PART NO. TTJBM-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
870-5A
870LC-5A
890H-5A
890LCH-5A
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOJBM-EN
Technical Manual (Troubleshooting)	: Vol. No.TTJBM-EN
Workshop Manual	: Vol. No.WJBM-EN
Engine Manual	: Vol. No.ETJBM-EN,EWJBM-EN

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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Monitor Controller (Information) Fault Code List

Fault Code	Trouble	Cause	Remedy
14001-2	ICF: Flash Memory Read/Write Error	The internal memory of monitor controller is abnormal	After initializing the monitor controller (information) by using MPDr., retry the troubleshooting. If the fault code is displayed after retry, the monitor controller may be broken. Replace the monitor controller. When initializing the monitor controller (information), all stored data is deleted.
14002-2	ICF: External RAM Read/Write Error	The internal memory of monitor controller is abnormal	After initializing the monitor controller (information) by using MPDr., retry the troubleshooting. If the fault code is displayed after retry, the monitor controller may be broken. Replace the monitor controller. When initializing the monitor controller (information), all stored data is deleted.
14003-2	Abnormal EEPROM	The internal memory of monitor controller is abnormal	Retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, the monitor controller may be broken. Replace the monitor controller.
14006-2	ICF: Communication Terminal: Communication Error	Communication error with communication equipment	Check the communication line, power line for communication terminal, and fuses. Then, retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, the communication equipment may be broken. Replace the communication equipment.
14008-2	ICF: Abnormal Internal RAM	The internal memory of monitor controller is abnormal	Retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, the monitor controller may be broken. Replace the monitor controller.
14021-2	Communication Terminal Security Error	Security failure of mobile communication equipment	Check the communication line. Check the GPS antenna. In case the communication equipment has been replaced, it may be considered faulty. After disable the checking function for mobile phone number by security setting of MPDr., enable it again. Retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, the communication equipment may be broken. Replace the communication equipment.
14022-2	SIM Card Error	Abnormal SIM card in mobile communication equipment	Retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, the communication equipment may be broken. Replace the communication equipment.
14023-2	Security Error	Communication error with MC	Check the CAN1 harness. Retry the troubleshooting by using MPDr.. If the fault code is displayed after retry, MC may be broken. Replace MC.

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Air Conditioner Controller Fault Codes 11 to 22

Preparation

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

Fault Code	Trouble	Inspection Method	Evaluation	Cause
11	Open Circuit in Re-circulated Air Temperature Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	∞ Ω (Normal value: 300 to 430 kΩ)	Faulty sensor
		Measure voltage between sensor harness end #25$_H$ and body.	0 V	Open circuit in wire harness #25$_H$
		-	Normal in above check.	Open circuit in wire harness #6$_B$
12	Short Circuit in Re-circulated Air Temperature Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	0 Ω (Normal value: 300 to 430 kΩ)	Faulty sensor
		-	Normal in above check.	Short circuit in wire harness #25$_H$ and #6$_B$
13	Open Circuit in Ambient Temperature Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	∞ Ω (Normal value: 100 to 210 kΩ)	Faulty sensor
		Measure voltage between sensor harness end #25$_H$ and body.	0 V	Open circuit in wire harness #25$_H$
		-	Normal in above check.	Open circuit in wire harness #6$_B$
14	Short Circuit in Ambient Temperature Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	0 Ω (Normal value: 100 to 210 kΩ)	Faulty sensor
		-	Normal in above check.	Short circuit in wire harness #25$_H$ and #6$_B$
18	Short Circuit in Solar Radiation Sensor	Continuity check between sensor harness end #25$_H$ and #6$_B$.	0 Ω	Short circuit in wire harness #25$_H$ and #6$_B$
		-	Normal in above check.	Faulty sensor
21	Open Circuit in Frost Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	∞ Ω (Normal value: 100 to 115 kΩ)	Faulty sensor
		Measure voltage between sensor harness end #25$_H$ and body.	0 V	Open circuit in wire harness #25$_H$
		-	Normal in above check.	Open circuit in wire harness #6$_B$
22	Short Circuit in Frost Sensor	Measure resistance between sensor #25$_H$ and #6$_B$.	0 Ω (Normal value: 100 to 115 kΩ)	Faulty sensor
		-	Normal in above check.	Short circuit in wire harness #25$_H$ and #6$_B$

