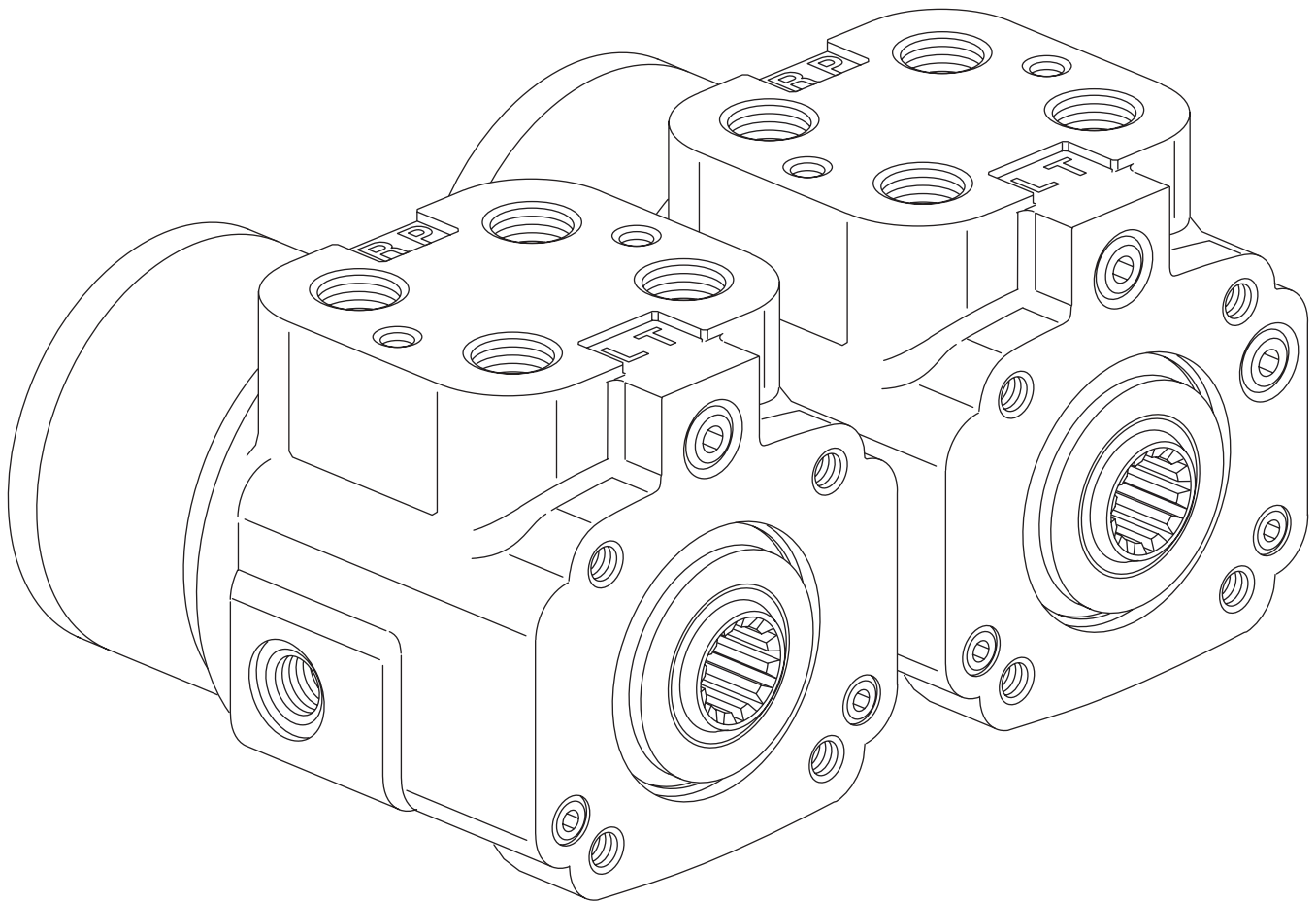




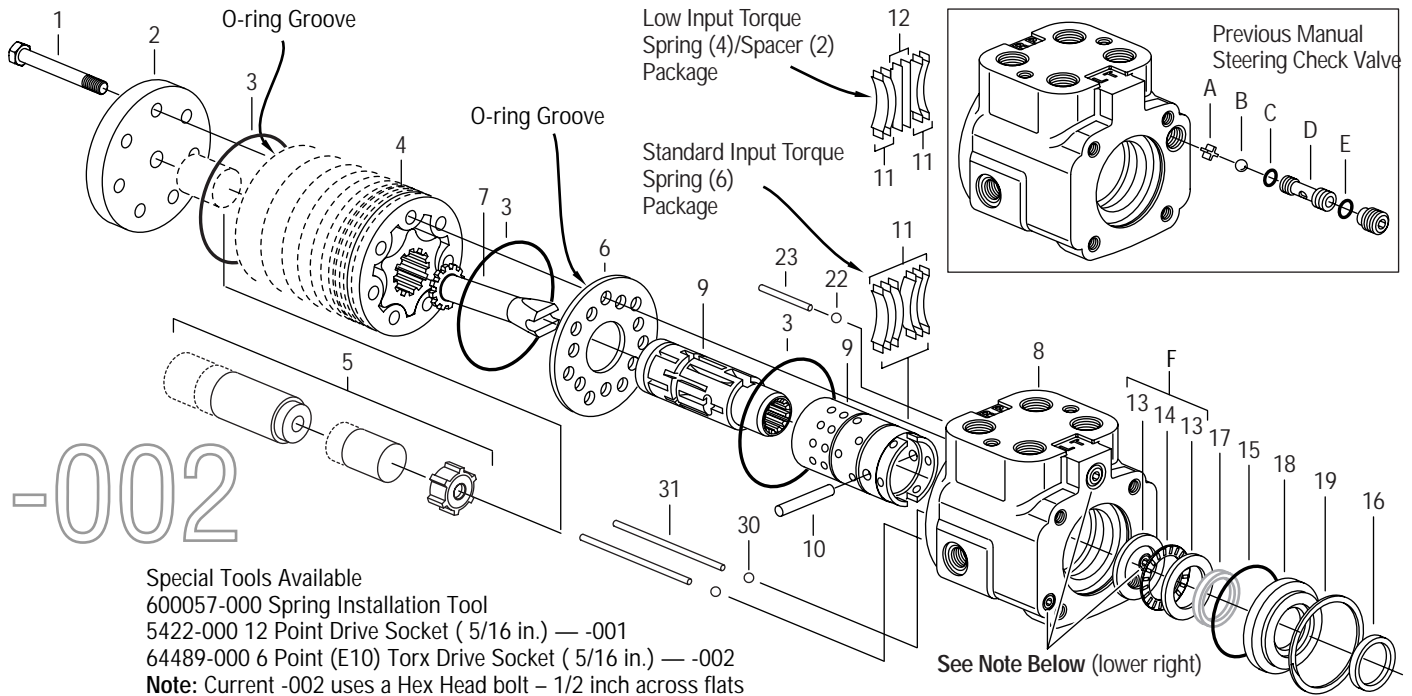
Parts Information



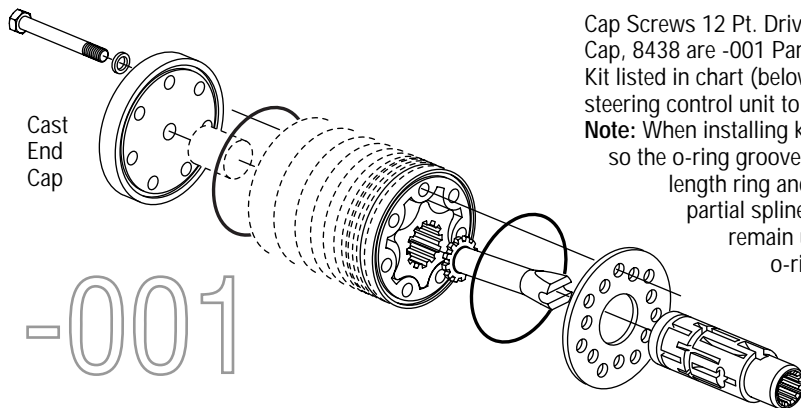
**110, 230, and 450 Series
Steering Control Units**

001 002

110, 230, and 450 Series



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
Note: Current -002 uses a Hex Head bolt – 1/2 inch across flats



Cap Screws 12 Pt. Drive No. 5389-XXX, Spacer Plate 7970, and End Cap, 8438 are -001 Parts. If any one of these parts needs replacing, order Kit listed in chart (below) 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.

Note: All housing valves are factory adjusted on assembled units to a code designation and are not to be changed. This housing (with specified valve pressure settings), the mating spool, and the sleeve are not practical replacement parts.

