

**MH4.6**  
**MH Plus C**

Operation and Maintenance Instruction Manual

Operation and  
Maintenance  
Instruction  
Manual

Print No. 604.21.812.00  
English - Printed in Italy

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL



## SAFETY PRECAUTIONS

### OPERATING

Do not run the engine of this machine in closed buildings without proper ventilation capable to remove harmful exhaust gases which concentrate in the air.

Keep the operator's compartment free of foreign objects, especially if not firmly secured. Never use the machine to transport objects, unless proper securing points are provided.

**Do not carry riders on the machine.**

Study and familiarise with escape routes alternative to normal exit routes.

For your personal safety, do not climb on or off the machine while it is in motion.

Make sure that bystanders are clear of the machine operating range before starting the engine and operating the attachment. Sound the horn.

Obey all hand signals, safety indications and signs.

When backing, always look to where the machine is to be moved. Be alert of the position of bystanders. Should someone enter the work area, stop the machine.

Maintain a safe distance from other machines or obstacles to ensure required visibility conditions.

Always give way to loaded machines.

Maintain a clear vision of the surroundings of the travel or work area at all times.

Keep cab windows clean and repaired.

When pulling loads or towing through a cable or chain, do not start suddenly at full throttle. Take-up slack carefully.

Avoid kinking or twisting chains or cables.

Carefully inspect cables or chains for flaws or problems before proceeding.

Do not pull through a kinked chain or cable as the high anomalous stresses existing in this condition may induce failures in the kinked portion.

Always wear heavy gloves when handling chains or cables.

Chains and cables should be securely anchored using suitable hooks. Anchor points should be strong enough to withstand the expected load.

Keep anyone clear of anchor points and cables or chains. **Do not pull or tow unless the operator's compartments of the machines involved are properly protected against possible backlash in case of cable or chain failure or detachment.**

Be alert of soft ground conditions close to newly constructed walls. The fill material and machine weight may cause the wall to collapse under the machine.

In darkness, check area of operation carefully before moving in with the machine. Use all lights provided.

Do not move into low visibility areas.

If the engine tends to slow down and stall for whatever reason under load or at idle, immediately report this problem to the maintenance managers for proper action. Do not operate the machine until this condition is corrected.

Regularly check all exhaust system components, as

exhaust fumes are toxic for the operator.

Operators must know the performance of the machine they are driving.

When working on slopes or near sudden level drops in the terrain, pay attention not to lose adherence and avoid loose soft ground since overturn or loss of machine control could result.

If noise level is high and exceeds 90 dB(A) over 8 hours at the operator's ear, wear approved ear protection in compliance with local regulations.

Do not operate the machine if you are extremely tired or feel ill.

Be especially careful towards the end of the working shift.

Where removable counterweights are provided, do not operate the machine if they have been removed.

When operating the machine, keep in mind height limits of overhead doors, arches, overhead cables and lines as well as width limits of corridors, roads and narrow passages. Also, get to know load limits of the ground and paving type of the ramps you are to work on.

Beware of fog, smoke or dust that obscure visibility.

Always inspect the working area to identify potential risks such as: inclines, overhangs, trees, demolition rubble, fires, ravines, steep slopes, rough terrain, ditches, crowns, ridge trenches, diggings in traffic areas, crowded parking lots, crowded service areas, fenced zones. In such conditions, proceed with extreme care.

Whenever possible, avoid crossing over obstacles such as very rough terrain, rocks, logs, steps, ditches, railroad tracks. When obstructions must be crossed, do so with extreme care and at a square angle, if possible. Slow down. Ease up to the break-over point, pass the balance point slowly and ease down the other side also using the attachment, if necessary.

To overcome deep trenches or sinking ground, place the machine perpendicular to the obstacle, drastically reduce ground speed and start crossing using also the attachment if necessary, only after assessing that ground conditions allow the traverse safely and without risks.

The gradient you may attempt to overcome is limited by factors such as ground conditions, load being handled, machine type and speed, and visibility.

There is no substitute for good judgement and experience when working on slopes.

Avoid operating the attachment too close to an overhang or high wall, either above or below the machine. Beware of caving edges, falling objects and landslides. Remember that such hazards are likely to be concealed by bushes, undergrowth and such.

Avoid faggots, bushes, logs and rocks. Never drive over them, nor over any other surface irregularities that discontinue adherence or traction with the ground, especially near slopes or drop-offs.

Be alert to avoid changes in adherence conditions that could cause loss of control. **Work with extreme care** on ice or frozen ground and on stepped slopes



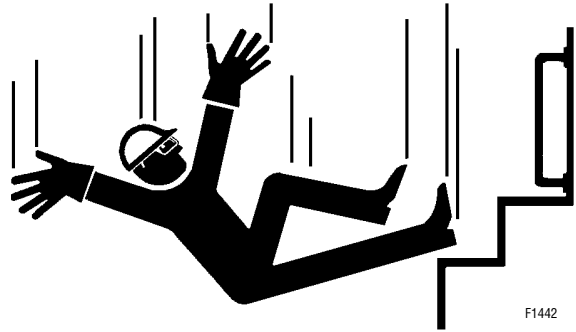
## SAFETY PRECAUTIONS

### USE HANDHOLDS AND STEPS

Falling is one of the major causes of personal injury. When you get on and off the machine, always maintain a three-point contact with the steps and handrails and face the machine. Do not use any controls as handholds.

Never jump on or off the machine. Never mount or dismount a moving machine.

Be careful of slippery conditions on platforms, steps, and handrails when leaving the machine.

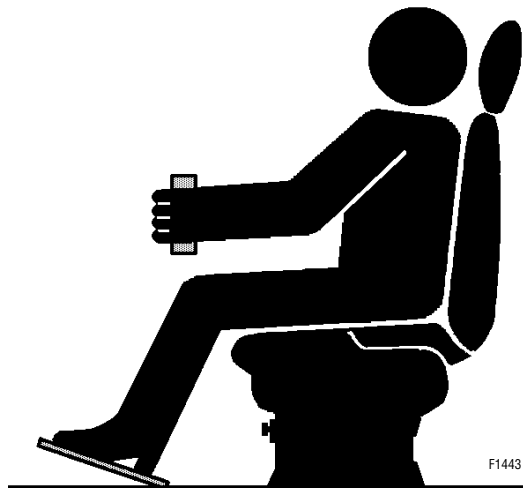


F1442

### ADJUST THE SEAT

Adjust the seat whenever changing operators. Be sure that the operator can fully depress the pedals with his back against the seat back.

If not, move the seat forward and check again.



F1443

### FASTEN SEAT BELT

Should the machine overturn, the operator may become injured and/or thrown from the cab. Not only, the operator may be crushed by the overturning machine resulting in serious injury or even death.

Prior to operating the machine, thoroughly examine belt webbing, buckle, and attaching hardware. If any item is damaged or worn, replace the seat belt or component before operating the machine.

Be sure to remain seated with the seat belt securely fastened at all times when the machine is in operation to minimise injury hazard in case of accident.

After a significant accident, replace the seat belts even though they do not look damaged.



F3261



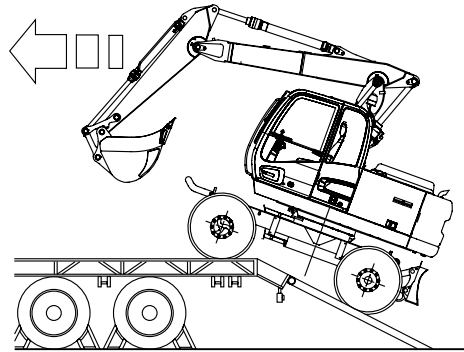
## SAFETY PRECAUTIONS

- Avoid steering while driving up or down the ramp as it is extremely dangerous.

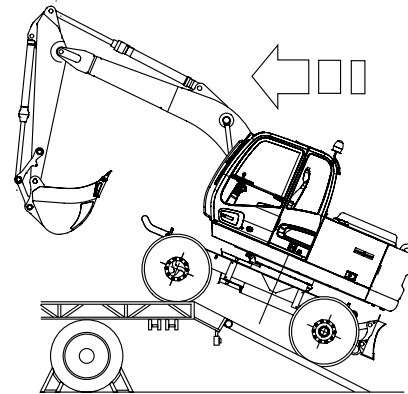
If steering is unavoidable, first move back to the ground or flatbed, modify travelling direction, and begin to drive again.

- Operate the safety lever but do not operate any other control except travel control when driving up or down the ramp.
- The top end of the ramp where it meets the flatbed is a sudden bump. Take care when traveling over it.
- Prevent possible injury from machine tipping while the upperstructure is rotating.
- Keep the arm tucked under and rotate the upperstructure slowly for best stability.
- Securely fasten machine frame using chains or cables.

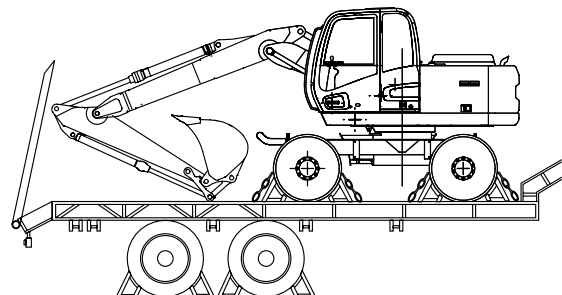
Refer to "Transport" chapter in this manual for details.



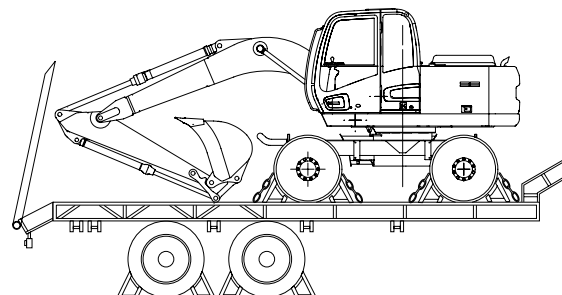
F14540



F14541



F14542



F14543



## SAFETY PRECAUTIONS

### HANDLE FLUIDS - AVOID FIRES

Handle fuel with care; it is highly flammable.  
Do not refuel the machine while smoking or near open flame or sparks.  
Always stop engine before refuelling machine. Fill fuel tank outdoors.

