

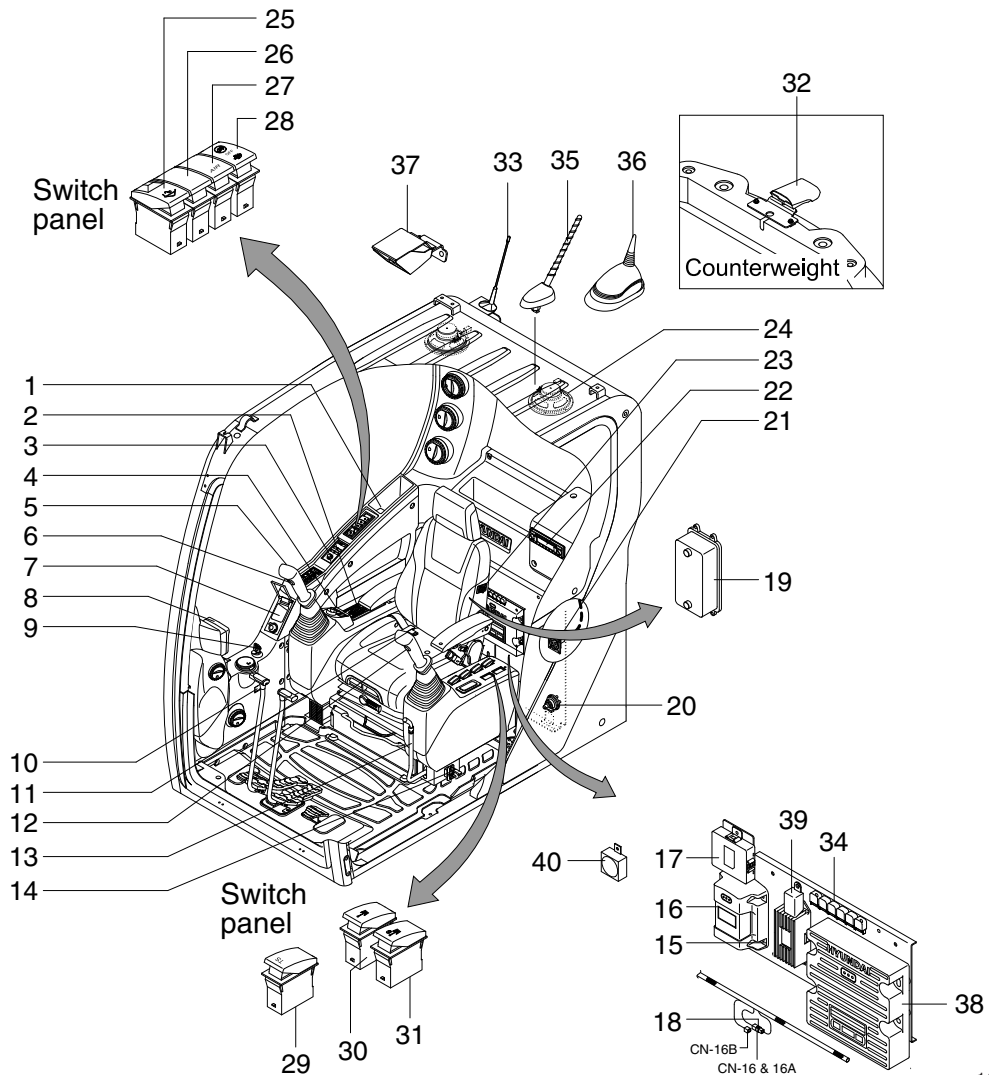
## SECTION 4 ELECTRICAL SYSTEM

|                                                  |      |
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| Group 1 Component Location .....                 | 4-1  |
| Group 2 Electrical Circuit .....                 | 4-3  |
| Group 3 Electrical Component Specification ..... | 4-23 |
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# SECTION 4 ELECTRICAL SYSTEM

