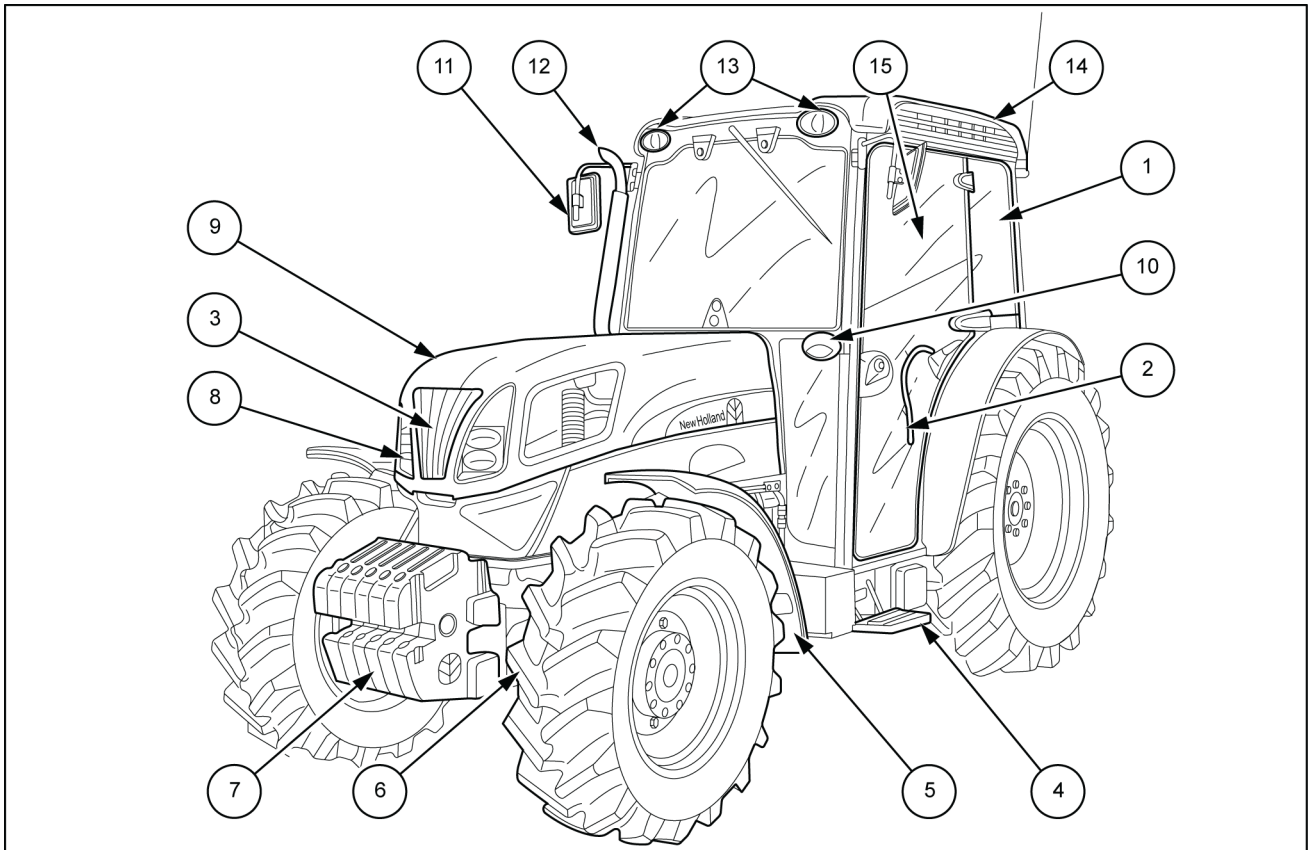


International symbols

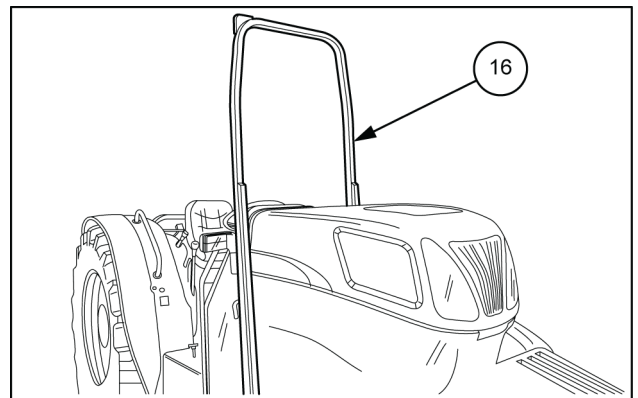
TYPICAL APPLICATIONS	RECOMMENDED SI (METRIC) UNITS		IMPERIAL UNIT	
	NAME	SYMBOL	NAME	SYMBOL
AREA				
	hectare	ha	acre	ha
	square meter	m²	square foot	ft²
			square inch	in²
	square millimetre	mm²	square inch	in²
ELECTRICITY				
	ampere	A	ampere	A
	volt	V	volt	V
	microfarad	µF	microfarad	µF
	ohm	Ω	ohm	Ω
FORCE				
	kilonewton	kN	pound	lb
	newton	N	pound	lb
FORCE PER LENGTH				
	Newton metres	Nm	pound inch	lb in
FREQUENCY				
	megahertz	MHz	megahertz	MHz
	kilohertz	kHz	kilohertz	kHz
	hertz	Hz	hertz	Hz
FREQUENCY - ROTATIONAL				
	revolution per minute	r/min	revolution per minute	r/min ^a
		rpm		rpm
LENGTH				
	kilometre	km	mile	mi
	meter	m	foot	ft
	centimetre	cm	inch	in
	millimetre	mm	inch	in
	micrometer	µm		
MASS				
	kilogram	kg	pound	lb
	gram	g	ounce	oz
	milligram	mg		
POWER				
	kilowatt	kW	horsepower	Hp
	watt	W	Btu/hour	Btu/hr
			Btu/minute	Btu/min
PRESSURE or STRESS (FORCE PER AREA)				
	kilopascal	kPa	pound per square inch	psi
			inch of mercury	inHg
	pascal	Pa	inch of water	inH2O
	megapascal	MPa	pound per square inch	psi

