

SERVICE MANUAL

L218 / L220

Tier 4B (final)

200 Series Skid Steer Loader

L218 PIN NDM449275 and above; L220 PIN NDM456673 and above

Part number 47851949

English

May 2015

Replaces part number 47712047



Link Product / Engine

Product	Market Product	Engine
L218 TIER 4B Final [NDM449275 -]	North America	N4LDI-TA-45SL
L220 TIER 4B Final [NDM456673 -]	North America	N4LDI-TA-50SL

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INTRODUCTION

Foreword - Important notice regarding equipment servicing

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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 NEW HOLLAND CONSTRUCTION Sales and Service Networks.

Safety rules

L218	
L220	


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 - Personal safety

L218	
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Carefully study these precautions, and those included in the external attachment operators manual, and insist that they be followed by those working with and for you.

1. Thoroughly read and understand this manual and the attachment Operator's Manual before operating this or any other equipment.
2. Be sure all people and pets are clear of the machine before starting. Sound the horn, if equipped, three times before starting engine.
3. Only the operator should be on the machine when in operation. Never allow anyone to climb on to the machine while it is in motion. If the machine is equipped with an Instructors Seat, this must only be used for training purposes. Passengers must not be allowed to use the Instructors Seat.
4. Keep all shields in place. Never work around the machine or any of the attachments while wearing loose clothing that might catch on moving parts.
5. Observe the following precautions whenever lubricating the machine or making adjustments.
 - Disengage all clutching levers or switches.
 - Lower the attachment, if equipped, to the ground or raise the attachment completely and engage the cylinder safety locks. Completing these actions will prevent the attachment from lowering unexpectedly.
 - Engage the parking brake.
 - Shut off the engine and remove the key.
 - Wait for all machine movement to stop before leaving the operators platform.
6. Always keep the machine in gear while travelling downhill.
7. The machine should always be equipped with sufficient front or rear axle weight for safe operation.
8. Under some field conditions, more weight may be required at the front or rear axle for adequate stability. This is especially important when operating in hilly conditions or/when using heavy attachments.
9. Always lower the attachment, shut off the engine, set the parking brake, engage the transmission gears, remove the key and wait for all machine movement to stop before leaving the operators platform.
10. If the attachment or machine should become obstructed or plugged; set the parking brake, shut off the engine and remove the key, engage the transmission gears, wait for all machine or attachment motion to come to a stop, before leaving the operators platform to removing the obstruction or plug.
11. Never disconnect or make any adjustments to the hydraulic system unless the machine and/or the attachment is lowered to the ground or the safety lock(s) is in the engaged position.
12. Use of the flashing lights is highly recommended when operating on a public road.
13. When transporting on a road or highway, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local government regulations. Various safety lights and devices are available from your NEW HOLLAND CONSTRUCTION dealer.
14. Practice safety 365 days a year.
15. Keep all your equipment in safe operating condition.
16. Keep all guards and safety devices in place.
17. Always set the parking brake, shut off the engine and remove the key, engage the transmission gears, wait for all machine or attachment motion to come to a stop, before leaving the operators platform to service the machine and attachment.
18. Remember: A careful operator is the best insurance against an accident.
19. Extreme care should be taken in keeping hands and clothing away from moving parts.



SERVICE MANUAL

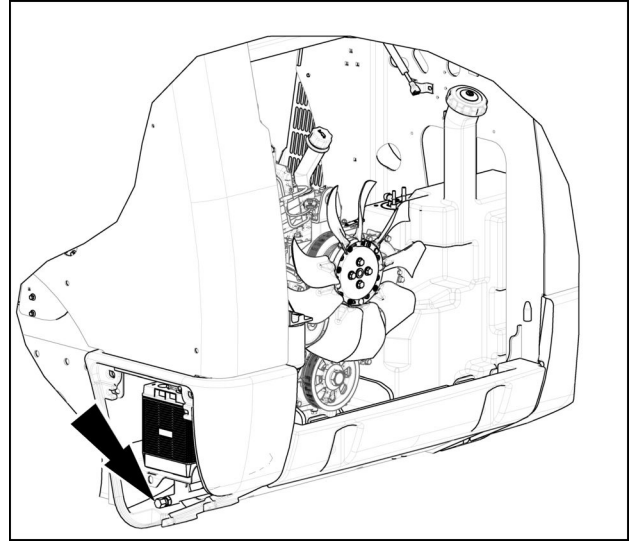
Engine

L218 TIER 4B Final [NDM449275 -]
L220 TIER 4B Final [NDM456673 -]