## GROUP 1 COMPONENT LOCATION

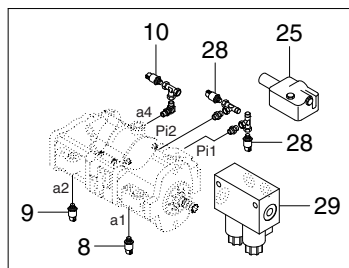
### 1. LOCATION 1



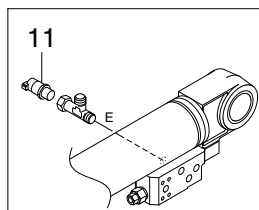
145A4EL01

|                                 |                                   |                                 |
|---------------------------------|-----------------------------------|---------------------------------|
| 1 Cigar lighter                 | 15 DC/DC converter                | 29 Travel straight switch       |
| 2 Aircon and heater switch      | 16 Remote controller unit         | 30 Fine swing switch            |
| 3 Remote controller             | 17 Handsfree control unit         | 31 Swing lock switch            |
| 4 Accel dial switch             | 18 Emergency engine connector     | 32 Around view camera (rear)    |
| 5 Horn switch                   | 19 Fuse box assy                  | 33 Satellite antenna            |
| 6 Breaker operation switch      | 20 Master switch                  | 34 Relay - 5P                   |
| 7 USB & socket assy             | 21 RS232 & J1939 service socket   | 35 Intergrated or AM/FM antenna |
| 8 Cluster                       | 22 Radio & USB player             | 36 Mobile antenna               |
| 9 Start switch                  | 23 Heated seat switch             | 37 Around view camera (front)   |
| 10 Service meter                | 24 Speaker                        | 38 Machine control unit         |
| 11 One touch decel switch       | 25 Quick clamp switch             | 39 Power relay                  |
| 12 Power max switch             | 26 Option attachment switch       | 40 Warning buzzer               |
| 13 Safety lever                 | 27 Air compressor switch          |                                 |
| 14 Emergency engine stop switch | 28 Exhaust system cleaning switch |                                 |

