PART NO. TTJBK40-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
670LC-6
690LCH-6
690LCR-6

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOJBK40-EN
Technical Manual (Troubleshooting)	: Vol. No.TTJBK40-EN
Workshop Manual	: Vol. No.WJBK40-EN
Engine Manual	: Vol. No.ETJBK40-EN, EWJBK40-EN

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Electric Lever System Fault Code List

CAN Data Receive Error

Fault Code	Trouble	Cause	Symptoms in machine operation when trouble occurs	Remedy:
15002-2	(Optional Controller) Main Controller Communication Error 2	Faulty controller. Faulty CAN1 Harness	-	Check the CAN1 harness. Replace the controller.

Pilot Failure

Fault Code	Trouble	Cause	Symptoms in machine operation when trouble occurs	Remedy:
15016-3	Right Analog Stroke Signal Sensor Circuit High Input	Voltage: more than 4.75 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15016-4	Right Analog Stroke Signal Sensor Circuit Low Input	Voltage: less than 0.25 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15017-3	Left Analog Stroke Signal Sensor Circuit High Input	Voltage: more than 4.75 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15017-4	Left Analog Stroke Signal Sensor Circuit Low Input	Voltage: less than 0.25 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.

Abnormal Voltage Judgment

Fault Code	Trouble	Cause	Symptoms in machine operation when trouble occurs	Remedy:
20303-2	Electric Lever Pilot Cut Alarm	Neutral monitoring failure is detected at one of an electric lever control	All functions of the front attachment stop.	Check the wire harness.

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MC Fault Codes 11004, 11006, 11007, 11009 Monitor Controller (Monitor) Fault Codes 13002, 13003, 13005

Preparation

- Check the wiring connections first.
- Check the CAN0 harness between the controllers. (Refer to CAN0 Harness Check.)

Fault Code	Trouble	Inspection Method	Cause
11004-2	Abnormal CAN Communication 1	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
11006-2	(MC) EC Communication Error	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
11007-2	(MC) IC Communication Error 1	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
11009-2	(MC) Monitor Controller Communication Error 1	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
13002-2	(Monitor Controller) Engine Controller Communication Error	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
13003-2	(Monitor Controller) Main Controller Communication Error 1	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.
13005-2	(Monitor Controller) Information Controller Communication Error 1	Continuity check (open circuit)	Open circuit in harness.
		Discontinuity check	Short circuit in wire harness.

NOTE: The information controller is the Information Control Unit of Monitor Controller.

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A-6 Manual regeneration of aftertreatment device cannot be performed.

Preparation

- Refer to SYSTEM/Control System/Aftertreatment Device Manual Regeneration Control.
- In case the tracks are raised off the ground (power is weak), the bypass shut-out valve may be faulty.
- Check the wiring connections first.

Procedure	Inspection Method	Condition	Evaluation:	Cause
1	Monitor Pilot Control Shut-Off Lever Switch.	Pilot Shut-Off Lever: UNLOCK Position	ON is displayed.	YES: Faulty pilot shut-off switch NO: Go to Procedure No. 2
2	Monitor Manual Regeneration Switch.	Aftertreatment Device Regeneration Switch: OFF	ON is displayed.	YES: Faulty aftertreatment device regeneration switch NO: Go to Procedure No. 3
3	Measure pressure at port SF of 4-spool solenoid valve unit.	Aftertreatment Device Manual Regeneration (Forcible): ON	The measured values are out of the specification. (Specification: approx. 1.3 MPa)	YES: Stuck spool in 4-spool solenoid valve unit (SF) NO: Go to Procedure No. 4
4	Monitor signal control valve SB port pressure	Aftertreatment Device Manual Regeneration (Forcible): ON	The measured values are out of the specification. (Specification: approx. 8.0 MPa)	YES: Pump 2 control solenoid valve is stuck NO: Go to Procedure No. 5
5	Monitor Pump 2 Delivery Pressure.	Control lever in neutral	The measured values are out of the specification. (Specification: approx. 0.7 MPa)	YES: Stuck bypass shut-out valve NO: Faulty MC

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Rewrite of Aftertreatment Device Serial No.

When the aftertreatment device has been replaced, rewrite the serial No. of aftertreatment device and upload the data to e-Service.

