

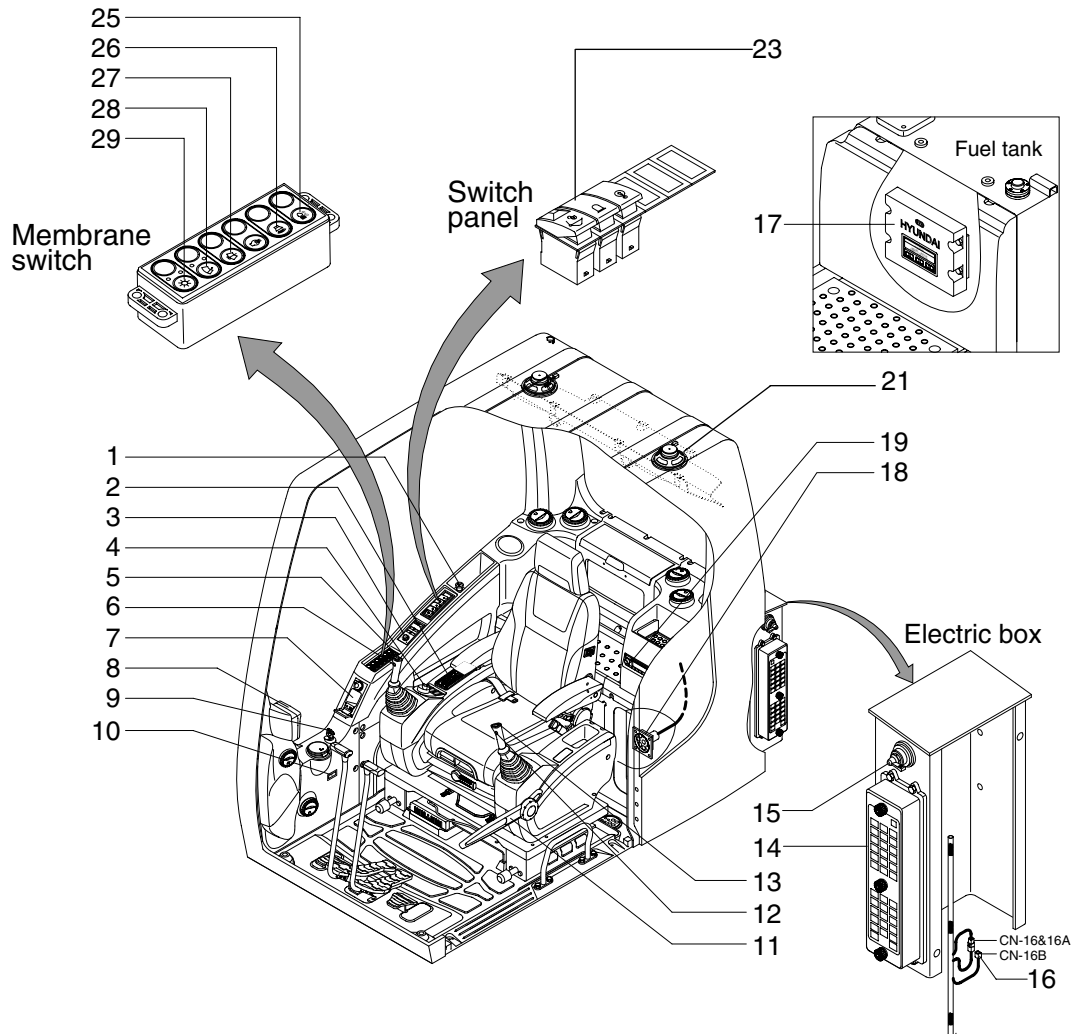
## SECTION 4 ELECTRICAL SYSTEM

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# SECTION 4 ELECTRICAL SYSTEM

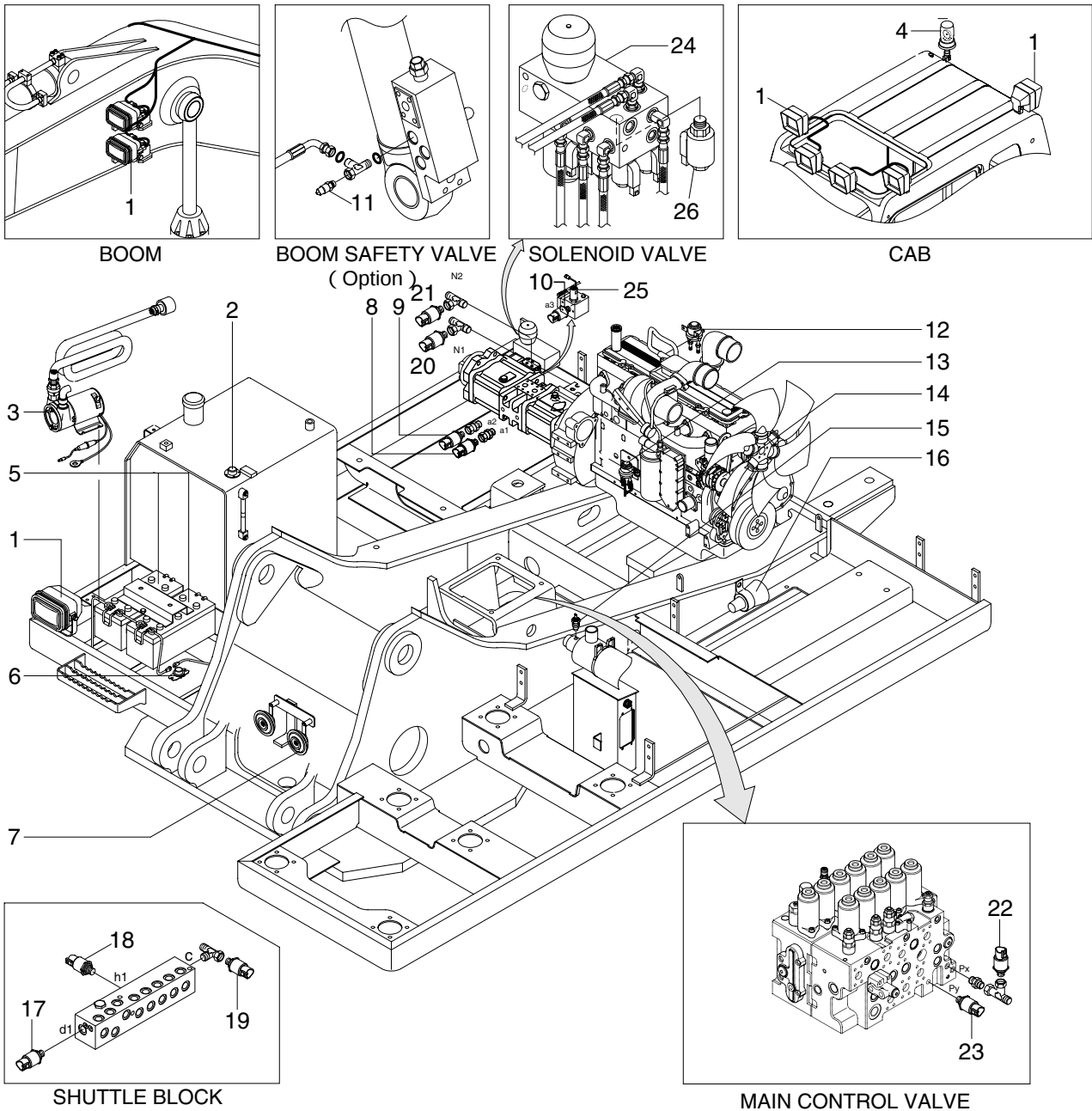
## GROUP 1 COMPONENT LOCATION

### 1. LOCATION 1



- |                                |                                 |                        |
|--------------------------------|---------------------------------|------------------------|
| 1 Cigar light                  | 11 Safety lever                 | 23 Beacon switch       |
| 2 Aircon & heater switch panel | 12 Power max switch             | 25 Cab light switch    |
| 3 Remote controller            | 13 One touch decel switch       | 26 Travel alarm switch |
| 4 Accel dial switch            | 14 Fuse box                     | 27 Washer switch       |
| 5 Horn switch                  | 15 Master switch                | 28 Wiper switch        |
| 6 Breaker operation switch     | 16 Emergency engine connector   | 29 Main light switch   |
| 7 Handsfree                    | 17 MCU                          |                        |
| 8 Cluster                      | 18 RS232 & J1939 service socket |                        |
| 9 Starting switch              | 19 Radio & CD/MP3 player        |                        |
| 10 Service meter               | 21 Speaker                      |                        |

## 2. LOCATION 2

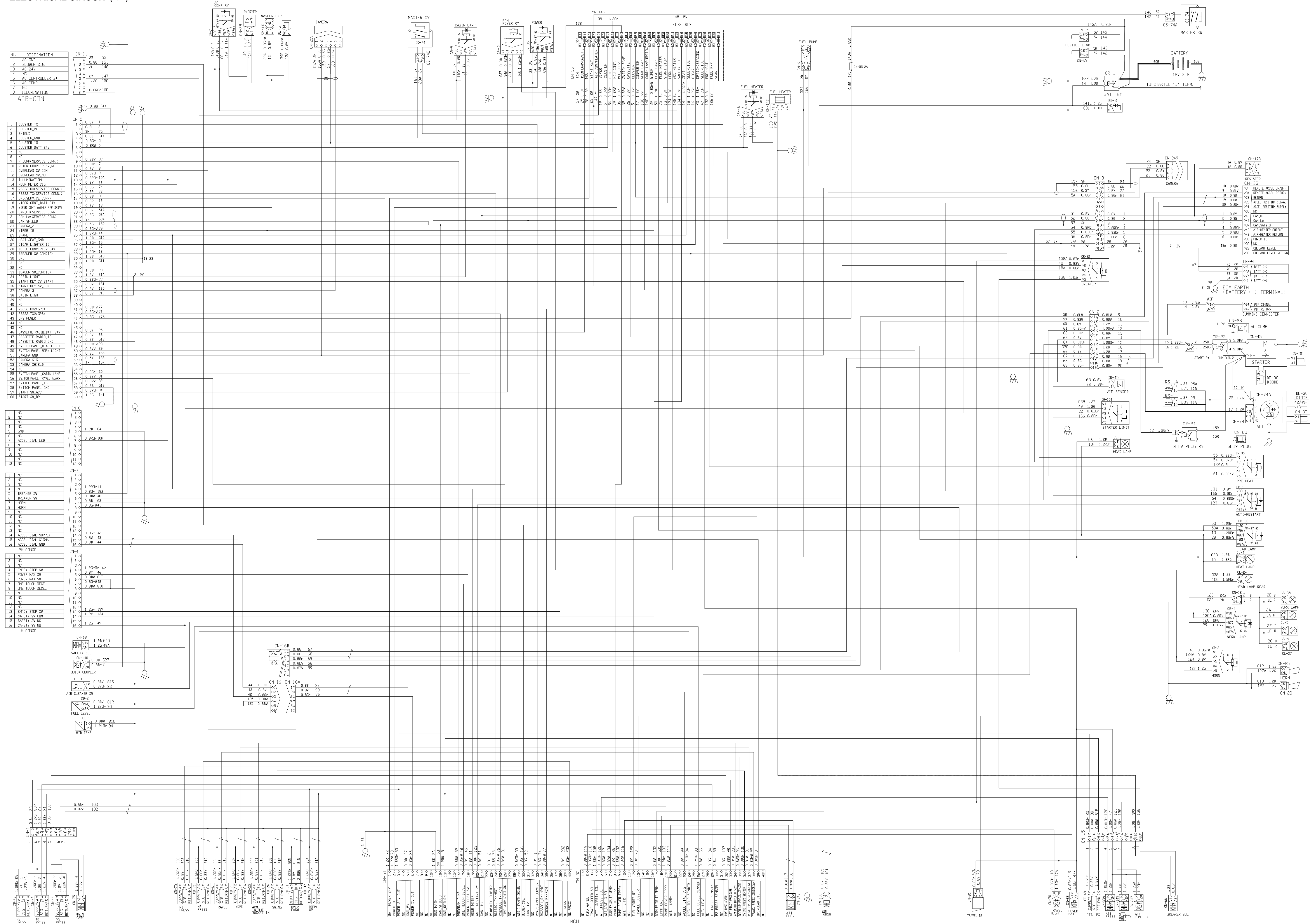


- |                         |                                  |                                   |
|-------------------------|----------------------------------|-----------------------------------|
| 1 Lamp                  | 10 eppr pressure sensor          | 19 Swing pressure sensor          |
| 2 Fuel sender           | 11 Overload pressure sensor(opt) | 20 Nega control 1 pressure sensor |
| 3 Fuel filler pump(opt) | 12 Heater relay                  | 21 Nega control 2 pressure sensor |
| 4 Beacon lamp           | 13 Start relay                   | 22 Attach pressure sensor         |
| 5 Battery               | 14 Alternator                    | 23 Travel pressure sensor         |
| 6 Battery relay         | 15 Air cleaner switch            | 24 Solenoid valve                 |
| 7 Horn                  | 16 Travel alarm buzzer           | 25 Pump EPPR valve                |
| 8 P1 pressure sensor    | 17 Arm/Bucket in pressure sensor | 26 Boom priority EPPR valve       |
| 9 P2 pressure sensor    | 18 Boom up pressure sensor       |                                   |

• ELECTRICAL CIRCUIT (1/2)



· ELECTRICAL CIRCUIT (2/2)



## MEMORANDUM

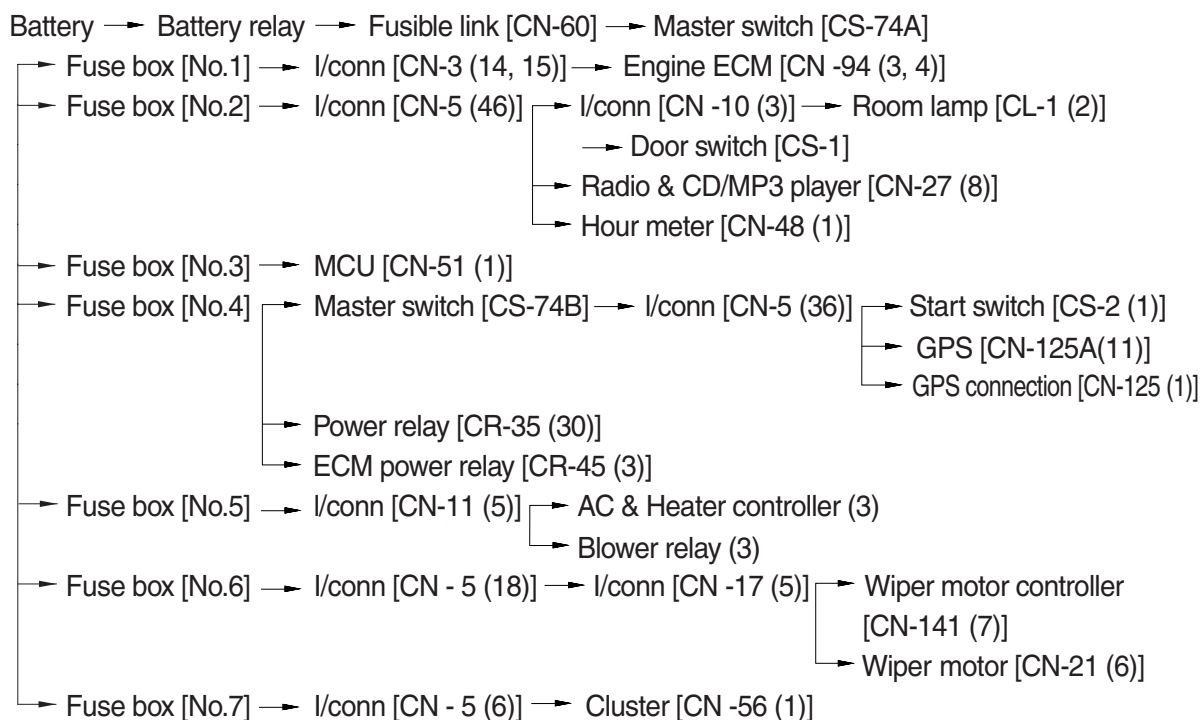
HYUNDAI HEAVY INDUSTRIES CO., LTD  
CONSTRUCTION EQUIPMENT DIV.