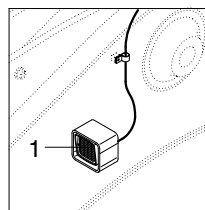
## 2. LOCATION 2



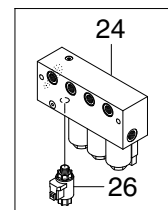
MAIN PUMP



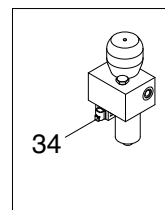
BOOM SAFETY VALVE



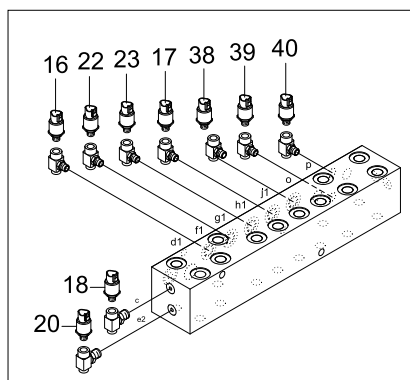
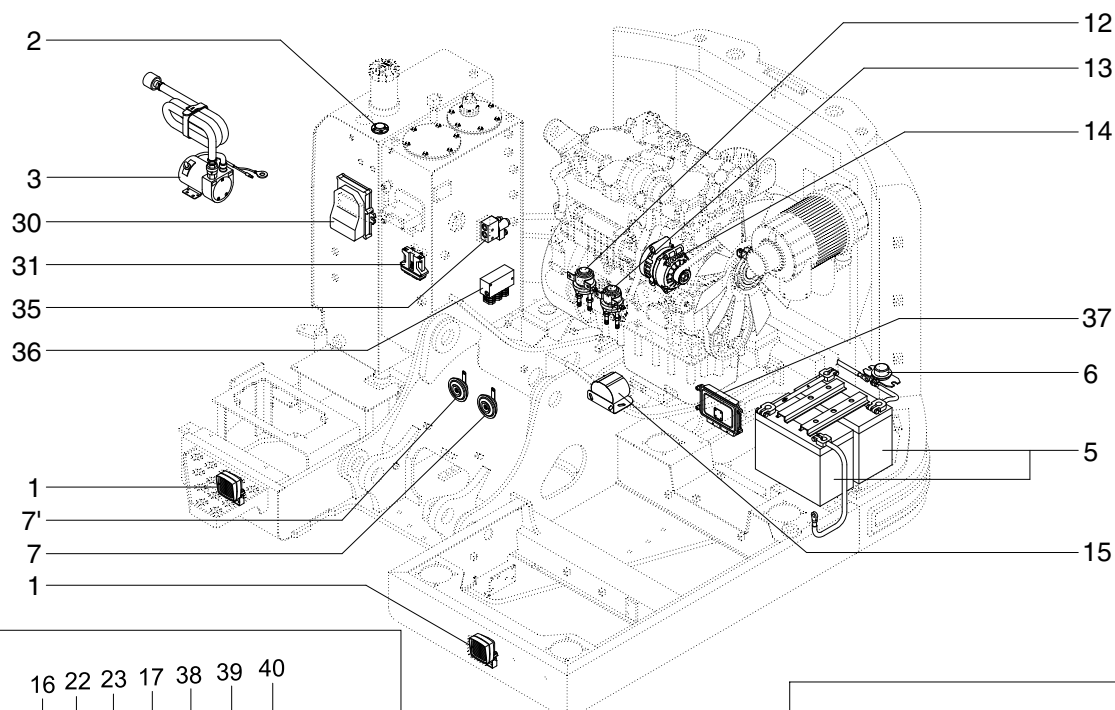
BOOM



