VM RANGE

Service Reference Manual

Model Numbers: VM30,VM31,VM36,VM50,VM51 and VM56

Serial Numbers 1000 upwards

Copy 070

Contents

Product: VM Service Procedure
Document Ref: VM00 5600
Description: Contents Page

Compiled by: M.Smith/K.Farthing
Issue: 2
Date: 08 March 2007

SECTION 1

INTRODUCTION

Introduction

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Introduction to Servicing

Preventative checks and routine maintenance are essential to keep the lift in proper working order.

Over the long term they may save money and will ultimately ensure safe and reliable operation of the lift and therefore customer satisfaction.

Both the lift user and the agency responsible for the funding of maintenance should be made aware of the need for regular maintenance by Engineers correctly trained to work on that particular item of equipment. The Wessex VM Home Lift should be checked and serviced at 6 monthly intervals, this is in accordance British Standards recommendations.

The Service Engineer will be required to carry out all of the routine safety checks as detailed on his Service Sheet, which should be based on the appropriate appendix in BS 5900 (1999). The checking, setting and adjusting of the lift must be in accordance with our own detailed procedures as laid out in our Installation / Service Reference File, available from Wessex Lift Co Ltd, Budds Lane, Romsey, Hampshire, SO51 0HA reference can also be made to the notes contained within this manual.

Whilst working on the lift extreme care must be exercised whenever any panels are removed that leave moving or electrically live parts exposed. The lift user and any other persons within the property must be made aware of the maintenance activity before it is commenced and if appropriate the lift and it's controls should be cordoned off.

The Engineer should be aware of the requirements of the Health and Safety at Work Act 1974 and take care to adhere to this.

The lift user and owner can help to be part of an effective maintenance program by being fully trained in the use of the lift and:

Informing the Maintenance Company of any unusual noises, operational difficulties, or of anything that appears to be visually incorrect.

Informing the maintenance company and the lift owner of any change of use, i.e.
A change of type and weight of wheelchair
A significant change of user's weight or disability
A change in user
An installation at another site
A change of duty cycle (number of starts per hour)

Ensuring that the lift is kept clean and clear from any obstructions.

Testing the lift alarm and battery backed functions on a weekly basis

Not exceeding the lift's maximum safe working load.

Ensuring that children and pets are kept well away from the lift when in use.

Introduction

Glossary of Terms

REFER TO THE INSTALLATION / SERVICE REFERENCE FOLDER FOR SPECIFIC SETTING INSTRUCTIONS.

ANTI CREEP SWITCH – Micro switch used to re-level lift after it has crept down from the 1st floor position. Operates with the door open or closed.

SAFETY EDGE – Sprung-loaded, switched, moving edge around top periphery of lift car. Used to sense an obstruction during travel and will stop lift if activated. Lift can be reversed away from obstruction.

FLOATING PLATFORM – A switched plate covering the whole underside of the lift car. It stops the lift on descent if it touches an object beneath the lift and will also stop the lift on ascent if it is pulled down from the lift. When the lift is parked at the upper level it helps to form a fireseal on the underside of the ceiling aperture.

FLOATING PLATFORM ZONE SWITCHES - Switches used to bypass the floating platform switches when the lift is almost fully descended on descent and the platform is almost touching the aperture on ascent.

POWER PACK – An assembly comprising of a pump, motor, reservoir, lowering, isolating, and emergency lowering valves.

OVER RUN TIMER – A manual reset timer located on the main PCB, used to isolate the lift if the pump motor should run for a time exceeding the pre-set duration.

SHOOT BOLT – A solenoid bolt located at low level at the rear of the lift car. In case of fire causing the ram seals to leak this bolt will hold the lift at the upper floor, thus maintaining the fireseal through the floor.

TRAP BOARD – A board, which covers the aperture opening when the lift is at the lower level and is raised as the lift, ascends. The board is switched so that if obstructed it will stop the lift.

TRAP BOARD ZONE SWITCH – Micro switch positioned in the rear of the aperture liner. It is used to override the trap board down safety switches once the trap board is located in the aperture, thus allowing the lift and trap assembly to separate and the lift car continue its descent.

FLOOR LEVELLING SWITCH – Switch used to prevent the lift rising more than 10mm above the upper level due to expansion within the ram (caused by temperature change of the hydraulic fluid).

DOOR BOOST SWITCH – Switch used to give a boost of power to the door actuator as it is almost closed, thus powering it up and onto the door latch brackets.

Lift Door Operation

The lift is fitted with a hinged door which can be either manually operated, or as an option, power operated.

In both cases the door can only be unlocked electrically when the lift is at a recognised floor level (if the lift is not at a floor level emergency opening can be effected using the key provided).

A particular feature of this lift is that the door handing can be altered with relative ease with very few parts having to be ordered.

Operation of manual door

A momentary press of the door safety edge, or door release button within the lift will energise the lock solenoid and allow the door to be pushed / pulled open. To close, the door is simply pushed / pulled shut.

Operation of power door

A momentary push of either the in-car or call station door button will activate the lock solenoid and door actuator and allow the door to open / close as required. A momentary push of the door safety edge will energise the lock solenoid only, thus allowing manual operation of the door.

The power door is fitted with a 24 v. DC actuator, a “breakout” mechanism (to allow manual use of the door), open limit switch and door boost switch (both fitted adjacent to the actuator) and a door close limit switch (fitted behind the lift side panel).

A timer that operates if either limit switch does not activate within 20 seconds of the actuator being energised protects the actuator. Correct operation of the door limit switches can be ascertained by observing the action of LED.s 16 and 17 on the PCB.

Specific setting instructions and description are given in the powered door setting instruction VM10 2130 (3 sheets).

Door Interlock Switches

The lift is designed to ensure that it will not travel unless the door is closed and locked. This is achieved through the use of a microswitch (activated by the door latch arm VM10 0676 being pressed down by the latch plate VM10 0656) and a magnetic proximity switch which complete the safety circuit when the door is closed and locked (refer to setting instruction VM00 2120).
The Service Engineer should check the operation of the door lock and interlock switching arrangement at each visit.

To test the magnetic door switch – stop the lift at the lowest level and open the door. By hand, press and hold down the door latch arm (located just above the lowest latch bracket) and press the “up” control button. The lift should not travel, if it does a fault with the magnetic switch must be rectified.

There is also an extra safety circuit incorporated on the PCB which prevents the lift from working if the door latch arm jams down. It will only reset when the door latch arm is functioning correctly.

This can be tested as follows:

Stop the lift at the lowest level, with the door closed, hold the door latch arm in position and open the door, whilst still holding the door latch arm down operate the “up” button, the lift must not move. On the PCB it will be seen that L.E.D. 25 will illuminate to confirm a fault condition.

Trap Board

As the lift ascends and descends it picks up and lowers a trap-board that forms the floor to cover the aperture when the lift is at the lowest level.

If the trap-board is impeded as the lift travels it will stop the lift. This is the case whether the lift is ascending or descending. In either case it is possible to reverse the lift away from an obstruction by selecting and pressing the appropriate lift control button. The switches that sense an obstruction are mounted on the lift carriage behind the upper rear panel. The lift will also stop if the trap assembly separates from the lift whilst the trap is still in a raised position.

To allow the lift to fully descend when the trap-board is in effect impeded by the aperture there is a trap-board zone switch which is mounted in the rear of the aperture. When the trap operates this, it switches out the trap-board “down” safety circuit and thus allows the lift to separate from the trap and continue its descent.

WARNING!

The material used for the trap-board maybe weakened if it is allowed to become wet. This fact should be considered when carrying out maintenance checks. The lift user is also made aware of this in their User Instruction Manual.

A weakened board must be replaced.

Batteries

The lift operates on a control circuit voltage of 24 volt DC

Battery back up is provided by 2 off 12 volt, sealed lead acid batteries that are kept charged via a charging circuit on the main PCB.

The batteries provide back up to the following functions in case of mains power failure:

Lift lighting (1 light only will illuminate).
Lift alarm.
Emergency lowering from within the lift, with all safety circuits still operative.
Lift stop and safety circuits.
Door operation (power and manual doors).

At each service visit the battery charging voltage should be checked with the batteries disconnected .It should be set at 27.5 volt DC +/- 0.1v with adjustments being effected using R15 on the main PCB.

The batteries are constructed of a fire resistant material and should always be replaced with batteries rated at the correct voltage, capacity and fire rating.

It is recommended that the batteries be replaced at 3-year intervals.

SECTION 2

Safety Advice

Important Safety Advice

Product :VM Range	Compiled by : K.Farthing
Document Ref : VM00 5620	Issue: 2
Description : Safety advice	Date : 08 March 2007

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The following pages offer important safety advice to consider when servicing the lift. Before commencing the service please read and become familiar with the advice given.

Unsupervised Children

Advise the user, and if applicable the householder, that unsupervised children must not be allowed near the lift when it is in use, especially at the first floor where there is a risk of falling into the lift during descent. Present the householder with the document 'Health and Safety at Work Guidelines' before commencing the service.

Safety Barriers

Where there is a risk to the public, safety barriers should be used at both levels.

Panels and Covers (Movable guards)

With the lift in motion, be aware that trapping and shearing hazards will be prevalent when panels and covers are not fitted. All panels and covers must be fitted before the lift can be commissioned and handed over to the user.

You should also familiarise yourself with our documents given on the following pages:

Safety When Working on the Lift
Safety and Hydraulic Systems
VM - Manual Handling

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Wessex Lift Co Ltd, Budds Lane, Romsey, Hampshire, SO51 0HA

Important Safety Advice

Product :VM Range	Compiled by : K.Farthing
Document Ref : VM00 5620	Issue: 2
Description : Safety advice	Date : 08 March 2007

SAFETY WHEN WORKING ON THE LIFT

Safety must be regarded as of paramount importance when working on any lift. Normal workshop practices should be followed when carrying out installation, repair or service.

General Safety Considerations

Before carrying out work on a lift, precautions should be taken to:

1. Read the Installation and Service Manuals as appropriate.

2. Ensure that a competent engineer carries out the work.

3. Ensure that bystanders are not exposed to risk.

4. Wear the correct personal protective equipment and clothing for the task being carried out, e.g. safety glasses, hearing protectors, gloves, protective footwear, overalls, etc.

5. Adequately support the lift if any of the hydraulic system is being worked upon whilst the lift car is above the ground floor.

Laceration Hazards

Whilst the lifts are fully finished it should be realised that metal components may have sharp edges, care should therefore be taken during handling of components.

Electrical Hazards

The lift operates on a 240V A.C. supply and a 24V D.C. control circuit, care should therefore be taken when working on the lift electrical system.
Where appropriate, disconnect the lift power supply and batteries before carrying out work on the lift, this is to stop any risk that may arise due to unintentional movement of the lift, this could happen by the client pressing a remote call station without the engineer's knowledge.

Leaving in a safe condition after maintenance

The lift must never be left operable if there is any risk to those using it. All lift panels, especially the rear panel must be refitted after completion of works. You should always remind the householder that unsupervised children should not be allowed to play / stand near the lift whilst it is in motion, there is a risk that they could fall into the lift car as it descends.

Trapping and shearing hazards

The Service Engineer must take extreme care if the lift is operated and moved with any panels removed. He should also be aware that the lift could be operated by someone other than himself whilst he is working on the lift.

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SAFETY AND HYDRAULIC SYSTEMS

Wessex Hydraulic Lifts operate with high hydraulic pressures that are potentially dangerous. Before removing any components from the hydraulic circuit ensure that there is no hydraulic pressure in the system. Lowering the lift onto the ground or a suitable support should do this and continuing to operate the manual lowering valve for a short period after the lift has ceased any visual movement.

If a fluid leak is suspected, do not attempt to trace the leak by wiping clean the pipes, with the hydraulic system under pressure, to establish where the leak is coming from. High-pressure jets of fluid are capable of penetrating skin. Visually inspect the suspected area to find the leak. If it is desired to wipe pipes clean, first release the hydraulic pressure.

Hydraulic Fluid

Health and Safety

Normally safe in use, however attention should be paid to the handling and storage information and to any necessary first aid measures.

Handling and Storage

Handling: Avoid prolonged or repeated skin contact. Any person with particular skin sensitivity to mineral oil should wear gloves or use a barrier cream. Avoid inhalation of vapour, mist or fumes. Do not wear contaminated clothing.

Storage: Keep containers tightly closed.

First Aid Measures

Eyes: Flush the eye with copious amounts of water. No emergency measures are necessary but if adverse eye effects follow, refer for medical attention.

Skin: Wash the contaminated skin thoroughly with soap and water. No emergency measures are necessary but if adverse skin effects follow, refer for medical attention.

Inhalation: Remove the effected person to fresh air. If recovery is not rapid, obtain medical attention.

Ingestion: Do not induce vomiting. No emergency measures are needed but if adverse health effects follow, refer for medical attention.

Additional Information

Injection under the skin of mineral oil under high pressure is a serious emergency requiring IMMEDIATE medical attention and hospitalisation, even if there may be little in the way of symptoms or signs to suggest the severity of the injury.

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VM – MANUAL HANDLING

Lifting and moving loads by hand is one of the most common causes of injury at work. Many manual handling injuries result from repeated operations, but even one bad lift can cause a lifetime of pain and disability. It is the responsibility of the employer to avoid the need to carry out manual handling which creates a risk of injury. Where avoidance is not reasonably practicable, an assessment must be undertaken.

Before any equipment is transported to site a Risk Assessment is undertaken.

