OPERATION & MAINTENANCE

Paver Finisher
F1000W T4i

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EN Keep for later use in document compartment

Valid for:

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Sustainable Productivity

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1 General safety instructions

1.1 Acts, directives, accident prevention regulations

NOTICE

The locally applicable acts, directives and accident prevention regulations shall be observed, even if the attention is not specifically directed to these.
The operator himself shall be responsible for the observation and performance of the related regulations and actions!

NOTICE

The following alerts, prohibitions and instructions refer to the risks to which people, machinery and environment are exposed.

NOTICE

Ignoring these instructions, bans and commands may lead to fatal injuries!

NOTICE

Furthermore, the Dynapac publication "Directives for the correct and specified application of pavers" shall also be observed.

1.2 Warning instructions

A paving machine has many components and implements that are controlled by a hydraulic system, either directly or indirectly. Before working on or inspecting any part of a paving machine, it is important that the individual knows how the components move and are controlled by the hydraulic system components including the respective control circuits.

Before working on or inspecting any component, it must be physically constrained from any movement that chould cause injury to the worker. The worker must be alert to not placing any part of his/her body where movement of a component could cause injury, unless that component is physically constrained from movement, if the hydraulic system fails, is disconnected, or is asignaled to cause movement.

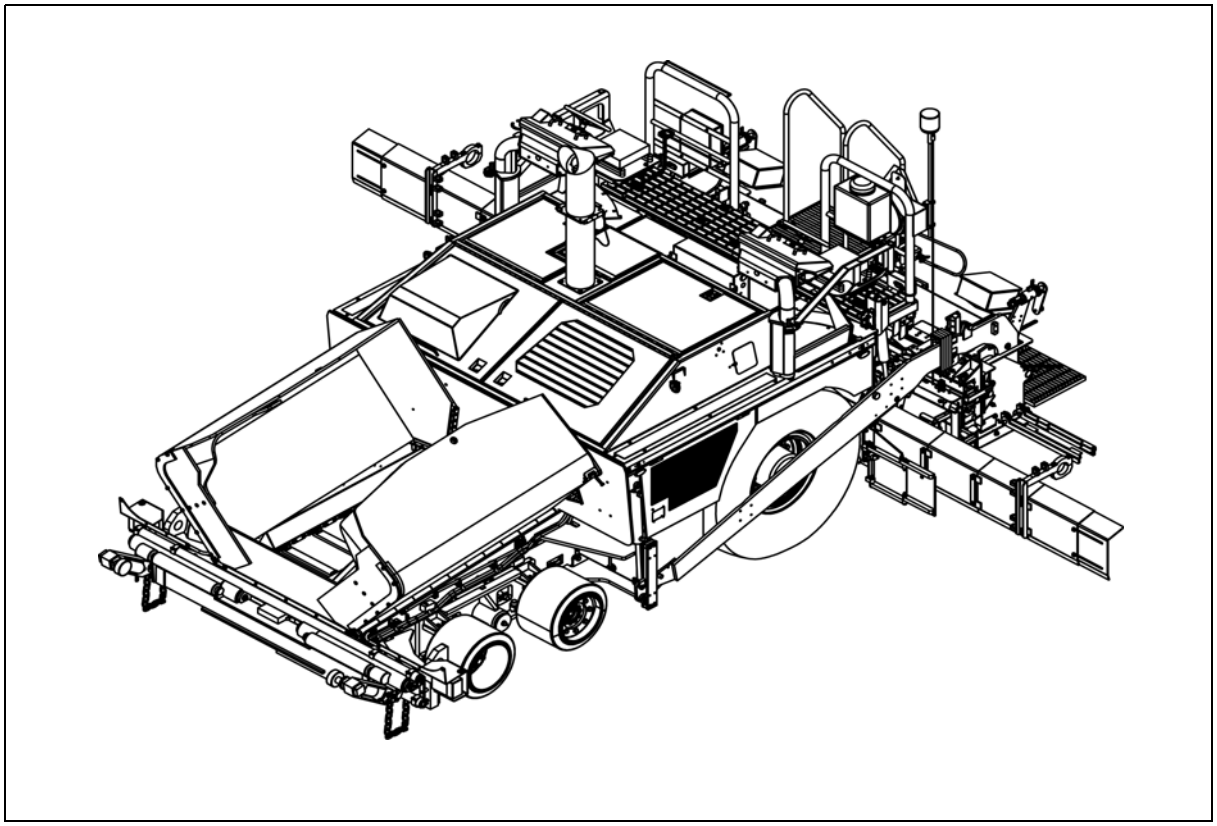
It must also be recognized that there are occasions where component and or vehicle movement may react to the release of potential energy. Where applicable it must be confirmed that all measures are employed to ensure that any and all sources of potential energy are released and/ or physically restrained.

It is also the responsibility of those involved to insure that all local, state and federal safety regulations are followed, prior to, and during any work or inspection.

B Vehicle description

1 Application

The Dynapac F1000W is a rubber tire fitted paver finisher that is used for laying bituminous mixed material, roll-down or lean-mixed concrete, track-laying ballast and unbound mineral aggregates for paving foundations.



4.11 Operator stations

Control consoles	Dual swing out operation stations

4.12 Material compartment (hopper)

Volume	approx. 207ft^3 (5.86m^3)
Minimum inlet height, center	38.5 in (978mm)

4.13 Conveyor

Conveyor type	Dual independent slat conveyor
Conveyor control	Proportional speed control, both side driven independently

4.14 Augerr

Auger control	Dual independent proportional augers

4.15 Permissible temperature ranges

Maximum Ambient Operating Temperature	+120°F (+48.9°C)

NOTICE

For the filling volumes of the various lubricants and operating substances, see chapter F.

2 Transportation on low-bed trailers

⚠ WARNING

Reduce the paver and the screed to their basic widths; also remove any attached side plates.
The maximum approach angle is indicated in the section entitled “Technical Data“!

⚠ WARNING

Check the fill level of the operating fluids so that these do not escape when driving on an incline.

