Operation & Maintenance Manual Supplement

Front Access System

Caterpillar Off-Highway Truck:
789C

Model: ADE006557

AUSTRALIAN DIVERSIFIED ENGINEERING PTY. LTD.

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1 General Information

This guideline provides all the necessary information to operate and maintain the access system (model: ADE006557) fitted to the Caterpillar 789C Off Highway Truck. Use this information in-conjunction with Caterpillar information where specified.

For part replacement items refer to the Parts Manual (ADE006739) for parts replacement details for the front access system.

Whenever a question arises regarding the information contained within this manual please consult Australian Diversified Engineering Pty Ltd for the latest available information. Selected manuals may be found at www.ade.net.au containing the most up to date information for the product.

2 Safety

2.1 Important Safety Information

Safety precautions and warnings may be listed in this manual and applied to the product (supplied by Australian Diversified Engineering) in the form of safety signs and labels.

Safety signs and labels may be positioned on specific parts of the product to draw attention to objects and situations affecting health and safety. If these hazard warnings are not heeded, bodily injury or death may occur to you or other persons.

The severity of the consequences of the hazard may be easily identified by the alert symbol at the top of the label.

The ***DANGER*** alert symbol is used to warn of a hazardous situation that is likely to be life threatening. Ensure you are aware of situations and locations on the product displaying this alert symbol.

The ***WARNING*** alert symbol is used to warn of a hazardous situation that is not likely to be life threatening. Ensure you are aware of situations and locations on the product displaying this alert symbol.

The wording given underneath the ***DANGER*** or ***WARNING*** alert symbol will warn of the hazard, the consequences of the hazard followed by information on how to prevent the hazardous situation from occurring.

Some signs placed on the product or machine (which do not contain a safety alert or symbol such as Danger or Warning) are to indicate that an instruction must be carried out. The label will contain black text on a white background. Read and obey the information contained on these labels.

The ***NOTICE*** heading may be contained within this manual and is used to highlight or alert to certain aspects of the product. Commonly the ***NOTICE*** heading is used to highlight the weight of an object or some other form of specific information applicable to the task to be performed.

Australian Diversified Engineering cannot anticipate all possible hazards. For instance, some hazards may be specific to your workplace or the equipment or tool you employ to complete the task.

Plan the job before proceeding. Planning before commencement of the job will help identify possible hazards in the job procedure which can be eliminated or controlled.

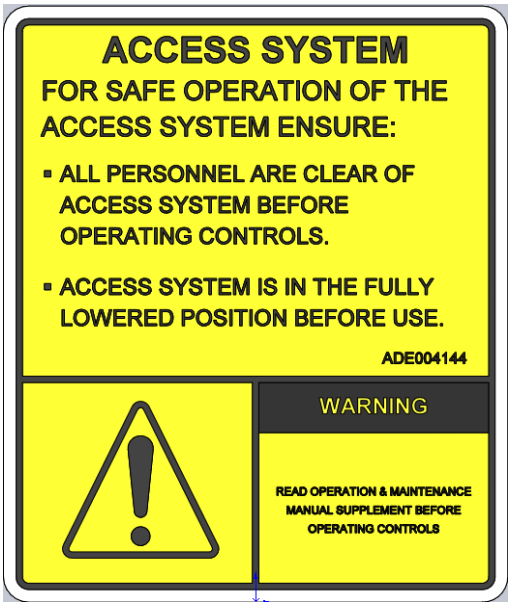
Be aware of unintended movement when assembling and disassembling components and ensure machines are isolated in accordance with workplace and supplier instructions when performing maintenance.

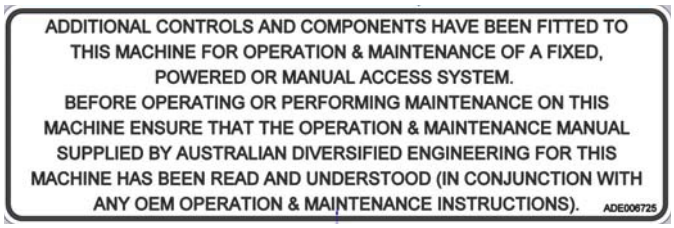
Ensure items are installed properly and are not damaged during the installation procedure or during operation of the machine. If damaged or installed incorrectly the product may not operate and perform as intended and may be made unsafe as a result. Ensure all items are repaired or replaced and care is taken when installing items on the machine.