Prior to attending site to install, make yourself familiar with this Risk Assessment and prepare yourself for any action which may be recommended, for example, use of a mobile hydraulic lifting hoist.

When installing or removing a lift:

- Ensure that access to and from the site is free from tripping and slipping hazards,
- Plan a route from your vehicle to the site which minimises the need for manual handling,
- Share heavy or awkward loads, but remember that some workers are stronger than others and no one is immune from injury.

Anyone injuring their back at work should be encouraged to report the injury, get early medical attention and return only gradually to handling duties.

Further guidance is provided in the following documents:

Safety and Hydraulic Systems
Safety When Working on the Lift

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SECTION 3

Service Procedure

Interior Panel Removal

Product : VM Service Manual
Document Ref : VM00 5630
Description : Panel Removal

Compiled by : K.Farthing
Issue: 1
Date : 08 March 2007

REMOVAL OF REAR PANEL

REFER TO THE INSTALLATION / SERVICE REFERENCE FOLDER FOR SPECIFIC SETTING INSTRUCTIONS.

WARNING The rear panel must be refitted after maintenance and extreme care taken if the car is to be operated with panels removed.

The rear panel is manufactured in 2 sections and is easily removed with the use of basic service tools.

Its removal will allow access to:

Up and down limit switches.
Anti-creep switch.
Power door speed control resistor.
Floating platform zone switches.
Shoot bolt.
PCB.
Batteries.
Trailing cable connections.
Carriage sliders.
Trap board up and down safety circuit switches.
Trap plunger mechanisms.
Floor leveling switch.

To remove the panels proceed as follows:
Remove the 2 off screws securing the lower rear panel, each screw is located just beneath the lamp pod in the rear corner of the lift.
The lower panel can be pulled clear and set aside.
The upper rear panel is secured with 2 screws through its lower return edge, once these screws are removed the panel can be lifted clear.
Replacement is the reverse of the above.

REMOVAL OF SIDE PANELS

REFER TO THE INSTALLATION / SERVICE REFERENCE FOLDER FOR SPECIFIC SETTING INSTRUCTIONS.

The side panels must be refitted after maintenance.

Removal of the side panels will allow access to:
The door interlock switch.
The floating platform switches (up and down safety circuits).
The floating platform ropes and gas strut assemblies.
The floating platform rope guide rollers.
The power door close limit switch.
The lift telephone socket.

Each side is fitted with 2 internal panels. The forward most side panel should be removed first and can be removed by removing 3 screws securing its rearmost edge, and flexing the panel as it is lifted clear.

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Replacement is the reverse of the above. You should ensure that the rear most panel is adequately fixed to prevent undue panel vibration.

REMOVAL OF DOOR ACTUATOR COVER

REFER TO THE INSTALLATION / SERVICE REFERENCE FOLDER FOR SPECIFIC SETTING INSTRUCTIONS.

The door actuator is mounted at low level in the base of the door. The small panel covering it also gives access to the door open limit switch and the door boost switch.

To remove the cover:

Open the door fully.
Remove the screws fitted along the upper and lower edges of the cover.

Replacement is the reverse of the above.

Service Procedure

Product: VM Vertical Lift
Document Ref: VM00 5640
Description: Service Procedure

Compiled by: K.Farthing
Issue: 3
Date: 08 March 2007

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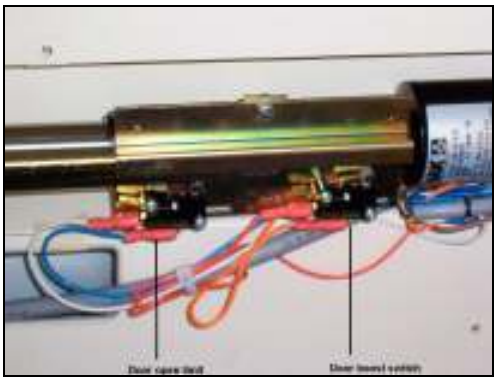
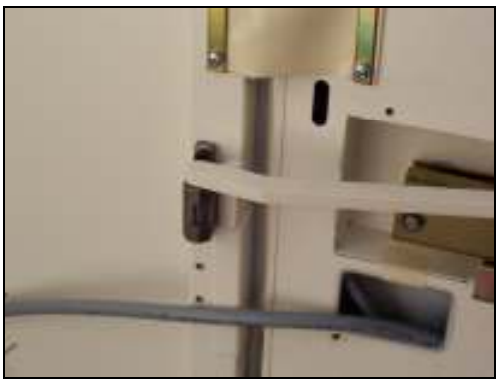
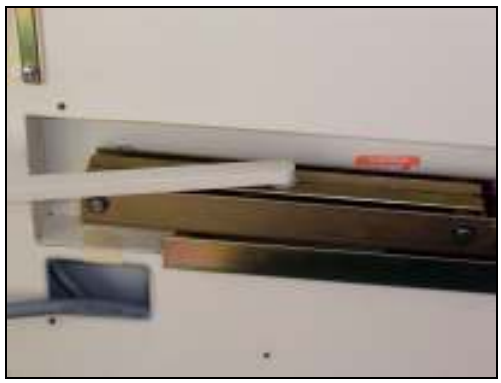
ITEM	PROCEDURE
1.0	***Internal Panels*** • Remove the large internal panel on each side of the lift. These are held on by 3 self tapping screws in a channel at the rear of the panel. Unclip the control console by removing the 4 plastic clips and remove the panel. The key holder in the opposite panel can be left in place. The panels are also held to the lift frame with Velcro type pads. • Unscrew the 2 M4 pozi pan screws at the top of the lower rear panel.This panel is also held on at the bottom by Velcro pads.The upper rear panel is removed by removing the 2 M4 pozi pan screws under the lip at the bottom of the panel.
1.1	***Door*** • Check the latch nibs are smooth and that the latch plate strikes both nibs at the same time to ensure a smooth closing operation. • Check that the door can be opened using the emergency release key. • Check the mechanical and electrical door interlocks are functioning correctly.With the lift at the lower floor and door open, press the mechanical interlock.***Fig 1***. Press the up button.The lift should not travel. • Check that the door boost is correctly set. This switch is to give the door a final burst of speed at the end of the closing cycle and should be set to operate 10mm before the door closes.***Fig 2*** The other switch on the assembly is the door open limit switch.(**Only applicable on models earlier than serial number 7000)** • Check that the flap on the underside of the door is free.Lubricate if required.  **Fig 1**  **Fig 2** • Lubricate door link arm pivot ***Fig 3*** and break out plates ***Fig 4***  **Fig 3**  **Fig 4**

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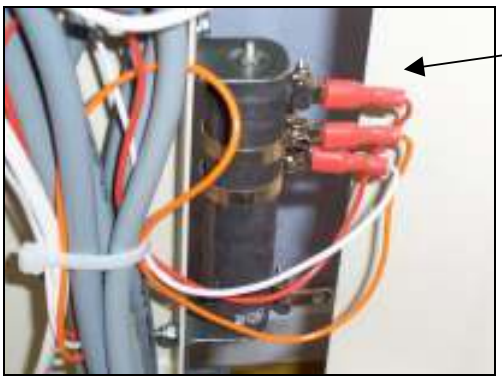
ITEM	PROCEDURE
1.2	***Door*** *continued* • If the door open or closing speed requires any adjustment this can be done by adjusting the rings on the variable resistor at the back of the lift car. The orange wire is door closing and the white wire is door opening.***Fig 5*** • If the door judders as the the it opens this is an indication that the door boost switch is being held on too long. Adjust the boost switch.***Fig 2***  **Fig 5** **This item is not applicable on lifts with serial numbers below 7000**
1.3	***Trap assembly*** • Ensure that the trap up and down safety switches function correctly when the lift is in travel.***Fig 6*** • Lubricate trap arm socket plunger and the inside faces of the socket if required. • Ensure that the trap board is lifting square and level in the liner as the lift goes up. ***Shootbolt*** • Ensure the Shootbolt is operating freely and that it fully extends when released.***Fig 7***  **Fig 6**  **Fig 7**

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ITEM	PROCEDURE
1.4	***Floating Platform***

- Check the operation of the floating platform down safety switches.***Fig 8.*** Push up in all 4 corners to test.
- Check the operation of the floating platform up safety switches.***Fig 8.*** Pull down in all 4 corners to test.
- Check wire ropes are not frayed and lubricate rollers if necessary.***Fig 9***
- Lubricate pulley guide slot.
- Ensure that the lip on the floating platform is over the lift car sides by at least 6mm so that the platform cannot be pushed sideways.
- Grease plunger beneath spring if required.***Fig 8***
- Ensure cable ties are fitted to the platform end of the wire ropes to stop them coming out of the keyhole slot.***Fig 10***

Fig 8

Fig 9

Fig 10

1.5	***Main Carriage***

- Ensure that the nylon slider blocks are not worn excessivley.The side slider blocks have a minimum thickness of 8mm.The front and back should be no less than 10mm. Blocks any less should be changed. Any excessive movement can be taken up using the adjusters.***See Drawing VM00 2030 pages 1 and 2 in setting instructions.***

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ITEM	PROCEDURE
1.6	***Hydraulics*** • Inspect the pump for any sign of leaks. • With the lift at its lower limit,check hydraulic oil level and top up if required.***ISO 32 grade fluid only.*** • Check the operation of the manual lowering valve.***Fig 11*** • With the lift in the upper position inspect the bottom of the hydraulic ram for any sign of leaks. • Inspect both stages of the hydraulic ram for leaks. This can be done from inside the lift car on the upper floor.**Fig 12**  **Fig 11**  **Fig 12**
1.7	***Tracks*** • Ensure that the tracks are tight by checking the jacking screws at the end of each of the top and bottom tracks.***Fig 13***  **Fig 13**

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ITEM	PROCEDURE
1.8	***Electrical Checks*** • Ensure the DC control voltage is correct. Measure DC volts between the earth stud and test point TP18 This should read 24V + 0.1v. Adjust variable resistor R10 to set correct value.***Fig 14*** • Check the battery charging voltage. Measure DC volts between test points TP17 +ve and TP16 – ve.This should measure 27.5 volts +0.1v. Adjust variable resistor R15 to set correct value.***Fig 14***  **Fig 14**  **Fig 15** • Check the lift car lighting.Replace as required. • Ensure the alarm functions correctly • Check all fuses and ensure they are of the correct rating. • Ensure the mains supply and fuse are in good condition. All connections should be checked, check fuses are correctly rated and test RCD if fitted. • Ensure the correct operation of the final limit switch.***Fig 15***
1.9	***General*** • Check all side,door and rear safety edges function correctly. • Check the operation of all push buttons. • Check the telephone (if fitted) for incoming and outgoing calls. • Ensure load label is fitted. • Check battery back-up is operates correctly. Turn off the mains power and the battery back up will come into operation. The right hand light only will illuminate and the top row of the in-car control console will light up. The Red button will lower the lift using the batteries. Check that the floating platform safety switches still operate and the door will open when the lift reaches the lower floor.
1.10	Replace all panels.
1.11	Complete service checklist.***See next page for sample checklist***

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PREVENTATIVE MAINTENANCE SERVICE REPORT

JOB No.	
DATE ISSUED	
TIME	

CONTRACT REF.

	User	Customer (if other)
Name		
Address	Postcode	Postcode
Tel. No.	(Code)	(Code)

CUSTOMER ORDER No.	PRODUCT DETAILS			
	MODEL	DESCRIPTION	INSTALL. DATE	SERIAL No.

TYPE OF CALL:

Warranty ☐ Chargeable ☐ PM Service ☐ Other ☐ Specify

Contract ☐ Specify: Ext. Warranty ☐ Gold ☐ PM Plus ☐ PM ☐

COMMENTS/OBSERVATIONS:

FURTHER WORK REQUIRED? Yes ☐ No ☐

SERVICE REPORT	Serviceable	Req. replacement
Motors, gears, brakes, drums		
All safety edges/limits		
O.S.G.		
Guide rails, tracks & fixings		
All push buttons		
Hoisting ropes/tapes		
Rollers		
Trailing cables		
Overload & earth linkage		
All wiring & fuses (incl. rating)		
Main isolator switches & wiring		
Manual lowering		
All fixings (nuts, nolts, etc.)		

