CASE CONSTRUCTION

SERVICE MANUAL

CRAWLER EXCAVATOR

CX225SR
TIER 3

84184367A EN-US

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SERVICE MANUAL

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* *Consult the Engine Service Manual*

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9 UPPERSTRUCTURE		
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Large size hydraulic schematics	Pocket	87746273A
Large size electrical schematics	Pocket	87746267A

NOTE: CNH Company reserves the right to make changes in the specification and design of the machine without prior notice and without incurring any obligation to modify units previously sold.

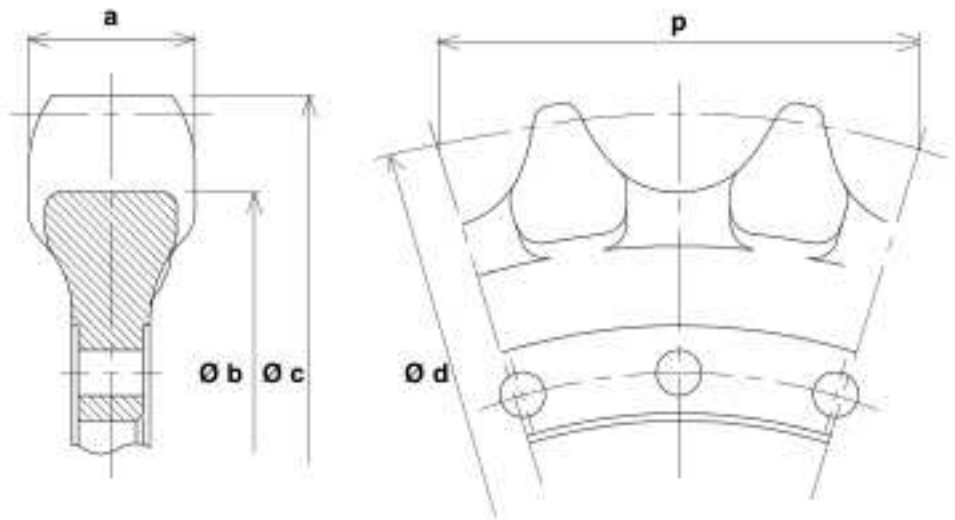
The description of the models shown in this manual has been made in accordance with the technical specifications known as of the date of design of this document.

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DIMENSIONS AND WEAR LIMIT OF THE TRACK ASSEMBLY

Sprocket

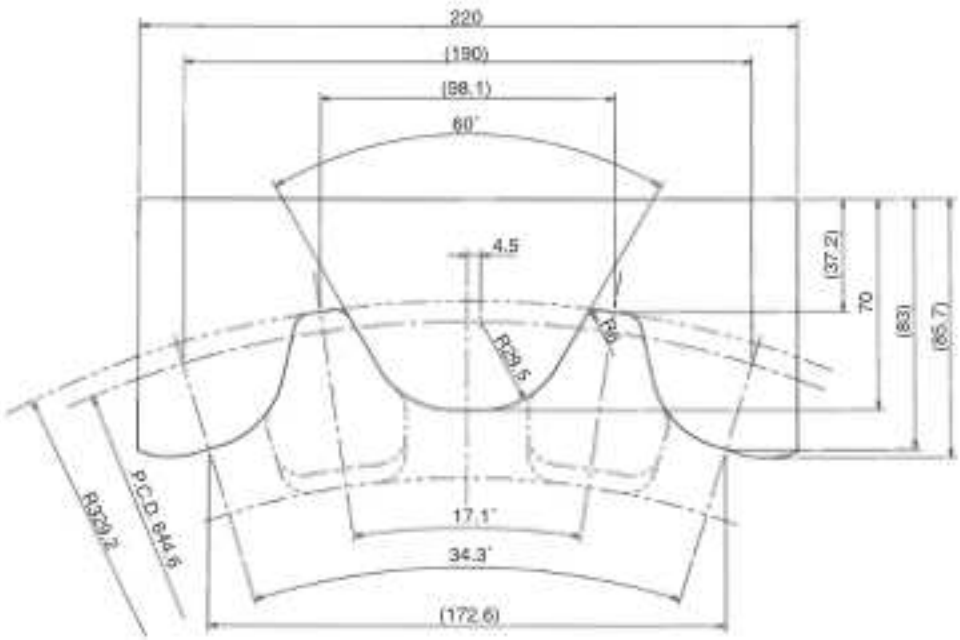
Dimensions



RI14001-001

Mark		Dimension	
		mm	in
a	Standard	66	2.59
	Limit	60	2.36
Ø b	Standard	585.5	23.05
	Limit	579.5	22.81
Ø c	Standard	659	25.94
	Limit	653	25.70
Ø d	Standard	644.6	25.37
	Limit	-	-
p	Standard	190	7.48
	Limit		

