

## **SINGLE STAGE CENTRIFUGAL HERMETIC MOTOR COMPRESSOR**

### **COMPRESSOR**

**MTC47  
MTC48  
MTC53  
MTC59**

### **SYSTEM**

**HT5, 6  
HT7, 8  
HT10, 11, 12  
HT13, 14**

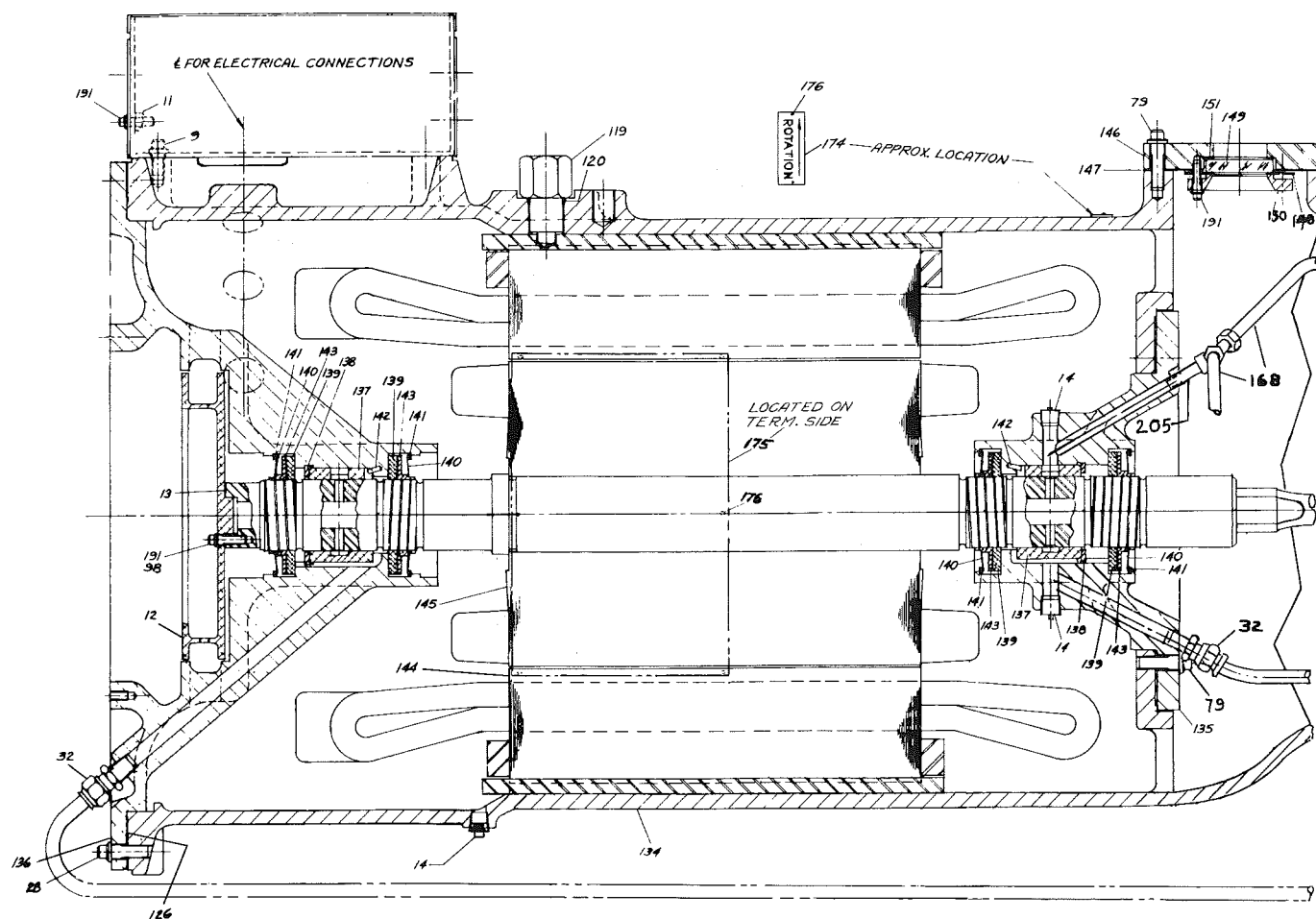
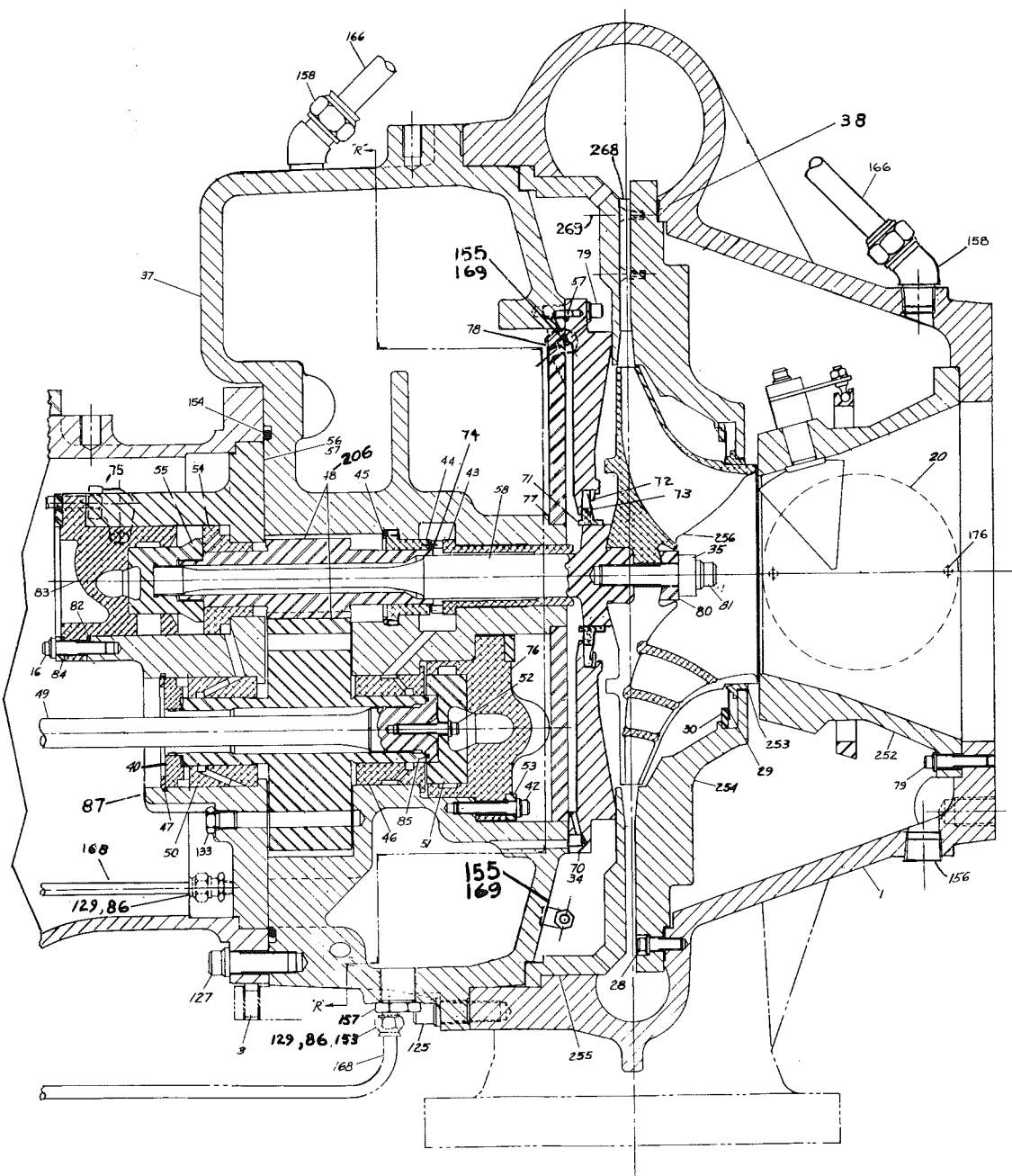


