

WD1903
WD2303
Self-Propelled Windrower
from PIN YCG667001 and above

SERVICE MANUAL

Part number 47487699
1st edition English
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INTRODUCTION

Basic instructions - Important notice regarding equipment servicing

[YCG667001-], WD1903, [YCG667001-], WD2303

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 CASE IH AGRICULTURE Sales and Service Networks.

Note to the Owner

COMPANY POLICY

Company policy, which is one of continuous improvement, reserves the right to make changes in design and specifications at any time without notice and without obligation to modify units previously built.

All data given in this book is subject to production variations. Dimensions and weights are approximate only and the illustrations do not necessarily show windrowers in standard condition.

PARTS AND ACCESSORIES

Genuine CASE IH AGRICULTURE parts and accessories have been specifically designed for CASE IH AGRICULTURE MACHINES.

We would like to point out those "NON-GENUINE" parts and accessories have not been examined and released by CASE IH AGRICULTURE. The installation and or use of such products could have negative effects upon the design characteristics of your machine and thereby affect its safety. CASE IH AGRICULTURE is not liable for any damage caused by the use of "NON-GENUINE" CASE IH AGRICULTURE parts and accessories.

LUBRICATION

Adequate lubrication and maintenance on a regular schedule is vital to maintaining your equipment. To ensure long service and efficient operation, follow the lubrication and maintenance schedules outlined in this manual. The use of proper fuels, oils, grease and filters, as well as keeping the systems clean, will also extend machine and component life.

NOTICE: Always use genuine CASE IH AGRICULTURE replacement parts, oils and filters to ensure proper operation, filtration of engine and hydraulic systems. See your CASE IH AGRICULTURE dealer for additional oil quantities.

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

[YCG667001-], WD1903, [YCG667001-], WD2303

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.

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.

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, all lighting, and Slow Moving Vehicle (SMV) emblem 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 disengaging drive systems.
Make sure all drive systems are fully disengaged.
Failure to comply could result in death or serious injury.**

W0113A

Shift the transmission into neutral.

4. Apply the parking brake.

⚠ General maintenance safety ⚠

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

Service machine on a firm level surface.

Install guards and shields after servicing 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 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 securely supported.

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

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

Stop the engine, remove key and relieve pressure before disconnecting or connecting fluid lines.

Stop the engine and remove key before disconnecting or connecting electrical connections.

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

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

Engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when servicing such components. Allow surfaces to cool before handling or disconnecting hot components. Wear protective equipment when appropriate.

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



SERVICE MANUAL

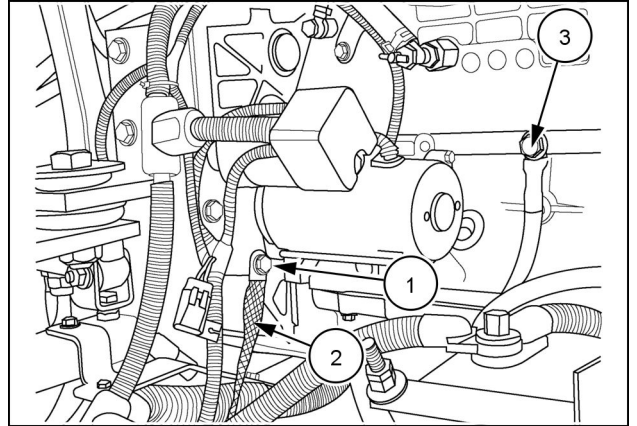
Engine

**WD1903
WD2303**

Engine - Remove

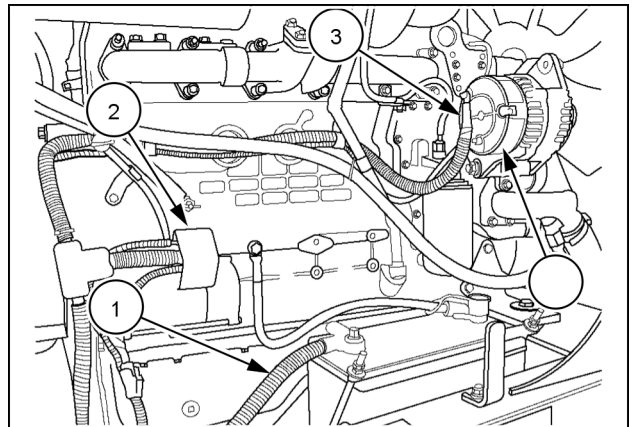
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1. Remove bolt (1) on starter to disconnect ground cable (2). Remove batteries negative ground cable (3) from engine.



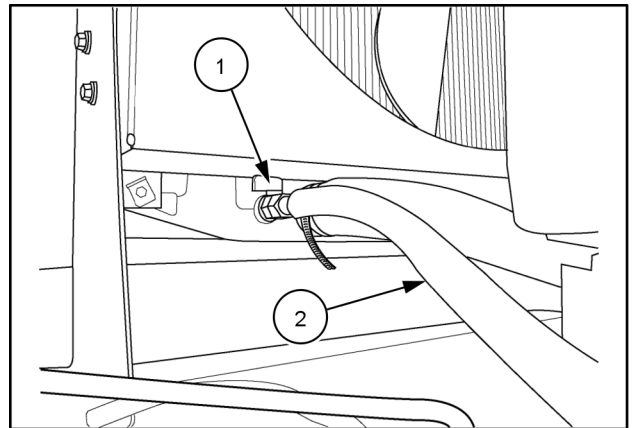
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2. Remove battery post nut and disconnect positive battery cable (1). Remove protective cap and disconnect all cables from starter solenoid (2). Disconnect cable and two wires (3) from alternator (4). Remove complete wire harness from engine block.



