

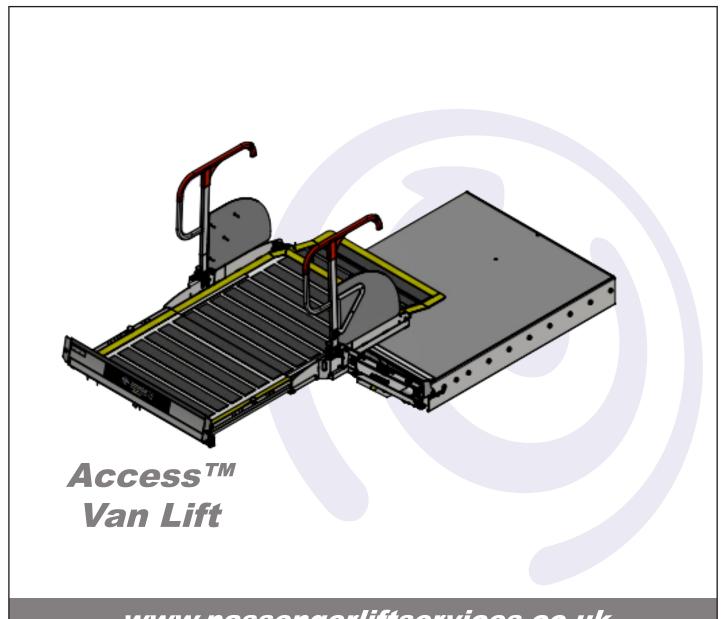


Revision: 1.4 Year: 2017 BS:EN 1756-2-2004 and A1:2009

Instruction Manual

Access™ Van Lift

ACC-1150, ACC-1200, ACC-1280, ACC-1300, ACC-1380



www.passengerliftservices.co.uk



1. GENERAL

- 1.1. Manufacturer
- 1.2. Markings
- 1.3. Using the Manual (symbols etc)
- 1.4. Operator Responsibility
- 1.5. Health & Safety (Scooters)

2. TECHNICAL

- 2.1. Main Components Access™ Van
- 2.2. Dimensions Access™ Van
- 2.3. Technical Data (Volts, PLS Blue)

3. PRODUCT USE:

- 3.1. Intended Use
- 3.2. Improper Use

4. SAFETY DEVICES

4.1. Description of Safety Devices Access™ Van

5. STICKERS

5.1. Description of Labels & Stickers

6. LOGISTICS

- 6.1. Receipt and Inspection
- 6.2. Storing the Lift
- 6.3. Handling

7. INSTALLATION

- 7.1. Risk Assessment
- 7.2. General Installation- Box Section Chassis
- 7.3. General Installation- Open Section Chassis
- 7.4. Power Pack Mounting Options
- 7.5. Checking the Power Pack Oil Level
- 7.6. Hydraulic and Electrical Fittings
- 7.7. Floor Height Adjustment
- 7.8. Bridge Plate Adjustment
- 7.9. Weight Test- Dynamic
- 7.10. Weight Test- Overload, Drift & Static
- 7.11. Installation Checklist
- 7.12. Torque Settings

8. OPERATION

- 8.1. Standard Operation procedure
- 8.2. Manual Override

9. CLEANING

9.1. Cleaning Instructions

10. SERVICE AND MAINTENANCE

- 10.1. UK Service & Warranty
- 10.2. Loler
- 10.3. Daily Inspections
- 10.4. Monthly Inspections
- 10.5. Six Monthly inspections
- 10.6. Lubrication
- 10.7. 31 Point Check

11. DISPOSAL

11.1. Safe Disposal

12. TROUBLE SHOOTING

12.1. Trouble Shooting

13. DIAGRAMS

- 13.1. Wiring Diagram- Power Pack
- 13.2. Wiring Diagram- Lift
- 13.3. Hydraulic Diagram

14. SPARE PARTS

- 14.1. Contents List of Spare Parts Access™ Van
- 14.2. Spare parts request form Access™ Van

15. NOTES



1.1 Manufacture



Passenger Lift Services Ltd

Unit 2 Summit Crescent Trading Estate Smethwick, West Midlands United Kingdom

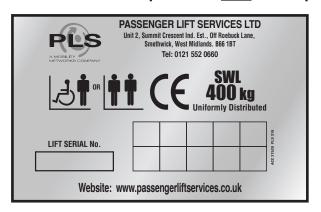
Tel: +44(0) 0121 552 0660

1.2 Manufacture

The lift device is manufactured in compliance with the relevant EC directives applicable on the date of entering the market. Considered a "medical device" pursuant to article 2, point 1), letter a), first paragraph of directive 2007/47/EC, the device carries a specific identification plate which, in addition to the specific technical data also includes the CE marking, guarantee of the compliance of the device to the directives/ standards referred to the enclosed Declaration of Conformity.

The plate, a facsimile of which is shown here, is stamped with the data indicating the specific model and unit.

NOTE: The Lift Serial number will be required for <u>ALL</u> correspondence with factory



CUSTOMER NAME:	
INSTALLER NAME:	
DATE OF INSTALLATION:	
SERIAL NUMBER:	





1.3 Using the Manual

This manual aims to provide users and operators with all the information they require to ensure that they are able both to use the lift appropriately and are able to manage it as autonomously and safely as possible.

Before performing any operations on the lift, users and operators must carefully read the instructions given in this publication.

In the event of doubt over the correct interpretation of the instructions, contact the PLS technical department to obtain the required clarifications.

This manual is an integral part of the lift, it must be kept safely by the purchaser and made available for use by the operators.

The contents of this manual comply with the Directive 2007/47/EC and were drafted following the guidelines given in UNI 10893:2000. They also comply with the requirements of UNI EN ISO 10535:2007 and BS EN 1789:2007 and A2:2014

Data and drawings are indicative only; with a view to the continuous development and updating of its products, the manufacturer may modify the contents without notice.

It is prohibited to disclose, edit or use this manual for any other purposes.



This symbol indicates IMPORTANT Information used by the Manufacture and the User



This symbol indicates areas that need routine maintenance



This symbol indicates Operators areas of responsibility



This symbol indicates IMPORTANT areas for the Safe operation of the Lift



This symbol indicates that a potentially hazardous situation could occur



This symbol indicates improper use of the lift



1.4 Operators Responsibility

The operator is individually responsible for the safe use and maintenance of the lift.

They are also responsible for the lift users and their own personal safety and in the event of an accident they will be prosecuted to the full extent of the law if they are deemed negligent.

Legal action will also be taken if any unauthorised modifications are made to the lift without direct prior written authority by a PLS director.





The lift owner is the person who purchases the product, uses or oversees the use of the lift, this person is legally responsible for the lift's safe use.





The accompanying person, also known as the operator is responsible for the safe operation of the lift.

The operator must be full trained in all the operation aspects of the lift such as the transportation of people with motor deficiencies or disabilities. The operator must exhibit the following characteristics/ attributes for them to safely operate the lift:

PHYSICAL – Possess the required physical qualities/ characteristics sufficiently to ensure safe operation of lift in a safe and controlled manner. Examples include:

- Good hearing & sight
- Physically capable of performing all operational functions of lift
- Not impaired by the consumption of legal and/or illegal substances (such as alcohol and/ or drugs)

MENTAL - Possess the required mental qualities / characteristics sufficiently to ensure safe operation of lift in a safe and controlled manner. Examples include:

- Understanding & application of the safety rules and procedures while operating the lift.
- Be constantly aware and pro-active to ensure the safety of operator, consumer and nearby people.
- Have the knowledge/ skills to perform as an assistant and/ or operator in all aspects of lift operation. E.g. the safe transportation, loading and unloading of disabled and other passengers.

EMOTIONAL - Possess the required emotional qualities/ characteristics sufficiently to ensure safe operation of lift in a safe and controlled manner. Examples include:

- Work in a calm & safe manner while under stress so to prevent stress from impairing good judgement.
- To be emotionally stable during normal or abnormal situations

TRAINING – Possess the required training qualities sufficiently to ensure safe operation of lift in a safe and controlled manner. Examples include:

 Completed operational training supervised by an experienced operator in PLS lifts in an environment which is safe and controlled. Such supervised training should allow the trainee to gain working experience in all operation aspects of the lift.





The lift owner is responsible for distributing and ensuring that a copy of this manual is read and fully understood by all potential lift operators before operating the lift.



No operator will use the lift if they believe it is unsafe and doing so could injury themselves or others, they MUST report their concerns directly to their manager or PLS

1.5 Heath & Safety (Scooters)

Safety Instructions for 'Scooters' and Large Powered Wheelchairs

Before operating tail lift:

Fully familiarize yourself with lift controls, relevant safety procedures and possible hazards, signified by warning labels or highlighted in your 'Operators Risk Assessment'.

Tail lift safety:

- Only an authorised (fully trained) operator must control the lift.
- Secure vehicle doors fully open, well clear of the lift platform.
- Keep within the stated maximum safe working load (SWL).
- Keep people away from the operating area (inside and outside of vehicle).
- Ensure that the platform is always level (horizontal, not more than 5°).
- NEVER leave the lift unattended at ground level if passengers are on board.
- When lift is not in use the controls should be deactivated.
- Ensure that the lift is correctly stowed after loading.

Operators ensure that:

- Lift will lower to firm, level ground.
- Scooter or powered wheelchair is not larger than lift platform in any direction.
- Tail lift is in a FULLY operational condition. Report any defects.
- Lift bridging-plate lands flat onto vehicle floor.
- Roll-off ramp is set vertically (approx. 80°), and fully operational.
- Accompany the passenger on the lift if possible, but do not overload the lift.
- You have a clear view of the lift platform before the scooter moves onto it.
- NEVER leave passengers unattended at any time.
- The passenger should not be required to operate ANY controls.

Loading & Unloading procedure:

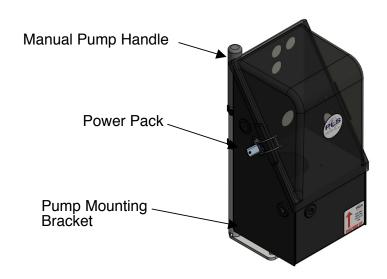
- Explain to passenger the sequence of movements that will occur.
- Where possible passenger should dismount scooter and board vehicle separately.
- Ensure that the lift platform and area around the lift are free from obstruction.
- Ensure that the lift platform is in the correct position before moving onto it.
- Scooter should be pushed onto the lift platform, NOT DRIVEN.
- Ensure that persons or equipment do not overhang the platform.
- Scooter breaks are applied BEFORE lift begins motion (or wheels blocked).
- All power to scooter is turned OFF.
- Operate lift platform to vehicle floor.
- Scooter is pushed off the lift platform, NOT DRIVEN.
- The scooter should be clamped to the vehicle floor using the correct equipment.
- The passenger utilises the static vehicle seats and seatbelts.

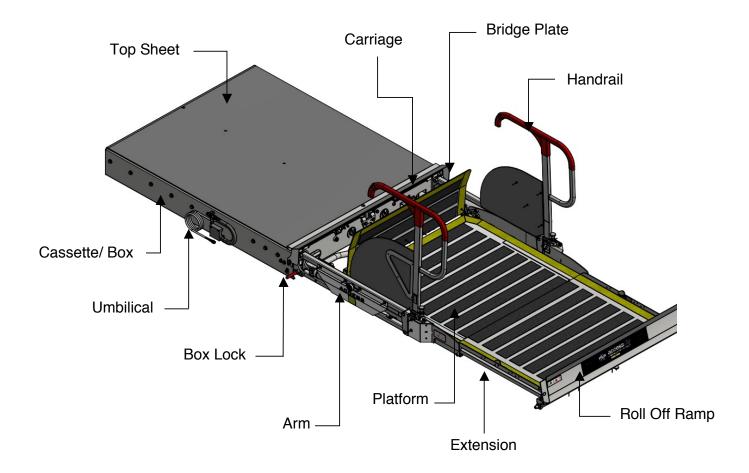
Please note: The transportation of scooters and large powered wheelchairs may require a 'NON STANDARD' tail lift size or specification. Where possible PLS can provide longer, wider platforms, higher roll-off ramps to help combat the increased hazards related to larger passenger vehicle transportation.



Technical

2.1 Main Components Access™ Van

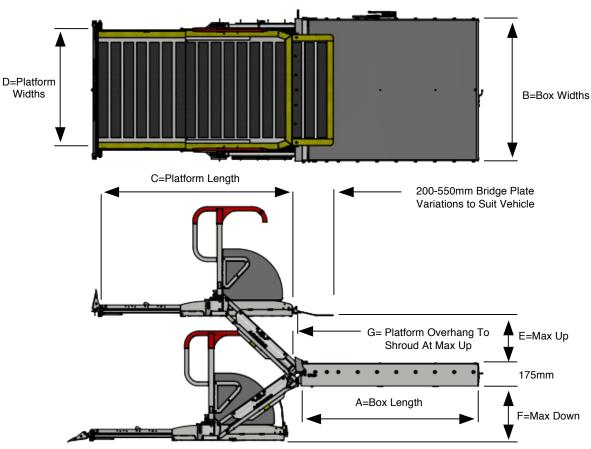






Technical

2.2 Dimensions Access™ Van



Overall Length =A +40mm (Shroud)

	ACC-1150	ACC-1200	ACC-1280	ACC-1300	ACC-1380
Α	1150mm	1200mm	1280mm	1300mm	1380mm
В	1000mm	1000mm	1000mm	1000mm	1000mm
	1100mm	1100mm	1100mm	1100mm	1100mm
С	1390mm	1410mm	1410mm	1510mm	1510mm
D	825mm	825mm	825mm	825mm	825mm
	925mm	925mm	925mm	925mm	925mm
E	360mm	425mm	470mm	425mm	470mm
F	370mm	400mm	470mm	400mm	470mm
G	95mm	100mm	70mm	100mm	70mm



Technical

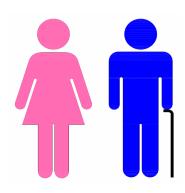
2.3 Technical Data Access™ Van

The Lift is designed To Transport:



One person in a wheelchair with or without an attendant, with a size not larger than the width/length of platform space available, or weight over the stated 'SWL' capacity

Or:



Two walking passengers. The operator should not attempt to transport more than two people at a time of increased risk of passenger discomfort. The passengers also may require extra space for mobility devices such as sticks and frames

	ACC-1150	ACC-1200	ACC-1280	ACC-1300	ACC-1380
SWL (Kg)	400	400	400	400	400
Voltage (DC)	12V	12V	12V	12V	12V
Pressure (Bar)	130	140	160	140	160
Auxiliary Hand Pump	Yes	Yes	Yes	Yes	Yes
Lift Control	2 Button Handset				

Note: Lift weight not including Power-pack & Installation

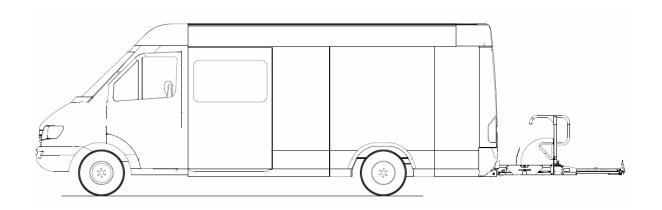


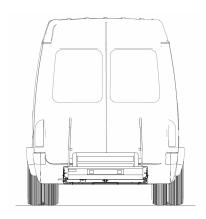
Product Use

3.1 Intended Use

The lift is designed for installation on the loading floor of a vehicle designed for transportation of the disabled in wheelchairs, within the limits of the performances and capacities indicated in the technical characteristics.

The lift must only be used by an authorised and trained operator, known as the accompanying person, who possesses the knowledge and physical requirements to safely perform operations with disabled persons.





Anything that is not specifically referred to in chapter 3.1 is considered **IMPROPER USE**.



THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR DAMAGE CAUSED TO PERSONS OR PROPERTY OR TO THE LIFT ITSELF DUE TO ANY USE OTHER THAN THAT DESCRIBED IN THIS MANUAL.



Product Use

3.2 Improper Use

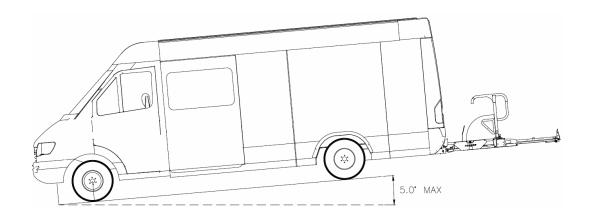
Anything that is not specifically referred to in chapter 3.1 is considered **IMPROPER USE**.

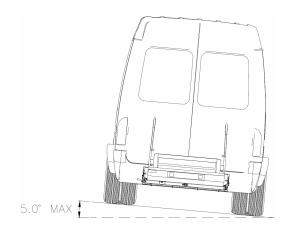


IT IS FORBIDDEN to climb onto the lift or any of its parts and go up or down while standing.

It is advisable to always attempt to use the lift on flat/ level ground

No angle of more than 5° from level (in any direction) should be attempted





Anything that is not specifically referred to in chapter 3.1 is considered **IMPROPER USE**.

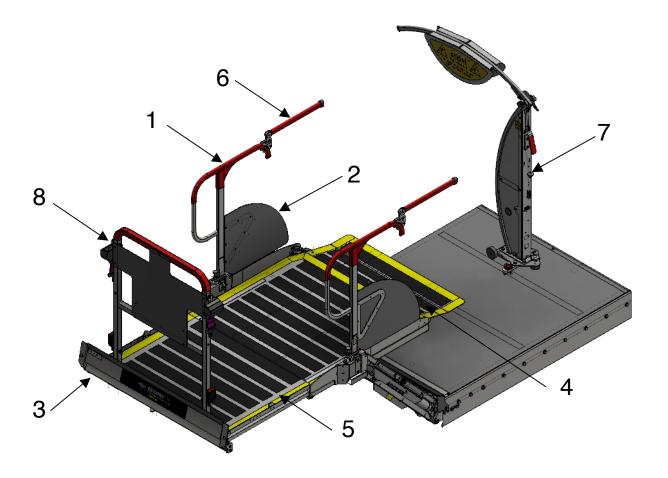


THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR DAMAGE CAUSED TO PERSONS OR PROPERTY OR TO THE LIFT ITSELF DUE TO ANY USE OTHER THAN THAT DESCRIBED IN THIS MANUAL.



