CASE

PROFESSIONAL PARTNER

SCHEMATIC SET

CRAWLER EXCAVATOR

CX800 TIER 3

87539044 NA

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CRAWLER EXCAVATOR
CX800 TIER 3
SCHEMATIC SET

TABLE OF CONTENTS

SECTION	SECTION No.	REFERENCE No.
Safety, General Information and Standard Torque Data	1001	7-27691NA
General Specifications and Special Torque Settings	1002	9-94710NA
Numerical value conversion table	1003	9-35540
Elecrical System, Electrical and Electronic Troubleshooting	4001	9-94700NA
Specifications, Troubleshooting, Checks and Hydraulic Pressure Settings	8001	9-94740NA
Hydraulic Functions	8020	9-94720NA
Hydraulic Component Functions	8030	9-94130NA
Removal and Installation	9010	9-94730NA
Large Size Hydraulic Schematics	Pocket	87528728
Large Size Electrical Schematics	Pocket	9-93951

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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TABLE OF CONTENTS

WARNING: *This symbol is used in this manual to indicate important safety messages. Whenever you see this symbol, carefully read the message which follows. Your safety depends on it.*

TYPE, SERIAL NUMBER
AND YEAR OF MANUFACTURE OF THE MACHINE 3

FLUIDS AND LUBRICANTS 4

SPECIFICATIONS 8

COMPONENT WEIGHT 16

DIMENSIONS AND WEAR LIMIT OF THE TRACK ASSEMBLY 18

DIMENSIONS AND WEAR LIMITS OF ATTACHEMENT MOBILE JOINTS 23

SHIMS FOR ADJUSTING ATTACHMENT GAPS 28

SPECIAL TORQUE SETTINGS 29

MACHINE OVERALL DIMENSIONS 32

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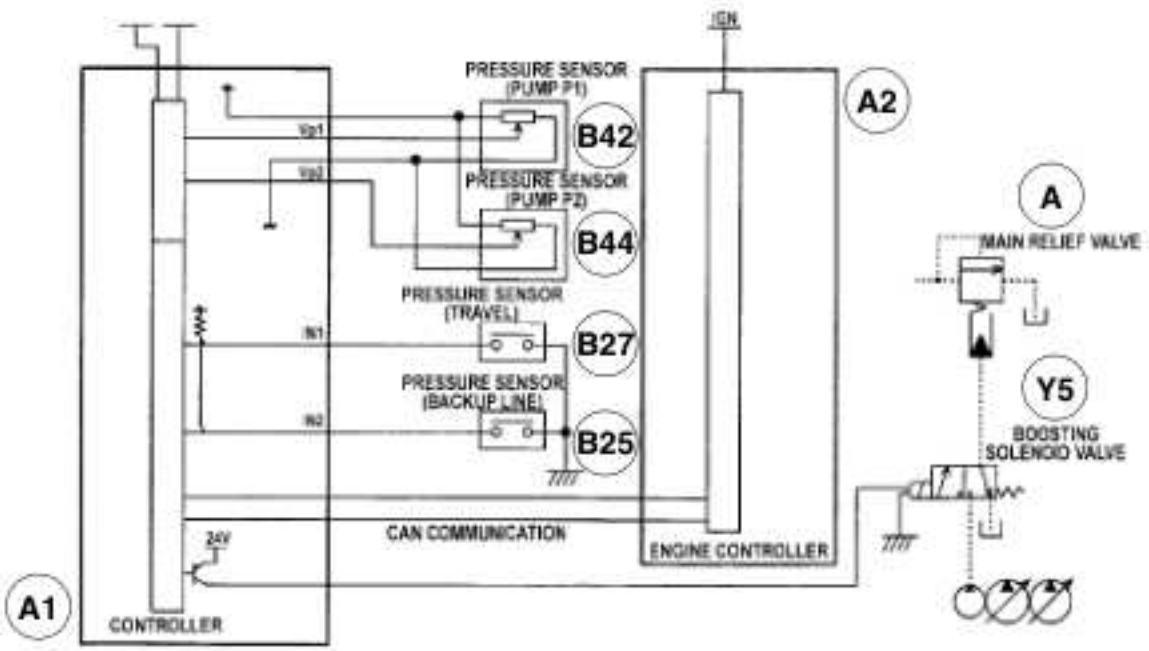
TABLE OF CONTENTS

NUMERICAL VALUE CONVERSION TABLE 3
Unit conversion rate 3
Length 4
Area 6
Volume 7
Mass 9
Pressure 10
Torque 11
Temperature 13

