

Parts List/Service Manual

## **HV04 - HV07 Models (ACS)**

**Stationary Air Compressors**





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# 1 Introduction

## 1.1 About this Publication

This publication contains parts lists and service information, please read it carefully before you attempt to service or carry out adjustments on the compressor.

This publication should be used in conjunction with the User Handbook.

If you need any specialist help or service, please contact your distributor or CompAir UK Ltd quoting the MODEL, TYPE and SERIAL NUMBER.

## 1.2 Product development

CompAir UK Ltd adopt a policy of continual product development. The information in this handbook, whilst fully up to date when issued, may be subject to change without notice.

## 1.3 Quality standards

**Note:** These instructions comply with the latest European Directives regarding content and are valid for machines carrying the CE mark.

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## 1.4 Model range

This handbook relates to all HV04 - HV07 compressors, model types:

<b>HV04 - HV07</b>
V04ACS07-4035D000
V04ACS010-4035D000
V05ACS07-4035D000
V05ACS10-4035D000
V07ACS07-4035S000
V07ACS10-4035S000
V07ACS07-4035V000
V04ACS07-2336D005
V05ACS07-2336D005
V05ACS10-233D005
V07ACS07-2336D005
V07ACS10-2336D005

This publication refers to compressors with serial numbers:

V04-000001  
V05-000001  
V07-000001

## 1.5 Terminology:

<b>Serial Number Segment</b>	<b>Signifies</b>
V	Vane
04, 05, 07	kW motor
AC	Air Centre
S	Standard Control
07, 10	Delivery pressure in bar
40	400, volt
3	3 phase
5, 6	50Hz, 60Hz
D, S, V	Direct On Line, Star/Delta, Variable Speed
000	European specification (50Hz)
005	American specification (60Hz)

1.6 Ownership Records

Model Number:	.....	Serial Number:	.....
R.P.M:	.....	kW:	.....
Maximum Bar:	.....		

1.7 Local CompAir UK Ltd Distributor

Name:	.....	Contact:	.....
Address:	.....	Telephone:	.....
	.....	Fax:	.....
	.....	Email:	.....

## 1.8 Service Kits

Only use genuine CompAir UK Ltd parts and approved oils.  
Oils must not be mixed.

### Service kits contents

Item	Part Number	Quantity	Description	Chapter Location
<b>KO457 Kit Oil Change</b>				
	75155	2	Air filter element	
	75279	2	Oil Filter	
	9824	2	'O' Ring	
	9617	2	Bonded Seal 5/8"	

Item	Part Number	Quantity	Description	Chapter Location
<b>KM 457 Main Service Kit, 4000 hours or 2 years</b>				
	9613	2	'O' Ring	
	75246	2	Quadralip Seal	
	75230	2	Unloader Valve Seat	
	75021	2	Spring	
	75099	2	'O' Ring	
	9609	2	Bonded seal	
	57596	2	Vacuum valve seal	
	9705	2	'O' Ring	
	9704	2	'O' Ring	
	9706	2	'O' Ring	
	0071	2	MPV seat	
	9711	2	'O' Ring	
	9619	2	Bonded seal	
	98262-214	2	Separator cartridge	
	9708	2	'O' ring	
	75205	2	Barrel coupling	
	75202	2	Sintered filter	
	75022	2	Thermal by-pass valve and spring	
	75155	2	Air filter element	
	75279	2	Oil filter	
	9617	2	Bonded seal 5/8"	
	9824	2	'O' Ring	
	9708	2	'O' Ring	
<b>KT457 Top-up Kit</b>				
	9722	2	'O' Ring	
	2056	2	Shaft Key	
	50054	2	Safety Valve 150psi/(175psi Part # 50053)	
	34774	2	Stator shim pack	
	75331-01	2	Stator shim L 4K	
	75331-02	2	Stator shim L 4K	
	75332-01	2	Stator shim U 4K	
	75332-02	2	Stator shim U 4K	
	75333-01	2	Stator shim L 4K	
	75333-02	2	Stator shim L 4K	

	75334-01	2	Stator shim U 4K	
	75334-02	2	Stator shim U 4K	
	34775	2	Stator shim pack	
	75327-01	2	Stator shim L5	
	75327-02	2	Stator shim L5	
	75328-01	2	Stator shim U5	
	75328-02	2	Stator shim U5	
	75329-01	2	Stator shim L5	
	75329-02	2	Stator shim L5	
	75330-01	2	Stator shim U5	
	75330-02	2	Stator shim U5	
	34776	2	Stator shim pack	
	75323-01	2	Stator shim L7	
	75323-02	2	Stator shim L7	
	75324-01	2	Stator shim U7	
	75324-02	2	Stator shim U7	
	75325-01	2	Stator shim L7	
	75325-02	2	Stator shim L7	
	75326-01	2	Stator shim U7	
	75326-02	2	Stator shim U7	
	9810	2	'O' Ring	
	9708	2	'O' Ring	
	74610	2	Oil Seal	
	9810	1	'O' Ring	
	75099	2	'O' Ring	
	9831	2	'O' Ring	
	9606	2	Bonded Seal 1/8"	
	75034	2	Unloader Valve Spring	
	58117	2	Sight Level Glass	
	9754	2	'O' Ring	
	9750	2	'O' Ring	
	74381	2	'O' Ring	
	9712	2	'O' Ring	

**Note:** Spare parts to be stored in original packaging and in a dry environment. Repaired or replacement units should be protected against corrosion and mechanical damage during storage.

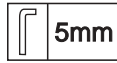
## 1.9 Key to symbols used



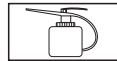
Torque Setting Nm.



Spanner Require (mm) A/F

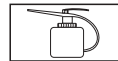
Grease Required  
(Specification)

Allen Key Required (mm)

Loctite Required and  
Specification Number

Lubricate With Sump Oil

## Recommended Oils



Fluid Force 2000

Fluid Force HPO

Fluid Force Clear

## Recommended Grease



Silkolene

Motor Grease

Esso Unirex N3

Shell Albida R2

Shell Nerita HV

SKF LGHQ3

Castrol Optimol PD2

**Note:** Do not mix oils.

## 1.10 Torque Settings

Listed below are recommended torque settings.

**Note:** Torque settings must be applied when indicated.

Torque Settings	
Thread size (mm)	Setting (Nm)
6	15
8	35
10	60
12	95
16	160
42	400

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## 2 Adjustments and Testing

### 2.1 Minimum Pressure Valve (Fig. 1)

**Note:** 10 bar machine details are in brackets.

- (a) Start compressor.
- (b) Open outlet valve fully to atmosphere with silencer fitted.
- (c) Check the lowest pressure gauge reading obtainable. This should be 5.5 - 6.6 bar.
- (d) Adjust pressure by using the adjusting screw ( C ).

### 2.2 Safety Valve Lift Pressure (Fig. 1)

- (a) Close outlet valve. Start compressor (continuous run).
- (b) Screw in servo until safety valve (B) lifts. Gauge pressure should be 10 bar (7 bar models) or 12 bar (10 bar models).
- (c) If lift pressure is incorrect, replace the valve complete.

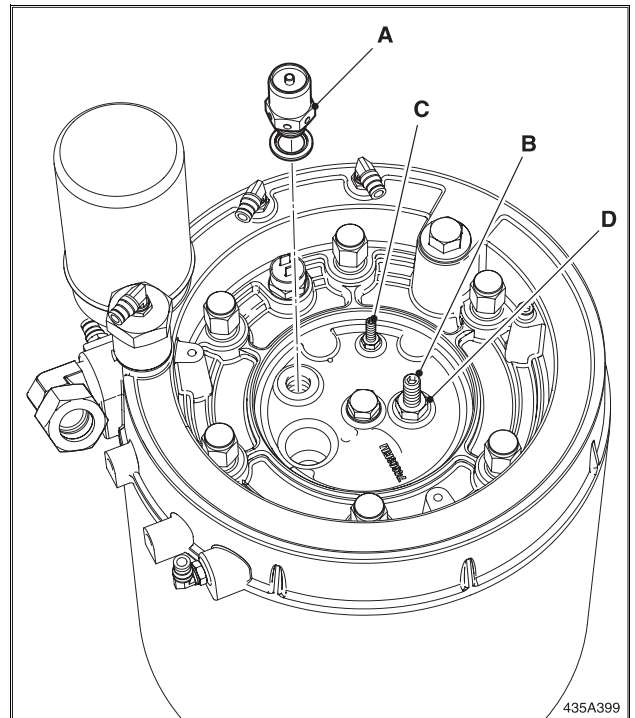
### 2.3 Servo Valve (Fig. 1)

The servo valve controls pressure at a pre-set factory setting when there is no demand for air. The specified setting is a **maximum** and must not be exceeded.

Factory setting 7 or 10 bar models :- 7.5 to 8.0 bar or 10.5 to 11.0 bar.

If the servo needs minor adjustments or a lower pressure is required then carry out the following procedure:

- (a) Turn mains electrical supply on at isolator.
- (b) Close air outlet valve to air-line system and open test valve.
- (c) Fit silencer to test valve.
- (d) Select continuous run mode and start compressor.
- (e) Adjust test valve so that the air-end pressure gauge reads approx 7 bar (10 bar) and allow compressor to warm up.
- (f) After approximately 10 minutes, close the test valve and stop compressor.
- (g) Remove air filter cover.
- (h) Release servo lock-nut.
- (i) Check test valve and air outlet valve are closed.
- (j) Start compressor and allow pressure to stabilise.
- (k) Check compressor pressure gauge reading:  
If reading too low, turn grub-screw (B) clockwise to increase pressure.  
**Note:** Must not exceed 8.0 bar (11.0 bar).  
If reading too high or a lower operating pressure is required, turn grub-screw (B) counter-clockwise to decrease pressure.
- (l) Open and close the test valve and check that pressure stabilises at required setting.
- (m) Secure lock-nut (D).
- (n) Refit air filter and cover.



**Fig. 1 - Minimum Pressure, Vacuum and Servo Valves**

## 2.4 Oil Temperature

- Introduce a very small amount of oil and a thermometer into the horizontal thermometer pocket.
- Allow compressor to run for 30 minutes in order to attain its normal working temperature.
- Average running temperature should be 80°C approx.
- Refit filler plug and its seal when testing is completed.
- Average running temperature should be approximately 50°C above ambient.

## 2.5 Air Output (Fig. 2)

- Screw test nozzle into compressor outlet valve.
- Close outlet valve and start compressor.
- Open outlet valve fully to atmosphere.
- Pressure indicated on the compressor gauge should not fall below 6.5 bar (9.5 bar).
- Test nozzle diameter must be reamed to a tolerance of  $\pm 0.025$  mm.

## 2.6 Leakage Check

- Examine all external seals, joint and pipe connections for air or oil leakage.
- No leaks are permissible.

## 2.7 Setting the Run-On Timer (located in Starter Box)

- The run-on timer sets the required duration of off-load running after which the compressor will stop.
- The timer is factory preset to 3 minutes standard control, 3 minutes electronic control, below 3 minutes constant run, but may be reset to suit the individual air system.

**Note:** Do not set the timer to less than 2 minutes.

- For guidance, each division between the marks S (short delay) and L (long delay) on the timer, represents approximately one minute delay time.

## 2.8 Testing Vacuum Relief Valve (Fig. 1)

- Close the air outlet tap and start the compressor, open and close the outlet valve while listening for any blade noise (rattle), close the outlet tap and stop the compressor.
- If noise is detected re-setting is probably necessary, remove top and front panel covers and remove the air intake filter complete with support by removal of three MS706-16 screws.
- Slacken the locknut and turn the adjusting screw clockwise fully in, do not tighten, unscrew anti-clockwise half a turn, just sufficient to eliminate any minor blade noise.
- Cooling fan has over temperature protection (160°C) in circuit and will stop the compressor, each phase of the fan is protected by 2Amp fuses.

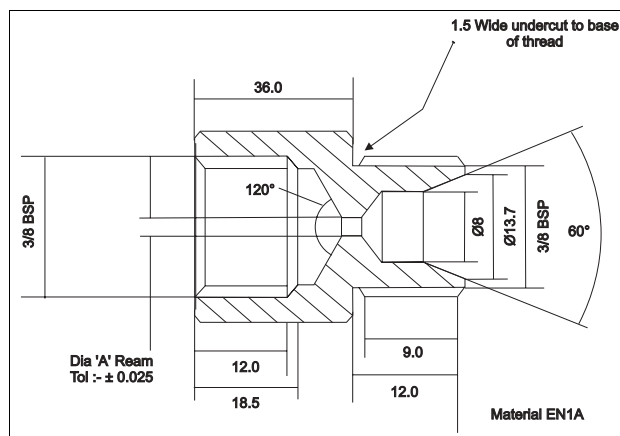


Fig. 2 - Test Nozzle 59636-00

Nozzle orifice Dia 'A'	Model	Bar	C.F.M.
No Sizes	HV04	7	TBA
No Sizes	HV04	10	TBA
3.52-01	HV05	7	29
2.69-02	HV05	10	23.6
4.03-03	HV07	7	38
3.11-06	HV07	10	31.5

## 2.9 RS Speed Compressors

### Target Pressure Setting

The system target pressure may be adjusted by pressing the 'up' arrow on the keypad to increase pressure or 'down' arrow to decrease pressure. The pressure is indicated on the keypad LED display; with the required pressure in view press the FUNC/DATA key to store.

### Speed control unit frequency setting

If the default factory pressure setting is altered the compressor motor maximum speed must also be adjusted. Operating at too high a maximum speed may result in an electric motor overload condition. Refer also to user warning above.

- Ensure that power is available at the compressor.
- If amber reset lamp 'r' is illuminated press reset button '1'.
- Turn the selector switch from position '1' to position '0'.
- Unlock keypad (see below).
- Press PRG key to obtain the program menu.
- Select program 2 (Data check) using Up/Down keys.
- Select function F03 using Up/Down keys.
- Press the Function/Data key to select the frequency (Hz) setting.
- The current frequency setting will be displayed in the LCD monitor window. Note that the right hand digit will be flashing.
- Press the Up/Down key to decrease or increase the frequency setting. Refer to chart below.
- Press the Function/Data Select key to store the new setting.

- (l) Press PRG key to return to the LED monitor.
- (m) Press the Function/Data Select key until the required LED display appears, e.g. motor speed.
- (n) Re-lock keypad (see below).

**Unlocking keypad**

- (a) Press PRG key to obtain the program menu.
- (b) Select program 2 (Data check) using Up/Down keys.
- (c) Select function code F00.
- (d) Function/Data key will highlight a value of 1.
- (e) Change value 1 to 0 by pressing the Down and Stop keys together.
- (f) Press the Function/Data key to store.

**Re-locking keypad**

- (a) Press PRG key to obtain the program menu.
- (b) Select program 2 (Data check) using Up/Down keys.
- (c) Select function code F00.
- (d) Function/Data key will highlight a value of 0.
- (e) Change value 0 to 1 by pressing the Down and Stop keys together.
- (f) Press the Function/Data key to store.

