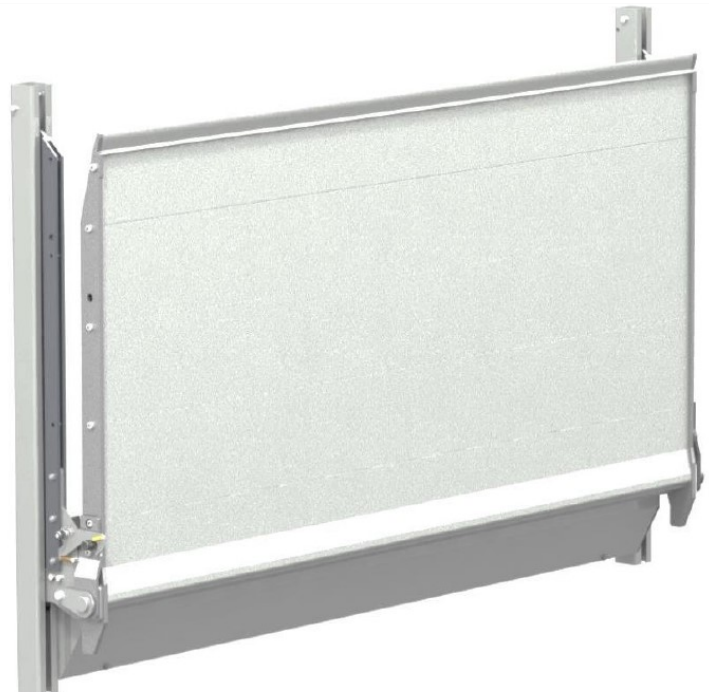


INSTALLATION MANUAL

COLUMN TAILIFTS



CE



DEL Equipment (UK) Ltd
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Windrush Industrial Estate
Windrush Park Road
Witney
OX29 7HA
TEL: 01993 708811
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EMAIL: sales@del-uk.com

EC Declaration of conformity for machinery

We hereby declare that:

DEL Column Tailift Models: **DL, DD, DT, DO, FC,GB, NL, S, TL**

- are in conformity with the provisions of the **Machinery Directive (2006/42/EC)**
- and furthermore declare that parts of the following European harmonised standards have been used:

BS EN 1756-1:2001
BS EN 50498 :2010

Signed:

Name:

Martin Saint

Position: Managing Director, DEL Equipment (UK) Ltd.

Place, Date: Witney, OX29 7HA, March 2013

Important:

This declaration is null and void without a completed Lift Installation Test Certificate attached and all signatures completed, or if modifications are made to the machine without prior written approval from Del Equipment (UK) Ltd.

INTRODUCTION

This manual covers the installation of the column tailift range DL, DD, DT, DO, FC,GB, NL, S and TL. The correct installation and setting up of the lift is vital to the working life of the lift.

Safety must be regarded as of paramount importance during installation.

A risk assessment for the installation and commissioning of the tailift is required before starting work.

Read this manual before commencing work. The lift frame and platform are heavy and can crush. Never work under the lift unless it is securely supported and always disconnect the vehicle battery before starting work.

Do not make any design modification to the tailift unless written permission is first obtained from DEL Equipment (UK) Ltd.

Please note that any unauthorised modification may: -

1. Invalidate the warranty
2. Lead to equipment failure
3. Create a hazard that is not immediately obvious at the time of installation.

If you are unsure about any aspect of the installation procedure please contact DEL service.

IMPORTANT

This manual forms part of the Inspection record for the tailift, and should be passed on to the end user, together with the operators manual.

The tail lift installer shall in consultation with his manufacturer and user confirm the compatibility between the tail lift and the vehicle taking into account the intended use.

NOTE

All vehicle rear structures needs to be rigid enough to support the loads and ensure the correct function of the tail lifts.

CONTENTS

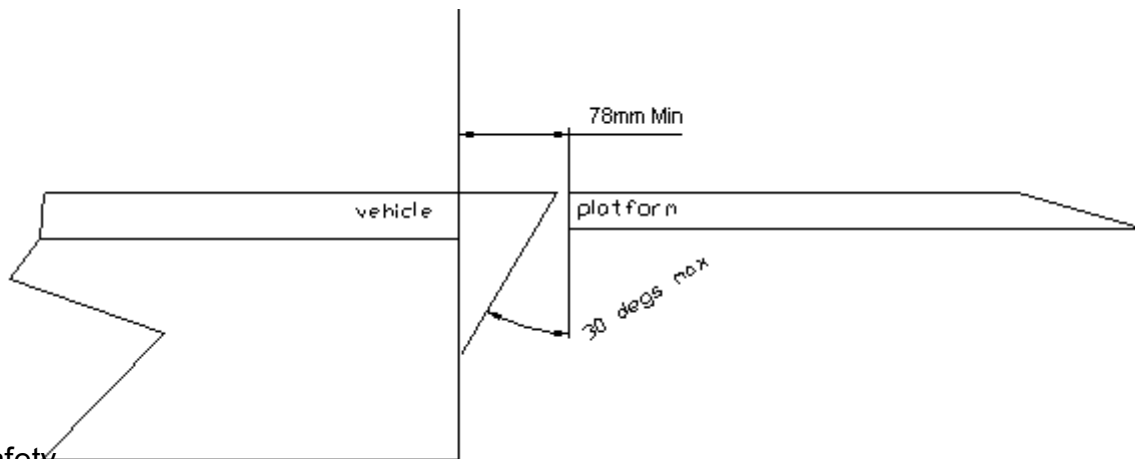
1. Installation procedure.....	6
2. Location of control positions.....	15
3. In-line fuses and the earth cable.....	16
4. Tailift mounting and bracing.....	17
5. Load safety device.....	20
6. Power pack relief valve.....	21
7. Chain adjustment.....	22
8. Location of warning decals.....	23
9. Tests after installation.....	25
10. Test checklist.....	28
11. Technical information.....	29
12. Final inspection checklist.....	31
13. Lift test certificate.....	32
14. Wiring and hydraulic diagrams.....	33

1. INSTALLATION PROCEDURE

The following procedure covers a standard bolt-on installation, if the lift is to be welded to the vehicle body, please refer to the welding notes.

Special precautions

When fitting the tailift, there has to be a minimum horizontal gap of 78mm between the moving parts of the platform and the fixed parts of the vehicle, except at those points where adequate toe protection is provided by a guard whose rear sloping edge is at an angle of no greater than 30 degrees to the vertical (see diagram below).



Safety

Make sure you fully understand the safe operation of the tailift by reading the operator/maintenance handbook before attempting to install the lift.

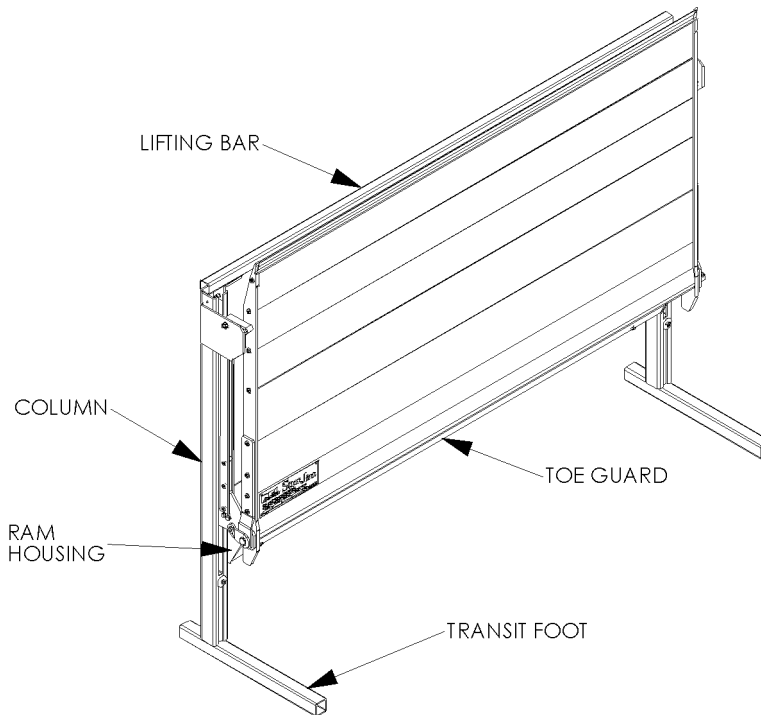
Ensure all work is supervised by a competent engineer in a clear area with adequate lighting.

Check that any specific requirements as stated in the relevant chassis manufacturer's bodybuilder's handbook are adhered to.

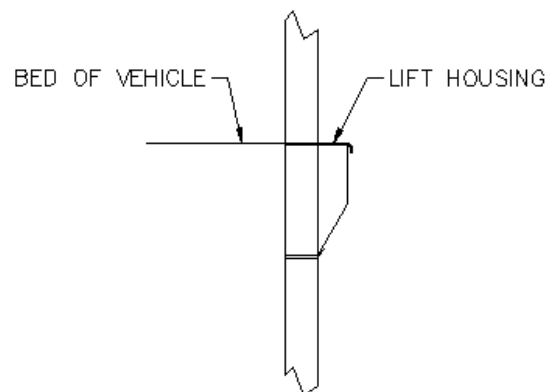
Ensure that all movements of the tail lift are limited at end of travel by mechanical means.

If the platform is required to lift or lower wheeled load(s) then it must have a device(s) with a minimum height of 50mm to prevent the load(s) from rolling unintentionally off the edge.

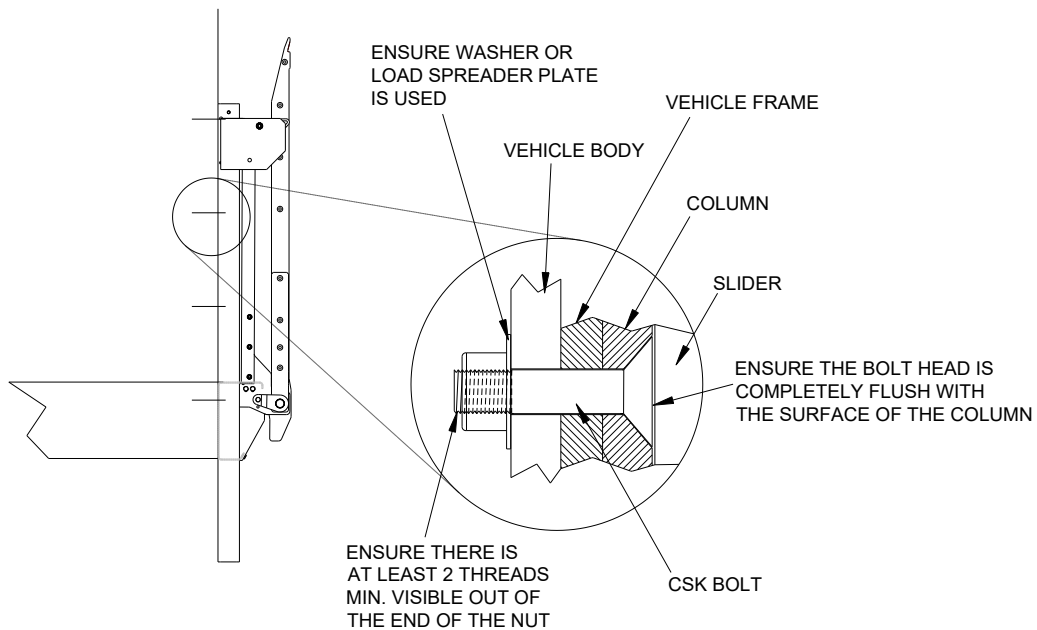
COLUMN LIFT INSTALLATION PROCEDURE



1. Ensure the body rear is flat and clear before fitting the lift and the vehicle battery is disconnected.
2. Remove the toe guard.
3. Position the lift close to the vehicle rear and raise the lift until the top of the lift housing is level with the vehicle floor, using a forklift truck or other suitable lifting device.