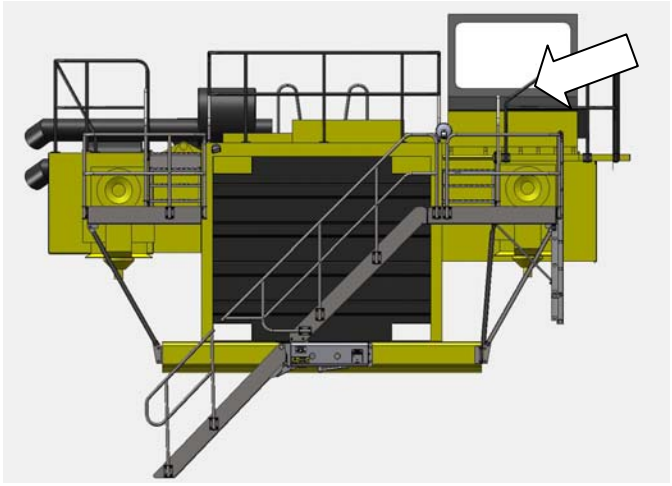
Operate and maintain the machine in accordance with procedures specified by the original equipment manufacturer and information contained within this manual.

2.2 Safety Signs & Labels

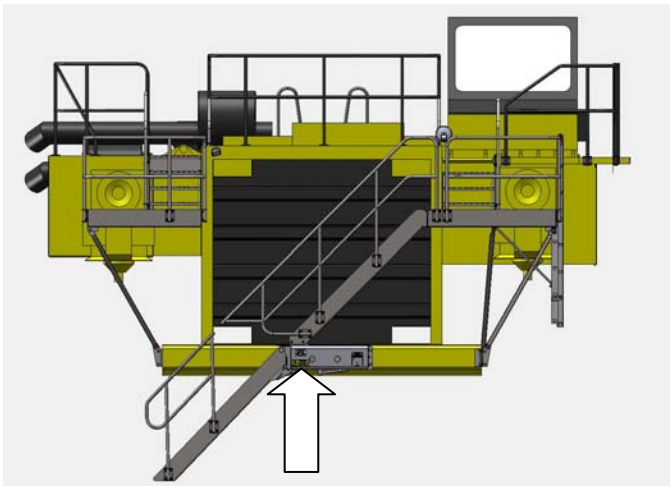
There are several specific safety signs specific to the access system. Their exact location and description of the hazard are reviewed in this section. Make sure that you can read all safety signs. You must replace a label if it is damaged, missing or cannot be read. If a label is on a part that is replaced, make sure a new label is installed on the replaced part. Contact Australian Diversified Engineering for replacement labels.







These signs are located inside the cab on the front dash

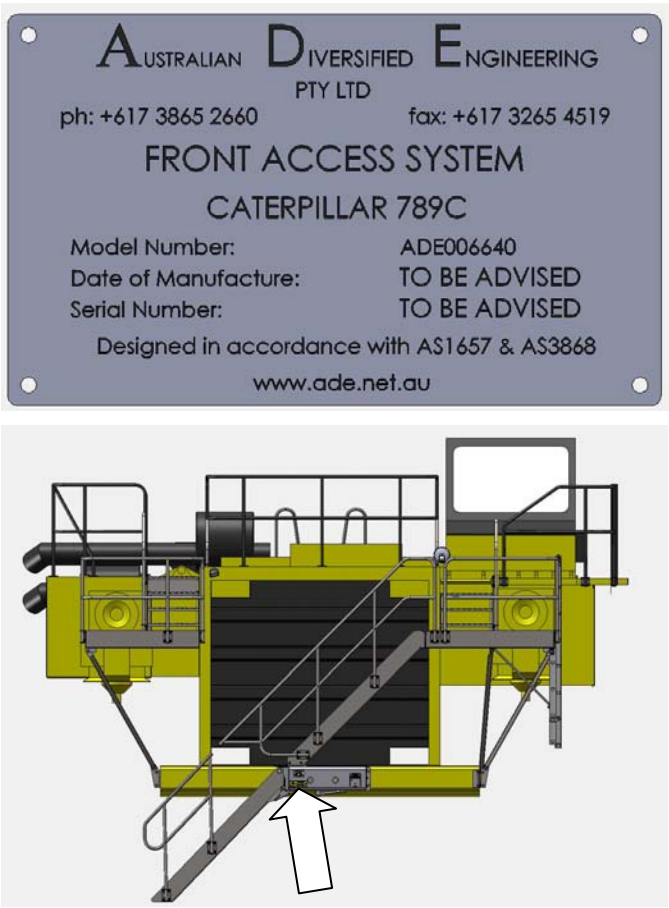


This sign is located on the front bumper

3 Product Identification Information

3.1 Front Access System – ID Plate

An ID plate has been fitted to the front access system which indicates information such as the model number, date of manufacture and the serial number. Refer to the plate fitted to each machine for specific details.

