
VM / VML
REFRIGERATION COMPRESSOR
COMPONENT PARTS
CATALOGUE

Ver. 2002

HASEGAWA
REFRIGERATION, LTD.



CONTENTS

Model VM / VML Compressor

Description	Parts #
Crankcase Component Parts External Casing Fittings Covers & Gaskets Suction Screen Thermometer Heater Service Valves Cooling Water Accessories	M1**
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Pipe System Component Parts Oil Cooler Oil Filter Connectors	M5**
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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 120270 from the catalogue.

Description

Each component also has a description and the above component would be VM Piston Pin Stopper.

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

2M*** 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

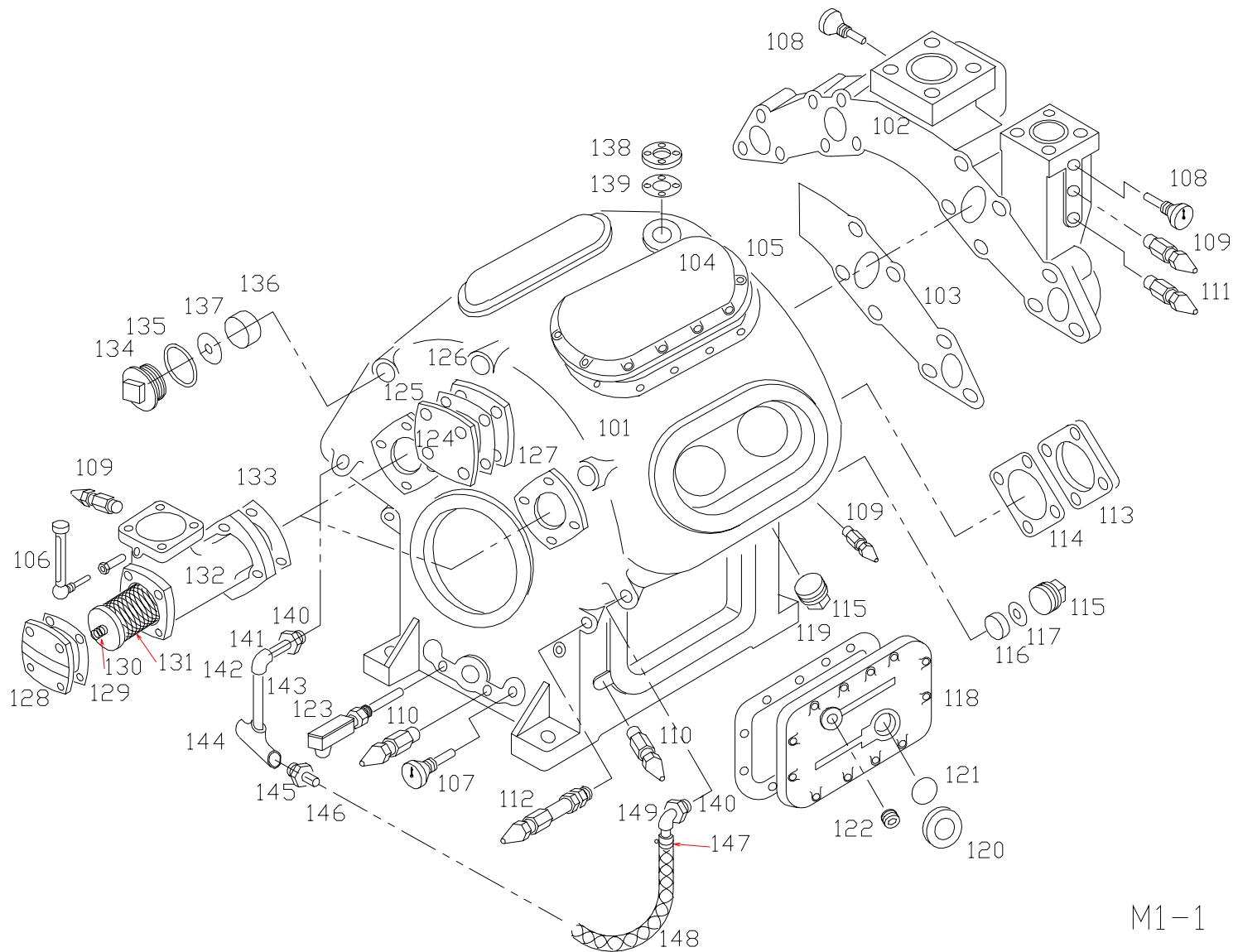
Ass'y:	Assembled parts
Set:	Complete set of items
Packing:	Gasket
R:	R22
N:	R717

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.

