

# MINI EXCAVATORS



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The following cleaning/inspection guide has been segmented to facilitate the process.  
The segmentation is as follows:

## 1.

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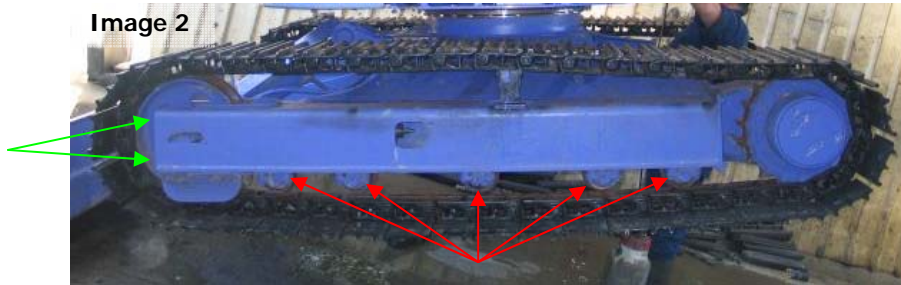
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## 1. Tracks

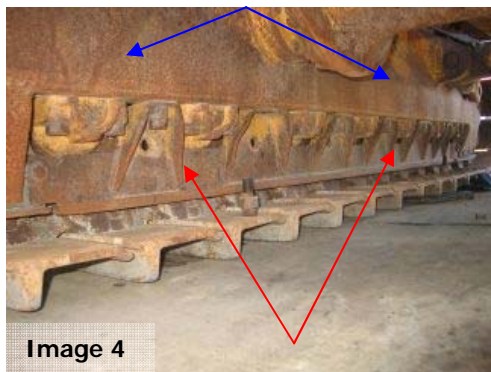
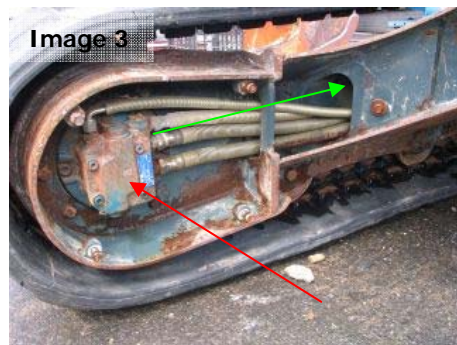


**Image 2:**

The tracks on any excavator are the main area that comes into contact with soil and other Quarantine risk material. Thorough cleaning and inspection techniques are required. In order to facilitate the cleaning and inspection process, all non-affixed panels, rock guards and motor covers must be dismantled. The red line indicates the rollers and the green arrows highlight the hollow channels on the idler wheel frame.

**Image 3:**

Red line indicates that the motor cover has been removed, allowing access to the drive motor. The green arrow indicates the hollow channel, which extends up through the frame into the turret or slew ring. These hollow areas on each side need to be thoroughly flushed to ensure cleanliness. The blue arrow indicates the area at the rear of the motor cover, which can be easily overlooked.

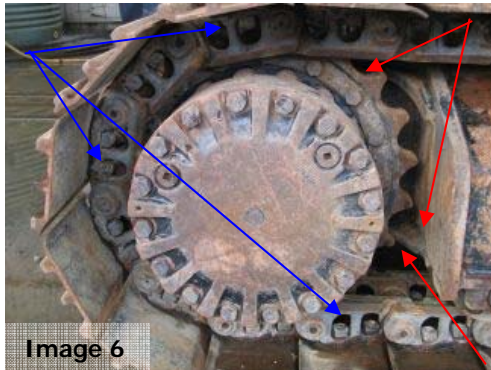
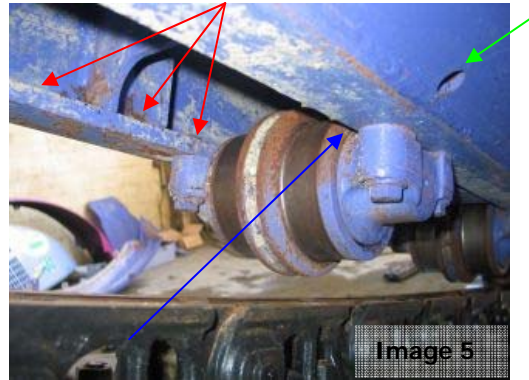


**Image 4:**

Rock Guards would be rare on mini excavators however if present, these must be removed to allow cleaning and inspection access to the inside track frame. The blue arrows highlighting the frame above the rock guards maybe a hollow channel or at least an internal ledge, which requires inspection

**Image 5:**

This picture highlights some of the internal ledges found inside track frames. All ledges and small recesses either side of each roller (blue arrow) must be thoroughly cleaned and inspected. The drainage hole under the slew ring (green arrow) requires flushing to verify internal cleanliness.