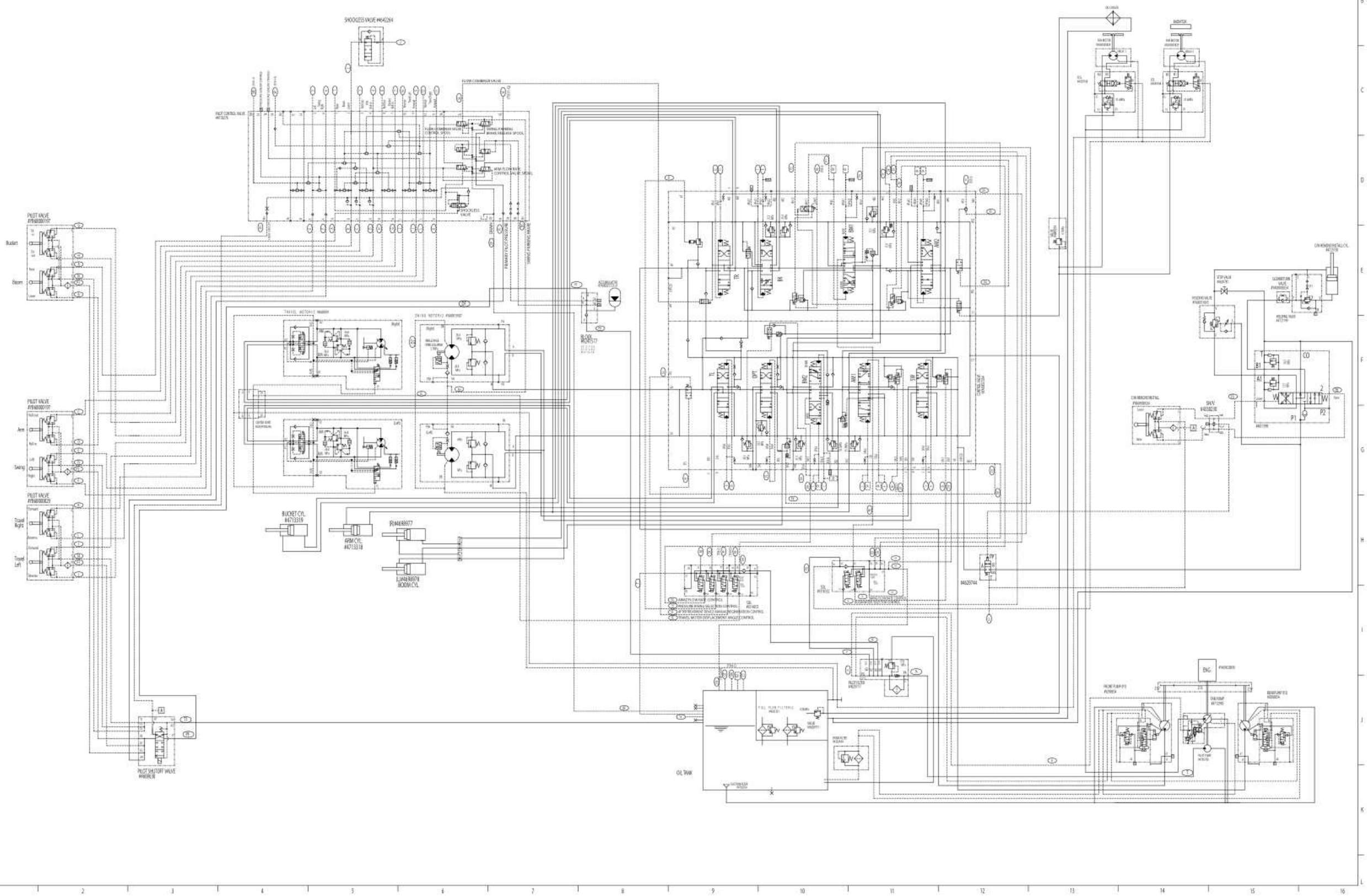
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HYDRAULIC CIRCUIT DIAGRAM (OPTION)

