ORIGINAL INSTRUCTIONS

Farmall® 110N
Farmall® 100N
Farmall® 90N
Farmall® 80N
Tractor

OPERATOR'S MANUAL

Part number 48042335
2nd edition English
June 2017
Replaces part number 47847680

CASE IH AGRICULTURE

1 - GENERAL INFORMATION

Note to the Owner

This manual contains information concerning the adjustment and maintenance of your new machine. You have bought a reliable machine, which will ensure high performance and long-lasting service, if you maintain and use the machine correctly. Ensure that all operators read this manual carefully. Always leave this manual at the operators' disposal for immediate reference.

The CASE IH dealer will provide you with the general operating instructions for your new machine. Your dealer's service technicians were trained directly by the manufacturer. The service technicians will be able to provide any further clarification that you need regarding the operation of your machine.

The Case IH Max Service program is also available. Call 1-877-4CASEIH (1-877-422-7344)
or email: maxservice.na@cnh.com.

Your CASE IH dealer has the full range of genuine CASE IH spare parts. These parts are manufactured and inspected carefully to ensure high quality and accurate fitting of all necessary spare parts. When ordering parts, you should give your dealer the model code and product identification number of your new machine. Locate these numbers now and record them below. Refer to the 'General Information' section of this manual for the location of the model code and product identification numbers of your machine.

PLEASE RECORD THE FOLLOWING INFORMATION
Model :
Product Identification Number (PIN):

Warning symbol. It is used with and without signal words to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

⚠ WARNING

Illustrations in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment.
Replace all shields before operating the machine.
Failure to comply could result in death or serious injury.

W0012A

The machine has been designed and built according to the highest standards of quality and it complies with all current safety regulations. However, the risk of accidents can never be completely excluded. That is why it is essential to observe elementary safety rules and precautions.

Read this manual carefully, paying particular attention to the instructions concerning safety, operation and maintenance so as to avoid the risk of injury while operating or servicing the machine.

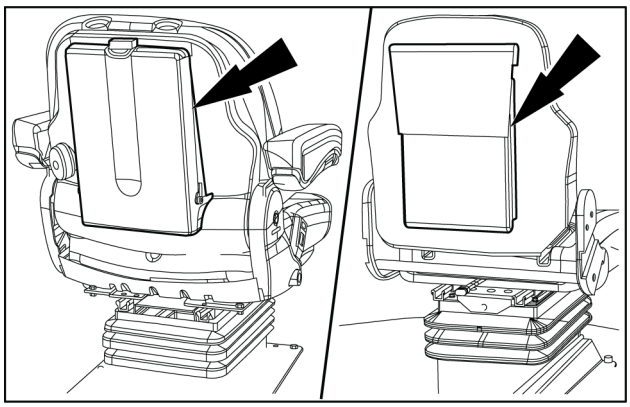
Do not use this machine for any applications or purposes other than those described in this manual. If the machine is to be used for work involving the use of special attachments, accessories or equipment, consult your CASE IH Dealer in order to make sure that any adaptations or modifications made are in keeping with the machine's technical specifications and with prevailing safety requirements.

Any modification or adaptation which is not approved by the manufacturer may invalidate the machine's initial conformity with safety requirements.

The machine must undergo regular inspections, the frequency of which varies according to the type of use. Consult your authorized CASE IH dealer.

Operator's manual storage

Keep the tractor instructions manual, in the compartment behind the operator's seat. The instructions manual must always be at every operator's disposal.



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Safety rules – Explosions and fires

⚠ Fire and explosion prevention ⚠

Fuel and oil that is leaked or spilled on hot surfaces or electrical components can cause a fire.

Crop material, branches, debris, bird nests, or flammable material can ignite on contact with hot surfaces

Remove branches and debris from the machine at least once a day and always at the end of the working day, especially from the areas surrounding the hot components such as the engine, the transmission, the exhaust, the battery, etc. Depending on the working environment and conditions, more frequent cleaning may be necessary.

Always keep a fire extinguisher on the machine or in the immediate vicinity of the machine.

Make sure that the fire extinguisher(s) is maintained and serviced according to the manufacturer's instructions.

Inspect the electrical system for loose connections and frayed insulation. To repair or replace loose or damaged parts, contact your authorized dealer.

Do not store oily rags or other flammable material on the machine.

Never perform welding or flame cutting on the cab, protective frame, wheel rims, or wheel discs.

Do not expose the machine to flames, brushwood fires, or explosives.

Use a non-flammable solvent to clean the parts of the tractor.

Promptly investigate any unusual smells or odors that may occur during operation of the machine.

Safety rules - Category 2 cabin (standard)

⚠ Operator protective structure ⚠

Definition of cab category 2

The cab meets the requirements defined in EN 15695−1. This means that the air delivery and filtration system provides protection against dust and that the minimum differential pressure is ensured. Necessary filtered fresh air flow rate can be obtained using the air-conditioning system and setting the fan on maximum speed, provided that doors, windows, and hatches are closed.

The cab category 2 provides protection against dust. For application of Plant Protection Products (PPP) e.g. pesticides, fungicides, herbicides, etc., please refer to the instructions provided by the supplier of the chemical agent as well as instructions provided by the sprayer's manufacturer. Use the special devices and Personal Protective Equipment (PPE) also when inside the cab and, particularly, on tractors without a cab.

Although the air delivery system cannot offer full protection, partial protection can be achieved by following some basic rules:

- Always use Personal Protective Equipment (PPE) and protective clothing.
- Keep doors, windows, and hatches closed during the spraying operation.
- Keep the cab interior clean.
- Do not enter the cab with contaminated shoes and/or clothing.
- Keep all used Personal Protective Equipment (PPE) outside the cab.
- Bring the wire harness of the remote sprayer control box into the tractor cab.
- Use only genuine filters and ensure that the filter is correctly installed.
- Check the condition of the sealing material and filters, replacing them if damaged.

Safety rules - Lifting and overhead loads

⚠ Lifting and overhead loads ⚠

Never use buckets, forks, or any other loader equipment or lifting, handling or digging equipment to lift persons.

Do not used any raised equipment as a work platform.

Locate the entire area for handling the machine and equipment and do not allow anyone to access this area while the machine is running.

Do not allow anyone to access the area below suspended equipment or stand there. Equipment and/or loads can fall unexpectedly and crush anyone underneath

Do not leave equipment in a raised position while the machine is parked or during service, unless securely supported. Should it be necessary to keep the hydraulic cylinders in a raised position, for maintenance work or for access, lock them mechanically or support them.

Buckets, forks or other loader equipment or equipment for lifting, handling or digging together with the load change the machine's centre of gravity. This can cause the machine to tip over on slopes or uneven ground.

Hanging loads can fall off the loader bucket or lifting equipment and crush the operator. Be extremely careful when you lift a load. Use the correct lifting equipment.

Do not lift loads to any greater height than necessary. Lower loads to transport. Remember to keep an appropriate clearance from the ground or other obstacles.

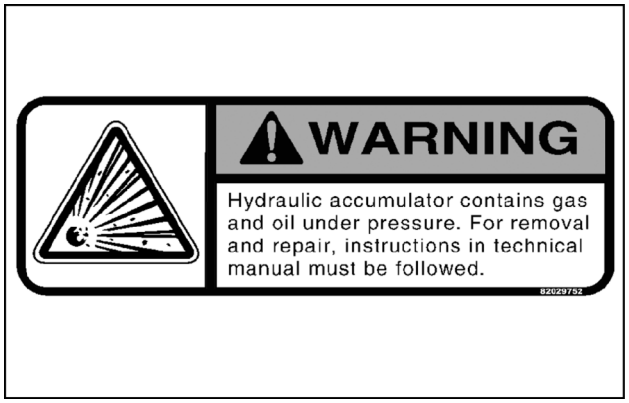
The equipment and loads carried can obstruct visibility and cause an accident. Do not operate the machine in conditions of poor visibility.

(17) Position: applied to the hydraulic/gas accumulators (when present) on the left-hand side.
Part number: 82029752

WARNING
Explosion Hazard

The hydraulic accumulator contains pressurised gas and oil. For removal and repair, you must follow the instructions given in the technical manual.

Failure to comply could result in death or serious injury..

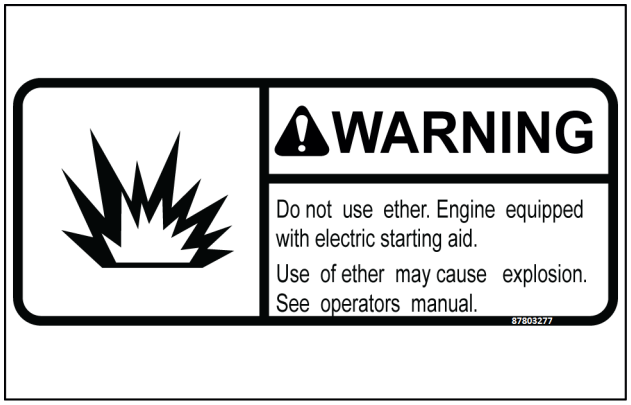


82029752 18

(18) Position: applied to the right-hand side of the radiator.
Part number: 87803277

WARNING
Risk of explosion.
Do not use ether. Engine equipped with electric starting aid. Use of ether may cause explosion. See the operator's manual.

Failure to comply could result in death or serious injury..



87803277 19

(19) Position: applied to the left- and right-hand sides of the center console, under the steering wheel.
Part number: 82030509

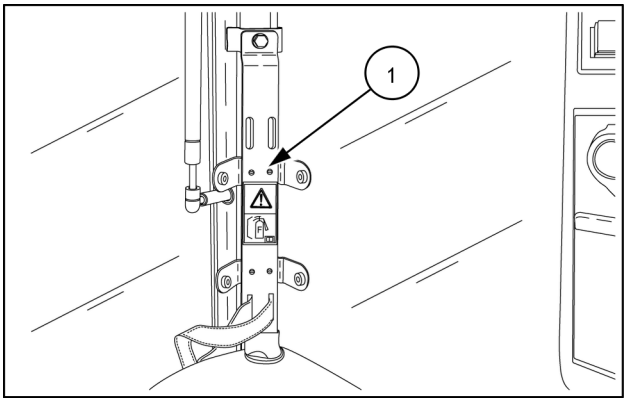
WARNING
Risk of falling.
USE GRABRAIL WHEN ENTERING AND LEAVING PLATFORM.

Failure to comply could result in death or serious injury..

82030509 20

Left-hand “C” pillar inside the cab

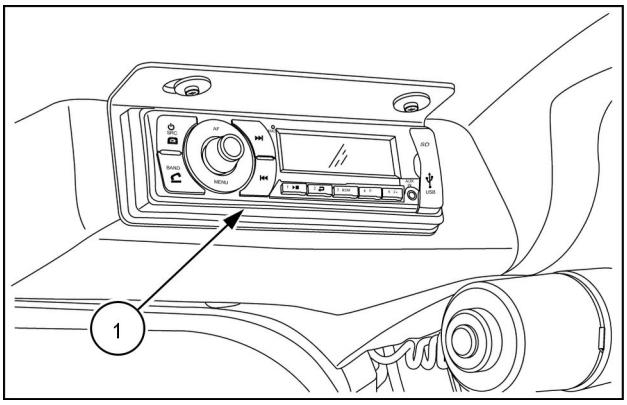
(1) Extinguisher mounting bracket



MOIL15TR03217AA 10

Radio

The radio **(1)** is located at the rear, above and to the right of the operator's seat. See its operation on page **10-2**.