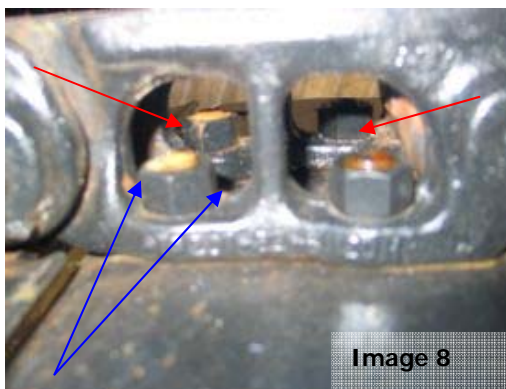
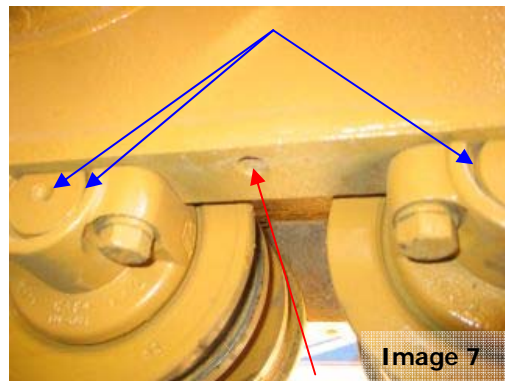


**Image 6:**

This picture indicates the outside of the drive motor. The red arrows highlight the rear of the motor cover and the blue arrows highlight each track nut.

**Image 7:**

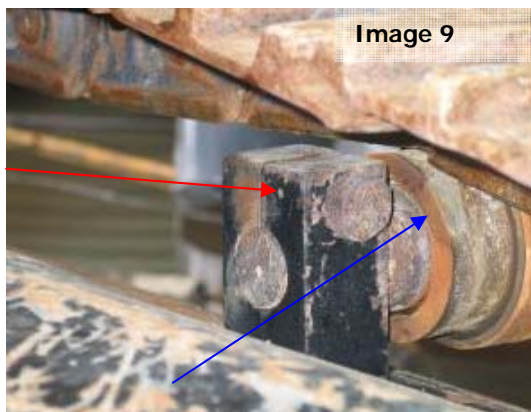
The blue arrows highlight the small gaps either side of each nut where contamination is commonly found. Inspect the rear of the inside nuts (red arrows) from the outside and vice versa.



**Image 8:**

This picture highlights the roller and the bolt hole (red arrow) where rock guards may be attached. The channel may be hollow and will require flushing to verify cleanliness. The small recesses (blue arrows) on the outside of the rollers may become compacted with contamination.



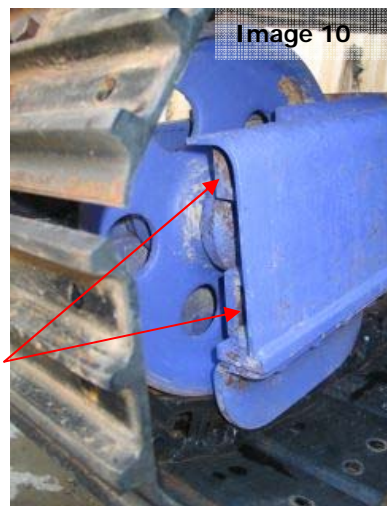


**Image 9:**

Indicates the top roller above the track frame. The red arrow highlights the small gap at the rear, which must be flushed while the blue highlights the small gap at the rear of the roller.

**Image 10:**

The red arrows show the hollow framework that requires thorough cleaning and inspection. All tracked machines must undergo one full revolution to ensure track pad cleanliness. The next illustration highlights the track pads opening slightly at the apex, allowing this area to be cleaned.



**Image 11:**

As the tracks revolve, they open slightly at the apex (red arrows) and allow for cleaning and inspection.

**Image 12:**

Each individual rubber track pad has been removed, allowing access to the small recesses that can be compacted with contamination. Each track pad must be verified clean.