Safety Devices

4.1 Description of Safety Devices Access™ Van



1	Handrail	Standard
2	Handrail Guard	Standard
3	Roll Off Ramp	Standard
4	Bridge Plate	Standard
5	Anti-Slip Surface Cleating	Standard
6	Handrail Extension	Optional
7	Door Safe	Optional
8	Stop Safe	Optional

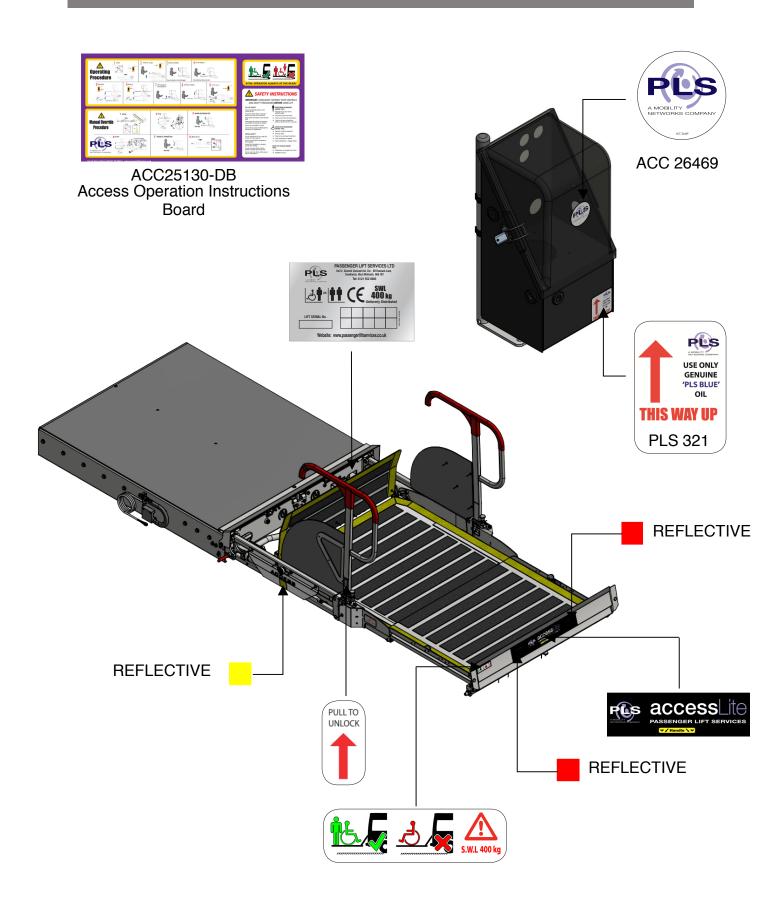


IT IS FORBIDDEN TO DISABLE, REMOVE OR TAMPER WITH THE EXISTING SAFETY SYSTEMS.



Warning Labels & Stickers

5.1 Description of Labels & Sticker





Logistics

6.1 Receipt and Inspection

Upon delivery of the lift, you need to perform the following inspections:

- Ensure the product delivered corresponds to the relevant documentation e.g. the order specification and the transport document.
- Examine packaging to ensure it is undamaged and all parts are intact during transportation.
- With great care, examine all devices to ensure they haven't been damaged during transportation and all parts haven't been tampered or removed.
- Ensure all documentation required for installation has been supplied.



IF THE DELIVERED DEVICE DOES NOT COMPLY WITH THESE REQUIREMENTS, NOTIFY THE MANUFACTURER IMMEDIATELY.

6.2 Storing The Lift

If the lift is not used, proceed as follows:

- Transport lift to an appropriate storage area, free from atmospheric agents / elements.
- Ensure all electrical / electronic devices are insulated from external environment so to prevent humidity damaging those components.
- Storage area selected **MUST** ensure temperature variation is between 5°C to 50°C fresh hold.
- Ensure all sliding parts (guides, cylinders ...) are adequately protected from dust, rust and water damage.

Note: If a lift is to be dry stored for more than 12 months then all cylinder seals MUST be checked before operation





STORAGE OF THE LIFT IN CONDITIONS THAT DO NOT COMPLY WITH THE ABOVE DESCRIPTION SHALL NULLIFY THE WARRANTY FOR ANY PARTS TO BE REPLACED.



Logistics

6.3 Handling

All lifting and short workshop distance transportation of packages lifts must be carried out using a forklift truck.

Safe lifting can only be achieved when using suitably rated load capacity equipment (Please refer to Technical Data Table for indicated lift weight)





HANDLING STAFF MUST WEAR: SAFETY SHOES WITH STEEL TOE CAP AND NON-SLIP SOLES.



MAKE SURE THAT NO UNAUTHORISED PERSONS ARE STANDING WITHIN THE RADIUS OF ACTION OF THE LIFTING/HANDLING MEANS (FORK LIFT TRUCK, TRANSPALLET, ETC.) DURING THE LIFTING, TRANSPORT AND HANDLING OPERATIONS.

Procedures for packaging removal are explained below:

- Using a Stanley Knife with a maximum blade length of 10mm, cut along the 4 sides of the base of the packaging, remove tape and ensure waste cardboard is recycled
- For wooden crates, remove nails from top panel and those present on the side walls.





STAFF REMOVING THE PACKAGING MUST WEAR:
SAFETY SHOES WITH STEEL TOE CAP AND NON-SLIP SOLES AND GLOVES.

7.1 General Installation- Risk Assessement

Location: Passer	nger Lift Services Ltd							Re	v No):			
Operation/Activ	ity: Lift Operation												
List below the o	perations, in your	Sev	erity	,			Like	eliho	od			Risk	Rating
opinion, which i	nvolve a significant	1	_	2	4	_	4	_	2	4	_		= S x L
hazard, risk of in	jury?	1	2	3	4	5	1	2	3	4	5		
Stability of lift do	uring operation			2					1				2
Entrapment fror	n moving parts			2					1				2
Slips, trips and fa	alls			3					1				3
Operating enviro	onment			3					2				6
Manual operation	on of lift			2					1				2
Contact with haza				2					1				2
Fire				1					1				1
List persons at	Operators			t minor					occur or		/0		
risk:	Passengers	plant, equipment or structure Minor injury – small cut or bruise – first aid treatment Serious – medical treatment required – doctor or small injury clinic Major – attendance at hospital accident and emergency department Fatalities		Minor injury – small cut or bruise – first aid treatment Serious – medical treatment required – doctor or small injury Moderate - could occur at		0	18 verall risk						
				sometime. (41-60% chance) Likely - not surprised could occur several times. (61-80% chance) Certain - to be expected, will occur repeatedly. (81-100%			rating						
		- dedities			chance)								
Risk rating has b	peen defined taking into a	ccoı	ınt t	he f	ollo	wing	con	tro	me	asu	res		
	clude (engineering quality conti											Custo	mer
Action Plan / Co													
All lifts are supp	lied with safety instruction	ıs ar	d sa	fe o	oera	iting	pro	cedi	ıres	wit	h vis	ual in	struction
	ic and manual operation o												
Safety instructio	n is also generated and su	ppli	ed fo	r th	e us	e of	lifts	by s	coo	ters	and	large	powered
wheelchairs.													
Supply and fitted	d lifts have a weight test co	ertif	cate	and	an	insta	allati	on a	and	exai	mina	tion r	eport
completed by a	competent engineer comp	lyin	g to;	Lifti	ng (Oper	atio	ns a	nd L	iftin	ıg Eq	uipm	ent
D = =l. 12 100	8.												
kegulations 199			l ma	inta	ned	by t	the e	nd	user	, wi	th six	k mor	ithly
U	ols are to be implemented	and										ا Lift	
Additional contr	ols are to be implemented led out on all lifting equipr			ıforr	ning	to;	Liftir	ng O	pera	atio	ns ar	IU LIII	ing
Additional contrinspections carri	ed out on all lifting equipr			forr	ning	to;	Liftir	ng O	pera	atio	ns ar	IU LIII	ing
Additional contr inspections carri Equipment Regu	ed out on all lifting equipr		Contropera	rols ar ation/	e dee	med a	adequ	ate- p	oroce	ed wi	th the	IU LIII	1-7
inspections carri Equipment Regu Has the overall risk Has the overall risk	ed out on all lifting equipr llations 1998.		Contropera Cons	rols ar ation/ ider a	e dee activi	med a	adequ ontrols	ate- p	orocee	ed wi	th the		Ť
Additional contrinspections carri Equipment Regulates the overall risk Has the overall risk Medium?	led out on all lifting equiprolations 1998. Trating been reduced to Low?	men	Contropers Conscontr	rols ar ation/ ider a ols re ation	e dee activii dditio quired activ	med a ty nal co d -pro vity is	adequ introls ceed v	ate- p , strice with co	orocee et moi cautio under	ed wi nitori n taker	th the		1-7

Assessment carried out by:

Position:

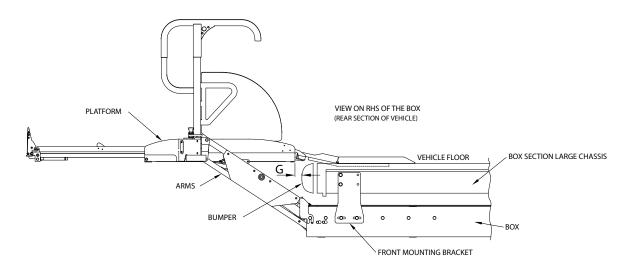
Date:

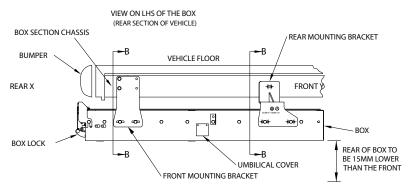
See Risk Assessment Action Plan for additional precautions / controls to be implemented.

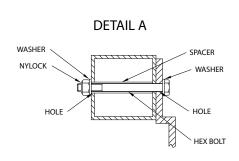


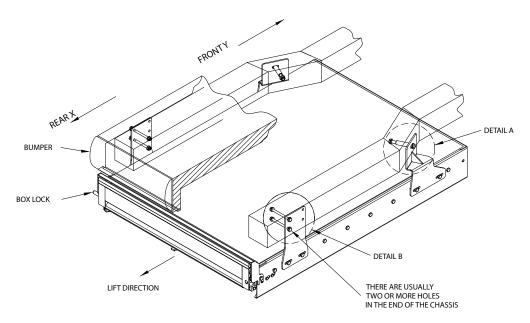


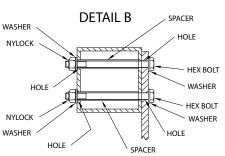
7.2 General Installation- Box Section Chassis







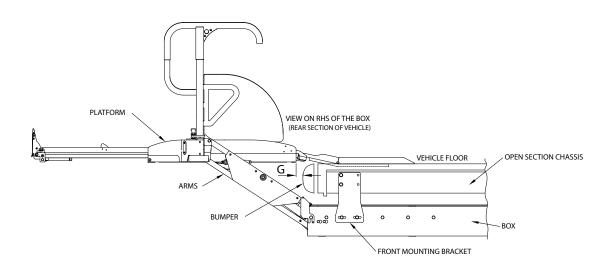




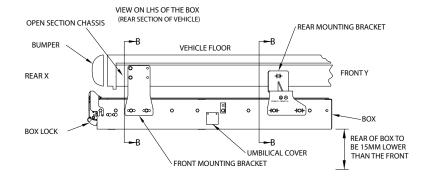


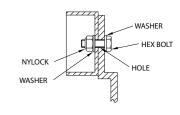


7.3 General Installation- Open Section Chassis

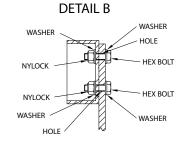


DETAIL A



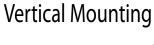


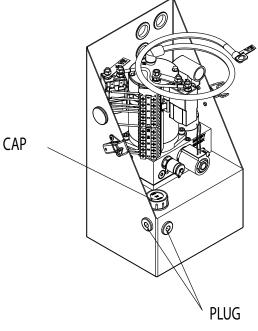
BUMPER BOX LOCK LIFT DIRECTION THERE ARE USUALLY TIVO OR MORE HOLES IN THE END OF THE CHASSIS



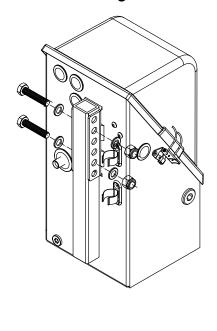


7.4 Power Pack Mounting Options

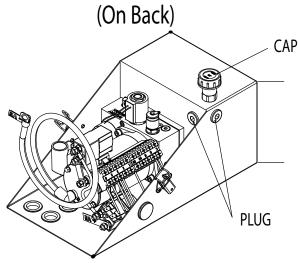




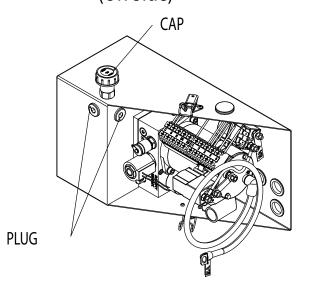
Mounting



Horizontal Mounting



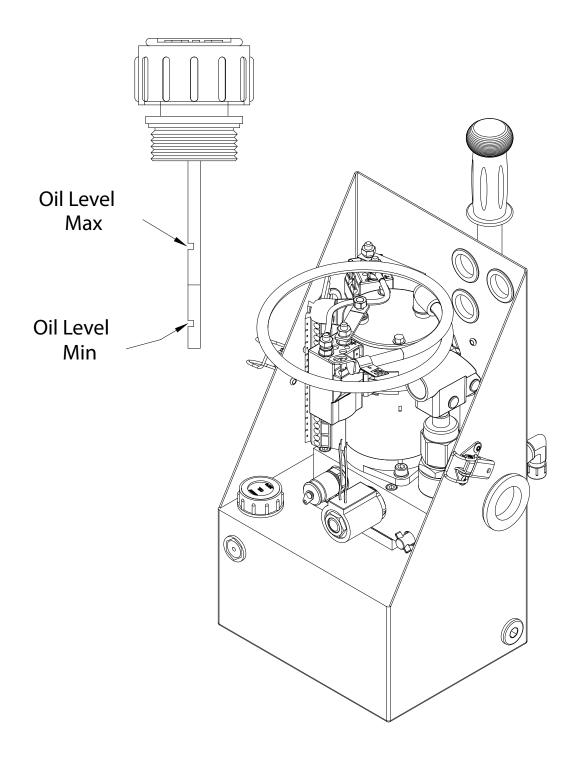
Horizontal Mounting (On Side)





7.5 Checking the Power Pack Oil Level

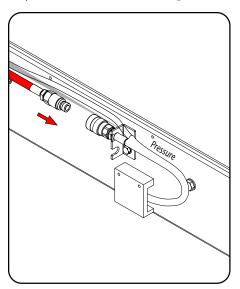
Before checking the Oil Level, ensure the lift is completely lowered to the ground. Remove Oil filler cap and wipe any residual oil form the dip stick using a clean dry cloth. Insert the dip stick fully into the Oil filler, remove and then check to see where the oil is indicated on the dip stick. If the oil is on the min mark then top up slowly with PLS Blue oil only, repeat checking procedure as above until the oil is mid way between min/ max levels.

