



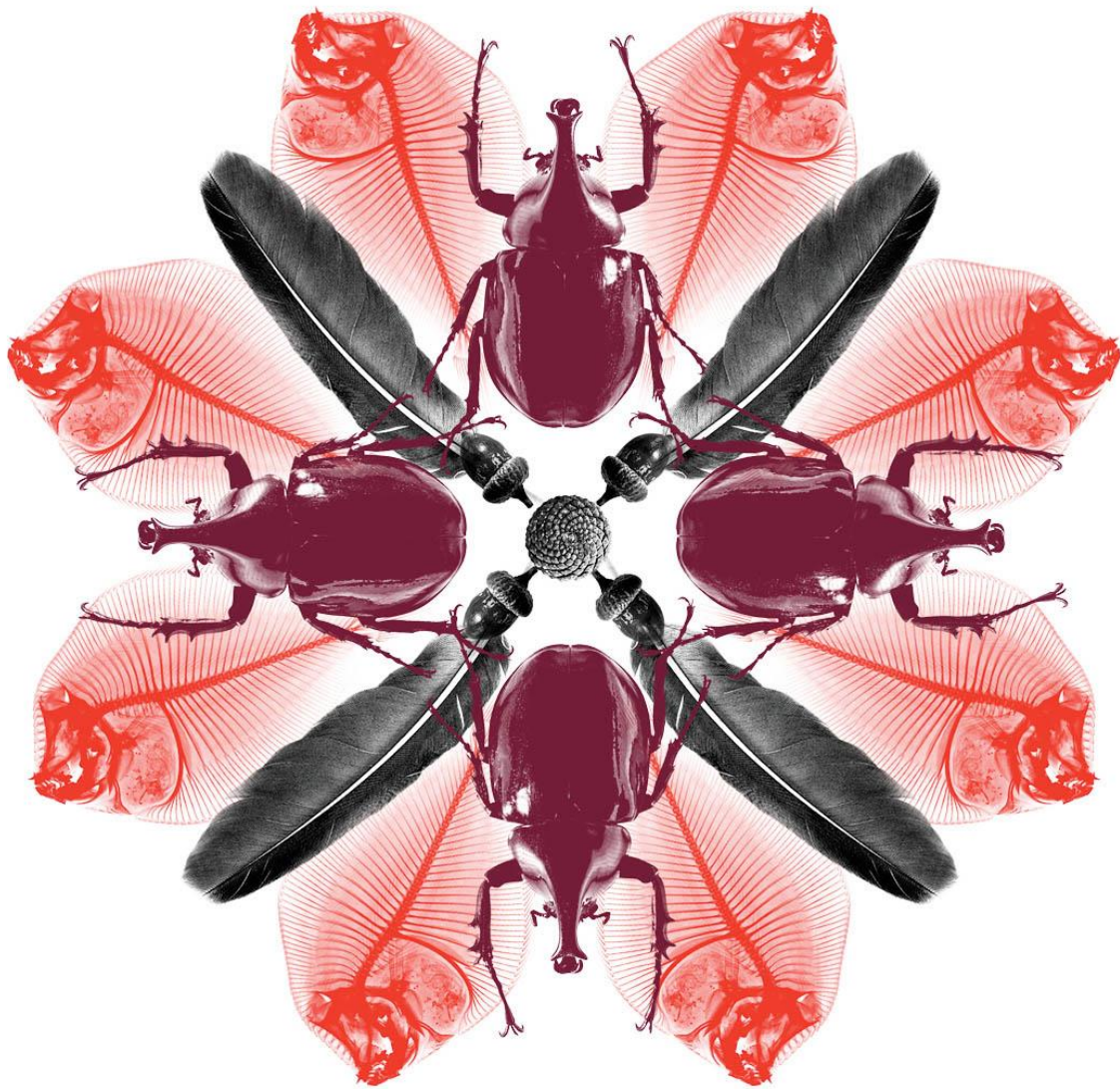
Australian Government
Department of Agriculture
and Water Resources

