

# SERVICE MANUAL

**T8.320 / T8.350 / T8.380 / T8.410 / T8.435  
T8.380 SmartTrax™ / T8.410 SmartTrax™ /  
T8.435 SmartTrax™  
Continuously Variable Transmission (CVT)  
Tractor**

*PIN ZERE08100 and above\*

Part number 47799439

1<sup>st</sup> edition English

November 2014





## SERVICE MANUAL

**T8.320 696110729 CVT TIER 2 [ZERE08100 - ] , T8.350 696110739 CVT TIER 2 [ZERE08100 - ] , T8.380 696110749 CVT TIER 2 [ZERE08100 - ] , T8.380 SmartTrax™ 696110779 CVT TIER 2 [ZERE08100 - ] , T8.410 696110759 CVT TIER 2 [ZERE08100 - ] , T8.410 SmartTrax™ 696110789 CVT TIER 2 [ZERE08100 - ] , T8.435 696110769 CVT TIER 2 [ZERE08100 - ] , T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]**

## Link Product / Engine

Product	Market Product	Engine
T8.320 696110729 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA613G*E024
T8.320 696110729 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA613G*E024
T8.320 696110729 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA613G*E024
T8.320 696110729 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA613G*E024
T8.350 696110739 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA613D*E024
T8.350 696110739 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA613D*E024
T8.350 696110739 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA613D*E024
T8.350 696110739 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA613D*E024
T8.380 696110749 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA613B*E024
T8.380 696110749 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA613B*E024
T8.380 696110749 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA613B*E024
T8.380 696110749 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA613B*E024
T8.410 696110759 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA614D*E022
T8.410 696110759 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA614D*E022
T8.410 696110759 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA614D*E022
T8.410 696110759 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA614D*E022
T8.435 696110769 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA614A*E022
T8.435 696110769 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA614A*E022
T8.435 696110769 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA614A*E022
T8.435 696110769 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA614A*E022
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T8.380 SmartTrax™ 696110779 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA613B*E024
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<b>Product</b>	<b>Market Product</b>	<b>Engine</b>
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T8.410 SmartTrax™ 696110789 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA614D*E022
T8.410 SmartTrax™ 696110789 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA614D*E022
T8.410 SmartTrax™ 696110789 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA614D*E022
T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]	Latin America	F2CFA614A*E022
T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]	Australia New Zealand	F2CFA614A*E022
T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]	Asia Pacific	F2CFA614A*E022
T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]	Middle East Africa	F2CFA614A*E022

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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 information in this manual is up-to-date at the date of the publication. It is the policy of the manufacturer for continuous improvement. Some information could not be updated due to modifications of a technical or commercial type, or changes to the laws and regulations of different countries.

In case of questions, refer to your NEW HOLLAND 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.

## Safety rules - General maintenance safety

### General maintenance safety

Keep the area used for servicing the machine clean and dry. Clean up spilled fluids.

Service the machine on a firm, level surface.

Install guards and shields after you service the machine.

Close all access doors and install all panels after servicing the machine.

Do not attempt to clean, lubricate, clear obstructions, or make adjustments to the machine while it is in motion or while the engine is running.

Always make sure that working area is clear of tools, parts, other persons and pets before you start operating the machine.

Unsupported hydraulic cylinders can lose pressure and drop the equipment, causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless the equipment is securely supported.

Jack or lift the machine only at jack or lift points indicated in this manual.

Incorrect towing procedures can cause accidents. When you tow a disabled machine follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove the key, and relieve pressure before you connect or disconnect fluid lines.

Stop the engine and remove the key before you connect or disconnect electrical connections.

Scalding can result from incorrect removal of coolant caps. Cooling systems operate under pressure. Hot coolant can spray out if you remove a cap while the system is hot. Allow the system to cool before you remove the cap. When you remove the cap, turn it slowly to allow pressure to escape before you completely remove the cap.

Replace damaged or worn tubes, hoses, electrical wiring, etc.

The engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before you weld on the machine. Always wash your hands after you handle battery components.