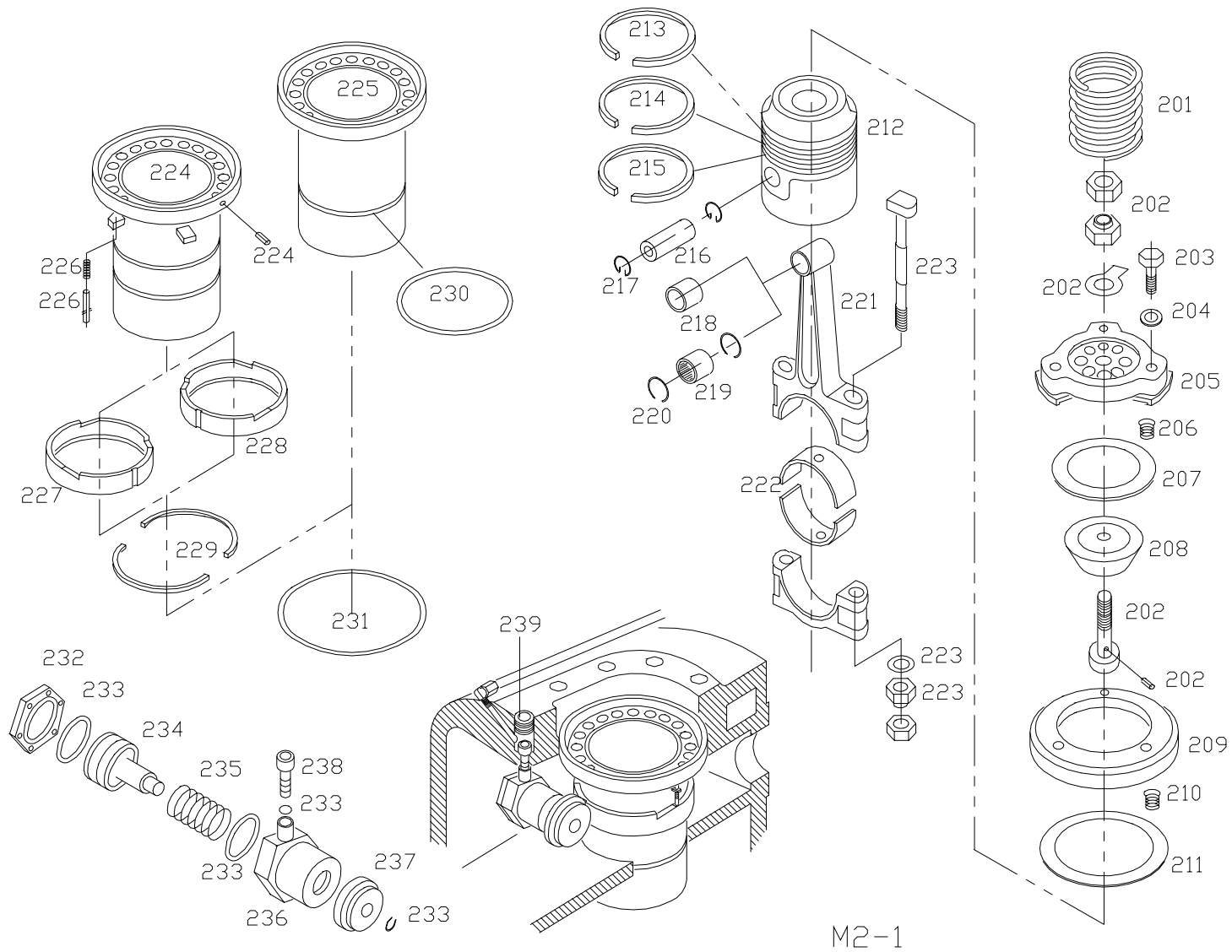


M1-1

M1 Crankcase Component Parts

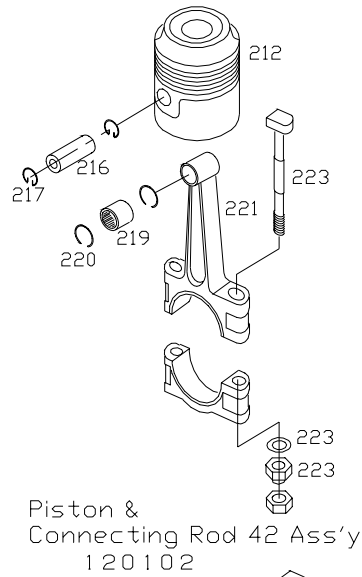
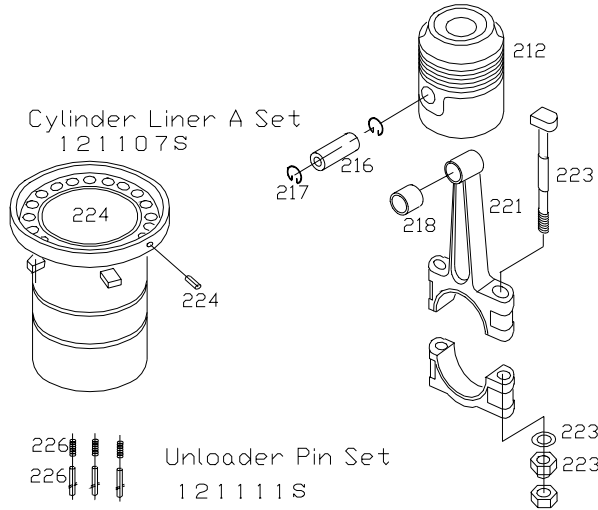
Ref #	Description	Part #	VM 3	VM 4	VM 6	VM 8	VM 21	VM 31	VM 42	VM 62	Remarks
2M101	Crankcase VM3	103210	1								
2M101	Crankcase VM4	104210		1							
2M101	Crankcase VM6	106210			1						
2M101	Crankcase VM8	108210				1					
2M101	Crankcase VM21	102210					1				
2M101	Crankcase VM31	105210						1			
2M101	Crankcase VM42	107210							1		
2M101	Crankcase VM62	109210								1	
2M101	Crankcase VML3	103310	1								
2M101	Crankcase VML4	104310		1							
2M101	Crankcase VML6	106310			1						
2M101	Crankcase VML8	108310				1					
2M101	Crankcase VML21	102310					1				
2M101	Crankcase VML31	105310						1			
2M101	Crankcase VML42	107310							1		
2M101	Crankcase VML62	109310								1	
2M102	Manifold, Discharge	103213	1								
2M102	Manifold, Discharge	104213		1							
2M102	Manifold, Discharge	106213			1						
2M102	Manifold, Discharge	108213				1					
2M102	Manifold, Discharge	102214					1				
2M102	Manifold, Discharge	105214						1			
2M102	Manifold, Discharge	107214							1		
2M102	Manifold, Discharge	109214								1	
2M103	Packing Discharge Manifold	803213	1		2		1		2		Set
2M103	Packing Discharge Manifold	804213	1		1		1		1		Set
2M103	Packing Discharge Manifold	806213		1				1			Set
2M103	Packing Discharge Manifold	808213		1		2		1		2	Set
2M104	Cover, Cylinder A	120208	3	3			3	3			
2M104	Cover, Cylinder B	120209		1				1			
2M104	Cover, Cylinder	120210			3	4			3	4	
2M105	Packing, Cylinder Cover	820208	3	4			3	4			
2M105	Packing, Cylinder Cover	820210			3	4			3	4	
2M106	Thermometer 10A LA (-70 +50)	309420					(1)	(1)	(1)	(1)	Marine low suction