Machinery Cleaning Guide - Hitachi DX-40

Biosecurity

Publication series

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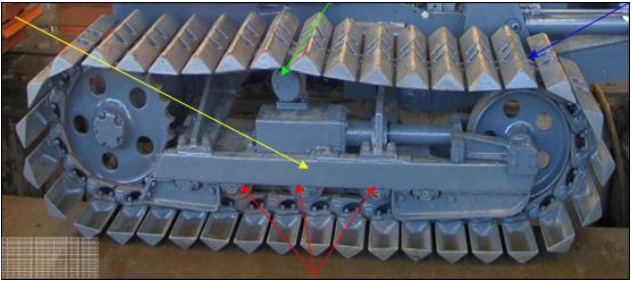
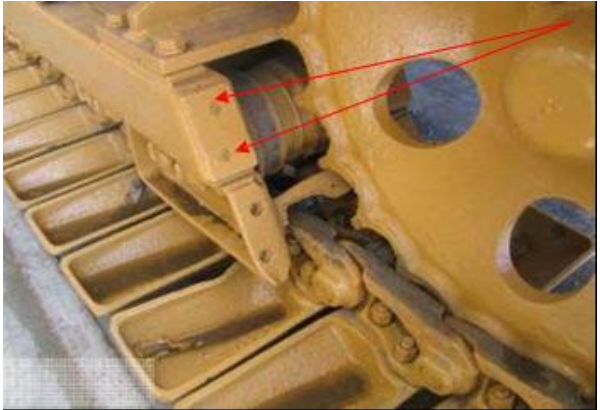
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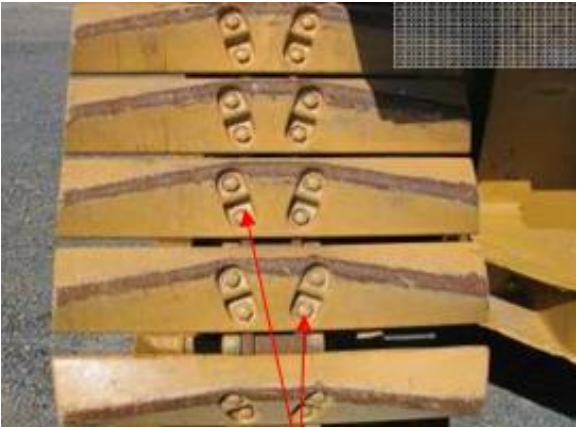