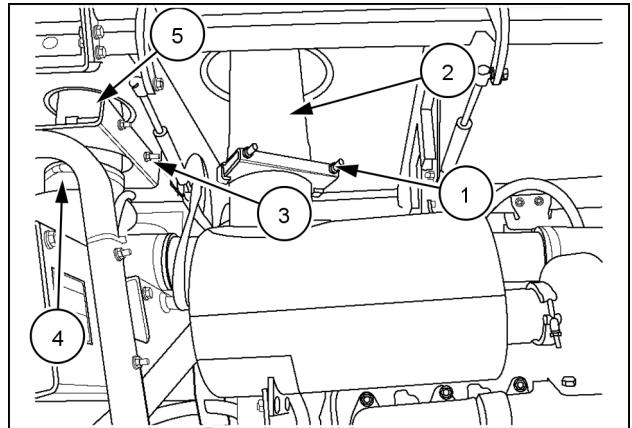
76075207 2

3. Drain coolant from radiator and engine by opening valve (1). Catch fluid from drain hose and save for recycling. Remove the radiator cap to speed up the draining, using caution if the system is hot.
4. Disconnect drain hose (2).



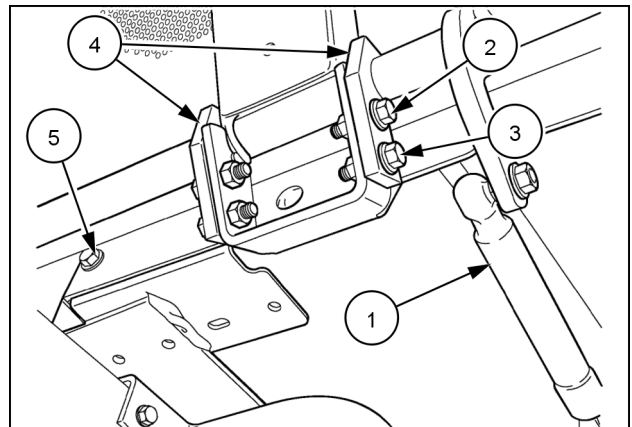
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5. Loosen pipe clamp (1) and remove exhaust stack (2). Remove pipe clamp (3) clamp (4) and remove pre-cleaner assembly (5).



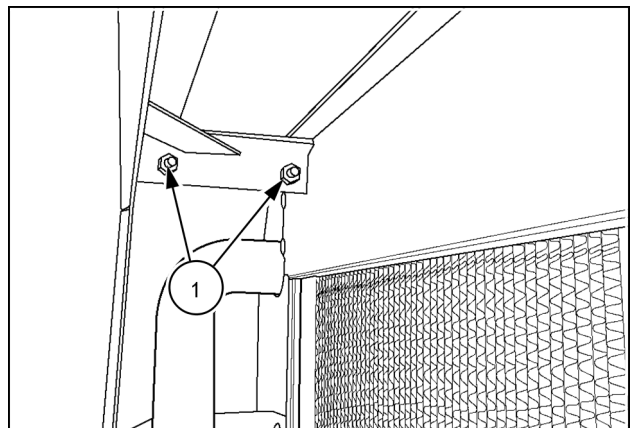
76075196 4

6. Using a helper, detach four gas springs (1) from engine area side doors by removing four flange nuts and lock washers.
7. Remove side doors by removing one bolt (2) and loosening one (3) at each of twelve pivot clips (4).
8. Remove four carriage bolts, lock washers and flange nuts (5) that secure the front of the hood.



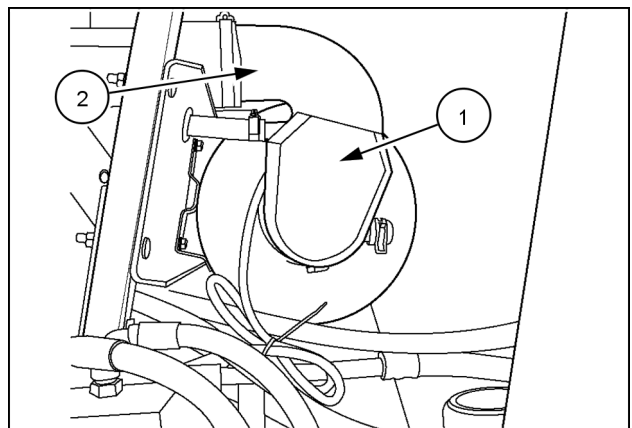
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9. Remove four flange bolts (1) that secure the rear of the hood to the radiator support frame.



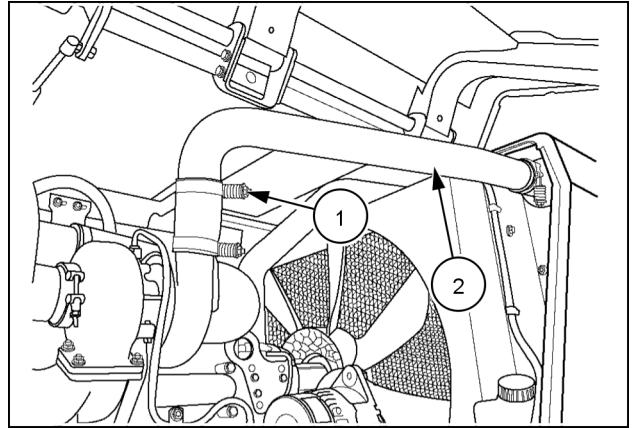
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10. Disconnect restriction indicator switch (1).
- NOTE:** Restriction switch is located behind outlet tube (2).