2M106	Thermometer 10A LA (-50 +50)	309421	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	Marine high suction
2M106	Thermometer 10A LB (-50 +50)	309410	1	1	1	1	2	2	2	2	Land
2M107	Thermometer 10A Dial (0 +100)	309430	1	1	1	1	1	1	1	1	Oil
2M108	Thermometer 10A Dial (0 +200)	309431	1	1	1	1	2	2	2	2	Discharge
2M109	Valve 8A AVS-R	402390	3	3	3	3	4	4	4	4	Gauge valve
2M110	Valve 10A AVS-R	402391	1	1	1	1	1	1	1	1	Oil charge
2M111	Valve 10A AVS-R	402391	1				1	1			Air purge
2M111	Valve 15A AVS-R	402392		1	1	1			1	1	Air purge
2M112	Valve 10A AVS-R	402391					1	1	1	1	Return oil
2M113	Cover, Blind (B) Crankcase Suction	120221	3	3	3	3	3	3	3	3	
2M114	Packing, Cover Blind	820221	3	3	3	3	3	3	3	3	
2M115	Plug, Jacket PT1 1/2	120216	2	2	3	3	2	2	3	3	
2M116	ZAP 40	120910	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	Marine
2M117	Packing ZAP 40	820910	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	Marine
2M118	Cover, Side A	120205	1	1			1	1			
2M118	Cover, Side A	120905			1	1			1	1	Marine x 2 oil gauge
2M118	Cover, Side B	120206	1	1			1	1			Marine x 2 oil gauge
2M118	Cover, Side B	120906			1	1			1	1	
2M118	Cover, Side C	120207	(1)	(1)			(1)	(1)			Oil control
2M118	Cover, Side C	120907			(1)	(1)			(1)	(1)	Oil control
2M119	Packing, Side Cover	820205	2	2			2	2			
2M119	Packing, Side Cover	820905			2	2			2	2	
2M120	Level Eye KLS-4	310241	1	1	1	1	1	1	1	1	Marine x 2
2M121	O-Ring, Level Eye	310246	1	1	1	1	1	1	1	1	Marine x 2
2M122	Plug, 20A	411524	2	2	2	2	2	2	2	2	
2M123	Heater (SCRB-2-200W 220V)	322200	1	1	1	1	1	1	1	1	
2M123	Heater (SCRB-2-200W 110V)	322201	1	1	1	1	1	1	1	1	
2M124	Cover, Equalizer	120222	1	1	1	1	1	1	1	1	
2M125	Cover, Suction Blind	120917	1	1							
2M126	Packing, Equalizing Cover	820222	1	1	1	1	1	1	1	1	
2M127	Plate, Equalizer	120225	1	1	1	1	1	1	1	1	
2M128	Cover, Strainer Suction	120904	1	1	2	2	2	2	2	2	
2M129	Packing, Cover, Strainer Suction	820904	1	1	2	2	2	2	2	2	
2M130	Spring, Suction Screen	120918	1	1	2	2	2	2	2	2	
2M131	Screen, Suction 265	120900							1	1	
2M131	Screen, Suction 220	120901	1	1	2	2	2	2	1	1	
2M132	Suction Strainer	119212	1	1							
2M132	Suction Strainer	106211			1						
2M132	Suction Strainer	108211				1					
2M132	Suction Strainer	102211					1				



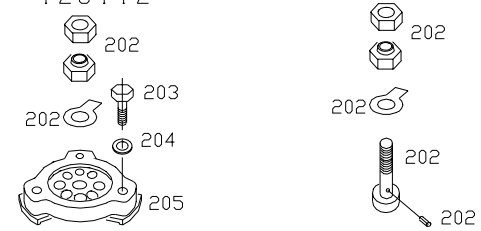
M2-1

Piston & Connecting Rod 30 Ass'y
120100

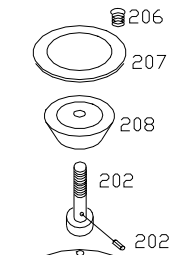
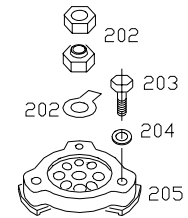


Discharge Seat Ass'y N
120111

Discharge Seat Ass'y R
120112



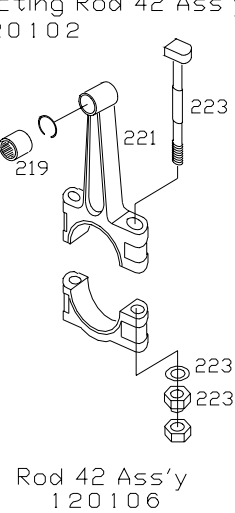
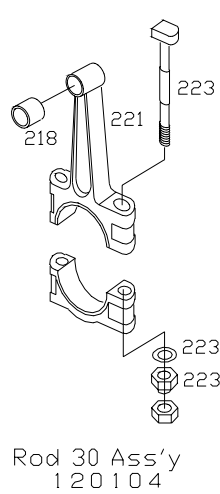
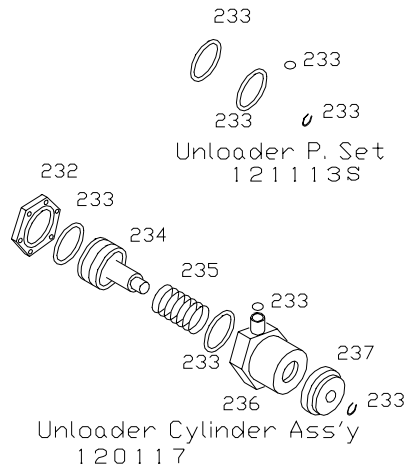
Bolt & Nut Set
Inner Seat
121102S



