Shop Manual

VEBM720100

PW148-8

MACHINE MODEL	SERIAL NUMBER
PW148-8	H50051 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.
- PW148-8 mount the SAA4D107E-1 engine.
- For details of the engine, see the 107 Series Engine Shop Manual.

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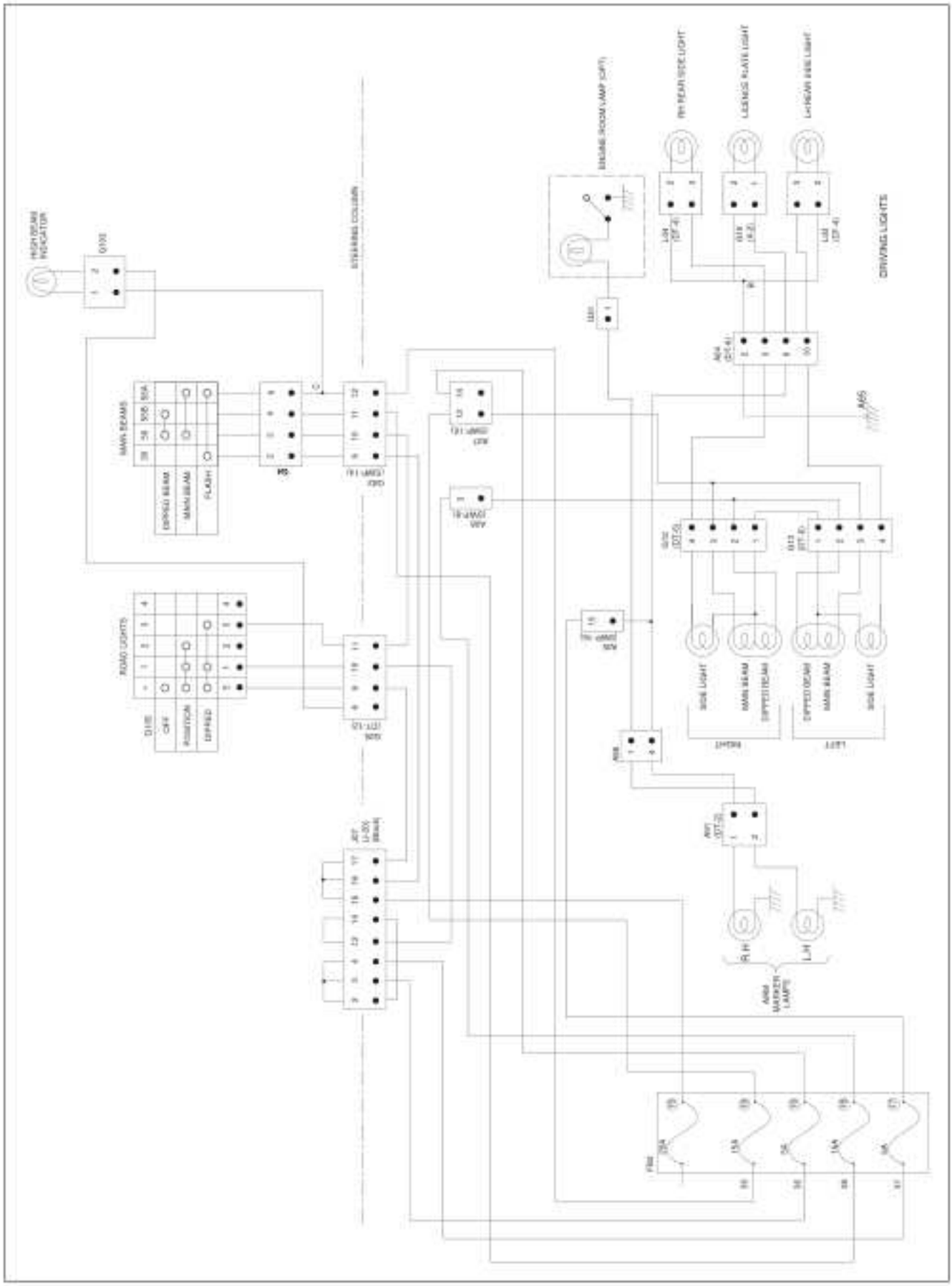
Failure code [CA757] – All continuous data lost error

User code	Failure code	Trouble	All continuous data lost error (Engine controller system)
E10	CA757		
Contents of trouble	• All data in engine controller are lost.		
Action of controller	• None in particular.		
Problem that appears on machine	• Engine may stop and may not be started again. • Monitoring function of machine monitor (engine controller system) may not work normally.		
Related information	• Method of reproducing failure code: Turn starting switch ON.		

