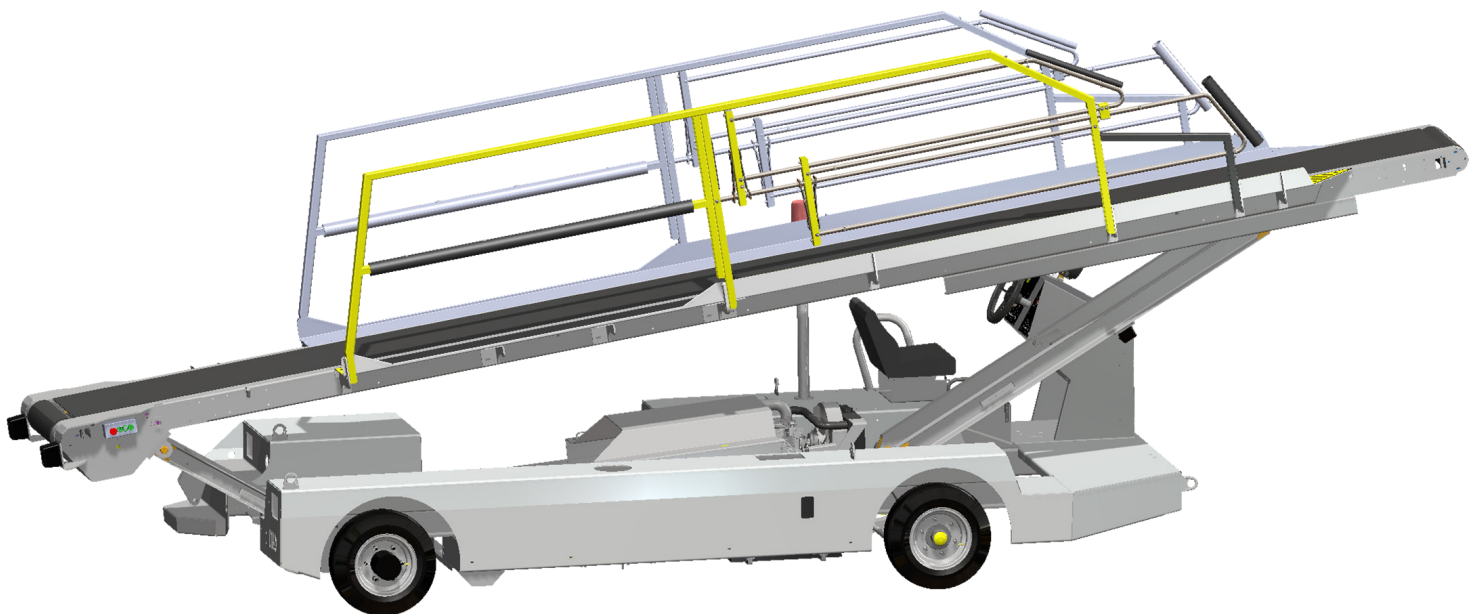


RAMPTECH® SAFETY HANDRAIL

QUICK START GUIDE



INNOVATION. PERFORMANCE. OEM QUALITY



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SAFETY HANDRAIL QUICK START GUIDE

TABLE OF CONTENTS

2	WARNING & OPERATIONS RECOMENDATIONS	8	UPPER RAIL OPERATION
3	ASSEMBLY	11	UNIVERSAL HANDRAIL DIM. / BELT LOADER COMPATIBILITY
4	HANDRAIL INSTALLATION	12	OTHER RAIL OPTIONS
5	COMPATABILITY WITH A220 AND RJ AIRCRAFT	13	TROUBLESHOOTING GUIDE
6	MANUNFACTURER'S NOTICE	14	ADJUSTMENT LOCATIONS
7	EXTENDABLE RAIL MOVEMENT & LOWER RAIL OPERATION	15	SERVICE PARTS AND MAINTENANCE



RAMPTECH UNIVERSAL HANDRAIL (DUAL INSTALLATION)

PN: 526036 / 526033

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NOTICE: SAFETY HANDRAIL USAGE ON GSE BELT LOADERS - HANDRAIL MANUFACTURER'S NOTICE

Dear Valued Customer,

Thank you for choosing the Ramptech Safety Handrail Kit designed specifically for GSE belt loaders. We appreciate your commitment to prioritizing safety in your operations. This notice contains crucial information about the handrail kit, including its description, installation, operation, and adjustments. We kindly request your careful review and adherence to the following guidelines:

1. Purpose:

The Ramptech Safety Handrail has been developed to provide enhanced support and stability during aircraft loading and unloading processes, aiming to prevent slips, falls, and accidents. Our primary goal is to ensure a safer working environment for ground handling crews.

2. Proper Usage:

- a. Use the Ramptech Safety Handrail exclusively when the belt loader is stationary, and the operator is engaged in the aircraft loading or unloading process.
- b. Maintain a secure grip on the handrails while moving up and down the stationary belt and fixed boom incline angle.
- c. Avoid leaning on the handrails or placing heavy objects on them to maintain stability.
- d. Ensure the handrails remain clear of any obstructions or debris.
- e. For maximum operator safety, fully deploy and configure the extendable lower and upper rails according to the specific aircraft type. Where applicable and compliant with end-user operating procedures, extend the lower and upper rails inside and against the cargo hold door.

3. Secure Attachment:

Prior to each use, ensure the Ramptech Safety Handrail is securely and properly installed and fully operational. Follow the detailed installation and operational instructions provided in the accompanying documentation for correct attachment and functionality. It's crucial to note that if the installation of the kits on GSE alters the visibility of the "original warning labels," these labels must be replaced to maintain safety standards. Please note that the customer assumes full responsibility for the appropriate installation, setting, adjustment, and maintenance of the handrail kit. Ramptech and its affiliates shall not be held liable for any issues arising from improper installation or maintenance.