Engine - Drain fluid

L218 TIER 4B Final [NDM449275 -]	
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1. Remove the access cover at the rear, lower left of the machine, exposing the engine oil drain hose and remote oil filter.
2. Remove the drain plug to drain the oil.
3. When the oil has completely drained, reinstall the drain plug and torque to **68 - 82 N·m (50 - 61 lb ft)**.



63109370 1

Engine - Remove

L218 TIER 4B Final [NDM449275 -]	NA
L220 TIER 4B Final [NDM456673 -]	NA

⚠ WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.

1. Disengage all drives.
2. Engage parking brake.
3. Lower all attachments to the ground, or raise and engage all safety locks.
4. Shut off engine.
5. Remove key from key switch.
6. Switch off battery key, if installed.
7. Wait for all machine movement to stop.

Failure to comply could result in death or serious injury.

W0047A

⚠ WARNING

Fire hazard!

When handling diesel fuel, observe the following precautions:

1. Do not smoke.
2. Never fill the tank when the engine is running.
3. Wipe up spilled fuel immediately.

Failure to comply could result in death or serious injury.

W0099A

⚠ DANGER

Heavy objects!

Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.

Failure to comply will result in death or serious injury.

D0076A

Prior operation:

Tilt the Roll Over Protection Structure (ROPS).

Prior operation:

Disconnect the battery. See **Battery - Disconnect (55.302)**.

Prior operation:

Drain the coolant. See

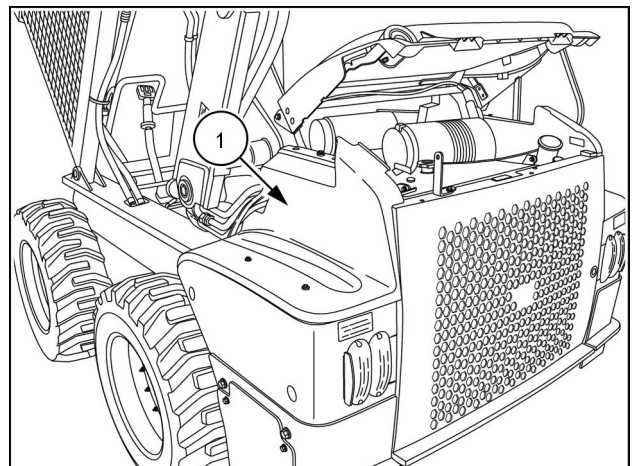
Prior operation:

Drain the oil.

Prior operation:

Recover the A/C refrigerant (if applicable). See **Air conditioning - Discharging (50.200)**

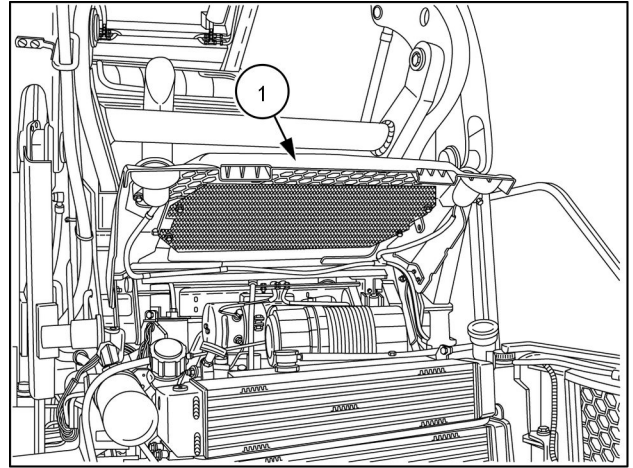
1. Remove the external, rear trim panels (1).



