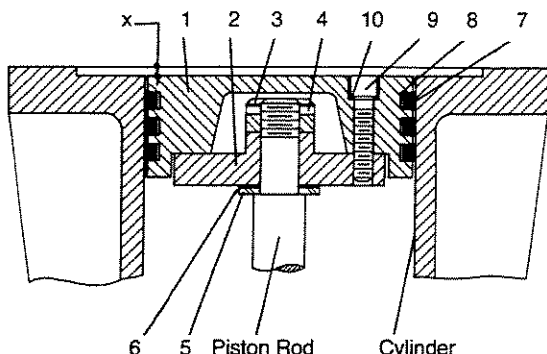
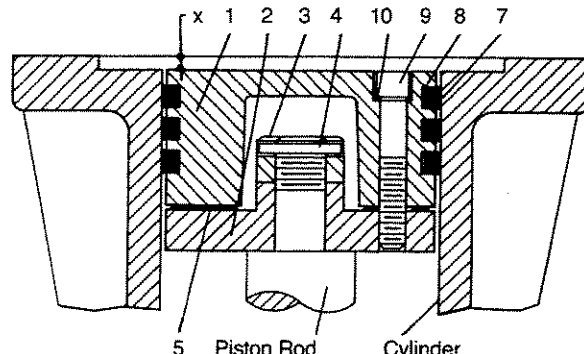


MODELS 91, 191, 291, 391, 491, 491-3



MODELS 590, 691, 691-4



| Piston Assembly No. | ALL MODELS 190/191 | | ALL MODELS 390/391 | | ALL MODELS 590/591 | | | | | | | |
|--|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|------------|
| | 1983-X | 2001-X | 1987-X | 1981-X | 1754-X | 1755-X | | | | | | |
| Piston Diameter | 3" (7.62 cm) | | 4 1/2" (11.43 cm) | | 6" (15.24 cm) | | | | | | | |
| Ref. No. Part Name | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston | | |
| 1. Head, Iron | 1983 | 1 | 2001 | 1 | 1987 | 1 | 1981 | 1 | 1754 | 1 | 1755 | 1 |
| 2. Piston Platform | 1984 | 1 | 2002 | 1 | 1986 | 1 | 1982 | 1 | 1986 | 1 | 1986-1 | 1 |
| 3. Locknut | 1482 | 1 | 1448 | 1 | 1482 | 1 | 1482 | 1 | 1482 | 1 | 1482 | 1 |
| 4. Lock Pin | 1483 | 1 | 1483 | 1 | 1483 | 1 | 1483 | 1 | 1483 | 1 | 1483 | 1 |
| 5. Thrust Washer | 1527 | 1 | None | - | 1527 | 1 | 1527 | 1 | None | - | None | - |
| 6. Shim Washer, Thick Shim Washer, Thin | 1528 1528-1 | As Req. | 1378 | As Req. | 1528 1528-1 | As Req. | 1528 1528-1 | As Req. | 1735 1735-1 | As Req. | 1735 1735-1 | As Req. |
| 7. Piston Ring | 1772 | 3 | 1770 | 3 | 1739 | 3 | 1771 | 3 | 1752 | 3 | 1756 | 3 |
| 8. Ring Expander | 1775 | 3 | 2015 | 3 | 1740 | 3 | 1774 | 3 | 1753 | 3 | 1757 | 3 |
| 9. Screw, Soc. Hd. | 7002-010 OC100A | 4 | 7002-008 NC125A | 4 | 7002-025 OC125A | 8 | 7002-008 NC125A | 6 | 7002-025 OC175A | 8 | 7002-025 OC175A | 4 |
| 10. Lock Washer | 7207-010A | 4 | 7207-008A | 4 | 7207-025A | 8 | 7207-008A | 6 | 7207-025A | 8 | 7207-025A | 4 |

| Piston Assembly No. | ALL MODELS 90/91, 290/291 | | ALL MODELS 490/491 | | ALL MODELS 491-3 | | ALL MODELS 690/691 | | ALL MODELS 690-4/691-4 | |
|--|---------------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|------------------------|-------------|
| | 1983-X | | 1985-X | | 1983-X1 | | 1987-X1 | | 1985-X1 | |
| Piston Diameter | 3" (7.62 cm) | | 4" (10.16 cm) | | 3" (7.62 cm) | | 4.5" (11.43 cm) | | 4" (10.16 cm) | |
| Ref. No. Part Name | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston | Part No. | Qty./Piston |
| 1. Head, Iron | 1983 | 1 | 1985 | 1 | 1983 | 1 | 1987 | 1 | 1985 | 1 |
| 2. Piston Platform | 1984 | 1 | 1986 | 1 | 1984-1 | 1 | 1986 | 1 | 1986 | 1 |
| 3. Locknut | 1482 | 1 | 1482 | 1 | 1482 | 1 | 1482 | 1 | 1482 | 1 |
| 4. Lock Pin | 1483 | 1 | 1483 | 1 | 1483 | 1 | 1483 | 1 | 1483 | 1 |
| 5. Thrust Washer | 1527 | 1 | 1527 | 1 | 1527 | 1 | None | - | None | - |
| 6. Shim Washer, Thick Shim Washer, Thin | 1528 1528-1 | As Req. | 1528 1528-1 | As Req. | 1528 1528-1 | As Req. | 1735 1735-1 | As Req. | 1735 1735-1 | As Req. |
| 7. Piston Ring | 1772 | 3 | 1773 | 3 | 1772 | 3 | 1739 | 3 | 1773 | 3 |
| 8. Ring Expander | 1775 | 3 | 1776 | 3 | 1775 | 3 | 1740 | 3 | 1776 | 3 |
| 9. Screw, Soc. Hd. | 7002-010 OC100A | 4 | 7002-025 OC125A | 8 | 7002-010 OC100A | 4 | 7002-025 OC125A | 8 | 7002-025 OC125A | 8 |
| 10. Lock Washer | 7207-010A | 4 | 7207-025A | 8 | 7207-010A | 4 | 7207-025A | 8 | 7207-025A | 8 |

