | CONNECTOR-TUBE |
| (1) | 85K3 | TUBE (1/4 OD x 12" Lg.) |
| (1) | 86E183 | NUT-TUBE |
| (1) | 64E28 | BUSHING-PIPE |

E2029276

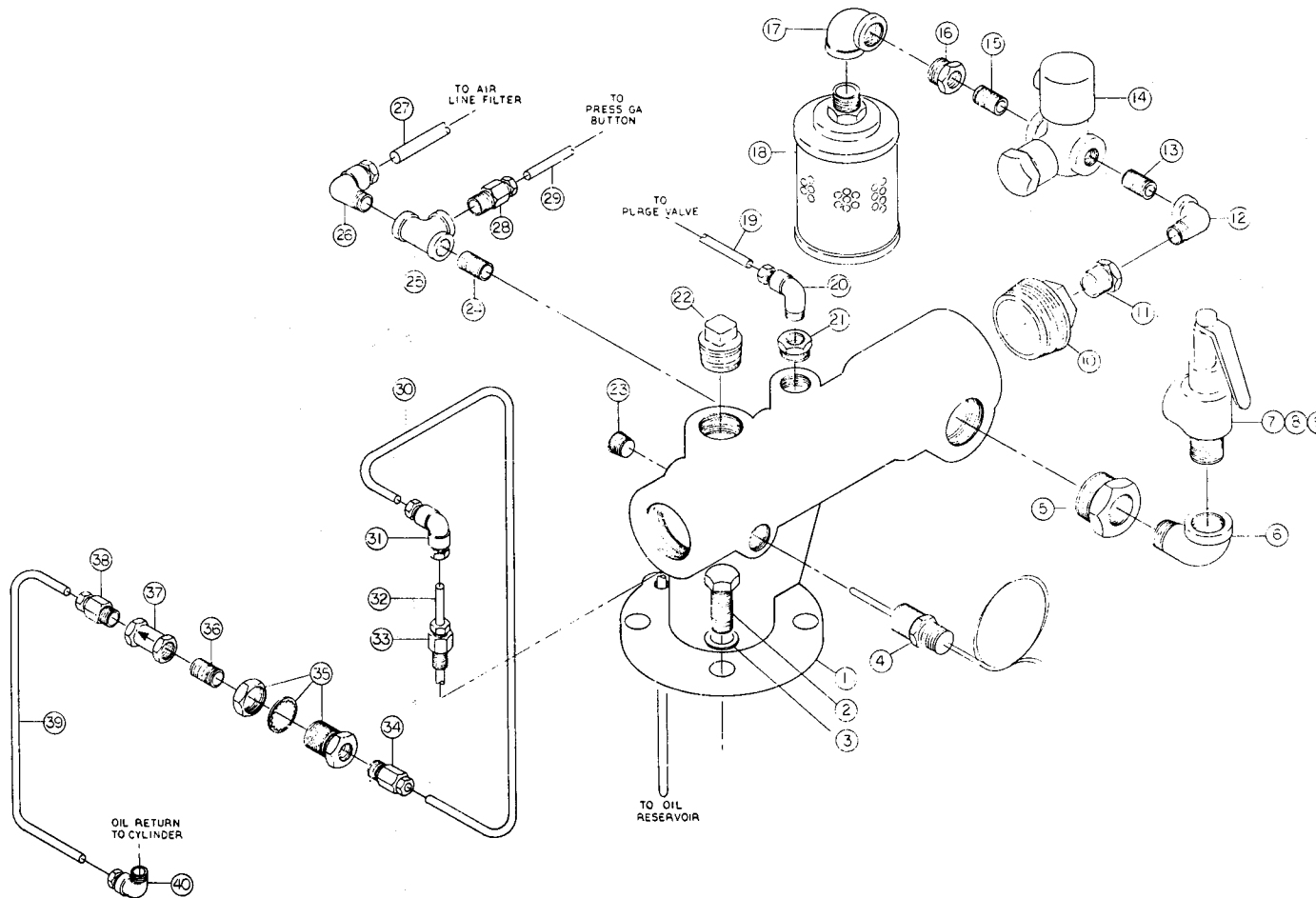
PC CONTROL DISCHARGE MANIFOLD GROUP



DET	QTY	PART NO	NAME
1	1	5600285	MANIFOLD-DISCH
2	4	75A29	SCREW-HEX CAP
3	4	25F13	GASKET-RING
4	1	21D81	TEMP-PROBE
5	1	64E6	BUSHING-PIPE
6	1	64D6G	ELBOW-PIPE ST
7	*	90AR381	VALVE-SAFETY 125*
8	*	90AR143	VALVE-SAFETY 1G5*
9	*	90AR382	VALVE SAFETY 150*
10	1	64E29	BUSHING-PIPE
11	1	64D5G	ELBOW-PIPE ST
12	1	63F36	NIPPLE-PIPE
13	—	85K3	TUBE 1/4
14	1	86E9	CONNECTOR-TUBE
15	1	90AR324	VALVE-AIR CONT
16	1	2011762	ORIFICE
17	1	64D5G	ELBOW-PIPE ST
18	1	43E6	MUFFLER
19	—	85K3	TUBE 1/4
20	1	86E60	ELBOW-TUBE
21	1	64E2	BUSHING-PIPE
22	1	64A25	PLUG-SQ HD PIPE
23	1	64AC3	PLUG-SQ HD PIPE
24	1	63D1G	NIPPLE PIPE
25	1	64G3G	TEE-PIPE
26	1	86E54	ELBOW-TUBE
27	—	85K5	TUBE 3/8
28	1	86E4	CONNECTOR-TUBE
29	—	85K3	TUBE 1/4
30	—	85K3	TUBE 1/4
31	1	86E95	ELBOW-TUBE
32	—	85K3	TUBE 1/4
33	1	86N15	CONNECTOR-TUBE
34	1	86E4	CONNECTOR-TUBE
35	1	64E8368	COUPLING-PIPE
36	1	63D1G	NIPPLE-PIPE
37	1	90AR297	VALVE-CHECK
38	1	86E4	CONNECTOR-TUBE
39	—	85K3	TUBE 1/4
40	1	86E59	ELBOW-TUBE

* SELECTIVE

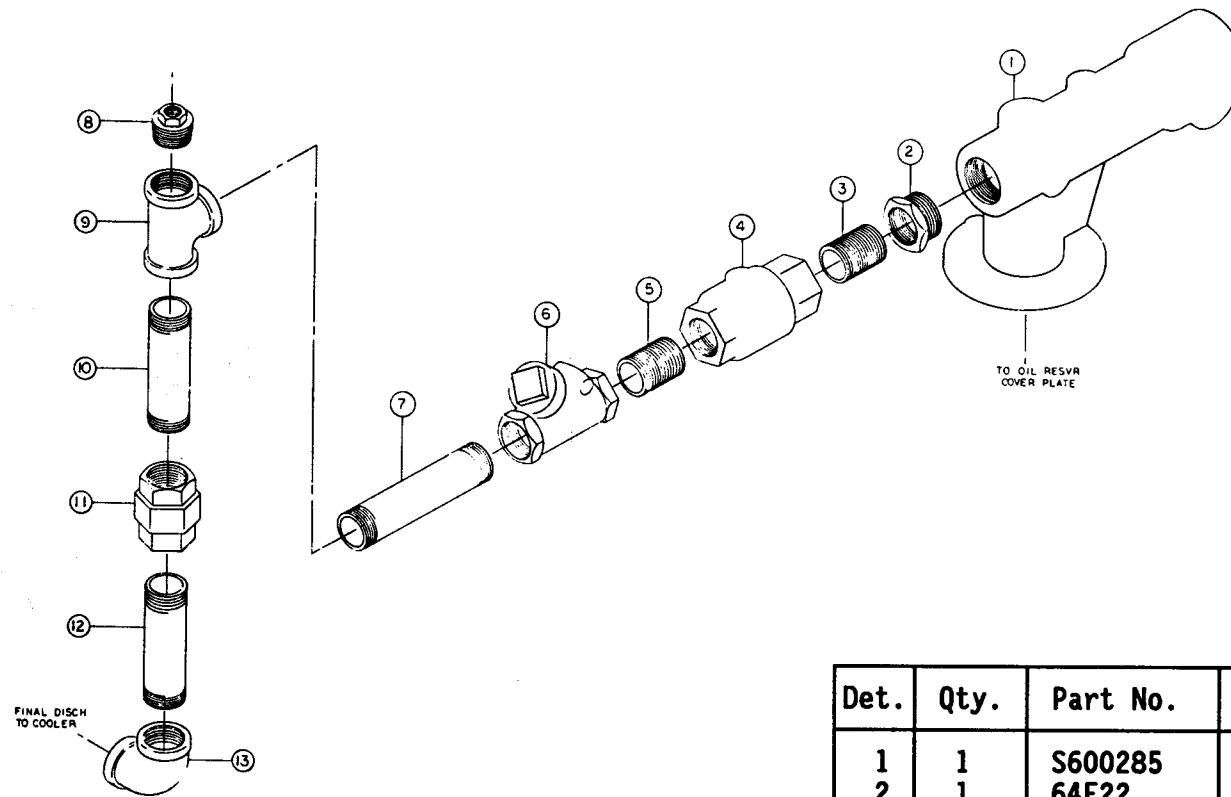
CONSTANT SPEED DISCHARGE MANIFOLD GROUP



DET	QTY	PART NO	NAME
1	1	5600285	MANIFOLD-DISCH
2	4	75A20	SCREW-HEX CAP
3	4	25F13	GASKET-RING
4	1	21D81	TEMP-PROBE
5	1	64E6	BUSHING-PIPE
6	1	64D6G	ELBOW-PIPE ST
7	*	90AR381	VALVE-SAFETY 125*
8	*	90AR143	VALVE-SAFETY 165*
9	*	90AR382	VALVE-SAFETY 150*
10	1	64E29	BUSHING-PIPE
11	1	64E2	BUSHING-PIPE
12	1	64D2G	ELBOW-PIPE ST
13	1	63D1G	NIPPLE-PIPE
14	1	91B70	VALVE-AIR CONT
15	1	63D1G	NIPPLE-PIPE
16	1	64E2	BUSHING-PIPE
17	1	64C4G	ELBOW-PIPE
18	1	43E6	MUFFLER
19	—	85K3	TUBE
20	1	86E60	ELBOW-TUBE
21	1	64E2	BUSHING-PIPE
22	1	64A25	PLUG-SQ HD PIPE
23	1	64AC3	PLUG-SQ HD PIPE
24	1	63D1G	NIPPLE-PIPE
25	1	64G3G	TEE-PIPE
26	1	86E61	ELBOW-TUBE
27	—	85K5	TUBE
28	1	86E4	CONNECTOR-TUBE
29	—	85K3	TUBE
30	—	85K3	TUBE
31	1	86E95	ELBOW-TUBE
32	—	85K3	TUBE
33	1	86N15	CONNECTOR-TUBE
34	1	86E4	CONNECTOR-TUBE
35	1	64EB368	COUPLING-PIPE
36	1	63D1G	NIPPLE-PIPE
37	1	90AR297	VALVE-CHECK
38	1	86E4	CONNECTOR-TUBE
39	—	85K3	TUBE
40	1	86E59	ELBOW-TUBE