FIG. 1- Cross Section View of Compressor - Hermetic

| ITEM | PART NO.  | QTY. | DESCRIPTION                                  |
|------|-----------|------|----------------------------------------------|
| 1    | 064-21048 | 1    | SCROLL, ROTOR                                |
| 2    | 029-11856 | 1    | SHAFT, CONTROL                               |
| 3    | 021-12234 | 4    | SCR., SET HEX SOCKET, 1/2-20UNF X 1 LG.      |
| 4    | 364-20722 | 1    | LEVER, P.R. DEVICE, INTERNAL                 |
| 5    | 064-10823 | 1    | ROD, ADJUSTABLE                              |
| 6    | 028-04522 | 2    | RING "O", 1 1/4 OD X 1 ID X 1/8 SECT.        |
| 7    | 021-11998 | 1    | SCR., CAP, 12 PT. HD., 1/2-20UNF X 6 LG.     |
| 8    | 064-15534 | 2    | SUPPORT, END                                 |
| 9    | 021-11979 | 4    | SCR., CAP, 12 PT. HD., 3/8-16 NC X 5/8       |
| 10   | 364-15528 | 1    | BOX, ELEC. TERM.                             |
| 11   | 021-00450 | 16   | NUT, HEX. 1/4-20 UNC                         |
| 12   | 064-15507 | 1    | FAN, MOTOR                                   |
| 13   | 064-15535 | 1    | GASKET, RD 1 1/2 X 1 7/8 OD                  |
| 14   | 023-01972 | 5    | PLUG, PIPE 1/4 - 18 NPT                      |
| 15   | 064-13909 | 1    | COVER, SHAFT CONTROL                         |
| 16   | 021-11175 | 11   | SCR., CAP, 12 PT. HD., 3/8-16UNC X 1 1/2 LG. |
| 17   | 028-00781 | 1    | GASKET, 2 1/2 OD X 2 ID X 1/16 THK.          |
| 18   | 028-04353 | 1    | RING-"O", 1 3/8 OD X 1 1/8 ID X 1/8 SECT.    |
| 19   | 070-00452 | 1    | NIP, PIPE, 1/4 SCH.40 X 3 LG.                |
| 20   | 029-00368 | 1    | NAMEPLATE, PUBLICITY 5                       |
| 21   | 021-10170 | 3    | NUT, HEX REG, 3/8-24 UNF                     |
| 22   | 064-10825 | 1    | SCR., SPECIAL, 3/8-24UNF X 1 5/8 LG.         |
| 23   | 064-09287 | 1    | SCR., SPECIAL, 3/8-24UNF X 2 1/2 LG.         |
| 24   | 029-08343 | 2    | BRG., ROD END SPHERICAL, 3/8                 |

