2 - SAFETY INFORMATION

Safety rules and signal word definitions

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual and on machine safety signs, you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury. The color associated with DANGER is RED.

WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury. The color associated with WARNING is ORANGE.

CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation that, if not avoided, could result in machine damage or property damage. The color associated with Notice is BLUE.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine damage or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: *Note indicates additional information that clarifies steps, procedures, or other information in this manual.*

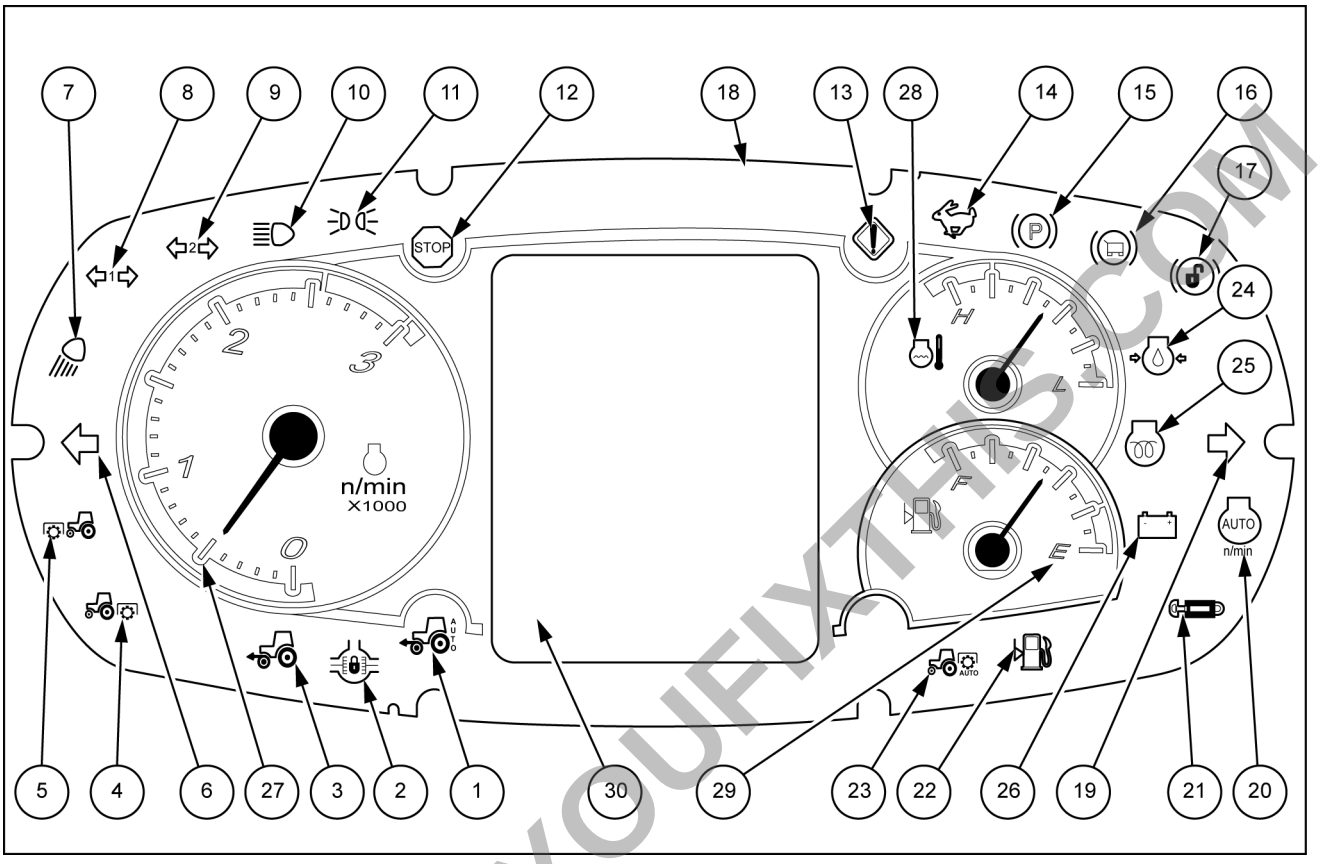
Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

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Forward controls

Instrument cluster



MOIL14TR00457FB 1

The colored warning indicators on the instrument cluster provide information on system operation, or warnings relating to system malfunctions. Illumination of a warning light may be accompanied by an audible alarm.

NOTE: *All indicator and warning lights will illuminate for a short period at 'key- on' as the electrical system carry out a self diagnostic check.*

(1) Warning light not used

(2) Differential lock warning indicator (amber)
This warning light comes on when the differential lock is engaged.

(3) Warning indicator for four-wheel drive (green)
This indicator light will illuminate when the drive to the front wheels is engaged.

(4) Warning indicator for rear Power Take-Off (PTO) (amber)
Illuminates when the engine is running and the rear PTO is engaged.
The indicator, from being steady, starts flashing when the PTO exceeds the maximum permissible number of revolutions.

(5) Warning light not used

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4 - OPERATING INSTRUCTIONS

Commissioning the unit

Basic operating safety rules

⚠ WARNING

Inhalation/asphyxiation hazard!
Make sure there is proper ventilation before starting the engine.
Failure to comply could result in death or serious injury.

W0091A

⚠ WARNING

Unexpected machine movement!
Before starting the engine, move all operating controls to neutral or park lock position. This prevents accidental movement of the machine or start up of power-driven equipment.
Failure to comply could result in death or serious injury.

W0302A

⚠ WARNING

Hazard to bystanders!
ALWAYS make sure the work area is clear of bystanders and domestic animals before starting this procedure. Know the full area of movement of the machine. Do not permit anyone to enter the area of movement during this procedure.
Failure to comply could result in death or serious injury.

W0245A

⚠ WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE DEATH OR SERIOUS INJURY.
MAKE SURE THAT EVERY OPERATOR:
-is instructed in the safe and proper use of this machine.
-reads and understands the operator's manual for this machine.
-reads and understands ALL safety signs on the machine.
Failure to comply could result in death or serious injury.

W0188A

⚠ WARNING

Avoid injury!
Carefully read and observe all the precautionary advice contained in this manual.
Failure to comply could result in death or serious injury.