4. Using suitable G Clamps, clamp the columns and ram housing to the rear frame of the vehicle, ensuring that the lift is central to the rear of the body.
5. Check the lift is square and level with the vehicle floor.
6. Drill suitable clearance holes into the vehicle frame to correspond with the countersunk holes which are pre-drilled in the lift columns. Using the countersunk bolts provided, bolt the lift to the vehicle frame ensuring that

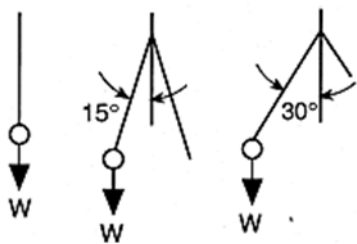
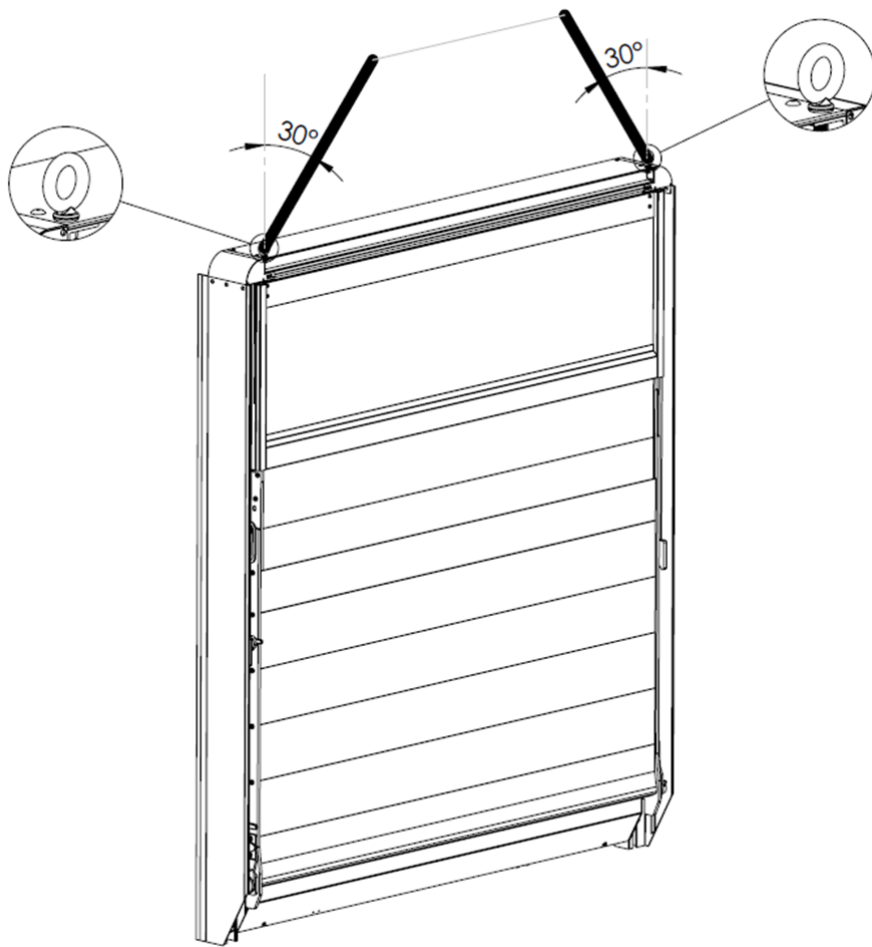


the nut is tightened to the torque specified in the technical section for that size bolt. Ensure that the washers provided are used between the nut and the body.

7. Re-check the lift columns for squareness using square and diagonal measurements. Brace the columns as indicated in section 5.
8. Ensure that the face of all the countersunk bolts in the back of both columns are flush with the face of the column.
9. Remove the lifting device and both transit feet. Retain the transit feet to brace the tailift – if required (see section 5).
10. Remove the Lifting bar and retain ready to brace the tailift back to the chassis/body – if required (see section 5).
11. Fix the control in position and route the 3-core cable to the control. (see section 3). Connect the control, note that a control bracket may have to be welded to the frame to protect the control and allow its installation, (see wiring diagrams).
12. For vehicles with a chassis mounted power pack, mount the power-pack with the brackets provided in a suitable position on the vehicle chassis. Connect the powerpack to the lift ram using ¼" bsp hoses.
13. Route the power cables to the vehicle battery and the isolation cable to the cab or the plug in wanderlead position.

14. Drill a 12mm diameter hole in a suitable place in the dashboard to mount the in cab isolation switch. Connect the isolation switch following the wiring diagram.
15. Connect the power cables to the vehicle battery; ensure that the in-line fuse is located as close to the battery as possible, and in a position where it is the least susceptible to the elements. For 12v chassis earth systems, connect the earth lead on the back of the lift housing to the vehicle chassis, and fit the additional earth cable from the battery negative terminal to the chassis.
16. Turn on the isolation switch in the cab and ensure that the red light on the switch comes on or connect the plug in wanderlead control. For lifts with chassis mounted power packs, press the raise and lower buttons simultaneously for 5 seconds to prime the pump.
17. Press the lower button to release the platform from its locks before opening the platform and continuing to lower it to the ground. For DL500 stow lock lifts press the raise button, to ensure the platform is in its fully raised position, lift the catch and open the platform before fully lowering the platform to the ground.
18. Operate the lift up and down 3 – 4 times to ensure correct operation.
19. Carry out the post installation tests (section 10). The test sheets must remain in the installation handbook as part of the service/maintenance record for the lift.
20. Check and adjust if needed the fully raised position of the platform. The DEL design of tailift differs from all other lifts in operation and the floor level adjustment is critical to the safe working and life of the lift. DO NOT adjust the platform more than 6mm above floor height (see section 8).
21. Activate the Load Safety Device (see section 6).
22. Refit the toe guard.
23. Before the lift is painted, run a bead of sealant between the vehicle bed and the top of the lift housing.
24. Once the vehicle has been painted, the Warning, Instruction and Safe Load working decals must be fitted (see section 9). Also fit the caps to the top of each column.
25. Complete the final inspection checklist.
26. Complete the test certificate and forward a copy to DEL.
27. Ensure that the installation and operators handbooks are passed on to the end user of the lift.

FULL CLOSURE LIFT INSTALLATION PROCEDURE

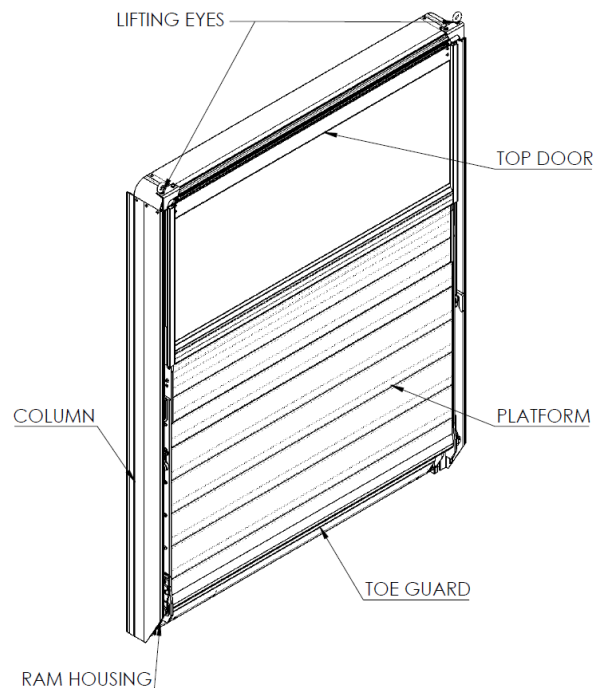


Safety chain angles for lifting and installation

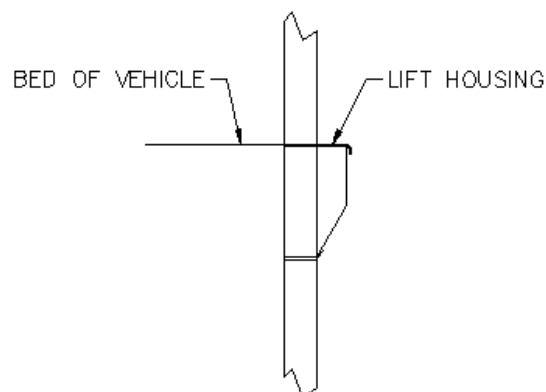
NOTE

For correct lifting and installation of the FC500 use both eyebolts and do not exceed a maximum chain angle of 30 deg.

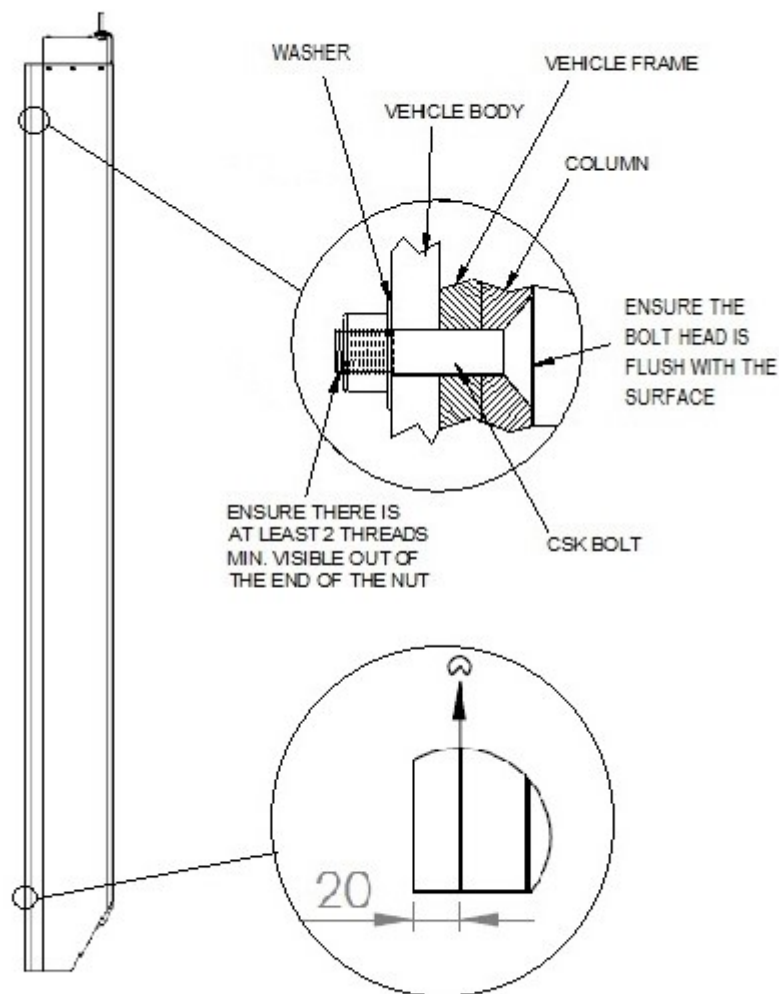
Remove eyebolts after completing the installation of the lift



1. Ensure the body rear is flat and clear before fitting the lift and the vehicle battery is disconnected.
2. Remove the toe guard.
3. Position the lift close to the vehicle rear and raise the lift until the top of the lift housing is level with the vehicle floor, using a forklift truck or other suitable lifting device. (Use lifting eyes)



4. Using suitable G Clamps, clamp the columns and ram housing to the rear frame of the vehicle, ensuring that the lift is central to the rear of the body.
5. Check the lift is square and level with the vehicle floor.
6. Drill countersunk holes or clearance holes on the side of the column and thru the vehicle frame.