▲PARTS INCLUDED IN KIT 464-21515

| ITEM | PART NO.              | QTY. | DESCRIPTION                                  |
|------|-----------------------|------|----------------------------------------------|
| 25   | 021-05269             | 1    | LOCKWASHER, SPG, 3/8                         |
| 26   | 064-09288             | 1    | FILLPIECE, 3/4 DIA. X 23/32 LG.              |
| 27   | 064-10821             | 1    | FILLPIECE, 3/4 DIA. X 1/4 LG.                |
| 28   | 021-11149             | 26   | SCR., CAP, 12 PT. HD., 3/8-16UNC X 1 LG.     |
| 29   | 064-13817             | 1    | WASHER, FLAT SPG.                            |
| 30   | 029-08311             | 1    | RING, INT. RET.                              |
| 31   | 029-04842             | 1    | PIN, INSERT, 3/32 X 5/8 LG.                  |
| 32   | 023-06801             | 5    | CONN., 3/8 TUBE X 1/4 MPT                    |
| 33   | 064-08815             | 1    | WASHER, SPECIAL 1 3/4 DIA. X 1 1/2 THK.      |
| 34   | 070-15440             | 1    | GASKET, OIL SEPARATOR                        |
| 35   | 064-16500             | 1    | WASHER, SPECIAL                              |
| 36   | 021-01083             | 1    | PIN, COTTER 3/32 DIA X 3/4 LG.               |
| 37   | 064-19267             | 1    | SUPPORT, ROTOR                               |
| 38   | 064-20802             | 1    | GASKET, NOZZLE BASE PLATE                    |
| 39   | 026-09306             | 1    | PUMP, AUXILIARY OIL                          |
| 39A  | 026-10904             | 1    | AUX. OIL PUMP SHAFT SEAL KIT                 |
| 40   | 064-17817             | 1    | RING, SHAFT SEAL                             |
| 41   | 023-01969             | 1    | PLUG, PIPE HEX HD. 1/8                       |
| 42   | 021-11916             | 12   | SCR., CAP, 12 PT. HD., 3/8-16UNC X 1 3/4 LG. |
| 43   | 064-09241             | 1    | BRG., MAIN SHAFT                             |
| 44   | 064-12285             | 1    | BRG., PINION GEAR                            |
| 45   | 029-07213             | 1    | RING, INT. RET. BEV. TYPE                    |
| 46   | 064-13837             | 1    | BRG., GEAR, FRONT                            |
| 47   | 029-08321             | 1    | RING, INT. RET. BEV. TYPE                    |
| 48   | SEE SYSTEM DATA PLATE | 1    | GEARS                                        |



| ITEM | PART NO.  | QTY. | DESCRIPTION                                                              |
|------|-----------|------|--------------------------------------------------------------------------|
| 49   | 064-15471 | 1    | SHAFT, DRIVE                                                             |
| 50▲  | 064-20925 | 1    | BRG., GEAR, REAR                                                         |
| 51   | 064-13828 | 1    | PUMP, CENTRIFUGAL OIL                                                    |
| 52   | 021-11532 | 1    | SCR., CAP, 12 PT. HD. $\frac{9}{16}$ -24 UNF X 1 $\frac{3}{4}$ L. H.     |
| 53   | 064-11649 | 6    | WASHER, FLAT                                                             |
| 54▲  | 064-12284 | 1    | BRG., THRUST                                                             |
| 55▲  | 064-09587 | 1    | COLLAR, THRUST                                                           |
| 56▲  | 064-12414 | 1    | GASKET, BRG. HSG.                                                        |
| 57   | 029-04138 | 3    | PIN, INSERT, $\frac{3}{16}$ DIA. X $\frac{1}{2}$ LG.                     |
| 58   | 064-12512 | 1    | SHAFT, MAIN                                                              |
| 59   | 023-06807 | 1    | CONN., $\frac{3}{4}$ TUBE X $\frac{3}{4}$ MPT                            |
| 60   | 368-00007 | 1    | VALVE, STOP ANGLE $\frac{3}{4}$ TYPE 1                                   |
| 61   | 021-12338 | 2    | BOLT-"U", $\frac{1}{4}$ DIA.                                             |
| 62   | 023-04321 | 1    | ELBOW, SCREW 45° $\frac{3}{4}$ FPT                                       |
| 63▲  | 028-06932 | 1    | RING "O" 1 OD X $\frac{7}{8}$ ID X $\frac{1}{16}$ SECTION                |
| 64   | 064-13895 | 1    | TUBE EXTENSION                                                           |
| 65   | 064-20636 | 1    | ADAPTER                                                                  |
| 66▲  | 028-04861 | 1    | RING "O" 1 $\frac{7}{8}$ OD X 1 $\frac{5}{8}$ ID X $\frac{1}{8}$ SECTION |
| 67   | 023-02015 | 1    | PLUG, PIPE, 1 $\frac{1}{4}$ NPT                                          |
| 68▲  | 064-12101 | 1    | GASKET, OIL JET                                                          |
| 69   | 023-04334 | 1    | TEE, SCR., $\frac{1}{4}$ FPT                                             |
| 70   | 064-21066 | 1    | PLATE, OIL SEPARATOR                                                     |
| 71▲  | 064-21073 | 1    | RING, SEAL                                                               |
| 72   | 029-05601 | 1    | RING, RETAINING, INTERNAL                                                |