## 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



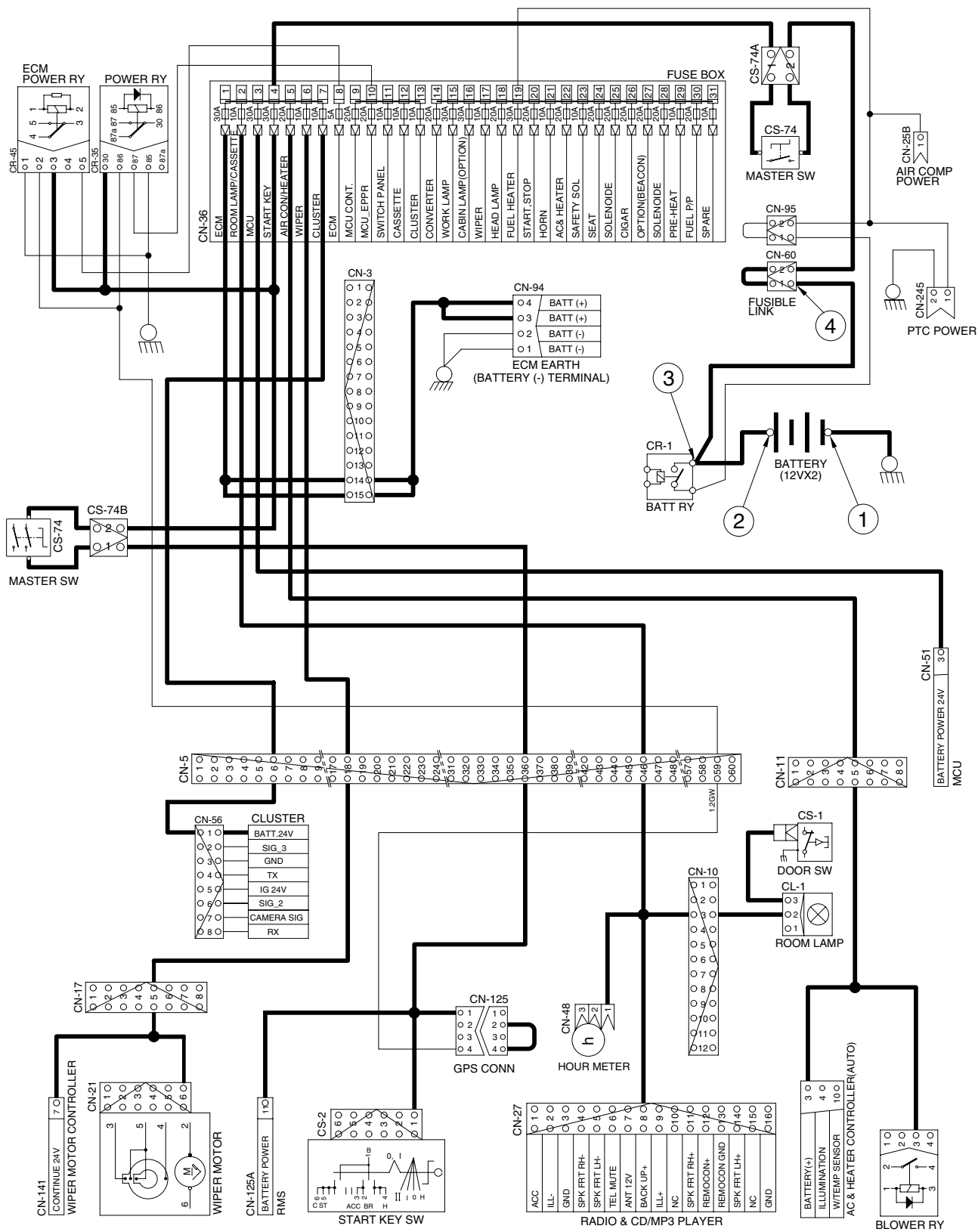
※ I/conn : Intermediate connector

### 2) CHECK POINT

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

※ GND : Ground

## POWER CIRCUIT



## 2. STARTING CIRCUIT

### 1) OPERATING FLOW

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

#### (1) When start key switch is in ON position

→ Start switch ON [CS-2 (2)] → I/conn [CN-5 (60)] → Battery relay [CR-1]  
     → Battery relay operating (all power is supplied with the electric component)  
 → Start switch ON [CS-2 (3)] → GPS conn [CN-125 (2)→(4)] → I/conn [CN-5 (59)]  
     → Power relay [CR-35 (86) → (87)] → Fuse box [No.10]  
     → ECM power relay [CR-45 (2) → (5)] → Fuse box [No.8]

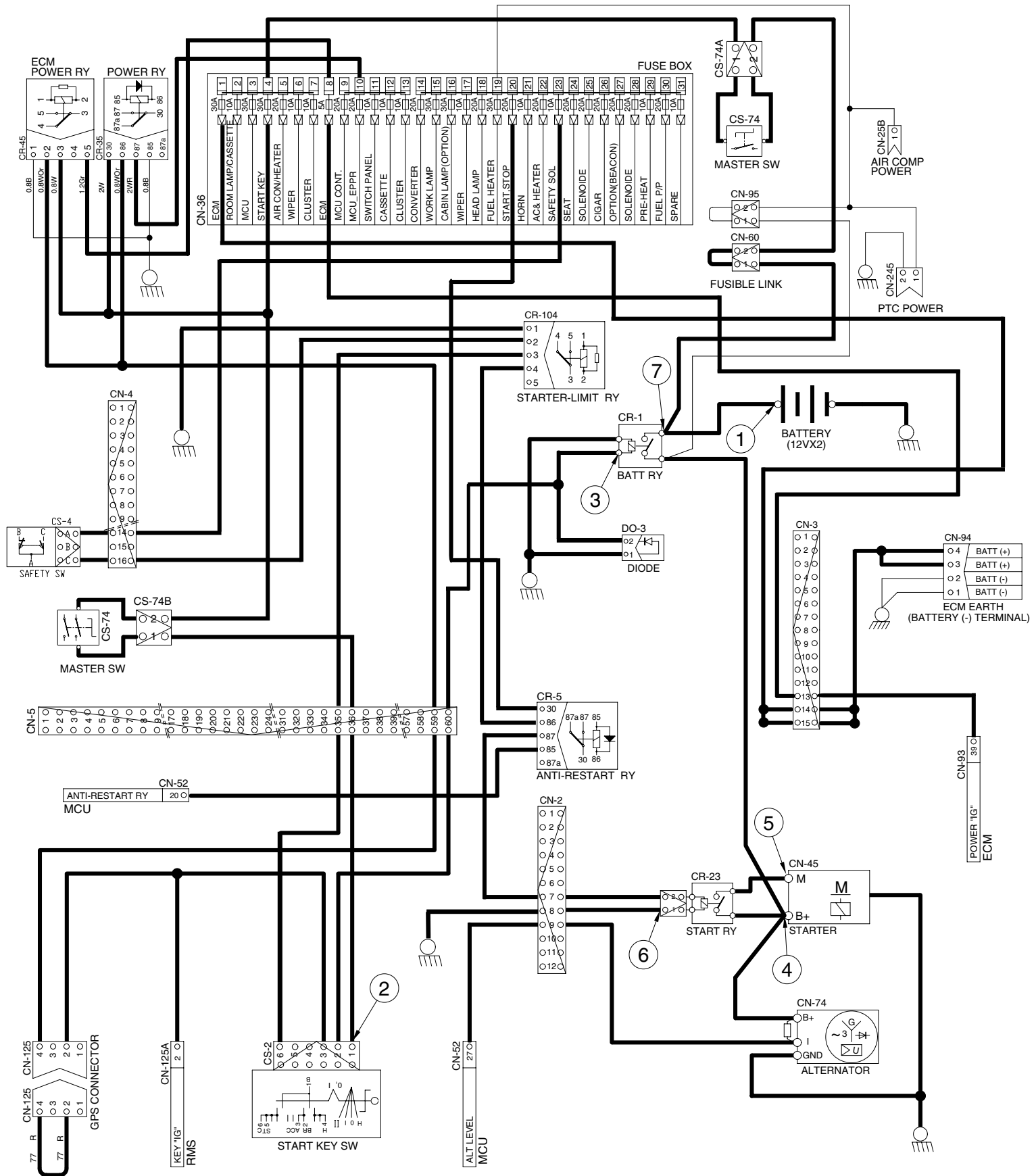
#### (2) When start key switch is in START position

Start switch START [CS-2 (6)] → I/conn [CN-5 (35)] → Starter limit relay [CR-104 (3)→(4)]  
 Anti-restart relay [CR-5 (86) →(87)] → I/conn [CN-2 (7)] → Start relay [CR-23 (2)]

### 2) CHECK POINT

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

# STARTING CIRCUIT



### 3. CHARGING CIRCUIT

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

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

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

#### 1) OPERATING FLOW

##### (1) Warning flow

Alternator "I" terminal → I/conn [CN-2 (9)] → MCU alternator level [CN-52 (27)]

→ Cluster charging warning lamp(Via serial interface)

##### (2) Charging flow

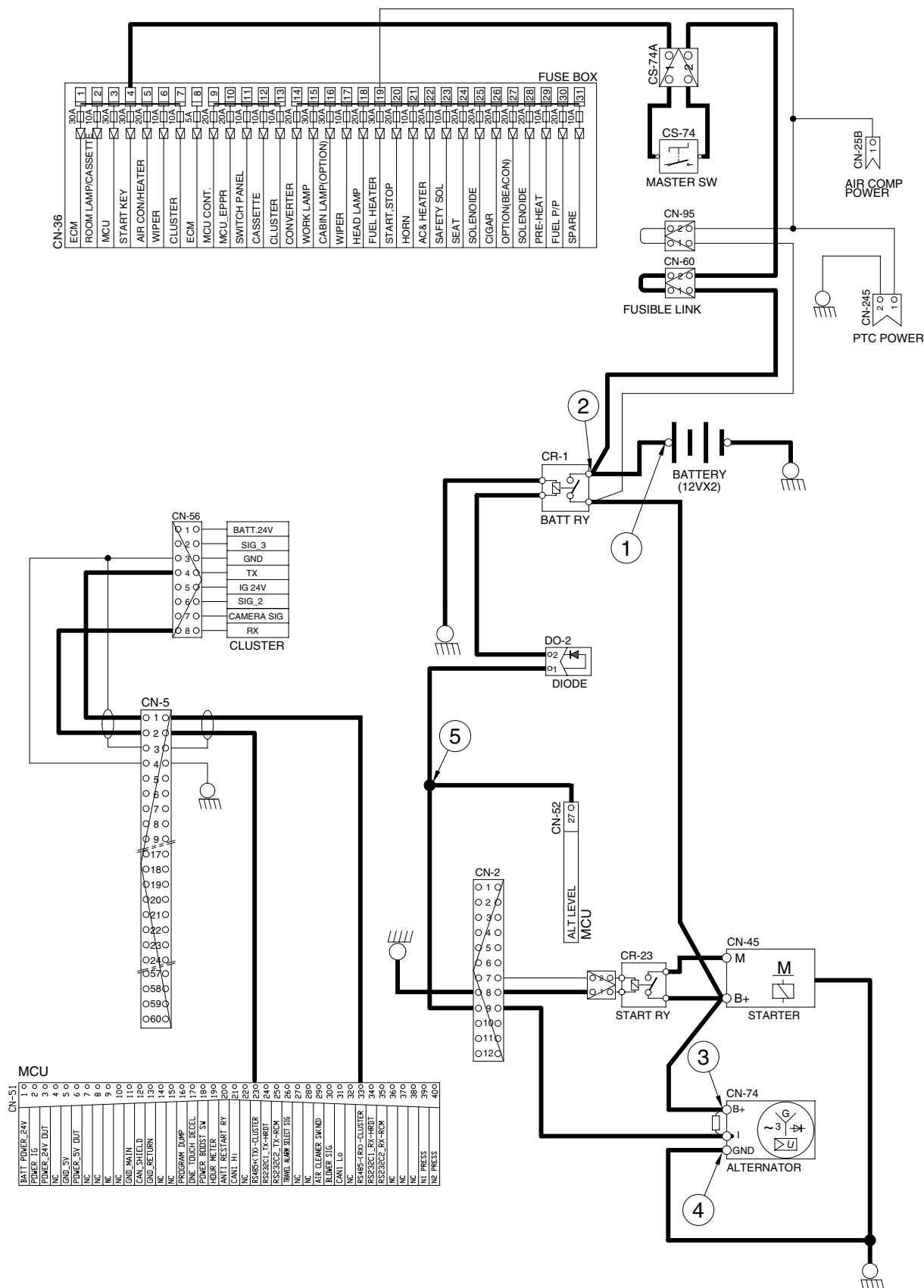
Alternator "B<sup>+</sup>" terminal → Battery relay(M8) → Battery(+) terminal  
→ Fusible link [CN-60] → Master switch [CS-74A]  
→ Fuse box

#### 2) CHECK POINT

| Engine | Start switch | Check point                                                                                                                                              | Voltage |
|--------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Run    | ON           | ① - GND (battery voltage)<br>② - GND (battery relay)<br>③ - GND (alternator B <sup>+</sup> terminal)<br>④ - GND (alternator I terminal)<br>⑤ - GND (MCU) | 20~25V  |

※ GND : Ground

# CHARGING CIRCUIT



## 4. HEAD AND WORK LIGHT CIRCUIT

### 1) OPERATING FLOW

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

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

#### (1) Head light switch ON

Head light switch ON [CN-116 (1)] → I/conn [CN-5 (49)] → Head light relay [CR-13 (85) → (87)]

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

→ I/conn [CN-8 (7)] → Accel dial LED ON [2]

→ I/conn [CN-5 (13)] → Cigar light [CL-2]

→ Radio & CD/MP3 player illumination ON [CN-27 (9)]

