

FIGURE 7-2. EXPLODED ISOMETRIC DRAWING OF A

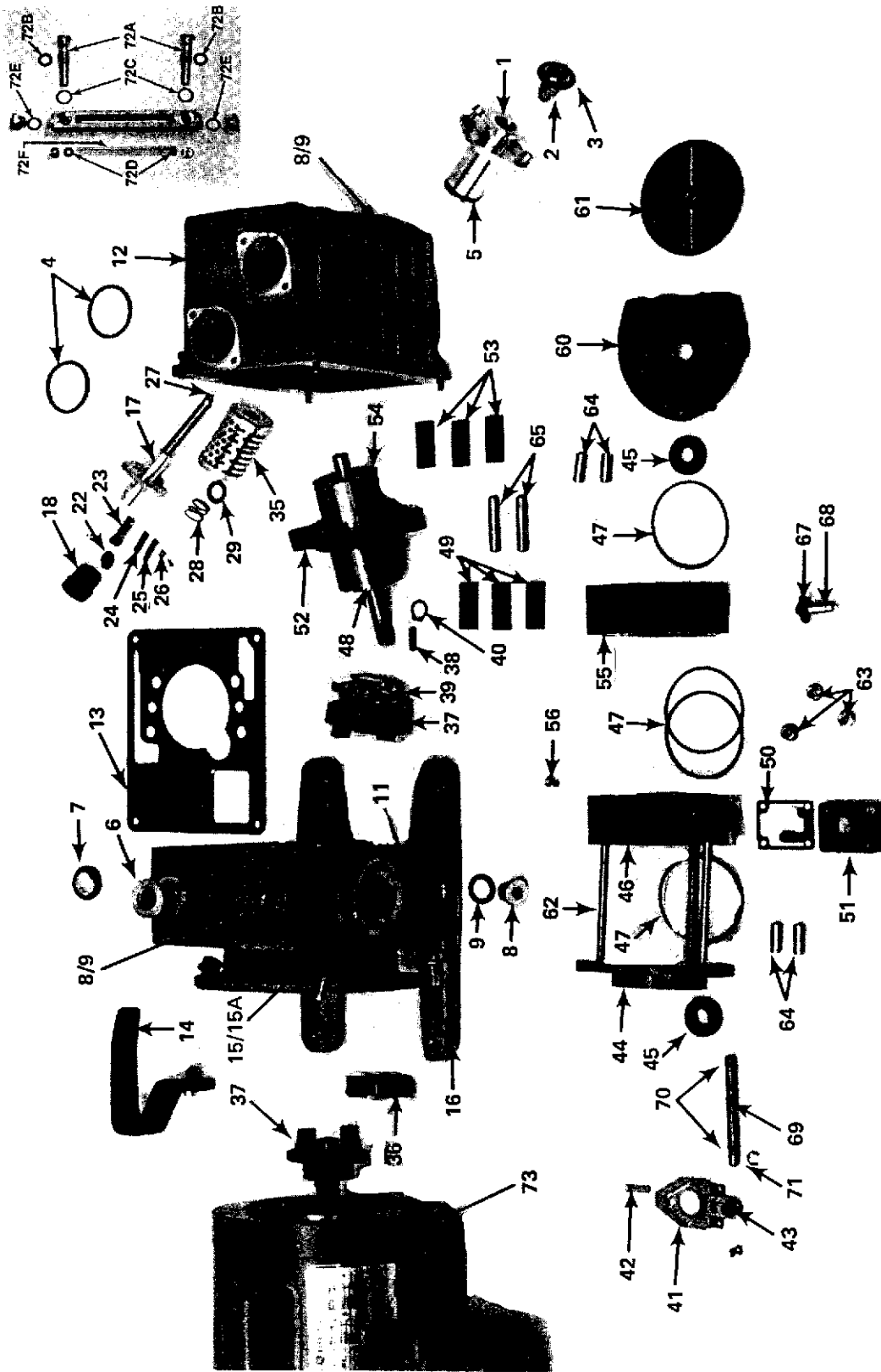


Figure 7-1. Disassembled Pump (D2A Pump Model Shown)

NOTE: The numbers on this figure correspond to the Position No. listed for each part in Table 7-2, beginning on page 58.