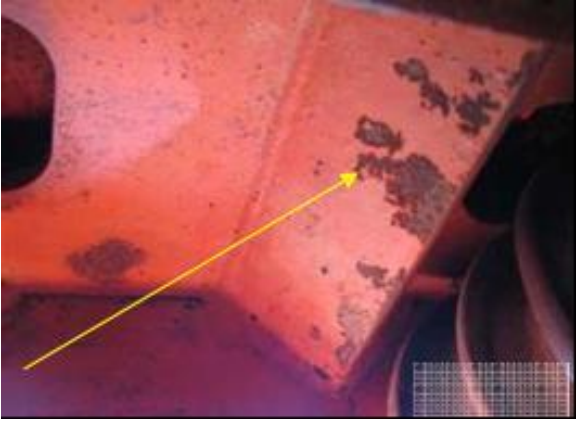



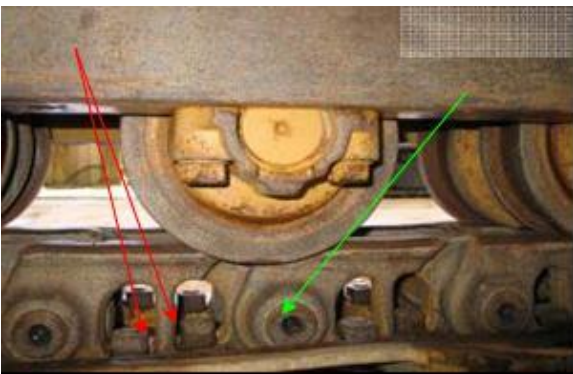

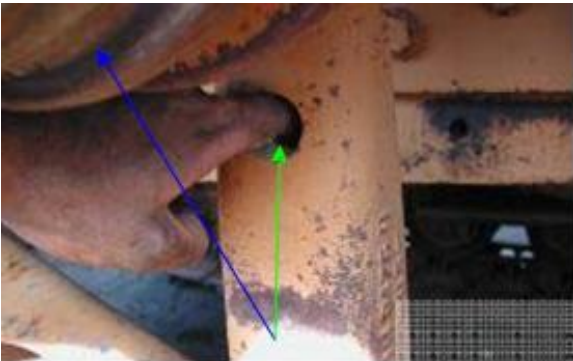
Cleaning guidelines

Track frame and swamp tracks

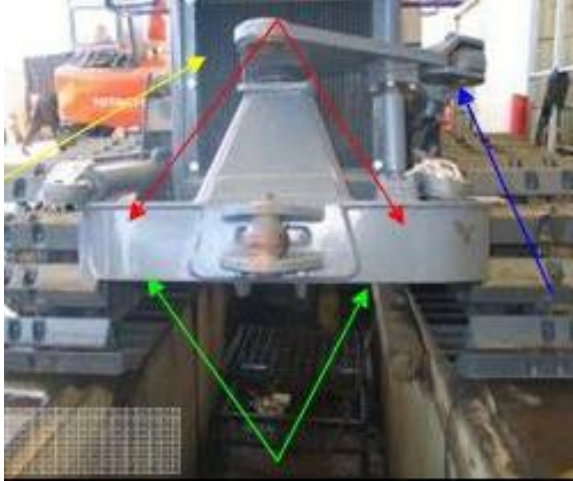

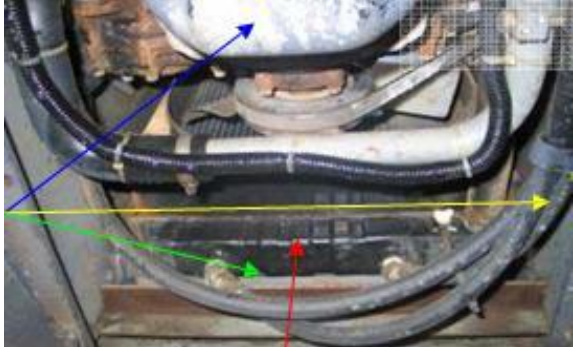
Description	Images
<p>The track frame and swamp tracks as seen on many small dozers. This track frame can be accessed for cleaning and inspection from both the topside and bottom. Each individual roller (red arrows), carrier roller (green arrow) and swamp tracks (blue arrow) must be thoroughly cleaned and inspected. The yellow arrow highlights the hollow track channel that must be flushed in the presence of the inspecting officer to verify internal cleanliness.</p>	
<p>The hollow track frame highlighted previously, may have drainage holes (red arrows) at the end or along the bottom – see next illustration. Pieces of cork have been placed in these holes, however they still require flushing.</p>	
<p>Another way to access the hollow track frame is via the bolt holes (blue arrow) after the rock guards have been removed. Small recesses (green arrow) also require inspection. Flush around the perimeter of the roller (yellow arrow) to verify cleanliness.</p>	




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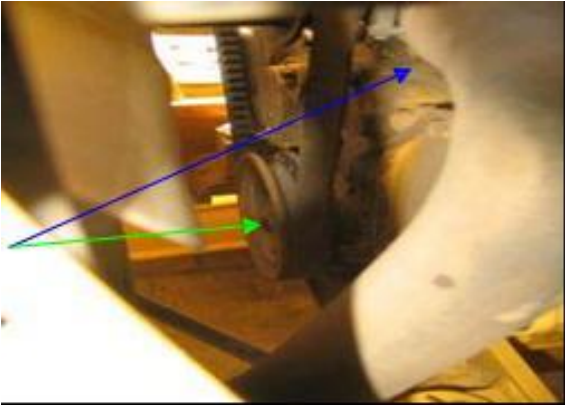
Description	Images
<p>Around the bolt heads (red arrows) of each track pad must be thoroughly cleaned and inspected. The tracks must undergo one full revolution at the time of inspection to verify all track pads are free of biosecurity risk material (BRM).</p>	 A close-up photograph of several yellow track pads stacked vertically. Two red arrows point to the bolt heads on the pads, indicating the areas that need to be cleaned and inspected for biosecurity risk material.
<p>All internal surfaces of the track frame must be cleaned and inspected. The small gap between the roller and the frame (red arrows) requires thorough attention.</p>	 A close-up photograph of the internal structure of a track frame, showing a roller and the frame. Two red arrows point to the small gaps between the roller and the frame, indicating areas that require thorough cleaning and inspection.
<p>Inside some track frames, V-shaped channels like the one illustrated may be present (yellow arrow). These may be sealed units however they must be verified clean if open from the topside or only spot welded in place.</p>	 A close-up photograph of a V-shaped channel in a track frame. A yellow arrow points to the channel, indicating that it must be verified clean if open from the topside or only spot welded in place.

