ANDREWS AIR CONDITIONING

HANDBOOK FOR PAC15, ET15, & PAC22AX MKII/MKIII WACPAC22AX, SINGLE PHASE 230V

CAUTION

PLEASE READ THIS LEAFLET CAREFULLY

1. DO NOT APPLY MAINS WATER PRESSURE TO PAC UNITS. ACCESS TO THE FILLING POINT FOR THE WATER CIRCULATING SYSTEM IS REACHED BY REMOVAL OF THE FILLER ACCESS PLATE IN THE PAC ROOM UNIT BACK PANEL.

2. WHEN REMOVING A PAC UNIT FROM AN INSTALLATION DISCONNECT WATER QUICK COUPLINGS AT ROOM UNIT FIRST.

INTERNAL ACCESS SHOULD BE RESTRICTED TO ANDREWS TRAINED STAFF ONLY.

SD259752 Iss 22.

WARNING !

This unit MUST be transported and operated in the upright position at all times.

1) ELECTRICAL SUPPLY As standard, this unit requires a 13 amp fused electrical supply rated at 230Volts, ~1N, 50Hz.
The unit will operate from a standard 13A wall socket. The size of any extension cable that may be used is **2·5mm² minimum** up to a **maximum length of 10 metres.** For longer lengths 4.0 mm² cable must be used. If the cable is on a "cable drum" then ensure that it is **completely unwound; serious complications will occur otherwise.**
Note:- most domestic proprietory extension cables are 1·5mm². This is **not** sufficient.

2) SYSTEM DESCRIPTION.
PAC15AX/PAC22AX
The system comprises a room unit cooling section, an external heat exchanger and the two are interconnected by means of a flow and return water pipe and an electrical supply to the heat exchanger fan. The room unit is fitted with an automatic condensate disposal pump which discharges the condensate via a small plastic **pipe into the base of the external heat exchanger** and all interconnecting pipes and electrics are enclosed in a flexible plastic sheath. In addition, both ends of each pipe are fitted with "quick connect" couplings that open on coupling but reseal to become water tight on disconnect.

ET15AX
The system comprises, a room unit fitted with either a fixed or flexible ducting system as specified by the customer. Condensate is collected, either in the units internal tank and emptied by the user or pumped away using an optional condensate disposal unit.

3) AIR FLOW
The angled air outlets at the top of the standard room unit are fitted with air grilles that allow the angle of air outlet to be adjusted vertically and horizontally and, in conjunction with the fan speed control switch, the air velocity and direction can be carefully set up to obtain maximum coverage of the area being cooled without causing drafts. An alternative top pavel with twin 7” ducts is available. Adjust able grilles and 7” ducts are not available for machines with a convex console. Care should be taken to avoid outlet air being obstructed as this will cause **the air to "eddy" around the unit** resulting in recirculation and short/inaccurate cycling of the machine. Ideally, cold air should be directed to create a "blanket" all across the ceiling area allowing natural convection to drop the air over the whole area at very low velocity.

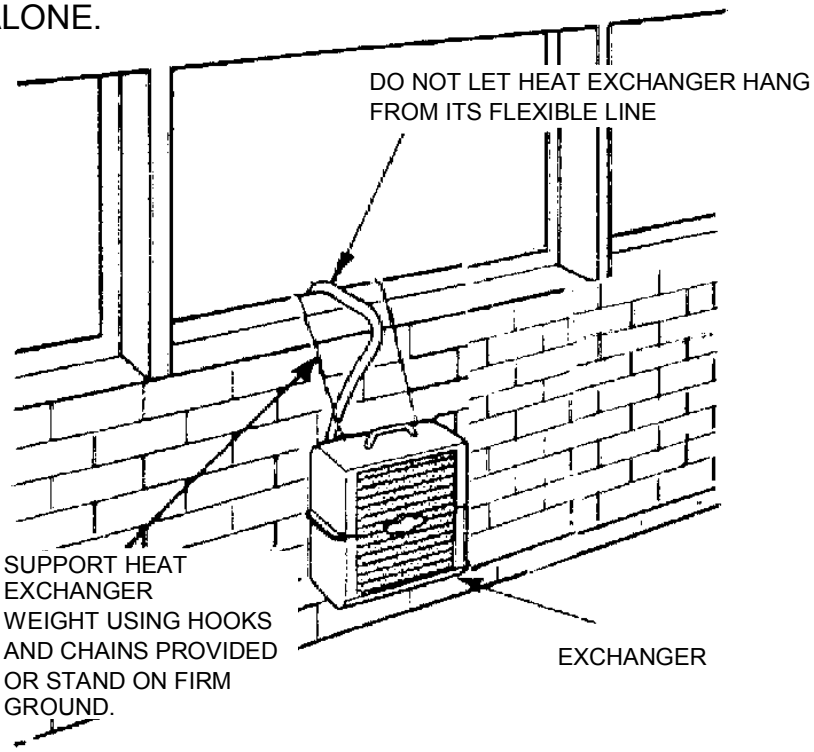
4) SITING
ROOM UNIT. AIR OR WATER COOLED
Ideally, the room unit should be positioned equidistant along the shortest wall in the room blowing down the length of the room. If there is more than one unit in the same area, then they would normally be positioned side by side, and **equidistant along the long wall,** all pointing in the same direction. Sometimes it may be necessary to position units around the perimeter of an area but, in this case, **great care should be taken to avoid** one unit blowing cold air straight into another which will adversely affect the machine operation. Good and correct air flow is, perhaps, the single most important aspect of satisfactorily applying portable air conditioners. If in doubt seek the advice of your supplier.

PAC15AX/PAC22AX HEAT EXCHANGER
The heat exchanger must stand external to the area being cooled and, preferably, in the outside atmosphere. It can stand freely on a flat surface or may be hung, in the upright position, from a window-sill, balcony, etc, see Fig 1.

ET15AX
The exhaust tube(s) must carry the air to an area external from that being cooled, preferably in the outside atmosphere.

USE THE CHAINS PROVIDED TO SUPPORT THE HEAT EXCHANGER. IT WOULD BE HIGHLY DANGEROUS TO SUPPORT THE HEAT EXCHANGER BY MEANS OF THE FLEXIBLE LINES ALONE.

FIG 1



CONDENSATE.

PAC15AX/PAC22AX.

In operation, the room unit is constantly condensing water vapour out of the atmosphere (reducing relative humidity). This water has to be drained away. An automatic condensate pump is fitted inside all PAC15AX/PAC22AX room units. The flexible hose outlet from the condensate pump runs to the outside, inside the flexible sheath, the condensate is deposited in the base of the heat exchanger, considerable re-evaporation of this water takes place on the warm air stream passing through and around the heat exchanger, but please remember that there will also be a degree of dripping through the base of the heat exchanger.

HAVE GREAT REGARD FOR THIS CHARACTERISTIC WHEN POSITIONING THE EXTERNAL HEAT EXCHANGER.

The flexible water pipes should be routed so as to avoid any possibility of kinking or unnecessary restrictions to the flow of water inside. Also, remember that plastic and rubber becomes much more flexible when warm and, as a result, much more susceptible to distortion.

ET15AX.

Condensate from the room unit is collected in an internal tank and emptied by the user. An optional pump kit may be fitted to pump liquid via a plastic tube to an external container or the ground. Care needs to be taken in the positoning of the tube.

5) MACHINE LINK-UP FOR PAC15AX/ PAC22AX

Ensure the mains supply lead to the room unit is disconnected. A 5m (extendable to 30m) line set to connect all services between the room unit and the external heat exchanger will have been supplied. The water pipe connections are by means of "quick connect couplers". These are simple 'push-on" connectors which, when disconnected (after pulling back sprung loaded locking ring), re-seal the water system on either side. The complete system will have been filled with the necessary amount of water/antifreeze prior to its arrival on site. A water proof 3 pin quick connect electrical coupler (push fit with screw lock ring, hand tight only), and condensate drain

pipe coupler 6mm clear polythene (push fit), should also be connected. Having made the couplings, the system is operational immediately.

WACPAC UNITS when required to run as a normal “PAC” unit need to have the switch in the recess panel at the back of the unit in the “1” position. When required to run as a “WAC” the WACPAC unit is connected to **total loss** mains water. When this is done the switch in the recess panel needs to be in the “0” position. (Water pump off).

ROOM UNIT WATER LEVELS FOR PAC15AX/PAC22AX

The water system in the room unit will be to the correct level when delivered.

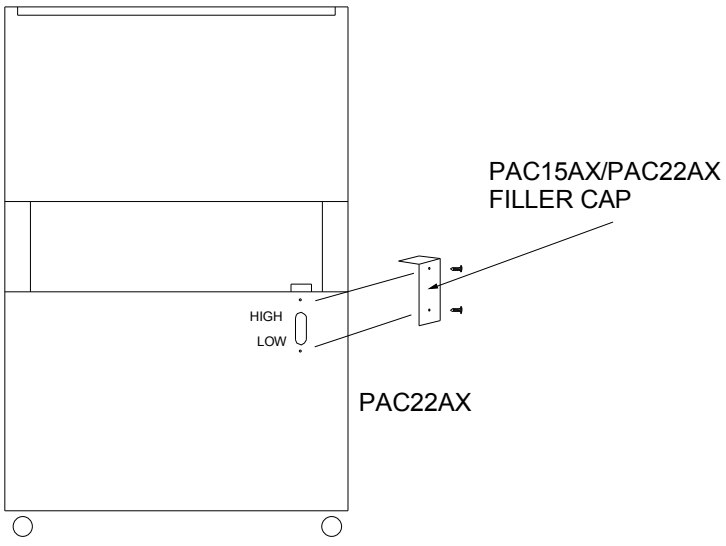
However if for some reason the level has fallen, antifreeze (33%) and water will have to be added. The header tank filler and level indication is located to the rear of the room unit and can be accessed by removing the two screws holding the security plate over the filler tank cap, see Fig 2.

Ensure the machine is running in cooling mode before removing the header tank cap, and as with all pressure caps, remove slowly. It is recommended that a mixture, by volume, of one part antifreeze to **two parts** water is utilised, this will prevent freezing down to an external temperature of -20°C/-5°F). The approximate total volume of the PAC system complete with heat exchanger and lines is shown below. WAC PAC fluid levels are checked at the schrader valve in the back of the room unit.

LINESET LENGTH	SYSTEM CAPACITIES	
	4.5/6.0kW UNITS	6.5kW UNIT
5M Lines	7·4 Litres/1·63 Galls.	10.8 Litres/2.4 Galls.
10M Lines	8·8 Litres/1·94 Galls.	12.2 Litres/2.71 Galls.
15M Lines	10·3 Litres/2·27 Galls.	13.6 Litres/2·27 Galls.
20M Lines	11·7 Litres/2·57 Galls	11·7 Litres/2·57 Galls
25M Lines	13·1 Litres/2·88 Galls.	13·1 Litres/2·88 Galls.
30M Lines	14·5 Litres/3·18 Galls.	14·5 Litres/3·18 Galls.