Actual Displacement cm ³ /r [in ³ /r]	Ref. No. 4 Gerotor		Ref. No. 5 Spacer		Ref. No.1 Cap Screw Hex Head		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	16336-513	34,9 [1.37]	64475-000
60 [3.6]**	8618-023	10,2 [.40]	None	None	16336-514	38,1 [1.50]	64476-000
75 [4.5]	8618-024	10,2 [.40]	None	None	16336-514	38,1 [1.50]	64477-000
95 [5.9]	8618-003	13,2 [.52]	6901-009	3,4 [.14]	16336-515	41,3 [1.62]	64478-000
120 [7.3]	8618-009	16,5 [.65]	6901-010	6,1 [.24]	16336-516	44,5 [1.75]	64479-000
145 [8.9]	8618-020	20,1 [.79]	6901-013	10,3 [.40]	16336-517	47,6 [1.87]	64480-000
160 [9.7]	8618-004	21,9 [.86]	6901-003	12,2 [.48]	16336-520	50,8 [2.00]	64481-000
185 [11.3]	8618-005	25,4 [1.00]	6901-014	15,6 [.61]	16336-521	54,0 [2.12]	64482-000
230 [14.1]	8618-031	31,7 [1.25]	6901-011	22,0 [.86]	16336-523	60,3 [2.37]	64483-000
295 [17.9]	8618-035	40,4 [1.59]	22638-000	30,7 [1.21]	16336-525	66,7 [2.62]	64484-000
370 [22.6]	8618-032	50,8 [2.00]	22362-004	41,1 [1.62]	16336-531	79,4 [3.12]	64485-000
460 [28.2]	8618-033	63,5 [2.50]	22362-001	53,6 [2.11]	16336-535	92,0 [3.62]	64486-000
590 [35.9]	8618-036	80,8 [3.18]	22362-005	70,9 [2.79]	16336-542	108,0 [4.25]	64487-000
740 [45.1]	8618-034	101,6 [4.00]	22362-003	91,7 [3.61]	16336-551	130,2 [5.12]	64488-000

** for 124 Bar [1800 PSI] Applications

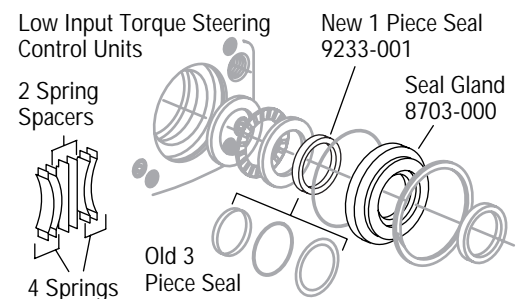
110, 230, and 450 Series

Ref. No.	Part Number	Description	Qty. Per Unit
1	*	Cap Screw, Hex Head	7
2	23901-000	Cap, End	1
X 3	5776-000	Seal, 72,6 mm [2.86 in.] ID	3
4	*	Gerotor	1
5	*	Spacer	1
6	23092-000	Plate, Spacer	1
7	5126-000	Drive	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 or 4
**12	NSS	Spring, Spacer	2
F 13	8329-000	Bearing Race	2
F 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, 24,9 mm [.98 in.] ID	1
X 17	20599-000	Seal, Quad Ring, 26,7 mm [1.05 in.] ID	1
18	7443-000	Bushing, Seal Gland	1
19	14317-000	Ring, Retaining	1
† 22	285020-080	Ball, 6,35 mm [.250 in.] OD	1
† 23	16026-422	Pin, Roll, 34,92 mm [1.375 in.] Length	1
30	18015-000	Ball, Check	2
31	268009-033	Pin, Roll, 40,00 mm [1.575 in.] Length	2
X† A	NSS	Retainer, Check Ball	1
X† B	NSS	Ball, Check	1
† C	NSS	Seal — 7,6 mm [.30 in.] ID	1
† D	NSS	Seat, Check Ball	1
† E	NSS	Seal — 9,2 mm [.36 in.] ID	1
F	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 (ref. no. 17 replaced w/seal shown below).	
	64560-000	Manual steering check valve kit — contains parts indicated by †.	

** — Ref No. 11 and 12 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 on page 2 for information on specific models. NSS — Not Sold Separately.

Centering spring installation kit no. 64431-000 — includes 6 centering springs and 2 spring spacers, 6 springs for standard steering unit spring replacement, or 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 for use with 4 of the 6 springs from standard unit, seal gland 8703-000, and 8 seals for complete reassembly (including new low input torque one piece seal 9233-001).



110 Series

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		Ref. No. 5 Spacer	
		Part No.	Width mm [in.]	Part No.	Length mm [in.]
370 [22.6]	64421-000	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]

Select product number from chart or use model code for combinations that differ from features shown below.

