

AVZC20 Heat Pump Inverter

AVZC200241AA
AVZC200241AB
AVZC200241AC
AVZC200361AA
AVZC200361AB
AVZC200361AC
AVZC200481AA
AVZC200481AB
AVZC200481AC
AVZC200601AA
AVZC200601AB
AVZC200601AC



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This manual is to be used by qualified technicians only.

This manual replaces RP-A4034C.

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Important Information

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Views shown are for parts illustrations only, not servicing procedures.

Text Codes:

AR - As Required

NA - Not Available

NS - Not Shown

00000000 - See Note

QTY - Quantity Example (QTY 3) (If Quantity not shown, Quantity = 1)

M - Model Example (M1) (If M Code not shown, then part is used on all Models)

Expanded Model Nomenclature:

Example M1 - Model#1 M2 - Model#2 M3 - Model#3

Goodman Company, L.P. is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Goodman Company, L.P. also recommends contacting an authorized technician and using authorized factory parts.

Goodman Company, L.P. reserves the right to discontinue, or change at any time, specifications or designs without notice or without incurring obligations.

For assistance within the U.S.A. contact:

Homeowner Support
Goodman Company, L.P.
19001 Kermier Road
Waller, Texas 77484
877-254-4729-Telephone
713-863-2382-Facsimile

For assistance outside the U.S.A. contact:

International Division
Goodman Company, L.P.
19001 Kermier Road
Waller, Texas 77484
713-861-2500-Telephone
713-863-2382-Facsimile