Image 13

**Images 13 & 14:**

Examples of contamination found inside motor covers. Access will be required to verify the cleanliness inside the drive motors.



Image 14

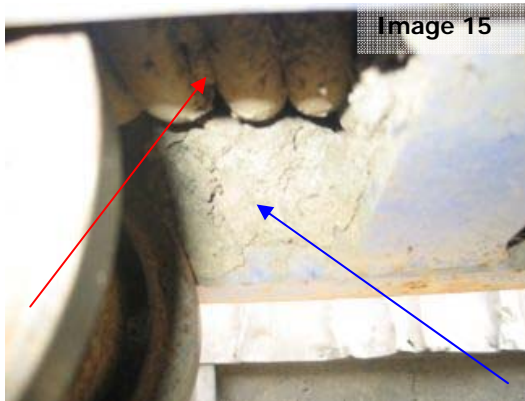


Image 15

**Image 15:**

The inside of the track frame, just highlighting the track adjuster spring (red arrow) and contamination (blue arrow) on one of the internal ledges that must be removed.

**Image 16:**

At the opposite end to the drive motor is the idler wheel (red arrow). Ensure that all surfaces either side of the idler wheel is clean as well as any ledges behind (green arrow).

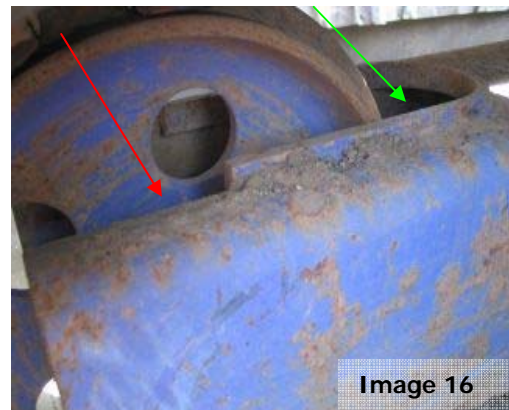


Image 16

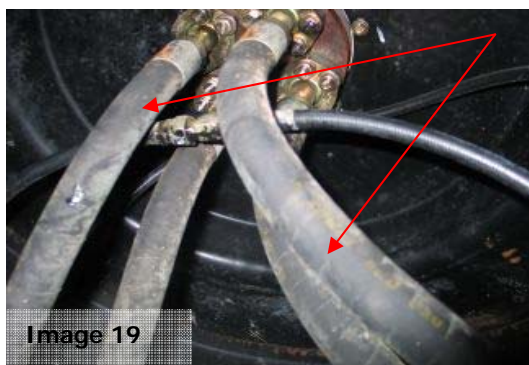
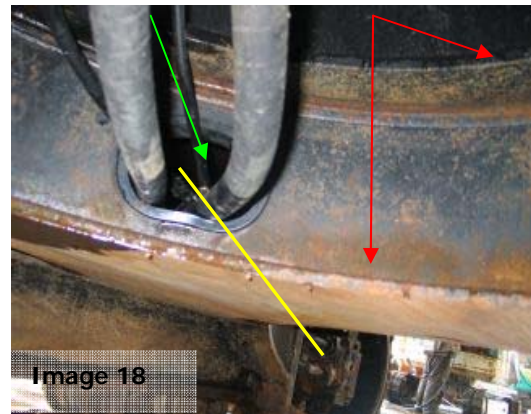


## 2. Turret/Slew Ring



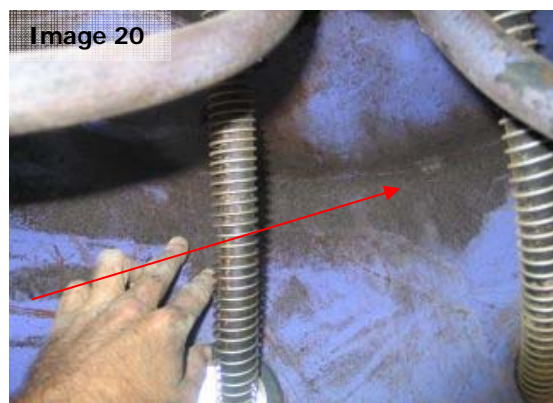
**Image 17:**  
All contaminated grease (red arrows) must be removed from the outer slew ring during the cleaning process.

