

FARMALL® 50A
FARMALL® 60A
FARMALL® 70A
Tier 4B (final)
Tractor

SERVICE MANUAL

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SERVICE MANUAL

Farmall® 50A

Farmall® 60A

Farmall® 70A

Link Product / Engine

Product	Market Product	Engine
Farmall® 50A Compact tractor, 2WD, 50 HP, TIER 4B (FINAL)	North America	R 753 IE4
Farmall® 50A Compact tractor, 4WD, 50 HP, TIER 4B (FINAL)	North America	R 753 IE4
Farmall® 60A Compact tractor, 4WD, 60 HP, TIER 4B (FINAL)	North America	R 753 IE4
Farmall® 60A Compact tractor, 2WD, 60 HP, TIER 4B (FINAL)	North America	R 753 IE4
Farmall® 70A Compact tractor, 4WD, 70 HP, TIER 4B (FINAL)	North America	R 753 IE4
Farmall® 70A Compact tractor, 2WD, 70 HP, TIER 4B (FINAL)	North America	R 753 IE4

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INTRODUCTION

Foreword

This repair manual provides the technical information needed to properly service the model tractors. Use this manual in conjunction with the operator's manual for complete operation, adjustment, and maintenance information

On CASE IH equipment, left and right are determined by standing behind the unit, looking in the direction of travel.

Foreword Ecology and the environment

Soil, air, and water are vital factors of agriculture and life in general. When legislation does not yet rule the treatment of some of the substances which are required by advanced technology, common sense should govern the use and disposal of products of a chemical and petrochemical nature.

NOTICE: *The following are recommendations which may be of assistance:*

- Become acquainted with and ensure that you understand the relative legislation applicable to your country.
- Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, antifreeze, cleaning agents, etc., with regard to their effect on man and nature and how to safely store, use and dispose of these substances.
- Agricultural consultants will, in many cases, be able to help you as well.

Helpful hints

- Avoid filling tanks using cans or inappropriate pressurized fuel delivery systems which may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of them contain substances which may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when draining off used engine coolant mixtures, engine, gearbox and hydraulic oils, brake fluids, etc. Do not mix drained brake fluids or fuels with lubricants. Store them safely until they can be disposed of in a proper way to comply with local legislation and available resources.
- Modern coolant mixtures, i.e. antifreeze and other additives, should be replaced every two years. They should not be allowed to get into the soil but should be collected and disposed of properly.
- Do not open the air-conditioning system yourself. It contains gases which should not be released into the atmosphere. Your CASE IH dealer or air conditioning specialist has a special extractor for this purpose and will have to recharge the system properly.
- Repair any leaks or defects in the engine cooling or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.
- Protect hoses during welding as penetrating weld splatter may burn a hole or weaken them, allowing the loss of oils, coolant, etc.

Safety rules

PRECAUTIONARY STATEMENTS

Personal Safety

Throughout this manual and on machine signs, you will find precautionary statements ("DANGER", "WARNING", and "CAUTION") followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.

Machine Safety

The precautionary statement ("IMPORTANT") is followed by specific instructions. This statement is intended for machine safety.

NOTICE: The word "IMPORTANT" is used to inform the reader of something they need to know to prevent minor machine damage if a certain procedure is not followed.

Information

NOTE: Instructions used to identify and present supplementary information.

Legal obligations

This machine may be equipped with special guarding or other devices in compliance with local legislation. Some of these require active use by the operator. Therefore, check local legislation on the usage of this machine.

Accident prevention

Most accidents or injuries that occur in workshops are the result of a non compliance to simple and fundamental safety regulations. In most case, accidents can be avoided by foreseeing possible causes and consequently acting with the necessary caution and care.

Accidents may occur with all types of machines, regardless of how well the machine in question was designed and built.

A careful and informed service technician is the best guarantee against accidents.

Decisive awareness of the most basic safety rule is normally sufficient to avoid many serious accident.

Safety requirements for fluid power systems and components - Hydraulics (European standard PR EM 982)

WARNING

Avoid injury!

Before you start any work on the unit:

- Park the unit on a hard, level surface.
- Apply the parking brake.
- Completely lower the attachments.
- Relieve all the hydraulic system pressure.
- Shut down the engine.
- Remove the ignition key.
- Secure the unit with wheel chocks.
- Turn the battery isolator switch to the OFF position.

Failure to comply could result in death or serious injury.

W1371A

Flexible hose assemblies must not be constructed from hoses which have been previously used as part of a hose assembly.

Do not weld hydraulic piping.

When flexible hoses or piping are damaged, replace them immediately.

It is forbidden to modify a hydraulic accumulator by machining, welding or any other means.

Before removing hydraulic accumulators for servicing, the liquid pressure in the accumulators must be reduced to zero.

Pressure check on hydraulic accumulators shall be carried out by method recommended by the accumulator manufacturer.

Care must be taken not to exceed the maximum allowable pressure of the accumulator. After any check or adjustment there must be no leakage of gas.

Safety rules

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before operating this tractor. Equipment should be operated only by those who are responsible and instructed to do so.

The tractor

1. Read the Operator's Manual carefully before using the tractor. Lack of operating knowledge can lead to accidents.
2. Use an approved roll bar and seat belt for safe operation. Overturning a tractor without a roll bar can result in death or injury. If your tractor is not equipped with a roll bar and seat belt, see your CASE IH Dealer.
3. Always use the seat belt. The only instance when the seat belt should not be used is if the roll bar has been removed from the tractor or folding ROPS is in down position.
4. If a front end loader is to be installed, always use a FOPS (Falling Object Protective Structure) canopy to avoid injury from falling objects.
5. Use the handrails and step plates when getting on and off the tractor to prevent falls. Keep steps and platform cleared of mud and debris.
6. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.
7. Keep all safety decals clean of dirt and grime, and replace all missing, illegible, or damaged safety decals. See the list of decals in the Decal section of this manual.

Servicing the tractor

1. The cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap while the system is hot. Always turn the cap slowly to the first stop and allow pressure to escape before removing the cap entirely.
2. Keep any type of open flame away from the tractor and do not smoke while refuelling. Wait for the engine to cool before refueling.
3. Keep the tractor and equipment, particularly brakes and steering, maintained in a reliable and satisfactory condition to ensure your safety and comply with legal requirements.
4. Keep open flame or cold weather starting aids away from the battery to prevent fires or explosions. Use jumper cables according to instructions to prevent sparks which could cause explosion.
5. Stop the engine before performing any service on the tractor.
6. Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury. If fluid is injected into the skin, obtain medical attention immediately or gangrene may result.
 - Do not use your hand to check for leaks.
 - Use a piece of cardboard or paper to search for leaks.
 - Stop the engine and relieve pressure before connecting or disconnecting lines.
 - Tighten all connections before starting the engine or pressurizing lines.
7. Do not modify or permit anyone else to modify or alter this tractor or any of its components or functions without first consulting a CASE IH Dealer.
8. The fuel oil in the injection system is under high pressure and can penetrate the skin. Unqualified persons should not remove or attempt to adjust a pump, injector, nozzle, or any other part of the fuel injection system. Failure to follow these instructions can result in serious injury.
9. Continuous long-term contact with used engine oil may cause skin cancer. Avoid prolonged contact with used engine oil. Wash skin promptly with soap and water.

10. Some components of your tractor, such as gaskets and friction surfaces (brake linings, clutch linings, etc.) may contain asbestos. Breathing asbestos dust is dangerous to your health. You are advised to have any maintenance or repair on such components carried out by an authorized CASE IH Dealer. However, if service operations are to be undertaken on parts that contain asbestos, the essential precautions listed below must be observed:
 - Work out of doors or in a well ventilated area.
 - Dust found on the tractor or produced during work on the tractor should be removed by extraction, not by blowing.
 - Dust waste should be dampened, placed in a sealed container, and marked to ensure safe disposal.
 - If any cutting, drilling, etc. is attempted on materials containing asbestos, the item should be dampened and only hand tools or low speed power tools used.