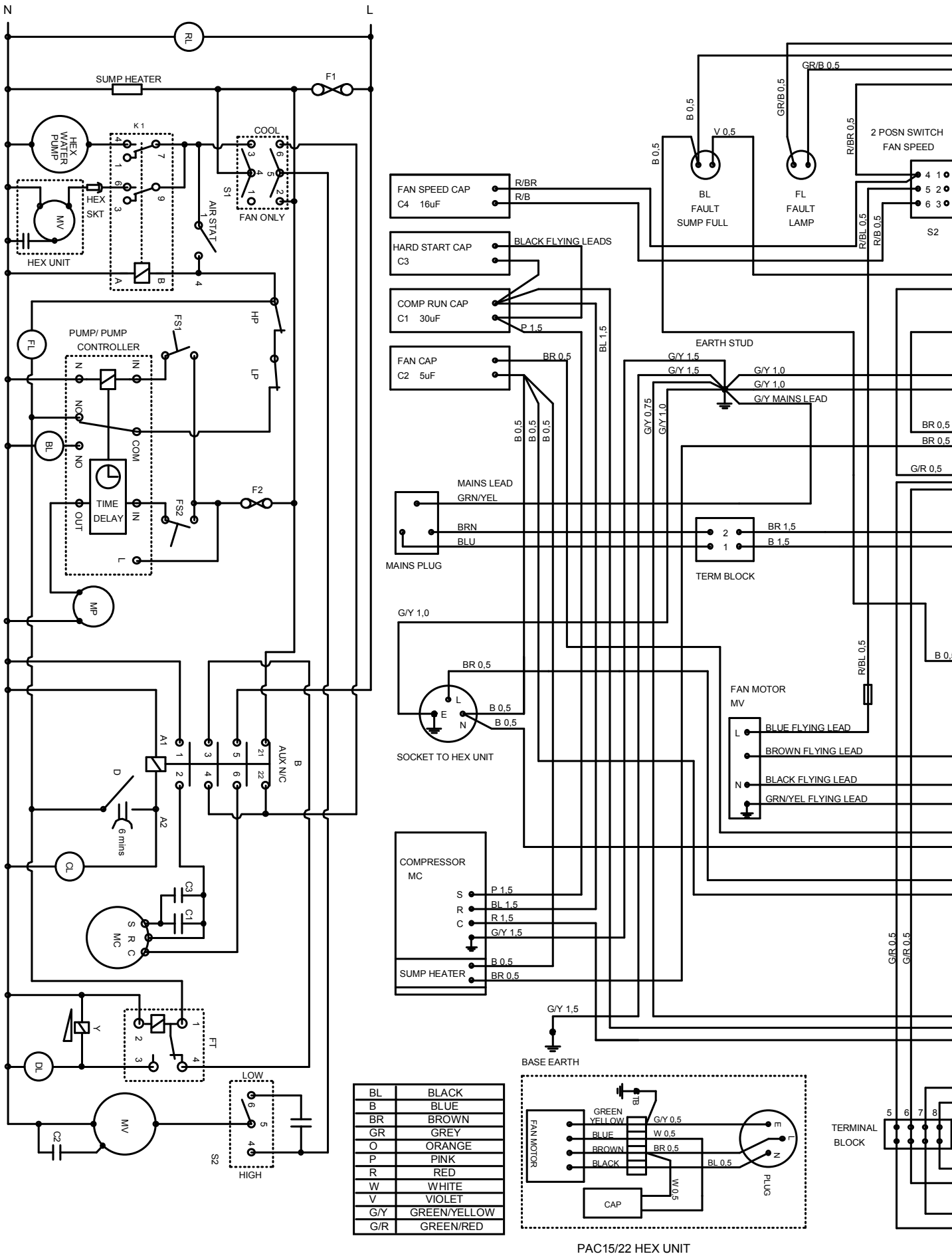
DO NOT APPLY MAINS WATER PRESSURE TO THE SYSTEM

FIG 2

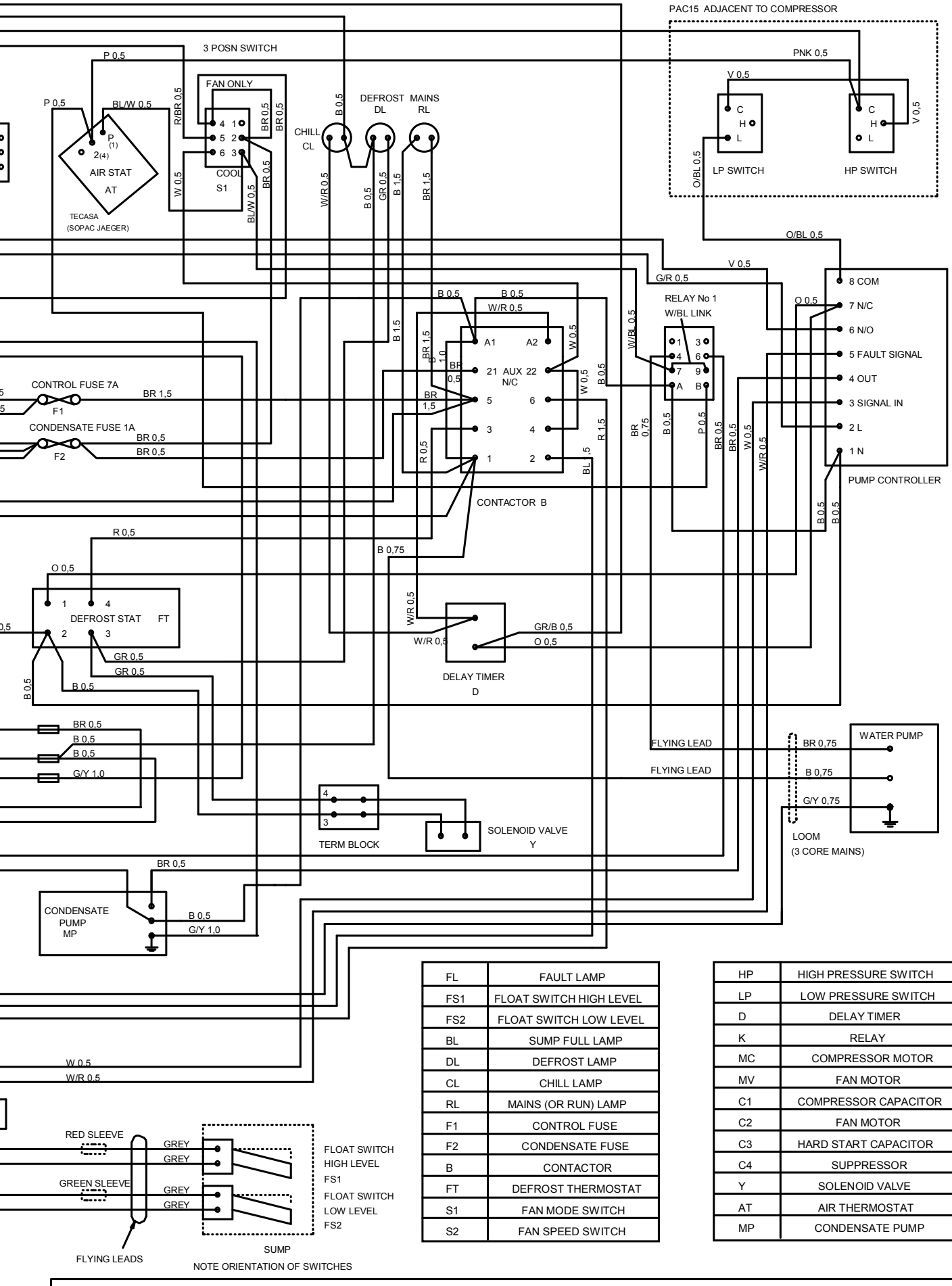


GAS CHARGE

The dehumidifier incorporates a hermetically sealed refeigeration circuit containing less than 6kg of refrigerant. R407c Global warming potential (GWP) 1700.