⚠ WARNING

Attachment and loading equipment must meet the federal, state and local safety regulations!

⚠ WARNING

The weight of the paver finisher must be taken into consideration when selecting the attachment and loading equipment!

2.1 Preparations

- Prepare the paver for transportation (see chapter D).
- Remove all overlaying or loose parts from paver finisher and screed (see also Operating instructions for the screed). Store these parts in a safe place.
- Move the paver to the uppermost position if necessary.

4 Loading by crane

⚠ WARNING

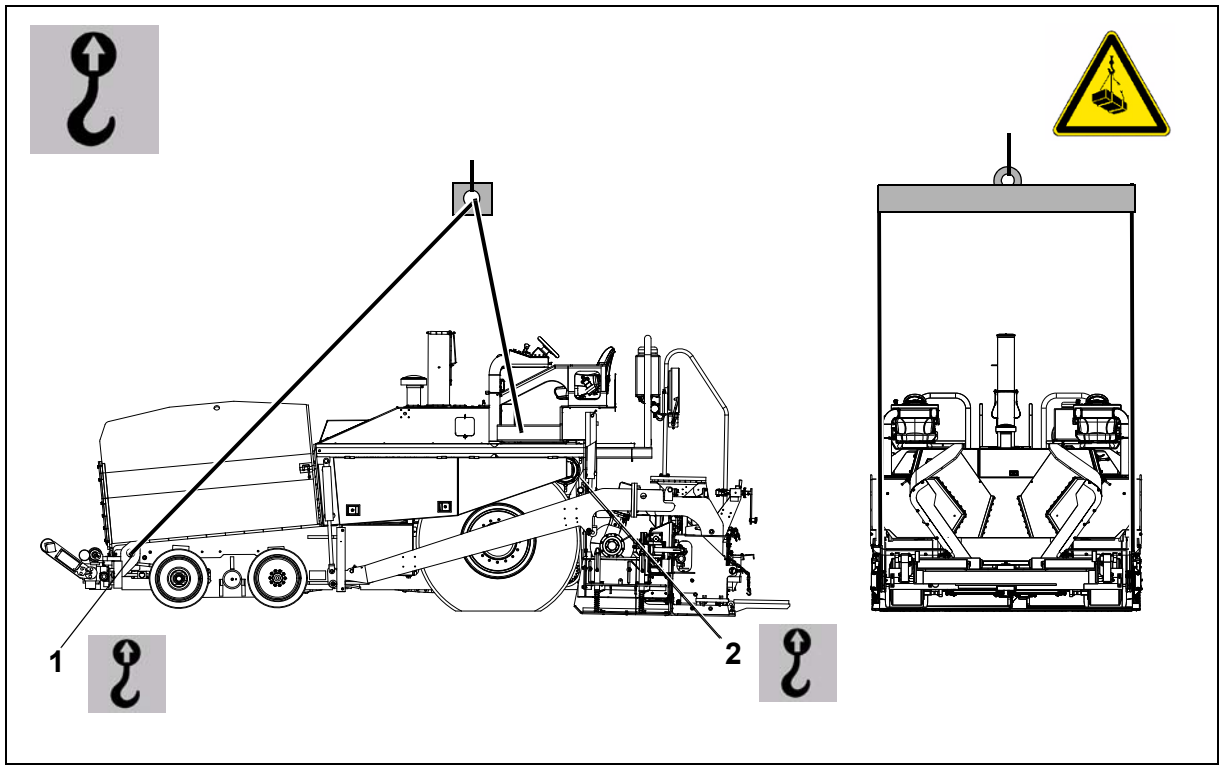
Use only lifting gear that can bear the load.
(See chapter B for weights and dimensions).

⚠ WARNING

Attachment and loading equipment must meet the conditions of the applicable accident prevention regulations!

⚠ WARNING

The vehicle's center of gravity is dependent on the mounted screed.



NOTICE

Four lifting eyes (1, 2) are provided for loading the vehicle with a crane.

NOTICE

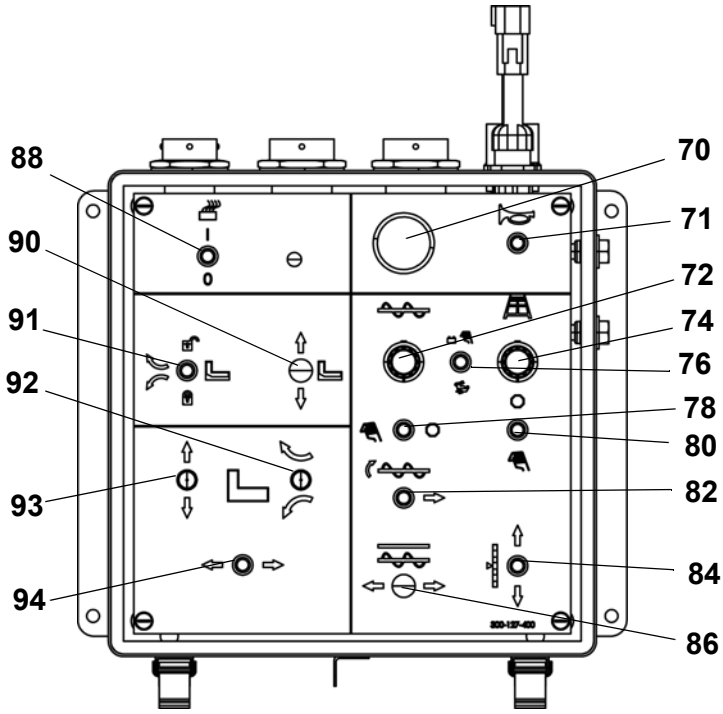
Depending on the type of screed used, the paver's center of gravity, with the screed mounted, is located in the area of the drive unit's rear reversing roller.

- Secure vehicle wherever it is parked.
- Engage the transport safeguards.