Gauge

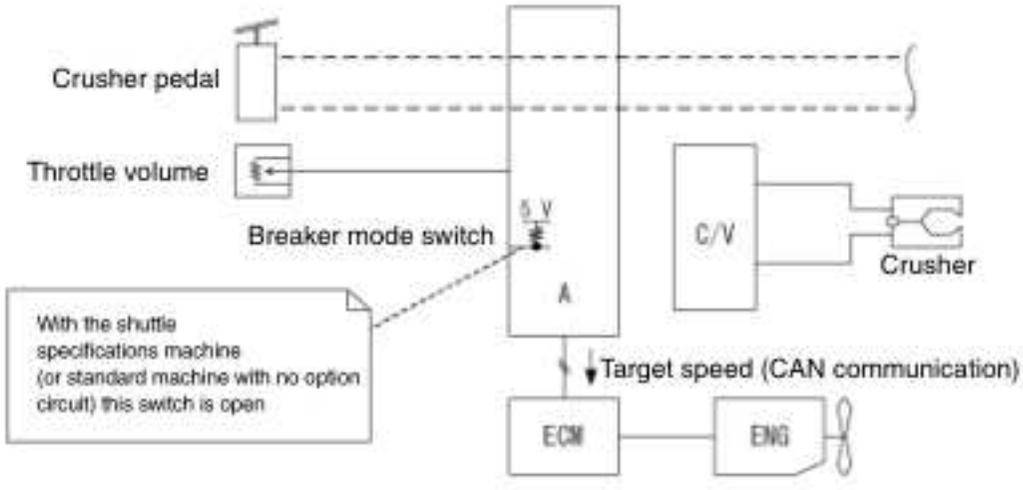


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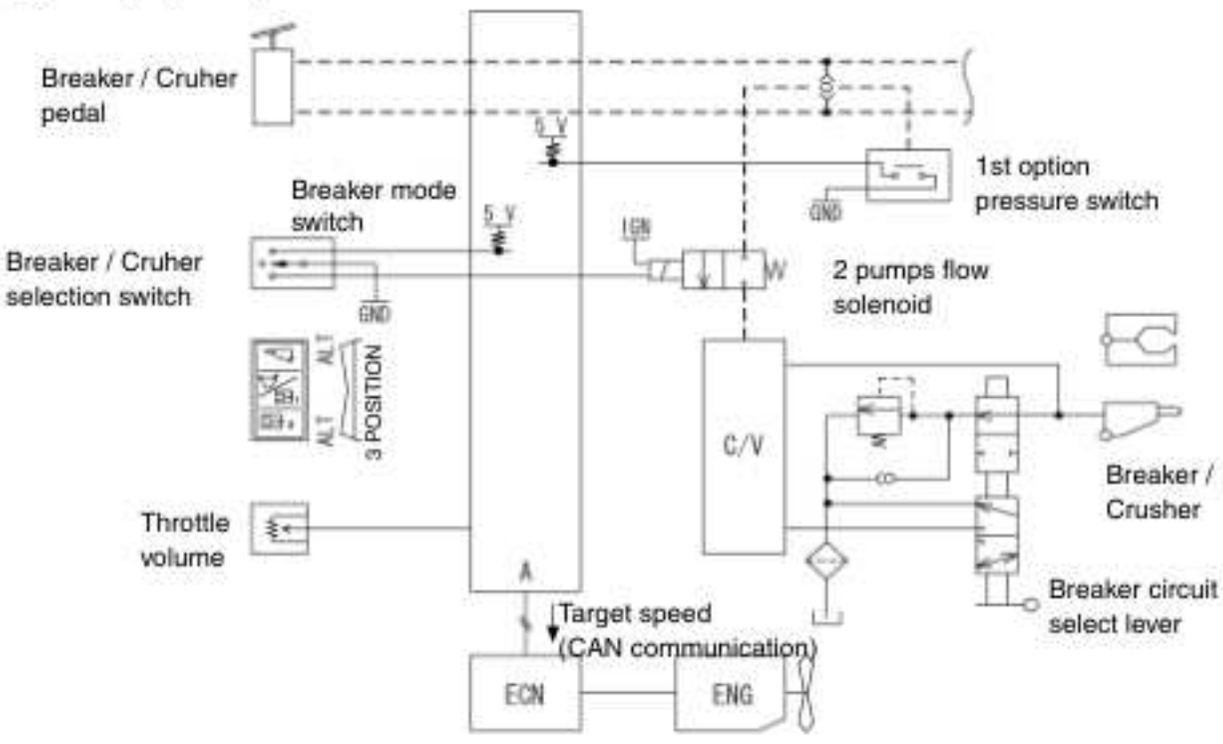
4) Breaker operation judgment conditions
Breaker operation is judged when (Breaker mode switch = ON) and (1st option pressure switch = ON).
However, because the breaker mode switch is grounded with the harness, just pressing down on the breaker pedal is OK.