Store flammable fluids away from fire hazards.  
Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

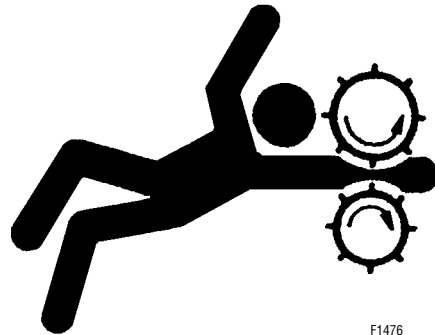
Do not store oily rags; they can ignite and burn spontaneously.



### SERVICE MACHINE SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

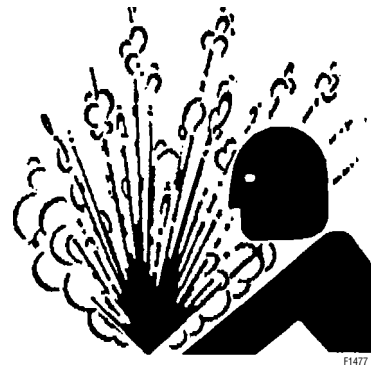
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



### SERVICE COOLING SYSTEM SAFELY

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands.





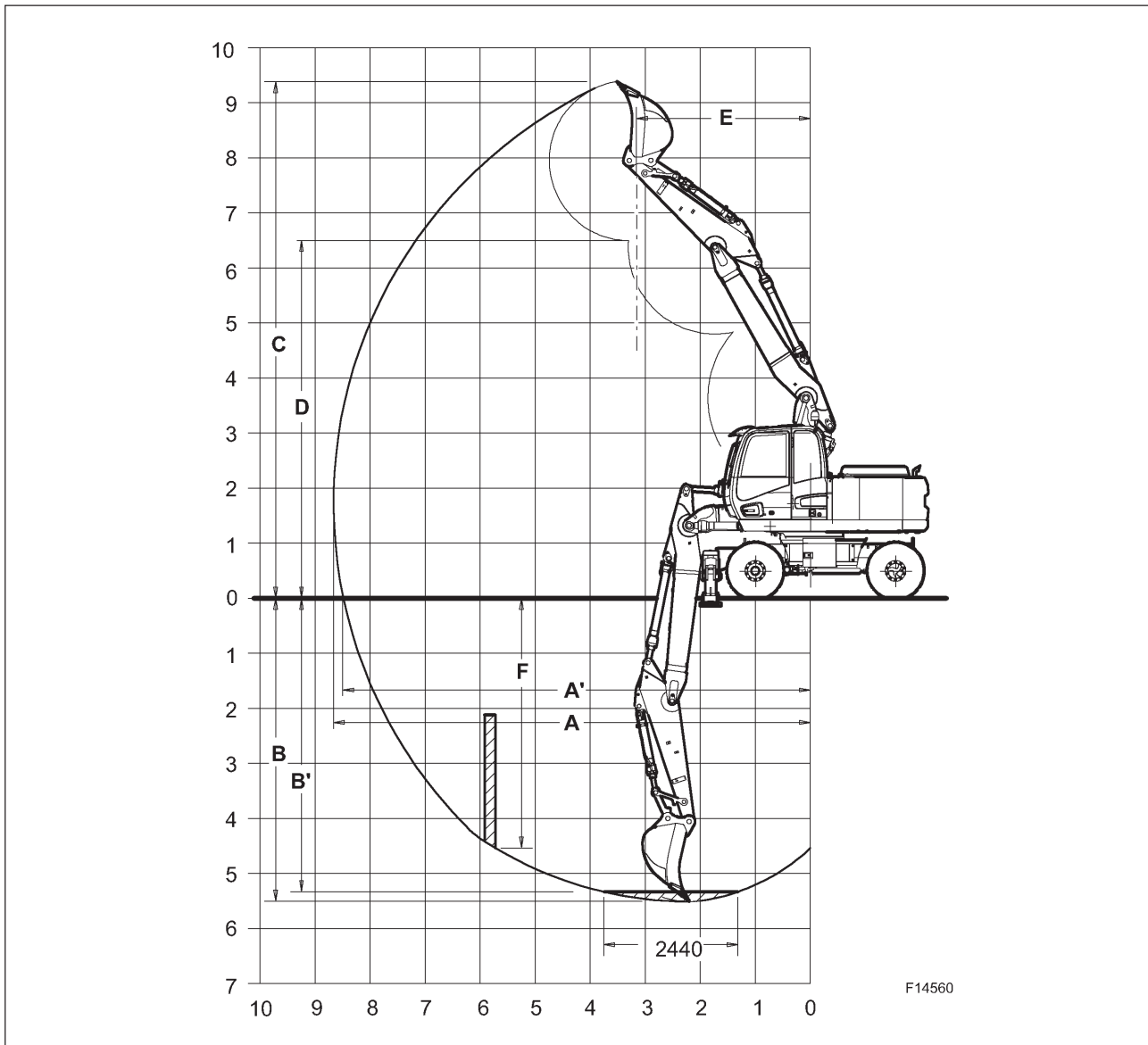
## SAFETY SIGNS

NOTES:

**MH4.6**  
**TECHNICAL SPECIFICATIONS**

<p><b>ENGINE</b> Make Model Type</p> <p>Net power at flywheel at 2000 rpm<sup>-1</sup> (80/1269/EC) Number of cylinders Total displacement Bore x Stroke</p>	<p>IVECO NEF F4BE0484E*D601 Diesel, 4-stroke, direct injection, turbocharged with aftercooler (turbo)</p> <p>83 kW 4 in-line 3900 cm<sup>3</sup> 102 x 120 mm</p>
<p><b>ELECTRICAL SYSTEM</b> Voltage of operation Batteries (Capacity/Voltage) Alternator (Current/Voltage) Starter motor (Power)</p>	<p>24 V 2 x 100 Ah / 12 V 70 A / 24 V 4 kW</p>
<p><b>HYDRAULIC SYSTEM</b> <b>Equipment/travel control pump</b> Maximum output Maximum operating pressure</p> <p><b>Upperstructure swing control circuit</b> Maximum output Maximum operating pressure</p> <p><b>Hydraulic cylinders (bore x stroke)</b> Lifting (triple articulation) Lifting (monobloc) Arm Bucket Positioner (triple articulation version only)</p>	<p>182 l/min 35 MPa</p> <p>90 l/min 20 MPa</p> <p>105 x 980 mm 105 x 980 mm 110 x 1140 mm 90 x 995 mm 145 x 730 mm</p>
<p><b>TRANSMISSION</b> Type</p> <p><b>Travel speeds</b> Working Slow Fast Transfer Slow Fast</p> <p><b>Maximum climbable gradient</b> Working Transfer</p>	<p>with variable displacement hydraulic motor and two-speed synchronized gearbox</p> <p>0 ÷ 3.5 km/h 0 ÷ 8.8 km/h</p> <p>0 ÷ 13.6 km/h 0 ÷ 34.5 km/h</p> <p>80 % 15 %</p>
<p><b>TURRET SWING</b> Swing motor Swing brake Final reduction Bullgear Swing speed</p>	<p>axial pistons automatic operation, disc-type oil-immersed planet. reduction in grease bath 8.0 rpm<sup>-1</sup></p>

**DIGGING PERFORMANCES TRIPLE ARTICULATION VERSION**



(Dimensions in mm)

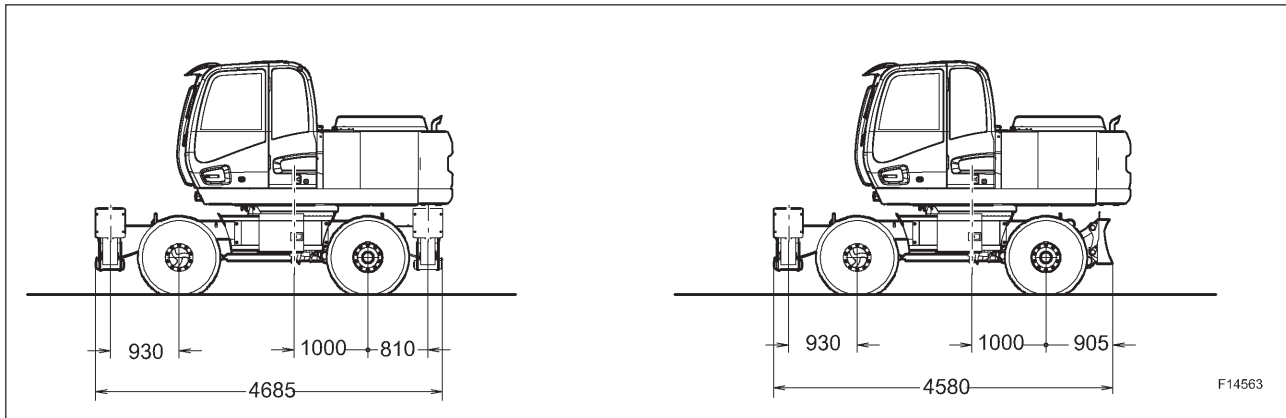
Arm	2200	2400	2700	3100
A	8670	8870	9130	9440
A'	8490	8695	8960	9275
B	5510	5710	6000	6350
B'	5330	5540	5830	6185
C	9390	9565	9710	9870
D	6495	6670	6825	6990
E	3165	3195	3340	3220
F	4535	4755	5020	5315