W0044A

⚠ WARNING

Misuse hazard!
Before starting the engine, make sure you are fully aware of the location and the function of each control.
Failure to comply could result in death or serious injury.

W0226A

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Maintenance planning

Maintenance chart

Maintenance action	Check	Adjust	Filling	Cleaning	Drain fluid	Change fluid	Tighten	Replace	Test	Grease	Page no.
As required											
Radiator - Check – Fluid level	x										7-16
Windshield washer fluid reservoir - Filling		x									7-16
Air conditioning - Check	x										7-17
Hand brake lever - Check (If fitted)	x										7-18
Remote control valve reservoir - Check	x										7-18
Radiator - Cleaning			x								7-19
Brake pedals - Check	x										7-19
External lighting - Check	x										7-19
Wheels - Check	x										7-20
Hydraulic steering line - Check	x										7-21
Master clutch release control - Check	x										7-21
Fuel tank - Cleaning - Filler neck filter			x								7-21
Diesel Exhaust Fluid (DEF)/AdBlue® tank - Cleaning - Filler neck filter			x								7-22
AT WARNING MESSAGE DISPLAY											
Air cleaner - Cleaning			x								7-23
Brake fluid reservoir - Filling		x									7-24
Fuel filters - Drain fluid					x						7-24
Diesel Exhaust Fluid (DEF)/AdBlue® tank - Change fluid						x					7-25
Every 10 hours or daily											
Engine - Check - Oil level	x										7-26
Front loader and bucket - Grease										x	7-27
Initial 50 hours											
Maintenance - Tighten							x				7-28
Maintenance - Check	x										7-28
Maintenance - Replace								x			7-28
Maintenance - Cleaning			x								7-29
Maintenance - Test									x		7-29
Maintenance - Grease										x	7-29
Every 50 hours											
Steering cylinder - Grease										x	7-30
Front axle - Grease										x	7-30
Steering knuckle - Grease										x	7-30
Four-Wheel Drive (4WD) axle - Grease										x	7-31
Rear three-point hitch - Grease										x	7-31
Rear hitch - Grease										x	7-31
Every 100 hours											
Air-conditioning condenser - Cleaning			x								7-32
Transmission cooler - Cleaning			x								7-32
Aftercooler - Cleaning			x								7-33
Cab air filters - Cleaning			x								7-33
Cab air filters - Cleaning - Recirculation Filters			x								7-34
Accessory belt - Check - Alternator belt	x										7-34
Compressor drive belt - Check	x										7-34
Front loader and bucket - Check – bolts and nuts	x										7-35

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8 - TROUBLESHOOTING

Fault code resolution

Engine - Troubleshooting

⚠ WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.
1. **Disengage all drives.**
2. **Engage parking brake.**
3. **Lower all attachments to the ground, or raise and engage all safety locks.**
4. **Shut off engine.**
5. **Remove key from key switch.**
6. **Switch off battery key, if installed.**
7. **Wait for all machine movement to stop.**

Failure to comply could result in death or serious injury.

W0047A

⚠ WARNING

Improper operation or service of this machine can result in an accident.
If you do not understand a maintenance procedure, or doubt your ability to perform a maintenance procedure correctly, see your authorized dealer.
Failure to comply could result in death or serious injury.

W0157A

Problem	Possible Cause	Correction
The engine will not start or starts with difficulty	Incorrect starting procedure	See starting procedure
	Fuel level low or empty	Check the fuel level
	Air in fuel system	Bleed fuel system
	Engine oil viscosity not right	Use oil of right viscosity
	Fuel not suitable for ambient temperature	Use correct type of fuel for temperature conditions
	Fuel system contaminated	Clean system
	Fuel filter clogged	Replace filter element
	Fuel injector fault	Contact your dealer
The engine does not run properly and/or cuts out	Fuel system contaminated	Clean system
	Fuel injector fault	Contact your dealer
Engine does not develop full power	Engine overload	Change to lower gear or reduce load
	Air filter clogged	Carry out maintenance on air filter
	Incorrect fuel type	Use the right fuel
	Low engine operating temperature	Check thermostat
	Fuel injector fault	Have your dealer check the injectors
	Implement incorrectly set	See equipment manual
	Improper valve clearance	Check and adjust
	Idling speed too low	Contact your dealer
Abnormal engine knocking	Oil level low	Top up fluid level
	Oil pressure low	Contact your dealer
Low engine operating temperature	Thermostat malfunction	Replace thermostat
	Fan viscous coupling malfunction	Contact your Dealer
Oil pressure low	Oil level low	Add oil as required
	Oil grade or viscosity wrong	Drain and refill with oil of correct grade and viscosity
Excessive oil consumption	Oil level too high	Reduce oil level

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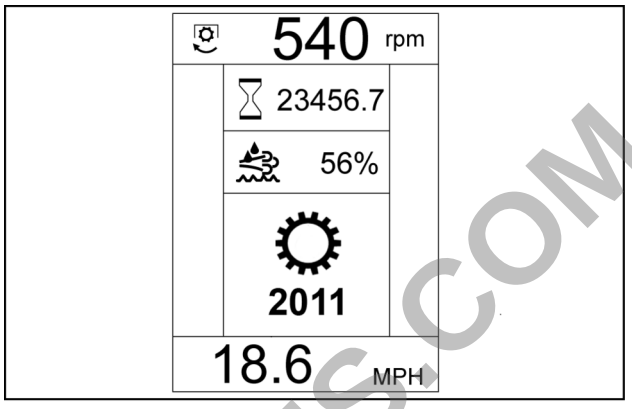
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Symptom(s)

Viewing error codes

Fault code transmission

The electronic control units of the tractor are able to detect operating faults or errors that occur in key areas such as the engine, the gearbox, the electric system, and the hydraulic system.
If an operating fault or error occurs, the relevant symbol and fault code will appear on the display.
In addition to this display, the amber warning indicator light or the red warning indicator light may illuminate on the control panel and an audible warning may sound, depending on the severity of the fault. Contact the specialized personnel at your CASE IH authorized dealer where necessary.