MOIL15TR02270AA 11

Right-hand side controls

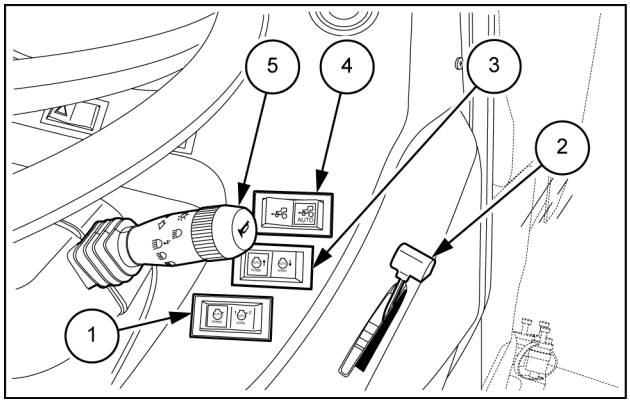
(1) Push button to select the engine rpm management program
(description of operation on page **6-3**)

(2) Hand accelerator lever
(description of operation on page **6-1**)

(3) Engine idle speed management switch
(description of operation on page **6-3**)

(4) Double drive push button
(description of operation on page **6-9**)

(5) Lights, direction indicators and horn control stalk



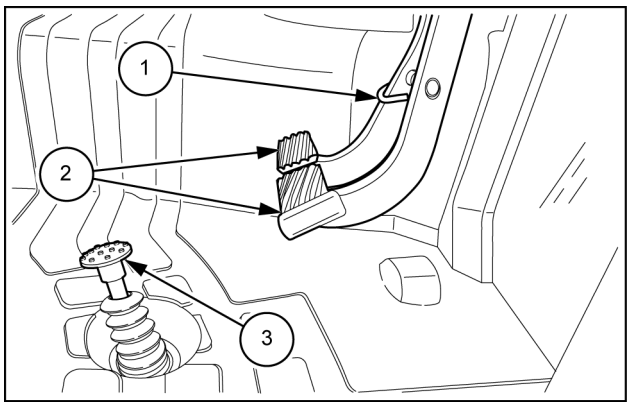
MOIL15TR02259AB 4

Right-hand pedal controls

(1) Service brake pedal connecting pin
(description on page **6-6**)

(2) Service brake pedals
(description on page **6-6**)

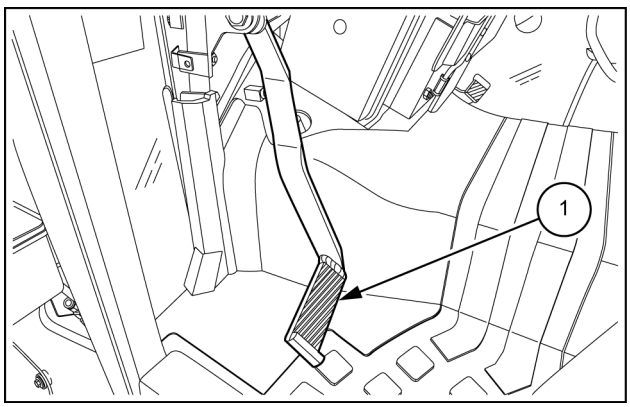
(3) Foot throttle pedal
(description of operation on page **6-2**)



MOIL15TR02267AB 5

Left-hand pedal controls

(1) Clutch pedal
(description of operation on page **6-4**)



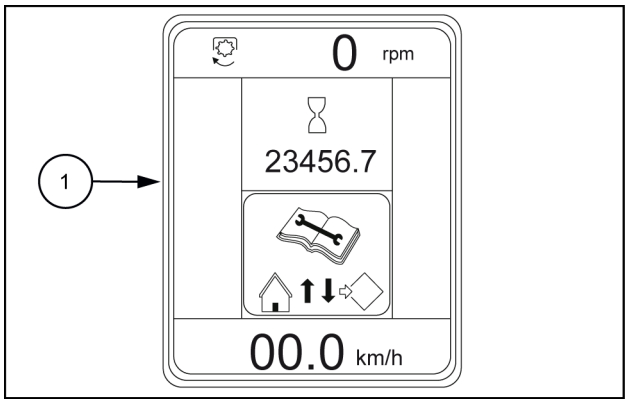
MOIL15TR02279AB 6

Display

Analog Digital Instrument Cluster (ADIC) programming

The multifunction liquid crystal display **(1)** can show useful and necessary information when driving and a menu for making the following adjustments:

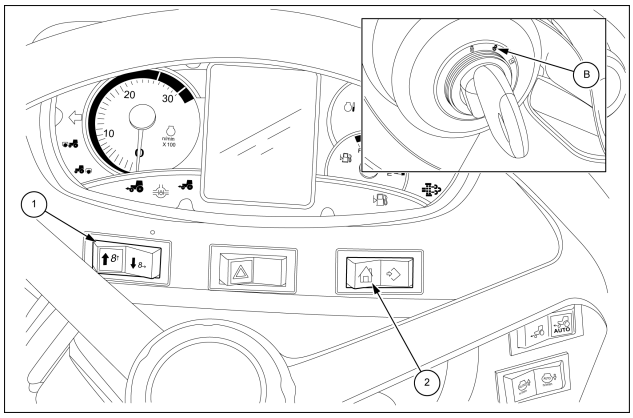
- Tractor speed calibration.
- Implement width calibration.
- Programmed maintenance reminder.
- Sound level on/off on pressing the buttons.
- Units of measurement in km/h or MPH
- Diesel particulate filter control (DPF)
- Resetting oil change.
- Viewing active error codes and warning messages.



MOIL13TR01414AA 1

The menu is navigated through by using the rocker switches **(1)** and **(2)**. Each switch provides two controls, depending on the position where it is pressed.

To enter the “SETUP MENU”, turn the ignition key to position **(B)**, panel powered, and subsequently keep the switch **(2)** pressed on the symbol **(D)**, fig. **2**, for more than three seconds.



MOIL15TR02296FB 2

(2) switch

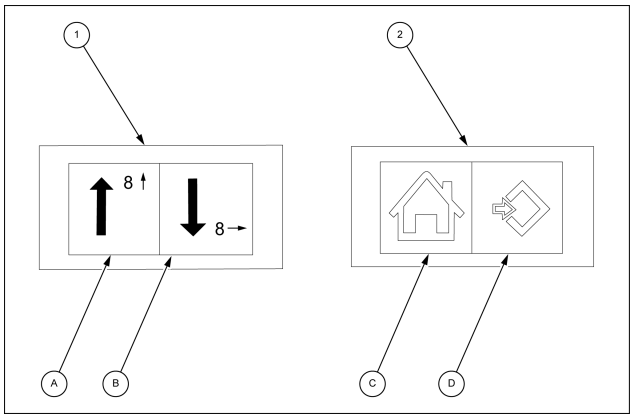
(A) Up arrow = scrolling up through the menu or numerical value. Press this switch position repeatedly to scroll forwards in the menu or change the value of a number.

(B) Down arrow = scrolling down through the menu or numerical value. Press this switch position to scroll backwards in the menu or to move to the right of a position.

(1) switch

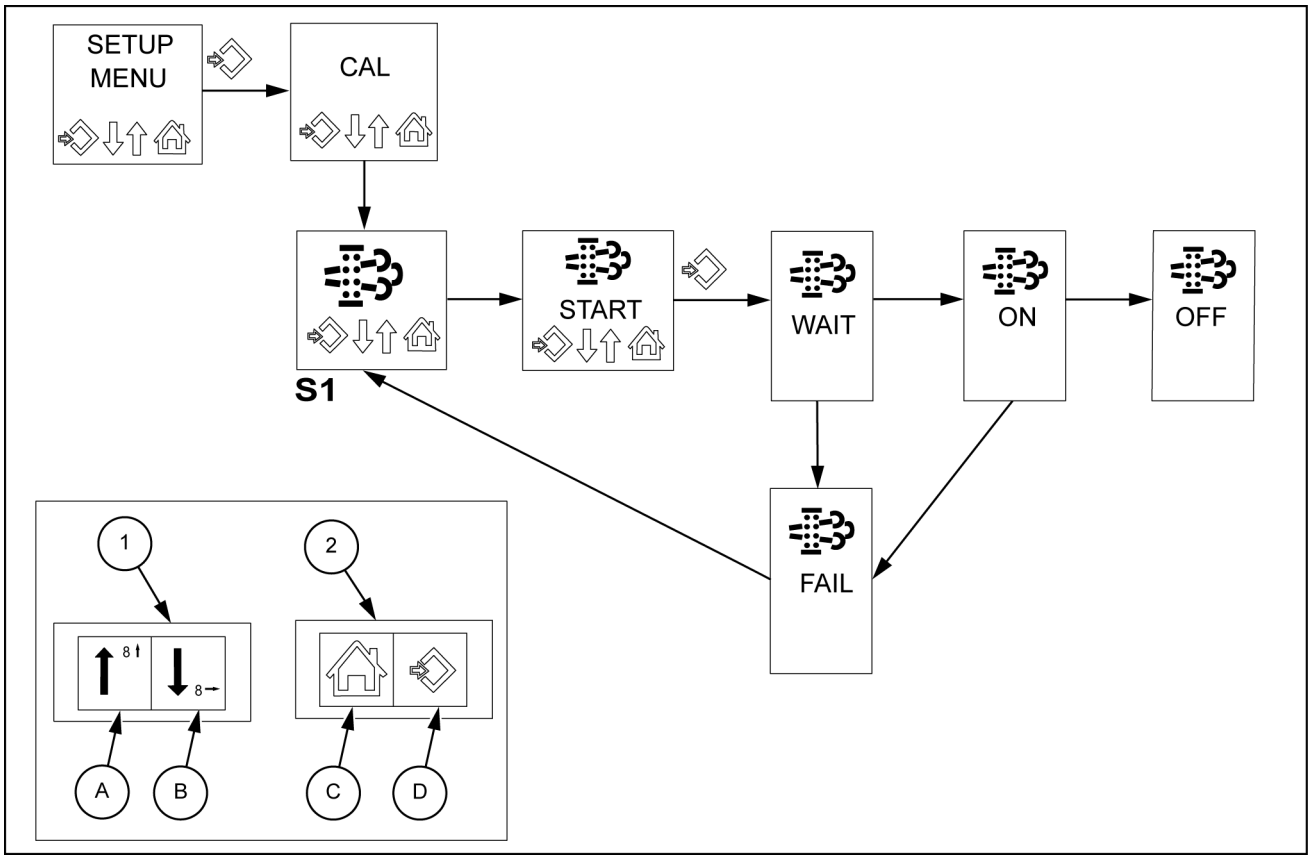
(C) Exit/Cancel. Use this switch position to cancel or quit the setting and programming modes.

(D) Menu/Enter. Use this switch position to enter the menu or confirm the settings.



MOIL15TR02297FB 3

Manual regeneration of the diesel particulate filter DPF



MOIL15TR02294FB 1

When the display shows the need to carry out the filter regeneration, it can be started manually. To be able, when necessary, to activate manual regeneration, it is necessary to stop work for the entire duration of the procedure (**15 - 20 min**) and set up the following conditions:

- engine running, machine stationary and hand brake on
- engine at normal operating temperature.
- hand throttle at minimum position
- foot throttle released
- Power Take-Off (PTO) not engaged
- hydraulic system not active

***NOTE:** should the above-mentioned conditions change during the entire process of regeneration, the operation is stopped.*

Proceed as follows to activate forced regeneration:

- Press the switch **(2)** on the symbol **(D)** for longer than three seconds to access the programming menu .The central display will show “SETUP MENU”. Release the switch.
- Press the switch **(1)** on the symbol **(B)** a certain number of consecutive times until the display shows the filter symbol.
- Press the switch **(2)** on the symbol **(D)**.
- If manual filter regeneration is requested, the display will automatically show “START” with the filter symbol.
- Press the switch **(2)** on the symbol **(D)** to move on to the message “WAIT”. Filter regeneration now commences. In this phase, if everything proceeds normally, no action is required by the operator and the control unit will automatically display the various phases of the procedure.
- At the end of regeneration, the display will show “OFF” with the filter symbol. After two seconds the control unit will automatically return to the initial condition. Press the switch **(2)** on the symbol **(C)** a certain number of times until you exit the programming menu.

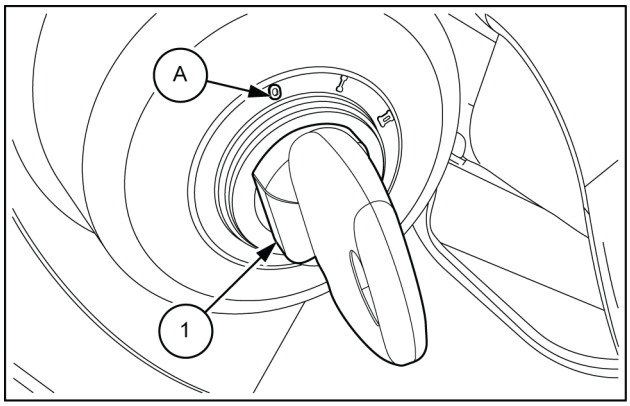
Stopping the unit

Stopping the engine

To stop the engine set the key ignition switch **(1)** in stop position **(A)**.

The label shown on the figure **2**, positioned on the right panel under the right-hand instrument cluster, near the ignition switch, shows the movement that the operator must perform to stop the engine and disengage the electrical contacts.

NOTICE: *before stopping the engine, wait a few minutes at idle speed in order to obtain a homogeneous cooling of all the components and to avoid possible damage caused by high temperatures and poor lubrication.*



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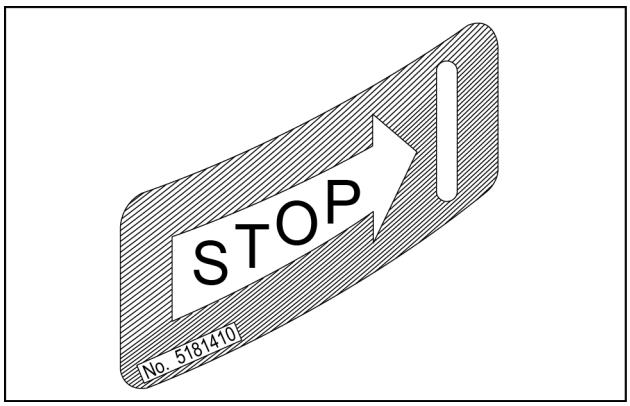


MOIL16TR02286AA 2

Hi-Lo transmission (32x16)

⚠ WARNING

Unexpected machine movement!
With the engine running and only the gear lever in neutral, the machine can engage and move suddenly if someone accidentally operates this lever. Place all levers in neutral, disengage the Power Take-Off (PTO), lower any implements, set the handbrake and parking brake before exiting the machine. Failure to comply could result in death or serious injury.

W1158B

Selection lever for gears and ranges

The range **(1)** and gear **(2)** selection levers are located on the right-hand side of the driver's seat, in reference to fig. **1**.