F14572gb

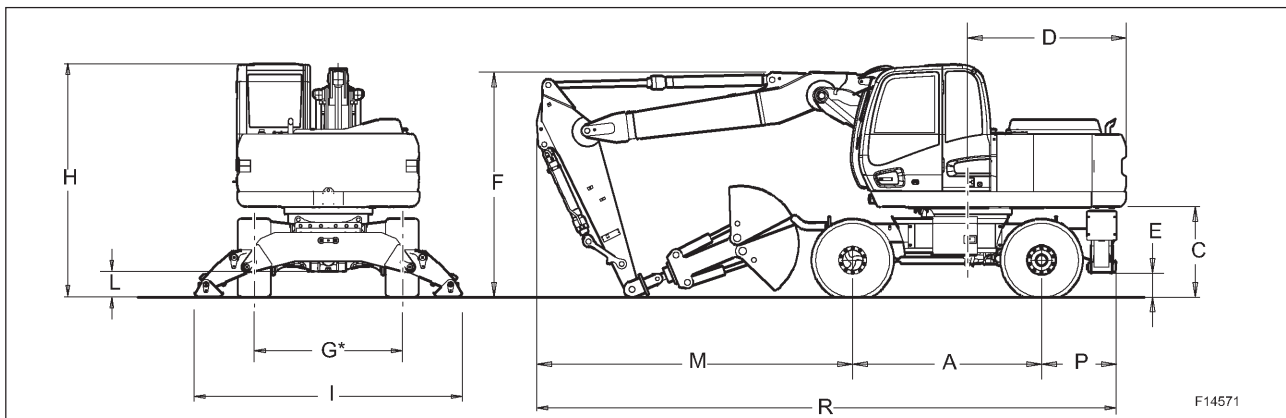
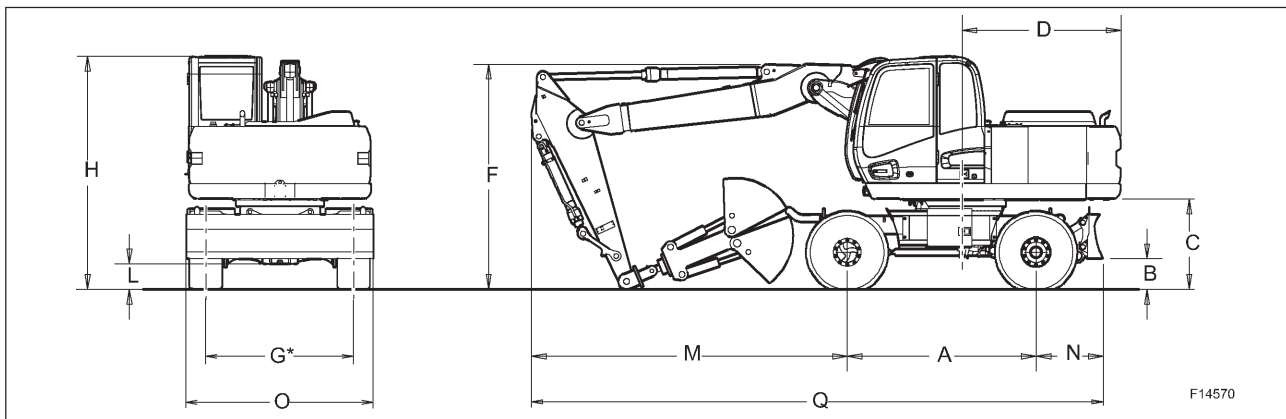
## FEATURES

### TRANSPORT DIMENSIONS - TRIPLE ARTICULATION VERSION WITH CLAMSHELL BUCKET

Version with twin tyres: 10.00 - 20 EM NB-38



(Dimensions in mm)



VERSIONS W/ ARM	A	B	C	D	E	F	*G	H	I	L	M	N	O	P	Q	R
<b>2200</b>	2550	415	1220	2145	320	3035	2000	3140	3625	340	4265	905	2530	1005	7720	7820
<b>2400</b>	2550	415	1220	2145	320	3135	2000	3140	3625	340	4285	905	2530	1005	7740	7840
<b>2700</b>	2550	415	1220	2145	320	3475	2000	3140	3625	340	4260	905	2530	1005	7715	7815
<b>3100</b>	2550	415	1220	2145	320	3885	2000	3140	3625	340	4185	905	2530	1005	7640	7740

F14580gb

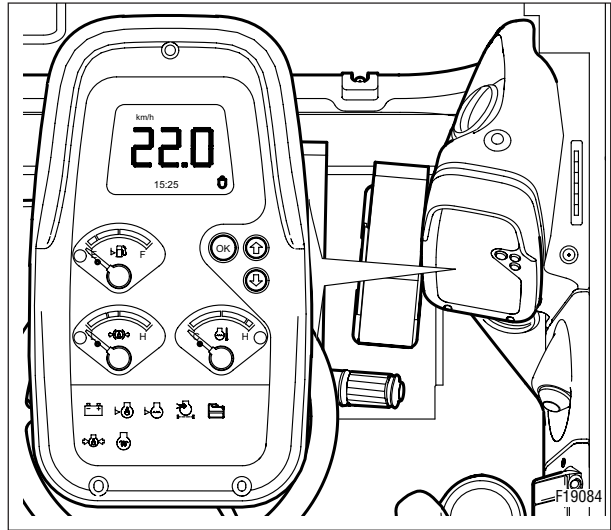
(Dimensions in mm)

\* With individual tyres 18R 19.5 XF-TL: ..... 2000  
 individual tyres 600/40-22.5: ..... 1950

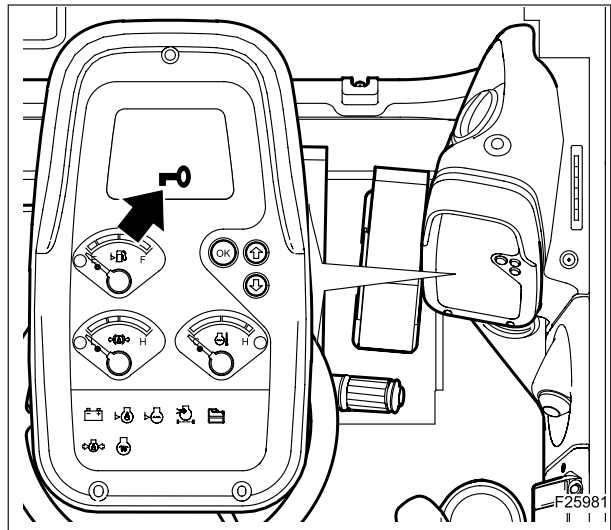
Study SAFETY RULES in the front of this manual thoroughly for the protection of machine and safety of personnel

**NOTE:** When the ignition key is moved to **ON**, all warning and indicator lights on the monitor panel illuminate (bulb test) for approximately 3 seconds, to the exception of the:

- low battery charge warning light
  - low engine oil pressure warning light which will remain on until engine start-up.
- If any light does not come on during the **CHECK**, contact the Customer Service to get the display replaced.



**NOTE:** The engine cannot be started if the **IMMOBILIZER** is connected and the monitor displays what shown in the picture on the right. Enter the "code-type" key to unlock it.



**TRAVEL CONTROL PEDAL**



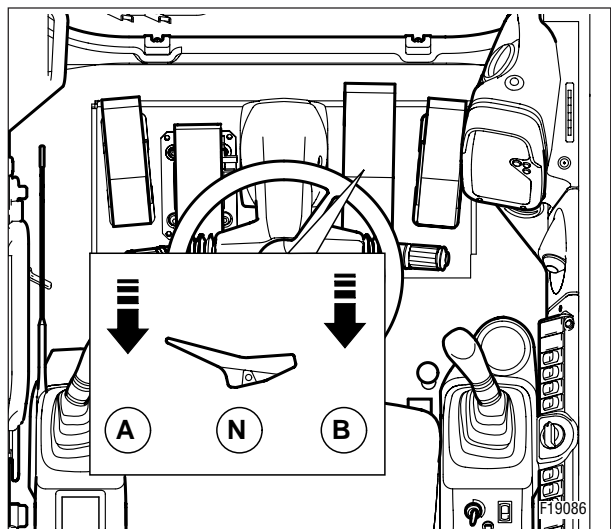
**WARNING**

When upperstructure is turned 180°, forward and reverse operations are opposite.

**NOTE:** the words right, left, front, back, clockwise, and anticlockwise are to be referred of the operator position properly sitting in the driver's seat.

**MACHINE MOVEMENTS**

- N - Neutral
- A - Tracks move forward
- B - Tracks move backward





### STEERING COLUMN ADJUSTMENT LEVER

In order to adjust the position of the steering wheel according to the operator's needs, pull down lever (1) and change the steering column inclination.



### PARKING BRAKE SWITCH, AXLE LOCK AND UNLOCK

Switch (1) has three different positions indicated by a position warning light:

- parking brake (P) (rear axle)
- axle lock 
- axle unlock 

The warning lights on the steering column panel indicated the operation of the parking brake, the axle lock and the axle unlock.

- Warning lights (2) and (3) light up when the parking brake is engaged.
- Warning light (3) lights up when the axle lock is engaged.
- Warning light (3) lights off when the axle unlock is engaged.

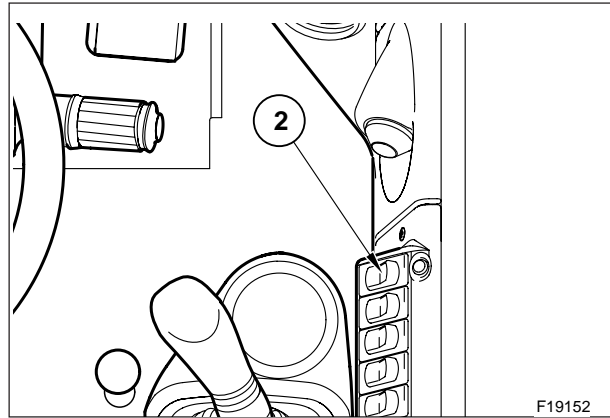


**NOTE:** Axle unlock is engaged after 4 seconds. The engagement is combined with a sound signal. In case the upperstructure is rotated with the axle unlocked, after 4 seconds an acoustic alarm signals the danger. At the same time a symbol appears on the monitor.

The chart herebelow summarizes the machine operation with the switch in different positions.

