

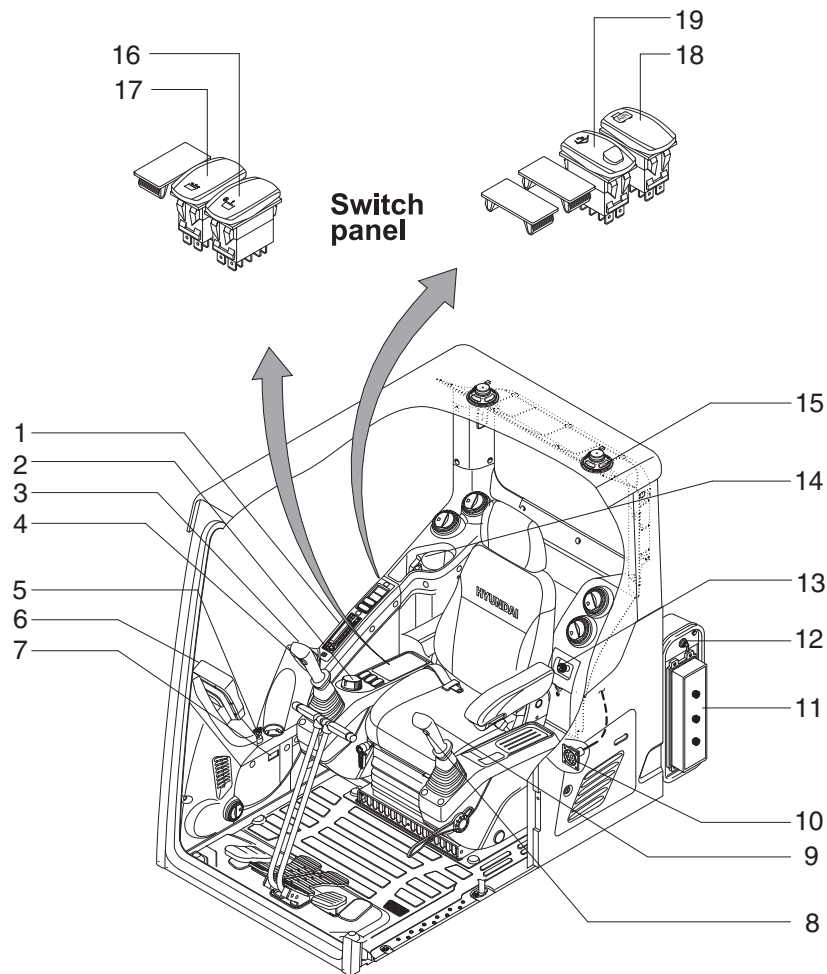
SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location	4-1
Group 2 Electrical Circuit	4-3
Group 3 Electrical Component Specification	4-22
Group 4 Connectors	4-31

SECTION 4 ELECTRICAL SYSTEM

GROUP 1 COMPONENT LOCATION

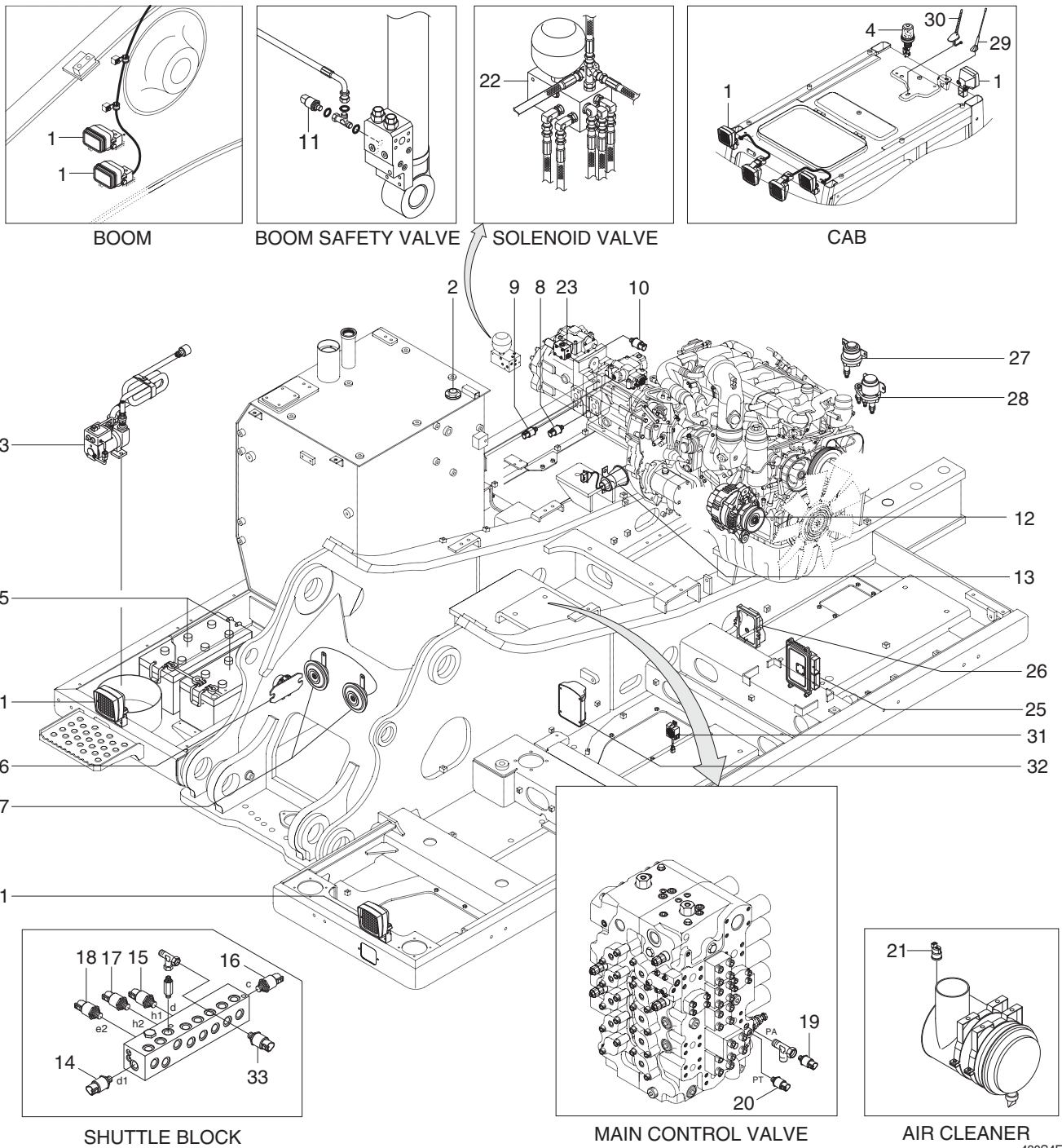
1. LOCATION 1



480S4EL01

1	Radio & USB player	8	Power max switch	14	Service socket
2	Haptic controller	9	One touch decel switch	15	Speaker
3	Horn switch	10	RS232 service socket	16	Swing fine switch(opt)
4	Cluster	11	Fuse & relay box	17	Swing lock switch(opt)
5	Breaker operation switch	12	Master switch	18	Air compressor switch
6	Starting switch	13	Cigar lighter	19	Quick clamp switch
7	Service meter				

2. LOCATION 2



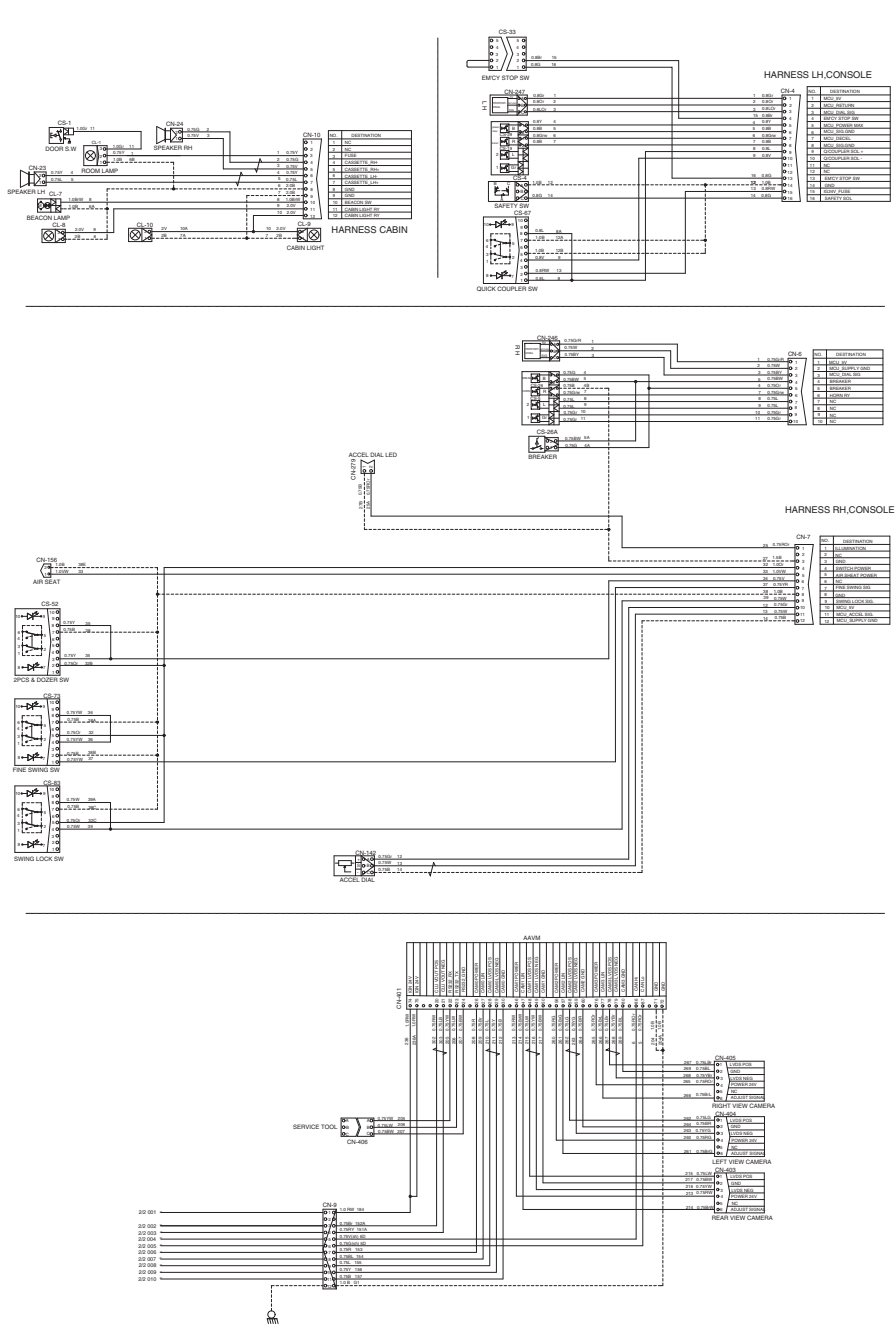
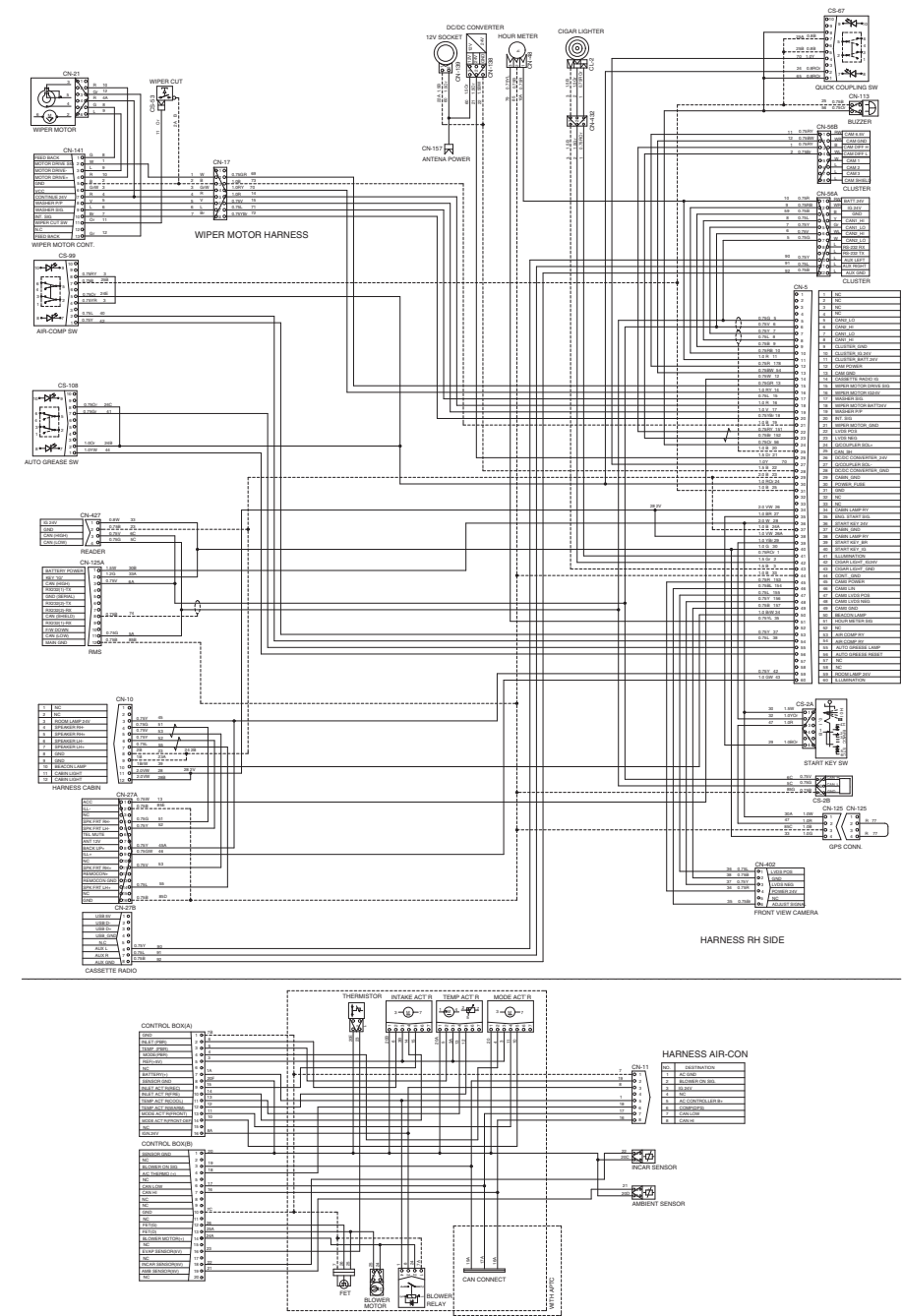
480S4EL02

- | | | |
|-----------------------------|--------------------------------------|----------------------------|
| 1 Lamp | 12 Alternator | 23 Pump EPPR valve |
| 2 Fuel sender | 13 Travel alarm buzzer | 25 Around view controller |
| 3 Fuel filler pump | 14 Arm out/Bucket in pressure sensor | 26 Relay drive unit |
| 4 Beacon lamp | 15 Boom up pressure sensor | 27 Start relay |
| 5 Battery | 16 Swing pressure sensor | 28 Heater relay |
| 6 Battery relay | 17 Boom down pressure sensor | 29 Satellite antenna |
| 7 Horn | 18 Arm in pressure sensor | 30 Integrated antenna |
| 8 P1 pressure sensor | 19 Attach pressure sensor | 31 Remote control unit |
| 9 P2 pressure sensor | 20 Travel pressure sensor | 32 Warning buzzer |
| 10 EPPR pressure sensor | 21 Air cleaner sensor | 33 Arm out pressure sensor |
| 11 Overload pressure sensor | 22 Solenoid valve | 34 Machine control unit |

1. ELECTRICAL CIRCUIT (1/2, OLD VERSION)



2. ELECTRICAL CIRCUIT (2/2)



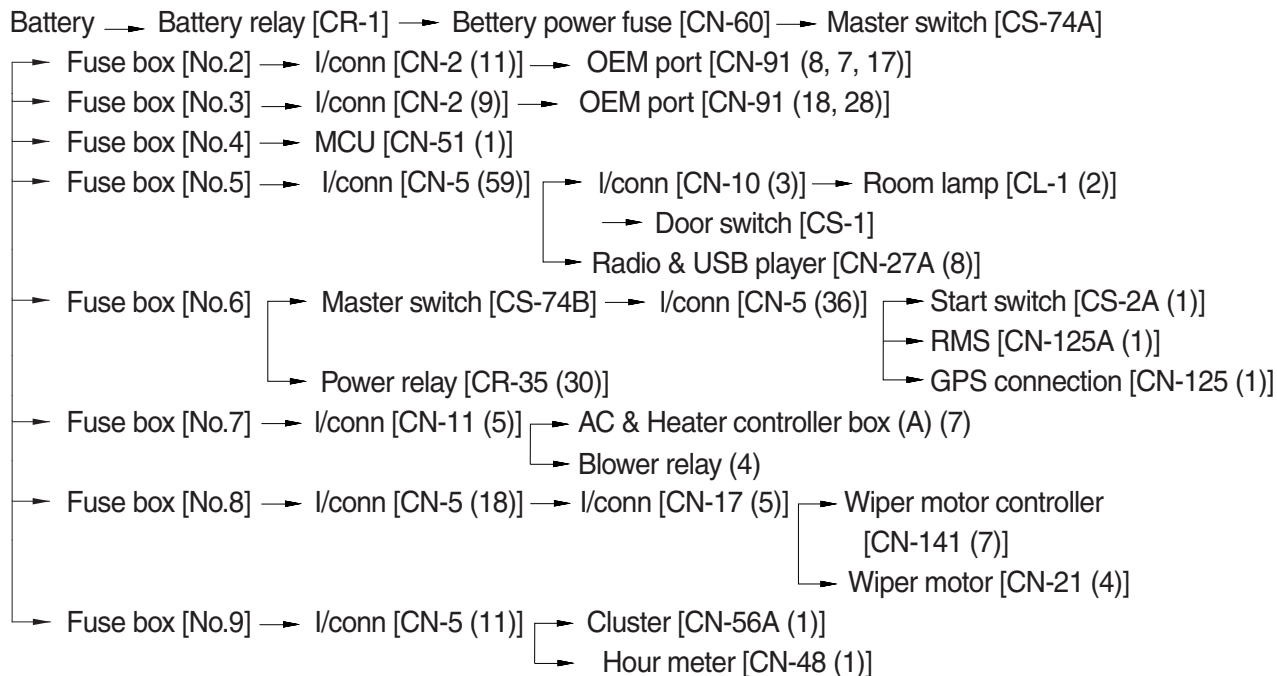
MEMORANDUM

1. POWER CIRCUIT

The negative terminal of battery is grounded to the machine chassis directly.

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

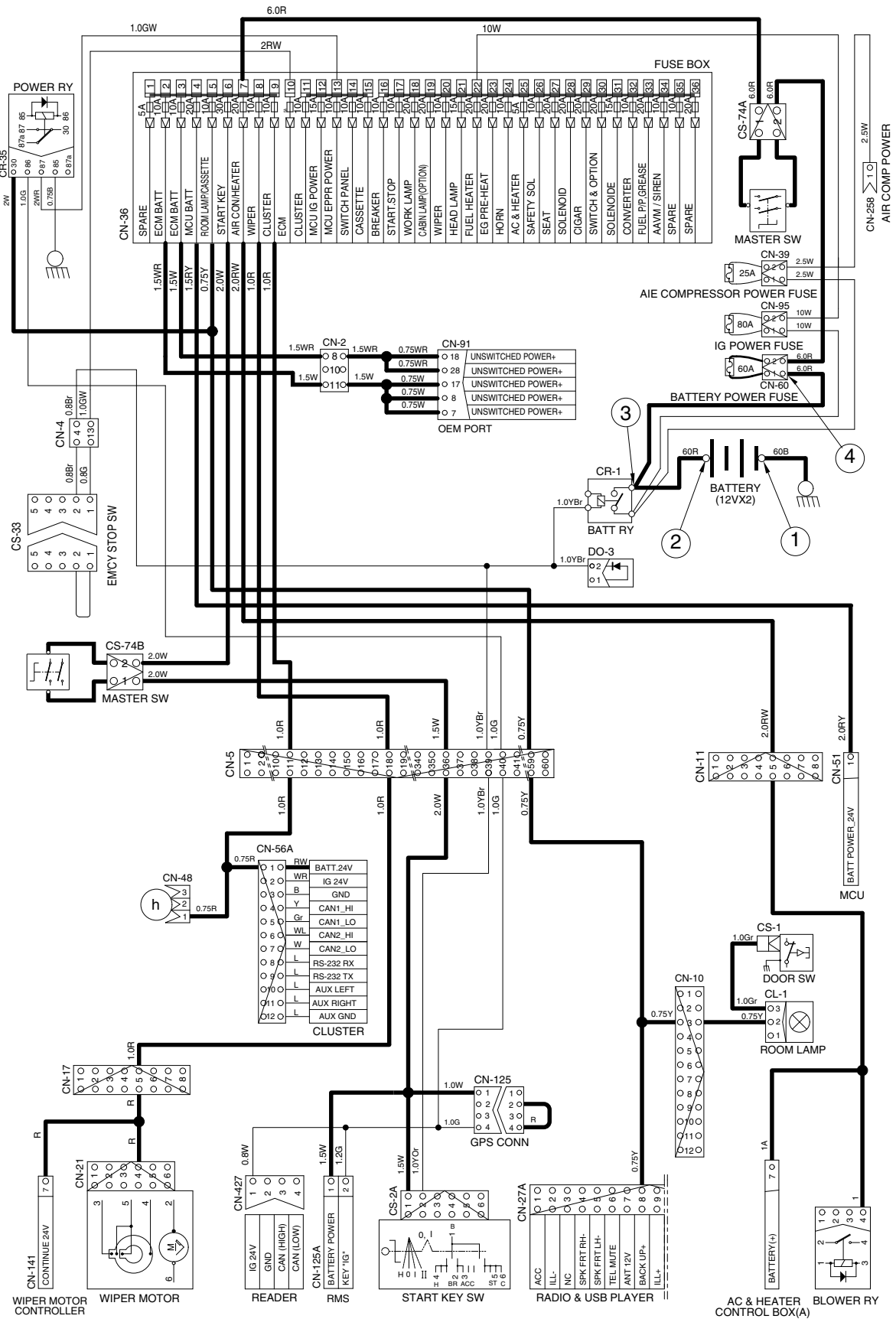
2) CHECK POINT

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

※ GND : Ground

※ The circuit diagram may differ from the equipment, so please check before a repair.

POWER CIRCUIT



480S4EL05

※ The circuit diagram may differ from the equipment, so please check before a repair.

2. STARTING CIRCUIT

1) OPERATING FLOW

Battery (+) terminal → Battery relay [CR-1] → Bettery power fuse [CN-60] → Master switch [CS-74A]
→ Fuse box [No.6] → Master switch [CS-74B] → I/conn [CN-5 (36)] → Start switch [CS-2A (1)]
 ↳ Power relay [CR-35 (30)]

(1) When start key switch is in ON position

```

graph LR
    A[Start switch ON [CS-2A (2)]] --> B[I/conn [CN-5 (39)]]
    B --> C[Battery relay [CR-1]]
    C --> D[Battery relay operating (all power is supplied with the electric component)]
    E[Start switch ON [CS-2A (3)]] --> F[GPS conn [CN-125 (2) → (4)]]
    F --> G[I/conn [CN-5 (40)]]
    G --> H[Power relay [CR-35 (86) → (87)]]
    H --> I[Fuse box [No.12]]
    I --> J[MCU [CN-51 (2)]]
    K[Reader [CN-427 (1)]]
    L[RMS [CN-125A (2)]]

```

(2) When start key switch is in START position

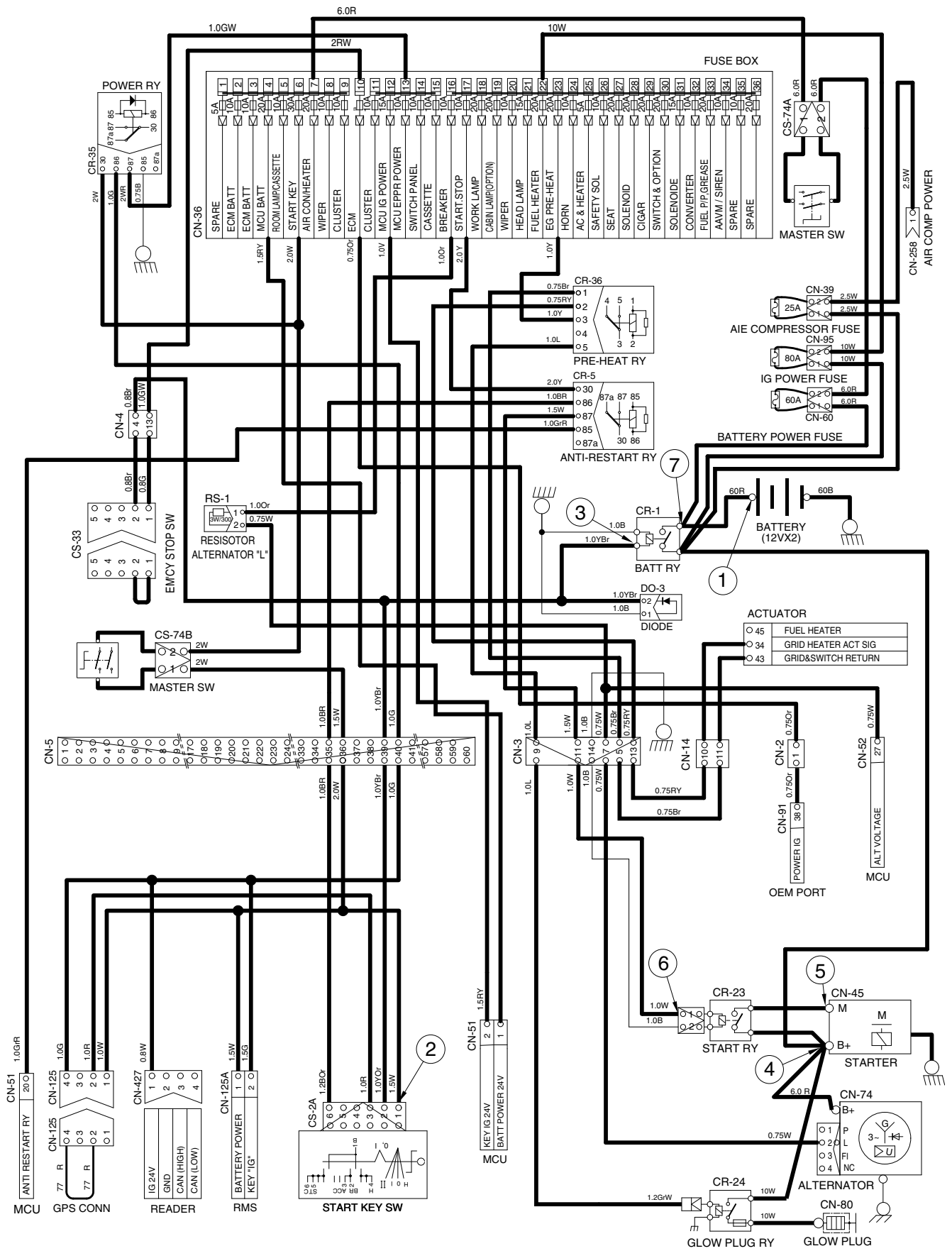
Start switch START [CS-2A (6)] → I/conn [CN-5 (35)] → Anti-restart relay [CR-5 (86) → (87)]
→ I/conn CN-3 (11) → Start relay [CR-23] → Starter motor operating

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

※ The circuit diagram may differ from the equipment, so please check before a repair.

STARTING CIRCUIT



480S4EL06

※ The circuit diagram may differ from the equipment, so please check before a repair.

3. CHARGING CIRCUIT

When the starter is activated and the engine is started, the operator releases the start 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-1 (7)] → United MCU alternator voltage [CN-52 (27)]
→ Cluster charging warning lamp (Via CANbus interface)

(2) Charging flow

Alternator [CN-74 (B⁺)] → Start motor [CN-45 (B⁺)] → Battery relay (M8)

- Battery (+) terminal
- Battery power fuse [CN-60] → Master switch [CS-74A] → Fuse box [No.1~9]
- IG power fuse [CN-95] → Fuse box [No.16~36]
- Air compressor power fuse → Air compressor power [CN-258 (1)]

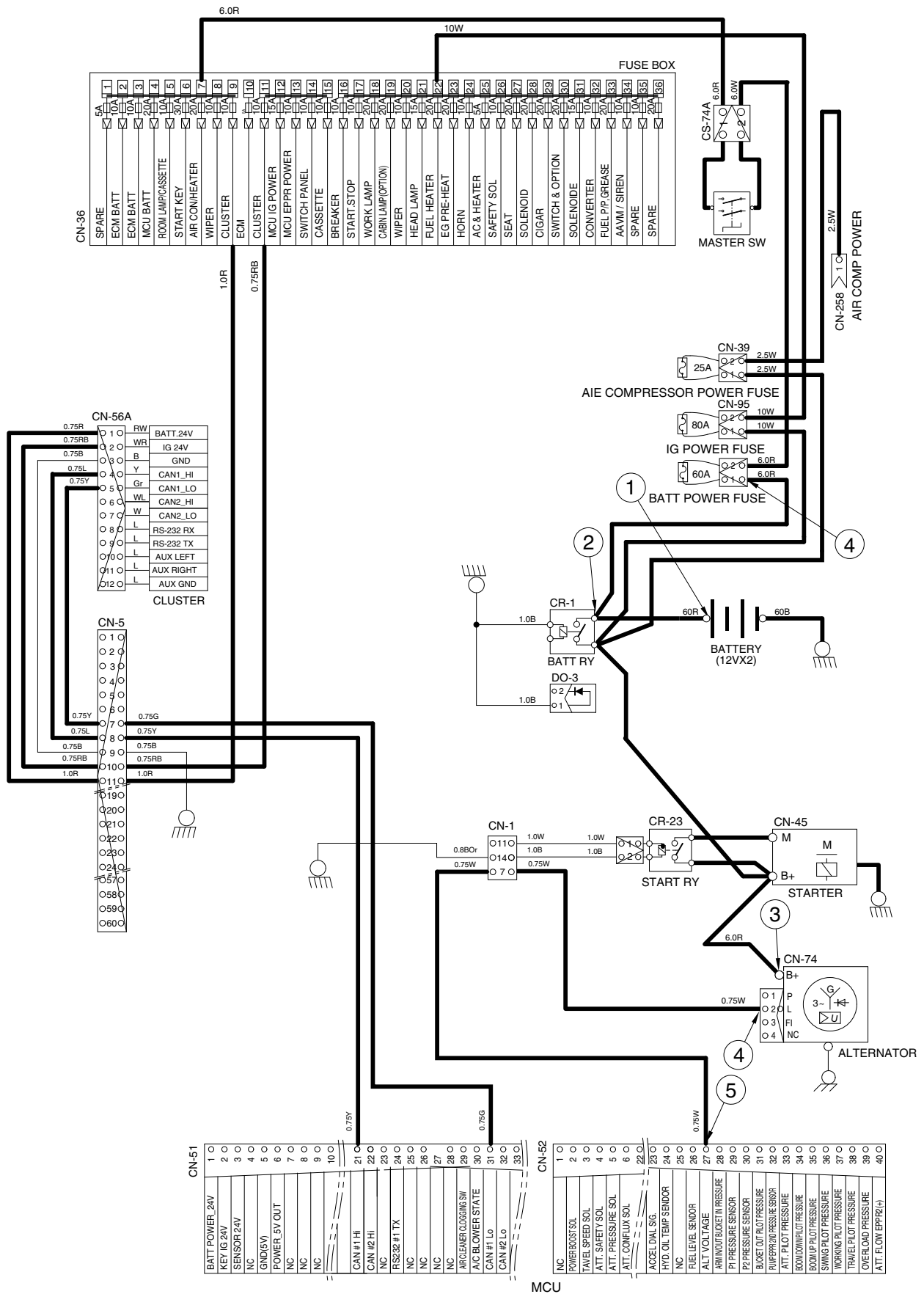
2) CHECK POINT

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

※ GND : Ground

※ The circuit diagram may differ from the equipment, so please check before a repair.

CHARGING CIRCUIT



4. HEAD AND WORK LIGHT CIRCUIT

1) OPERATING FLOW

Fuse box (No.21) → Head light relay [CR-13 (30, 86)]

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

Fuse box (No.14) → Relay drive unit [CN-376 (1)]

(1) Head light switch ON

Head light switch ON [CN-376 (13)] → Head light relay [CR-13 (85) → (87)]

→ Head light ON [CL-3 (2), CL-4 (2), CL-24A (1)]

→ I/conn [CN-5 (41)] → Cigar lighter [CL-2]

→ I/conn [CN-5 (60)] → Radio & USB player illumination ON [CN-27A (9)]

→ I/conn [CN-7 (1)] → Accel dial LED [CN-279 (2)]

(2) Work light switch ON

Work light switch ON [CN-376 (4)] → Work light relay [CR-4 (85) → (87)]

→ I/conn [CN-12 (2)] → Work light ON [CL-5 (2), CL-36 (2), CL-6 (2), CL-37 (2)]

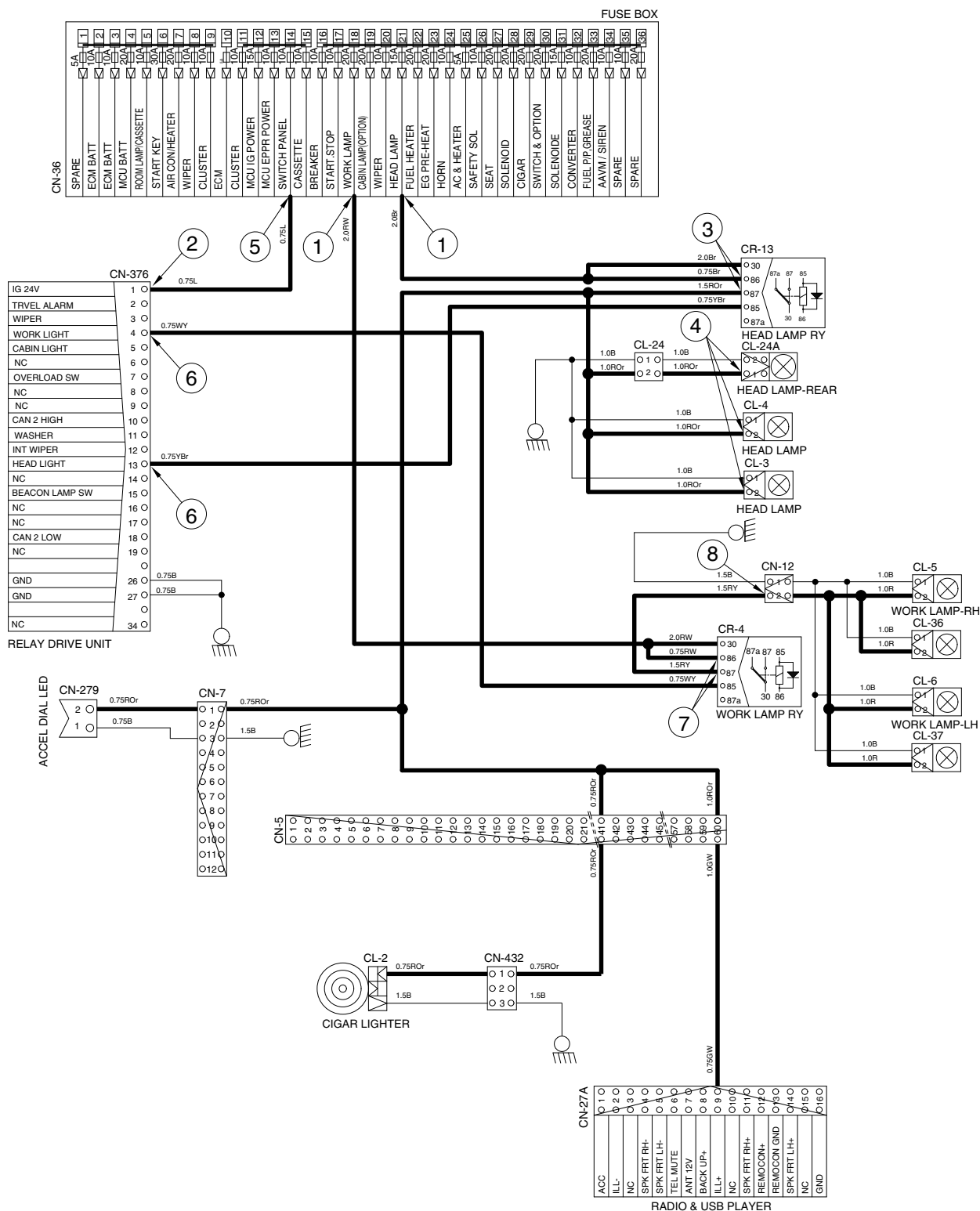
2) CHECK POINT

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

※ GND : Ground

※ The circuit diagram may differ from the equipment, so please check before a repair.

HEAD AND WORK LIGHT CIRCUIT



5. BEACON LAMP AND CAB LIGHT CIRCUIT

1) OPERATING FLOW

Fuse box (No.30) → Beacon lamp relay [CR-81 (2, 3)]

Fuse box (No.19) → Cab light relay [CR-9 (30, 86)]

Fuse box (No.14) → Relay drive unit [CN-376 (1)]

(1) Beacon lamp switch ON

Beacon lamp switch ON [CN-376 (15)] → Beacon lamp relay [CR-36 (1)→ (5)]

→ I/conn [CN-5 (50)] → I/conn [CN-10 (10)] → Beacon lamp ON [CL-7]

(2) Cab light switch ON

Cab light switch ON [CN-376 (5)] → Cab lamp relay [CR-9 (85)→ (87)]

→ I/conn [CN-5 (34, 38)] → I/conn [CN-10 (11)] → Cab light ON [CL-8 (2)]

→ I/conn [CN-10 (12)] → Cab light ON [CL-9 (2), CL-10 (2)]

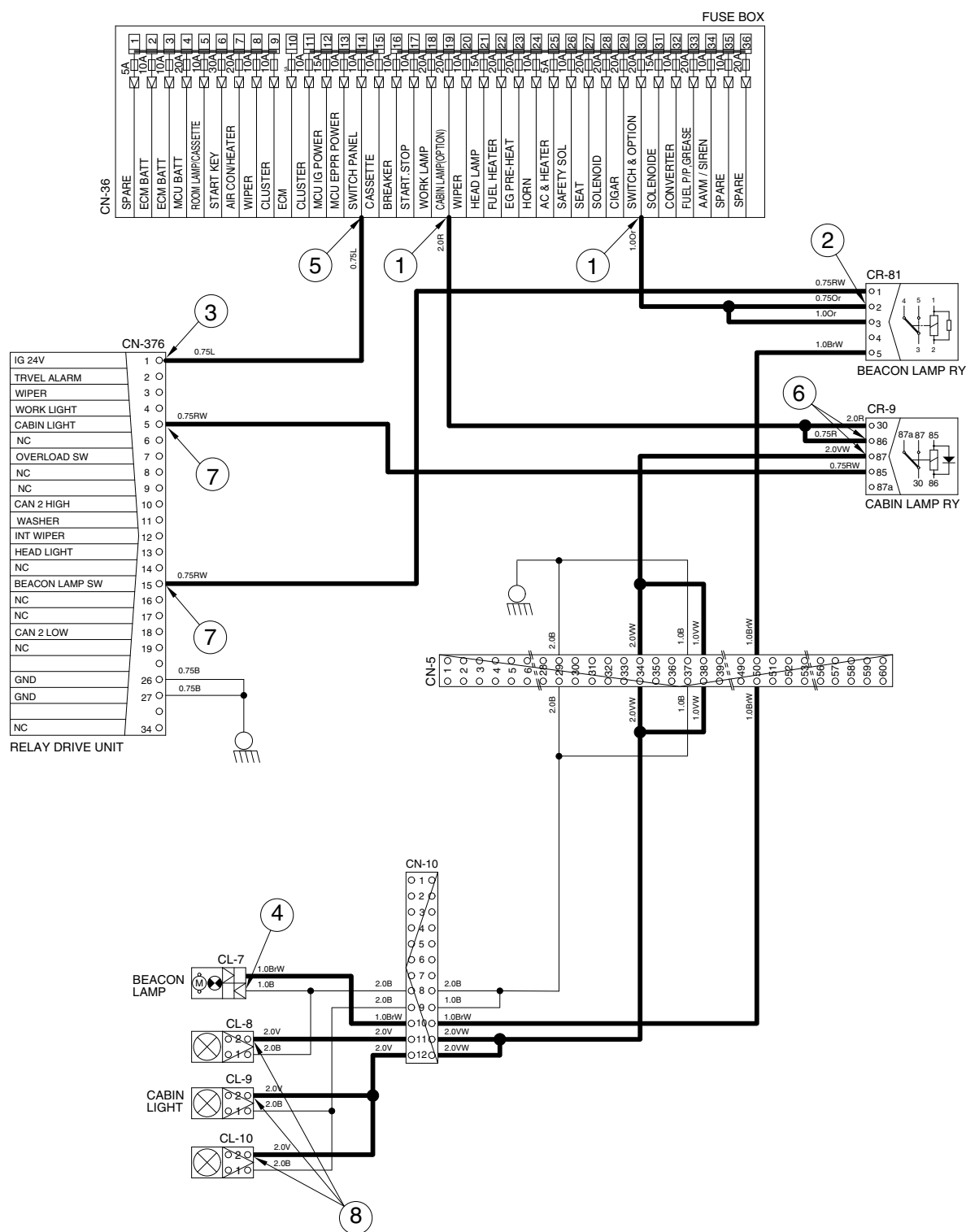
2) CHECK POINT

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

※ GND : Ground

※ The circuit diagram may differ from the equipment, so please check before a repair.

BEACON LAMP AND CAB LIGHT CIRCUIT



480S4EL09

※ The circuit diagram may differ from the equipment, so please check before a repair.

6. WIPER AND WASHER CIRCUIT

1) OPERATING FLOW

(1) Start switch ON

Fuse box (No.14) → Relay drive unit [CN-376 (1)]

Fuse box (No.8) → I/conn [CN-5 (18)] → I/conn [CN-17 (5)] → Wiper motor controller [CN-141 (7)]
 → Wiper motor [CN-21 (4)]

Fuse box (No.20) → I/conn [CN-5 (16)] → I/conn [CN-17 (4)] → Wiper motor controller [CN-141 (6)]
 → Wiper pump [CN-22 (2)]

(2) Wiper switch ON (Intermittent)

Wiper switch ON [CN-376 (12)] → I/conn [CN-5 (20)] → I/conn [CN-17 (8)]

→ Wiper motor controller [CN-141 (10)→(3)] → Wiper motor [CN-21 (6)] → Intermittently operating

(3) Wiper switch ON (continual)

Wiper switch ON [CN-376 (3)] → I/conn [CN-5 (15)] → I/conn [CN-17 (2)]

→ Wiper motor controller [CN-141 (2) → (4)] → Wiper motor [CN-21 (2)] → Continual operating

(4) Washer switch ON

Washer switch ON [CN-376 (11)] → I/conn [CN-5 (17)] → 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-376 (3)] → I/conn [CN-5 (15)] → I/conn [CN-17 (2)]

→ Wiper motor controller [CN-141 (2) → (4)] → Wiper motor [CN-21 (2)] → Continual operating

(5) Auto parking (when switch OFF)

Switch OFF [CN-376 (3)] → Wiper motor parking position by wiper motor controller

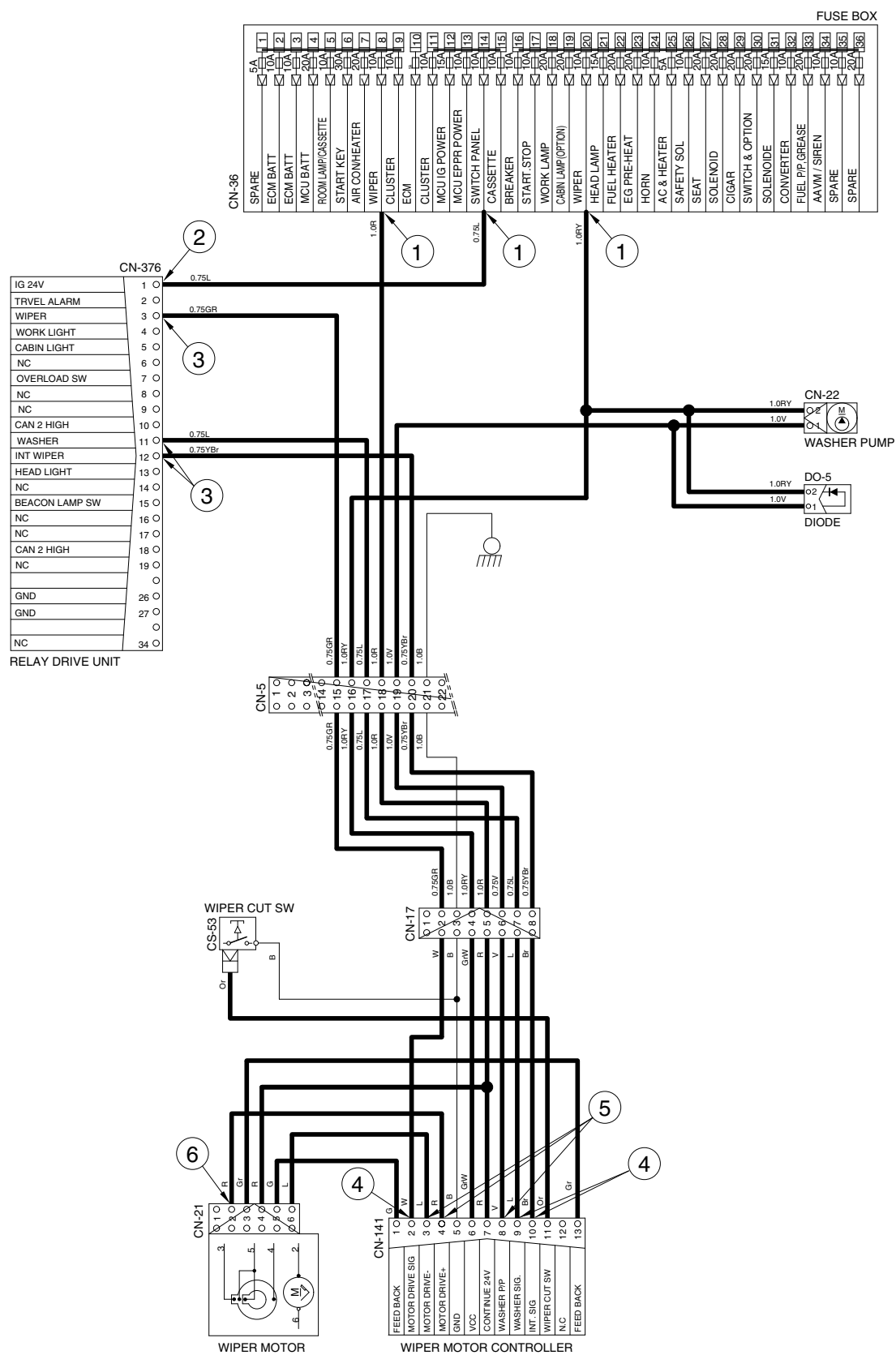
3) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box)	20~25V
		② - GND (switch power input)	
		③ - GND (switch power output)	0 ~ 5V
		④ - GND (wiper switch power input)	
		⑤ - GND (wiper power output)	24V
		⑥ - GND (wiper motor)	0 or 24V

※ GND : Ground

※ The circuit diagram may differ from the equipment, so please check before a repair.

WIPER AND WASHER CIRCUIT



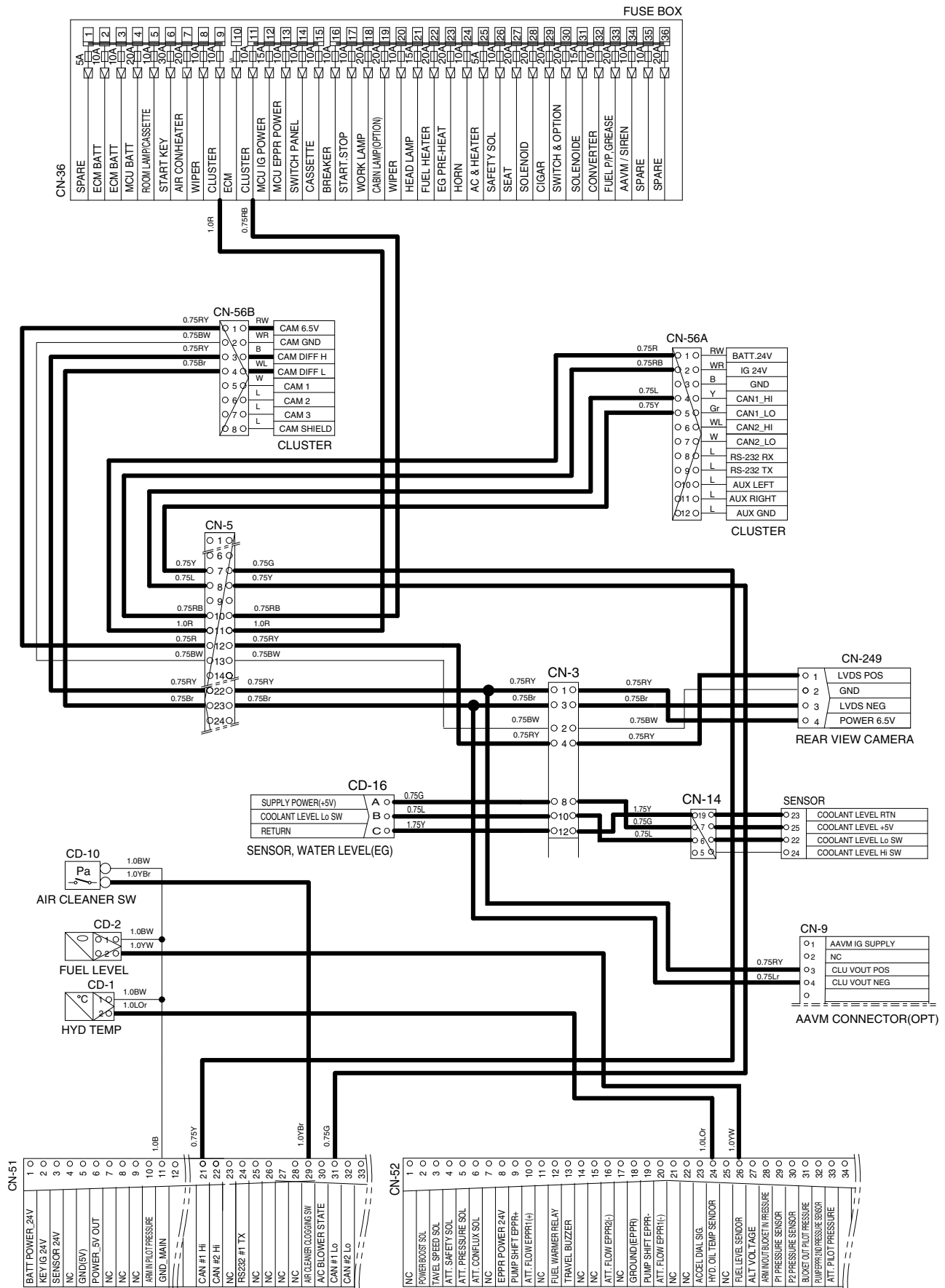
480S4EL10

※ The circuit diagram may differ from the equipment, so please check before a repair.

※ The circuit diagram may differ from the equipment, so please check before a repair.



MONITORING CIRCUIT

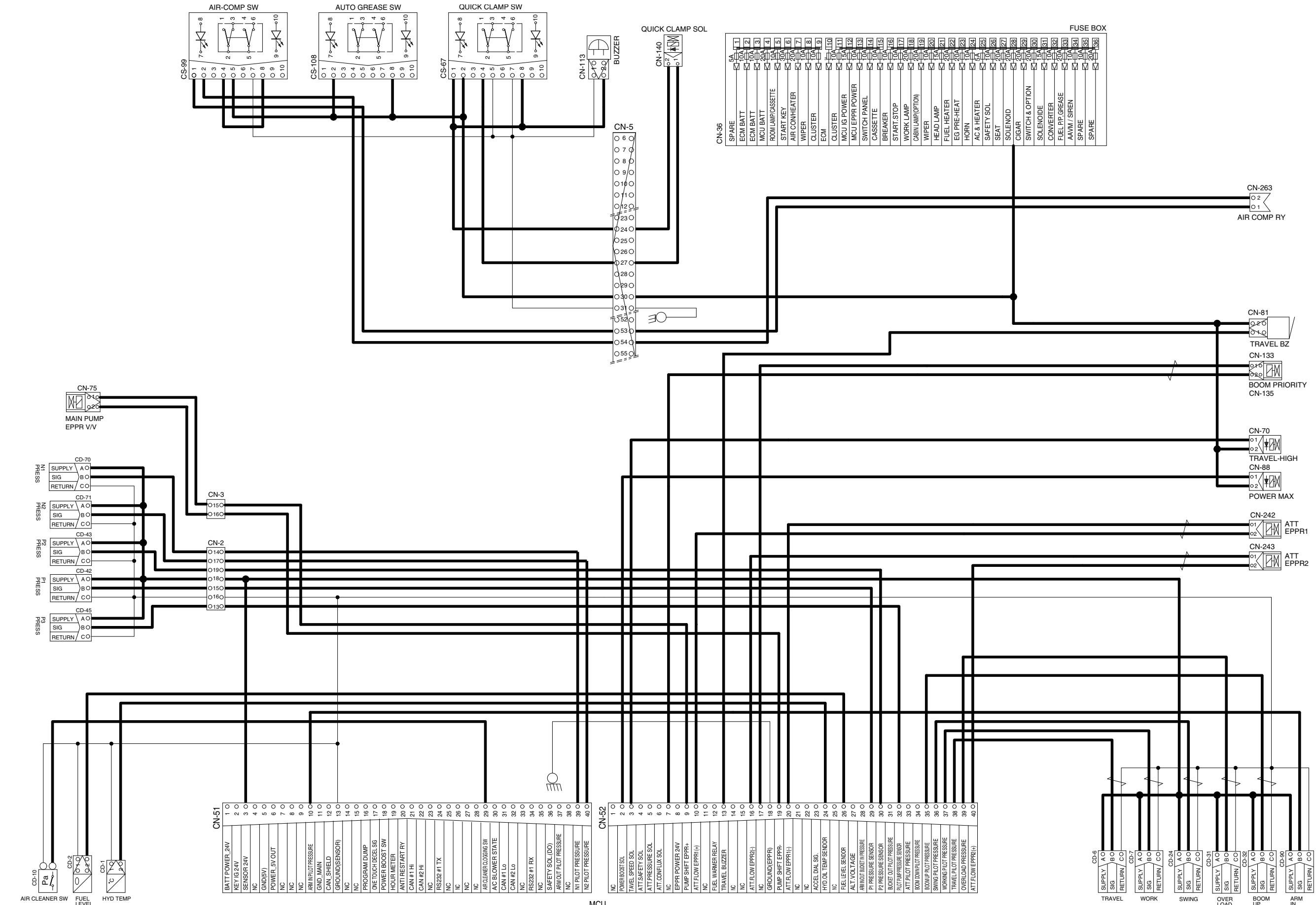


MCU

480S4EL12

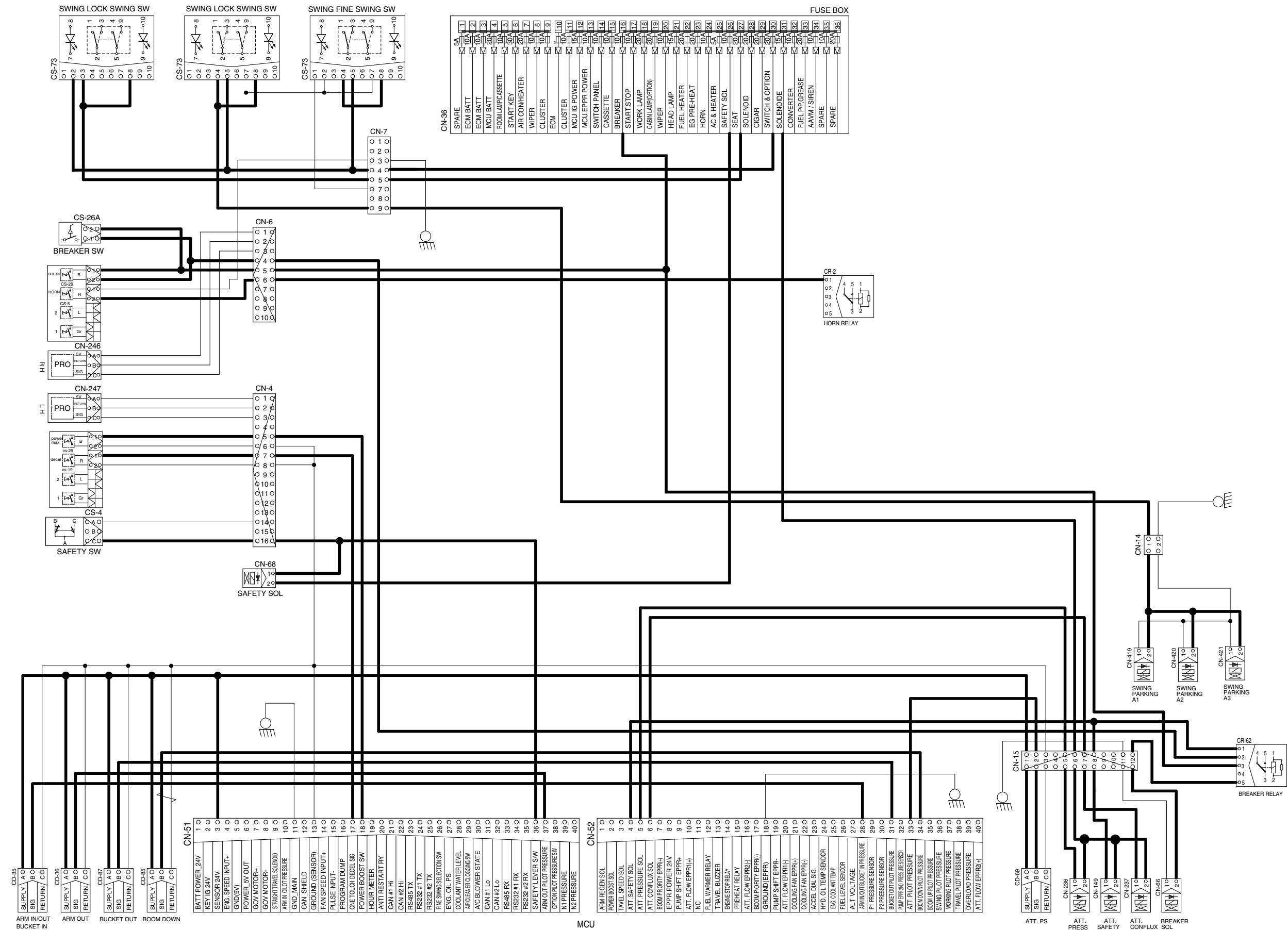
※ The circuit diagram may differ from the equipment, so please check before a repair.

ELECTRIC CIRCUIT FOR HYDRAULIC (1/2)



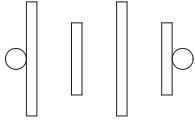
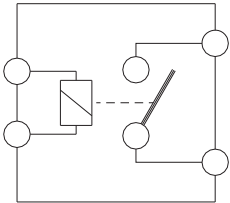
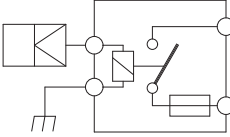
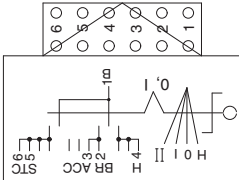
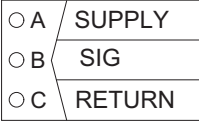
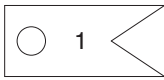
※ The circuit diagram may differ from the equipment, so please check before a repair.

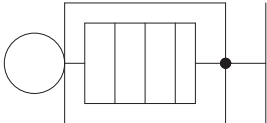
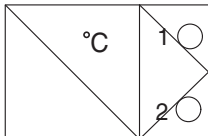
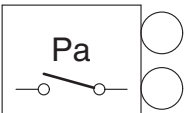
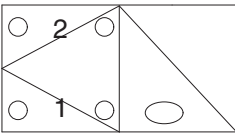
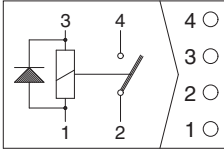
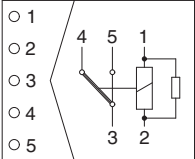
ELECTRIC CIRCUIT FOR HYDRAULIC (2/2)

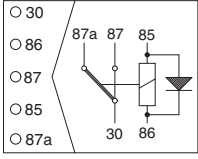
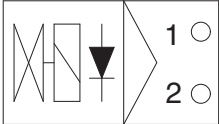
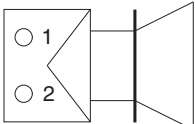
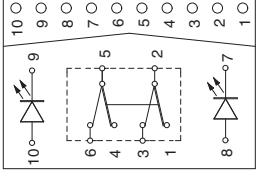
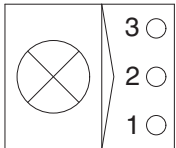


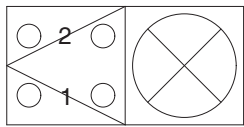
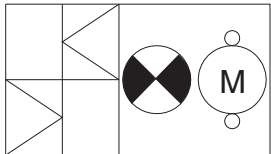
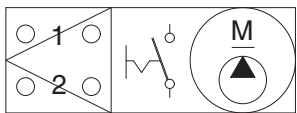
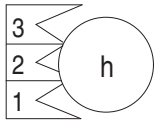
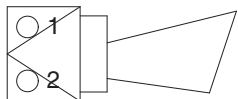
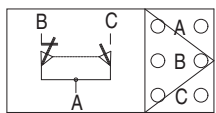
※ The circuit diagram may differ from the equipment, so please check before a repair.

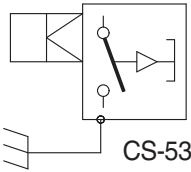
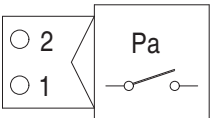
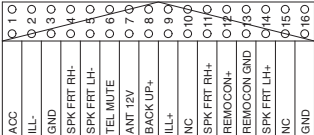
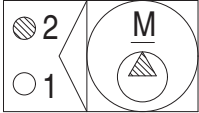
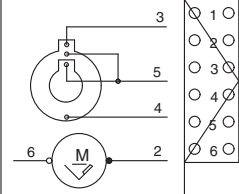
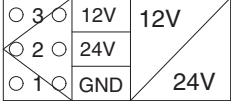
GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

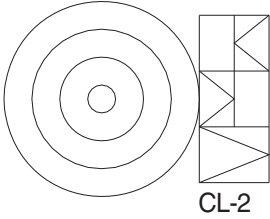
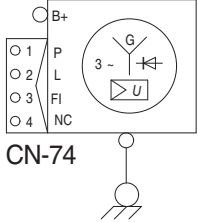
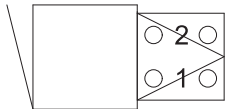
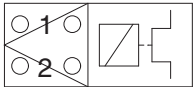
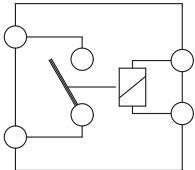
Part name	Symbol	Specifications	Check
Battery		12V × 200Ah (2EA)	※ Check specific gravity 1.280 over : Over charged 1.280 ~ 1.250 : Normal 1.250 below : Recharging
Battery relay	 CR-1	Rated load : 24V 100A (continuity) 1000A (30seconds)	※ Check coil resistance(M4 to M4) Normal : About 50Ω ※ Check contact Normal : ∞Ω
Preheat relay	 CR-24	24V 200A	※ Check contact Normal : 0.942Ω (For terminal 1-GND)
Start switch	 CS-2A	B-BR : 24V 1A B-ACC : 24V 10A B-ST : 24V 40A	※ Check contact OFF : ∞Ω (for each terminal) ON : 0Ω (for terminal 1-3 and 1-2) START : 0Ω (for terminal 1-6)
Pressure sensor	 CD-6 CD-7 CD-24 CD-31 CD-32 CD-35 CD-36 CD-42 CD-43 CD-45 CD-69 CD-70 CD-71 CD-85 CD-87 CD-90	8~30V	※ Check contact Normal : 0.1Ω
Air compressor power	 CN-25B	15A	

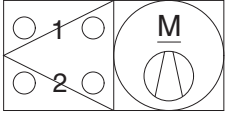
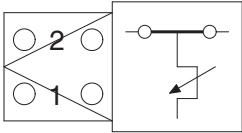
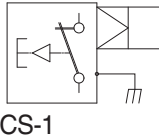
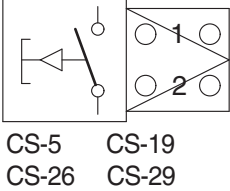
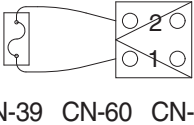
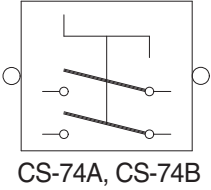
Part name	Symbol	Specifications	Check
Pre-heater	 CN-80	24V 200A	※ Check resistance 0.25~0.12Ω
Temperature sensor (hydraulic)	 CD-1 CD-8	-	※ Check resistance 50°C : 804Ω 80°C : 310Ω 100°C : 180Ω
Air cleaner pressure switch	 CD-10	N.O TYPE	※ Check contact High level : ∞Ω Low level : 0Ω
Fuel level sender	 CD-2	-	※ Check resistance Full : 50Ω 6/12 : 350Ω 11/12 : 100Ω 5/12 : 400Ω 10/12 : 150Ω 4/12 : 450Ω 9/12 : 200Ω 3/12 : 500Ω 8/12 : 250Ω 2/12 : 550Ω 7/12 : 300Ω 1/12 : 600Ω Empty warning : 700Ω
Relay (air con blower)		24V 20A	※ Check resistance Normal : About 200Ω (for terminal 1-3) ∞Ω (for terminal 2-4)
Relay	 CR-2 CR-36 CR-62	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 1-2) 0Ω (for terminal 3-4) ∞Ω (for terminal 3-5)

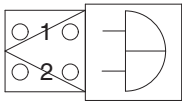
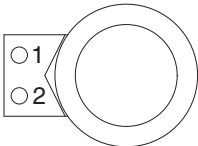
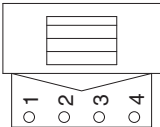
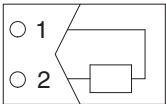
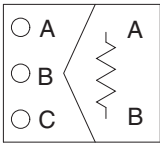
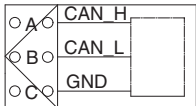
Part name	Symbol	Specifications	Check
Relay	 CR-4 CR-5 CR-7 CR-9 CR-13 CR-35 CR-46 CR-81	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 85-86) 0 Ω (for terminal 30-87a) ∞ Ω (for terminal 30-87)
Solenoid valve	 CN-66 CN-68 CN-70 CN-88 CN-140 CN-149 CN-236 CN-237 CN-419 CN-420 CN-421	24V 1A	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
EPPR valve	 CN-75 CN-242 CN-243	700mA	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
Speaker	 CN-23 (LH) CN-24 (RH)	20W	※ Check resistance Normal : A few Ω
Switch (locking type)	 CS-52 CS-67 CS-73 CS-83 CS-99 CS-108	24V 8A	※ Check contact Normal ON : 0 Ω (for terminal 2-3, 5-6) ∞ Ω (for terminal 1-2, 4-5) OFF : ∞ Ω (for terminal 2-3, 5-6) 0 Ω (for terminal 1-2, 4-5)
Room lamp	 CL-1	24V 10W	※ Check disconnection Normal : 1.0 Ω ON : 0 Ω (For terminal 1-2) ∞ Ω (For terminal 1-3) OFF : ∞ Ω (For terminal 1-2) 0 Ω (For terminal 1-3)

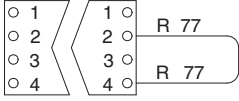
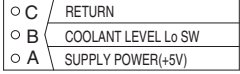
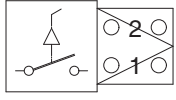
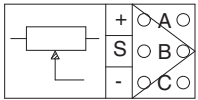
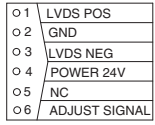
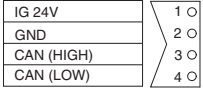
Part name	Symbol	Specifications	Check
Head lamp, Work lamp, Cab lamp	 CL-3 CL-4 CL-5 CL-6 CL-8 CL-9 CL-10 CL-24A CL-37	24V 65W (H3 Type)	※ Check disconnection Normal : 1.2Ω
Beacon lamp	 CL-7	21V 70W (H1 Type)	※ Check disconnection Normal : A few Ω
Fuel filler pump	 CN-61	24V 10A 35 ℓ /min	※ Check resistance Normal : 1.0Ω
Hour meter	 CN-48	16~32V	※ Check operation Supply power(24V) to terminal No.2 and connect terminal No.1 and ground
Horn	 CN-20 CN-25	DC22~28V 2A	※ Check operation Supply power(24V) to each terminal and connect ground.
Safety switch	 CS-4	24V 15A (N.C TYPE)	※ Check contact Normal : 0Ω (for terminal A-B) ∞Ω (for terminal A-C) Operating : ∞Ω (for terminal A-B) 0Ω (for terminal A-C)

Part name	Symbol	Specifications	Check
Wiper cut switch	 CS-53	24V (N.O TYPE)	※ Check contact Normal : 0Ω (one pin to ground)
Receiver dryer	 CN-29	24V 2.5A	※ Check contact Normal : ∞Ω
Radio & USB player	 CN-27A	24V 2A	※ Check voltage 20~25V (for terminal 1-3, 3-8)
Washer pump	 CN-22	24V 3.8A	※ Check contact Normal : 10.7Ω (for terminal 1-2)
Wiper motor	 CN-21	24V 2A	※ Check disconnection Normal : 7Ω (for terminal 2-6)
DC/DC Converter	 CN-138	12V 3A	※ Check voltage 24V (for terminal 1-2) 12V (for terminal 1-3)

Part name	Symbol	Specifications	Check
Cigar lighter	 CL-2	24V 5A 1.4W	※ Check coil resistance Normal : About 1M Ω ※ Check contact Normal : $\infty \Omega$ Operating time : 5~15sec
Alternator	 CN-74	Delco Remy 24V 90A	※ Check contact Normal : 0 Ω (for terminal B ⁺ -L) Normal : 24~27.5V
Starter	 CN-45	Delco Remy 24V 7.2W	※ Check contact Normal : 0.1 Ω
Travel alarm	 CN-81	24V 0.5A	※ Check contact Normal : 5.2 Ω
Aircon compressor	 CN-28	24V 79W	※ Check contact Normal : 13.4 Ω
Start relay	 CR-23	24V 300A	※ Check contact Normal : 0.94 Ω (for terminal 1-2)

Part name	Symbol	Specifications	Check
Blower motor		24V 9.5A	※ Check resistance Normal : 2.5Ω (for terminal 1-2)
Thermistor		1°C OFF 4°C ON	※ Check resistance Normal : 0Ω (for terminal 1-2), the atmosphere temp : Over 4°C
Door switch		24V 2W	※ Check resistance Normal : About 5MΩ
Switch (power max, one touch decel, horn, breaker)		24V 6A	※ Check resistance Normal : ∞Ω
Fuse		CN-39 : 25A CN-60 : 60A CN-95 : 80A	※ Check disconnection Normal : 0Ω (connect ring terminal and check resist between terminal 1 and 2)
Master switch		6-36V	※ Check disconnection Normal : 0.1Ω

Part name	Symbol	Specifications	Check
Quick clamp buzzer	 CN-113	24V 200mA 107±4dB	-
Socket	 CN-139	12V 10A	-
Fuel heater	 CN-96	24V 200W	-
Resistor alternator	 RS-1	3W 300Ω	-
Resistor - CAN	 CN-99	120Ω	-
Start button	 CS-2B	-	-

Part name	Symbol	Specifications	Check
GPS connector	 CN-125	-	-
Water level sensor (EG)	 CD-16	-	-
Breaker switch	 CS-26A	-	-
Accel dial	 CN-142	-	-
Camera	 CS-402 CS-403 CS-404 CS-405	-	-
Reader	 CN-427	-	-

GROUP 4 CONNECTORS

1. CONNECTOR DESTINATION

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-2	ITT CANNON	19	I/conn (Frame harness-Engine harness)	121583-0135	121583-0119
CN-3	ITT CANNON	19	I/conn (Engine harness-Frame harness)	121583-0135	121583-0119
CN-4	AMP	16	I/conn (Console harness LH-Frame harness)	368047-1	368050-1
CN-5	DEUTSCH	60	I/conn (Side harness RH-Frame harness)	DRB16-60SAE-L018	DRB12-60P-L018
CN-6	AMP	10	I/conn (Console harness RH-Frame harness)	S816-010002	S816-110002
CN-7	AMP	12	I/conn (Console harness RH-Frame harness)	S816-012002	S816-112002
CN-8	AMP	12	I/conn (Console harness RH-Frame harness)	S816-010002	S816-112002
CN-9	DEUTSCH	12	I/conn (AAVM harness-Frame harness)	DT06-12SA-P021	DT04-12PA-P021
CN-10	DEUTSCH	12	I/conn (Cab harness-Side harness RH)	DT06-12S-EP06	DT04-12PA-P021
CN-11	DEUTSCH	8	I/conn (Frame harness-Aircon harness)	DT06-8S-EP06	-
CN-12	DEUTSCH	2	I/conn (Frame harness-Boom wire harness)	DT06-2S-EP06	DT04-2P
CN-14	DEUTSCH	2	Swing parking	DT06-2S-EP06	-
CN-14	DEUTSCH	31	OEM	HD36-24-31SE	-
CN-15	AMP	12	I/conn (Frame harness-Breaker sol)	S816-012002	S816-112002
CN-16	-	6	Emergency engine speed control	-	S816-106002
CN-16A	-	6	Emergency engine speed control	S816-006002	-
CN-16B	-	6	Emergency engine speed control	S816-006002	S816-106002
CN-17	AMP	8	I/conn (Wiper harness-Side harness RH)	S816-008002	S816-108002
CN-20	-	2	Horn	36825-0211	-
CN-21	AMP	6	Wiper motor	S810-006202	-
CN-22	KET	2	Washer pump	MG640605	-
CN-23	KET	2	Speaker-LH	MG610070	-
CN-24	KET	2	Speaker-RH	MG610070	-
CN-25	-	2	Horn	36825-0211	-
CN-27	KET	2	Washer tank	MG640795	-
CN-27A	KUM	16	Radio & USB player	PK145-16017	-
CN-27B	AMP	8	Radio & USB player	-	174984-2
CN-28	KET	2	Aircon compressor	S814-002100	-
CN-29	KET	2	Receiver dryer	MG640795	-
CN-36	-	-	Fuse & relay box	21Q7-10910	-
CN-39	-	-	Air compressor power fuse	21Q6-03270	-
CN-45	RING-TERM	-	Starter motor B ⁺	S820-108000	-
CN-48	KET	1	Hour meter	2-520193-2	-
CN-51	DEUTSCH	40	MCU	DRC26-40SA	-
CN-52	DEUTSCH	40	MCU	DRC26-40SB	-

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-56A	AMP	12	Cluster	-	174663-2
CN-56B	AMP	8	Cluster	-	174984-2
CN-60	-	2	Battery power fuse	21Q6-03270	21LM-30140
CN-61	DEUTSCH	2	Fuel filler pump	DT06-2S	DT04-2P-E005
CN-66	DEUTSCH	2	Breaker solenoid	DT06-2S-EP06	-
CN-68	DEUTSCH	2	Safety solenoid	DT06-2S-EP06	-
CN-70	DEUTSCH	2	Travel high solenoid	DT06-2S-EP06	-
CN-74	-	4	Alternator	1218 6568	-
CN-75	AMP	2	Pump EPPR	S816-002002	-
CN-81	DEUTSCH	2	Travel buzzer solenoid	DT06-2S-EP06	-
CN-88	DEUTSCH	2	Power max solenoid	DT06-2S-EP06	-
CN-91	DEUTSCH	50	ECM	DRC26-50S-01	-
CN-95	-	-	IG power fuse	21Q6-03270	21LM-03180
CN-99	DEUTSCH	3	Resistor	DT06-3S-EP06	DT04-3P-EP10
CN-113	KET	2	Buzzer	MG651205-5	-
CN-125	Econoseal J	4	RMS connector	S816-004002	S816-104002
CN-125A	DEUTSCH	12	RMS	DT06-12S-P021	DT04-12PA-P021
CN-126	DEUTSCH	10	Service tool	DT06-12SA-P021	S816-110002
CN-138	FASTEN	3	DC/DC Converter	S810-003202	-
CN-139	FASTEN	2	12V socket	172434-2	-
CN-140	DEUTSCH	2	Quick clamp solenoid	DT06-2S-EP06	DT04-2P
CN-141	AMP	13	Wiper motor controller	172498-1	-
CN-147	DEUTSCH	2	Fuel heater	DT06-2S-E003	-
CN-149	DEUTSCH	2	Attach safety solenoid	DT06-2S-EP06	-
CN-150	AMP	4	Auto grease	S816-004002	S816-104002
CN-156	DEUTSCH	2	Air seat	-	DT04-2P
CN-157	AMP	1	Antena power	S822-014002	-
CN-236	DEUTSCH	2	Attachment pressure sensor	DT06-3S-EP06	-
CN-237	DEUTSCH	2	Attach confluent solenoid	DT06-2S-EP06	-
CN-242	DEUTSCH	2	Attach EPPR 1	DT06-2S-EP06	-
CN-243	DEUTSCH	2	Attach EPPR 2	DT06-2S-EP06	-
CN-246	DEUTSCH	3	Proportional valve-RH	DT06-3S	DT04-3P
CN-247	DEUTSCH	3	Proportional valve-LH	DT06-3S	DT04-3P
CN-249	DEUTSCH	4	Rear view camera	DT06-4S	DT04-4P-E005
CN-258	KET	1	Air compressor power	MG640944-5	MG650943-5
CN-263	DEUTSCH	2	Air compressor relay	DT06-2S-EP06	-
CN-279	-	2	Accel dial LED	S816-002002	-
CN-376	AMP	34	RDU	4-1437290-1	-
CN-401	FCI	90	AAVM controller	-	-

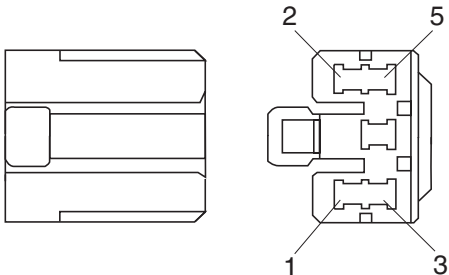
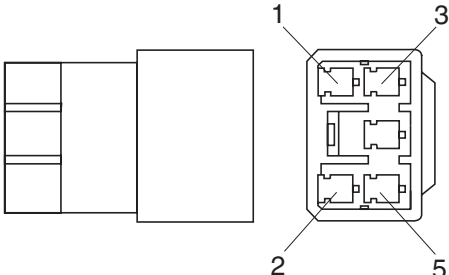
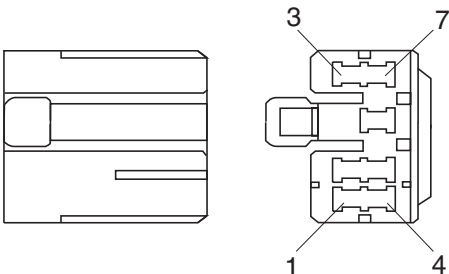
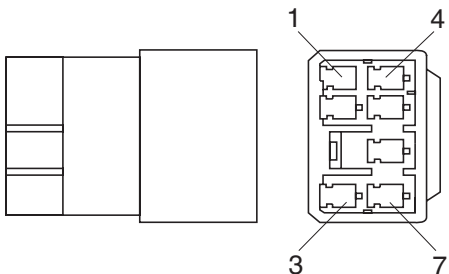
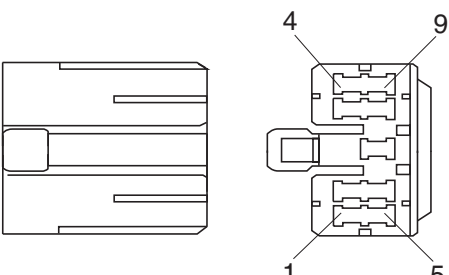
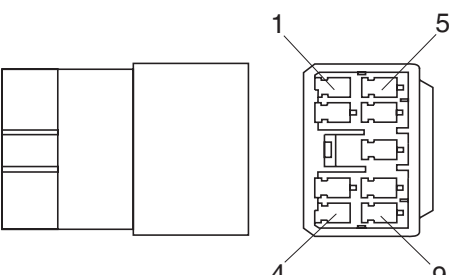
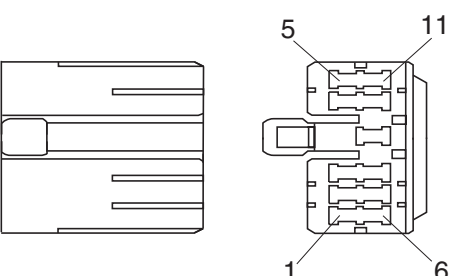
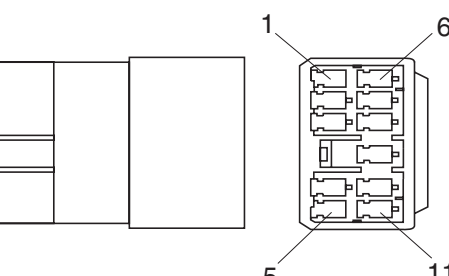
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-402	DEUTSCH	6	Front view camera	DT06-6S-PO21	DT04-6P-EP14
CN-403	DEUTSCH	6	Rear view camera	DT06-6S-EP06	DT04-6P-EP14
CN-404	DEUTSCH	6	LH view camera	DT06-6S-EP06	DT04-6P-EP14
CN-405	DEUTSCH	6	RH view camera	DT06-6S-EP06	DT04-6P-EP14
CN-406	DEUTSCH	4	RS232	DT06-4S-EP06	DT06-4P-E005
CN-427	MOLEX	4	Reader-RMS	039012040	026013096
CN-432	AMP	3	Ciger & power	174357-2	-
CN-432	AMP	3	I/conn (Side harness-RH)	-	174359-2
· Relay					
CR-1	KET	-	Battery relay	ST710289-2	-
CR-2	-	5	Horn relay	-	-
CR-4	-	5	Working lamp relay	-	-
CR-5	-	5	Anti restart relay	-	-
CR-7	-	5	Aircon compressor relay	-	-
CR-9	-	5	Cabin lamp relay	-	-
CR-13	-	5	Head lamp relay	-	-
CR-23	KET	2	Start relay	S814-002001	S814-102100
CR-24	-	1	Pre-heater relay	S822-014000	-
CR-35	-	5	Power relay	-	-
CR-36	-	5	Preheat relay	-	-
CR-46	-	5	Fuel warmer relay	-	-
CR-62	-	5	Breaker relay	-	-
CR-81	-	5	Beacon lamp relay	-	-
· Switch					
CS-1	SHUR	1	Door switch	S822-014002	S822-114002
CS-2A	WP	6	Start key switch	S814-006100	-
CS-2B	WP	3	BKCU	DT06-3S-EP06	DT04-2P-E005
CS-4	DEUTSCH	3	Safety switch	DT06-3S	-
CS-5	DEUTSCH	2	Horn switch	DT06-2S-EP06	DT04-2P
CS-19	DEUTSCH	2	One touch decel switch	DT06-2S-EP06	DT04-2P
CS-26	DEUTSCH	2	Breaker switch	DT06-2S	DT04-2P-E005
CS-26A	AMP	2	Breaker pedal switch	S816-002002	S816-102002
CS-29	DEUTSCH	2	Power max switch	DT06-2S	DT04-2P-E005
CS-33	AMP	6	Emergency engine stop switch	S816-006002	S816-106002
CS-52	CARLING	10	2 pcs & dozer switch	VC2-01	-
CS-53	AMP	1	Wiper cut switch	S822-014002	-
CS-67	CARLING	10	Quick clamp switch	VC2-01	-
CS-73	CARLING	10	Swing fine switch	VC2-01	-

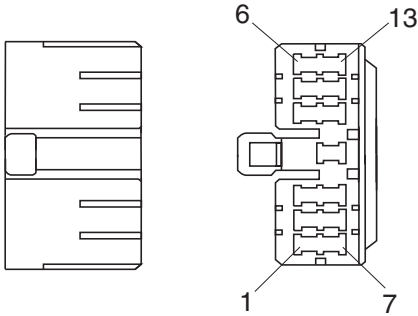
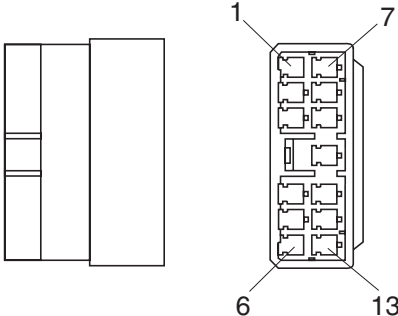
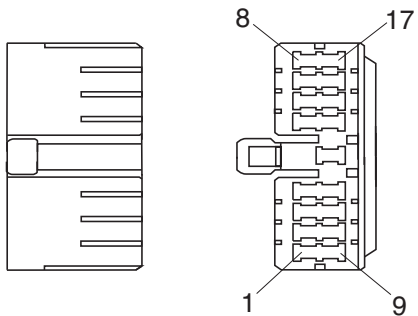
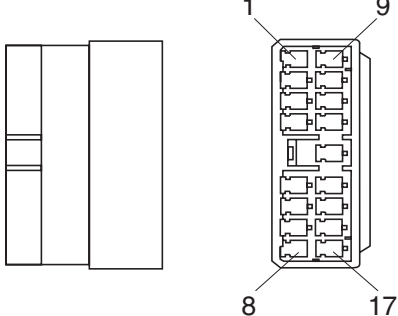
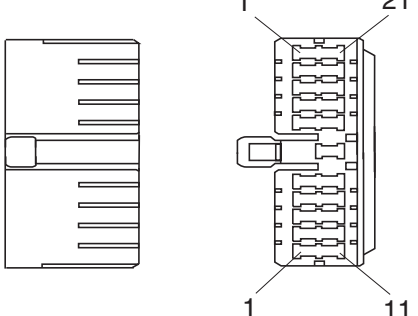
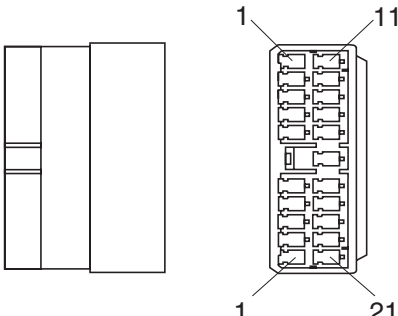
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CS-74A	KET	2	Master switch	MG610557-5	-
CS-74B	DEUTSCH	2	Master switch	DT06-2S-EP06	DT04-2P-E005
CS-83	CARLING	10	Swing lock switch	VC2-01	-
CS-99	CARLING	10	Air compressor switch	VC2-01	-
CS-108	CARLING	10	Auto grease switch	VC2-01	-
CS-142	DEUTSCH	3	Accel dial switch	DT06-3S	-
· Light					
CL-1	KET	3	Room lamp	MG651032	-
CL-2	AMP	1	Cigar lighter	S822-014002	S822-114002
CL-3	DEUTSCH	2	Head lamp-LH	DT06-2S-EP06	-
CL-4	DEUTSCH	2	Head lamp-RH	DT06-2S-EP06	-
CL-5	DEUTSCH	2	Work lamp-LH	DT06-2S	-
CL-6	DEUTSCH	2	Work lamp-RH	DT06-2S	-
CL-7	SHUR	1	Beacon lamp	S822-014002	S822-114002
CL-8	DEUTSCH	2	Cab light-LH	DT06-2S-EP06	DT04-2P
CL-9	DEUTSCH	2	Cab light-RH	DT06-2S-EP06	DT04-2P
CL-10	DEUTSCH	2	Cab light	DT06-2S-EP06	DT04-2P
CL-24	DEUTSCH	2	Head lamp-rear	DT06-2S-EP06	DT04-2P-E005
CL-36	DEUTSCH	2	Work lamp-LH	DT06-2S	DT04-2P-E005
CL-37	DEUTSCH	2	Work lamp-RH	DT06-2S	DT04-2P-E005
· Sensor, sensor					
CD-1	AMP	2	Hydraulic oil temp sender	85202-1	-
CD-2	DEUTSCH	2	Fuel sender	DT06-2S	-
CD-6	DEUTSCH	3	Travel pressure switch	DT06-3S-EP06	-
CD-7	DEUTSCH	3	Working pressure switch	DT06-3S-EP06	-
CD-10	AMP	2	Air cleaner switch	85202-1	-
CD-16	DELPHI	3	Water level sensor	12110293	-
CD-24	DEUTSCH	3	Swing sensor	DT06-3S-EP06	-
CD-31	DEUTSCH	3	Overload sensor	DT06-3S-EP06	DT06-4P
CD-32	DEUTSCH	3	Boom up sensor	DT06-3S-EP06	S816-103002
CD-35	DEUTSCH	3	Arm & bucket in pressure sensor	DT06-3S-EP06	DT06-4P-E005
CD-36	DEUTSCH	3	Arm out pressure sensor	DT06-3S-EP06	DT06-4P-E005
CD-41	DEUTSCH	3	N1 pressure sensor	DT06-3S-EP06	DT06-4P-E005
CD-42	DEUTSCH	3	Pump pressure 1	DT06-3S-EP06	DT06-4P-E005
CD-43	DEUTSCH	3	Pump pressure 2	DT06-3S-EP06	DT06-4P-E005
CD-45	DEUTSCH	3	Pump pressure 3	DT06-3S-EP06	DT06-4P-E005
CD-69	DEUTSCH	3	Attach pressure sensor	DT06-3S-EP06	DT06-4P-E005
CD-70	DEUTSCH	3	N1 pressure sensor	DT06-3S-EP06	DT06-4P-E005

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CD-71	DEUTSCH	3	N2 pressure sensor	DT06-3S-EP06	DT06-4P-E005
CD-85	DEUTSCH	3	Boom down pressure sensor	DT06-3S-EP06	DT06-3P-E005
CD-87	DEUTSCH	3	Bucket out pressure sensor	DT06-3S-EP06	DT06-3P-E005
CD-90	DEUTSCH	3	Arm in pressure sensor	DT06-3S-EP06	DT06-3P-E005

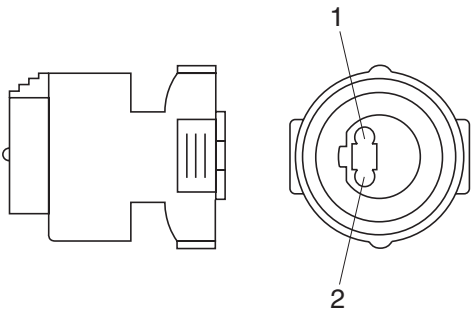
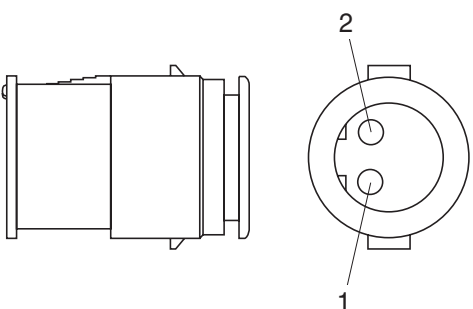
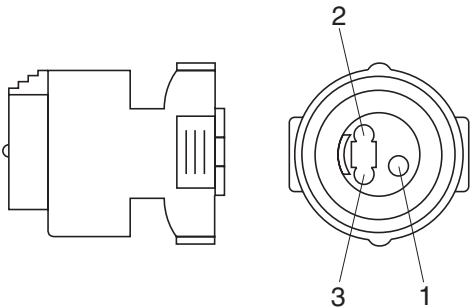
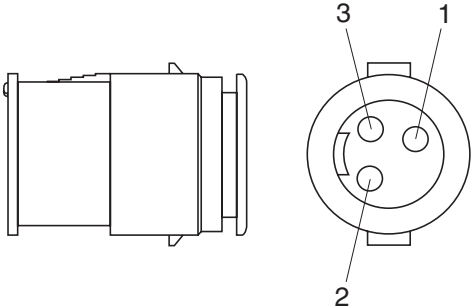
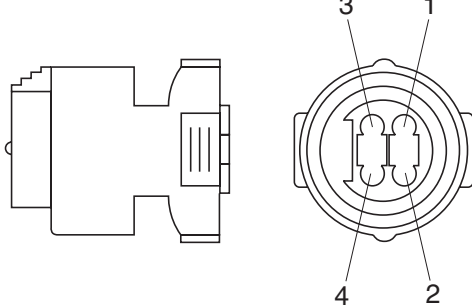
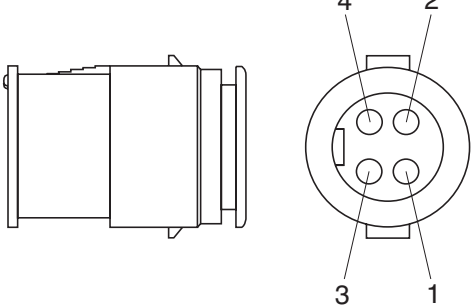
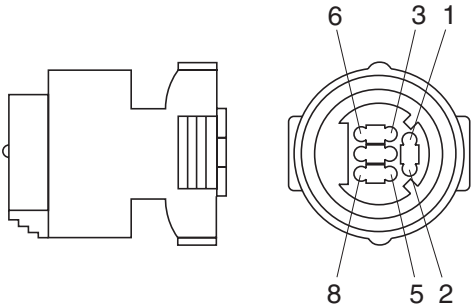
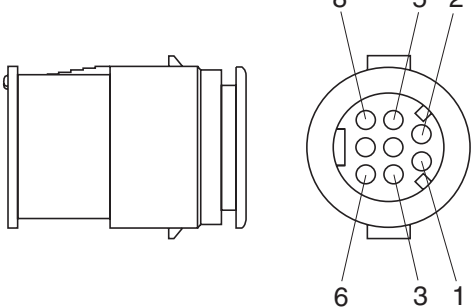
2. CONNECTION TABLE FOR CONNECTORS

1) PA TYPE CONNECTOR

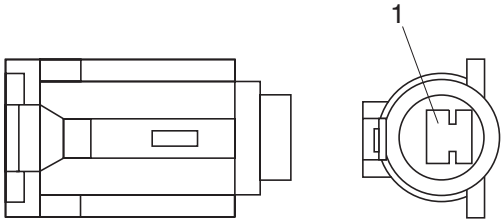
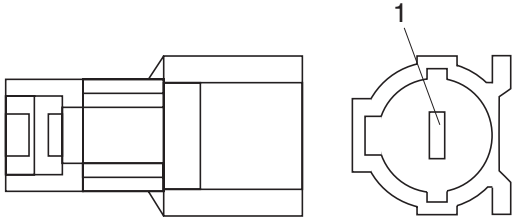
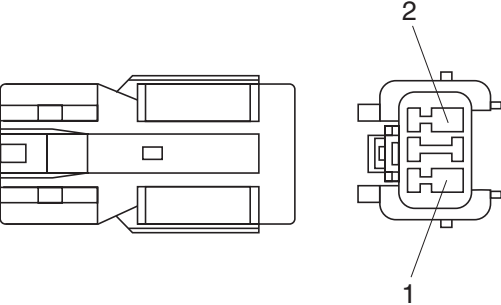
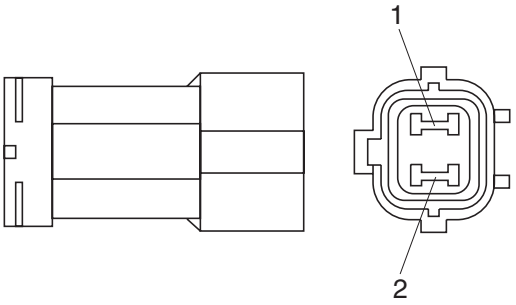
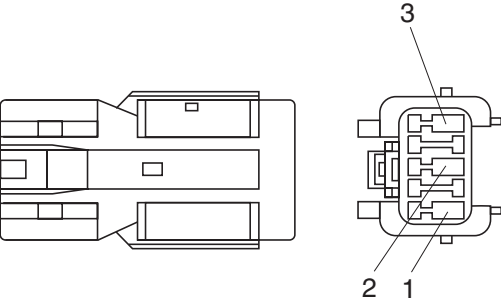
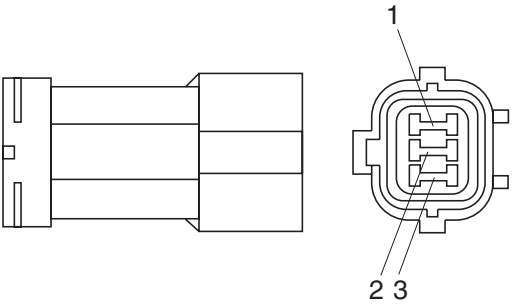
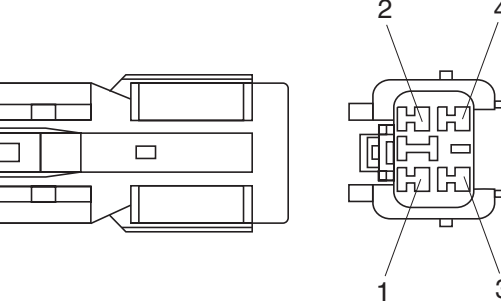
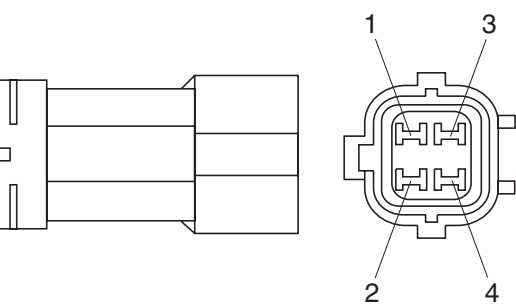
No. of pin	Receptacle connector (female)	Plug connector (male)
5	 S811-005002	 S811-105002
7	 S811-007002	 S811-107002
9	 S811-009002	 3S811-109002
11	 S811-011002	 S811-111002

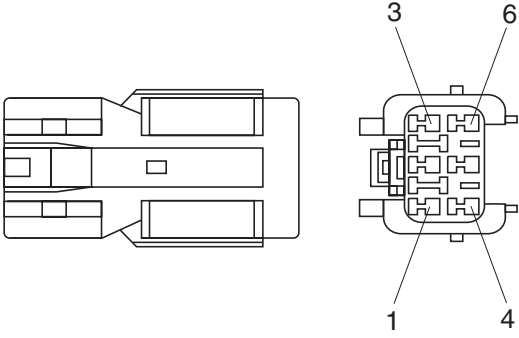
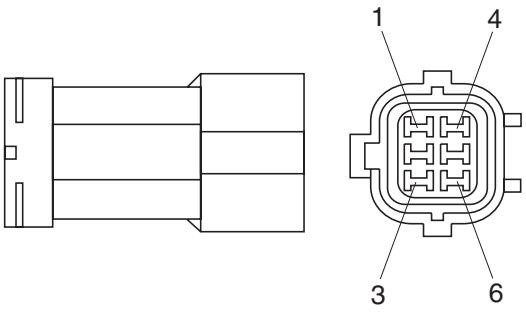
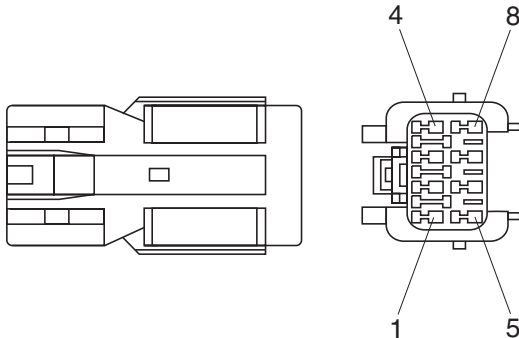
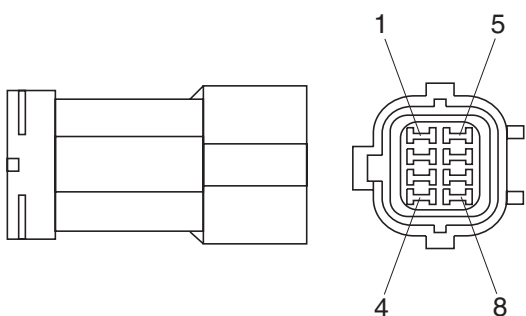
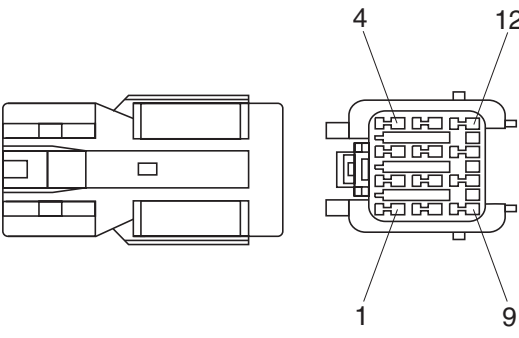
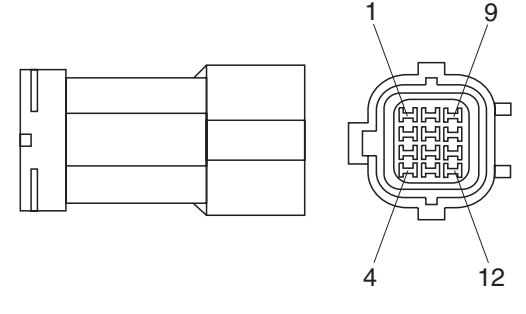
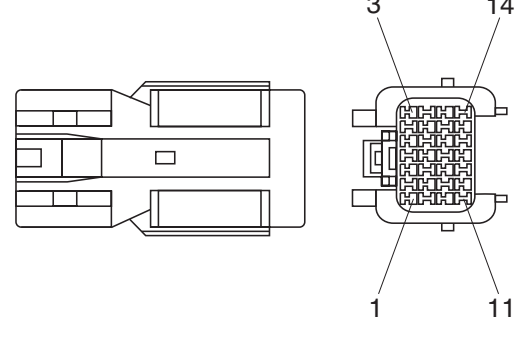
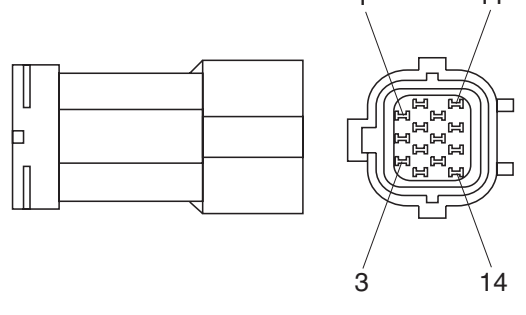
No. of pin	Receptacle connector (female)	Plug connector (male)
13	 S811-013002	 S811-113002
17	 S811-017002	 S811-117002
21	 S811-021002	 S811-121002

2) J TYPE CONNECTOR

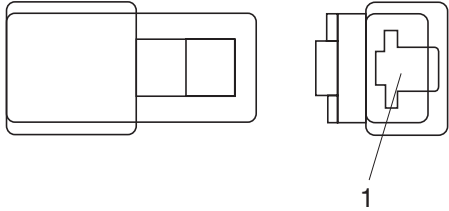
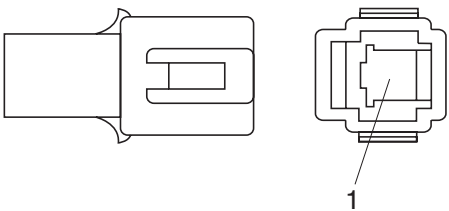
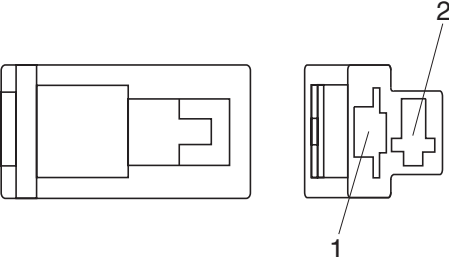
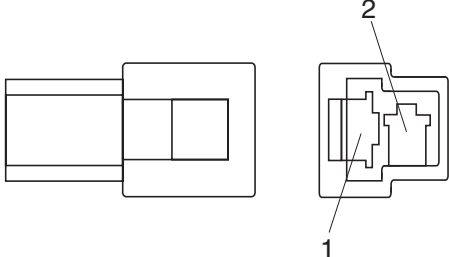
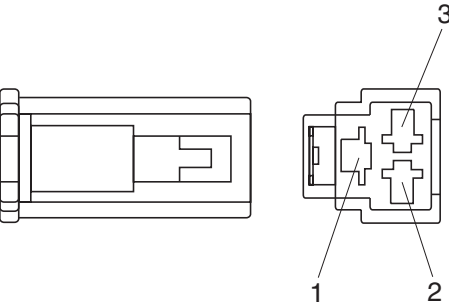
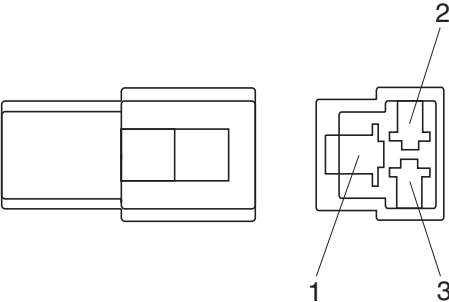
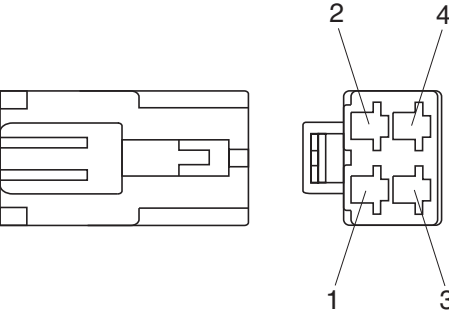
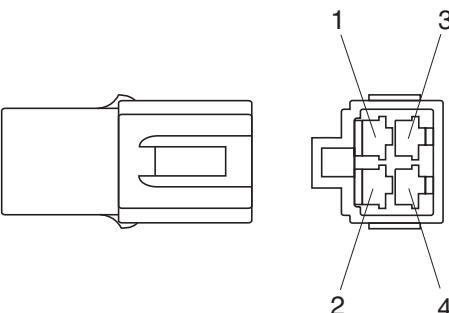
No. of pin	Receptacle connector (female)	Plug connector (male)
2	 S816-002001	 S816-102001
3	 S816-003001	 S816-103001
4	 S816-004001	 S816-104001
8	 S816-008001	 S816-108001

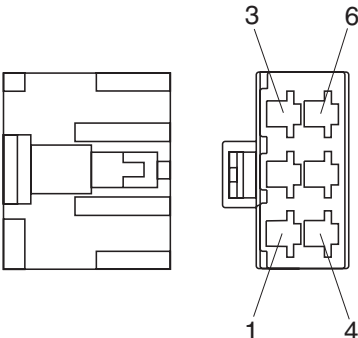
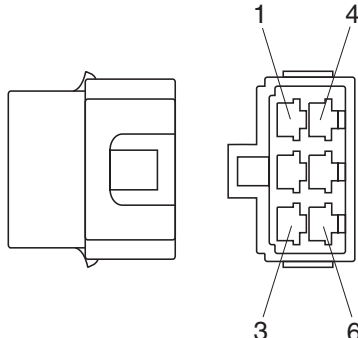
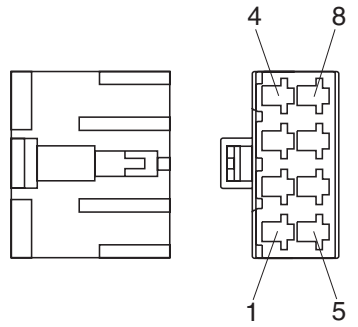
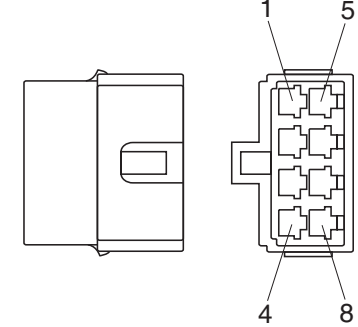
3) SWP TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 S814-001000	 S814-101000
2	 S814-002000	 S814-102000
3	 S814-003000	 S814-103000
4	 S814-004000	 S814-104000

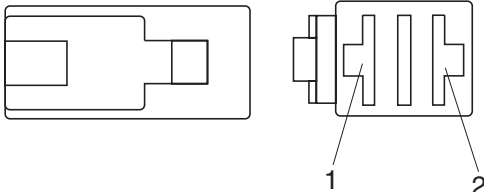
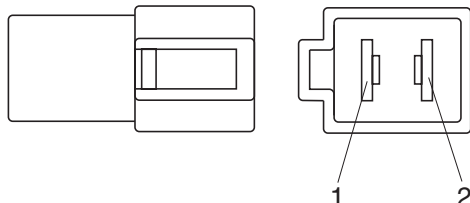
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 S814-006000	 S814-106000
8	 S814-008000	 S814-108000
12	 S814-012000	 S814-112000
14	 S814-014000	 S814-114000

4) CN TYPE CONNECTOR

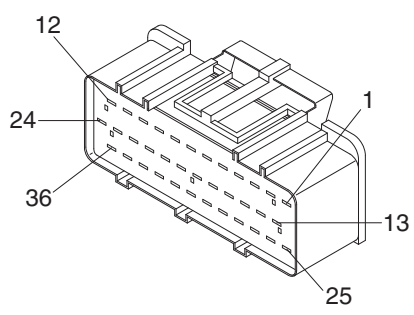
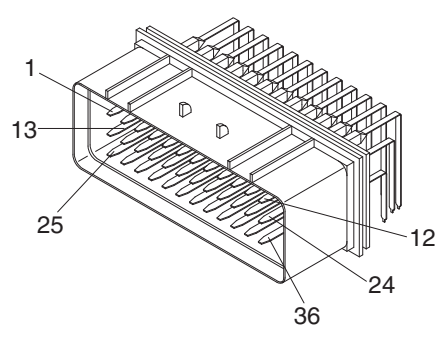
No. of pin	Receptacle connector (female)	Plug connector (male)
1	 S810-001202	 S810-101202
2	 S810-002202	 S810-102202
3	 S810-003202	 S810-103202
4	 S810-004202	 S810-104202

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 S810-006202	 S810-106202
8	 S810-008202	 S810-108202

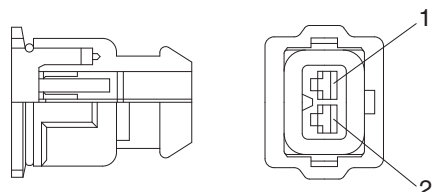
5) 375 FASTEN TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 S810-002402	 S810-102402

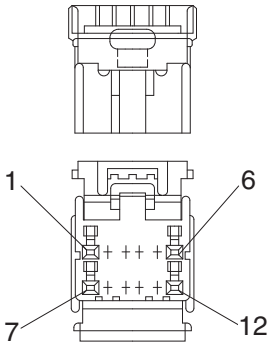
6) AMP ECONOSEAL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
36	 344111-1	 344108-1

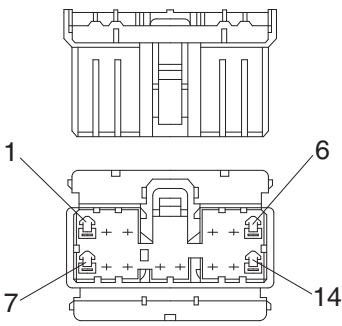
7) AMP TIMER CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 85202-1	

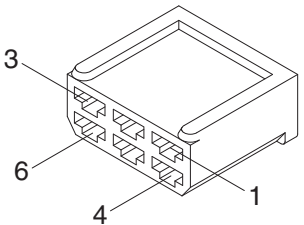
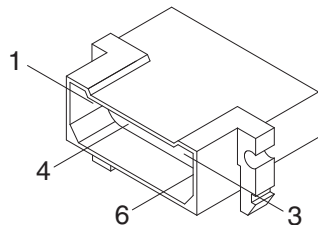
8) AMP 040 MULTILOCK CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
12	 174045-2	

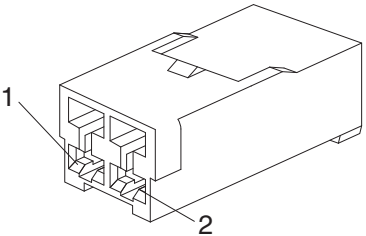
9) AMP 070 MULTILOCK CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
14	 173852	

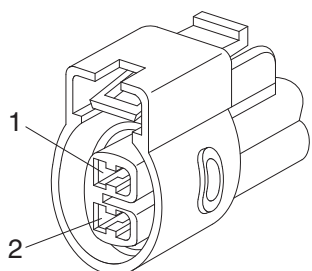
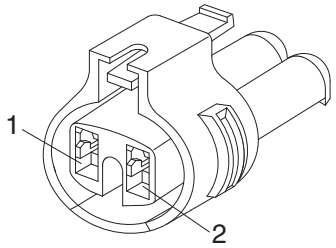
10) AMP FASTIN - FASTON CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 925276-0	 480003-9

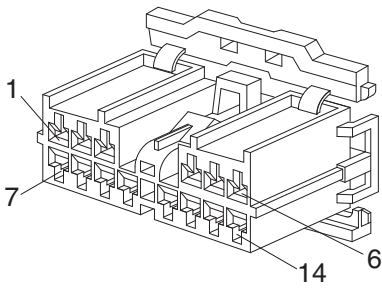
11) KET 090 CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 MG610070	

12) KET 090 WP CONNECTORS

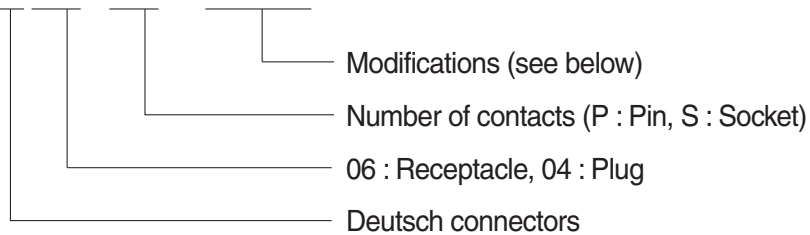
No. of pin	Receptacle connector (female)	Plug connector (male)
2	 MG640605	
2	 MG640795	

13) KET SDL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
14	 MG610406	

14) DEUTSCH DT CONNECTORS

DT 06 - 3S - ★★★★★



※ Modification

E003 : Standard end cap - gray

E004 : Color of connector to be black

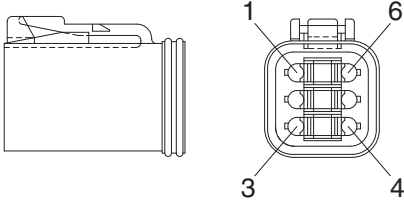
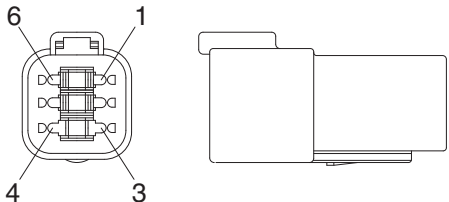
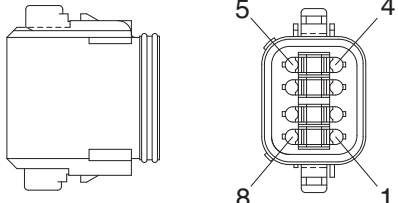
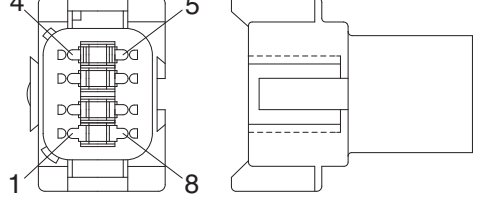
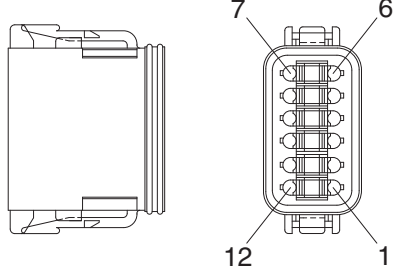
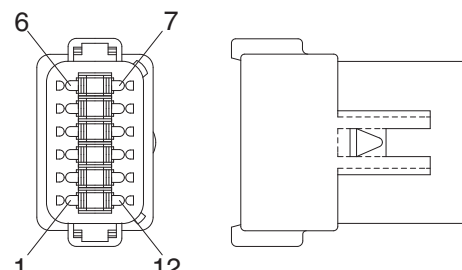
E005 : Combination - E004 & E003

EP04 : End cap

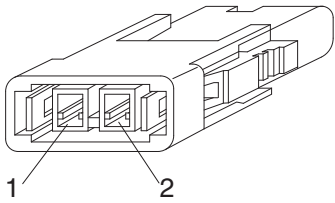
EP06 : Combination P012 & EP04

P012 : Front seal enhancement - connectors color to black for 2, 3, 4 & 6pin

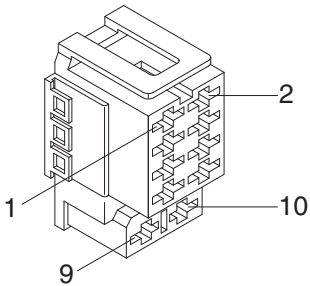
No. of pin	Receptacle connector (female)	Plug connector (male)
2	DT06-2S	DT04-2P
3	DT06-3S	DT04-3P
4	DT06-4S	DT04-4P

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 DT06-6S	 DT04-6P
8	 DT06-8S	 DT04-8P
12	 DT06-12S	 DT04-12P

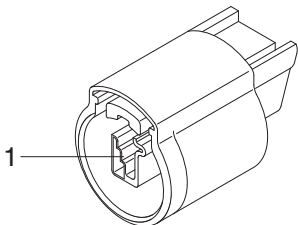
15) MOLEX 2CKTS CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 35215-0200	

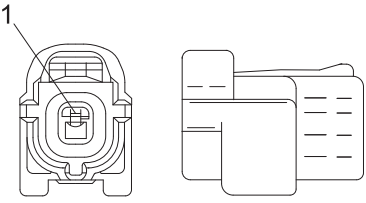
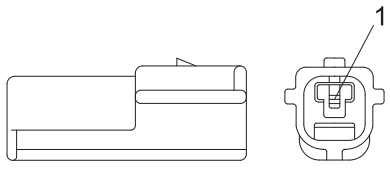
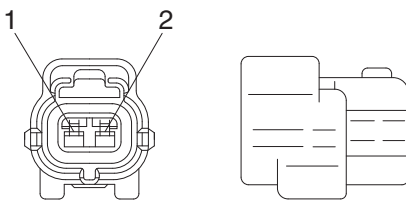
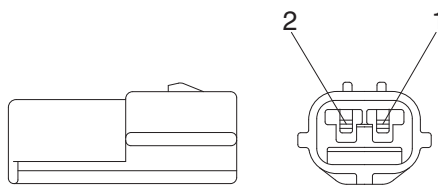
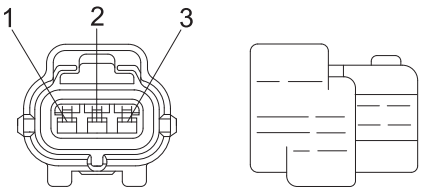
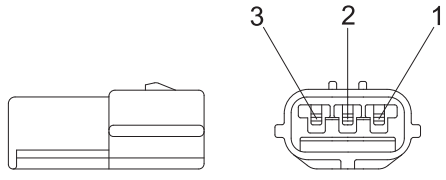
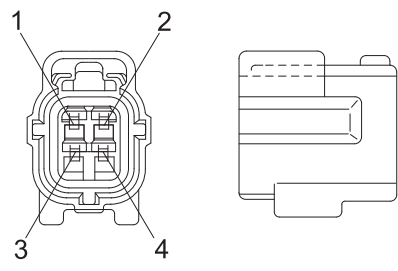
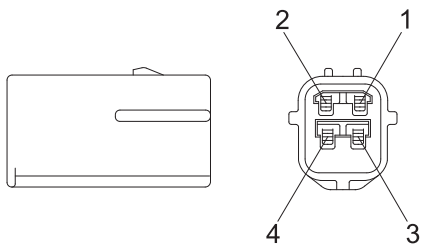
16) ITT SWF CONNECTOR

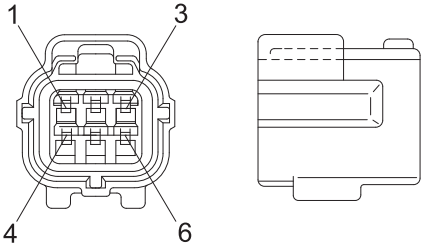
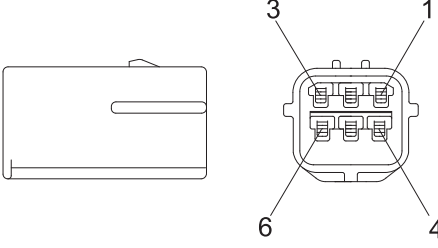
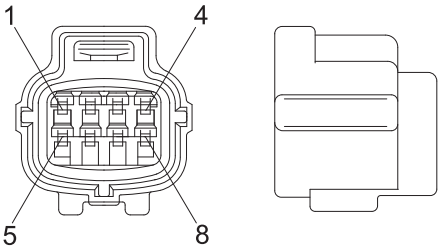
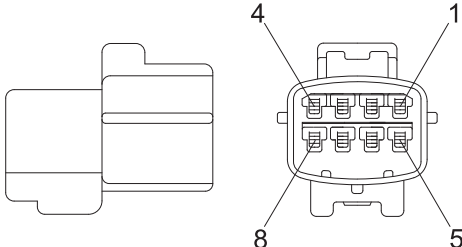
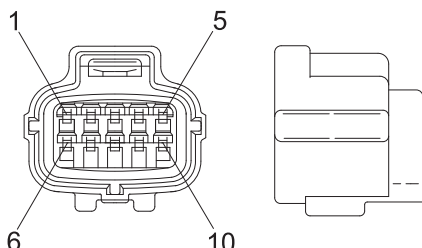
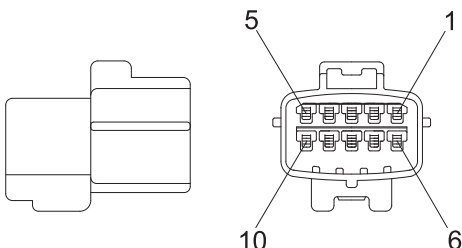
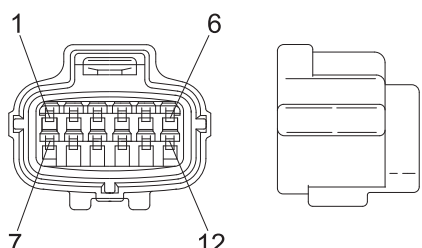
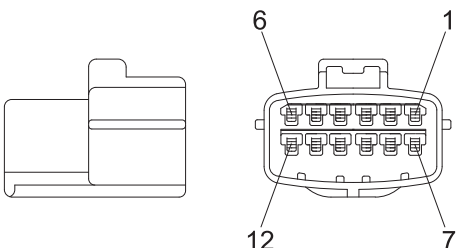
No. of pin	Receptacle connector (female)	Plug connector (male)
10	 SWF593757	

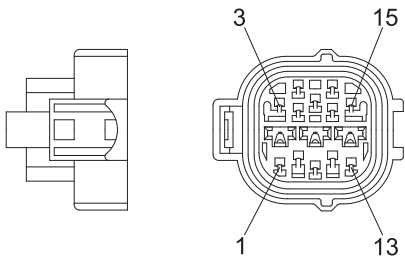
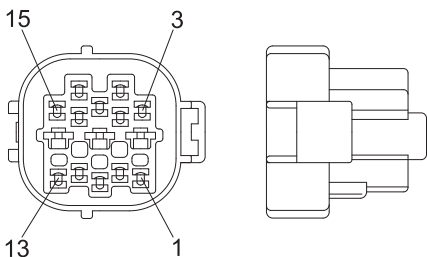
17) MWP NMWP CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 NMWP01F-B	

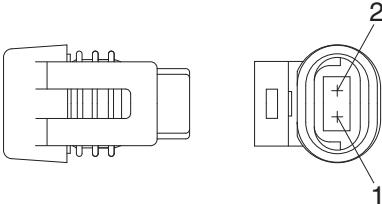
18) ECONOSEAL J TYPE CONNECTORS

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 S816-001002	 S816-101002
2	 S816-002002	 S816-102002
3	 S816-003002	 S816-103002
4	 S816-004002	 S816-104002

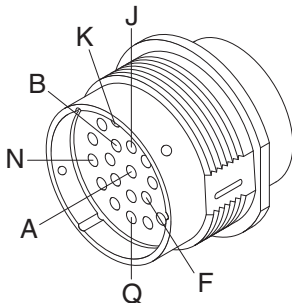
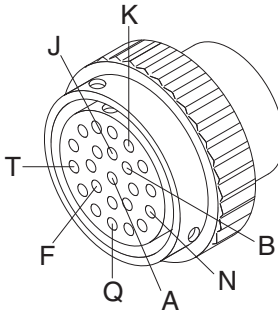
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 S816-006002	 S816-106002
8	 S816-008002	 S816-108002
10	 S816-010002	 S816-110002
12	 S816-012002	 S816-112002

No. of pin	Receptacle connector (female)	Plug connector (male)
15	 368301-1	 2-85262-1

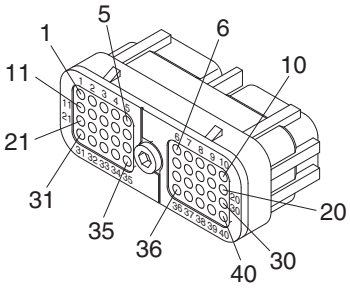
19) METRI-PACK TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 12040753	

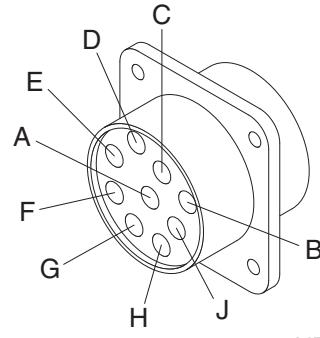
20) DEUTSCH HD30 CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
23	 HD36-24-23SN	 HD34-24-23PN

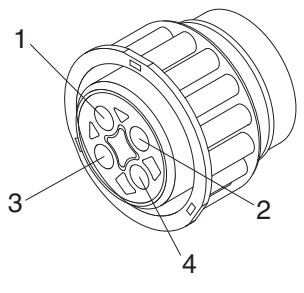
21) DEUTSCH MCU CONNECTOR

No. of pin	Receptacle connector (Female)	Plug connector (Male)
40	 DRC26-40SA/B	

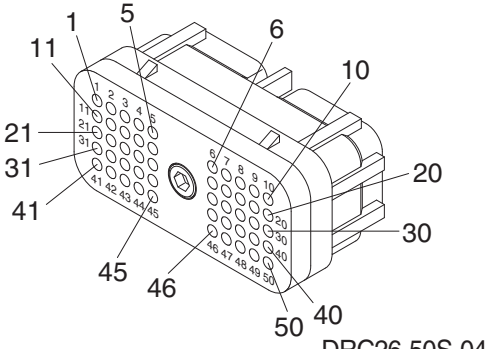
22) DEUTSCH SERVICE TOOL CONNECTOR

No. of pin	Receptacle connector (Female)	Plug connector (Male)
9	 HD10-9-96P	

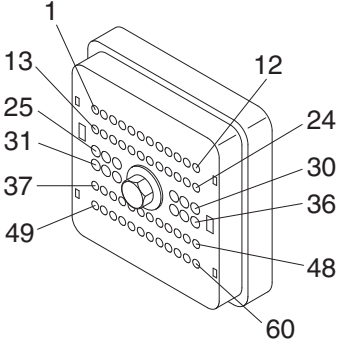
23) AMP FUEL WARMER CONNECTOR

No. of pin	Receptacle connector (Female)	Plug connector (Male)
4	 2-967325-3	

24) DEUTSCH ENGINE ECM CONNECTOR

No. of pin	Receptacle connector (Female)	Plug connector (Male)
50	 DRC26-50S-04	

25) DEUTSCH INTERMEDIATE CONNECTOR

No. of pin	Receptacle connector (Female)	Plug connector (Male)
60	 DRB16-60SAE-L018	