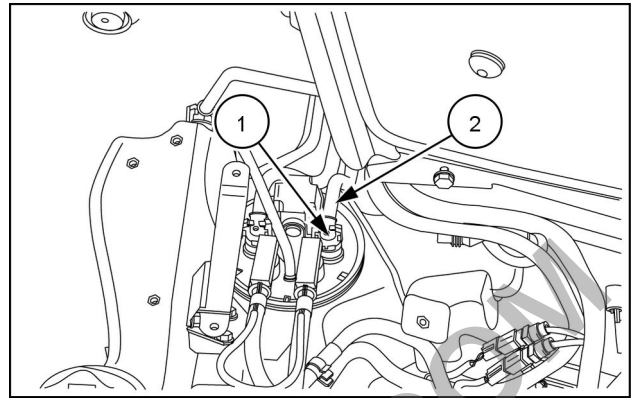


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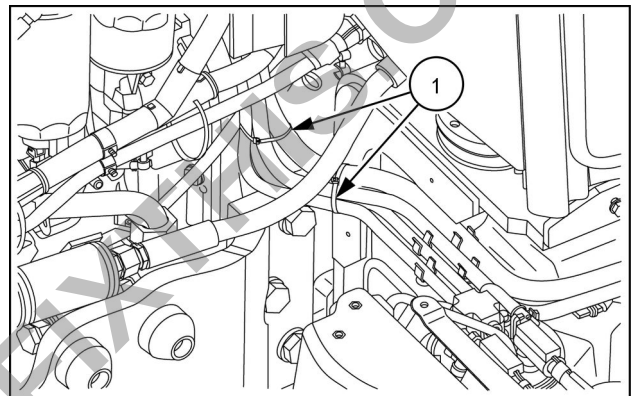
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4. Disconnect the hydraulic coupling (1) for the coolant delivery line (2).



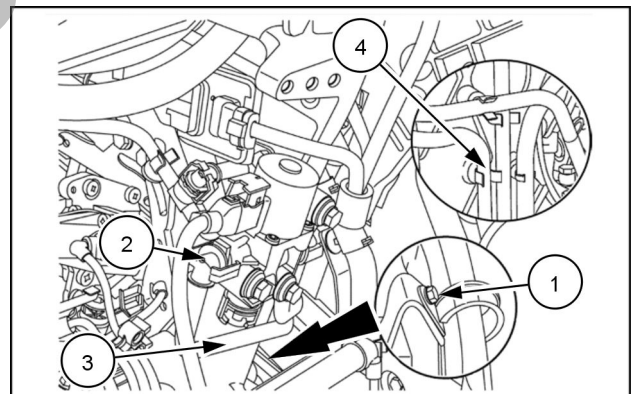
MOIL15TR00722AA 3

5. Release the line from the clamps (1).



MOIL15TR00723AA 4

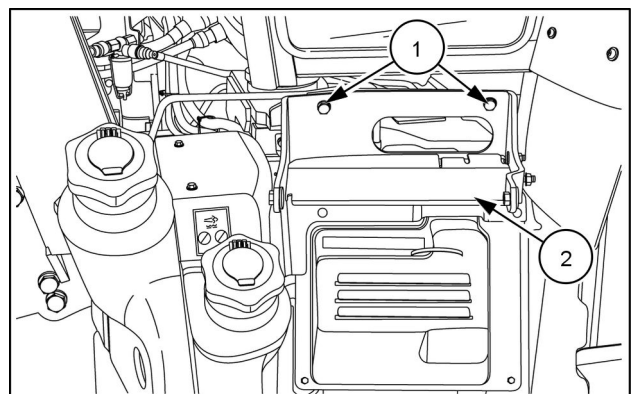
6. Loosen the retaining screw (1) for the line support clamp.
7. Release the line (3) from the retainer (4).
8. Disconnect the hydraulic fitting (2) from the cooling hydraulic control valve.
9. Remove the delivery line (3) pulling it out from the left-hand side of the vehicle.



MOIL17II00388AA 5

Return lines

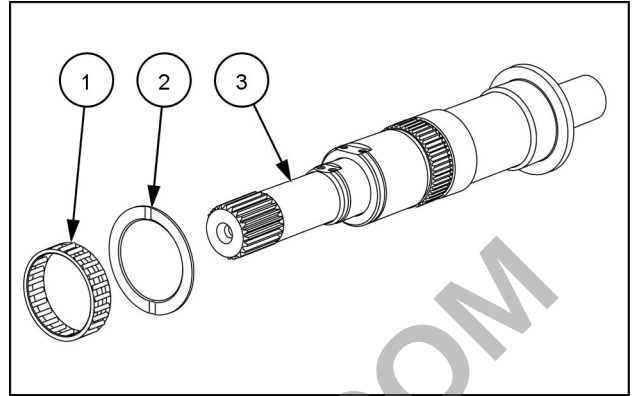
1. Empty the coolant tank; see **Radiator - Change fluid (10.400)**.
2. Loosen the retaining screws (1) and remove the support (2) for the left-hand ladder.



MOIL15TR03204AA 6

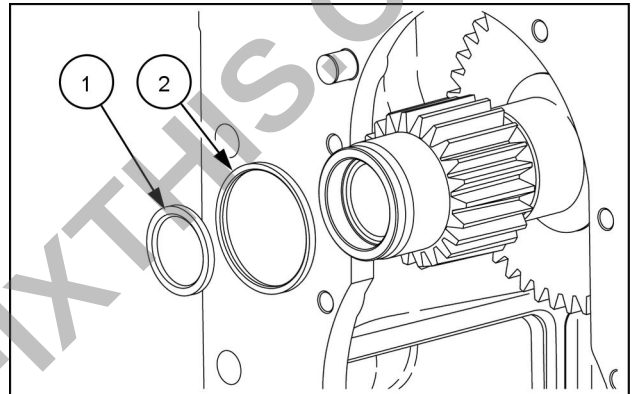
PREVIEW - YOUFIXTHIS.COM

15. Recover the roller bearing **(1)** and the thrust washer **(2)** from the lower rear shaft **(3)**.



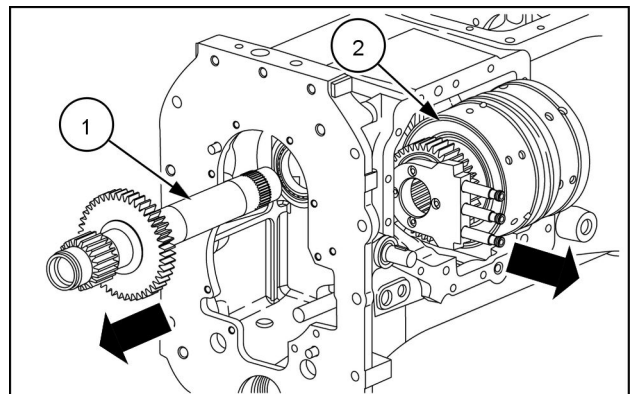
MOIL15TR01065AA 15

16. Recover the gasket **(1)** and the spacer **(2)**.



MOIL15TR01066AA 16

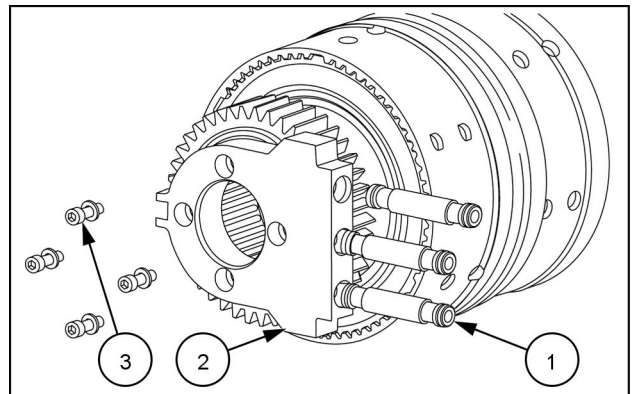
17. Pull off the driven shaft **(1)**, of the clutch C3, and simultaneously recover the C3 and C4 clutches assembly **(2)**.



