

SERVICE MANUAL

Boomer™ 40
Boomer™ 50
Tier 3
Compact Tractor

Part number 47698299

2nd edition English

November 2016

Replaces part number 84373327





SERVICE MANUAL

**Boomer™ 40 [0 - 2103012735] , Boomer™ 40 [2103012736 - 2106014859] ,
Boomer™ 40 [2106014860 -] , Boomer™ 50 [0 - 2105012137] , Boomer™ 50
[2105012138 - 2105013791], Boomer™ 50 [2105013792 -]**

Link Product / Engine

Product	Market Product	Engine
Boomer™ 40 [0 - 2103012735]	North America	S4Q2
Boomer™ 40 [2103012736 - 2106014859]	North America	S4Q2
Boomer™ 40 [2106014860 -]	North America	S4Q2
Boomer™ 50 [0 - 2105012137]	North America	S4Q2
Boomer™ 50 [2105012138 - 2105013791]	North America	S4Q2
Boomer™ 50 [2105013792 -]	North America	S4Q2

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Contents

INTRODUCTION

Engine.....	10
[10.001] Engine and crankcase	10.1
[10.202] Air cleaners and lines	10.2
[10.206] Fuel filters	10.3
[10.218] Fuel injection system.....	10.4
[10.304] Engine lubrication system.....	10.5
[10.400] Engine cooling system	10.6
Clutch	18
[18.100] Clutch mechanical release control	18.1
[18.110] Clutch and components	18.2
[18.112] Slip clutch or flywheel damper	18.3
Transmission.....	21
[21.114] Mechanical transmission	21.1
[21.140] Mechanical transmission internal components.....	21.2
Front axle system	25
[25.100] Powered front axle	25.1
[25.102] Front bevel gear set and differential	25.2
[25.108] Final drive hub, steering knuckles, and shafts	25.3
[25.310] Final drives	25.4
Rear axle system.....	27
[27.106] Rear bevel gear set and differential	27.1
[27.120] Planetary and final drives	27.2
Hydrostatic drive.....	29
[29.100] Transmission and steering hydrostatic control	29.1
[29.202] Hydrostatic transmission	29.2

[29.218] Pump and motor components.....	29.3
Power Take-Off (PTO).....	31
[31.101] Rear mechanical control	31.1
[31.104] Rear electro-hydraulic control	31.2
[31.114] Two-speed rear Power Take-Off (PTO)	31.3
[31.120] Central Power Take-Off (PTO)	31.4
Brakes and controls	33
[33.110] Parking brake or parking lock	33.1
[33.120] Mechanical service brakes	33.2
Hydraulic systems.....	35
[35.000] Hydraulic systems.....	35.1
[35.104] Fixed displacement pump	35.2
[35.114] Three-point hitch control valve	35.3
[35.116] Three-point hitch cylinder	35.4
[35.204] Remote control valves	35.5
[35.300] Reservoir, cooler, and filters.....	35.6
[35.350] Safety and main relief valves	35.7
[35.355] Hydraulic hand control	35.8
Hitches, drawbars, and implement couplings.....	37
[37.100] Drawbars and towing hitches	37.1
[37.108] Rear three-point hitch external controls.....	37.2
[37.110] Rear three-point hitch	37.3
Steering.....	41
[41.101] Steering control	41.1
[41.106] Tie rods.....	41.2
[41.200] Hydraulic control components.....	41.3
[41.216] Cylinders	41.4

Wheels	44
[44.511] Front wheels	44.1
[44.520] Rear wheels	44.2
Electrical systems	55
[55.000] Electrical system	55.1
[55.010] Fuel injection system	55.2
[55.011] Fuel tank system	55.3
[55.012] Engine cooling system	55.4
[55.013] Engine oil system	55.5
[55.031] Parking brake electrical system	55.6
[55.048] Rear Power Take-Off (PTO) control system	55.7
[55.100] Harnesses and connectors	55.8
[55.201] Engine starting system	55.9
[55.202] Cold start aid	55.10
[55.302] Battery	55.11
[55.404] External lighting	55.12
[55.405] External lighting switches and relays	55.13
[55.408] Warning indicators, alarms, and instruments	55.14
[55.525] Cab engine controls	55.15
[55.610] Ground speed control	55.16
[55.640] Electronic modules	55.17
Platform, cab, bodywork, and decals	90
[90.100] Engine hood and panels	90.1
[90.110] Operator platform less cab	90.2
[90.114] Operator protections	90.3
[90.116] Fenders and guards	90.4
[90.120] Mechanically-adjusted operator seat	90.5



INTRODUCTION

Safety rules - Ecology and the environment

Boomer™ 40	NA
Boomer™ 50	NA

Soil, air, and water quality is important for all industries and life in general. When legislation does not yet rule the treatment of some of the substances that advanced technology requires, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these substances on man and nature and how to safely store, use, and dispose of these substances.