TABLE 7-1 - SPARE MODULES, GASKET SETS, AND REPAIR KITS

Number Required Per Unit										Remarks
Pump Model										
D2A	D4A	D8A	D16A	D30A	D60A/ D90A	Part Name	Catalog No.			
1						Module, standard	899510			The module is made up of all parts listed with an "..." beside its catalog number in Table 7-2. For extreme-corrosive service pump modules, contact the main office.
1	1					Module, corrosive series	10166C			
	1					Module, standard	899511			
		1				Module, corrosive series	10167C			
		1				Module, standard	899512			
		1				Module, corrosive series	899512			
			1			Module, standard	899513			
			1			Module, corrosive series	899513			
				1		Module, standard	899514			
				1		Module, corrosive series	10170C			
					1	Module, standard	899515			
					1	Module, corrosive series	10171C			
1	1					Universal gasket set	200-39-063			The gasket set is made up of all parts listed with a "+ +" beside its catalog number in Table 7-2. The gaskets are Viton; they can be used for standard, corrosive, and extreme-corrosive applications. Buna gasket sets are available on request.
		1	1			Universal gasket set	200-39-064			
				1		Universal gasket set	200-39-054			
1						Module repair kit	899527			The repair kit is made up of all parts listed with a "+ +" or "or" + " beside its catalog number in Table 7-2.
	1					Module repair kit	899528			
		1				Module repair kit	899529			
			1			Module repair kit	899530			
				1		Module repair kit	899531			
					1	Module repair kit	899532			
1	1					Oil Filter (demister)	390 26 121	Item 35		
		1	1			Oil Filter (demister)	390 26 117	Item 35		
1	1					Anti-suckback modification kit ‡	720-24-003	120V, 60 Hz		
1	1					Anti-suckback modification kit ‡	720-24-002	208/240/480V, 50/60 Hz		
		1	1			Anti-suckback modification kit ‡	720-24-005	120V, 60 Hz		
		1	1			Anti-suckback modification kit ‡	720-24-004	208/240/480V, 50/60 Hz		
				1		Anti-suckback modification kit ‡	720-24-001	208/240/480V, 50/60 Hz		

‡ This kit must be installed before pumping toxic, pyrophoric, or hazardous gases. See the supplemental instructions that come with the kits and with the TRIVAC AC pumps for the part numbers of each item in the kit.

TABLE 7-2—COMPLETE LIST OF PARTS

Position No. on Figs.	Number Required per Unit							Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model											
	D2A	D4A	D8A	D16A	D30A	D60A/D90A						
1	1							INTAKE TUBE ASSEMBLY	433 60 118	KF16	Al-aly	
1			1					Intake tube	433 60 119	KF25x71	Al-aly	
1				1		1		Intake tube	431 65 116	KF40x107	Al-aly	
2	1	1						Dirt trap with centering ring	411 70 122	KF16	Steel	
2			1	1				Dirt trap & centering ring	411 70 206	KF25	Steel	
2					1	1		Dirt trap with centering ring	411 70 121	KF40	Steel	
3	2	2						O-ring	239 70 176++	D18x5	Viton	One of the O-rings goes on the intake centering ring; the other goes on the exhaust centering ring.
3			2	2				O-ring	239 70 506++	D28x5	Viton	
3					2	2		O-ring	239 70 516	D42x5	Viton	
4	2	2						Flat gasket	238 20 147++ *	D38x44	AFM	One of the flat gaskets fits under the intake tube; the other fits under the gas ballast valve.
4			2	2				Flat gasket	238 20 156++ *	D55x63	AFM	
4					2	2		Flat gasket	238 20 158++ *	D75x84	AFM	
5	1	1						O-ring	239 70 410++	D22x3	Viton	
5			1	1				O-ring	239 70 117++	D29x3	Viton	
5					1	1		O-ring	239 70 304++	D45x3	Viton	
6	1	1						EXHAUST PORT ASSEMBLY	433 60 113	KF16	Al-aly	
6			1	1				Exhaust port	433 60 117	KF25x42	Al-aly	
6					1	1		Exhaust port	433 60 115	KF40x63	Al-aly	

++Included in universal gasket set and module repair kit (see page 57 of parts list).