MOIL15TR01067AA 17

18. Remove the hydraulic tubes **(1)**.

19. Unscrew the retaining screws **(3)** of the commutator **(2)**.



MOIL15TR01068AA 18

Axle housing - Replace - Suspension axle

⚠ 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:

Four-Wheel Drive (4WD) axle Four-Wheel Drive (4WD) suspended axle - Remove (25.100)

Prior operation:

Axle support bracket - Disassemble (25.100)

Prior operation:

Steering knuckle and king pin - Disassemble (25.108)

Prior operation:

Axle shaft - Remove (25.108)

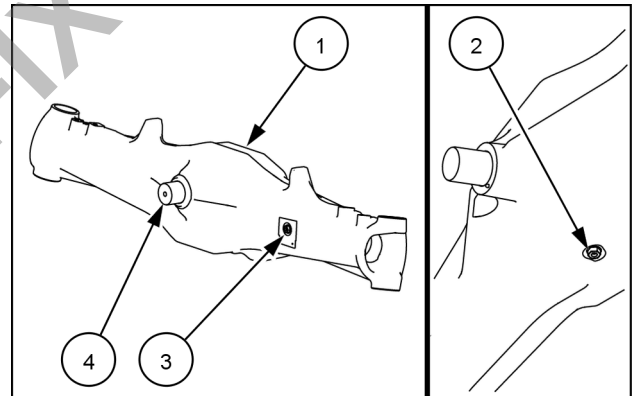
Prior operation:

Steering cylinder - Remove (41.216)

Prior operation:

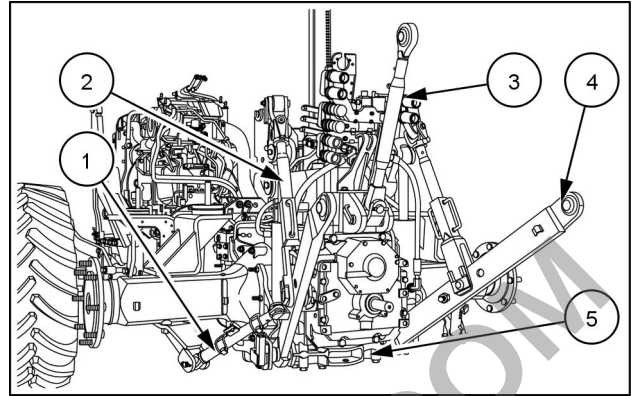
Bevel gear set and differential carrier - Remove (25.102)

1. Remove the pivot pin (4).
2. Remove the lower plug (2).
3. Remove the front plug (3).
4. Replace the front axle compartment (1).



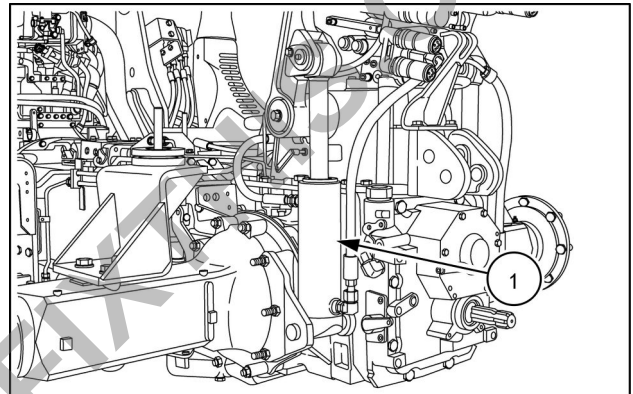
MOIL16TR03030AA 1

3. Remove the upper tie rod arm (3), as described in **Top link arm - Remove (37.120)**.
4. Remove the side stabilizers (1), as described in **Stabilizer - Remove (37.120)**.
5. Remove the lower arms (4), as described in **Lower link arm - Remove (37.120)**.
6. Remove the vertical rods (2) as described in **Vertical rod - Remove (37.120)**.
7. Remove the lower support (5), as described in **Load-sensing assembly - Remove (37.120)**.



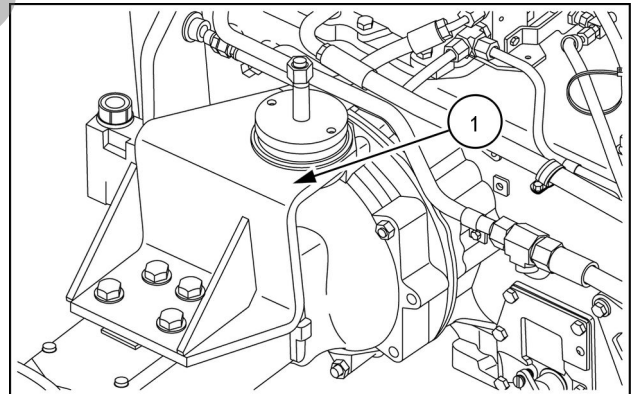
MOIL15TR03254AA 3

8. Remove the rear auxiliary cylinders (1) on both sides.



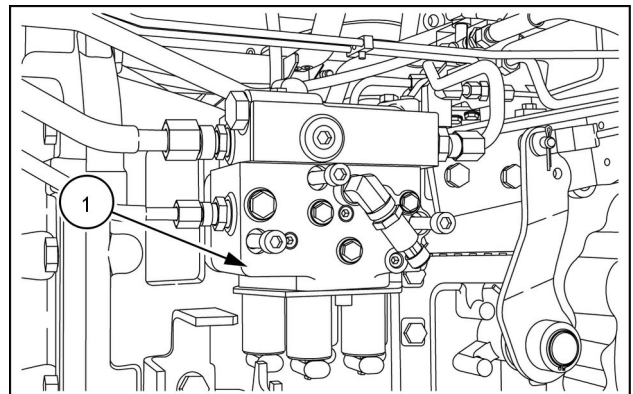
MOIL15TR03255AA 4

9. Remove the rear cab supports (1) as described in **Cab rear mount - Remove (90.150)**.



MOIL15TR00333AA 5

10. Remove the services distributor (1) as described in **Front-Wheel Drive (FWD) control valve - Remove (23.202)**.



MOIL15TR01637AA 6

Synchronized Power Take-Off (PTO) drive shaft and gears - Assemble

⚠ 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.