Helpful hints

- Avoid the use of cans or other inappropriate pressurized fuel delivery systems to fill tanks. Such delivery systems may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of these products contain substances that 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 you drain fluids such as used engine coolant mixtures, engine oil, hydraulic fluid, brake fluid, etc. Do not mix drained brake fluids or fuels with lubricants. Store all drained fluids safely until you can dispose of the fluids in a proper way that complies with all local legislation and available resources.
- Do not allow coolant mixtures to get into the soil. Collect and dispose of coolant mixtures properly.
- The air-conditioning system contains gases that should not be released into the atmosphere. Consult an air-conditioning specialist or use a special extractor to recharge the system properly.
- Repair any leaks or defects in the engine cooling system 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. Penetrating weld splatter may burn a hole or weaken hoses, allowing the loss of oils, coolant, etc.

Battery recycling

Batteries and electric accumulators contain several substances that can have a harmful effect on the environment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. NEW HOLLAND strongly recommends that you return all used batteries to a NEW HOLLAND dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



Mandatory battery recycling

NOTE: The following requirements are mandatory in Brazil.

Batteries are made of lead plates and a sulfuric acid solution. Because batteries contain heavy metals such as lead, CONAMA Resolution 401/2008 requires you to return all used batteries to the battery dealer when you replace any batteries. Do not dispose of batteries in your household garbage.

Points of sale are obliged to:

- Accept the return of your used batteries
- Store the returned batteries in a suitable location
- Send the returned batteries to the battery manufacturer for recycling

Safety rules - Personal safety

Boomer™ 40	NA
Boomer™ 50	NA

General safety rules

Read this manual carefully before starting, using carrying out maintenance, refueling or performing any other type of operation on the tractor.

Read all the safety decals on the tractor and follow the instructions thereon before starting, operating, refueling or carrying out maintenance on the tractor. Promptly replace any decals that are damaged, lost or illegible. Clean the decals if they are covered by mud or debris.

The tractor must only be used by responsible personnel, trained in tractor use and authorized to operate the tractor.

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

Avoid using the tractor in unsuitable physical conditions, stop work instead.

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

Never operate the tractor 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.
- Before removing any hydraulic tubing, check that the system is not pressurized.

Do not alter the calibration of the pressure relief valves in the various hydraulic circuits (steering, hydraulic lift, auxiliary distributors, etc.).

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 tractor 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 tractor. Never operate the tractor with shields removed. Always close access doors or panels before operating the tractor.

Enter and leave the tractor using the steps and handles provided. 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 tractor can be struck or crushed by the tractor 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.

INTRODUCTION

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

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

Before starting the engine, make sure that all attached implements are lowered to the ground.

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 tractor.

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



SERVICE MANUAL

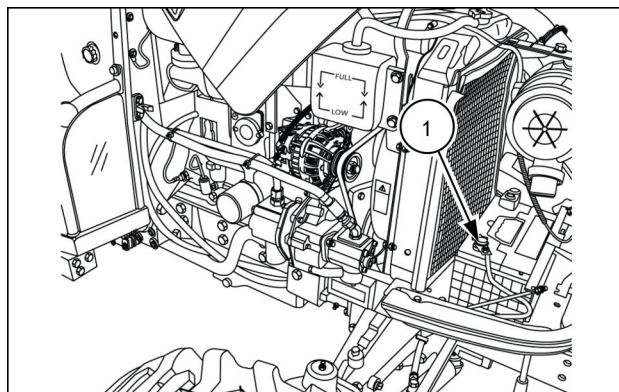
Engine

**Boomer™ 40 [0 - 2103012735] , Boomer™ 40 [2103012736 - 2106014859] ,
Boomer™ 40 [2106014860 -] , Boomer™ 50 [0 - 2105012137] , Boomer™ 50
[2105012138 - 2105013791], Boomer™ 50 [2105013792 -]**