| ITEM | PART NO.  | QTY. | DESCRIPTION                                  |
|------|-----------|------|----------------------------------------------|
| 73   | 064-12887 | 1    | WASHER, FLAT SPRING, 5 OD X 3 9/16 ID X .037 |
| 74▲  | 029-01990 | 1    | PIN, ROLL, 1/8 DIA. X 9/16 LG.               |
| 75   | 023-06815 | 1    | ELL, 90°, 3/8 TUBE X 3/8 MPT                 |
| 76   | 064-13838 | 1    | HSG, OIL PUMP                                |
| 77▲  | 070-12260 | 1    | GASKET, INNER SPRING                         |
| 78   | 064-12259 | 1    | PLATE, SEAL                                  |
| 79   | 021-11141 | 41   | SCR., CAP, 12 PT. HD. 3/8-16UNC X 1 1/4 LG.  |
| 80   | 064-09228 | 1    | COLLAR, IMPELLER CLAMPING                    |
| 81   | 021-12347 | 1    | SCR., CAP, 12 PT. HD., 5/8-18UNF X 2 3/4 LG. |
| 82▲  | 028-04409 | 1    | RING "O" 3 1/2 OD X 3 1/4 ID X 1/8 SECT.     |
| 83   | 064-12317 | 1    | COVER, OIL PUMP                              |
| 84   | 064-12548 | 1    | PLATE, PRESSURE                              |
| 85▲  | 028-04479 | 1    | RING "O", 1 11/16 OD, 1 1/2 ID X 3/32 SECT.  |
| 87   | 064-17815 | 1    | HOUSING, BEARING                             |
| 88.  | 029-10646 | 3    | PIN, DOWEL, 1/2 DIA. X 2 LG.                 |
| 89   | 064-22207 | 1    | CONN., OIL COOLER TO JET PUMP                |
| 90   | 025-13722 | 1    | CONTROL, TEMPERATURE                         |
| 91   | 025-09450 | 1    | HEATER, CARTRIDGE TYPE                       |
| 92▲  | 026-07446 | 2    | ELEMENT, FILTER                              |
| 93   | 029-07217 | 1    | SPRING, FILTER                               |
| 94▲  | 028-04349 | 1    | RING-"O", 4 1/4 OD X 4 ID X 1/8 SECT.        |
| 95   | 064-20822 | 1    | COVER, OIL FILTER                            |
| 96   | 026-10787 | 1    | COOLER, OIL                                  |
| 97   | 070-16054 | 1    | NIP, PIPE, 3/4 SCH. 80 X 2 LG.               |

▲ PARTS INCLUDED IN KIT 464-21515

| ITEM | PART NO.  | QTY. | DESCRIPTION                                    | ITEM | PART NO.  | QTY. | DESCRIPTION                                    |
|------|-----------|------|------------------------------------------------|------|-----------|------|------------------------------------------------|
| 98   | 064-14393 | 3    | WASHER, 28 ID X .563 OD X .020 THK.            | 172  | 021-11735 | 3    | SCR., CAP, 12 PT. HD. 5/8-11UNC 2 X 3 LG.      |
| 99   | 023-04353 | 1    | TEE, SCREWED, 3/4 X 3/8 X 3/4                  | 173  | 064-17699 | 3    | FILL. PCS. 3/4 SCH. 40 X 1 1/8 LG.             |
| 100  | 023-06805 | 1    | CONN., 5/8 TUBE X 1/2 MPT                      | 174  | 029-00334 | 1    | NAMEPLATE, INSTRUCTION, ROT.                   |
| 101  | 023-04313 | 1    | ELBOW, SCREW 90° 3/4 FTT                       | 175  | 029-09432 | 1    | NAMEPLATE DATA, SYSTEM                         |
| 102  | 023-04010 | 2    | BUSHING, PIPE 3/4 X 1/2                        | 176  | 021-03720 | 10   | SCR., DRIVE #4 X 1/4 LG.                       |
| 103  | 064-07937 | 1    | CONN., 1/2 TUBE X 1/2 MPT (SPECIAL)            | 177  | 064-14970 | 6    | BOLT, TERMINAL, 5/8-11UNC                      |
| 104  | 023-01894 | 3    | PLUG, PIPE, HEX SOC. HD. X 1/2                 | 178  | 064-12740 | 6    | WASHER, TERMINAL BOLT                          |
| 107  | 025-04785 | 2    | BOX, JUNCTION                                  | 179  | 025-08586 | 12   | BUSHING, TERMINAL BOLT                         |
| 108  | 025-01732 | 2    | COVER, JUNCTION BOX                            | 180  | 028-03896 | 12   | RING, TERMINAL BOLT                            |
| 109  | 025-05701 | 4    | LOCKNUT, ELEC. 1/2                             | 181  | 028-03897 | 6    | RING, PACKING, TERM. BOLT                      |
| 110  | 025-04866 | 2    | BUSHING, ELEC. 1/2                             | 182  | 025-11508 | 12   | PLATE-INSULATOR                                |
| 111  | 023-01690 | 1    | ELL, ST., 45°, 1/2                             | 183  | 025-11507 | 1    | BAR-LOCKING, TERM. BOLT                        |
| 112  | 070-01294 | 2    | NIP, PIPE 1/2 SCH. 40 X 2 LG.                  | 184  | 068-00142 | 6    | WASHER, PLAIN 1 1/16 OD X 2 1/32 ID X 1/8 THK. |
| 113  | 070-01541 | 3    | NIP, PIPE, 3/4 SCH. 80 X 1 3/8 LG.             | 185  | 064-15981 | 1    | CONNECTION, VENT TUBE                          |
| 114  | 064-13893 | 1    | PUMP, JET OIL                                  | 186  | 064-15538 | 6    | BAR, ELEC., BUS.                               |
| 115  | 026-13123 | 1    | SIGHT GLASS                                    | 187  | 067-35603 | 1    | NIPPLE, PIPE, 1/2 SCH. 80 X 2 LG.              |
| 116  | 028-07407 | 1    | RING "O" 2 OD X 1.799 ID X .103 SECT.          | 188  | 021-00569 | 12   | NUT, JAM HEX, 5/8-11UNC-2                      |
| 117  | 025-01017 | 1    | CONTROL, ELEC. FLOAT SWITCH OLS                | 189  | 021-00466 | 6    | NUT, HEX., 3/8-16UNC                           |
| 118  | 021-12039 | 8    | SCR., CAP, 12 PT. HD., 5/16-18UNC X 1 LG.      | 190  | 021-01274 | 6    | WASHER, PLAIN, 13/16 OD X 13/32 ID X .065      |
| 119  | 064-12161 | 1    | PLUG, STATOR LOCKING                           | 191  | 021-11741 | 19   | TERM. ELEC., 1/8-27NPT BODY                    |
| 120  | 028-05403 | 1    | RING "O", 1 1/8 OD X 15/16 ID X 3/32 SECT.     | 192  | 025-09346 | 2    | BUSHING, PIPE, 1/2 X 1/8                       |
| 121  | 023-06802 | 1    | CONN., 3/8 TUBE X 3/8 MPT                      | 193  | 068-09057 | 2    | BOX, ELEC., OCT. CONCRETE RING                 |
| 122  | 023-01983 | 1    | PLUG, PIPE, 3/8 SQ.                            | 194  | 025-10290 | 1    | COVER, ELEC. BOX, OCT. CON. RING               |
| 123  | 368-00003 | 1    | VLAVE, STOP, ANGLE, 3/8, TYPE 1                | 195  | 025-10291 | 1    | TAG, CAUTION                                   |
| 124  | 021-11139 | 4    | SCR., CAP, 12 PT. HD. 3/8-16UNC X 7/8 LG.      | 196  | 030-13751 | 1    | SCR., CAP HEX. HD. 5/16-18UNC X 3/4 LG.        |
| 125  | 021-11159 | 21   | SCR., CAP, 12 PT. HD. 5/8-11UNC X 1 1/2 LG.    | 197  | 021-01418 | 4    | NUT, HEX. 5/16-18UNC                           |
| 126  | 064-15536 | 1    | GASKET, RD., 18 1/4 OD X 16 9/16 ID X 1/32 THK | 198  | 021-00461 | 4    | BRACKET ASS'Y; AUX. OIL PUMP                   |
| 127  | 021-11127 | 18   | SCR., CAP, 12 PT. HD., 5/8-11UNC X 1 3/4 LG.   | 199  | 364-20271 | 1    | PLUG, PIPE 2"                                  |
| 128  | 023-07342 | 1    | CPUG., 5/8 TUBE X 1/2 FTT                      | 200  | 023-02021 | 1    | ELBOW, 90° 1/2 TUBE X 3/8 MPT                  |
| 129  | 064-14180 | 2    | ORIFICE                                        | 201  | 021-01379 | 1    | SCR., CAP HEX. HD. 1/4-20UNC-2A X 3/4 LG.      |
| 130  | 022-02417 | 1    | CHECK VALVE 3/8 FTT (N) X 3/8 MPT (OUT)        | 202  | 023-06816 | 1    | ELBOW, 90° 1/2 TUBE X 3/8 MPT                  |
| 131  | 023-06803 | 1    | CONNECTOR 1/2 TUBE X 3/8 MPT                   | 203  | 013-01678 | 1    | LOCITE "NUT LOCK" TYPE CV (4-10)               |
| 132  | 023-06817 | 2    | ELBOW 90° 1/2 TUBE X 1/2 MPT                   | 204  | 023-07092 | 1    | ELL, 45° 3/8 TUBE X 1/4 MPT                    |
| 133  | 023-07158 | 1    | PLUG, FLARELESS, WITH "O" RING                 | 205  | 070-00715 | 1    | NIPPLE, PIPE 1/4 SCH. 80 X 1 1/2 LG.           |
| 134  | 064-17833 | 1    | HSG., MOTOR                                    |      |           |      |                                                |
| 135  | 064-20890 | 1    | SUPPORT, BRG., COMPR. END                      |      |           |      |                                                |

