
VZ / VZL

REFRIGERATION COMPRESSOR

**COMPONENT PARTS
CATALOGUE**

Ver. 5

HASEGAWA
REFRIGERATION, LTD.



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Model VZ / VZL Compressor

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Revision date: February 28, 2002

Hasegawa Refrigeration Ltd. provides the information enclosed as a guide and is subject to periodic revision.

Component Identification

Reference Number

Compressor component parts are identified in the following manner using five characters:



Part Number

Each component part is identified with a Part Number, usually a six or seven figure number. Therefore the above component is identified as 121132S from the catalogue.

Description

Each component also has a description and the above component would be VZ Cylinder Liner 'A' set.

Component Ordering

1. Compressor model number, serial number and refrigerant designation is required.
2. Reference number.
3. Part number.
4. Description

Utilize the published parts catalogue version that was supplied at the time of procurement of the compressor. Additional information, for example procurement date would assist in the identification of component parts.

Symbols

Reference Number

5Z*** Assemblies

Part Number

***** Components not held as stock items – please consult when identified components are required.
----- Item supplied as part of an assembly.

Parts Quantity


The parts marked with * in the list are required for two stage compressors with an intermediate stop valve.

Remarks

Ass'y:	Assembled parts
Set:	Complete set of items
Packing:	Gasket
R:	R22
N:	R717

Authentication of Spare Parts

Genuine Hasegawa replacement parts are guaranteed for high quality and specification, therefore components are identified as follows:

1. Piston Rings: at the counter portion of the ring HRL mark is applied.
2. Suction & Discharge Valve Plates: the Surely trademark is applied. 
3. Other Parts: are packed with a label indicating the parts are 'HASEGAWA GENUINE PARTS'.

Hasegawa Genuine parts are guaranteed for quality, reliability and performance utilizing stringent manufacturing procedures to ensure absolute customer satisfaction. The use of non-approved components would invalidate any remaining or implied warranty that is provided with Hasegawa compressors.

