

**Steiger<sup>®</sup> 370 / 420 / 470 / 500 / 540 / 580 / 620**  
**Quadtrac<sup>®</sup> 470 / 500 / 540 / 580 / 620**  
**Stage IV**  
**Tractor**

*PIN JEEZ00000FF314001 and above*

**SERVICE MANUAL**

Part number 48193200

1<sup>st</sup> edition English

November 2017

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## SERVICE MANUAL

**Steiger® 370 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 370 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 420 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 420 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 CVT, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 CVT, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ]**

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# INTRODUCTION

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## **Foreword - Important notice regarding equipment servicing**

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The manufacturer reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication but are subject to change without notice.

In case of questions, refer to your CASE IH Sales and Service Networks.

## Safety rules

### Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

**FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.**

### Machine safety

**NOTICE:** Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

### Information

**NOTE:** Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

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## Personal safety - Personal safety

### General safety rules

Use caution when operating the machine on slopes. Raised equipment, full tanks and other loads will change the center of gravity of the machine. The machine can tip or roll over when near ditches and embankments or uneven surfaces.

Stay off slopes too steep for safe operation. Shift down before you start up or down a hill with a heavy load. Avoid “free wheeling.”

Never permit anyone other than the operator to ride on the machine.

Never operate the machine under the influence of alcohol, drugs, or while otherwise impaired.

While driving on the road, the seat swivel position must always be straight forward and locked in position with no rotation. The seat swivel should only be rotated for in field operation.

Do not drive on roads, or at high speed anywhere, with the differential lock engaged. Difficult steering will occur, and can result in an accident. In field operation, use the differential lock for traction improvement, but release for turning at row ends.

Do not exceed implement transport speed or the speed rating on the implement tires. Review the implements Operator’s Manual for specifications. Failure to comply could result in death or serious injury.

For speeds up to **16 km/h (10 mph)**, make sure that the weight of a trailed vehicle that is not equipped with brakes does NOT EXCEED 1.5 times the Tractor weight. For speeds up to **40 km/h (25 mph)**, make sure that the weight of the trailed vehicle that is not equipped with brakes, does NOT EXCEED the weight of the Tractor. Stopping distance increases with increasing speed as the weight of the towed load increases, especially on hills and slopes.

Rear upset can result if pulling from wrong location on tractor. Hitch only to the drawbar. Use three-point hitch only with the implements designed for its use – not as a drawbar.

Modifications made to this machine may increase the likelihood or potential for debris accumulations that would normally not be present. Modifications include frame-mounted attachments, plates, screens, or other aftermarket equipment. Operators of modified machines must be aware of accumulations of organic debris and/or material and overall machine cleanliness.

Modified machines require additional and more frequent inspection and cleaning during usage. The machine may require inspection and cleaning multiple times per day during usage. Operators must be aware of the operating environment and conditions. Operators must take appropriate actions to maintain the machines during use. In particular, pay attention to the following machine areas:

- In and around the engine compartment
- Hot exhaust components
- Moving, turning, or rotating machine components

Operators that operate the machine in atypical applications and/or conditions must be aware of accumulations of organic debris and/or material and overall machine cleanliness. Pay particular attention where material accumulations are possible or may result.

Machines that operate in atypical applications or conditions require additional and more frequent inspection and cleaning during usage. The machine may require inspection and cleaning multiple times per day during usage. Operators must be aware of the operating environment and conditions. Operators must take appropriate actions to maintain the machines during use. In particular, pay attention to the following machine areas:

- In and around the engine compartment
- Hot exhaust components
- Moving, turning, or rotating machine components

Do not look directly into the front or rear work lamps. Eye damage can occur.

## INTRODUCTION

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Do not tamper with the ballast on the front or rear High Intensity Discharge (HID) lamp since it uses high voltage. Personal injury or death can occur.

To avoid possible eye damage from microwave signals emitted by the radar sensor, do not look directly into the sensor face.

When digging or using ground engaging attachments be aware of buried cables. Contact local utilities to determine the locations of services.

Pay attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety.

Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin, causing serious injury or infection.

- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.
- Stop engine, remove key and relieve the pressure before connecting or disconnecting fluid lines.
- Make sure all components are in good condition and tighten all connections before starting the engine or pressurizing the system.
- If hydraulic fluid or diesel fuel penetrates the skin, seek medical attention immediately.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.

Keep clear of moving parts. Loose clothing, jewelry, watches, long hair, and other loose or hanging items can become entangled in moving parts.

Wear protective equipment when appropriate.

DO NOT attempt to remove material from any part of the machine while it is being operated or components are in motion.

Make sure all guards and shields are in good condition and properly installed before operating the machine. Never operate the machine with shields removed. Always close access doors or panels before operating the machine.

Dirty or slippery steps, ladders, walkways, and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.

A person or pet within the operating area of a machine can be struck or crushed by the machine or its equipment. DO NOT allow anyone to enter the work area.

Raised equipment and/or loads can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.

Never operate engine in enclosed spaces as harmful exhaust gases may build up.

Before starting the machine, be sure that all controls are in neutral or park lock position.

Start the engine only from the operator's seat. If the safety start switch is bypassed, the engine can start with the transmission in gear. Do not connect or short across terminals on the starter solenoid. Attach jumper cables as described in the manual. Starting in gear may cause death or serious injury.