# SERVICE MANUAL

## Engine

**T8.320 696110729 CVT TIER 2 [ZERE08100 - ] , T8.350 696110739 CVT TIER 2 [ZERE08100 - ] , T8.380 696110749 CVT TIER 2 [ZERE08100 - ] , T8.380 SmartTrax™ 696110779 CVT TIER 2 [ZERE08100 - ] , T8.410 696110759 CVT TIER 2 [ZERE08100 - ] , T8.410 SmartTrax™ 696110789 CVT TIER 2 [ZERE08100 - ] , T8.435 696110769 CVT TIER 2 [ZERE08100 - ] , T8.435 SmartTrax™ 696110799 CVT TIER 2 [ZERE08100 - ]**

## Engine - Remove

**Prior operation:**

Disconnect the batteries — **Battery - Disconnect (55.302)**

**Prior operation:**

Remove the hood — **Hood - Remove (90.100)**

**Prior operation:**

**Side shield - Remove (90.102)**

**Prior operation:**

Recover the refrigerant — **Air conditioning - Recover (50.200)**

**Prior operation:**

Drain the coolant — **Engine cooling system - Emptying (10.400)**

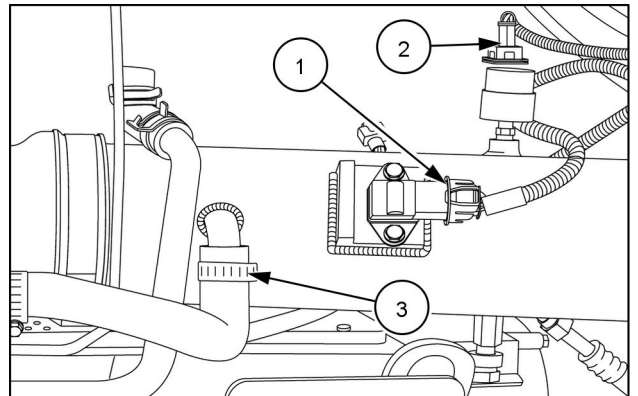
**Prior operation:**

**Engine cooling system - Remove (10.400)**

**NOTE:** Clean all fittings before disconnecting.

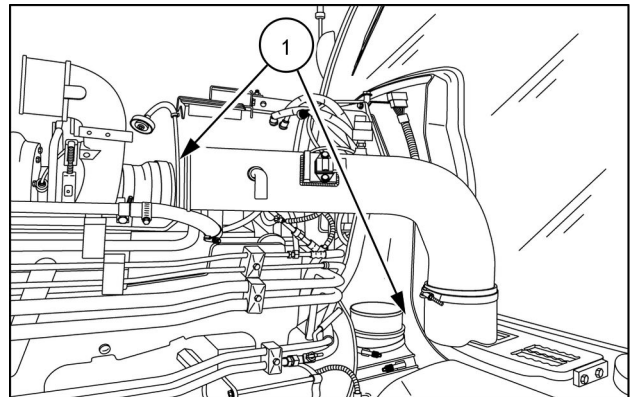
**NOTE:** Cap or plug all lines and ports when disconnecting hydraulic components.

1. Disconnect the harness connector to the humidity sensor (1) and the air restriction sensor (2). Disengage the hose clamp (3) and disconnect the hose from the air intake tube.