Functional Parts

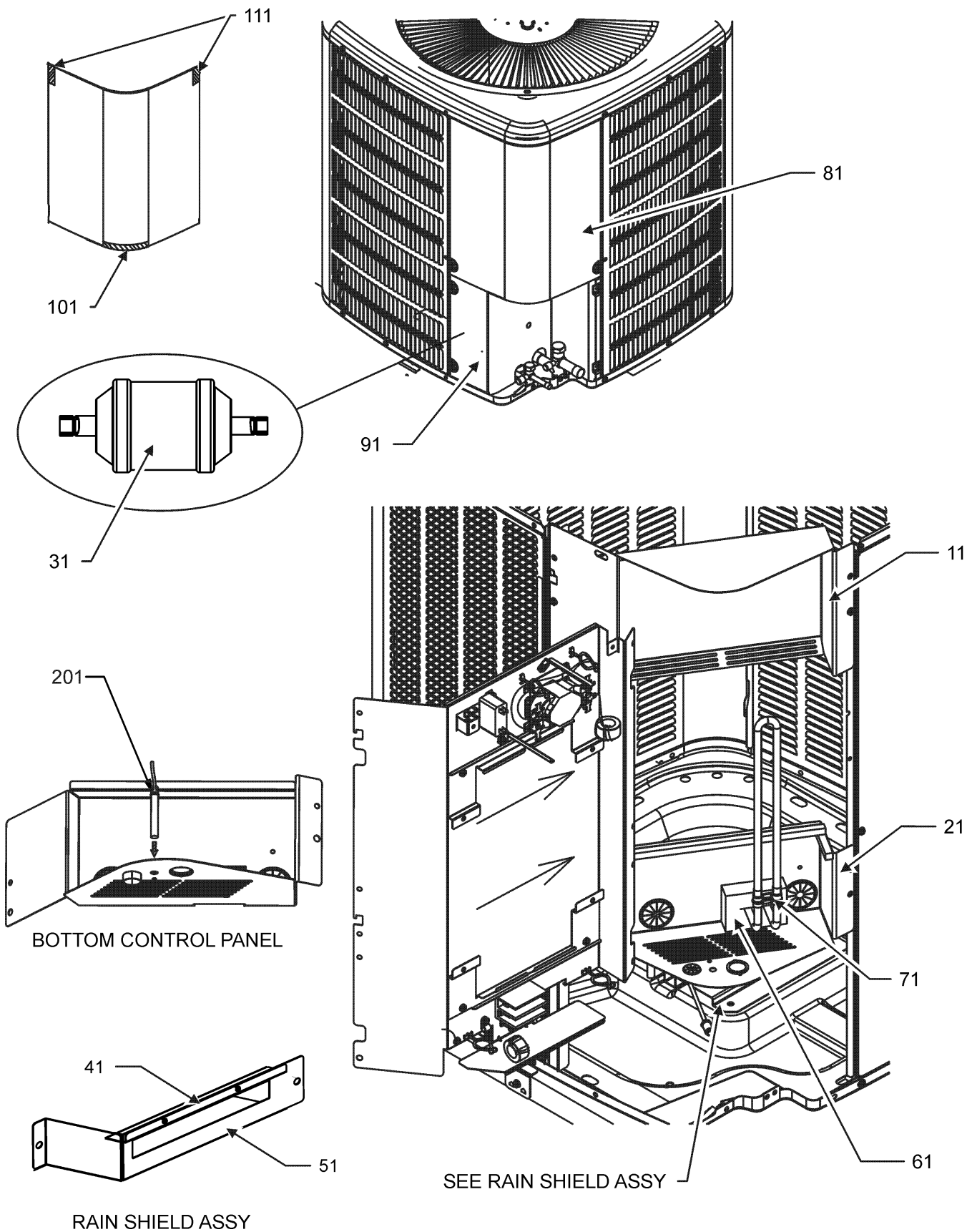
Part No: **Description:**

Part No:	Description:	Expanded Model Nomenclature
0151R00097	3/4" BALL VALVE (M1, M2, M3)	M1 - AVZC200241AA
0151R00078	3/8" SERVICE VALVE (M10, M11, M12)	M2 - AVZC200241AB
0151R00081	7/8" BALL VALVE (M4, M5, M6, M7, M8, M9, M10, M11, M12)	M3 - AVZC200241AC
0151L00020	ACCUMULATOR (M4, M5, M6, M7, M8, M9)	M4 - AVZC200361AA
0151L00021	ACCUMULATOR (M10, M11, M12)	M5 - AVZC200361AB
0151L00019	ACCUMULATOR (M1, M2, M3)	M6 - AVZC200361AC
3E600193-1	CAPACITOR (M10, M11, M12)	M7 - AVZC200481AA
4SA27011-1	CHECK VALVE (M4, M5, M6, M7, M8, M9)	M8 - AVZC200481AB
4SA27006-1	CHECK VALVE	M9 - AVZC200481AC
3SA27018-1	CHECK VALVE (M1, M2, M3)	M10 - AVZC200601AA
0156R00006	COMPRESSOR 2YC36MXD (M1, M2, M3)	M11 - AVZC200601AB
0156R00008	COMPRESSOR 2YC90FXD (M4, M5, M6, M7, M8, M9)	M12 - AVZC200601AC
0156R00005	COMPRESSOR JT100GCVDW@SB (M10, M11, M12)	
3P130357-15	CRANKCASE HEATER (M10, M11, M12)	
3EA74081-1	CURRENT SENSOR, CHR-6Z-E-X (M10, M11, M12)	
3P356931-1	FAN MOTOR	
R3269031-3	FILTER, OIL SEPARATOR (M1, M2, M3, M4, M5, M6, M7, M8, M9)	
3P381424-2	HIGH PRESSURE SWITCH	
2P346080-1	NF PCB (M4, M5, M6, M7, M8, M9, M10, M11, M12)	
3P357142-1	OIL SEPARATOR	
0272R00991	PCB ASSY (M7, M8, M9)	
0272R00997	PCB ASSY (M10, M11, M12)	
0272R00988	PCB ASSY (M4, M5, M6)	
0272R00985	PCB ASSY (M1, M2, M3)	
2P361564-1	PCB, FAN DRIVE, INVERTER (M10, M11, M12)	
3P362914-1	POWER CONDITIONER (M10, M11, M12)	
3E750074-1	POWER CONDITIONER (M1, M2, M3)	
3S481010-1	PRESSURE SENSOR	
3S500031-1	Pulse Motor Expans EEV (M4, M5, M6, M7, M8, M9, M10, M11, M12)	
3S500032-1	Pulse Motor Expans EEV (M1, M2, M3)	
0151R00099	REVERSING VALVE (M1, M2, M3)	
0151R00101	REVERSING VALVE (M4, M5, M6, M7, M8, M9, M10, M11, M12)	
0130M00186	TERMINAL BLOCK	
3P381576-1	THERMISTOR AMBIENT	
3P381575-1	THERMISTOR ASSY	
0130M00187	TRANSFORMER	

