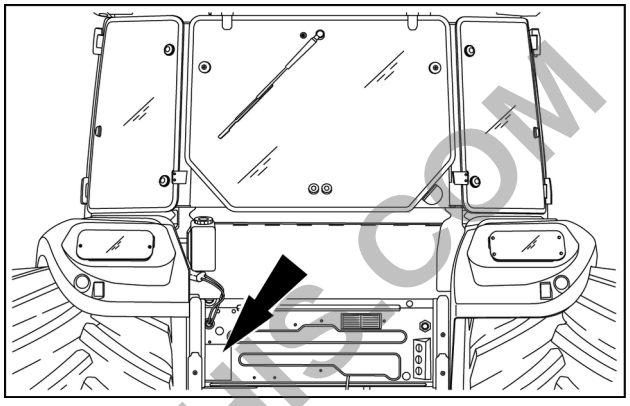
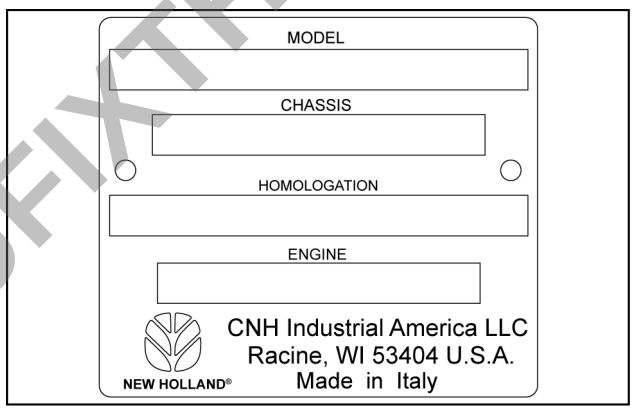
Identification plates

Product Identification Numbers (PIN) and serial numbers identify the tractor and its main components. The identification data must be supplied by the dealer for requests for spare parts or service operations. Identification data is of fundamental importance in the event of theft of the tractor. The following provides the locations of the identification data.

(1) Tractor type-approval data plate



MOIL16TR03479AA 1

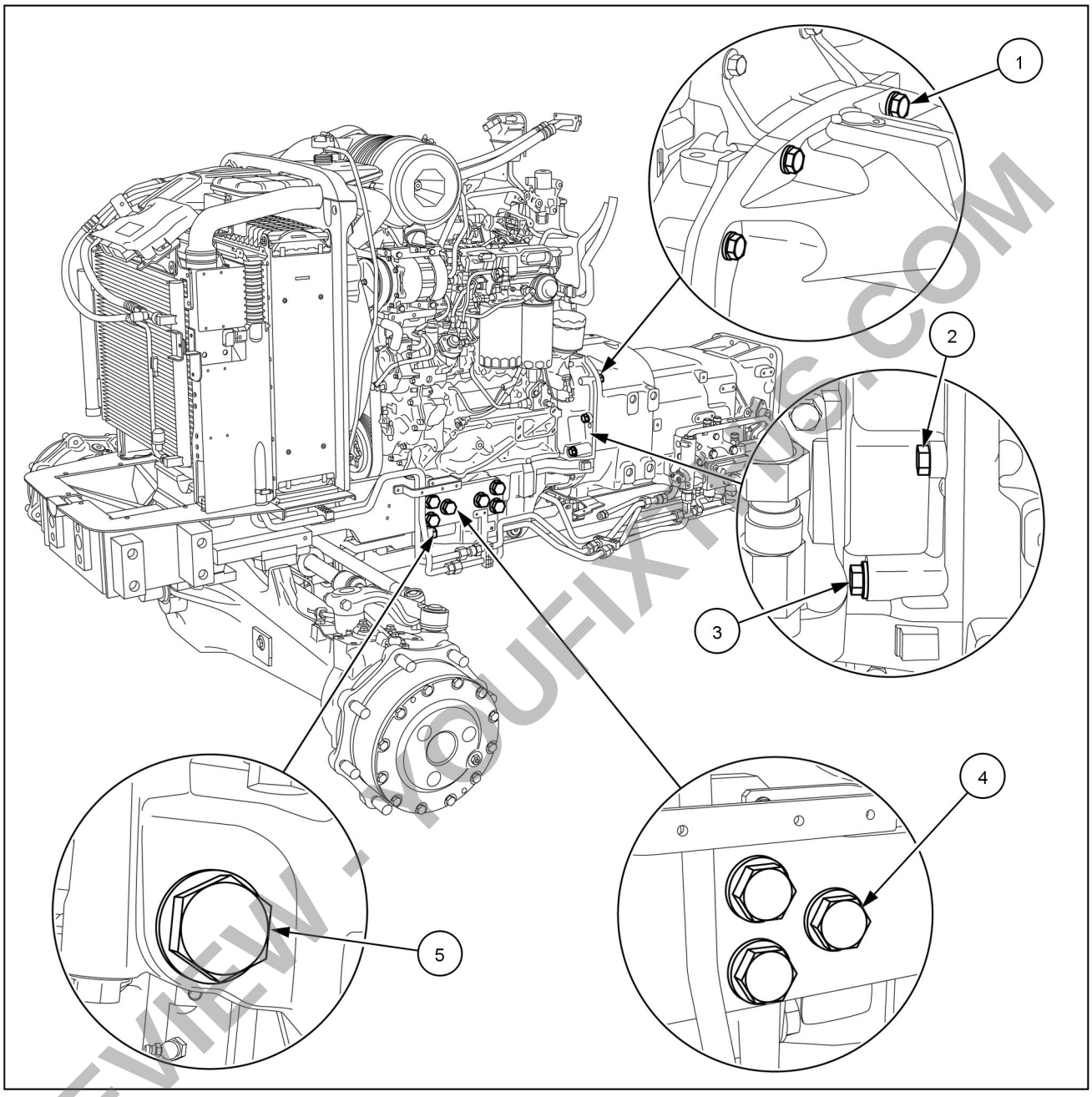


MOIL14TR00019AA 2

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Engine - Torque



MOIL17TR02997GA 1

Part to tighten	Thread	Tighten torque
Bolt **(5)** securing the front axle to the engine block	M20 x 1.5 x 130	**587 N·m** (**432.95 lb ft**)
Bolt **(4)** securing the engine block to the front axle	M20 x 1.5 x 110	**587 N·m** (**432.95 lb ft**)
Bolt **(1)** securing the gearbox to the engine block	M12 x 1.25 x 50	**121 N·m** (**89.25 lb ft**)
Bolt **(2)** securing the engine block to the gearbox	M12 x 1.25 x 50	**121 N·m** (**89.25 lb ft**)
Bolt **(3)** securing the engine block to the gearbox	M12 x 1.25 x 90	**121 N·m** (**89.25 lb ft**)

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Master clutch release control - Install

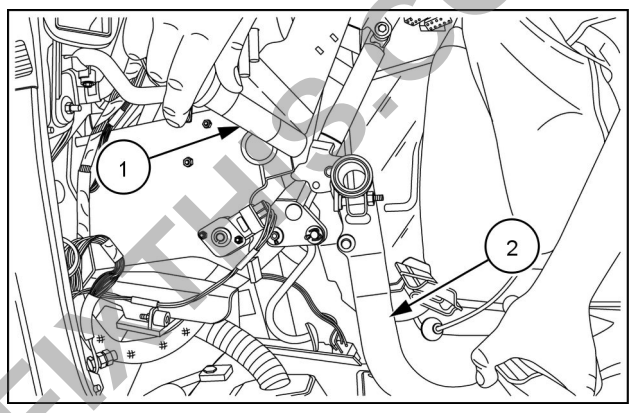
⚠ WARNING

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

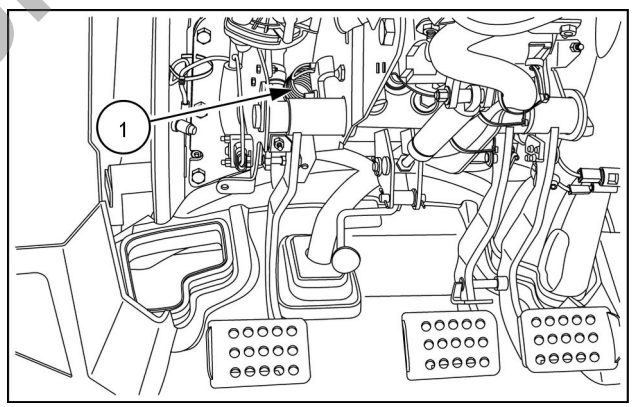
Prior operation:
Master clutch release control - Remove (18.100).