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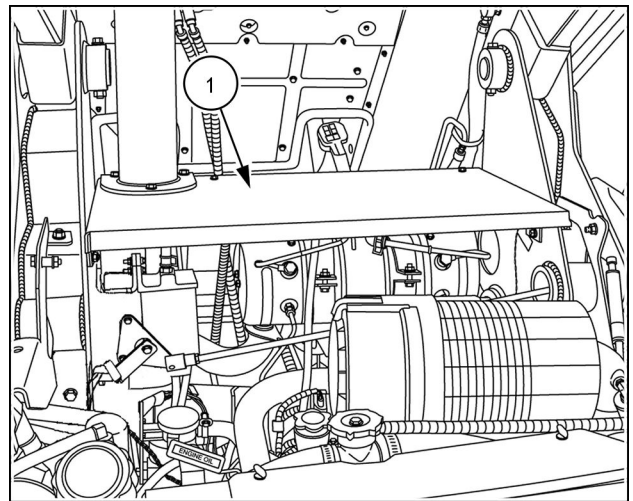
Engine - Engine and crankcase

2. Remove the engine hood strut from the side by gently prying the retaining clip just enough to release the strut.
3. Disconnect the A/C lines (if applicable).
4. Disconnect the lights and disconnect the harness from the hood.
5. Remove the engine hood mounting hardware from left-hand and right-hand side of the engine hood.
6. Remove the engine hood (1).



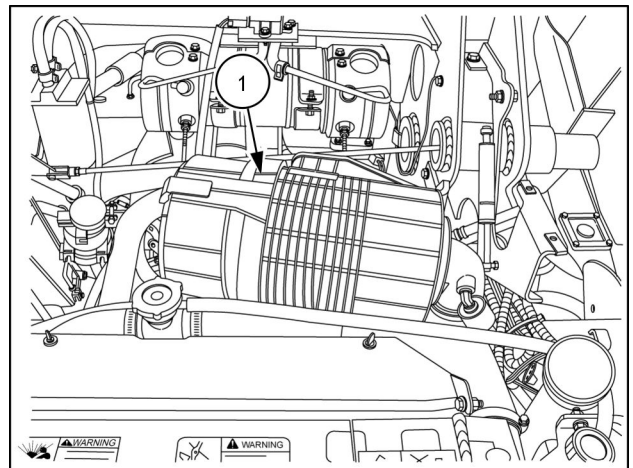
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7. Remove the engine cover (1).



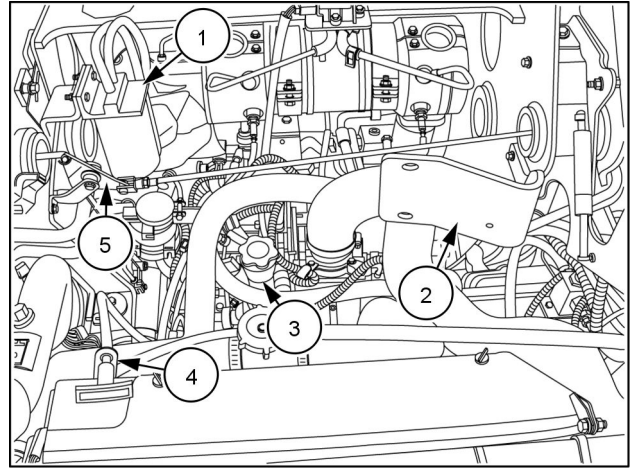
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8. Remove the air filter assembly (1) and hoses.



