

1.6 TECHNICAL DATA

1.6.1 ENGINE

	W50	W60	W70	W80
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1.6.5 FLUIDS AND LUBRICANTS

	W50		
	Approx. filling quantity (liters)	Change after operating hours	Quality ²⁾
Diesel engine (incl. filters)	10.5 ¹⁾	1000 ²⁾	API CF-4, CG-4, CH-4
Cooling system	3.4 ¹⁾	1000 ²⁾	API CF-4, CG-4, CH-4
Fuel tank	90	see engine operating instructions	
Hydraulic system	60 ¹⁾	3000 ³⁾	multigrade hydraulic oil
Front axle - Differential	7.5 ¹⁾	1000 ⁴⁾	API GL4, GL5 MIL-L2105/2105D
Front axle - Wheelhub	2 x 0.7 ¹⁾	1000 ⁴⁾	API GL4, GL5 MIL-L2105/2105D
Rear axle - Differential	7.5 ¹⁾	1000 ⁴⁾	API GL4, GL5 MIL-L2105/2105D
Rear axle - Wheelhub	2 x 0.7 ¹⁾	1000 ⁴⁾	API GL4, GL5 MIL-L2105/2105D
Greasing points	2 x for all greasing points ⁶⁾	weekly ²⁾	NLGI-Nr. 2 ⁵⁾

¹⁾ filling quantities referred to oil change, **not** to initial filling

²⁾ see operating instructions

³⁾ after 3 years at the latest

⁴⁾ after 3 years at the latest

⁵⁾ at ambient temperatures below 0 °C use grease type NLGI-No. 1 or 0.

⁶⁾ 0.4 kg cartridge

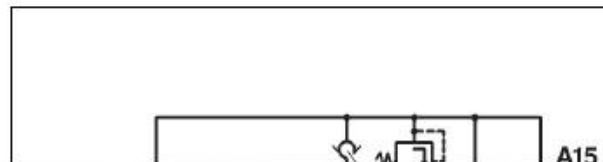
1.5.3 BOLTS WITH STANDARD THREAD DIN 13 – 13

Thread nominal Ø	Material quality	Tightening torques M _A in Nm		
		total 0.10 ¹⁾	total 0.12 ²⁾	total 0.16 (L) ³⁾

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3.1.4 PRINCIPLE: HYDROSTATIC TRANSMISSION

To meet the demands of customers for optimum output with operating simplicity and minimum-maintenance units in small to medium wheeled loaders,



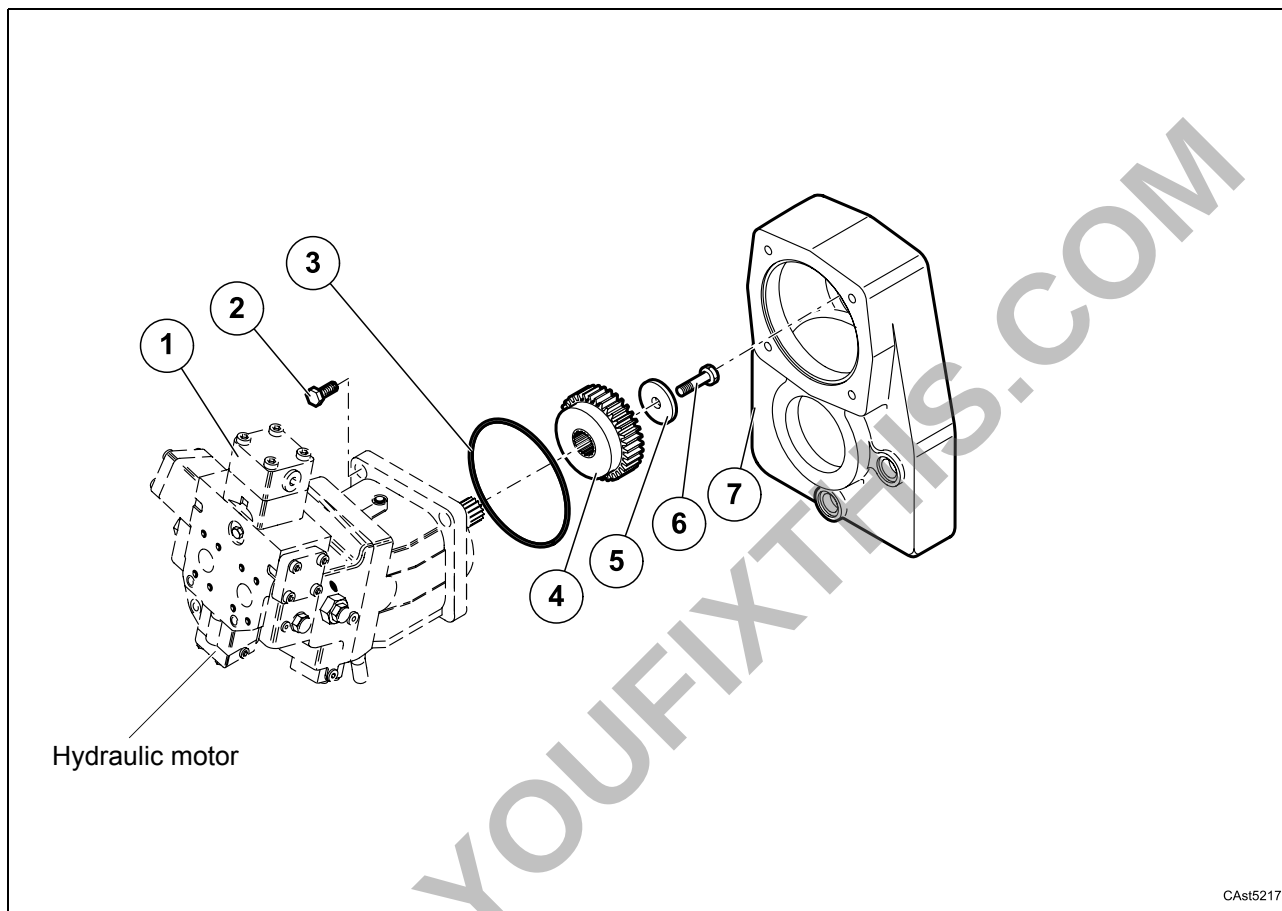
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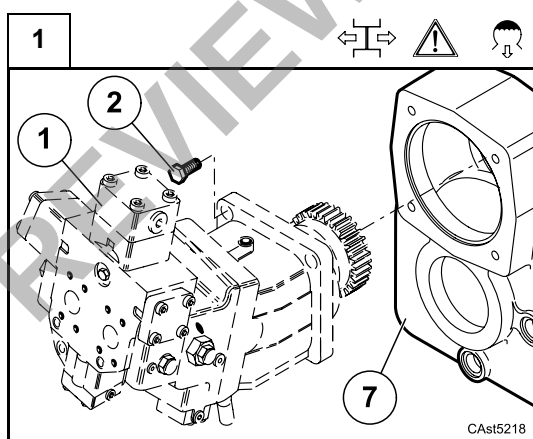
4.6 DISASSEMBLY AND ASSEMBLY OF REAR AXEL

4.6.1 HYDRAULIC MOTOR GROUP (TB150)



Disassembly

Some of the following pictures may not show exactly your axle, but the indicated operations are correct anyway.



WARNING

Before operating on the group, drain the oil (Par. 4.5.4).



WARNING

Support the hydraulic motor with a rope or other appropriate means.

Unscrew fastening bolts (2) and disassembly hydraulic motor from the transmission box (7).

Service schedule

Specified maintenance intervals are for standard-duty use.
Severe operating conditions may require more short intervals.

Operation	First time	Ordinary maintenance	
Axle oil change	150-200 hours	● seasonally or every 1500 hours ⁽¹⁾	■
Clean magnetic oil plugs	first oil change	■ every oil change	●
Check and adjust oil level	50-100 hours	■ monthly or every 300-400 hours ⁽¹⁾	●
Clean oil breather	300-400 hours ⁽³⁾	■ monthly or every 300-400 hours ⁽¹⁾	●
Greasing (if required)	150-200 hours ⁽²⁾	● weekly or every 150-200 hours ⁽¹⁾⁽²⁾	●
Lubrication works (if required)	150-200 hours ⁽³⁾	■ seasonally or every 1500 hours ⁽¹⁾	■

● this operation must be performed only by personnel authorized by the manufacturer

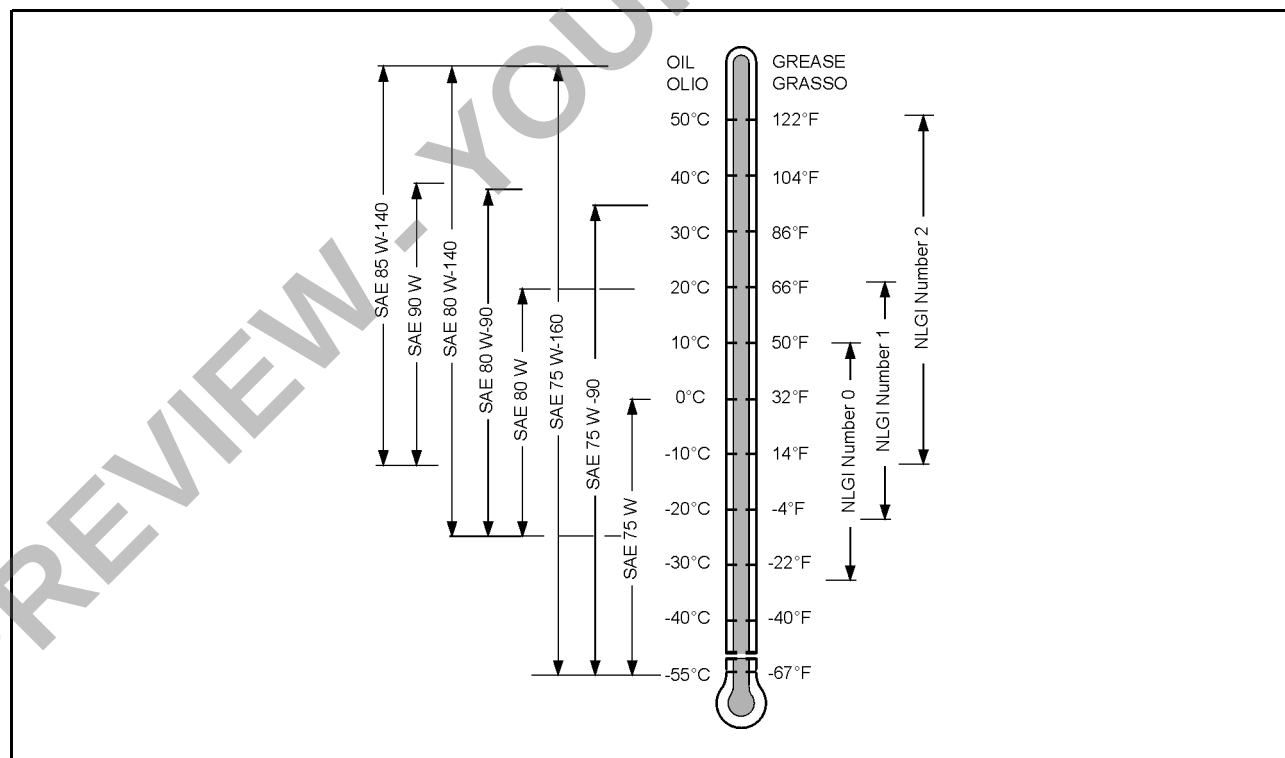
■ this operation must be performed only by trained personnel

⁽¹⁾ which of both conditions comes first

⁽²⁾ 50 hours for severe operating condition

⁽³⁾ at the season end if you have not reached the indicated work-hours

Lubricants application range



Carefully read personal and machine SAFETY INSTRUCTIONS (at the beginning of this manual)

4.4 TROUBLESHOOTING

PROBLEMS	POSSIBLE CAUSES										
	1	2	3	4	5	6	7	8	9	10	11
- Wheel vibration; front tyre resistance; halfshaft breakage.	●	●	●		●						●
- Steering is difficult; vehicle goes straight while its turning.	●	●	●	●							●
- No differential action; jamming while steering.	●			●	●						●
- No differential action; jamming while steering.	●	●	●	●	●		●		●		●
- Uneven wear of tyre.	●	●	●	●	●	●	●				●
- Friction noise.	●			●	●			●	●	●	●
- Vibration during forward drive, intermittent noise.	●	●	●		●						●

1. Incorrect installation / defective axle

Correct installation or repair or replace the differential in case it does not survive any one of the test phases.

2. Overloading / incorrect weight distribution

Remove excessive weight and redistribute load, following instructions related to the vehicle.

3. Different rotation radius of the tyres

If one tyre has a smaller radius, it will cause partial wheel slipping when force is applied. The other tyre with bigger radius will have to support all the work. Replace the tyre or adjust pressure to have same radius on both tyre.

4. Broken halfshaft

It is not advisable to operate the vehicle with a broken halfshaft.

It is acceptable to move the vehicle (engine off unloaded) a few meters away only.

5. Bent halfshaft

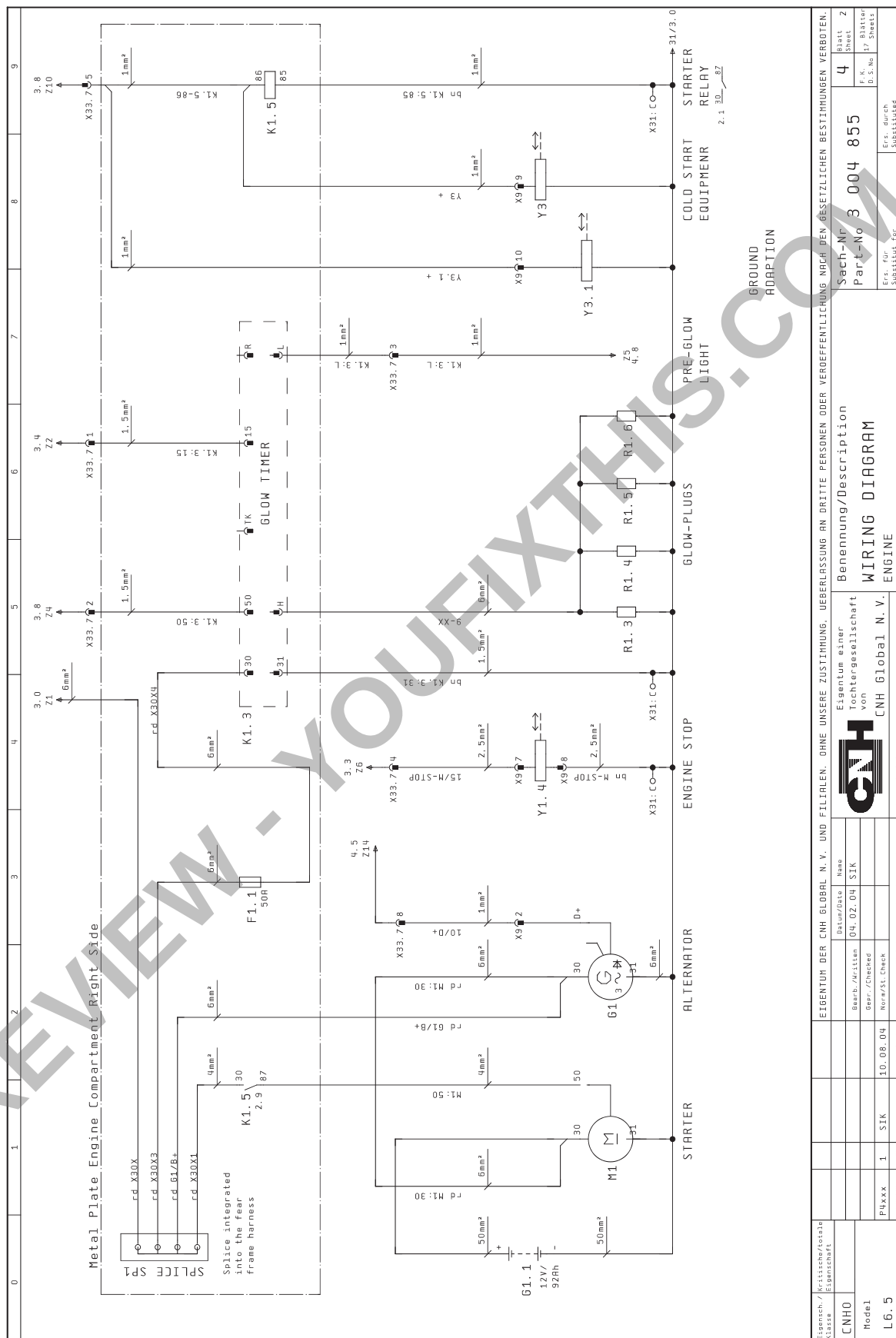
Replace halfshaft.

6. Blocked differential

Abnormal functioning of the differential or breakage/ blockage of command device. Verify assembly and all components.

Vehicles with wide steering angle may proceed with kicks, have steering difficulty or cause pneumatic wearing at sharp turns. Reduce the steering angle to minimum and decelerate when the vehicle begins to kick.

8.1.3 ENGINE



SUMMARY

SAFETY INSTRUCTION.....	SECTION 0
SERVICE DATA.....	SECTION 1
DIESEL ENGINE.....	SECTION 2
TRANSMISSION.....	SECTION 3
AXLES	SECTION 4
STEERING.....	SECTION 5
BRAKE SYSTEM	SECTION 6
HYDRAULIC SYSTEM.....	SECTION 7
ELECTRICAL SYSTEM	SECTION 8
FRAME.....	SECTION 9

FUNDAMENTAL SAFETY INSTRUCTIONS

WARNINGS AND SYMBOLS

The following signs are used in the Workshop Manual to designate exceptionally important information:

	Precautionary rules and measures designed to protect the operator and other persons from life-threatening hazards or injury and to prevent extensive damage to property.
	Information and precautionary measures designed to prevent damage to the machine and other property.

RISKS RESULTING FROM FAILURE TO OBSERVE THE SAFETY INSTRUCTIONS

	<p>This wheeled loader has been built in accordance with state-of-the-art standards and recognized safety regulations.</p> <p>Nevertheless, its use may constitute a risk if it is still operated despite a suspected or obvious defect or if it is inexpertly repaired.</p> <p>There is then a potential</p> <ul style="list-style-type: none">- risk to life and limb- risk of the machine and other assets being damaged. <p>The wheeled loader must be stopped immediately if suspected or obvious damage represents a risk to the safety of the operator, of other persons at the deployment site, or of other assets.</p> <p>All components are carefully coordinated. Original parts must be used to ensure smooth running and a long service life.</p>
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ORGANIZATIONAL MEASURES

The Operation and Maintenance Instruction Manual must always be at hand at the deployment site of the machine, e.g. in the container provided.

In addition to the Operation and Maintenance Instruction Manual, observe and instruct the user in all other generally applicable statutory and other mandatory regulations relevant to accident prevention and environmental protection.

These compulsory regulations may also deal, for example, with the handling of hazardous substances, the issuing/wearing of personal protective equipment, or traffic regulations.

The Operation and Maintenance Instruction Manual must be supplemented by instructions covering the duties involved in supervising and notifying special organizational features, such as job organization, working sequences or deployed personnel.

The personnel assigned to work on the machine must have read the operating instructions and in particular the Safety Instructions section before starting work. Reading the instructions after work has begun is too late. This applies especially to persons working only occasionally on the machine, e.g. during setting-up or servicing.

Check at least occasionally whether the work is being carried out in compliance with the Operation and Maintenance Instruction Manual and with attention being paid to risks and safety factors.

Long hair must be tied back or otherwise secured, garments must be close-fitting, and no jewellery including rings may be worn. Injury may result from such items being caught up in the machinery or catching on moving parts.

Use personal protective equipment wherever required by the circumstances or by law.

Observe all safety instructions and warnings attached to the machine.

See to it that safety instructions and warnings attached to the machine are always complete and perfectly legible.

NOTES:

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Carefully read personal and machine SAFETY INSTRUCTIONS (at the beginning of this manual)

Download full manual at youfixthis.com

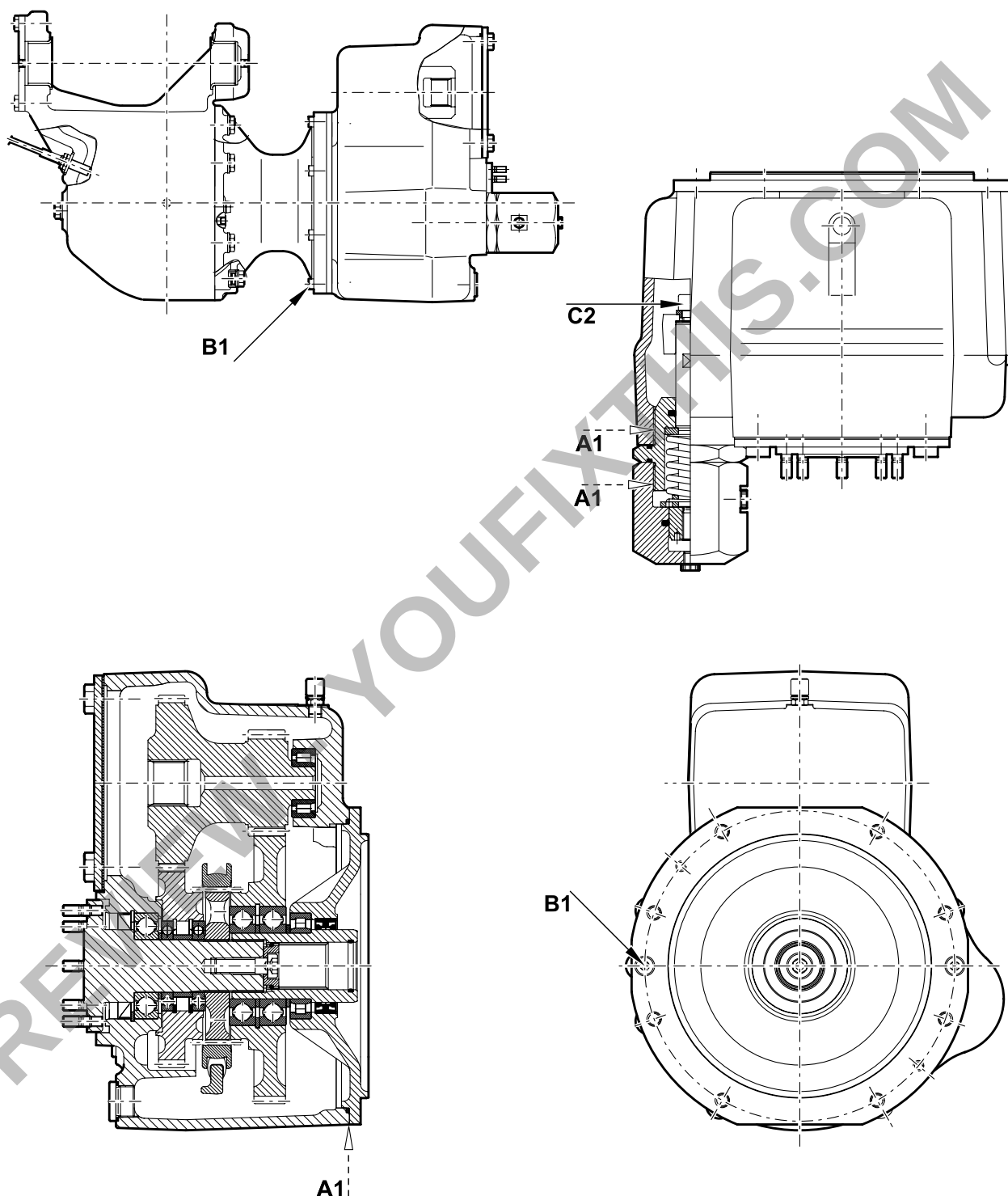
2.1 DIESEL ENGINE

Please contact the service of the company DEUTZ.

PREVIEW - YOUFIXTHIS.COM

Sealing compounds and adhesives

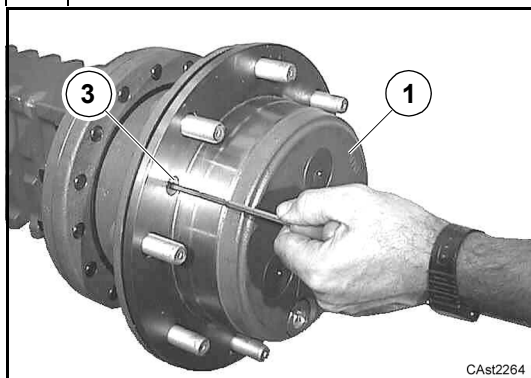
Only for
TB138.5



CAst5273

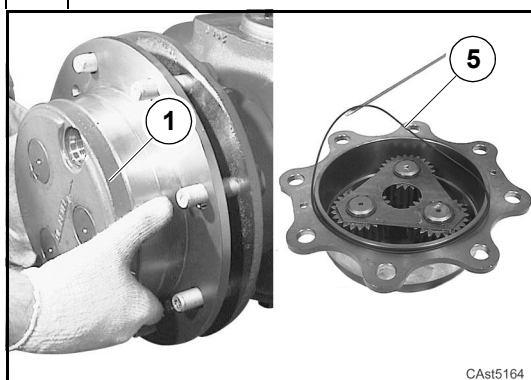
Carefully read personal and machine SAFETY INSTRUCTIONS (at the beginning of this manual)

2



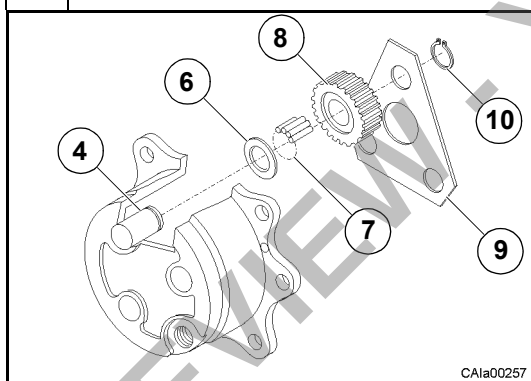
Unscrew and remove the two fastening screws (3) of the planetary carrier (1) with a wrench.

3



Remove the planetary carrier (1) from the wheel hub and collect the relative O-Ring (5). Position the planetary carrier (1) on a workbench and check its wear conditions.

4



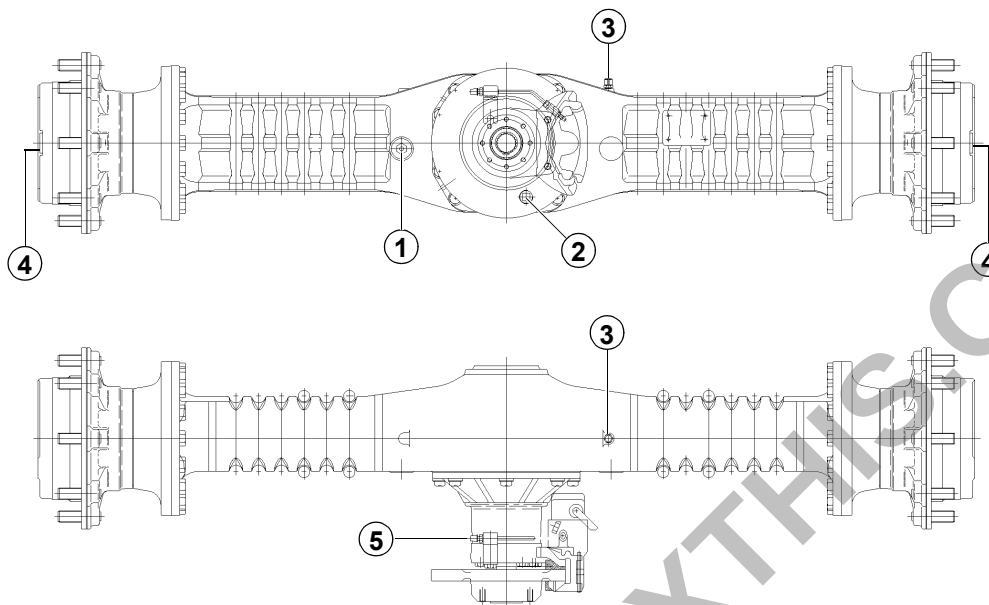
If required replace the planetary gears as follows:

- remove the snap rings (10) on every pin (4);
- remove the triangular plate (9);
- remove the planetary gears (8) from the pins;
- collect the needle bearings (7), checking their conditions;
- collect the washer (6).

4.7.4 OIL CHANGE AND CHECKS

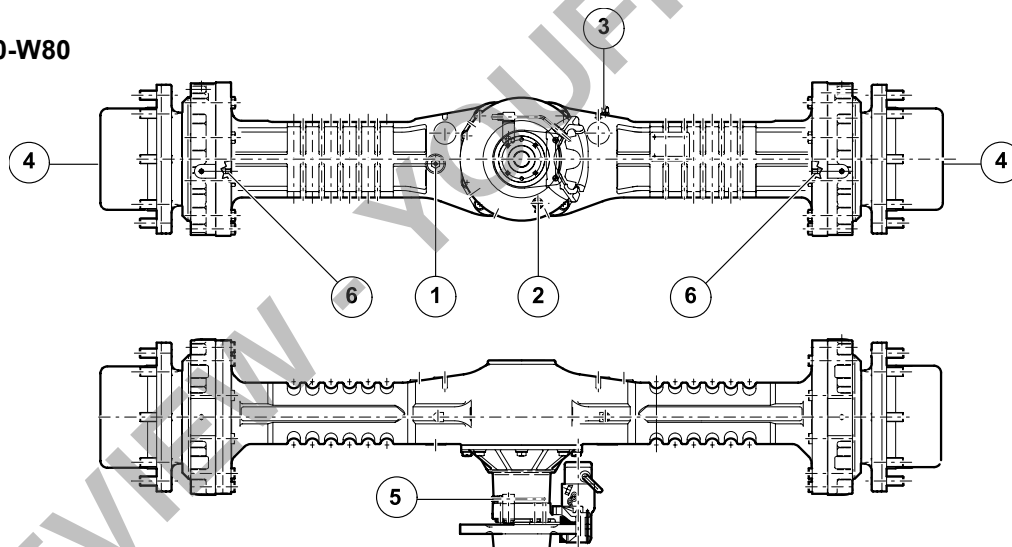
Some of the following pictures may not show exactly your axle, but the indicated operations are correct anyway.

W50



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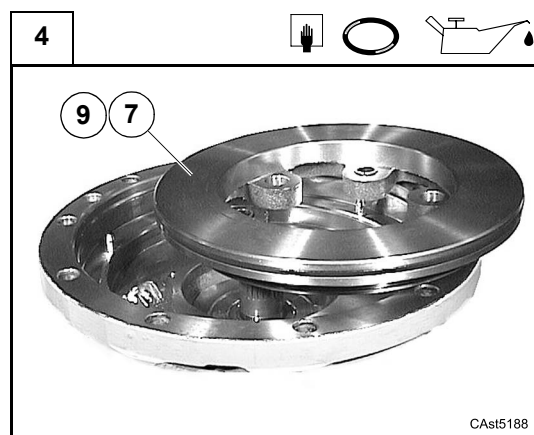
W60-W70-W80