1. Position the clutch pedal **(2)** on the pedal bracket and insert the anchor pin **(1)**.



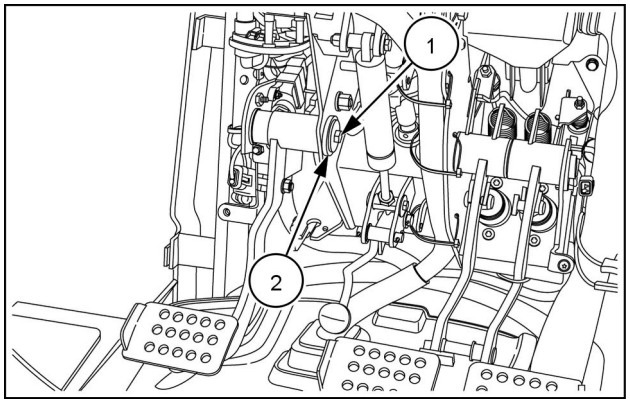
MOIL16TR01626AA 1

2. Fit the clutch pedal return spring **(1)**.



MOIL16TR01625AA 2

3. Position the washers **(2)** and tighten the inside bolt **(1)** securing the pin.



MOIL16TR01624AA 3

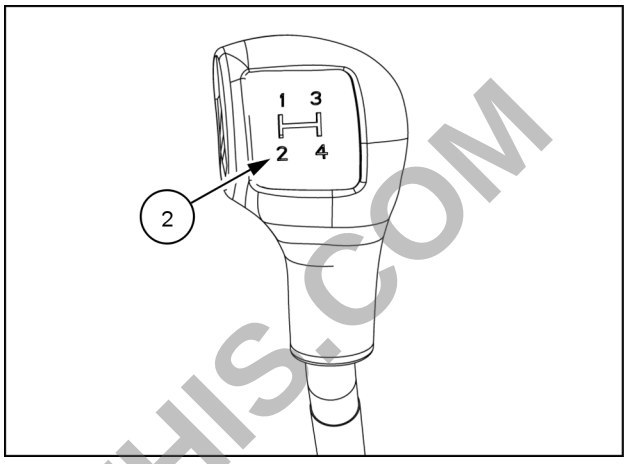
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Mechanical transmission external controls - Adjust - Gear and range control cables

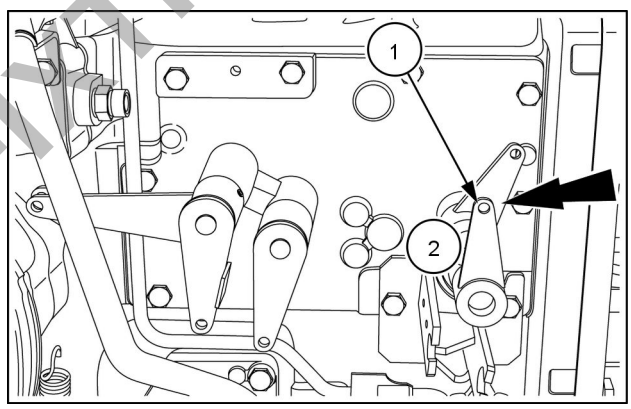
First/second gear cable (white cable)

1. Pull the shift lever in the cab into position **(2)**.



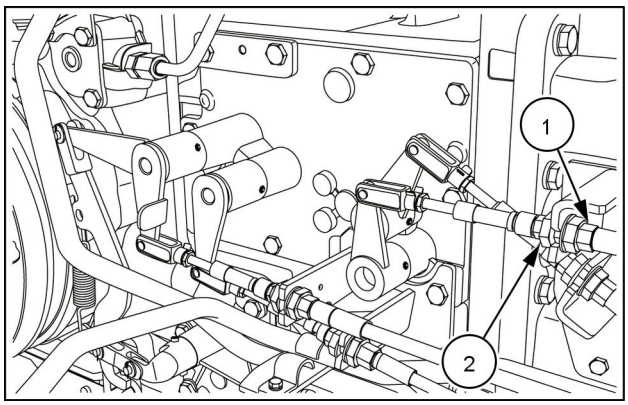
NHVM12TR00685AA 1

2. Move the first/second lever **(1)** on the right-hand side of the transmission to position **(2)**.



MOIL17TR00397AA 2

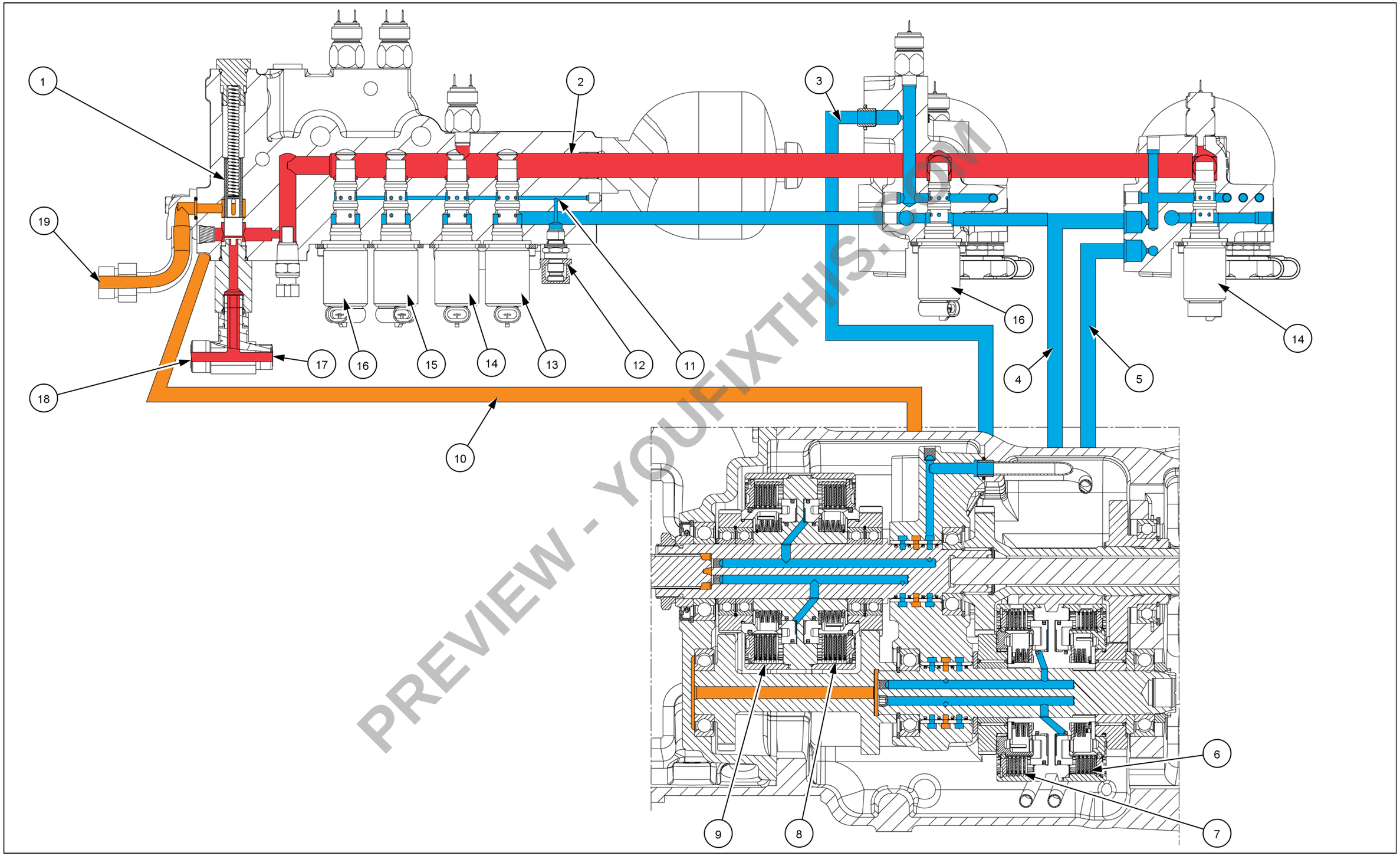
3. Loosen nuts **(1)** and **(2)** completely.
4. Push the white cable, applying a load of approximately **5 kg** (**11.0 lb**), and screw the nut **(1)** to the mounting bracket until the clevis can be connected to the lever.
5. Loosen the nut **(1)** two revolutions.
6. Tighten the nut **(2)** to the mounting bracket until the specified torque of **15 N·m** (**11.1 lb ft**) is reached.



MOIL17TR00395AA 3

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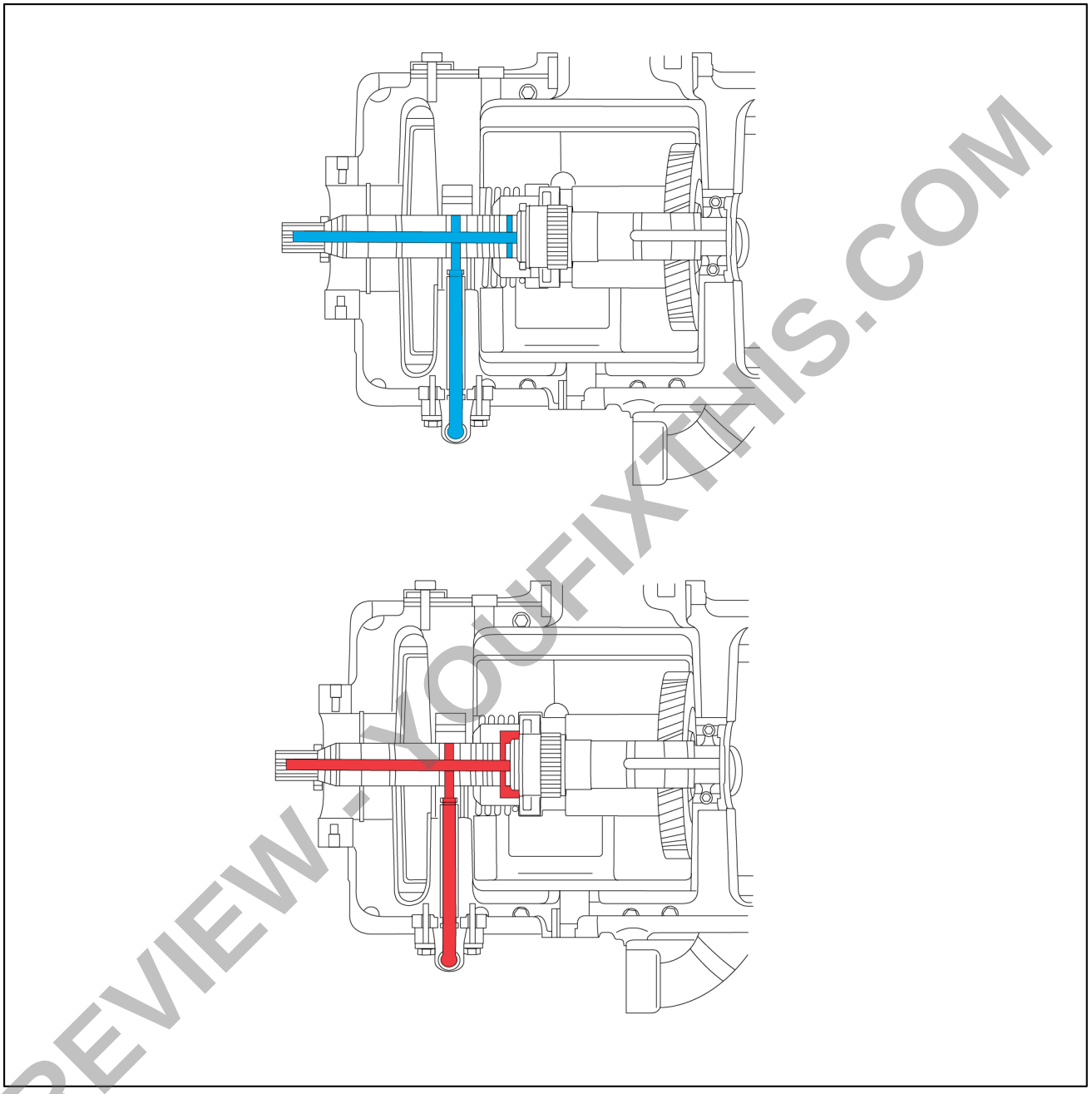
MOIL16TR01163JB 1

