

**PARTS MANUAL**

# Hydra-Cell<sup>®</sup>

## INDUSTRIAL PUMPS

**Models: D-12, G-12**

**IMPORTANT**

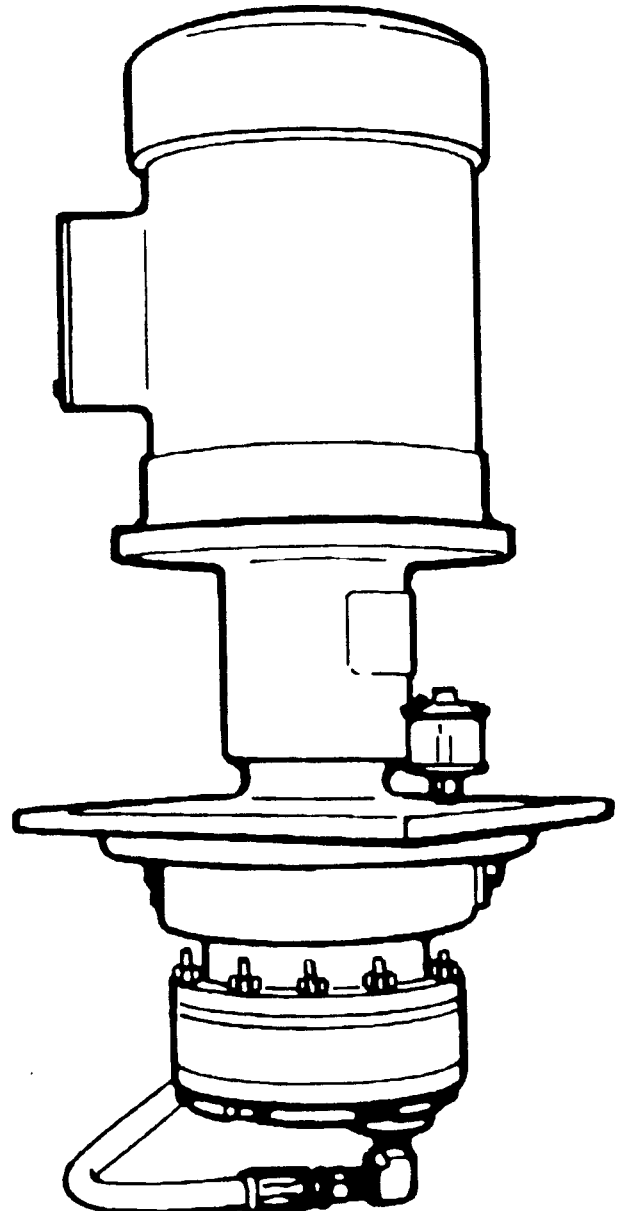
Record your pump model number and serial number here for easy reference:

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Date of Purchase \_\_\_\_\_

When ordering parts or making inquiries about this pump, please mention the model and serial numbers.

