UEBM001901

SHOP MANUAL

KOMATSU®

PW200-7K
PW220-7K

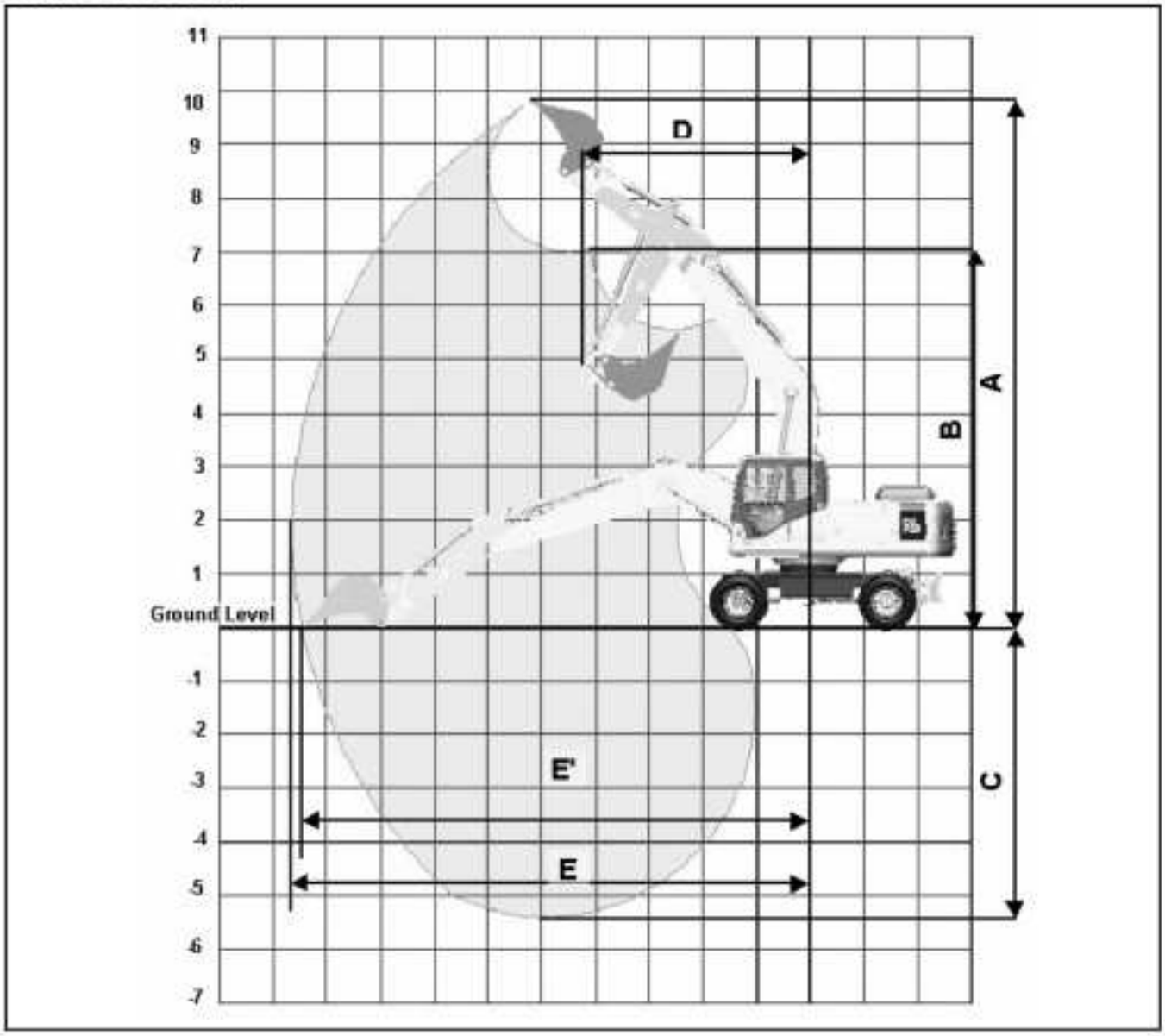
MACHINE MODEL	SERIAL NUMBER
PW200-7K	**K40001 AND UP**
PW220-7K	**K40001 AND UP**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require.
  Materials and specifications are subject to change without notice.
- PW200/PW220-7K mount the SAA6D102E-2 engine.
  For details of the engine, see the 102 Series Engine Shop Manual.

