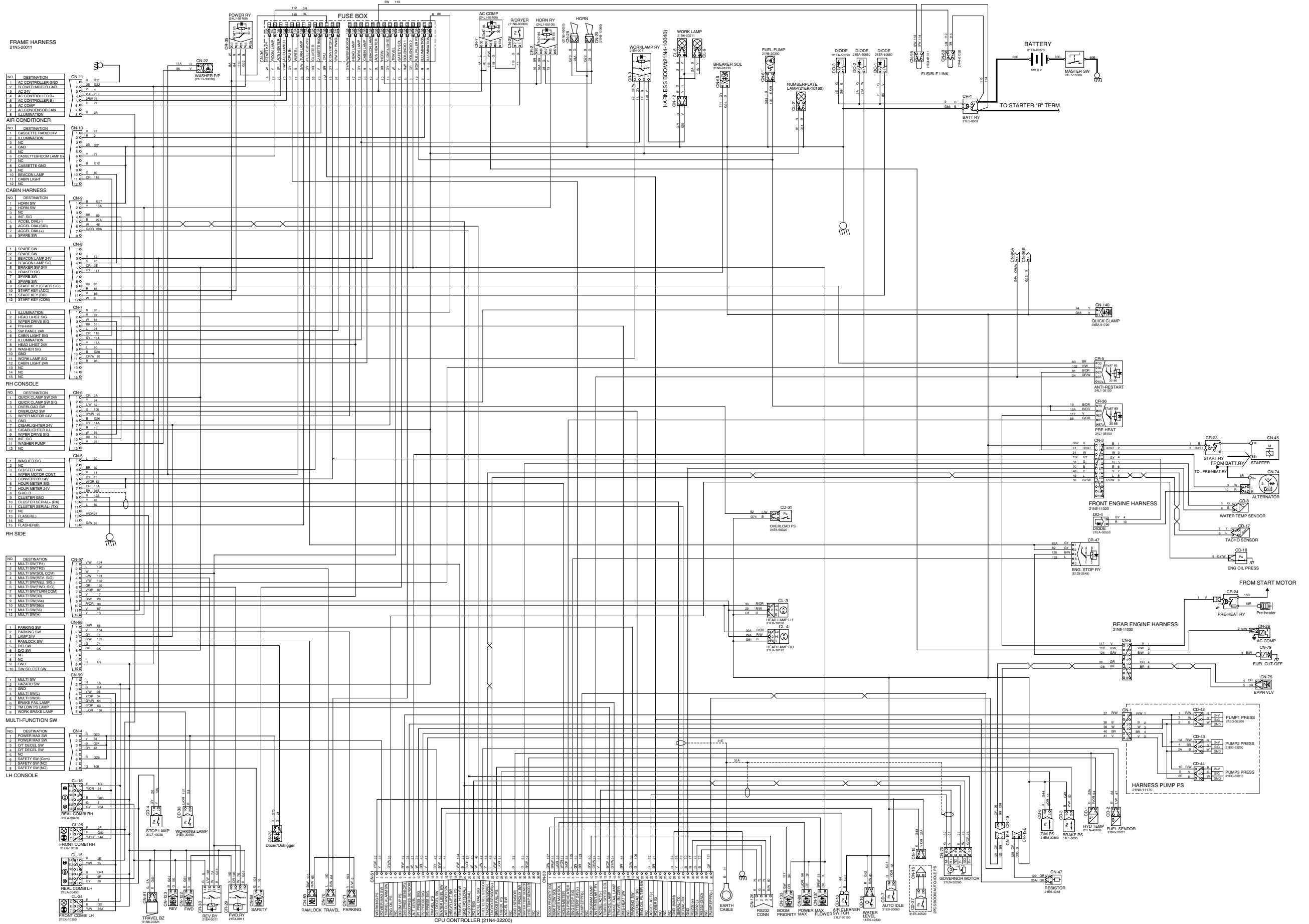
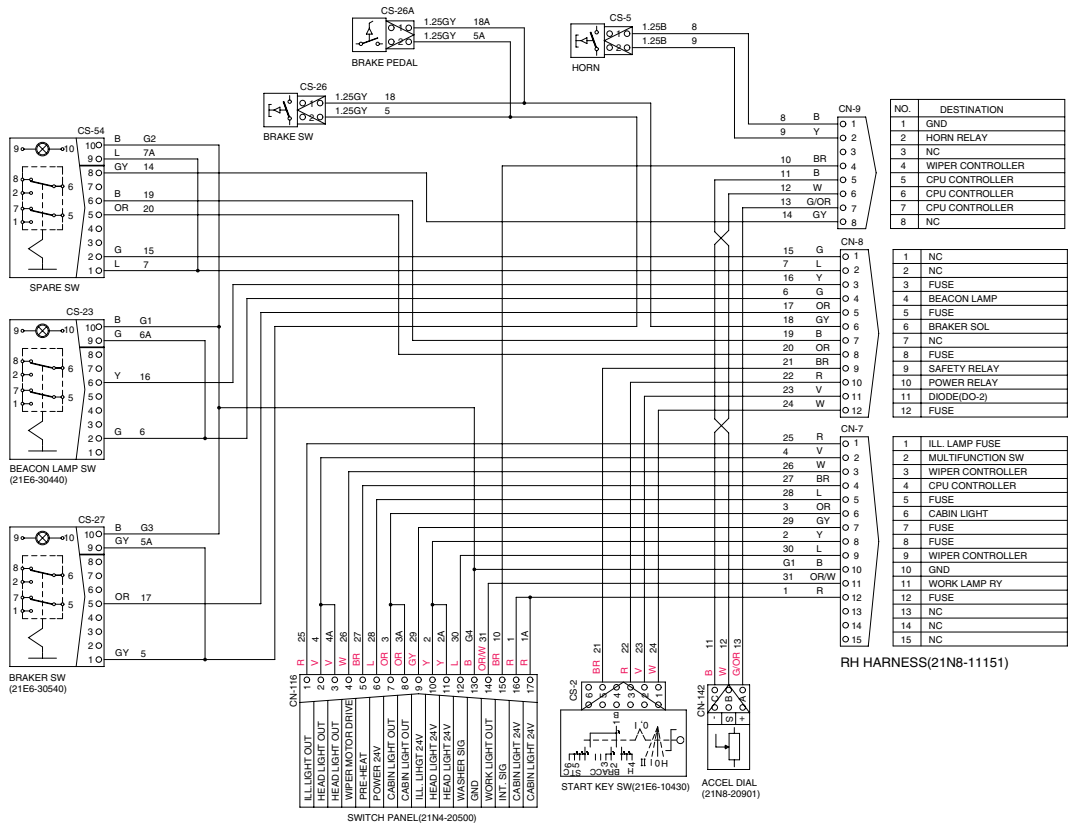
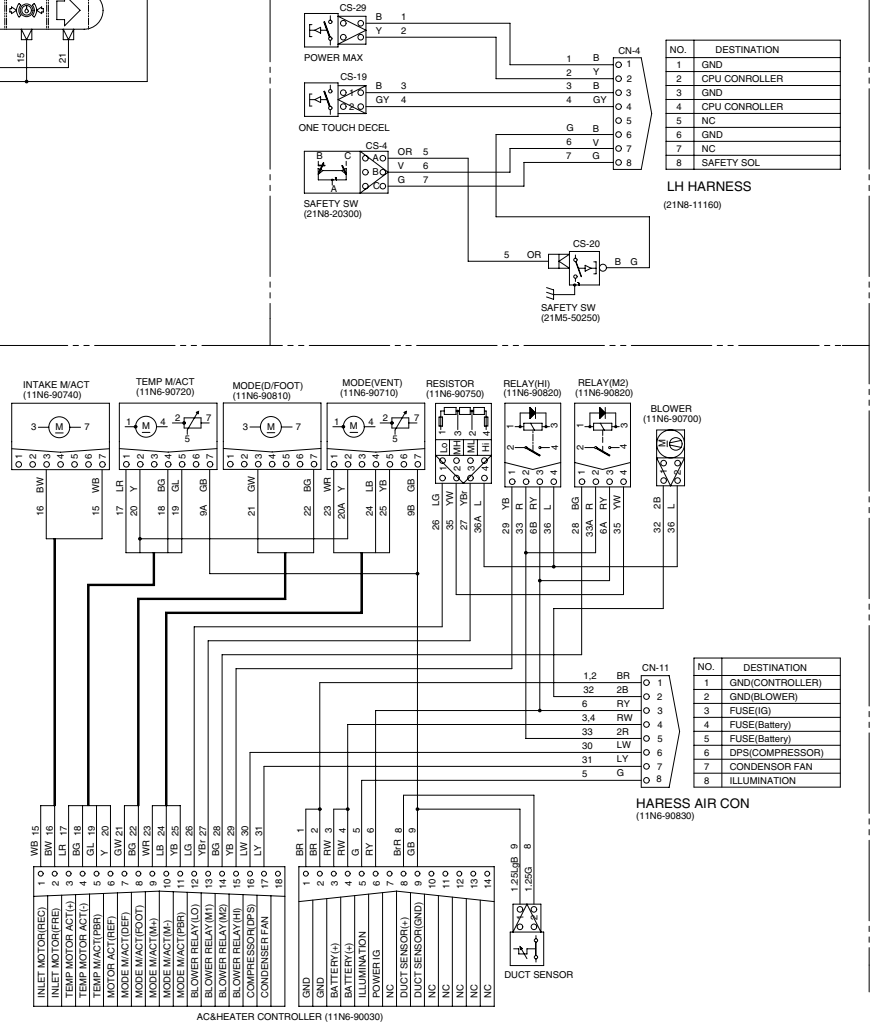
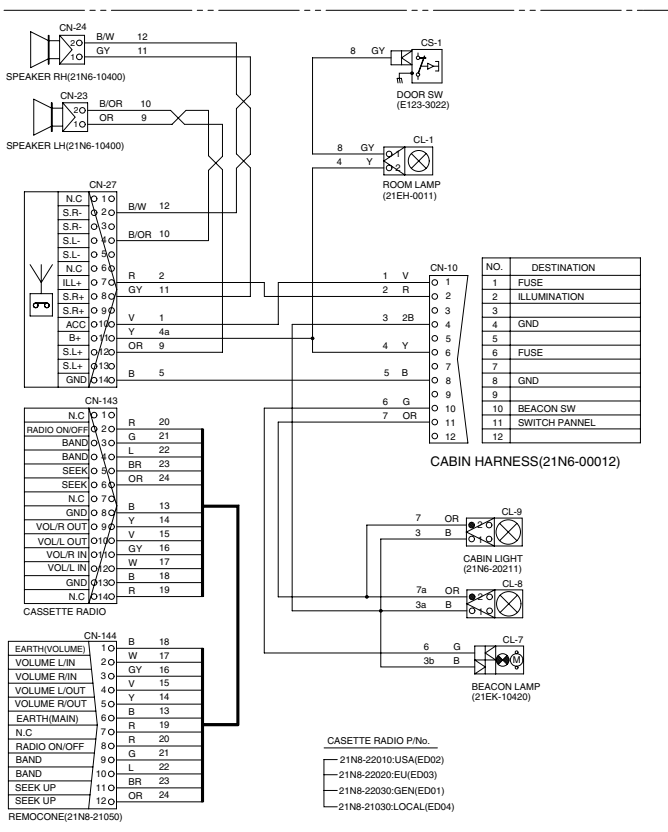
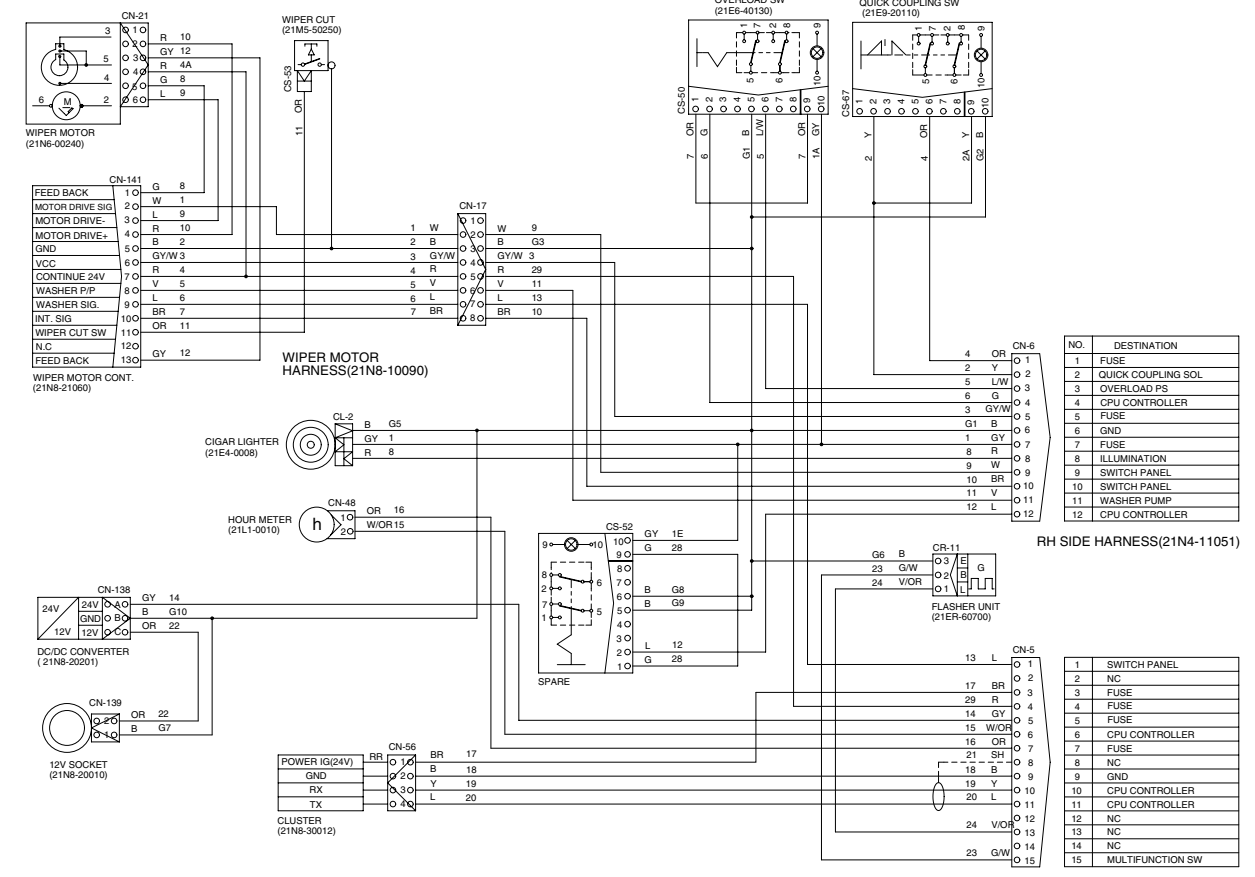
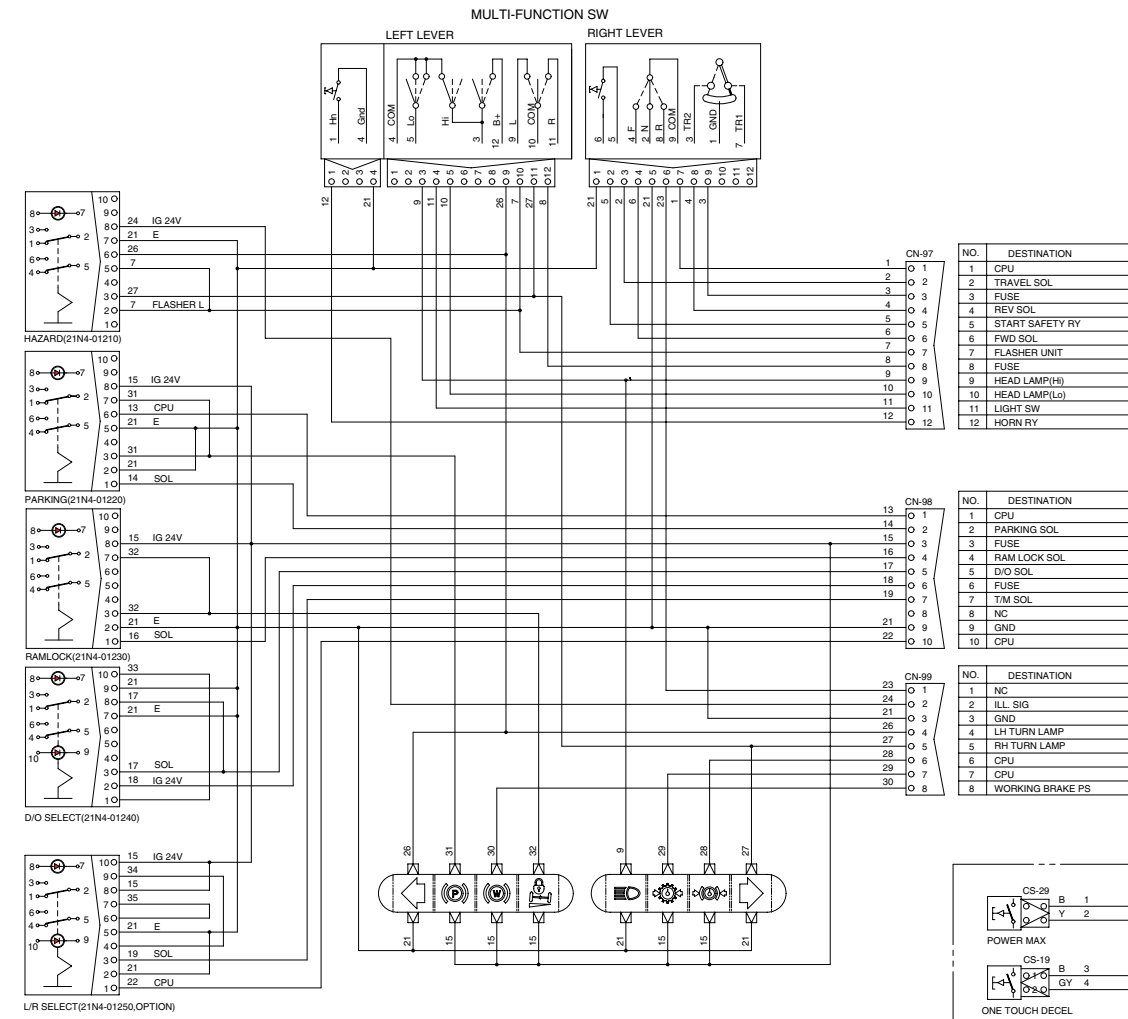