Use the "V shape" line to position the holes (20 mm from the edge). A minimum of 7 holes (per side) equally distributed should be drilled to attach the lift to the vehicle frame.

Monobolt/Rivets can be used. Ensure that they are equivalent to M8 Bolts 10.9 grade.

7. Re-check the lift columns for squareness using square and diagonal measurements.
8. Remove the lifting device. (Eye bolts brackets)
9. Fix the control in position and route the 3-core cable to the control. (see section 3). Connect the control, note that a control bracket may have to be welded to the frame to protect the control and allow its installation, (see wiring diagrams).
12. For vehicles with a chassis mounted power pack, mount the powerpack with the brackets provided in a suitable position on the vehicle chassis. Connect the power pack to the lift ram using 1/4" bsp hoses.
13. Route the power cables to the vehicle battery and the isolation cable to the cab or the plug in wanderlead position.

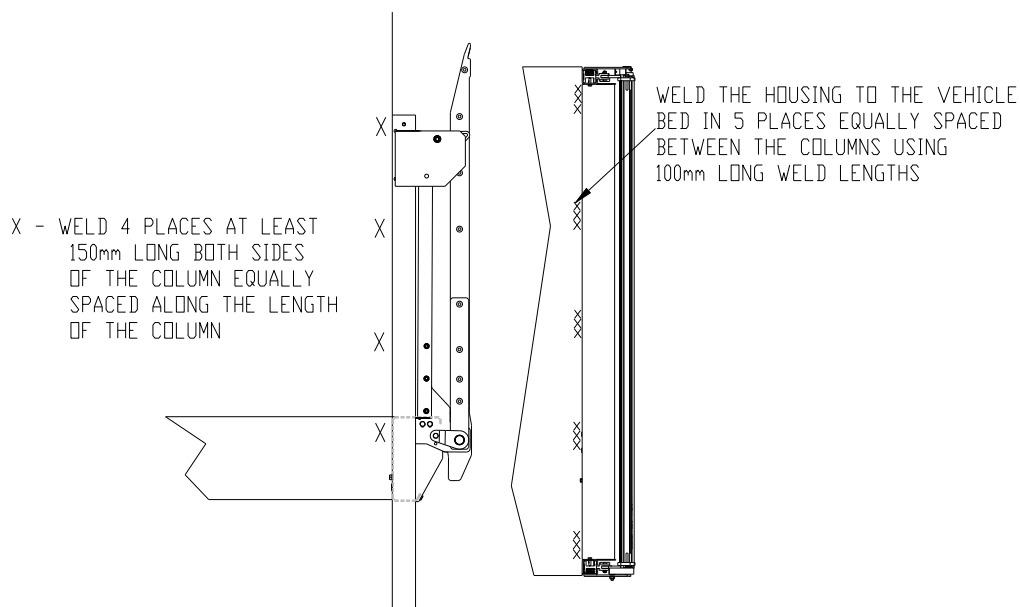
14. Drill a 12mm diameter hole in a suitable place in the dashboard to mount the in cab isolation switch. Connect the isolation switch following the wiring diagram.
15. Connect the power cables to the vehicle battery; ensure that the in-line fuse is located as close to the battery as possible, and in a position where it is the least susceptible to the elements. For 12v chassis earth systems, connect the earth lead on the back of the lift housing to the vehicle chassis, and fit the additional earth cable from the battery negative terminal to the chassis.
16. Turn on the isolation switch in the cab and ensure that the red light on the switch comes on or connect the plug in wanderlead control. For lifts with chassis mounted power packs, press the raise and lower buttons simultaneously for 5 seconds to prime the pump.
17. Press the lower button to release the platform from its locks before opening the platform and continuing to lower it to the ground. For DL500 stow lock lifts press the raise button, to ensure the platform is in its fully raised position, lift the catch and open the platform before fully lowering the platform to the ground.
18. Operate the lift up and down 3 – 4 times to ensure correct operation.
19. Carry out the post installation tests (section 10). The test sheets must remain in the installation handbook as part of the service/maintenance record for the lift.
20. Check and adjust if needed the fully raised position of the platform. The DEL design of tailift differs from all other lifts in operation and the floor level adjustment is critical to the safe working and life of the lift. DO NOT adjust the platform more than 6mm above floor height (see section 8).
21. Activate the Load Safety Device (see section 6).
22. Refit the toe guard.
23. Before the lift is painted, run a bead of sealant between the vehicle bed and the top of the lift housing.
24. Once the vehicle has been painted, the Warning, Instruction and Safe Load working decals must be fitted (see section 9). Also fit the caps to the top of each column.
25. Complete the final inspection checklist.
26. Complete the test certificate and forward a copy to DEL.
27. Ensure that the installation and operators handbooks are passed on to the end user of the lift.

WELD ON LIFTS

IMPORTANT

When welding ensure: -

- The vehicle's battery is disconnected.
- A good earth is achieved by clamping the earth cable onto the lift columns, NEVER any lift fittings.
- All paint is removed from the weld site before starting to weld.
- The power pack and all hydraulic hoses and electrical wires are protected from weld heat and splatter.
- Do not weld near the vehicle batteries.
- The weld area is painted after welding.



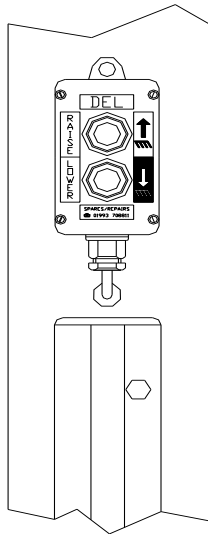
- A) Ensure the vehicle battery is disconnected, and that all other vehicle electrical systems are disconnected as detailed in the chassis manufacturer's instructions.
- B) Stitch weld the ram housing at bed level and tack the top of the columns to the vehicle frame.
- C) Ensure that the lift is level and square with the bed of the vehicle before fully welding the lift in position.
- D) Continue fitting the lift following the procedure from step 9 detailed above.

2. LOCATION OF CONTROL POSITIONS

Please refer to the instructions for electrical installation regarding ancillary equipment from your supplier. Install control units at suitable places, but the position of the controls unit should ensure that the operator has a good view of the load, the working area and the loading area, whilst maintaining a safe distance from the risk zone between the platform, the body and passing traffic.

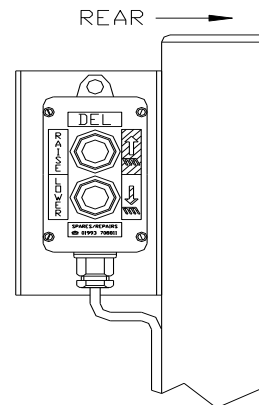
3.5T BOX/LUTON BODY

Position control above column.
Route the wire inside the body through a grommet



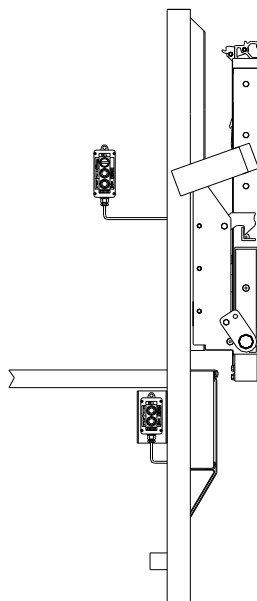
3.5T DROPSIDE BODY

Position control onto the rear of the column facing out or forward.
Care must be taken to protect the wire



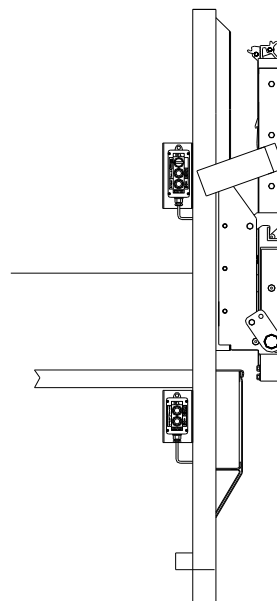
7.5T BOX/CURTAIN SIDE BODY

Position 3 button control inside body housed inside cover with the wires down. Weld a cover to the column to mount the 2-button control.



7.5T DROPSIDE BODY

Weld a cover to the column to position the 3-button control facing into the body with the wires down. Repeat for the 2-button control facing out

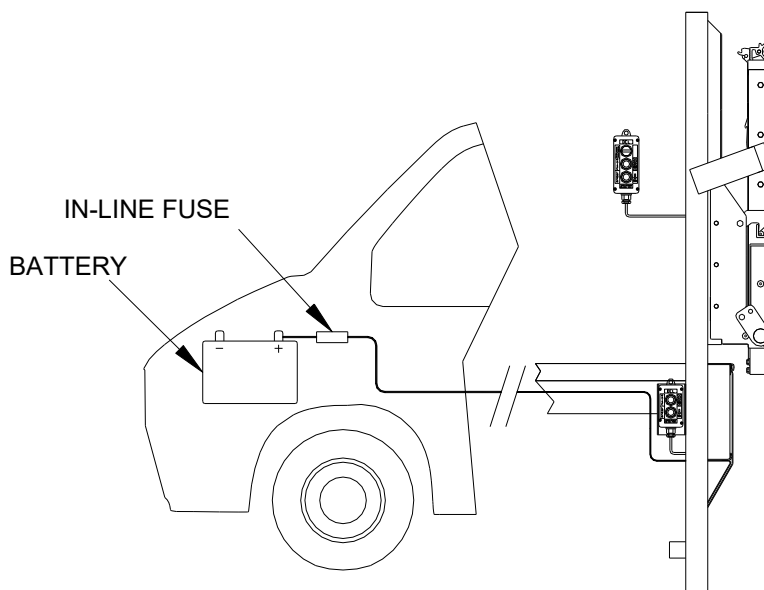


3. INSTALLATION OF IN-LINE FUSE & EARTH

The following instructions cover lifts fitted with an insulated earth cable, which cover all of the 24v systems supplied and some of the 12v systems. For 12v systems not fitted with an insulated earth cable i.e. the tailift is earthed to the vehicle chassis; a separate earth to chassis lead must be fitted (supplied in the kit). DO NOT rely on the vehicle manufacturers earth cable, this is not adequate.

