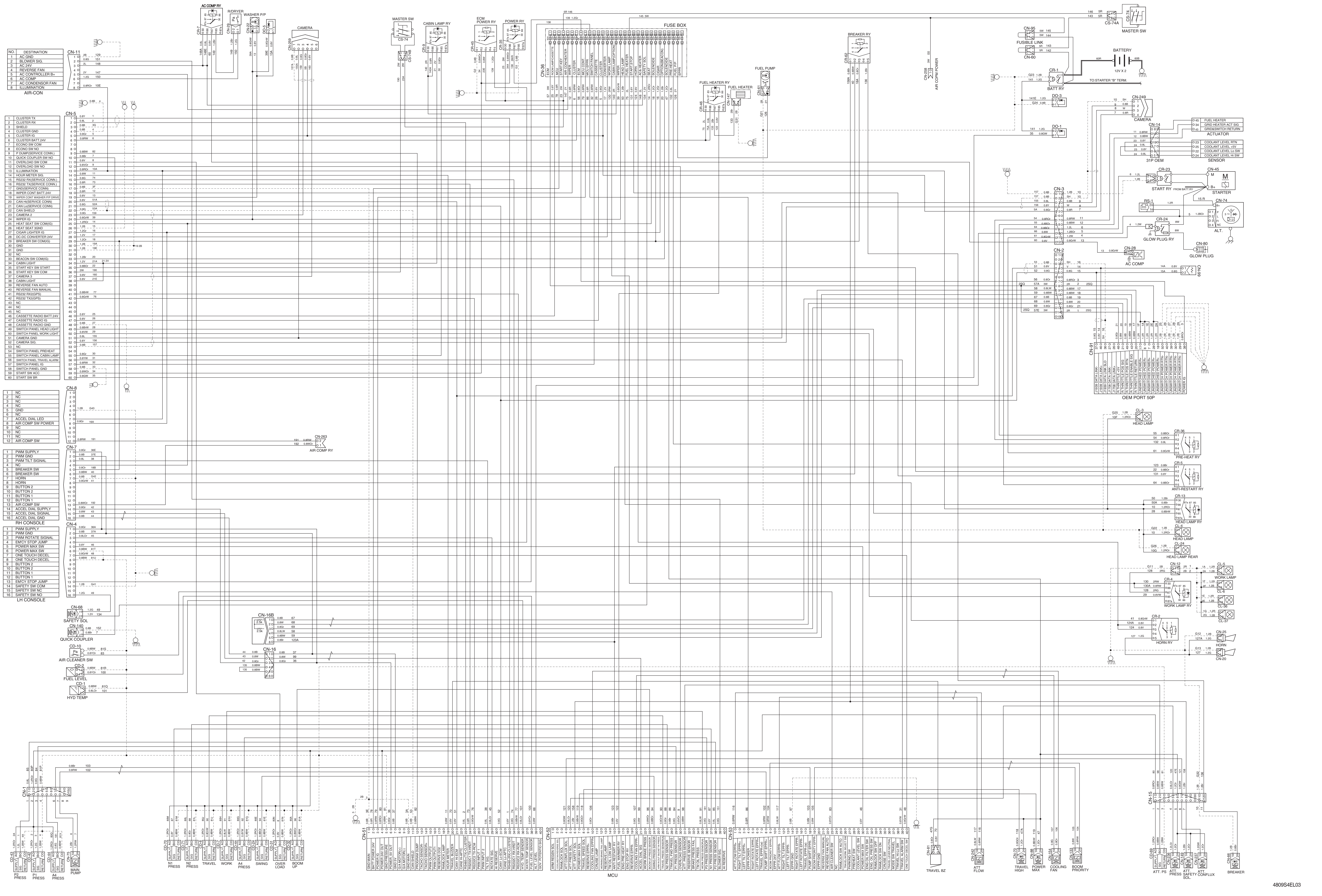
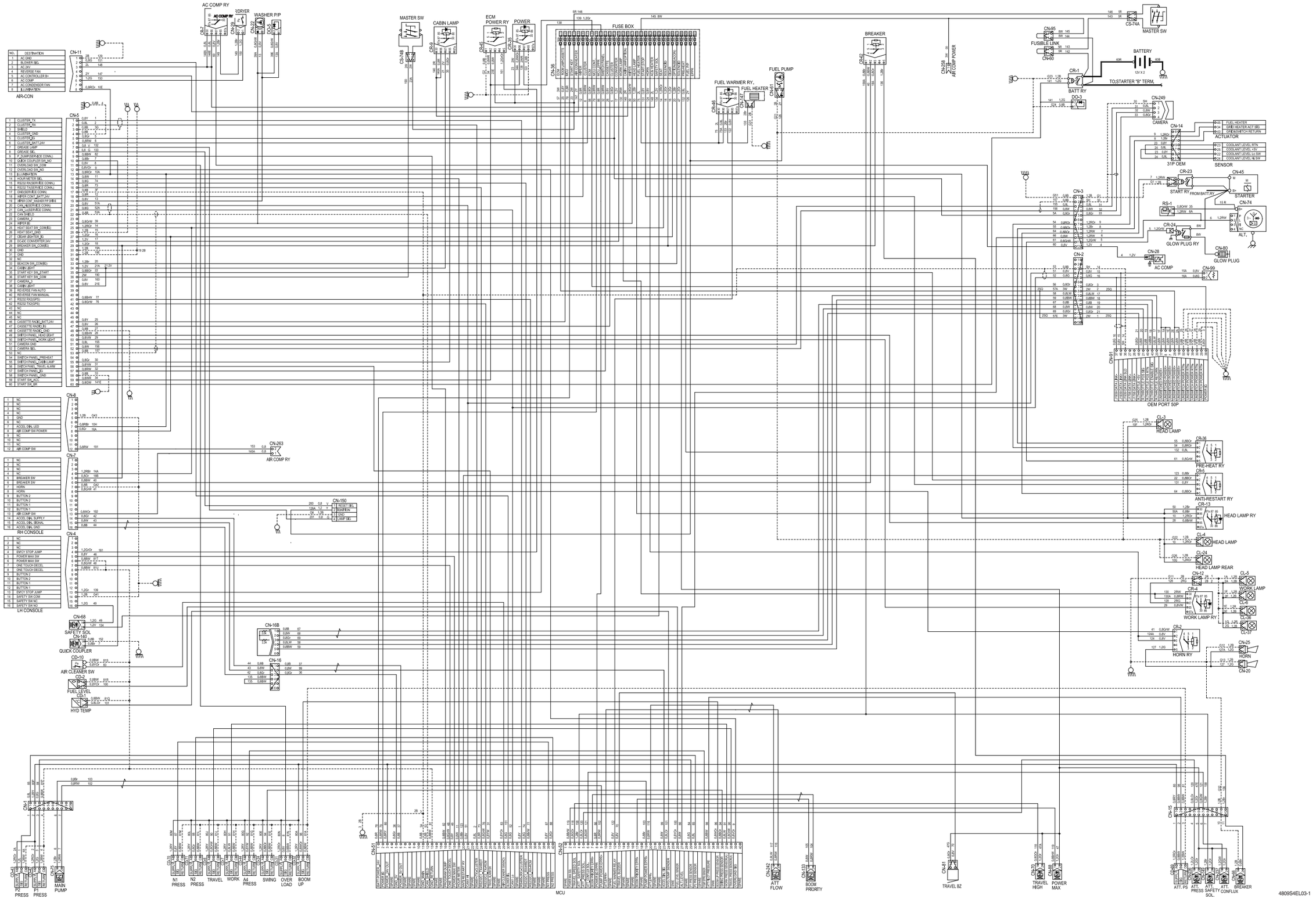
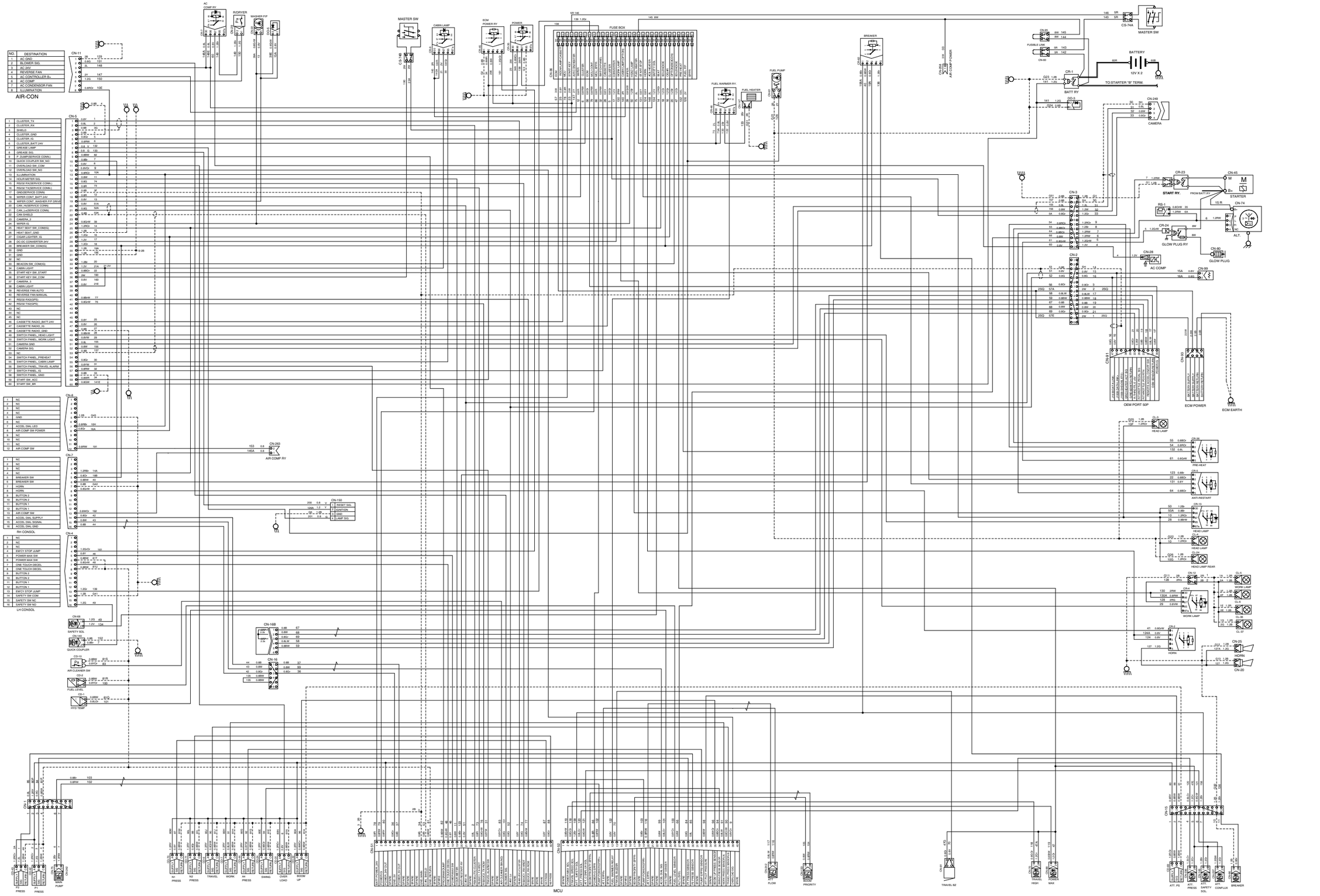
· ELECTRICAL CIRCUIT (1/2, CLUSTER TYPE 1) OLD VERSION



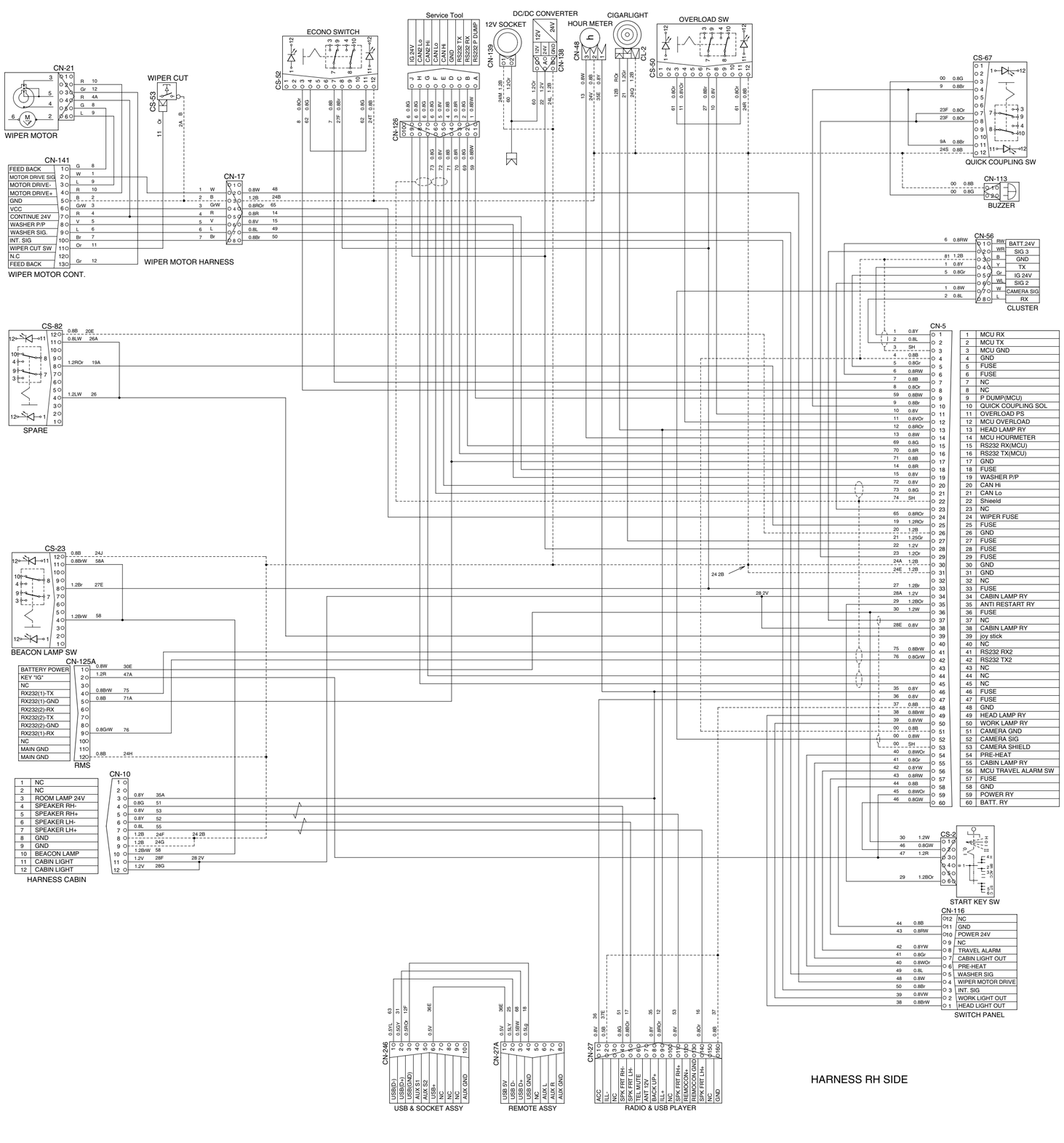

AIR-CON
RH CONSOLE
LH CONSOLE
AC COMP RY
3DRYER
WASHER P/P
MASTER SW
CABIN LAMP
ECM POWER RY
POWER
FUSE BOX
BREAKER
FUEL WARMER RY
FUEL HEATER
FUEL PUMP
AIR COMP POWER
FUSIBLE LINK
BATTERY
TO STARTER "B" TERM.
BATT RY
CAMERA
ACTUATOR
SENSOR
START RY
STARTER
ALT.
GLOW PLUG RY
GLOW PLUG
AC COMP
OEM PORT 50P
HEAD LAMP
PRE-HEAT RY
ANTI-RESTART RY
HEAD LAMP RY
HEAD LAMP REAR
WORK LAMP
WORK LAMP RY
HORN RY
HORN
SAFETY SOL
QUICK COUPLER
AIR CLEANER SW
FUEL LEVEL
HYD TEMP
AIR COMP RY
MCU
N1 PRESS
N2 PRESS
TRAVEL
WORK
A4 PRESS
SWING
OVER LOAD
BOOM UP
P2 PRESS
P1 PRESS
MAIN PUMP
ATT FLOW
BOOM PRIORITY
TRAVEL BZ
TRAVEL HIGH
POWER MAX
ATT. PS
ATT. PRESS
ATT. SAFETY SOL.
CONFLUX
BREAKER
4809S4EL03-1

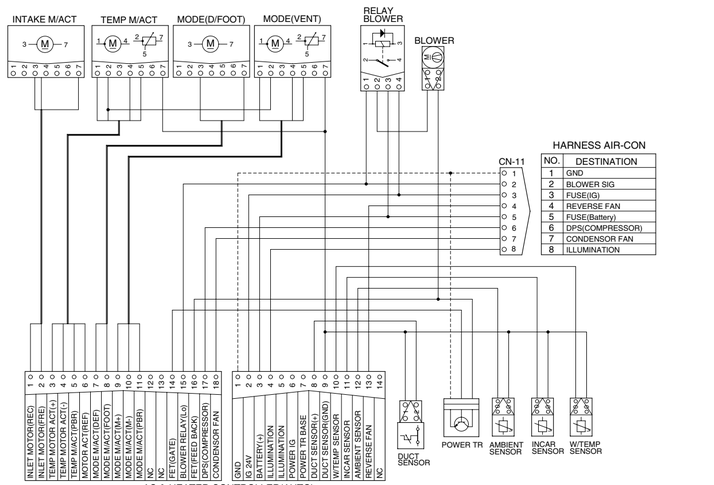
· **ELECTRICAL CIRCUIT** (1/2, CLUSTER TYPE 1) **NEW ECU VERSION**

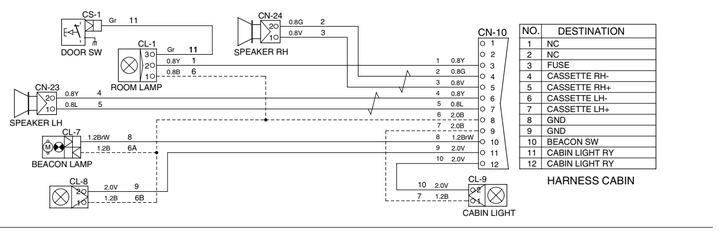


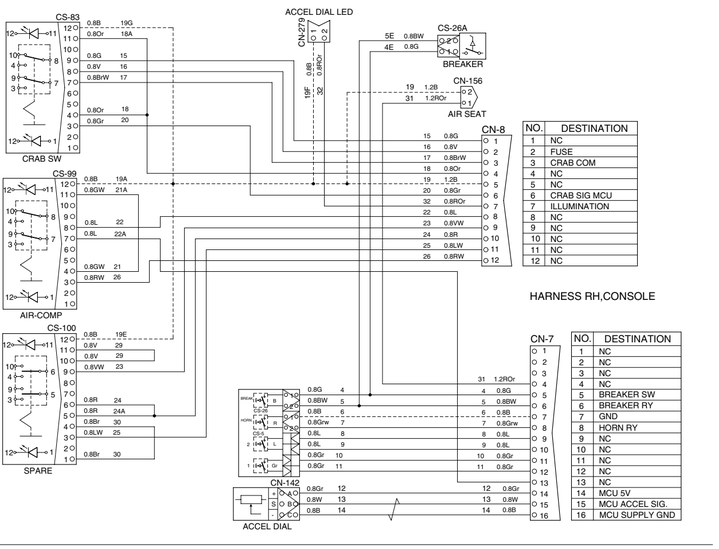
20QB-17104-02

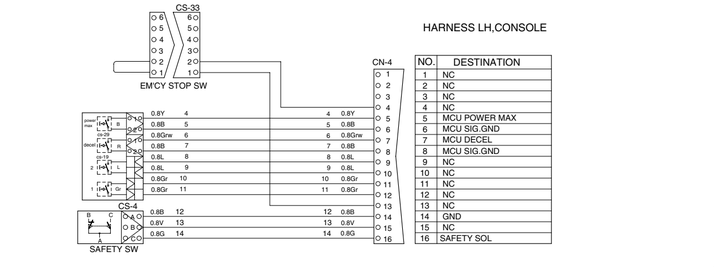
· ELECTRICAL CIRCUIT (2/2, CLUSTER TYPE 1) OLD VERSION