GROUP 2 ELECTRICAL CIRCUIT(up to #468)



ELECTRICAL CIRCUIT(up to #468)



ELECTRICAL CIRCUIT(#469 and up)

FRAME HARNESS

NO.	DESTINATION	CN-11
1	AC CONTROLLER GND	01 G 011
2	WASHER MOTOR GND	02 B 022
3	AC 24V	03 B 015
4	AC CONTROLLER B+	04 B 016
5	AC CONTROLLER B-	05 B 017
6	AC COMP	06 B 018
7	AC CONDENSER FAN	07 B 019
8	ILLUMINATION	08 R 2A

NO.	DESTINATION	CN-10
1	CASSETTE RADIO 24V	01 Y 78
2	ILLUMINATION	02 A 2
3	NC	03
4	GND	04 2B G21
5	NC	05
6	CASSETTE ROOM LAMP B+	06 Y 79
7	NC	07
8	CASSETTE GND	08 B G12
9	NC	09
10	BEACON LAMP	10 G 80
11	CABIN LIGHT	11 Op 116
12	NC	12

NO.	DESTINATION	CN-9
1	HORN SW	01 G 027
2	HORN SW	02 Y 124
3	NC	03
4	NC	04
5	ACCEL DALL(S)	05 B 27A
6	ACCEL DALL(S)	06 Op 46
7	ACCEL DALL(S)	07 Op 28A
8	SPARE SW	08

NO.	DESTINATION	CN-8
1	SPARE SW	01
2	SPARE SW	02
3	BEACON LAMP 24V	03 Y 12
4	BEACON LAMP SIG	04 G 80
5	BRAKER SW 24V	05 Op 111
6	BRAKER SW	06
7	SPARE SW	07
8	SPARE SW	08
9	START KEY (START SIG)	09 Br 83
10	START KEY (ACC)	10 Br 84
11	START KEY (GND)	11 V 85
12	START KEY (COM)	12 W 8