SERVICE REPORT	Serviceable	Req. replacement
Labelling (incl.SWL)		
Slack wire switches		
Lights/alarm		
Oil levels & seals		
Hydraulic components (incl.pump)		
Hydraulic hoses & joints		
Upholstery		
Batteries		
Rack & pinion and sprockets		
Foot rest/arm swivel operation		
Traverse mechanism		
Harness, sling, spreader bar		
Door locks		

PARTS USED			OFFICE USE	
Part No.	Description	Qty	Unit cost	Total

MILEAGE	TIME	TRAVEL TIME	ON SITE TIME	TOTAL HOURS	TOTAL
START :	START :				
FINISH :	FINISH :	ENG. SIGNATURE		INITIALS	DATE

CLIENTS SIGNATURE	CERTIFIED BY	DATE

WESSEX MEDICAL TEL No: (01794) 830303 Customer:white/File:blue/Accts:yellow FORM 020 Iss.7 10/94

SECTION 4

Electrical Drawings

Electrical Section Contents

Product:	**VM Service Procedure**	**Compiled by:**	**K.Farthing**
Document Ref:	**VM00 5650**	**Issue:**	**3**
Description:	**Electrical Section Contents**	**Date:**	**08 March 2007**

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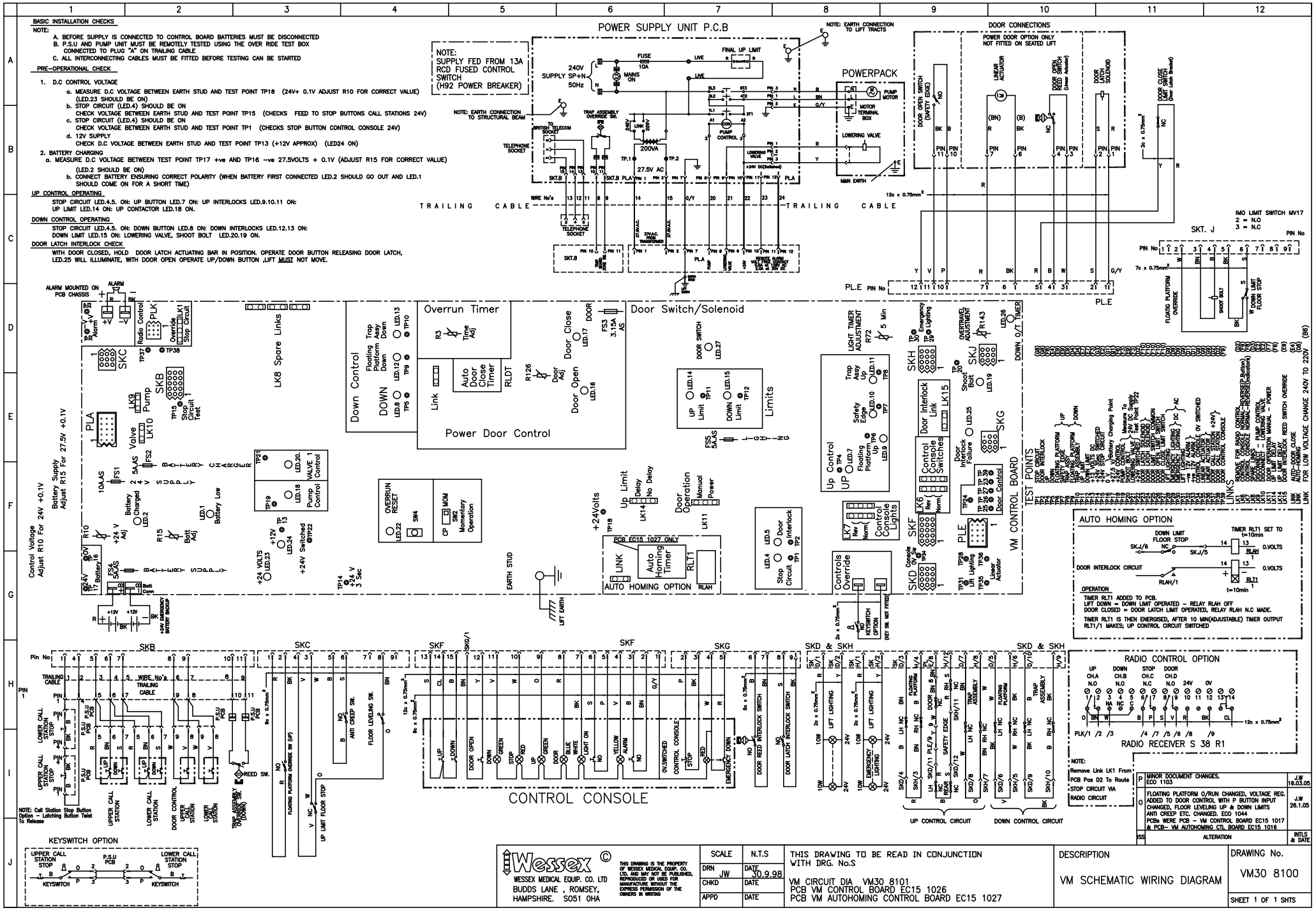
BASIC INSTALLATION CHECKS
NOTE:
A. BEFORE SUPPLY IS CONNECTED TO CONTROL BOARD BATTERIES MUST BE DISCONNECTED
B. P.S.U AND PUMP UNIT MUST BE REMOTELY TESTED USING THE OVER RIDE TEST BOX CONNECTED TO PLUG "A" ON TRAILING CABLE
C. ALL INTERCONNECTING CABLES MUST BE FITTED BEFORE TESTING CAN BE STARTED
PRE-OPERATIONAL CHECK
1. D.C CONTROL VOLTAGE
a. MEASURE D.C VOLTAGE BETWEEN EARTH STUD AND TEST POINT TP18 (24V+ 0.1V ADJUST R10 FOR CORRECT VALUE) (LED.23 SHOULD BE ON)
b. STOP CIRCUIT (LED.4) SHOULD BE ON CHECK VOLTAGE BETWEEN EARTH STUD AND TEST POINT TP15 (CHECKS FEED TO STOP BUTTONS CALL STATIONS 24V)
c. STOP CIRCUIT (LED.4) SHOULD BE ON CHECK VOLTAGE BETWEEN EARTH STUD AND TEST POINT TP1 (CHECKS STOP BUTTON CONTROL CONSOLE 24V)
d. 12V SUPPLY CHECK D.C VOLTAGE BETWEEN EARTH STUD AND TEST POINT TP13 (+12V APPROX) (LED24 ON)
2. BATTERY CHARGING
a. MEASURE D.C VOLTAGE BETWEEN TEST POINT TP17 +ve AND TP16 –ve 27.5VOLTS + 0.1V (ADJUST R15 FOR CORRECT VALUE) (LED.2 SHOULD BE ON)
b. CONNECT BATTERY ENSURING CORRECT POLARITY (WHEN BATTERY FIRST CONNECTED LED.2 SHOULD GO OUT AND LED.1 SHOULD COME ON FOR A SHORT TIME)
UP CONTROL OPERATING
STOP CIRCUIT LED.4.5. ON: UP BUTTON LED.7 ON: UP INTERLOCKS LED.9.10.11 ON: UP LIMIT LED.14 ON: UP CONTACTOR LED.18 ON.
DOWN CONTROL OPERATING
STOP CIRCUIT LED.4.5. ON: DOWN BUTTON LED.8 ON: DOWN INTERLOCKS LED.12.13 ON: DOWN LIMIT LED.15 ON: LOWERING VALVE, SHOOT BOLT LED.20.19 ON.
DOOR LATCH INTERLOCK CHECK
WITH DOOR CLOSED, HOLD DOOR LATCH ACTUATING BAR IN POSITION. OPERATE DOOR BUTTON RELEASING DOOR LATCH, LED.25 WILL ILLUMINATE, WITH DOOR OPEN OPERATE UP/DOWN BUTTON ,LIFT MUST NOT MOVE.
POWER SUPPLY UNIT P.C.B
NOTE: SUPPLY FED FROM 13A RCD FUSED CONTROL SWITCH (H92 POWER BREAKER)
240V SUPPLY SP+N 50Hz
FUSE 10A
MAINS ON
FINAL UP LIMIT
NOTE: EARTH CONNECTION TO LIFT TRACTS
NOTE: EARTH CONNECTION TO STRUCTURAL BEAM
TRAP ASSEMBLY OVERRIDE SW.
TO BRITISH TELECOM SOCKET
TELEPHONE SOCKET
200VA
27.5V AC
POWERPACK
PUMP MOTOR
MOTOR TERMINAL BOX
LOWERING VALVE
MAIN EARTH
TRAILING CABLE
DOOR CONNECTIONS
POWER DOOR OPTION ONLY NOT FITTED ON SEATED LIFT
DOOR OPEN SWITCH (SAFETY EDGE)
LINEAR ACTUATOR
DOOR OPEN REED SWITCH (Linear Actuator)
DOOR LATCH SOLENOID
DOOR GLOSE SWITCH (Door Latch Strained)
IMO LIMIT SWITCH MV17
2 = N.O
3 = N.C
SKT. J
PL.E
FLOATING PLATFORM OVERRIDE
SHOOT BOLT
DOWN LIMIT FLOOR STOP
ALARM MOUNTED ON PCB CHASSIS
Overrun Timer
Door Switch/Solenoid
Down Control
Power Door Control
Limits
Door Interlock Link
Control Switches
Up Control
Control Console Lights
Controls Override
LK8 Spare Links
Battery Supply Adjust R15 For 27.5V +0.1V
Control Voltage Adjust R10 For 24V +0.1V
BATTERY CHARGER
BATTERY SUPPLY
AUTO HOMING OPTION
PCB EC15 1027 ONLY
EARTH STUD
LIFT EARTH
TEST POINTS
LINKS
VM CONTROL BOARD
SKB
SKC
SKF
SKG
SKD & SKH
CONTROL CONSOLE
UP CONTROL CIRCUIT
DOWN CONTROL CIRCUIT
KEYSWITCH OPTION
RADIO CONTROL OPTION
RADIO RECEIVER S 38 R1
AUTO HOMING OPTION
DOOR INTERLOCK CIRCUIT
OPERATION
TIMER RLT1 ADDED TO PCB.
LIFT DOWN = DOWN LIMIT OPERATED – RELAY RLAH OFF
DOOR CLOSED = DOOR LATCH LIMIT OPERATED, RELAY RLAH N.C MADE.
TIMER RLT1 IS THEN ENERGISED, AFTER 10 MIN(ADJUSTABLE) TIMER OUTPUT RLT1/1 MAKES; UP CONTROL CIRCUIT SWITCHED
NOTE: Call Station Stop Button Option – Latching Button Twist To Release
NOTE: Remove Link LK1 From PCB Pos D2 To Route STOP CIRCUIT VIA RADIO CIRCUIT
P MINOR DOCUMENT CHANGES. ECO 1103 J.W 16.03.05
O FLOATING PLATFORM O/RUN CHANGED, VOLTAGE REG. ADDED TO DOOR CONTROL WITH P BUTTON INPUT CHANGED, FLOOR LEVELING UP & DOWN LIMITS ANTI CREEP ETC. CHANGED. ECO 1044 PCBs WERE PCB – VM CONTROL BOARD EC15 1017 & PCB– VM AUTOHOMING CTL BOARD EC15 1016 J.W 26.1.05
ISS ALTERATION INITLS & DATE
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BUDDS LANE , ROMSEY, HAMPSHIRE. SO51 0HA
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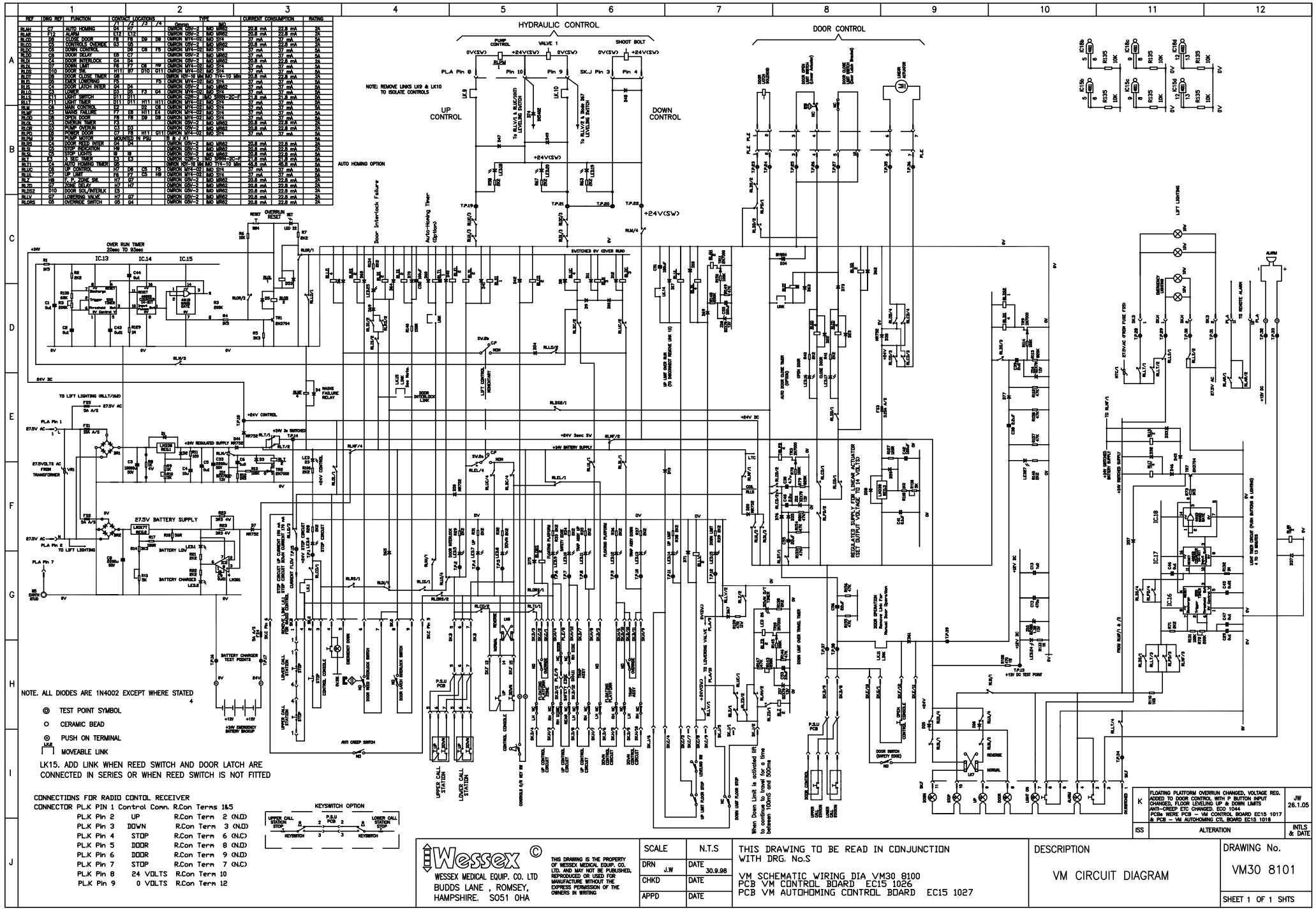
SCALE N.T.S
DRN JW DATE 30.9.98
CHKD DATE
APPD DATE
THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. No.S
VM CIRCUIT DIA VM30 8101
PCB VM CONTROL BOARD EC15 1026
PCB VM AUTOHOMING CONTROL BOARD EC15 1027
DESCRIPTION
VM SCHEMATIC WIRING DIAGRAM
DRAWING No.
VM30 8100
SHEET 1 OF 1 SHTS



