

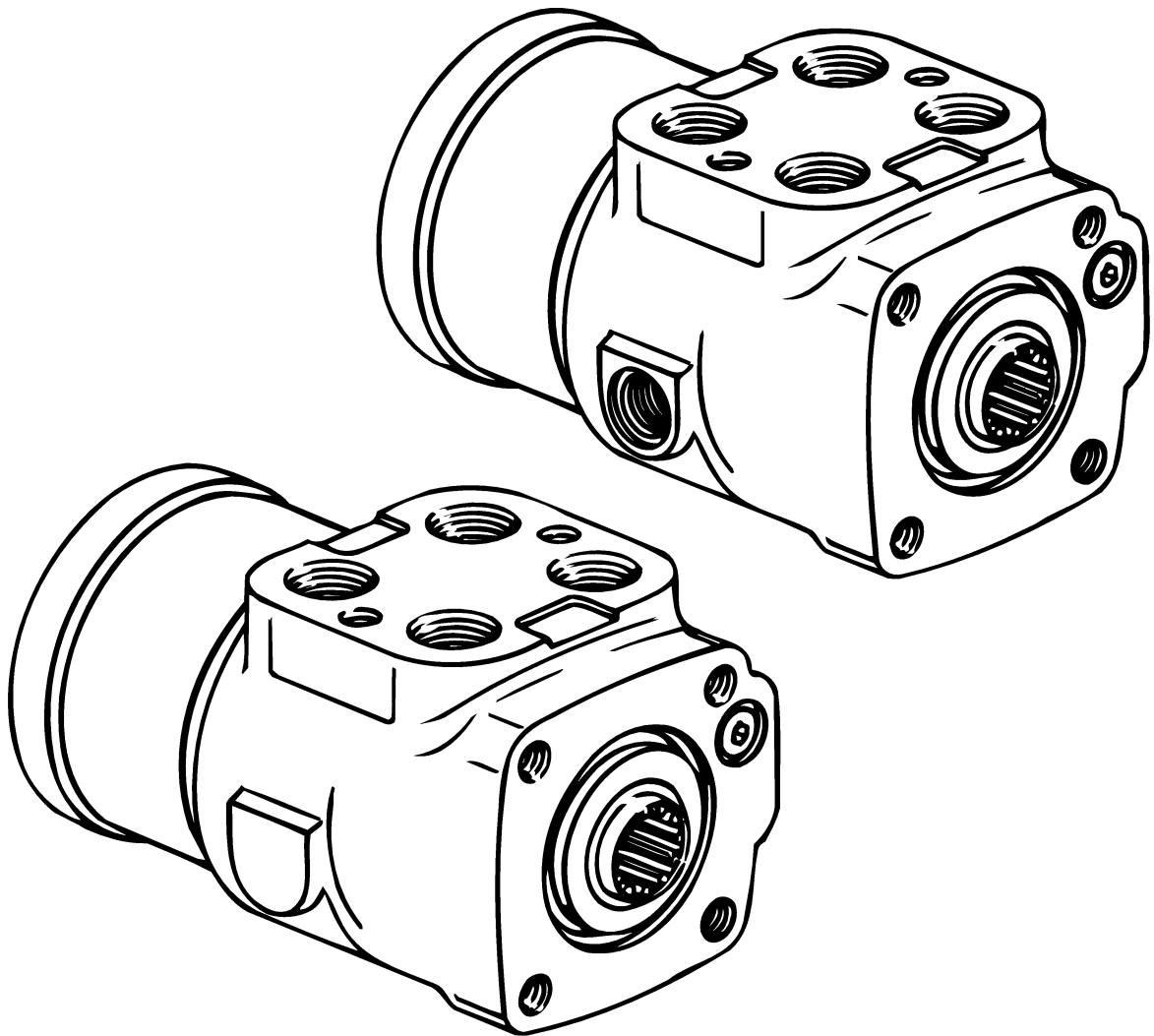
EATON

Char-Lynn

Power Steering

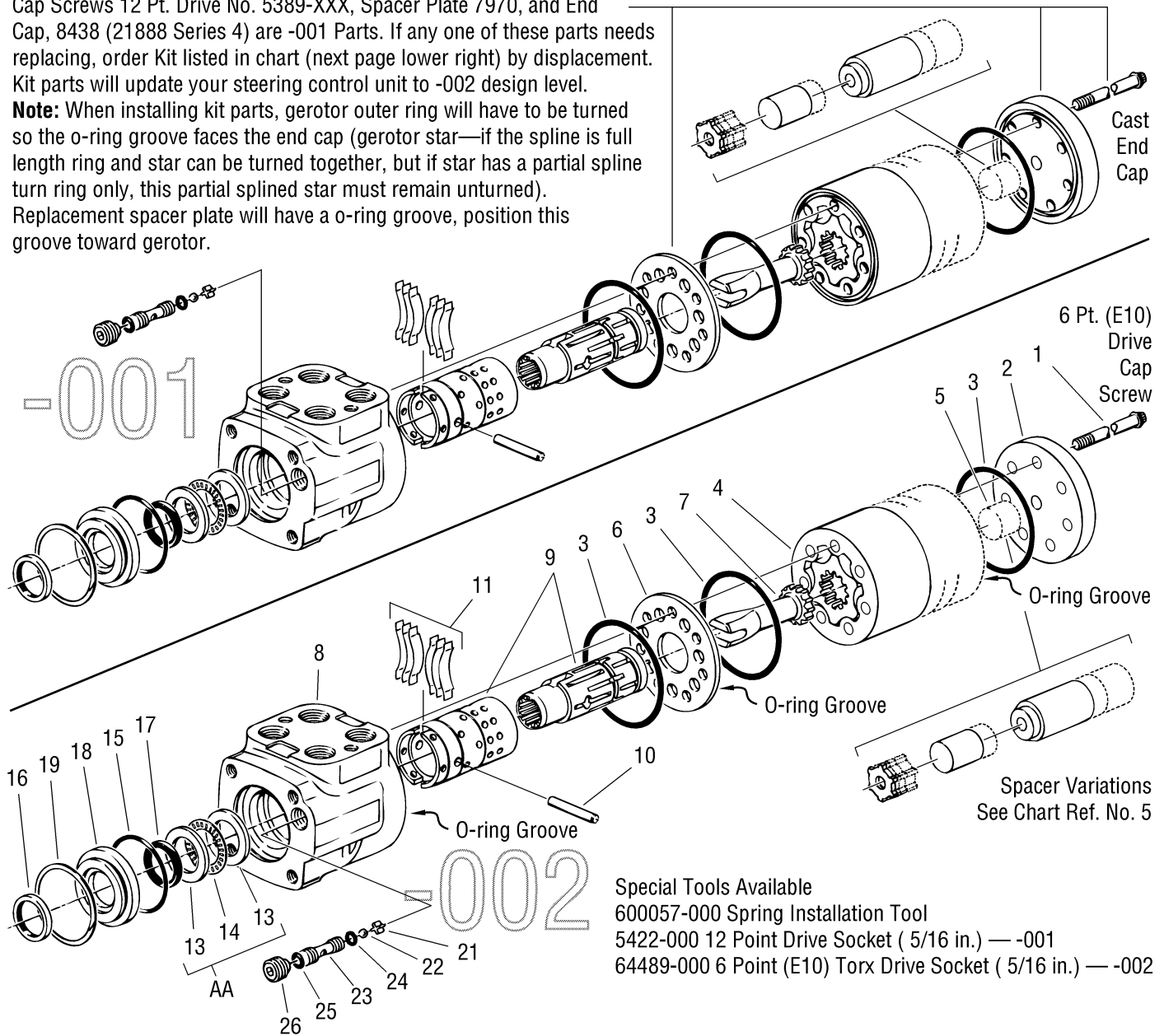
3, 4, 6, and 12 Series
Steering Control Units

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

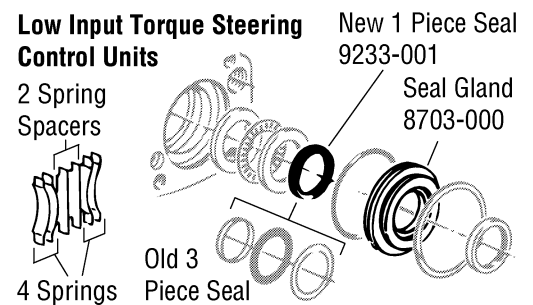
Ref. No.	Part Number	Description	Qty. Per Unit
1	*	Cap Screw, 6 Point (E10) Torx Dive	7
2	23901-000	Cap, End	1
X 3	5776-000	Seal, 73,5 mm [2.89 in.] ID	3
4	*	Gerotor	1
5	*	Spacer	*
6	23092-000	Plate, Spacer	1
7	5126-000	Drive NOT for 45 cm ³ /r [2.8 in ³ /r]	1
	8000-000	Drive for 45 cm ³ /r [2.8 in ³ /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