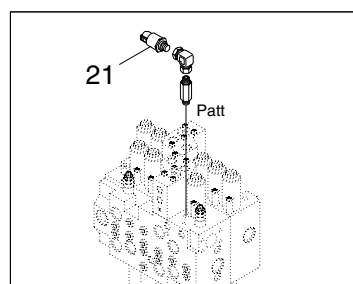
4-CARTRIDGE VALVE



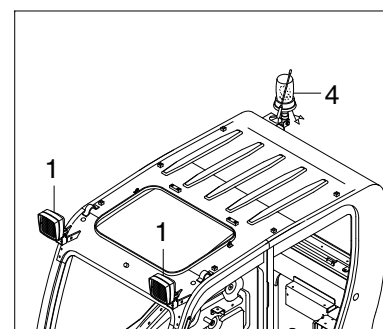
1-CARTRIDGE VALVE



TERMINAL BLOCK



MAIN CONTROL VALVE



CAB

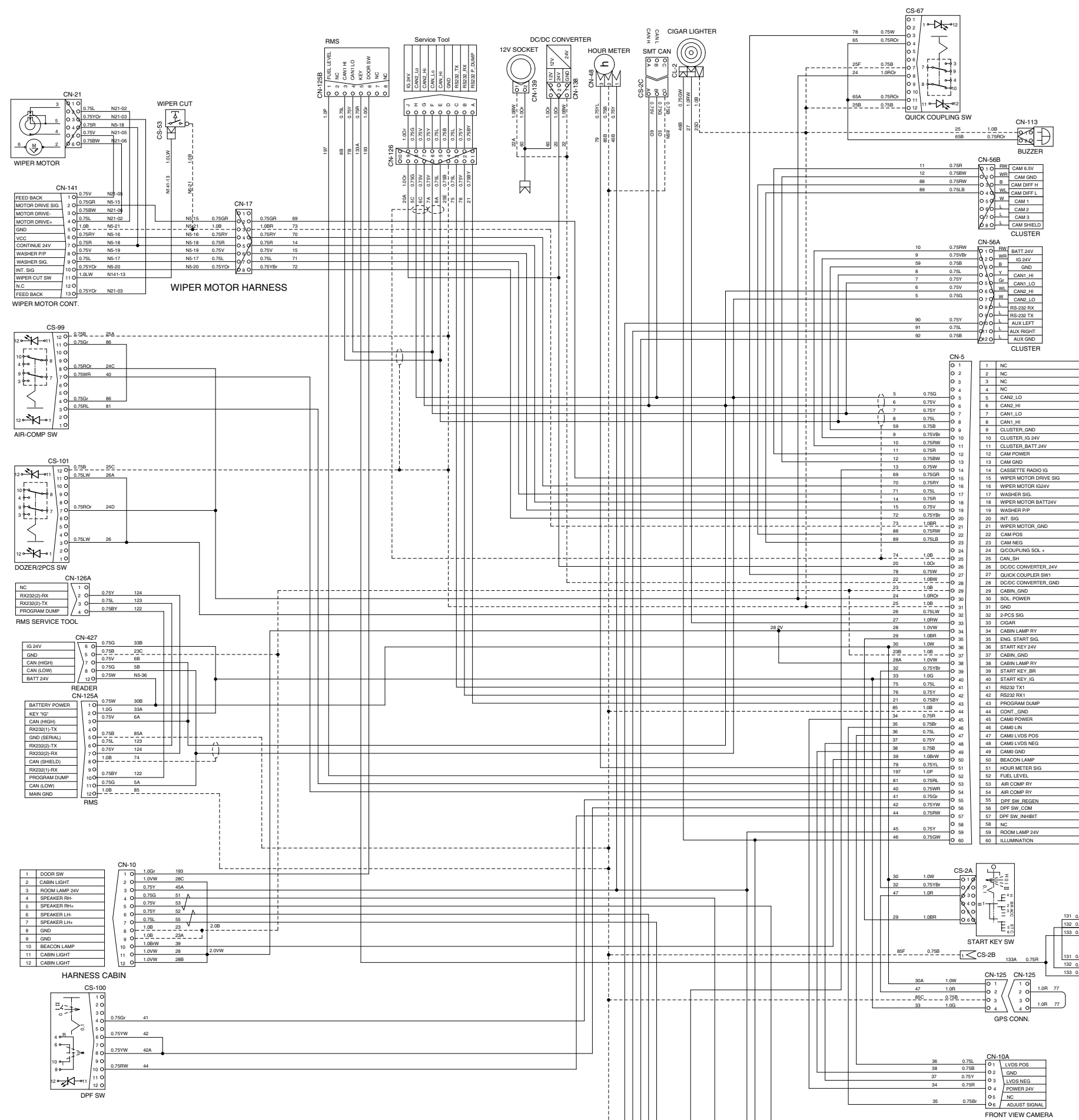
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- |                             |                              |                                 |
|-----------------------------|------------------------------|---------------------------------|
| 1 Lamp                      | 13 Heater relay              | 28 Nega-control pressure sensor |
| 2 Fuel sender               | 14 Alternator                | 29 Flow control EPPR valve      |
| 3 Fuel filler pump          | 15 Travel alarm buzzer       | 30 Relay drive unit             |
| 4 Beacon lamp               | 16 Arm out pressure sensor   | 31 PVG 32 controller            |
| 5 Battery                   | 17 Boom up pressure sensor   | 34 Safety solenoid valve        |
| 6 Battery relay             | 18 Swing pressure sensor     | 35 Swing fine solenoid valve    |
| 7 Horn - high               | 20 Arm in pressure sensor    | 36 Swing lock solenoid valve    |
| 7' Horn - low               | 21 Attach pressure sensor    | 37 AAVM controller              |
| 8 A1 pressure sensor        | 22 Bucket in pressur sensor  | 38 Boom down pressure sensor    |
| 9 A2 pressure sensor        | 23 Bucket out pressur sensor | 39 LH travel pressure sensor    |
| 10 EPPR pressure sensor     | 24 4 cartridge valve         | 40 RH travel pressure sensor    |
| 11 Overload pressure sensor | 25 Pump EPPR valve           |                                 |
| 12 Start relay              | 26 Boom priority EPPR valve  |                                 |