Always keep windows, mirrors, and all lighting clean to provide the best possible visibility while operating the machine.

Operate controls only when seated in the operator's seat, except for those controls expressly intended for use from other locations.

Before leaving the machine:

1. Park machine on a firm level surface.
2. Put all controls in neutral or park lock position.
3. Engage park brake. Use wheel chocks if required.
4. Lower all hydraulic equipment — Implements, header, etc.
5. Turn off engine and remove key.

When, due to exceptional circumstances, you would decide to keep the engine running after leaving the operator's station, then the following precautions must be followed:

1. Bring the engine to low idle speed.
2. Disengage all drive systems.

3. **▲ WARNING**

**Some components may continue to run down after you disengage drive systems.  
Make sure all drive systems are fully disengaged.  
Failure to comply could result in death or serious injury.**

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Shift the transmission into park.

4. Apply the parking brake.



## SERVICE MANUAL

### Engine

Steiger® 370 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 370 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 420 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 420 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 CVT, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 470 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 500 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 CVT, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® CVT, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 540 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 580 Quadtrac® Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Powershift, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Powershift, scraper, TIER 4B [JEEZ00000FF314001 - ], Steiger® 620 Quadtrac® Powershift, TIER 4B [JEEZ00000FF314001 - ]

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## Engine - Change fluid - Changing engine oil and filter

**NOTE:** Reduce to 300 hours or less if **CASE IH AKCELA UNITEK NO. 1™ SBL CJ-4** is not used.

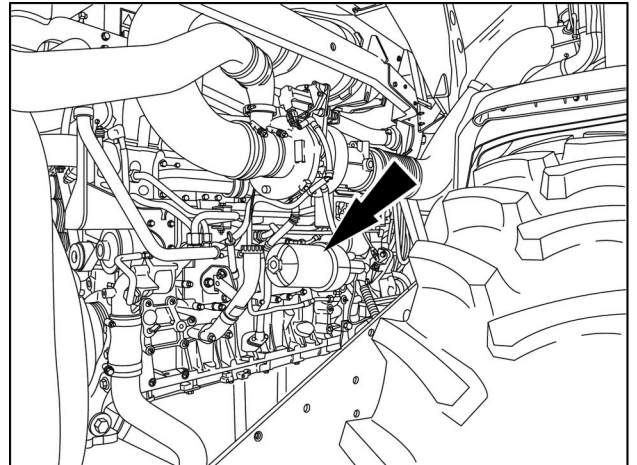
Change the engine oil and filter every 600 hours or once a year or before storage, whichever occurs first. Your dealer has approved oil and filters. Do not use other types of oil or filters.

**NOTE:** For best results change the oil and filter while the engine is still warm to the touch from operation (not hot). The tractor must be on a level surface.

Remove the engine side shields.

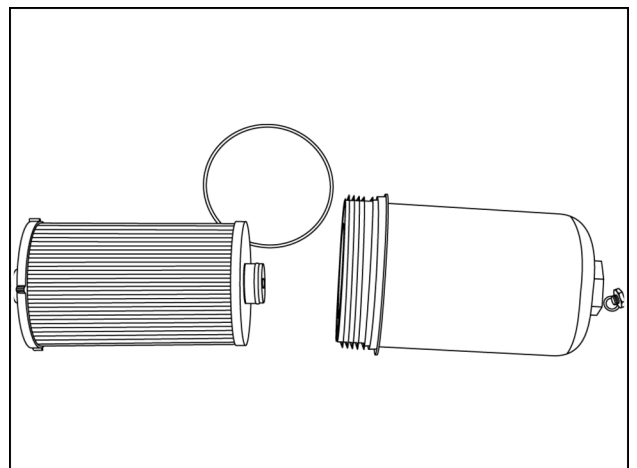
### 9L engine

1. Remove the oil pan drain plug and drain the oil from the engine into a container.
2. After all oil has drained, install new washer 98474302 on drain plug, center washer on plug and install drain plug. Torque drain plug to **30 N·m (22 lb ft)**.
3. Clean the area around the filter head and housing on the left side of the engine. Place a container under the oil filter and turn the filter housing counterclockwise to loosen with a **51 mm (2 in)** wrench. After all oil has drained from the filter, remove the housing with filter.



RAIL13TR04406AA 1

4. Install the new filter cartridge and O-ring. Lightly oil new O-ring.
4. Reinstall the filter assembly onto the tractor. Do not over tighten or O-ring will leak.

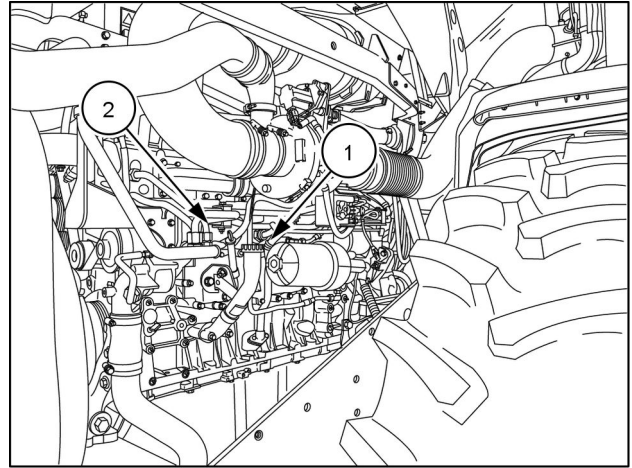


RCPH10FWD928BAM 2

5. Fill with new oil into the engine oil fill **(1)**.

**NOTE:** Total oil refill capacity will be determined by how completely the crankcase drains. Do not fill above the high mark on the dipstick **(2)** when refilling.