SPECIAL PARTS

0161R00008P	AMANA LOGO CAP
0161R00010P	AMANA NAMEPLATE
117269J	THERMAL GREASE

Control Assy



Control Assy

Ref. Part No:	Ref. Part No:	Description:	Description:
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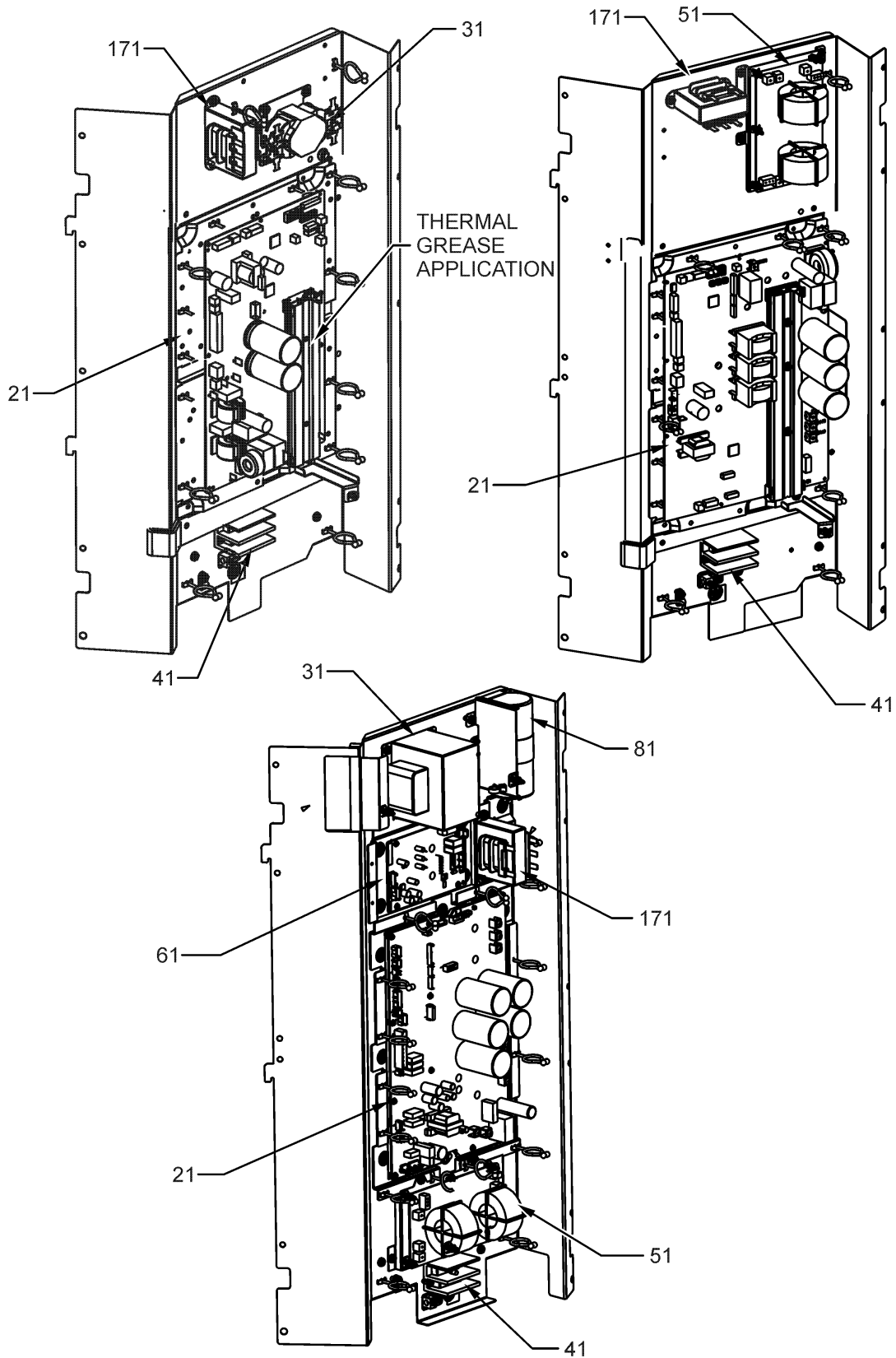
Image 1:

11	0121R00519PDG	TOP CONTROL PANEL (M10, M11, M12)
11	0272R01007PDG	TOP CONTROL PANEL ASSY (M1, M2, M3, M4, M5, M6, M7, M8, M9)
21	0121R00521PDG	CONTROL PANEL, BOTTOM
31	20485201	BI-FLOW FILTER DRIER
41	0121R00562	RAIN SHIELD COVER
51	0121R00563	Rain shield bracket
61	0154R00016	GASKET - CONTROL PANEL
71	4P305027-1	COOLING LOOP SEPARATOR (M1, M2, M3, M4, M5, M6, M7, M8, M9)
81	0121R00380PDG	CONTROL COVER (M1, M2, M3)
81	0121R00517PDG	CONTROL COVER (M4, M5, M6, M7, M8, M9, M10, M11, M12)
91	0121R00379PDG	PANEL, LOWER ACCESS
101	0154R00023	GASKET, CONTROL PANEL COVER
111	0154R00017	GASKET - CONTROL PANEL (QTY 2)
201	3P381576-1	THERMISTOR AMBIENT
NS	0161R00008P	AMANA LOGO CAP
NS	0161R00010P	AMANA NAMEPLATE
NS	0154R00015	GASKET - TOP CONTROL PANEL (QTY 2)

Expanded Model Nomenclature

- | |
|--------------------|
| M1 - AVZC200241AA |
| M2 - AVZC200241AB |
| M3 - AVZC200241AC |
| M4 - AVZC200361AA |
| M5 - AVZC200361AB |
| M6 - AVZC200361AC |
| M7 - AVZC200481AA |
| M8 - AVZC200481AB |
| M9 - AVZC200481AC |
| M10 - AVZC200601AA |
| M11 - AVZC200601AB |
| M12 - AVZC200601AC |