4 PARTS INCLUDED IN KIT 464-21515

# VARIABLE COMPONENTS

| ITEM NO. | DESCRIPTION                              | ELECTRIC P. R. V. MOTOR |            |            |            | AIR P. R. V. MOTOR |            |            |            |
|----------|------------------------------------------|-------------------------|------------|------------|------------|--------------------|------------|------------|------------|
|          |                                          | LINE NO. 1              | LINE NO. 2 | LINE NO. 3 | LINE NO. 4 | LINE NO. 5         | LINE NO. 6 | LINE NO. 7 | LINE NO. 8 |
| 252      | DEVICE, PRE - ROTATION                   | 364-15260               | 364-15260  | 364-15261  | 364-15262  | 362-15260          | 364-15260  | 364-15261  | 364-15262  |
| 253      | RING, SEAL IMPELLER                      | 064-13814               | 064-13814  | 064-13815  | 064-13816  | 064-13814          | 064-13814  | 064-13815  | 064-13816  |
| 254      | PLATE, NOZZLE BASE                       | 064-20798               | 064-20799  | 064-20800  | 064-20801  | 064-20798          | 064-20799  | 064-20800  | 064-20801  |
| 255      | PLATE, DIFFUSER                          | 064-12769               | 064-12769  | 064-12769  | 064-12768  | 064-12769          | 064-12769  | 064-12769  | 064-12768  |
| 256      | IMPELLER                                 | 064-12304               | 064-12304  | 064-12306  | 064-12305  | 064-12304          | 064-12304  | 064-12306  | 064-12305  |
| 257      | LEVER, P. R. DEVICE (EXTERNAL)           | 064-09310               | 064-09310  | 064-09310  | 064-09310  | 064-17898          | 064-17898  | 064-17898  | 064-17898  |
| 258      | MOTOR, P. R. DEVICE                      | 025-09359               | 025-09359  | 025-09359  | 025-09359  | 024-09599          | 024-09599  | 024-09599  | 024-09599  |
| 259      | AUX. SWITCH                              | 024-08864               | 024-08864  | 024-08864  | 024-08864  |                    |            |            |            |
| 260      | BOLT, SHOULDER                           | 064-12815               | 064-12815  | 064-12815  | 064-12815  |                    |            |            |            |
| 261      | SCREW, CAP                               | 021-11994               | 021-11994  | 021-11994  | 021-11994  | 021-02399          | 021-02399  | 021-02399  | 021-02399  |
| 262      | LINK, EXT.                               | 064-20789               | 064-20789  | 064-20789  | 064-20789  |                    |            |            |            |
| 263      | SCREW, CAP 12 PT. HD.                    | 021-11741               | 021-11741  | 021-11741  | 021-11741  | 021-11394          | 021-11394  | 021-11394  | 021-11394  |
| 265      | NUT, HEX 1/4-20UNC                       | 021-00450               | 021-00450  | 021-00450  | 021-00450  | 364-16838          | 364-16838  | 364-16838  | 364-16838  |
| 267      | BRACKET, P. R. MOTOR MOUNTING            |                         |            |            |            | 021-08310          | 021-08310  | 021-08310  | 021-08310  |
| 266      | SCREW, CAP, HEX HD. 1/4-20 UNC X 5/8 LG. |                         |            |            |            | 064-16874          | 064-16874  |            |            |
| 268      | VANE                                     |                         |            |            |            | 021-08182          | 021-08182  |            |            |
| 269      | SCREW, MACH. CTSK. 1/4-20 UNC X 1/2 LG.  |                         |            |            |            |                    |            |            |            |