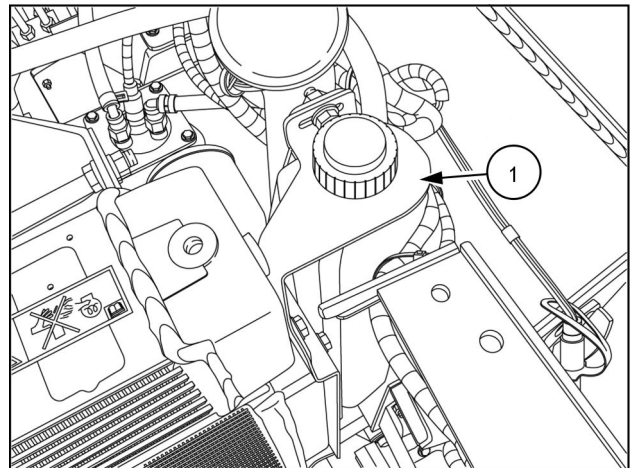
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9. Remove the fuel filter assembly **(1)** and plug the hoses.
10. Remove the bracket **(2)** for the air filter assembly.
11. Remove the oil fill tube **(3)**.
12. Disconnect the mount **(4)** for the oil dip stick from the cooling package bracket.
13. For vertical lift machines, remove the cotter pin on the lock pin link for the left boom. Unbolt the boom lock bellcrank **(5)** and place it away from the engine area.



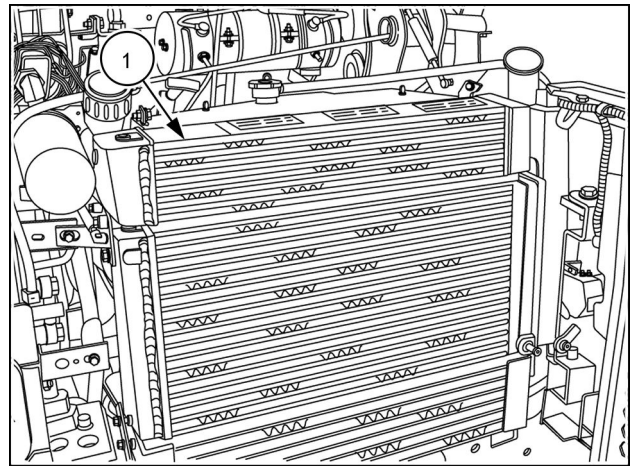
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14. Remove the bracket **(1)** for the coolant overflow bottle.



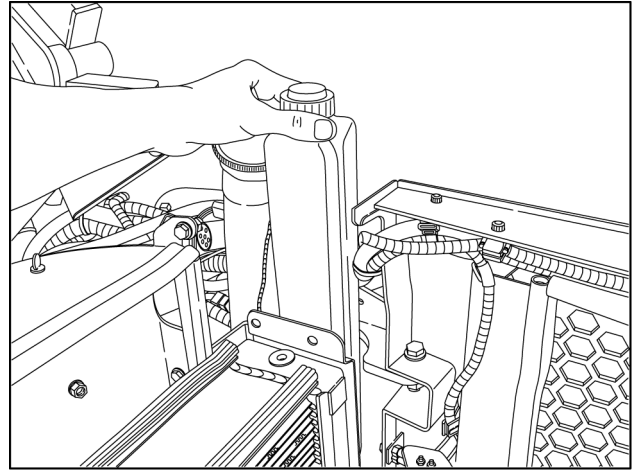
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15. Remove the air cooler **(1)**.



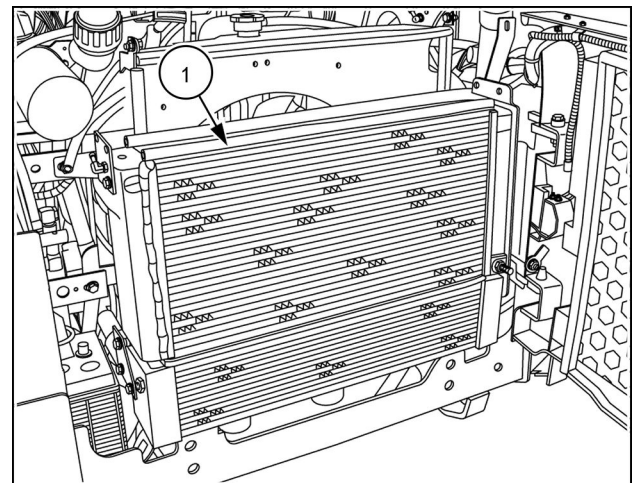
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16. Remove the coolant overflow bottle.