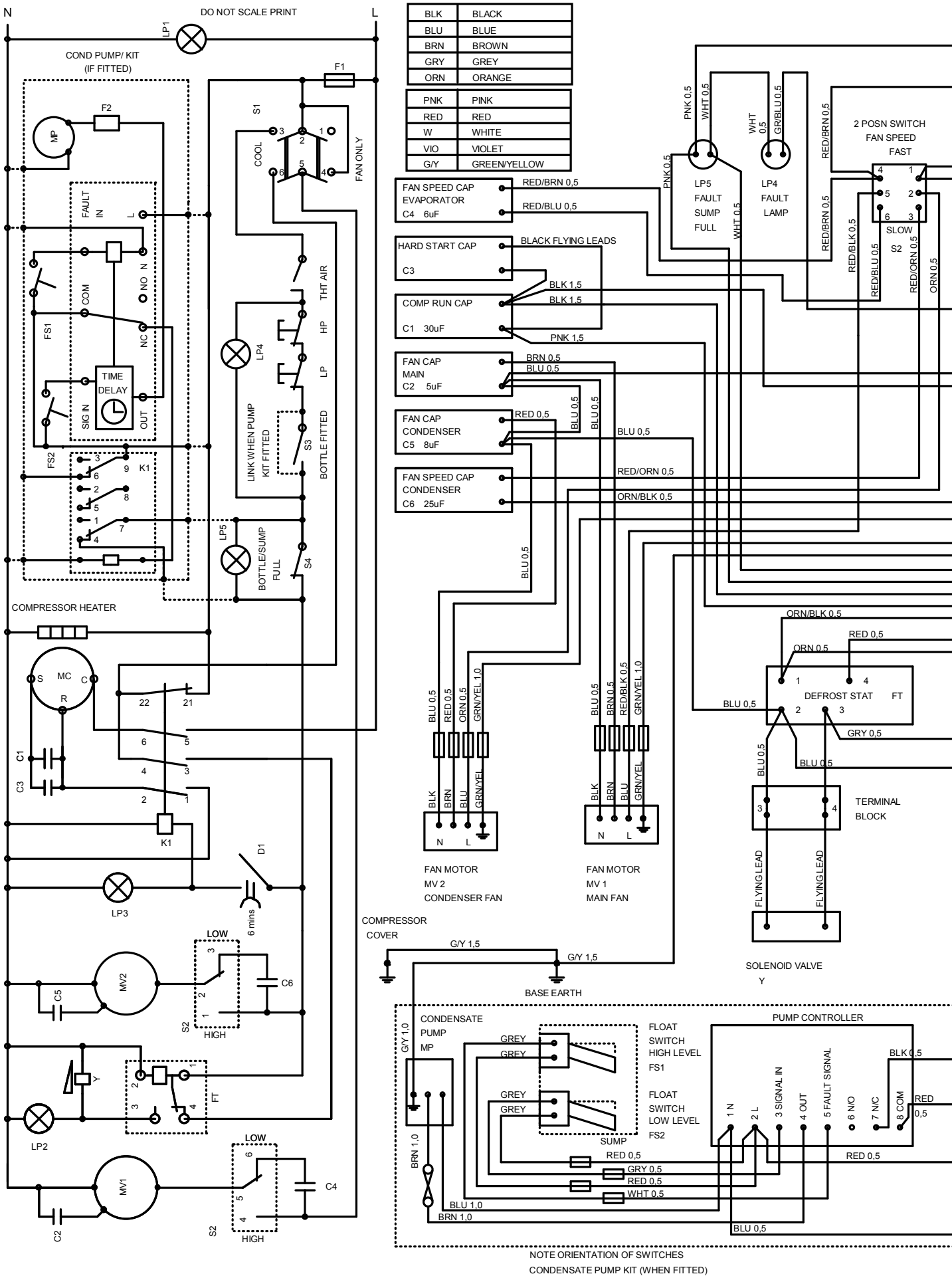
PAC15/22 HEX UNIT

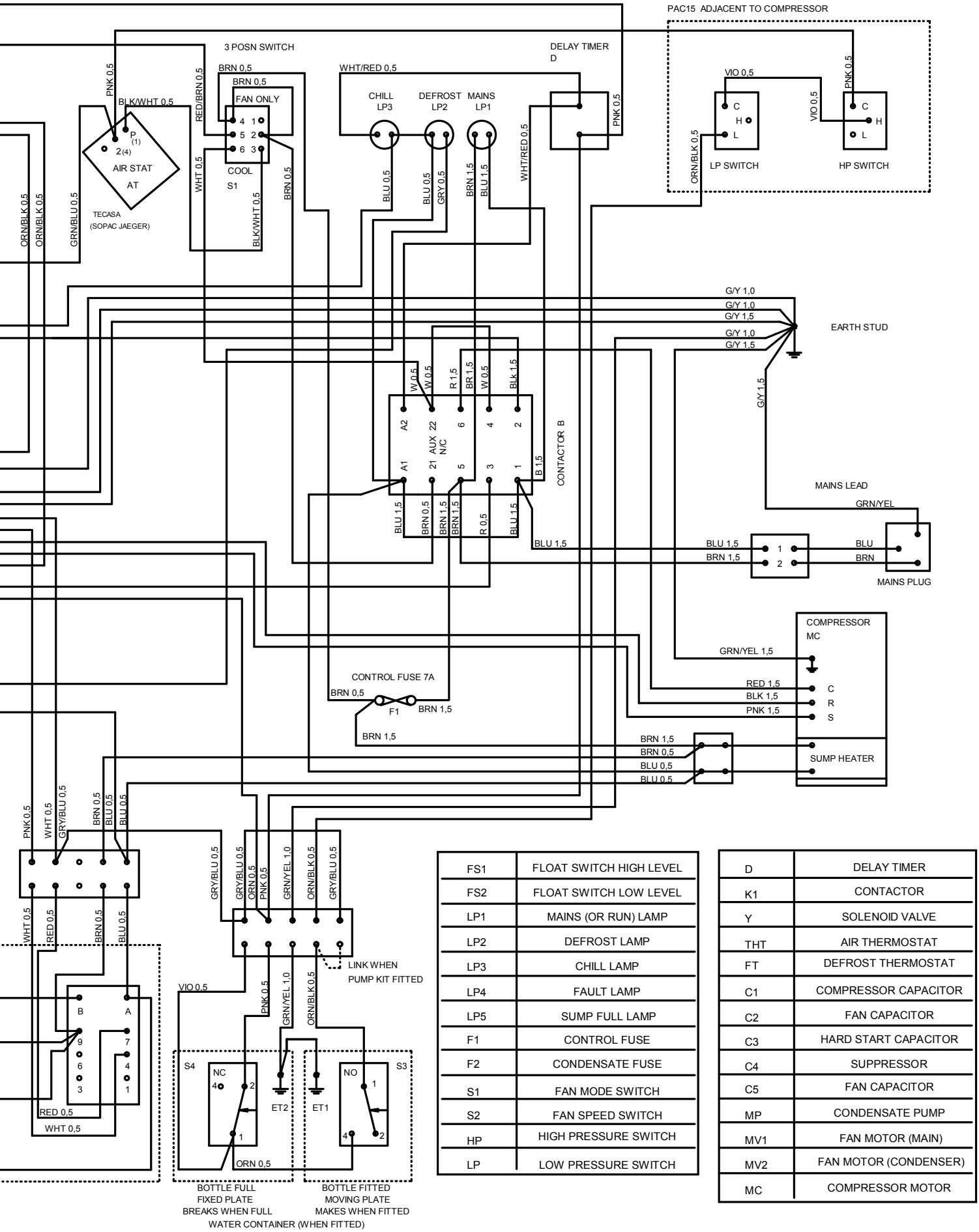


FL	FAULT LAMP
FS1	FLOAT SWITCH HIGH LEVEL
FS2	FLOAT SWITCH LOW LEVEL
BL	SUMP FULL LAMP
DL	DEFROST LAMP
CL	CHILL LAMP
RL	MAINS (OR RUN) LAMP
F1	CONTROL FUSE
F2	CONDENSATE FUSE
B	CONTACTOR
FT	DEFROST THERMOSTAT
S1	FAN MODE SWITCH
S2	FAN SPEED SWITCH

HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH
D	DELAY TIMER
K	RELAY
MC	COMPRESSOR MOTOR
MV	FAN MOTOR
C1	COMPRESSOR CAPACITOR
C2	FAN MOTOR
C3	HARD START CAPACITOR
C4	SUPPRESSOR
Y	SOLENOID VALVE
AT	AIR THERMOSTAT
MP	CONDENSATE PUMP

WIRING DIAGRAM PAC15/HEX22 STANDARD MACHINE D439550 ISSUE 10

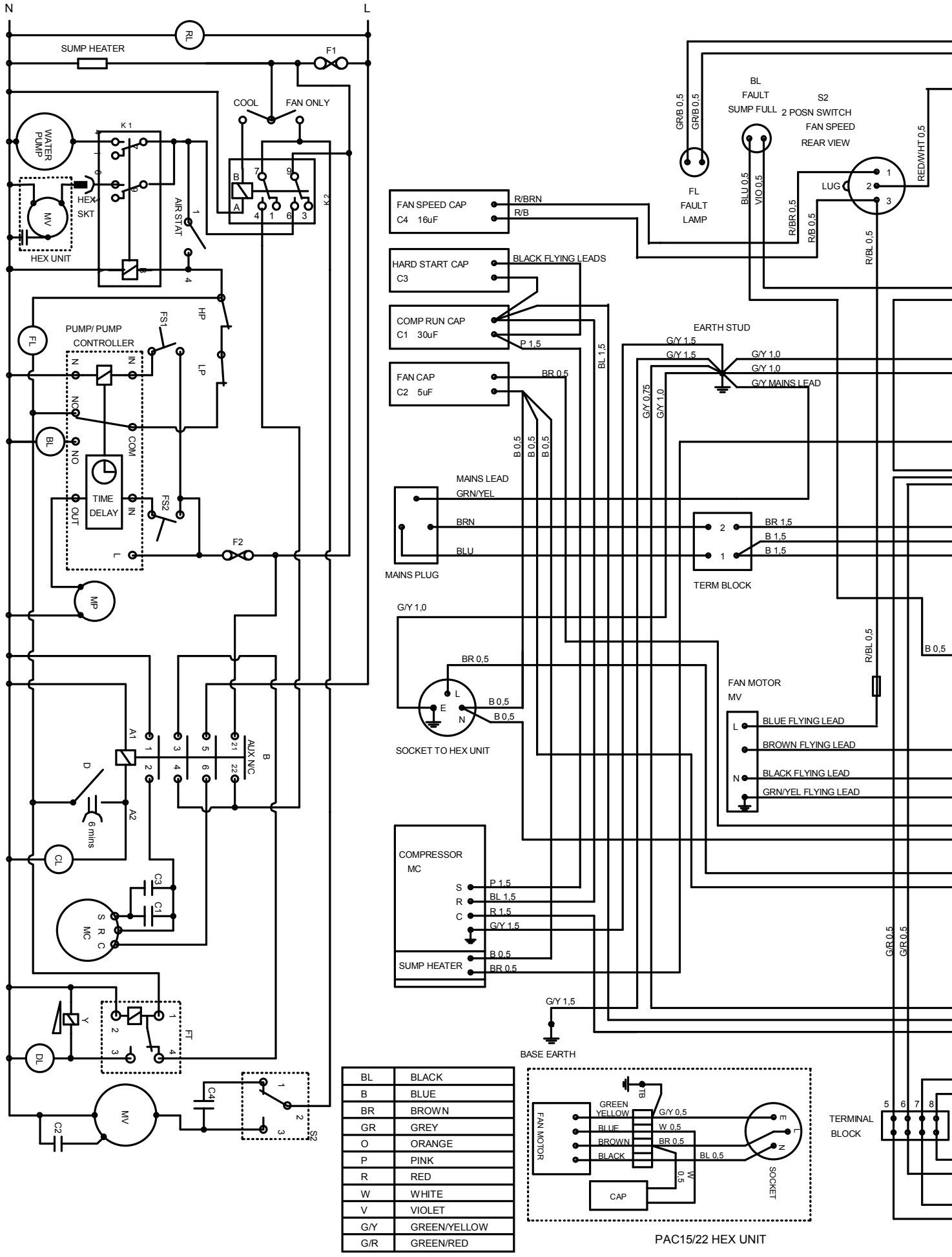

N
L
DO NOT SCALE PRINT
LP1
COND PUMP/ KIT
(IF FITTED)
F1
F2
MP
S1
COOL
FAN ONLY
FAULT
IN
L
N
NO
COM
NC
FS1
TIME
DELAY
SIG IN
OUT
FS2
K1
THT AIR
HP
LP
LP4
LINK WHEN PUMP
KIT FITTED
S3
BOTTLE FITTED
LP5
BOTTLE/SUMP
FULL
S4
COMPRESSOR HEATER
S
MC
C
R
22
21
6
5
4
3
2
1
C1
C3
K1
D1
LP3
6 mins
LOW
MV2
C5
C6
S2
HIGH
Y
FT
LP2
MV1
C2
C4
BLK BLACK
BLU BLUE
BRN BROWN
GRY GREY
ORN ORANGE
PNK PINK
RED RED
W WHITE
VIO VIOLET
G/Y GREEN/YELLOW
FAN SPEED CAP
EVAPORATOR
C4 6uF
RED/BRN 0,5
RED/BLU 0,5
HARD START CAP
C3
BLACK FLYING LEADS
COMP RUN CAP
C1 30uF
BLK 1,5
BLK 1,5
PNK 1,5
FAN CAP
MAIN
C2 5uF
BRN 0,5
BLU 0,5
FAN CAP
CONDENSER
C5 8uF
RED 0,5
BLU 0,5
FAN SPEED CAP
CONDENSER
C6 25uF
RED/ORN 0,5
ORN/BLK 0,5
PNK 0,5
WHT 0,5
LP5
FAULT
SUMP
FULL
WHT
0,5
GR/BLU 0,5
LP4
FAULT
LAMP
2 POSN SWITCH
FAN SPEED
FAST
SLOW
S2
RED/BRN 0,5
RED/BLK 0,5
RED/BLU 0,5
RED/ORN 0,5
ORN 0,5
BLU 0,5
RED 0,5
ORN 0,5
GRN/YEL 1,0
BLK
BRN
BLU
GRN/YEL
N
L
FAN MOTOR
MV 2
CONDENSER FAN
FAN MOTOR
MV 1
MAIN FAN
ORN/BLK 0,5
RED 0,5
ORN 0,5
DEFROST STAT
FT
GRY 0,5
TERMINAL
BLOCK
FLYING LEAD
FLYING LEAD
SOLENOID VALVE
Y
COMPRESSOR
COVER
G/Y 1,5
G/Y 1,5
BASE EARTH
CONDENSATE
PUMP
MP
G/Y 1,0
GREY
GREY
GREY
GREY
FLOAT
SWITCH
HIGH LEVEL
FS1
FLOAT
SWITCH
LOW LEVEL
FS2
SUMP
PUMP CONTROLLER
1 N
2 L
3 SIGNAL IN
4 OUT
5 FAULT SIGNAL
6 N/O
7 N/C
8 COM
BLK 0,5
RED 0,5
BRN 1,0
RED 0,5
GRY 0,5
RED 0,5
WHT 0,5
BLU 1,0
BRN 1,0
BLU 0,5
NOTE ORIENTATION OF SWITCHES
CONDENSATE PUMP KIT (WHEN FITTED)