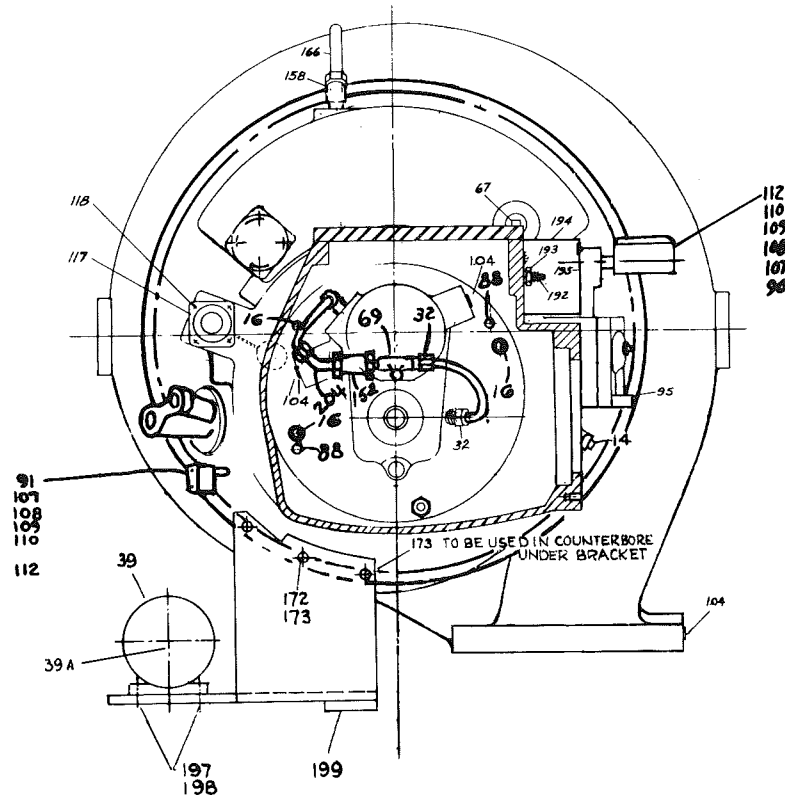


FIG. 2—Front View Compressor

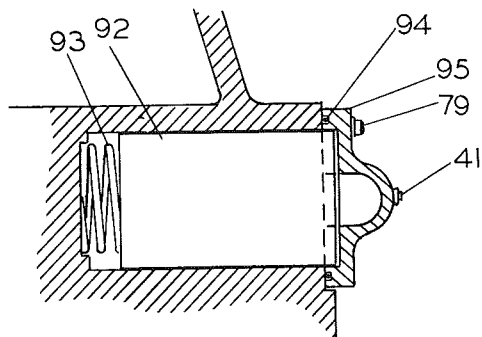


FIG. 3—Filter

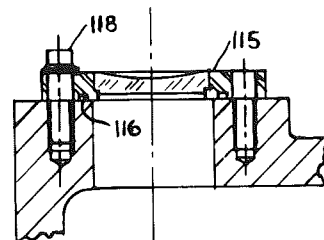


FIG. 4—Oil Sight Glass

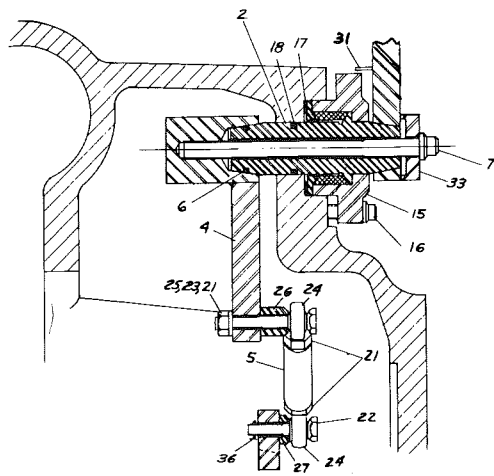


FIG. 5- Internal PRV Control Shaft

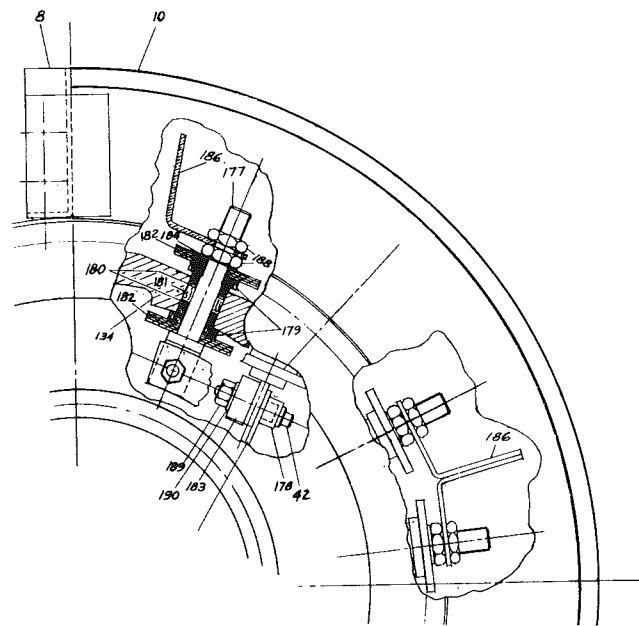


FIG. 6- Motor Terminals

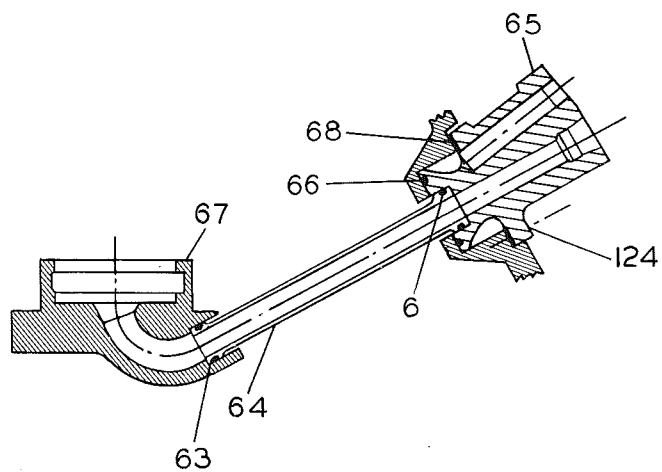


FIG. 7- Internal Oil Piping of Low Speed Oil Pump

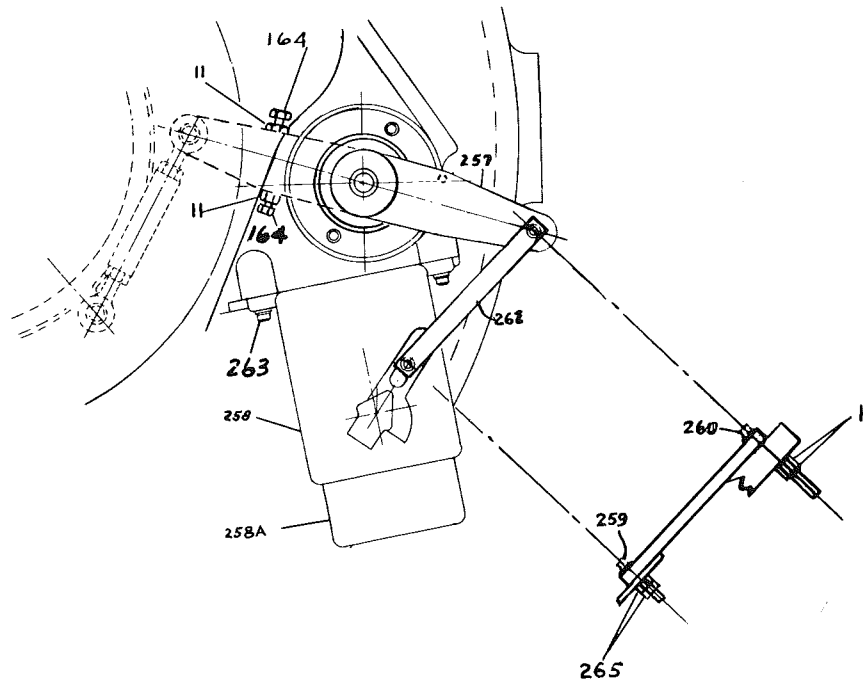


FIG. 8—Electric Motor

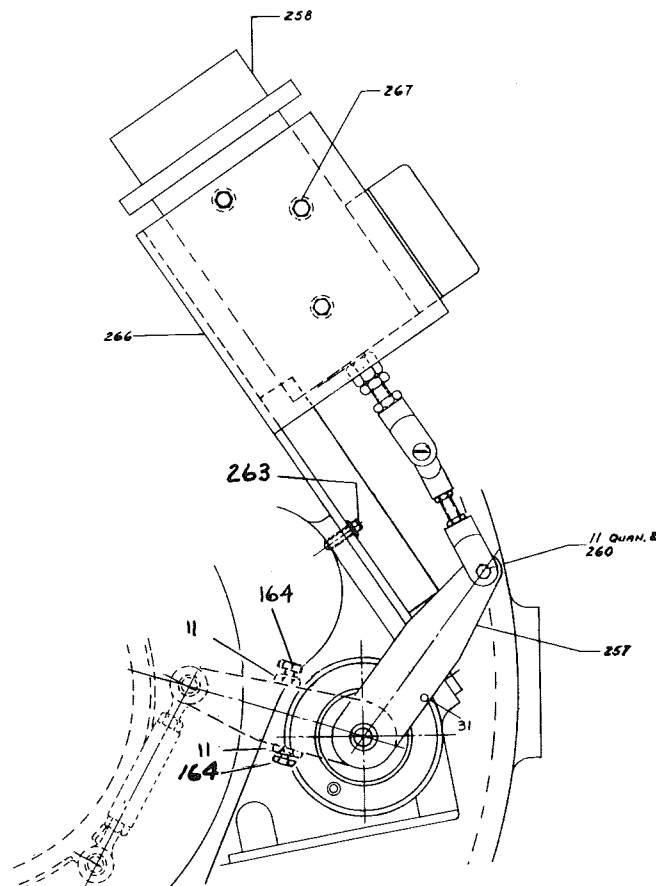
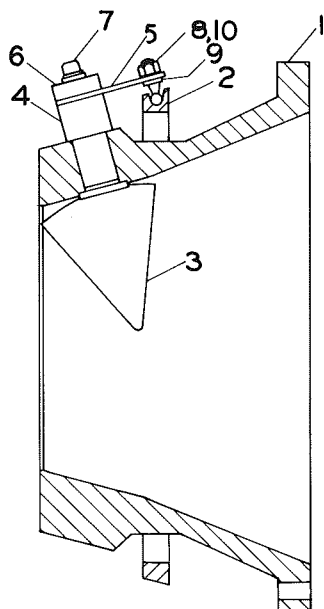
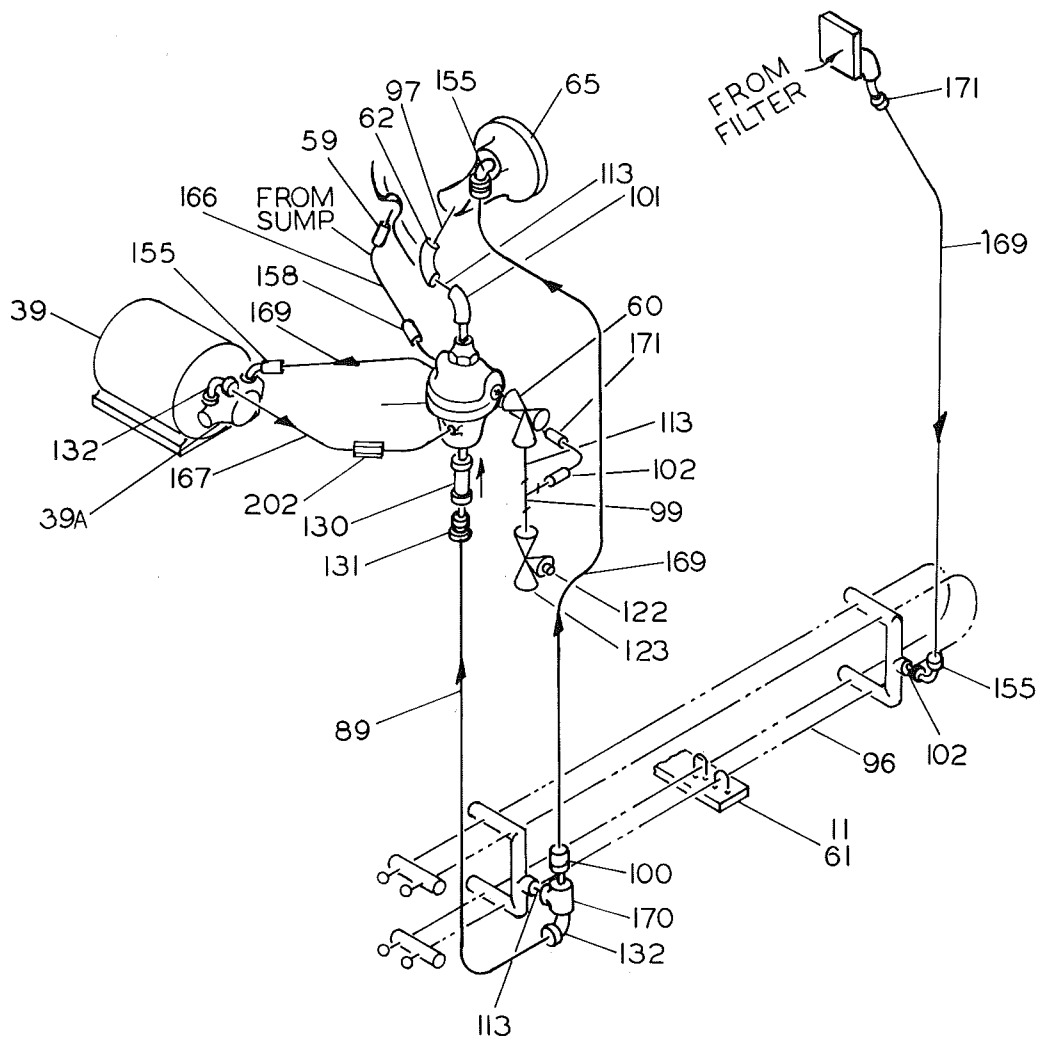