Component Identification



MOIL13TR00772FA 1

1. Cab
2. Hand rail
3. Fuel tank
4. Steps
5. Transmission
6. Front axle
7. Ballast
8. Front light
9. Hood/Engine
10. Indicator light
11. Rear view mirror
12. Exhaust stack
13. Front work lights
14. Rear work lights
15. Rear widow emergency exit
16. R.O.P.S. (Roll Over Protective Structure)



MOIL13TR00756AA 2

- Always use the correct implement (grab forks, buckets, etc) for the specific task to ensure that the load is securely kept in place.
- It is recommended to install a front loader provided with a parallel guide system and to use it always; this system keeps the load in the bucket horizontal, irrespective of the lift height of the arms.

Installation and working with front loader on tractors without cab

ATTENTION: *It is not recommended to install a front - end loader on a tractor without cab, which cannot offer a minimum protection against falling objects.*

Strictly observe the following precautionary warnings:

- Do not lift the front - end loader to a height from which objects may fall or roll on the driver.
- Always use the correct implement (grab forks, buckets, etc) for the specific task to ensure that the load is securely kept in place.
- It is recommended to install a front loader provided with a parallel guide system and to use it always; this system keeps the load in the bucket horizontal, irrespective of the lift height of the arms.
- If available install a FOPS structure or ask the supplier of the loader to install either a FOPS certified structure on main ROPS structure or at least a minimal structure offering partial protection from falling objects (e.g. a "Suncanopy").

General precautions to be followed when working with a front - end - loader

- Do not allow bystanders in the manoeuvring zone of the tractor equipped with a front-end loader. Do not allow

bystanders to stand near or under the lifted bucket of a front – end loader.

- Do not use the front – end loader as a lift for persons for activities that must be done at a certain height (for example, cleaning eaves).
- Do not use the front- end loader in an area with overhead power lines. In case of contact with overhead power lines, jump from the tractor without making instant contact between tractor and ground. When possible, disconnect the power lines from the grounds.

Operators Protection Structure OPS.

This tractor is not provided with an OPS certified structure; please carefully read the following important information especially when working in a forestry environment.

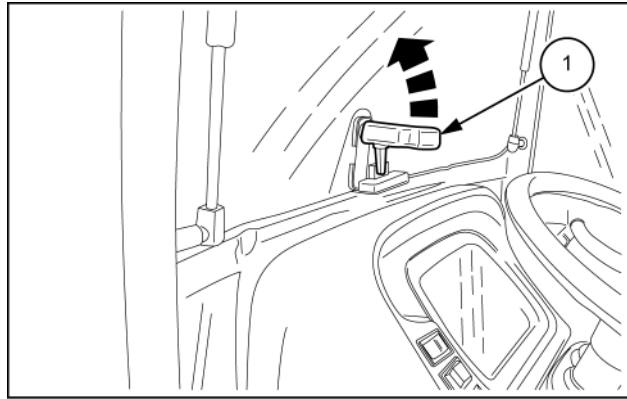
Forestry Applications

ATTENTION: *This tractor is not designed for heavy forestry applications; usage is prohibited unless a certified FORESTRY KIT is installed; contact your dealer to verify whether a forestry kit exists for this tractor model. Only a forestry specific kit will provide necessary protection against falling trees.*

Protection against penetrating objects (OPS) can be obtained only fitting a specific KIT, contact your dealer to verify whether an OPS certified KIT is available for your tractor.

Opening Front Windscreen

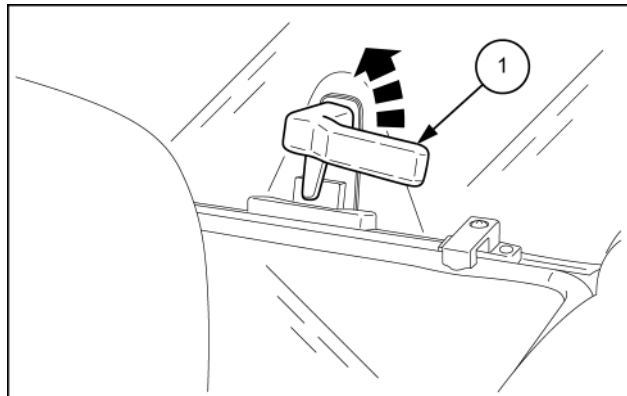
To open, pull handle **(1)** upwards and push forward. The window will be held in position by special struts.



MOIL13TR00492AA 3

Rear Window

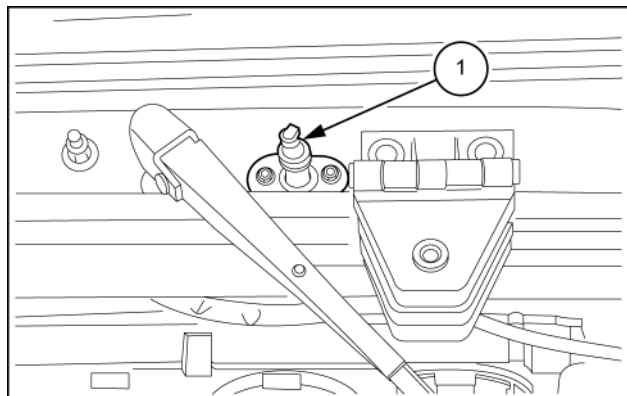
To open, pull handle **(1)** upwards and push forward. The window will be held in position by special struts.