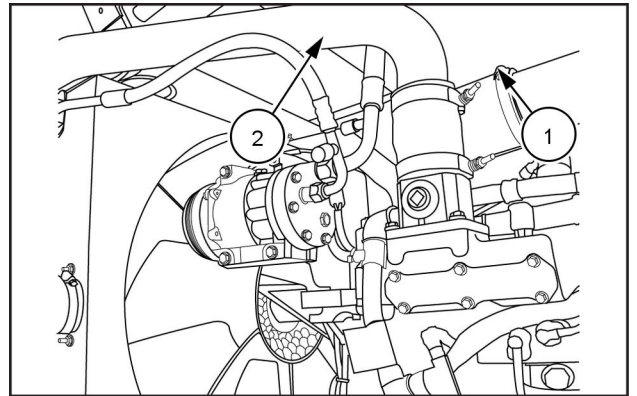
76075200 7

11. Loosen spring clamps (1) and remove tubing (2) from turbo to intercooler.



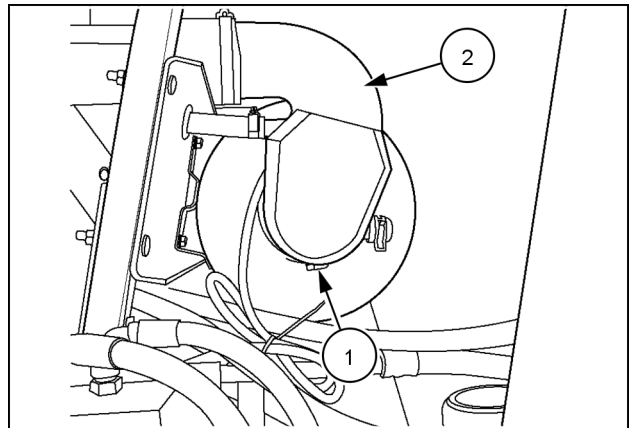
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12. Loosen spring clamps (1) and remove tubing (2) from intercooler to intake manifold.



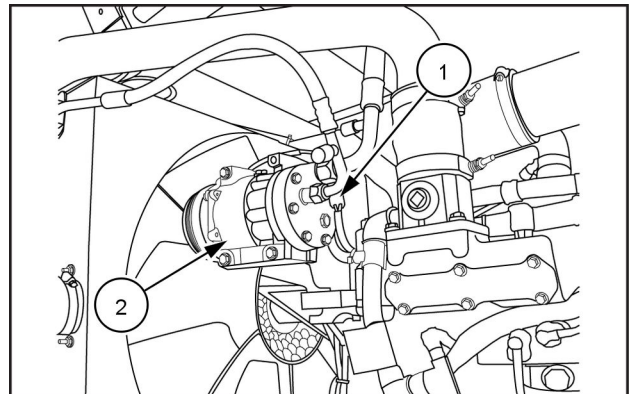
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13. Loosen clamps (1) and remove 127 mm (5 in) diameter outlet tubing (2) from air cleaner to rear bulkhead.



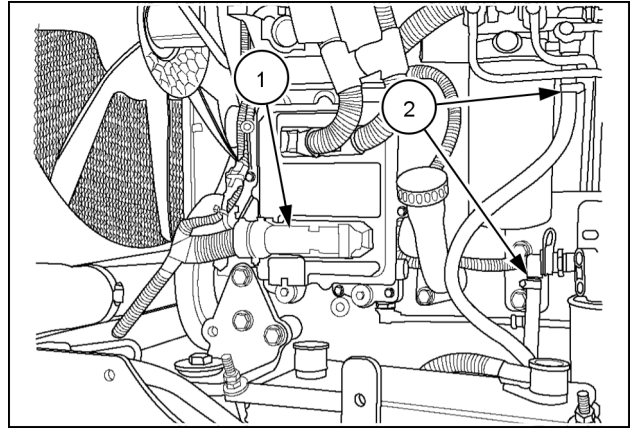
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14. Disconnect wire harness (1) from A/C compressor (2).



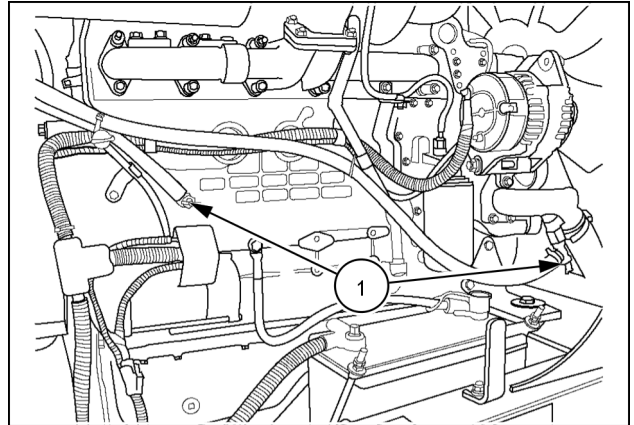
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15. Disconnect ECM harness (1). Remove ECM harness and A/C compressor harness from the engine.
16. Remove and cap fuel lines (2).



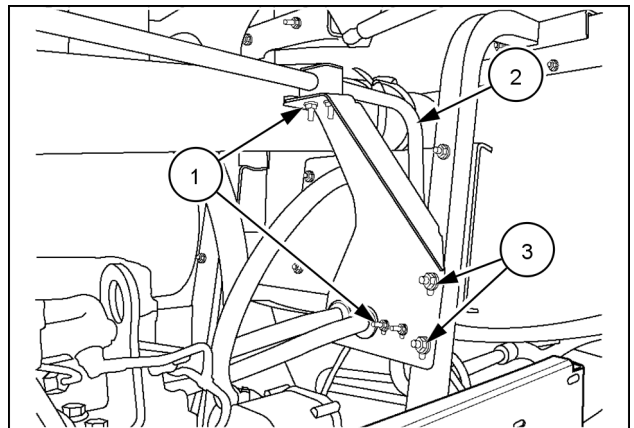
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17. Remove and cap both heater hoses (1).



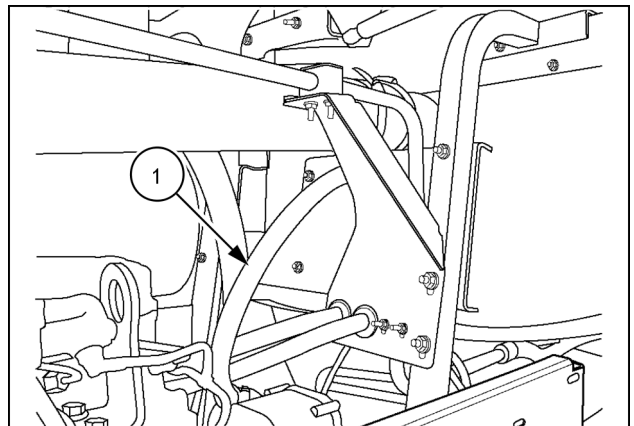
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18. Remove clamps (1) that secure A/C compressor line (2).
19. Remove flange nuts (3) that secure bracket (4). Set bracket and heater hoses aside.