FIG. 9—Air Motor



| ITEM | PART NO.  | QUAN.    | DESCRIPTION                      |
|------|-----------|----------|----------------------------------|
| 1    | 064-14518 | 1        | HOUSING - PRE-ROTATION (T47-T48) |
|      | 064-14519 |          | HOUSING - PRE-ROTATION (T53)     |
|      | 064-14520 |          | HOUSING - PRE-ROTATION (T59)     |
| 2    | 064-09286 | 1        | RING - VANE DRIVING              |
| 3    | 064-09285 | 9        | VANE - PRE-ROTATION              |
| 4    | 064-09290 | 9        | WASHER                           |
| 5    | 064-09291 | 9        | ARM - VANE                       |
| 6    | 064-09289 | 9        | WASHER - SPECIAL                 |
| 7    | 021-11742 | 9        | SCREW - CAP                      |
| 8    | 029-07017 | 9        | SCREW - BALL                     |
| 9    | 021-11973 | AS REQ'D | WASHER                           |
| 10   | 021-12943 | 9        | NUT, 12-PT, 1/4-28UNF 3B         |

**FIG. 10** Cross Section View of Pre-Rotation Device



**FIG. 11-** Oil Piping

Subject to Change Without Notice

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GP 5M 1168 .20 Code: S(J) & R(J)  
Form 160,41-RP1.1

**YORK**

DIVISION OF BORG-WARNER CORPORATION

**BORG WARNER**