SWITCH POSITION \ MACHINE OPERATION	Parking brake	Axle lock	Equipment	Travel
	Parking	Connected	Connected	Disconnected
Work with axle locked	Disconnected	Connected	Connected	Connected
Work with axle unlocked	Disconnected	Disconnected	Connected	Connected

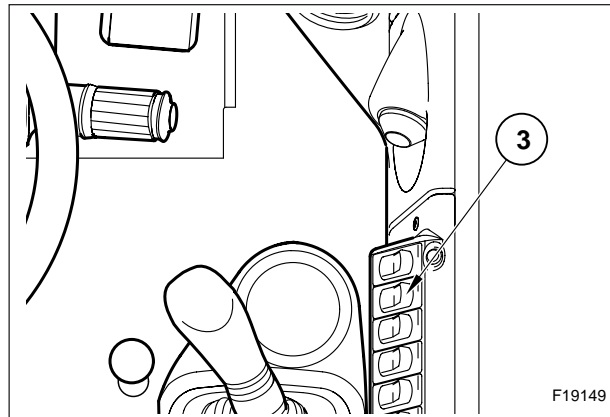
**SWITCH**  
(available)



**ROTATING BEACON SWITCH**

The rotating beacon lights on when operating switch (3). The control connection is signalled by a warning light. The activation of road light switch illuminates the symbol light on the control.

**IMPORTANT:** *Connect blinking lights devices during road transfers.*



**LOAD LIMITER ALARM SWITCH**

When operating switch (4) the alarm system of the maximum liftable load is activated/deactivated. The control connection is signalled by a warning light. The activation of road light switch illuminates the symbol light on the control.

If the maximum liftable limit of the machine is exceeded, an acoustic signal is activated.



**WORKING LIGHT SWITCH**

Switch (5) can have the following positions:

- **position OFF:** both lights switch off.
  - **position 1:** the equipment working light (A) switches on;
  - **position 2:** the lights (B) on the cab switch on.
- The control connection is signalled by a warning light. The activation of road light switch illuminates the symbol light on the control.



### Audio setting

- Press key (7) to select the desired audio mode.
- Adjust the settings with the volume up/down buttons:
  - Sound style: (BASS-TRE, FLAT, JAZZ, VOCAL, POP, CLASSIC, ROCK)
  - BASS: (Low notes)
  - TREBLE: (High notes)
  - BALANCE: (Left-right)
  - FADER: (Rear-front)
  - LOUD: (OFF, LOW, MID, HIGH)
- Press the volume key to adjust the selected audio mode. After 5 seconds the display goes back to the last operating mode. Adjustment of Bass and Treble setting is only possible when BASS-TRE is selected as the sound style.

### WAVEBAND SELECTION

Press key (12) to select the desired band:  
FMI, FM II, FM AST, LW, MWAST (AMAST), MW I

### STATIONS SEARCH AND MEMORIZATION

#### Automatic search

Use this function to automatically search for a station.

- Press key (10) ◀ to tune to a lower frequency station or ▶ to an higher frequency.
  - To search for another station, press the key again.

Manual tuning (only if you know the frequency of the requested station).

- To switch to manual tuning: Long press the search button or for more than 2 seconds will switch the tuning to manual tuning.
- Then press to tune to a station of a lower frequency or to a higher frequency.
- When keys are released, a time-out start to count. After 5 seconds, display shows **Auto** for one second and return to automatic search.

#### Preselected stations

Manually storing stations in a preset:

Five stations per band can be stored and recalled using the preset keys (from 1 to 5).

- Tune in to the desired station.
- Press the desired preset key (1-5) for more than 2 seconds to store the current tuned station.

**When storing an FM station, the current Program Station Name and the AF mode are stored on the preset (Some stations use alternating Program Service Name).**

Stored station recalled:

- Press the desired preset key (da 1 a 5) to recall the stored station

Automatically storing stations (AUTO-STORE):

You can automatically store 5 strongest FM stations on the FM AST band or 5 strongest MW (AM) stations on the MW(AM) AST band. When you use Auto Store, the new stations replace any stations previously stored in the FM AST band or the MW(AM) AST band.

- Press key (11) **AST** to activate autostore
  - The set gives a beep and then mutes
  - When it has finished, you hear a beep followed by the station stored on preset 1
  - Sometimes it may not be possible to find 5 stations

### RADIO DATA SYSTEM (RDS)

More and more stations broadcasts **RDS** informations in order to offer you many advantages including:

- Program Service Name (PS)  
Allows the radio to display the name of the station instead of its frequency.
- Automatic Retuning (AF)  
The set remains tuned to the current station by continually searching the best alternative frequency for best reception.

#### NOTE:

*You can switch **AF** off.*

Activate/Deactivate **AF**:

This set continuously search for other alternative frequencies for the tuned radio station and automatically selects the best frequency for reception. Long press for more than 2 seconds to activate/deactivate **AF**. Long press (6) for more than 2 seconds to activate/deactivate **AF**.

Alarm messages (PTY alarm):

This set automatically receives emergency messages made by the broadcaster.

- During the messages the display shows **ALARM** and the station name alternately.

Traffic announcements (**TA**):

You can activate the **TA** modes to give priority so as to hear traffic announcements (even if you play a cassette\*/CD\* or mute the set).

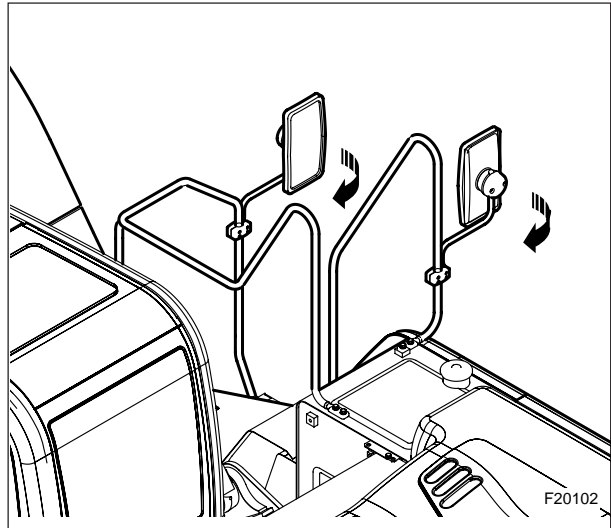
Activate/Deactivate **TA**:

- Short press key (12) to select an **FM** band.
- Press key (6) to activate/deactivate **TA**.

If you active **TA** mode:

- You will hear the Traffic Announcements when broadcast by station (even if you play a cassette\*/CD\* or mute the set).
- If the tuned station does not enable the reception of

**NOTE:** before transporting the machine, remove rearview mirrors or position them within machine max. width.



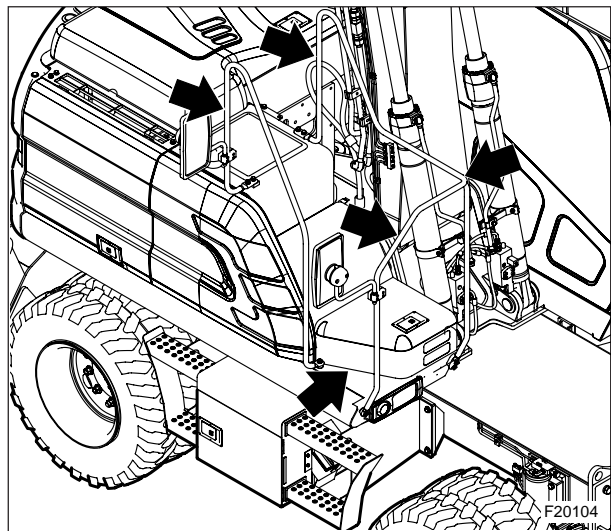
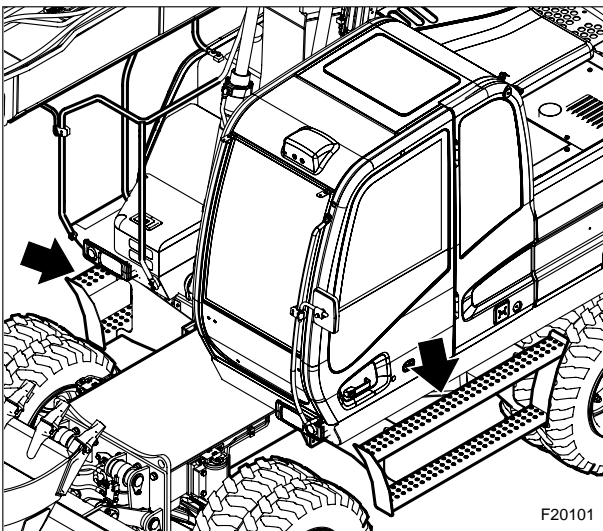
**GRAB RAILS AND STEPS**

To get in or off the cab or to move outside the machine during routine inspections and checks, always use the specially provided grab rails and steps, shown in the figure.



**WARNING**

Always use the grab rails and steps provided on the machine. Danger of accidental fall.



CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below

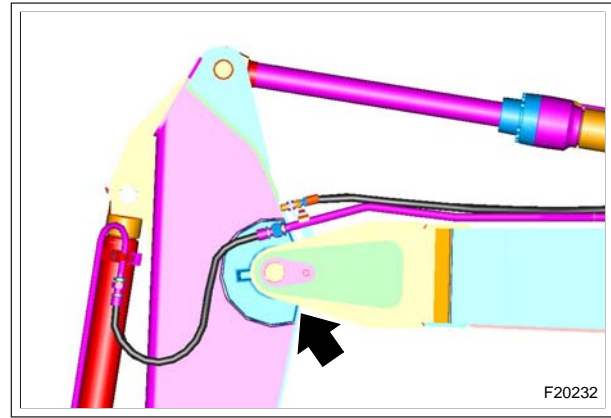


- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

<b>MH4.6</b>					
<b>MONOBLOC VERSION</b>					
<b>Arm</b>	<b>mm</b>	2100	2500	3000	
<b>A</b>	<b>Max. height</b>	<b>mm</b>	3760	3950	4000
<b>B</b>	<b>Max. front distance</b>	<b>mm</b>	3740	3620	3670
<b>TRIPLE ARTICULATION VERSION</b>					
<b>Arm</b>	<b>mm</b>	2100	2500	3000	
<b>A</b>	<b>Max. height</b>	<b>mm</b>	3960	3940	/
<b>B</b>	<b>Max. front distance</b>	<b>mm</b>	2770	2840	/

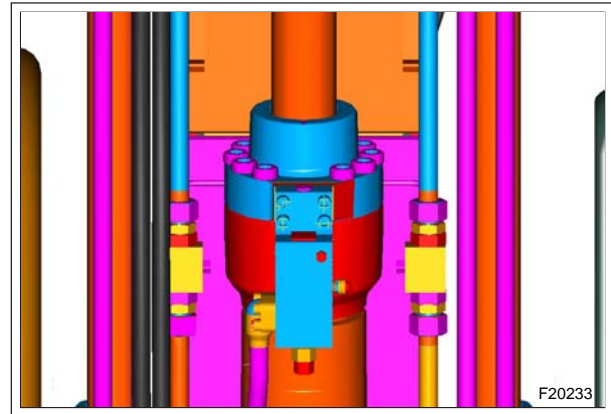
F20228gb



F20232

<b>MHPlusC</b>						
<b>MONOBLOC VERSION</b>						
<b>Arm</b>	<b>mm</b>	2200	2400	2700	3100	
<b>A</b>	<b>Max. height</b>	<b>mm</b>	3700	3570	3780	3980
<b>B</b>	<b>Max. front distance</b>	<b>mm</b>	4420	4420	4400	4320
<b>TRIPLE ARTICULATION VERSION</b>						
<b>Arm</b>	<b>mm</b>	2200	2400	2700	3100	
<b>A</b>	<b>Max. height</b>	<b>mm</b>	3960	3960	/	/
<b>B</b>	<b>Max. front distance</b>	<b>mm</b>	3080	3080	/	/

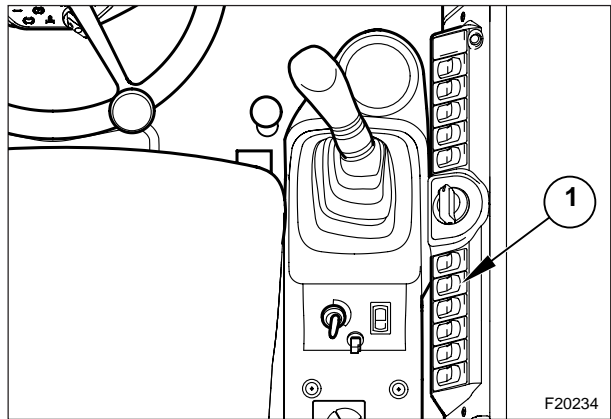
F20229gb



F20233

**! WARNING**

The machine has been homologated for ITALIAN road traffic in the following versions:  
**MONOBLOC VERSION.**  
**TRIPLE ARTICULATION VERSION.**  
 For the different versions refer to the technical enclosure of circulation paper.

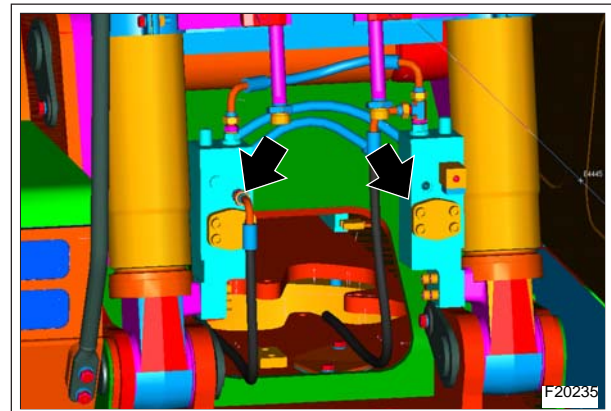


F20234

For machine configuration follow the procedure herebelow:

**MONOBLOC VERSION**

- Monobloc up to (A) as shown by the reference mark located between lifting cylinders and upper frame.
- Arm as shown by the reference mark located between arm and monobloc. Check dimension (B).
- Bucket retracted with bucket cylinder fully extended.
- Lock by means of switch (1) for servocontrol lock/unlock, to avoid unintentional movements.



F20235

## MACHINE WARM-UP

Perform **correct engine warm-up** as follows:

- Start the engine by turning the speed hand control (1) fully anti-clockwise to slow idle, as shown.
- Let the engine run at low speed for at least 5 minutes and wait until coolant temperature indicator (2) reaches the green range.

Perform **correct warm-up of the hydraulic system components** as follows:

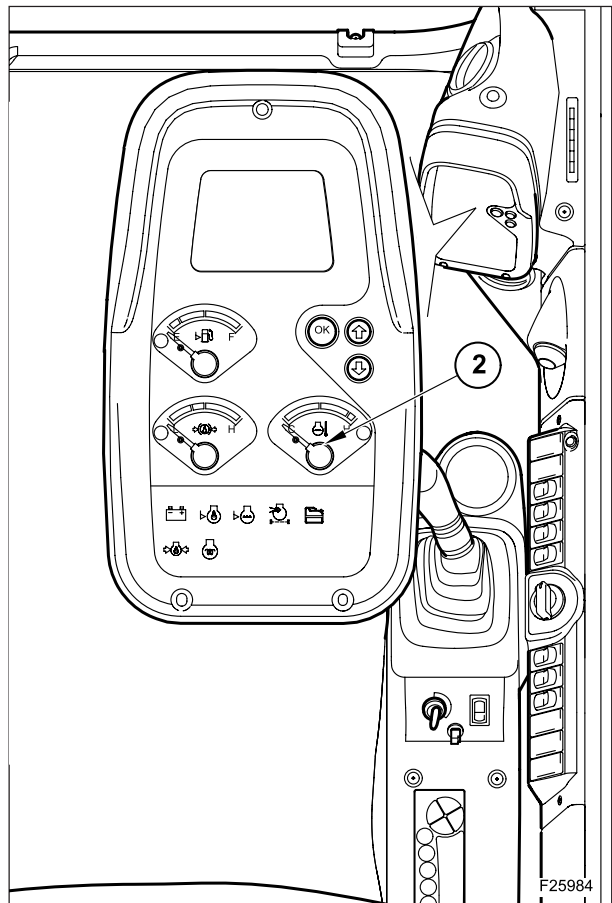
- After correct engine preheating as detailed below, move the engine speed hand control (1) to the intermediate position.

**IMPORTANT:** Hydraulic system components can be seriously damaged if the machine is operated with hydraulic oil temperature below 30°C.

Do not keep drive cylinders fully extended longer than 15 seconds (by holding the control lever). This is to avoid excess heating of hydraulic oil in the operating section only. After each operating cycle, wait 5 to 10 seconds at least.

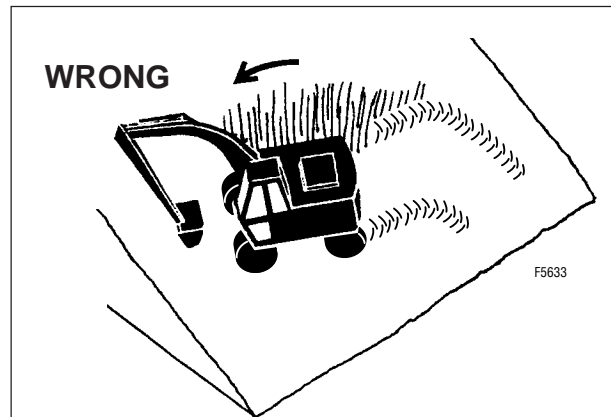
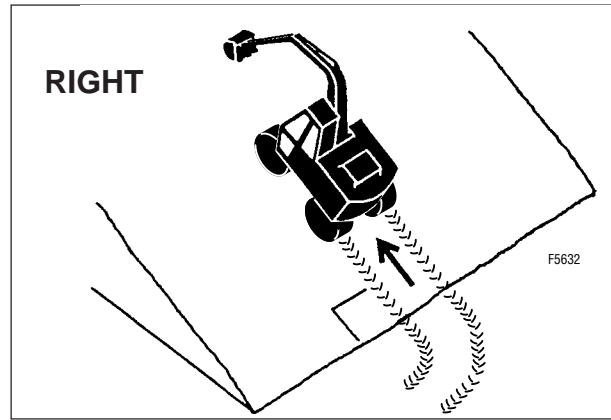


- Move control levers slowly to operate the boom, arm, and bucket cylinders to stroke end. Repeat this operation several times.
- Slowly move the upperstructure swing control in both directions, one after the other. Repeat this operation several times.
- Operate travel controls and travel short distances only at first.



## OPERATING INSTRUCTIONS

- Do not swing the upperstructure on slopes.
- Never attempt to swing the upperstructure downhill as the machine may overturn. If swinging uphill is unavoidable, operate very carefully by moving very slowly the upperstructure swing and lift control.
- Never turn loads downhill. Keep the bucket to the uphill side and reduce rotation speed at minimum.
- If the engine stalls on a slope, immediately lower the bucket to the ground and move control levers back to the neutral position. Then restart the engine.
- Be sure the machine has completely warmed up before ascending a steep slope. If hydraulic oil has not warmed up correctly, sufficient performance may not be obtained.



## PRECAUTIONS IN COLD WEATHER

The antifreeze fluid is recommended for all climates: it widens the operating temperature range, lowers the freezing point and raises the boiling point.

When temperature is next to 0° C, to avoid freezing hazard, it is necessary to check that the cooling system is filled with an antifreeze mixture. If not, replace the radiator coolant with this mixture.

Flush the cooling system prior to filling with the antifreeze mixture (refer to the chapter “**MAINTENANCE**”).



### CAUTION

*Fluid under pressure.  
Turn cap or cover slowly before removing to relieve pressure.*

We recommend to use **AGRIFLU** antifreeze fluid. Refer to the below for mixing percentage according to outer temperature.