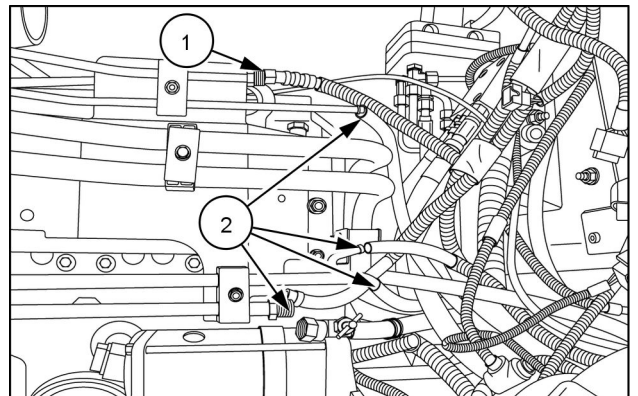
RAIL13TR04202AA 1

2. Disconnect the clamps (1) from each end of the air intake tube and remove the tube.



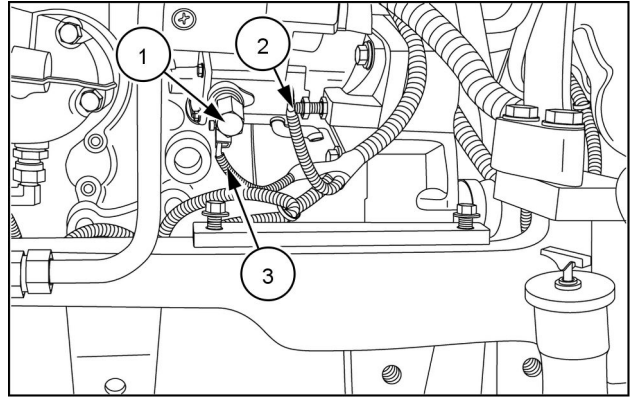
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3. Disconnect the high pressure air conditioning hose (1) and the coolant lines (2). Plug or cap all ports and lines.



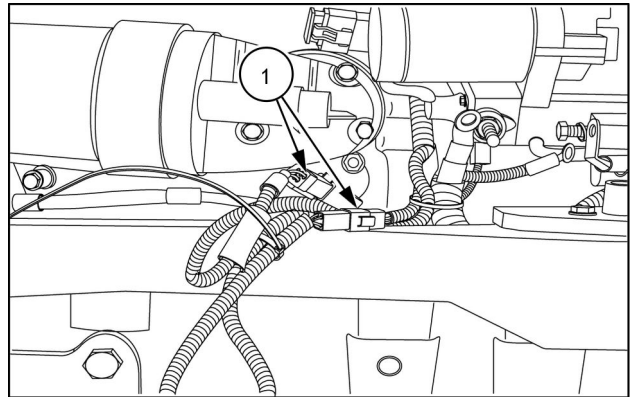
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4. Disconnect the power cable **(1)**, the ground cable **(2)** and the ignition wire **(3)** from the starter.



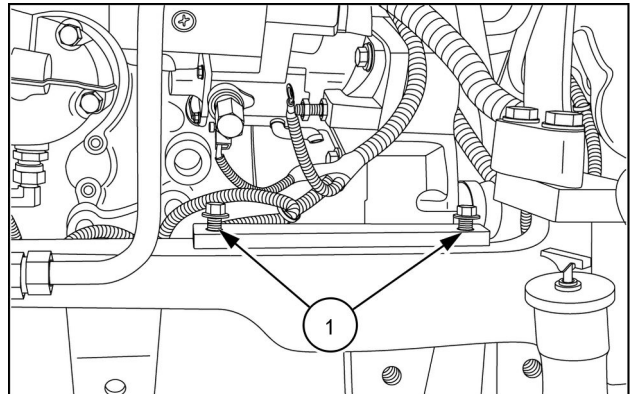
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5. Disconnect the suspended axle harness connectors **(1)** if equipped.



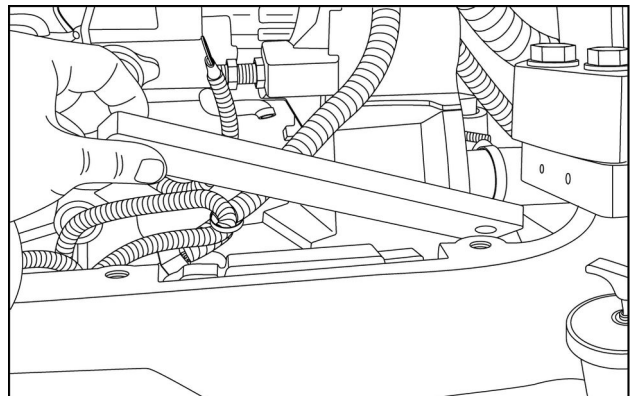
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6. Remove the two bolts **(1)** from the rear engine mount cover plate on both sides, (left hand side shown).