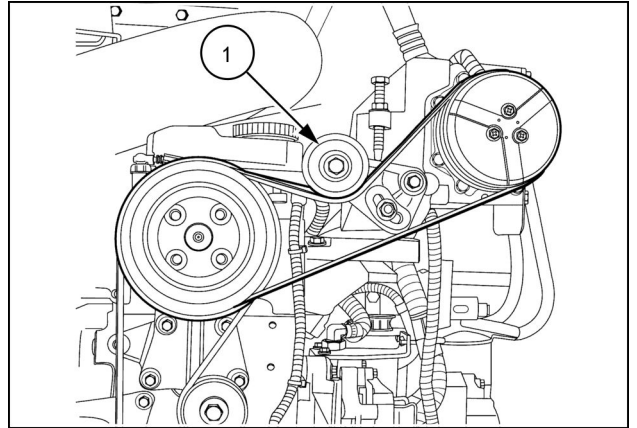
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20. Remove air hose (1) that lead to crankcase ventilation filters.



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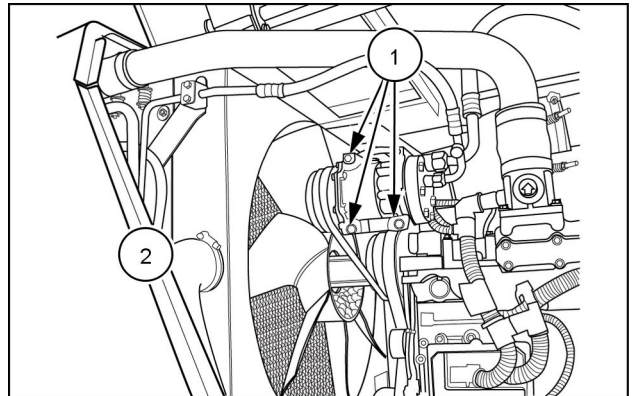
21. Remove A/C compressor drive belt by releasing tension at tensioner (1).



86070777 16

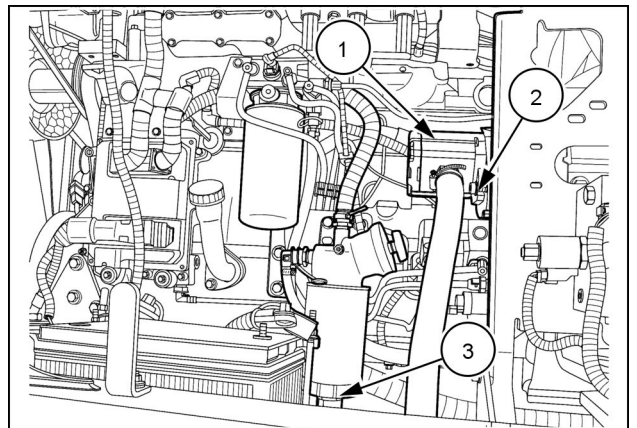
22. Remove three bolts (1) that secure A/C compressor. Hang compressor on right side of machine at (2) with hoses connected.

NOTICE: Use caution when hanging compressor at (2). Be sure not to damage or bend any of the steel fluid lines.



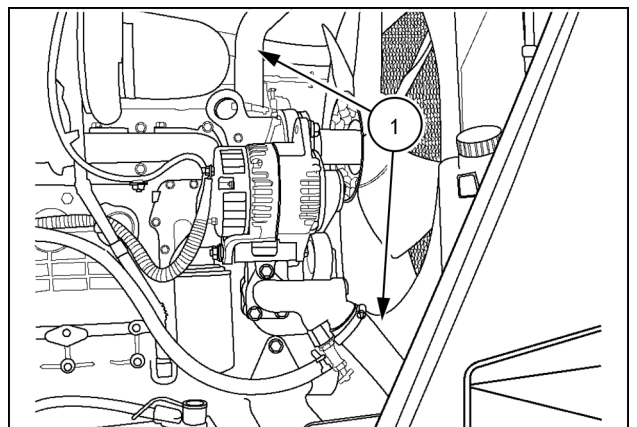
NHILWR00594AA 17

23. If equipped with optional hydraulic pump (1) remove two bolts (2) and lay this pump over to right side.
24. Disconnect wire harness from fuel water switch (3).