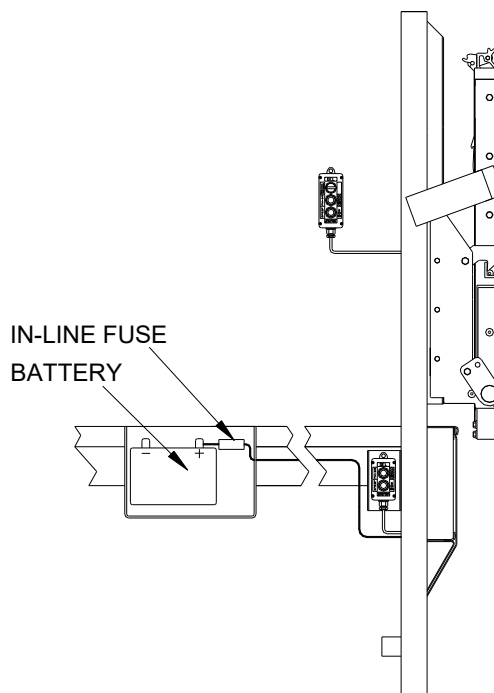
3.5T WITH THE BATTERY UNDER THE BONNET

Route main battery cable from tailift to the battery along the chassis avoiding the exhaust, fuel pipes and sharp edges. Locate the fuse holder **as close to the battery as possible, inside the engine compartment** using the short cable to the battery +ve terminal



7.5T VEHICLE WITH CHASSIS BATTERY

Route main battery cable from tailift to the battery along the chassis avoiding the exhaust, fuel pipes and sharp edges. Locate **the fuse holder inside the battery case, using bolts, not self-tappers**. If insufficient space inside case, locate **as close to the battery as possible, in an area least susceptible to the elements**



4. TAILIFT MOUNTING AND BRACING

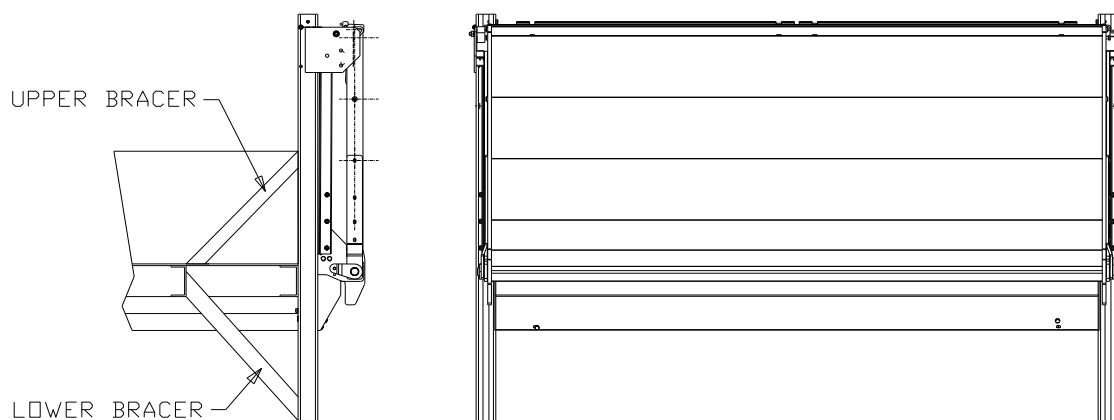
N₁ VEHICLES (3.5T)

BOX BODY

Bracing is not normally required when mounting a lift to a Luton/box body vehicle.

DROPSIDE BODY

Both upper and lower bracing is required when mounting a lift to a dropside body vehicle. The body should be built with a box section rear frame, braced above and below bed as shown below.

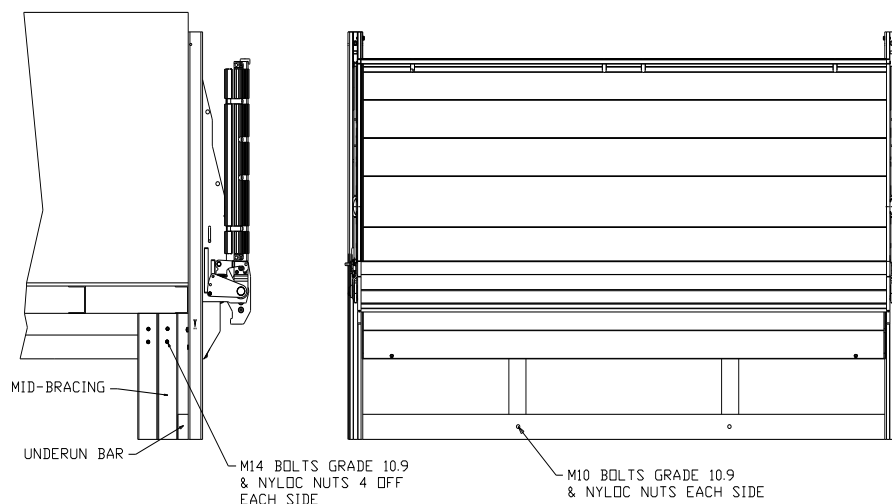


N₂ &

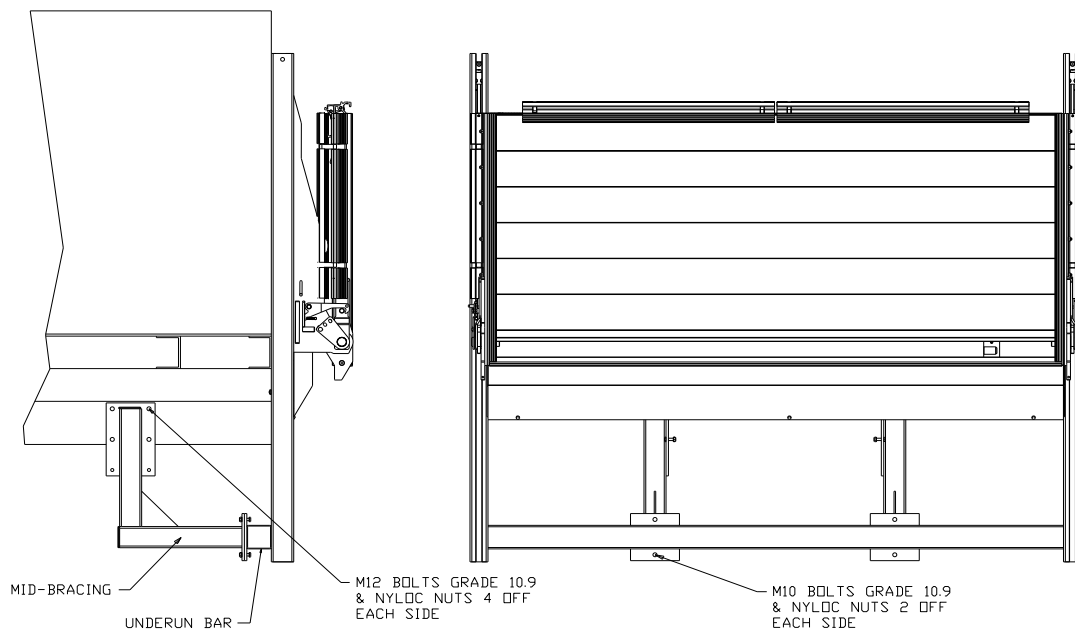
N₃ VEHICLES

Lifts which are supplied with an underun bar and need to comply with EC WVTA must be fitted using the mid-bracing and fixings supplied. The mid-bracing should be bolted to the vehicle chassis and the underun bar, as follows;

BOX BODY (750kg - 1000kg LIFTS)

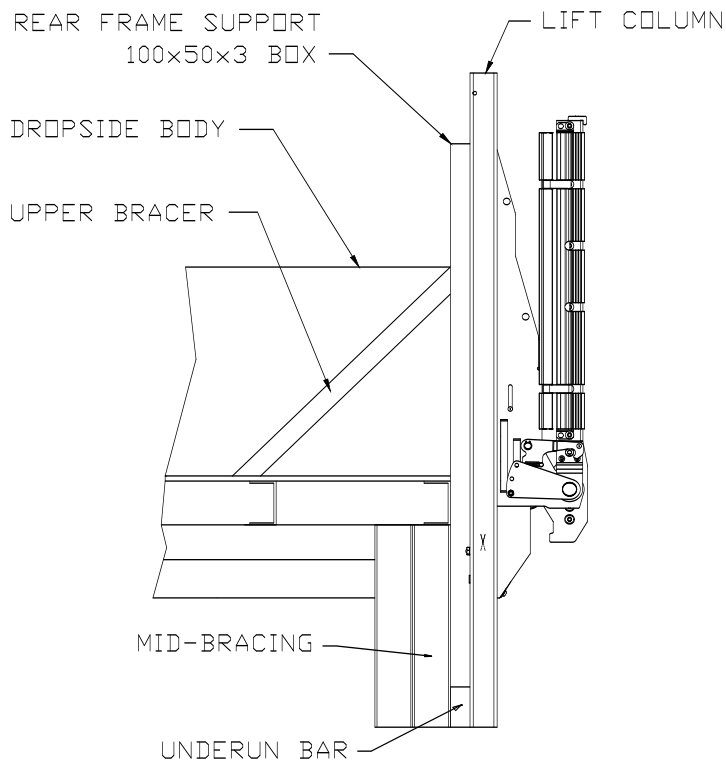


BOX BODY (1500kg LIFTS)



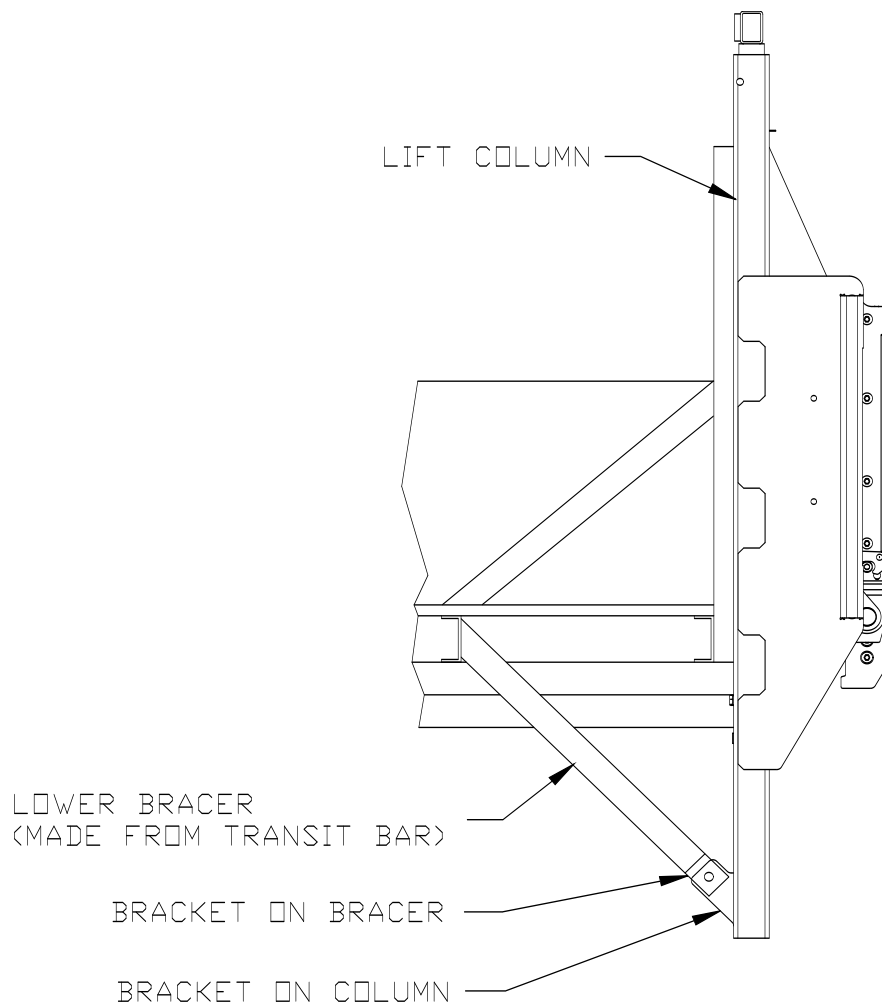
DROPSIDE BODY

In addition to the mid-bracing, upper bracing is also required when mounting a lift to a dropside body vehicle. The body should be built with a box section rear frame, braced above bed as shown below.