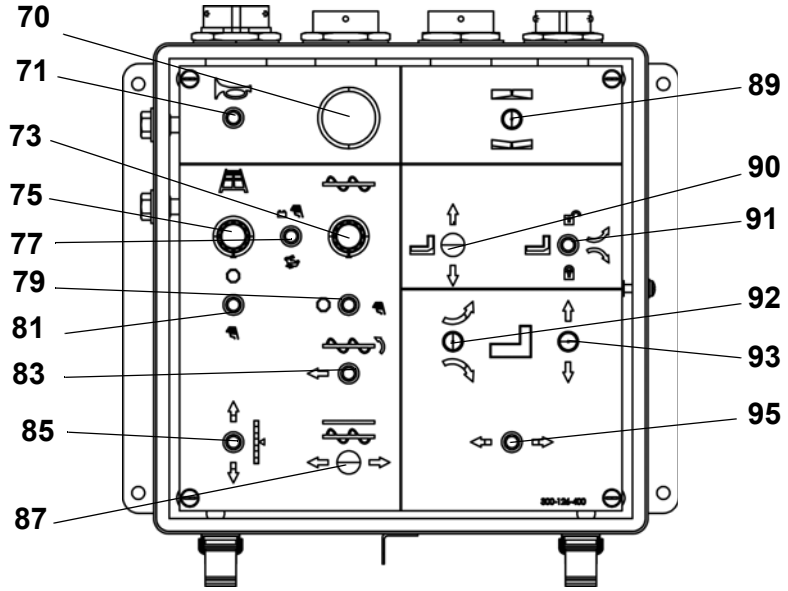
Item	Designation	Brief description
20	Drive lever (traction)	For switching on the paver finisher functions and for continuously regulating the road speed – forward or reverse. Zero position: starting is possible; engine at idling speed; no traction; protection against inadvertent start. To move the lever, lift the ring (20a). Depending on the position of the drive lever, the following functions can be activated: - 1st position: Engine runs at preselected speed (see "Travel drive/engine preselector switch"). - 2nd position: Conveyor and auger on. - 3rd position: Travel drive (propel) is on; increase speed by turning the speed control until it stops (maximum speed). **NOTICE** The maximum speed is set with the travel drive/engine preselector switch and with the travel drive preselector. **NOTICE** The auger conveyor clean mode only operates when the drive lever is in the neutral position. The auger conveyor automatic function only operates when the drive lever is out of neutral and in the forward position.
21	Preselector switch travel drive/engine fast/slow	To preselect the desired speed level. - Switch setting 0: Preselected vehicle speed "0" - Switch setting 1: Vehicle speed – for paving with low operating speed. - Switch setting 2: Vehicle speed – for paving with higher operating speed. - Switch setting 3: Transport speed – for transportation.
22	Pushbutton parking brake	Use the pushbutton to activate the parking brake. The parking brake must be activated anytime the vehicle is stationary. - Parking brake activated – push button illuminated - Parking brake de-actived – push button not illuminated
23	Front wheel drive On/Off	In the upper position the supplementary front-wheel drive is engaged when the paver is moving forward. - Switch On: Paver gear selection in idle position, drive assist is on. - Switch On: Paver gear selection in 1st position, drive assist is on. - Switch On: Paver gear selection in 2nd position, drive assist is on. - Switch On: Paver gear selection in 3rd position, drive assist is off. - Switch Off: Paver gear selection in any position, drive assist is off.

Item	Designation	Brief description
47	Raise / lower left auger	Hydraulically adjusts the height of the left auger. Toggle switch function: - Toggle the switch forward (away from the operator): Raise auger. - Toggle the switch back (toward the operator): Lower auger. **NOTICE** Toggle both switches (raise / lower left + right auger) at the same time to keep the auger crossbeam level! **⚠ DANGER** Do not raise or lower the auger until all equipement and persons are clear of the machine
48	Raise / lower right auger	Hydraulically adjusts the height of the right auger. Toggle switch function: - Toggle the switch forward (away from the operator): Raise auger. - Toggle the switch back (toward the operator): Lower auger. **NOTICE** Toggle both switches (raise / lower left + right auger) at the same time to keep the auger crossbeam level! **⚠ DANGER** Do not raise or lower the auger until all equipement and persons are clear of the machine
49	Auger / conveyor clean mode / one fill	Toggles between a slow cleaning mode and a fast fill speed for the auger and conveyor. Toggle switch function: - Toggle the switch forward (away from the operator): Slows the auger / conveyor speed for cleaning. - Toggle the swtich back (toward the operator): Runs the auger and conveyor at full speed for a fast fill. **NOTICE** The clean mode only works when the paver is not moving. **⚠ DANGER** Before using the clean mode, ensure all equipment and personnel are clear of the paver.

Item	Designation	Brief description
57	Regeneration system temperature	Lit LED indicates that the regeneration system temperature is elevated. During a manual regeneration, the LED turns on during automatic regeneration or when the filter temperature reaches 1247°F. The LED stays on during the regeneration and will then turn off when the temperature falls below 1157°F. **⚠ WARNING** Regeneration is an extremely hot process. Care should be taken to avoid contact with potentially hot surfaces.
58	Regeneration inhibited	Lit LED indicates that the regeneration system is inhibited by the activation of the regeneration inhibit switch. Neither automatic nor manual regeneration can occur if this LED is lit. Refer to Item 24 for more information on regeneration inhibit. **⚠ DANGER** This function should only be enabled if a combustible material is nearby. Regeneration is an extremely hot pocess and could easily ignite combustible materials. **⚠ CAUTION** The diesel particulate filter may require servicing with prolonged use of this function.