MOIL14TR00477AA 1

Error code identification

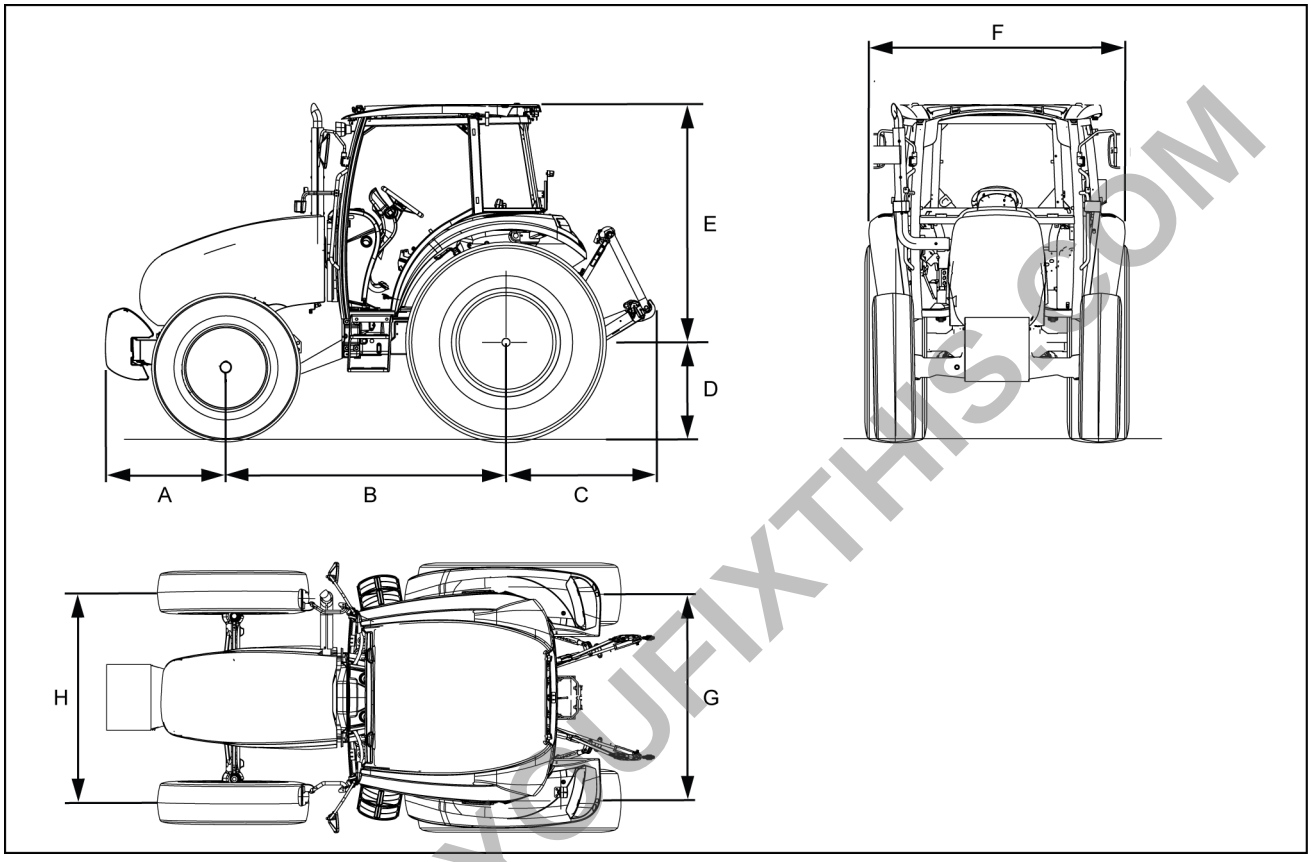
NOTE: *In the event that an anomaly is found, a warning signal and a four- or five-digit error code will appear on the central display of the instrument cluster. To resolve the problem, contact your authorized CASE IH dealer, providing the data from the error code displayed.*

Symbol on the display	Error code	Area of fault
	From **1001** to **2000**	EDC (Electronic Draft Control)
	From **2001** to **3000**	Transmission
	From **3001** to **4000**	Engine
	From **5001** to **6000**	Rear Power Take-Off
	From **6001** to **7000**	Front-wheel drive
	From **7001** to **8000**	Differential locking
	From **14001** to **15000**	Electrical/electronic problems
	From **17001** to **18000**	Engine – Selective Catalytic Reduction (SCR) system
	From **19001** to **20000**	Engine – Selective Catalytic Reduction (SCR) system

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9 - SPECIFICATIONS

Dimensions and weights



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Reference	Size
A	**933 mm** (**36.73 in**)
B ● 2WD	**2343 mm** (**92.24 in**)
B ● 4WD	**2285 mm** (**89.96 in**)
C	**831 - 881 mm** (**32.72 - 34.69 in**)
D	Tire index radius
E	**1819 mm** (**71.61 in**)
F	**1923 mm** (**75.71 in**)
G	**1337 - 1937 mm** (**52.64 - 76.26 in**)
H ● 2WD	**1429 - 2029 mm** (**56.26 - 79.88 in**)
H ● 4WD	**1235 - 1947 mm** (**48.62 - 76.65 in**)