Operating the tractor

1. Before starting the tractor, apply the parking brake, place the PTO lever in the 'OFF' position, the lift control lever in the down position, the remote control valve levers in the neutral position, and the transmission in neutral.
2. Always sit in the tractor seat when starting the engine or operating controls. Do not start the engine or operate controls while standing beside the tractor.
3. Do not bypass the neutral start switches. Consult your CASE IH Dealer if your neutral start controls malfunction. Use jumper cables only in the recommended manner. Improper use can result in tractor runaway.
4. Avoid accidental contact with the gear shift lever while the engine is running, as this can cause unexpected tractor movement.
5. Before getting off the tractor, disengage the PTO, turn the engine off, and apply the parking brake. Never get off the tractor while it is in motion.
6. Do not park the tractor on a steep incline.
7. Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death or illness.
8. If the power steering or engine ceases operating, stop the tractor immediately.
9. Pull only from the drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
10. If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.
11. Always set the hydraulic selector lever in position control when attaching or transporting equipment. Ensure hydraulic couplers are properly mounted and will disconnect safely in case of accidental detachment of implement.
12. Do not leave equipment in the raised position.
13. Use the flasher/turn signal lights and Slow Moving Vehicle (SMV) signs when traveling on public roads both day and night (unless prohibited by law).
14. When operating at night, adjust lights to prevent blinding oncoming drivers.

Driving the tractor

1. Watch where you are going, especially at row ends, on roads, around trees and low hanging obstacles.
2. To avoid upsets, drive the tractor with care and at a safe speed. Use extra caution when operating over rough ground, when crossing ditches or slopes, and when turning corners.
3. To provide two-wheel braking, lock tractor brake pedals together when transporting on roads.
4. Do not coast or free wheel down hills. Use the same gear when going downhill as is used when going uphill.
5. Any towed vehicle with a total weight exceeding that of the towing tractor should be equipped with brakes for safe operation.
6. If the tractor becomes stuck or the tires become frozen to the ground, back up the tractor to prevent upset.
7. Always check overhead clearance, especially when transporting the tractor.
8. When operating at night, adjust lights to prevent blinding oncoming drivers.

Operating the Power Take-Off (PTO)



SERVICE MANUAL

Engine

Farmall® 50A

Farmall® 60A

Farmall® 70A

Engine - Remove

⚠ WARNING

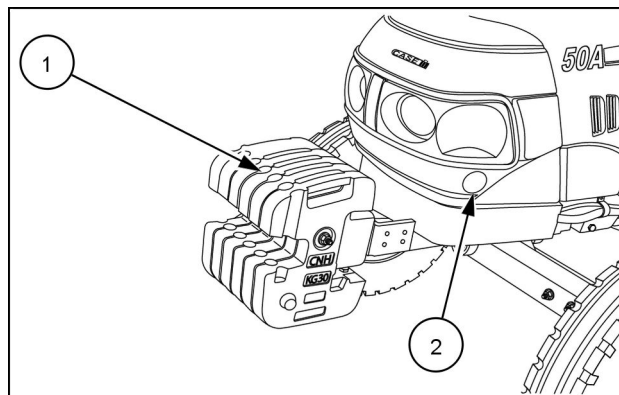
Avoid injury!

Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.

Failure to comply could result in death or serious injury.

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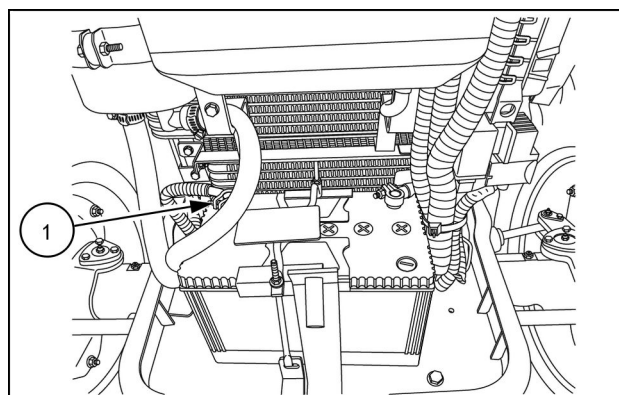
1. Remove the front weights (1).
2. Press the lock (2) and lift the hood.



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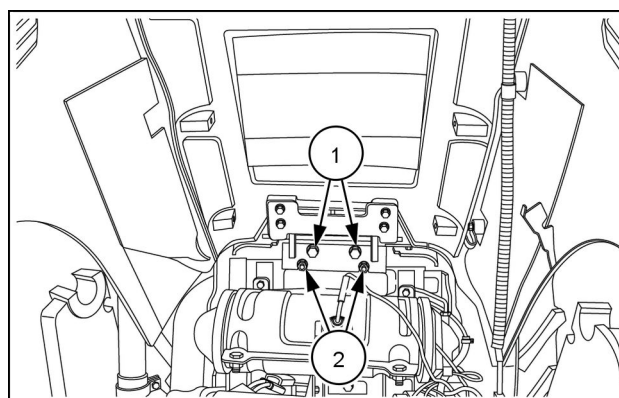
3. Disconnect the battery terminals.

NOTE: Always disconnect the negative cable (1) first.



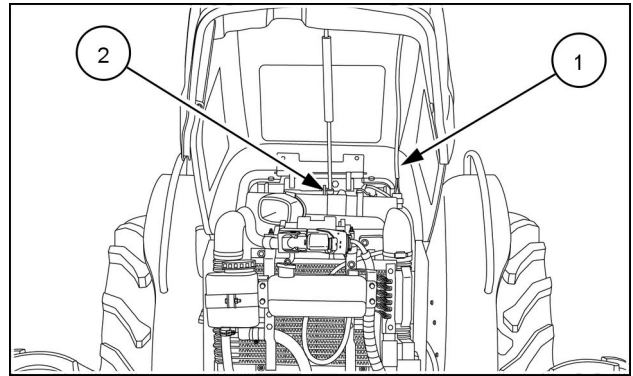
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4. Unscrew the hood mounting bracket bolts (1) and nuts (2) from engine frame.



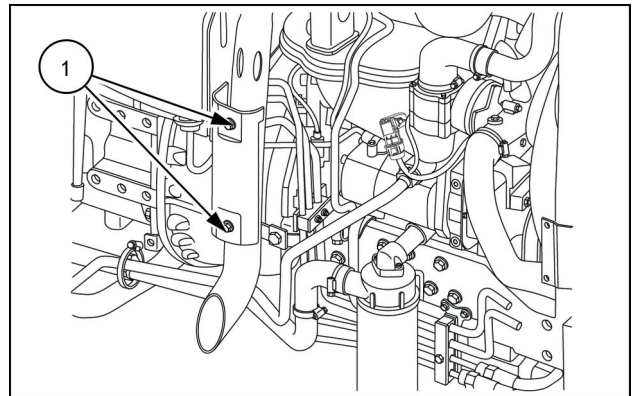
GNIL14TR00856AA 3

5. Disconnect headlight and horn harness connection **(1)**.
6. Unscrew gas strut bolt **(2)** and remove the front hood.