REF	DWG REF	FUNCTION	CONTACT LOCATIONS /1 /2 /3 /4	TYPE		CURRENT CONSUMPTION		RATING
RLAH	C7	AUTO HOMING	D4 D7	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLAL	F12	ALARM	E12 E12	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLCD	D8	CLOSE DOOR	F8 F8 D9 D9	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLCO	C5	CONTROLS OVERIDE	D3 D5	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLDC	C5	DOWN CONTROL	D6 C6 F5	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLDD	C8	DOOR DELAY	E8 D7	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLDI	C4	DOOR INTERLOCK	D4 D4	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLDL	D7	DOWN LIMIT	F6 F7 C6 H9	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLDS	D10	DOOR SW.	H11 B7 D10 G11	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLDT	D8	DOOR CLOSE TIMER	G8	OMRON HJY-10 Mini	IMO TY4-10 Mini	20.8 mA	22.8 mA	2A
RLDI	D5	DOOR LOWERING	D5 F5	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLLS	C4	DOOR LATCH INTER	D4 D4	OMRON G5V-2	IMO MR62	20.8 mA	37 mA	5A
RLLO	C5	LOWER	D5 D5 F3 G4	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLLT	F11	LIGHT SWITCH	D11 D11	OMRON MM2-2C-F	IMO MM2-2C-F	21.8 mA	21.8 mA	5A
RLLT	F11	LIGHT TIMER	D11 D11 H11 H11	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLM	C6	DOOR CONTROL	E4 D9 C6	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLMF	E3	MAINS FAILURE	F7 E8 H11 E4	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLOD	D8	OPEN DOOR	F8 F8 D9 D9	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLOL	C3	OVERUN TIMER	F3	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLOR	D3	PUMP OVERUN	C3 D3	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLPD	D8	POWER DOOR	D7 F8 H11 G11	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLPM	E9	PUMP MOTOR	MOUNTED IN PSU			18 & 2 K1		5A
RLRS	C4	DOOR REED INTER	D4 D4	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLSI	C5	STOP INDICATION	H9	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLSL	C6	STOP LIGHTS	H9	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLT	F3	3 SEC TIMER	E4 E3	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLTI	C4	AUTO HOMING TIMER	G6	OMRON HJY-10 Mini	IMO TY4-10 Mini	46.8 mA	46.8 mA	5A
RLUC	C6	UP CONTROL	H7 D8 C6 F5	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLUL	C7	UP LIMIT	F6 F7 C5 H9	OMRON MY4-02	IMO SY4	37 mA	37 mA	5A
RLZ	H8	F. P. ZONE SW.	H7 G7	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLZh	G7	ZONE DELAY	H7 H7	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLDS2	D10	DOOR SOL/INTERLK	E5	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLLV	G7	LOWERING VALVE	H7 G7	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A
RLORS	G5	OVERRIDE SWITCH	G5 G4	OMRON G5V-2	IMO MR62	20.8 mA	22.8 mA	2A

ISS	ALTERATION	INTLS & DATE
K	FLOATING PLATFORM OVERRUN CHANGED, VOLTAGE REG. ADDED TO DOOR CONTROL WITH P BUTTON INPUT CHANGED, FLOOR LEVELING UP & DOWN LIMITS ANTI-CREEP ETC CHANGED. ECO 1044 PCBs WERE PCB – VM CONTROL BOARD EC15 1017 & PCB – VM AUTOHOMING CTL BOARD EC15 1016	JW 26.1.05

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SCALE	N.T.S
DRN J.W	DATE 30.9.98
CHKD	DATE
APPD	DATE

THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. No.S

VM SCHEMATIC WIRING DIA VM30 8100
PCB VM CONTROL BOARD EC15 1026
PCB VM AUTOHOMING CONTROL BOARD EC15 1027

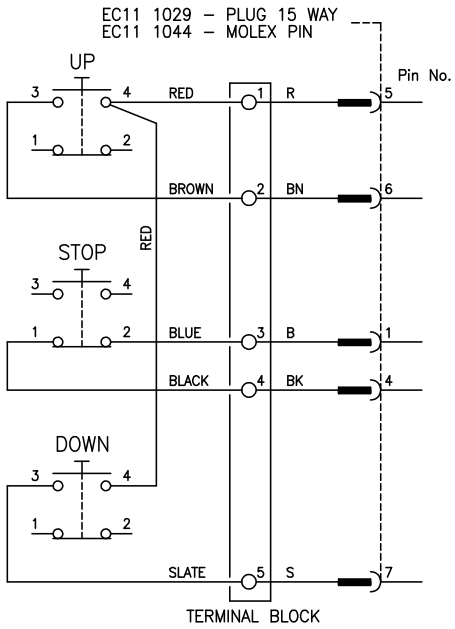
DESCRIPTION

VM CIRCUIT DIAGRAM

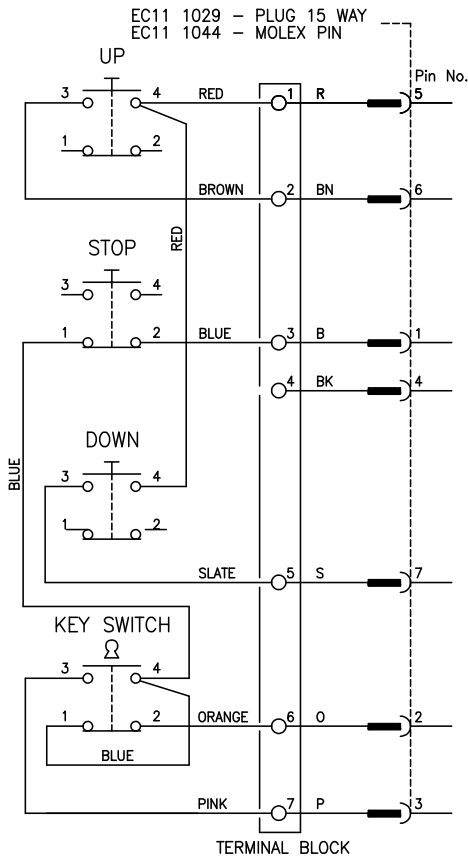
DRAWING No.

VM30 8101

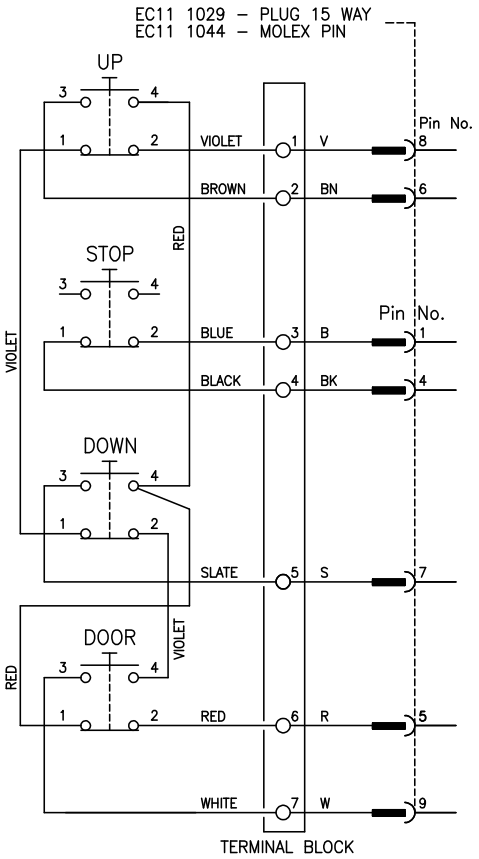
SHEET 1 OF 1 SHTS



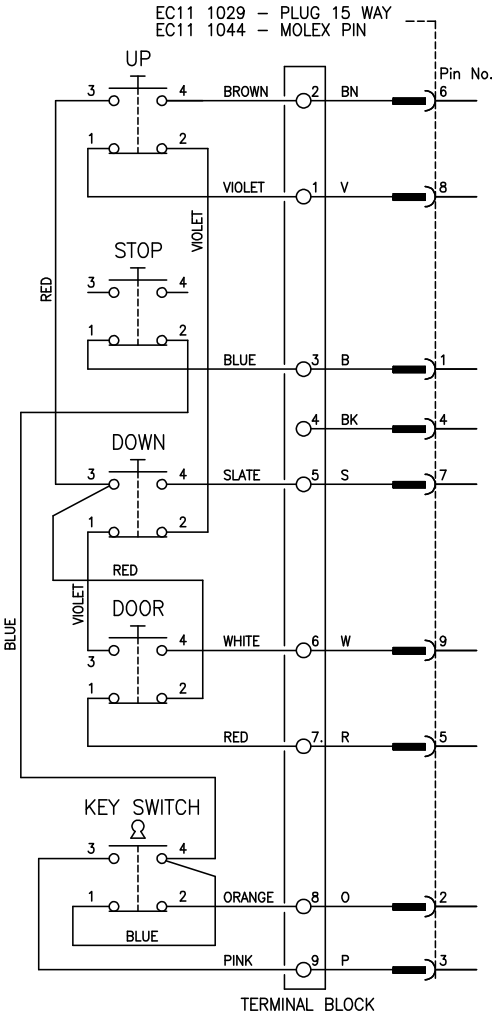
VM10 8007
CALL STATION 3 BUTTON



VM10 8010
CALL STATION 3 BUTTON & KEY SWITCH



VM10 8011
CALL STATION 4 BUTTON



VM10 8012
CALL STATION 4 BUTTON & KEY SWITCH

C	LOOM CHANGES FOR NEW PSU PRINTED CIRCUIT. ECO 0896	JW 30.10.02
ISS	ALTERATION	INTLS & DATE

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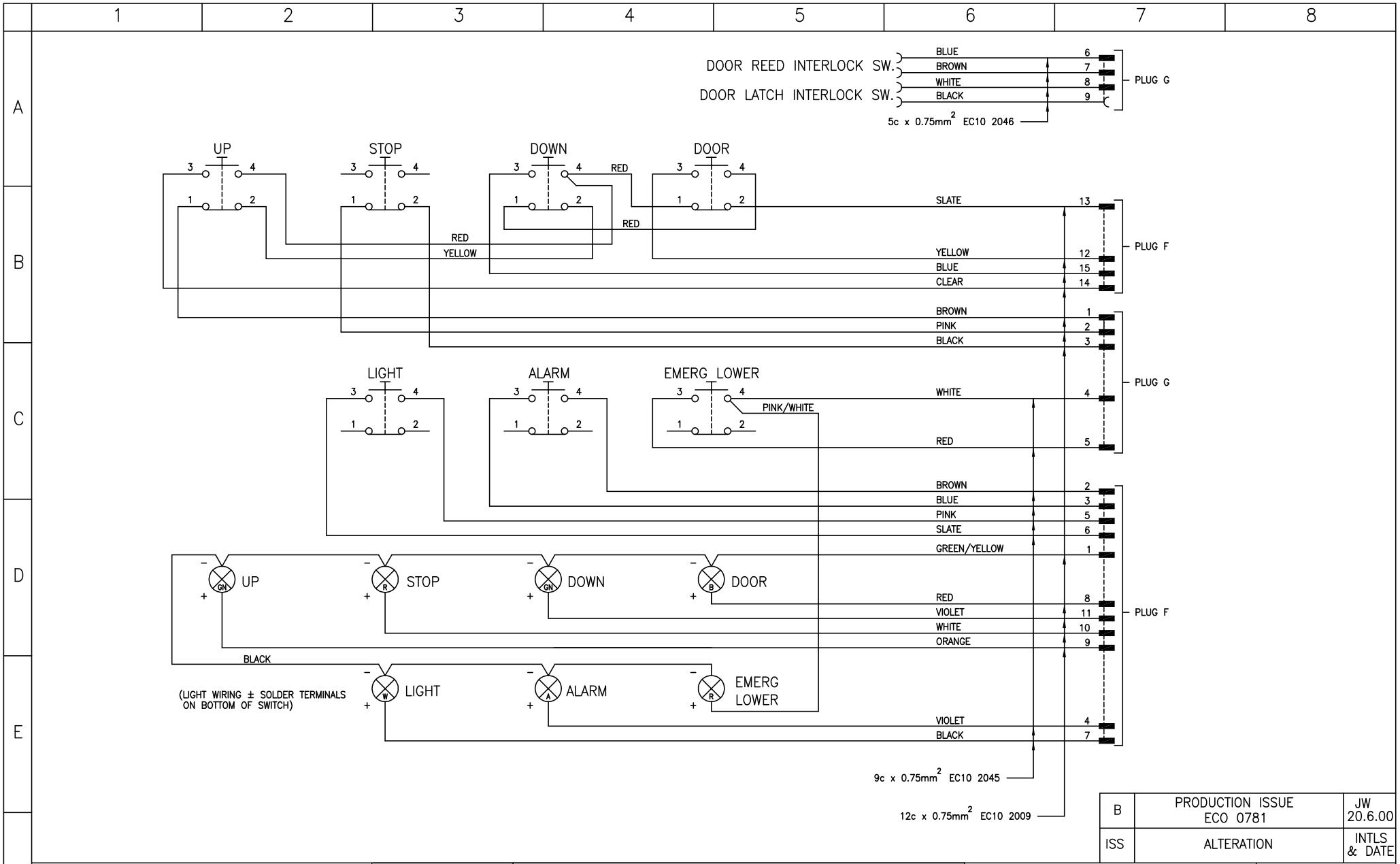
HAMPSHIRE. SO51 0HA

SCALE	N.T.S
DRN KE	DATE 2.8.99
CHKD	DATE
APPD	DATE

DESCRIPTION
CALL STATIONS
WIRING DIAGRAM

DRAWING No.
VM10 8007

SHEET 1 OF 1 SHTS



B	PRODUCTION ISSUE ECO 0781	JW 20.6.00
ISS	ALTERATION	INTLS & DATE

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SCALE	N.T.S
DRN KE	DATE 2.8.99
CHKD	DATE
APPD	DATE

DESCRIPTION

CONTROL CONSOLE WIRING DIAGRAM

DRAWING No.