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defect in related system	If another failure code is displayed, carry out troubleshooting for it.			
	2	Looseness or corrosion of battery terminal	Battery terminal may be loosened or corroded. Check it directly.			
	3	Low battery voltage	★ Prepare with starting switch OFF, then keep starting switch OFF and start engine and carry out troubleshooting in each case.			
			Battery (1 piece)	Starting switch	Voltage	
			Between (+) – (–) terminals	OFF	Min. 12 V	
				START	Min. 6.2 V	
	4	Defective fuse No. 19	If fuse is broken, circuit probably has ground fault.			
	5	Defective relay for engine controller power supply	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.			
			Replace relay (R03, R04) for engine controller with another relay and perform reproducing operation. If "E" of failure code goes off at this time, replaced relay is defective.			
	6	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between FB1-19 – R03, R04 (female) (3)		Resistance	Max. 10 Ω
			Wiring harness between R03, R04 (female) (5) – CE03 (female) (3)		Resistance	Max. 10 Ω
			Wiring harness between CE03 (female) (1) – chassis ground (T12)		Resistance	Max. 10 Ω
	7	Defective wiring harness connector	Connecting parts between fuse No. 19 – machine wiring harness – engine controller may be defective. Check them directly. • Looseness of connector, breakage of lock, or breakage of seal • Corrosion, bend, breakage, push-in, or expansion of pin • Moisture or dirt in connector or defective insulation			
	8	Defective engine controller	★ Prepare with starting switch OFF, then turn starting switch ON and start engine and carry out troubleshooting in each case.			
			CE03 (female)	Starting switch	Voltage	
			Between (3) – (1)	ON	Min. 24 V	
				START	Min. 12 V	

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Circuit diagram for driving lights



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Installation

Carry out installation in the reverse order to removal.

[*1]

Radiator hose mounting clamp bolt:
10.8- 11.8 Nm {1.1- 1.2 kgm}

[*2] [*4]

★ Procedure for installing MIKALOR clamp

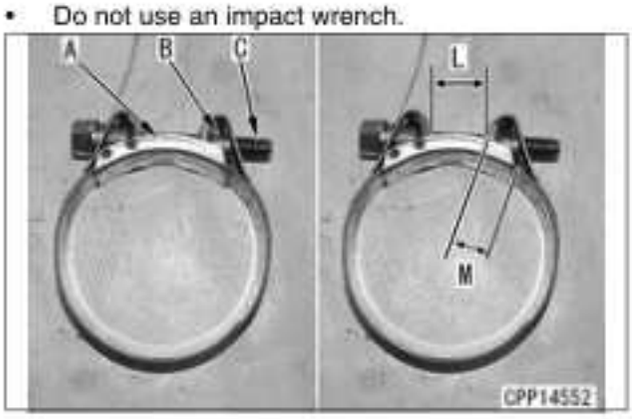
- When tightening the clamp, apply the following lubricating oil or equivalent to its threaded part [C].
  Lubricating oil: Threebond (PANDO 18B)
- Adjust bridge [A] so that it will be under band [B].
- Tighten until dimensions [L] and [M] are set to the specified dimensions.

  Dimension L
  Between aftercooler and air intake connector:
  Aftercooler side: 10 (+0/-3) mm

  Air intake connector side:
  16 (+0/-3) mm

  Between aftercooler and turbocharger connector: 10 (0/-3) mm

  Dimension M: Min. 5 mm
- If the tightened dimensions are out of the above ranges, replace the clamp with new one.
- Do not use an impact wrench.



