PART NO.

TATA HITACHI

Reliable solutions

Technical Manual

Troubleshooting

ZAXIS 470H

GI - SERIES

Hydraulic Excavator

Serial No. :

ZX470H - 000001 ONWARDS

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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ECF Fault Code List

Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs	Remedy
11600-2	Abnormal EEPROM	Faulty ECF	-	Replace ECF
11601-2	Abnormal RAM	Faulty ECF	-	Replace ECF
11602-2	Abnormal A/D Conversion	Faulty ECF	-	Replace ECF
11603-3	Abnormal Sensor Voltage	Faulty ECF Faulty sensor Faulty harness	Although the engine control dial is operated, the engine speed does not change	Check the sensor connected to ECF Check the harness Replace ECF
11604-2	Abnormal CAN Communication	Faulty ECF Faulty CAN harness	The machine movement is slow	Check the CAN harness Replace ECF
16605-2	Abnormal Engine Speed (Overrunning)	Engine speed: more than 4000 min^{-1}	The machine movement is slow (During speed sensing, the torque is reduced)	Check the harness Replace the N sensor
16606-3	Abnormal EC Angle Sensor high Voltage	Voltage: more than 4.78 V	Engine learning fails Engine learning is impossible	Check the harness Replace the EC sensor
16606-4	Abnormal EC Angle Sensor Low Voltage	Voltage: less than 0.22 V	Engine learning fails Engine learning is impossible	Check the harness Replace the EC sensor
16607-2	Target Engine Speed Sent from MC	Faulty harness	The engine speed is kept at the speed just before trouble (Can communication is impossible)	Check the harness

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Air Conditioner Controller Fault Codes 43 to 92

Preparation

- Check the wiring connections first.
- Before inspection, set the key switch to the ON position.

Fault Code	Trouble	Inspection Method	Evaluation	Cause
43	Abnormal Air Vent Damper Servo Motor	Measurement of voltage between air vent damper servo motor harness end 7C and body. (AUTO/OFF switch / blower switch: ON)	0 V	Faulty controller or open circuit in harness between controller and air vent damper servo motor
		Measurement of voltage between air vent damper servo motor harness end 7C and 25D. (AUTO/OFF switch / blower switch: ON)	0 V	Faulty controller or open circuit in harness between controller and air vent damper servo motor
		-	Normal in above check	Faulty air vent damper servo motor
44	Abnormal Air Mix Damper Servo Motor	Measurement of voltage between air mix damper servo motor harness end 7D and body. (AUTO/OFF switch / blower switch: ON)	0 V	Faulty controller or open circuit in harness between controller and air mix damper servo motor
		Measurement of voltage between air mix damper servo motor harness end 7D and 25E. (AUTO/OFF switch / blower switch: ON)	0 V	Faulty controller or open circuit in harness between controller and air mix damper servo motor
		-	Normal in above check	Faulty air mix damper servo motor
51	Abnormal High/ Low Refrigerant Pressure	Measurement of voltage between high/low pressure switch harness end A21 and A05. (AUTO/OFF switch / blower switch: ON)	0 V	Faulty controller or open circuit in harness between controller and high/low pressure switch
		-	Normal in above check	Faulty high/low pressure switch
91	CAN Communication Error	Continuity check in CAN1 harness.	Normal	Faulty controller
			Abnormal	Faulty CAN1 harness
92	CAN Bus Off Error	Continuity check in CAN1 harness.	Normal	Faulty controller
			Abnormal	Faulty CAN1 harness

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Swing System Troubleshooting

S-1 Swing is slow or unmoving.

