



# Operation & Maintenance Manual Supplement

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## Front Access System

Caterpillar Off-Highway Trucks:  
*776/777*

Model: ADE005168

(includes watercarts)

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# 1 Overview

## 1.1 Literature Information

The operation and maintenance manual supplement should be permanently stored in the operator's cabin.

The operation and maintenance manual supplement contains safety, operation and maintenance information for the access system as fitted by Australian Diversified Engineering and **must** be used in conjunction with the machine specific Caterpillar Operation and Maintenance Manual.

Whenever a question arises regarding the access system, or the operation and maintenance manual, please consult Australian Diversified Engineering Pty Ltd for the latest available information.

## 1.2 Safety

The safety section lists basic safety precautions. In addition, this section identifies the text and locations of warning signs used on the access system.

## 1.3 Operation

The operation section includes a description of the controls, their location and operation with respect to the access system. Illustrations are provided to guide the operator through the correct operating procedures for the access system.

## 1.4 Maintenance

The maintenance information is a guide to equipment care. The illustrated, step-by-step instructions are grouped by servicing intervals. Items without specific intervals are listed under "When Required" topics. Items in the Maintenance Interval Schedule are referenced to detailed instructions that follow.

Under extremely severe, dusty or wet operating conditions, more frequent lubrication than is specified in the Maintenance Intervals schedule may be necessary.

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## 2 Safety

### 2.1 Important Safety Information

**Improper operation & maintenance of this product can be dangerous and could result in injury or death.**

**Do not operate or perform maintenance on this product, until you have read and understood the operation and maintenance information.**

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, personal injury or death could occur to you or other persons.

Hazards are identified by the warning symbol below. Always follow instructions given on warning labels for your safety.



Australian Diversified Engineering cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are therefore not all inclusive. If a tool, procedure, work method or operating technique not specifically recommended by Australian Diversified Engineering is used, you must satisfy yourself that it is safe for you and others. You should also ensure that the product would not be damaged or made unsafe by the operation, lubrication, maintenance or repair procedures you choose.

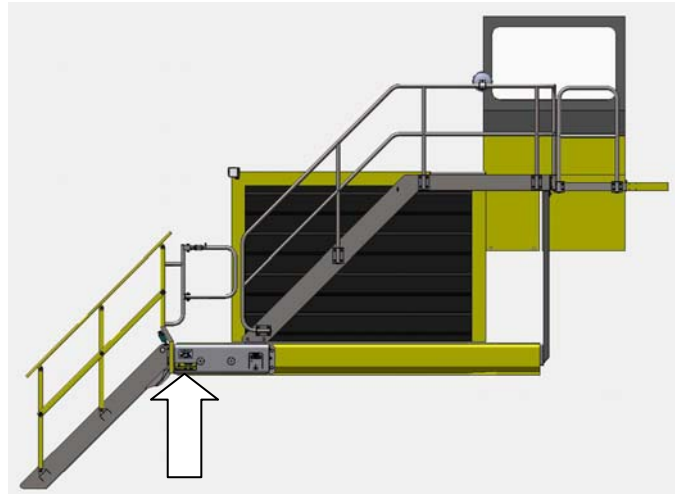


**Do not operate or work on this machine unless you have read and understand the instructions and warnings in the Operation and Maintenance Manual. Failure to follow the instructions or heed the warnings could result in injury or death. Contact Australian Diversified Engineering for replacement manuals. Proper care is your responsibility.**

The information, specifications, and illustrations in this publication are on the basis of information available at the time it was written. Obtain the complete and most current information before starting any job from Australian Diversified Engineering.

