

SERVICE MANUAL

Workmaster™ 55

Workmaster™ 65

Workmaster™ 75

Tractor

Part number 51489998

1st edition English

October 2018





SERVICE MANUAL

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Link Product / Engine

Product	Market Product	Engine
WORKMASTER 55 Workmaster 55 ROPS 2WD	North America	8035.25A IIIB
WORKMASTER 55 Workmaster 55 CAB 2WD	North America	8035.25A IIIB
WORKMASTER 55 Workmaster 55 CAB 4WD	North America	8035.25A IIIB
WORKMASTER 55 Workmaster 55 ROPS 4WD	North America	8035.25A IIIB
WORKMASTER 65 Workmaster 65 ROPS 2WD	North America	8035.25B IIIB
WORKMASTER 65 Workmaster 65 CAB 2WD	North America	8035.25B IIIB
WORKMASTER 65 Workmaster 65 ROPS 4WD	North America	8035.25B IIIB
WORKMASTER 65 Workmaster 65 CAB 4WD	North America	8035.25B IIIB
WORKMASTER 75 Workmaster 75 CAB 2WD	North America	8035.25C IIIB
WORKMASTER 75 Workmaster 75 ROPS 2WD	North America	8035.25C IIIB
WORKMASTER 75 Workmaster 75 ROPS 4WD	North America	8035.25C IIIB
WORKMASTER 75 Workmaster 75 CAB 4WD	North America	8035.25C IIIB

Contents

Maintenance	00
[00.100] New unit pre-delivery operations	00.1
[00.150] Start-up	00.2
Engine	10
[10.001] Engine and crankcase	10.1
Clutch	18
[18.110] Clutch and components	18.1
Transmission	21
[21.114] Mechanical transmission	21.1
[21.112] Power shuttle transmission	21.2
Four-Wheel Drive (4WD) system	23
[23.101] Mechanical control	23.1
[23.304] Four-Wheel Drive (4WD) gearbox	23.2
Front axle system	25
[25.100] Powered front axle	25.1
Rear axle system	27
[27.100] Powered rear axle	27.1
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
Brakes and controls	33
[33.202] Hydraulic service brakes	33.1
Hydraulic systems	35
[35.000] Hydraulic systems	35.1

[35.116] Three-point hitch cylinder	35.2
[35.204] Remote control valves	35.3
Steering.....	41
[41.101] Steering control	41.1
[41.200] Hydraulic control components.....	41.2
[41.216] Cylinders	41.3
Cab climate control	50
[50.100] Heating.....	50.1
[50.200] Air conditioning.....	50.2
Electrical systems	55
[55.000] Electrical system	55.1
[55.051] Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls.....	55.2
[55.100] Harnesses and connectors.....	55.3
[55.201] Engine starting system.....	55.4
[55.301] Alternator.....	55.5
[55.302] Battery.....	55.6
[55.408] Warning indicators, alarms, and instruments	55.7
[55.512] Cab controls.....	55.8
[55.DTC] FAULT CODES.....	55.9
Front loader and bucket.....	82
[82.100] Arm.....	82.1
[82.300] Bucket.....	82.2
[82.AAA] Front loader and bucket generic sub-group	82.3
Platform, cab, bodywork, and decals	90
[90.150] Cab.....	90.1



SERVICE MANUAL

Maintenance

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Contents

Maintenance - 00

[00.100] New unit pre-delivery operations.....	00.1
[00.150] Start-up.....	00.2

CONSUMABLES INDEX

Consumable	Reference	PAGE
NEW HOLLAND AMBRA AGRIFLU	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA ACTIFULL™ OT EXTENDED LIFE COOLANT	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA UNITEK 10W-40	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA UNITEK SSL 0W-40	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA BRAKE LHM	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA MULTI G™ HYDRAULIC TRANSMISSION OIL	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA MASTERTRAN® ULTRACTION	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4



Maintenance - 00

New unit pre-delivery operations - 100

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Contents

Maintenance - 00

New unit pre-delivery operations - 100

FUNCTIONAL DATA

New unit pre-delivery operations	
Overview GENERAL INSTRUCTION	3

New unit pre-delivery operations - Overview GENERAL INSTRUCTION

NOTE: Take due care and attention during all maintenance and repairs. We recommend you work with a service center authorized by NEW HOLLAND. Each section contains warnings for careful maintenance. Do not make adjustments without the necessary special tools. Anyone who carries out procedures outside of a service center is responsible for those procedures.

SHIMS

When adjusting with shims, collect the values found by measuring each shim separately with a micrometer. Do not simply consider the nominal thickness values given on the shims or the overall thickness of the shim.

ROTATING SHAFT SEALS

To correctly position the rotating shaft seals, carry out the following steps:

1. Before you position the seal in its recess, soak the seal in oil for at least half an hour to ensure the seal sits in its location properly.
2. Carefully clean the shafts and ensure that the seal and contact surface are not worn.
3. Turn the seal so that its edge moves toward the oil. If the seal is an oil-recycling seal, turn the seal so that the grooved lip goes into the oil. Thus, oil is expelled while the shaft rotates.
4. Coat the seal lips with a light oil (choose engine oil rather than grease). Fill the gap between the seal lip and the dust prevention lip with grease. (also applicable to double-lip seal)
5. Position the seal with a flat-tipped tool. Do not use a hammer.
6. When you position the seal in its recess, ensure the seal is not positioned at an angle. Make sure that the seal fits snugly into its recess by applying a constant pressure perpendicular to the seal surface.
7. When you slide the seal along the shaft, use a protective sleeve to protect the seal lips.

O-RINGS

Oil each O-ring before you position the O-ring. When you install the O-ring, slide the O-ring flat along the part, but do not twist. Otherwise, a leak will occur.

LIQUID SEALS

Apply one of the following sealants to the joint surfaces marked with an 'X': RTV SILMATE, RHODORSIL CAF 1, or LOCTITE PLASTIC GASKET

Do the following to the joint surfaces before you apply the sealant:

1. Clean away debris thoroughly with a wire brush.
2. Thoroughly clean and degrease the surfaces with a mixture of hot water and soda or solvent gas oil.

BEARINGS

When you position the bearings:

1. Heat the bearings to **80–90 °C** before you position the bearings on the shaft.
2. Cool the bearings before you hammer the bearings into their housings.

PINS

When you position beveled spring pins, make sure that the cut end of the pin is installed perpendicularly to the direction of work. Spiral spring pins can be placed in any position.

REPLACEMENT PARTS

Only use genuine NEW HOLLAND replacement parts. Genuine parts are durable and safe. Genuine NEW HOLLAND replacement parts guarantee quality, durability, and safety.

Specify the following information when you request replacement parts:

1. Tractor model and chassis number
2. Engine type and number
3. Part number (specified in the spare parts catalog or on barcodes)

SERVICE TOOLS

Tools detailed in the service catalog

1. These tools have been specially produced for NEW HOLLAND tractors.
2. They are essential for safe repair.
3. They are manufactured and tested to be robust and efficient work tools.

Use these special tools to ensure:

1. Optimum working conditions
2. The best results
3. Time and energy savings
4. Safer operation

ATTENTION: *The wear limit values recommended for some parts are provided as an indication only. When references are made to the "front", "rear", "right", and "left", these are from the driver's perspective when facing forward.*

Index

Maintenance - 00

New unit pre-delivery operations - 100

New unit pre-delivery operations - Overview GENERAL INSTRUCTION	3
-----------------------------------------------------------------------	---



Maintenance - 00

Start-up - 150

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Contents

Maintenance - 00

Start-up - 150

TECHNICAL DATA

Start-up

Technical Data LIQUID AND OIL CAPACITIES	4
------------------------------------------------	---

FUNCTIONAL DATA

Start-up

Overview	5
----------------	---

OPERATING

Start-up

Warning SAFETY PRECAUTIONS	7
----------------------------------	---

CONSUMABLES INDEX

Consumable	Reference	PAGE
NEW HOLLAND AMBRA AGRIFLU	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA ACTIFULL™ OT EXTENDED LIFE COOLANT	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA UNITEK 10W-40	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA UNITEK SSL 0W-40	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA BRAKE LHM	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA MULTI G™ HYDRAULIC TRANSMISSION OIL	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA MASTERTRAN® ULTRACTION	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4
NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE	Start-up - Technical Data LIQUID AND OIL CAPACITIES	00.2 / 4

Start-up - Technical Data LIQUID AND OIL CAPACITIES

SPECIFICATION	AMOUNT	PRODUCT RECOMMENDED BY NEW HOLLAND
Engine Cooling System		Conventional coolant: NEW HOLLAND AMBRA AGRIFLU mixed 50% with distilled water Alternative type coolant: NEW HOLLAND AMBRA ACTIFULL™ OT EXTENDED LIFE COOLANT (If the premixed coolant is not available, mix the concentrate with 50% distilled water)
On Workmaster series	9 L	
Windshield Washer Fluid Container		Water with Detergent
On all models	2 L	
Fuel Tank		Stabilized, Filtered Diesel
On all models	82 L	
Crank Case Oil		NEW HOLLAND AMBRA UNITEK 10W-40 or NEW HOLLAND AMBRA UNITEK SSL 0W-40
Unfiltered		
On all models	7,9 L	
Filtered		
On all models	8,6 L	
Braking Unit		NEW HOLLAND AMBRA BRAKE LHM
On all models	0,7 L	
Front Axle		NEW HOLLAND AMBRA MULTI G™ HYDRAULIC TRANSMISSION OIL or NEW HOLLAND AMBRA MASTERTRAN® ULTRACTION
On all models		
Front Axle Casing	6 L	
Front Axle Reducer (each)	1 L	
Mechanic Transmission		
On all models	30 L	
Powershuttle Transmission		
On all models	35 L	
Air Conditioning System Coolant Gas		NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE
On all models	1,5 kg	
Front Wheel Wheel Rim Hub	–	
On all models		
All Grease Points		
On all models	–	

Start-up - Overview

OPERATION

1. Do not operate the engine in an enclosed environment with insufficient ventilation for exhaust gas emissions.
2. Do not insert your head, your body, feet, fingers, or arms between the rotating parts of the fan or the belt.

ENGINE

1. Before you remove the radiator cap, turn the cap slowly to reduce the pressure. Add water to the engine when the engine is at a standstill, or in idle when the engine is warm.
2. Make sure that the engine is stopped when you refuel. Be careful when the engine is hot, as the fuel may ignite.
3. Never check or adjust the fan belts when the engine is running. Do not adjust the fuel pump while the engine is running.
4. Never lubricate while the engine is running.

ELECTRICAL SYSTEM

1. When you use the auxiliary battery, make sure that the cable end connections to the terminals are (+) to (+) and (-) to (-). Do not short the ends. BATTERY VAPOR IGNITES VERY QUICKLY. While the battery is charging, open the battery plugs to ensure adequate ventilation. Do not place metal items between the terminals to check the battery charge. Protect the battery from light and sparks. Do not smoke near the battery.
2. Check for fuel and battery electrolyte leaks before you carry out servicing or maintenance. Repair any leaks before you start work.
3. Do not charge the battery in an enclosed area. After the battery is charged, ensure proper ventilation so that explosive gasses produced during battery charging can escape.
4. Disconnect the battery before any repair work, or before you start work on the electrical system.