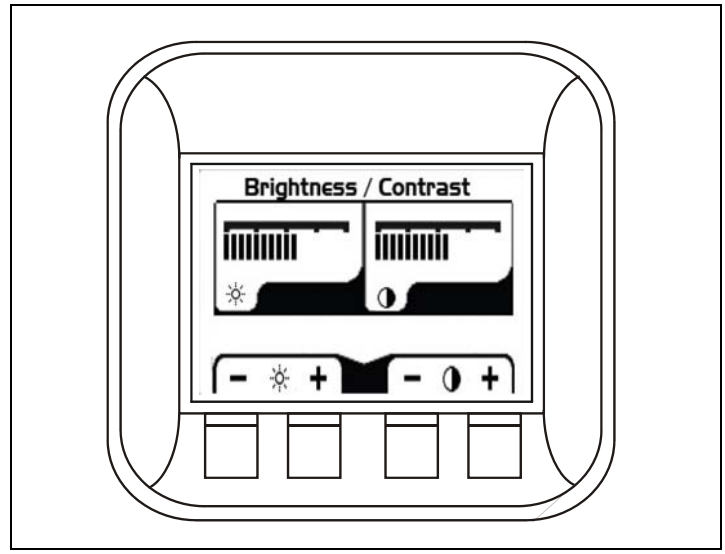
The left remote controls the left auger and conveyor



The right remote controls the right auger and conveyor

Brightness/Contrast Adjustment

- Adjust brightness and contrast levels by pressing the far left soft key. This will display the brightness and contrast soft key bar.

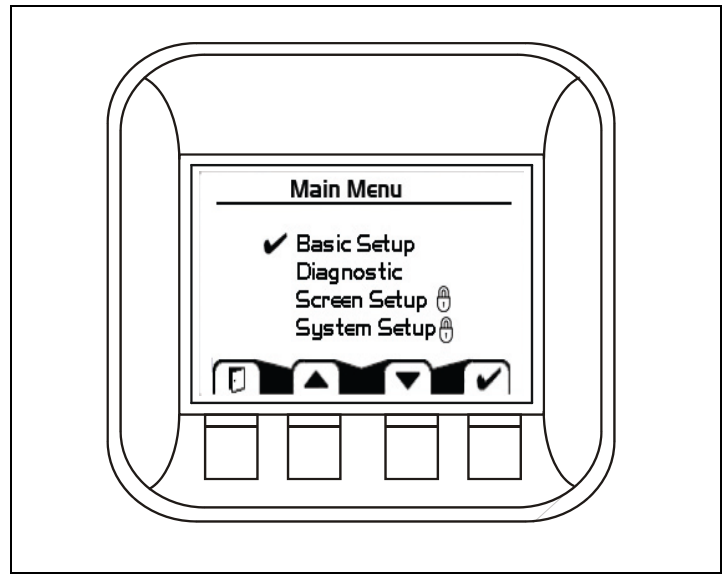


NOTICE

The bar will disappear after 3 seconds of inactivity.

Main Menu - Start Menu

The Main Menu screen is the starting point for configuring the terminal.



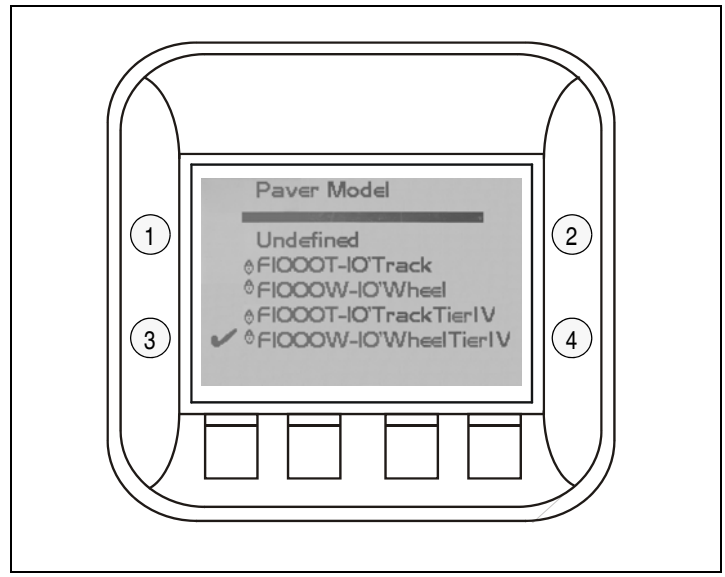
Basic Setup	-	Use to set time/date, language and units.
Diagnostics	-	Use to set system info, info fault log and J1939 lists.
Screen Setup	-	(PIN protected)
System Setup	-	(PIN protected)

Start Display

Appears at system start.

Model Select

Use the scroll buttons to select the appropriate paver movel. Once the check mark is on the correct model, press “OK”.



FMI	Description
0	Data valid but above normal operational range
1	Data valid but below normal operational range
2	Data erratic, intermittent, or incorrect
3	Voltage above normal or shorted high
4	Voltage below normal or shorted low
5	Current below normal or open circuit
6	Current above normal or grounded circuit
7	Mechanical system not responding properly

FMI	Description
8	Abnormal frequency, pulse width,or period
9	Abnormal update rated
10	Abnormal rate of change
11	Failure mode not identifiable
12	Bad intelligent device or component
13	Out of Calibration
14	Special Instructions
15	Reserved

D 4.0 Operation

1 Preparation of operation

Required equipment and tools

To avoid delays on site, check before starting work whether or not the following equipment and tools are present:

- Wheel loader for transporting heavy extendable parts
- Diesel fuel
- Engine oil and hydraulic oil, lubricants
- Separating agents (emulsion) and manual injector
- Shovel and broom
- Scraper (shovel or scoop) for cleaning the auger and the hopper intake area
- Necessary parts for extending the auger
- Necessary parts for extending the screed
- Percentage spirit level and levelling rail, 4 yards (4 m) long
- Levelling wire
- Protective clothing, signal vest, gloves, hearing protection

1.2 Transport Operation

Lifting and securing the screed

- Raise the screed using switch (52).
- Center the levelling cylinders using the switches (54)/(55).

NOTICE

The remote control must be connected and this function must be set to “Manual“.

- Raise the auger crossbeam using switches (47)/(48).

NOTICE

Engage both screed transport safeguards to secure the screed in the raised position.

Driving and stopping the paver

- Set the selector (21) for traction drive / engine to position 3.
- Set the preselector (12) for traction drive to approx. 50%.
- To start driving, carefully tilt the drive lever (20) forward or backward according to the drive direction desired.