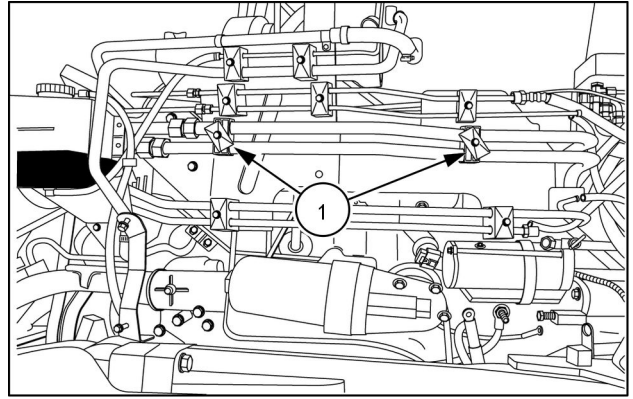
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7. Remove the engine mount cover plate (left hand side).



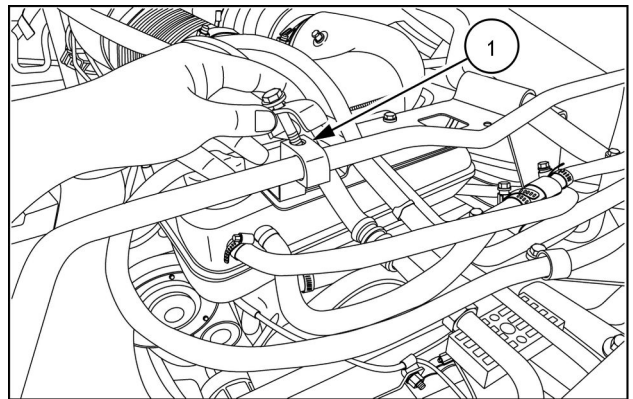
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8. Remove the two tube clamps **(1)** securing the hydraulic cooler tubes.



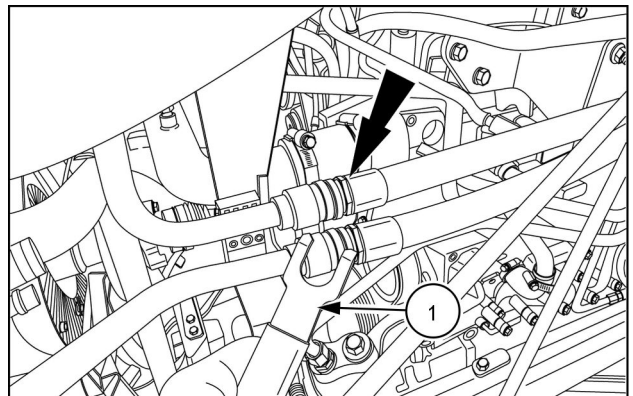
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9. At the front of the engine, remove the tube clamp **(1)** for the oil cooler tube.