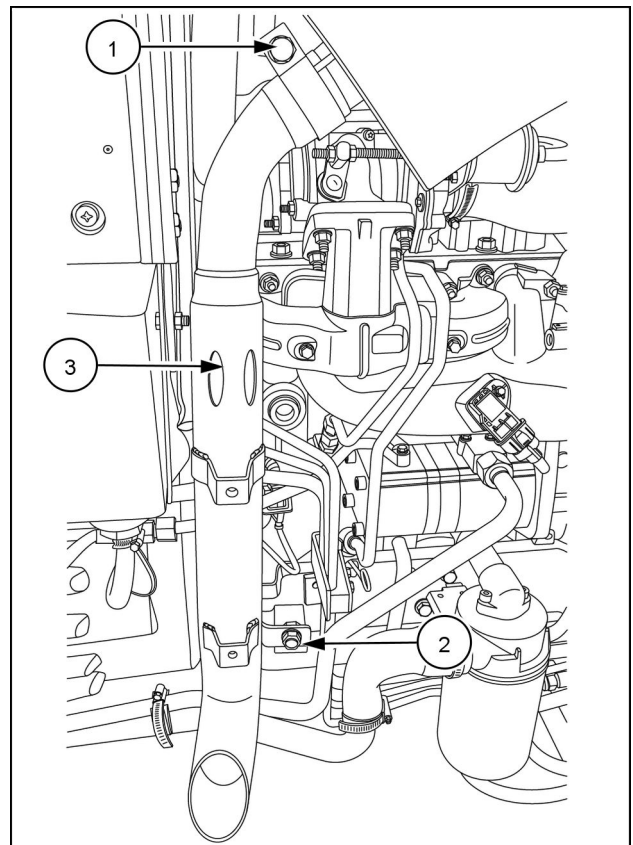
GNIL14TR00822AA 4

7. Loosen the bolts **(1)** and remove the silencer guard.



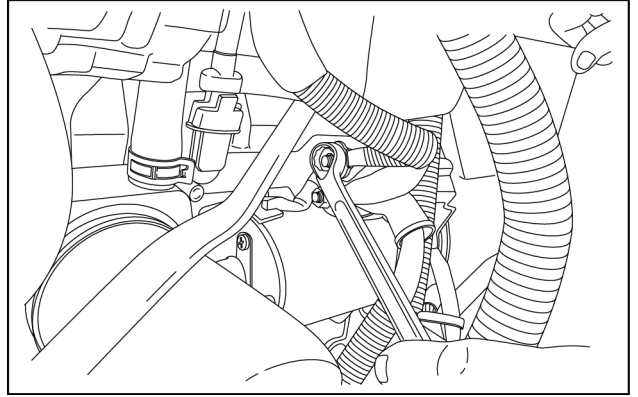
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8. Loosen the silencer mounting bolts **(1)** and **(2)**.
9. Remove the silencer **(3)**.



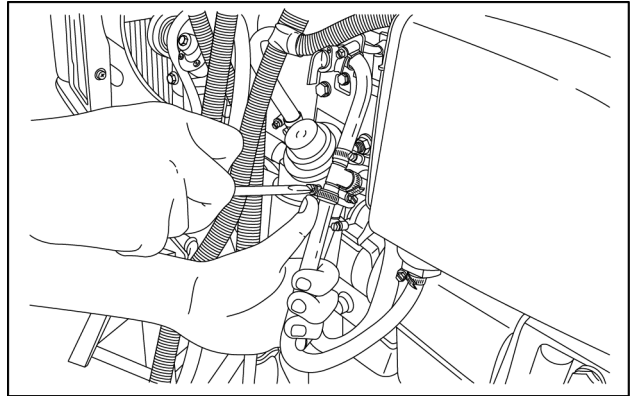
GNIL14TR00611AA 6

10. Disconnect the electric connection **(1)** to starter motor.



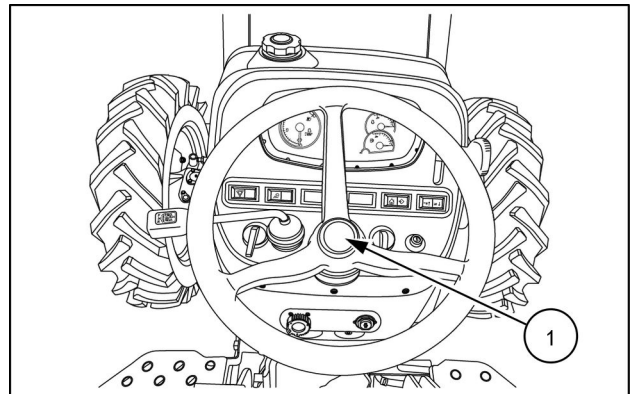
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11. Disconnect the fuel supply and return lines.



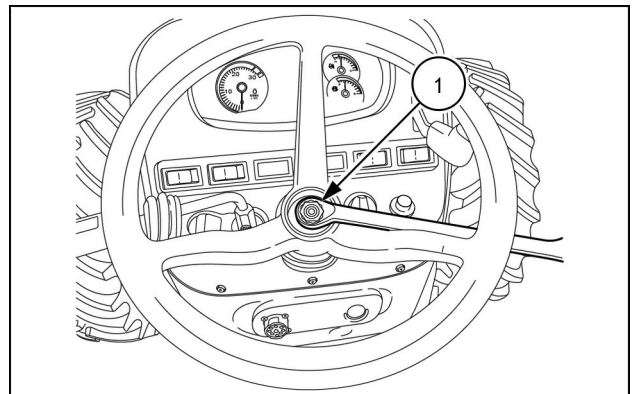
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12. Remove the steering wheel cover **(1)**.



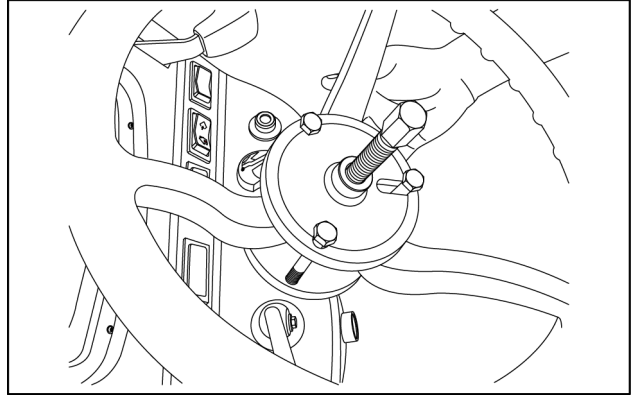
GNIL14TR00512AA 9

13. Remove the steering wheel securing nut **(1)**.



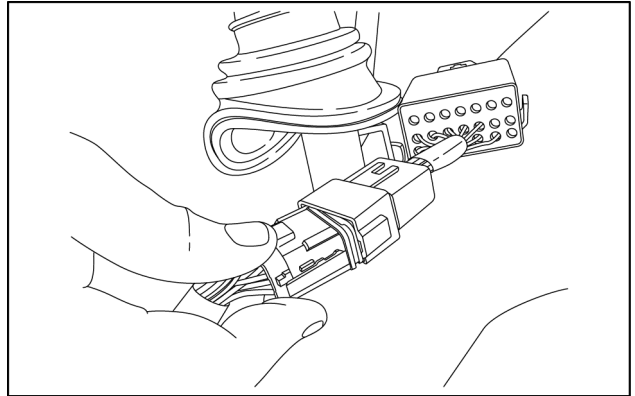
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14. Remove the steering wheel using tool number **380001672**, and **380003008**.



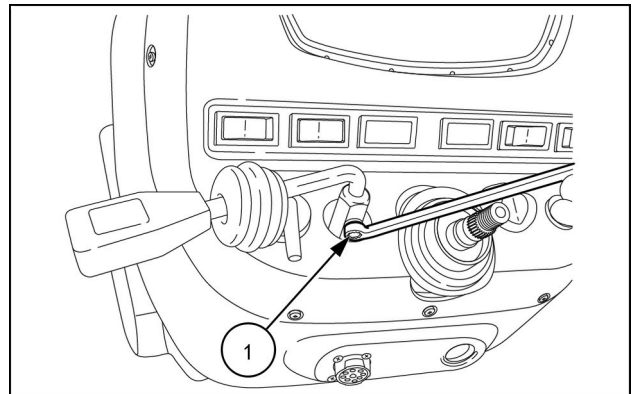
GNIL14TR00704AA 11

15. Disconnect the wiring (1) on the steering column.



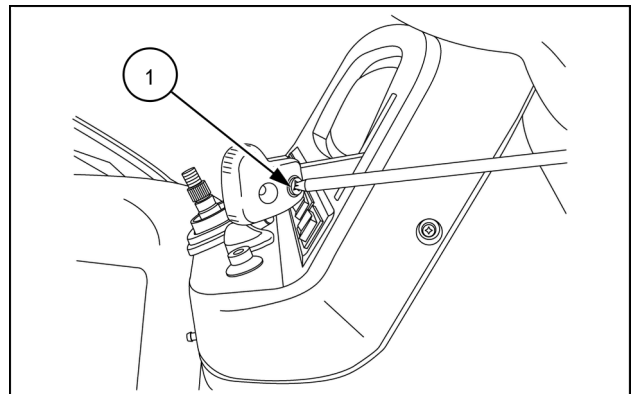
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16. Loosen the bolt (1) and remove the shuttle lever.