DROPSIDE WITH TIPPER BODY

Lifts which are not supplied with an under-run bar require both upper and lower bracing. The body should be built with a box section rear frame, braced above and below as shown below.



IMPORTANT

Please refer to page 9 for precautions to take when welding.

HYDRAULIC BODY LOCK

If tipper lift is supplied with a Hydraulic Body Lock, please refer to DEL Sales for installation instructions (ref. Part No. 61317)

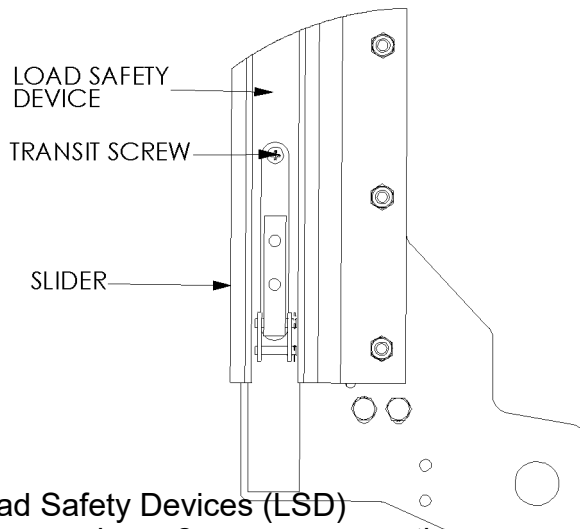
5. LOAD SAFETY DEVICE

DEL Tailifts is fitted with a chain failure LSD. During transit and installation of the lift, the LSD is disengaged to prevent accidental operation.

TO ACTIVATE THE LSD

1. Lower the platform to within 300mm of the ground. Remove the LSD transit screw from both sliders.
2. The LSD will now be active

Please contact DEL Service if you are unsure or have any problems.



Testing of Load Safety Devices (LSD)

Warning: This may be a 2 persons operation, care must be taken when lowering platform over any object. Do not go underneath platform when testing LSD.

Load Safety Device (LSD) Test Procedure

1. To test the nearside LSD lower the platform onto a jack with the jack positioned on the nearside of the platform and in line with the hinge pins. Please note that this LSD test should be carried out with the chain termination block fully out of the column.
2. Raise the platform using the jack a minimum of 100mm.
3. At this point if the chain does not appear, you will need to remove the beam cover/toe guard and whilst pressing the 'down' button push the ram into the closed position. This will create slack in the chain enabling the test to continue. Slack chain is **ESSENTIAL** otherwise the LSD test will prove negative.
4. Now manually drop (or remove) the jack allowing the platform to drop at least 100mm. You should find that the LSD will activate within the 100mm distance.
5. If the LSD has not activated, check the LSD rod is free to move up and down within the slider. Also ensure no foreign objects etc. are preventing the free movement of the slider.
6. Repeat test 1 to 5 on the offside LSD.

6. POWER PACK RELIEF VALVE & GAUGE PORT

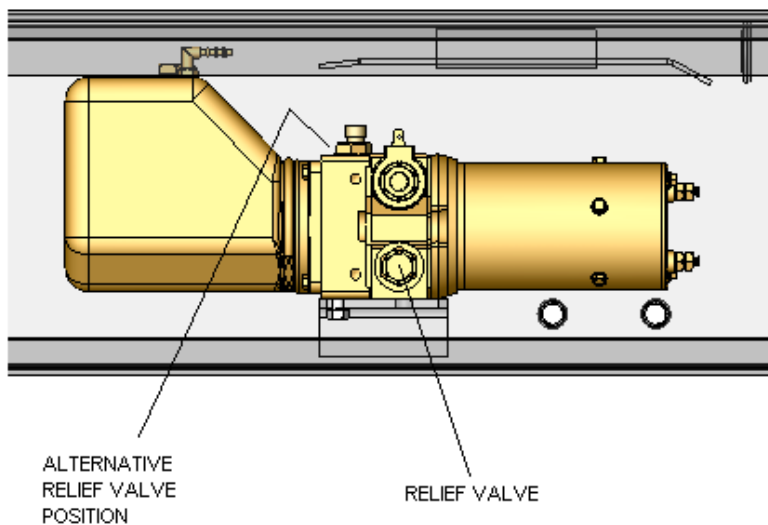
Identify gauge port on power pack and connect pressure test gauge suitable for pressure range. If gauge port is not present one can be created using a tee adaptor.

Turn the relief valve **CLOCKWISE** to **INCREASE** the load.

Turn the relief valve **ANTICLOCKWISE** to **DECREASE** the load.

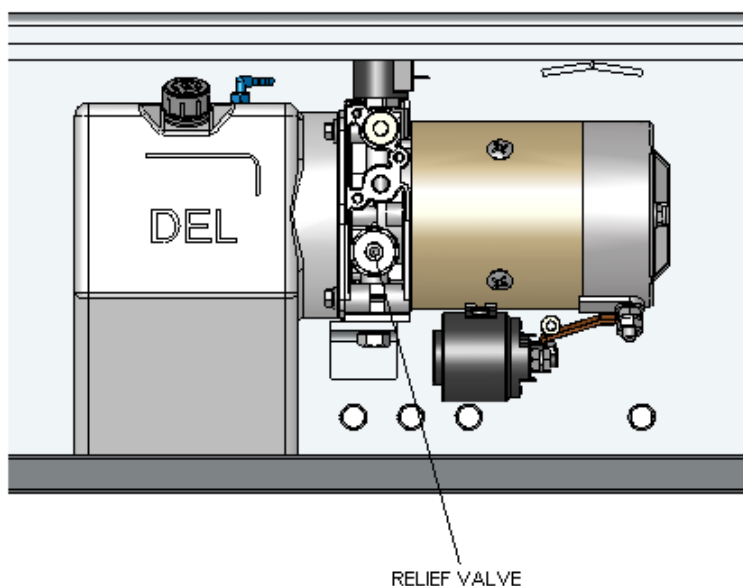
DL500 Lifts

- Remove the cover cap
- Adjust the valve
- Refit the cap
- Check the adjustment with the post-installation tests



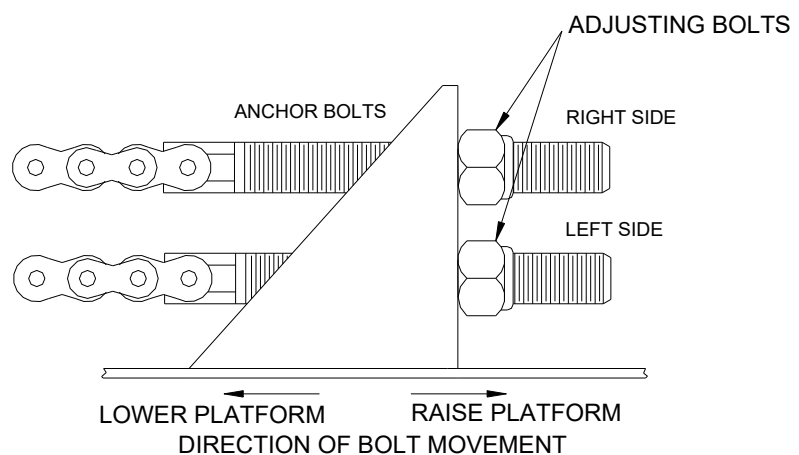
DL1000 and DL1500 Lifts

- Release the locknut
- Adjust the relief valve with an Allen key.
- After adjustment, tighten the locknut.
- Check the adjustment with the post-installation tests



7. CHAIN ADJUSTMENT

1. Remove the main housing cover.
2. Open the platform.
3. Raise the tailift to the full height possible while in the horizontal position.
4. Check the adjustment required on each side.
5. Lower the platform to the ground.
6. Turn the NUT on the anchor bolt to either tighten or loosen the chain. Tightening will raise platform, loosening will lower it. Note that for every 5mm of adjustment, the platform will move 5mm
7. Replace the main housing cover.



The platform should now be level with the truck bed or up to **6mm** above floor level.

8. LOCATION OF WARNING DECALS

A - LOCATED NEXT TO THE CONTROL BOX. WITH REMOTE CONTROL OPERATION IT IS LOCATED ON THE PASSENGER SIDE, AS CLOSE TO THE LIFT AS POSSIBLE AND AT EYE LEVEL (APPROX. 5 FEET FROM THE GROUND)

B - LOCATED NEXT TO 'A'

C - LOCATED ON THE MAIN HOUSING COVER ABOVE THE TOE GUARD ON THE PASSENGER SIDE.

D - LOCATED ON THE MAIN HOUSING COVER ABOVE THE TOE GUARD OR TO THE RIGHT OF 'B'

E - LOCATED NEXT TO 'B'

F - LOCATED AROUND THE POSITIVE CABLE FROM THE LIFT TO THE BATTERY

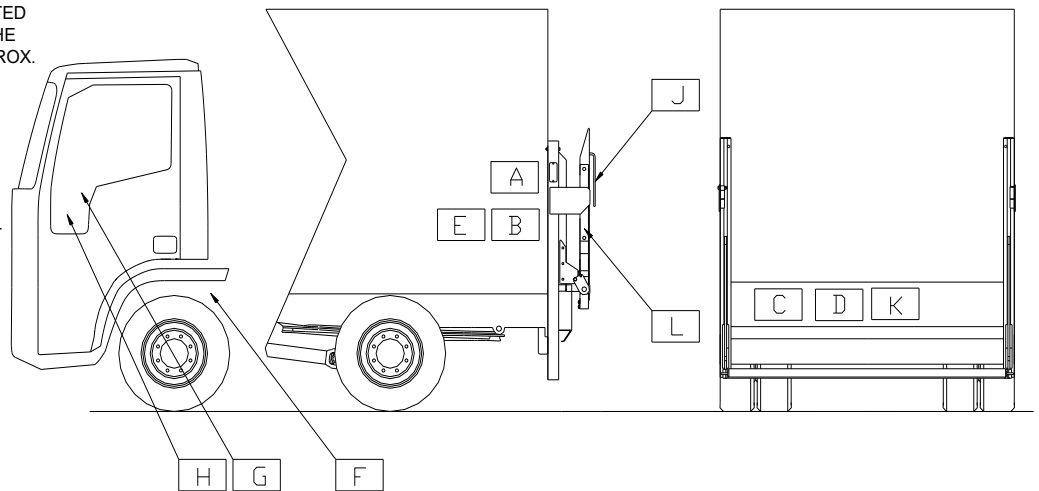
G - LOCATED IN THE DRIVERS CAB AS CLOSE TO THE STOW INDICATOR AS POSSIBLE.

H - LOCATED IN THE DRIVERS CAB AS CLOSE TO THE ISOLATION SWITCH AS POSSIBLE.