NO.	DESTINATION	CN-7
1	ILLUMINATION	01 R 86
2	HEAD LIGHT SIG	02 Op 87
3	WASHER MOTOR SIG	03 Br 88
4	Pre-Heat	04 Br 85
5	SW PANEL 24V	05 B 01
6	CABIN LIGHT SIG	06 Op 116
7	ILLUMINATION	07 Y 17A
8	HEAD LIGHT 24V	08 Y 17A
9	WASHER SIG	09 G 80
10	GND	10 Op 92
11	WORK LAMP SIG	11 Op 92
12	CABIN LIGHT 24V	12 Op 93
13	NC	13
14	NC	14
15	NC	15

NO.	DESTINATION	CN-6
1	DOCK COUPLING SW 24V	01 Op 84
2	DOCK COUPLING SW SIG	02 Op 84
3	OVERLOAD SW	03 LW 52
4	OVERLOAD SW	04 LW 106
5	WASHER MOTOR 24V	05 Op 95
6	TRAVEL MODE	06 Op 144
7	CHARLIGHTER ILL	07 Op 88
8	WASHER MOTOR SIG	08 Op 89
9	WASHER MOTOR SIG	09 Op 89
10	TRAVEL MODE	10 Op 141
11	TRAVEL MODE	11 Op 141

NO.	DESTINATION	CN-5
1	WASHER SIG	01 L 90
2	WORK MODE	02 S 140
3	CLUSTER 24V	03 R 11
4	WASHER MOTOR CONT.	04 R 11
5	CONVERTOR 24V	05 Op 97
6	HOUR METER SIG	06 Op 15A
7	HOUR METER 24V	07 Op 15A
8	ENGINE	08 Op 15E
9	CLUSTER GND	09 B 122
10	CLUSTER SERIAL (BRT)	10 Op 69
11	CLUSTER SERIAL (RX)	11 Op 69
12	W/ REFLECT SW	12 Op 139
13	FLASHERS	13 Op 142
14	GND	14 Op 98
15	FLASHERS	15 Op 98

NO.	DESTINATION	CN-4
1	MULTI SWITCH	01 LW 124
2	MULTI SWITCH	02 Op 100
3	MULTI SWITCH (COM)	03 Op 100
4	MULTI SWITCH (SIG)	04 LW 101
5	MULTI SWITCH (SIG)	05 Op 102
6	MULTI SWITCH (SIG)	06 Op 103
7	MULTI SWITCH (COM)	07 Op 104
8	MULTI SWITCH	08 Op 105
9	MULTI SWITCH	09 RW 130
10	MULTI SWITCH	10 Op 131
11	MULTI SWITCH	11 Op 87
12	MULTI SWITCH	12 Op 13

NO.	DESTINATION	CN-3
1	PARKING SW	01 Op 66
2	PARKING SW	02 Op 14
3	LAMP 24V	03 RW 105
4	RAM LOCK SW	04 Op 14
5	DO SW	05 Op 3K
6	DO SW	06
7	NC	07
8	NC	08 B 05
9	GND	09
10	TRW SELECT SW	10

NO.	DESTINATION	CN-2
1	MULTI SW	01 R 1A
2	HAZARD SW	02 R 1A
3	GND	03 Op 34
4	MULTI SW	04 Op 34
5	MULTI SW	05 Op 34
6	BRAKE FALL LAMP	06 Op 64
7	TR LOW PS LAMP	07 BOP 63
8	WORK BRAKE LAMP	08 Op 136

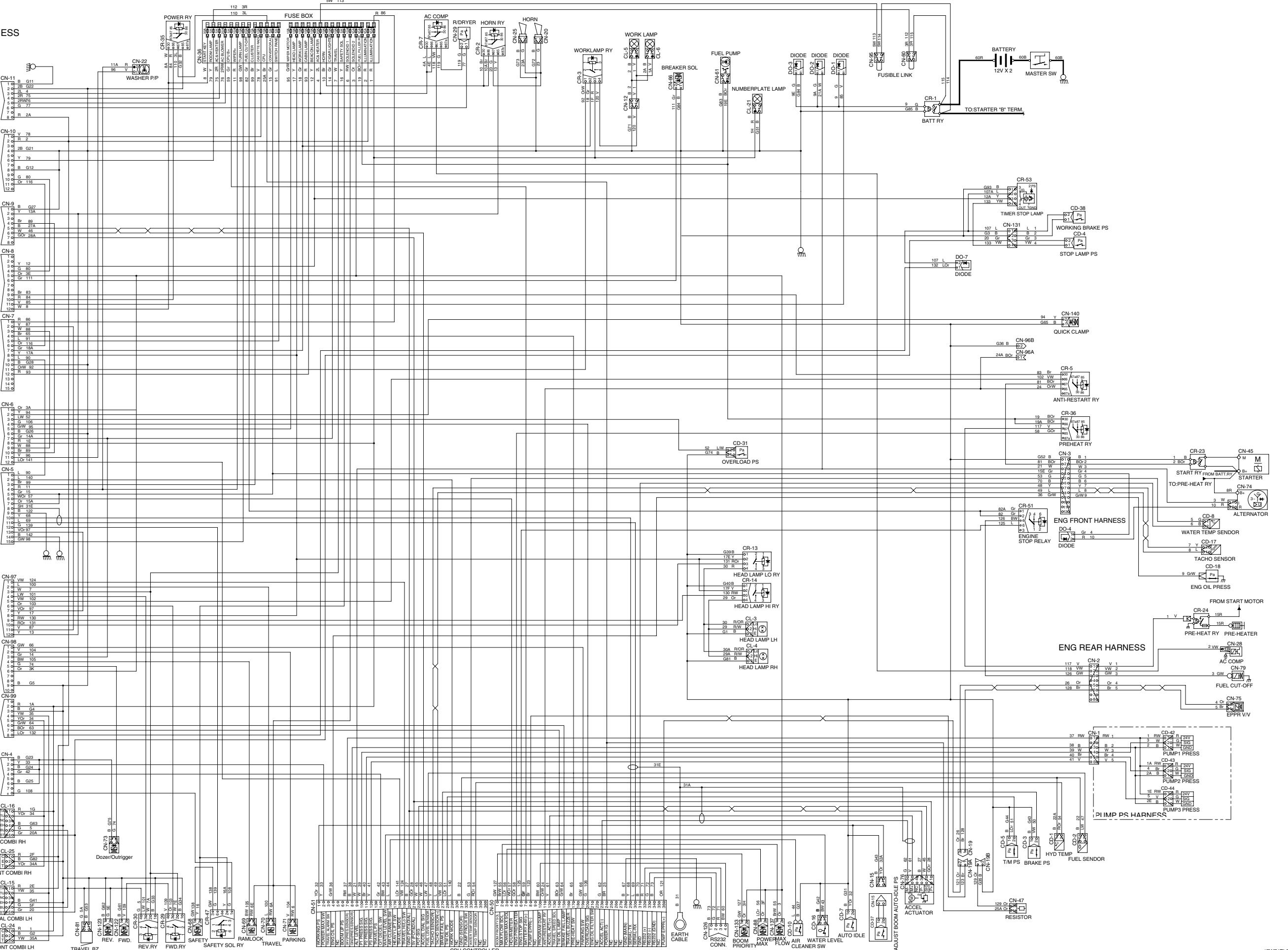
NO.	DESTINATION	CN-1
1	POWER MAX SW	01 B G23
2	POWER MAX SW	02 Op 33
3	DI DIESEL SW	03 Op 42
4	DI DIESEL SW	04 Op 42
5	NC	05
6	SAFETY SW (COM)	06 B G25
7	SAFETY SW (SIG)	07 G 108
8	SAFETY SW (NO)	08

NO.	DESTINATION	CL-16
1	POWER MAX SW	01 Op 10
2	POWER MAX SW	02 Op 34
3	DI DIESEL SW	03 Op 42
4	DI DIESEL SW	04 Op 42
5	NC	05
6	SAFETY SW (COM)	06 B G25
7	SAFETY SW (SIG)	07 G 108
8	SAFETY SW (NO)	08

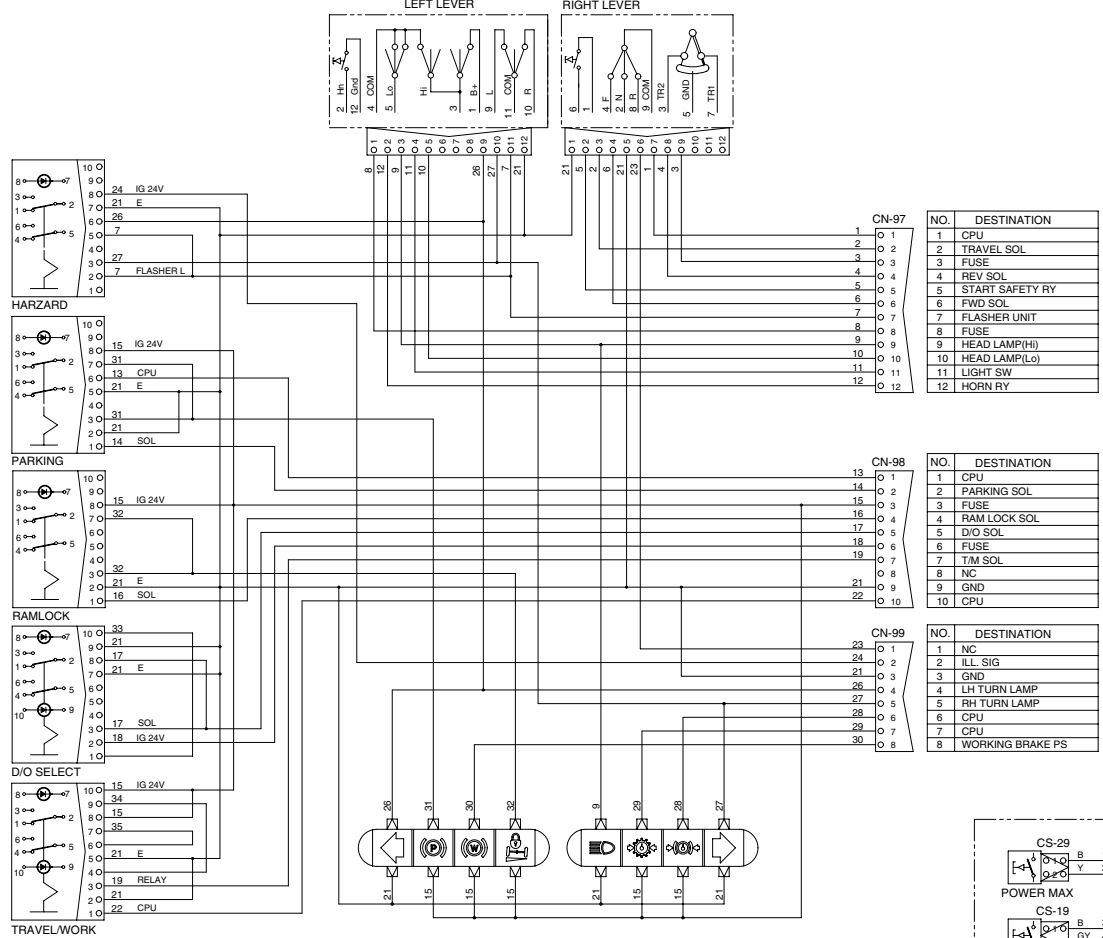
NO.	DESTINATION	CL-15
1	POWER MAX SW	01 Op 10
2	POWER MAX SW	02 Op 34
3	DI DIESEL SW	03 Op 42
4	DI DIESEL SW	04 Op 42
5	NC	05
6	SAFETY SW (COM)	06 B G25
7	SAFETY SW (SIG)	07 G 108
8	SAFETY SW (NO)	08