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Electro-hydraulic control - Hydraulic schema

Electro-hydraulically engaged/disengaged drive gear



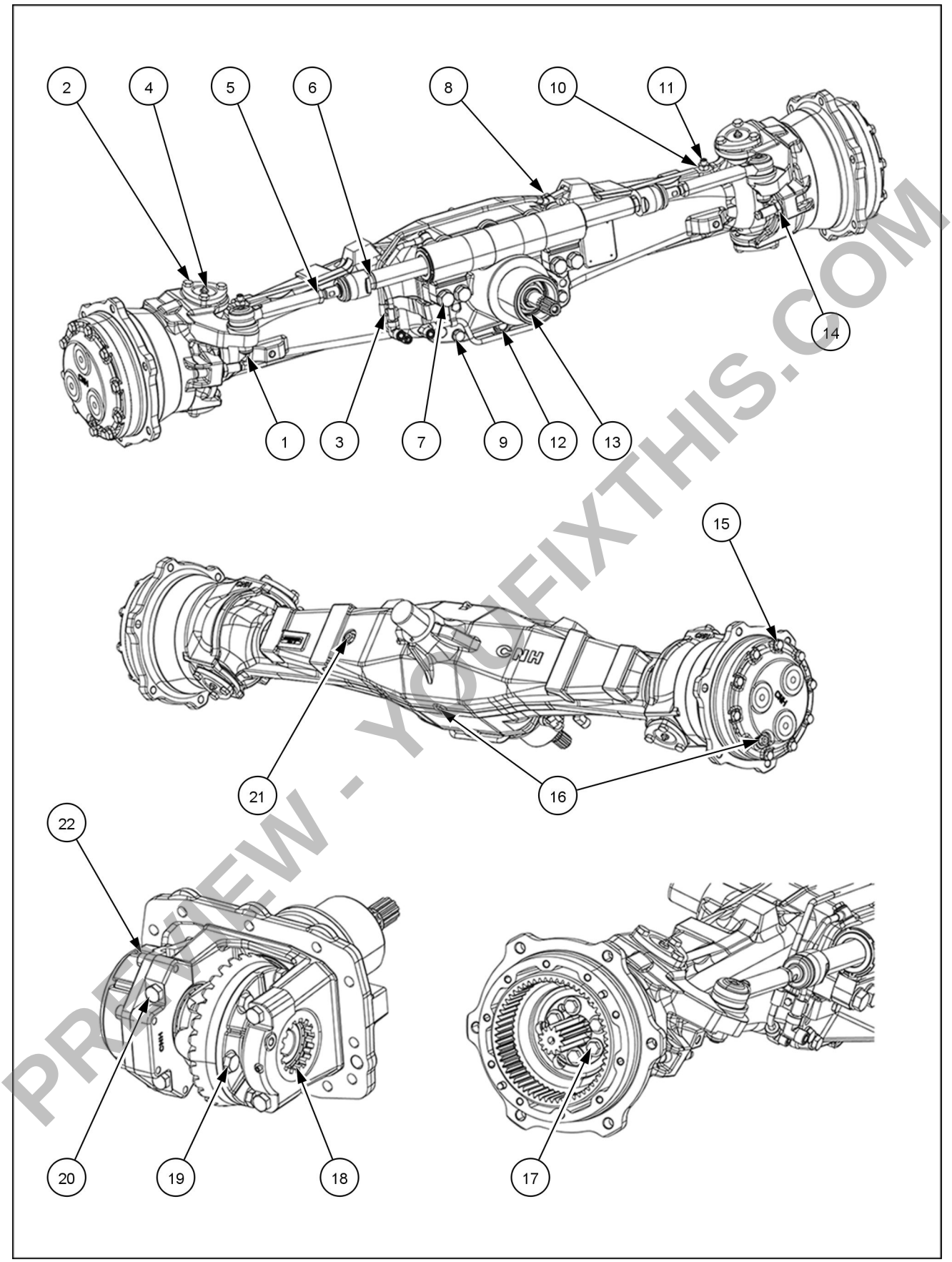
MOIL17TR00408GA 1

Four wheel drive engaged (top image), Four wheel drive disengaged (bottom image)

Circuit oil discharging	Circuit oil under pressure

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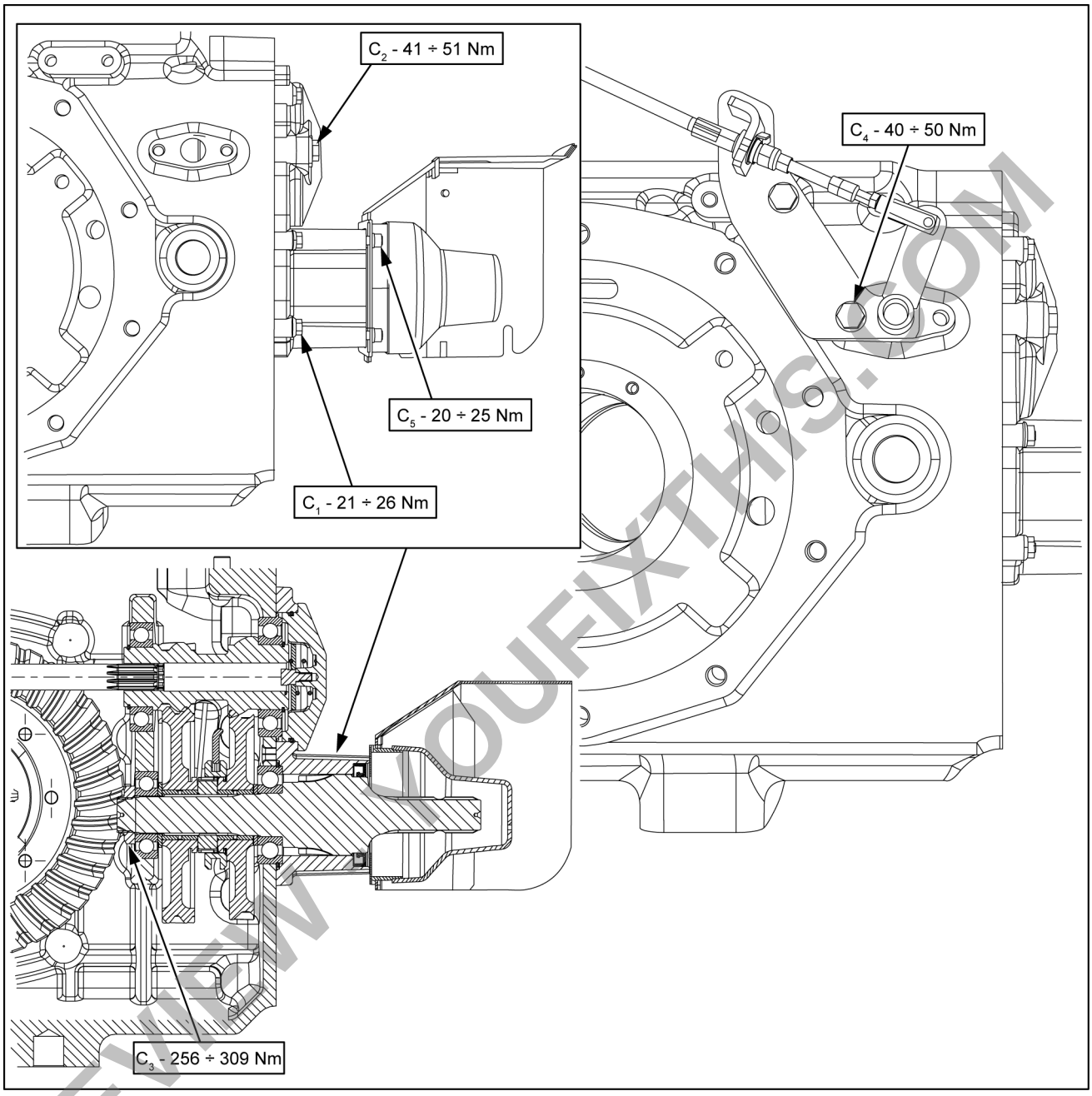


