

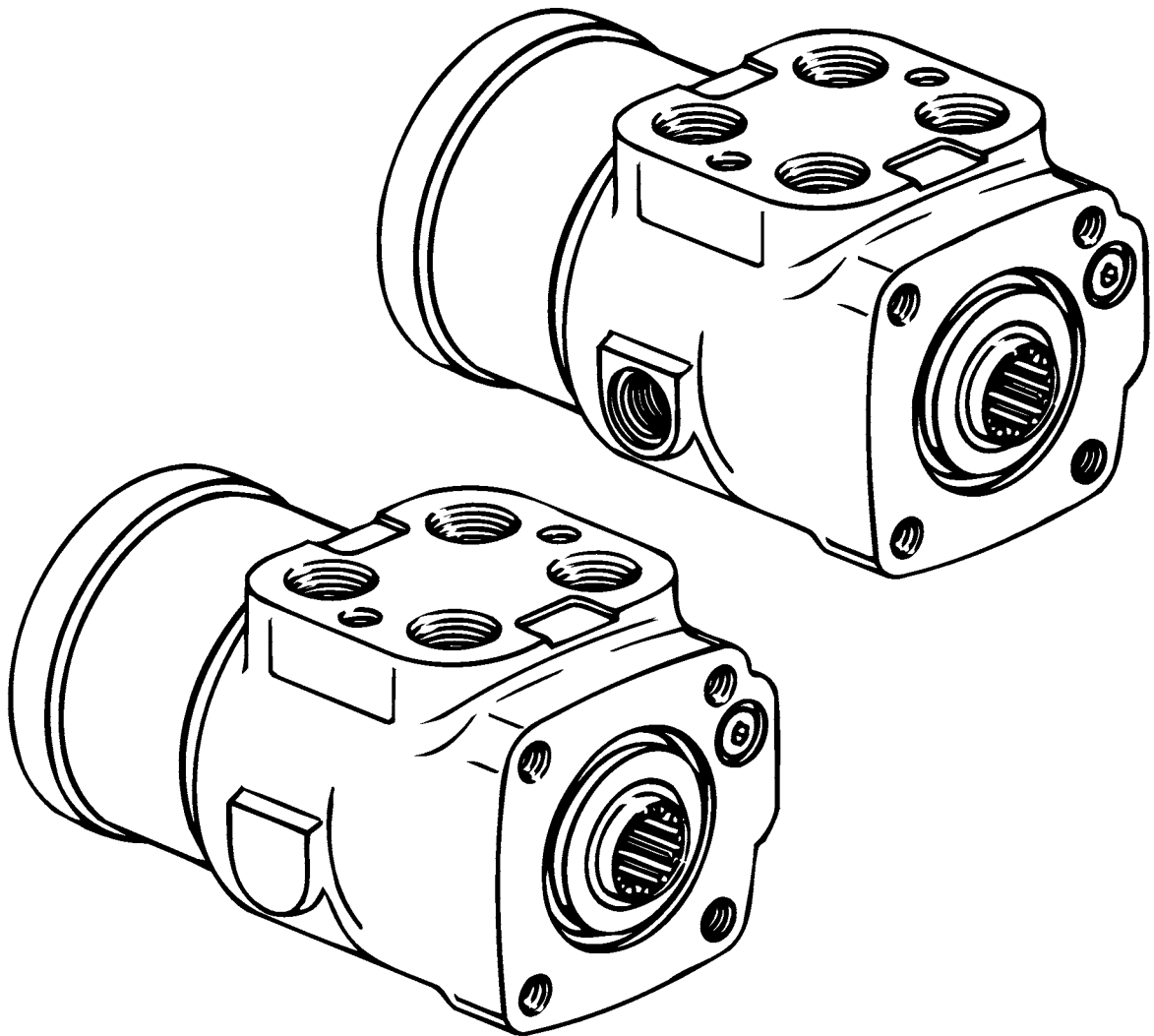
EATON

Char-Lynn

Power Steering

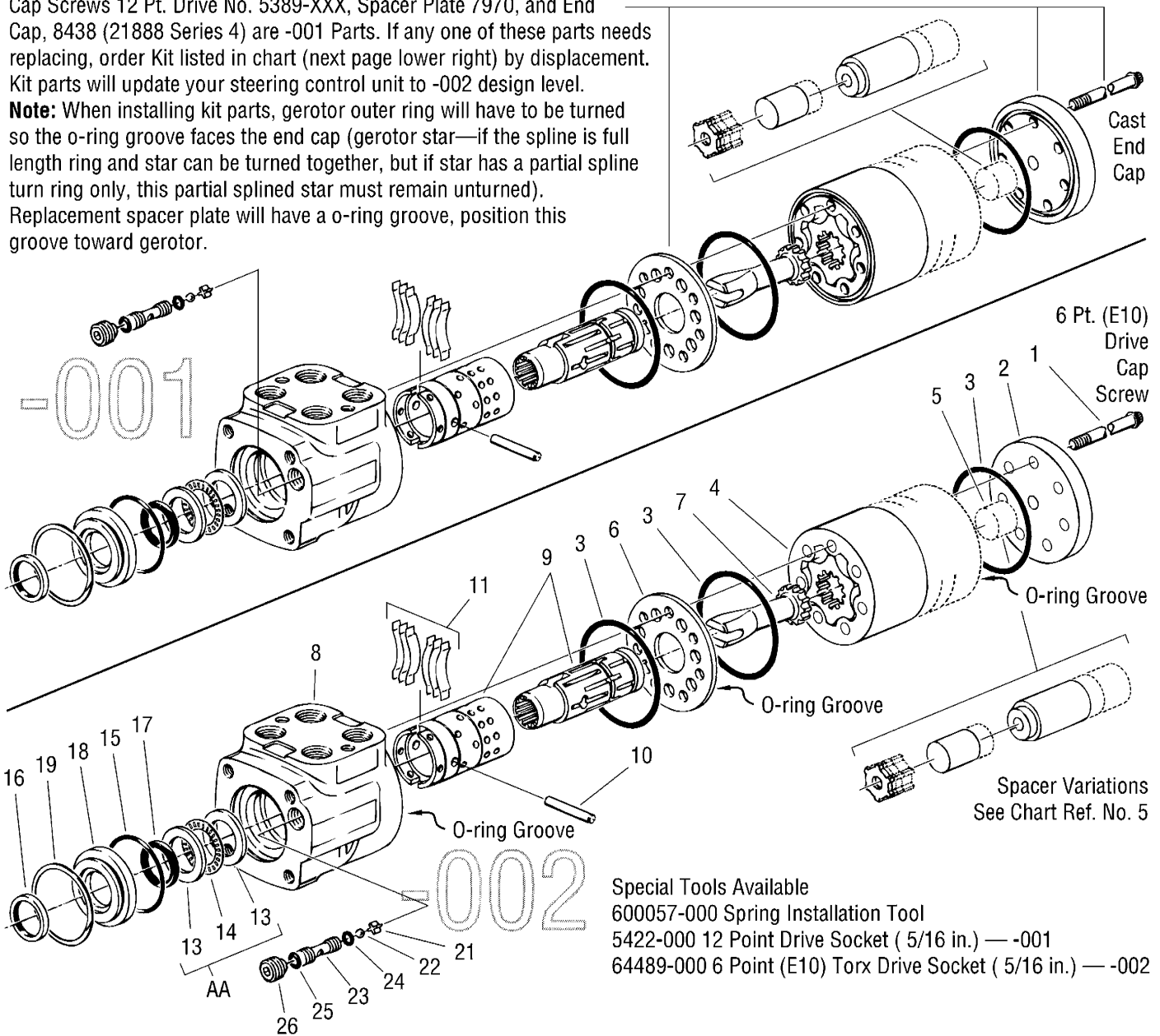
3, 4, 6, and 12 Series
Steering Control Units

001 002



Cap Screws 12 Pt. Drive No. 5389-XXX, Spacer Plate 7970, and End Cap, 8438 (21888 Series 4) are -001 Parts. If any one of these parts needs replacing, order Kit listed in chart (next page lower right) by displacement. Kit parts will update your steering control unit to -002 design level.

Note: When installing kit parts, gerotor outer ring will have to be turned so the o-ring groove faces the end cap (gerotor star—if the spline is full length ring and star can be turned together, but if star has a partial spline turn ring only, this partial splined star must remain unturned). Replacement spacer plate will have a o-ring groove, position this groove toward gerotor.



Special Tools Available
 600057-000 Spring Installation Tool
 5422-000 12 Point Drive Socket (5/16 in.) — -001
 64489-000 6 Point (E10) Torx Drive Socket (5/16 in.) — -002

| Actual Displacement cm ³ /r [in ³ /r] | Ref. No. 4 Gerotor | | Ref. No. 5 Spacer | | Ref. No.1 Cap Screw 6 Pt. (E10) Torx Drive | | Kit Including: Cap Screws (Qty. 7) Spacer Plate, and End Cap (Qty. 1 each) Kit No. |
|---|--------------------|----------------|-------------------|-----------------|---|-----------------|--|
| | Part No. | Width mm [in.] | Part No. | Length mm [in.] | Part No. | Length mm [in.] | |
| 45 [2.8] | 8618-001 | 6,3 [.25] | None | None | 16294-138 | 35,1 [1.38] | 64475-000 |
| 60 [3.6] | 8618-023 | 10,2 [.40] | None | None | 16294-150 | 38,1 [1.50] | 64476-000 |
| 75 [4.5] | 8618-024 | 10,2 [.40] | None | None | 16294-150 | 38,1 [1.50] | 64477-000 |
| 95 [5.9] | 8618-003 | 13,2 [.52] | 6901-009 | 3,6 [.14] | 16294-162 | 41,1 [1.62] | 64478-000 |
| 120 [7.3] | 8618-009 | 16,5 [.65] | 6901-010 | 6,1 [.24] | 16294-175 | 44,5 [1.75] | 64479-000 |
| 145 [8.9] | 8618-020 | 20,1 [.79] | 6901-013 | 10,3 [.40] | 16294-188 | 47,8 [1.88] | 64480-000 |
| 160 [9.7] | 8618-004 | 21,9 [.86] | 6901-003 | 12,2 [.48] | 16294-200 | 50,8 [2.00] | 64481-000 |
| 185 [11.3] | 8618-005 | 25,4 [1.00] | 6901-014 | 15,6 [.61] | 16294-212 | 53,8 [2.12] | 64482-000 |
| 230 [14.1] | 8618-031 | 31,7 [1.25] | 6901-011 | 22,0 [.86] | 16294-238 | 60,5 [2.38] | 64483-000 |
| 295 [17.9] | 8618-035 | 40,4 [1.59] | 22638-000 | 30,7 [1.21] | 16294-262 | 66,5 [2.62] | 64484-000 |
| 370 [22.6] | 8618-032 | 50,8 [2.00] | 22362-004 | 41,1 [1.62] | 16294-312 | 79,2 [3.12] | 64485-000 |
| 460 [28.2] | 8618-033 | 63,5 [2.50] | 22362-001 | 53,6 [2.11] | 16294-362 | 92,0 [3.62] | 64486-000 |
| 590 [35.9] | 8618-036 | 80,8 [3.18] | 22362-005 | 70,9 [2.79] | 16294-425 | 108,0 [4.25] | 64487-000 |
| 740 [45.1] | 8618-034 | 101,6 [4.00] | 22362-003 | 91,7 [3.61] | 16294-512 | 130,0 [5.12] | 64488-000 |

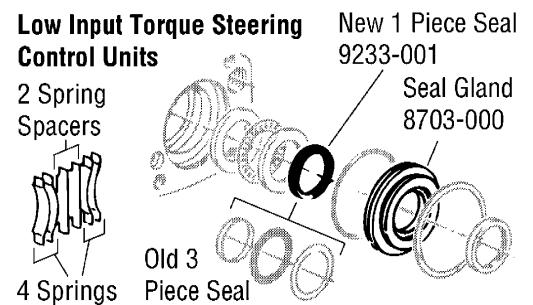
| Ref. No. | Part Number | Description | Qty. Per Unit |
|----------|-------------|--|---------------|
| 1 | * | Cap Screw, 6 Point (E10) Torx Dive | 7 |
| 2 | 23901-000 | Cap, End | 1 |
| X 3 | 5776-000 | Seal, 73,5 mm [2.89 in.] ID | 3 |
| 4 | * | Gerotor | 1 |
| 5 | * | Spacer | * |
| 6 | 23092-000 | Plate, Spacer | 1 |
| 7 | 5126-000 | Drive NOT for 45 cm ³ /r [2.8 in ³ /r] | 1 |
| | 8000-000 | Drive for 45 cm ³ /r [2.8 in ³ /r] | 1 |
| 8 | NSS | Housing | 1 |
| 9 | NSS | Sleeve, Control | 1 |
| | NSS | Spool, Control | 1 |
| 10 | 15-000 | Pin, Centering | 1 |
| * * 11 | NSS | Spring, Centering | 6 |
| 13 | 8329-000 | Bearing Race | 2 |
| 14 | 5544-000 | Bearing, Needle Thrust | 1 |
| X 15 | 15074-000 | Seal, 47,2 mm [1.86 in.] ID | 1 |
| X 16 | 844-000 | Seal, 25 mm [1 in.] ID | 1 |
| X 17 | 20599-000 | Seal, Quad Ring, 26,57mm [1.046 in.] ID | 1 |
| 18 | 7443-000 | Bushing, Seal Gland | 1 |
| 19 | 14317-000 | Ring, Retaining | 1 |
| 21 | 6862-000 | Retainer, Check Ball | 1 |
| 22 | 18001-000 | Ball, Check | 1 |
| 23 | 8318-000 | Seat, Check Ball | 1 |
| X 24 | 15006-000 | Seal, 7,7 mm [.30 in.] ID | 1 |
| X 25 | 15007-000 | Seal, 9,3 mm [.36 in.] ID | 1 |
| 26 | 14380-000 | Screw, Set | 1 |
| AA | 64009-000 | Needle Bearing Kit | |
| | 64466-000 | Seal Kit — Contains Parts Indicated by X. | |
| | 64425-000 | Viton Seal Kit (for use with synthetic fluids) — Contains Items Indicated by X (Part No.s Differ). | |
| | 64470-000 | Seal Kit with Low Input Torque Seal — Contains Items Indicated by X (Item 17 Replaced w/Seal Shown Below). | |

* * — Item 11 Sold only in Kit form (Centering Spring Kit No. 64431-000), or Special Low Torque Spring Spacer Kit (See Kit No. Listed Above)

* — See Chart bottom this Page, for Information on Specific Models NSS — Not Sold Separately

Centering Spring Installation Kit No. 64431-000 — Includes **6 Centering Springs** and **2 Spring Spacers**. Use 6 springs for standard steering torque unit spring replacement, or use 4 springs, 2 spring spacers for low input torque steering unit spring replacement.

Low Input Torque Seal/Spring Conversion Kit No. 64467-000 — Includes **2 spring spacers** (to be used with 4 of the 6 springs from standard input torque unit), **seal gland 8703-000**, and **8 Seals** (including one piece **low input torque seal 9233-001**).