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WORKING RANGES

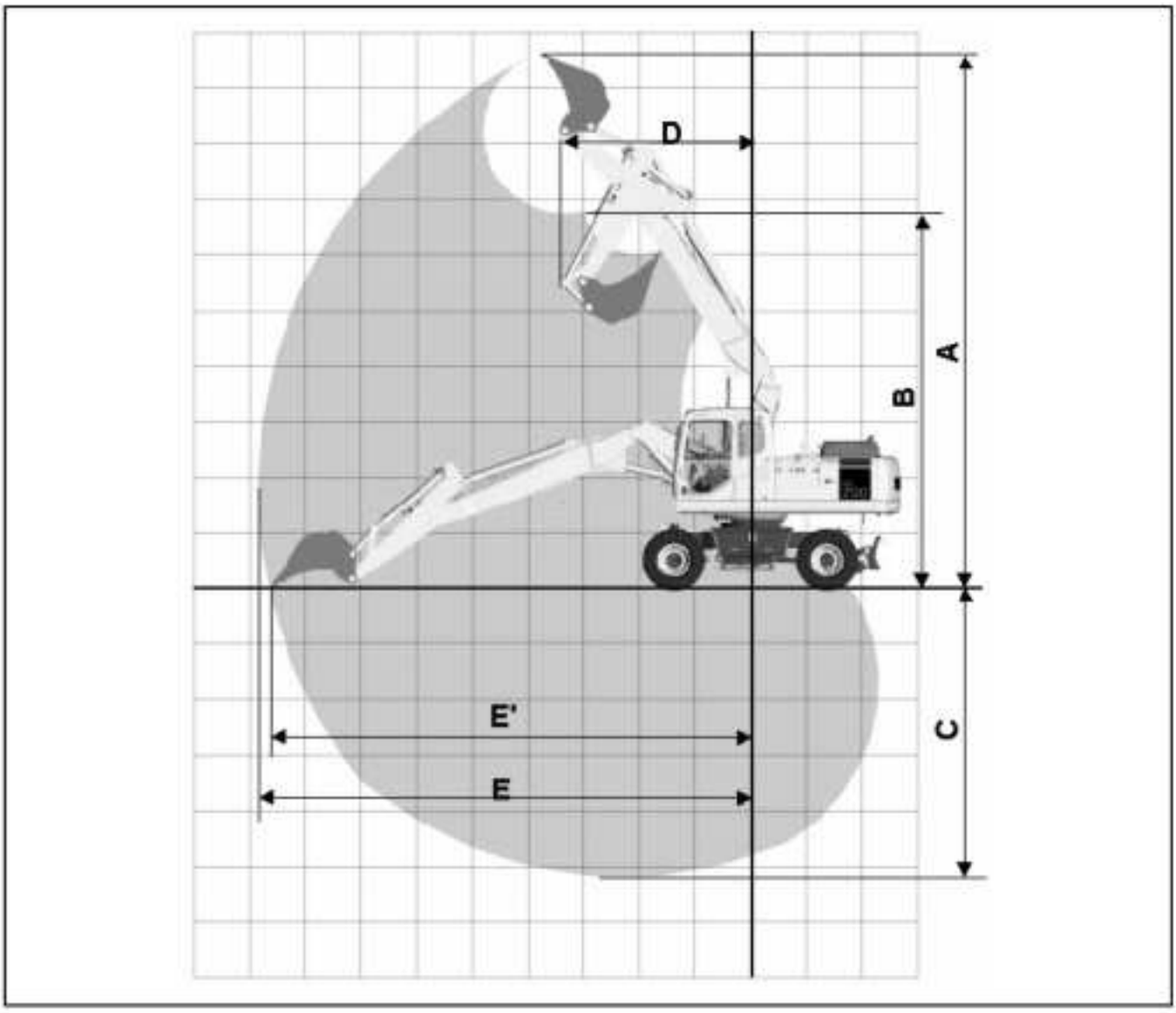
1 PIECE BOOM



Arm length mm (Tt/In)		1800	2400	2900	3500
A	Max. digging height	9467	9883	10003	10438
B	Max. dumping height	6704	7057	7229	7612
C	Max. digging depth	4791	5402	5917	6500
D	Min. swing radius	3906	3201	3143	3184
E'	Max. digging reach ay GL	8867	9438	9875	10478
E	Max. digging reach	9067	9651	10060	10642

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2 PIECE BOOM



Arm length mm (Tt/In)		1800	2400	2900	3500
A	Max.digging height	9532	9842	10168	10434
B	Max.dumping height	6670	6982	7298	7574
C	Max digging depth	5166	5785	6285	6860
D	Min. swing radius	2594	3121	2745	2866
E'	Max. digging reach ay GL	8599	9144	9634	10156
E	Max. digging reach	8818	9348	9822	10338