The range gear selection lever **(1)** is for selecting one of the four different ranges available (A - BL - BH - C).
Each range gear is described below:

A	slow
BL	medium slow
BH	medium fast
C	fast

To shift from one range to another, press the clutch pedal fully, then operate the range selection lever **(1)**.

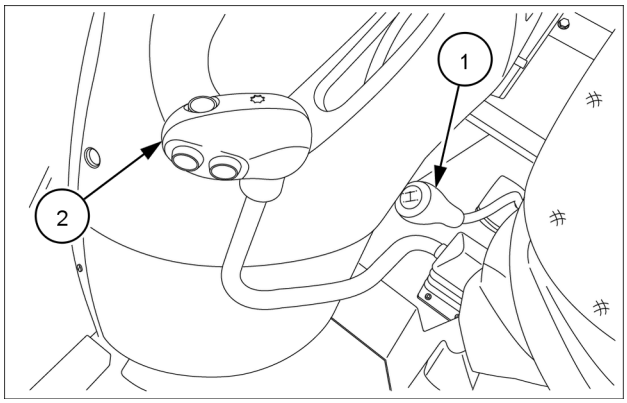
NOTE: *you must stop the vehicle to shift from one range to another.*

NOTE: *The neutral position is between the medium fast range and the fast range, as shown in fig.* ***2****.*

The gear selection lever **(2)** is for selecting one of four different gear ratios (1 - 2 - 3 - 4), as shown in figure **2**.
To shift from one gear to another, press button **(1)** of figure **2**, and operate on lever **(2)** of figure **1**.

NOTE: *to switch from one gear to another, it is not necessary to stop the vehicle.*

NOTE: *operate the clutch pedal when starting from a standstill.*



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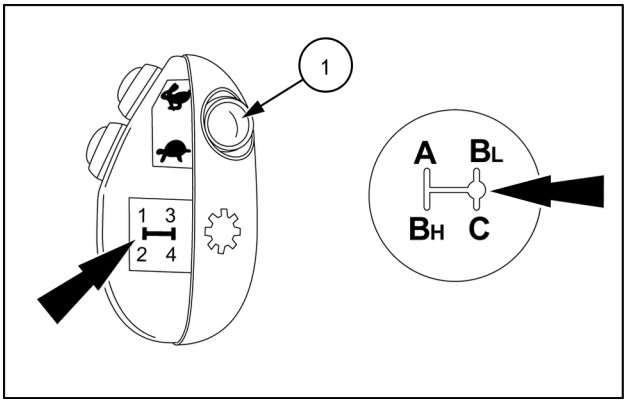


MOIL16TR01057AA 2

5 - TRANSPORT OPERATIONS

Road transport

Transporting the machine

⚠ WARNING

Transport hazard!
The machine can slip or fall from a ramp or trailer. Make sure the ramp and trailer are not slippery. Remove all oil, grease, ice, etc. Move the machine on or off the trailer with machine centered on the trailer or ramp.
Failure to comply could result in death or serious injury.

W0152A

⚠ WARNING

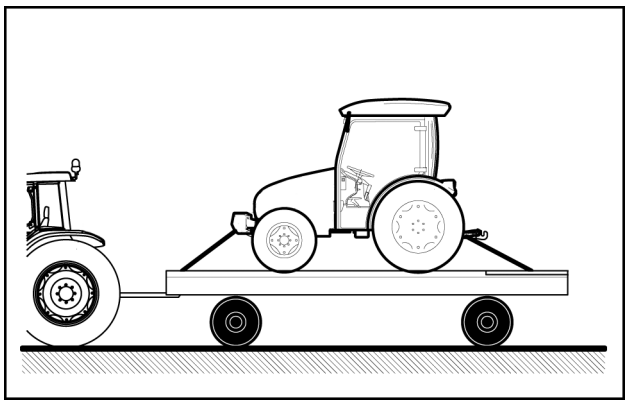
Transport hazard!
Collision of high speed road traffic and slow moving machines can cause death or personal injury. On roads use transport lighting according to local laws. Make sure the Slow Moving Vehicle (SMV) emblem is visible.
Failure to comply could result in death or serious injury.

W0244A

To transport the tractor it is necessary to load it onto a suitable means of transportation; platform of the truck or trailer equipped with a double axle.

Engage the Parking Brake.

Secure the tractor on the vehicle with suitable anchoring belts or chains. Secure the rear of the tractor using the tow bar or tow bar supports and the front of the tractor using the towing hook.



DCUTLNEIT012S5A 1

NOTICE: *Do not hook or connect chains around the front axle drive shaft, the power steering cylinders, the front axle itself or other parts of the tractor which could be damaged either by the chains or excessive strain.*

On models fitted with the turbocharger, cover the exhaust outlet to prevent the turbocharger rotating in the wind, resulting in possible damage to the bearings. The turbocharger turbine must be prevented from rotating freely (with the engine off), as the shaft bearings will not be lubricated.

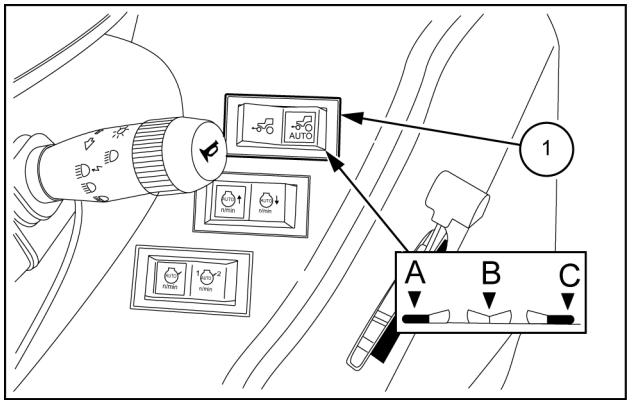
Four-Wheel Drive (4WD)

Four-wheel drive

The electrohydraulic control of the four-wheel drive manages the addition of the front-wheel drive to the rear-wheel drive.
The advantages of four-wheel drive are evident when working on uneven, muddy or slippery ground, or when working in poor-grip conditions. We also recommend enabling the four-wheel drive where certain types of work require it, in order to improve their efficiency.

Using selector **(1)** it is possible to choose the following three operation modes:

- Four-wheel drive disengaged
- Permanent four-wheel drive
- Automatically engaged four-wheel drive



MOIL15TR02238AB 1

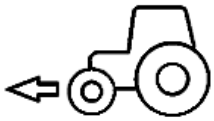
Four-wheel drive disengaged

In order to not use the four-wheel drive, leave the selector **(1)** in position **(B)**. No warning light will light up.

In this operating condition, the tractor only has rear-wheel drive.

NOTE: *if both pedals are pressed at the same time, the four-wheel drive is automatically engaged. The warning indicator* ***(2)*** *in the instrument cluster will light up.*

2



Permanent four-wheel drive

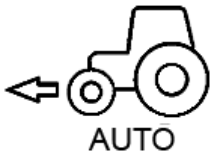
To engage the permanent four-wheel drive, press selector **(1)** onto position **(A)**. Upon release, the selector **(1)** will return to position **(B)**, and the warning indicator **(2)** will light up in the instrument cluster.
In this case, the front-wheel drive is engaged together with the rear-wheel drive.

NOTE: *the permanent four-wheel drive remains engaged in any operating condition.*

NOTICE: *do not use four-wheel drive when driving on hard top roads to prevent increasing wear on the front tyres, and to contain fuel consumption.*

To disengage the permanent four-wheel drive, press again selector **(1)** onto position **(A)**. Upon release, the selector **(1)** will return to position **(B)**. The warning indicator **(2)** in the instrument cluster will switch off.

3



System alert

⚠ DANGER

Chemical hazard!
The cab air filters are designed to remove dust from the air, but will not keep out chemical vapor. Extended periods of exposure to pesticides could cause death or personal injury. Follow the chemical manufacturer's directions for protection from dangerous chemicals.
Failure to comply will result in death or serious injury.

D0060A

In some cases of malfunction, the cab filtration system may not guarantee a category 4 level of protection. If this is the case, the cab guarantees a category 2 level of protection.

***NOTE:** in this operation mode, follow the instructions provided on page **2-15**.*

The green LED on indicates the correct operation of the category 4 cab filtration system.

The red LED on and/or an intermittent alarm indicates a malfunction or a state of alert relating to the category 4 cab filtration system.

In some malfunction cases, the system automatically switches to protection mode:

- Both the fins to the filter are closed.
- The electric fan is off
- Pressurization and ventilation turn off.
- The monitor continues to show all the information.

The conditions that activate the cab automatic protection mode are described below.

A. Category 4 filter blocked:

Category 4 filter blocked:

- “PRESSURIZATION” icon and relative bar graph flashing
- Ventilation bar graph flashing
- “FILTER STATUS” icon flashing;
- “PRESSURIZATION” icon and relative bar graph flashing.
- Green LED off, red LED on
- Intermittent alarm on

In these conditions, the cab pressurization and ventilation are insufficient:

1. Take the vehicle outside of the work area, upwind if possible.
2. Turn the category 4 cab filtration system off manually, switching to a category 2 level of protection.
3. Turn the category 4 cab filtration system back on and check the red LED goes off. If the red LED stays on, replace the category 4 filter, see **7-35**.
4. If a new filter is installed, reset the hourmeter — See **6-14**.

B. Category 4 filter missing or incorrectly installed:

- “FILTER STATUS” icon flashing
- “PRESSURIZATION” icon and relative bar graph flashing
- Green LED off, red LED on
- Intermittent alarm on

In these conditions, pressurization is sufficient and the fan speed is maintained at minimum for more than **5 s**:

1. Take the vehicle outside of the work area, upwind if possible.
2. Turn the category 4 cab filtration system off manually, switching to a category 2 level of protection.
3. Turn the category 4 cab filtration system back on and check the red LED goes off. If the red LED is still on, follow the correct installation procedure for the category 4 filter, see **7-35**.
4. if a new filter is installed, reset the hourmeter as described in “Managing the life of the filter”.

C. Maximum saturation of the category 4 filter:

⚠ DANGER

Hazardous chemicals!
Replace the cab air filter immediately at the service interval this manual specifies.
Failure to comply will result in death or serious injury.

D0177B

- “FILTER STATUS” icon and 10 flashing bars
- “PRESSURIZATION” icon and relative bar graph flashing
- Green LED off, red LED on
- Intermittent alarm on

In these conditions, the filter does not guarantee protection:

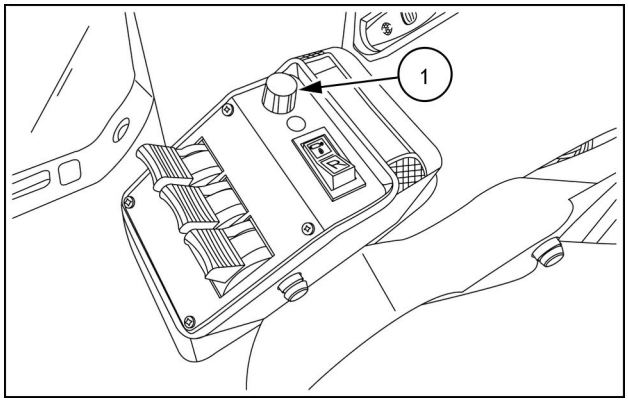
1. Take the vehicle outside of the work area, upwind if possible.

Remote valve flow control

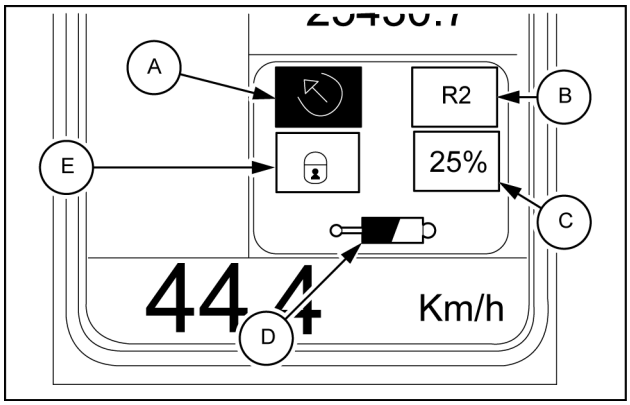
In the presence of hydroelectric control valves, the LCD display provides details on the functioning of each control valve.

Use the knob **(1)** to select and adjust the individual control valves.

1. Press the knob **(1)** to enter the setting mode. The LCD display shows the icon for entering/exiting the setting mode **(A)**.
2. Rotate the knob **(1)** until the selection pane for the control valve **(B)** is selected. The LCD display shows the selection icon for the control valve **(B)**. Press the knob **(1)** again to confirm the setting mode for the control valve.
3. Rotate the knob **(1)** to select the hydraulic control valve to adjust (e.g. in the image, the second control valve “R2” is selected). Press the knob **(1)** again to confirm selection of the control valve.
4. Rotate the knob **(1)** until the pane for adjusting the flow rate of the selected control valve **(C)** is selected. The LCD display shows the selection icon for the flow rate percentage **(C)**. Press the knob **(1)** again to access the flow rate setting mode.