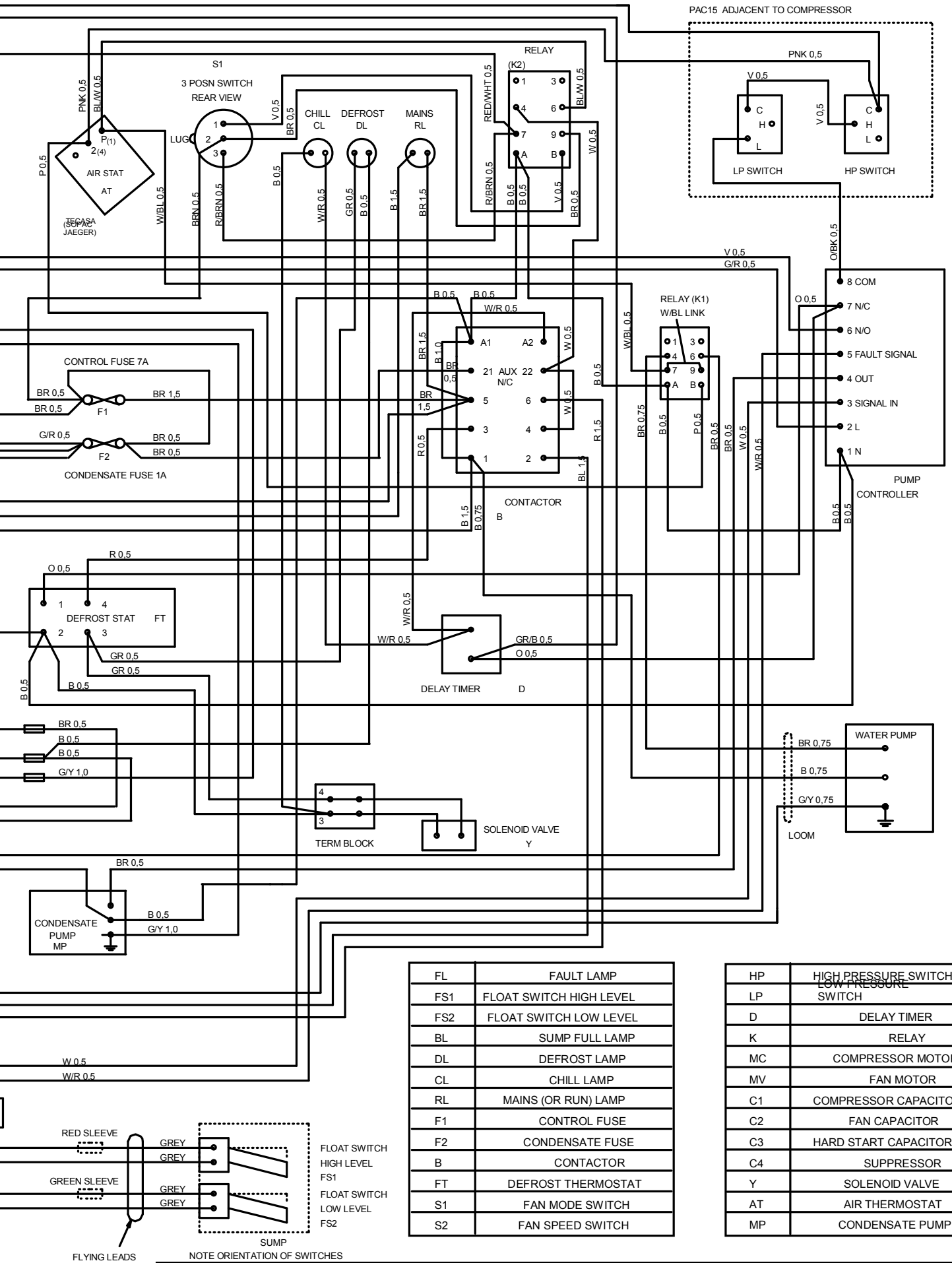


FS1	FLOAT SWITCH HIGH LEVEL
FS2	FLOAT SWITCH LOW LEVEL
LP1	MAINS (OR RUN) LAMP
LP2	DEFROST LAMP
LP3	CHILL LAMP
LP4	FAULT LAMP
LP5	SUMP FULL LAMP
F1	CONTROL FUSE
F2	CONDENSATE FUSE
S1	FAN MODE SWITCH
S2	FAN SPEED SWITCH
HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH

D	DELAY TIMER
K1	CONTACTOR
Y	SOLENOID VALVE
THT	AIR THERMOSTAT
FT	DEFROST THERMOSTAT
C1	COMPRESSOR CAPACITOR
C2	FAN CAPACITOR
C3	HARD START CAPACITOR
C4	SUPPRESSOR
C5	FAN CAPACITOR
MP	CONDENSATE PUMP
MV1	FAN MOTOR (MAIN)
MV2	FAN MOTOR (CONDENSER)
MC	COMPRESSOR MOTOR

WIRING DIAGRAM ET15 STANDARD MACHINE D439552 ISSUE 10

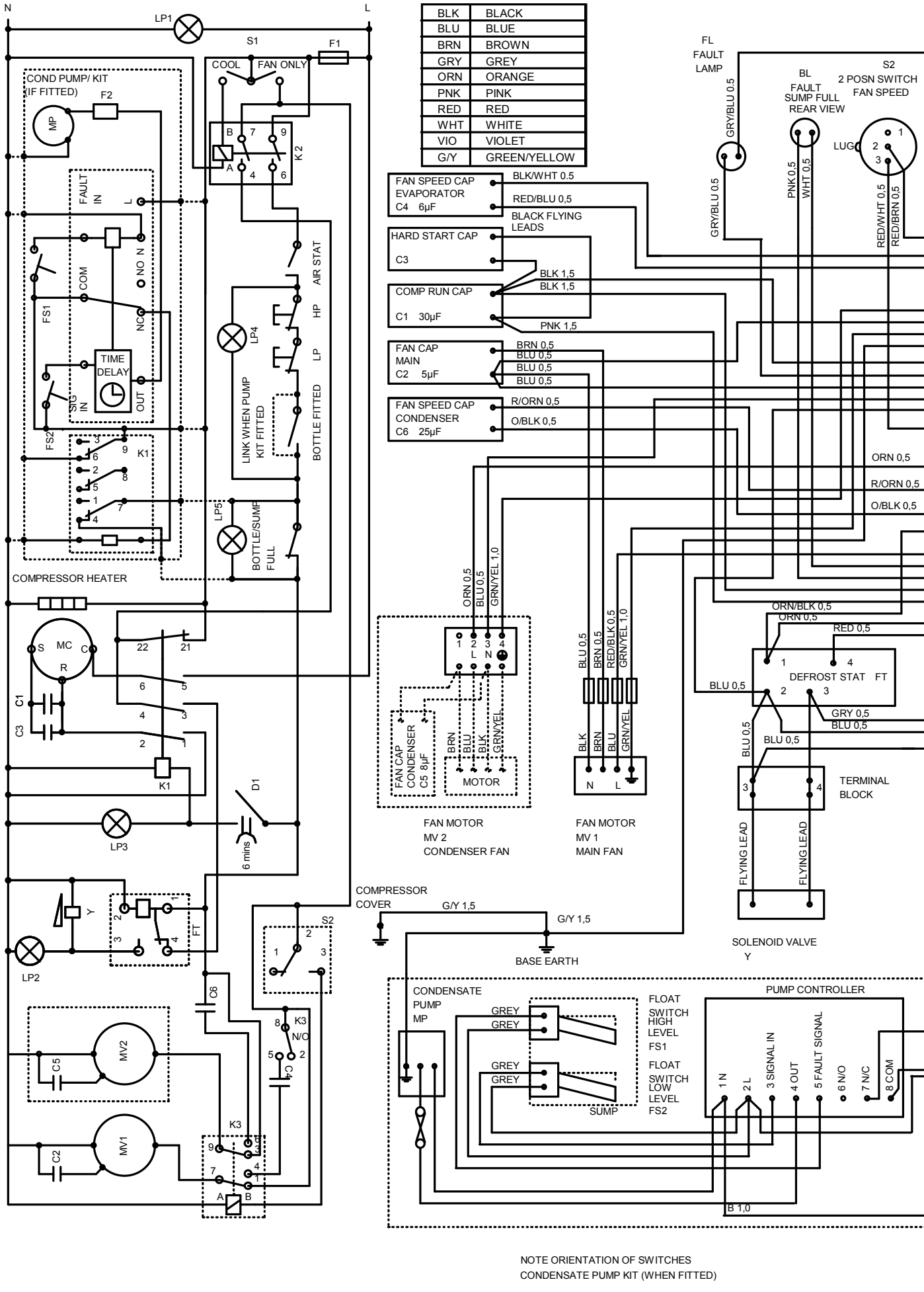

N
L
RL
SUMP HEATER
F1
COOL
FAN ONLY
WATER PUMP
K 1
HEX SKT
MV
HEX UNIT
AIR STAT
K2
PUMP/ PUMP CONTROLLER
FS1
HP
LP
FL
N
IN
NC
COM
NO
BL
TIME DELAY
OUT
FS2
F2
MP
A1
A2
D
6 mins
CL
C3
C1
S R C
MC
AUX N/C
B
Y
FT
DL
C4
C2
S2
BL FAULT SUMP FULL
S2 2 POSN SWITCH FAN SPEED REAR VIEW
GR/B 0,5
FL FAULT LAMP
BLU 0,5
VIO 0,5
LUG
RED/WHT 0,5
R/BR 0,5
R/B 0,5
R/BL 0,5
FAN SPEED CAP C4 16uF
R/BRN
R/B
HARD START CAP C3
BLACK FLYING LEADS
COMP RUN CAP C1 30uF
P 1,5
FAN CAP C2 5uF
BR 0,5
BL 1,5
EARTH STUD
G/Y 1,5
G/Y 1,0
G/Y MAINS LEAD
G/Y 0,75
B 0,5
MAINS LEAD
GRN/YEL
BRN
BLU
MAINS PLUG
TERM BLOCK
BR 1,5
B 1,5
SOCKET TO HEX UNIT
FAN MOTOR MV
BLUE FLYING LEAD
BROWN FLYING LEAD
BLACK FLYING LEAD
GRN/YEL FLYING LEAD
COMPRESSOR MC
S
R
C
R 1,5
SUMP HEATER
BASE EARTH
BL BLACK
B BLUE
BR BROWN
GR GREY
O ORANGE
P PINK
R RED
W WHITE
V VIOLET
G/Y GREEN/YELLOW
G/R GREEN/RED
TB
GREEN YELLOW
BLUE
BROWN
BLACK
FAN MOTOR
G/Y 0,5
W 0,5
BR 0,5
BL 0,5
CAP
SOCKET
PAC15/22 HEX UNIT
TERMINAL BLOCK