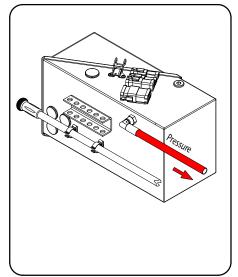




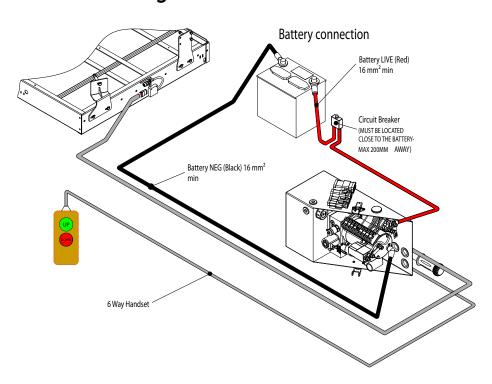
7.6 Hydraulic and Electrical Fittings

Hydraulics Fitting



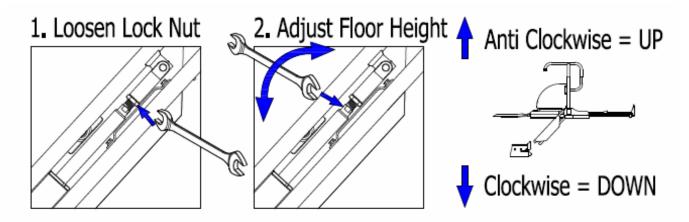


Electrics Fitting

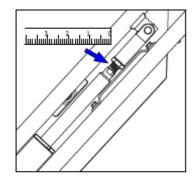




7.7 Floor Height Adjustment



3. Check Thread Length

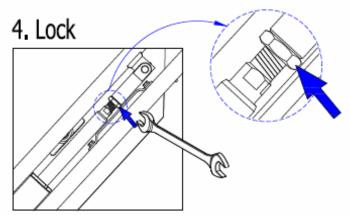


Thread Length 5mm To 20 mm

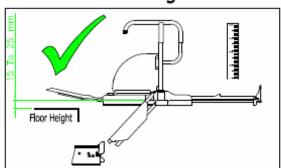


Thread Length Over 20 mm



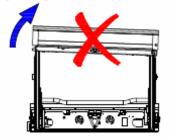


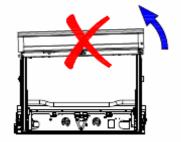
5. Check Floor Height



6. Check Cylinder Balance (kick)



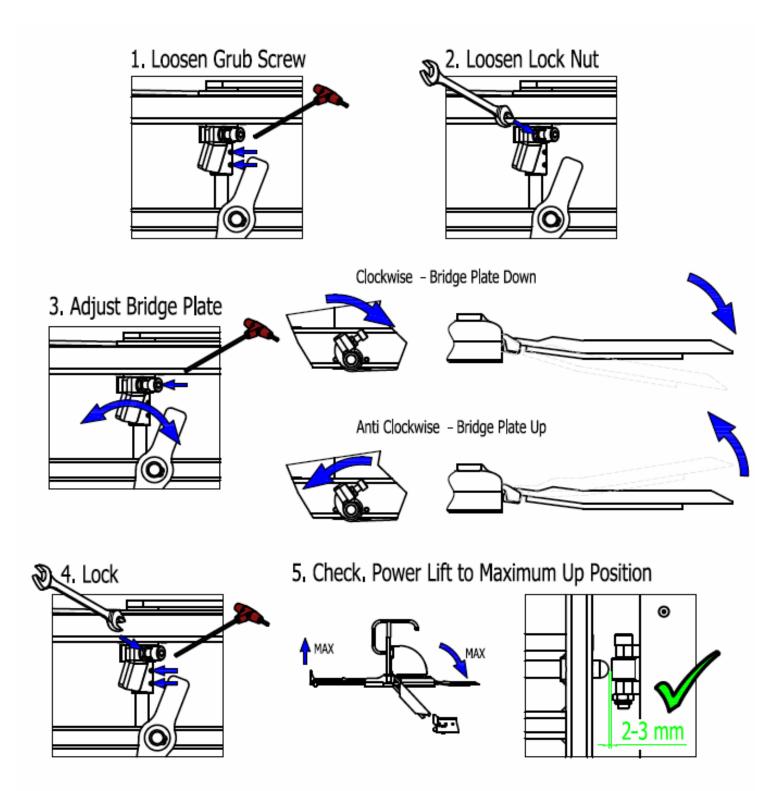






7.8 Bridge Plate Adjustment

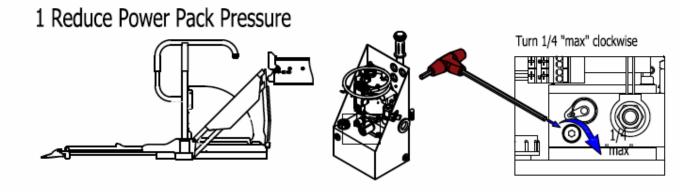
Access is gained from top of Platform



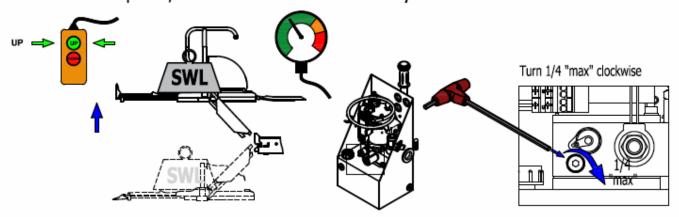


7.9 Weight Test

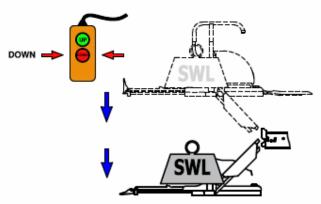
Dynamic



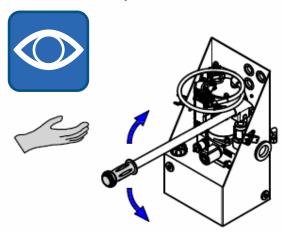
2 Power Up Lift, Increase Pressure Gradually To Lift







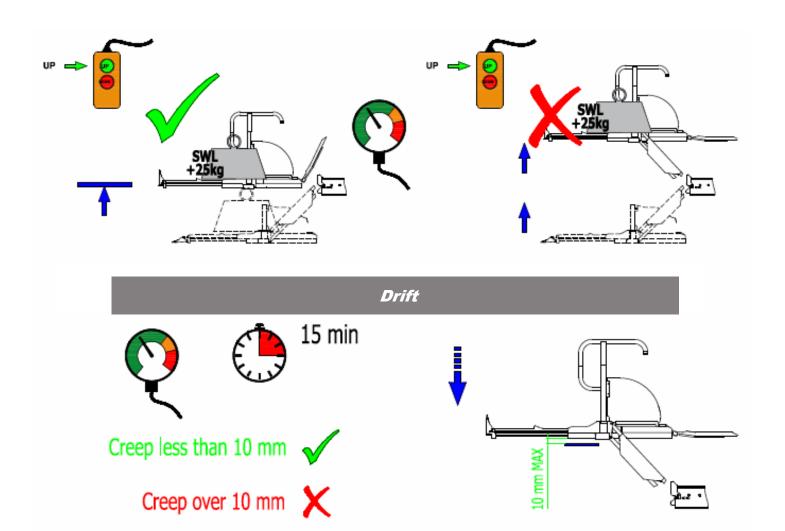
Check Manual Pump



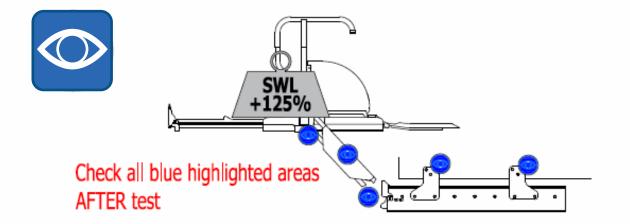


7.10 Weight Test

Overload



Static



7



Installation

7.11 Installation Check List

	Installation Checklist	
Engi	neer Name:	
Date		
Cust	omer Details:	
Addı	ress Contact:	
Tall	lumber:	
rein	vumber.	
ı ift 9	Serial Number:	
No	Item	Checked
1	Check lift to order supplied by PLS	CHECKEU
2	Dispose of any excess parts / materials appropriately	
3	Lift to be collected in a timely manner	
4	If lifts cannot be collected and delivered for any reason, PLS will dispatch	
4	lift to the customer's premises (UK ONLY)	
5	Ensure enough time is allowed to install the lift in one full day	
6	To sign in / register with relevant manager at Coach Builders, and abide by	
0	the Site's H & S Policy.	
7	Dependent on the Customer's H & S Policy, the Engineer maybe required	
*	to provide a working on site risk assessment	
8	Deliver the lift (s), plus tooling and test weights	
9	To co-ordinate lift, tooling and weights to the installation bay	
10	For the given vehicle, Engineer to check correct paperwork	
11	Check vehicle is (Standard), anything other than (Standard) should be	
	reported immediately. This includes spare wheels, fuel tank, modification	
	of suspension, air conditioning unit, exhaust and all parts of exhaust	
12	Installation should commence in correlation to guidelines set out by PLS	
13	Hand control cable through door – Vehicle cable bush	
14	Door plug (Nutrik) 20mmø hole required.	
15	Door switch 12mmø hole. One required if no cab switch?	
16	Rubber boot on 70 amp isolator.	
17	Drill chassis 20mmø, and used tube spacers.	
18	Shroud nitto plastic taken off.	
19	Tape on box back holding top sheet on	
20	Once lift is installed and correctly adjusted, Loler inspection certificate to	
	be completed. A full weight test to be conducted in accordance with the	
	weight certificate. (BS:EN 1756-2-2004 15 minute creep test)	
21	First weight test to be tested to 125% stated S.W.L load (I.e. 400kgs =	
	500kgs full test). Photographs are to be taken of the weight applied	
22	After load test, pump should be reset to (400kgs < 425kgs max)	
	The local test, partly stroate be reset to (Tooks > TESKS Illah)	

22	Once test weights are removed to viewally improved lift / hypolysts / all								
23	Once test weights are removed, to visually inspect lift / brackets / all								
	fastenings, if necessary check with tools (Calibrated torque wrench)								
24	Cosmetics of the installation are standardised by the following:								
	Operation board to be screwed in with appropriate fastenings								
	Handset located in standard position								
	 Handset cable correctly wired through door and door hinge 								
	 Door or cab switch correctly installed and adjusted 								
	Hydraulic pump topped up to correct level of fluid								
	 All cabling correctly tightened and exposed ends rubber booted 								
	Conduit in all cables (70 amp)								
	 Isolator relay routed on bracket 								
	 Power pack is fused correctly as supplied by the factory, any 								
	modifications required or witnessed should be fully documented								
	and reported to all parties concerned.								
	 Hand pump handle should be correctly clipped to power pack or 								
	customer's preferred location								
	 Pump c/s link wire taken out 								
25	Lift to be fully cleaned down and checked in accordance with new								
	equipment automotive supply. (Air blow and silicone, lubricate)								
26	Remaining photographs to be taken of lift fully up / lift fully down / lift								
	cassette box from under vehicle, to include weight test photo. Photos to								
	be emailed to Head Office								
27	Relevant manager to be contacted to inspect installation and sign off								
	relevant paperwork								
28	Work area to be cleaned to a satisfactory level								
29	Tools, weights and pallet to be removed back to Engineer's vehicle								
30	Engineer to sign out accordingly with the site policy								



7.12 Torque Settings in Nm

Thread Size	Tightening Torque Nm Property Class						
HTS	8.8	10.9	12.9				
M4	2.9	4.1	4.95				
M5	5.75	8.1	9.7				
M6	9.9	14.0	16.5				
M8	24.0	34.0	40.0				
M10	48.0	67.0	81.0				
M12	83.0	117.0	140.0				
M14	132.0	185.0	220.0				
M16	200.0	285.0	340.0				

Thread Size	Tightening Torque Nm Property Class					
HTS Hex Flange	8.8	10.9	12.9			
M6	9.0	14.7	16.8			
M8	20.0	35.6	41.0			
M10	40.0	70.6	81.0			

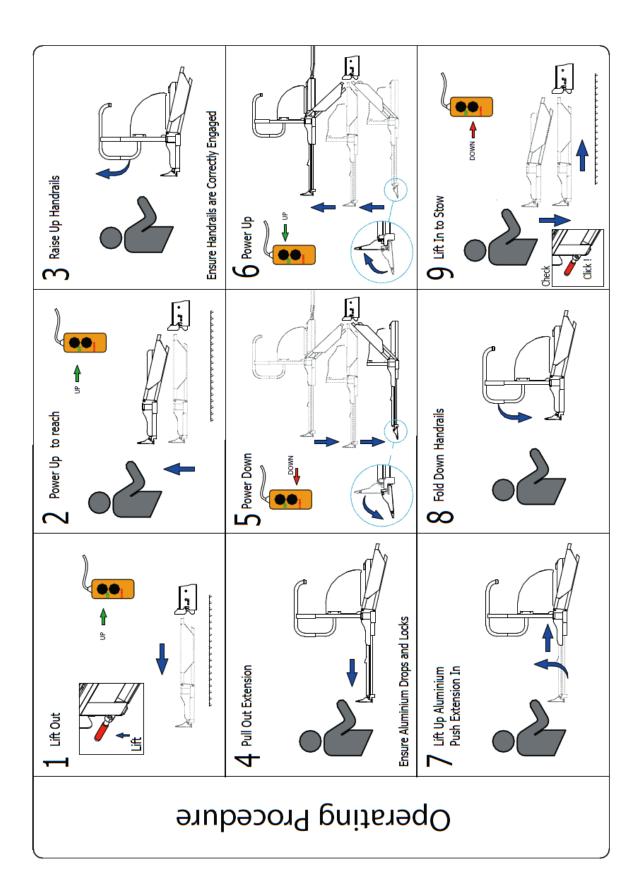
Thread Size	Tightening Torque Nm Property Class				
Stainless Steel	A2-70 A4-80				
M4	2.6	3.5			
M5	5.1	6.9			
M6	8.8	11.8			
M8	21.4	28.7			
M10	44.0	58.0			
M12	74.0	100.0			
M14	119.0	159.0			
M16	183.0	245.0			

Thread Size	Tightening Torque Nm
Hydraulic Fitting BSP	
1/8	17.0
1/4	34.0
3/8	47.0



Operation

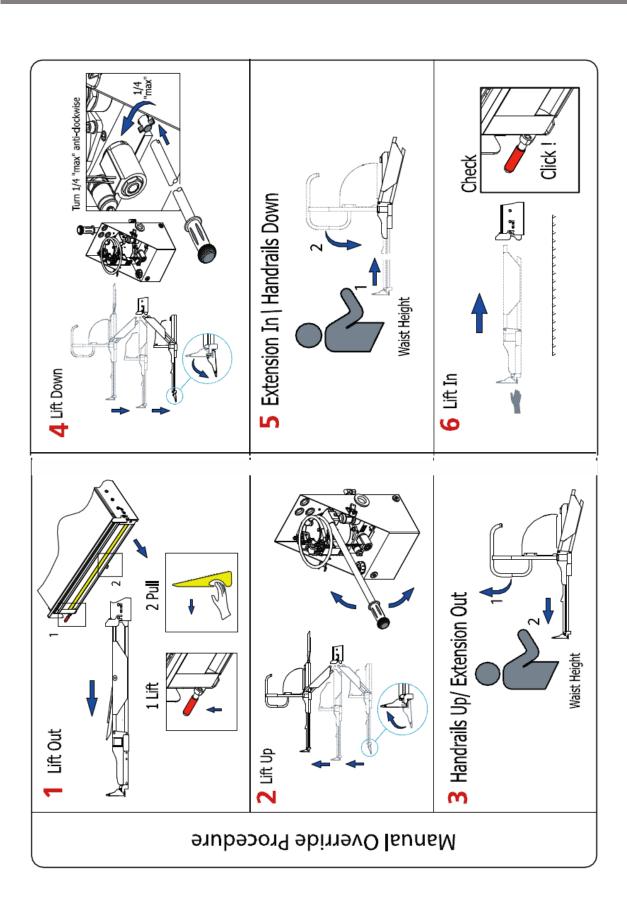
8.1 Standard Operating Procedure





Operation

8.2 Manual Override Procedure





Cleaning

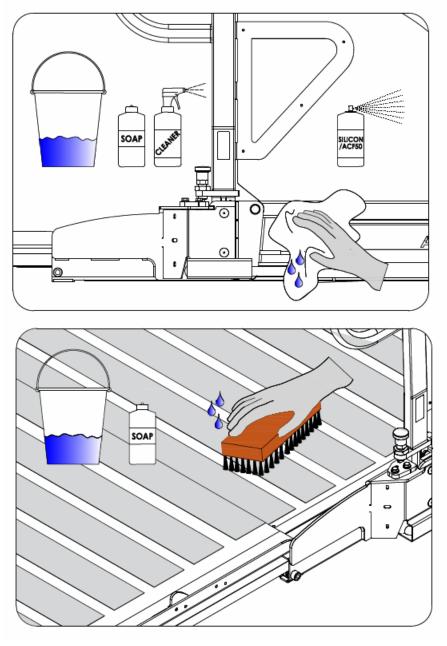
9.1 Cleaning Instructions

Great care needs to be taken during the cleaning process, all cleaning is to be carried out by hand using a gentle cloth or sponge soaked in non-aggressive detergent and then rinsed with a cloth dampened with water. Ensure all moving parts are re-lubricated where necessary.



DO NOT USE AGGRESSIVE DETERGENTS.

DO NOT USE WATER JETS OR HOT WATER JET CLEANERS.



Check and re-lubricate parts as described in section 10.6



UK Service & Warranty

10

10.1 Warranty

Warranty Cover & Period

The PLS Warranty covers parts and labour, and is effective for 36 months from the date of initial commission by PLS or a certified authorised engineer.

If the date of initial commission is in excess of 90 days from date of despatch, the warranty will start from the date of despatch.

Procedure:

- To qualify for this warranty, it is necessary to register the Lift and Vehicle details on line www.passengerliftservices.co.uk or via post within 45 days of the initial LOLER inspection.
- 2. An operator requiring attention to a unit will contact PLS
- 3. directly and quote the Lift serial number.
- PLS will then instruct a company engineer or an authorised approved Service Agent by issuing an official order number to affect the repair.

NB: ANY WORK CARRIED OUT WITHOUT AUTHORISATION WILL NOT BE REIMBURSED.

Conditions:

Warranty does not extend to lifts that have not been regularly serviced by a PLS engineer, or factory trained and authorised engineer. This includes the 6 monthly LOLER inspection and separate weight test, which must be current at the date of the Warranty Claim.

All previous LOLER and Weight Test Certificates must have been copied to PLS and run concurrently.

The lift must be made available during the hours of 08.30 and 17.00, Monday to Friday, excluding public holidays.

No delivery costs or travel time will be reimbursed except by prior agreement, as specified on the original Purchase Order.

The initial Warranty period applies to original parts only.

Replacement parts changed under warranty, and new parts purchased, carry 12 months warranty only.

New parts that have been purchased and require a warranty repair will require either a copy of the original Purchase Order or details of the original Purchase Order number to qualify.

The serial number(s) for the component claiming warranty must match the serial number(s) recorded to the lift it was originally fitted to.

If a customer has an invoice unpaid beyond PLS terms and conditions or is in dispute customers lift will not be visited.