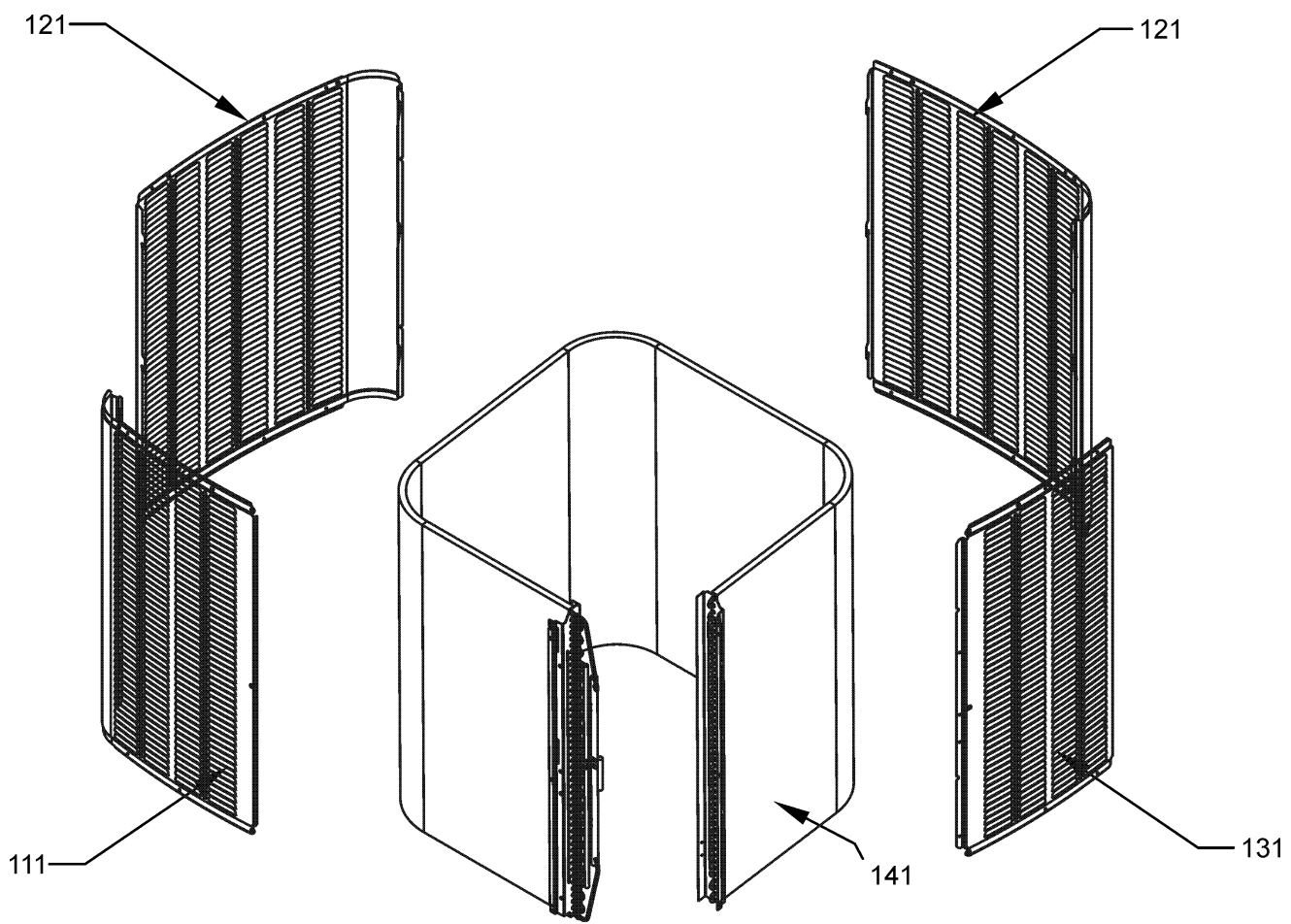
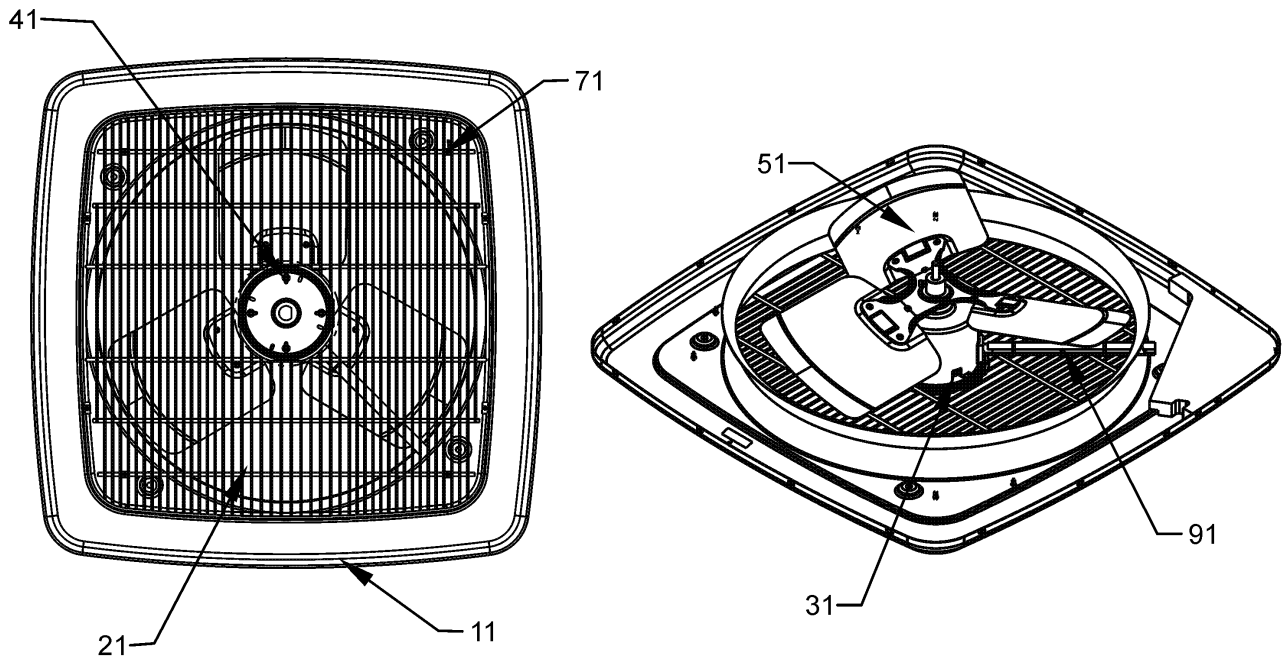
Control Panel Assy