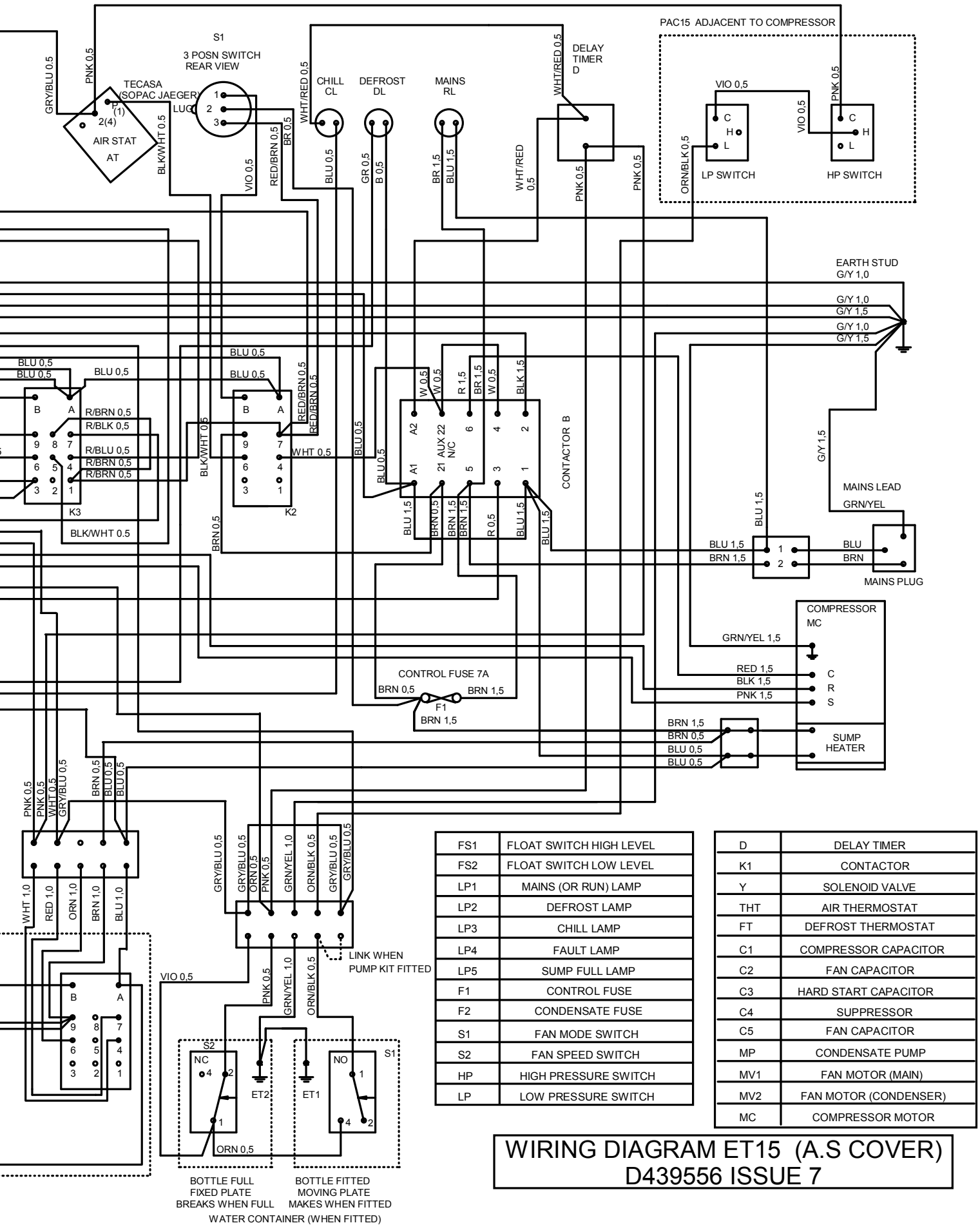
FL	FAULT LAMP
FS1	FLOAT SWITCH HIGH LEVEL
FS2	FLOAT SWITCH LOW LEVEL
BL	SUMP FULL LAMP
DL	DEFROST LAMP
CL	CHILL LAMP
RL	MAINS (OR RUN) LAMP
F1	CONTROL FUSE
F2	CONDENSATE FUSE
B	CONTACTOR
FT	DEFROST THERMOSTAT
S1	FAN MODE SWITCH
S2	FAN SPEED SWITCH

HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH
D	DELAY TIMER
K	RELAY
MC	COMPRESSOR MOTOR
MV	FAN MOTOR
C1	COMPRESSOR CAPACITOR
C2	FAN CAPACITOR
C3	HARD START CAPACITOR
C4	SUPPRESSOR
Y	SOLENOID VALVE
AT	AIR THERMOSTAT
MP	CONDENSATE PUMP

WIRING DIAGRAM PAC15 & HEX 22 (A.S COVER) D439554 ISSUE 8



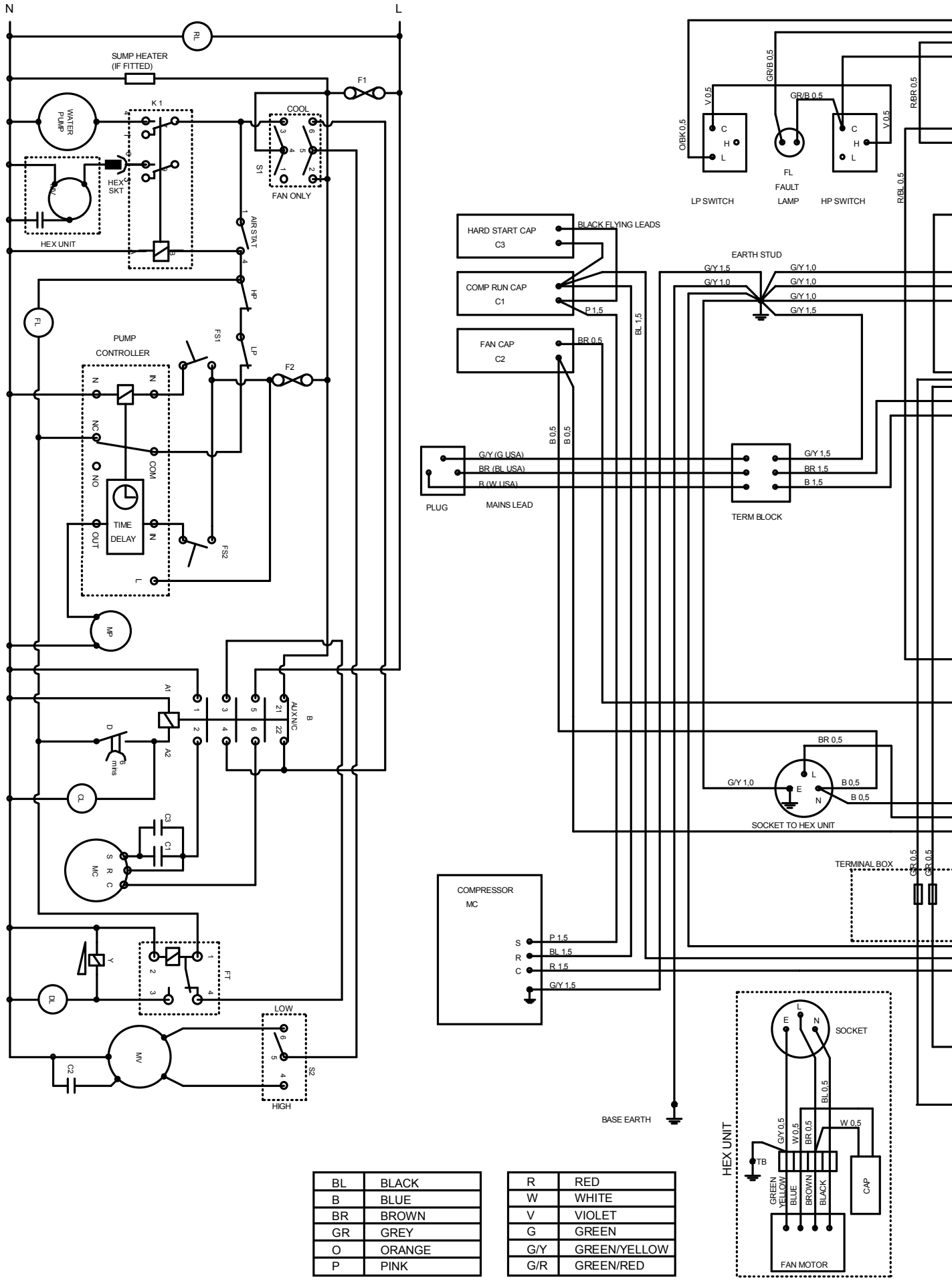
NOTE ORIENTATION OF SWITCHES
CONDENSATE PUMP KIT (WHEN FITTED)



FS1	FLOAT SWITCH HIGH LEVEL
FS2	FLOAT SWITCH LOW LEVEL
LP1	MAINS (OR RUN) LAMP
LP2	DEFROST LAMP
LP3	CHILL LAMP
LP4	FAULT LAMP
LP5	SUMP FULL LAMP
F1	CONTROL FUSE
F2	CONDENSATE FUSE
S1	FAN MODE SWITCH
S2	FAN SPEED SWITCH
HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH

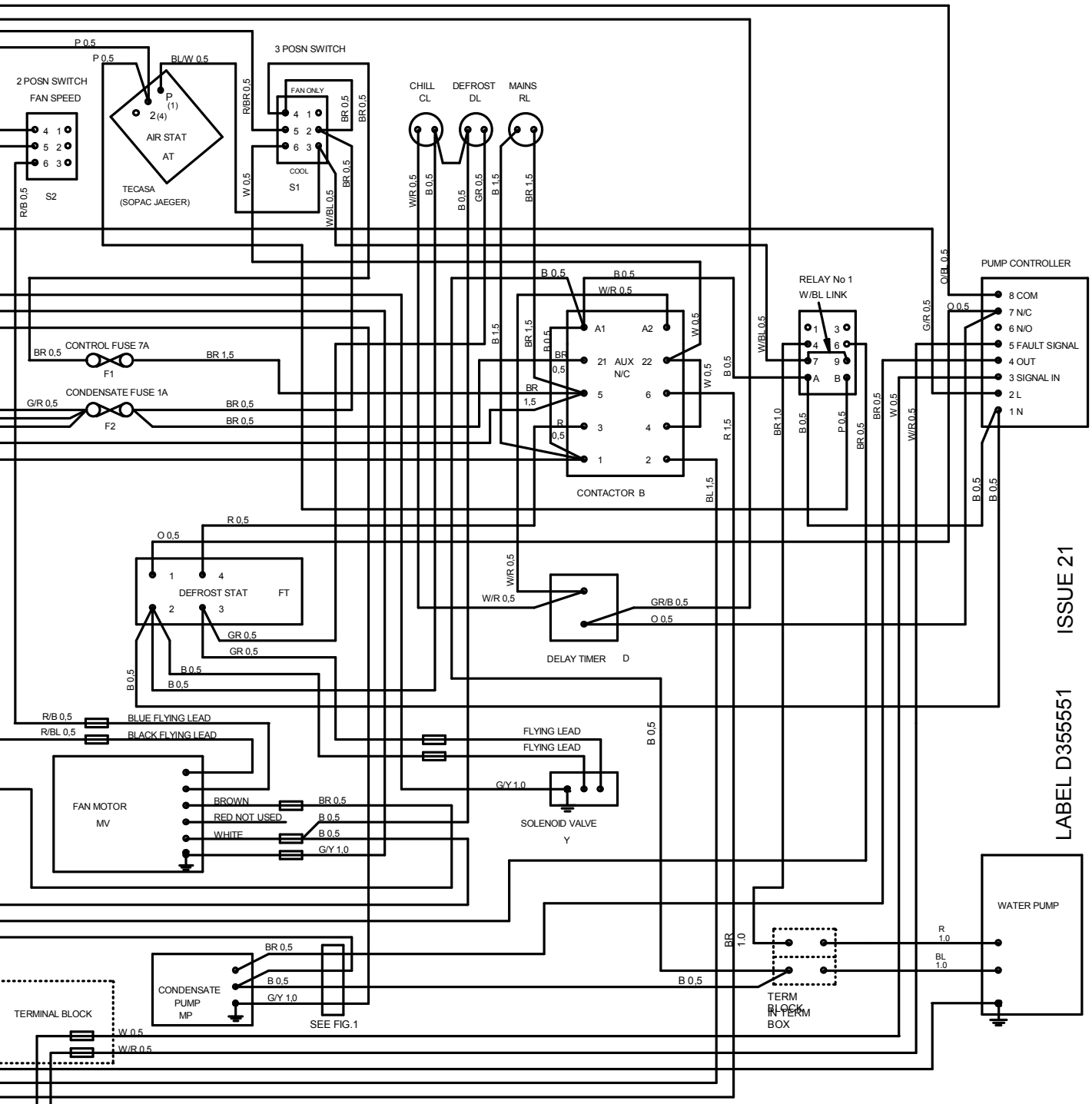
D	DELAY TIMER
K1	CONTACTOR
Y	SOLENOID VALVE
THT	AIR THERMOSTAT
FT	DEFROST THERMOSTAT
C1	COMPRESSOR CAPACITOR
C2	FAN CAPACITOR
C3	HARD START CAPACITOR
C4	SUPPRESSOR
C5	FAN CAPACITOR
MP	CONDENSATE PUMP
MV1	FAN MOTOR (MAIN)
MV2	FAN MOTOR (CONDENSER)
MC	COMPRESSOR MOTOR

