

DJ-02: Replace Coolant Screens

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- Each person entering or working on the pit must have authorization.
- Personnel entering the pit must attach their lock and tag to the disconnect.
- Security must ensure the area against dangerous gas leaks or fumes present in the tank.
- The hazards associated with moving equipment and rotating machines exist when jogging the chain manually.
- The pit is confined, so overhead hazard, low lighting, and tripping hazards exist.

EQUIPMENT

- stainless steel screws must be used to install screens to avoid rust
- ventilation fan may be used to provide more air
- basic Maintenance Mechanic hand tools
- screen and gasket replacement
- portable lighting
- anti-seize compound
- caution tape, rails or required warning devices for securing the pit
- portable lighting

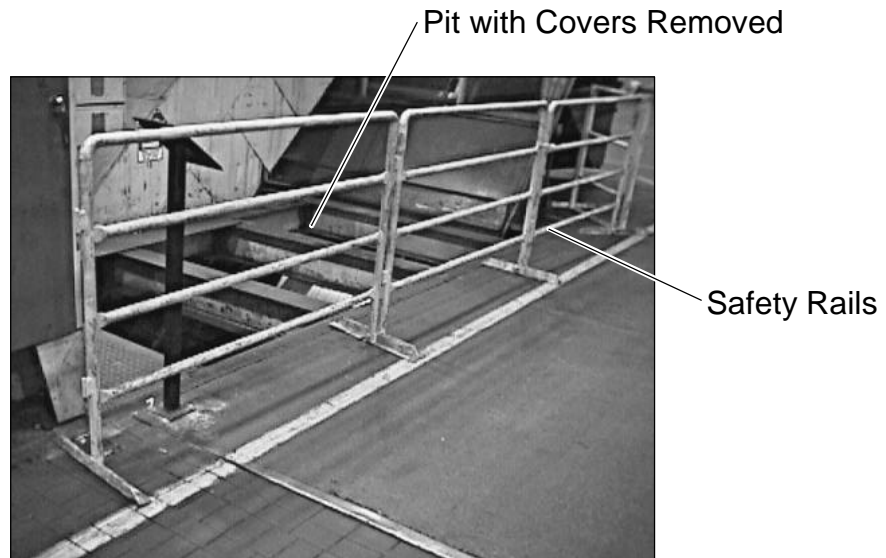
RESOURCES

- required permits and authorization forms (for pit work)



Replace Coolant Screens

1. Pull up the pit covers.
 - Remove the covers to allow access to the pit.
2. Secure the area.
 - Mark the area with caution tape, rails, or any recommended method for warning personnel about the open pit.



Secured Area

3. Ask Met Lab to remove the coolant.
 - Coolant removal may take many hours to pump out.

4. Obtain the permits and authorizations required to work in the pit.



Permit Area

- All personnel working in the pit must sign the authorization form.

Note: The permit is only good for eight hours.

5. Ask an Electrician to provide manual remote control of the drag chain.
 - Check remote control for proper operation of the drag chain.
6. Jog the chain until the opening is over the first set of screens.
 - Ask an assistant to jog the chain while you watch for the opening to line up over the first row of screens.
7. Remove one drag flight, if necessary.
 - Some drag chains have adequate space between flights to allow removal of the screens. Remove a drag flight if there is not enough space.

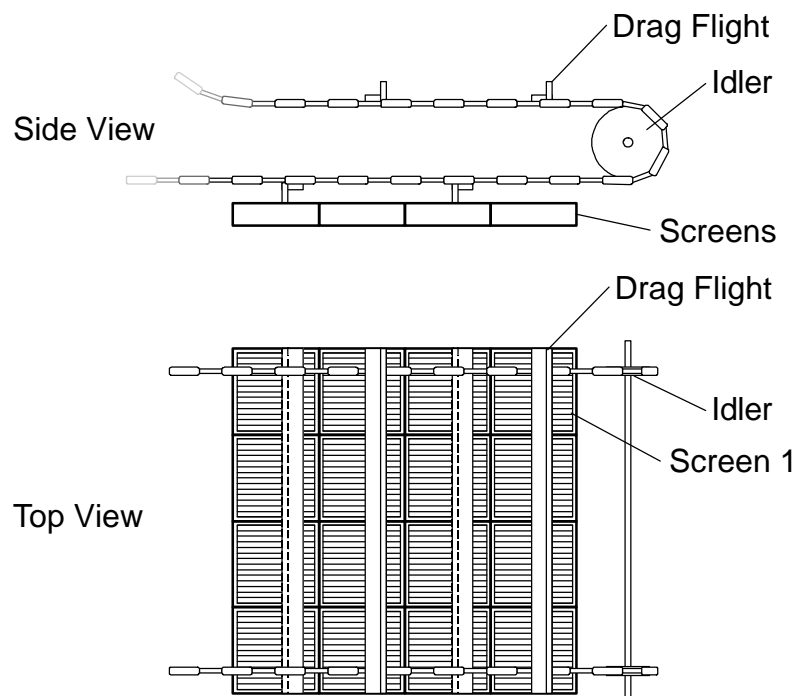
- Remove the drag flight bracket mounting bolts and nuts, as shown below.