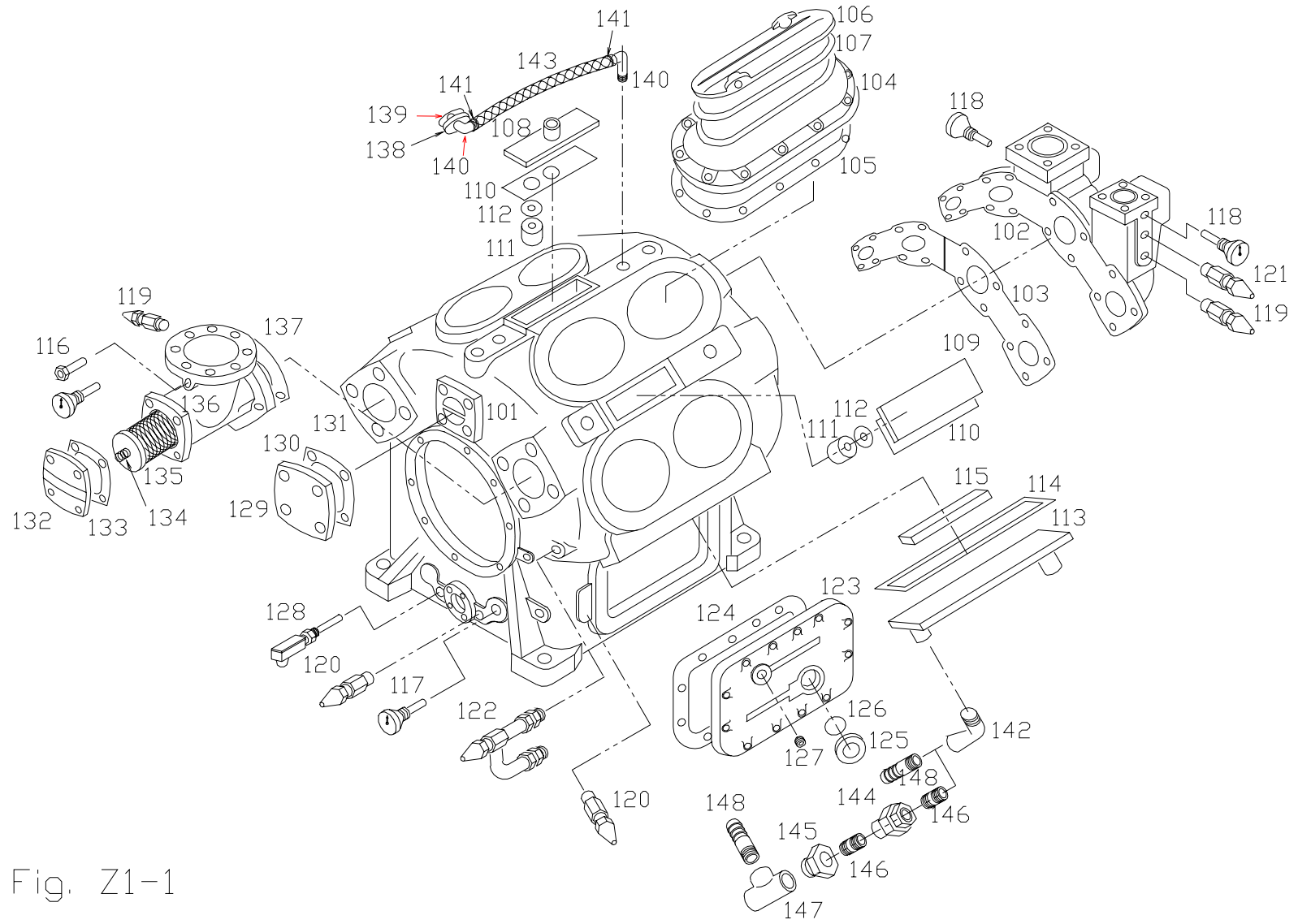


Fig. Z1-1

Z1 Crankcase Component Parts

Ref #	Description	Part #	VZ 6	VZ 42	VZ 8	VZ 62	VZL 4	VZL 31	VZL 8	VZL 62	Remarks
5Z101	Crankcase	*****	1	1	1	1	1	1	1	1	
5Z102	Manifold Discharge	*****	1	1	1	1			1	1	
5Z103	Packing, Discharge Manifold	819214	1	1	1	1			1	1	Set
5Z104	Cylinder Cover	*****	3	3	4	4	2	1	4	4	
5Z104	Cylinder Cover, High Stage	*****						1			
5Z105	Packing, Cylinder Cover	820610	3	3	4	4	2	1	4	4	
5Z105	Packing, High Stage Cylinder Cover	820695						1			
5Z106	Cylinder Jacket Cover A	1206120	3	3	4	4					VZ Logo
5Z106	Cylinder Jacket Cover A	1206030					2	2	4	4	VZL Logo
5Z107	Packing, Cylinder Cover Jacket	820612	3	3	4	4	2	2	4	4	
5Z108	Crankcase Jacket Cover B	1206250	1	1	1	1			1	1	Water – Outlet
5Z108	Crankcase Jacket Cover B(Z)	1206150									Seawater – Outlet
5Z108	Crankcase Jacket Cover D	1206270					1	1			
5Z109	Crankcase Jacket Cover C	1206260	1	1	2	2			2	2	Water
5Z109	Crankcase Jacket Cover C(Z)	1206160									Seawater
5Z110	Packing, Crankcase Jacket Cover B C	820616	2	2	3	3			3	3	
5Z110	Packing, Crankcase Jacket Cover D	820696					1	1			
5Z111	ZAP 35	1206189	2	2	3	3	1	1	3	3	Seawater
5Z112	Packing, ZAP 35	820618	2	2	3	3	1	1	3	3	Seawater
5Z113	Crankcase Jacket Cover A	1206140	2	2	2	2	2	2	2	2	Water
5Z113	Crankcase Jacket Cover A(Z)	1201880	2	2	2	2	2	2	2	2	Seawater
5Z114	Packing, Crankcase Jacket Cover A	820614	2	2	2	2	2	2	2	2	Water
5Z114	Packing, Crankcase Jacket Cover A(Z)	820615	2	2	2	2	2	2	2	2	Seawater
5Z115	ZAP 250 x 50 Set	1201890	2	2	2	2	2	2	2	2	Seawater
5Z116	10A Dial Thermometer (-70 +50)N	3094350	1	2	1	2	1	2	1	2	Suction
5Z116	Holder N, 10A Dial Thermometer	3094380	1(3)	2(5)	1(3)	2(5)	1(3)	2(5)	1(3)	2(5)	() Marine
5Z117	10A Dial Thermometer (0 +100)T	3094300	1	1	1	1	1	1	1	1	Land, Oil
5Z118	10A Dial Thermometer (0 +200)T	3094310	1	2	1	2	1	2	1	2	Land, Discharge
5Z118	10A Dial Thermometer (0 +150)N	3094340	2	3	2	3	2	3	2	3	Marine, Discharge & Oil
5Z119	8A AVS-R	4023900	3	4	3	4	3	4	3	4	Gauge Valve
5Z120	10A AVS-R	4023910	1	1	1	1	1	1	1	1	Return Oil Stop Valve, R22
5Z120	10A AVS-R	4023910	1	1	1	1	1	1	1	1	Oil Charge, Land
5Z121	15A AVS-R	4023920		1		1	1	1		1	Air Purge
5Z121	20A AVS-R	4023930	1	*	1	*			1	*	Air Purge

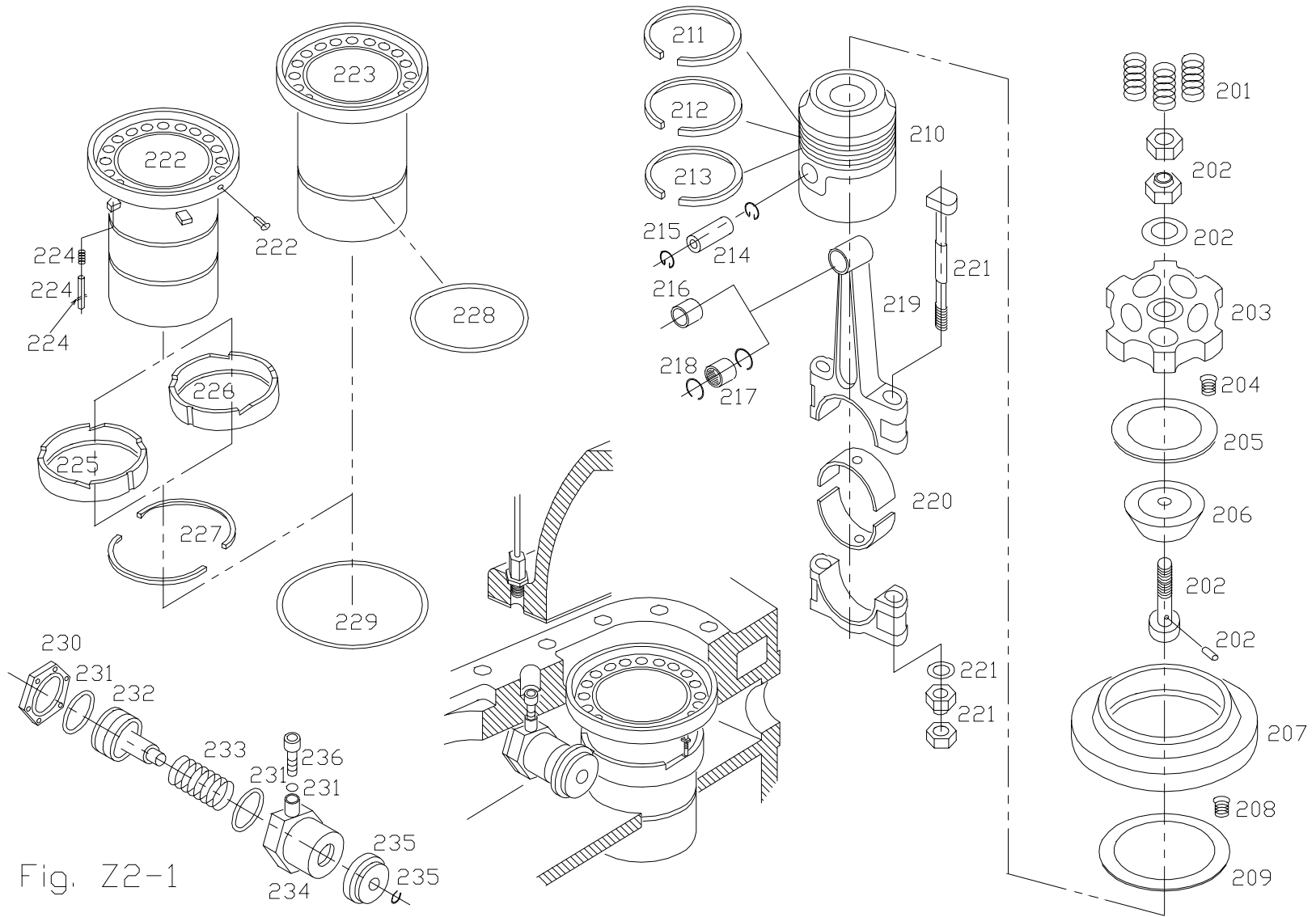
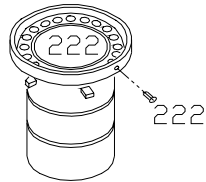
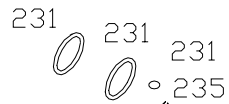
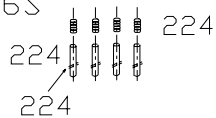


Fig. Z2-1

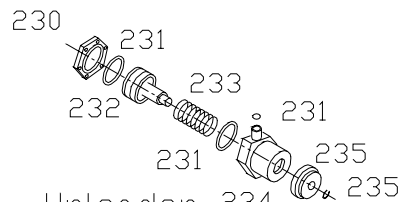
VZ Cylinder Liner A 121132S
 VZL Cylinder Liner A 120604S



Unloader Pins (N) Set 121135S
 Unloader Pins (R) Set 121136S

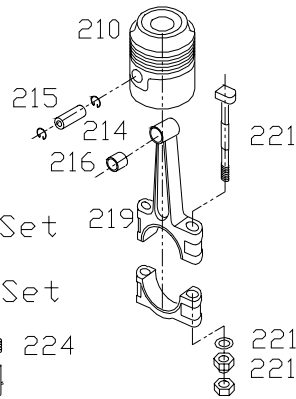


Packing Set Unloader Cylinder 121113S

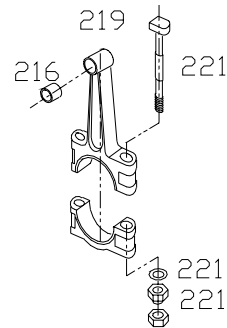


Unloader Cylinder Ass'y 1201570

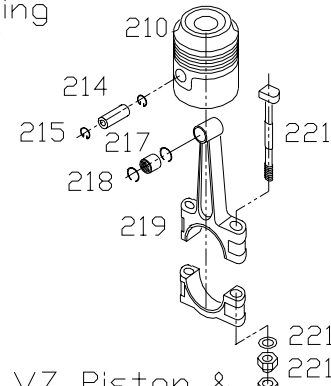
Piston & Connecting Rod 40 Assembly 1201400



Connecting Rod 40 Assembly 1201440

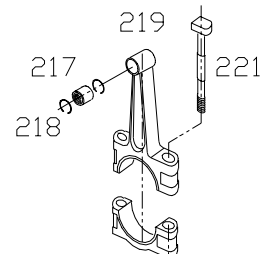


Discharge Valve Inner Seat Ass'y 1201501



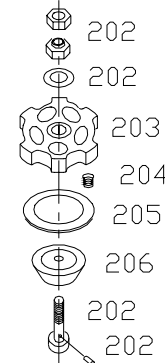
VZ Piston & Connecting Rod 52 Ass'y 1201420

