

# 1410D Forwarder Serial Number WJ1410D000692-

## OPERATOR'S MANUAL 1410D Forwarder

OMF067072 Issue 15MAR2005 (ENGLISH)

### CALIFORNIA Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

### **WARNING**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

**Worldwide Construction  
And Forestry Division**  
(This manual replaces 18NOV2004)  
Published in Finland

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

# Warranty

## Standard warranty clauses

The machine is covered by Timberjack's guarantee in compliance with the standard warranty clauses accepted by the Timberjack group.

The manufacturer will not assume responsibility for the machines delivered should the following conditions be violated:

- The machine is exclusively operated and maintained by experienced personnel who have been trained by Timberjack or by a dealer authorized by Timberjack.

- The machine must be operated and maintained in accordance with the instructions provided in this manual.
- Only fuels, lubricants and washing fluids specified in this manual are used.
- Only genuine spare parts are used

EL62757,000015D -19-28SEP04-1/1

## Timberjack Standard Warranty

12 Months Warranty Full Machine Coverage to 2000 hr. on all Timberjack forestry machines.

The warranty given by Timberjack will be valid provided that the machine is handed over for following maintenances at the service shop authorized by Timberjack:

- Pre Delivery Inspection (PDI)
- 250 hours maintenance
- 1000 hours maintenance.

From here after we recommend *service every 1000 hours*, done by authorized workshop.

EL62757,000015E -19-19APR02-1/1

## Machines with Extended Coverage (For specified machines only!)

EXTENDED COVERAGE is a purchased coverage program sold by authorized dealers. It provides additional coverage beyond the Standard Warranty provided with the new machine.

The Extended Coverage will be valid provided that the machine is handed over for following maintenances at the service shop authorized by Timberjack:

- Pre Delivery Inspection (PDI)<sup>1</sup>
- 250 hours maintenance<sup>1</sup>
- 1000 hours maintenance<sup>1</sup>.

There after service every 1000 hours, done by authorized workshop, *as long as the coverage period lasts*.

<sup>1</sup>the same as in Standard Warranty

EL62757,0000001 -19-28SEP04-1/1

## Secondary exit

There is an emergency exit through the front right hand side window.

**IMPORTANT:** Remove the lock pin (1) from behind the window latch before you start to work.

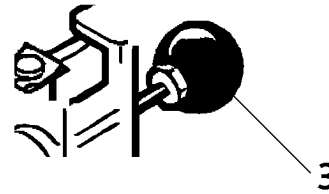
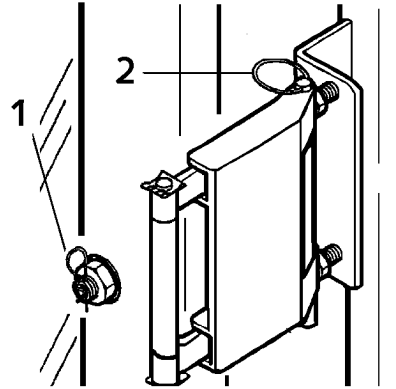
**CAUTION:** Always remember to remove the lock pin before you start the machine. If not, the window can't be opened from the outside in case of emergency.

**IMPORTANT:** In case of emergency the window can be opened from outside and inside.

**From the inside :** Pull the hinge pin (2) entirely out and push the window fully open.

**From the outside** (the lock pin has to be removed): Push in the releasing handle (3). The window can be opened so much that you are able to pull the hinge pin (2) out and open the window fully.

**IMPORTANT:** Replace the lock pin (1) again when locking the cab. That is to prevent unauthorized access to the cab through the window



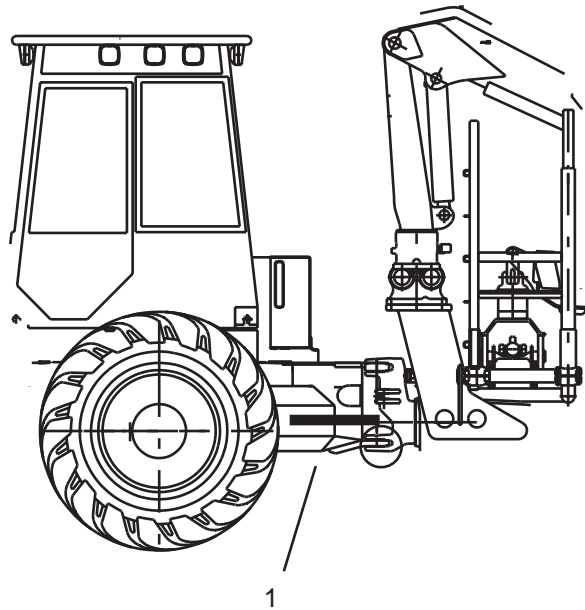
T152785 -UN-06APR03

EL62757\_0000165 -19-19APR02-1/1

## Securing the Service Position

Before servicing machine:

1. Park the machine on a level surface.
2. Lower the boom to ground.
3. Install the frame lock (1) to prevent accidental articulation of the machine.
4. Engage park brake. If repairing the brakes, make sure that the machine cannot start moving.
5. Turn key switch OFF. If maintenance procedure must be performed with engine running, do not leave machine unattended.
6. Turn main switch off.
7. Allow engine to cool.
8. Make sure that unauthorized persons are not allowed near the machine.



1—Frame lock

TT152685 -JUN-19MAR02

Prepare service properly:

- Clean work area and machine.
- Make sure you have all necessary tools and right parts on hand
- Understand service procedure before doing work. Read all instructions thoroughly; do not attempt shortcuts.

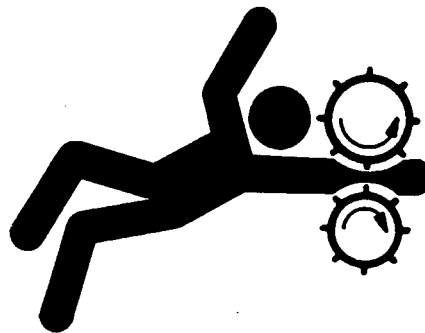
**NOTE:** *The operator and serviceman are responsible for safety on and around the machine.*

EL62757,000016A -19-19APR02-1/1

## Use Proper Clothing

Use the appropriate working clothes. Loose jackets and sleeves or long hair may get caught in the moving parts of the machine. Never service machine while it is moving.

Rings and other jewellery can get caught in the machinery or cause it to short circuit. Use protective goggles, gloves and safety shoes where required.



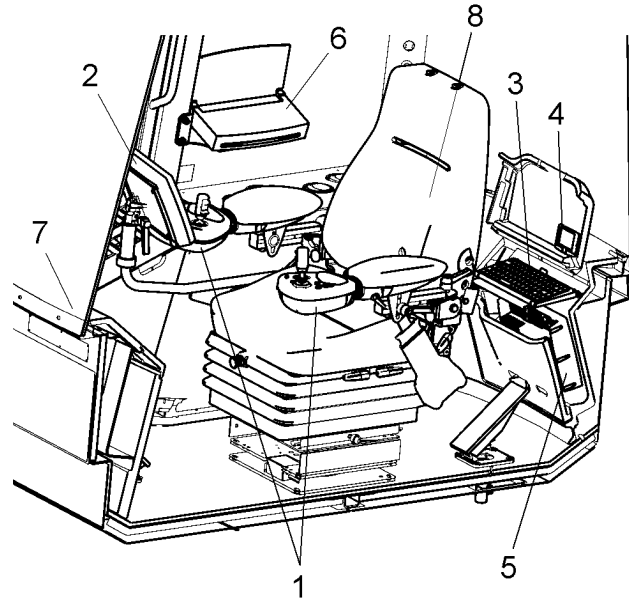
TS228 -JUN-23AUG88

EL62757,00003F9 -22-05MAY03-1/1

### Cabin with a personal computer

If the machine is equipped with Timbermatic™ 700 Control System, see: 'Operator's manual Timbermatic™ 700 / 900 Control System'.

1. Control panels
2. Display module
3. PC keyboard
4. Touchpad mouse
5. FPC-CPU
6. Color A4 printer
7. Hub module
8. Chair module (Ch)



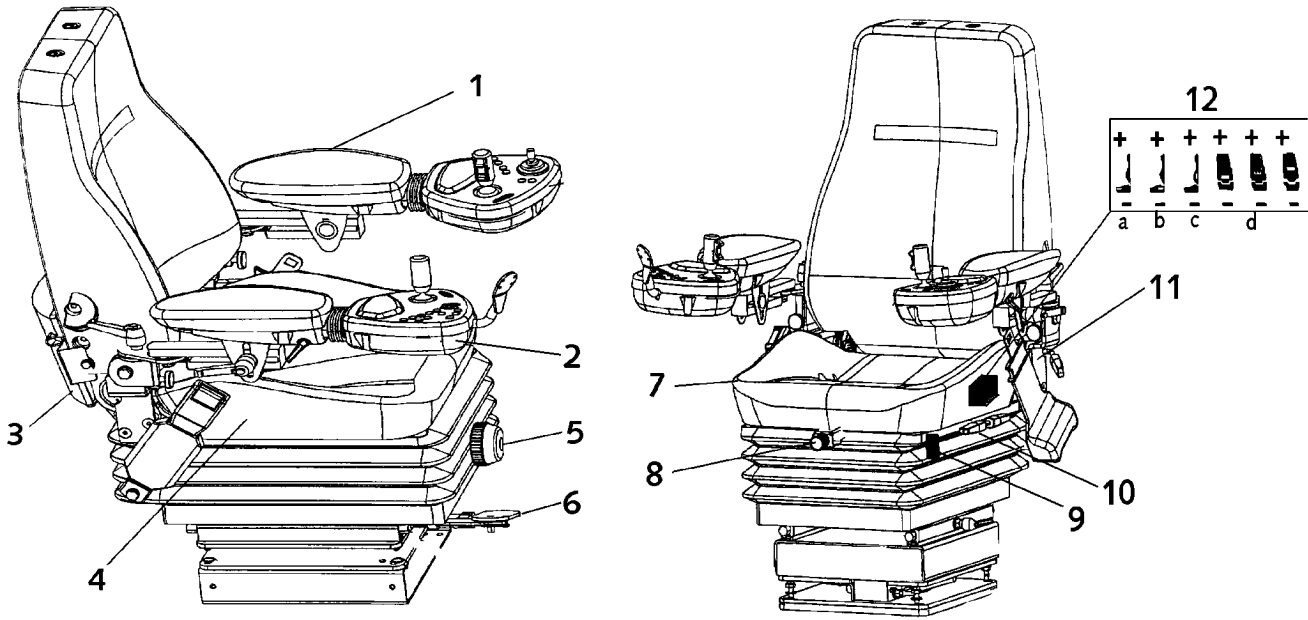
Cabin and control system equipment

T164835 -UN-30JAN03

Timbermatic is a registered trade mark of Timberjack.