Drag Flight Removal

Note: Some drag chains may have the flights welded to them. In this instance, links from the chain need to be removed.

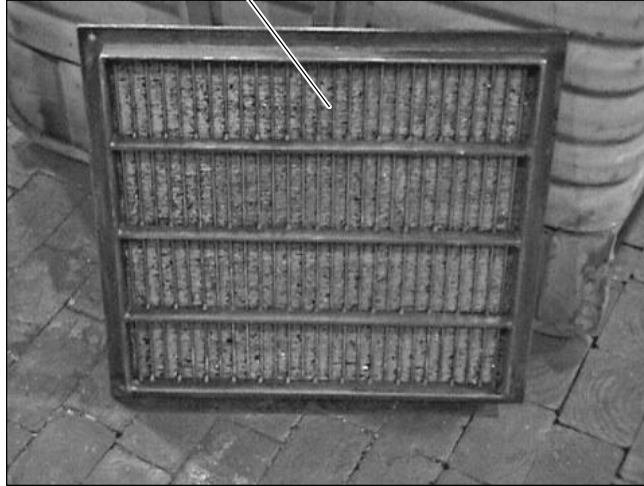
8. Remove the row of screens.



Depiction of Filter Screen Location

- Remove the four stainless steel screws from each corner of the first screen.

Dirty Filter Screen



Filter Screen

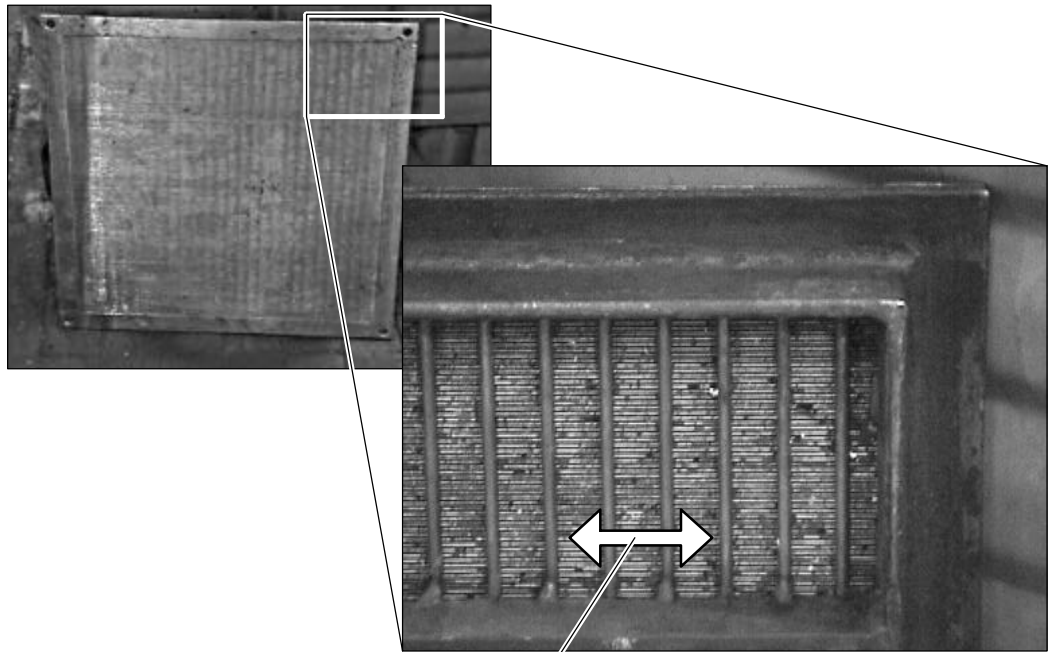
- Hand the screen to your assistant to remove from the area.
 - Remove the gasket.
 - Continue removing the other screens until the entire row is removed.
9. Jog the unit to the next row of screens.

Caution: Look out for all moving parts when jogging the chain.

- Ask your assistant to jog the chain until it is over the next row of screens.
10. Repeat steps 8 and 9 until all screens and gaskets have been removed.
11. Ask Met Lab to clean the pit.
12. Replace filter screens with clean screens.
- Ask your assistant to jog the chain until it is over the first row of screens.
 - Replace the gaskets with new ones.

Note: Use only stainless steel screws when installing anything in the pit. Stainless steel is rust resistant.

- Place screens so the slots are 90 degrees to the drag flight.



Orient Slots 90° to Drag Flight

Filter Screen Orientation

- Install the clean screens, applying anti-seize to the stainless steel screws.
 - Tighten the stainless steel screws hand-tight with a screwdriver.
 - Continue installing each row, joggling the chain as needed, until all screens are replaced.
13. Replace the removed drag flight, if necessary.
 14. Return the chain to the top, verifying normal operation.
 15. Visually inspect the drag chain for damage.
 - Look for damage to the idler chain, drag chain, and drag flights.
 - Replace or repair any damaged parts, as needed.
 16. Ask the Electrician to restore normal control of the drag chain.

17. Ask Met Lab to refill the coolant.
18. Replace the pit covers.
19. Remove guards and caution tape, as needed.
20. Clean up the work area.