* SELECTIVE

FINAL DISCHARGE PIPING GROUP



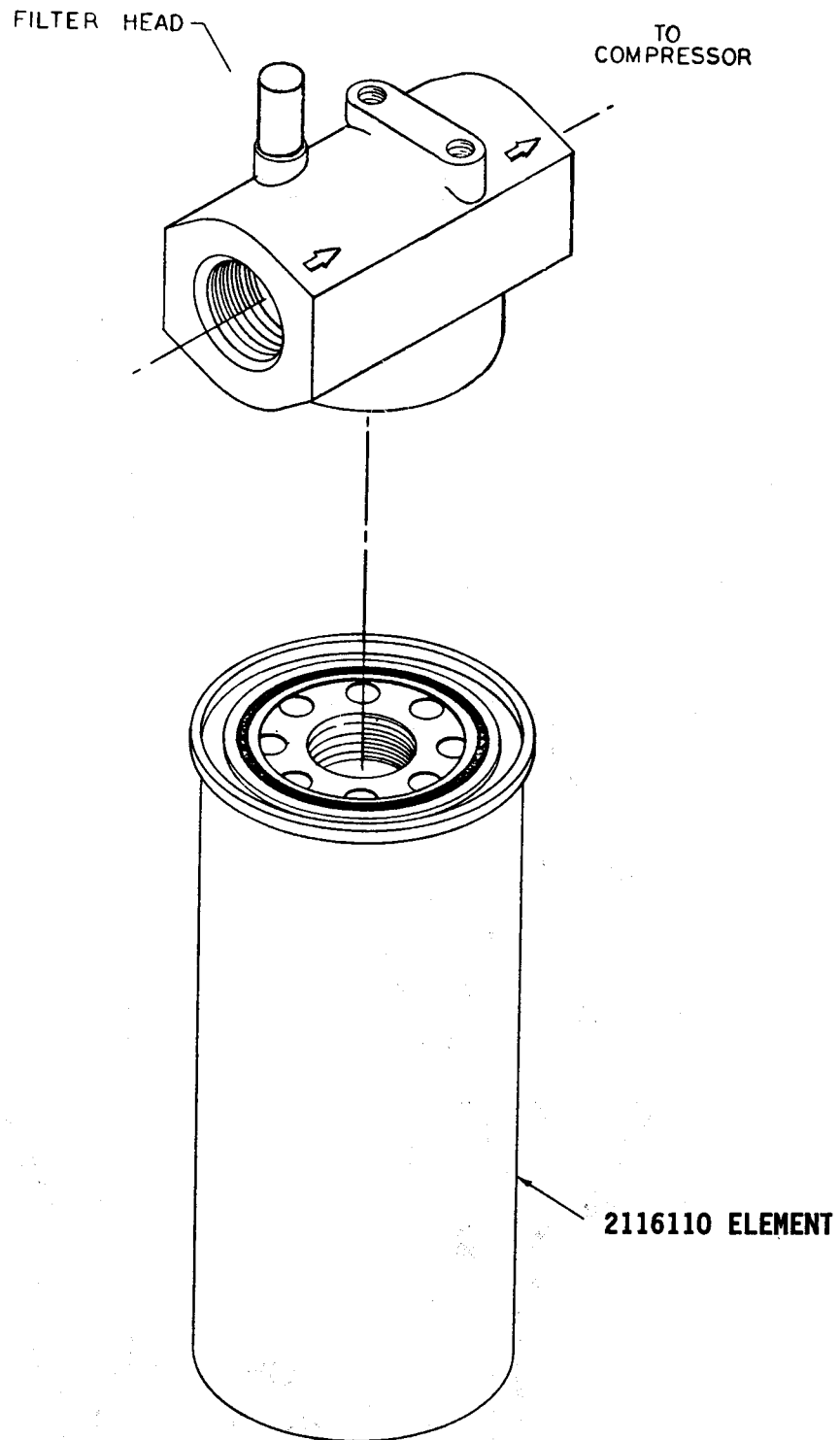
Det.	Qty.	Part No.	Name of Part
1	1	S600285	MANIFOLD-DISCH
2	1	64E22	BUSHING-PIPE
3	1	64J15G	NIPPLE-PIPE
4	1	200ECH527	ASM MIN PRESS VLV
5	1	63J26G	NIPPLE-PIPE
6	1	90J131	VALVE-CHECK
7	1	63J5G	NIPPLE-PIPE
8	1	145246	BUSHING-PIPE
9	1	64G9G	TEE-PIPE
10	1	63J7G	NIPPLE-PIPE
11	1	64Z5	UNION-PIPE
12	1	63J7G	NIPPLE-PIPE
13	1	64C7G	ELBOW-PIPE

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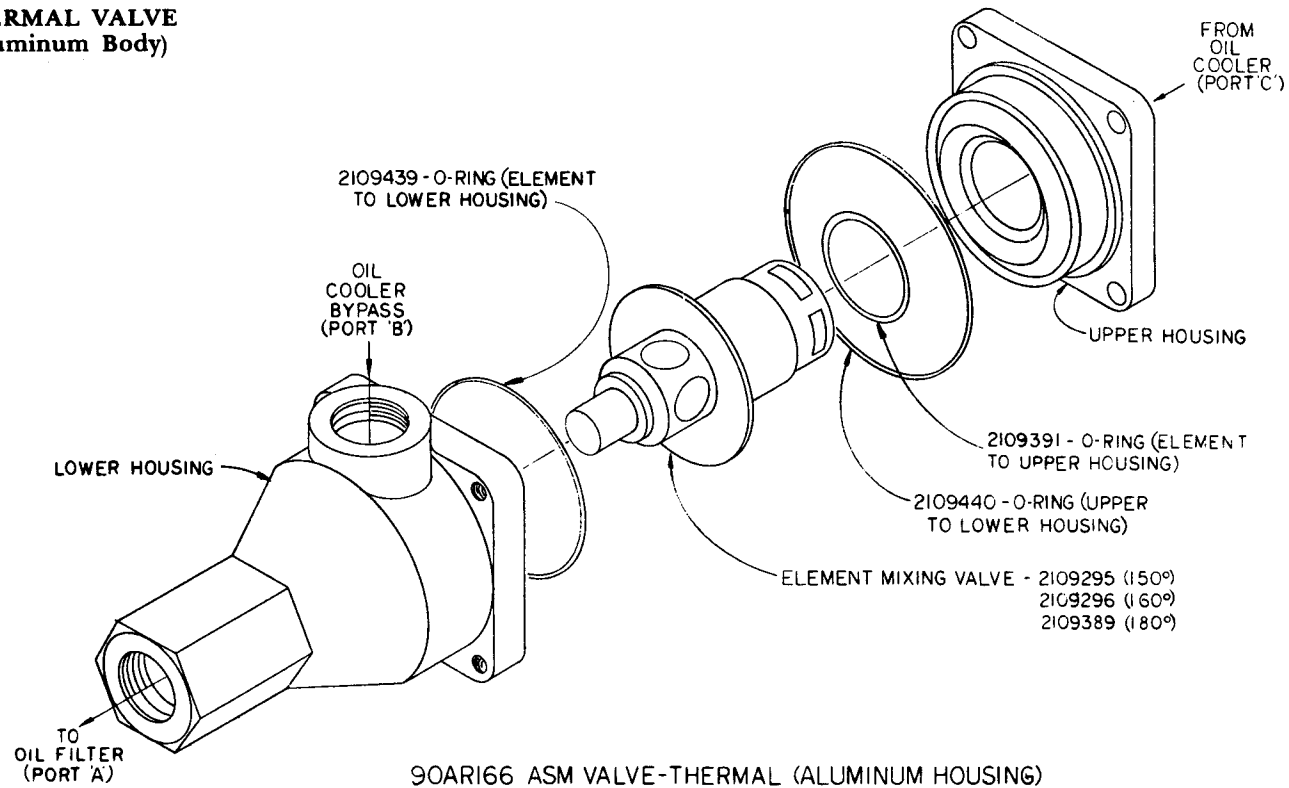
OIL FILTER - 26C26



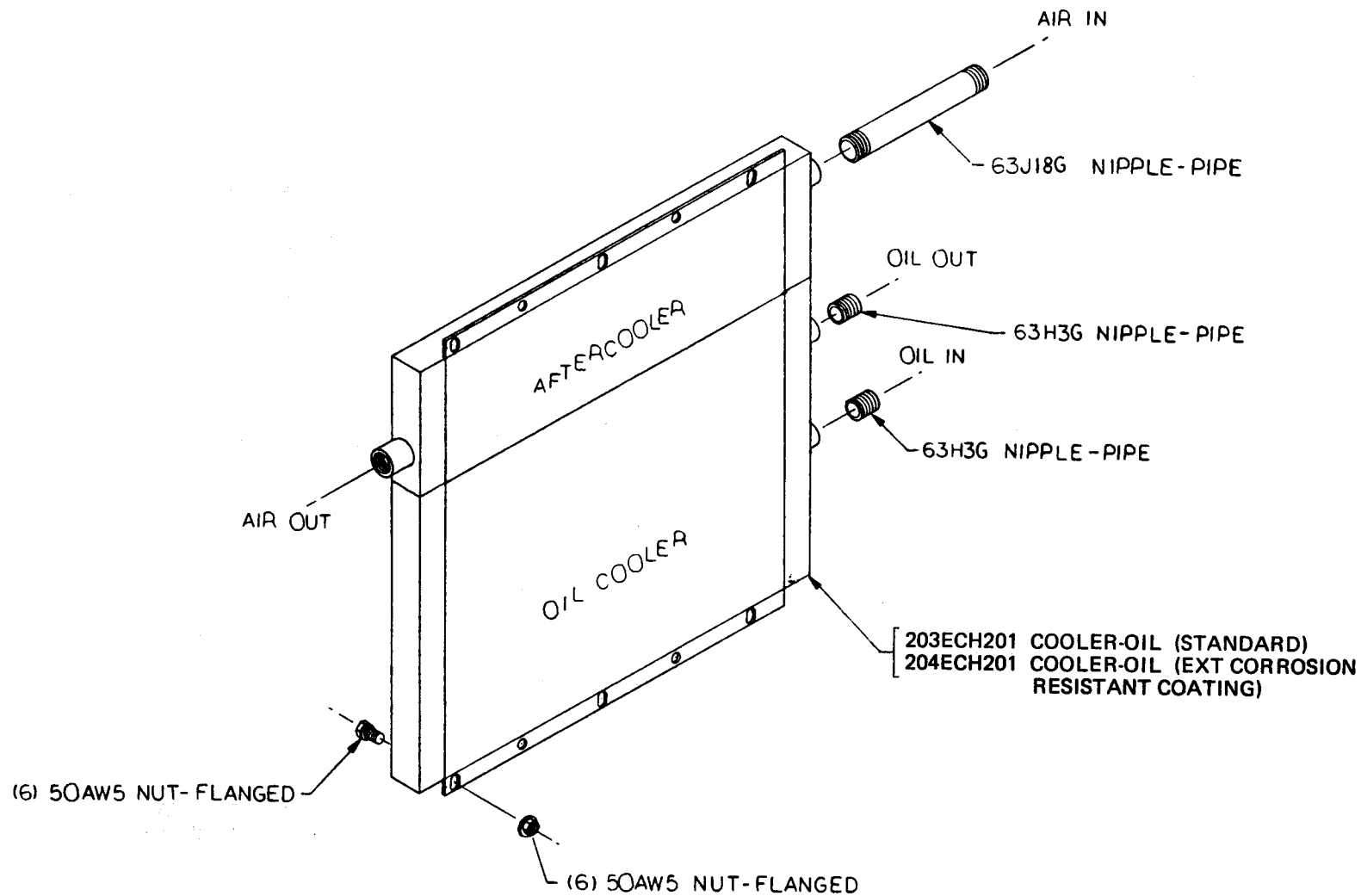
NOTE: 212ECM077 Decal mounted on element.