4. Recommended Installation:

For optimal safety during belt loader operations, it is highly recommended to install handrails on both sides of the belt loader boom. This balanced installation provides superior support and stability, reducing the risk of accidents during loading or unloading, regardless of the boom's orientation. However, if a single handrail solution is installed, it becomes the responsibility of the vehicle's owner and operator to

understand the inherent hazards, to conduct periodic risk analyses, and define the appropriate procedures and training to be performed to mitigate any such risk

5. Regular Inspection:

Regularly inspect the Ramptech Safety Handrail for any signs of damage, wear, or malfunction. Promptly report any identified issues to our support team or your supervisor for further evaluation and necessary repairs. The customer is responsible for the maintenance and upkeep of the handrail kit.

6. Operator Training:

The customer is solely responsible for ensuring that operators receive proper training on the safe usage and operation of the belt loader, including the correct utilization of the Ramptech Safety Handrail Kit. Thoroughly train operators in the installation, adjustment, and maintenance procedures specific to the handrail kit to maximize its effectiveness and ensure their safety. Ramptech shall not be held liable for any accidents or incidents resulting from inadequate training or misuse of the handrail kit.

7. Liability Limitation:

Please be aware that while the Ramptech Safety Handrail has been designed with utmost care and attention to safety, its use is at your own risk. Ramptech and its affiliates shall not be liable for any direct, indirect, incidental, consequential, or special damages arising out of or in connection with the use or misuse of the Ramptech Safety Handrail Kit, including but not limited to personal injury, property damage, or loss of productivity. It is the responsibility of the vehicle's owner and operator's management to understand the hazards associated with GSE operation, conduct risk analysis, define appropriate procedures, and provide necessary training. Consideration should be given to the influence of weather conditions expected at the airport of use.

8. Reporting Incidents:

We strongly urge you to report any accidents, near misses, or safety concerns related to the handrails on the belt loader immediately to our support team or your supervisor. Your feedback is vital in helping us improve our products and ensure the continued safety of all users.

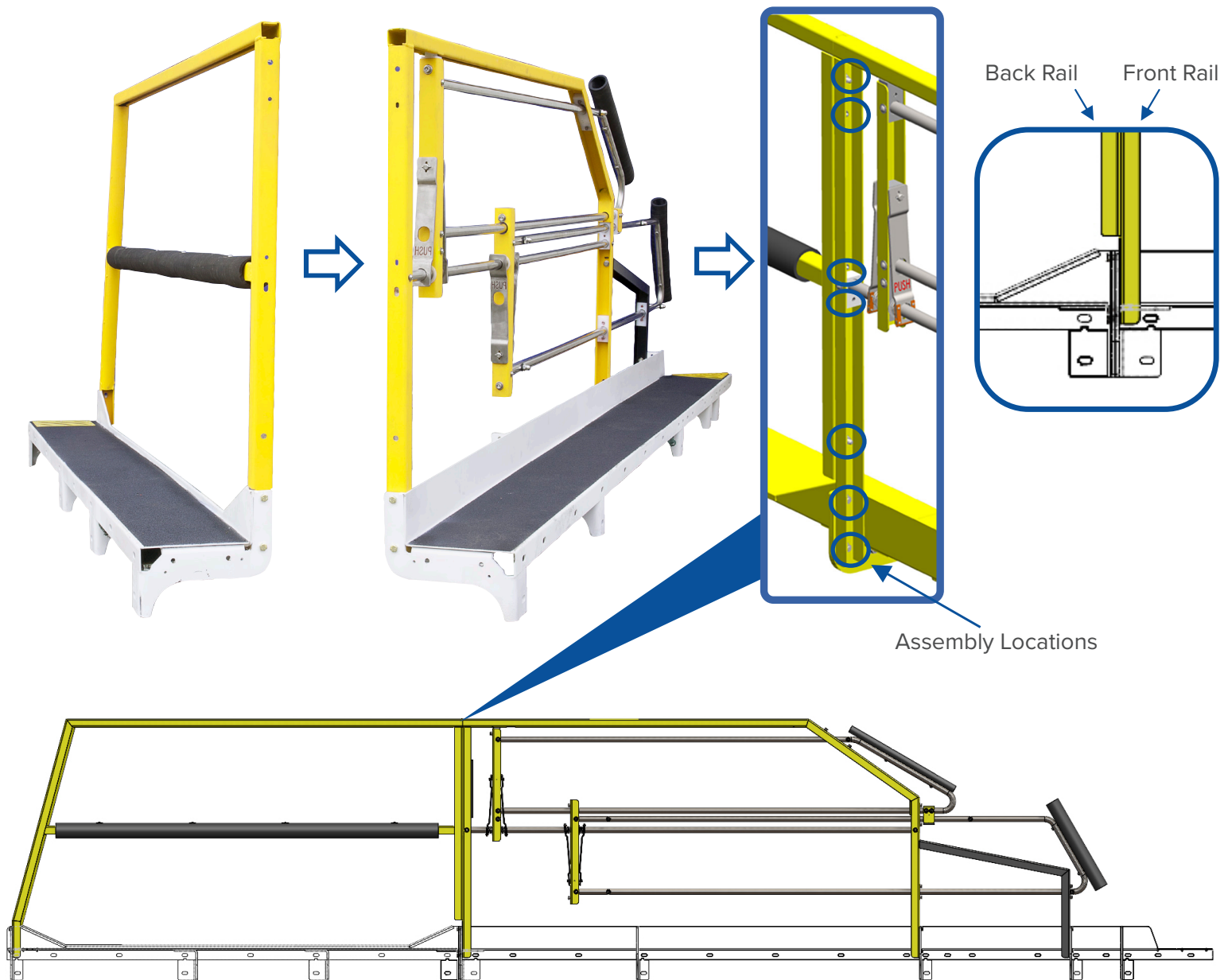
By using the Ramptech Safety Handrail Kit, you acknowledge and agree to these terms and conditions, including the limitation of liability. It is essential to comply with these guidelines and use the handrail kit responsibly to prioritize the safety of operators and personnel.

Thank you for choosing the Ramptech Safety Handrail Kit. We are committed to providing you with reliable safety solutions for your GSE belt loaders.