WIRING DIAGRAM ET15 (A.S COVER)
D439556 ISSUE 7



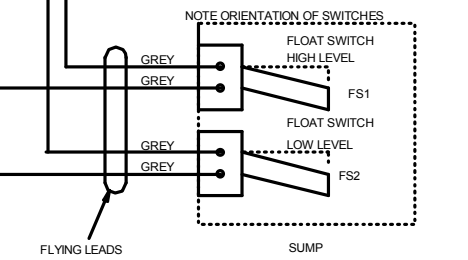
BL	BLACK
B	BLUE
BR	BROWN
GR	GREY
O	ORANGE
P	PINK

R	RED
W	WHITE
V	VIOLET
G	GREEN
G/Y	GREEN/YELLOW
G/R	GREEN/RED



ISSUE 21

LABEL D355551



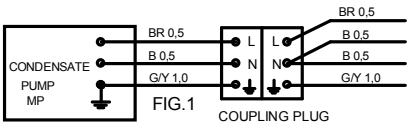


FIG.1

CONDENSATE PUMP COUPLING PLUG (IF FITTED)

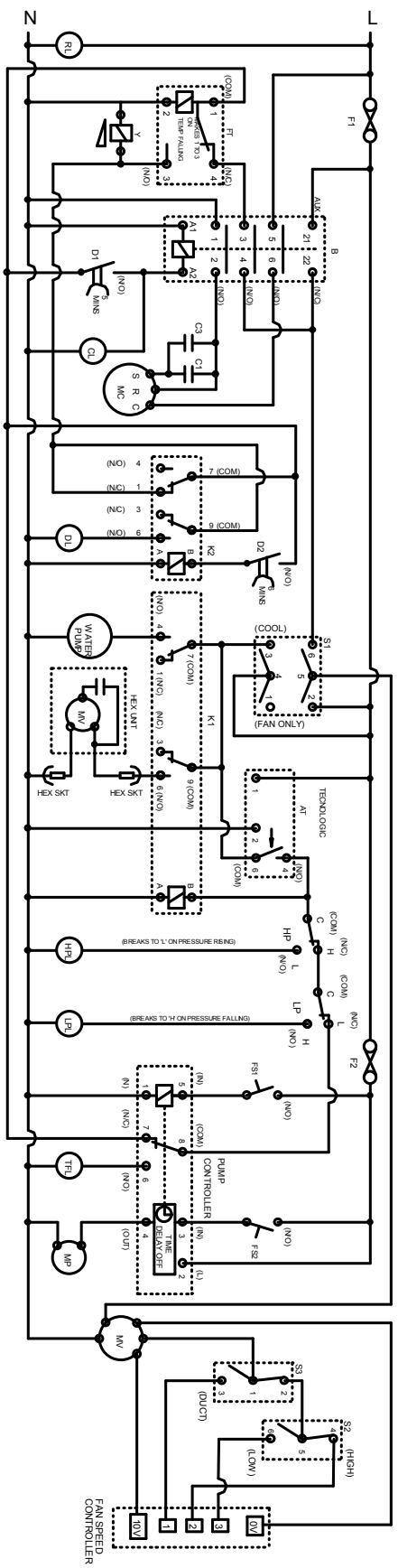
FL	FAULT LAMP
FS1	FLOAT SWITCH HIGH LEVEL
FS2	FLOAT SWITCH LOW LEVEL
DL	DEFROST LAMP
CL	CHILL LAMP
RL	MAINS (OR RUN) LAMP
F1	CONTROL FUSE
F2	CONDENSATE FUSE
B	CONTACTOR
FT	DEFROST THERMOSTAT
S1	FAN MODE SWITCH
S2	FAN SPEED SWITCH

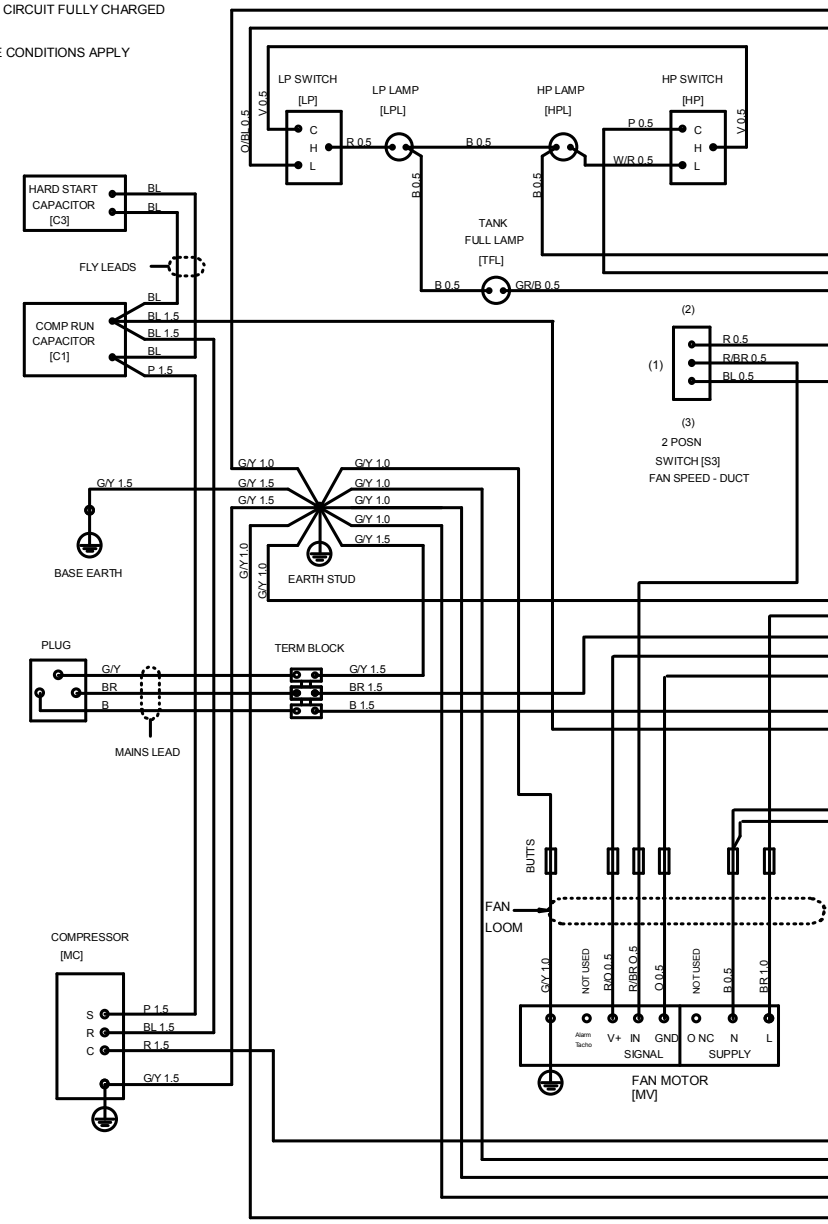
HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH
D	DELAY TIMER
K	RELAY
MC	COMPRESSOR MOTOR
MV	FAN MOTOR
C1	COMPRESSOR CAPACITOR
C2	FAN CAPACITOR
C3	HARD START CAPACITOR
C4	SUPPRESSOR
Y	SOLENOID VALVE
AT	AIR THERMOSTAT
MP	CONDENSATE PUMP

WIRING DIAGRAM PAC22/HEX22 D355550 ISSUE 21

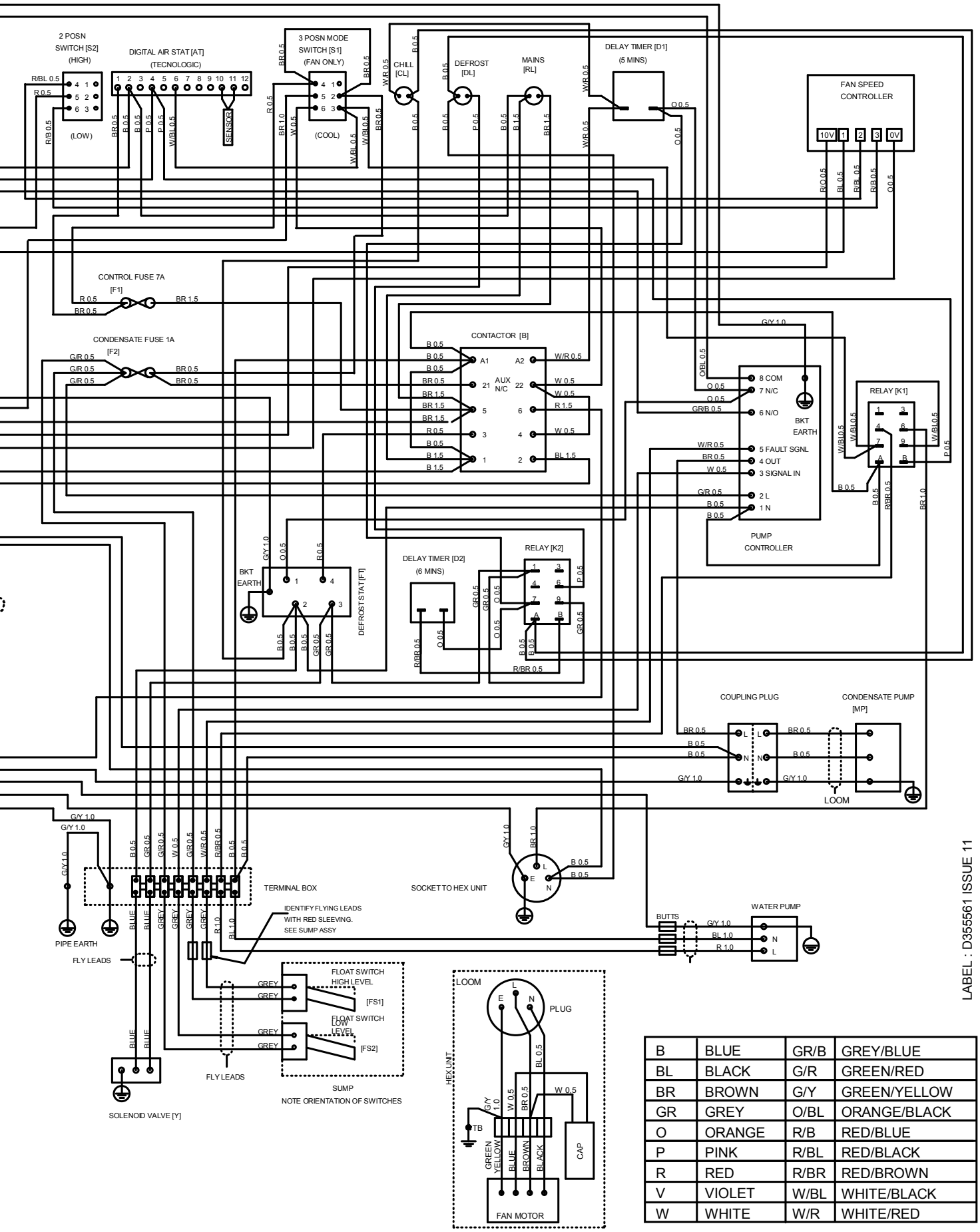
ALL CONTACTS SHOWN IN DE-ENERGISED STATE BUT WITH REFRIGERATION CIRCUIT FULLY CHARGED
CONDENSATE / SUMP TANK IN AN EMPTY STATE .