Bolt & Nut Set
Connecting Rod
121101S

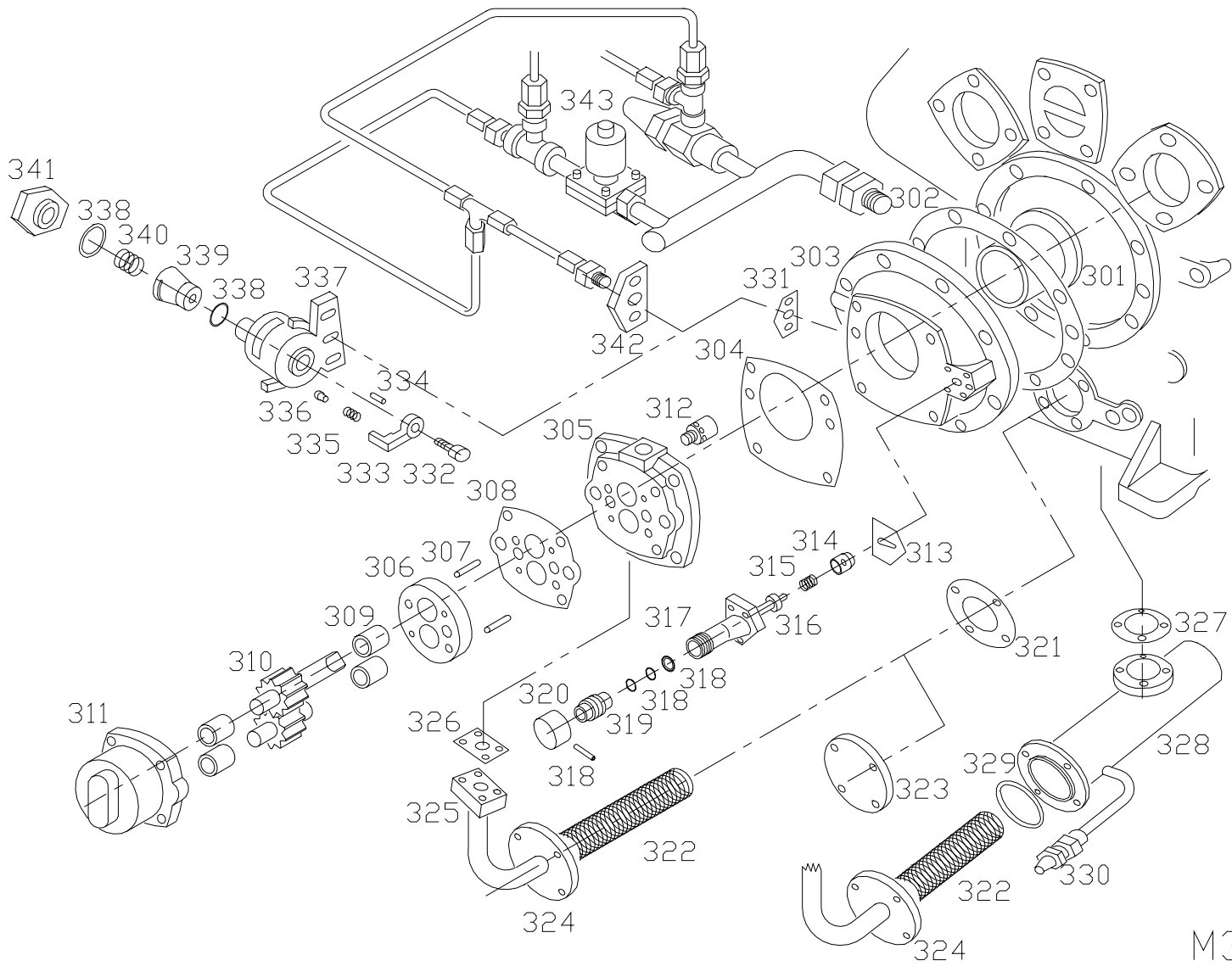
DV N ASSY
120109

DV R ASSY
120110



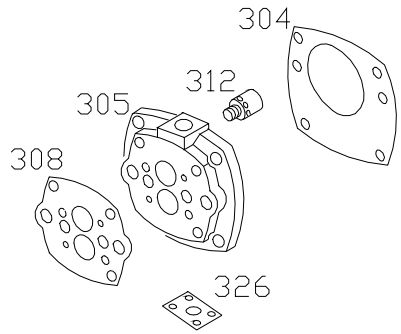
M2 Internal Component Parts

Ref #	Description	Part #	VM 3	VM 4	VM 6	VM 8	VM 21	VM 31	VM 42	VM 62	Remarks
2M201	Spring, Safety Head VM	120235	3	4	6	8	3	4	6	8	
2M201	Spring, Safety Head VML	120236	3	4	6	8	3	4	6	8	
2M***	Discharge Valve Assembly N	120109	3	4	6	8	3	4	6	8	R717
2M***	Discharge Valve Assembly R	120110	3	4	6	8	3	4	6	8	R22
2M***	Discharge Seat Assembly N	120111	3	4	6	8	3	4	6	8	R717
2M***	Discharge Seat Assembly R	120112	3	4	6	8	3	4	6	8	R22
2M202	Center Bolt Assembly	121102S	3	4	6	8	3	4	6	8	Set
2M- - -	Center Bolt	120240	3	4	6	8	3	4	6	8	
2M- - -	Nut, Center Bolt	120241	3	4	6	8	3	4	6	8	
2M- - -	Washer, Center Bolt	120242	3	4	6	8	3	4	6	8	
2M- - -	Parallel Pin, 5 x 10	853330	3	4	6	8	3	4	6	8	
2M203	Bolt W3/8 x 50	850830	9	12	18	24	9	12	18	24	
2M204	Spring Washer W3/8	852473	9	12	18	24	9	12	18	24	
2M205	Discharge Valve Guide N	120237	3	4	6	8	3	4	6	8	R717
2M205	Discharge Valve Guide R	120238	3	4	6	8	3	4	6	8	R22
2M206	Spring, Discharge R	120246	27	36	54	72	27	36	54	72	R22
2M206	Spring, Discharge N	120247	18	24	36	48	18	24	36	48	R717
2M207	Plate, Discharge	120948	3	4	6	8	3	4	6	8	
2M208	Seat, Inner Discharge	120243	3	4	6	8	3	4	6	8	
2M209	Outer Seat, Discharge N	120244	3	4	6	8	3	4	6	8	R717
2M209	Outer Seat, Discharge R	120245	3	4	6	8	3	4	6	8	R22
2M210	Spring, Suction Valve N	120247	12	16	24	32	12	16	24	32	R717
2M210	Spring, Suction Valve R	120247	18	24	36	48	18	24	36	48	R22
2M211	Plate, Suction Valve	120249	3	4	6	8	3	4	6	8	
2M***	Piston & Connecting Rod 30 Ass'y	120100	3	4	6	8					
2M***	Piston & Connecting Rod 42 Ass'y	120102					1	1	2	2	
2M***	Connecting Rod 30 Ass'y	120104	3	4	6	8					
2M***	Connecting Rod 42 Ass'y	120106					1	1	2	2	
2M212	Piston	120255	3	4	6	8	3	4	6	8	
2M213	Piston Ring # 1	120256	3	4	6	8	3	4	6	8	
2M214	Piston Ring # 1	120257	3	4	6	8	3	4	6	8	
2M215	Oil Ring	120258	3	4	6	8	3	4	6	8	
2M216	Piston Pin	120266	3	4	6	8	3	4	6	8	
2M217	Piston Pin Stopper	120270	6	8	12	16	6	8	12	16	
2M218	Piston Pin Metal	120267	3	4	6	8	3	4	6	8	Rod 30
2M219	Piston Pin Needle Bearing	120271					1	1	2	2	Rod 42