THERMOSTATIC MIXING VALVE

THERMAL VALVE (Aluminum Body)



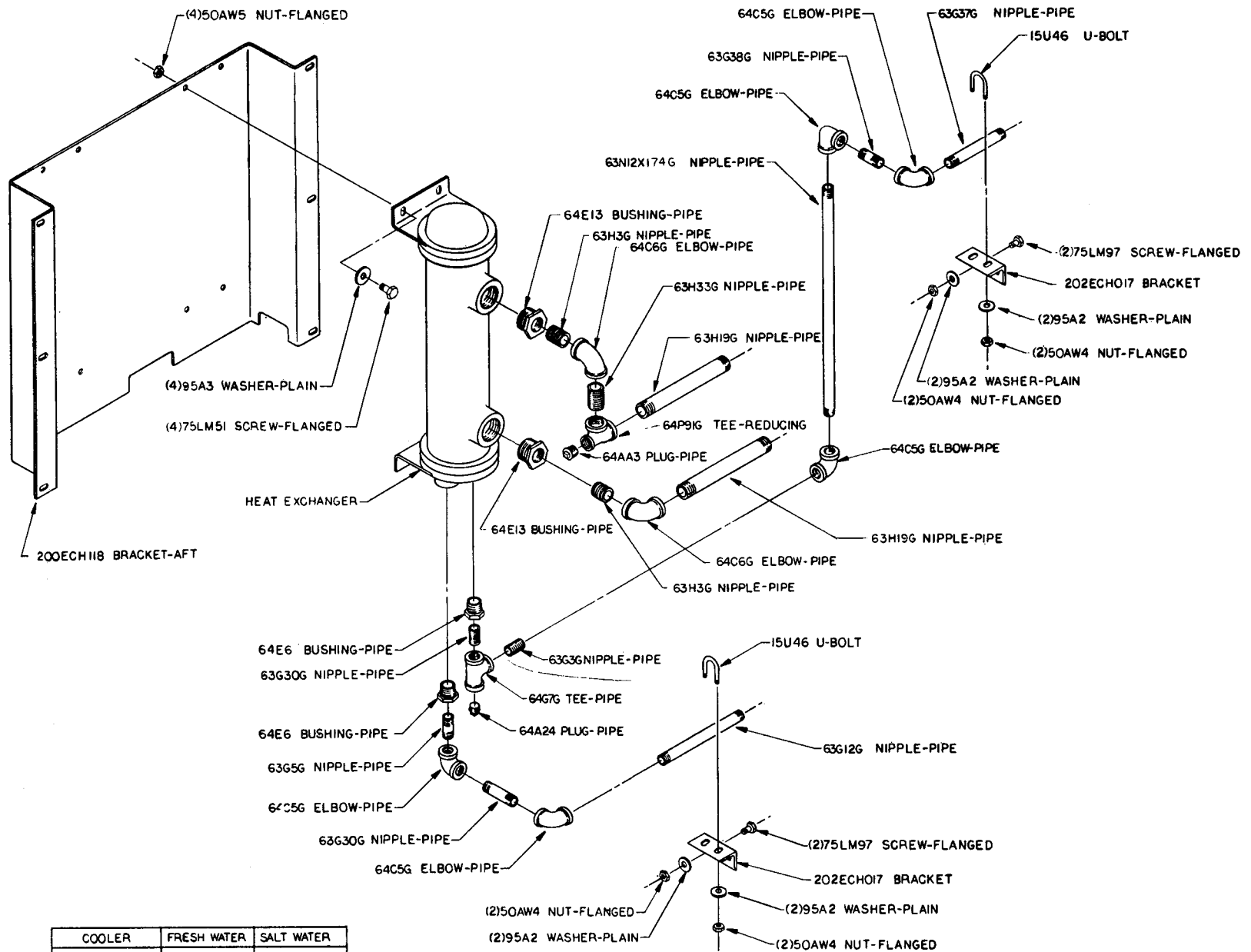
AIR-COOLED OIL COOLER



NOTE: 83C83 Separator/Trap shipped loose.

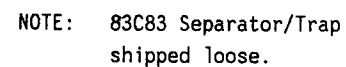
D2029395

WATER-COOLED HEAT EXCHANGER (Oil Cooler)



COOLER	FRESH WATER	SALT WATER
HEAT EXCHANGER	200ECH349	201ECH349

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3-87

E2029410

HEAT EXCHANGER REPAIR COMPONENTS

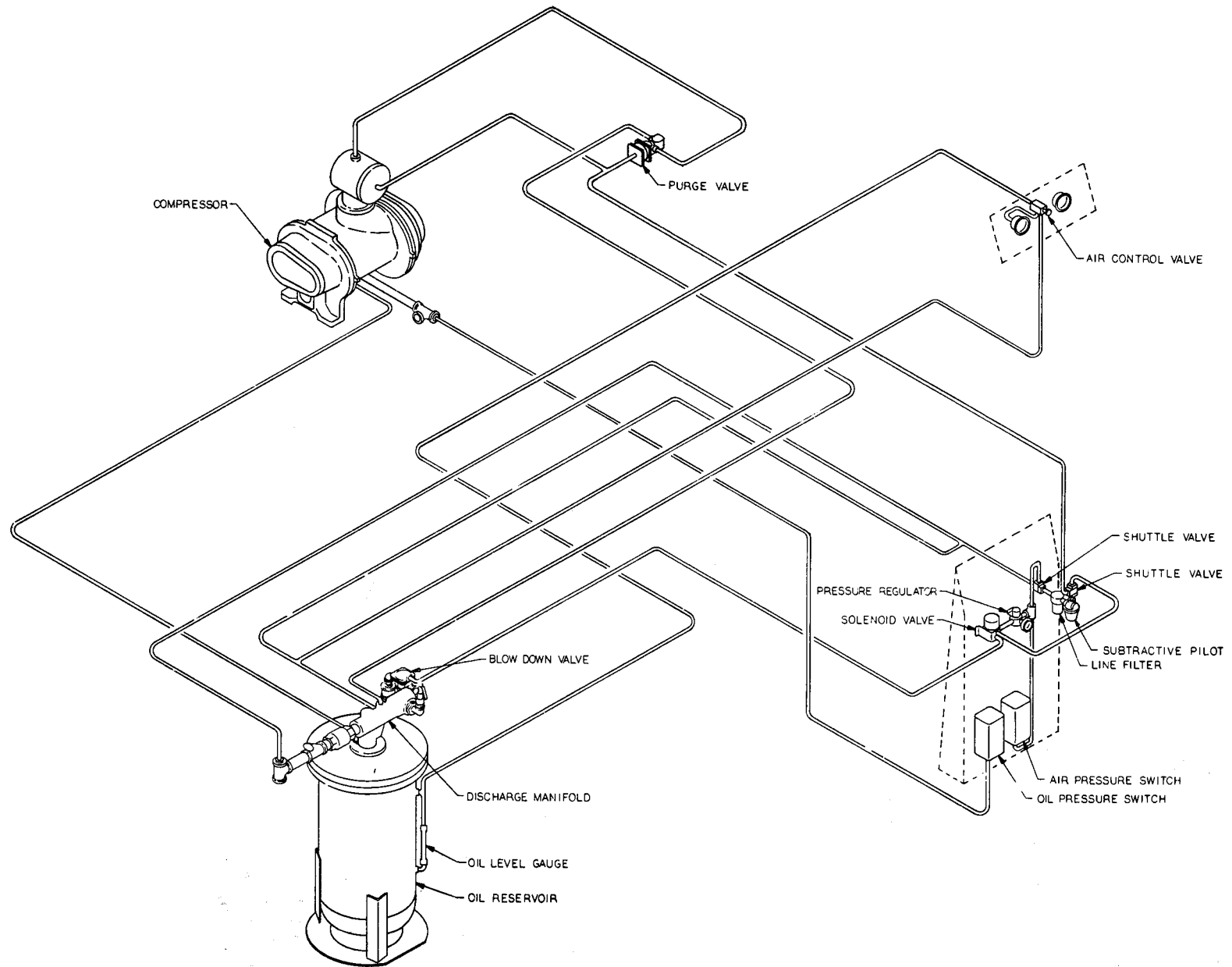
HEAT EXCHANGER, Fresh Water	200ECH349
HEAT EXCHANGER, Salt Water	201ECH349
BONNET, In/Out	2115969
BONNET, Reversing	2115971
GASKET, In/Out	2115970
GASKET, Reversing	2115972
ZINC PLUG (2)	2115973
REGULATOR-TEMPERATURE, Water*	90AR326
VALVE-SOLENOID, Water (NEMA 1)*	90AC118
VALVE-SOLENOID, Water (NEMA 4)*	90AC103

* Shipped loose — mounted by customer.