Passenger Lift Services Ltd,

Unit 2, Summit Crescent, Smethwick, West Midlands. B66 1BT enquiries@pls-access.co.uk • www.passengerliftservices.co.uk Tel: 01215520660 fax: 01215520200

Warranty Exclusions:

Hydraulic Power packs that are fitted to the exterior of the vehicle only carry 12 months warranty (if cover is missing warranty void).

Hydraulic Power packs fitted to the interior of the vehicle qualify for the 24 months warranty.

The following are all excluded from warranty:

Consumable parts e.g. Fuses, Bulbs, Electrical Connectors, Bearings, Hydraulic Hoses (with the exception of manufacturing defects). Fastenings which should be checked at the service intervals. Driver misuse Accident damage. Items that are subject to the level of wear & tear which would normally involve replacement during normal service, maintenance and operating conditions.

Handsets carry 12 months warranty only.

No claim will be accepted for:

Replacement vehicle hire or loss of earnings.

The Warranty Agreement does not supersede the Suppliers liability for all components as defined in the Sale of Goods act 1982.

Months 24 to 36 of the Warranty:

The vehicle will be required to be returned to the PLS Factory for 'free of charge' warranty work.

When this is not possible, labour and travel will be charged at the current PLS hourly rate, weather it is a PLS engineer or an agent working on behalf of PLS Ltd that conducts the repair.

If an agent is used, it will be at the discretion of PLS Ltd as to who will affect the repair.

Any parts sent to an agent for warranty work within the 24-36 Month period, will incur the relevant courier costs at commercial rates, and will be at the expense of the customer.

Extended Warranty:

Extended Warranty is available for months 37-60 with a written agreement of PLS Ltd, initiated BEFORE month 37 starts.

This warranty will follow the same basis as the 24-36 month period.

Extended Warranty does not include Power packs, motors, hydraulic cylinders and hoses.







Service & Maintenance

10.2 Loler







This lifting equipment is covered by the "Lifting Operations & Lifting Regulations Act 1998. "LOLER".

It is the lift operating company or duty holders responsibility to ensure that at regular **SIX** monthly intervals this equipment is **INSPECTED**, **SERVICED & WEIGHT TESTED** by a competent tail lift engineer.

For more information, please contact **PLS Service Department direct line:**

0121 559 0466



Service & Maintenance

10.3 Daily Inspections

Lift Inspection checks are required on a DAILY basis by the lift operating company. The working life of your lift will be greatly prolonged if these steps are adhered to. This should include the following:

	Daily Inspection Check List	Lift no:				
	Daily Inspection Offeck List	Vehicle Reg:				
Eng	ineer's Name:	Date:				
Cus	tomer Details:					
Add	ress, Contact:					
Tel	Number:		ОК			
1	Visually check fluid level using dip stick.					
2	Visually check for any leaks or damage.					
3	Check for obvious signs of damage, and noti	fy as manager if necessary.				
4	Ensure that the Operation instructions are vis	sible.				
5	Ensure the hand pump handle is present.					
6	Ensure the Handset control is working correct damage.	ctly and there are no signs of				
7	Ensure the Platform is clean and dry.					
8	Ensure the Box Lock is working correctly.					
9	Ensure the Carriage centre lock is working correctly.					
10	Ensure the Handrails are clean, working correctly and rust free.					
11	1 Ensure the Handrail guards are present and undamaged.					
12	Ensure the Roll-Off-Ramp operates correctly	and lands on the ground.				
13	Ensure the warning lights are operating corre (If fitted).	ectly before using the lift				

IF IN DOUBT, CONTACT THE MANUFACTURER



Service & Maintenance

10.4 Monthly Inspections

Regular lift maintenance is recommended at MONTHLY intervals by the lift operating company. The working life of your lift will be greatly prolonged if these steps are adhered to.

This should include the following:

- 1. Check for obvious signs of damage, replace parts as necessary.
- 2. Check the operation and stowing of the lift, if the platform base is touching the bottom of the box, adjust tow height by raising the N/S and O/S stowing bolts.
- 3. Check the box lock operation by attempting to pull the lift out of the box with the lock engaged. If this can be achieved, the hook will need to be LOWERED in relation to the handle.
- 4. Check the carriage lock operation by attempting to push the lift back into the box once the platform has been fully deployed. If this can be achieved the carriage lock mechanism will require adjustment.
- 5. Check the rear roll-off-ramp operation. Check ramp 'dummy pin' which holds ramp in vertical position whilst lift is stowed. Lubricate roll-off pivot with silicone spray in accordance with instructions on 10.6.
- 6. Check bridging plate operates correctly, it must land flat on the vehicle floor, if not see Bridge plate adjustment instructions 7.7.
- 7. Check platform extension operation and security of alloy sheet. N.B. do not overtighten fastenings which hold extension alloy. Check platform end stops are tight and vertically aligned.
- 8. Check hand rail operation and security. If components are corroded they should be replaced due to potential hazard to users! Check location pivot pins, these should be fully secure.
- 9. When cleaning the vehicle wash the working platform of the lift in accordance with instructions on 9.1.
- 10. Check Up/ Down pump for fluid leaks and loose/ corroded electrics. Top up reservoir (with lift at ground position) with PLS Blue Hydraulic Oil, do NOT overfill. Coat any exposed electrics with dielectric grease (or similar) to protect.
- 11. Lubricate lift in accordance with instructions on 10.6.

IF IN DOUBT, CONTACT THE MANUFACTURER



Service & Maintenance

10.5 Six Monthly Inspections

For Factory Trained Lift Engineers

As monthly safety checks plus:

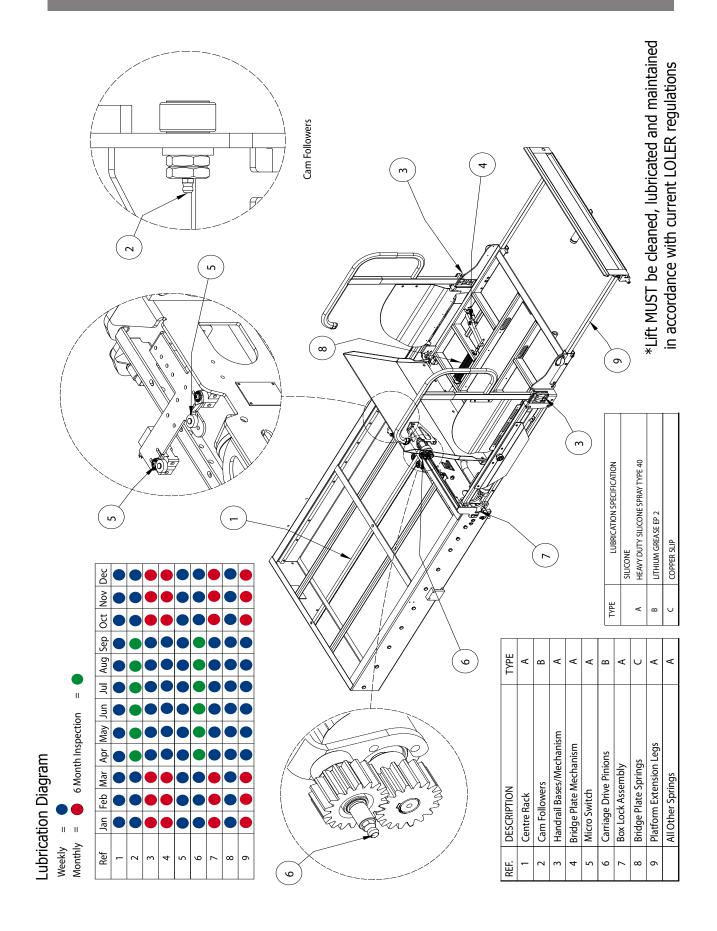
- 1. Check arm pivot pins, bushes, bearings and retaining grub screws.
- 2. Check cylinder rod clevis and grub screws.
- 3. Check cylinders for oil leaks. Replace piston seal if excessive oil leaking from the cylinder.
- 4. Remove the bottom sheet, check all hoses and fittings for leaks, wear or perishing. When bottom sheet is replaced remember to position retaining bolts with nuts (on the OUTSIDE of stowage box). If access to the lift is not possible COMPLETELY REMOVE LIFT FROM STOWAGE BOX (ENSURING THE PLATFORM IS CORRECTLY SUPPORTED)
- 5. Check guide bearings, cam followers and carriage mechanisms.
- 6. With the lift fully powered out, and the bottom sheet removed: Clean the interior of the stowage cassette and degrease the side tracks and guide racks with solvent. DO NOT GREASE TRACKS OR CENTRE GUIDE, USE SILICONE SPRAY OR ACF50 ONLY.
- 7. Check the UMBILICAL (main hydro/electrical cable between carriage and inside of box) for signs of wear, if split or damaged this must be replaced! NOTE: Umbilical should not be twisted.
- 8. Check platform wear strips (on underside of platform extension surface) for wear, or 'fastening protrusion' replace if necessary.
- 9. Check bridging plate for correct operation. The bridging plate must land flush with the vehicle floor and NOT form a trip hazard.
- 10. Check that the platform does not have a side-to-side 'kick'. If a 'kick' is present the lifting cylinders should be adjusted.
- 11. Check that the lift mounting brackets and track bolts are tight / secure and free from damage. Corrosion in this area of the lift is likely to occur, however if in an advanced state components should be exchanged for new items.
- 12. Check manual hand pump operation (see Auxiliary Hand Pump Operation Procedure), lubricate all pivot points. REMEMBER TO RETURN ANY MANUAL OVERRIDE TAPS TO THEIR CLOSED POSITION.
- 13. Check condition and security of arm side guards, replace if damaged.
- 14. Check right hand arm hose tray, check hose and cable condition and all cable ties are in place correctly.
- 15. Check the handset wiring by powering the lift whilst manipulating the cable in any direction.

IF IN DOUBT CONTACT THE MANUFACTURER



Service & Maintenance

10.6 Lubrication



10



Service & Maintenance

10.7 31 Point Check

	LOLER / SERVICE Repair Check List					
	LOLEN / SERVICE REPAIR CHECK LIST	Vehicle Reg:	j :			
Engi	neer's Name:	Date:				
Cust	omer Details:					
Addı	ress, Contact:					
	Number:		Poor	Ok	Good	
			F001	Ok	Good	
1	Ramp stop (roll-off) operation/condition					
2	Condition of ramp stop cylinder (corrosion, leaks, loose caps)					
3	Bridging plate operation/condition					
4	Carriage lock and rocker(s) working correctly					
5	Platform stability					
6	Platform extension operation (stops tight)					
7	Platform stowage set correctly					
8	Handrail and side guard operation/condition					
9	Cleating and wearstrip condition					
10	All set pins secure/ Grub screws tight					
11	All fasteners tight					
12	In/Out Motor operation/condition/ check top cog					
13	Condition of all bearings and camfollowers/ grease x 4					
14	Umbilical hose condition					
15	Check lift isolator (cab or door switch)					
16	Condition of lifting cylinders (corrosion, leaks, loose caps)					
17	Up/Down hydraulic pump operation/condition (relief valve) with SWL	on lift				
18	Hand pump operation/condition/ check tightness					
19	All hoses in good condition/ arm hose/ cylinder hoses and platform p	pe & hose.				
20	Hydraulic fittings in good condition/ ports on power pack tight					
21	Wiring loom condition (crimps, fuse holder, earth wires, etc)					
22	Box lock operation/condition					
23	Condition of box tracks (not bent or indented)					
24	Top and bottom sheets secure					
25	Box brushes present and secure					
26	Condition of stowage box and fitting brackets					
27	Lift correctly lubricated/ cam followers / extension/ switches and cam	and cranks				
28	If powermatic, in/out operation & switches set correctly	and oranico.				
29	Speed of operation acceptable					
30	Handset condition					
31 Engl	Labels and operating instructions					
⊏ngi	neers Comments					



Safe Disposal

11.1 Safe Disposal



When disposing of the machine, please comply with the procedures imposed by the laws in force.

Generally the machine should be disassembled and identical materials grouped together these must then be disposed of in accordance with local environmental legislation.

Contact the local Authority to ensure that specific materials such as lubricants, electrical/ electronic components are disposed of correctly.



YOU MUST RETURN THE MACHINE ID PLATES AND ANY OTHER CONNECTED DOCUMENTS TO PLS WHEN THE PRODUCT HAS BEEN RECYCLED.



Trouble Shooting

12.1 Trouble shooting

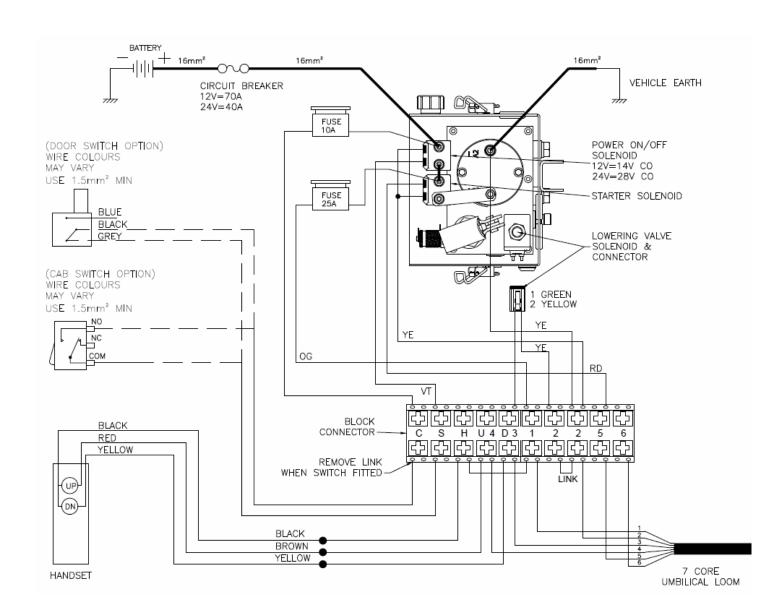
Problem	Fault	Solution
Lift not operating	Circuit breaker or fuse tripped	Reset circuit breaker or replace fuse
	Cab switch not turned on	Turn cab switch on
	Door switch sticking	Lubricate and free switch
	Low voltage	Charge battery
	Poor earth	Check battery cables & earth points
	Corrosion on crimped cables	Re-crimp cables and clean corrosion
	Loose power-pack electrical connections	Check electrical connections
	Handset failure	Replace handset
Lift stuck in box	Box lock not fully disengaged	Make sure lock handle is pulled fully up
	Lift is pressurized up in box	Press Down on handset to lower lift or open the down valve to release pressure
	Box grounded and damaged underneath	Repair / replace box
Lift not powering IN	Motor cut-off switch (In switch)	Check switch adjustment & lubricate
	Umbilical damaged	Replace umbilical cable
	Carriage solenoid failure	Replace solenoid
	Motor failure	Replace motor
	Carriage lock not lowering correctly	Check & readjust carriage lock stowing
	Carriage lock switch failure	Check switch adjustment & lubricate
Lift not powering OUT	Lift Up switch (Out switch)	Check switch adjustment & lubricate
	Umbilical damaged	Replace umbilical cable
	Carriage solenoid failure	Replace solenoid
	Motor failure	Replace motor
	Loose carriage electrical connections	Check plugs, sockets & pins
Lift not powering UP	Low oil	Add PLS Blue Hydraulic oil
	No pump pressure	Check and readjust pressure relief
	Hose burst	Replace
	Lift Up switch (Out switch)	Check switch adjustment & lubricate
	Manual release left open	Close manual override
	Down valve stuck open (contamination)	Remove / clean and replace
	Low voltage	Charge battery
Lift not lowering DOWN	Contamination in PC Burst valves	Replace PC burst valve set
	Crash vales locked (cold weather)	Readjust crash valve gap
	Down valve not opening due to low voltage	Charge battery
	Down valve sticking (contamination)	Remove / clean and replace
	Down valve coil failure	Check / replace

Problem	Fault	Solution
Platform Extension will not extend	Handrails not raised up	Raise up handrails into locked position
	Extension legs not free from stow bolts	Power lift UP to higher position
	Lack of lubrication	Lubricate moving parts
	End stops loose	Tighten end stops
	Extension pipe / hose catching in platform	Reposition hose / pipe
Platform Extension will not retract	Extension pipe / hose catching in platform	Reposition hose / pipe
	Extension legs hitting stow bolts	Power lift UP to higher position
	Lack of lubrication	Lubricate moving parts
	Extension pulled out to hard, End stops jammed on rollers	Reset, Replace extension end stops
Ramp will not deploy	Lack of lubrication	Lubricate pivot sand moving parts
	Ramp damaged	Replace
	Cylinder failure	Replace
	Air in Cylinder	Bleed out air in cylinder
Bridge Plate operation not operating smoothly / noisy	Lack of lubrication	Lubricate pivot sand moving parts
	Bridge plate parts damaged	Replace damaged parts
Bridge plate not touching vehicle floor	Push rod position incorrect	Adjust toggle joints or adjustable crank
	Cam & Crank slipped	Reset, Replace Cam & Cranks
Bridge plate not lifting to vertical position when	Bridge plate compression springs force to	Adjust spring collars
lowering lift	low	(do not bottom out springs)
Bridge plate not lifting to vertical position when powering lift out of box	Torsion bars twisted / broken	Replace Torsion Bars
Lift platform jamming on arms when powering UP	Incorrect operation due to Under stowing extension	Lower lift and retract extension
Handrail rattling / loose	Handrail pins loose or missing	Reset, Replace pins
Handrails not locking when raised up	Handrail damaged	Replace
	Handrail lock out of adjustment	Readjust Handrail Lock
Auxiliary hand pump not working	Air in system	Bleed out air, open manual override valve and pump hand pump 10 times, close and try again