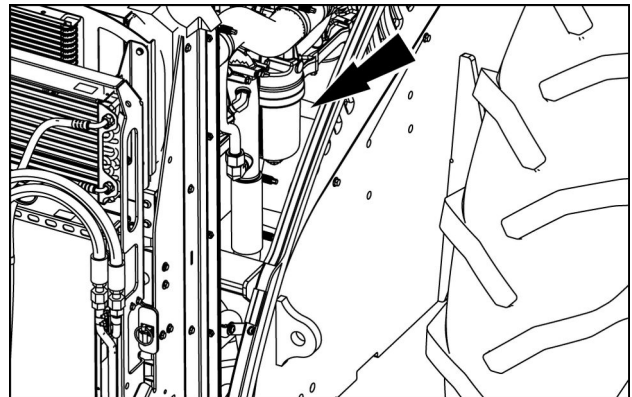
6. Operate the engine for five minutes at **1000 RPM**. Check for oil leaks at the filter base and drain plug.
7. Stop the engine. Wait approximately five minutes for the oil to return to the oil pan. Check the oil level on the dipstick **(2)** and add oil if needed.



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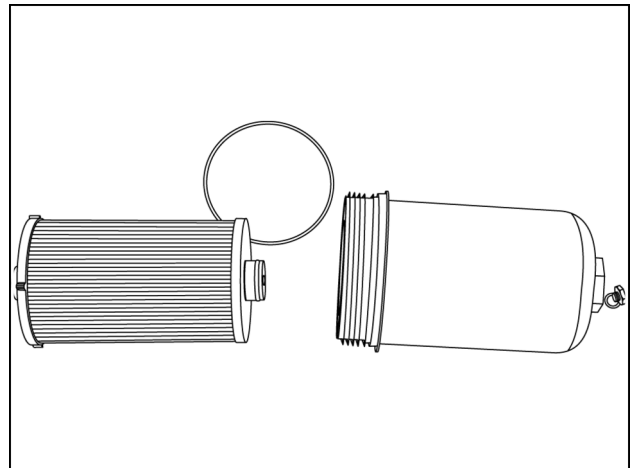
### 13L engines

1. Remove the oil pan drain plug and drain the oil from the engine into a container.
2. After all oil has drained, install new washer 98474302 on drain plug, center washer on plug and install drain plug. Torque drain plug to **30 N·m (22 lb ft)**.
3. Place a container under the oil filter on the left side of the engine. Use a **19 mm (0.75 in)** socket to open drain on bottom of housing. This will allow oil to drain from the housing. After oil is drained, turn the filter housing counterclockwise to loosen with a **51 mm (2 in)** wrench and remove the filter housing.



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4. Install the new filter cartridge and O-ring.
4. Reinstall the filter assembly. Do not over tighten or the O-ring will leak.

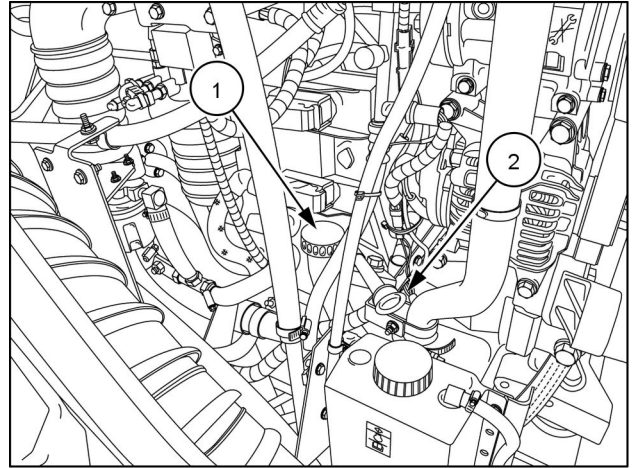


RCPH10FWD928BAM 5

5. Fill with new oil into the engine oil fill **(1)**.

**NOTE:** Total oil refill capacity will be determined by how completely the crankcase drains. Do not fill above the high mark on the dipstick **(2)** when refilling.

6. Operate the engine for five minutes at **1000 RPM**. Check for oil leaks at the filter base and drain plug.
7. Stop the engine. Wait approximately five minutes for the oil to return to the oil pan. Check the oil level on the dipstick **(2)** and add oil if needed.



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## Engine - Remove - 9L

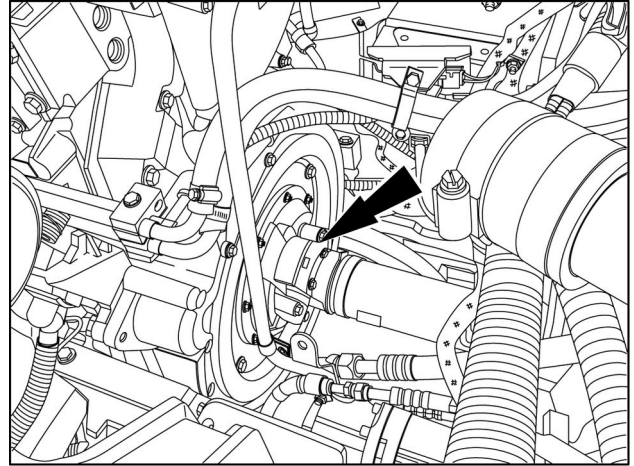
Steiger® 370

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### Prior operation:

Remove the hood support, refer to **Hood support - Remove - Row crop frame, 9L engine (90.102)** for procedure.