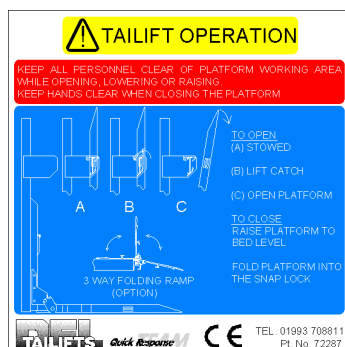
J - REFLECTIVE FLAGS LOCATED AT THE TOP OF THE PLATFORM ON BOTH SIDES

K - LOCATED ON THE MAIN HOUSING OR ON THE POWER PACK BOX (CHASSIS PACKS)

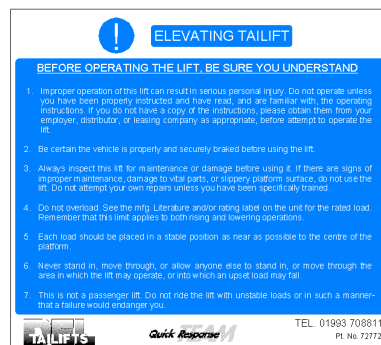
L - LOCATED ON THE EDGE OF BOTH SIDES OF THE PLATFORM



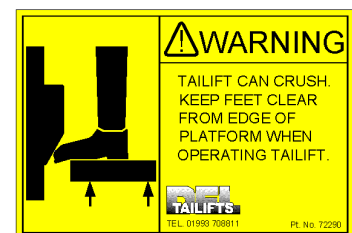
A) TAILIFT OPERATION



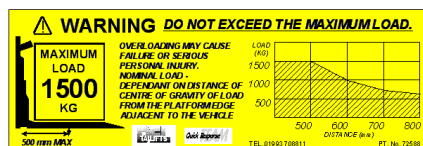
B) CAUTION



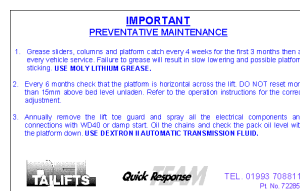
C) WARNING



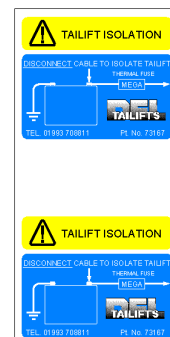
D) MAX LOAD



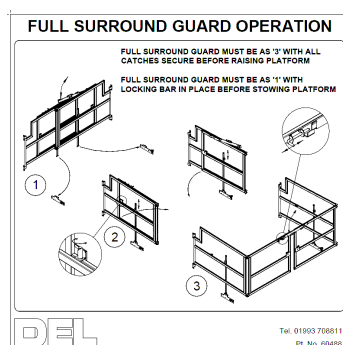
E) MAINTENANCE



F) TAILIFT ISOLATION



FULL SURROUND GUARD OPERATION (WHERE APPLICABLE)



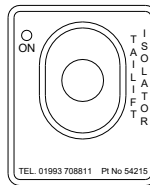
SELF ERECT GUARD OPERATION (WHERE APPLICABLE)



G) STOW INDICATOR (ON DASHBOARD) IF FITTED



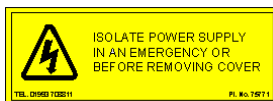
H) ISOLATION (ON DASHBOARD)



J - FLAGS



K) ISOLATE POWER SUPPLY

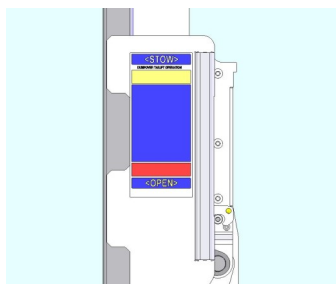
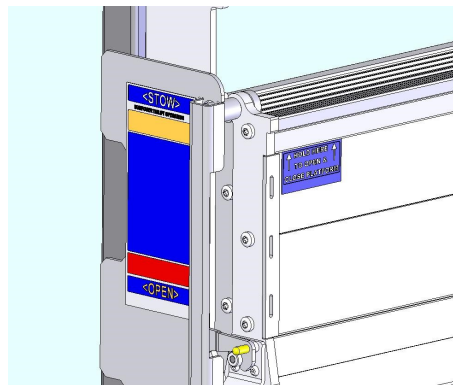


L) KEEP FEET CLEAR



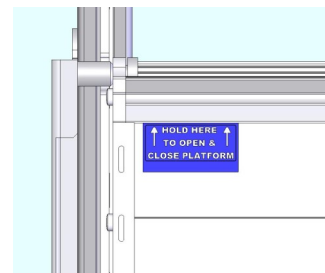
LIFT OPERATION DECAL POSITIONS, DUMPOVER LIFTS

Affix the 'TAILIFT OPERATION, and 'HOLD HERE TO OPEN & CLOSE PLATFORM' decals where shown.



ERATION

DUMPOVER TAILIFT OP-
HOLD HERE TO OPEN & CLOSE
PLATFORM



9. TESTS AFTER INSTALLATION

After the lift has been initially installed the following tests **MUST** be completed to ensure the lift has been installed and set up correctly in accordance with CE regulations. The results of the tests should be entered on the test certificate provided and a copy returned to DEL Equipment (UK) Ltd, the original should remain in this handbook as part of the inspection record for the tailift. This handbook should be kept, together with the operators handbook, with the tailift as part of the inspection record for the lift.



Do not leave a loaded platform unattended

IMPORTANT – CE REGULATIONS REQUIRE THE TEST CERTIFICATE TO BE COMPLETED AND RETURNED TO DEL Equipment (UK) Ltd

The lift shown for illustration purposes is the DL500. The same tests apply to all other column lift models.

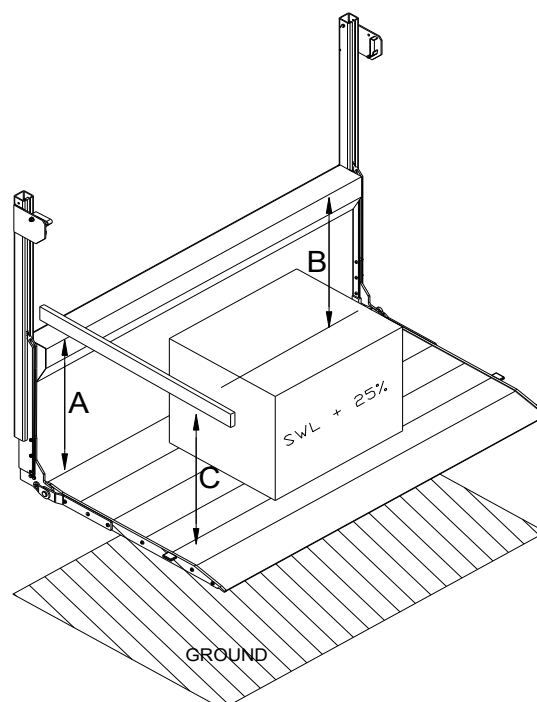
1) STATIC TESTS

a) Deformation

This test is to ensure that the lift attachment is secure.

- Lower the platform mid-way between vehicle floor level and ground level.
- Measure the height of the platform from the vehicle floor at each side of the platform and at the front of the platform (measurements A, B and C below). Note that a straight edge resting flat on the lift housing will be needed to measure dimension C. Record the initial measurements in the table below.

Dimensions A are taken from the back left hand side of the platform



Dimension B is taken from the back right hand side of the platform

Dimension C is taken from either the front left or front right of the platform

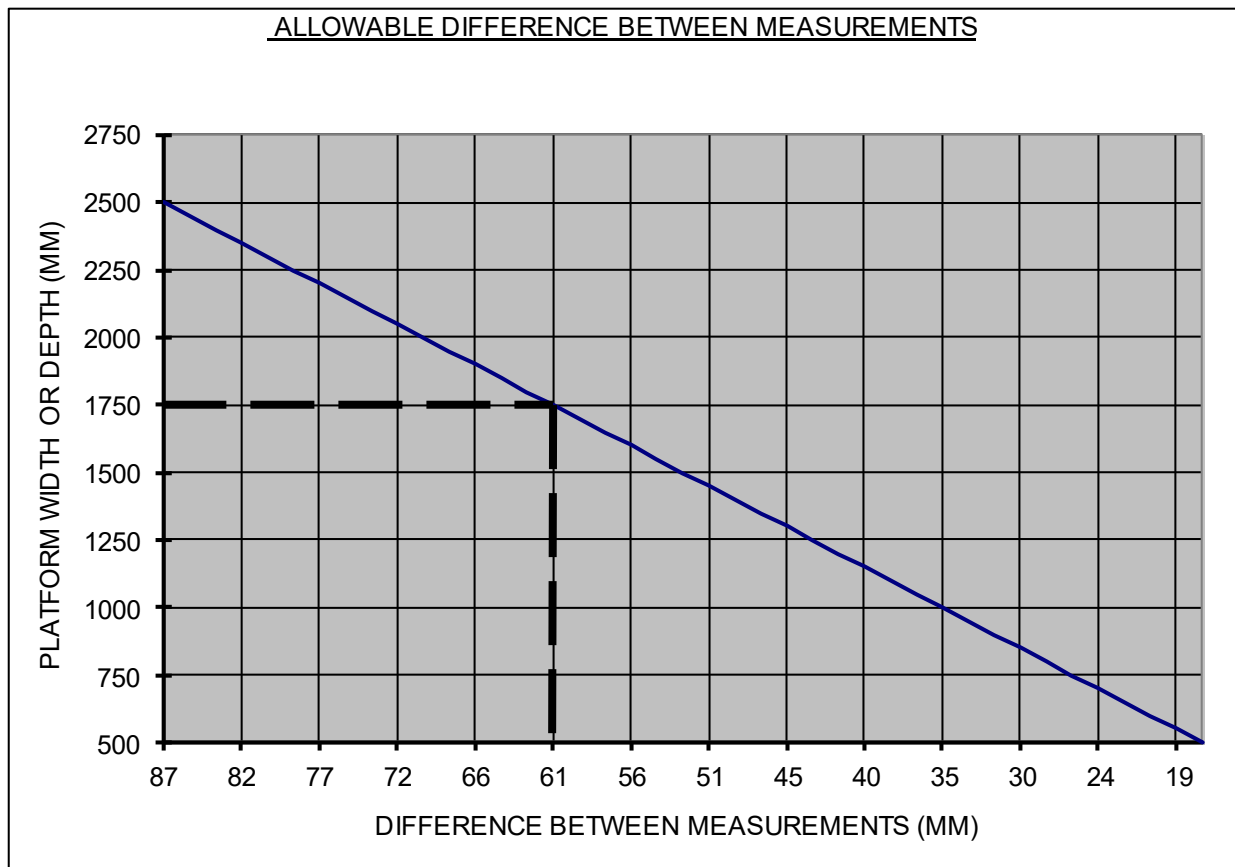
- Apply a load equal to the safe working load +25% (e.g. 625 kgs for 500kg rated lift), at a distance of 500mm from the load centre to the back of the platform, leave it for 10 seconds before removing it.
- Re-measure the distances A, B and C and record under 'measurement 1' in the table below.
- If the new values of A, B and C recorded under measurement 1 are not the same as the previous values, repeat the test until they are, recording all subsequent tests in the spaces given.
- Check that no permanent deformation has occurred in the lift or its attachment to the vehicle, which would affect its function.

	INITIAL	MEASUREMENT 1	MEASUREMENT 2	MEASUREMENT 3
A				
B				
C				

b) Platform drift

This test is to ensure that the platform remains stationary within 15mm of its original position over a 15-minute test period.