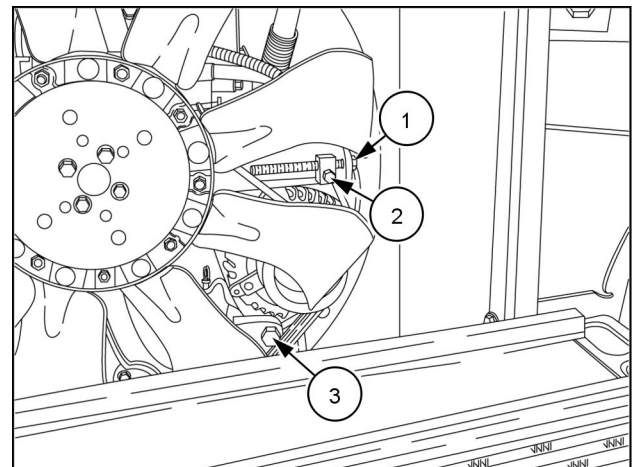
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17. Remove the radiator (1).



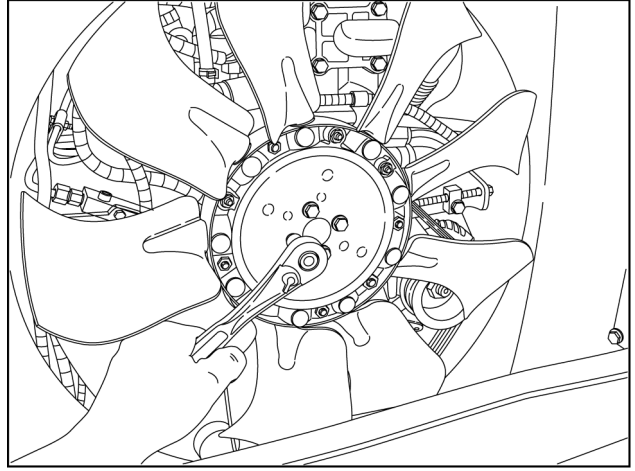
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18. Loosen the alternator mounting bolt (3) and the mounting bolt (2) for the adjustment bolt (1).
19. Remove the tension from the belt by turning the adjustment screw (1) on the alternator.



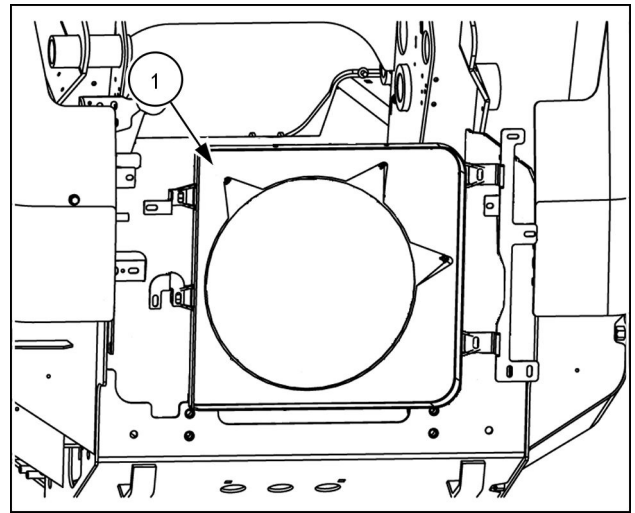
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20. Remove the engine fan assembly.



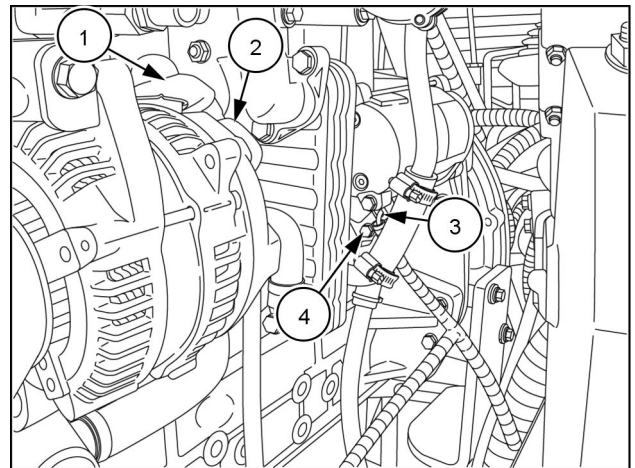
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21. Remove the cooling package bracket assembly (1).