NO.	DESTINATION	CL-14
1	POWER MAX SW	01 Op 10
2	POWER MAX SW	02 Op 34
3	DI DIESEL SW	03 Op 42
4	DI DIESEL SW	04 Op 42
5	NC	05
6	SAFETY SW (COM)	06 B G25
7	SAFETY SW (SIG)	07 G 108
8	SAFETY SW (NO)	08

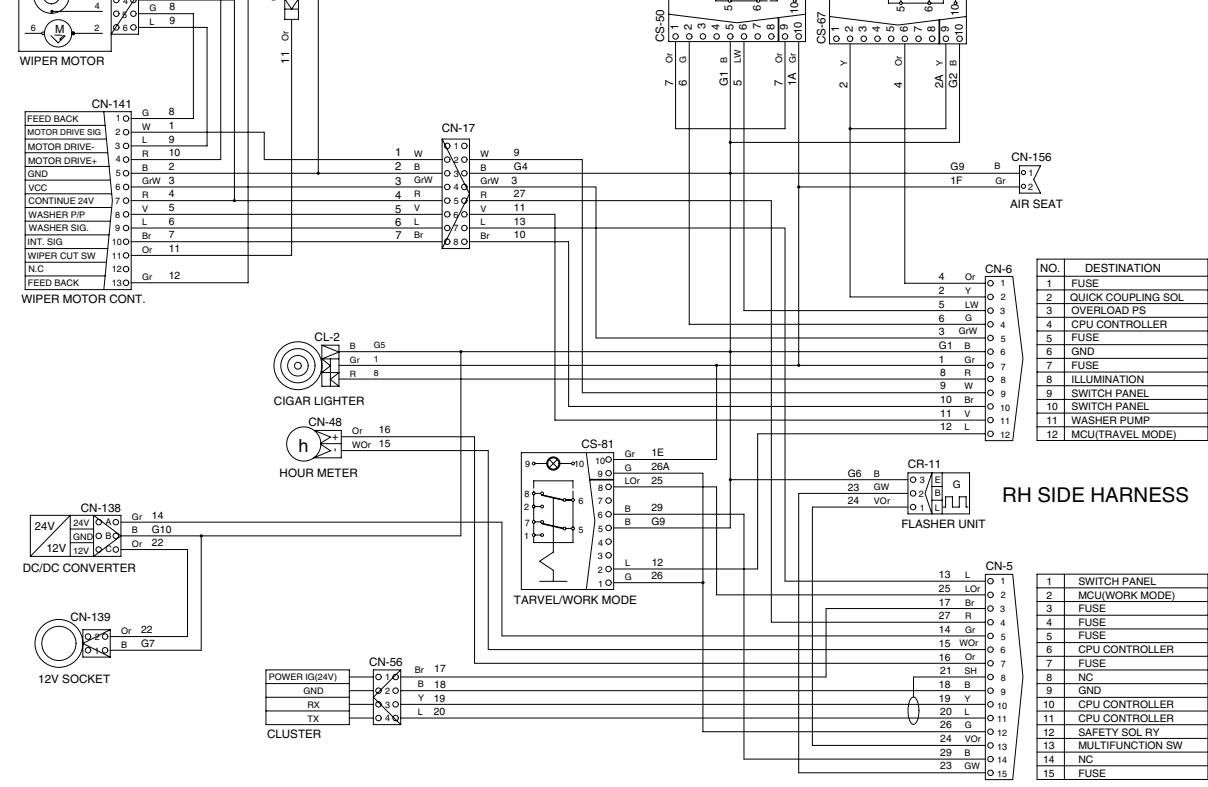
NO.	DESTINATION	CL-13
1	POWER MAX SW	01 Op 10
2	POWER MAX SW	02 Op 34
3	DI DIESEL SW	03 Op 42
4	DI DIESEL SW	04 Op 42
5	NC	05
6	SAFETY SW (COM)	06 B G25
7	SAFETY SW (SIG)	07 G 108
8	SAFETY SW (NO)	08



