operation manual vanloda system

Date: 14/03/2024 Document No: MSTRO4OPN-en Rev 2 Language: EN

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LIGHTENING LOADS

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1. Record of Revisions

Revision Number	Issue Date	Date Received	Received By
01	01/06/2021		
02	14/03/2024		

2. Abbreviations

Abbreviation	Definition
ASSY/Assy	Assembly
C	Celsius
cm	centimetre
CSK	Countersunk
DIA	Diameter
EC	European Community
EN	English
Fig	Figure
FLT(s)	Fork Lift Truck(s)
FWD	Forward
ID	Inside Diameter
kg	kilogram
LH	Left Hand
Ltd	Limited
m	metre
min	minute
Mk	Mark
mm/MM	millimetre
N/A	Not Applicable
Nm	Newton metre
No.	Number
OD	Outside Diameter
P/N	Part Number
PPE	Personal Protective Equipment
PPV	Pressure Protection Valve
PRT	Pneumatic Roller Track
psi/PSI	pounds per square inch
PZD	Pozidrive (Screw Driver)
QEV	Quick Exhaust Valve
Qty	Quantity

Abbreviation	Definition
RH	Right Hand
rpm	Revolution per minute
SR	Standard Roller
SWL	Safe Working Load
Tee	'T' Shaped air pipe connector
ULD	Unit Load Device
UK	United Kingdom
V	Volts
W	Watts

3. EC Declaration of Conformity

Joloda Hydraroll Ltd hereby certify that the Vanloda™ system complies with all the relevant provisions of the EC Machinery Directive and the National Laws and Regulations adopting this Directive.

Modifications to the Vanloda™ without prior approval from Joloda Hydraroll Ltd will render this declaration null and void.

4. Health and Safety

4.1 - Disclaimer

4.1.1 - Manual Objectives

This manual gives the information and procedures necessary for the operator, van driver and maintenance personnel to install, operate or maintain the system safely.

The manual also tells personnel the specification and function of the system.

The manual must be given to all personnel who work on the system, to decrease the risk of injury, damage to the equipment and prevent any dangerous procedures.

All the manuals for the system including manufacturers' manuals must always be available and kept in a safe, dry area free from dirt.

The driver must have a manual available for use in the van.

4.1.2 - Manual Revision Service

If you are not sure about any of the information or procedures in the manual, you must tell your local Joloda Hydraroll representative.

The information will then be sent to our technical department to review and if necessary a revision to the manual will be done and sent to the customer.

4.1.3 - Approved Personnel

The information and procedures in the manual are only applicable if the operator, van driver and maintenance personnel have been approved by the customer.

All personnel must also have manual handling approval.

The customer is the approval authority not Joloda Hydraroll Ltd.

All approved personnel must know and obey the warning labels.

An approved person must do the maintenance procedures, refer to Section 10. Routine Maintenance.

4.1.4 - Condition of the System

The system must only be operated if it is clean and serviceable.

Parts and components which are high use can wear quickly, so they must be examined regularly and if they are worn/damaged, replace immediately.

All replacement parts must be installed in accordance with the manufacturers' manual. All original parts are under warranty from the manufacturer.

4.1.5 - Entrapment and Crushing Risk

The mechanical dangers regarding the Vanloda equipment refer to finger entrapment, between the top plate and the roller when the system is pressurised and a drawing in and crush hazard. Safe working practices must always be referred to when operating the Vanloda system, fingers and clothing should always be kept clear when system is receiving power.

There is also the possibility of a load crushing personnel. It is paramount that the loading / unloading area is kept completely clear of personnel when the system is being operated.

4.1.6 - Pallet Stops

Pneumatic Roller Track in vans must have pallet stops installed. The pallet stops are manually operated.

Contact Joloda Hydraroll Ltd or your local Joloda Hydraroll representative for further information.

4.2 - Warnings and Cautions

READ THE MANUAL
DO NOT START ANY WORK BEFORE YOU READ THIS MANUAL.
Always read the manual to make sure that you know the system before you start any work.

WARNING
PALLET END STOPS MUST BE INSTALLED IN EACH TRACK OF THE VAN, REFER TO SECTION 6.3 - END STOPS.
If you do not obey this instruction injury or death to personnel can occur.

WARNING
MAKE SURE THAT THERE ARE NO PERSONNEL IN THE VEHICLE BEFORE YOU OPERATE THE SYSTEM.
If you do not obey this instruction injury or death to personnel can occur.

WARNING
MAKE SURE THAT THE SYSTEM IS ISOLATED FROM THE PNEUMATIC SUPPLY BEFORE COMMENCING ANY MAINTENANCE.
If you do not obey this instruction injury or death to personnel can occur.

WARNING
DRAWING IN AND CRUSH HAZARD. DO NOT PUT YOUR FINGERS OR CLOTHES IN THE ROLLERS DURING OPERATION OF THE SYSTEM.
If you do not obey this instruction injury to personnel can occur.

WARNING
ALWAYS PUT ON THE CORRECT PERSONAL PROTECTIVE EQUIPMENT (PPE) BEFORE OPERATION OR MAINTENANCE.
If you do not obey this instruction injury to personnel can occur.

WARNING
DO NOT WALK ON THE ROLLER TRACK.
If you do not obey this instruction injury to personnel can occur.

CAUTION
COMPRESSED AIR, NORMAL OPERATING PRESSURE IS 2.1 BAR
Do not disconnect any equipment until pressure has been totally released.

CAUTION
MAKE SURE THAT TRACKS AND PRT ARE CLEAN AND THERE IS NO DEBRIS BEFORE YOU START ANY MAINTENANCE.
If you do not obey this instruction damage to the system can occur.

CAUTION
DO NOT DRIVE THE VAN WITH ROLLERS IN THE UP POSITION.
If you do not obey this instruction damage to the system and van can occur.

CAUTION
STRAIN INJURY CAN OCCUR IF LADEN PALLETS ARE INCORRECTLY MOVED ALONG RAISED ROLLER TRACK
If you do not obey this instruction injury to personnel can occur.

4.3 - Safety Components

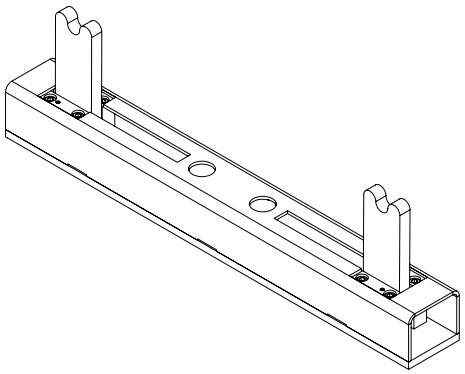
The system has many safety devices to give the operator and maintenance personnel a high level of safety.

4.3.1 - End Stops

The end stops are a manually operated pallet stop that is installed at the rear of the van on the Vanloda system.

The end stop's purpose is to stop product from rolling off the rear of the system, by ensuring the pallet stops are upright and in a safe position when the system is not in use.

Figure 1 - End Stops

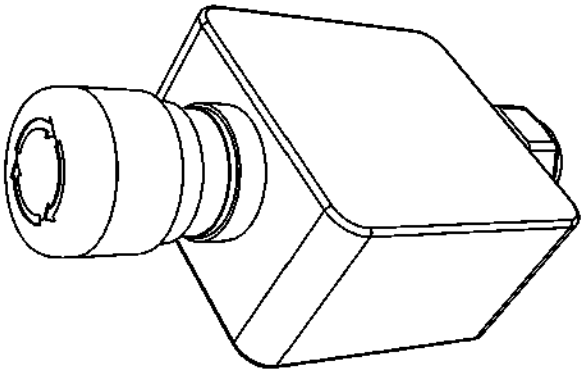


4.3.3 - Operation Switch

The operation switch contains an autodown function which is activateed by an electronic pulse from the switch.

