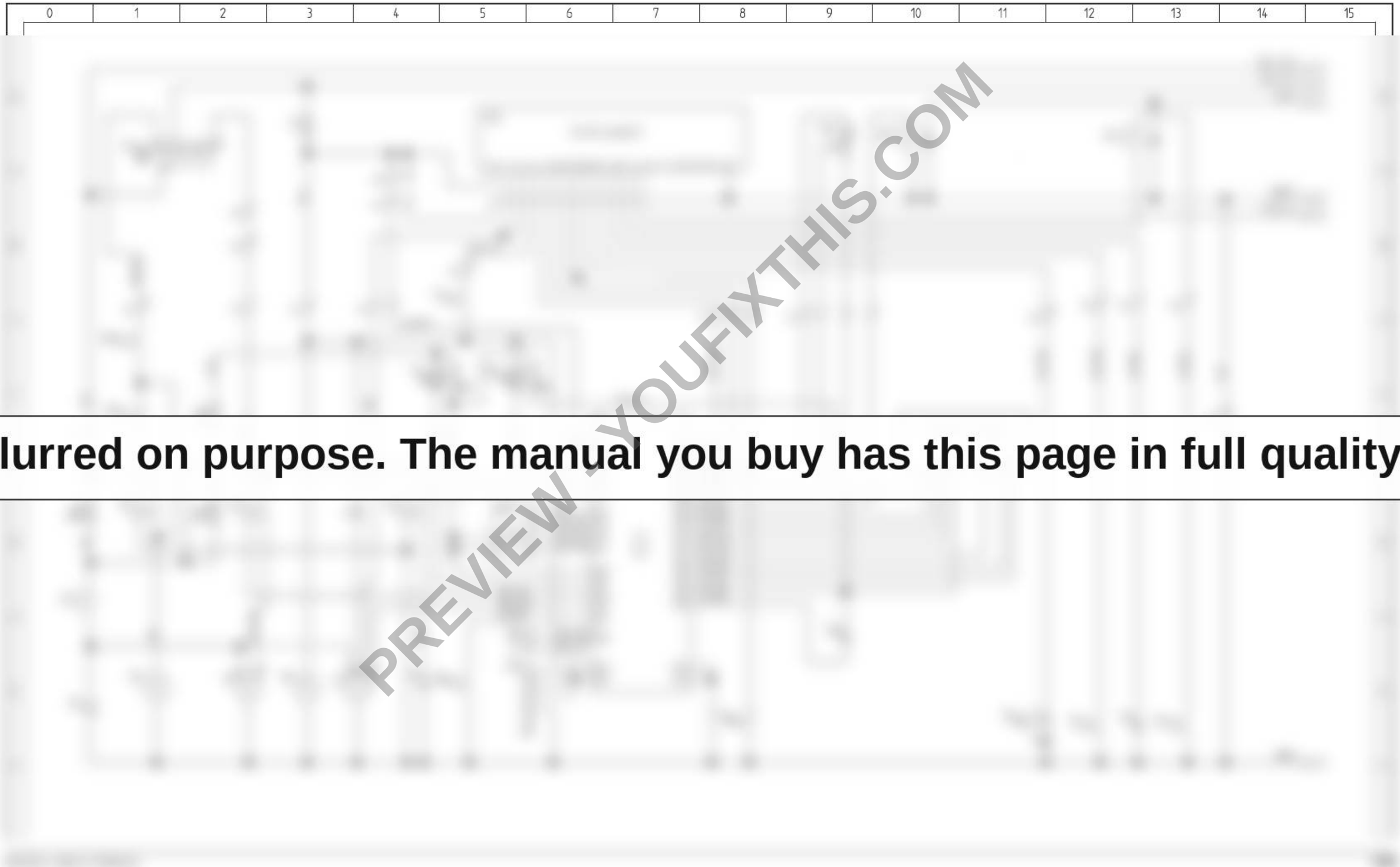
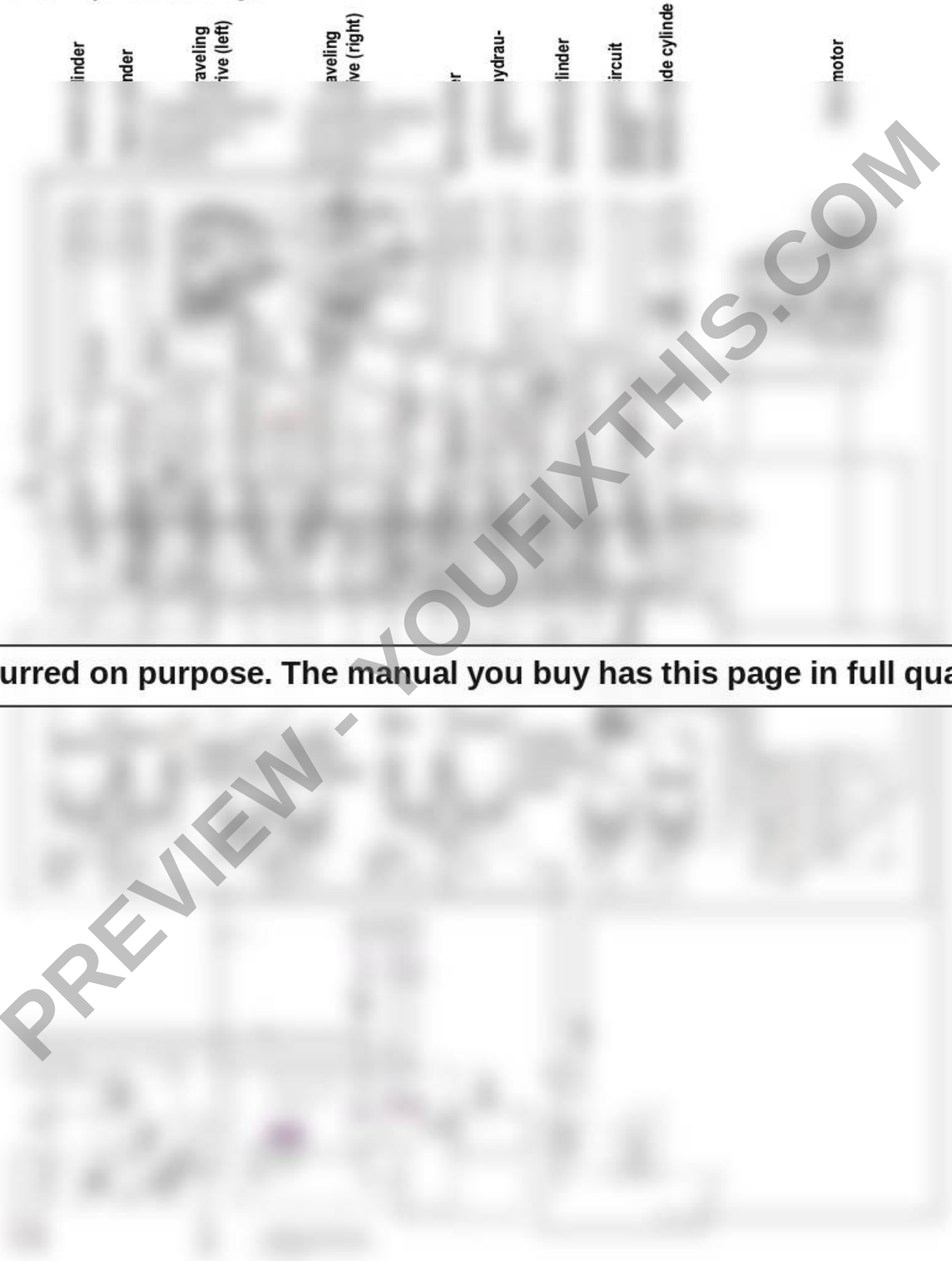
6.33 Wiring diagram A4 (1) from serial no. AH00646



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5.16 Hydraulics diagram



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Main valve block diagram



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Engine diagnosis codes				Page
Flash code		**Component**	**Troubleshooting**	**Error diagnosis**
7	Proportional injection pump solenoid (control rack) (Rack position sensor failure)	Loose connector	Tighten the connector	*4-35*
		Wiring error	Check and replace the malfunctioning component	
		Malfunctioning sensor	Contact a Wacker Neuson service center	
5	Manual throttle lever (Accelerator sensor failure)	Wiring error Sensor voltage: 4.6 V or more, or 0.2 V or less	Check and replace the malfunctioning component	*4-39*
		Malfunctioning manual throttle lever sensor	Replace the manual throttle lever sensor	
4-1	ECU internal (ECU internal)	Internal ECU error	Contact your dealer	*4-42*
	ECU failure (ECU failure)			*4-45*
2-5	ECU overheated (ECU overheat alarm)	ECU temperature too high	Allow to cool down	*4-45*
4	Coolant temperature sensor (Coolant temperature sensor failure)	Wiring harness error Sensor voltage: 4.8 V or more, or 0.2 V or less	Check and replace the malfunctioning component	*4-46*
		Malfunctioning coolant temperature sensor	Replace the sensor	
3-6	Coolant temperature too high (Coolant temperature high alarm)	Overheated engine	Let the engine cool down	*4-48*
		Not enough coolant	Add coolant	
		Malfunctioning engine cooling system	Check the engine cooling system and replace the malfunctioning component if necessary	
		Malfunctioning coolant temperature sensor	Replace the sensor	
2-4	5 V sensor (Sensor 5 V failure)	Wiring harness error Sensor voltage: less than 4.5 V or more than 5.5 V	Check and replace the malfunctioning component	*4-50*
		Internal ECU error	Contact a Wacker Neuson service center	
2-3	Power supply (Power supply voltage abnormal)	Old battery	Replace the battery	*4-53*
		Oxidized battery terminals	Clean the battery terminals	
		Malfunctioning alternator	Replace the alternator	
		Wiring harness error Battery voltage: more than 10 V or more than 16 V	Check and replace the malfunctioning component	

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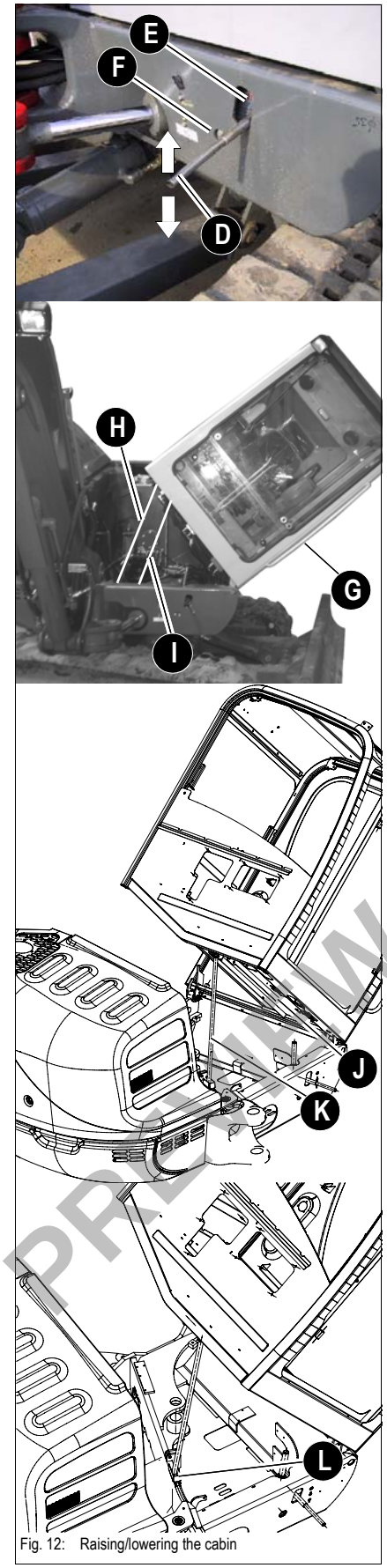


Fig. 12: Raising/lowering the cabin

Raising/lowering the cabin

Proceed as follows:

☞ *Insert tube **D** onto guide pin **E** and pump as far as it will go.*

➥ (jack function)

➥ The cabin is raised as far as the pump will go.

☞ *Pull handle **G** until the cabin is completely tilted beyond the center of motion.*

➥ The cabin is secured with safety cables **H** and **I**.

☞ *Remove the split pin from bracket **J**.*

➥ Slide tilt rod **K** into guide **L**.

➥ Secure tilt rod **K** with the split pin in guide **L**.

Lowering the cabin:

☞ *Remove the split pin from guide **L**.*

➥ Pull tilt rod **K** into bracket **J**.

➥ Secure tilt rod **K** with the split pin in bracket **J**.

☞ *Use handle **G** to lower the cabin until it is back on the pump.*

☞ *Insert tube **D** on pin **F**.*

☞ *Slowly turn tube **D** anticlockwise (to the left).*

➥ The cabin is lowered by its own weight.

➥ **The lift pump must be opened when driving with the machine! (to prevent the lift piston from touching the cabin.)**

☞ *Install screws **A** (front) and **C** (rear) with suitable tools and the specific torque – see Tightening torques for high-resistance threaded fittings on page 2-11*

Caution!

Check tilt rod **K**, the split pin and safety cables **H** and **I** at regular intervals for cracks and cuts.

☞ *Replace malfunctioning parts immediately.*

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3.3 Maintenance plan (overview)

Work description

For servicing and maintenance on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.

	Maintenance plan/operating hours (o/h)								
	Service work (daily)	Every 50 o/h	Every 250 o/h	Every 500 o/h	Every 1000 o/h once a year	Every 1500 o/h	Every 2000 o/h	Customer	Authorized service center
Fluid and filter changes ( ):									
Perform the following oil and filter changes (check oil levels after test run):									
• Engine oil[1]		●		●					●
• Engine oil filter[2]		●		●					●
• Fuel filter[3]		●		●					●
• Air filter element (if indicator light illuminates)[4]				●				●	
• Coolant					●				●
• Hydraulic oil filter insert[5]		●		●					●
• Hydraulic oil[6]					●				●
• Hydraulic oil reservoir breather					●				●
• Drain the condensation water from the hydraulic oil reservoir				●					●
• Replace cabin air filter for heating and air conditioning					●			●	
• Drive gearbox oil[7]		●			●				●
Inspection work ( ):									
Check the following material. Refill if necessary:									
• Engine oil	●							●	
• Engine coolant	●							●	
• Hydraulic oil	●							●	
• Fuel	●							●	
• Drive gearbox oil			●						●
Clean water ducts							●		●
Check pedal function	●							●	
Check engine/hydraulic oil radiator and air conditioning for dirt. Clean if necessary	●							●	

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2 Technical data

2.1 Chassis

Sturdy steel sheet chassis, rubber-mounted engine

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Screwable hose burst valve

Location	Thread	Gap dimension
Stabilizer blade	1/2"	1.2 mm (0.05")

2.4 Travel gear and swivel unit

Travel gear/swivel unit	Model 75Z$_3$
2 speed ranges	3.1/4.8 kph (1.93/2.98 mph)
Climbing ability	30°/58 %
Track width	450 mm (17.72")
No. of track rollers on either side	5
Ground clearance	375 mm (14.76")
Ground pressure	0.35 kg/cm² (4.8 psi)
Upper carriage swivel speed	8.0 rpm

2.5 Stabilizer blade

Stabilizer blade	Model 75Z$_3$
Width/height	2300/500 mm (90.55/19.68")
Max. lift over/under subgrade	465/405 mm (18.31/15.94")

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Draining coolant

Danger!

Never open the coolant reservoir and never drain coolant if the engine is warm since the cooling system is under high pressure –

Burn hazard!

☞ *Wait at least 10 minutes after stopping the engine.*

☞ *Wear protective gloves and clothing.*

☞ *Open filler cap **17**/**B** to the first notch and release the pressure.*

Notice!

Do not add a different coolant to the one in the reservoir.

- Only use the coolant prescribed by Wacker Neuson
  – *see Fluids and lubricants* on page 3-2.

After the engine has cooled down:

☞ *Release overpressure in the radiator.*

☞ *Open the cap to the first notch and fully release the pressure.*

☞ *Open filler cap **17**/**B**.*

☞ *Open the drain plug of the radiator and drain the coolant.*

☞ *Close the drain plug again.*

☞ *Fill up the radiator with suitable coolant* *– see Fluids and lubricants on page 3-2.*

☞ *Check the coolant level* *– see Checking the coolant level on page 3-21.*

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Lubrication points of control lever base (from serial no. AJ02793)

Danger!

In the area of the moving parts of the control lever base –

Crushing hazard.

☞ *Stay clear (extremities, clothing) of the moving parts.*

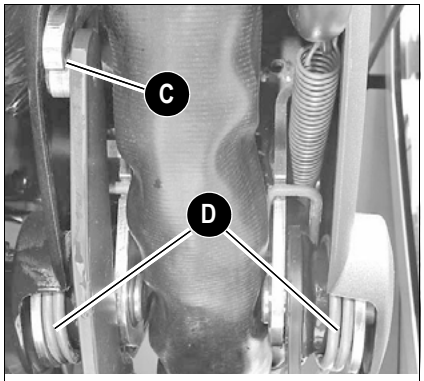


Fig. 69: Guide lever and double spring

☞ *Raise the control lever base.*

☞ *Spray fluid grease onto guide lever **C**.*

☞ *Spray fluid grease on both sides of double spring **D**.*

Notice!

Spray fluid grease onto the lubrication points once a month (every 250 o/h).

Maintenance of attachments

Notice!

Correct maintenance and service is absolutely necessary for smooth and continuous operation, and for an increased service life of the attachments. Please observe the lubrication and maintenance instructions in the Operator's Manuals of the attachments.

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4.23 Compression

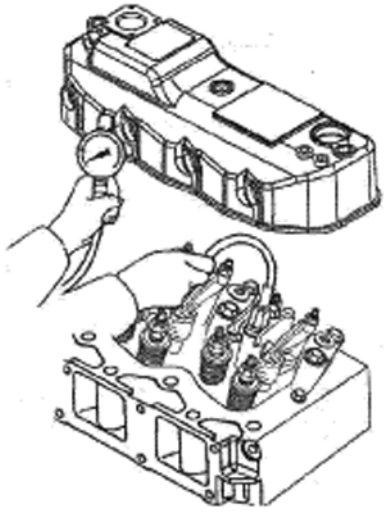


Fig. 38: Compression

☞ *Remove the injection lines and the injection nozzles.*

☞ *Set the fuel injection pump to zero delivery (remove the plug for the cutoff solenoid).*

☞ *Turn the engine.*

☞ *Install the compression gage on the cylinder you want to measure.*

☞ *Turn the engine with the starter and read the pressure off the pressure gage.*

➥ Specified value: **33.3 – 35.3 bar (483 – 512 psi) at 250 rpm**

➥ Threshold value: **26.5 – 28.5 bar (384 – 413 psi) at 250 rpm**

4.24 Checking the coolant thermostat

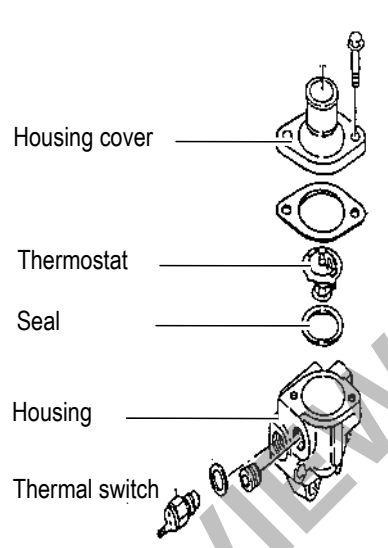
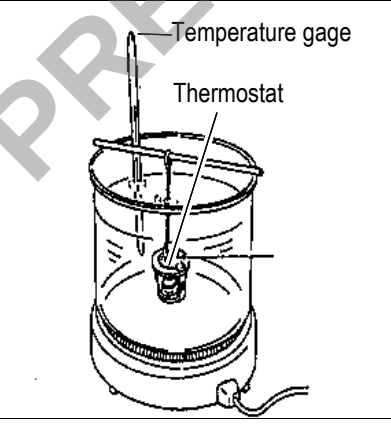


Fig. 39: Coolant thermostat

☞ *Remove the thermostat.*

➥ The thermostat is located on the water pump.



☞ *Warm up the thermostat in a container with water.*

☞ *Check whether the thermostat opens at the specified temperature (check with a temperature gage).*

➥ Thermostat opening temperature: **69.5 – 72.5 °C (157.1 – 162.5 °F)**

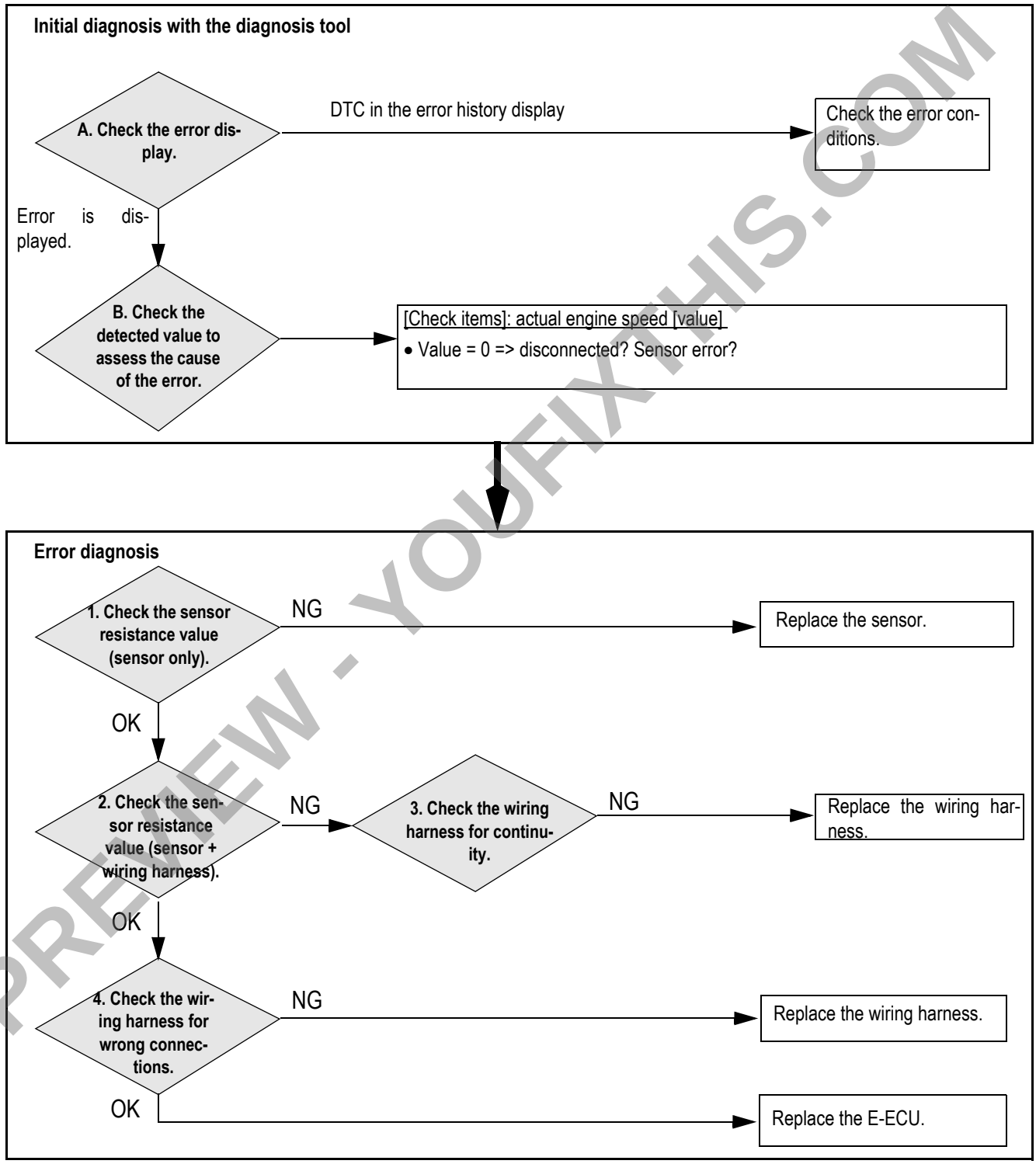
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Flash code 6 – engine speed sensor

Related DTC

DTC	P0340/4	Engine speed sensor error



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Work description

1. Check the relay coil resistance value (relay only):

- Disconnect the E-ECU main relay from the wiring harness.
- Check the continuity between terminals A and B on the relay side by means of a multimeter.

NG	Replace the E-ECU main relay.
OK	Check the resistance of the E-ECU main relay coil. -> Next: [2. Check the resistance value of the relay coil (relay only):]

2. Check the relay coil resistance value (relay only):

- Disconnect the E-ECU main relay from the wiring harness.
- Measure the resistance between terminals C and D on the relay side by means of a multimeter.

Measurement conditions		Measured value	Status
Tester (+) side	**Tester (−) side**		
Terminal C	Terminal D	Existing (*)	OK if both are normal
Terminal D	Terminal C	Infinite (*)	
Terminal C	Terminal D	Infinite (*)	NG: internal relay circuit error
Terminal D	Terminal C		

*A series-connected diode integrated in reverse direction requires using the checking method mentioned above and causes the measured value to vary depending on the multimeter used.

NG	Replace the E-ECU main relay.
OK	With the E-ECU main relay and the wiring harness connected, check the relay coil resistance. -> Next: [3. Check the resistance value of the relay coil (relay + wiring harness side):]

3. Check the resistance value of the relay coil (relay + wiring harness side):

- Connect the E-ECU main relay onto the wiring harness.
- Disconnect the E-ECU from the wiring harness.
- Measure the resistance between the battery cable (+) and the E-ECU connector E34 on the wiring harness side.

Measurement conditions		Measured value	Status
Tester (+) side	**Tester (−) side**		
Battery (+) line	E34	Existing (*)	OK: normal
E34	Battery (+) line	Infinite (*)	
Battery (+) line	E34	Infinite (*)	NG: wiring harness error
E34	Battery (+) line		

*A series-connected diode integrated in reverse direction requires using the checking method mentioned above and causes the measured value to vary depending on the multimeter used.

NG	Replace the wiring harness.
OK	Check the wiring harness for continuity. -> Next: [4. Check the wiring harness for continuity:]

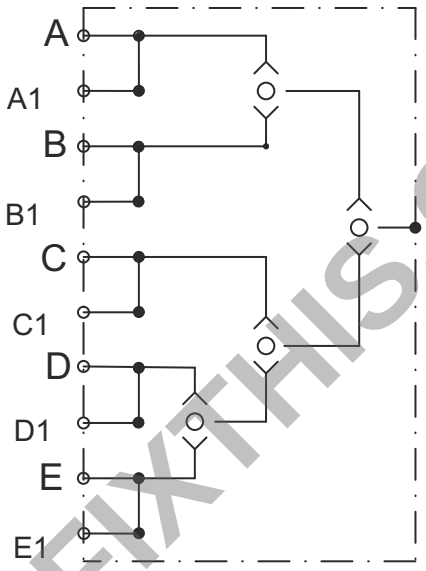
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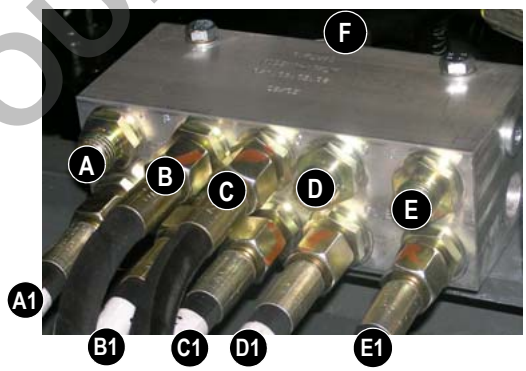
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Shuttle valve block

Actuating upper carriage rotation, boom swivel and stick retraction must release the gear motor's brake.

High forces act on the brake and destroy it if it is not released during these operations.





Pos.	Designation
A	Rotation control (right) from the joystick
A1	Rotation control (right) to the main valve block
B	Rotation control (left) from the joystick
B1	Rotation control (left) to the main valve block
C	Swiveling cylinder extension control (from the joystick)
C1	Swiveling cylinder extension control (to the main valve block)
D	Swiveling cylinder retraction control (from the joystick)
D1	Swiveling cylinder retraction control (to the main valve block)
E	Stick cylinder extension control (from the joystick)
E1	Stick cylinder extension control (to the main valve block)
F	Gear motor brake release control

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6.8 Relays up to serial no. AD07209

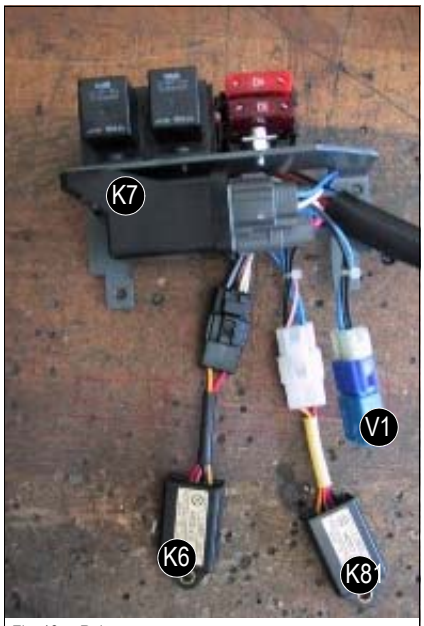


Fig. 13: Relays

The relays are located in the relay box under the cabin.

Switching relay no.	Protected circuit
K 6	– Preheating timer (indicator light only); black plug
K 7	– Starting relay
K 8	– Cutoff solenoid timer; white plug
V 1	– Cutoff solenoid recovery diode

6.9 Fuse box on the instrument panel (from serial no. AH00646)

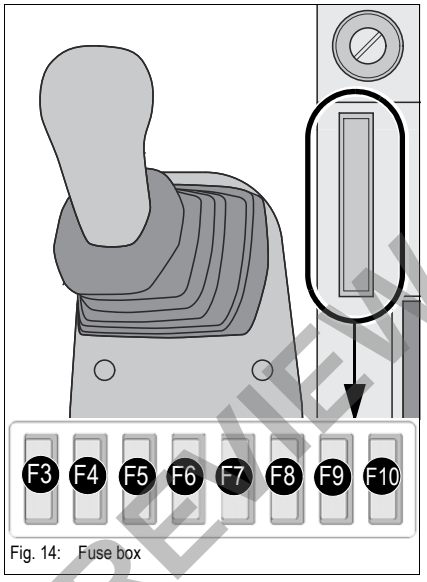


Fig. 14: Fuse box

Fuse no.	Rated current (A)	Protected circuit
F3	10 A	– Displays, E-ECU
F4	10 A	– Boom working light
F5	15 A	– Cabin working lights
F6	10 A	– Valves, horn
F7	15 A	– Heating, air conditioning
F8	10 A	– Wiper, interior light
F9	10 A	– Rotating beacon, radio
F10	15 A	– 12 V power outlet

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Maintenance

Notice!

Important information for maintenance and repair work:

- There may be residual pressure in the system even if it is empty. Release this pressure with extreme care as you remove the connections.
- When working on the cooling circuit, close all openings tightly to prevent humidity from penetrating into the system.
- Do not open the cooling circuit outdoors in humid weather or rain.

Checking the compressor oil

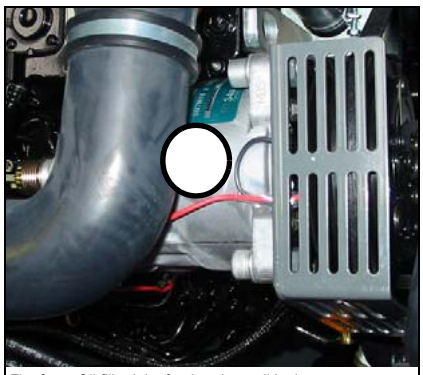


Fig. 3: Oil filler inlet for the air conditioning compressor

Check the oil level if:

- a system component has been replaced.
- the system leaks oil.
- the maintenance interval is due – *see Maintenance plan (overview)* on page 3-6.

Proceed as follows:

☞ *Let the compressor run at idling speed with the diesel engine for 10 minutes.*

☞ *Open the oil filler opening.*

☞ *Push the oil dipstick into the oil filler opening.*

☞ *Withdraw the oil dipstick from the compressor and read off the oil level at the grooves on the oil dipstick.*

➥ The oil level must reach 5 – 7 grooves.

☞ *Add oil of the same grade if the oil level is lower* – *see Fluids and lubricants on page 3-2.*

Fresh/recirculated air filter

Raise the cabin to replace the filter– *see Raising/lowering the cabin* on page 1-17.

The air conditioning system is located at the rear half of the cabin.

Replacing:

☞ *Remove the cover between the air conditioning unit and the front air duct.*

☞ *You can now access the cabin filter.*

☞ *Remove the cabin filter.*

☞ *Insert a new cabin filter.*

☞ *Fit the cover between the air conditioning unit and the front air duct back on again.*

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