MOIL15TR03214AA 10



MOIL15TR02165AA 11

5. To adjust the flow rate of the auxiliary control valve, rotate the knob **(1)** until the required flow rate percentage is obtained. The LCD display shows the percentage of the flow rate **(C)** reserved for the previously selected control valve and the respective graphic representation **(C)** (e.g. in the image, the flow rate percentage is **25%**). Press the knob **(1)** again to confirm the required flow rate percentage.
6. To save the previous settings, rotate the knob **(1)** until the setting saving pane **(E)** is selected. The LCD display shows the setting saving icon **(E)**. Press the knob **(1)** again to save the setting.
7. Rotate the knob **(1)** until the pane for exiting the setting mode **(A)** is selected. Press the knob **(1)** again to exit the setting mode.

NOTE: *The potentiometer **(1)** is very useful for adjusting the oil flow that supplies the hydraulic motors connected to the distributors.*

Two-speed 540/540E RPM power take-off

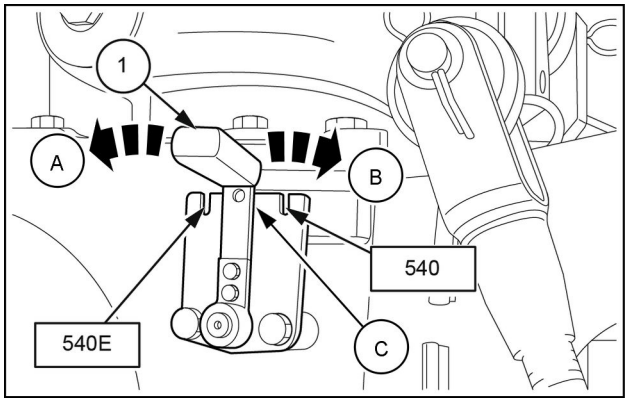
The power take-off rotation speed selection lever is located in the left-hand rear of the tractor, near the rear axle, together with its descriptive label shown in figure **4**.

To operate the power take-off in one of two speeds from the neutral position **(C)**, figure **3**, proceed as follows:

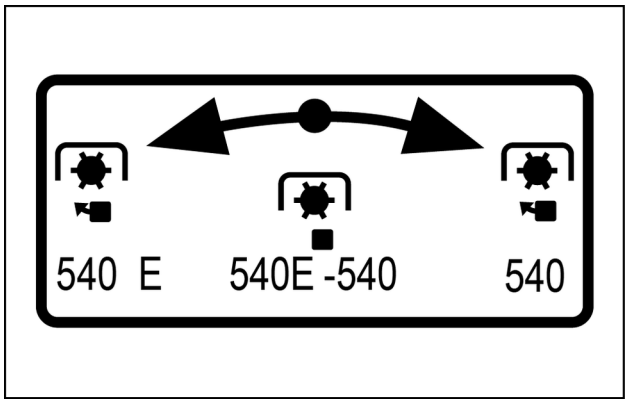
1. Select the rotation speed of the power take-off using the lever **(1)** of figure **3**, as follows:
   - Forward **(A)**: **540E RPM**
   - Middle **(C)**: power take-off in neutral position
   - Backward **(B)**: **540 RPM**
2. Move the lever **(1)** of figure **1** from position **(B)** to position **(A)**.

To change the power take-off rotation speed, proceed as described below:

1. Move the lever **(1)** from the engagement position **(A)** to the disengagement position **(B)**, as shown in the figure **1**.
2. Select the rotation speed of the power take-off using the lever **(1)** of figure **3**.
3. Move the lever **(1)** from the disengagement position **(B)** to the engagement position **(A)**, as shown in the figure **1**.



MOIL16TR01100AB 3



MOIL16TR02833AA 4

Two-speed 540/1000 RPM power take-off

The engagement or disengagement occurs as in the case of the PTO at a speed, previously described.

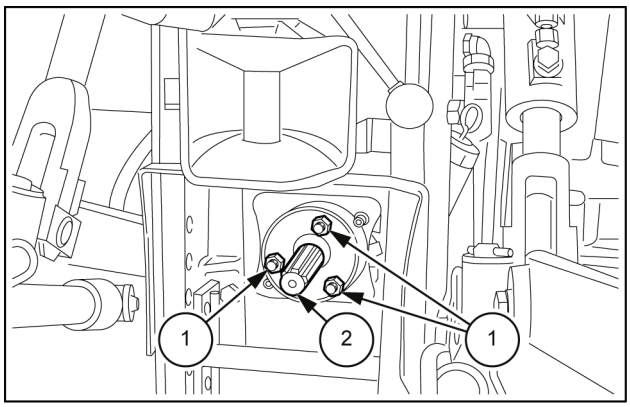
To increase the PTO rotation speed from **540 RPM** to **1000 RPM** it is necessary to change the splined output shaft **(2)** shown in figure **5**, after loosening the screws **(1)**.

The available splined output shafts are:

- **1 3/8 in** splined output shaft with 6 grooves for the rotation speed of **540 RPM**
- **1 3/8 in** splined output shaft with 21 grooves for the rotation speed of **1000 RPM**

NOTE: *when you use the power take-off, and especially when you change the rotation speed, always make sure that the tractor is fitted with the correct splined output shaft for the speed selected.*

NOTE: *when using any implement requiring a speed of* ***540 RPM****, never select* ***1000 RPM****, and conversely.*



MOIL13TR00566AA 5

Electronically controlled rear hydraulic lift

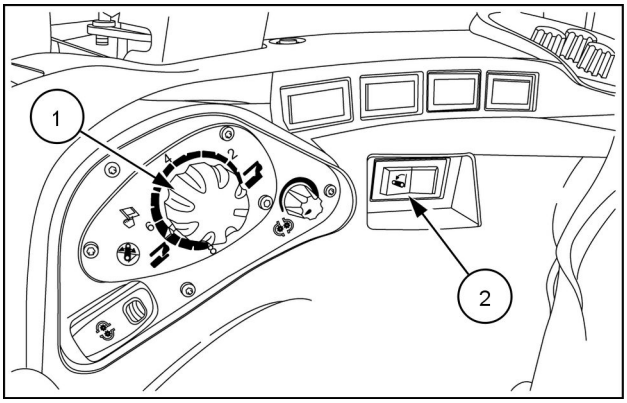
With respect to other mechanically controlled hydraulic lifts, the electronically controlled rear one offers greater precision and sensitivity when moving implements attached to the lift arms.

Hydraulic lift controls

(1) Raise/lower control knob for the rear lift lower arms

(2) Fast raise/lower switch for the rear lift

(3) Disable warning device for the rear lift



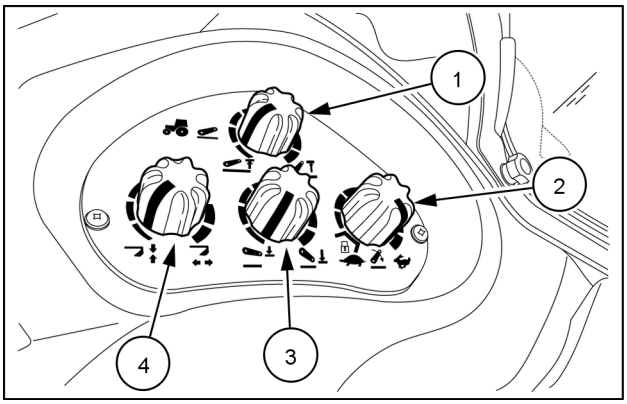
MOIL15TR03218AA 1

(1) Limit adjustment knob for the rear lift height

(2) Lowering speed adjustment knob for the rear lift

(3) Limit adjustment knob for the rear lift lowering

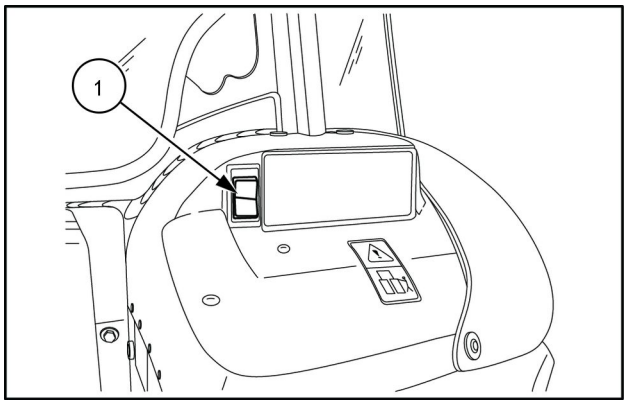
(4) Position/draft sensitivity control knob for the rear lift



MOIL15TR02262AB 2

(1) External fast raise/lower switch for the rear lift

NOTE: *The switch* ***(1)*** *is only on the versions with a cab and with an electronically controlled hydraulic lift.*



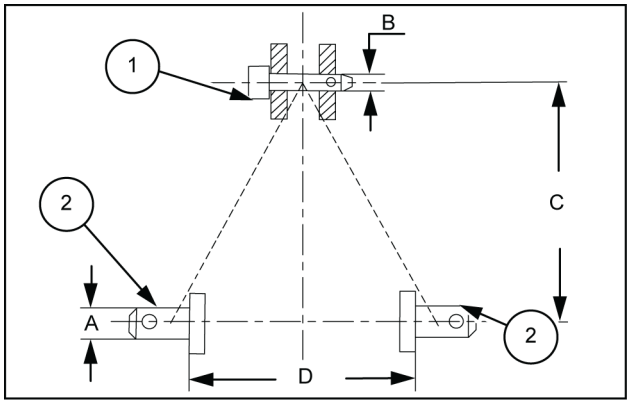
MOIL16TR01103AA 3

CONVERTING FROM CATEGORY I TO CATEGORY II CONNECTION

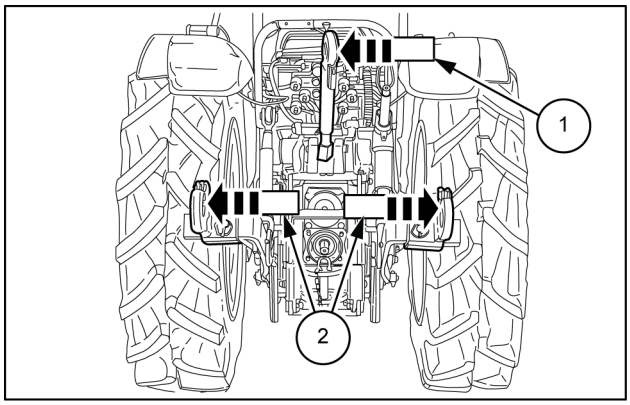
To allow the use of both Cat I and Cat II implements, the hitching of the three points of the **(1)** hitch and three-point **(2)** has:

- A bush with an internal diameter of **19.00 mm** (**0.75 in**) **(1)** for Cat II implements, to be inserted in the spherical bushing at the end of the top link.
- A set of bushes with an internal diameter of **22.00 mm** (**0.87 in**) **(2)** for Cat II implements, to be inserted into the spherical bushings at the ends of the lower lift arms.

Depending on the category of the implement connected, we recommend that you respect the dimensions **(C)** and **(D)** given in the table below in order to not damage the coupler.



MOIL13TR02579AB 11



MOIL13TR00589AA 12

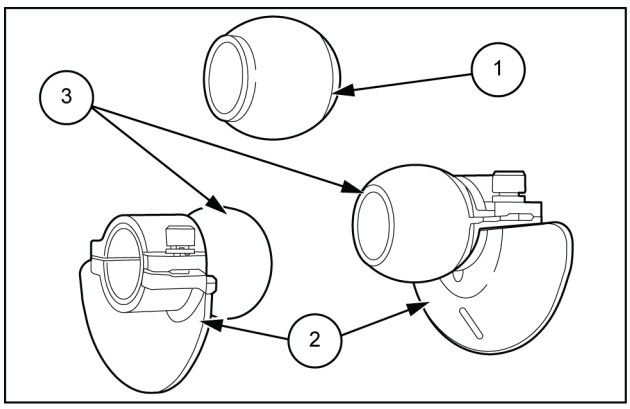
Size	Categories			
	1	1N	2	2N
A	**22.00 mm** (**0.87 in**)	**22.00 mm** (**0.87 in**)	**28 mm** (**1.1 in**)	**28 mm** (**1.1 in**)
B	**19.00 mm** (**0.75 in**)	**19.00 mm** (**0.75 in**)	**25.5 mm** (**1.0 in**)	**25.5 mm** (**1.0 in**)
C	**360.00 mm** (**14.17 in**)	**460.00 mm** (**18.11 in**)	**610 mm** (**24.0 in**)	**610 mm** (**24.0 in**)
D	**400.00 mm** (**15.75 in**)	**683.00 mm** (**26.89 in**)	**825 mm** (**32.5 in**)	**683 mm** (**26.9 in**)

CONNECTION SYSTEM OF THE QUICK COUPLING IMPLEMENT

The quick coupler is an instant hitching system of the implement. What sets this system apart from the standard coupling system is the presence of special hitches at the ends of the top links, to automatically engage the towable mass.

Ball-bushings

Three second category ball-bushings are supplied for installation on the implement, if required. The ball-bushing with projecting lips **(1)** should be installed on the implement upper hitch pin. The two plain ball-bushings **(3)** with their detachable guides **(2)** should be installed on the implement lower hitch pins.



DCUTLNEIT043S6A 13

LOAD INDEX

The loading index (IC) is a numerical index indicating the maximum permissible load on the tire, for the speed indicated by the relevant speed code, under the conditions specified by the manufacturer.