When pressed, the switch cuts power and de-pressurises all rollers so the payload rests on the van floor and not on the live rollers.

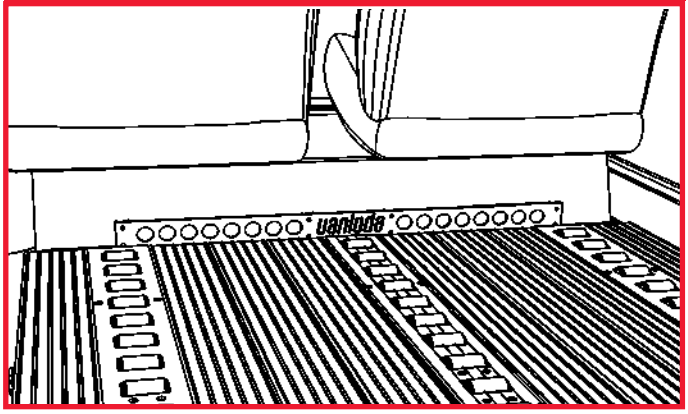
Figure 2 - Operation Switch



4.3.4 - Integrated bulkhead

At the cabin side, the floor is fitted with a reinforced galvanized steel kick strip which acts ass a bulkhead to prevent the pallet from hitting the cabin or partition wall.

Figure 3 - Bulkhead



5. General Information

5.1 - Document Specification

Document Specification	
Description	**Information**
Responsibility	Joloda Hydraroll Ltd
Document Name	Vanloda Operation and Maintenance Manual
Document Number	MSTR04OPN-en
Revision Number	02

5.2 - System Specification

Vanloda Specification	
Description	**Information**
System Height	63 mm
System Length	Variable
Standard Module Length	3254 mm
Standard Module Width	1862 mm (Variable)
Standard No. Of Lanes	4
PRT Lift Capacity	550 kg per metre
PRT Types	MK 9
MK9 Lift Height	10.2 mm

5.3 - System Description

Vanloda systems are a pneumatic system which are controlled via an operation switch and compressor. there is no air reservoir in the system, so the compressor directly infflates the PRT airbags.

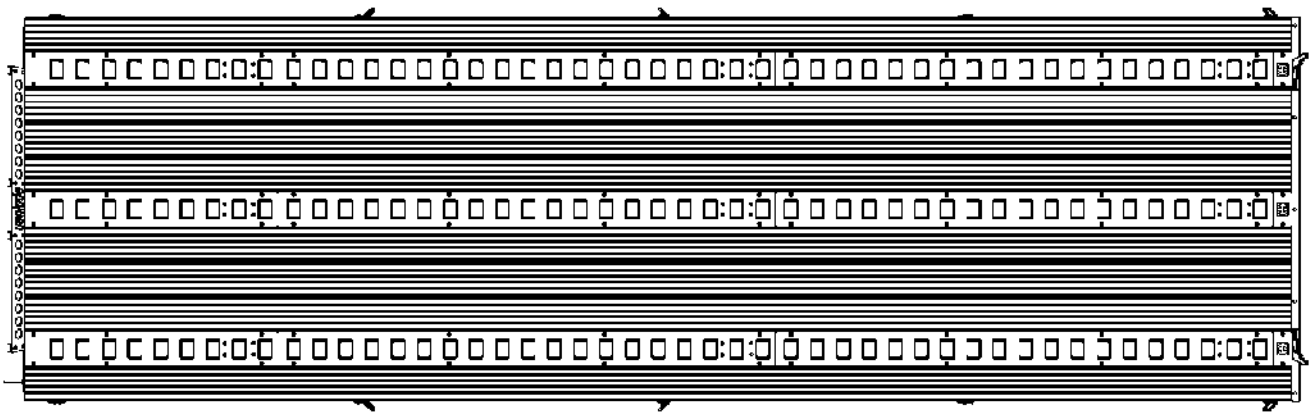
Vanloda uses the Modular Rollerbed System to integrate the floor system and Pneumatic Roller Tracks together. This allows easy installation of the pre-assembled modules with no modification to the van.

Safety features included are pallet stops and auto down procedures.

When raised, pallet stops ensure that a load is not able to be lost over the edge of a van, and act as a safety barrier for both operators, and the load.

An auto down procedure is also included in all Vanloda installations, through the operation switch.

Figure 4 - Vanloda System



6. Vanloda System

6.1 - Pneumatic Roller Track

PRT is a set of steel rollers fixed within a roller cradle, which is housed within a channel section that is contained with a top plate. The rollers rise and fall through the implementation of a pneumatic airbag. PRT lanes are fitted within the aluminium extrusion of the modular floor at set intervals depending on the type of pallets being transported.

When live the PRT smoothly transfers the weight of the pallets and when in the safe position the PRT acts as the van floor.

Figure 5 - Pneumatic Roller Track (PRT)

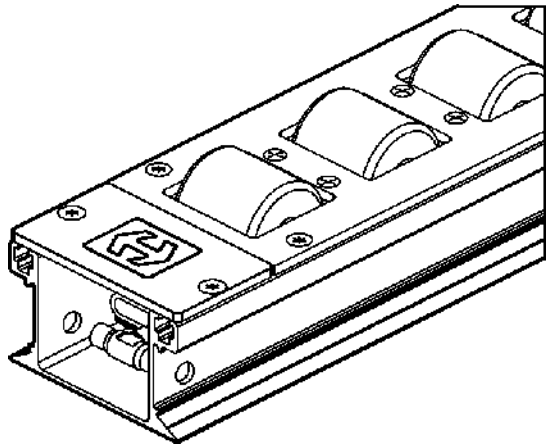
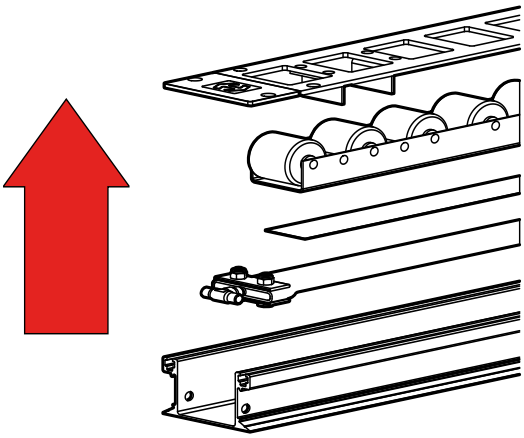


Figure 6 - Pneumatic Roller Track Sections



6.2 - Modular Floor

The Vanloda system consists of a lightweight aluminium extrusion modular floor with integrated PRT's, electrical cables and pneumatic pipes.

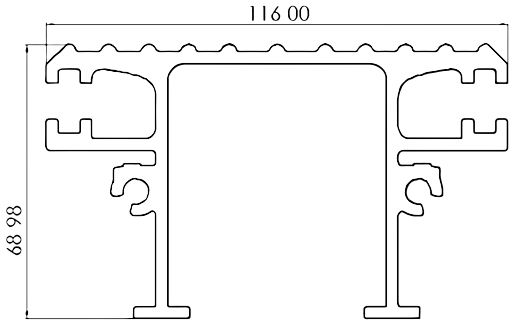
The floors typically consist of three lanes of PRT and eight lanes of aluminium flooring one assembly, which is delivered pre-assembled due to the size.

6.2.1 - Aluminium Extrusion

The lightweight aluminium extrusion integrates the PRT, electrical cables and pneumatic air pipes into the floor.