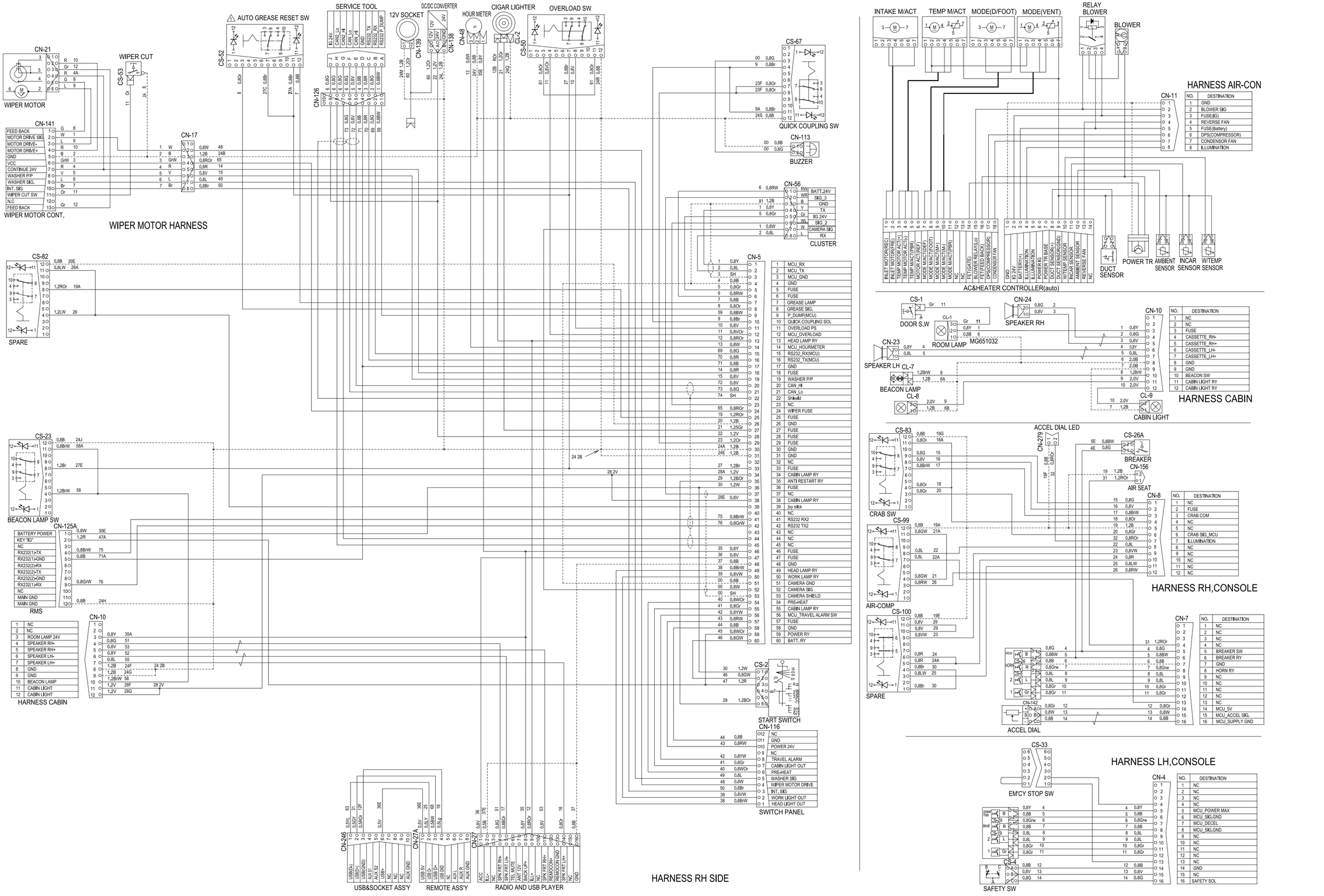








4809S4EL04



NO.	DESTINATION
1	GND
2	BLOWER SIG
3	FUSE(IG)
4	REVERSE FAN
5	FUSE(Battery)
6	DPS(COMPRESSOR)
7	CONDENSOR FAN
8	ILLUMINATION

NO.	DESTINATION
1	NC
2	NC
3	FUSE
4	CASSETTE_RH-
5	CASSETTE_RH+
6	CASSETTE_LH-
7	CASSETTE_LH+
8	GND
9	GND
10	BEACON SW
11	CABIN LIGHT RY
12	CABIN LIGHT RY

NO.	DESTINATION
1	NC
2	FUSE
3	CRAB COM
4	NC
5	NC
6	CRAB SIG_MCU
7	ILLUMINATION
8	NC
9	NC
10	NC
11	NC
12	NC

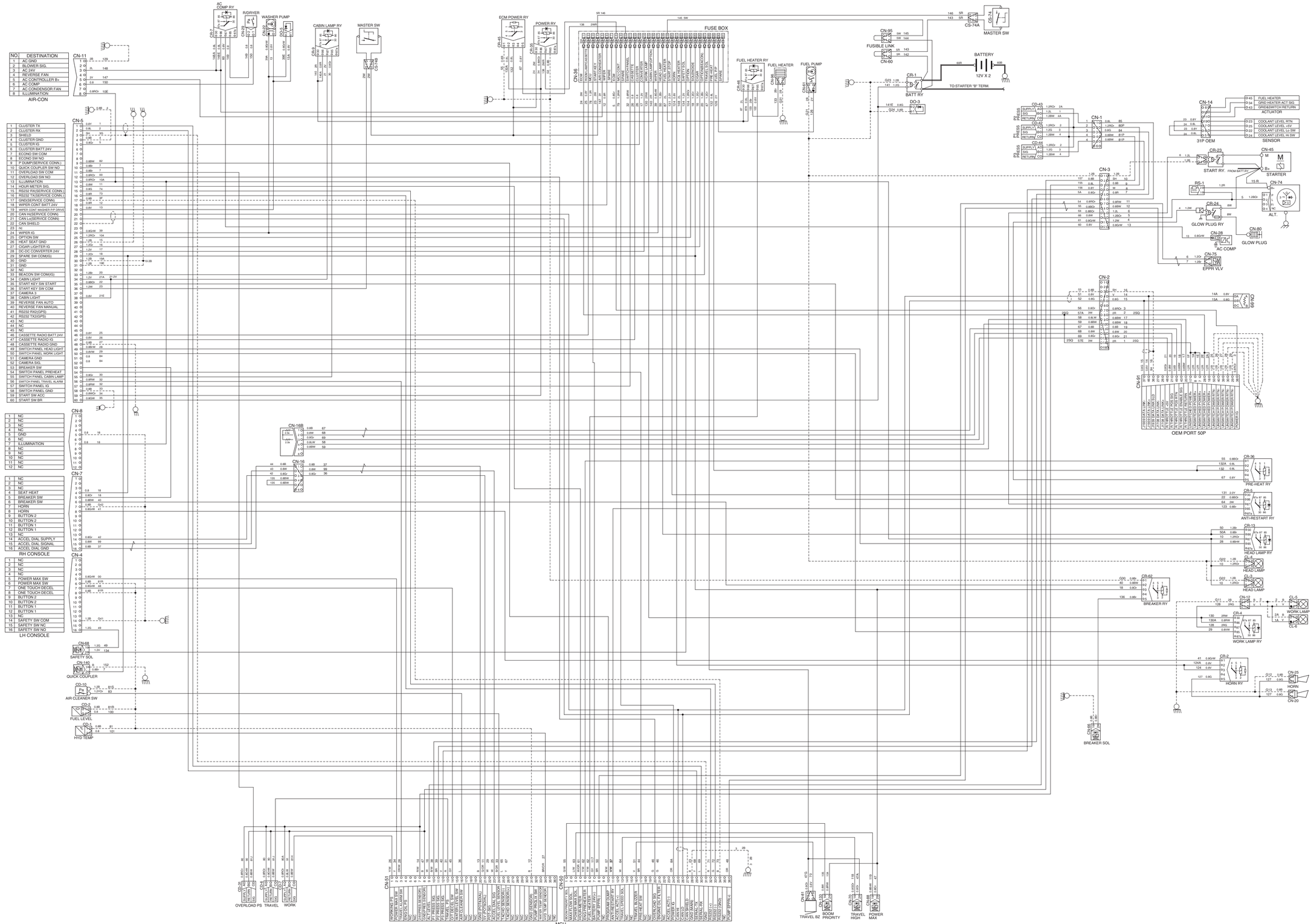
NO.	DESTINATION
1	NC
2	NC
3	NC
4	NC
5	BREAKER SW
6	BREAKER RY
7	GND
8	HORN RY
9	NC
10	NC
11	NC
12	NC
13	NC
14	MCU_5V
15	MCU_ACCEL SIG.
16	MCU_SUPPLY GND

NO.	DESTINATION
1	NC
2	NC
3	NC
4	NC
5	MCU_POWER MAX
6	MCU_SIG.GND
7	MCU_DECEL
8	MCU_SIG.GND
9	NC
10	NC
11	NC
12	NC
13	NC
14	GND
15	NC
16	SAFETY SOL

1	MCU_RX
2	MCU_TX
3	MCU_GND
4	GND
5	FUSE
6	FUSE
7	GREASE LAMP
8	GREASE SIG.
9	P_DUMP(MCU)
10	QUICK COUPLING SOL
11	OVERLOAD PS
12	MCU_OVERLOAD
13	HEAD LAMP RY
14	MCU_HOURMETER
15	RS232_RX(MCU)
16	RS232_TX(MCU)
17	GND
18	FUSE
19	WASHER P/P
20	CAN_HI
21	CAN_Lo
22	Shield
23	NC
24	WIPER FUSE
25	FUSE
26	GND
27	FUSE
28	FUSE
29	FUSE
30	GND
31	GND
32	NC
33	FUSE
34	CABIN LAMP RY
35	ANTI RESTART RY
36	FUSE
37	NC
38	CABIN LAMP RY
39	Joy stick
40	NC
41	RS232 RX2
42	RS232 TX2
43	NC
44	NC
45	NC
46	FUSE
47	FUSE
48	GND
49	HEAD LAMP RY
50	WORK LAMP RY
51	CAMERA GND
52	CAMERA SIG
53	CAMERA SHIELD
54	PRE-HEAT
55	CABIN LAMP RY
56	MCU_TRAVEL ALARM SW
57	FUSE
58	GND
59	POWER RY
60	BATT. RY

1	NC
2	NC
3	ROOM LAMP 24V
4	SPEAKER RH-
5	SPEAKER RH+
6	SPEAKER LH-
7	SPEAKER LH+
8	GND
9	GND
10	BEACON LAMP
11	CABIN LIGHT
12	CABIN LIGHT

■ ELECTRICAL CIRCUIT (1/2, CLUSTER TYPE 2)



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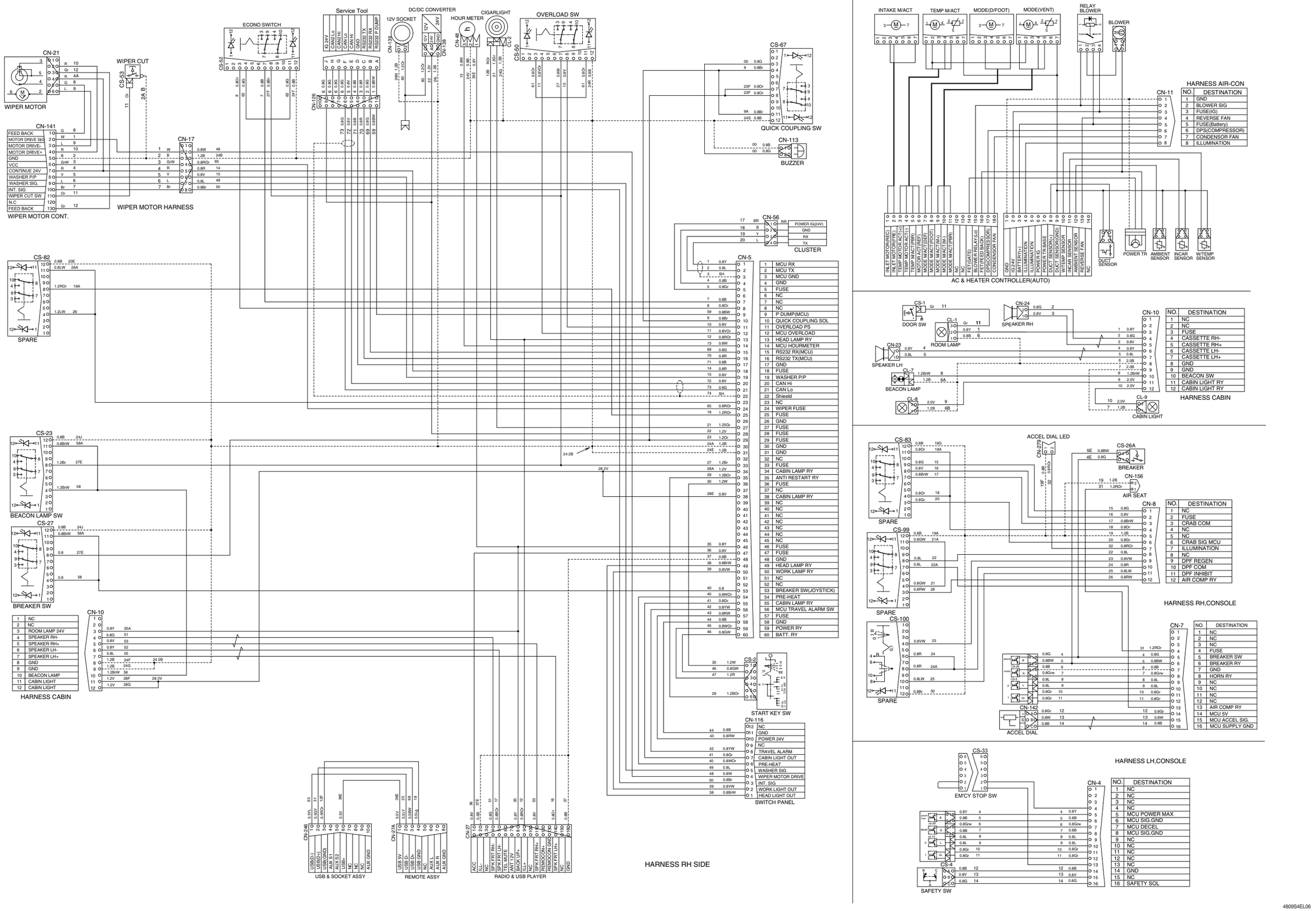
· **ELECTRICAL CIRCUIT** (2/2, CLUSTER TYPE 2)



NO.	DESTINATION
1	GND
2	BLOWER SIG
3	FUSE(IG)
4	REVERSE FAN
5	FUSE(Battery)
6	DPS(COMPRESSOR)
7	CONDENSOR FAN
8	ILLUMINATION

1	MCU RX
2	MCU TX
3	MCU GND
4	GND
5	FUSE
6	NC
7	NC
8	NC
9	P DUMP(MCU)
10	QUICK COUPLING SOL
11	OVERLOAD PS
12	MCU OVERLOAD
13	HEAD LAMP RY
14	MCU HOURMETER
15	RS232 RX(MCU)
16	RS232 TX(MCU)
17	GND
18	FUSE
19	WASHER P/P
20	CAN Hi
21	CAN Lo
22	Shield
23	NC
24	WIPER FUSE
25	FUSE
26	GND
27	FUSE
28	FUSE
29	FUSE
30	GND
31	GND
32	NC
33	FUSE
34	CABIN LAMP RY
35	ANTI RESTART RY
36	FUSE
37	NC
38	CABIN LAMP RY
39	NC
40	NC
41	NC
42	NC
43	NC
44	NC
45	NC
46	FUSE
47	FUSE
48	GND
49	HEAD LAMP RY
50	WORK LAMP RY
51	NC
52	NC
53	BREAKER SW(JOYSTICK)
54	PRE-HEAT
55	CABIN LAMP RY
56	MCU TRAVEL ALARM SW
57	FUSE
58	GND
59	POWER RY
60	BATT. RY

1	NC
2	NC
3	ROOM LAMP 24V
4	SPEAKER RH-
5	SPEAKER RH+
6	SPEAKER LH-
7	SPEAKER LH+
8	GND
9	GND
10	BEACON LAMP
11	CABIN LIGHT
12	CABIN LIGHT

NO.	DESTINATION
1	NC
2	NC
3	FUSE
4	CASSETTE RH-
5	CASSETTE RH+
6	CASSETTE LH-
7	CASSETTE LH+
8	GND
9	GND
10	BEACON SW
11	CABIN LIGHT RY
12	CABIN LIGHT RY

HARNESS CABIN

NO.	DESTINATION
1	NC
2	FUSE
3	CRAB COM
4	NC
5	NC
6	CRAB SIG MCU
7	ILLUMINATION
8	NC
9	DPF REGEN
10	DPF COM
11	DPF INHIBIT
12	AIR COMP RY

HARNESS RH,CONSOLE

NO.	DESTINATION
1	NC
2	NC
3	NC
4	FUSE
5	BREAKER SW
6	BREAKER RY
7	GND
8	HORN RY
9	NC
10	NC
11	NC
12	NC
13	AIR COMP RY
14	MCU 5V
15	MCU ACCEL SIG.
16	MCU SUPPLY GND

HARNESS LH,CONSOLE

NO.	DESTINATION
1	NC
2	NC
3	NC
4	NC
5	MCU POWER MAX
6	MCU SIG.GND
7	MCU DECEL
8	MCU SIG.GND
9	NC
10	NC
11	NC
12	NC
13	NC
14	GND
15	NC
16	SAFETY SOL

4809S4EL06

MEMORANDUM

1. POWER CIRCUIT (CLUSTER TYPE 1) OLD VERSION

The negative terminal of battery is grounded to the machine chassis through master switch.
When the start switch is in the OFF position, the current flows from the positive battery terminal as shown below.

1) OPERATING FLOW

Battery → Battery relay → Fusible link [CN-60] → Master switch [CS-74A]

- → Fuse box [No.1] → I/conn [CN-2 (8, 14)] → Engine ECM [CN-91]
- → Fuse box [No.2] → I/conn [CN-5 (46)]
  - → I/conn [CN -10 (3)] → Room lamp [CL-1 (2)]
    - → Door switch [CS-1]
  - → Radio & USB player [CN-27 (8)]
  - → Hour meter [CN-48 (1)]
- → Fuse box [No.3] → MCU [CN-51 (2)]
- → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5 (36)]
  - → Start switch [CS-2 (1)]
  - → RMS controller [CN-125A(1)]
  - → Power relay [CR-35 (30)]
  - → ECM power relay [CR-45 (3)]
- → Fuse box [No.5] → I/conn [CN-11 (5)]
  - → AC & Heater controller (3)
  - → Blower relay (3)
- → Fuse box [No.6] → I/conn [CN - 5 (18)] → I/conn [CN -17 (5)]
  - → Wiper motor controller [CN-141 (7)]
  - → Wiper motor [CN-21 (4)]
- → Fuse box [No.7] → I/conn [CN - 5 (6)] → Cluster [CN - 56 (1)]
- → Fuse box [No.8] → I/conn [CN - 2 (7)] → Engine ECM power [CN - 91 (38)]

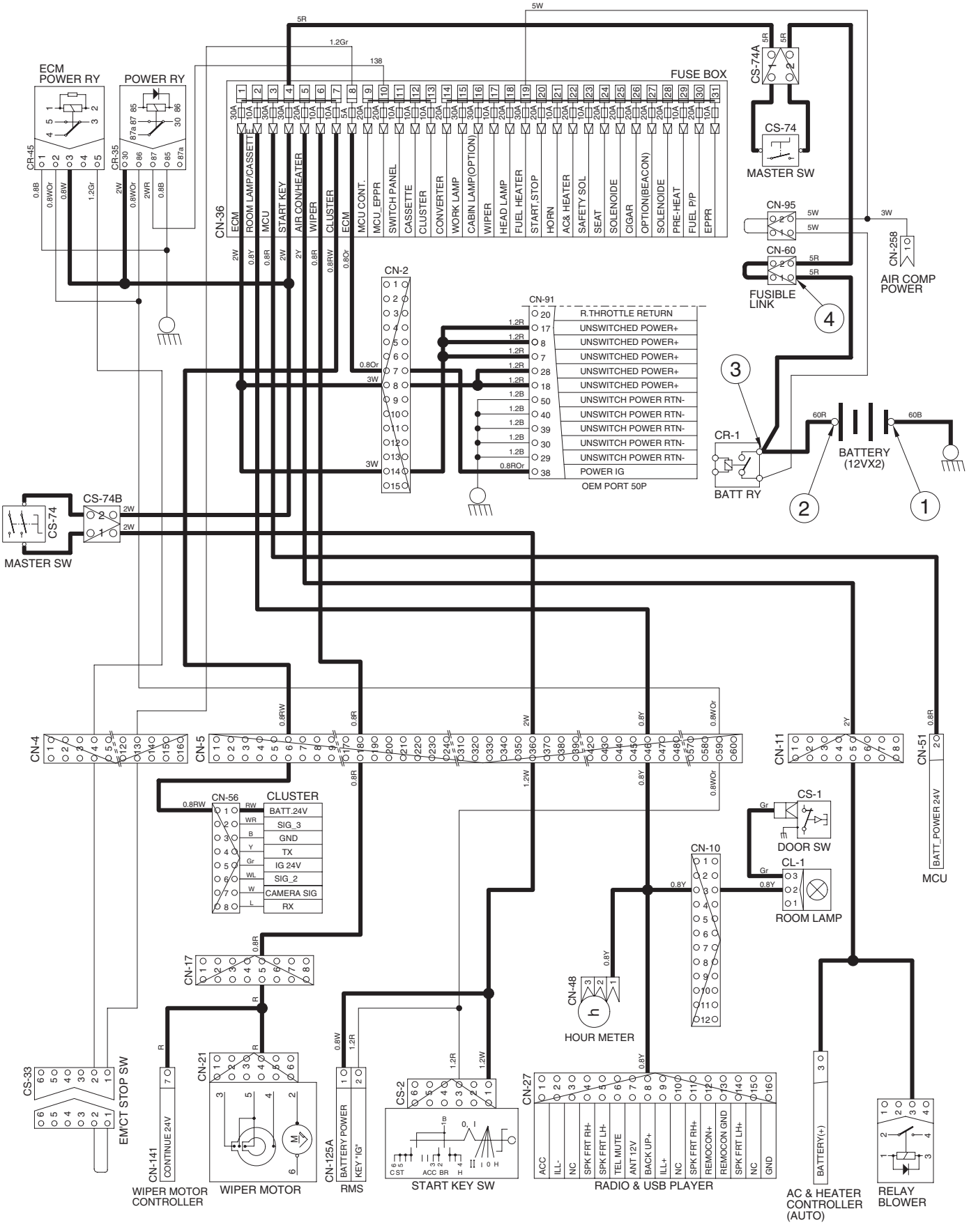
※ I/conn : Intermediate connector

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OFF	OFF	① - GND (battery 1EA)	10~12.5V
		② - GND (battery 2EA)	20~25V
		③ - GND (battery 2EA)	20~25V
		④ - GND (fusible link)	20~25V

※ GND : Ground

POWER CIRCUIT (CLUSTER TYPE 1) OLD VERSION



1. POWER CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

The negative terminal of battery is grounded to the machine chassis through the cable.
When the start switch is in the OFF position, the current flows from the positive battery terminal as shown below.