## 2.2 Safety Signs & Labels

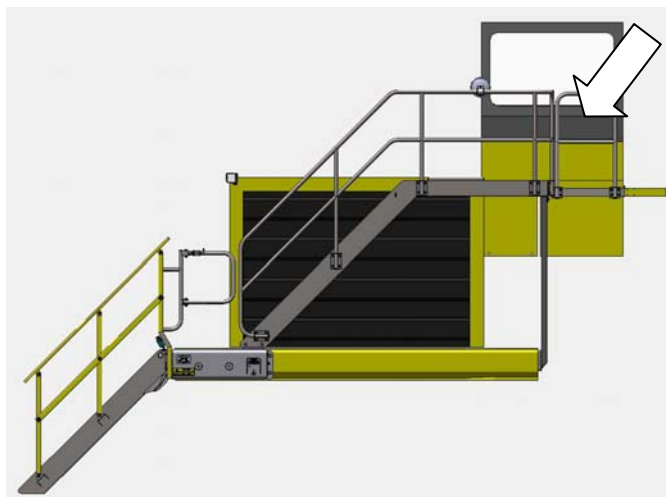
There are several specific safety signs specific to the access system. Their exact location and description of the hazard are reviewed in this section. Make sure that you can read all safety signs. You must replace a label if it is damaged, missing or cannot be read. If a label is on a part that is replaced,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



This sign is located on the front bumper



ADDITIONAL CONTROLS AND COMPONENTS FITTED TO THIS MACHINE FOR OPERATION AND MAINTENANCE OF A FIXED, POWERED OR MANUAL ACCESS SYSTEM. BEFORE OPERATING OR PERFORMING MAINTENANCE ON THIS MACHINE ENSURE THE OPERATION AND MAINTENANCE MANUAL SUPPLIED BY AUSTRALIAN DIVERSIFIED ENGINEERING FOR THIS MACHINE HAS BEEN READ (IN CONJUNCTION WITH ANY OEM OPERATION & MAINTENANCE INSTRUCTIONS) AND UNDERSTOOD. ADE006275



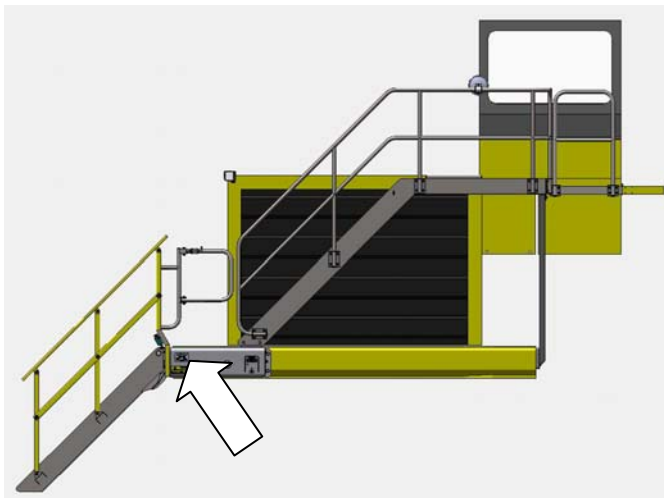
These signs are located inside the cab on the front dash

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### 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.