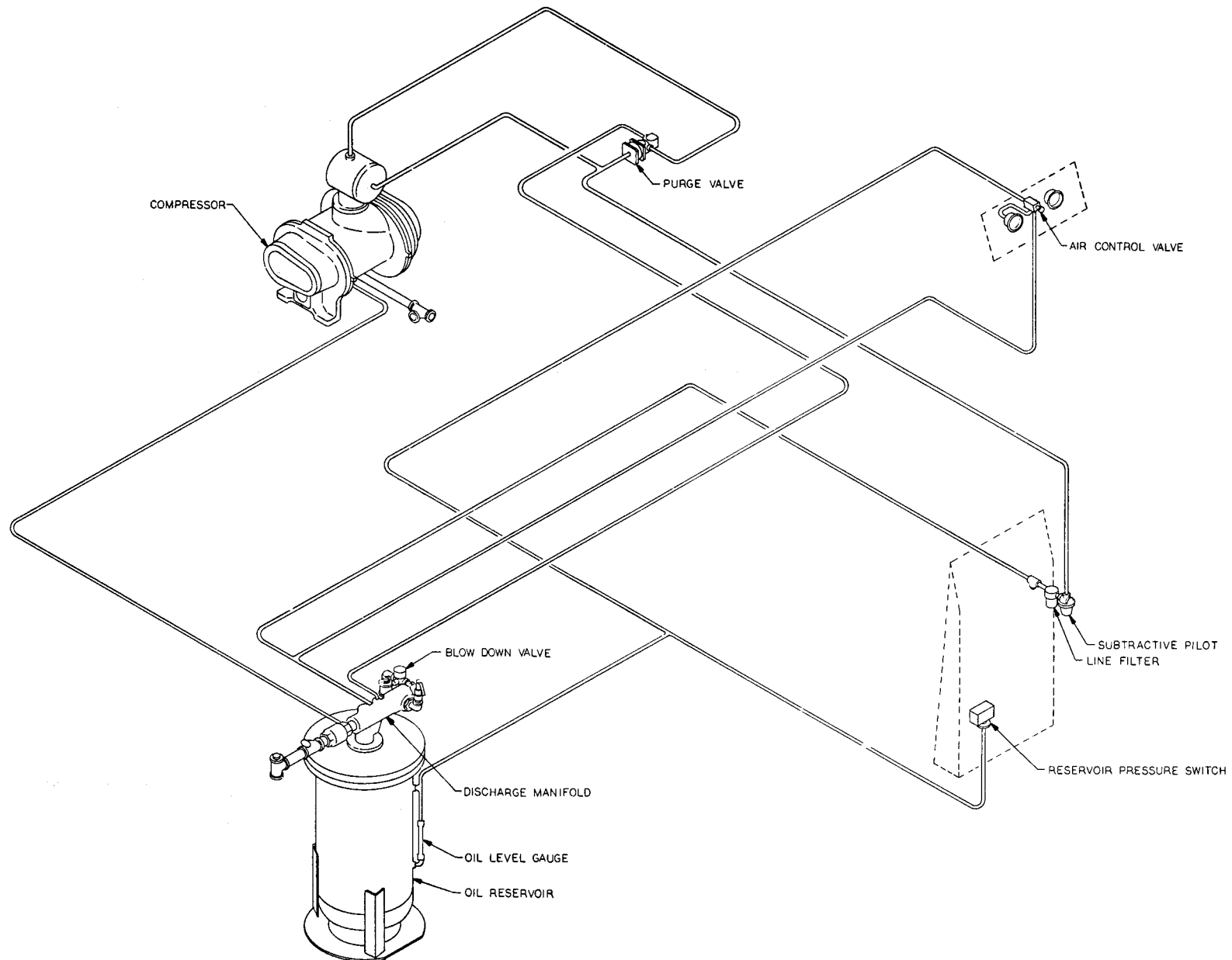
AFTERCOOLER REPAIR COMPONENTS

AFTERCOOLER, Fresh Water, Includes next 6 parts	201ESG292
BRACKET, Mounting (2)	2109062
GASKET, Inlet/Outlet	2109058
BONNET, Inlet/Outlet	2109060
GASKET, Return	2109059
BONNET, Return	2109061
ANODE-ZINC (2)	2109057
AFTERCOOLER, Salt Water, Includes next 6 parts	202ESG292
BRACKET, Mounting (2)	2109062
GASKET, Inlet/Outlet	2109058
BONNET, Inlet/Outlet	2109075
GASKET, Return	2109059
BONNET, Return	2109074
ANODE-ZINC (2)	2109057

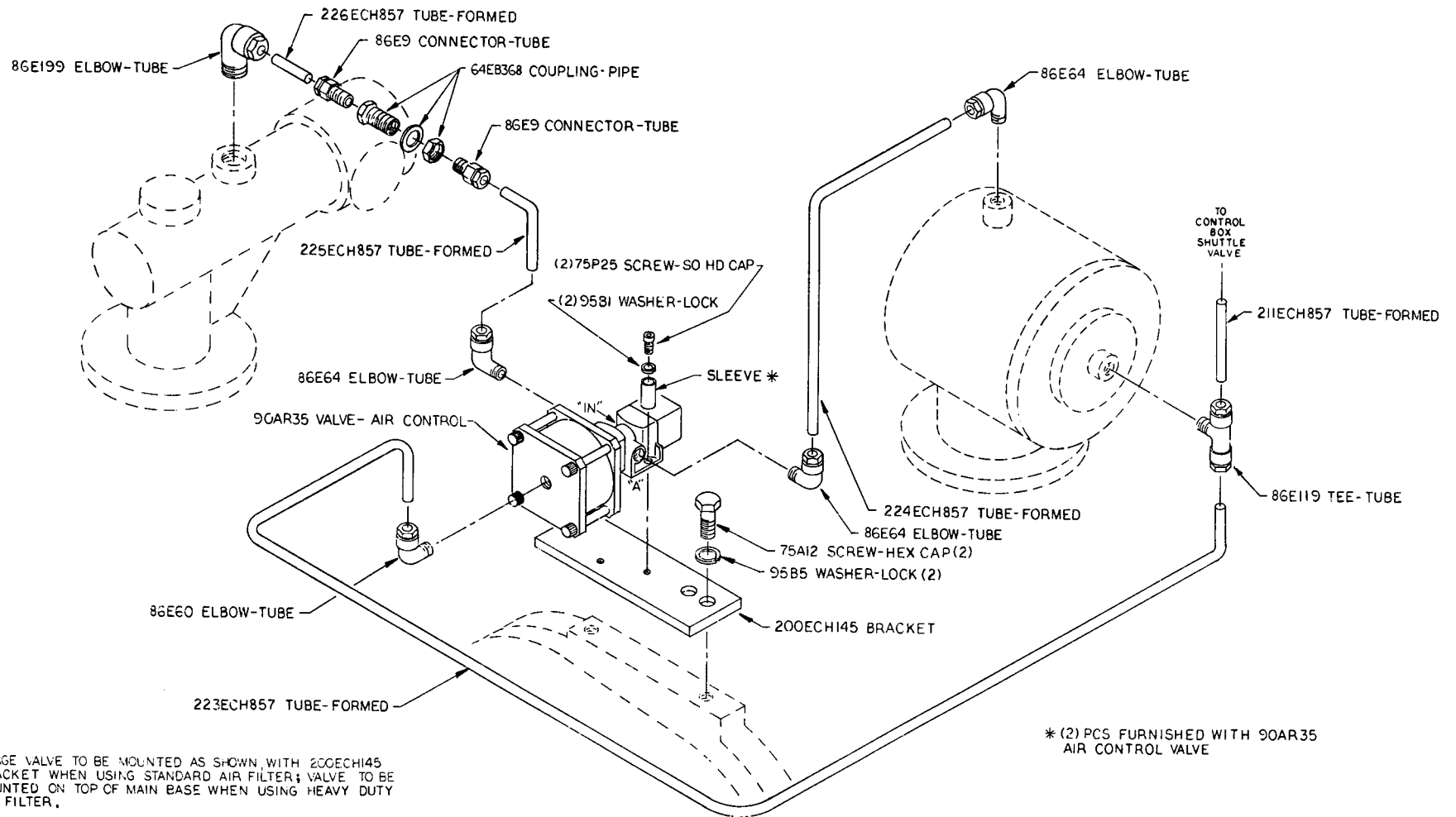
TUBING SCHEMATIC – PC CONTROL



TUBING SCHEMATIC – CONSTANT SPEED CONTROL



PURGE VALVE

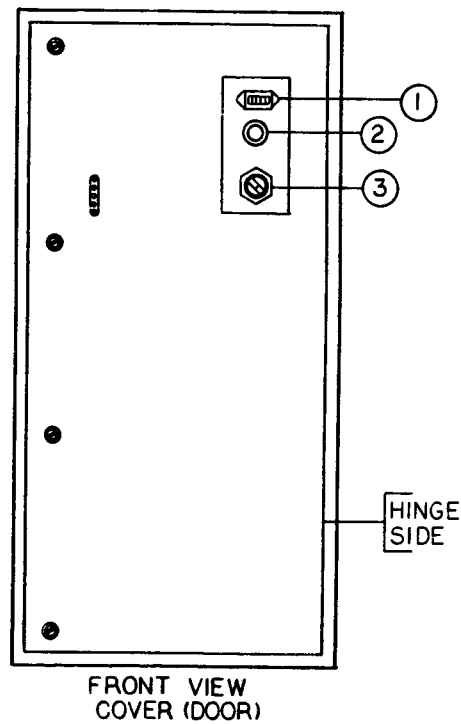
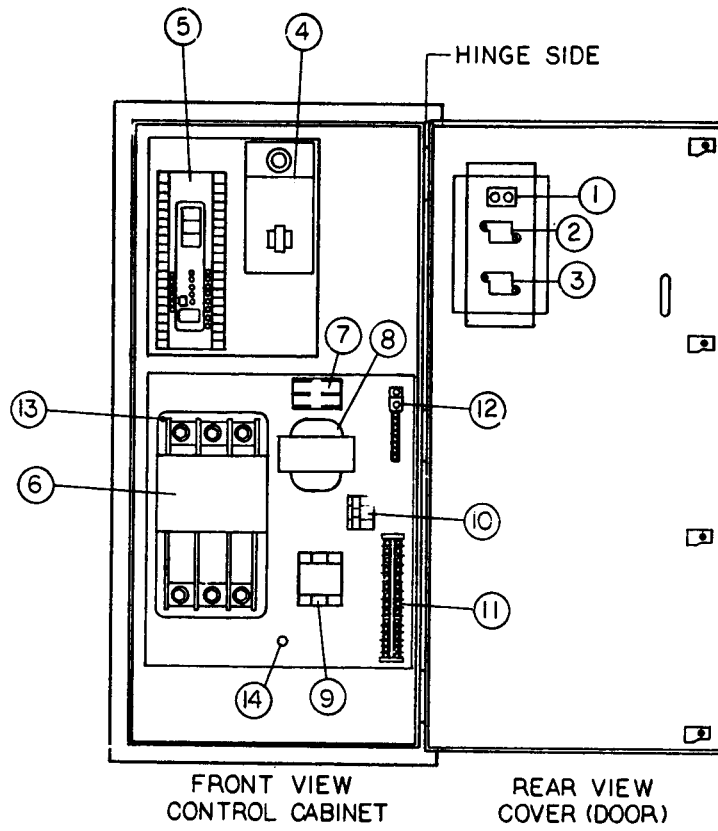