1) OPERATING FLOW

Battery → Battery relay [CR-1] → Fusible link [CN-60] → Master switch [CS-74A]

- → Fuse box [No.1] → I/conn [CN-2 (8, 14)] → Engine ECM battery power [CN-91]
- → Fuse box [No.2] → I/conn [CN-5 (46)]
  - → I/conn [CN -10 (3)] → Room lamp [CL-1 (2)]
    - → Door switch [CS-1]
  - → Radio & USB player [CN-27 (8)]
  - → Hour meter [CN-48 (1)]
- → Fuse box [No.3] → MCU [CN-51 (2)]
- → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5 (36)]
  - → Start switch [CS-2 (1)]
  - → RMS controller [CN-125A (1)]
  - → Power relay [CR-35 (30)]
  - → ECM power relay [CR-45 (3)]
- → Fuse box [No.5] → I/conn [CN-11 (5)]
  - → AC & Heater controller (3)
  - → Blower relay (3)
- → Fuse box [No.6] → I/conn [CN - 5 (18)] → I/conn [CN -17 (5)]
  - → Wiper motor controller [CN-141 (7)]
  - → Wiper motor [CN-21 (4)]
- → Fuse box [No.7] → I/conn [CN - 5 (6)] → Cluster [CN - 56 (1)]

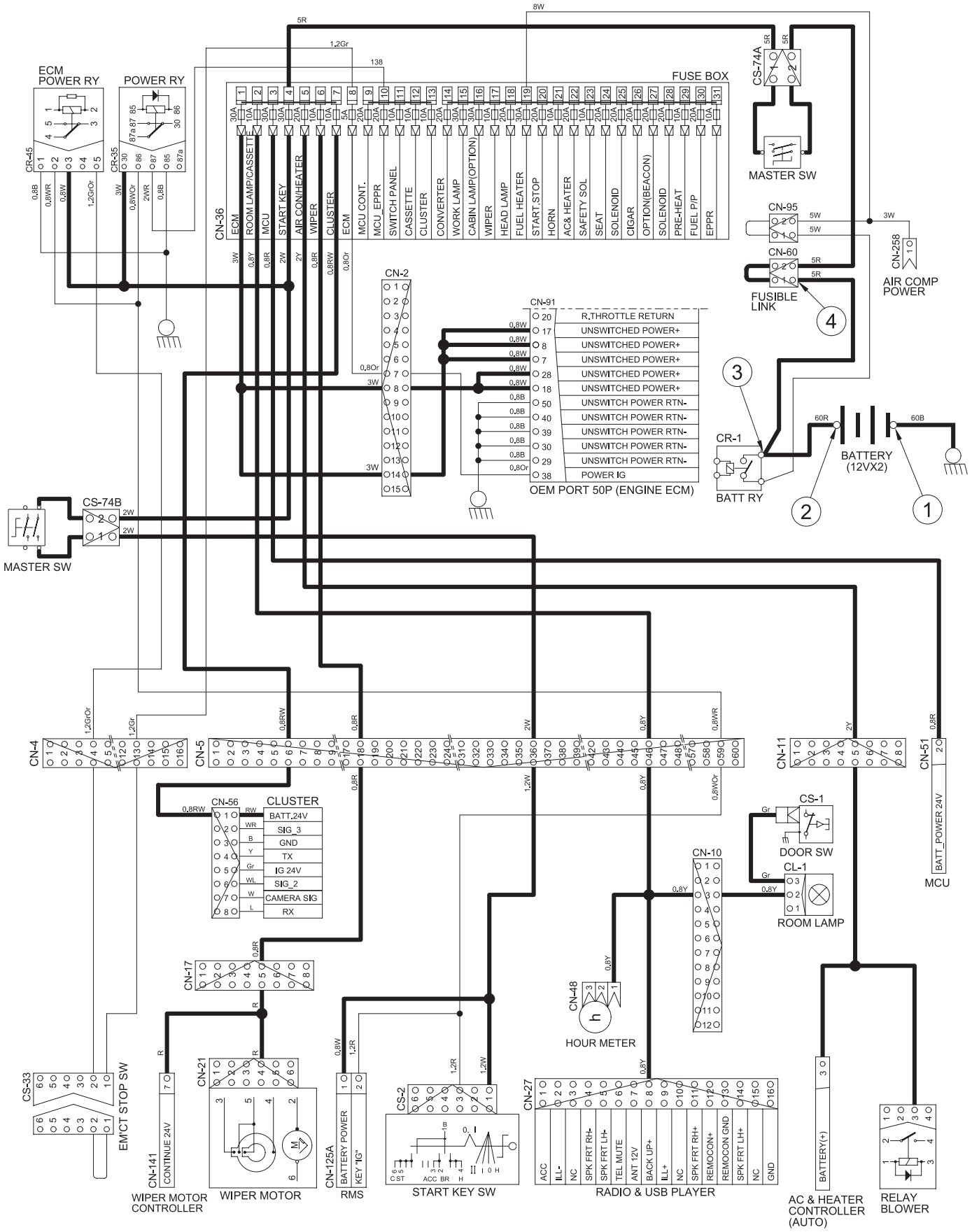
※ I/conn : Intermediate connector

2) CHECK POINT

Engine	Start switch	Check point	Voltage
		① - GND (battery 1EA)	10~12.5V
OFF	OFF	② - GND (battery 2EA)	20~25V
		③ - GND (battery relay)	20~25V
		④ - GND (fusible link)	20~25V

※ GND : Ground

POWER CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION



■ POWER CIRCUIT (CLUSTER TYPE 2)

The negative terminal of battery is grounded to the machine chassis through master switch.
When the start switch is in the OFF position, the current flows from the positive battery terminal as shown below.

1) OPERATING FLOW

Battery → Battery relay → Fusible link [CN-60] → Master switch [CS-74A]

- → Fuse box [No.1] → I/conn [CN-2 (8, 14)] → Engine ECM [CN-91]
- → Fuse box [No.2] → I/conn [CN-5 (46)]
  - → I/conn [CN -10 (3)] → Room lamp [CL-1 (2)]
    - → Door switch [CS-1]
  - → Radio & USB player [CN-27 (8)]
  - → Hour meter [CN-48 (1)]
- → Fuse box [No.3] → MCU [CN-50 (7)]
- → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5 (36)]
  - → Start switch [CS-2 (1)]
  - → Power relay [CR-35 (30)]
  - → ECM power relay [CR-45 (3)]
- → Fuse box [No.5] → I/conn [CN-11 (5)]
  - → AC & Heater controller (3)
  - → Blower relay (3)
- → Fuse box [No.6] → I/conn [CN - 5 (18)] → I/conn [CN -17 (5)]
  - → Wiper motor controller [CN-141 (7)]
  - → Wiper motor [CN-21 (4)]
- → Fuse box [No.8] → I/conn [CN - 2 (7)] → Engine ECM power [CN - 91 (38)]
- → Fuse box [No.13] → I/conn [CN - 5 (5)] → Cluster [CN - 56 (1)]

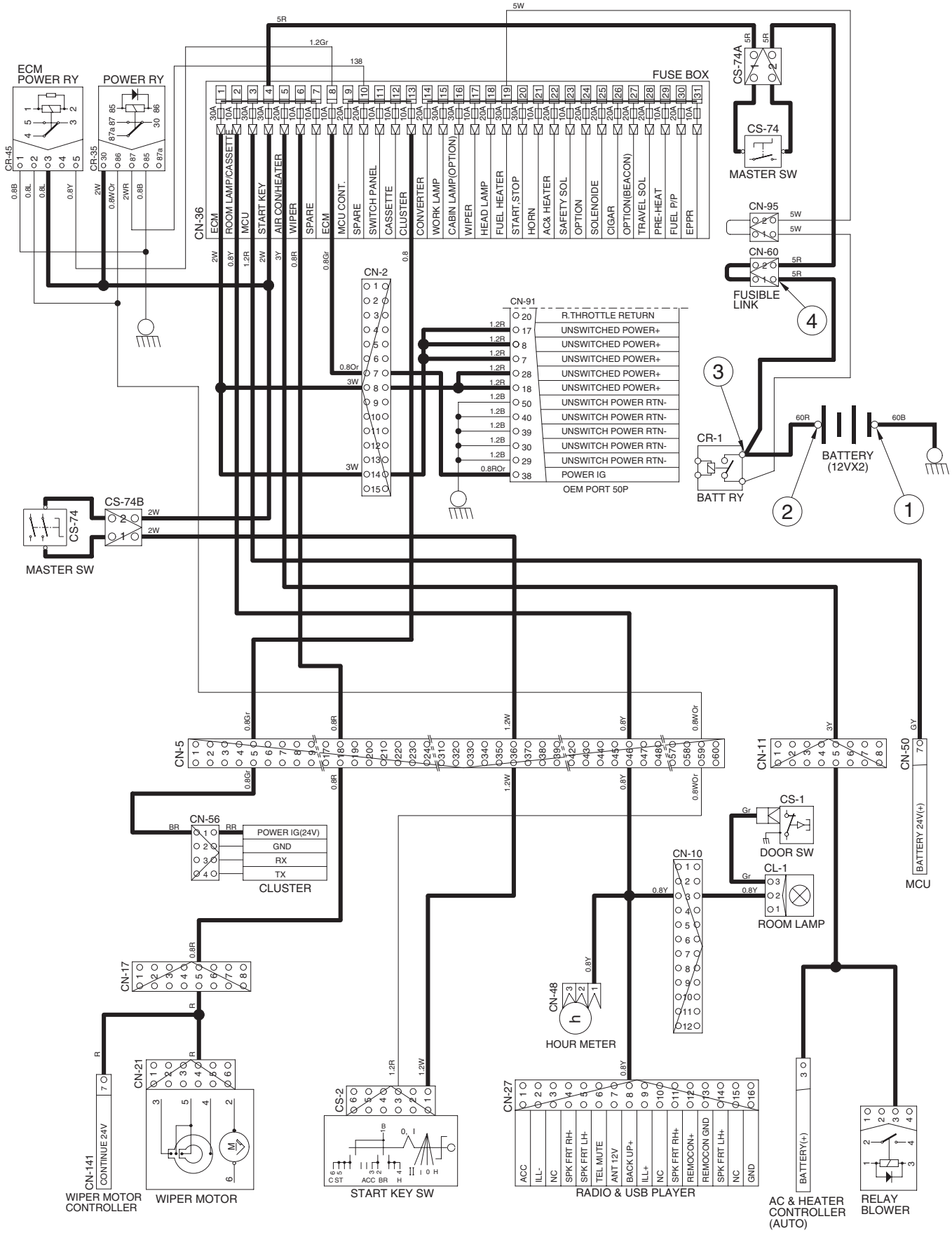
※ I/conn : Intermediate connector

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OFF	OFF	① - GND (battery 1EA)	10~12.5V
		② - GND (battery 2EA)	20~25V
		③ - GND (battery 2EA)	20~25V
		④ - GND (fusible link)	20~25V

※ GND : Ground

POWER CIRCUIT (CLUSTER TYPE 2)



2. STARTING CIRCUIT (CLUSTER TYPE 1) OLD VERSION

1) OPERATING FLOW

Battery(+) terminal → Battery relay [CR-1] → Fusible link [CN-60] → Master switch [CS-74] → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5(36)] → Start switch [CS-2(1)]

(1) When start key switch is in ON position

→ Start switch ON [CS-2 (2)] → I/conn [CN-5 (60)] → Battery relay [CR-1]
→ Battery relay operating (all power is supplied with the electric component)
→ Start switch ON [CS-2 (3)] → RMS controller [CN-125A (2)]

(2) When start key switch is in START position

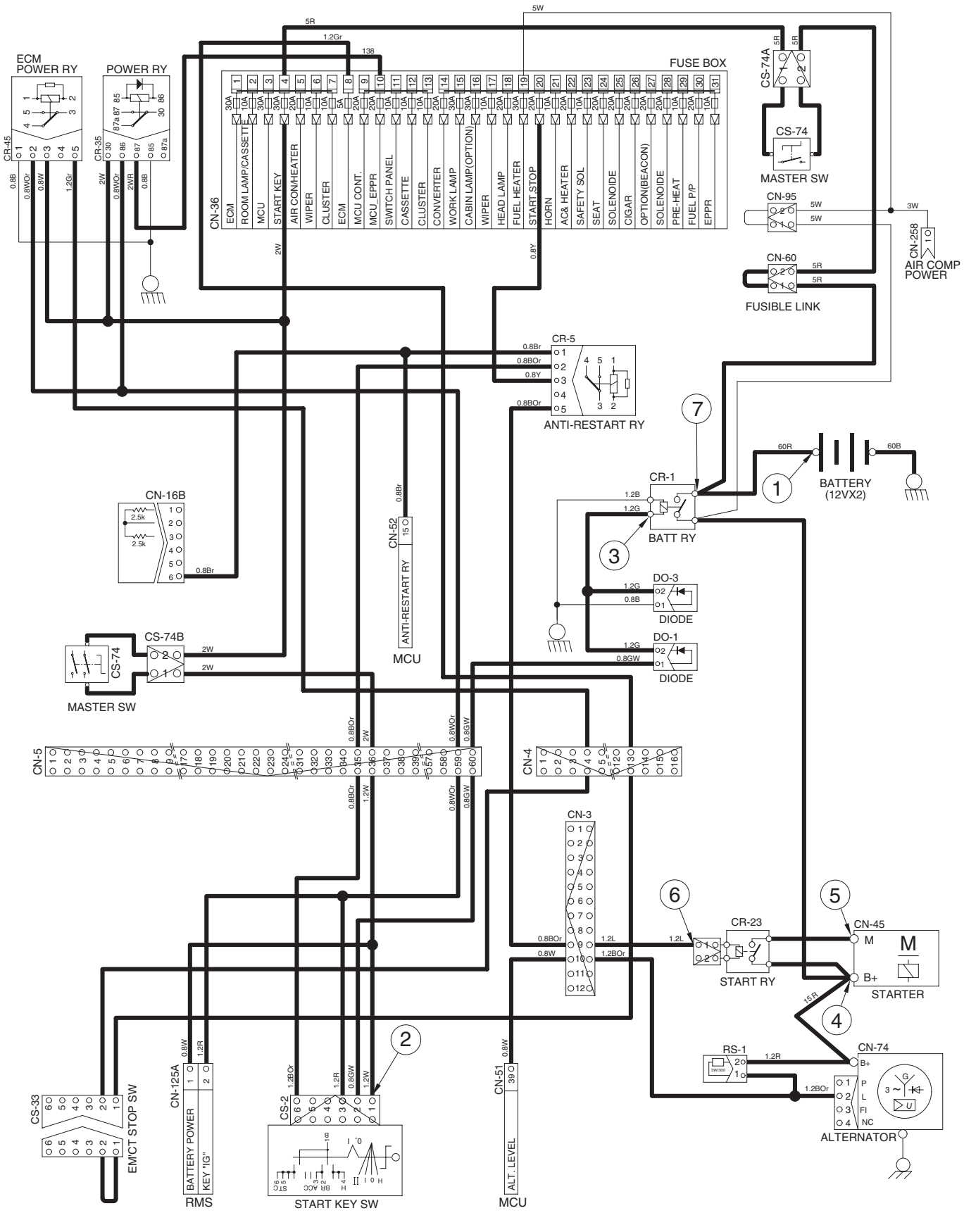
Start switch START [CS-2 (6)] → I/conn [CN-5 (35)] → Anti-restart relay [CR-5 (2)→(5)] → I/conn [CN-3 (9)] → Start relay [CR-23]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OPERATING	START	① - GND (battery) ② - GND (start key) ③ - GND (battery relay M4) ④ - GND (starter B^+) ⑤ - GND (starter M) ⑥ - GND (start relay) ⑦ - GND (battery relay M8)	20~25V

※ GND : Ground

STARTING CIRCUIT (CLUSTER TYPE 1) OLD VERSION



4809S4EL09

2. STARTING CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

1) OPERATING FLOW

Battery(+) terminal → Battery relay [CR-1] → Fusible link [CN-60] → Master switch [CS-74A] → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5(36)] → Start switch [CS-2(1)]

(1) When start key switch is in ON position

- Start switch ON [CS-2 (2)] → I/conn [CN-5 (60)] → Battery relay [CR-1] → Fusible link [CN-95]
  - Battery relay operating (all power is supplied with the electric component)
  - Fuse box [No. 20] → Anti-restart relay [CR-5(3)]
- Start switch ON [CS-2 (3)]
  - RMS controller [CN-125A (2)]
  - I/conn [CN-5 (59)]
    - Power relay [CR-35 (86→87)] → Fuse box [No. 9~13]
    - ECM power relay [CR-45 (2→5)] → I/conn [CN-4 (4)] → Emergency stop switch [CS-33 (2→1)] → I/conn [CN-4 (13)] → Fuse box [No. 8]
    - → I/conn [CN-2 (7)] → Engine ECM power IG [CN-91 (38)]

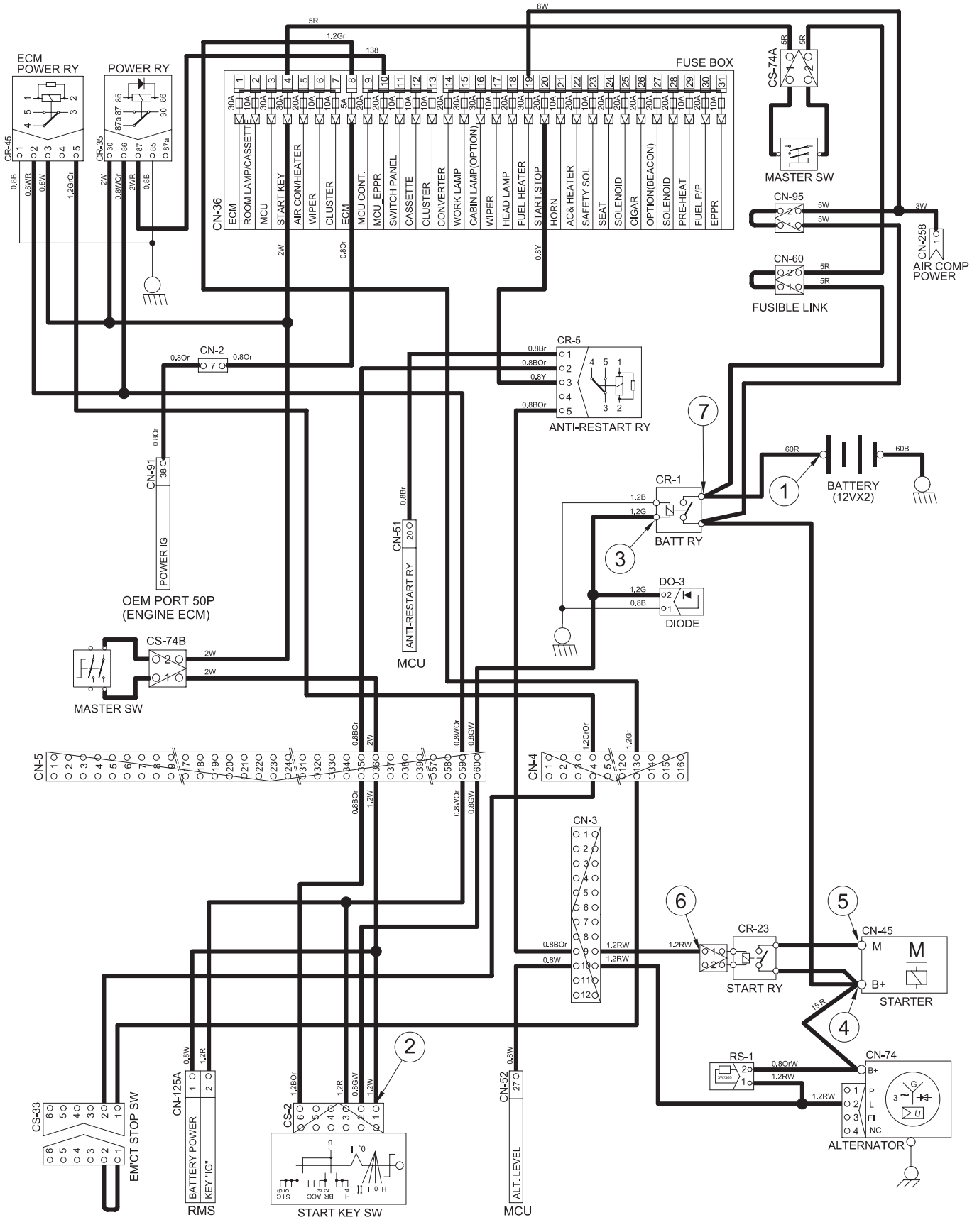
(2) When start key switch is in START position

Start switch START [CS-2 (6)] → I/conn [CN-5 (35)] → Anti-restart relay [CR-5 (2) → (5)] → I/conn [CN-3 (9)] → Start relay [CR-23 (1)] → Starter operating

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OPERATING	START	① - GND (battery) ② - GND (start switch) ③ - GND (battery relay M4) ④ - GND (starter B^+) ⑤ - GND (starter M) ⑥ - GND (start relay) ⑦ - GND (battery relay M8)	20~25V

※ GND : Ground


ECM POWER RY
POWER RY
CR-45
CR-35
FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU_EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOID
CIGAR
OPTION(BEACON)
SOLENOID
PRE-HEAT
FUEL P/P
EPPR
CS-74A
MASTER SW
CN-95
CN-60
FUSIBLE LINK
CN-258
AIR COMP POWER
CN-2
CR-5
ANTI-RESTART RY
CN-91
POWER IG
OEM PORT 50P (ENGINE ECM)
CN-51
ANTI-RESTART RY
MCU
CR-1
BATT RY
BATTERY (12VX2)
DO-3
DIODE
CS-74B
MASTER SW
CN-5
CN-4
CN-3
CR-23
START RY
CN-45
STARTER
RS-1
CN-74
ALTERNATOR
CS-33
EM'CT STOP SW
CN-125A
BATTERY POWER
KEY "IG"
RMS
CS-2
START KEY SW
CN-52
ALT. LEVEL
MCU
4809S4EL09-1