Control Panel Assy

Ref. Part No:	Ref. Part No:	Description:	Description:
Image 1:		Expanded Model Nomenclature	
21	0272R00985	PCB ASSY (M1, M2, M3)	M1 - AVZC200241AA
21	0272R00988	PCB ASSY (M4, M5, M6)	M2 - AVZC200241AB
21	0272R00991	PCB ASSY (M7, M8, M9)	M3 - AVZC200241AC
21	0272R00997	PCB ASSY (M10, M11, M12)	M4 - AVZC200361AA
31	3E750074-1	POWER CONDITIONER (M1, M2, M3)	M5 - AVZC200361AB
31	3P362914-1	POWER CONDITIONER (M10, M11, M12)	M6 - AVZC200361AC
41	0130M00186	TERMINAL BLOCK	M7 - AVZC200481AA
51	2P346080-1	NF PCB (M4, M5, M6, M7, M8, M9, M10, M11, M12)	M8 - AVZC200481AB
61	2P361564-1	PCB, FAN DRIVE, INVERTER (M10, M11, M12)	M9 - AVZC200481AC
81	3E600193-1	CAPACITOR (M10, M11, M12)	M10 - AVZC200601AA
171	0130M00187	TRANSFORMER	M11 - AVZC200601AB
NS	3EA74081-1	CURRENT SENSOR, CHR-6Z-E-X (M10, M11, M12)	M12 - AVZC200601AC
NS	3P263839-1	FERRITE CORE	
NS	0163M00075	FLANGE NUT, SERRATED	
NS	0154R00018	GASKET - MOUNTING PANEL (M1, M2, M3, M4, M5, M6, M7, M8, M9)	
NS	0154R00019	GASKET - MOUNTING PANEL (M1, M2, M3, M4, M5, M6, M7, M8, M9)	
NS	0154R00024	GASKET, CONTROL PANEL (M10, M11, M12)	
NS	0154R00025	GASKET, CONTROL PANEL (M10, M11, M12)	
NS	0163M00092	SCREW, HWH, 10-24X.500,BZ,SLOT	
NS	0130M00571	Shared data (M1, M2, M3)	
NS	0130M00572	Shared data (M4, M5, M6)	
NS	0130M00573	Shared data (M7, M8, M9)	
NS	0130M00574	Shared data (M10, M11, M12)	
NS	117269J	THERMAL GREASE	
NS	3P381575-1	THERMISTOR ASSY	
NS	0130M00210	WIRE HARNESS (M4, M5, M6, M7, M8, M9)	
NS	0130M00211	WIRE HARNESS (M4, M5, M6, M7, M8, M9)	
NS	0130M00212	WIRE HARNESS (M10, M11, M12)	
NS	0130M00213	WIRE HARNESS (M10, M11, M12)	
NS	0130M00214	WIRE HARNESS (M10, M11, M12)	
NS	0130M00215	WIRE HARNESS (M10, M11, M12)	
NS	0130M00217	WIRE HARNESS (M10, M11, M12)	
NS	0130M00218	WIRE HARNESS (M10, M11, M12)	
NS	0130M00219	WIRE HARNESS (M10, M11, M12)	
NS	0130M00220	WIRE HARNESS (M1, M2, M3)	
NS	0130M00221	WIRE HARNESS (M1, M2, M3)	
NS	0130M00222	WIRE HARNESS (M1, M2, M3)	
NS	0130M00223	WIRE HARNESS (M1, M2, M3, M4, M5, M6, M7, M8, M9)	
NS	0130M00227	WIRE HARNESS	
NS	0130M00188	WIRE HARNESS ASSY (M4, M5, M6, M7, M8, M9)	
NS	0130M00189	WIRE HARNESS ASSY (M10, M11, M12)	
NS	0130M00194	WIRE HARNESS ASSY (M1, M2, M3)	
NS	0130M00195	WIRE HARNESS ASSY (M4, M5, M6, M7, M8, M9)	
NS	0130M00201	WIRE HARNESS ASSY (M10, M11, M12)	
NS	0130M00202	WIRE HARNESS ASSY (M10, M11, M12)	
NS	0130M00206	WIRE HARNESS ASSY (M1, M2, M3)	
NS	0130M00225	WIRE HARNESS ASSY (M10, M11, M12)	