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22. Disconnect the positive battery cable (1) on the alternator.
23. Disconnect the electrical connector (2) on the alternator.
24. Disconnect the starter ignition wire (3).
25. Disconnect the positive battery cable (4) on the starter.



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26. If applicable, disconnect the supply and return hoses for the heater core.

NOTE: The supply hose is located on the left-hand side of the engine and the return hose is located on the right-hand side of the engine.



Suggest:

If the above button click is invalid.

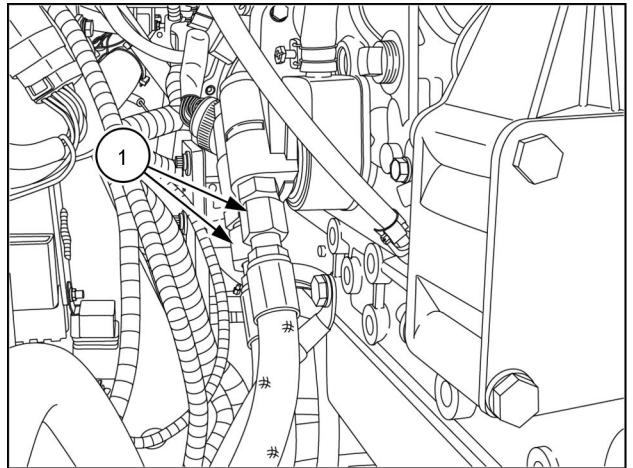
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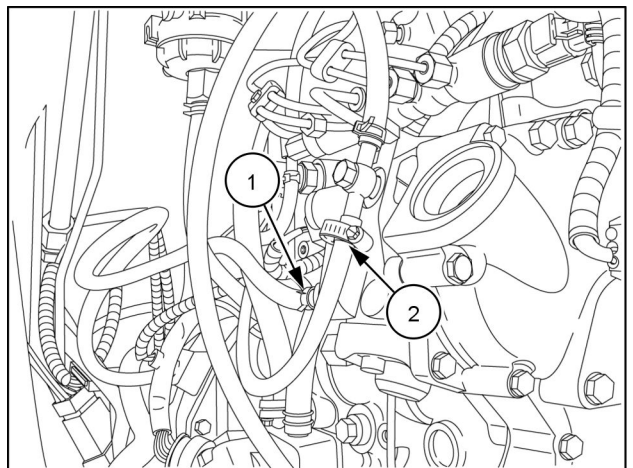
Thank you so much for reading

27. Disconnect and cap the lines **(1)** for the remote, oil filter housing.



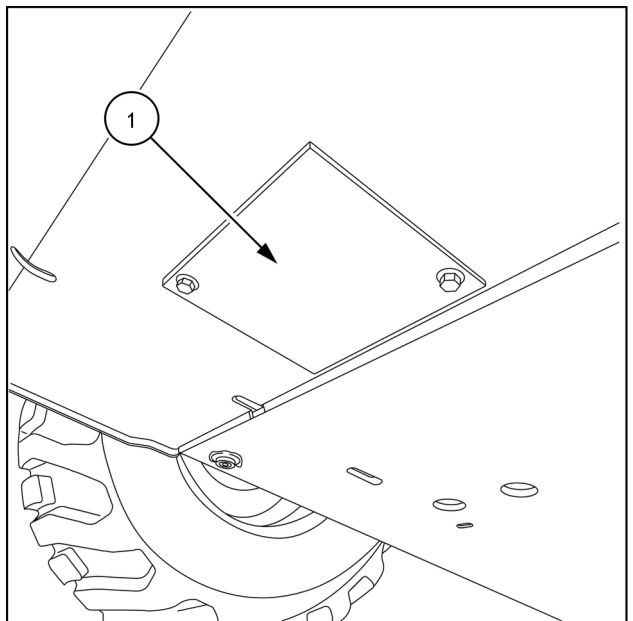
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28. Disconnect and cap the fuel feed line **(1)** and the fuel return line **(2)**.



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29. Remove the access plate **(1)** for the engine oil pan.



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