HYDRAULIC SYSTEM

1. Pressurized liquid leaking from a very small hole may not be visible and can damage your skin. As such, DO NOT CHECK FOR LEAKS WITH YOUR HANDS. Use a piece of wood or cardboard to check for leaks. Seek medical attention if you are injured by leaking liquid. If you do not receive immediate medical attention, a serious infection or reaction may develop.
2. When you check the pressure, use an indicator appropriate for the expected pressure.

WHEELS AND TIRES

1. Ensure that tires are inflated to the pressure values indicated by their manufacturer. Check tires periodically for wear.
2. Take care when you adjust tire pressure and position yourself safely.
3. Check tire pressure with the tractor empty. To avoid over-inflation, only check tires when they are cold. Do not use worn tires. Improper welding heating or soldering reduces the resistance of the wheels and causes the wheels to malfunction.
4. Never weld inflated tires to the rims.
5. Use chocks on the front and rear wheels when you carry out tire maintenance. After you raise the tractor on a jack, position a support stand underneath the tractor to prevent the tractor from falling.
6. Deflate the tires before you remove items that may cause tires to burst from the tire tread.
7. Never inflate tires with flammable gas. This can cause explosions and injury.

EQUIPMENT

1. Use lifters with appropriate capacities to lift heavy parts. Make sure that parts are properly supported (with rings, hooks, rings, etc.). Use a jack if necessary. Be aware of people around you.

2. Be very careful when you carry parts. Take care not to trap fingers or toes. Wear work gloves, shoes, and safety glasses as instructed by the authorities.
3. Look out for twisted chains and cables. Always wear thick gloves when handling chains and cables manually.

Start-up - Warning SAFETY PRECAUTIONS

ATTENTION: WARNINGS ARE THERE FOR YOUR HEALTH AND SAFETY. BE CAUTIOUS AND AWARE.

AVOID ACCIDENTS.

Most accidents in workshops can be avoided by observing basic safety rules. Most accidents can be avoided by taking precautionary measures and applying the safety rules. No matter how well equipment is designed or manufactured, unsafe situations that hinder your ability to access and to work with equipment may still exist. The best insurance against an accident is a careful user. By following all of the basic rules below, you can avoid the risk of serious accident.

ATTENTION: *Never lubricate or make adjustments when the tractor is running.*

SAFETY PRECAUTIONS

1. Carry out specified maintenance and repair procedures in full.
2. While you work, avoid wearing clothes or items that may become caught in moving parts such as rings, watches, jewelry, torn or loose clothing, ties, scarves, buttons, or zips. Use protective helmets, boots, gloves, and goggles.
3. Do not service the tractor without someone to start the tractor.
4. Never operate the tractor without sitting in the driver's seat. Never use the equipment other than in the ways specified.
5. Never lubricate, service, or make adjustments while the engine is running.
6. Stop the engine and check whether the hydraulic system is pressurized before you remove covers or caps.
7. Carry out all service procedures with utmost care and diligence.
8. Platforms and ladders used in the workshop or in the field for tractor maintenance and repair should be manufactured to respond to local or national conditions.
9. Disconnect the battery and the start controls when you work. Make sure that equipment to be lifted is under control.
10. Because of the presence of flammable substances, do not refuel, or check or replenish the battery fluid while you are smoking or near a flame.
11. When the tractor is in neutral, use chocks or another method when you service the brakes to ensure that the tractor is secure and under control.
12. Only use the specified tow hitch points. Before you tow, make sure that locking equipment and pins are working. Under load, stand away from chains, cables, and tow hooks.
13. To prevent static electricity or any kind of spark when you refuel, make sure that the fuel nozzle is in contact with the tank.
14. To move a non-operational tractor, use a tow truck or a low-body truck if available.
15. Make sure that the truck wheels are secured when you load or unload the tractor. Place chocks under the tractor wheels after you have loaded the tractor on the truck.
16. To reduce the risk of electric shock, only use grounded auxiliary power outputs to charge devices, pumps, and similar equipment.
17. Lift heavy parts with appropriate machinery.
18. Be aware of those around you when you work with the tractor.
19. Do not put diesel in open containers.
20. Never use diesel, solvents, or other flammable liquids to clean parts. Always use flame resistant, non-toxic solvents.
21. Wear protective goggles when you use pressurized air to clean parts.
22. In accordance with national regulations, limit air pressure to **2,1 bar**.
23. Do not run the engine in buildings with inadequate ventilation.
24. Do not smoke when you work with flammable materials.
25. Do not use an open-flame lighting device to carry out any checks on the tractor or to check for leaks.

26. Be careful when you are near, in, or near a tractor or equipment. Wear appropriate safety equipment (protective helmets, goggles, boots).
27. When you check equipment when the engine is running, the driver should be seated in the driver's seat. Take the nature of the equipment into account.
28. When you service the tractor in the field position the tractor on flat ground, if possible.
29. If this is not possible, use chocks to secure the tractor and equipment. Position the tractor on flat ground as soon as possible.
30. Watch out for twisted chains or cables. Do not lift or tow the tractor with twisted chains. Use thick gloves when you use chains or cables.
31. Make sure that cables are hooked and that the connection points are strong enough for the prescribed loads. Move people away from the connection points of chains and cables.
32. Keep your service area dry and clean. Clean the water or oil deposits.
33. Keep highly flammable material such as oily rags or grease cloths in a closed metal container. Check, adjust, and lock the driver's seat before you start the tractor. Make sure that no one is in the vicinity of the tractor.
34. Do not carry items in your pockets that could fall into spaces within the tractor.
35. If you do drop an item, wear protective goggles, steel-capped boots, thick gloves, and a hard hat when you try to retrieve the item.
36. Wear protective clothing, a helmet, and dark protective glasses when you weld. Make sure that those around you also wear dark protective glasses while you weld. **DO NOT LOOK AT WELDING LIGHT WITHOUT PROTECTIVE GLASSES**
37. Metal shavings may be present on steel wires. Use work gloves and protective gloves when you handle steel wires.
38. Hold parts carefully. Make sure that your hands or fingers do not get trapped between parts. Wear safety glasses, gloves, and boots as recommended by the authorities.

Index

Maintenance - 00

Start-up - 150

Start-up - Overview	5
Start-up - Technical Data LIQUID AND OIL CAPACITIES	4
Start-up - Warning SAFETY PRECAUTIONS	7



PRINTED IN TURKEY

© 2018 CNHI International All rights reserved.

No part of the text or illustrations of this publication may be reproduced.

CNHI International 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 the time of publication, but are subject to change without notice.

Availability of some models and equipment builds varies according to the country in which the equipment is being used. For exact information about any particular product, please consult your NEW HOLLAND dealer.

NEW HOLLAND is a trademark registered in the United States and many other countries, owned or licensed to CNH Industrial N.V., its subsidiaries or affiliates.

Any trademarks referred to herein, in association with goods and/or services of companies, other than owned by or licensed to CNH Industrial N.V., its subsidiaries or affiliates, are the property of those respective companies.



SERVICE MANUAL

Engine

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Contents

Engine - 10

[10.001] Engine and crankcase	10.1
-------------------------------------	------

CONSUMABLES INDEX

Consumable	Reference	PAGE
Loctite® 518™	Engine and crankcase - Install	10.1 / 16



Engine - 10

Engine and crankcase - 001

**WORKMASTER 55
WORKMASTER 65
WORKMASTER 75**

Contents

Engine - 10

Engine and crankcase - 001

SERVICE

Engine and crankcase

Disassemble	4
Install	13

CONSUMABLES INDEX

Consumable	Reference	PAGE
Loctite® 518™	Engine and crankcase - Install	10.1 / 16

Engine and crankcase - Disassemble

ENGINE – Removal

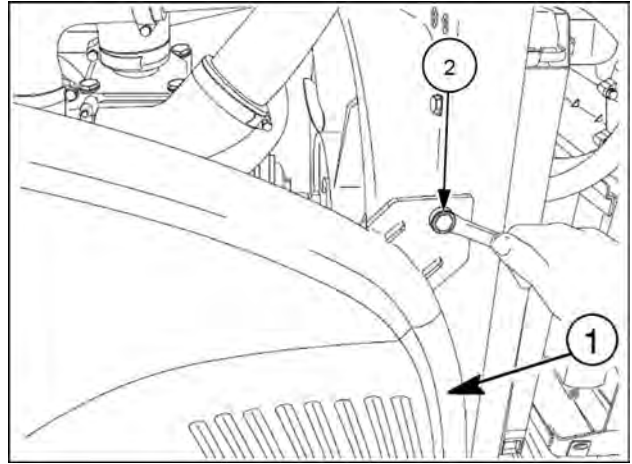
ATTENTION: Use appropriate equipment to hold and lift heavy parts.

Make sure that the body and parts are safely supported safely by ropes and hooks. Make sure that no one is close when you lift heavy loads.

ATTENTION: Use appropriate tools to align holes on parts. NEVER USE YOUR FINGERS OR HANDS

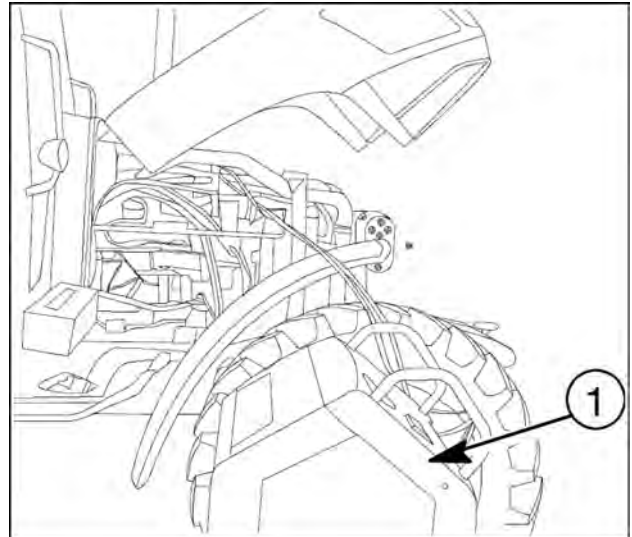
Follow these steps.

1. To access the engine, remove the protective covers (1) on either side. Remove the cover retaining bolts (2) and remove the side covers.



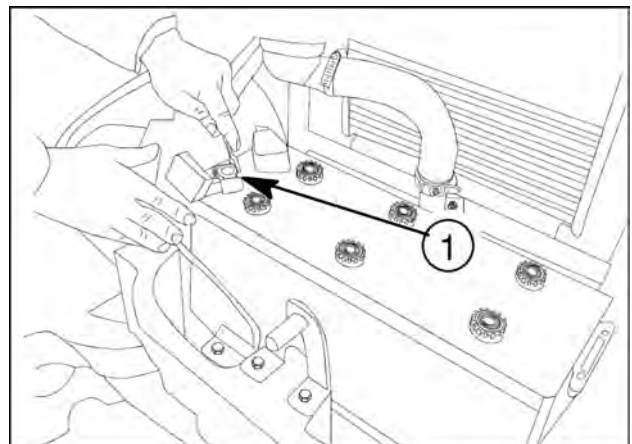
ANIL17TRO0925AA 1

2. Use the A/C device (1) to discharge the gas in the system. For this, use the A/C device pressure hose (red) and connect to the compressor's red bushing. Connect the blue hose to the compressor's blue bushing.