Loading index per wheel											
IC	**• kg**	**• lb.**	**IC**	**• kg**	**• lb.**	**IC**	**• kg**	**• lb.**	**IC**	**• kg**	**• lb.**
100	800	1764	120	1400	3086	140	2500	5512	160	4500	9921
101	825	1819	121	1450	3197	141	2575	5677	161	4625	10196
102	850	1874	122	1500	3307	142	2650	5842	162	4750	10472
103	875	1929	123	1550	3417	143	2725	6008	163	4875	10748
104	900	1984	124	1600	3527	144	2800	6173	164	5000	11023
105	925	2039	125	1650	3638	145	2900	6393	165	5150	11354
106	950	2094	126	1700	3748	146	3000	6614	166	5300	11684
107	975	2150	127	1750	3858	147	3075	6779	167	5450	12015
108	1000	2205	128	1800	3968	148	3150	6945	168	5600	12346
109	1030	2271	129	1850	4079	149	3250	7165	169	5800	12787
110	1060	2337	130	1900	4189	150	3350	7385	170	6000	13228
111	1090	2403	131	1950	4299	151	3450	7606	171	6150	13558
112	1120	2469	132	2000	4409	152	3550	7826	172	6300	13889
113	1150	2535	133	2060	4542	153	3650	8047	173	6500	14330
114	1180	2601	134	2120	4674	154	3750	8267	174	6700	14771
115	1215	2679	135	2180	4806	155	3875	8543	175	6900	15212
116	1250	2756	136	2240	4938	156	4000	8818	176	7100	15653
117	1285	2833	137	2300	5071	157	4125	9094	177	7300	16094
118	1320	2910	138	2360	5203	158	4250	9370	178	7500	16535
119	1360	2998	139	2430	5357	159	4375	9645	179	7750	17086

SPEED CODE

The speed code indicates the speed at which the tire can transport a load corresponding to its loading index, under the conditions specified by the manufacturer:

NOTICE: *Respecting the limits in the tables will ensure that the tires both perform well and are long-lasting. Overloading tires substantially reduces their service life.*

NOTE: *The values in these tables are also marked on the walls of the tires themselves.*

Speed codes		
SYMBOL	**• km/h**	**• mph**
A1	5	3.10
A2	10	6.21
A3	15	9.32
A4	20	12.42
A5	25	15.53
A6	30	18.64
A7	35	21.74
A8	40	24.85
B	50	31.06
C	60	37.28
D	65	40.38

Tires	A	B	C	D	E	F	G	H
380/85 R 28	-	-	-	-	-	**1114.0 mm (43.9 in)**	**1162.0 mm (45.7 in)**	**1273.0 mm (50.1 in)** *
420/70 R 28	-	-	-	-	-	**1114.0 mm (43.9 in)**	**1162.0 mm (45.7 in)**	**1273.0 mm (50.1 in)** *

(*) Track settings to be made only on the field or on road with the maximum clearance lights extended.

NOTE: *tracks lower then rated setting could require: steering angle reduction, or front axle oscillation angle reduction, or front fender remotion, if installed.*

Introduction

This section gives full details of the maintenance procedures required to keep your tractor in optimal working conditions. The lubrication and maintenance table provides rapid reference for this purpose.

Maintenance frequency

The maintenance intervals at set times, given in this section, apply when the tractor is used under normal and not harsh conditions.

These maintenance intervals should be reduced even on a daily basis if necessary when there are adverse conditions (humidity, mud, sand, great dustiness, etc.).

Shortening the maintenance interval is particularly recommended for the following parts:

- Cleaning the cab air filters (use in humid or particularly dusty places).
- Radiator cores (use in particularly dusty places).
- Lubricators (use in particularly muddy places).

Environmental protection

Always bear in mind the environmental protection rules before servicing this machine and before disposing of old fluids, lubricants and filters.

- Do not pour oil or fluids on the ground, down drains or into containers that can leak.
- Dispose of all old fluids, lubricants and filters in accordance with local regulations.
- Check with your local environmental recycling center or your local dealer for correct information.

When it is necessary to refill the fuel tank, or top up or change the oil, always place a container under the component to collect any spillage.
The products mentioned are pollutants and we must therefore prevent them from contaminating the environment in which we live.

Preventing system contamination

To prevent contamination when changing oils, filters, etc., always clean the area around filler caps, level and drain plugs, dipsticks and filters prior to removal.
Before connecting auxiliary cylinders, ensure that oil contained within them is clean, has not degenerated due to long storage and is of the correct type. To prevent dirt entering, clean the lubricating fittings before lubrication.
Wipe excess grease from the fitting after greasing.

Consumables

Component to refill	RECOMMENDED PRODUCTS	SPECIFICATION CASE IH	INTERNATIONAL SPECIFICATION
Engine cooling system	Conventional coolant: **CASE IH AKCELA PREMIUM ANTI-FREEZE** mixed to the **50%** with distilled water	MAT3620	ASTM D 6210 Type 1-FF (Ethylene glycol base concentrate)
	Alternative coolant type: **CASE IH AKCELA ACTIFULL™ OT EXTENDED LIFE COOLANT** (if the premixed coolant is not available, mix the concentrate with 50% distilled water)	MAT3624	ASTM 6210
Windshield washer reservoir	Water and Detergent liquid	-	-
Fuel tank	Decanted, filtered diesel fuel	-	-
Engine oil sump	**CASE IH AKCELA ENGINE OIL 15W-40** or **CASE IH AKCELA UNITEK NO. 1™ SBL CJ-4 SAE 10W-40** or **CASE IH AKCELA UNITEK NO. 1™ SSL CJ-4 SAE 0W-40**	MAT3521	**API CJ-4**
Brakes circuit	**CASE IH AKCELA LHM FLUID**	**NH610A**	**ISO 7308**
Front axle housing	**CASE IH AKCELA NEXPLORE™ FLUID**	**NH410B**	**API GL-4 ISO 32/46 SAE 10W30**
Front axle final drives (each)	**CASE IH AKCELA GEAR 135 H EP 80W-90**	**NH520A**	**API GL-5 MIL-L-2105 D SAE 80W90**
Front axle final drives (each) - without brakes	**CASE IH AKCELA GEAR 135 H EP 80W-90**	**NH520A**	**API GL-5 MIL-L-2105 D SAE 80W90**
Rear axle (bevel drive, final drives and brakes), transmission, hydraulic lift, power take-off and hydrostatic steering:	**CASE IH AKCELA NEXPLORE™ FLUID**	**NH410B**	**API GL-4 ISO 32/46 SAE 10W30**
Grease fittings	**CASE IH AKCELA 251H EP MULTI-PURPOSE GREASE**	**NH710A**	**NLGI 2**
Air-conditioning system. Refrigerant fluid	—	—	**R134A**
Air-conditioning system. Compressor oil	—	—	SP−10

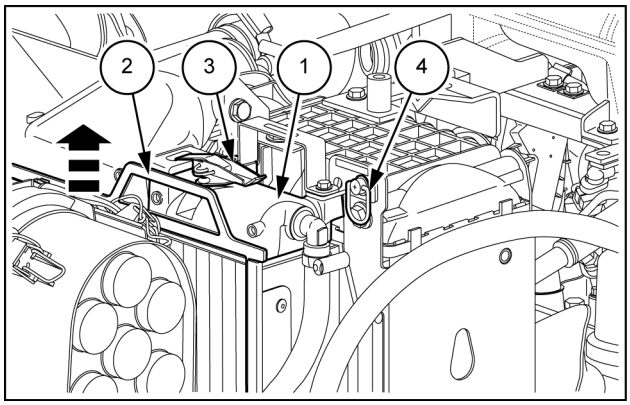
Oil cooler Drive line - Cleaning

⚠ WARNING

Hot surface possible!
Wait for all components to cool before performing any operation.
Failure to comply could result in death or serious injury.

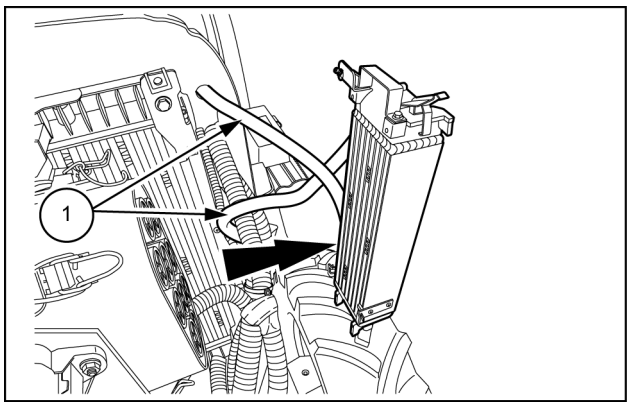
W0251A

1. Open the bonnet, see **7-15**.
2. Remove the side panels, see **7-16**.
3. Take hold of the strainer screen handle **(2)** and remove it from the casing, sliding it along the runners.
4. Remove the fastener clips **(3)** and **(4)** from the radiator oil drive line **(1)**.



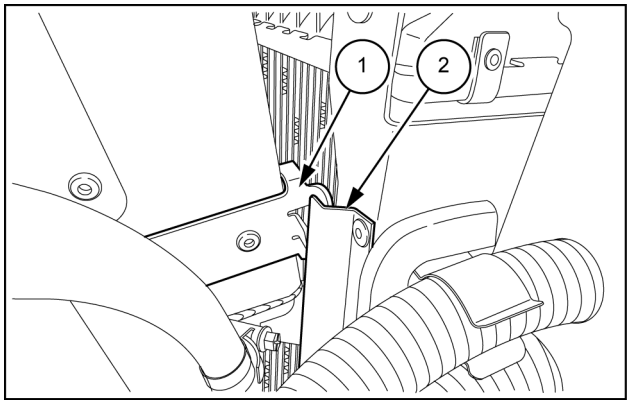
MOIL15TR02108AB 1

5. Take hold of the oil cooler drive line and carefully remove it from its casing, sliding it along the runners.
6. Place the oil cooler drive line on a suitable surface, taking care to minimise bending the tubes **(1)**.
7. Clean the oil cooler drive line with compressed air in the direction indicated by the arrow.



MOIL15TR02111AB 2

8. Clean the intercooler and radiator — see **7-25**.
9. With due care, properly insert the oil cooler drive line into its casing, making sure the tongues slide **(1)** along the runners **(2)** located on the sides of the intercooler and radiator.



MOIL15TR02109AB 3

Cab air filter category 2 - Check

⚠ DANGER

Inhalation hazard!
Excessive moisture and water infiltration into a Category 2 cab air filter housing may cause mold and bacterial growth in the air-conditioning system. If this occurs, then follow the instructions in this manual to replace the filter and/or sanitize the cab air ducts.
Failure to comply will result in death or serious injury.

D0175A

⚠ DANGER

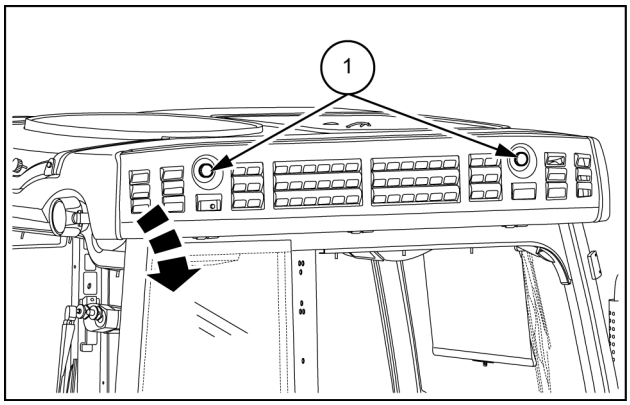
Hazardous chemicals!
The cab air filter contains residue from hazardous substances. Always wear Personal Protective Equipment (PPE) in accordance with the Material Safety Data Sheet (MSDS) of the Plant Protection Product (PPP) manufacturer and/or the PPP instructions when you service the filter.
Failure to comply will result in death or serious injury.

D0176B

NOTE: *to carry out the operation, use a suitable size ladder.*

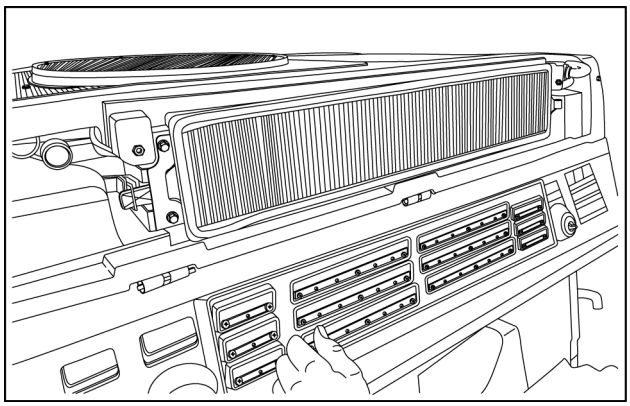
NOTICE: *avoid setting the ladder against the cab and/or vehicle.*

1. Unscrew the knobs **(1)** attaching the grill to the left-hand side of the cab and rotate downwards.



MOIL15TR02124AB 1

2. Look to make sure the filter is not wet.
3. If, after washing the cab or after heavy rainfall, the filter is wet and/or damaged, replace as described on page **7-85** and clean the tank filter and air ducts.