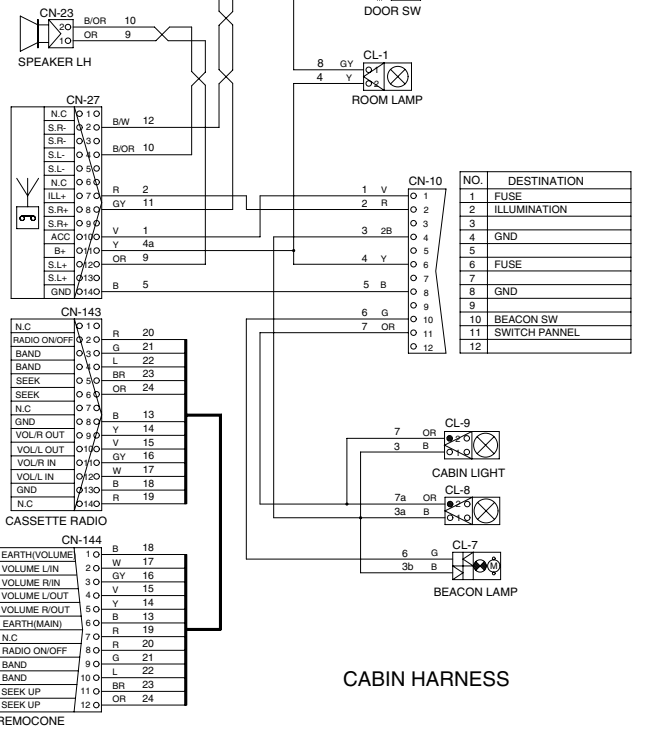
FRAME HARNESS



WIPER MOTOR HARNESS



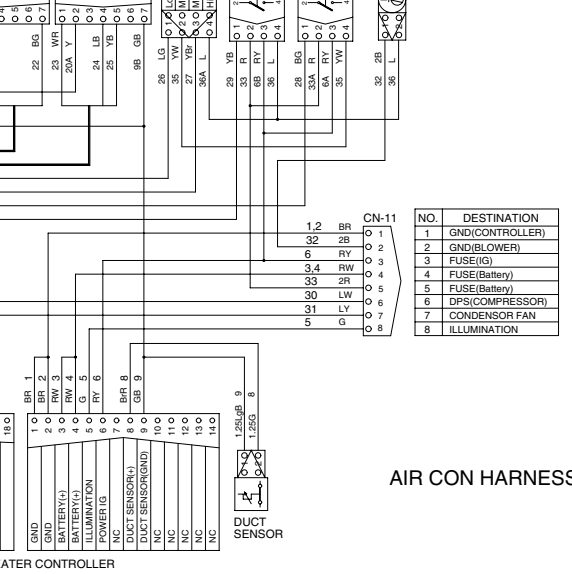
CABIN HARNESS



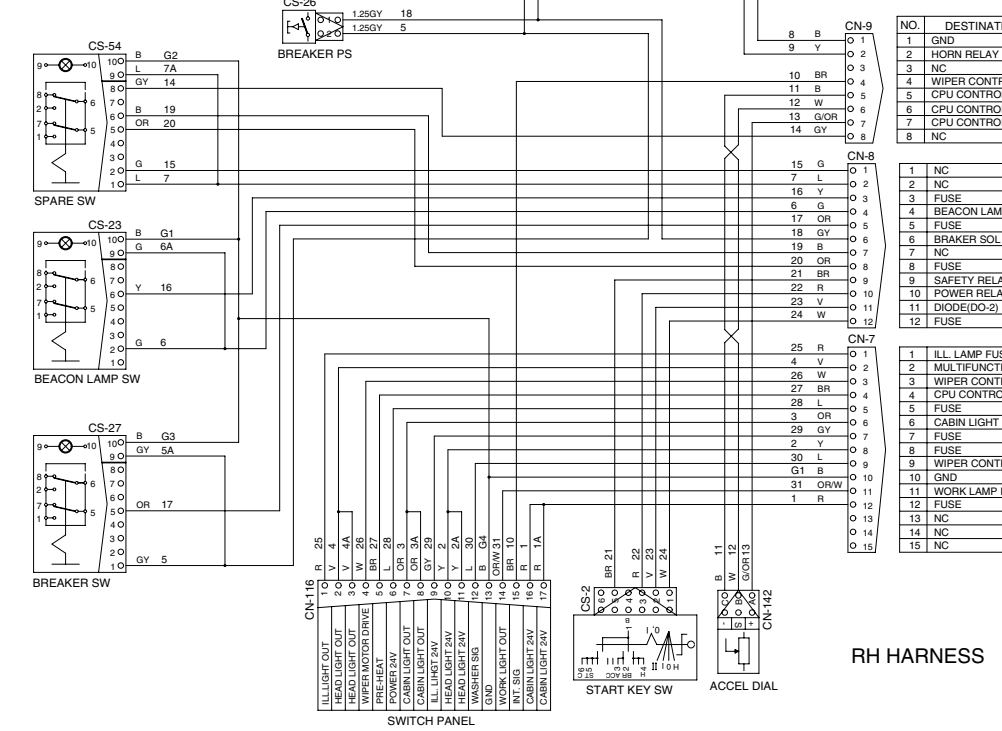
LH HARNESS



AIR CON HARNESS



RH HARNESS

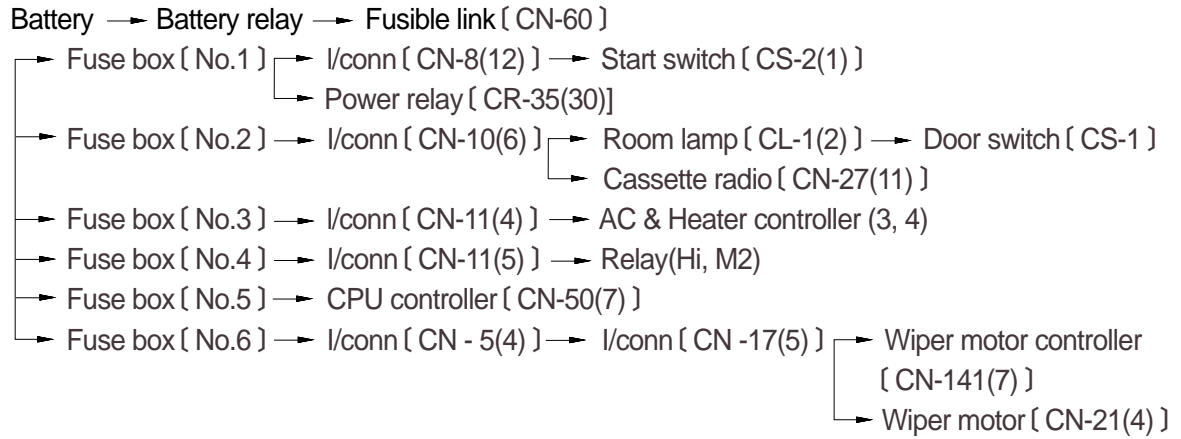


1. POWER CIRCUIT

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



I/conn : Intermediate connector

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OFF	OFF	- GND (Battery 1EA) - GND (Battery 2EA) - GND (Battery 2EA) - GND (Fusible link)	10~12.5V 20~25V 20~25V 20~25V

GND : Ground

2. STARTING CIRCUIT

1) OPERATING FLOW

Battery(+) terminal → Battery relay[CR-1] → Fusible link [CN-60] → Fuse box [No.1]
 → I/conn [CN-8(12)] → Start switch [CS-2(1)]

(1) When start key switch is in ON position

→ Start switch ON [CS-2(2)] → I/conn [CN-8(11)] → Battery relay [CR-1]
 → Battery relay operating (All power is supplied with the electric component)
 → Start switch ON [CS-2(3)] → I/conn [CN-8(10)] → Power relay [CR-35(86) (87)]
 → Fuse box [No.10]

(2) When start key switch is in START position

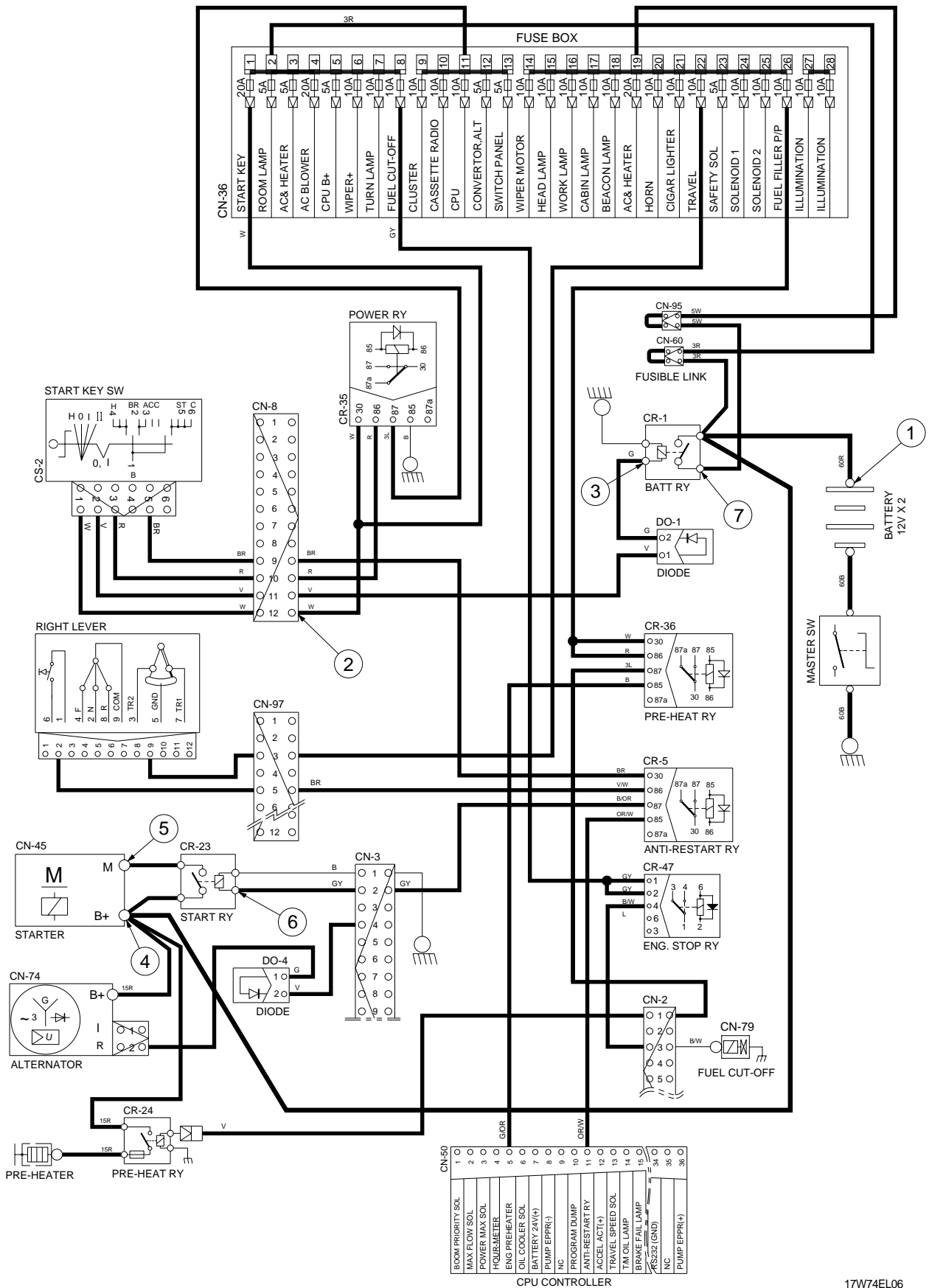
Start switch START [CS-2(5)] → I/conn [CN-8(9)] → Anti restart relay [CR-5(30) (87)]
 → I/conn [CN-3(2)] → Start relay[CR-23]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
OPERATING	START	- GND(Battery) - GND(Start key) - GND(Battery relay M4) - GND(Starter B ⁺) - GND(Starter M) - GND(Start relay) - GND(Battery relay M8)	20~25V

GND : Ground

STARTING CIRCUIT



17W74EL06

3. CHARGING CIRCUIT

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-2(13)] → CPU alternator level [CN-51(9)]
Cluster charging warning lamp (Via serial interface)

(2) Charging flow

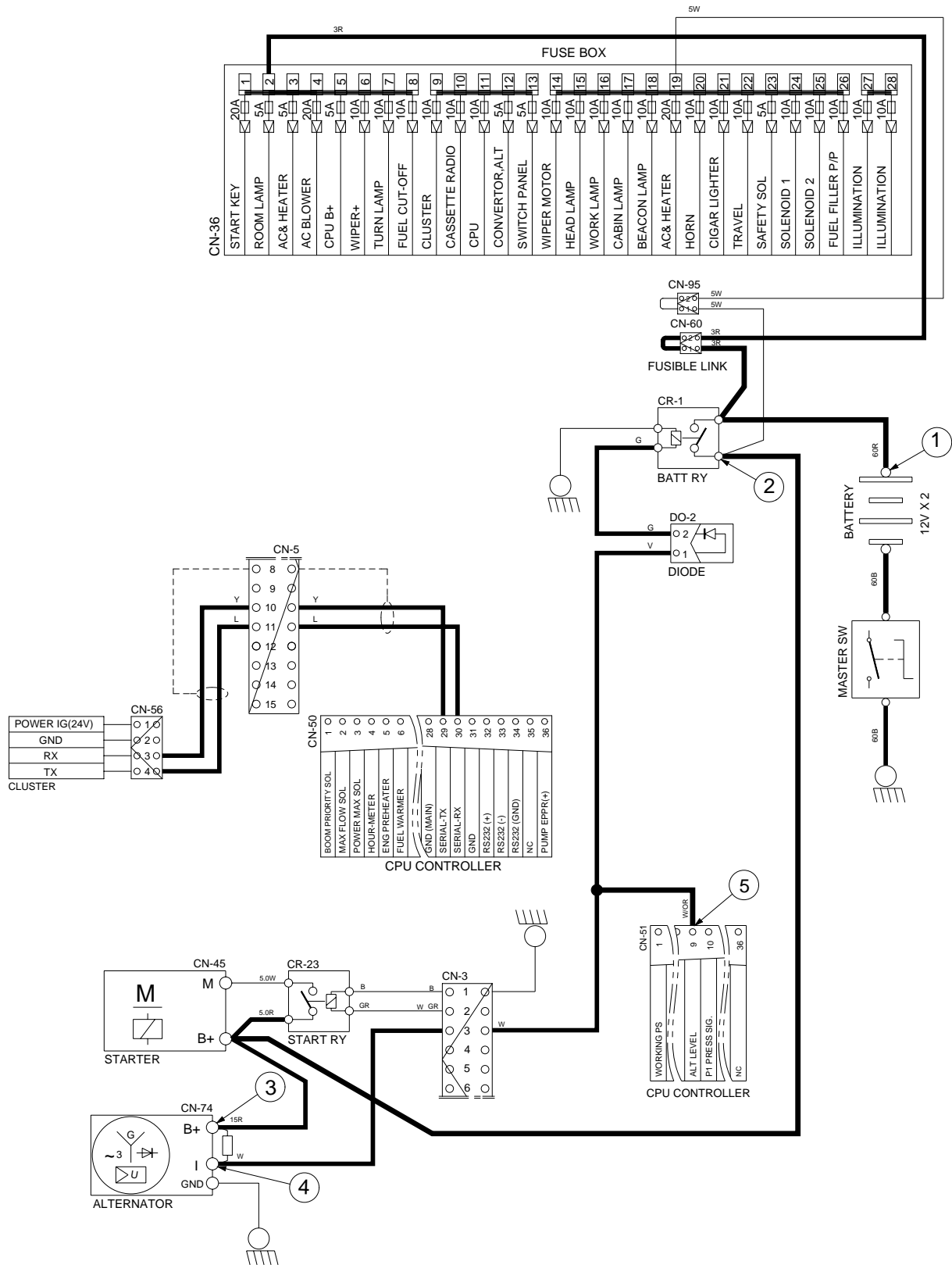
Alternator "B+" terminal → Battery relay (M8) → Battery (+) terminal
→ Fusible link [CN-60] → Fuse box