*Included in the standard module (see Page 57).

KF — Leybold quick assembly clamp ring diameter
D — diameter
Al-aly — aluminum alloy
Viton — heat resistant synthetic rubber
AFM — asbestos-free gasket fiber

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model														
	D2A	D4A	D8A	D16A	D30A	D60A/D90A									
7	1	1									EXHAUST PORT ASSY. (Cont'd.) Centering ring with O-ring	88346	KF16	SS, Viton	
7			1	1							Centering ring with O-ring	88347	KF25	SS, Viton	
7					1	1					Centering ring with O-ring	88348	KF40	SS, Viton	
8	3	4	4	4	4	4					PUMP HOUSING ASSEMBLY Plug screw	201 27 105 ++	D16x1.5	Stl	DIN 908, Isometric, Straight
9	3	4	4	4	4	4					Flat gasket	239 55 165 ++	D22x15.1x2	Viton	
10					1	1					Eye bolt	201 13 101	M8	Stl	See Figure 7-2.
11	1	1									Coupling housing	720 00 001	228x140x185	C Al-aly	
11			1	1							Coupling housing	720 00 003	265x172.5x216.5	C Al-aly	
11					1						Coupling housing	720 00 019	149x242x272.5	Cast iron	
11						1					Coupling housing	720 00 021	164x242x272.5	Cast iron	
12	1										Oil casing	720 00 005	127.5x135x162	C Al-aly	
12		1									Oil casing	720 00 007	162.5x135x162	C Al-aly	
12			1								Oil casing	720 00 009	158x172.5x192.5	C Al-aly	
12				1							Oil casing	720 00 011	200.5x172.5x192.5	C Al-aly	
12					1						Oil casing	720 00 015	246.5x242x279.5	Al-aly	
12						1					Oil casing	720 00 017	321.5x242x279.5	Al-aly	
13	1	1									Seal	200 10 724 ++*	136x162x1	AFM	Asbestos-free
13			1	1							Seal	200 10 725 ++*	172x190x1	AFM	Asbestos-free
13					1	1					Seal	200 10 726 ++*	242x270x1	AFM	Asbestos-free

SS—Stainless Steel
 KF—Leybold quick assembly clamp ring diameter
 D—Diameter
 Stl—steel
 Viton—heat resistant synthetic rubber
 C Al-aly—cast aluminum alloy
 Al-aly—aluminum alloy
 AFM—asbestos-free gasket fiber
 Buna-N—synthetic rubber
 Al—Aluminum

++Included in universal gasket set and module repair kit (see page 57 of parts list).

*Included in the standard module (see Page 57).

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit							Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model											
	D2A	D4A	D8A	D16A	D30A	D60A/D90A						
14	1	1						PUMP HOUSING ASSY. (Cont'd.) Handle	283 02 106	100x86x28	Black plastic	
14			1					Handle	283 02 107	106x120x32	Black plastic	
15	1	1						Oil level glass	520 40 124	M50x1.5	Glass, Viton	Includes flat gasket (Item 15A)
15			1	1	1	1		Oil level glass	520 40 125	M60x2	Glass, Viton	
15A	1	1						Flat gasket	239 55 172 ++	48x56x2	Viton	
15A			1	1	1	1		Flat gasket	239 55 171 ++	60x68x2	Viton	
16	4	4	4	4				Rubber foot	279 80 308	D20x16	Buna-N	
16					2	2		Support	720-00-088	63.5x38	Stl	Not shown in Figs.
					4	4		Vibration pad	99 274 005		Buna-S	
	1	1						GAS BALLAST VALVE ASSEMBLY				
			1					Gas ballast valve assy.	720 00 077			This assembly includes Position Numbers 17 thru 27 and 30, 31, & 32.
				1				Gas ballast valve assy.	720 00 079			
					1			Gas ballast valve assy.	720 00 080			
17	1	1						Gas ballast valve stem	‡	43x109	Al-aly, Stl	
17			1	1				Gas ballast valve stem	‡	65x113.5	Al-aly-Stl	
17					1	1		Gas ballast valve stem	‡	85x85x67	Al-aly, Stl	
								Flat gasket				See Position No. 4.
18	1	1						Cap	349 75 102	D22x24	Buna-N	
18			1	1	1	1		Cap	349 75 105	D50x40	Buna-N	
19			1	1	1	1		Valve assembly	350 20 158	D31.7x6	Thermoplastic	See Fig. 5-10A.
20			1	1	1	1		O-ring	239 70 436 + +	D27x2.5	Viton	See Fig. 5-10A.
21			1	1	1	1		Retaining washer	221 49 207	D19.5x33x0.9	Steel	See Fig. 5-10A.
22	1	1						Stiffening disk	222 04 104	D15x3	Brass	
22			1	1	1	1		Stiffening disk	222 04 107	D40x0.5	Bronze	
23	1	1						Nonreturn valve	350 20 126	D16x26	Steel	
24	1	1						Flat gasket	239 73 133 + +	19x6x1	Viton	
25	1	1						Spring	451 74 424 + +	19x0.1	Steel	
26	1	1						Strengthening piece	451 74 425 + +	6x7x0.1	Steel	
	1	1						Pan head screw	201 04 129	M2 x 6	Steel	Not shown