[*3]

Air hose clamp bolt:
10.0- 11.0 Nm {1.02- 1.12 kgm}

[*5]

Connector mounting nut:
10 ± 2 Nm {1.02 ± 0.2 kgm}

[*6]

Lubrication inlet hose mounting nut:
24 ± 4 Nm {2.4 ± 0.4 kgm}

★ When nut on turbocharger side was loosened

Nut on turbocharger side:
36 ± 5 Nm {3.7 ± 0.5 kgm}

[*7]

★ When stud bolt was removed

Stud bolt:
24 ± 4 Nm {2.4 ± 0.4 kgm}

[*8]

Turbocharger mounting nut:
24 ± 4 Nm {2.4 ± 0.4 kgm}

★ When stud bolt was removed

Stud bolt:
10 ± 2 Nm {1.0 ± 0.2 kgm}

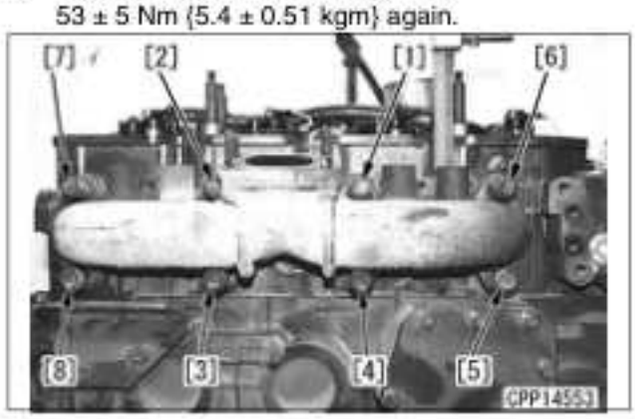
[*9]

Lubrication return hose mounting bolt:
10 ± 2 Nm {1.0 ± 0.2 kgm}

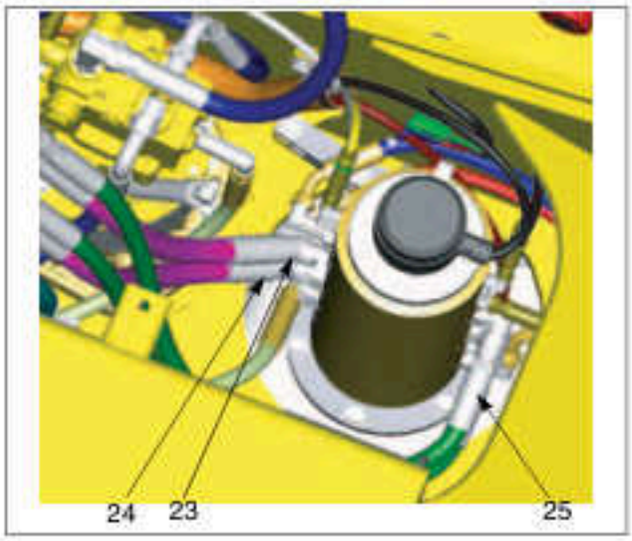
[*10]

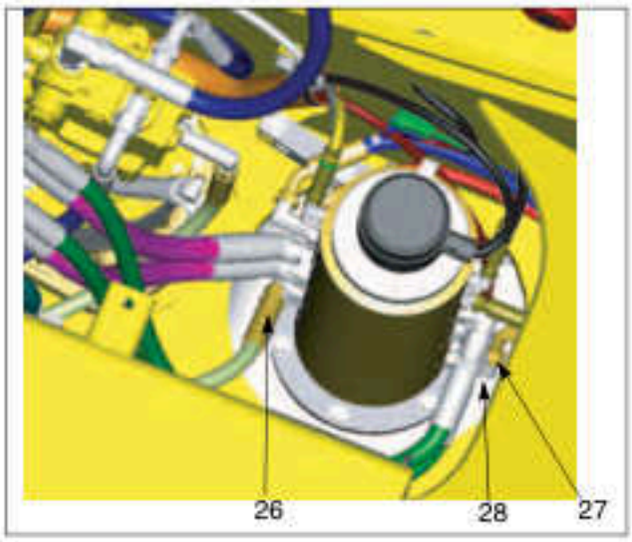
★ Tighten the exhaust manifold mounting bolts according to the following procedure.

1. Tighten the bolts to
   24 ± 4 Nm {2.4 ± 0.4 kgm} in the order shown in the figure.
2. Tighten the bolts to
   53 ± 5 Nm {5.4 ± 0.51 kgm} in the order shown in the figure.
3. Tighten only [1]- [4] in the figure to
   53 ± 5 Nm {5.4 ± 0.51 kgm} again.