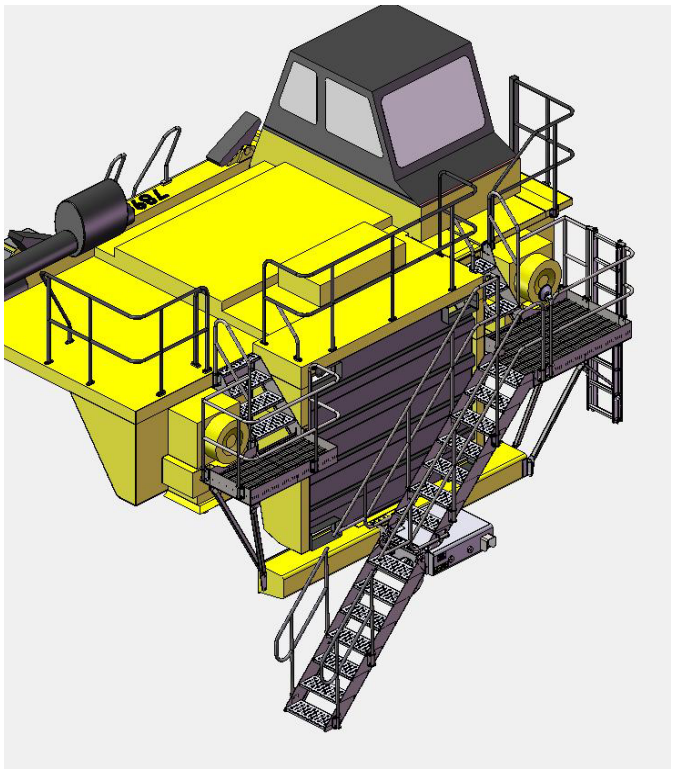


ID plate for the access system

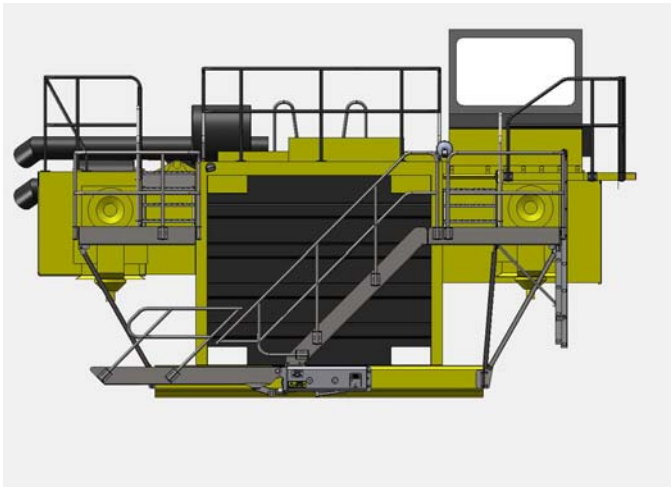
4 Operation Section

4.1 General Information

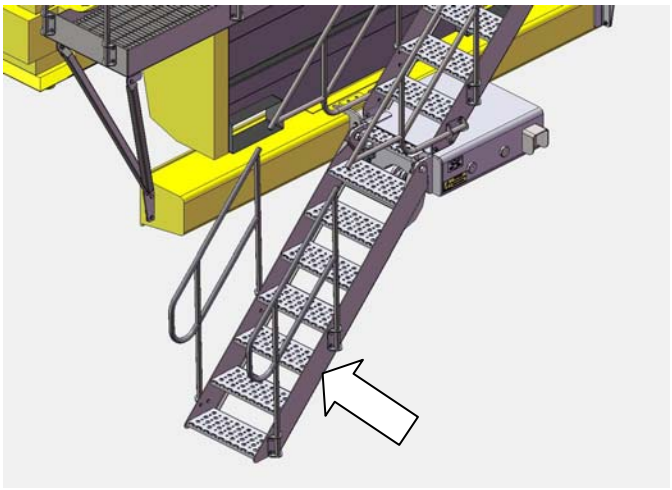
This machine has been fitted with a front access system which includes a pneumatically powered lower stair assembly with controls located inside the cab adjacent to the standard Caterpillar transmission control.



Typical installation of the front access system in the lowered position for mounting and dismounting on a CAT 789

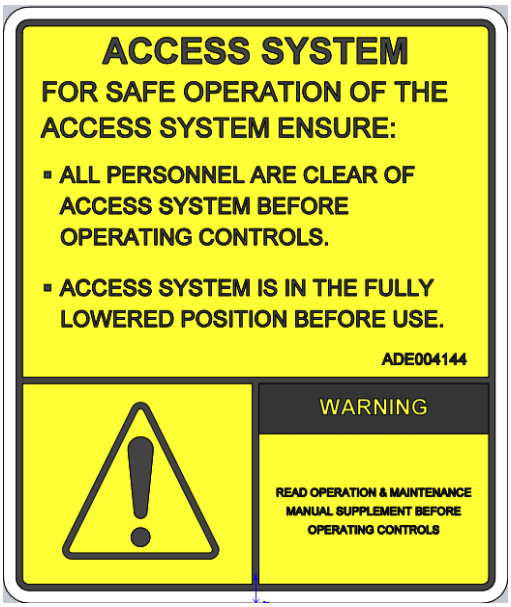


Typical installation of the front access system in the raised position for machine operation