VM10 8024

SHEET 1 OF 1 SHTS

SECTION 5

Setting Instructions

Setting Instructions

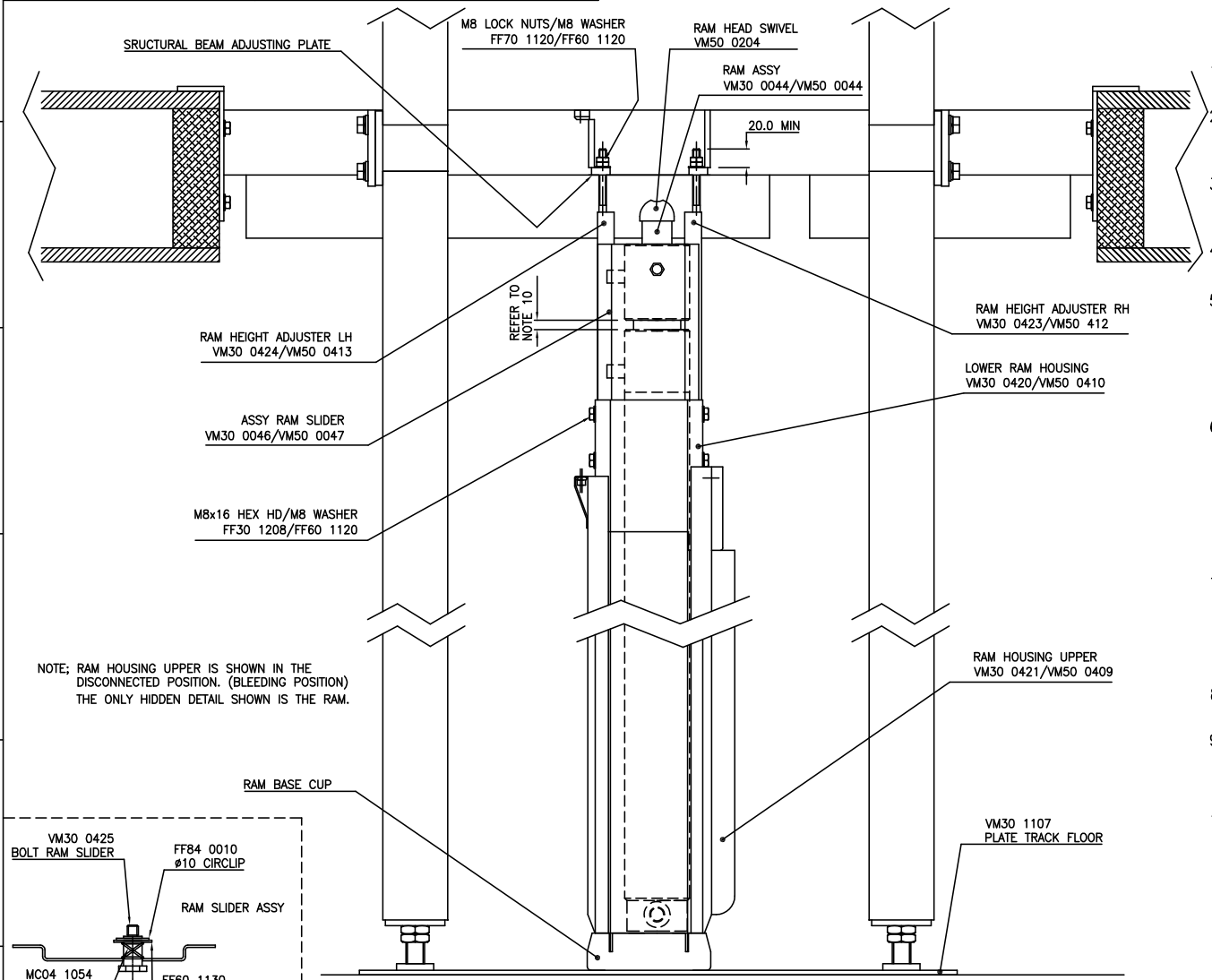
Product: VM Service Procedure	**Compiled by:** K.Farthing
Document Ref: VM00 5660	**Issue:** 2
Description: Setting Instructions	**Date:** 08 March 2007

Return to contents

Wessex Lift Co Ltd, Budds Lane, Romsey, Hampshire, SO51 0HA

THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK



NOTE; RAM HOUSING UPPER IS SHOWN IN THE DISCONNECTED POSITION. (BLEEDING POSITION) THE ONLY HIDDEN DETAIL SHOWN IS THE RAM.

1. Position the lower ram housing assy into the ram base cup.
2. Slide the upper ram housing over the lower ram housing. The lower ram housing should already be pre–assembled with the ram, ram height adjusters and cover ram slide fitted.
3. Pull out the 2 ram height adjusters and position them so the M8 studding protrudes through the holes in the structural beam. Place 1 washer & 1 M8 locknut to each stud at this stage.
4. Wind the M8 nuts down until there is at least 20mm of studding protruding above the structural beam adjusting plate.
5. Looking through the side of the lower ram housing where the 4 holes are (4 each side) pull the ram height adjusters up until the holes in the adjusters align with the holes in the ram housing. Once the holes are aligned screw in the 4 M8x16 hex hd screws with washers (4 screws & washers/side). Tighten finger tight only at this stage.
6. Wind down the 4 off M8 locknuts to take the slack up which has probably occurred due to aligning the housing & adjuster holes. When the slack has been taken up wind the 4 off M8 nuts down a further 1/2 turn and check the lower ram housing is not resting on the bottom of the ram base cup. Keep doing this until there is some free play between the lower ram housing and ram base cup. Now add another 4 off lock nuts and lock them down onto the existing 4 M8 lock nuts.
7. Now tighten the 8 off M8X16 hex hd screws on the side of the ram housing to 23NM. Put a screw driver between the ram housing and height adjusters and push the height adjusters towards the back of when tightening the M8 hex hd screws. (this will give more running clearance for the ram slide cover).
8. Pull the cover ram slide up until the ø10.5 hole aligns with the tapped hole in the ram and screw in the pre–assembled spring & bolt assy.
9. The ram housing upper is left resting on the ram base cup at this stage. It is screwed onto the structural beam using 2 off M5x20 pozi csk screws FF20 0909 when the carriage has been fitted and the ram has been bled.
10. When the lift car has been fitted & the bottom limit switch set, the gap between the two glands on the hydraulic ram must be:
    VM30/31/36 LIFTS = 10–24mm with the lift on it's bottom limit.
    VM50/51/56 LIFTS = 20–34mm with the lift on it's bottom limit.

ISS	ALTERATION	INTLS & DATE
F	PICTORIAL CHANGE TO UPPER RAM HOUSING ECO 0860	WP 3.5.02

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HAMPSHIRE. SO51 0HA

SCALE 1:5 @ A3

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308

DRN	WP	DATE	21.9.98	TOLERANCES: UNLESS OTHERWISE STATED		ANGULAR ±0.5°
CHKD		DATE		X	X.X	X.XX
APPD		DATE		±1.0	±0.25	±0.13

THREAD ISO COARSE CLASS 6

MATERIAL: N/A
B.S. SPEC:

FINISH: N/A

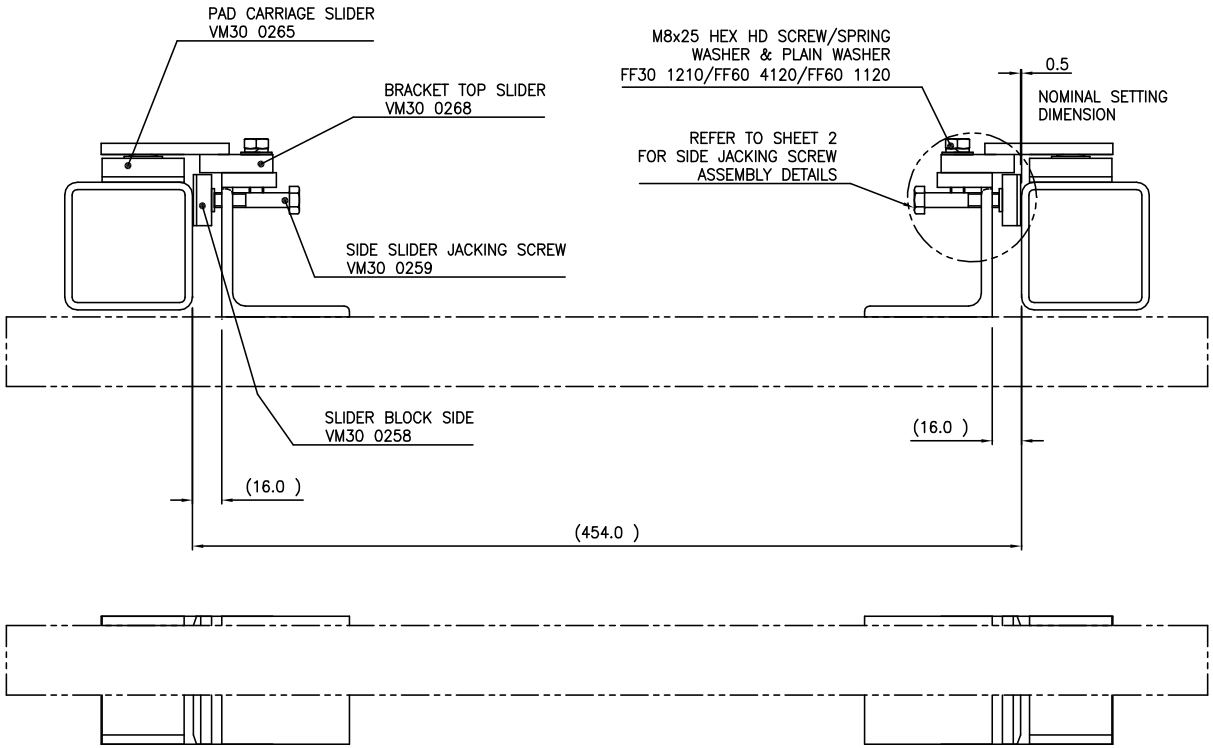
DESCRIPTION
RAM HOUSING SETTING INSTRUCTION

DRAWING No.
VM00 2020

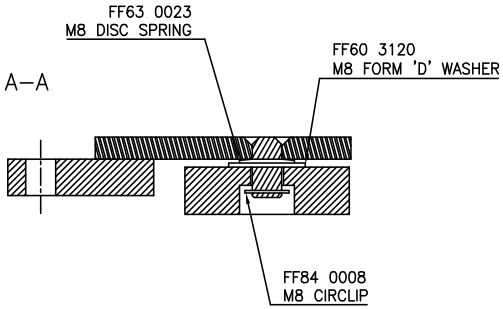
SHEET 1 OF 1 SHTS

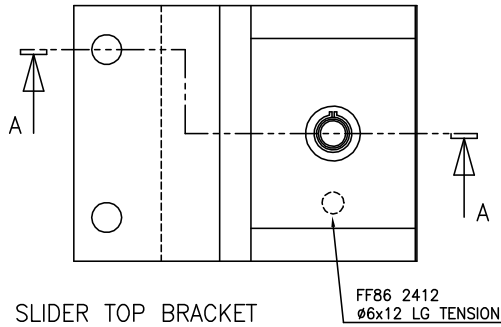
THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK

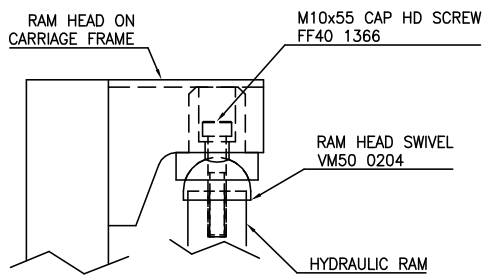


SECTION A–A





SLIDER TOP BRACKET
ASSEMBLY DETAILS



1. The carriage frame should be pre–assembled with the slider brackets and side jacking screws all fitted.
   The side jacking screws should be pre–set to 453mm wide, which is the nominal setting dimension. (0.5mm clearance either side).
2. Before you can put the carriage frame into position you must remove the top slider brackets (VM30 0268) by unscrewing the 4 off M8x25 hex hd screws.
   You must then check the rear sliders fitted on bottom of the carriage (refer to sheet 2) are both moved across in there slots to enable the carriage frame to be fitted.
3. Put the carriage frame into position and fit the top slider brackets back on (4 off M8x25 hex hd screws).
4. Slide the bottom rear sliders across (refer to sheet 2) and tighten the 2 off M8x20 hex hd screws.
5. Check the ram head on the carriage frame is properly located onto the ram head swivel VM50 0204.
   Send the ram up using the override box just enough to ensure the full weight of the carriage frame is taken by the ram.
   Drop the M10x55 socket head cap screw into the hole in the top of the ram head on the carriage frame and screw it down into the tapped hole in the top of the ram.
6. Send the carriage up and down the full travel checking the running clearances of the side slider blocks against the tracks in various positions. They are pre–set to a nominal setting dimension but may need slight adjustment due to tolerance build up.

