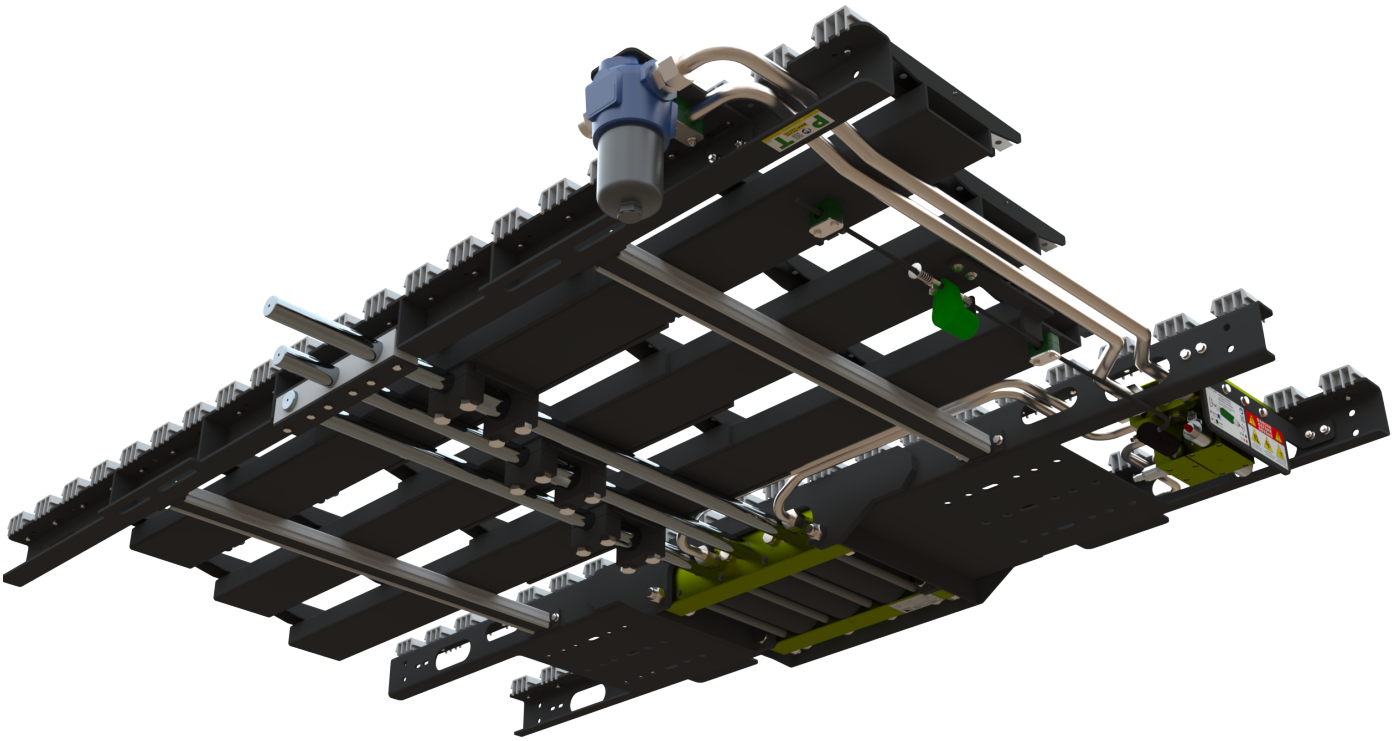
NEXUS™

powered by HALLCO™

INSTALLATION MANUAL

100 mm through 140 mm frames. Manual, hybrid and electric control function.



HALLCO™ INDUSTRIES

Original Instructions
E.&O.E.

Table of Contents

About This Manual

This manual is to be used as the primary guide for installing your NEXUS™ LIVE FLOOR® conveying system. A separate Owner's Manual and Repair Manual is also included in your kit.

Carefully read the Installation Manual and Owner's Manual. Make sure you have a complete understanding of the work to be carried out prior to starting. Both manuals include critical safety information that must be followed during the installation and operation of the equipment.

All manuals must be presented to the end user upon commissioning and be kept for future reference.[1]

The Owner's Manual includes additional information on the NEXUS™ systems not included in this manual. Including, preventative maintenance, spare parts and disassembly diagrams.

Hallco will periodically update these manuals. You can find the latest versions online at www.hallco.eu/support/ or you can contact your Hallco representative. Also note, in the lower right corner of each page is the Hallco part number and, if revised, a revision letter of the manual. This will allow you to quickly identify if you have the latest version.

Use this QR code to quickly locate manuals on your smart phone.

Safety

Your safety is the utmost importance to Hallco. Follow safe working practices while installing this system. Review all safety guidelines and pay attention to safety warning symbols as they will highlight specific dangerous aspects of the task at hand.

Only properly trained and authorized personnel shall install, operate and service Hallco equipment. Installers are expected to have a fundamental understanding of tool safety and safe working practices.

DO NOT deviate from these instructions or modify the equipment without written authorization from Hallco. Modifications can render the equipment unsafe and void your warranty.

Hallco is not responsible for equipment damage or personal injury as a result of failing to follow these instructions or failing to incorporate safe working practices.

FAILURE TO FOLLOW SAFETY GUIDELINES WILL RESULT IN INJURY OR DEATH.

1. Article 13 of the Machinery Directive requires a copy of this manual to be included as part of the Technical File for the machinery. Please retain a copy at all times.

Important Notes Regarding CE Compliance

The NEXUS™ LIVE FLOOR® conveying system is characterized as “Partly Completed Machinery” per article 1, section G of the Machinery Directive. **Due to the variables of trailer design, not all guards or safety features are able to be provided to satisfy the Machinery Directive.** Ensure the vehicle and equipment has been declared in conformity with the provisions of the Machinery Directive before placing into service.

It is strongly recommended the OEM perform a risk analysis on the completed machinery to identify additional hazards that must be protected against in order to meet CE compliance.

Hallco Industries has identified some of these risks and, without any obligation, indicates below possible additional, non exhaustive measures, that can be taken by the installer.

E-stop Accessibility:
The NEXUS™ is equipped with a single E-stop, fitted on the control box (HDS-E & HDS-H configurations only). This E-stop only covers the operators side of the trailer. OEM should perform a risk analysis to determine if additional E-stops are required in order to comply with the Machinery Directive.

Specifically, the OEM should determine if an E-stop(s) should be installed on additional sides or ends of the trailer to ensure quick accessibility in case of an emergency.

Adding E-stops can be done by branching these in line on the power line of the Live floor which is branched off of the power supply for the trailer lights.

E-stop Function:
The NEXUS™ is equipped with manual overrides (HDS-E & HDS-H configurations only) to be able to operate the system without current.

However this also means the present E-stop(s) won't stop the floor operation once the overrides have been activated.

It is therefore recommended to fit a hydraulic E-stop on the connection between the trailer and hydraulic pump on the truck. This is to be done at the installer's discretion based on the risk analysis of the completed machinery.

Guards:
The installer has to fit additional guards to prevent anyone from accessing the moving parts of the NEXUS™ LIVE FLOOR® conveying system. Proper guarding methods should be selected based on the risk analysis of the completed machinery.

Refer to Annex III of this manual for NEXUS™ Declaration of Incorporation and EHSRS Compliance Tables for further information.

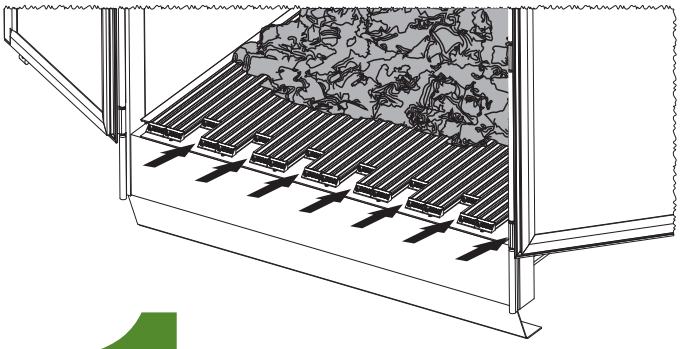
What is a Live Floor™ Conveyor and How it Works

A Live Floor™ conveyor is designed to unload the contents of a trailer through the rear doors without the need for lifting or tilting the trailer itself.

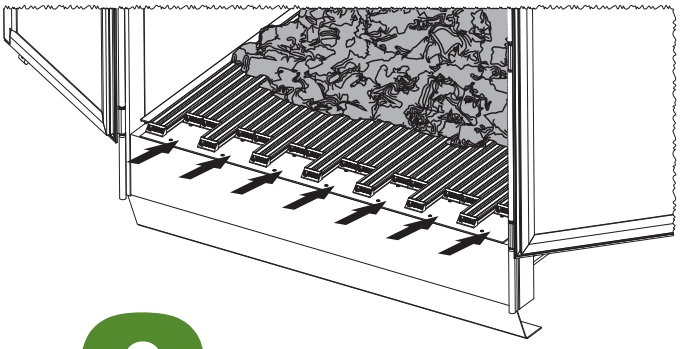
A Live Floor™ conveyor is made of multiple slats or boards that are as long as the conveyor. The slats are arranged side by side and all at the same level so they cover the entire width of the floor. They don't move up and down or side to side, only back and forth.

Entire trailer loads are unloaded at once by conveying all of the slats together in one direction for a stroke; keeping two thirds of the slats stationary and retracting one third at a time under the load to their original position; then conveying all of the slats together again.

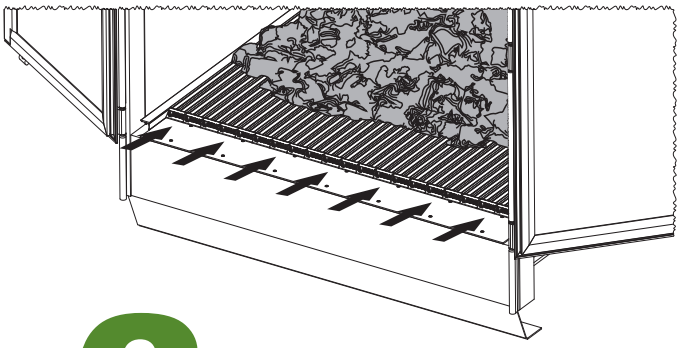
The slats are divided into three groups and each group is driven by a hydraulic cylinder. There are very few moving parts.



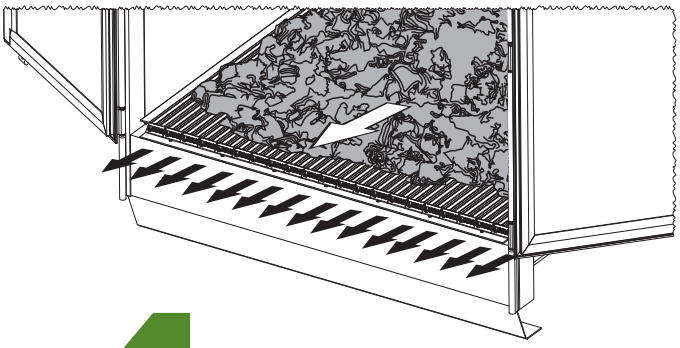
1 First group retracts



2 Second group retracts



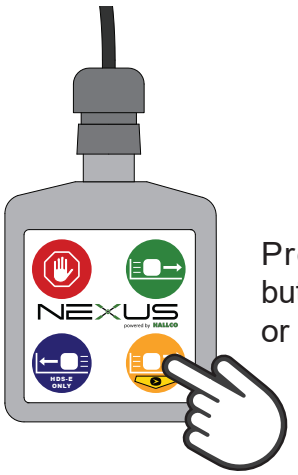
3 Third group retracts



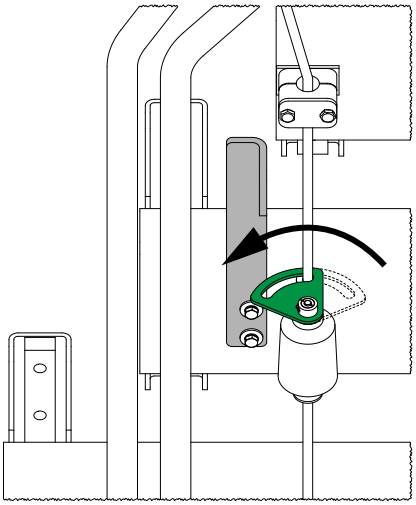
4 All groups convey together

The Benefits of Hallco's Accelerator Technology

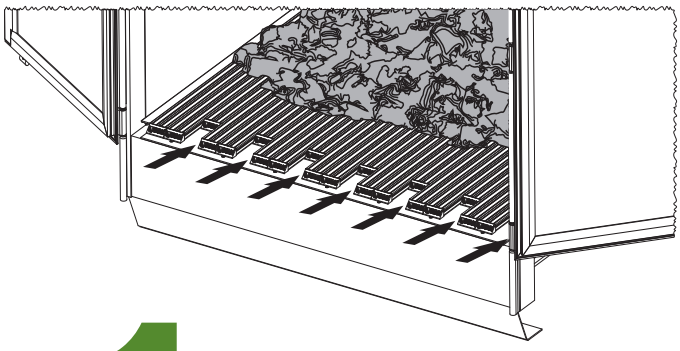
The NEXUS™ LIVE FLOOR® conveying system can be optionally equipped with Hallco's Accelerator feature. The Hallco Accelerator allows for 30% faster unloading at the touch of a button. Because some loads only need the force of a 2-step cycle, the Accelerator switches your floor from a standard 3-step operation to a 2-step all within the same system.



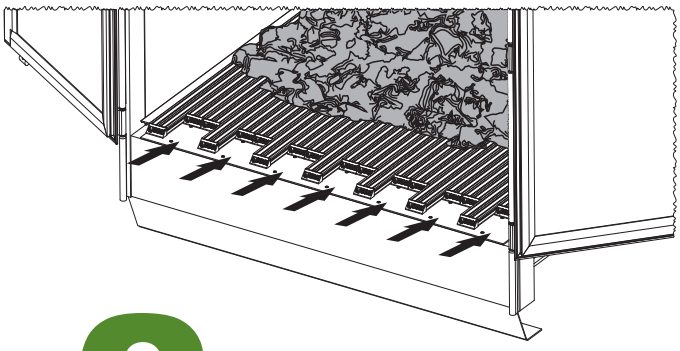
Press the Accelerator button on the base control or the remote control.



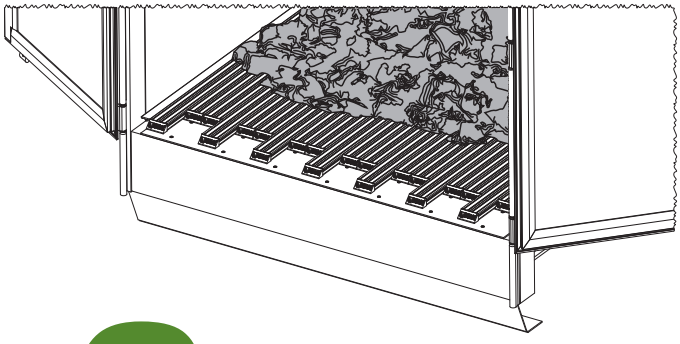
Accelerator Actuator Toggles



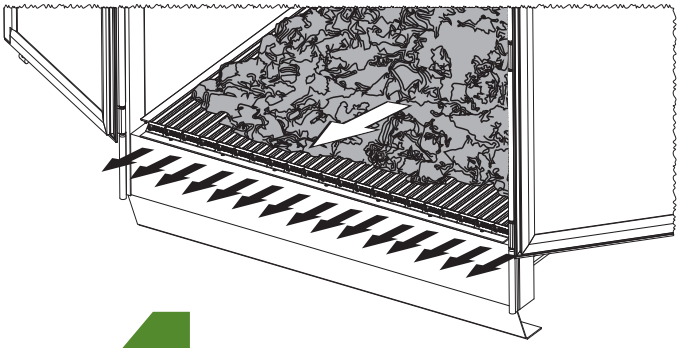
1 First group retracts



2 Second group retracts



3 Third group remains, saving valuable time



4 Two groups convey together

Safety Symbols

The following safety symbols are used throughout this manual and on safety decals; they represent potential hazards, mandatory notices and safety precautions that should be taken while working with Hallco equipment. A description of the alert will accompany each icon. Familiarize yourself with them below to quickly identify important information while working on this equipment.

These symbols indicate immediate dangers or hazards associated with the task at hand. Take extra precautions where indicated:

Signifies a general hazard to your safety or potential damage to equipment.

Signifies a trip hazard.

Signifies a crushing hazard between two moving parts.

Signifies a slip/fall hazard. SRB or SRC rated anti-slip footwear should be used.

Signifies an electrical hazard.

Signifies a crushing hazard by ejected or falling loads.

Signifies a burn hazard or hot surface.

These symbols indicate a safety requirement or informational safety instruction:

Signifies a mandatory safety precaution that must be taken.

Signifies there is additional information in a supplementary manual or guide that must be read prior to carrying out a task.

Signifies all forms of energy must be locked in the OFF position prior to carrying out a task. Follow safe lock-out-tag-out procedures.

Signifies the various forms of personal protective equipment (PPE) required to safely complete a task.

Safety Guidelines

BE CAREFUL around the NEXUS™ LIVE FLOOR® conveying system. It is industrial equipment that can move without warning!

STOPPED EQUIPMENT IS NOT SAFE EQUIPMENT! Just because the machine is not running does not mean it is safe. LOCK OUT AND BLOCK all stored energy prior to working on the equipment.

Consider all these areas **EXTREME HAZARD ZONES** and take extra precautions when nearby. Visually clear area prior to operating the equipment.

DO NOT STAND NEAR THE TRUCK WHILE UNLOADING!
Operators may leave the truck in NEUTRAL to assist in unloading. TRUCK MAY MOVE UNEXPECTEDLY crushing someone between the truck and immovable objects or under the tires.

DO NOT LEAVE THE TRUCK UNATTENDED WHILE UNLOADING!
Materials being unloaded will behave in unpredictable ways causing jams or creating projectiles. Be aware of the area around the vehicle and be ready to initiate an emergency shut-down at all times.

DO NOT STAND BEHIND THE TRAILER!
Do not stand near the discharge end of a Live Floor conveyor. Materials may get stuck or jammed. DO NOT attempt to unjam the materials from the rear of the trailer! Doing so can cause the load to shift unexpectedly and bury or overwhelm persons in this area.

DO NOT ENTER THE TRAILER WHEN IT IS LOADED!
Loads are unstable and can shift while in the trailer. DO NOT stand between the load and the front wall of the trailer. The load can reverse and crush you! DO NOT attempt to climb the load!

DO NOT TOUCH THE CROSS-DRIVES WHEN ENERGIZED!
Cross-drives will crush you when they operate! DO NOT place your hands near or in-between the cross-drives when the system is powered on and hydraulics are pressurized. Only enter this area after proper lock-out tag-out procedures have been implemented!

DO NOT TOUCH THE FRAME WHEN ENERGIZED!
Cross-drives will crush you when they operate! DO NOT place your hands near or in between the frame and the cross-drives or cross-drive shoes when the system is powered on and hydraulics are pressurized. Only enter this area after proper lock-out tag-out procedures have been implemented!

DO NOT TOUCH THE SLATS WHEN ENERGIZED!
Slats can crush hands or feet between the front wall and the slat ends. Sharp edges on the slats can cut you!

DO NOT TOUCH THE HYDRAULICS!
Allow the system to cool before touching. The hydraulic systems will get hot enough to burn you.

There are many other areas on the NEXUS™ LIVE FLOOR® conveying system that are hazardous. Take extra precautions when working with the system and always follow safe lock-out tag-out procedures.

Prior to starting the NEXUS™ always complete the PRE-STARTUP checklist and the RUNNING safety checklist on page 41.

General Guidelines for Proper Operation of your NEXUS™ LIVE FLOOR®

Your NEXUS™ LIVE FLOOR® will experience reduced efficiency at extreme temperatures. If you are operating your floor in extreme hot or cold temperatures you will want to make accommodations to your system for optimum operational performance. See below for critical temperature ranges.

- ISO 32/46 hydraulic fluid: Temperature range varies by oil manufacturer and additives in the oil. Check with your hydraulic fluid supplier for optimal temperature range.
- Internal seals and o-rings: -20° C to +100° C [-4° F to +212° F].
- Floor slats and seals: -10° C to +82° C [+14° F to +179.6° F].

Your NEXUS™ LIVE FLOOR® conveying system will **convey poorly or not at all** if any of the following conditions apply to the material you are trying to convey:

- If the load adheres to the slats or the walls of the container.
- If the load has a higher pressure against the walls than against the floor. This happens when a light weight, compressible material is loaded from the top and then compressed into the container from the top. The risk of this happening can be reduced by sloping the side walls so that the distance between the walls is narrow at the top and wide near the floor.
- If the load is not cohesive. In order to unload all of the material a tarp or other form of sheeting will need to be placed under 2-3m [6.6'-9.8'] of the load and all of the way up the front wall. This sheeting will need to be free to move with the load.
- If a load is palletized on pallets that do not evenly distribute the weight over their base. This causes the pallets to only be moved by one or two of the slat groups making them try to twist instead of convey. Place something under these pallets that will more evenly distribute the weight across the floor.

The NEXUS™ LIVE FLOOR® conveying system **will wear out quickly** if you load it with materials of the following characteristics:

- Abrasive materials such as crushed glass or sharp gravel.
- Corrosive materials such as chicken manure or other materials with a very high or very low acidity [pH] level.
- High impact where heavy objects are dropped directly on the aluminium slats from over 2m [6.6'] height.
- High temperature, materials exceeding +75° C [+167° F].

The NEXUS™ LIVE FLOOR® is not designed to prevent load liquids from leaking to the ground.

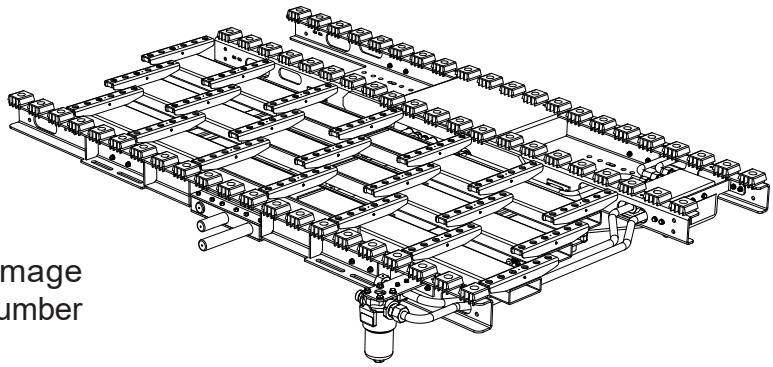
The ends of the slats will wear out quickly if the load is not free to fall off the end of the conveyor but is restrained by a wall or the pile of unloaded material.

In freezing conditions the floor may hesitate or not move due to slats being frozen together. If the floor exhibits signs of jamming in freezing conditions wait until temperatures rise enough to thaw the load before attempting to unload.

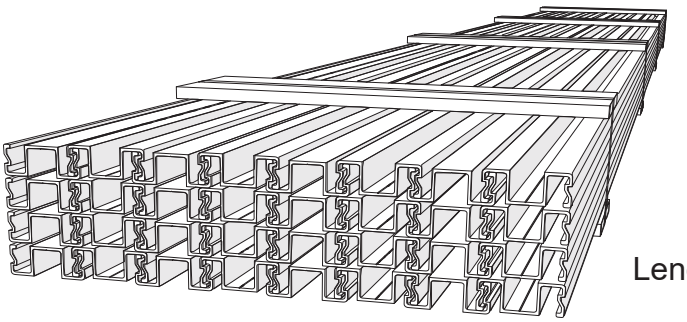
Evenly distributed loads will provide for the best unloading/loading conditions. When possible load the trailer as evenly as possible.

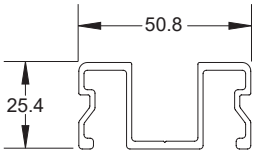
Identify Your Kit Parts

Your NEXUS™ LIVE FLOOR® kit will be provided with some or all of the parts shown below. Use the pictures below as a guide to identify the parts on your packing slip. If anything is damaged or believed to be missing contact your Hallco representative immediately.

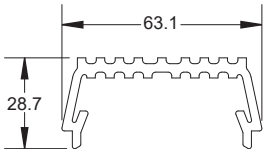


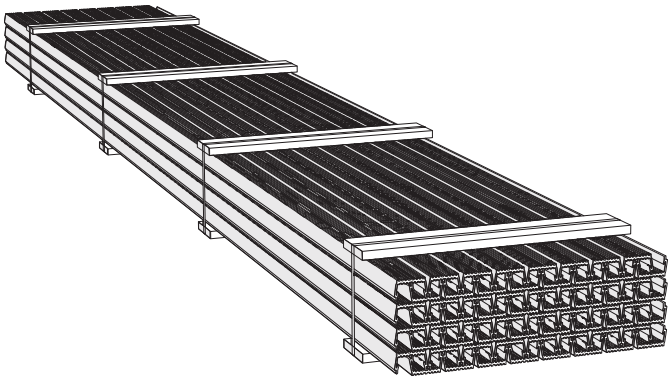
Complete Drive Unit (CDU)
Your configuration may differ from the image depending on options ordered. Hallco part number varies based on configuration.



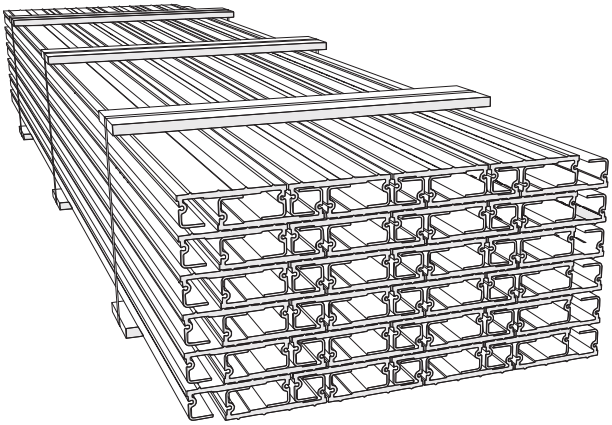


Aluminium Easy Sub-Deck, 50 mm x 25 mm
Hallco #41-7415
Lengths and quantity will vary based on application.
Contact your Hallco representative.



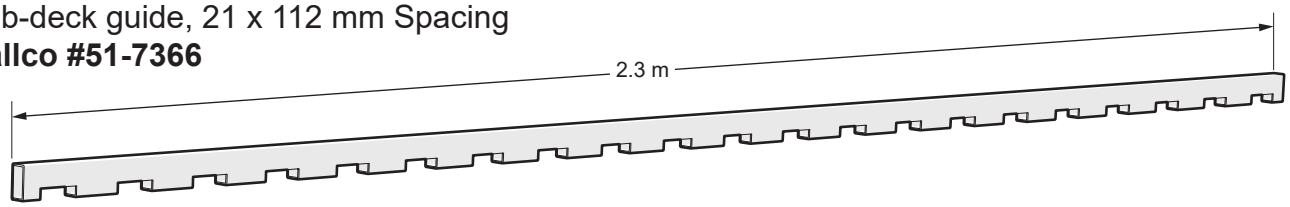


Continuous Easy Bearing
Hallco #39-6602 [3.6m length]
Quantity will vary based on application.
Additional bearing styles available.
Contact your Hallco representative.



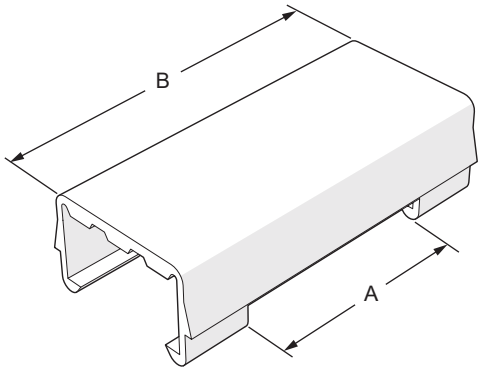
Optional kit item
Aluminium Slats - Many options available.
Lengths and quantity will vary based on application.
Contact your Hallco representative.