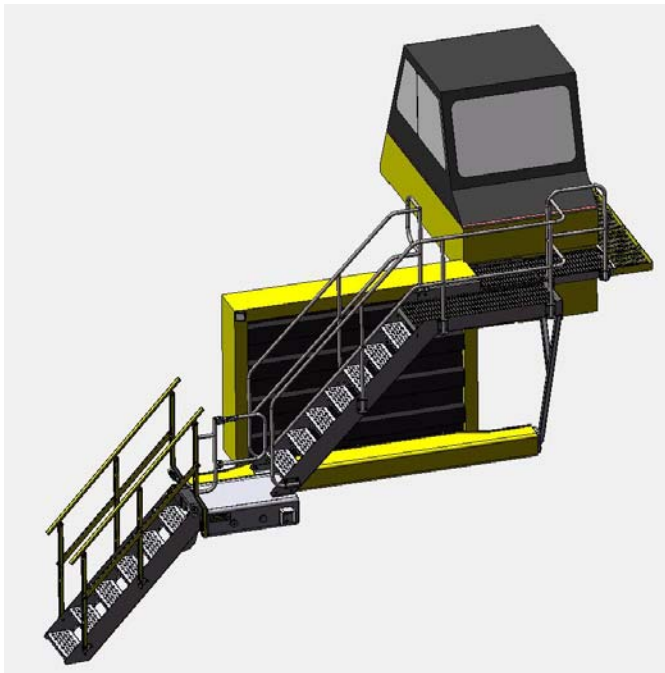
ID plate for the access system

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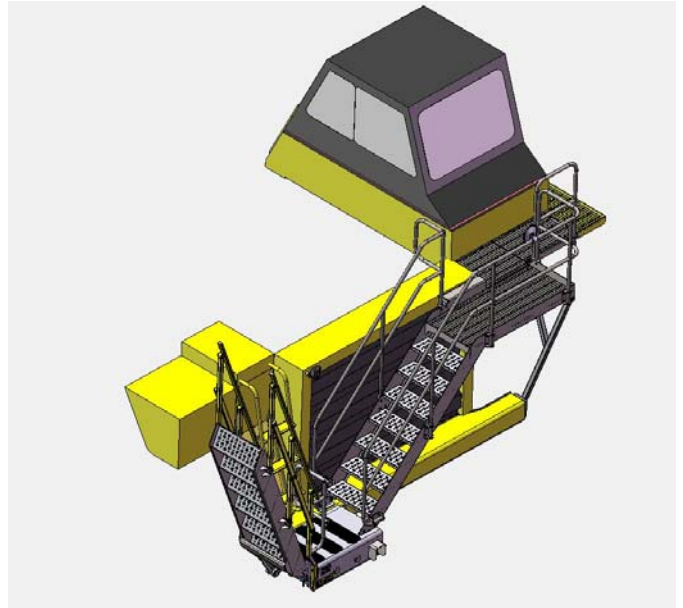
## 4 Operation Section

### 4.1 General Information

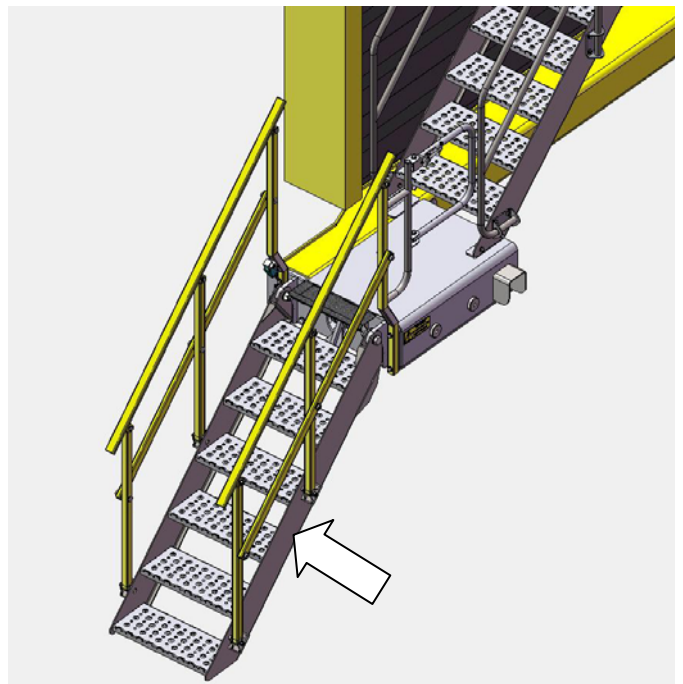
This machine has been fitted with a front access system which includes a pneumatically powered lower stair assembly with controls located inside the cab adjacent to the standard Caterpillar transmission control.