MOIL16TR01683HA 2

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Rear mechanical control - Torque



MOIL13TR01684GB 1

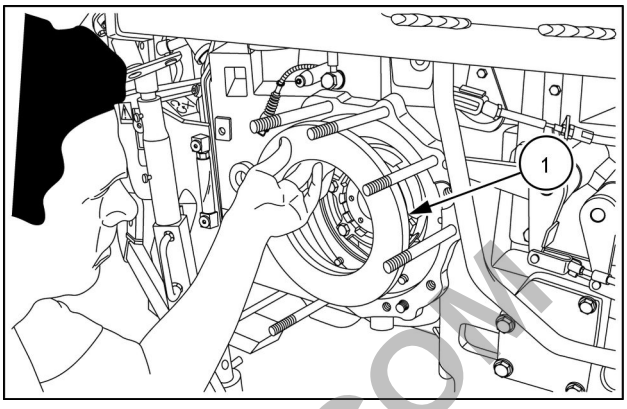
Mechanically controlled power take-off 540 RPM, 540/540E RPM, and 540/1000 RPM

Parts to be torqued	Thread	Tightening torque
PTO cover retaining bolt **(C1)**	**M8x1.25**	**21.0 – 26.0 N·m** (**15.5 – 19.2 lb ft**)
Retaining bolt of the brake disc cover **(C2)**	**M10 x 1.25**	**41.0 – 51.0 N·m** (**30.2 – 37.6 lb ft**)
Locking nut of the driven gear shaft **(C3)**	**M32 x 1.5**	**256.0 – 309.0 N·m** (**188.8 – 227.9 lb ft**)
Reaction bracket retaining bolt **(C4)**	**M10 x 1.5**	**40.0 – 50.0 N·m** (**29.5 – 36.9 lb ft**)
Retaining bolt of the splined output shaft shroud **(C5)**	**M8x1.25**	**20.0 – 25.0 N·m** (**14.8 – 18.4 lb ft**)

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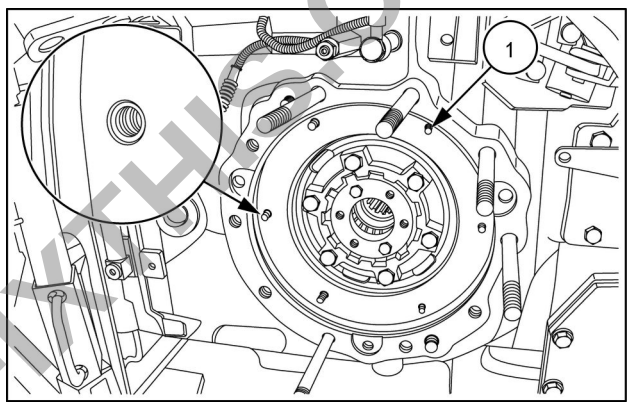
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4. Extract the rear brake piston **(1)**.



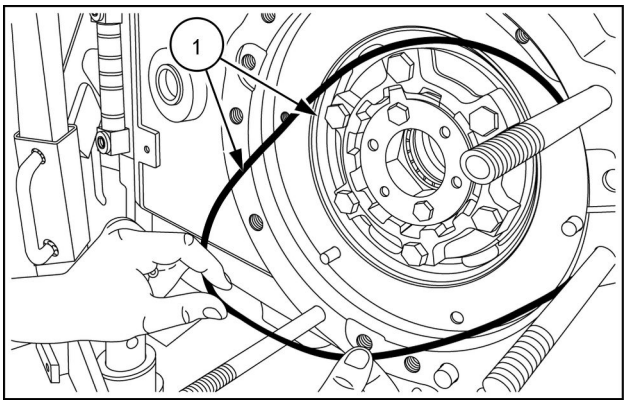
MOIL16TR03567AA 3

5. Recover the thrust spring **(1)**.



MOIL16TR03568AA 4

6. Remove the sealing gaskets **(1)**.

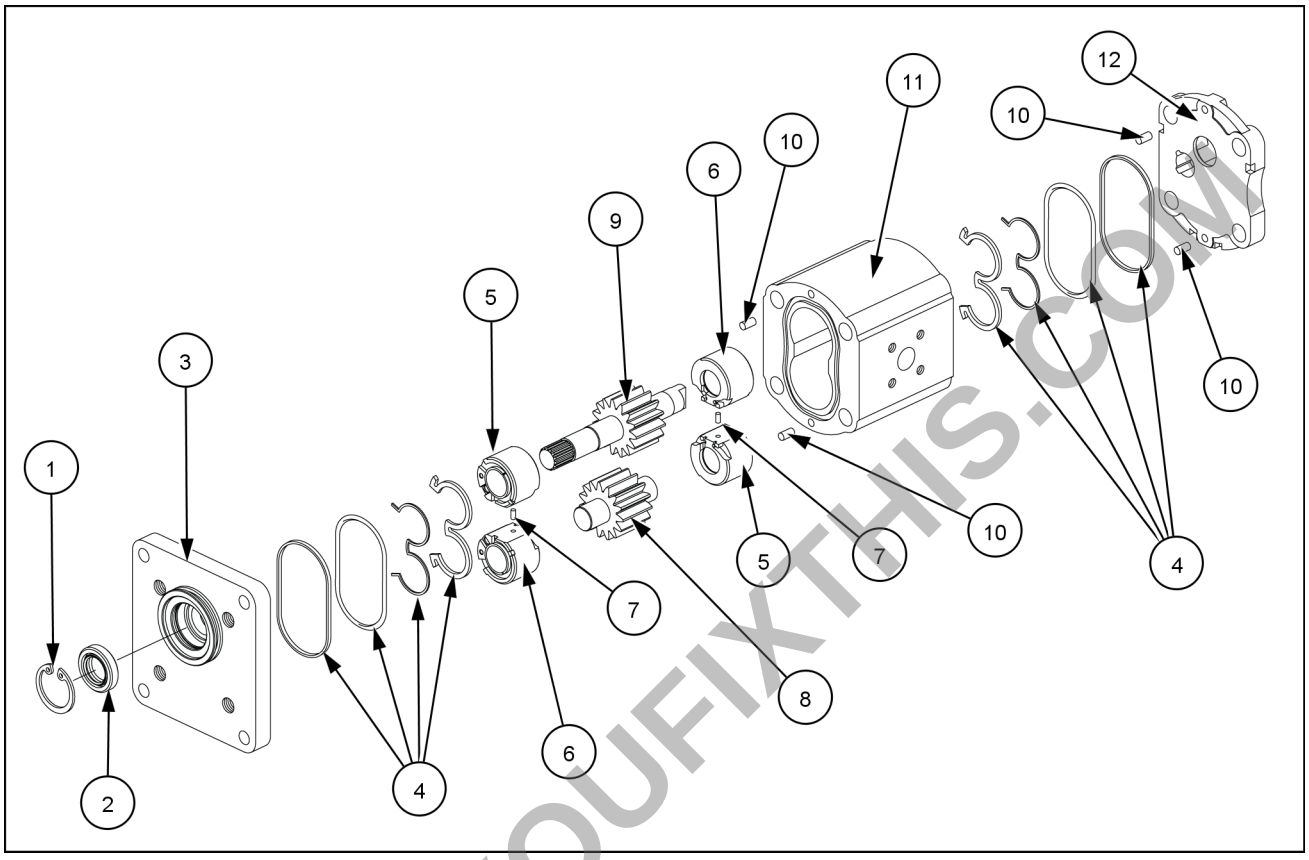


MOIL16TR03569AA 5

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Fixed displacement pump - Component identification - Gear pump 25 cc



MOIL18TR01390FA 1

Item	Description
1	Retaining ring
2	Radial lip type oil seal
3	Bearing end.plate
4	Seal kit
5	Bushing
6	Bushing
7	Straight pin
8	Toothed gear
9	Toothed gear
10	Straight pin
11	Pump housing
12	Housing cover

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Drawbar support - 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.

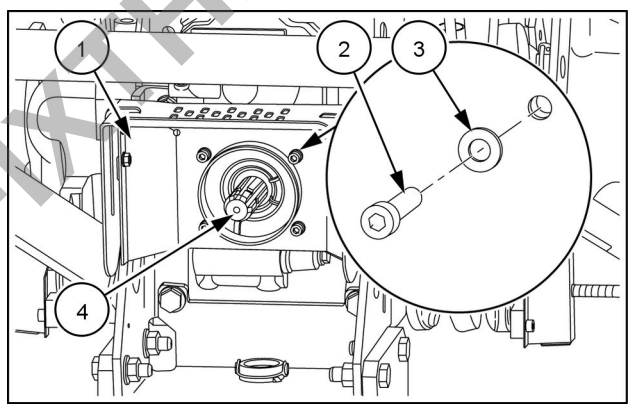
W0208A

⚠ DANGER

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply will result in death or serious injury.

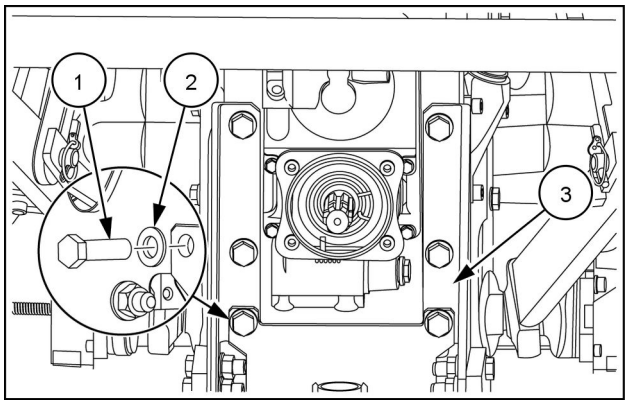
D0076A

1. Remove the guard of the splined output shaft **(1)** of the Power Take−Off (PTO).
2. Remove the rear guard **(1)** of the splined output shaft of the PTO **(4)** by unscrewing the four fixing screws **(2)** and removing the spacers **(3)**.