⚠ WARNING

In case of an emergency, press the emergency stop button (40)!

- To stop the vehicle, move the drive lever (20) into its center position.

Switching off and securing the paver

- Lower the screed using switch (52).
- Turn off the engine by turning the ignition key (10) to the “0“ position. Pull the key out of the switch.

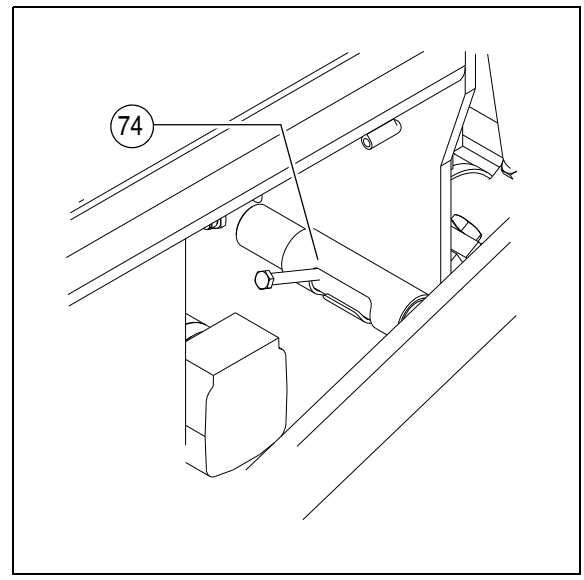
⚠ CAUTION

The battery may become drained if the paver stands still for long periods of time even though the ignition is not switched on.

When work is finished

- Run the paver empty, then bring it to a stop.
- Turn drive lever (20) to the center position. Move the preselector (12) and selector (21) to minimum position.
- Switch off conveyor+auger (45), vibration (27), tamper (if equipped)(28), lights (25) and exhaust system (24).
- Lift the screed by using switch (52).
- Retract the screed parts to the basic screed width with switches (50) and (51).
- Use switch (47) and (48) to lift the auger .
- Where applicable, completely extend the levelling cylinders by using switches (54) and (55).

- Insert the mechanical screed transport safeguard (74) on both screed lifting cylinders.
- While operating the tampers at a low speed, let any material residue drop out.

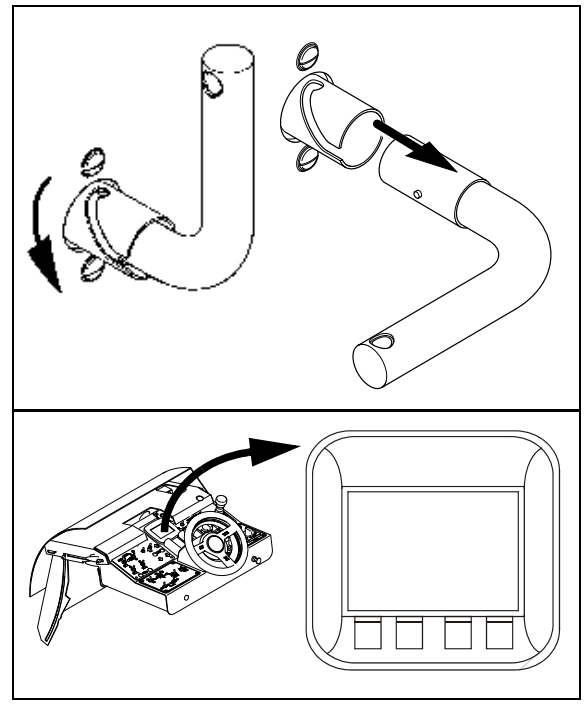


Switch the ignition (10) off.

- Switch screed heater (system) off.
- Remove the levelling units and stow them away in their boxes and close the boxes.
- Remove all parts that extend beyond the paver width. Secure them if the paver is to be transported over public roads on a low-bed trailer.

⚠ CAUTION

Do not turn the main switch off until 30 seconds after the ignition has been turned off!
The engine electronics require this length of time to back up data, and such device can prevent the engine's electronic control module (ECM) from sustaining damage and battery discharging.

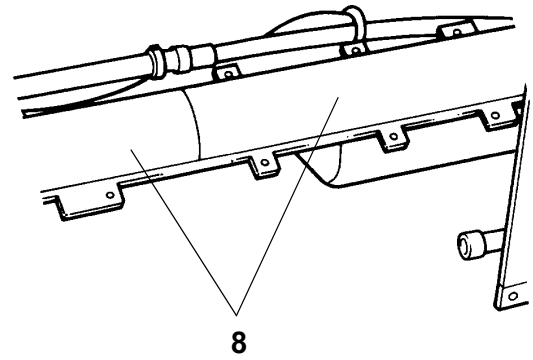


- Read and check the operating hour meter to determine whether maintenance work must be performed (see chapter F).
- Cover and lock the operating panel, so as to restrain unauthorized persons from starting and operating the machine.
- Remove material residue from the screed and the paver and spray all parts with release agent fluid.

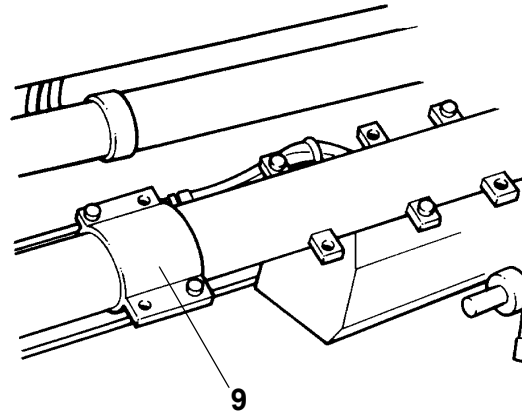
2.5 Mounting support tube extensions

If the working width exceeds 23 ft. (7.01 m.), an auger crossbeam extension must be mounted.

The support tube extension of the auger cross-beam consists of two halves (8) and is attached to the existing support tube by using a total of 5 screws. After the two halves have been screwed to the support tube, they also must be linked to each other by means of screwed connections.