The aluminium extrusion is captivated by the air beam and end plate using tap fix screws to make up the modular floor of the system.

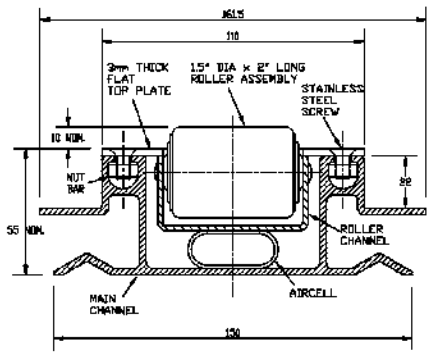
Figure 7 - Aluminium Extrusion



6.2.2 - Roller Track Mk 9

Roller Track Mk 9 Specification	
Roller Assembly Diameter	50.8 mm
Roller Lift	10.2 mm

Figure 8 - Roller Track Mk 9



Pneumatic Roller Tracks are assembled with main module channels of extruded aluminium section cut to module lengths of up to 4m.

6.3 - End Stops

End stops ensure that no pallet can fall off the end of the van.

1. To engage the pallet stops, with your hand lever them up 90 degrees until they drop vertically down into the slot, refer to Figure 11 - End Stops Up

2. To lower the end stops lift them out of their slots and rotate them 90 degrees until horizontal and are flush within the apertures, refer to Figure 12 - End Stops Down

Figure 11 - End Stops Up

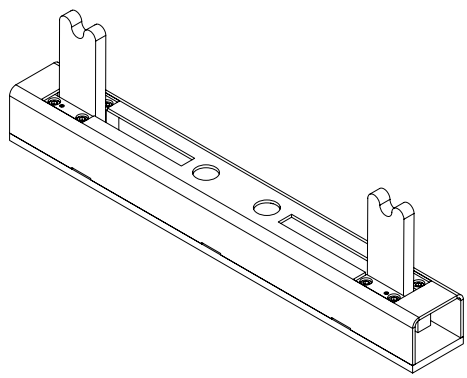
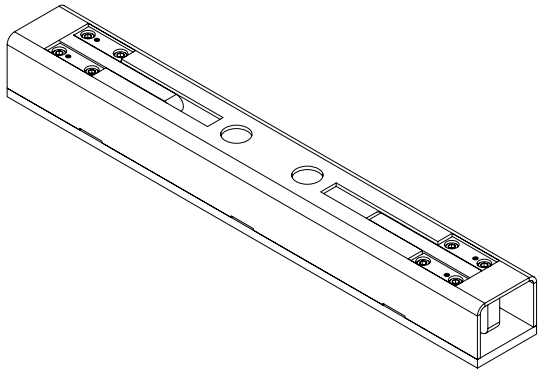


Figure 12 - End Stops Down

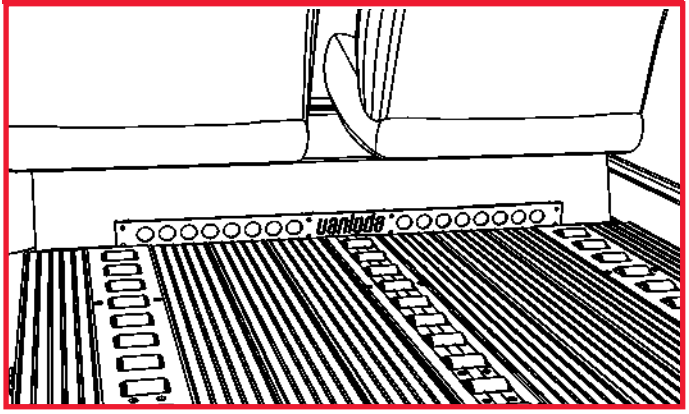


6.4 - Bulkhead Stop

The bulkhead stop is integral to the end plate, and is designed to stop the load from rolling too far and hitting the cabin or partition wall.

It is made from reinforced galvanized steel, with a height of 50mm.

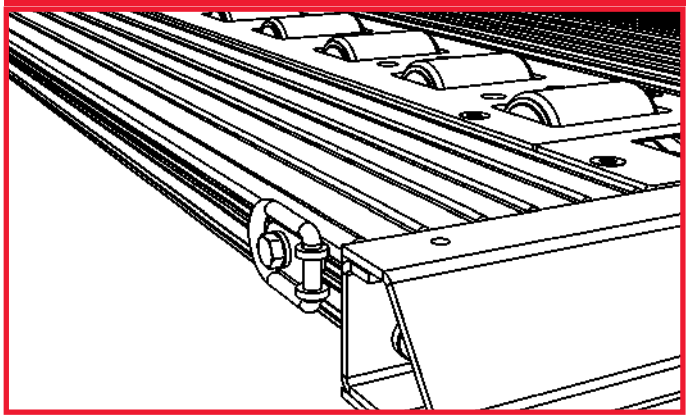
Figure 9 - Bulkhead Stop



6.5 - Lashing Rings

The lashing rings are used to secure the system in the van using tie wraps or turnbuckles. There are a number of these along each side, and are supplied loose so that they can be positioned along the system length to suit the van anchor points.

Figure 10 - Lashing Rings



6.6 - Air Control Systems

The raise and lower functions of all marks of Hydraroll pneumatic roller tracks are controlled via an 'Air Control System'.

An auto down feature is built into all control boxes. This is an emergency feature which, in the event that the operator forgets to lower the rollers prior to transport, the system resets itself into a 'safe' condition with the rollers down. For vanloda systems, this is through the mounting position of the operation switch at the rear door. When the door is closed, the switch is pushed in and air supply to the rollers is cut off.

The Vanloda Air Control Box houses the compressor, pressure switch and air inlet and outlet.

The outside of the box consists of air inlet and outlet and power outlet cable. The air outlets of the box are piped directly to the independent air bags of each roller track module, since there is no air reservoir tank.

The roller tracks are lowered when the air in the air bags is released and exhausts to the atmosphere through the quick exhausts valves.

The operating switch controls the power to the compressor. When the switch is pulled out, the compressor will engage and start to raise the rollers. This will take 60 to 80 seconds to complete.

When pressed, the switch cuts power and de-pressurises all rollers so the payload rests on the van floor and not on the live rollers.

The pneumatic system has built in over-pressure protection through pressure protection valves. In the unlikely event this system is deployed, the auxiliary air inlet valve can be used to pressurise the system temporarily, for removal of payloads.

Figure 13 - Air Control Box

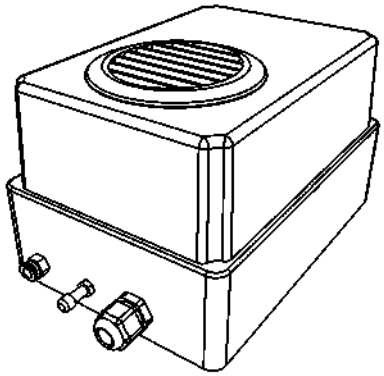


Figure 14 - Operation Switch

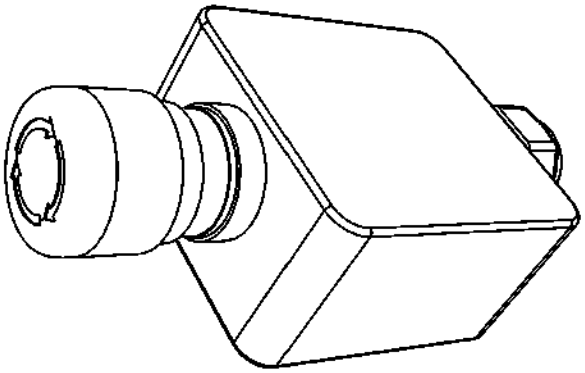
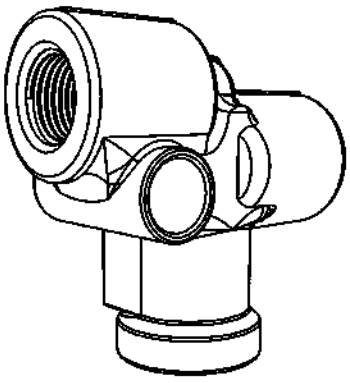


Figure 15 - Pressure Protection Valve



7. Operation

7.1 - Pallet Stops

Pallet stops must always be engaged when transporting loads, ensure that after the loading/ unloading process has been completed, the pallet stops are engaged to ensure no loads are lost over the edge.