MOIL15TR00248AA 1

3. Remove the retaining pin **(1)** and slide out the lock pin **(2)** of the drawbar **(3)**.
4. Remove the drawbar.
5. Unscrew the six fixing screws **(1)** of the supporting assembly **(3)** of the drawbar and remove the spacers **(2)**.
6. Remove the drawbar support.



MOIL15TR00249AA 2

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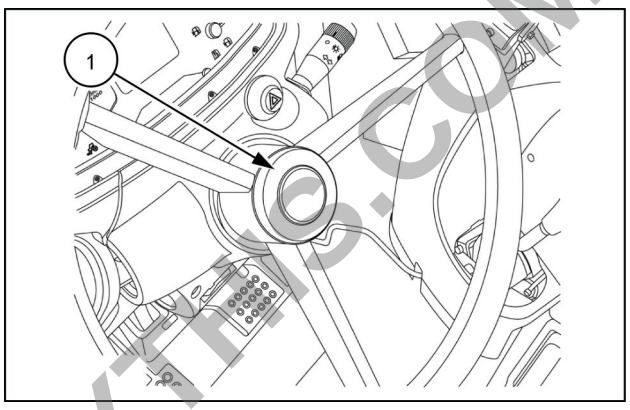
Power steering wheel - Replace - Steering wheel

⚠ 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.

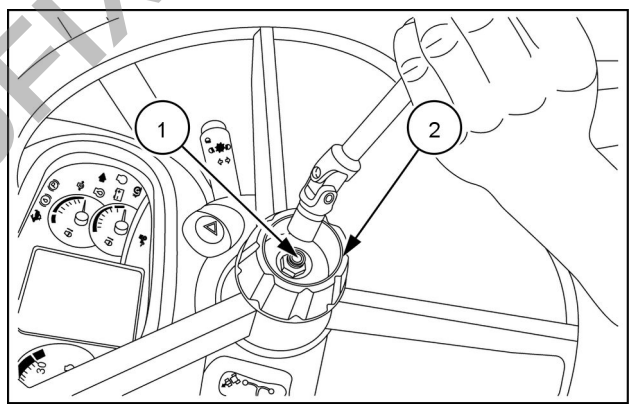
W0208A

1. Remove the cover **(1)** with the emblem from the steering wheel.



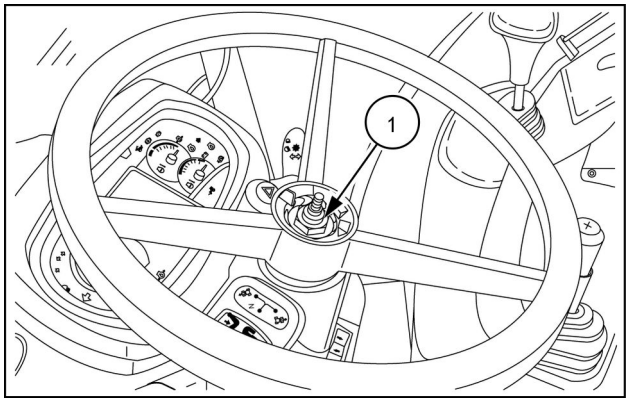
MOLI11U0361AA 1

2. Unscrew the retaining nut **(1)** and remove the cap **(2)** from the steering wheel.



MOIL15TR01531AA 2

3. Unscrew the nut **(1)** locking the steering wheel.



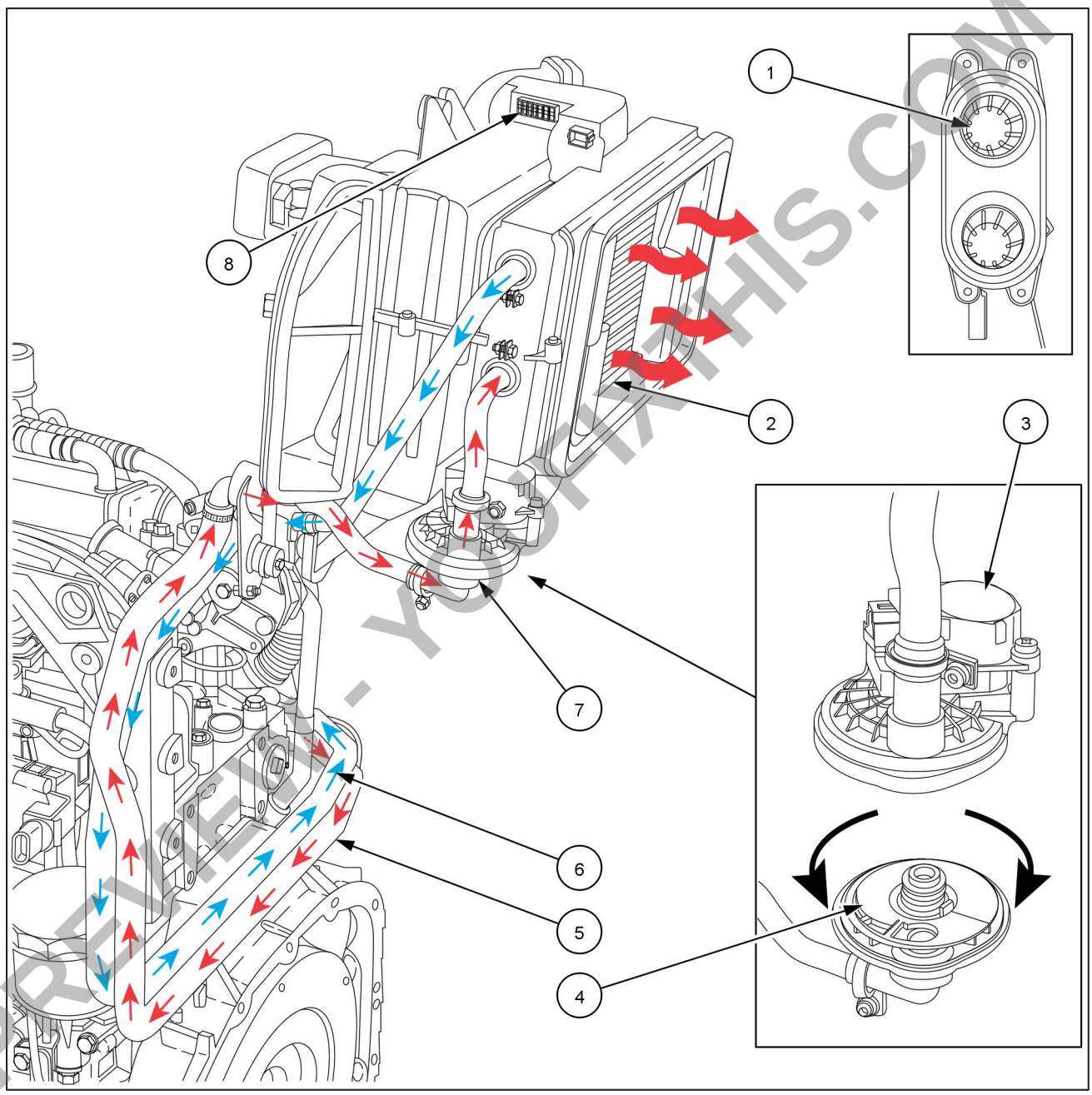
MOIL15TR01532AA 3

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Heating - Dynamic description

T5.100 With cab, with Dual Command™ transmission [HLRT5100CJLE03039 -]	
T5.110 With cab, with Dual Command™ transmission [HLRT5110CJLE04173 -]	
T5.120 With cab, with Dual Command™ transmission [HLRT5120AJLE00620 -]	
T5.90 With cab, with Dual Command™ transmission [HLRT5090AJLE03730 -]	