Front access system in the lowered position for mounting and dismounting



Front access system in the raised position for machine operation



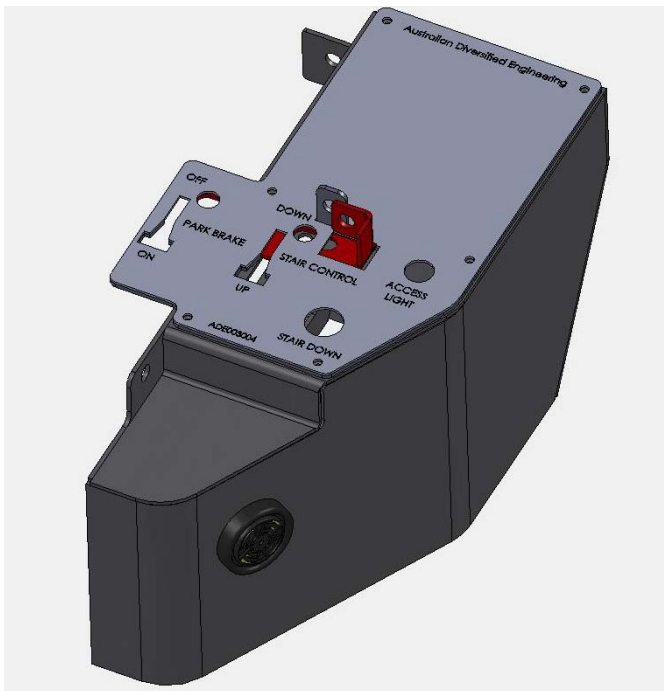
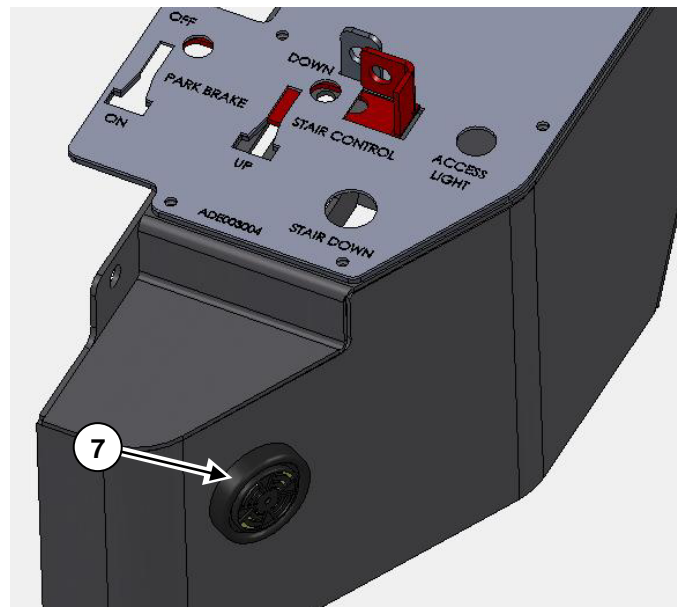
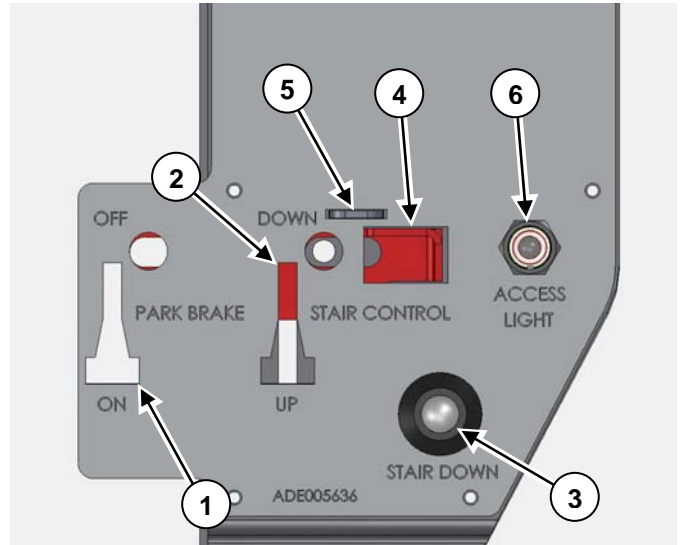
Pneumatically powered lower stair assembly

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 control panel.

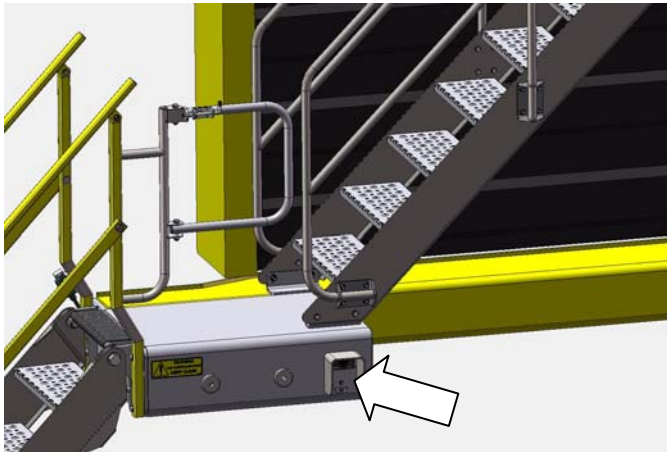
The standard park brake switch has been interlocked with the stair up/down switch so that the park brake cannot be released and the machine driven without the access system being raised. The interlock also ensures the park brake is applied before the front access system is lowered.