Diagrams

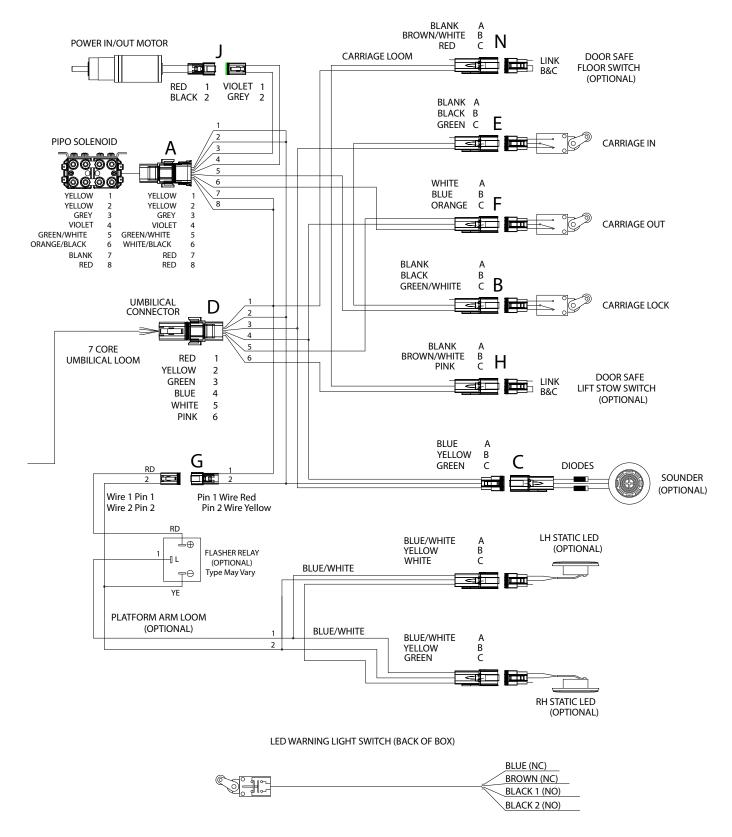
13.1 Wiring Diagram- Power Pack





Diagrams

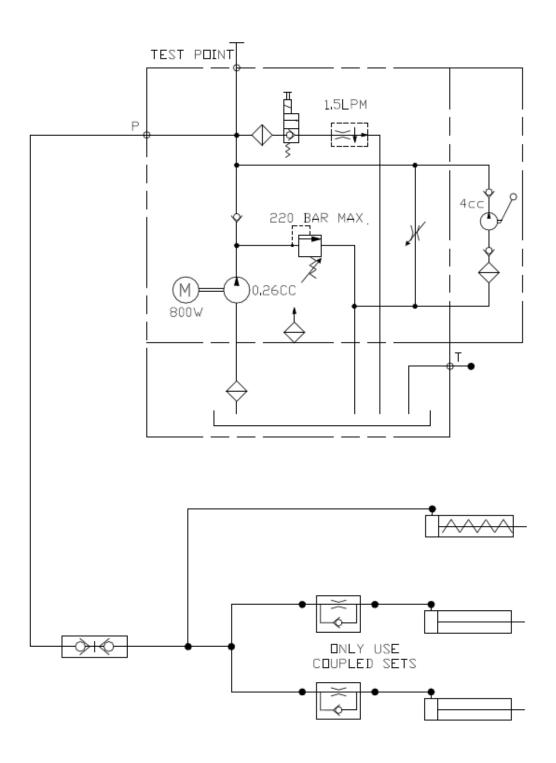
13.2 Wiring Diagram- Lift





Diagrams

13.3 Hydraulic Diagram





Spare Parts

14.1 Contents List of Spare Parts



For spare parts, either, use the assembly drawings to identify the required part, then add these to the following form or contact the PLS spare parts department and talk to one of our staff.

Description:-

- 1. Box Assembly
- 2. Box Rear Switch
- 3. Box Lock Assembly LH
- 4. Box Umbilical
- 5. Carriage Assembly
- 6. In/ Out Motor Assembly
- 7. Front Centre Bearing
- 8. Carriage Extended Rear Bearing
- 9. Carriage Switch Bracket Assembly
- 10. DS2 Ready Standard Spec (Up to Feb 2018)
- 11. DS2 Ready Lite Spec (Up to Feb 2018)
- 12. Carriage Hydraulics
- 13. Handrail "H" Assembly
- 14. Single Throw In Handrail
- 15. Single Throw Out Handrail
- 16. Lower Left Arm
- 17. Lower Right Arm
- 18. Upper Left Arm
- 19. Upper Right Arm
- 20. Arm Cylinders
- 21. Arm Brace
- 22. Bridge Plate Assembly
- 23. Bridge Plate Alloy
- 24. Platform "H" Single Mechanism
- 25. Platform Alloy
- 26. Platform Extension
- 27. Extension Alloy
- 28. Extension Pipe and Hoses
- 29. Roll-Off-Ramp
- 30. External Enclosed Pack, Horizontal Position
- 31. Internal Enclosed Pack, Vertical Position
- 32. Standard Handset Kit
- 33. Handset Kit

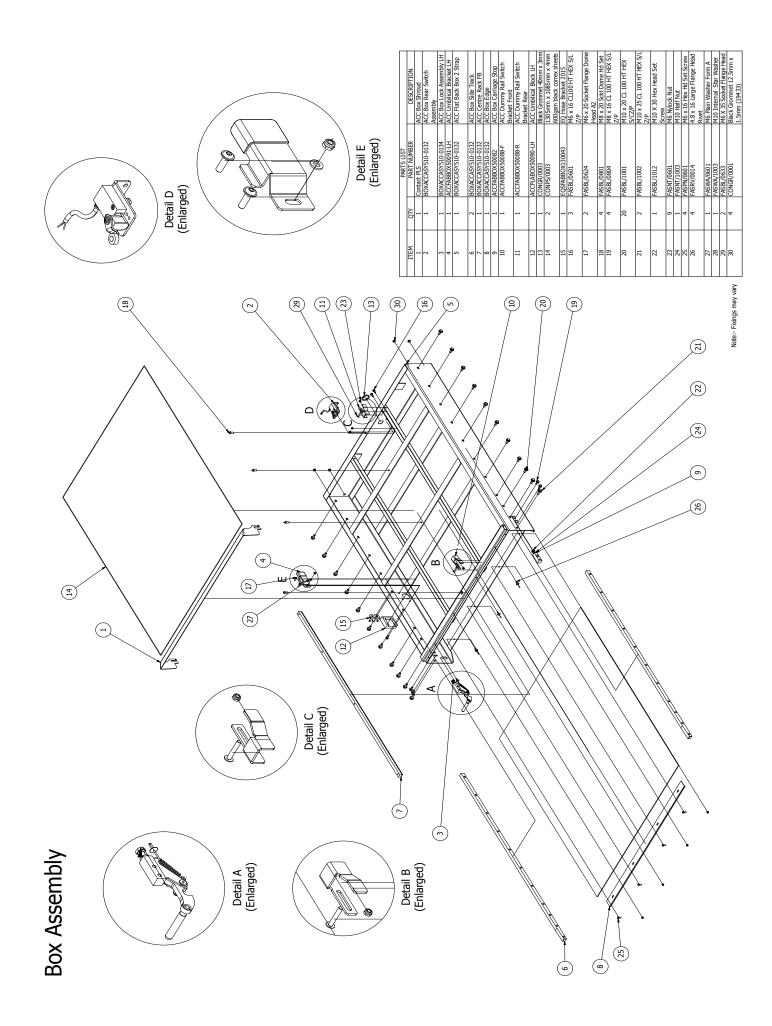


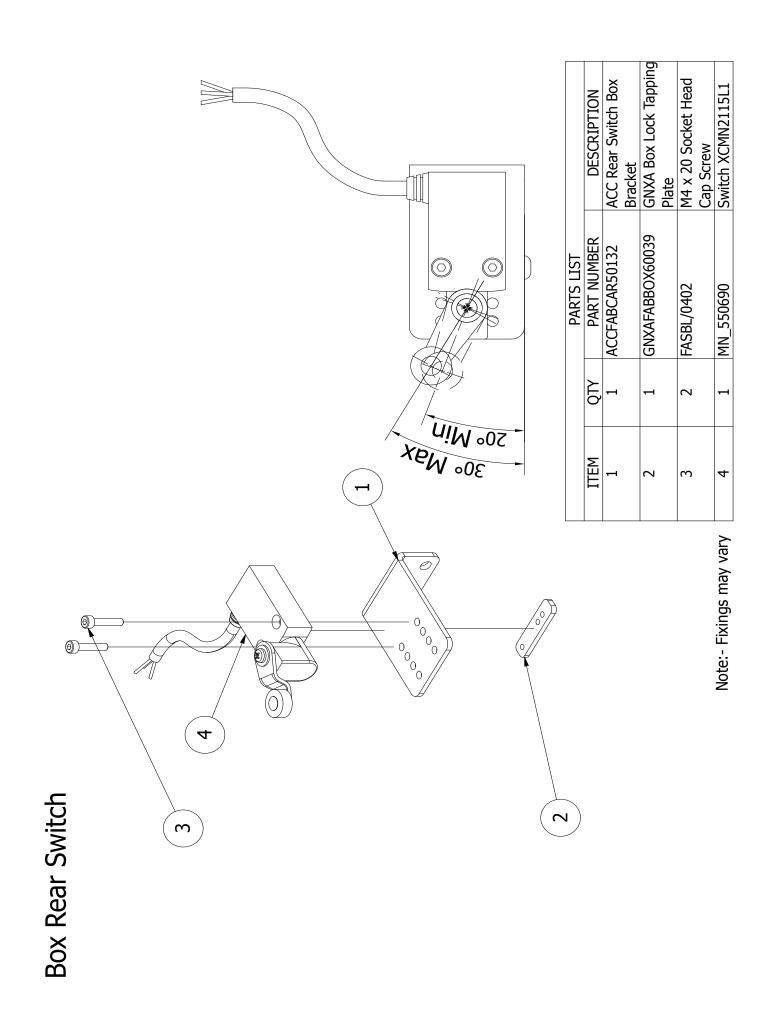
Spare Parts

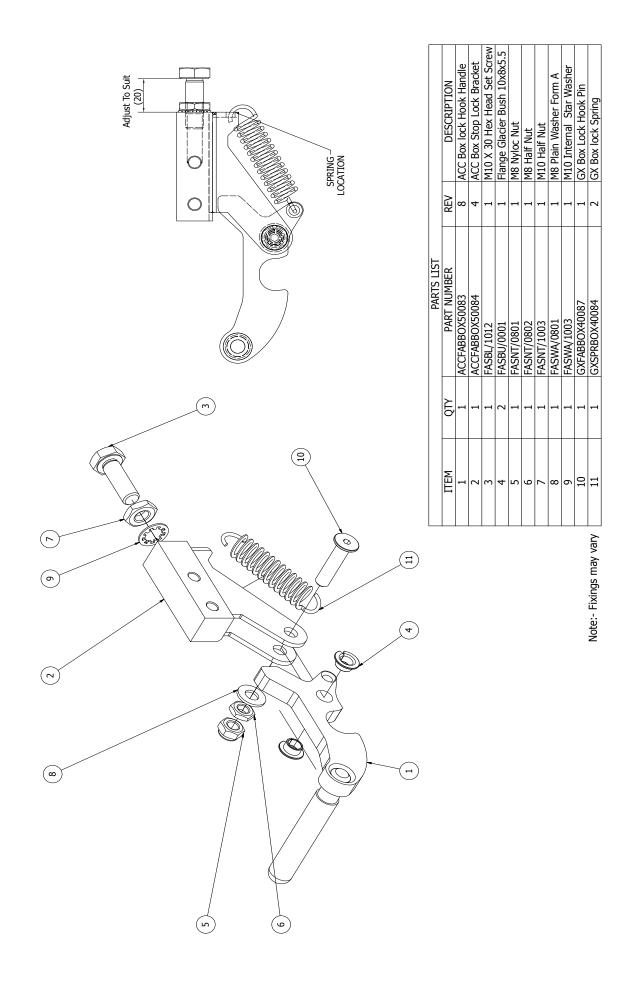
14.2 Spare Parts- Request From

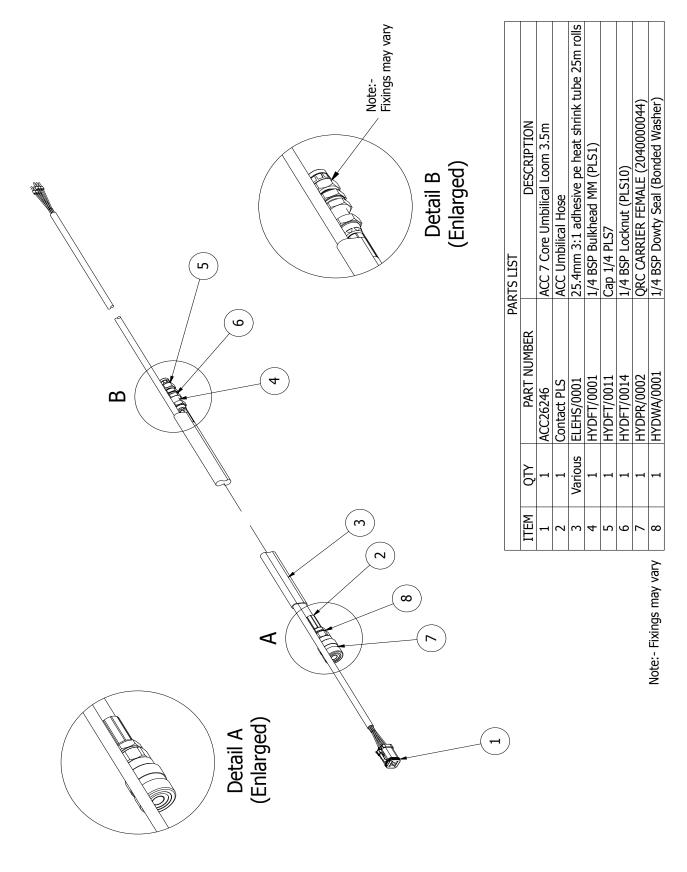
A MOBILITY NETWORKS	SPARE PARTS REQUEST FOR	RM
FROM	Mr.	
	SPARE PARTS DEPARTMENT	
	Email: parts@pls-access.co.uk	
	DESCRIPTION	Qty