PISTON CLEARANCE (COLD)

| MODEL | "X" INCHES (MILLIMETER) | |
|---|-------------------------|-------------|
| | MINIMUM | MAXIMUM |
| 91, 191, 291, 491 (b) | .020 (.51) | .044 (1.12) |
| A91, D91, A191, D191, A291, D291, WA391, WD391, D491, 491-3 (b) | .025 (.64) | .049 (1.24) |
| T91, T191, T291, FT191, FT291 | .030 (.76) | .054 (1.35) |
| T690-4, WT690-4, WT690, WT590 | .100 (2.54) | .112 (2.84) |
| T691 | .115 (2.92) | .127 (3.22) |
| 190, 390, 490, 491 (a) | .000 (.00) | .024 (.61) |
| A190, D190, A390, D390, A490, D490, D491, D490-3, D491-3 | .005 (.13) | .029 (.74) |
| T491, T490-3 | .010 (.25) | .034 (.86) |
| WT391, T491, T491-3 (b) | .030 (.76) | .054 (1.36) |
| 590, 690, W690 | .000 (.00) | .012 (.30) |
| 691 | .015 (.38) | .027 (.68) |
| A590, WA590, A690, WA690 | .045 (1.14) | .057 (1.45) |
| D590, WD590, D690, D690-4, WD690, WD690-4 | .050 (1.27) | .062 (1.57) |
| D691 | .065 (1.65) | .077 (1.95) |

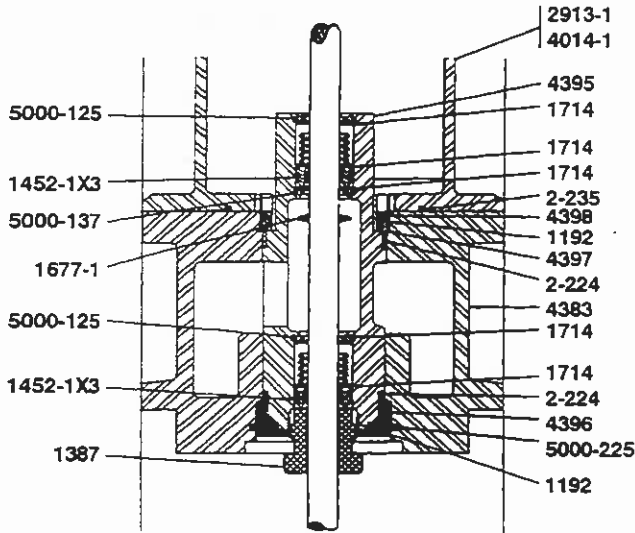
NOTES:

- (a) For 491 Compressor with flat gasket.
- (b) For 491 Compressor with head o-rings.

**CAUTION: ALWAYS RELIEVE PRESSURE
IN THE UNITS BEFORE
ATTEMPTING ANY REPAIRS.**

DISTANCE PIECE DETAILS
 MODELS D191 AND D291 COMPRESSORS
 S/N SS55685 AND LATER

PACKING SPEC. A



| PART NO. | PART NAME |
|----------|--|
| 1192 | LOCKING DEVICE TFE 1/8" DIA. X 1/4" LONG |
| 1387 | ADJUSTMENT SCREW |
| 1452-1 | FEMALE PACKING RING |
| 1453-1 | MALE PACKING RING |
| 1454 | PACKING RING |
| 1628 | PACKING SPRING |
| 1677-1 | OIL DEFLECTOR RING |
| 1714 | PACKING BOX WASHER |
| 4383 | CROSSHEAD GUIDE |
| 4395 | PACKING CARTRIDGE |
| 4396 | CARTRIDGE PLATE |
| 4397 | SPACER |
| 4398 | CARTRIDGE HOLDDOWN SCREW |
| 2913-1 | CYLINDER |
| 1183-6 | ADAPTER PLATE |
| 4014-1 | CYLINDER (191) |
| 5000-125 | RETAINER RING |
| 5000-225 | RETAINER RING |
| 2-224 | O-RING |
| 2-235 | O-RING |
| 4005 | PACKING INST. TOOL |

NOTE:

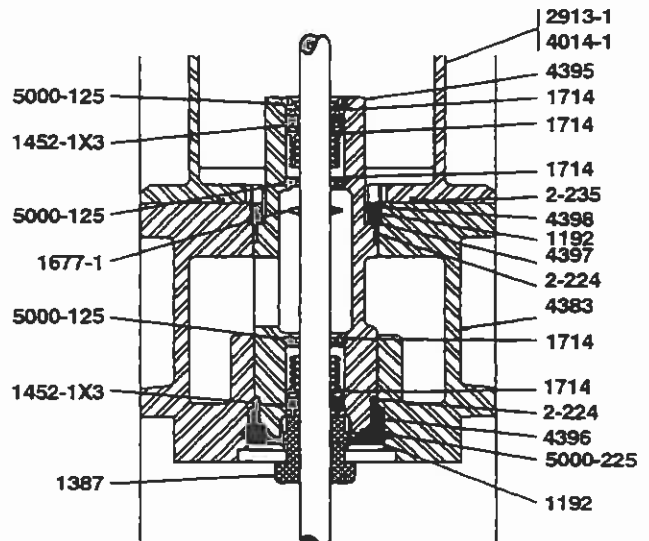
| ASSEMBLY NO. | ASSEMBLY NAME |
|--------------|--|
| 1132-X | CROSSHEAD-PISTON ROD ASSEMBLY |
| 1132-X3 | QUANTITY 2 (D291) |
| 1132-X5 | QUANTITY 2 (D291 - CHROME OXIDE) |
| 1132-X3 | QUANTITY 1 (D191) |
| 1132-X4 | QUANTITY 1 (D191 - 2ND STAGE) |
| 1132-X5 | QUANTITY 1 (D191 - CHROME OXIDE) |
| 1132-X6 | QUANTITY 1 (D191 - CHROME OXIDE - 2ND STAGE) |
| 1452-1X3 | PACKING SET WITH 1452-1, 1453-1, 1454(5), 1628, 1714 |
| 1452-2X3 | PACKING SET - ALLOY - D STYLE |
| 4383-X | CROSSHEAD GUIDE ASSEMBLY WITH 4383, 4396, 5000-225 |

USE CONE 4005 FOR INSTALLATION OF PACKING.