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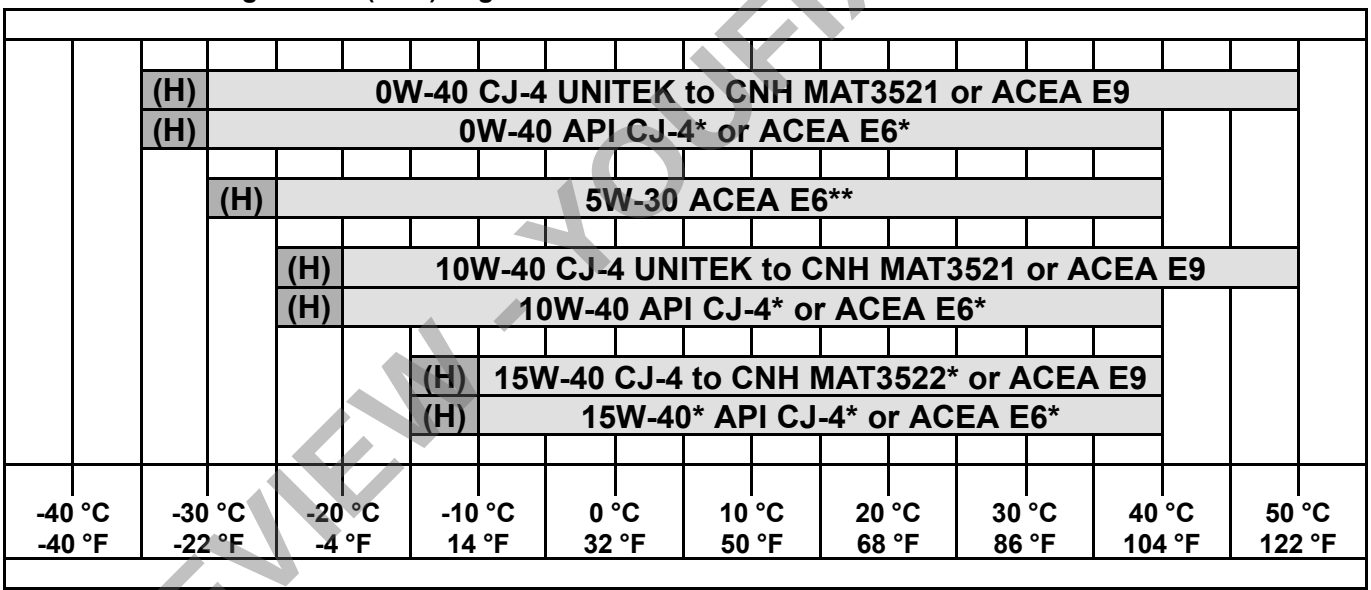
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Capacities

	QUANTITY
System Cooling	Models with cab: **16.0 L** (**4.2 US gal**) Model without cab: **14 L** (**3.7 US gal**)
Windshield washer reservoir	**2 L** (**0.5 US gal**)
Fuel tank	**125.0 L** (**33.0 US gal**)
DEF/AdBlue® tank	**9.6 L** (**2.5 US gal**)
Engine oil	**8.5 L** (**2 US gal**)
Brake control circuit	**0.7 L** (**0.18 US gal**)
Front axle	**4.5 L** (**1.2 US gal**)
Front axle side reduction gears (each)	**1.0 L** (**0.3 US gal**)
Hydraulic circuit — Models with mechanical transmission	**48 L** (**12.7 US gal**)
Hydraulic circuit — Models with Power Shuttle trasmission	**54.0 L** (**14.3 US gal**)
Hydraulic circuit — Models with Hi-Lo transmission	**57.0 L** (**15.1 US gal**)
Air-conditioning refrigerant	**650 g** (**23 oz**)
Air-conditioning compressor oil	**0.185 L** (**0.05 US gal**)

Recommended engine oil for operating temperature ranges

For machines using Tier 4B (final) engines

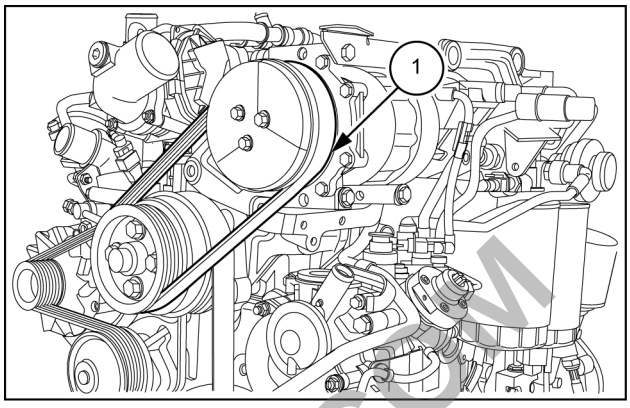


(H) Engine oil pan or coolant block heater recommended in this range
* Requires a **50 %** reduction in oil change interval
**The use of 5W-30 CJ-4 engine oil is not recommended.

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Inspect the belt **(1)** over its entire length, checking for chafing, cracking, cuts, and general wear.
If in doubt, contact the authorized dealer to install a new belt.



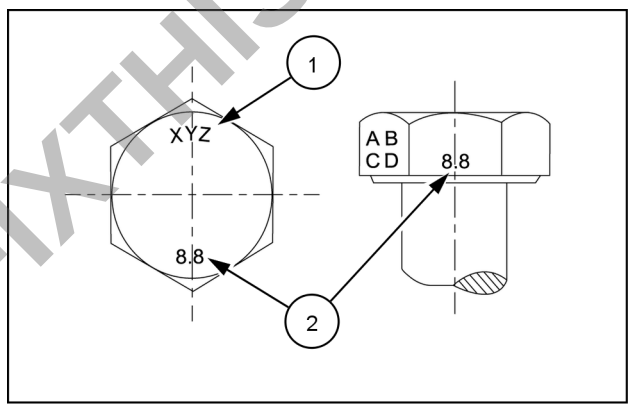
MOIL13TR00308AA 1

Front loader and bucket - Check – bolts and nuts

1. Check all the hardware. Tighten as required in accordance with the following tightening torques.

   Metric hex head screws and carriage bolts, classes 5.6 and up

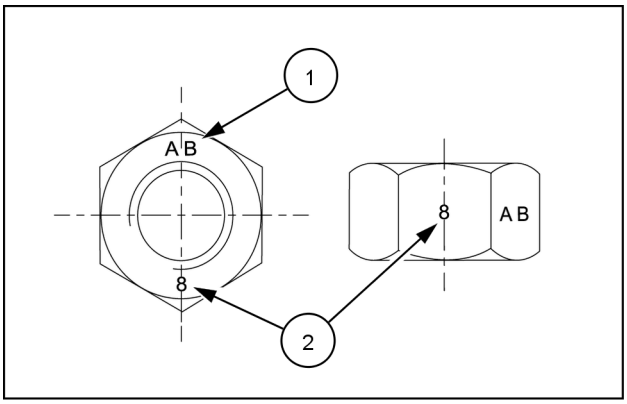
   1. Manufacturer's identification
   2. Property class



MOIL14TR00479AA 1

2. Hex head nuts and lock nuts, classes 0.5 and up

   1. Manufacturer's identification
   2. Property class



MOIL14TR00480AA 2

Torque chart for standard hardware used on the loader boom

Size	Property class	
	8.8	10.9
M6	**12 N·m (9 lb ft)**	**17 N·m (13 lb ft)**
M8	**23 N·m (17 lb ft)**	**33 N·m (24 lb ft)**
M10	**46 N·m (34 lb ft)**	**65 N·m (48 lb ft)**
M12	**80 N·m (59 lb ft)**	**110 N·m (81 lb ft)**