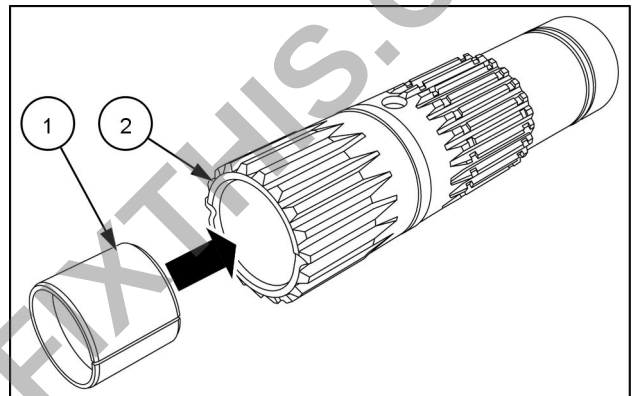
Failure to comply could result in death or serious injury.

W0208A

Prior operation:

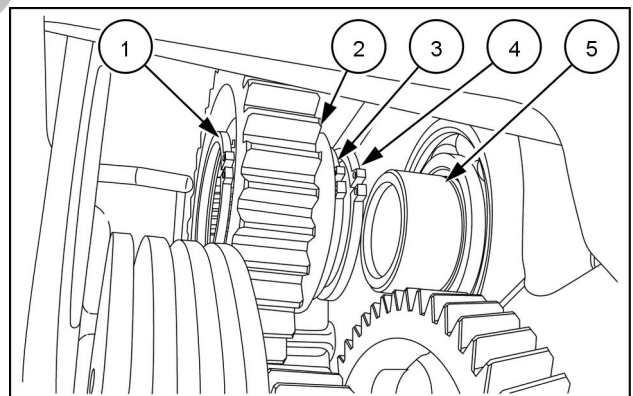
Synchronized Power Take-Off (PTO) drive shaft and gears - Disassemble (31.104).

1. Insert the bushing (1) inside the driven shaft (2).



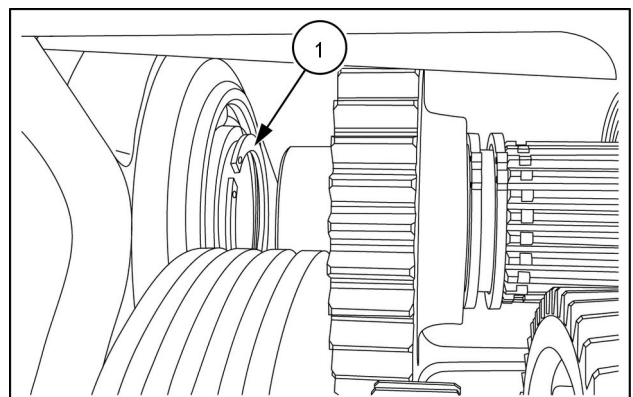
MOIL15TR02883AA 1

2. Insert the driven shaft (5) in the driven gear (2) with the circlips (1), (3) and (4).



MOIL15TR02882AA 2

3. Position the circlip (1) before inserting the driven shaft.



MOIL15TR02881AA 3

Drive shaft - Remove

⚠ WARNING

Avoid injury!

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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

Prior operation:

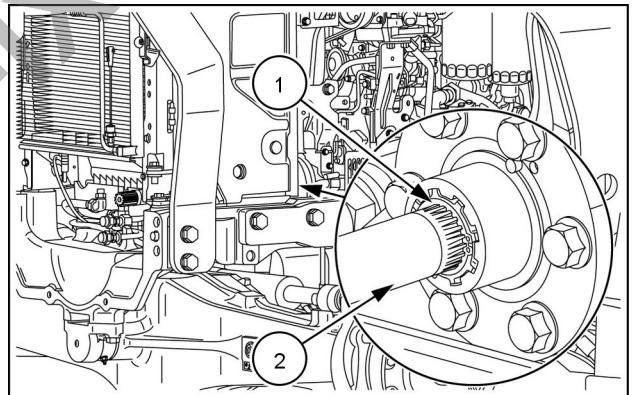
Side panels - Remove (90.100).

Front hitch support - Remove (37.162).

Front Power Take-Off (PTO) housing - Remove (31.146).

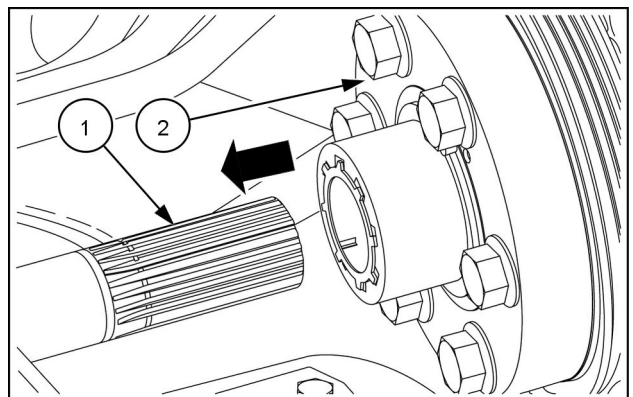
Front Power Take-Off (PTO) clutch - Remove (31.146).

1. Remove the circlip (1) of the transmission drive shaft (2) of the front power take-off (PTO).



MOIL16TR00914AA 1

2. Pull out the front PTO transmission drive shaft (1) from the flexible coupling (2).



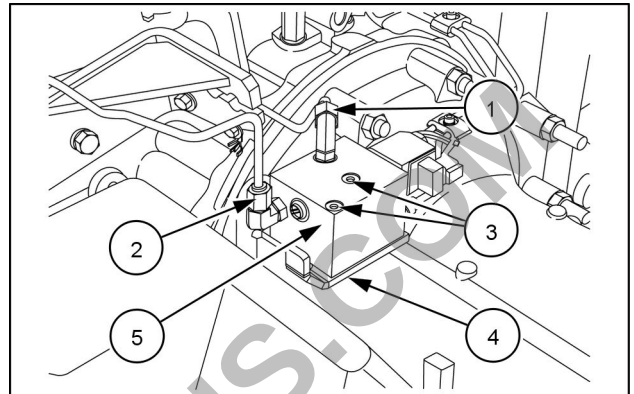
MOIL16TR00915AA 2

Speed controlled select valve - Install 12 kph brake valve

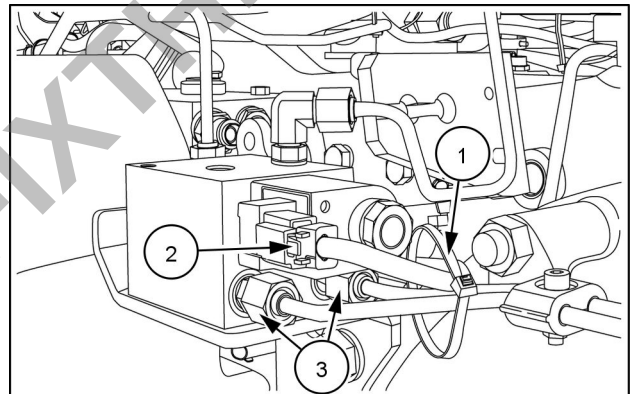
Prior operation:

Speed controlled select valve - Remove (33.220)

1. Position the speed controlled selector valve (5) in its housing.
2. Tighten the two fastening screws (3) on the support bracket (4).
3. Tighten the upper coupling (2).
4. Tighten the front coupling (1).