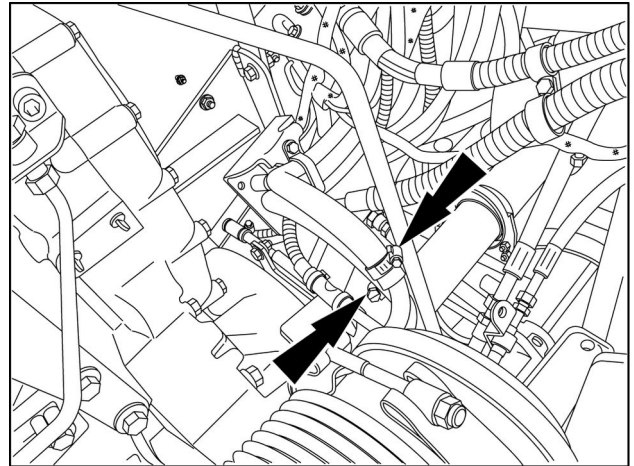
1. Disconnect the driveshaft from the engine.



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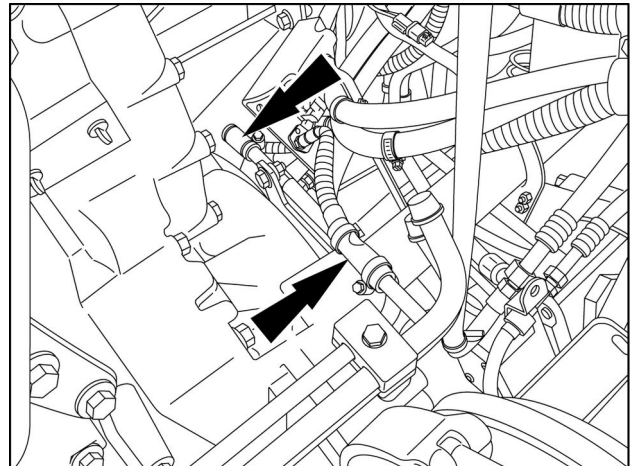
2. Label and disconnect the heater hoses from the tubes.

**NOTE:** Plug and cap all disconnected hoses and tubes.



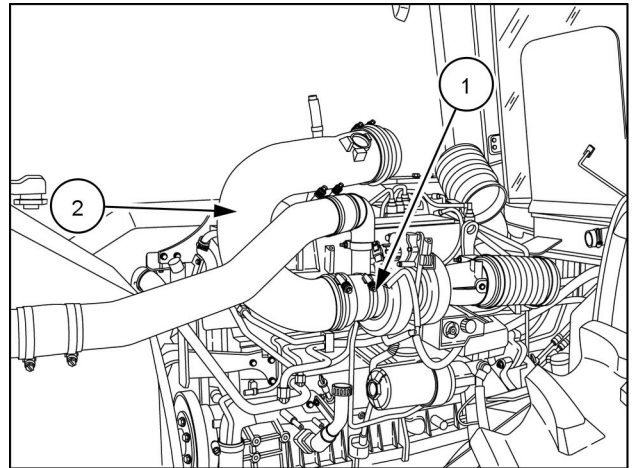
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3. Label and disconnect the two hoses for the diesel emissions fluid tank solenoid.



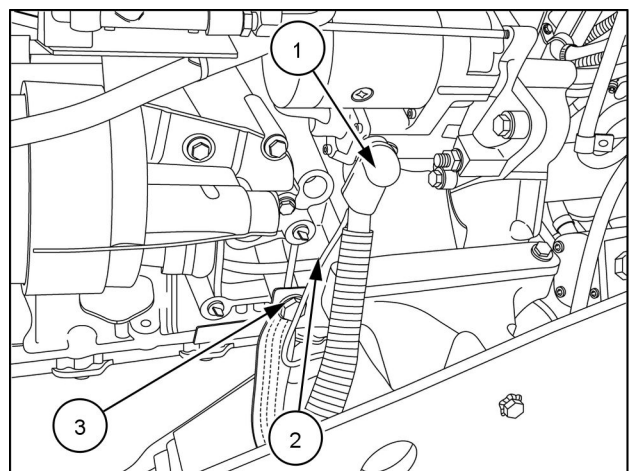
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4. Loosen the hose clamp (1) at the turbo.
5. Remove the air intake tube (2) from the engine.