Torque chart for self-locking hardware used on the loader boom

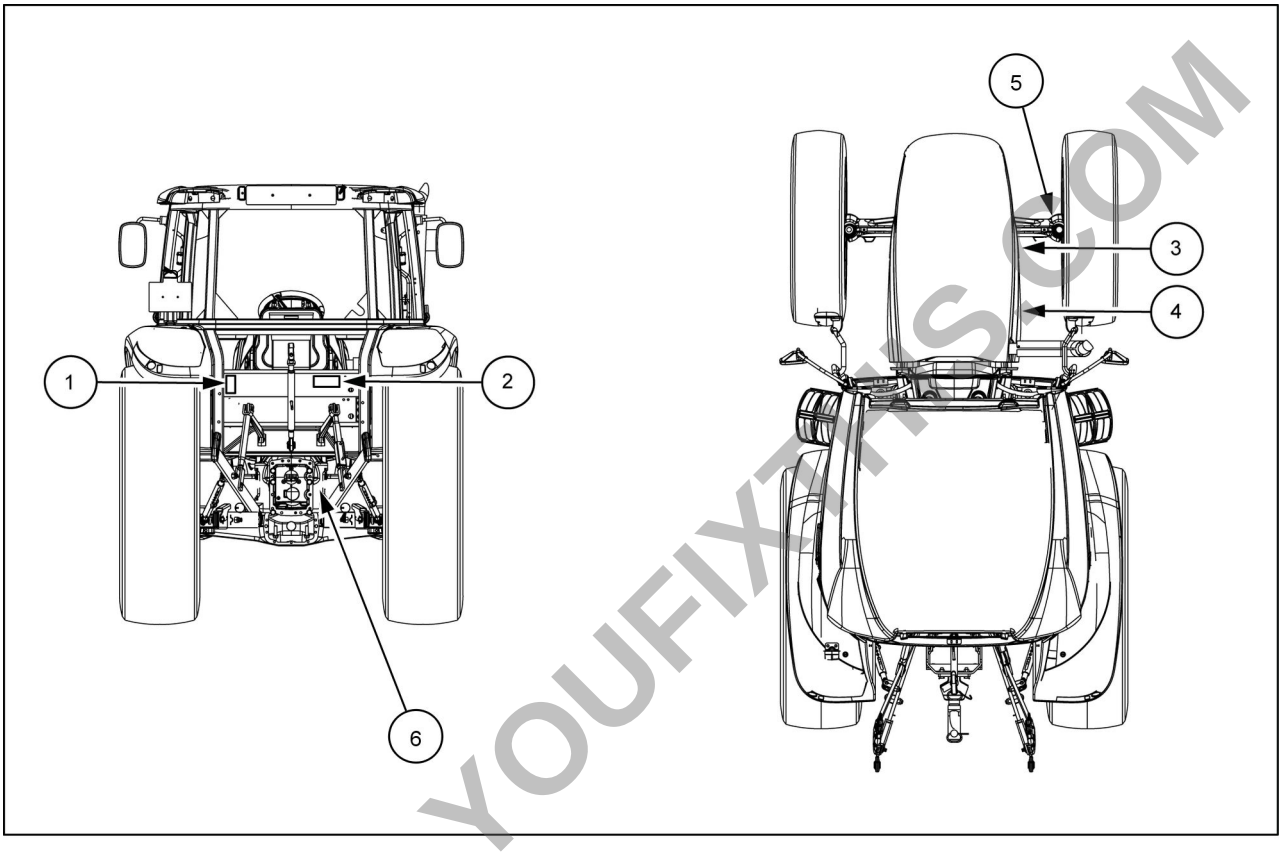
Size	Property class
	8.8
M8	**19 N·m (14 lb ft)**
M10	**38 N·m (28 lb ft)**

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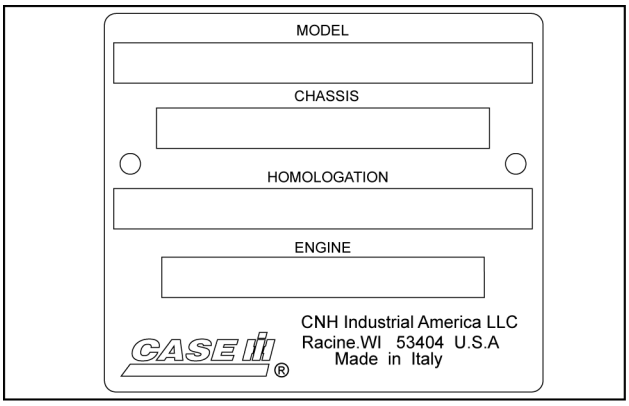
Identification plates

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.