MOIL13TR00493AA 4

Windscreen washer spray nozzle

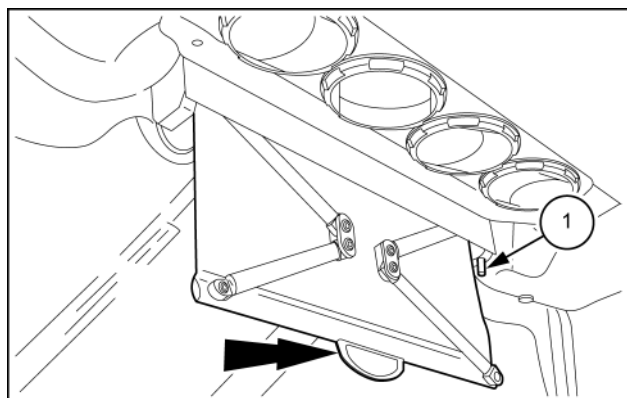
For better windscreen cleaning, adjust the angle of the spray nozzle **(1)** using a screwdriver. If the orifice of the spray nozzle is obstructed, clear it with a pin.



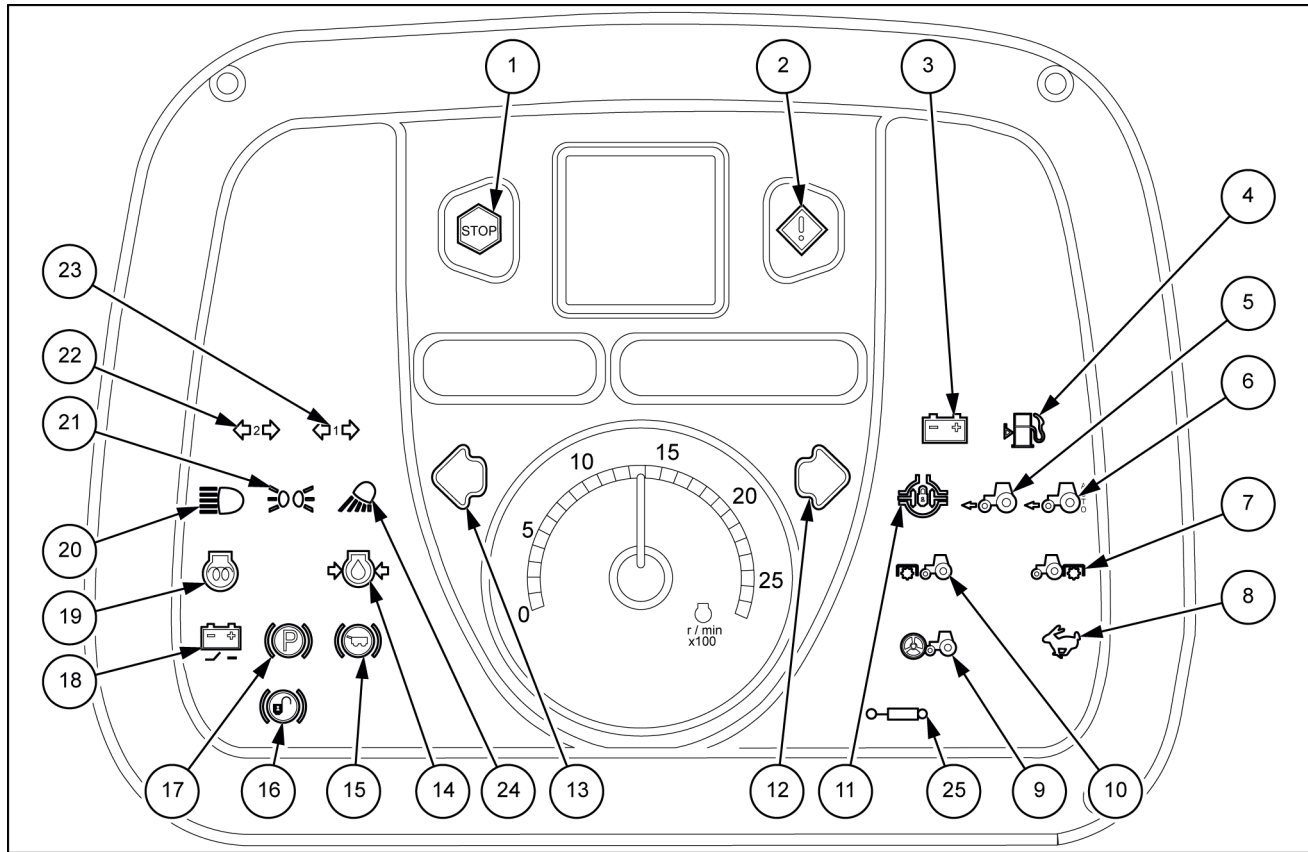
MOIL13TR00495AA 5

Sun shade





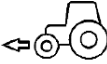


Pull the tab of the sun blind down to open it, as indicated by the arrow in the figure. To rewind the sun blind, press button **(1)**.