EL62757,000016C -19-19APR02-2/2

## Operator's seat



Kab 544, 564, 569

1. Armrest
  - The armrest is adjustable in all directions
2. Control Panels, left and right
3. Chair module
  - Most of the controls and switches are installed to the Chair2-module.
4. Seat safety switch
  - Function of the seat safety switch is explained in group 5-2.
5. Weight setting with a mechanical knob (depending on model)
  - Turn knob for appropriate weight.
6. Mechanical swing (depending on model)
7. Ventilation
8. Weight setting (depending on model)
  - Push for harder suspension
  - Pull for softer suspension
9. Heater
  - Adjustable
  - Temperature between +27° to 42° C.
10. Height riser
  - The height could be set in 5 positions
  - Pull rear handle for adjustment of the rear part of the seat
  - Pull from handle for adjustment of the front part of the seat
11. Backrest angle
  - Could be adjusted forward or backwards
  - Pull handle for required position
12. ACS - Air Comfort System (depending on the model)
  - a. Thigh support
  - b. Side support, seat
  - c. Side support, back
  - d. Trippel lumbar support
    - More support, press "+"
    - Less support, press "-"

T188313 -JUN-06APR03

## Using the Differential Lock-Up

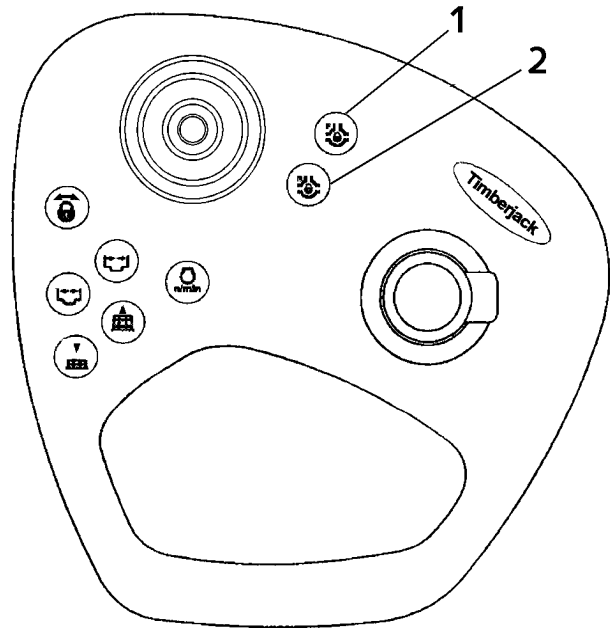
The switches (1 and 2) for the lock-up of the front axle and rear axle differential are located on the left-hand-side control panel.

If the differential lock switch is pressed during driving the machine will stop automatically and the lock will be engaged. After this, the driving speed can be regained.

**NOTE:** The locks can only be engaged when the machine stands still.

- The switch has to be held down until the machine moves. They will stay on until the machine is brought to a halt again. When the locks are engaged a lock symbol is flashing on the TMC display.
- The letter F in the upper left corner of the symbol indicates that the front differential lock is engaged.
- The letter R in the upper right corner of the symbol indicates that the rear differential lock is engaged.

**IMPORTANT:** Exercise great caution when using the locks, and keep them engaged for short periods only. When the differential is locked, avoid turning the machine sharply.



A flashing symbol in the TMC display indicates that the differential locks are engaged.

- 1—Switch, differential lock-up
- 2—Switch, differential lock-up

T160563 -UN-18SEP03

EL62757,0000183 -19-21APR02-1/1

## Operating the Decking Blade (Optional Equipment)

See ssection 11-4. Equipment, Decking Blade.

EL62757,0000184 -19-21APR02-1/1

## Operating the Clambunk

See section 11-4. Equipment, Clambunk.

EL62757,0000185 -19-21APR02-1/1

# Transporting and Towing the Machine

## Use hold-down straps

Make sure that the tracks, fuel container, and other loose items on the load area of the machine are properly secured for the transport (use heavy-duty hold-down straps, for instance).

EL62757,0000189 -19-21APR02-1/1

## Positioning

When positioning the forwarder onto the trailer, ensure that the machine is laterally as well centered as possible. Similarly, when positioning the machine and the boom bear in mind the maximum axle loads permitted for the truck or trailer as well as the maximum width and height. If necessary, the values must be checked by measuring before transporting.

EL62757,000018A -19-21APR02-1/1

## Minilevers

For the transport minilevers are clamped to the extreme position with rubber loops situated on outer side of control panels.

EL62757,000018B -19-21APR02-1/1

## Handling And Storing Diesel Fuel

**CAUTION:** Handle fuel carefully. Do not fill the fuel tank when engine is running.

**DO NOT** smoke while you fill the fuel tank or service the fuel system.

- Fill the fuel tank at the end of each day's operation to prevent water condensation and freezing during cold weather.
- Keep all storage tanks as full as practicable to minimize condensation..
- Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering.
- Monitor water content of the fuel regularly.
- Fuel filter may require more frequent replacement due to premature plugging.
- When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your fuel supplier for recommendations.



TSS202 -JUN-23AUG88

### Monitoring the quality of the fuel

DIESELSCAN™ is a John Deere fuel sampling program help you monitor the quality of your fuel source.

It verifies fuel type, cleanliness, water content, suitability for cold weather operation, and if fuel is within ASTM specifications.

Check with your John Deere dealer for availability of DIESELSCAN kits.

### Minimizing the Effect of Cold Weather on Diesel Engines

- Use Grade No. 1-D Fuel When temperatures fall below 5°C (40°F),
- Coolant Heaters Engine block heaters (coolant) if equipped.
- Use Seasonal Viscosity Oil and Proper Coolant Concentration

## Check all bolted joints

When the *machine is new*, check all bolted joints daily, especially those between the loader and the frame and those between the axles and the frame.

Keep tightening until the bolts maintain their tightness.

Check the hose joints, too. During ordinary operation, the joints should be frequently checked in addition to scheduled maintenance.

### Bolt torque values

JOINT	TORQUE Nm
Wheel bolts	550 ( 405 lb -f t)
Joints between axles and frame	
Horizontal bolts	950 (700 lb -f t)
Vertical bolts	950 ( 700 lb -f t)

EL62757,0000221 -19-28NOV02-1/1

# Maintenance - Every 10 hours or Daily

## Check the hydraulic oil level

1. Check the hydraulic oil level in the sight glass (1) of the tank.  
When you do this, the lift and jib cylinders have to be in the innermost position.
2. If necessary add oil through the quick coupler (4) with the hydraulic fill-up pump (3) (optional equipment).
  - The quick coupler is mounted in a way that the new oil enters the system through the filter.
  - Also a manual pump can be used.
3. During the fill up, open venting screw (2). Do not forget to close the screw.

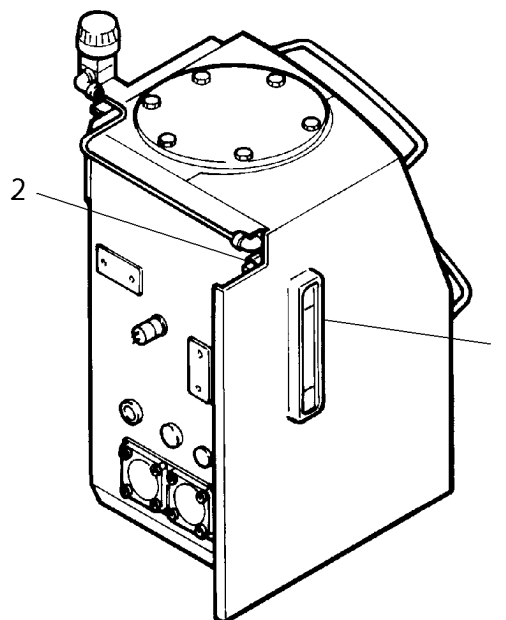
**NOTE:** Do not exceed the 'MAX' mark. There always has to be enough air space in the hydraulic oil tank, because the fluid level goes up and down during the operation.