WHERE CONTACTS ARE MARKED (N/O) OR (N/C) ON CIRCUIT DIAGRAM ABOVE CONDITIONS APPLY





TFL	TANK FULL LAMP	S3	FAN SPEED SWITCH (DUCTED)
FS1	FLOAT SWITCH HIGH LEVEL	HP	HIGH PRESSURE SWITCH
FS2	FLOAT SWITCH LOW LEVEL	LP	LOW PRESSURE SWITCH
DL	DEFROST LAMP	D	DELAY TIMER
CL	CHILL LAMP	K	RELAY
RL	MAINS (OR RUN) LAMP	MC	COMPRESSOR MOTOR
HPL	HIGH PRESSURE FAULT LAMP	MV	FAN MOTOR
LPL	LOW PRESSURE FAULT LAMP	C1	COMPRESSOR CAPACITOR
F1	CONTROL FUSE	C2	FAN CAPACITOR
F2	CONDENSATE FUSE	C3	HARD START CAPACITOR
B	CONTACTOR	Y	SOLENOID VALVE
FT	DEFROST THERMOSTAT	AT	AIR THERMOSTAT
S1	FAN MODE SWITCH	MP	CONDENSATE PUMP
S2	FAN SPEED SWITCH		



LABEL : D355561 ISSUE 11

B	BLUE	GR/B	GREY/BLUE
BL	BLACK	G/R	GREEN/RED
BR	BROWN	G/Y	GREEN/YELLOW
GR	GREY	O/BL	ORANGE/BLACK
O	ORANGE	R/B	RED/BLUE
P	PINK	R/BL	RED/BLACK
R	RED	R/BR	RED/BROWN
V	VIOLET	W/BL	WHITE/BLACK
W	WHITE	W/R	WHITE/RED

WIRING DIAGRAM PAC6500/ HEX22A [SERIES 3] D355560 ISSUE 11

7) OPERATING INSTRUCTIONS.

The Control Panel on the room unit is illustrated below, see Fig 3.

AIR CONDITIONER (NOT PAC22 MK3)

a) Revolve thermostat knob fully CLOCKWISE to the number "8" position.

b) Plug in the room unit mains cable, and switch on electricity, red mains light will illuminate.

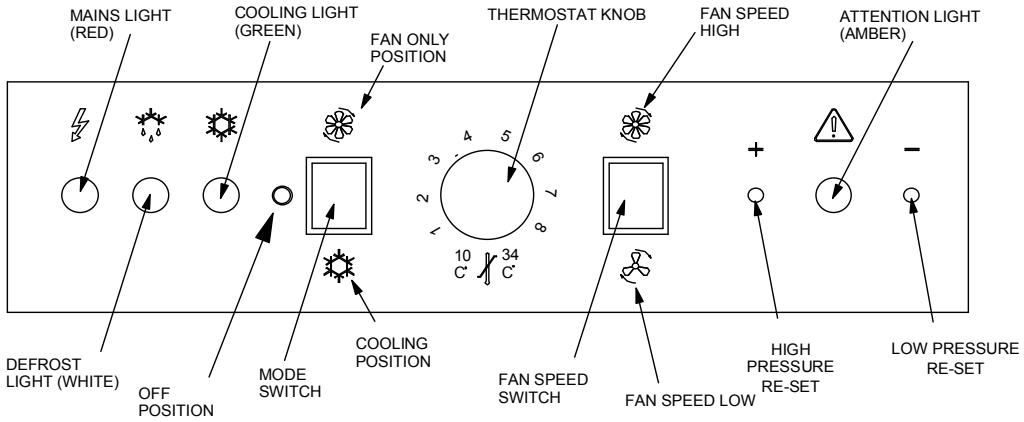
c) Select "Fan Only" with the mode switch. The fan will start.

d) Select "Fan Speed", with the fan speed switch, high or low depending on air velocity required.

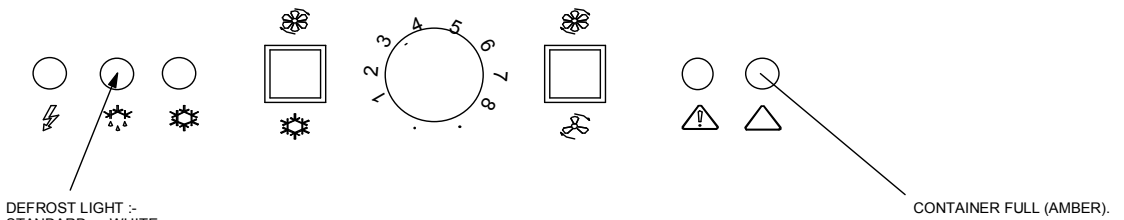
e) Select "Cooling" with the mode switch, and revolve the thermostat knob fully ANTICLOCKWISE to the number "1" position. If fitted the external heat exchanger fan and the water pump in the room unit will start. After a delay of 5 to 10 minutes the green "Cooling" light will illuminate and the machine will proceed to cool the air.

f) Monitor the room temperature and when it has reduced to the desired level, very slowly revolve the thermostat knob back, clockwise, until the green "Cooling" light goes out. The room unit will now control the room temperature cooling automatically at this setting.

FIG.3 CONSOLE LABEL/ MARKING OPTIONS WITH DIAL THERMOSTAT



PAC22AX



PAC15AX/ET15AX

7) OPERATING INSTRUCTIONS.

The Control Panel on the room unit is illustrated below,

AIR CONDITIONER PAC22 MK3

a) Plug in the room unit mains cable, and switch on electricity, red mains light will illuminate.

b) Select "Fan Only" with the mode switch. The fan will start.

c) Select "Fan Speed", with the fan speed switch, high or low depending on air velocity required.

d) Select "Cooling" with the mode switch.

e) The PAC22 MK3 is fitted with a digital thermostat which is factory preset at 28ºC. With the PAC set like this the PAC starts to cool at 29ºC and will stop cooling at 28ºC.

Changing the set point.

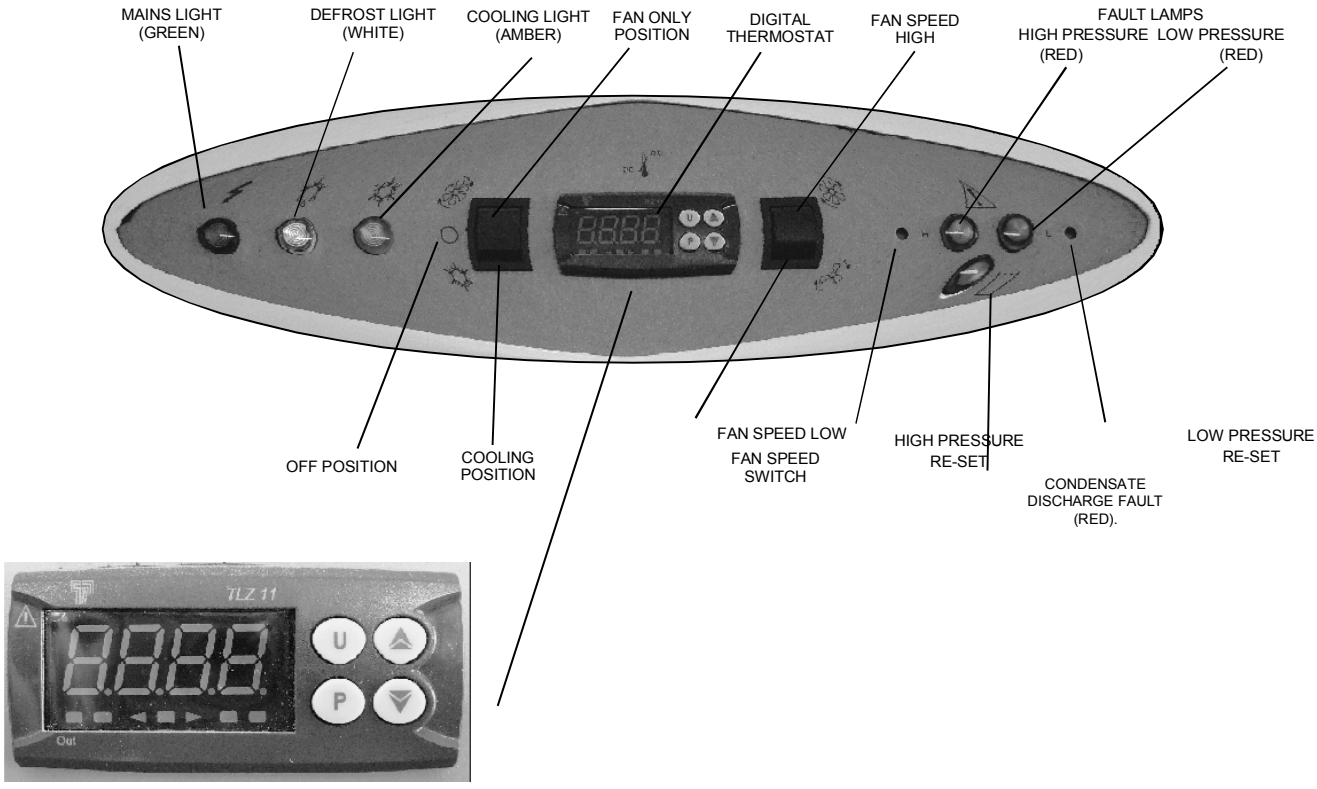
Thermostat - marked TLZ11

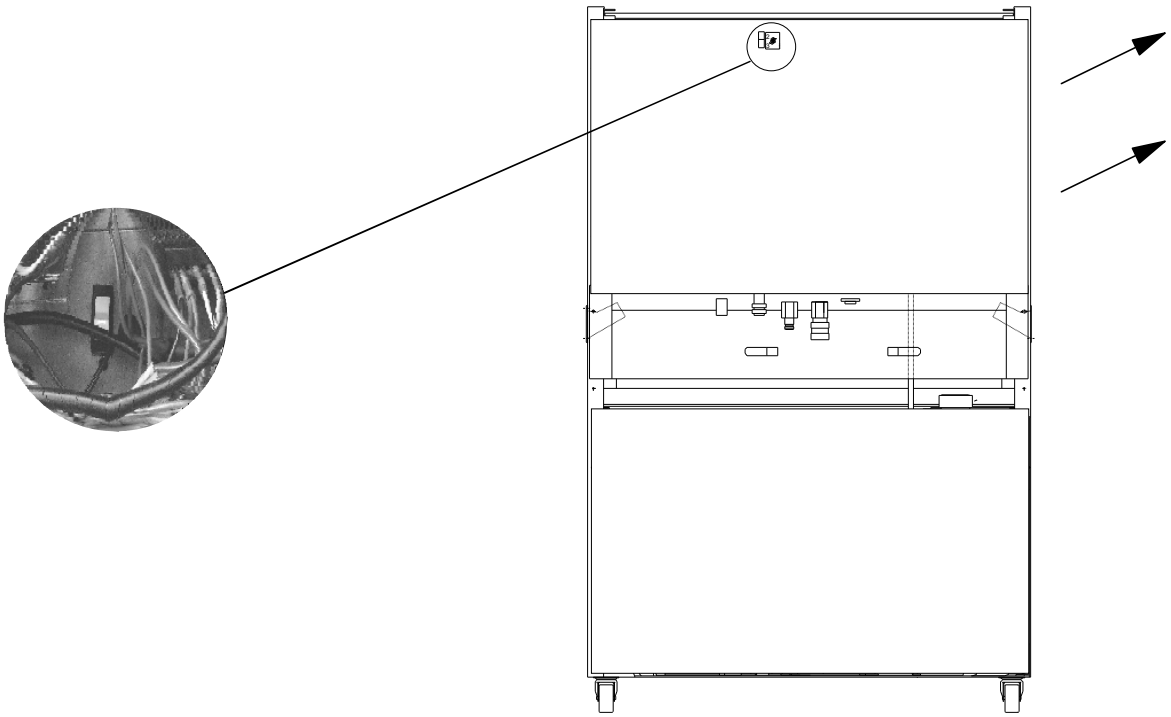
TLZ 11 Thermostat.Press P button once and release. Set Point and set point value (28) will be displayed alternately.

Press the ▲ or ▼ key to change the value of the set point. Once the desired value is displayed press P again to memorise the value. Cooling starts at 1ºC above the new set point value and stops at the set point.