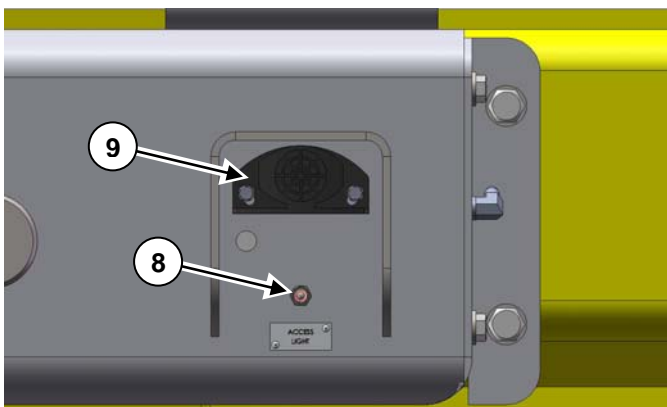
Typical installation of the additional console adjacent to the transmission control which houses the access system controls

The controls on the in-cab control panel include:

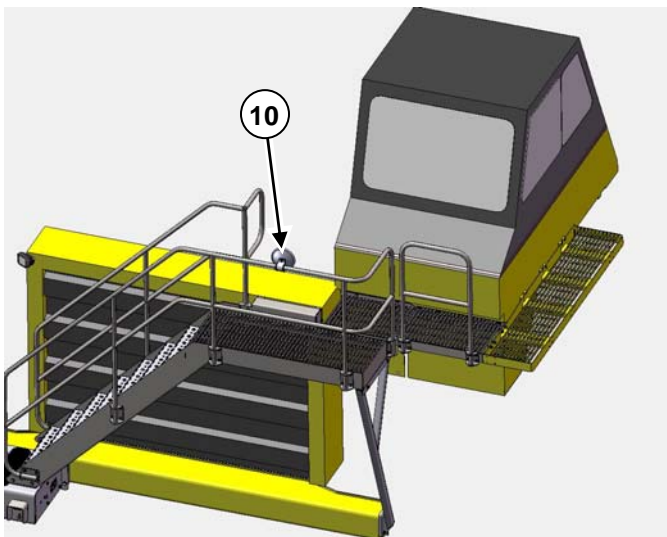
- (1) Park Brake ON/OFF Switch
- (2) Stair Raise/Lower Switch
- (3) Stair Down Visual Indicator
- (4) Sliding Lockout Tab
- (5) Fixed Lockout Tab
- (6) Access Lights Switch – Cab Mounted
- (7) Audible Alarm – Cab Mounted
- (8) Access Lights Switch – Ground Level
- (9) Audible Alarm – Ground Level
- (10)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



Ground level audible alarm and access lights switch



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



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

#### 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.

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### 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 is 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.
- 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 operated.

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#### 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.