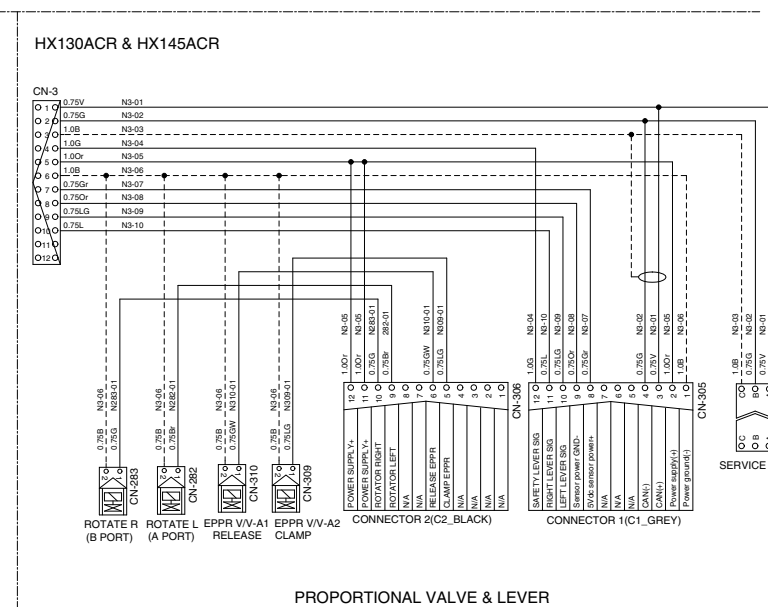
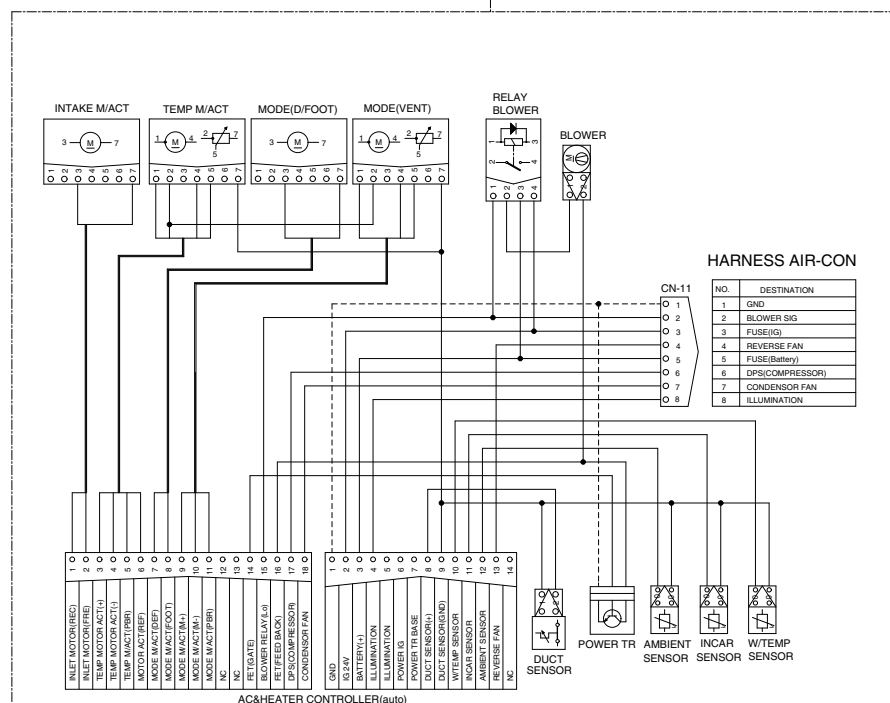
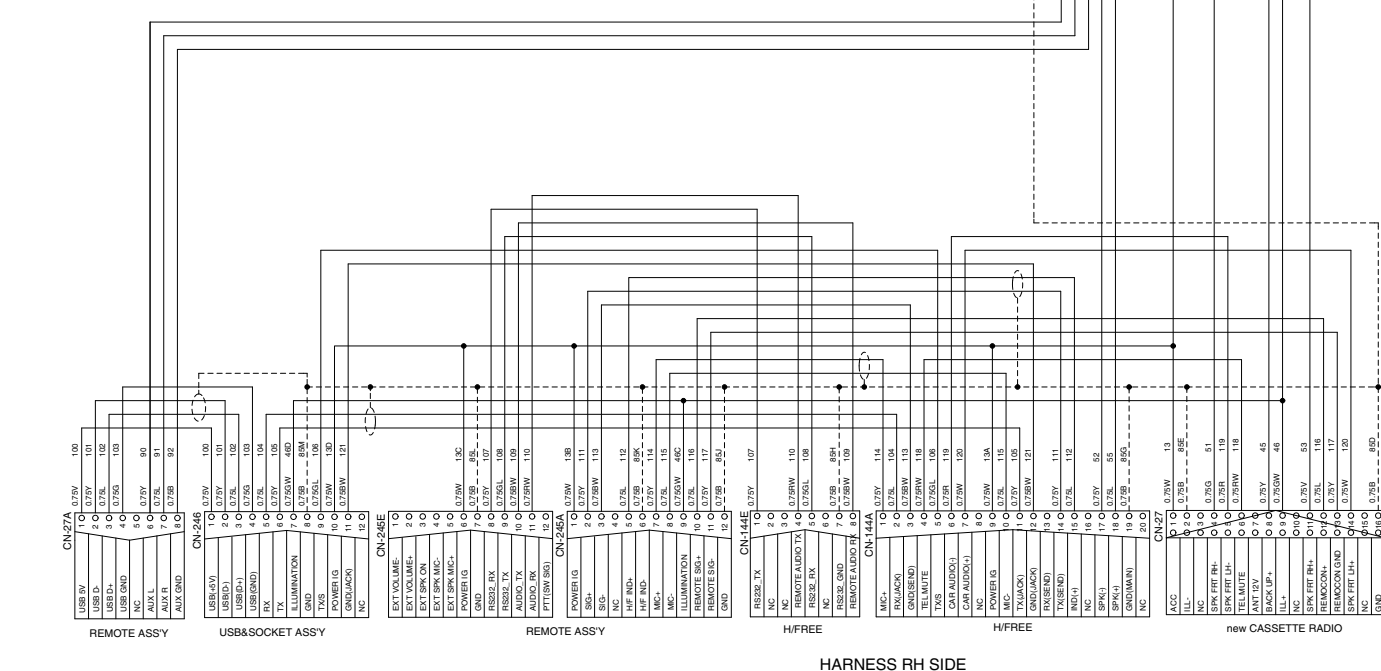
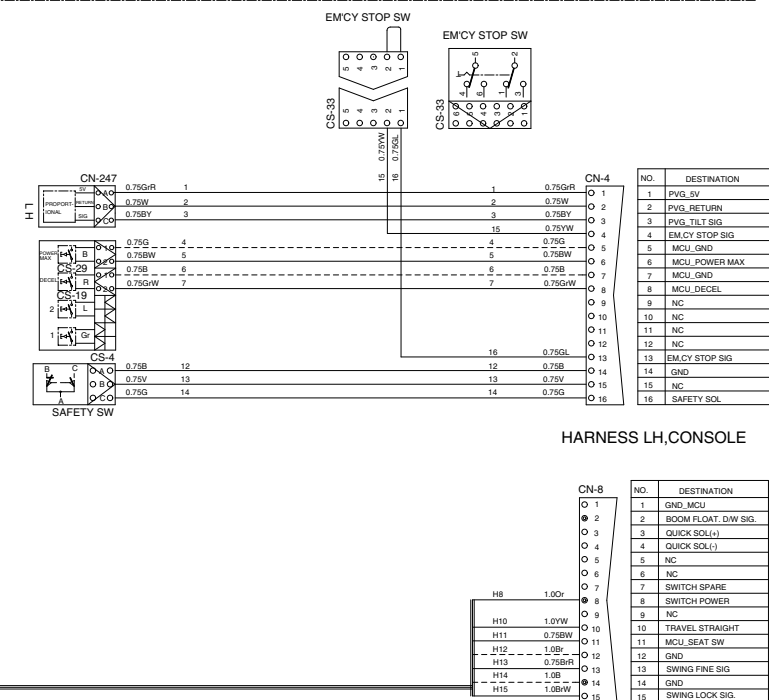
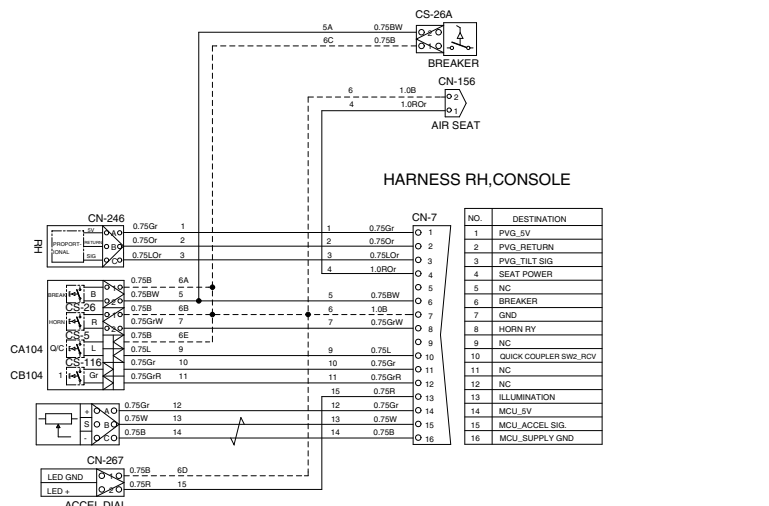