After a delay of 5 to 10 minutes the amber “Cooling” light will illuminate and the machine will proceed to cool the air.

FIG.3 CONSOLE LABEL/ MARKING OPTIONS WITH DIGITAL THERMOSTAT

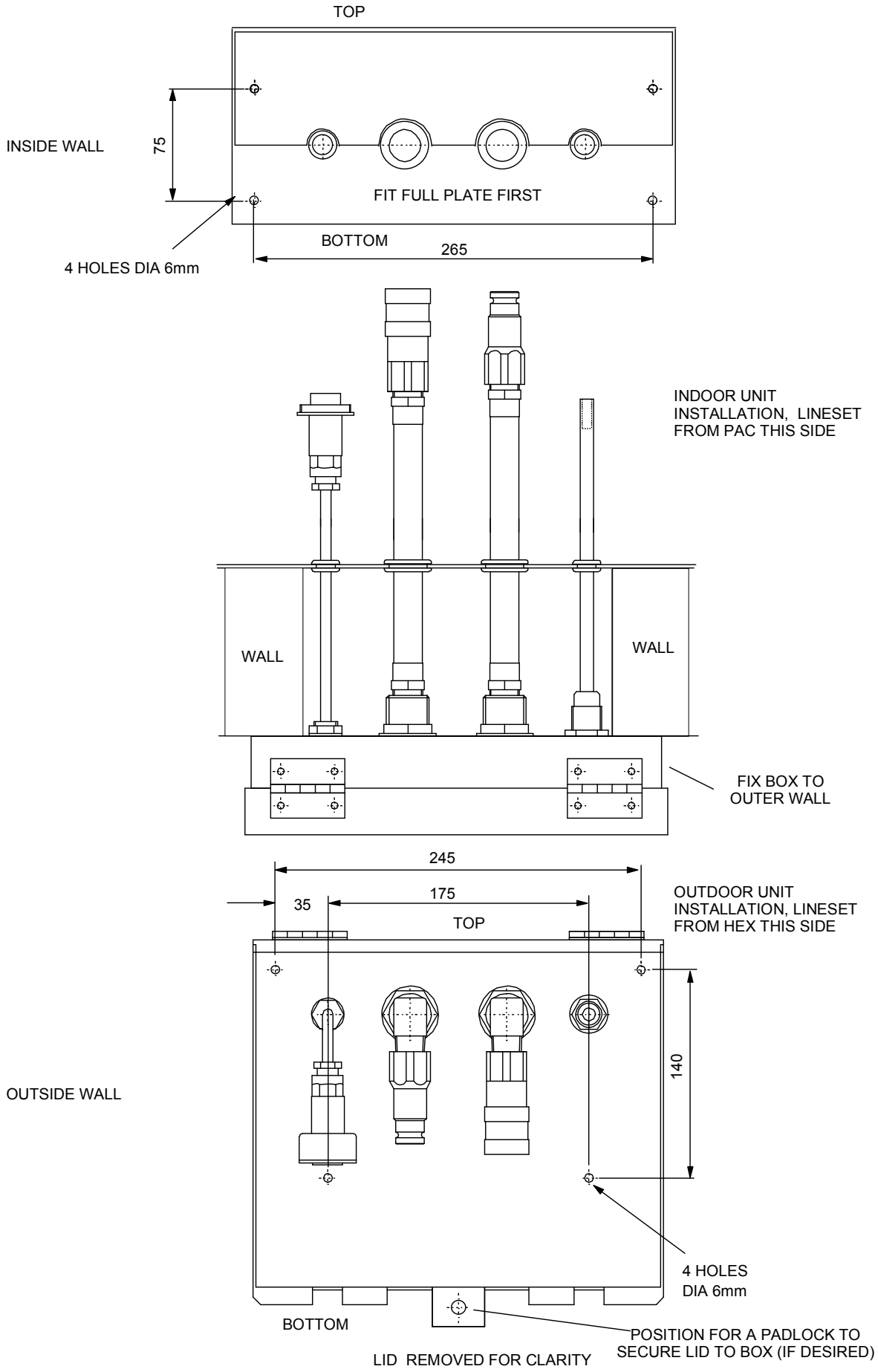




The PAC22MK3 has a third (higher) fan speed which is ONLY used when the PAC is fitted to optional ducting. The switch is situated in the electric box and is accessed by removing the upper back panel. It needs to be set to the 3 position.

Use of the switch in this position 3 without ducting fitted will result in failure of the PAC, causing blown fuses or burning out of the fan motor.

The PAC22MK3 has an optional wall plate kit which is installed in the following way.
Please note: Fixings provided are for securing the kit to a brick wall.



8) ROUTINE MAINTENANCE

The air filter must be kept clean, never allow to become choked with dust or dirt. If allowed to do so, the performance of the unit will become impaired, resulting in loss of air flow, freezing up of the evaporator coil and possible component damage.

ACCESSING THE FILTER PAC15AX/ ET15AX

Open the lower front panel, filter is located in front of the evaporator. A second filter is fitted to the rear panel on of an ET15.

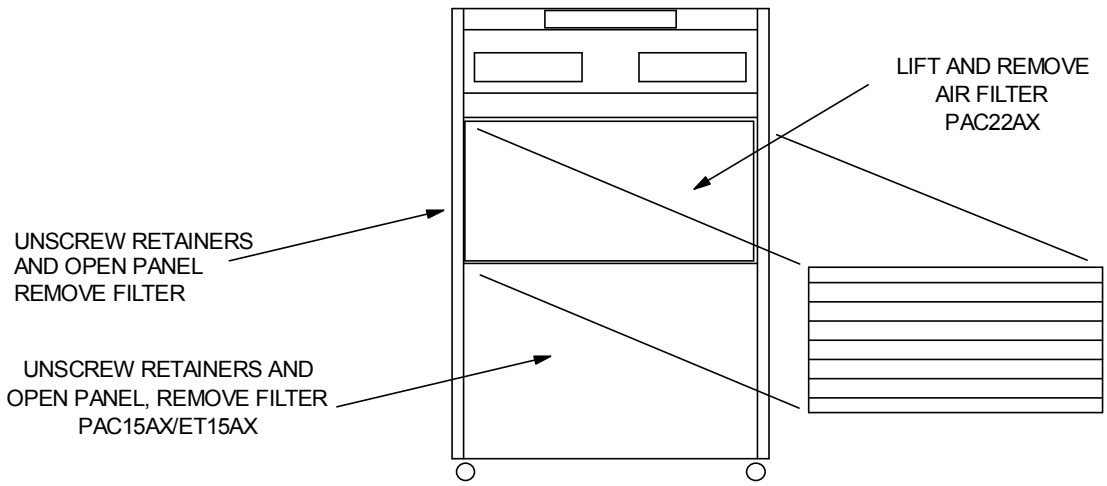
PAC22AX Lift out the return air grille on the front face of the unit, Fig 4. On refitting the filter ensure that it is correctly positioned covering the whole rear face of the grille.
The filter (see Fig. 4) can be washed in warm, soapy water, rinsed and shaken dry before replacement. Frequency of cleaning depends upon application and can only be determined by the user. However, you should never allow more than two months to elapse between cleaning. The probable life of the filter will be about one year and spares are available from the supplier of the unit itself. Failure to have filter fitted during operation will cause serious damage.

The refrigeration circuit inside the room unit is fitted with a HIGH and a LOW pressure sensing switch. They are both manually resettable. A pencil or screwdriver with gentle pressure on the knob behind is all that is required to re-set.

Necessary access is provided either via the lower front panel on PAC15AX/ET15AX and through the control console of the PAC22AX.

HOWEVER, DO NOT ATTEMPT TO RESET WITHOUT FIRST DISCOVERING WHY THE TRIP OCCURRED IN THE FIRST PLACE.

FIG 4



9) MACHINE NOT WORKING?

ONLY A COMPETENT ELECTRICIAN SHOULD ATTEMPT TO RECTIFY ELECTRICAL SUPPLY PROBLEMS. DO NOT REMOVE ANY PANELS FROM THE MACHINE.

Problem - No air flow from room unit.
Diagnosis -Red (Green on PAC22mk3) "MAINS" light off.
Cure - Turn on electricity and/or check mains supply fuse.

Problem - No air flow from room unit.
Diagnosis - Red (Green PAC22mk3) "MAINS" light on, White "DEFROST" light on.
Cure - Machine in defrost mode, do not adjust anything, machine will revert to normal run after 10 mins.

Problem - Insufficient air flow from room unit.
Diagnosis - Blocked air filter.
Cure - Clean filter

Problem - No cooling. **NOT** PAC22 MK 3
Diagnosis - Green "COOLING" light off.
Cure - Revolve thermostat knob fully anticlockwise to "1". Wait 10 minutes for time delay on start-up.

Problem - No cooling. PAC22 MK 3
Diagnosis - Amber "COOLING" light off.
Cure - Change value of set point on digital thermostat to a lower setting.

Problem - No cooling.
Diagnosis - Amber "ATTENTION"(PAC22mk3 Red High Pressure fault) light illuminated. High pressure trip.
Cure - Press "+" button to re-set and check for :- Lack of water flow ... kinked hoses?
Shortage of water ... top up.
External heat exchanger unit mounted in very high temperature?
Water frozen? Add glycol (33%).or 50% in PAC/HEX6500AHXS
External heat exchanger coil blocked with dirt.. clean.
Air cooled units.. lack of air flow from exhaust.. kinked or blocked duct, duct too long.

Problem - No Cooling.
Diagnosis - Amber "ATTENTION" (PAC22mk3 Red Low Pressure fault) lig light illuminated. Low pressure trip.
Cure - Press, "-" button to re-set and check for No air flow, blocked filter? Evaporator blocked with ice. Very low air temperature?

Problem - No cooling.(PAC22AX)
Diagnosis - Amber "ATTENTION" (PAC22mk3 Red Condensate discharge fault) light illuminated. High level condensate trip.
Cure - Condensate pump not reducing water level. Kink in condensate tube between room unit and external heat exchanger? Leak inside room unit. Sump filter inside room unit blocked. Condensate tube frozen.

WACPAC ONLY IN PAC MODE
Problem - Water pump not working.
Diagnosis - No fluid flow.
Cure - Is switch in back of unit in the “1” position. If in “0” position switch to “1” position.

Problem - No cooling.(ET15AX)
Diagnosis - Amber "ATTENTION" light illuminated. Bottle fitted switch trip.
Cure - **ET15AX** with pump kit. Ensure link fitted to terminal block.
ET15AX with bottle. Remove and empty container, then replace in machine.

Problem - No cooling (PAC15AX/ ET15AX
Diagnosis - Amber "CONTAINER FULL" light illuminated. High level condensate trip.
Cure - **PAC15AX** As PAC22AX
ET15AX With condensate kit - As PAC22AX.
ET15AX With bottle. Remove and empty container, then replace in machine.

10) LIGHT COLOURS FOR MACHINES WITH CONVEX CONSOLES

Mains :- Red
Defrost :- Green
Cool :- Green
Fault :- Amber
Fault (sump) :- Amber

11) ERROR CODES ASSOCIATED WITH DIGITAL THERMOSTAT.

TLZ11 THERMOSTAT

DISPLAY	ERROR	ACTION
E1 OR -E1	PROBE INTERRUPTED OR SHORT CIRCUIT	VERIFY CORRECT CONNECTION BETWEEN PROBE AND STAT, THEN VERIFY CORRECT FUNCTIONING OF PROBE.
EEPr	INTERNAL MEMORY ERROR	CHECK AND, IF NECESSARY REPROGRAMME THE PARAMETERS FUNCTION

AIR TREATMENT DIVISION

Andrew Sykes Hire Limited

Premier House,Darlington Street, Wolverhampton WV1 4JJ

Telephone 01902 328700

Fax 01902 422466