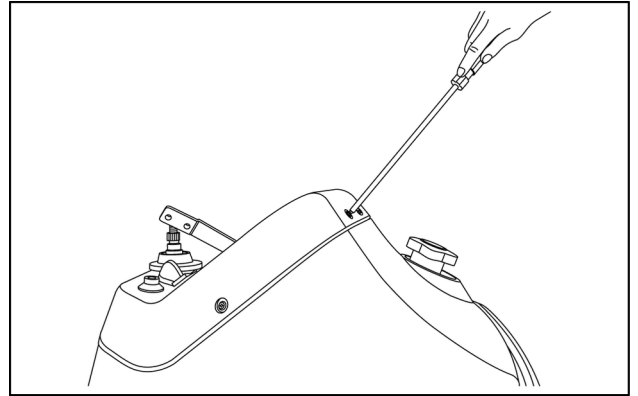
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17. Loosen the screw (1) and remove the hand throttle knob.



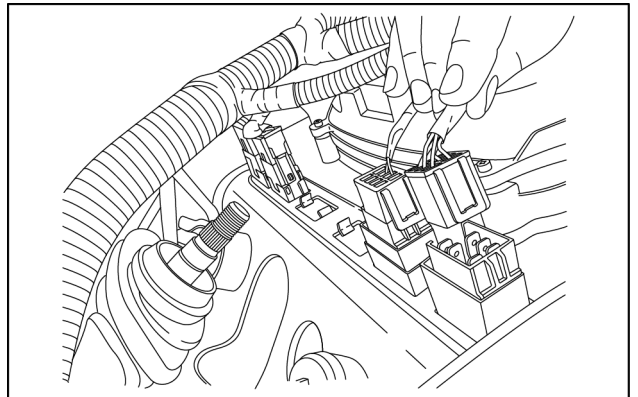
GNIL14TR00706AA 14

18. Unscrew all the screws securing instrument panel to the rear hood.



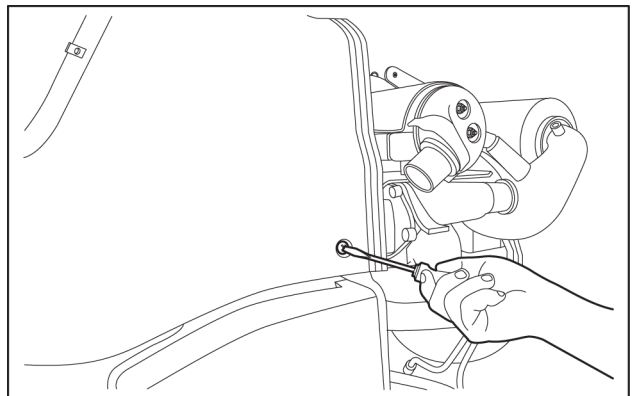
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19. Pull out the instrument panel from the rear hood.
20. Disconnect all the wirings of the instrument cluster.



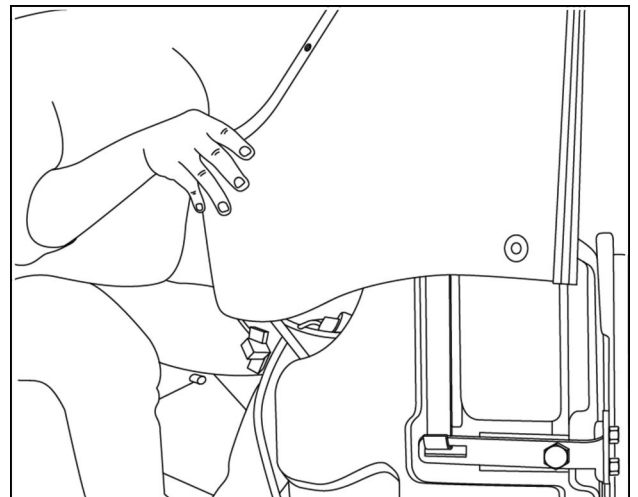
GNIL14TR00714AA 16

21. Remove pull to stop knob and then centre panel.
Unscrew all rear hood securing bolts and screws on rear hood.



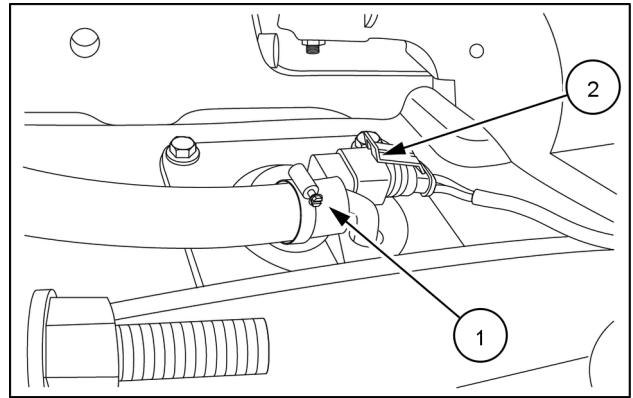
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22. Lift and remove the rear hood.



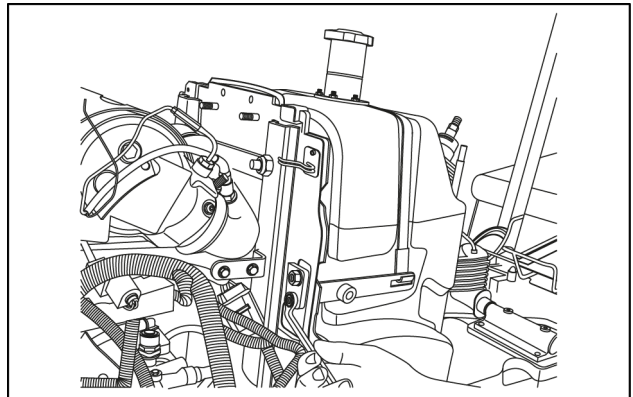
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23. Disconnect the diesel overflow pipe **(1)** on the fuel tank.
24. Disconnect the fuel sensor electric connection **(2)**.



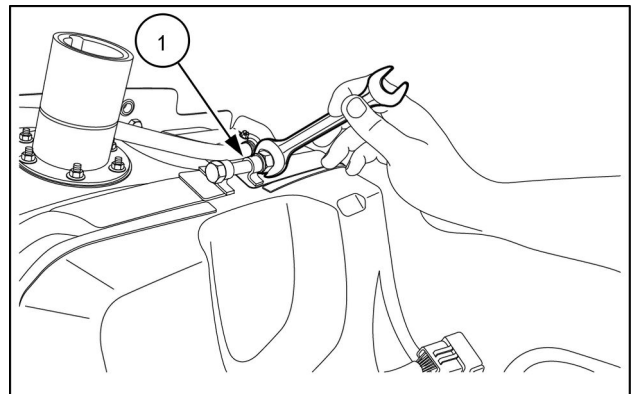
25. Loosen the bolts and remove the bracket that holds the fuel tank strap.

NOTE: It is advisable to drain diesel from fuel tank if tank is more than half filled.

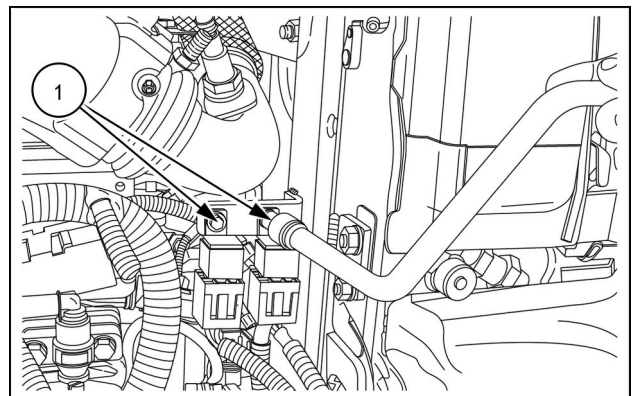


26. Loosen the bolts **(1)** and release the fuel tank strap.

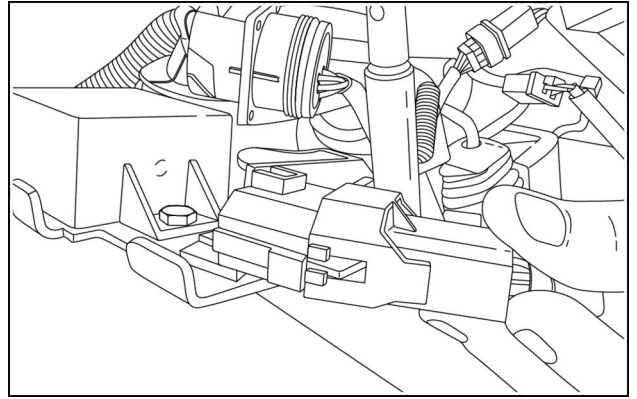
NOTE: It is advisable to drain diesel from fuel tank if tank is more than half filled.