B	SLIDER PAD CHANGED TO BE SELF ALIGNING ECO 0752	WP 1.7.99
A	PRODUCTION ISSUE ECO 0729	WP 7.10.98
ISS	ALTERATION	INTLS & DATE

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SCALE 1:2 @ A2		ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308			
DRN WP	DATE 23.9.98	TOLERANCES: UNLESS OTHERWISE STATED			ANGULAR ±0.5'
CHKD	DATE	X	X.X	X.XX	THREAD ISO COARSE CLASS 6
APPD	DATE	±1.0	±0.25	±0.13	

MATERIAL: N/A
B.S. SPEC:

FINISH: N/A

DESCRIPTION

TOP CARRIAGE SLIDERS SETTING INSTRUCTION

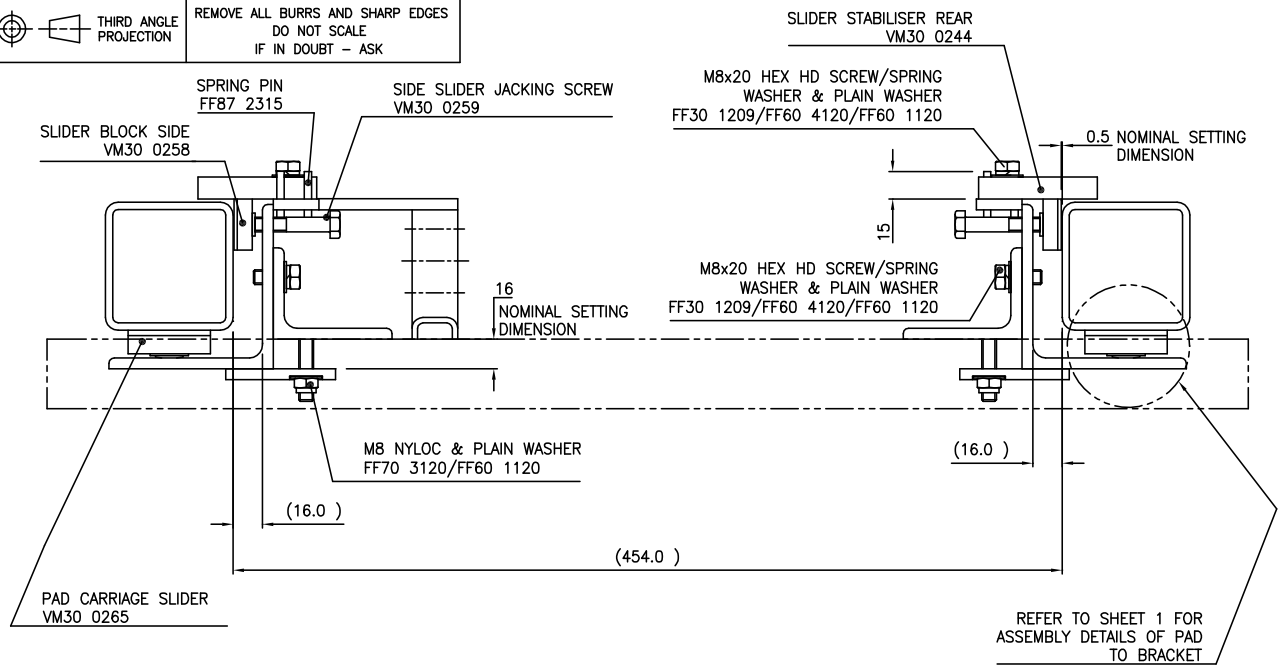
DRAWING No.

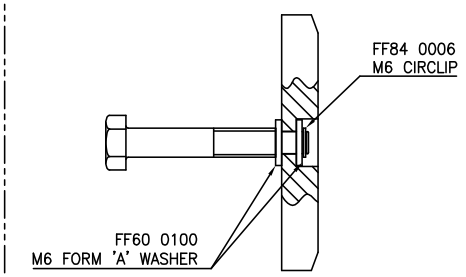
VM00 2030

SHEET 1 OF 2 SHTS

THIRD ANGLE PROJECTION

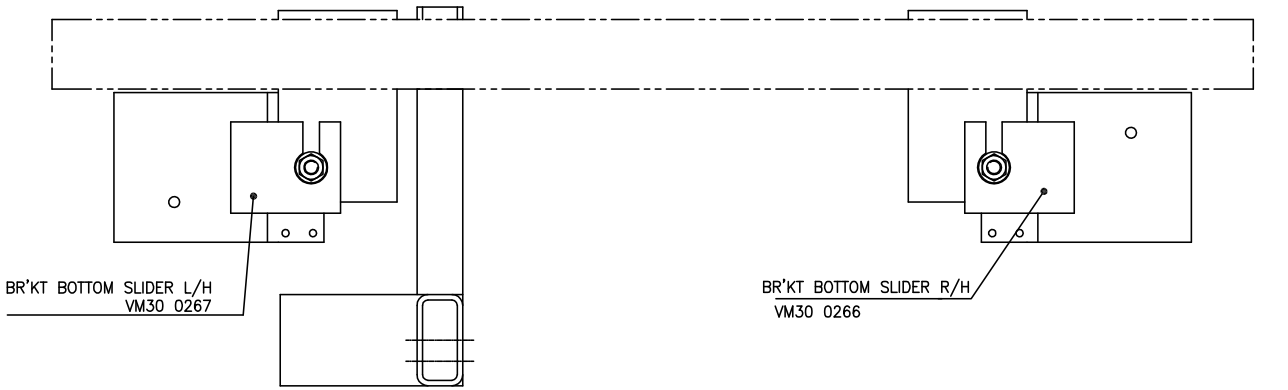
REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK





SIDE JACKING SCREW
ASSEMBLY DETAILS

1. Read sheet 1 first.
2. Before trying to put the carriage into position check you have loosened the M8x20 hex hd screws holding the slider stabiliser rear (VM30 0244) and move the sliders in–board so the carriage can be fitted.
3. Now the carriage is in position against the tracks push the sliders (VM30 0244) back out as shown in the diagram and tighten the M8x20 screws up. (23NM).
4. The side slider jacking screws should be pre–set to 453mm wide, which is the nominal setting dimension. (0.5mm clearance either side).
5. The bottom slider brackets (VM30 0266/7) can be adjusted in or out, which will tilt the car backwards or forwards. They should be pre–set to a nominal 16mm dimension. Only adjust if the running clearance at the front of the aperture to lift floor is incorrect (7.5mm nominal), or if the lift car floor is running out badly to the room floor. To adjust the bottom slider brackets you must first loosen the M8x20 hex hd screws on the side of the brackets and then adjust the M8 nyloc at the front of the bracket in or out. After adjustment tighten the side M8x20 hex hd screws back up (23NM).
6. Send the carriage up and down the full travel checking the running clearances of the side slider blocks against the tracks in various positions. They are pre–set to a nominal setting dimension but may need slight adjustment due to tolerance build up.



B	SLIDER PADS CHANGED TO BE SELF ALIGNING ECO 0752	WP 1.7.99
A	PRODUCTION ISSUE ECO 0729	WP 8.10.98
ISS	ALTERATION	INTLS & DATE

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SCALE 1:2 @ A2		ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308				MATERIAL: N/A B.S. SPEC:
DRN WP	DATE 23.9.98	TOLERANCES: UNLESS OTHERWISE STATED			ANGULAR ±0.5'	
CHKD	DATE	X	X.X	X.XX	THREAD ISO COARSE CLASS 6	FINISH: N/A
APPD	DATE	±1.0	±0.25	±0.13		

DESCRIPTION

BOTTOM CARRIAGE SLIDERS SETTING INSTRUCTION

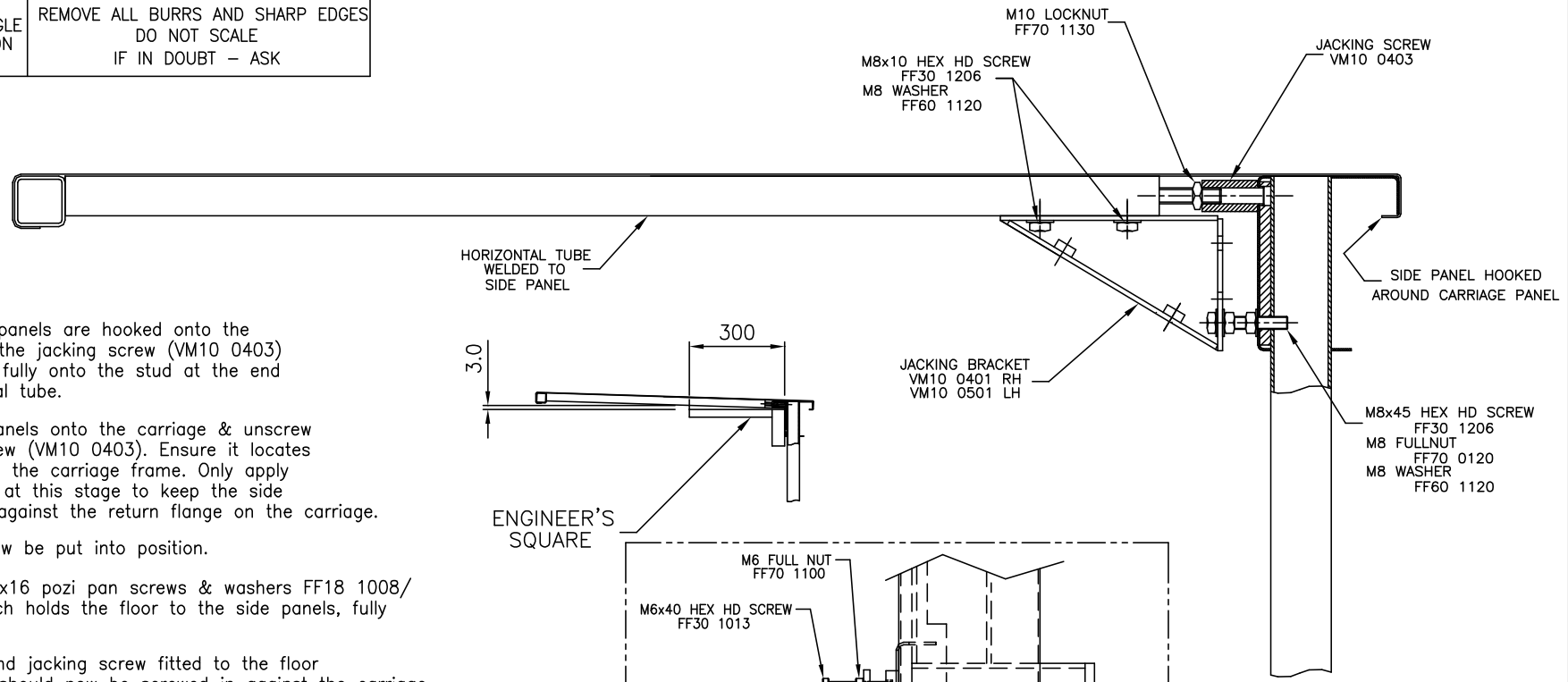
DRAWING No.