Clamping of the telescopic tube occurs by tightening the screwed connections (9) linking the support tube extension.



If the working width exceeds 14 ft. (6.26 m.) the hydraulic hoses (10) for the auger motors must be replaced with longer ones.
These long hoses are included in the scope of delivery for this working width.

⚠ DANGER

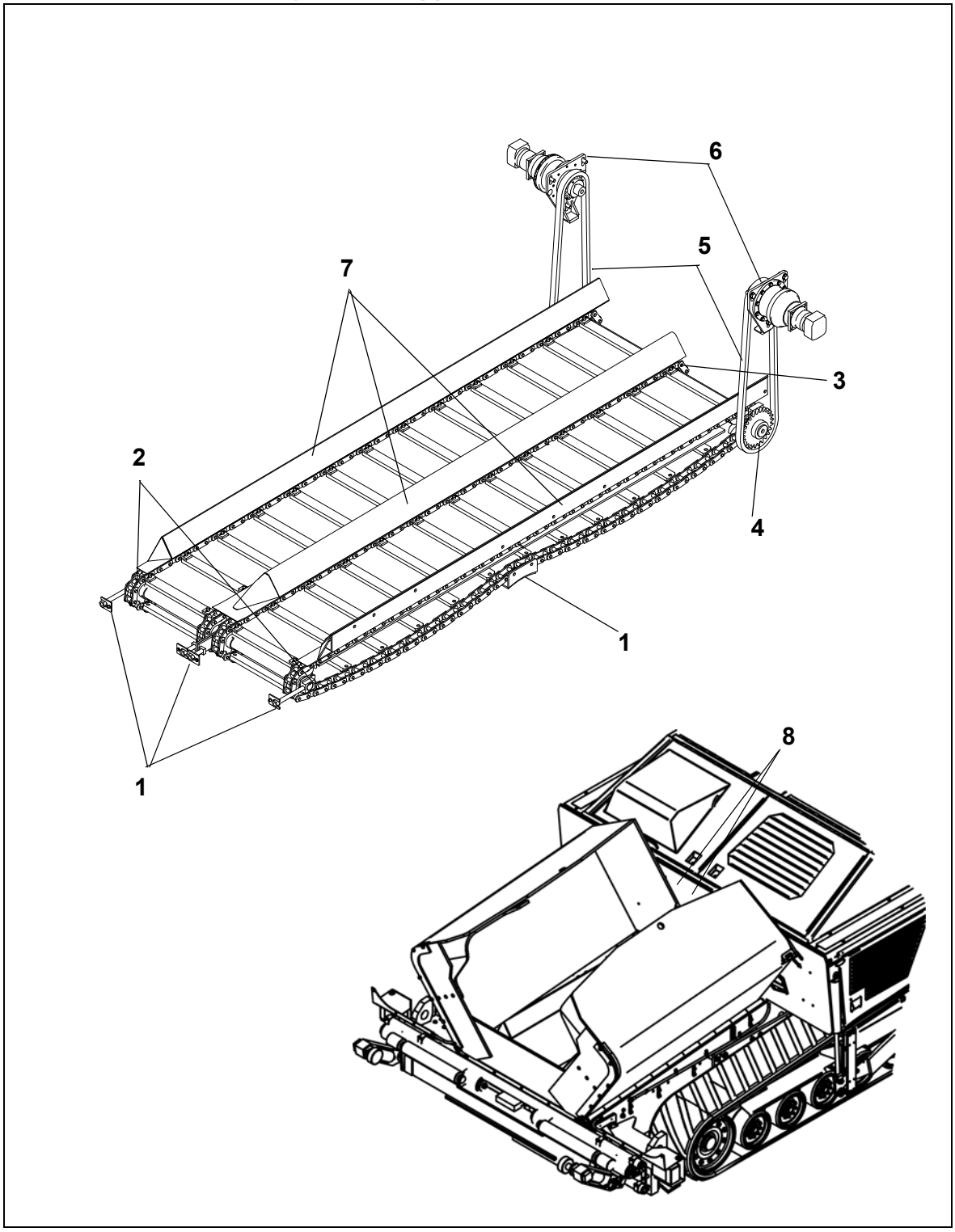
When connecting or disconnecting hydraulic hoses, hydraulic fluid can spray out at a high pressure and can cut or enter the skin.
Switch the paver off and de-pressurize the hydraulic circuit! Protect your eyes!

⚠ CAUTION

When installing the hoses, make sure that the area around the connections is clean.
Any contaminants that enter the hydraulic system can cause damage to the hydraulic system.

F 3.0 Maintenance - Conveyor and Hopper

1 Maintenance - Conveyor and Hopper



1.2 Points of maintenance

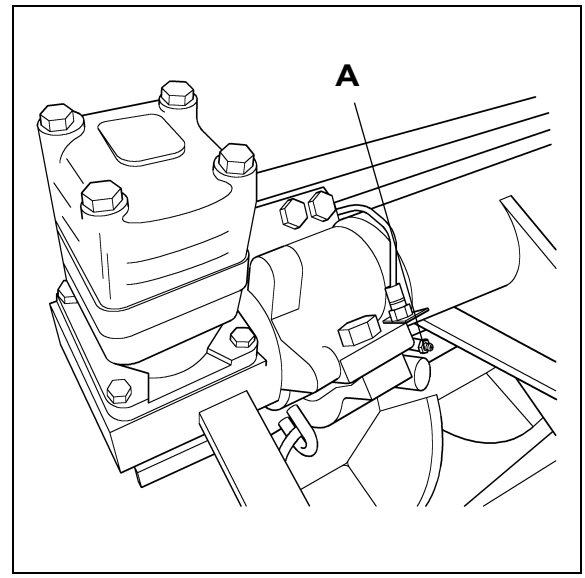
Auger - outer bearing (1)

The grease zerts (A) are located on each side on the top of outer bearing. These zerts must be lubricated each time work is finished.

NOTICE

The outer bearings of the auger must be lubricated when hot, so that the eventual bitumen residue is expelled.