**Image 18:**  
The red arrows highlight the various ledges that can be found inside the turret/slew ring, each ledge requires thorough cleaning. The green arrow points to the hollow channel where the hydraulic hoses run down through the turret housing to the drive motors (yellow line demonstrates the path of the hydraulic hoses). This area must be flushed in the presence of the inspecting officer to verify cleanliness.



**Image 19:**  
The hydraulic hoses inside the turret/slew ring. Each hose must be individually cleaned.

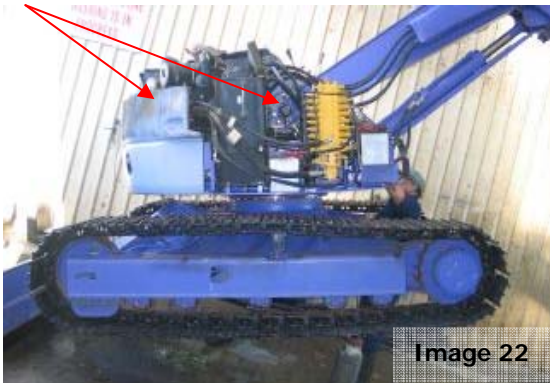
**Image 20:**  
All contaminated grease (red arrow) must be removed from the inside surfaces of the slew ring during the cleaning process.



### 3. Engine Bay

**Image 21:**

Dismantle all non-affixed panels (red arrows) from the underside of the mini excavator carbody for cleaning and inspection.



**Image 22:**

All non-affixed engine covers and shrouds have been removed, allowing for cleaning and inspection.



**Image 23:**

Example of the amount of dismantling required to facilitate the cleaning and inspection process. The rear shroud and engine cover have been removed in this illustration.



**Image 24:**

**Image 24:**

The underside non-affixed panels have been removed, allowing cleaning and inspection access to the sump.



**Image 25:**

The topside of the fuel cell, accessible for cleaning and inspection after the engine covers are removed.







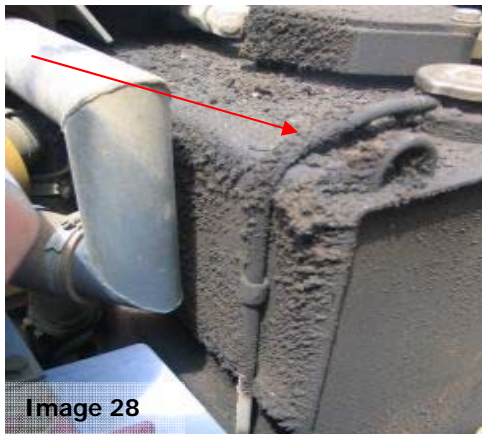
**Image26:**

The side of the fuel cell, accessible for cleaning and inspection after the engine covers are removed.



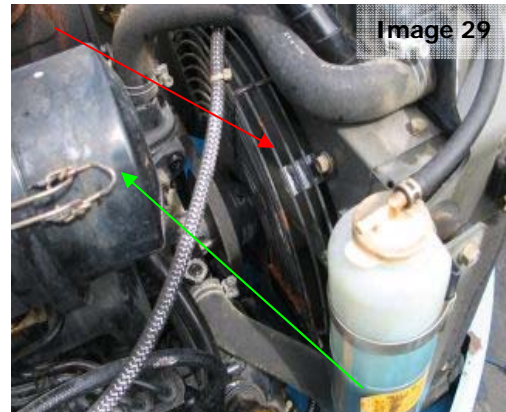
**Image 27:**

On some models, a small recess (red arrow) can be found between tanks. To access this recess for cleaning and inspection, dismantling may be required.



**Image 28:**

All contamination, including dirty grease must be removed during the cleaning process.



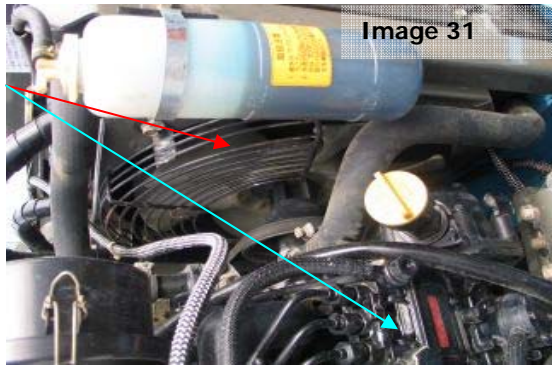
**Image 29:**

The radiator grill (red arrow) must be removed to allow cleaning and inspection access to the inside of the radiator shroud. Remove the air filter and check for cleanliness (pressurised air).



