

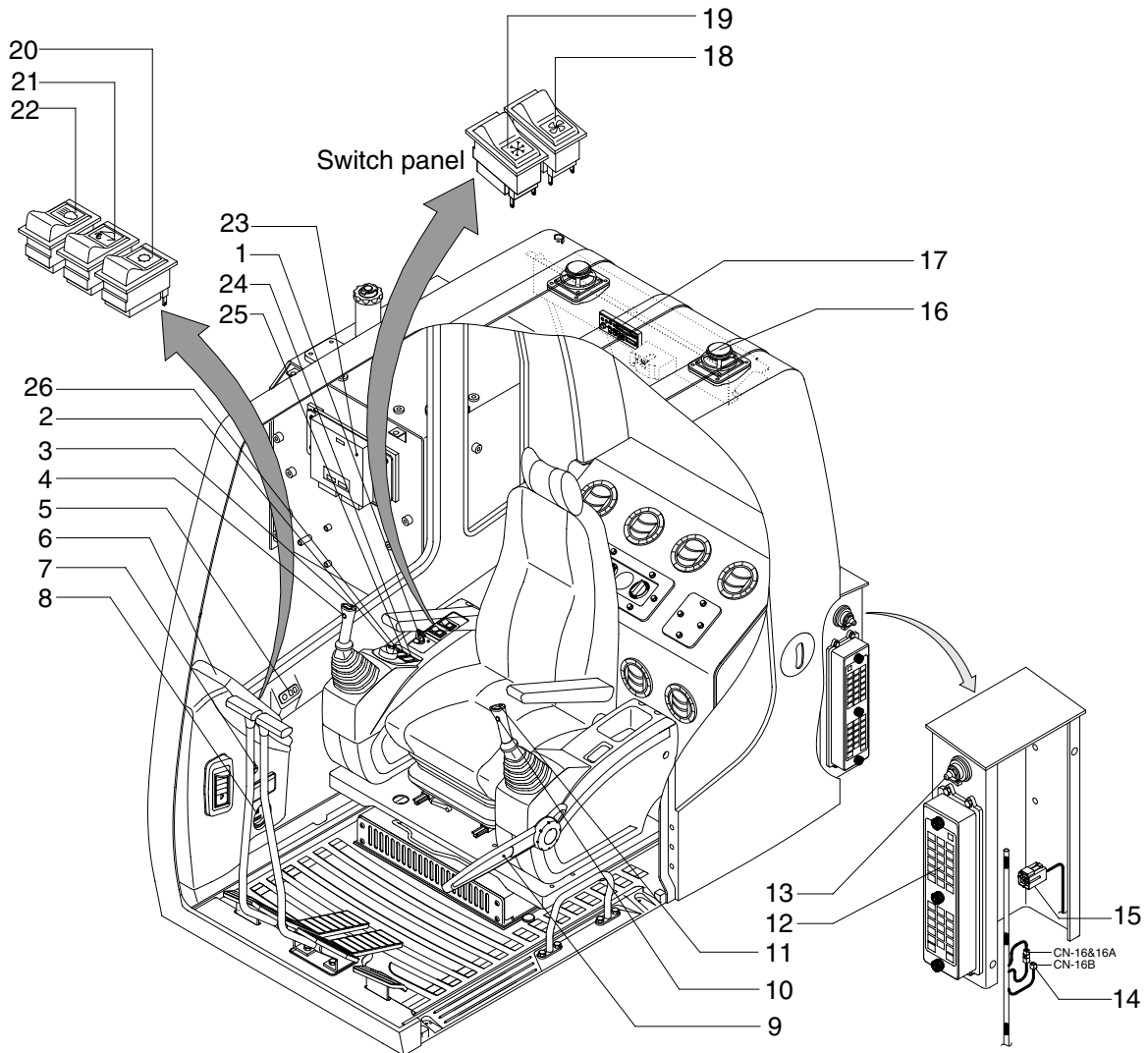
SECTION 4 ELECTRICAL SYSTEM

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SECTION 4 ELECTRICAL SYSTEM

GROUP 1 COMPONENT LOCATION

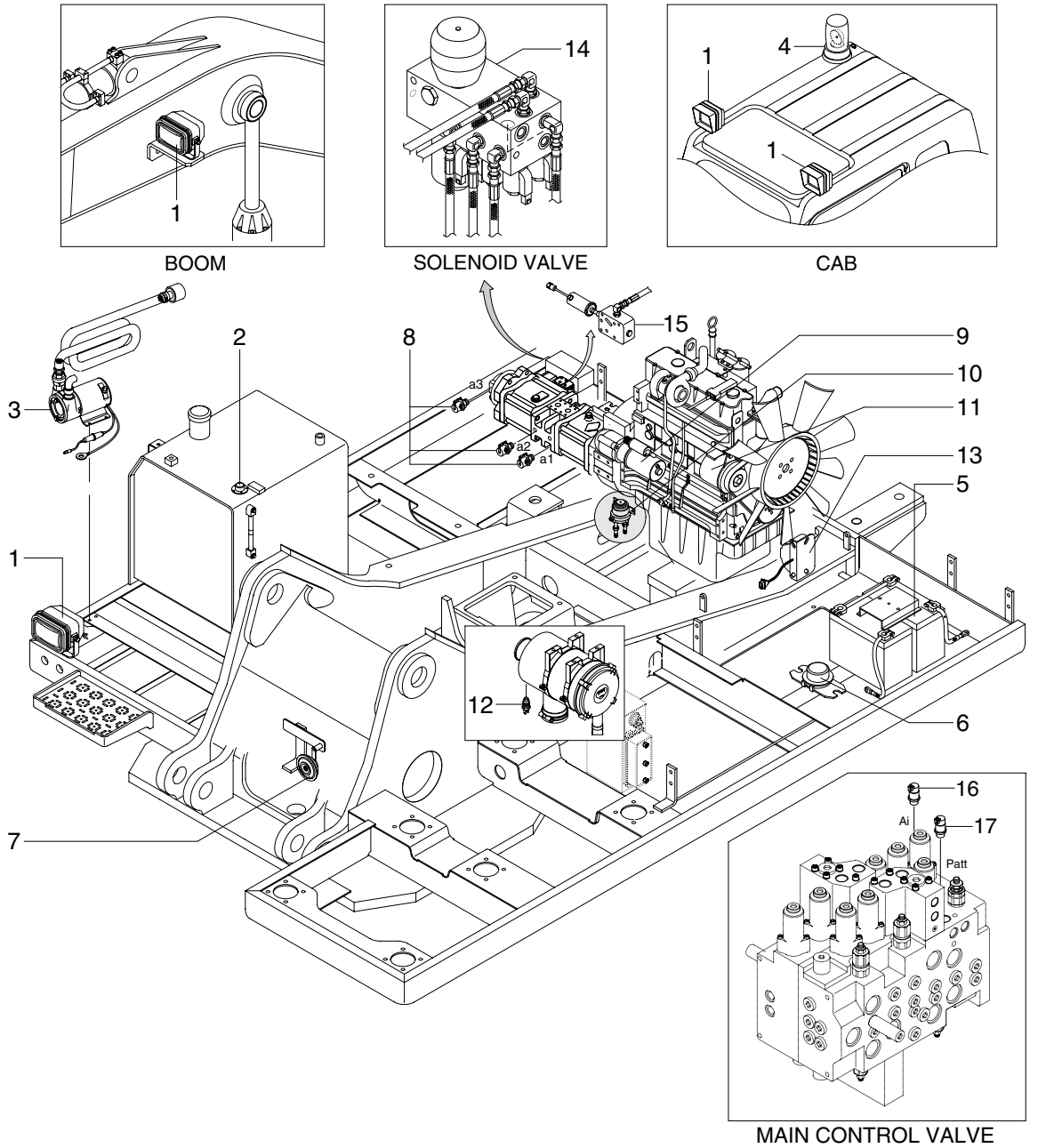
1. LOCATION 1



140V94EL01

- | | | |
|--------------------------------------|-------------------------------|-----------------------------|
| 1 Start switch | 10 Power max switch | 19 Aircon switch |
| 2 Accel dial switch | 11 One touch decel switch | 20 Main light switch |
| 3 Horn switch | 12 Fuse & relay box | 21 Quick clamp switch |
| 4 Breaker operation switch | 13 Master switch | 22 Cab light switch |
| 5 Cassette & radio remote controller | 14 Emergency engine connector | 23 Machine control unit |
| 6 Cluster | 15 RS232 service socket | 24 Wiper switch |
| 7 Power socket | 16 Speaker | 25 Washer switch |
| 8 Hour meter | 17 Cassette & Radio | 26 Breaker selection switch |
| 9 Safety lever | 18 Fan switch | |