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POWER BOOST

1) Circuit configuration



700.1.04.01.23BR

A Main relief (standard)
A1 Computer
A2 Engine controller
B25 Breaker pilot pressure switch
B27 Travel pilot pressure switch
B42 Pump pressure sensor (P1)
B44 Pump pressure sensor (P2) (yellow band)
Y5 Power-up solenoid valve (yellow band)

2) Increasing the pressure in each work mode

Mode Auto	Automatic power boost (*) 31.4 to 34.3 MPa (4554 ↔ 4974 psi)
H mode (Pressure)	Automatic power boost (*) 31.4 to 34.3 MPa (4554 ↔ 4974 psi)
S mode (Pressure)	Automatic power boost (*) 31.4 to 34.3 MPa (4554 ↔ 4974 psi)
L mode (Pressure)	Constant power boost (*) 31.4 to 34.3 MPa (4554 ↔ 4974 psi)

* When the travel pilot pressure switch (B27) or the optional breaker pilot pressure switch (B25) is activated, power boost is deactivated.

3) Operation

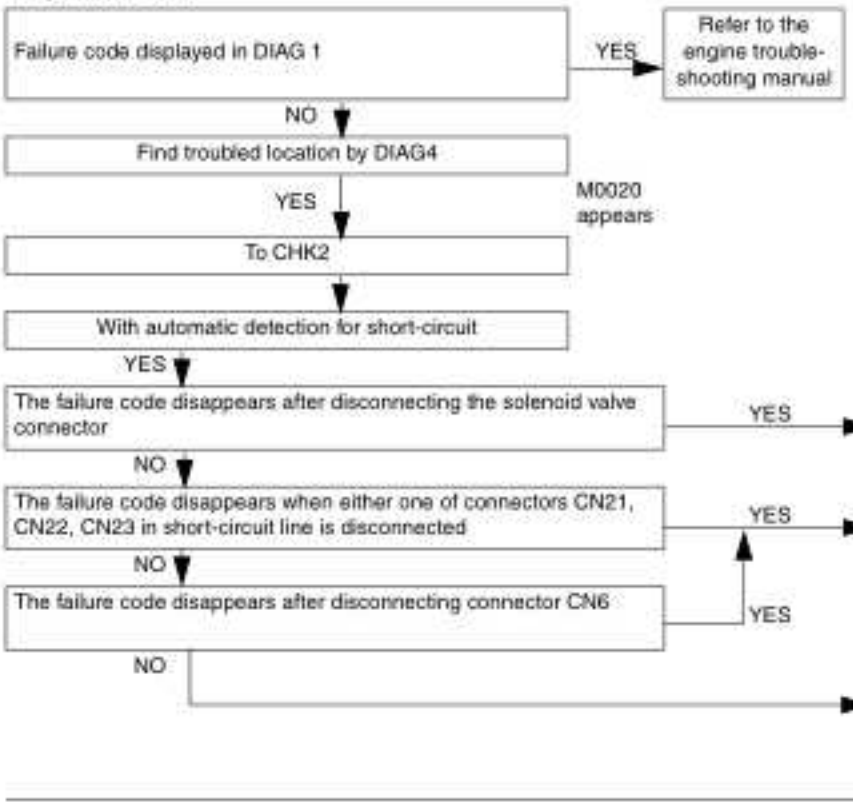
When operating in H or S mode, the computer (A1) records the ratio between:

- The engine load transmitted by the engine controller (A2).
- The hydraulic circuit load transmitted by the pump pressure sensors (P1) (B42) and (P2) (B44).

If the pump pressure (P1) or (P2) is greater than 29.9 MPa (4351 psi) and the load ratio is within a range of ± 5% for 2 seconds, the computer (1) activates the power-up solenoid valve (yellow band) (Y5) for 8 seconds, which increases the main pressure.

When the travel pilot pressure switch (B27) or the optional pilot pressure switch (B25) is activated, the computer (A1) deactivates the power-up solenoid valve (yellow band)(Y5).

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Troubleshooting	Cause	Action
Troubleshooting using the diagnostic system Key switch ON 	Defective (Yn) solenoid valve Short-circuit on wire Defective controller	Replace the solenoid valve (Yn) Repair the wiring Replace controller

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4. Lower the counterweight to the chosen location slowly, keeping if in balance.