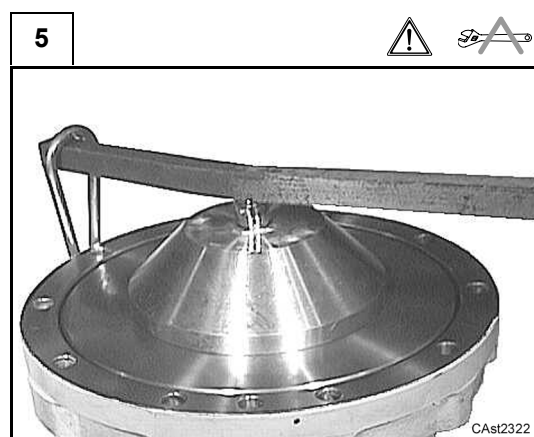
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- 1 Oil filling and level plug
- 2 Oil drain plug
- 3 Oil breather
- 4 Filling, level and drain plug of epicyclic reduction gear oil
- 5 Brake bleed
- 6 Brakes connection port (only for W60 - W70 - W80 High Travel Speed)

Carefully read personal and machine SAFETY INSTRUCTIONS (at the beginning of this manual)



Clean the piston and the seat of the Quad-rings.
Grease the Quad-ring seat (Par. 4.7.2).
Insert and grease the Quad-rings (7) and (9) (Par. 4.7.2).

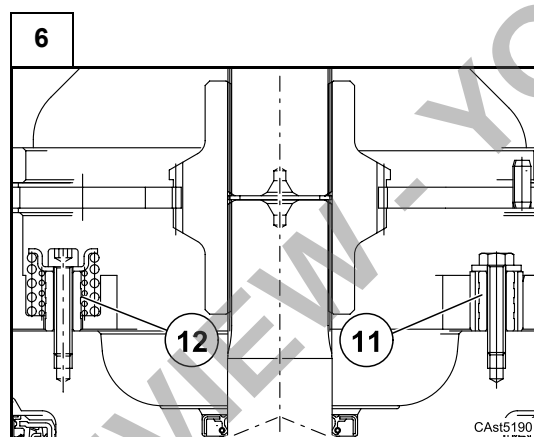


Position a flat disc on the piston.
With a lever anchored to an eyebolt, exert a pressure just enough
to insert the piston into the wheel shaft.

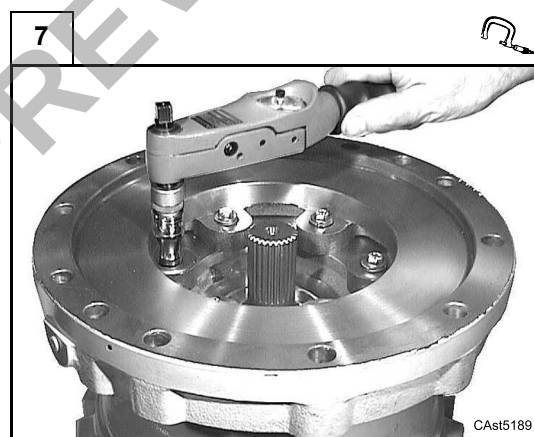


WARNING

Do not damage the Quad-rings.



Collect the components of the self-adjust kit (11) and the piston
return kit (12). Install them into the piston as shown in the picture.



Tighten the fastening screws of the kits to the prescribed torque
(Par. 4.7.5).

Operation

The pressure accumulator (B4) is under a pre-charging pressure of 50 bars. For checking of this precharging pressure, diesel engine (1) is shut off and the pressure accumulator pumped empty by depressing the brake pedal.

The last pressure value indicated on the pressure gauge connected to measuring port PBS before breakdown of the feed pressure is the precharging pressure of the pressure accumulator.

If the precharging pressure is too low, the accumulator precharging pressure can be corrected with a suitable filling station. Older pressure accumulators and accumulators losing their pressure within a short time after filling must be replaced.



IMPORTANT:

In a correctly working brake system, the machine can be braked at least ten times when the engine is stationary and the pressure accumulator filled before the feed pressure breaks down.

Accumulators, safety instructions



Accumulators are installed in the hydraulic system. These accumulators contain nitrogen under high initial pressure.

Even when the hydraulic pressure in the system is reduced, the nitrogen remains in the accumulator.

The accumulators are completely safe in operation. If incorrectly handled, however, there is a risk of explosion.

So:

- Never handle accumulator mechanically, never weld or solder it.
- Testing and servicing work must be carried out by experts only.
- Prior to any testing and servicing work, depressurize the hydraulic part of the system.
- To dismantle the accumulator, always wear goggles and working gloves.
- Fill accumulator with nitrogen only, never with compressed air or oxygen.
- Report any defects or damage to the machine owner without delay.
- Prior to recommissioning, an inspection by a specialist or expert is essential if the accumulator was damaged or if the admissible operating temperature or operating pressure was exceeded.

Never remove or paint over warning and information plates, rating plates or type identification markings. Replace illegible or damaged plates immediately.

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