THE QUANTITY OF 1454 PACKING RINGS REQUIRED WILL VARY DUE TO TOLERANCES.

CAUTION: ALWAYS RELIEVE PRESSURE IN THE UNIT BEFORE ATTEMPTING ANY REPAIRS.

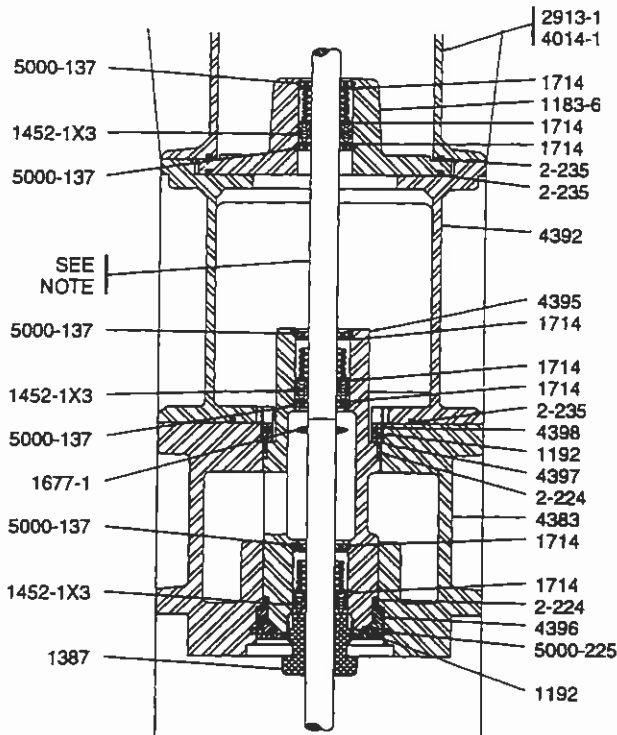
PACKING SPEC. B



DISTANCE PIECE DETAILS
 MODELS T191 AND T291 COMPRESSORS
 ALL SPECIFICATIONS

| | |
|-------------------------------------|---------------------|
| SERVICE PAGE JANUARY FIRST ISSUE | MANUAL E288 1995 |
|-------------------------------------|---------------------|

PACKING SPEC. G



| PART NO. | PART NAME |
|----------|--|
| 1192 | Locking Device TFE 1/8" Dia. x 1/4" Long |
| 1387 | Adjustment Screw |
| 1452-1 | Female Packing Ring |
| 1453-1 | Male Packing Ring |
| 1454 | Packing Ring |
| 1628 | Packing Spring |
| 1677-1 | Oil Deflector Ring |
| 1714 | Packing Box Washer |
| 2288-1 | Cylinder |
| 4383 | Crosshead Guide |
| 4395 | Packing Cartridge |
| 4396 | Cartridge Plate |
| 4397 | Spacer |
| 4398 | Cartridge Holddown Screw |
| 2913-1 | Cylinder (T291) |
| 4392 | Distance Piece |
| 1183-6 | Adapter Plate |
| 4014-1 | Cylinder (T191) |
| 5000-137 | Retainer Ring |
| 5000-225 | Retainer Ring |
| 2-224 | O-ring |
| 2-235 | O-ring |

SEE NOTE

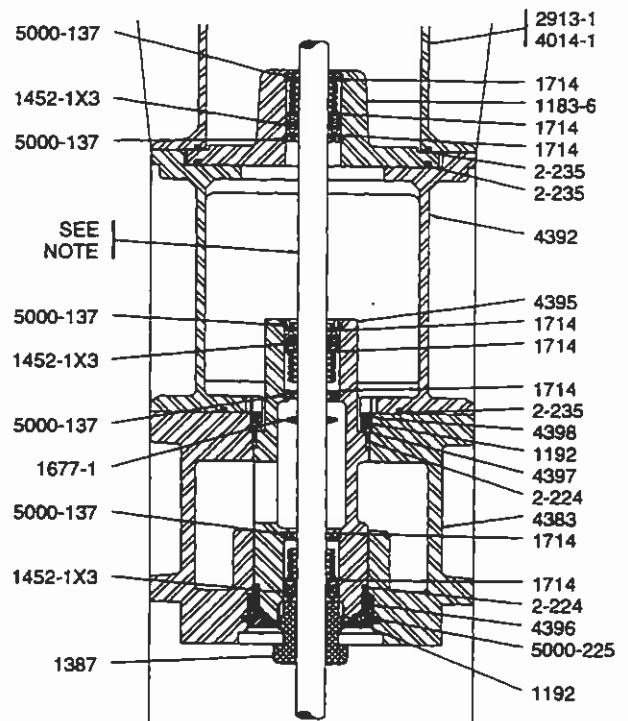
NOTE:

| ASSEMBLY NO. | ASSEMBLY NAME |
|--------------|--|
| 1132-X7 | Quantity 2 (T291 - Nitrotec) |
| 1132-X9 | Quantity 2 (T291 - C _r O ₂) |
| 1132-X7 | Quantity 1 (T191 - Nitrotec) |
| 1132-X8 | Quantity 1 (T191 - Nitrotec) (2nd Stage) |
| 1132-X9 | Quantity 1 (T191 - C _r O ₂) |
| 1132-X10 | Quantity 1 (T191 - C _r O ₂) (2nd Stage) |
| 1384-X2 | Crosshead-Piston Rod Assembly (Coated Piston Rods) |
| 1132-X10 | Crosshead Assembly Chrome Oxide T191 |
| 1384-X3 | Crosshead-Piston Rod Assembly (Chrome Oxide Piston Rods) |
| 1452-1X3 | Packing Set with 1452-1, 1453-1, 1454(5), 1628, 1714 |
| 1452-2X3 | Packing Set-Alloy-D Style |
| 2773-X | Crosshead Guide Assembly with 2773, 2777, 5000-262 |

Use cone 4005 for installation of packing.
 The quantity of 1454 Packing Rings required will vary due to tolerances.
 For O-ring Material Coding See Page A500.

CAUTION: Always Relieve Pressure In The Unit Before Attempting Any Repairs.

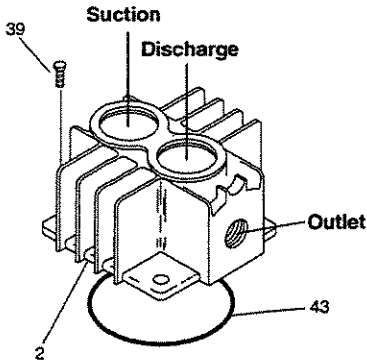
PACKING SPEC. H



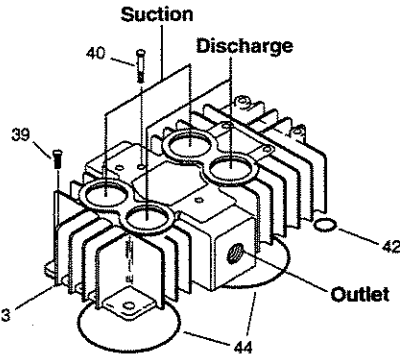
HEAD ASSEMBLY DETAILS
 ALL MODELS 91 AND 291 S/N JW47628 AND LATER
 ALL MODELS 191

SERVICE PAGE
 OCTOBER SUPERSEDES
 MANUAL E300L
 1994 E300K

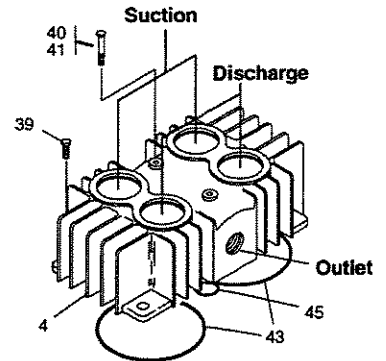
HEAD 90/91



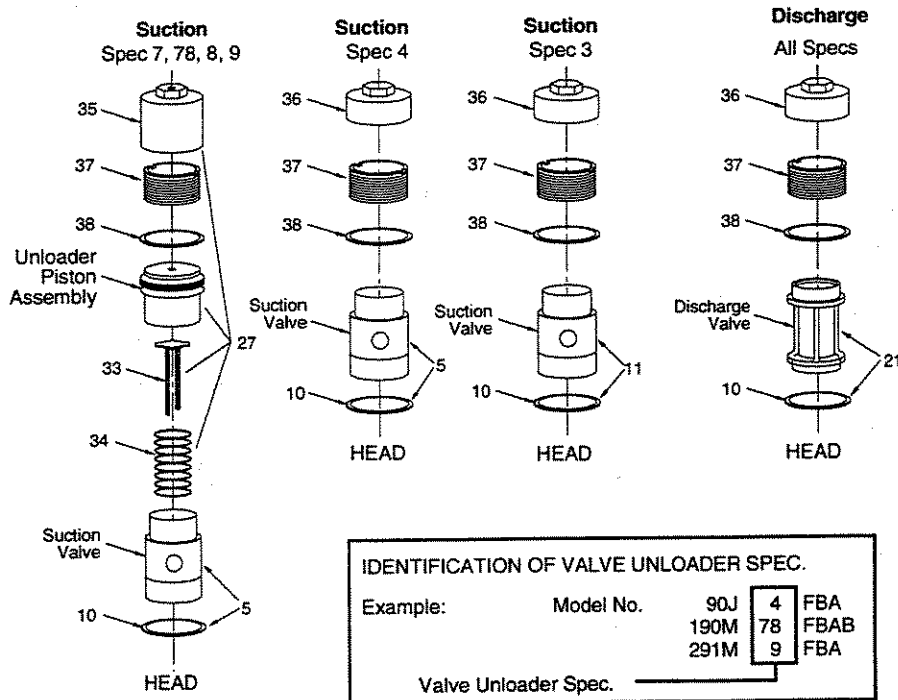
191



290/291

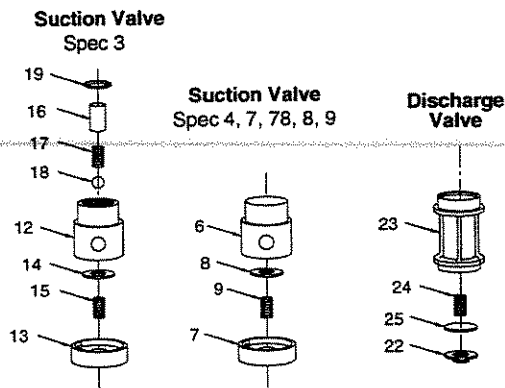


VALVE REMOVAL

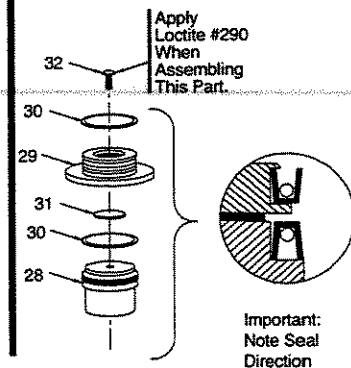


| IDENTIFICATION OF VALVE UNLOADER SPEC. | | | |
|--|----------------------|------|---------|
| Example: | Model No. | 90J | 4 FBA |
| | | 190M | 78 FBAB |
| | | 291M | 9 FBA |
| | Valve Unloader Spec. | | |

