

Parts Manual

QDP and iQDP Drystar Vacuum Pumps

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1 INTRODUCTION

1.1 Scope of this manual

This manual provides information about the component parts of the BOC Edwards QDP/iQDP40 and QDP/iQDP80 Multi-stage Dry Pumps.

General Assembly (GA) exploded views of both pumps are shown in Sections 2 to 9, together with a list of the component parts shown and an indication of whether the component parts are available as spares.

Section 10 lists the maintenance kits available for both pumps.

1.2 Applicability

The information in this manual applies to production standard QDP and iQPD pumps with the following serial numbers:

QDP40 pumps with serial number 13940 and higher
QDP80 pumps with serial number 16700 and higher
iQDP40 pumps with serial number 11210 and higher
iQDP80 pumps with serial number 12414 and higher

1.3 Parts list

The GA's of the Multi-stage Dry Pumps and their ancillary assemblies are shown in Figures 1 to 14. The component parts referenced on these figures are listed in Tables 2 to 9. When you read Tables 2 to 9, take note of the following:

- The 'Ref number' is the number of the component part on Figures 1 to 14. The Ref numbers used on Figures 1 to 14 and in Tables 2 to 9 are the same numbers as used in the QDP and iQDP40 and QDP and iQDP80 General Assembly drawings.
- The entries in the 'Kit No.(s)' column are cross references to the kits in Table 10. If a part has an entry in this column, then the component part is included in the referenced maintenance kit(s).
- If a part has an entry in the 'Item Number' column, then the part is available as a spare and the entry defines the Item Number of the spare part.
- The issues of GA drawings used in this Parts Manual are listed in Table 1.

GA Number	Issue
A40091905	H
A40191905	H
A52840070	C
A52880070	C
A52840210	E
A52840210	E