**Continuous running option**

If the flow demands of the system result in continual and rapid stopping and starting of the motor the compressor speed control unit may be set to continuous running as follows:

- (a) Ensure that power is available at the compressor.
- (b) If amber reset lamp 'r' is illuminated press reset button '1'.
- (c) Turn the selector switch from position '1' to position '0'.
- (d) Unlock keypad (see above).
- (e) Press PRG key to obtain the program menu.
- (f) Select program 2 (Data check) using Up/Down keys.
- (g) Select function F16 using Up/Down keys.
- (h) Press the Function/Data key.
- (i) Press the Up/Down key to select value '35'.
- (j) Press the Function/Data Select key to store the new setting.
- (k) Press PRG key to return to the LED monitor.
- (l) Press the Function/Data Select key until the required LED display appears, e.g. motor speed.
- (m) Re-lock keypad (see above).

**Note:** If this option is selected the compressor will continue to operate under speed control achieving energy savings compared with single speed compressor operating at part load.

**Maximum pressure/frequency combination settings**

Compressor model	Target pressure	Max output frequency	Synchronous speed	Nominal off load Servo pressure
HV07RS	7	65	2010	8 bar
HV07RS	8	61	1890	9 bar
HV07RS	9	57	1770	10 bar
HV07RS	10	53	1650	11 bar

\* Factory settings

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## 3 Fault Finding

### WARNING !

#### READ HEALTH AND SAFETY PRECAUTIONS BEFORE YOU START ANY SERVICE WORK.

Servicing of the compressor must only be carried-out by authorised persons fully trained and competent in the maintenance of CompAir UK Ltd compressors. They must fully understand and adopt correct and safe working practices.

Text in Light Green (Greyed out) is not applicable to these machine models.

3.1 System Pressure Low					
Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Demand exceeds capacity	Air leaks in air-line system	Audible check for air leaks or time pressure decay		Identify and rectify leaks
			Compressor too small		
2	Low output from compressor				See B

3.2 Low or No Air Delivery					
Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Compressor not rotating	Motor not running	Visual check of cooling fan	Electrical supply failure	Restore supply
				System pressure switch fault	Repair pressure switch
		Drive coupling failure	Remove grommet from bell housing and visually check coupling	Mechanical breakdown	Replace coupling
2	Compressor rotating in reverse		Visual check of cooling fan against direction arrow on compressor	Motor wiring reversed	Correct motor direction (Note that compressor will be damaged if run in the wrong direction.)
3	Motor speed low		Check motor speed with optical tachometer	Electrical supply fault	Check speed and rectify supply
4	Intake filter blocked	Heavy contamination	Dismount intake filter and check for presence of excessive dirt	Environmental conditions	Replace air filter
				Maintenance failure	Replace air filter
5	Safety valve lifting		Check for short loud pressure release from behind air filter and oil on air filter		See G
6	Minimum pressure valve closed	Adjustment incorrect	Read pressure gauge and follow adjustment procedure	Service error or Spring wear	Adjust MPV
		Valve jammed	Read pressure gauge. If no output from compressor, remove MPV and examine	Mechanical failure	Replace MPV
7	Servo set too low	Adjustment incorrect	Follow adjustment procedure. If rated pressure cannot be achieved inside compressor, remove and change spring	Service error	Adjust servo
		Servo spring worn or broken	Check length against new spring		Replace spring and adjust
8	Oil separation system blocked	Separator element blocked	Read pressure gauge. If 1 bar, replace spin on separator	Contamination	Replace separator and return canister
		Separator flooded with oil	Read pressure gauge. If 1 bar, replace spin on separator	Oil return restrictor blocked	Replace separator and return restrictor
9	Rotor blades not extended	Blades stuck in rotor	Compressor will run very quietly without producing air and no air will be sucked in through inlet	Oil too thick	Check/replace oil

**3.2 Low or No Air Delivery**

			Remove intake end cover to inspect condition of rotor and blades	Blades seized	Free blades/slots
10	Internal air leaks in compressor	Shim breakdown	Dismantle compressor to examine rotor/stator unit		Check temperature, flow and power
					Replace stator shims

**3.3 High Temperature**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Oil level low	Incorrectly filled			Drain and replace oil to sight glass
		Oil leaks	Visually check for external oil		Repair leaks, drain and fill with new oil
		Oil carryover	Check downstream equipment for signs of oil contamination		See D
2	Dirty/blocked cooler matrix		Visually examine cooler matrix for excessive dirt		Clean cooler, drain and fill with new oil
3	Thermal bypass failure	Damaged thermal motor	Remove thermal motor and examine. If wax has leaked or piston rod is loose, it must be replaced. Check function of piston in hot water @ 90°C		Replace thermal motor, drain and fill with new oil
4	Dirty/blocked Oil filter	Oil contamination	Remove filter and visually check condition		Drain oil, clean filter, fill with fresh oil
5	Incorrect oil	Service error	Remove sample and compare with correct oil or check source		Drain, flush, drain, fill with fresh oil
6	Internal air leakage	Damaged shims	Dismantle compressor to examine rotor/stator unit		Dismantle and replace
7	Blocked internal oil passageways	Hydrocarbon deposits	Dismantle compressor to examine oil passageways	High temperature oil	Dismantle, clean and rebuild

**3.4 Excessive Oil Consumption**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Oil leaks		Visually check for external oil		Identify source and rectify
2	Compressor running at Minimum pressure		Fit pressure gauge in test point and check internal running pressure	Excessive air demand	Rectify system leaks
3	Incorrect oil	Service error	Remove sample and compare with correct oil or check source		Drain, flush, drain, fill with fresh oil
4	Oil carryover	Flooded or broken separator	Check downstream equipment for signs of oil contamination. Remove oil return restrictor plug and check if blocked		If restrictor plug is blocked, remove and replace separator elements and oil return restrictors
5			Remove separator and examine.		If separator element is faulty, replace separator element, oil return restrictor, and change oil

**3.5 Oil Mist From Air Intake When Stopping and/or Rapid Venting**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Unloader valve seats damaged		Remove air filter and support and observe where mist exits when machine is stopping		Replace damaged seats

**3.5 Oil Mist From Air Intake When Stopping and/or Rapid Venting**

2	Unloader valve body worn		Remove air filter and observe where mist exits when machine is stopping		Replace unloader valve body
3	Vacuum valve seal leaking		Remove air filter and observe where mist exits when machine is stopping		Replace vacuum valve seal/gasket
4	Servo valve leaking		Remove air filter and observe where mist exits when machine is stopping		Replace servo valve

**3.6 Unusual Noise or Vibration During Running**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Vacuum valve incorrectly adjusted		Compressor makes rattling noise when running off load only		Adjust vacuum valve
2	Fan fouling cooler ducting		Visually check for interference		Check/realign ducting
3	Damaged/worn drive coupling		Remove grommet from bell housing and visually check coupling. Remove compressor from motor to verify		Check/replace motor coupling.
4	Motor bearing failure		Listen for rumbling or screaming noise from each end of motor. Remove compressor and rotate motor by hand to check for rough feeling		Check/replace motor bearings
5	Seized blade in slot		Listen for uneven popping noise from compressor under load. Remove intake end cover to check condition of blades		Check/free/replace blades

**3.7 Safety Valve Lifting**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Overpressure in compressor	Servo set too high	Read pressure gauge		Adjust servo
		Servo piston incorrectly assembled	Remove servo assembly and check orientation of piston		Reassemble servo and adjust
		Excessive Air intake during offload running	Read pressure gauge	Leaking vacuum valve	Replace vacuum valve
				Leaking bearing cap gasket	Replace end cap gasket
				Leaking unloader valve	Replace unloader valve seat
2	Faulty safety valve	Worn spring	Read pressure gauge in test point and check internal pressure when safety valve blows		Replace safety valve
		Damaged/worn seating	Fit pressure gauge in test point and check internal pressure when safety valve blows		Replace safety valve

**3.8 Slow/No Ventdown**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	Automatic Ventdown orifice blocked		Listen for air loss into intake area after stopping. Fit pressure gauge in test point to monitor vent down of pressure		Clean orifice

**3.9 Motor Overload or High Power Consumption**

Ref	Cause (Level 1)	Cause (Level 2)	Diagnosis	Cause (Level 3)	Action
1	High pressure setting		Fit pressure gauge in test point and check internal pressure		Check/adjust servo
2	Compressor overheating		Fit thermometer in oil filler pocket and check maximum temperature		See C
3	Faulty motor		Check impedance of motor windings		Check motor windings/ bearings repair or replace
4	Seized blade in slot		Listen for uneven popping noise from compressor under load. Remove intake end cover to check condition of blades		Check/free/ replace blades
5	Compressor rotor seizing	Rotor pushed against intake end cover	Remove compressor, dismantle and examine rotor and end cover. Check setting of coupling		Replace damaged parts
		Bearing seizing	Remove compressor, dismantle and examine rotor and bearings	Lubrication failure	Replace damaged parts



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## 4 Parts List

This section contains a list of parts and servicing information.

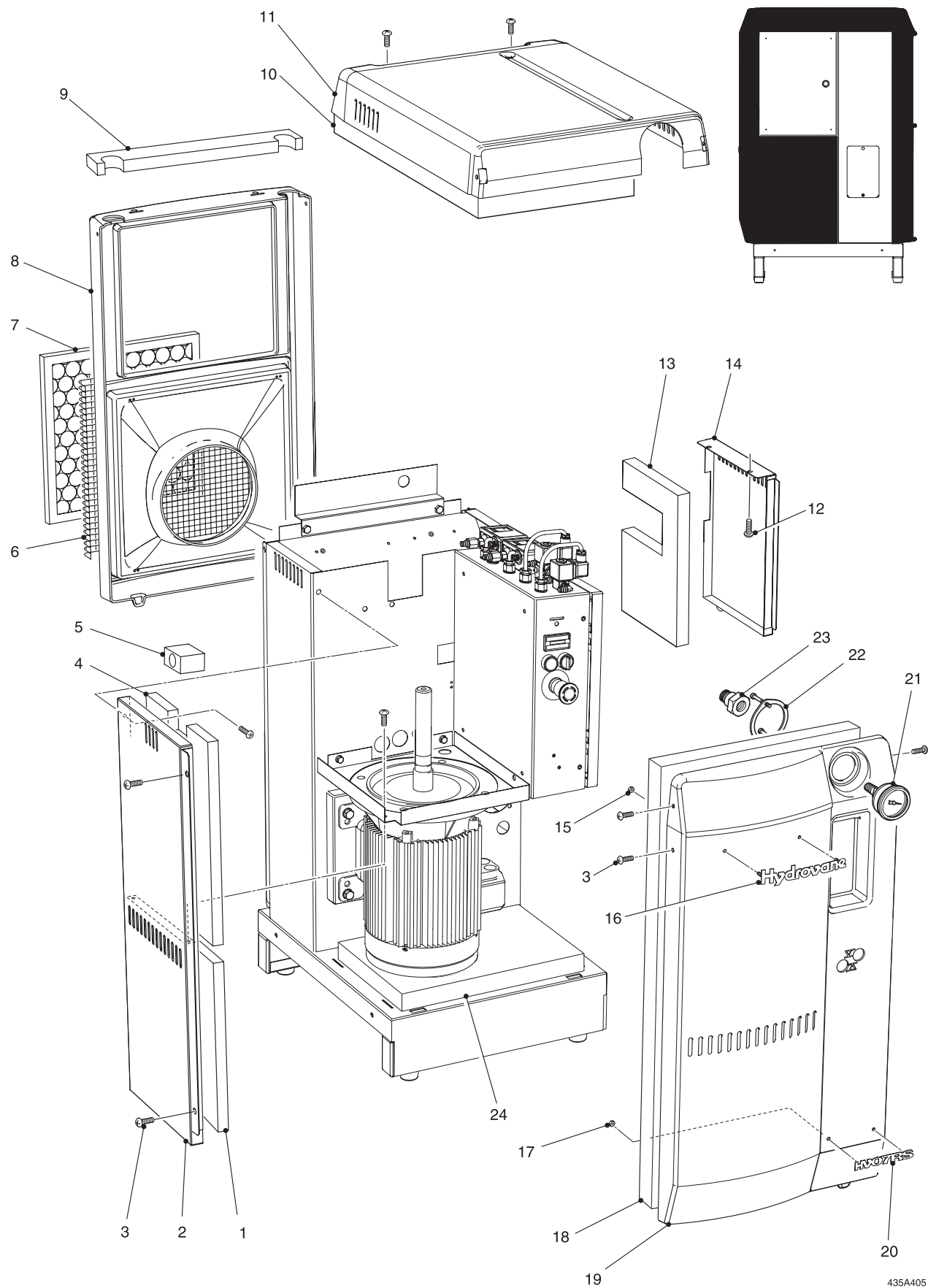
The illustrations used are from a HV07 machine (V07ACS07-4035S000), but will generally apply to all variations of the type. Where types and quantities differ, these are indicated.

## 4.1 Panels

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	75284	Foam Lh Panel		1			
2	75129	Panel Lh		1			
3	75232	Dzus Fastener		8			
4	75290	Foam Lh Panel Top		1			
5	75286	Foam Intake		1			
6	74890	Fan Guard		1			
7	74695	Cabinet Filter		1			
8	75134	Rear Cover		1			
9	75138	Foam Rear Cover		2			
10	75137	Foam Top Cover		1			
11	75135	Top Cover		1			
12	MS2106-12	M6 X 12 Poz Pan Hd Screw					
13	75285	Foam Rh Panel		1			
14	75130	Panel Rh		1			
15	MN1704	M4 Locknut		2			
16	75235	Logo 'hydrovane'		1			
17	MN1704	M4 Locknut		2			
18	75136	Foam Front Cover		1			
19	75133	Front Cover		1			
20a	75238	Model Number Badge 'hv04'			1		
20b	75237	Model Number Badge 'hv05'				1	
20c	75236	Model Number Badge 'hv07'					1
20d	75266	Model Number Badge 'hv07rs'					1
21	34404	Pressure Gauge assembly		1			
22	34404	Clamp & Screws		1			
23	73213	1/4 Rp - 6mm Push with female stud		1			
24	75240	Foam Plinth		1			

## 4.2 Panel Removal

Information not available at time of publication.



435A405

Fig. 3 - Panels

### 4.3 Air Intake End

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	74603	Intake Cover		1			
2	75099	'O' Ring		1			
3	MS 706-12	Cap screw M6 x 12		2			
4	MW6	M6 Washer - Heavy Gauge		1			
5	MCE4-8	Circlip External		1			
6	W3	3/16 Washer		1			
7	0071	MPV Seat		1			
8	71760	MPV Non Return Valve		1			
9	57842	MPV Piston		1			
10	57588	Spring		1			
11	9711	'O' Ring		1			
12	9619	Bonded Seal 3/4		1			
13	74620	MPV Housing		1			
14	58470	Adjusting Plug		1			
15	9750	Bonded Seal		1			
16	75210	Air separator Adapter		1			
17	98262-214	Air/oil separator cartridge		1			
18	75019	Air Filter Unit		1			
19	75155	Air filter element		1			
20	75017	Air Filter Adapter		1			
21	MS706-12	M6 x 12 Skt Head Screw		3			
22	75002	Filter Support		1			
23	9824	'O' Ring		1			
24	★	Refer to air pipes section		AR			
25	73283	1/4" x 6mm Push-in elbow		2			
26	★	Refer to air pipes section		1			

### 4.4 Changing the Air Filter

Refer to the User Handbook.