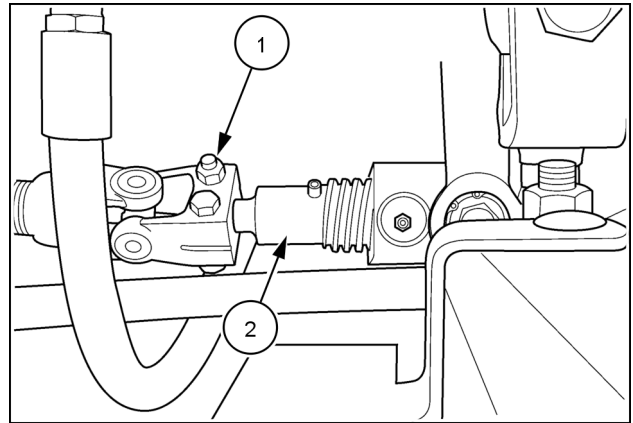
86070781 18

25. Disconnect both upper and lower radiator hoses (1).



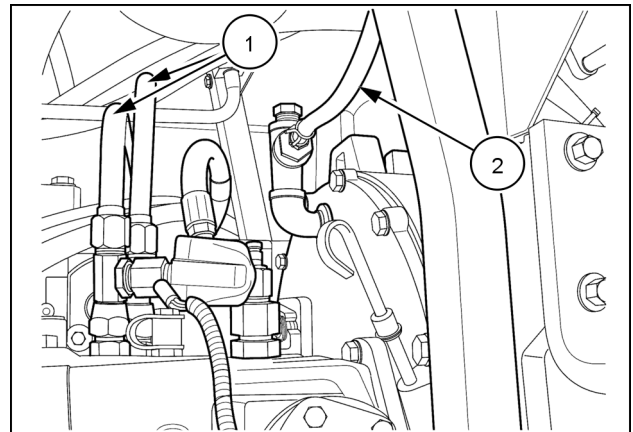
76077320 19

26. Losen clamp bolts **(1)** in steering yoke and remove from splined shaft **(2)**.



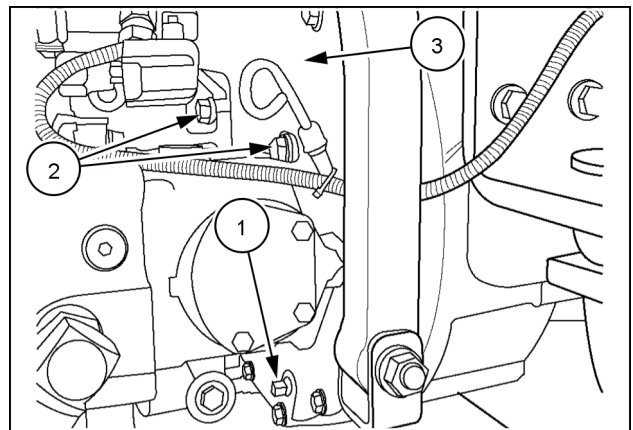
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27. Remove and cap steel hydraulic lines **(1)** to the top of transmission. Use a collection pan to catch any excess fluid that may escape. Disconnect breather hose **(2)**.



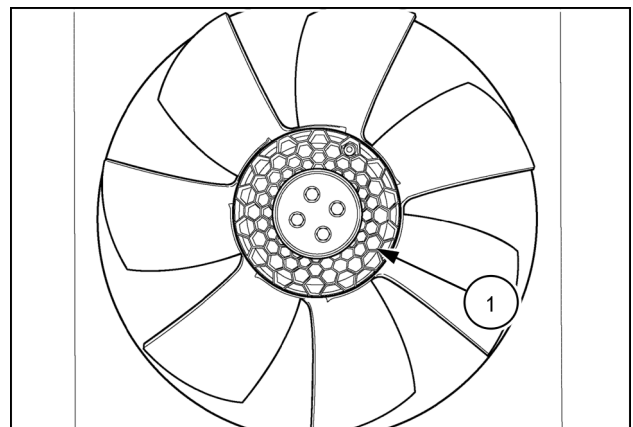
86070789 21

28. Remove plug **(1)** to drain oil from gear box.
 29. With adequate support provided for the pumps, remove flange bolts **(2)** that secure the pumps to cover plate **(3)**.
 30. With adequate support provided for the pumps, carefully move transmission and header drive pump away from engine.



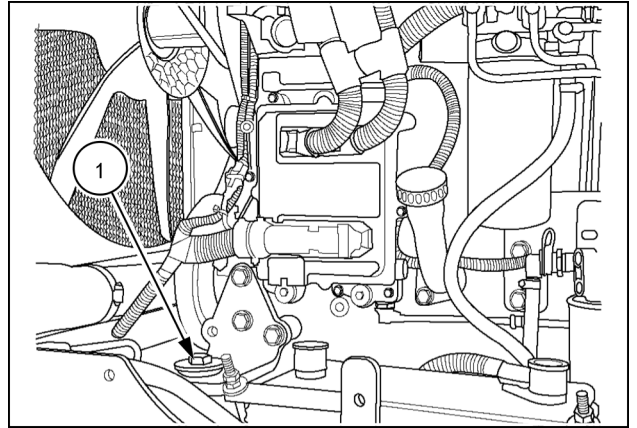
76077321 22

31. Remove four flange screws and lock washers **(1)** from radiator side of fan and detach from drive sheave. Set fan rearward in fan shroud to give maximum clearance to lift out engine.



50050774 23

32. Remove four large cap screws with lock nuts **(1)**.
33. Use appropriate lifting equipment to lift engine out of machine.
34. Mount the engine to an engine stand before removing the chain and hoist.



76075209 24

Engine - Install

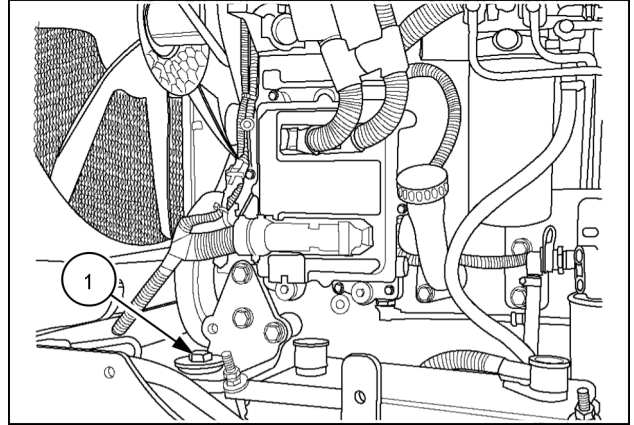
[YCG667001-], [YCG667001-]

⚠ WARNING

Heavy parts!
Support designated component(s) with adequate lifting equipment.
Failure to comply could result in death or serious injury.

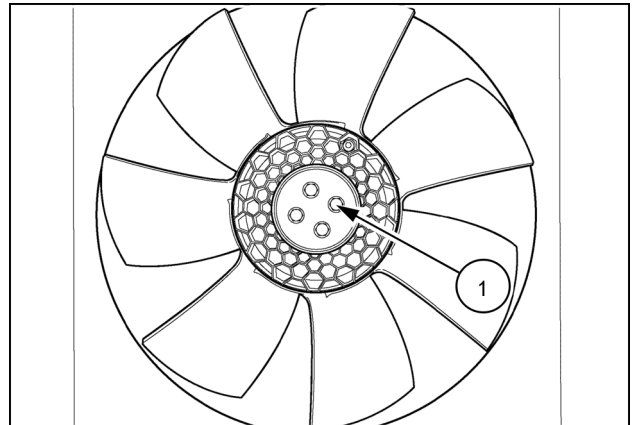
W1024A

1. Align holes in engine supports and install four **5/8 in. x 3-1/2 in** bolts with large washers **(1)** down through engine mounts and install lock nuts. Tighten to **149 N·m (110 lb ft)**