MOIL13TR00547AA 6



MOIL13TR00298FA 2

- 1**  **Stop warning light (red)**
If the red "Stop" warning light comes on, switch off the tractor immediately and look for the cause. A warning symbol will appear on the display confirming the location of the fault.
- 2**  **Indicator lamp (amber)**
This indicator light comes on and the display shows a warning symbol. The light blinks for 4 seconds, after which the symbol on the display disappears and the indicator light stays on steady. To display the fault, you need to go to the menu. Stop the tractor and investigate the cause of the trouble.
- 3**  **Battery charging system failure (red)**
This warning light should switch off as soon as the engine starts. If the light stays on when the engine is running, switch off the engine and find the cause of the problem.
- 4**  **Fuel gauge (amber)**
The light comes on when the tractor needs refuelling.
- 5**  **Four-wheel drive (green)**
This warning light comes on when the four-wheel drive is automatically engaged.
- 6**  **Four-wheel drive automatic control (green)**
This warning light comes on when with the respective button you select the automatic four-wheel drive engagement mode.
- 7**  **Power take-off (amber)**
This warning light comes on when the engine is running and the power take-off is engaged.

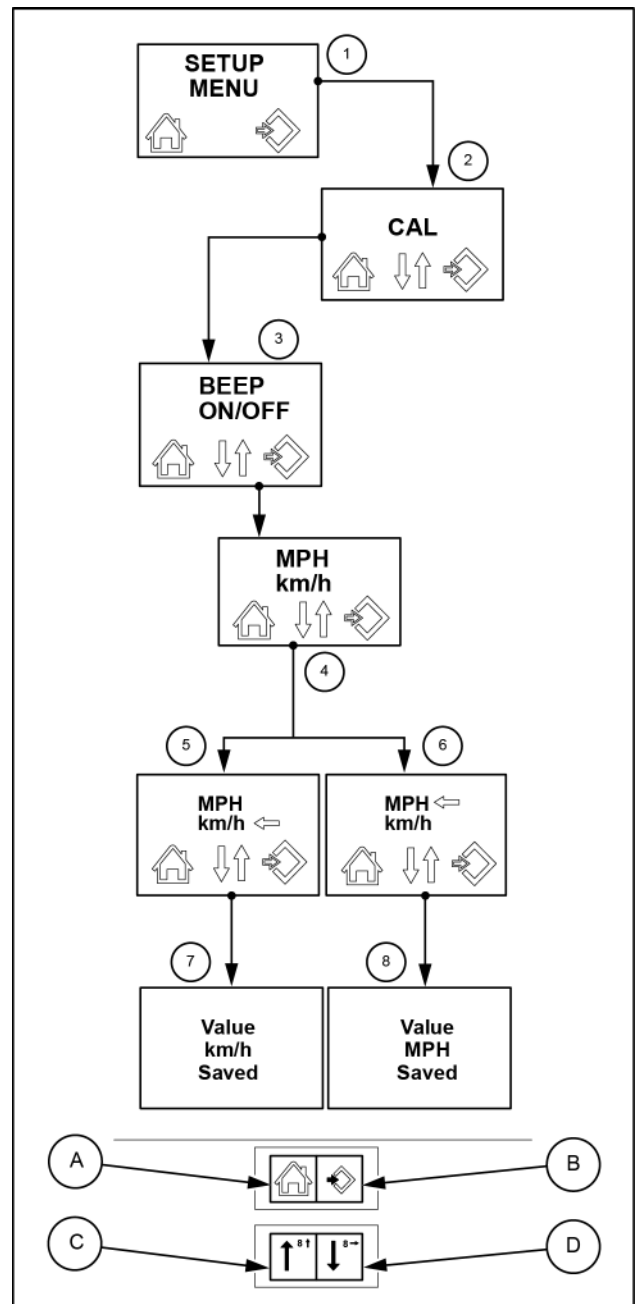
Changing unit of measurement

If you want to turn audible warning on or off each time a button is pressed, proceed as follows:

Turn the ignition key onto the first click, holding down the symbol **(B)** on the switch for more than three seconds.

- The central display shows **"SETUP MENU"** as in detail (1). Release the symbol **(B)** to go to detail (2) **(CAL)**.
- Now press the arrow **(D)** on the switch and the display will show the screens in sequence as illustrated in details (2) and (3).
- From viewing the detail (3) press the arrow **(D)** again and the display will show **"MPH km/h"** as in detail (4).
- Press the symbol **(B)** and the display will show the last setting made, **"km/h"** indicated by the arrow as in detail (5) or **"MPH"** indicated by the arrow as in detail (6). Press on the arrow **(C)** on the switch to pass from **"km/h"** to **"MPH"** or on the arrow **(D)** to pass from **"MPH"** to **"km/h"**.
- From the condition of detail (5) press **(B)** to save ON, the display will show **"Value km/h Saved"** as in detail (7) or from the condition of detail (6) to save OFF, the display will show **"Value MPH Saved"** as in detail (8).

NOTE: If you want to stop the display, press the symbol **(A)** on the switch. This will automatically take you back to the display as in detail (4). Press the same symbol again to exit the programming menu.



MOIL13TR00553CA 4

SPEED AT MAXIMUM POWER**30 km/h (18.6 mph) transmission 32 FWD + 16 REV version****FORWARD SPEED**