To enable the valve body to be fully inserted, spring pressure must be eased by fully unscrewing the adjuster (14).

Screw in adjuster (14) to an approximate depth of 12 mm.

### 4.5 Minimum Pressure Valve

Disconnect the vent-down pipe (24), and remove elbow (25).

**Note:** This is only a temporary setting. Further adjustments will be required (see Chapter 2 Adjustments & Testing) to obtain the correct minimum pressure setting. Elbow (25) and vent-down pipe (24) need not be fitted until testing is finished.

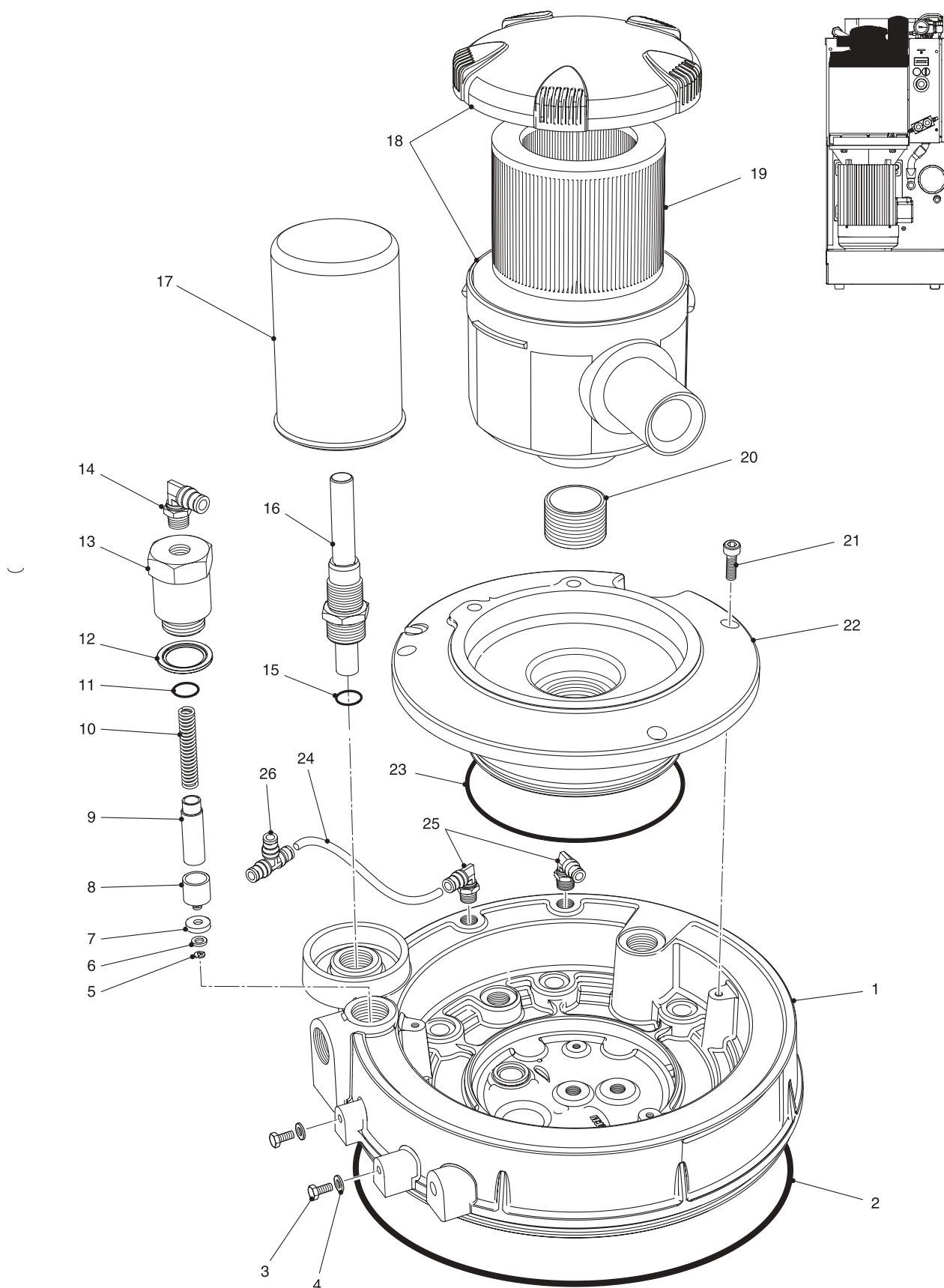
Before removing the valve body (13), unscrew the adjuster (14) to ease spring pressure.

Removal of non-return valve assembly (8) is simplified using long-nosed pliers.

Examine valve seat (7) for damage. Renew if necessary.

Renew 'O' ring (11). Silicon grease must be applied prior to fitting.

On assembly, fit spring (10), piston (9) and the non-return valve assembly (8) to the valve body, before inserting the valve body into its housing.



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Fig. 4 - Air Intake End

## 4.6 Air End

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	9831	'O' Ring		2			
2	74601	Non-drive-end Cover		1			
3	9708	'O' Ring		2			
4	75205	Barrel Coupling		1			
5	9613	'O' Ring		1			
6	52866	Filter					
7		?					
8	75246	Quadralip seal		1			
9	74611	Unloader Valve Piston		1			
10	74886	Unloader Spring Support		1			
11	MRP2.5-22	Roll Pin		1			
12	75021	Unloader Return Spring		1			
13	75034	Unloader Valve Spring		1			
14	74612	Unloader Valve Head		1			
15	75230	Valve Facing (was 0053)		1			
16	RO6000-329	Retaining Washer		1			
17	MS706-12	M6 x 12 Skt Head Screw		1			
18	75018	Servo Valve Plug		1			
19	56618	Servo Valve Piston		1			
20	71564	Servo Valve Spring		1			
21	74614	Servo Adjuster Plug		1			
22	9712	'O' Ring		3			
23	75258	Servo Sleeve		1			
24	59425-03	Taper Plug Brass 3/8		2			
25	74605	Stator Stud M12		6			
26							
27	9704	'O' Ring		1			

## 4.7 Servicing the Unloader Valve

Withdraw unloader valve assembly from housing.

Dismantle and clean the assembly.

Check seating washer (15) for damage, renew if necessary.

Ensure piston (9) works freely in the valve body.

**Note:** Screw nut (17) to bottom of thread.

Screw nut ( ) until it touches support ( ). Tighten until valve facing ( ) turns stiffly.

**Note:** Over tightening will distort item ( )

When inserting valve assembly use a slight turning action. This should overcome Quadralip seal resistance.

**Note:** Valve operates as an :

Inlet valve (stop/start machines)

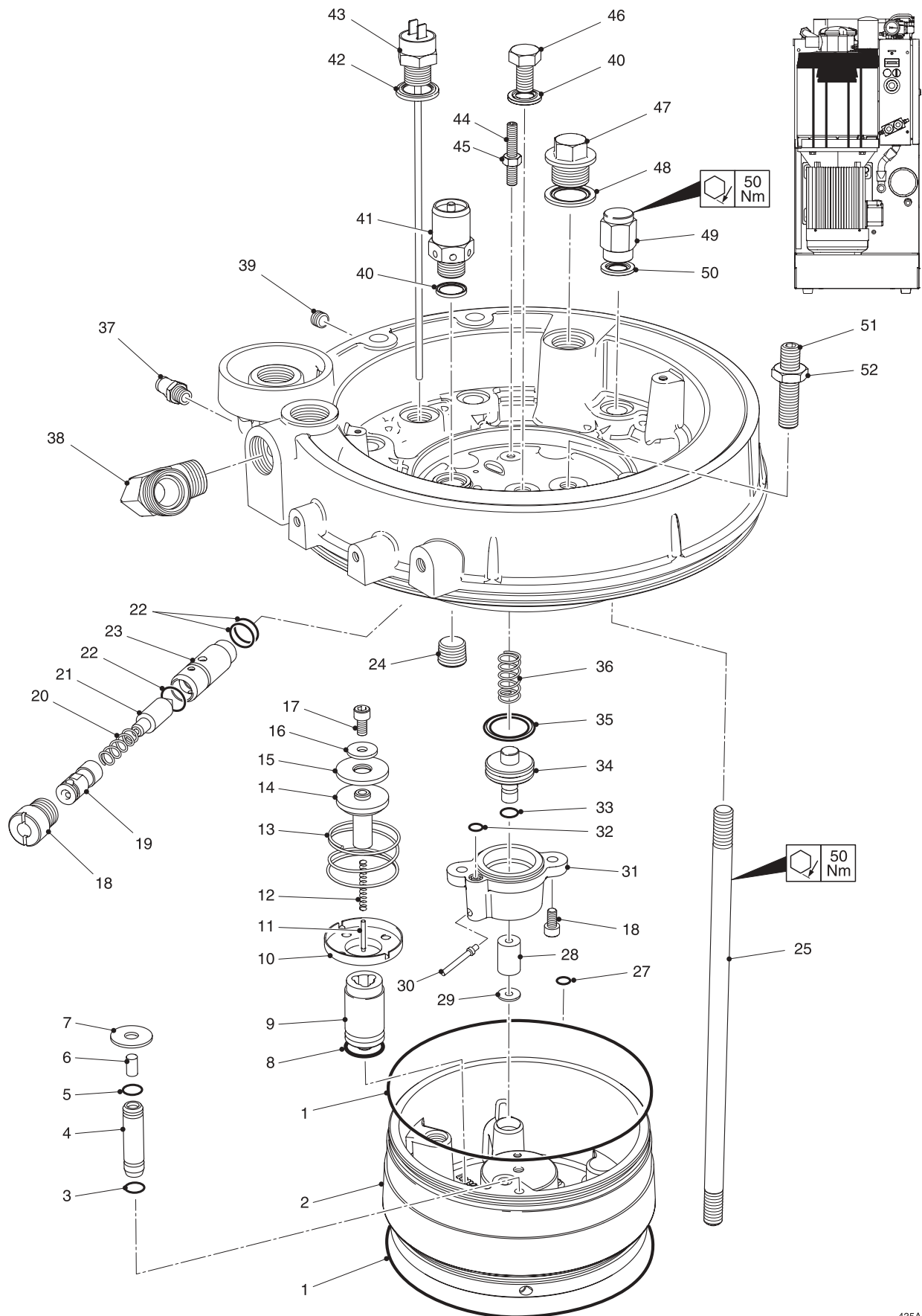
Inlet/unloader valve (continuous run machines)

## 4.8 Servicing the Servo Valve

Remove servo valve plug (18) and using the extractor tool, withdraw servo valve assembly from housing.

**Note:** The sleeve remains in the housing and requires a special tool to remove.

Dismantle and clean the assembly.



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Fig. 5 - Air End

## 4.9 Air End (Cont'd)

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
28	57596	Vacuum Valve Seat		1			
29	9706	'O' Ring		1			
30	58607	Avdel Seal 5mm		1			
31	74617	Vacuum Valve Housing		1			
32	9704	'O' Ring		1			
33	9705	'O' Ring		1			
34	74616	Vacuum Valve Piston		1			
35	57596	Vacuum Valve Seal		1			
36	RO2000-79	Spring		1			
37	73215	R1/8 - 6mm Push-in Elbow		3			
38	75885	Elbow		1			
39	MG1706-06	M6x6 LG SKT Set TLOC Grub Screw		1			
40a	9613	Bonded Seal 3/8		1			
40b	50053	Safety Valve 175PS (10 bar machines)		1			
41	50054	Safety Valve 150PS (7 bar machines)		1			
42	9609	Bonded Seal 1/4		1			
43	74974	Thermistor Probe		1			
44	MG706-40	M6 X 40 Grub Screw		1			
45	MN106	M6 Hexagon Nut		1			
46	MS112-20	Screw		1			
47	75020	Oil Filler Plug		1			
48	9617	Bonded Seal 5/8		1			
49	75001	Stator nut		1			
50	9609	Bonded Seal 1/4		1			
51	75000	Grub Screw M12 x 20		1			
52	MN212	M12 Thin Locknut		1			
	75312	Vacuum Valve insert					
	75313	Vacuum Valve stem					
	72118	Pressure Transducer					

Renew 'O' rings ( 1 ) on sleeve.

Removal and refitting of piston (19) is simplified using a threaded rod (1/4" B.S.F.) screwed in to the end of the piston.

Prior to assembly, ensure piston (19) is free from sharp edges and surface damage. Coat piston with APPROVED OIL and ensure that it slides freely within the bore (23). DO NOT USE GRINDING PASTE.

Piston must be inserted into the housing, cross-drilled end last.

Insert support ( ) and fit spring ( ) in end cap.

Ensure circlip ( ) is securely located in housing.

Nut ( ) should be left loose to enable setting of servo (see adj & test) when all servicing has been completed.

## 4.10 Testing

Remove air intake filter/filter support.

Close outlet valve and start compressor.

Slacken nut ( )

Adjust screw ( ) until gauge pressure indicates 7.5/7.8 (7 bar compressor) or 10.5/10.8 bar (10 bar compressor).

Tighten nut ( ) after adjustment, ensuring screw ( ) is held in position using an allen key.