Optional kit item
Sub-deck guide, 21 x 112 mm Spacing
Hallco #51-7366

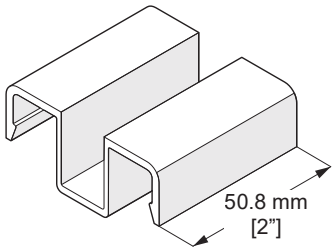


Optional kit item ***(in place of Continuous Easy Bearing)***
FlicOn bearings for Hallco aluminium sub-deck
Size varies based on cross member size, contact your Hallco representative.

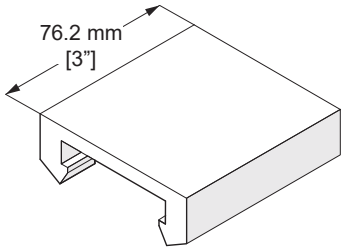
Dimension A		Dimension B		Hallco P/N
50.8 mm	2.00"	108.0 mm	4.25"	39-2486
57.1 mm	2.25"	114.3 mm	4.50"	39-2487
63.5 mm	2.50"	120.7 mm	4.75"	39-2488
69.9 mm	2.75"	127.0 mm	5.00"	39-2489
76.2 mm	3.00"	133.4 mm	5.25"	39-2490



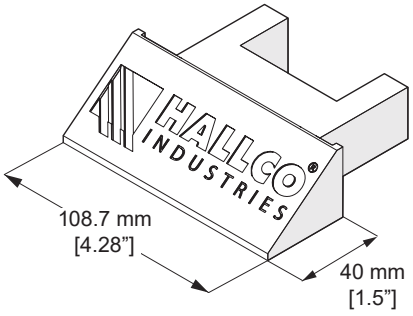
Aluminium bearing stop for Hallco aluminium sub-deck
Hallco #41-6621



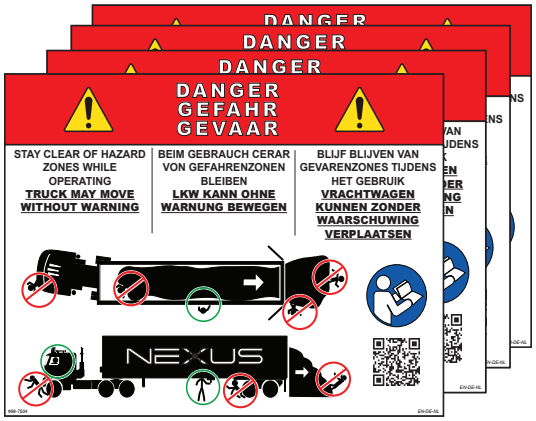
Optional kit item
Plastic Anti-lift Block for Hallco aluminium sub-deck
Hallco #39-7367



Optional kit item
Aluminium slat end cap for Hallco aluminium slats
Hallco #41-7060

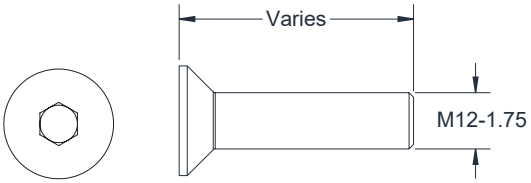


Hazard Zone Decals:
Qty 4 - 127mm x 203mm
[5”x8“] **Hallco #99-7504**



Optional Fasteners:

Deck Bolts
M12-1.75
Length varies based on slat type.

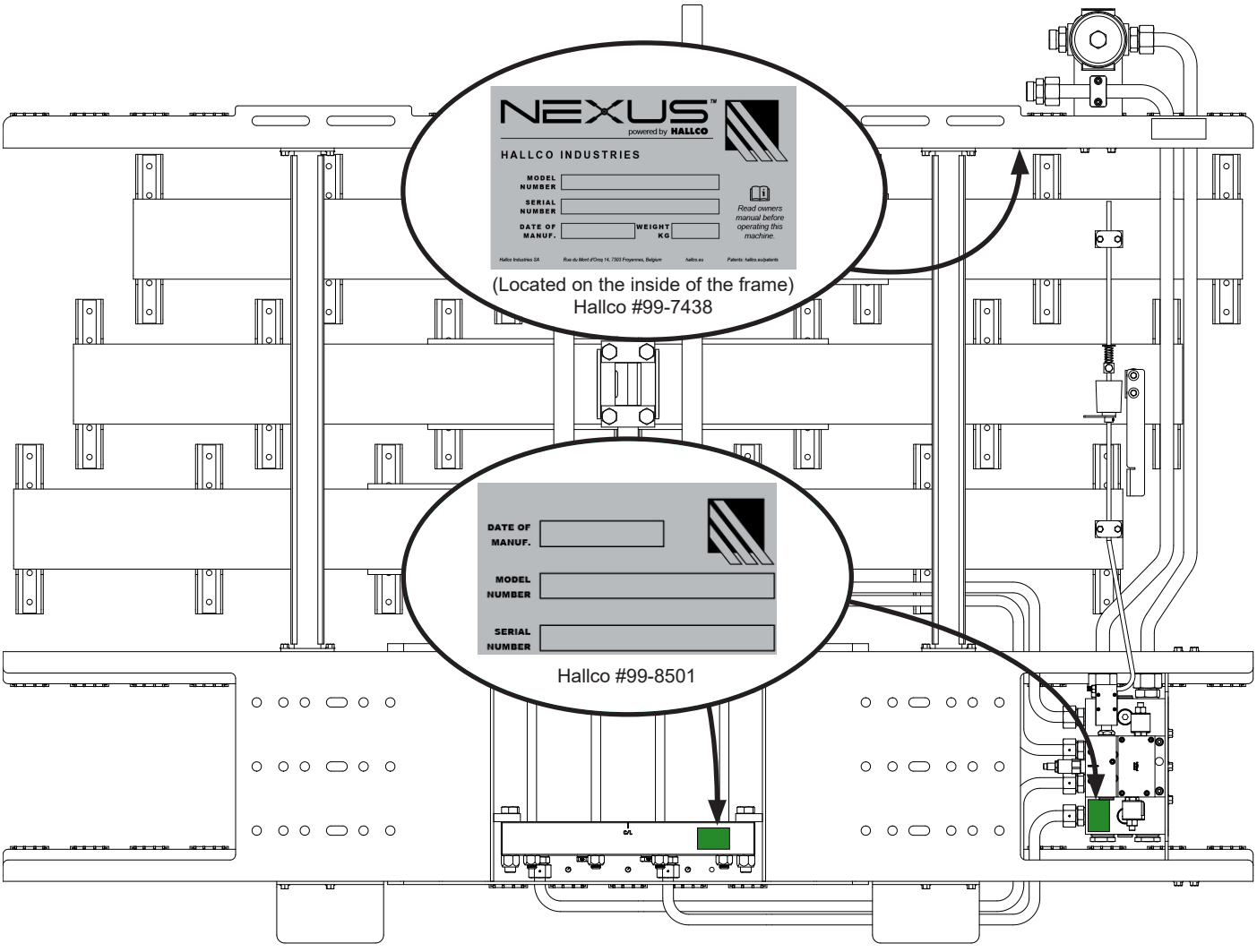


NEXUS™ Identification

When requesting technical support it is important to have your NEXUS™ Serial number and Model number available. There are separate identification numbers for the system, HDS valve and HPU Please locate the serial numbers, model numbers, and date(s) of manufacture and write them below for quick future reference.

- System Identification: Located on the inside of the frame near the filter bracket bolts.
- HDS Valve Identification: Located on the underside of the main valve body.
- HPU Identification: Located on the underside of the base manifold.

If your serial plates become, lost, damaged or unreadable contact your Hallco representative for replacements.

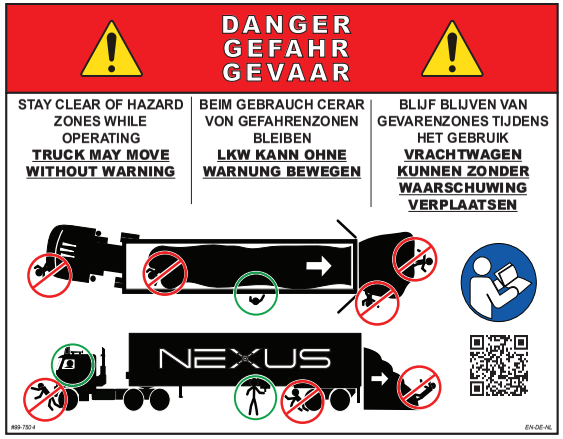


System Identification	HDS Valve Identification	HPU Identification
Serial Number: _____	**Serial Number:** _____	**Serial Number:** _____
Model Number: _____	**Model Number:** _____	**Model Number:** _____
Date of Mfg.: _____	**Date of Mfg.:** _____	**Date of Mfg.:** _____

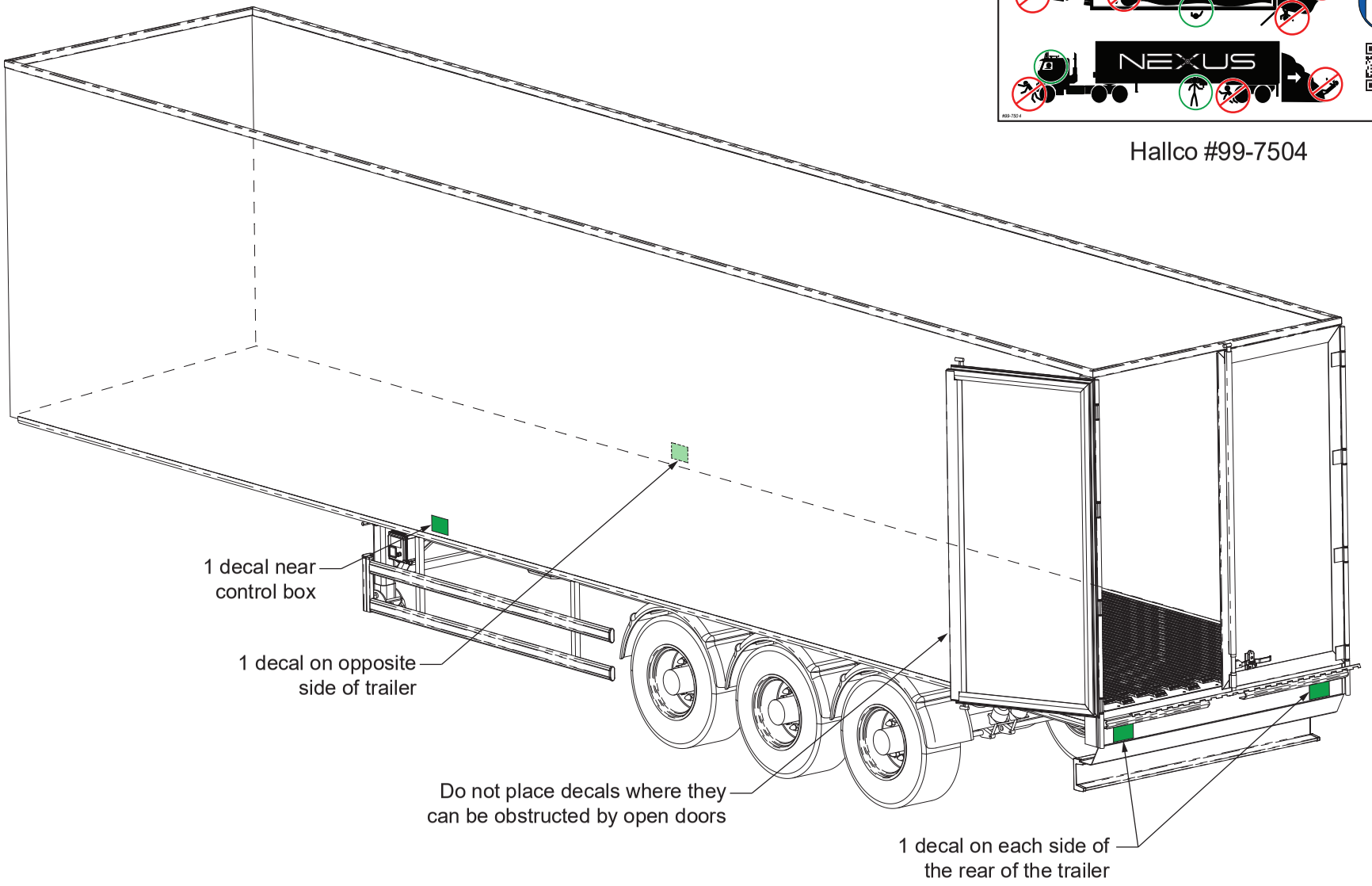
Safety Decals

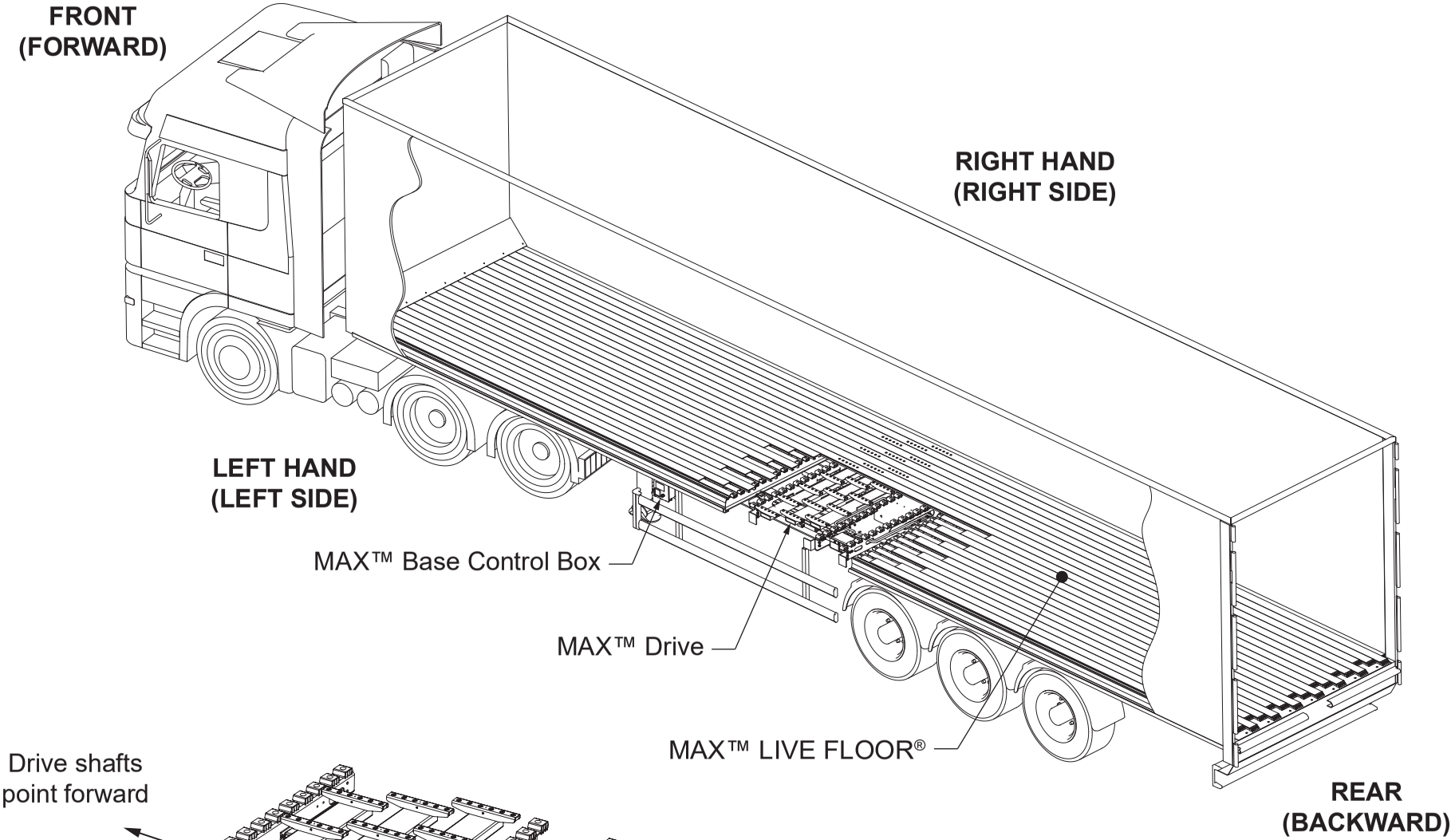
Hallco provides four decals warning of hazard zones. The decals must be applied so that they are easily identifiable from all approach angles.

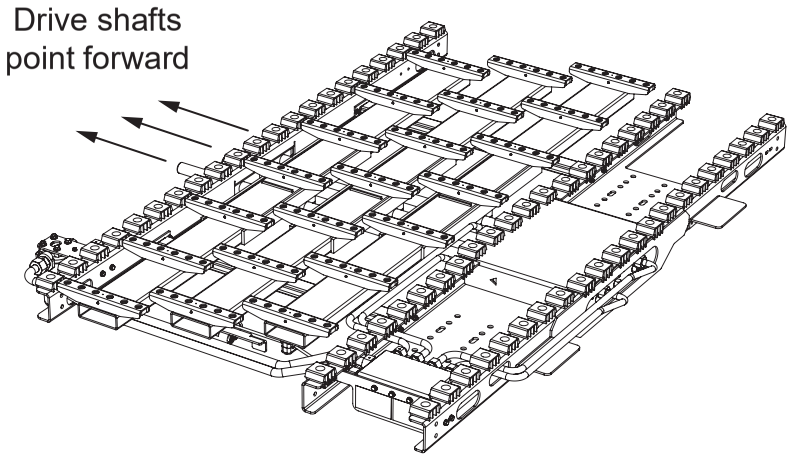
If these decals are damaged or removed contact your Hallco representative for replacement.



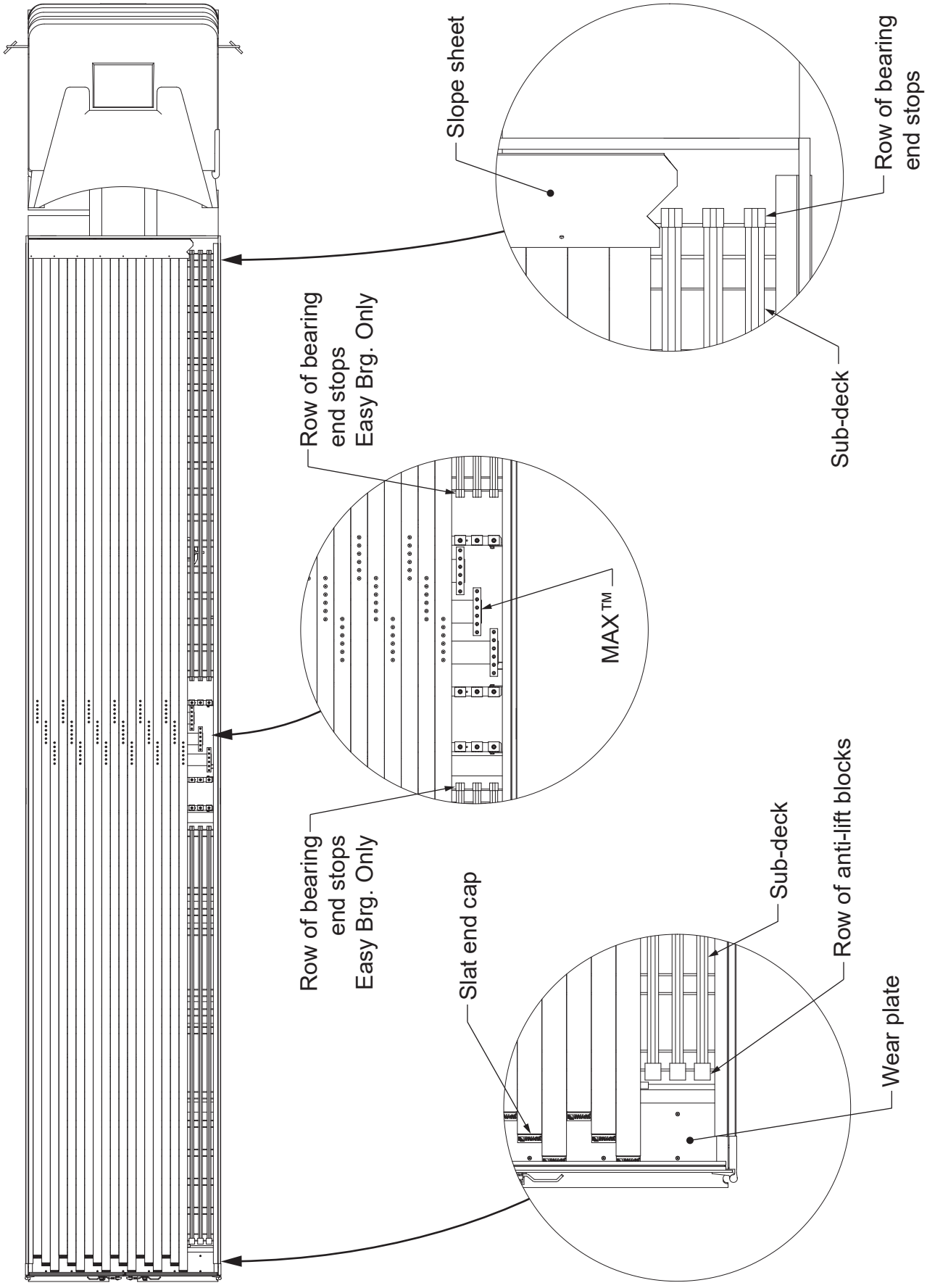
Hallco #99-7504



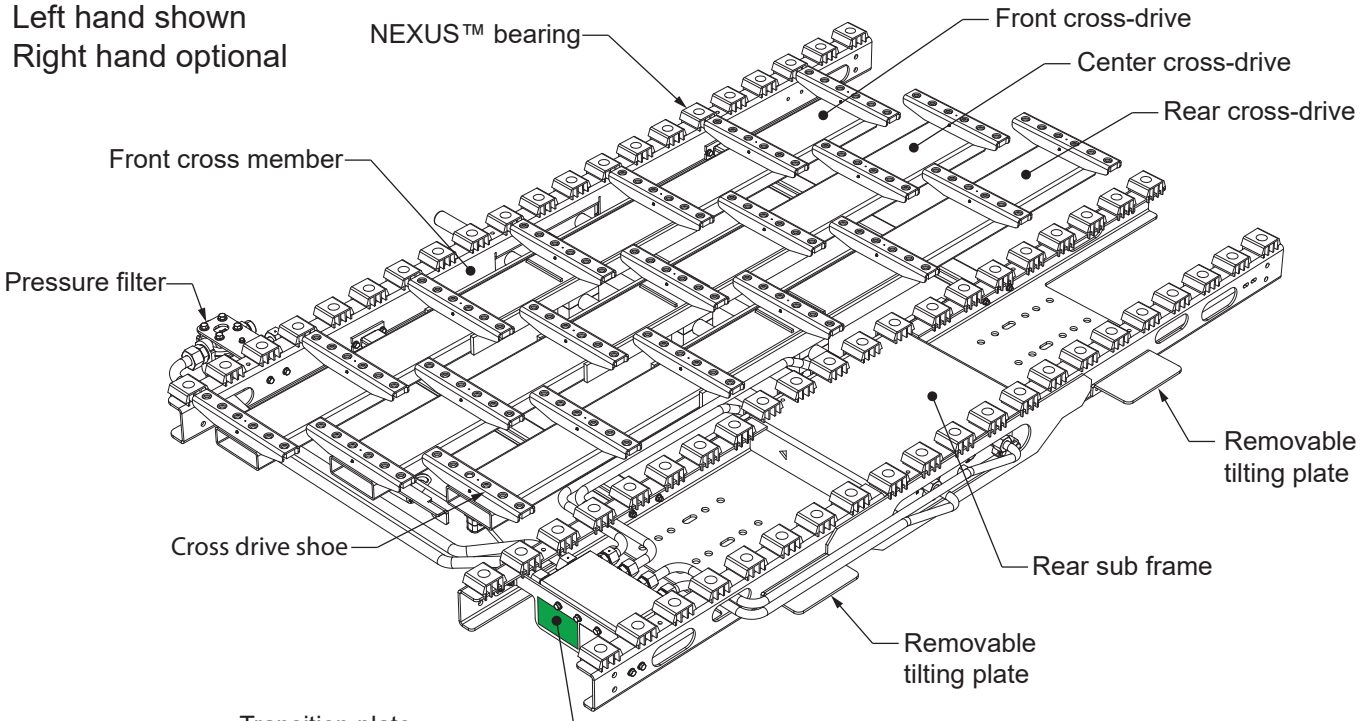


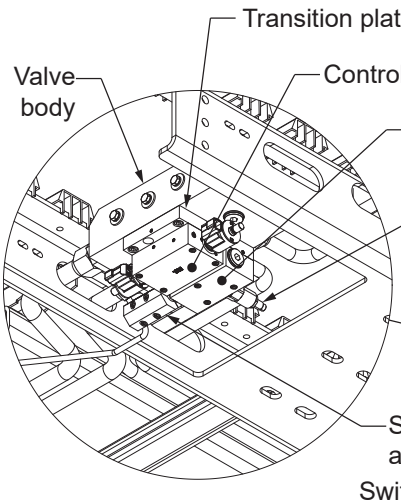


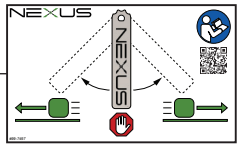
Left hand configuration shown
Right hand configuration optional


Slope sheet
Row of bearing end stops
Sub-deck
Row of bearing end stops Easy Brg. Only
MAX™
Row of bearing end stops Easy Brg. Only
Slat end cap
Sub-deck
Row of anti-lift blocks
Wear plate

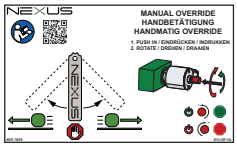
Left hand shown
Right hand optional



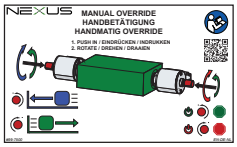




Hallco #99-7497
HDS-M Version

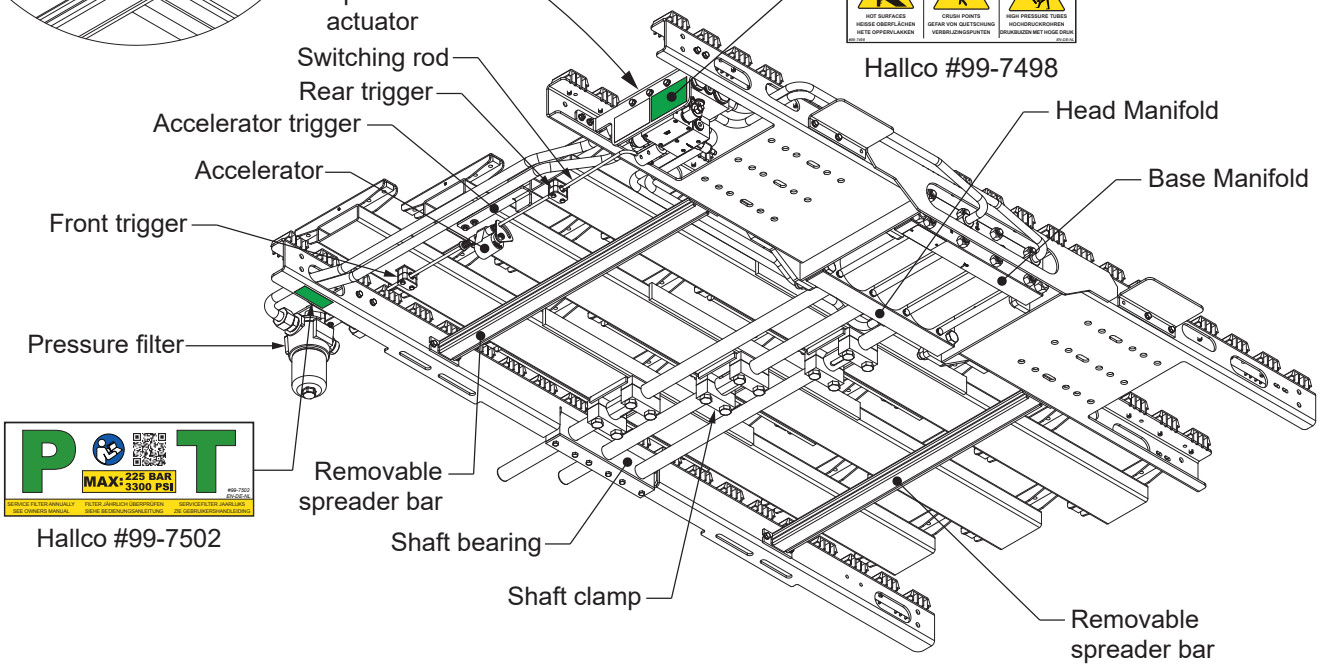


Hallco #99-7659
HDS-H Version



Hallco #99-7500
HDS-E Version

Hallco #99-7498



Hallco #99-7502

NEXUS™ System Specifications

Shaft Diameter	38.1 mm [1.5"]
Cylinder Diameter	100 mm [3.94"]
Stroke	200 mm [7.87"]
Max. Operating Pressure	225 bar [3300 psi]
Max. Operating Flow Rate	120 lpm [32 gpm]
Load Capacity	40 Metric Ton [44 Ton]

Theoretical Minimum Unload Times for a 13.6 m [44'] Trailer

Oil Flow		Cycles Per Minute	Convey Speed[1]		Unloading Time[1] (minutes)
LPM	[GPM]		m/min	[ft/min]	
20	[5]	2.29	0.50	[1.64]	29.7
40	[11]	4.58	0.90	[2.95]	14.9
60	[16]	6.87	1.40	[4.59]	9.9
80	[21]	9.15	1.80	[5.91]	7.4
100	[26]	11.44	2.30	[7.55]	5.9
120	[32]	13.73	2.70	[8.86]	5.0

1 Convey speeds and unload times shown are at 100% efficiency and do not account for such things as load slippage or other environmental factors. Actual conveyor speeds and unload times vary by load type.