CONTROL/STARTER BOX

VOLTAGE	COL. CODE	CS CONTROL BOX	PC CONTROL BOX	WIRING HARNESS GROUP *
40 HP - AIR/WATER COOLED - W/COMPRESSOR MOTOR STARTER				
200 V.....	8 & 9	212ECH466	213ECH466	ECH75573
230 V.....	8 & 9	210ECH466	211ECH466	ECH75573
460 V.....	8 & 9	200ECH466	201ECH466	ECH80404
575 V.....	8 & 9	202ECH466	203ECH466	ECH80404
50 HP - AIR/WATER COOLED - W/COMPRESSOR MOTOR STARTER				
200 V.....	8 & 9	218ECH466	219ECH466	ECH75573
230 V.....	8 & 9	210ECH466	211ECH466	ECH75573
460 V.....	8 & 9	200ECH466	201ECH466	ECH80404
575 V.....	8 & 9	202ECH466	203ECH466	ECH80404
40/50 HP - AIR/WATER COOLED - W/O COMPRESSOR MOTOR STARTER				
200 V.....	8 & 9	206ECH466	207ECH466	ECM81148
230 V.....	8 & 9	204ECH466	205ECH466	ECM81147
460 V.....	8 & 9	204ECH466	205ECH466	ECM81147
575 V.....	8 & 9	208ECH466	209ECH466	ECM81143

* Wiring between Control/Starter Box and Main Motor

CONTROL PANEL



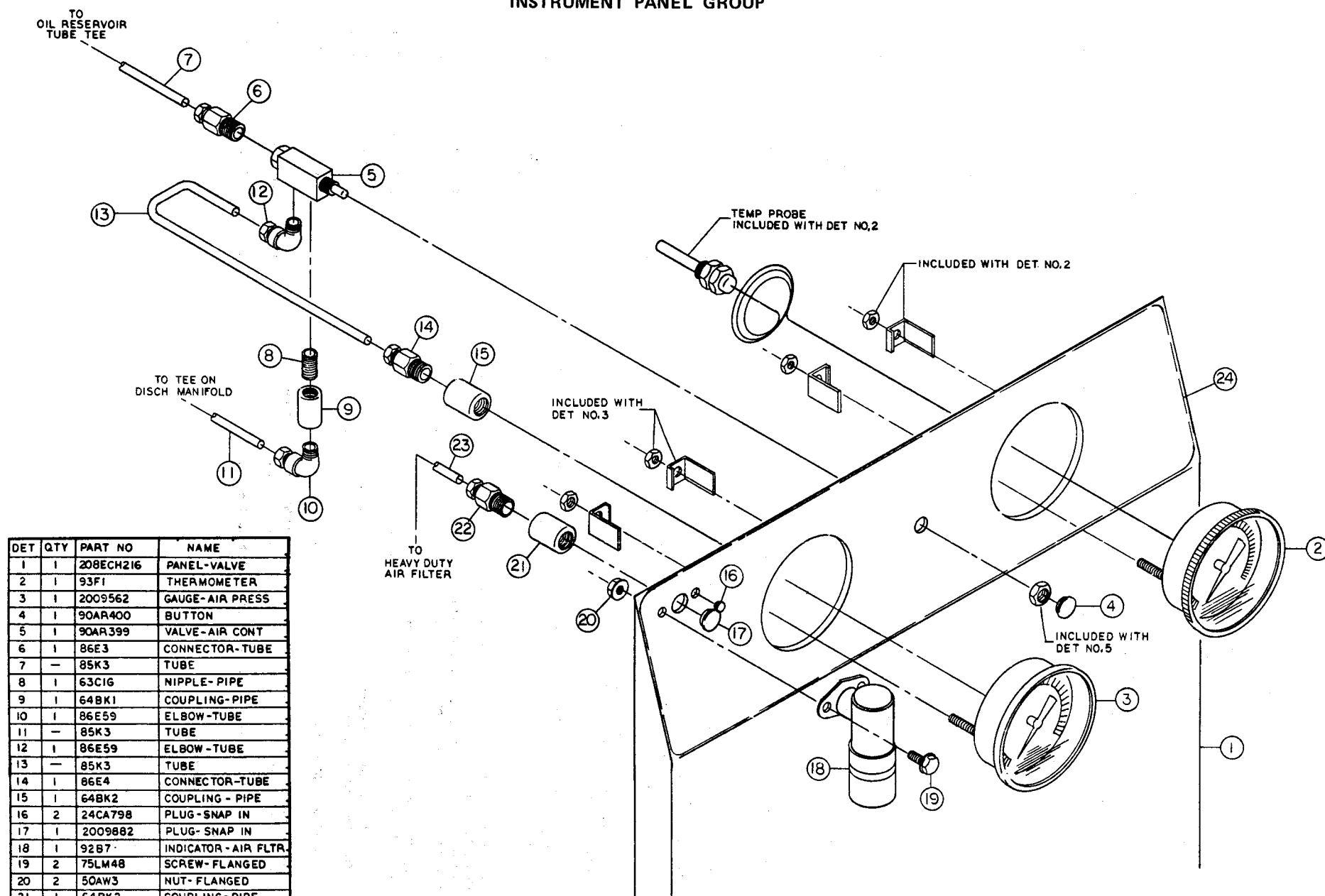
243ECH810

Ref. No.	Name of Part	Qty.	Part No.	Control
CONTROL PANEL GROUP				
1	METER-HOUR (60 Hz)	1	24CA1994	PC/CS
†	METER-HOUR (50 Hz)	1	24CA1995	PC/CS
2	OPERATOR PUSH-PULL, Power On/Off PB	1	2115955	PC
2	CONTACT BLOCK, SPSTNC (Operator)	1	24CA2508	PC
2	BUTTON EXTENDED, Operator Red	1	24CA2512	CS
2	SWITCH, Contact SPSTNO (Operator)	1	24CA2174	CS
3	ROTARY OPERATOR, 4 Position	1	2115954	PC
3	CONTACT BLOCK (Selector)	2	24CA2339	PC
3	BUTTON EXTENDED, Operator Red	1	24CA2512	CS
3	CONTACT BLOCK	1	24CA2339	CS
4	SWITCH-TEMPERATURE	1	21D80	PC/CS
†	KIT, Temperature Probe, Includes following 3 items	2	EAQ78540	PC/CS
	SWITCH-TEMP	1	21D81	
	CONNECTOR-FEMALE	2	24CA45	
	CONNECTOR-MALE	2	24CA1993	
5	CONTROLLER, PC (Programmable)	1	24CA2489	PC
5	MODULE, Memory	1	200ECM566	PC
5	FUSE	1	24CA2498	PC
5	BATTERY	1	2115949	PC
6	STARTER, Compressor Motor — Size 3 (Optional)	1	*	
	COIL	1	2115951	PC/CS
	CONTACT KIT, Power — 3 Pole	1	2109786	PC/CS
	CONTACT-AUXILIARY, N.O.	1	24CA1992	PC/CS
	RELAY, Overload	1	2109780	PC/CS
6	STARTER, Compressor Motor — Size 4 (Optional)	1	*	
	COIL	1	2115952	PC/CS
	CONTACT KIT, Power — 3 Pole	1	2109787	PC/CS
	CONTACT-AUXILIARY, N.O.	1	24CA1992	PC/CS
	RELAY, Overload	1	2109781	PC/CS
6	STARTER, Compressor Motor — Size 5 (Optional)	1	*	
	COIL	1	2115952	PC/CS
	CONTACT KIT, Power — 3 Pole	1	2109788	PC/CS
	CONTACT-AUXILIARY, N.O.	1	24CA1992	PC/CS
	RELAY, Overload	1	2109782	PC/CS
7	FUSE HOLDER, Primary (Class CC)	1	24CA2553	PC/CS
	LIMITRON FUSE (200/230 V)	2	24CA617	PC/CS
	LIMITRON FUSE (460/575 V)	2	24CA276	PC/CS
8	TRANSFORMER, .250 KVA (250 VA) — 115 V Secondary — Select Per Voltage —			
	208 V	1	2115978	PC/CS
	230/460 V	1	2115977	PC/CS
	575 V	1	2115979	PC/CS
9	CONTROL RELAY	1	*	
	COIL, 110/120 VAC	1	2115950	PC/CS
	RELAY, Contactor 2 Pole 110/120, 50/60 Hz	1	24CA2537	PC/CS
	CONTACT-AUXILIARY, N.O.	1	24CA2503	PC/CS
10	FUSE BLOCK, Transformer — Secondary	1	2115986	PC/CS
	FUSETRON	1	24CA1991	PC/CS
11	BLOCK-TERMINAL (15 Point)	5	24CA2551	PC/CS
	BLOCK-TERMINAL (End)	1	24CA2552	PC/CS
12	BAR-GROUND (8 Point)	1	24CA612	PC/CS
13	LUG, Ground (End User's Equipment), I/O Copper Wire Max. (When Starter Furnished Mounted)	1	24CA2555	PC/CS
14	LUG, Ground (Compressor Motor (When Starter Is Mounted)	1	24CA2555	PC/CS

* Shown on page 33.

† Not shown on illustration.