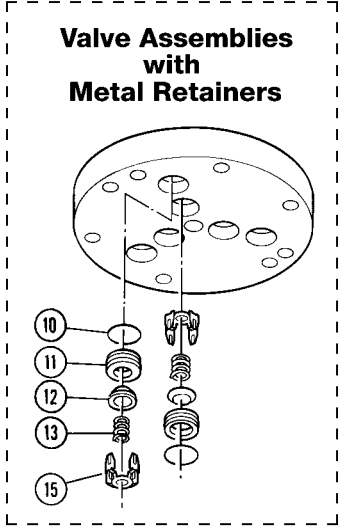
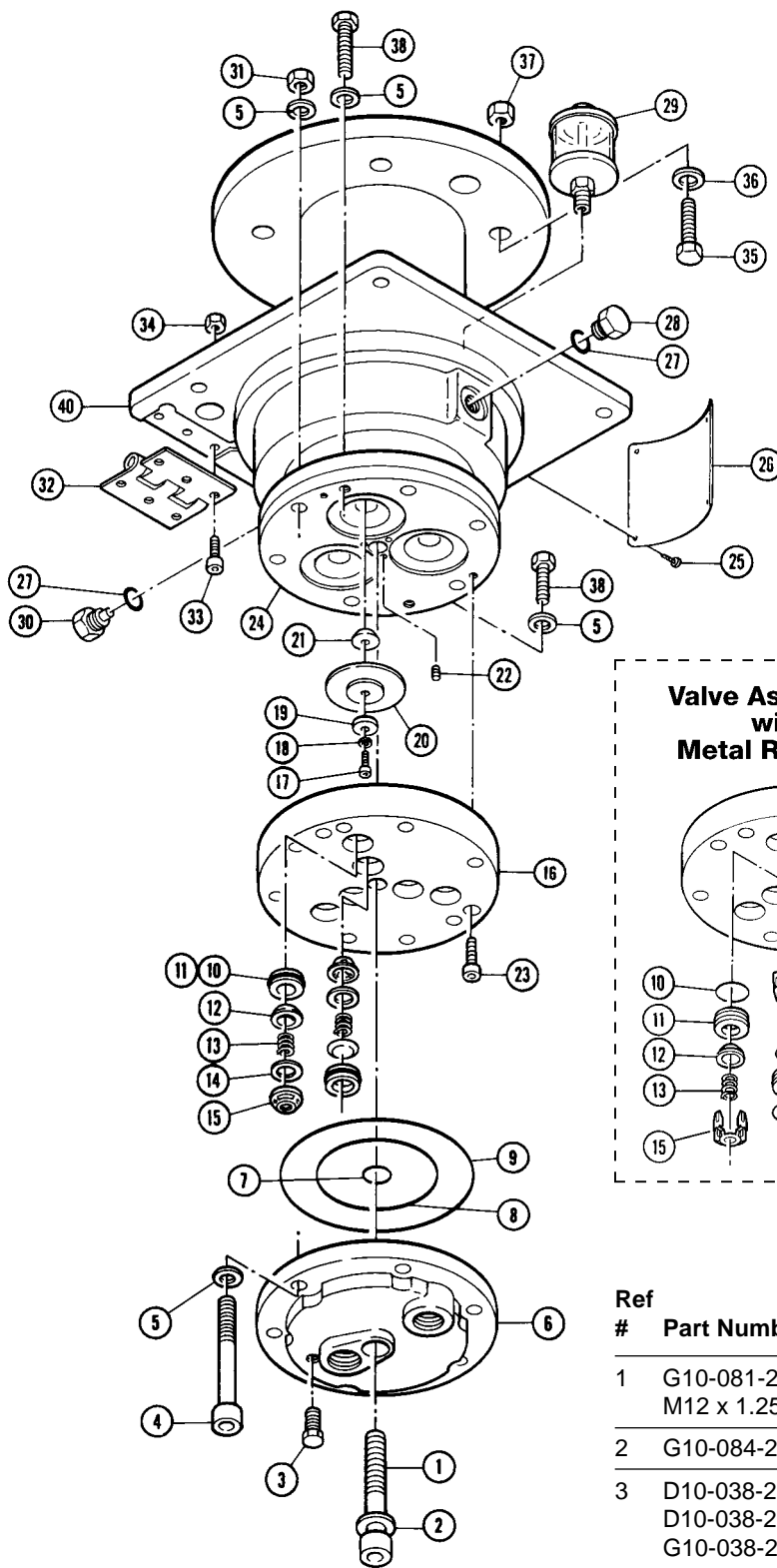