	Specification (sec/3 rev)	Remark
Swing Speed	21.0±1.5	The bucket should be empty

Preparation

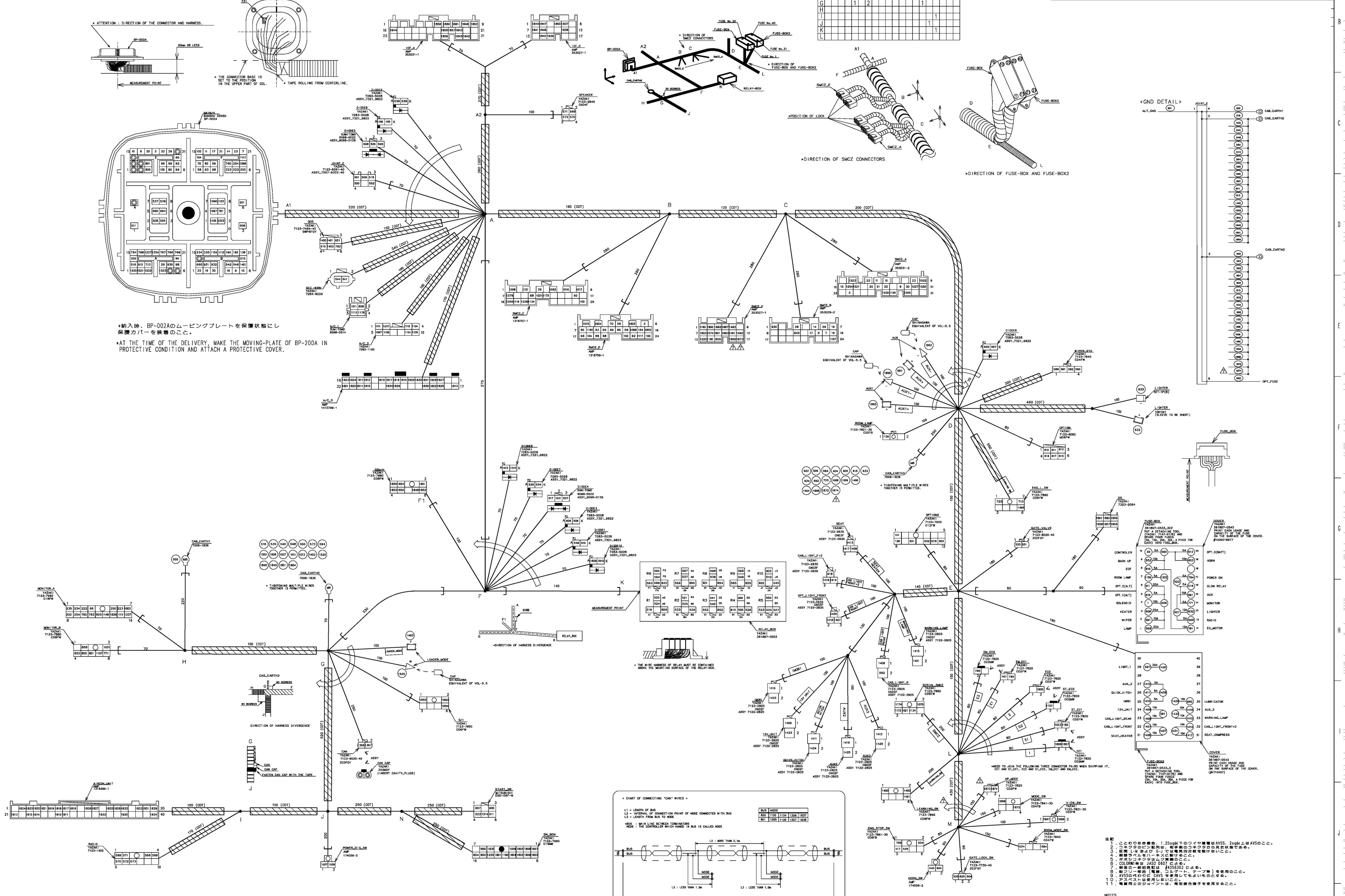
- Check whether the pilot system is faulty or the main circuit is faulty.
- If other functions (front attachment and travel) are operated normally, the pilot pump (primary pilot pressure) and pump flow rate control are considered to be normal. If the pilot system is faulty, the cause of trouble may exist in the circuit after the pilot valve.

Procedure	Inspection Method	Condition	Evaluation	Cause
1	Monitor Swing Pilot Pressure	Fully swing	The measured values are not within the normal values (Normal Value: 3.4-4.0 MPa)	Faulty pilot valve
2	Monitor Front ATT Pilot Pressure	When relieving arm	The measured values are not within the normal values (Normal Value: 3.4-4.0 MPa)	Faulty swing parking brake release spool in signal control valve
3	Disassemble and inspect the parking brake release valve in the swing motor	-	There is abnormality	Faulty swing parking brake release valve
4	Monitor Pump 2 Delivery Pressure	When relieving swing	The measured values are not within the normal values (Normal Value: 28.4 MPa)	Faulty swing relief valve
5	Measure the swing motor drainage	With constant speed	The measured values are not within the normal values (Normal Value: 0.2-0.3 L/min)	Faulty swing motor
6	-	-	The check mentioned above is normal	Faulty swing reduction gear