Table 1 - GA Drawing list

2 QDP AND iQDP40 PUMP ASSEMBLY

AW/7139/A

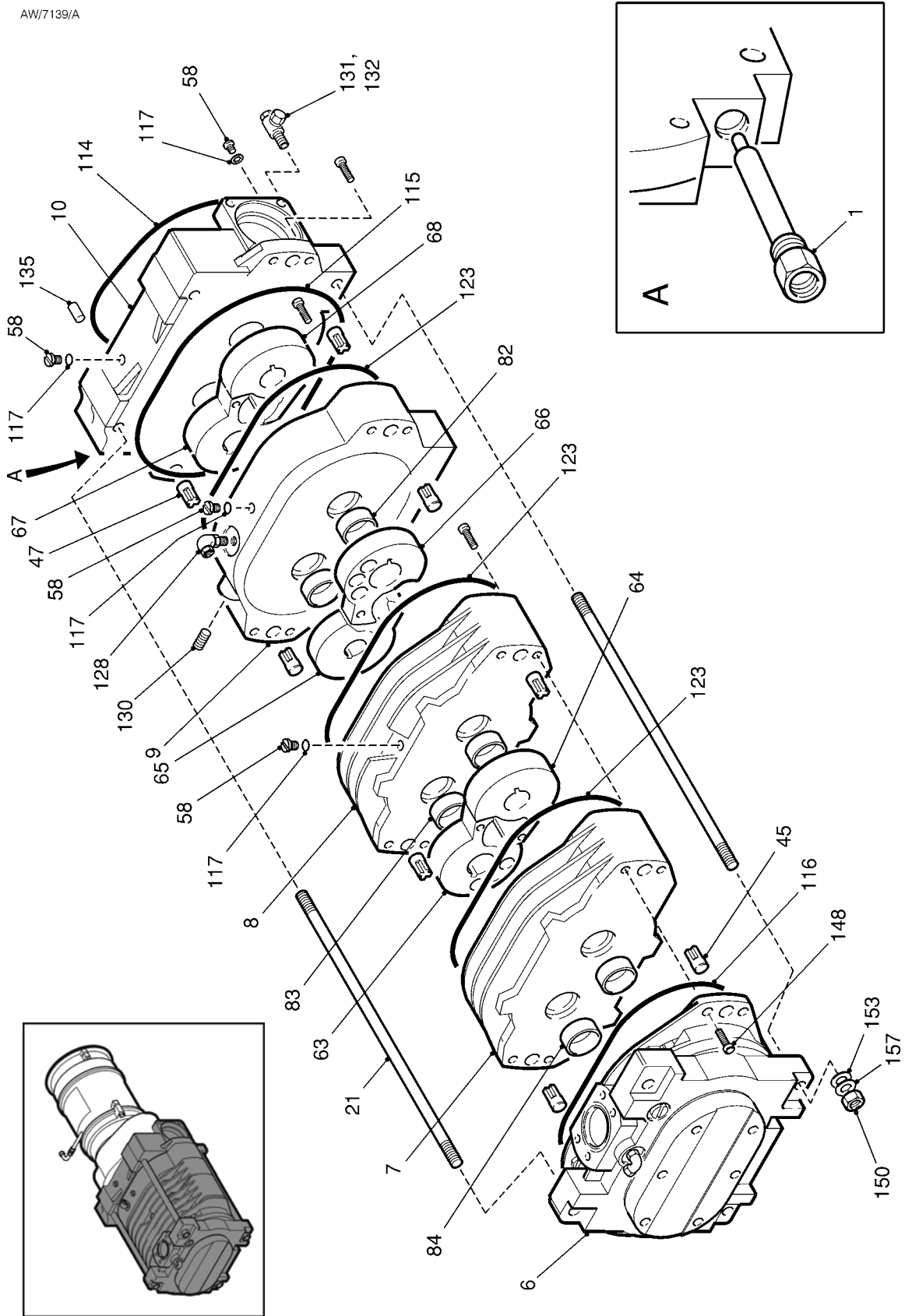


Figure 1 - QDP and iQDP40 Pump assembly

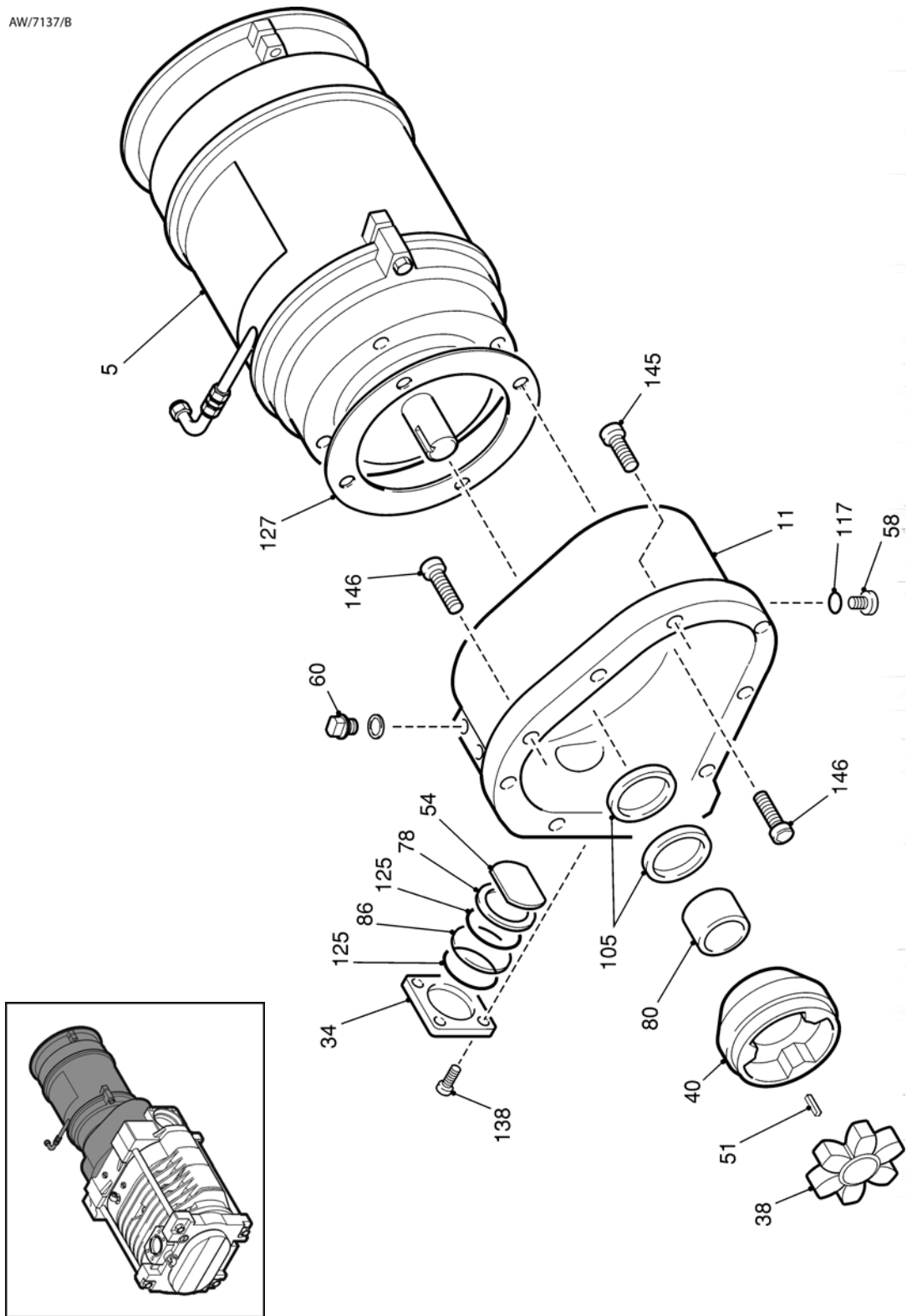


Figure 3 - QDP and iQDP40 Motor assembly

Ref	Description	Quantity	Item Number	Kit No.(s)
001	TCV bulb pocket	1	22491-008	
005	Universal W/cooled motor 2.2kw	1	A07113770	
006	HV stator (C/Iron)	1	A40001741	
007	Second stage stator (C/Iron)	1	A40001702	
008	Third stage stator (C/Iron)	1	A40001703	
009	LV Stage (C/Iron)	1	A40001704	
010	LV Headplate (C/Iron)	1	A40090702	
011	Gear cover (C/Iron)	1	A40091703	
012	End cover (C/Iron)	1	A40101707	
015	Bearing retainer	2	A40101012	
016	Seal carrier	2	A40101018	
017	RH Oil thrower - HV	1	A40101014	
018	LH Oil thrower - HV	1	A40101015	
019	RH Oil thrower - LV	1	A40101016	
020	LH Oil thrower - LV	1	A40101017	
021	Tie bar	4	A40001043	
029	Ball bearing (25 x 62 x 25.4)	2		5
030	Roller bearing (25 x 62 x 17)	2		5
031	Inner ring IR (25 x 30 x 20)	2		5
032	Inner ring IR (25 x 30 x 17)	2		5
034	Sight glass bezel	1	A20416707	
038	Flexible component	1		3
040	Coupling assy	1	A21071789	
041	Safety washer (29 x 13 x 3 thk)	1	218986740	
042	Filter	1		2,5
043	Dust seal	2		5
045	Dowel pin	4	A22425004	
046	Pair of gears (Timing)	1 pr	A22903048	
047	Acorn dowel	4	A22425007	
051	Key (8 x 7 x 16 lg)	8	A24301021	
054	Sight glass reflector	1	A25976001	
058	Plug 1/8" BSP	5	A26002027	
059	Plug 3/8" BSP	1	A26002013	
060	Plug 1/2" BSP	1	A26002040	
061	HV Rotor - Driving -'X	1	A26401733	
062	HV Rotor - Driven -'Y	'1	A26401732	
063	Rotor - 2nd stage -'X	'1	A26401140	
064	Rotor - 2nd stage -'Y	'1	A26401141	
065	Rotor - 3rd stage -'X	'1	A26401142	
066	Rotor - 3rd stage -'Y	'1	A26401143	

Table 2 - QDP and iQDP40 Pump parts list

Ref	Description	Quantity	Item Number	Kit No.(s)
067	Rotor - LV stage -'X'	1	A26401144	
068	Rotor - LV stage -'Y'	1	A26401145	
069	Thrust ring	4	A26407007	
071	Retainer	2		5
072	Locking element -'Ringfeder	2pr	A26440002	
073	Dust seal retainer	2		5
074	Loctite 518	A/R		
075	Shim - 0.03mm thick	A/R	A27165022	
076	Shim - 0.5mm thick	A/R	A27165023	
077	Shim - 0.10mm thick	A/R	A27165024	
078	Compression ring	1	A27820008	
079	Clamp ring	1	A27801002	
080	Sleeve (Hardened)	1		3
081	Sleeve - Headplate	2		5
082	Sleeve - LV stage	2	A27820028	
083	Sleeve - 3rd stage	2	A27820029	
084	Sleeve - 2nd stage	2	A27820030	
086	Sight glass	1		3
096	Blanking plate - NW25	1	C10514366	
097	Centering ring - NW25 Viton s/s	1	C10514395	
097	Centering ring - NW25 Nit s/s	1	C10514396	
098	C'- Clamp - NW25	1	C11004040	
099	Shim - 0.20mm thick	A/R	A27165025	
100	Shim - 0.0015" thick	A/R	A27165033	
102	Male elbow 3/8" BSPTx1/4" Tube (ST STL)	1	23512-023	
104	Lip seal plain - (30x42x8) (PTFE)	4		5
105	Unidir lip seal RH - (40x52x7) (PTFE)	2		3,5
106	Unidir lip seal RH - (30x42x8) (PTFE)	1		5
107	Unidir lip seal LH - (30x42x8) (PTFE)	1		5
110	'O' Ring - (21.6 I/D x 2.4 Sect)	1		5
111	1/2" BSP Rubber bonded seal	1	23754-016	
113	'O' Ring - (139.5 I/D x 3.0 Sect) (VITON)	1		2,5
114	'O' Ring - (199.5 I/D x 3.0 Sect)	1		3
115	'O' Ring - (239.5 I/D x 3.0 Sect)	1		5
116	'O' Ring - (209.5 I/D x 3.0 Sect) (VITON)	1		5
117	'O' Ring - (11.1 I/D x 1.6 Sect) (VITON)	5		5
120	'O' Ring - (57.6 I/D x 2.4 Sect) (VITON)	2		5
123	'O' Ring - (194.5 I/D x 3.0 Sect) (VITON)	3		5
124	'O' Ring - (28.0 I/D x 5.0 Sect) (VITON)	1		5
125	'O' Ring - (1.234" I/D x 0.139" Sect) (VITON)	2		3

Table 2 - QDP and iQDP40 Pump parts list (continued)

Ref	Description	Quantity	Item Number	Kit No.(s)
126	'O' Ring - (61.9 I/D x 3.53 Sect) (VITON)	4		5
127	Motor/Gear cover printed gasket	1		3
128	Male elbow 3/8" BSP x A10 tube (ST STL)	1	23512-013	
130	Taper pressure plug - 3/8" BSP	1	H03517002	
131	Banjo coupling - 3/8" BSP x 12mm	1	H03505206	
132	Blanking plug -12mm	1	23584-021	
133	Chorbert pin 1180-0809	2	A00508023	
135	D. pin P. LLEL NT Al 0 x 25 lg (MS)	2	212211051	
136	Chorbert pin 1181-0809	2	A00508016	
138	Scr pan sl M5 x 10 lg (ST ST)	4		
139	Scr hex hd M12 x 30 lg (MS)	4		
143	Scr hx M6 x 25 lg (MS Ni)	6		
144	Scr cap Ht M6 x 25 lg	6		
145	Scr cap Ht M8 x 20 lg	2		
146	Scr cap Ht M8 x 30 lg	8	218091413	
147	Scr cap Ht M8 x 25 lg	2	27522-012	
148	Scr cap Ht M10 x 30 lg	8		
150	Nut full Ht Ni - M16	4		
153	Wshr Std M16 (MS Ni)	4		
155	Krytox 1525 or Fomblin 26/6	A/R	H11309018	
156	Wshr S coil M6 (MS Ni)	6	218982709	
157	Wshr S coil sq M16 (MS Ni)	4		
158	Waved wshrsee drw spec	10	218984945	
163	'Rocal' A S dry film anti scuffing spray	A/R		
164	'Loctite' 641	A/R		
165	Grease - RT15	A/R		2
166	'Loctite' 577	A/R		
167	'Loctite screwlock' 222	A/R		
173	LOX-8 thread sealant	A/R	375702002	

Table 2 - QDP and iQDP40 Pump parts list (continued)