MOIL15TR02931AA 2

NOTICE: *if the fins holding the protection grills for the cab air cleaners are damaged, contact the local dealership immediately.*

NOTICE: *carry out a visual inspection to check the filter. If damaged, replace. Do not repair. Only use original replacement parts.*

NOTICE: *if the filter control reveals the presence of mould on the filters and/or in the air ducts, replace all the cab air cleaners and clean and disinfect the air-conditioning system using specific disinfecting products.*

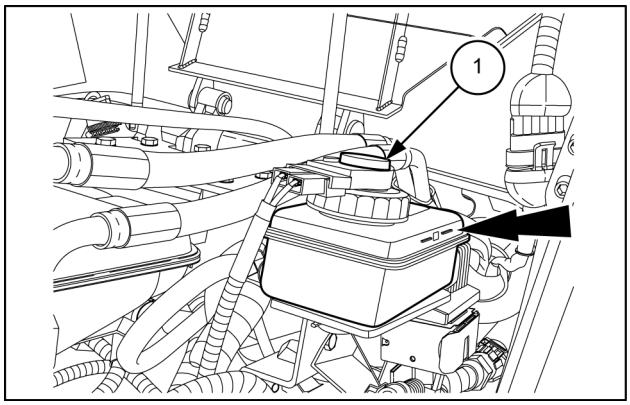
Brake fluid reservoir - Check

1. Open the bonnet, see **7-15**.
2. Check the brake fluid is at the "MAX" mark indicated on the left-hand side of the tank. If necessary, remove the cap **(1)**and top up the oil until the correct level is reached.

NOTE: *for the type of brake fluid to use, see **7-13**.*

NOTICE: *never mix different types of brake fluid.*

NOTICE: *if frequent top ups are needed, contact the local dealership immediately.*



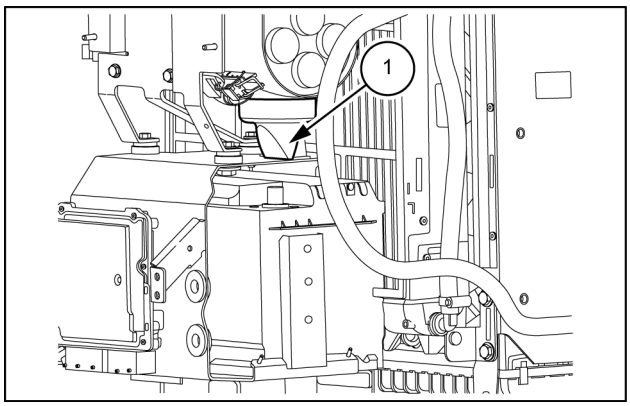
MOIL15TR02121AB 1

Engine air cleaner - check

Air filter discharge valve

1. Open the bonnet, see **7-15**.
2. Check the state of the air cleaner cover exhaust valve **(1)**, by pressing the rubber terminal to expel any accumulated dirt.

NOTE: *check the air cleaner cover exhaust valve daily to make sure it is filtering properly.*

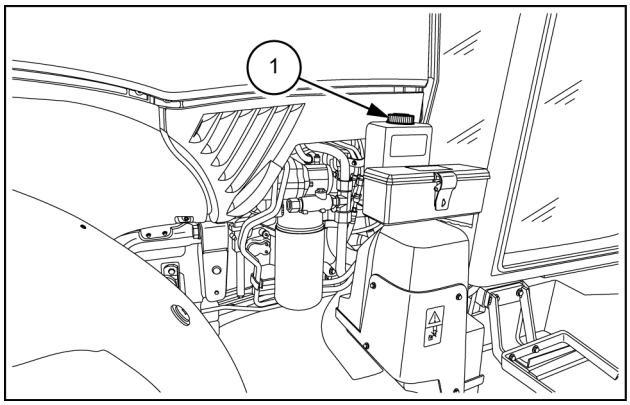


MOIL15TR02241AB 1

Windshield washer fluid reservoir - Check

1. Thoroughly clean the area to prevent contamination of the parts.
2. Manually unscrew the cap **(1)**.
3. Check the windscreen washer fluid. If necessary, top up with the recommended fluid to the proper level, see **7-21**.
4. Manually tighten the cap **(1)**.

NOTICE: *if frequent top ups are needed when the windscreen washers have not been used, contact the local dealer immediately.*



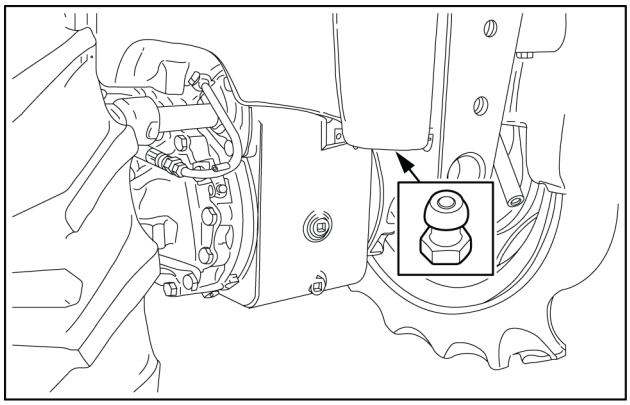
MOIL15TR02120AB 1

4WD front axle pivot

NOTICE: *First, clean the area thoroughly to avoid contaminating the parts.*

NOTICE: *Only use the type of grease indicated by the manufacturer.*
Never mix different types of grease, it may hamper proper vehicle operation

1. Thoroughly clean the grease nipples to avoid contaminating the grease.
   Using a greasing nozzle, inject the specific grease into the grease nipples indicated.



MOIL13TR00650AA 1

Product
CASE IH AKCELA MULTIPURPOSE

Cab air filter category 2 - Clean

⚠ DANGER

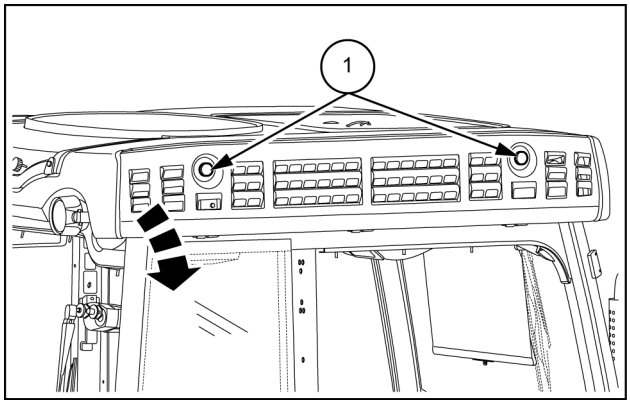
Hazardous chemicals!
The cab air filter contains residue from hazardous substances. Always wear Personal Protective Equipment (PPE) in accordance with the Material Safety Data Sheet (MSDS) of the Plant Protection Product (PPP) manufacturer and/or the PPP instructions when you service the filter.
Failure to comply will result in death or serious injury.

D0176B

NOTE: *to carry out the operation, use a suitable size ladder.*

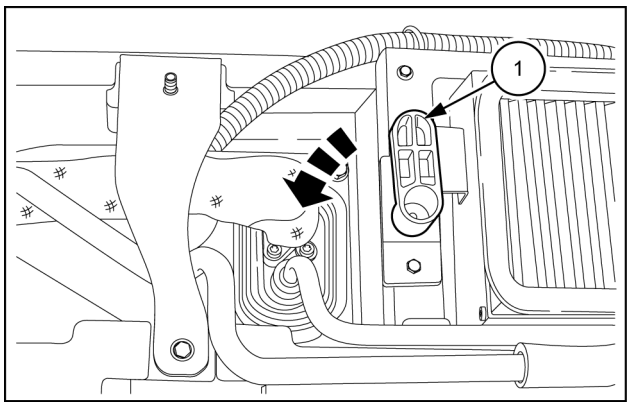
NOTICE: *avoid setting the ladder against the cab and/or vehicle.*

1. Loosen the retainer knobs **(1)** on the filter protective grill on the left-hand side of the cab roof.
2. Manually rotate the cab air cleaner protective grill downwards.



MOIL15TR02124AB 1

3. Pull and rotate the front filter retainer **(1)** counter-clockwise to release it.

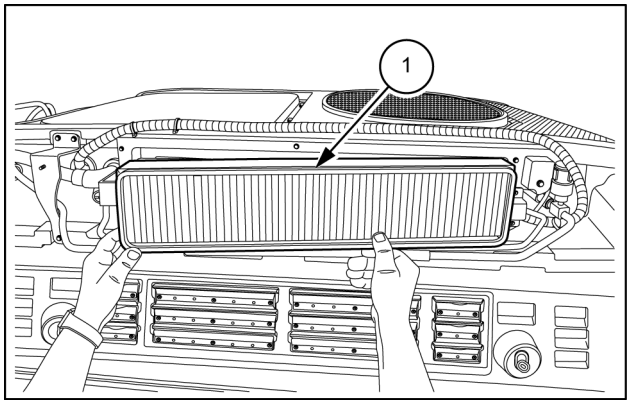


MOIL15TR02250AB 2

4. Remove the cab air cleaner **(1)** from its seat.
5. Clean the filtering cartridge **(1)** by knocking it gently on a flat surface with the outside facing downwards, being careful not to damage the seal which may compromise the seal.

NOTICE: *never use water or compressed air to clean the cleaner.*

6. Use a cloth to clean the cab air cleaner seat.
7. Visually inspect as described on page **7-33**.
8. Insert the car air cleaner **(1)** (fig. **3**) into its seat, making sure the arrows on the cleaner label are facing towards the cab interior.
9. Rotate the front filter retainer **(1)** (fig. **2**) of the filter clockwise.
10. Manually rotate the cab air cleaner protective grill downwards **(1)** (fig. **1**).



MOIL15TR02251AB 3

Every 600 hours

Engine lubrication system - Change fluid - Change oil and filter (Models without a cab)

⚠ WARNING

Hot surface possible!
Wait for all components to cool before performing any operation.
Failure to comply could result in death or serious injury.

W0251A

⚠ CAUTION

Hot area!
Use care when working near hot components. Wear protective gloves.
Failure to comply could result in minor or moderate injury.

C0034A

⚠ WARNING

Burn hazard!
Be very careful to avoid contact with hot fluids. If fluid is extremely hot, allow it to cool to a moderately warm temperature before proceeding.
Failure to comply could result in death or serious injury.

W0362A

⚠ WARNING

Fire hazard!
When handling diesel fuel, observe the following precautions:
1. Do not smoke.
2. Never fill the tank when the engine is running.
3. Wipe up spilled fuel immediately.
Failure to comply could result in death or serious injury.

W0099A

⚠ WARNING

Fire hazard!
Do not add gasoline, alcohol, or blended fuels to diesel fuel, except as recommended in this manual.
Fuel combinations may increase fire and explosion hazards.
Failure to comply could result in death or serious injury.

W0401A

NOTE: *this operation describes the procedures for draining oil from the engine sump and changing the relevant oil filter. The oil change period of 600 hours can be affected by other factors, see* ***7-41****.*

Engine oil drain

1. Follow the procedure to drain the engine oil, see **7-31**.

Change engine oil and filter

NOTE: *for the particular configuration of models without cab, replace the oil filter only after having removed the filter and fuel pre-filter.*

2. Open the hood, see **7-15**.
3. Remove the left-hand side engine panel, see **7-16**.

Front Power Take-Off (PTO) - Check

⚠ WARNING

Hot surface possible!
Wait for all components to cool before performing any operation.
Failure to comply could result in death or serious injury.

W0251A

⚠ CAUTION

Hot area!
Use care when working near hot components. Wear protective gloves.
Failure to comply could result in minor or moderate injury.

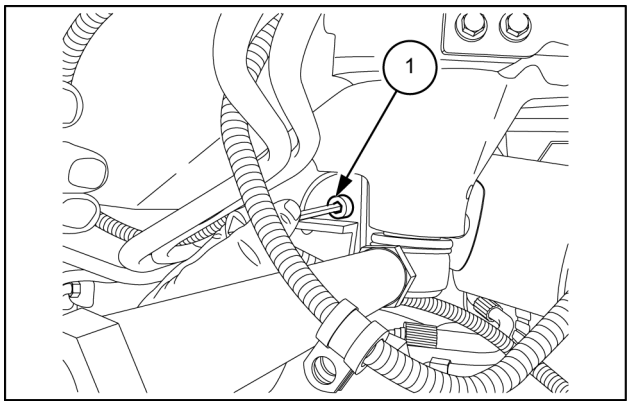
C0034A

⚠ WARNING

Burn hazard!
Be very careful to avoid contact with hot fluids. If fluid is extremely hot, allow it to cool to a moderately warm temperature before proceeding.
Failure to comply could result in death or serious injury.