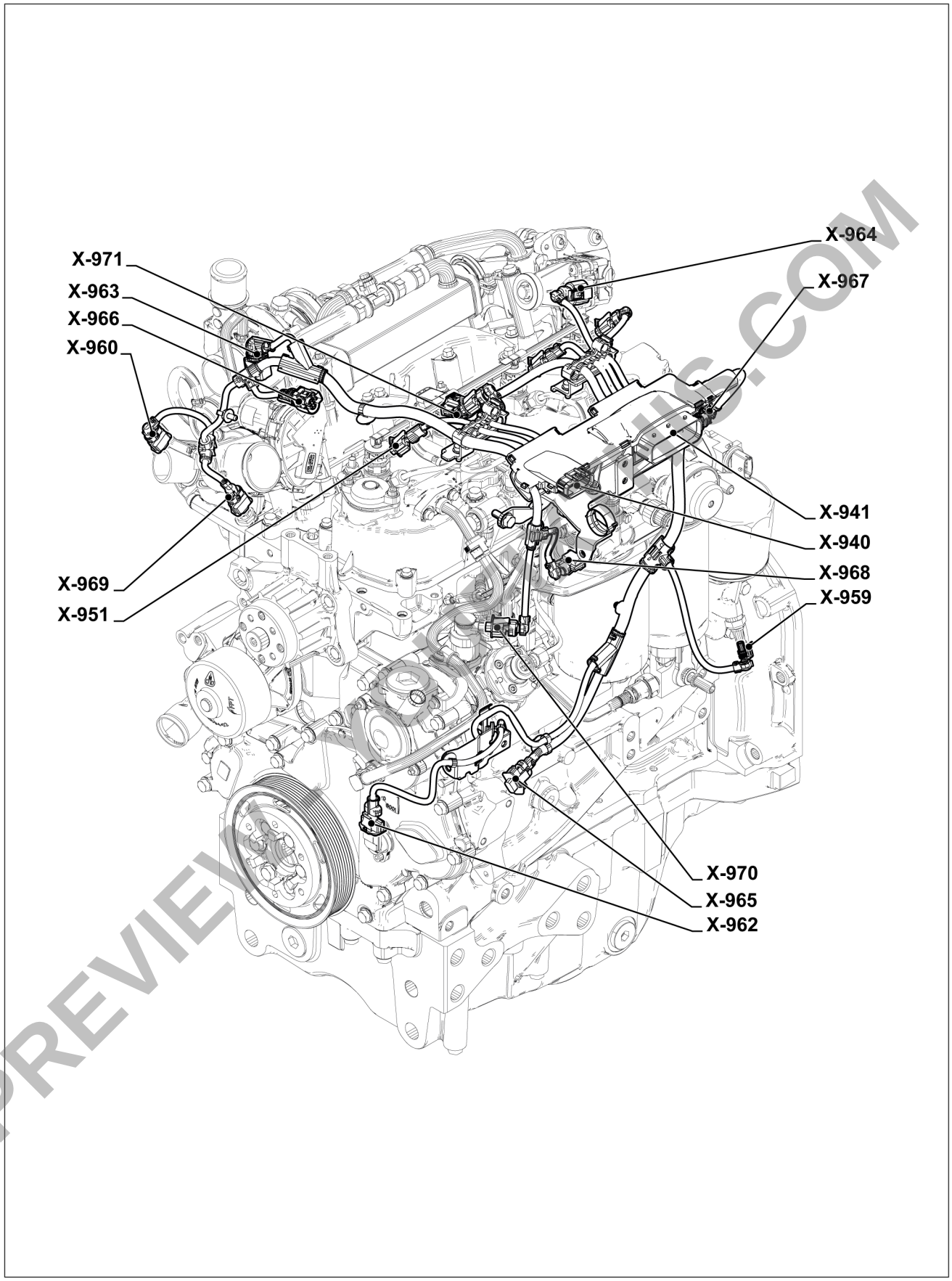
MOIL15TR02953GA 1

The tractor passenger compartment (cab) is heated by the radiator **(2)** which being connected with the ventilation system of the cab, acts as a ventilated stove.
The hot coolant arriving to the engine through the discharge pipe **(5)**, reaches the control valve **(7)** that according to pulse that it receives from the temperature control knob **(1)**operation, opens or closes proportionally allowing a higher or lower amount of hot liquid to flow in the radiator **(2)**.

Temperature control knob

- Rotated fully in a counter-clockwise direction = minimum temperature (hot water circulation closed).

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MOIL17TR01879HA 1

Drawing 01 — engine wiring harness 1, LH side view

PREVIEW ONLY
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Wiring harnesses - Electrical schematic sheet 03 SH-003_POWER DISTRIBUTION_MAIN_BATTERY

T5.100 With cab, with Dual Command™ transmission [HLRT5100CJLE03039 -]	
T5.110 With cab, with Dual Command™ transmission [HLRT5110CJLE04173 -]	
T5.120 With cab, with Dual Command™ transmission [HLRT5120AJLE00620 -]	
T5.90 With cab, with Dual Command™ transmission [HLRT5090AJLE03730 -]	

Type	Component	Connector / Link
ECU	**A-005** - ADIC LOW LINE (ECU)	**X-460** - ADIC LL-CN2 [A-005] (82016219) **X-377** - ADIC LL - CN3 [A-005] (87710588)
ECU	**A-007** - BDS relay (ECU)	**X-008** - BDS SET-RESET [A-007] (87745968)
ECU	**A-100** - EFH CONTROL MODULE (ECU)	**X-524** - EFH CONTROL MODULE [A-100] (87705965)
Fuse	**F-004** - KAM XCM (Fuse)	
Fuse	**F-008** - KAM ADIC (Fuse)	
Fuse	**F-036*** - KAM DIAG. NAR (Fuse)	
Fuse	**F-042** - KAM DIAG. ISO (Fuse)	
Fuse	**F-095** - FHPL SOCKETS POWER FUSE (Fuse)	**X-432** - FHPL SOCKETS POWER FUSE [F-095] (84247657)
Fuse	**F-114** - KAM fuse (Fuse)	
Voltage source	**G-001** - Alternator (Voltage source)	**X-012** - ALTERNATOR D+ [G-001] (87687239) **X-013** - Alternator B+ [G-001] (84153306)
Voltage source	**G-002** - Battery (Voltage source)	**X-500** - Battery positive clamp [G-002] (82863787) **X-600** - Battery negative clamp [G-002] (82032329)
Motor	**M-001** - Starter Motor (Motor)	**X-011** - +50 STARTER MOTOR [M-001] (82944111)
Switch	**S-016** - Battery isolator SW (Switch)	**X-197** - BDS SW [S-016] (87745329) **X-197L** - BDS Sw LAMP [S-016] (84131048)
Connector	X-001A	**X-001A** - CAB - ENGINE 1 INLINE (84142902)
Connector	X-001B	**X-001B** - Engine-cab inline (84142903)
Connector	X-008	**X-008** - BDS SET-RESET [A-007] (87745968)
Connector	X-009	**X-009** - BDS B (84549335)
Connector	X-010	**X-010** - Starter motor + battery (82013012)
Connector	X-011	**X-011** - +50 STARTER MOTOR [M-001] (82944111)
Connector	X-012	**X-012** - ALTERNATOR D+ [G-001] (87687239)
Connector	X-013	**X-013** - Alternator B+ [G-001] (84153306)
Connector	X-101	**X-101** - BDS A (84549335)
Connector	X-103	**X-103** - PDU power (starter motor side) (84138841)
Connector	X-104	**X-104** - AUX power (84153308)
Connector	X-105	**X-105** - Supply KAM (84123827)
Connector	X-110	**X-110** - FUSE RELAY MODULE R1-R8 F33-F36 [F-028*] (87314762)
Connector	X-130	**X-130** - FUSE RELAY MODULE F1-F32 [F-031*] (87314761)
Connector	X-140	**X-140** - FUSE RELAY MODULE R17-R24 - F41 [F-044] (87314762)

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Throttle pedal - Remove

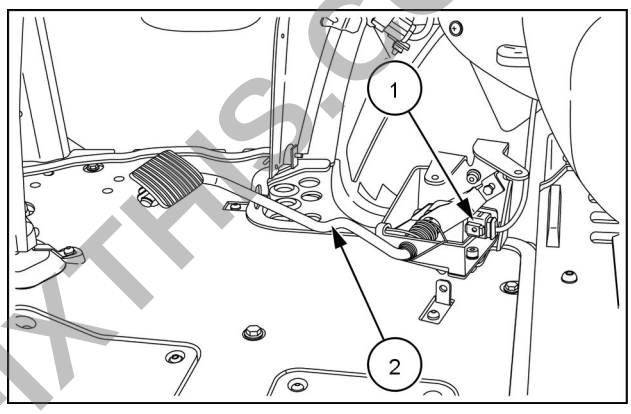
⚠ WARNING

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W0208A

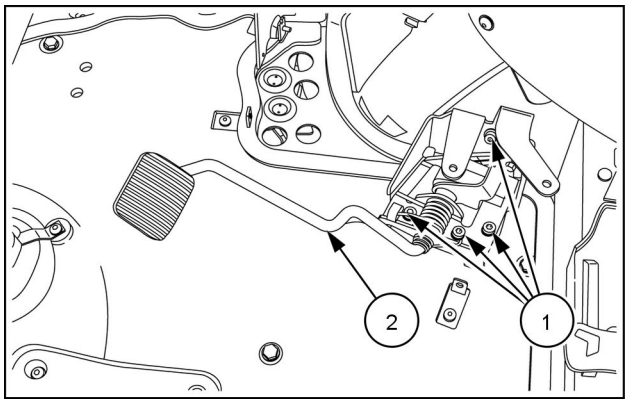
Prior operation:
Cab right-hand side panel - Remove (90.160)