[2] Shuttle specifications



1) Configuration
In contrast with the breaker specifications, there is no 1st option pressure switch.
2 pumps flow is also not set with the shuttle specifications. The breaker mode switch is open.
2) Flow adjustment
The engine speed is adjusted with the throttle volume (manual).

[3] Multipurpose specifications



1) Configuration
Switching is done with the 3-position rocker switch [breaker / normal dig mode or crusher 1 pump flow / crusher 2 pumps flow].
Hydraulic circuit switchover is performed with the lever on top of the valve (manual).
2) Breaker operation detection
Breaker operation is judged when (Breaker mode switch = ON) and (1st option pressure switch = ON).
3) Flow adjustment

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Item	Symptom	Related parts	Error item	Preventive/remedy measures
1	Oil leakage on piston rod sliding section	Rod packing (buffer ring and U-ring)	Packing has lost rubber elasticity and is crumbling. The whole lip is also missing.	1) Replace. 2) The life of the packing or hydraulic oil deterioration or high temperature may e the cause. 1. Change hydraulic oil. 2. Check hydraulic oil temperature. (The oil temperature should be 80 °C or less.) 3. Check for uneven hot temperatures.
			Heel part of the packing. Too much extrusion.	1) Replace. 2) Abnormal high pressure may act on the packing. 1. Check the pressure when starting operation. 2. Abnormality in the buffer ring if the buffer ring is attached. Inspect buffer rings.
		Backup ring	Visible distortion	1) Change rod packings together, as a general rule. (Buffer rings should be replaced at the same time if attached). 2) Abnormally high pressure may have caused this. In this case, check it by following the same steps described above for the packing heel extrusion.
		Wiper ring	Foreign substances engaged in the lip	Remove foreign substances.
			The lip is damaged. Other abnormal damages	Replace.
		Bearing material (Bushing)	Extreme wear, the clearance with piston rod exceeds the allowable maximum value (see 5-3. Maintenance reference)	Replace.
			Significant damage in sliding surfaces	1) Replace. 2) Inspect the piston rod.
		Cylinder head	Scratches or rust in seal fitting area.	1) Remove scratches and rust with an oil stone. 2) If repair is not possible, replace the cylinder head
2	Oil leakage from cylinder head fitting section	O-ring	Foreign substances on the inside and outside surfaces Damaged O-ring	1) Remove foreign substances. 2) If O-ring is damaged, replace it. 3) Inspect the tube inside: If scratches and rust are found, smooth the surfaces with oil-stone. 4) Check O-ring grooves in the cylinder head: Same as above 5) Check backup rings:If distortion or extrusion is found, replace it. Change O-rings after confirming items above.

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[14]Install the push rod sub assemblies assembled in the previous steps 10), 11), 12), and 13) into the casing (102).



MG25001-045

[15]Place cover (201) on a level surface. Using special jig 1, push down bushing (414) against the cover and lightly tap it with a hammer to press fit.
Be careful that the ends of the bushings do not stick out from within the cover.



MG25001-046

[16]Secure the lower cover assembly, assembled in steps 1 through 5, in a vise and install the upper cover assembly, assembled in steps 6 through 14, onto it.
Assemble it in the same position as before disassembly.