Pump 5 strokes of grease with a grease gun!



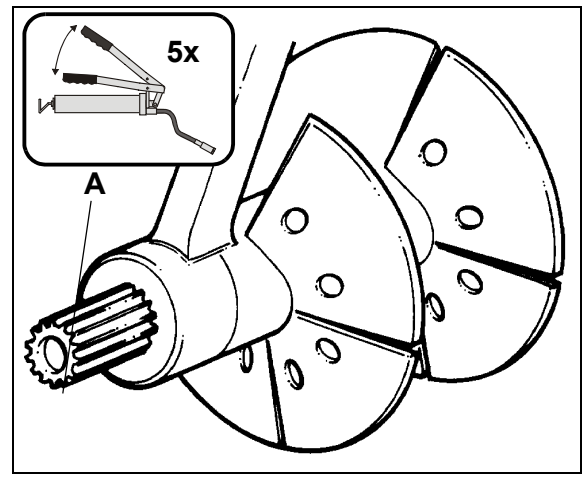
Auger middle bearing (2)

The central bearing (A) is lubricated on the LH-side of the auger.
To do so, slide the bevel gear out.

NOTICE

The central bearing must be lubricated when hot, so that the eventual bitumen residue is expelled.

Pump 5 strokes of grease with a grease gun!



Engine fuel system (3)

The fuel filter system consists of two filters:

- Pre-filter (A) with water separator (located in the engine compartment).
- Main filters (B)

Pre-filter - drain the water

Empty the condensation prior to every engine start or when the engine electronics indicate a fault.

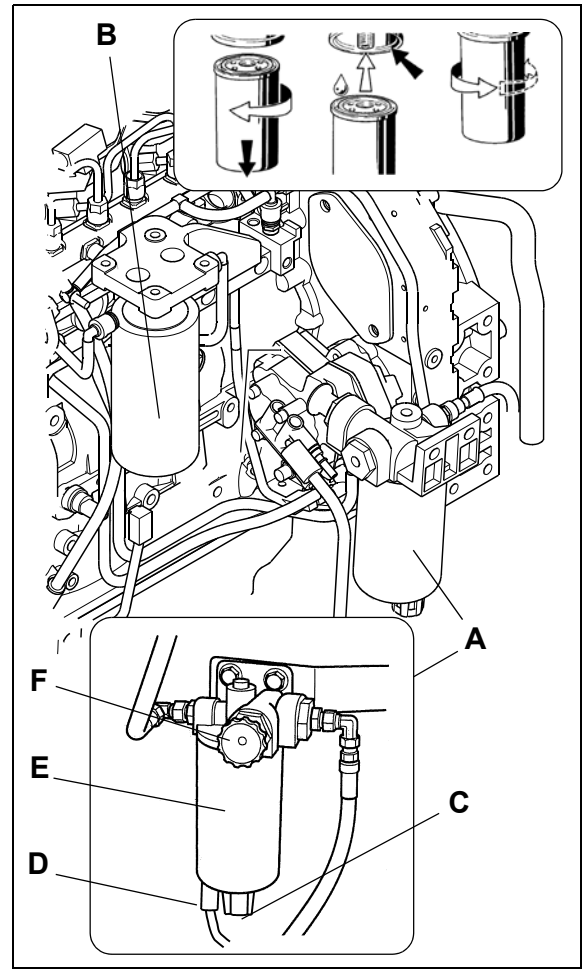
- Drain the water at the drain valve (C), collect it, then close the drain valve again.

⚠ WARNING

Fuel leaked or spilled onto hot surfaces or electrical components can cause a fire. To help prevent possible injury, turn the start switch off when chaning fuel filter or water separtor elements. Clean up any spilled fuel immediately.

Change the pre-filter:

- Drain the separated water at the tap (C), collect it, then close the tap again.
- Remove the water detection indicator connection (D).
- Loosen the filter cartridge (E) using an oil filter wrench or oil filter strap and remove it.
- Clean the sealing surface where the new filter will mount.
- Apply a thin coat of oil to the gasket of the collection sump, mount it under the filter cartridge and tighten by hand.
- Apply a thin coat of oil to the gasket of the filter cartridges, mount them under the holder and tighten by hand.
- Replace the water detector indicator connection (D).
- Unscrew hand wheel of the pump (F). Pump the hand wheel until the filter has filled with fuel.



The system is filled with fuel when resistance at the hand wheel is noticeable during pumping!

- Screw in pump's hand wheel (F).

1.2 Hydraulic System

A paving machine has many components and implements that are controlled by a hydraulic system, either directly or indirectly. Before working on or inspecting any part of a paving machine, it is important that the individual knows how the components move and are controlled by the hydraulic system components including the respective control circuits.