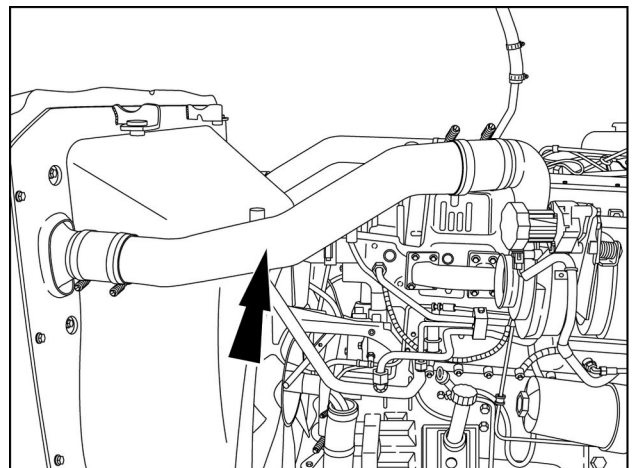
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6. Disconnect the power cable (1) from the starter.
7. Disconnect the wire (2) from the starter.
8. Remove the bolt (3) and disconnect the ground strap from the engine block.



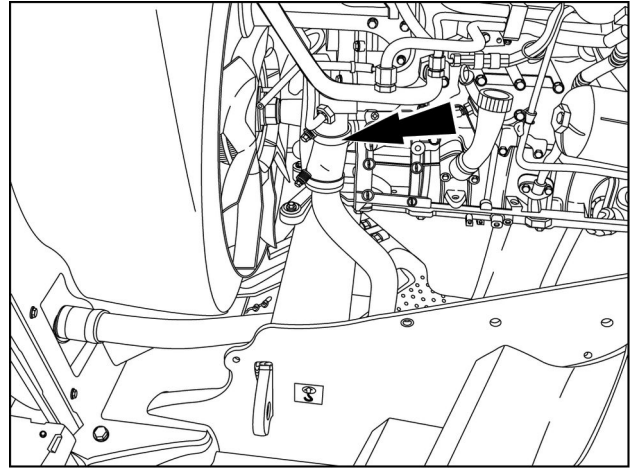
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9. Remove the left hand charged air cooler tube.
- NOTE:** Plug and cap disconnected tubes and ports.



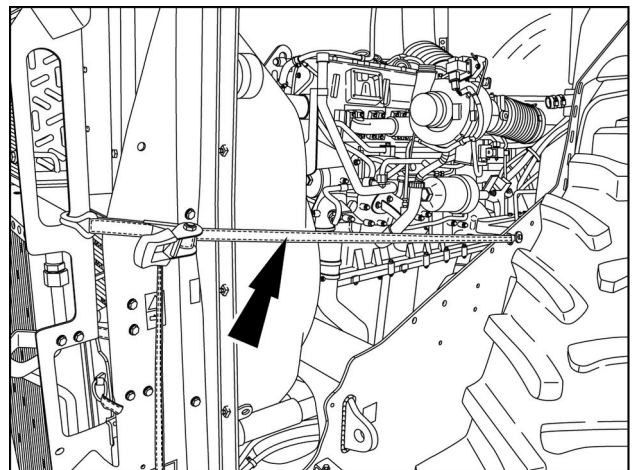
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10. Disconnect the lower radiator hose at the engine.