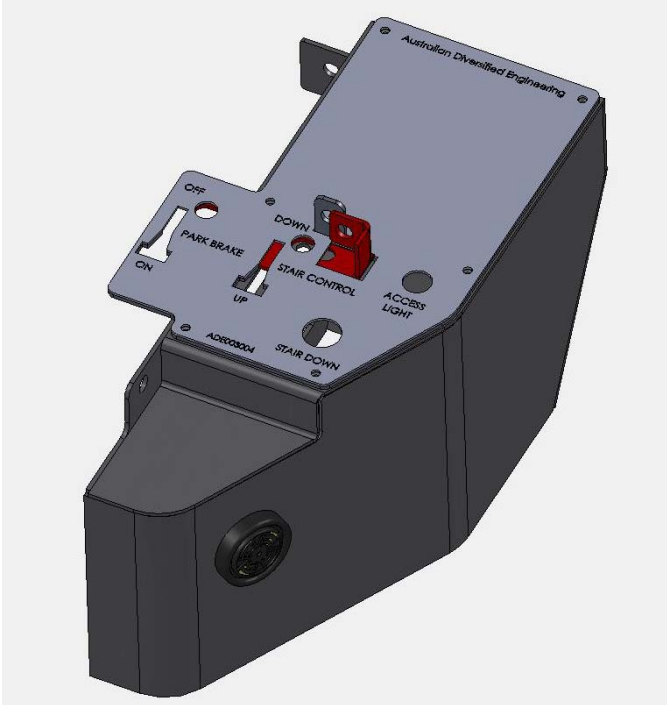
Pneumatically powered lower stair assembly

4.2 Controls & Indicators

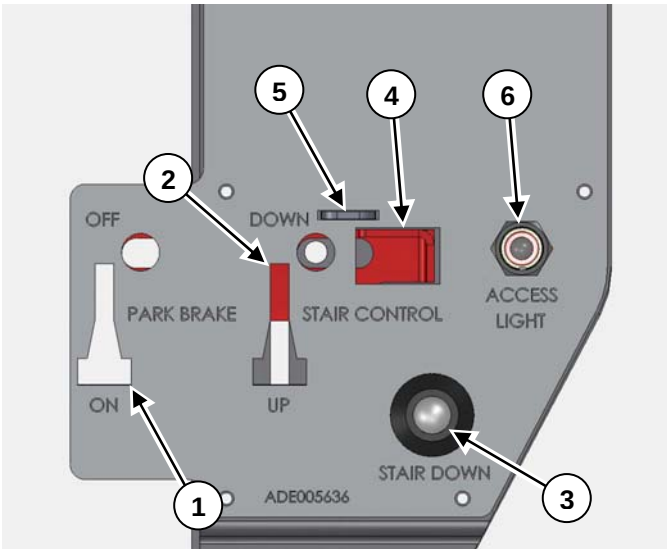


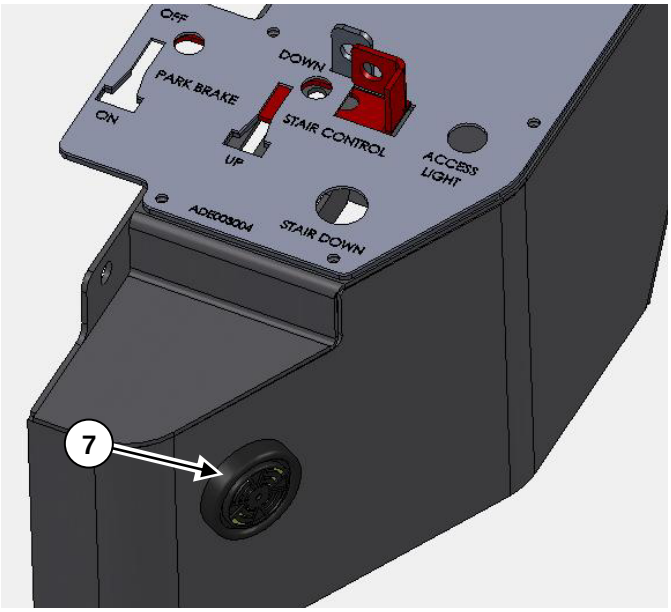
The front access system is operated via controls located inside the cab. These controls have been located adjacent to the standard Caterpillar transmission control on an additional panel.