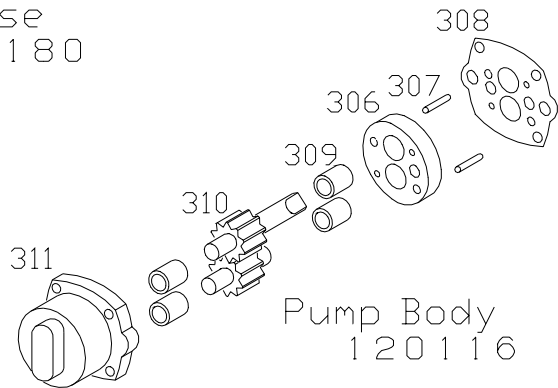


M3-1

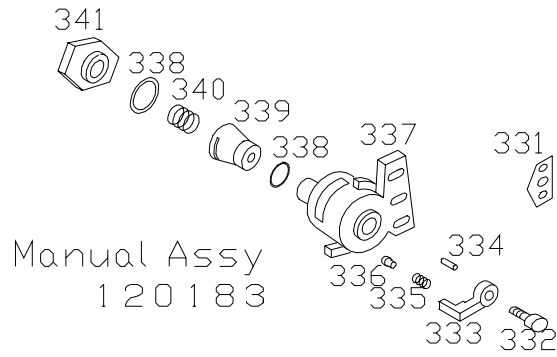
312
Relief Valve
120182



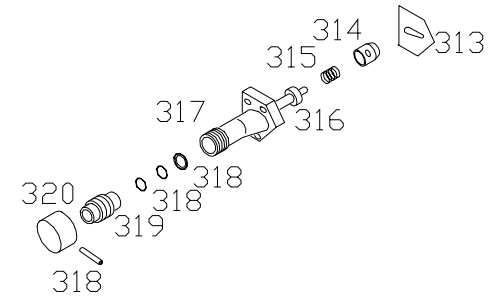
Pump Base
120180



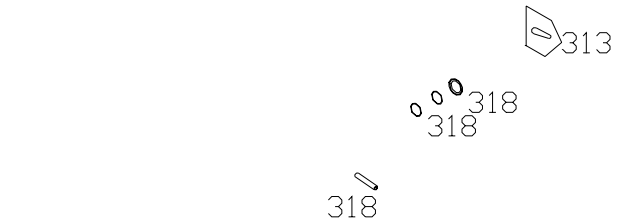
Pump Body
120116



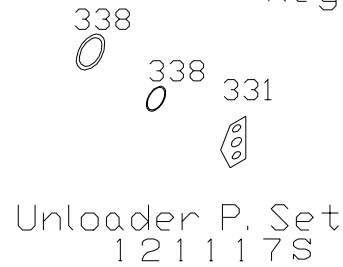
Manual Assy
120183



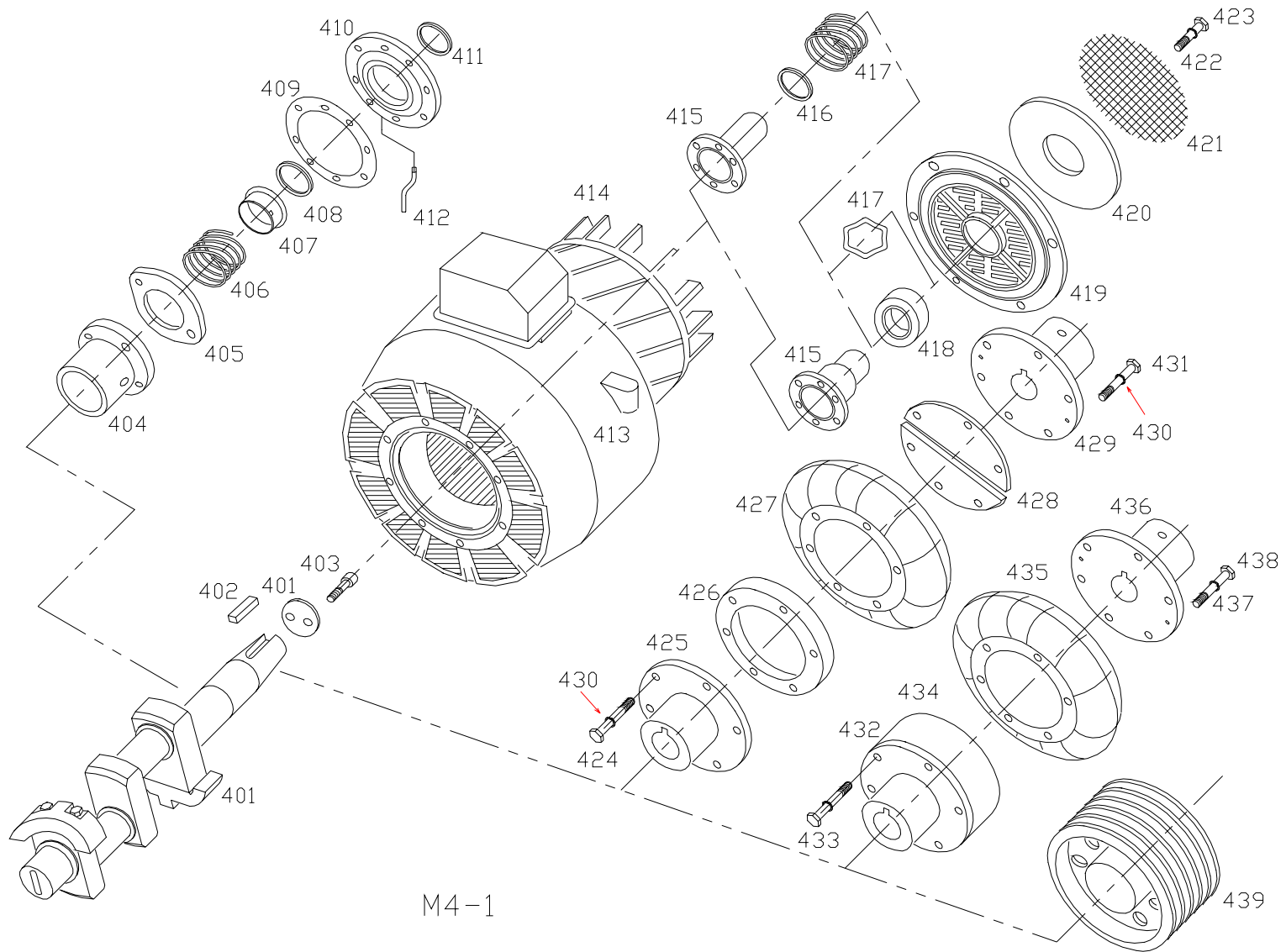
Regulating Valve Assy.
120181



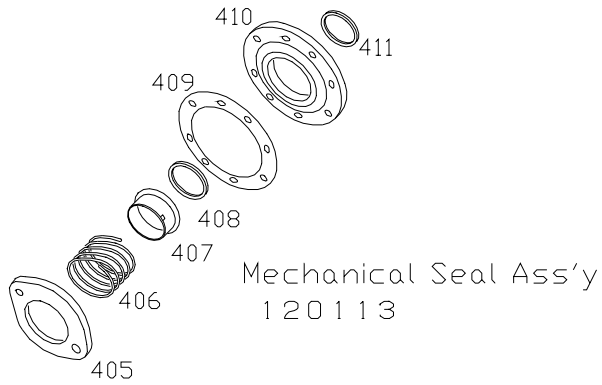
Regulating Valve P. Set
121112S



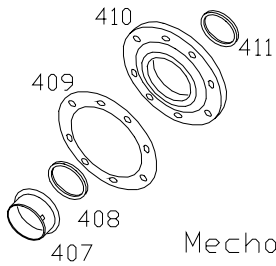
Unloader P. Set
121117S



M4-1



Mechanical Seal Ass'y
120113

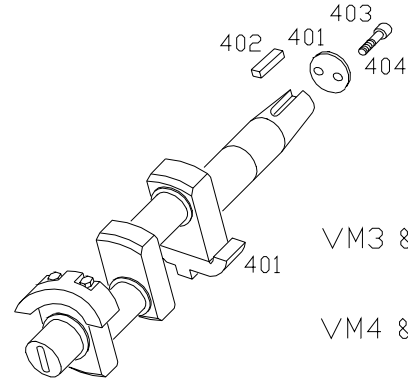


Mechanical Seal
Replacement Ass'y
120114



Mechanical Seal
Rotating Ring
120300

M4-2

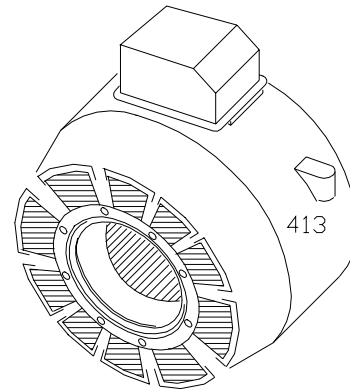


VM3 & 21 Crankshaft Ass'y
103100

VM4 & 31 Crankshaft Ass'y
104100

VM6 & 42 Crankshaft Ass'y
106100

VM8 & 62 Crankshaft Ass'y
108100



Stator 22 KW Ass'y
121121S

Stator 30 KW Ass'y
121122S

Stator 45 KW 220V Ass'y
121123S

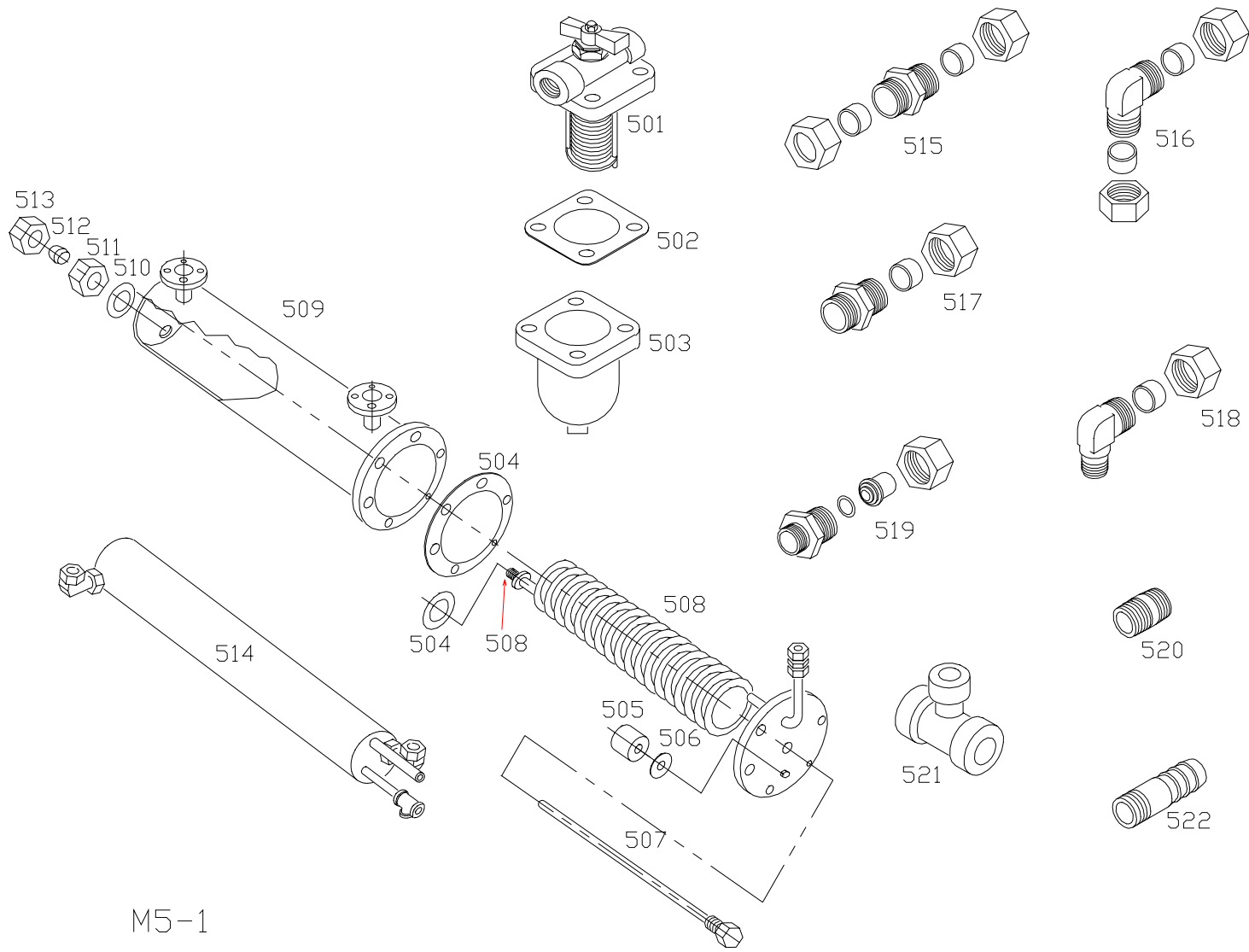
Stator 60 KW 220V Ass'y
121124S

Stator 45 KW 440V Ass'y
121125S

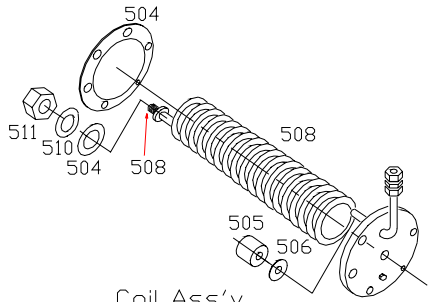
Stator 60 KW 440V Ass'y
121126S

M4 Drive Mechanism Component Parts

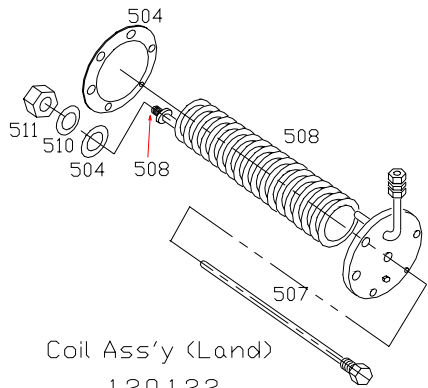
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2M401	Crankshaft VM	103100	1				1				
2M401	Crankshaft VML	103110	1				1				
2M401	Crankshaft VM	104100		1				1			