VALVE DETAILS



Unloader Piston Assembly



HEAD ASSEMBLY DETAILS
ALL MODELS 91 AND 291 S/N JW47628 AND LATER
ALL MODELS 191

NOTE: When ordering parts use
"PART NO." not "REF NO."

| REF NO. | PART NO. | DESCRIPTION |
|---------|----------|--|
| (a)1. | 2374-X | Head Assy, Spec 3, Model 90, 91, D90, D91 |
| | 2463-X1 | Head Assy, Spec 3, Model 290, D290 |
| | 2912-X1 | Head Assy, Spec 3, Model 291, D291 |
| | 2374-X1 | Head Assy, Spec 4, Model 90, 91, D90, D91, A90, A91 |
| | 4013-X1 | Head Assy, Spec 4, Model 191, A191, D191 |
| | 2463-X2 | Head Assy, Spec 4, Model 290, A290, D290 |
| | 2912-X2 | Head Assy, Spec 4, Model 291, D291 |
| | 2374-X2 | Head Assy, Spec 8,9, Model 90, 91, D90, D91 |
| | 2374-X3 | Head Assy, Spec 8,9, Model A90, A91 |
| | 4013-X2 | Head Assy, Spec 7,78,8,9, Model 191, A191, D191 |
| | 2463-X3 | Head Assy, Spec 7,78,8,9, Model 290, D290 |
| | 2463-X4 | Head Assy, Spec 7,78,8,9, Model A290 |
| | 2912-X3 | Head Assy, Spec 7,78,8,9, Model 291, D291 |
| 2. | 2374 | Head Model 90, 91 |
| | 4302 | Head Model F91 (ANSI FLANGE) |
| 3. | 4013 | Head Model 191 |
| | 4371 | Head Model F191 (ANSI FLANGE) |
| 4. | 2463 | Head Model 290, A290, D290 (Obsolete replace by 2912) |
| | 2912 | Head Model 291, A291, D291 |
| | 4300 | Head Model F291 (ANSI FLANGE) |
| 5. | 3483-X | Suction Valve Assy, Spec 4,7,78,8,9 |
| (b) | 3483-X1 | Same as above but with Copper Gaskets |
| (b) | 3483-X2 | Same as above but with Iron-Lead Gaskets |
| 6. | 3483 | Suction Valve Seat |
| 7. | 3484 | Suction Valve Bumper |
| 8. | 3972 | Suction Valve Plate |
| 9. | 4009 | Suction Spring |
| 10. | 2717 | Valve Gasket, Alum. |
| (b) | 2717-1 | Valve Gasket, Copper |
| (b) | 2717-2 | Valve Gasket, Iron-Lead |
| 11. | 3483-1X | Suction Valve Assy, Spec 3 |
| (b) | 3483-1X1 | Same as above but with Copper Gaskets |
| (b) | 3483-1X2 | Same as above but with Iron-Lead Gaskets |
| 12. | 3483-1 | Suction Valve Seat, Spec 3 |
| 13. | 3484 | Suction Valve Bumper |
| 14. | 3972 | Suction Valve Plate |
| 15. | 4009 | Suction Spring |
| 16. | 3977 | Suction Valve Relief Housing |
| 17. | 1411 | Spring |
| 18. | 1410 | Ball |
| 19. | 5000-77 | Retainer Ring |
| 20. | | |
| 21. | 3485-X | Discharge Valve Assy |
| (b) | 3485-X1 | Same as above but with Copper Gaskets |
| (b) | 3485-X2 | Same as above but with Iron-Lead Gaskets |
| 22. | 3485 | Discharge Valve Seat |
| 23. | 3486 | Discharge Valve Bumper |
| 24. | 4008 | Discharge Spring |
| 25. | 3973 | Discharge Valve Plate |

| REF NO. | PART NO. | DESCRIPTION |
|---------|--------------------|-----------------------------------|
| 27. | 3919-X | Unloader Assy |
| 28. | 3919 | Unloader Piston |
| 29. | 2857 | Piston Cap |
| 30. | 2619-X | Piston Seat Assy |
| 31. | 2858 | Unloader Piston Cap Gasket |
| 32. | 1910 | Bolt 1/4-20 x 1/2 Soc. Button Hd. |
| 33. | 3975 | Unloader Actuator |
| 34. | 3976 | Unloader Spring |
| 35. | 2598-1 | Unloader Cap |
| 36. | 2714-1 | Valve Cap |
| 37. | 2715 | Holddown Screw |
| (c)38. | 2-031_ | O-ring |
| 39. | 7001-037 NC100A | Bolt, 3/8-16 x 1" Gr.5 Hex Hd. |
| 40. | 2731 | Center Headbolt |
| 41. | 2732 | Gasket |
| 42. | 2-118E | O-ring, Teflon (Intercooler) |
| (c)43. | 2-235_ | O-ring |
| (c)44. | 2-236_ | O-ring |
| (c)45. | 2-113_ | O-ring |

NOTES:

- (a) Not Shown.
- (b) Optional.
- (c) For O-ring material coding see page A500

**CAUTION: Always Relieve Pressure In The Unit
Before Attempting Any Repairs.**

CONNECTING ROD AND CROSSHEAD ASSEMBLY DETAILS
ALL MODELS
ALL SPECIFICATIONS

| MODEL NUMBER | 91 | A91 D91 | T91 | 181 | A191 D191 | T191 | 291 | A291 D291 | T291 | 391 W391 491 | A391 WA391 D391 WD391 A491 D491-3 D491 | T391 T491-3 T491 | A590 WA590 D590 WD590 A691 WA690 D691 D691-4 WD690 WD690-4 | SPEC. K,P ONLY | 590 W590 W690 691 | A590 WA590 D590 WD590 A691 WA690 D691 D691-4 WD690 WD690-4 | SPEC. M ONLY | 590 W590 W690 691 | D791 D8091 |
|--------------|--------------------|------------|--------------------------------------|---------------------------|--------------------|---|----------------|--------------------|---------------------------|------------------------------|--|---------------------------|---|----------------------|----------------------------|---|--------------------|----------------------------|---------------|
| NO. | DESCRIPTION | | | | | | | | | | | | | | | | | | |
| 1. | CROSSHEAD ASSEMBLY | 1132-X2 | 1132-X3 1132-X7 1132-X9 (f) | 1132-X1 (g) 1132-X2 | 1132-X3 1132-X4 | 1132-X8 (h) 1132-X7 1132-X9 (i) 1132-X10 (j)(k) | 1132-X2 (l) | 1132-X3 1132-X5 | 1132-X7 1132-X9 (f) | 1394-X 2765(h) 1366(i) | 1394-X1 1384-X4 (f) | 1394-X2 1394-X3 (f) | 1717-X 1716-X | SPEC. M ONLY | 3544-X4 2405-X | 1717-X1 1716-X | SPEC. M ONLY | 3544-X5 2405-X | 3544-X3 |
| 2. | CROSSHEAD GUIDE | 2240 | 4940-X | 4393 | 4383 | 4383-X | 4393 | 4383-X | 4383-X | 1490-X 1490 | 1490-X | 1490-X | 1720-X 1720 | SPEC. K,P ONLY | 3785-X1 3785 | 1720-X1 1720 | SPEC. M ONLY | 3785-X1 3785 | 3785-X |
| 3. | CONN. ROD ASSY. | 1889-1X | 1889-1X | 1889-X | 1889-X | 1889-X | 1889-X | 1889-X | 1889-X | 1490-X 1490 | 1490-X | 1490-X | 1720-X 1720 | SPEC. K,P ONLY | 3785-X1 3785 | 1720-X1 1720 | SPEC. M ONLY | 3785-X1 3785 | 3785-X |
| 4. | CONNECTING ROD | 1889-1 | 1889-1 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1490-X 1490 | 1490-X | 1490-X | 1720-X 1720 | SPEC. K,P ONLY | 3785-X1 3785 | 1720-X1 1720 | SPEC. M ONLY | 3785-X1 3785 | 3785-X |
| 5. | CONN. ROD BEARING | 1367 | 1367 | 1367 | 1367 | 1367 | 1367 | 1367 | 1367 | 1491 1492 | 1491 | 1491 | 1719 1726 | SPEC. K,P ONLY | 3542 1726 | 1719 1726 | SPEC. M ONLY | 3542 1726 | 3542 |
| 6. | BOLT | 1599 | 1599 | 1599 | 1599 | 1599 | 1599 | 1599 | 1599 | 1492 | 1492 | 1492 | 1726 | SPEC. K,P ONLY | 1726 | 1726 | SPEC. M ONLY | 1726 | 1726 |
| 7. | NUT | 1600(c) | 1600(c) | 1600(c) | 1600(c) | 1600(c) | 1600(c) | 1600(c) | 1600(c) | 1493(d) 1496 | 1493(d) | 1493(d) | 1727(e) 1727(e) | SPEC. K,P ONLY | 1727(e) 1727(e) | 1727(e) | SPEC. M ONLY | 1727(e) 1727(e) | 1727(e) |
| 8. | WRIST PIN | 2505 | 2505 | 2505 | 2505 | 2505 | 2505 | 2505 | 2505 | 1496 | 1496 | 1496 | 1718 | SPEC. K,P ONLY | 3540 | 1718 | SPEC. M ONLY | 3540 | 3540 |
| 9. | WRIST PIN BUSHING | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1846-X(a) | 1495-X(a) 1498 | 1495-X(a) | 1495-X(a) | 1495-X(a) | SPEC. K,P ONLY | 3541-X(k) 3590 | 1495-X(a) | SPEC. M ONLY | 3541-X(k) 3590 | 3541-X(k) |
| 10. | RETAINER RING | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | 1498 | SPEC. K,P ONLY | 1761 | 1498 | SPEC. M ONLY | 1761 | 1761 |
| 11. | CRANKCASE GASKET | 2526 | 2526 | 2526 | 2702 | 2702 | 2702 | 2702 | 2702 | 1489 | 1489 | 1489 | 1761 | SPEC. K,P ONLY | 1761 | 1761 | SPEC. M ONLY | 1761 | 1761 |
| 12. | DIPPER | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | ***** | ***** | ***** | ***** | SPEC. K,P ONLY | ***** | ***** | SPEC. M ONLY | ***** | ***** |