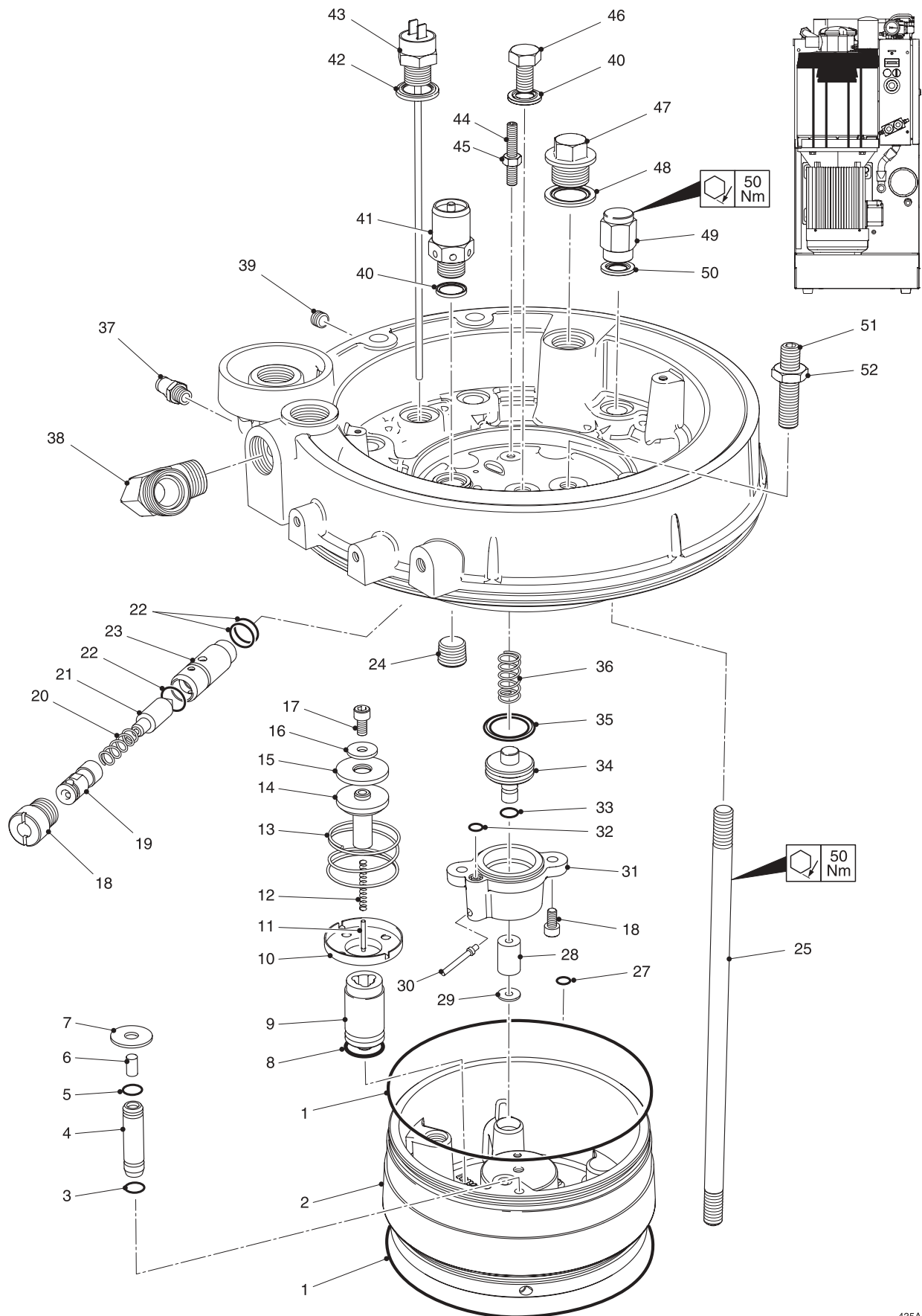


Fig. 6 - Air End (Cont'd)

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## 4.11 Rotor Stator Unit (RSU)

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	75201	Dowel Pin (6 x 30)		1			
2	★	Shim					
3 a	75309	Rotor 5.5kW & 7kW 60Hz				1	1
3b	74923	Rotor 4kW & 5kW 50Hz & 60Hz 7 bar & 10 bar			1	1	
4a	74920	Stator 4kW 7bar & 5kW 7 bar 60Hz			1	1	
4b	75112	Stator 4kW 10 bar & 5kW 10 bar 60Hz			1	1	
4c	74919	Stator 5.5kW. 7kW 7 bar & RS					1
4d	75110	Stator 5.5kW. 7kW, 10 bar 60Hz					1
4e	74599	Stator 7.5kW 7 bar star/delta					1
4f	75108	Stator 7.5kW 10 bar					1
4g	75322	Stator 5.5kW 10 bar 50Hz & 7kW 10 bar 60Hz				1	1
4h	75412	Stator 4kW 7 bar 60 Hz			1		
4j	75303	Stator 5.5kW 7 bar 50Hz & 7kW 7 bar 60Hz				1	1
5	★	Shim					
6	MWG6	M6 Spring Washer		4			
7	MS706-10	M6 x 10 Skt Head		4			
8	74604	Main Housing		1			

★ Consult you Compair distributor

## 4.12 Dismantling the Rotor Stator Unit (RSU)

### 4.12.1 INTAKE END COVER REMOVAL

Unscrew and remove six stator nuts ( ) and discard bonded seals ( )

Use the gap between the intake end cover flange and the oil chamber to lever the intake end cover clear of the oil chamber.

Use two levers positioned diagonally opposite each other to achieve even leverage and ease of extraction. Avoid damage to the end cover 'O' ring groove.

Discard 'O' ring ( )

Inspect inner face of intake end cover and its white metal bearing ( ) for damage, wear or score marks. Renew intake end cover complete if any damage is found.

Fit parts contained in Service Kit on assembly.

### 4.12.2 ROTOR, BLADES AND STATOR

Lift the stator ( ) over the studs ( ) and out of the oil chamber, noting their relative positions to aid assembly.

Note the position and thickness of the shims (2 and 5) found at each end of the stator.

If the shims are undamaged, and the rotor and/or stator do not need renewing they may be retained for assembly.

Retain the blades ( ) in position in the rotor ( ) using rubber bands.

Remove rotor blades ( ).

If blades are to be re-used, they must be removed from their slots and marked with a felt tip pen (NOT SCRATCHED) so that each blade can be refitted in its original position.

Blades and slots must be perfectly clean before assembly.

Examine end face and white metal bearing in non drive ( ) in the oil chamber for wear. or damage. Renew if necessary.

Remove cowl ( ) from stator, to gain access for servicing oil relief valve.

Examine stator for damage, renew if necessary.

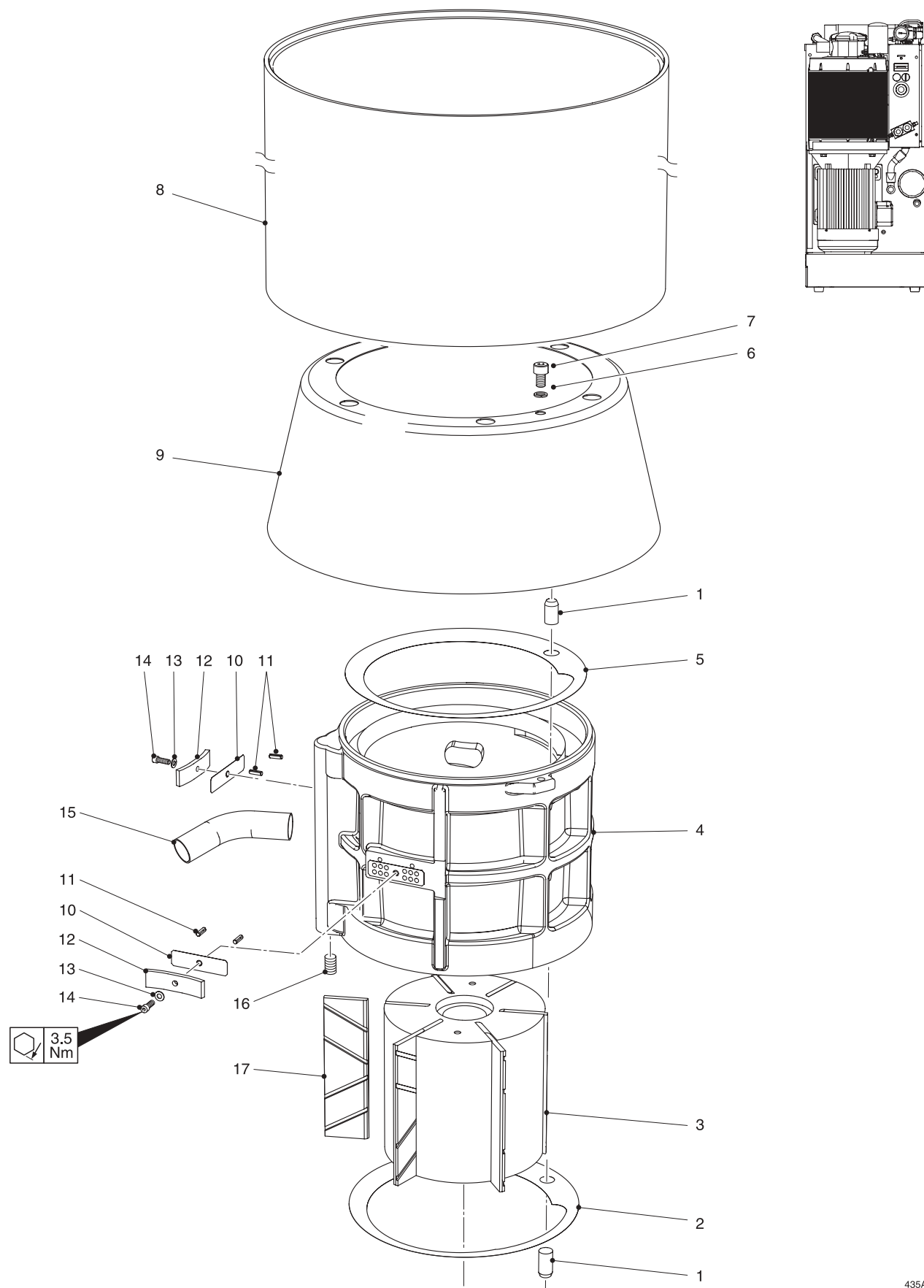
Ensure the cut-away is clearly defined by two straight lines running the length of the bore.

Ensure the stator bore and end faces are free from debris and perfectly clean before assembly.

### 4.12.3 DEFLECTOR AND OIL RELIEF VALVE

#### 4.12.3.1 DEFLECTOR

Ensure that the discharge pipe ( ) is facing downward toward DEC and location of grub screw.



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Fig. 7 - Rotor Stator Unit (RSU)

## 4.13 Rotor Stator Unit (cont'd)

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
9	74607	Impingement Cowl		1			
10	56302	Shim					
11	57027	Tension Pin		4			
12	56302	Valve Plate		2			
13	AGS203B	4BA Lock Washer		2			
14	FS702-3	4BA x 3/8 Skt Head Screw		2			
15	75223	Pipe Stator Discharge		1			
16							
17a	74921	Blade 4kW 7 bar & 5kW 7bar 60Hz			6	6	
17b	75113	Blade 4 kW 10 bar & 5kW10 bar 60Hz			6	6	
17c	75096	Blade 5.5kW, 7kW 7 bar 60Hz & RS					6
17d	75111	Blade 5.5kW. 7kW 10 bar 60Hz					6
17e	74602	Blade 7.5kW 7 bar 50Hz					6
17f	75109	Blade 7.5kW 10 bar 50Hz					6
17g	75407	Blade 4kW 10 bar 60Hz			6		
17h	75406	Blade 4kW 7 bar 60Hz			6		
17i	75311	Blade 5.5kW 10 bar 50Hz & 7kW 10 bar 60Hz				6	6
17j	75310	Blade 5.5kw 7 bar 50Hz & 7kW 7 bar 60Hz				6	6

## 4.13.0.1 OIL RELIEF VALVE

Remove screw ( ) and washer ( ) from the oil relief valve. Remove support ( ) and plate ( )

Check plate ( ) for wear or damage. Renew if necessary.

Ensure valve seating surface on stator is perfectly flat. Use an emery stone to obtain flatness.

Remove any traces of emery dust.

Renew washer ( ) on screw ( )

Renew screw ( ) if worn.

Check valve guide pins ( ). Renew if worn or bent.

## 4.13.1 ASSEMBLING THE ROTOR STATOR UNIT

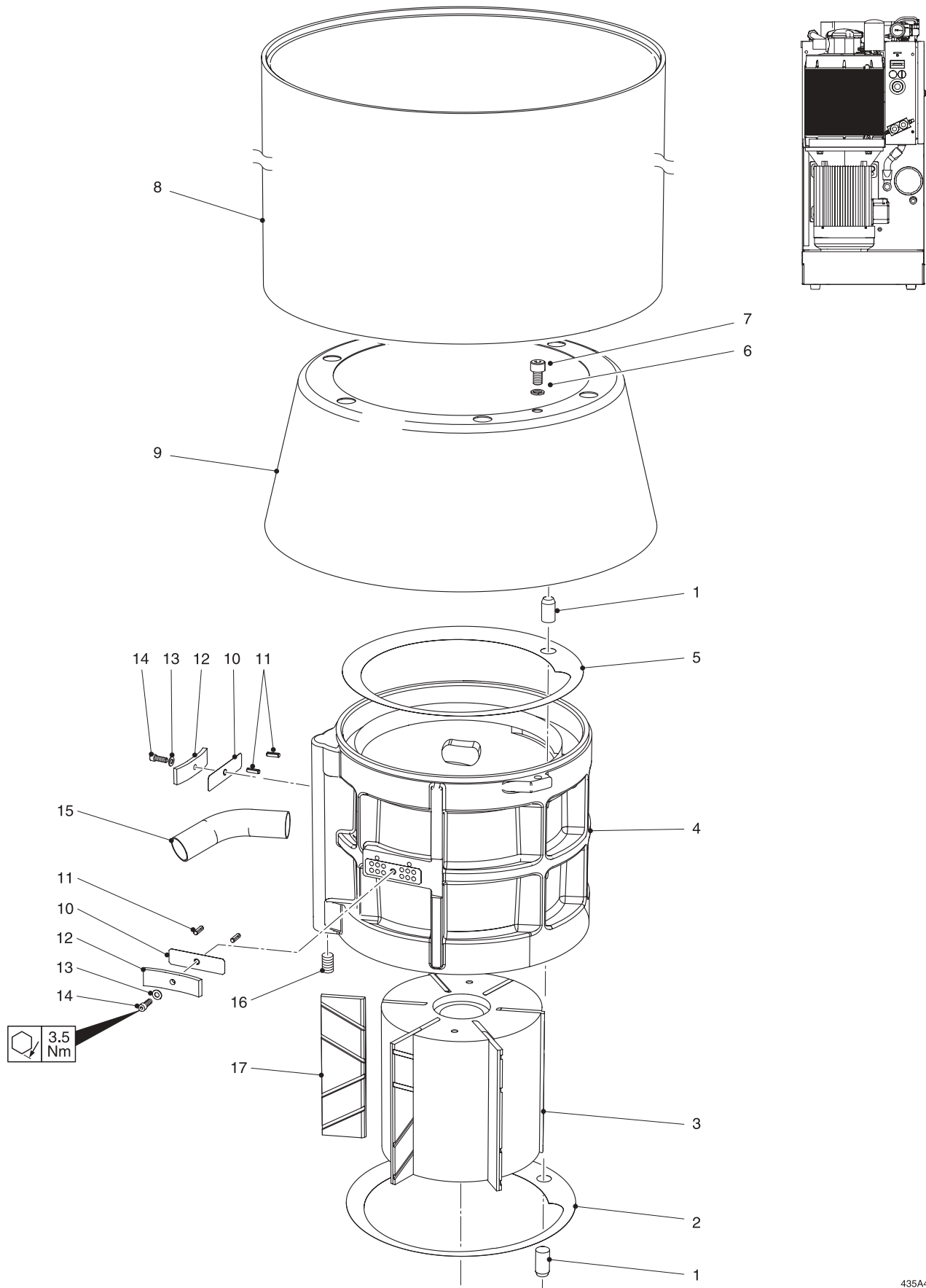
Check discharge pipe in oil chamber for condition and tightness. If replacement or tightening of the pipe is necessary, separator cap must be removed to obtain access to the pipe locknut. Pipe must be positioned parallel with the end face of the oil chamber.

If stator studs ( ) have been removed, apply loctite and screw fully in to chamber.

Clean all components.

Fit parts contained in service kits.

Refit the stator nuts ( ) ensuring new bonded seals ( ) are used.