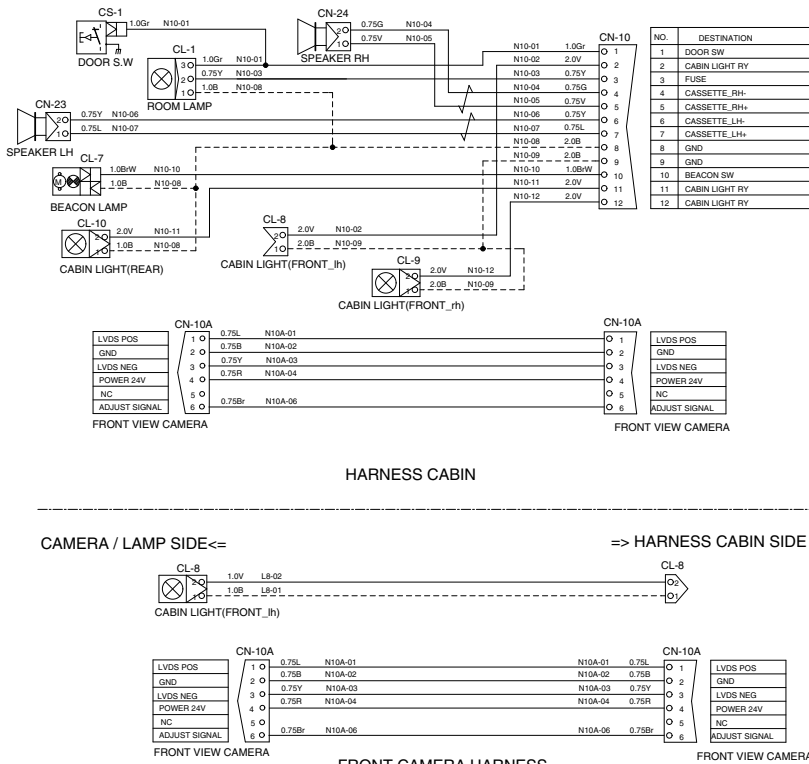
## · ELECTRICAL CIRCUIT (1/3)