#### (2) Work light switch ON

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

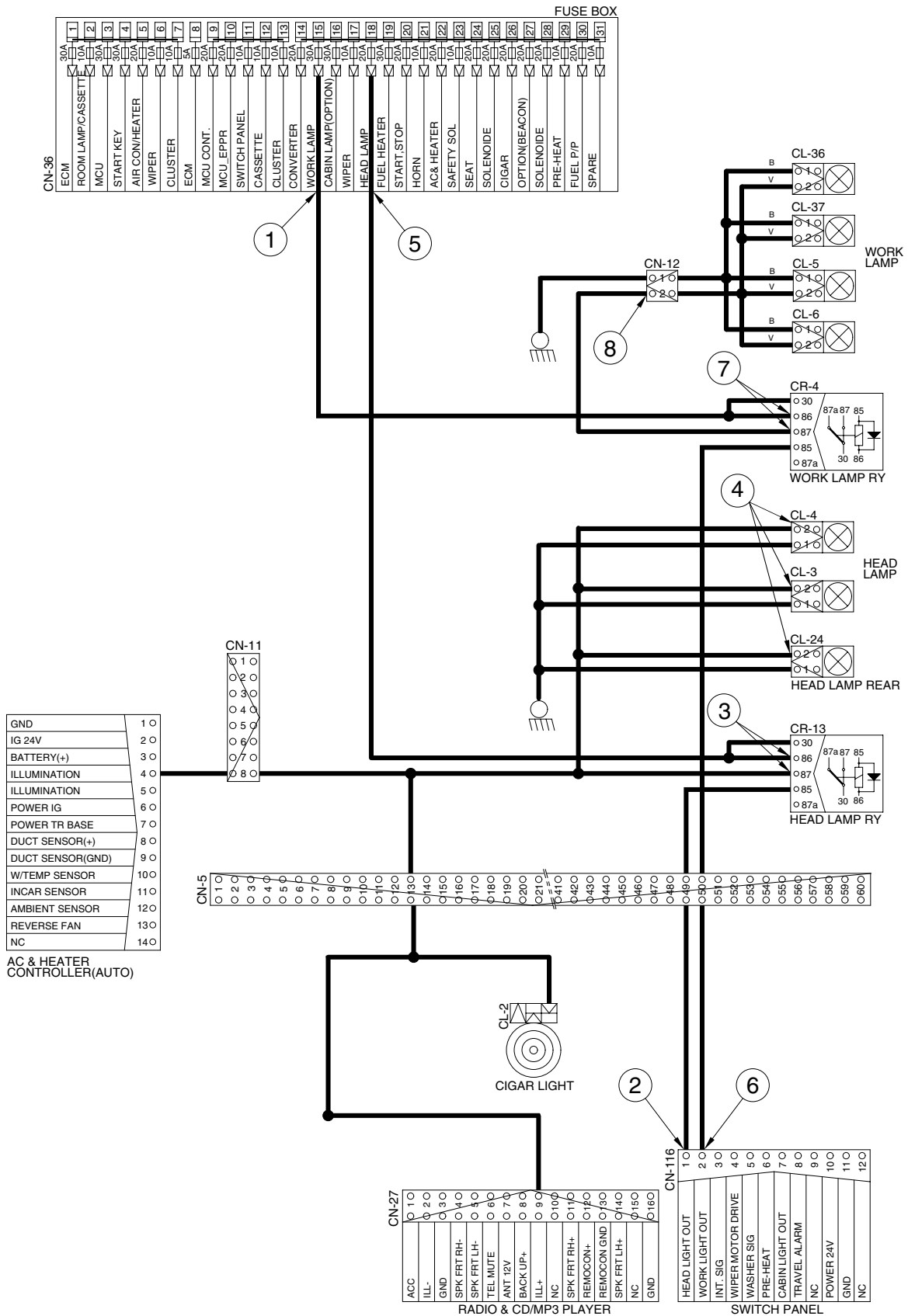
→ I/conn [CN-12 (2)] → Work light ON [CL-5 (2), CL-6 (2), CL-36 (2), CL-37 (2)]

### 2) CHECK POINT

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

※ GND : Ground

# HEAD AND WORK LIGHT CIRCUIT



## 5. BEACON LAMP AND CAB LIGHT CIRCUIT

### 1) OPERATING FLOW

Fuse box (No.27) → I/conn [CN-5 (33)] → Beacon lamp switch [CN-23 (8)]

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

#### (1) Beacon lamp switch ON

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

#### (2) Cab light switch ON

Cab light switch ON [CN-116 (7)] → I/conn [CN-5 (55)] → Cab lamp relay [CR-9 (85) → (87)]

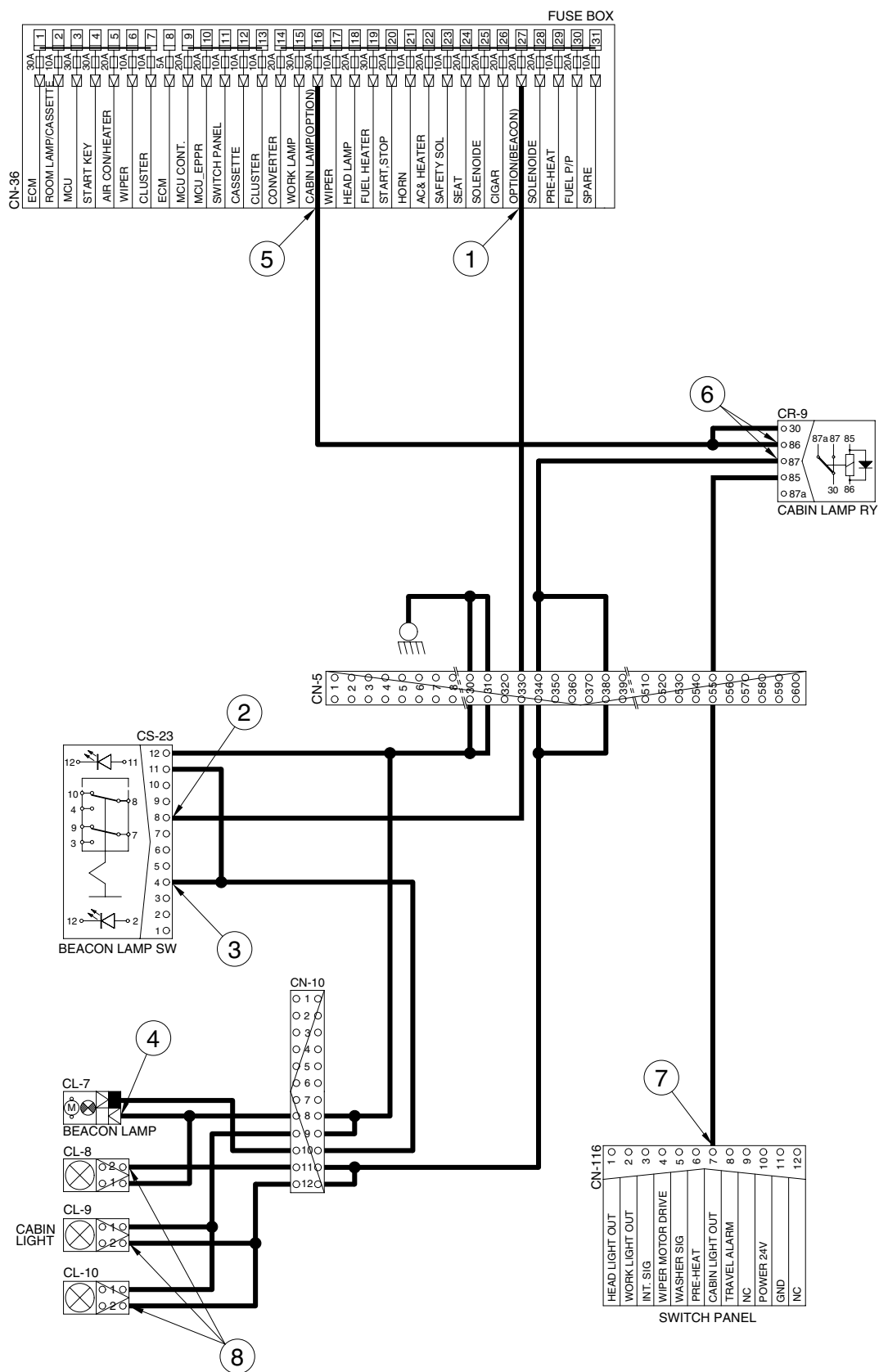
→ I/conn [CN-5 (34, 38)] → I/conn [CN-10 (11)] → Cab light ON [CL-8 (2)]  
 → I/conn [CN-10 (12)] → Cab light ON [CL-9 (2), CL-10 (2)]

### 2) CHECK POINT

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

※ GND : Ground

## BEACON LIGHT AND CAB LIGHT CIRCUIT



## 6. WIPER AND WASHER CIRCUIT

### 1) OPERATING FLOW

#### (1) Key switch ON

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

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

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

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

Wiper switch ON [CN-116 (3)] → I/conn [CN-17 (8)] → Wiper motor controller [CN-141 (10) → (3)]  
 → Wiper motor intermittently operating [CN-21 (4)]

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

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

#### (4) Washer switch ON

Washer switch ON [CN-116 (5)] → I/conn [CN-17 (7)] → Wiper motor controller [CN-141 (9) → (8)]  
 → I/conn [CN-17 (6)] → I/conn [CN-5 (19)] → Washer pump [CN-22 (1)] → Washer operating  
 Wiper switch ON [CN-116 (4)] → I/conn[CN-17 (2)] → Wiper motor controller [CN-141 (2) → (4)]  
 → Wiper motor operating [CN-21 (2)]

#### (5) Auto parking(when switch OFF)

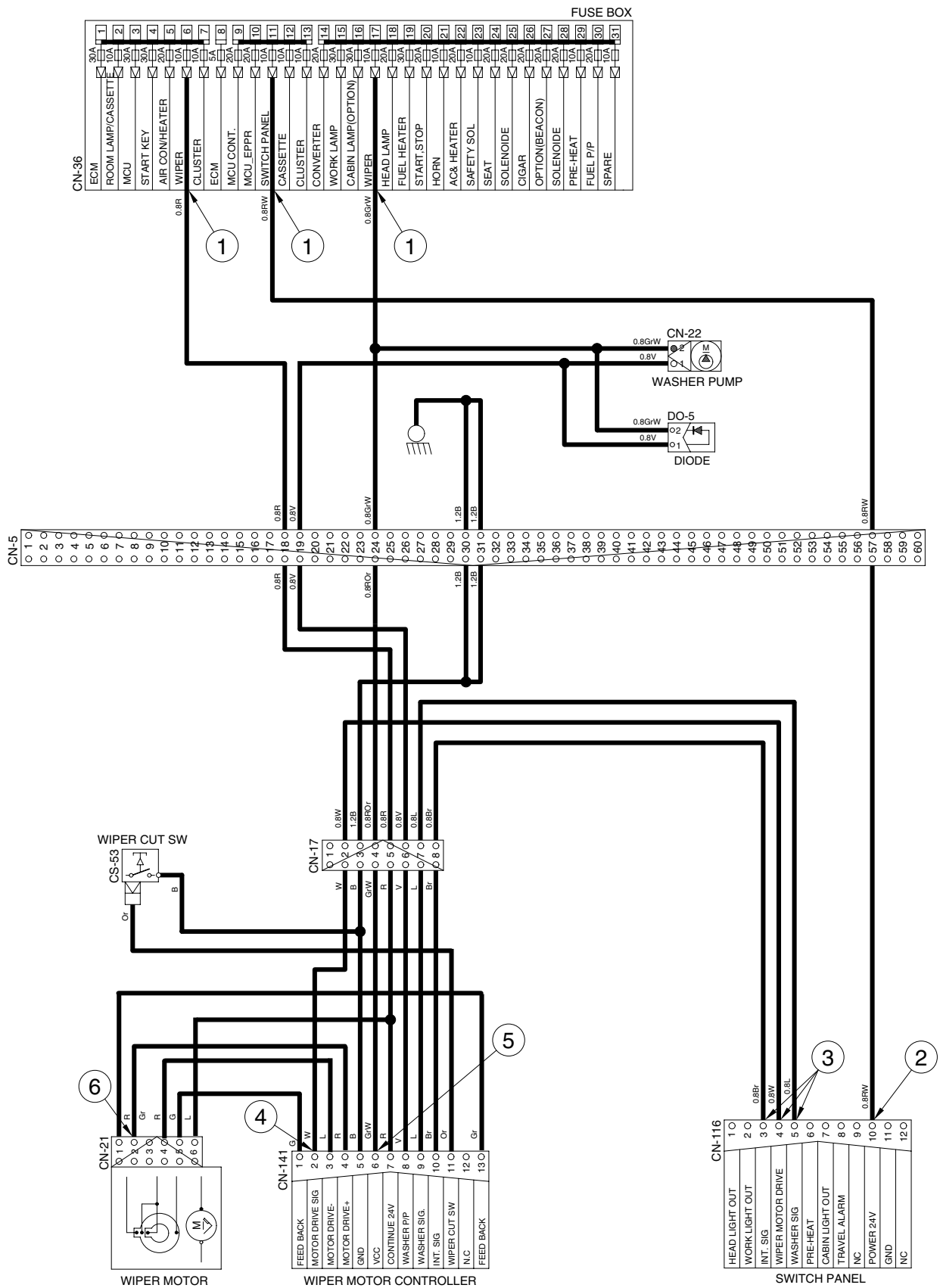
Switch OFF [CN-116 (4)] → Wiper motor parking position by wiper motor controller

### 2) CHECK POINT

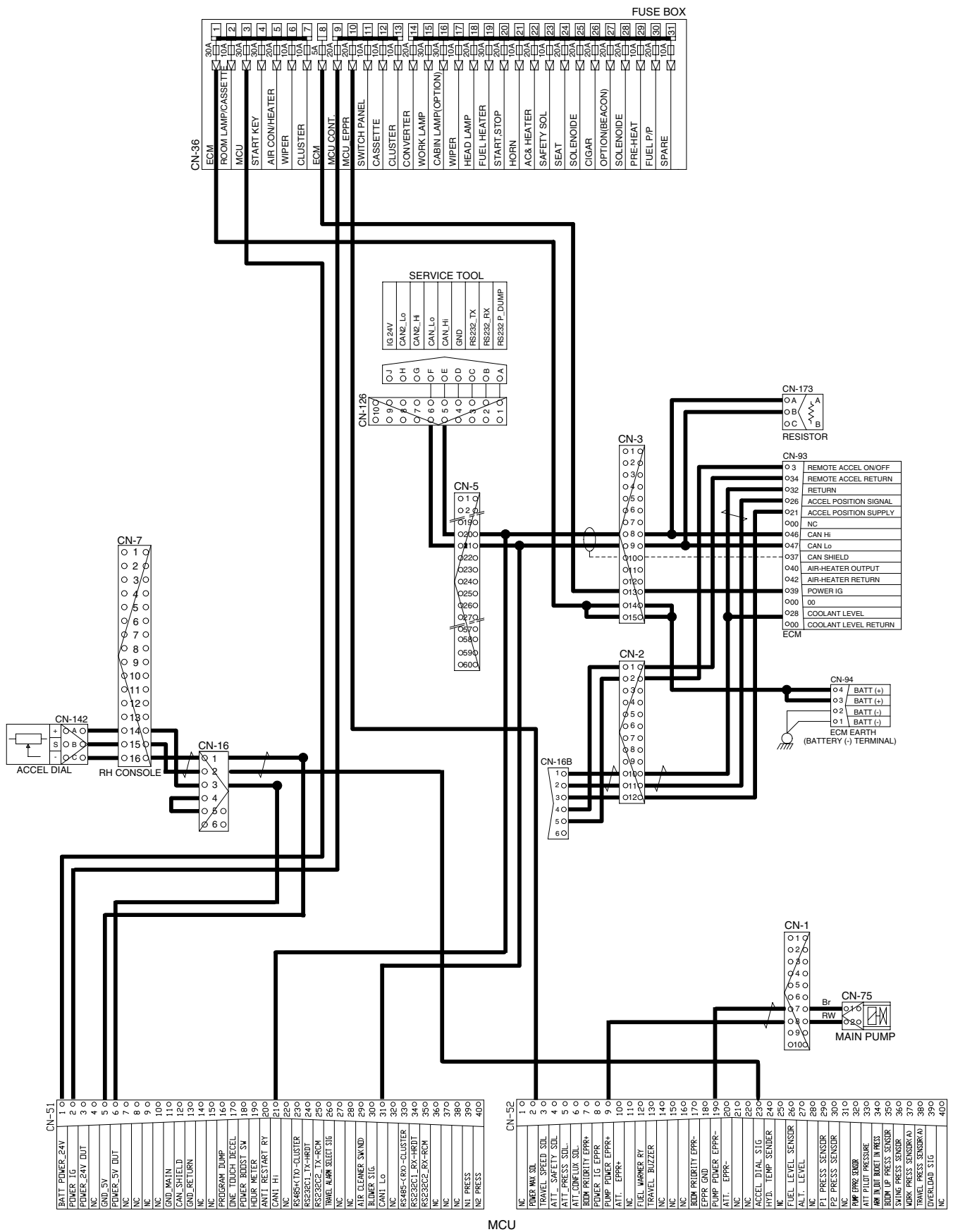
| Engine | Start switch | Check point                   | Voltage  |
|--------|--------------|-------------------------------|----------|
| STOP   | ON           | ① - GND (fuse box)            | 24V      |
|        |              | ② - GND (switch power input)  |          |
|        |              |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