Hydraulic System Requirements

Hydraulic Fluid

Anti-Wear (AW). Viscosity of ISO 32 to 46
Petroleum OR mineral base.
Moisture content, H_2O < 1%
Some eco-friendly oils may be used.
Contact Hallco for compatibility.

Fluid Temperature: < 82° C [180° F]

Pump

Pump must be a Gear, Vane or Piston type that will provide the desired oil flow rate at a full 250 bar [3,600 psi].
Pump must be matched to it's power source.
Drive it directly or through a PTO by an engine or electric motor powerful enough to support the flow and pressure.

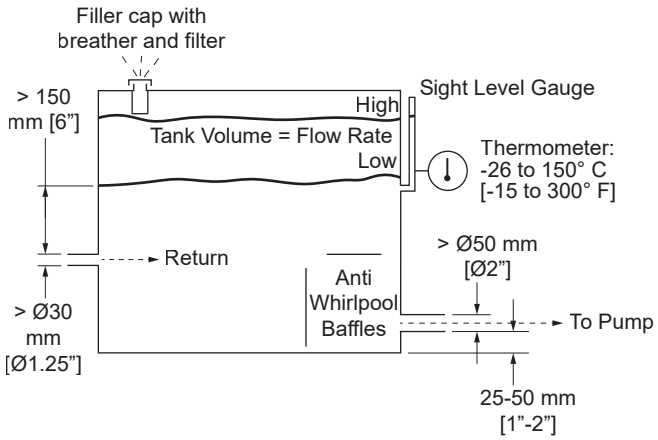
Summary:

Recommended flow: 20-120 lpm [5-32 gpm]
Pressure rating: ≥ 250 bar [3,600 psi]
Power source for 120 lpm [32 gpm]: ≥ 50 kw [68 hp]
Speed: Motor or PTO ↔ Pump

Tank / Reservoir

Use a reservoir that has all of these features:

- Capacity equivalent to desired flow rate. i.e. 120L [31.7 gal] capacity for 120 lpm [31 gpm] flow rate.
- Inlet diameter greater than 30 mm [1.25"].
- Outlet diameter greater than 50 mm [2.0"].
- Turbulence reducer on return inlet.
- Pump supply outlet near bottom.
- Whirlpool prevention on the outlet.
- Filler cap with breather and filter.
- Visible fluid level gauge.
- Visible thermometer.
- Oil heater for climates with ambient temps below 0°C [32°F].



Hydraulic Supply Circuit

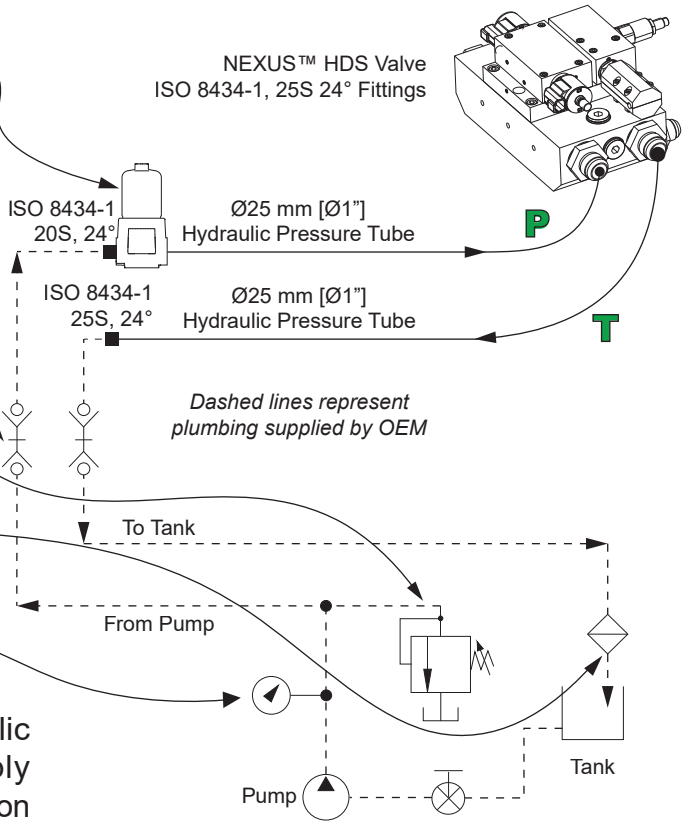
25 micron (max.) pressure filter rated to handle the maximum pressure and flow. Included with the NEXUS™ system.

Quick-connects that are matched and rated for the maximum system pressure and flow rate.

Pressure relief valve set at the maximum operating pressure of the pump and rated to handle at least the maximum pump output flow.

25 micron (max.) return filter rated to handle more than the maximum pump flow. Place it as close to the tank as possible. Make the hydraulic line between the filter and the tank at least Ø38 mm [Ø1.5"] to prevent filter failure.

Visible pressure gauge. 0 to 350 bar [0 to 5000 psi]. Glycerine filled.



Hallco recommends consulting a hydraulic specialist to design the hydraulic supply system. Refer to pump supplier documentation for further information.

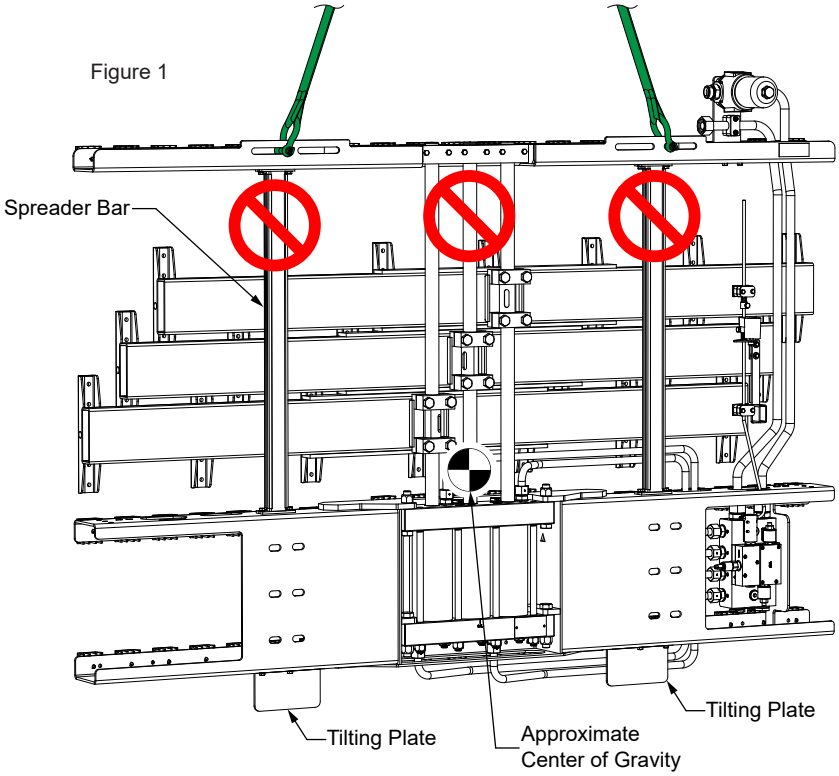
Proper NEXUS™ Lifting

The NEXUS™ can be lifted vertically using the hooks at the front of the unit (fig. 1).

When lifting vertically it is recommended you adjust the cross-drives close to the manifold as shown to keep the centre of gravity as low as possible for ease of manoeuvring.

Tilting plates are supplied to offer support when the NEXUS™ is being lifted; and to protect the hydraulic tubes. Tilting plates and spreader bars can be removed after installation to save 10.1 kg [22.3 lb] from the unit.

Figure 1



Always inspect lifting devices and remove from service immediately if there are signs

DO NOT lif the NEXUS™ by the cross-drives, shafts or spreader bars or hydraulic plumbing.

For lifting purposes only use devices capable of lifting 500kg [1,100lbs]

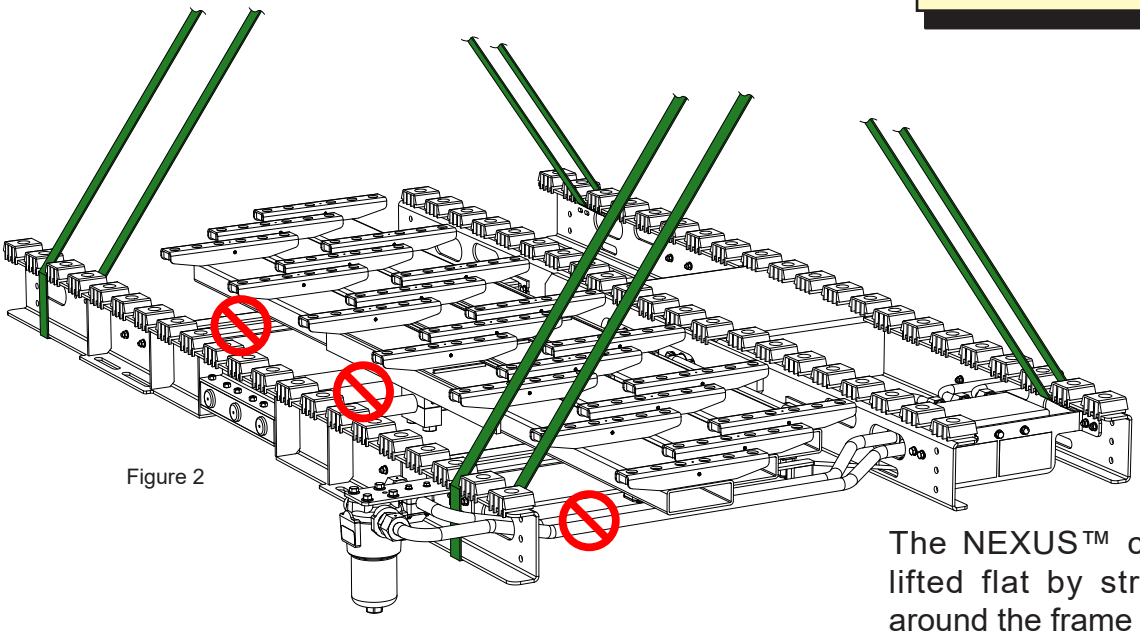


Figure 2

The NEXUS™ can also be lifted flat by straps routed around the frame and through the frame slots (fig. 2).

Check Frame

Before installing sub-deck you must check the trailer frame for accuracy.

BE EXTREMELY THOROUGH and check multiple places along the frame if installing the NEXUS™ in a used trailer.

1. Visually check frame and cross members as a whole for twisting, bowing and other problems.
2. Stretch a string tightly down the centre of the entire frame to use as a straightness reference. Make sure the string doesn't contact anywhere but at its ends! Measure every 0.5m [18"] along the length of the frame from the side rail to the string. These measurements will show any bowing of the side rails and lower side walls. Repair bowing that is more than 6mm [1/4"] (fig. 1).
3. Use a straight edge slightly shorter than a cross member. Lay the straight edge across the length of each cross member and check them for bowing. Fix/replace any that are bowed more than 3mm [1/8"].
4. Use the straight edge again to check that the tops of the cross members are level with each other. Fix/replace any that are off more than 3mm [1/8"]. Low cross members can be shimmed to bring them to the level of the surrounding cross members (fig. 2 & 3).
5. Check cross member size. The cross member height must be the same height as the NEXUS™ frame (80, 100, 120 & 140mm). If using FlicOn style bearings the cross member flange CANNOT exceed 76.2mm [3"] (fig. 3).

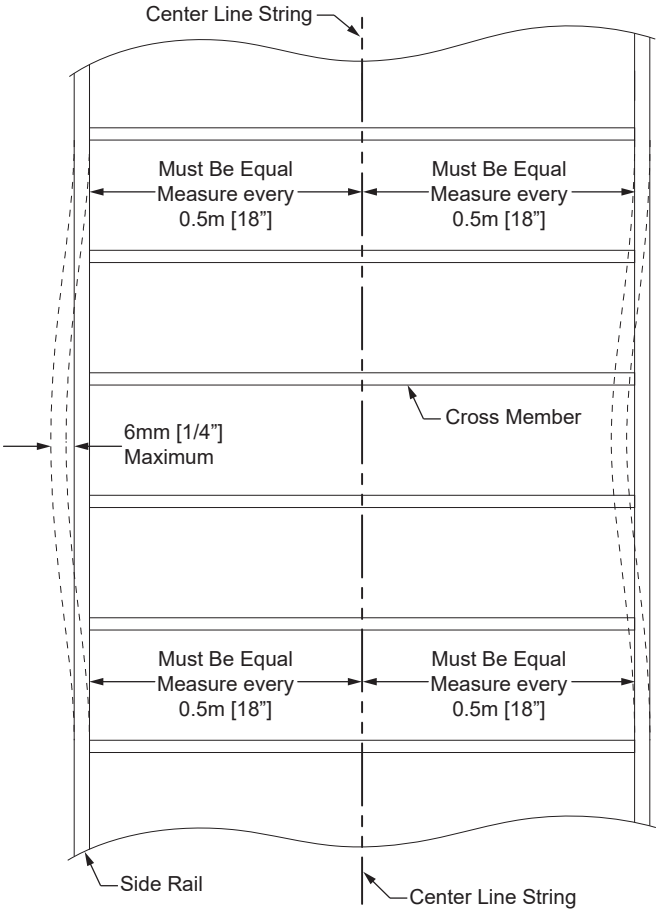


Figure 1

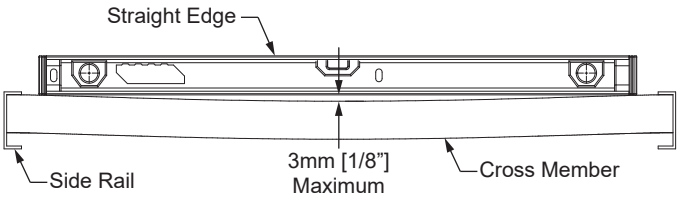


Figure 2

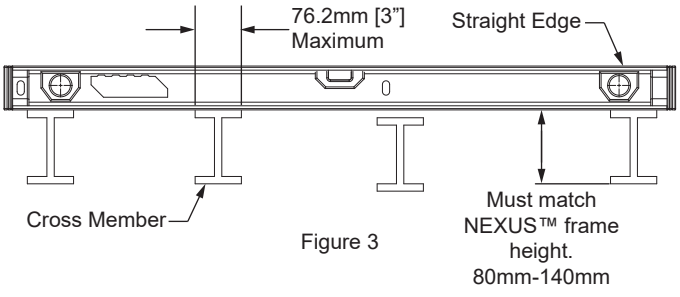


Figure 3

CAUTION! Cross members have uneven surfaces and gaps that can trap limbs causing slips, falls and severe bodily injury.!

Sub-deck Installation

1. Install a 5mm [0.2”] thick x 300mm [11.8”] deep x 2.5m [98.4”] wide UHMW or steel wear plate on the rear sill of the trailer (optional, Hallco #39-7642). Use counter sink fasteners to keep secure (fig. 3). Trim width to fit your trailer sill. Support the sill plate well enough that it doesn't bend down under load
2. NOTE: Any horizontal surface directly under the subdeck will collect material causing the slats to lift. Place holes in these surfaces to allow cleaning.
3. Before installing sub-deck provide an open space for the NEXUS™ to be installed. The distance between the inside edge of the nearest cross members must be a minimum of 1900mm [74.80”] and a maximum of 2000mm [78.75”] (fig. 1). Note: See page 26 for positioning the NEXUS™ within this space
4. You should cut your sub-deck before installing. You will have a front length and a back length of sub-deck. To get proper sub-deck lengths measure the outside-to-outside distance of the cross members and add 100mm [3.94”] to this measurement (fig. 1).
5. Centre the first sub-deck on the frame using a centreline string and clamp in place (fig. 1). Make sure each end of sub-deck overlaps cross member by 50mm [2”] (fig. 2 & 3). Then check the sub-deck along the length of the string to verify it is straight. (fig. 1, page 21).
6. Secure the sub-deck at every cross member by a short weld, rivet or if your cross member is steel you can use a self tapping screw (fig. 4).

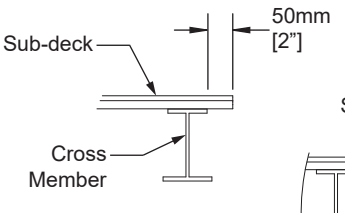


Figure 2

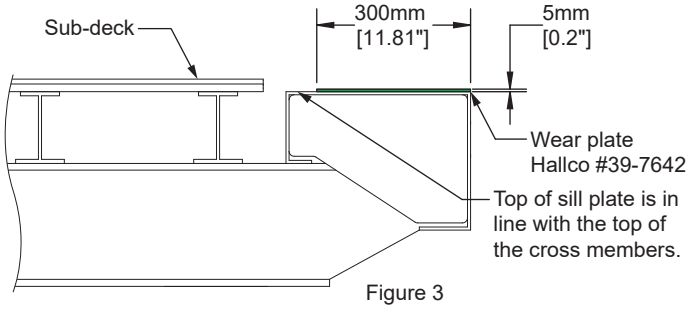


Figure 3

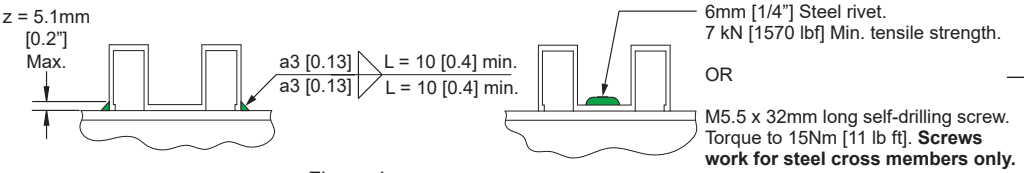


Figure 4

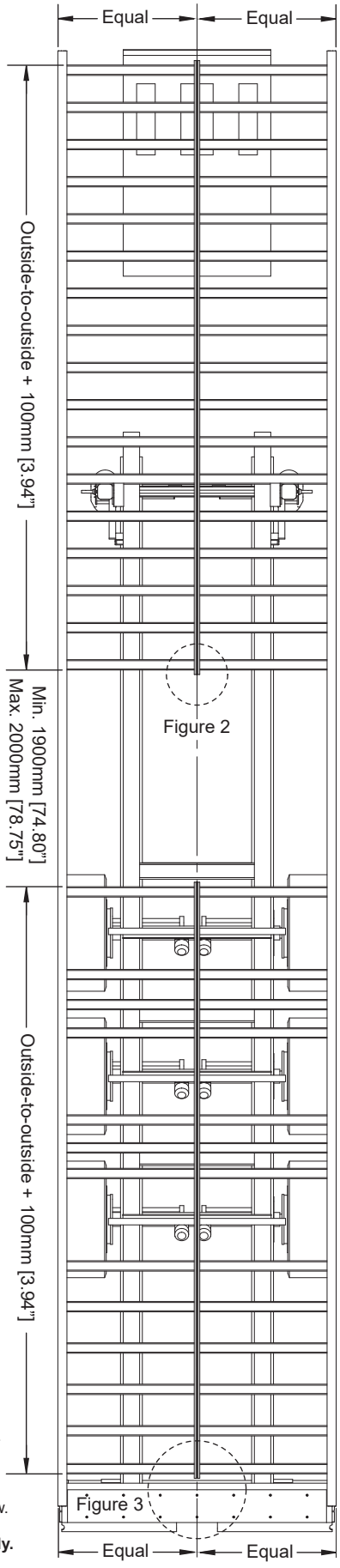
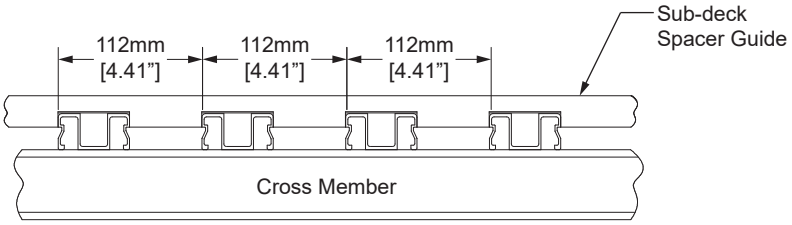


Figure 1

6. Align the remaining front sub-deck pieces using the sub-deck spacer guides provided (reference Hallco #51-7366).
7. Tip: Keep the alignment jigs close to the cross members where the sub-deck is being fastened
8. Continue to slide the sub-deck spacers along as you secure the sub-deck to the cross members (see fig. 4, page 22) for securing methods.
9. Repeat the process with the rear sub-deck pieces (fig. 1).

CAUTION! Deck has uneven surfaces and gaps that can trap limbs causing slips, falls and severe bodily injury.!



Proper use of sub-deck guide

Figure 2

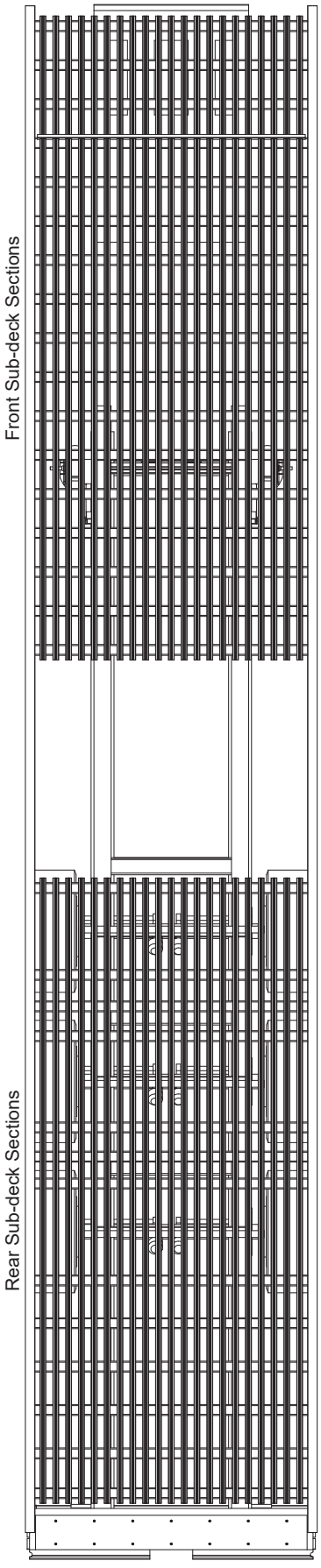
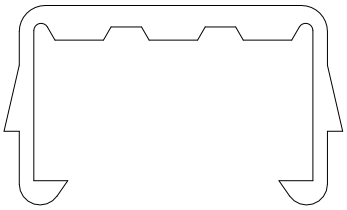


Figure 1

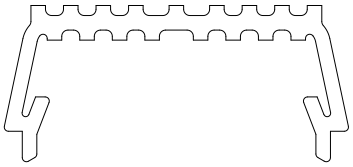
What you need to know about Hallco bearings

Hallco offers two styles of bearings. FlicOn bearings and Hallco brand Easy bearings. Hallco recommends Easy bearings due to their ease of installation and special design that protects and extends the life of your slats.

Determine the style of bearing you are installing and follow the installation instructions. This page for FlicOn bearings and next page for Easy bearings.



FlicOn Bearing

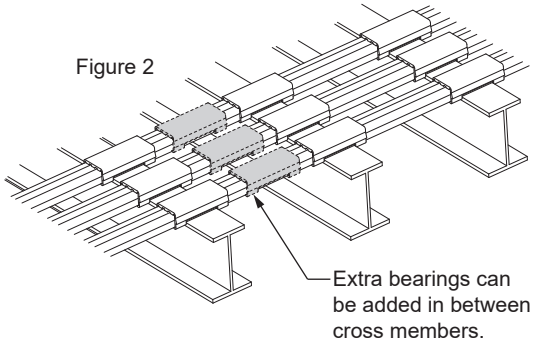


Continuous Easy Bearing

Installing FlicOn Bearings

1. Check your cross member flange size. Your FlicOn bearings should fit over the cross member flange and have little forwards and backwards movement. Hallco provides a variety of bearing sizes. Make sure you have the bearing that best fits your cross member flange (refer to chart page 11).
2. FlicOn bearings must be installed at the intersection of every sub-deck and cross member (fig. 2). DO NOT install FlicOn bearings in the zone where the end of the slats cycle.
3. Install FlicOn bearings in between the rear crossmember and the anti-lift blocks.
4. Extra bearings may be installed in between cross members. Start with rows of bearings on either side of the NEXUS™ frame and at the rear sill of the trailer. Extra bearings increase stability that improves seal performance and bearing life.

Figure 2



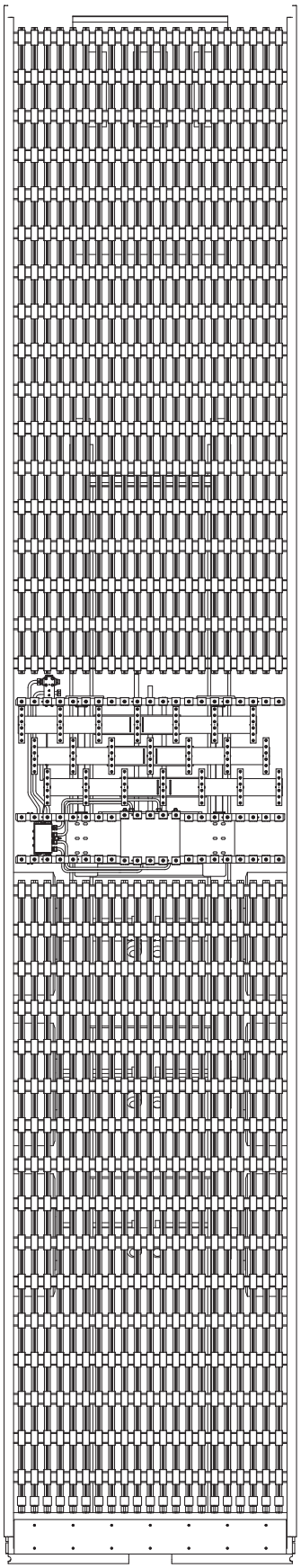


Figure 1

Installing Easy Bearings

1. Install one row of aluminium bearing stops (Hallco #41-6621) on either side of the NEXUS™ drive unit. Bearing stops do not need to be installed over a cross member (fig. 1).
2. Install one row of aluminium bearing stops (Hallco #41-6621) at the forward end of the sub-deck.
3. Install one row of plastic anti-lift blocks (Hallco #39-7367) at the rear end of the sub-deck approximately 25mm [1"] from the bearing stop (fig. 2).
4. Install one row of aluminium bearing stops (Hallco #41-6621) at the rear end of the sub-deck.
5. Secure aluminium bearing stops to the aluminium sub-deck by using two M5.5 x 32mm long self-drilling screws (Hallco #81-7799) (fig. 2).
6. Alternatively you can weld aluminium bearing stops to the sub-deck by welding on both ends in the valley (fig. 1).
7. Snap down Easy bearings (Hallco #39-6602) starting with the full length bearings closest to the NEXUS™ and working your way out. Trimming the last bearing to fit (fig. 3).