VM00 2030

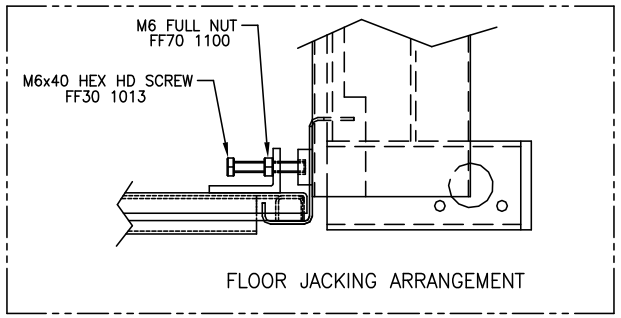
SHEET 2 OF 2 SHTS

THIRD ANGLE PROJECTION

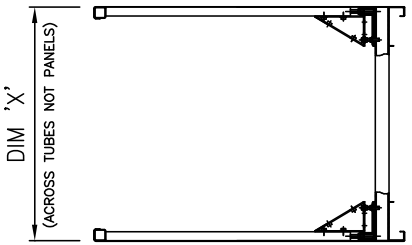
REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK



1. Before the side panels are hooked onto the carriage screw the jacking screw (VM10 0403) & M10 locknut fully onto the stud at the end of the horizontal tube.
2. Hook the side panels onto the carriage & unscrew the jacking screw (VM10 0403). Ensure it locates into the hole in the carriage frame. Only apply enough tension at this stage to keep the side panel hard up against the return flange on the carriage.
3. The floor can now be put into position.
4. Fit the 4 off M6x16 pozi pan screws & washers FF18 1008/ FF60 0100 which holds the floor to the side panels, fully tighten them.
5. The M6x40 hex hd jacking screw fitted to the floor angle brackets should now be screwed in against the carriage frame. Note: ensure the screw locates in the hole in the carriage frame. This should make sure the bottom of the side panel is located hard up against the carriage panel.
6. The jacking screws (VM10 0403) can now be jacked out until the 3mm dimension 300mm from the carriage is achieved. The locknuts can now be tigthened against the jacking screws.
7. The jacking brackets can now be fitted. Screw it onto the horizontal tube first using the 2 off M8x10 screws and washers fully tighten them. Fit the M8x45 hex hd screw and nuts as shown. Tighten the M8x45 screw up until the side panel is pulled back square to the carriage frame and then tighten up the locking nuts. Use the special 13mm spanner provided tool reference IT022.
8. Re-check the floor jacking screws are still applying pressure to the carriage and tighten the locking nuts.



LIFT	DIM 'X'
VM30/50	658
VM31/51	808
VM36/56	858



A	PRODUCTION ISSUE ECO 0729	WP 8.10.98
ISS	ALTERATION	INTLS & DATE

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BUDDS LANE , ROMSEY,
HAMPSHIRE. SO51 0HA

SCALE 1:3 @ A3

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308

DRN M HUNT | DATE 15.10.96

TOLERANCES: UNLESS OTHERWISE STATED

		X	X.X	X.XX
CHKD	DATE	±1.0	±0.25	±0.13
APPD	DATE			

ANGULAR ±0.5°

THREAD ISO COARSE CLASS 6

MATERIAL N/A
B.S. SPEC: N/A

FINISH: N/A

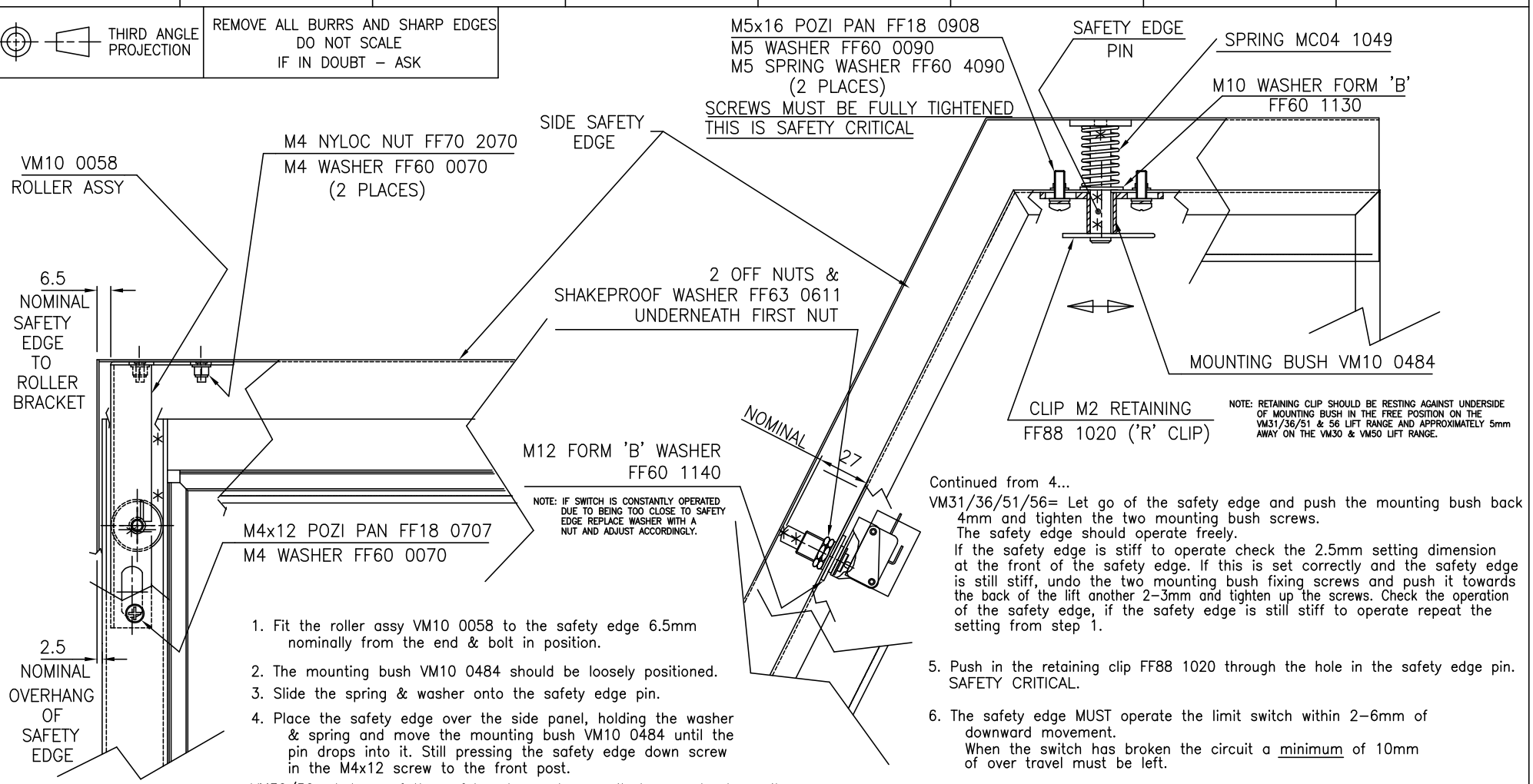
DESCRIPTION
SIDE PANEL JACKING SETTING INSTRUCTION

DRAWING No.
VM00 2040

SHEET 1 OF 1 SHTS

THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK



1. Fit the roller assy VM10 0058 to the safety edge 6.5mm nominally from the end & bolt in position.
2. The mounting bush VM10 0484 should be loosely positioned.
3. Slide the spring & washer onto the safety edge pin.
4. Place the safety edge over the side panel, holding the washer & spring and move the mounting bush VM10 0484 until the pin drops into it. Still pressing the safety edge down screw in the M4x12 screw to the front post.

VM30/50= Let go of the safety edge and press it down and release it a couple of times, tighten the two mounting bush screws in the position it has settled. The safety edge should operate freely.
If the safety edge is stiff to operate check the 2.5mm setting dimension at the front of the safety edge. If this is set correctly and the safety edge is still stiff, undo the two mounting bush fixing screws and push it towards the back of the lift 2–3mm and tighten up the screws. Check the operation of the safety edge.
If the safety edge is still stiff to operate repeat the setting from step 1.

Continued from 4...

VM31/36/51/56= Let go of the safety edge and push the mounting bush back 4mm and tighten the two mounting bush screws.
The safety edge should operate freely.
If the safety edge is stiff to operate check the 2.5mm setting dimension at the front of the safety edge. If this is set correctly and the safety edge is still stiff, undo the two mounting bush fixing screws and push it towards the back of the lift another 2–3mm and tighten up the screws. Check the operation of the safety edge, if the safety edge is still stiff to operate repeat the setting from step 1.

5. Push in the retaining clip FF88 1020 through the hole in the safety edge pin. SAFETY CRITICAL.
6. The safety edge MUST operate the limit switch within 2–6mm of downward movement.
When the switch has broken the circuit a minimum of 10mm of over travel must be left.

'*' DENOTES: APPLY GREASE IN THIS AREA
MM31 5010 – CASTROL GREASE MEDIUM

C	LOCKING NUT & SHAKEPROOF WASHER ADDED ECO 0760	W.P 5.7.99
B	SET UP CHANGED ECO 0743	W.P 29.3.99
ISS	ALTERATION	INTLS & DATE

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HAMPSHIRE. SO51 0HA

SCALE 1:2 @ A3

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308

DRN	W.P	DATE	9.10.96	TOLERANCES: UNLESS OTHERWISE STATED		ANGULAR ±0.5°
CHKD		DATE		X	X.X	X.XX
APPD		DATE		±1.0	±0.25	±0.13

THREAD ISO COARSE CLASS 6

MATERIAL: N/A
B.S. SPEC: N/A

FINISH: N/A

DESCRIPTION
SETTING INSTRUCTION SIDE SAFETY EDGE

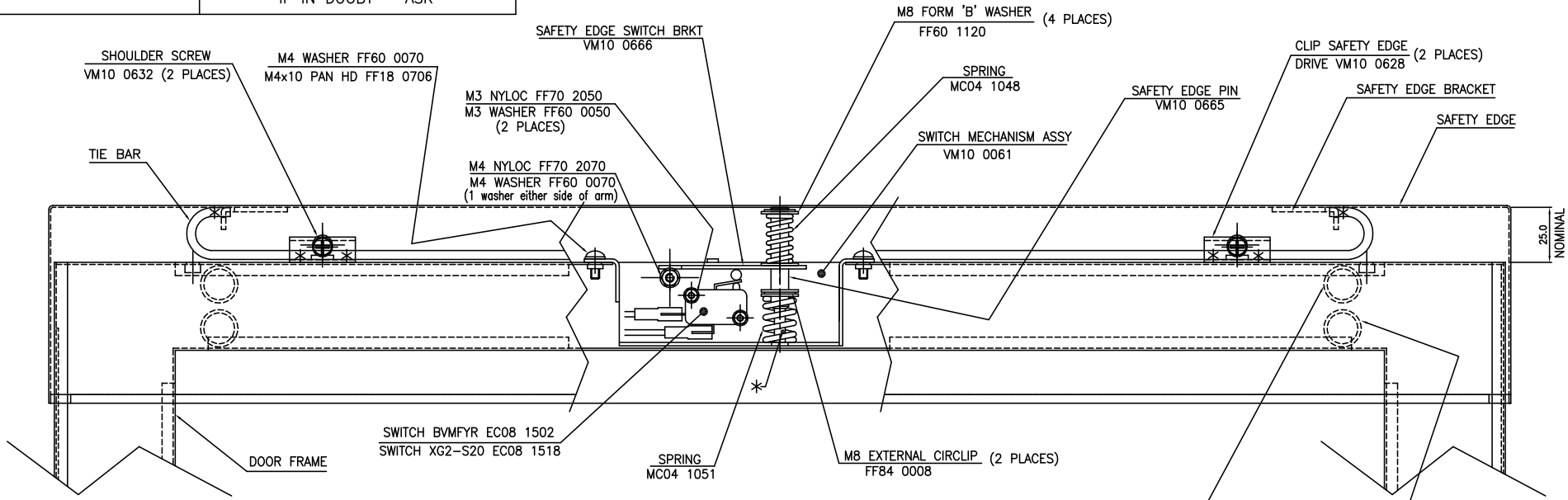
DRAWING No.
VM00 2050

SHEET 1 OF 1 SHTS

THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK

'*' DENOTES : APPLY GREASE IN THIS AREA
MM31 5010 – CASTROL GREASE MEDIUM



1. The switch mechanism (VM10 0061) should be pre–assembled as a sub assy, ensuring that the washers & springs are in the correct positions.
2. Hold the switch mechanism assy (VM10 0061) near the cutout in the top of the door frame and connect the wires to the switches.
3. Position the switch mechanism assy (VM10 0061) into the cutout in the door frame being careful not to trap the electrical wires. Screw in place using 2 off M4x10 pozi pan screws (FF18 0706) & 2 off M4 washers (FF60 0070).
4. Assemble the tie bar to the safety edge by lightly springing the tie bar in the centre to allow it to clip into the safety edge brackets.
5. Place the safety edge over the door frame & press down lightly in the centre until the holes in the safety edge line up with the shoulder screws(VM10 0632). Tighten the two screws & let go of the safety edge.
6. Pull up the safety edge at each end to ensure the tie bar has been clamped in position. If not repeat step 5.
7. Check the safety edge moves up & down freely.
8. Check at either end and in the centre of the safety edge that the safety switch is operated within 2–4mm of downward movement.
9. When the safety edge is functioning correctly push the two grommets EC10 6031 into the holes of the safety edge.

NOTE: IF THE SAFETY EDGE IS STIFF & NOT OPERATING CORRECTLY REMOVE ONE OF THE WASHERS FROM BEHIND EACH OF THE INSIDE PUSH–IN FASTENERS.