DCUTLNEIT010S2F 1

(1) Tractor type-approval data plate

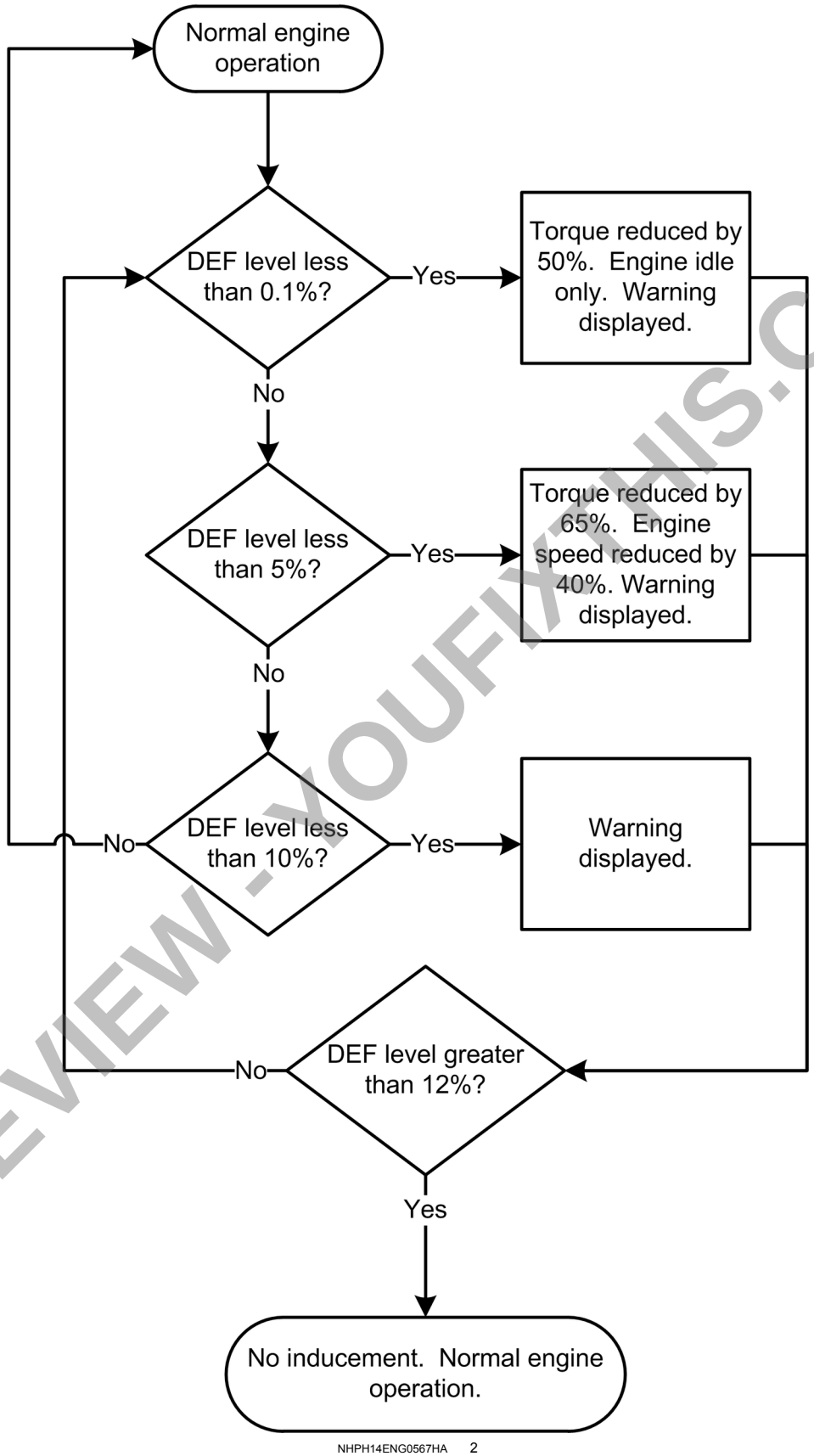


MOIL14TR00020AA 2

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DEF/AdBlue® level faults, failures, and engine power loss levels



NHPH14ENG0567HA 2

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4 OPERATING INSTRUCTIONS

Commissioning the unit

Basic operating safety rules 4-1
Refueling 4-2
Filling the Diesel Exhaust Fluid (DEF)/AdBlue® tank 4-3

Starting the unit

Engine operation 4-4

Stopping the unit

Stopping the engine 4-6

Moving the unit

Machine movement start-up 4-7
Operating in cold temperatures 4-8
Low idle speed management 4-9
Installation of the front loader 4-10
Removing the loader 4-11
Installing the bucket 4-12
Removing the bucket 4-14

5 TRANSPORT OPERATIONS

Road transport

Transporting the machine 5-1
Road transport of the tractor with loader installed 5-2

Recovery transport

Towing the tractor 5-3

6 WORKING OPERATIONS

Transmission

Transmission operation 6-1

Four-Wheel Drive (4WD)

Four-wheel drive with mechanical engagement 6-5
Four-wheel drive with electro-hydraulic control 6-7

Differential lock system

Mechanical differential lock 6-8
Electrohydraulic differential lock 6-9

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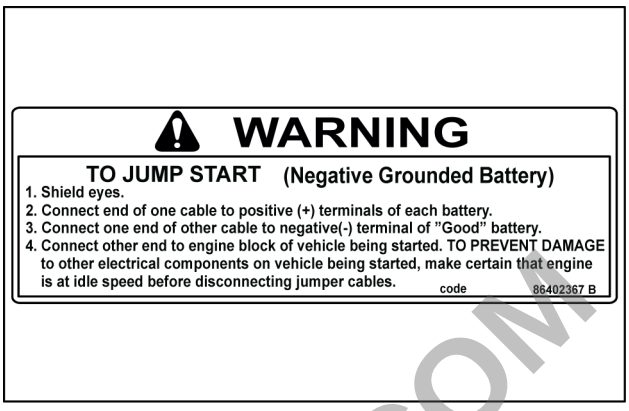
(15) Position: battery compartment.
Part number: 86402367

WARNING
Unexpected machine movement !

TO JUMP START (Negative Grounded Battery)

1. Shield eyes.
2. Connect end of one cable to positive (+) terminals of each battery.
3. Connect one end of other cable to negative (-) terminal of "Good" battery.
4. Connect other end to engine block of vehicle being started. TO PREVENT DAMAGE to other electrical components on vehicle being started, make certain that engine is at idle speed before disconnecting jumper cables.

Failure to comply could result in death or serious injury.



86402367 17

(16) Position: applied to the right hand side of the console.
Part number: 47739782

DO NOT APPLY PARK LOCK WHILE TRACTOR IS MOVING
FAILURE TO COMPLY MAY CAUSE DAMAGE TO THE VEHICLE



47739782 18

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To quickly reduce in cab temperature operate the air conditioner with the blower speed set to maximum and the heater control fully off. When the air has cooled sufficiently, adjust the fan control to maintain the desired temperature. The windows and doors should remain closed.
Under certain conditions, it may be desirable to operate both the air conditioner and heater together, e.g. to demist the windscreen and interior door glass on a cold morning. (The air conditioner, as well as cooling, also removes moisture from the air in the cab). Run the engine to normal operating temperature, turn the heater temperature control **(2)** and blower control **(1)** to the maximum settings (fully clockwise). Turn on the air conditioner and adjust the air vents to direct the air flow, as required.

When the windows are clear, turn the air conditioner off and adjust the heater controls to maintain the desired cab air temperature.

NOTICE: *Run the engine at idle speed for at least 3 minutes after switching on the air conditioner, if the air conditioner has been out of use for more than 30 days.*
Always turn the air conditioner off when cooled or dehumified air is not required. For proper operation of the air conditioner, ensure that the cab air filters are serviced regularly.