Gerotor/Spacer Kits — for 22.6 28.2 35.9 45.1 [in³/r] displacement units built before July 1988

Note: Use service kit number from chart when ordering replacement gerotor, spacer is included in kit (spacer from old steering control unit will not work with new gerotor).

| Actual Displ. cm ³ /r [in ³ /r] | Gerotor/Spacer Service Kit Kit No. | Parts Included in Gerotor/Spacer Service Kit | | | |
|---|------------------------------------|--|----------------|----------------------------|-----------------|
| | | Ref. No. 4 Gerotor Part No. | Width mm [in.] | Ref. No. 5 Spacer Part No. | Length mm [in.] |
| 370 [22.6] | 64441-000 | 8618-032 | 50,8 [2.00] | 22362-004 | 41,1 [1.62] |
| 460 [28.2] | 64445-000 | 8618-033 | 63,5 [2.50] | 22362-001 | 53,6 [2.11] |
| 590 [35.9] | 64446-000 | 8618-036 | 80,8 [3.18] | 22362-005 | 70,9 [2.79] |
| 740 [45.1] | 64447-000 | 8618-034 | 101,6 [4.00] | 22362-003 | 91,7 [3.61] |

3, 4, 6, and 12 Series

3 Series — Port Size 9/16-18

| System | Signal | Load Circuit | Rated* Flow LPM [GPM] | Actual Displacement cm ³ /r [in ³ /r] — Product Number | | | | |
|---------------|--------|-------------------|--------------------------|--|----------|-----------|-----------|-----------|
| | | | | 75 [4.5] | 95 [5.9] | 120 [7.3] | 145 [8.9] | 160 [9.7] |
| Open Center | N/A | Non Load Reaction | 7,5-15 [2-4] | 211-1001 | 211-1002 | 211-1003 | 211-1157 | — |
| Closed Center | N/A | Non Load Reaction | 7,5-15 [2-4] | 212-1009 | 212-1010 | 212-1011 | 212-1072 | 212-1012 |
| | | Load Reaction | 7,5-15 [2-4] | 212-1021 | 212-1022 | 212-1023 | 212-1073 | 212-1024 |

4 Series-001 — Port Size 9/16-18

| System | Signal | Load Circuit | Rated Flow | Displacement cm ³ /r [in ³ /r] — Product Number | | | | | |
|-------------|--------|-------------------|----------------|---|----------|----------|-----------|-----------|------------|
| | | | | Original | 49 [3.0] | 75 [4.5] | 102 [6.2] | 121 [7.4] | 167 [10.2] |
| | | | | Replacement | 45 [2.8] | 75 [4.5] | 95 [5.9] | 120 [7.3] | 160 [9.7] |
| Open Center | N/A | Non Load Reaction | 4 GPM [15 LPM] | | 241-1001 | 241-1002 | 241-1003 | 241-1004 | 241-1005 |

4 Series-002 — Port Size 9/16-18

| System | Signal | Load Circuit | Rated Flow | Displacement cm ³ /r [in ³ /r] — Product Number | | | | |
|--------------|--------|-------------------|----------------|---|----------|----------|----------|-----------|
| | | | | 45 [2.8] | 60 [3.6] | 75 [4.5] | 95 [5.9] | 120 [7.3] |
| Open Center | N/A | Non Load Reaction | 4 GPM [15 LPM] | 241-1001 | — | 241-1002 | 241-1003 | 241-1004 |
| Load Sensing | Static | Non Load Reaction | 4 GPM [15 LPM] | 243-1008 | 243-1009 | 243-1010 | 243-1011 | 243-1012 |

4 Series with Power Beyond

| | | | | | | | | |
|-------------|-----|-------------------|----------------|----------|----------|----------|----------|----------|
| Open Center | N/A | Non Load Reaction | 4 GPM [15 LPM] | 241-5025 | 241-5026 | 241-5027 | 241-5028 | 241-5029 |
|-------------|-----|-------------------|----------------|----------|----------|----------|----------|----------|