Example: **261-1031-0XX**

Product Number Design Level

The product number (left) describes a Series 110 open center, non-load reaction, 7,5 - 15 l/min [2-4 GPM], 3/4-16 ports, "12" option, 120 cm³/r [7.3 in³/r] 124 bar [1800 PSI] inlet relief pressure, 185 bar [2675 PSI] shock valve pressure.

Series 110

System	Signal	Load Circuit	Rated Flow l/min [GPM]	Port Size	Valve Options (see Chart Below)	Actual Displacement cm ³ /r [in ³ /r] – Product Number		
						75 [4.5]	95 [5.9]	120 [7.3]
Open Center	N/A	Non Load Reaction	7,5-15 [2-4]	3/4-16	12	261-1029-042	261-1408-002	261-1031-042
				G1/2 (BSP)	12	261-1409-002	261-1002-042	261-1003-042
					01	261-1008-002	261-1009-002	261-1010-002
				M18 x 1,5	12	261-1328-002	261-1410-002	261-1411-002
				01	261-1022-002	261-1023-002	261-1024-002	

Explanation of valve options

- Steering Control with:
- 12** • Inlet Check Valve
 - Cylinder Port Shock Valves — 235 bar [3410 PSI]
 - Anti-cavitation Valve for Cylinder Ports
 - Inlet Relief Valve — 176 bar [2550 PSI]

01 Steering Control without Integral Valves

Product numbers on this page are steering control units with valve option noted. Use model in Catalog 11-872 code when ordering any other valve combinations.

230 Series

Select product number from chart or use model code for combinations that differ from features shown below.

Example: **261-1413-0XX**
 Product Number Design Code

The product number (left) describes a Series 230 open center, non-load reaction, 15-30 l/min [4-8 GPM], 3/4-16 ports, "12" option, 295 cm³/r [17.9 in³/r] 124 bar [1800 PSI] inlet relief pressure, 185 bar [2675 PSI] shock valve pressure.

Series 230

System	Signal	Load Circuit	Rated Flow l/min [GPM]	Port Size	Valve Options (see Chart Below)	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]	185 [11.3]	230 [14.1]	295 [17.9]
Open Center	N/A	Non Load Reaction	15-30 [4-8]	3/4-16	12				261-1412-002	1032-042	1033-042	1034-042	1413-002
				G1/2 (BSP)	12				261-1159-042	1004-042	1005-042	1006-042	1160-042
				G1/2 (BSP)	01				261-1161-002	1011-002	1012-002	1013-002	1162-002
				M18 x 1,5	12				261-1414-002	1415-002	1416-002	1330-002	1417-002
					01			261-1165-002	1025-002	1026-002	1027-002	1166-002	
Load Sensing	Static	Non Load Reaction	30 [8]	3/4-16	10	263-1029-082	1210-002	1211-002	1212-002	1157-002	1213-002	1034-082	1097-082
				G1/2 (BSP)	10	263-1173-002	1002-082	1003-082	1214-002	1004-082	1005-082	1215-002	1098-082
				G1/2 (BSP)	01	263-1008-002	1009-002	1010-002	1094-002	1011-002	1012-002	1013-002	1099-002
				M18 x 1,5	10	263-1216-002	1217-002	1218-002	1219-002	1220-002	1019-082	1020-082	1221-002
					01	263-1022-002	1023-002	1024-002	1096-002	1025-002	1026-002	1027-002	1101-002
Load †† Sensing	Dynamic	Non Load Reaction	30 [8]	3/4-16	10	263-4405-002	4406-002	4407-002	4408-002	4409-002	4045-082	4283-002	4410-002
				G1/2 (BSP)	10	263-4047-082	4048-082	4049-082	4411-002	4051-002	4052-082	4053-082	4076-082
				G1/2 (BSP)	01	263-4054-002	4055-002	4056-002	4057-002	4058-002	4059-002	4060-002	4077-002
				M18 x 1,5	10	263-4412-002	4062-002	4413-002	4414-002	4415-002	4066-082	4067-082	4416-002
					01	263-4068-002	4069-002	4070-002	4071-002	4072-002	4073-002	4074-002	—

†† Low Torque Centering Springs

The part number prefix 261- (open center units) or 263- (load sensing units) needs to be applied in front of every part number in the table, when ordering.