2) CHECK POINT

Engine	Start switch	Check point	Voltage
Run	ON	<ul style="list-style-type: none"> - GND (Battery voltage) - GND (Battery relay) - GND (Alternator B⁺ terminal) - GND (Alternator I terminal) - GND (CPU) 	20~30V

GND : Ground

CHARGING CIRCUIT



17W74EL07

4. HEAD AND WORK LIGHT CIRCUIT

1) OPERATING FLOW

Fuse box (No.15) → I/conn [CN-7(8)] → Switch panel [CN-116(10,11)]

Fuse box (No.16) → I/conn [CN-7(7)] → Switch panel [CN-116(9)]

(1) Main light switch ON : 1st step

Head light switch ON [CN-116(2,3)] → I/conn [CN-7(2)] → I/conn [CN-97(11)] →

Mutifunction sw left lever(3) → (5) → [CN-97(10)] → Head light ON [CL-3(1), CL-4(1)]
: Head lamp ON

(2) Main light switch ON : 2nd step

Work light switch ON [CN-116(14)] → I/conn [CN-7(11)] → Work lamp relay [CR-3(1), (4)]

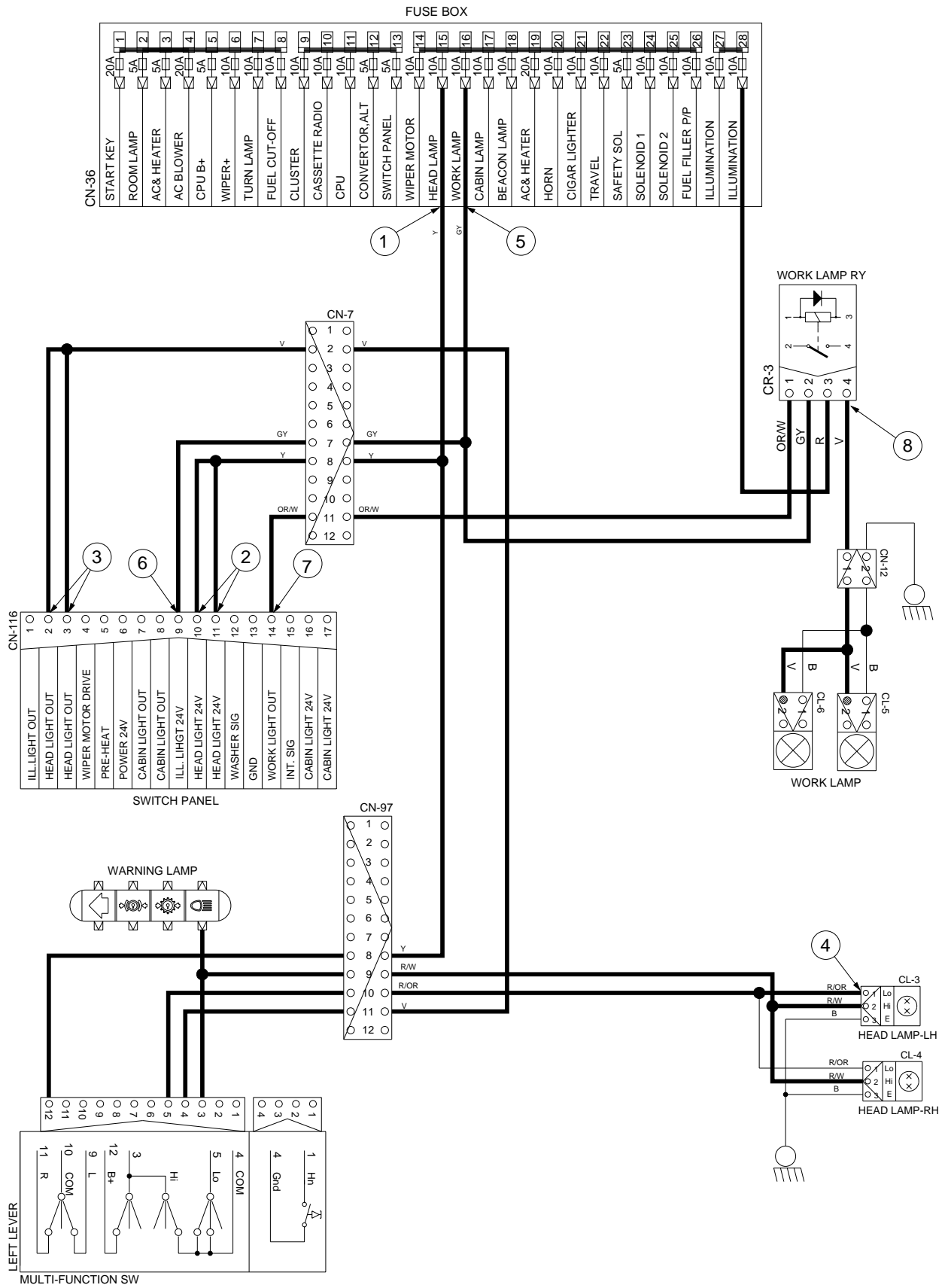
→ I/conn [CN-12(1)] → Work light ON [CL-5(2), CL-6(2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	<ul style="list-style-type: none"> - GND(Fuse box) - GND(Switch power input) - GND(Switch power output) - GND(Head light) 	20~25V
STOP	ON	<ul style="list-style-type: none"> - GND(Fuse box) - GND(Switch power input) - GND(Switch power output) - GND(Work light) 	20~25V

GND : Ground

HEAD AND WORK LIGHT CIRCUIT



17W74EL08

5. BEACON LAMP AND CAB LIGHT CIRCUIT

1) OPERATING FLOW

Fuse box (No.18) → I/conn [CN-8(3)] → Beacon lamp switch [CN-23(6)]

Fuse box (No.17) → I/conn [CN-7(12)] → Switch panel [CN-116(16, 17)]

(1) Beacon lamp switch ON

Beacon lamp switch ON [CS-23(2)] → Switch Indicator lamp ON [CS-23(9)]
 → I/conn [CN-8(4)] → I/conn [CN-10(10)]
 → Beacon lamp ON [CL-7]

(2) Cab light switch ON

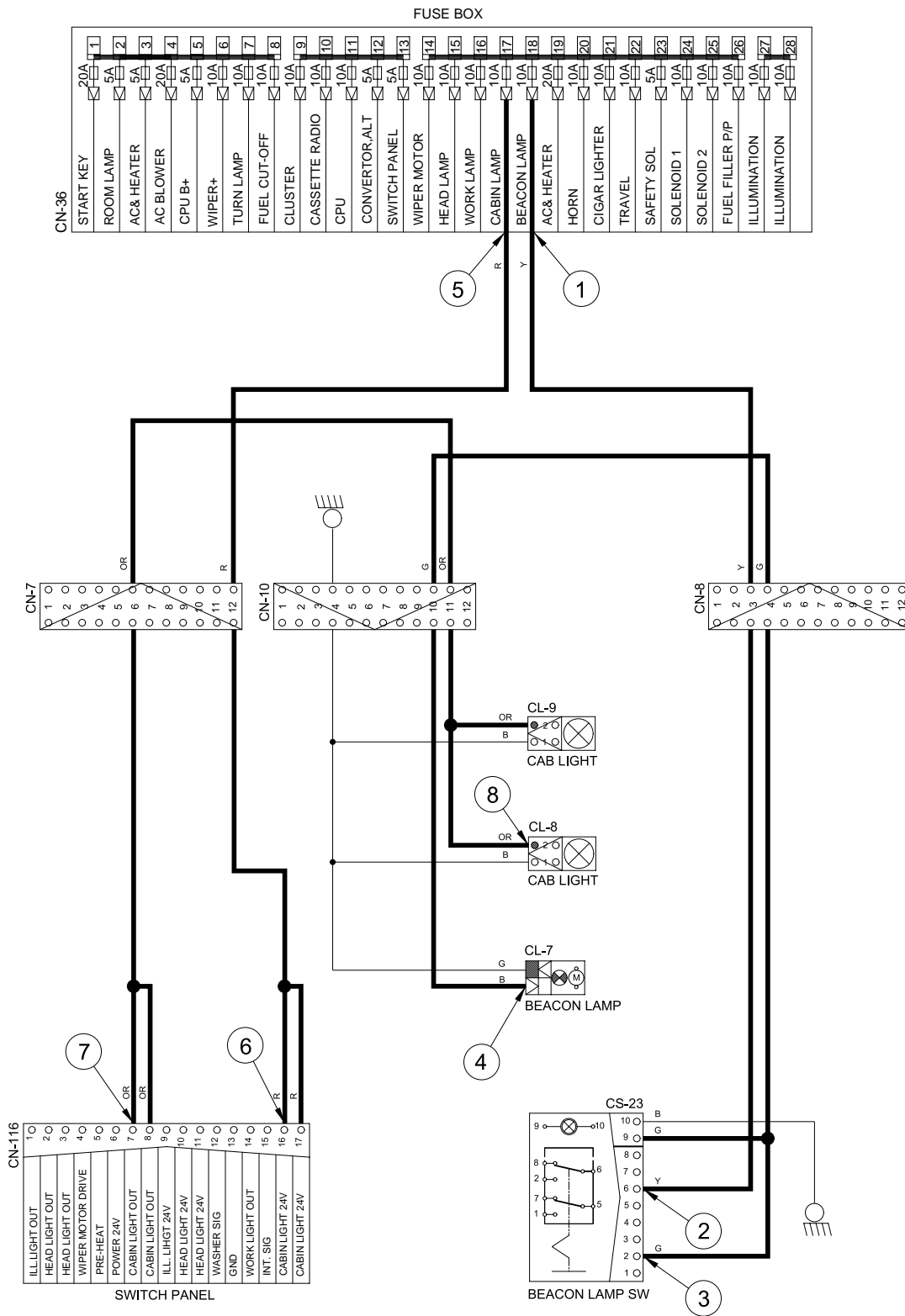
Cab light switch ON [CN-116(7, 8)] → I/conn [CN-7(6)] → I/conn [CN-10(11)]
 → Cab light ON [CL-8(2), CL-9(2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	- GND(Fuse box) - GND(Switch power input) - GND(Switch power output) - GND(Beacon lamp)	20~25V
STOP	ON	- GND(Fuse box) - GND(Switch power input) - GND(Switch power output) - GND(Cab light)	20~25V