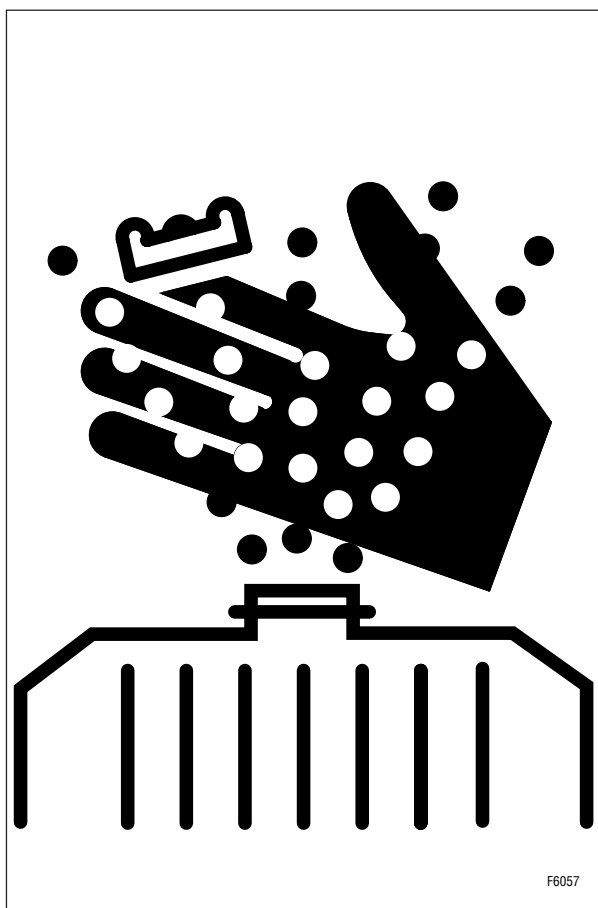
Outer temperature (up to ...)	AGRIFLU	Water
- 8°C	20%	80%
-15°C	30%	70%
- 25°C	40%	60%
- 35°C	50%	50%

F5667gb

We recommend to use lubricants of adequate viscosity, as detailed in the “**FILLING CHART**” in the **MAINTENANCE** chapter.

**NOTE:** *Do not use the machine immediately after first start-up of the day or after prolonged inoperative time.*

*Always warm up hydraulic, engine and cylinder oil as detailed in the previous paragraphs.*



## CRUSHER

### CRUSHER SELECTION AND INSTALLATION

Considering that the crusher is heavier than the bucket, select a crusher model whose characteristics meet the excavator requirements to prevent problems, namely as regards stability.

Contact your authorised Dealer to select a type of crusher suitable for this machine.

**NOTE:** for operations with crusher, refer to the relevant Instruction Manual provided by the Manufacturer.



#### WARNING

Ask your Dealer for the choice of the crusher most suitable for your machine and also for the possible regulations of the feed capacity and of the working pressures needed by the chosen tool.



#### WARNING

Works for the demolition of buildings and general structures present a high level of intrinsic risks. In the event a building must be demolished, using an excavator simply equipped with arms and bucket, the maximum working height must not exceed those allowed by local and national regulations.

### PRECAUTIONS TO BE OBSERVED WHEN USING THE CRUSHER



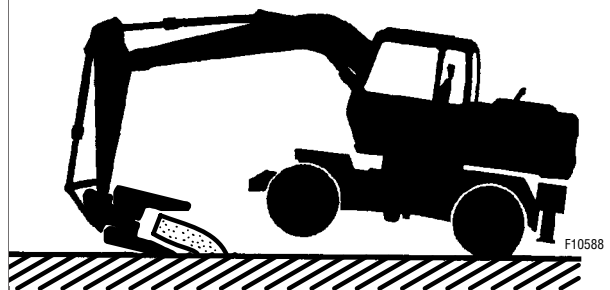
#### WARNING

The crusher is much heavier than the bucket, therefore it reduces excavator stability and increases overturn hazard. During operation, splinters or flying debris may hit the cab or other parts of the excavator.

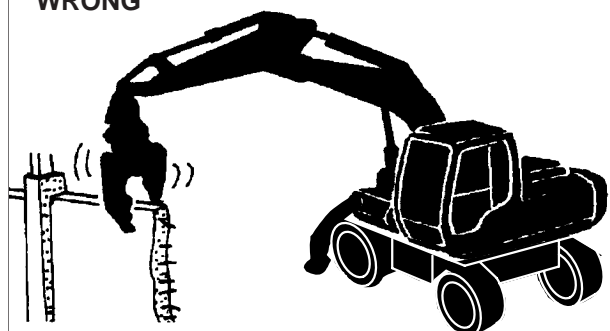
Observe all following precautions and take all necessary measures to prevent accidents that may damage the excavator and cause personal injuries to the Operator.

1. Do not allow the machine weight to be supported by prying with the crusher and cylinders fully extended or retracted. Doing so may damage the front attachment. In particular, avoid doing so with the crusher cylinder fully extended as the front attachment will be more easily damaged.
2. Do not perform crushing on either side of the machine, always do so at front or rear, parallel with tracks. Otherwise, the machine may overturn.

#### WRONG



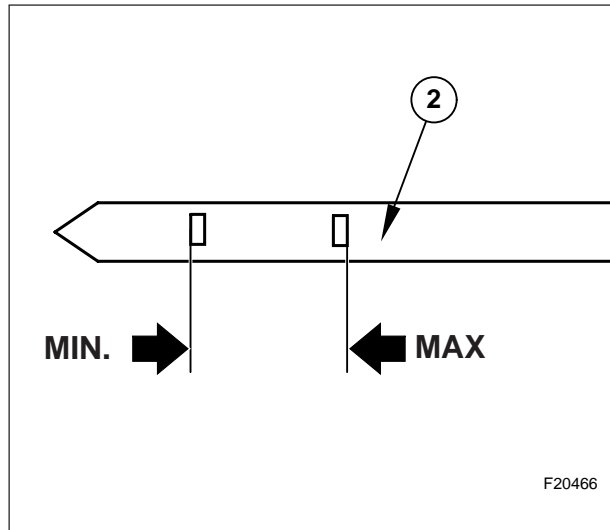
#### WRONG



**NOTES:**

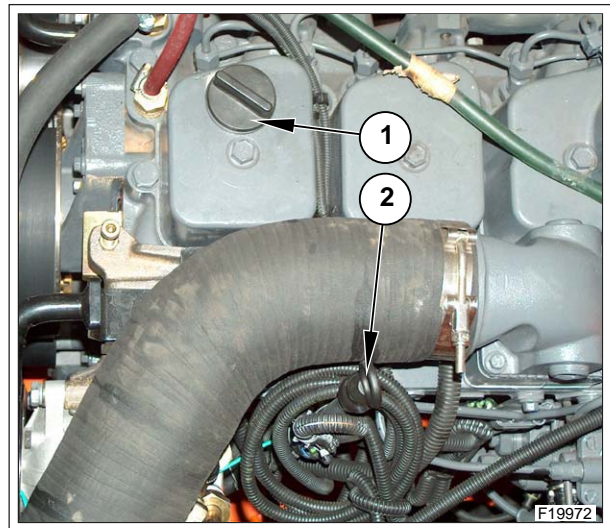
- Wait for 15-20 minutes until oil flows inside the sump.
- Open the engine hood as described in the paragraph “**HOOD AND ACCESS COVERS**”.
- Pull out the dipstick (2), wipe it clean using a clean cloth and insert it again into its seat. Pull it out again and check the level. The level should be between the **MIN** and **MAX** marks indicated on the dipstick.

**NOTE:** Insert the dipstick into its seat slowly to prevent that pressure may alter the level check.



- If a low engine oil level is indicated, remove the plug (1) and restore correct level by adding oil through the filler neck.
- Close the engine hood.

**IMPORTANT:** Do not add oil with different characteristics from the oil already in the engine (see “**FILLING CHART**” in this chapter).



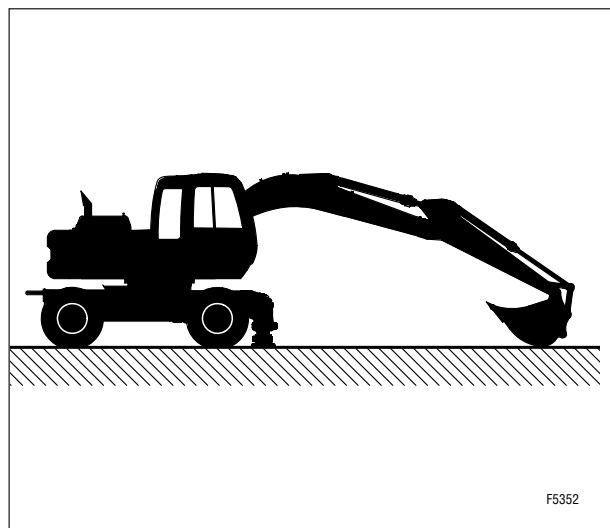
**HYDRAULIC SYSTEM OIL**  
(Visual inspection and topping up)



During work components and lines composing the hydraulic system can reach high temperatures. Shut off the machine and let it cool down before starting any inspection or maintenance: danger of burns.

If check is performed at the end of the working period, follow the indications herebelow:

- Park the machine on a level surface.



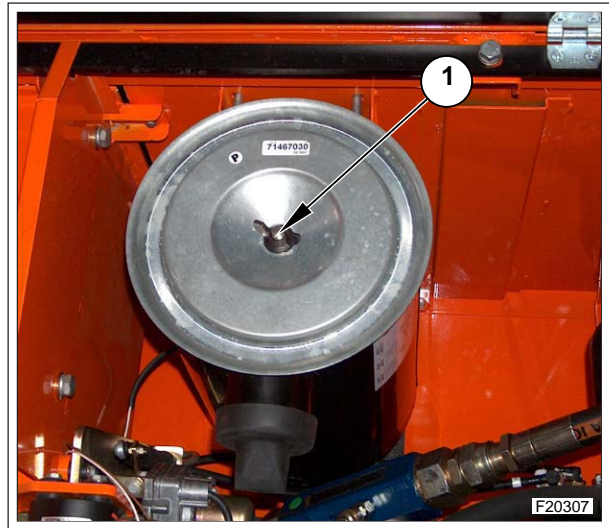
**AIR FILTER: OUTER ELEMENT  
(Cleaning)**

**IMPORTANT:** operation to be performed also in the case of activation of the relevant indicator light on the display of the monitor.