Sincerely,

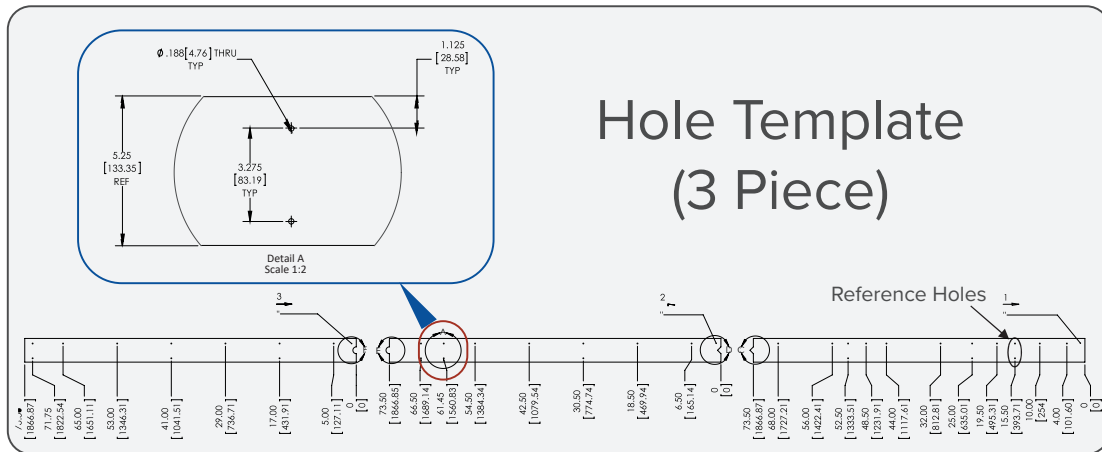
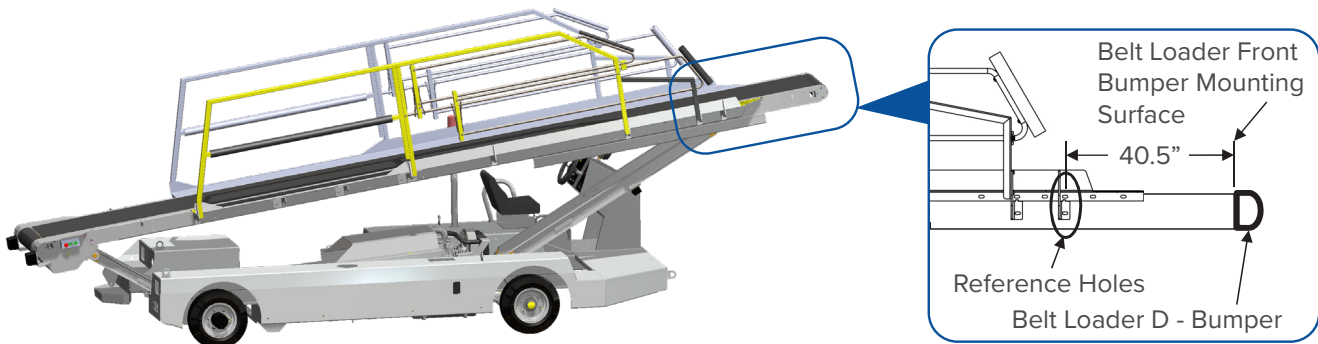
June 4, 2023

ASSEMBLY



Note: All assembly hardware is included

HANDRAIL INSTALLATION



Install handrail on belt loader as shown above. Align the template numerically with arrows pointed toward front of belt loader, top edge of template even with top of boom. Mark holes on belt loader mounting surface. Use included Grade 8 hardware for installation.

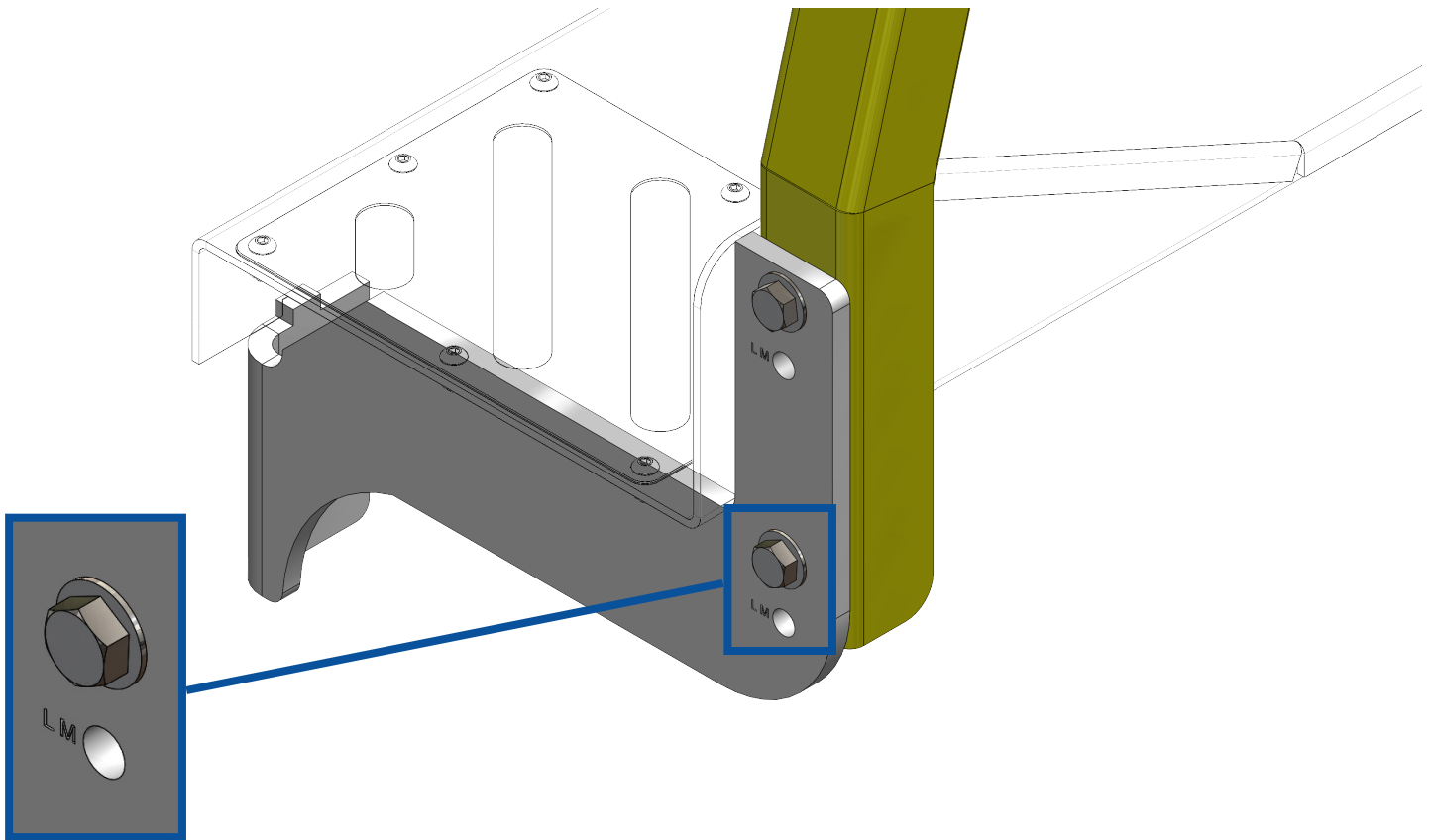
For optimal mounting please use the recommended "Reference Holes" position at 40.5 inches from the front of the boom. Note - Above handrail install configuration has been tested to be compatible with TLD NBL, TUG 660, Wollard TC-888 belt loaders and the following aircraft:

A220, A319, A320	B747
B737 700/800/900	CRJ200/700
B757 200/300	EMB170/175
B767 300/400	ERJ-145
B777	Q200/300/400

In our continuous dedication to ensuring utmost compatibility with a wide array of aircraft (as listed above), it's important to acknowledge that certain operators might employ varying methods for positioning belt loader boom ends in relation to the aircraft (such as having the boom end away from the fuselage - "No Touch," aligning it with the door sill, placing it within the cargo hold, etc.).

To maintain a secure configuration, we highly recommend confirming the appropriate setup with each aircraft slated for servicing. This prudent approach also extends to new or forthcoming aircraft models or versions that come into consideration. This methodology serves as a reliable means to consistently uphold safety standards and operations across the spectrum of aircraft types.

COMPATABILITY WITH A220 AND RJ AIRCRAFT



The handrailing has been designed to be adaptable for use on smaller regional jet aircraft such as the Airbus A220 and Embraer EMB 179/175 and others.

Railing mounting brackets have an additional hole Lower Mounting (LM).

Mounting the railing in the Lower Mounting (LM) position reduces the overall height of the installed railing by one inch (1") or 25mm.

WARNING

ALWAYS POSITION BOTH EXTENDABLE HANDRAIL SECTIONS AS CLOSE TO THE AIRCRAFT AS POSSIBLE TO PROVIDE MAXIMUM OPERATOR SAFETY

FOLLOW YOUR LOCAL SAFETY AUTHORITY FOR SPECIFIC OPERATIONAL GUIDELINES



OPERATIONAL RECOMMENDATIONS:

For the safe opening and closing of the cargo hold door and secure access to the hold using the belt loader boom, it is advised to follow these steps:

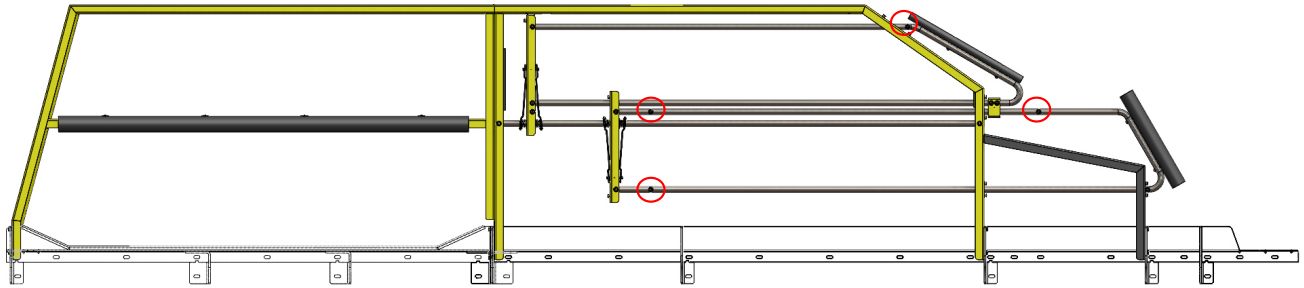
1. Position the belt loader perpendicular to the aircraft.
2. Lift the boom at an appropriate angle to allow access without obstructing slide deployment areas or passenger evacuation routes.
3. Ensure the angle prevents objects or individuals from falling between the boom and doorsill.
4. Use the rear access step of the belt loader to move from the ground to the chassis and then to the boom.
5. Extend the rails immediately after positioning the belt loader and reaching the handrail locking mechanism.
6. Exercise caution when extending the handrail in areas with limited clearance near the aircraft's fuselage or engines.

These recommendations are based on general best practices. Additionally, it is important to follow your employer's Standard Operating Procedures (SOPs) which provide specific instructions aligned with safety policies and regulatory requirements and also the original OEM recommendations. Adhering to the SOPs ensures safe and compliant practices during aircraft servicing operations. Always prioritize and strictly follow your employer's SOPs to maintain a secure working environment.

WARNING

The act of opening or closing the cargo compartment door while standing or kneeling on the belt during aircraft access and egress presents a significant risk of tripping and falling hazards. It is crucial to implement measures aimed at eliminating or reducing the risk of falls during these door operations. The responsibility lies with the management of the vehicle owner and operator to fully understand the inherent hazards associated with ground support equipment (GSE) operations. This includes conducting thorough risk assessments, establishing appropriate procedures, and providing necessary training to mitigate risks. Furthermore, it is important to consider the expected weather conditions at the specific airport of operation to account for their potential influence on safety.