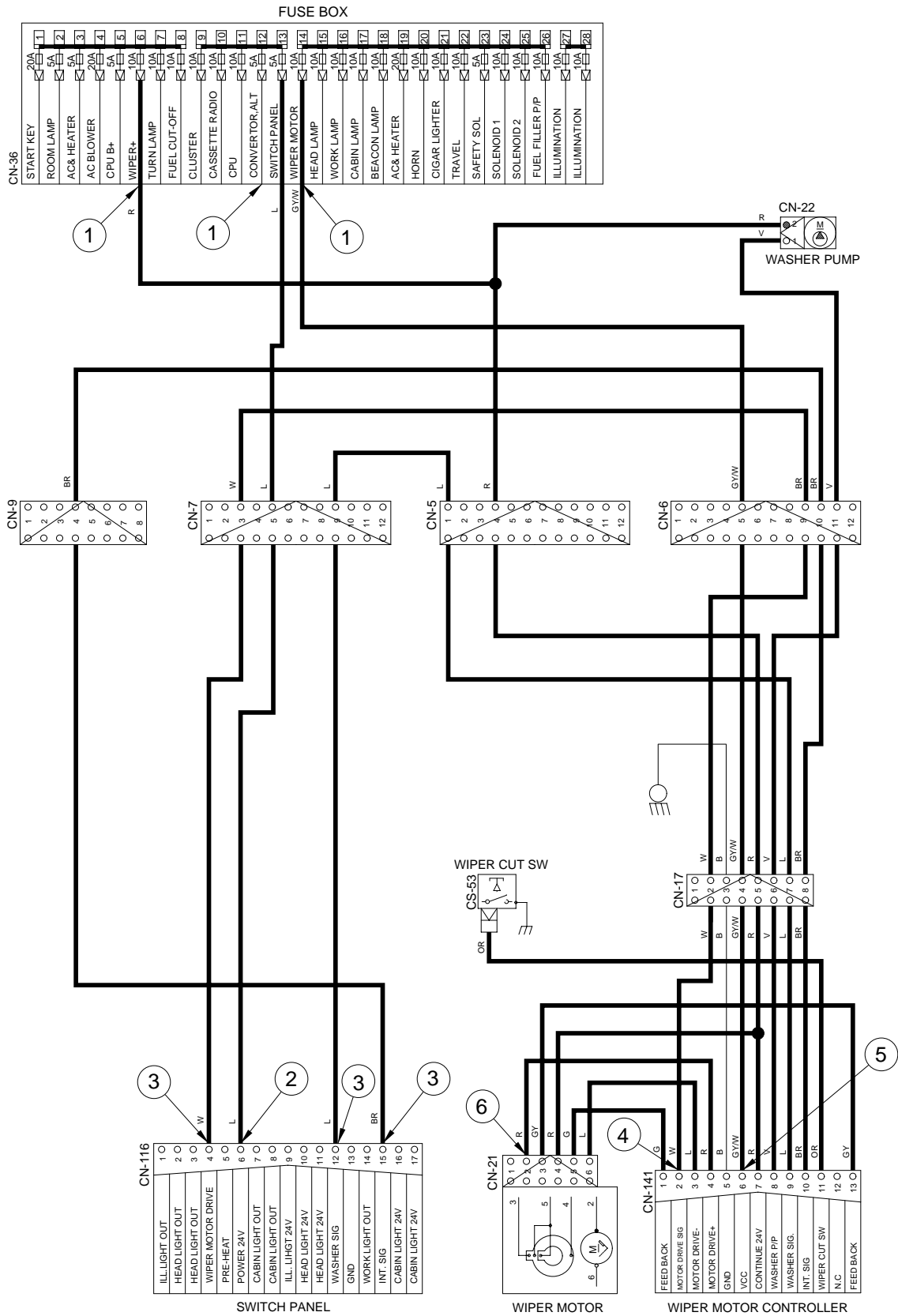
GND : Ground

BEACON LAMP AND CAB LIGHT CIRCUIT

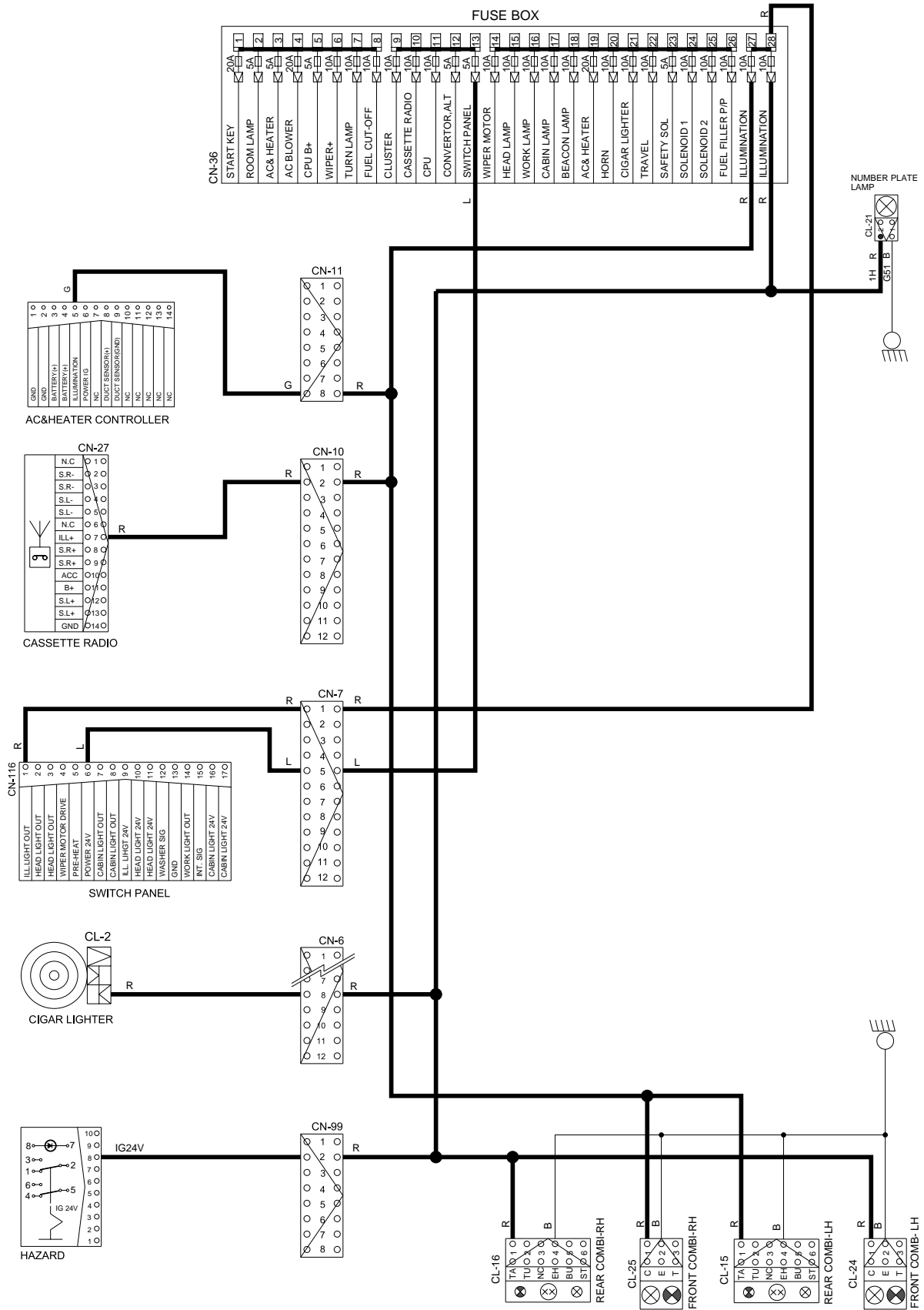


17W74EL09

WIPER AND WASHER CIRCUIT

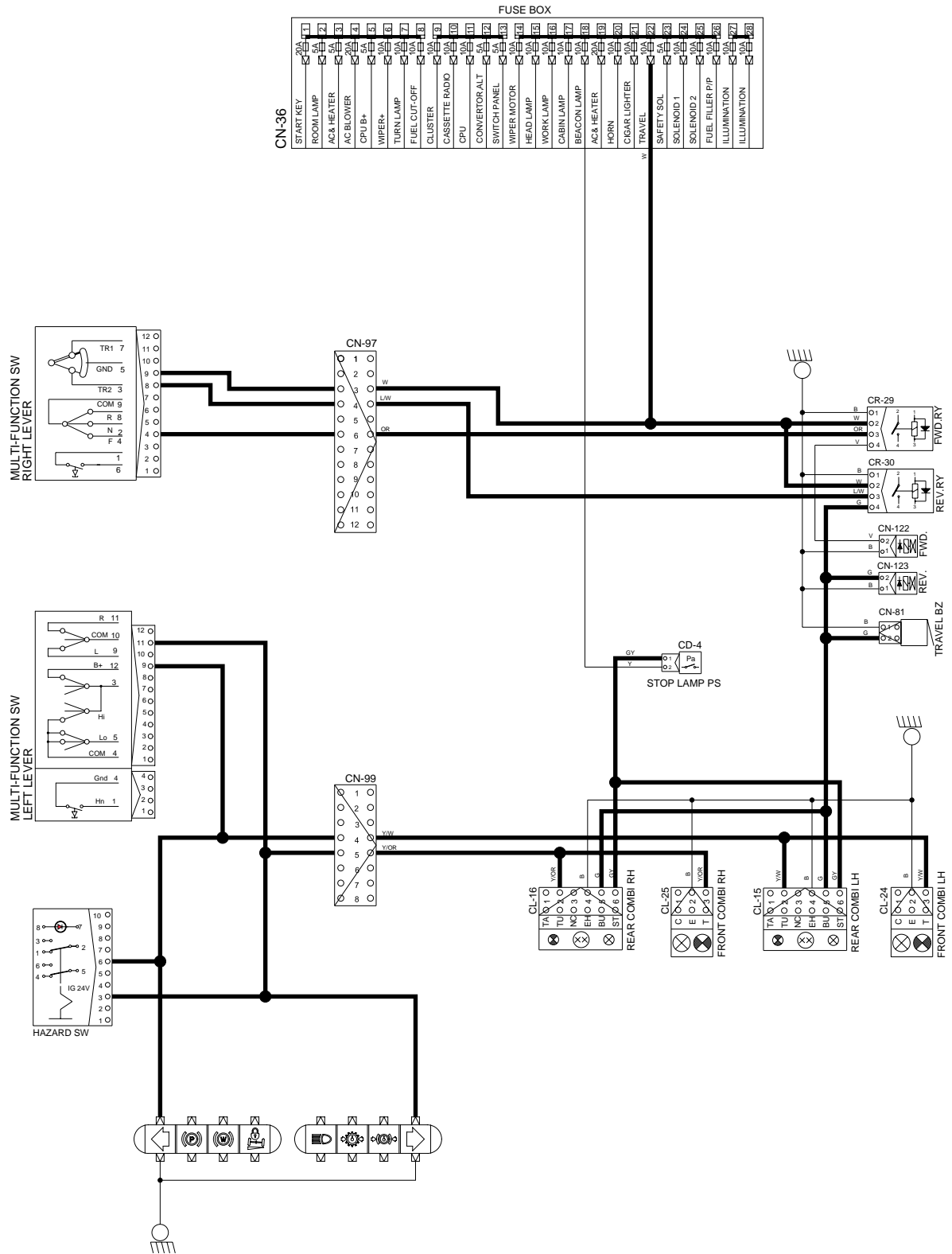


ILLUMINATION CIRCUIT