2M401	Crankshaft VML	104110		1				1			
2M401	Crankshaft VM	106100			1				1		
2M401	Crankshaft VML	106110			1				1		
2M401	Crankshaft VM	108100				1				1	
2M401	Crankshaft VML	108110				1				1	
2M- - -	Plate, Support	103207	1	1	1	1	1	1	1	1	
2M402	Key	103203	1	1	1	1	1	1	1	1	
2M403	Spring Washer M12	852455	2	2	2	2	2	2	2	2	
2M- - -	Bolt M12 x 40	850255	2	2	2	2	2	2	2	2	
2M- - -	Bolt M12 x 65	850277	2	2	2	2	2	2	2	2	Marine
2M404	Main Metal, Front	120278	1	1			1	1			
2M404	Main Metal, Front	120279			1	1			1	1	
2M***	Mechanical Seal Ass'y	120113	1	1	1	1	1	1	1	1	
2M405	Spring Retainer	120298	1	1	1	1	1	1	1	1	
2M406	Spring	120297	1	1	1	1	1	1	1	1	
2M***	Seal, Replacement Ass'y	120114	1	1	1	1	1	1	1	1	
2M407	Packing, Rubber	120293	1	1	1	1	1	1	1	1	
2M408	Seal Ring	120294	1	1	1	1	1	1	1	1	
2M409	Packing, Cover plate	820291	1	1	1	1	1	1	1	1	
2M410	Cover Plate	120291	1	1	1	1	1	1	1	1	
2M411	Dust Seal	120290	1	1	1	1	1	1	1	1	
2M412	Drain Pipe	120299	1	1	1	1	1	1	1	1	
2M413	Casing	120444	(1)	(1)	(1)		(1)	(1)	(1)	(1)	22, 30 KW
2M413	Casing	120544		(1)					(1)	(1)	45 KW
2M413	Casing	120545			(1)						60 KW
2M- - -	Stator	120439	(1)	(1)	(1)		(1)	(1)	(1)	(1)	22 KW
2M- - -	Stator	120440	(1)					(1)			30 KW
2M- - -	Stator	120540		(1)					(1)	(1)	45 KW
2M- - -	Stator	120840			(1)						60 KW
2M414	Rotor	120441									22, 30 KW
2M414	Rotor	120541		(1)					(1)	(1)	45 KW