■ STARTING CIRCUIT (CLUSTER TYPE 2)

1) OPERATING FLOW

Battery(+) terminal → Battery relay [CR-1] → Fusible link [CN-60] → Master switch [CS-74] → Fuse box [No.4] → Master switch [CS-74B] → I/conn [CN-5(36)] → Start switch [CS-2(1)]

(1) When start key switch is in ON position

→ Start switch ON [CS-2 (2)] → I/conn [CN-5 (60)] → Battery relay [CR-1] → Battery relay operating (all power is supplied with the electric component)

→ Start switch ON [CS-2 (3)] → I/conn [CN-5 (59)] → Power relay [CR-35 (86) → (87)] → Fuse box [No.10]

(2) When start key switch is in START position

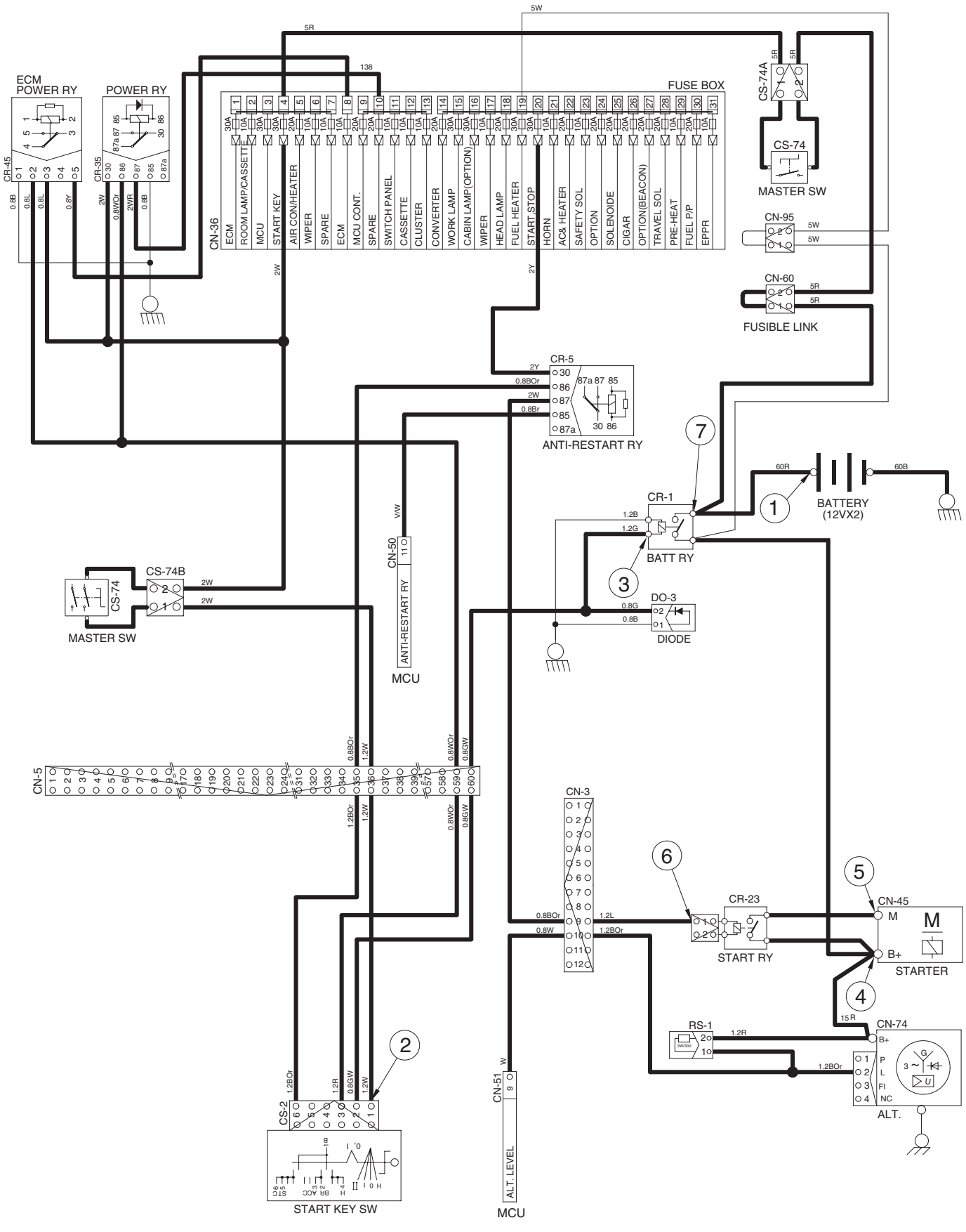
Start switch START [CS-2 (6)] → I/conn [CN-5 (35)] → Anti-restart relay [CR-5 (86) → (87)] → I/conn [CN-3 (9)] → Start relay [CR-23]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OPERATING	START	① - GND (battery) ② - GND (start key) ③ - GND (battery relay M4) ④ - GND (starter B^+) ⑤ - GND (starter M) ⑥ - GND (start relay) ⑦ - GND (battery relay M8)	20~25V

※ GND : Ground

STARTING CIRCUIT (CLUSTER TYPE 2)



3. CHARGING CIRCUIT (CLUSTER TYPE 1) OLD VERSION

When the starter is activated and the engine is started, the operator releases the key switch to the ON position.

Charging current generated by operating alternator flows into the battery through the battery relay [CR-1].

The current also flows from alternator to each electrical component and controller through the fuse box.

1) OPERATING FLOW

(1) Warning flow

Alternator "I" terminal → I/conn [CN-3 (10)] → MCU alternator level [CN-51 (39)]
→ Cluster charging warning lamp (Via CAN interface)

(2) Charging flow

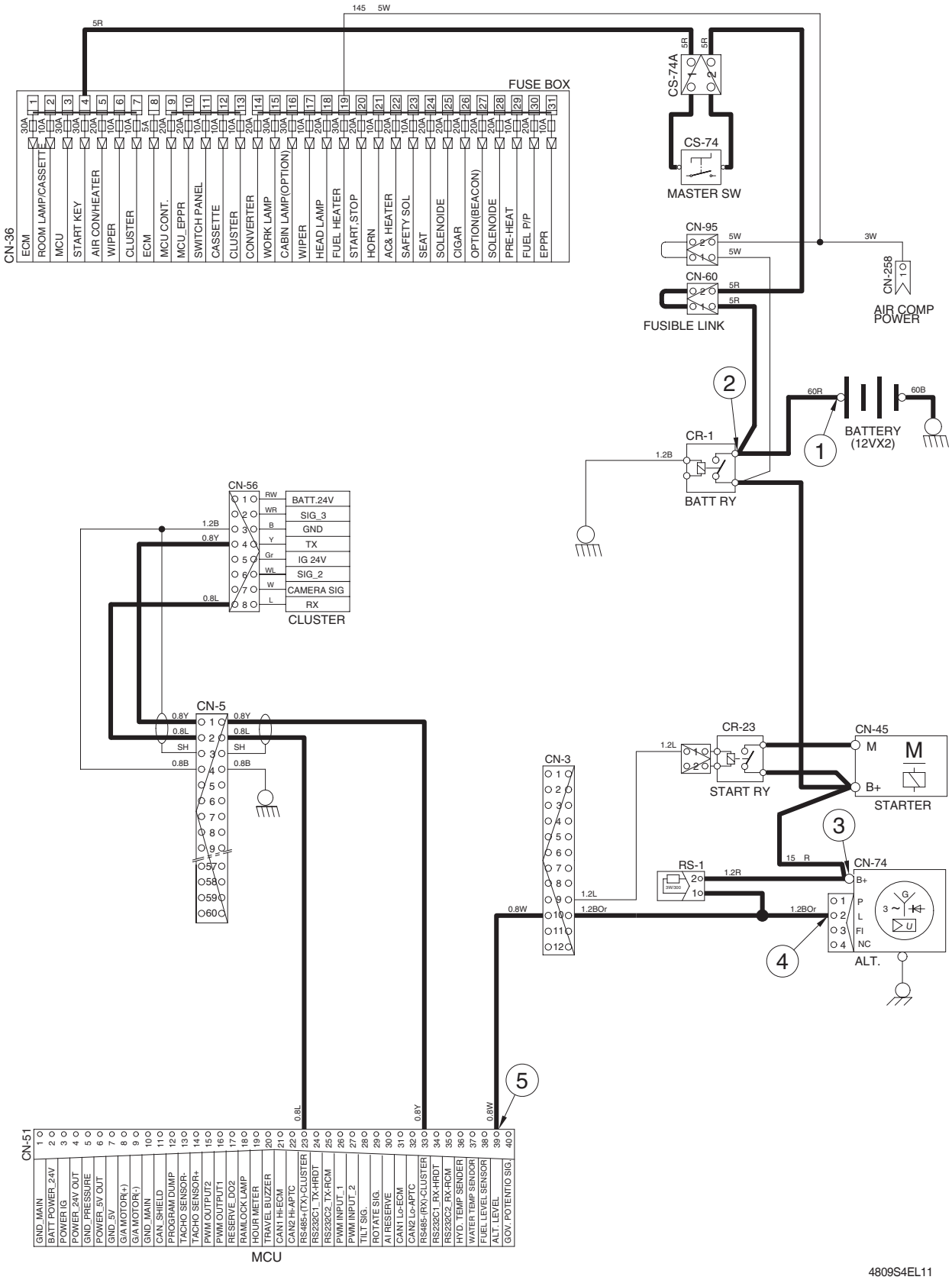
Alternator "B^+" terminal → Battery relay(M8) → Battery(+) terminal
Fusible link [CN-60] → Master switch [CS-74]
→ Fuse box

2) CHECK POINT

Engine	Start switch	Check point	Voltage
RUN	ON	① - GND (battery voltage) ② - GND (battery relay) ③ - GND (alternator B^+ terminal) ④ - GND (alternator I terminal) ⑤ - GND (MCU)	20~25V

※ GND : Ground

CHARGING CIRCUIT (CLUSTER TYPE 1) OLD VERSION



3. CHARGING CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

When the starter is activated and the engine is started, the operator releases the key switch to the ON position.

Charging current generated by operating alternator flows into the battery through the battery relay [CR-1].

The current also flows from alternator to each electrical component and controller through the fuse box.

1) OPERATING FLOW

(1) Warning flow

Alternator [CN-74 (2)] → I/conn [CN-3 (10)] → MCU alternator level [CN-52 (27)]
→ Cluster charging warning lamp (Via CAN interface)

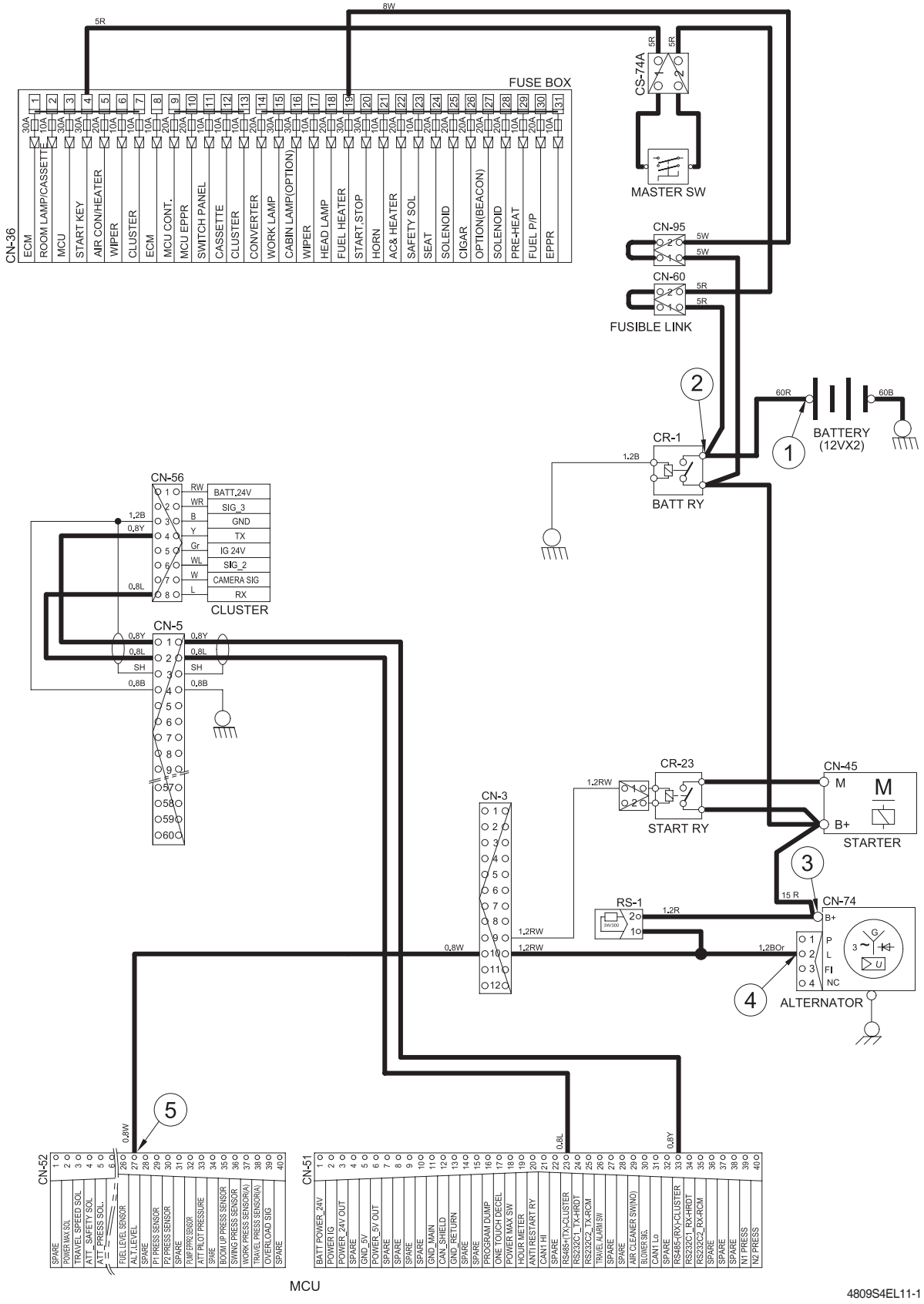
(2) Charging flow

Alternator [CN-74 (B+)] → Starter [CN-45 (B+)] → Battery relay(M8)
→ Battery(+) terminal
→ Fusible link [CN-60] → Master switch [CS-74A] → Fuse box [No. 1~7]
→ Fusible link [CN-95] → Fuse box [No. 14~31]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
RUN	ON	① - GND (battery voltage) ② - GND (battery relay) ③ - GND (alternator B^+ terminal) ④ - GND (alternator L terminal) ⑤ - GND (MCU)	20~25V

※ GND : Ground


8W
5R
FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START.STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOID
CIGAR
OPTION(BEACON)
SOLENOID
PRE-HEAT
FUEL P/P
EPPR
CS-74A
MASTER SW
CN-95
CN-60
FUSIBLE LINK
BATTERY
(12VX2)
CR-1
BATT RY
CN-56
BATT.24V
SIG_3
GND
TX
IG 24V
SIG_2
CAMERA SIG
RX
CLUSTER
CN-5
CN-3
CR-23
START RY
CN-45
STARTER
RS-1
CN-74
ALTERNATOR
CN-52
CN-51
MCU
4809S4EL11-1

■ CHARGING CIRCUIT (CLUSTER TYPE 2)

When the starter is activated and the engine is started, the operator releases the key switch to the ON position.

Charging current generated by operating alternator flows into the battery through the battery relay [CR-1].

The current also flows from alternator to each electrical component and controller through the fuse box.

1) OPERATING FLOW

(1) Warning flow

Alternator "I" terminal → I/conn [CN-3 (10)] → MCU alternator level [CN-51 (9)]
→ Cluster charging warning lamp (Via CAN interface)

(2) Charging flow

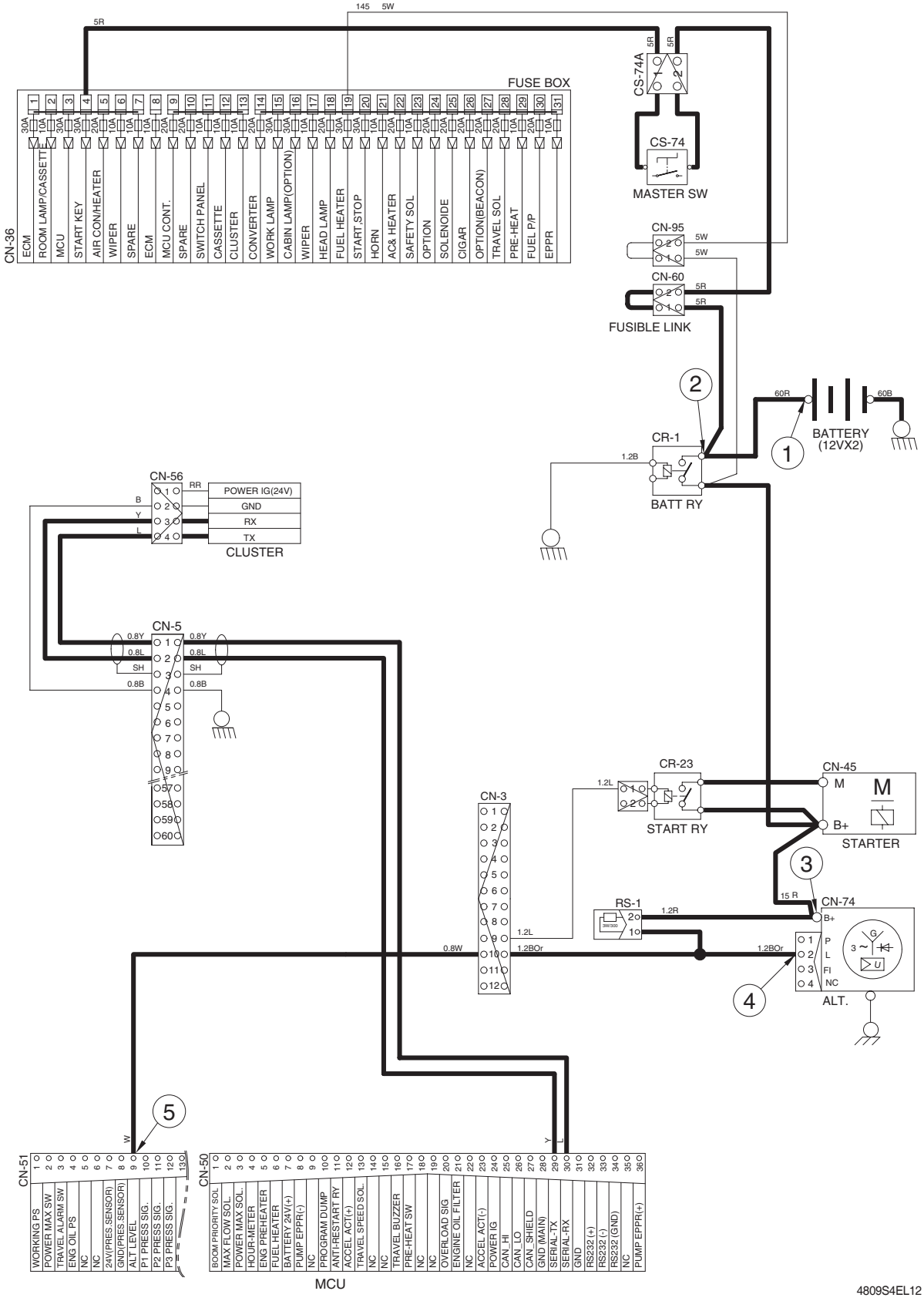
Alternator "B^+" terminal → Battery relay(M8) → Battery(+) terminal
Battery relay(M8) → Fusible link [CN-60] → Master switch [CS-74] → Fuse box

2) CHECK POINT

Engine	Start switch	Check point	Voltage
RUN	ON	① - GND (battery voltage) ② - GND (battery relay) ③ - GND (alternator B^+ terminal) ④ - GND (alternator I terminal) ⑤ - GND (MCU)	20~25V

※ GND : Ground

CHARGING CIRCUIT (CLUSTER TYPE 2)



4. HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 1) OLD VERSION

1) OPERATING FLOW

Fuse box (No.15) → Work light relay [CR-4 (30, 86)]
Fuse box (No.18) → Head light relay [CR-13 (30, 86)]

(1) Head light switch ON

Head light switch ON [CN-116 (1)] → I/conn [CN-5 (49)] → Head light relay [CR-13 (85) → (87)]
- → Head light ON [CL-3 (2), CL-4 (2), CL-24 (2)]
- → I/conn [CN-11 (8)] → AC & Heater controller illumination ON [4]
- → I/conn [CN-5 (13)]
  - → Radio & USB player illumination ON [CN-27 (9)]
  - → Cigar light [CL-2]
- → I/conn [CN-8 (7)] → Accel dial LED ON