Explanation of valve options

Steering Control with:

- 10**
 - Inlet Check Valve
 - Cylinder Port Shock Valves — 235 bar [3410 PSI]
 - Anti-cavitation Valve for Cylinder Ports

Steering Control with:

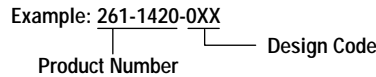
- 12**
 - Inlet Check Valve
 - Cylinder Port Shock Valves — 235 bar [3410 PSI]
 - Anti-cavitation Valve for Cylinder Ports
 - Inlet Relief Valve — 176 bar [2550 PSI]

01 Steering Control without Integral Valves

Product numbers on this page are steering control units with valve option noted. Use model code in Catalog 11-872 when ordering any other valve combinations, or pressure settings.

450 Series

Select product number from chart or use model code for combinations that differ from features shown below.



The product number (left) describes a Series 450 open center, non-load reaction, 30-60 l/min [8-16 GPM], 3/4-16 ports, *12" option, 740 cm³/r [45.1 in³/r] 124 bar [1800 PSI] inlet relief pressure, 185 bar [2675 PSI] shock valve pressure.

Series 450

System	Signal	Load Circuit	Rated Flow l/min [GPM]	Port Size	Valve Options (see Chart Below)	Actual Displ. 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]	3/4-16	12	261-1226-042	1418-002	1419-002	1420-002
				G1/2 (BSP)	12	261-1421-002	1422-002	1423-002	1424-002
					01	261-1425-002	1426-002	1427-002	1428-002
				M18 x 1,5	12	261-1234-042	1429-002	1313-002	1430-002
					01	261-1431-002	1432-002	1433-002	1434-002
Load Sensing	Static	Non Load Reaction	60 [16]	3/4-16	09	263-1103-002	1222-002	1159-002	1223-002
				G1/2 (BSP)	01	263-1047-002	1048-002	1111-002	1112-002
					09	263-1224-002	1225-002	1226-002	1227-002
				M18 x 1,5	01	263-1053-002	1054-002	1117-002	1118-002
					09	263-1228-002	1229-002	1230-002	1231-002
Load †† Sensing	Dynamic	Non Load Reaction	60 [16]	3/4-16	09	263-4417-002	4418-002	4082-082	4419-002
				G1/2 (BSP)	01	263-4088-002	4089-002	4090-002	4091-002
					09	263-4084-082	4085-082	4086-082	4087-082
				M18 x 1,5	01	263-4096-002	4097-002	4098-002	4099-002
					09	263-4420-002	4421-002	4422-002	4423-002

†† Low Torque Centering Springs

The part number prefix 261- (open center units) or 263- (load sensing units) needs to be applied in front of every part number in the table, when ordering.

Explanation of valve options

- 12** Steering Control with:
- Inlet Check Valve
 - Cylinder Port Shock Valves — 235 bar [3410 PSI]
 - Anti-cavitation Valve for Cylinder Ports
 - Inlet Relief Valve — 176 bar [2550 PSI]
-
- 01** Steering Control without Integral Valves
- Steering Control with:
- Cylinder Port Shock Valves — 235 bar [3410 PSI]
 - Anti-cavitation Valve for Cylinder Ports

Product numbers on this page are steering control units with valve option noted. Use model in Catalog 11-872 code when ordering any other valve combinations.

Power Steering

110, 230, and 450 Series

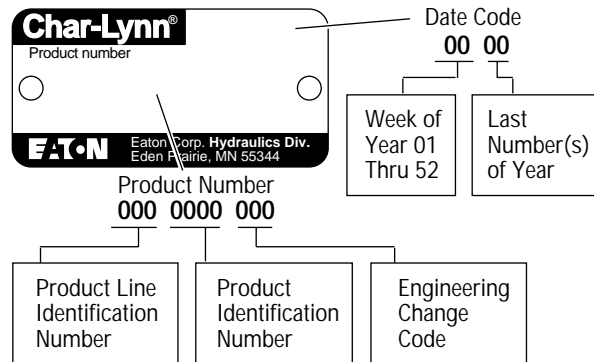
How to Order Replacement Parts

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. 7-309. This Repair Manual List Tools Required, Step by Step Disassembly and Reassembly Procedures.

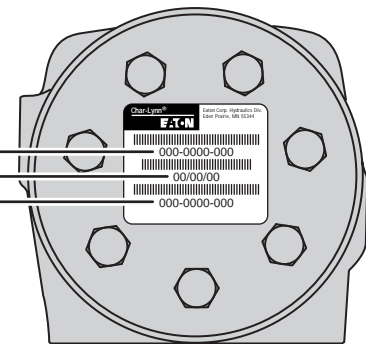


Bar Code Label — Launch Date June, 1999

Customer part number or base unit number if it has a column or valve assembled

Month / Day / Year

Eaton Part Number



Port Face

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