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NO.	SIZE	COL.	CIRCUIT FROM		CIRCUIT TO		KIND	COMMENT
1	2	R	(2)(1603)(1604)		FUSE_BOX	4-	AVS	
2	1.25	R	(1)		SMCZ	D6	AVSS	
3	0.5	LgR	SMCZ	A23	MAIN/H	E18	AVSS	
6	0.5	G	SMCZ	B14	MAIN/H	E16	AVSS	
7	0.5	YG	SMCZ	B15	MAIN/H	F21	AVSS	
9	0.5	Lg	SMCZ	A18	MAIN/H	B5	AVSS	
10	0.5	W	SMCZ	A5	MAIN/H	E15	AVSS	
11	0.5	Lg	SMCZ	A4	MAIN/H	F16	AVSS	
14	0.5	WY	SMCZ	B5	MAIN/H	F19	AVSS	
15	0.5	VG	SMCZ	A10	MAIN/H	B6	AVSS	
16	0.5	LR	SMCZ	B16	MAIN/H	B2	AVSS	
17	0.5	R	SMCZ	B13	MAIN/H	F17	AVSS	
19	0.5	LG	SMCZ	B7	MAIN/H	B4	AVSS	
20	0.5	LgB	SMCZ	A14	MAIN/H	E17	AVSS	
21	0.5	RB	SMCZ	A15	MAIN/H	F18	AVSS	
22	0.5	LB	SMCZ	A3	MAIN/H	B1	AVSS	
23	0.5	LgR	SMCZ	A8	MAIN/H	F20	AVSS	
26	0.5	WR	SMCZ	B3	MAIN/H	A10	AVSS	
29	0.5	YB	SMCZ	B6	MAIN/H	E20	AVSS	
30	0.5	LY	SMCZ	A19	MAIN/H	B3	AVSS	
32	0.5	Y	SMCZ	A16	MAIN/H	E19	AVSS	
39	0.85	L	SMCZ	E3	FUSE_BOX	10-	AVSS	
58	0.3	BW	MAIN/H	F1	SMCZ	D13	AVSS	
59	0.3	YR	MAIN/H	F9	SMCZ	D4	AVSS	
60	0.3	L	SMCZ	D7	MAIN/H	E5	AVSS	
66	0.3	GB	MONITOR_A	4	MAIN/H	E14	AVSS	
68	0.3	P	MAIN/H	F3	SMCZ	D20	AVSS	
69	0.3	O	SMCZ	D11	MAIN/H	E11	AVSS	
70	0.3	YB	MAIN/H	F7	SMCZ	D3	AVSS	
80	0.3	RB	MAIN/H	F8	SMCZ	D12	AVSS	
88	0.5	RB	SMCZ	E10	(764)		AVSS	
90	0.3	LY	SMCZ	E16	MAIN/H	A14	AVSS	
92	0.3	YL	SMCZ	D22	MAIN/H	E12	AVSS	
93	0.3	WG	MAIN/H	F2	SMCZ	D9	AVSS	
96	0.3	GR	MAIN/H	E10	SMCZ	D17	AVSS	
98	0.3	RG	MAIN/H	A12	SMCZ	D19	AVSS	
99	0.3	GY	SMCZ	D10	MAIN/H	E6	AVSS	
100	0.3	L	MAIN/H	E4	SMCZ	E26	AVSS	
102	0.3	YB	MAIN/H	F15	SMCZ	D21	AVSS	
104	0.3	W	MAIN/H	F13	SMCZ	D18	AVSS	
138	0.5	GB	OPTION2	6	MAIN/H	B21	AVSS	
141	0.5	WY	OPTION2	1	(610)		AVSS	
155	0.5	O	DIODE9	K	(530)		AVSS	
164	0.3	L	MAIN/H	B19	SMCZ	D15	AVSS	
165	0.3	G	MAIN/H	B20	SMCZ	D24	AVSS	
202	0.5	LY	MONITOR_A	8	MAIN/H	A13	AVSS	
222	0.3	Br	MONITOR_A	3	MAIN/H	F4	AVSS	
223	0.3	WV	MONITOR_A	6	MAIN/H	F5	AVSS	
234	0.3	GL	MONITOR_A	2	MAIN/H	B15	AVSS	
235	0.3	WL	MONITOR_A	1	MAIN/H	B16	AVSS	
250	0.3	WB	MONITOR_A	5	MAIN/H	F6	AVSS	
254	0.5	WR	MONITOR_A	9	MAIN/H	F11	AVSS	
500	3	B	JOINT_E	4	CAB_EARTH1	1	AVS	
501	3	B	JOINT_E	1	MAIN/H	D6	AVS	
503	0.5	B	OPTION2	12	CAB_EARTH3	1	AVSS	
505	2	WB	R4	D4	MAIN/H	C3	AVSS	
506	5	W	MAIN/H	D3	FUSE_BOX	1+	AVS	
508	2	W	DIODE3	K	MAIN/H	C2	AVSS	
509	3	B	JOINT_E	2	CAB_EARTH3	1	AVS	
510	2	W	DIODE1	K	(508)		AVSS	
511	3	R	START_SW	6	MAIN/H	C1	AVS	
515	0.5	GR	QOS	4	MAIN/H	B14	AVSS	
516	0.5	GY	FUSE_BOX	16-	MAIN/H	A7	AVSS	
517	0.5	Br	ENG_STOP_SW	3	DIODE4	1	AVSS	
518	3	B	JOINT_E	3	CAB_EARTH2	1	AVS	
519	1.25	R	R1	A1	(511)		AVSS	
520	2	R	R1	A3	(511)		AVS	
522	3	L	START_SW	4	FUSE_BOX	16+	AVS	
523	0.85	R	R5	E1	(1)		AVSS	
524	2	W	R1	A5	(508)		AVS	
525	0.5	V	R5	E4	R2	B5	AVSS	
526	0.5	VG	R4	D2	ENG_STOP_SW	4	AVSS	
527	0.5	VR	R5	E2	DIODE4	3	AVSS	
528	0.5	Br	DIODE5	1	(517)		AVSS	