27. Loosen the bolts **(1)** and remove the wiring couplers at the rear of fuel tank.

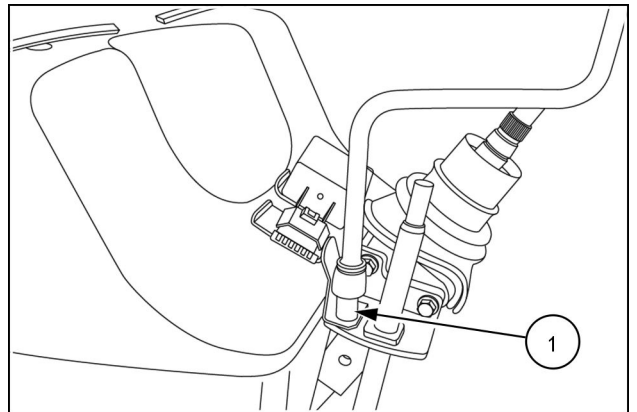


28. Disconnect the wiring from the adaptor under the rear hood.



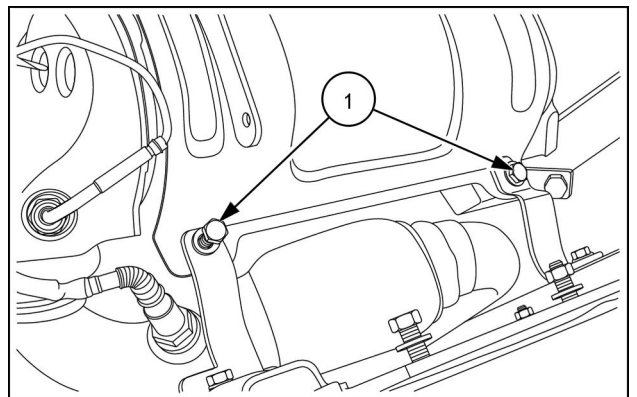
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29. Remove the bolts (1).
30. Remove the adaptor.
31. Remove the fuel tank.



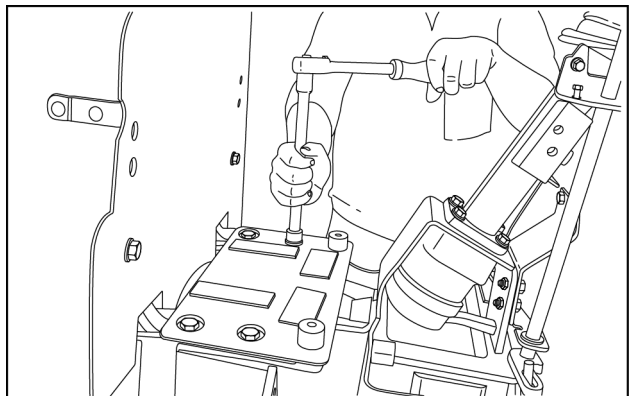
GNIL14TR00727AA 24

32. Loosen the bolts securing the SCR (Selective Catalytic Reduction) assembly to the fuel tank support plate.



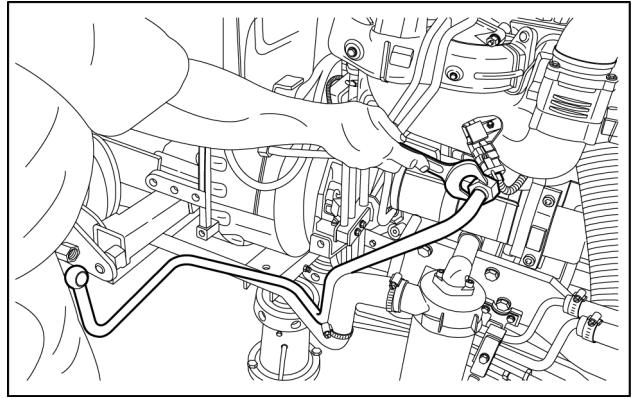
GNIL14TR00857AA 25

33. Loosen the bolts (1) securing cover of the SCR (Selective Catalytic Reduction) assembly to the fuel tank support plate.
34. Remove the fuel tank base plate.



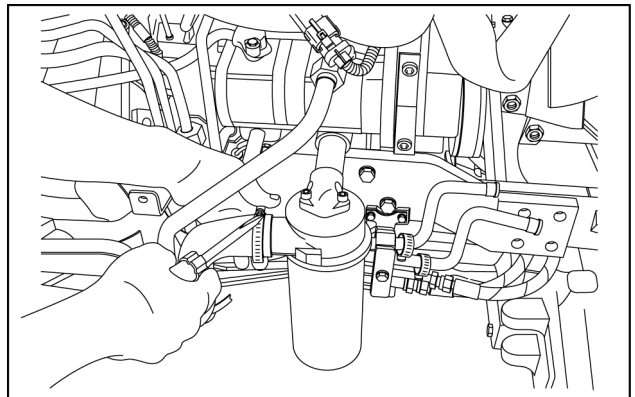
GNIL14TR00850AA 26

35. Disconnect the hydraulic line between the pump and the mid mount valve.



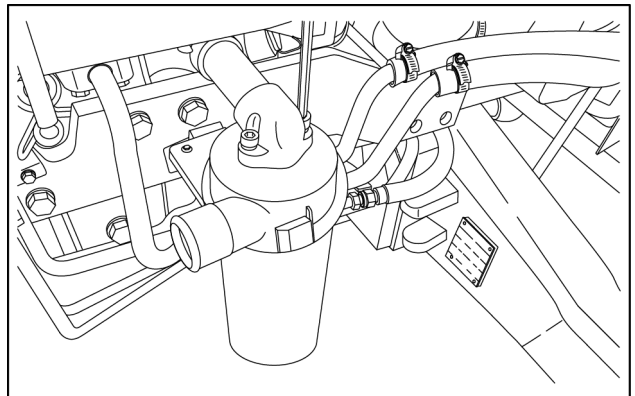
GNIL14TR00783AA 27

36. Loosen the clamp and remove the suction pipe from the hydraulic filter.



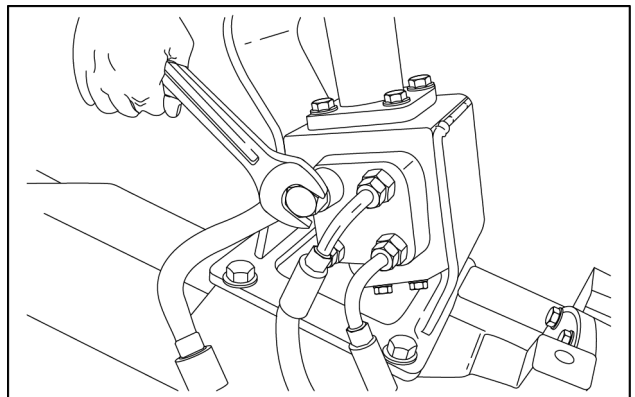
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37. Loosen the set screws and remove the hydraulic filter.