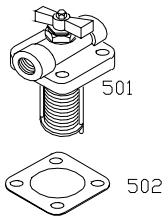
M5-1



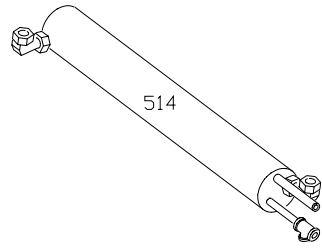
Coil Ass'y
120120



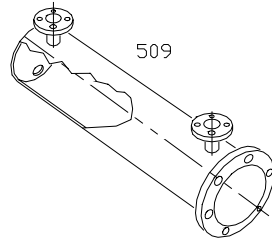
Coil Ass'y (Land)
120122



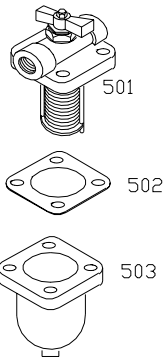
Filter Cover Ass'y
120185



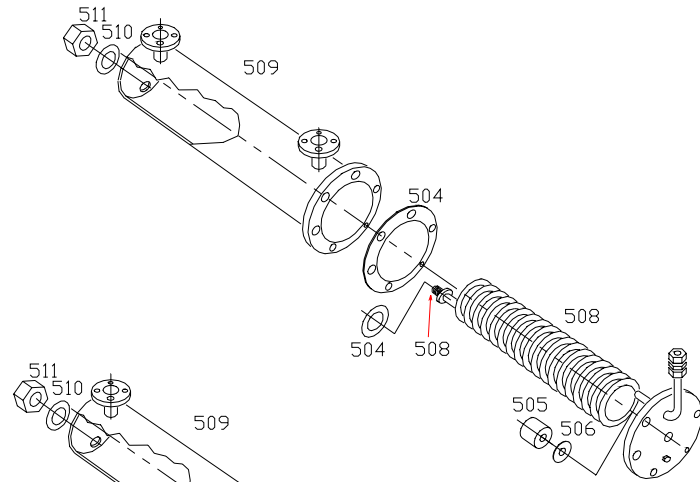
Ref. Cooled Oil Cooler
120187



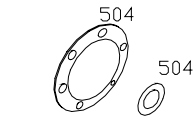
Shell Ass'y
120119



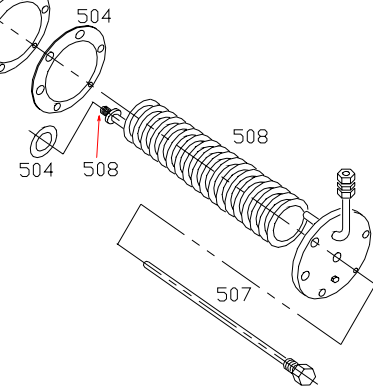
Oil Filter Ass'y
120184



Oil Cooler Ass'y
120118



Packing Set
121118S

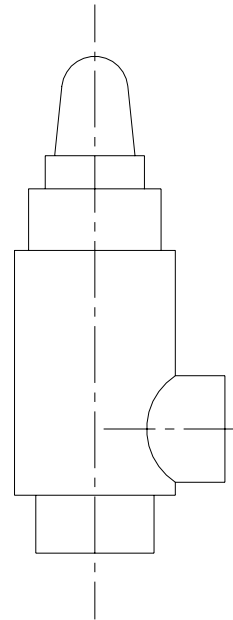


Oil Cooler Ass'y (Land)
120121

M5 Pipe System Component Parts

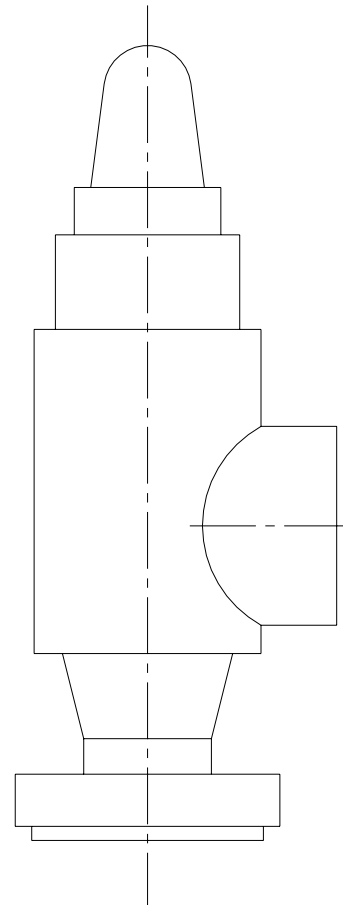
Ref #	Description	Part #	Remarks
2M***	Oil Filter Assembly	1201840	
2M***	Oil Filter Cover Assembly	1201850	
2M501	Cover, Filter	120924	
2M502	Packing, Oil Filter	820955	
2M503	Oil Filter Body	120955	
2M***	Oil Cooler Assembly – Water	120118	Seawater
2M***	Oil Cooler Assembly – Water	120122	
2M504	Packing Set, Oil Cooler Water	121118S	1 Set = 2
2M- - -	Packing	820572	
2M- - -	Packing	820578	
2M505	ZAP 65	120213	Seawater
2M506	Packing, ZAP 40	820213	Seawater, Synthetic rubber
2M507	MGNAP 19-05	120585	
2M508	Coil Assembly – Water	120120	Seawater
2M508	Coil Assembly – Water	120122	
2M509	Shell Assembly - Water	120119	
2M510	Washer	120580	
2M511	Nut, Oil Cooler	120579	
2M512	Sleeve PT1 / 2B	411273	
2M513	Nut PN1 / 2B	411283	
2M514	Oil Cooler Assembly - Refrigerant	120187	