(2) Work light switch ON

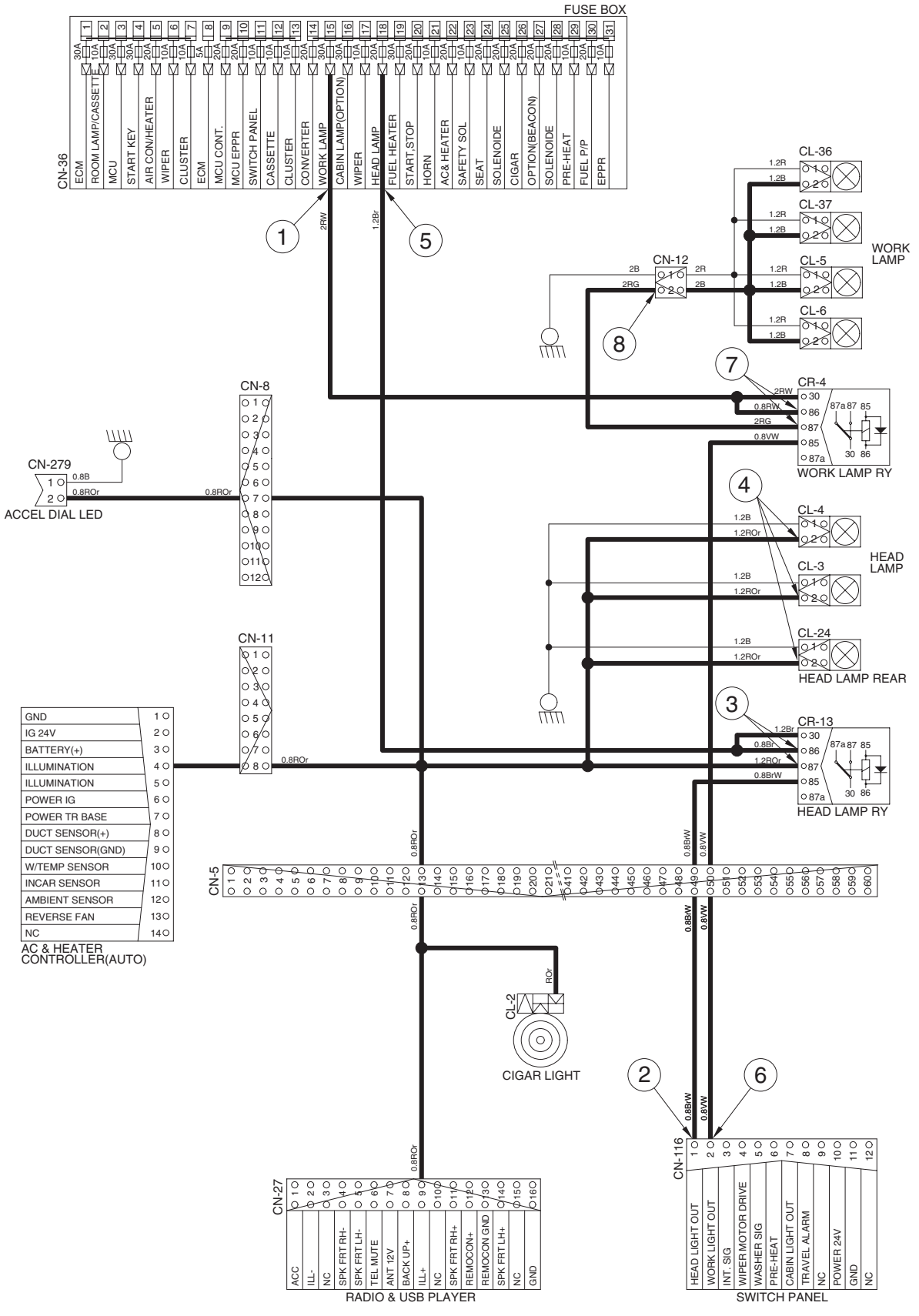
Work light switch ON [CN-116 (2)] → I/conn [CN-5 (50)] → Work light relay [CR-4 (85) → (87)]
→ I/conn [CN-12 (2)] → Work light ON [CL-5 (2), CL-6 (2), CL-36 (2), CL-37 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power output) ③ - GND (head light relay) ④ - GND (head light) ⑤ - GND (fuse box) ⑥− GND (switch power output) ⑦ - GND (work light relay) ⑧ - GND (work light)	20~25V

※ GND : Ground

HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 1) OLD VERSION



4809S4EL13

4. HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

1) OPERATING FLOW

Fuse box (No.15) → Work light relay [CR-4 (30, 86)]
Fuse box (No.18) → Head light relay [CR-13 (30, 86)]
Fuse box (No.11) → I/conn [CN-5 (7)] → Switch panel [CN-116 (10)]

(1) Head light switch ON (main light switch once)

Head light switch ON [CN-116 (1)] → I/conn [CN-5 (49)] → Head light relay [CR-13 (85) → (87)]
- → Head light ON [CL-3 (2), CL-4 (2), CL-24 (2)]
- → I/conn [CN-11 (8)] → AC & Heater controller illumination ON [4]
- → I/conn [CN-5 (13)]
  - → Radio & USB player illumination ON [CN-27 (9)]
  - → Cigar lighter [CL-2]
- → I/conn [CN-8 (7)] → Accel dial LED ON [CN-279 (2)]

(2) Work light switch ON (main light switch once more)

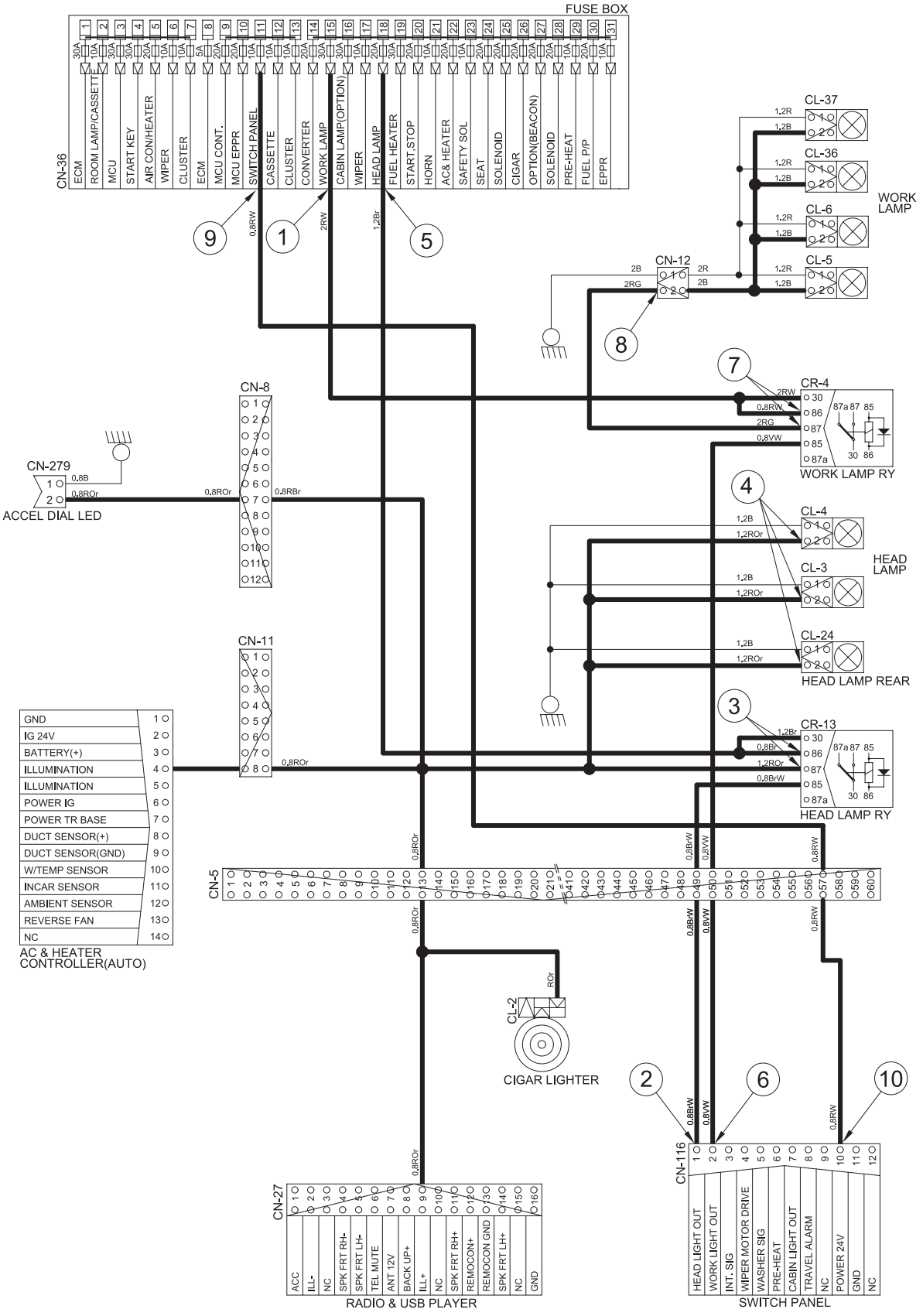
Work light switch ON [CN-116 (2)] → I/conn [CN-5 (50)] → Work light relay [CR-4 (85) → (87)]
→ I/conn [CN-12 (2)] → Work light ON [CL-5 (2), CL-6 (2), CL-36 (2), CL-37 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power output) ③ - GND (head light relay) ④ - GND (head light) ⑤ - GND (fuse box) ⑥ - GND (switch power output) ⑦ - GND (work light relay) ⑧ - GND (work light) ⑨ - GND (fuse box) ⑩ - GND (switch power input)	20~25V

※ GND : Ground

HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION



4809S4EL13-1

■ HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 2)

1) OPERATING FLOW

Fuse box (No.15) → Work light relay [CR-4 (30, 86)]
Fuse box (No.18) → Head light relay [CR-13 (30, 86)]

(1) Head light switch ON

Head light switch ON [CN-116 (1)] → I/conn [CN-5 (49)] → Head light relay [CR-13 (85) → (87)]
- → Head light ON [CL-3 (2), CL-4 (2)]
- → I/conn [CN-11 (8)] → AC & Heater controller illumination ON [4]
- → I/conn [CN-5 (13)]
  - → Radio & USB player illumination ON [CN-27 (9)]
  - → Cigar light [CL-2]
- → I/conn [CN-8 (7)] → Accel dial LED ON

(2) Work light switch ON

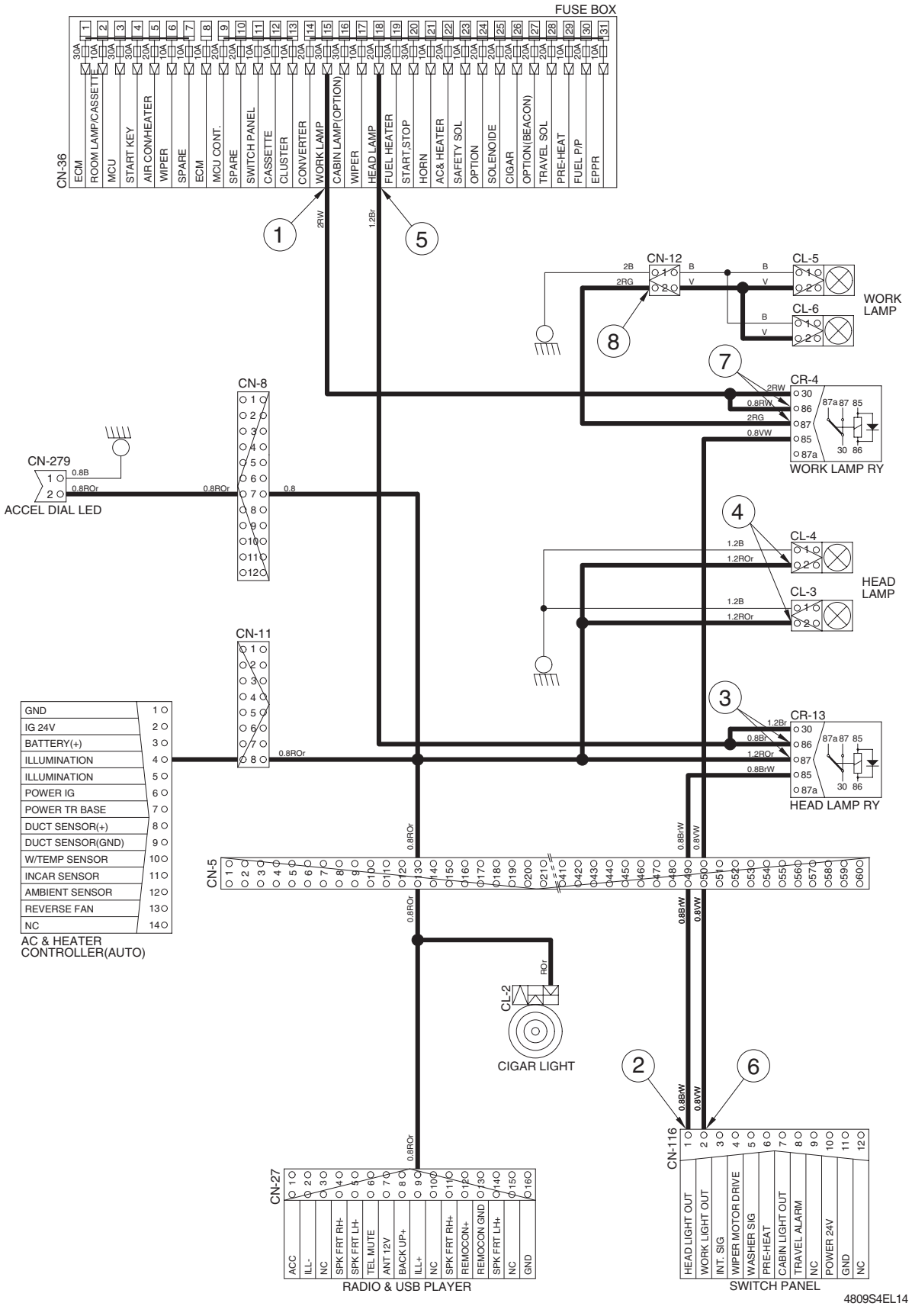
Work light switch ON [CN-116 (2)] → I/conn [CN-5 (50)] → Work light relay [CR-4 (85) → (87)]
→ I/conn [CN-12 (2)] → Work light ON [CL-5 (2), CL-6 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power output) ③ - GND (head light relay) ④ - GND (head light) ⑤ - GND (fuse box) ⑥− GND (switch power output) ⑦ - GND (work light relay) ⑧ - GND (work light)	20~25V

※ GND : Ground

HEAD AND WORK LIGHT CIRCUIT (CLUSTER TYPE 2)



5. BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 1) OLD VERSION

1) OPERATING FLOW

Fuse box (No. 27) → I/conn [CN-5 (33)] → Beacon lamp switch [CN-23 (8)]
Fuse box (No.16) → Cab light relay [CR-9 (30, 86)]

(1) Beacon lamp switch ON

Beacon lamp switch ON [CS-23 (4)] → Switch indicator lamp ON [CS-23 (11)]
→ I/conn [CN-10 (10)] → Beacon lamp ON [CL-7]

(2) Cab light switch ON

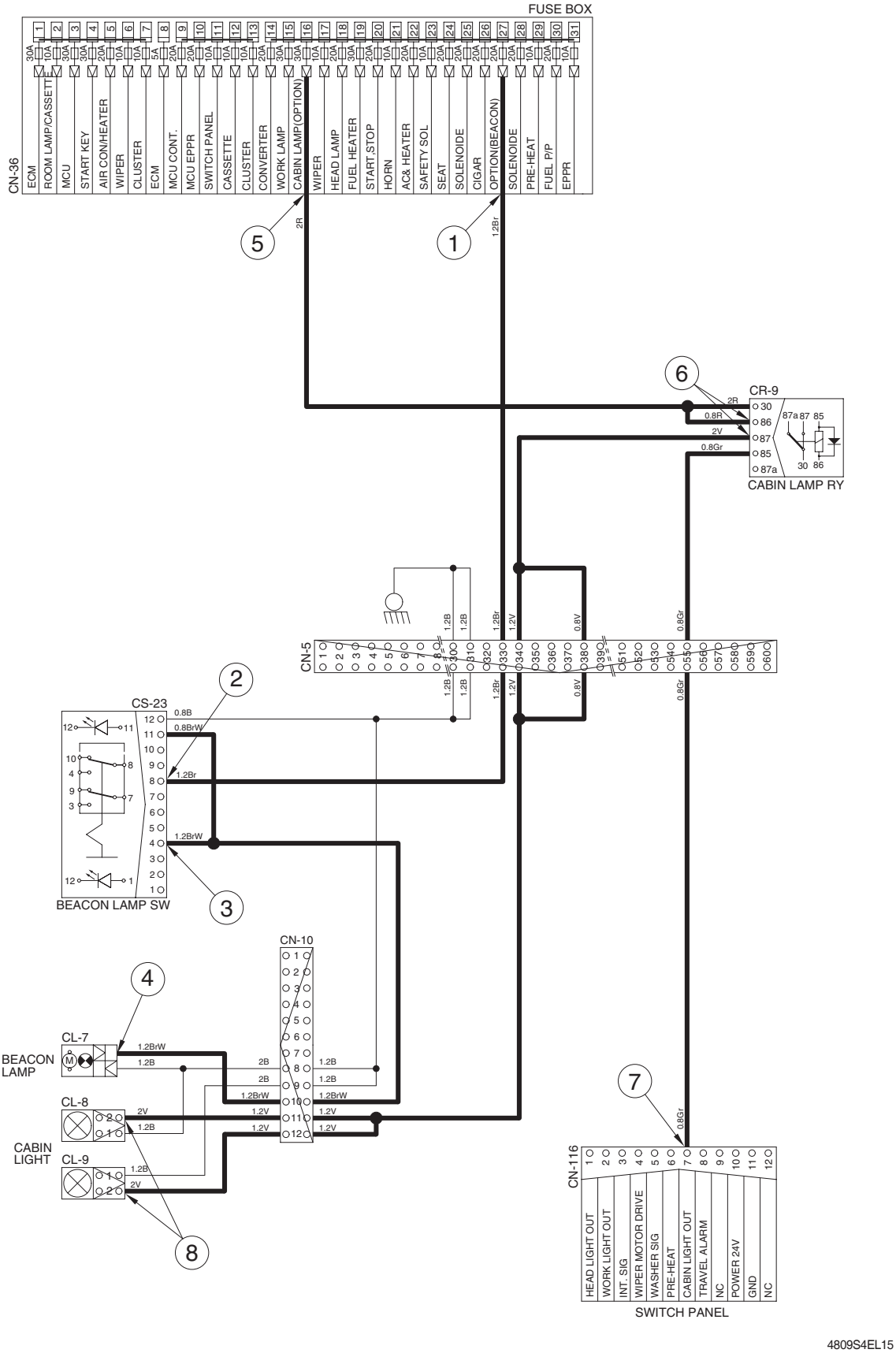
Cab light switch ON [CN-116 (7)] → I/conn [CN-5 (55)] → Cabin light relay [CR-9 (85) → (87)]
→ I/conn [CN-5 (34)] → I/conn [CN-10 (11, 12)] → Cab light ON [CL-8 (2), CL-9 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input) ③ - GND (switch power output) ④ - GND (beacon lamp) ⑤ - GND (fuse box) ⑥ - GND (cab light relay) ⑦ - GND (switch power output) ⑧ - GND (cab light)	20~25V

※ GND : Ground

BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 1) OLD VERSION



4809S4EL15

5. BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

1) OPERATING FLOW

Fuse box (No. 27) → I/conn [CN-5 (33)] → Beacon lamp switch [CN-23 (8)]
Fuse box (No.16) → Cab light relay [CR-9 (30, 86)]
Fuse box (No.11) → I/conn [CN-5 (57)] → Switch panel [CN-116 (10)]

(1) Beacon lamp switch ON

Beacon lamp switch ON [CS-23 (4)] → Switch indicator lamp ON [CS-23 (11)]
→ I/conn [CN-10 (10)] → Beacon lamp ON [CL-7]

(2) Cab light switch ON

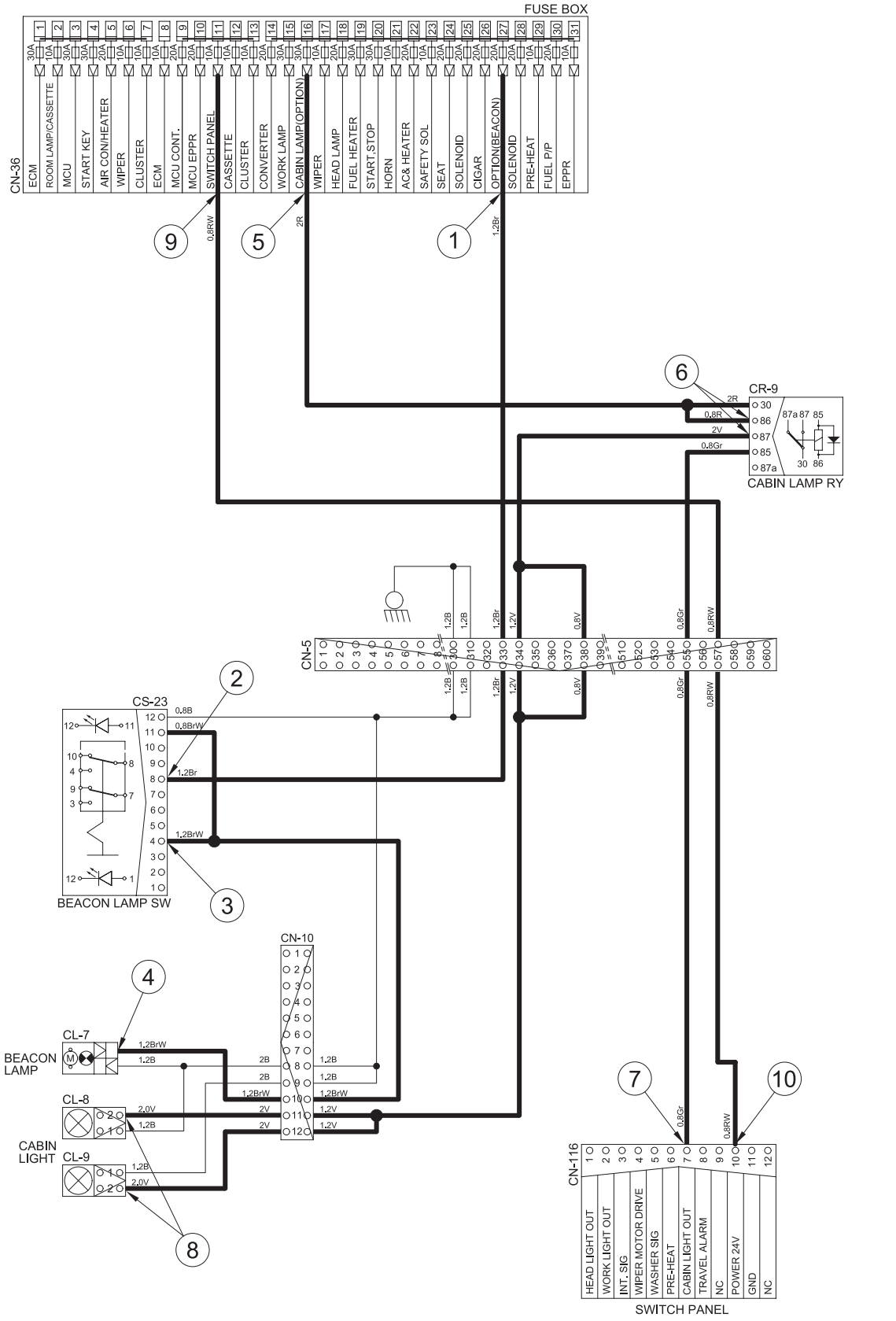
Cab light switch ON [CN-116 (7)] → I/conn [CN-5 (55)] → Cabin light relay [CR-9 (85) → (87)]
→ I/conn [CN-5 (34, 38)] → I/conn [CN-10 (11, 12)] → Cab light ON [CL-8 (2), CL-9 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input) ③ - GND (switch power output) ④ - GND (beacon lamp) ⑤ - GND (fuse box) ⑥ - GND (cab light relay) ⑦ - GND (switch power output) ⑧ - GND (cab light) ⑨ - GND (fuse box) ⑩ - GND (switch panel input)	20~25V