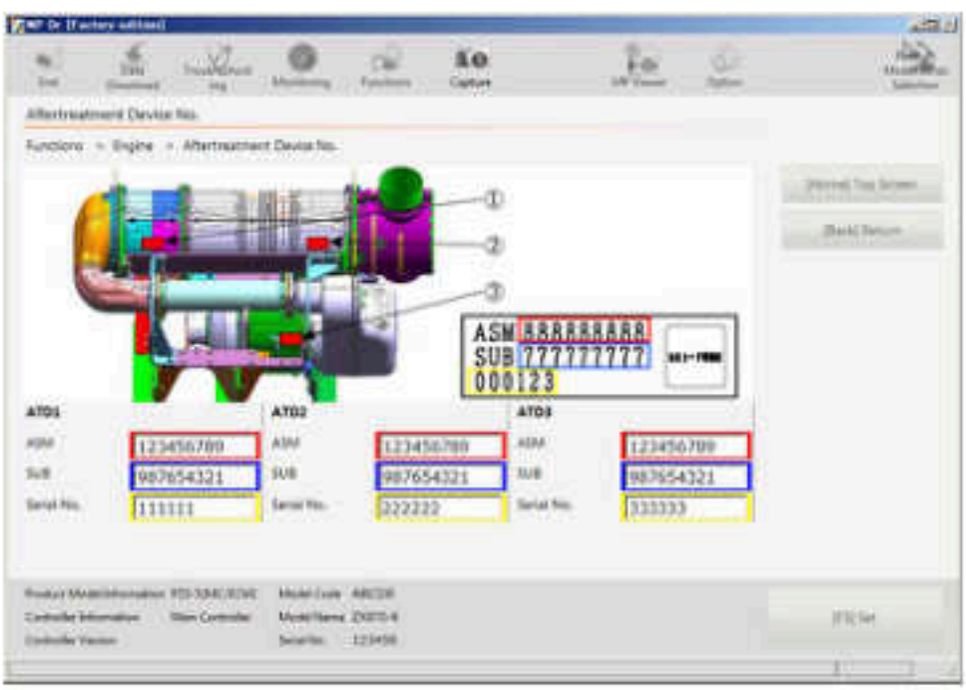
Procedure

1. Connect MPDr..
2. Set the key switch to the ON position.
3. Select Functions-Engine-Aftertreatment Device No. with MPDr..
4. Input the serial No. after the replacement to the following items of Oxidation Catalyst (DOC) and SCR Catalyst.

- ASM
- SUB
- Serial No.

5. After inputting, select Set.
6. Upload the input data to e-Service.

NOTE: When the input data is uploaded to e-Service, the M-Find product specification and history will be updated.



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CONNECTORS (ONE NOx SENSOR) (MACHINE: UP TO SERIAL NO.60012)

CONNECTOR CHART

(NO COMMENTS CONNECTOR IS HARNESS SIDE)

<INSIDE OF CAB>

SEC_HORN — 7283-8220
CAN1 — Z02FGY — 7123-8520-40
OPTION — M06FW — 7123-6060
OPTION2 — C12FW — 7123-7920
OPT_SW — C03FW — 7123-7830
OPT_WIPER — C06FW — 7123-7860
FAN_REVERSE_SW — C04FB — 7123-7841-30
AUTO_LUB_SW — C06FBR — 7123-7862-80
AUX_2,AUX_3,12V_UNIT,IMMOBI,WARNING_LAMP, CAB_LAMP_REAR,QUICK_HITCH — CN02F — 7123-2825
SEAT,CAB_LAMP_FRONT, CAB_LAMP_FRONT+2 — CN03F — 7123-2835
POWER_DIG_SW — 174056-2
BACK_UP — Z02FBR — 7123-8521-80
D_BACK_UP — Z02MBR — 7222-8521-80

JOINT1 — DSD-06F-W
JOINT_E — 7123-6261-40
WIPER_STD BOOM_MODE_SW — C04FW — 7123-7840
CAB LIGHT — C03FW — 7123-7830
DOOR_SW — 6520-0564
HORN_SW — 174056-2
EC1 — C02MW — 7122-7820
ST_EC1 — C02FW — 7123-7820
EC2 — C02FW — 7123-7820
ST_EC2 — C02MW — 7122-7820
EM_EC1 — C02FW — 7123-7820
EM_EC2 — C02MW — 7122-7820
PILOT SHUT-OFF SOL — Z02FGY — 7123-8520-40
PILOT SHUT-OFF SW — Z03FGY — 7123-7730-40
ENG_STOP_SW — C06FB — 7123-7861-30
MANUAL REGENERATION_SW/H — C06FB — 7123-7861-30
EL_LEVER_OPTION — C12FW — 7123-7920

MC_A — 353031-2
MC_B — 353029-2
MC_C — 353027-1
MC_D — 1318758-1
MC_E — 1318756-1
MC_F — 1318757-1
T_WIPER_B — C02MB — 7122-7821-30
T_WIPER — C02FB — 7123-7821-30
SPEAKER — CN04F — 7123-2845