INSTRUMENT PANEL GROUP



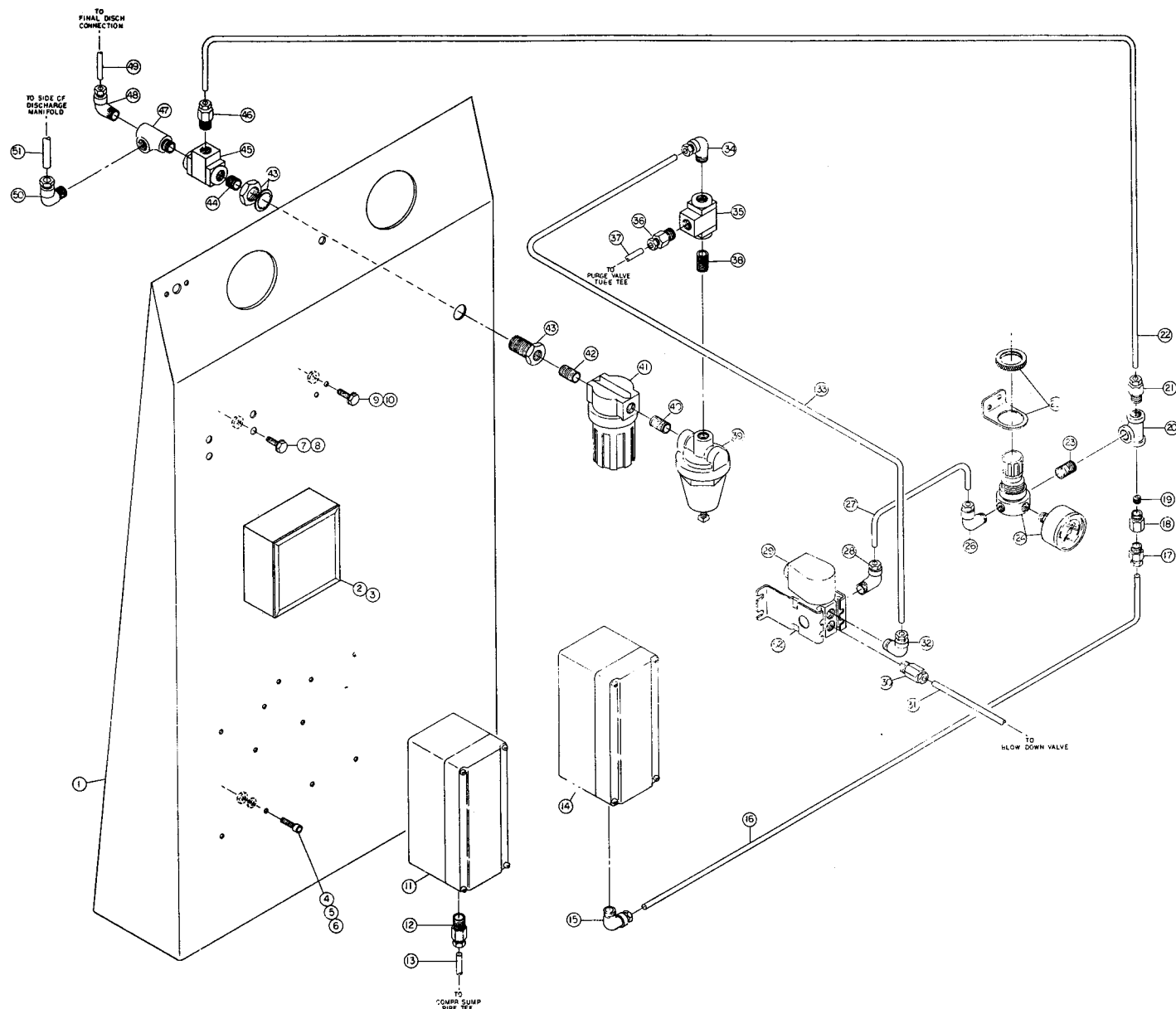
DET	QTY	PART NO	NAME
1	1	208ECH216	PANEL-VALVE
2	1	93F1	THERMOMETER
3	1	2009562	GAUGE-AIR PRESS
4	1	90AR400	BUTTON
5	1	90AR399	VALVE-AIR CONT
6	1	86E3	CONNECTOR-TUBE
7	—	85K3	TUBE
8	1	63C16	NIPPLE-PIPE
9	1	64BK1	COUPLING-PIPE
10	1	86E59	ELBOW-TUBE
11	—	85K3	TUBE
12	1	86E59	ELBOW-TUBE
13	—	85K3	TUBE
14	1	86E4	CONNECTOR-TUBE
15	1	64BK2	COUPLING-PIPE
16	2	24CA798	PLUG-SNAP IN
17	1	2009882	PLUG-SNAP IN
18	1	92B7	INDICATOR-AIR FLTR.
19	2	75LM48	SCREW-FLANGED
20	2	50AW3	NUT-FLANGED
21	1	64BK2	COUPLING-PIPE
22	1	86E4	CONNECTOR-TUBE
23	—	85K3	TUBE
24	1	206ECHO77	DECAL

NOTE: DET NO.5 18 THRU 23
ARE OPTIONAL AND
FURNISHED WITH
HEAVY DUTY AIR FILTER

242ECH810

PC CONTROL BRACKET GROUP

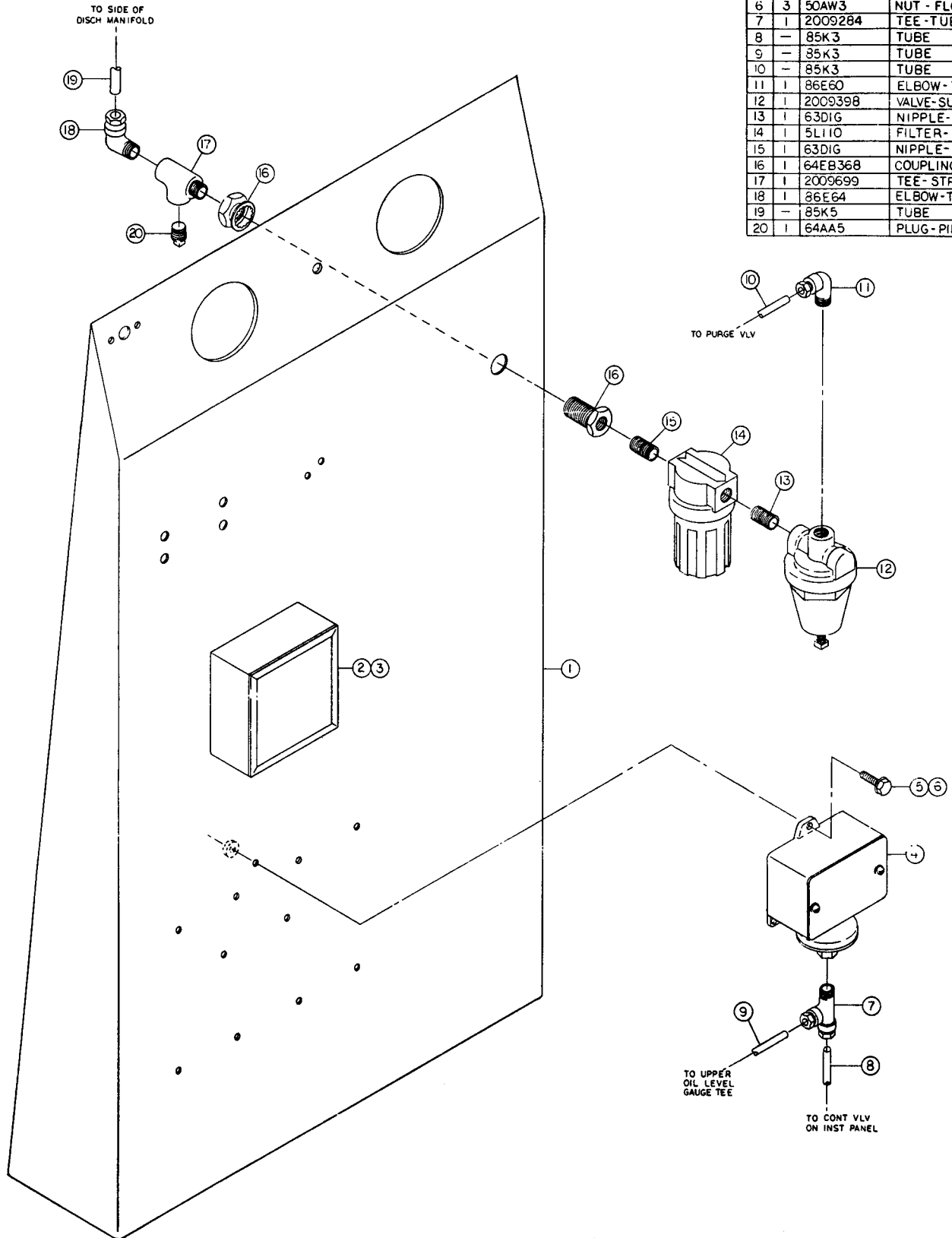
DET	QTY	PART NO	NAME
1	2	206ECH216	PANEL - VALVE
2	1	24CA2467	BOX-OUTLET
3	1	24CA2468	COVER-BOX
4	8	75P15	SCREW-SO HD
5	8	8504915	WASHER-LOCK
6	8	8502120	NUT-HEX
7	4	75LM48	SCREW-FLG
8	4	50AW3	NUT-FLG
9	2	75LM48	SCREW-FLG
10	2	50AW3	NUT-FLG
11	1	88H137	SWITCH-PRESS
12	1	86E4	CONNECTOR-TUBE
13	1	85K3	TUBE
14	1	88A294	SWITCH-PRESS
15	1	86E60	ELBOW-TUBE
16	1	85K3	TUBE
17	1	86E3	CONNECTOR-TUBE
18	1	1AUX354	ORIFICE
19	1	2AUX354	ORIFICE
20	1	64G3G	TEE-PIPE
21	1	86E4	CONNECTOR-TUBE
22	1	85K3	TUBE
23	1	63G1G	NIPPLE-PIPE
24	1	88H139	REGULATOR-PRESS
25	1	88H140	BRACKET-MTG
26	1	86E60	ELBOW-TUBE
27	1	85K3	TUBE
28	1	86E60	ELBOW-TUBE
29	1	91B66	VALVE-SOLENOID
30	1	86E4	CONNECTOR-TUBE
31	1	85K3	TUBE
32	1	86E60	ELBOW-TUBE
33	1	85K3	TUBE
34	1	86E60	ELBOW-TUBE
35	1	90ARI07	VALVE-SHUTTLE
36	1	86E4	CONNECTOR-TUBE
37	1	85K3	TUBE
38	1	63DIG	NIPPLE-PIPE
39	1	2009398	VALVE-SUB PILOT
40	1	63DIG	NIPPLE-PIPE
41	1	5L110	FILTER-LINE
42	1	63DIG	NIPPLE-PIPE
43	1	64EB368	COUPLING-PIPE
44	1	63DIG	NIPPLE-PIPE
45	1	90ARI07	VALVE-SHUTTLE
46	1	86E4	CONNECTOR-TUBE
47	1	2009699	TEE-STREET
48	1	86E60	ELBOW-TUBE
49	1	85K3	TUBE
50	1	86E64	ELBOW-TUBE
51	1	85K5	TUBE
52	1	91B68	BRACKET-MTG KIT



237ECH810

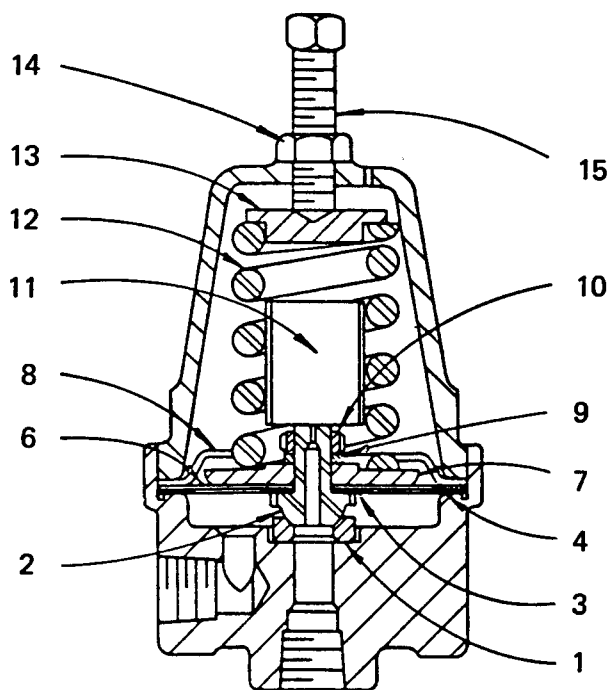
CONSTANT SPEED CONTROL BRACKET GROUP

DET	QTY	PART NO.	NAME
1	1	208ECH216	PANEL- VALVE
2	1	24CA2467	BOX- OUTLET
3	1	24CA2468	COVER- BOX
4	1	88H99	SWITCH-PRESS
5	3	75LM48	SCREW- FLG
6	3	50AW3	NUT - FLG
7	1	2009284	TEE -TUBE
8	—	85K3	TUBE
9	—	85K3	TUBE
10	—	85K3	TUBE
11	1	86E60	ELBOW - TUBE
12	1	2009398	VALVE-SUB PILOT
13	1	63D1G	NIPPLE- PIPE
14	1	5L110	FILTER- LINE
15	1	63D1G	NIPPLE- PIPE
16	1	64EB368	COUPLING- PIPE
17	1	2009699	TEE- STREET
18	1	86E64	ELBOW-TUBE
19	—	85K5	TUBE
20	1	64AA5	PLUG- PIPE



238ECH810

ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.