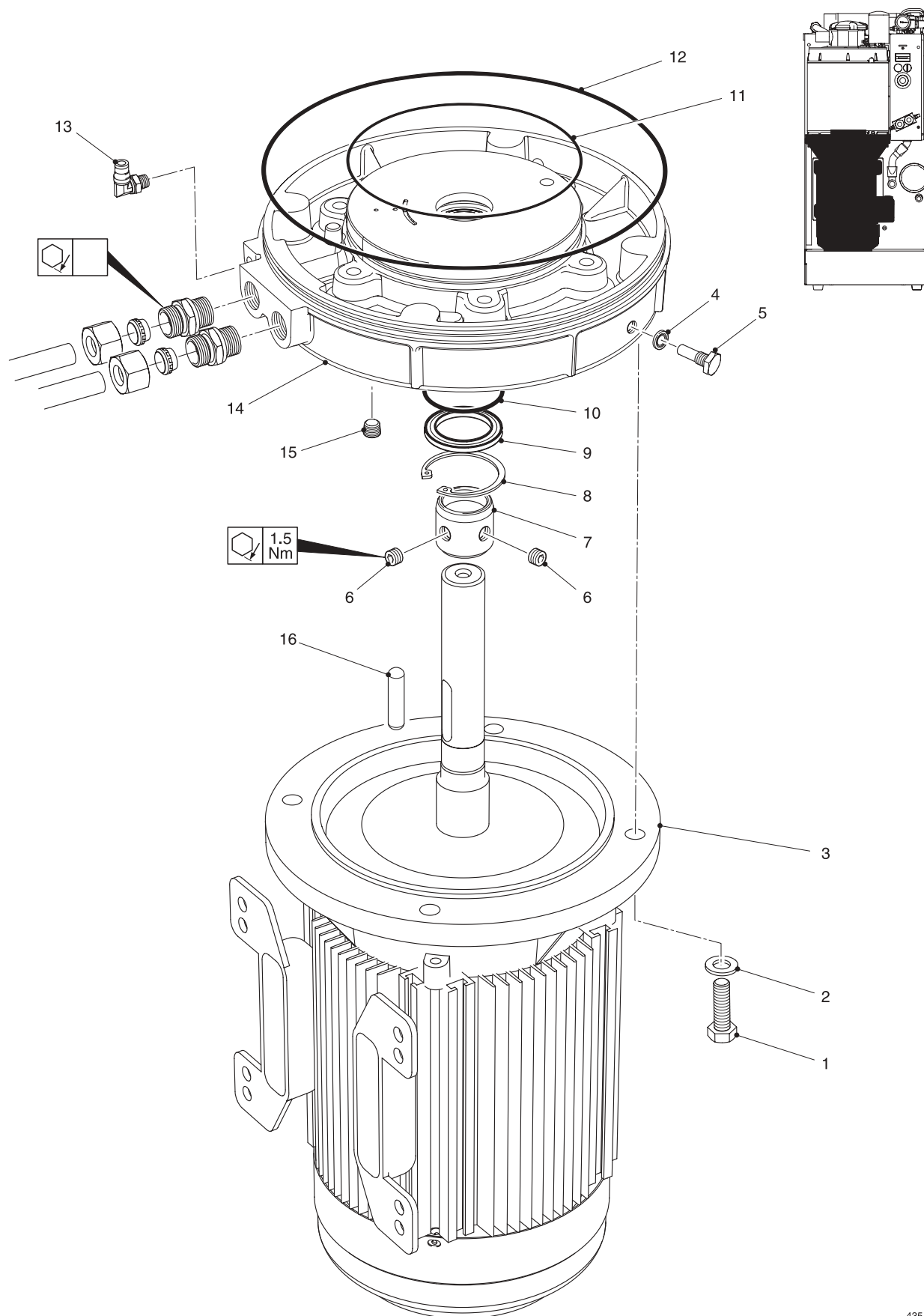


435A403

Fig. 8 - Rotor Stator Unit (cont'd)

## 4.14 Drive End

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	MS112-40	M12 X 40 Hex Head Screw		4			
2	MW12	M12 Washer Zinc Coated		4			
3a	74925-10	Motor 4kW			1		
3b	74924-10	Motor 5.5kW				1	
3c	74624-10	Motor 7.5kW (and RS)					1
3d	75359-65	Motor 4kW 60Hz			1		
3e	75357-65	Motor 5.5kW 60Hz				1	
3f	75119-65	Motor 7.5Kw 60Hz 7 bar					1
3g	75355-65	Motor 7.5kW 60Hz 10 bar					1
4	9606	Bonded Seal 1/8		1			
5	75219	Thermal Pocket		1			
6	MG1704-05	Grub screw, M4 x 5 long		2			
7	74608	Wear Sleeve		1			
7a	9722	'O' ring (inside item 7)		1			
8	MC160	Circlip 60 dia		1			
9	74610	Oil Seal 42mm		1			
10	9810	'O' Ring (0595-30)		1			
11	9831	'O' Ring		1			
12	75099	'O' Ring BS276		1			
13	73215	R1/8 - 6mm Push-in Elbow		1			
14	74598	Drive-end Cover		1			
15	59425-02	Taper Plug Brass1/4		1			
16	2056	Key		1			
17	75215	Stud coupling 15mm		2			

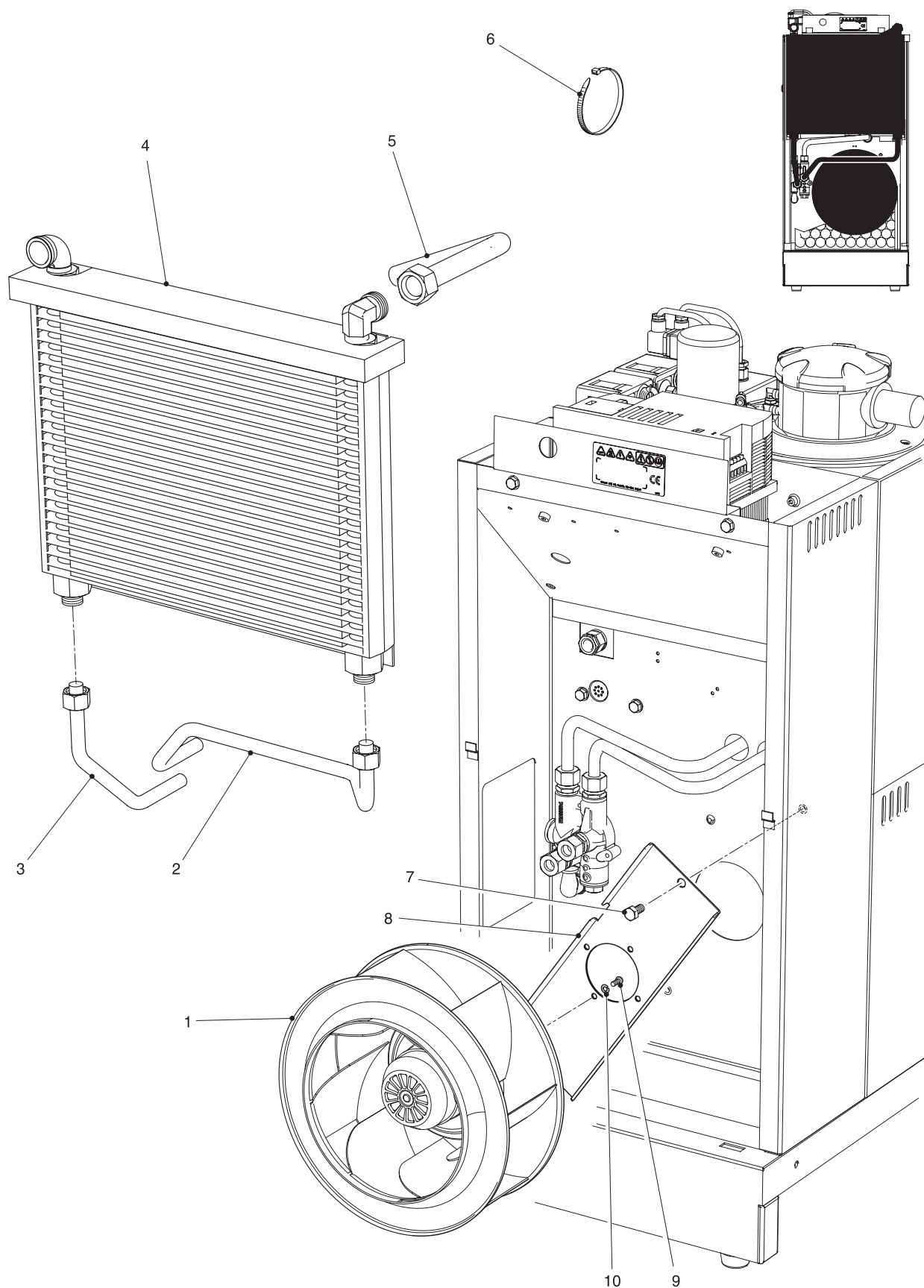


**Fig. 9 - Drive End**

## 4.15 Cooler Matrix and Fan Assembly

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1a	74685	Fan Unit 50Hz		1			
1b	75120	Fan Unit 60Hz		1			
2	74688	Pipe: Cooler-filter		1			
3	74687	Pipe: Filter-cooler		1			
4	71432	Cooler (Shell)		1			
5	74693	Pipe: Air Outlet		1			
6	6520	Cable Tie 200mm		AR			
7	MS108-16	Screw hex		2			
8	75227	Fan Bracket		1			
9	MS2106-12	M6 x 12 Poz Pan Head Screw		4			
10	MWG6	M6 Spring Washer		4			



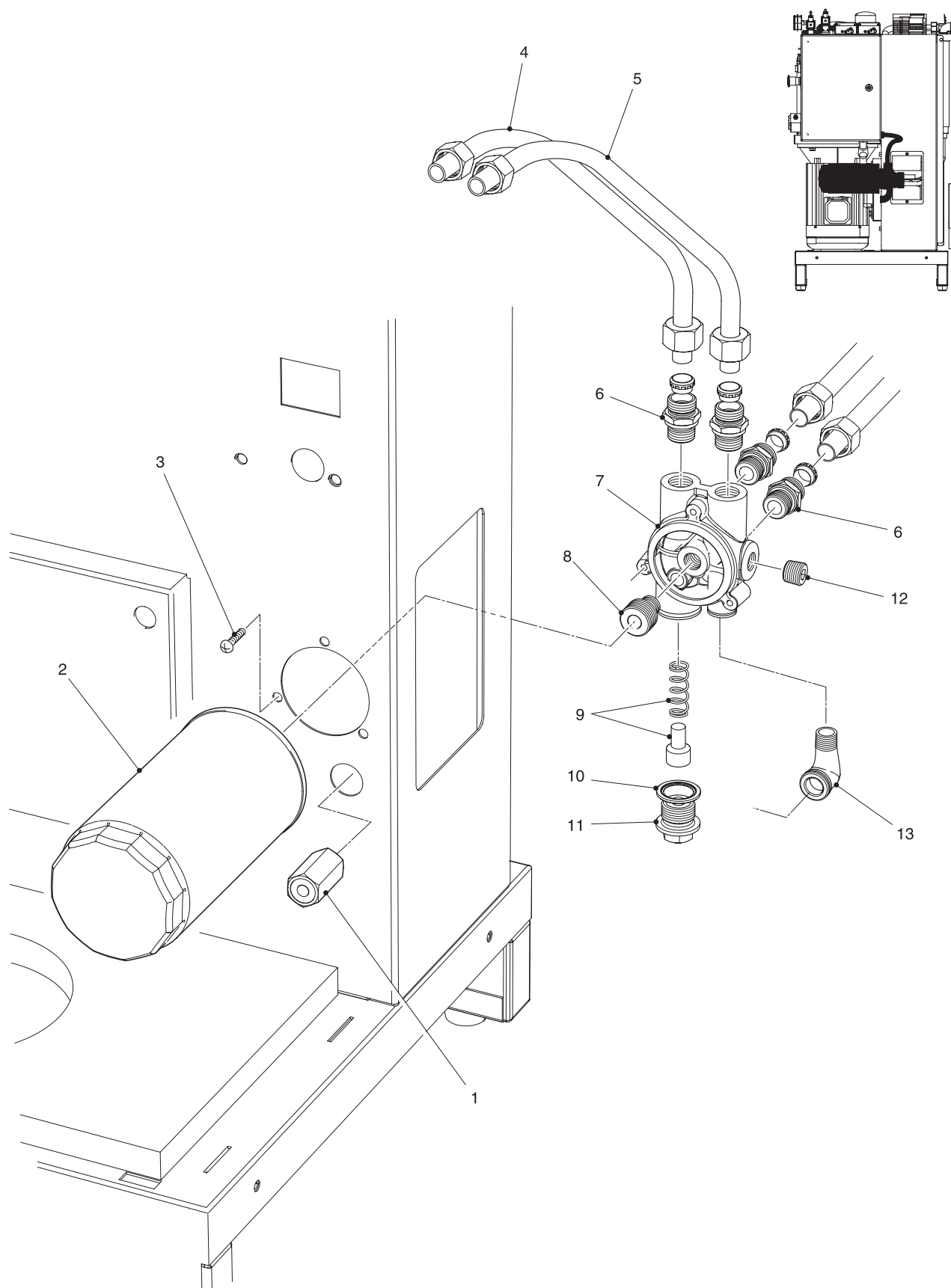


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**Fig. 10 - Cooler Matrix and Fan Assembly**

## 4.16 Oil Filter and Manifold

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	56633	Outlet Tap		1			
2	52866	Oil filter		1			
3	MS2106-12	M6 x 12 Poz Pan Head Screw		3			
4	75042	Pipe: Filter-compressor		1			
5	74686	Pipe: Compressor-filter		1			
6	75215	Stud Coupling 15mm		6			
7	74669	Oil Filter Manifold		1			
8	74891	Oil filter insert		1			
9	75022	Thermal By-pass valve		1			
10	9619	Bonded Seal 3/4		4			
11	74975	By-pass Valve Plug		1			
12	59425-03	Taper Plug Brass 3/8		2			
13	72122	Elbow R.3/8 x Rc.3/8		1			