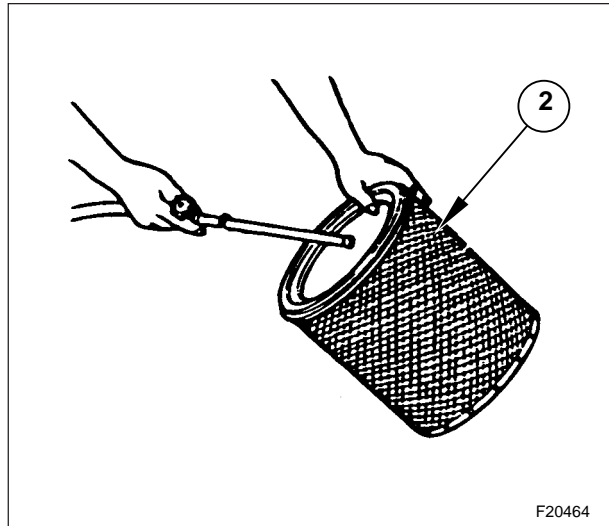
**CAUTION**

Always wear safety glasses with side shields when using compressed air to clean parts to reduce the risk of personal injuries due to projected particles. Limit pressure to 0.2 MPa (2 kg/cm<sup>2</sup>).



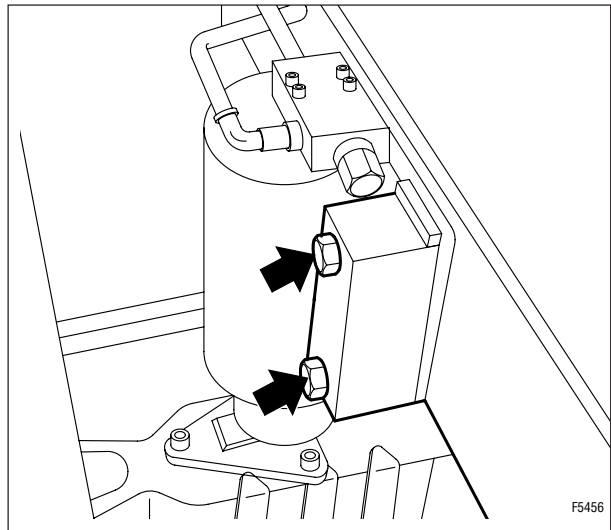
Proceed with the cleaning of the outer element of the cleaner operating as follows:

- Position the machine on a flat surface.
- Rest the bucket on the ground.
- Switch off the auto/idle, fully turn the engine speed manual control anticlockwise, stop the engine, remove the ignition key and move the l.h. console in the locked position (**LOCK**).
- Open hydraulic pump bay access panel.
- Loosen wing nut (1) and extract the cover with the outer element.
- Clean outer element (2) using compressed air. Direct the air jet from the inside to the outside of the filter.
- Check that there are no holes or cuts in the filter placing a light inside the filter. The light shows holes or cuts in the filter. In this case replace it.
- Insert outer element (2), making sure that it is well fitted and secure it with wing nut (1).



**BOLTS FIXING FRONT AXLE LOCKING CYLINDER**

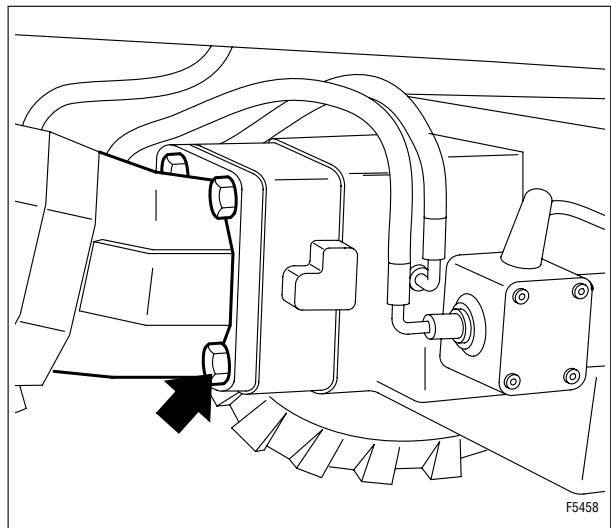
- Bolt: M18 x 2.5
- Torque: 29.4 ± 3 da Nm
- Bush: 27 mm



F5456

**BOLTS FIXING HYDRAULIC MOTOR**

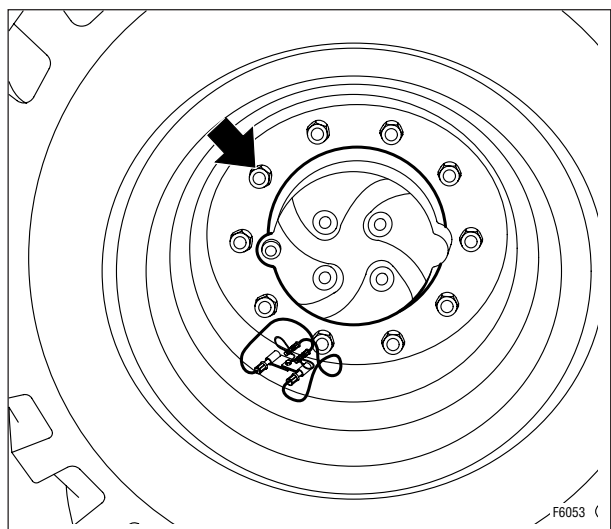
- Bolt: M 16 x 2
- Torque: 20.6 ± 2 da Nm
- Bush: 24 mm



F5458

**WHEELS FIXING BOLTS**

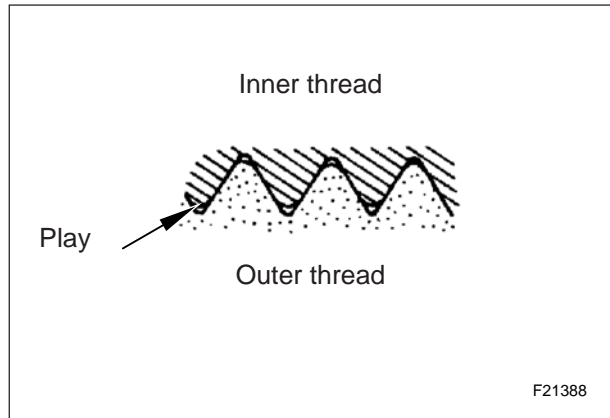
- Bolt: M22 x 1.5
- Torque: 49 ± 5 daNm
- Bush: 32 mm



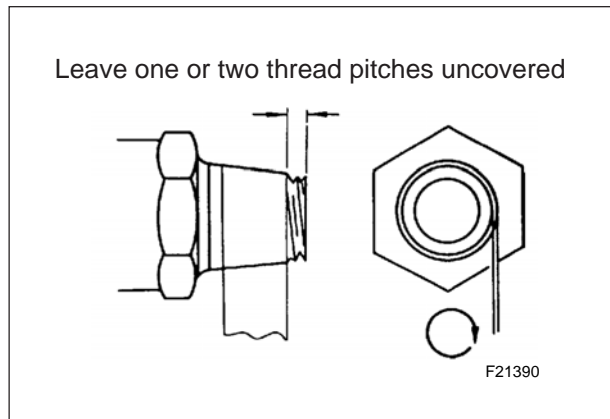
F6053 (

**PRECAUTIONS WHEN USING THE SEALING TAPE**

- The sealing tape is used to seal the clearance between male and female thread, in order to avoid leakings. Make sure that only the strictly necessary quantity of tape is used. Do not exceed with tape appliance.



- Verify that the thread surface is clean, without dust or damages. Apply the tape around the threads, as showed. Wind the sealing tape in the same direction of the threads.

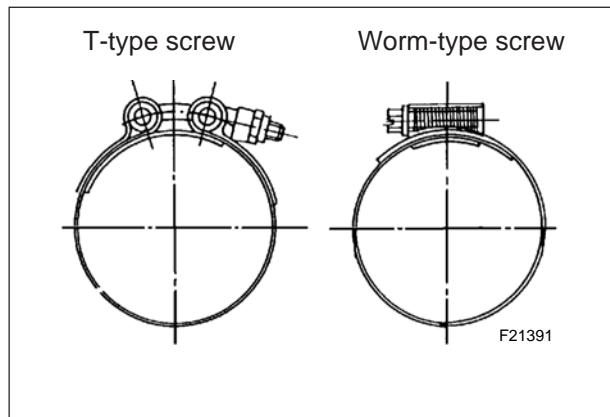


**CLIPS ASSEMBLY PRECAUTIONS**

- The tightening torque of the clips for hoses under low pressure differs according to the type of clip. See, herewith, the correct tightening torque of each clip type for hose under low pressure.

Clamp with T-screw to tighten clips:  
4.4 Nm

Clamp with worm screw to tighten clips:  
5.9 a 6.9 Nm



## SLEWING RING BEARING

(Lubrication)

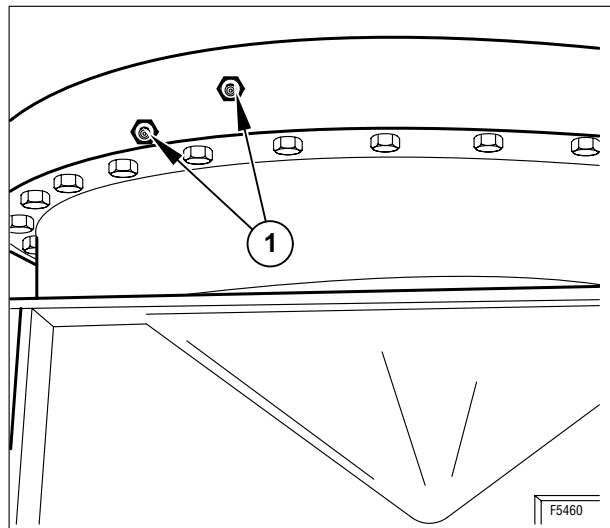
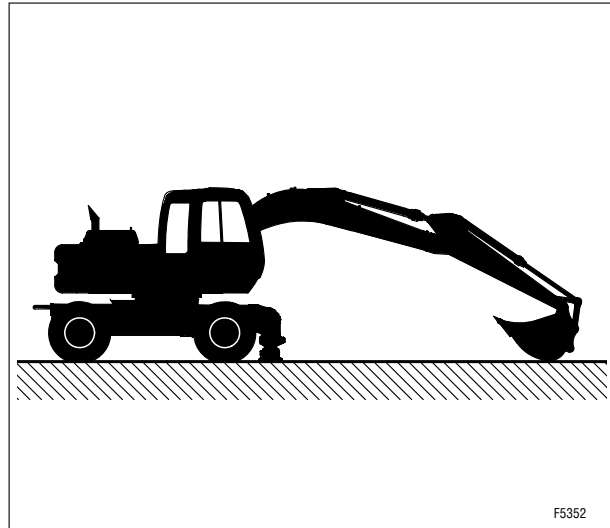


### WARNING

The lubrication of the slewing ring, of the gear and the upperstructure swing should be carried out by only one person. Before lubricating the slewing ring, move people away from the operation area of the machine.