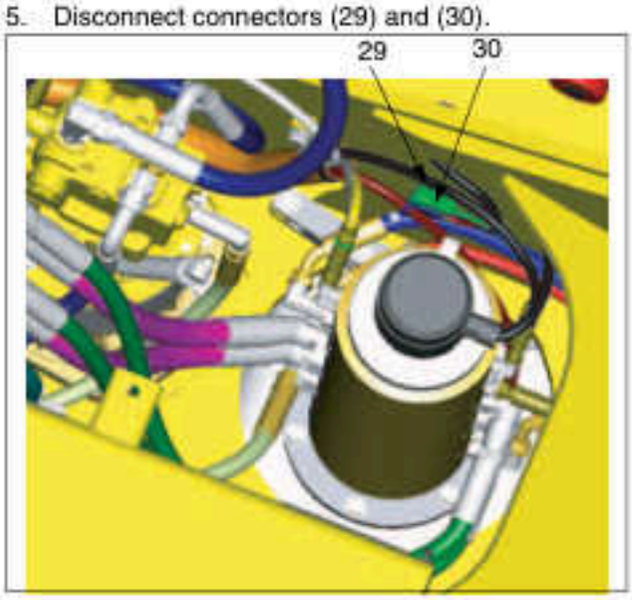


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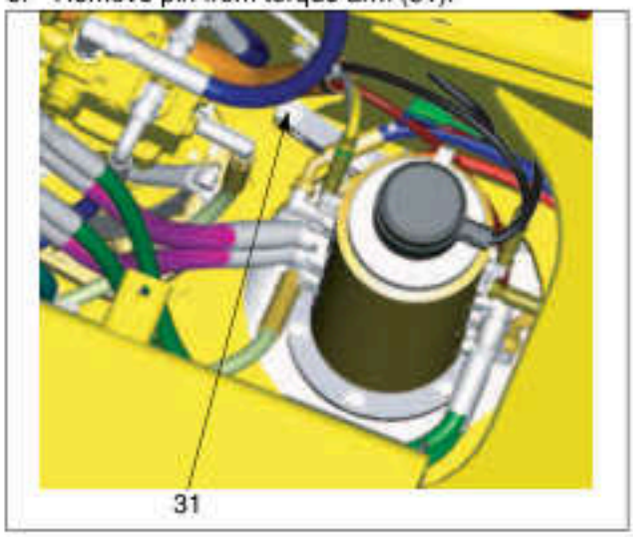




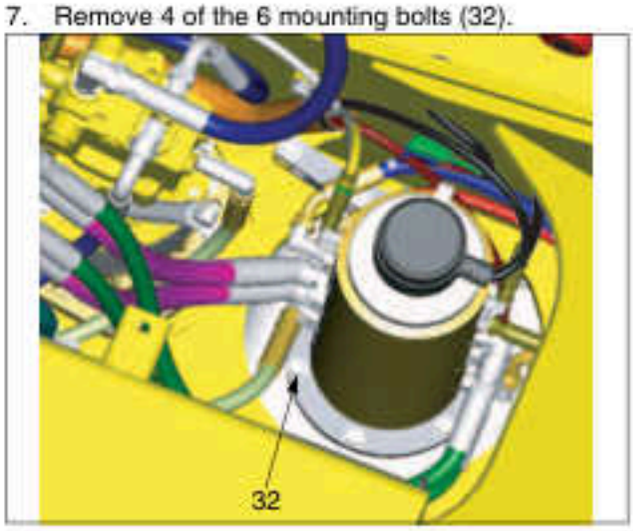
5. Disconnect connectors (29) and (30).



6. Remove pin from torque arm (31).



7. Remove 4 of the 6 mounting bolts (32).



8. Sling centre swivel joint then remove 2 remaining mounting bolts (32) and remove.

kg Center swivel joint assembly: 95 kg

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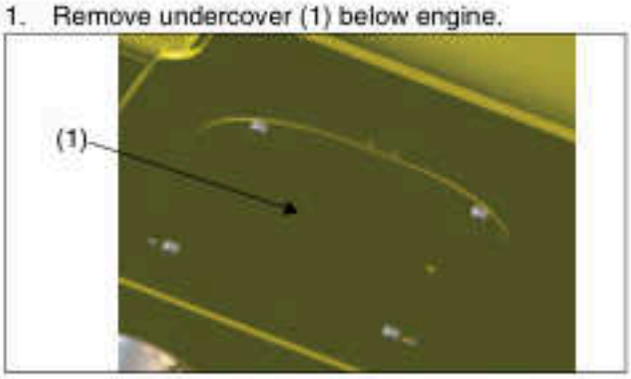
Removal of swing motor assembly

Removal

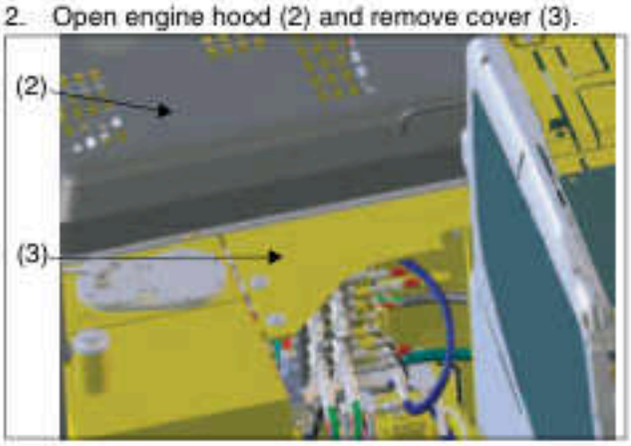
Lower the work equipment to the ground completely, after the engine is stopped, loosen the hydraulic tank cap gradually to reduce the pressure inside, and set the lock lever in the lock position.

★ Attach an identification tag to each piping to avoid a mistake in the position of installation later.

1. Remove undercover (1) below engine.

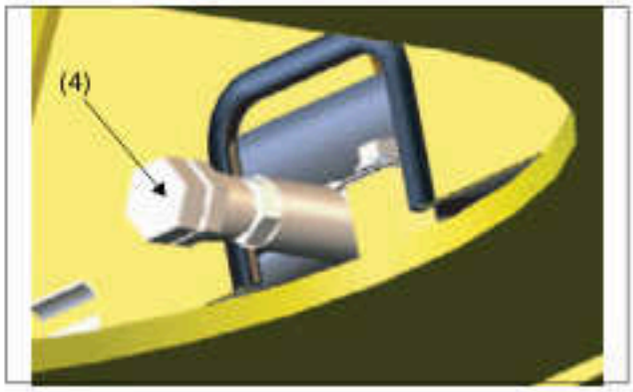


2. Open engine hood (2) and remove cover (3).

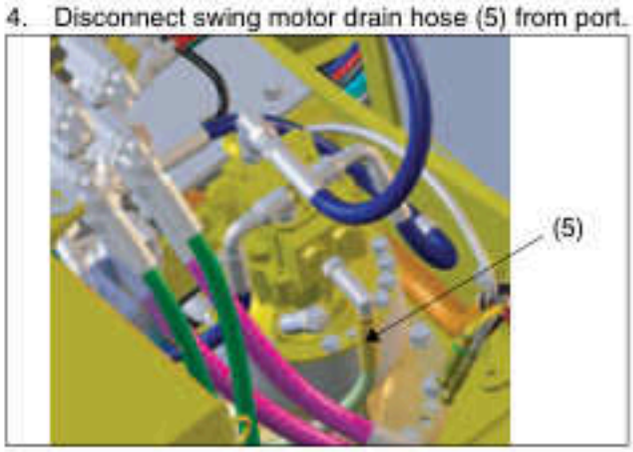


3. Drain oil from swing machinery case (into a suitable receptacle) by removing plug (4).

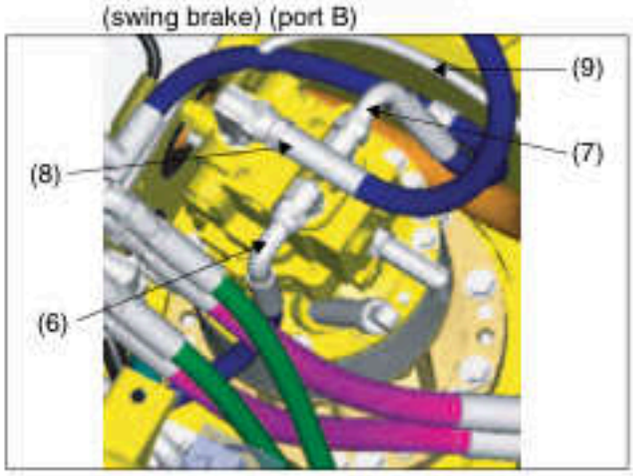
Swing machinery case: Approx. 2.5 l



4. Disconnect swing motor drain hose (5) from port.

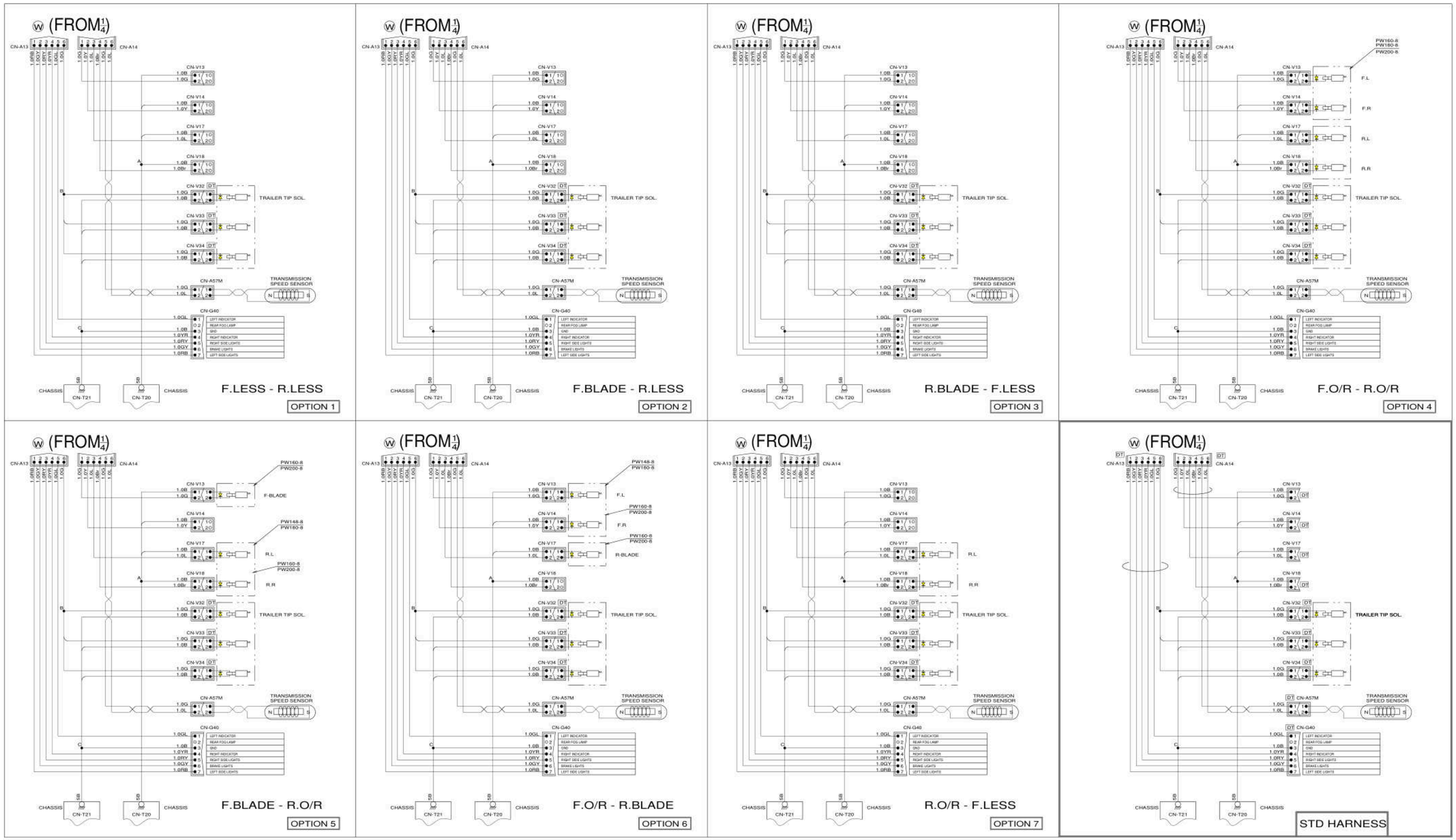


5. Disconnect the 4 swing motor hoses (6), (7), (8) and (9).
   - (6): Between swing motor – control valve (port MA)
   - (7): Between swing motor – control valve (port MB)
   - (8): Suction hose (port S)
   - (9): PPC hose to sol. valve block (swing brake) (port B)



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Electrical circuit diagram (machine 4/4))



4/4
PW200-8
PW180-8
PW160-8
PW148-8

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