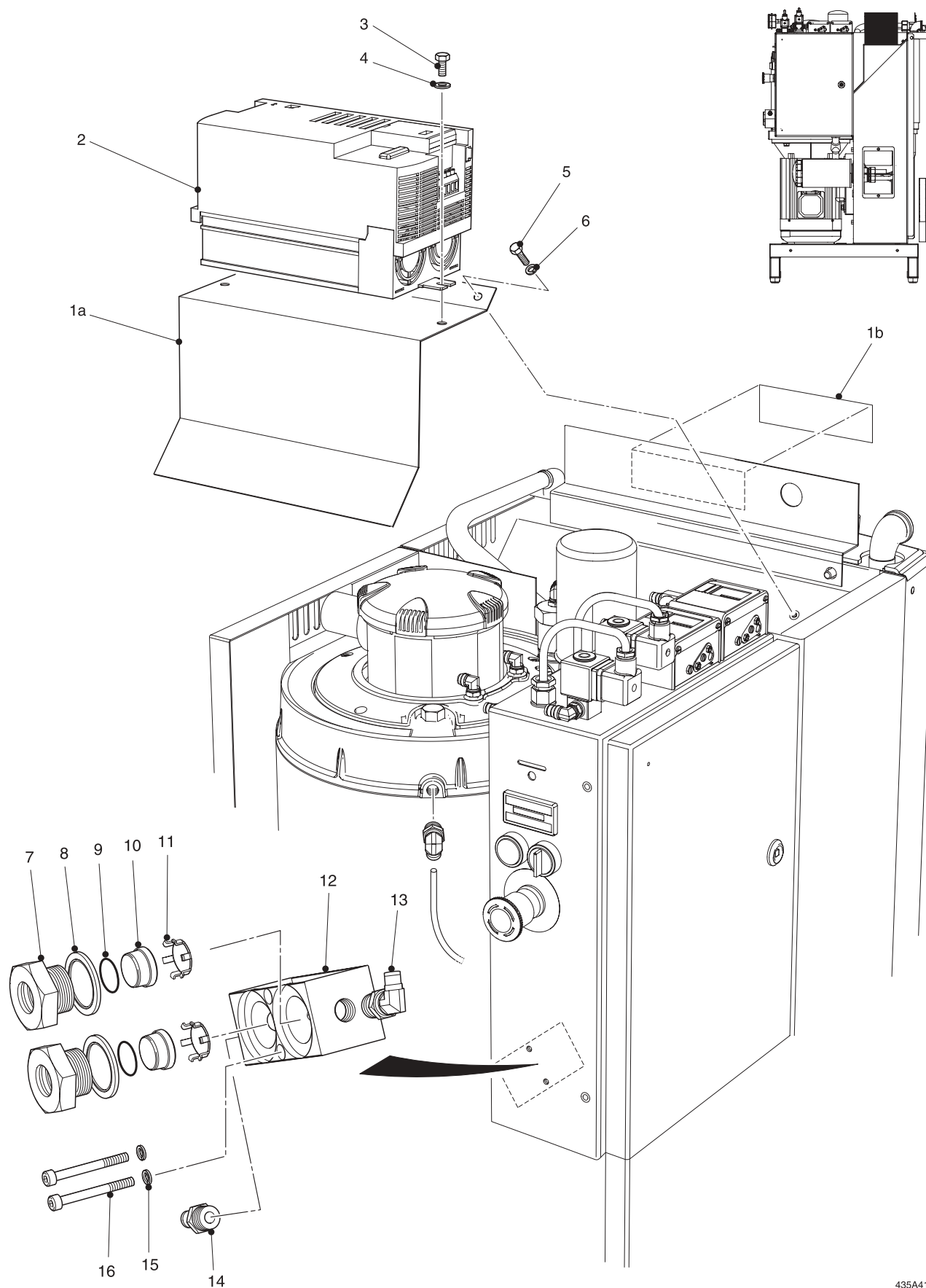


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Fig. 11 - Oil Filter and Manifold

## 4.17 Inverter and Oil Level Manifold

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1a	75275	VSD bracket (RS)					1
1b	75278	VSD cover					
2	75269	Inverter 7.5Kw, 400V (RS)					1
3	MS706-16	Screw (RS)					2
4	MW6	Washer (RS)					2
5	MS706-16	Screw (RS only)					2
6	MW6	Washer (RS only)					2
7							
8	9617	Bonded Seal 5/8		2			
9	9754	'O' Ring		2			
10	58117	Sight Level Glass		2			
11	58426	Sight glass clip		2			
12	75188	Sight Glass Housing		1			
13	73212	R1/4 x 6mm Push fit straight		1			
14	73215	1/8 BSPT x 6mm Push in male stud elbow		1			
15	MWG6	M6 Washer		2			
16	MS706-40	M6 x 40 Cap Hd Screw		2			

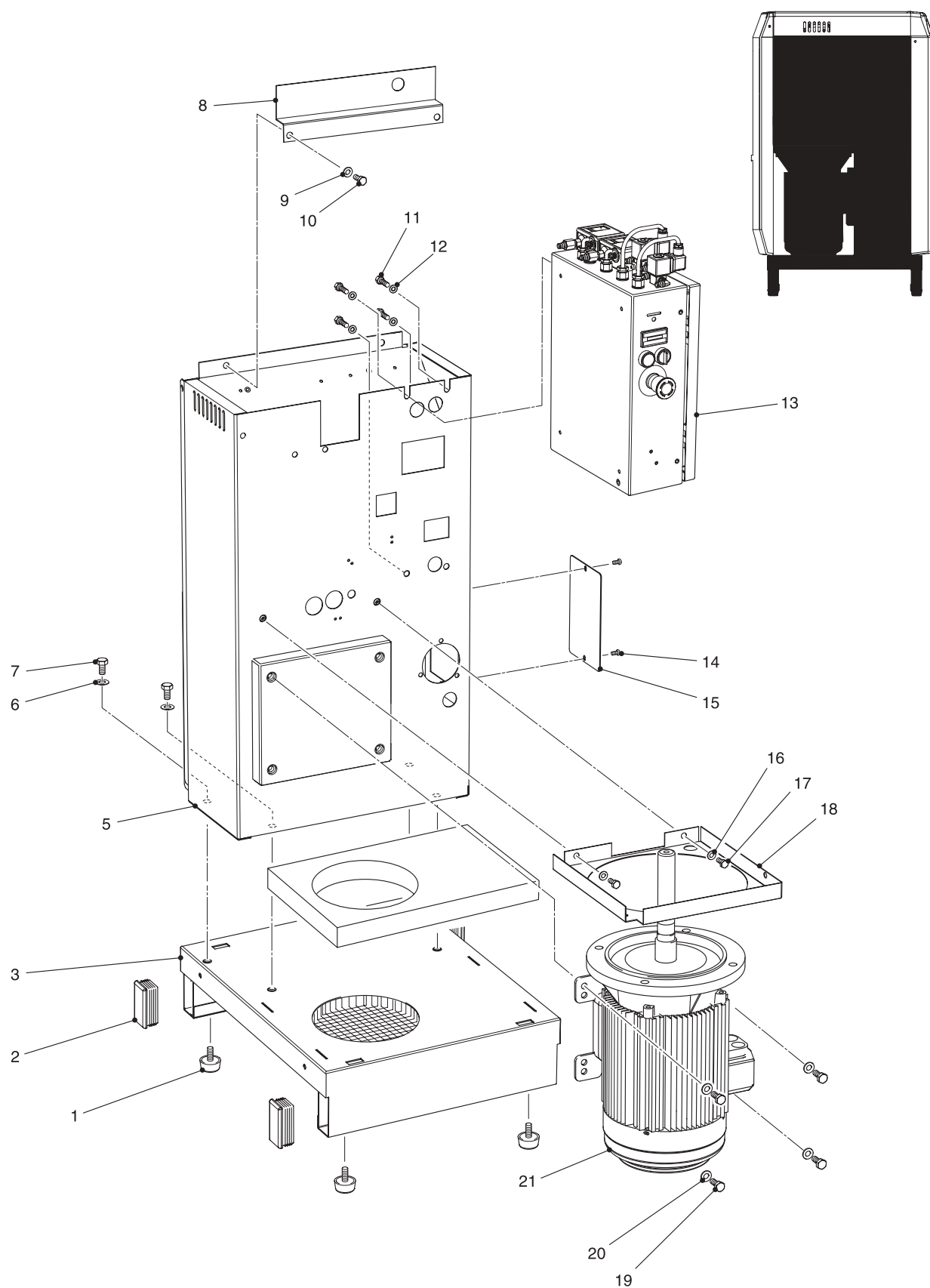


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**Fig. 12 - Inverter and Oil Level Manifold**

## 4.18 Chassis

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	75041	Anti-vibration mount		4			
2	75128	End plug		4			
3	74694	Base		1			
5	75127	Plinth		1			
6	MW10	Washer 10mm		4			
7	MS110-20	M10 x 20 hex screw		4			
8	75132	Cooler bracket		1			
9		?		2			
10		?		2			
11	MS108-16	M8 x 16 hex head screw		4			
12	MW8	Washer 8mm		4			
13		Starter (for clarity only, refer to Fig.5.3 and Fig.19)					
14	MS2106-12	M6 x 12 Poz pan hd screw		2			
15	75140	Access plate		1			
16		?		2			
17		?		2			
18	75131	Motor baffle		1			
19	MS110-25	M10 x 25 hx hd screw		4			
20	MW10	Washer 10mm		4			
21		Motor (for clarity only, refer to Drive End section)					



435A412

Fig. 13 - Chassis

## 4.19 Control Group DOL and Star Delta

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
A		Cut in/out Line Pressure Switch		1			
B		Pressurised re-start prevention switch		1			
C		Vent-down solenoid		1			
D		Rapid vent-down solenoid		1			
E		Oil Level Sight Glass Assembly		1			
1-6 10-12 14-16	73215	¼" x 6mm Push-in elbow		14			
7,8,17	?	¼" x 6mm Push-in straight		3			
9,13	73282	6mm x 6mm x 6mm Push-in T		2			

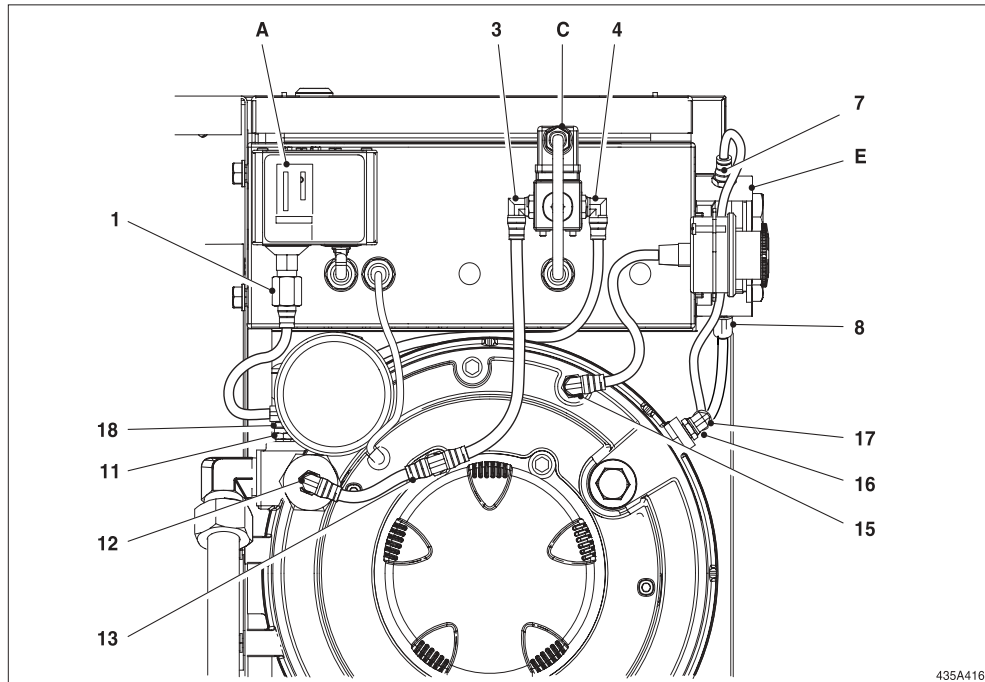
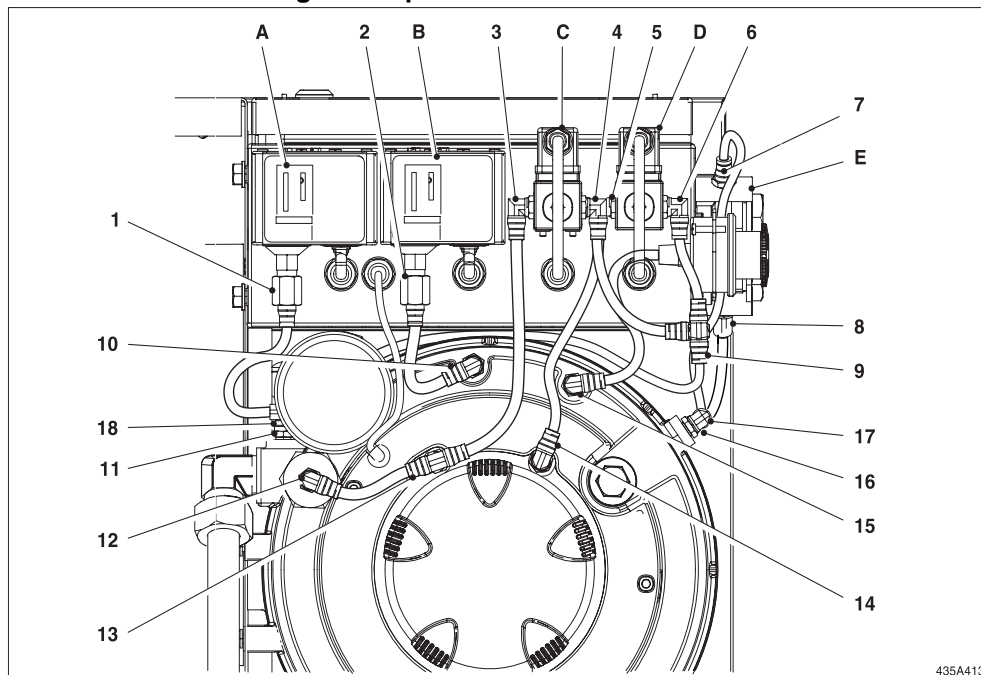
Table 4.1 - Air Pipes Connections DOL

Between	
1	11
2	Not Used
3	13
4	18
5	Not Used
6	Not Used
7	17
8	16
9	Not Used
10	Not Used
11	1
12	13
13	12
14	Not Used
15	Gauge
16	8

Table 4.2 - Air Pipes Connections Star/Delta

Between	
1	11
2	10
3	13
4	9
5	14
6	9
7	17
8	16
9	6,4,18
10	2
11	1
12	13
13	12
14	5
15	Gauge
16	8



**Fig. 14 - Pipes and Connectors DOL****Fig. 15 - Pipes and Connectors Star/Delta**

## 4.20 Parts Modifications

[illegible]