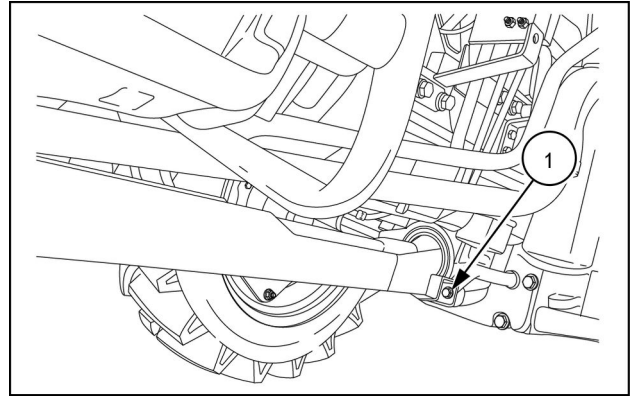
GNIL14TR00728AA 29

38. Disconnect the power steering hoses on the steering motor.



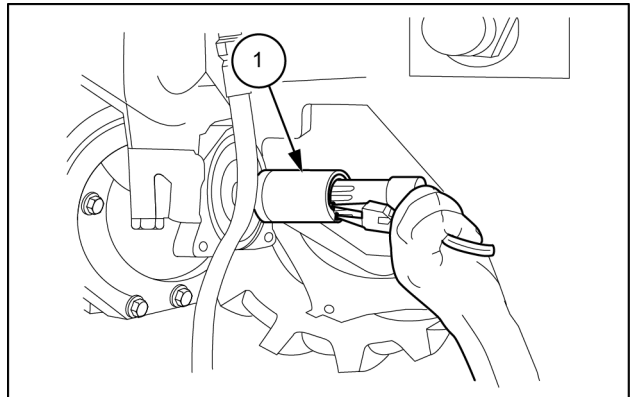
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39. Loosen the bolts **(1)** of the 4WD shaft cover.



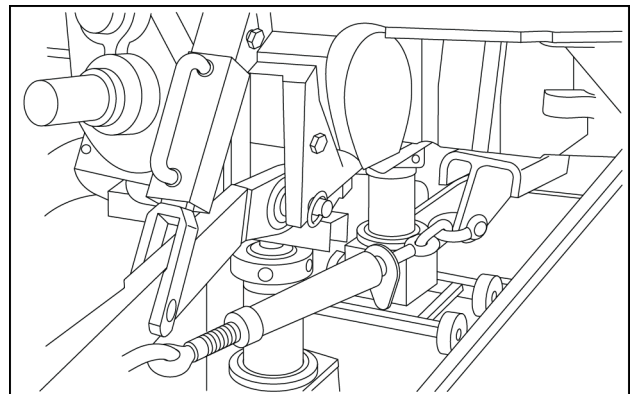
GNIL14TR00823AA 31

40. Remove the circlip and slide the coupler **(1)** backward.



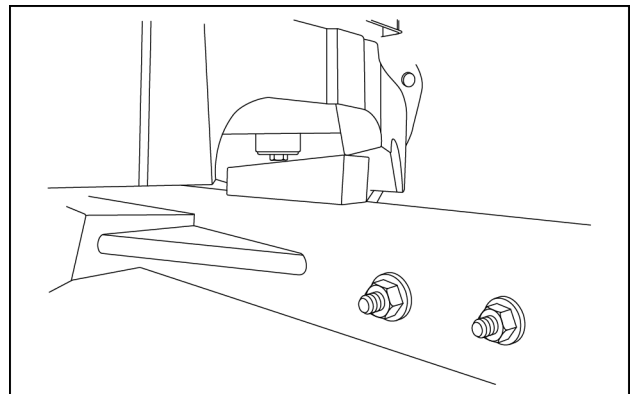
GNIL14TR04359AB 32

41. Position splitting trolley, special tool number 292320, with engine supports in position.
42. Block front wheels both at front and back using suitable wedges.



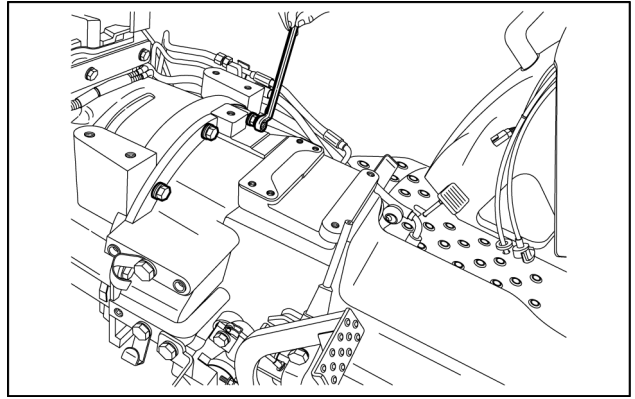
GNIL14TR04779AA 33

43. Support the engine at the back of the front axle.
44. Position wedges between axle and support to prevent articulation.



GNIL14TR04781AA 34

45. Loosen the bolts securing the engine to the centre housing.
46. Wheel the centre housing and rear wheels away from the engine.

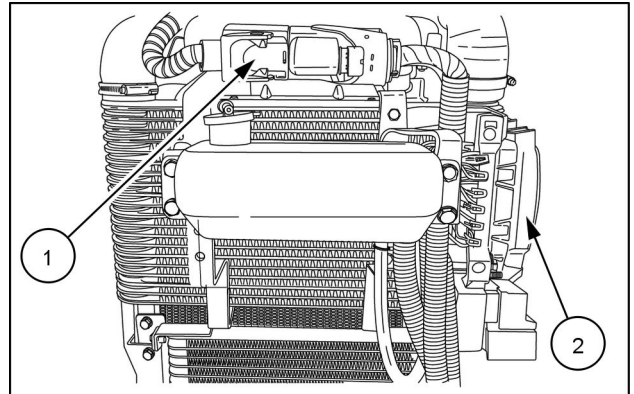


GNIL14TR00753AA 35

Separating front axle from engine

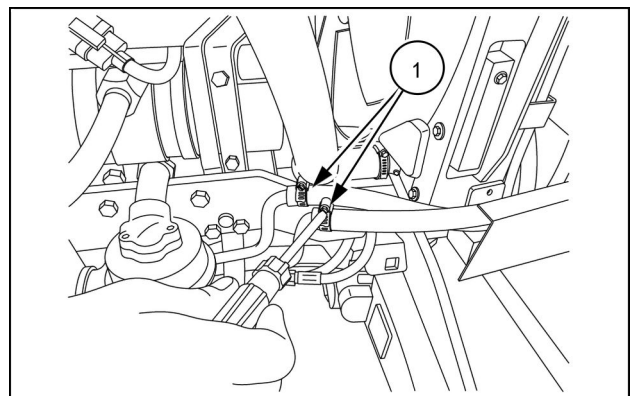
With engine previously separated from centre housing

47. Remove the electrical couplers **(1)** from Engine Control Unit (ECU) and **(2)** for rear lamps, flasher unit, fuse box etc.