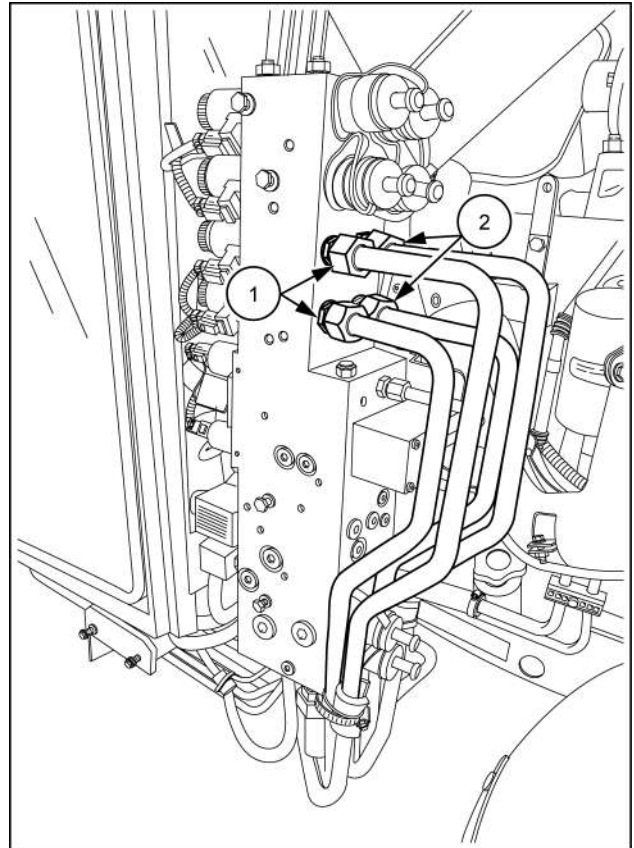
RANGE	GEAR		REAR TIRES											
			380/70 R 20		380/70 R 24		420/70 R 24		13.6 R 28 340/85 R 28 380/70 R 28 19.5L - 24		14.9 R 28 380/85 R 28 420/70 R 28		420/70 R 30	
			km/h	mph	km/h	mph	km/h	mph	km/h	mph	km/h	mph	km/h	mph
A	1	LO	0,53	0.33	0,45	0.28	0,47	0.29	0,49	0.31	0,51	0.32	0,53	0.33
		HI	0,64	0.40	0,54	0.34	0,57	0.35	0,59	0.37	0,62	0.38	0,64	0.40
	2	LO	0,80	0.49	0,68	0.42	0,71	0.44	0,74	0.46	0,76	0.47	0,79	0.49
		HI	0,96	0.59	0,81	0.50	0,85	0.53	0,88	0.55	0,92	0.57	0,95	0.59
	3	LO	1,17	0.73	0,99	0.62	1,04	0.64	1,08	0.67	1,12	0.7	1,17	0.72
		HI	1,41	0.87	1,19	0.74	1,24	0.77	1,30	0.81	1,35	0.84	1,40	0.87
	4	LO	1,73	1.08	1,47	0.91	1,54	0.95	1,60	0.99	1,66	1.03	1,73	1.07
		HI	2,08	1.29	1,77	1.10	1,84	1.15	1,92	1.19	2,00	1.24	2,07	1.29
BL	1	LO	2,25	1.40	1,91	1.18	1,99	1.24	2,07	1.29	2,15	1.34	2,24	1.39
		HI	2,69	1.67	2,29	1.42	2,39	1.48	2,49	1.54	2,59	1.61	2,69	1.67
	2	LO	3,35	2.08	2,84	1.77	2,96	1.84	3,09	1.92	3,21	2.0	3,34	2.07
		HI	4,02	2.50	3,41	2.12	3,56	2.21	3,71	2.30	3,85	2.39	4,00	2.49
	3	LO	4,92	3.06	4,18	2.59	4,36	2.71	4,54	2.82	4,72	2.93	4,90	3.05
		HI	5,90	3.67	5,01	3.11	5,23	3.25	5,45	3.38	5,67	3.52	5,88	3.66
	4	LO	7,29	4.53	6,19	3.84	6,46	4.01	6,73	4.18	6,99	4.35	7,26	4.51
		HI	8,75	5.43	7,42	4.61	7,75	4.81	8,07	5.01	8,39	5.22	8,72	5.42
BH	1	LO	2,75	1.71	2,33	1.45	2,43	1.51	2,54	1.58	2,64	1.64	2,74	1.70
		HI	3,30	2.05	2,80	1.74	2,92	1.82	3,04	1.89	3,62	2.25	3,29	2.04
	2	LO	4,10	2.55	3,48	2.16	3,63	2.26	3,78	2.35	3,93	2.44	4,08	2.54
		HI	4,92	3.05	4,17	2.59	4,36	2.71	4,54	2.82	4,72	2.93	4,90	3.04
	3	LO	6,02	3.74	5,11	3.18	5,34	3.32	5,56	3.45	5,78	3.59	6,00	3.73
		HI	7,23	4.49	6,14	3.81	6,40	3.98	6,67	4.14	6,94	4.31	7,20	4.48
	4	LO	8,92	5.54	7,57	4.71	7,90	4.91	9,88	6.14	8,56	5.32	8,89	5.52
		HI	10,71	6.65	9,09	5.65	9,48	5.89	9,88	6.14	10,27	6.38	10,67	6.63
C	1	LO	7,93	4.93	6,74	4.19	7,03	4.37	7,32	4.55	7,61	4.73	7,91	4.91
		HI	9,52	5.92	8,08	5.02	8,43	5.24	8,79	5.46	9,14	5.68	9,49	5.90
	2	LO	11,83	7.35	10,05	6.24	10,48	6.51	10,91	6.78	11,35	7.05	11,79	7.32
		HI	14,19	8.82	12,05	7.49	12,57	7.81	13,10	8.14	13,62	8.46	14,15	8.79
	3	LO	17,39	10.8	14,76	9.17	15,40	9.57	16,04	9.97	16,69	10.37	17,33	10.77
		HI	20,86	12.96	17,71	11.01	18,48	11.48	19,25	11.96	20,02	12.44	20,79	12.92
	4	LO	25,76	16.01	21,87	13.59	22,82	14.18	23,77	14.77	24,72	15.36	25,67	15.95
		HI	30,91	19.21	26,24	16.31	27,38	17.01	28,52	17.72	29,66	18.43	30,80	19.14

NOTE: With the creeper switched off, the forward and reverse gear ratios are the same as indicated for the 16 FWD + 16 REV transmissions.