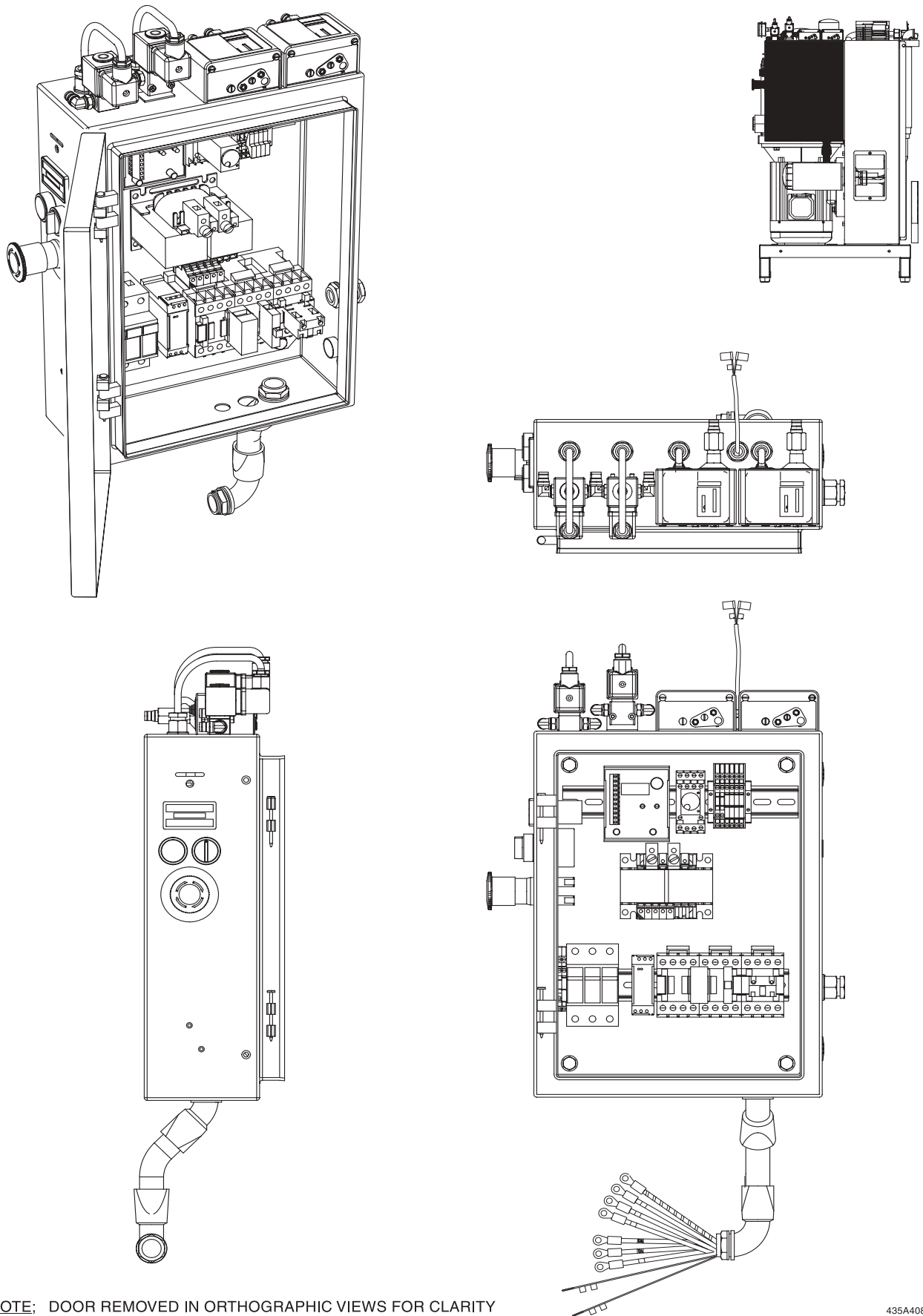
## 5 Starter Units

This section contains Starter Units parts and servicing information.

## 5.1 Typical Starter Unit

The following table shows the application and part numbers of starter units contained in this section.

<b>34682 7.5kW 400V 50Hz Star Delta</b>
V04ACS07-4035D000
V04ACS10-4035D000
V05ACS07-4035D000
V05ACS10-4035D000
V07ACS07-4035D000
V07ACS10-4035D000
<b>34687 5.5kW 400V 50Hz DOL</b>
V04ACS07-4035S000
V04ACS10-4035S000
V05ACS07-4035S000
V05ACS10-4035S000
<b>34724 7.5kW 230/460V 60Hz</b>
V05ACS07-2336D005
V05ACS10-2336D005
V07ACS07-2336D005
V07ACS10-2336D005
<b>34756 7.5kW 50/60Hz RS</b>
V05ACS07-4035V000
<b>34787 4kW 230V 60Hz</b>
V04ACS07-2336D005
V04ACS10-2336D005



NOTE: DOOR REMOVED IN ORTHOGRAPHIC VIEWS FOR CLARITY

435A408

**Fig. 16 - Typical Starter Unit**

## 5.2 Starter (34687) 5kW 400V 50 Hz DOL

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	53287	Pressure switch				1	
2	73841	Solenoid Valve (NO)				1	
3	73215	R1/8" - 6mm 90° Elbow				2	
4	73213	G1/4" - 6mm Legris coupling				1	
5		16mm Cable gland				4	
6		Pressure switch cable				1	
7		Solenoid cap				4	
8	56122	Run on timer				1	
9		Transformer + slow blow 2A(T) IEC127				1	
10		Terminal double stack controls				4	
11		Contactor				1	
12		Terminal end section controls				3	
13		End bracket				3	
14	59344	OTC board				1	
15		Auxillary contact block				1	
16		DIN rail x 205 mm long				1	
17	74249	Emergency stop push button				1	
18		Controls earth terminal				3	
19	MS704-30	M4 x 30 mm long socket head cap screw				2	
20	FWZ110/50-60Hz	Hours counter				1	
21		Starter enclosure				1	
22		Emergency stop ground				1	
23		Circuit label				1	
24		M4 spring washer				2	
25		Heyco plug				1	
26		Solenoid valve cable				1	
27		20mm Cable gland				2	
28		Fuse holder				1	
29		Illuminated push button				1	
30		Auto/Manual selector				1	
31		Mounting rail				1	

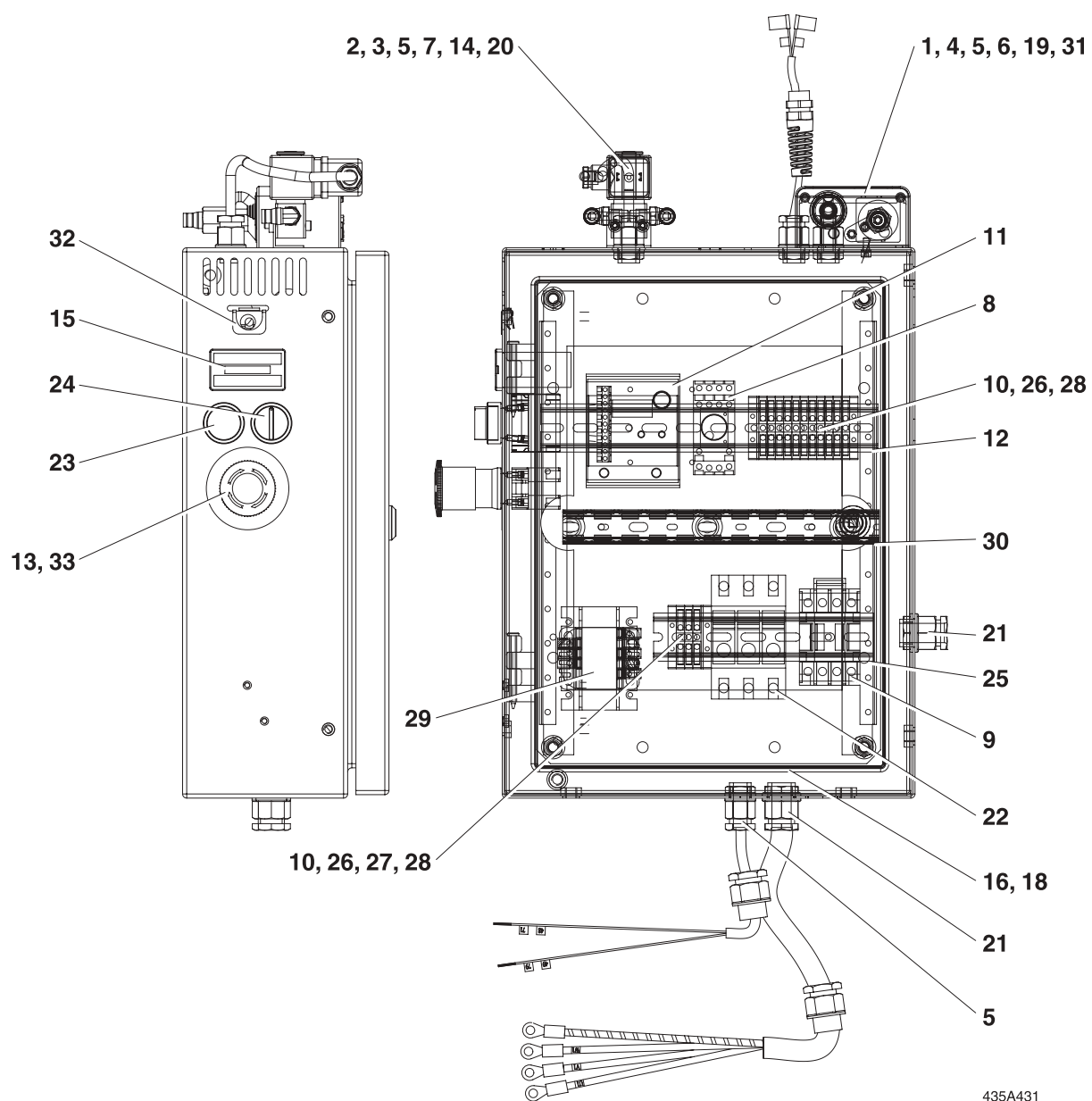
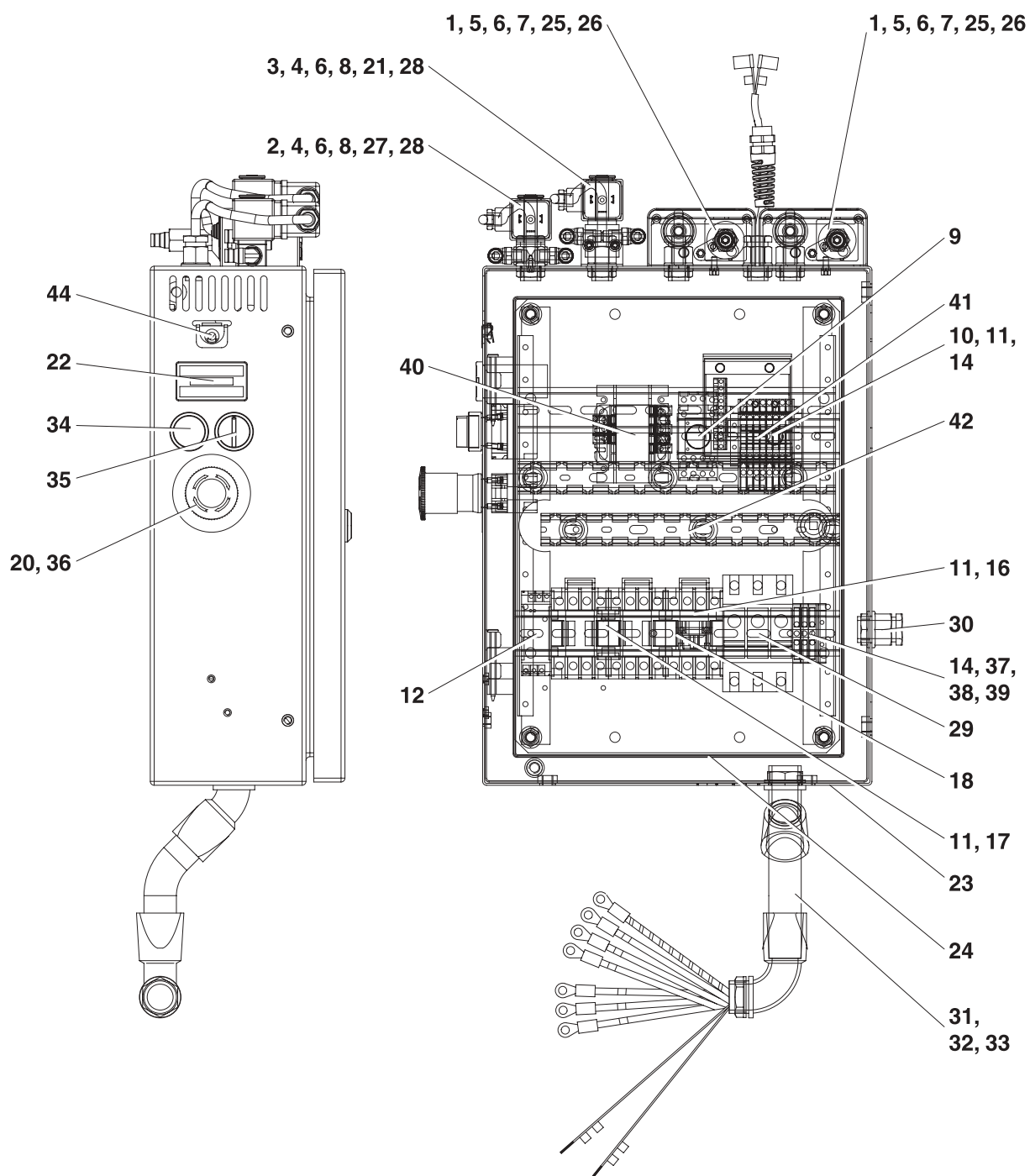


Fig. 17 - Starter (34687) 5kW 400V 50 Hz DOL

## 5.3 Starter (34682) 7.5kW 400V 50 Hz Star/Delta

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	53287	Pressure switch					1
2	73841	Solenoid Valve (NC)					1
3		Solenoid Valve (NO)					1
4	73215	R1/8" - 6mm 90° Elbow					4
5	73213	G1/4" - 6mm Legris coupling					2
6		16mm Cable gland					5
7		Pressure switch cable					1
8		Solenoid cap					4
9		Run on timer					1
10		Transformer + slow blow 1A(T) IEC127					1
11		Terminal controls					5
12		Contactor					3
13		Timer Star/Delta					1
14		Terminal end section controls					2
15		End bracket					3
16	59344	OTC board					1
17	74039	Auxillary contact block					1
18	74063	Auxillary contact block					1
19	74897	Mechanical interlock					1
20		DIN rail x 150 mm long					1
21		DIN rail x 205 mm long					1
22	74249	Emergency stop push button					1
23		Controls earth terminal					3
24	MS704-30	M4 x 30 mm long socket head cap screw					2
25	FWZ110/50-60Hz	Hours counter					1
26		Starter enclosure					1
27		Emergency stop ground					1
28		Circuit label					1
29	MS704-10	M4 x 10 mm long cap head screw					4
30	MWG4	M4 spring washer					4
31		Heyco plug					1
32	MS703-06	M3 x 6 mm long screw					2
33	MS703-06	M3 x 6 mm long screw					1
34		20mm Cable gland					1
35		Fuse holder					1
36		Motor conduit					1
37		Conduit 90					1
38		Conduit 45					1