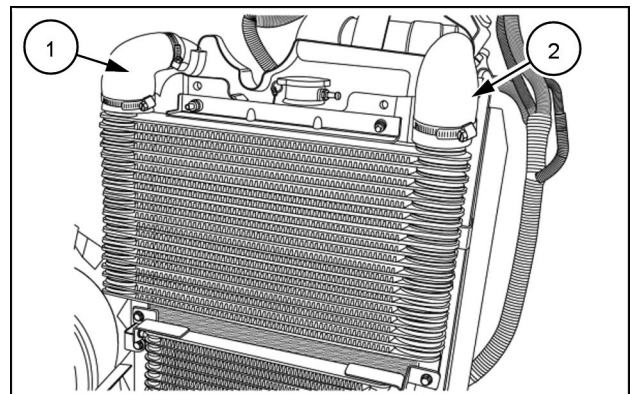
GNIL14TR00757AA 36

48. Disconnect the steering hoses **(1)**.



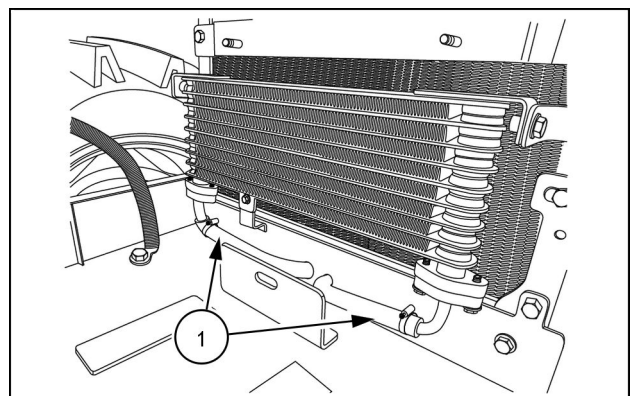
GNIL14TR00758AA 37

49. Disconnect the hoses **(1)** from the intercooler.



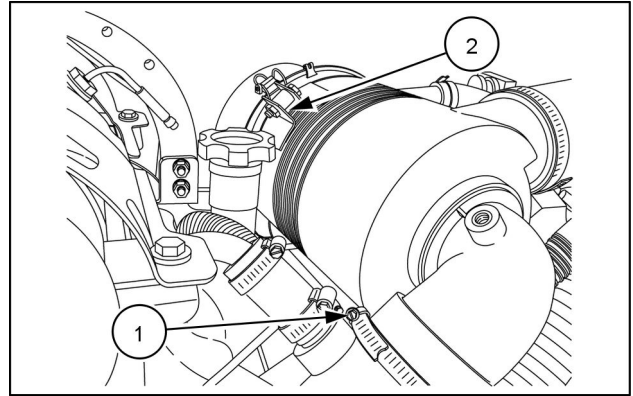
GNIL14TR00702AA 38

50. Disconnect the pipes **(1)** from the fuel cooler.



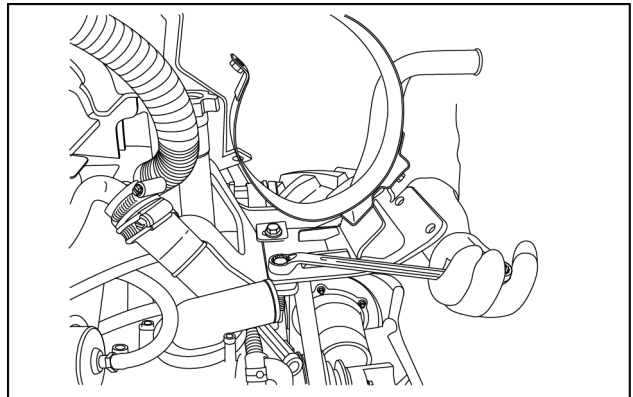
GNIL14TR00703AA 39

51. Loosen the clamp **(1)** on the air inlet hose.
52. Loosen the bolt **(2)** and remove the air cleaner assembly.



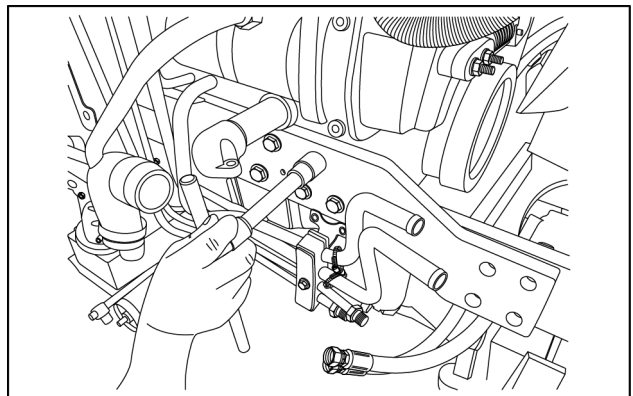
GNIL14TR00720AA 40

53. Loosen the bolts and remove the air cleaner mounting bracket.



GNIL14TR00860AA 41

54. Support the front axle at the front bracket.
55. Support the engine using a suitable hoist.
56. Remove the buckle up bolts and set screws between the engine and front axle support. Carefully lift the engine from the front axle support.
57. Make sure that all the wires and tubes are disconnected. Place the engine on a suitable stand for repair.



GNIL14TR00755AA 42

Engine flywheel - Remove

⚠ WARNING

Avoid injury!

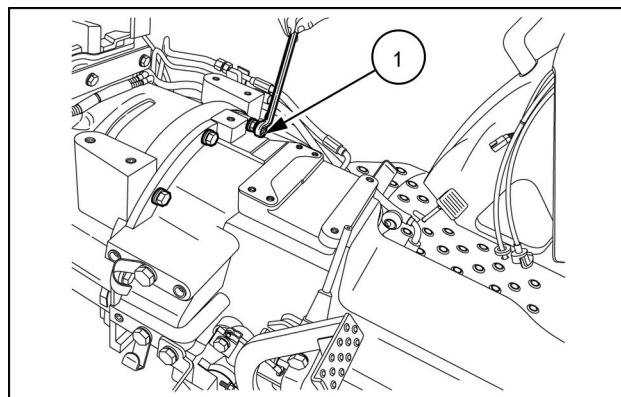
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.

Failure to comply could result in death or serious injury.

W0208A

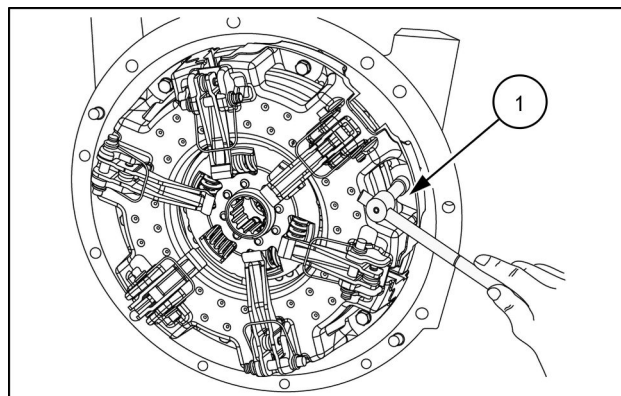
It is necessary to split the tractor between engine and transmission housing to gain access to the clutch. See engine removal section.

1. Remove the bolts (1). Separate the transmission housing from engine.



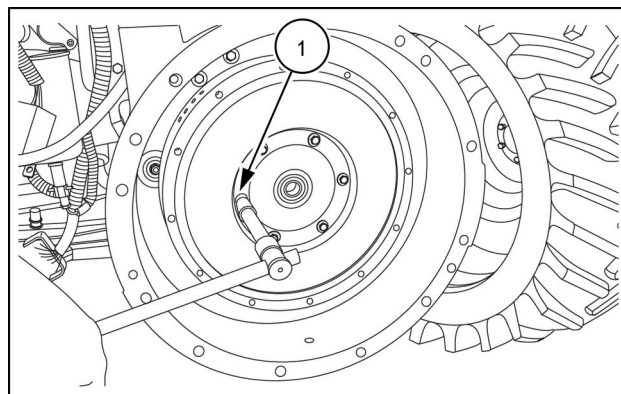
GNIL14TR00753AA 1

2. Remove the bolts (1) which retains the clutch assembly to the engine fly wheel and slacken the two remaining bolts.



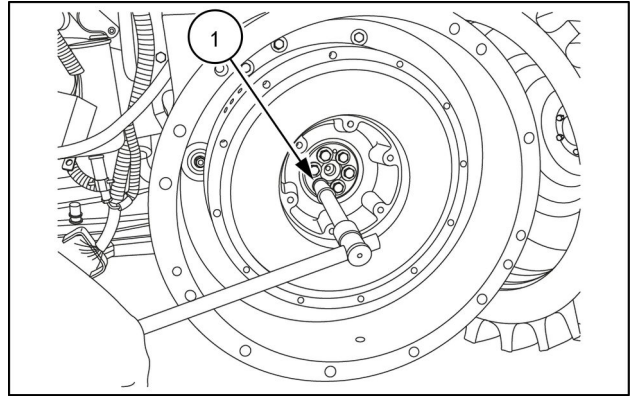
GNIL14TR00754AA 2

3. Insert centralizing pin special tool number **380000612** in clutch plate shaft seats back off the two remaining bolts and remove assembly completely. Retrieve Power Take-Off (PTO) clutch disc.
4. Remove the bolts (1) and retrieve the pilot bearing assembly.



GNIL14TR00769AA 3

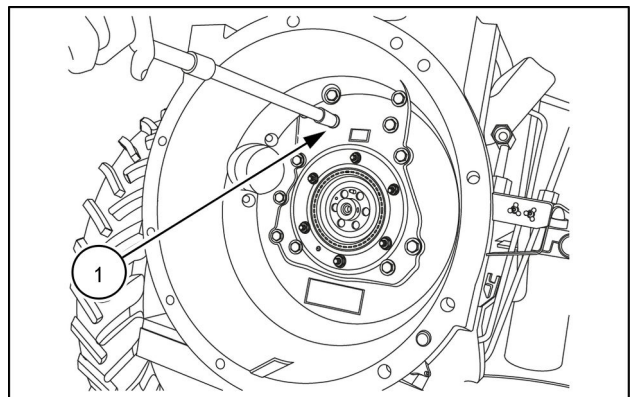
5. Remove the bolts (1) and take out the flywheel from the main clutch housing.