Electrohydraulically controlled rear remote control valves

On request, two pairs of electro-hydraulically controlled side spool valves can be used to supply the same number of auxiliary rear hydraulic control valves.

1. Line control valves **X**, yellow
2. Line control valves **Y**, black

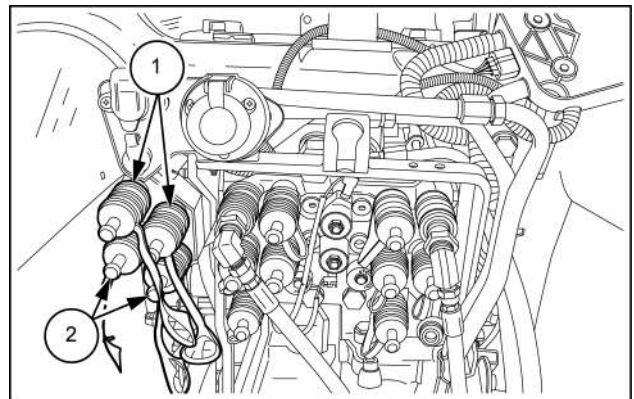


MOIL13TR00302BA 1

To work the two rear control valves, press the corresponding colour on the relative line switch.

1. Yellow
2. Black

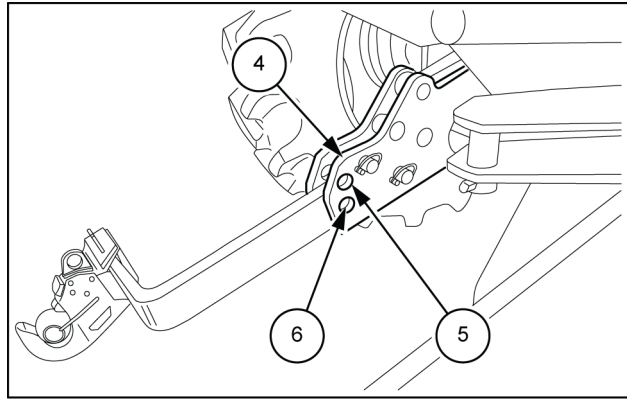
NOTE: Depending on the colors selected by the two switches, the joystick controls simultaneously side and rear remote control valves.
For joystick operation, see the previous chapter, "Electro-hydraulically controlled side spool valves".



MOIL13TR00376AA 2

Third position

- Floating position with the lock pin inserted in the hole **(4)** and the holes **(5)** and **(6)** free. In this position the lifting arms are free to move vertically.

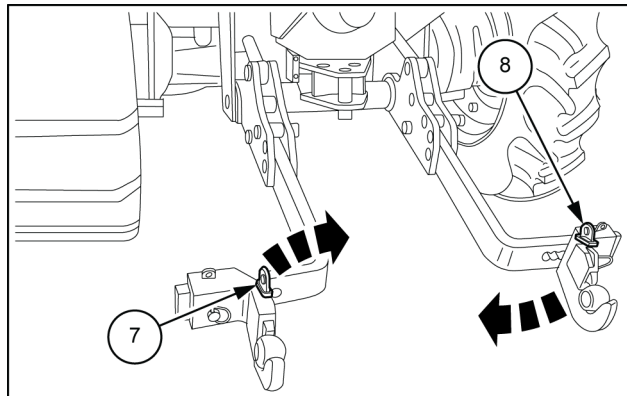


MOIL13TR00971AA 4

Positions for mounting the hook ends

The hook ends **(7)** and **(8)** slide and can be secured in six different positions according to the width of the implement. The assembly shown in figure illustrates the three narrowest positions that can be obtained.

You can obtain another three positions for implements of a higher class by swapping over the position of the hooks as shown by the arrows in figure.



MOIL13TR00972AA 5

Maximum lift capacity

With third point connected to top hole of top link attachment bracket and for the entire lifting stroke:

At link ends of horizontal lines

1275 kg (2810.9 lb)

With centre of gravity at **610 mm (24.0 in)** from link ends

980 kg (2160.5 lb)

7 - MAINTENANCE

GENERAL INFORMATION

General safety before you service

DANGER

Improper operation or service of this machine can result in an accident.
Do not operate this machine or perform any lubrication, maintenance, or repair on it until you have read and understood the operation, lubrication, maintenance, and repair information.
Failure to comply will result in death or serious injury.

D0010A

DANGER

Improper operation or service of this machine can result in an accident.
Any unauthorized modifications made to this machine can have serious consequences. Consult an authorized dealer on changes, additions, or modifications that may be required for this machine. Do not make any unauthorized modifications.
Failure to comply will result in death or serious injury.

D0030A

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.
7. Wait for all machine movement to stop.

Failure to comply could result in death or serious injury.

W1023A

WARNING

Maintenance hazard!

Before you start servicing the machine, attach a DO NOT OPERATE warning tag to the machine in a visible area.

Failure to comply could result in death or serious injury.

W0004A

WARNING

Maintenance hazard!

Always perform all service procedures punctually at the intervals stated in this manual. This ensures optimum performance levels and maximum safety during machine operation.

Failure to comply could result in death or serious injury.

W0132A

WARNING

Improper operation or service of this machine can result in an accident.

Read and understand the SAFETY INFORMATION Section before you perform any maintenance, service, or repairs. Read and understand the specific service procedures for the components you plan to work with before you start servicing the machine.

Failure to comply could result in death or serious injury.