   It is not necessary to leave gaps for thermal expansion between the bearings as they will shrink over time.

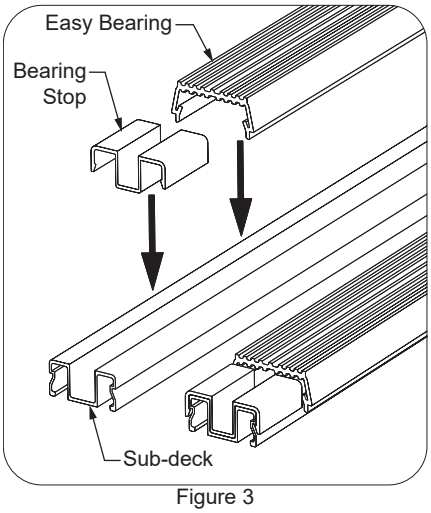


Figure 3

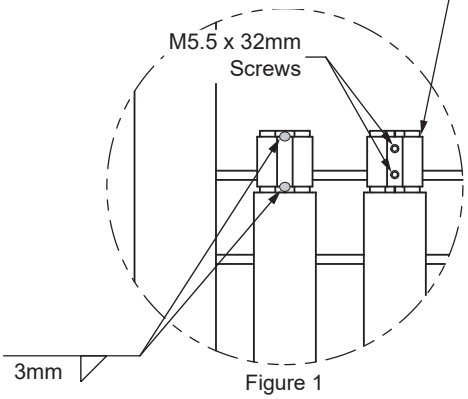


Figure 1

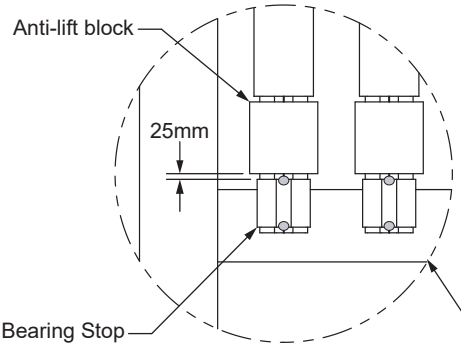
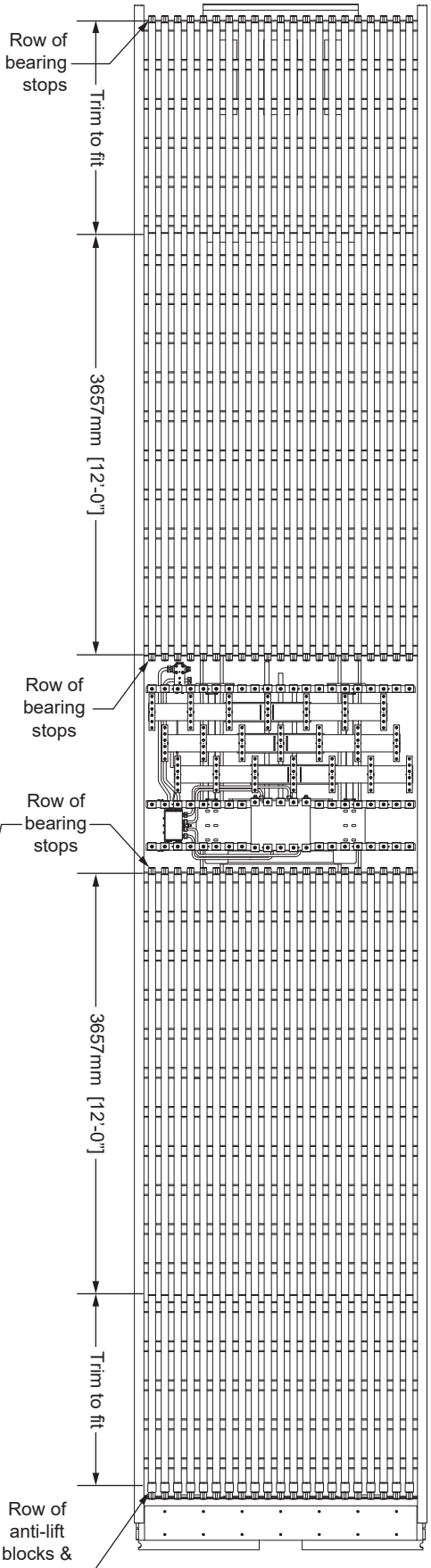


Figure 2



ALIGNING THE NEXUS™

1. Carefully lift the NEXUS™ unit and place into the frame resting on the chassis. The shaft ends should point towards the front of the trailer (fig. 1). See page 20 for NEXUS™ lifting guidelines.
2. Position the NEXUS™ roughly centred in between the openings of the sub-deck referencing figure 2 below for minimum allowable gap between the NEXUS™ frame and the nearest cross member.
3. Verify that the NEXUS™ cross members are the same height as the trailer cross members.
4. Once in place, align the NEXUS™ with the sub-deck and bearings using a 6-8mm [0.24”-0.31”] x 25mm [1”] straight bar placed on one side of the CENTRE sub-deck. The bar should extend past at least two (2) cross members on either side of the NEXUS™.
5. Make sure the bar is pushing the same direction against all bearings (on the sub-deck and on the NEXUS™) to ensure proper alignment (fig. 3). Clamp NEXUS™ in place.
6. Move bar to adjacent bearings to verify that the NEXUS™ is aligned with all the sub-decks.

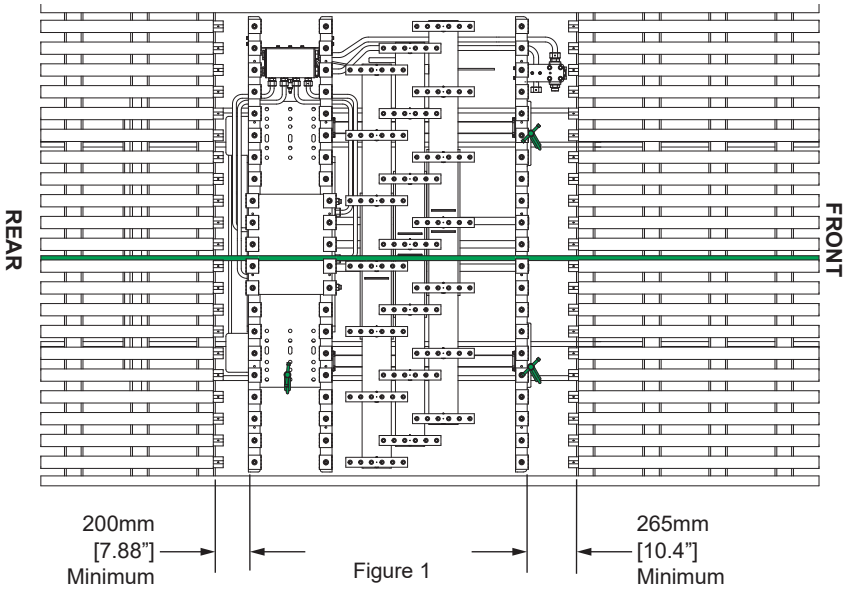


Figure 1

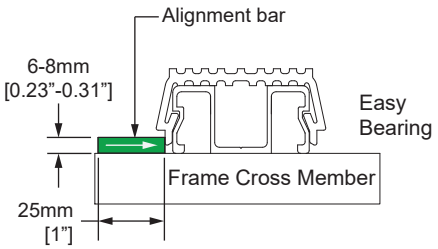


Figure 3

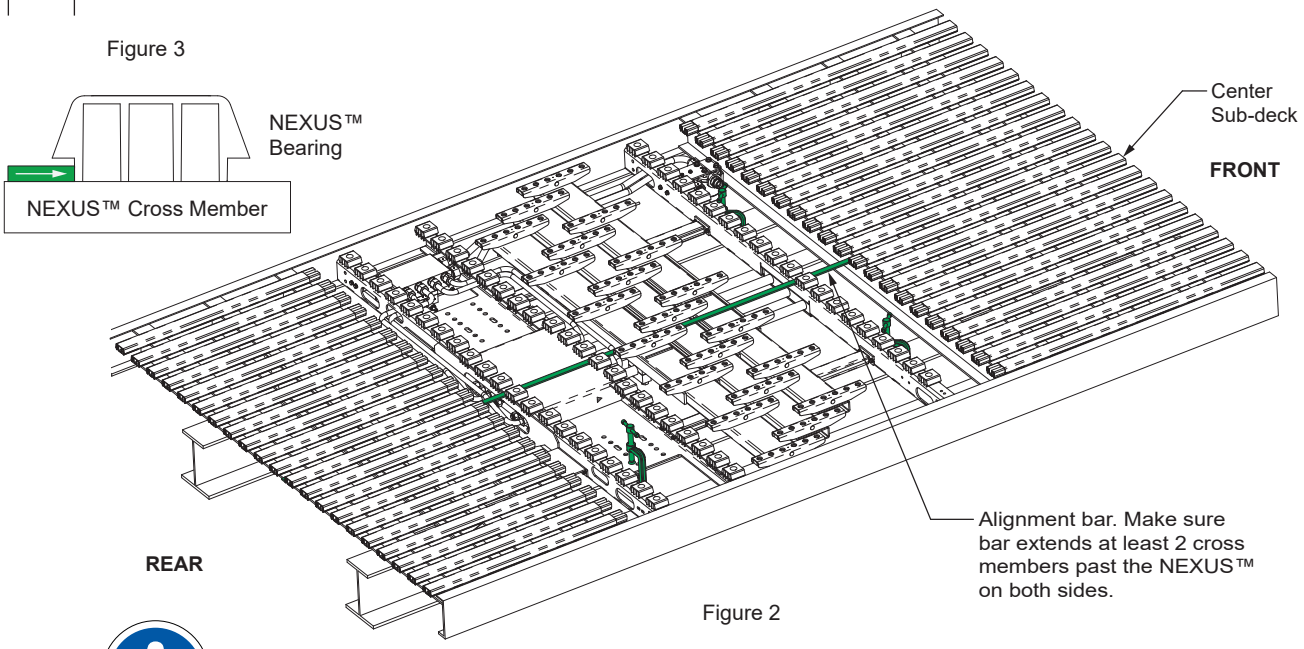


Figure 2

Misalignment of the NEXUS with the subdeck will cause poor performance and damge to the cylinders!

Securing the NEXUS™ to the Frame

The preferred method for securing the NEXUS™ drive unit to the chassis is by welding. Welds should be done in a controlled, clean environment by an experienced welder while the frame is still clamped to the chassis from the previous step.

The surfaces should be prepped to bare metal prior to welding. Do not attempt to weld over factory coatings.

Hydraulic shafts must be protected during welding! Slag or scorching on the shafts will damage internal components causing the hydraulic unit to leak.
DO NOT Attachthe welding ground cable to any part of the NEXUS™ or DAMAGE to the CHROME of the SHAFTS may result from arcing. This will cause leakage.

Use proper protective equipment when welding. Keep the area clear of flammable liquid and debris. Keep appropriate fire suppression equipment nearby while welding.

All welds should be cleaned and painted over to prevent corrosion.

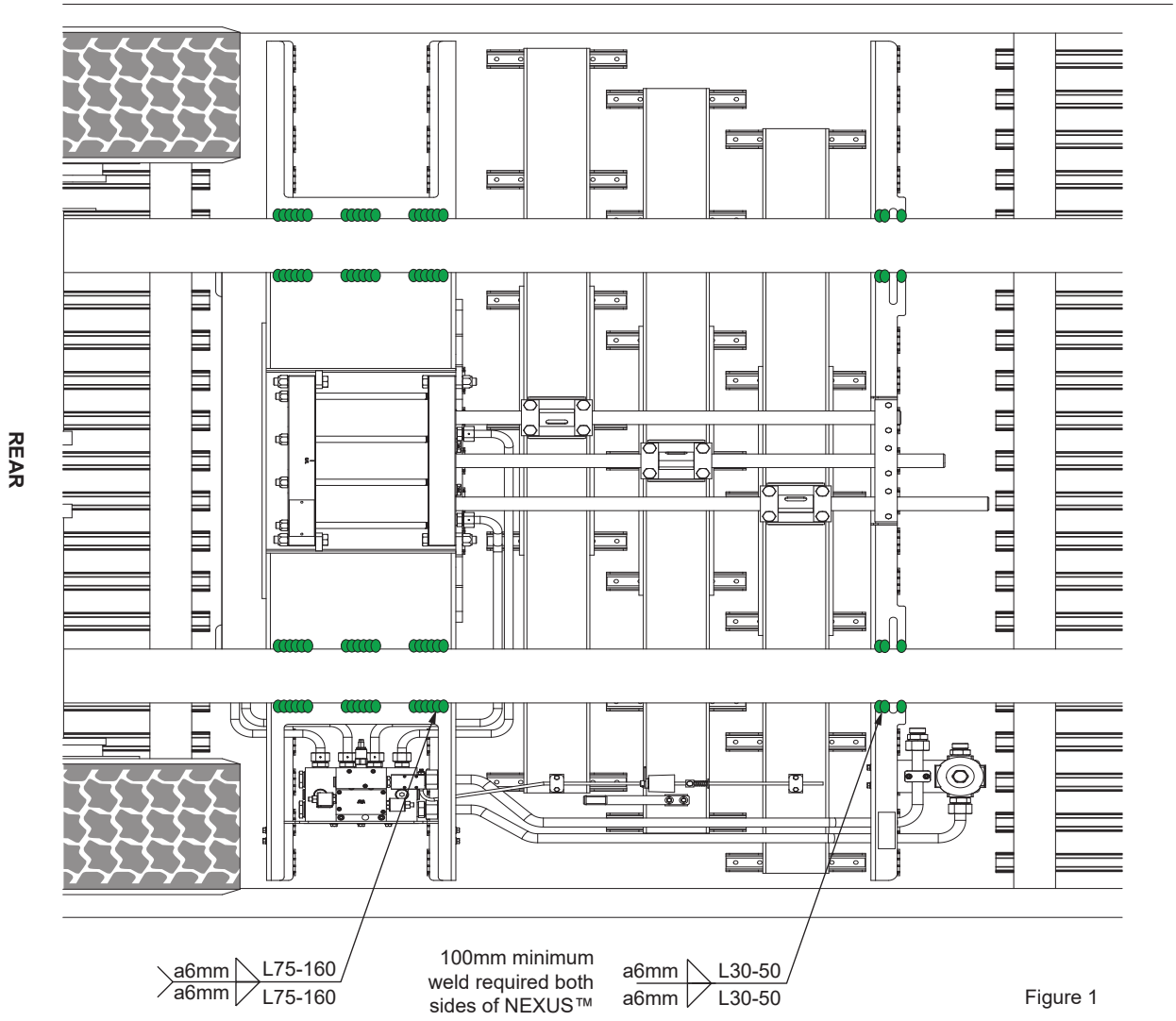


Figure 1

When working with aluminium chassis or when welding is not feasible you can use the pre-drilled holes in the NEXUS™ frame to bolt it to the chassis.

When bolting make sure to secure the NEXUS™ with minimum 7 bolts per chassis member. (6 on the sub-frame and at least 1 on the front NEXUS™ cross member) (fig. 1 & 2).

Use the following fastener specification for your connections. **DO NOT SUBSTITUTE FASTENERS!**

- Hex bolt: M16-2.0 x minimum 50mm length, class 10.9, ISO 4014/DIN 931, Zinc flake coating Cr6+free. Partially threaded (do not use fully threaded bolts).
- Two washers: M16 nominal size, 17mm ID x minimum 30mm OD, ISO 7089/DIN 125-2, ≥300 HV, Zinc flake coating Cr6+free.
- Prevailing torque lock nut: M16-2.0, class 10, ISO 7040/DIN 982, Zinc flake coating Cr6+free.

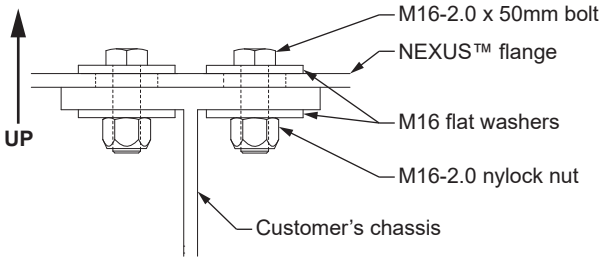


Figure 2

This is a slip-critical joint. Sufficient clamping force is VERY important. Therefore Hallco recommends that you periodically check the torque and mark the bolts to ensure they have not loosened.

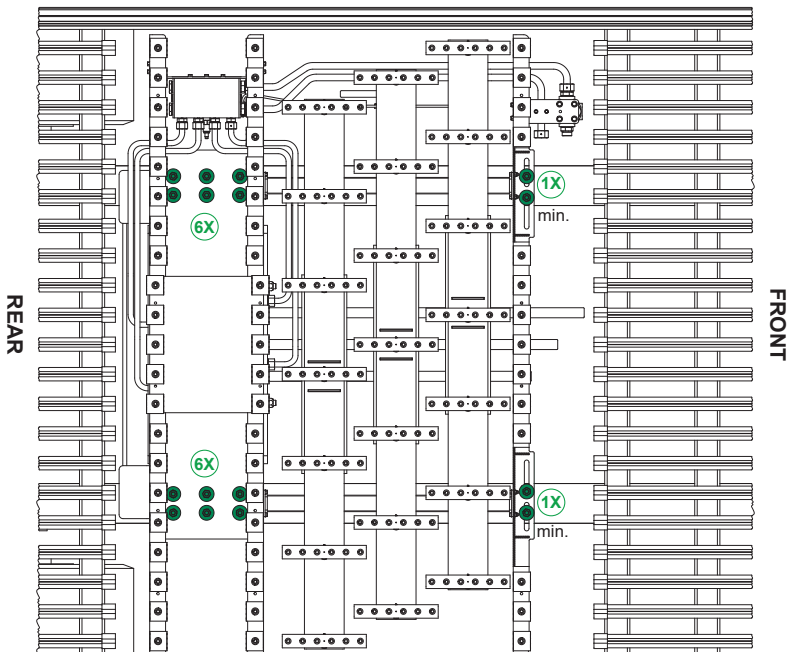


Figure 1

1. Begin by tightening the bolts to 95 Nm [70 lb-ft] torque.
2. After torquing all of the bolts, mark the nut and the bolt end with a witness line (fig 3).
3. Hold the bolt head so that it doesn't rotate and then rotate the nut 1/3 of a turn (approximately 120°) relative to the witness line (fig 3).
4. After all the bolts have been tightened visually check that the nut marks are 1/3 of a turn apart (fig. 3).
5. Repeat for front cross member fastener(s).

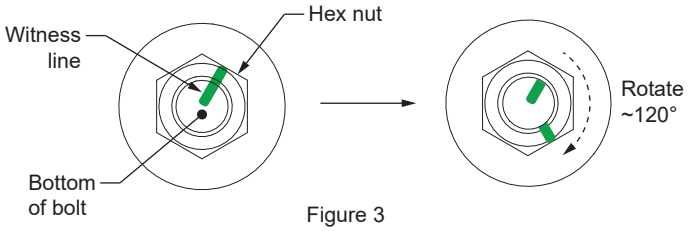


Figure 3

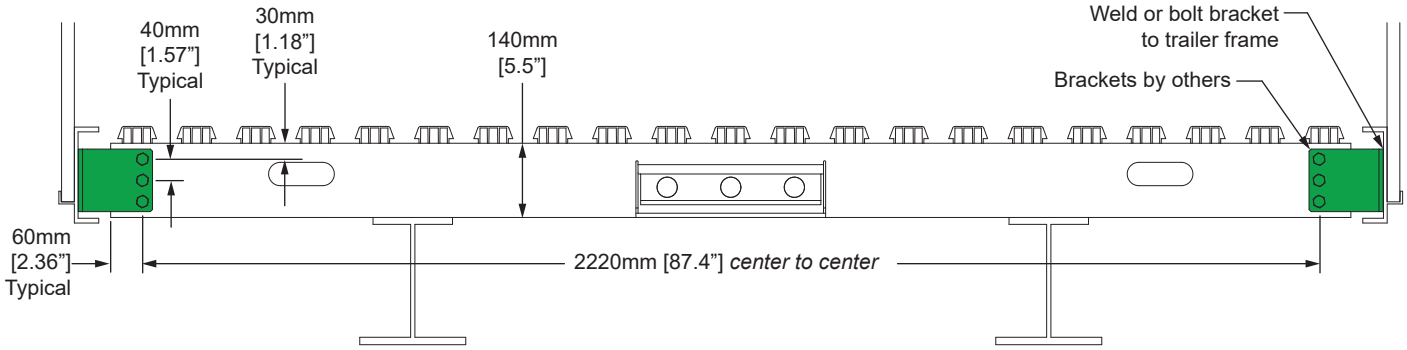
Stiffening Trailer Side Walls

This step is optional. Bracket design and use determined by OEM.

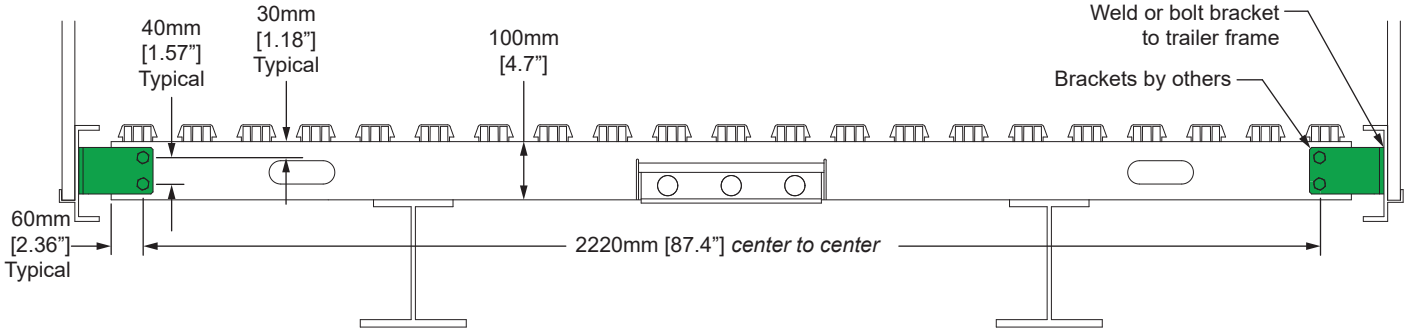
Due to the lack of cross members around the NEXUS™ drive you may want to include additional side wall support to prevent the walls from buckling under heavy loads.

The NEXUS™ frame can be utilized as a support member for side walls. Mounting holes are provided at the ends of the NEXUS™ frame members to use for attaching support braces.

The bolt pattern will vary depending on frame size. Always check your frame before making stiffener brackets.



140mm NEXUS™ Shown
3-hole pattern typical at the end of each
NEXUS™ cross member (6 places)



100mm NEXUS™ Shown
2-hole pattern typical at the end of each
NEXUS™ cross member (6 places)

Cutting Deck Slats to Proper Length

1. Measure the distance from the inside of the front wall of the trailer to the inside of the rear doors. This distance is the “Inside Length” or “A” (fig. 1).
2. Calculate the “Slat Length” or “S” by subtracting 280mm [11”] from the “Inside Length” of the trailer (fig. 2 & 3). [S = A - 280mm]
3. Cut all slats to this length and deburr fresh cut edges.

Take note of door position. Some doors are flush to outside sill plate. Others are inset. Make sure you measure from the inside of the doors when closed.

Use personal protective equipment when cutting slats. Aluminium edges are sharp and will easily cut you!

CAUTION! Deck has uneven surfaces and gaps that can trap limbs causing slips, falls and severe bodily injury.!

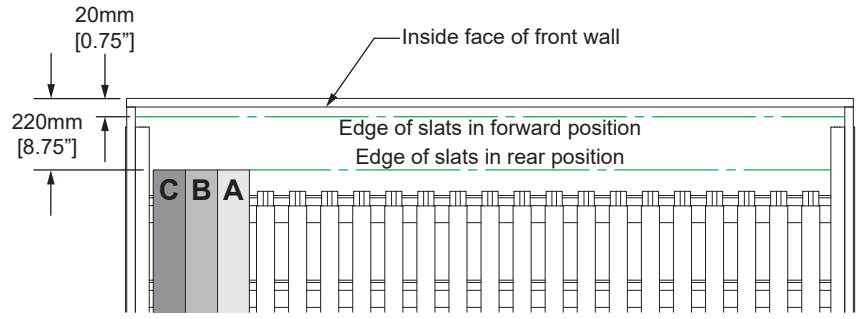


Figure 2 - Front Trailer Detail

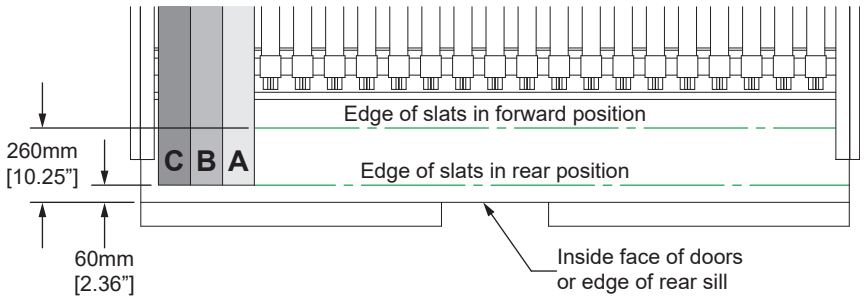


Figure 3 - Rear Trailer Detail

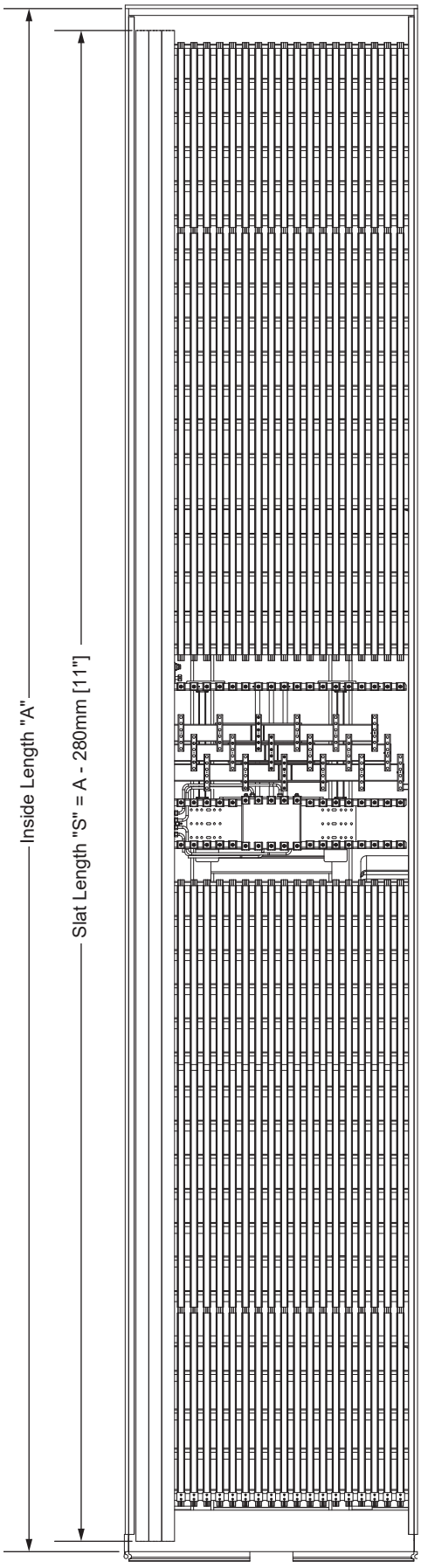


Figure 1

Drilling Slats

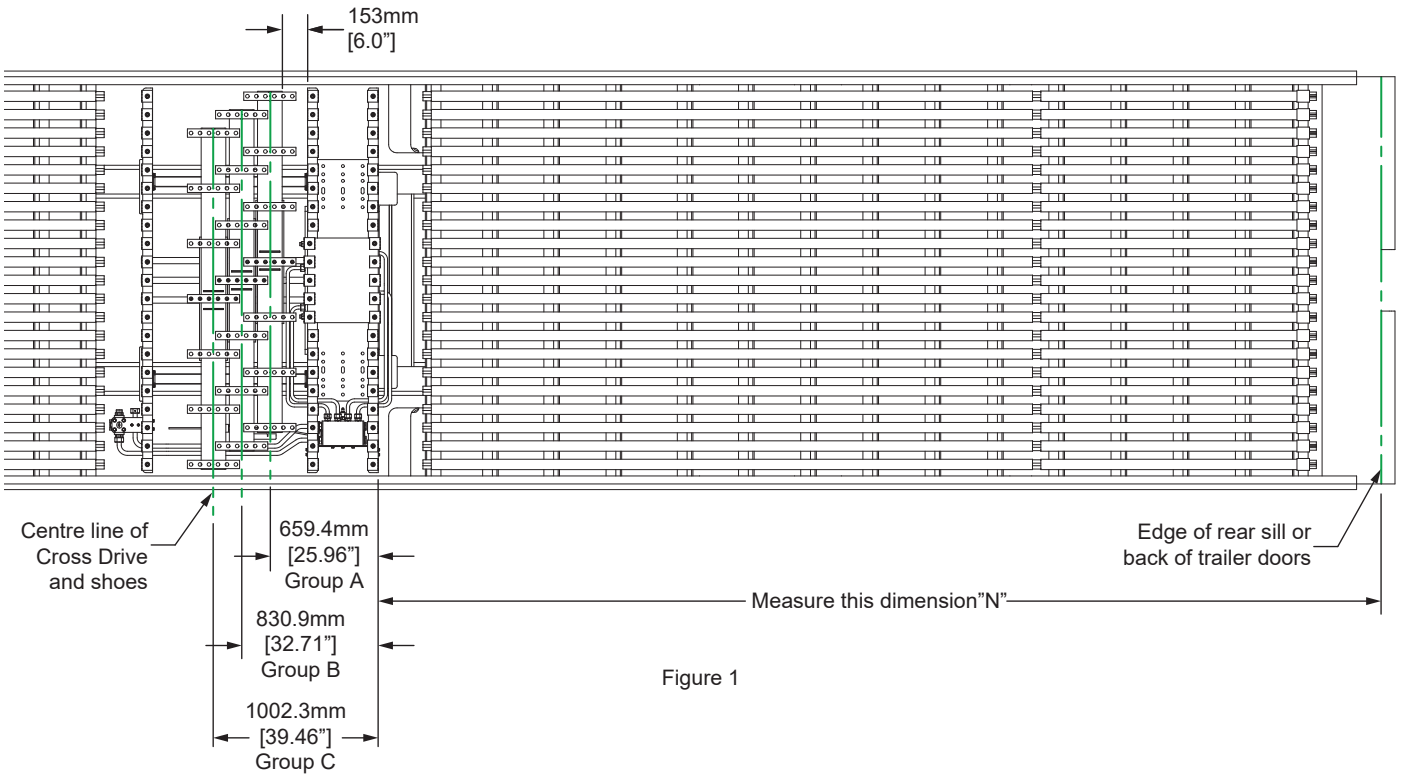


Figure 1

1. Retract the cross-drives to the rear most position. Verify crossdrive position using (fig. 1). Rear cross-drive face should be ~153mm [6"] from front face of the middle NEXUS™ cross member.
2. Verify the location of NEXUS™ by measuring from inside of rear doors to the rear edge of the NEXUS™ frame cross member. This is dimension "N".
3. Separate your slats into groups of 7. Each group represents a slat position (A, B & C). Mark the centreline of the drill fixture by measuring from the **SAME END** of each slat, adding its corresponding dimension of each group and subtract 60mm [2.36"] for end cap clearance.

    - Group A slats: Drill fixture centreline = Dimension "N" + 659.4mm [25.96"] - 60mm [2.36"]
    - Group B slats: Drill fixture centreline = Dimension "N" + 830.9mm [32.71"] - 60mm [2.36"]
    - Group C slats: Drill fixture centreline = Dimension "N" + 1002.3mm [39.46"] - 60mm [2.36"]

4. Centre a drill template over the centreline from step 3 and clamp securely into place. Then pre-drill 4 or 6 holes using Ø4.5mm [Ø0.18" / #15] drill bit (fig. 2 this page & fig. 1, page 32).

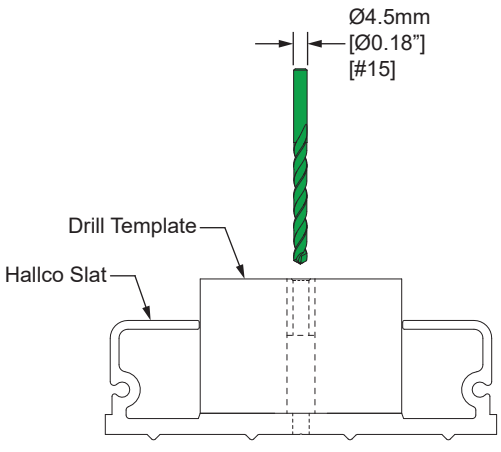


Figure 2

Use personal protective equipment when drilling slats.

Tip: Drilling centre holes are optional and only necessary for heavy duty applications.

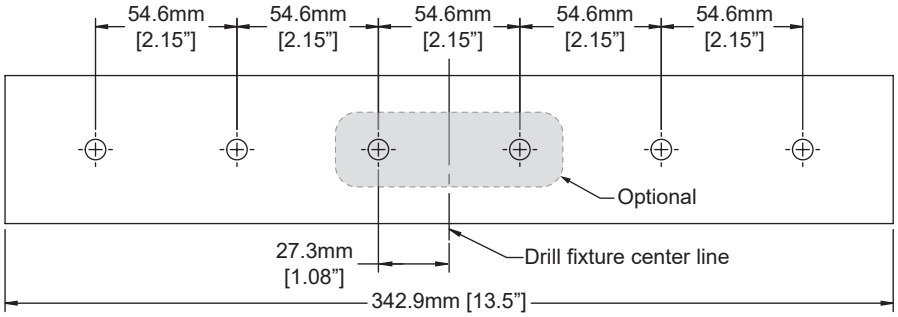


Figure 1

5. Remove the drill fixture and enlarge the Ø4.5mm holes by re-drilling with 12mm bit.
6. Counter sink each hole from the top side of the slat using a counter sink tool. DO NOT COUNTER SINK TOO DEEPLY. Top of bolt should be flush with top of slat (fig. 2).

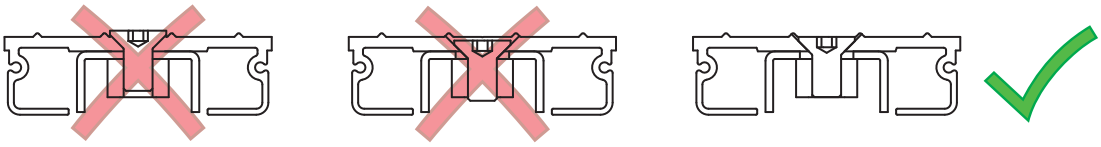
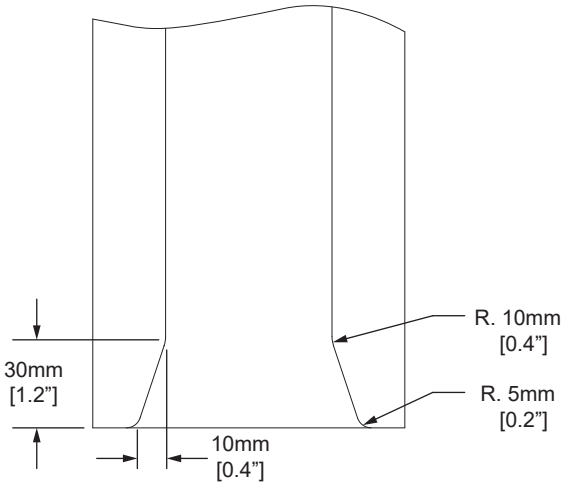


Figure 2

7. Bevel the slats.

Bevelling the leading end of each slat is necessary to ensure slats will smoothly transition from bearing to bearing during installation.

8. Bevel the sharp corner of each slat leg and the centre of the front of each slat (fig. 3 & fig. 4).
9. Bevel the inside top edge of each slat leg (fig. 5).
10. Bevel the edges where the seal enters on the rear end of the slats. This will prevent seal damage during installation of the slats.



Recommended bevel dimensions

Figure 3

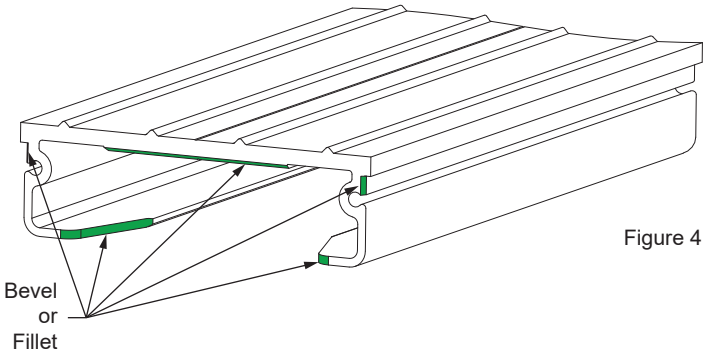


Figure 4

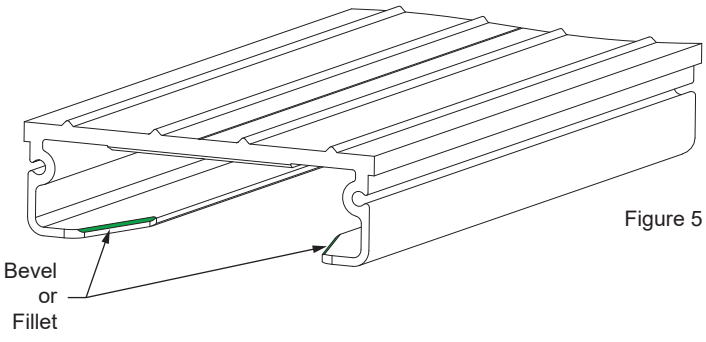


Figure 5

Installing Slat Seals

1. Verify the seal grooves are clear of debris prior to pulling the seal.
2. Once grooves are clear notch the ball portion of the seal approximately 100mm [4”] back from the end of the seal. This will be used as a pulling handle to help pull the seal along the length of the slat (fig. 1).
3. Position the seal in the proper orientation in the seal groove (fig. 2) and pull the seal along the full length of each slat, paying special attention to slat and seal orientation (fig. 3).
4. Pull the seal along the slat seal groove up to the end cap (if installed). Cut off the 100mm [4”] stripped handle where you made the initial notch (fig. 4).
5. IMPORTANT! Slats are supplied with left and right handed seal grooves. Make sure seals all point the same direction! DON’T FORGET, one outside slat will require a seal installed in BOTH grooves to seal against the side trim (fig. 1, page 35).

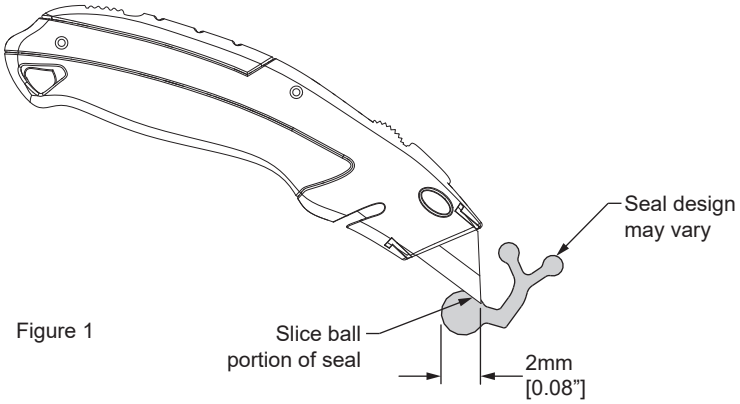


Figure 1

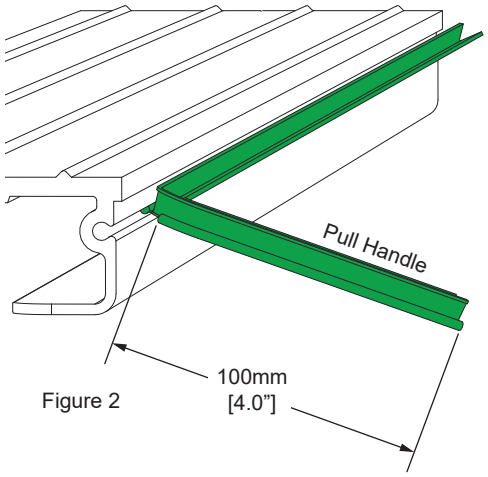


Figure 2

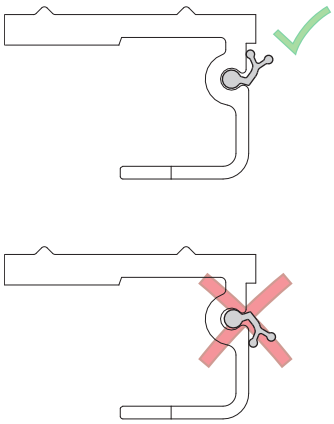


Figure 3

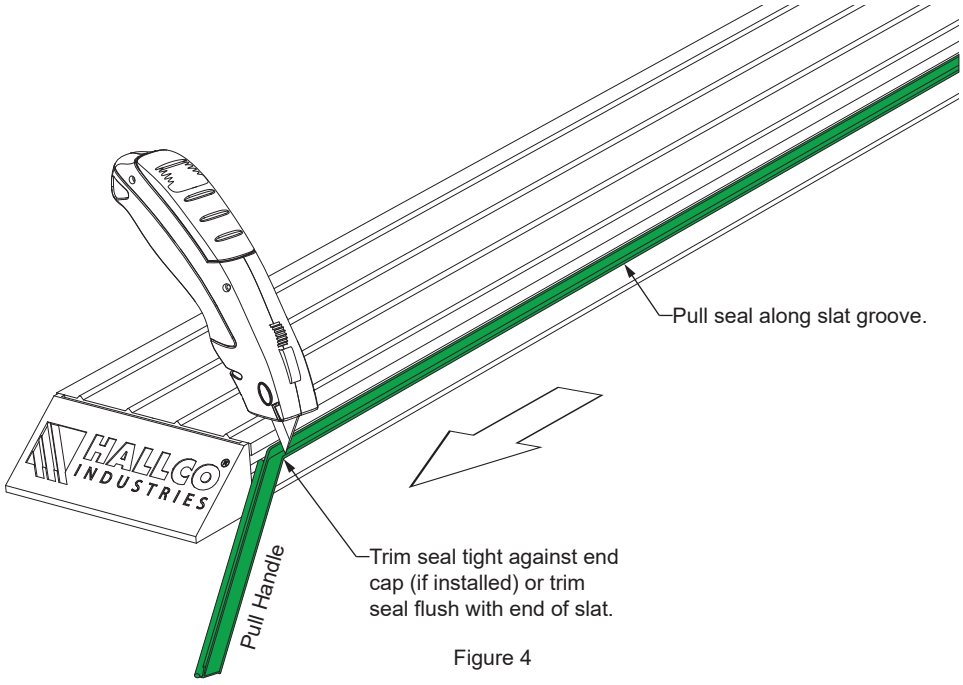


Figure 4

6. At the front end of the slat install an M5 self-tapping screw (provided by others) to prevent seal from creeping out of the seal groove (fig. 1). Alternatively, you can use a set-screw in lieu of a standard screw. Do this for all seals.

Note: If you are not using Hallco supplied aluminium end caps install screws at both ends of slats.

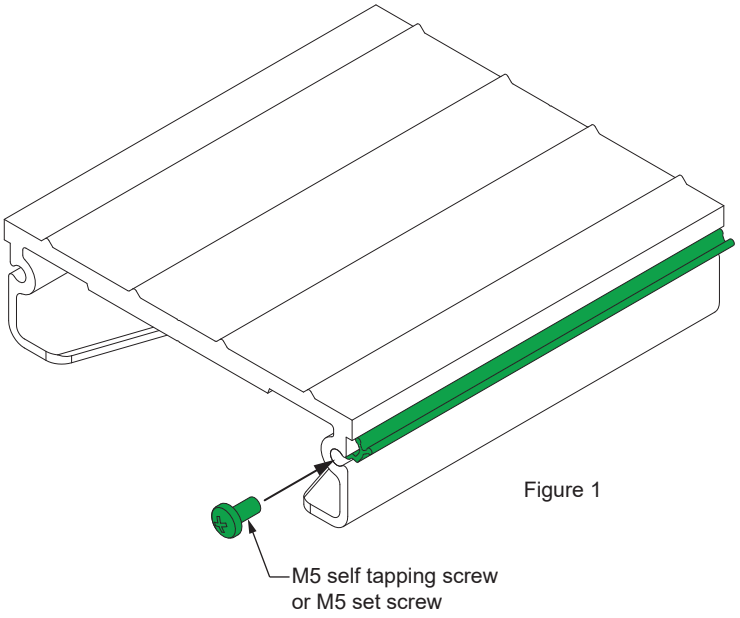


Figure 1

Installing Hallco Aluminium End Caps

1. Install the aluminium end caps (Hallco #41-7060) by inserting them into the end of the slat and weld the end cap as shown (fig. 2).

   Alternatively, you can secure the end caps by using two (2) M4.8-1.6 x 25 self tapping counter sunk screws (fig. 3).

If welding, protect the seal from heat damage by sliding it away or cooling it.

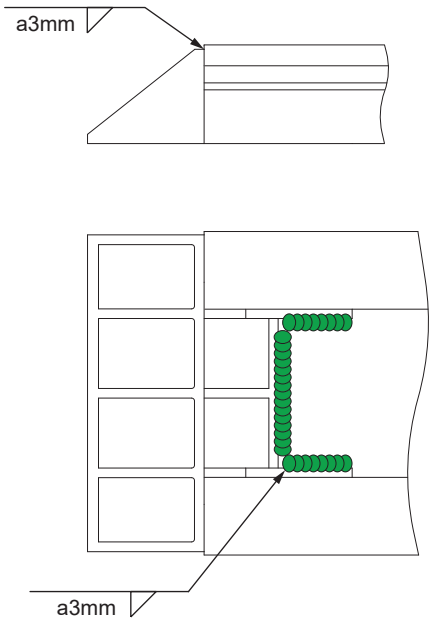


Figure 2

OR

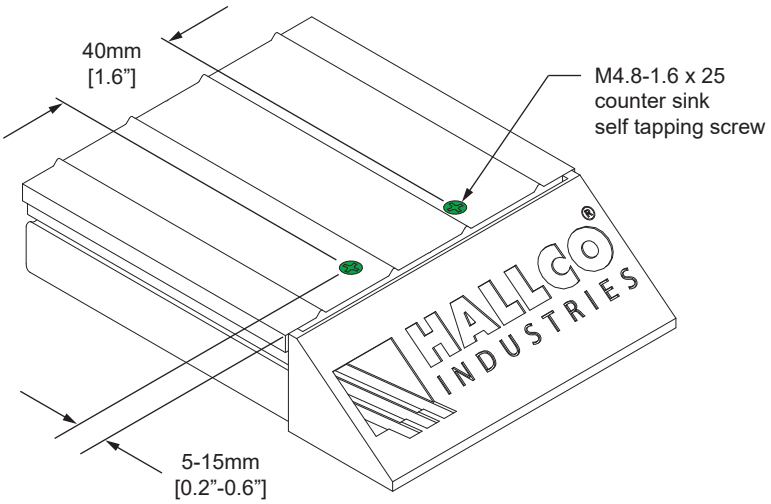


Figure 3

Installing Slats

1. Starting from the left and a “group C” slat, slide each slat from the end of the trailer towards the front. Make sure the bevelled edge of the slat goes in first and that each seal points to the right (fig. 1).
2. Use a thin prybar to move slats side to side near the drive to make the gaps between slats consistent and not more than 2mm. Fix the cause of gaps that are too large before continuing.
3. When countersunk holes in slat are lined up with the holes in the cross-drive shoes bolt the slat down using DIN 7991 M12-1.75 deck bolts. Apply a small amount of medium duty thread locker then torque deck bolts to 100-140 Nm [74-103 ft-lb] (fig. 2).

After torquing, bolt heads must be flush with top of slat (fig. 3).

3. Continue to install each slat in a C-B-A pattern from left to right (fig. 1).
4. The last slat on the far right will have 2 seals installed. This slat should be installed last (fig. 1).

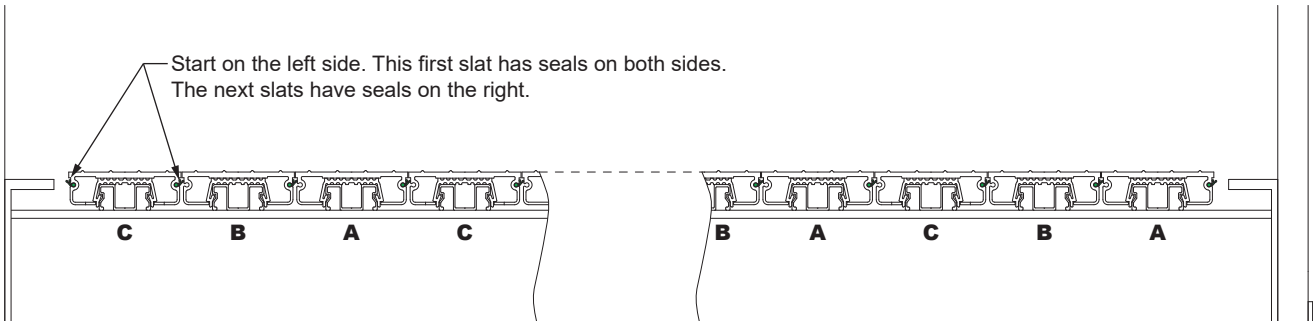


Figure 1

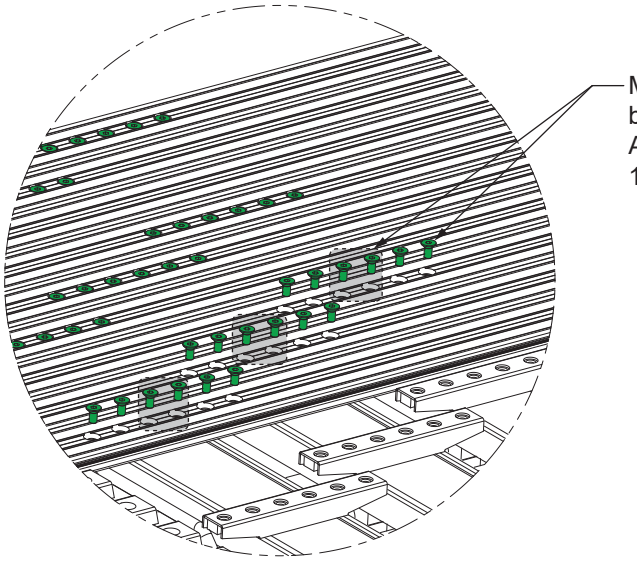


Figure 2

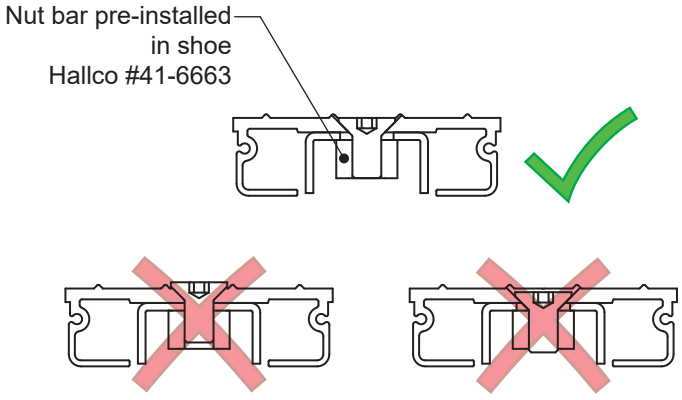


Figure 3

Installing Side Trim (Optional)

1. Place side trim over frame side rail.
2. Slide side trim towards the slat so that the slat seals firmly against the side trim leg (fig. 1).
3. Screw side trim down using counter sunk fasteners installed every 1.5m-2m [60”-78”].

   Alternatively side trim can be welded to frame with a small stitch weld every 1.5m-2m [60”-78”].

Keep in mind side trim will eventually wear and should be replaced. Therefore full welds along side trim are not recommended.

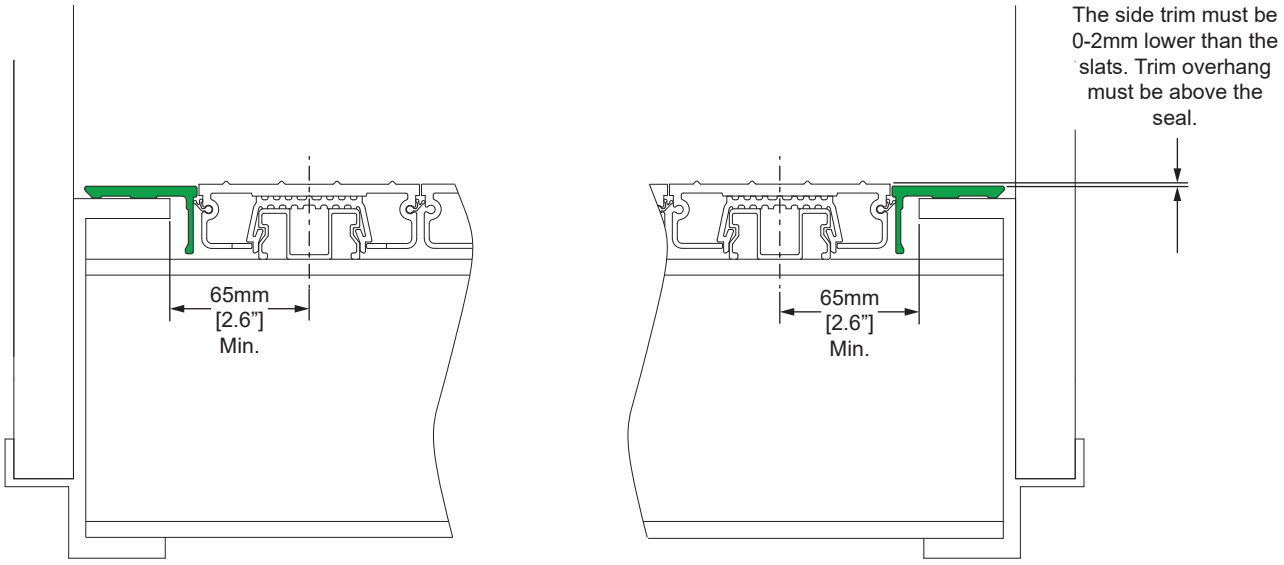


Figure 1

Hydraulic Plumbing

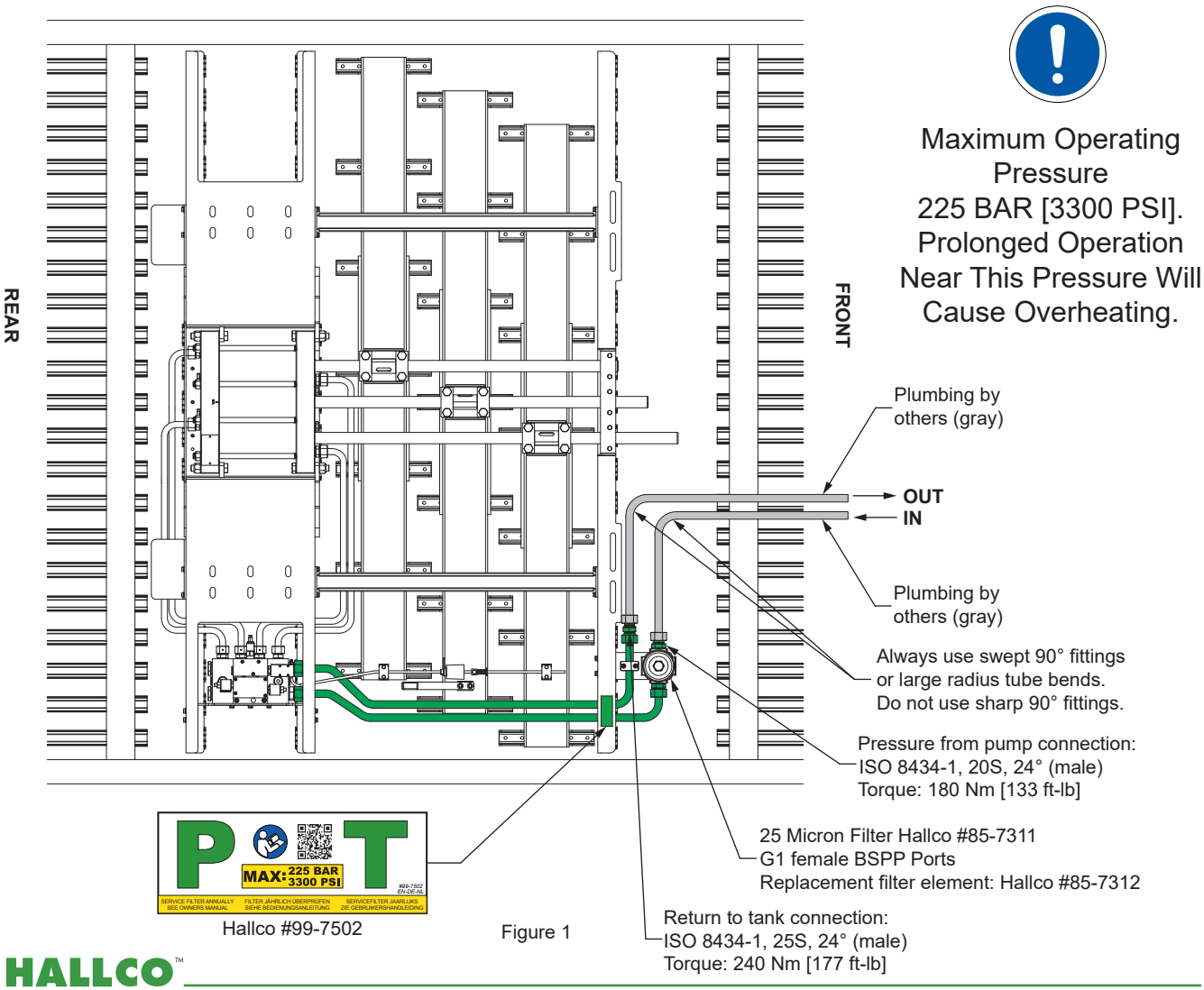
Connecting the hydraulic system incorrectly will lead to equipment damage and injury. Always double check your connections.