Engine - Remove - Separating the tractor at the clutch housing/engine

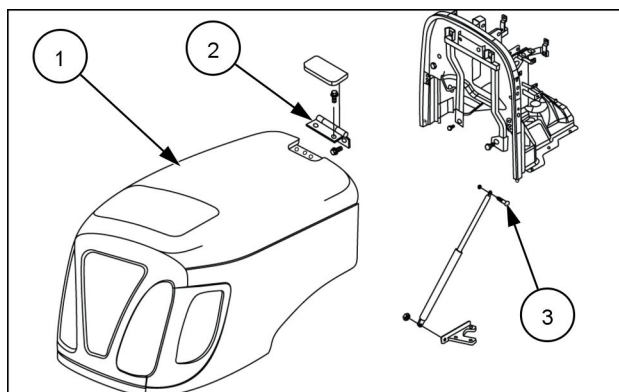
Boomer™ 40 [0 - 2103012735]	NA Platform - With ROPS
Boomer™ 40 [2103012736 - 2106014859]	NA Platform - With ROPS
Boomer™ 40 [2106014860 -]	NA Platform - With ROPS
Boomer™ 50 [0 - 2105012137]	NA Platform - With ROPS
Boomer™ 50 [2105012138 - 2105013791]	NA Platform - With ROPS
Boomer™ 50 [2105013792 -]	NA Platform - With ROPS

1. Chock all four wheels so that the tractor cannot move.
2. Disconnect negative (-) battery cable **(1)**.



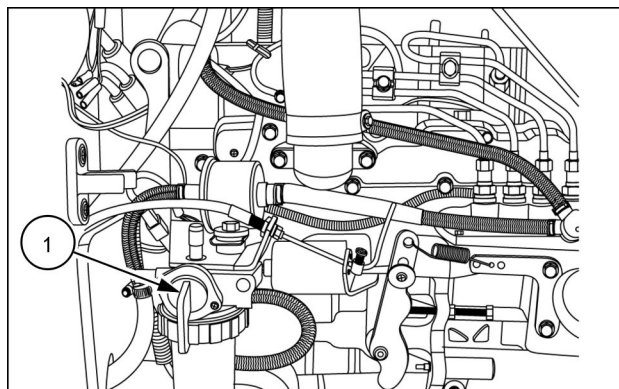
93100929 1

3. Disconnect headlight wire harness.
4. Disassemble the pin **(3)** at the hood strut and wire harness connector.
5. Remove hinge cover and M8 x 16mm bolt **(2)**.
6. Carefully remove hood **(1)**.



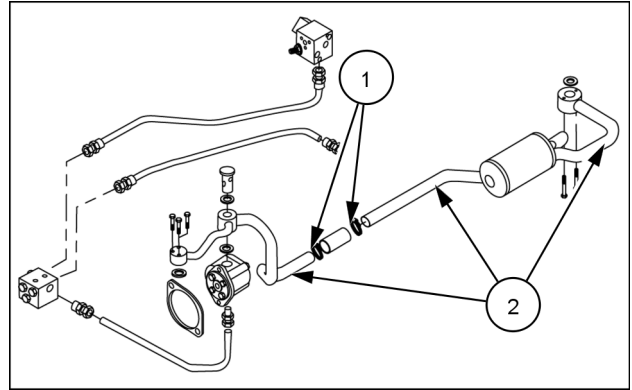
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7. Disconnect the main and engine wire harnesses.
8. Turn off fuel supply at the filter **(1)**, and then disconnect fuel hose.



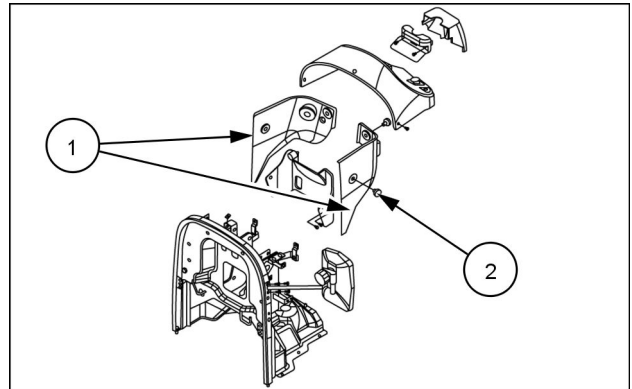
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9. Position a drain pan to collect drain oil and unfasten clamps **(1)**.
10. Disassemble suction tube assembly **(2)**.