VZL Piston & Connecting Rod 52 Ass'y 1201430

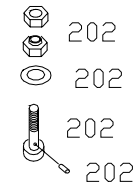


VZ Connecting Rod 52 Assembly 1201460
 VZL Connecting Rod 52 Assembly 1201470

Discharge Valve Inner Seat Ass'y 1201501

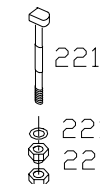


Discharge Valve Bolt & Nut Set 121128S



Discharge Valve Ass'y (N) 1201490

Discharge Valve Ass'y (R) 1201500



Connecting Rod Bolt & Nut Set 121127S

Safety Head Spring Set 121130S

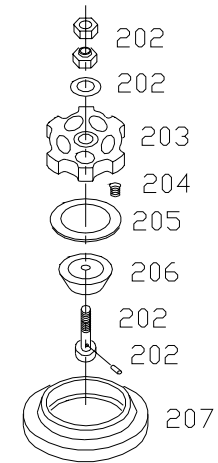


Fig. Z2-2

Z2 Internal Component Parts

Ref #	Description	Part #	VZ 6	VZ 42	VZ 8	VZ 62	VZL 4	VZL 31	VZL 8	VZL 62	Remarks
5Z201	Safety Head Spring, Set	121130S	6	6	8	8	4	4	8	8	1 Set = 3 Springs
5Z- - -	Safety Head Spring	1206350	18	18	24	24	12	12	24	24	
5Z***	Discharge Valve Assembly (N)	1201490	6	6	8	8	4	4	8	8	R717
5Z***	Discharge Valve Assembly (R)	1201500	6	6	8	8	4	4	8	8	R22
5Z***	Discharge Inner Seat Assembly	1201510	6	6	8	8	4	4	8	8	
5Z202	Center Bolt & Nuts Discharge Valve, Set	121128S	6	6	8	8	4	4	8	8	
5Z- - -	Nut	1206410	12	12	16	16	8	8	16	16	
5Z- - -	Washer	1206420	12	12	16	16	8	8	16	16	
5Z- - -	Bolt	1206400	6	6	8	8	4	4	8	8	
5Z- - -	Pin	853330	6	6	8	8	4	4	8	8	
5Z203	Discharge Valve Guide	1206379	6	6	8	8	4	4	8	8	
5Z204	Spring Discharge Valve, Set	121129S	6	6	8	8	4	4	8	8	1 Set = 8 Springs
5Z- - -	Spring Discharge Valve	1206460	48	48	64	64	32	32	64	64	
5Z205	Discharge Valve Plate	1209480	6	6	8	8	4	4	8	8	
5Z206	Discharge Valve Plate Inner Seat	1206439	6	6	8	8	4	4	8	8	
5Z207	Discharge Valve Outer Seat N	1206449	6	6	8	8	4	4	8	8	R717
5Z207	Discharge Valve Outer Seat R	1206459	6	6	8	8	4	4	8	8	R22
5Z208	Spring Suction Valve, Set	121131S	6	6	8	8	4	4	8	8	1 Set = 6 Springs
5Z- - -	Spring Suction Valve	1206470	36	36	48	48	24	24	48	48	
5Z209	Suction Valve Plate	1206490	6	6	8	8	4	4	8	8	
5Z***	Piston & Connecting Rod 40, Assembly	1201400	6	4	8	6	4	3	8	6	
5Z***	Connecting Rod 40, Assembly	1201440	6	4	8	6	4	3	8	6	
5Z***	Piston & Connecting Rod 52, Assembly	1201420		2		2					VZ
5Z***	Piston & Connecting Rod 52, Assembly	1201430						1		2	VZL
5Z***	Connecting Rod 52, Assembly	1201460		2		2					VZ
5Z***	Connecting Rod 52, Assembly	1201470						1		2	VZL
5Z210	Piston	1206550	6	6	8	8	4	4	8	8	
5Z211	Piston Ring #1	1206560	6	6	8	8	4	4	8	8	
5Z212	Piston Ring #2	1206570	6	6	8	8	4	4	8	8	
5Z213	Piston Ring, Oil	1206580	6	6	8	8	4	4	8	8	
5Z214	Piston Pin	1206660	6	6	8	8	4	4	8	8	
5Z215	Retaining Ring, Piston Pin	1206700	12	12	16	16	8	8	16	16	
5Z216	Metal, Piston Pin	1206670	6	4	8	6	4	3	8	6	
5Z217	Needle Bearing, VZ Piston Pin	1206710		2		2					High Stage
5Z217	Needle Bearing, VZL Piston Pin	1206060						1		2	High Stage
5Z218	Retaining Ring, Needle Bearing	1206720		4		4		4		4	High Stage
5Z219	Connecting Rod 40	- - - - -	6	4	8	6	4	3	8	6	

5Z219	Connecting Rod 52	-----		2		2		1		2	High Stage
5Z220	Metal, Crank Pin	1206730	6	6	8	8	4	4	8	8	Set
5Z220	Metal, Crank Pin 0.25	1206740	6	6	8	8	4	4	8	8	Set
5Z220	Metal, Crank Pin 0.50	1206750	6	6	8	8	4	4	8	8	Set
5Z221	Bolts & Nuts Connecting Rod, Set	121127S	12	12	16	16	8	8	16	16	
5Z---	Bolt	1206640	12	12	16	16	8	8	16	16	
5Z---	Washer	1206630	12	12	16	16	8	8	16	16	
5Z---	Nut	1206650	12	12	16	16	8	8	16	16	
5Z222	Cylinder Liner A, VZ	1206510	4	2	4(6)	4(6)					
5Z222	Cylinder Liner A, VZL	1260490					2	2	4(6)	4(6)	
5Z223	Cylinder Liner B, VZ	1206520	2	4	4(2)	4(2)					
5Z223	Cylinder Liner B, VZL	1260500					2	2	4(2)	4(2)	
5Z224	Unloader Pin (N), Set	121135S	4	2	4(6)	4(6)	2	2	4(6)	4(6)	1 Set = 4 Pins & Springs
5Z224	Unloader Pin (N), Set (S)	121137S									Special Application
5Z224	Unloader Pin (R), Set	121136S	4	2	4(6)	4(6)	2	2	4(6)	4(6)	1 Set = 4 Pins & Springs
5Z224	Unloader Pin (R), Set (S)	121138S									Special Application
5Z---	Unloader Pin (N)	1207630	16	8	16*	16*	8	8	16*	16*	*24
5Z---	Unloader Pin (R)	1207640	16	8	16*	16*	8	8	16*	16*	*24
5Z---	Spring	1207650	16	8	16*	16*	8	8	16*	16*	*24
5Z225	Unloader Cam Ring A	1207609	2	1	2(3)	2(3)	1	1	2(3)	2(3)	Oil pump side
5Z225	Unloader Cam Ring A (S)	121133S									Special Application
5Z226	Unloader Cam Ring B	1207619	2	1	2(3)	2(3)	1	1	2(3)	2(3)	Mechanical seal side
5Z226	Unloader Cam Ring B (S)	121134S									Special Application
5Z227	Unloader Stop Ring	1207620	4	2	4(6)	4(6)	2	2	4(6)	4(6)	Set
5Z228	O-Ring (N), Cylinder Liner	1206530	6	6	8	8	4	4	8	8	R717
5Z228	O-Ring (R), Cylinder Liner	1206540	6	6	8	8	4	4	8	8	R22
5Z229	Shim, Cylinder Liner	1206300	6	6	8	8	4	4	8	8	
5Z***	Unloader Assembly	1201570	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z230	Cover, Unloader Cylinder	*****	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z231	Packing Set, Unloader Cylinder	121113S	2	1	2(3)	2(3)	1	1	2(3)	2(3)	1 Set = 3
5Z---	Packing	1209720	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z---	Packing	1209770	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z---	O Ring	1209740	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z232	Unloader piston	*****	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z233	Spring, Unloader Piston	1209790	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z234	Unloader Cylinder	*****	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z235	Unloader Plate & Retaining Ring	*****	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z---	Plate, Working	1207670	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z---	Clip, Retaining	1209760	2	1	2(3)	2(3)	1	1	2(3)	2(3)	
5Z236	Bolt, Unloader Cylinder	1209710	2	1	2(3)	2(3)	1	1	2(3)	2(3)	