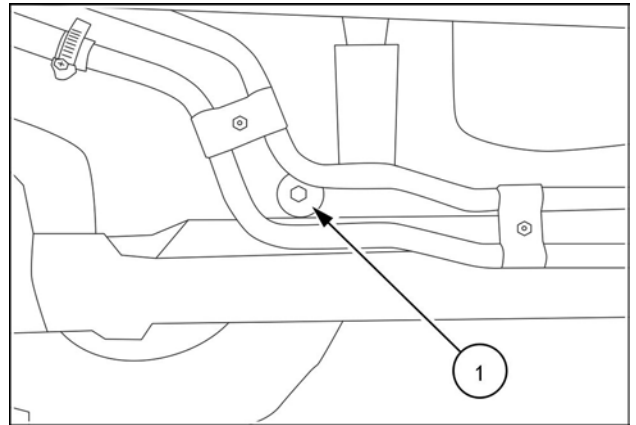
ANIL17TRO0926AA 2

3. Disconnect the battery terminals (1).

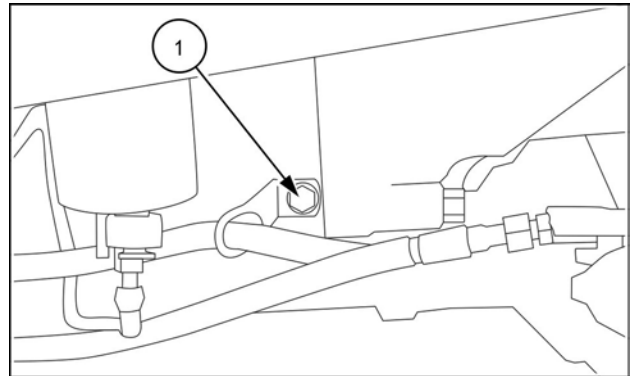


ANIL17TRO0927AA 3

4. Engage the handbrake. Remove the engine oil drain plug (1) on both side.

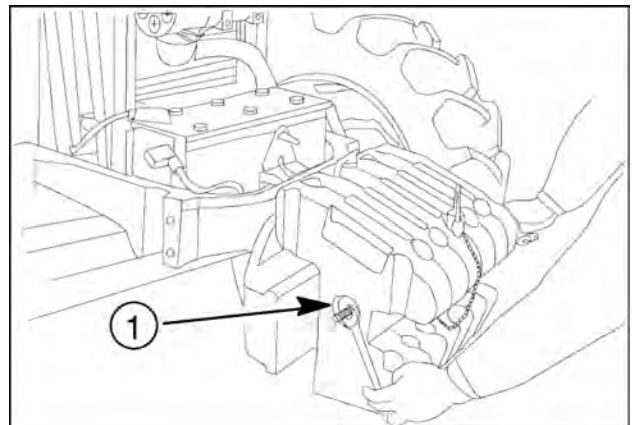


ANIL18TRO1093AA 4



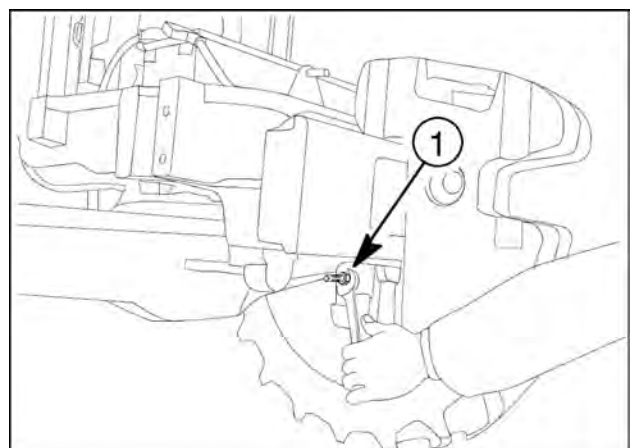
ANIL18TRO1092AA 5

5. Remove the front weight connection rod (1).



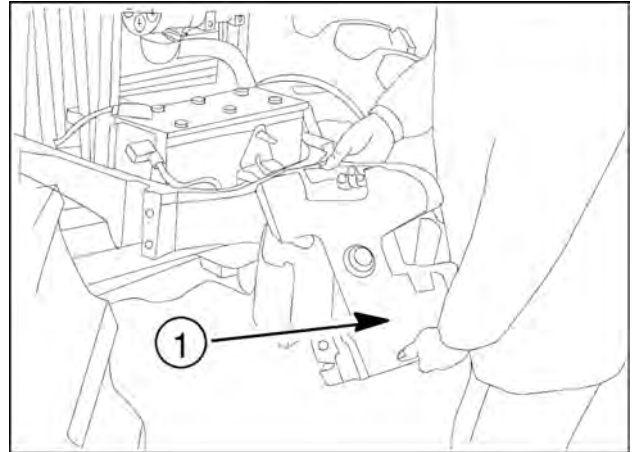
ANIL17TRO0992AA 6

6. Remove the front weight lower connection rod (1).



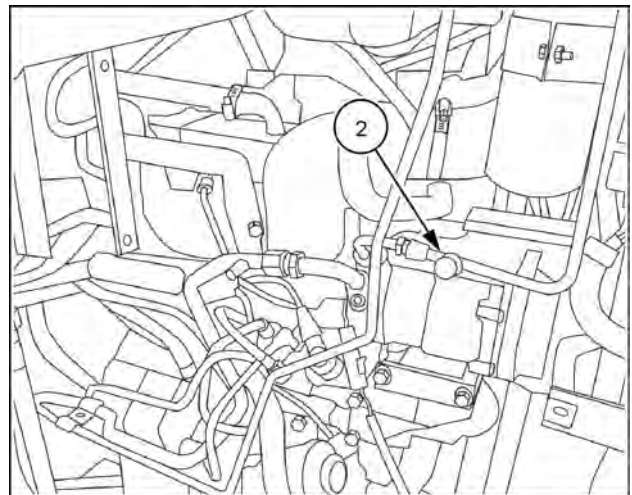
ANIL17TRO0930AA 7

7. Remove the front weights **(1)**.



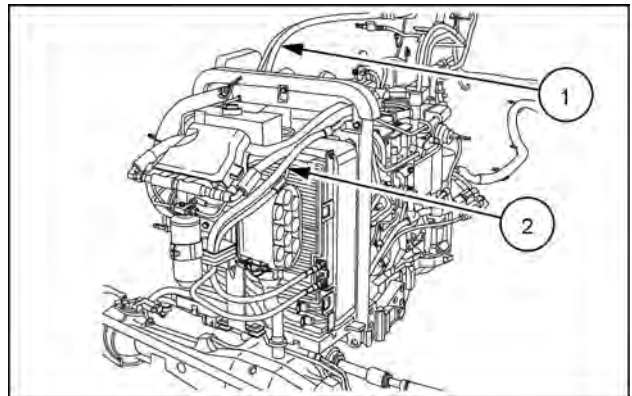
ANIL17TRO0931AA 8

8. **(1)**Use the specific tool to discharge the refrigerant from the system via the greasers and **(2)**. Remove the bracket strips and separate the two lines. 380000315



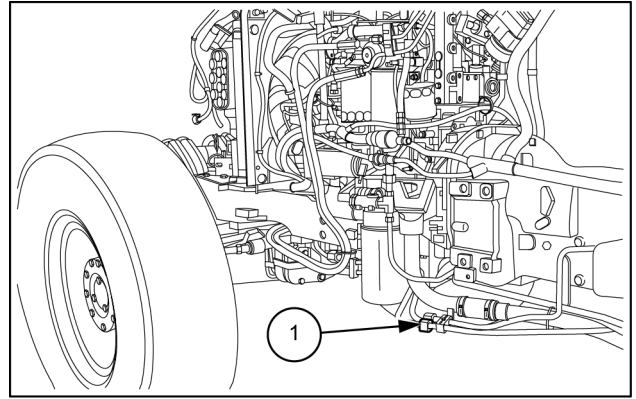
ANIL1800789AA 9

9. Disconnect lines **(1)** and **(2)** of the cab A/C and heating (if any).



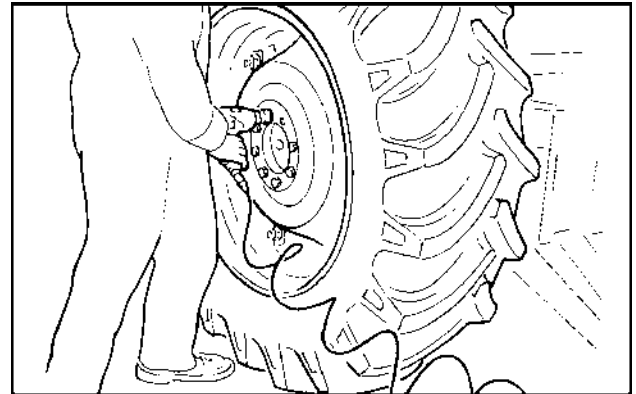
MOIL13TR02884AA 10

10. Separate the supply and return pipes for the **(1)** transmission cooling oil at the connection point. Disconnect the hoses from the supports on the engine block. .



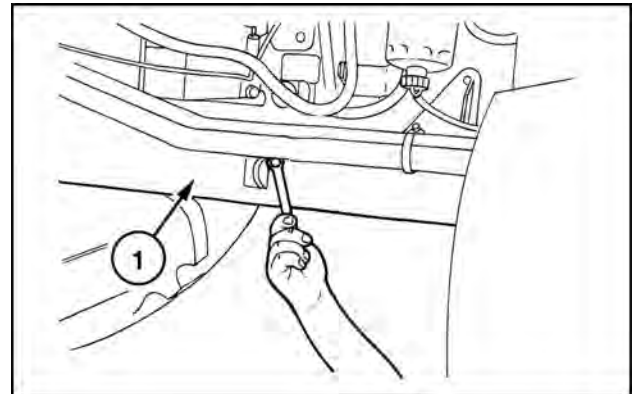
MOIL13TR02886AB 11

11. Lift the rear of the tractor with a hydraulic jack. Place a mechanical jack under the crawl speed gear housing. Use an air gun to remove the retaining nuts on the left rear wheel. Then remove the wheel.



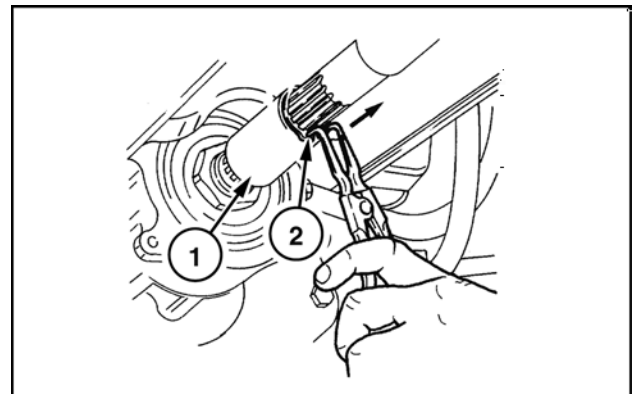
WLAPL4S10C110A 12

12. Remove the front center and rear retaining bolts on the front wheel drive control shaft housing. Then remove the guard. **(1)**.