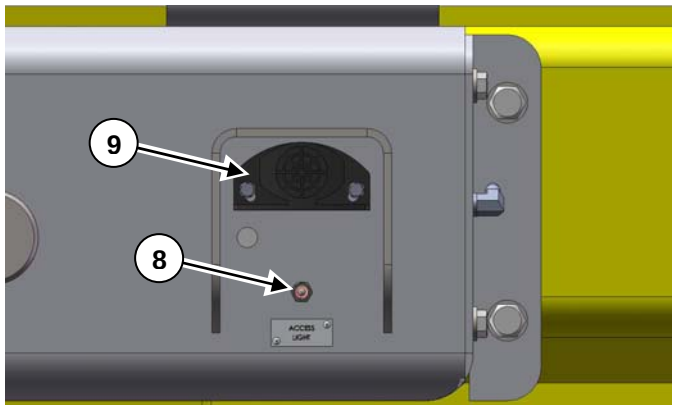
The standard park brake switch has been interlocked with the stair up/down switch so that the park brake cannot be released and the machine driven without the access system being raised. The interlock also ensures the park brake is applied before the front access system is lowered.



Typical installation of the additional console adjacent to the transmission control which houses the access system controls



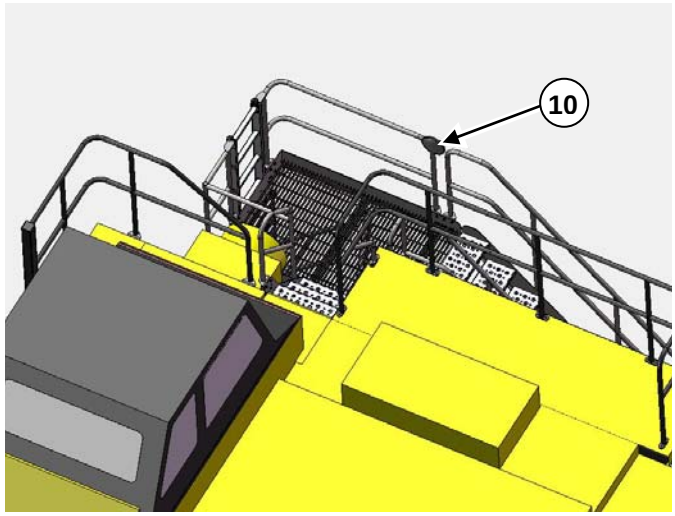




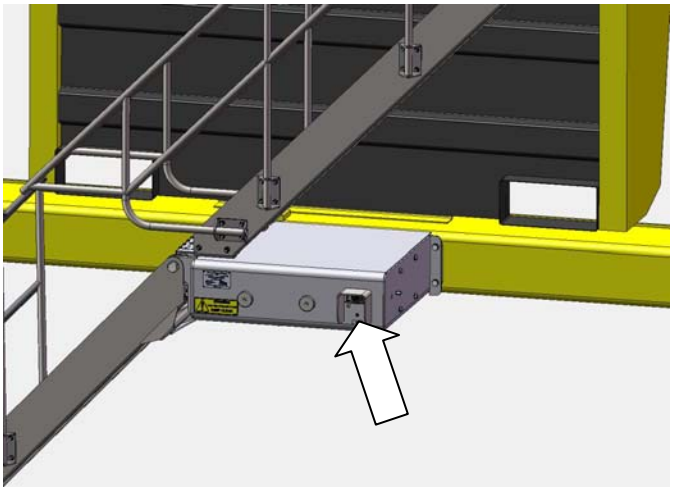
Audible alarm (9) and ground level access lights switch (8)

The controls on the in-cab control panel include:

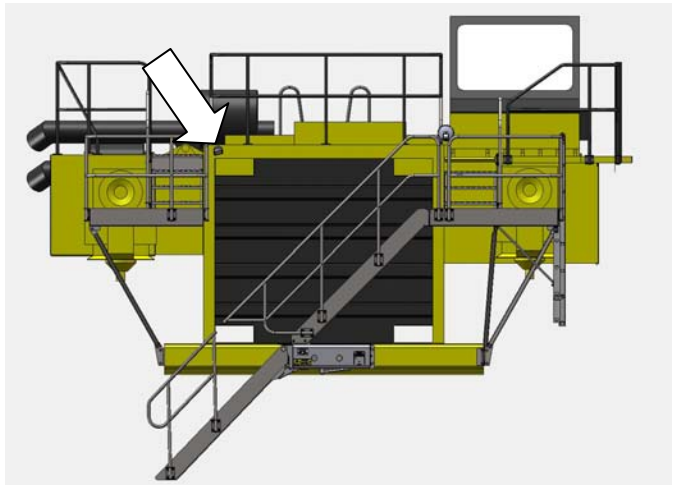
(1) Park Brake ON/OFF Switch
(2) Stair Raise/Lower Switch
(3) Stair Down Visual Indicator
(4) Sliding Lockout Tab
(5) Fixed Lockout Tab
(6) Access Lights Switch – Cab Mounted
(7) Audible Alarm – Cab Mounted
(8) Access Lights Switch – Ground Level
(9) Audible Alarm – Ground Level
(10) Check Mirror



A typical front access system check mirror mounted to the top handrail of the access system visible from the cab (10)



Ground level audible alarm and access lights switch



Access system light on the radiator cowl

4.3 Stair Raising, Lowering & Switch Lockout

4.3.1 Stair Raise Procedure

To raise the stairs and release the park brake:

1. Use the check mirror (10) to ensure that the access system is free from personnel.
2. Move the stair control (2) to the Up position. During raising the bumper mounted audible alarm (9) will sound to alert personnel that the access system is moving.
3. Move the sliding interlock (4) to the right. The sliding interlock cannot be moved right until the stair control is in the up position.
4. Release the park brake using switch (1).

4.3.2 Stair Lower Procedure

To apply the park brake and lower the stairs:

1. Apply the park brake using switch (1).
2. Move the sliding interlock (4) to the left. The sliding interlock cannot be moved left until the park brake switch (1) is in the ON position.
3. Use the check mirror (10) to ensure that the access system is free from personnel.
4. Lower the stairs using the stair raise/lower switch (2). During lowering a bumper mounted audible alarm (9) will sound to alert personnel that the access system is moving.
5. Once in the lowered position the stair down visual indicator (3) will illuminate.

4.3.3 Park Brake Switch Lockout

To lockout the park brake switch:

1. Ensure the park brake switch (1) is in the ON position.
2. Ensure the stair raise/lower switch (2) is in the down position.
3. With the sliding interlock (4) in the left position place a lockout through the hole in this tab and the hole through the fixed lockout tab (5).

4.3.4 Machine Operation

The in-cab audible alarm (7) will sound if the access system has lowered due to a fault during machine operation (ie. in circumstances where the machine park brake not applied). Illumination of the stair down light will also occur. If audible and visual alarms are activated do not continue to operate the machine as damage to the access system may occur.

4.4 Mounting & Dismounting

4.4.1 General Information

- Mount and dismount the machine only where ladders and steps are provided.
- Inspect, and when necessary, clean and have repairs made to steps and handrails before mounting and dismounting.
- Ensure the access system is in the fully lowered position before accessing.
- Face the access system ladder when mounting and dismounting.
- Maintain a three-point contact (two feet and one hand or one foot and two hands contact) with the steps and handholds.
- Ensure the machine is in a safe state before

mounting and dismounting the machine via the access system.

4.4.2 Mounting Procedure

Do not attempt to access the machine whilst still moving or whilst another operator is in the machine and the engine running. Refer to applicable mine site regulations for approaching machines. If not governed by mine site regulation ensure two-way radio contact has been made with the operator prior to approaching the machine.

To mount the machine using the access system:

1. Ensure that the battery disconnect switch is in the connected position. Refer to the machine specific Operation and Maintenance Manual for location and operation of the battery disconnect switch.
2. If required, use the ground level access lights switch to illuminate the access system when mounting in low light conditions.
3. Ensure the access system is completely lowered.
4. With the access system in the lowered position mount the stairs whilst maintaining a three point contact.
5. Enter the cab and start the machine in accordance with procedures outlined in the Operation and Maintenance Manual as well as applicable mine site instructions.
6. Ensure the park brake is engaged and make a visual inspection of the mirror mounted to the handrail in front of the cab to ensure the stairs are free from personnel.
7. Raise the stairs using the stair raise button. During stair raising an audible alarm will sound to indicate the stairs are moving.
8. Once stowed correctly the machine can be driven.

4.4.3 Dismounting Procedure

To dismount the machine via the access system:

1. Stop the machine in accordance with procedures outlined in the machine specific Operation and Maintenance Manual as well as applicable mine site instructions.
2. Ensure the park brake is engaged and make a visual inspection of the mirror mounted to the handrail in front of the cab to ensure the stair lowering area is free from personnel.
3. Lower the stairs using the stair lower button until the stair down light illuminates. During stair lowering an audible alarm will sound to indicate the stairs are moving.
4. If required, use the cab mounted access lights switch to illuminate the access system when dismounting in low light conditions.
5. Exit the cab and make a visual inspection to ensure the access system has lowered.
6. Dismount the machine maintaining three point contact at all times.