W0138A

MAINTENANCE CHART


Maintenance Chart

Interval	Page no.	Maintenance action	No. of pts.										
				Check	Level make up	Adjust	Cleaning	Tighten	Drain fluid	Filling	Grease	Change fluid	Replace
AS REQUIRED	7-15	Radiator expansion tank		X									
	7-15	Windscreen washer tank				X							
	7-15	Road light		X									
	7-16	Clutch pedal adjustment					X						
	7-16	Parking brake or parking lock					X						
	7-16	Radiator						X					
	7-17	Tyre pressure		X									
	7-18	Wheel nuts torque							X				
	7-18	Brake pedals		X									
AT WARNING MESSAGE DISPLAY	7-19	Engine air filters						X					
	7-21	Brake fluid level								X			
EVERY 10 HOURS OR EACH DAY	7-22	Engine oil level		X									
EVERY 50 HOURS	7-23	Rear wheel hub										X	
	7-23	Lift and linkage										X	
	7-23	2WD steering cylinder										X	
	7-24	4WD steering cylinders										X	
	7-24	2WD front axle pivot										X	
	7-24	4WD front axle pivot										X	
	7-25	4WD transmission shaft										X	
	7-25	2WD right and left-hand stub axle										X	
	7-25	Front lift arms shaft										X	
EVERY 100 HOURS	7-26	Front PTO coupling										X	
	7-27	Transmission oil cooler						X					
	7-27	Air conditioning condenser						X					
	7-27	Intercooler						X					
	7-28	Cab air filter						X					
EVERY 300 HOURS	7-28	Cab recirculated air filter						X					
	7-29	Transmission oil filter										X	
	7-29	Oil filter models with power shuttle/dual command											X
	7-30	Engine air filters					X						
	7-30	Transmission oil level							X				
	7-30	4WD front axle housing		X									
	7-31	4WD front axle final drives										X	
	7-31	4WD front axles stub									X		
	7-31	2WD front wheels									X		

Fuel filter water drain

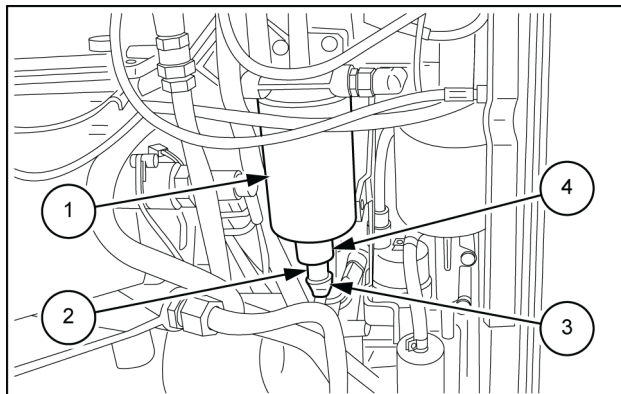
NOTICE: Before loosening or disconnecting any part of the fuel injection system, thoroughly clean the area to be worked on to prevent contamination.

When the instrument cluster display shows the water

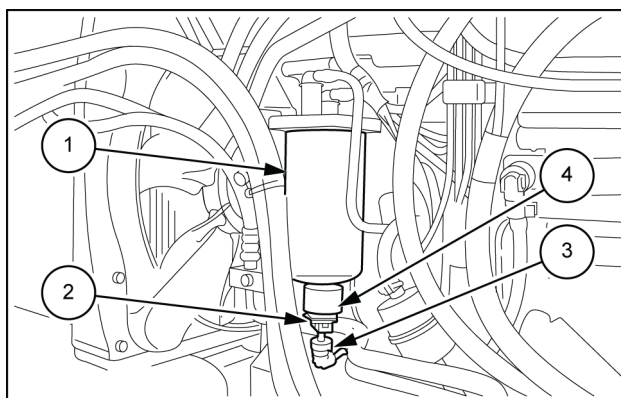
in fuel symbol , drain the fuel filter (with sedimentator) immediately as follows:

1. Place a container under the filter **(1)**;
2. Remove the retaining pin **(2)** and disconnect the sensor **(3)**;
3. Remove the drain plug **(4)** at the base of the filter;
4. Allow contaminated fuel to drain until only clean fuel runs out. Drain off the fuel and dispose of it appropriately. Close the drain plug and replace the sensor wire in position.
5. Start the engine running, after a few seconds the indicator light must go out. If the indicator stays on, replace the filter even if it has not yet reached the time for it to be changed.

- Figure 1, models **T4.75F** and **T4.85F**
- Figure 2, models **T4.95F** and **T4.105F**