※ GND : Ground

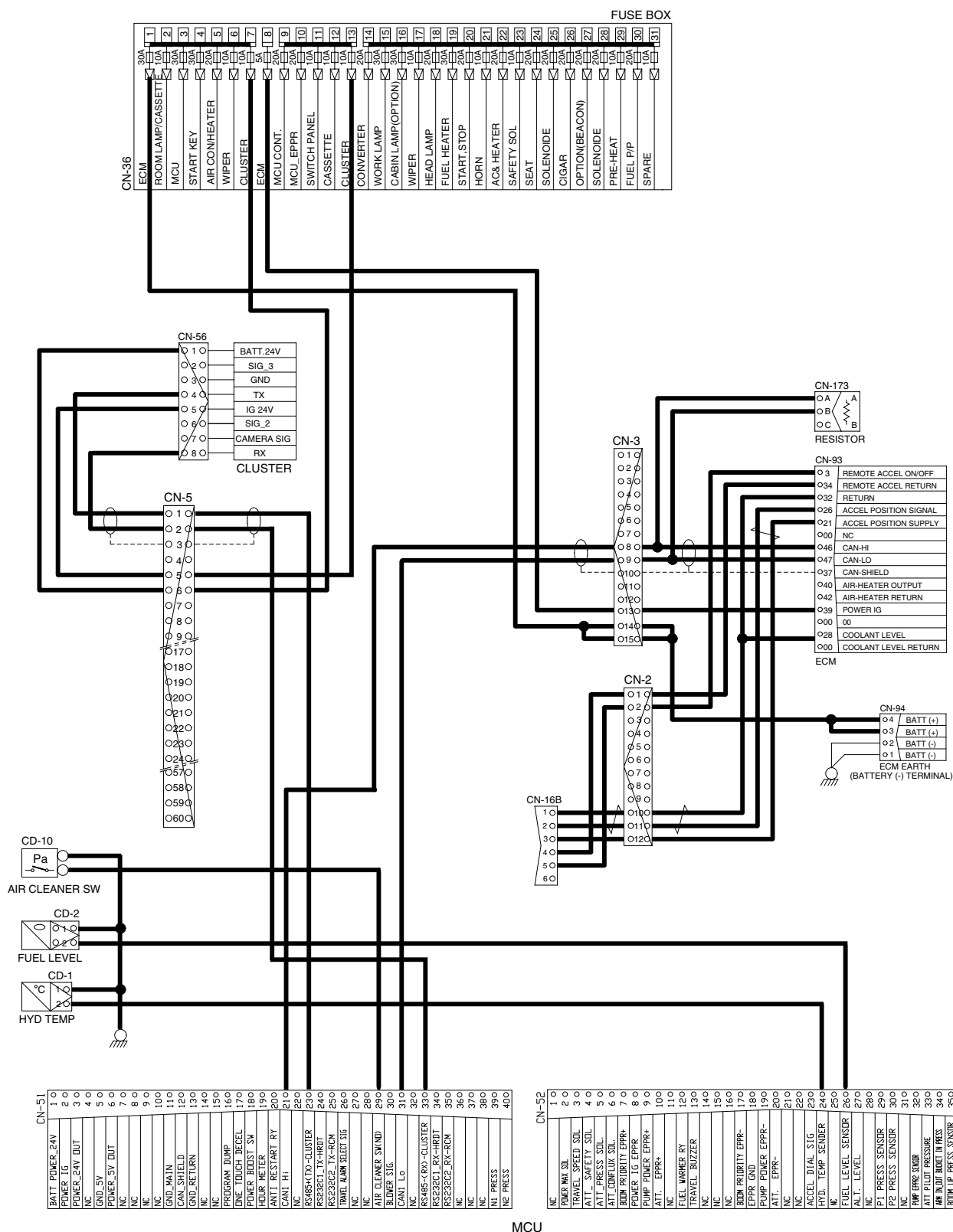
# WIPER AND WASHER CIRCUIT



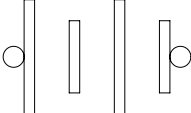
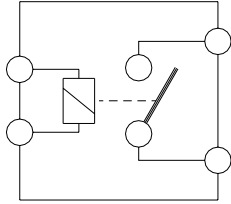
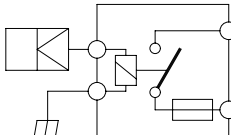
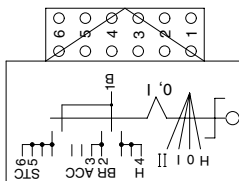
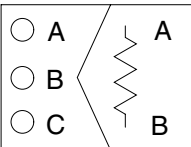
## CONTROLLER CIRCUIT

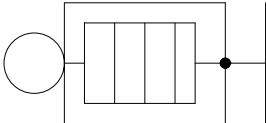
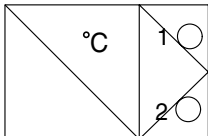
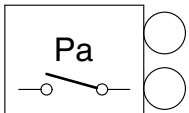
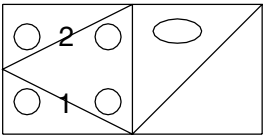
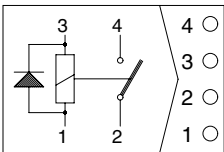
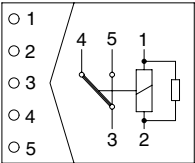


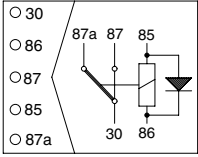
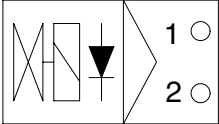
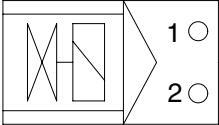
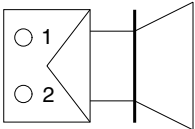
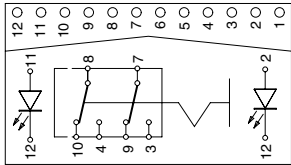
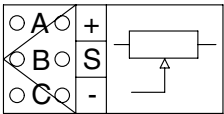
## MONITORING CIRCUIT

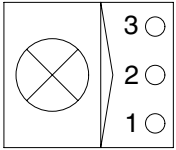
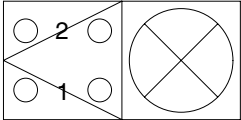
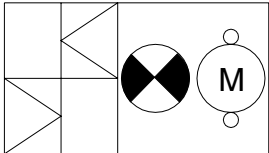
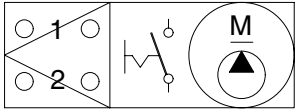
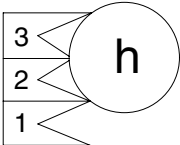
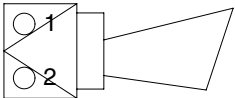


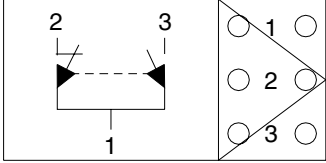
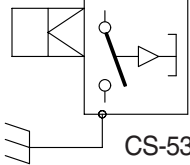
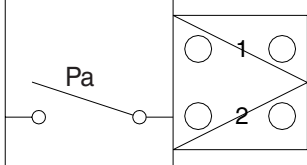
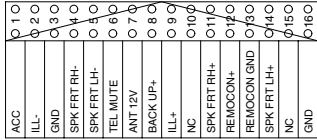
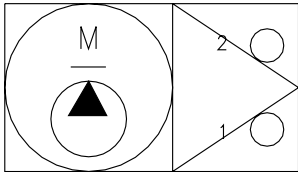
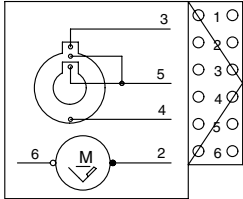
## GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

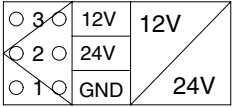
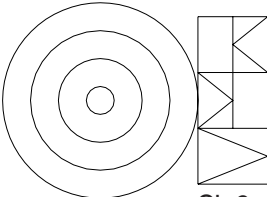
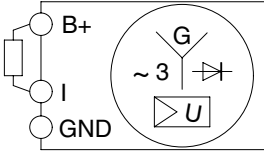
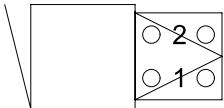
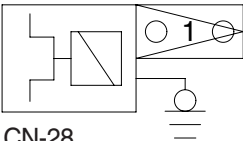
| Part name       | Symbol                                                                                                                                                                                                                                              | Specifications                                                | Check                                                                                                                     |     |     |     |        |       |                                   |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|--------|-------|-----------------------------------|
| Battery         |                                                                                                                                                                    | 12V × 100Ah<br>(2EA)                                          | ※ Check specific gravity<br>1.280 over : Over charged<br>1.280 ~ 1.250 : Normal<br>1.250 below : Recharging               |     |     |     |        |       |                                   |
| Battery relay   | <br>CR-1                                                                                                                                                           | Rated load :<br>24V<br>100A (continuity)<br>1000A (30seconds) | ※ Check coil resistance(M4 to M4)<br>Normal : About 50 Ω<br>※ Check contact<br>Normal : ∞ Ω                               |     |     |     |        |       |                                   |
| Glow plug relay | <br>CR-24                                                                                                                                                         | 24V 200A                                                      | ※ Check contact<br>Normal : 0.942 Ω<br>(For terminal 1-GND)                                                               |     |     |     |        |       |                                   |
| Start key       | <br>CS-2                                                                                                                                                         | B-BR : 24V 1A<br>B-ACC : 24V 10A<br>B-ST : 24V 40A            | ※ Check contact<br>OFF : ∞ Ω (for each terminal)<br>ON : 0 Ω (for terminal 1-3 and 1-2)<br>START : 0 Ω (for terminal 1-5) |     |     |     |        |       |                                   |
| Pressure sensor | <table border="1" data-bbox="467 1532 668 1655"><tr><td>○ A</td><td>SUPPLY</td></tr><tr><td>○ B</td><td>SIG</td></tr><tr><td>○ C</td><td>RETURN</td></tr></table><br>CD-6 CD-7 CD-24<br>CD-31 CD-32 CD-35<br>CD-42 CD-43 CD-44<br>CD-69 CD-70 CD-71 | ○ A                                                           | SUPPLY                                                                                                                    | ○ B | SIG | ○ C | RETURN | 8~30V | ※ Check contact<br>Normal : 0.1 Ω |
| ○ A             | SUPPLY                                                                                                                                                                                                                                              |                                                               |                                                                                                                           |     |     |     |        |       |                                   |
| ○ B             | SIG                                                                                                                                                                                                                                                 |                                                               |                                                                                                                           |     |     |     |        |       |                                   |
| ○ C             | RETURN                                                                                                                                                                                                                                              |                                                               |                                                                                                                           |     |     |     |        |       |                                   |
| Resistor        | <br>CN-173                                                                                                                                                       | 4W                                                            | ※ Check resistance<br>A-B : 120 Ω                                                                                         |     |     |     |        |       |                                   |

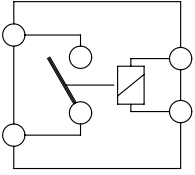
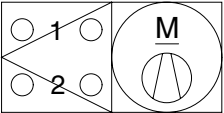
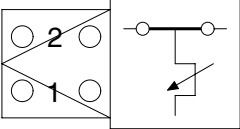
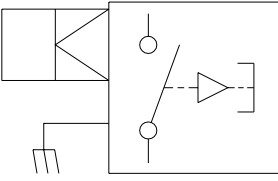
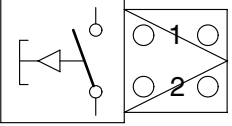
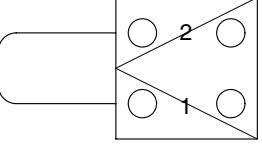
| Part name                      | Symbol                                                                                                                  | Specifications | Check                                                                                                                                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Glow plug                      | <br>CN-80                              | 24V 200A       | ※ Check resistance<br>0.25~0.12 Ω                                                                                                                                                                                                                 |
| Temperature sensor (hydraulic) | <br>CD-1                               | -              | ※ Check resistance<br>50°C : 804 Ω<br>80°C : 310 Ω<br>100°C : 180 Ω                                                                                                                                                                               |
| Air cleaner pressure switch    | <br>CD-10                             | (N.O TYPE)     | ※ Check contact<br>High level : ∞ Ω<br>Low level : 0 Ω                                                                                                                                                                                            |
| Fuel sender                    | <br>CD-2                             | -              | ※ Check resistance<br>Full : 50 Ω      6/12 : 350 Ω<br>11/12 : 100 Ω    5/12 : 400 Ω<br>10/12 : 150 Ω    4/12 : 450 Ω<br>9/12 : 200 Ω     3/12 : 500 Ω<br>8/12 : 250 Ω     2/12 : 550 Ω<br>7/12 : 300 Ω     1/12 : 600 Ω<br>Empty warning : 700 Ω |
| Relay (air con blower)         |                                      | 24V 20A        | ※ Check resistance<br>Normal : About 200 Ω<br>(for terminal 1-3)<br>0 Ω<br>(for terminal 2-4)                                                                                                                                                     |
| Relay                          | <br>CR-2 CR-36 CR-45<br>CR-62 CR-104 | 24V 16A        | ※ Check resistance<br>Normal : About 160 Ω<br>(for terminal 1-2)<br>0 Ω (for terminal 3-4)<br>∞ Ω (for terminal 3-5)                                                                                                                              |

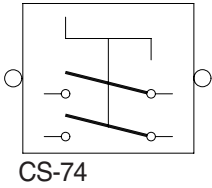
| Part name                | Symbol                                                                                                                                                      | Specifications | Check                                                                                                                                                              |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relay                    |  <p>CR-4 CR-5 CR-7<br/>CR-9 CR-13 CR-35 CR-46</p>                          | 24V 16A        | ※ Check resistance<br>Normal : About 160 Ω<br>(for terminal 85-86)<br>0 Ω (for terminal 30-87a)<br>∞ Ω (for terminal 30-87)                                        |
| Solenoid valve           |  <p>CN-66 CN-68 CN-70<br/>CN-88 CN-140 CN-149<br/>CN-236 CN-237 CN-242</p> | 24V 1A         | ※ Check resistance<br>Normal : 15~25 Ω<br>(for terminal 1-2)                                                                                                       |
| EPPR valve               |  <p>CN-75 CN-133</p>                                                       | 700mA          | ※ Check resistance<br>Normal : 15~25 Ω<br>(for terminal 1-2)                                                                                                       |
| Speaker                  |  <p>CN-23(LH)<br/>CN-24(RH)</p>                                          | 20W            | ※ Check resistance<br>Normal : A few Ω                                                                                                                             |
| Switch<br>(locking type) |  <p>CS-23 CS-50 CS-52<br/>CS-67 CS-73 CS-82<br/>CS-83 CS-99 CS-100</p>   | 24V 8A         | ※ Check contact<br>Normal<br>ON : 0 Ω (for terminal 3-7, 4-8)<br>∞ Ω (for terminal 7-9, 8-10)<br>OFF : ∞ Ω (for terminal 3-7, 4-8)<br>0 Ω (for terminal 7-9, 8-10) |
| Accel dial               |  <p>CN-142</p>                                                           | -              | ※ Check resist<br>Normal : About 5k Ω<br>(for terminal A-C)<br>※ Check voltage<br>Normal : About 5V<br>(for terminal A-C)<br>: 2~4.5V<br>(for terminal C-B)        |

| Part name                            | Symbol                                                                                                                                           | Specifications       | Check                                                                                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Room lamp                            | <br>CL-1                                                        | 24V 10W              | ※ Check disconnection<br>Normal : 1.0 Ω<br>ON : 0 Ω (For terminal 1-2)<br>∞ Ω (For terminal 1-3)<br>OFF : ∞ Ω (For terminal 1-2)<br>0 Ω (For terminal 1-3) |
| Head lamp,<br>Work lamp,<br>Cab lamp | <br>CL-3 CL-4 CL-5<br>CL-6 CL-8 CL-9 CL-10<br>CL-24 CL-36 CL-37 | 24V 65W<br>(H3 Type) | ※ Check disconnection<br>Normal : 1.2 Ω                                                                                                                    |
| Beacon lamp                          | <br>CL-7                                                       | 21V 70W<br>(H1 Type) | ※ Check disconnection<br>Normal : A few Ω                                                                                                                  |
| Fuel filler pump                     | <br>CN-61                                                     | 24V 10A<br>35 l /min | ※ Check resistance<br>Normal : 1.0 Ω                                                                                                                       |
| Hour meter                           | <br>CN-48                                                     | 16~32V               | ※ Check operation<br>Supply power(24V) to terminal<br>No.2 and connect terminal No.1<br>and ground                                                         |
| Horn                                 | <br>CN-20 CN-25                                               | DC22~28V<br>2A       | ※ Check operation<br>Supply power(24V) to each<br>terminal and connect ground.                                                                             |

| Part name                | Symbol                                                                                           | Specifications        | Check                                                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Safety switch            |  <p>CS-4</p>    | 24V 15A<br>(N.C TYPE) | ※ Check contact<br>Normal : 0 Ω (for terminal 1-2)<br>∞ Ω (for terminal 1-3)<br>Operating : ∞ Ω (for terminal 1-2)<br>0 Ω (for terminal 1-3) |
| Wiper cut switch         |  <p>CS-53</p>   | 24V<br>(N.O TYPE)     | ※ Check contact<br>Normal : 0 Ω (one pin to ground)                                                                                          |
| Receiver dryer           |  <p>CN-29</p>  | 24V 2.5A              | ※ Check contact<br>Normal : ∞ Ω                                                                                                              |
| Radio &<br>CD/MP3 player |  <p>CN-27</p> | 24V 2A                | ※ Check voltage<br>20~25V<br>(for terminal 1-3, 3-8)                                                                                         |
| Washer pump              |  <p>CN-22</p> | 24V 3.8A              | ※ Check contact<br>Normal : 10.7 Ω (for terminal 1-2)                                                                                        |
| Wiper motor              |  <p>CN-21</p> | 24V 2A                | ※ Check disconnection<br>Normal : 7 Ω (for terminal 2-6)                                                                                     |

| Part name         | Symbol                                                                                       | Specifications        | Check                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| DC/DC Converter   | <br>CN-138  | 12V 3A                | 24V (1-2)<br>12V (1-3)                                                                                                           |
| Cigar lighter     | <br>CL-2    | 24V 5A 1.4W           | ※ Check coil resistance<br>Normal : About 1M $\Omega$<br>※ Check contact<br>Normal : $\infty \Omega$<br>Operating time : 5~15sec |
| Alternator        | <br>CN-74  | Delco Remy<br>24V 55A | ※ Check contact<br>Normal : 0 $\Omega$ (for terminal B <sup>+</sup> -I)<br>Normal : 24~27.5V                                     |
| Starter           | <br>CN-45 | Denso<br>24V 4.5kW    | ※ Check contact<br>Normal : 0.1 $\Omega$                                                                                         |
| Travel alarm      | <br>CN-81 | 24V 0.5A              | ※ Check contact<br>Normal : 5.2 $\Omega$                                                                                         |
| Aircon compressor | <br>CN-28 | 24V 79W               | ※ Check contact<br>Normal : 13.4 $\Omega$                                                                                        |

| Part name                                                   | Symbol                                                                                                                | Specifications    | Check                                                                                                         |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------|
| Start relay                                                 | <br>CR-23                            | 24V 300A          | ※ Check contact<br>Normal : 0.94 Ω (for terminal 1-2)                                                         |
| Blower motor                                                |                                      | 24V 9.5A          | ※ Check resistance<br>Normal : 2.5 Ω (for terminal 1-2)                                                       |
| Duct sensor (switch)                                        |                                     | 1°C OFF<br>4°C ON | ※ Check resistance<br>Normal : 0 Ω (for terminal 1-2),<br>the atmosphere temp :<br>Over 4°C                   |
| Door switch                                                 | <br>CS-1                           | 24V 2W            | ※ Check resistance<br>Normal : About 5M Ω                                                                     |
| Switch<br>(power max,<br>one touch decel,<br>horn, breaker) | <br>CS-5    CS-19<br>CS-26   CS-29 | 24V 6A            | ※ Check resistance<br>Normal : ∞ Ω                                                                            |
| Fusible link                                                | <br>CN-60   CN-95                  | 60A               | ※ Check disconnection<br>Normal : 0 Ω<br>(connect ring terminal and check<br>resist between terminal 1 and 2) |

| Part name     | Symbol                                                                                         | Specifications | Check                                   |
|---------------|------------------------------------------------------------------------------------------------|----------------|-----------------------------------------|
| Master switch |  <p>CS-74</p> | 6-36V          | ※ Check disconnection<br>Normal : 0.1 Ω |

## GROUP 4 CONNECTORS

### 1. CONNECTOR DESTINATION

| Connector number | Type      | No. of pin | Destination                               | Connector part No. |                  |
|------------------|-----------|------------|-------------------------------------------|--------------------|------------------|
|                  |           |            |                                           | Female             | Male             |
| CN-1             | AMP       | 10         | I/conn (Frame harness-Pump PS harness)    | S816-010002        | S816-110002      |
| CN-2             | AMP       | 12         | I/conn (Frame harness-Engine harness)     | S816-012002        | S816-112002      |
| CN-3             | AMP       | 15         | I/conn (Frame harness-Engine harness)     | 2-85262-1          | 368301-1         |
| CN-4             | AMP       | 16         | I/conn (Console harness LH-Frame harness) | 368047-1           | S816-116002      |
| CN-5             | DEUTSCH   | 60         | I/conn (Side harness RH-Frame harness)    | DRB16-60SAE-L018   | DRB12-60PAE-L018 |
| CN-7             | AMP       | 16         | I/conn (Console harness RH-Frame harness) | 368047-1           | 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-Side 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-E004     |
| CN-14            | AMP       | 8          | I/conn (Frame harness-Bucket EPPR)        | S816-008002        | S816-108002      |
| CN-15            | AMP       | 12         | I/conn (Frame harness-Breaker solenoid)   | S816-012002        | S816-112002      |
| CN-16            | AMP       | 6          | Emergency engine start & speed control    | S816-006002        | S816-106002      |
| CN-17            | DEUTSCH   | 8          | I/conn (Wiper harness-Side harness RH)    | DT06-8S-EP06       | DT04-8P          |
| CN-20            | MOLEX     | 2          | Horn                                      | 36825-0211         | -                |
| CN-21            | AMP       | 6          | Wiper motor                               | 925276-0           | -                |
| 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            | KUM       | 16         | Radio & CD/MP3 player                     | PK145-16017        | -                |
| CN-28            | KUM       | 1          | Aircon compressor                         | NMWP01F-B          | -                |
| CN-29            | KET       | 2          | Receiver dryer                            | MG640795           | -                |
| CN-36            | -         | -          | Fuse & relay box                          | 21Q7-10910         | -                |
| CN-45            | RING-TERM | -          | Starter motor B <sup>+</sup>              | S820-308000        | -                |
| CN-48            | AMP       | 1          | Hour meter                                | 2-520193-2         | -                |
| CN-51            | DEUTSCH   | 40         | MCU                                       | DRC26-40SA         | -                |
| CN-52            | DEUTSCH   | 40         | MCU                                       | DRC26-40SB         | -                |
| CN-53            | DEUTSCH   | 40         | MCU                                       | DRC26-40SC         | -                |
| CN-56            | DEUTSCH   | 6          | Cluster                                   | -                  | DT04-6P-E005     |
| CN-60            | YAZAKI    | 2          | Fusible link                              | 21N4-01320         | 7122-4125-50     |
| 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       | -                |

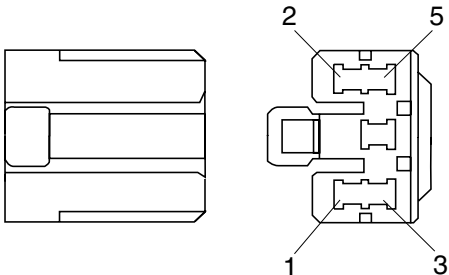
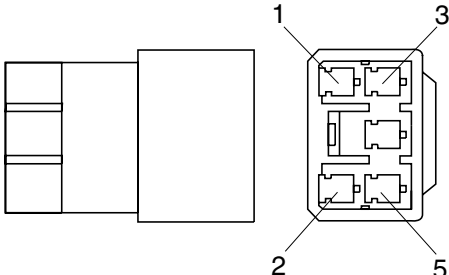
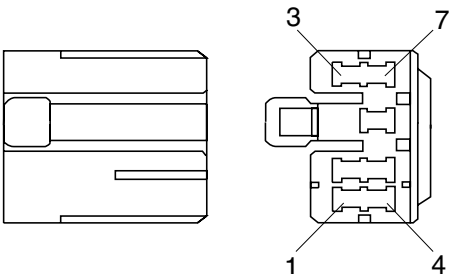
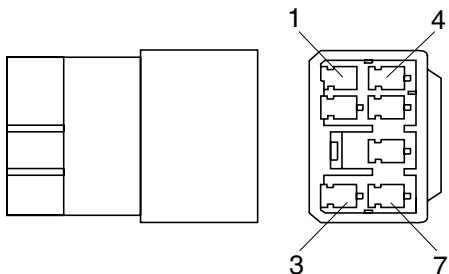
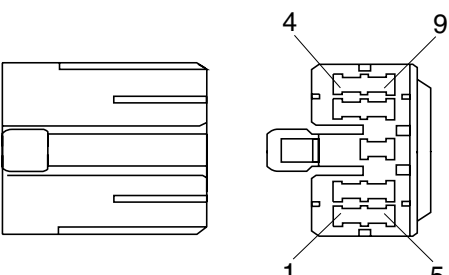
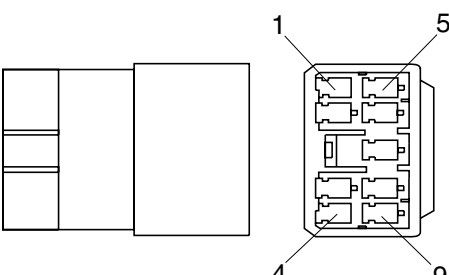
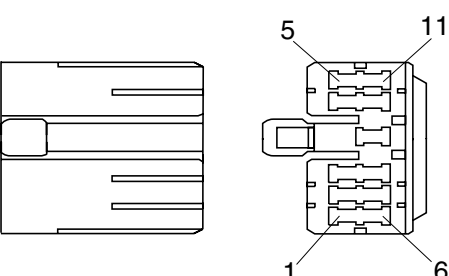
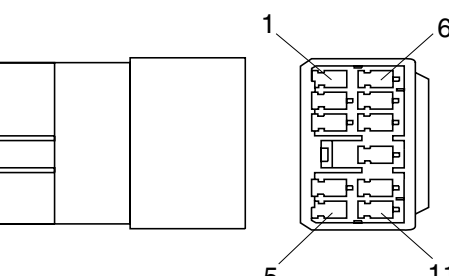
| Connector number | Type        | No. of pin | Destination               | Connector part No. |              |
|------------------|-------------|------------|---------------------------|--------------------|--------------|
|                  |             |            |                           | Female             | Male         |
| CN-74            | RING-TERM   | 2          | Alternator "I" terminal   | S820-105000        | -            |
| CN-75            | AMP         | 2          | Pump EPPR                 | S816-002002        | -            |
| CN-80            | RING-TERM   | -          | Glow plug                 | S820-306000        | -            |
| CN-81            | DEUTSCH     | 2          | Travel buzzer solenoid    | DT06-2S-EP06       | -            |
| CN-88            | DEUTSCH     | 2          | Power max solenoid        | DT06-2S-EP06       | -            |
| CN-93            | DEUTSCH     | 50         | ECM                       | DRC26-50S-04       | -            |
| CN-94            | DEUTSCH     | 4          | ECM earth                 | DTP06-4S-EP06      | -            |
| CN-95            | KET         | 2          | Fusible link              | 21N4-01311         | S813-130201  |
| CN-96            | AMP         | 4          | Fuel warmer               | 2-967325-3         | -            |
| CN-116           | AMP         | 12         | Switch panel              | 176116             | -            |
| CN-125           | Econoseal J | 4          | GPS connector             | S816-004002        | S816-104002  |
| CN-126           | AMP         | 10         | Service tool              | S816-010002        | S816-110002  |
| CN-133           | DEUTSCH     | 2          | Boom priority solenoid    | DT06-2S-EP06       | -            |
| CN-135           | DEUTSCH     | 2          | Arm regeneration solenoid | DT06-2S-EP06       | -            |
| CN-138           | FASTEN      | 3          | DC/DC Converter           | S810-003202        | -            |
| CN-139           | FASTEN      | 2          | 12V socket                | S810-002202        | 172434-2     |
| 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-142           | DEUTSCH     | 3          | Accel dial                | DT06-3S-EP06       | -            |
| CN-144           | KET         | 20         | Handsfree                 | MG610240           | -            |
| CN-147           | AMP         | 4          | Fuel-heater               | 2-967325-3         | -            |
| CN-149           | DEUTSCH     | 2          | Attach safety solenoid    | DT06-2S-EP06       | -            |
| CN-154           | DEUTSCH     | 2          | Cooling fan               | DT06-2S-EP06       |              |
| CN-155           | AMP         | 2          | Reverse solenoid          | 85202-1            |              |
| CN-156           | DEUTSCH     | 2          | Air seat                  | DT06-2S-EP06       | DT04-2P-E005 |
| CN-170           | AMP         | 2          | Heated seat               | 174352-2           | 174354-2     |
| CN-173           | DEUTSCH     | 3          | Resistor                  | DT06-3S-EP06       | DT04-3P-EP10 |
| CN-236           | DEUTSCH     | 2          | Attach pressure solenoid  | DT06-2S-EP06       | -            |
| CN-237           | DEUTSCH     | 2          | Attach confluent solenoid | DT06-2S-EP06       | -            |
| CN-242           | DEUTSCH     | 2          | Attach flow solenoid      | DT06-2S-EP06       | DT04-2P-E005 |
| CN-244           | AMP         | 2          | CAN 2                     | -                  | S816-102002  |
| CN-245           | AMP         | 2          | PTC power                 | S813-030201        | -            |
| CN-246           | KET         | 12         | USB & Socket assy         | MG610240           | -            |
| CN-247           | DEUTSCH     | 8          | PWM convert               | DT06-08SA-EP06     | DT04-8P      |
| CN-249           | DEUTSCH     | 4          | Rear view camera          | DT06-4S-EP06       | DT04-4P-E005 |
| CN-255           | AMP         | 2          | PTC Power                 | S813-030201        | -            |
| CN-256           | AMP         | 8          | Proportional              | -                  | S816-108002  |
| CN-258           | KET         | 1          | Air compressor power      | MG640944-5         | MG650943-5   |

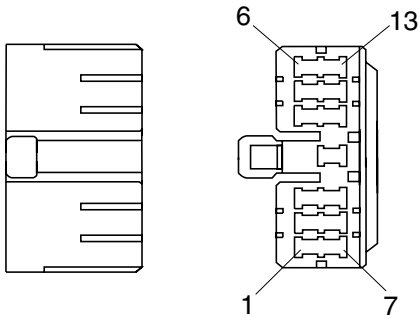
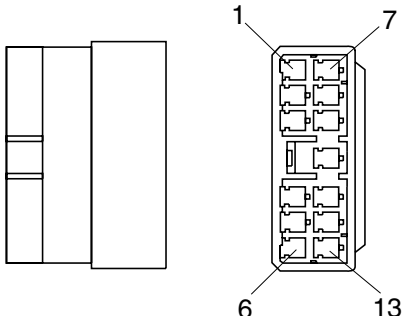
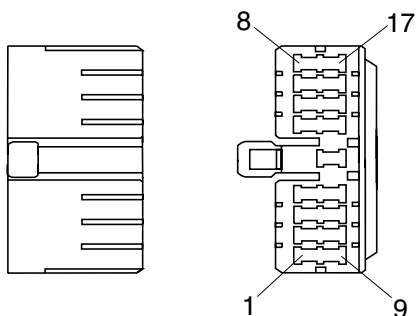
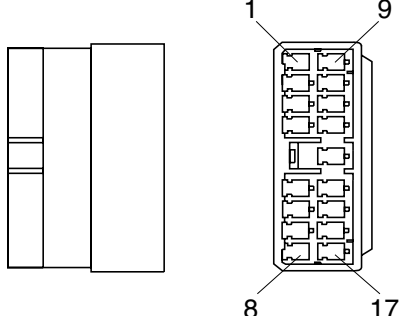
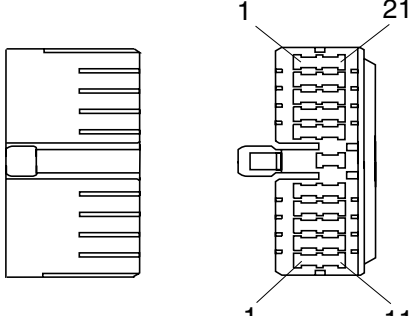
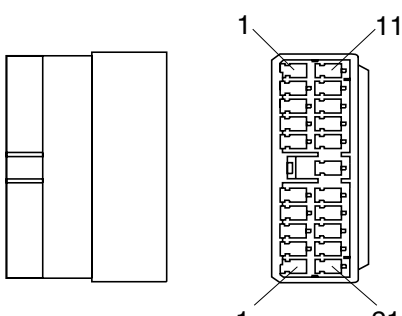
| Connector number | Type      | No. of pin | Destination             | Connector part No. |              |
|------------------|-----------|------------|-------------------------|--------------------|--------------|
|                  |           |            |                         | Female             | Male         |
| · Relay          |           |            |                         |                    |              |
| CR-1             | RING-TERM | -          | Battery relay           | ST710285-2         | -            |
| 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          | Head lamp relay         | -                  | -            |
| CR-13            | -         | 5          | Cabin lamp relay        | -                  | -            |
| CR-23            | KET       | 2          | Start relay             | S814-002001        | S814-102001  |
| CR-24            | RING TERM | 1          | Preheat relay           | S822-014000        | -            |
| CR-35            | -         | 5          | Power relay             | -                  | -            |
| CR-36            | -         | 5          | Preheat relay           | -                  | -            |
| CR-45            | -         | 5          | ECM power relay         | -                  | -            |
| CR-46            | -         | 5          | Fuel warmer relay       | -                  | -            |
| CR-62            | -         | 5          | Breaker relay           | -                  | -            |
| · Switch         |           |            |                         |                    |              |
| CS-1             | SHUR      | 1          | Door switch             | S822-014002        | S822-114002  |
| CS-2             | WP        | 6          | Start key switch        | S816-006002        | -            |
| 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-23            | SWF       | 12         | Beacon lamp switch      | SWF589790          | -            |
| 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-50            | SWF       | 12         | Overload switch         | SWF589790          | -            |
| CS-52            | SWF       | 10         | Econo switch            | SWF 593757         | -            |
| CS-53            | AMP       | 1          | Wiper cut switch        | S822-014002        | -            |
| CS-67            | SWF       | 12         | Quick clamp switch      | SWF 589790         | -            |
| CS-73            | SWF       | 12         | Reverse fan switch      | SWF 589790         | -            |
| CS-74            | AMP       | 2          | Master switch           | S813-030201        | -            |
| CS-82            | SWF       | 12         | Spare switch            | SWF 589790         | -            |
| CS-83            | SWF       | 12         | Spare switch            | SWF 589790         | -            |
| CS-99            | SWF       | 12         | Spare switch            | SWF 589790         | -            |
| CS-100           | SWF       | 12         | Spare switch            | SWF 589790         | -            |

| Connector number | Type      | No. of pin | Destination               | Connector part No. |              |
|------------------|-----------|------------|---------------------------|--------------------|--------------|
|                  |           |            |                           | Female             | Male         |
| · 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              | DT06-2S-EP06       | -            |
| CL-4             | DEUTSCH   | 2          | Head lamp-RH              | DT06-2S-EP06       | DT04-2P-E005 |
| CL-5             | DEUTSCH   | 2          | Work lamp-LH              | DT06-2S-EP06       | DT04-2P      |
| CL-6             | DEUTSCH   | 2          | Work lamp-RH              | DT06-2S-EP06       | DT04-2P      |
| CL-7             | SHUR      | 1          | Beacon lamp               | S822-014002        | S822-114002  |
| CL-8             | DEUTSCH   | 2          | Cab lamp-LH               | DT06-2S-EP06       | DT04-2P      |
| CL-9             | DEUTSCH   | 2          | Cab lamp-RH               | DT06-2S-EP06       | DT04-2P      |
| CL-10            | DEUTSCH   | 2          | Cab lamp-RH               | DT06-2S-EP06       | DT04-2P      |
| CL-24            | DEUTSCH   | 2          | Rear work lamp            | DT06-2S-EP06       | DT04-2P-E005 |
| CL-36            | DEUTSCH   | 2          | Work lamp-LH              | DT06-2S-EP06       | DT04-2P      |
| CL-37            | DEUTSCH   | 2          | Work lamp-RH              | DT06-2S-EP06       | DT04-2P      |
| · Sensor, sendor |           |            |                           |                    |              |
| CD-1             | AMP       | 2          | Hydraulic oil temp sender | 85202-1            | -            |
| CD-2             | DEUTSCH   | 2          | Fuel sender               | DT06-2S-EP06       | -            |
| CD-6             | DEUTSCH   | 3          | Travel pressure switch    | DT06-3S-EP06       | -            |
| CD-7             | DEUTSCH   | 3          | Working pressure switch   | DT06-3S-EP06       | -            |
| CD-10            | RING TERM | -          | Air cleaner switch        | ST730135-2         | S820-104002  |
| CD-24            | DEUTSCH   | 3          | Swing sensor              | DT06-3S-EP06       | -            |
| CD-31            | DEUTSCH   | 3          | Overload sensor           | DT06-3S-EP06       | DT04-3P-E005 |
| CD-32            | DEUTSCH   | 3          | Boom up sensor            | DT06-3S-EP06       | -            |
| CD-35            | DEUTSCH   | 3          | Arm & bucket in 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-45            | DEUTSCH   | 2          | WIF sensor                | DT06-2S-EP06       | -            |
| CD-69            | DEUTSCH   | 3          | Attach pressure sensor    | DT06-3S-EP06       | -            |
| CD-70            | DEUTSCH   | 3          | N1 pressure sensor        | DT06-3S-EP06       | -            |
| CD-71            | DEUTSCH   | 3          | N2 pressure sensor        | DT06-3S-EP06       | -            |

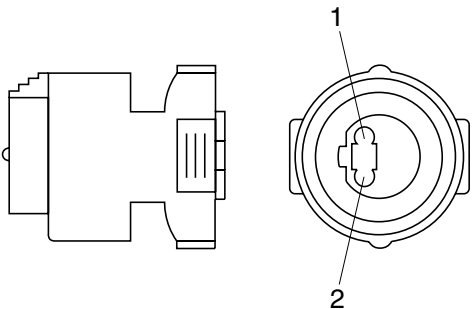
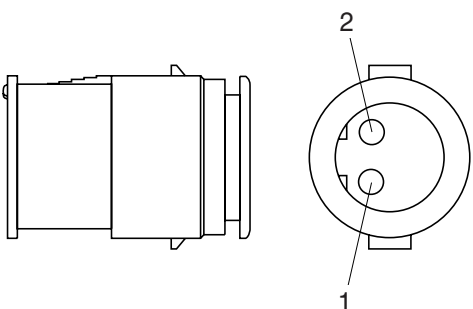
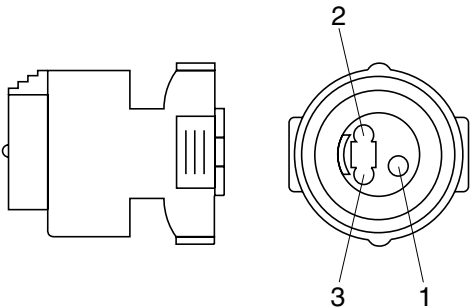
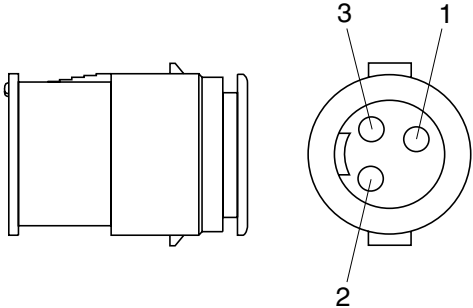
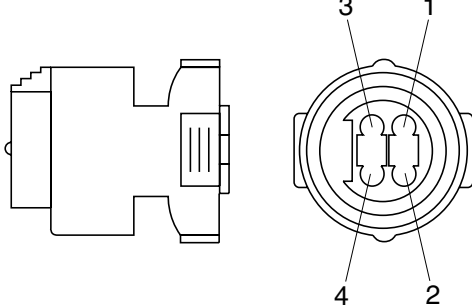
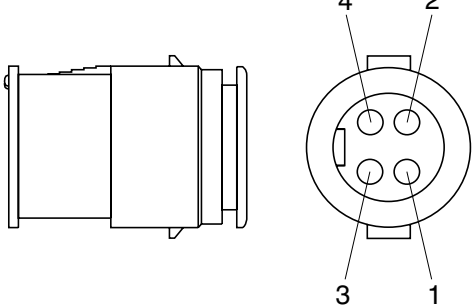
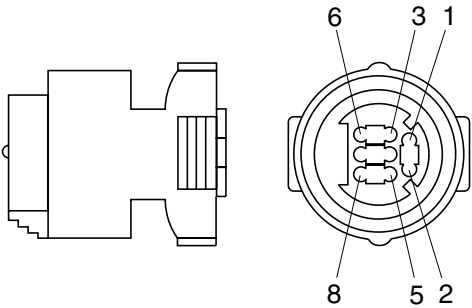
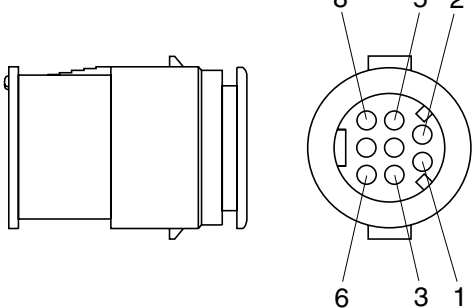
## 2. CONNECTION TABLE FOR CONNECTORS

### 1) PA TYPE CONNECTOR

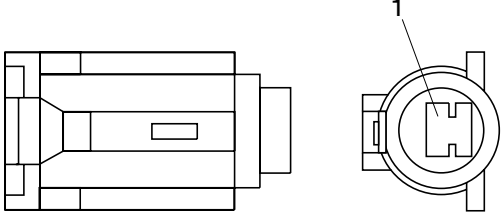
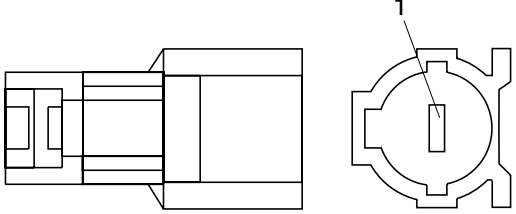
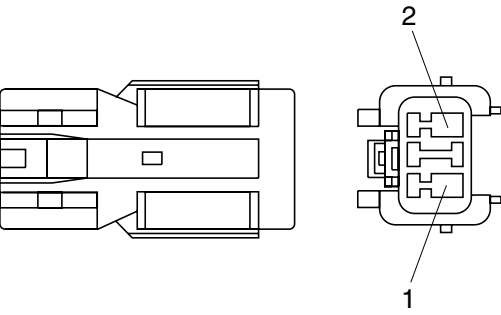
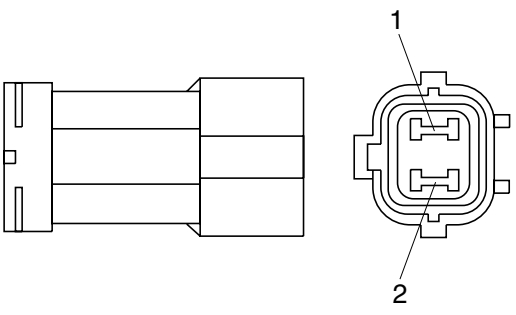
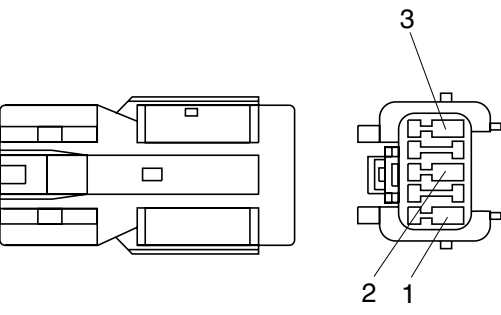
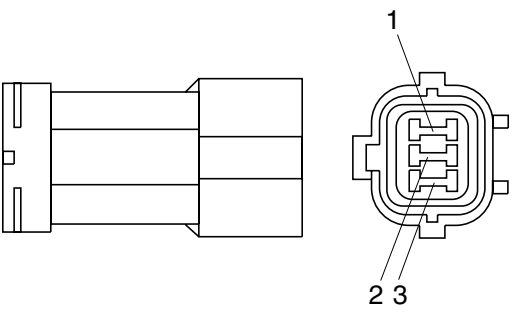
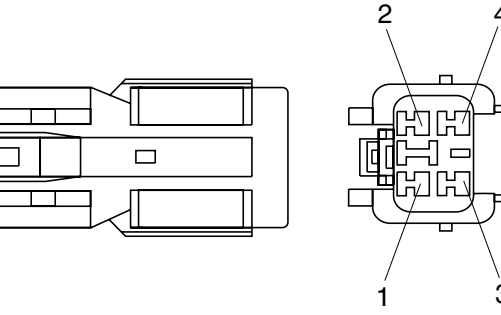
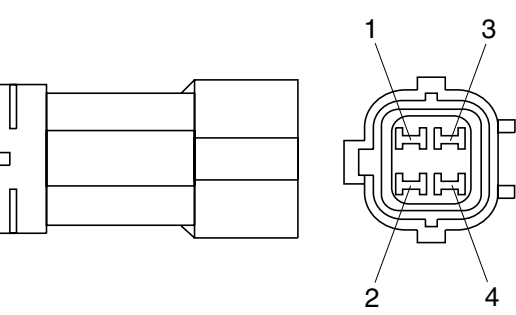
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                    |
|------------|--------------------------------------------------------------------------------------------------------|------------------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

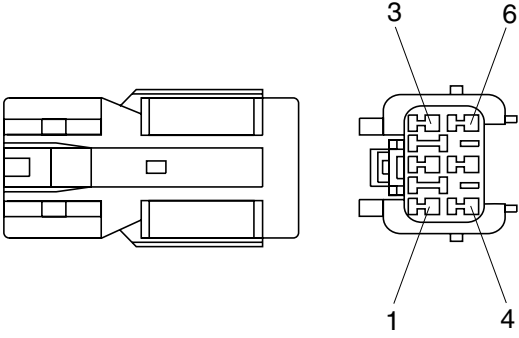
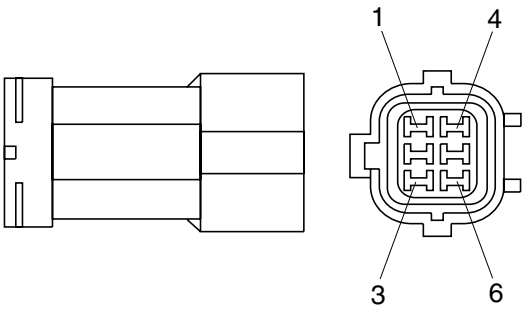
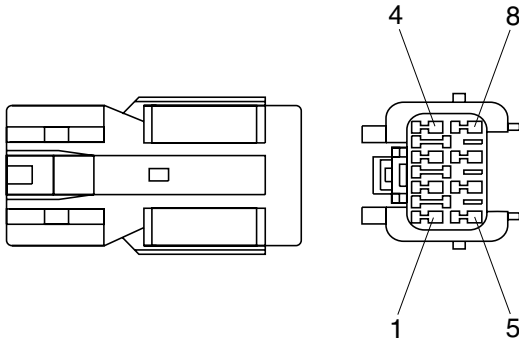
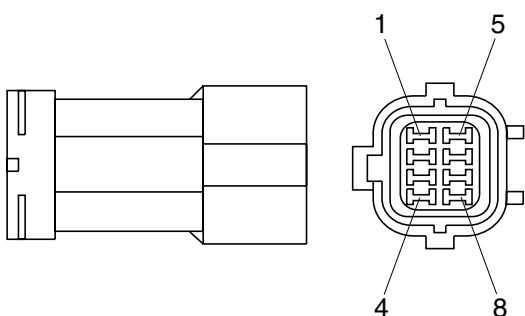
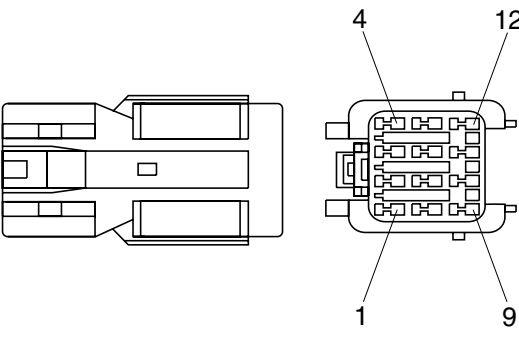
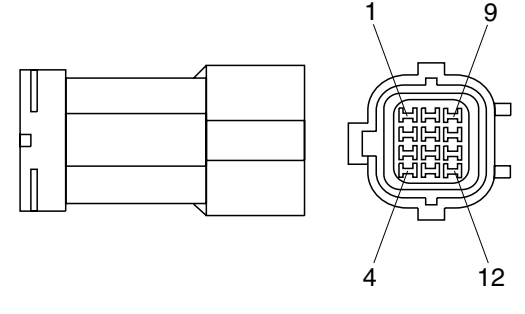
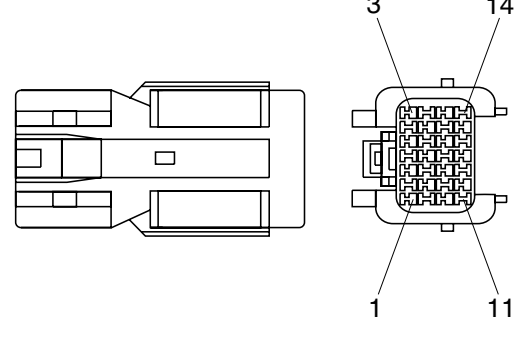
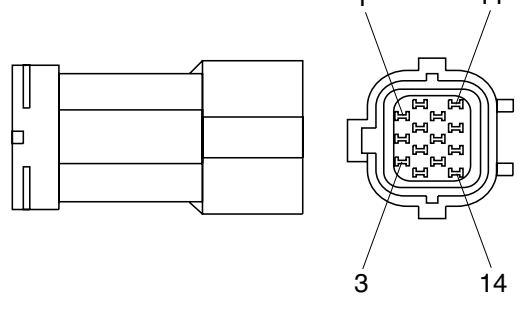
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|-------------------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

## 2) J TYPE CONNECTOR

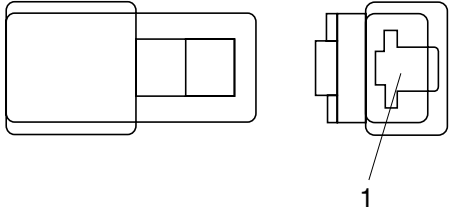
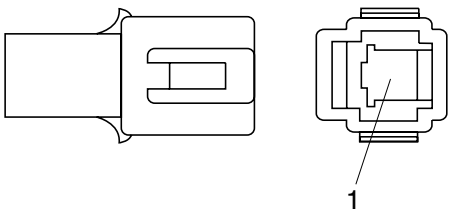
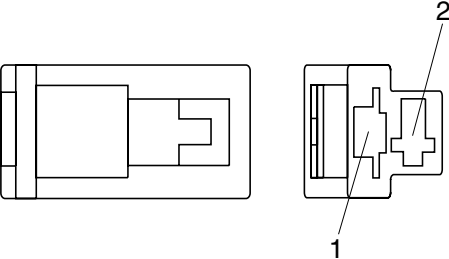
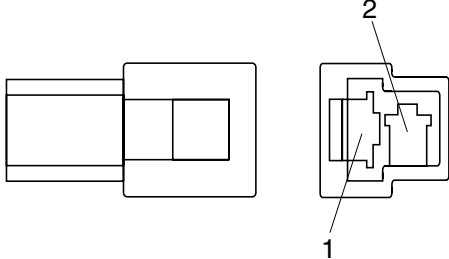
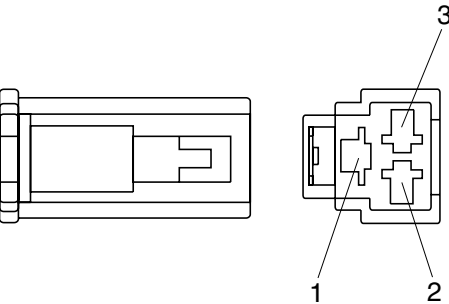
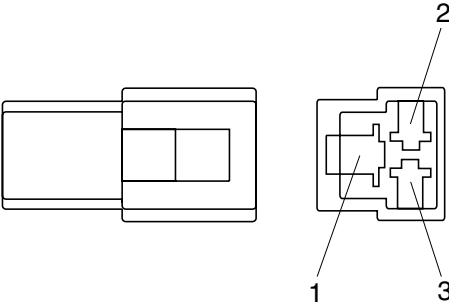
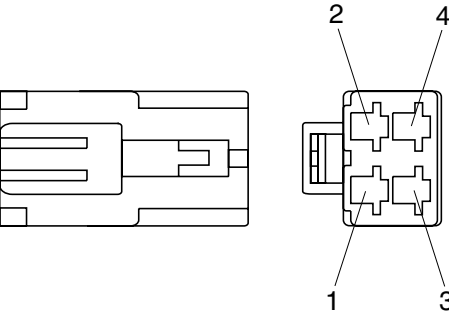
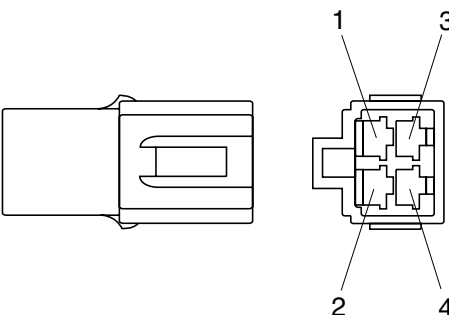
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|-------------------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

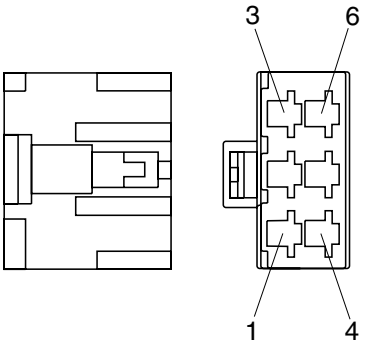
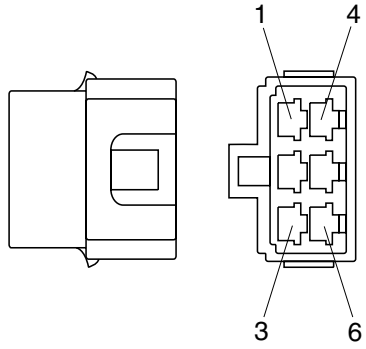
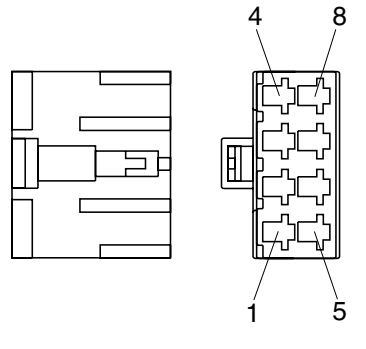
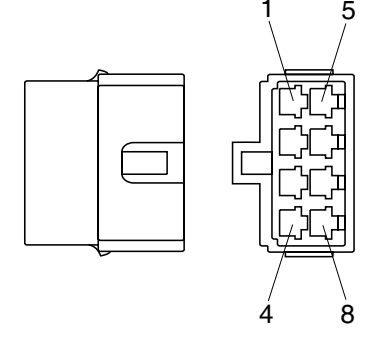
### 3) SWP TYPE CONNECTOR

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

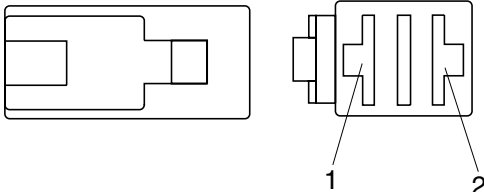
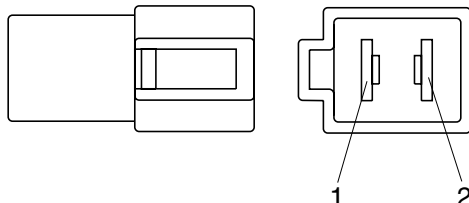
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|-------------------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

#### 4) CN TYPE CONNECTOR

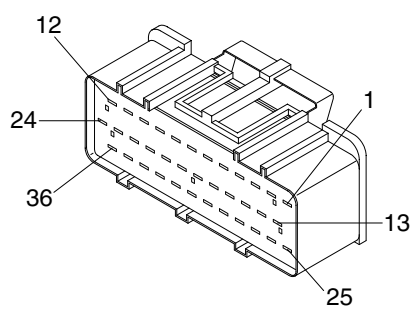
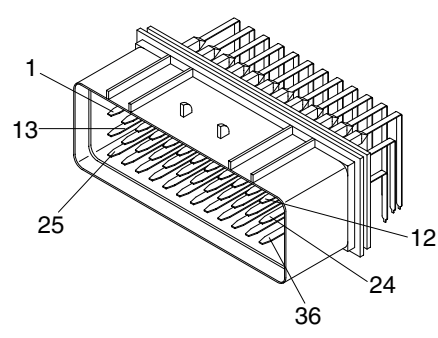
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|-------------------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

| No. of pin | Receptacle connector (female)                                                                         | Plug connector (male)                                                                                  |
|------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 6          |  <p>S810-006202</p>  |  <p>S810-106202</p>  |
| 8          |  <p>S810-008202</p> |  <p>S810-108202</p> |

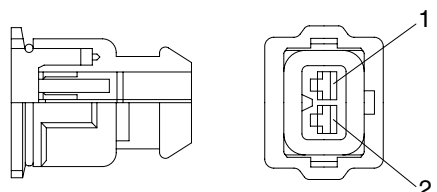
### 5) 375 FASTEN TYPE CONNECTOR

| No. of pin | Receptacle connector (female)                                                                        | Plug connector (male)                                                                                 |
|------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 2          |  <p>S810-002402</p> |  <p>S810-102402</p> |

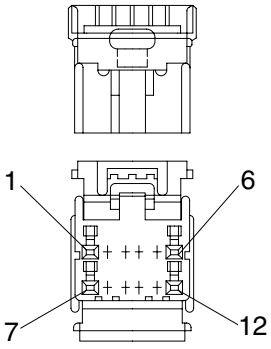
### 6) AMP ECONOSEAL CONNECTOR

| No. of pin | Receptacle connector (female)                                                                      | Plug connector (male)                                                                               |
|------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 36         |  <p>344111-1</p> |  <p>344108-1</p> |

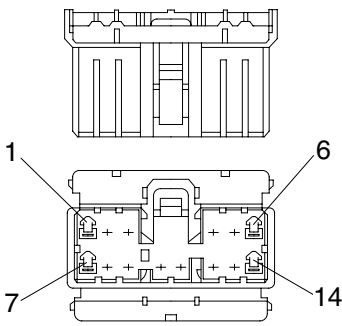
### 7) AMP TIMER CONNECTOR

| No. of pin | Receptacle connector (female)                                                                      | Plug connector (male) |
|------------|----------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>85202-1</p> |                       |

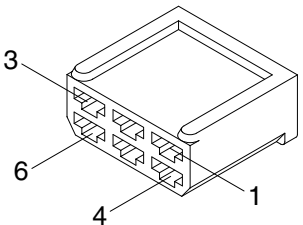
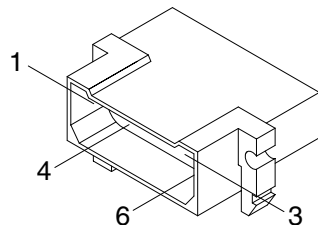
### 8) AMP 040 MULTILOCK CONNECTOR

| No. of pin | Receptacle connector (female)                                                                     | Plug connector (male) |
|------------|---------------------------------------------------------------------------------------------------|-----------------------|
| 12         |  <p>174045-2</p> |                       |

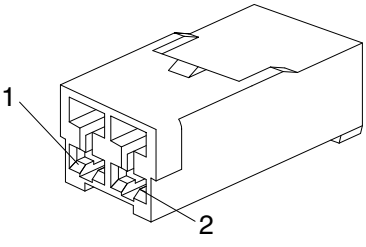
### 9) AMP 070 MULTILOCK CONNECTOR

| No. of pin | Receptacle connector (female)                                                                    | Plug connector (male) |
|------------|--------------------------------------------------------------------------------------------------|-----------------------|
| 14         |  <p>173852</p> |                       |

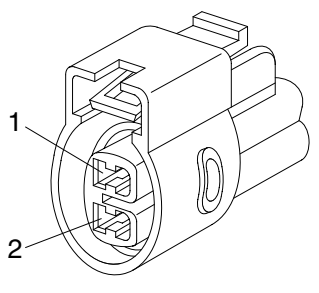
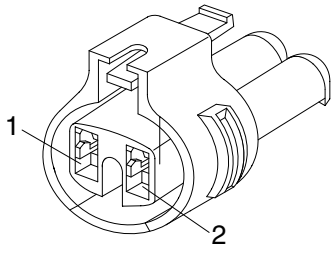
### 10) AMP FASTIN - FASTON CONNECTOR

| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male)                                                                                |
|------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 6          |  <p>925276-0</p> |  <p>480003-9</p> |

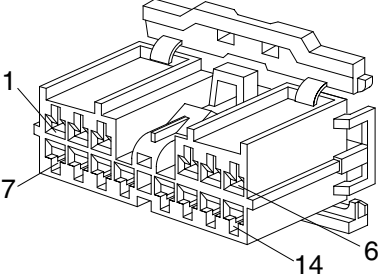
### 11) KET 090 CONNECTOR

| No. of pin | Receptacle connector (female)                                                                     | Plug connector (male) |
|------------|---------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>MG610070</p> |                       |

### 12) KET 090 WP CONNECTORS

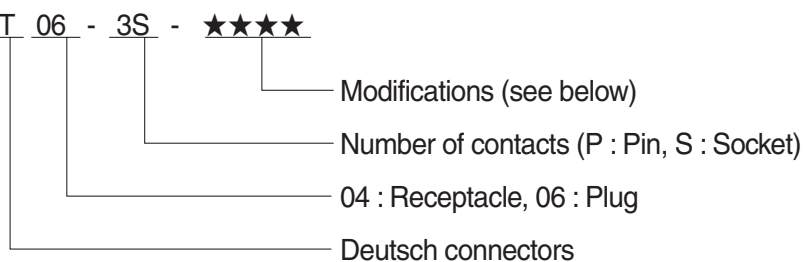
| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male) |
|------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>MG640605</p>  |                       |
| 2          |  <p>MG640795</p> |                       |

13) KET SDL CONNECTOR

| No. of pin | Receptacle connector (female)                                                                               | Plug connector (male) |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------|
| 14         | <div><p>MG610406</p></div> |                       |

## 14) DEUTSCH DT CONNECTORS

DT 06 - 3S - ★★☆☆



### ※ Modification

E003 : Standard end cap - gray

E004 : Color of connector to be black

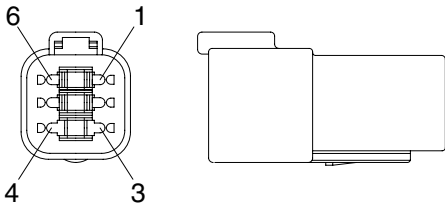
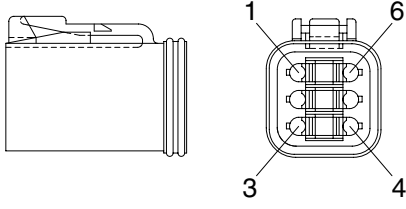
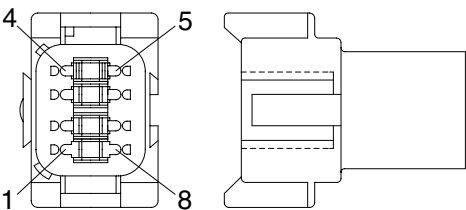
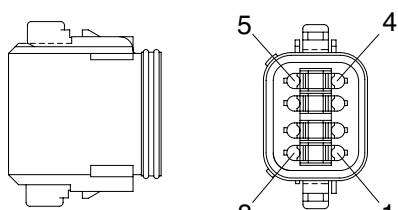
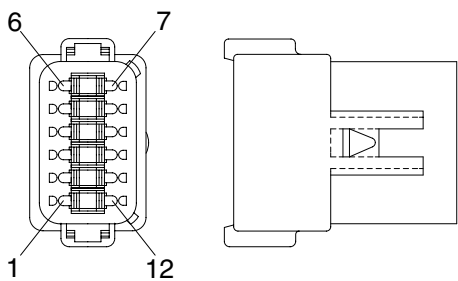
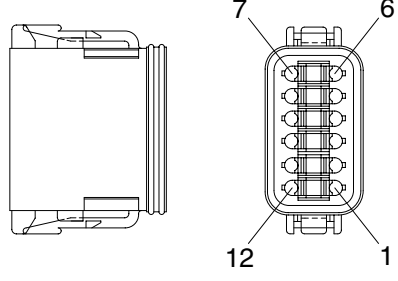
E005 : Combination - E004 & E003

EP04 : End cap

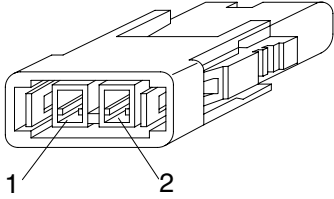
EP06 : Combination P012 & EP04

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

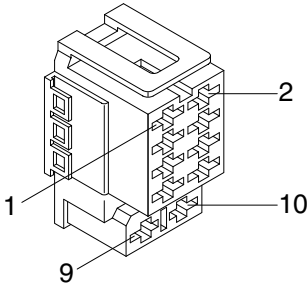
| No. of pin | Receptacle connector (female) | Plug connector (male) |
|------------|-------------------------------|-----------------------|
| 2          | <p>DT06-2S</p>                | <p>DT04-2P</p>        |
| 3          | <p>DT06-3S</p>                | <p>DT04-3P</p>        |
| 4          | <p>DT06-4S</p>                | <p>DT04-4P</p>        |

| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male)                                                                                |
|------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 6          |  <p>DT06-6S</p>    |  <p>DT04-6P</p>    |
| 8          |  <p>DT06-8S</p>    |  <p>DT04-8P</p>    |
| 12         |  <p>DT06-12S</p> |  <p>DT04-12P</p> |

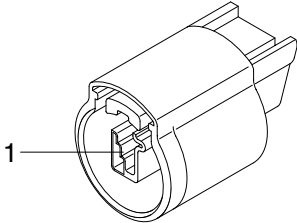
### 15) MOLEX 2CKTS CONNECTOR

| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male) |
|------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>35215-0200</p> |                       |

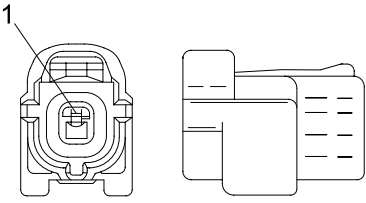
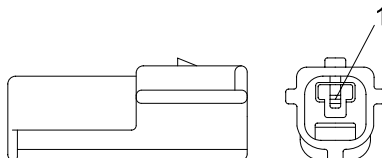
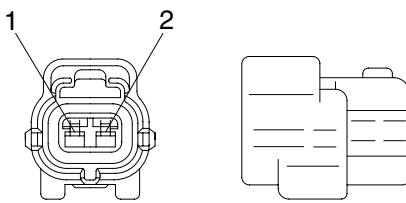
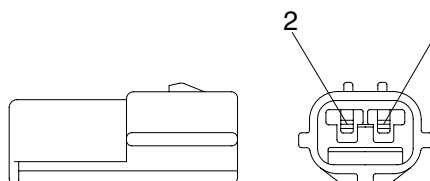
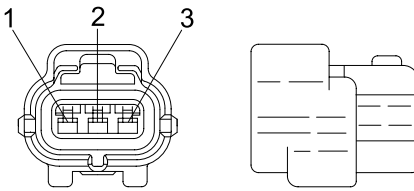
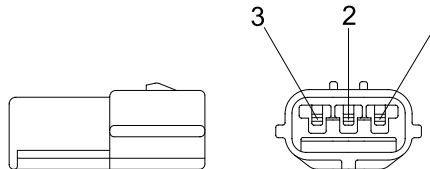
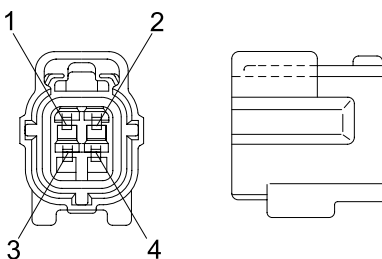
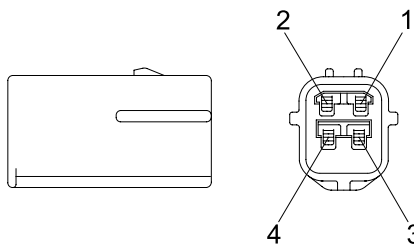
### 16) ITT SWF CONNECTOR

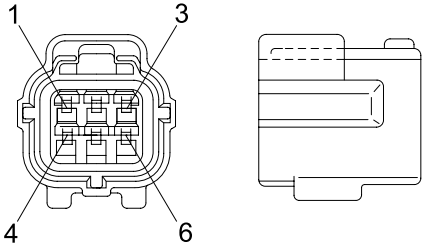
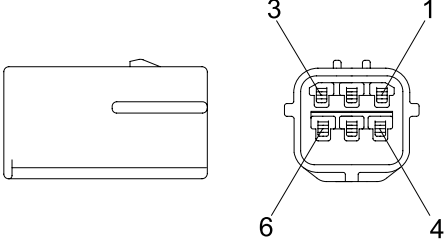
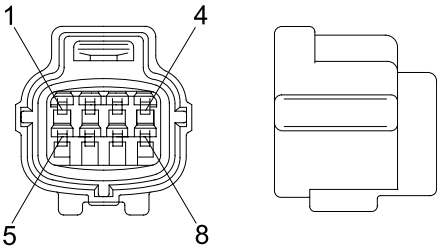
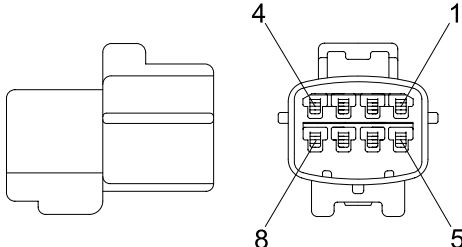
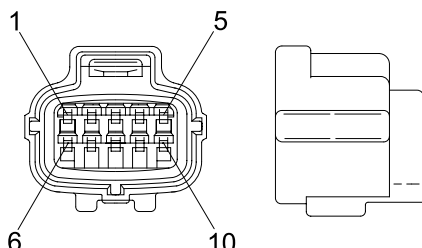
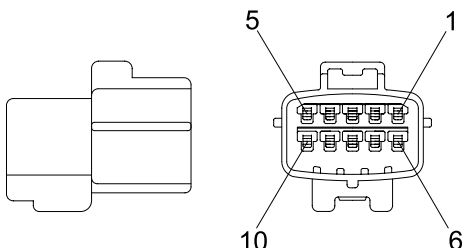
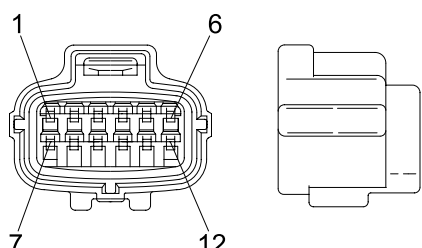
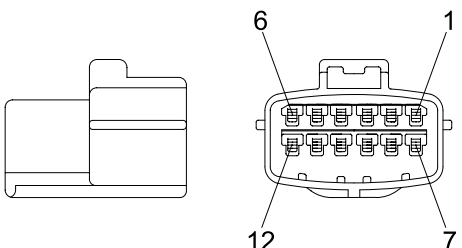
| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male) |
|------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| 10         |  <p>SWF593757</p> |                       |

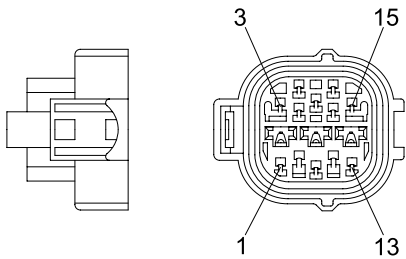
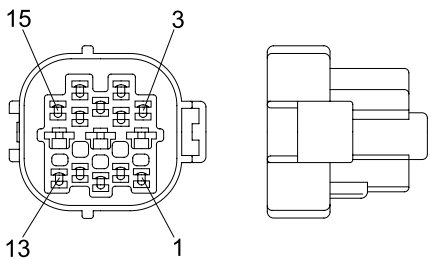
### 17) MWP NMWP CONNECTOR

| No. of pin | Receptacle connector (female)                                                                        | Plug connector (male) |
|------------|------------------------------------------------------------------------------------------------------|-----------------------|
| 1          |  <p>NMWP01F-B</p> |                       |

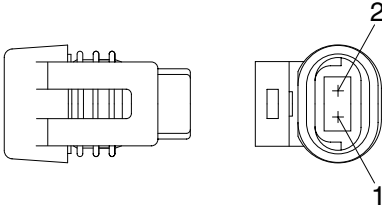
## 18) ECONOSEAL J TYPE CONNECTORS

| No. of pin | Receptacle connector (female)                                                                                                        | Plug connector (male)                                                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1          |  <p data-bbox="691 678 837 712">S816-001002</p>     |  <p data-bbox="1244 678 1391 712">S816-101002</p>     |
| 2          |  <p data-bbox="691 1081 837 1115">S816-002002</p>  |  <p data-bbox="1244 1081 1391 1115">S816-102002</p>  |
| 3          |  <p data-bbox="691 1485 837 1518">S816-003002</p> |  <p data-bbox="1244 1485 1391 1518">S816-103002</p> |
| 4          |  <p data-bbox="691 1888 837 1921">S816-004002</p> |  <p data-bbox="1244 1888 1391 1921">S816-104002</p> |

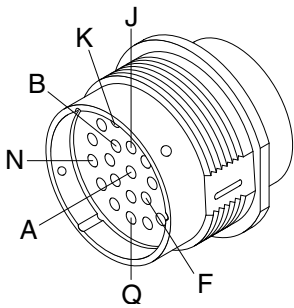
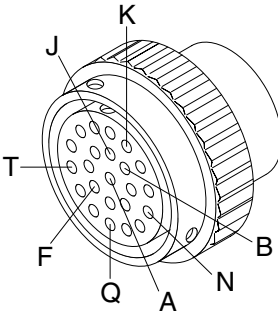
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|-------------------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

| No. of pin | Receptacle connector (female)                                                                     | Plug connector (male)                                                                               |
|------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 15         |  <p>368301-1</p> |  <p>2-85262-1</p> |

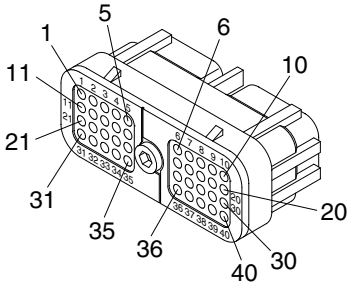
**19) METRI-PACK TYPE CONNECTOR**

| No. of pin | Receptacle connector (female)                                                                      | Plug connector (male) |
|------------|----------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>12040753</p> |                       |

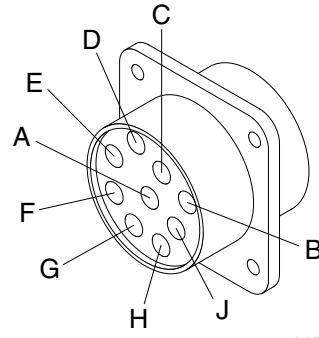
**20) DEUTSCH HD30 CONNECTOR**

| No. of pin | Receptacle connector (female)                                                                           | Plug connector (male)                                                                                    |
|------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 23         |  <p>HD36-24-23SN</p> |  <p>HD34-24-23PN</p> |

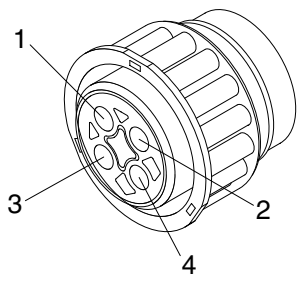
## 21) DEUTSCH MCU CONNECTOR

| No. of pin | Receptacle connector (Female)                                                                           | Plug connector (Male) |
|------------|---------------------------------------------------------------------------------------------------------|-----------------------|
| 40         |  <p>DRC26-40SA/B/C</p> |                       |

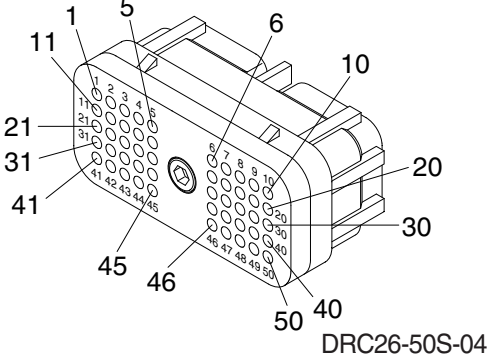
## 22) DEUTSCH SERVICE TOOL CONNECTOR

| No. of pin | Receptacle connector (Female)                                                                        | Plug connector (Male) |
|------------|------------------------------------------------------------------------------------------------------|-----------------------|
| 9          |  <p>HD10-9-96P</p> |                       |

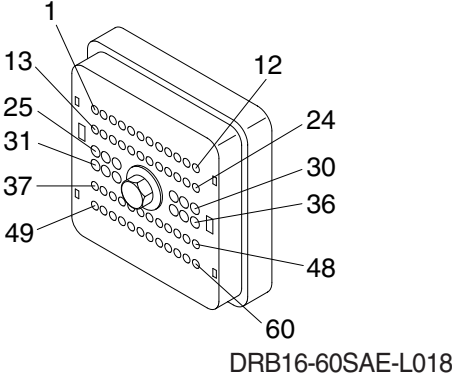
## 23) AMP FUEL WARMER CONNECTOR

| No. of pin | Receptacle connector (Female)                                                                         | Plug connector (Male) |
|------------|-------------------------------------------------------------------------------------------------------|-----------------------|
| 4          |  <p>2-967325-3</p> |                       |

## 24) DEUTSCH ENGINE ECM CONNECTOR

| No. of pin | Receptacle connector (Female)                                                                         | Plug connector (Male) |
|------------|-------------------------------------------------------------------------------------------------------|-----------------------|
| 50         |  <p>DRC26-50S-04</p> |                       |

## 25) DEUTSCH INTERMEDIATE CONNECTOR

| No. of pin | Receptacle connector (Female)                                                                              | Plug connector (Male) |
|------------|------------------------------------------------------------------------------------------------------------|-----------------------|
| 60         |  <p>DRB16-60SAE-L018</p> |                       |