Removal of travel motor piping and small accessories

Preparation (for removing the travel motor piping)

1. Prepare a space for placing screws, etc....
2. Prepare tools such as hydraulic torque wrench, etc....

Travel motor piping removal

1. Take off the cover.
2. Remove the hydraulic hoses from the hydraulic motors.

Small accessory removal

1. Remove the cat walks.
2. Check the hydraulic oil quantity level. (To add oil if necessary).
3. Remove the handrails.

Separation of upperstructure and undercarriage and loading

Preparation (for loading attachments)

1. Load the removed attachments on the trailer truck.
2. Position the 2 sets of rough terrain crane.
   - 1 set placed at the boom cylinder foot side.
   - Another set placed at the counterweight side.
3. Prepare the lifting tools.
   - Wire (T17) x 4
   - Shackle (T21) x 2
   - Protector (Waste tire cut pieces)
   - For prevention of damage to boom cylinder foot pin.
4. Prepare the stool (2 sets).
5. Following are used when the shoe lifting jigs are applied:
   - Wire (T19) x 4
   - Shackle (T20) x 4
   - Chain block (T25) x 2
   - Shoe lifting jig (T27) x 4

Cable sling

1. Prepare for applying the lifting tools by swinging the upperstructure 90 degrees.
2. Prepare cut piece of waste tire for attaching the lifting tool to the boom cylinder foot side.
3. Attach the tools to the boom cylinder foot pin, inserting the pieces of waste tire to for prevent damage (Boom foot side).
4. Prepare the protector board for prevention of inference between the engine hood portion and the cables (counterweight side).
5. Fix the prepared board on the counterweight tentatively and attach the lifting tools to the counterweight.
6. Prepare stool (T23).

Removal of the undercarriage, step by step

1. Add load slightly.
2. Prepare the stool (T23) x 2 sets.
3. Remove the screws from the power side frame on one side (load still added).
4. Position the stools (T23), while maintaining the upperstructure balance.
5. Lower the lifted upperstructure on the stools (T23).
6. Make sure the shoes are slightly lifted off the ground.
7. Disengage once the lifting tools (T23) applied to the boom foot portion.
8. Prepare for moving the shoes.
9. Attach to the shoe lifting jigs (T27) the wires (T23) disengaged from the boom foot side.
10. Attach the shoe lifting jigs (T23) to the shoes.
11. Their attached position is 20 in towards the center from the upper roller.
12. Lift up the lower side frame (shoes) slowly and move. Lower to the ground.

Upperstructure swing 180 degrees and loading on trailer truck

1. Remove the lifting tools (T23) applied on the counterweight side.
2. Swing the upperstructure 180 degrees.
3. Attach the lifting tools to the counterweight side and to the boom foot pin side.
4. Take up the slack.

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COMPONENT IDENTIFICATION

CODE	COMPONENT DESCRIPTION
A1	COMPUTER
A2	ENGINE CONTROLLER
A4	WIPER CONTROLLER
A5	BLOWER CONTROLLER
A9	AIR CONDITIONER CONTROLLER
B1	COOLANT TEMPERATURE SENSOR
B2	HYDRAULIC OIL TEMPERATURE SENSOR
B3	FUEL TEMPERATURE SENSOR
B5	MAP SENSOR
B6	AIR INTAKE TEMPERATURE SENSOR
B21	ENGINE OIL PRESSURE SWITCH
B22	SWING PILOT PRESSURE SWITCH
B23	BREAKER / CRUSHER PILOT PRESSURE SWITCH
B24	SECOND OPTION PILOT CIRCUIT 2 PRESSURE SWITCH
B25	BREAKER PILOT PRESSURE SWITCH
B26	UPPER PILOT PRESSURE SWITCH (YELLOW BAND)
B27	TRAVEL PILOT PRESSURE SWITCH
B28	SECOND OPTION PILOT CIRCUIT 1 PRESSURE SWITCH
B29	BOOM RAISING PILOT PRESSURE SWITCH
B42	PUMP PRESSURE SENSOR (P1)
B43	PRESSURE SENSOR (NEGA-CONT)
B44	PUMP PRESSURE SENSOR (P2) (BLUE BAND)
B47	BOOST PRESSURE SENSOR
B48	AMBIENT AIR (BAROMETRIC) PRESSURE SENSOR
B49	CRANKSHAFT POSITION SENSOR
B50	CAMSHAFT POSITION SENSOR
B51	BOOST TEMPERATURE SENSOR
B52	COMMON RAIL PRESSURE SENSOR
B53	EXHAUST GAS RECIRCULATION VALVE POSITION SENSOR
B61	SUNLOAD SENSOR
B81	HORN
E1	WORKING LIGHT (UPPERSTRUCTURE)
E2	WORKING LIGHT (ATTACHMENT)
E3	WORKING LIGHT (CAB)
E4	CAB LIGHT
E51	CIGARETTE LIGHTER
E52	AIR CONDITIONER
G1	BATTERY
G2	ALTERNATOR
H1	AUDIBLE WARNING DEVICE
H2	TRAVEL ALARM
K2	RELAY-GLOW PLUG
K3	RELAY-HORN
K5	RELAY-ROTARY LIGHT
K6	RELAY-AIR CONDITIONER CONDENSER FAN
K7	RELAY BATTERY
K8	RELAY SAFETY
K10	RELAY-WORKING LIGHT
K11	RELAY-WORKING LIGHT (CAB) (UPPERSTRUCTURE / ATTACHMENT)
K17	BLOWER OFF RELAY
K32	RELAY, HYDRAULIC FAN
K33	MAIN RELAY
M1	STARTER MOTOR
M3	WIPER MOTOR
M4	WASHER MOTOR
M5	MOTOR (AIR CHANGING)
M6	AIR VENT DIRECTION CONTROL MOTOR
M7	MOTOR ACT (AIR-MIX)
M8	BLOWER MOTO
M9	AIR CONDITIONER CONDENSER FAN
M15	EXHAUST GAS RECIRCULATION MOTOR
M20	ELECTRIC FUEL PUMP
P1	INSTRUMENT PANEL
P2	SWITCH PANEL (LEFT-HAND)
P3	SWITCH PANEL (RIGHT-HAND)
P4	MONITOR DISPLAY
P5	HOURMETER
P6	AIR CONDITIONER CONTROL PANEL
R1	GLOW PLUG
R3	THROTTLE VOLUME
R4	THERMISTOR INNER TEMPERATURE
R5	FUEL SENSOR
S1	KEY SWITCH
S2	TRAVEL MODE SWITCH
S3	WORK MODE SWITCH
S4	AUTO MODE SWITCH
S5	CUSHION CONTROL SWITCH
S7	AUDIBLE ALARM CUT OUT SWITCH
S8	SWING BRAKE SWITCH
S9	ENGINE EMERGENCY STOP SWITCH
S10	WORKING LIGHT SWITCH
S11	WIPER SWITCH
S12	WASHER SWITCH
S13	OVERLOAD SWITCH
S14	BREAKER / CRUSHER SWITCH
S15	HORN SWITCH
S16	ONE TOUCH IDLE
S17	BOOM RAISING PRIORITY SWITCH
S18	COUNTERWEIGHT REMOVAL MAIN SWITCH
S19	COUNTERWEIGHT RAISING/ LOWERING SWITCH
S20	COUNTERWEIGHT ARM RAISING/LOWERING SWITCH
S21	DOUBLE ACTING SWITCH (RIGHT)
S22	FREE SWING SWITCH
S25	DOUBLE ACTING SWITCH (LEFT)
S51	HYDRAULIC FUNCTION CANCELLATION LEVER SWITCH
S52	AIR CONDITIONING COMPRESSOR CLUTCH SWITCH
S53	DOOR LIMIT SWITCH
S54	FRONT WINDOW LIMIT SWITCH
S55	RESERVE TANK LOW SWITCH
S56	RESERVE TANK LOW SWITCH
S62	AIR CLEANER SENSOR
S63	DOUBLE ACTING SWITCH (OPTIONAL)
S64	COOLING HYDRAULIC MOTOR SWITCH
U1	DC-DC (24V-12V) CONVERTER
W1	ANTENNA
X2	ROTARY LIGHT CONNECTOR
X3	OPTIONAL POWER CONNECTOR
X4	ENGINE TEST POINT CONNECTOR
X5	CONTROLLER TEST POINT CONNECTOR
X6	CAB SEAT COMPRESSOR MOTOR CONNECTOR
X7	LUBRICATOR CONNECTOR
X8	RADIO CONNECTOR
X9	ANTI-THEFT SYSTEM CONNECTOR
X15	ACCESSORY SOCKET
X23	CLEAR MEMORY 1
X24	CLEAR MEMORY 2
Y1	SWING PILOT SHUT-OFF SOLENOID VALVE (GREEN BAND)
Y2	PILOT PRESSURE SOLENOID VALVE (BLUE BAND)
Y3	SWING BRAKE SOLENOID VALVE (PINK BAND)
Y4	2 STAGE TRAVEL SOLENOID VALVE (RED BAND)
Y5	POWER-UP SOLENOID VALVE (YELLOW BAND)
Y6	CUSHION CONTROL SOLENOID VALVE (LIGHT GREEN BAND)
Y7	MAIN PUMP PROPORTIONAL SOLENOID
Y8	AIR CONDITIONER MAGNET CLUTCH
Y9	CRUSHER/BREAKER OPTION TWO FLOW SOLENOID VALVE
Y10	BOOM RAISING PRIORITY SOLENOID (BLACK BAND)
Y11	NEGATIVE FLOW CONTROL (WHITE BAND)
Y12	COUNTERWEIGHT RAISING SOLENOID VALVE
Y13	COUNTERWEIGHT LOWERING SOLENOID VALVE
Y14	COUNTERWEIGHT ARM RAISING SOLENOID VALVE
Y15	COUNTERWEIGHT ARM LOWERING SOLENOID VALVE
Y16	DOUBLE ACTING SOLENOID VALVE (RIGHT)
Y17	DOUBLE ACTING SOLENOID VALVE (LEFT)
Y18	FREE SWING SOLENOID VALVE
Y31	COOLING HYDRAULIC MOTOR SOLENOID VALVE
Y32	PROPORTIONAL SOLENOID FOR COOLING HYDRAULIC MOTOR
Y33	SUPPLY PUMP VALVE (PCV1)
Y34	SUPPLY PUMP VALVE (PCV2)

FUSE IDENTIFICATION

CODE	AMPERAGE	DESCRIPTION
F1	FUSE 20A	ENGINE CONTROLLER
F2	FUSE 5A	COMPUTER CONTROL INSTRUMENT PANEL AND DIAGNOSTIC TEST SOCKET
F3	FUSE 20	COMPUTER POWER
F4	FUSE 10A	HYDRAULIC FUNCTION CANCELLATION LEVER SWITCH
F5	FUSE 10A	AIR CONDITIONER CONDENSER FAN
F6	FUSE 10A	ROTARY LIGHT
F7	FUSE 30A	FUEL FILLER PUMP
F8	FUSE 20A	FUEL FEED PUMP
F9	FUSE 30A	GLOW PLUG
F10	FUSE 20A	LUBRICATOR (OPTION) CONNECTOR
F11	FUSE 10A	BACK-UP
F12	FUSE 20A	KEY SWITCH
F13	FUSE 20A	HEATER / AIR CONDITIONER
F14	FUSE 5A	AIR CONDITIONER COMPRESSOR
F15	FUSE 15A	WORKING LIGHT (UPPERSTRUCTURE/ATTACHMENT)
F16	FUSE 15A	WORKING LIGHT (CAB) AND OPTION CONNECTOR
F17	FUSE 10A	DC-DC (24V-12V) CONVERTER
F18	FUSE 10A	WIPER AND WASHER
F19	FUSE 15A	HORN, COUNTERWEIGHT REMOVAL
F20	FUSE 15A	CIGARETTE LIGHTER AND CAB SEAT COMPRESSOR ADJUSTMENT
F21	--------	FUSE BOX
F22	FUSE 20A	MAIN FUSE FOR F11 AND F12 CIRCUITS
F23	FUSE 65A	MAIN FUSE FOR F3 TO F10 AND F13 TO F20 CIRCUITS
F24	FUSE 20A	MAIN FUSE FOR F2 CIRCUIT
F25	FUSE 20A	MAIN FUSE FOR F1 CIRCUITS
F27	FUSE 60A	SAFETY RELAY

LEGEND

TABLE OF COLOR SYMBOLS

SYMBOL	COLOR	SYMBOL	COLOR
B	BLACK	R	RED
W	WHITE	Y	YELLOW
Br	BROWN	Lg	LIGHT GREEN
P	PINK	Sb	SKY BLUE
V	VIOLET	L	BLUE
G	GREEN	Gr	GRAY
O	ORANGE		

NOTE - "9W" INDICATES BLACK CABLE WITH RED STRIPE

B2 COMPONENT NUMBER

60 B 001 CIRCUIT NUMBER / COLOR / AREA

CONNECTED

NOT CONNECTED

SINGLE WIRE CONNECTOR

INSULATION AGAINST MAGNETISM

BOOT GROUND

CABLE GROUND

HARNESS

CONNECTOR (MALE) / CONNECTOR (FEMALE)

CN CONNECTOR NUMBER

SWP CONNECTOR'S NAME

CX 700, CX 800 EXCAVATOR ELECTRICAL SCHEMATIC

Number 9-93951

9CE0E094-00A

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