1. Disconnect the wiring harness **(1)** from the accelerator pedal **(2)**.



MOIL16TR03453AA 1

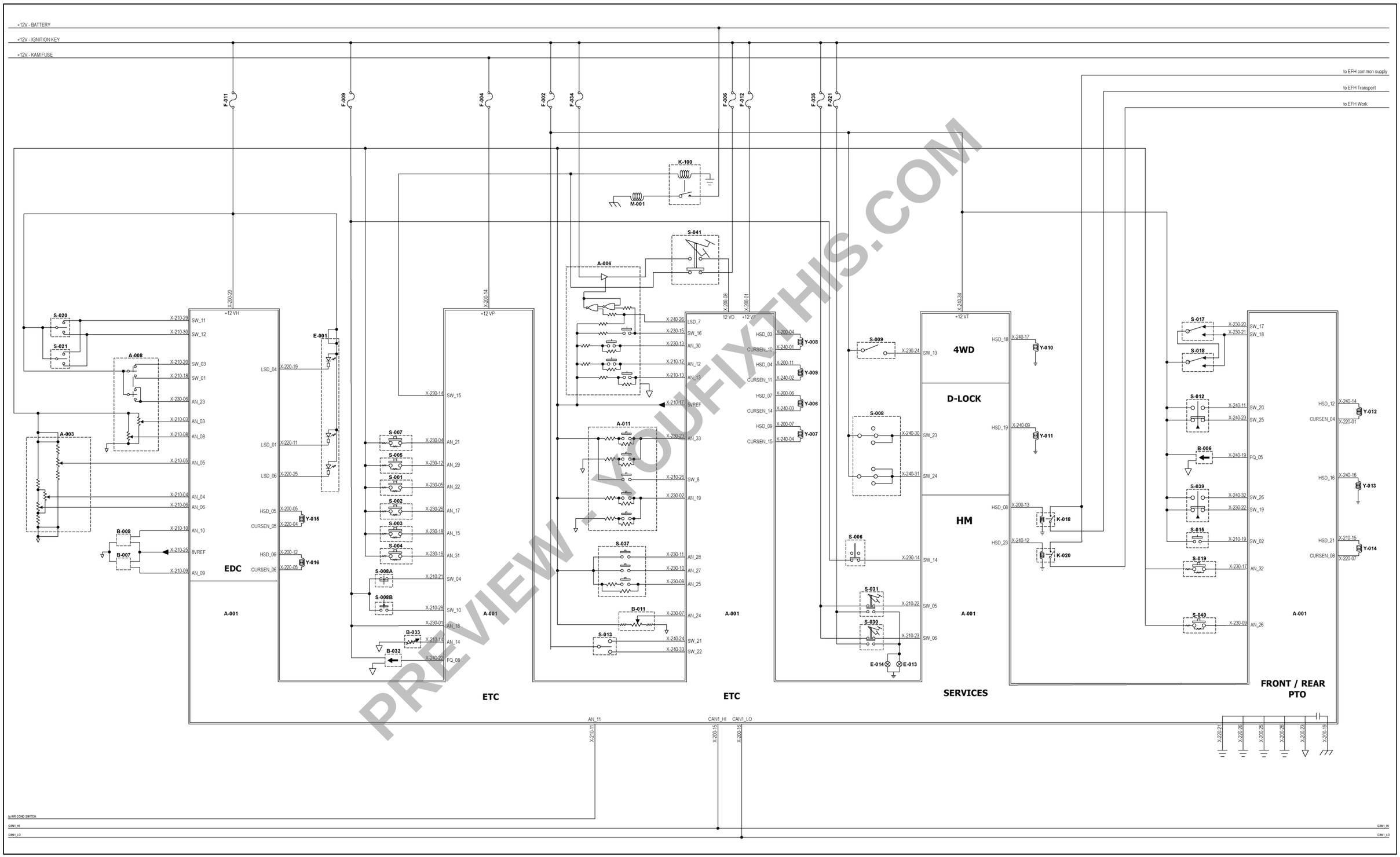
2. Loosen the accelerator pedal fastening screws **(1)**.
3. Remove the accelerator pedal **(2)**.



MOIL16TR03454AA 2

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Electrical systems - 55

FAULT CODES - DTC

T5.100 With cab, with Dual Command™ transmission [HLRT5100CJLE03039 -], T5.100 Without cab, with Dual Command™ transmission [HLRT5100JJLE03967 -], T5.110 With cab, with Dual Command™ transmission [HLRT5110CJLE04173 -], T5.110 Without cab, with Dual Command™ transmission [HLRT5110CJLE04139 -], T5.120 With cab, with Dual Command™ transmission [HLRT5120AJLE00620 -], T5.120 Without cab, with Dual Command™ transmission [HLRT5120EJLE00119 -], T5.90 With cab, with Dual Command™ transmission [HLRT5090AJLE03730 -], T5.90 Without cab, with Dual Command™ transmission [HLRT5090PJLE03963 -]

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Front loader side member - Remove

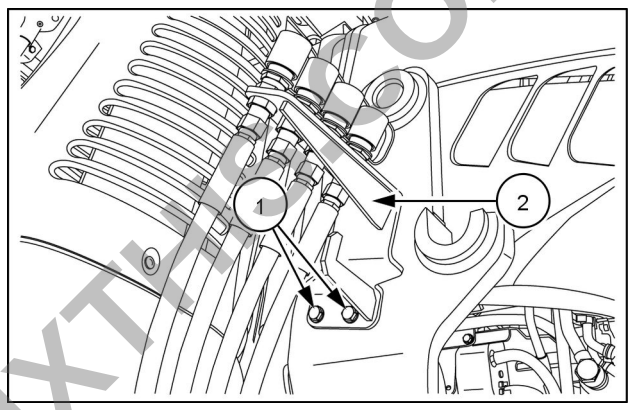
⚠ WARNING

Personal Protective Equipment (PPE) required.
When assembling, operating, or servicing the machine, wear protective clothing and PPE necessary for the particular procedure. Some PPE that may be necessary includes protective shoes, eye and/or face protection, hard hat, heavy gloves, filter mask, and hearing protection.
Failure to comply could result in death or serious injury.

W0353A

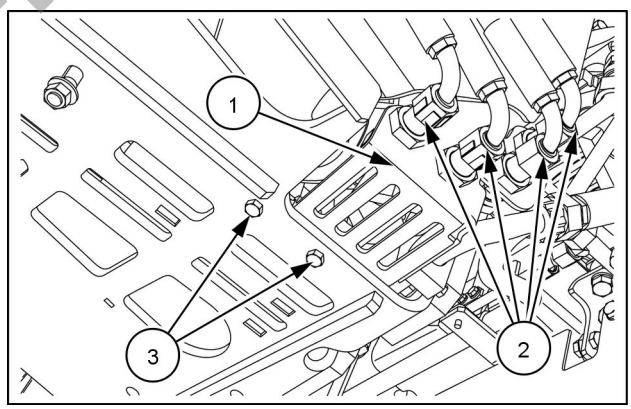
Right-hand side

1. Loosen the fastening screws **(1)** and remove the bracket **(2)** complete with the lines.



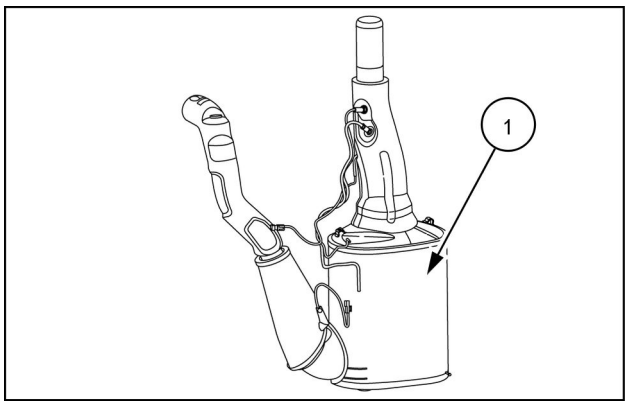
MOIL17TR03474AA 1

2. Disconnect the couplings **(2)**.
3. Loosen the fastening screws **(3)** and remove the bracket **(1)**.



MOIL17TR03475AA 2

4. Remove the exhaust assembly **(1)** as described in **Selective Catalytic Reduction (SCR) muffler and catalyst - Remove (10.500)**.



MOIL17TR00602AA 3

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Cab and platform - Remove

T5.100 With cab, with Dual Command™ transmission [HLRT5100CJLE03039 -]	
T5.110 With cab, with Dual Command™ transmission [HLRT5110CJLE04173 -]	
T5.120 With cab, with Dual Command™ transmission [HLRT5120AJLE00620 -]	
T5.90 With cab, with Dual Command™ transmission [HLRT5090AJLE03730 -]	

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders. Failure to comply could result in death or serious injury.

W0398A

⚠ WARNING

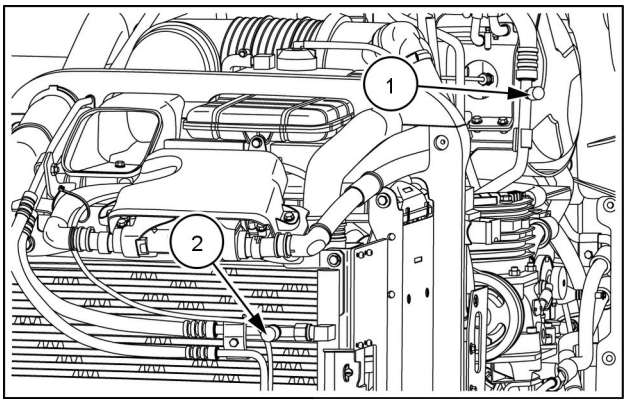
Personal Protective Equipment (PPE) required.
When assembling, operating, or servicing the machine, wear protective clothing and PPE necessary for the particular procedure. Some PPE that may be necessary includes protective shoes, eye and/or face protection, hard hat, heavy gloves, filter mask, and hearing protection.
Failure to comply could result in death or serious injury.

W0353A

Prior operation:
Rear wheel - Remove (44.520)
Fuel tank - Remove (10.216)
Hood - Remove (90.100)

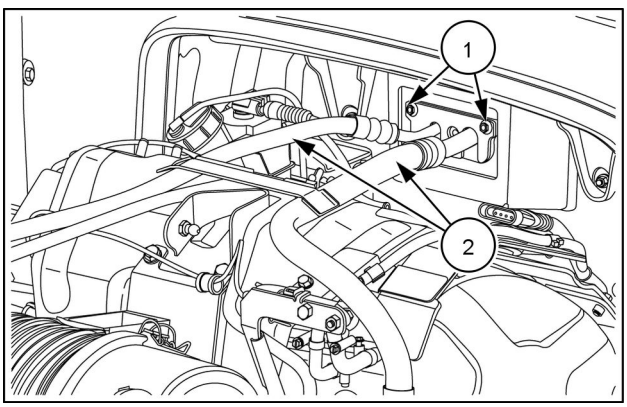
Air conditioning system

1. Using the service connectors **(1)** and **(2)** recover the refrigerant as described in **Air conditioning - Evacuate refrigerant (50.200)**.