Engaging Pallet Stops

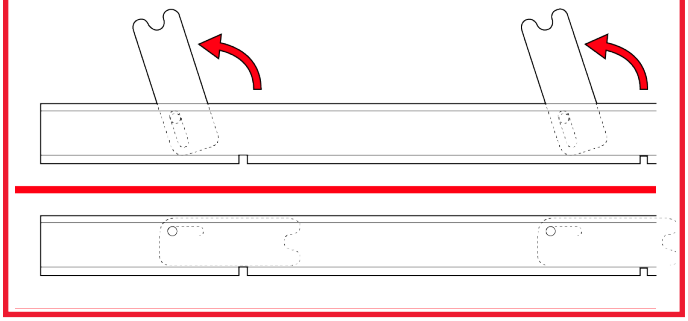
Pallet stops are operated by lifting from their holding channels with a finger, the pallet stop will then lift up and lock in place.

Disengaging Pallet Stops

To disenage and lower the pallet stop firmly hold and lft up the pallet stop, then slide sideways into it's designated channel.

Pallet stops are an integral function of all Vanloda safety systems and must be active when no loading/unloading is taking place.

Figure 16 - Manual End Stops



7.2 - Loading

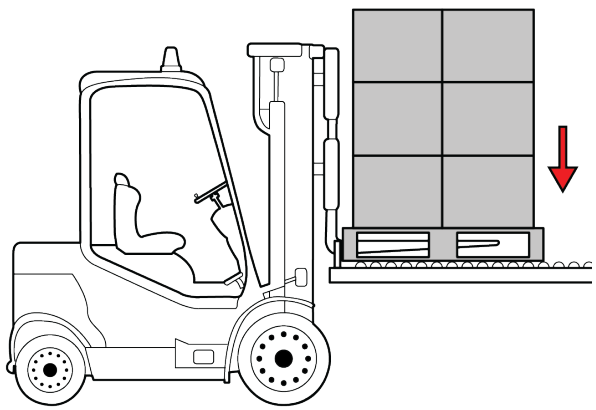
When loading a Vanloda™ system with a forklift, ensure that the following instructions are acted.

- Ensure rollers are in the lowered position.
- Raise the end stop pallet stops to ensure no load is lost over the edge.
- Carefully lower the load behind the pallet stops, ensuring that the pallet is parallel to track and rollers
- Engage the air to the system via the operation switch, and the pallet is now ready to be moved.

Note

Use a banksman wherever possible to ensure safety.

Figure 17 - FLT Loading



7.3 - Movement of Loads

7.3.1 - Conditions of Use

As indicated in 4. Health and Safety, Joloda Hydraroll Ltd underline that in order to guarentee the safety of personnel in the operating area of equipment, the following actions are mandatory:

- DO NOT remain in any area(s) which will be effected by movement of loads.
- DO NOT modify or replace the control systems with components other than those provided by Joloda Hydraroll Ltd.

Individual protection equipment

No personal protection equipment or devices are required for the correct operation of the equipment.

WARNING

VAN/VEHICLE MUST BE LEVEL FOR CORRECT AND EFFECTIVE OPERATION. FAILURE TO ENSURE THIS CAN POSSIBLY RESULT IN SERIOUS INJURY OR DAMAGE TO LOAD.

Note

Ensure all health and safety notices and instructions are adhered to at all times during the operation of the PRT system. Failure to do so could result in damage to load or operator/pedestrian injury.

- Ensure tracks are clean and free from dirt/ debris prior to any operation.

7.3.2 - Manual Movement

Note

Only operators who have been trained in manual handling should be moving loads by hand.

WARNING

ROLLERS ARE NOW ENGAGED. INCREASED RISK OF TRIPPING OR SLIPPING. ALWAYS BE VIGILANT WHEN WALKING ON BED WITH THE ROLLERS ENGAGED.

Loads which are on a Vanloda™ system can be easily moved by hand, through placing both hands on load, and pushing towards the bulkhead. Always be sure to walk on the infill flooring to ensure safety.

WARNING

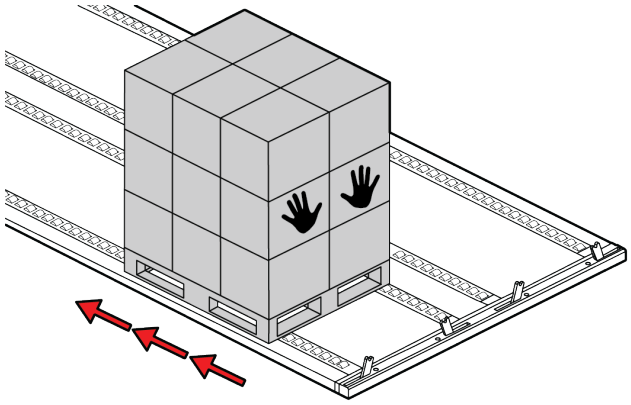
WHEN MOVING LOADS BY HAND, NEVER EXCEED A CONTROLLABLE SPEED, THE OPERATOR MUST BE IN FULL CONTROL OF THE LOAD AT ALL TIMES, FAILURE TO DO SO COULD RESULT IN DAMAGE TO LOAD AND POSSIBLE SERIOUS INJURY.

Once load movement has finished, lower the rollers and secure load for transport. Repeat the loading process for each pallet until the van is fully loaded.

WARNING

IF ONLY PART LOADING, IT IS THE OPERATOR'S DUTY TO ENSURE THE LOAD IS EVENLY DISTRIBUTES AND SECURELY FASTENED.

Figure 18 - Manual Movement



7.4 - Unloading

For forklift unloading, always ensure that the pallet stops are engaged before supplying air to the van, this is to ensure personnel and load safety.

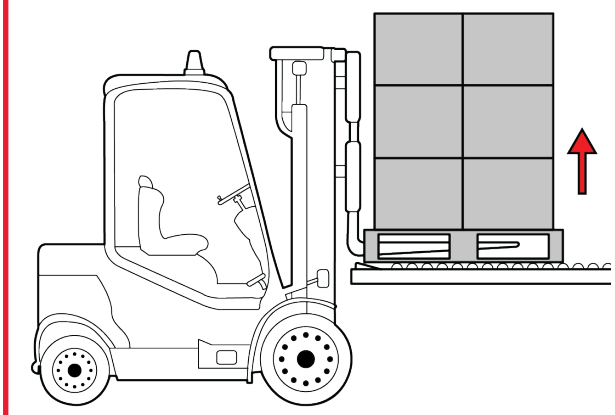
Once pallet stops are engaged, activate the air to the roller lane/ section required.

Insert the forklift's forks into the pallet and lift clear of the pallet stops and reverse backwards, providing sufficient clearance for turning.

Pull next pallet forward up to the pallet stop by hand, then lift from van floor with forklift, repeating the process until van is completely unloaded.

Once all pallets have been unloaded, deactivate the air supply to the rollers with the operation switch to set the system into a safe mode.