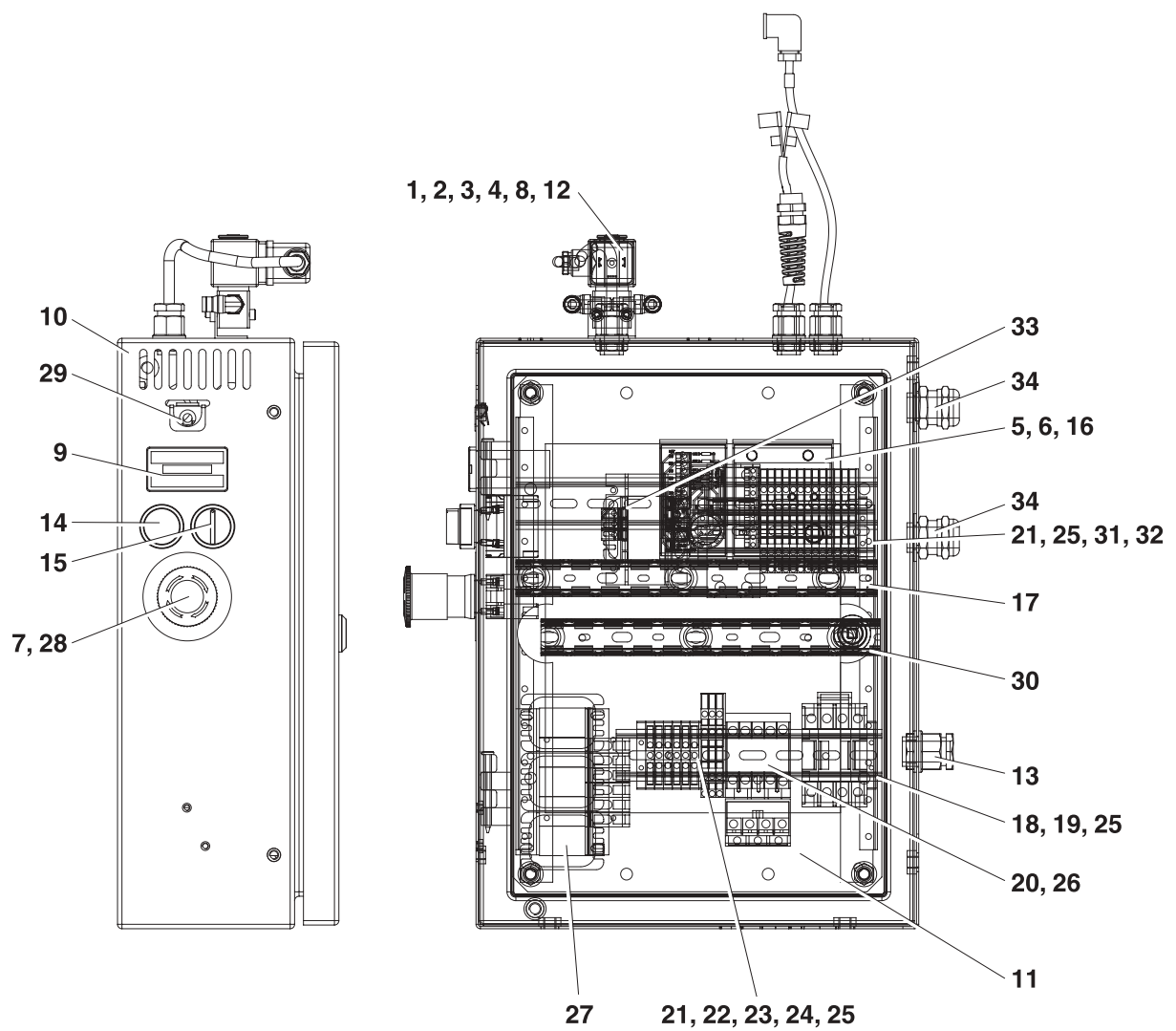


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Fig. 18 - Starter (34682) 7.5kW 400V 50 Hz Star/Delta

#### 5.4 Starter (34756) 7.5 kW 50/60Hz Variable Speed

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1		Solenoid Valve (NO)					1
2	73215	R1/8" - 6mm 90° Elbow					2
3		16mm Cable gland					3
4		Solenoid cap					1
5	59344	OTC board					1
6		DIN rail x 245 mm long					1
7	74249	Emergency stop push button					1
8	MS704-30	M4 x 30 mm long socket head cap screw					2
9	H604S24V	Hours counter					1
10		Starter enclosure					1
11		Circuit label					1
12		Solenoid valve cable					1
13		20mm Cable gland					1
14		Illuminated push button					1
15		Auto/Manual selector					1
16	75292	POT/Alarm board					1
17		Cable trunking 245mm long					1
18		DIN rail x 180 mm long					1
19		Contactor					1
20		Fan motor contactor					1
21		Terminal double stack controls					15
22		Terminal controls earth					1
23		Terminal motor					6
24		Terminal end					1
25		End stop unit					4
26		Fan motor overload					1
27		Mains choke					1
28		Emergency stop ground					1
29		DIN rail x 130 mm long					1
30		Dzus receptacle					1
31		Cable trunking 230mm long					1
32		Circuit breaker two pole 6A					1
33		Transformer 200/230/400/460V 50/60Hz					1
34		20mm Cable gland with locknut					3
35		Blanking grommet 26mm					1

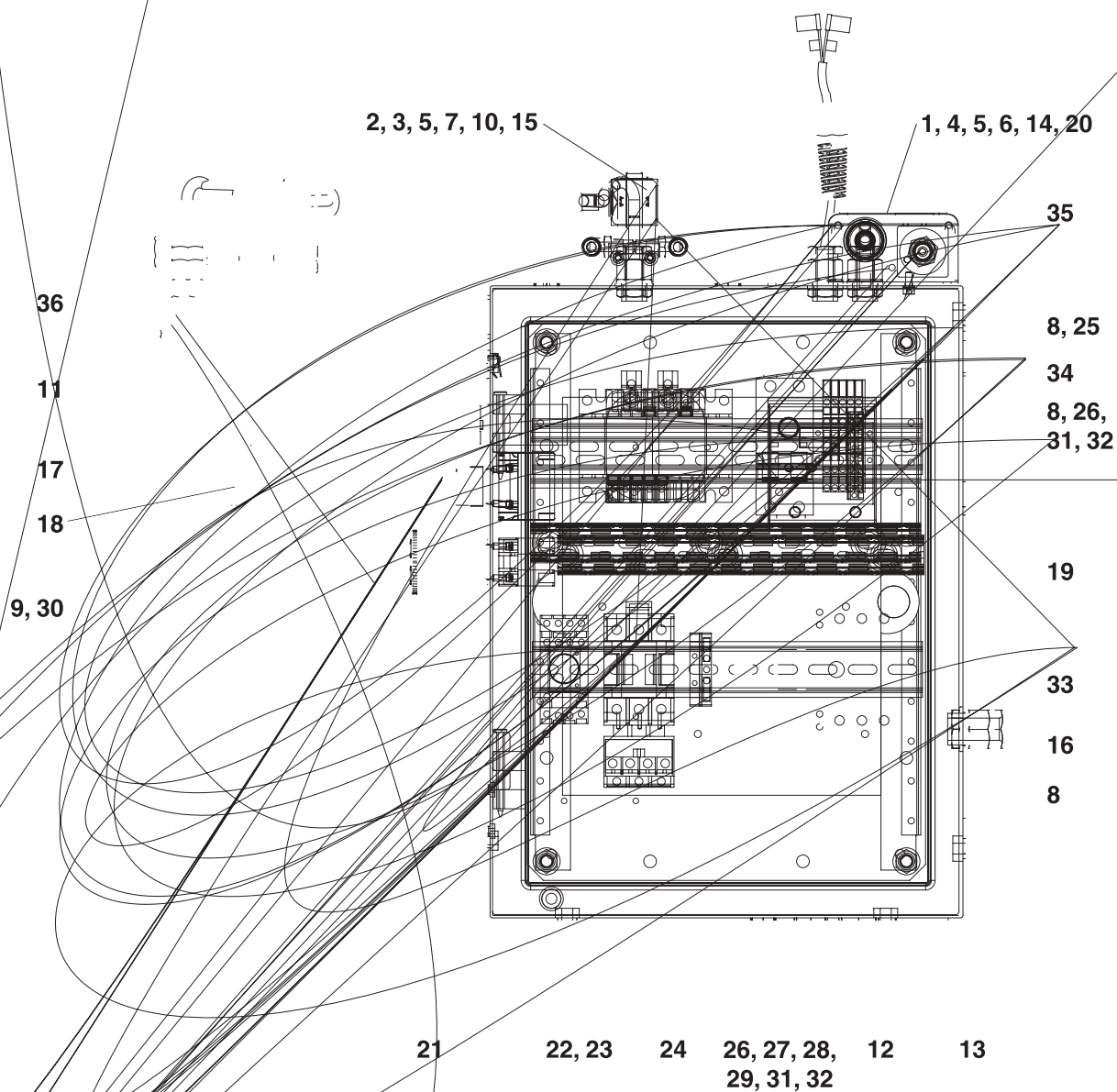


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**Fig. 19 - Starter (34756) 7.5 kW 50/60Hz Variable Speed**

## 5.5 Starter (34724) 7.5kW 230/460V 60Hz

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	53287	Pressure switch					1
2	73841	Solenoid Valve (NO)					1
3	73215	R1/8" - 6mm 90° Elbow					2
4	73213	G1/4" - 6mm Legris coupling					1
5		16mm Cable gland					4
6		Pressure switch cable					1
7		Solenoid cap					4
8		DIN rail x 245 mm long					1
9	74249	Emergency stop push button					1
10	MS704-30	M4 x 30 mm long socket head cap screw					2
11	H604S24V	Hours counter					1
12		Starter enclosure					1
13		Circuit label					1
14	MWG4	M4 spring washer					4
15		Solenoid valve cable					1
16		20mm Cable gland					1
17		Illuminated push button					1
18		Auto/Manual selector					1
19		Cable trunking 230mm long					1
20	MS704-10	M4 x 10 mm long socket head cap screw					2
21		Run on timer					1
22		Contactor					1
23		Thermal overload					1
24		Cable trunking 245mm long					1
25	59344	OTC board					1
26		End stop unit					4
27		Terminal end					1
28		Terminal motor					6
29		Earth terminal					2
30		Emergency stop ground					1
31		Terminal controls double stack					7
32		Controls terminal end					2
33		Manual motor starter					1
34		Circuit breaker					1
35		Transformer 200/230/400/460V 50/60Hz					1
36		Dzus receptacle					1

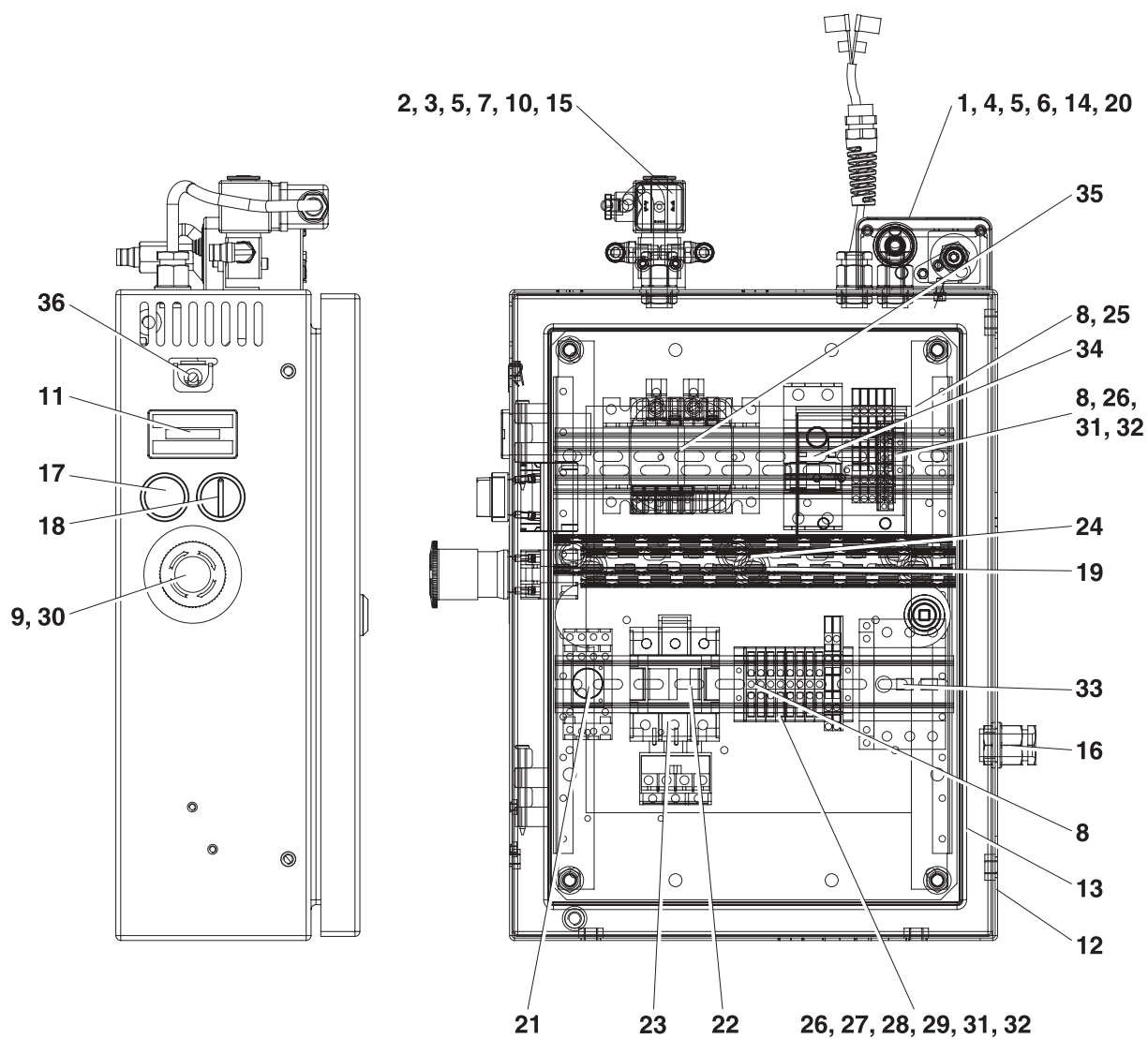


435A428

Fig. 20 - Starter (34724) 7.5kW 230/460V 60Hz

## 5.6 Starter (34787) 4kW 230V 60Hz

Item	Part Number	Description	Kit	Quantity			
				All	04	05	07
1	53287	Pressure switch			1		
2	73841	Solenoid Valve (NO)			1		
3	73215	R1/8" - 6mm 90° Elbow			2		
4	73213	G1/4" - 6mm Legris coupling			1		
5		16mm Cable gland			3		
6		Pressure switch cable			1		
7		Solenoid cap			4		
8		DIN rail x 245 mm long			1		
9	74249	Emergency stop push button			1		
10	MS704-30	M4 x 30 mm long socket head cap screw			2		
11	H604S24V	Hours counter			1		
12		Starter enclosure			1		
13		Circuit label			1		
14	MWG4	M4 spring washer			4		
15		Solenoid valve cable			1		
16		20mm Cable gland			1		
17		Illuminated push button			1		
18		Auto/Manual selector			1		
19		Cable trunking 230mm long			1		
20	MS704-10	M4 x 10 mm long socket head cap screw			2		
21		Run on timer			1		
22		Contactor			1		
23		Thermal overload			1		
24		Cable trunking 245mm long			1		
25	59344	OTC board			1		
26		End stop unit			4		
27		Terminal end			1		
28		Terminal motor			6		
29		Earth terminal			2		
30		Emergency stop ground			1		
31		Terminal controls double stack			7		
32		Controls terminal end			2		
33		Manual motor starter			1		
34		Circuit breaker			1		
35		Transformer 200/230/400/460V 50/60Hz			1		
36		Dzus receptacle			1		



435A427

Fig. 21 - Starter (34787) 4kW 230V 60Hz

## 5.7 Starter Units Part Modifications

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