529	0.5	VW	DIODE5	3	R2	B2	AVSS	
530	0.5	O	DIODE5	2	GATE_LOCK_SW	1	AVSS	
531	0.5	PB	R2	B3	GATE_VALVE	2	AVSS	
532	0.85	R	(1)		GATE_VALVE	1	AVSS	
533	0.85	R	R2	B1	(1)		AVSS	
534	2	WB	DIODE7	K	(505)		AVSS	
535	2	B	DIODE7	A	CAB_EARTH2	1	AVSS	
536	2	RL	R8	H5	MAIN/H	C8	AVSS	
537	2	LR	R7	G5	MAIN/H	C7	AVSS	
538	0.5	GR	DIODE2	A	(515)		AVSS	
539	0.5	GY	DIODE2	K	(516)		AVSS	
540	0.5	B	R3	C5	CAB_EARTH2	1	AVSS	
541	0.5	PG	R3	C3	SEC_HORN	2	AVSS	
542	0.85	P	R10	J5	MAIN/H	B10	AVSS	
544	0.5	RL	(552)		SEC_HORN	1	AVSS	
545	0.5	WV	R10	J2	HORN_SW	1	AVSS	
546	0.5	V	R9	I5	MAIN/H	B11	AVSS	
548	2	B	DIODE1	A	CAB_EARTH2	1	AVSS	
550	0.5	B	R5	E3	CAB_EARTH2	1	AVSS	
552	0.85	RL	R3	C1	FUSE_BOX	9-	AVSS	
560	3	R	(511)		FUSE_BOX	10+	AVS	
561	5	W	(506)		FUSE_BOX2	23+	AVS	
562	3	B	JOINT_E	6	CAB_LIGHT_R	2	AVS	
566	0.5	YR	RADIO	3	FUSE_BOX	12-	AVSS	
568	0.5	RL	RADIO	4	(552)		AVSS	
569	0.5	O	RADIO	1	SPEAKER	2	AVSS	
570	0.5	Br	RADIO	5	SPEAKER	4	AVSS	
571	0.5	GyB	RADIO	2	SPEAKER	1	AVSS	
572	0.5	WB	RADIO	6	SPEAKER	3	AVSS	
573	0.5	B	RADIO	7	CAB_EARTH2	1	AVSS	
589	0.85	BP	R6	F4	WIPER_STD	1	AVSS	
590	0.85	BY	R6	F3	WIPER_STD	4	AVSS	
591	0.85	BR	FUSE_BOX	2-	WIPER_STD	2	AVSS	
592	0.85	B	CAB_EARTH3	1	WIPER_STD	3	AVSS	
593	0.5	RB	R6	F1	(764)		AVSS	
594	0.85	B	R6	F5	CAB_EARTH2	1	AVSS	
595	0.5	RB	R9	I1	(764)		AVSS	
596	0.5	BR	R9	I3	(591)		AVSS	
597	3	G	R7	G3	FUSE_BOX2	29-	AVS	
598	3	G	R8	H3	FUSE_BOX	1-	AVS	
599	0.5	RB	R7	G1	(764)		AVSS	
601	0.5	G	R8	H1	(598)		AVSS	
602	0.5	W	R10	J1	(603)		AVSS	
603	0.85	W	R10	J3	FUSE_BOX	19-	AVSS	
604	0.5	B	CAB_EARTH3	1	GATE_LOCK_SW	3	AVSS	
605	0.5	B	CAB_EARTH3	1	HORN_SW	2	AVSS	
606	2	L	DIODE3	A	(522)		AVSS	
607	3	W	START_SW	1	FUSE_BOX	12+	AVS	
609	2	RG	A/C_1	2	FUSE_BOX	3-	AVS	
610	1.25	WY	OPTION	1	FUSE_BOX	5-	AVSS	
611	2	R	OPTION	2	FUSE_BOX	6-	AVS	
612	1.25	LgR	OPTION	3	FUSE_BOX	20-	AVSS	
615	3	B	OPTION	6	CAB_EARTH3	1	AVS	
616	1.25	LR	OPTION	4	(537)		AVSS	
617	1.25	RL	OPTION	5	(536)		AVSS	
618	2	RL	CAB_LIGHT_F+2	1	(536)		AVS	
621	1.25	BW	QOS	3	(505)		AVSS	
632	1.25	LY	LIGHTER	+	FUSE_BOX	13-	AVS	
633	1.25	B	LIGHTER	-	CAB_EARTH3	1	AVSS	
634	0.5	B	ENG_STOP_SW	2	CAB_EARTH3	1	AVSS	
660	1.25	R	FUSE_BOX2	35-	MAIN/H	C5	AVSS	
661	1.25	G	AUX	+	FUSE_BOX	15-	AVSS	
662	1.25	B	AUX	-	CAB_EARTH3	1	AVSS	
664	1.25	WY	(610)		MAIN/H	C6	AVSS	
665	0.5	WY	(610)		MAIN/H	B7	AVSS	
666	1.25	B	DIODE6	A	(662)		AVSS	
667	1.25	G	DIODE6	K	(661)		AVSS	
713	0.5	Gy	ENG_L_SW	2	MAIN/H	A9	AVSS	
725	0.5	B	ENG_L_SW	1	CAB_EARTH3	1	AVSS	
760	0.5	WY	MONITOR_A	10	MAIN/H	F10	AVSS	
762	0.3	BG	QOS	6	MONITOR_A	11	AVSS	
764	0.5	RB	MAIN/H	A15	FUSE_BOX	17-	AVSS	
766	0.3	GyL	EM_EC2	2	MAIN/H	A20	AVSS	
767	0.3	OL	EM_EC1	1	MAIN/H	A19	AVSS	
768	0.5	GyR	MAIN/H	A16	ENG_STOP_SW	1	AVSS	
769	0.3	RL	EM_EC1	2	MAIN/H	A21	AVSS	
771	0.5	LB	MONITOR_B	8	FUSE_BOX	14-	AVSS	