76075209 1

2. Install four flange bolts and lock washers **(1)** from radiator side of fan and attach to drive sheave.

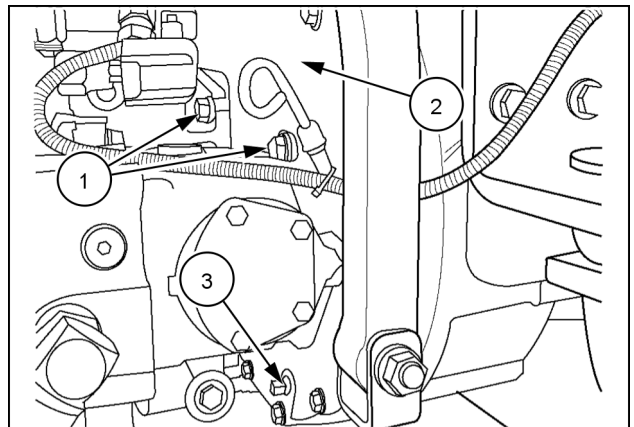


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3. With adequate support provided for the pumps, carefully move transmission and header drive pump into mounting position. Install all flange bolts **(1)** that secure the pumps to cover plate **(2)**.

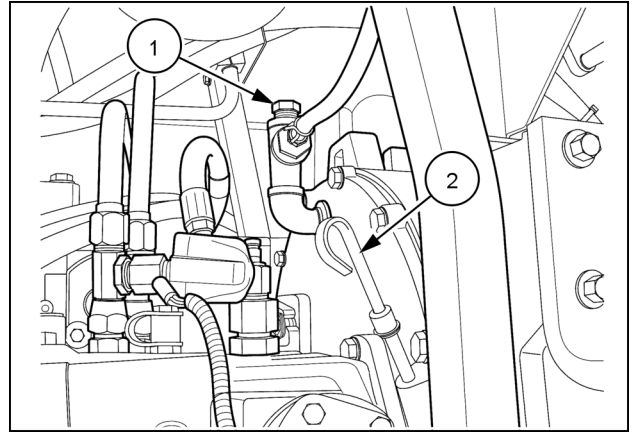
NOTE: Use **LOCTITE® 598 ULTRA BLACK silicon sealant** on mating surfaces before joining pumps to cover plate.

4. Install and tighten drain plug **(3)** to cover plate.



76077321 3

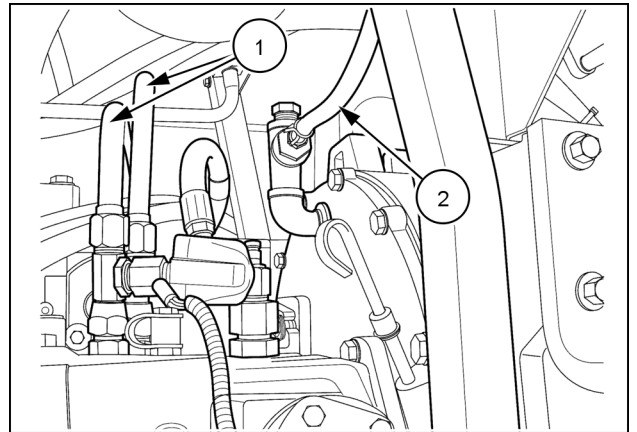
5. Fill front gear case section of flywheel housing by removing breather plug (1) with 1.65 l (1.75 US qt) **CASE IH AKCELA GEAR 135 H EP 80W-90** or **CASE IH AKCELA GEAR LUBE SSL 75W90**. Oil level should be between the two marks on the dipstick (2).



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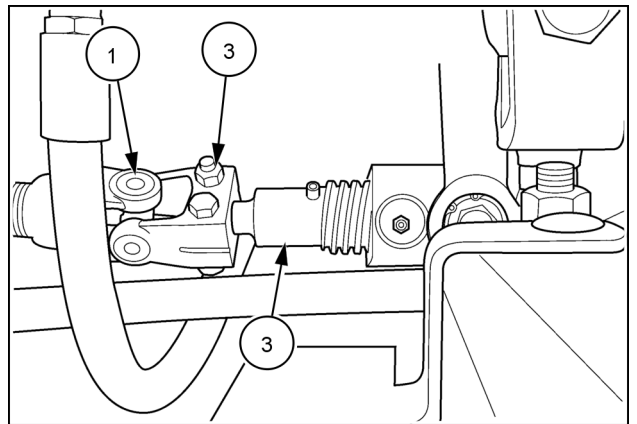
6. Replace breather plug, (1).

7. Install steel hydraulic lines (1) to the top of transmission. Attach breather hose (2).



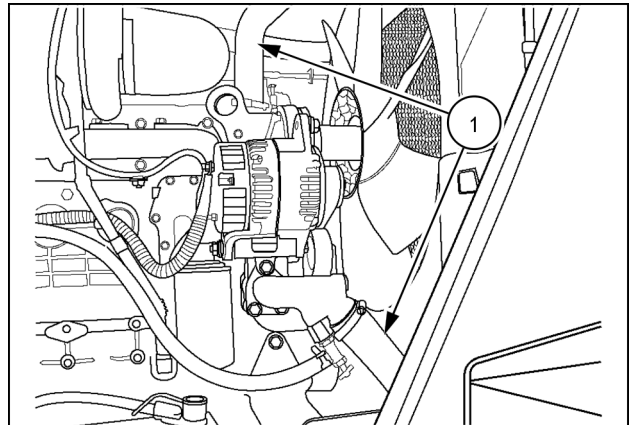
86070789 5

8. Attach steering yoke (1) to splined shaft (2). Tighten clamp bolts (3).



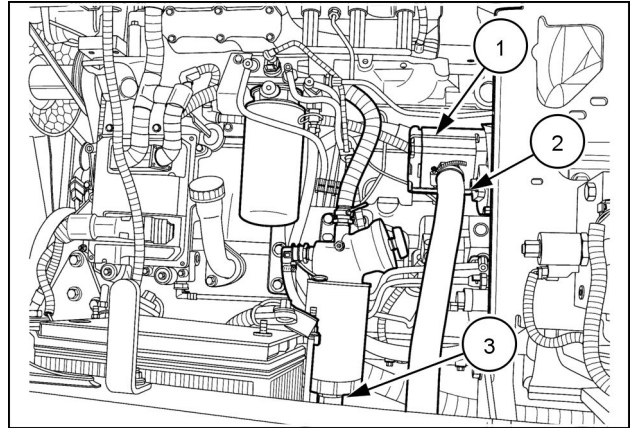
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9. Connect and tighten both upper and lower radiator hoses (1).