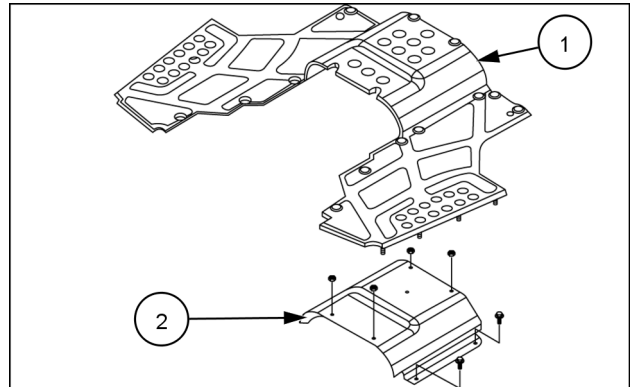
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11. Remove the knobs **(2)** on both rear cover halves **(1)** and remove.



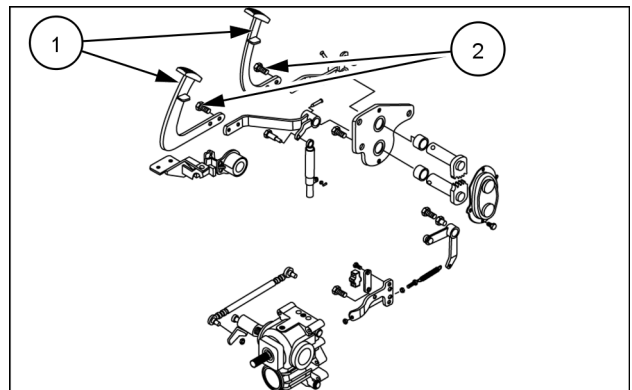
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12. Remove the mat **(1)**.
13. Remove the M8 nuts and bolts and remove cover **(2)**.



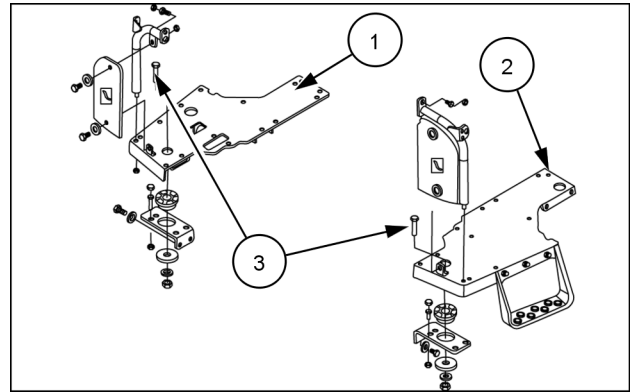
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14. Remove the bolts **(2)** and remove the pedals **(1)**.



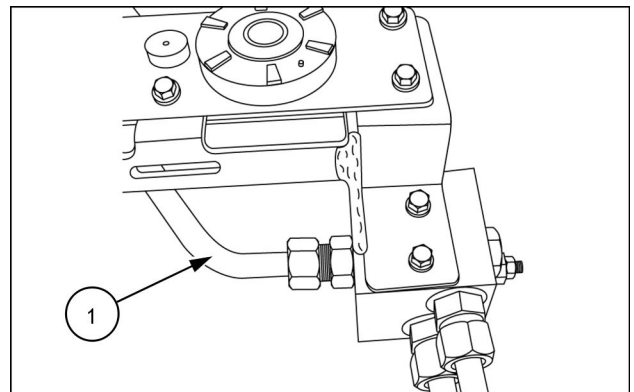
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15. Remove the seven M8 and one M24 bolts **(3)**.
16. Remove right-hand step **(1)** and left-hand step **(2)**.



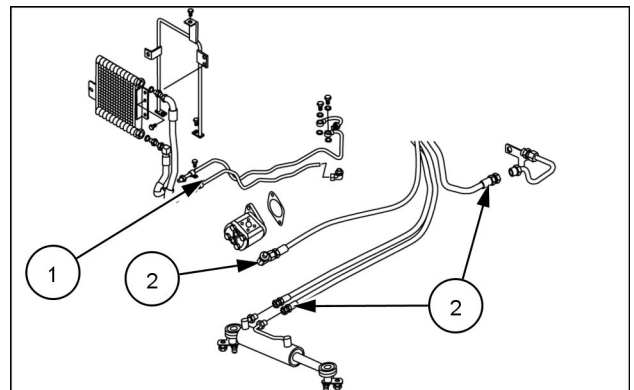
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17. Disconnect the front high pressure tube **(1)**.