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SPECIFICATIONS

PW200-7, PW220-7

Machine model				PW200-7	PW220-7	PW220-7 (Heavy duty option)
Serial Number				K40001 and up		
Bucket capacity		Arm size (m)	m^3	0.8	1.0	
Operating weight			kg	19,900	20,400	21,160
Performance	Max. digging force (using power max. function)	1.8	kN {kg}	138.3 {14,100} (149.1 {15,200})	138.3 {14,100} (149.1 {15,200})	
		2.4				
		2.9			163 {16,621} (176 {17,947})	
		3.5				
	Swing speed		rpm	12.4		
	Swing max. slope angle		deg.	20		
	Travel speed		km/h	Cr : 0-2 Lo : 0-9 Hi : 10-35 (Germany :10-20)		
	Gradeability		deg. kPa (kg cm^2)	35 36.3 {0.37}		
	Standard Tyre Width		mm	10.00 - 20	11.00 - 20	

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POINTS TO REMEMBER WHEN TROUBLESHOOTING

! Stop the machine in a level place, and check that the safety pin, blocks, and parking brake are securely fitted.
! When carrying out the operation with two or more workers, keep strictly to the agreed signals, and do not allow any unauthorized person to come near.
! If the radiator cap is removed when the engine is hot, hot water may spurt out and cause burns, so wait for the engine to cool down before starting troubleshooting.
! Be extremely careful not to touch any hot parts or to get caught in any rotating parts.
! When disconnecting wiring, always disconnect the negative (–) terminal of the battery first.
! When removing the plug or cap from a location which is under pressure from oil, water, or air, always release the internal pressure first. When installing measuring equipment, be sure to connect it properly.

The aim of troubleshooting is to pinpoint the basic cause of the failure, to carry out repairs swiftly, and to prevent reoccurrence of the failure.
When carrying out troubleshooting, and important point is of course to understand the structure and function.
However, a short cut to effective troubleshooting is to ask the operator various questions to form some idea of possible causes of the failure that would produce the reported symptoms.

1. When carrying out troubleshooting, do not hurry to disassemble the components.
If components are disassembled immediately any failure occurs:
- Parts that have no connection with the failure or other unnecessary parts will be disassembled.
- It will become impossible to find the cause of the failure.

It will also cause a waste of manhours, parts, or oil or grease, and at the same time, will also lose the confidence of the user or operator.
For this reason, when carrying out troubleshooting, it is necessary to carry out thorough prior investigation and to carry out troubleshooting in accordance with the fixed procedure.

2. Points to ask user or operator
1) Have any other problems occurred apart from the problem that has been reported?
2) Was there anything strange about the machine before the failure occurred?
3) Did the failure occur suddenly, or were there problems with the machine condition before this?
4) Under what conditions did the failure occur?
5) Had any repairs been carried out before the failure?
When were these repairs carried out?
6) Has the same kind of failure occurred before?

3. Check before troubleshooting
1) Check the oil level
2) Check for any external leakage of oil from the piping or hydraulic equipment.
3) Check the travel of the control levers.
4) Check the stroke of the control valve spool.
5) Other maintenance items can be checked externally, so check any item that is considered to be necessary.

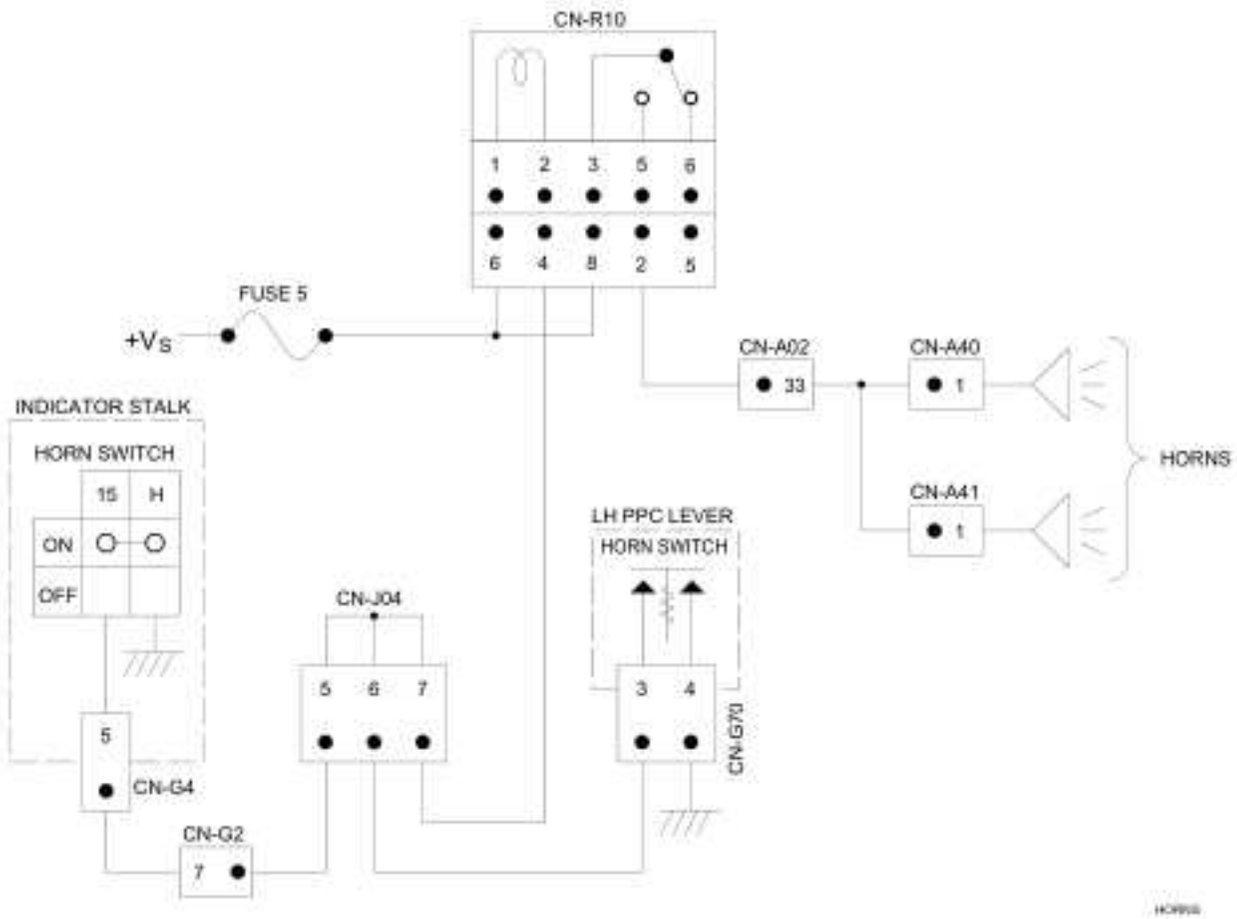
4. Confirming failure
- Confirm the extent of the failure yourself, and judge whether to handle it as a real failure or as a problem with the method of operation, etc.
  - ★ When operating the machine to reenact the troubleshooting symptoms, do not carry out any investigation or measurement that may make the problem worse.

5. Troubleshooting
- Use the results of the investigation and inspection in Items 2 – 4 to narrow down the causes of failure, then use the troubleshooting flowchart to locate the position of the failure exactly.
  - ★ The basic procedure for troubleshooting is as follows.
    1)Start from the simple points.
    2)Start from the most likely points.
    3)Investigate other related parts or information.

6. Measures to remove root cause of failure
- Even if the failure is repaired, if the root cause of the failure is not repaired, the same failure will occur again.
To prevent this, always investigate why the problem occurred. Then, remove the root cause.

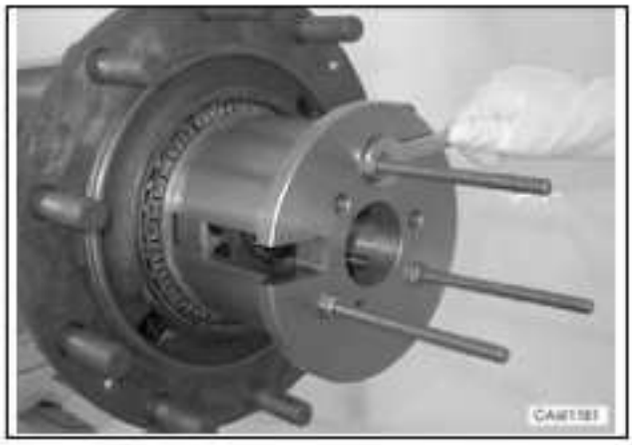
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Circuit Diagram for Horn

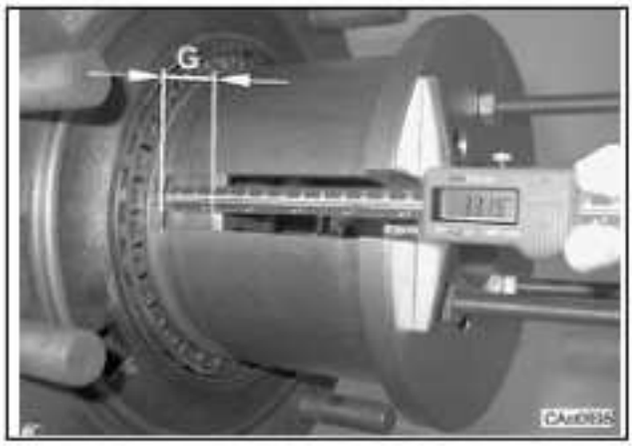


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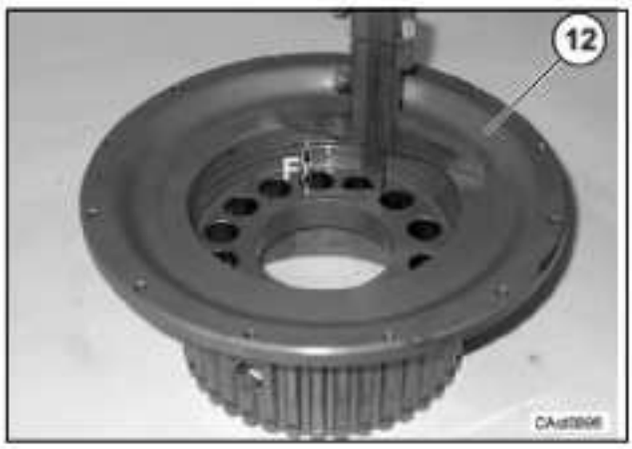
10. Assemble the tool 2897012, 3 draw plates M10 x 285 and 3 nuts M10.



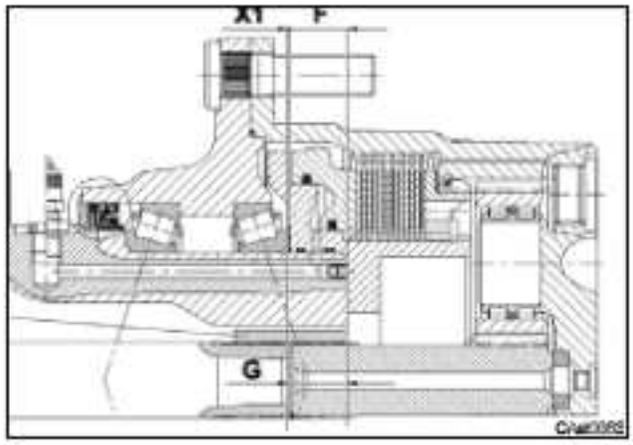
11. Use a depth gauge to measure dimension (g) of wheel hub.



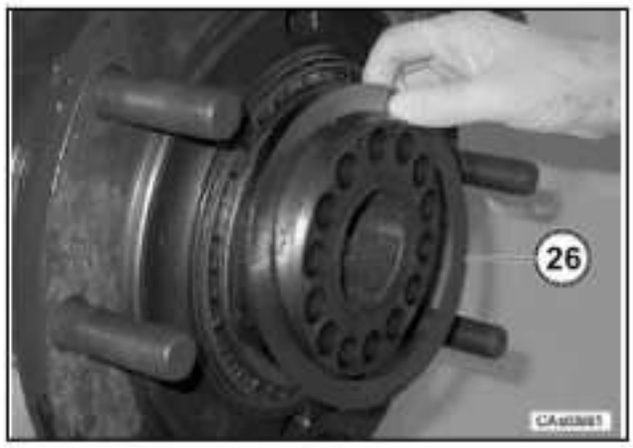
12. Use a depth gauge to measure dimension F of brake carrier (12).



13. Calculate shims X1 of adjustment shims by using the following procedure: X1 (G-F) + 0.05.



14. Assemble previously calculated shims (26) X1.

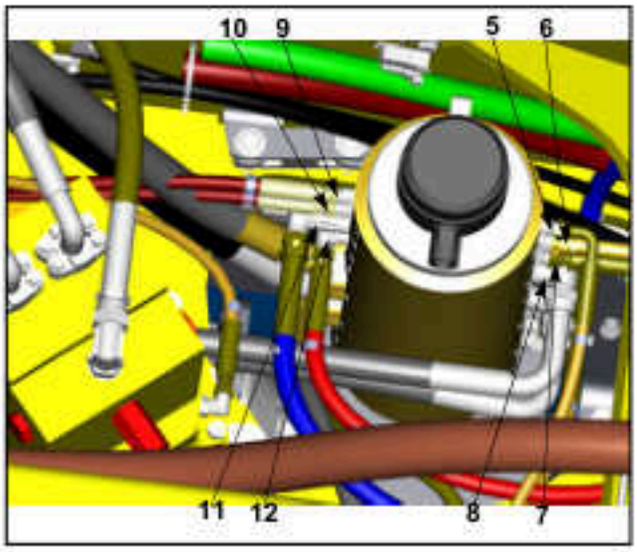


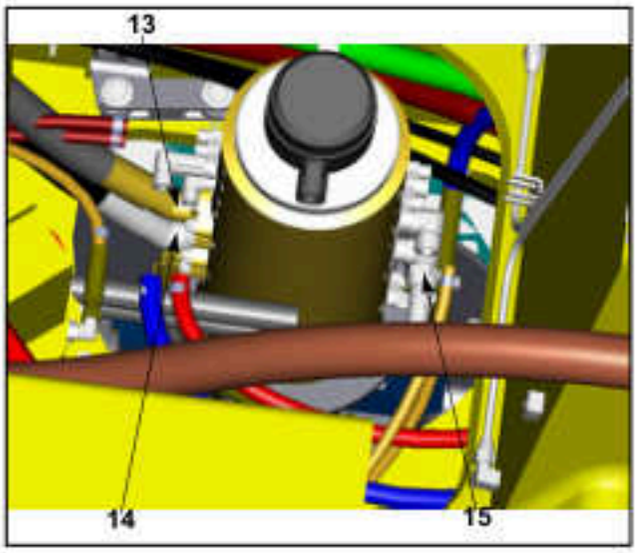
15. Assemble O-rings (9) and (10) on piston (8).

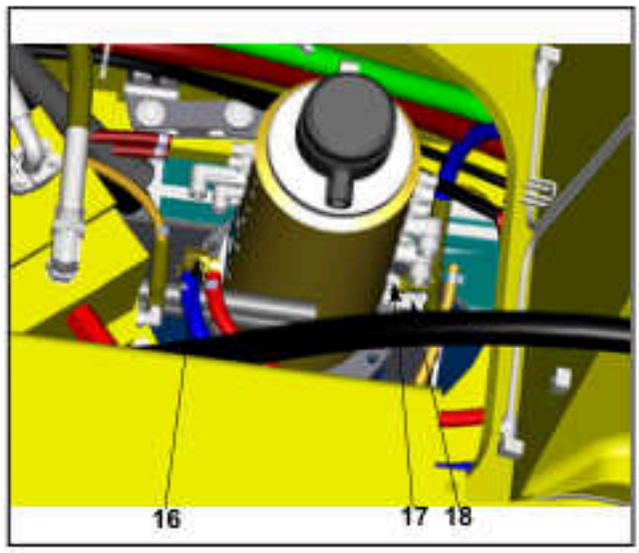


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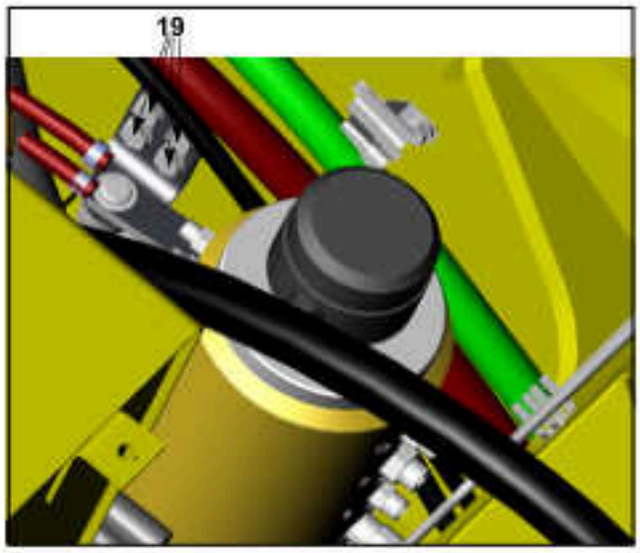
7. Disconnect the 14 hoses on the swivel joint assembly at the swivel joint side.
   (5): Suspension lock
   (6): Speed sensor
   (7): Brake 2
   (8): Attachment bottom
   (9): 2nd clutch
   (10): 1st clutch
   (11): Steer right
   (12): Brake 1
   (13): Travel B
   (14): Travel A
   (15): Attachment Head
   (16): Drain
   (17): Motor volume pilot
   (18): Steer left



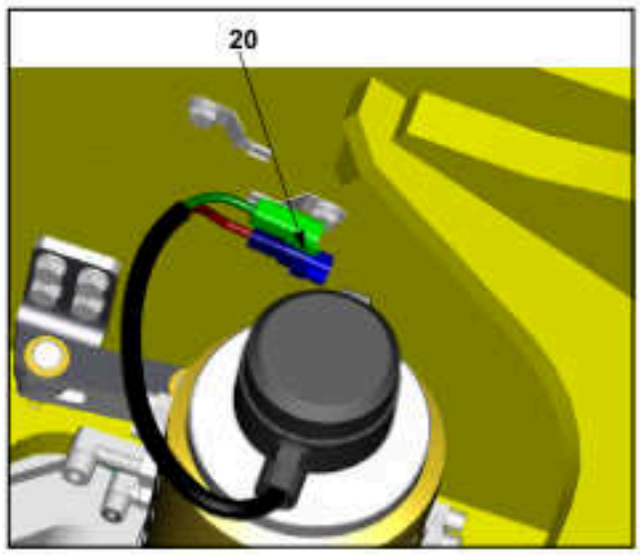




8. Remove 4 bolts (19) from revolving frame.



9. Disconnect connector (20).



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REMOVAL AND INSTALLATION OF COMBINATION COOLER

REMOVAL

WARNING! Lower the work equipment completely to the ground and stop the engine. Then loosen the oil filter cap slowly to release the pressure inside the hydraulic tank.

- Remove the hydraulic tank strainer, and using tool B stop the oil.
- When not using tool B, remove the drain plug, and drain the oil from the hydraulic tank and inside the system.

1. Drain the engine cooling water.

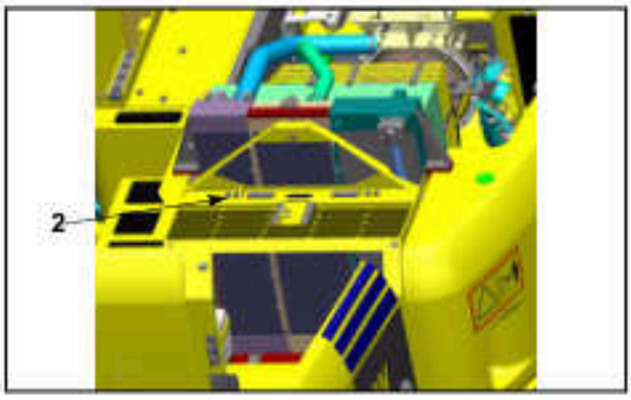
Engine cooling water: Approx. 28.5 l

2. Open up the engine hood and remove (see page 30- 28).

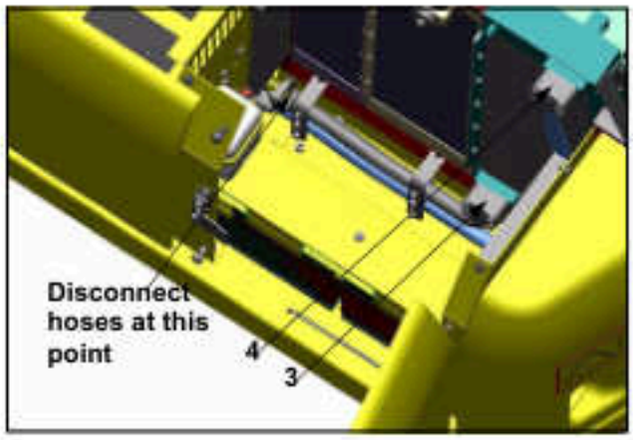
3. Remove cover (1).



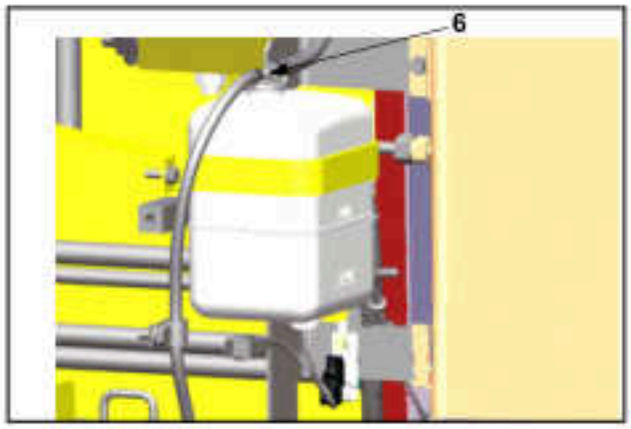
4. Remove cover (2).