Applicable Machine

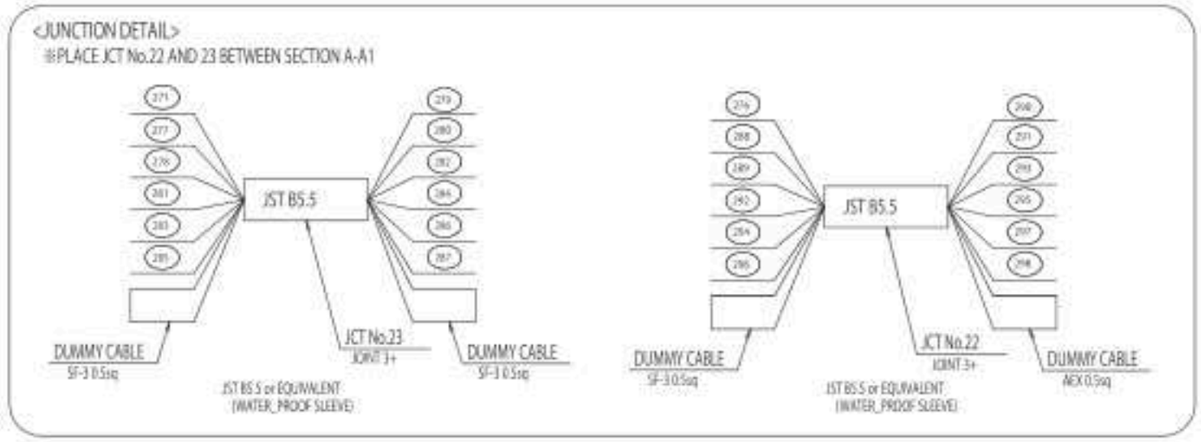
Attach to vol. No.	Model
TTJBL40-EN-00	ZX870-6/870LC-6/890H-6/890LCH-6/890LCR-6/890R-6

▲ CAUTION: Parts numbers on the drawing are provided only for reference purpose.
To order parts on the drawing, be sure to consult the Parts Catalog.