Before leaving the cab, arrange machine and controls as follows:

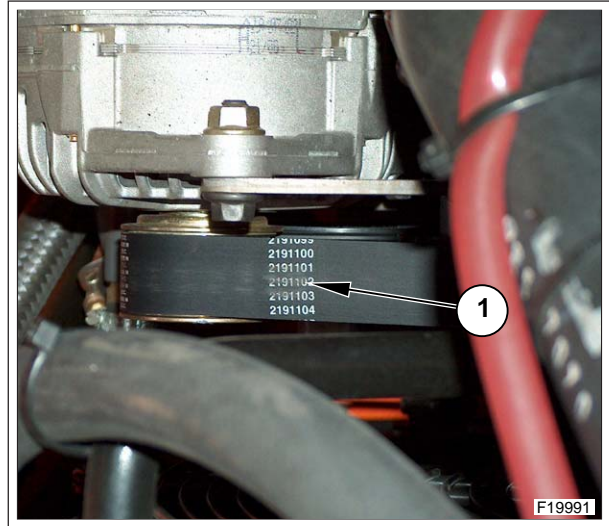
- Park the machine on a level surface.
- Rest the bucket to the ground.
- Switch off the auto-idle, fully turn the engine speed manual control anti-clockwise, stop the engine, remove the ignition key and move the l.h. console in the locked position (**LOCK**).
- With the upperstructure stationary, inject grease of the specified type (see the **FILLING CHART** in this chapter) through the two grease fittings (1).
- Start the engine, raise the bucket approximately 20 cm from the ground and swing the upperstructure by 45° (1/8 of a turn).
- Lower the bucket to the ground.
- Repeat the procedure above three times. Always observe safety precautions supplied at the beginning of the paragraph.
- Grease should be injected until it is seen coming out of the seals. Do not inject excess grease. Quantity of grease necessary for this operation ~ 0.30 liters.



**ALTERNATOR - FAN BELT  
(Replacement)**

**! WARNING**

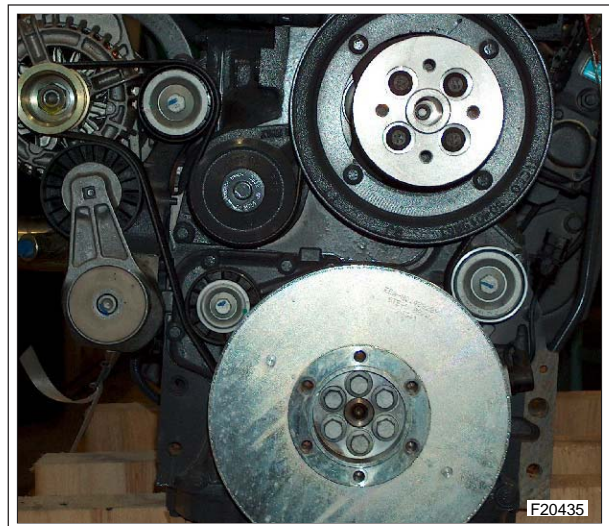
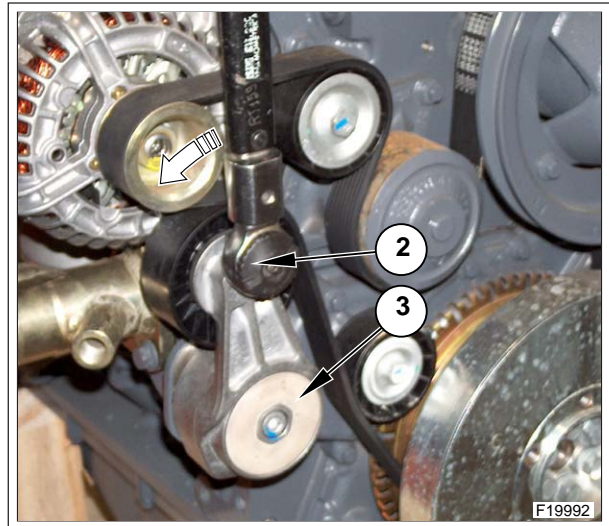
Always make sure that the engine hood, once open, has the locking device securely applied; there is a danger for personal injuries. Never place any part of the body near belts or rotating blades. Be particularly aware near fans (alternator and radiator fan).



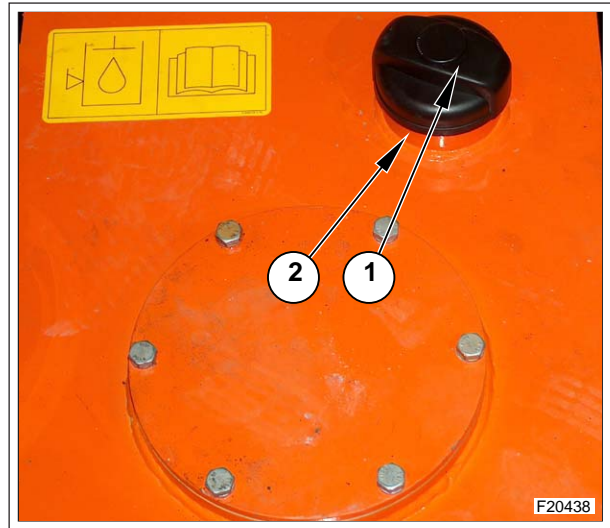
**! CAUTION**

The engine, when in operation, can reach high temperatures. Thus, prior to performing these operations, cut-off the machine and let it cool-off. In the event it is imperative to operate just the same on a hot engine, protect body and limbs with appropriate clothing and protections, since there is a danger of burns and personal injuries.

- Proceed with the replacement of the fan-alternator (1) belt operating as follows:
- Position the machine on a flat surface.
- Rest the bucket on the ground.
- Cut-off the auto-idle, turn the manual throttle knob anticlockwise, cut-off the engine, extract the starter key and move the l.h. console into (LOCK) position.
- Wait for the machine to cool-off.
- Move to the upperstructure and open the engine hood compartment.
- Install the 3/8" wrench with square connection into seat (2) and act in the direction of the arrow to move tensioner (3) and free the belt.
- Proceed with the installation of the new belt, making sure that it is arranged as indicated in the figure.



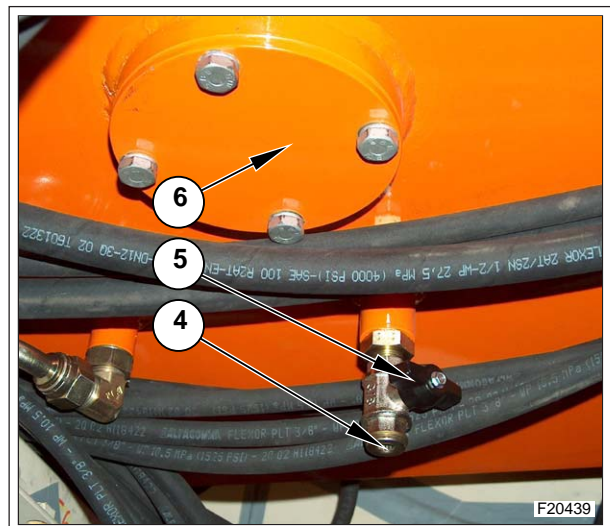
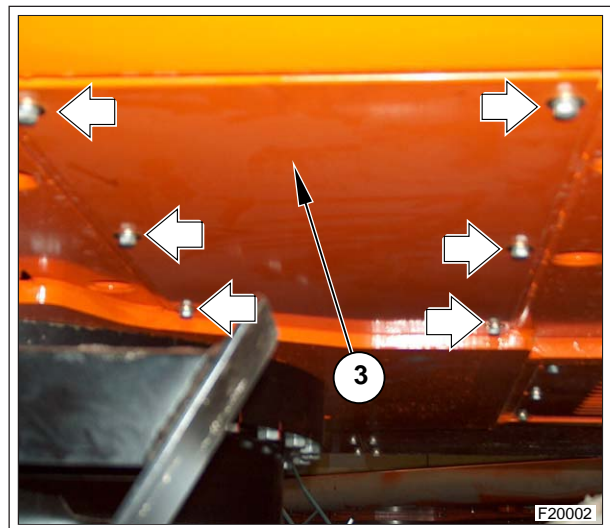
- Park the machine on a level surface and turn the upperstructure by 90° to obtain easy access.
- Fully retract the arm cylinder and fully extend bucket cylinder.
- Rest the bucket to the ground.
- Switch off the auto-idle, fully turn the engine speed manual control anti-clockwise, stop the engine, remove the ignition key and move the l.h. console in the locked position (**LOCK**). Wait until the machine is cold.
- Apply the maintenance in progress card as shown on chapter "**SAFETY SIGNS**" to the safety lever.



Proceed as follows:

**OIL DISCHARGE**

- Clean the hydraulic oil reservoir upper side to prevent dirt contamination in the hydraulic system.
- Remove tank drain plug (1).
- Remove lower panel (3) under oil tank.
- Untighten plug (4) on cock (5).
- Remove oil from filling plug (2) with a suction pump.
- Remove drain plug (6) and open cock (5). Collect residual oil into a container.





CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL