SEN05693-04

Shop Manual

WHEEL LOADER **WA500-7**

SERIAL NUMBERS 10001 and up

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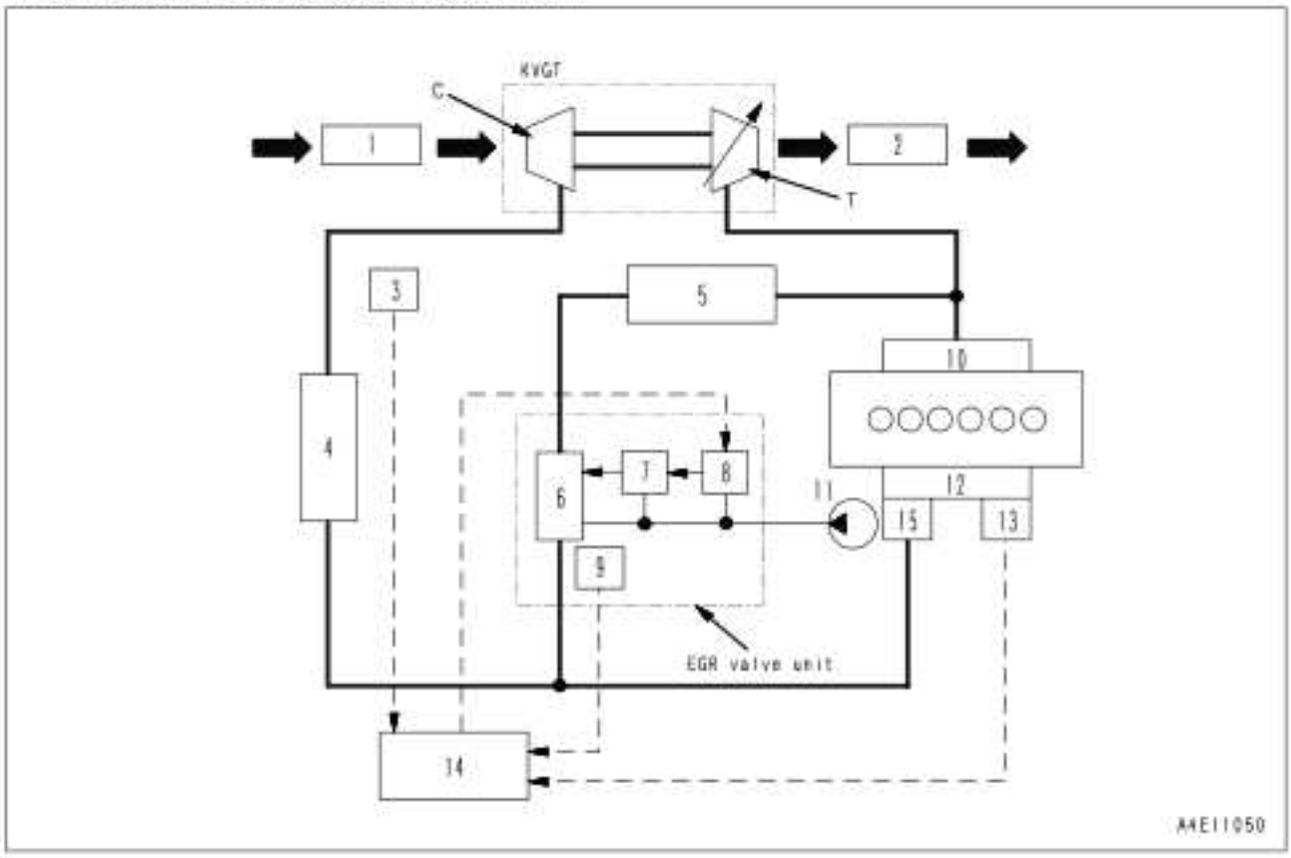
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EGR system circuit diagram (ENG125-A9J0-052-K-00-A)

EGR: Abbreviation for Exhaust Gas Recirculation



1. Air cleaner
2. KDPF
3. Ambient pressure sensor
4. Aftercooler
5. EGR cooler
6. EGR valve
7. Hydraulic actuator (power piston)
8. EPC valve (for EGR valve)
9. EGR valve lift sensor
10. Exhaust manifold
11. Boost pump
12. Intake manifold
13. Charge (boost) pressure and temperature sensors
14. Engine controller
15. Mixing connector

C: Blower impeller

T: Turbine impeller

Operation (ENG125-A9J0-044-K-00-A)

- The engine controller outputs signals for opening EGR valve (6) most properly according to the load on the engine to attain both clean exhaust gas and low fuel consumption.
- When EGR valve (6) opens, a part of the exhaust gas (EGR gas) flows from exhaust manifold (10) through EGR piping to EGR cooler (5).
- The exhaust gas cooled by EGR cooler (5) flows through EGR valve (6) and mixes with the intake air in mixing connector (15), and then flows into intake manifold (12).

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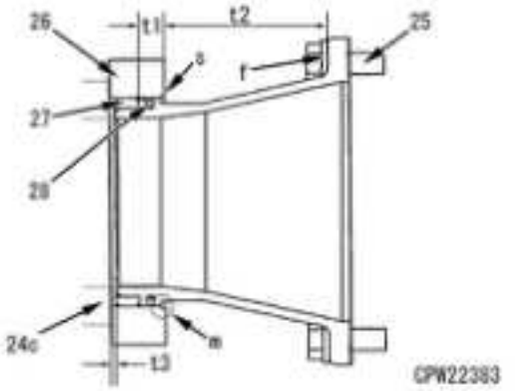
Failure code [DSJ0KR] CAN2 Discon (Meter Unit) (WA500_7-DSJ0KR-400-A-Z0-A)

Action level	Failure code	Failure	CAN2 Disconnection (Meter Unit) (Detected by monitor controller) (Machine monitor system)
L01	DSJ0KR		
Detail of failure	• Monitor controller does not recognize meter unit (connector DPC3) of machine monitor over CAN communication-2 line (KOMNET/c).		
Action of controller	• Lights up centralized warning lamp and sounds alarm buzzer. • If cause of failure disappears, machine becomes normal by itself.		
Problem on machine	• Pointer of engine speed meter returns to zero point. • Speedometer indicates "00".		
Related information	• Method of reproducing failure code: Turn starting switch to ON position. • Start of CAN communication is recognized by each controller when ACC signal of starting switch is received. • Monitor controller uses six failure codes, [D8AQKR], [DAQQKR], [DAZQKR], [DB1QKR], [DB2QKR], and [DSJ0KR] to indicate failure in CAN communication through CAN 2 line. When all of these six failure codes are displayed simultaneously on screen, ground fault, short circuit, or hot short circuit may occur in wiring harness (CAN communication line). In this case, check whether air conditioner is operated (ON/OFF and air flow adjustment) from air conditioner operation screen since air conditioner is also controlled over CAN communication line. ★ Air conditioner can be controlled even when failure code is displayed on screen. If air conditioner is controlled, wiring harness (CAN communication line) does not have ground fault, short circuit, or hot short circuit. • Since each controller and machine monitor are connected directly to battery, they are supplied with power even after starting switch is turned to OFF position. • Since signal of active CAN communication line is pulse voltage, it cannot be measured by using multimeter.		

No.	Cause	Procedure, measuring location, criteria and remarks		
1	Defective fuse-3 and fuse-15 in fuse box 2	If fuse is blown, circuit probably has grounding fault.		
2	Defective power supply to meter unit of machine monitor	• Starting switch ACC signal 1. Turn starting switch to OFF position. 2. Turn battery disconnect switch to OFF position. 3. Disconnect connector MDM3, and connect T-adapters to female side. 4. Turn battery disconnect switch to ON position. 5. Turn starting switch to ON position.		
		Voltage	Between MDM3 (1) and (4)	20 to 30 V
			Between MDM3 (2) and (4)	20 to 30 V
3	Ground fault in wiring harness (contact with ground circuit)	★ If no failure is found by check on cause 2, this check is not required. 1. Turn starting switch to OFF position. 2. Turn battery disconnect switch to OFF position. 3. Remove fuse-3 and fuse-15 in fuse box 2. 4. Disconnect connectors AL1, MCM1 A, S_FS, MDM3, TEL, L73, and RVM1, and connect T-adapter to female side of S_FS or MDM3.		
		Resis-tance	Between ground and S_FS (female) (2), (5) or MDM3 (female) (2)	Min. 1 MΩ
			Between MDM3 (female) (1) and ground	Min. 1 MΩ
4	Defective CAN2 communication system	Perform checks on causes 4 to 9 in troubleshooting for failure code [DB2QKR].		
5	Defective meter unit of machine monitor	If no failure is found by above checks, meter unit of machine monitor is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		
6	Defective monitor controller	If no failure is found by above checks, monitor controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		

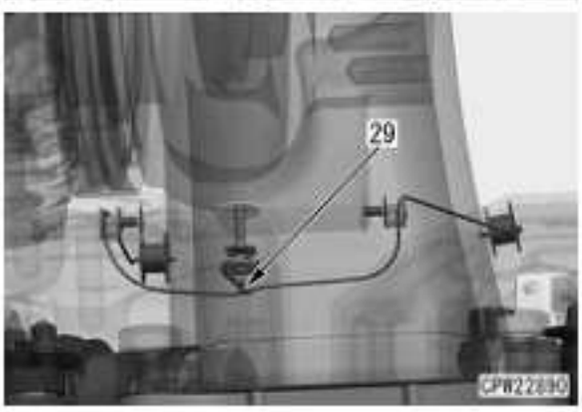
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★ Install it according to the following dimensions.
- Insertion depth (t1) of expansion graphite seal (27): 14.5 mm
- Distance (t2) between flange surface (S) of ring (26) and exhaust connector flange surface (f): 91 mm
- Clearance (t3) between turbine housing and expansion graphite seal (27): 3 mm



★ If wire (29) is removed, be sure to fix cover (30) with wire (29) according to the following figure, when installing the KVGT.





KVGT mounting bolt (24a):
44.1 to 53.9 Nm {4.5 to 5.5 kgm}

- Refilling with coolant
  Refill with the coolant to the specified level through the coolant filler port. Run the engine to circulate the coolant through system. Then check the coolant level again.

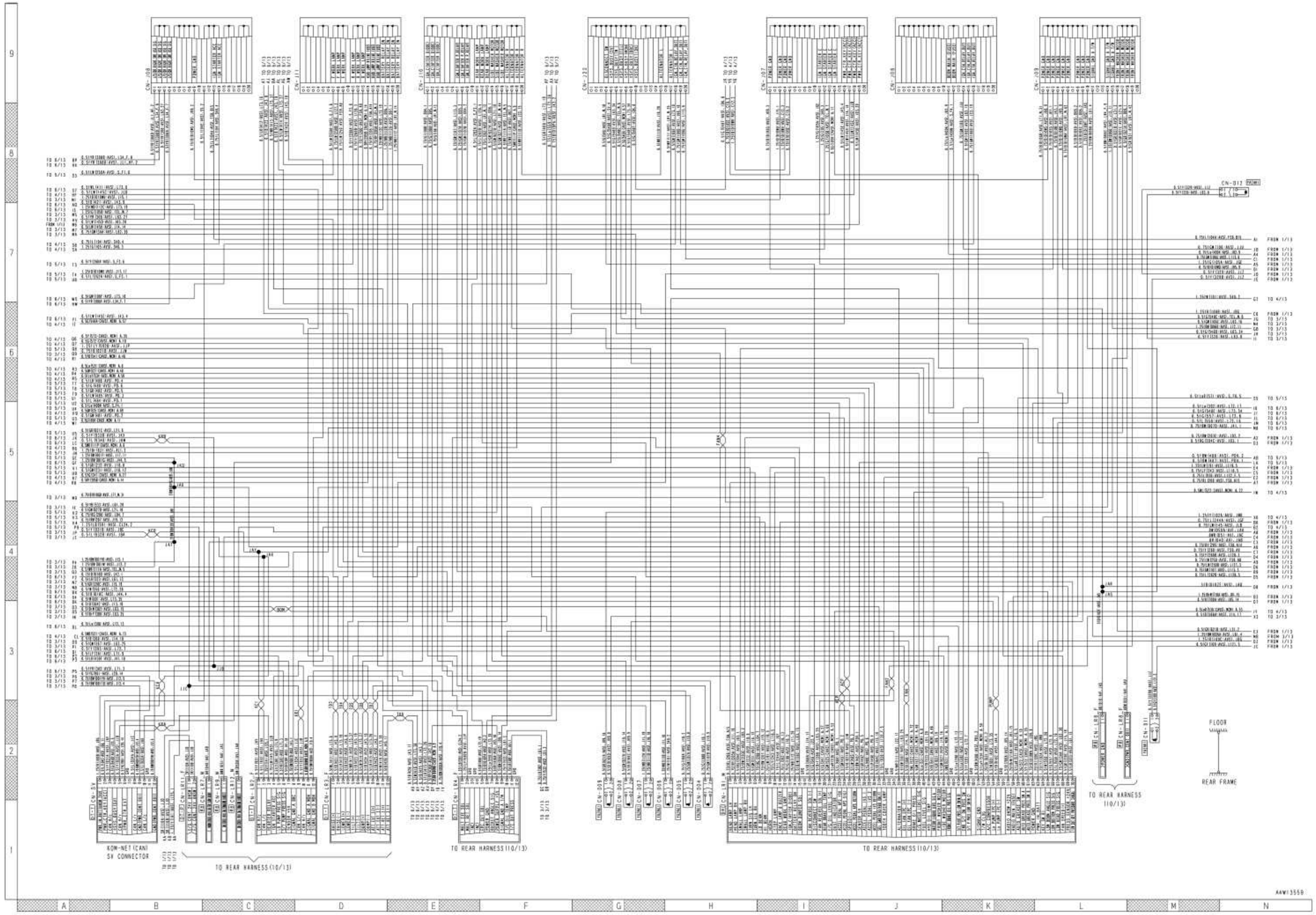
Radiator:
132.5 ℓ

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Electrical circuit diagram (2/13)

WA500-7

★ This figure covers the equipment and devices that are unavailable as optional items in some areas.



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