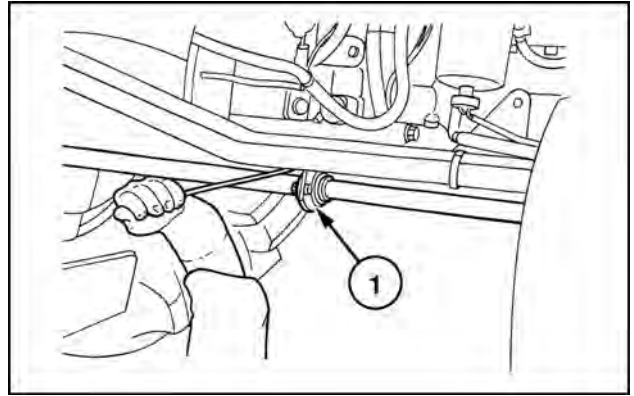
WLAPL4S10C112AA 13

13. Remove the retaining ring **(2)**. Move the front screen in the direction of the arrow **(1)** to remove the screen from the grooves on the front axle.



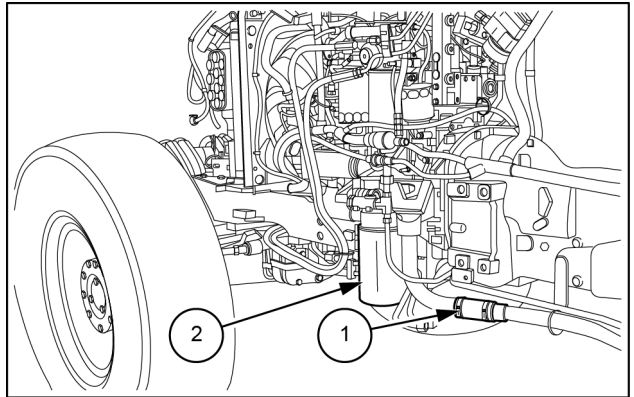
WLAPL4S10C113AA 14

14. Remove the retaining bolts of the middle bracket of the drive shaft **(1)**. Remove the shaft and the bracket. Remove the adjustment washer that adjusts the shaft space behind.



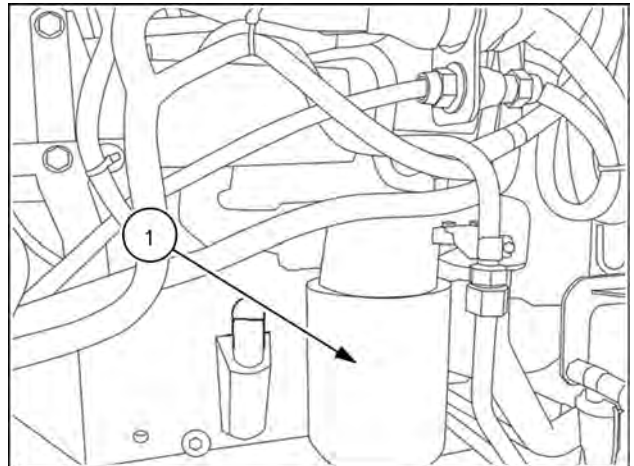
WLAPL4S10C115AA 15

15. Loosen the strips. Separate the suction hose **(1)** that goes to the oil filter from the transmission **(2)**.



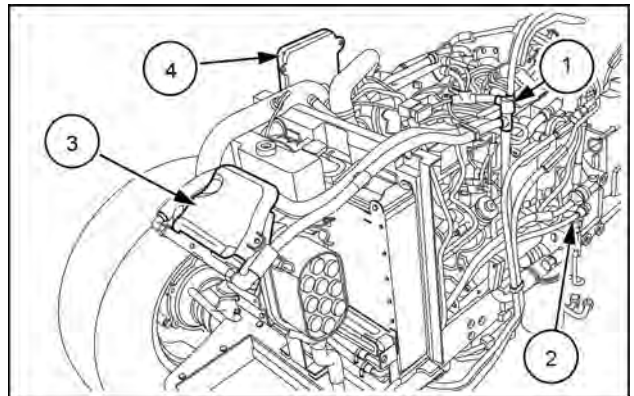
MOIL13TR02887AB 16

16. For machines with a hydraulic lifter and middle mounted valves, remove the oil feed pipe to the distributor of the lifting device and oil filter **(1)**.



ANIL18TR01094AA 17

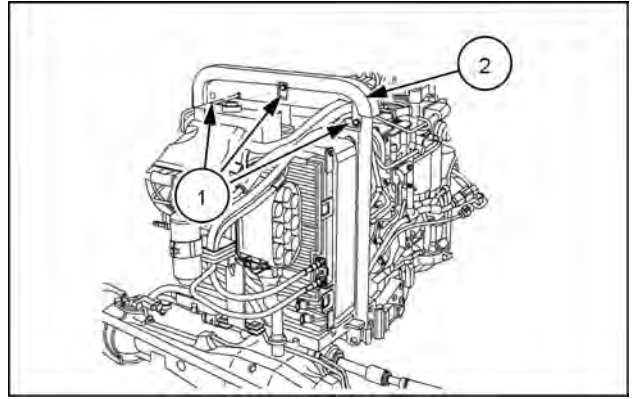
17. Disconnect all electrical connections that prevent the engine from being removed from the gearbox transmission housing. For example, the main connections **(1)**, the main cab and power connections **(2)**, the engine control unit connections **(3)**, the fuse box **(4)**, the sensors, and the extensions, depending on the tractor model.



MOIL13TR02889AB 18

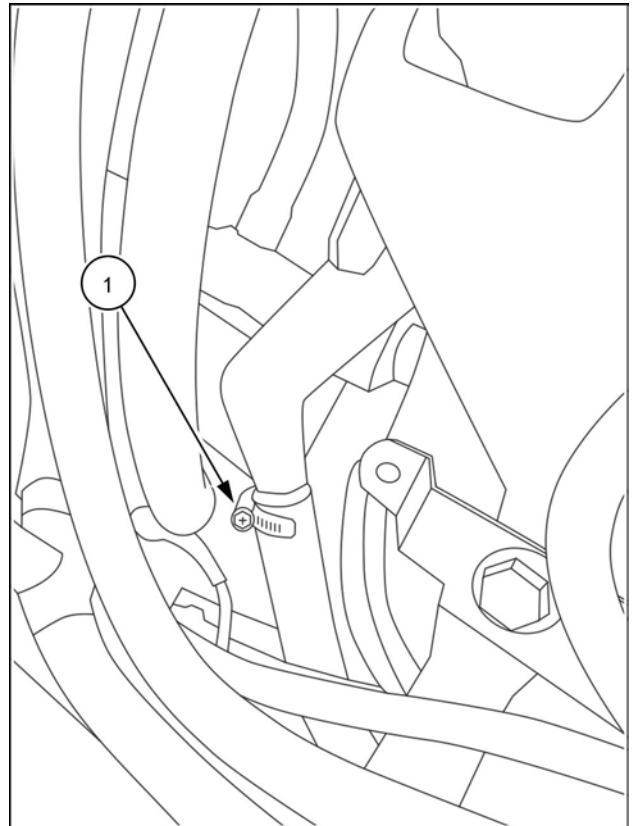
18. Remove the retaining bolts (1). Remove the top radiator guard (2). Remove all the remaining free wire bundles.

..



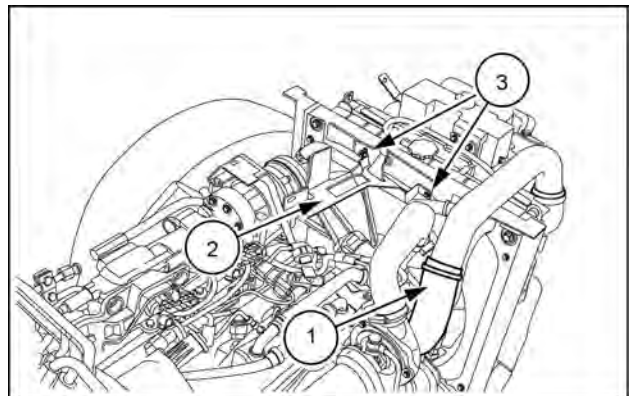
MOIL13TR02942AA 19

19. Loosen the strip on the inlet of the hose (1) that feeds fluid to the radiator. Disconnect the hose. Drain the engine radiator fluid and refill with fluid.
20. Remove the retaining strip. Hose (2) that returns the radiator fluid to the engine.



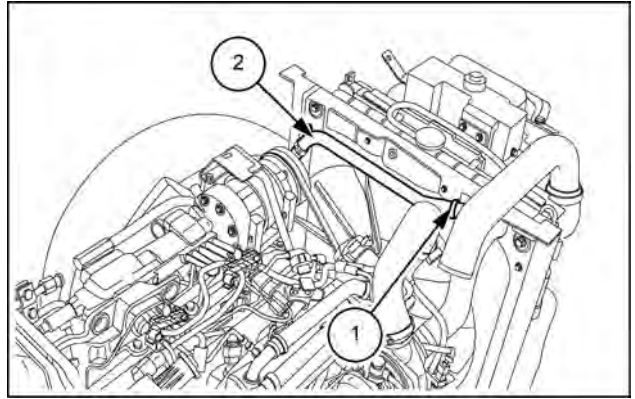
ANIL18TRO1099AA 20

21. Loosen the strip. Disconnect the hose (1) that runs from the air filter to the turbine. Next, remove the two bolts (3) and remove the bracket (2).



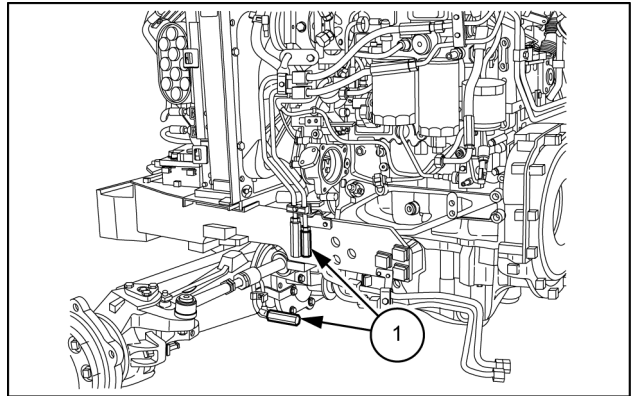
MOIL13TR02890AB 21

22. Loosen the strip **(1)**. Remove the hose **(2)** that connects the air filter to the injection pump. .



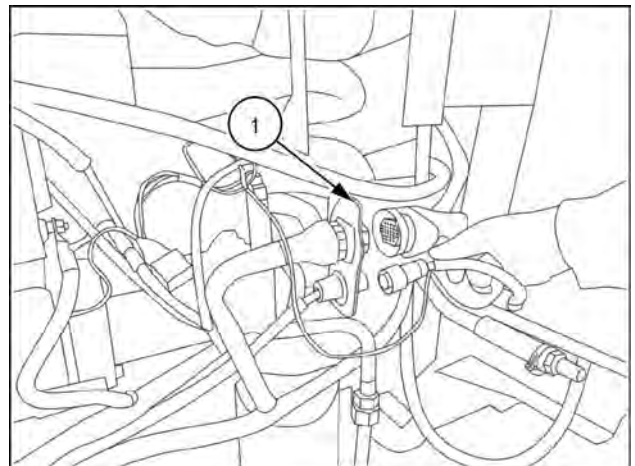
MOIL13TR02891AB 22

23. Disconnect the hydraulic steering hoses **(1)**. Disconnect the lines from the axle bracket. .



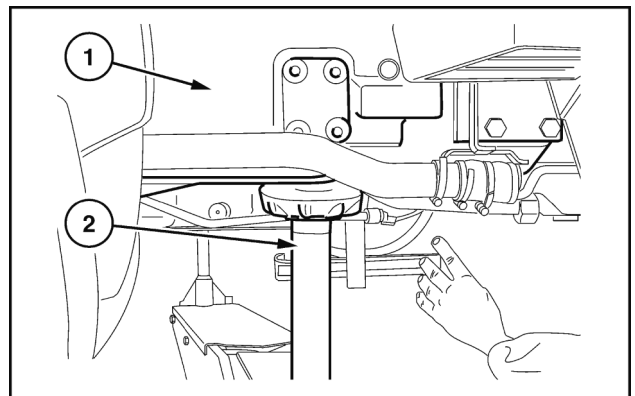
MOIL13TR02881AB 23

24. Unplug the headlamp and the signal cable bundle from the engine hood socket **(1)**.



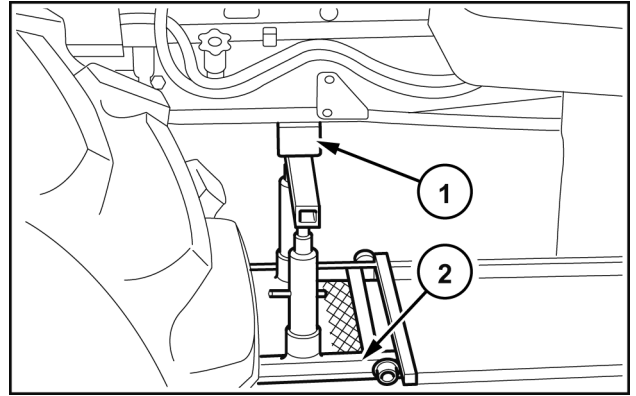
ANIL1898734AA 24

25. Attach chains or ropes to the lifting and eye bolts behind the engine and attach to a winch. Place a fixed lifting jack **(2)** under the clutch body **(1)** next to the engine retaining flange. Apply the handbrake.



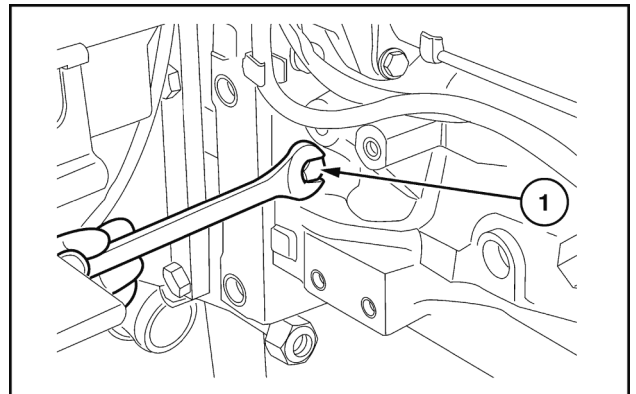
WLAPL4S10C129A 25

26. Place the moving tractor separator tool (2) under the engine with the mounting bracket and the adapter plate. Place a wooden block (1) at the points of contact between the tool and the motor. Chock the axle to prevent the axle from shaking. **380000405**.



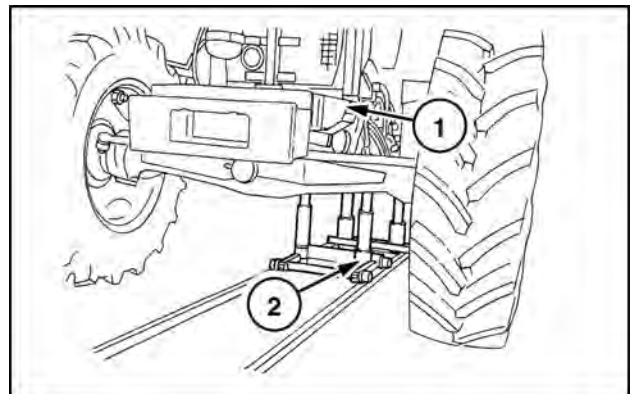
WLAPL4S10C140A 26

27. Remove the retaining bolts (1) between the engine and the transmission.



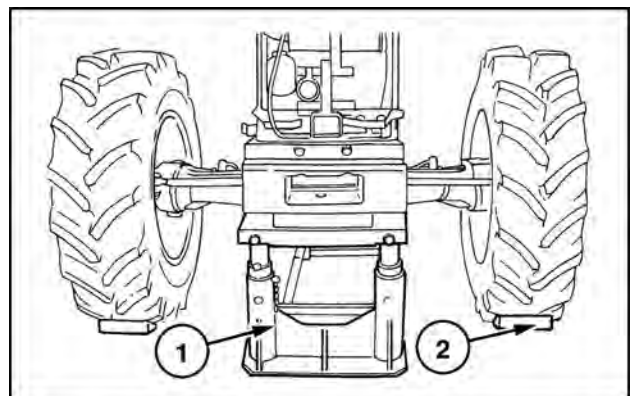
WLAPL4S10C130A 27

28. Separate the engine from the transmission with tool **380000405** (2). **380000405**.



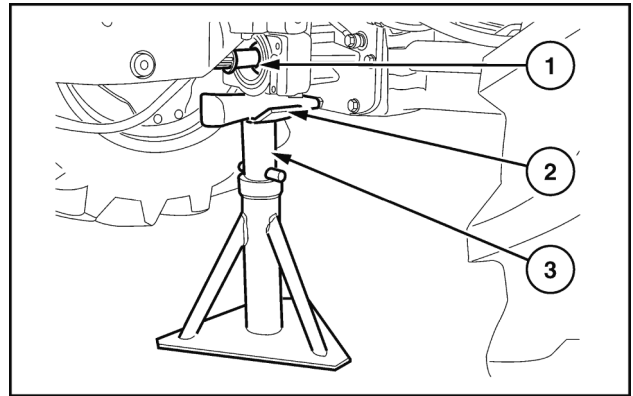
WLAPL4S10C131AA 28

29. Place the fixed lifting jack (1) under the additional weight support. Use wooden blocks (2) to secure the front wheels.



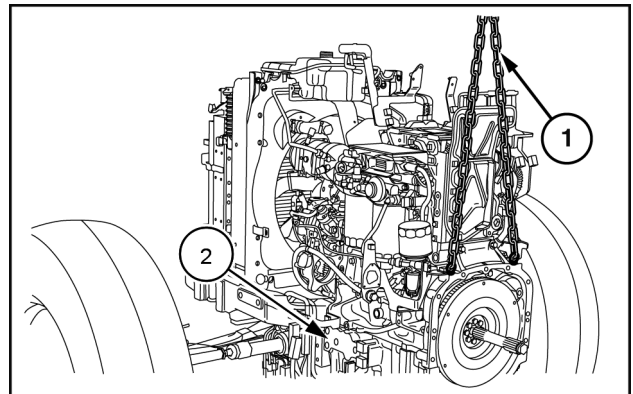
WLAPL4S10C132AA 29

30. Place a wooden stop between parts **(3)** and **(1)**. Place a fixed lifting jack **(3)** under the front axle drive groove **(1)** bracket.



WLAPL4S10C133A 30

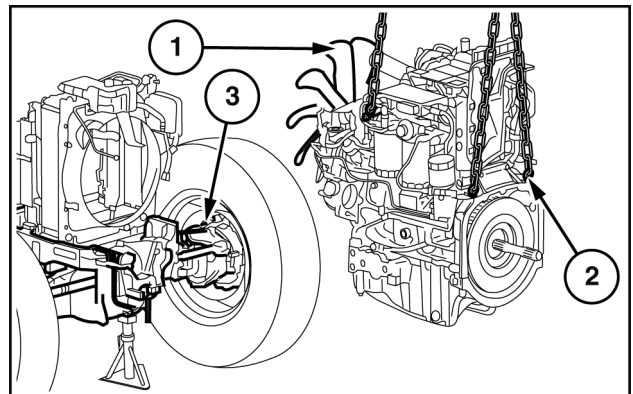
31. With the connection assembly firmly secure, place a lifting jack at the rear of the engine to leave slack in the winch. Add a rope or chain to the front of the engine **(1)**. Keep the engine balanced and take the slack out of the lifting assembly.



WLAPL4S10C136A 31

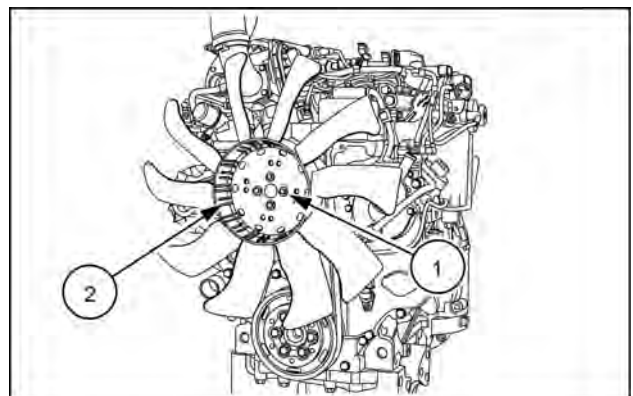
32. Remove the bolts that secure the front axle bracket to the engine **(2)**.

33. Check that there is no elbow between the engine and the radiator. Separate the engine **(2)** from the axle **(3)**. To prevent damage to the fins of the radiator on the engine ventilator **(1)** axle, try to avoid incorrect manoeuvres with the winch. Lower the engine **(2)** onto a support bracket.



WLAPL4S10C138A 32

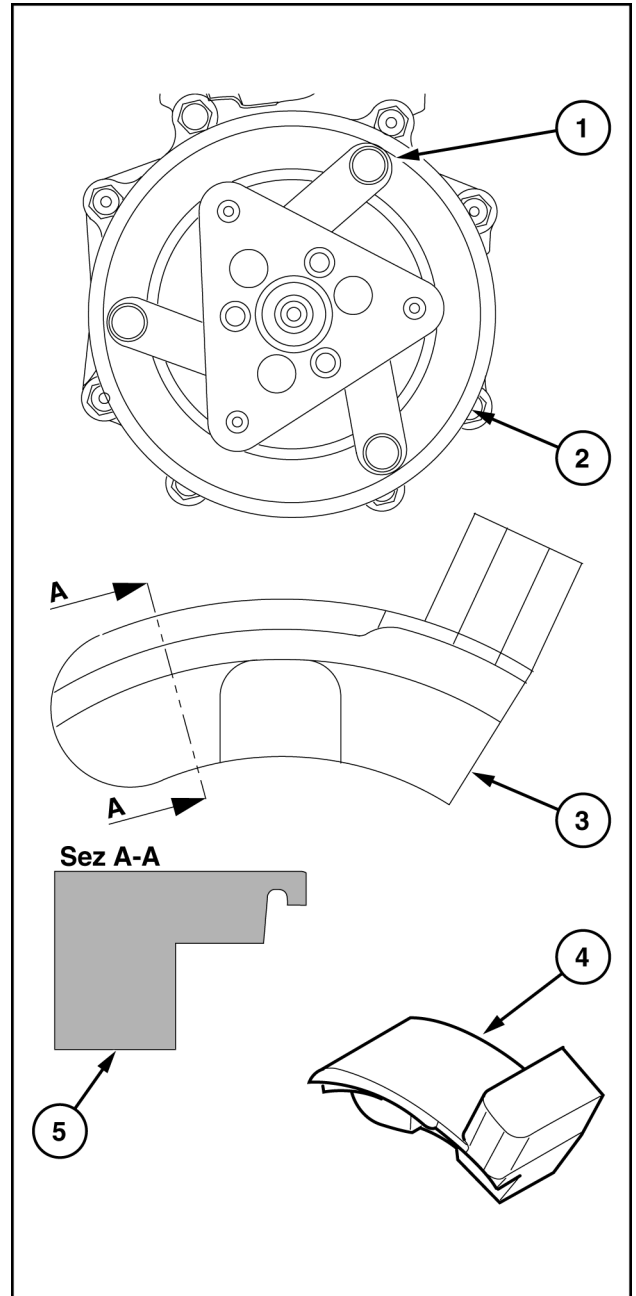
34. Loosen the four bolts **(1)**. Remove the fan **(2)**.



MOIL13TR02885AA 33

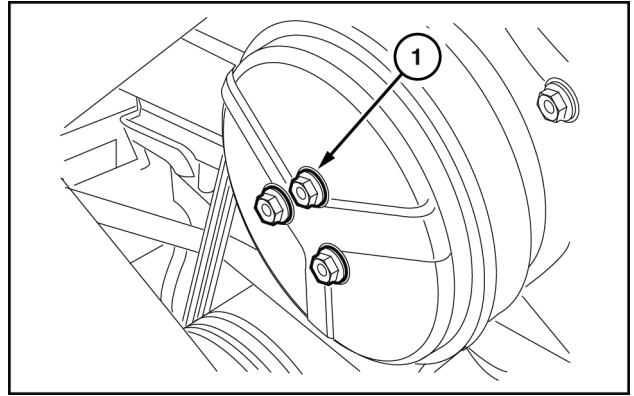
Engine and crankcase - Install

1. Reattach the flexible strap to the alternator and take the tension according to the procedure in the **Alternator - Tension adjust (55.301)** section.
2. Repeat this operation to reposition the compressor and the corresponding belt.
 - Put the compressor on the bracket together with the relevant hose bracket. Secure with the bolts.
 - - Use tool **380200011** to install the multi-V belt.
 - (1)The drive bracket of the compressor clutch actuator.
 - (2)Outer edge of the multi-V belt pulley.
 - (3)Tool space. Use to drive the tool. The bracket (1) is housed in this space
 - (4) Tail end. The multi-V belt drives the pulley socket.
 - (5) Coupling. This space around the outer edge (2) allows the tool to remain connected to the compressor. (2).



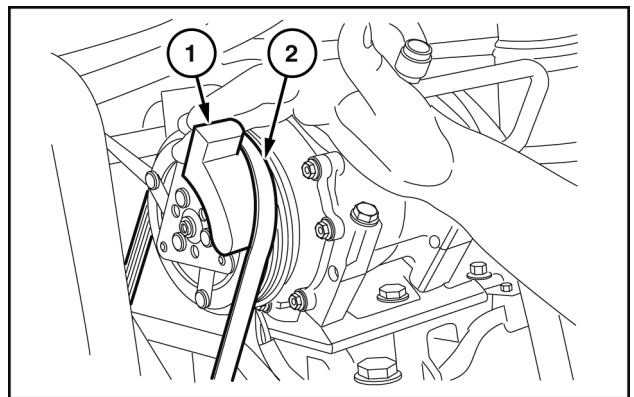
WLAPL4S10C101C 1

3. Remove the three bolts (1). Remove the corresponding dust cover for the compressor clutch.



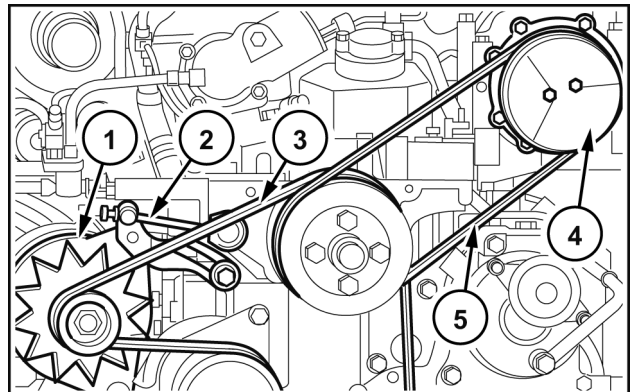
WLAPL4S10C142A 2

4. Make sure that the multi-V belt (2) is properly positioned in the ventilator pulley.
5. Move the belt (2) to the side of the compressor pulley. Hold tool 380200011 under the belt. Hook the compressor clutch from the innermost part of the tool to slightly stretch the belt.



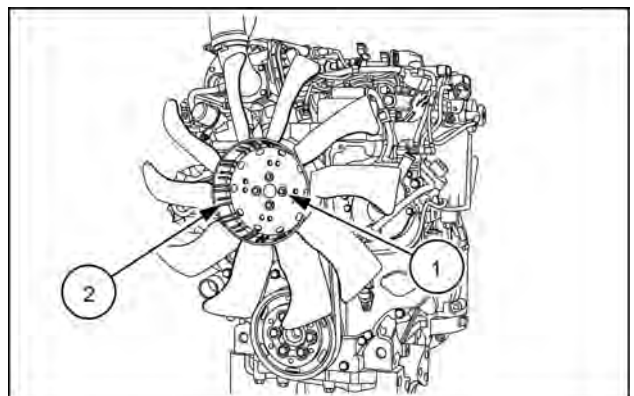
WLAPL4S10C143A 3

6. With your left hand on the ventilator and your right hand on the tool, turn both clockwise to move the belt along the compressor pulley. Replace the dust cap on the compressor clutch. To prevent loosening, make sure that locking film covers the ends and tighten the three screws.
7. Position the alternator (1) and elastic belt (3). Tighten the belt tensioner (2).



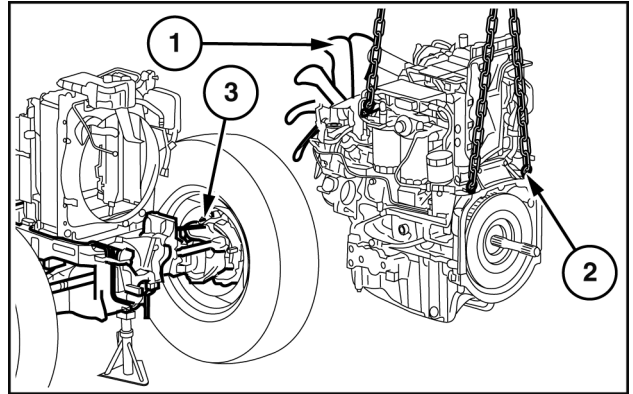
WLAPL4S10C145A 4

8. Position the ventilator (2). (1) Tighten the four screws to the correct torque value.



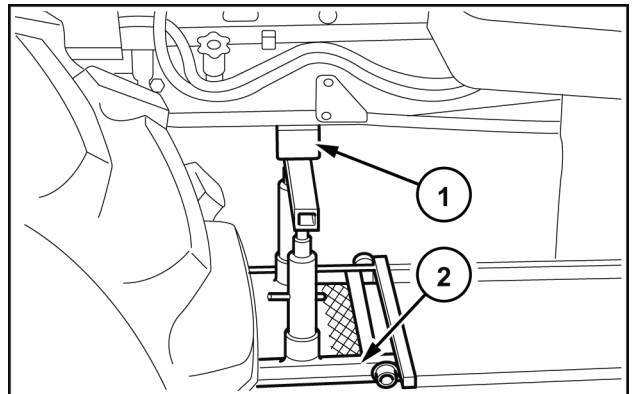
MOIL13TR02885AA 5

9. Place the three hooks of the chain in the holes on the engine. Use a winch to lift the engine completely from the platform bracket.
10. Position the engine **(2)** on the front axle. **(3)**. To prevent damage to the fins of the radiator on the engine ventilator, try to avoid incorrect manoeuvres with the winch. **(1)**.
Then combine the two components with the special adjustment bolts and the necessary adjustment spacers of the sump/cylinder block bracket.



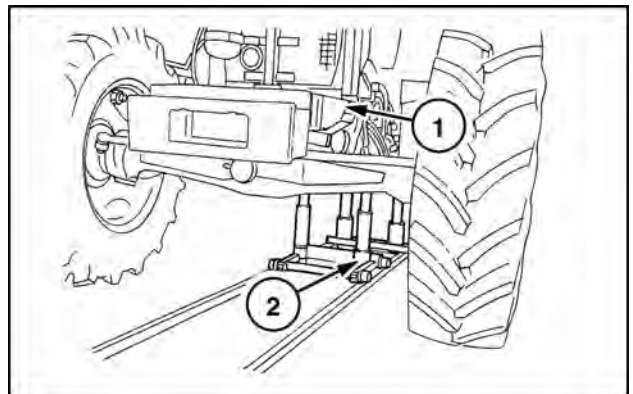
WLAPL4S10C138A 6

11. Reposition the moving tool under the engine to disassemble the tractors **(2)**. Place a wooden block between the contact points of the tool **(1)** and engine.



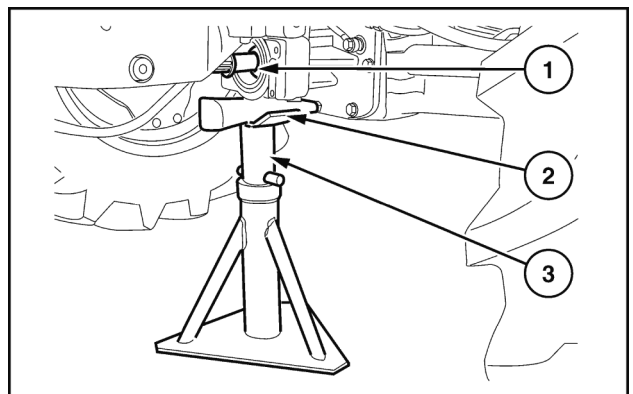
WLAPL4S10C140A 7

12. With a winch, position the engine **(1)** on the tool **(2)**. Remove the bolts attached previously to the rear of the engine for the purposes of lifting.



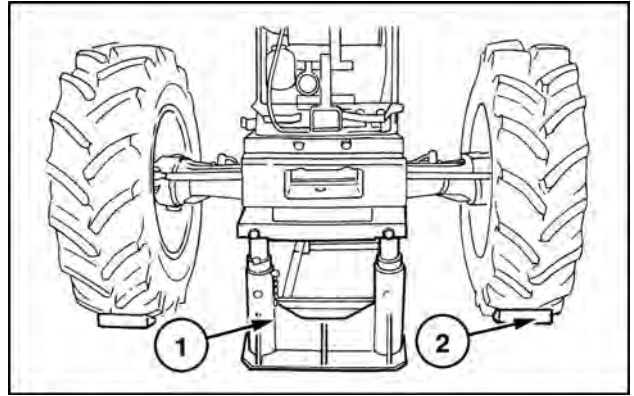
WLAPL4S10C131AA 8

13. Remove the fixed lifting jack **(3)** and the wooden wedge **(2)** previously positioned under the groove bracket of the front axle drive shaft **(1)**. **(2)**.



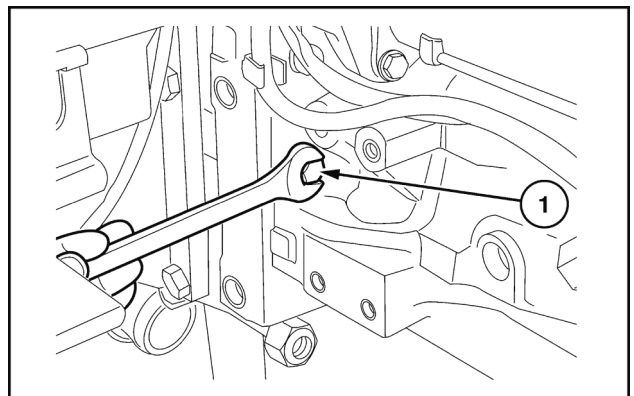
WLAPL4S10C133A 9

14. Remove the fixed lifting jack **(1)** previously placed under the additional weight bracket. Remove the chocks **(2)** that secure the front wheels. **(2)**



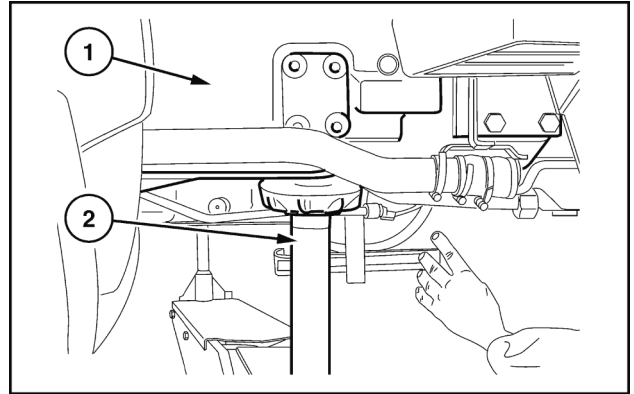
WLAPL4S10C132AA 10

15. Remove the sealant from the two surfaces of the engine and housing.
16. Apply **LOCTITE® 518™** and sealant to the matching surfaces of the motor and the clutch housing.
17. Place a wooden chock under the right rear wheel. Make sure that the handbrake is fully applied and that all fixed and movable stands are securely positioned.
18. The assembly phase described here requires the presence of two or three workers to use the special moving tool needed to dismantle the tractor, and to move the engine/front axle housing towards the gearbox housing.
19. When you mount the engine/front axle assembly to the gearbox housing, push the front wheels to prevent the hoses and the cables/electrical connections being trapped between the two parts. In this phase you also need to turn the crankshaft with the radiator cooling fan to help establish a connection between the sleeve and the drive shaft.
20. Tighten all the retaining bolts **(1)** that connect the engine to the gearbox housing to connect the two assemblies. **(1)**



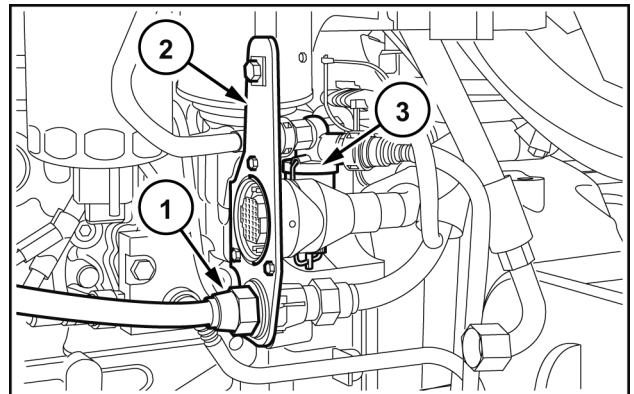
WLAPL4S10C130A 11

21. Remove the winch chains. Remove the lifting jack (1) previously positioned under the clutch housing (2). Remove the moving tool used to disassemble the tractors.



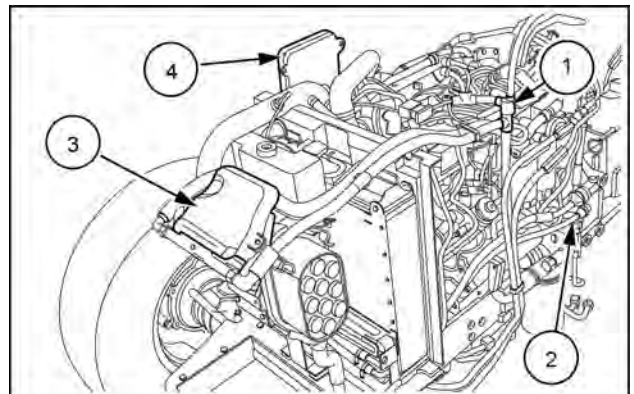
WLAPL4S10C129A 12

22. Reinstall the support bracket (2) of the cab connectors (1), the cab electrics, and the cup filter (3). Connect the mechanical diesel automator connection on the sediment filter of the cup filter.
23. Connect the cab electrical cable connector (1) on the left side. Put the connector on the maxi fuse box and fasten with the cuffs.



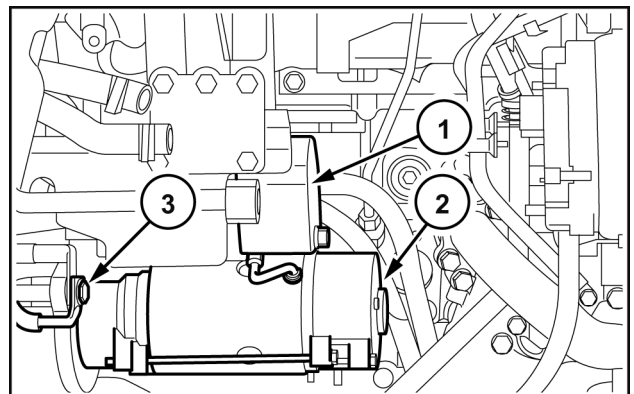
WLAPL4S10C139A 13

24. Lay the FPT engine cable on the machine. Reconnect the various connections. Secure the cables with the cuffs.
- Reconnect the main electrical connections (1), the cab connections and power (2), the engine control connections (3), the fuse section (4) and connections, the sensors, and the extensions, depending on the tractor model.



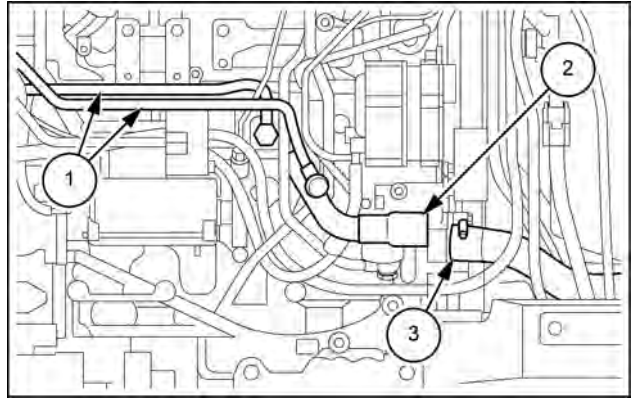
MOIL13TR02889AB 14

25. Reattach the starter motor (2). Then connect the engine chassis cable and battery system. Secure the chassis cable with the bolt (3).
26. On the right-hand side, reconnect the positive battery cable and wiring harness to the starter motor and alternator. Put the cover (1) back onto the starter motor (2).



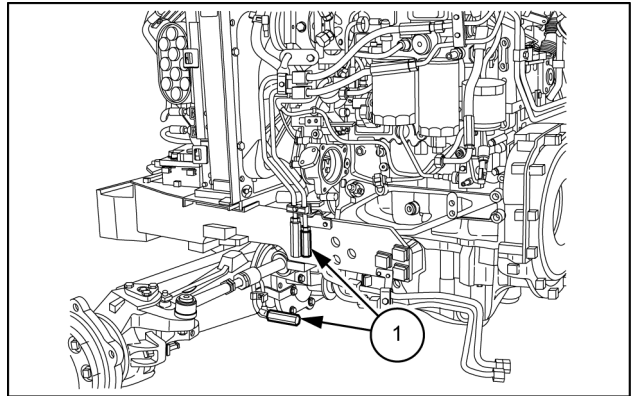
WLAPL4S10C135A 15

27. Reinstall the two feed and return pipes to the cab heater (1) and the hose (3) from the expansion tank, which is attached to the bottom sleeve.



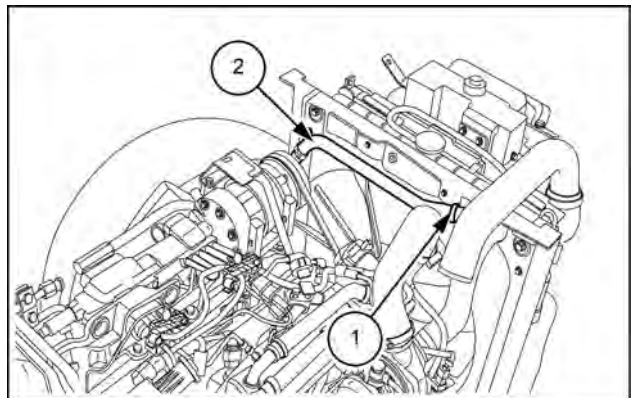
MOIL13TR01739AB 16

28. Install and connect the hydraulic steering (1). Secure the hydraulic steering lines to the front axle bracket.



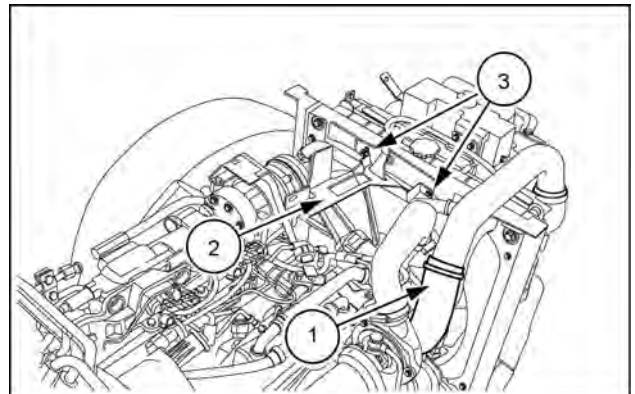
MOIL13TR02881AB 17

29. Connect the hose (2) that connects the air filter to the injection pump. Tighten the strip (1) to secure the hose.



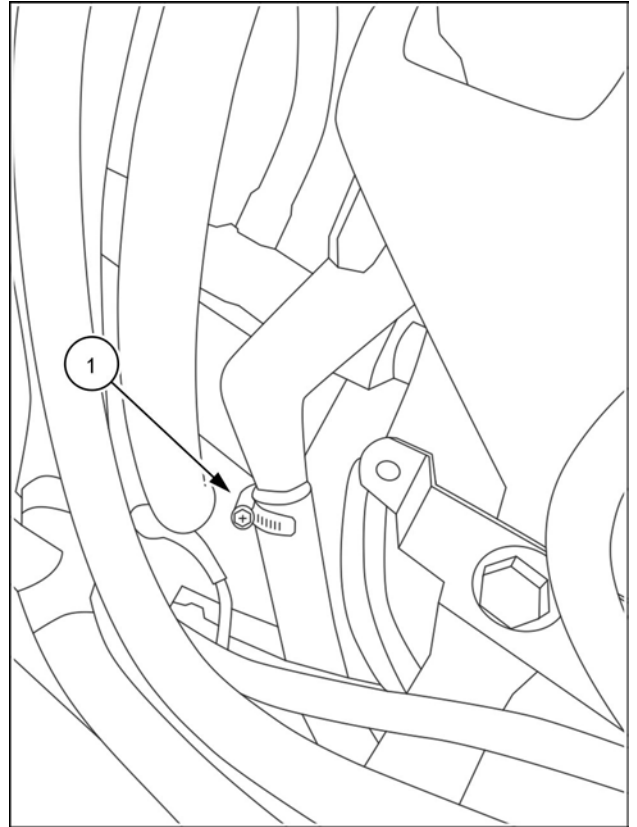
MOIL13TR02891AB 18

30. Connect the hose that runs from the air filter to the turbine. Tighten the strip to secure the hose. (1)
 . - - Also reattach the hood bracket (2). Tighten the two bolts (3) to secure the hood bracket.



