SERVICE ENGINE

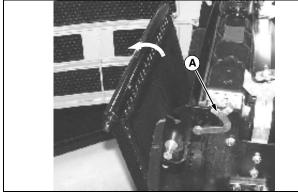
Cleaning Radiator and Oil Cooler Fins

1. Park machine safely. (See Parking Safely in the SAFETY section.)



CAUTION: Avoid injury! Allow engine to cool enough so that components can be touched with bare hands.

2. Open rear service door.



- 3. Lift upper two latches (A) from oil cooler (one on each side). Pivot oil cooler out and away from radiator.
- 4. Clean radiator fins and cooler fins using compressed air.
- 5. Clean any dirt build-up in the engine area.
- 6. If any areas require washing after cleaning with air, allow radiator and cooler parts to dry thoroughly before operating skid steer.
- 7. Pivot oil cooler into position and secure with latches (A).
- 8. Close rear service door.

Replacing Primary Air Cleaner Element

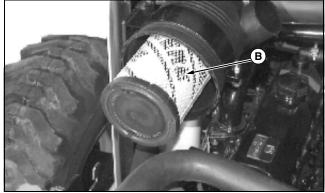
IMPORTANT: Avoid damage! Do not clean primary air cleaner element. Replace it when air restriction light is illuminated on the instrument panel. To prevent dirt from being sucked in to the engine, do not remove element when the engine is running.

Do not start engine without both the primary and secondary filter elements installed.

- 1. Park machine safely. (See Parking Safely in the SAFETY section.)
- 2. Open rear service door and engine cover.
- 3. Remove left side engine panel.



4. Unhook three end cap latches (A) and remove end cap.



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- 5. Remove and discard primary element (B).
- 6. Clean any loose dirt from the canister and inspect the end of the canister for dirt that may prevent the new element from sealing properly.
- 7. Install new primary element.
- 8. Install cover and secure with three latches.
- 9. Start engine and check air restriction indicator to be sure there is no restriction.
 - · If air restriction indicator still shows restriction, replace secondary element.

10. Install left side engine panel, close engine cover, and rear service door.

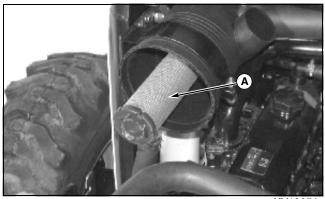
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Replacing Secondary Air Cleaner Element

IMPORTANT: Avoid damage! Do not clean secondary element. Replace it when air restriction light is illuminated on the instrument panel and primary element has already been replaced. Do not remove secondary element unless you are replacing it.

Do not start engine without both the primary and secondary filter elements installed.

- 1. Park machine safely. (See Parking Safely in the SAFETY section.)
- 2. Remove primary element.



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- 3. Remove secondary element (A). Discard element.
- 4. Install new secondary element.
- 5. Install primary element.
- 6. Install cover and secure with three latches.
- 7. Start engine and check air restriction light on the instrument panel to be sure there is no restriction.
 - If restriction indicator light is still on, see your Authorized John Deere Skid Steer Dealer.
- 8. Install left side engine panel, close engine cover, and rear service door.

Recommended Engine Coolant

The following John Deere coolants are preferred:

- COOL-GARD™ PRE-DILUTED SUMMER COOLANT (TY16036).
- COOL-GARD™ CONCENTRATED SUMMER COOLANT (TY16034).

If neither of the recommended coolants is available, use a glycol base coolant that meets the following specification:

• ASTM D4985 (JDM H24A2).

Check container label before using to be sure it has the appropriate specifications for your machine. Use coolant with conditioner or add conditioner to coolant before using.

IMPORTANT: Avoid damage!

To prevent engine damage, do not use pure antifreeze or more than 50% antifreeze in the cooling system.

Do not mix or add any other types of additives other than John Deere Liquid Coolant Conditioner to the cooling system.

If using concentrate, mix approximately 50 percent antifreeze with 50 percent distilled or deionized water before adding to cooling system. This mixture will provide freeze protection to -37 $^{\circ}$ C (-34 $^{\circ}$ F).

Certain geographical areas may require lower temperature protection. See the label on your antifreeze container or consult your Authorized John Deere Skid Steer Dealer to obtain the latest information and recommendations.

Liquid Coolant Conditioner

The skid steer is equipped with a John Deere wet sleeve block engine. John Deere Liquid Coolant Conditioner may be added for additional protection against rust and corrosion in the engine and to protect the cooling system. Other conditions may be used is they contain non-chromate inhibitors. Follow directions on the container.