781	1.25	GyR	MAIN/H	D5	FUSE_BOX	11-	AVSS	
800	0.5	G	MONITOR_B	5	MAIN/H	E3	AVSSCS	SHIELD TWIST PAIR TO 801
801	0.5	L	MONITOR_B	6	MAIN/H	E9	AVSSCS	SHIELD TWIST PAIR TO 800
810	0.5	L	MAIN/H	A8	FUSE_BOX	8-	AVSS	
825	0.5	RB	MONITOR_A	12	GATE_LOCK_SW	2	AVSS	
845	0.5	GyR	R6	F2	SMCZ	B11	AVSS	
850	0.5	Y	R7	G2	SW_BOX	15	AVSS	
852	0.5	GB	R3	C2	MONITOR_B	4	AVSS	
854	0.5	RY	R8	H2	SW_BOX	16	AVSS	
855	0.5	BL	R9	I2	SMCZ	C15	AVSS	
856	0.5	O	R1	A2	MONITOR_B	2	AVSS	
900	2	WR	START_SW	3	R4	D3	AVS	
910	1.25	WR	(900)		R4	D1	AVSS	
930	0.5	BR	SMCZ	B1	MAIN/H	A11	AVSS	
931	0.5	LB	OPTION2	8	MAIN/H	B8	AVSS	
932	0.3	RW	OPTION2	10	MAIN/H	B9	AVSS	
1003	0.85	B	MONITOR_A	7	CAB_EARTH2	1	AVSS	
1006	0.5	B	SW_BOX	4	CAB_EARTH2	1	AVSS	
1007	0.5	B	POWER_DIG_SW	1	CAB_EARTH2	1	AVSS	
1008	0.85	B	SMCZ	E1	CAB_EARTH3	1	AVSS	
1009	2	B	(1015) - (1017)		CAB_EARTH3	1	AVS	
1011	2	B	A/C_1	1	CAB_EARTH2	1	AVS	
1013	2	B	DIODE8	A	CAB_EARTH2	1	AVSS	
1015	1.25	B	(1009)		SMCZ	D1	AVSS	
1016	1.25	B	(1009)		SMCZ	E5	AVSS	
1017	1.25	B	(1009)		SMCZ	E6	AVSS	
1021	0.5	R	SMCZ	E11	SERIAL_SMCZ	4	AVSS	
1023	0.85	RY	ST_EC1	1	MAIN/H	D2	AVSS	
1031	0.5	GL	MONITOR_B	3	DIODE4	2	AVSS	
1039	0.3	GB	POWER_DIG_SW	2	SMCZ	A27	AVSS	
1062	0.85	L	SMCZ	E4	(39)		AVSS	
1070	0.3	BY	(1153)		SERIAL_SMCZ	2	AVSS	
1074	0.3	Lg	BOOM_MODE_SW	1	SMCZ	C8	AVSS	
1096	0.5	B	(1011)		MAIN/H	D7	AVSS	
1097	0.5	GB	A/C_2	5	MAIN/H	D4	AVSS	
1098	0.5	GR	SMCZ	D14	MAIN/H	F12	AVSS	
1104	0.3	BrL	A/C_2	4	MAIN/H	B17	AVSS	
1105	1.25	W	A/C_2	6	MAIN/H	D1	AVSS	
1111	0.3	O	A/C_2	1	MONITOR_A	15	AVSS	
1112	0.3	RY	A/C_2	3	MAIN/H	B18	AVSS	
1113	2	RG	A/C_1	3	(609)		AVS	
1117	0.5	WV	SMCZ	D23	MAIN/H	F14	AVSS	
1119	0.5	RY	SMCZ	E19	(1023)		AVSS	
1120	0.5	G	SMCZ	A28	(800)		AVSSCS	SHIELD TWIST PAIR TO 1205
1121	0.85	B	SMCZ	E2	(1008)		AVSS	
1124	0.5	G	A/C_2	9	(800)		AVSSCS	SHIELD TWIST PAIR TO 1125
1125	0.5	L	A/C_2	10	(801)		AVSSCS	SHIELD TWIST PAIR TO 1124
1134	0.5	B	SMCZ	E21	SERIAL_SMCZ	5	AVSS	
1148	0.5	RL	MONITOR_A	13	(552)		AVSS	
1153	0.85	BY	ST_EC2	2	MAIN/H	D8	AVSS	
1157	0.5	YW	SMCZ	B24	MONITOR_B	7	AVSS	
1159	0.5	WR	ROOM_LAMP	1	FUSE_BOX	7-	AVSS	
1160	0.3	G	SMCZ	C14	SW_BOX	12	AVSS	
1172	0.5	W	SMCZ	E12	SERIAL_SMCZ	3	AVSS	
1174	0.3	RY	(1023)		SERIAL_SMCZ	1	AVSS	
1176	0.5	RB	A/C_1	4	(764)		AVSS	
1182	0.3	W	ST_EC1	2	SMCZ	D8	AVSS	
1190	0.5	YG	DIODE9	A	SMCZ	C1	AVSS	
1205	0.5	L	SMCZ	A29	(801)		AVSSCS	SHIELD TWIST PAIR TO 1120
1218	0.3	BR	OPTION2	11	(930)		AVSS	
1225	0.3	BL	SMCZ	C13	SW_BOX	14	AVSS	
1227	0.5	GW	SMCZ	A20	MAIN/H	A17	AVSS	
1228	0.5	BY	SMCZ	E20	(1153)		AVSS	
1237	0.3	YR	A/C_2	2	MONITOR_A	16	AVSS	
1242	1.25	W	DIODE8	K	(1105)		AVSS	
1254	0.5	PG	SMCZ	A11	MAIN/H	A18	AVSS	
1255	0.5	BY	SMCZ	E18	(1153)		AVSS	
1276	0.5	RY	SMCZ	E7	(1023)		AVSS	
1314	3	W	START_SW	5	(607)		AVS	

NO.	SIZE	COL.	CIRCUIT FROM		CIRCUIT TO		KIND	COMMENT
1332	1.25	WR	(607)		FUSE_BOX	7+	AVSS	
1356	0.5	G	CAN	1	(800)		AVSSCS	SHIELD TWIST PAIR TO 1357
1357	0.5	L	CAN	2	(801)		AVSSCS	SHIELD TWIST PAIR TO 1356
1400	0.5	GY	QOS	1	(516)		AVSS	
1401	0.5	L	QOS	2	MAIN/H	B12	AVSS	
1403	0.5	B	QOS	5	CAB_EARTH2	1	AVSS	
1405	0.5	RL	(618)		OPT_LIGHT_FRONT	1	AVS	
1406	2	R	SEAT	3	FUSE_BOX2	21-	AVS	
1407	2	R	FUSE_BOX2	22-	OPT_LIGHT_FRONT	3	AVS	
1408	2	R	CAB_LIGHT_R	1	FUSE_BOX2	23-	AVS	
1409	2	R	12V_UNIT	1	FUSE_BOX2	24-	AVS	
1410	1.25	RB	IMOBI	1	FUSE_BOX2	25-	AVSS	
1411	1.25	RB	QUICK_HITCH	1	FUSE_BOX2	26-	AVSS	
1412	1.25	RB	AUX3	1	FUSE_BOX2	27-	AVSS	
1413	2	R	SEAT	1	FUSE_BOX2	31-	AVS	
1414	2	R	CAB_LIGHT_F+2	3	FUSE_BOX2	32-	AVS	
1415	2	R	WARNING_LAMP	1	FUSE_BOX2	33-	AVS	
1416	2	R	AUX2	1	FUSE_BOX2	34-	AVS	
1417	2	B	SEAT	2	(562)		AVS	
1418	2	B	(562)		OPT_LIGHT_FRONT	2	AVS	
1419	2	B	CAB_LIGHT_F+2	2	(562)		AVS	
1421	2	B	WARNING_LAMP	2	(562)		AVS	
1422	2	B	IMOBI	2	(562)		AVS	
1423	2	B	12V_UNIT	2	(562)		AVS	
1424	2	B	QUICK_HITCH	2	(562)		AVS	
1425	2	B	AUX2	2	(562)		AVS	
1426	2	B	AUX3	2	(562)		AVS	
1427	3	W	(561)		FUSE_BOX2	21+	AVS	
1428	3	W	(561)		FUSE_BOX2	25+	AVS	
1429	3	W	(561)		FUSE_BOX2	35+	AVS	
1430	7 3	W	(561)		FUSE_BOX2	29+	AVS	
1431	3	W	(561)		FUSE_BOX2	31+	AVS	
1432	3	W	(561)		FUSE_BOX2	33+	AVS	
1463	0.5	GR	LOADER_MODE	F	SMCZ	C5	AVSS	
1490	0.3	B	LEARNING_SW	1	CAB_EARTH3	1	AVSS	
1491	0.3	GB	LEARNING_SW	6	SMCZ	C11	AVSS	
1492	0.3	RY	LEARNING_SW	2	SMCZ	C12	AVSS	
1495	0.3	GB	ENG_L_SW	6	(1491)		AVSS	
1520	0.5	PB	SMCZ	A21	MAIN/H	A1	AVSS	
1521	0.5	PW	SMCZ	A12	MAIN/H	A2	AVSS	
1522	0.5	GB	SMCZ	A9	MAIN/H	A3	AVSS	
1523	0.5	BrY	SMCZ	A2	MAIN/H	A4	AVSS	
1525	0.5	B	LOADER_MODE	M	CAB_EARTH2	1	AVSS	
1554	0.5	B	BOOM_MODE_SW	4	CAB_EARTH3	1	AVSS	
1603	1.25	R	(1)		SMCZ	D5	AVSS	
1604	1.25	R	(1)		SMCZ	D2	AVSS	
1800	0.3	W	SMCZ	C2	SW_BOX	6	AVSS	
1801	0.3	RW	SMCZ	C9	SW_BOX	13	AVSS	
1802	0.3	RB	SMCZ	D16	SW_BOX	10	AVSS	
1803	0.3	GB	SMCZ	C7	SW_BOX	8	AVSS	
1804	0.85	BY	(1805)		SW_BOX	11	AVSS	
1805	0.85	BY	EC2	2	SW_BOX	3	AVSS	
1806	0.85	RY	(1807)		SW_BOX	9	AVSS	
1807	0.85	RY	EC1	1	SW_BOX	1	AVSS	
1808	0.3	W	EC1	2	SW_BOX	2	AVSS	
1809	0.5	Y	DIODE10	A	(850)		AVSS	
1810	0.5	RY	DIODE10	K	(854)		AVSS	
1811	0.3	RB	AIRCON_UNIT	28	A/C_3	14	AVSS	
1812	0.3	WR	AIRCON_UNIT	27	A/C_3	13	AVSS	
1813	0.3	RL	AIRCON_UNIT	21	A/C_3	17	AVSS	
1814	0.3	GW	AIRCON_UNIT	24	A/C_3	30	AVSS	
1815	0.3	Lg	AIRCON_UNIT	23	A/C_3	29	AVSS	
1816	0.5	G	AIRCON_UNIT	9	A/C_3	11	AVSSCS	SHIELD TWIST PAIR TO 1817
1817	0.5	L	AIRCON_UNIT	8	A/C_3	10	AVSSCS	SHIELD TWIST PAIR TO 1816
1818	0.3	BrY	AIRCON_UNIT	7	A/C_3	9	AVSS	
1819	0.3	Sb	AIRCON_UNIT	6	A/C_3	8	AVSS	
1820	0.3	YR	AIRCON_UNIT	4	A/C_3	31	AVSS	
1821	0.3	GR	AIRCON_UNIT	5	A/C_3	32	AVSS	
1822	0.3	GyL	AIRCON_UNIT	18	A/C_3	20	AVSS	
1823	0.3	O	AIRCON_UNIT	3	A/C_3	16	AVSS	
1824	0.3	P	AIRCON_UNIT	2	A/C_3	15	AVSS	
1825	0.3	WB	AIRCON_UNIT	14	A/C_3	19	AVSS	
1826	0.3	RB	AIRCON_UNIT	11	A/C_3	7	AVSS	
1827	0.3	YL	AIRCON_UNIT	12	A/C_3	3	AVSS	
1828	0.3	RW	AIRCON_UNIT	15	A/C_3	4	AVSS	
1829	0.3	BrL	AIRCON_UNIT	20	A/C_3	25	AVSS	
1830	0.3	GB	AIRCON_UNIT	36	A/C_3	21	AVSS	
1831	0.3	OB	AIRCON_UNIT	19	A/C_3	5	AVSS	
1832	0.3	OrB	AIRCON_UNIT	16	A/C_3	6	AVSS	
1833	0.3	B	AIRCON_UNIT	33	(1834)		AVSS	
1834	0.3	B	AIRCON_UNIT	40	A/C_3	26	AVSS	
1835	0.85	LR	(616)		SW_BOX	5	AVSS	
1836	0.5	LR	MONITOR_A	14	(616)		AVSS	
1837	0.5	G	ICF	C5	(800)		AVSSCS	SHIELD TWIST PAIR TO 1838
1838	0.5	L	ICF	C11	(801)		AVSSCS	SHIELD TWIST PAIR TO 1837
1839	0.5	B	ICF	C15	(1840)		AVSS	
1840	0.5	B	ICF	C14	CAB_EARTH2	1	AVSS	
1841	0.5	RB	ICF	C7	(764)		AVSS	
1842	0.85	B	ICF	A30	(1845)		AVSS	
1843	0.85	B	ICF	A19	(1845)		AVSS	
1844	0.85	B	ICF	A10	(1845)		AVSS	
1845	0.85	B	ICF	A29	CAB_EARTH2	1	AVSS	
1846	0.85	L	ICF	C1	(552)		AVSS	
1847	0.85	L	ICF	C2	(1846)		AVSS	
1848	0.5	LY	ICF	C8	(202)		AVSS	
1849	0.3	BW	ICF	A8	GSM/H	7	AVSS	
1850	0.3	RW	ICF	C4	GSM/H	5	AVSS	
1851	0.5	B	CAB_EARTH2	1	GSM/H	3	AVSS	
1852	0.3	WL	ICF	A9	GSM/H	8	AVSS	
1853	0.5	LY	(1848)		GSM/H	4	AVSS	
1854	0.5	L	(1846)		GSM/H	2	AVSS	
1855	0.5	RB	(1841)		GSM/H	1	AVSS	
1856	0.3	BG	ICF	A17	DR	6	AVSS	
1857	0.3	B	ICF	A18	DR	5	AVSS	
1858	0.85	BP	ICF	A5	DR	4	AVSS	
1859	0.3	BL	ICF	A28	DR	3	AVSS	
1860	0.3	RB	ICF	A6	DR	2	AVSS	
1861	0.3	R	ICF	A7	DR	1	AVSS	
1862	0.3	Lg	D/I	1	SMCZ	C3	AVSS	
1863	0.3	GR	D/I	2	SMCZ	C10	AVSS	
1864	0.5	B	D/I	6	CAB_EARTH2	1	AVSS	
1865	1.25	G	(661)		AUX1	+	AVSS	
1866	1.25	B	(662)		AUX1	-	AVSS	
1867	0.5	GW	VIEW_SW	1	SMCZ	C4	AVSS	
1868	0.5	B	VIEW_SW	2	CAB_EARTH3	1	AVSS	
1869	0.3	GR	MODE_SW	1	SMCZ	7 C16	AVSS	
1872	0.5	B	MODE_SW	4	CAB_EARTH3	1	AVSS	
1873	0.3	RB	HP_MODE	1	SMCZ	C17	AVSS	
1874	0.5	B	HP_MODE	2	CAB_EARTH3	1	AVSS	