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# D/G-12 Fluid End



Ref #	Part Number	Description	Quantity/ Pump
1	G10-081-2010	Cap Screw, socket-head, M12 x 1.25 x 70 mm	1
2	G10-084-2010	Washer, flat	1
3	D10-038-2210	Plug, brass, NPT	1
	D10-038-2211	Plug, SST, NPT	1
	G10-038-2211	Plug, SST, BSPT	1
4	G10-024-2010	Cap Screw, socket-head, M10 x 1.5 x 90 mm	6
5	G25-048-2010	Washer, split-lock	14

# D/G-12 Fluid End

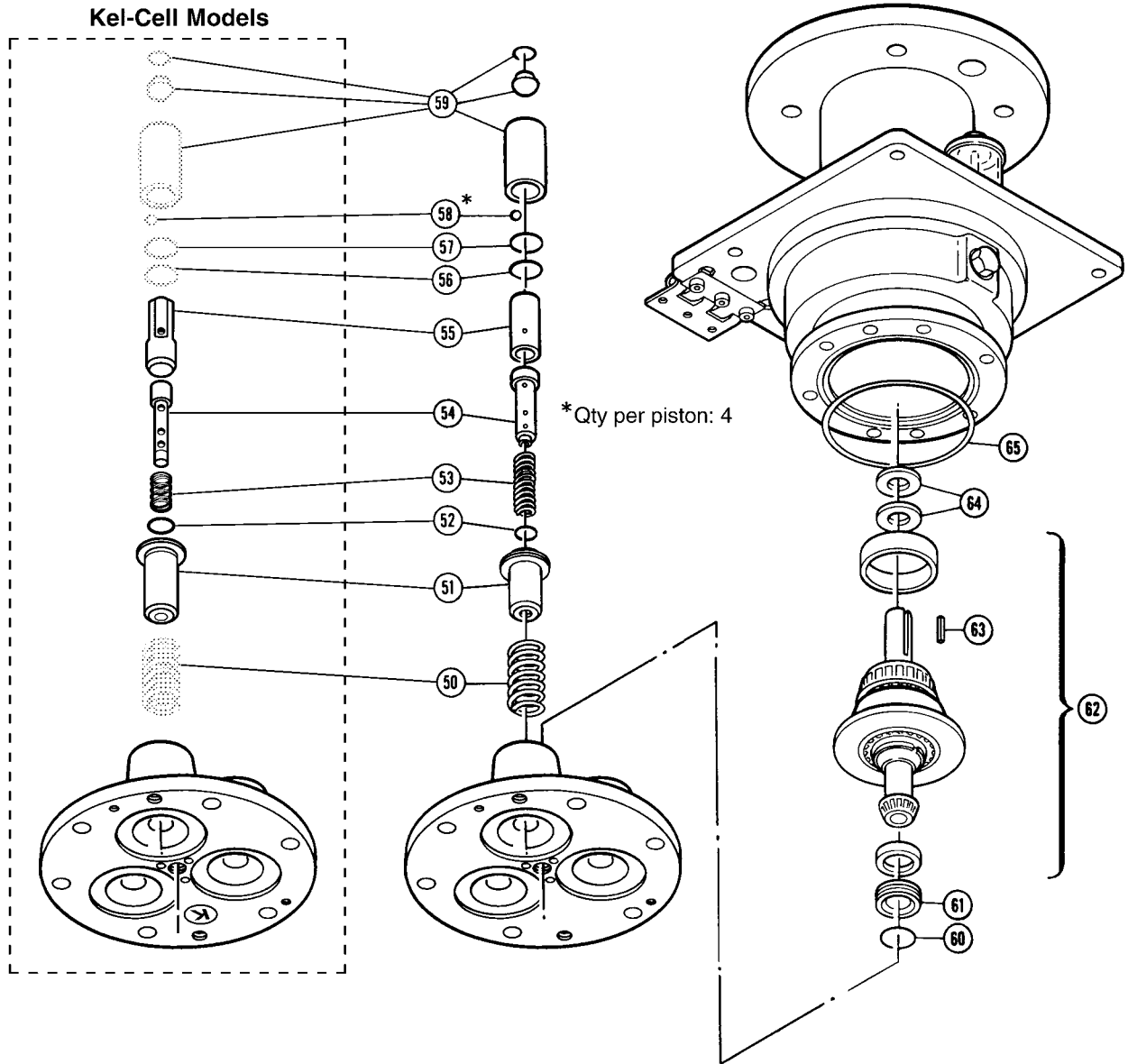
Ref #	Part Number	Description	Quantity/ Pump	Ref #	Part Number	Description	Quantity/ Pump
6	D10-004-1002	Manifold, 316 SST, NPT .....	1	17	D10-030-2010	Screw, flat-head, 316 SST .....	3
	D10-004-1008	Manifold, brass NPT .....	1	18	D10-047-2110	O-ring, follower, Buna-N .....	3
	D10-004-1034	Manifold, cast iron, NPT .....	1		D10-047-2111	O-ring, follower, Viton .....	3
	G10-004-1002	Manifold, 316 SST, BSPT .....	1		D10-047-2112	O-ring, follower, Neoprene .....	3
	G10-004-1008	Manifold, brass, BSPT .....	1		D10-047-2113	O-ring, follower, EPDM .....	3
	G10-004-1034	Manifold, cast iron, BSPT .....	1		D10-047-2118	O-ring, follower, Teflon .....	3
7	D10-083-2110	O-ring, center bolt, Buna .....	1	19	D10-017-1010	Follower, 316 SST .....	3
	D10-083-2111	O-ring, center bolt, Viton .....	1	20	D10-018-2312	Diaphragm, Neoprene .....	3
	D10-083-2112	O-ring, center bolt, Neoprene .....	1		D10-018-2313	Diaphragm, EPDM .....	3
	D10-083-2113	O-ring, center bolt, EPDM .....	1		D10-018-2315	Diaphragm, Viton-XT .....	3
	D10-083-2118	O-ring, center bolt, Teflon .....	1		D10-018-2318	Diaphragm, Teflon .....	3
8	D10-073-2118	O-ring, inner manifold, Teflon .....	1		D10-018-2320	Diaphragm, Buna-N-XS .....	3
	D11-073-2120	O-ring, inner manifold, Buna .....	1	21	D10-016-1010	Plunger .....	3
	D11-073-2121	O-ring, inner manifold, Viton .....	1	22	G10-082-2010	Set Screw, M6 x 1 x 10mm .....	3
	D11-073-2122	O-ring, inner manifold, Neoprene .....	1	23	G10-088-2010	Cap Screw, socket-head, M6 x 1 x 30 mm .....	2
	D11-073-2123	O-ring, inner manifold, EPDM .....	1	24	G10-002-1010	Cylinder Housing .....	1
9	D10-074-2118	O-ring, outer manifold, Teflon .....	1		G10-002-1210	Cylinder Housing Assembly, Buna <sup>1</sup> ..	–
	D11-074-2120	O-ring, outer manifold, Buna .....	1		K10-002-1020	Cylinder Housing, Kel-Cell .....	1
	D11-074-2121	O-ring, outer manifold, Viton .....	1		K10-002-1220	Cylinder Housing Assembly, Kel-Cell <sup>1</sup> –	–
	D11-074-2122	O-ring, outer manifold, Neoprene .....	1	25	G20-090-2010	Screw, M4 x 10 mm .....	4
	D11-074-2123	O-ring, outer manifold, EPDM .....	1	26	D12-140-2410	Cover, caution .....	1
10	D10-035-2110	O-ring, valve seat, Buna .....	6	27	D12-121-2111	O-ring, Viton .....	2
	D10-035-2111	O-ring, valve seat, Viton .....	6	28	D12-111-2211	Plug .....	1
	D10-035-2112	O-ring, valve seat, Neoprene .....	6	29	D12-116-2210	Reservoir, oil .....	1
	D10-035-2113	O-ring, valve seat, EPDM .....	6	30	D12-111-2210	Plug, magnetic .....	1
	D10-035-2118	O-ring, valve seat, Teflon .....	6	31	G10-028-2010	Nut, hex, M10 .....	6
11	D10-020-1010	Valve Seat, 17-4 SST, HT .....	6	32	D12-115-2210	Hinge .....	2
	D10-020-1011	Valve Seat, 316 SST .....	6	33	G03-088-2010	Bolt, M6 x 20 mm .....	6
	D10-020-1017	Valve Seat, Hastelloy C .....	6	34	G12-108-2010	Nut, lock, M6 .....	6
	D10-020-3300	Valve Seat, ceramic .....	6	35	M10-110-2000	Bolt, 1/2" x 1-1/2" .....	4
12	D10-021-1011	Valve, Nitronic .....	6		A04-043-2010	Bolt, M12 x 40 mm <sup>2</sup> .....	4
	D10-021-1015	Valve, 17-4 SST, machined, HT .....	6	36	M10-111-2000	Washer, lock, 1/2" .....	4
	D10-021-1017	Valve, Hastelloy C .....	6	37	A04-045-2010	Nut, M12 <sup>2</sup> .....	4
	D10-021-3300	Valve, ceramic .....	6	38	G10-1029-2010	Cap Screw, hex head, M10 x 25 mm ..	2
13	D10-022-3117	Valve Spring, Elgiloy .....	6	40	D12-001-1011	Pump Housing .....	1
	D10-022-3123	Valve Spring, Hastelloy C .....	6		D12-001-1211	Pump Housing Assembly <sup>3</sup> .....	–
14	D10-092-2110	Tetra Seal, Buna .....	6		G12-001-1012	Pump Housing <sup>2</sup> .....	1
	D10-092-2111	Tetra Seal, Viton .....	6		G12-001-1212	Pump Housing Assembly <sup>2,3</sup> .....	–
	D10-092-2112	Tetra Seal, Neoprene .....	6				
	D10-092-2113	Tetra Seal, EPDM .....	6				
	D10-092-2118	Tetra Seal, Teflon .....	6				
15	D10-023-1010	Retainer, valve spring, 17-7 SST .....	6				
	D10-023-1017	Retainer, valve spring, Hastelloy C ...	6				
	D10-023-2310	Retainer, valve spring, Celcon .....	6				
	D10-023-2326	Retainer, valve spring, nylon .....	6				
	D10-023-2327	Retainer, valve spring, polypropylene .....	6				
	D10-023-2328	Retainer, valve spring, Kynar .....	6				
16	D10-003-1011	Valve Plate, brass .....	1				
	D10-003-1012	Valve Plate, 316 SST .....	1				
	D10-003-1019	Valve Plate, cast iron .....	1				

<sup>1</sup> Cylinder Housing Assembly includes casting (24), bearing cup, adjusting plate (61), O-ring (60), and set screws (22).

<sup>2</sup> For metric motors.

<sup>3</sup> Pump Housing Assembly includes housing (40) and bearing cup.

# D/G-12 Hydraulic End



# D/G-12 Hydraulic End

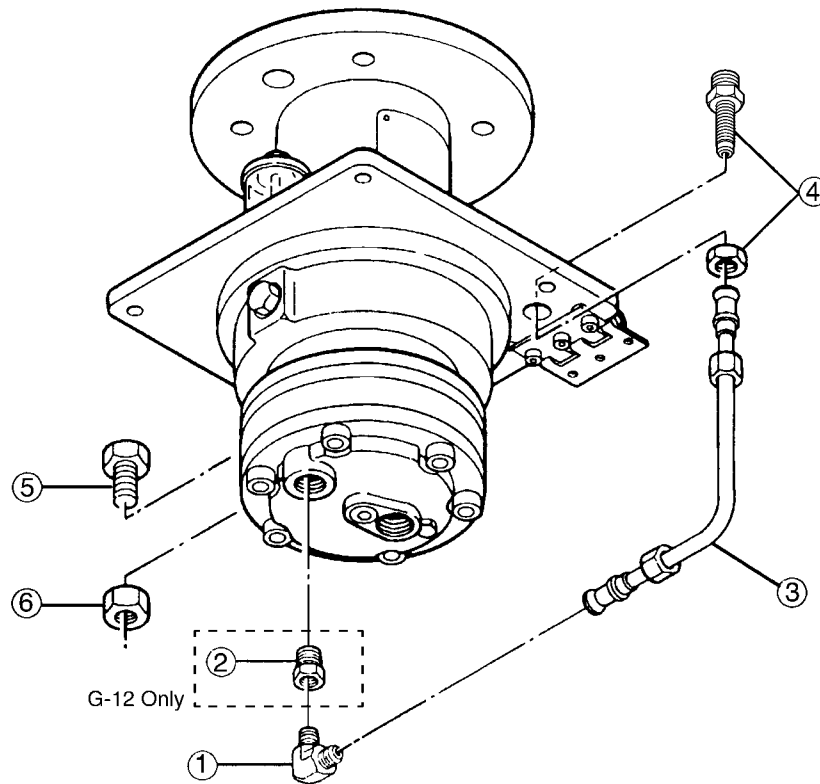
Ref #	Part Number	Description	Quantity/ Pump
50	D10-019-3110	Spring, piston return .....	3
51	D10-042-1010	Retainer, spring .....	3
	K10-042-1010	Retainer, spring, Kel-Cell <sup>1</sup> .....	3
52	D10-046-2110	O-ring, valve cylinder, Buna .....	3
	C23-009-2110	O-ring, valve cylinder, Buna, Kel-Cell <sup>1</sup> .....	3
53	D10-045-3110	Spring, sleeve valve .....	3
	D10-045-3111	Spring, sleeve valve (Teflon diaphragm) .....	3
	K10-045-3110	Spring, sleeve valve, Kel-Cell <sup>1</sup> .....	3
54	D10-044-1010	Valve Plunger .....	3
	K10-044-1010	Valve Plunger, Kel-Cell <sup>1</sup> .....	3
55	D10-043-1010	Cylinder, valve .....	3
	K10-043-1010	Cylinder, valve, Kel-Cell <sup>1</sup> .....	3
56	D10-034-2110	O-ring, Buna .....	3
57	D10-041-1010	Washer, ball retainer .....	3
58	D10-015-3010	Ball .....	12
59	D10-014-1209	Piston, with foot and retainer .....	3
	D10-014-1210	Piston Assembly, Buna <sup>2</sup> .....	—
	K10-014-1210	Piston Assembly, Kel-Cell <sup>1,2</sup> .....	—
60	D10-075-2110	O-ring, bearing adjusting plate, Buna	1
61	D10-012-1010	Bearing Adjusting Plate .....	1
62	D10-007-1210	Cam Assembly (X) <sup>3</sup> , 8 gpm (30.3 lpm) @ 1450 rpm .....	—
	D10-007-1211	Cam Assembly (I) <sup>3</sup> , 4 gpm (15.1 lpm) @ 1750 rpm .....	—
	D10-007-1212	Cam Assembly (S) <sup>3</sup> , 6 gpm (22.7 lpm) @ 1750 rpm .....	—
	D10-007-1214	Cam Assembly (E) <sup>3</sup> , 8 gpm (30.3 lpm) @ 1750 rpm .....	—
63	D10-085-2210	Key, shaft .....	1
64	D10-031-2120	Seal, Buna .....	2
65	D10-037-2110	O-ring, pump housing, Buna .....	1
—	D10-111-2401	Label, caution .....	1
	D10-111-2402	Label, caution .....	1

<sup>1</sup> Parts used in Kel-Cell version pumps (Kel-Cell version pumps are indicated by a “K” in the 5th digit of the pump model number).

<sup>2</sup> Piston Assembly includes cylinder, foot, valve plunger, O-rings, spring retainer, and springs (50-59).

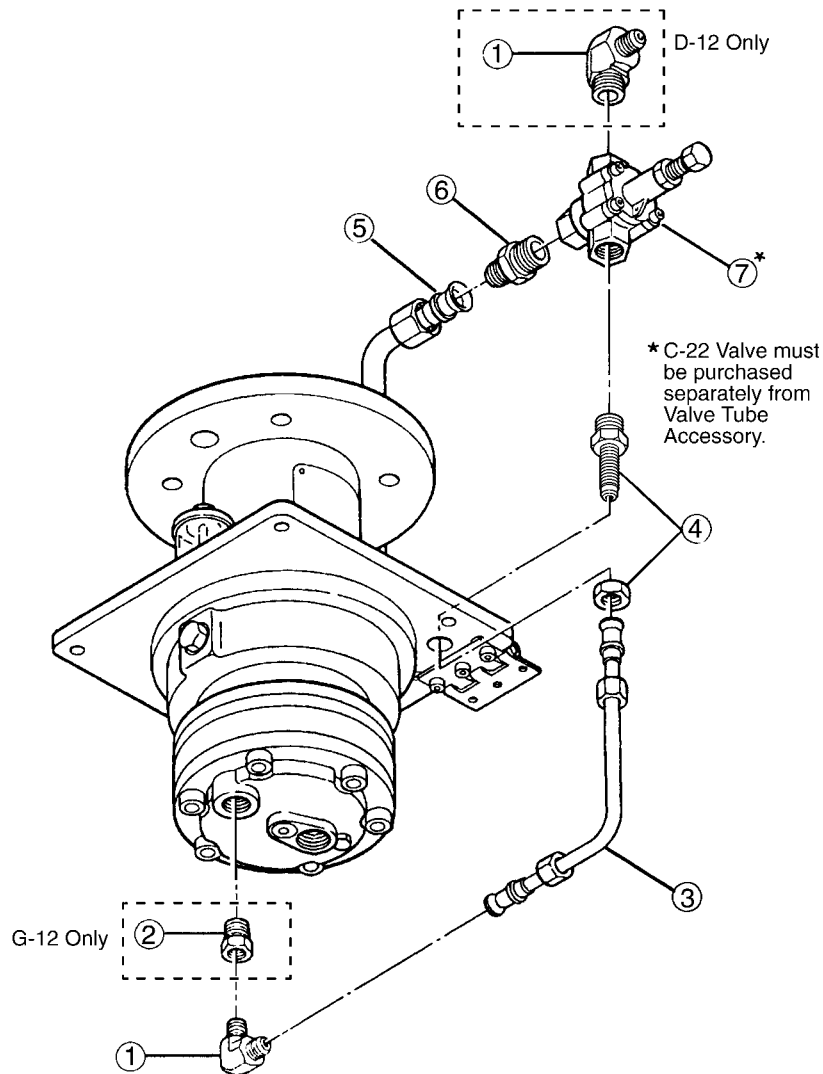
<sup>3</sup> Cam Assembly includes can, shaft, wobble plate, cups and bearings. It is only available as an assembly.

# D/G-12 Tube Accessory



Ref #	Part Number	Description	Quantity/ Pump
1	D12-112-2210	Elbow, 90°, flare, 3/4" NPT .....	1
	G12-112-2210	Elbow, 90°, flare, 1/2" BSPT .....	1
2	G12-122-2210	Bushing, reducer, 1/2" to 3/4" BSPT ..	1
3	D12-113-1210	Tube Assembly, pressure .....	1
4	D12-120-2210	Union, bulkhead, NPT, with nut .....	1
	G12-120-2210	Union, bulkhead, BSPT, with nut .....	1
5	D12-107-2010	Bolt, hex, 3/4" x 1-1/4" .....	1
6	D12-106-2010	Nut, hex, 3/4" .....	1

# D/G-12 Valve-Tube Accessory



Ref #	Part Number	Description	Quantity/ Pump
1	D12-112-2210	Elbow, 90°, flare, 3/4" NPT .....	2
	G12-112-2210	Elbow, 90°, flare, 1/2" BSPT .....	1
2	G12-122-2210	Bushing, reducer, 1/2" to 3/4" BSPT .	1
3	D12-113-1210	Tube Assembly, pressure .....	1
4	D12-120-2210	Union, bulkhead, NPT, with nut .....	1
	G12-120-2210	Union, bulkhead, BSPT, with nut .....	1
5	D12-114-1210	Tube Assembly, bypass .....	1
6	D12-117-2210	Connector, male, flare, 3/4" NPT .....	1
	G12-117-2210	Connector, male flare, 3/4" BSPT .....	1
7	C-22 Valve	[Refer to Valve Parts List for breakdown] .....	—

# D/G-12 Series Replacement Parts Kits

TO ORDER REPLACEMENT PARTS KIT: A Replacement Parts Kit contains 11 digits corresponding to customer-specified design options.

1	2	3	4	5	6	7	8	9	10	11
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Digit	Order Code	Description
<b>1-3</b>		<b>Pump Configuration</b>
	D12	For all D-12 Pumps
	G12	For all G-12 Pumps
<b>4</b>		<b>Kit Designator</b>
	K	Complete Fluid End Kit
	D	Diaphragm Kit
	V	Valve Kit (diaphragm not included)
<b>5-6</b>		<b>Pump Head Version</b>
	52	Metallic Pump Head Version
<b>7</b>		<b>Diaphragm &amp; O-ring Material</b>
	E	EPDM
	G	Viton®-XT
	J	Teflon®
	P	Neoprene
	T	Buna-N-XS
<b>8</b>		<b>Valve Seat Material</b>
	C	Ceramic
	D	Tungsten Carbide
	H	17-4 PH Stainless Steel
	S	316 Stainless Steel
	T	Hastelloy® C
	X	Not included in Diaphragm Kit
<b>9</b>		<b>Valve Material</b>
	C	Ceramic
	D	Tungsten Carbide
	F	17-4 PH Stainless Steel – Machined
	N	Nitronic 50
	T	Hastelloy® C
	X	Not included in Diaphragm Kit
<b>10</b>		<b>Valve Springs</b>
	E	Elgiloy®
	T	Hastelloy® C
	X	Not included in Diaphragm Kit
<b>11</b>		<b>Valve Spring Retainers</b>
	C	Celcon
	H	17-7 PH Stainless Steel
	M	Kynar®
	P	Polypropylene
	T	Hastelloy® C
	Y	Nylon (Zytel)
	X	Not included in Diaphragm Kit

## Kit Contents

Part Number*	Description	Qty	Kit Designator		
			K	D	V
D10-018-___	Diaphragm	3	•	•	
D10-047-___	O-ring, follower	3	•	•	
D10-074-___	O-ring, outer manifold	1	•	•	•
D10-073-___	O-ring, inner manifold	1	•	•	•
D10-083-___	O-ring, center bolt	1	•	•	•
D10-035-___	O-ring, valve seat	6	•		•
D10-020-___	Valve seat	6	•		•
D10-021-___	Valve	6	•		•
D10-022-___	Valve spring	6	•		•
D10-092-___	Tetra seal <sup>1</sup>	6	•		•
D10-023-___	Retainer, valve spring	6	•		•
A01-113-3400	Threadlocker	1	•	•	

\* Last four digits of part numbers with \_\_\_ refer to specific material of construction.

<sup>1</sup> Not included with metal spring retainers.



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