**Image 30:**

Another example of dismantling to allow access to the engine block (red arrow) and radiator (blue arrow).

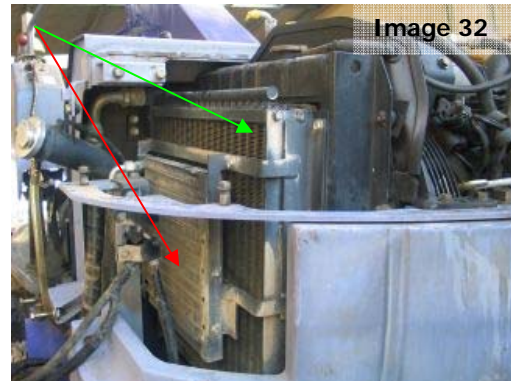


**Image 31:**

The red arrow highlights the radiator grill that is currently preventing access to the inside of the shroud, while the aqua arrow is highlighting the topside of the engine block.

**Image 32:**

The radiator (green arrow) and oil cooler (red arrow) must be flushed in the presence of the inspecting officer to verify cleanliness of the fins.



**Image 33:**

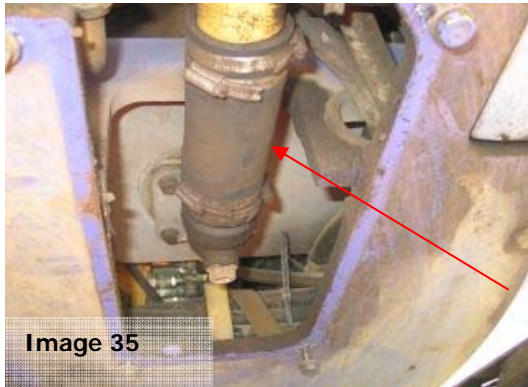
Once the engine covers have been removed, areas like the one highlighted become accessible for cleaning and inspection.

**Image 34:**

All hoses (red arrows) must be thoroughly cleaned and inspected. These were only accessible for cleaning and inspection after dismantling of the engine covers.





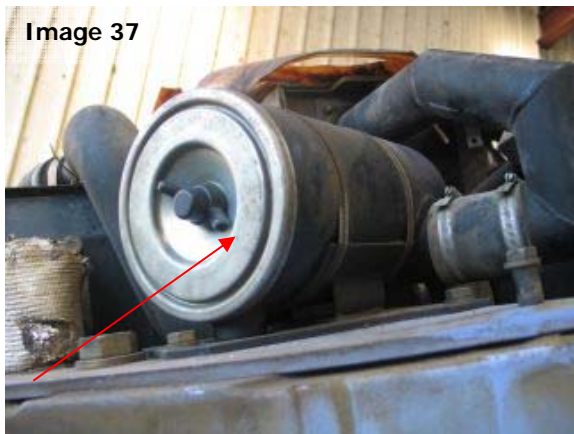


**Image 35:**

Another view of the underside of the block, now accessible for cleaning after all non-affixed panels have been removed.

**Image 36:**

Evidence of dismantling on another model of excavator. All shrouds (red arrow) and engine covers (green arrow) have been removed to facilitate the cleaning and inspection process.



**Image 37:**

Remove the air-filter and check for cleanliness.

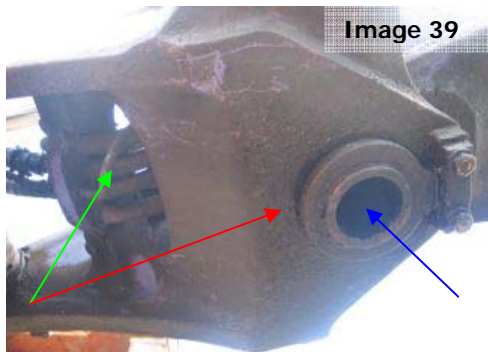
**Image 38:**

The batteries must be loosened from the tie-down points to allow for cleaning and inspection of the underside.