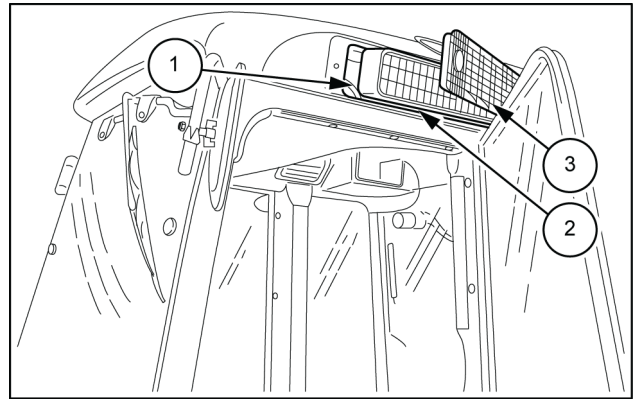
MOIL13TR00639AA 1



MOIL13TR00640AA 2

Cab air filter

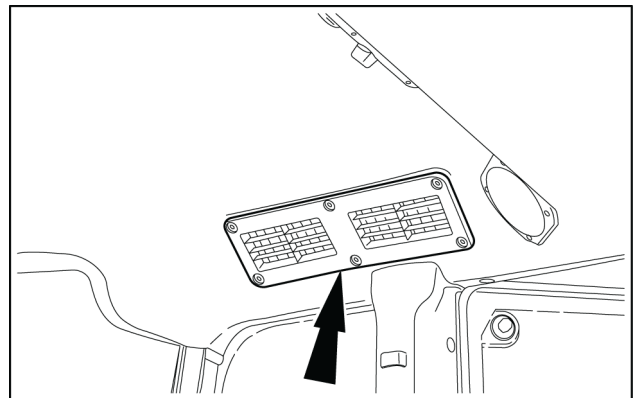
1. Open the wire mesh guards **(3)**, extract the cartridges **(2)** and clean them:
by tapping gently on a flat surface with the outward-facing part downwards;
or
with a jet of compressed air at a pressure of less than **6.9 bar (100 psi)** 100.05 psi (6.9 bar);
Clean the filter seats **(1)** with a cloth. When refitting, make sure the arrows on the cartridge labels are pointing towards the inside of the cab.



MOIL13TR00654AA 1

Cab recirculated air filter

1. Remove the grilles on either side of the cab and clean the recirculated air cartridges located in the housings.



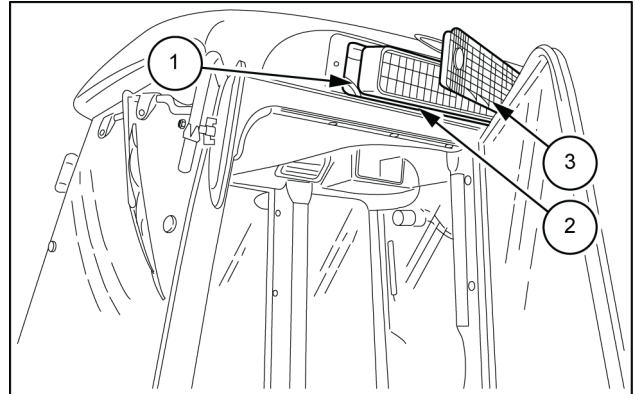
MOIL13TR00655AA 1

EVERY 1200 HOURS OR ANNUALLY

Cab air filters

1. Remove the grilles (3), one on each side, and replace the internal cartridges (2). Before fitting new cartridges, clean the seats (1) with a damp cloth.

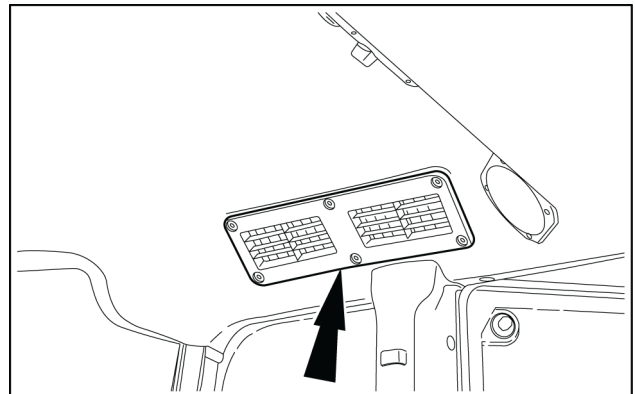
NOTE: In this phase it is necessary to replace the active carbon filters too.



MOIL13TR00654AA 1

Cab recirculated air filter

1. Remove the grilles on either side of the cab and clean the recirculated air cartridges located in the housings.

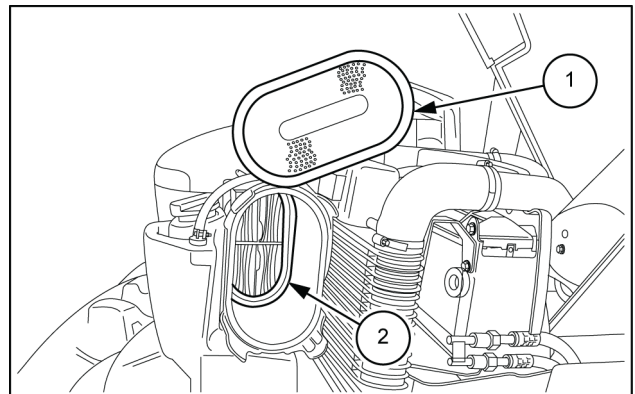


MOIL13TR00655AA 1

Engine air filters

1. Replace the external filter (1), together with the internal filter (2).

NOTE: Never clean the internal safety cartridge. Replace together with the external cartridge.



















MOIL13TR00677AA 1

8 - TROUBLESHOOTING

FAULT CODE RESOLUTION

Display fault codes

Fault code	Symbol	Function	Audible warning	Indicator (Amber) on
14001		Rear PTO short to VCC	NO	YES
14002		Rear PTO short to GND	NO	YES
14011		Engine speed sensor short to VCC or open circuit	YES	YES
14012		Engine speed sensor short to GND	YES	YES
14015		5 V supply voltage too high	NO	YES
14016		5 V supply voltage too low	NO	YES
14021		Cranking line shorted to VCC	NO	YES
14022		Cranking line shorted to GND	NO	YES
14041		Engine coolant temp short to VCC or open circuit	YES	YES
14042		Engine coolant temp short to GND	YES	YES
14051		Fuel level sensor short to VCC or open circuit	NO	YES
14052		Fuel level sensor short to GND	NO	YES
14058		Seat switch closed over 25 hours	YES	YES
14091		Transmission out speed short to VCC	NO	YES
14092		Transmission out speed short to GND	NO	YES
14093		Seat switch short to VCC or open circuit	YES	YES