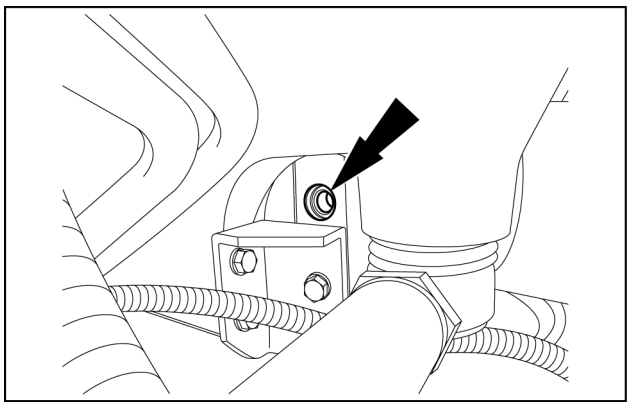
W0362A

1. Park the vehicle on solid, level ground, with the front wheels turned all the way to the left.
2. Shut down the engine.
3. Make sure the front Power Take-Off box (PDF) looks to be intact and make sure there are no oil leaks or damage.
4. Thoroughly clean the area to prevent contamination of the parts.
5. Remove the control plug **(1)** and the front Power Take-Off (PTO) gearbox oil top-up.



MOIL15TR02932AB 1

6. Check the front Power Take-Off oil level is near the hole indicated, using the recommended oil to top up to the level of the hole.
7. Clean the plug **(1)** (Fig. **1**) and replace the seal.
8. Thoroughly clean any oil that may have spilled on the parts during the operation.
9. Start up the engine and engage the front Power Take-Off (PDF), then wait a few minutes. Shut down the engine.
10. Check for any oil leaks.



MOIL15TR02933AB 2

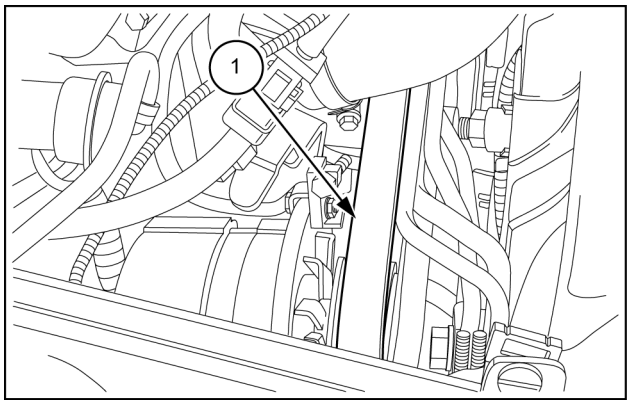
Front Power Take-Off (PTO) - Check Oil breather

NOTE: *before cleaning the oil breather on the front power take-off, clean the radiator unit, see* ***7-25****.*

Alternator drive belt - Replace

1. Replace the engine belt (Poly-V) **(1)**.

NOTICE: *to replace the engine belt (Poly-V)* ***(1)*** *contact the local dealership.*

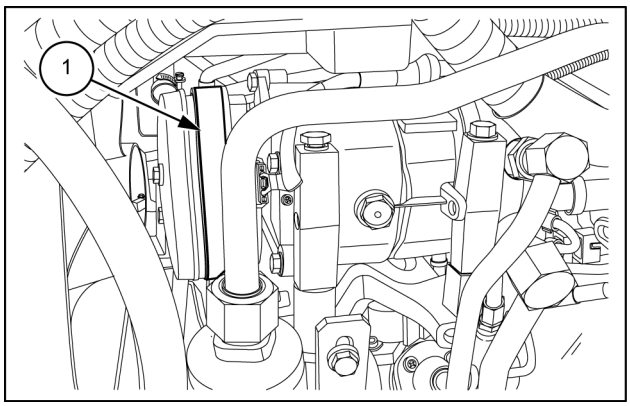


MOIL15TR02080AB 1

Air conditioning compressor belt - Replace

1. Replace the compressor belt AC (Poly-V) **(1)**.

NOTICE: *to replace the compressor belt AC (Poly-V)* ***(1)*** *contact the local dealership.*



MOIL15TR02365AA 1

Front Power Take-Off (PTO) - Change oil

⚠ WARNING

Hot surface possible!
Wait for all components to cool before performing any operation.
Failure to comply could result in death or serious injury.

W0251A

⚠ CAUTION

Hot area!
Use care when working near hot components. Wear protective gloves.
Failure to comply could result in minor or moderate injury.

C0034A

⚠ WARNING

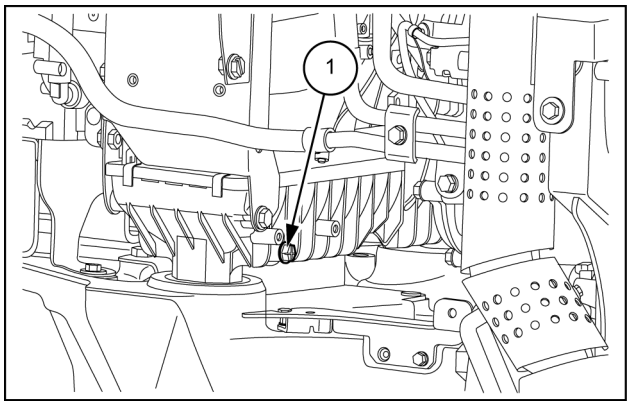
Burn hazard!
Be very careful to avoid contact with hot fluids. If fluid is extremely hot, allow it to cool to a moderately warm temperature before proceeding.
Failure to comply could result in death or serious injury.

W0362A

NOTICE: *first, thoroughly clean the area to prevent the parts from becoming contaminated.*

NOTICE: *first, make sure the vehicle is on a solid, level surface with the engine off.*

5. Remove the drain plug **(1)** from the radiator and drain the coolant into the container.
6. Tighten the radiator drain plug **(1)**.
7. Prepare a filtered solution with a weight ratio of **250 g** (**8.8 oz**) of Solvay soda for every **10 l** (**2.2 UK gal**) **2.70 US gal** of distilled water in a quantity corresponding to the capacity of the engine's cooling system (see table above).



MOIL15TR02289AB 4

8. Fill the cooling circuit with the prepared solution through the neck **(1)** fig. **3**, of the expansion tank, up to the "MAX" level indicated on the left-hand side of the tank.
9. Start and run the engine at low idle speed for about an hour.
10. Run the cab heating (see **6-12**) to allow the fluid to circulate throughout the system. While the engine is in operation, monitor the coolant level (Solvay soda and distilled water solution) and if necessary, top up to the "MAX" level.
11. Stop the engine and wait until the coolant is cool.
12. Repeat Step **3** through Step **5**.
13. Pour distilled water through the neck of the expansion tank **(1)** fig. **3**, letting it flow over the radiator drain plug **(1)** fig. **4**.
14. Tighten the radiator drain plug **(1)** fig. **4**.
15. Fill the cooling circuit with distilled water through the neck of the expansion tank **(1)** fig. **3**, up to the "MAX" level indicated on the left-hand side of the tank.
16. Start the engine and allow it to run at low idle for a few minutes.
17. Run the cab heating (see **6-12**) to allow the fluid to circulate throughout the system - While the engine is in operation, monitor the coolant level (Solvay soda and distilled water solution) and if necessary, top up to the "MAX" level.
18. Stop the engine and wait until the coolant is cool.
19. Repeat Step **3** through Step **6**.
20. Fill the cooling circuit with the recommended fluid up to the "MAX" level.
21. Turn off the cab heating system (see **6-12**)
22. Start the engine and let it run at medium throttle until it reaches operating temperature (approximately 10 min).
23. Remove the top radiator cap fig.
24. Run the cab heating to allow the fluid to circulate throughout the system and run the engine at full throttle for 5 minutes.

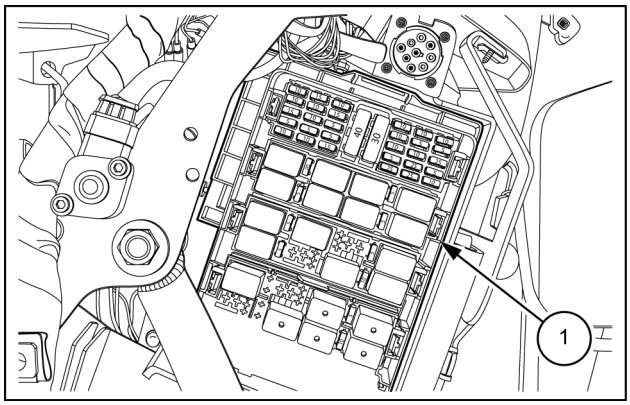
Fuse and relay locations

Fuse and relay box - Overview

Main 12-way fuse compartment for all models

On all models, the 12−way fuse compartment **(1)** is located on the left−hand side of the central console, beneath the steering wheel.

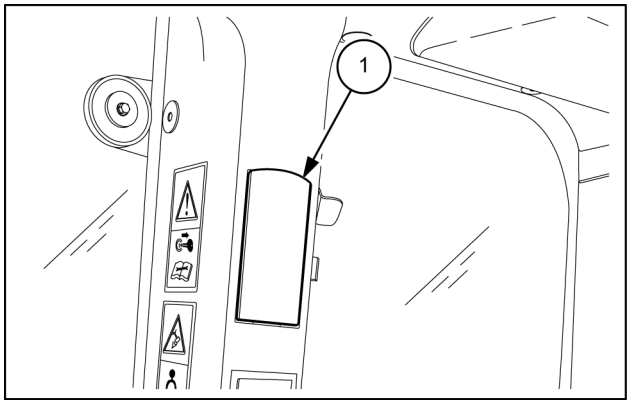
NOTE: *When replacing a blown fuse, make sure that the new fuse has the same amp value.*
If electrical system relays need to be changed, check that correct spare parts are used and that they are fitted in the correct positions. The use of structurally or functionally different relays - even if interchangeable – could seriously compromise tractor control with dangerous results.



MOIL15TR02162AA 1

Six−way fusebox for cab circuit

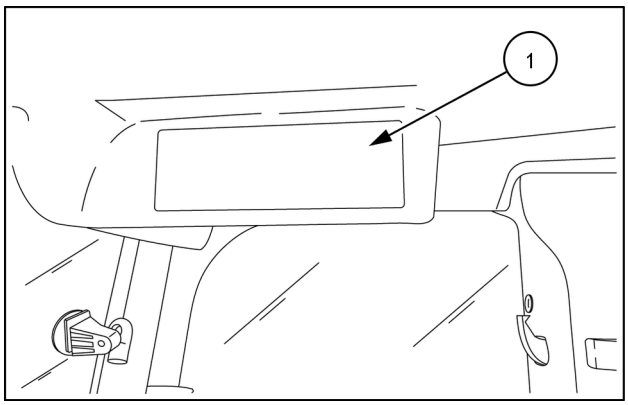
Together with the main fuse box shown in fig. **1**, tractors with cabs are fitted with an additional 6 way fuse compartment **(1)**, located on the right−hand upright.



MOIL15TR02160AA 2

Fuse block for roof circuits

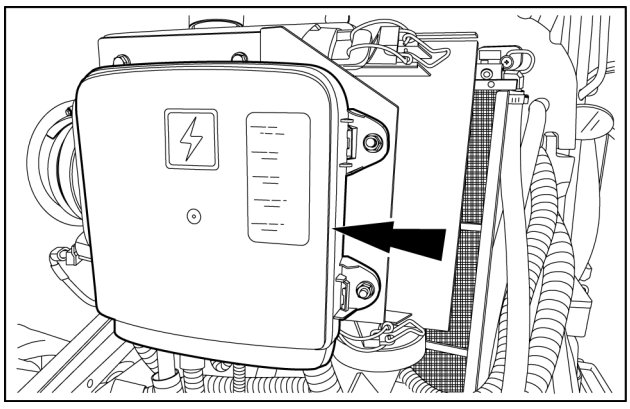
This fuse block **(1)** is located on the left-hand rear side of the roof, accessible from inside the cab, and contains the fuses and relays of the electrical circuit of the roof that control the air-conditioning system and the cab pressurization system.



MOIL16TR02564AA 3

Maxi-fuse compartment

On all models, the maxi fuse compartment is located beneath the hood on the front of the tractor.



MOIL15TR02163AA 4

Storage

Tractor storage

NOTICE: *if the vehicle is unused for long periods, it is necessary to carry out the following procedures. Failure to observe the following instructions may result in damaging the vehicle and losing the manufacturer's warranty and/or legal obligations.*

Storage - from 3 to 6 months:

- Clean the vehicle and the bodywork. - See **7-4**. Protect the paintwork with silicone wax and use protective lubricants on non-painted metal parts;
- Remove all implements from the vehicle.
- Always park the vehicle in a covered, dry and well-ventilated place
- Remove the air filter cartridge and clean it according to the instructions given in the MAINTENANCE chapter - See **7-68**.
- Do not drain off the engine cooling system. During the winter, make sure that the proportions of the water and anti-freeze mixture are as specified (see the topping-up table in the "Maintenance" chapter). For this reason, follow the instructions given in the "Maintenance" chapter.
  - Coolant **CASE IH AKCELA PREMIUM ANTI-FREEZE** - See **7-95**;
  - Coolant of type **CASE IH AKCELA ACTIFULL™ OT EXTENDED LIFE COOLANT** - See **7-100**.
- Make sure that the hydraulic cylinder rods (hydrostatic steering, lifter, etc.) are in the closed position.
- Put all controls in the neutral position (including electrical switches and the parking brake control).
- Do not leave the ignition key in the switch.
- Remove the battery and clean it - See **7-108**; apply a protective product (e.g. Vaseline) to the battery terminals and cable clamps; then put the battery in a ventilated place that is not subject to temperatures below **10.0 °C** (**50.0 °F**) and not exposed to direct sunlight - Check the battery charge state using a digital tester (voltmeter);
- Lift the wheels off the ground by positioning stands or other suitable supports under the vehicle axles - See **2-37**. With the vehicle raised, we recommend deflating the tires - With the vehicle on the ground, periodically check the tire pressures.
- Cover the vehicle with a sheet (not plastic and not waterproof).