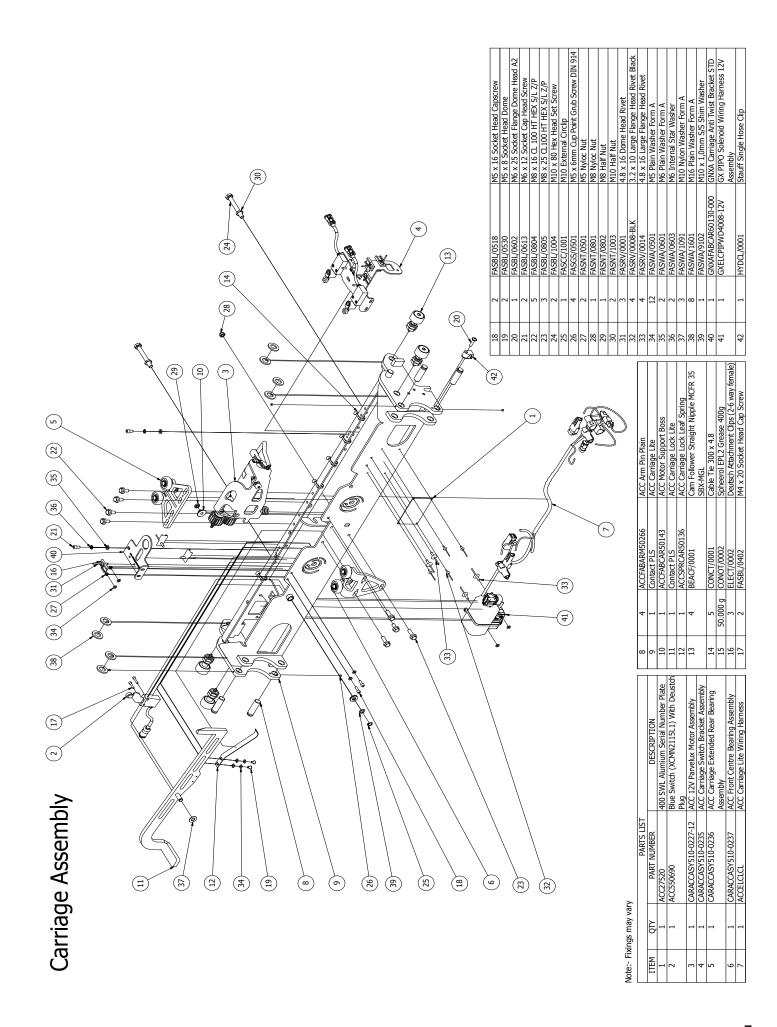
PRIORITY	URGENT	NORMAL □
SHIPMENT		
PAYMENT		
DESTINATION		
SIGNATURE		DATE

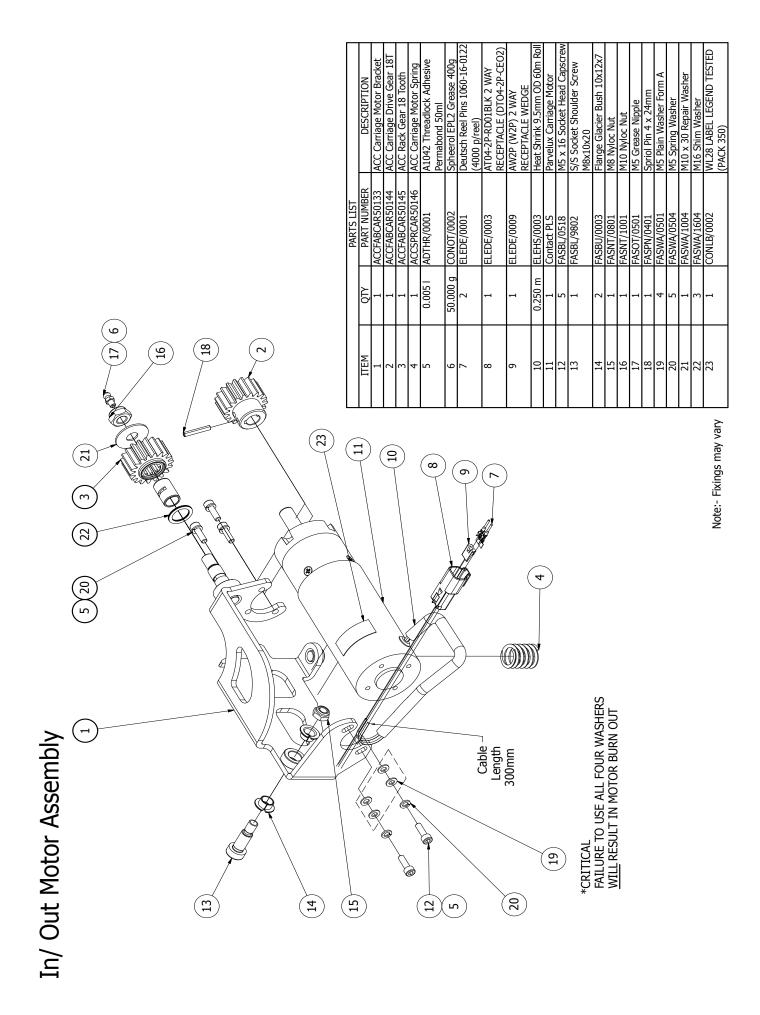








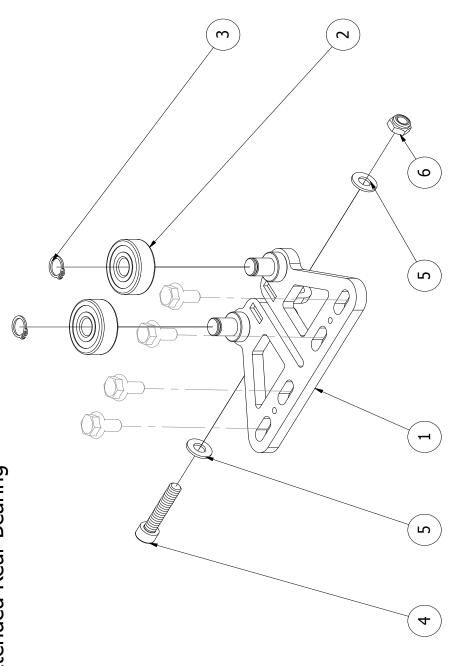




M8 Internal Star Washer M8 Plain Washer Form A M8 x 40 Socket Head DESCRIPTION Front & Rear Centre Bearing 6301-2RS1 M12 External Circlip ACC Carriage Front Bearing BRKT Capscrew PARTS LIST
PART NUMBER ACCFABCAR50135 FASWA/0803 FASWA/0801 \sim BEARN/0001 FASBL/0803 FASCC/1201 ΩŢ 7 ITEM 2 9 Note:- Fixings may vary 2 9

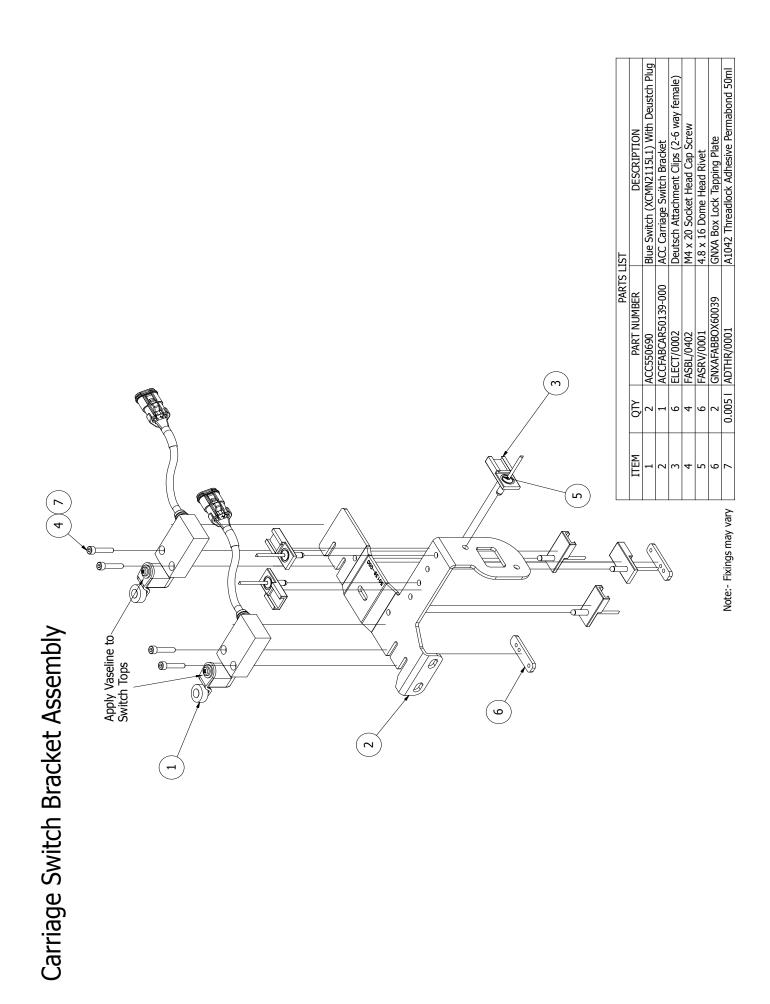
Front Centre Bearing

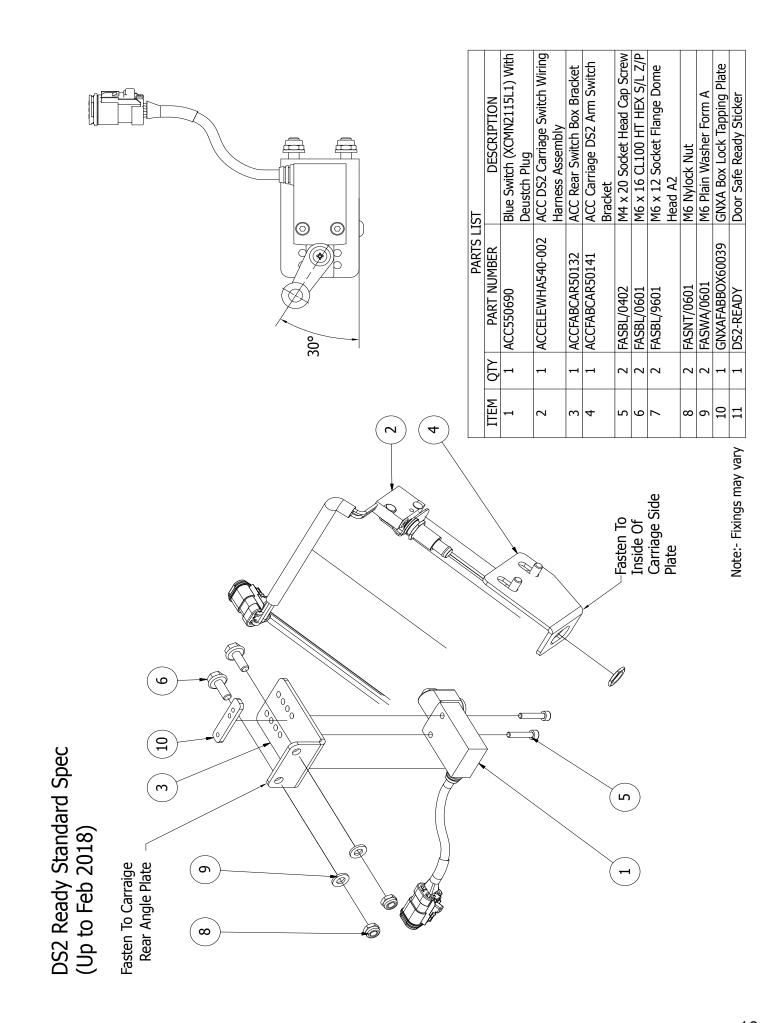
Carriage Extended Rear Bearing

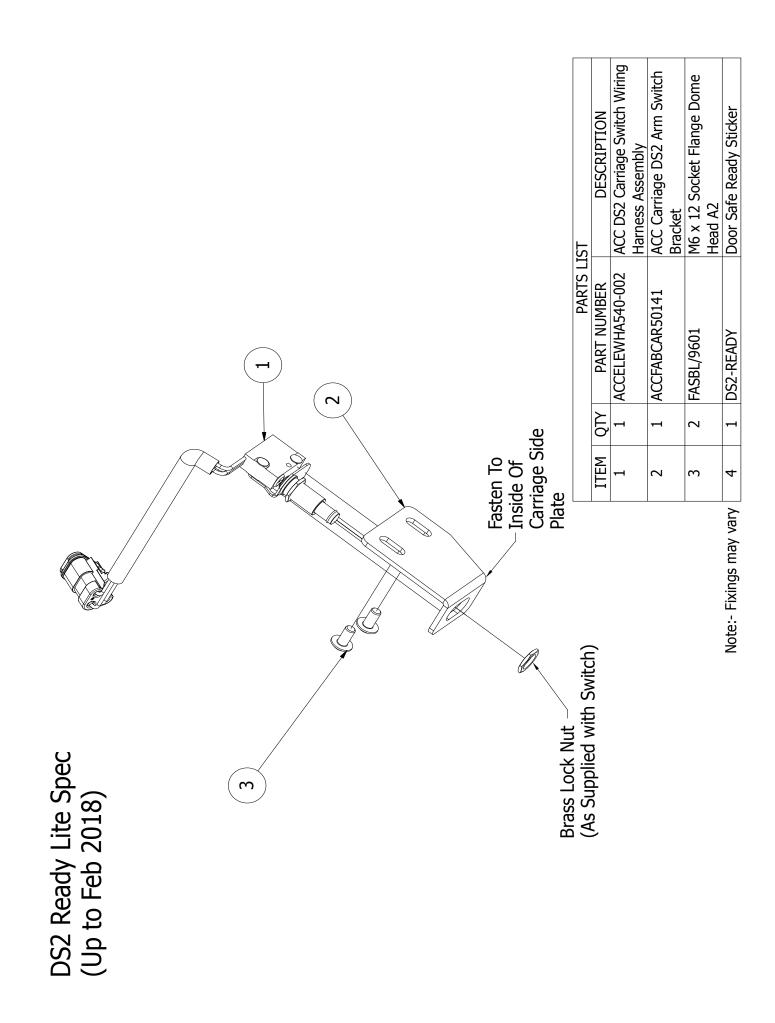


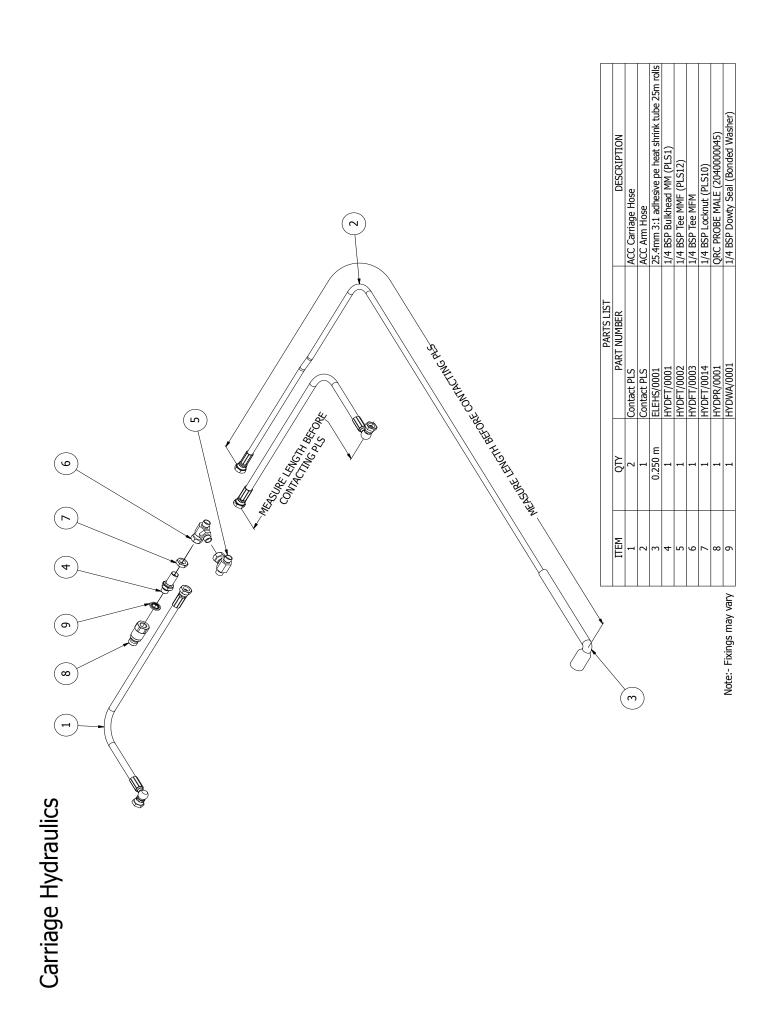
									_	
	DESCRIPTION	ACC Rear Extended	Bearing Bracket	Front & Rear Centre	Bearing 6301-2RS1	M12 External Circlip	M8 x 40 Socket Head	Capscrew	M8 Plain Washer Form A	M8 Nvloc Nut
PARTS LIST	PART NUMBER	ACCFABCAR50137		BEARN/0001		FASCC/1201	FASBL/0803		FASWA/0801	FASNT/0801
	QΤΥ	П		7		2	П		7	-
	ITEM	П		2		3	4		5	9
		I								ary

Note:- Fixings may vary



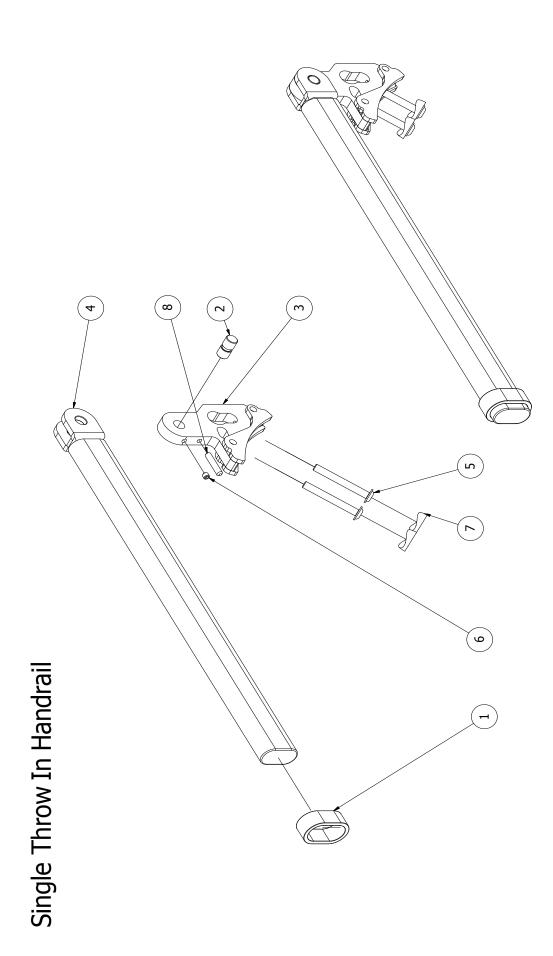






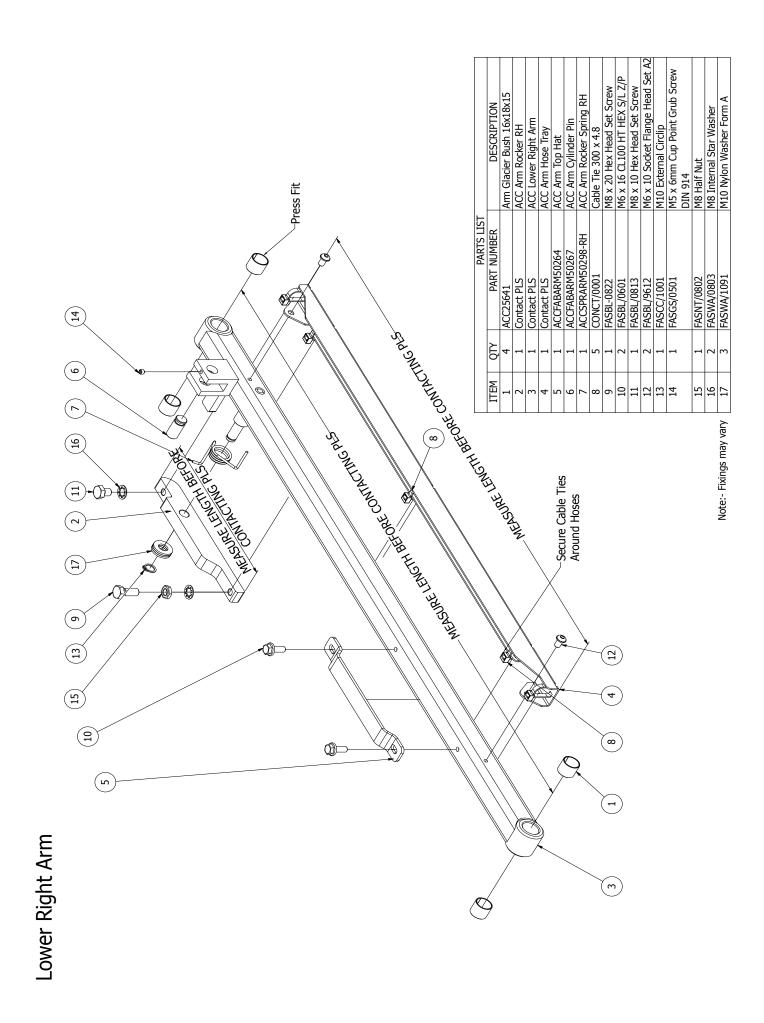
ACC Handrail Frame 'H' LH/RH
ACC Handrail Rubber Bands
ACC Handrail Guard 'H'
M8 x 20 Sckt Dome Hd Set
Flange Glacier Bush 10x12x7
M8 Half Nut
3.2 x 10 Large Flange Head Rivet Black
S/Steel M16 Index Plunger & Nut
Pull To Unlock Sticker Part No. HANACCASY510-0701-RH 4 6 DESCRIPTION ၜြ 2 CONLB/0012 8 (8) ITEM Note:- Fixings may vary (7) Part No. HANACCASY510-0701-LH 8 2 Handrail "H" Assembly િ 4 ်စ