MAIN/H_1 — BP-002A
MAIN/H_2 — NMWP32FGY
A/C_1 — 6098-0514
A/C_2 — 7283-1100
RADIO — 174046-2
RADIO_AUX — C06FB — 7123-7861-30
MONITOR/H — C04FW — 7123-7840
SEC_D — C02MW — 7122-7820
SEC_H — C02FW — 7123-7820
MONITOR CONTROLLER_C — MX340125F1
MONITOR CONTROLLER_A — MX34028SF1
MONITOR CONTROLLER_B — MX34036SF1
MONITOR CONTROLLER_D — MX34016SF1
MONITOR CONTROLLER_G — MX38002FQ1

FUSE_BOX — 361897-0533
FUSE_BOX2 — 361897-0533
SW_BOX_1 — C10FW — 7123-7900
SW_BOX_2 — C12FB — 7123-7921-30
SW_BOX_3 — C16FB — 7123-7961-30
SW_BOX_4 — C16FW — 7123-7960
GSM/H — C08FW — 7123-7880
RELAY_BOX — 361897-0553
WIPER/LIGHT CONTROLLER_A — 174044-2
WIPER/LIGHT CONTROLLER_B — 174047-2
Dr — 7323-2064

R11,R14,R15 — 6098-1493
R12,R13,R16 — 6098-1493
DIODE1,3,6-10,11-13 — 7283-5028 — ASSY_7321-9822
DIODE2,4,5,14 — 6098-0022 — ASSY_6098-0126

<OUTSIDE OF CAB>

CAB/H_1 — BP-001C
ECM_1 — 2109432-2
ECM_2 — 2109431-2
CAB/H_2 — NMWP32MGY
MAIN_P/H — 6189-0714
PUMP/H,CV/H, ENG/H — 6188-0494
ENG_1 — NMWP32FGY
ENG_2,PUMP/H_2 — SWP16MGY — 7222-7564-40
ENG_3 — SWP14MGY — 7222-7544-40
ENG_4 — Y01MGY — 7222-4210-40
ENG_5 — 6188-0494

NOX/H — 6188-0495
NOX/H(PUMP) — 6189-0715
CAMERA_MAIN — 6189-7039
CAMERA_SUB — 6188-4776
CAMERA — TC57392
ATT — 6189-0714
TEMP_SENSOR — 54200206
DCU-CAN_RESISTOR — DT06-3S-CE05
VGS(TURBO)_C/U — SWP16FGY — 7123-7564-40

DCU_1 — 9-4486-01
DCU_2 — 9-4493-01
DEF SENSOR UNIT — 1-1719434-1
P1,P2 — EJ3FF — 173091-2
PC1,PC2,FUEL_P/S,BMU,BMD,AMC ,AMD,BKD,BKC,TR,S3,SA,SB — RW03FB — 7223-6536-30
STARTER RELAY 1 — 7123-1424-40
BOX/H — SWP6MGY — 7222-7464-40
COOLANT_LEVEL — Z02MGY — 7222-8520-40
SUPPLY_MODULE — 2-1703639-1
CAN,DCU_CAN — Z02FGY — 7123-8520-40
STARTER RELAY 1 — Y02FGY — 7123-4220-40
GLOW PLUG RELAY — 7323-3010
GLOW PLUG RELAY — 7323-3010
GLOW PLUG RELAY — 7323-2228
4SG,4SJ,4SF,4SC,FP,2SC,2SJ — 6189-0031
DIAG — Z08FGY — 7123-7780-40
ROOF_WASHER — Z02MBR — 7222-8521-80
HORN_H/L — 7283-8220
DEF SENSOR UNIT/H — Z06FGY — 7123-7760-40
TRAVEL_ALARM — SJD PH805-04008
SWING_ALARM — Z04FGY — 7123-7740-40
OPEN_AIR_S — 7283-7028-30
OIL_TEMP_S — 178390-2
WASHER — 7323-2228
FUEL_FEED_M — X02FB — 7123-6423-30
FUEL_PUMP — W02FW — 7223-1824-40
ENG_OIL_LEVEL_SW — 7123-7414-40
ISOCAN_RESISTOR — DT06-3S-CE05
CW_P/S — Z03FGY — 7123-7730-40
DOSING MODULE — COMPACT_CONN(B) — 1_928_404_072
WATER_SEPARATOR — 7283-7028-30
NOX_SENSOR_1 — 872-860-541
HEATER_VALVE — 6189-0682
AIR_COMPRESSOR — 4F017B-0001K
F/L_45A — 7322-4125-50
F/L_75A — 7322-4123-30
EXHAUST_TEMP 1(CSF)/S — 7282-7026-30
EXHAUST_TEMP 2(DOC)/S — 7282-7023-10
PRESSURE_SW — 6189-0094
ALTERNATOR — 7323-7414-40

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