5. Tighten the two couplings (3) of the rear brake pressure signal pipes.
6. Connect the connector (2) of the speed controlled select valve solenoid and close the clamp (1).



Next operation:

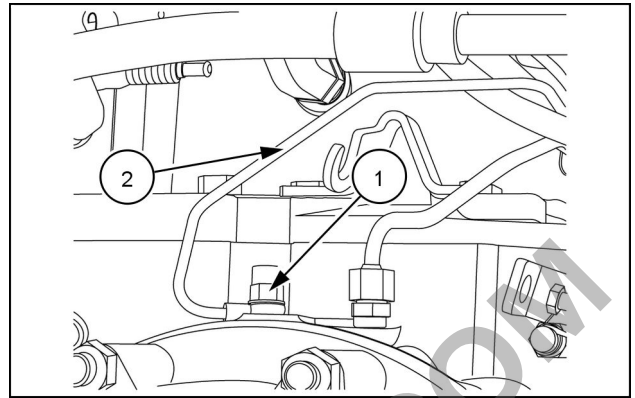
Fit the left-hand rear wheel as described in **Rear wheel - Install (44.520)**

Next operation:

Brake fluid reservoir - Bleed (33.202)

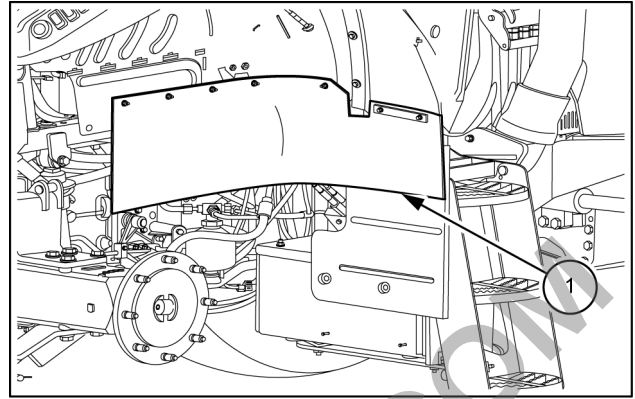
8. Disconnect the coupling (1) on the rear right-hand brake.
9. Remove the right-hand brake pressure signal pipe (2).

NOTE: During removal take care not to bend the pipe (2).



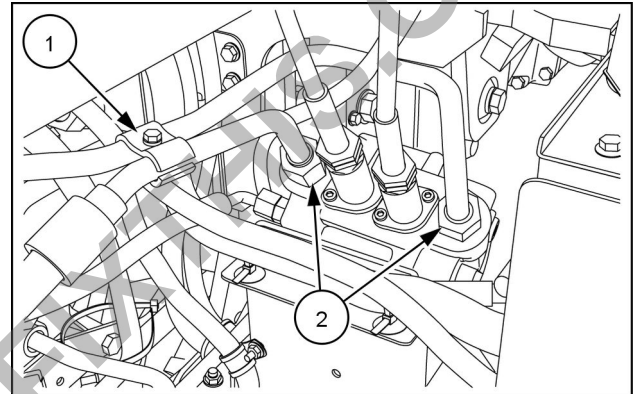
PREVIEW - YOUFIXTHIS.COM

2. Loosen the retaining nuts and remove the rubber extension **(1)** on the right-hand side fender.



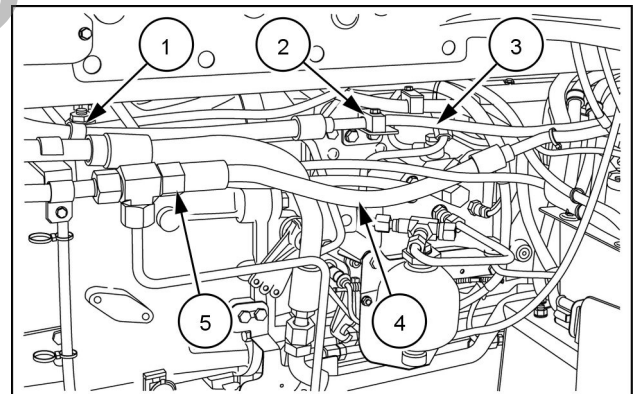
MOIL12TR00671AA 8

3. Loosen the fastening fittings **(2)** and disconnect the pipes **(3)** from the mechanical control valve assembly.
4. Loosen the fastening screw and remove the retaining clamp **(1)** on the pipes.



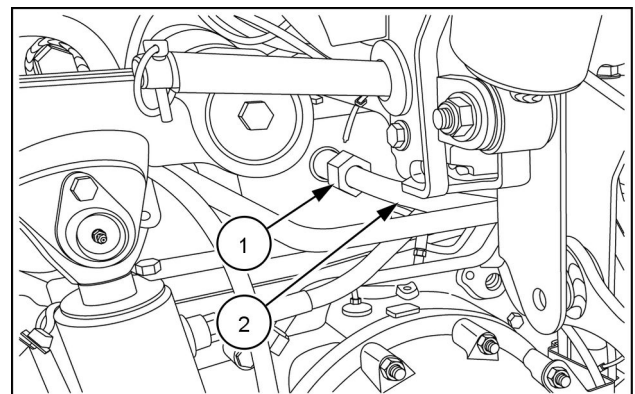
MOIL16TR03229AA 9

5. Loosen the fastening fitting **(5)** and remove the pipe **(4)**.
6. Loosen the fastening screws and remove the retaining clamps **(1)** and **(2)** on the pipe **(3)**.