※ GND : Ground

BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION



4809S4EL15-1

■ BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 2)

1) OPERATING FLOW

Fuse box (No. 27) → I/conn [CN-5 (33)] → Beacon lamp switch [CN-23 (8)]
Fuse box (No.16) → Cab light relay [CR-9 (30, 86)]

(1) Beacon lamp switch ON

Beacon lamp switch ON [CS-23 (4)] → Switch indicator lamp ON [CS-23 (11)]
→ I/conn [CN-10 (10)] → Beacon lamp ON [CL-7]

(2) Cab light switch ON

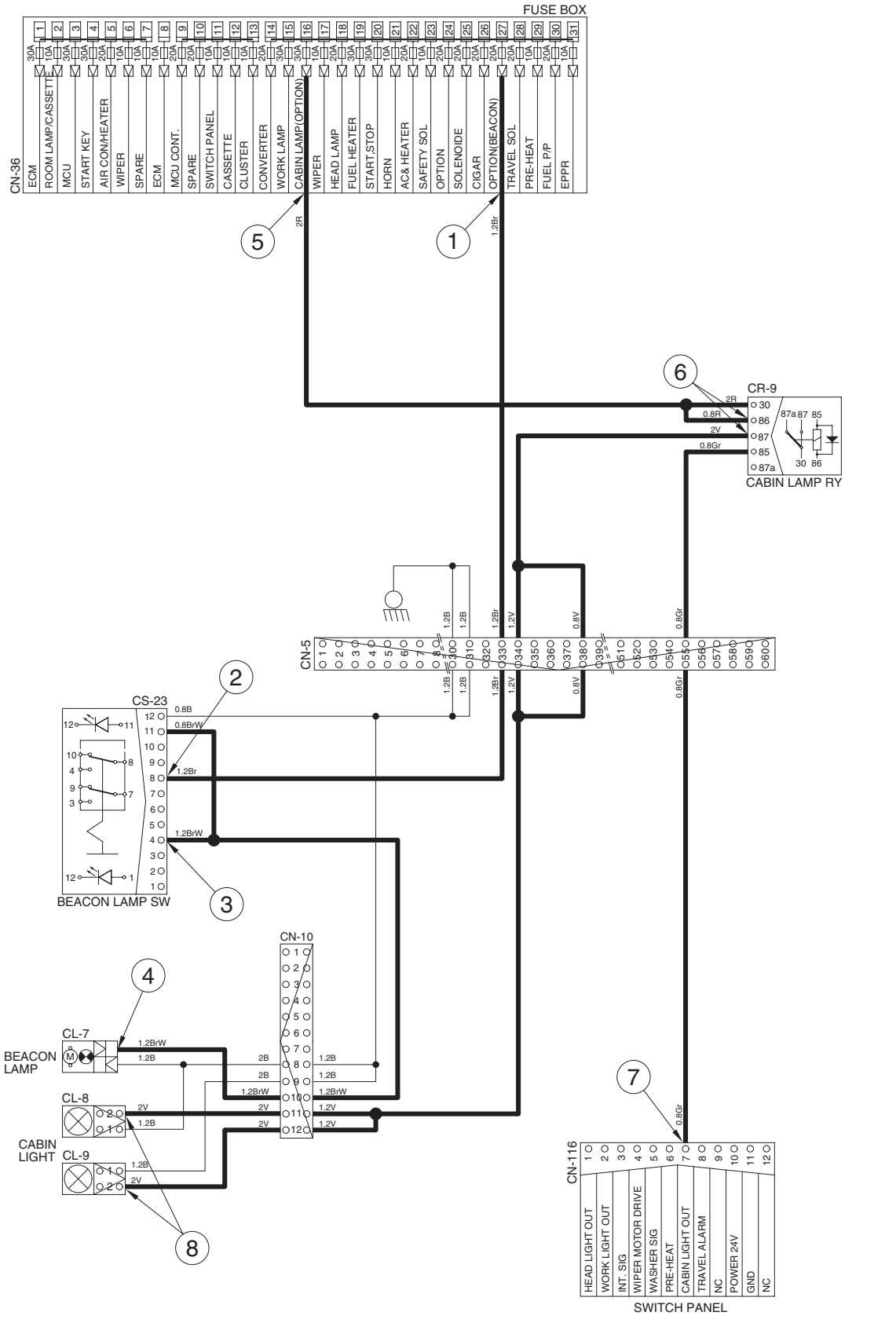
Cab light switch ON [CN-116 (7)] → I/conn [CN-5 (55)] → Cabin light relay [CR-9 (85) → (87)]
→ I/conn [CN-5 (34)] → I/conn [CN-10 (11, 12)] → Cab light ON [CL-8 (2), CL-9 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input) ③ - GND (switch power output) ④ - GND (beacon lamp) ⑤ - GND (fuse box) ⑥ - GND (cab light relay) ⑦ - GND (switch power output) ⑧ - GND (cab light)	20~25V

※ GND : Ground

BEACON LAMP AND CAB LIGHT CIRCUIT (CLUSTER TYPE 2)



6. WIPER AND WASHER CIRCUIT (CLUSTER TYPE 1) OLD VERSION

1) OPERATING FLOW

(1) Key switch ON

Fuse box (No.11) → I/conn [CN-5 (57)] → Switch panel [CN-116 (10)]

Fuse box (No.6) → I/conn [CN-5 (18)] → I/conn [CN-17 (5)] → Wiper motor controller [CN-141 (7)]
→ Wiper motor [CN-21 (4)]

Fuse box (No.17) → I/conn [CN-5 (24)] → I/conn [CN-17 (4)] → Wiper motor controller [CN-141 (6)]
→ Washer pump [CN-22 (2)]

(2) Wiper switch ON : 1st step (Intermittent)

Wiper switch ON [CN-116 (3)] → I/conn [CN-17 (8)] → Wiper motor controller [CN-141 (10) → (3)]
→ Wiper motor intermittently operating [CN-21 (6)]

(3) Wiper switch ON : 2nd step (continual)

Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]
→ Wiper motor operating [CN-21 (2)]

(4) Washer switch ON

Washer switch ON [CN-116 (5)] → I/conn [CN-17 (7)] → Wiper motor controller [CN-141 (9) → (8)]
→ I/conn [CN-17 (6)] → I/conn [CN-5 (19)] → Washer pump [CN-22 (1)] → Washer operating

Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]
→ Wiper motor operating [CN-21 (2)]

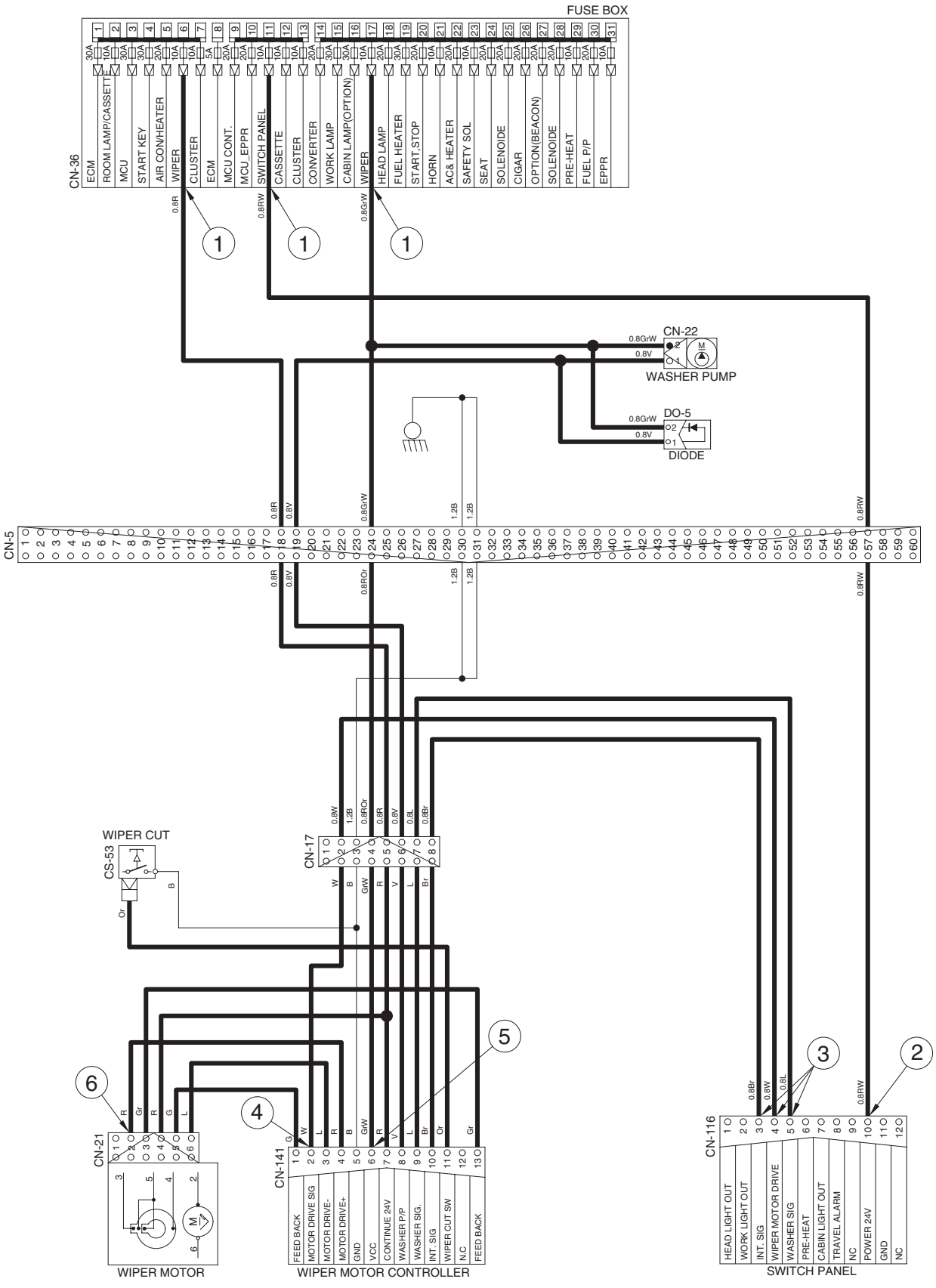
(5) Auto parking (when switch OFF)

Switch OFF [CN-116 (4)] → Wiper motor parking position by wiper motor controller

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input)	24V
		③ - GND (switch power output) ④ - GND (wiper power input)	0 ~ 5V
		⑤ - GND (wiper power output)	24V
		⑥ - GND (wiper motor)	0 or 24V

※ GND : Ground


FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU_EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START,STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOIDE
CIGAR
OPTION(BEACON)
SOLENOIDE
PRE-HEAT
FUEL P/P
EPPR
CN-22
WASHER PUMP
DO-5
DIODE
CN-5
WIPER CUT
CS-53
CN-17
CN-21
WIPER MOTOR
CN-141
WIPER MOTOR CONTROLLER
CN-116
SWITCH PANEL
HEAD LIGHT OUT
WORK LIGHT OUT
INT. SIG
WIPER MOTOR DRIVE
WASHER SIG
PRE-HEAT
CABIN LIGHT OUT
TRAVEL ALARM
NC
POWER 24V
GND
NC
FEED BACK
MOTOR DRIVE SIG
MOTOR DRIVE-
MOTOR DRIVE+
GND
VCC
CONTINUE 24V
WASHER P/P
WASHER SIG.
INT. SIG
WIPER CUT SW
N.C
FEED BACK

4809S4EL17

6. WIPER AND WASHER CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

1) OPERATING FLOW

(1) Key switch ON

Fuse box (No.11) → I/conn [CN-5 (57)] → Switch panel [CN-116 (10)]

Fuse box (No.6) → I/conn [CN-5 (18)] → I/conn [CN-17 (5)] → Wiper motor controller [CN-141 (7)]
→ Wiper motor [CN-21 (4)]

Fuse box (No.17) → I/conn [CN-5 (24)] → I/conn [CN-17 (4)] → Wiper motor controller [CN-141 (6)]
→ Washer pump [CN-22 (2)]

(2) Wiper switch ON : 1st step (Intermittent)

Wiper switch ON [CN-116 (3)] → I/conn [CN-17 (8)] → Wiper motor controller [CN-141 (10) → (3)]
→ Wiper motor intermittently operating [CN-21 (6)]

(3) Wiper switch ON : 2nd step (continual)

Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]
→ Wiper motor operating [CN-21 (2)]

(4) Washer switch ON

Washer switch ON [CN-116 (5)] → I/conn [CN-17 (7)] → Wiper motor controller [CN-141 (9) → (8)]
→ I/conn [CN-17 (6)] → I/conn [CN-5 (19)] → Washer pump [CN-22 (1)] → Washer operating

Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]
→ Wiper motor operating [CN-21 (2)]

(5) Auto parking (when switch OFF)

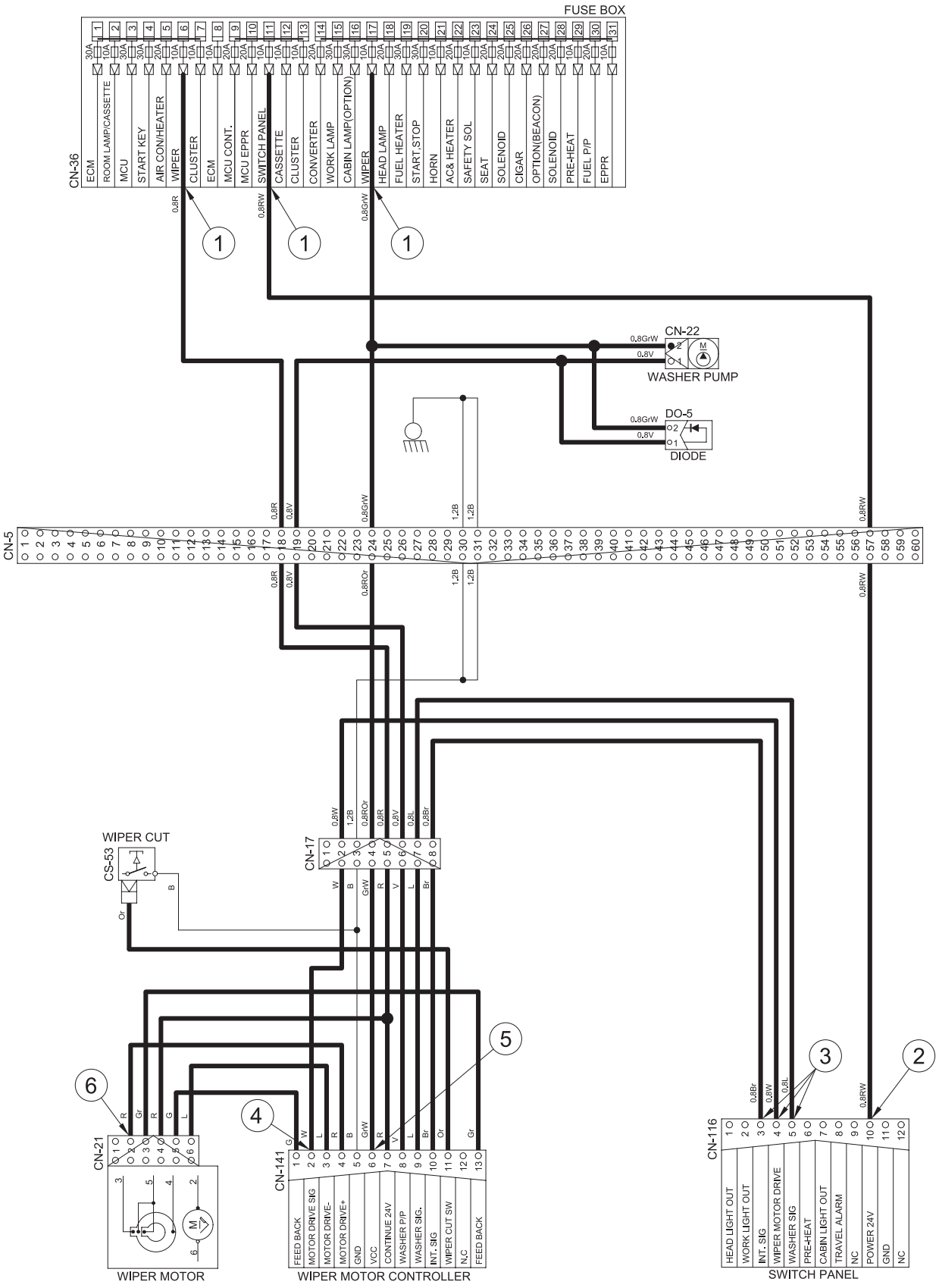
Switch OFF [CN-116 (4)] → Wiper motor parking position by wiper motor controller

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input)	24V
		③ - GND (switch power output) ④ - GND (wiper power input)	0 ~ 5V
		⑤ - GND (wiper motor controller power input)	24V
		⑥ - GND (wiper motor)	0 or 24V

※ GND : Ground

WIPER AND WASHER CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION



4809S4EL17-1

■ WIPER AND WASHER CIRCUIT (CLUSTER TYPE 2)

1) OPERATING FLOW

(1) Key switch ON

Fuse box (No.11) → I/conn [CN-5 (57)] → Switch panel [CN-116 (10)]

Fuse box (No.6) → I/conn [CN-5 (18)] → I/conn [CN-17 (5)] → Wiper motor controller [CN-141(7)]
→ Wiper motor [CN-21(4)]

Fuse box (No.17) → I/conn [CN-5 (24)] → I/conn [CN-17 (4)] → Wiper motor controller [CN-141 (6)]
→ Washer pump [CN-22 (2)]

(2) Wiper switch ON : 1st step (Intermittent)

Wiper switch ON [CN-116 (3)] → I/conn [CN-17 (8)] → Wiper motor controller [CN-141 (10) → (3)]
→ Wiper motor intermittently operating [CN-21 (6)]

(3) Wiper switch ON : 2nd step (continual)

Wiper switch ON [CN-116(4)] → I/conn[CN-17(2)] → Wiper motor controller [CN-141(2) → (4)]
→ Wiper motor operating [CN-21(2)]

(4) Washer switch ON

Washer switch ON [CN-116 (5)] → I/conn [CN-17 (7)] → Wiper motor controller [CN-141 (9) → (8)]
→ I/conn [CN-17 (6)] → I/conn [CN-5 (19)] → Washer pump [CN-22 (1)] → Washer operating

Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]
→ Wiper motor operating [CN-21 (2)]

(5) Auto parking(when switch OFF)

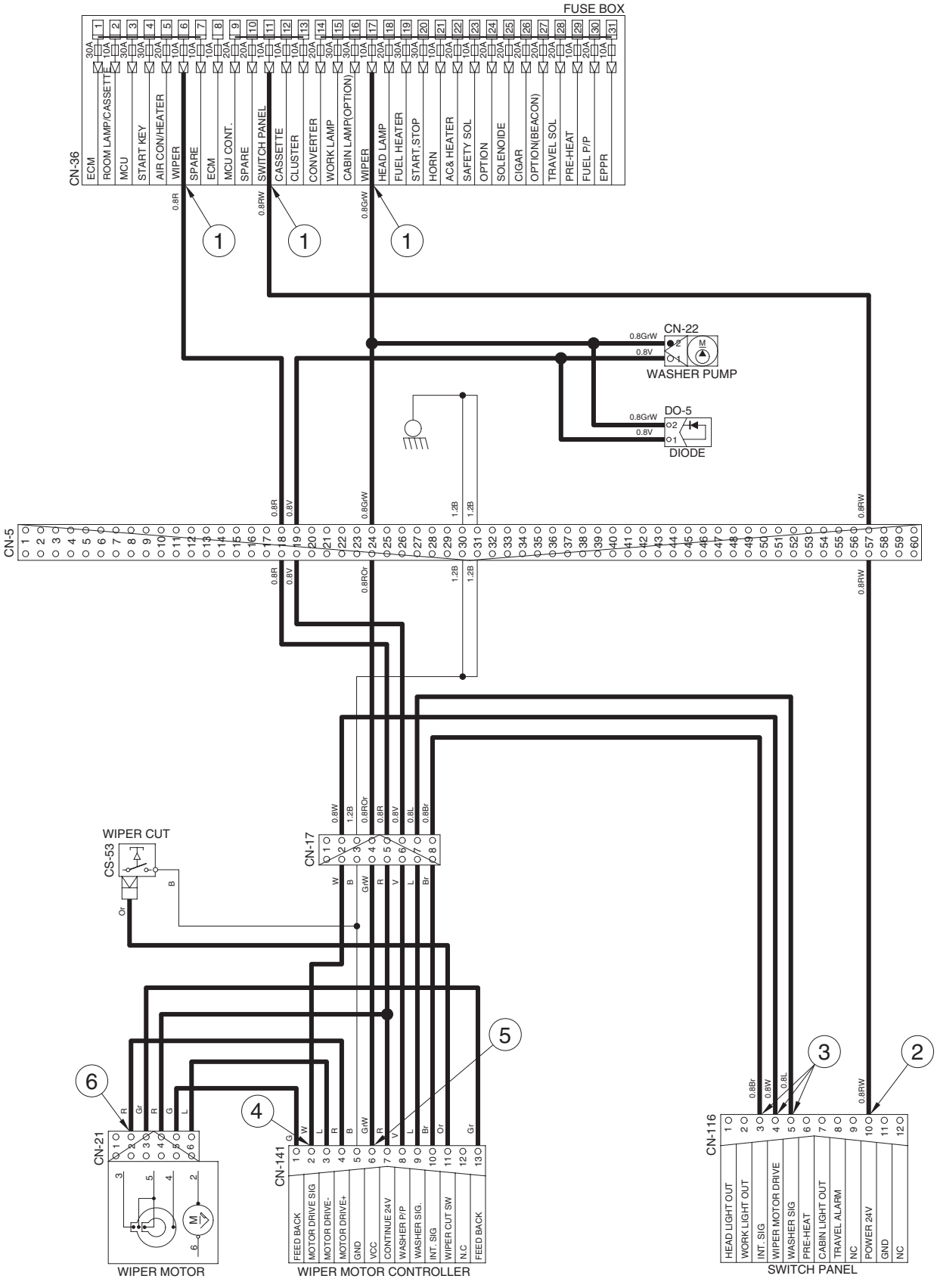
Switch OFF [CN-116 (4)] → Wiper motor parking position by wiper motor controller