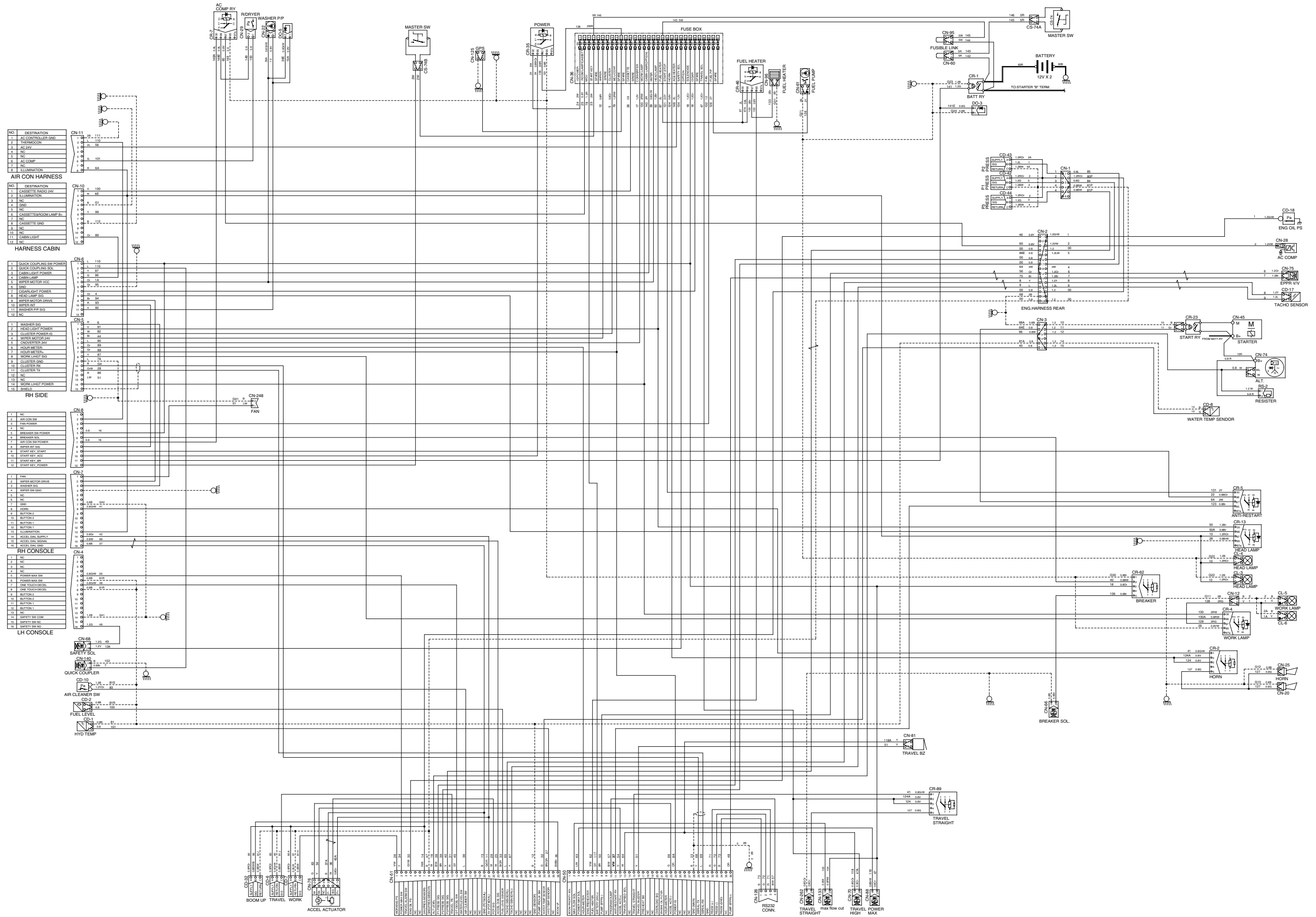
2. LOCATION 2



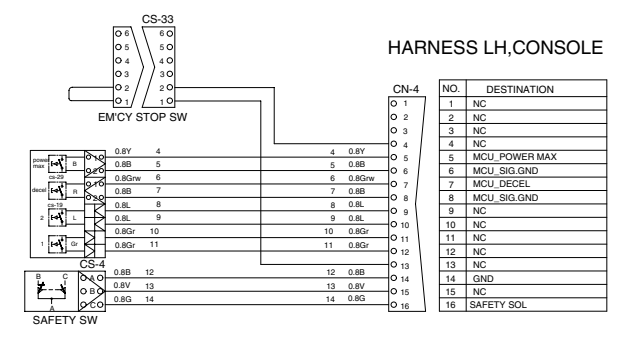
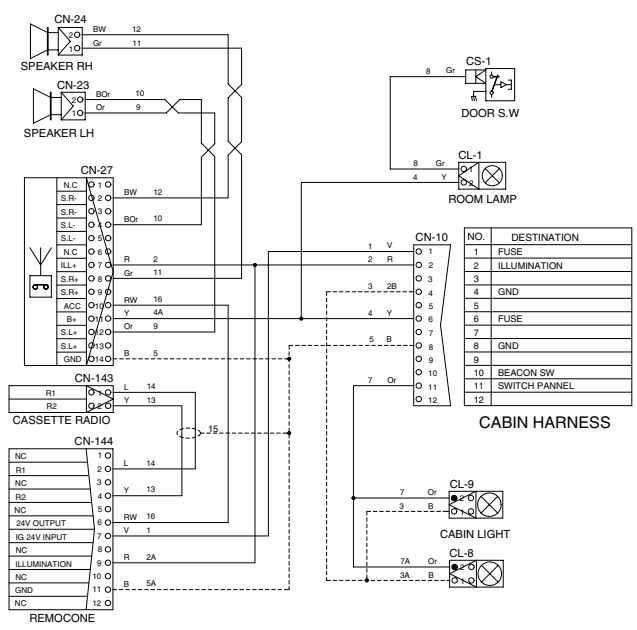
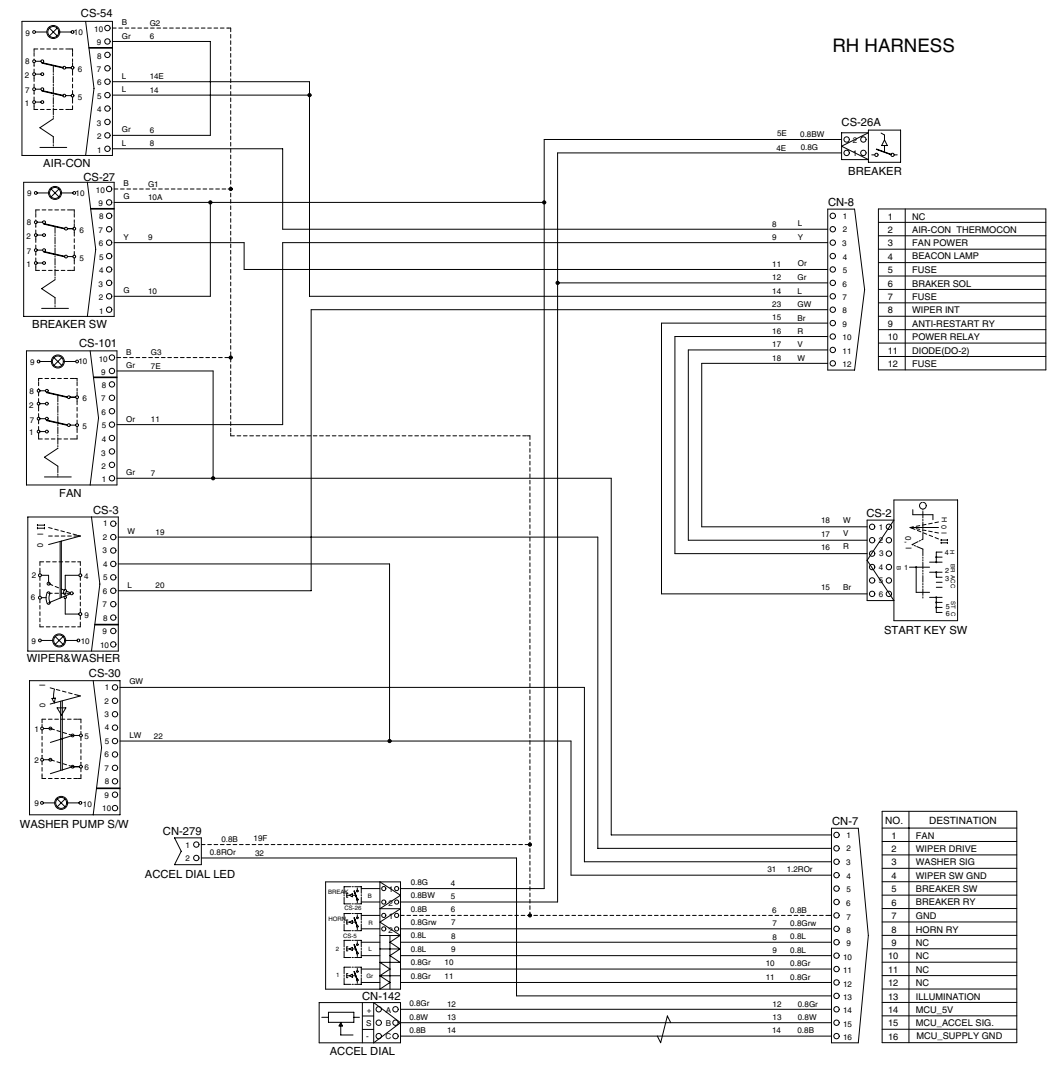
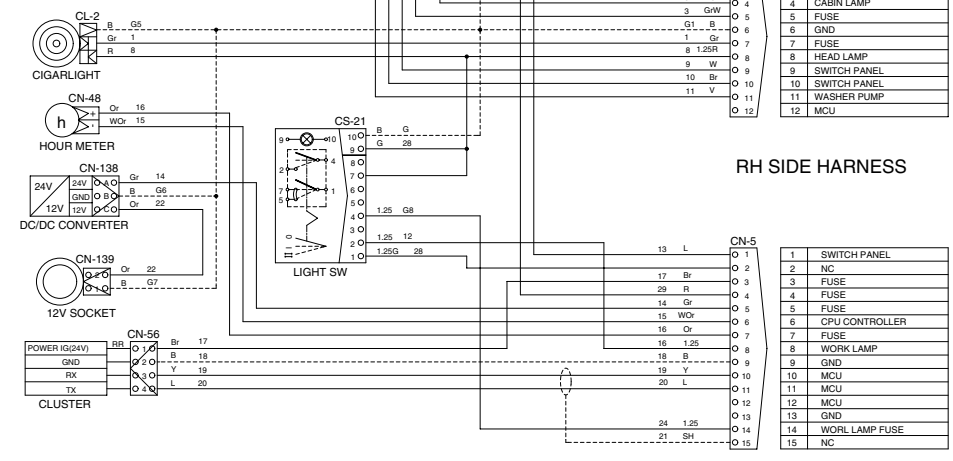
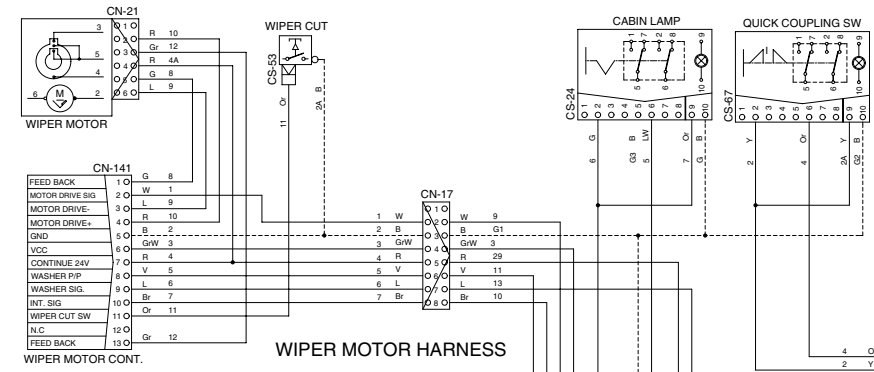
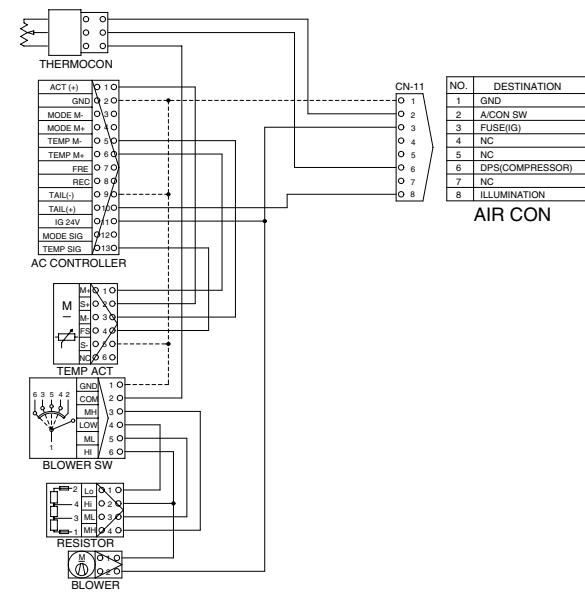
RD14094EL02

- | | | | | | |
|---|------------------|----|--------------------|----|------------------------|
| 1 | Lamp | 7 | Horn | 13 | Travel alarm buzzer |
| 2 | Fuel sender | 8 | Screw coupling | 14 | Solenoid valve |
| 3 | Fuel filler pump | 9 | Heater relay | 15 | Pump EPPR valve |
| 4 | Beacon lamp | 10 | Start relay | 16 | Travel pressure sensor |
| 5 | Battery | 11 | Alternator | 17 | Attach pressure sensor |
| 6 | Battery relay | 12 | Air cleaner switch | | |

GROUP 2 ELECTRICAL CIRCUIT(1/2)



ELECTRICAL CIRCUIT(2/2)



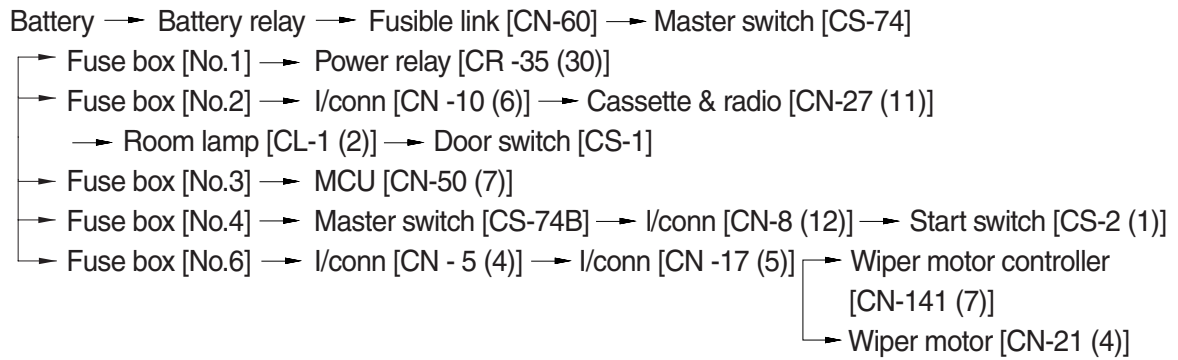
MEMORANDUM

HYUNDAI HEAVY INDUSTRIES CO., LTD
CONSTRUCTION EQUIPMENT DIV.

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



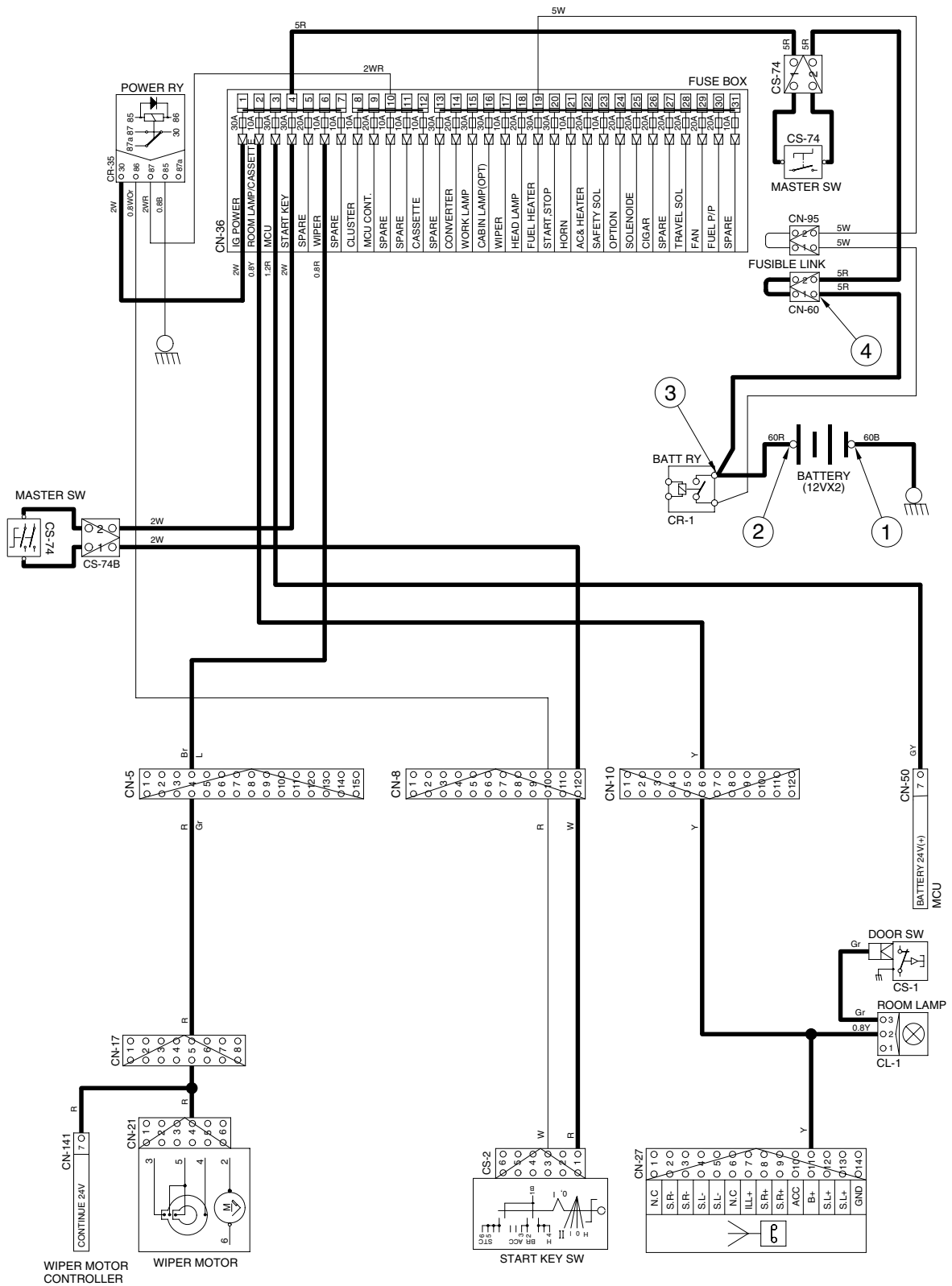
※ I/conn : Intermediate connector

2) CHECK POINT

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

※ GND : Ground

POWER CIRCUIT



2. STARTING CIRCUIT

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-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 (6)] → I/conn [CN-8 (9)] → Anti-restart relay [CR-5 (86) → (87)]
 → I/conn [CN-3 (2)] → 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

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 [CN-74 (2)] → I/conn [CN-3 (3)] → MCU alternator level [CN-51 (9)]
Cluster charging warning lamp (Via serial interface)

(2) Charging flow

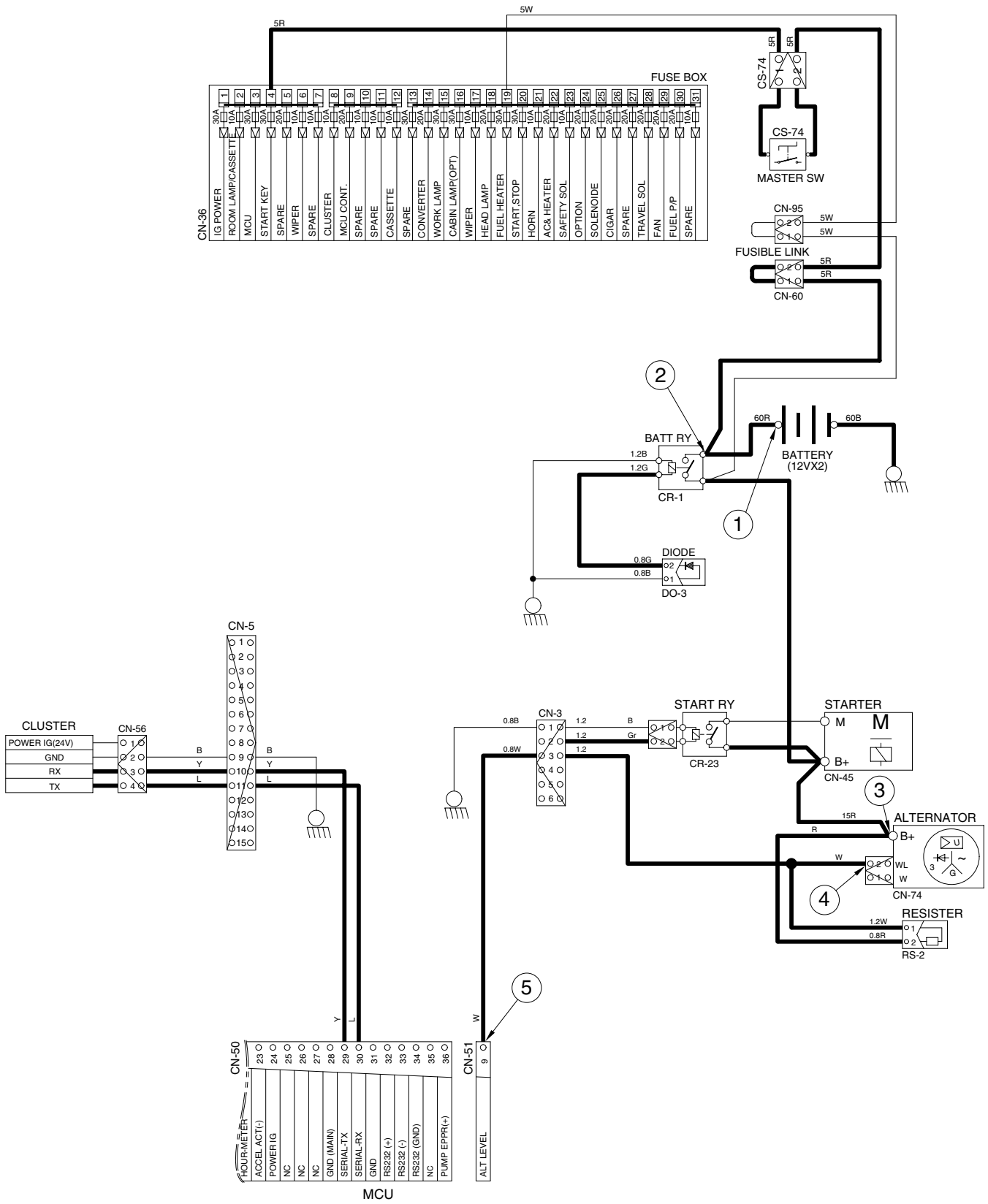
Alternator "B+" terminal → Battery relay(M8) → Battery(+) terminal
→ Fusible link [CN-60] → Master switch [CS-74]
→ Fuse box

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)	20~30V

※ GND : Ground

CHARGING CIRCUIT



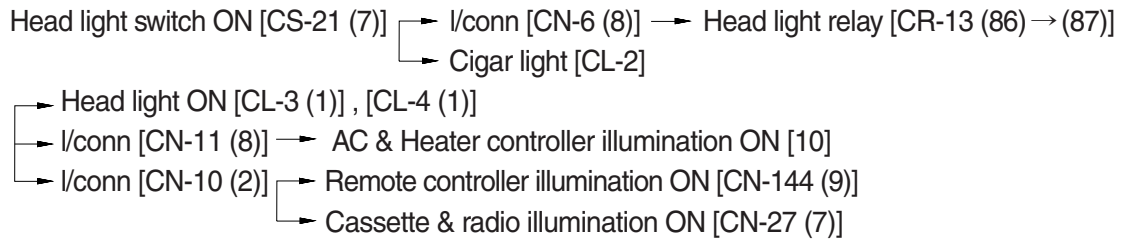
4. HEAD AND WORK LIGHT CIRCUIT

1) OPERATING FLOW

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

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

(1) Head light switch ON



(2) Work light switch ON

Work light switch ON [CN-21 (2)] → I/conn [CN-5 (8)] → Work light relay [CR-4 (86) → (87)]

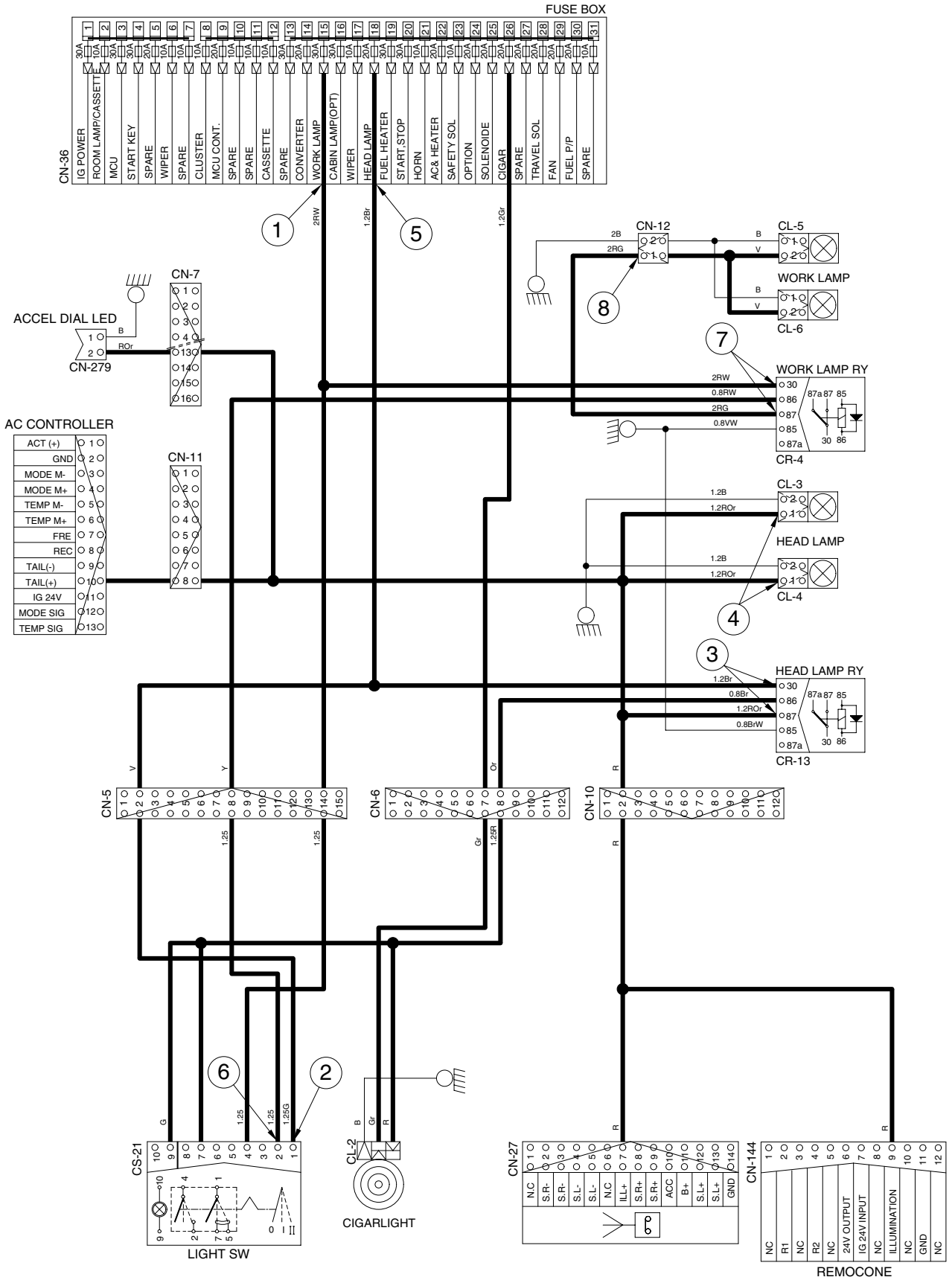
→ I/conn [CN-12 (1)] → Work light ON [CL-5 (2), CL-6 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	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



5. CAB LIGHT CIRCUIT

1) OPERATING FLOW

Fuse box (No.16) → Cab light relay [CR-9 (30, 86)]

(1) Cab light switch ON

Cab light switch ON [CS-24 (2)] → I/conn [CN-6 (4)] → I/conn [CN-10 (11)]

→ Cab light ON [CL-8 (2)]

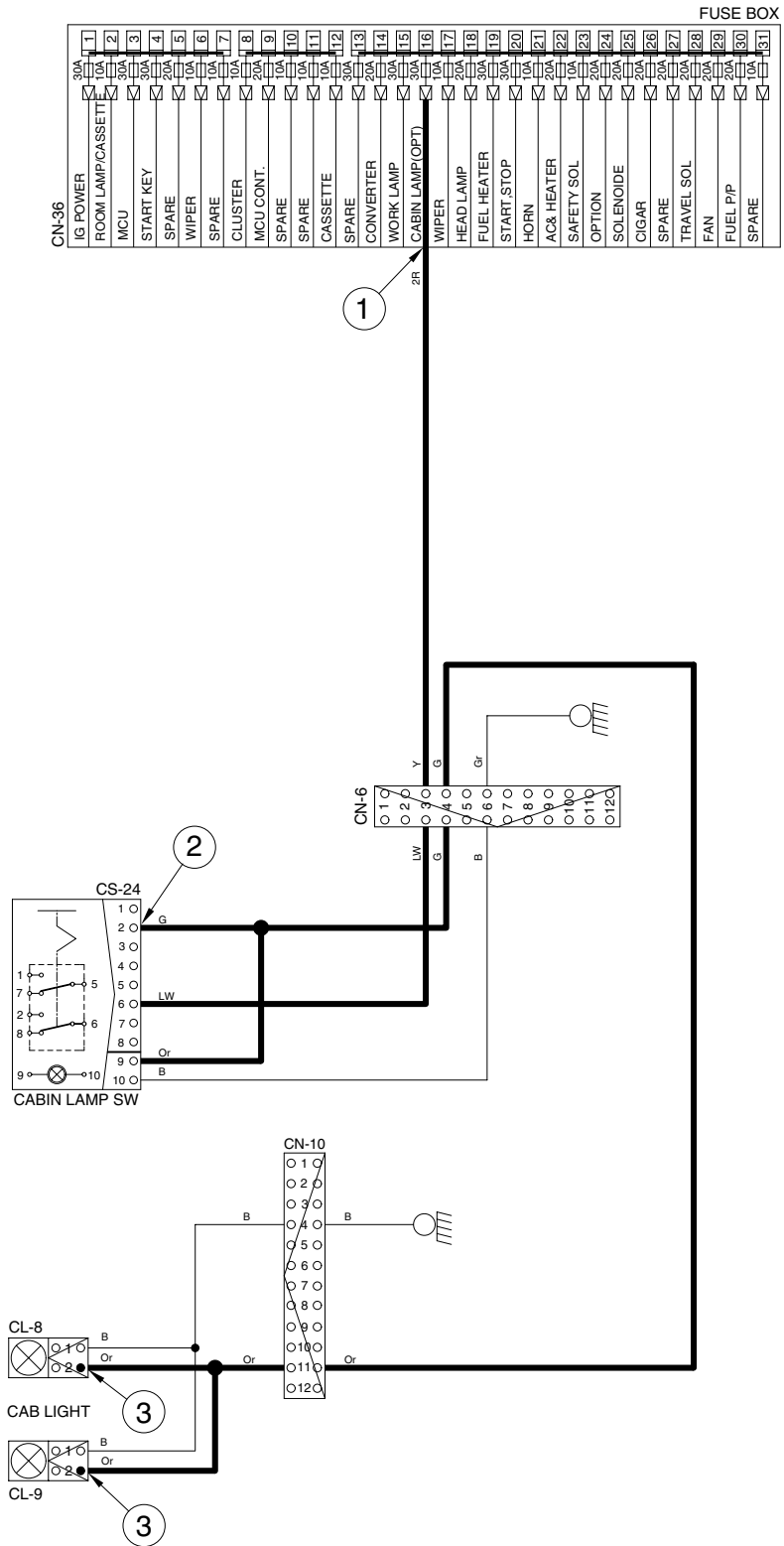
→ Cab light ON [CL-9 (2)]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box) ② - GND (cabin light relay) ③ - GND (cab light)	20~25V

※ GND : Ground

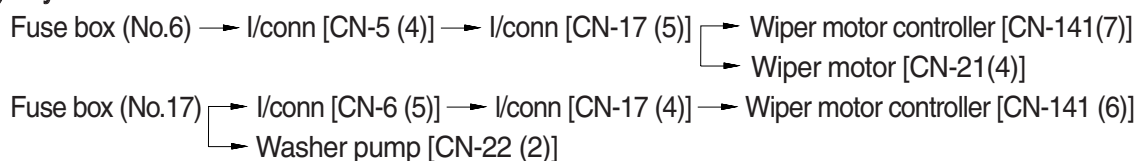
CAB LIGHT CIRCUIT



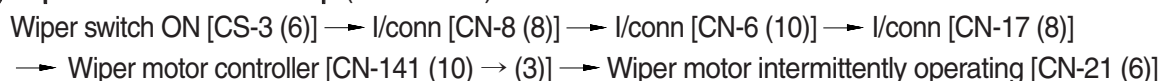
6. WIPER AND WASHER CIRCUIT

1) OPERATING FLOW

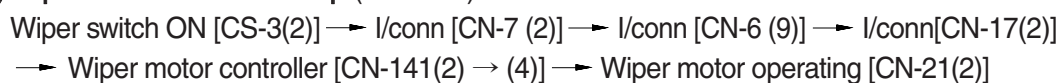
(1) Key switch ON



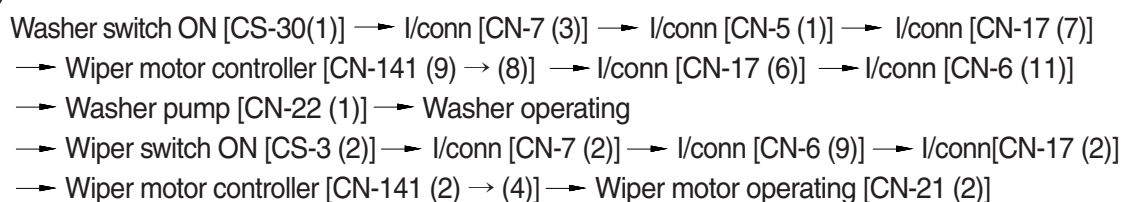
(2) Wiper switch ON : 1st step (Intermittent)



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



(4) Washer switch ON



(5) Auto parking (when switch OFF)

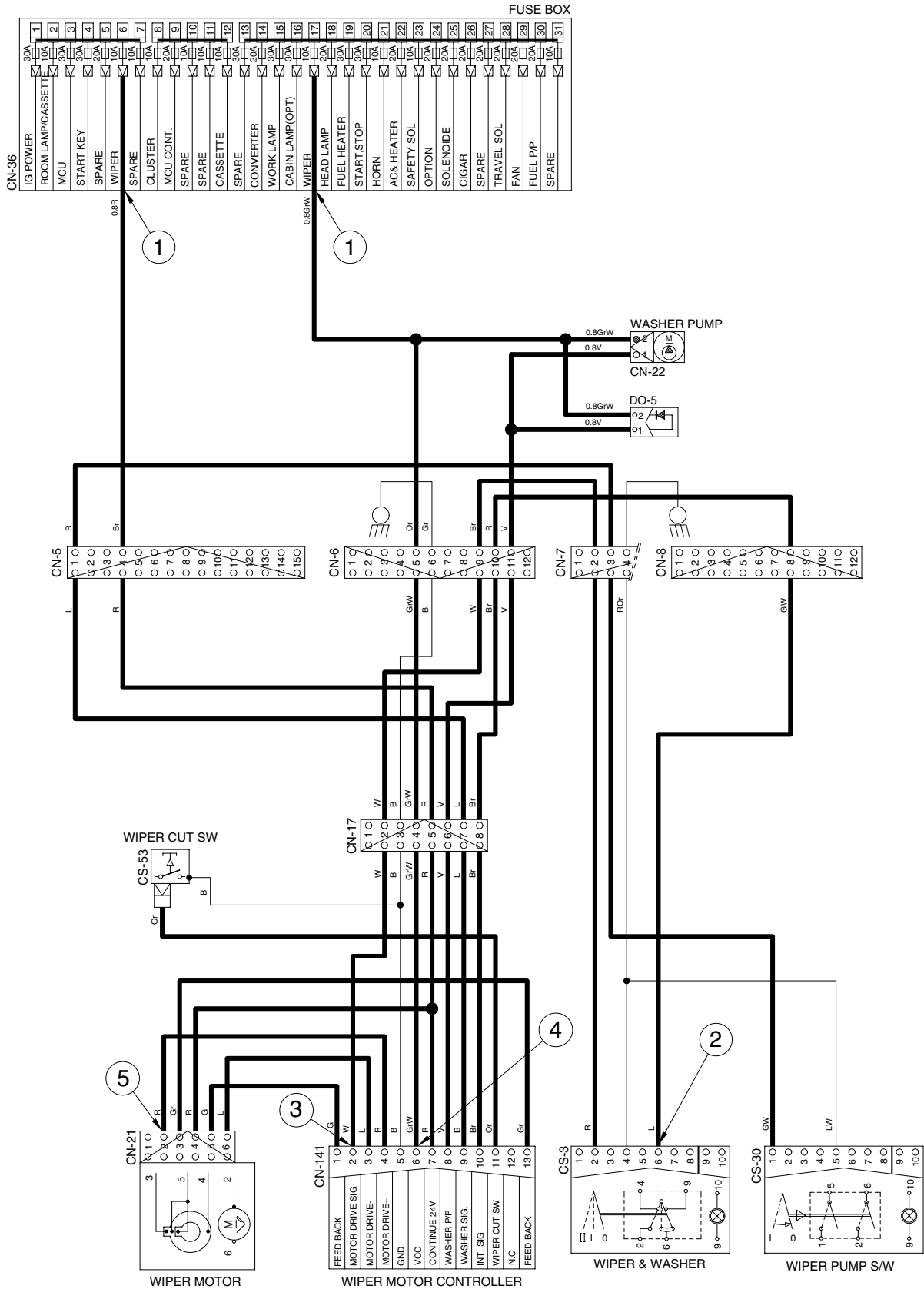


2) CHECK POINT

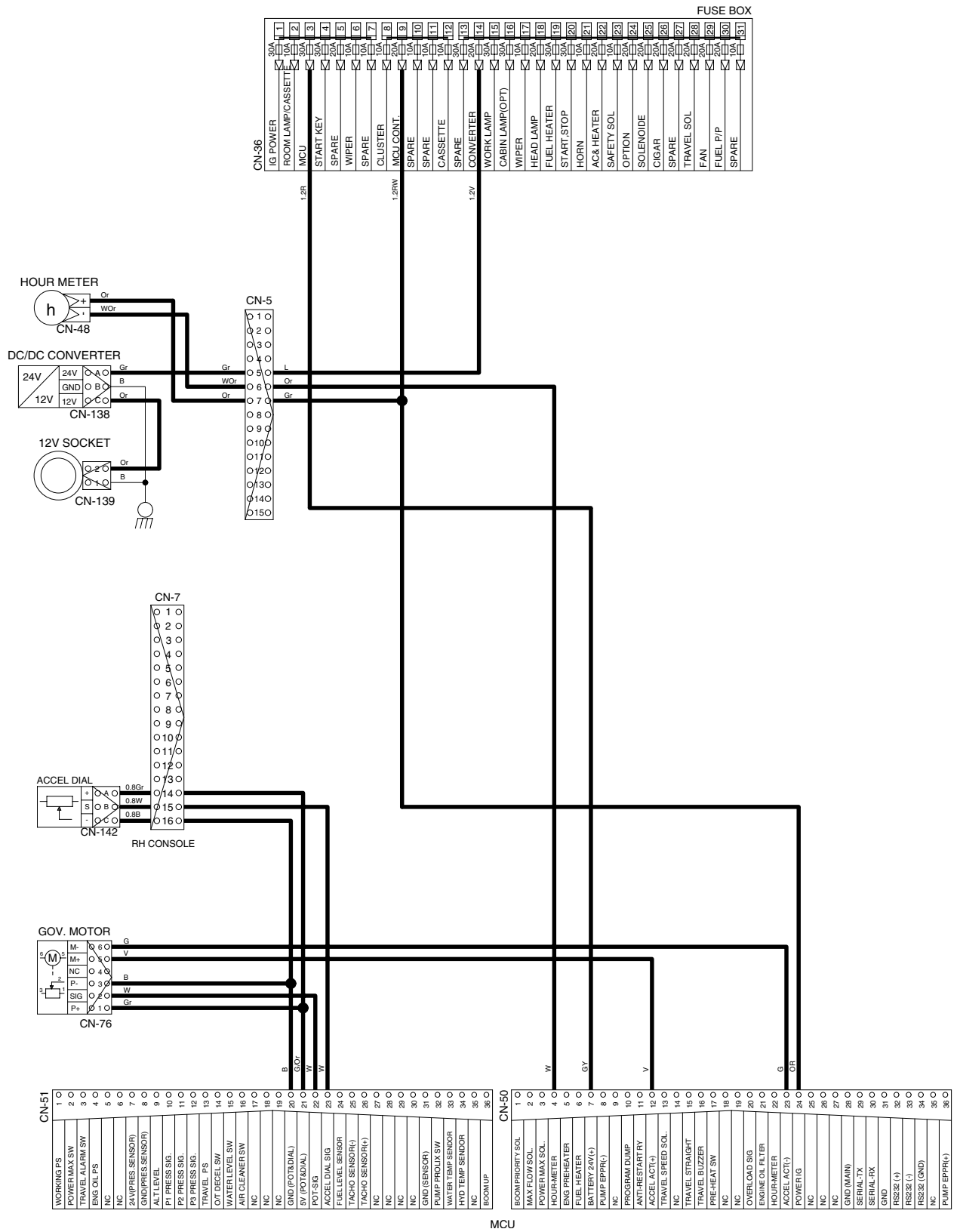
Engine	Start switch	Check point	Voltage
STOP	ON	① - GND (fuse box)	24V
		② - GND (switch power output)	0 ~ 5V
		③ - GND (wiper power input)	0 ~ 5V
		④ - GND (wiper power output)	24V
		⑤ - GND (wiper motor)	0 or 24V

※ GND : Ground

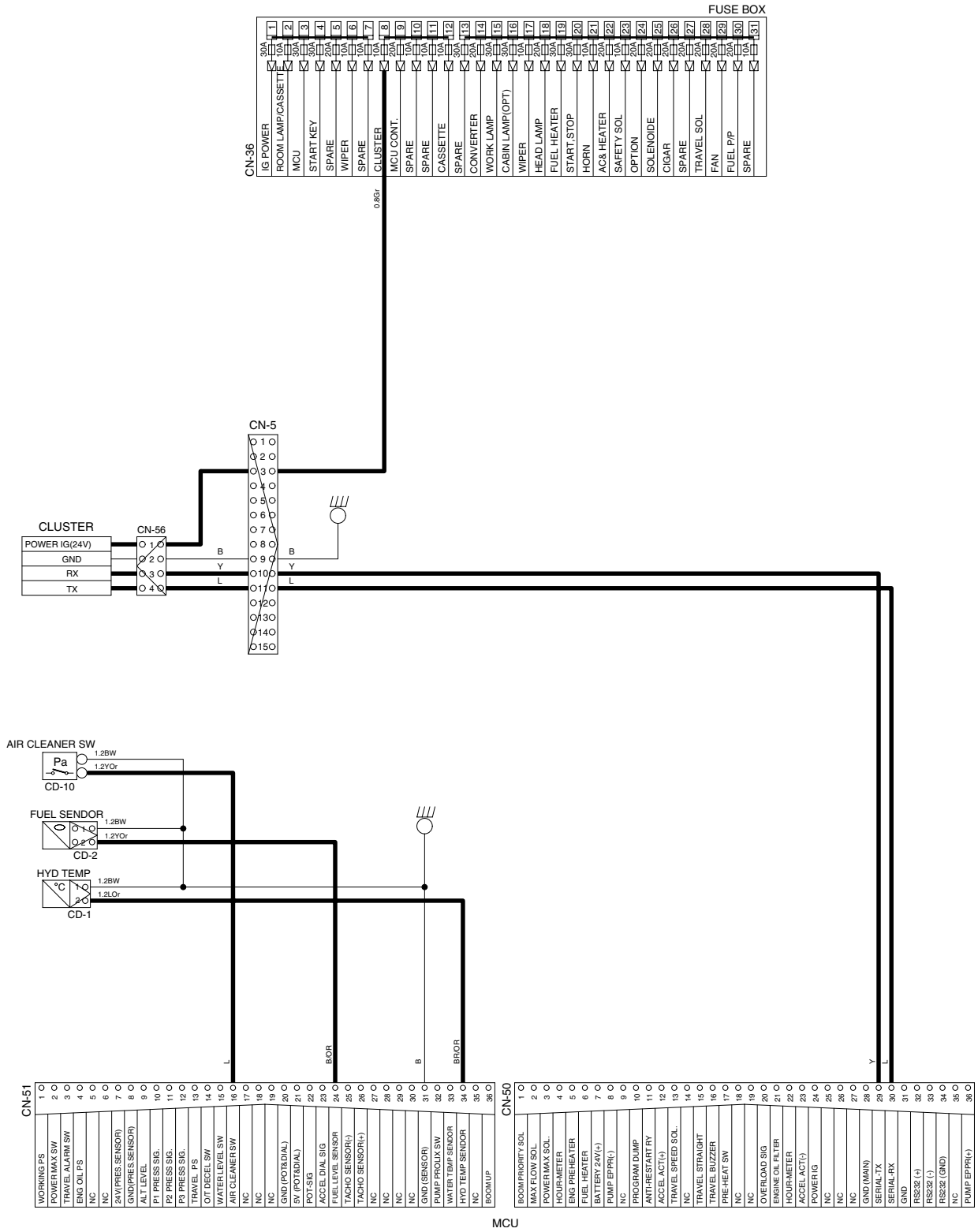
WIPER AND WASHER CIRCUIT



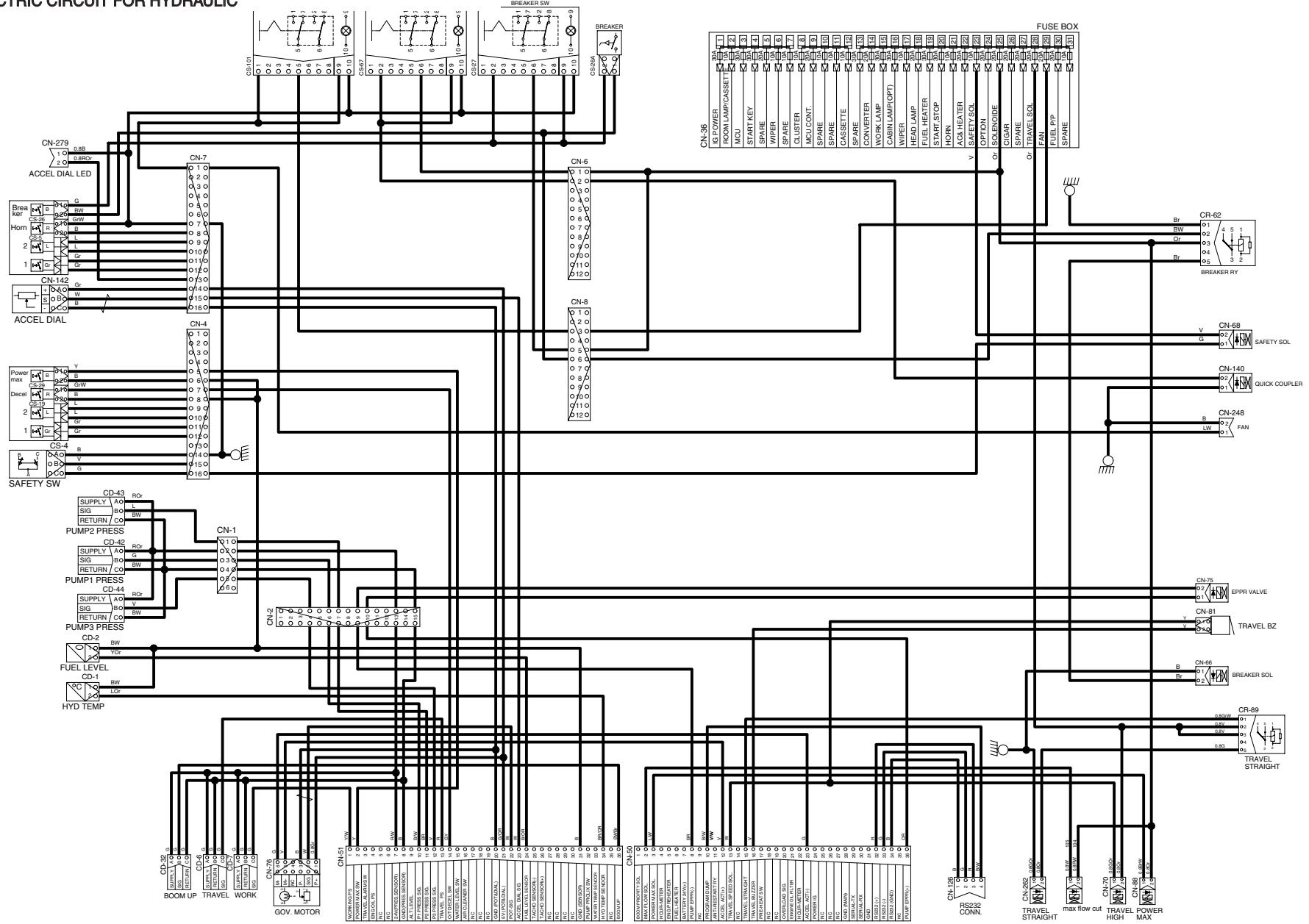
CONTROLLER CIRCUIT



MONITORING CIRCUIT

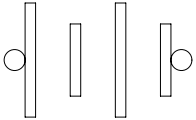
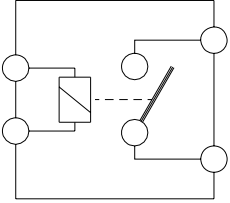
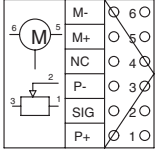
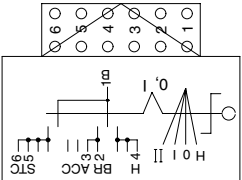
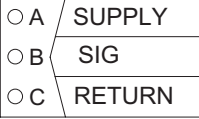
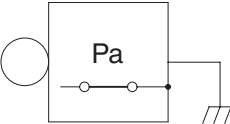


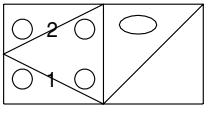
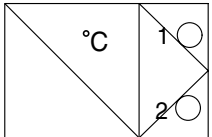
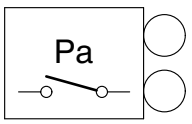
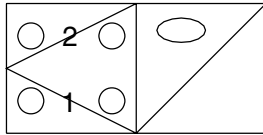
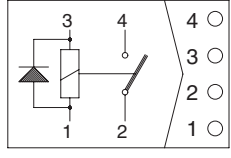
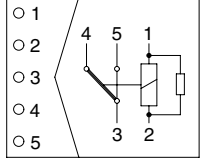
ELECTRIC CIRCUIT FOR HYDRAULIC

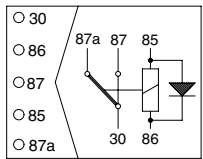
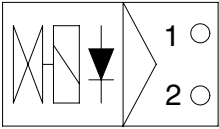
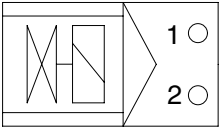
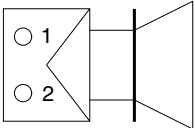
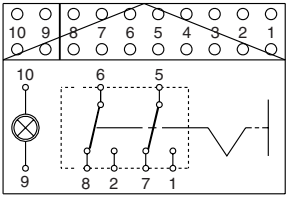
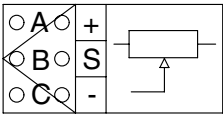


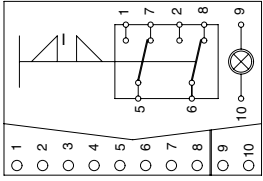
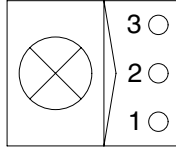
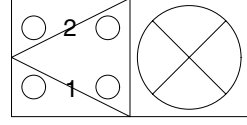
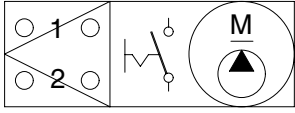
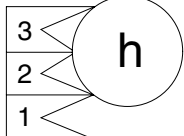
MCU

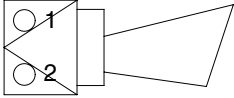
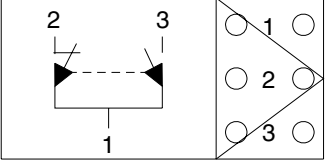
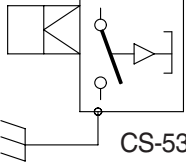
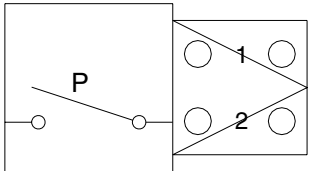
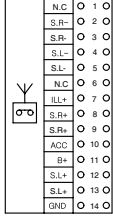
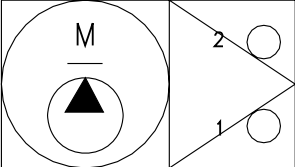
GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

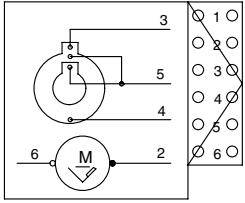
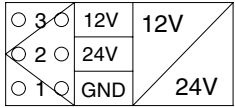
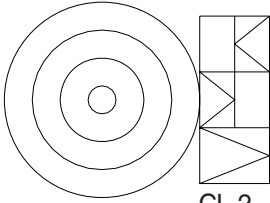
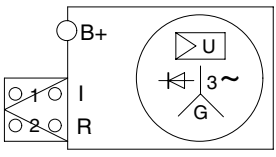
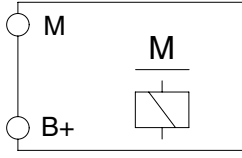
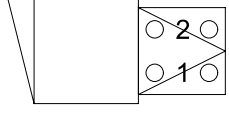
Part name	Symbol	Specifications	Check
Battery		12V × 80Ah (2EA)	※ Check specific gravity 1.280 over : Over charged 1.280 ~ 1.250 : Normal 1.250 below : Recharging
Battery relay	 <p style="text-align: center;">CR-1</p>	Rated load : 24V 100A (continuity) 1000A (30seconds)	※ Check coil resistance(M4 to M4) Normal : About 50 Ω ※ Check contact Normal : ∞ Ω
Accel actuator	 <p style="text-align: center;">CN-76</p>	-	※ Check resistance Normal : 1-2 Ω (For terminal 5-6) 0.8-1.2k Ω (For terminal 1-3)
Start key	 <p style="text-align: center;">CS-2</p>	B-BR : 24V 1A B-ACC : 24V 10A B-ST : 24V 40A	※ Check contact OFF : ∞ Ω (for each terminal) ON : 0 Ω (for terminal 1-3 and 1-2) START : 0 Ω (for terminal 1-5)
Pressure sensor	 <p style="text-align: center;">CD-6 CD-7 CD-32 CD-42 CD-43 CD-44</p>	8~30V	※ Check contact Normal : 0.1 Ω
Pressure switch (For engine oil)	 <p style="text-align: center;">CD-18</p>	0.5 kgf/cm ² (N.C TYPE)	※ Check resistance Normal : 0 Ω (CLOSE)

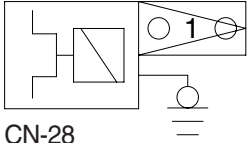
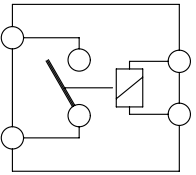
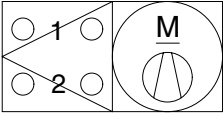
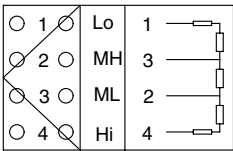
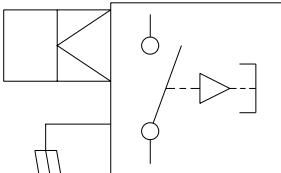
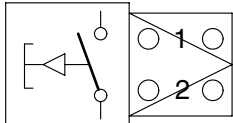
Part name	Symbol	Specifications	Check
Tacho sensor	 CD-17	24V 20A	※ Check resistance Normal : 300 Ω (For terminal 1, 2)
Temperature sensor (hydraulic, coolant)	 CD-1 CD-8	-	※ Check resistance 50°C : 804 Ω 80°C : 310 Ω 100°C : 180 Ω
Air cleaner pressure switch	 CD-10	(N.O TYPE)	※ Check contact High level : ∞ Ω Low level : 0 Ω
Fuel sender	 CD-2	-	※ Check resistance Full : 50 Ω 6/12 : 350 Ω 11/12 : 100 Ω 5/12 : 400 Ω 10/12 : 150 Ω 4/12 : 450 Ω 9/12 : 200 Ω 3/12 : 500 Ω 8/12 : 250 Ω 2/12 : 550 Ω 7/12 : 300 Ω 1/12 : 600 Ω Empty warning : 700 Ω
Relay (air con blower)		24V 20A	※ Check resistance Normal : About 200 Ω (for terminal 1-3) 0 Ω (for terminal 2-4)
Relay	 CR-2 CR-62 CR-89	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 1-2) 0 Ω (for terminal 3-4) ∞ Ω (for terminal 3-5)

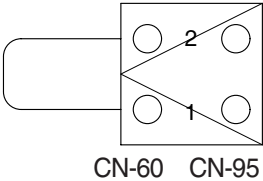
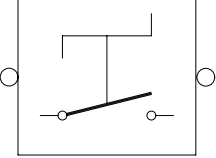
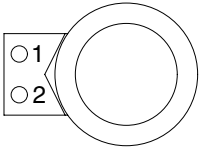
Part name	Symbol	Specifications	Check
Relay	 <p>CR-4 CR-5 CR-7 CR-13 CR-35 CR-46</p>	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 85-86) 0 Ω (for terminal 30-87a) ∞ Ω (for terminal 30-87)
Solenoid valve	 <p>CN-66 CN-68 CN-70 CN-88 CN-133 CN-140 CN-262</p>	24V 1A	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
EPPR valve	 <p>CN-75</p>	700mA	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
Speaker	 <p>CN-23(LH) CN-24(RH)</p>	20W	※ Check resistance Normal : A few Ω
Switch (locking type)	 <p>CS-24 CS-27 CS-54 CS-67 CS-101</p>	24V 8A	※ Check contact Normal ON : 0 Ω (for terminal 1-5, 2-6) ∞ Ω (for terminal 5-7, 6-8) OFF : ∞ Ω (for terminal 1-5, 2-6) 0 Ω (for terminal 5-7, 6-8)
Accel dial	 <p>CN-142</p>	-	※ Check resist Normal : About 5k Ω (for terminal A-C) ※ Check voltage Normal : About 5V (for terminal A-C) : 2~4.5V (for terminal C-B)

Part name	Symbol	Specifications	Check
Switch	 <p>CS-67</p>	24V 8A	※ Check disconnection Normal : 1.0Ω ON : 0 Ω (For terminal 1-5, 2-6) ∞ Ω (For terminal 5-7, 6-8) OFF : ∞ Ω (For terminal 1-5, 6-8) 0 Ω (For terminal 5-7, 6-8)
Room lamp	 <p>CL-1</p>	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)
Head lamp, Work lamp, Cab lamp	 <p>CL-3 CL-4 CL-5 CL-6 CL-8 CL-9</p>	24V 65W (H3 Type)	※ Check disconnection Normal : 1.2 Ω
Fuel filler pump	 <p>CN-61</p>	24V 10A 35 l /min	※ Check resistance Normal : 1.0 Ω
Hour meter	 <p>CN-48</p>	16~32V	※ Check operation Supply power(24V) to terminal No.2 and connect terminal No.1 and ground

Part name	Symbol	Specifications	Check
Horn	 <p>CN-20 CN-25</p>	DC22~28V 2A	※ Check operation Supply power(24V) to each terminal and connect ground.
Safety switch	 <p>CS-4</p>	24V 15A (N.C TYPE)	※ Check contact Normal : 0 Ω (for terminal 1-2) ∞ Ω (for terminal 1-3) Operating : ∞ Ω (for terminal 1-2) 0 Ω (for terminal 1-3)
Wiper cut switch	 <p>CS-53</p>	24V (N.O TYPE)	※ Check contact Normal : 0 Ω (one pin to ground)
Receiver dryer	 <p>CN-29</p>	24V 2.5A	※ Check contact Normal : ∞ Ω
Cassette & radio	 <p>CN-27</p>	24V 2A	※ Check voltage 20~25V (for terminal 10-14, 11-14)
Washer pump	 <p>CN-22</p>	24V 3.8A	※ Check contact Normal : 10.7 Ω (for terminal 1-2)

Part name	Symbol	Specifications	Check
Wiper motor	 <p>CN-21</p>	24V 2A	※ Check disconnection Normal : 7 Ω (for terminal 2-6)
DC/DC Converter	 <p>CN-138</p>	12V 3A	24V (1-2) 12V (1-3)
Cigar lighter	 <p>CL-2</p>	24V 5A 1.4W	※ Check coil resistance Normal : About 1M Ω ※ Check contact Normal : ∞ Ω Operating time : 5~15sec
Alternator	 <p>CN-74</p>	24V 55A	※ Check contact Normal : 0 Ω (for terminal B ⁺ -I) Normal : 24~27.5V
Starter	 <p>CN-45</p>	Denso 24V 4.5kW	※ Check contact Normal : 0.1 Ω
Travel alarm	 <p>CN-81</p>	24V 0.5A	※ Check contact Normal : 5.2 Ω

Part name	Symbol	Specifications	Check
Aircon compressor	 <p>CN-28</p>	24V 79W	※ Check contact Normal : 13.4 Ω
Start relay	 <p>CR-23</p>	24V 300A	※ Check contact Normal : 0.94 Ω (for terminal 1-2)
Blower motor		24V 9.5A	※ Check resistance Normal : 2.5 Ω (for terminal 1-2)
Resistor		-	※ Check resistance 1.12 Ω (For terminal 4-2) 2.07 Ω (For terminal 2-3) 3.17 Ω (For terminal 3-1)
Door switch	 <p>CS-1</p>	24V 2W	※ Check resistance Normal : About 5M Ω
Switch (power max, one touch decal, horn, breaker)	 <p>CS-5 CS-19 CS-26 CS-26A CS-29</p>	24V 6A	※ Check resistance Normal : ∞ Ω

Part name	Symbol	Specifications	Check
Fusible link	 <p>CN-60 CN-95</p>	60A	※ Check disconnection Normal : 0 Ω (connect ring terminal and check resist between terminal 1 and 2)
Master switch	 <p>CS-74A CN-74B</p>	6-36V	※ Check disconnection Normal : 0.1 Ω
Socket	 <p>CN-139</p>	12V 10A	-

GROUP 4 CONNECTORS

1. CONNECTOR DESTINATION

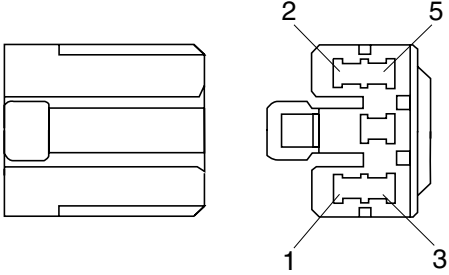
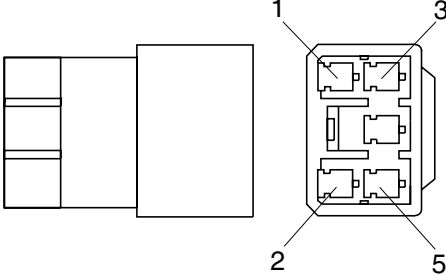
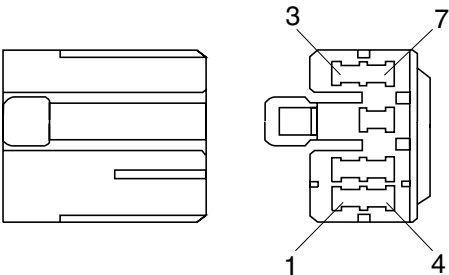
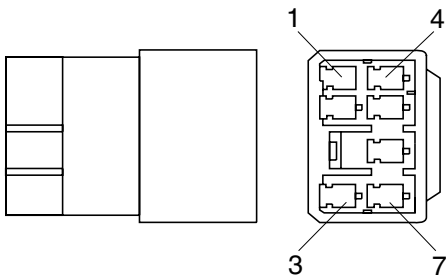
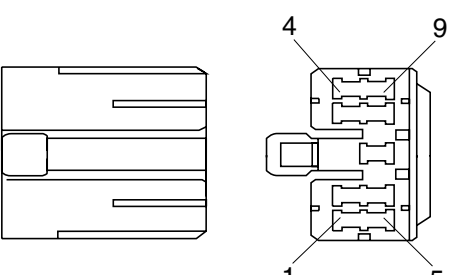
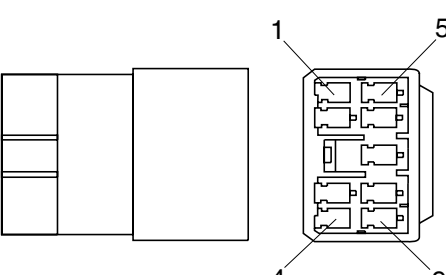
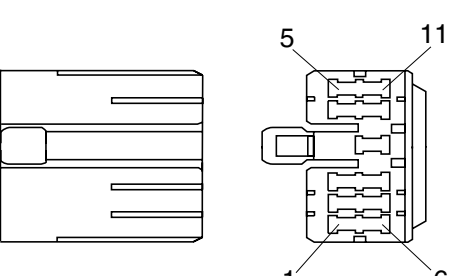
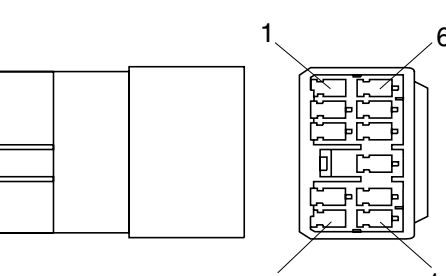
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	AMP	6	I/conn (Frame harness-Pump PS harness)	S816-006002	S816-106002
CN-2	AMP	15	I/conn (Frame harness-Engine harness)	2-85262-1	S816-112002
CN-3	AMP	6	I/conn (Frame harness-Engine harness)	S816-006002	S816-106002
CN-4	AMP	16	I/conn (Console harness LH-Frame harness)	368047-1	S816-116002
CN-5	DEUTSCH	15	I/conn (Side harness RH-Frame harness)	2-85262-1	368301-1
CN-6	AMP	12	I/conn (Side harness RH-Frame harness)	S816-012002	S816-112002
CN-7	AMP	16	I/conn (Console harness RH-Frame harness)	S816-016002	S816-116002
CN-8	AMP	12	I/conn (Console harness RH-Frame harness)	S816-012002	S816-112002
CN-10	DEUTSCH	12	I/conn (Cab harness-Frame harness RH)	DT06-12S-EP06	DT04-12P-BE02
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-E005
CN-17	DEUTSCH	8	I/conn (Side harness RH-Wiper harness)	DT06-8S-EP06	DT04-8P
CN-20	MOLEX	2	Horn	36825-0211	-
CN-21	AMP	6	Wiper motor	925276-0	-
CN-21A	AMP	6	Wiper motor	S816-006202	-
CN-22	KET	2	Washer pump	MG640605	-
CN-23	KET	2	Speaker-LH	MG610070	-
CN-24	KET	2	Speaker-RH	MG610070	-
CN-25	MOLEX	2	Horn	36825-0211	-
CN-27	AMP	14	Cassette & radio	173852	-
CN-28	KUM	1	Aircon compressor	NMWP01F-B	-
CN-29	KET	2	Receiver dryer	MG640795	-
CN-36	-	-	Fuse & relay box	21Q7-10901	-
CN-45	RING-TERM	-	Starter motor B ⁺	R8-10	-
CN-48	KET	1	Hour meter	GP890469	-
CN-51	DEUTSCH	36	MCU	341111-1	-
CN-52	DEUTSCH	36	MCU	341111-1	-
CN-56	DEUTSCH	4	Cluster	-	DT04-4P-E004
CN-60	AMP	2	Fusible link	21N4-01320	S813-130201
CN-61	DEUTSCH	2	Fuel filler pump	DT06-2S-EP06	-
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	-

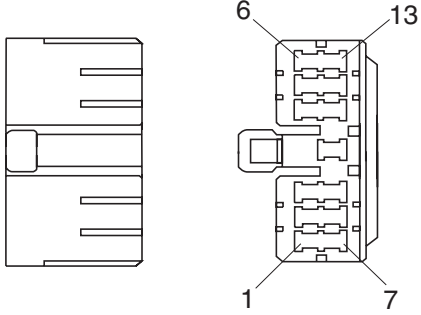
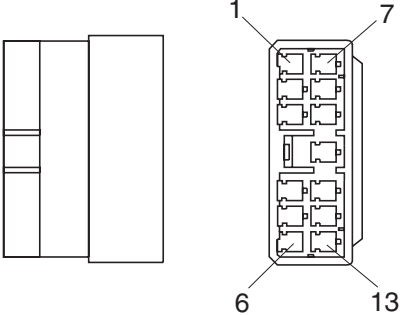
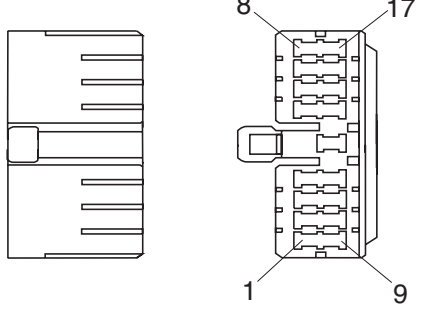
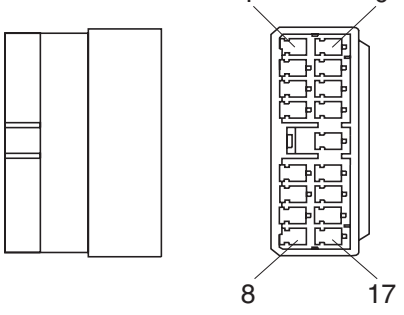
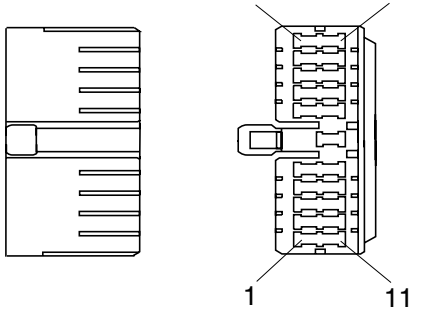
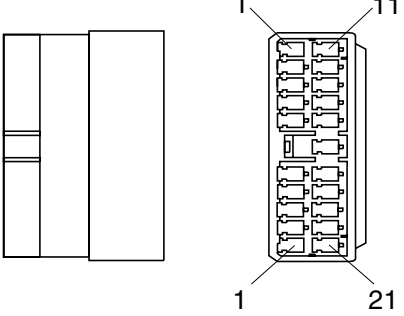
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-74	KET	2	Alternator "I" terminal	S810-002200	-
CN-75	AMP	2	Pump EPPR	S816-002002	-
CN-76	DEUTSCH	-	Accel actuator	DT06-6S-EP06	-
CN-81	DEUTSCH	2	Travel buzzer solenoid	DT06-2S-EP06	-
CN-88	DEUTSCH	2	Power max solenoid	DT06-2S-EP06	-
CN-95	YAZAKI	2	Fusible link	-	S813-130201
CN-125	Econoseal J	2	GPS connector	S816-002002	S816-102002
CN-126	DEUTSCH	4	RS 232 connector	DT06-4S	-
CN-133	DEUTSCH	2	Max flow cut off solenoid	DT06-2S-EP06	-
CN-138	DEUTSCH	3	DC/DC Converter	DT06-3S-P012	-
CN-139	DEUTSCH	2	12V socket	DT04-2P-E004	-
CN-140	DEUTSCH	2	Quick clamp solenoid	DT06-2S-EP06	DT04-2P-E005
CN-141	AMP	13	Wiper motor controller	172498-1	DT04-3P-EP10
CN-144	AMP	12	Remocon	174045-2	-
CN-147	AMP	2	Fuel heater	1530-0027	-
CN-248	AMP	2	Fan	S816-002002	S816-102002
CN-262	DEUTSCH	2	Straight travel solenoid	DT06-2S-EP06	-
· Relay					
CR-1	RING-TERM	-	Battery relay	ST710289-1	-
CR-2	-	5	Horn relay	-	-
CR-4	-	5	Work lamp relay	-	-
CR-5	-	5	Anti restart relay	-	-
CR-7	-	5	Aircon compressor relay	-	-
CR-13	-	5	Head lamp relay	-	-
CR-23	RING TERM	-	Start relay	-	S814-102001
CR-35	-	5	Power relay	-	-
CR-46	-	5	Fuel warmer relay	-	-
CR-62	-	5	Breaker relay	-	-
· Switch					
CS-1	SHUR	1	Door switch	S822-014004	S822-114004
CS-2	WP	6	Start key switch	S814-006100	-
CS-4	DEUTSCH	3	Safety switch	DT06-3S-EP06	-
CS-5	DEUTSCH	2	Horn switch	-	DT04-2P-E005
CS-19	DEUTSCH	2	One touch decel switch	-	DT04-2P-E005
CS-20	AMP	1	Safety switch	S822-014002	-
CS-21	SWF	12	Light switch	SWF 593757	-
CS-23	SWF	12	Beacon lamp switch	SWF 589790	-
CS-24	SWF	12	Cab light switch	SWF 593757	-

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CS-26	DEUTSCH	2	Breaker switch	DT06-2S-EP06	-
CS-26A	AMP	2	Breaker pedal switch	S816-002002	S816-102002
CS-27	SWF	10	Breaker switch	SWF 593757	-
CS-29	DEUTSCH	2	Power max switch	DT06-2S-EP06	-
CS-53	AMP	1	Wiper cut switch	S822-014002	-
CS-54	SWF	12	Aircon switch	SWF 593757	-
CS-67	SWF	12	Quick clamp switch	SWF 593757	-
CS-74A	AMP	2	Master switch	S813-030201	-
CS-74B	DEUTSCH	2	Master switch	DT06-2S-EP06	
CS-83	SWF	12	Spare switch	SWF 593757	-
CS-99	SWF	12	Air compressor switch	SWF 593757	-
CS-100	SWF	12	Spare switch	SWF 593757	-
CS-101	SWF	12	Fan switch	SWF 593757	-
CS-142	DEUTSCH	3	Accel dial switch	DT06-3S	-
· Light					
CL-1	KET	3	Room lamp	MG651032	-
CL-2	AMP	1	Cigar light	S822-014002	S822-114002
CL-3	DEUTSCH	2	Head lamp-LH	DT06-2P-EP06	DT04-2P-E005
CL-4	DEUTSCH	2	Head lamp-RH	DT06-2P-EP06	DT04-2P-E005
CL-5	AMP	2	Work lamp-LH	-	180923-0
CL-6	AMP	2	Work lamp-RH	-	180923-0
CL-8	DEUTSCH	2	Cab light-LH	DT04-2S	DT04-2P-E005
CL-9	DEUTSCH	2	Cab light-RH	DT04-2S	DT04-2P-E005
· Sensor, sensor					
CD-1	AMP	2	Hydraulic oil temp sender	85202-1	-
CD-2	DEUTSCH	2	Fuel level sender	DT06-2S-EP06	-
CD-6	DEUTSCH	3	Travel pressure sensor	DT06-3S-EP06	-
CD-7	DEUTSCH	3	Working pressure sensor	DT06-3S-EP06	-
CD-8	AMP	2	Water temp sender	85202-1	-
CD-10	RING TERM	-	Air cleaner switch	ST730135-2	-
CD-17	AMP	2	Tacho sensor	S816-002002	-
CD-18	RING TERM	-	Engine oil pressure sensor	S820-104000	-
CD-32	DEUTSCH	3	Boom up sensor	DT06-3S-EP06	-
CD-42	DEUTSCH	3	Pump pressure 1	DT06-3S-EP06	-
CD-43	DEUTSCH	3	Pump pressure 2	DT06-3S-EP06	-
CD-44	DEUTSCH	3	Pump pressure 3	DT06-3S-EP06	-
CD-50	DEUTSCH	2	Dozer pressure switch	DT06-2S-EP06	DT04-2P-E005

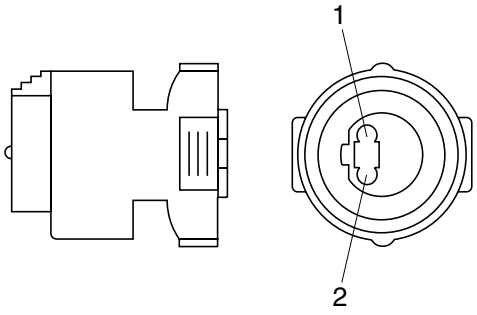
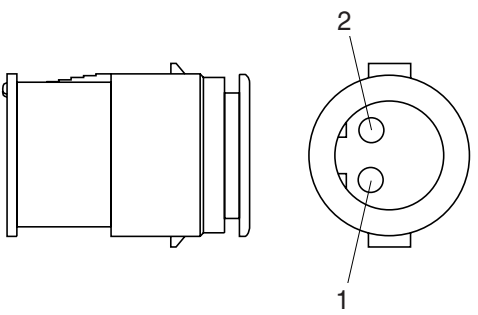
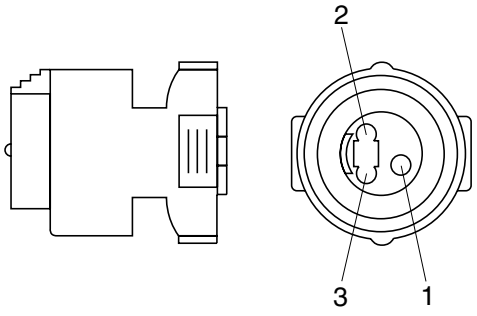
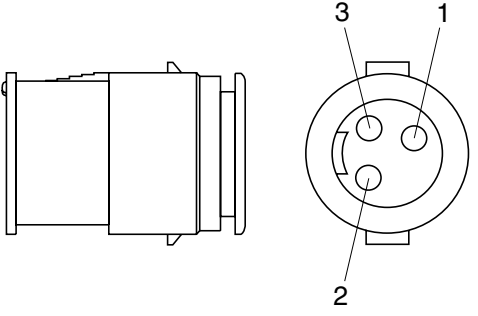
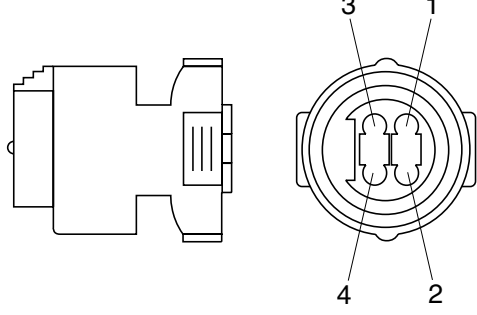
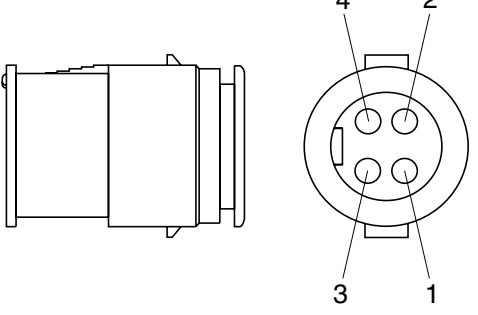
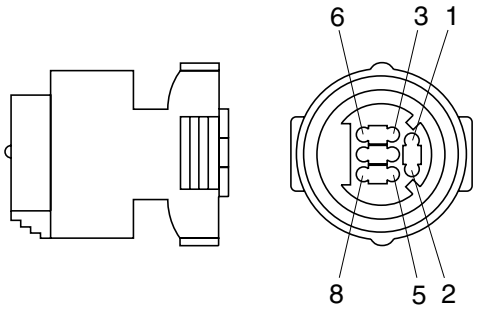
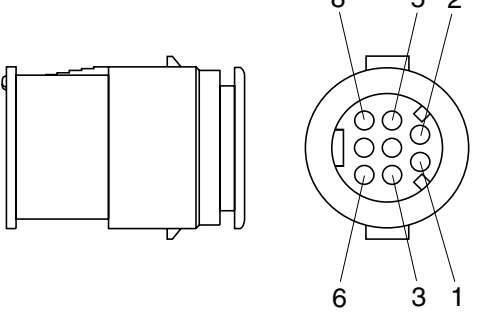
2. CONNECTION TABLE FOR CONNECTORS

1) PA TYPE CONNECTOR

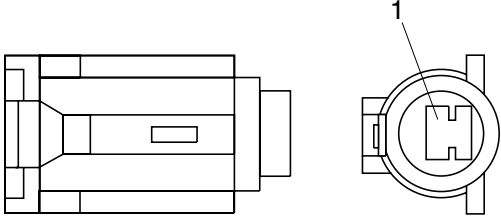
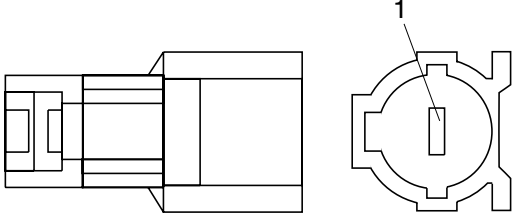
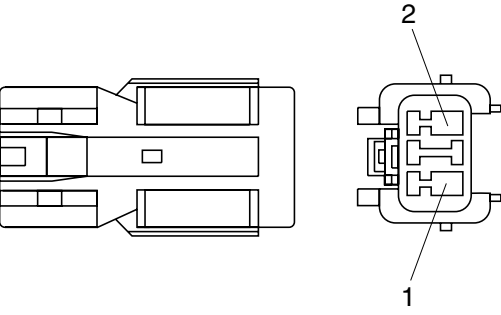
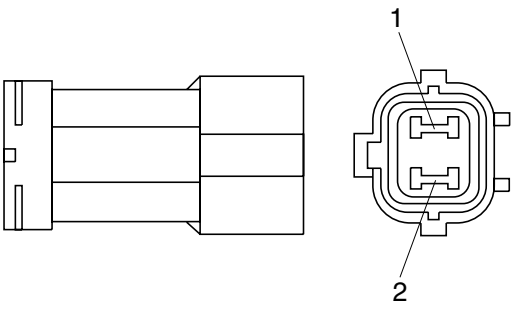
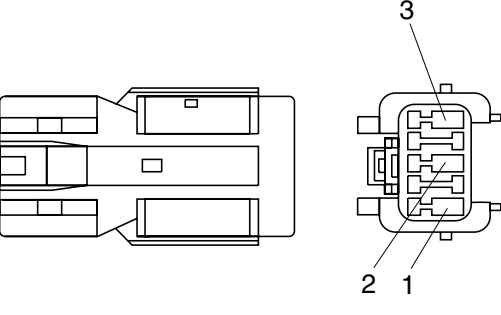
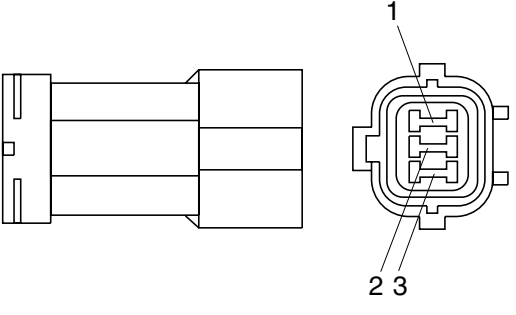
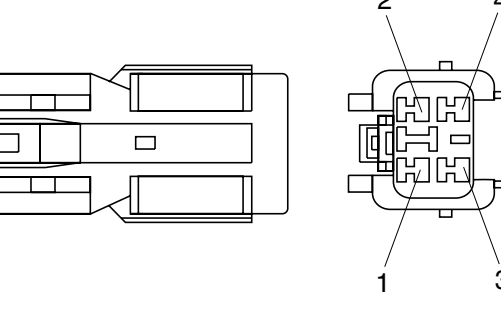
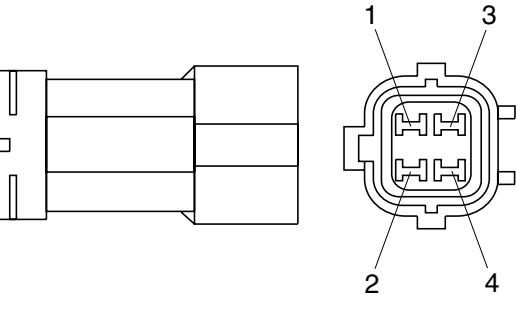
No. of pin	Receptacle connector (female)	Plug connector (male)
5	 <p style="text-align: center;">S811-005002</p>	 <p style="text-align: center;">S811-105002</p>
7	 <p style="text-align: center;">S811-007002</p>	 <p style="text-align: center;">S811-107002</p>
9	 <p style="text-align: center;">S811-009002</p>	 <p style="text-align: center;">3S811-109002</p>
11	 <p style="text-align: center;">S811-011002</p>	 <p style="text-align: center;">S811-111002</p>

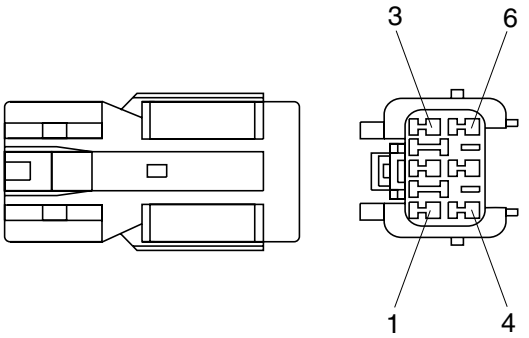
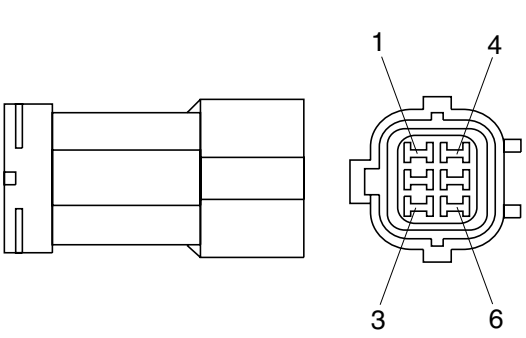
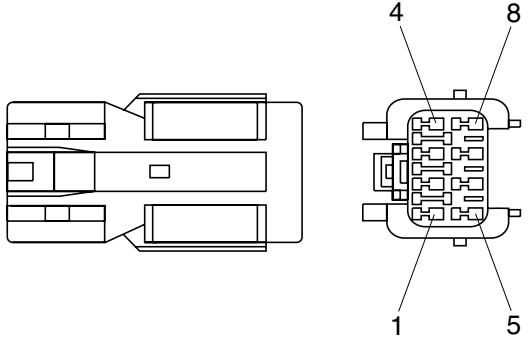
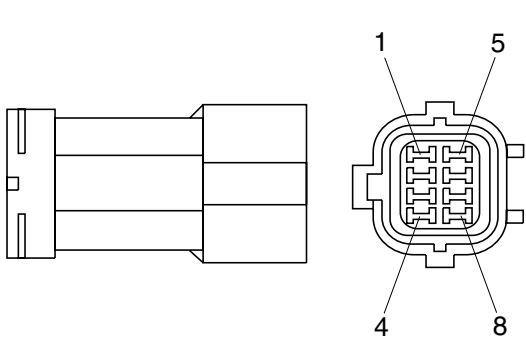
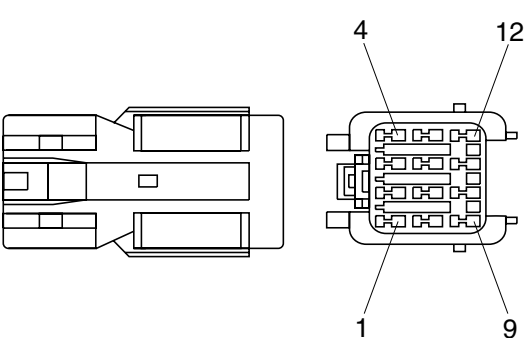
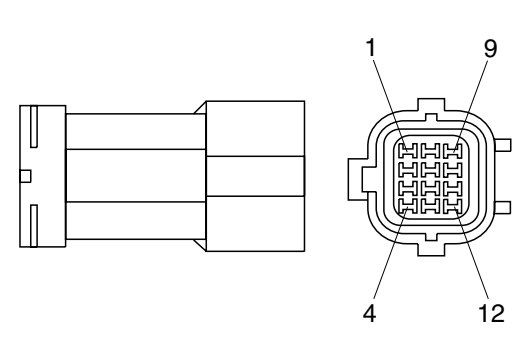
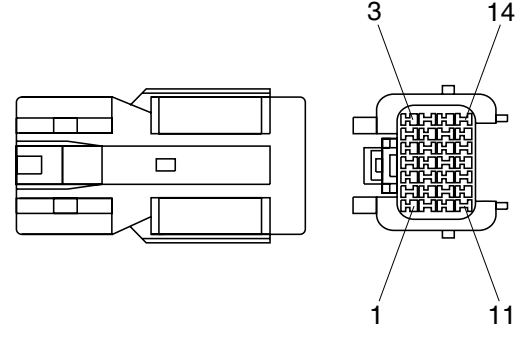
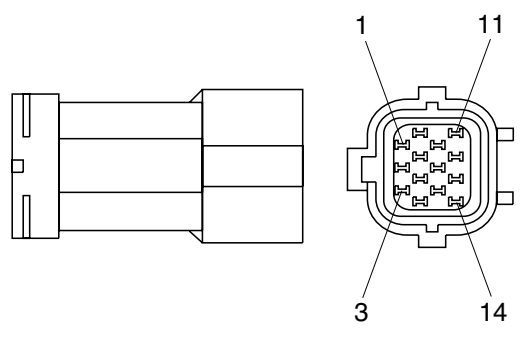
No. of pin	Receptacle connector (female)	Plug connector (male)
13	 <p style="text-align: center;">S811-013002</p>	 <p style="text-align: center;">S811-113002</p>
17	 <p style="text-align: center;">S811-017002</p>	 <p style="text-align: center;">S811-117002</p>
21	 <p style="text-align: center;">S811-021002</p>	 <p style="text-align: center;">S811-121002</p>

2) J TYPE CONNECTOR

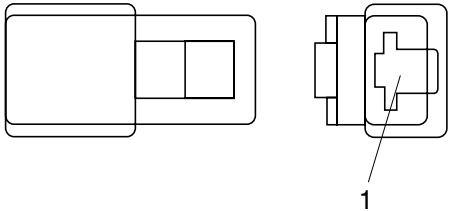
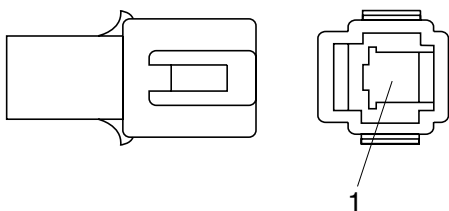
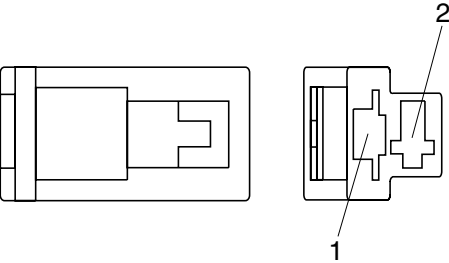
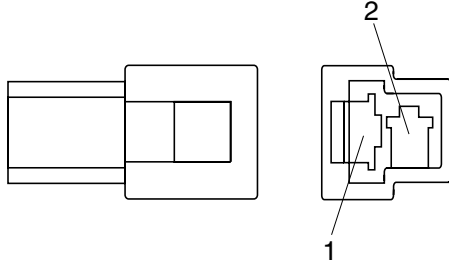
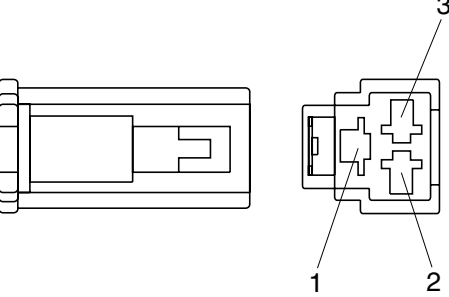
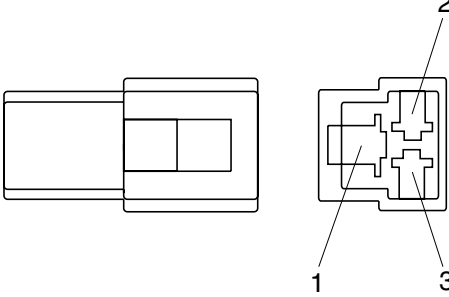
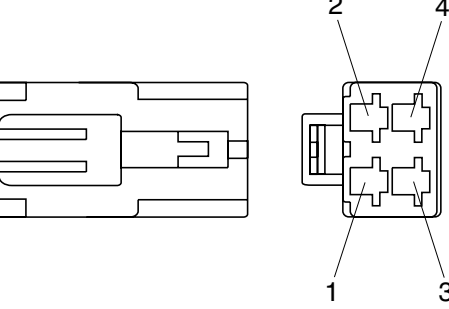
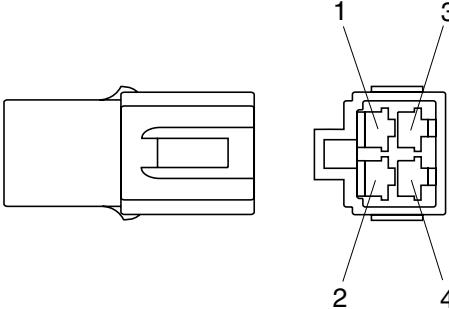
No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: center;">S816-002001</p>	 <p style="text-align: center;">S816-102001</p>
3	 <p style="text-align: center;">S816-003001</p>	 <p style="text-align: center;">S816-103001</p>
4	 <p style="text-align: center;">S816-004001</p>	 <p style="text-align: center;">S816-104001</p>
8	 <p style="text-align: center;">S816-008001</p>	 <p style="text-align: center;">S816-108001</p>

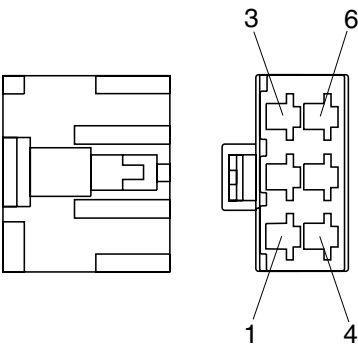
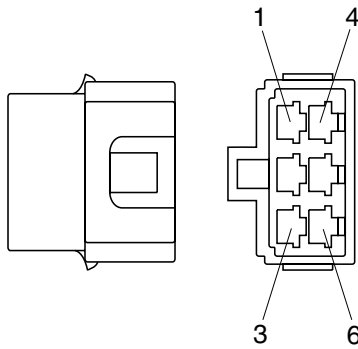
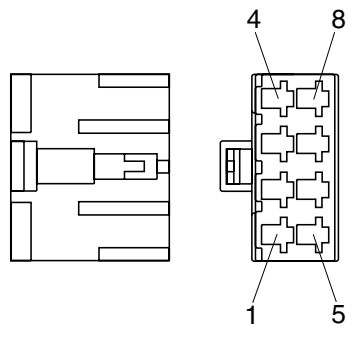
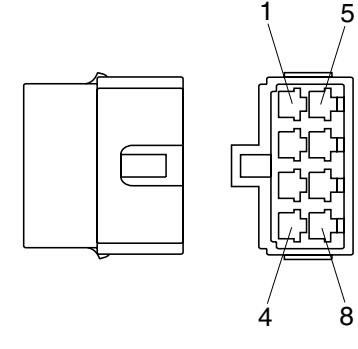
3) SWP TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p data-bbox="687 685 839 712">S814-001000</p>	 <p data-bbox="1241 685 1393 712">S814-101000</p>
2	 <p data-bbox="687 1088 839 1115">S814-002000</p>	 <p data-bbox="1241 1088 1393 1115">S814-102000</p>
3	 <p data-bbox="687 1498 839 1525">S814-003000</p>	 <p data-bbox="1241 1498 1393 1525">S814-103000</p>
4	 <p data-bbox="687 1908 839 1935">S814-004000</p>	 <p data-bbox="1241 1908 1393 1935">S814-104000</p>

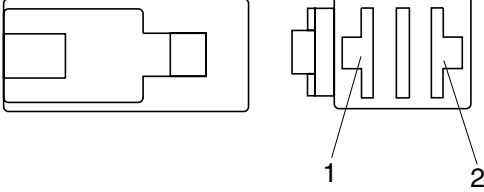
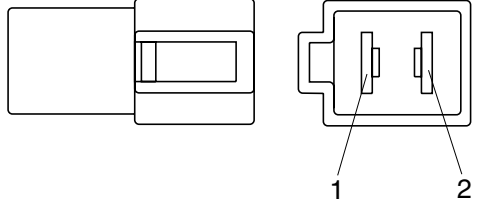
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p data-bbox="686 638 837 672">S814-006000</p>	 <p data-bbox="1236 638 1388 672">S814-106000</p>
8	 <p data-bbox="686 1048 837 1081">S814-008000</p>	 <p data-bbox="1236 1048 1388 1081">S814-108000</p>
12	 <p data-bbox="686 1458 837 1491">S814-012000</p>	 <p data-bbox="1236 1458 1388 1491">S814-112000</p>
14	 <p data-bbox="686 1868 837 1901">S814-014000</p>	 <p data-bbox="1236 1868 1388 1901">S814-114000</p>

4) CN TYPE CONNECTOR

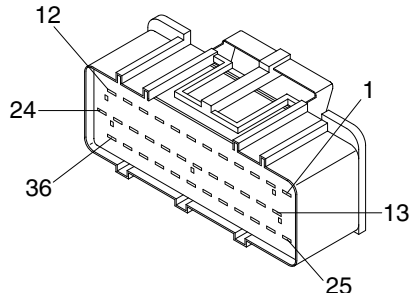
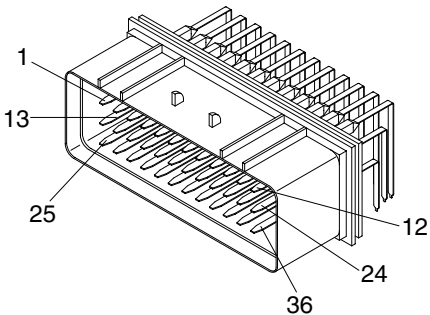
No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p style="text-align: center;">S810-001202</p>	 <p style="text-align: center;">S810-101202</p>
2	 <p style="text-align: center;">S810-002202</p>	 <p style="text-align: center;">S810-102202</p>
3	 <p style="text-align: center;">S810-003202</p>	 <p style="text-align: center;">S810-103202</p>
4	 <p style="text-align: center;">S810-004202</p>	 <p style="text-align: center;">S810-104202</p>

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p data-bbox="686 638 837 672">S810-006202</p>	 <p data-bbox="1244 638 1396 672">S810-106202</p>
8	 <p data-bbox="686 1041 837 1075">S810-008202</p>	 <p data-bbox="1244 1041 1396 1075">S810-108202</p>

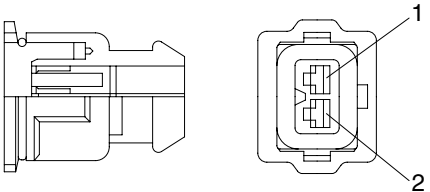
5) 375 FASTEN TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: center;">S810-002402</p>	 <p style="text-align: center;">S810-102402</p>

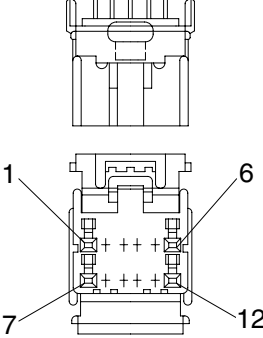
6) AMP ECONOSEAL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
36	 <p style="text-align: center;">344111-1</p>	 <p style="text-align: center;">344108-1</p>

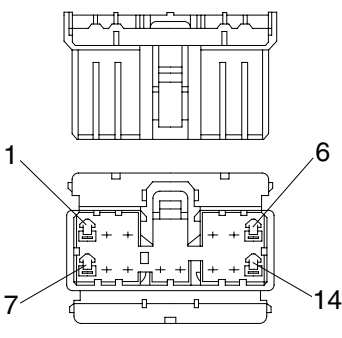
7) AMP TIMER CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: center;">85202-1</p>	

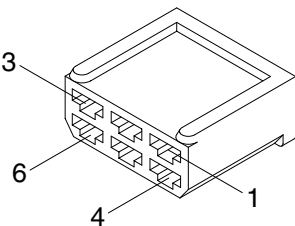
8) AMP 040 MULTILOCK CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
12	 <p style="text-align: right;">174045-2</p>	

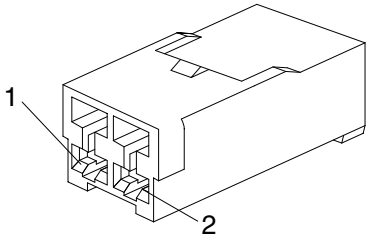
9) AMP 070 MULTILOCK CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
14	 <p style="text-align: right;">173852</p>	

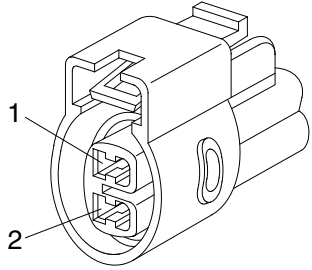
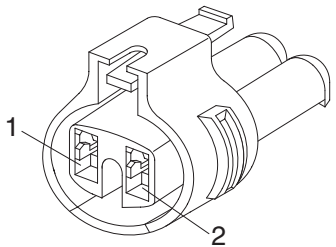
10) AMP FASTIN - FASTON CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p style="text-align: right;">925276-0</p>	

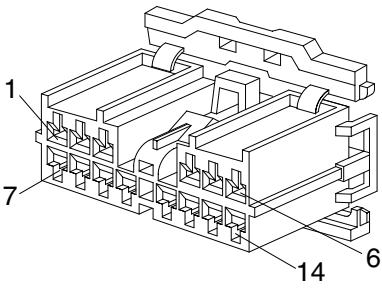
11) KET 090 CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: right;">MG610070</p>	

12) KET 090 WP CONNECTORS

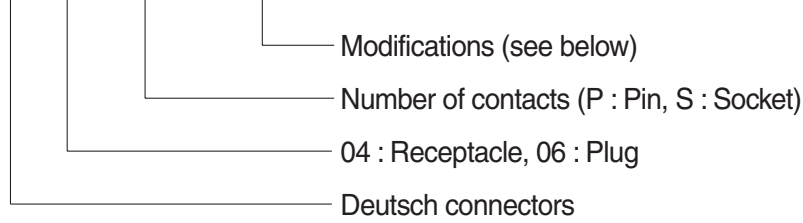
No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: right;">MG640605</p>	
2	 <p style="text-align: right;">MG640795</p>	

13) KET SDL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
14	 <p data-bbox="710 683 837 705">MG610406</p>	

14) DEUTSCH DT CONNECTORS

DT 06 - 3S - ★★☆☆



※ Modification

E003 : Standard end cap - gray

E004 : Color of connector to be black

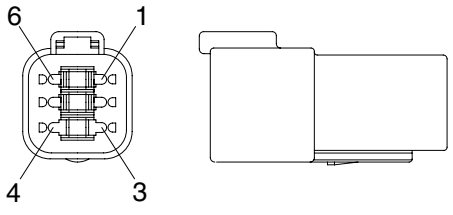
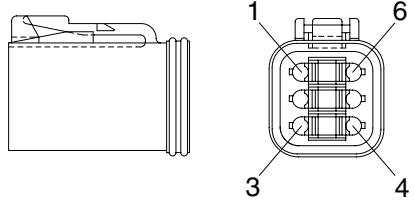
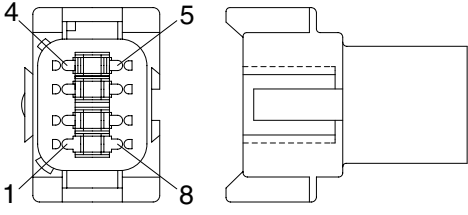
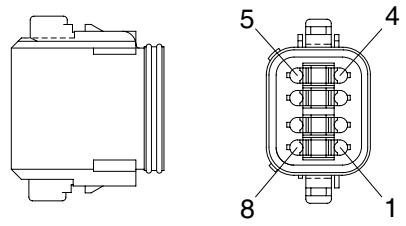
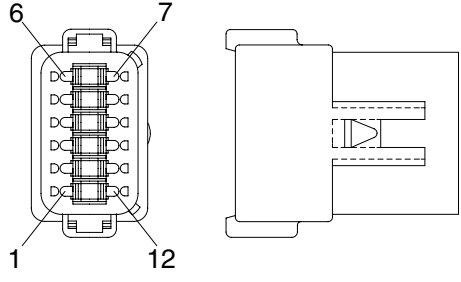
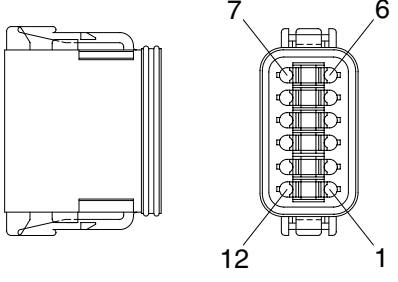
E005 : Combination - E004 & E003

EP04 : End cap

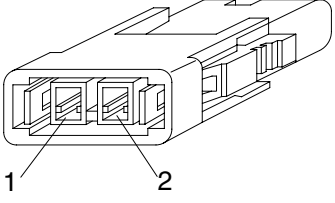
EP06 : Combination P012 & EP04

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

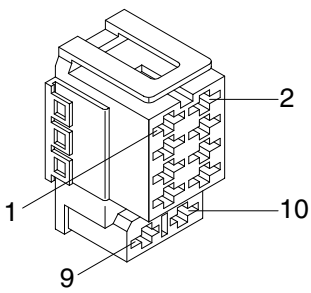
No. of pin	Receptacle connector (female)	Plug connector (male)
2	<p style="text-align: right;">DT06-2S</p>	<p style="text-align: right;">DT04-2P</p>
3	<p style="text-align: right;">DT06-3S</p>	<p style="text-align: right;">DT04-3P</p>
4	<p style="text-align: right;">DT06-4S</p>	<p style="text-align: right;">DT04-4P</p>

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p style="text-align: right;">DT06-6S</p>	 <p style="text-align: right;">DT04-6P</p>
8	 <p style="text-align: right;">DT06-8S</p>	 <p style="text-align: right;">DT04-8P</p>
12	 <p style="text-align: right;">DT06-12S</p>	 <p style="text-align: right;">DT04-12P</p>

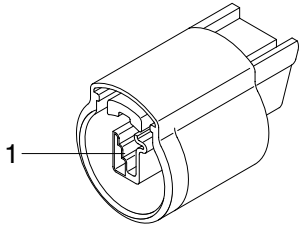
15) MOLEX 2CKTS CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p data-bbox="702 683 837 705">35215-0200</p>	

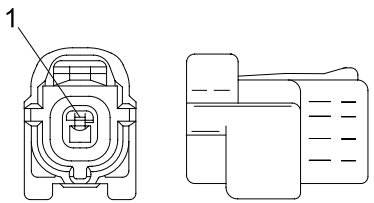
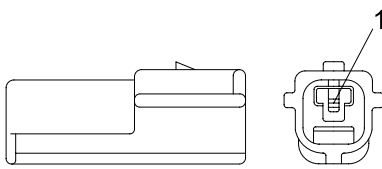
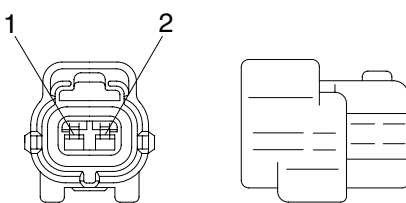
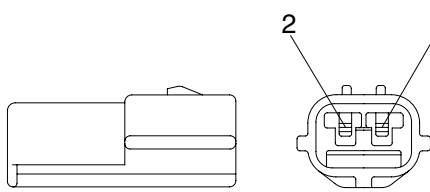
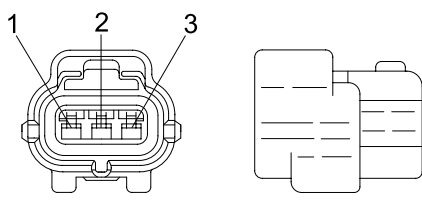
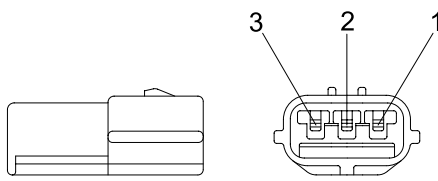
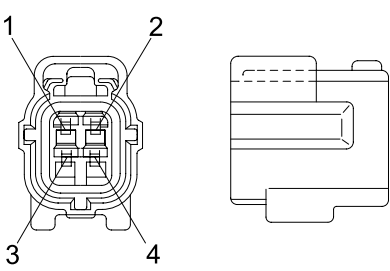
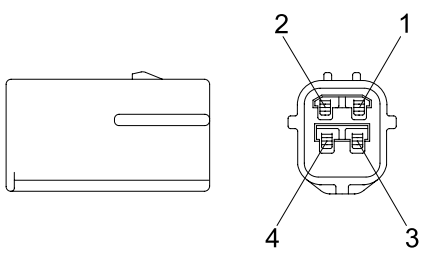
16) ITT SWF CONNECTOR

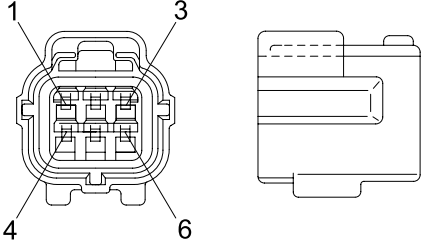
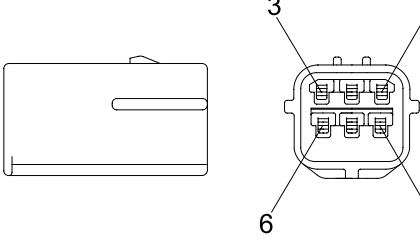
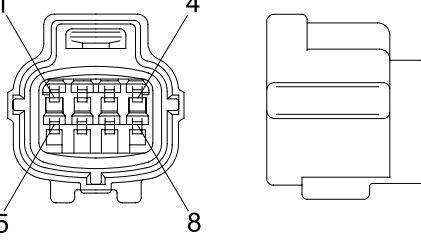
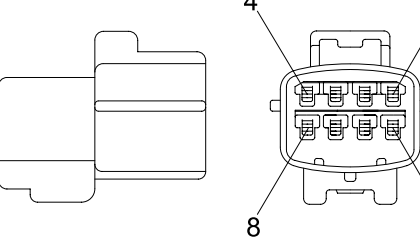
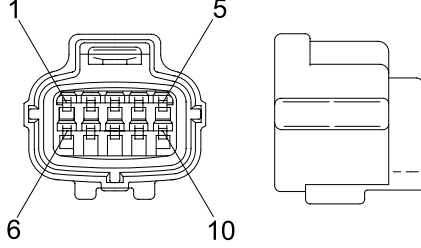
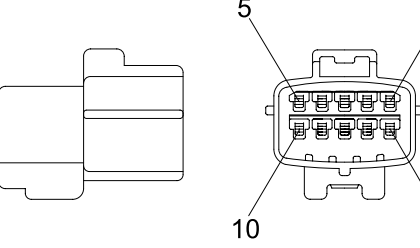
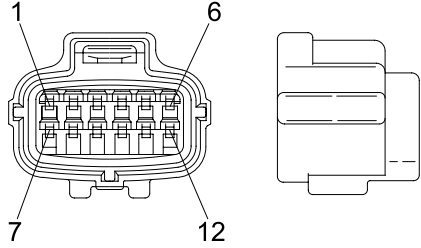
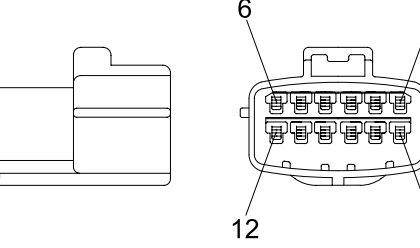
No. of pin	Receptacle connector (female)	Plug connector (male)
10	 <p data-bbox="694 1288 837 1310">SWF593757</p>	

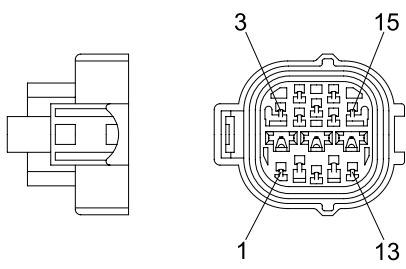
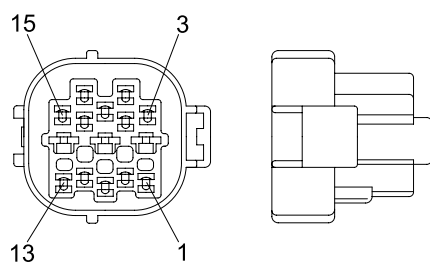
17) MWP NMWP CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p data-bbox="686 1892 837 1915">NMWP01F-B</p>	

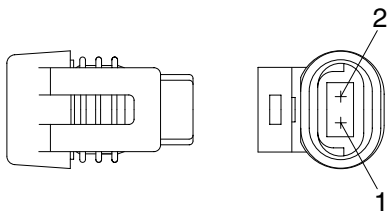
18) ECONOSEAL J TYPE CONNECTORS

No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p style="text-align: right;">S816-001002</p>	 <p style="text-align: left;">S816-101002</p>
2	 <p style="text-align: right;">S816-002002</p>	 <p style="text-align: left;">S816-102002</p>
3	 <p style="text-align: right;">S816-003002</p>	 <p style="text-align: left;">S816-103002</p>
4	 <p style="text-align: right;">S816-004002</p>	 <p style="text-align: left;">S816-104002</p>

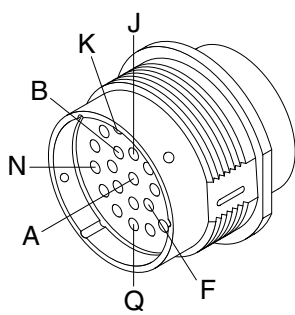
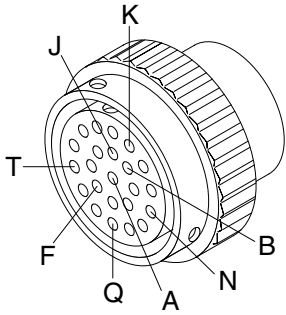
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p data-bbox="692 640 839 672">S816-006002</p>	 <p data-bbox="1241 640 1388 672">S816-106002</p>
8	 <p data-bbox="692 1048 839 1079">S816-008002</p>	 <p data-bbox="1241 1048 1388 1079">S816-108002</p>
10	 <p data-bbox="692 1451 839 1482">S816-010002</p>	 <p data-bbox="1241 1451 1388 1482">S816-110002</p>
12	 <p data-bbox="692 1854 839 1886">S816-012002</p>	 <p data-bbox="1241 1854 1388 1886">S816-112002</p>

No. of pin	Receptacle connector (female)	Plug connector (male)
15	 <p data-bbox="730 638 837 672">368301-1</p>	 <p data-bbox="1276 638 1383 672">2-85262-1</p>

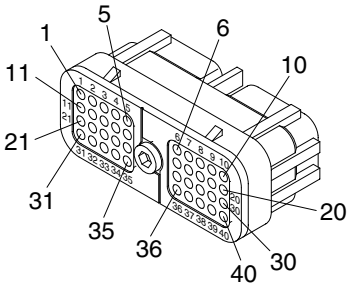
19) METRI-PACK TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p data-bbox="726 1243 833 1276">12040753</p>	

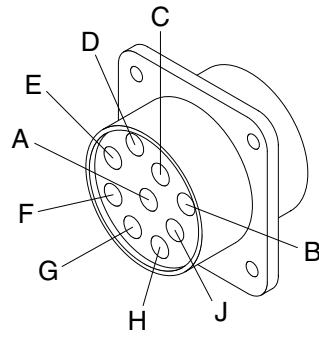
20) DEUTSCH HD30 CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
23	 <p data-bbox="662 1848 837 1881">HD36-24-23SN</p>	 <p data-bbox="1220 1848 1396 1881">HD34-24-23PN</p>

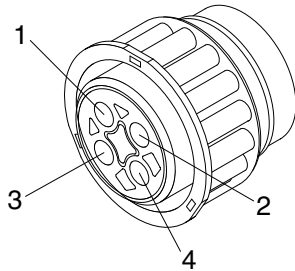
21) DEUTSCH MCU CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
40	 <p style="text-align: right;">DRC26-40SA/B</p>	

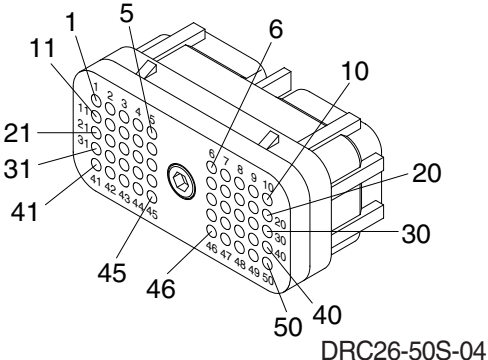
22) DEUTSCH SERVICE TOOL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
9	 <p style="text-align: right;">HD10-9-96P</p>	

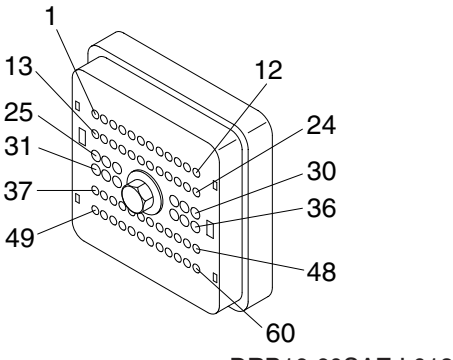
23) AMP FUEL WARMER CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
4	 <p style="text-align: right;">2-967325-3</p>	

24) DEUTSCH ENGINE ECM CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
50	 <p style="text-align: right;">DRC26-50S-04</p>	

25) DEUTSCH INTERMEDIATE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
60	 <p style="text-align: right;">DRB16-60SAE-L018</p>	