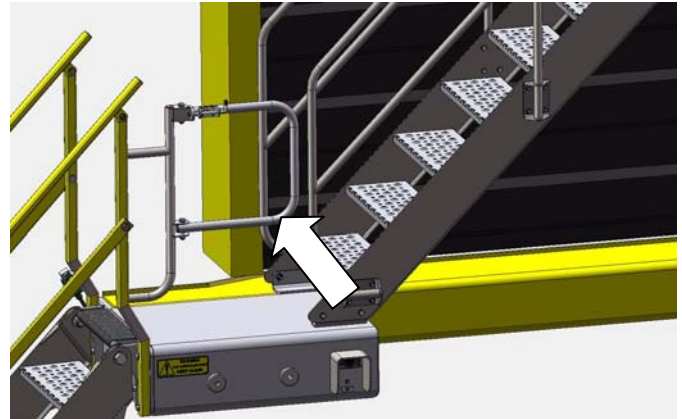
#### 4.5 Alternate Egress

##### 4.5.1 Dismounting Procedures

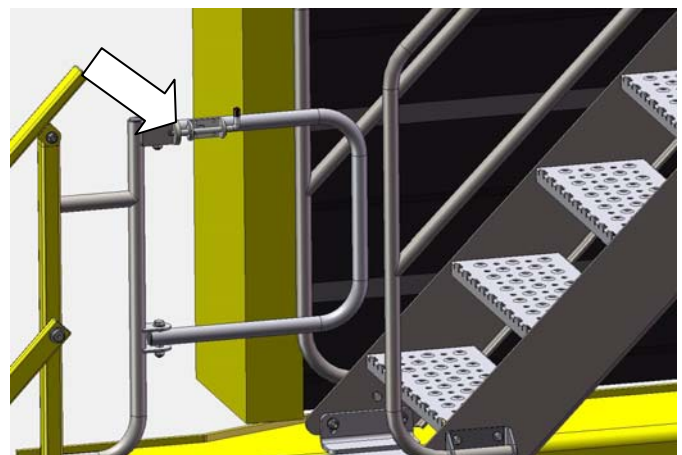
To dismount the machine (without the use of the access system) in the event of partial or complete access system failure or to promptly egress the machine in an emergency situation:

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; dismount the machine via the route specified below for the particular machine.
3. Ensure the ladder failure is investigated and fault/s repaired.

Use the standard right side egress ladder to bumper level then egress through the emergency gate to ground level.



Emergency egress gate at bumper level



Emergency egress gate latch

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## 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.

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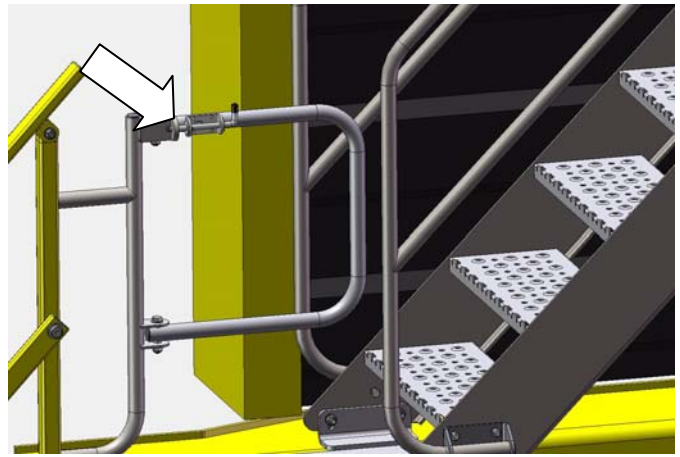
### 5.3 Maintenance Interval - Every 1000 Service Hours or 6 Months

#### 5.3.1 Bolts and Mounting Hardware

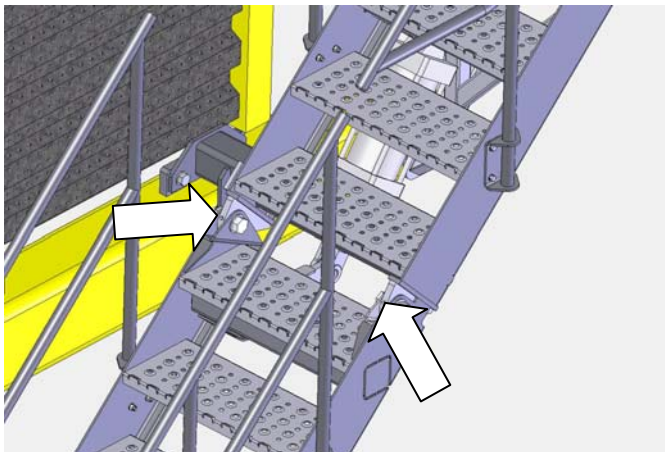
Check the tightness of all bolts fitted to the access systems. This includes checking the handrails, access platforms and their mountings.

#### 5.3.2 Lower Stair Pivot Points – Lubricate

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



Emergency egress gate latch



Two grease points for the lower stair assembly

#### 5.3.3 Emergency Egress Gate

Open the latch of the emergency gate and ensure the gate opens and closes. The gate and latch must be able to be opened easily.

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## 6 Literature Reference Materials

### 6.1 Reference Material

Machine specific Caterpillar Operation and  
Maintenance Manual.