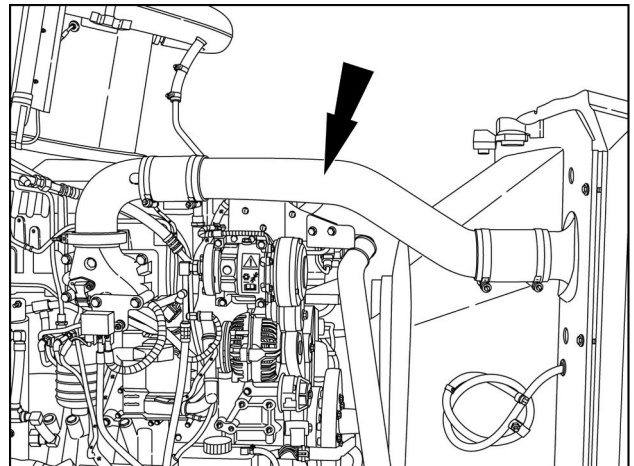
RAIL13TR02971AA 7

11. Attach a support strap to the cooling package frame and the chassis frame as shown to support the cooling package.



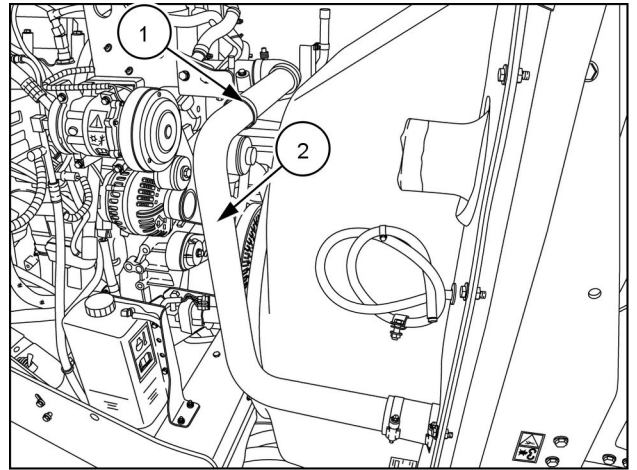
RAIL13TR02973AA 8

12. Remove the right hand charged air cooler tube.



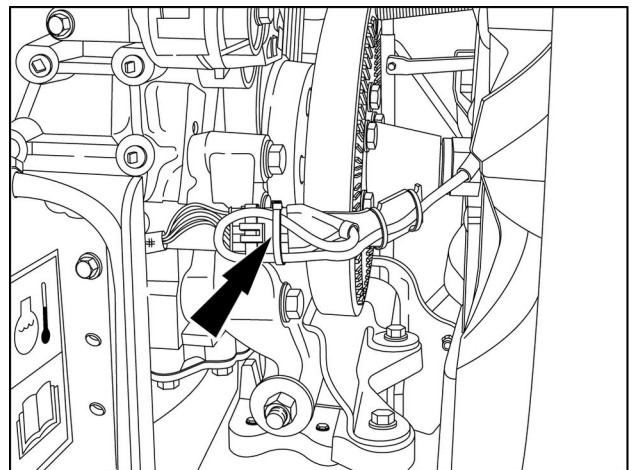
RAIL13TR02972AA 9

13. Remove the clamp **(1)** securing the upper radiator tube to the bracket on the engine.
14. Remove the upper radiator tube **(2)**.