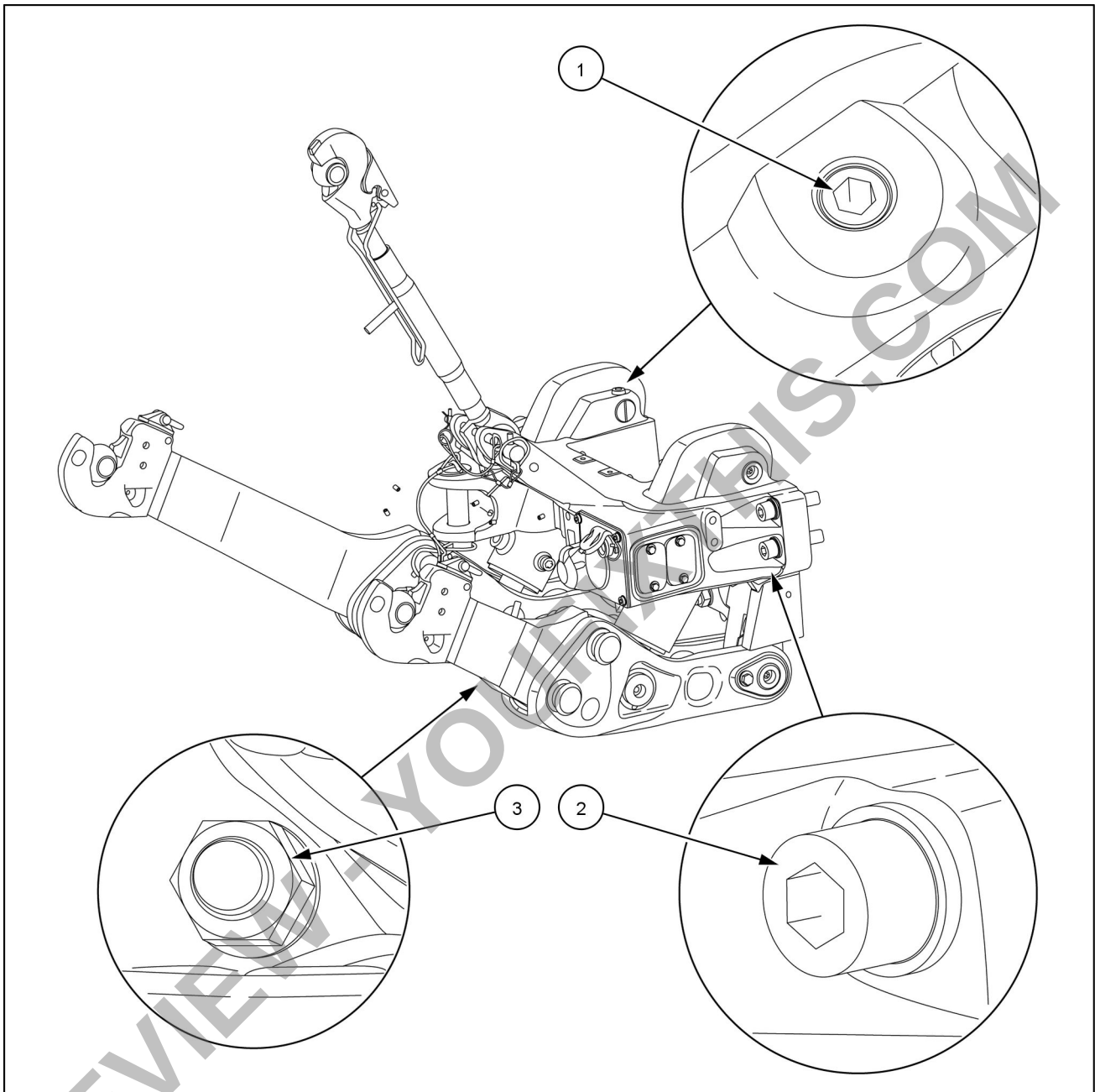
MOIL16TR03230AA 10

7. Loosen the coupling **(1)** connecting the pipe **(2)** to the rear lift.



MOIL16TR03205AA 11

Front hitch support - Torque



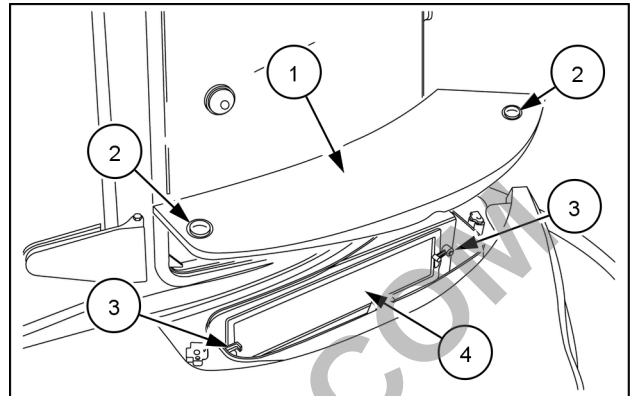
MOIL16TR01137GA 1

Part to tighten	Thread	Tightening torque
Hydraulic cylinders retaining screws (1)	M8 x 16	20 – 30 N·m (14.75 – 22.13 lb ft)
Axle support rear retaining screw (2)	M18 x 1.5 x 80	350 – 410 N·m (258.15 – 302.40 lb ft)
Front axle support retaining nut (3)	M16	247 – 275 N·m (182.18 – 202.83 lb ft)

Cab air filters - Replace

To install the cab air cleaner, proceed as follows:

1. Unscrew the retaining bolts **(2)** to remove the cover **(1)** from the rear fender.
2. Open the two filter retaining clips **(3)**.
3. Remove the filter **(4)**
4. Clean the filter seat with a cloth.
5. Install the new filter with the arrows on the label pointing towards the inside of the fender.
6. Close the two filter retaining clips **(3)**.
7. Refit the cover **(1)**.



MOIL15TR01625AA 1

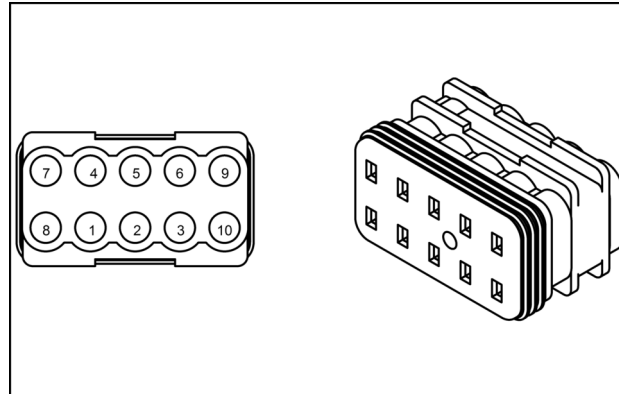
NOTE: repeat the same operations on the opposite fender.

Wiring harnesses - Electrical schematic sheet 16 SH-016_GROUND-ING_CHASSIS_1

Type	Component	Connector / Link
Connector	X-025A	X-025A - ENGINE 1 - HOOD INLINE (87691968)
Connector	X-025B	X-025B - HOOD-ENGINE 1 INLINE (87710588)
Connector	X-089A	X-089A - CAB-3RD DIVERTER INLINE (82012083)
Connector	X-089B	X-089B - CAB-3RD DIVERTER INLINE [SH28: D-1] (87687244)
Connector	X-100A	X-100A - CAB - Armrest inline [SH22: A-1] (87699386)
Connector	X-100B	X-100B - Armrest - CAB inline (87714265)
Connector	X-180A	X-180A - CAB - ISOBUS int inline [SH40: C-6] (84165866)
Connector	X-180B	X-180B - ISOBUS - CAB int inline [SH46: A-6] (87714273)
Connector	X-280	X-280 - XCM ground 1 [SH16: A-1] (84153306)
Connector	X-300A	X-300A - Cab-transmission inline (84154701)
Connector	X-300B	X-300B - Trasnmission-cab inline [SH27: A-6] (84154706)
Connector	X-343	X-343 - Diff LOCK SOL [Y-011] (82012083)
Connector	X-391A	X-391A - Front loader ready - cab inline (87736477)
Connector	X-391B	X-391B - Front loader ready - cab inline (87736504)
Connector	X-420	X-420 - ENGINE GND (84237741)