6 Series — Port Size 3/4-16

| System | Signal | Load Circuit | Rated* Flow LPM [GPM] | Displacement cm ³ /r [in ³ /r] — Product Number | | | | | | | |
|-----------------|---------|-------------------|--------------------------|---|----------|-----------|-----------|-----------|------------|------------|------------|
| | | | | 75 [4.5] | 95 [5.9] | 120 [7.3] | 145 [8.9] | 160 [9.7] | 185 [11.3] | 230 [14.1] | 295 [17.9] |
| Open Center | N/A | Non Load Reaction | 15-30 [4-8] | 211-1007 | 211-1008 | 211-1009 | 211-1137 | 211-1010 | 211-1011 | 211-1012 | 211-1158 |
| | | Load Reaction | 15-30 [4-8] | 211-1047 | 211-1048 | 211-1049 | 211-1159 | 211-1050 | 211-1051 | 211-1052 | — |
| Closed Center | N/A | Non Load Reaction | 30 [8] | 212-1001 | 212-1002 | 212-1003 | 212-1069 | 212-1004 | 212-1005 | 212-1006 | 212-1070 |
| Load †† Sensing | Dynamic | Non Load Reaction | 30 [8] | 213-4001 | 213-4002 | 213-4045 | 213-4042 | 213-4046 | 213-4043 | 213-4047 | 213-4044 |

12 Series — Port Size 3/4-16

| System | Signal | Load Circuit | Rated* Flow LPM [GPM] | Displacement cm ³ /r [in ³ /r] — Product Number | | | |
|-----------------|---------|-------------------|--------------------------|---|------------|------------|------------|
| | | | | 370 [22.6] | 460 [28.2] | 590 [35.9] | 740 [45.1] |
| Open Center | N/A | Non Load Reaction | 30-60 [8-16] | 211-1038 | 211-1178 | 211-1160 | 211-1041 |
| Closed Center | N/A | Non Load Reaction | 60 [16] | 212-1014 | 212-1015 | 212-1071 | 212-1017 |
| Load †† Sensing | Dynamic | Non Load Reaction | 60 [16] | 213-4051 | 213-4048 | 213-4049 | 213-4050 |

†† Low Torque Centering Springs

* For closed center unit, rated flow is measured at 70 Bar [1000 PSI] pressure drop at full valve deflection.
 For load sensing unit, rated flow is designed for 4,5 Bar [65 PSI] pressure drop between inlet (P) and load sensing (LS) port at full valve deflection.

3, 4, 6, and 12 Series

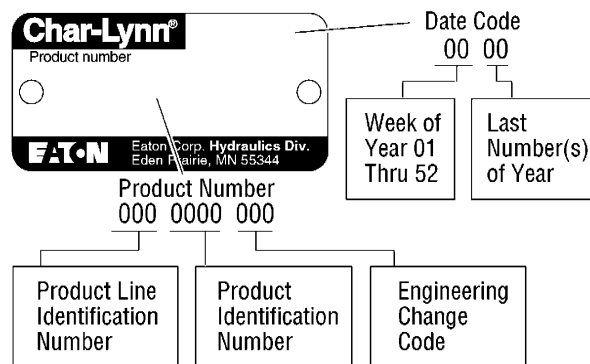
How to Order Replacement Parts

Each Order Must Include the Following:

- | | |
|-------------------|----------------------|
| 1. Product Number | 4. Part Number |
| 2. Date Code | 5. Quantity of Parts |
| 3. Part Name | |

For More Detailed Information Contact Eaton Corp. Hydraulics Division 15151 Highway 5 Eden Prairie, MN 55344.

- Specifications and performance Data, Catalog No. 11-872
- When servicing Steering Control Unit refer to Repair Information No. 7-304. This repair manual lists tools required, and step by step disassembly and reassembly procedures, and trouble shooting (problem, possible cause, and correction procedure).



3, 4, 6, and 12 Series

Notes: _____

3, 4, 6, and 12 Series

Notes: _____

Power Steering

3, 4, 6, and 12 Series

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