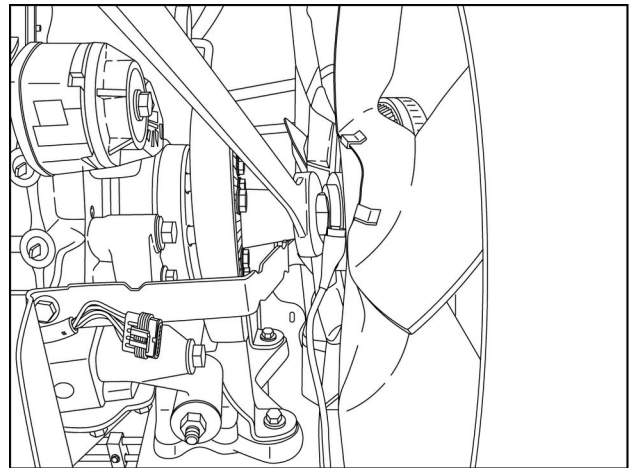
RAIL13TR02974AA 10

15. Cut the ties securing the harness and disconnect the harness.



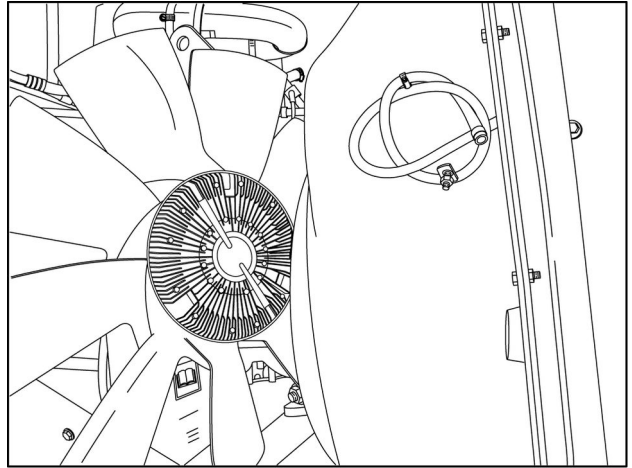
RAIL13TR02976AA 11

16. Loosen the viscous drive from the shaft.  
**NOTE:** The fan pulley hub is left handed threaded.



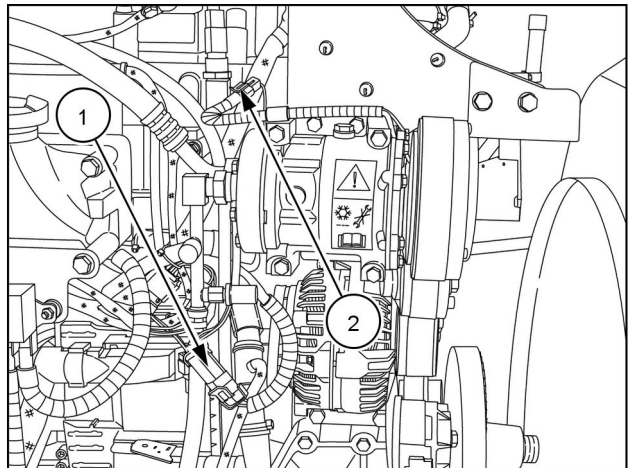
RAIL13TR02979AA 12

17. With the help of an assistant remove the fan out the right hand side of the machine.



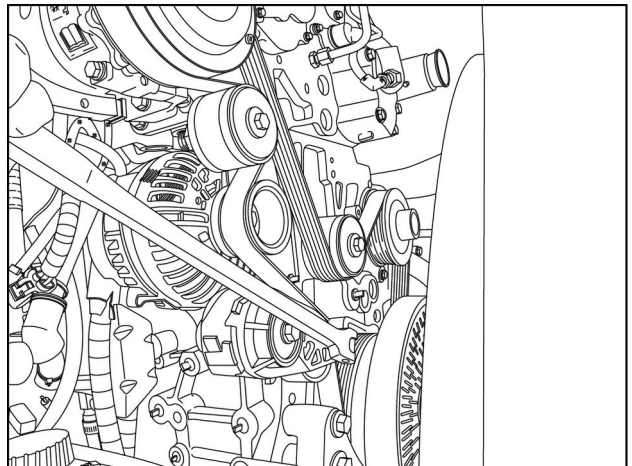
RAIL13TR02977AA 13

18. Disconnect the harness lead to the air conditioner high pressure switch (1) and the clutch activation lead (2).



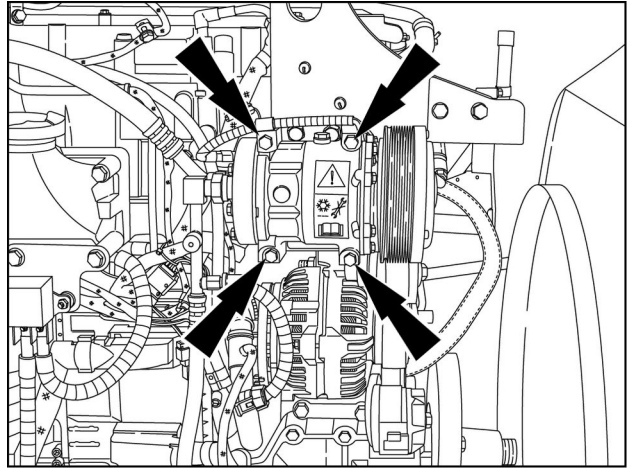
RAIL13TR02981AA 14

19. Use a breaker bar to relieve the tension on the serpentine belt and remove the belt from the air conditioner compressor pulley.



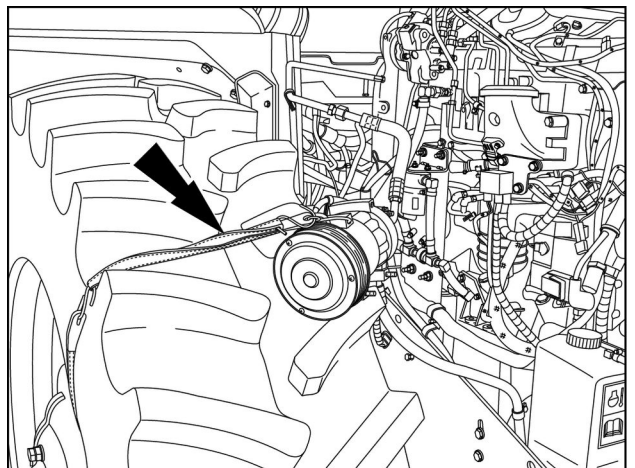
RAIL13TR02987AA 15

20. Support the compressor and remove the four mounting bolts.



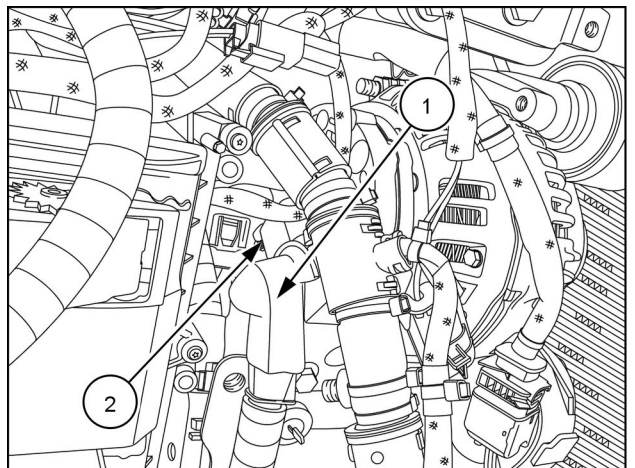
RAIL13TR02986AA 16

21. Set the compressor on the right hand front tire and secure with holding straps as shown.



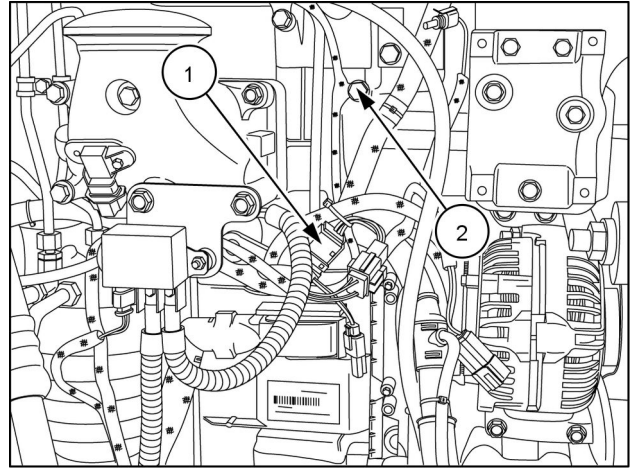
RAIL13TR02982AA 17

22. Disconnect the power cable (1) from the alternator.  
23. Disconnect the exciter wire (2) from the alternator.



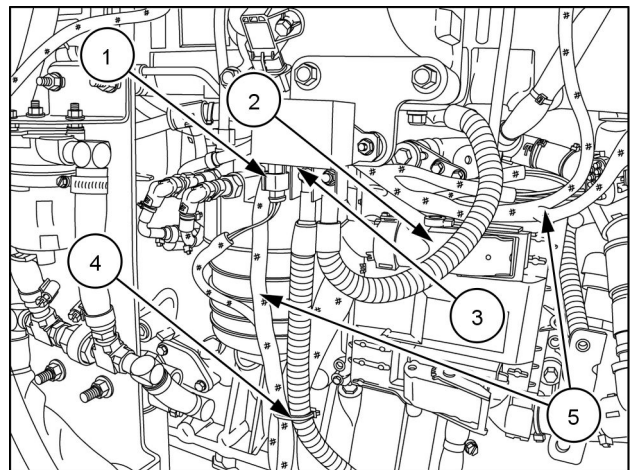
RAIL13TR02983AA 18

24. Disconnect the harness (1).
25. Remove the bolt (2) securing the harness to the engine block.



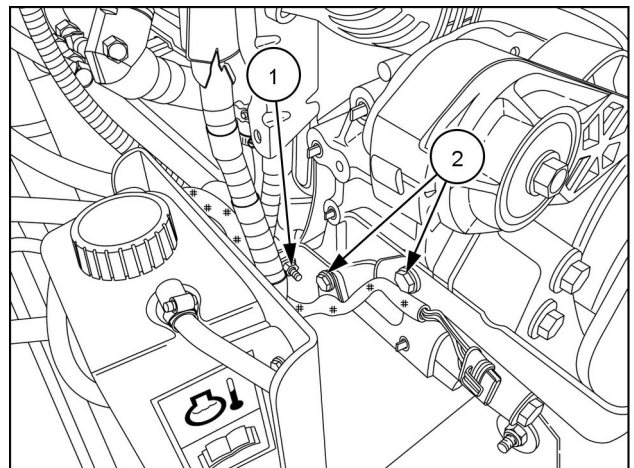
RAIL13TR02985AA 19

26. Unplug the connector (1).
27. Disconnect the main harness (2) from the engine controller.
28. Disconnect the cable (3) from the junction box.
29. Cut the tie (4) securing the harness and cable together.
30. Move the harness (5) out from behind the junction box and the engine to stay with the chassis during engine removal.



RAIL13TR02988AA 20

31. Remove the nut and bolt (1) securing the cable to the bracket.
32. Remove the bolts (2) securing the bracket to the engine block.



RAIL13TR02984AA 21



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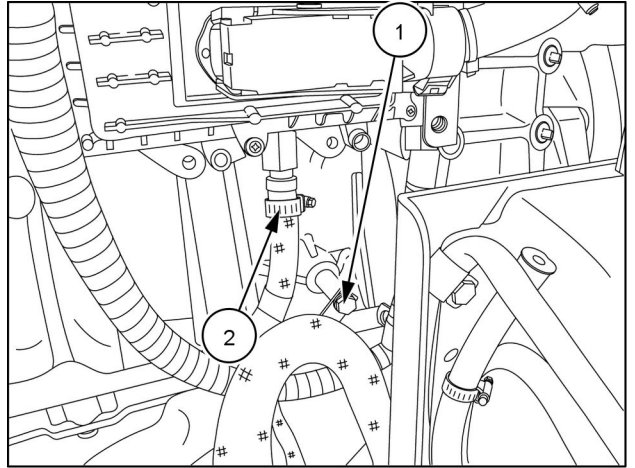
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33. Remove the bolt (1) securing the harness to the engine block.

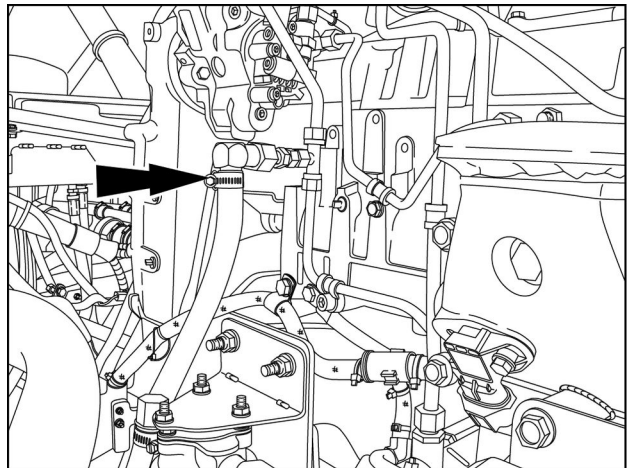
34. Disconnect the fuel inlet hose (2).

**NOTE:** Plug and cap all disconnected fuel hoses and fittings.



RAIL13TR02993AA 22

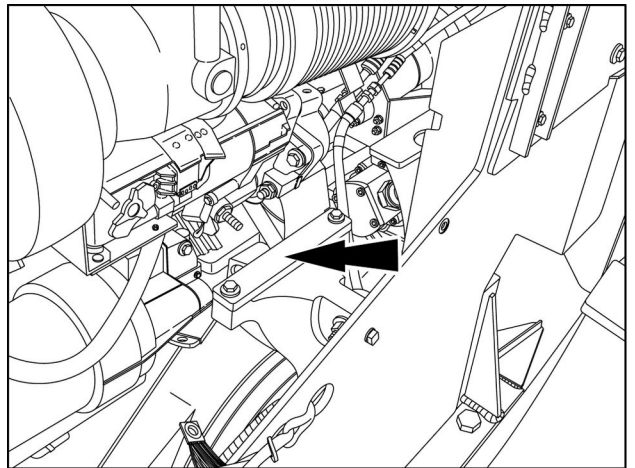
35. Disconnect the fuel return hose.



RAIL13TR02991AA 23

36. Remove the right and left hand hold down brackets.

**NOTE:** Left hand side is shown. Remove both sides.



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