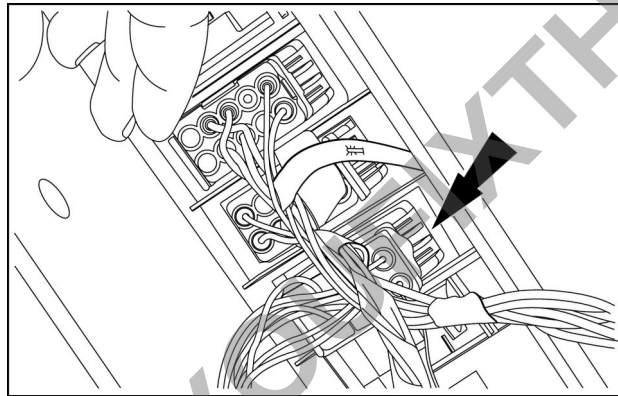
Wire connectors - Component diagram 29

X-290 - AUTO - BRAKEREAR PTO SW [SH26: C-6] (84819781) (Receptacle)



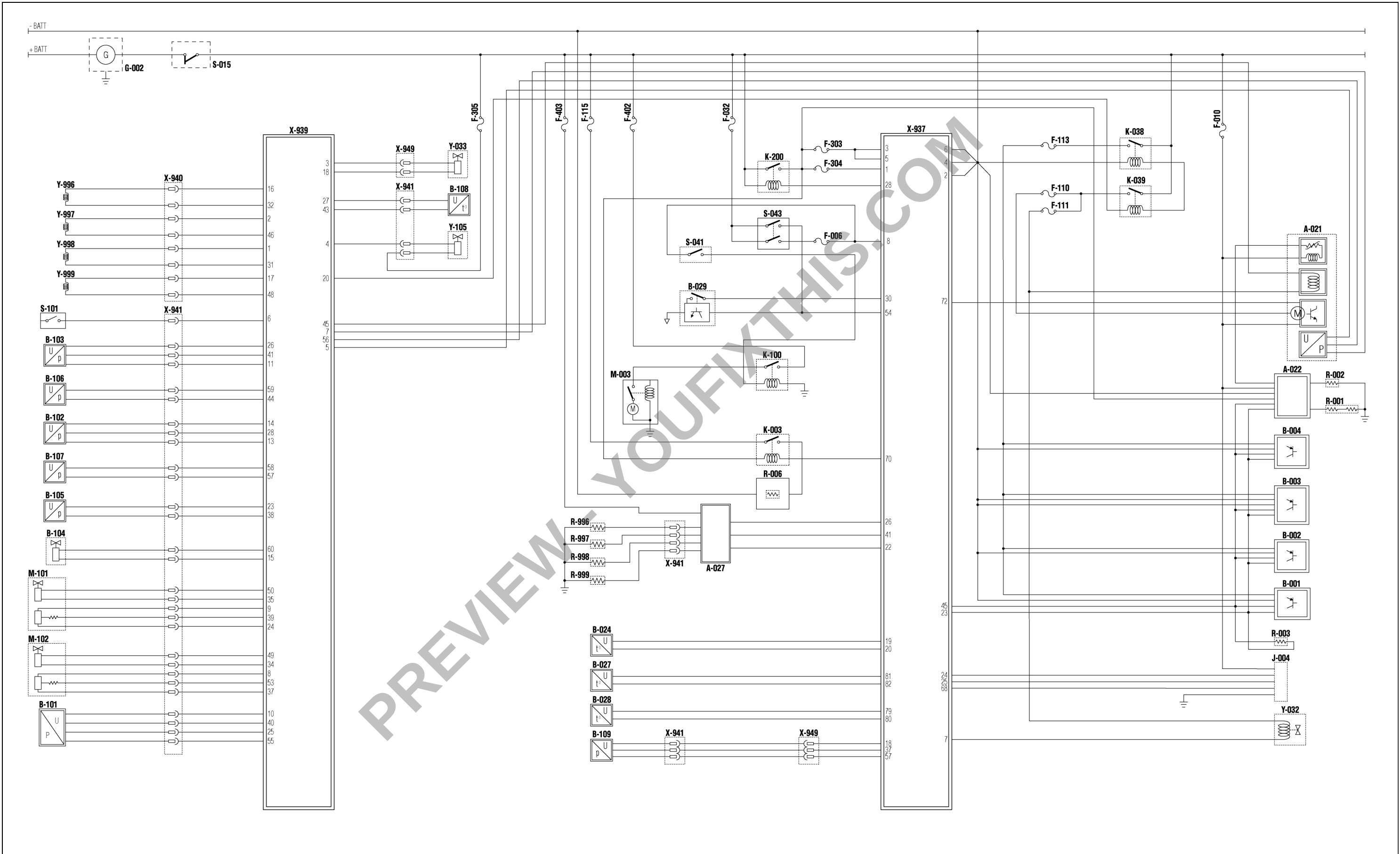
84819781 1

84819781



MOIL15TR03078AA 2

Pin	From	Wire	Description	Color-Size	Frame
1	X-351A (Plug) pin 2 - PTO REAR BRAKE SW ON SELECTOR [S-013] (87311796)	MC-1050B	Rear PTO Brake signal from rocker sw	YE - 0.5	SHEET 26 SH-026_PTO FRONT AND REAR
2	MC-SP-5100-P-X	MC-5100H	12 V from F-002 to PTO AUTO/Brake sw (2)	OR - 0.5	SHEET 08 SH-008_POWER DISTRIBUTION_TRANSMISSION
5	MC-SP-5100-P-X	MC-5100L	12 V from F-002 to PTO AUTO/Brake sw (5)	OR - 0.5	
6	X-230 (Receptacle) pin 12 - XCM CN3A [A-001] (82016219)	MC-1052	AUTO rear PTO signal	YE - 0.5	SHEET 26 SH-026_PTO FRONT AND REAR
7	MC-SP-2252A-P-X	MC-2252BH	Backlighting PTO BRAKE/AUTO sw [7]	BK - 0.5	
8	MC-SP-5003-P-X	MC-5003H	Backlighting PTO AUTO/BRAKE sw [8]	VT - 0.5	SHEET 15 SH-015_POWER DISTRIBUTION_LIGHTS
9	MC-SP-2252A-P-X	MC-2252BL	Backlighting PTO BRAKE/AUTO sw [9]	BK - 0.5	SHEET 26 SH-026_PTO FRONT AND REAR
10	MC-SP-5003-P-X	MC-5003L	Backlighting PTO AUTO/BRAKE sw [10]	VT - 0.5	SHEET 15 SH-015_POWER DISTRIBUTION_LIGHTS



Diesel Exhaust Fluid (DEF)/AdBlue®/ARLA dosing module - Install

⚠ 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.

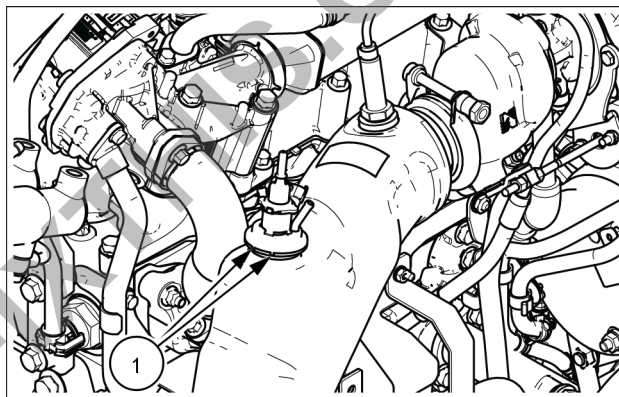
Failure to comply could result in death or serious injury.