- Raise the platform to vehicle bed height.
- Apply a load equal to the safe working load + 25% at a distance of 500mm from the load centre to the back of the platform. (note that the power pack relief setting prevents this load from being raised)
- Measure the distances A, B, and C and record them in the table below.
- Leave the platform loaded for 15 minutes.
- After the 15 minutes test period, re-measure the values A to C and record them in the table.
- Check that:
 1. The difference between measurements A and A' and B and B' does not exceed 15mm
 2. The angular drift of the platform does not exceed 2 degrees. This is checked using the graph below. The graph shows the allowable difference allowed between measurements A' and B' and A' and C' (angular drift, side to side and front to back). By plotting the platform depth / width on the vertical axis across to the diagonal line, the horizontal axis will indicate the maximum difference permitted between A' and B' / A' and C. The example shown, the horizontal dotted line is for a platform width of 1750mm. This value translates to the vertical dotted line indicating a maximum difference between A' and B' of 61mm. If the difference between the measurements is greater than that shown by the graph, contact DEL After Sales for advice.



	Initial Measure- ment		After 15 minutes	Difference between Measurements
A		A'		A' & B'
B		B'		A' & C'
C		C'		

2) TEST TO VERIFY THAT THE LIFT CANNOT RAISE EXCESSIVE LOAD

- Lower the platform to Ground level.
- Apply the safe working load + 25% to the platform in the position shown in the deformation test.
- Verify that the load cannot be lifted.

Note If the load is lifted reset the power-pack relief valve by following the procedure given under the installation procedure section.

3) DYNAMIC TEST

- Apply the safe working load to the platform.
- Ensure that the lift operates through its full range of movements.
- With the load still on the platform go straight to the safety tests.

4) TEST OF SAFETY FUNCTIONS

a) Vertical speed

- With the safe working load on the platform measure the time taken for the platform to lower from bed height to the ground.
- With NO load on the platform, measure the time taken for the platform to raise from the ground to vehicle bed height.
- Record the values in the table below.
- Using the height 'A' measured in the platform drift section above calculate the speed for both the lowering and raising operations (speed = A/time), and record them in the table.
- Check that the speeds do not exceed 150 mm/second

	Laden (lowering)	Unladen (raising)	Measurement 'A'
Time			
Speed (A/Time)			

NOTE

- If the speeds exceed 150 mm/second check that there is no damage to mechanical parts and that the correct oils/greases have been used.
- Check that if the hydraulic circuit leaks, the maximum speed of any movement does not exceed the usual operating speed by more than 50% and no part of the platform moves more than 100mm (>500kg lifts only)

b) Effort

- Test the effort required to open and close platform using suitable weighing scales. Measure the effort required to initiate movement at the mid point extremity of the platform section. This should not exceed 350N (35.7Kg.f).

10. TEST CHECK LIST

• Static test complete

- Excessive load test complete ☐
- Dynamic test complete ☐
- Safety function test complete ☐
- Effort test complete ☐
- Vertical speeds measured ☐
- ☐

11. TECHNICAL INFORMATION

TORQUE SETTINGS –

	<u>TIGHTENING TORQUES (N/M)</u>	
	GRADE 8.8	GRADE 10.9
M6	8	12
M8	20	29
M10	40	57
M12	70	99
M14	112	158
M16	175	246
G 1/4	20	
G 3/8	34	

HYDRAULIC FLUID

Automatic Transmission Fluid – Viscosity - 39 Centi-strokes at 40°C
7.5 Centi-strokes at 100°C

Type 'A' automatic transmission fluid or Shell T22 or equivalent is recommended.

ELECTRICAL WIRES

Where not supplied with the tailift, the wires used on the lift should be of the following minimum CSA.

Power and Earth - 1500kg: 35mm², 1000kg: 25mm², 500kg: 20mm²

Hand control and isolator - 1mm²

BOLTS

Where not supplied with the tailift, the minimum specification for the bolts to mount the tailift should be:

Grade 10.9, diameter 8mm, countersunk.

Note that the mounting bolts should have a minimum shank length of 5mm and screws should never be used.

MANUAL EFFORT WHEN OPERATING TAILIFT

Manual effort shall not exceed 250N, however, to initiate motion, the effort shall not exceed 350N. Note that these requirements do not apply to the effort used when handling loads.

WEIGHTS –

<u>MODEL</u>	<u>MASS (KG)</u>	
	<u>STEEL PLATFORM</u>	<u>ALUMINUM PLAT-FORM</u>
GB450	-	140
DL500T	290	250
DL500G/FC	-	250
DL500F	205	145

BD500	-	250
DO500T	330	200
DT500	300	270
DL550GP	185	-
DL750T	310	270
BD750	-	230
DO750T	340	-
DD1000	-	500
DL1000T	310	270
BD1000	-	270
S1000	330	280
DO1000T	350	-
GB1000	360	325
S1500	425	280
GB1500	425	350
FC 500	-	220

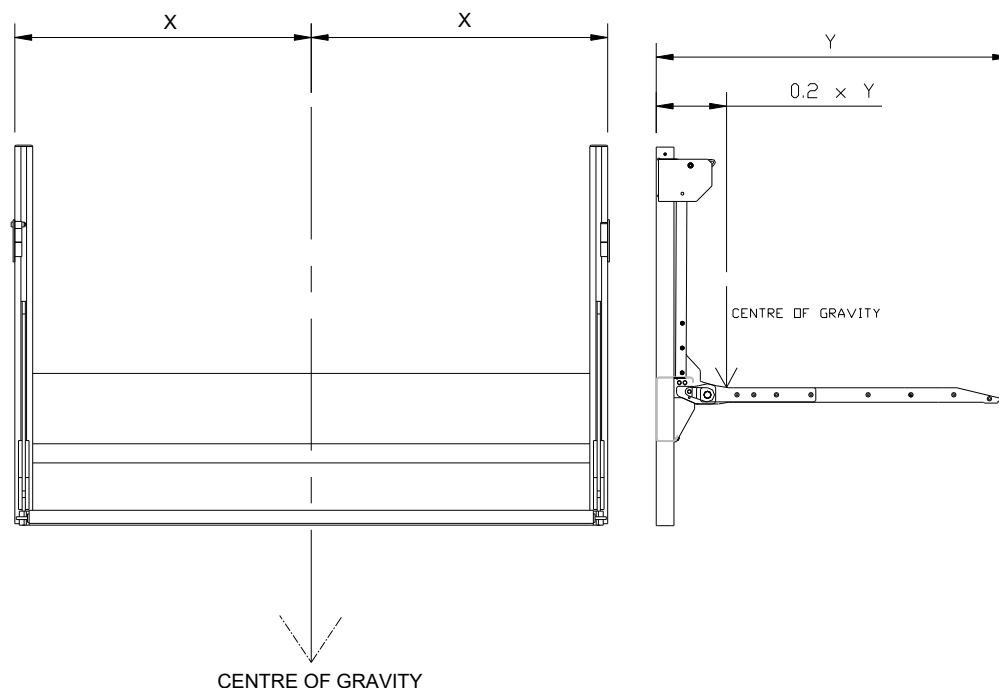
For platforms with 3 way folding ramps add 10kgs to the weight of the platform.

NOTE: - The above weights are approximate and are given as a guide only, and assume a standard width platform.

CENTRE OF GRAVITY –

The centre of gravity of a column tailift lies at approximately 0.2 times the distance from the back of the lift columns to the front edge of the platform and halfway between the lift columns.

NOTE when loading the platform; place the centre of the load as close to the centre of gravity of the platform as possible.



12. FINAL INSPECTION CHECKLIST



CAUTION: Do not use the tailift if any of the items below are not checked and verified. If you have any questions contact DEL sales. Failure to verify the following could result in severe damage to the tailift or personal injury.

Installation is not fully complete until all the following items are checked and verified and the Installation Manual is passed on to the end user of the lift.

- ☐ Oil level meets fill mark in pump reservoir.
- ☐ All tack welds are now complete welds.
- ☐ Platform bed height set correctly.
- ☐ Hydraulic components checked for leakage.
- ☐ Battery cables attached and clamped tight.
- ☐ Lights wired properly, are operational, and comply with current lighting Regulations.
- ☐ On/off switch inside lockable drivers cab or other device to prevent unauthorised operation in the absence of the operator is fitted.
- ☐ Fuse is fitted as close to battery as is practical.
- ☐ Audible and visual warning signals operational (if fitted).
- ☐ Vehicle licence plate properly fitted.
- ☐ All decals in place and legible after painting. Reflective flags or alternative warning device fitted.
- ☐ Visual check to ensure any crushing or shearing risks are avoided and decals are in place warning of risks.
- ☐ Operators manual in vehicle.
- ☐ Earth strap properly installed.
- ☐ Columns greased if needed.
- ☐ Platform opens properly.
- ☐ Platform stow locks operating correctly.
- ☐ Control switch operates properly and the direction of the control operation is logically consistent with the direction of travel. Only one control is operational at any one time. The controls are installed to give the operator a secure working position and also good visibility of the load, the platform and working area.
- ☐ Platform torsion assistance is working and the manual effort does not exceed 250N or 350N to initiate motion.
- ☐ LSD transit screws have been removed and LSD tested ok.
- ☐ Tailift tested and test certificate completed.
- ☐ Minimum toe gap of 78mm or 30 degree slope.
- ☐ Wire protection fitted to all cable holes. Unshielded hydraulic pipes and electrical wires have been placed so as to avoid damage due to movements resulting from the operation of the tail lift or the vehicle.
- ☐



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 Windrush Industrial Estate
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 Witney
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 TEL: 01993 708811
 FAX: 01993 708787
 EMAIL: sales@del-uk.com

LIFT TEST CERTIFICATE

DATE:

CUSTOMER NAME:.....

INSTALLER/TESTER NAME:.....

ADDRESS:..... ADDRESS:

.....

MODEL..... SERIAL NO:..... FITTED TO:

RATEDCAPACITY:.....KG VEHICLE REG:
 (TEST LOAD)

OVERLOAD SETTING: KG
 (TEST LOAD + 25%)

INSTALLATION TESTS

1. STATIC TEST.....PASS/FAIL?
2. DYNAMIC TEST.....PASS/FAIL?
3. EXCESSIVE LOAD TEST.....PASS/FAIL?
4. SAFETY FUNCTION.....PASS/FAIL?
5. VERTICAL SPEED TEST.....PASS/FAIL?

HAS THE LSD TRANSIT SCREW BEEN REMOVED.....YES/NO?

HAS THE FINAL INSPECTION CHECKLIST BEEN COMPLETED...YES/NO?

HAS THE OPERATORS MANUAL BEEN PASSED ON TO THE ENDUSER...YES/NO?