Figure 19 - FLT Unloading



8. Testing

8.1 - Air Leak Testing

All Joloda Hydraroll Ltd equipment is manufactured to the highest standard of quality, and all components have been tested against failures. Regardless leaks and tears can always happen over time, and it is always good practice to test for leaks at appropriate time intervals.

Note

The normal operating pressure for Joloda Hydraroll Ltd PRT is 2.1 Bar (30 PSI).

1. First set rollers to raised position.
2. Pressure system from the main source - regulator gauge in control box should read 2.1 BAR/ 30 PSI (+/- 10%).
3. Allow to settle.
4. Read and record air pressure.
5. Wait one hour.
6. Re-check the pressure on the gauge and ensure it has not dropped more than 0.3 BAR/ 4.35 PSI.
7. If pressure drop is more than 0.3 BAR check all connections with soap solution
8. Watch for bubbles in soap solution.
9. Rapid drop in pressure indicates severe leakage which would normally also be heard.

If severe leakage is found, contact Joloda Hydraroll Ltd representatives for information regarding replacement parts for any damaged equipment.

Figure 20 - Damaged Line/Connection

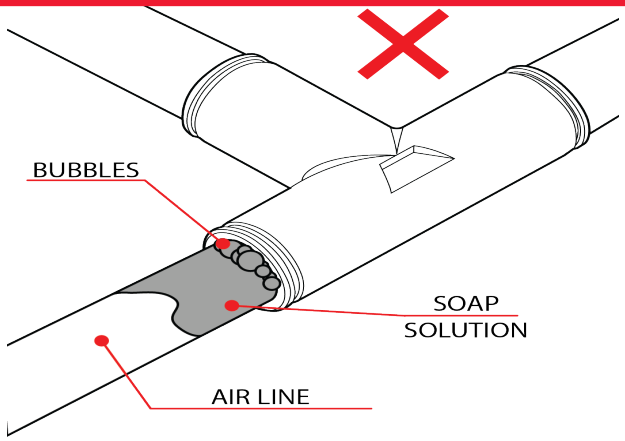


Figure 21 - Testing Operating Pressure

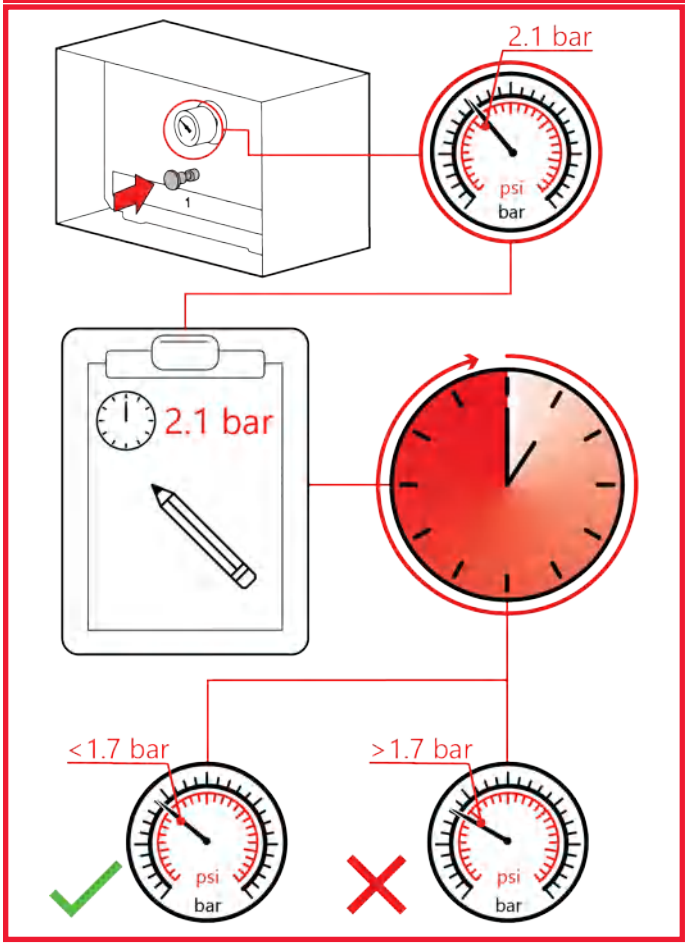
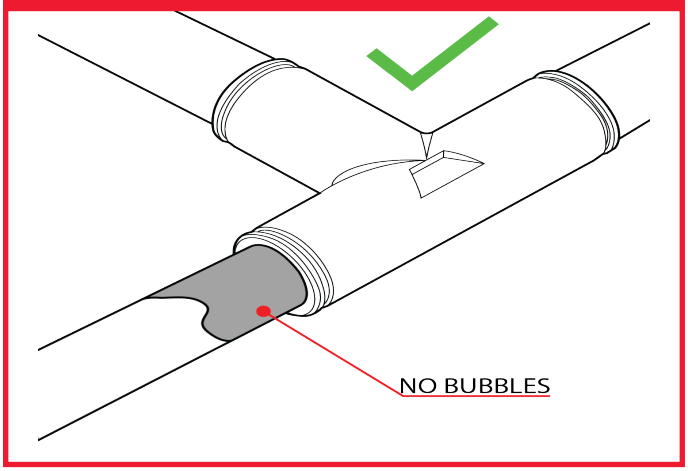


Figure 22 - No Damage



9. Spare Parts List

Spare Parts List			
Item No.	**Part Number**	**Description**	**Qty**
1	See Parts List	Track Module Complete	
2	See Parts List	Roller Assembly	
3	See Parts List	Roller Pin	
4	4AD027	Stainless Steel Top Plate Screw - Torx	
5	HY10023404	Nut Bar	
6	2AC001	Air Cell – 1.5”	
7	AE-ABCKIT-1.5IN	Airbag Clamping Kit – 1.5”	
8	2ED001	Pressure Gauge 0 - 4 bar	
10	AE-ATSKIT	Strap Kit	
11	2HD001	Drain Valve	
12	AE-PPVKIT-80	PPV Assembly	
13	AE-QEV	Quick Exhaust Valve	
14	2AB002	Tubing - 8 mm	
15	2AB001	Tubing 3/8”, Blue Brake Pipe	

10. Routine Maintenance

10.1 - Maintenance Schedule

WARNING
BEFORE YOU START ANY MAINTENANCE, MAKE SURE THAT YOU HAVE READ AND KNOW THE HEALTH AND SAFETY INFORMATION, REFER TO SECTION 4. HEALTH AND SAFETY.

An approved person must do the maintenance procedures. If you do not obey this instruction injury or death to personnel can occur.

No.	Maintenance Procedure	Week 1	Week 2	Week 3	Week 4	Daily	Weekly	Monthly	Quarterly	6 Months	Yearly
1	Make sure that the flip up end stops operate					X					
2	Ensure the vehicle floor, pneumatic roller track and associated power systems are free from dirt and debris.					X					
3	Check that all rollers lift, rotate and drop pneumatically					X					
4	Check that the powered rollers rotate correctly with power, with no excessive vibration or unusual sounds.					X					
5	Check that the operation switch works correctly.						X				
6	Do a visual inspection of the track and rollers for damage							X			
7	Ensure systems are disconnected then check that all electrical connections are free from corrosion and provide efficient contact							X			
8	Check for air leaks or damaged airbags, see Section 8. Testing							X			
9	Remove roller track top plates and lift out roller channel assemblies and check for damage. Replace damaged rollers.									X	
10	Check air bags for damage and leaks and replace/ repair as necessary.									X	
11	Clean out dirt and debris from roller track main channels and roller channels.									X	
12	Re-assemble roller tracks and replace top plates using new top plate screws. Tighten screws to a torque setting of 7 - 9.5Nm.									X	

10.2 - General

Prior to any maintenance ensure that all systems are disconnected from electrical power supplies before commencing any repair or maintenance work.