W0353A

NOTE: Prevent contamination of the electrical connectors with **DEF/AdBlue®** diesel exhaust fluid by first connecting the electrical connections and then the **DEF/AdBlue®** diesel exhaust fluid pipes.

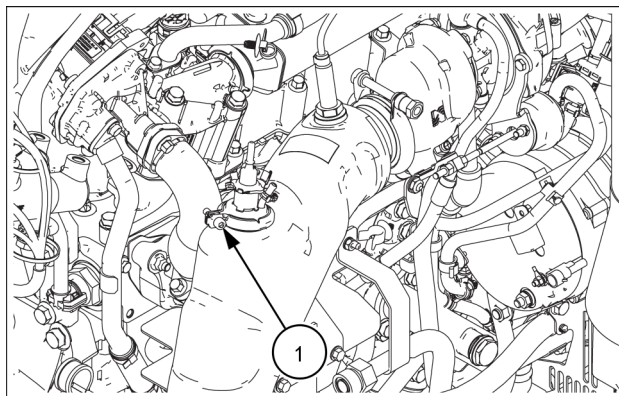
NOTE: Thoroughly clean the area around the dosing module using clean water. Crystallization has to be removed with water and a brush.

1. Position the SCR dosage module, paying attention to the correct alignment with the notches on the seat (1).



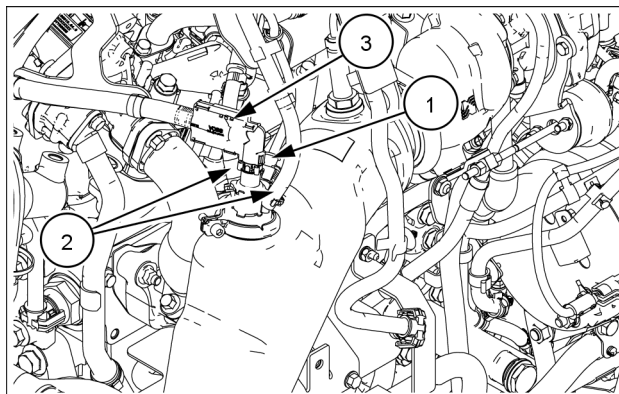
MOIL17TR00953AA 1

2. Secure the dosing module with the clamp, tightening the screw (1) to the prescribed torque, see **Selective Catalytic Reduction (SCR) electrical system - Torque (55.988)**.



MOIL17TR00952AA 2

3. Connect the electrical connection (1) and the **DEF/AdBlue®** diesel exhaust fluid pipe (3).
4. Connect the coolant lines (2).



MOIL17TR00951AA 3

Specifications	
Electrical	
Rotational life -30 – 85 °C (-22 – 185 °F)	5000000 full cycles 10000000 dither cycles (2°
Functional temperature range	-40 – 130 °C (-40 – 266 °F)

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Rear three-point hitch control - Remove

⚠ WARNING

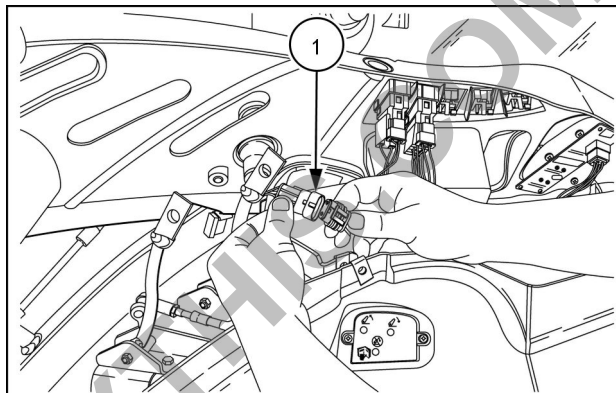
Avoid injury!

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.

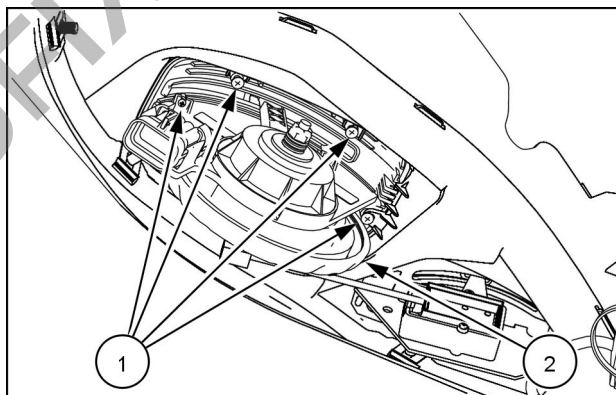
W0208A

1. Lift the right-hand side panel and disconnect the electrical wire (1) as described in **Cab right-hand side panel - Remove (90.160)**.



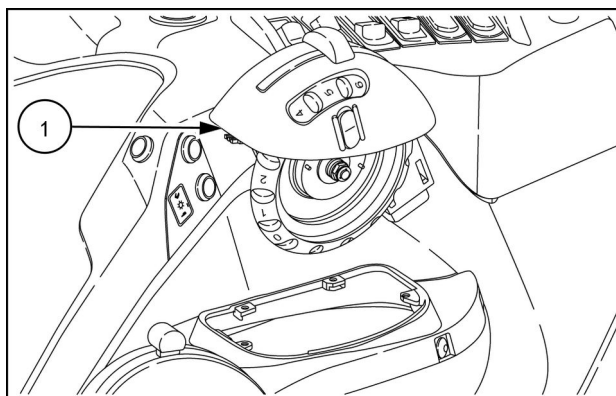
MOIL15TR01660AA 1

2. Loosen the retaining screws (1) of the rear three-point hitch control (2).



MOIL16TR03085AA 2

3. Remove the control (1).



MOIL16TR03086AA 3

- C. If the error is still present, download the correct level of software. If the error is repeated, remove and replace the control unit (CCU).

PREVIEW - YOUFIXTHIS.COM

3146 - Water in fuel level sensor defect detection

Control Module: ECU

NOTE: This fault code is for the Water in Fuel switch with black connector housing.

Context:

The Engine Control Unit (ECU) **A-010** monitors the voltage output from the water in fuel switch **B-029** to determine if water is present in the fuel supply. If water is detected in the fuel, warnings will be displayed to alert the operator of potential engine damage if operation continues. High voltage signal from the water in fuel switch **B-029** indicates water present.

Cause:

This fault code is displayed to warn the operator that the ECU **A-010** has detected excess water in the fuel system or a fault in the water in fuel switch circuit.

Possible failure modes:

1. Excess water in the fuel supply.
2. Faulty water in fuel switch **B-029**, wiring or internal (mechanical and/or electrical) failure.
3. Faulty ECU **A-010**, software.

Solution:

1. Verify this fault code is still present and in an active state.

Use the Electronic Service Tool (EST) to check the fault status.