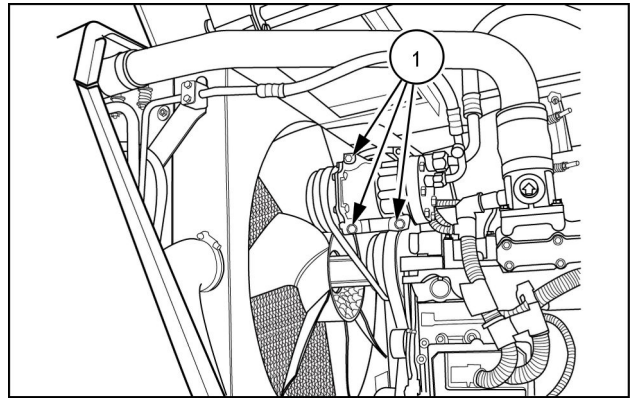
76077320 7

10. If equipped with optional hydraulic pump (1) install two **3/8 in. x 1-1/2 in.** socket head bolts and lock washers (2) that secure pump.
11. Connect wire harness to fuel water switch (3).



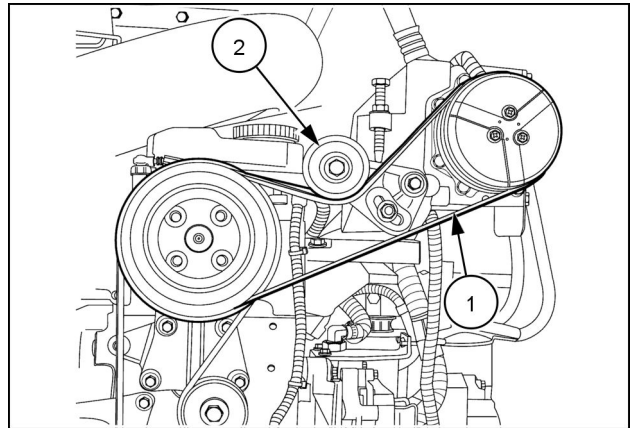
86070781 8

12. Install and tighten **5/16 in. x 4 in.** bolts (1) through the base of A/C compressor.



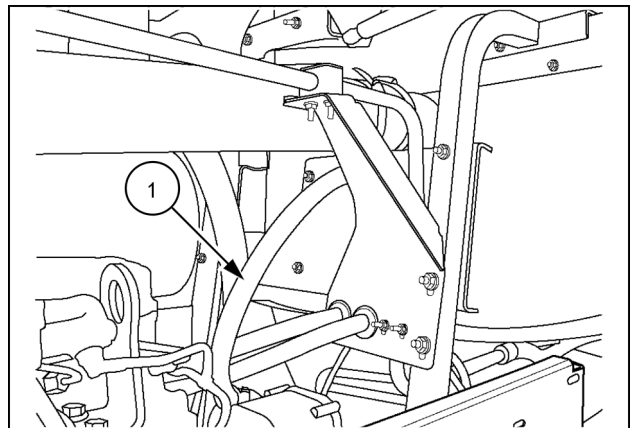
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13. Install and adjust A/C compressor drive belt (1) by adjusting tension at tensioner (2).



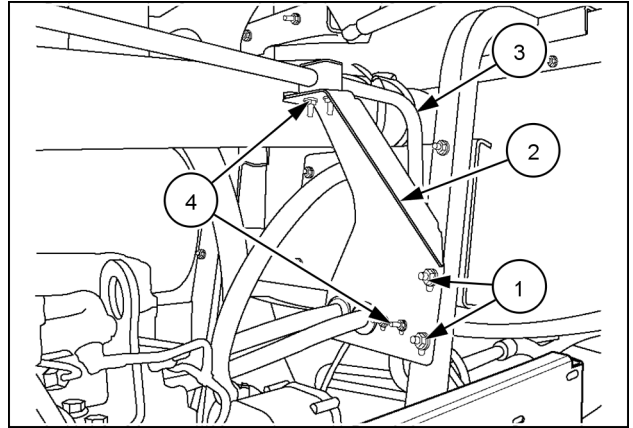
86070777 10

14. Attach air hose (1) that leads to crankcase ventilation filters.



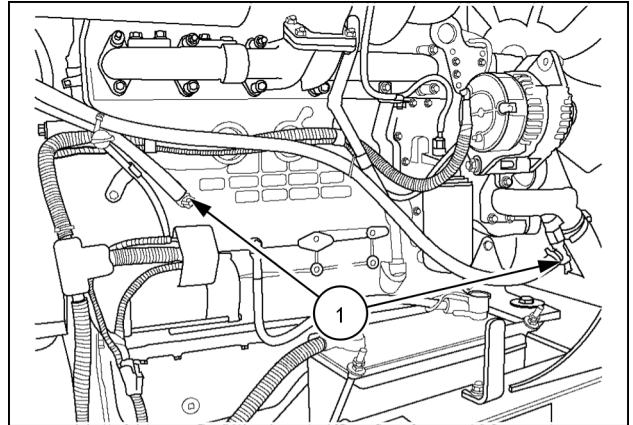
76075210 11

15. Install flange bolts, flange nuts, and lock washers **(1)** that secure bracket **(2)**. Secure A/C compressor line **(3)** with clamps **(4)**.