+ + Included in universal gasket set and module repair kit (see page 57 of parts list).

‡ Must be purchased as gas ballast assembly.

Buna-N — synthetic rubber
 Stl — steel
 Al-aly — aluminum alloy
 D — diameter
 Viton — heat resistant synthetic rubber

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model														
	D2A	D4A	D8A	D16A	D30A	D60A/D90A									
27	1	1	1	1			GAS BALLAST VALVE ASSEMBLY (Cont'd.)				239 70 148++	D5x2	Viton		
27					1	1	O-ring				239 70 147++	D16x2.5	Viton		
28							Spring (filter)				221 62 144	D14.5x12x1.25	Steel		
28			1	1			Spring (filter)				221 62 143	D20x35	Steel		
28					1	1	Spring (filter)				221 62 142	D25.2x38	Steel		
29	1	1					Flat gasket				239 25 227++	D18x10x1	Viton		
29			1	1			Flat gasket				239 25 226++	D30x16x1	Viton		
29					1	1	Flat gasket				239 25 225++	D30x18x1	Viton		
30					1	1	Retainer ring				231 04 104	D15x1	Steel	See Fig. 5-10B.	
31					1	1	Spring (gas ballast)				221 62 140	D15x11.5	Steel	See Fig. 5-10B.	
32					1	1	Valve plate				401 64 117++	D14.8x0.2	Steel	See Fig. 5-10B.	
33			1	1			Cover				341 01 109	D48x5	Steel	Not shown in Figs.	
34			1	1			Retainer ring				231 03 106	17x1	Steel	Not shown in Figs.	
35	1	1					Oil filter				390 26 121+	D36x55	Stl, fiber		
35			1	1			Oil filter				390 26 117+	D42x55	Stl, fiber		
35					1	1	Oil separator				411 12 108-A	D58x90	Steel	See Fig. 5-10B.	
							Oil filter spring							See position 28	
36	1	1	1	1			COUPLING ASSEMBLY								
36							Elastic element				701 00 147* ++	41x15	Buna-N		
37	1	1			1	1	Coupling ring				701 00 196* ++	D80x21	Vulkollan	See Fig. 5-11.	
37							Coupling, complete				570 42 130*	D58x60		Includes pump-side and motor-side coupling and Pos. No. 36.	
37			1	1			Coupling, complete				570 42 134*	D58x61			
37					1	1	Coupling, complete				570 42 132*	D85x85	Cast iron		
37						1	Coupling, complete				570 42 133*	D85x85	Cast iron	See Fig. 5-3.	

* Included in module (see page 57 of parts list).

+ Included in module repair kit (see page 57 of parts list).

++ Included in universal gasket set and module repair kit (see page 57 of parts list).