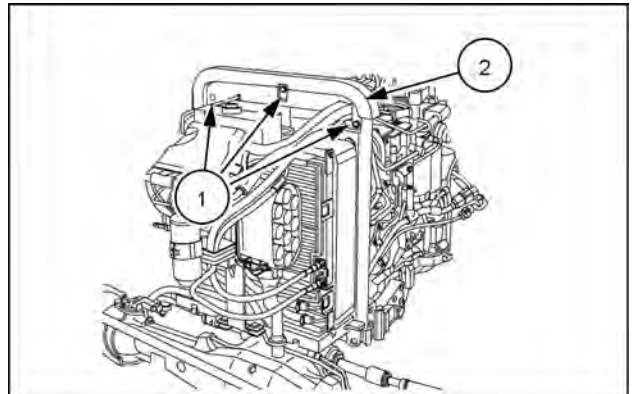
MOIL13TR02890AB 19

31. Install the hose (1) that supplies radiator fluid to the radiator. Tighten the strip to secure the hose.



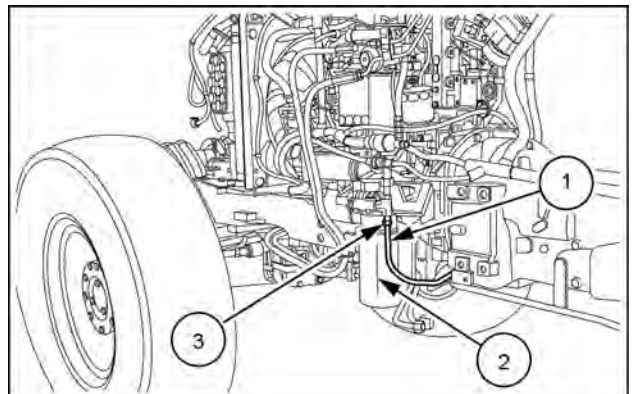
ANIL18TRO1099AA 20

32. Attach the top radiator guard (2). Make sure to position the electrical wiring bundles and hoses correctly in the slots between the shield and the radiator. Tighten the three radiator guard bolts (1).



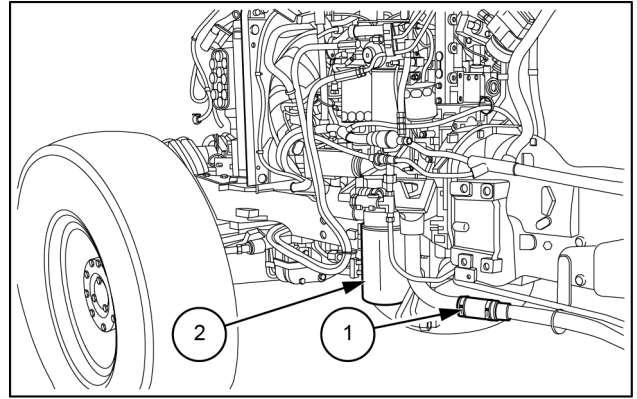
MOIL13TR02942AA 21

33. Install the transmission oil filter (2).
.For machines with a hydraulic lifter and middle mounted valves, connect and secure the oil feed hose to the distributor of the lifting device and the middle mounted valves (1), if any, at the connection point (3).



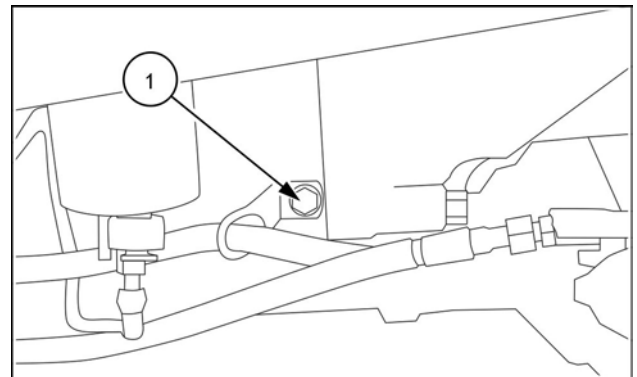
MOIL13TR02888AB 22

34. Connect the transmission oil feed hose (1) to the filter (2). Use the strips to secure the feed hose. .

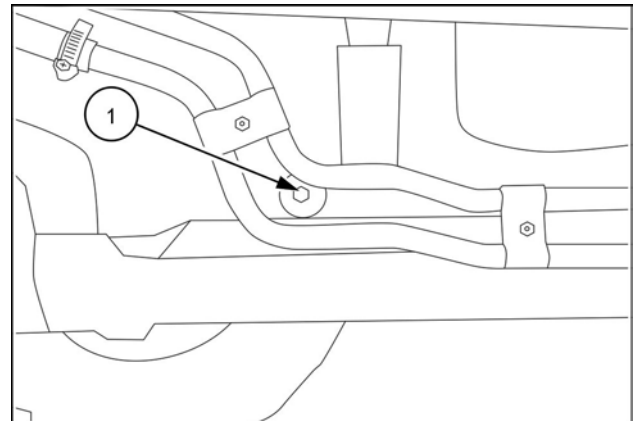


MOIL13TR02887AB 23

35. Reinstall the transmission oil drain plug (1) on both side. Use a pump to refill the oil.

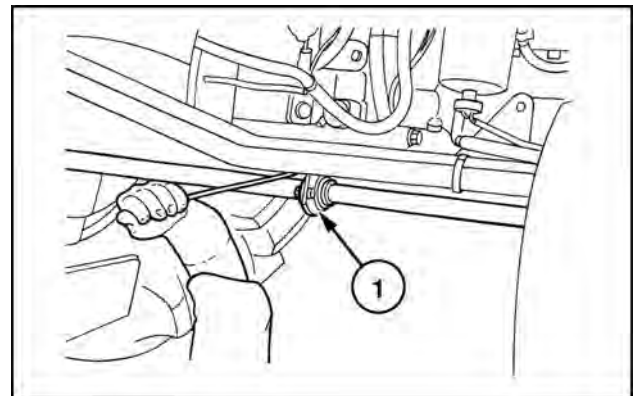


ANIL18TRO1092AA 24



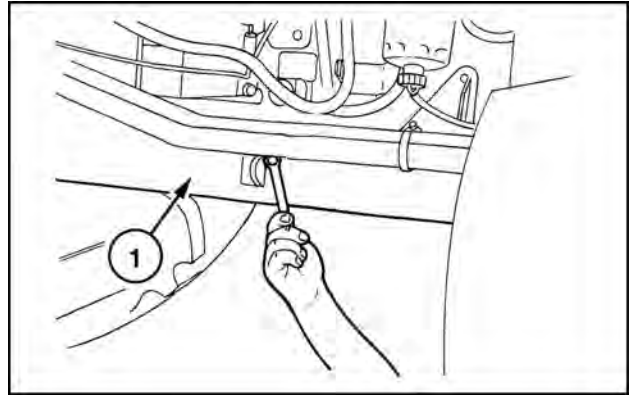
ANIL18TRO1093AA 25

36. Reattach the drive shaft with its center bracket (1) and retaining bolts. Install the adjustment washer. Adjust the shaft movement. .



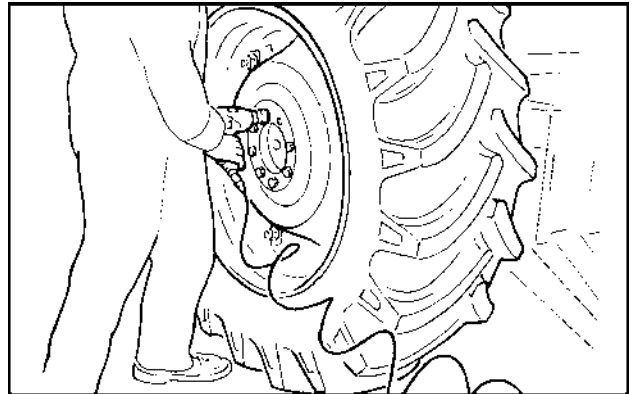
WLAPL4S10C115AA 26

37. Reinstall the front axle control shaft guard (1). Tighten the front, center, and rear retaining bolts.



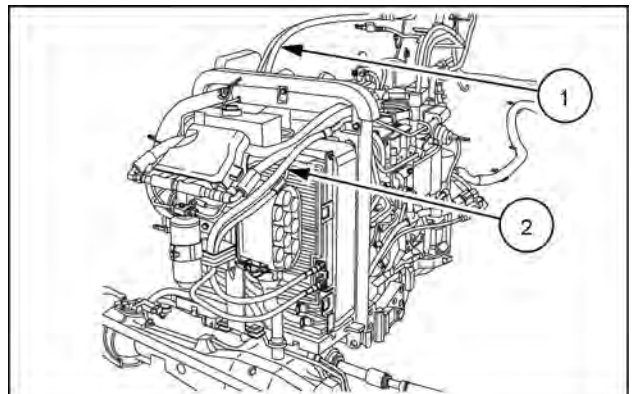
WLAPL4S10C112AA 27

38. Use a hydraulic jack to lift the rear of the tractor. Remove the mechanical lifting jack from under the left crawl speed gear. Lower the wheels onto the ground. Use an air gun to tighten the retaining bolts.



WLAPL4S10C110A 28

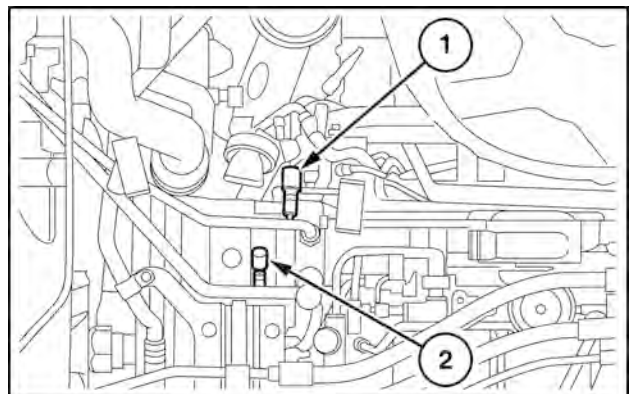
39. Connect and secure lines (1) and (2) to the cab A/C and heater systems (if any).



MOIL13TR02884AA 29

40. Reconnect the air conditioner lines (1) and (2) to the compressor. Secure the lines with cuffs and brackets.

41. Use the defined control unit 380000315 to fill the A/C system with coolant gas.



WLAPL4S10C106AA 30

This as a preview PDF file from best-manuals.com



Download full PDF manual at best-manuals.com