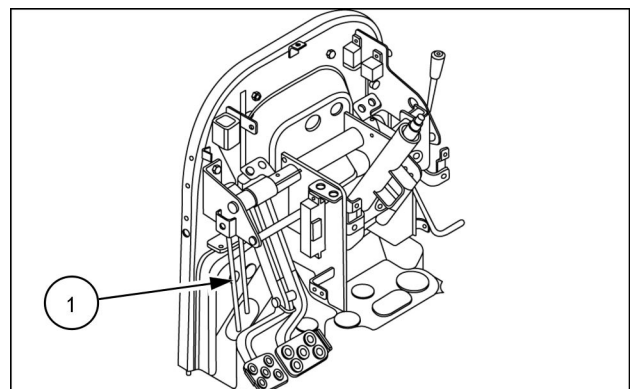
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18. Disconnect steering hoses **(2)** and tubes **(1)**.



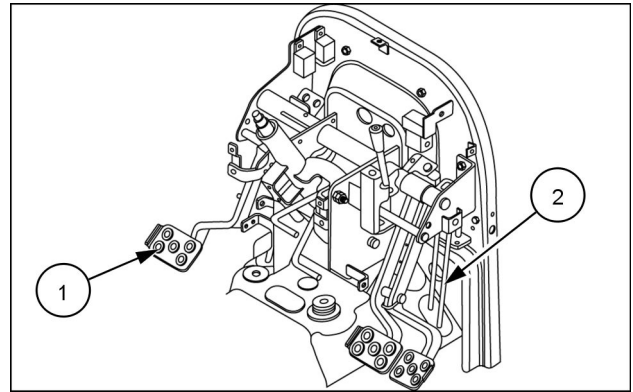
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19. Disconnect brake the rod **(1)**, HST or gear transmission.



93102247 11

20. Disconnect brake rod **(2)** on the right-hand side and clutch rod on the left-hand side; gear transmission only.

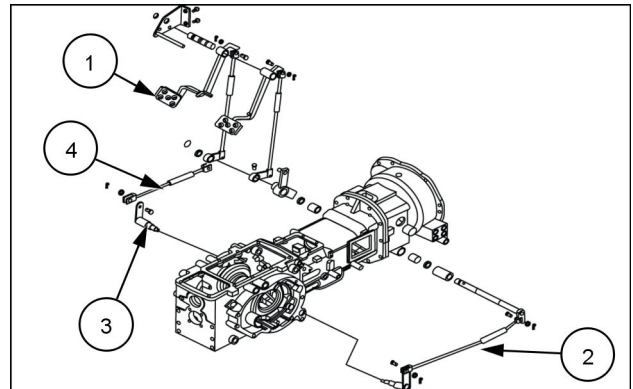


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(1) Clutch pedal

Brake rod connection; HST transmission

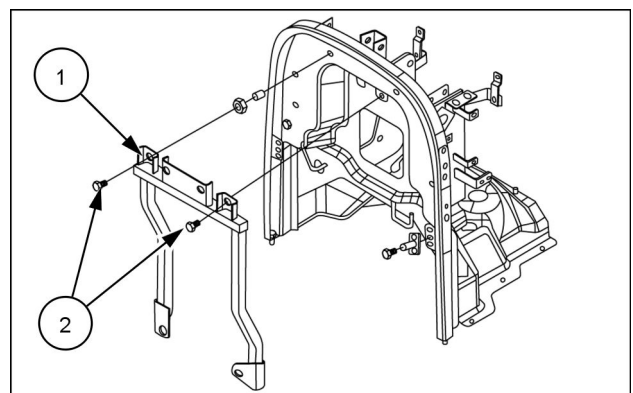
1. Disassemble the brake rods as shown in figure 13 .



93102250 13

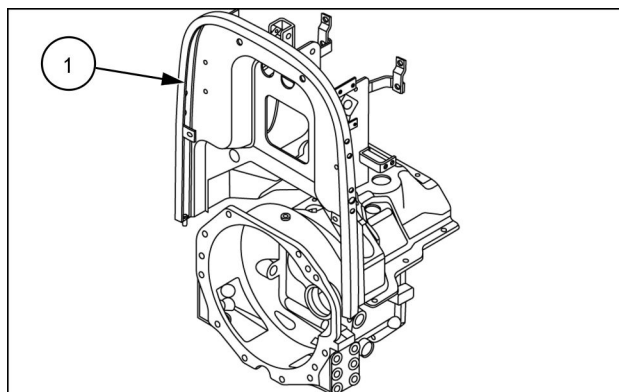
(1) Pedal **(3)** Arm
(2) Rod **(4)** Arm assembly