Check all lines and connections for damage. Do not pressurize the system if there is damage to any of the hydraulic plumbing components. Replace damaged components immediately.

System under extreme pressure. There is a hazard of rupture. Take extra precautions when working with the hydraulics.

During operation, hydraulic fluid and components will get hot. Allow the system to cool prior to working with the hydraulics.

The NEXUS™ is supplied pre-plumbed with Ø25mm stainless steel rigid plumbing. The input line is provided with an ISO 8434-1-20, 24° female fitting. The output line is provided with an ISO 8434-1-25, 24° female fitting. All other plumbing is supplied by others (fig. 1). Plumb to the NEXUS™ with as few 90° bends as possible to reduce heat generation and pressure loss.



Hallco #99-7502

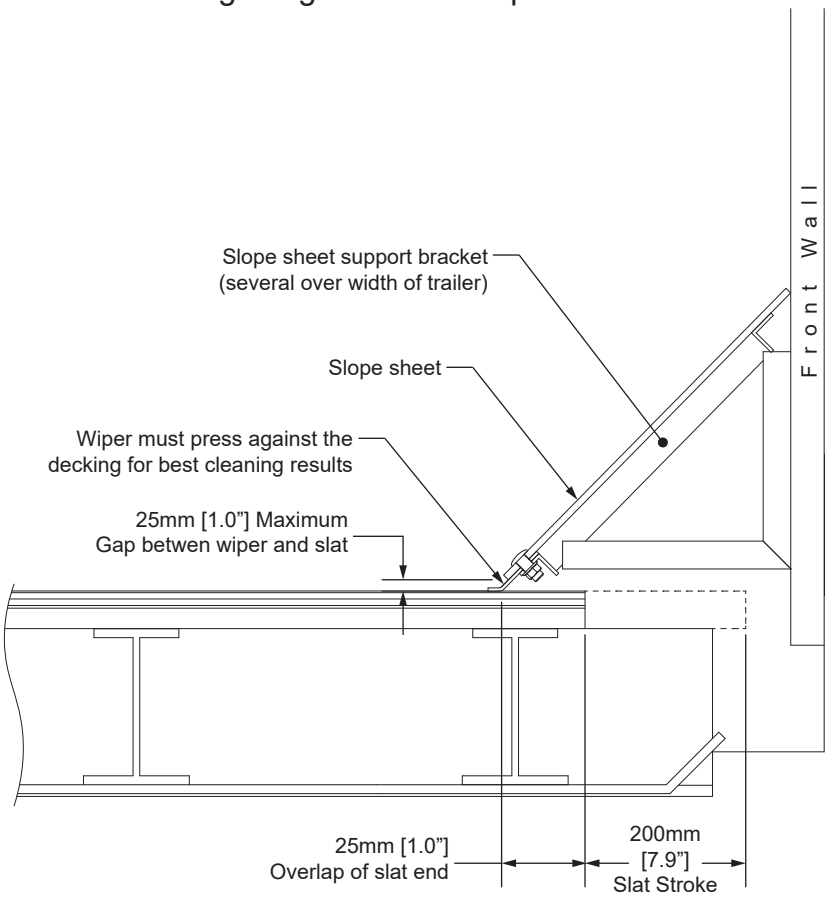
Figure 1

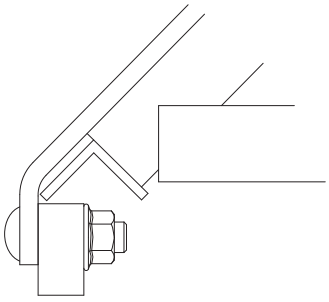
Slope Sheet Design and Installation

A slope sheet is required at the front of the trailer to protect the slats from getting jammed with debris and to protect against top side pinch points.

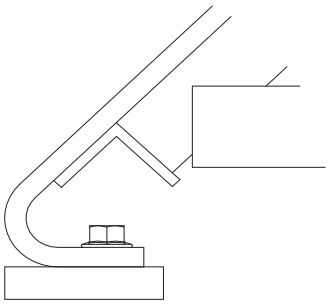
The slope sheet should be sturdy enough so that it doesn't flex under loads and so that it is kept from coming in contact with any part of the deck.

Hallco also recommends installing a plastic wiper at the base of the slope sheet to help prevent debris from migrating under the slope sheet.

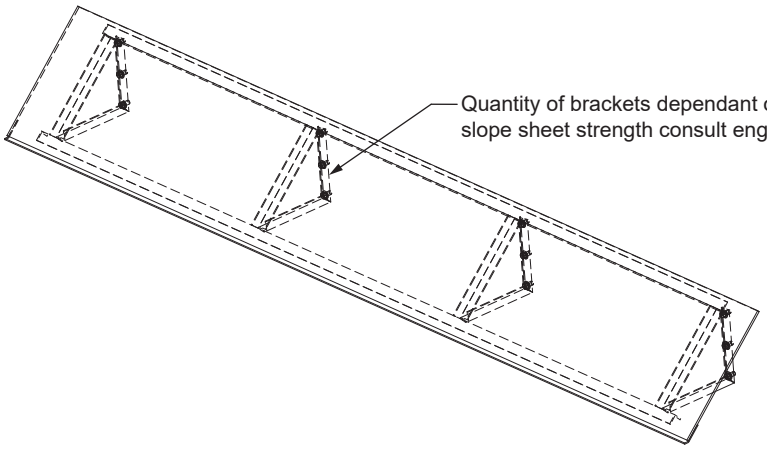




Optional wiper design



Optional wiper design



Slope sheet as shown does not meet the minimum requirements to be considered a guard under EN ISO 14120.

Locating the Control Box (HDS-E & HDS-H)

The following pages are for installing the electric controls (HDS-E or HDS-H) for your NEXUS™ drive unit. Skip this section if your NEXUS™ is fully manual operation (HDS-M).

When locating the control box take into consideration hazard areas associated with the system. For safety reasons, Hallco recommends locating the box as far away from the NEXUS™ as possible. See below for ideal locations for the control box mounting (fig. 1).

Make sure you place the control box set back from the outside face of the trailer for additional protection. Confirm control box will open minimum 90° without obstruction (fig. 2).

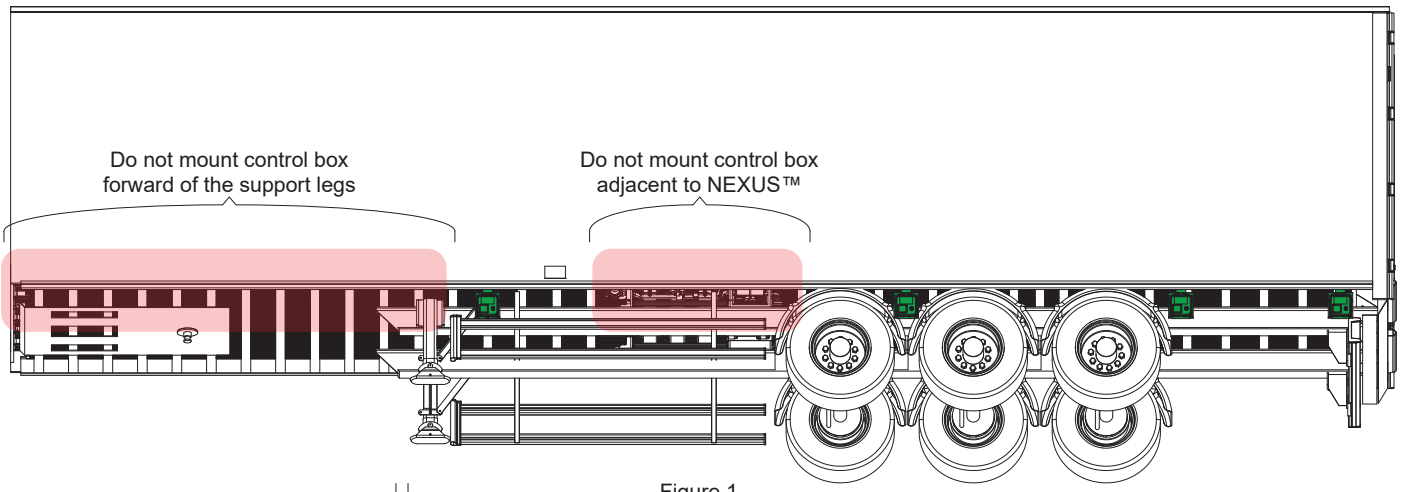


Figure 1

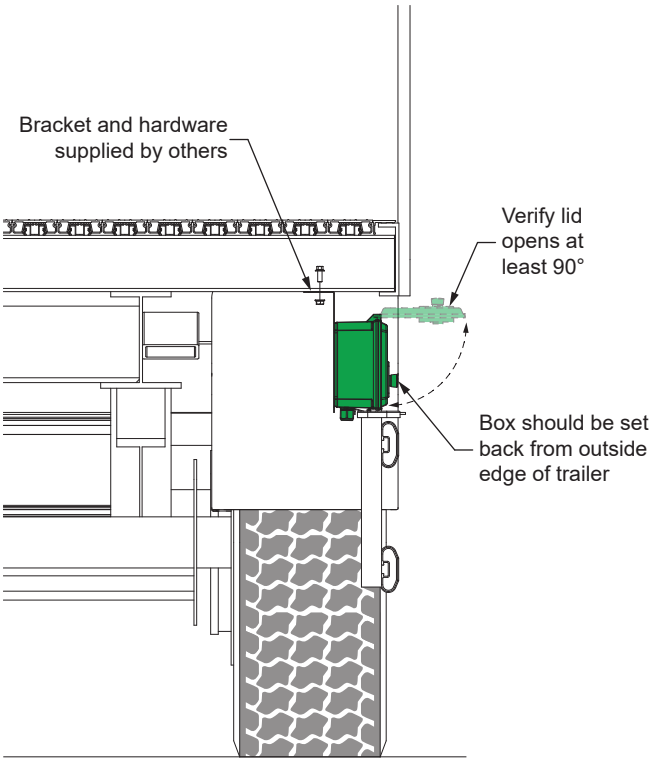
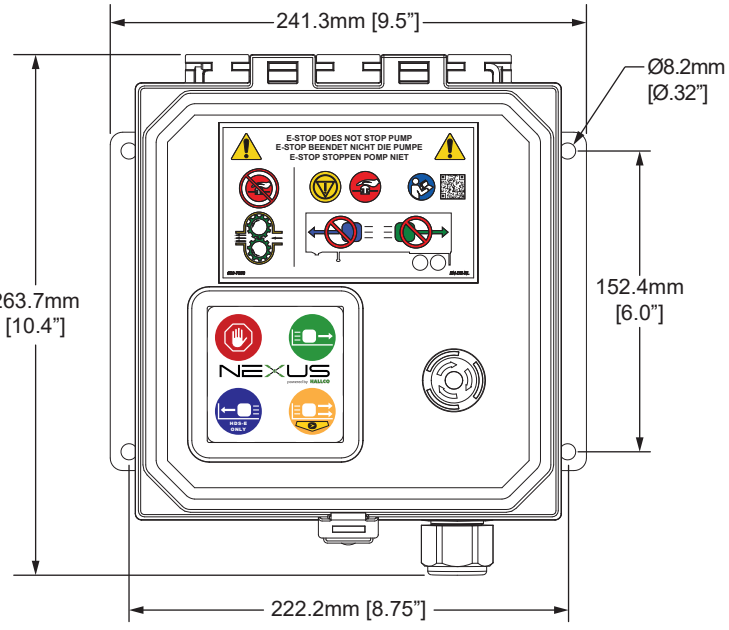


Figure 2



Overal box depth: 158mm [6.1”]

Figure 3
Control Box Dimensions

Wiring Base Control Box

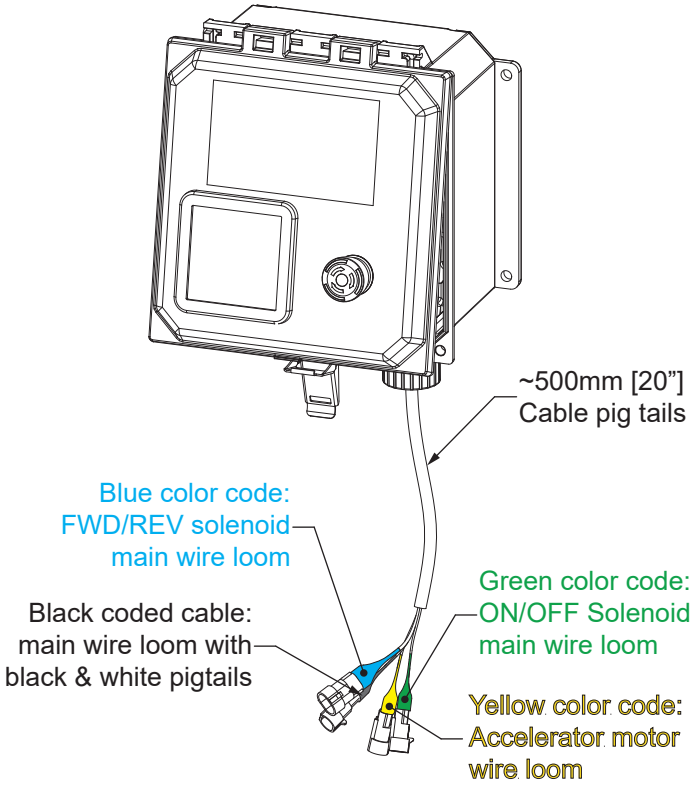
After the Base Control Box is mounted, attach the pig tail ends to the main wire loom and run the wire loom along the length of the trailer to the NEXUS™ drive unit.

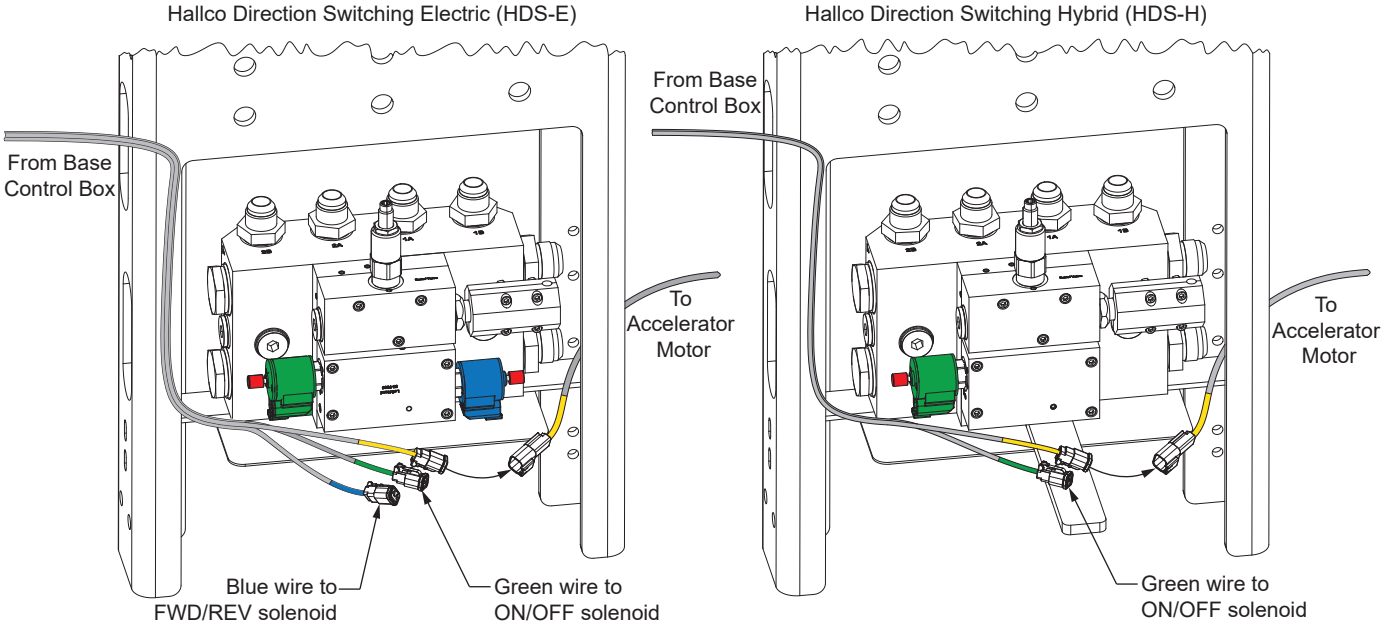
Route the cables through conduit or along the inside edge of the frame rail making sure that they are fully protected from snagging, fraying and catching on moving parts.

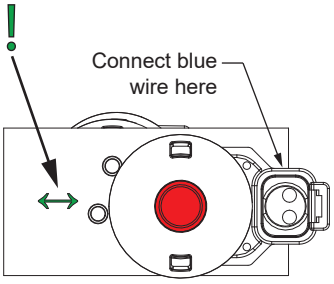
Cables should be secured so that they don't move under normal operating conditions. Cables that move will wear and short out.

Connect main wire loom ends to appropriate accessories based on color code.

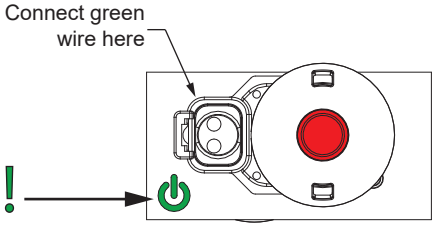
Connect the BLACK wire to 24vdc, 2amp max. trailer power source. Connect the WHITE wire to the trailer ground (fig. 1, page 54).







Control valve end view showing FWD/REV solenoid. Solenoid supplied on HDS-E configurations only.



Control valve end view showing ON/OFF solenoid. Solenoid supplied on both HDS-E & HDS-H configurations.

Pre-Startup Checklist

Hallco strongly recommends operators follow a Pre-Startup Checklist at the beginning of each shift or prior to starting the floor after it has been sitting for periods exceeding 24 hours.

- ☐ Check the entire floor to make sure all the slats are fully on each bearing.
- ☐ Check the front and rear slat clearances for obstructions.
- ☐ Make sure all the hydraulic fittings are tight.
- ☐ Make sure the switching rod is straight and the stops are tight. Skip this check if the stops have not been set yet.
- ☐ Make sure there are no clamps, temporary blocks or tools in the area where the cross-drives move back and forth.
- ☐ Make sure the chrome surface of the shafts near the cylinders is clean and free of paint, weld spatter or other roughness which could damage the seals.
- ☐ Check that the pressure and return lines are correctly plumbed to the hydraulic pump.
- ☐ Check the electrical connections to make sure they are proper.

Pre-Run Checklist

IMPORTANT! Perform this safety check EVERY TIME you operate the floor. Failing to clear the surrounding area prior to operating the NEXUS™ can lead to injury or death!

- ☐ Check position of manual overrides. IF THE MANUAL OVERRIDE IS ENGAGED THE EQUIPMENT WILL START UNEXPECTEDLY! See pages 43 & 45 for manual override instructions.
- ☐ Check to make sure rear doors are open and secured.
- ☐ Check to make sure there are no persons or property in the unloading zone behind or to the sides of the trailer.
- ☐ Check under the trailer to make sure there are no persons or property in the hazard zone under the trailer.
- ☐ Check for nearby persons that are not familiar with the function of the machine be aware of their location at all times. ESPECIALLY IF VEHICLE IS TO REMAIN IN NEUTRAL DURING THE UNLOADING PROCESS!

Do not operate the equipment until the Pre-Run Checklist has been completed!

Operating the NEXUS™ Manual Version (HDS-M)

To operate the NEXUS™ with Manual Control you need to simply rotate the handle in the direction you want the floor to move. The handle will be held in place by a detent ball and spring.

The mechanical switching rod will automatically cycle the floor until it is stopped or the PTO/PUMP is shut off.

To stop the floor rotate the handle in the straight down (stop/neutral) position (fig. 1).

Always rotate the handle back into straight down (stop/neutral) position after use to avoid unexpected starting.

In the event of an emergency rotate the handle to the straight down position to stop the floor, then immediately turn off the PTO/PUMP.

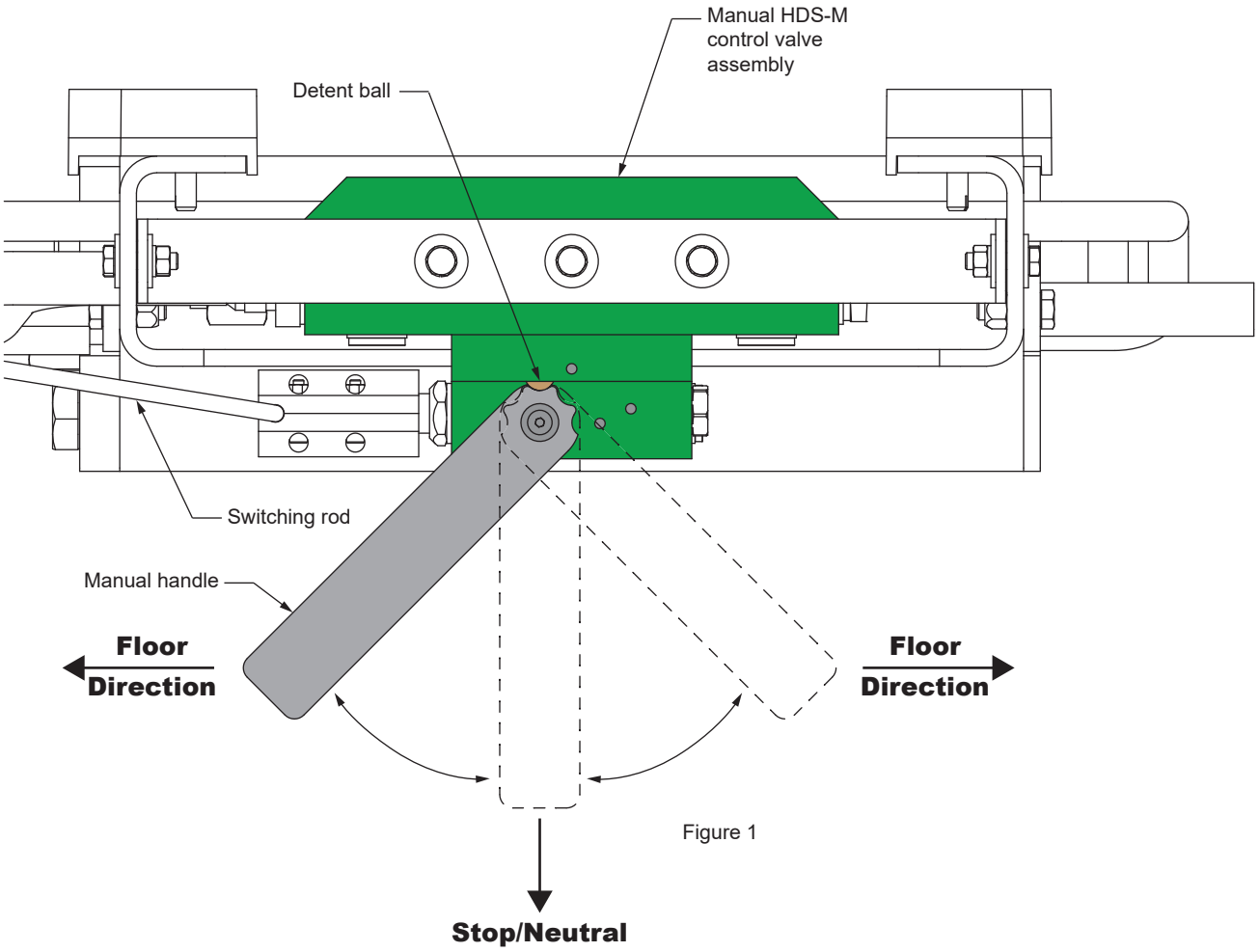


Figure 1

Operating the NEXUS™ Hybrid Version (HDS-H)

To operate the NEXUS™ with Hybrid Control, you need to simply rotate the handle in the direction you want the floor to move. The handle will be held in place by a detent ball and spring (fig. 1). The switching rod will automatically cycle the floor until it is stopped or the PTO/PUMP is shut off.

To START the floor, press the GREEN UNLOAD button or the YELLOW ACCELERATOR button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 44).

To STOP the floor, press the RED STOP button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 44).

Alternatively, to stop the floor you can rotate the manual handle in the straight down position.

When the handle is in the down (stop/neutral) position, the keypad buttons and the manual override on solenoid will not operate.

In the event of an emergency, press the e-stop button on the base control box then immediately turn off the PTO/PUMP.

When the manual override on the solenoid is activated the keypad buttons will not have control over START/STOP functions, although the buttons will light up as usual.