Top and Side Panel Assy



Top and Side Panel Assy

Ref. Part No:	Ref. Part No:	Description:	Description:
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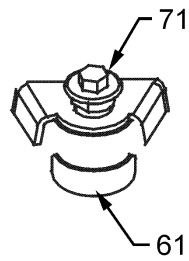
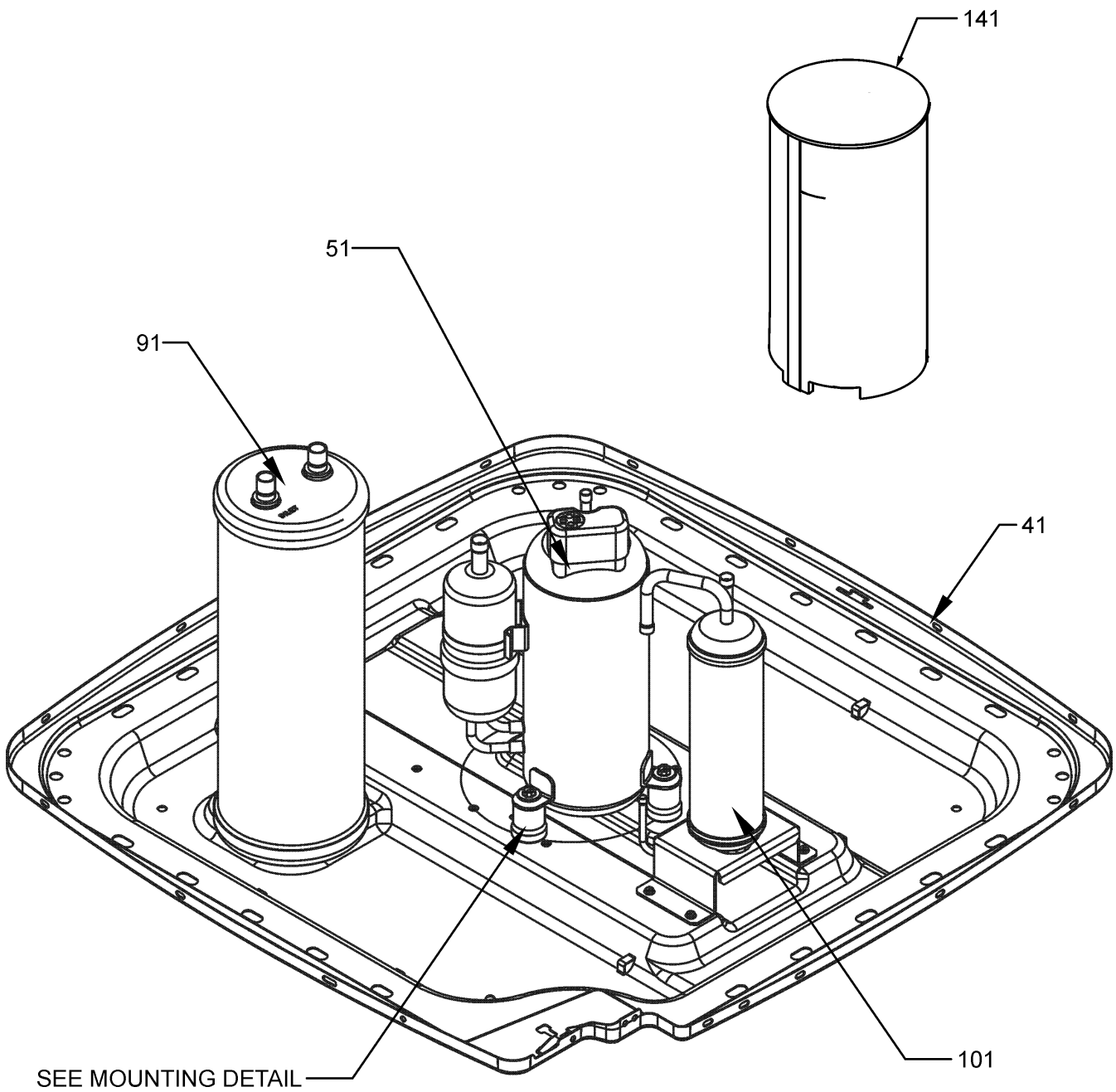
Image 1:

11	0121R00013PDG	PANEL, VENTURI 35"
21	0152R00014	GRILLE, WIRE 35" TOP
31	3P356931-1	FAN MOTOR
41	M0280801	HEX NUT (QTY 4)
51	10625738	FAN BLADE 26" ALUM CCW
71	0163M00003P	SCREW #10 X 1/2, A, SLOT, SR, BLACK (QTY 8)
91	0163M00221	CONDUIT, FLEXIBLE
111	0121R00363LGB	PANEL 1, BENT LOUVER ASSY (M1, M2, M3)
111	0121R00513LGB	PANEL 1, BENT LOUVER ASSY (M4, M5, M6, M7, M8, M9, M10, M11, M12)
121	0121R00364LGB	PANEL 2, BENT LOUVER ASSY (M1, M2, M3)
121	0121R00514PLGB	PANEL 2, BENT LOUVER ASSY (M4, M5, M6, M7, M8, M9, M10, M11, M12)
131	0121R00365LG	PAINTED LOUVER PANEL 3 ASSY (M1, M2, M3)
131	0121R00515LG	PAINTED LOUVER PANEL 3 ASSY (M4, M5, M6, M7, M8, M9, M10, M11, M12)
141	0201R00505	COIL TBG, 36.38xL, 22mm CTC (M1, M2, M3)
141	0201R00550	COIL TBG, 39.85xL, 22mm CTC (M10, M11, M12)
141	0201R00508	COIL TBG, 39.85xL, 22mm CTC (M4, M5, M6, M7, M8, M9)
NS	0121R00480	ADAPTER PLATE (M1, M2, M3)
NS	0121R00482	ADAPTER PLATE (M4, M5, M6, M7, M8, M9, M10, M11, M12)

Expanded Model Nomenclature

- | |
|--------------------|
| M1 - AVZC200241AA |
| M2 - AVZC200241AB |
| M3 - AVZC200241AC |
| M4 - AVZC200361AA |
| M5 - AVZC200361AB |
| M6 - AVZC200361AC |
| M7 - AVZC200481AA |
| M8 - AVZC200481AB |
| M9 - AVZC200481AC |
| M10 - AVZC200601AA |
| M11 - AVZC200601AB |
| M12 - AVZC200601AC |