EXTENDABLE RAIL MOVEMENT STOPS

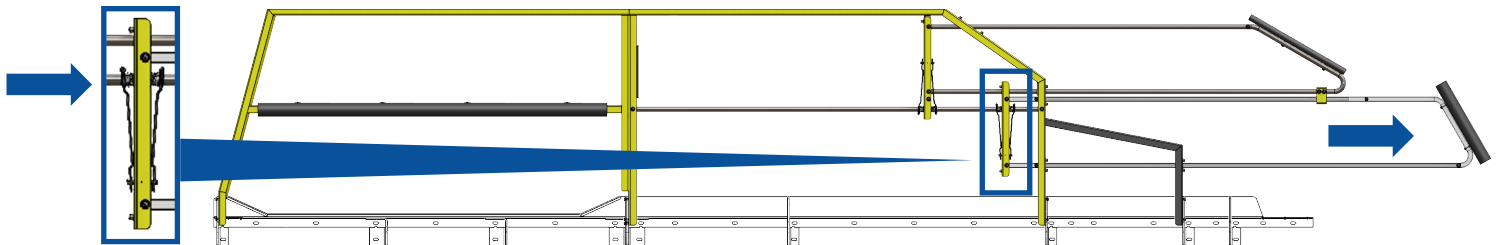


Extendable rail movement is limited by physical stops at the locations shown above.

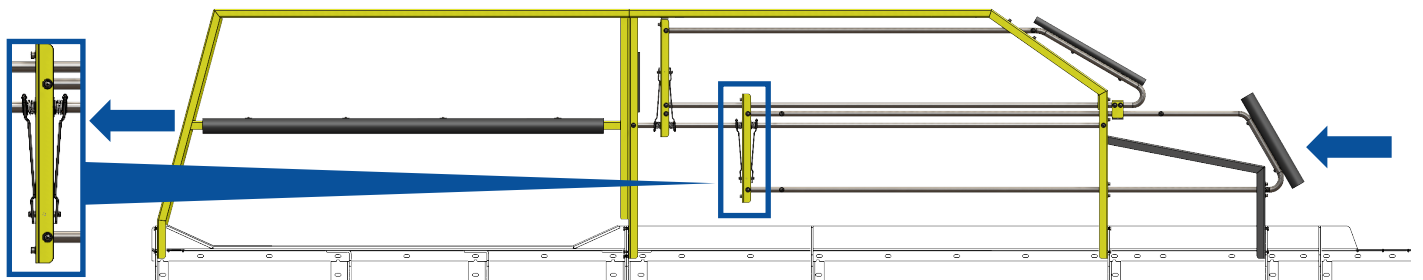


WARNING: Do not remove stops. Removing stops will create pinch points which may result in serious injury.

LOWER RAIL OPERATION



EXTEND



RETRACT

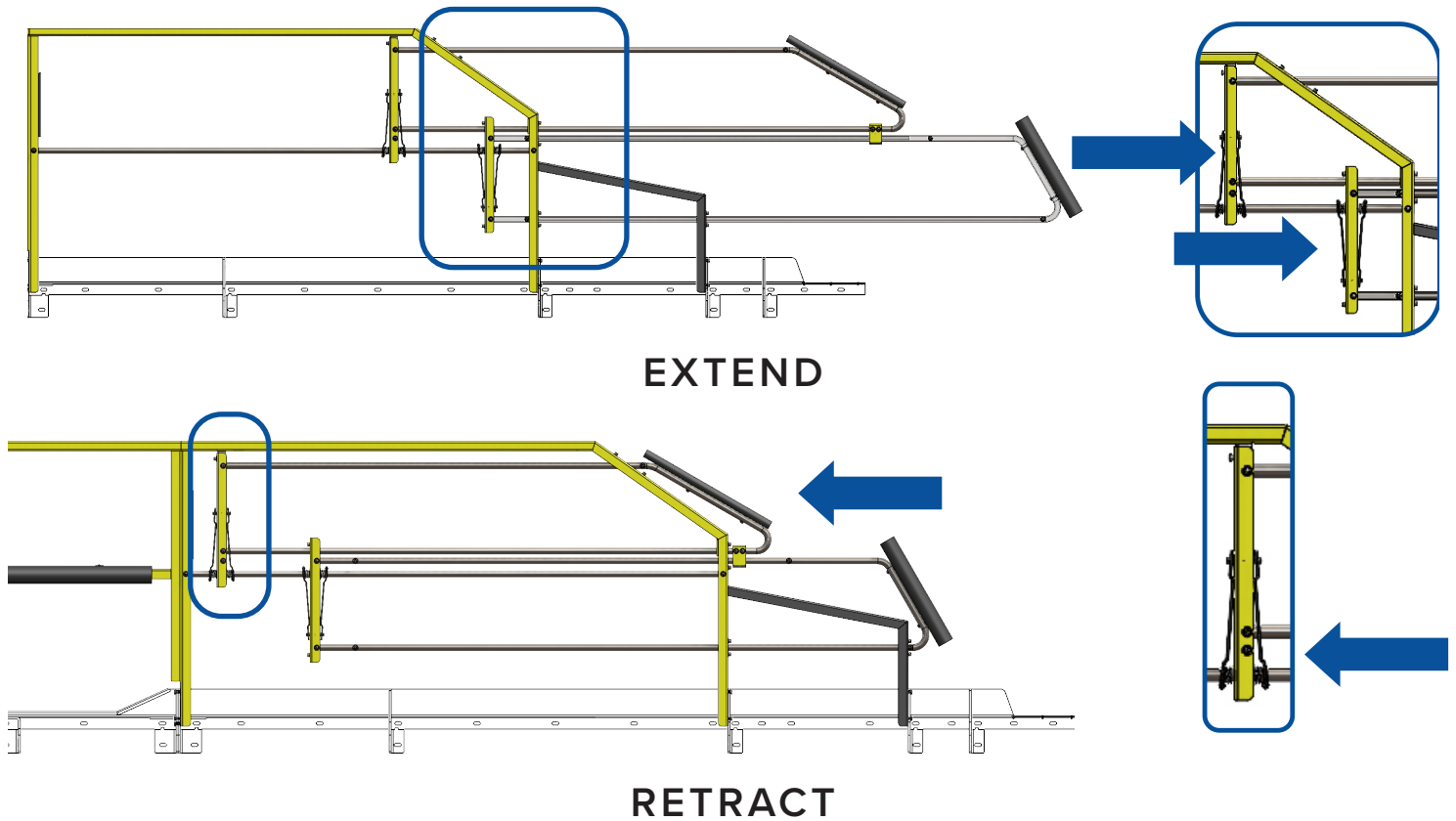
Push the lower handles as shown above to extend or retract lower extendable rail. For proper operation there is no need to squeeze both handles.

Lower rail can be moved independently if the upper rail is completely retracted.



ATTENTION: Squeezing both handles is not required to move the extendable rail. Engage the handle close to the word “PUSH”.

UPPER RAIL OPERATION



Upper extendable rail is connected to the lower extendable rail as shown. Upper rail will not extend without also extending the lower rail. For proper operation there is no need to squeeze both handles.

Push the upper handles as shown above to extend or retract upper extendable rail.

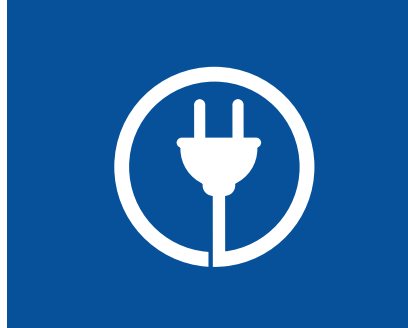


ATTENTION: Squeezing both handles is not required to move the extendable rail. Push closer to the spring for easier operation.

TESTED AND PROVEN TO LAST LONG



CONTROL DEVICES



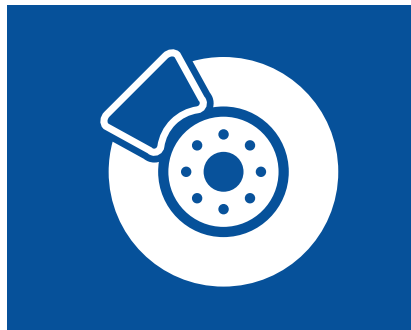
ELECTRIC CONVERSIONS



IBS LITHIUM BATTERIES



RAMP SAFETY



BRAKING SYSTEMS

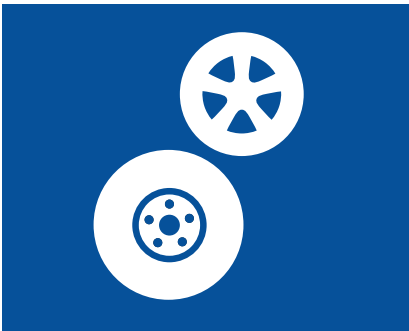


POWER TRAIN



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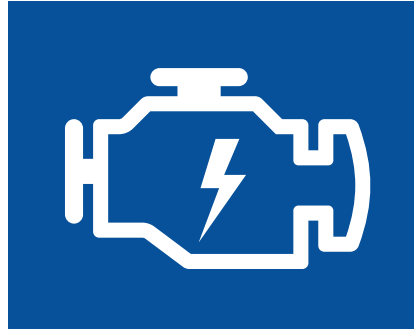
ER AND PERFORM BETTER FOR GSE



GSE TIRES



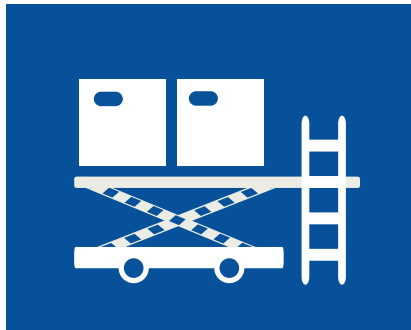
AIRCRAFT CONNECTIONS



ENGINES



LIGHTING



CARGO COMPONENTS



MILITARY APPLICATIONS

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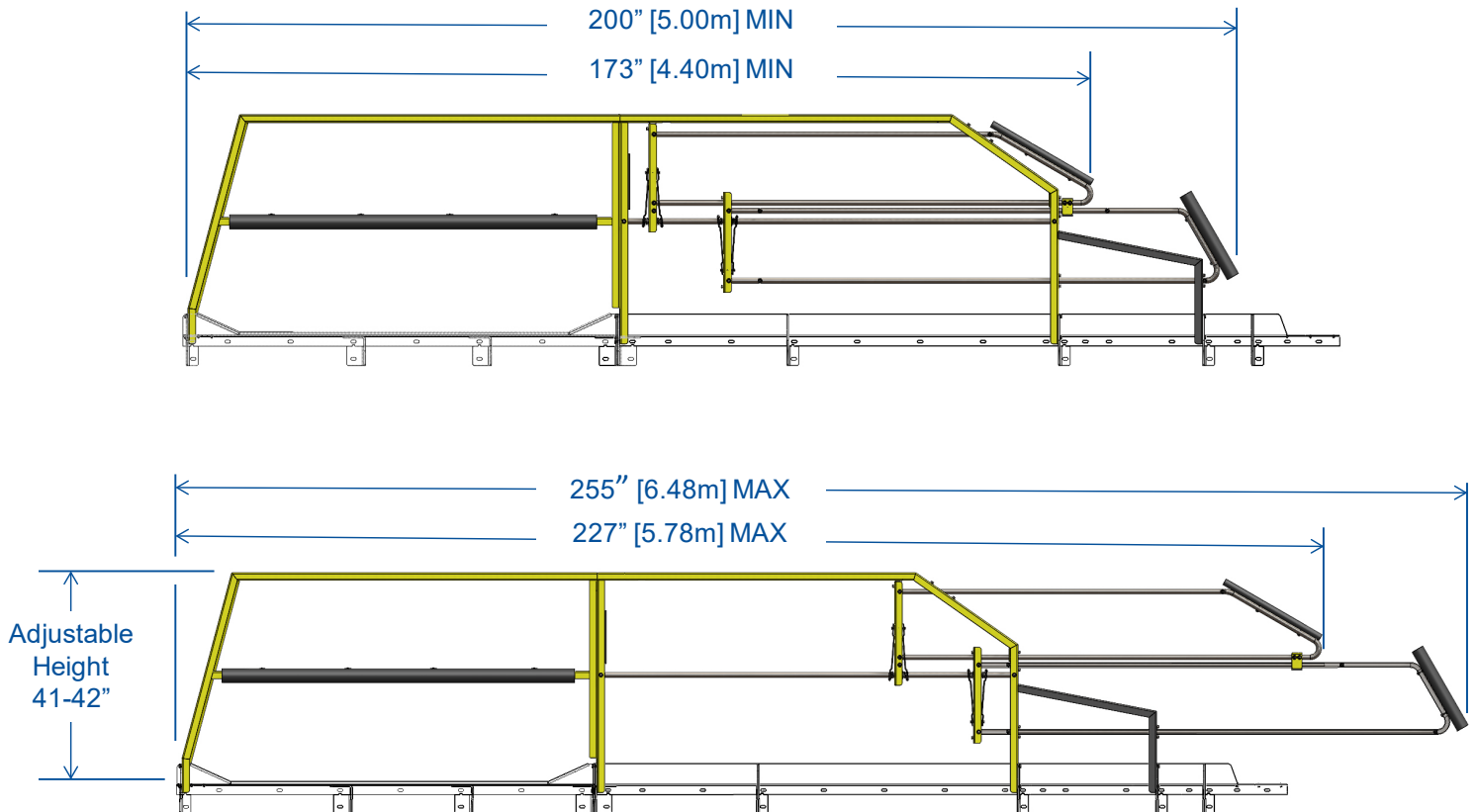
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UNIVERSAL HANDRAIL DIMENSIONS / BELT LOADER COMPATIBILITY

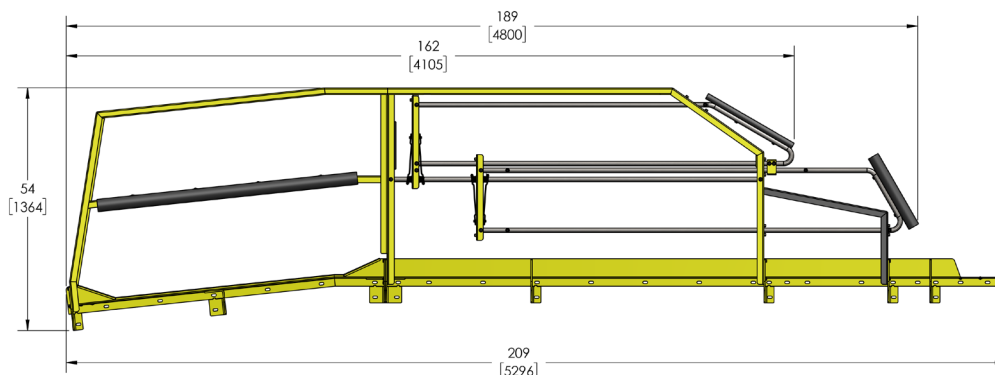


HANDRAILS ARE COMPATIBLE WITH THE FOLLOWING BELT LOADER BRANDS

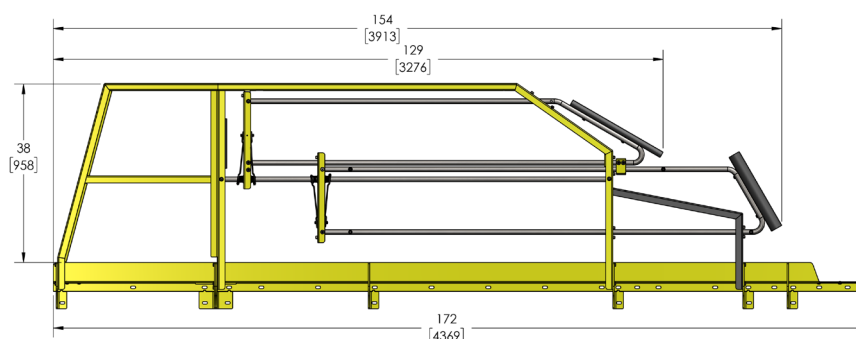
- TLD NBL (526036)
- CHARLATTE CBL2000 (526036)
- CHARLATTE CBL150 (526034)
 - TUG 660 (526036)
- POWERSTOW (526037)

Other options are available. Consult with your Sage Parts representative for more information.

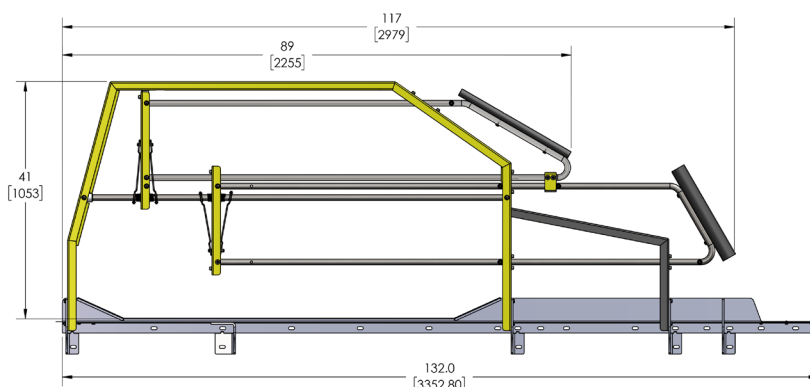
OTHER RAIL OPTIONS



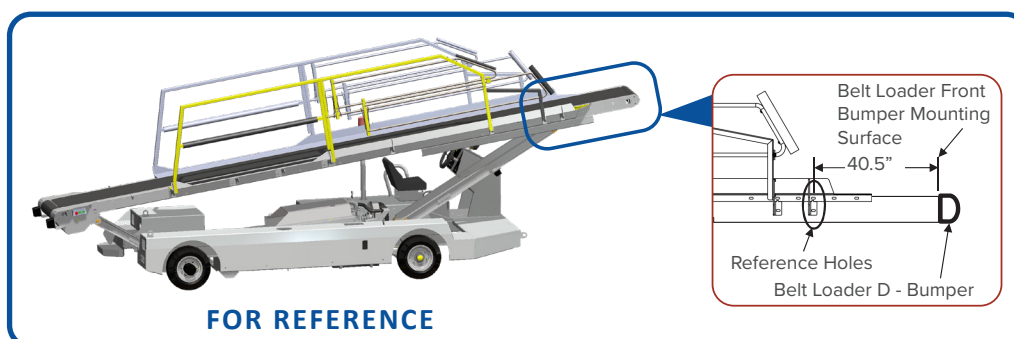
POWERSTOW (526037)