注記
1．ことわりなき場合、1.25sq以下のワイヤ線種はAVSS、2sq以上はAVSのこと。
2．コネクタのピン配列は、相手側のコネクタから見た状態である。
3．区間 L-M および G-J では電気的分岐を設けないこと。
4．図番ラベルをハーネスに設けること。
5．ギボシコネクタはムク黄銅のこと。
6．COLOR記号は JASO D607 による。
7．図面の一般的表記は #4259303 による。
8．鉛フリー部品（電線、コルゲート、テープ等）を使用のこと。
9．AVSSの代わりに CAVS を使用してもよいものとする。
10．アスベストは使用しないこと。
11．電線同士のジョイントは、筒型接合端子を使用すること。

NOTES
1. UNLESS OTHERWISE SPECIFIED, WIRE UNDER 1.25sq SIZE TO BE TYPE AVSS OR CAVS. WIRE SIZE OVER 2sq SIZE TO BE TYPE AVS.
2. THE FIGURE OF ARRANGEMENT OF PINS EXPRESS THE SIDE WHICH LOOKED FROM THE OTHER CONNECTOR.
3. NO ELECTRIC DIVERGENCE IN SECTIONS A-A2, L-M AND G-J.
4. PUT THE DRAWING NUMBER LABEL ON THE HARNESS.
5. BULLET TERMINAL IS MADE OF PURE BRASS WITH NO PLATING.
6. COLOR ABBREVIATIONS ARE USED BASED ON JASO D607.
7. RULES OF DRAWING ARE BASED ON #X4259303.
8. USE LEAD-FREE PARTS. (WIRE, COT, TAPE, etc.)
9. USING "CAVS" AS SUBSTITUTION OF "AVSS" IS PERMITTED.
10. MUST NOT USE ASBEST.
11. USING TUBLAR SPLICES TO WIRE JOINT..

回路数：339

ZX470GI CAB/H

関係図 RELATED DWG.		部署 SHOP	材質 MATERIAL	素材形状 MATERIAL SHAPE	仕上質量 FIN.MASS	長サ LENGTH	基ニシタ図 REF DWG	尺度 SCALE
4259303	4710407	B	NTG	CAB/H	6.00		YA00003360	N.T.S
4716434		DWN SHU.KOBAYASHI	DRAW.DATE 2012.09.10	品名 ハーネス；ワイヤ		付加記号 ADD.CODE ZX470GI	投影法 3rd ANGLE P.	
YA00018977		CHKD KE.TASHIRO	入庫 REGD 2012.09.18	PART NAME HARNESS;WIRE		図番 DWG.# YA00013324	来歴 REV 7	頁 P 1/1
		APPD KE.TASHIRO		Hitachi Construction Machinery Group				

I-DEAS LA0400-B