MG25001-047

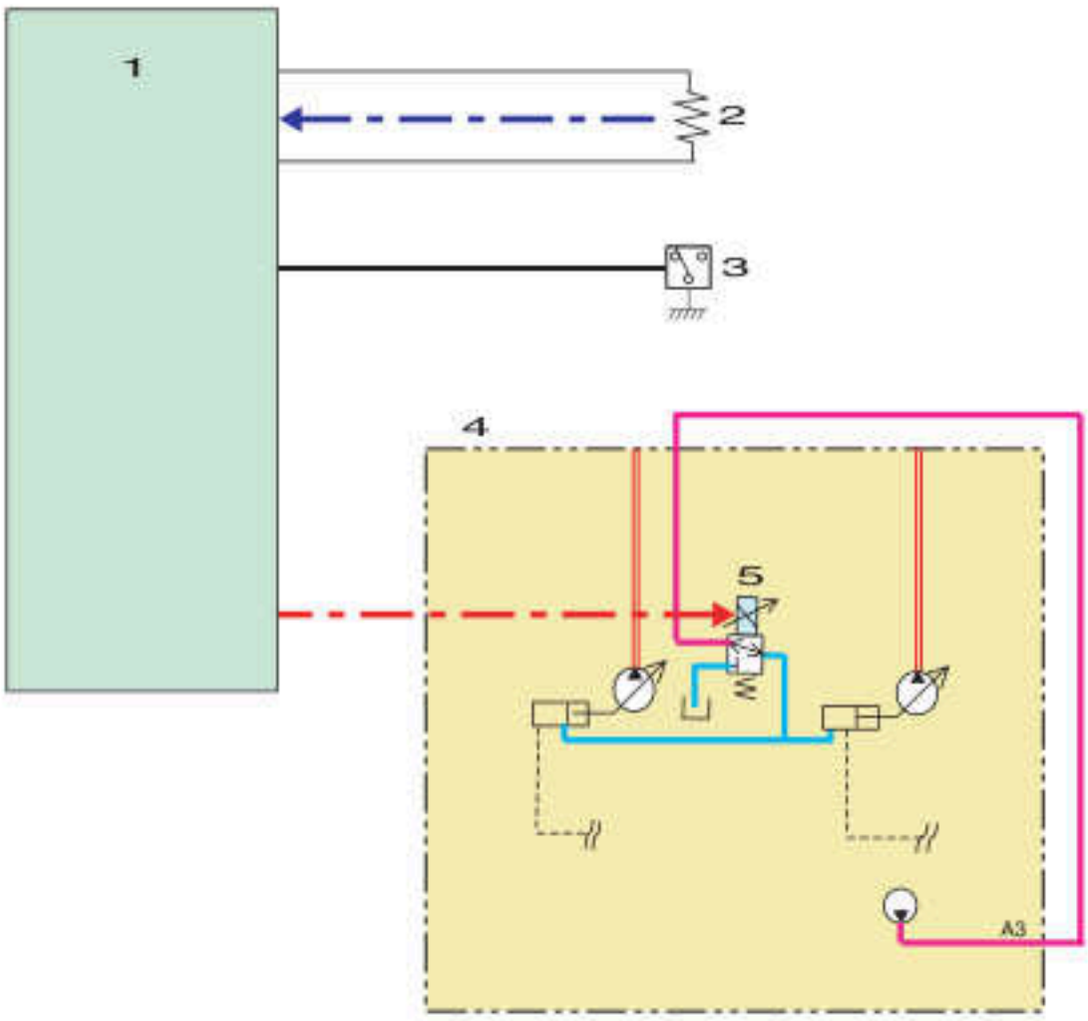
[17]Install the covers (201) on the casing (102).
Install them in the positions they were in before disassembly.
Be careful of the cover rising up due to the damping springs (336).