## 4. Boom Stick & Bucket

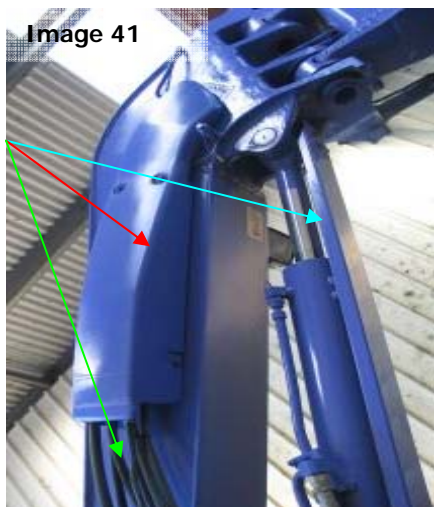
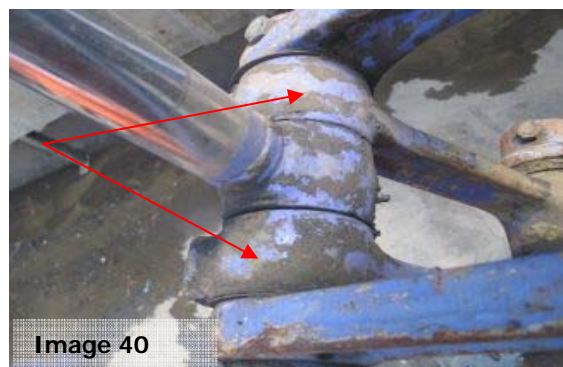


**Image 39:**

All contamination, including dirty grease must be removed from the boom stick (red arrow) and hydraulic hoses (green arrow). Verify hollow areas are free of all contamination.

**Image 40:**

All contaminated grease (red arrows) must be removed from all pivot points along the boom stick.

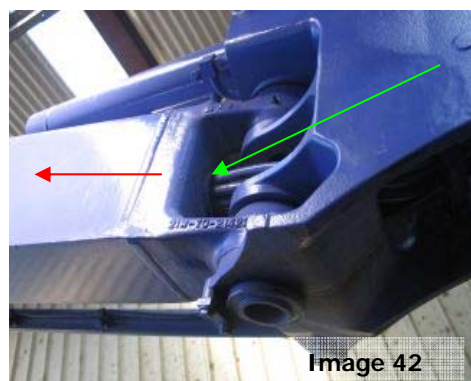


**Image 41:**

Ensure all hollow cavities where hydraulics run through the boom stick (green arrow) are flushed to verify internal cleanliness.

**Image 42:**

Remove all non-affixed boom stick panels (red arrow), clean and check all hydraulic hoses (green arrow). Clean inside all protective plates (aqua arrow).



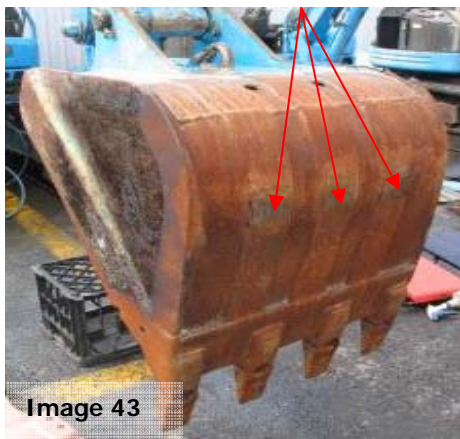


Image 43

**Image 43:**

Check all wear plates on the bottom of the bucket. If only spot-welded, these will have to be flushed to verify cleanliness. Check all surfaces of the bucket for any cracks, splits or evidence of repair.

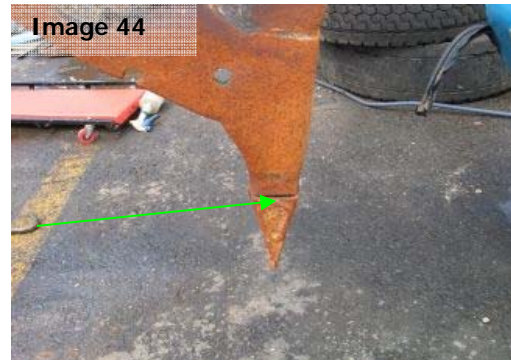


Image 44

**Image 44:**

All cutting teeth (green arrow) on the bucket must be removed for internal cleaning and inspection.



Image 45

**Image 45:**

An example of flushing the spot-welded wear plates (green arrow) on the bottom of the bucket. All side wear plates (blue arrow) must be loosened off and flushed.