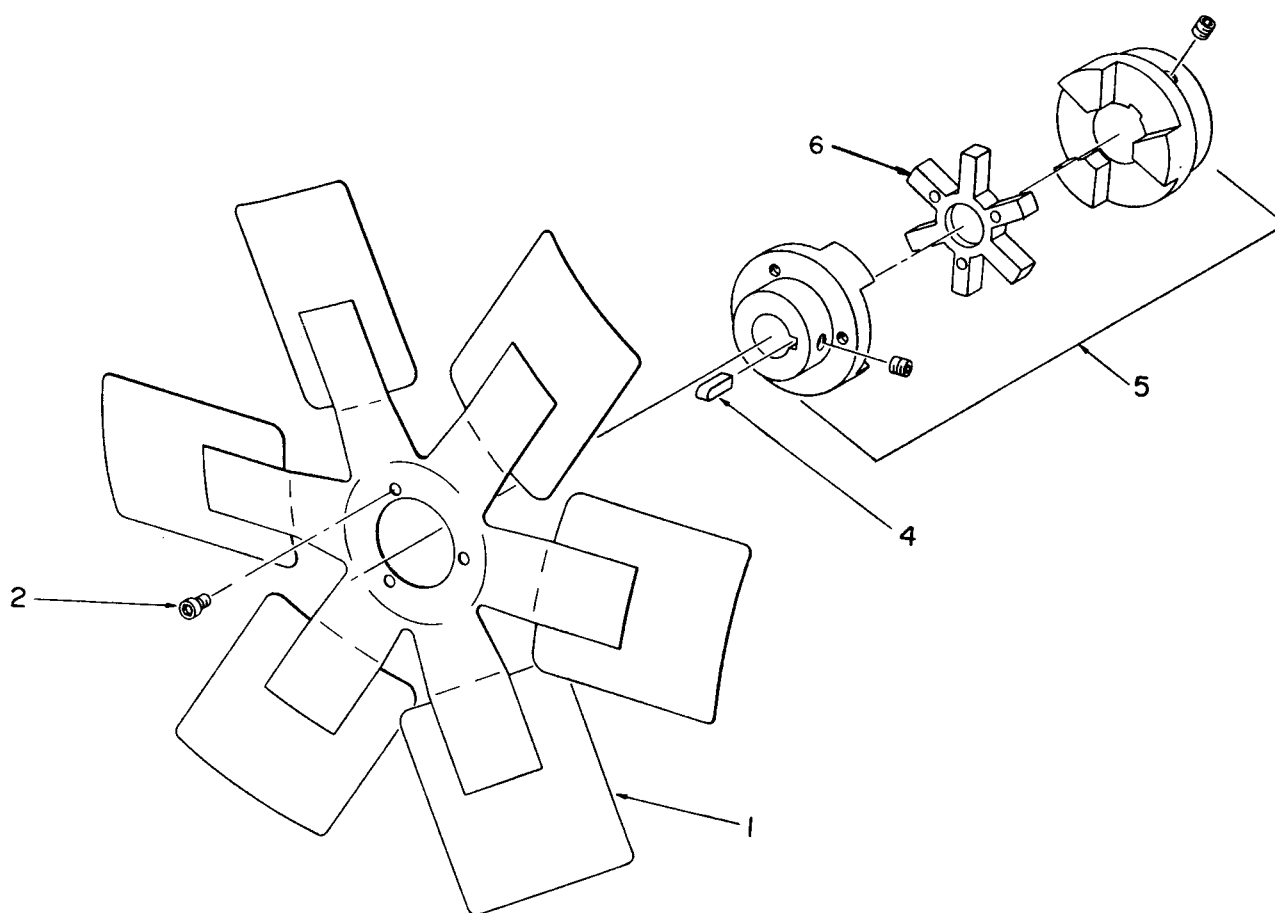


B74480X

Ref. No.	Name of Part	Qty. Req. Per Comp.	All ECH Models
SUBTRACTIVE PILOT VALVE			Part No.
	VALVE-SUBTRACTIVE PILOT, Incl. Ref. No. 1 thru 15.		2009398
1	RING-SEAT.	1	2008021
2	DISC-SEAT.	1	2010080
3	GASKET-DURABLE.	1	2008019
4	GASKET-DURABLE.	1	2008017
6	DIAPHRAGM.	5	2008018
7	PLATE-PRESSURE.	1	2008015
8	STOP-DIAPHRAGM.	1	2008016
9	WASHER-LOCK.	1	95B1
10	NUT-PRESSURE PLATE.	1	2008888
11	DAMPER.	1	2008711
12	SPRING-PRESSURE.	1	2008014
13	BUTTON-SPRING.	1	2008891
14	LOCKNUT.	1	50Y2
15	SCREW-PRESSURE.	1	2008952

NOTE: It is necessary to replace some parts in groups to insure satisfactory repair. When replacing diaphragm, also replace both diaphragm and seat gaskets. When replacing seat disc or seat ring, replace also the mating seat ring or disc and the seat disc gasket.

ORDER BY PART NUMBER AND DESCRIPTION. REFERENCE NUMBERS FOR YOUR CONVENIENCE ONLY.



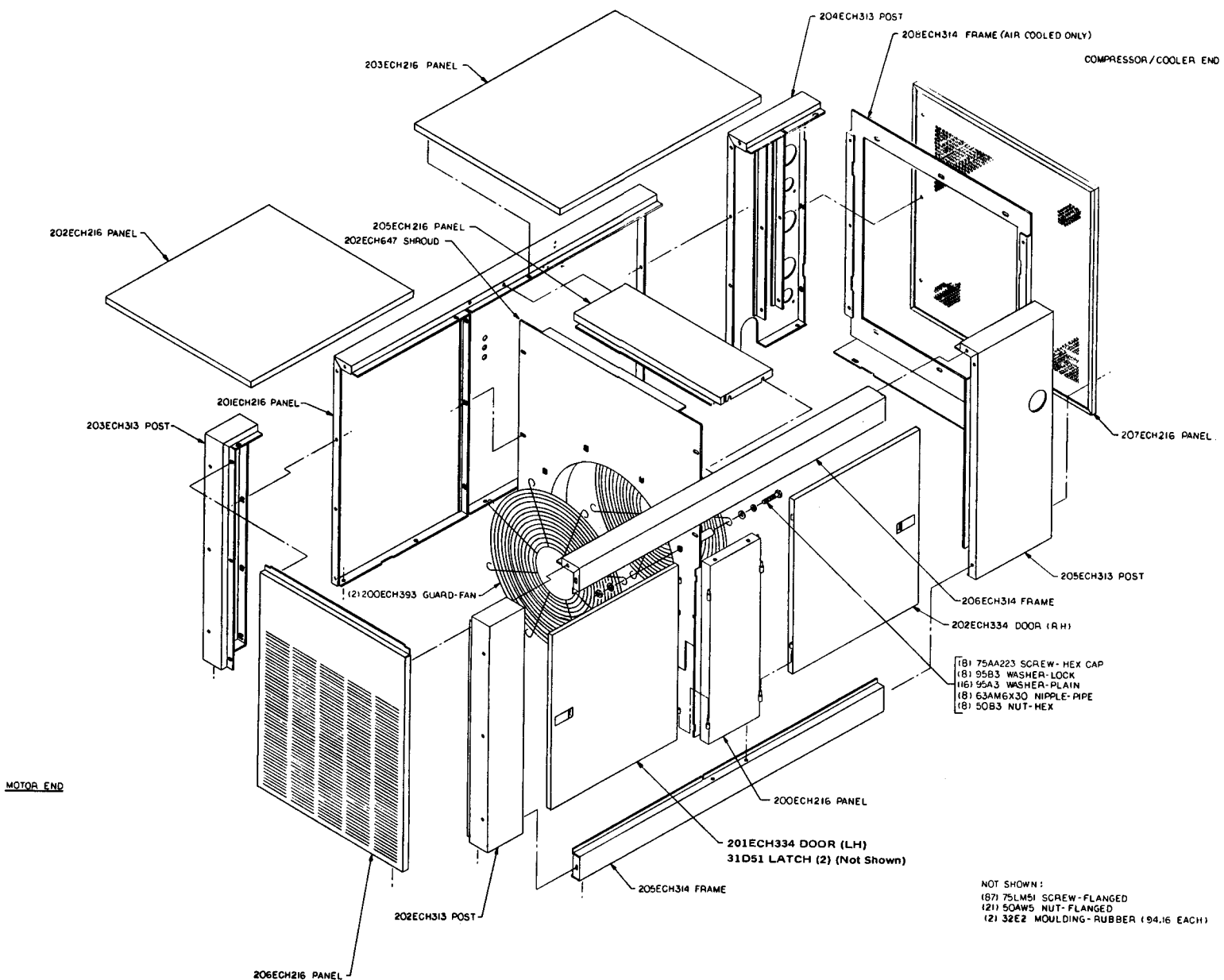
D76443X

Ref. No.	Name of Part	Qty. Req. Per Comp.	All ECH Models
COUPLING & FAN GROUP			
1	FAN.....	1	200ECH701
2	SCREW-SoHd CAP, Fan to Coupling.....	3	75P6N
4	KEY-SQUARE, Coupling to Compressor.....	1	35L35
5	COUPLING-FLEXIBLE, Compressor to Motor, Incl. Ref. No. 6.....	1	200ECH064
6	SPIDER, Coupling.....	1	2010219