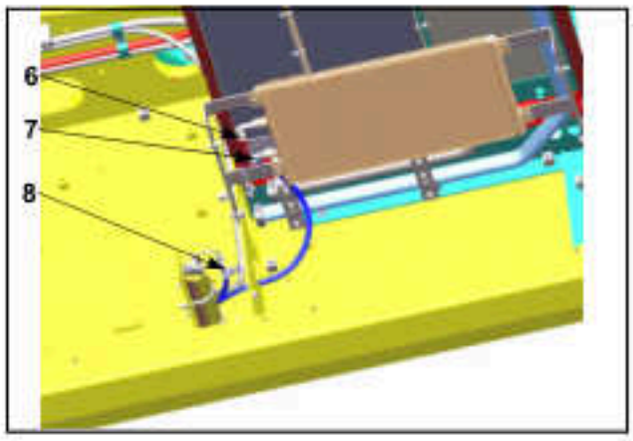
5. Disconnect oil cooler inlet (3) and out let (4) hoses.



6. Disconnect reservoir tank (6).



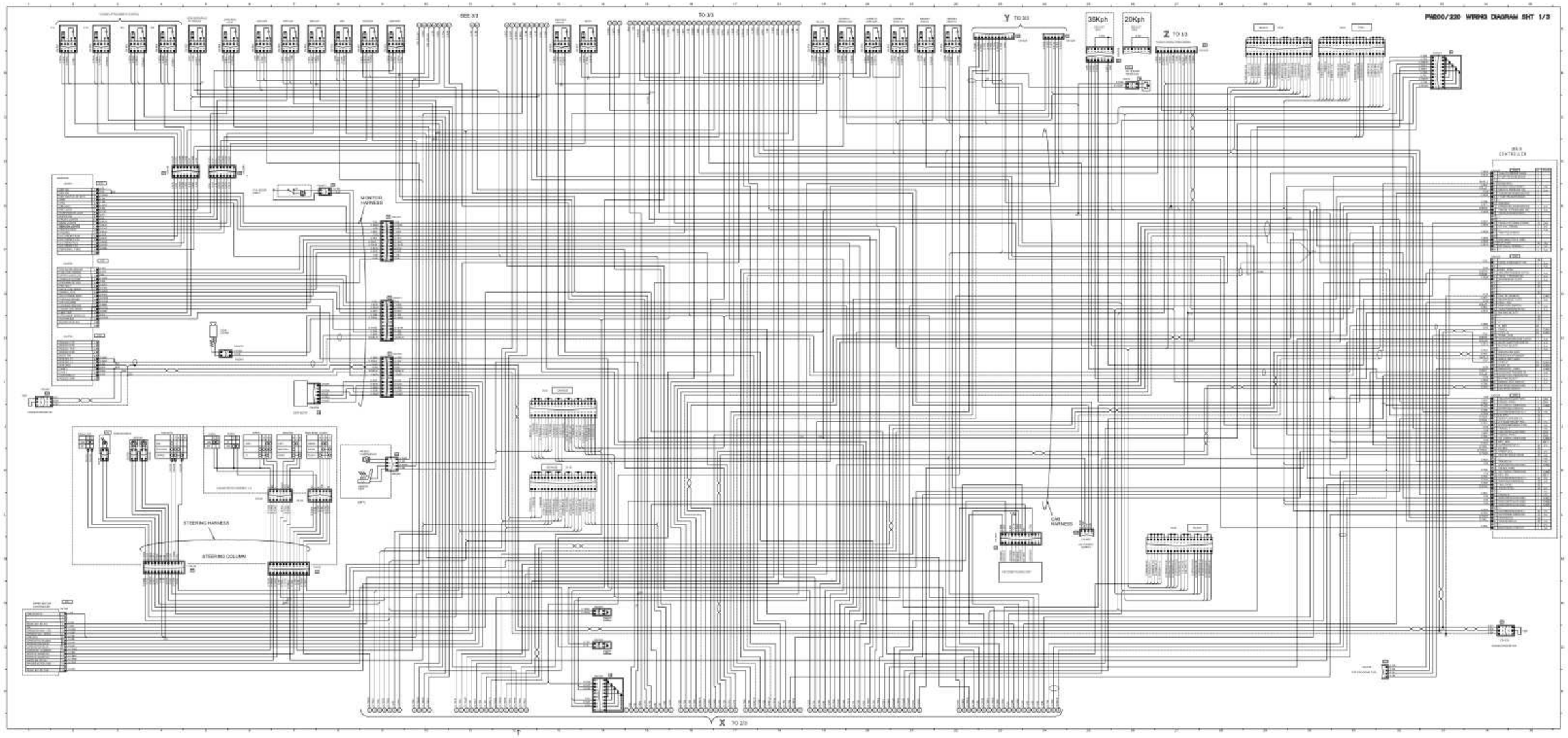
7. Remove hoses at points (6, 7, 8).



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ELECTRICAL CIRCUIT DIAGRAM (1/3)

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