**Image 46:**

A close up of the boots and which the cutting teeth are mounted. Ensure around each pinhole is clean. The blue arrows highlight a narrow opening that tends to become compacted with risk material and can be overlooked if the cutting teeth are still attached.

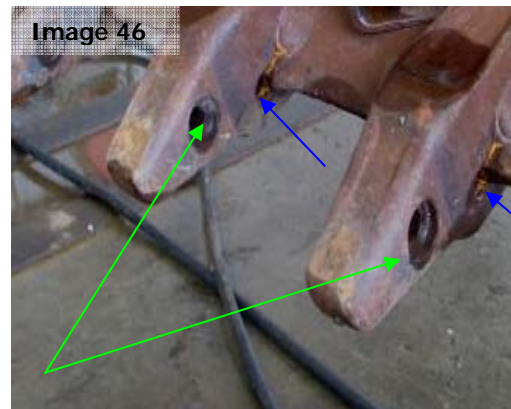


Image 46

## 5. Cabin

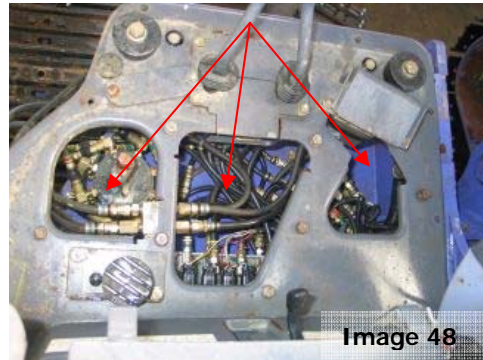


**Image 47:**

Some mini excavators may have a cabin as illustrated. Check the framework for drainage holes on the underside (red arrows) and the underside shroud (green arrow) has been removed to allow cleaning and inspection access to the myriad of hydraulics under the floorpan. On some models, the cabin may need to be unbolted and lifted to allow cleaning and inspection of the fuel cell and hydraulic hoses under the seat.

**Image 48:**

An illustration of the floorpans removed from under the rubber floor matting, exposing the hydraulic hoses underneath.



**Image 49:**

An example of the contamination found after the rubber floor mats and floorpans have been removed. Cabin door rubbers (green arrow) can be contaminated and are therefore an area of concern to AQIS.

**Image 50:**

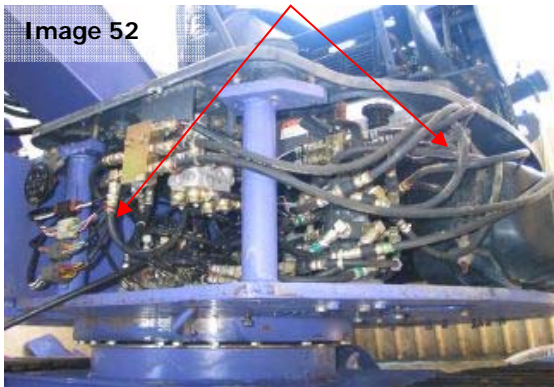
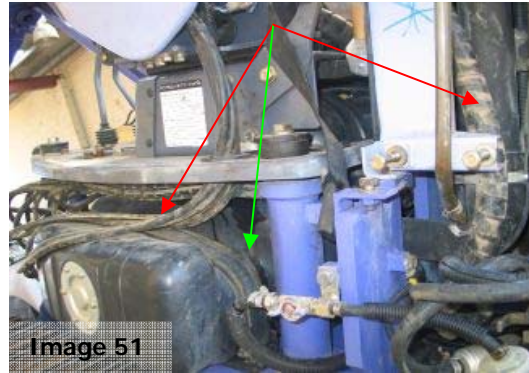
An illustration of the fuel cell under the seat. In some instances, the cabin will require unbolting and lifting to allow cleaning and inspection access to the topside of the fuel cell and hydraulic hoses (currently not in view). The bands around the tank (red arrow) need to be loosened off and flushed to remove any contaminants.