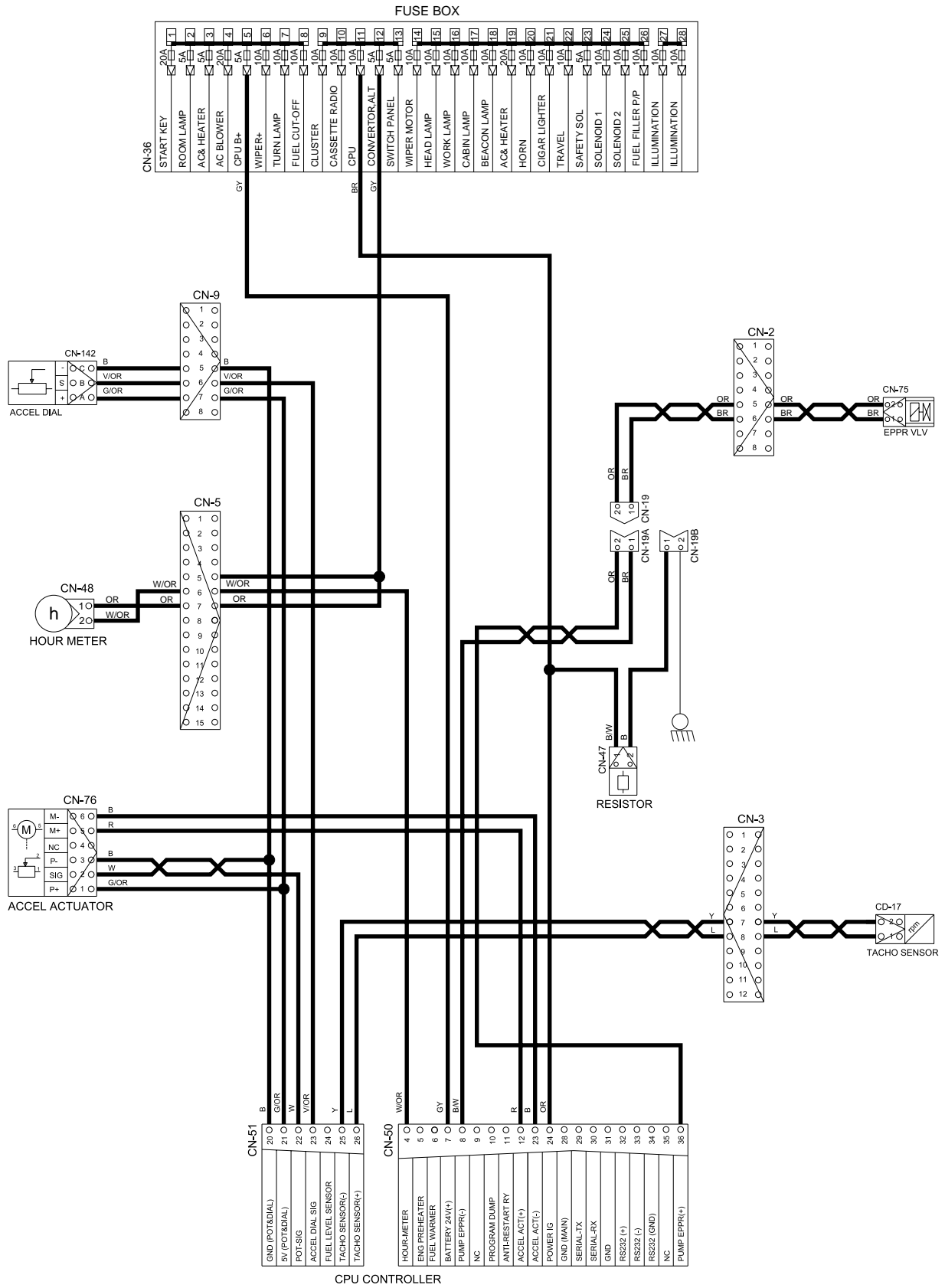
17W74EL11

COMBINATION LAMP CIRCUIT



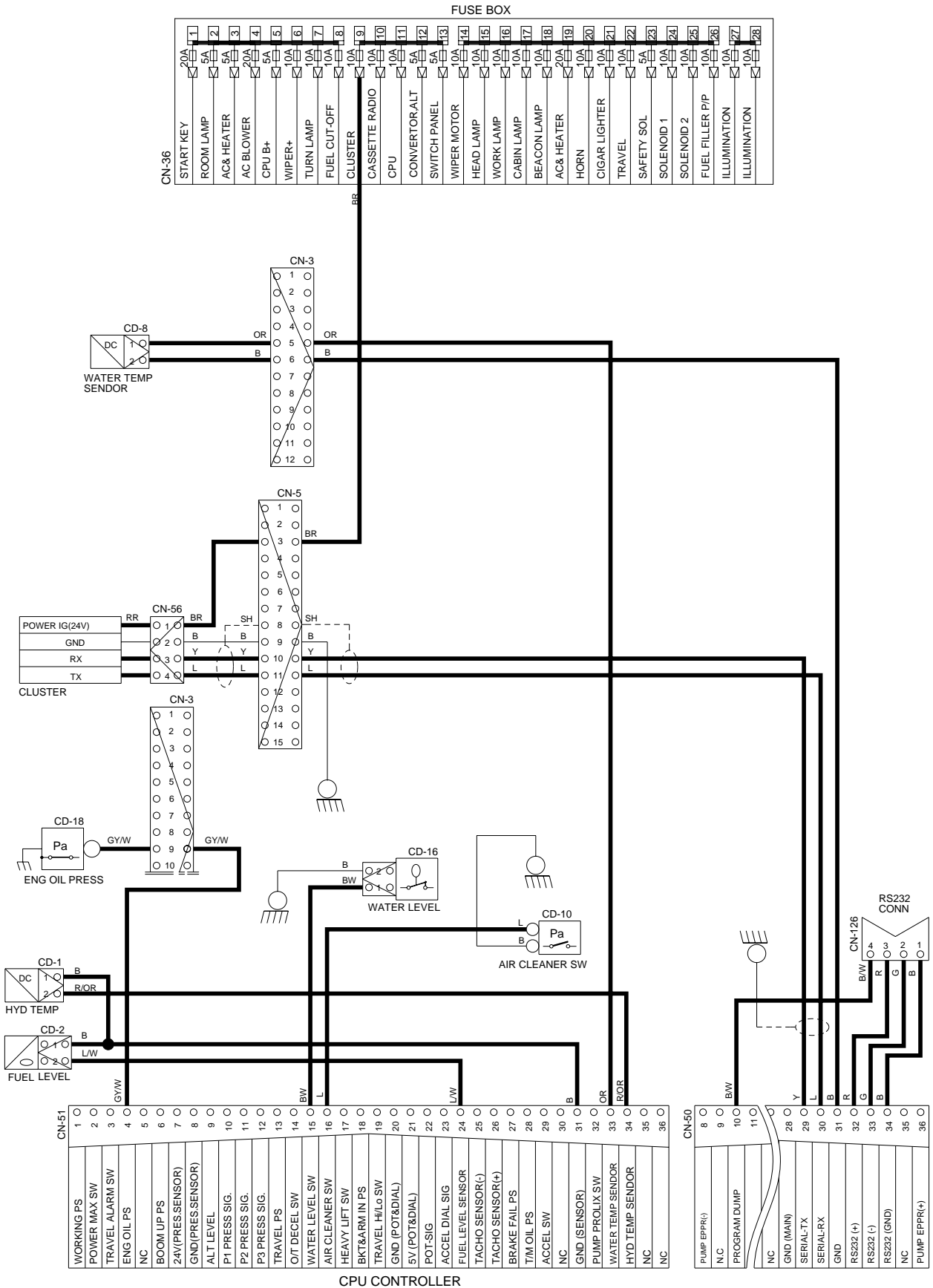
17W74EL12

CONTROLLER CIRCUIT



17W74EL13

MONITORING CIRCUIT



17W74EL14

ELECTRIC CIRCUIT FOR HYDRAULIC