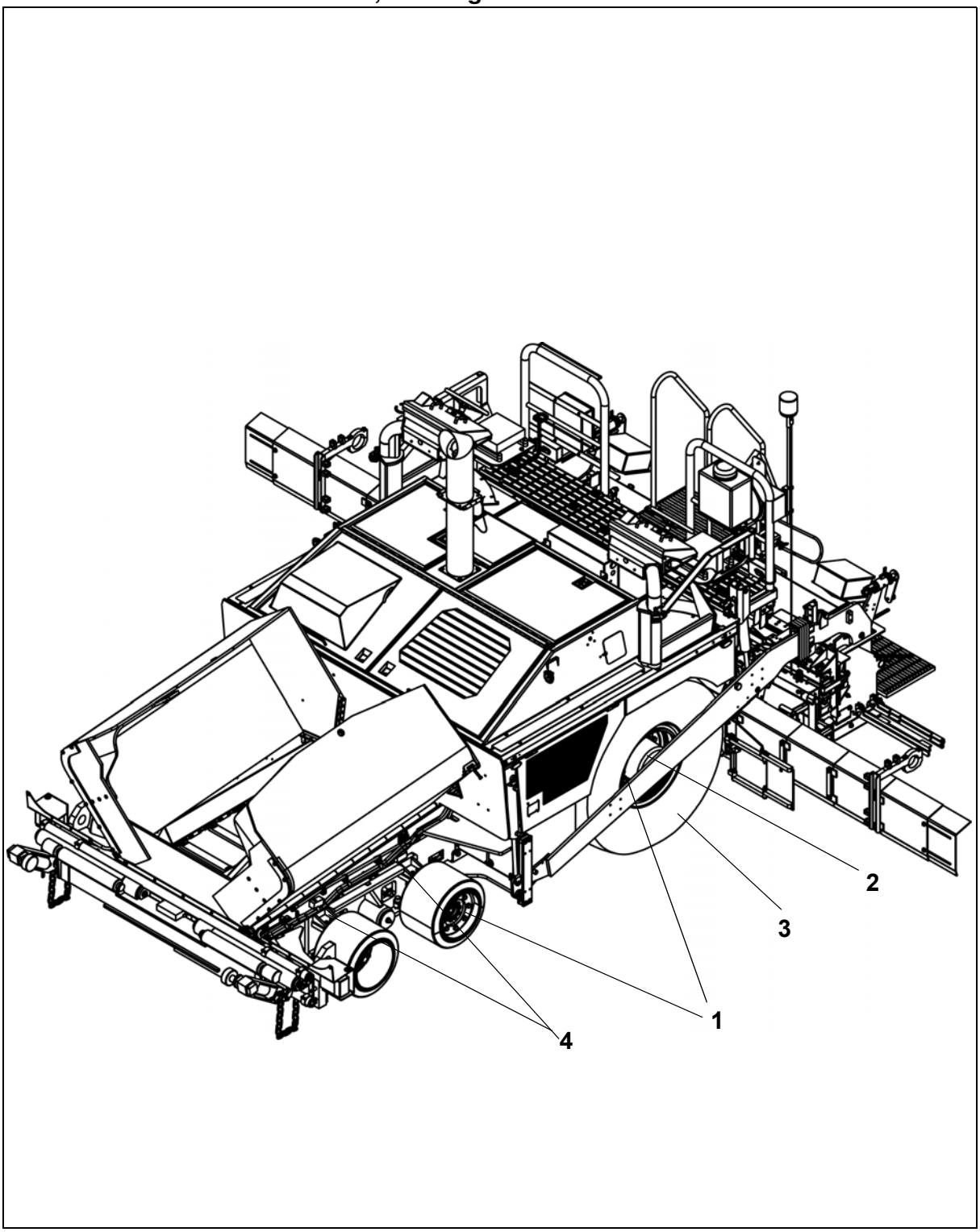
Before working on or inspecting any component, it must be physically constrained from any movement that could cause injury to the worker. The worker must be alert to not placing any part of his/her body where movement of a component could cause injury, unless that component is physically contrained from movement, if the hydraulic system fails, is disconnected, or is asignaled to cause movement.

It must also be recognized that there are occasions where component and or vehicle movement may react to the release of potential energy. Where applicable it must be confirmed that all measures are employed to ensure that any and all sources of potential energy are released and/ or physically restrained.

All tramming, hopper and conveyor functions and augers are hydraulically powered. The hydraulic system consists of a 50 gallon (189.21 liter) hydraulic reservoir with a 10 micron filtration system. The propel pumps, conveyor and auger pump, generator pump and screed functions are driven by the pump drive gear box which is mounted directly to the engine. The hydraulic system includes various motors, cylinders, valves, filters and hose piping. A hydraulic oil cooler assures optimum oil temperatures to maximize system efficiency and component life.

F 7.1 Maintenance - Travel Drive, Steering

1 Maintenance - travel drive, steering



1.2 Points of maintenance

Batteries (1)

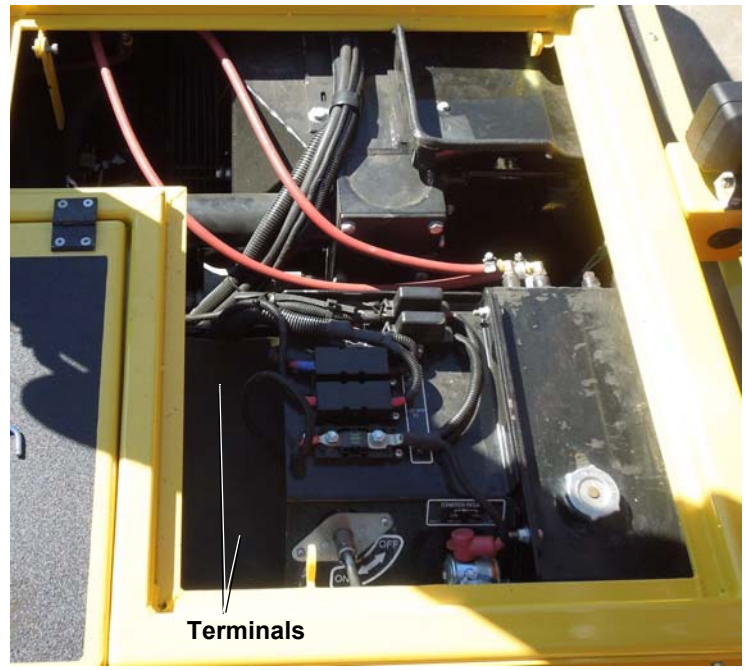
Maintenance of batteries

NOTE:

The batteries equipped with the paver are “Maintenance Free” batteries. When batteries can no longer hold a charge, they must be replaced.

NOTICE

The battery terminal clips must be free of corrosion (oxide) and protected with grease.



⚠ CAUTION

When removing the batteries, always remove the negative terminal first, ensuring that the battery terminals do not short circuit. After batteries are replaced, connect the negative terminal last

⚠ WARNING

Always where protective glasses when working with batteries.

⚠ WARNING

Never disconnect any charging unit circuit or battery circuit cable from the battery when charging unit is operating. A spark can cause explosions.

F10.0 Checks, Decommissioning

1 Tests, check-up, cleaning, stopping