Stl — steel
 Vulkollan — vulcanized rubber
 Buna-N — synthetic rubber
 Viton — heat resistant synthetic rubber
 D — diameter

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model					D60A/D90A	D30A	D16A	D8A	D4A					
	D2A	D4A	D8A	D16A	D30A										
38	1	1									COUPLING ASSEMBLY (Cont'd.)	221 16 065*	4x4x18	Steel	
38			1	1							Key (coupling)	221 16 151*	5x5x18	Steel	
38					1	1					Key (coupling)	221 16 179*	6x6x22	Steel	
39	1	1									CENTRIFUGAL SWITCH AND RETAINER RING	500 36 123*	D60x23	Brs, Stl	
39			1	1							Centrifugal switch	500 36 128*	D70x27	Brs, Stl	
39					1	1					Centrifugal switch	500 36 147*	D60x23	Brs, Stl	
40	1	1									Retainer ring	231 03 101*	D12x1	Steel	
40			1	1							Retainer ring	231 03 104*	D15x1	Steel	
40					3	3					Retainer ring	231 03 111*	D22x1.2	Steel	The 2 additional rings fit onto the shaft on both sides of the second stage rotor.
41	1	1									LEVER ASSEMBLY	281 53 130*	73x36	Steel	
41			1	1							Lever	281 53 102*	88x40x1	Steel	
41					1	1					Lever	281 53 101*	109x40x1	Steel	
42	1	1									Spring (lever)	221 61 199*	D5.8x18x0.4	Steel	
42			1	1	1	1					Spring (lever)	221 62 141*	D8.5x23	Steel	
43	1	1	1	1	1	1					Seal (lever)	239 73 131**	D9x11	Buna-N	
44	1	1									SECOND STAGE ASSEMBLY	301 51 138*	D12x18	Cl, Brz	
44			1	1							Front end plate	301 51 137*	D15x23	Cl, Brz	
44					1	1					Front end plate	301 51 140*	D40x27	Cl	
45	2	2									Radial shaft seal	239 53 124**	D12x28x7	Viton	One of the seals fits into the front end plate; the other fits into the rear end plate.
45			2	2							Radial shaft seal	239 53 142**	D15x32x7	Viton	
45					2	2					Radial shaft seal	239 53 110**	D22x40x7	Viton	

*Included in module (see Page 57 of parts list).

**Included in universal gasket set and module repair kit (see page 57 of parts list).

Stl — steel
Cl — cast iron
Viton — heat resistant synthetic rubber

D — diameter
Brs — brass
Brz — bronze

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model														
	D2A	D4A	D8A	D16A	D30A	D60A/D90A									
46	1	1									SECOND STAGE ASSEMBLY (Cont'd.)	231 58 117*	D54.8x35	CI	
46			1								Second stage pump cylinder	231 58 124*	D79x45	CI	
46					1						Second stage pump cylinder	231 58 122*	D118.5x75	CI	
47	4	4									O-ring	239 70 409*++	D60x2	Viton	Two of these O-rings go on the second stage pump cylinder; the other two go on the high vacuum stage pump cylinder.
47			4	4							O-ring	239 70 156*++	D86x2	Viton	
47					4						O-ring	239 70 411*++	D122x3	Viton	
48	1										Oil nozzle				See Position No. 56.
48		1									Rotor with shaft	481 21 242*	D48x151	CI, Stl	
48											Rotor with shaft	481 21 243*	D48x186	CI, Stl	
48			1								Rotor with shaft	481 21 238*	D68x183	CI, Stl	
48				1							Rotor with shaft	481 21 239*	D68x228	CI, Stl	
48					1						Rotor with shaft	481 21 240*	D101 x 75	CI, Stl	
48									1		Rotor with shaft	481 21 241*	D101 x 75	CI, Stl	
49	3	3									Vane	200 10 878*+	14x35x4.5	Inkutex	Asbestos-free
49			3								Vane	200 10 882*+	22x45x4.5	Inkutex	Asbestos-free
49					3					3	Vane	200 10 846*+	32.5x75x4.5	Inkutex	Asbestos-free

* Included in module (see page 57 of parts list).

+ Included in module repair kit (see page 57 of parts list).

++ Included in universal gasket set and module repair kit (see page 57 of parts list).