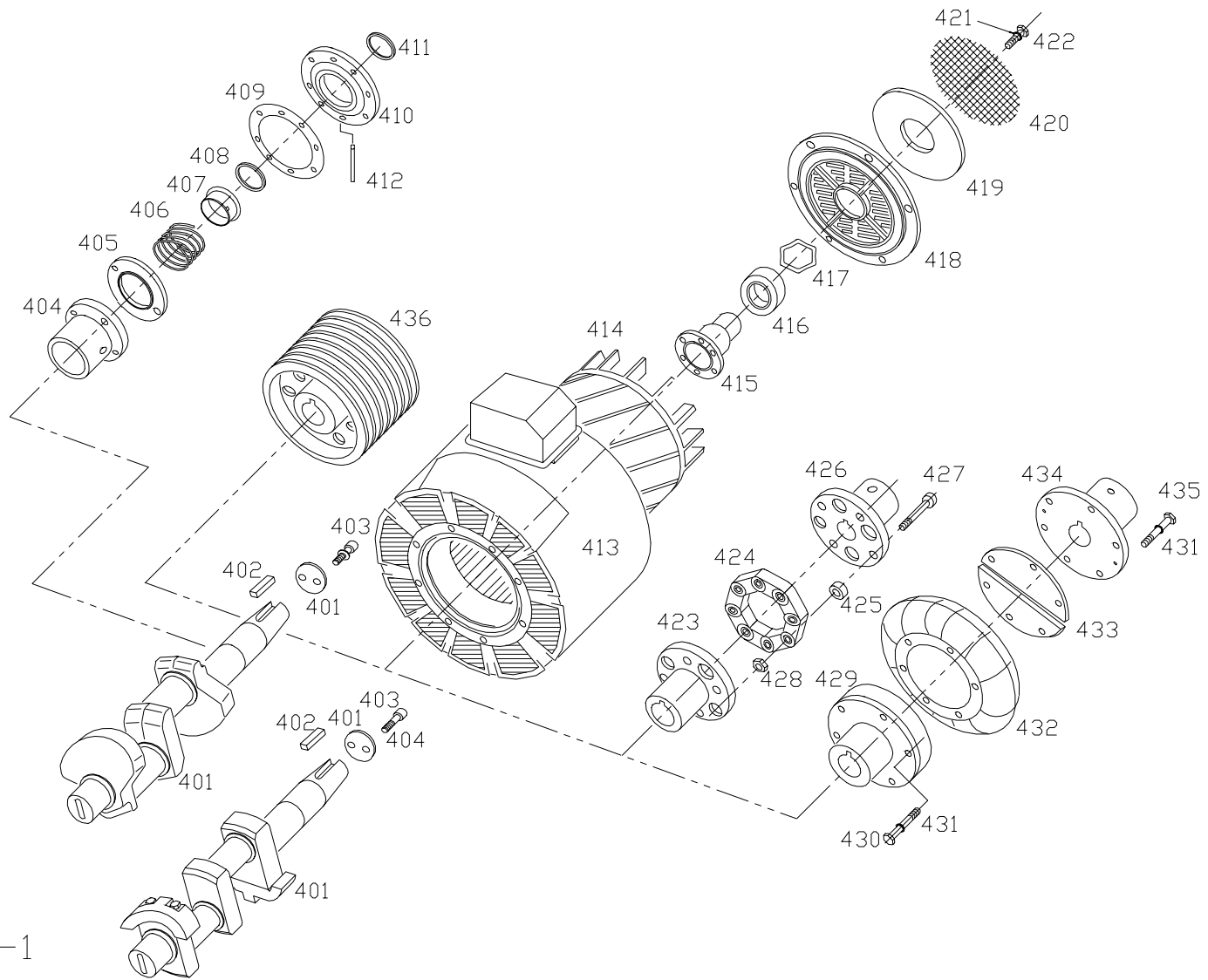
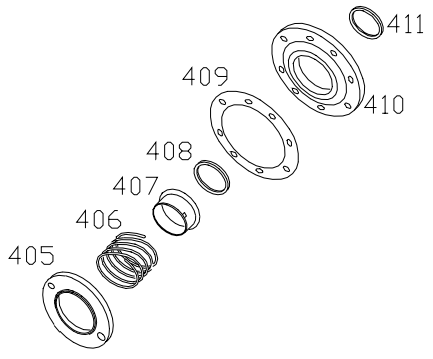
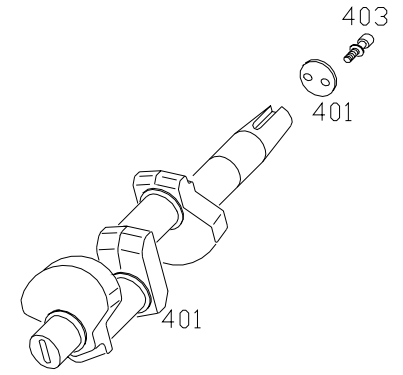