2. Remove the bolts **(2)** securing frame **(1)** to fire wall, and remove frame.



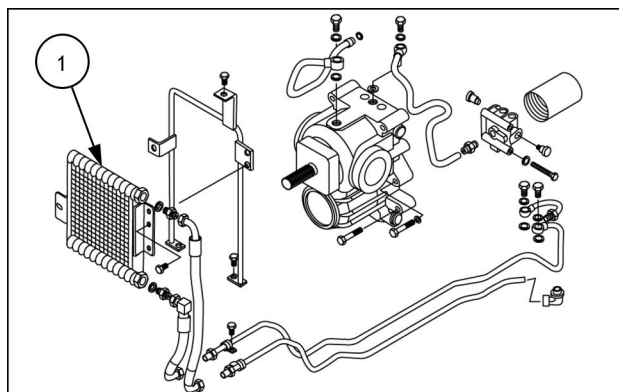
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3. Remove the fire wall (1) with the aid of a hoist.



93102252 15

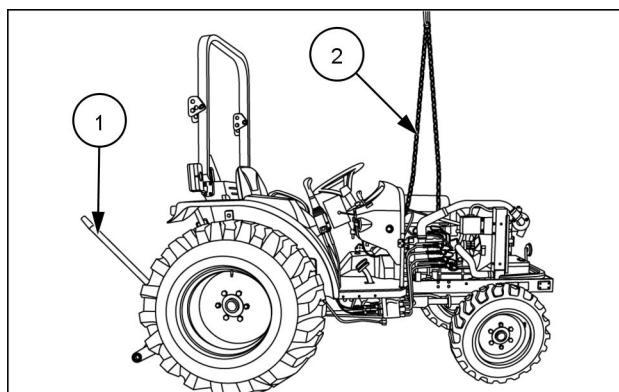
4. Disconnect and remove the oil cooler (1) and related parts, as shown in figure 16.



93102253 16

Secure the tractor for separation:

1. Attach a chain sling (2) to the two hoist eyes on the engine: One located on the left-hand side above the exhaust manifold, the other on the right-hand side to the rear of the injector rail.
2. Attach a suitable hoist to the chain sling.
3. Roll a floor jack (1) under the tractor from the rear of the tractor, and place under the clutch housing. Raise the jack enough to support the drive train.



93105782 17



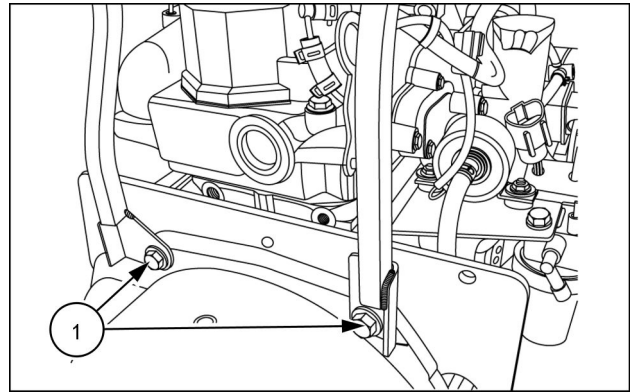
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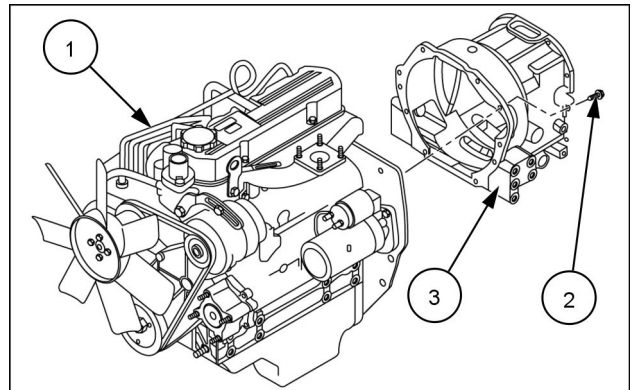
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4. Remove the eight M12 bolts (2) holding the engine (1) and transmission (3), while checking front wheel drive shaft for separation from the transmission.



93102254 18



93105783 19

NOTE: The hoist and/or the floor jack may need to be raised or lowered to allow the separation of the engine from the clutch housing.

5. Carefully roll the drive train away from the engine, using the floor jack for support.

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