B	PUSH–IN FASTENERS ADDED SPRING MC04 0151 WAS MC04 1047 ECO 0742	W.P 22.2.99
A	PRODUCTION RELEASE ECO 0729	W.P 12.10.98
ISS	ALTERATION	INTLS & DATE

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HAMPSHIRE. SO51 0HA

SCALE 1:2 @ A3

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308

DRN W.P	DATE 12.10.98	TOLERANCES: UNLESS OTHERWISE STATED			ANGULAR ±0.5'
CHKD	DATE	X	X.X	X.XX	THREAD ISO COARSE CLASS 6
APPD	DATE	±1.0	±0.25	±0.13	

MATERIAL: N/A
B.S. SPEC: N/A

FINISH: N/A

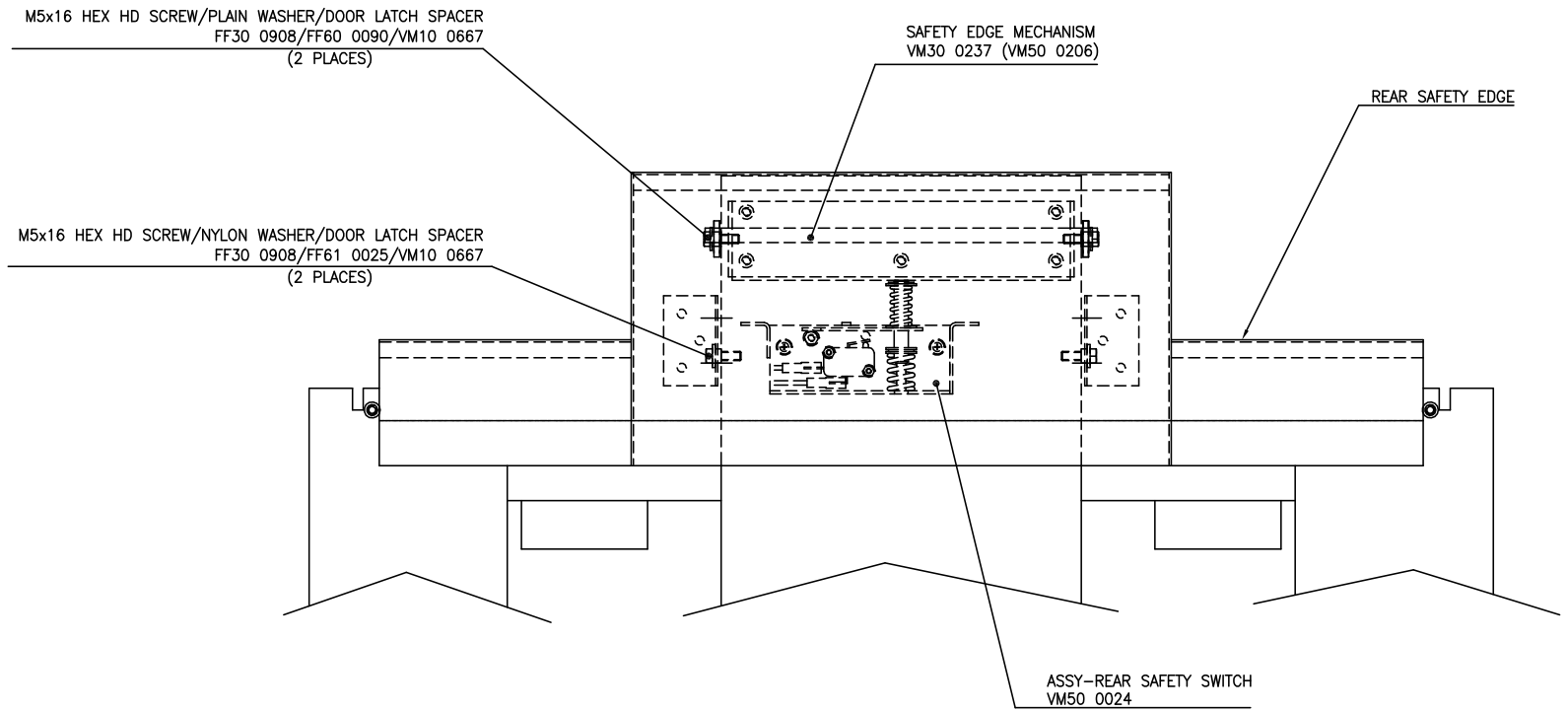
DESCRIPTION
DOOR SAFETY EDGE SETTING INSTRUCTION

DRAWING No.
VM00 2060

SHEET 1 OF 1 SHTS

THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK



1. The safety edge should be pre–assembled with the safety edge mechanism fitted.

2. Position the rear safety edge so that the tapped holes in the carriage frame align with the holes and slots in the safety edge assy. Screw in the M5x16 screw/ washers and door latch spacers.

Note: The nylon washers are only fitted to the bottom fixings.
The top fixings have plain steel washers fitted.
Apply grease to the door latch spacers and all moving faces (MM31 5010 – castrol grease medium).

3. Check that the safety edge moves up and down freely.

4. The safety edge should operate the safety switch within 2–6mm of downward movement.

B	M5x16 HEX HD WAS PAN HD ECO 0791	WP 6.12.00
A	PRODUCTION ISSUE ECO 0729	WP 13.10.98
ISS	ALTERATION	INTLS & DATE

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HAMPSHIRE. SO51 0HA

SCALE 1:2 @ A2		ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308				MATERIAL: N/A B.S. SPEC:
DRN WP	DATE 13.10.98	TOLERANCES: UNLESS OTHERWISE STATED			ANGULAR ±0.5'	
CHKD	DATE	X	X.X	X.XX	THREAD ISO COARSE CLASS 6	FINISH: N/A
APPD	DATE	±1.0	±0.25	±0.13		

DESCRIPTION

REAR SAFETY EDGE SETTING INSTRUCTION

DRAWING No.

VM00 2070

SHEET 1 OF 1 SHTS

THIRD ANGLE PROJECTION

REMOVE ALL BURRS AND SHARP EDGES
DO NOT SCALE
IF IN DOUBT – ASK

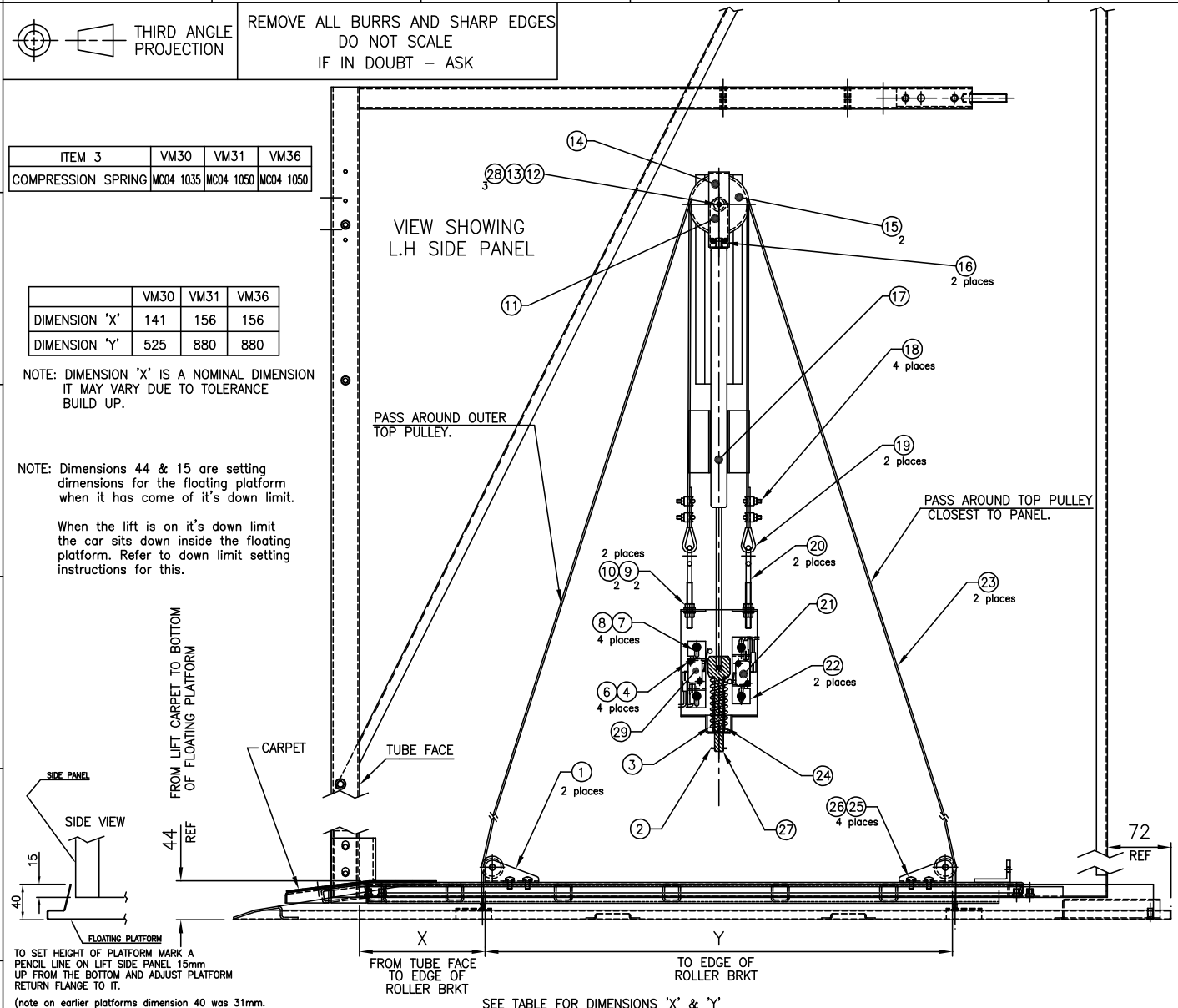
ITEM 3	VM30	VM31	VM36
COMPRESSION SPRING	MC04 1035	MC04 1050	MC04 1050

	VM30	VM31	VM36
DIMENSION 'X'	141	156	156
DIMENSION 'Y'	525	880	880

NOTE: DIMENSION 'X' IS A NOMINAL DIMENSION IT MAY VARY DUE TO TOLERANCE BUILD UP.

NOTE: Dimensions 44 & 15 are setting dimensions for the floating platform when it has come of it's down limit.

When the lift is on it's down limit the car sits down inside the floating platform. Refer to down limit setting instructions for this.



TO SET HEIGHT OF PLATFORM MARK A PENCIL LINE ON LIFT SIDE PANEL 15mm UP FROM THE BOTTOM AND ADJUST PLATFORM RETURN FLANGE TO IT.

(note on earlier platforms dimension 40 was 31mm. on these platforms the setting dimension 15 would be 6)

ITEM No	PART No	DESCRIPTION	QTY
1	VM10 0033	ROLLER ASSY	2
2	FF84 0010	CIRCLIP EXT ø10	1
3		SEE TABLE (TOP LEFT HAND CORNER)	1
4	FF18 0508	M3x16 POZI PAN SCREW	4
6	FF70 2050	M3 NYLOC NUT	4
7	FF60 0070	M4 FORM 'A' WASHER	4
8	FF70 2070	M4 NYLOC NUT	4
9	FF60 0100	M6 FORM 'A' WASHER	4
10	FF70 0100	M6 FULLNUT	4
11	VM10 0422	GAS STRUT CLEVIS	1
12	VM10 0424	PIVOT PIN	1
13	FF84 0005	CIRCLIP EXT ø5	1
14	VM10 0454	GAS STRUT RETAINER	1
15	VM10 0049	SHEAVE BEARING ASSY	2
16	FF20 0505	M3x8 POZI CSK SCREW	2
17	MM35 0031	GAS STRUT	1
18	MM37 2103	BULL DOG GRIP 3mm	4
19	MM37 2203	WESSEX THIMBLE 3mm	2
20	FF58 0000	M6 EYE BOLT	2
21	EC08 1502	SWITCH BVMFYR	1
22	VM10 0420	SWITCH PLATE	2
23	VM10 0465	PLATFORM WIRE ASSY	2
24	VM10 0421	STOP GAS STRUT	1
25	FF18 0906	M5x10 POZI PAN SCREW	4
26	FF60 0090	M5 FORM 'A' WASHER	4
27	VM10 0419	PLUNGER	1
28	FF61 0006	M8 SHIM WASHER	3
29	EC08 1501	SWITCH BVM3FYR1	1

1. Position the lift approximately 600mm from the ground floor.
2. Position the floating platform underneath the lift and fit the rear track fire sealing infills to the platform.
3. Connect the wire ropes to the floating platform and put a cable tie around the brass ferrule to prevent the wire rope from disengaging.
4. Pass the wire ropes up through the slots in the bottom of the side panel.
5. Lower the lift down, taking up the slack of the wire ropes as the lift lowers. Stop the lift approximately 40mm from lift floor to ground floor.
6. Connect the wire ropes up as shown in the diagram, pull up the slack and tighten up the bulldog grips.
7. Raise the lift up so it's approximately 200mm off the ground floor.
8. Check that the wire ropes are still attached to the floating platform correctly.
9. Adjust the eye bolts to achieve the 15mm dimension from underside of side panel to return flange on floating platform.
10. Adjust the switch brackets so that the lift is stopped within 2–5mm of floating platform movement in the up & down travel.
11. The floating platform should be checked for sensitivity in both directions of lift travel, in various positions along it's sides, front edges & underneath the platform.
12. The excess wire rope by the bulldog grips can now be trimmed to length and taped up.

ISS	ALTERATION	INTLS & DATE
E	SETTING DIMENSION CHANGED TO REFLECT NEW HIGHER RETURN FLANGE ON PLATFORM ECO 0819	W.P 23.8.01

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HAMPSHIRE. SO51 0HA

SCALE 1:5 @ A3

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED AND DRAWN TO BS 308

DRN W.P	DATE 14.10.98	TOLERANCES: UNLESS OTHERWISE STATED			ANGULAR ±0.5°
CHKD	DATE	X	X.X	X.XX	THREAD ISO COARSE CLASS 6
APPD	DATE	±1.0	±0.25	±0.13	

MATERIAL N/A
B.S. SPEC: N/A

FINISH: N/A

DESCRIPTION
FLOATING PLATFORM SETTING INSTRUCTION

DRAWING No.
VM00 2080

SHEET 1 OF 2 SHTS