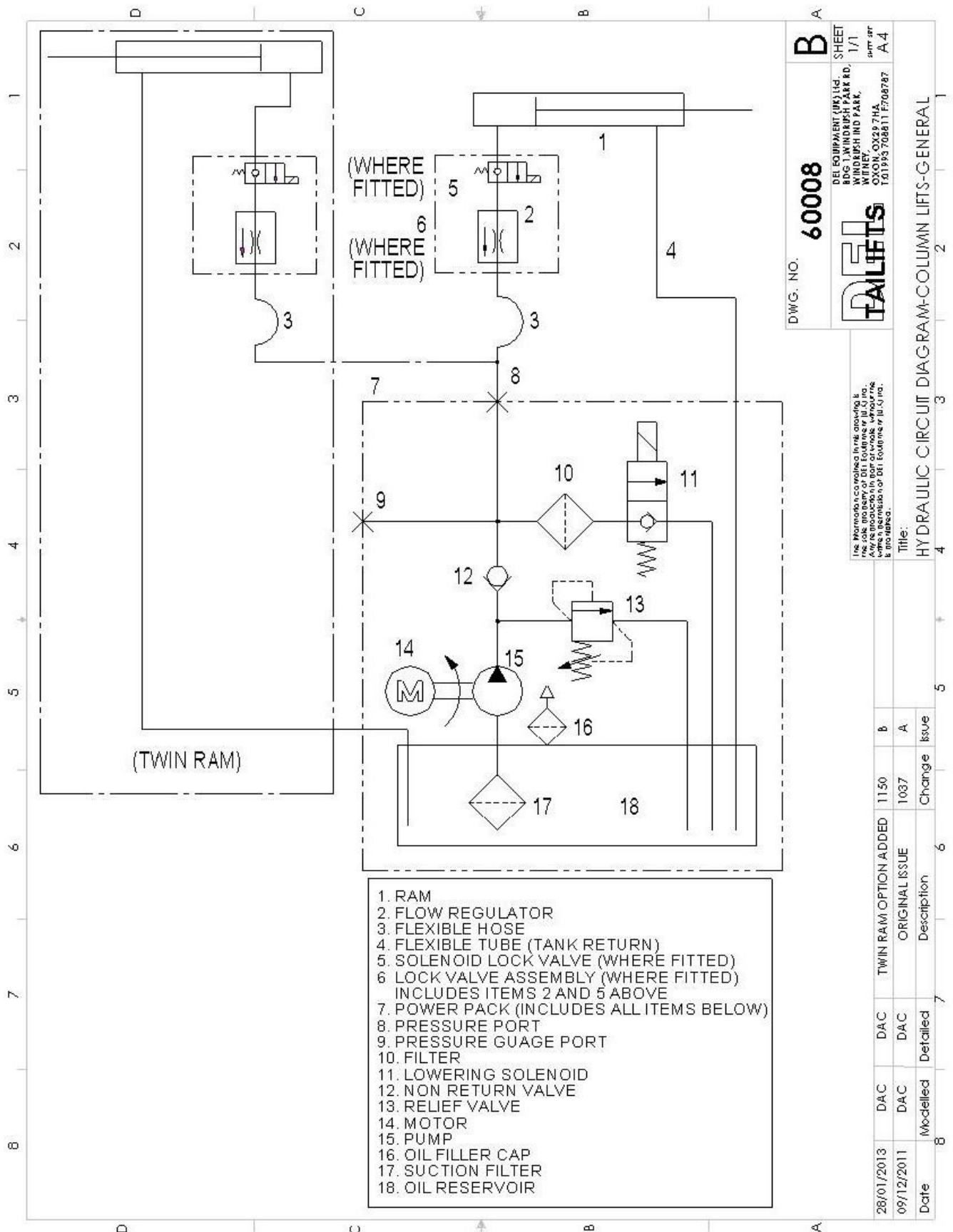
GENERAL.OBSERVATIONS.....

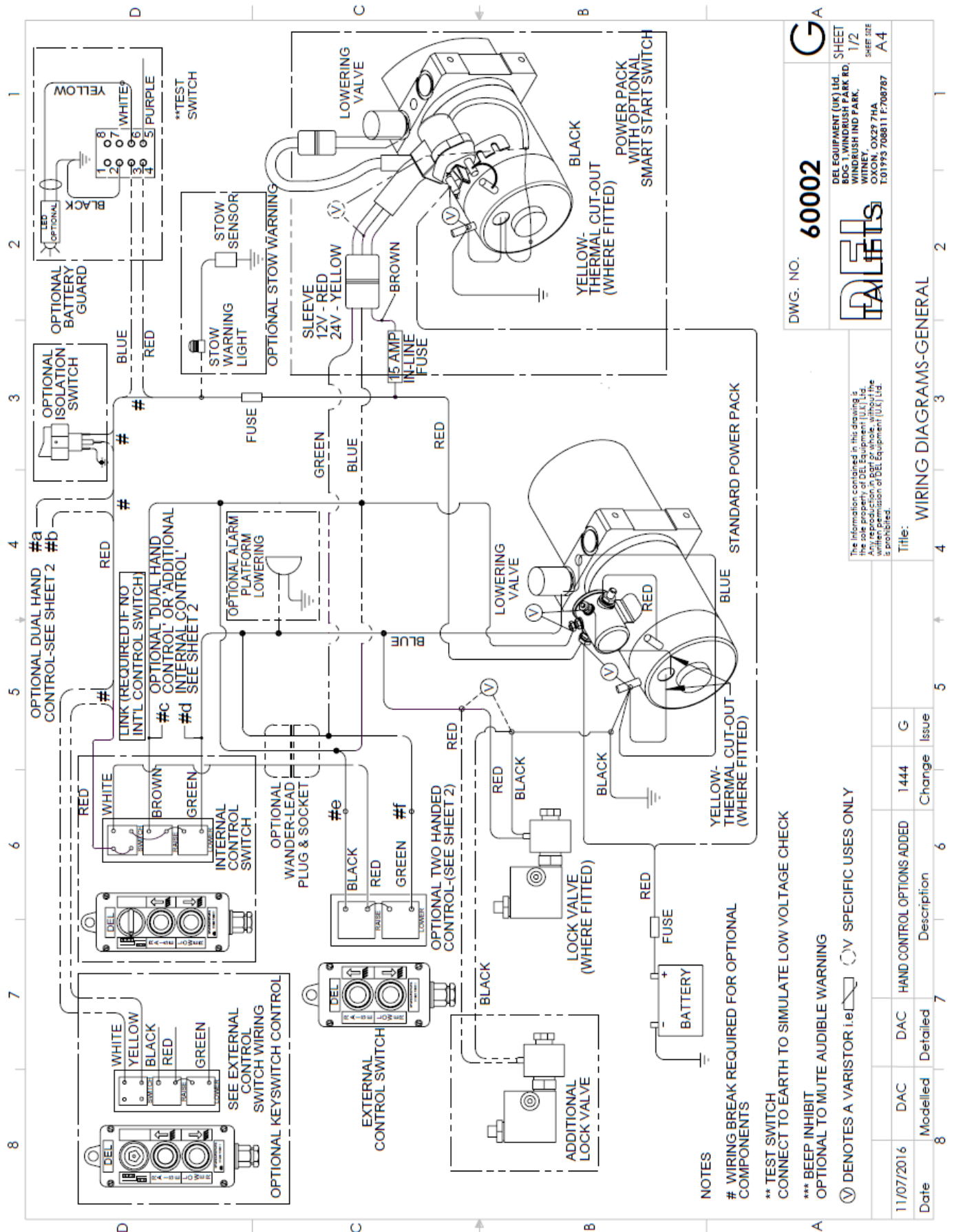
We certify that the product detailed above has been installed in accordance with the manufacturers instructions and that all post installation tests have been completed and passed. We confirm that the manufacturer and end user have been consulted with regard to the products compatibility with the vehicle taking into account the intended use. The product has not been modified in any way. Any modifications have been approved in writing by the manufacturer.

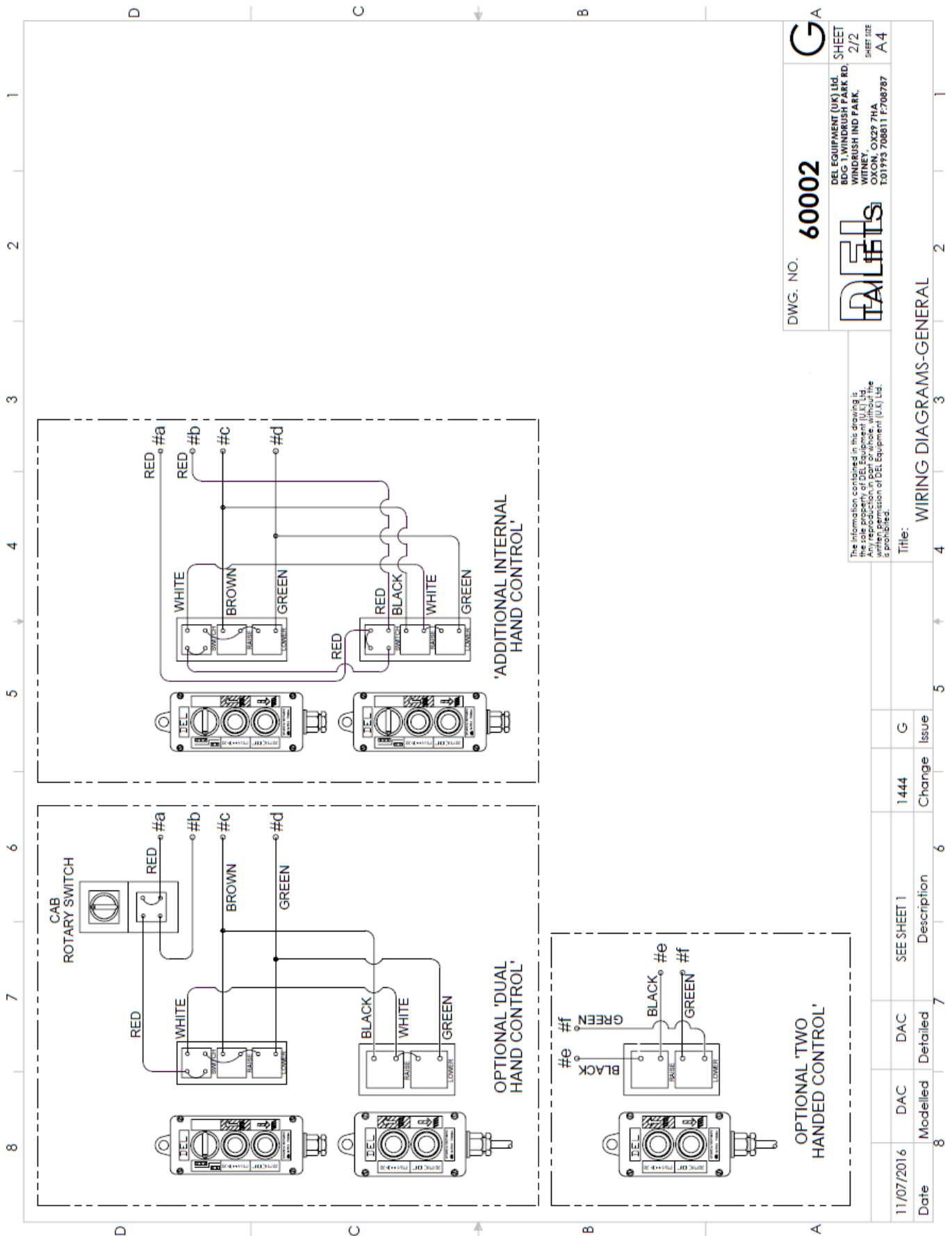
TESTED BY: SIGNED.....

COMPANY.....

THIS CERTIFICATE SHOULD REMAIN IN THE INSTALLATION HANDBOOK.







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Windrush Industrial Park
Witney
Oxon, OX29 7HA
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E-mail: sales@del-uk.com | hiab.com