A. If the fault is still present and active, continue with Step 2.

B. If the fault is no longer present or is in an inactive state, continue with Step 7.

2. Check fuel for water contamination.

A. If there is water contamination, continue with Step 3.

B. If there is no water contamination, Continue with Step 4.

3. Verify proper water in fuel switch **B-029** operation.

Purge fuel supply system, replace fuel filter(s) and refill with fuel that is free of water contamination.

Start and run engine for 5 minutes.

Check for code to return to active status.

A. If code returns in an active status, replace water in fuel switch **B-029**.

B. If code remains inactive, return the machine to service.

4. Check for open, short and grounded circuit conditions in the water in fuel switch **B-029** circuit.

Disconnect the water in fuel switch **B-029** at connector **X-950**.

Disconnect the vehicle (VE) harness from the ECU **A-010** at connector **X-937**.

Disconnect the vehicle (VE) harness from the ignition key switch **S-043** at connector **X-510**.

With the key switch in the OFF position, use a multimeter to perform the following tests, on the vehicle (VE) harness from :

From	To	Value
X-950 pin 1	X-937 pin 30	There should be continuity.
X-950 pin 2	Chassis ground	There should be continuity.

Wiring harnesses - Electrical schematic sheet 28 (55.100)

Wiring harnesses - Electrical schematic sheet 48 (55.100)

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17425 - SCR inducement: warning, triggered by EGR valve blocked fault

Control Module: ECU

Context:

The Engine Control Unit (ECU) **A-010** monitors the efficiency of the Exhaust Gas Recirculation (EGR) valve **M-101**. If at least one fault related to the EGR valve **M-101** is active, this inducement driver warning is activated. This fault indicates a least severe inducement level. Although this fault requires no direct action, it is the result of another system failure related to the EGR valve **M-101**. Check for other active faults, if necessary.

19797 - SCR inducement: level 1 (torque reduction), triggered by DEF/AdBlue quality fault

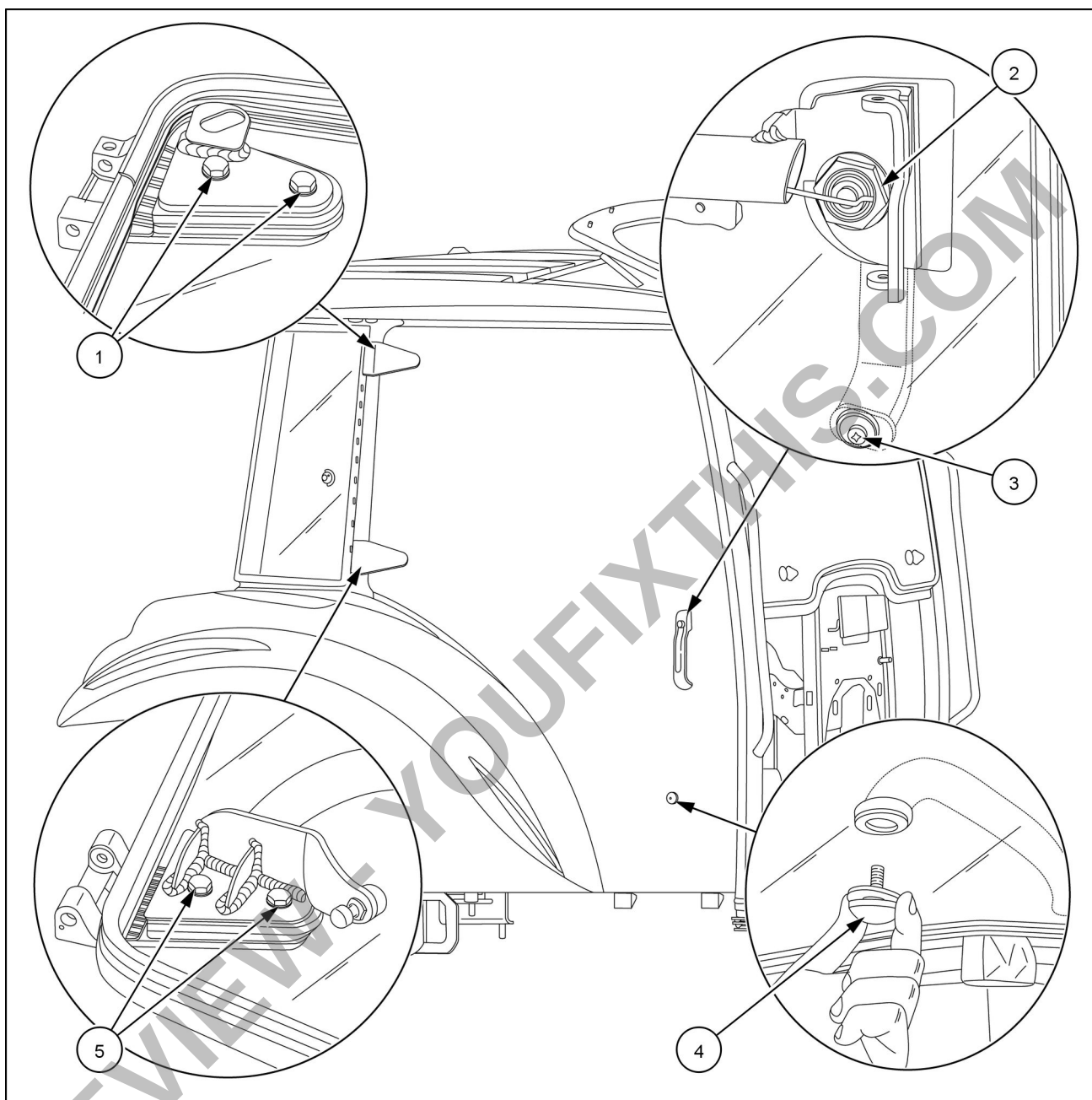
Control Module: ECU

NOTE: Since this fault is part of the inducement strategy, it may be necessary to perform the Engine Restart Counter Reset / Unlock Inducement configuration with the Electronic Service Tool (EST) before you return the machine to service, unless this was accomplished as part of the resolution of the fault causing this fault. See **Selective Catalytic Reduction (SCR) exhaust treatment - Configure - Engine restart counter reset (10.500)** within engine technical information, if necessary.

Context:

This fault is only for informational purposes and requires no action other than the resolution of the active fault **19140 – DEF/AdBlue concentration is out of range** and/or **19141 – DEF/AdBlue quality sensor detects diesel fuel in DEF/AdBlue tank**, which after being active for more than **10 h** will cause this fault to occur.

Cab door window - Torque



MOIL15TR00829GA 1

Part to tighten	Thread	Rated torque
Hinge retaining bolts (1)	M8 x 1.25	6 – 8 N·m (4.43 – 5.90 lb ft)
Handle retaining nut (2)	-	10 – 12 N·m (7.38 – 8.85 lb ft)
Handle retaining bolt (3)	M6 x 1	3.5 – 4 N·m (2.58 – 2.95 lb ft)
Handle retaining bolt (4)	-	4.5 – 5 N·m (3.32 – 3.69 lb ft)
Hinge retaining bolts (5)	M8 x 1.25	6 – 8 N·m (4.43 – 5.90 lb ft)

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