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (switch power input)	24V
		③ - GND (switch power output) ④ - GND (wiper power input)	0 ~ 5V
		⑤ - GND (wiper power output)	24V
		⑥ - GND (wiper motor)	0 or 24V

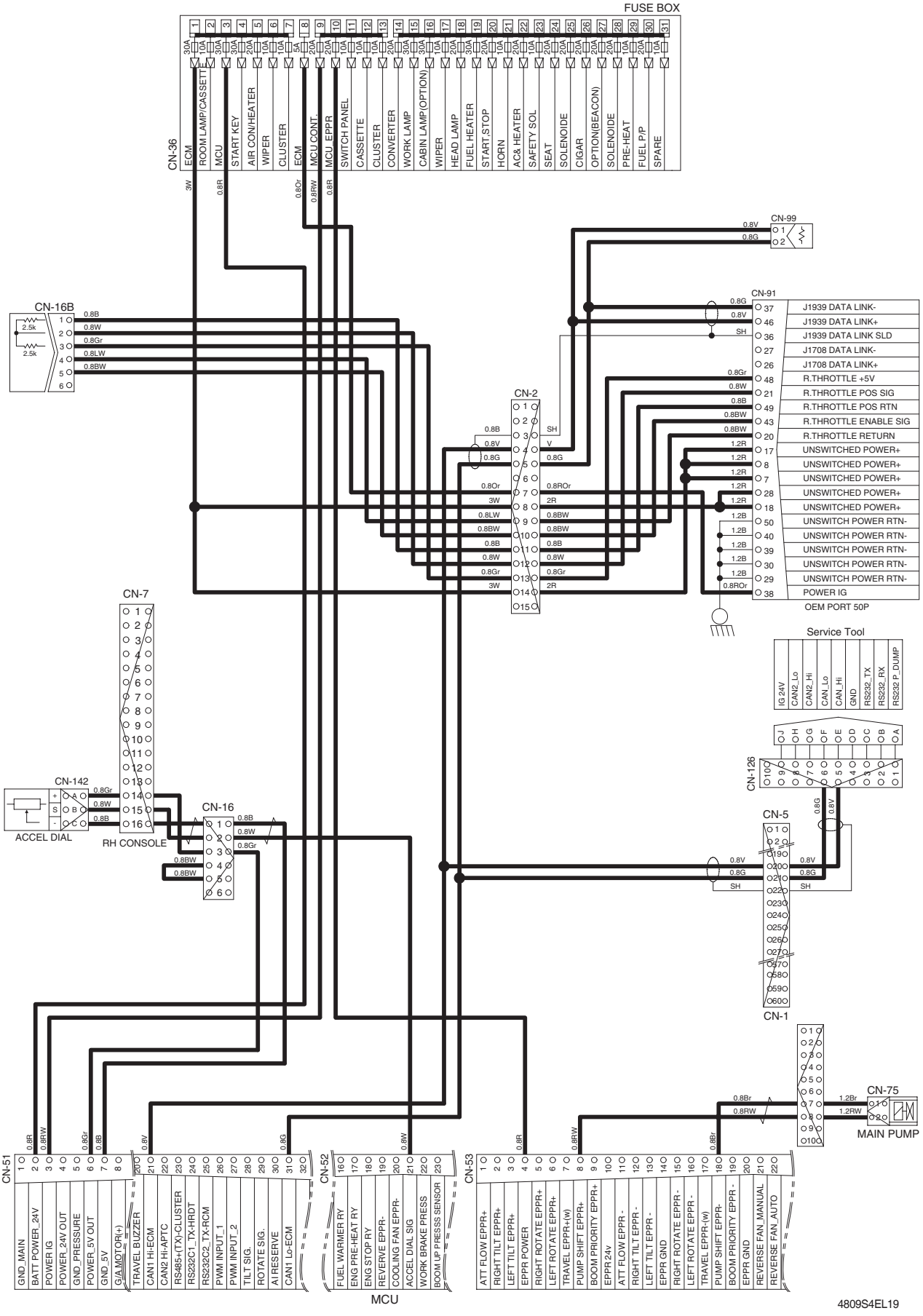
※ GND : Ground

WIPER AND WASHER CIRCUIT (CLUSTER TYPE 2)

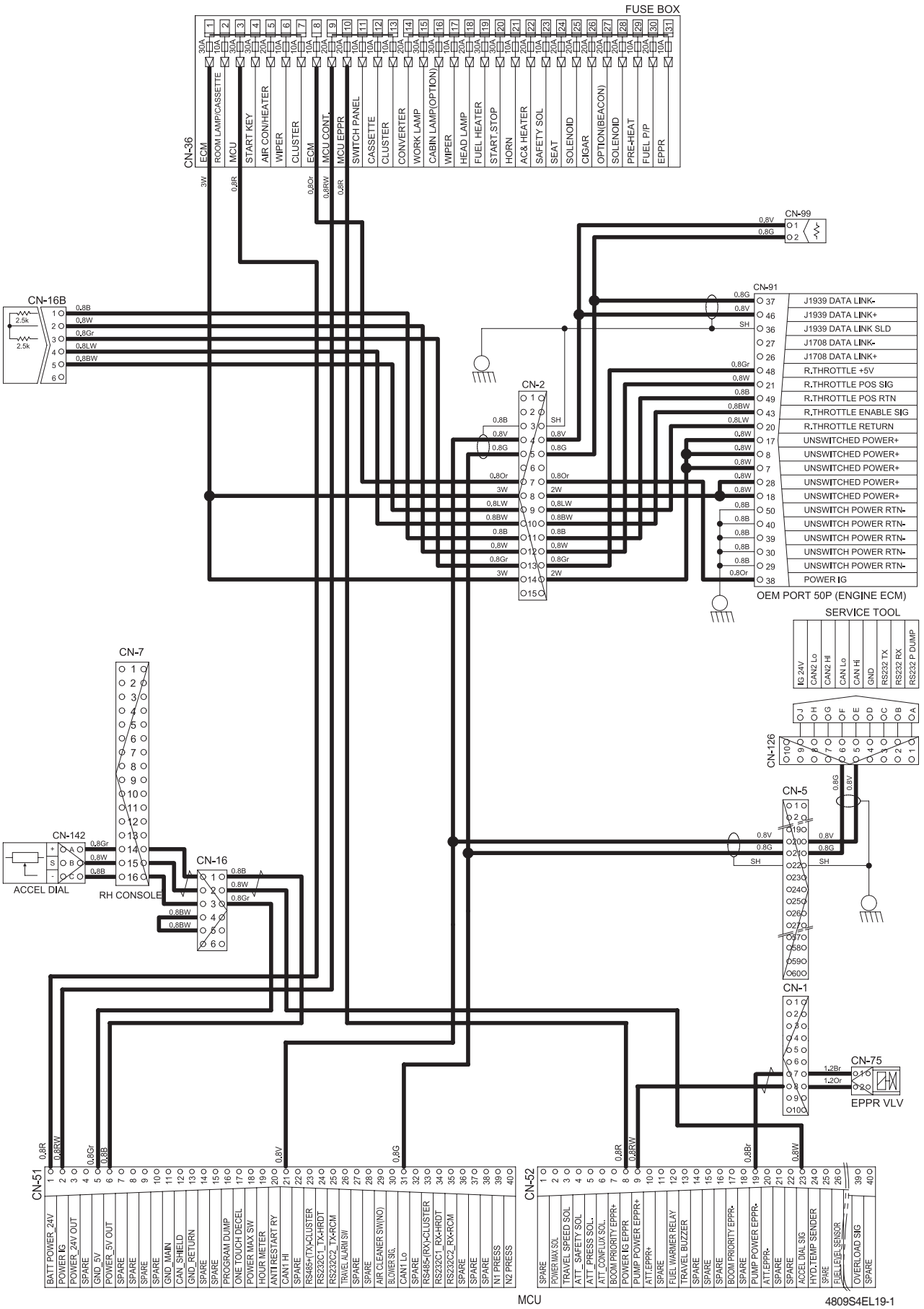


4809S4EL18

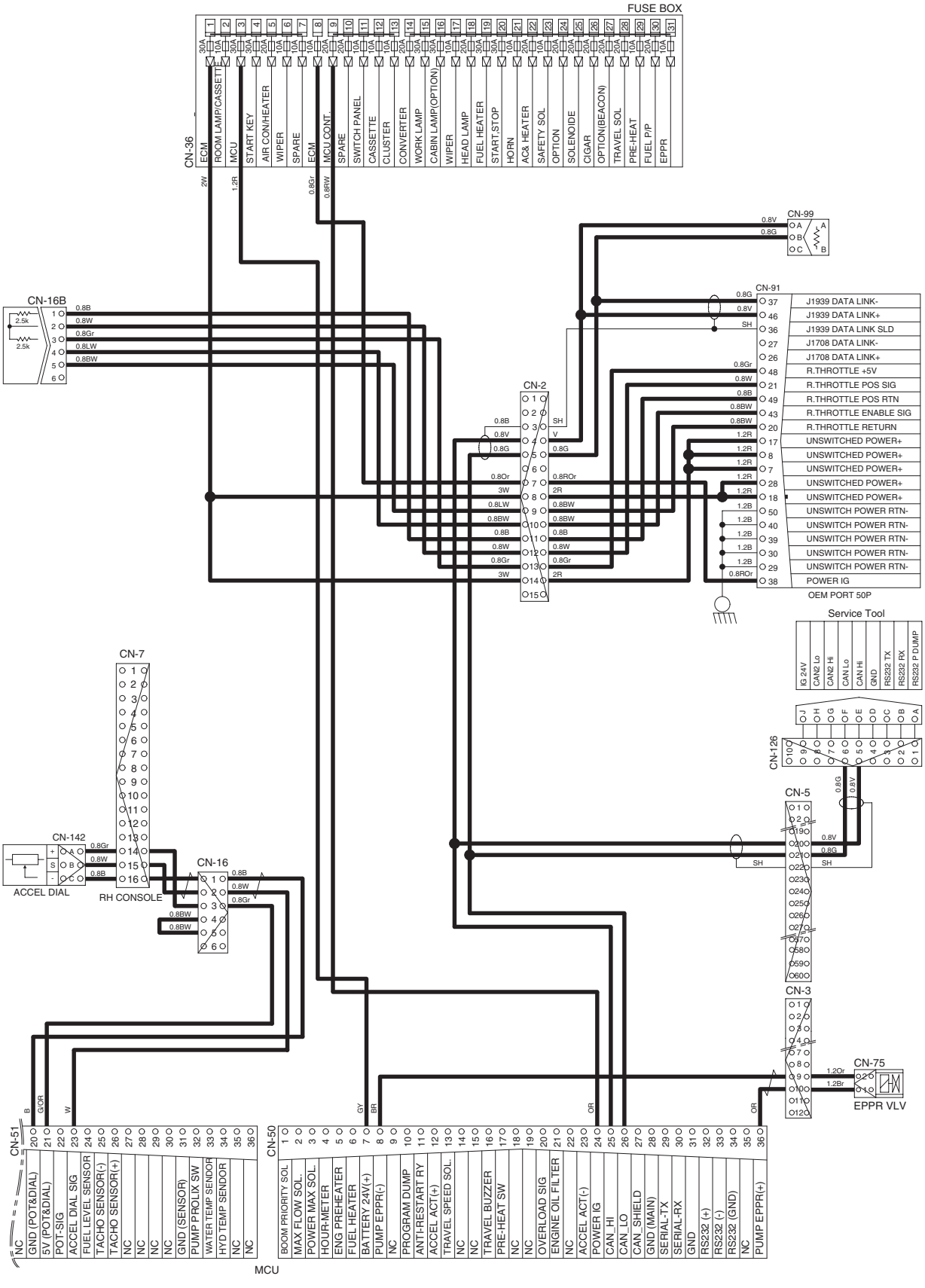
CONTROLLER CIRCUIT (CLUSTER TYPE 1) OLD VERSION



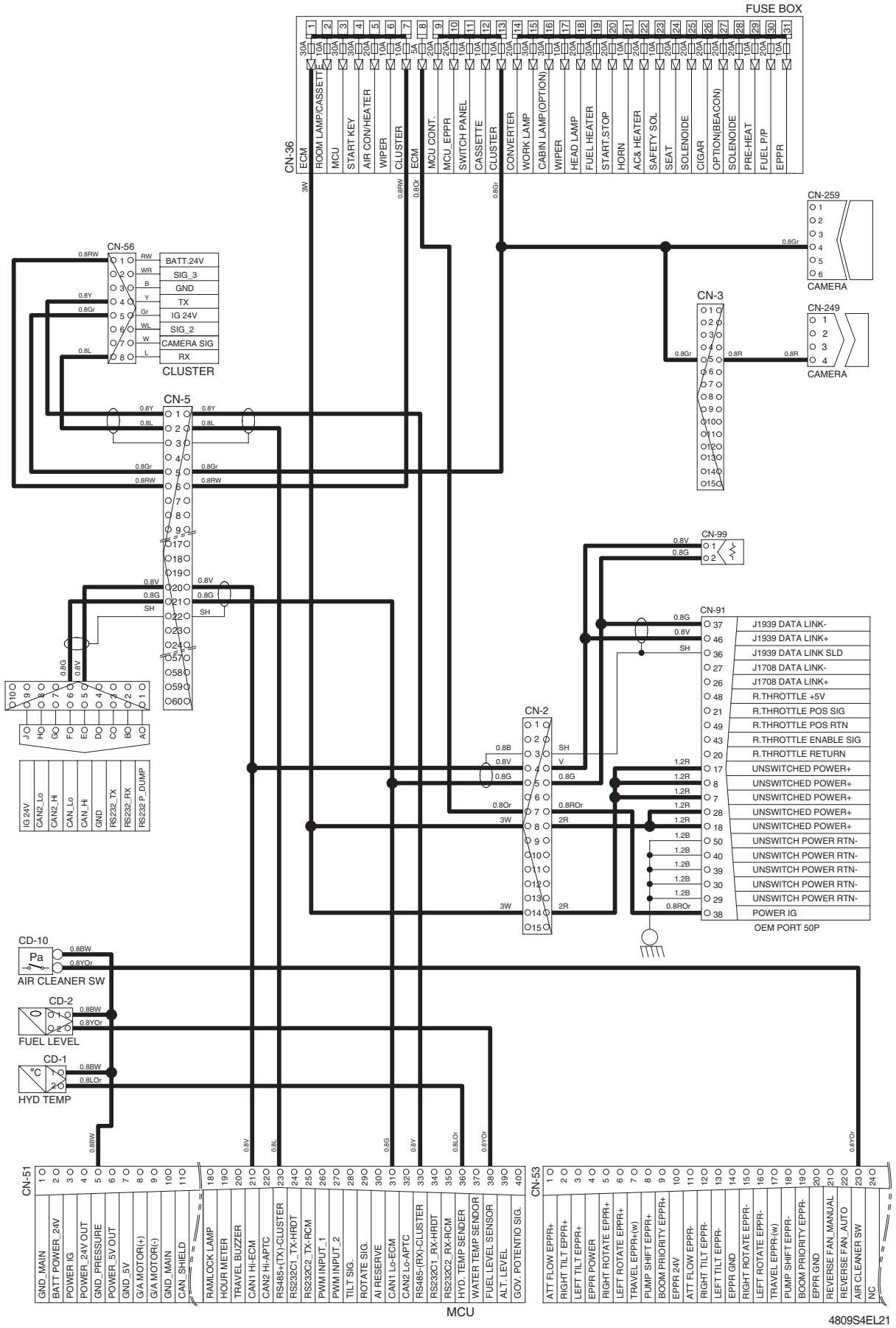
CONTROLLER CIRCUIT (CLUSTER TYPE 1) CURRENT VERSION

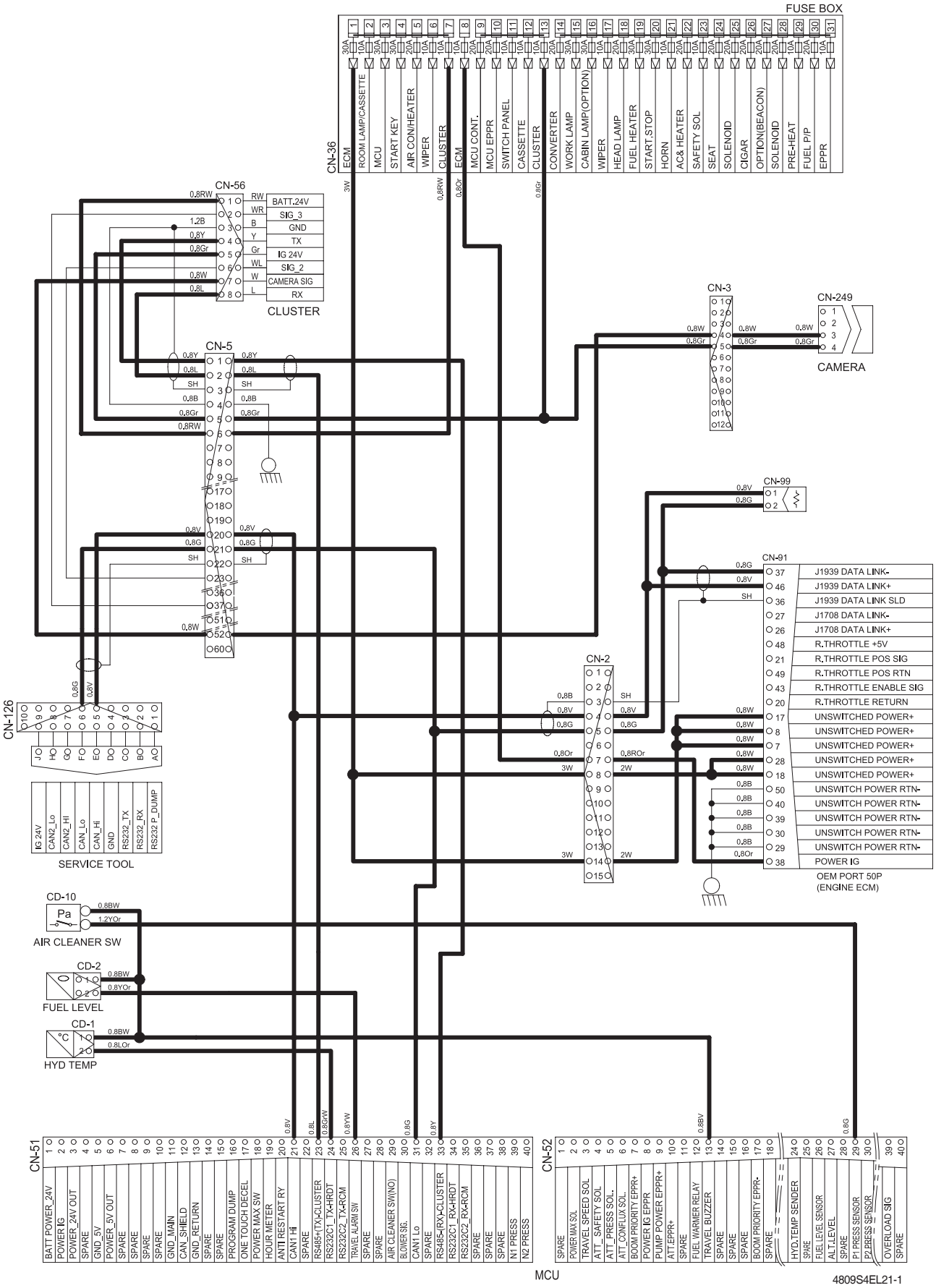


CONTROLLER CIRCUIT (CLUSTER TYPE 2)