CBL150 / 440E LONG (526034)



440E SHORT (526035)



TROUBLESHOOTING GUIDE

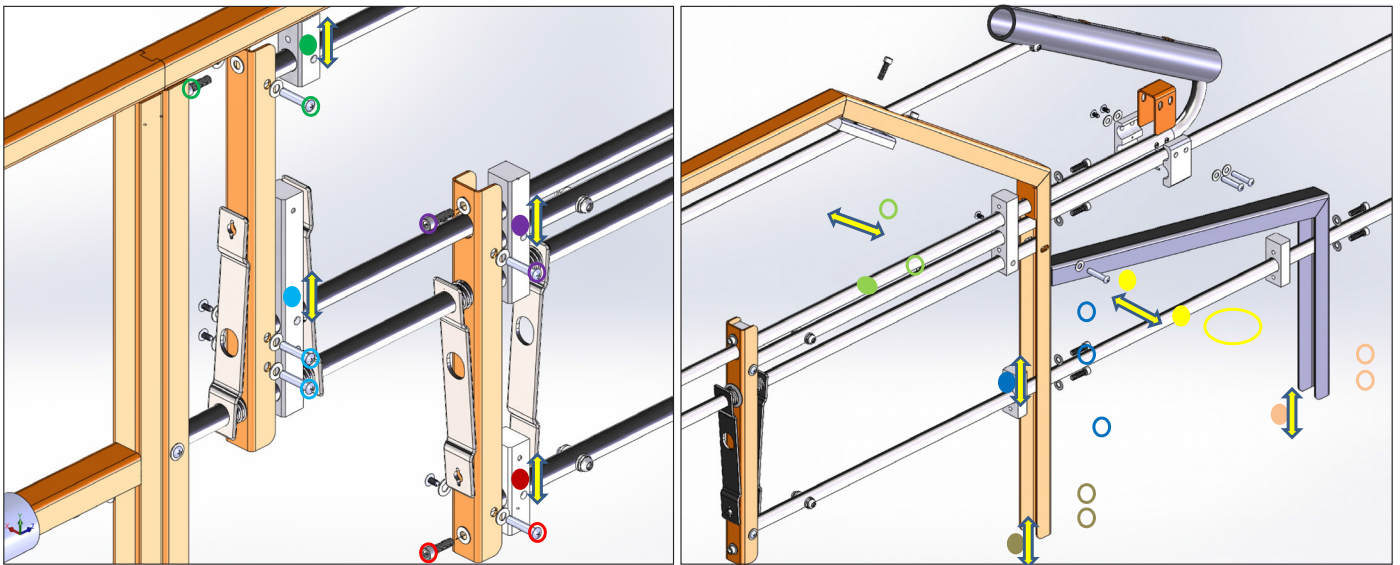
- Sliding rails binding/hard to move during operation:
 - Check that the handrail frame alignment is straight after installation. Loosen and adjust blocks to account for handrail misadjustment. Make sure sliding rails are straight and in line with frame.
 - Adjust blocks to account for locking handles misadjustment. Make sure locking handles are able to be squeezed without becoming stuck.
 - Remove blocks for the binding rail and clean/polish holes from any flash, dirt, or debris and reassemble.
- Rails not locking:
 - Wipe down rails to ensure no grease/oil or other lubricant is on the rail surface.
- For further assistance please contact Customer Service.

Customer Service contact information can be found on the last page of this guide.

ADJUSTMENT LOCATIONS

Hardware is color coded to the individual blocks.

Loosen matching color hardware to adjust the corresponding block.



SERVICE PARTS AND MAINTENANCE

PART NUMBER	DESCRIPTION
526036-16	HANDLE, LOWER HANDRAIL
526036-17	HANDLE, UPPER HANDRAIL
526030-1-21-1	BUMPER, TOP RAIL 5/32 IN. WALL 1 IN. ID
526030-1-17	BUMPER, LOWER RAIL 1/4 IN. x 2IN x 18IN.
526030-1-28	BUMPER, ELBOW GUARD SPLIT
526030-3-9	BUMPER, MID-RAIL SPLIT
526030-1-11	BLOCK, TOP RAIL HANDLE T-SECTION
526030-1-8	BLOCK, SPLIT 2 PC SET

As the manufacturer of the handrail assembly retrofitted to your belt loaders, RAMPTECH is committed to ensuring your safety and the reliable operation of our equipment. We emphasize the importance of regularly inspecting the handrail assembly for functionality, damaged or missing parts.

The handrail assemblies are critical in providing stability and support during loading and unloading activities. Regular inspections are essential to identify any potential issues early, enabling prompt action to be taken and maintaining a secure working environment for everyone involved. By following these simple steps, you can contribute to the ongoing safety of your operations:

Visual Inspection:

- Before each use, take a moment to visually inspect the RAMPTECH handrail assembly.
- Look for any visible signs of damage, such as cracks, bends, or signs of wear and tear.
- Check for missing components, such as screws, brackets, or fasteners.

Physical Examination:

- Give the handrail a firm shake to assess its stability.
- Ensure that it is securely fastened to the belt loader structure. If you notice any excessive movement, instability, or loosening, please report it immediately.

Functionality Check:

- Frequently verify that the RAMPTECH handrail performs its intended function effectively.
- In a safe manner, preferably in the GSE shop, test its load-bearing capacity by applying slight pressure to ensure it can support the weight of operators during usage.

We recommend contacting your maintenance service team if you discover any issues during your inspection. While RAMPTECH does not provide direct maintenance services, we are here to assist you with warranty claims or the provision of replacement parts as needed. Promptly reporting any concerns will allow us to address them efficiently and ensure the continued safety and reliability of your RAMPTECH handrail assembly. We appreciate your commitment to regular maintenance and vigilance in ensuring the proper functioning of our retrofitted handrails.