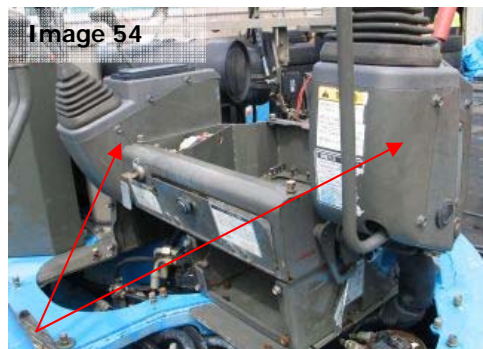
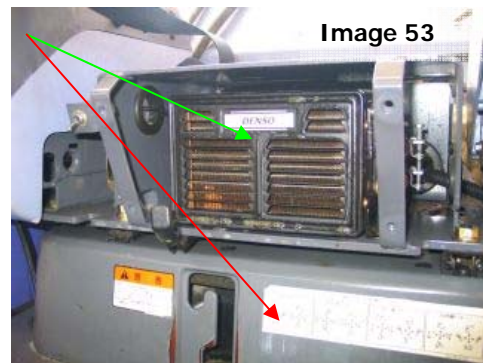
**Images 51 & 52:**

These pictures illustrate the access provided for cleaning and inspection, once the shrouds around the underside of the cabin have been removed. All hydraulic hoses and looming (red arrows) require thorough cleaning and inspection. The bands around the fuel cell (green arrow) also need to be loosened and flushed to remove any contaminants.



**Image 53:**

On this model, the air-conditioning system (green arrow) is located under the seat. This area has been opened to allow cleaning and inspection. The plate below (red arrow), is covering the fuel cell and will require dismantling.



**Image 54:**

Access will be required to verify the internal cleanliness of the joystick control housing (red arrows).

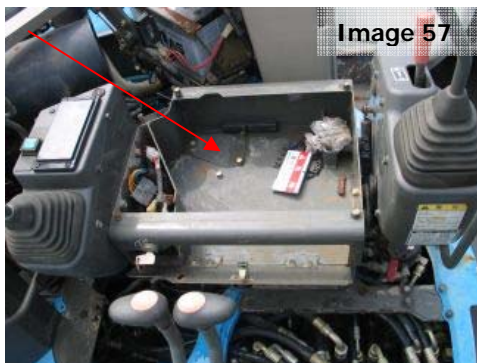


**Image 55:**

On some models, a hollow section below the foot pedals (red arrow) will require internal cleaning and inspection. Each foot pedal cover requires cleaning (green arrow) – see next illustration.

**Image 56:**

Each individual foot pedal has been removed for cleaning and inspection.



**Image 57:**

The seat (red arrow) has been removed from this model to allow cleaning and inspection underneath.

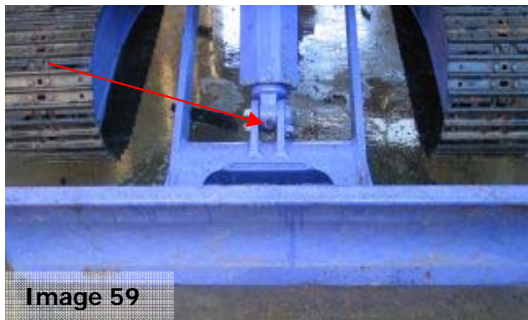
**Image 58:**

All foam insulation (red arrow) around electrical cabling must be internally cleaned and inspected.





## 6. Blade

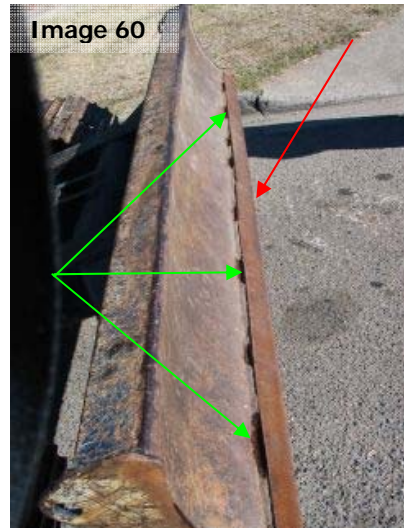


**Image 59:**

Check all surfaces of the blade to verify free of any cracks, splits or evidence of repair. All contaminated grease must be removed from all pivot points (red arrow).

**Image 60:**

On this blade a cutting blade has been spot welded to the face (red arrow). All recesses (green arrows) along the blade must be flushed to verify cleanliness.



## 7. General



**Image 61:**

All wiring harnesses must be thoroughly cleaned and inspected.

**Image 62:**

Ensure that all looming around hydraulic hoses is clean and free of all contamination.



**Image 63:**

An example of the amount of dismantling required for cleaning and inspection.