2M515	E1 / 2B Pipe Fitting (Sleeve)	4119320	Oil Cooler – Water [OLD PART # 411242]
2M516	F1/2B Pipe Fitting (Sleeve)	4119340	Lubrication – Rear Metal [OLD PART # 411244]
2M516	F3/4B Pipe Fitting (Sleeve)	4119350	Oil Cooler – Refrigerant [OLD PART # 411245]
2M517	A6 x PT1/8 Pipe Fitting (Sleeve)	4119200	Unloader [OLD PART # 411230]
2M517	A6 x PT1/4 Pipe Fitting (Sleeve)	4119210	Gauge Stop Valve [OLD PART # 411231]
2M517	A6 x PT 3/8 Pipe Fitting (Sleeve)	4119220	Auto. Unloader [OLD PART # 411232]
2M517	A6 x PT 3/8 Pipe Fitting (Sleeve)	4119230	Auto. Unloader, Orifice 1.2mm [OLD PART # 411233]
2M517	A3/8 x PT3/8 Pipe Fitting (Sleeve)	4119250	Oil Return Valve [OLD PART # 411235]
2M517	A3/4 x PT3/4 Pipe Fitting (Sleeve)	4119270	Oil Filter [OLD PART # 411237]
2M518	B6 x PT3/4 Pipe Fitting (Sleeve)	4119280	Unloader [OLD PART # 411238]
5Z518	B3/4 x PT3/4 Pipe Fitting (Sleeve)	4119310	Oil Filter [OLD PART # 411241]
2M519	8 x 8A Pipe Joint S25C	411223	Gauge Stop Valve
2M519	10 x 10A Pipe Joint S25C	411225	Return Oil Stop Valve

2M519	15 x 15A Pipe Joint S25C	411226	Relief valve
2M519	20 x 20A Pipe Joint S25C	411227	Relief valve
2M520	8A Nipple #80	411340	Gauge valve
2M520	10A Nipple #80	411341	Return Oil Stop Valve
2M520	15A Nipple #80	411342	Purge Valve
2M520	10A Nozzle SUS	411801	Suction Oil Drain
2M520	15A Nozzle SUS	411802	Purge Valve
2M521	10A Tee	411711	
2M522	10 A Nozzle SUS	411801	
2M522	15A Nozzle SUS	411802	

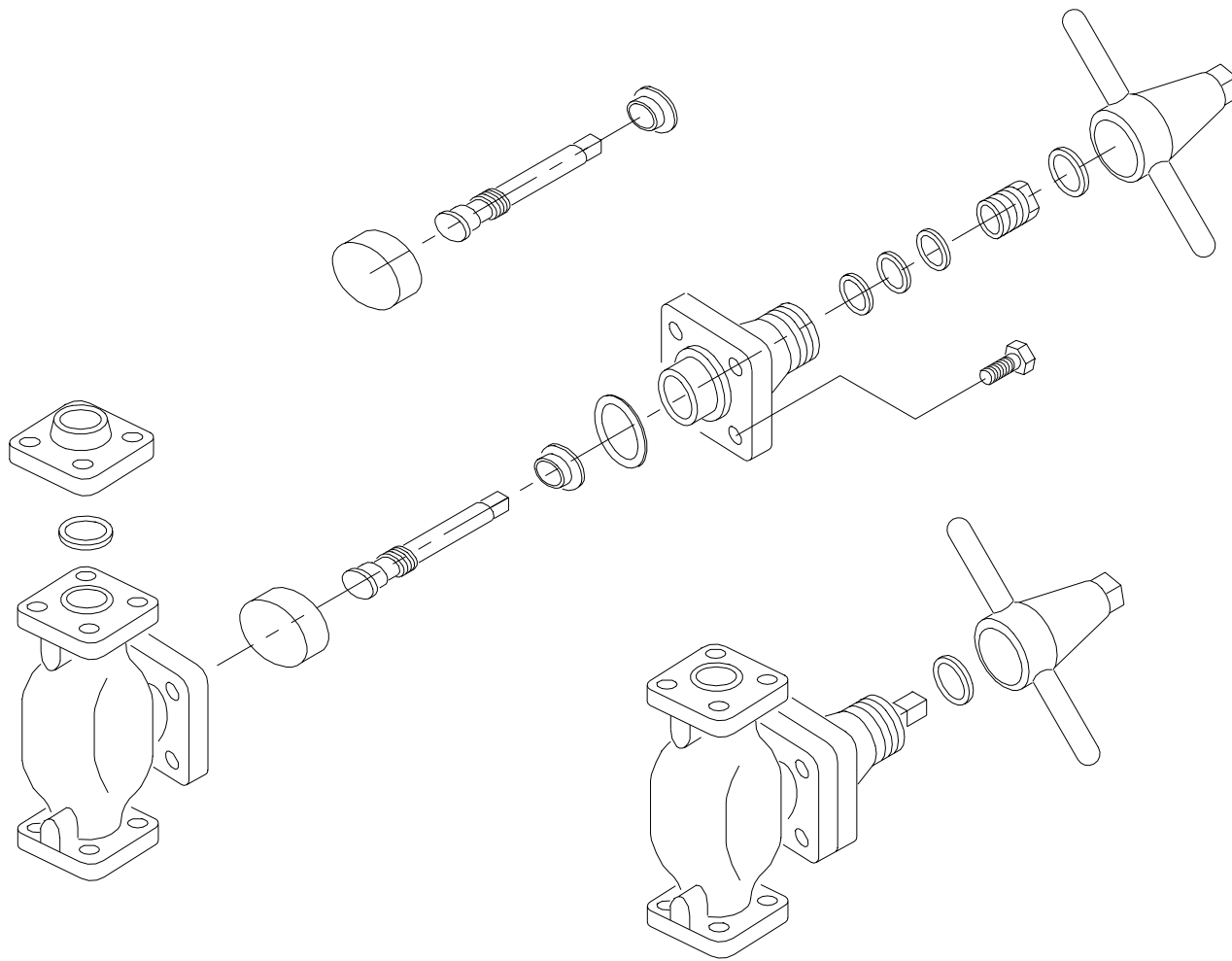


25A / 40A

Fig.Z6-1



50A



M6-2