Stl — steel

CI — cast iron

Viton — heat resistant synthetic rubber

D — diameter

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit							Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model											
	D2A	D4A	D8A	D16A	D30A	D60A/D90A						
50	1						SECOND STAGE ASSEMBLY (Cont'd.)	401 64 109*+	45x35x0.1	Stl	For strd. series pumps. For strd. series pumps. For strd. series pumps. For corr. series pumps. For corr. series pumps. For corr. series pumps. The valve stop in the Figures is made of black plastic.	
50		1	1			Valve plate (standard)	401 64 116*+	63x45x0.1	Stainless steel			
50				1	1	Valve plate (standard)	401 64 114*+	75x82x0.2	Stl			
50	1					Valve plate (corrosive)	401 64 121*	45x35x0.1	Gold plated			
50		1	1			Valve plate (corrosive)	401 64 116*+	63x45x0.1	Stainless steel			
50					1	Valve plate (corrosive)	401 64 124*	75x82x0.2	Gold plated			
51	1					Valve stop	373 58 103*	34.6x45x10	Black plastic			
51			1	1		Valve stop	373 58 107*	63x45x9	Black plastic			
51					1	Valve stop	373 58 106*	80x74.5x12	Al-aly			
52	1					Center bearing	261 51 132*	D12x15	Cast iron			
52		1	1			Center bearing	261 51 131*	D15x15	Cast iron			
52					1	Intermediate plate	261 51 135*	D30x30	Cast iron			
53	3						HIGH VACUUM STAGE ASSEMBLY	200 10 878*+	14x35x4.5	Inkutex	Asbestos-free Asbestos-free Asbestos-free Asbestos-free Asbestos-free Asbestos-free	
53		3				Vane	200 10 879*+	14x70x4.5	Inkutex			
53			3			Vane	200 10 882*+	22x45x4.5	Inkutex			
53				3		Vane	200 10 881*+	22x90x4.5	Inkutex			
53					3	Vane	200 10 846*+	32.5x75x4.5	Inkutex			
53					3	Vane	200 10 880*+	32.5x150x4.5	Inkutex			

*Included in module (see page 57 of parts list).
+Included in module repair kit (see page 57 of parts list).

D — diameter
Duroplast — durable thermoplastic
Al-aly — aluminum alloy

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Catalog No.	Dimensions (mm)	Material	Remarks	
	Pump Model						D60A/ D80A	D30A	D16A	D8A						D4A
	D2A	D4A	D8A	D16A	D30A	D60A/ D80A										
54	1											HIGH VACUUM STAGE ASSEMBLY (Cont'd.)				
54		1										Rotor, HV stage	321 66 126*	D48x35	Cast iron	
54			1									Rotor, HV stage	321 66 125*	D48x70	Cast iron	
54				1								Rotor, HV stage	321 66 123*	D68x45	Cast iron	
54					1							Rotor, HV stage	321 66 122*	D68x90	Cast iron	
54						1						Rotor, †	321 66 119*	D101x75	Cast iron	†
54							1					Rotor, HV stage	321 66 120*	D101x150	Cast iron	
55	1											Pump cylinder, HV stage	231 65 117*	D54.8x35	Cast iron	
55		1										Pump cylinder, HV stage	231 65 116*	D54.8x70	Cast iron	
55			1									Pump cylinder, HV stage	231 65 121*	D79x45	Cast iron	
55				1								Pump cylinder, HV stage	231 65 122*	D79x90	Cast iron	
55					1							Pump cylinder, HV stage	231 65 118*	D118.5x75	Cast iron	
55												Pump cylinder, HV stage	231 65 107*	D118.5x150	Cast iron	
56												O-rings				See position 47.
56	1	1										Oil nozzle	392 25 107*	0.5	Brass	The oil nozzle is located in the second stage pump cylinder.
56			1	1								Oil nozzle	392 25 113*	0.8	Brass	
56					2							Oil nozzle	392 25 124*	1.5	Brass	
57	1	1										Radial shaft seal				See position 45.
57												Key (rotor)	221 16 070*	4x4x28	Stl	See Fig. 5-9.
57												Key (rotor)	221 16 156*	5x5x28	Stl	See Fig. 5-9.
57					2							Key (rotor)	221 16 188*	6x6x50	Stl	See Fig. 5-9.
58		1										Valve plate	400 50 135* ++	16x16x5	Stl, Viton	See Fig. 5-13.
58												Valve plate	400 50 138* ++	25x25x5	Stl, Viton	See Fig. 5-13.

* Included in module (see page 57 of parts list).

++ Included in universal gasket set and module repair kit (see page 57 of parts list).

† Both rotors are the same part

number on the D30A pump model.

D — diameter
Stl — steel
Viton — heat resistant synthetic rubber
HV — high vacuum

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit							Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model											
	D2A	D4A	D8A	D16A	D30A	D60A/D90A						
59		1						HIGH VACUUM STAGE ASSEMBLY (Cont'd.)	491 60 109*	40x8x4	Steel	See Fig. 5-13.
59				1				Retaining bracket	491 60 107*	40x10x8	Steel	See Fig. 5-13.
59						2		Retaining bracket	491 60 111*	52x4x4	Steel	See Fig. 5-13.
60	1	1						Rear end plate	351 55 131*	D12x16	Cast iron	
60			1	1				Rear end plate	351 55 130*	D15x18	Cast iron	
60					1	1		Rear end plate	351 55 132*	D40x28	Cast iron	
61	1	1	1	1	1	1		Disk (oil slinger)	451 74 335*	D85x2.1	Steel	
62	3							MODULE STUDS AND PINS	201 52 104*	D6x107	Steel	
62		3						Threaded stud	201 52 103*	D6x142	Steel	
62			4					Threaded stud	201 52 109*	D6x133	Steel	
62				4				Threaded stud	201 52 110*	D6x178	Steel	
62					3			Threaded stud	201 52 106*	D8x218	Steel	
62						3		Threaded stud	201 52 108*	D8x293	Steel	
63	3	3	4	4				Hexagon nut	211 01 312*	D6	Steel	
63					3			Hexagon nut	211 01 314*	D8x8	Steel	
64	4	4	4	4				Cylindrical pin	241 03 585*	D8x20	Steel	
64					2			Cylindrical pin	241 03 586*	D8x24	Steel	For rear end plate
64					2			Cylindrical pin	241 03 590*	D8x40	Steel	For front end plate
65	2	2	2	2				Cylindrical pin	241 03 590*	D8x40	Steel	
65					2			Cylindrical pin	241 03 593*	D8x60	Steel	

* Included in module (see page 57 of parts list).

D — Diameter

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit							Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model											
	D2A	D4A	D8A	D16A	D30A	D60A/D90A						
								ANTI-SUCK BACK ASSEMBLY				
								Centrifugal switch				See position 39.
								Lever				See position 41.
								Spring (lever)				See position 42.
								Seal (lever)				See position 43.
66					1	1		Air nozzle	392 25 204	0.36	Brass	Not shown in Figures
67	1	1						Valve disk	400 50 136*++	D20	Stl, Viton	
67			1	1				Valve disk	400 50 139*++	D32	Stl, Viton	
67					1	1		Valve disk	400 50 137*++	D45	Stl, Viton	
68	1	1						Piston	321 06 130*	D7.9x26	Brass	
68			1	1				Piston	321 06 104*	D12x30	Brass	
68					1	1		Piston	321 06 131*	D12x22	Brass	
69	1	1						Air inlet tube	431 31 161*	D8x79	Steel	
69			1	1				Air inlet tube	431 31 177*	D8x92.5	Steel	
69					1	1		Air inlet tube	431 31 174*	D8x144	Steel	
70	2	2	2	2	2	2		O-ring	239 70 148*++	D5x2	Viton	
71	1	1						Retainer disk	231 05 107*	D5	Steel	
71			1	1	1	1		Retainer disk	231 05 108*	D6	Steel	
72	1	1						OIL SIGHT GAUGE ASSEMBLIES	720 00 113	5 11/32"x5/8"	Aluminum	
72			1	1					720 00 114	5 11/32"x5/8"	Aluminum	
72					1	1			720 00 115	6 13/16"x5/8"	Aluminum	
72A	2	2	2	2	2	2		Mounting bolt	720 00 129	5/16-24 UNF-2A		A mounting bolt with 2 flat gaskets (72B) is available under Part No. 720 00 118
72B	2	2	2	2	2	2		Flat gasket	725 90 001++		Viton	A seal kit containing these 4 seals is available under Part No. 720 00 116
72C	2	2	2	2	2	2		O-ring	725 91 001++		Viton	
72D	2	2	2	2	2	2		Flat gasket	725 90 000++		Viton	
72E	2	2	2	2	2	2		O-ring	725 91 000++		Viton	
72F	1	1	1	1	1	1		Sight tube	722 11 003		Glass	
					1	1		Sight tube	722 11 004		Glass	

*Included in module (see page 57 of parts list)

++Included in module repair kit and universal gasket set (see page 57 of parts list)

D — Diameter

C — alloy — cast aluminum alloy

M — motor side adapter flange

P — pump side adapter flange

Viton — heat resistant synthetic rubber

Al — aluminum

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit						Part Name	Motor Specifications	Motor Part No.
	Pump Model								
	D2A	D4A	D8A	D16A	D30A	D60A			
73	1	1					Motor 1/3 hp, TEFC, 1 ph 115/208-230V, 60 Hz, 1725 rpm 115/208-230V, 50 Hz, 1500 rpm Wired for 115V	722-60-066*	
73	1	1					Motor 1/3hp, TEFC, 3ph 200/230/460V, 60 Hz, 1725 rpm 200/220/380V, 50Hz, 1500 rpm	722-60-067	
73			1	1			Motor 1 hp, TEFC, 1 ph 115/208-230V wired for 115V 50/60 Hz, 1500/1725 rpm	722-60-069*	

* This motor has an automatic resetting thermal overload.

hp—horsepower
kw—kilowatt
V—voltage
VAC—voltage, alternating current
ph—phase
Hz—hertz
TEFC—totally enclosed fan cooled
rpm—revolutions per minute

TABLE 7-2 --- COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit						Part Name	Motor Specifications	Motor Part No.
	Pump Model								
	D2A	D4A	D8A	D16A	D30A	D60A			
73			1	1			Motor	1 hp, 1 ph, TEFC 208-230V, wired for 208V 50/60 Hz, 1500/1725 rpm	722-60-005*
73			1	1			Motor	1 hp, TEFC, 3 ph 208/230/460V, 60 Hz, 1725 rpm 200/220/380V, 50 Hz, 1500 rpm	722-60-070
73					1		Motor	1-1/2 hp, TEFC, 3 ph 208-230/460V, 60Hz, 1725 rpm 200-220/380V, 50 Hz, 1500 rpm	722-60-076†
73					1		Motor	2 hp, 1 ph, TEFC, 208-230V, wired for 208V, 60 Hz, 1725 rpm	722-60-007*

† This motor has a rotational lock bearing.

* This motor has an automatic resetting thermal overload.

hp – horsepower
kw – kilowatt
V – voltage
VAC – voltage, alternating current
ph – phase
Hz – hertz
TEFC – totally enclosed fan cooled
rpm – revolutions per minute

TABLE 7-2 — COMPLETE LIST OF PARTS (continued)

Position No. on Figs.	Number Required per Unit										Part Name	Motor Specifications	Motor Part No.
	Pump Model												
	D2A	D4A	D8A	D16A	D30A	D60A	D90A	D90A	D90A	D90A			
73						1					Motor	2 hp, 3 ph, TEFC 200-230/460V, 1200 rpm, 60Hz 200-220/380V, 1000 rpm, 50Hz	722-60-074†
73										1	Motor	3 hp, TEFC, 3 ph 208/230/460V, 60Hz, 1800 rpm 200-220/380V, 50 Hz, 1500 rpm	722-60-013†

hp — horsepower
kw — kilowatt
V — voltage
VAC — voltage, alternating current
ph — phase
Hz — hertz
TEFC — totally enclosed fan cooled
rpm — revolutions per minute

† This motor has a rotational lock bearing.