Routine inspections

At least once every three months:

- Eliminate any foreign bodies from the condenser fins and evaporator;
- check the tension of the compressor belt;
- check the condition of the tubing, connections and mounting brackets;
- check that the fixing screws and nuts, pulleys and compressor are correctly tightened.

Annual maintenance

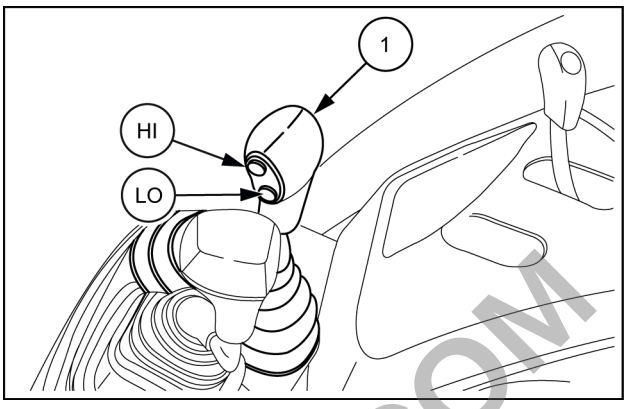
At the start of the season, have the specialist personnel from the CASE IH service network carry out the following operations:

- check the oil level in the compressor
- check system pressure and, if necessary, fill the system with **R134A**;
- drain the air conditioning system and replace the dehydration filter, only if strictly necessary;
- fill the air conditioning system with **R134A**.
- check operation of system.

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Hi-Lo transmission



MOIL13TR02559AA 9

The main shift lever, equipped with two switches **(HI)** and **(LO)** , supplies two speeds in the same gear ratio.

HI — High speed gears

LO — Low speed gears

The button **(1)** controls the transmission engine electro-hydraulic clutch. By pressing the button it is possible to pass from one gear to another without using the clutch pedal.



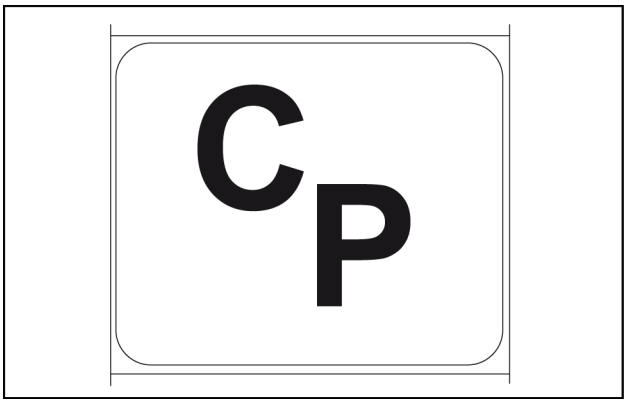
With the range HI engaged, the green high gear range engaged indicator shown in the figure (hare symbol) lights up.

transmission 24 x 24

By using the main shift **(1)**, range gear **(2)**, shuttle levers **(3)** and HI and LO buttons you can select 24 forward gears and 24 reverse gears.

transmission 40 x 40

Use the gear lever **(1)**, the range gear lever **(2)**, the shuttle lever **(3)**, the HI and LO buttons, and the creeper control handles **(4)** together to select 40 forward gears and 40 reverse gears.
The creeper unit lever in position B, underdrive, inhibits operation of the third range.



MOIL14TR01098AA 10

The electro-hydraulic clutch button on the main shift lever enables the operator to control tractor drive without using the clutch pedal

If for whatever reason there is the need to stop the tractor momentarily, press this control button and the tractor will stop immediately. Release the button to restart work.

NOTE: *The function is disabled when you keep button* ***(1)*** *fig.* ***9*** *pressed for longer than 10 seconds or if you get up out of the driving seat with the tractor in motion. Cancellation of the function is highlighted on the central monitor by the error code "CP". An audible alarm warning signal will sound at the same time. To reactivate this function you can move the shuttle control lever into neutral or momentarily press the clutch pedal.*

Four-Wheel Drive (4WD)

Four-wheel drive with mechanical engagement

⚠ WARNING

Overturning hazard!
Four-wheel drive (4WD) greatly increases traction. Extra caution is needed on slopes. Compared to two-wheel drive, a 4WD machine maintains traction on steeper slopes, increasing the possibility of overturning.
Failure to comply could result in death or serious injury.

W0453A

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Track adjustment

Adjustment of the front tracks

2WD models

To adjust the front wheel track, proceed as follows:

- raise the front of the tractor using a jack positioned in the middle of the axle;
- Release the sliding ends by loosening the two retention screws **(1)** and **(2)** on each side.

Rated torque		
220 N·m	**22.5 kgm**	**162.7 ftlbs.**

- Adjust the length of the steering struts connected to the two wheels by loosening the fixing screws **(3)**

Rated torque		
39 N·m	**4 kgm**	**29 ftlbs.**

- Seven possible wheel tracks are provided

A further larger track width (maximum track) can be obtained by reversing the wheels on their hubs.
Only use the maximum track when absolutely necessary.
The tightening torque of the wheel-hub locknuts is:

115 N·m	**11.7 kgm**	**85 ftlbs.**

NOTE: *As the tractor is fitted with hydrostatic steering, proceed as described above for the left−hand wheel. For the right−hand wheel, after having released the sliding end of the axle the internal angle of the hydraulic cylinder must be suitably adjusted. Proceed as follows :*

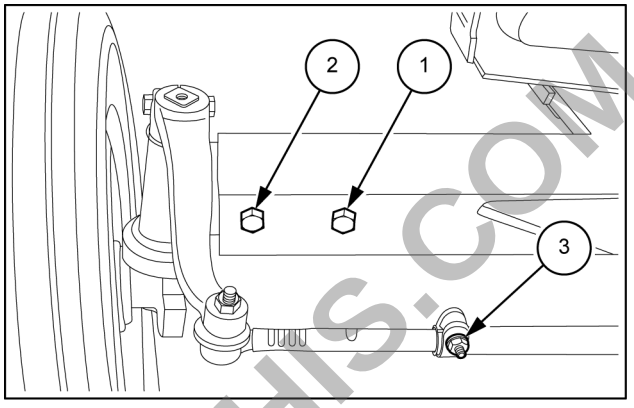
- make sure the screw **(3)** remains loose;
- insert the articulation pin **(5)** in one of the corresponding holes **(4)**;
- Tighten the nut on the pin **(5)**.