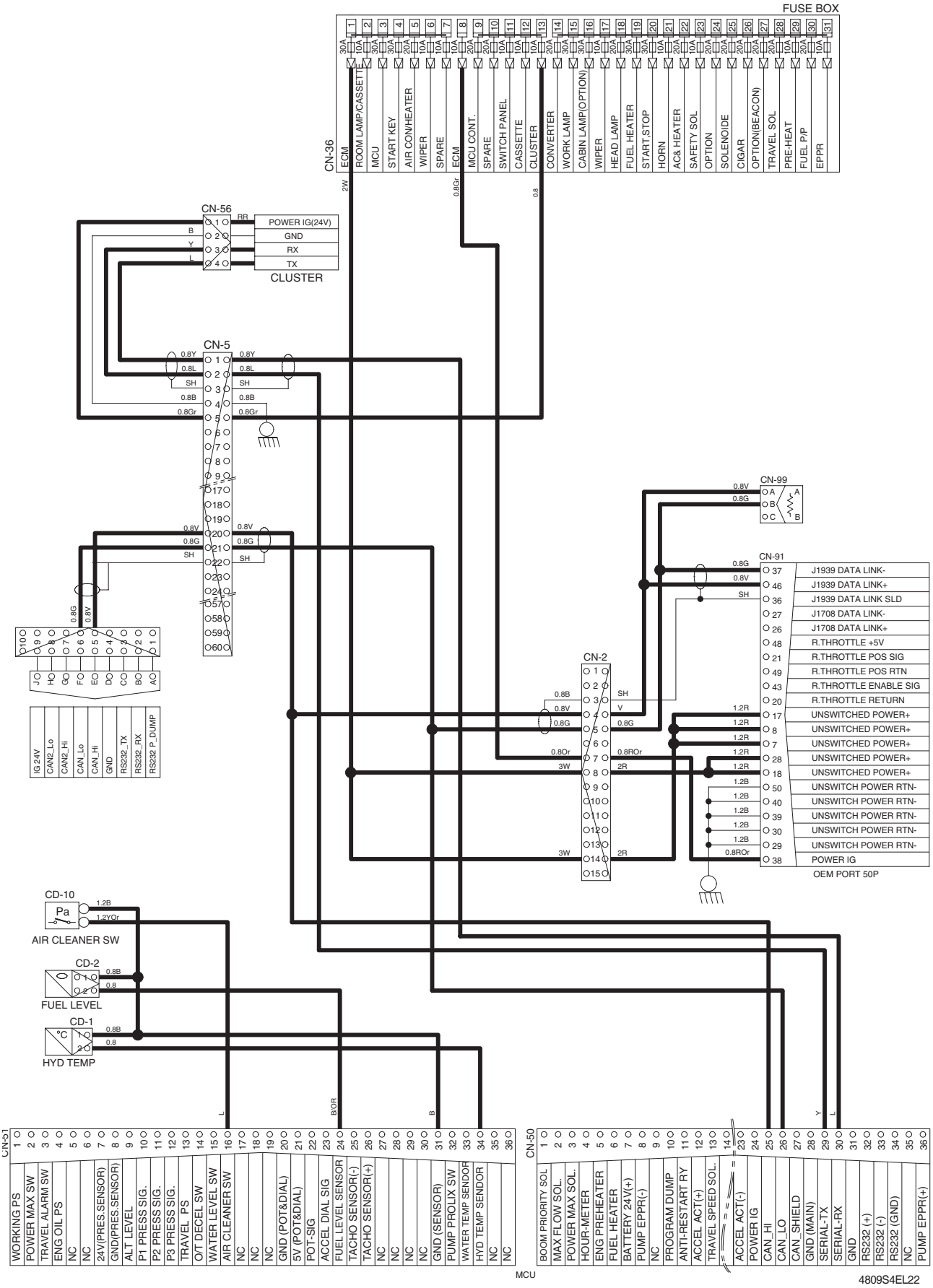


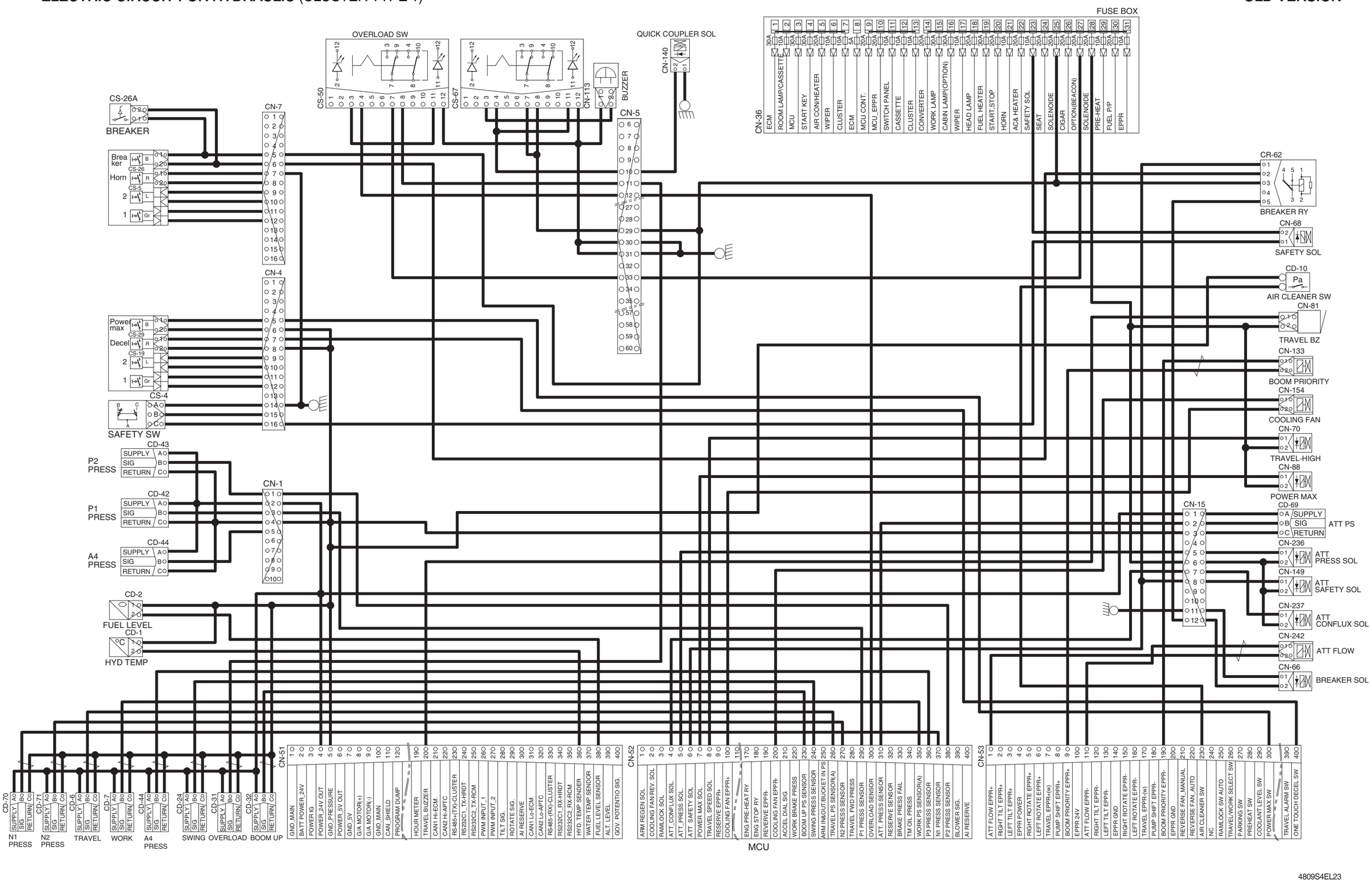
4809S4EL20


FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU_EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START,STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOIDE
CIGAR
OPTION(BEACON)
SOLENOIDE
PRE-HEAT
FUEL P/P
EPPR
CN-259
CAMERA
CN-249
CAMERA
CN-3
CN-56
BATT.24V
SIG_3
GND
TX
IG 24V
SIG_2
CAMERA SIG
RX
CLUSTER
CN-5
CN-99
CN-91
J1939 DATA LINK-
J1939 DATA LINK+
J1939 DATA LINK SLD
J1708 DATA LINK-
J1708 DATA LINK+
R.THROTTLE +5V
R.THROTTLE POS SIG
R.THROTTLE POS RTN
R.THROTTLE ENABLE SIG
R.THROTTLE RETURN
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
POWER IG
OEM PORT 50P
CN-2
CD-10
AIR CLEANER SW
CD-2
FUEL LEVEL
CD-1
HYD TEMP
CN-51
GND_MAIN
BATT POWER_24V
POWER IG
POWER_24V OUT
GND_PRESSURE
POWER_5V OUT
GND_5V
G/A MOTOR(+)
G/A MOTOR(-)
GND_MAIN
CAN_SHIELD
RAMLOCK LAMP
HOUR METER
TRAVEL BUZZER
CAN1 Hi-ECM
CAN2 Hi-APTC
RS485-(TX)-CLUSTER
RS232C1_TX-HRDT
RS232C2_TX-RCM
PWM INPUT_1
PWM INPUT_2
TILT SIG.
ROTATE SIG.
AI RESERVE
CAN1 Lo-ECM
CAN2 Lo-APTC
RS485-(RX)-CLUSTER
RS232C1_RX-HRDT
RS232C2_RX-RCM
HYD. TEMP SENDER
WATER TEMP SENDOR
FUEL LEVEL SENSOR
ALT. LEVEL
GOV. POTENTIO SIG.
MCU
CN-53
ATT FLOW EPPR+
RIGHT TILT EPPR+
LEFT TILT EPPR+
EPPR POWER
RIGHT ROTATE EPPR+
LEFT ROTATE EPPR+
TRAVEL EPPR+(w)
PUMP SHIFT EPPR+
BOOM PRIORITY EPPR+
EPPR 24V
ATT FLOW EPPR-
RIGHT TILT EPPR-
LEFT TILT EPPR-
EPPR GND
RIGHT ROTATE EPPR-
LEFT ROTATE EPPR-
TRAVEL EPPR-(w)
PUMP SHIFT EPPR-
BOOM PRIORITY EPPR-
EPPR GND
REVERSE FAN_MANUAL
REVERSE FAN_AUTO
AIR CLEANER SW
NC
4809S4EL21


FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START.STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOID
CIGAR
OPTION(BEACON)
SOLENOID
PRE-HEAT
FUEL P/P
EPPR
CN-56
BATT.24V
SIG_3
GND
TX
IG 24V
SIG_2
CAMERA SIG
RX
CLUSTER
CN-3
CN-249
CAMERA
CN-5
CN-99
CN-91
J1939 DATA LINK-
J1939 DATA LINK+
J1939 DATA LINK SLD
J1708 DATA LINK-
J1708 DATA LINK+
R.THROTTLE +5V
R.THROTTLE POS SIG
R.THROTTLE POS RTN
R.THROTTLE ENABLE SIG
R.THROTTLE RETURN
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCHED POWER+
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
UNSWITCH POWER RTN-
POWER IG
OEM PORT 50P
(ENGINE ECM)
CN-126
IG 24V
CAN2_Lo
CAN2_HI
CAN_Lo
CAN_Hi
GND
RS232_TX
RS232_RX
RS232 P_DUMP
SERVICE TOOL
CN-2
CD-10
AIR CLEANER SW
CD-2
FUEL LEVEL
CD-1
HYD TEMP
CN-51
BATT POWER_24V
POWER IG
POWER_24V OUT
SPARE
GND_5V
POWER_5V OUT
SPARE
SPARE
SPARE
SPARE
GND_MAIN
CAN_SHIELD
GND_RETURN
SPARE
SPARE
PROGRAM DUMP
ONE TOUCH DECEL
POWER MAX SW
HOUR METER
ANTI RESTART RY
CAN1 Hi
SPARE
RS485+(TX)-CLUSTER
RS232C1_TX-HRDT
RS232C2_TX-RCM
TRAVEL ALARM SW
SPARE
SPARE
AIR CLEANER SW(NO)
BLOWER SIG.
CAN1 Lo
SPARE
RS485-(RX)-CLUSTER
RS232C1_RX-HRDT
RS232C2_RX-RCM
SPARE
SPARE
SPARE
N1 PRESS
N2 PRESS
CN-52
SPARE
POWER MAX SOL
TRAVEL SPEED SOL
ATT_ SAFETY SOL
ATT_ PRESS SOL.
ATT_CONFLUX SOL
BOOM PRIORITY EPPR+
POWER IG EPPR
PUMP POWER EPPR+
ATT.EPPR+
SPARE
FUEL WARMER RELAY
TRAVEL BUZZER
SPARE
SPARE
SPARE
BOOM PRIORITY EPPR-
SPARE
HYD.TEMP SENDER
SPARE
FUEL LEVEL SENSOR
ALT.LEVEL
SPARE
P1 PRESS SENSOR
P2 PRESS SENSOR
OVERLOAD SIG
SPARE
MCU
4809S4EL21-1

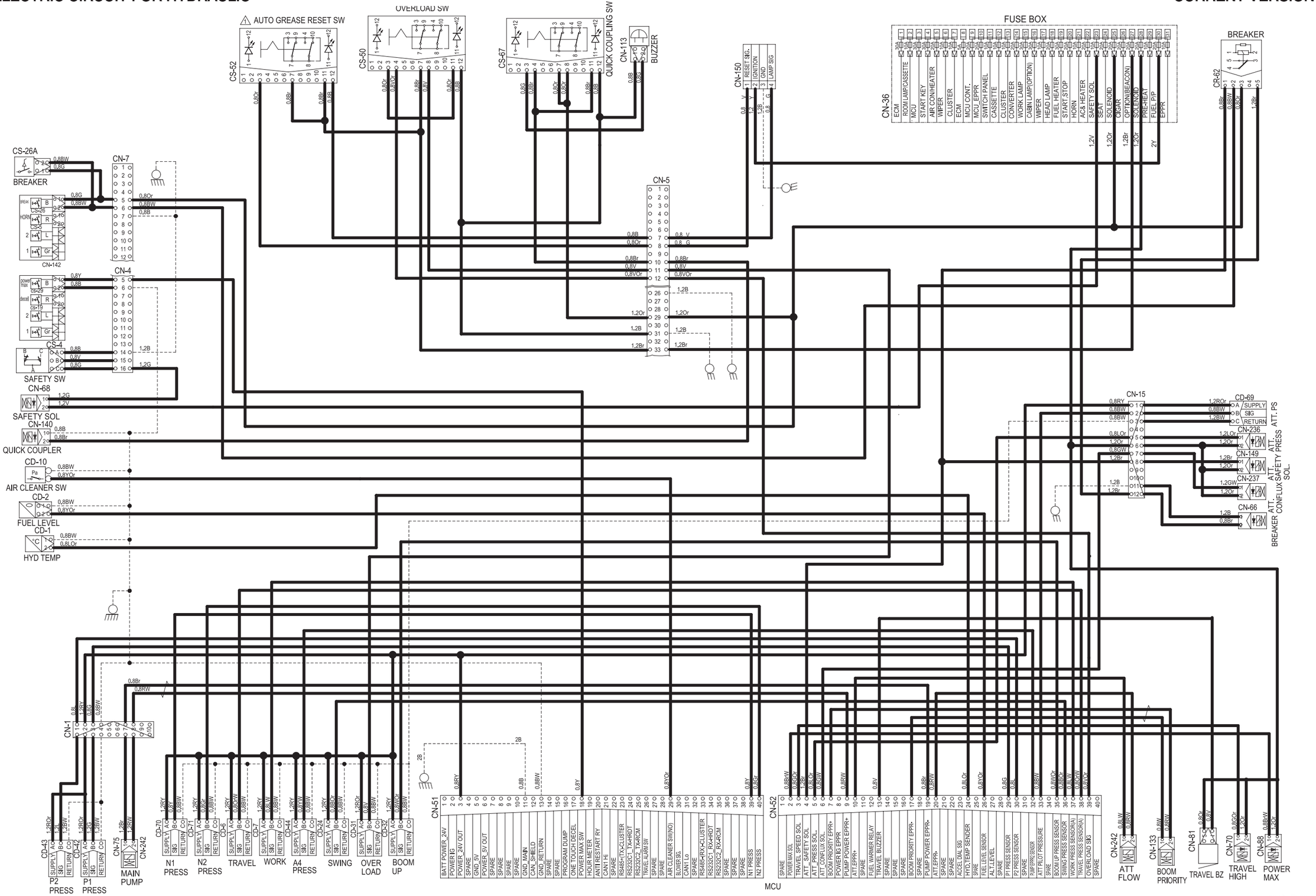
MONITORING CIRCUIT (CLUSTER TYPE 2)




FUSE BOX
CN-36
ECM
ROOM LAMP/CASSETTE
MCU
START KEY
AIR CON/HEATER
WIPER
CLUSTER
ECM
MCU CONT.
MCU_EPPR
SWITCH PANEL
CASSETTE
CLUSTER
CONVERTER
WORK LAMP
CABIN LAMP(OPTION)
WIPER
HEAD LAMP
FUEL HEATER
START STOP
HORN
AC& HEATER
SAFETY SOL
SEAT
SOLENOIDE
CIGAR
OPTION(BEACON)
SOLENOIDE
PRE-HEAT
FUEL P/P
EPPR
OVERLOAD SW
CS-50
CS-67
CN-113
BUZZER
QUICK COUPLER SOL
CN-140
CS-26A
BREAKER
CN-7
CN-5
CN-4
CS-26
CS-5
CS-29
CS-19
CS-6
CS-4
SAFETY SW
CD-43
P2 PRESS
CD-42
P1 PRESS
CD-44
A4 PRESS
CN-1
CD-2
FUEL LEVEL
CD-1
HYD TEMP
CR-62
BREAKER RY
CN-68
SAFETY SOL
CD-10
AIR CLEANER SW
CN-81
TRAVEL BZ
CN-133
BOOM PRIORITY
CN-154
COOLING FAN
CN-70
TRAVEL-HIGH
CN-88
POWER MAX
CN-15
CD-69
ATT PS
CN-236
ATT PRESS SOL
CN-149
ATT SAFETY SOL
CN-237
ATT CONFLUX SOL
CN-242
ATT FLOW
CN-66
BREAKER SOL
CD-70
N1 PRESS
CD-71
N2 PRESS
CD-6
TRAVEL
CD-7
WORK
CD-44
A4 PRESS
CD-24
SWING
CD-31
OVERLOAD
CD-32
BOOM UP
CN-51
CN-52
CN-53
MCU
4809S4EL23

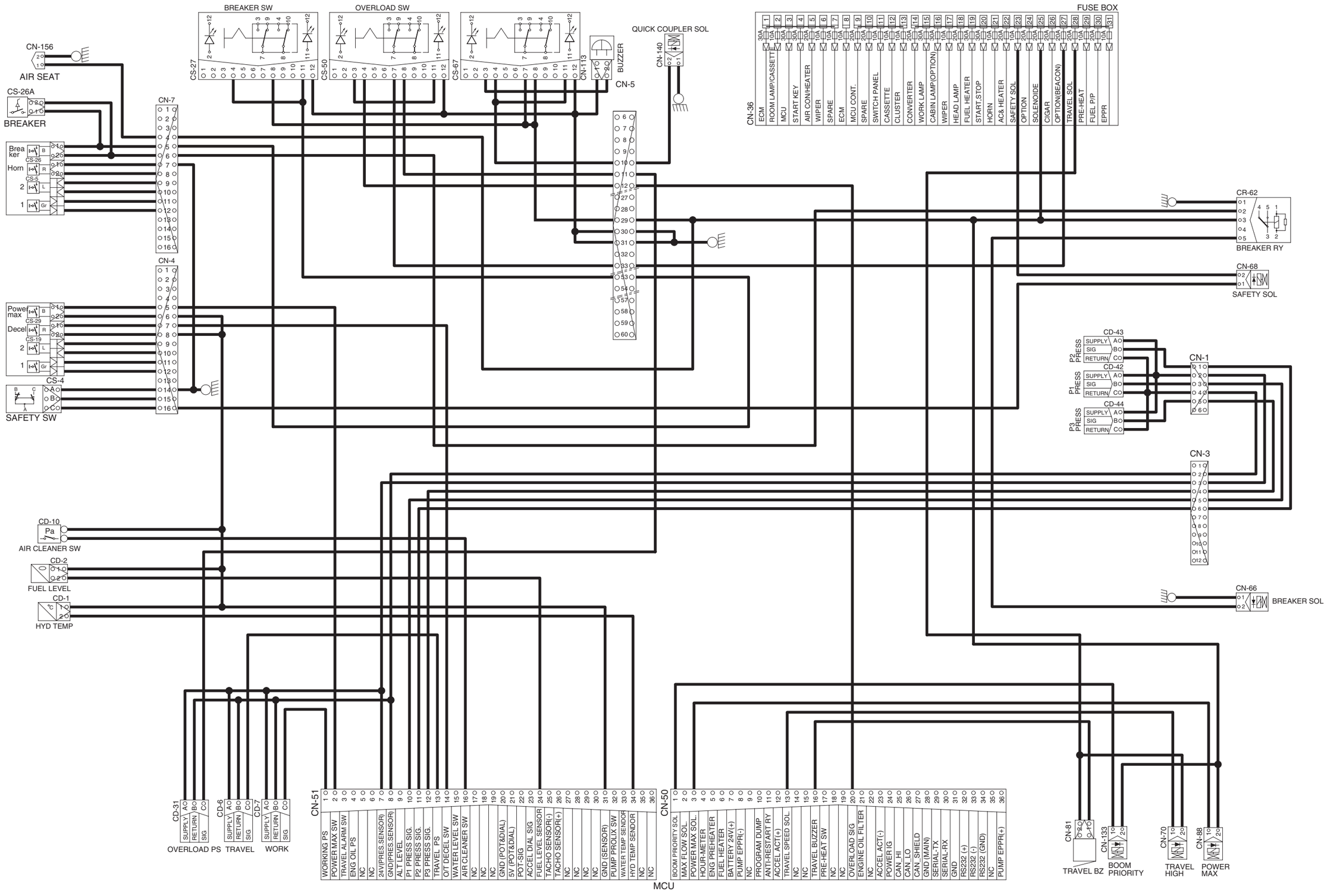
ELECTRIC CIRCUIT FOR HYDRAULIC

CURRENT VERSION



4809S4EL23-1

ELECTRIC CIRCUIT FOR HYDRAULIC (CLUSTER TYPE 2)



4809S4EL24