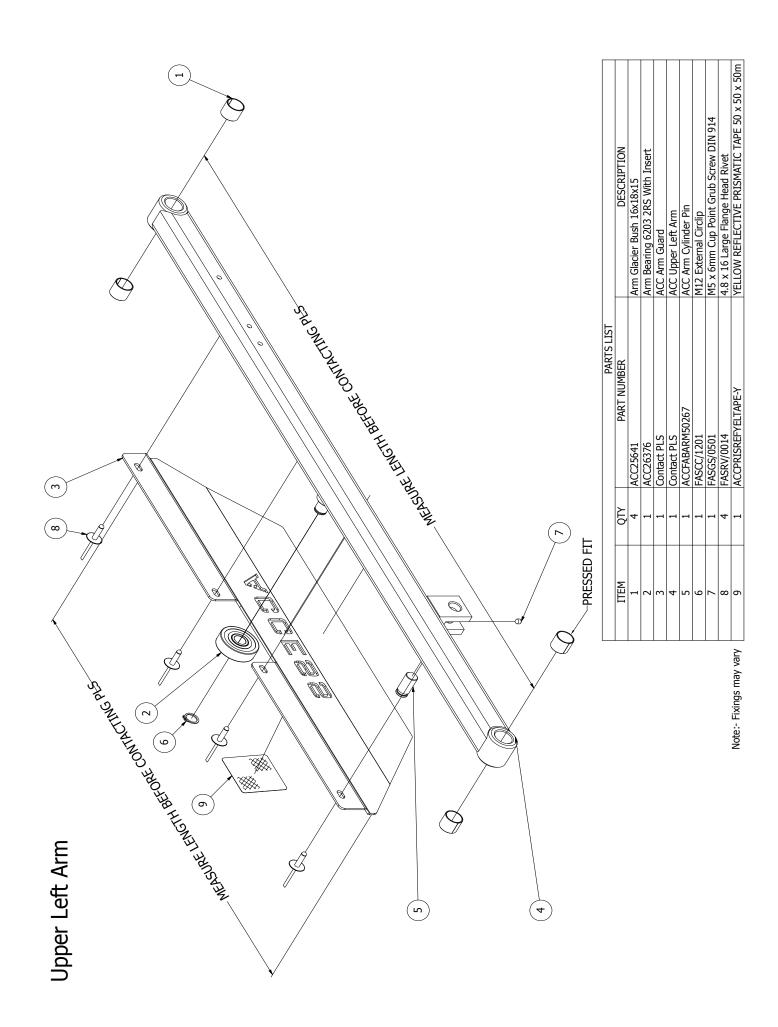
13

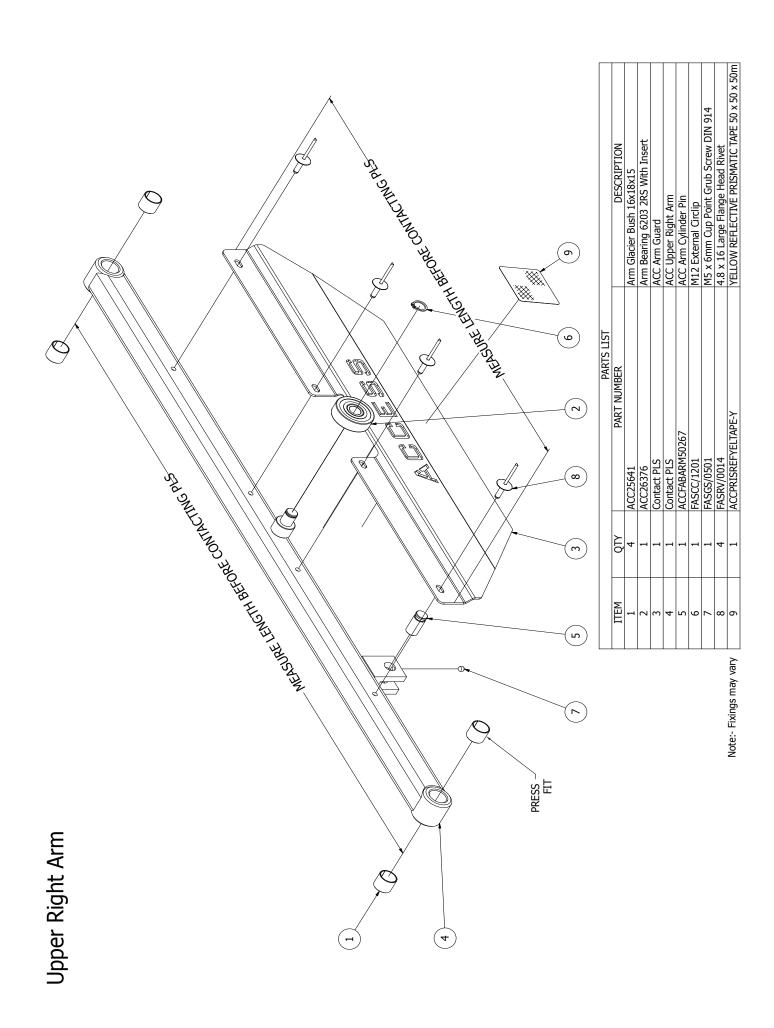


	DESCRIPTION	ACC Handrail Rubber Bands	ACC Handrail Throw Over Pin	ACC Handrail Throw Over Base	ACC Handrail Throw Over	M6 x 50 Socket Flange Dome Head A2	M5 x 6mm Cup Point Grub Screw DIN 914	M6 Saddle WSH. 102.0200.000.01	M5 x 25mm Cup Point Grub Screw BZP
PARTS LIST	PART NUMBER	ACCPLAHAN50730	ACCFABHAN50706	ACCFABHAN50746	ACCFABHAN50747	FASBL/9618	FASGS/0501	FSTM6-WSH-SADDLE	FASGS/0503
	QTY	П	1	1	1	2	1	2	1
	ITEM	1	2	3	4	2	9	7	8
			1			1			ay vary

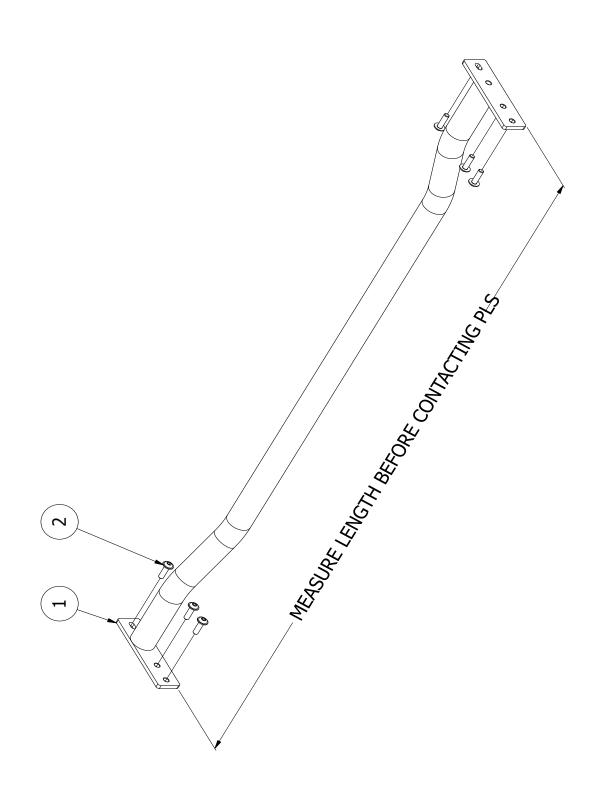
Note:- Fixings may





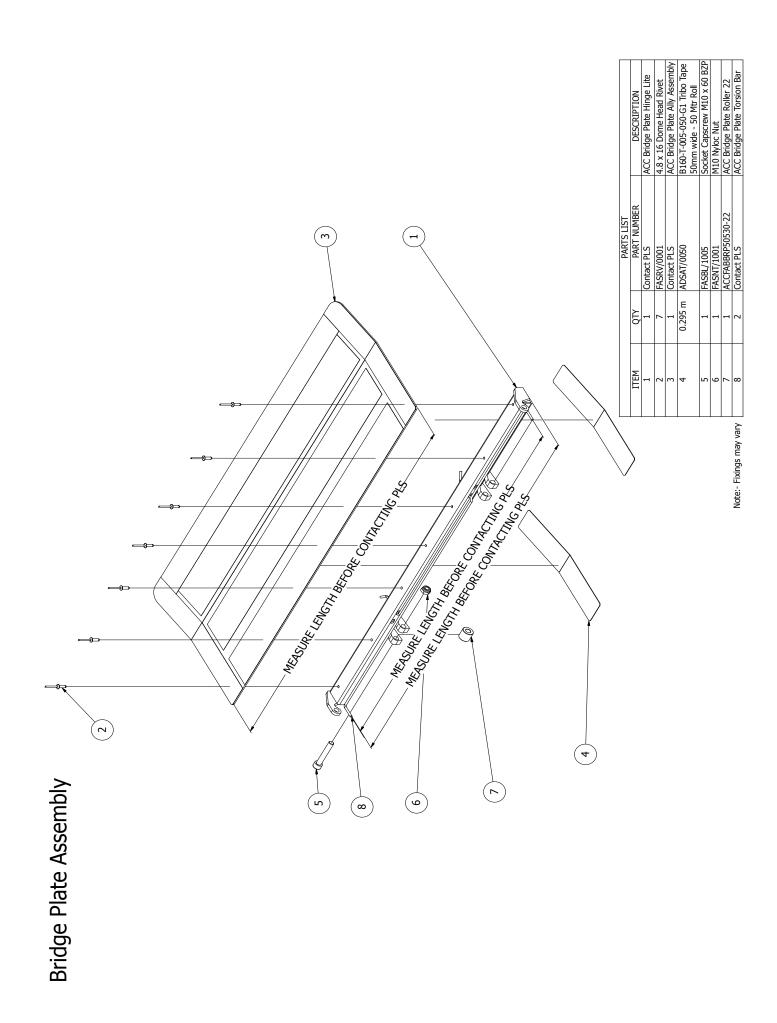


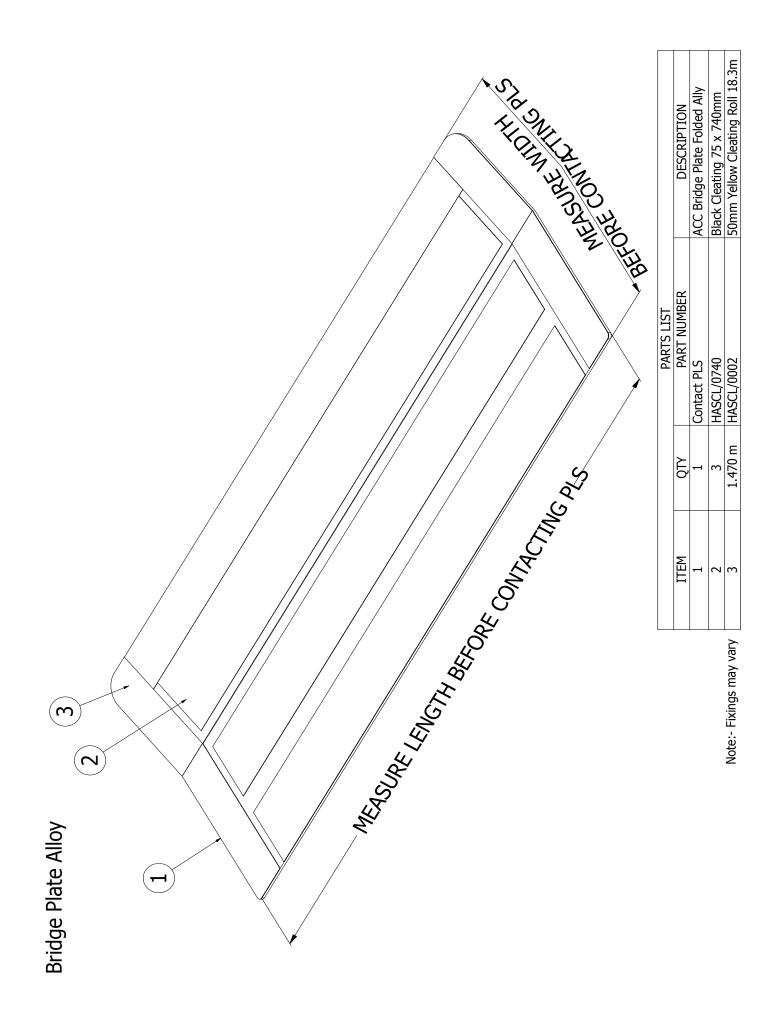
20

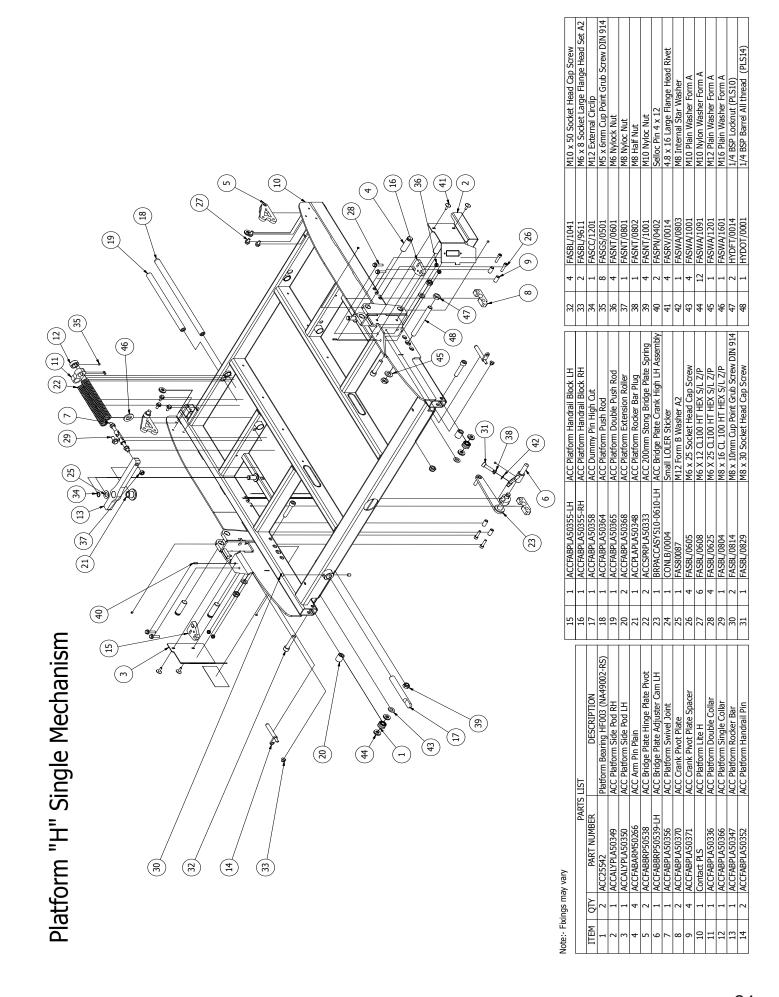


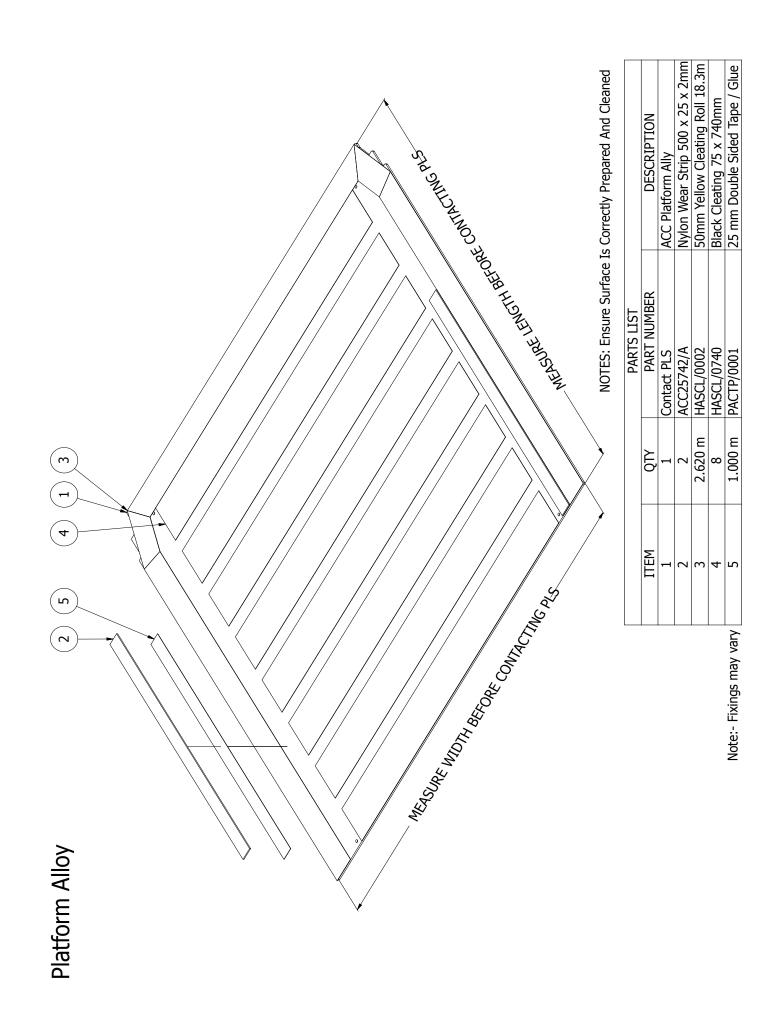
	DESCRIPTION	ACC Arm Stabilizer	M6 x 20 Socket Flange	Dome Head A2
PARTS LIST	PART NUMBER	Contact PLS	FASBL/0624	
	QTY	1	9	
	ITEM	1	2	
			2	<u>~</u>