Rated torque		
294 N·m	**30 kgm**	**217 ftlbs.**

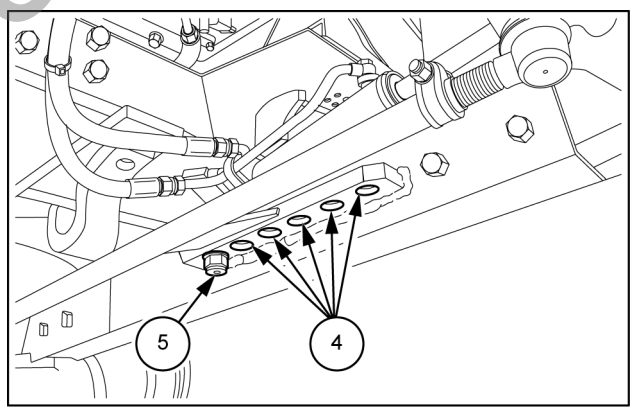
- Tighten the screw **(3)**

Rated torque		
39 N·m	**4 kgm**	**29 ftlbs.**

- make sure that the hoses are not twisted and tighten the connectors.



DCUTLNEIT054S6A 1



DCUTLNEIT055S6A 2

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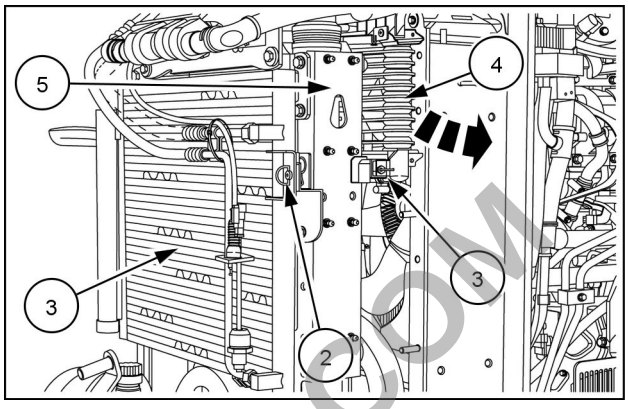
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Aftercooler - Cleaning

Check no dirt has accumulated on the fins of the intercooler **(1)** and that they are not obstructed. If necessary, clean them as follows:

1. Disassemble the flap as described on page **7-19**.
2. Rotate the retaining clamp **(2)**.
3. Rotate the condenser **(3)** in the direction of the arrow.
4. Rotate the retaining clamp **(4)**.
5. Slide out the heat exchanger **(5)** in the direction of the arrow.
6. Clean the intercooler **(1)** directing a jet of air or water from the back towards the front.

   NOTE: *For cleaning, use compressed air or a pressure washer not exceeding* ***7 bar*** *(****101.5 psi****)*
7. Position the heat exchanger back in its seat **(5)** and lock it with the retaining clamp **(4)**.
8. Close the condenser **(3)** and lock it using the retainer **(2)**.
9. Refit the flap as described on page **7-19**.



MOIL15TR02339AA 1

NOTICE: *If using a pressure washer, take care not to direct the jet of water onto the cover of the engine air cleaner.*

Cab air filters - Cleaning

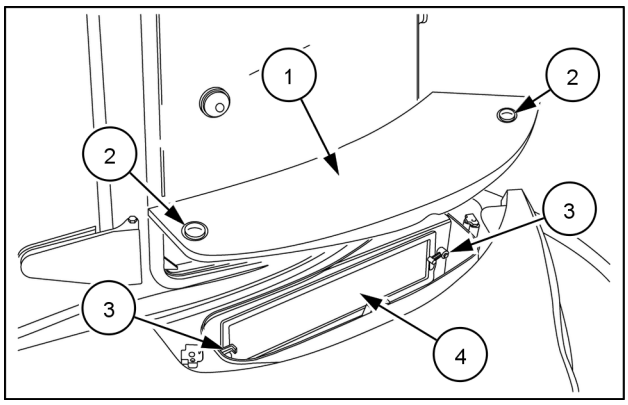
To clean the cab air cleaners proceed as follows:

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 **(4)** by one of two methods:

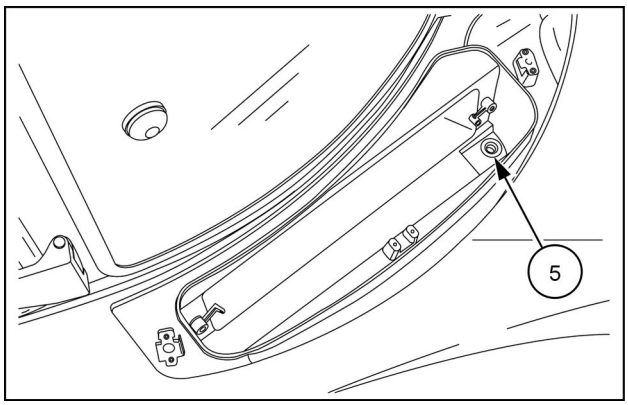
- Tap the filter gently on a flat surface with the outward−facing part downwards
- Clean with a jet of compressed air with a maximum pressure of **2.0 bar** (**29.0 psi**) at a minimum distance of **10.0 cm** (**3.9 in**)

5. Clean the filter seat with a cloth.
6. Check that the **(5)** drain hole is not clogged.
7. Refit the clean filter with the arrows on the label pointing towards the inside of the fender.
8. Close the two filter retaining clips **(3)**.
9. Refit the cover **(1)**.

NOTE: *repeat the same operations on the opposite fender.*



MOIL15TR01625AA 1



MOIL15TR01626AA 2

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Hydraulic service brakes - Troubleshooting

Problem	Possible Cause	Correction
Pedals soft when engine off	Air in the braking system	Call your Dealer
Pedal depresses fully with engine off	Brake piston seals leaking	Call your Dealer
	Brake discs worn	Call your Dealer
	Brake release leaking	Call your Dealer
	Brake valve(s) leaking	Call your Dealer

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