MOIL17TR00269AA 1

2. Unscrew the retaining nuts **(1)** to remove the cab air conditioned gasket.
3. Disconnect the air conditioning system lines **(2)** from the cab.



MOIL17TR00258AA 2

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Operator platform less cab - Remove

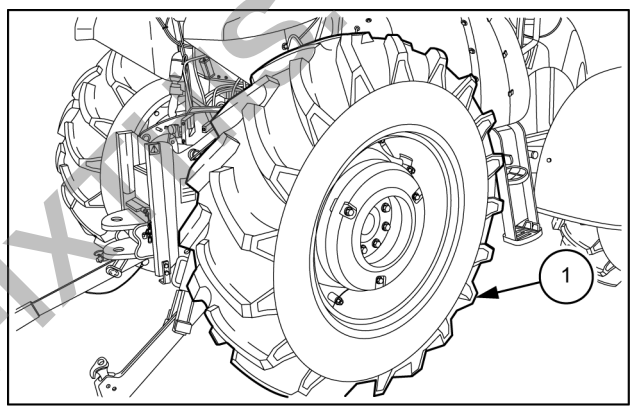
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T5.120 Without cab, with Dual Command™ transmission [HLRT5120EJLE00119 -]	
T5.90 Without cab, with Dual Command™ transmission [HLRT5090PJLE03963 -]	

NOTICE: *Lift and handle all heavy parts using suitable lifting equipment. Make sure that assemblies or parts are supported by means of suitable slings and hooks. Keep personnel away from the vicinity of the load to be lifted.*

ATTENTION: *Handle all parts carefully. Do not put your hands or fingers between parts. Wear the prescribed safety clothing, including goggles, gloves and safety footwear.*

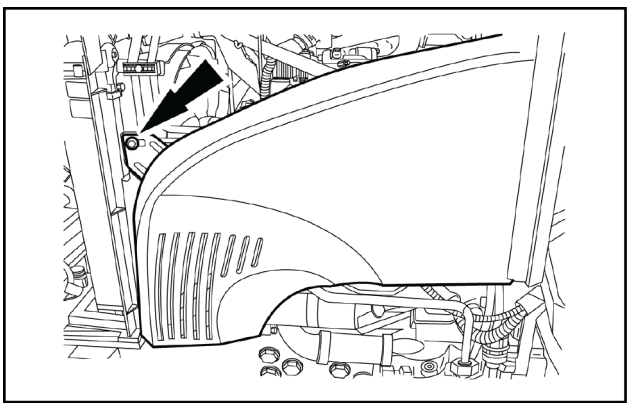
Removal

1. Raise the tractor and place two stands under the rear final drive units; unscrew the retaining bolts and remove the rear wheels **(1)**.
2. Carry out operation **Hood - Remove (90.100)**.



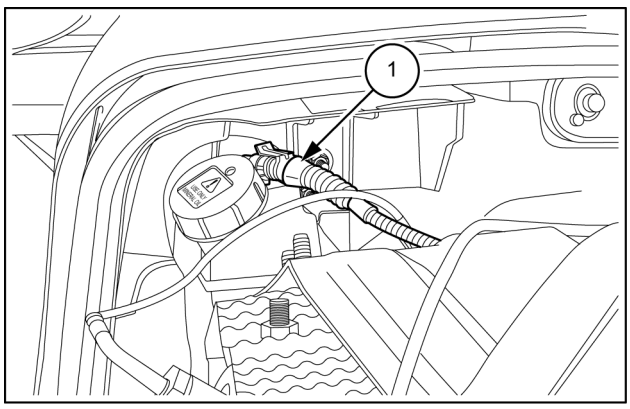
MOIL12TR00532AA 1

3. Remove the engine side panels.



MOLI12U0166AA 2

4. Disconnect the electrical connection **(1)** of the brake fluid reservoir.



MOIL12TR00553AA 3

5. Carry out operation **Fuel tank - Remove (10.216)**.

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SPECIAL TOOL INDEX

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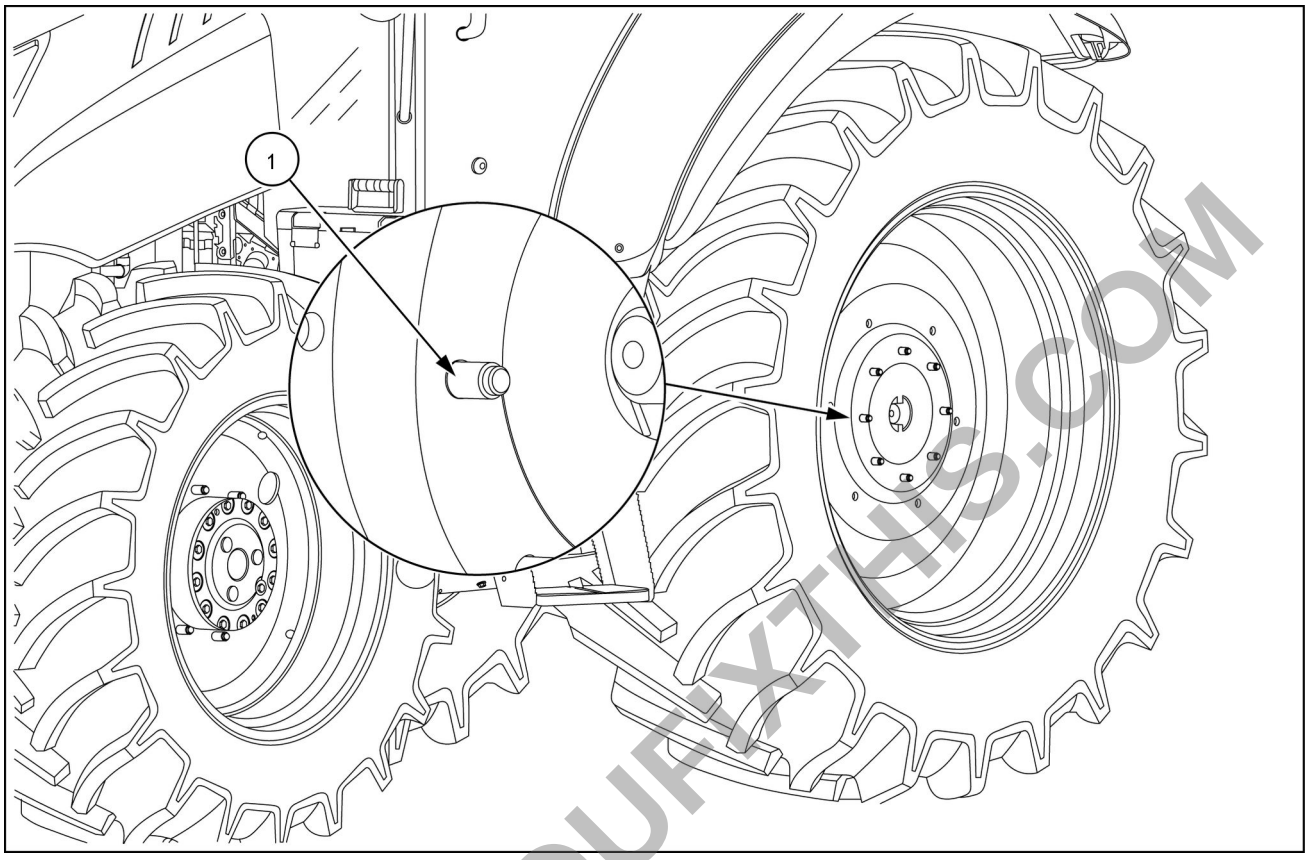
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Rear wheel - Torque



MOIL15TR01704FA 1

Part to tighten	Thread	Tightening torque
Rear wheel stud bolt **(1)**	M18	**250 N·m** (**184.39 lb ft**)

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Air-conditioning system pressure switch - Replace

T5.100 With cab, with Dual Command™ transmission [HLRT5100CJLE03039 -]	
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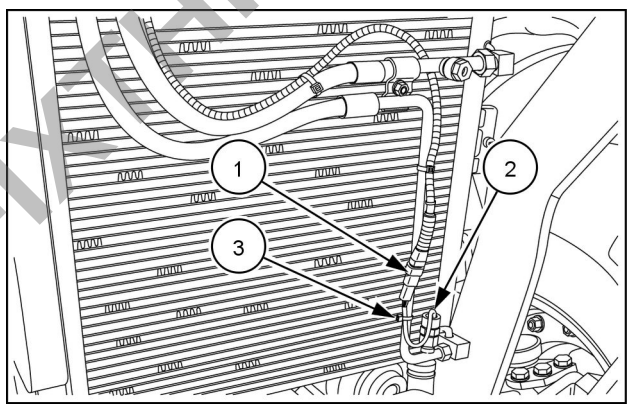
⚠ WARNING

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

NOTE: *The replacement of the high pressure switch is carried out without draining the refrigerant from the air-conditioning system. The connection fitting on the line is equipped with a check valve that prevents the refrigerant leakage.*

1. Raise the engine hood compartment.
2. Remove the self-locking clamp **(3)** that fastens the high pressure switch wiring.
3. Disconnect the electrical connection **(1)** and replace the pressure switch **(2)**.
4. Connect the electrical connection **(1)** and secure the wiring with the clamp **(3)**.



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