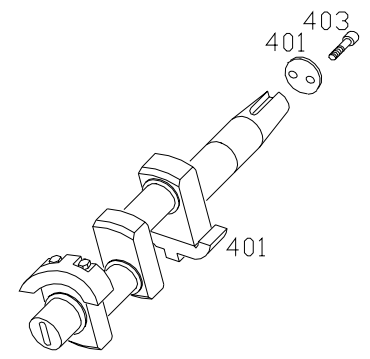
Fig. Z4-1



Mechanical Seal Ass'y
1201530



VZ6 Crankshaft Ass'y
1161000



VZL4 Crankshaft Ass'y
1151000

VZ42 Crankshaft Ass'y
1161000

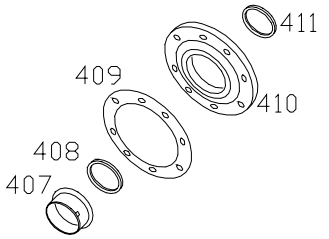
VZL31 Crankshaft Ass'y
1151000

VZ8 Crankshaft Ass'y
1181000

VZL8 Crankshaft Ass'y
1191000

VZ62 Crankshaft Ass'y
1181000

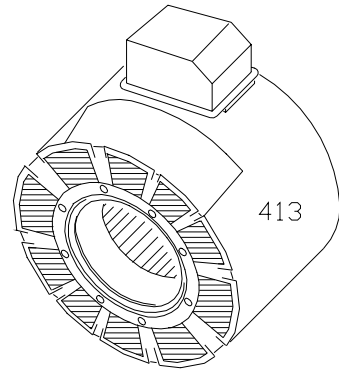
VZL62 Crankshaft Ass'y
1191000



Mechanical Seal
Replacement Ass'y
1201540



Mechanical Seal
Rotating Ring
1207000



Motor Stator Ass'y

Fig. Z4-2

Z4 Drive Mechanism Component Parts

Ref #	Description	Part #	VZ 6	VZ 42	VZ 8	VZ 62	VZL 4	VZL 31	VZL 8	VZL 62	Remarks
5Z401	Crankshaft Assembly	1161000	1	1							
5Z401	Crankshaft Assembly	1181000			1	1					
5Z401	Crankshaft Assembly	1191000							1	1	
5Z401	Crankshaft Assembly	1151000					1	1			
5Z402	Key, Crankshaft	1182030	1	1	1	1	1	1	1	1	
5Z402a	Plate, Crankshaft Key	1182040	1	1	1	1	1	1	1	1	
5Z403	M12 x 40 Socket Head Screw	850274	2	2	2	2	2	2	2	2	
5Z403	M12 x 65 Socket Head Screw	850279	2	2	2	2	2	2	2	2	RM /AM Motor
5Z403a	M12 Spring Washer	852455	2	2	2	2	2	2	2	2	N/A – RM / AM Motor
5Z404	Main Metal, Front	1206780	1	1	1	1	1	1	1	1	
5Z***	Mechanical Seal Assembly	1201530	1	1	1	1	1	1	1	1	
5Z405	Spring Retainer, Mechanical Seal	1206980	1	1	1	1	1	1	1	1	
5Z406	Spring, Mechanical Seal	1206970	1	1	1	1	1	1	1	1	
5Z***	Replacement Assembly, Mechanical Seal	1201540	1	1	1	1	1	1	1	1	
5Z407	Ring, Rotating Mechanical Seal	1207000	1	1	1	1	1	1	1	1	
5Z408	Seal Ring, Mechanical Seal	1206920	1	1	1	1	1	1	1	1	
5Z409	Packing, Cover Plate Mechanical Seal	820691	1	1	1	1	1	1	1	1	
5Z410	Cover Plate, Mechanical Seal	1206919	1	1	1	1	1	1	1	1	
5Z411	Seal, Dust	1206900	1	1	1	1	1	1	1	1	
5Z412	Pipe, Drain	*****	1	1	1	1	1	1	1	1	
5Z413	Motor Stator Assembly	*****	1	1	1	1	1	1	1	1	RM /AM Motor
5Z414	Motor Rotor	*****	1	1	1	1	1	1	1	1	RM /AM Motor
5Z415	End Shaft, Motor	1208479	1	1	1	1	1	1	1	1	RM /AM Motor
5Z416	Bearing, Motor	1208490	1	1	1	1	1	1	1	1	RM /AM Motor
5Z417	Spring, Motor Bearing	1208500	1	1	1	1	1	1	1	1	RM /AM Motor
5Z418	Motor End Cover 45 – 90KW	*****	1	1	1	1	1	1	1	1	RM /AM Motor
5Z418	Motor End Cover 115 – 160KW	*****	1	1	1	1	1	1	1	1	RM /AM Motor
5Z419	Air Filter 462, Motor	1208590	1	1	1	1	1	1	1	1	RM /AM 45 – 90KW
5Z419	Air Filter 548, Motor	1208970	1	1	1	1	1	1	1	1	RM /AM 115 – 160KW
5Z420	Air Filter Support, Motor	1208580	1	1	1	1	1	1	1	1	RM /AM 45 – 90KW
5Z420	Air Filter Support, Motor	1208980	1	1	1	1			1	1	RM /AM 115 – 160KW
5Z421	M20 Washer	851355	1	1	1	1	1	1	1	1	RM /AM Motor
5Z422	M20 x 14 Hexagon Bolt	850570	1	1	1	1	1	1	1	1	RM /AM Motor
5Z423	Coupling Flange C	*****	1		1				1		CG5508