Storage - more than 6 months:

NOTICE: *the vehicle must not be left unused for more than 6 months with biodiesel in the fuel system, otherwise the fuel system could be damaged - Carry out the procedure described in the "Biodiesel fuel - Storage" - See **7-9**.*

- Fill the fuel tank with diesel fuel.

Resuming activity:

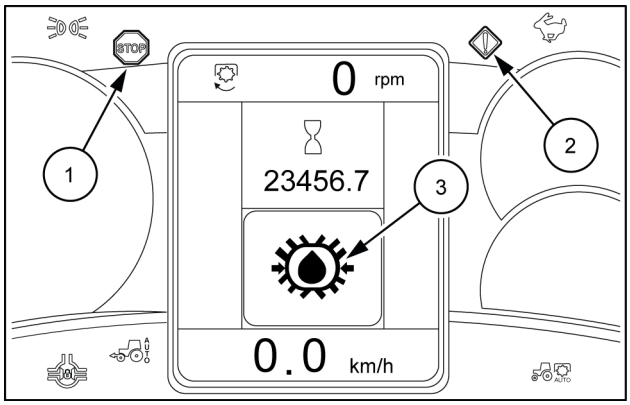
NOTICE: *before resuming activity, check and/or replace the category 2 cab filter and replace the category 4 filter; check that there is no dirt and/or mould inside the air ducts - See **7-33** and **7-34**.*

NOTICE: *before starting the engine, pay particular attention to the instructions - See **4-3**.*

Alarm(s)

Alarms

Illumination of a warning light may be accompanied by an audible alarm. Depending on the severity of the malfunction, one of the following alarms may be heard.



DCUTLNEIT001S8A 1

Red indicator lamp

Illumination of the red warning light **(1)** is normally associated with a critical alarm. Stop the tractor immediately when this warning light comes on. The warning light will stay on until the fault is corrected or the engine is switched off.

Amber indicator lamp

Illumination of the amber warning light **(2)** is normally associated with a non-critical alarm. When this indicator light comes on, the operator can continue working. The fault should be rectified as soon as possible.

Required action

A two pulse alarm will sound for 1 second to advise the operator that a certain action is required. The alarm will continue to be displayed until the operator carries out the appropriate action or the tractor engine is switched off.

Safety and general alarms

A general continuous audible warning is emitted if the operator tries to perform inappropriate operations, for instance driving the tractor with the parking brake engaged.

Parking Lights

A pulse alarm will sound for a short period if the engine is switched off and the parking lights are left on.

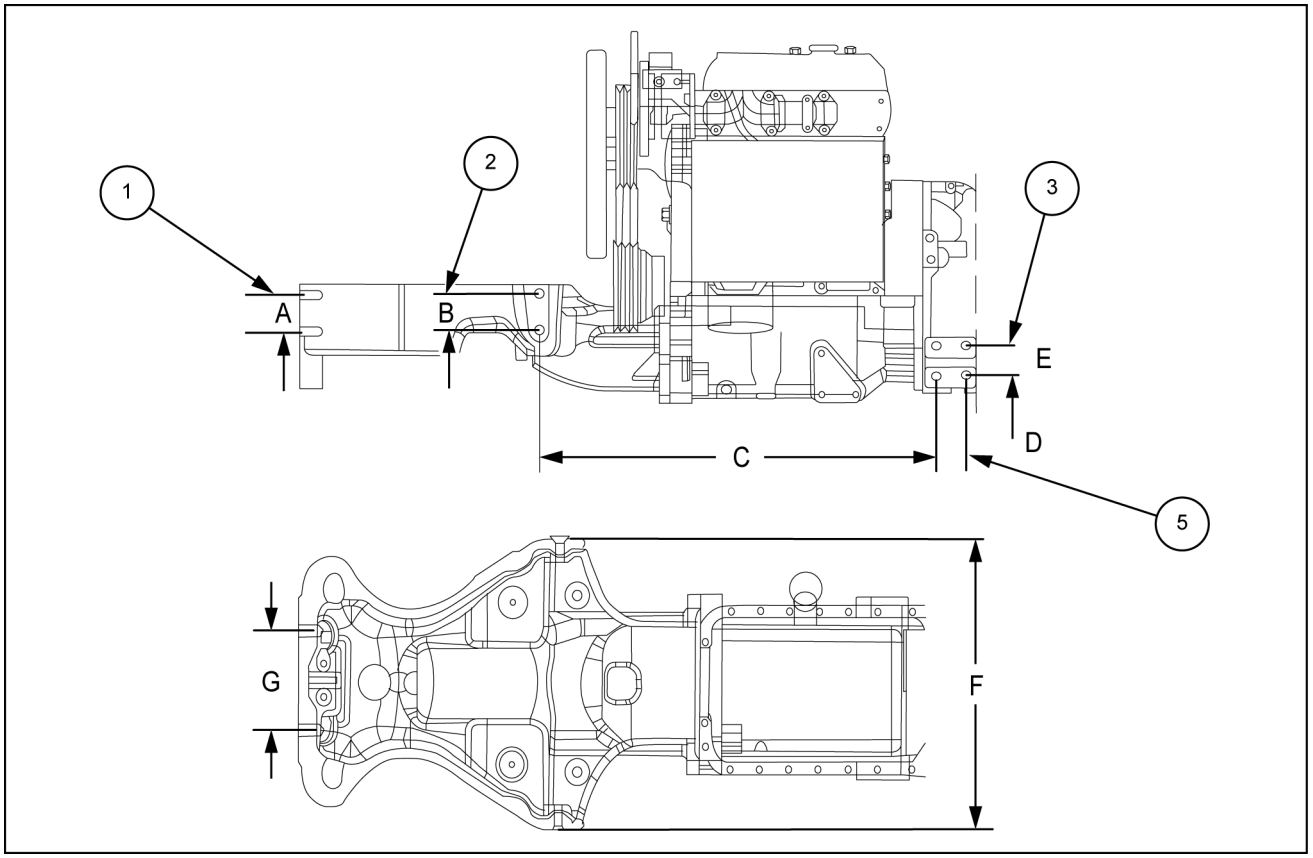
Warning and advisory symbols

There are a number of warning/advisory symbols that may appear on the display **(3)**. This display may be accompanied by the warning lights **(1)** or **(2)** coming on and by an audible warning, depending on the severity of the fault. The symbols can be categorized into four main groups.

1. Warning.
   These symbols advise of a fault that is critical to the operation of the tractor. Stop the tractor as soon as possible, investigate the cause and rectify the fault.
2. Maintenance.
   These symbols tell the operator there is a concern relating to the basic functions of the tractor, ie. water contamination in the fuel, alternator not charging etc.
3. System malfunction warning.
   The system fault symbols relate to an operational fault in one or more of the tractors main components, either electrical or mechanical. Maybe accompanied by a fault code.
4. Advisory.
   The advisory symbols are not detrimental to the operation of the tractor but should not be ignored. Take appropriate action where necessary.

Additional equipment attachment points

Two wheel drive models (2WD)



MOIL15TR03275FB 1

NOTE: *the tractor is provided with threaded holes on both sides for connecting implement and auxiliary equipment. The figure shows the free fixing holes on the left-hand side of the tractor. These holes are identical and symmetrical to the fixing holes on the right-hand side.*
Use exclusively the holes specified in fig. when mounting auxiliary equipment. The use of different holes for auxiliary applications automatically excludes the manufacturer from any liability regarding damage to the tractor or injury to persons caused by failure to follow the regulations given.

Hole			Torque rates
1	M 20 x 2.5	**36.0 mm** (**1.4 in**)	**400 – 450 N·m**
2	M 16x 2.0	**33 mm** (**1 in**)	
3	M 20 x 2.5	**35.0 mm** (**1.4 in**)	

Dim.

A	B	C	D	E	F	G
97 mm (**4 in**)	**55 mm** (**2 in**)	**899 mm** (**35 in**)	**80 mm** (**3 in**)	**60 mm** (**2 in**)	**512 mm** (**20 in**)	**174 mm** (**7 in**)

Speed table 44x16 gearbox

40 km/h (24.9 mph) at 2300 RPM

FORWARD SPEED WITH CREEPER ENGAGED

RANGE	SPEED	REAR TIRE RADIUS					
		525	550	575	600	625	650
A	1	0.32 km/h (0.20 mph)	0.27 km/h (0.17 mph)	0.29 km/h (0.18 mph)	0.30 km/h (0.19 mph)	0.32 km/h (0.20 mph)	0.33 km/h (0.21 mph)
	2	0.48 km/h (0.30 mph)	0.40 km/h (0.25 mph)	0.44 km/h (0.27 mph)	0.45 km/h (0.28 mph)	0.47 km/h (0.29 mph)	0.49 km/h (0.30 mph)
	3	0.71 km/h (0.44 mph)	0.59 km/h (0.37 mph)	0.64 km/h (0.40 mph)	0.67 km/h (0.42 mph)	0.70 km/h (0.43 mph)	0.72 km/h (0.45 mph)
	4	1.05 km/h (0.65 mph)	0.91 km/h (0.57 mph)	0.95 km/h (0.59 mph)	0.99 km/h (0.62 mph)	1.03 km/h (0.64 mph)	1.07 km/h (0.66 mph)
BL	1	1.36 km/h (0.85 mph)	1.14 km/h (0.71 mph)	1.23 km/h (0.76 mph)	1.28 km/h (0.80 mph)	1.33 km/h (0.83 mph)	1.38 km/h (0.86 mph)
	2	2.03 km/h (1.26 mph)	1.70 km/h (1.06 mph)	1.83 km/h (1.14 mph)	1.91 km/h (1.19 mph)	1.97 km/h (1.22 mph)	2.06 km/h (1.28 mph)
	3	2.99 km/h (1.86 mph)	2.49 km/h (1.55 mph)	2.69 km/h (1.67 mph)	2.80 km/h (1.74 mph)	2.92 km/h (1.81 mph)	3.04 km/h (1.89 mph)
	4	4.43 km/h (2.75 mph)	3.81 km/h (2.37 mph)	3.98 km/h (2.47 mph)	4.15 km/h (2.58 mph)	4.33 km/h (2.69 mph)	4.50 km/h (2.80 mph)
BH	1	1.67 km/h (1.04 mph)	1.39 km/h (0.86 mph)	1.50 km/h (0.93 mph)	1.57 km/h (0.98 mph)	1.63 km/h (1.01 mph)	1.70 km/h (1.06 mph)
	2	2.49 km/h (1.55 mph)	2.07 km/h (1.29 mph)	2.24 km/h (1.39 mph)	2.33 km/h (1.45 mph)	2.43 km/h (1.51 mph)	2.53 km/h (1.57 mph)
	3	3.66 km/h (2.27 mph)	3.05 km/h (1.90 mph)	3.29 km/h (2.04 mph)	3.43 km/h (2.13 mph)	3.57 km/h (2.22 mph)	3.72 km/h (2.31 mph)
	4	5.42 km/h (3.37 mph)	4.66 km/h (2.90 mph)	4.87 km/h (3.03 mph)	5.08 km/h (3.16 mph)	5.29 km/h (3.29 mph)	5.51 km/h (3.42 mph)

NOTE: *with the creeper disengaged, the forward speeds are the same as those given for the 32x16 gearboxes and the reverse speeds ar the same as those given for the 16x16 gearboxes.*

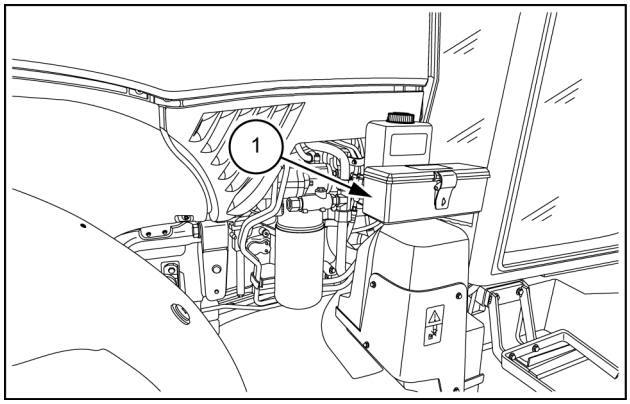
NOTE: *the speeds may differ from those in the table, depending on the tire loading and inflation pressures.*

10 - ACCESSORIES

Tool box

As an accessory it is possible to request a tool box with inside the tools necessary for the connection of additional equipment to the tractor, for adjustments and maintenance operations for which the operator is enabled.

The tool box, if present, is positioned on the left-hand side of the tractor, above the main tank.



MOIL15TR02120AC 1

The tools available inside the box are:

- Double ended wrench, size 6 - 7
- Double ended wrench, size 10 - 13
- Double ended wrench, size 11 - 14
- Double ended wrench, size 17 - 19
- Double ended wrench, size 22 - 24
- Single ended wrench, size 27
- Double ended socket wrench, size 22 - 24
- Double ended socket wrench, size 24 - 27
- **90°** Allen wrench, size 12
- Pin for double ended socket wrench