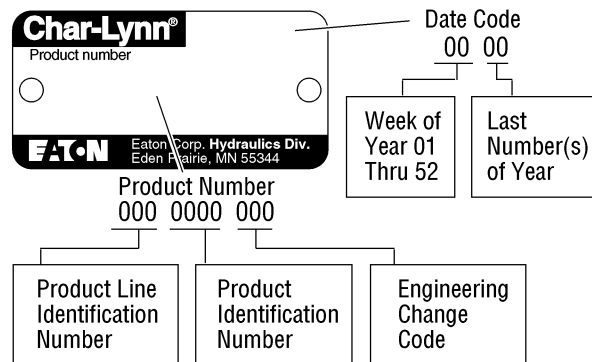
How to Order Replacement Parts

Each Order Must Include the Following:

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

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

Eaton
14615 Lone Oak Road
Eden Prairie, MN 55344
USA
Tel: 952 937-9800
Fax: 952 974-7722
www.hydraulics.eaton.com

Eaton
20 Rosamond Road
Footscray
Victoria 3011
Australia
Tel: (61) 3 9319 8222
Fax: (61) 3 9318 5714

Eaton
46 New Lane, Havant
Hampshire PO9 2NB
England
Tel: (44) 23 92 486 451
Fax: (44) 23 92 487 110



Char-Lynn