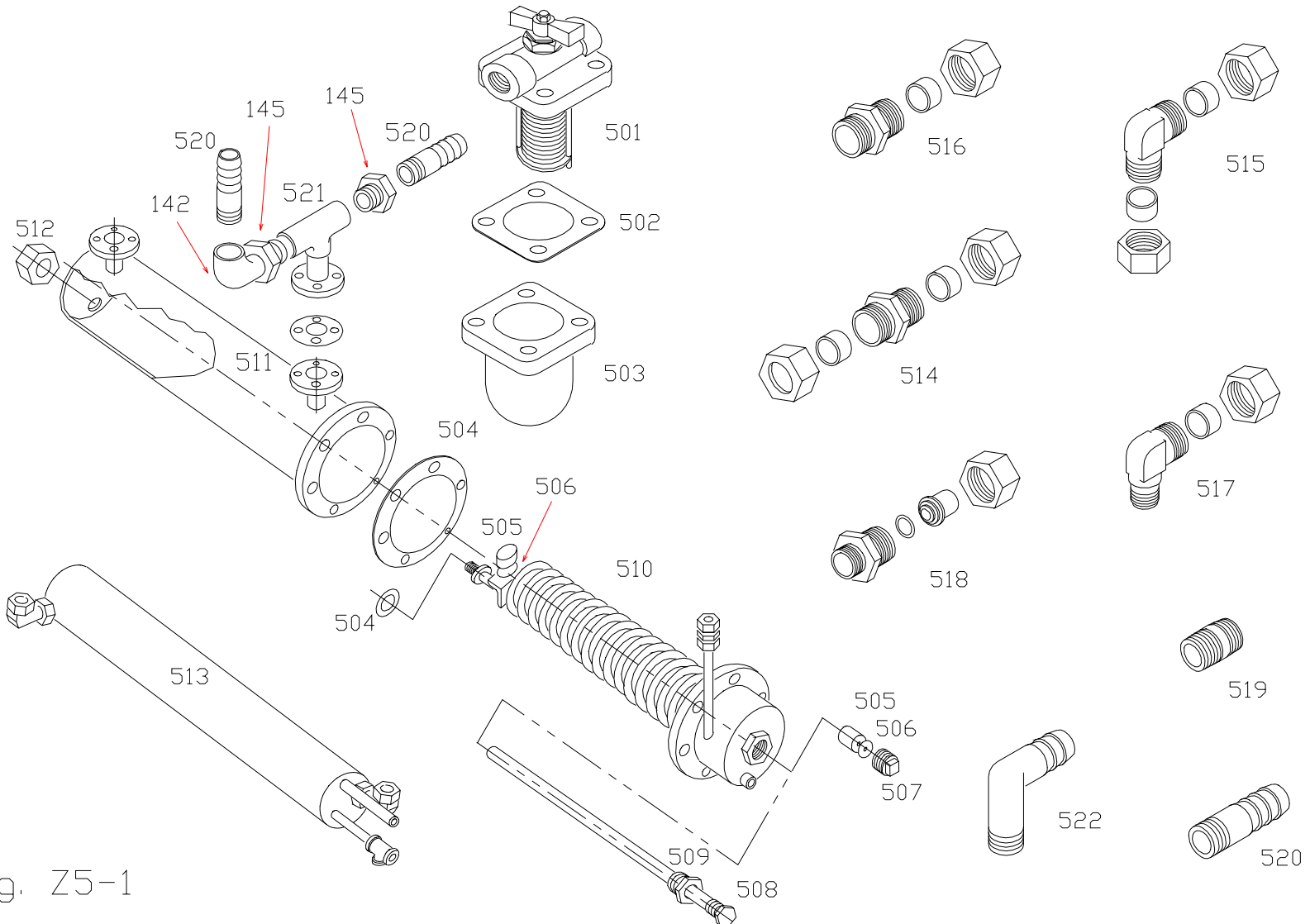


Fig. Z5-1

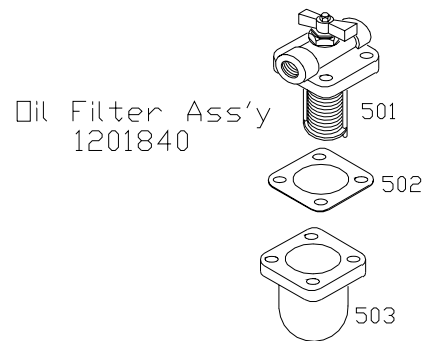
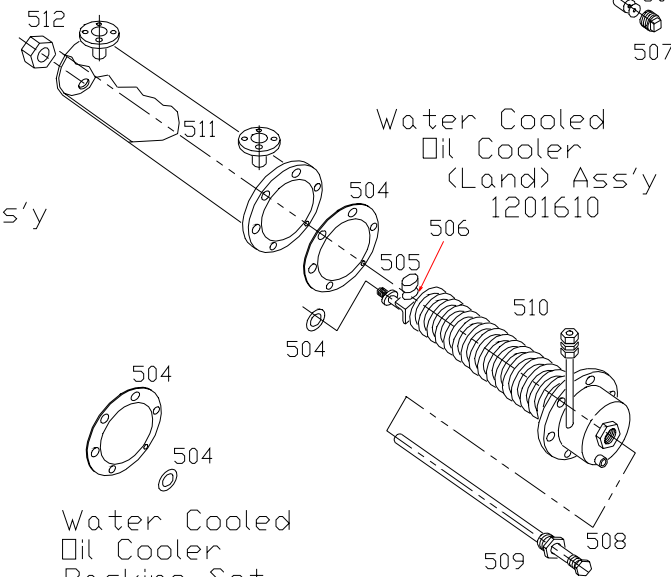
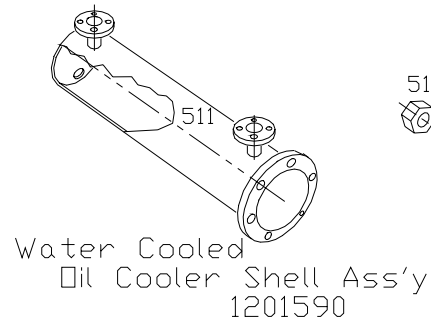
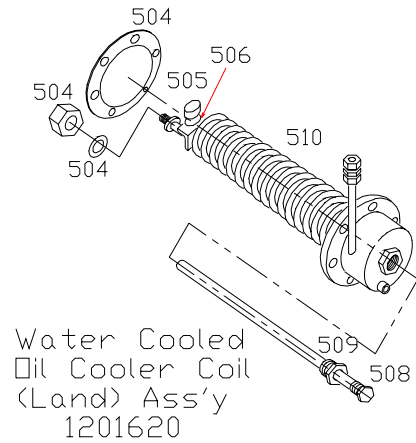
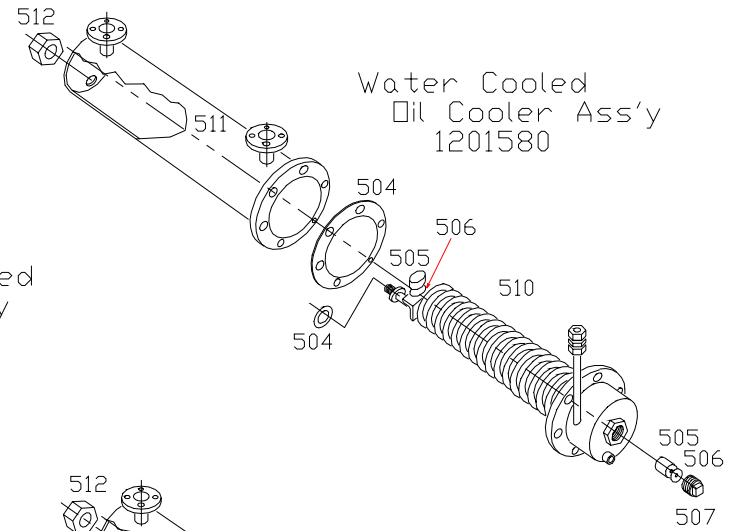
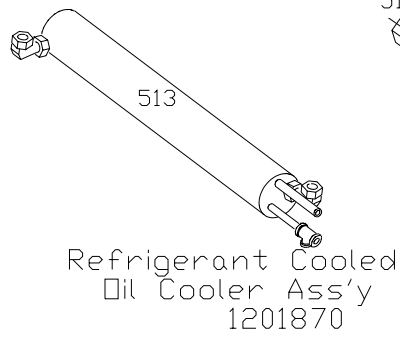
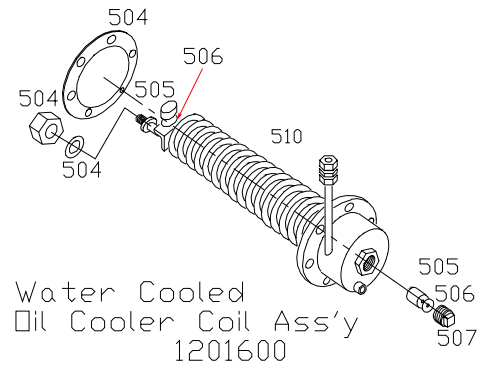
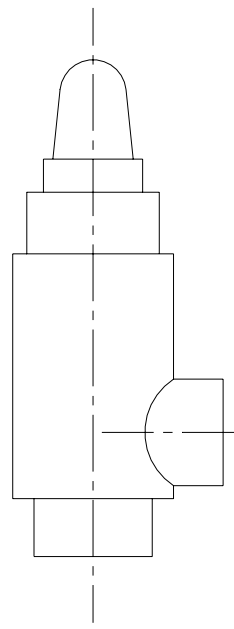