Base Pan and Compressor Assy



MOUNTING
DETAIL

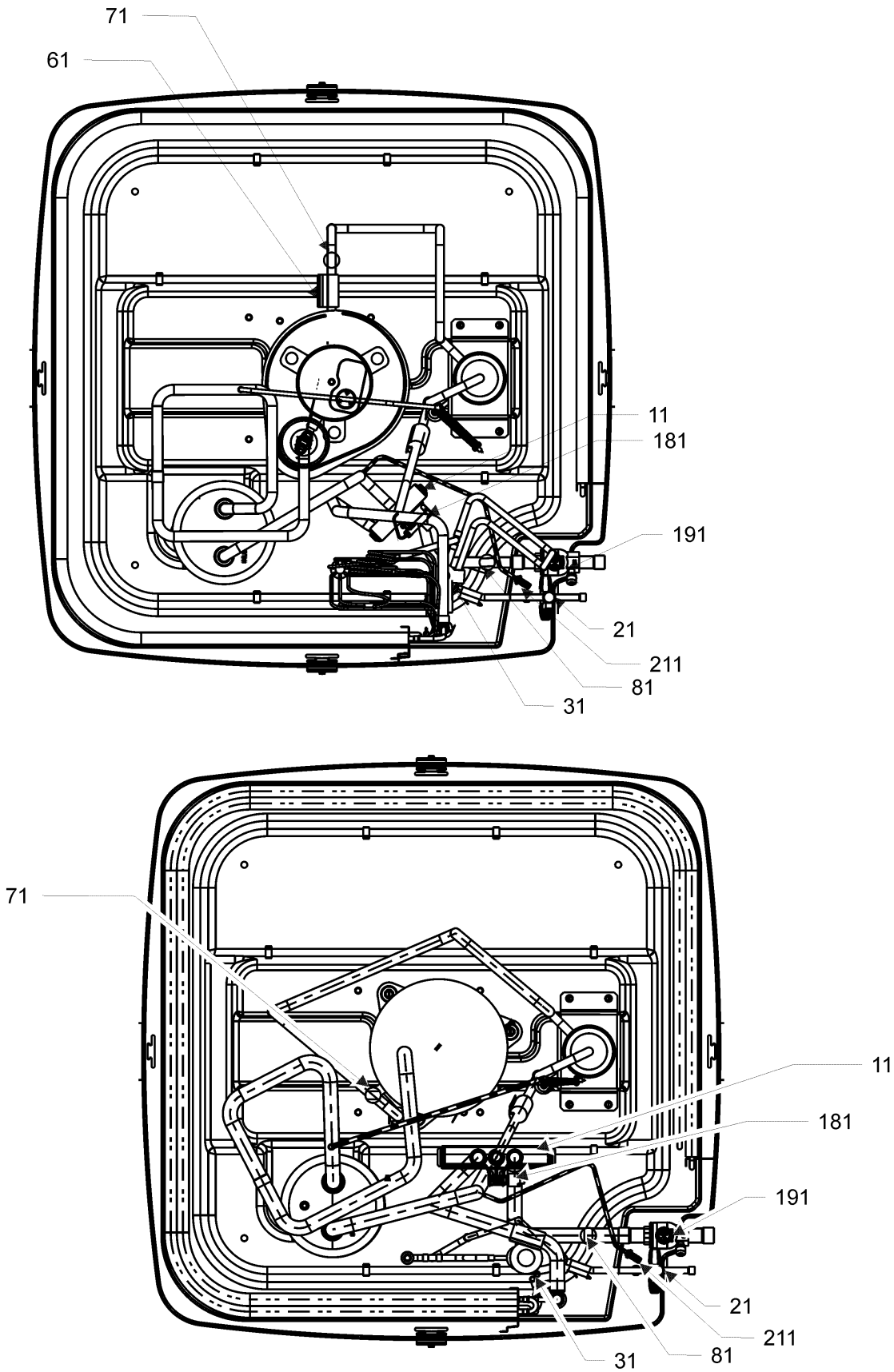
Base Pan and Compressor Assy

Ref. Part No:	Ref. Part No:	Description:	Description:
Image 1:			
41	0121R00007PDG	BASE PAN, 35.5"	
51	0156R00006	COMPRESSOR 2YC36MXD (M1, M2, M3)	
51	0156R00008	COMPRESSOR 2YC90FXD (M4, M5, M6, M7, M8, M9)	
51	0156R00005	COMPRESSOR JT100GCVDW@SB (M10, M11,	
61	0164M00027	RUBBER GROMMET (M4, M5, M6, M7, M8, M9, M10, M11, M12)	
61	0164M00028	RUBBER GROMMET (M1, M2, M3)	
71	0163R00018	SCREW-SHOULDER TF (M4, M5, M6, M7, M8, M9, M10, M11, M12)	
71	0163R00020	SCREW-SHOULDER TF (M1, M2, M3)	
91	0151L00019	ACCUMULATOR (M1, M2, M3)	
91	0151L00020	ACCUMULATOR (M4, M5, M6, M7, M8, M9)	
91	0151L00021	ACCUMULATOR (M10, M11, M12)	
101	3P357142-1	OIL SEPARATOR	
141	0160M00007	COMPRESSOR BLANKET (M1, M2, M3)	
141	0160M00008	COMPRESSOR BLANKET (M4, M5, M6, M7, M8, M9)	
141	0160M00009	COMPRESSOR BLANKET (M10, M11, M12)	
NS	0163R00023	ACCUMULATOR, NUT	
NS	0159R00012	COMPRESSOR WIRE HARNESS (M1, M2, M3)	
NS	0159R00013	COMPRESSOR WIRE HARNESS (M4, M5, M6, M7, M8, M9)	
NS	0159R00014	COMPRESSOR WIRE HARNESS (M10, M11, M12)	
NS	3P130357-15	CRANKCASE HEATER (M10, M11, M12)	
NS	R3269031-3	FILTER, OIL SEPARATOR (M1, M2, M3, M4, M5, M6, M7, M8, M9)	

Expanded Model Nomenclature

M1 - AVZC200241AA
M2 - AVZC200241AB
M3 - AVZC200241AC
M4 - AVZC200361AA
M5 - AVZC200361AB
M6 - AVZC200361AC
M7 - AVZC200481AA
M8 - AVZC200481AB
M9 - AVZC200481AC
M10 - AVZC200601AA
M11 - AVZC200601AB
M12 - AVZC200601AC

Tubing Assy



Tubing Assy

Ref. Part No:	No:	Description:	Ref. Part No:	No:	Description:
Image 1:					
11	0151R00099	REVERSING VALVE (M1, M2, M3)			
11	0151R00101	REVERSING VALVE (M4, M5, M6, M7, M8, M9, M10, M11, M12)			
21	0151R00078	3/8" SERVICE VALVE (M10, M11, M12)			
31	3P381420-1	EV COIL (M4, M5, M6, M7, M8, M9, M10, M11, M12)			
31	3P381421-1	EV COIL (M1, M2, M3)			
61	4PA17856-4	THERMISTOR HOUSING TUBE			
71	3P381424-2	HIGH PRESSURE SWITCH			
81	3S481010-1	PRESSURE SENSOR			
181	0130M00224	REVERSING VALVE CABLE			
191	0151R00097	3/4" BALL VALVE (M1, M2, M3)			
191	0151R00081	7/8" BALL VALVE (M4, M5, M6, M7, M8, M9, M10, M11, M12)			
211	B1787000	VALVE CORE			
NS	3SA27018-1	CHECK VALVE (M1, M2, M3)			
NS	4SA27006-1	CHECK VALVE			
NS	4SA27011-1	CHECK VALVE (M4, M5, M6, M7, M8, M9)			
NS	4PA38890-1	MOUNTING SPRING, THERMISTOR (QTY 4)			
NS	R3269031-7	OIL RETURN FILTER (QTY 2)			
NS	3S500031-1	Pulse Motor Expans EEV (M4, M5, M6, M7, M8, M9, M10, M11, M12)			
NS	3S500032-1	Pulse Motor Expans EEV (M1, M2, M3)			
NS	4PA55176-1	WATER PROOF CAP			

Expanded Model Nomenclature

M1 - AVZC200241AA
M2 - AVZC200241AB
M3 - AVZC200241AC
M4 - AVZC200361AA
M5 - AVZC200361AB
M6 - AVZC200361AC
M7 - AVZC200481AA
M8 - AVZC200481AB
M9 - AVZC200481AC
M10 - AVZC200601AA
M11 - AVZC200601AB
M12 - AVZC200601AC