4.5 Alternate Egress

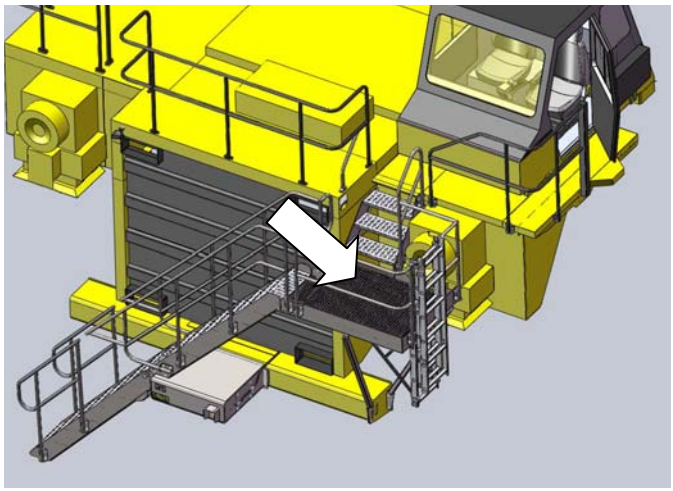
4.5.1 Dismounting Procedures

To dismount the machine (without the use of the access system) in the event of partial or complete access system failure or to promptly egress the machine in an emergency situation:

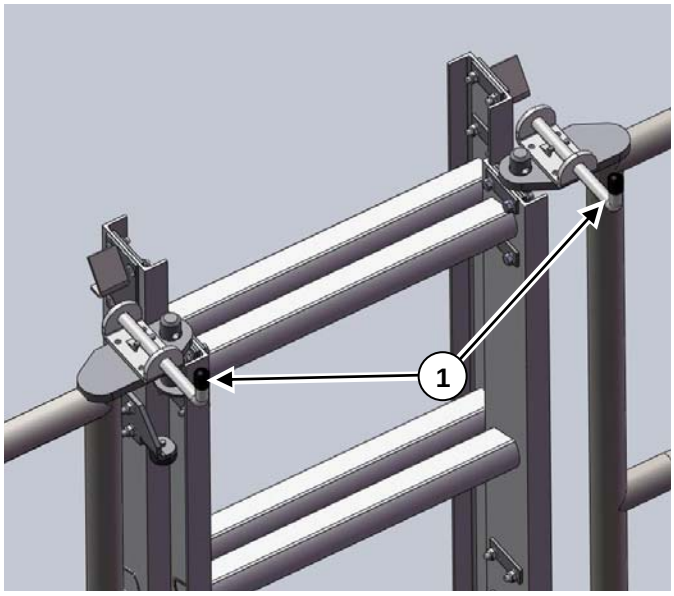
1. Stop the machine in accordance with procedures outlined in the Operation and Maintenance Manual as well as applicable mine site instructions.
2. Ensuring the park brake is applied; exit the cab then dismount to the intermediate platform on the left side of the machine.
3. Once on the intermediate platform check to ensure that the area beneath the emergency ladder is

clear then release the two pins (1) and drop the ladder to ground level.

4. Face the ladder and egress to ground level.
5. Ensure ladder faults/failure are rectified (if applicable)



Exit the cab then dismount to the intermediate platform on the left side of the machine



Release two pins (1) to deploy the emergency ladder

5 Maintenance Section

⚠ WARNING

Unintended machine movement may result in personal injury or death. Before performing maintenance on this machine ensure it has been isolated in accordance with mine site and manufacturer procedures and a Do Not Start Tag has been applied in the appropriate location on the machine.

⚠ WARNING

Disconnection of hoses and removal of supporting pins and bolts of the access system may result in unintended machine movement and/or release of stored energy. Personal injury or death may result. Before disassembly of any components of the access system ensure that stored energy has been relieved and components are chocked/blocked to prevent unintended movement.

NOTICE

You must read and understand the warnings and instructions contained in the Safety Section of this manual, before performing any maintenance procedures.

5.1 General Hazard Information

Perform all maintenance unless otherwise specified as follows:

- The machine parked on level ground.
- The park brake engaged.
- The engine stopped.
- The start switch key off and the key removed.
- All disconnect switches locked out and a Do Not Start Tag applied.
- All other external energy sources disconnected from the machine.

5.1.1 Crushing & Cutting Prevention

⚠ WARNING

Disconnection of hoses and removal of supporting pins and bolts of the access system may result in unintended machine movement and/or release of stored energy. Personal injury or death may result. Before disassembly of any components of the access system ensure that stored energy has been relieved and components are chocked/blocked to prevent unintended movement.

- Support equipment and attachments properly when working beneath them. Never attempt adjustments while the machine is moving or the engine is running unless otherwise specified.
- Stay clear of all rotating and moving parts.

5.2 Maintenance Interval - Before Use

5.2.1 Walk-Around Inspection

Perform a walk-around inspection on the machine prior to operation.