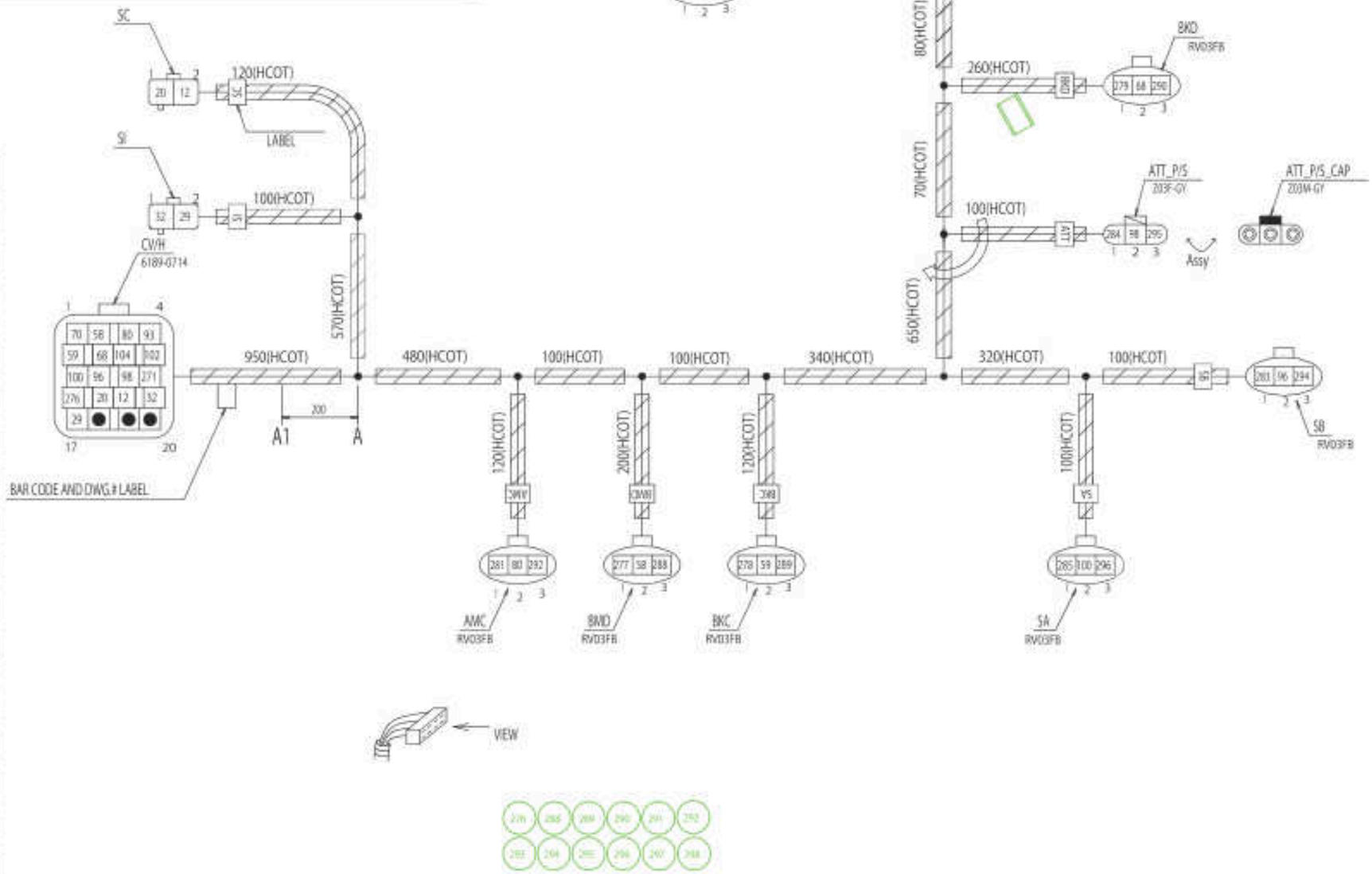


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ZX870-5A • 870LC-5A • 890H-5A • 890LCH-5A CONTROL VALVE HARNESS



⚠ CAUTION: Parts numbers on the drawing are provided only for reference purpose.
To order parts on the drawing, be sure to consult the Parts Catalog.



NO.	SIZE	COL.	CIRCUIT FROM		CIRCUIT TO		KIND	COMMENT
12	0.5	L	SC	2	CV/H	15	SF-3	
20	0.5	P	SC	1	CV/H	14	SF-3	
29	0.5	Y	SI	2	CV/H	17	SF-3	
32	0.5	Gy	SI	1	CV/H	16	SF-3	
58	0.5	Br	BMD	2	CV/H	2	SF-3	
59	0.5	G	BKC	2	CV/H	5	SF-3	
68	0.5	O	BKD	2	CV/H	6	SF-3	
70	0.5	L	BMU	2	CV/H	1	SF-3	
80	0.5	P	AMC	2	CV/H	3	SF-3	
93	0.5	W	AMD	2	CV/H	4	SF-3	
96	0.5	G	SB	2	CV/H	10	SF-3	
98	0.5	O	ATT_P/S	2	CV/H	11	SF-3	
100	0.5	Br	SA	2	CV/H	9	SF-3	
102	0.5	Y	TR	2	CV/H	8	SF-3	
104	0.5	Gy	S3	2	CV/H	7	SF-3	
271	0.5	R	JOINT_3+		CV/H	12	SF-3	JCT No.23
276	0.5	B	JOINT_3-		CV/H	13	SF-3	JCT No.22
277	0.5	R	BMD	1	JOINT_3+		SF-3	JCT No.23
278	0.5	R	BKC	1	JOINT_3+		SF-3	JCT No.23
279	0.5	R	BKD	1	JOINT_3+		SF-3	JCT No.23
280	0.5	R	BMU	1	JOINT_3+		SF-3	JCT No.23
281	0.5	R	AMC	1	JOINT_3+		SF-3	JCT No.23
282	0.5	R	AMD	1	JOINT_3+		SF-3	JCT No.23
283	0.5	R	SB	1	JOINT_3+		SF-3	JCT No.23
284	0.5	R	ATT_P/S	1	JOINT_3+		SF-3	JCT No.23
285	0.5	R	SA	1	JOINT_3+		SF-3	JCT No.23
286	0.5	R	TR	1	JOINT_3+		SF-3	JCT No.23
287	0.5	R	S3	1	JOINT_3+		SF-3	JCT No.23
288	0.5	B	BMD	3	JOINT_3-		SF-3	JCT No.22
289	0.5	B	BKC	3	JOINT_3-		SF-3	JCT No.22
290	0.5	B	BKD	3	JOINT_3-		SF-3	JCT No.22
291	0.5	B	BMU	3	JOINT_3-		SF-3	JCT No.22
292	0.5	B	AMC	3	JOINT_3-		SF-3	JCT No.22
293	0.5	B	AMD	3	JOINT_3-		SF-3	JCT No.22
294	0.5	B	SB	3	JOINT_3-		SF-3	JCT No.22
295	0.5	B	ATT_P/S	3	JOINT_3-		SF-3	JCT No.22
296	0.5	B	SA	3	JOINT_3-		SF-3	JCT No.22
297	0.5	B	TR	3	JOINT_3-		SF-3	JCT No.22
298	0.5	B	S3	3	JOINT_3-		SF-3	JCT No.22

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