3 QDP AND iQDP40 GAS ASSEMBLY

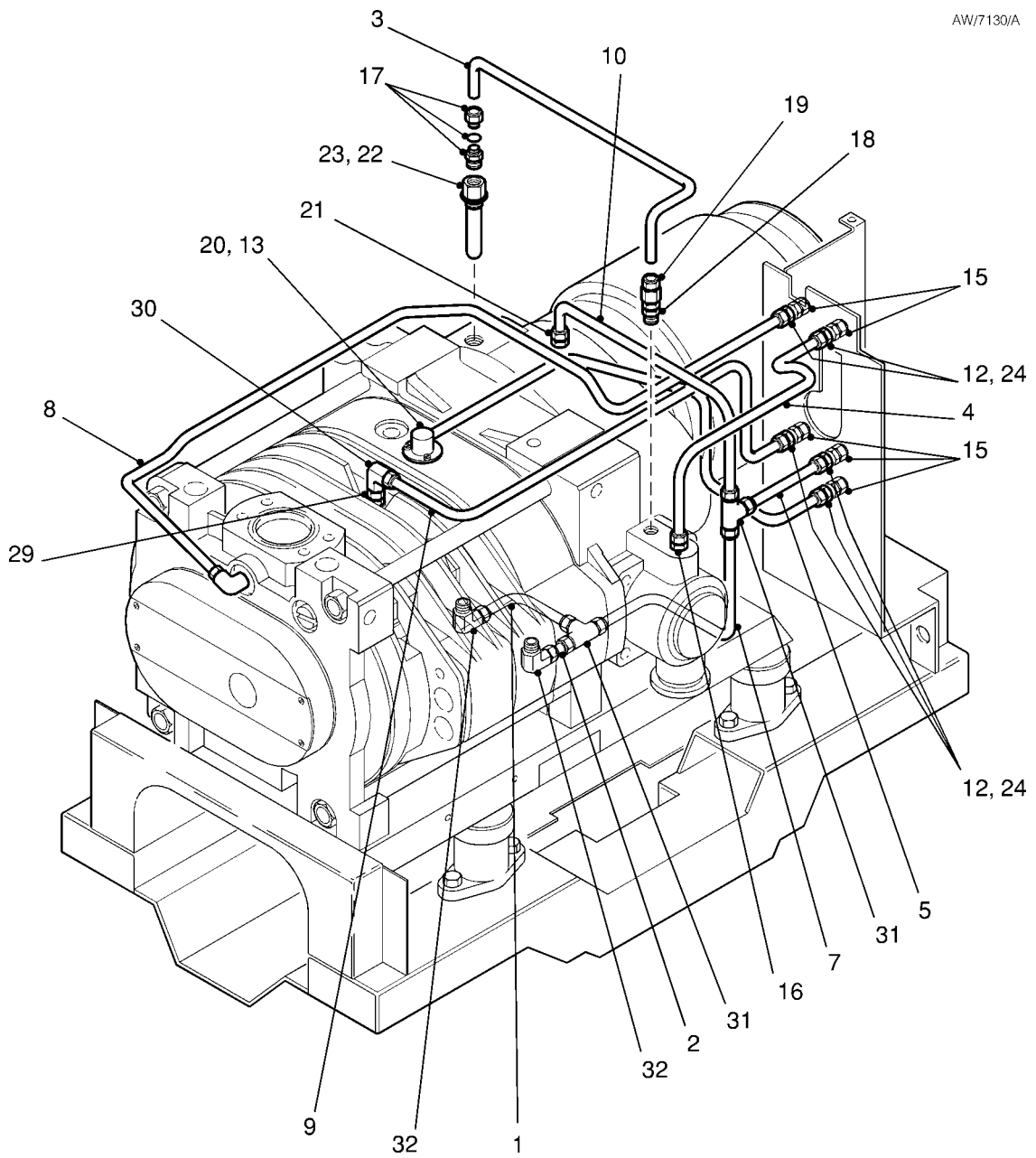


Figure 5 - QDP and iQDP40 Gas assembly

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840200	
2	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840201	
3	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840202	
4	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840203	
5	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840204	
7	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840206	
8	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840207	
9	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840208	
10	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840209	
12	Wshr S coil M12 (MS Ni)	5	218982712	
13	3/4 interstage assy	1		
13a	3 to 4 interstage adaptor QDP40	1	A52840212	
13b	3 to 4 interstage body	1	A52840214	
13c	3 to 4 interstage retainer	1	A52840216	
13d	3 to 4 interstage valve	1	A52840217	
13e	Viton 'O' ring VIT 1114	1	H02106114	
15	Bulkhead union 01/4" - 1/4" (ST STL)	5	H03524280	
16	Male connector 01/4" - 1/4" NPT (ST STL)	1	23510-098	
17	Rest male connector 01/4" - 1/4" BSPT (ST STL)	1	A52840065	
18	Check valve (NUPSS-4CP2-1/3) (ST STL)	1	22441-041	
19	Female connector 01/4" - 1/4" NPT (ST STL)	1	23510-095	
20	'O' Ring - (11.1 I/D x 1.6 Sect)(VITON)	1	H02123009	
21	Rest male connector 1/4" - 1/8" BSPT (ST STL)	1		6
22	Plug with filter (MS)	1	A52640013	
23	1/2" BSP Rubber bonded seal	1	23754-016	
24	Wshr Std M12 (MS Ni)	5	218980212	
29	Adaptor 01/4" - 1/8" BSPT (ST STL)	1	23510-094	
30	Union elbow 01/4" - 1/4" (ST STL)	1	H03524044	
31	Equal Tee 01/4" (ST STL)	2	23505-015	
32	Male elbow 01/4" - 1/8" BSPT (ST STL)	2	23512-037	
35	Gas service plate	1	A20001230	
36	LOX-8 thread sealant	A/R	375702002	
37	'Loctite screwlock' 222	A/R		

Table 3 - QDP and iQDP40 Gas assembly parts list

4 QDP AND iQDP40 WATER ASSEMBLY

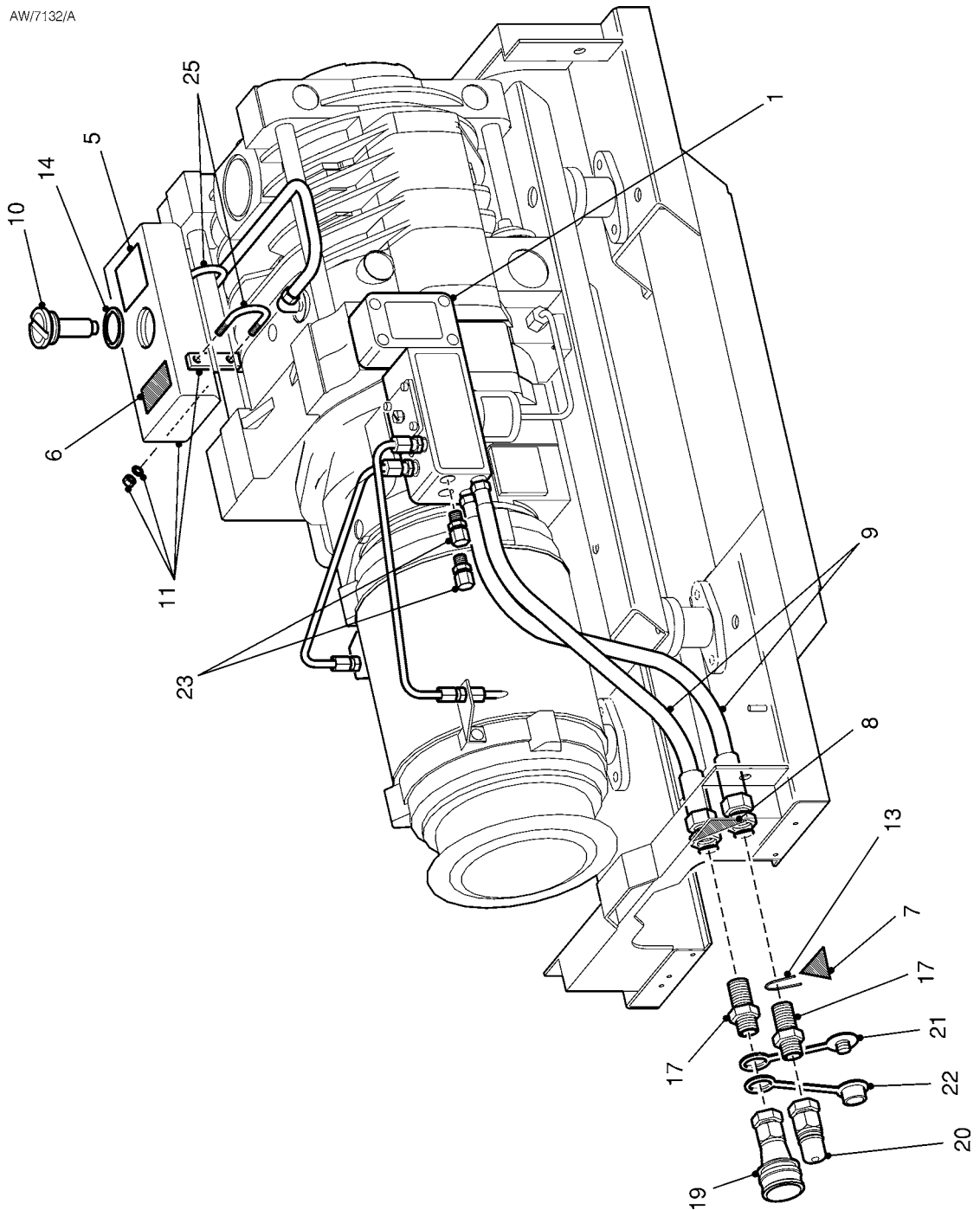


Figure 6 - QDP and iQDP40 Water assembly

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Water assy - QDP pump	1		
1a	IN/OUT air bleed label	1	A20001245	
1 b	Valve preset label	1	A20001246	
1 c	Label - refer to manual	1	A20001247	
1 d	Filter	1	A22304200	
1 e	Compression Spring	1	A27102048	
1f	Pipe manifold side	1	A27860010	
1g	Pipe exhaust side	1	A27860011	
1 h	Cooling coil assembly	1	A52840027	
1 i	Main manifold assembly	1	A52840029	
1 j	Spacer case - (short)	1		
1 k	Cable tie ref 543 412	1		
11	Cable tie (TY RAP TY25M)	2		
1 m	Viton 'O' ring 0.3021D x.070SEC!P! Pk 5	2	H02106008	
1 n	M6 x 40 std soc/hd cap screw	4		
10	M8 x 50 mm soc hd cap screw	2		
1 p	Male conn. 6mm tube - 3/8 BSPT	1	23510-093	
1 q	Male conn. 6mm tube -1/4 BSPT	1	23510-105	
1 r	'O' ring vit 2.1751D x.1 03 SEC!N!	1	23712-048	
1s	1/4" BSPT hex pressure plug	2	23811-035	
5	Warning label "Hazard" Pk 50	1	A20001840	
6	Label "Do not overfill"	1	A20001223	
7	Label "Caution"	1	A20001210	
8	Label "Water in/out"	1	A20001234	
9	Hose 3/8" BSP female / 1/4" BSPT Male (NIT/BR)	2	A23302027	
10	Filler plug (ST STL)	1	A26002043	
11	Header tank assy (ST STL)	1	A40090020	
13	Cable tie (TY-RAP TY25M)	1		
14	1/2" BSP Dowty seal (VIT/ST)	1		7,8
17	3/8" BSPP - 3/8" BSPT bulkhead fitting (brass)	2	A27913006	
19	3/8" BSP Quick connect - socket (brass)	1	H03530015	
20	3/8" BSP Quick connect - plug (brass)	1	H03530016	
21	Dust cap - socket (plast)	1	H03530017	
22	Dust cap - plug (plast)	1	H03530018	
23	Adaptor 3/8" BSPP to 1/4" BSPT (brass)	2	23811-035	
25	Pipe grip - 016 (rub/st)	2	27914-001	
31	'Loctite' 577	A/R		

Table 4 - QDP and iQDP40 Water assembly parts list

5 QDP AND iQDP40 ANCILLARIES

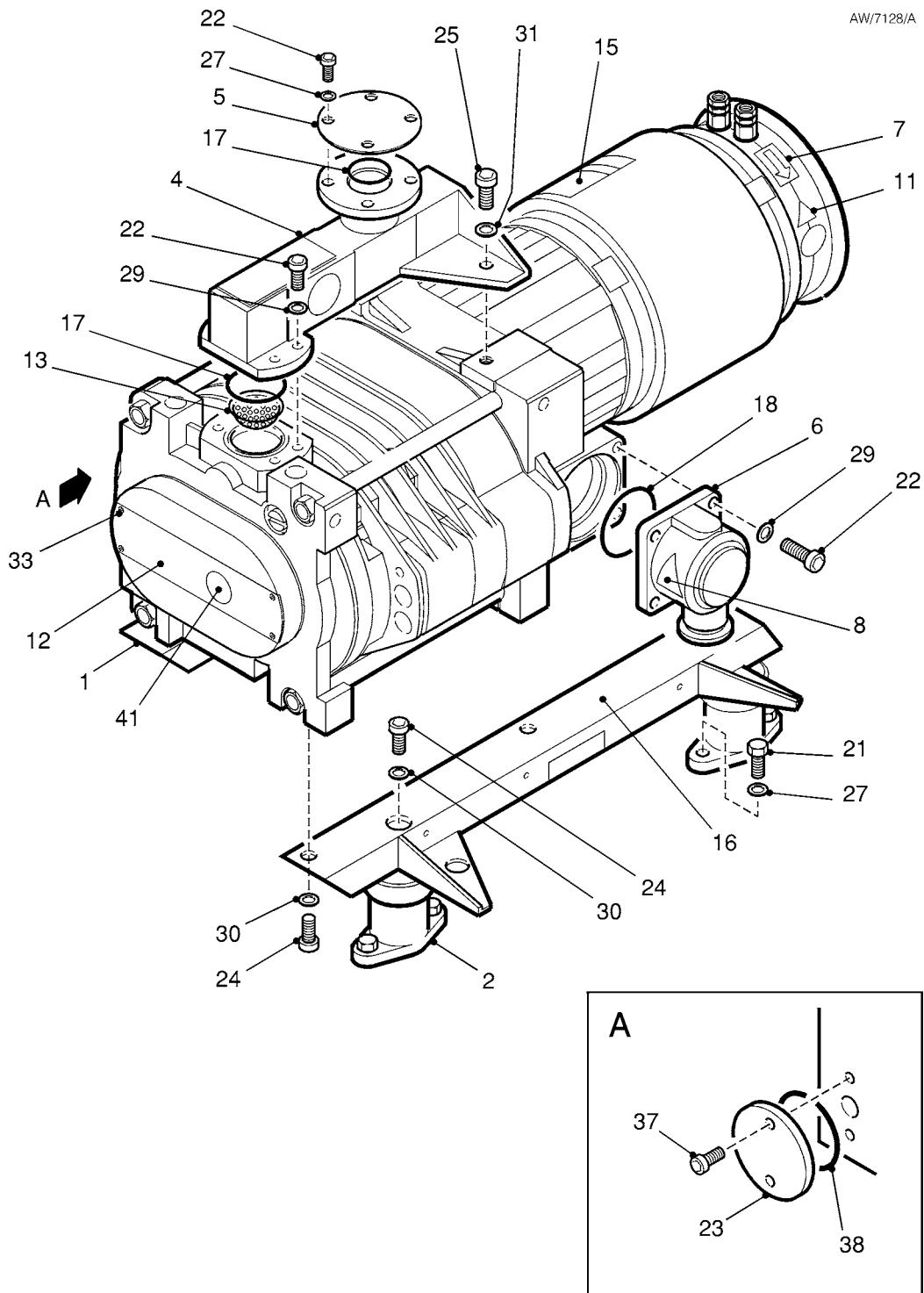


Figure 7 - Exploded view of the QDP and iQDP40 pump ancillaries

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Base runner R/Hand	1	A20499039	
2	Antivibration mount	4	A24801017	
4	Manifold support	1	A50442000	
5	Inlet blank	1	A52801027	
6	Outlet connector	1	C10610002	
7	Direction label	1	A20001085	
8	Warning label "Hot surface" Pk25	1	A20001786	
9	Warning label "Overfill"	1	A20001209	
11	Warning symbol	1	E20001063	
12	Pump label (QDP40/80)	1	A20001365	
13	Inlet strainer	1	A22305053	
14	1/4" BSPT pressure plug	1	H03517003	
15	Label, Motor 2.2kW	1	A20001235	
16	Base runner L/Hand	1	A20499040	
17	`O' ring 49.5 id x 3.0 section	2	H02122079	
18	`O' ring 74.5 id x 3.0 section	1	H02122084	
21	Hexagon hd screw M8 x 25	8		
22	Cap hd screw M8 x 25	12		
23	Gas ballast blank (st steel)	1	A52880015	
24	Cap hd screw M10 x 16	8		
25	Cap hd screw M12 x 30	2		
26	Full nut M8	4		
27	Washer M8	12		
29	S coil square washer M8	8		
30	Shakeproof washer M10	8		
31	S coil square washer M12	2		
33	Pop rivet 2.4mm	4		
37	Cap hd screw M4 x 12	2		
38	`O' ring 24.6 id x 2.4 section	1	H02122043	
41	Label S-Mark 10mm Dia Pk50	1	A20001720	

Table 5 - QDP and iQDP40 Ancillaries parts list

6 QDP AND iQDP80 PUMP ASSEMBLY

AW/7133/A

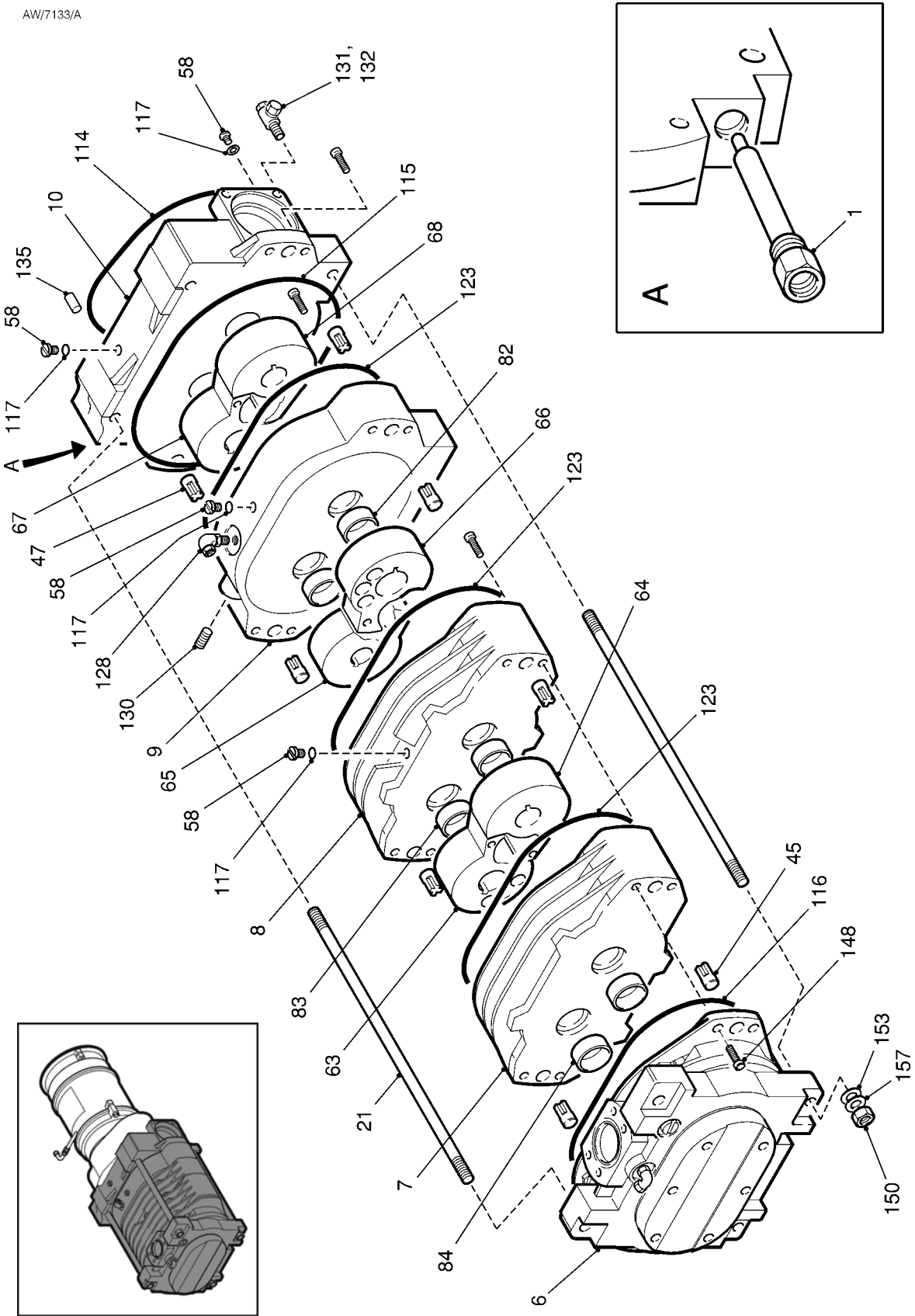


Figure 8 - QDP and iQDP80 Pump assembly

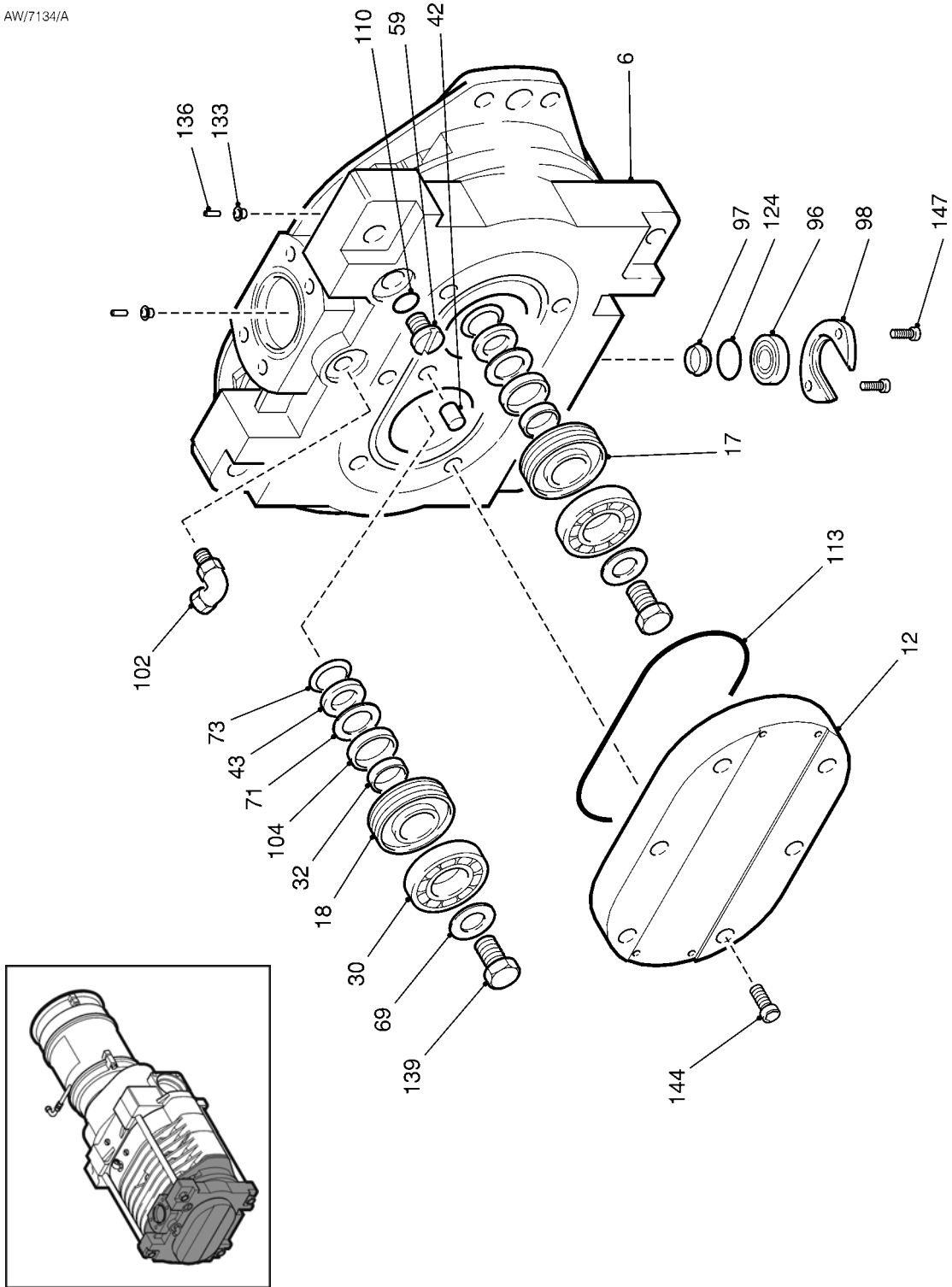


Figure 9 - QDP and iQDP80 HV Stator assembly

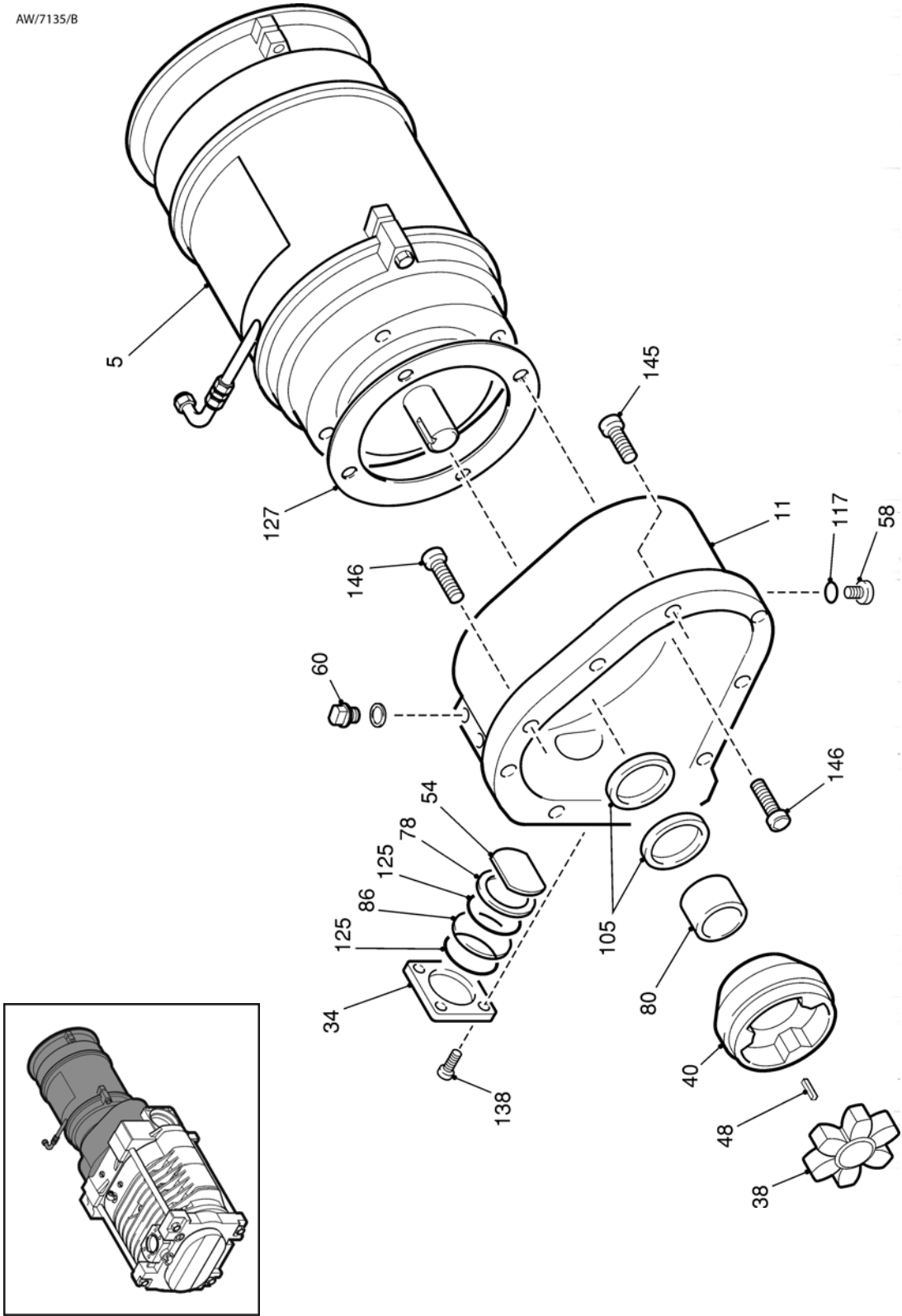


Figure 10 - QDP and iQDP80 Motor assembly

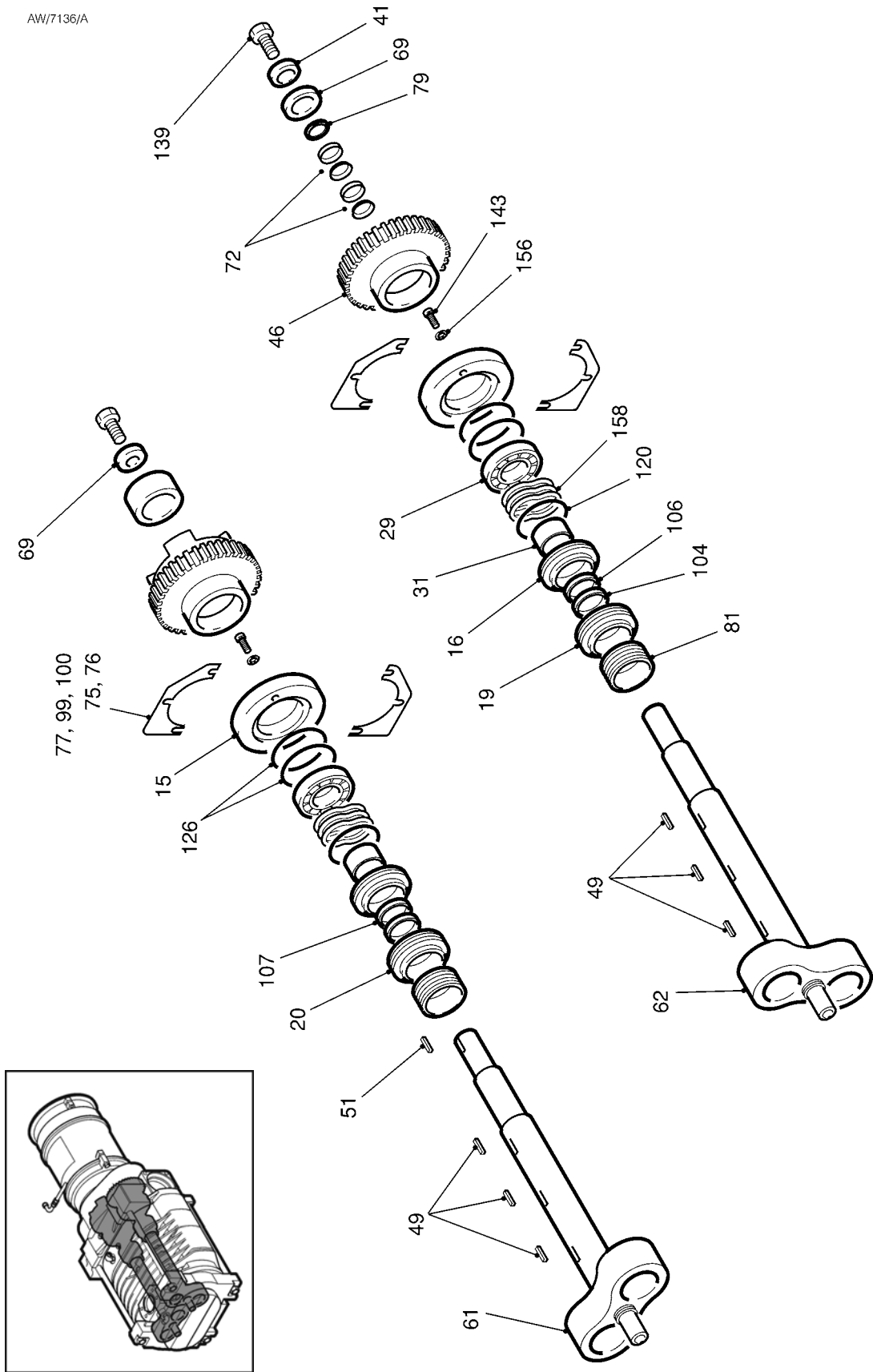


Figure 11 - QDP and iQDP80 Rotor assemblies

Ref	Description	Quantity	Item Number	Kit No.(s)
001	TCV bulb pocket	1	22491-008	
005	Universal W/cooled motor 6kw	1	A07115770	
006	HV stator (C/Iron)	1	A40101741	
007	Second stage stator (C/Iron)	1	A40101702	
008	Third stage stator (C/Iron)	1	A40101703	
009	LV Stage (C/Iron)	1	A40101704	
010	LV Headplate (C/Iron)	1	A40090702	
011	Gear cover (C/Iron)	1	A40191703	
012	End cover (C/Iron)	1	A40101707	
015	Bearing retainer	2	A40101012	
016	Seal carrier	2	A40101018	
017	RH Oil thrower - HV	1	A40101014	
018	LH Oil thrower - HV	1	A40101015	
019	RH Oil thrower - LV	1	A40101016	
020	LH Oil thrower - LV	1	A40101017	
021	Tie bar	4	A40101043	
029	Ball bearing (25 x 62 x 25.4)	2		5
030	Roller bearing (25 x 62 x 17)	2		5
031	Inner ring IR (25 x 30 x 20)	2		5
032	Inner ring IR (25 x 30 x 16)	2		5
034	Sight glass bezel	1	A20416707	
038	Flexible component	1		4
040	Coupling assy	1	A21071790	
041	Safety washer (29 x 13 x 3 thk)	1	218986740	
042	Filter	1		2,5
043	Dust seal	2		5
045	Dowel pin	4	A22425004	
046	Pair of gears (Timing)	1 pr	A22903048	
047	Acorn dowel	4	A22425007	
048	Key (8 x 5 x 20 lg)	1	A24301013	
049	Key (8 x 7 x 30 lg)	6	A24301016	
051	Key (8 x 7 x 16 lg)	1	A24301021	
054	Sight glass reflector	1	A25976001	
058	Plug 1/8" BSP	4	A26002027	
059	Plug 3/8" BSP	1	A26002013	
060	Plug 1/2" BSP	1	A26002040	
061	HV Rotor - Driving - 'X'	1	A26401775	
062	HV Rotor - Driven - 'Y'	1	A26401776	
063	Rotor - 2nd stage - 'X'	1	A40191010	
064	Rotor - 2nd stage - 'Y'	1	A40191011	

Table 6 - QDP and iQDP80 Pump parts list

Ref	Description	Quantity	Item Number	Kit No.(s)
065	Rotor - 3rd stage -'X'	1	A40191012	
066	Rotor - 3rd stage -'Y'	1	A40191013	
067	Rotor - LV stage -'X'	1	A40191014	
068	Rotor - LV stage -'Y'	1	A40191015	
069	Thrust ring	4	A26407007	
071	Retainer	2		5
072	Locking element -'Ringfeder'	2pr	A26440002	
073	Dust seal retainer	2	A40130800	
074	Loctite 518	A/R		
075	Shim - 0.03mm thick	A/R	A27165022	
076	Shim - 0.5mm thick	A/R	A27165023	
077	Shim - 0.10mm thick	A/R	A27165024	
078	Compression ring	1	A27820008	
079	Clamp ring	1	A27801002	
080	Sleeve (Hardened)	1		4
081	Sleeve - Headplate	2	A27820038	
082	Sleeve - LV stage	2	A27820028	
083	Sleeve - 3rd stage	2	A27820029	
084	Sleeve - 2nd stage	2	A27820030	
086	Sight glass	1	A29201004	
096	Blanking plate - NW25	1	C10514366	
097	Centering ring - NW25 VITON S/S	1	C10514395	
097	Centering ring - NW25 NIT S/S	1	C10514396	
098	'C'- Clamp - NW25	1	C11004040	
099	Shim - 0.20mm thick	A/R	A27165025	
100	Shim - 0.04mm thick	A/R	A27165033	
102	Male elbow 3/8" BSPTx1/4" Tube (ST STL)	1	23512-023	
104	Lip seal plain - (30x42x8) (PTFE)	4		5
105	Unidir lip seal RH - (40x52x7) (PTFE)	2		4,5
106	Unidir lip seal RH - (30x42x8) (PTFE)	1		5
107	Unidir lip seal LH - (30x42x8) (PTFE)	1		2
110	'O' Ring - 21.6 I/D x 2.4 Sect	1		2,5
111	1/2" BSP Rubber bonded seal	1	23754-016	
113	'O' Ring - (139.5 I/D x 3.0 Sect) (VITON)	1		5
114	'O' Ring - (199.5 I/D x 3.0 Sect)	1		4,5
115	'O' Ring - (239.5 I/D x 3.0 Sect)	1		5
116	'O' Ring - (209.5 I/D x 3.0 Sect) (VITON)	1	H02122110	
117	'O' Ring - (11.1 I/D x 1.6 Sect) (VITON)	4	H02122009	
120	'O' Ring - (57.6 I/D x 2.4 Sect) (VITON)	2		5
123	'O' Ring - (194.5 I/D x 3.0 Sect) (VITON)	3		5
124	'O' Ring - (28.0 I/D x 5.0 Sect) (VITON)	1		5

Table 6 - QDP and iQDP80 Pump parts list (continued)

Ref	Description	Quantity	Item Number	Kit No.(s)
125	'O' Ring - (1.234" I/D x 0.139" Sect) (VITON)	2		4
126	'O' Ring - (61.9 I/D x 3.53 Sect) (VITON)	4		5
127	Motor/Gear cover printed gasket	1		4
128	Male stud elbow 3/8" BSPT x Al 0 tube (ST STL)	1	23512-013	
130	Taper pressure plug - 3/8" BSP	1	H03517002	
131	Banjo coupling - 3/8" BSP x 12mm	1	H03505206	
132	Blanking plug - 12mm	1	23584-021	
133	Chorbert rivet 1121-0809	3	A00508023	
135	D. pin P. LLEL NT Al 0 x 25 lg (MS)	2	212211051	
136	Chorbert pin 1181-0809	3	A00508016	
138	Scr pan sl M5 x 10 lg (ST STL)	4		
139	Scr hex hd M12 x 30 lg (MS)	4		
143	Scr hx M6 x 25 lg (MS Ni)	6		
144	Scr cap Ht M6 x 25 lg	6		
145	Scr cap Ht M8 x 20 lg	2		
146	Scr cap Ht M8 x 30 lg	8	218091413	
147	Scr cap Ht M8 x 25 lg (MS El Ni)	2	27522-012	
148	Scr cap Ht M10 x 30 lg	8		
150	Nut full Ht Ni - M16	4		
153	Wshr Std M16 (MS Ni))	4		
155	Krytox 1525 or Fomblin 26/6	A/R	H11309018	
156	Wshr S coil M6 (MS Ni)	6	218982709	
157	Wshr S coil sq M16 (MS Ni)	4		
158	Waved wshr see drw spec	10	218984945	
163	'Rocal' A S dry film anti scuffing spray	A/R		
164	'Loctite' 641 (10cc)	A/R		
165	Grease - RT15	A/R		2
166	'Loctite' 577 (50ml)	A/R		
167	'Loctite screwlock' 222 (10ml)	A/R		
173	LOX-8 thread sealant	A/R	375702002	

Table 6 - QDP and iQDP80 Pump parts list (continued)

7 QDP AND iQDP80 GAS ASSEMBLY

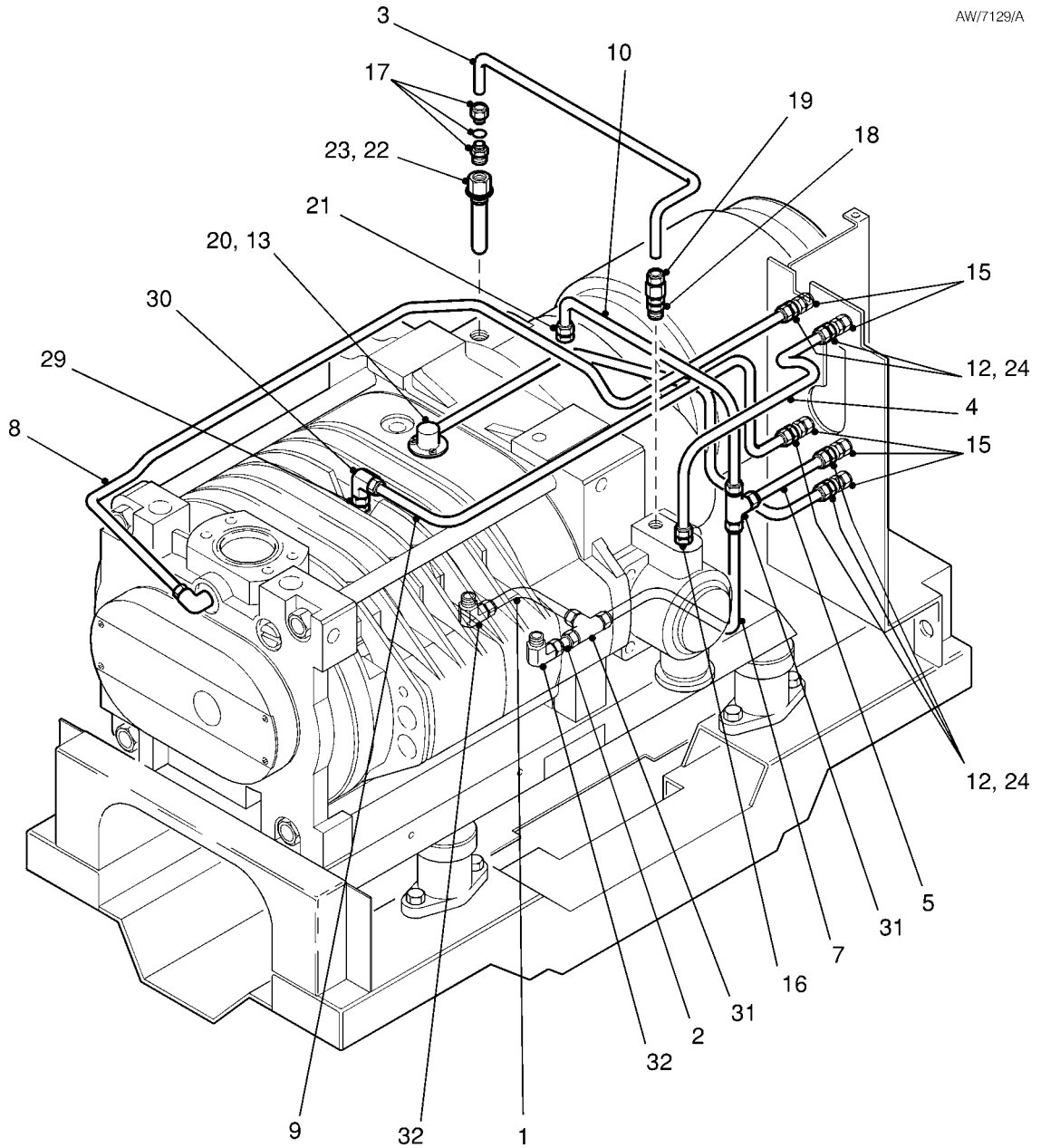


Figure 12 - QDP and iQDP80 Gas assembly

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840200	
2	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840201	
3	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840202	
4	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840210	
5	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840211	
7	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840206	
8	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840214	
9	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840215	
10	Pipe 1/4" od x 1/32" wall (ST STL)	1	A27840209	
12	Wshr S coil M12 (MS Ni)	5	218982712	
13	3/4 interstage assy	1		
13a	3 to 4 interstage adaptor QDP40	1	A52880212	
13b	3 to 4 interstage body	1	A52840214	
13c	3 to 4 interstage retainer	1	A52840216	
13d	3 to 4 interstage valve	1	A52840217	
13e	Viton 'O' ring VIT 1114	1	H02106114	
15	Bulkhead union 01/4" - 1/4" (ST STL)	5	H03524280	
16	Male connector 01/4" - 1/4" NPT (ST STL)	1	23510-098	
17	Rest male connector 01/4" - 1/4" BSPT (ST STL)	1	A52840065	
18	Check valve (NUP.SS-4CP2-1/3) (ST STL)	1	22441-041	
19	Female connector 01/4" - 1/4" NPT (ST STL)	1	23510-095	
20	'O' Ring - (11.1 I/D x 1.6 Sect)(VITON)	1	H02123009	
21	Rest male connector 1/4" - 1/8" BSPT (ST STL)	1		6
22	Plug with filter (MS)	1	A52640013	
23	1/2" BSP Rubber bonded seal	1	23754-016	
24	Wshr Std M12 (MS Ni)	5	218980212	
29	Adaptor 01/4" - 1/8" BSPT (ST STL)	1	23510-094	
30	Union elbow 01/4" - 1/4" (ST STL)	1	H03524044	
31	Equal Tee 01/4" (ST STL)	2	23505-015	
32	Male elbow 01/4" - 1/8" BSPT (ST STL)	2	23512-037	
35	Gas service plate	1	A20001230	
36	LOX-8 thread sealant	A/R	375702002	
37	'Loctite screwlock' 222	A/R		

Table 7 - QDP and iQDP80 Gas assembly parts list

8 QDP AND iQDP80 WATER ASSEMBLY

AW/7131/A

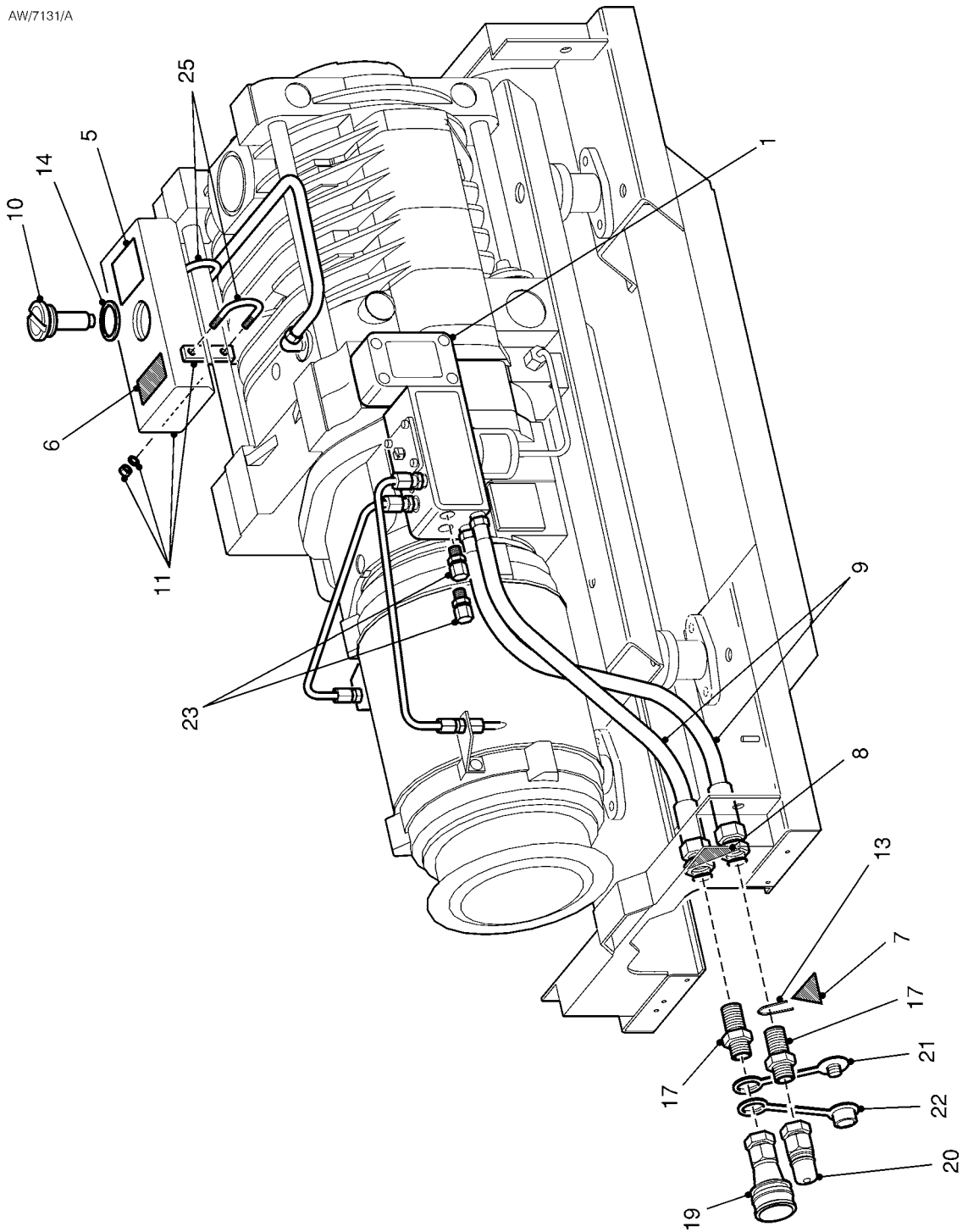


Figure 13 - QDP and iQDP80 Water assembly

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Water assy - QDP pump	1		
1a	IN/OUT air bleed label	1	A20001245	
1 b	Valve preset label	1	A20001246	
1 c	Label - refer to manual	1	A20001247	
1 d	Filter	1	A22304200	
1 e	Compression Spring	1	A27102048	
1f	Pipe manifold side	1	A27860010	
1g	Pipe exhaust side	1	A27860011	
1 h	Cooling coil assembly	1	A52840027	
1 i	Main manifold assembly	1	A52840029	
1 j	Spacer case - (short)	1		
1 k	Cable tie ref 543 412	1		
11	Cable tie (TY RAP TY25M)	2		
1 m	Viton 'O' ring 0.3021D x.070SEC!P! Pk 5	2	H02106008	
1 n	M6 x 40 std soc/hd cap screw	4		
10	M8 x 50 mm soc hd cap screw	2		
1 p	Male conn. 6mm tube - 3/8 BSPT	1	23510-093	
1 q	Male conn. 6mm tube -1/4 BSPT	1	23510-105	
1 r	'O' ring vit 2.1751D x.1 03 SEC!N!	1	23712-048	
1s	1/4" BSPT hex pressure plug	2	23811-035	
5	Warning label "Hazard" Pk50	1	A20001840	
6	Label "Do not overfill"	1	A20001223	
7	Label "Caution"	1	A20001210	
8	Label "Water in/out"	1	A20001234	
9	Hose 3/8" BSP Female/ 1/4" BSPT Male (NIT/BR)	2	A23302027	
10	Filler plug (ST STL)	1	A26002043	
11	Header tank assy (ST STL)	1	A40190020	
13	Cable tie (TY-RAP TY25M) (plast)	1		
14	1/2" BSP Dowty seal (VIT/ST)	1		7,8
17	3/8" BSPP - 3/8" BSPT bulkhead fitting (brass)	2	A27913006	
19	3/8" BSP Quick connect - socket (brass)	1	H03530015	
20	3/8" BSP Quick connect - plug (brass)	1	H03530016	
21	Dust cap - socket (plast)	1	H03530017	
22	Dust cap - plug (plast)	1	H03530018	
23	Adaptor 3/8" BSPP to 1/4" BSPT (brass)	2	23811-035	
25	Pipe grip - 0 16 (rub/st)	2	27914-001	
31	'Loctite' 577	A/R		

Table 8 - QDP and iQDP80 Water assembly parts list

9 QDP AND iQDP ANCILLARIES

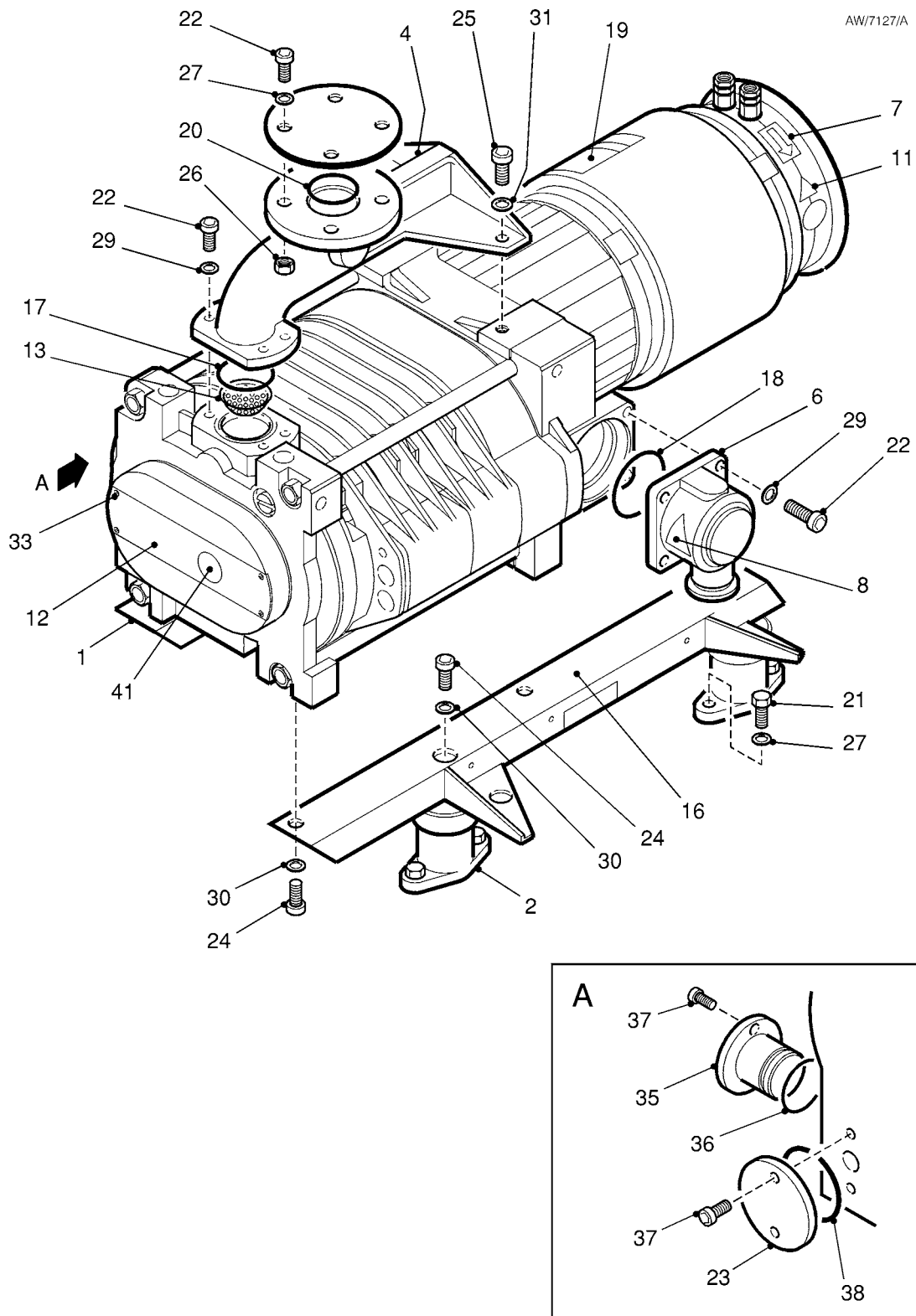


Figure 14 - Exploded view of the QDP and iQDP80 pump ancillaries

Ref	Description	Quantity	Item Number	Kit No.(s)
1	Base runner R/Hand	1	A20499041	
2	Antivibration Mount	4	A24801017	
4	Manifold support	1	A52880785	
5	Inlet blank	1	A52803027	
6	Outlet connector	1	C10610002	
7	Direction label	1	A20001085	
8	Warning label "Hot surface" Pk25	1	A20001786	
9	Warning label "Overfill"	1	A20001209	
11	Warning symbol	1	E20001063	
12	Pump label (QD40/80)	1	A20001365	
13	Inlet strainer	1	A22305053	
16	Base runner L/Hand	1	A20499042	
17	`O' ring 49.5 id x 3.0 section	1	H02122079	
18	`O' ring 74.5 id x 3.0 section	1	H02122084	
19	Label, Motor 4kW	1	A20001237	
20	`O' ring 3.1 id x 0.21 section	1	H02126053	
21	Hexagon hd screw M8 x 25	8		
22	Cap hd screw M8 x 25	12		
23	Gas ballast blank, (st steel)	1	A52880015	
24	Cap hd screw M10 x 16	8		
25	Cap hd screw M12 x 30	2		
26	Full nut M8	3		
27	Washer M8	12		
29	S coil square washer M8	8		
30	Shakeproof washer M10	8		
31	S coil square washer M12	2		
33	Pop rivet 2.4mm	4		
35	Blanking plug	1	A40105004	
36	`O' ring	1	H02122037	
37	Cap screw M4 x 12	4		
38	`O' ring 24.6 id x 2.4 section	1	H02122043	
41	Label S-Mark 10mm Dia Pk50	1	A20001720	

Table 9 - QDP and iQDP Ancillaries parts list

10 MAINTENANCE KITS

The maintenance kits available for the QDP and iQDP pumps are listed in Table 10 below.

Table 2 to 9 cross reference	Description	Item Number
1	CDP/QDP and iQDP/EH/QMB Motor Bearings kit	A30151805 (QDP40) A30551805 (QDP80)
2	CDP40/80 Routine Maintenance Kit	A52640820
3	QDP and iQDP40 Motor Replacement Kit	A52840800
4	QDP and iQDP80 Motor Replacement Kit	A52880800
5	DP40 and DP80 Module Spares Kit	A40130800
6	QDP and iQDP Gas Assembly Kit	A52840810
7*	QDP Water Assembly Kit QDP40 serial numbers 7500-7914 QDP80 serial numbers 7500-8180	A52840820
8	QDP and iQDP Water Assembly Kit QDP40 from serial number 7914 QDP80 from serial number 8180 iQDP40 from serial number 11000 iQDP80 from serial number 11000	A52840830

Table 10 - Maintenance kits

* *Information about these kits is included for reference only.
This Parts Manual does not apply to pumps in these serial number ranges.*