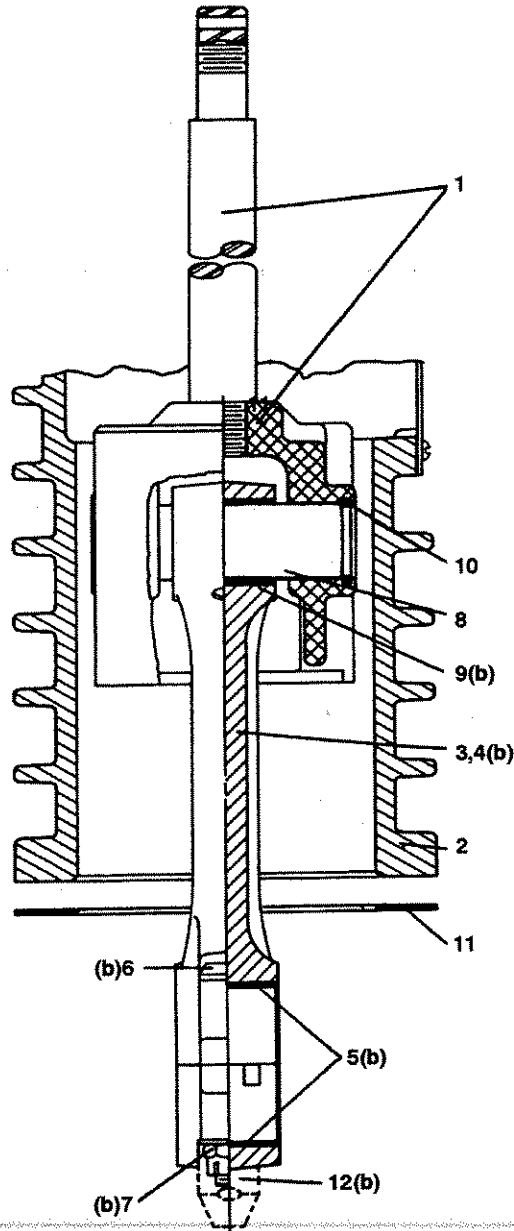
NOTES:

- (a) Must be rebored after replacing (0.8754/0.8751 Dia.)
- (b) Included with Connecting Rod Assembly
- (c) Torque Connecting Rod Nut to 28 ft. lbs.
- (d) Torque Connecting Rod Nut to 30 ft. lbs.
- (e) Torque Connecting Rod Nut to 40 ft. lbs.
- (f) Optional Chrome Oxide Piston Rods Only
- (g) Second Stage (Smaller Piston)
- (h) S/N XC30633 and Later
- (i) Prior to S/N XC30633
- (k) Must be rebored after replacing (1.1256/1.1252 Dia.)

Never attempt to separate the Piston Rod and Crosshead. When repair becomes necessary the entire Crosshead Assembly must be replaced.

CONNECTING ROD AND CROSSHEAD ASSEMBLY DETAILS
ALL MODELS
ALL SPECIFICATIONS

| | |
|------------|--------|
| SERVICE | MANUAL |
| PAGE | E350J |
| MAY | 1997 |
| SUPERSEDES | E350I |



REFER TO PARTS LIST
ON BACK SIDE OF
THIS SHEET.

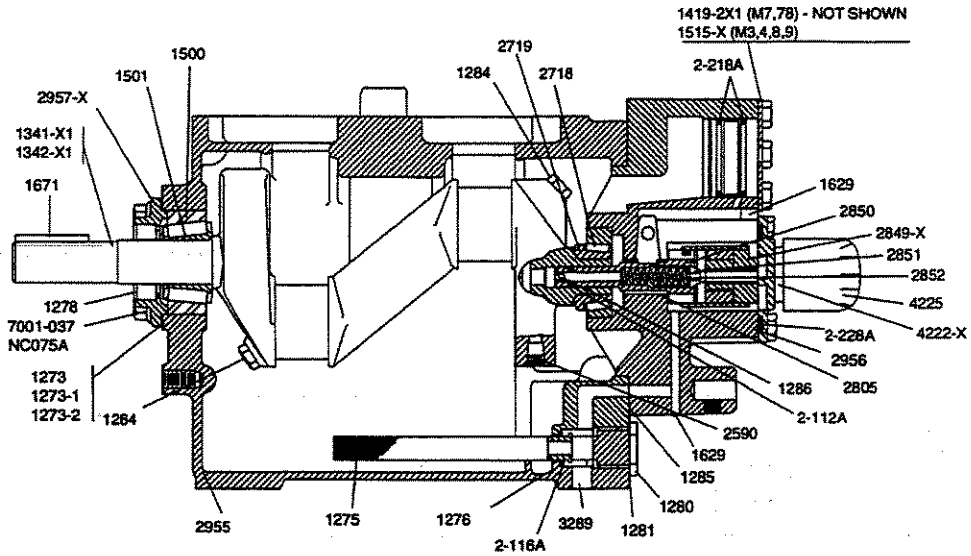
**CAUTION: ALWAYS RELIEVE PRESSURE IN THE
UNIT BEFORE ATTEMPTING ANY REPAIRS.**

**CRANKCASE DETAILS
ALL MODELS 151, 191, 291
COMPRESSORS
CRANKCASE SPECIFICATION: M**

| | |
|---------------|--------------|
| SERVICE PAGE | MANUAL E402G |
| DECEMBER 1999 | |
| SUPERSEDES | E402F |

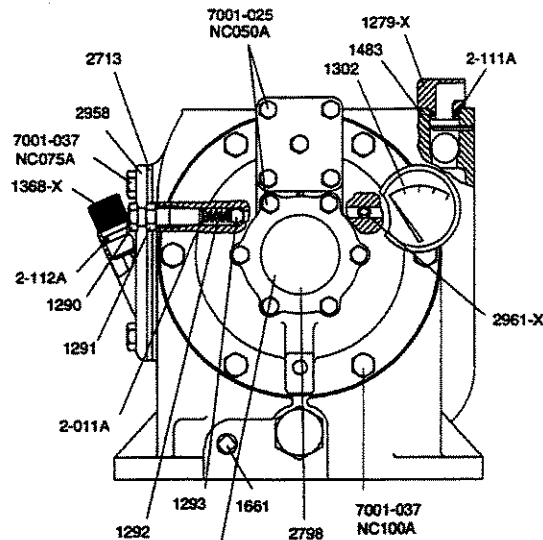
CRANKCASE DETAILS - FD151

IDENTIFICATION OF VALVE/UNLOADER SPEC.
 Example: Model No. FD151AM FBA
 Valve/Unloader Spec. _____



**Crankcase Assembly No. 2955-X1 (M3, 4, 8, 9)
Crankcase Assembly No. 2955-X2 (M7, 78)**

**2549-X1 Flywheel Assembly Not Shown (16")
Optional Flywheel Assembly 3271-X1 Not Shown (14")**



2848-X USED ON ALL COMPRESSORS
WITHOUT OIL FILTER ASSEMBLY

Caution: Always relieve pressure in the units
before attempting any repairs.