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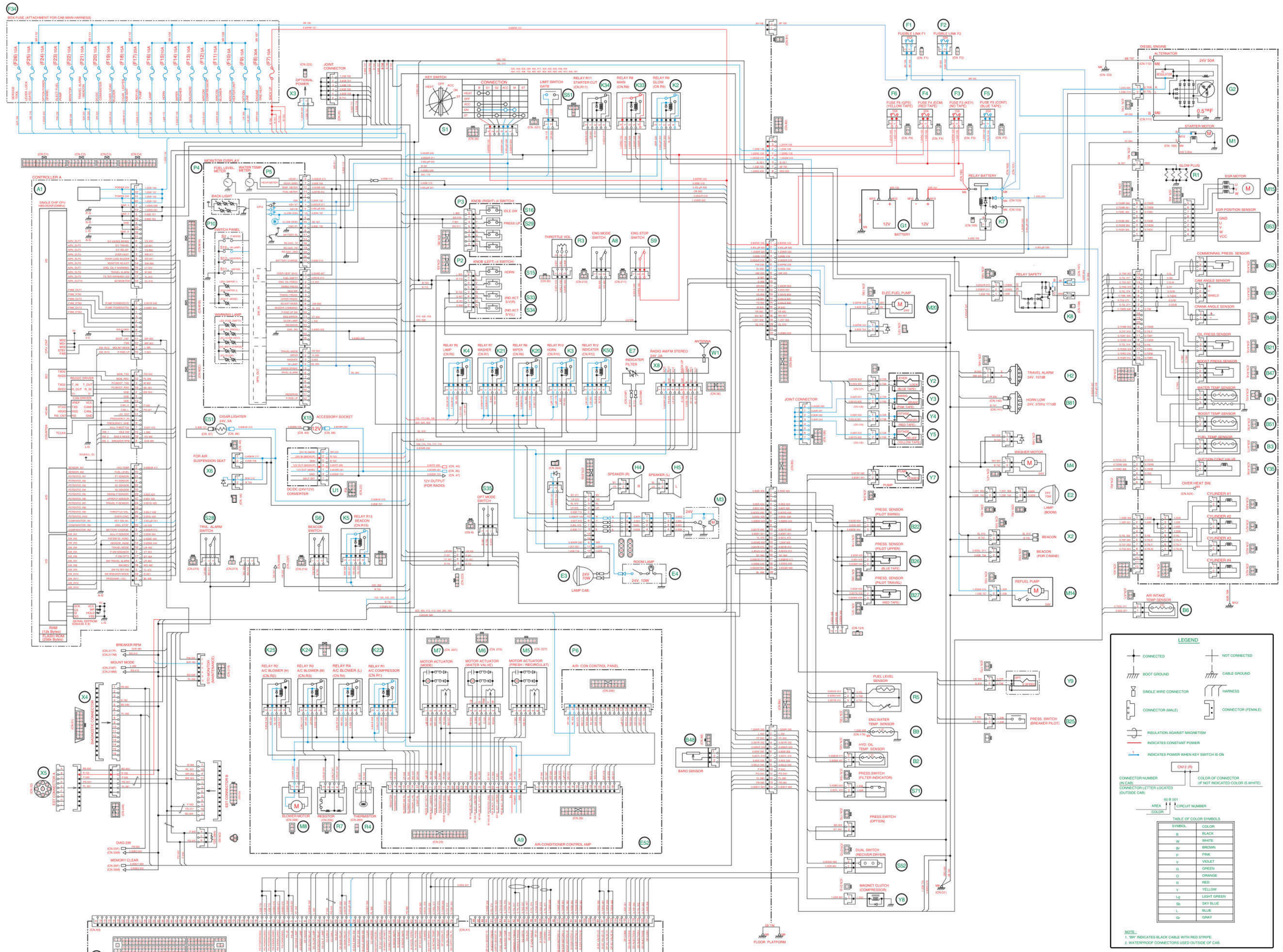
Control milli-amp		* = When the target engine speed is E mode or less, milli-amp for pump horsepower control proportional valve is 50 mA.		
Work mode		N	E	
Engine speed (min^{-1}) {rpm}		1700	1600	1599 - 1300
Milli-amp for pump horsepower control proportional valve (mA)	I Max	570	460	50
	I Min	50	50	50
Boosted pressure		One touch	Normal	Normal



RC02001-002

1	Computer A
2	Throttle volume
3	E mode select switch
4	Hydraulic pump
5	Pump horsepower control proportional valve

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F34
BOX FUSE (ATTACHMENT FOR CAB MAIN HARNESS)
(F26) 10A
(F25) 10A
(F24) 10A
(F23) 20A
(F22) 10A
(F21) 10A
(F20) 10A
(F19) 10A
(F18) 10A
(F17) 20A
(F16) 10A
(F15) 10A
(F14) 10A
(F13) 10A
(F12) 10A
(F11) 10A
(F10) 10A
(F9) 10A
(F8) 30A
(F7) 10A
WIPER MOTOR
LEVER LOCK SOLENOID
SPEAKER RIGHT
SPEAKER LEFT
TRAVEL ALARM
SOLENOID
CIGAR LIGHTER
ROTARY LIGHT
LAMP
WIPER MOTOR
WASHER MOTOR
BEACON
SPARE
SPARE
SPARE