- Ensure all steps are clean and free from debris.
- Visually inspect components for damage and wear and tear. Have any damaged or missing components repaired or replaced.
- Visually inspect all air lines, hoses, fittings and hose clamps for security, damage, deterioration and leaks.
- Check to ensure that the access system light is in working condition.
- Ensure the check mirror is clean.
- Visually inspect all switches of the system. Ensure all visual indicators are operational.
- Check to ensure all labels can be read and are visible in conjunction with the Safety Signs and Labels section of this manual. Replace label/s if they cannot be read or are missing.
- Ensure the bumper mounted audible alarm operates in conjunction with the access system.

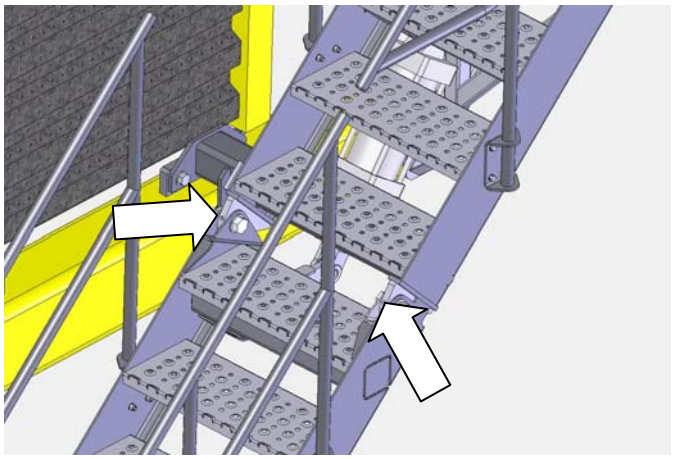
5.3 Maintenance Interval - Every 1000 Service Hours or 6 Months

5.3.1 Bolts and Mounting Hardware

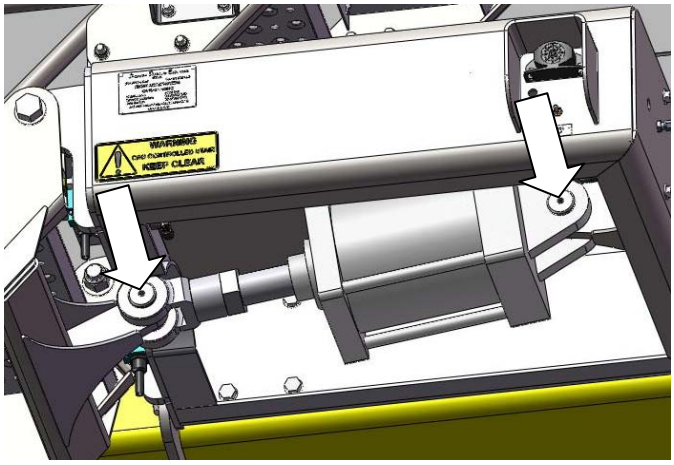
Check the tightness of all bolts fitted to the access systems. This includes checking the handrails, access platforms and their mountings.

5.3.2 Lower Stair & Cylinder Shaft Pivot Points – Lubricate

Lubricate the main pivot points of the access system via the grease fittings with good quality molybdenum based grease. There are four grease fittings for the access system.



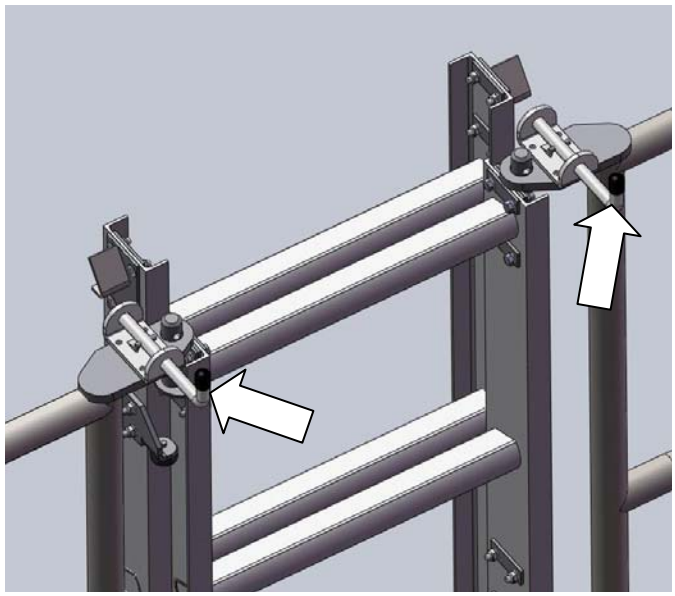
Two grease points for the lower stair assembly



One grease fitting on each end of the pneumatic cylinder pins

5.3.3 Emergency Egress

Check to ensure that the area below the ladder is clear and remove the pins from the emergency egress ladder and ensure that the ladder will slid to allow egress to ground level.



Release two pins and check ladder deploys to allow egress to ground level

6 Literature Reference Materials

6.1 Reference Material

Machine specific Caterpillar Operation and Maintenance Manual.