GNIL14TR00770AA 4

Clutch housing separation from the engine (if necessary)

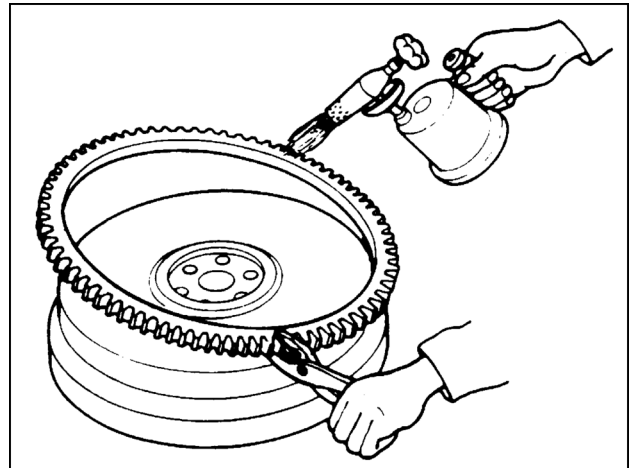
6. Place a suitable support. Remove the bolts (1) and separate the clutch housing.



GNIL14TR00771AA 5

Engine flywheel - Inspect

1. Inspect the ring gear for cracked, broken, chipped, or worn gear teeth. If found damaged, replace the ring gear.
2. If necessary, remove the starter ring gear using a hammer and chisel to crack the ring gear.
3. To reinstall a new ring gear, heat the new ring gear to **120 - 150 °C (245 - 300 °F)** from the inside only. Be careful not to overheat the ring gear teeth. Use a temperature sensitive crayon to mark the inside of the ring gear. Quench the ring gear quickly to obtain a good shrink fit onto the flywheel.

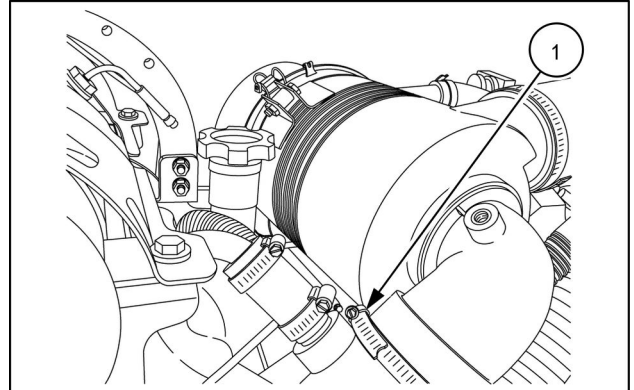


20093403 1

Air cleaner - Remove

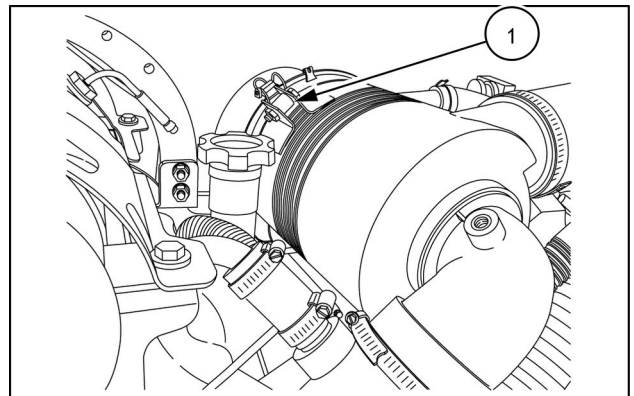
NOTE: It is not necessary to remove the complete air cleaner body, as described below, to service the air cleaner elements.

1. Lift the front hood.
2. Loosen the clamp **(1)** of air cleaner hose. Remove the air cleaner hose.



GNIL14TR00720AA 1

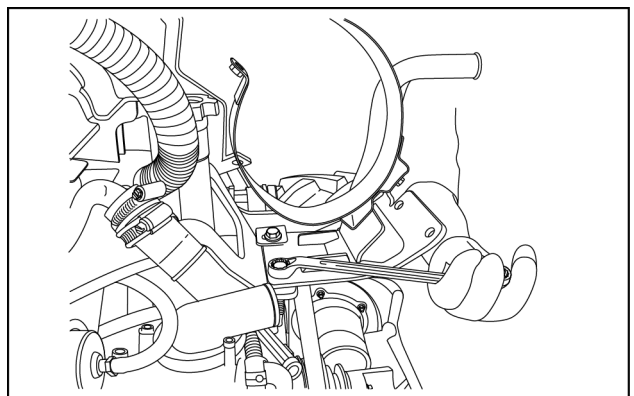
3. Loosen the bolt of the air cleaner securing clamp. **(1)**.
4. Remove the air cleaner assembly.



GNIL14TR00720AA 2

Air cleaner mounting bracket removal

5. Loosen the bolts and remove the air cleaner mounting bracket.



GNIL14TR00722AA 3



Suggest:

If the above button click is invalid.

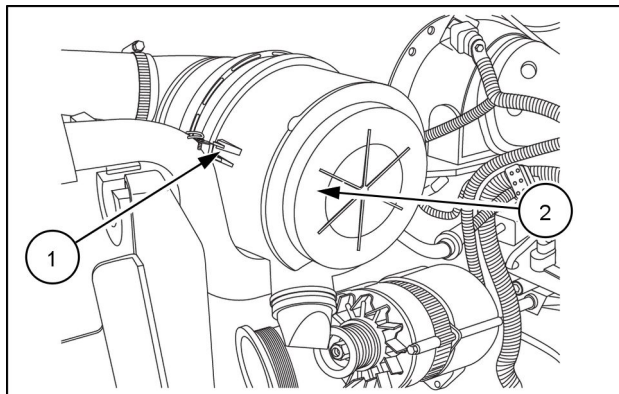
**Please download this document
first, and then click the above link
to download the complete manual.**

Thank you so much for reading

Air cleaner - Disassemble

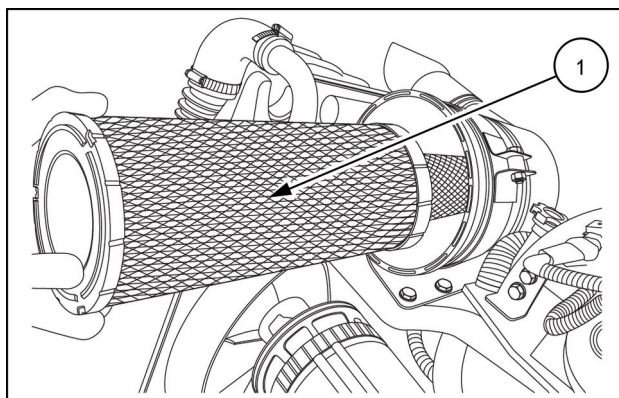
NOTE: The air cleaner assembly can be serviced on the tractor. It is not necessary to remove the complete assembly from the tractor.

1. Release the locking clips (1) and remove the air cleaner cover (2).



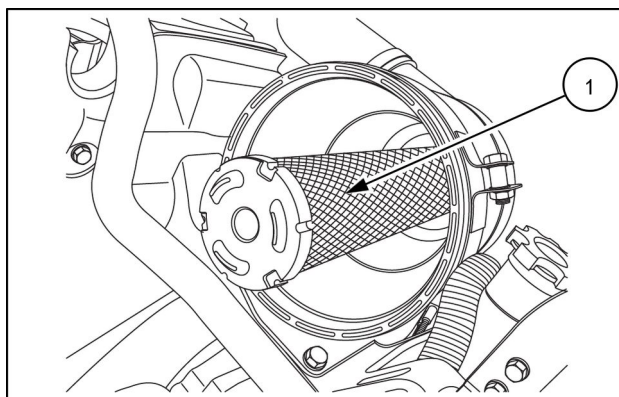
GNIL14TR00721AA 1

2. Remove the air cleaner outer element (1).



GNIL14TR00723AA 2

3. Remove the inner element (1).



GNIL14TR00724AA 3

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