See section 7-1, Vacuum pump (opt. equipment)

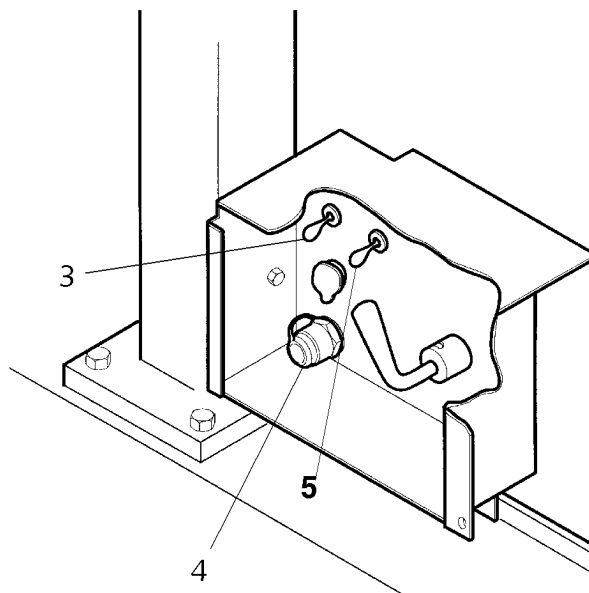
**NOTE:** Do not mix different type of oils.

Capacities	Hydraulic tank	min. 79 l (20.8 gal) / max. 150 l (39.6 gal)
Mineral oil	Summer oil	SMRs norm SH 68
	Winter oil	SMRs norm SHS 32
	Year-round oil	SMRs norm SHS 46
If you use synthetic biodegradeable oil:		Neste Biohydrauli SE 46

- 1—Oil level sight class
- 2—Venting screw
- 3—Switch, fill-up pump
- 4—Quick coupler - oil fill
- 5—Switch, vacuum pump



T152230 -UN-05MAR02



T152231 -UN-07APR02

EL62757,00000E8 -19-10APR02-1/1

### **Check the fire extinguisher system**

Fire extinguisher system is an extra equipment. See section 11-4.

EL62757,0000100 -19-10APR02-1/1

### **Maintenance of the Active Loadspace (ALS)**

If the machine is equipped with an Active Loadspace, please see Section 11-5: 'Maintenance every 50 hours'.

EL62757,0000001 -39-08OCT03-1/1

**IMPORTANT:** Immediately after completing any oil change, crank engine for 30 seconds without permitting engine to start. This will help insure adequate lubrication to engine components before engine starts.

9. Detach the connection (Y01) from the control unit of the fuel pump and operate the engine by means of the starter motor about 30 seconds. Reconnect the connector again. Start engine and run to check for possible leaks.
10. Stop engine and check oil level after 10 minutes. Oil level reading should be within crosshatch of dipstick.

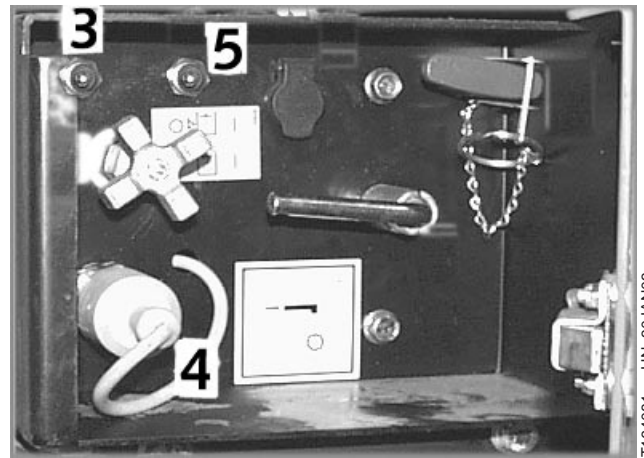
DPSG,OUOE003,8005 -19-18JUN99-2/2

### Using the vacuum pump

The vacuum pump is used to avoid oil spill, e.g., in the event of hose rupture or other leakage.

**IMPORTANT:** Before starting and using the vacuum pump, make sure the machine is level and that the hydraulic fluid is not above maximum level, see the sight glass.

Otherwise the hydraulic fluid might reach up to the suction connection in the tank!



T164081 -UN-30JAN03

1. Stop the engine.
  - Set the ignition lock to the vacuum pump mode (P) before activating switch (5)

*NOTE:* The vacuum pump will be disconnected automatically if the machine is started

2. Run for 2 or 3 minutes before doing anything with the hydraulic system
3. After the vacuum pump has been turned off start the engine and let it idle for a couple of minutes.

### Filling the oil

**IMPORTANT:** Do not exceed the 'MAX' mark.

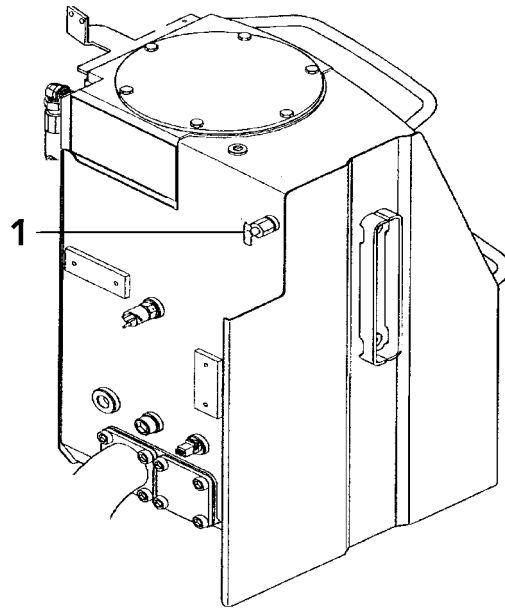
There always has to be enough air space in the hydraulic oil tank, because the fluid level goes up and down during the operation.

**IMPORTANT:** Do not mix different type of oils.

Add oil through the quick coupler (4) with the hydraulic fill-up pump (3) (optional equipment). The quick coupler is mounted in a way that the new oil enters the system through the filter.

*NOTE:* During the fill up, open the vent tap of the hydraulic tank.

1. Clean the filling hose and remove the dust cap.
2. Place the hose into the canister containing new hydraulic oil.



T159294 -UN-22OCT04

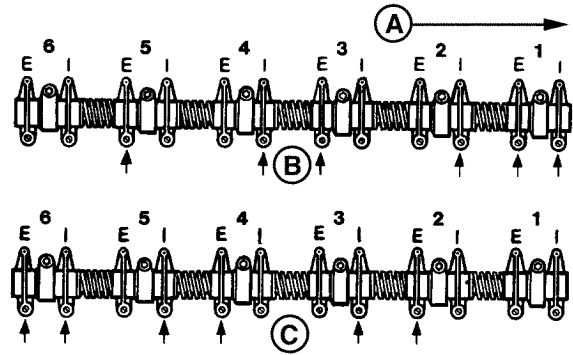
- 3—Switch, fill-up pump (optional equipment)
- 4—Quick coupler
- 5—Switch, vacuum pump
- 1—Hydraulic tank vent plug

- With engine lock-pinned at TDC of No. 1 piston's compression stroke, check valve clearance on Nos. 1, 3, and 5 exhaust valves and Nos. 1, 2, and 4 intake valves.

**Specification**

Intake Valve Clearance Checking (Rocker Arm-to-Valve Tip With Engine Cold)—Clearance.....	0.31...0.38 mm (0.012...0.015 in.)
Exhaust Valve Clearance Checking (Rocker Arm-to-Valve Tip With Engine Cold)— Clearance .....	0.41...0.48 mm (0.016...0.019 in.)

- Rotate flywheel 360° until No. 6 piston is at "TDC" of its compression stroke. Rocker arms for No. 6 piston should be loose.
- Check valve clearance to the same specifications on Nos. 2, 4, and 6 exhaust and Nos. 3, 5, and 6 intake valves.
- If valve clearance needs to be adjusted, let an authorized workshop do that.
- Install rocker arm cover with vent tube and tighten cap screws to specifications in order shown.



A—Front of Engine  
 B—No. 1 Piston TDC Compression  
 C—No. 6 Piston TDC Compression  
 E—Exhaust Valve  
 I—Intake Valve

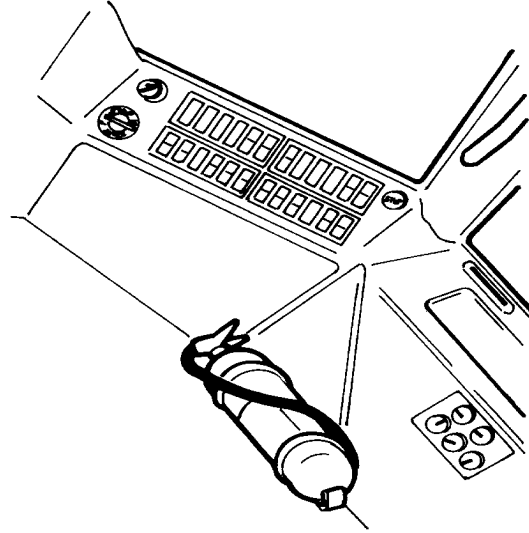
RG4777 -UN-31OCT97

# Maintenance - Every 6 months

## Service the fire extinguisher

The fire extinguishers must be checked, serviced and stamped by an authorized dealer. On certain markets fire insurance terms stipulate that fire extinguishers must be checked after every six months.

Contact your insurance company for all the details.

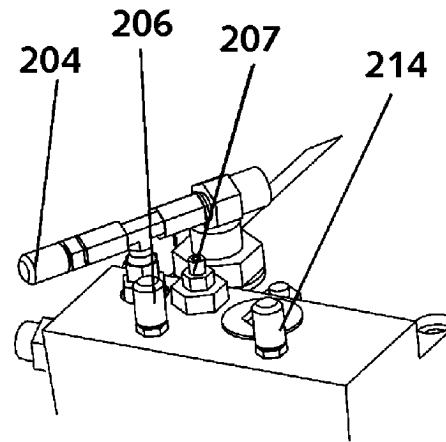


T152581 -UN-11MAR02

EL62757,00000EE -19-10APR02-1/1

5. Connect bleed hoses to the measuring points of the drive hydraulics:
  - Supply pressure (204)
  - Driving pressure (206) and (214)
6. Operate the starter motor for appr. five seconds
7. Repeat the starting procedure after waiting one minute (do this 3 ... 5 times), until no more air comes out of the bleed hoses.
8. Disconnect the bleed hoses

(204)—Supply pressure  
(206)—Drive pressure backwards  
(214)—Drive pressure forward



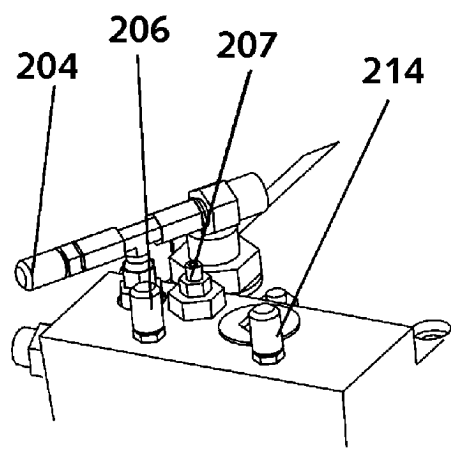
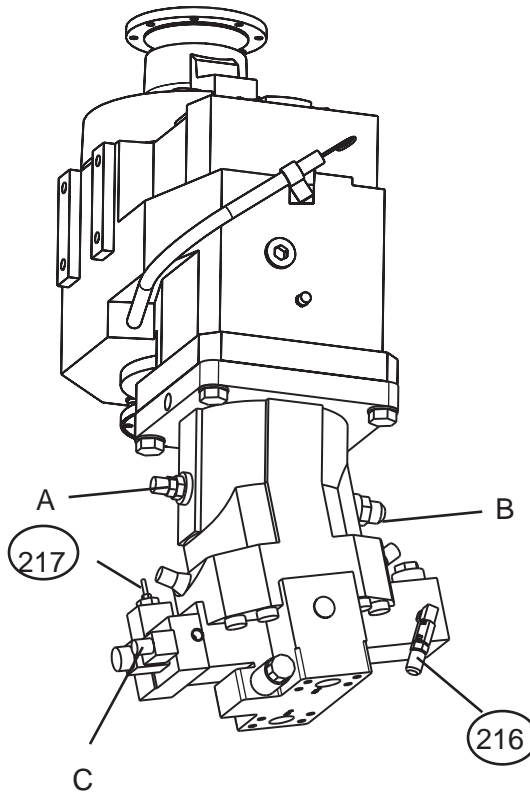
T153143 -UN-19FEB03

EL62757,000019A -19-21APR02-2/2

## B) Drive motor, rough adjustment of cut-off valve

The tools needed: 3-mm hex key and 10-mm wrench

1. Disconnect the parking brake solenoid Y41 from the valve block. After this, the parking brake will stay engaged.
2. Connect a pressure sensor to measuring point (214) (...60 MPa) (0...8702 psi) and a pressure gauge to measuring point (216) (...60 MPa) (0...8702 psi)
3. Disconnect the connector of the motor steering (pos. C)
4. Connect a 24 V tension with a separate cable from the power outlet next to the main switch to the motor steering (pos.C).
5. Start the engine
6. Engage high gear and rear wheel drive. Let it idle.
7. Select the driving direction forward.
8. Set the adjustable speed range (snail) to 15 %
9. Press smoothly the drive pedal, the pressure will first start to rise at measuring points (216) and (214).
10. The engine rpm and the pressures are increasing, but at a certain point the pressure of (216) stops to increase and finally it starts to decrease.
11. When the pressure at (214) reaches 36 MPa (5076 psi) the pressure at (216) should then be  $14 \pm 2$  MPa ( $2030 \pm 290$  psi).
  - a. If (214) reaches 36 MPa (5076 psi) and the value at (216) is higher than  $14 \pm 2$  MPa ( $2030 \pm 290$  psi) , turn the adjusting screw (217) counterclockwise in small increments and repeat the test.
  - b. If (214) reaches 36 MPa (5076 psi) and the value at (216) is lower than  $14 \pm 2$  MPa ( $2030 \pm 290$  psi), turn the adjusting screw (217) clockwise in small increments and repeat the test.
12. Disconnect the cable between the power outlet and the position C
13. Connect back the connector of the motor steering (pos. C) .
14. After making the adjustment, fit the solenoid into the valve and tighten the lockscrew hand tight



C—Adjusting screw  
 (216)—Measure point,  
 (217)—Adjusting screw, cut-of

T152684 -UN-19MAR02

T153143 -UN-19FEB03

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

# Electrical System

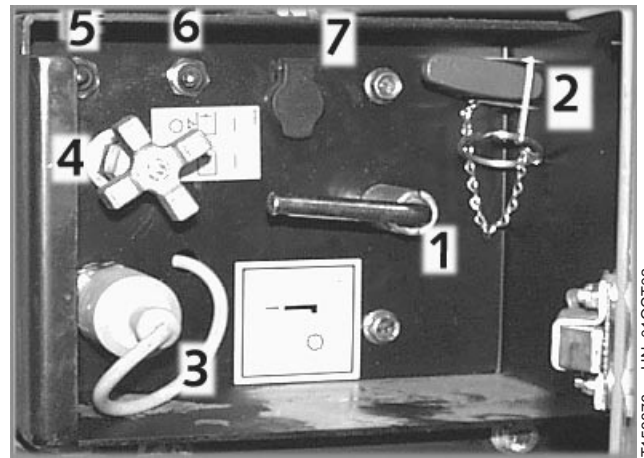
## Main Switch

The main switch (1) is behind a cover on the left-hand side of the machine.

The main current coming from the battery is divided between two 60 A fuses.

The fuses can be found in a fuse box under the cab.

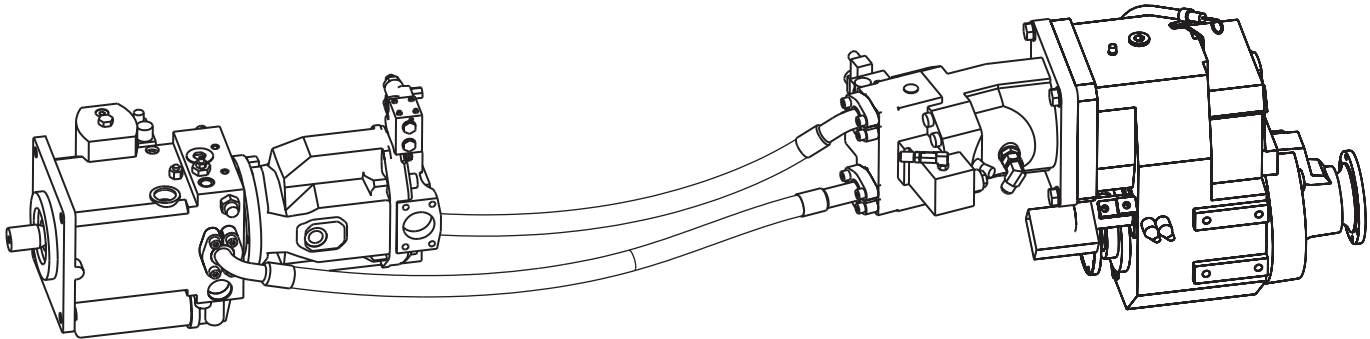
There is a socket serving as a power outlet (24 V) next to the main switch. If the machine is equipped with an automatic fire extinguishing system (opt. eq.) the system will be switched on to the automatic mode when the main switch is turned off.



- 1—Main Switch
- 2—Triggering handle for fire extinguisher
- 3—Quick coupler for hydraulic oil filling
- 4—Tap for decking blade's floating system
- 5—Switch, hydraulic oil filling pump
- 6—Switch, vacuum pump
- 7—24V Current

EL62757,00001AD -19-21APR02-1/1

## Hydrostatic System



The main components of the system are a hydraulic pump and a hydraulic motor. These components make up a closed loop circuit in which the oil flowing from the pump to the motor will return to the pump from the motor. Both the pump and the motor are of the variable displacement piston type.

The direction of rotation of the pump shaft is always the same. The displacement of the pump is regulated by means of two electrically controlled proportional valves. One of the valves adjusts the pump plate in one direction and the other valve in the opposite direction. This system alters the direction and amount of oil flow generated by the pump, which, in turn, changes the direction of rotation of the motor (driving direction and speed) accordingly. In addition to the control current of the proportional valve, the amount of flow generated by the pump can also be changed by adjusting the speed of the diesel engine.

The direction of rotation and speed of the motor depend on the direction and magnitude of the flow generated by the pump.

The motor displacement is adjusted by turning the motor shaft while the plate stays in place.

The pump and motor angles are interdependent. If the machine stands still, the pump angle is zero and the motor angle at its maximum. When the machine starts off, the pump angle begins to increase. When the pump angle reaches its maximum, the motor angle begins to decrease. If you drive at full speed, the pump angle is at its maximum and the motor angle at its minimum.

T152541 -UN-08MAR02

EL62757,00001C2 -19-22APR02-1/1

# Boom - Maintenance

## Maintenance Schedule

Maintenance daily or every 10 hours	
<input type="checkbox"/> Check boom structures	<input type="checkbox"/> Clean the boom
Maintenance weekly or every 50 hours	
<input type="checkbox"/> Check the boom slewing housing oil level	<input type="checkbox"/> Check that the joint pins of the boom are secured
<input type="checkbox"/> Check the sideways clearance of the extension booms	<input type="checkbox"/> Check the loader extension boom chains for tightness
<input type="checkbox"/> Grease the boom	<input type="checkbox"/> Lubricate the extension boom chains with oil
Maintenance every 250 hours	
<input type="checkbox"/> Clean the boom	<input type="checkbox"/> Check boom structures
<input type="checkbox"/> Check the extension booms for vertical clearance	<input type="checkbox"/> Check the tightness of loader screw joints
<input type="checkbox"/> Grease the grapple and link	
Maintenance every 1000 hours	
<input type="checkbox"/> Clean the magnetic plug of rotator	<input type="checkbox"/> Change the loader slewing system oil
Maintenance as required	
<input type="checkbox"/> Adjusting the rotator link brakes	

EL62757,00001C9 -19-22APR02-1/1

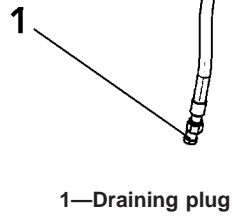
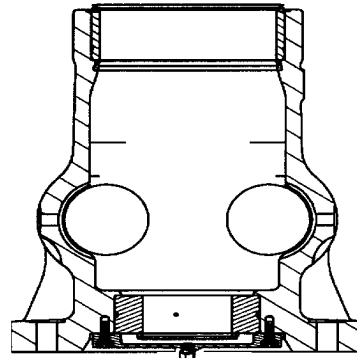
### Change the boom slewing system oil

The oil must be changed after every 1000 running hours or once a year.

Drain the water from the drain hose by opening the drain plug (1).

1. The drain hose is located under the base of the boom. Unscrew the plug (1), clean it and drain the oil into an oil sump.
2. Replace the plug.
3. Fill in new oil.

Volume	Boom Slewing System	9.5 l (2,5 gal)
Hypoid oil	API GL-5 eller MIL-L-2105 B eller D	
Viscosity	SAE 90 SAE 85W/90 SAE 80W/90 SAE 75W/90	



T160025 -JUN-02OCT02

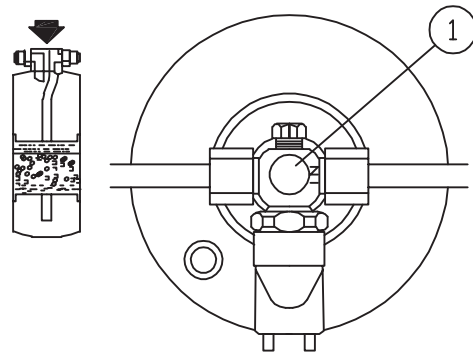
Continued on next page

EL62757,00003B4 -19-19MAR03-2/3

### Maintenance and Inspections: Check the refrigerant level.

1. The engine must be running at 1500 RPM.
2. Switch on the air conditioner.
3. Turn the fan speed and thermostat to the maximum position.

When the compressor is running no bubbles should be seen in the sightglass (1), and the refrigerant should not appear 'cloudy'. Bubbles and cloudiness indicate that the charge of refrigerant is insufficient. If this is the case, immediately contact the nearest authorized dealer to have the problem remedied.



1—Inspection sightglass

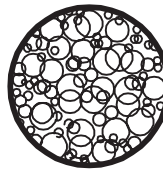
T139550 -UN-07MAR05

EL62757,00001DD -19-22APR02-1/5

### A. CLEARLY INSUFFICIENT AMOUNT OF REFRIGERANT

- Continuous flow of bubbles or a flow that appears foamy
- The difference in temperature between the low and high pressure sides is small.
- The pressure of the high-pressure side is unusually low.

STOP THE COMPRESSOR IMMEDIATELY and contact an authorized mechanic to check the system.



T139551 -UN-07MAR05

Continued on next page

EL62757,00001DD -19-22APR02-2/5

Start heating; press (3).

To reduce heating duration: press (4).

To increase heating duration (to max. 120 min):  
press (5).

b. Permanently

Do not switch heating on.

Press the (4) key and hold it down (approx. 3 s) until  
the display appears and flashes.

Release the key.

Then set the heating duration (10...120 min) using  
the(4) or (5) key. The new heating duration is set when  
the display disappears.

#### 4. **Switching off the heater**

Press (3), automatic cooling phase, about 130  
seconds.

#### 5. **Heating without preselection (ignition of the base machine is on)**

Press (3) .

Heating stays in operation until ignition is switched off.

After ignition is switched off, a residual heating period  
of 15 min remains.

This can be changed (1...120 min) by pressing the (4)  
or (5) key. Switching off the heater: press (3).

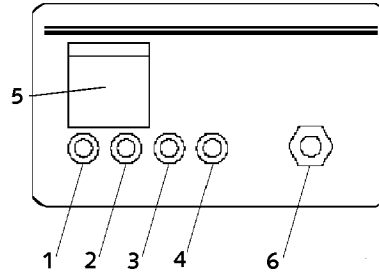
#### 6. **Heating operation preselection**

Continued on next page

EL62757,00001FF -19-24APR02-5/9

## Control unit

1. Green light emitting diode, indicating that the system is operative.  
Goes out if the power supply is broken.
2. Yellow light emitting diode, supervising the detector circuit.  
Lights up if the circuit is broken or if the end resistor is removed.
3. Yellow light emitting diode, supervising the circuit to the gas generator in the mechanical / electrical triggering unit.  
Lights up if the circuit is broken or when the gas generator is triggered
4. Yellow light emitting diode.  
Lights up when the system is in the manual mode = Battery master switch is ON.
5. Triggering button for the system.  
Issues a pulsating light when the fire alarm is given and a steady light when the system is triggered electrically.
6. Toggle switch for alarm and error testing.
  - a. **Upper position, testing the alarm.**  
The alarm 5 of the installation shall be activated, push-button (5) flashes and diode (1) and (3) will show a steady light.
  - b. **Middle position: Simulating break of the detector circuit and the detonator loop.**  
Diodes 1, 2 and 3 should light. Diode 4 should also light if the battery master switch is ON. The steady light for the electrically triggered system will also be reset when the toggle switch is moved to the middle position.
  - c. **Lower position, operating mode:**  
Diode 1 should light, and also 4 if the battery master switch is ON.



Control unit of the fire extinguisher system

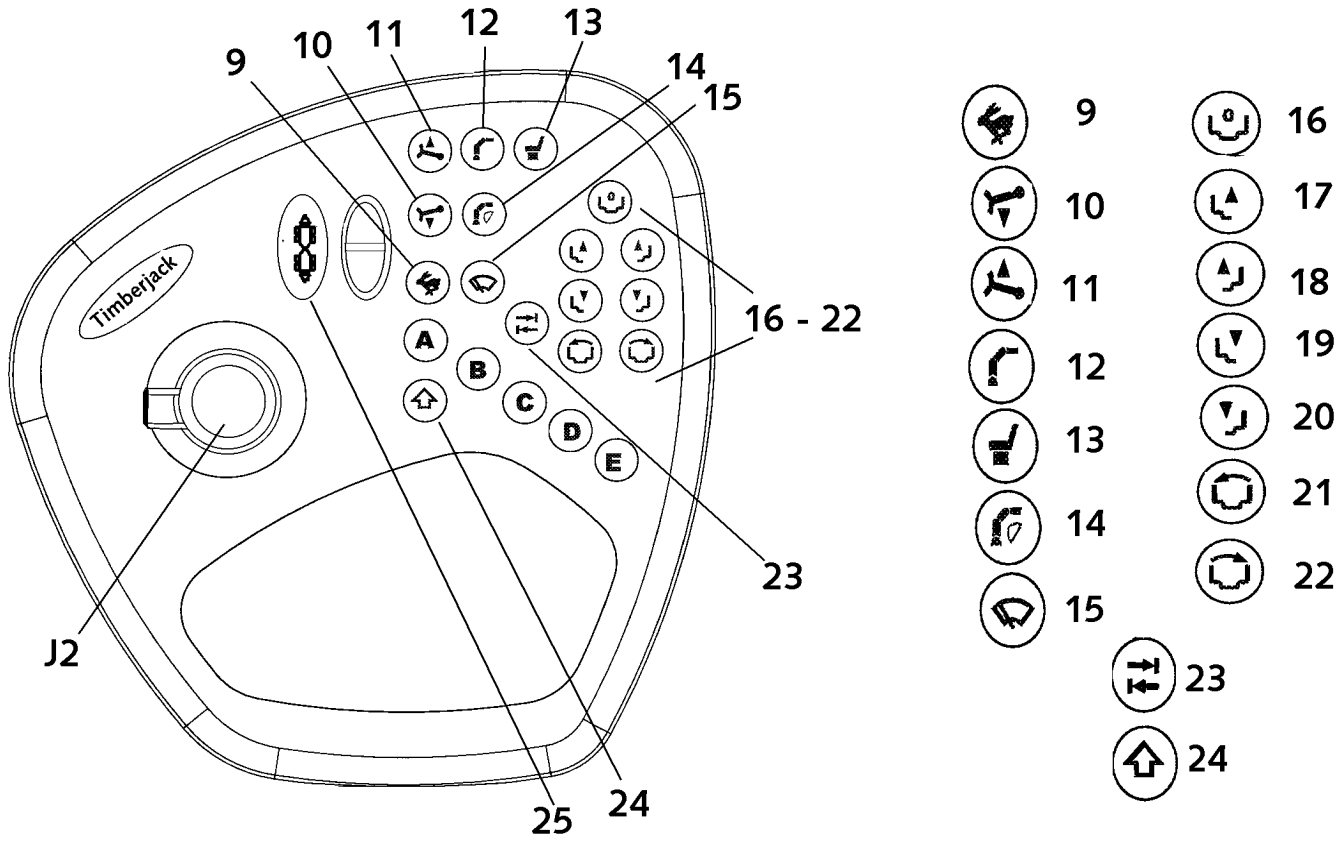
- 1—Green
- 2—Yellow
- 3—Yellow
- 4—Yellow
- 5—Triggering button for the system
- 6—Toggle switch for alarm and error testing

T152354 -UN-06MAR02

### Check every day:

- That diode 1 lights up, and also 4 if the battery master switch is ON, when switch 6 is in the operation mode.

### ALS, Right Arm Control Panel



		<b>In ALS and PC use:</b>	
J2	Boom control lever, right	16	Reset of load space
9	High / low gear	17	Stake up, right side
10	Decking blade down	18	Stake up, left side
11	Decking blade up	19	Stake down, right side
12	Boom functions ON/OFF	20	Stake down, left side
13	Seat locking / release	21	Load space tilt to the left
14	Jib boom lights	22	Load space tilt to the right
15	Windscreen wiper	23	PC button TAB
25	Driving direction switch	24	PC button SHIFT
Multifunction buttons for TMC use (see TMC manual)			

EL62757,0000172 -19-19APR02-1/1

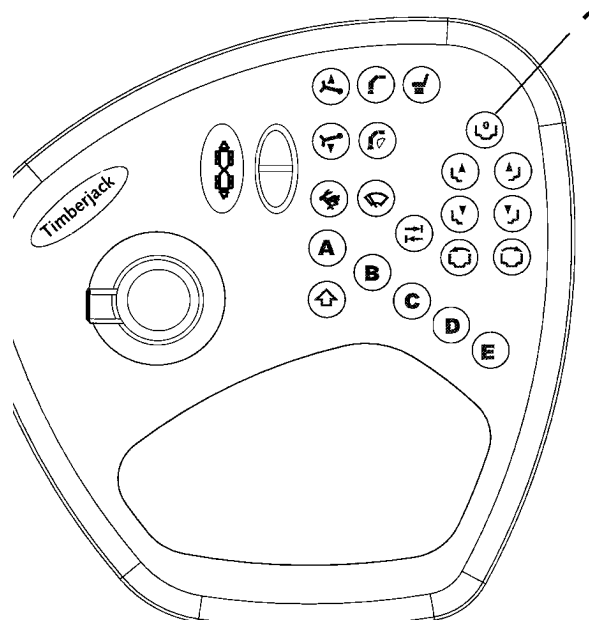
T163704 -UN-05APR03

## Aligning load bunks

If the aligning of the load bunks for some reason has failed, the bunks have to be aligned according to the following procedure.

*NOTE: This procedure has to be done whenever necessary.*

1. Shut off the engine.
2. Open the bleeding valves on both cylinders on the front load bunk
  1. Loosen the valve by opening the jam nut.
  2. Open the valve approx. 1-1,5 turns.
  3. Tighten the jam nut to prevent oil leakage.
3. Press the RESET button (1) until both bunks are completely down.
4. Close both bleeding valves
  1. Open the jam nut
  2. Close the valve.
  3. Tighten the jam nut.

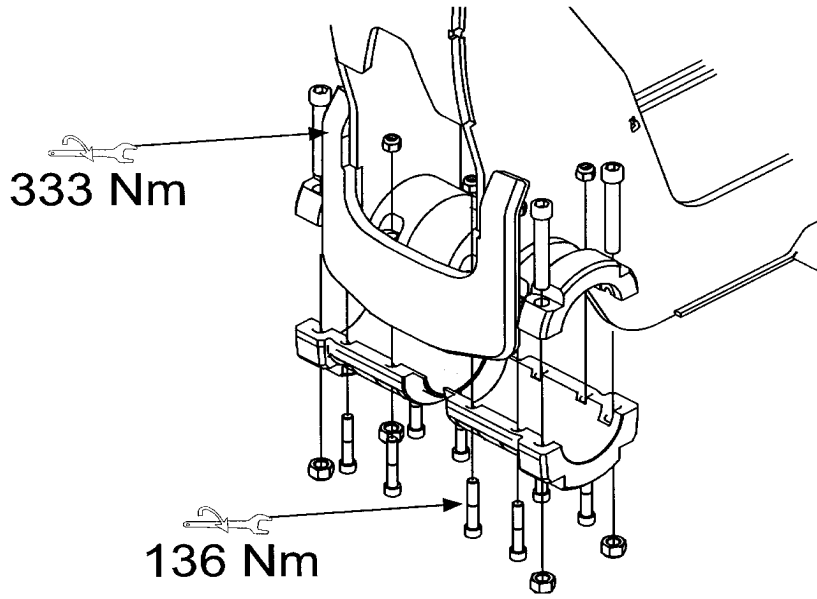


1—RESET -button

T192447 -UN-23JUN03

EL62757,0000434 -18-23JUN03-1/1

### Maintenance Every 250 hours of operation



T192438 -UN-23JUN03

#### Check fasteners for male brackets

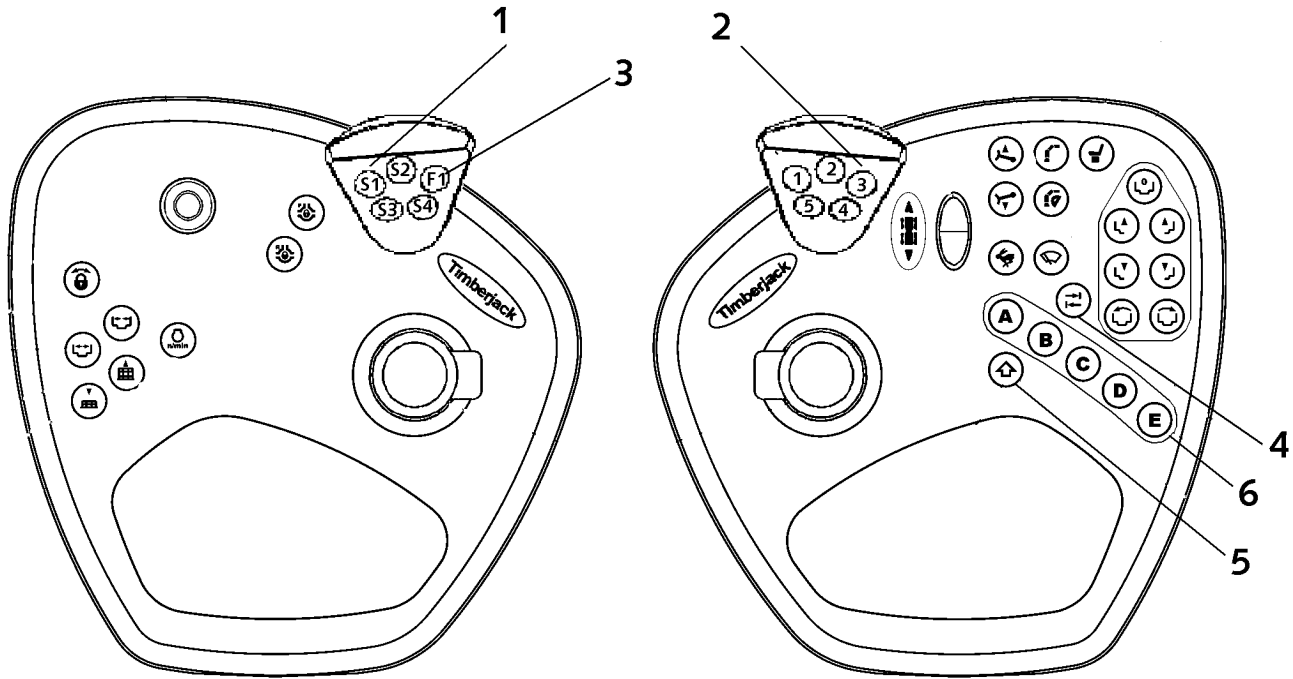
Check the torque and general condition of the fasteners. Replace any damaged screws.

Total Qty	32	16
Dimension	M12, 12.9	M16, 12.9
Torque	136 Nm	333 Nm

Continued on next page

EL62757,000043C -18-23JUN03-1/6

## Control panel functions



### 1. Species buttons S1...S4

Use these buttons to enter the tree species of the grapple load, e.g. pine, spruce, birch or mixed species.

The species names and their order are determined in the administrative program.

### 2. Assortment buttons 1...5

### 3. Shift button F1

Used together with other buttons when selecting assortments 6...10 (F1 + 1...5). **PC:** Shift

### 4. PC: Tab

### 5. PC: Alt

The combination of Alt (5) and Tab (4) buttons can be used to browse the programs currently open on the display, e.g. Timbermatic™ - TMC™ - TimberNavi™.

### 6. A, B, C, D, E = Multifunction buttons for TMC use

T196018 -UN-05NOV03

Continued on next page

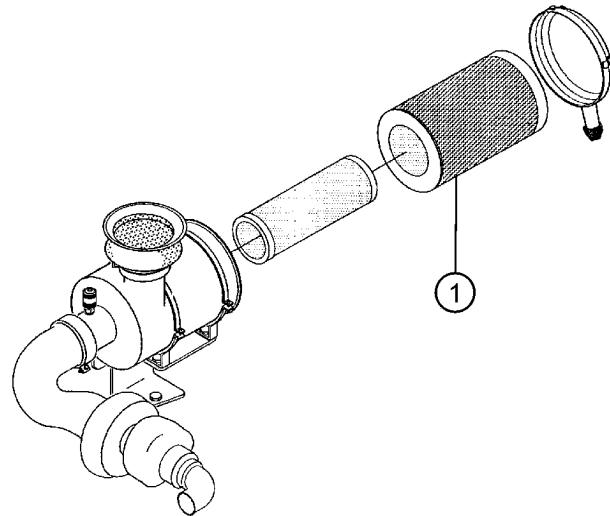
EL62757,00004BC -19-29OCT03-1/2

# Storage

## Prepare Machine for Storage

1. Repair worn or damaged parts. Install new parts, if necessary, to avoid needless delays later.
2. Clean primary air cleaner element.

1—Primary Air Filter



T142828 -JUN-13JUN01

Continued on next page

OUTJ003,0000665 -19-13MAY01-1/3

## Diagnose Brake Hydraulics

Symptom	Problem	Solution
<b>Parking brake does not engage when parking brake switch is ON</b>	Parking brake solenoid Y41 malfunction. Pressure not bled off correctly.	See authorized dealer.
	Brake cylinders worn, out of adjustment or springs are broken.	See authorized dealer.
<b>Parking brake does not release when parking brake switch is OFF</b>	Insufficient hydraulic pressure in parking brake circuit to release spring applied brake.	See authorized dealer.
<b>Service brake does not engage when parking brake is disengaged.</b>	Service brake solenoid Y41W malfunction.	See authorized dealer.
<b>Driving brake does not apply when pedal is pressed (but service brake works normally).</b>	Insufficient fluid level in brake master cylinder.	Check level in brake master cylinder (ATF Tank). Refill if necessary.

OUTJ003,000067A -19-14MAY01-1/1

## Diagnose Cab Tilt Hydraulics

Symptom	Problem	Solution
<b>Cab tilts slowly or settles between pump strokes</b>	Faulty seals in cab tilt cylinder.	See authorized dealer.
	Faulty seals in cab tilt pump.	See authorized dealer.
	Leak in hoses or fittings.	See authorized dealer.

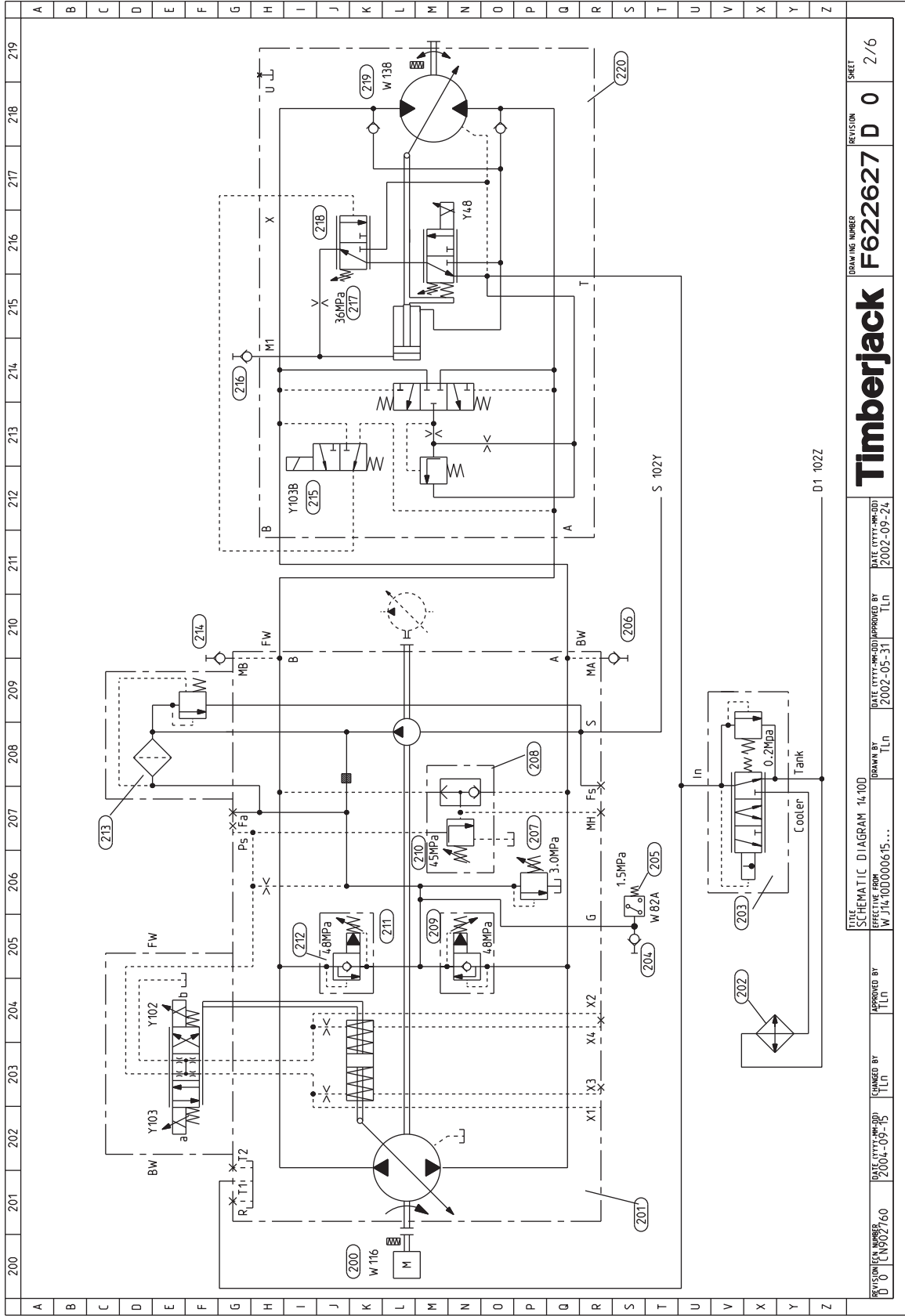
OUTJ003,000067B -19-14MAY01-1/1

*Troubleshooting*

<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
<b>Slows down when lifting</b>	Insufficient oil.	Check level in hydraulic tank. Add oil, if necessary.
	Defective valve spool port reliefs at loader control valve.	Service valve. See authorized dealer.
	Defective main relief valve at Loader Control Valve.	Service valve. See authorized dealer.
	Engine does not maintain correct RAM	Adjust engine speed control throttle.
	Defective or worn work pump.	See authorized dealer.
<b>Pulsating oil flow</b>	Leak in hose or fitting.	Check hoses and fittings. See authorized dealer.
	Insufficient oil.	Check level in hydraulic tank. Add oil, if necessary.
	Defective or worn work pump.	See authorized dealer.
	Blocked hoses or filter.	See authorized dealer.
<b>Erratic slewing</b>	Defective valve spool or port reliefs at loader control valve.	Service valve. See authorized dealer..
	Slewing support bearing worn.	See authorized dealer.
	Air in cylinders.	Carefully operate cylinders too extreme positions several times to eliminate air from hydraulics.
<b>Oil drains out of cylinders</b>	Defective cylinder seals.	Service cylinder. See authorized dealer.
<b>Water in slew housing</b>	Defective slewing seals.	Drain water through oil drain plug. Replace oil.
		Replace seals. See authorized dealer.

Continued on next page

OUTJ003,0000680 -19-14MAY01-3/4



REVISION NUMBER	REVISED	SHEET
D 0	F622627 D 0	2/6
DATE (YYYY-MM-DD)	DATE (YYYY-MM-DD)	DATE (YYYY-MM-DD)
2004-09-15	2002-05-31	2002-09-24
APPROVED BY	BRAWN BY	TITLE
TLN	TLN	SCHEMATIC DIAGRAM 14.100
CHANGED BY	EFFECTIVE FROM	
TLN	W 114.100.0000615...	
REVISION NUMBER	DATE (YYYY-MM-DD)	DATE (YYYY-MM-DD)
D 0	2004-09-15	2002-05-31
APPROVED BY	BRAWN BY	DATE (YYYY-MM-DD)
TLN	TLN	2002-05-31
CHANGED BY	EFFECTIVE FROM	DATE (YYYY-MM-DD)
TLN	W 114.100.0000615...	2002-09-24

**Timberjack**

### Wiring Diagram Explanations

1. Seek column	4. Reference, seek column 608 E	7. Connector hose X16 terminal 9	10. Single line	13. Operation symbol
2. Double lines, conductor on circuit card	5. Earth terminal, connector X3 terminal 3	8. Number of wire 65+	11. Magnet valve Y65	
3. Relay K7	6. Fuse 25, 10A	9. S9 in the box, not mounted in all machines	12. Machine frame	

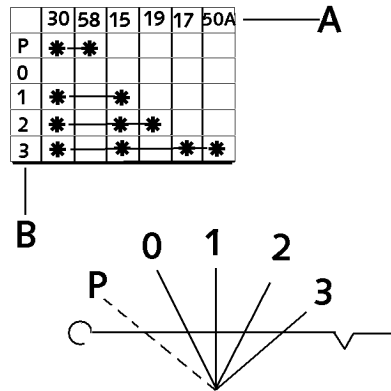
Codes for electric wire colors:							
BE = blue	BL =black	BR = brown	GN = green	GR = gray	OR = orange	RD = red	YL = yellow

EL62757,00001EF -19-24APR02-2/3

### Ignition key positions

In the illustration is shown which connectors are in use in different positions of the ignition switch.