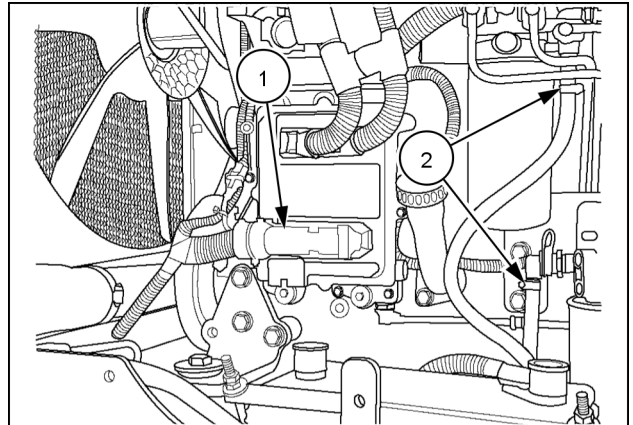
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16. Connect both heater hoses **(1)**.



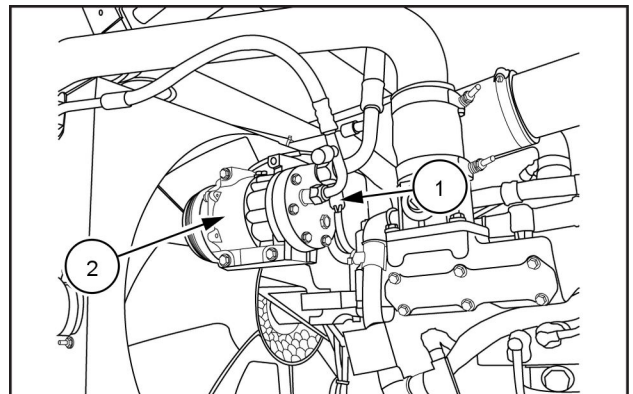
76075207 13

17. Connect ECM harness **(1)**.
18. Connect both inlet and return fuel lines **(2)**.



76075209 14

19. Connect wire harness **(1)** to A/C compressor **(2)**.



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Suggest:

If the above button click is invalid.

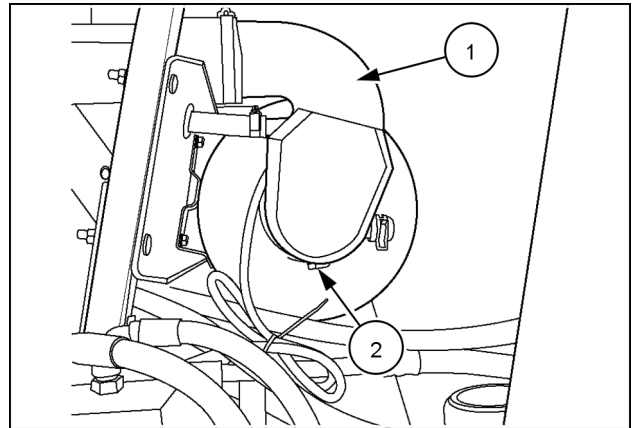
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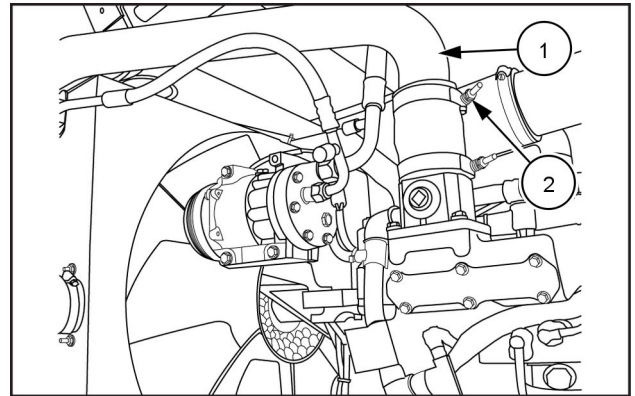
Thank you so much for reading

20. Install **127 mm (5 in)** diameter outlet tubing **(1)** from air cleaner to rear bulkhead. Secure with clamps **(2)**



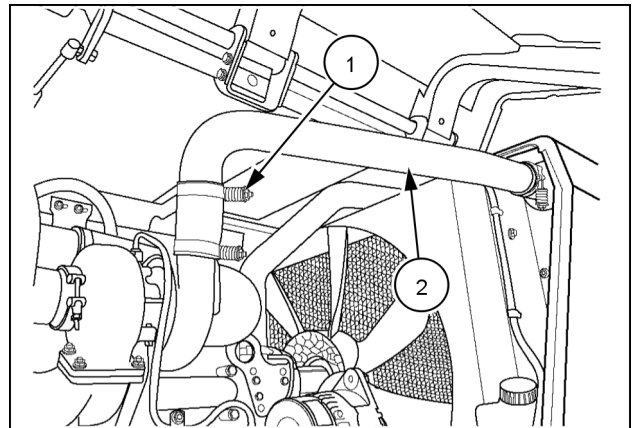
76075200 16

21. Install tubing **(1)** from intercooler to intake manifold. Tighten spring clamps **(2)**.



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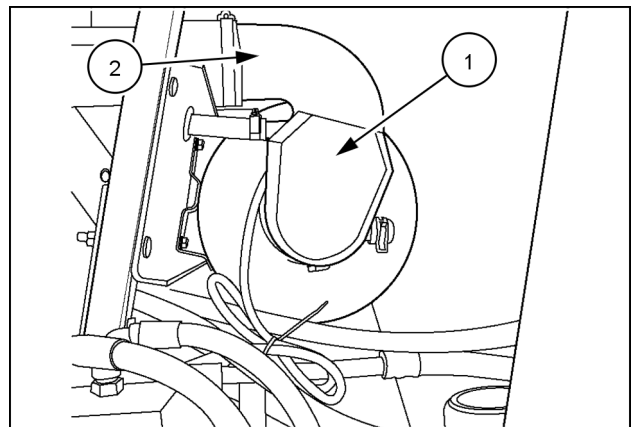
22. Install tubing **(1)** from turbo to intercooler. Tighten spring clamps **(2)**.



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23. Connect restriction indicator switch **(1)**.

NOTE: Restriction switch is located behind outlet tube **(2)**.



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