CRANKCASE DETAILS
ALL MODELS 151, 191, 291
COMPRESSORS
CRANKCASE SPECIFICATION: M

| PART NO. | PART NAME |
|--------------------|--|
| 1273 | Bearing Adjustment Shim (0.005") |
| 1273-1 | Bearing Adjustment Shim (0.007") |
| 1273-2 | Bearing Adjustment Shim (0.020") |
| 1275 | Oil Filter Screen |
| 1276 | Filter Screen Washer |
| 1278 | Oil Seal |
| 1279 | Breather Cap |
| 1280 | Filter Screw |
| 1281 | Filter Screen Screw Gasket |
| 1284 | Crankshaft Orifice (2) |
| 1285 | Bearing Carrier Gasket |
| 1286 | Pump Shaft Drive Pin |
| 1290 | Relief Valve Adjusting Screw |
| 1291 | Adjusting Screw Locknut |
| 1292 | Relief Valve Spring |
| 1293 | Relief Valve Ball |
| 1302 | Oil Pressure Gauge |
| 1368-X | Oil Bayonet |
| 1483 | Piston Lock Pin - 1/8 x 1" |
| 1500 | Bearing Cup |
| 1501 | Bearing Cone |
| 1629 | Pipe Plug - 1/16 NPT, Flush Seal |
| 1661 | Pipe Plug - 3/8 NPT |
| 1671 | Flywheel Key |
| 2590 | Pipe Plug - 1/8 NPT, Flush Seal |
| 2713 | Crankcase Inspection Plate Gasket |
| 2718 | Bearing Cup |
| 2719 | Bearing Cone |
| 2796 | Breather Ball |
| 2798 | Pump Cover Pin |
| 2805 | Pump Shaft Bushing |
| 2848-X | Pump Cover (Includes Pin) |
| 2849-X | Oil Pump Assembly (Individual pump parts not available) |
| 2850 | Pump Shaft Adapter |
| 2851 | Spring Guide |
| 2852 | Oil Pump Spring |
| 2955 | Crankcase |
| 2956 | Bearing Carrier |
| 2957 | Bearing Cover |
| 2958 | Crankcase Inspection Plate |
| 3289 | Pipe Plug - 1/4 NPT, Flush Seal |
| 4222-X | Oil Filter Assembly |
| 4225 | Filter |
| 2-011A | O-Ring (Relief Valve Adj. Screw) |
| 2-111A | O-Ring (Breather Cap) |
| 2-112A | O-Ring (Oil Bayonet) |
| 2-112A | O-Ring (Pump Shaft) |
| 2-116A | O-Ring (Filter Screen) |
| 2-218A | O-Ring (Closure Body) (2 Required) (Spec 3, 4, 8, 9 Only) |
| 2-228A | O-Ring (Pump Cover) |
| 7001-025 NC050A | Bolt, 1/4-20 x 1/2, Hex Head |
| 7001-037 NC075A | Bolt, 3/8-16 x 3/4, Hex Head |
| 7001-037 NC100A | Bolt, 3/8-16 x 1, Hex Head |

| ASSEMBLY NO. | ASSEMBLY NAME |
|--------------|---|
| 1279-X | Breather Cap Assembly with 1279, 2-111A |
| 1341 -X1 | Crankshaft Assembly with 1284 (2),1286,1341, 1501,2590,2719 |
| (a) 1342-XI | Extended Crankshaft Assembly with 1284 (2),1286, 1342,1501, 2590, 2719 |
| 1368-XI | Oil Bayonet Assembly with 1368-X, 2-112A |
| 1419-2X1 | Hydraulic Unloader Assembly (Up to 200 psi) (Spec 7, 78 Only) |
| (a) 1419-2X2 | Hydraulic Unloader Assembly (200 psi & Above) (Spec 7, 78 Only) |
| 1515-X | Closure Cap Assembly including 2-218A (2) (Spec 3, 4, 8, 9 Only) |
| 2549-X1 | Flywheel Assembly, 16" O.D. 3 Groove with 2549 and 3218 (Not part of Crankcase Assembly) (Not Shown) |
| 2956-X | Bearing Carrier Assembly with 1285, 1290,1291, 1292,1293,1515-X, 2718, 2805, 2806 (2), 2848-X, 2849-X, 2850, 2851, 2852, 2956, 2961 -X, 2-011A, 2-112A, 2-228A. |
| 2957-X | Bearing Cover Assembly with 2957 and 1278 |
| 2961 -X | Air Release Valve Assembly with 2961, 2962, 2963 |
| (a) 3271-X1 | Flywheel Assembly, 14" O.D. 2 Groove with 3218 and 3271 (Not part of Crankcase Assembly) (Not Shown) |
| 4222-X | Oil Filter Assembly with 4222, 4225, 2798 (Standard on All Models Starting January 1, 1993) |

NOTES:

(a) Optional Equipment

Crankcase Capacity: 1.5 Quarts (1.4 Liters)

Caution: Always relieve pressure in the unit before attempting any repairs.