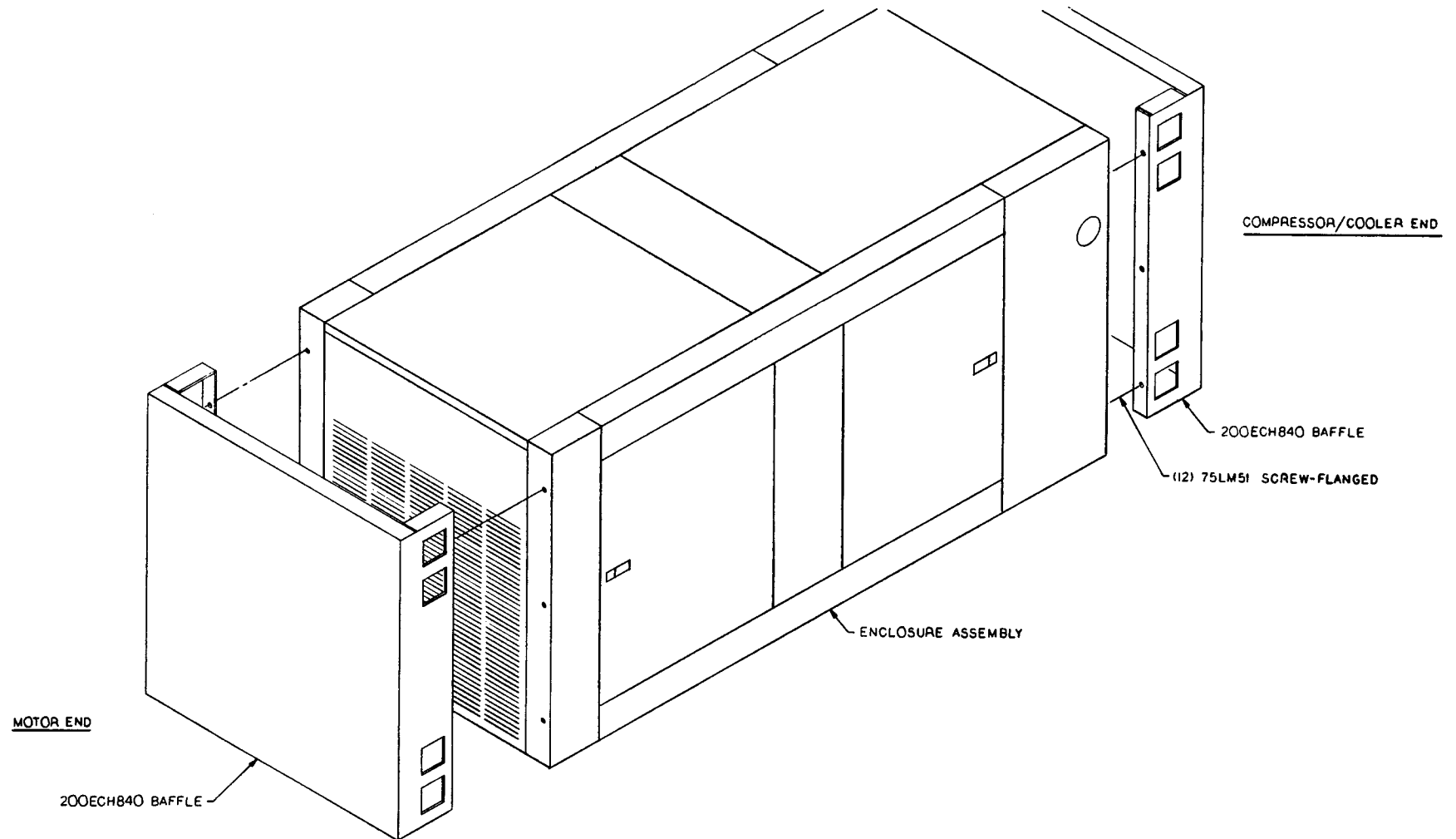
MAIN MOTOR & MOUNTING GROUP

Column Option Number		OPEN DRIP-PROOF (60 HZ) (ODP)				TOTALLY ENCLOSED FAN-COOLED (60 HZ) (TEFC)			
		200V	230V	460V	575V	200V	230V	460V	575V
		13-A	13-B	13-C	13-D	13-M	13-N	13-O	13-P
40 HP	Motor	24AW12	24AW28	24AW28	24AW47	24CA2397	24CA2398	24CA2398	24CA2399
	Voltage Marker	69F1	69F2	69F3	69F28	69F1	69F2	69F3	69F28
	Overload Heater (3 Required)	24CA1789	24CA972	24CA965	24CA963	24CA1789	24CA972	24CA965	24CA963
50 HP	Motor	24AW13	24AW29	24AW29	24AW48	24CA2404	24CA2405	24CA2405	24CA2406
	Voltage Marker	69F1	69F2	69F3	69F28	69F1	69F2	69F3	69F28
	Overload Heater (3 Required)	24CA1781	24CA1790	24CA967	24CA965	24CA1781	24CA1790	24CA967	24CA965

STANDARD ENCLOSURE GROUP



QUIET ENCLOSURE GROUP



IDENTIFICATION & INSTRUCTION GROUP

Name of Part	Quantity	Part No.
DECAL - WARNING - ELECTRICAL SHOCK MAY BE FATAL..... (Located Inside Control Box Door) 1. This compressor must be grounded, etc. 2. Disconnect the compressor unit, etc.	1	208ESG077
DECAL - WARNING (Located Outside Control Box)..... 1. Electrical shock can be fatal. 2. Open main disconnect switch, etc.	12	202ESG077
DECAL - INSTRUCTION.....	1	200ES0077
DECAL - DANGER - Do not use the air discharge from this unit for breathing, etc.....	1	209SPH077
DECAL - USE COPPER WIRE ONLY (Located Outside Control Box).....	1	214ESG077
DECAL - MAGNETIC CONTROL SYSTEM DATA PLATE..... (Located Outside Control Box Door)	1	69D38
DECAL - "G-D" (Vertical).....	1	69F18
DECAL - FILLED AT FACTORY WITH "GD800".....	1	200EBE077
DECAL - "G-D" (Square).....	1	69F14
DECAL - RIBBON TRIM.....	2	203ES0077
DECAL - ELECTRA-SAVER\ INTENSIVE INJECTION..... (Center on Door [1] and Ends [2])	3	202ECQ077
DECAL - DRAIN MOISTURE.....	1	205ES0077
DECAL - INSTALLATION (Oil Filter-Mtd on Oil Filter Cannister).....	1	212ECM077
DECAL - OPERATING & MAINTENANCE (PC Control).....	1	207ECH077
DECAL - OPERATING & MAINTENANCE (Constant Speed Control).....	1	208ECH077
PLATE-DATA - OIL LEVEL INDICATION..... (Located On Oil Reservoir At Oil Level Gauge)	1	200ESG454
PLATE-DATA - DANGER - FAN & CAUTION - COOLING.....	1	200ECH454
PLATE-NAME (Located Left Lower Front Of Frame).....	1	203EAQ496
RIVET, Plate to Base.....	4	2009307
DECAL-INSTRUMENT PANEL.....	1	206ECH077
DECAL-WATER FLOW RATES (HEAT EXCHANGER).....	1	209ECH077
DECAL-PARTS LISTS & SERVICE MANUAL (BOOK #).....	1	204EDE077

REPAIR KITS

Name of Part	Quantity	Part No.
ROUTINE MAINTENANCE KIT (3000 Hrs.), Standard Filter, Includes.....		ECM80672
ELEMENT, Air Filter.....	2	2008616
ELEMENT, Oil Filter.....	3	2116110
ROUTINE MAINTENANCE KIT (3000 Hrs.), HD AIR FIL 5L127, Includes.....		EDE80757
ELEMENT, Air Filter.....	2	2010228
ELEMENT, Oil Filter.....	3	2116110
PERIODIC MAINTENANCE KIT (9000 Hrs.), Includes the following.....		ECH75592
DISCHARGE VALVE, Inlet Valve.....	1	200SSF067
SPRING, Inlet Valve.....	1	78A360
SPRING, Inlet Valve Piston.....	1	78W34
PACKING-RING, Block Vee.....	2	60AM47
PERIODIC OVERHAUL KIT (18000 Hrs.), Includes the following.....		ECH75593
SEAL-SHAFT, Drive Shaft.....	1	60DD98
BEARING-ROLLER, Inlet End Main Rotor.....	1	12BA130
BEARING-ROLLER, Inlet End Secondary Rotor.....	1	12BA88
BEARING-ROLLER, Discharge End Main Rotor.....	2	12BA91
BEARING-ROLLER, Discharge End Secondary Rotor.....	2	12BA90
KIT (Gasket & Shim).....	1	ECH76355
SEPARATOR KIT (18000 Hrs.), Includes the following.....		ECH80134
SEPARATOR.....	1	55B24
CONNECTOR, Discharge Manifold.....	1	86N15
ELBOW-TUBE.....	1	86E95
GASKET-ELIMINATOR, Discharge Manifold to Cover.....	1	25BC222
PNEUMATIC CONTROLS & GAUGES (18000 Hrs.), P/Constant Speed Control Includes the following.....		ECH80386
GAUGE, Air Pressure.....	1	2009562
THERMOMETER, Compressor Discharge Temperature.....	1	93F1
VALVE, Shuttle.....	2	90AR107
VALVE-AIR CONTROL, Blowdown Valve.....	1	90AR324
VALVE-SUBTRACTIVE PILOT.....	1	2009398
VALVE-AIR CONTROL.....	1	90AR399
KNOB.....	1	90AR400
ELECTRICAL CONTROL KIT (18000 Hours), Constant Speed, Includes.....		ECM80301
SWITCH-TEMPERATURE.....	1	21D80
SWITCH-TEMPERATURE, Probe.....	2	21D81
VALVE-SOLENOID, 4-Way - 120 VAC.....	1	91B70
SWITCH-PRESSURE, Reservoir Pressure.....	1	88H99
ELECTRICAL CONTROL KIT (18000 Hours), PC Control, Includes.....		EAP80304
SWITCH-TEMPERATURE, Oil.....	1	88A294
SWITCH-TEMPERATURE.....	1	21D80
SWITCH-TEMPERATURE, Probe.....	2	21D81
VALVE-SOLENOID, 4-Way - 120 VAC.....	1	91B66
SWITCH-PRESSURE, Reservoir Pressure.....	1	88H137
REGULATOR-PRESSURE.....	1	88H26
REGULATOR-PRESSURE.....	1	88H139
BRACKET.....	1	88H140
DRIVE COUPLING KIT, Includes the following.....		ECK77777
SPIDER, Coupling.....	1	2010219



INDUSTRIAL MACHINERY

1800 GARDNER EXPRESSWAY • QUINCY, ILLINOIS 62305-4024 • (217) 222-5400