Description	Images
<p>On some models, the drainage hole for the hollow track frame rail may be on the inside edge as highlighted by the green arrow.</p>	
<p>The track nuts (red arrows) and chain links (green arrow) must be thoroughly cleaned and inspected.</p>	
<p>All ledges inside the track frame must be clean and verified free of all BRM.</p>	
<p>The vertical support for the carrier roller (blue arrow) may be hollow and full of BRM as illustrated (green arrow). All contaminants must be removed and the interior verified at the time of inspection.</p>	

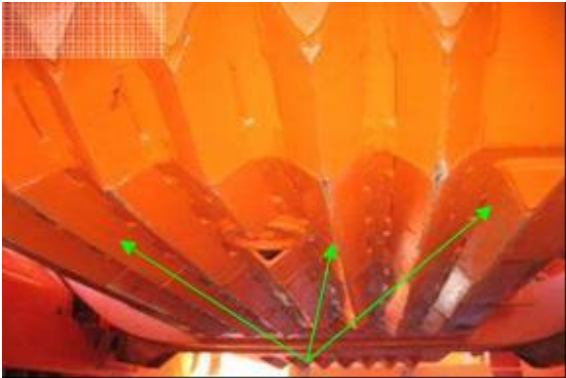
Front end, harmonic balancers and underside of engine bay

Description	Images
<p>The dozer blade push arms (red arrows) may have drainage holes (green arrows) on the underside. Flush to verify cleanliness if present. If sealed, check to verify that all surfaces are free of cracks, splits or evidence of repair. All contaminated grease must be removed from all pivot points (blue arrow). The grill must be removed (yellow arrow) to allow access to the radiator core.</p>	 <p>A photograph showing the front view of the engine bay. Red arrows point to the dozer blade push arms. Green arrows point to drainage holes on the underside of the push arms. A blue arrow points to a pivot point. A yellow arrow points to the grill. A blue arrow points to the radiator core.</p>
<p>The front of the radiator core. The radiator fins must be flushed to verify cleanliness (red arrow).</p>	 <p>A close-up photograph of the radiator core. A red arrow points to the radiator fins.</p>
<p>The belly plate has been removed, allowing cleaning and inspection access to the underside of the radiator (red arrow). All ledges (green arrow), hoses (yellow arrow) and the underside surface of the sump (blue arrow) must be cleaned and free of all BRM.</p>	 <p>A photograph showing the underside of the engine bay. A red arrow points to the underside of the radiator. A green arrow points to a ledge. A yellow arrow points to hoses. A blue arrow points to the underside surface of the sump.</p>



Description	Images
<p>The bottom half of the internal radiator grill (red arrow) has been removed, allowing cleaning and inspection access to the bottom of the radiator shroud (yellow arrow).</p>	
<p>The underside of the engine block and sump (red arrow). All surfaces must be free of all BRM, including dirty grease. The inside of all wiring harnesses (green arrow) and harmonic balancer (blue arrow) must be verified clean.</p>	
<p>Just behind the block, the universal joint (red arrow), springs (aqua arrow), ledges (blue arrow), looming (yellow arrow) and countersunk holes (green arrows) must be thoroughly cleaned and inspected.</p>	

Description	Images
<p>The right hand side of the block. The engine cover and side panels have been removed to allow access for cleaning and inspection (yellow arrow). The hydraulic rams and pivot points (red arrows) must have all contaminated grease removed. Remove the air filter (green arrow) and verify cleanliness. All surfaces of the block are to be thoroughly cleaned and inspected.</p>	
<p>The left hand side of the block. The engine cover and side panels have been removed to allow access for cleaning and inspection. The hydraulic rams and pivot points (red arrows) must have all contaminated grease removed. All surfaces of the block (yellow arrow), including oil filters (blue arrow) and hoses (green arrow) must be thoroughly cleaned and inspected.</p>	
<p>The harmonic balancer (green arrow) and front of the block (blue arrow). Both require thorough cleaning and inspection to verify cleanliness.</p>	

Biosecurity

Description	Images
<p>The belly plate of the dozer. All V-shaped gussets (green arrows) are only spot welded and require flushing to verify internal cleanliness.</p>	

Cabin and below floor pan

Description	Images
<p>A side view of the cabin highlighting fuel cell (red arrow), seat (blue arrow), floor pan (green arrow) and instrument panel (purple arrow). Access to the internal of the joystick control panel (aqua arrow) and instrument panel is required for cleaning and inspection.</p>	
<p>The floor pan has been removed to allow access to the topside of the gearbox (red arrow) and hydraulics (blue arrow). These hydraulic lines extend under the fuel cell (green arrow) and this area requires thorough cleaning and inspection. The rubber foot pedal covers (yellow arrow) have been removed for cleaning.</p>	

Rear end


The rear flap on the dozer opens and the seat lifts forward (red arrow) to provide cleaning and inspection access to the battery box. Ensure that the underside of the seat is clean.



The batteries (green arrows) must be loosened from the tie down points to allow cleaning and inspection of the underside. All internal surfaces must be clean and free of all BRM (blue arrow).



General

Description	Images
All looming around hydraulic and electrical cables is to be verified free of BRM.	
All wiring harnesses are to be cleaned and checked for any BRM.	