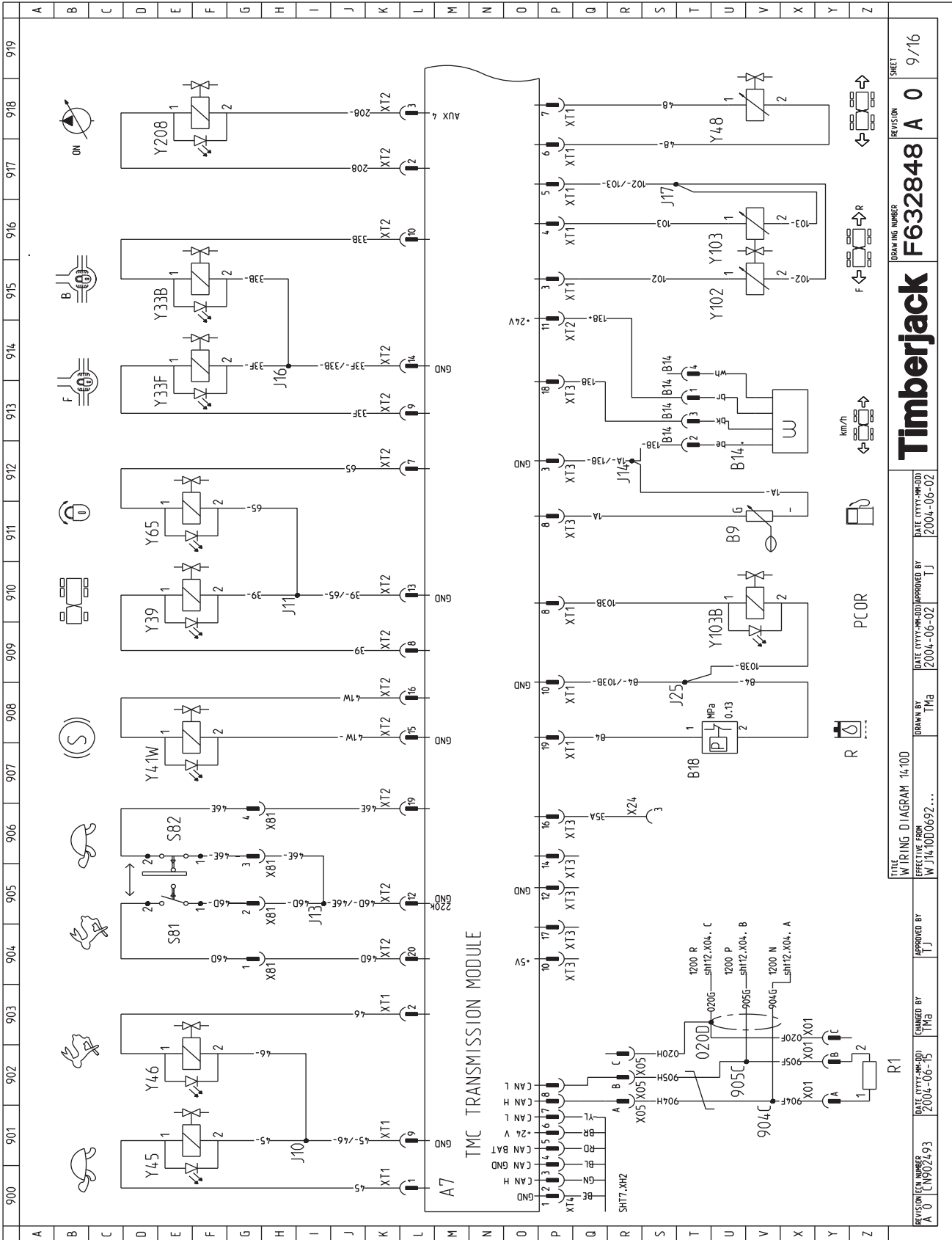
A—Connectors



T159290 -UN-15OCT02

EL62757,00001EF -19-24APR02-3/3

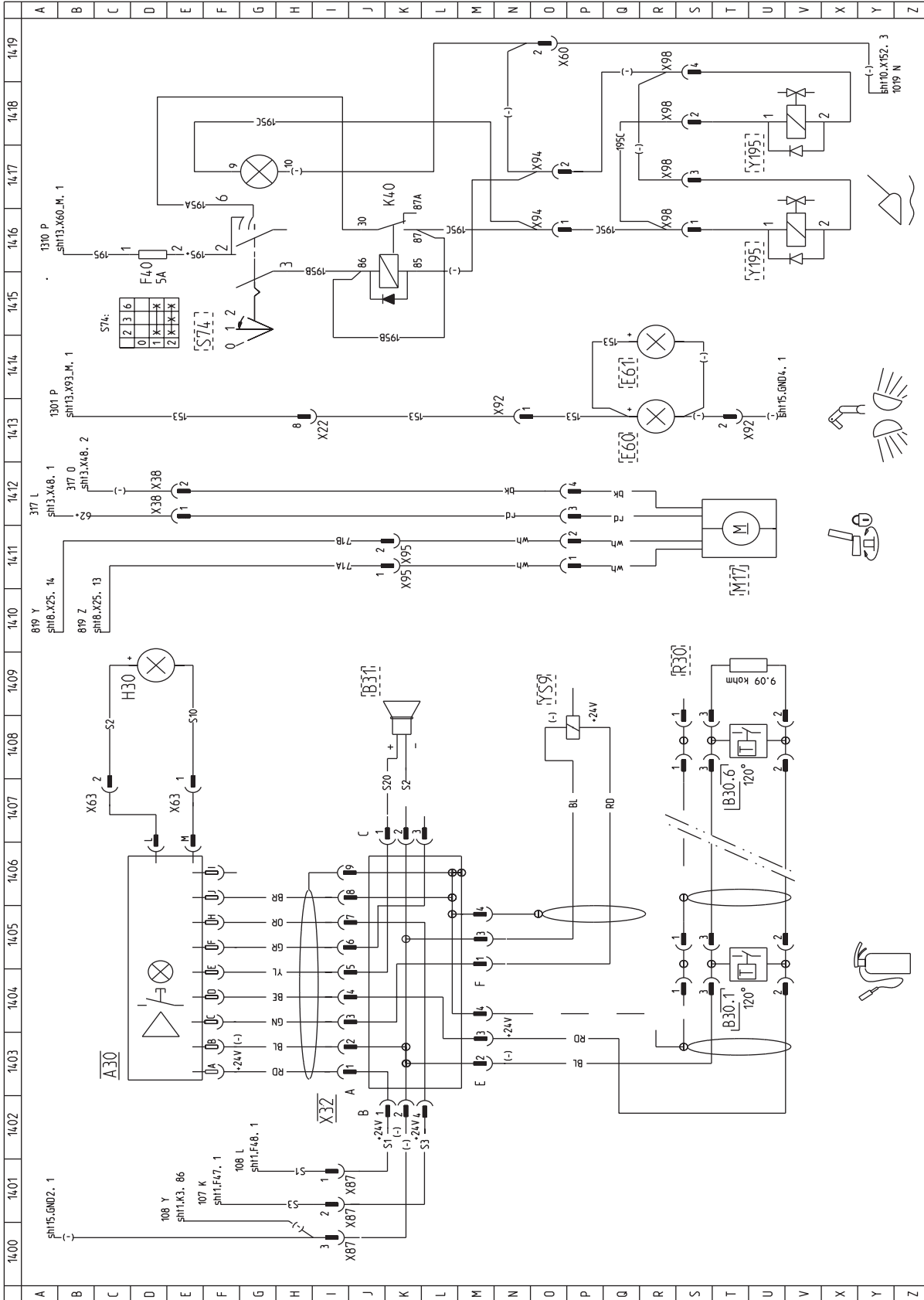




REVISION NUMBER	DATE (YYYY-MM-DD)	APPROVED BY	CHANGED BY	DATE (YYYY-MM-DD)
A 0	2004-06-15	TJ	TMG	2004-06-15
REVISION NUMBER	DATE (YYYY-MM-DD)	APPROVED BY	CHANGED BY	DATE (YYYY-MM-DD)
F632848 A 0	2004-06-02	TJ	TMG	2004-06-02
TITLE WIRING DIAGRAM 14-100				
EFFECTIVE FROM W 14-1000692...				
DRAWN BY TMG				
DATE (YYYY-MM-DD) APPROVED BY TJ				
DATE (YYYY-MM-DD) 2004-06-02				
DRAWING NUMBER F632848				
REVISION A 0				
SHEET 9/16				

Continued on next page EL62757.0000482 -67-28OCT04-20/34

T202782 -UN-27OCT04



DATE (YYYY-MM-DD)		DATE (YYYY-MM-DD)		DATE (YYYY-MM-DD)		DATE (YYYY-MM-DD)			
14/02		14/03		14/04		14/05			
14/06		14/07		14/08		14/09			
14/10		14/11		14/12		14/13			
14/14		14/15		14/16		14/17			
14/18		14/19							
DRAWING NUMBER				REVISION				SHEET	
F632848				A 0				14/16	
TITLE		DRAWN BY		APPROVED BY		DATE (YYYY-MM-DD)			
WIRING DIAGRAM 14:100		TJB		TJB		2004-06-02			
EFFECTIVE FROM		DRAWN BY		APPROVED BY		DATE (YYYY-MM-DD)			
W 14:100.0692...		TJB		TJB		2004-06-02			
REVISION NUMBER		DATE (YYYY-MM-DD)		APPROVED BY		DATE (YYYY-MM-DD)			
A 0		14/02/04		TJB		2004-06-15			

T202787 -UN-27OCT04

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