Fig. Z5-2

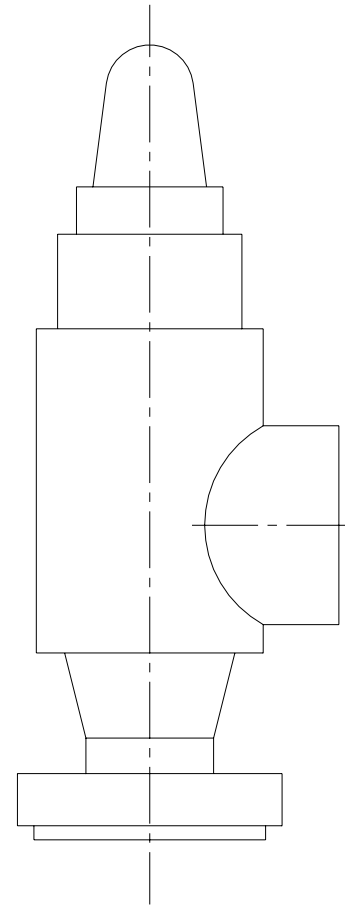
Z5 Pipe System Component Parts

Ref #	Description	Part #	Remarks
5Z***	Oil Filter Assembly	1201840	
5Z501	Oil Filter Cover Assembly	1201850	
5Z502	Packing, Oil Filter	820955	
5Z503	Oil Filter Body	1209550	
5Z***	Oil Cooler Assembly – Water	1201580	Seawater
5Z***	Oil Cooler Assembly – Water	1201610	
5Z504	Packing Set, Oil Cooler Water	121140S	1 Set = 2
5Z505	ZAP 40	1209109	Seawater
5Z506	Packing, ZAP 40	820910	Seawater, Synthetic rubber
5Z507	PT 1½ Jacket Plug	1202169	Seawater
5Z508	MGNAP 19-08	1208850	
5Z509	40 x 20A Bushing	4117780	
5Z510	Coil Assembly – Water	1201600	Seawater
5Z510	Coil Assembly – Water	1201620	
5Z511	Shell Assembly - Water	1201590	
5Z512	Nut, Oil Cooler	1208790	
5Z513	Oil Cooler Assembly - Refrigerant	1201870	
5Z514	E3 / 4B Pipe Fitting (Sleeve)	4119330	Oil Cooler – Water [OLD PART # 4112430]
5Z515	F1/2B Pipe Fitting (Sleeve)	4119340	Lubrication – Rear Metal [OLD PART # 4112440]
5Z515	F3/4B Pipe Fitting (Sleeve)	4119350	Oil Cooler – Refrigerant [OLD PART # 4112450]
5Z516	A6 x PT1/8 Pipe Fitting (Sleeve)	4119200	Unloader [OLD PART # 4112300]
5Z516	A6 x PT1/4 Pipe Fitting (Sleeve)	4119210	Gauge Stop Valve [OLD PART # 4112310]
5Z516	A6 x PT 3/8 Pipe Fitting (Sleeve)	4119220	Auto. Unloader [OLD PART # 4112320]
5Z516	A6 x PT 3/8 Pipe Fitting (Sleeve)	4119230	Auto. Unloader, Orifice 1.2mm [OLD PART # 4112350]
5Z516	A3/8 x PT3/8 Pipe Fitting (Sleeve)	4119250	Oil Return Valve [OLD PART # 4112350]
5Z516	A3/8 x PT3/4 Pipe Fitting (Sleeve)	4119270	Oil Filter [OLD PART # 4112370]
5Z517	B3/4 x PT3/4 Pipe Fitting (Sleeve)	4119310	Oil Filter [OLD PART # 4112410]
5Z518	6 x 8A Pipe Joint S25C	4112210	Gauge Stop Valve
5Z518	10 x 10A Pipe Joint S25C	4112250	Return Oil Stop Valve
5Z519	8A Nipple #80	4113409	Gauge valve
5Z519	10A Nipple #80	4113419	Return Oil Stop Valve
5Z519	15A Nipple #80	4113429	Purge Valve
5Z520	10A Nozzle SUS	4118010	Suction Oil Drain
5Z520	15A Nozzle SUS	4118020	Purge Valve
5Z521	25A Tee	4117140	Jacket Cooling
5Z522	20A Elbow Nozzle FR	4118080	



25A / 40A

Fig.Z6-1



50A