In the event of a malfunction or for troubleshooting you can manually override the solenoid by pushing in the RED cap on the valve and turning it CLOCKWISE to turn OFF the floor and COUNTER-CLOCKWISE to turn ON the floor (fig. 2). **Deactivate override when done to prevent unexpected starting when the system is put back into automatic mode.**

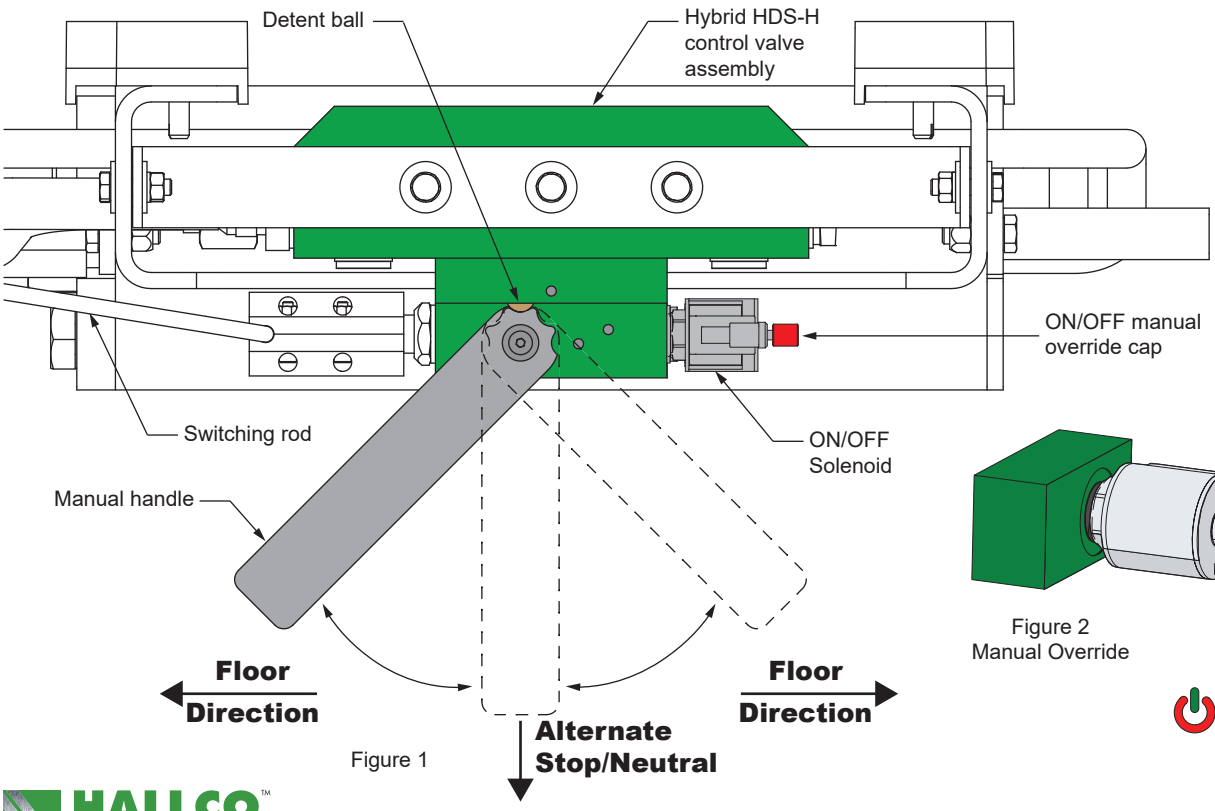


Figure 1

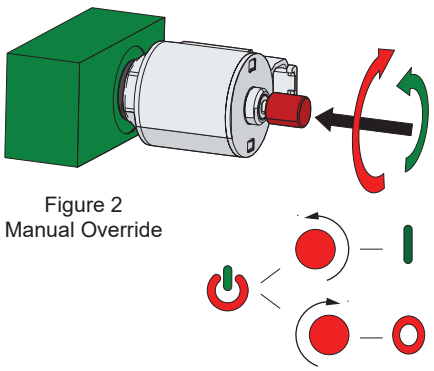
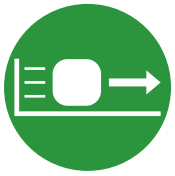


Figure 2
Manual Override

Operating the NEXUS™ Hybrid Version (HDS-H cont.)

The base control box functions are outlined below.
When the trailer lights are turned on, the RED stop button will light up.

Red STOP button.
Lights up when system is in stopped state.
Press to STOP the floor.



Green UNLOAD button.
Will light up when pressed.
All other buttons will go dark.
Press once to activate.
Press STOP to deactivate.
Will not change floor direction in HDS-H version.
Floor direction set by position of manual handle.

Blue LOAD button.
Will light up when pressed.
All other buttons will go dark.
Press and hold to activate.
Release to deactivate.
Will not change floor direction in HDS-H version.
Floor direction set by position of manual handle.

Yellow ACCELERATOR button.
Will light up when pressed.
All other buttons will go dark.
Press once to activate.
Press STOP to deactivate.
Will not change floor direction in HDS-H version.
Floor direction set by position of manual handle.

Red E-STOP button.
Stops floor and routes oil back to the pump.
E-stop DOES NOT STOP PUMP!
Press to engage.
Rotate clockwise to disengage.
When the e-stop is engaged keypad lights will go dark.

This button on Wireless Pendant only:
Push to turn remote ON.
Push again to turn remote OFF.

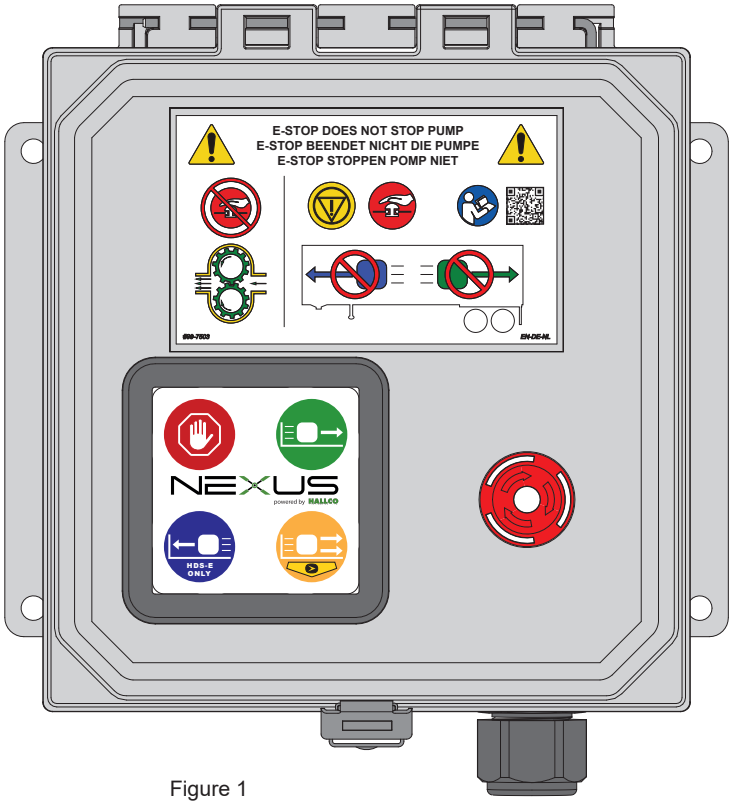


Figure 1

When operating hand-held remote:

Remote buttons are synchronized to base unit. Pressing a button on either keypad will over-ride current function on other keypad.
If connected. Wired remote keypad will illuminate simultaneously to indicate current function.

If the remote loses signal while the system is running the system will stop.
This can happen if the cable is damaged or disconnected.
This can happen if the remote is moved out of range or has not been used for 20 minutes causing it to automatically turn off.

Figure 2

Optional wireless control.
Keypads function same as base control.

Pre-wired to inside of base unit.

Optional wired control.
Keypads function same as base control.

Operating the NEXUS™ Electric Version (HDS-E)

To operate the NEXUS™ with Electric Control. You simply press the corresponding button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 46). The switching rod will automatically cycle the floor until it is stopped or the PTO/PUMP is shut off.

To START the floor in UNLOAD mode, press the GREEN UNLOAD button or the YELLOW ACCELERATOR button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 46).

To STOP the floor in UNLOAD mode, press the RED STOP button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 46).

To START the floor in LOAD mode, press and HOLD the BLUE UNLOAD button on the base unit keypad or on the optional tethered/wireless keypad (fig. 1 & 2, page 46).

To STOP the floor in LOAD mode, release the BLUE LOAD button.

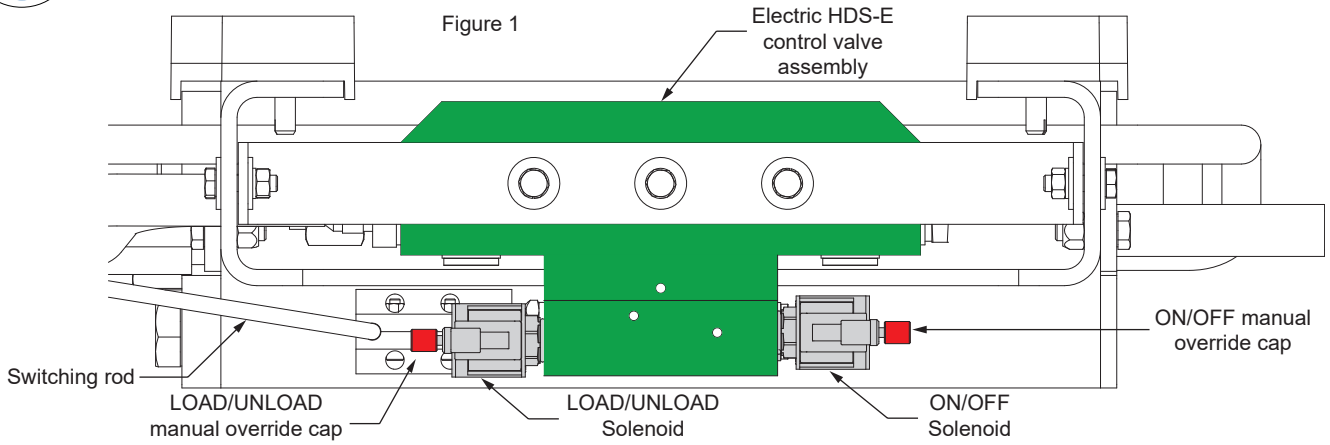
In the event of an emergency, press the e-stop button on the base control box then immediately turn off the PTO/PUMP.

In the event of a malfunction or for troubleshooting, you can manually override the START/STOP solenoid by pushing in the RED cap on the valve and turning it CLOCKWISE to turn OFF the floor, and COUNTER-CLOCKWISE to turn ON the floor (fig. 2).

You can manually override the LOAD/UNLOAD solenoid by pushing in the RED cap on the valve and turning it CLOCKWISE to UNLOAD the floor, and COUNTER-CLOCKWISE to LOAD the floor (fig. 2). **Deactivate override when done to prevent unexpected starting when the system is put back into automatic mode.**

When the manual override on the solenoid is activated, the keypad buttons will not have control over functions, although the buttons will light up as usual.

Figure 1



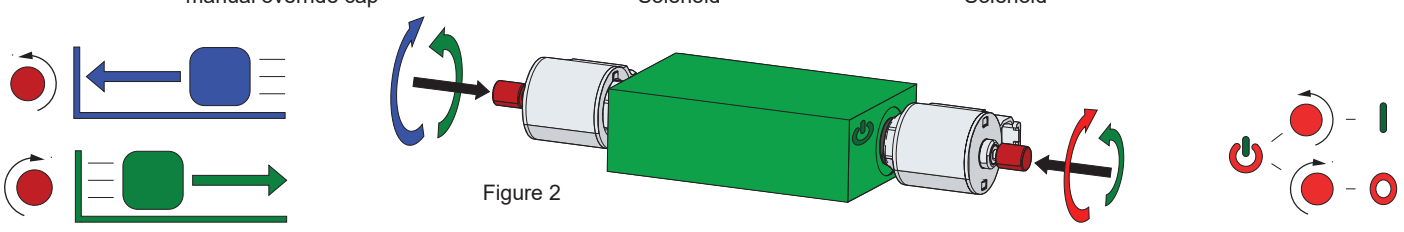
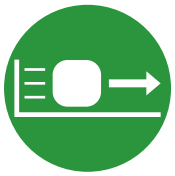


Figure 2

Operating the NEXUS™ Electric Version (HDS-E cont.)

The base control box functions are outlined below.
When the trailer lights are turned on, the RED stop button will light up.

Red STOP button.
Lights up when system is in stopped state.
Press to STOP the floor.



Green UNLOAD button.
Will light up when pressed.
All other buttons will go dark.
Press once to activate.
Press STOP to deactivate.

Blue LOAD button.
Will light up when pressed.
All other buttons will go dark.
Press and hold to activate.
Release to deactivate.

Yellow ACCELERATOR button.
Will light up when pressed.
All other buttons will go dark.
Press once to activate.
Press STOP to deactivate.

Red E-STOP button.
Stops floor and routes oil back to the pump.
E-stop DOES NOT STOP PUMP!
Press to engage.
Rotate clockwise to disengage.
When the e-stop is engaged keypad lights will go dark.

This button on Wireless Pendant only:
Push to turn remote ON.
Push again to turn remote OFF.

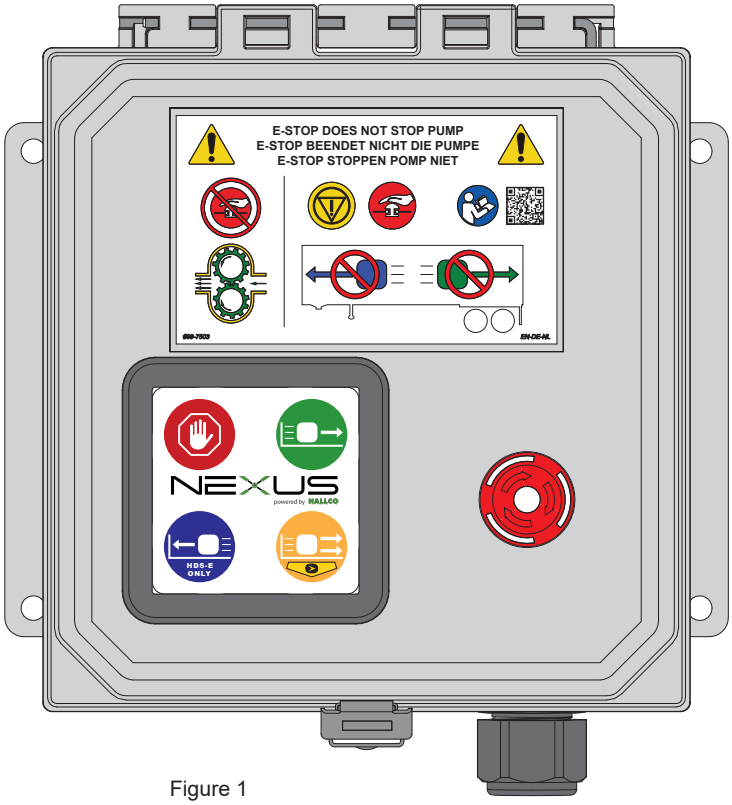


Figure 1

When operating hand-held remote:

Remote buttons are synchronized to base unit. Pressing a button on either keypad will over-ride current function on other keypad.
If connected. Wired remote keypad will illuminate simultaneously to indicate current function.

If the remote loses signal while the system is running the system will stop.
This can happen if the cable is damaged or disconnected.
This can happen if the remote is moved out of range or has not been used for 20 minutes causing it to automatically turn off.

Figure 2

Optional wireless control.
Keypads function same as base control.

Pre-wired to inside of base unit.

Optional wired control.
Keypads function same as base control.

Commissioning Checklist

Prior to delivering trailer to customer, Hallco strongly recommends you do the following:

- ☐ Review the declaration of incorporation of partly completed machinery contained in this manual. Verify that the equipment conforms to the provisions of Directive 2006/42/EC and any other Directives that the machinery must comply with.
- ☐ Verify that the system was tested with no load and that the conveyor operated correctly as defined in the operations section starting on page 42.
- ☐ Verify that the system was tested with the maximum hydraulic pressure to see if there were any leaks.
- ☐ Verify the emergency stop function is operating correctly (if equipped, HDS-E & HDS-H only).
- ☐ Verify that all mounting bolts have been tightened to the specified torque.
- ☐ Verify that all deck bolts have been tightened to the specified torque with thread locker.
- ☐ Measure the largest gap between adjacent slats as well as the gap between the side slats and side trim. This measurement needs to be less than 2.5 mm [0.1”] for the seal to function well. Repair any gaps that are larger than this amount.
- ☐ Inspect the portion of each shaft that enters the cylinder for paint, weld spatter, dents and scratches. These items will cause hydraulic seal failure during operation if they are not removed or replaced, if damaged.
- ☐ Verify that all safety decals are in place and visible.
- ☐ Verify that the operating controls are visible and accessible.
- ☐ Verify that all electric cables are firmly secured to the chassis so that they will not be damaged by abrasion.

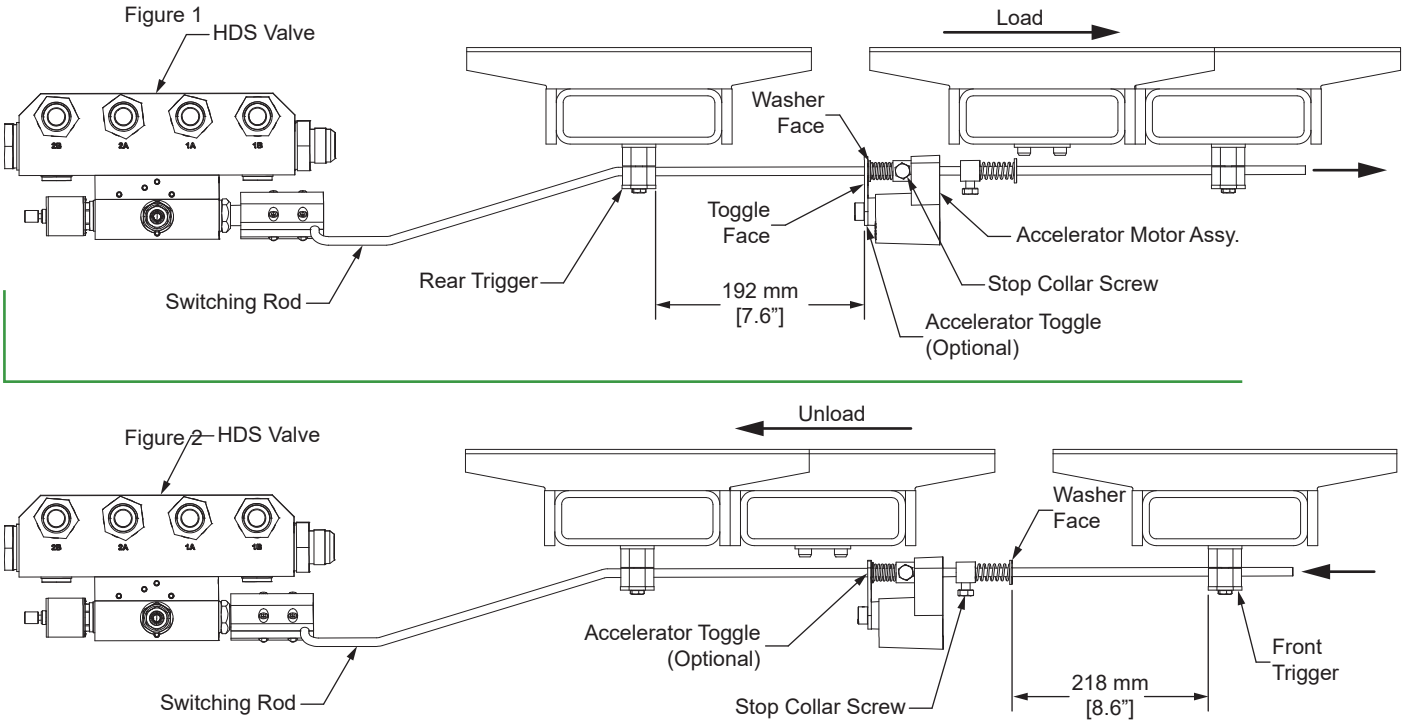
Training Checklist

Machine Directive REQUIRES the End User be properly trained on NEXUS™ LIVE FLOOR® conveying system. Hallco strongly recommends you do the following prior to delivery of the trailer:

- ☐ Give the End User a printed or electronic copy of the Installation Manual and Owner’s Manual. Review these manuals with them.
- ☐ Review and advise the End User of the specific hazard areas that have not been guarded against.
- ☐ Explain the proper emergency stop procedures for the NEXUS™.
- ☐ Train the End User in the safe operation of the conveyor. Show them where to find more information on the safe operation of the system and proper maintenance.
- ☐ Provide instructions for where the End User can take their equipment for service.
- ☐ Instruct the End User where they can purchase replacement parts.
- ☐ Advise the End User of the Hallco Warranty Terms and Conditions. If installer hasn’t done so, instruct the End User to return the registration card at the back of either manual.
- ☐ Advise the End User that they are also obligated to fully train any subsequent users of the equipment.

Adjusting the Switching Rod

The NEXUS™ switching rod is pre-adjusted from the factory. The stop collar screws will be marked indicating the NEXUS™ has been test run and adjusted.



Process for Adjusting Switching Rod

Reference figure 1 for these steps:

1. Pull the switching rod away from HDS valve.
2. Turn the floor on in “LOAD” mode until the rear cross-drive reaches it’s end of stroke.
3. Stop the floor.
4. Make sure the switching rod is still pulled away from the HDS valve.
5. Move the accelerator motor assembly (if equipped) and its stop until the face of toggle (or washer face if without accelerator) is 192 mm [7.6”] from the rear trigger then tighten the stop collar screw to 21 Nm [16 lb-ft].

Reference figure 2 for these steps:

6. Push the switching rod toward HDS valve.
7. Turn the floor on in “UNLOAD” mode until the front cross drive reaches it’s end of stroke.
8. Stop the floor.
9. Make sure the switching rod is still pushed towards the HDS valve.
10. Move the front rod stop washer face until it is 218 mm [8.6”] from the front trigger then tighten the stop collar screw to 21 Nm [16 lb-ft].

Troubleshooting the NEXUS™ drive system

If you experience problems with your NEXUS™ drive, follow the troubleshooting guide over the next few pages.

If you get stuck at anytime contact your Hallco representative. Make sure you have your model number and serial number ready before calling, see page 13 for locating this information.

Important Troubleshooting Safety Notes

When troubleshooting the NEXUS™ make sure that you have locked out and tagged out all energy sources. DO NOT operate the NEXUS™ without its guarding.

When servicing electric components disconnect electrical supply between the trailer and truck to prevent electrical shock.

When hydraulics are disconnected take extra precautions to prevent debris from entering the system. Small particulates can prevent the NEXUS™ from switching properly.

When troubleshooting, have the PTO/PUMP documentation readily available. The NEXUS™ is an integral piece of a larger machine, some steps will require you to check status of the PTO/PUMP and it's components.

DO NOT attempt to troubleshoot the system if you do not have experience running it. When troubleshooting you will be expected to know what is proper operational sounds, lights and movements. Inexperienced users can cause additional damage if they are not familiar with the equipment.

PROBLEM: No part of the floor moves.

Confirm the following conditions:

The PTO/pump is on and operating normally. CONFIRMED

Do all the lights on the Base Unit Keypad light up normally?

YES — Attach a pressure gauge to the NEXUS™ test point (optional). Follow the steps based on readings:

225 bar [3263 psi] — Are all of the cross drives and slats at the front position or at the rear position?

YES — Is the spring between the trigger and the rod stop compressed?

YES — Then there is something wrong with the switching valve. Loosen the rod stop enough that the rod can be shifted back and forth manually. If it is moved back and forth manually does the floor start to move again?

YES — Manually shift it some more to see if it gets stuck again. If you can't get the floor to stick again. Re-position the rod stop and tighten it. Run the floor as usual. The cause was probably a small bit of debris in the oil keeping the spool from shifting. Replace the pressure filter element.

NO — Load may be too heavy or frozen or there is a switching valve problem. The slats may be misaligned causing too much friction. Remove some load by other means, allow the load to thaw, replace the switching valve, OR visit a Hallco service location. Check alignment of the slats and drive unit, check for damaged components that are binding.

NO — Move the rod manually. Does the floor move again?

YES — Does it get stuck in the same place?

YES — The rod stop must be re-positioned OR there is some debris between the end of the slats and the front wall or between the cross drives keeping them from moving.

NO — Contact Hallco service.

NO — Check the return disconnect between the truck and trailer to make sure that it is connected and properly matched. Contact Hallco service.

NO — Load may be too heavy or frozen or there is a switching valve problem. The slats may be misaligned causing too much friction. Remove some load by other means, allow the load to thaw, replace the switching valve, OR visit a Hallco service location. Check alignment of the slats and drive unit, check for damaged components that are binding.

15-50 bar [218-725 psi] — Replace the ON/OFF cartridge valve.

0 or 50-225 bar [725-3263 psi] — Is the tank full of oil?

YES — Check the pressure line disconnect between the truck and trailer to make sure that it is connected and properly matched.

Check the pump to make sure that it can produce 225 bar pressure. See pump documentation for more information.

Replace the pressure relief valve at the pump and/or on the NEXUS HDS valve.

NO — Refill to proper levels. See page 19 for hydraulic oil details.

Continue to next page...

PROBLEM: No part of the floor moves (cont.)

... continued from previous page

NO — If the red Stop button on the Base Unit Keypad is faintly lit or not lit at all but the other buttons light up when pressed and the floor runs when the ON/OFF manual override is turned on, then replace the ON/OFF solenoid.

(If no lights are lit up see: “PROBLEM: None of the buttons on Base Unit Keypad light up when pressed”)

PROBLEM: Floor moves in “Unload” mode but gets stuck in “Load” mode OR floor moves in “Load” mode but gets stuck in “Unload” mode.

Confirm the following conditions:

The PTO/pump is on and operating normally.
All of the buttons light up properly. — CONFIRMED

- Is there debris between the cross drives, or damage to the cross drives preventing them from moving?
  - YES — Clear the cross drives, check for and repair additional damage prior to running the floor.
  - NO — Is there debris or damage on either end of the slats preventing them from moving?
    - YES — Clear the slats, check for and repair additional damage prior to running the floor.
    - NO — Contact Hallco service.

PROBLEM: None of the buttons on the Base Unit Keypad light up when pressed.

Confirm the following conditions:

The PTO/pump is on and operating normally.
The floor turns on and off when I engage and disengage the manual override on the ON/OFF cartridge valve. — CONFIRMED

- Is the e-stop button disengaged?
  - YES — Continue to the next troubleshooting step.
  - NO — Rotate e-stop clockwise until the button head pops up indicating the e-stop has been disengaged.
- Are the trailer lights on?
  - YES — Check the fuse inside the Control Box. Is it blown?
    - YES — Replace fuse with 2 amp mini ATC (blade style) fuse. Check wiring for damage, repair if needed.
    - NO — Does the Base Unit Keypad have 24vdc power?
      - YES — Are the supply wires connected to the back of the Base Unit Keypad correctly?
        - YES — Replace the Base Unit Keypad.
        - NO — Re-wire back of Base Unit Keypad per schematic on back decal.
      - NO — Check all source wiring. Look for and repair any wire damage.
  - NO — Turn on trailer lights. Trailer lights provide source voltage to Base Control Box.

PROBLEM: FLOOR WILL NOT SHIFT INTO "LOAD" MODE EVEN WHEN THE BLUE LOAD/UNLOAD BUTTON ON THE KEYPAD IS PRESSED AND LIT.

Confirm the following conditions:

All of the buttons light up properly.
The Floor will shift into "Load"mode when the LOAD/UNLOAD manual override is engaged. → CONFIRMED

→ Replace the LOAD/UNLOAD solenoid.

PROBLEM: FLOOR WILL NOT SHIFT INTO "ACCELERATOR" MODE EVEN WHEN THE YELLOW "ACCELERATOR" BUTTON ON THE KEYPAD IS PRESSED AND LIT.

Confirm the following conditions:

The buttons on the Keypad light up properly.
The floor turns on and operates in both directions. → CONFIRMED

→ Verify the YELLOW wire loom is connected, in good condition and connections are not corroded.
- YES: Continue to the next troubleshooting step.
- NO: Replace Accelerator Wire Loom or cable ends.

→ Is the connector end of the YELLOW cable connected to the wire loom near switching valve?
- YES: Continue to the next troubleshooting step.
- NO: Check for damage and reconnect.

→ Manually move the accelerator toggle back and forth, does it move freely?
- YES: Contact Hallco service location for additional troubleshooting.
- NO: Replace accelerator motor.

PROBLEM: FLOOR IS RUNNING IN "ACCELERATOR" MODE AND THEN WHEN THE "ACCELERATOR" BUTTON IS PRESSED THE FLOOR RUNS IN NORMAL NON-ACCELERATOR MODE.

The accelerator is wired for opposite hand machine. Reverse the positive and negative wires on the accelerator wire loom to reverse the accelerator function.

PROBLEM: FLOOR OPERATES IN "LOAD" MODE REGARDLESS OF WHICH BUTTON (LOAD/UNLOAD) IS PRESSED.