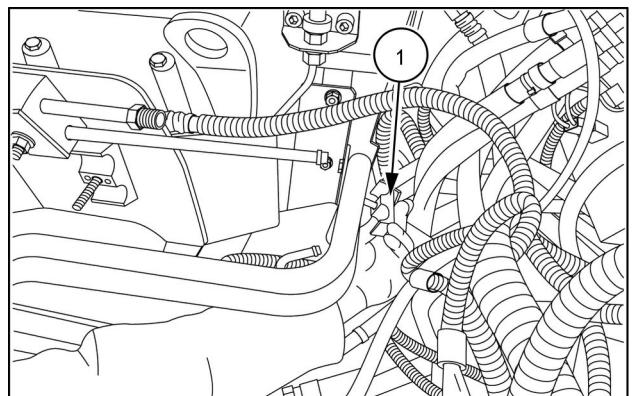
RAIL14TR01915AA 9

10. Using special tool **380000795 (1)**, disconnect the hydraulic tubes and set them aside.



RAIL14TR01924AA 10

11. At the rear of the engine, remove the oil cooler tube clamp **(1)**.



RAIL13TR04236AA 11



**Suggest:**

**If the above button click is invalid.**

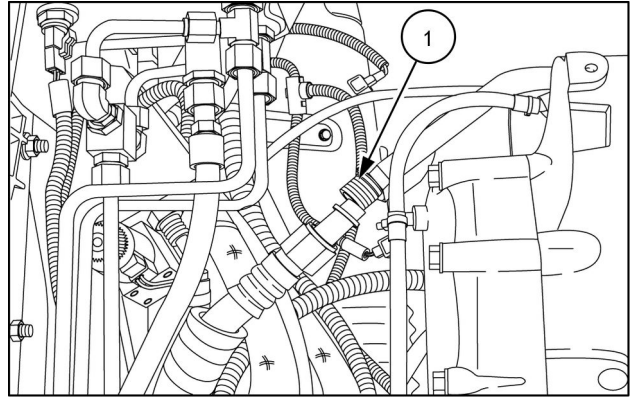
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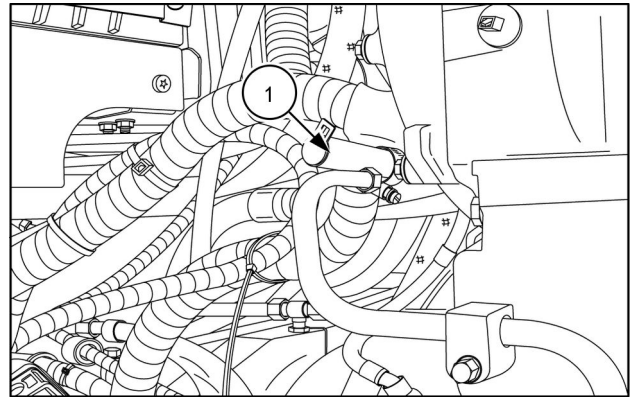
**Thank you so much for reading**

12. Disconnect the low pressure air conditioning line (1). Plug or cap the fittings.



RAIL13TR04228AA 12

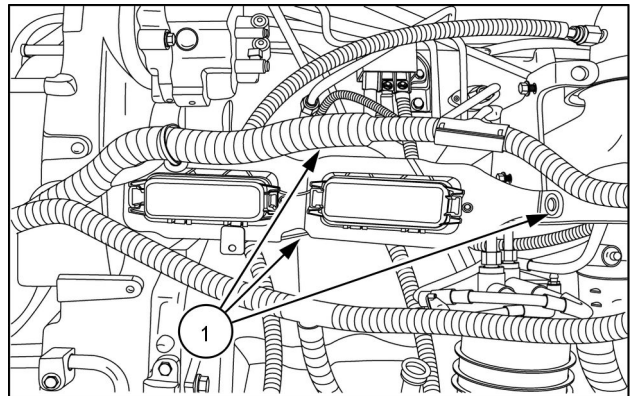
13. Disengage the hose clamp and disconnect the engine controller oil line (1).



RAIL13TR04227AA 13

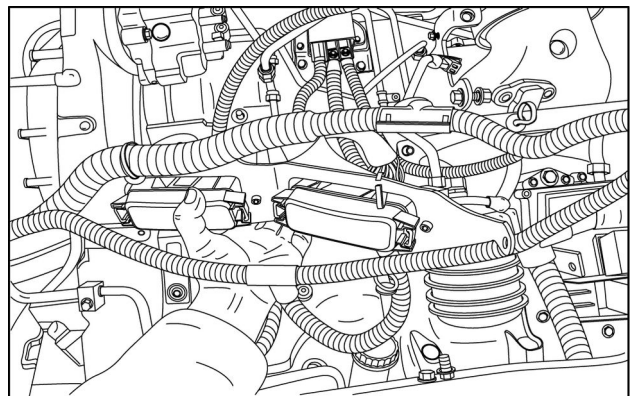
14. Remove the three mounting bolts (1) securing the fuse panel bracket.

**NOTE:** Cut and remove any wire ties securing the harness.



RAIL13TR04216AA 14

15. Remove the fuse panel and set to the side.



RAIL13TR04214AA 15

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