Ensure air systems are isolated from their supply and that system pressures are released before disconnecting any air equipment.

Replace all covers and guards after installation.

All maintenance work should be carried out by qualified staff.

10.3 - Roller Replacement

1. Identify the track assembly that has the damaged roller, refer to Figure 23 - Damaged Roller.
2. Remove the screws that attach the logo plate.
3. Remove the logo plate, refer to Figure 24 - Disassemble the Track Assembly.
4. Remove the screws that attach the top plate.
5. Remove the top plate, refer to Figure 24 - Disassemble the Track Assembly

Note

Step 6 is only applicable for slipchain docks with fixed rollers installed.

6. Remove the screws at the front that attach the fixed roller to the roller track.
7. Remove the roller track, refer to Figure 24 - Disassemble the Track Assembly
8. Put the roller track on a flat work surface.
9. Use a grinder to remove the peined end of the roller pin, refer to Figure 25 - Remove the Roller Pin
10. Use a hammer and a punch to remove the roller pin.
11. Remove the roller.
12. Discard the roller and roller pin.
13. Put a new roller in position on the roller track and push a new roller pin all the way through the roller track and roller, refer to Figure 26 - Install a new Roller
14. Position the roller track, so that the side that the roller pin protrudes through is at the top, refer to Figure 26 - Install a new Roller.
15. Use a ball-pein hammer to pein over the roller pin, refer to Figure 27 - Hand Pein the Roller Pin
16. Use an air gun to remove any debris from the main channel or the extrusion and the roller track, refer to Figure 28 - Remove any Debris.
17. Put the roller track in position in the main channel or the extrusion, refer to Figure 29 - Assemble the Track Assembly.
18. Attach the top plate with the screws, refer to Figure 29 - Assemble the Track Assembly.
19. Torque the screws between 7 Nm and 9.5 Nm.
20. Attach the logo plate with the screws, refer to Figure 29 - Assemble the Track Assembly.
21. Torque the screws between 7 Nm and 9.5 Nm.

Figure 23 - Damaged Roller

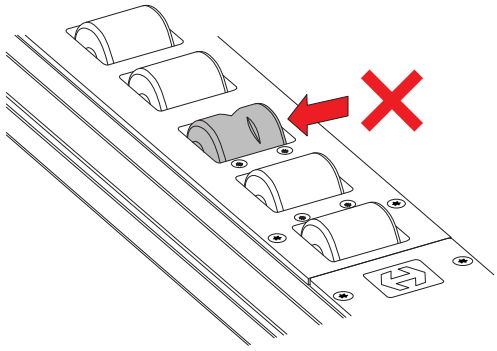


Figure 24 - Disassemble the Track Assembly

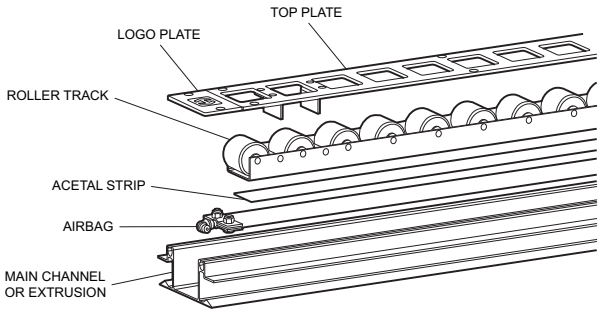


Figure 25 - Remove the Roller Pin

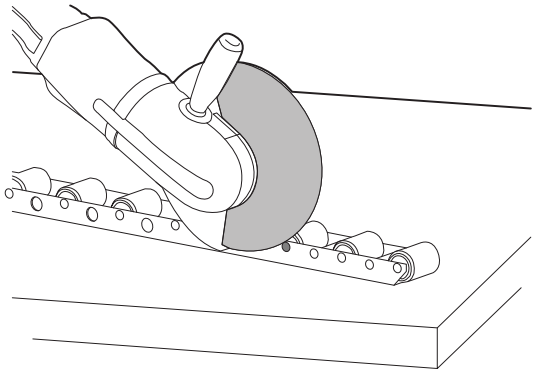


Figure 26 - Install a new Roller

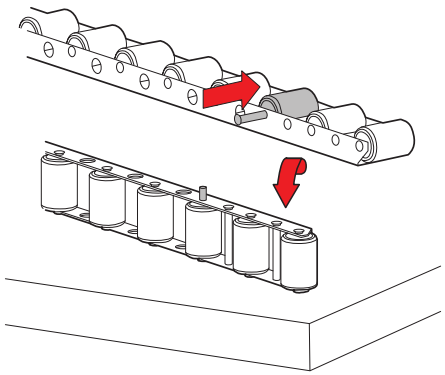


Figure 27 - Hand Pein the Roller Pin

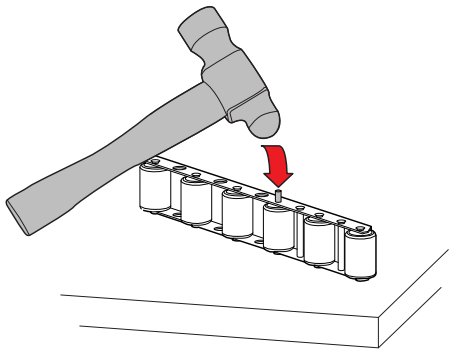


Figure 28 - Remove any Debris

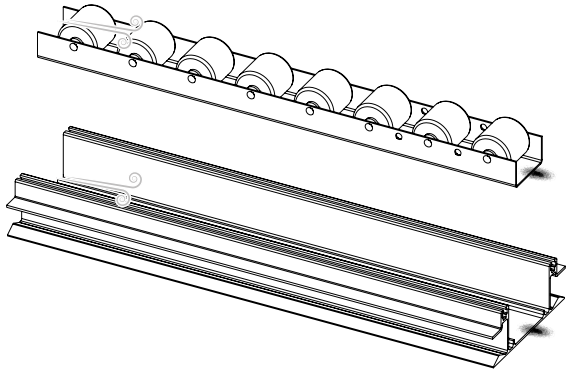
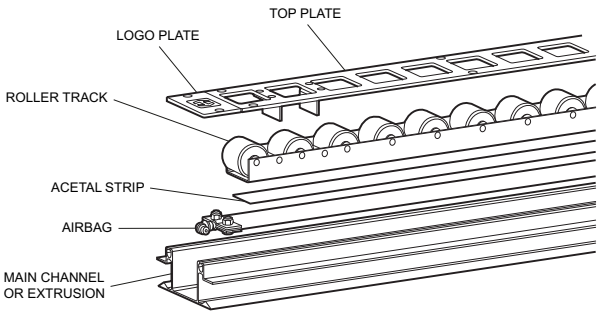


Figure 29 - Assemble the Track Assembly



10.4 - PRT - Airbag Replacement

1. Remove the screws that attach the logo plate.
2. Remove the logo plate, refer to Figure 30 - Disassemble the Track Assembly.
3. Remove the screws that attach the top plate.
4. Remove the top plate, refer to Figure 30 - Disassemble the Track Assembly.

Note

Step 5 is only applicable for slipchain docks with fixed rollers installed.

5. Remove the screws at the front that attach the fixed roller to the roller track.
6. Remove the roller track, refer to Figure 30 - Disassemble the Track Assembly.
7. If installed, remove the acetal strip, refer to Figure 30 - Disassemble the Track Assembly.
8. Disconnect the air pipe(s) from the elbow or the tee.
9. Remove and discard the airbag, refer to Figure 30 - Disassemble the Track Assembly.
10. Put the new airbag on a flat work surface.
11. Remove the nuts and the screws that attach the clamp plates.
12. Remove the clamp plates.
13. Measure the length of the main channel or the extrusion or the total length of the system and record the dimension.
14. Mark a line on the new airbag to show the length of the dimension at Step 13, refer to Figure 31 - Mark a line on the Airbag.
15. The new airbag must be cut to the length of the dimension at Step 13 minus 32 mm to 35 mm, refer to Figure 32 - Calculate the Airbag Cut Length.
16. Mark the cut line on the new airbag, in accordance with the dimension calculated at Step 15, refer to Figure 33 - Airbag Cut Line.

CAUTION

WHEN YOU DO STEP 17, MAKE SURE THAT THE CUT IS STRAIGHT.

17. Use a sharp pair of scissors to cut the new airbag at the cut line, refer to Figure 34 - Cutting the Airbag.

Note

When you do Step 18 make sure that the clamp plate is held tightly in position.

18. Put a clamp plate on top of the new airbag and mark the two holes in the clamp plate on to the new airbag, refer to Figure 35 - Mark the Holes on the Airbag.
19. Remove the clamp plate from the new airbag.
20. Use a 4 mm drill bit to drill the two holes marked on the new airbag, refer to Figure 36 - Drill the Holes for the Clamp Plates.
21. Use the screws and the nuts to attach the clamp plates to the new airbag, refer to Figure 37 - Attach the Clamp Plates.
22. Torque the nuts to no less than 24 Nm.
23. Make sure that the nuts at the elbow or the tee end are torqued between 10 Nm and 14 Nm.
24. Clean the new airbag with a soft, dry cloth.
25. Use an air gun to remove any debris from the main channel or the extrusion and the roller track, refer to Figure 38 - Remove any Debris.
26. Put the new airbag in position with the elbow or the tee at the rear of the van and the clamp plates at the front of the van, refer to Figure 39 - Airbag Position
27. The elbow or the tee must align with the holes in the main channel or the extrusion, refer to Figure 40 - Elbow or Tee Position
28. Connect the air pipe(s) to the elbow or the tee.
29. If installed before, put the acetal strip in position on top of the new airbag, refer to Figure 41 - Assemble the Track Assembly.
30. Put the roller track in position in the main channel or the extrusion, refer to Figure 41 - Assemble the Track Assembly.
31. Attach the top plate with the screws, refer to Figure 41 - Assemble the Track Assembly
32. Torque the screws between 7 Nm and 9.5 Nm.
33. Attach the logo plate with the screws, refer to Figure 41 - Assemble the Track Assembly
34. Torque the screws between 7 Nm and 9.5 Nm.
35. Do the Leak Test, refer to Section 8.1 - Air Leak Testing

Figure 30 - Disassemble the Track Assembly

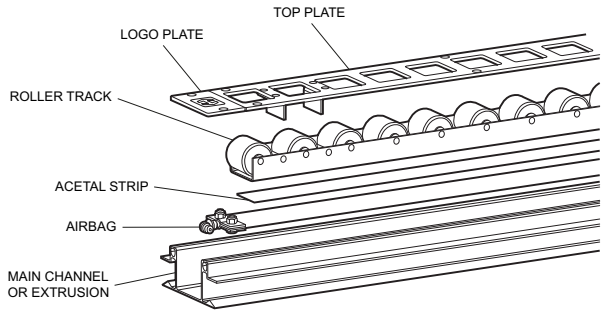


Figure 31 - Mark a line on the Airbag

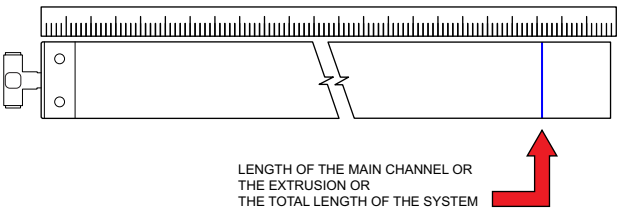


Figure 32 - Calculate the Airbag Cut Length

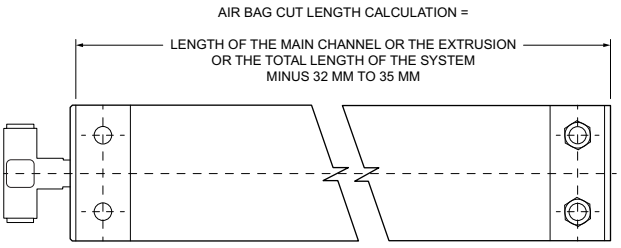


Figure 33 - Airbag Cut Line

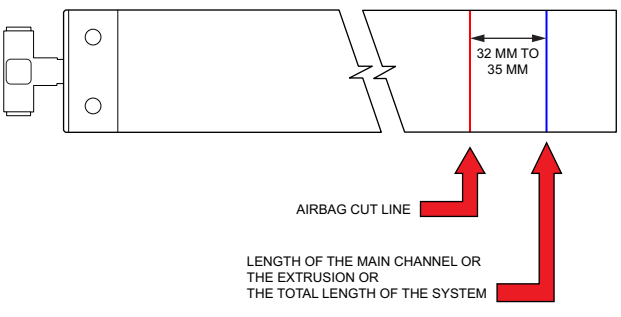


Figure 34 - Cutting the Airbag

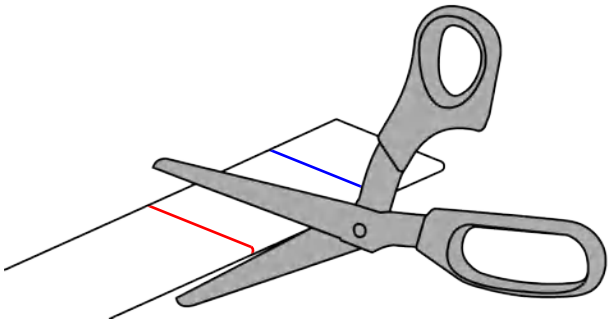


Figure 35 - Mark the Holes on the Airbag

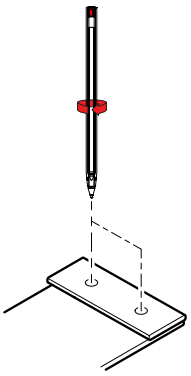


Figure 36 - Drill the Holes for the Clamp Plates

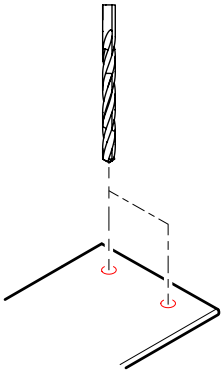


Figure 37 - Attach the Clamp Plates

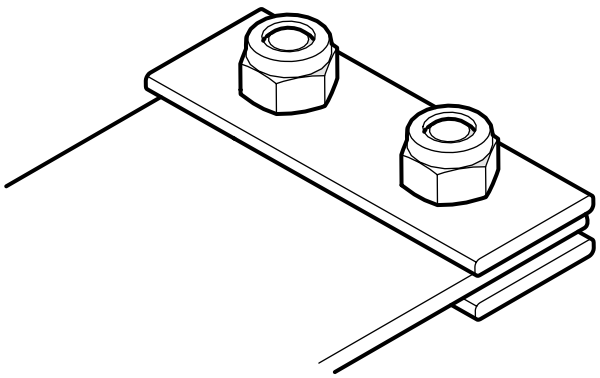


Figure 38 - Remove any Debris

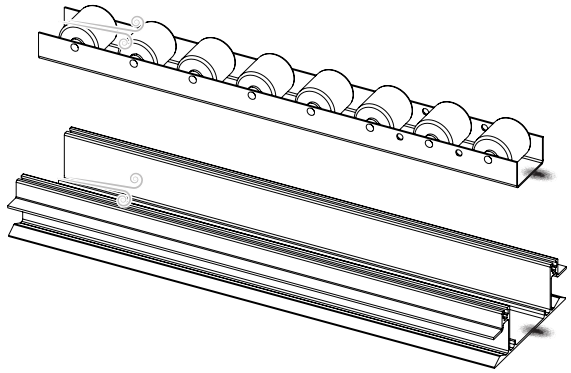


Figure 39 - Airbag Position

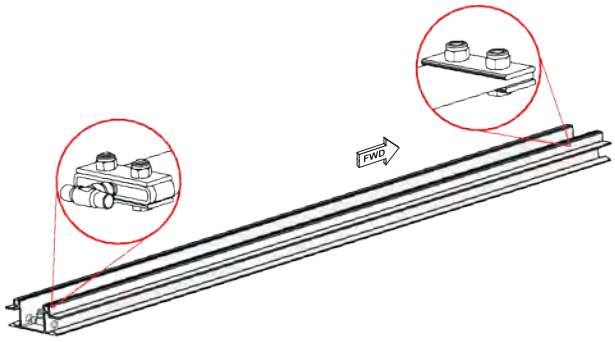


Figure 40 - Elbow or Tee Position

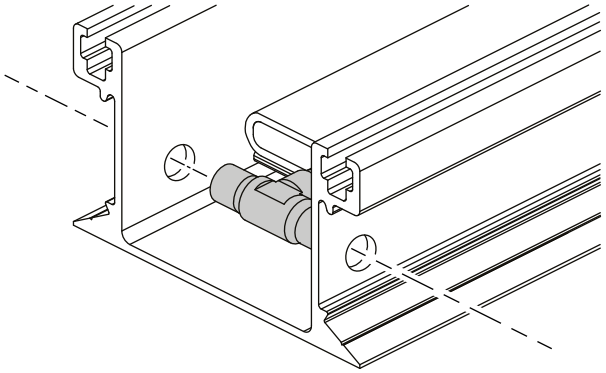
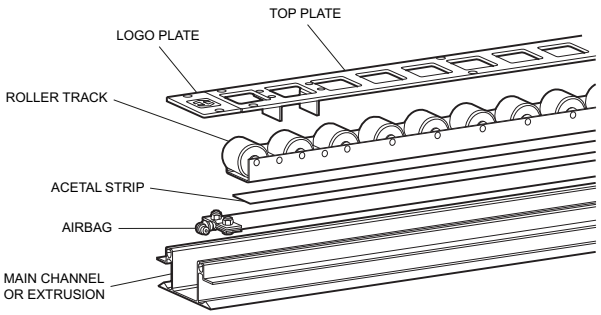


Figure 41 - Assemble the Track Assembly



11. Troubleshooting

CAUTION
DO NOT LUBRICATE OR USE ANY CLEANING SOLVENTS ON THE ROLLERS OR THE TRACKS.

If you do not obey this instruction damage to the system can occur.

Mechanical Troubleshooting		
Fault	**Cause**	**Solution**
PRT rollers will not lift	No Air Supply to the Regulator	Make sure that the valves in the control boxes are open or switch on the compressor
		Make sure that the pressure from the air supply is sufficient and increase if necessary
		Check for the correct operation of the PPV and replace if necessary
		Check the air pipes and connectors for leaks and repair / replace if necessary, refer to Section 8. Testing
	No air supply to the valves in the control boxes	Check operation switch has not been depressed. Release if necessary.
		Check the regulator setting and operation
		Check the air pipes and connectors for leaks and repair / replace if necessary, refer to Section 8. Testing
	No air supply to the airbags	Check for the correct operation of the valves in the control boxes and replace if necessary
		Check the air pipes and connectors for leaks and repair / replace if necessary, refer to Section 8. Testing
	Damaged airbags	Replace the airbag, refer to Section 10.4 - PRT - Airbag Replacement
PRT rollers will not lower	Defective Valves in the Control Boxes	Check the correct operation of the valves in the control boxes and repair / replace if necessary.
	Debris in the Main Channel or Roller Track of the PRT	Remove the top plates to gain access then follow the cleaning procedure to remove any debris present, refer to Section 10. Routine Maintenance.
	Blocked Air Pipes	Check the air pipes for a blockage and replace if necessary.
	Damaged parts	Check if any parts have been deformed or damaged and therefore are clashing with adjacent parts. Repair / replace as necessary.

Mechanical Troubleshooting		
Fault	**Cause**	**Solution**
Roller(s) do not rotate freely	Damaged roller	Do the roller replacement procedure, refer to Section 10.3 - Roller Replacement.
	Debris in the roller track	Disassemble the roller track and use high pressure air to blow out the debris from the main channel / follow the cleaning procedure to remove debris.
Rollers lower when load is applied	Insufficient air supply	Check the air pipes and connectors for leaks and replace if necessary, refer to Section 8. Testing
		Inspect the airbags for leaks and replace as necessary, refer to Section 10.4 - PRT - Airbag Replacement.
		Make sure that the pressure from the air supply is sufficient and increase if necessary.
		Check pressure sensors are set at correct pressure.
	Load exceeds the weight limit of the system	Review and reduce the load.
		Review the load and the possibility of distributing the load more evenly across the van
Parking brake auto down not functioning	Air leak	Repair / replace any damaged piping / connections.

Note

If issues persist after attempted repairs, contact Joloda Hydraroll Ltd for further assistance.

12. Disposal of the System

WARNING
BEFORE YOU START TO DISPOSE OF THE SYSTEM, MAKE SURE THAT YOU HAVE READ AND KNOW THE HEALTH AND SAFETY INFORMATION, REFER TO SECTION 4. HEALTH AND SAFETY.

An approved person must do the disposal of the system. If you do not obey this instruction injury or death to personnel can occur.

When the system is unserviceable or the service life of the system has expired you must dispose of the system in accordance with local regulations and safety procedures.

13. Warranty

13.1 - Warranty Statement

This statement is part of and subject to Joloda Hydraroll Ltd's Warranty Terms and Conditions and contractual agreements specified in the Terms and Conditions of Sale.

This section only includes the general aspects of the warranty, refer to Joloda Hydraroll Ltd's Warranty Terms and Conditions and Terms and Conditions of Sale for more information.

You must not change any component in the system without approval from Joloda Hydraroll Ltd. Any changes could cause damage to the system or a malfunction.

Any changes to the system without approval from Joloda Hydraroll Ltd will result in the warranty being cancelled.

The Joloda Hydraroll Ltd warranty for the system supplied is only applicable if the system is operated and the maintenance done in accordance with this Manual.

The maintenance instructions in this manual are what Joloda Hydraroll Ltd thinks is the minimum amount of maintenance necessary for the operational reliability of the system.

If the system does not operate or it stops, an approved person must do the troubleshooting procedures, refer to Section 11. Troubleshooting, before you tell Joloda Hydraroll Ltd.

If you think that a problem with the system is covered by the warranty, you must tell Joloda Hydraroll Ltd or your local Joloda Hydraroll representative.

Any costs for maintenance done by the customer or a third party without written approval from Joloda Hydraroll Ltd, are not covered by the warranty.

13.2 - Period of Warranty

All systems supplied by Joloda Hydraroll Ltd have a warranty period of 12 months, which starts on the delivery date.

If the system is supplied by a third party and/or is an integrated part of a system supplied by a third party, the Joloda Hydraroll Ltd system is to be an integrated part of the resellers warranty. The warranty period of 12 months starts on the first day of installation.

14. Notes

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