Is the manual override on the LOAD/UNLOAD cartridge valve engaged (ref. page 45)?
- YES: Disengage the manual override on the LOAD/UNLOAD cartridge valve.
- NO: Replace the LOAD/UNLOAD cartridge valve.

PROBLEM: FLOOR STARTS RUNNING AS SOON AS PUMP IS TURNED ON AND THE "STOP" BUTTON IS LIT.

Is the manual override on the ON/OFF cartridge valve engaged (ref. pages 43 & 45)?
- YES: Disengage the manual override on the ON/OFF cartridge valve.
- NO: Replace the ON/OFF cartridge valve.

PROBLEM: FLOOR RUNS IN “LOAD” DIRECTION WHEN THE GREEN BUTTON IS LIT OR THE HANDLE IS IN THE "UNLOAD" POSITION. IT RUNS IN THE "UNLOAD" DIRECTION WHEN THE BLUE LOAD/UNLOAD BUTTON IS LIT OR THE MANUAL HANDLE IS IN THE "LOAD" POSITION.

Confirm the following conditions:

Floor runs in “LOAD” direction when the green or yellow button is lit or the handle is in the "UNLOAD" position. It runs in the "UNLOAD" direction when the blue LOAD/UNLOAD button is lit or the manual handle is in the "LOAD" position.

CONFIRMED

→ Switch the Pressure and Return supply hoses on the truck or the front of the trailer.

PROBLEM: PRESSURE FILTER ELEMENT IS "BURST" OR EXPANDED.

Does the floor run in “LOAD” direction when the green or yellow button is lit or the handle is in the "UNLOAD" position? Does it run in the "UNLOAD" direction when the blue LOAD/UNLOAD button is lit or the manual handle is in the "LOAD" position?

- YES — Switch the Pressure and Return supply hoses on the truck or the front of the trailer.
- NO — Make sure the flow direction arrow on the pressure filter housing points toward the HDS valve.

PROBLEM: SLATS HAVE LIFTED UP FROM THE BEARINGS.

Near the discharge doorway?

- YES — Possible causes are: Bent down sill plate allowing material to build up under the ends of the slats. Broken sub-deck rivets or welds. Slat seal tips stuck in adjacent slat seal groove.
- NO — Possible causes are: Material has built up on top of the tailer coupler plate or other flat area under the slats pushing them up. The slopesheet has dug into the top of the slats causing them to buckle up.

PROBLEM: THERE IS A RED LED ON THE WIRELESS REMOTE THAT IS BLINKING/FLASHING.

The remote battery voltage is getting low. Replace the battery soon.

PROBLEM: SLATS MOVE SEPERATELY WHEN THEY SHOULD BE MOVING TOGETHER.

Load on the floor?

- YES — The Load/Unload cartridge valve may be damaged. Component(s) of the slats/bearings/subdecks may be damaged and causing extra friction. Locate and repair the damage.
- NO — The floor will operate correctly when a load is placed on it. The problem is caused by unbalanced friction between the slat groups. A load will balance the friction.

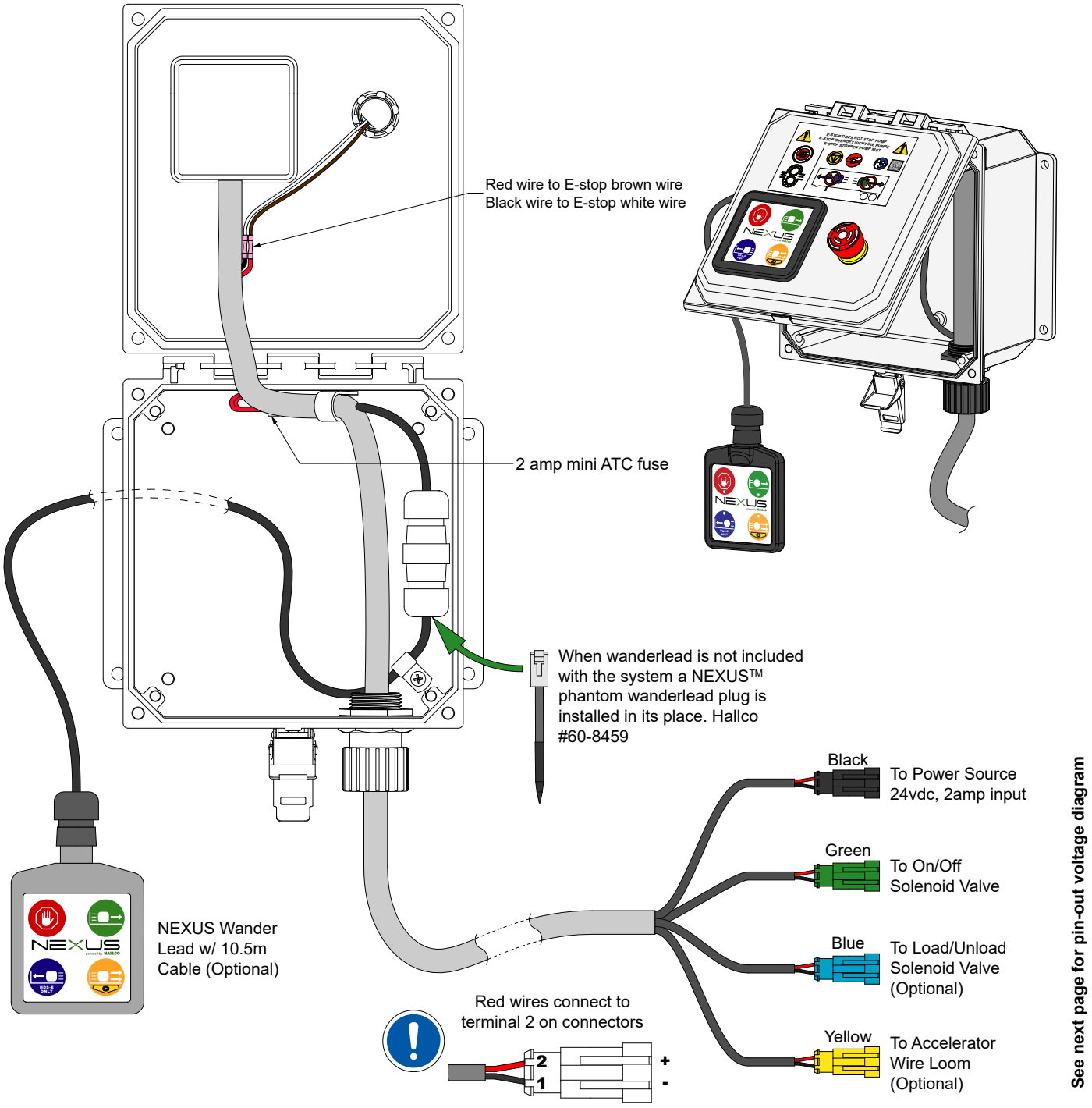
PROBLEM: BLOBS OR BALLS OF ALUMINUM ARE FORMED BETWEEN NEW SLATS.

When slats contact each other due to sub-deck that is not properly spaced aluminum dust and shavings will form as they wear each other down. If blobs or balls are formed instead of shavings and dust this means the slats are soft and not of the proper hardness. Contact the dealer where the equipment was purchased or Hallco Customer service.

NEXUS™ Control Box Layout

Below is the control box assembly layout for troubleshooting. Refer to the next page for the pin-out voltage diagram.

Caution! System is powered by 24vdc. Care should be taken around electrical components even when working with low voltages.



Pinout Table

Leaving all other cables connected, disconnect each cable and test the voltage between its two pins following the polarity shown in figure 2. The chart below lists the normal voltage values measured for each button state for pins 1.1 through 1.8 (ref. fig. 1).

Disconnect the ethernet cable from the waterproof connector. Measure the voltage of pins 2.1 through 2.7 relative to pin 2.8 which is common/negative (ref. fig. 3). Note that the control will not work normally with this cable disconnected. The Red Button will remain lit and the other buttons will be lit only while the button is depressed.

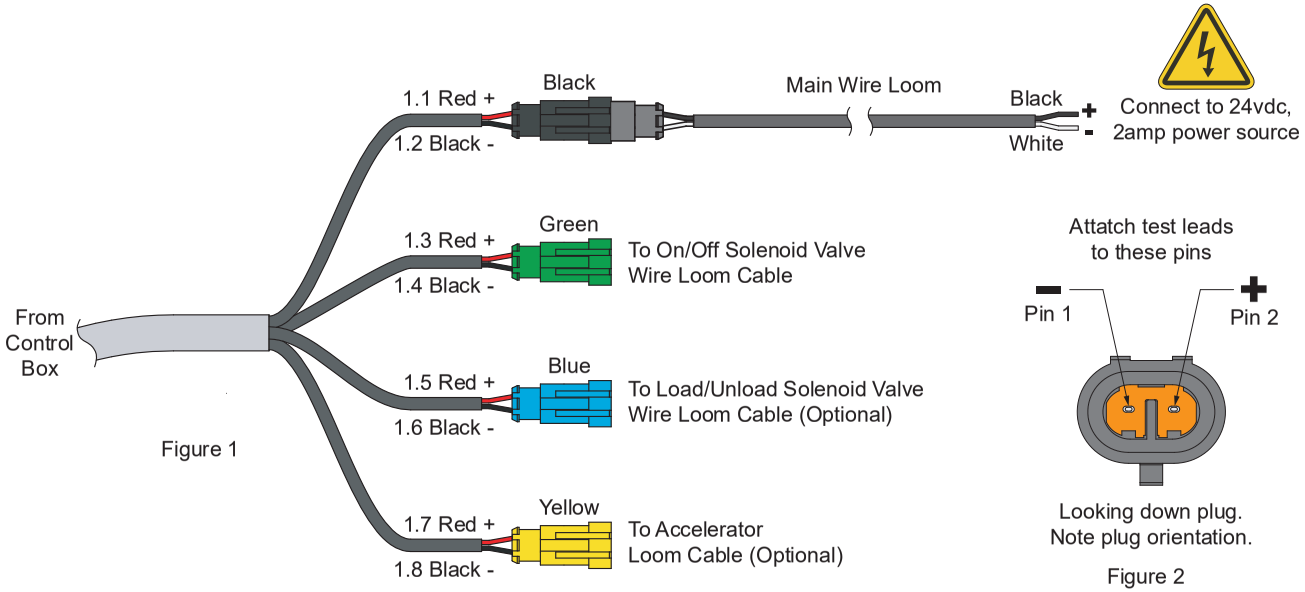


Figure 1

Looking down plug.
Note plug orientation.

Figure 2

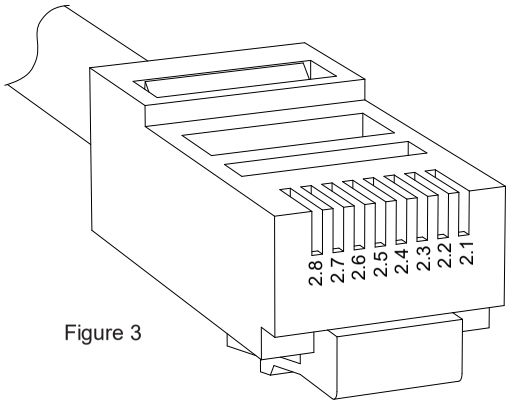
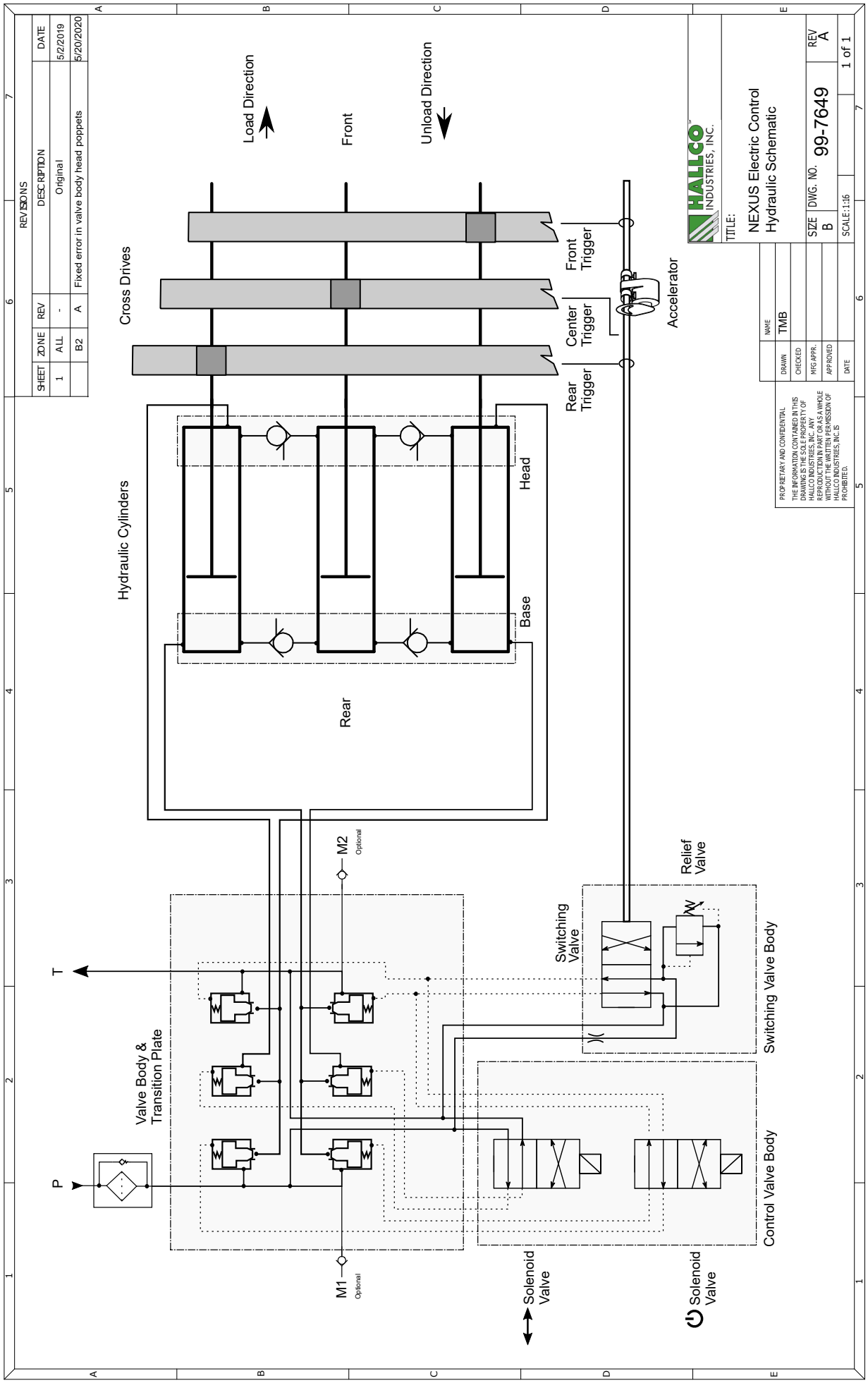


Figure 3

Button states					Voltage relative to common, negative															
E-Stop	Red Button	Green Button	Blue Button	Yellow Button	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
Out	Lit	Off	Off	Off	+24	0	+12-19	0	+0-12	0	+0-2	0	0	0	0	+24	+0-2	0	0	0
Out	Off	Lit	Off	Off	+24	0	+22-24	0	+0-12	0	+22-24	0	+24	0	0	+24	+0-2	+23-24	0	0
Out	Off	Off	Lit	Off	+24	0	+22-24	0	+0-12	0	+22-24	0	0	0	+24	+24	+0-2	+23-24	0	0
Out	Off	Off	Off	Lit	+24	0	+22-24	0	+22-24	0	-22-24	0	0	+24	0	+24	+0-2	+23-24	0	0
In	Off	Off	Off	Off	0	0	0	0	0	0	-22-24	0	0	0	0	0	0	0	0	0


REVISIONS
SHEET | ZONE | REV | DESCRIPTION | DATE
1 | ALL | - | Original | 5/2/2019
B2 | A | Fixed error in valve body head poppets | 5/20/2020
Load Direction
Front
Unload Direction
Cross Drives
Front Trigger
Center Trigger
Rear Trigger
Accelerator
Hydraulic Cylinders
Head
Base
Rear
M2
Optional
M1
Optional
T
P
Valve Body & Transition Plate
Switching Valve
Relief Valve
Switching Valve Body
Control Valve Body
Solenoid Valve
Solenoid Valve
HALLCO INDUSTRIES, INC.
TITLE:
NEXUS Electric Control
Hydraulic Schematic
SIZE B
DWG. NO. 99-7649
REV A
SCALE:1:16
1 of 1
NAME
DRAWN TMB
CHECKED
MFG APPR.
APPROVED
DATE
PROPRIETARY AND CONFIDENTIAL
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NEXUS™ Series Limited Warranty

Hallco Industries hereby warrants, only to the first owner of a new **Hallco NEXUS™** series system from the factory or selling distributor, that the product shall be free from defects in material and workmanship for a period of **one year** after delivery to the first owner. **This warranty does not cover normal wear and tear and maintenance and is not to be construed as a service contract.**

Owner's Obligation:
To qualify for warranty coverage, a **Warranty Card** must be completed and returned to **Hallco Industries** within **ten (10) days** of delivery. The equipment must be subject to normal use and service only.

Definition of Normal Use and Service:
"Normal use and service" means the loading and/or unloading of uniformly distributed, **non-corrosive** material properly restrained and secured on properly maintained public roads, with gross vehicle weights not in excess of factory-rated capacity as stated in the vehicle owner's manual. For stationary installations, "normal use and service" means the conveying of uniformly distributed, **non-corrosive** material, with weights not in excess of factory-rated capacity.

Sole and Exclusive Remedy:
If the product covered hereby fails to conform to the above Warranty, **Hallco Industries** sole liability under this Warranty and the owner's sole and exclusive remedy is limited to repair or replacement of the defective part(s) at a facility authorized by **Hallco Industries**. Contact **Hallco Industries** for the closest Authorized Dealer. This is the owner's sole and exclusive remedy for all contract claims, and all tort claims including those based on strict liability in tort and/or negligence. Any defective part(s) must be shipped freight prepaid to **Hallco Industries**.

EXCEPT AS EXPRESSLY SET FORTH ABOVE, HALLCO INDUSTRIES MAKES NO WARRANTIES EXPRESS, IMPLIED OR STATUTORY, SPECIFICALLY: NO WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR WARRANTIES OF MERCHANTABILITY ARE MADE. FURTHER, HALLCO INDUSTRIES WILL NOT BE LIABLE FOR INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, LOSS OF USE OF THE PRODUCT, DAMAGE TO THE PRODUCT, TOWING EXPENSES, LEGAL FEES AND THE LIABILITY YOU MAY HAVE IN RESPECT TO ANY OTHER CLAIM OR REASON.

Tort Disclaimer:
Hallco Industries shall not have any liability in tort with respect to the products, including any liability based on strict liability in tort and/or negligence, or any other theory.

NEXUS™ Series Warranty Conditions

Warranty conditions are as follows:

The warranty period is for the first equipment owner only.
A warranty period is one (1) year for the entire Hallco NEXUS™ system from the date of delivery to the first purchaser.
A warranty period is one (1) year for any electrical component of the Hallco NEXUS™ system.
The NEXUS™ series system must be installed by the trailer manufacturer according to Hallco installation procedures located in the Installation Manual.
Purchaser must follow recommended maintenance and control procedures located in the Owners Manual.
In the case of a malfunction, trailer manufacturer or Hallco Industries must be informed within 10 business days.

The following components are not covered by the warranty:

Malfunction of equipment, or caused by equipment, which was not supplied by Hallco Industries.
Malfunction caused by the use of dirty oil, or oil of the wrong type as stated in the owner's manual.
Malfunction caused by overheated oil: maximum temperature of 82° C or 180° F.
Malfunction caused by corrosive materials.
Malfunction caused by repair work performed by an unauthorized third party. Contact Hallco Industries for the closest authorized dealer.
Filter elements and components, which are subject to wear-and-tear.
Defects in electrical components due to incorrect connection and/or incorrect voltage levels.

The Warranty is void if:

The NEXUS™ series system is used for purposes which have not been recommended by Hallco Industries.
The wet kit does not meet Hallco Industries system recommendations.
The Hallco NEXUS™ series system is not installed properly.
Loads in excess of legal limits are moved with the system without written permission from Hallco Industries.

NEXUS™ Series Warranty Registration

Warranty Registration Process:
Warranty registration will be the responsibility of the selling party to the end user, (The Dealer or Manufacturer of the trailer or bin).

The warranty registration card (below) must be completed and returned to Hallco Industries in order for the warranty period to begin on the date of delivery (date purchaser actually takes delivery of trailer). **The beginning of the warranty will be the date of manufacture if the warranty card is not completed and sent to Hallco Industries.**

Hallco Industries Warranty Registration Card

Purchaser:	**E-mail:**
Company:	**Phone:**
Address:	**State:**
City:	**Postal Code:**
Country:	**Trailer Manufacturer:**
Date of Delivery:	**Trailer VIN #:**
NEXUS™ Model Number:	**Dealer Name:**
NEXUS™ Serial Number:	**Dealer Location:**
Type of Material Unloaded:	**Trailer Leased or Owned:**

I have fully read the Hallco Industries warranty information and I/we fully understand and agree to the terms of the warranty.

Signature: _____ **Date:** _____

Please print or type

To validate the warranty, this registration card must be filled out completely and returned to Hallco Industries within ten (10) business days of delivery to the original end customer.

For your convenience this form is available online at www.hallco.eu

Mail warranty card to:
Hallco Industries, SA
Rue du Mont d'Orcq 14, 7503 FROYENNES

E-mail warranty card to: warranty@hallco.eu

Rue du Mont d'Orcq 14, 7503 FROYENNES
Phone : +32 (0) 69 84 47 66, hello@hallco.eu

EU Declaration of Incorporation

In accordance with EN ISO 17050-1:2010

1. Manufacturer:

Name	Hallco Industries, SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES

1a. Technical Representative:

Name	Jonas Roggeman
Business	Hallco Industries SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES

2. Product Identification:

Product	Hallco Moving Floor Conveyor System
Model/type	NEXUS™ Series
Version	HDS-M, Left Hand/Right Hand, Version 1

3. We hereby declare that the applicable EHSRs have been complied with in respect of the partly completed machinery to the extent indicated in the table below.

4. We undertake to transmit, in response to a reasoned request by the appropriate national authorities, relevant information on the partly completed machinery identified above. The method of transmission shall be either, CD/DVD-ROM or USB storage device sent by post. Method to be determined at the time of request by Hallco Industries, Inc. and/or Hallco Industries Limited.

5. **The machinery is incomplete and must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the Directive**.

6. Place and Date of Declaration:

Place of Issue	Hallco Industries, SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES
Date of Issue	2021-06-10

7. Responsible Authority:

Signed on behalf of	Hallco Industries, SA
Name	Arran Leatherland
Position	Managing Director
Signature	**** Signature on file at Hallco Industries, SA ****

EHSRS Compliance Table

Key:
C: PCM complies with the requirement
N/A: Requirement is not applicable to the PCM
I: PCM does not comply – The installer must assess the finished machinery to the requirement.

EHSR	Title	C	N/A	I
1.1	**General remarks**			
1.1.2	Principles of Safety Integration	C		
1.1.3	Materials and products	C		
1.1.4	Lighting		N/A	
1.1.5	Design of machinery to facilitate its handling	C		
1.1.6.	Ergonomics	C		
1.1.7.	Operating positions	C		
1.1.8.	Seating		N/A	
1.2.	**Control systems**			
1.2.1.	Safety and reliability of control systems			I
1.2.2.	Control devices			I
1.2.3.	Starting			I
1.2.4.	Stopping			I
1.2.5.	Selection of control or operating modes			I
1.2.6.	Failure of the power supply			I
1.3.	**Protection against mechanical hazard**			
1.3.1.	Risk of loss of stability	C		
1.3.2.	Risk of break-up during operation	C		
1.3.3.	Risks due to falling or ejected objects			I
1.3.4.	Risks due to surfaces, edges or angles	C		
1.3.5.	Risks related to combined machinery		N/A	
1.3.6.	Variations in operating conditions		N/A	
1.3.7.	Risks related to moving parts			I
1.3.8.	Choice of protection against moving parts risks			I
1.3.9.	Risks of uncontrolled movements	C		
1.4.	**Requirements for guards and protective devices**			
1.4.1.	General requirements			I
1.4.2.	Special requirements for guards			I
1.4.3.	Special requirements for protective devices			I
1.5.	**Risks due to other hazards**			
1.5.1.	Electricity supply		N/A	
1.5.2.	Static electricity		N/A	
1.5.3.	Energy supply other than electricity			I
1.5.4.	Errors of fitting	C		
1.5.5.	Extreme temperatures	C		
1.5.6.	Fire	C		
1.5.7.	Explosion	C		
1.5.8.	Noise	C		

1.5.9.	Vibrations	C		
1.5.10	Radiation		N/A	
1.5.11	External radiation		N/A	
1.5.12	Laser radiation		N/A	
1.5.13	Emissions of hazardous substances		N/A	
1.5.14	Risk of being trapped in a machine			I
1.5.15	Risk of slipping, tripping or falling			I
1.5.16	Lightning		N/A	
1.6.	**Maintenance**			
1.6.1.	Machinery maintenance			I
1.6.2.	Access to operating and servicing positions	C		
1.6.3.	Isolation of energy sources			I
1.6.4.	Operator intervention	C		
1.6.5.	Cleaning of internal parts	C		
1.7.	**Information**			
1.7.1.	Information and warnings on the machinery	C		
1.7.2.	Warning of residual risks	C		
1.7.3.	Marking of machinery	C		
1.7.4.	Instructions	C		
2.	**Requirements for certain categories of machinery**			
2.1.	Machinery for foodstuffs, cosmetics or pharmaceutical products		N/A	
2.2.	Portable hand-held and/or hand-guided machinery		N/A	
2.3.	Machinery for working wood, etc.		N/A	
3.	Hazards due to the mobility of machinery		N/A	
4.	Hazards due to lifting operations		N/A	
5.	Machinery intended for underground work		N/A	
6.	Hazards due to the lifting of persons		N/A	

Rue du Mont d'Orcq 14, 7503 FROYENNES
Phone:+32 (0) 69 84 47 66, hello@hallco.eu

EU Declaration of Incorporation

In accordance with EN ISO 17050-1:2010

1. Manufacturer:

Name	Hallco Industries, SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES

2. Technical Representative:

Name	Jonas Roggeman
Business	Hallco Industries SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES

3. Product Identification:

Product	Hallco Moving Floor Conveyor System
Model/type	NEXUS™ Series
Version	HDS-H & HDS-E, Left Hand/Right Hand, Version 1

4. We hereby declare that the applicable EHSRs have been complied with in respect of the partly completed machinery to the extent indicated in the table below.
5. We undertake to transmit, in response to a reasoned request by the appropriate national authorities, relevant information on the partly completed machinery identified above. The method of transmission shall be either, CD/DVD-ROM or USB storage device sent by post. Method to be determined at the time of request by Hallco Industries, Inc. and/or Hallco Industries Limited.
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7. Place and Date of Declaration:

Place of Issue	Hallco Industries, SA
Address	Rue du Mont d'Orcq 14, 7503 FROYENNES
Date of Issue	2021-06-10

8. Responsible Authority:

Signed on behalf of	Hallco Industries, SA
Name	Arran Leatherland
Position	Managing Director
Signature	*** Signature on file at Hallco Industries, SA ***

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1.1.5	Design of machinery to facilitate its handling	C		
1.1.6.	Ergonomics	C		
1.1.7.	Operating positions	C		
1.1.8.	Seating		N/A	
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1.2.3.	Starting			I
1.2.4.	Stopping			I
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1.5.4.	Errors of fitting	C		
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1.5.7.	Explosion	C		
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1.5.10	Radiation		N/A	
1.5.11	External radiation		N/A	
1.5.12	Laser radiation		N/A	
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4.	Hazards due to lifting operations		N/A	
5.	Machinery intended for underground work		N/A	
6.	Hazards due to the lifting of persons		N/A	