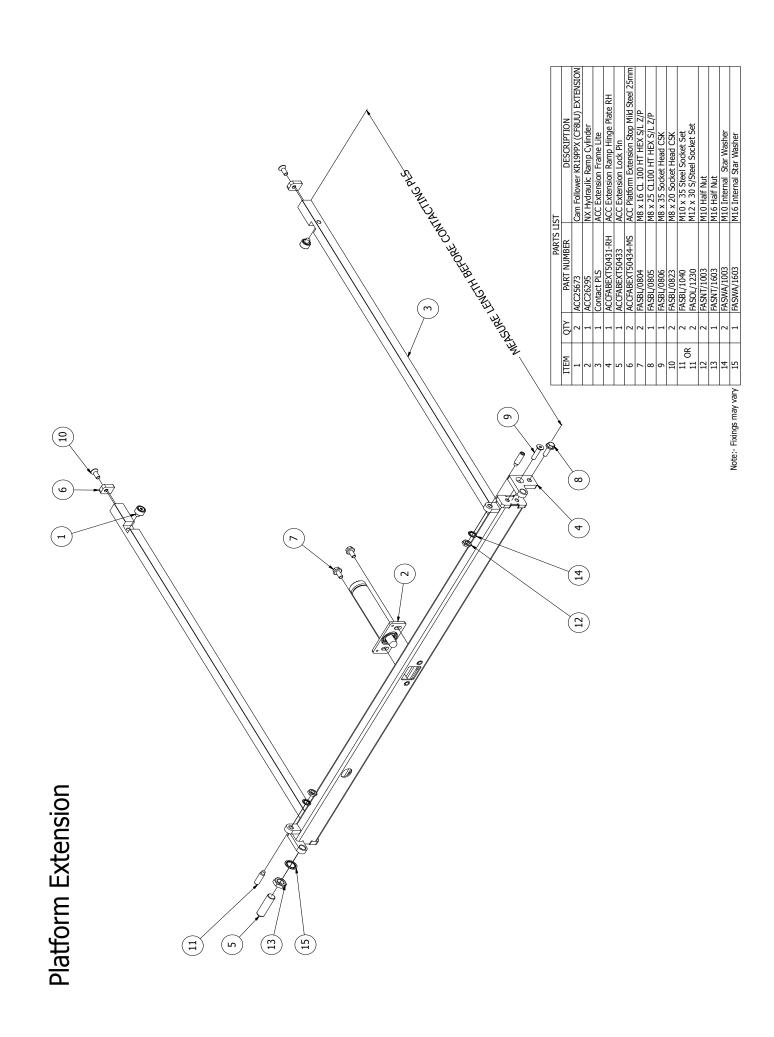
Note:- Fixings may vary

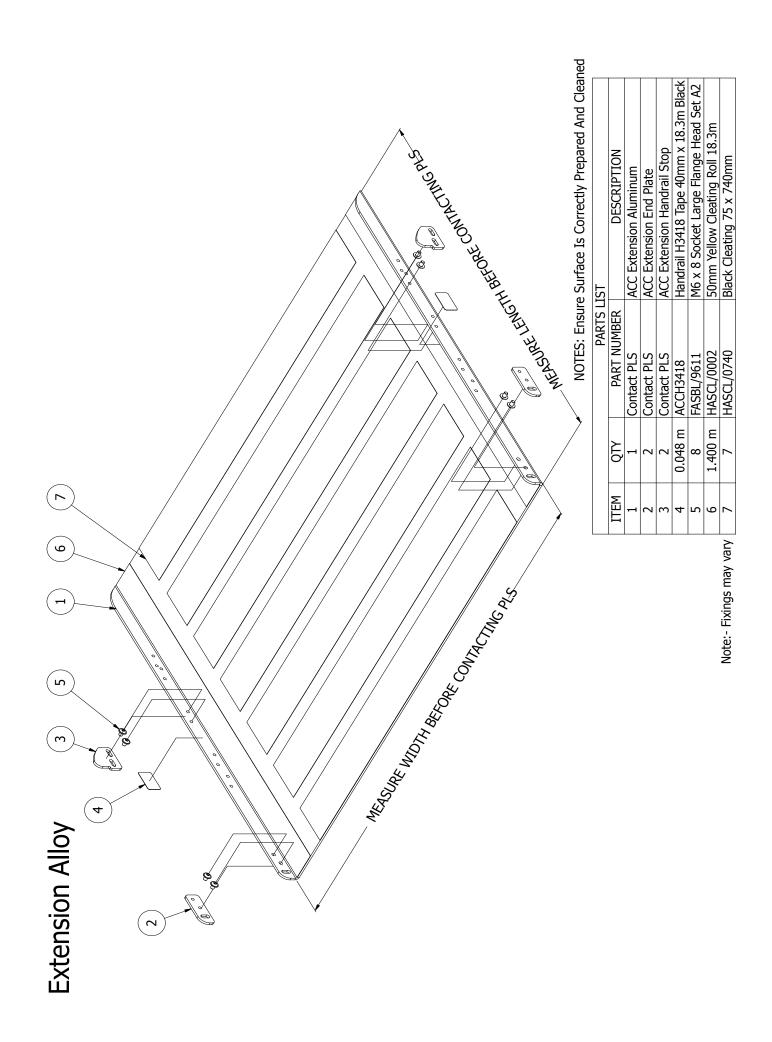


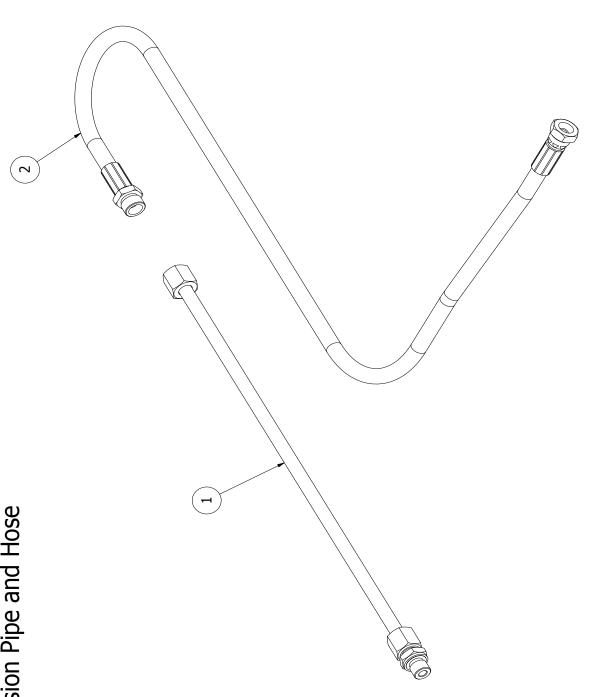




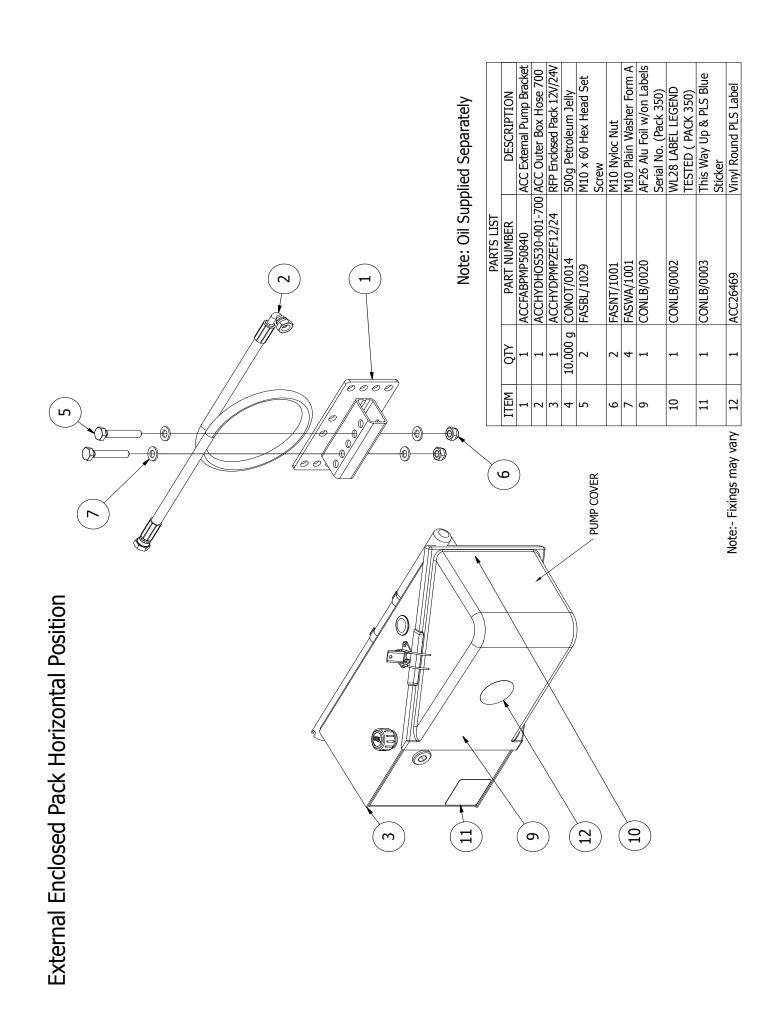


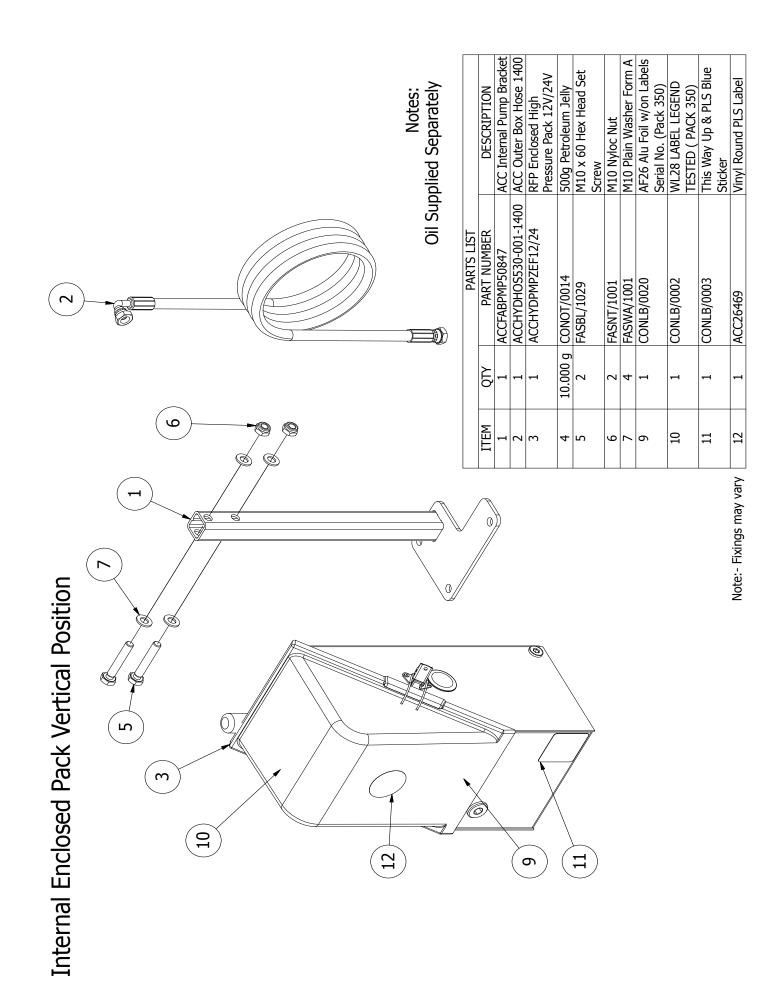


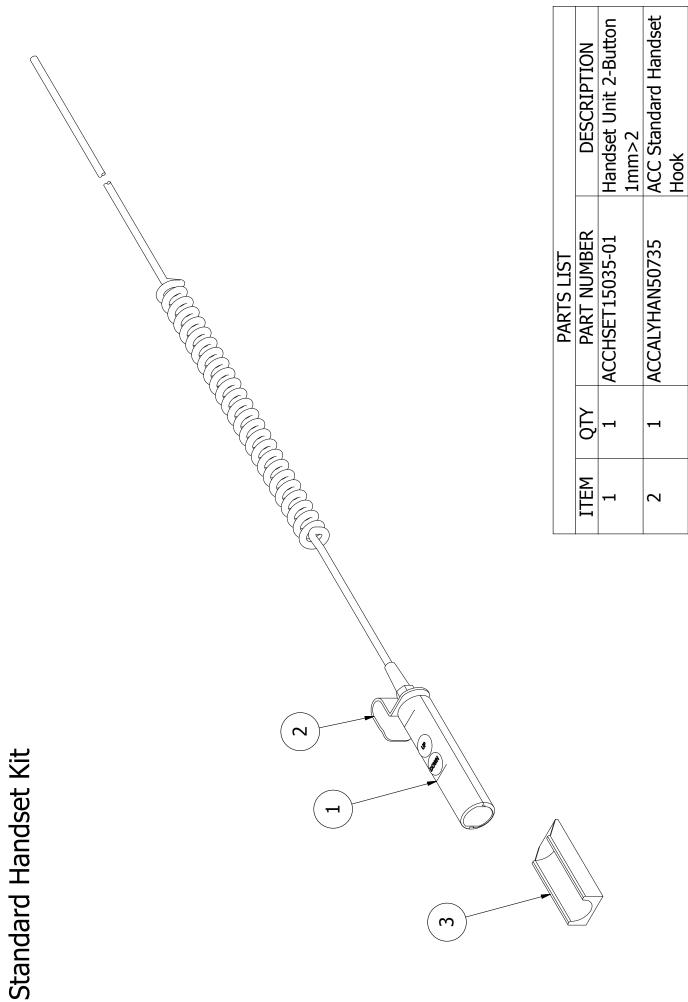




			PARTS LIST	
	ITEM	ДÌÒ	PART NUMBER	DESCRIPTION
			ACC26199-T	10 x 1.5 x 395mm Extension Tube
Note:- Fixings may vary	2	1	ACCHYDHOS530-005-885	ACC Extension Pipe Hose 885





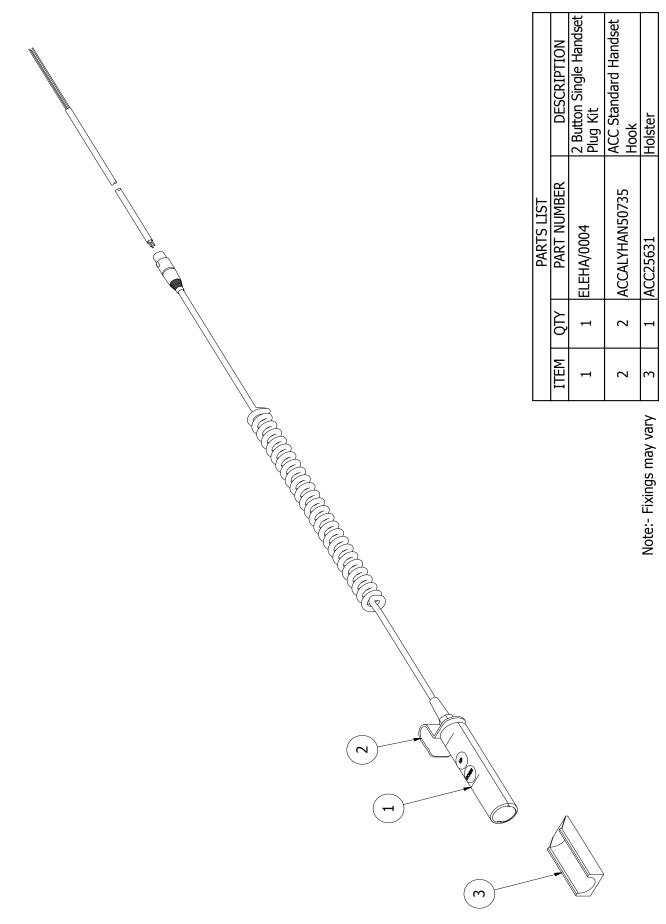


Holster

ACC25631

 \sim

Note: - Fixings may vary



PLS A MOBILITY NETWORKS COMPANY

Notes

PLS A MOBILITY NETWORKS COMPANY

Notes





Passenger Lift Services Limited

Unit 2, Summit Crescent Ind. Est., Off Roebuck Lane, Smethwick, West Midlands B66 1BT. U.K.

Tel: +44 (0)121 552 0660 Fax: +44 (0)121 552 0200

E-mail: enquiries@pls-access.co.uk Web Site: www.passengerliftservices.co.uk