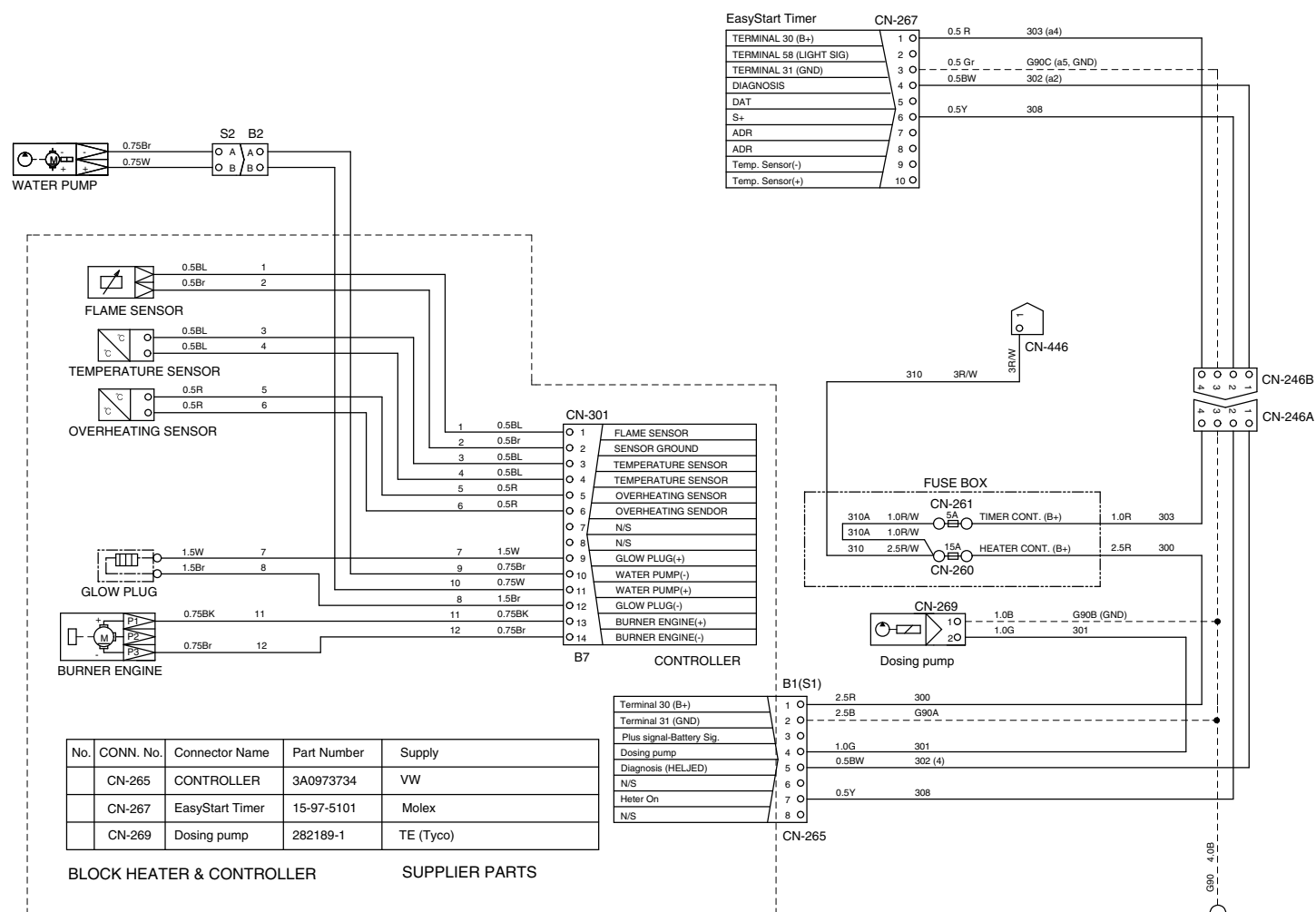
ELECTRICAL CIRCUIT (2/3)



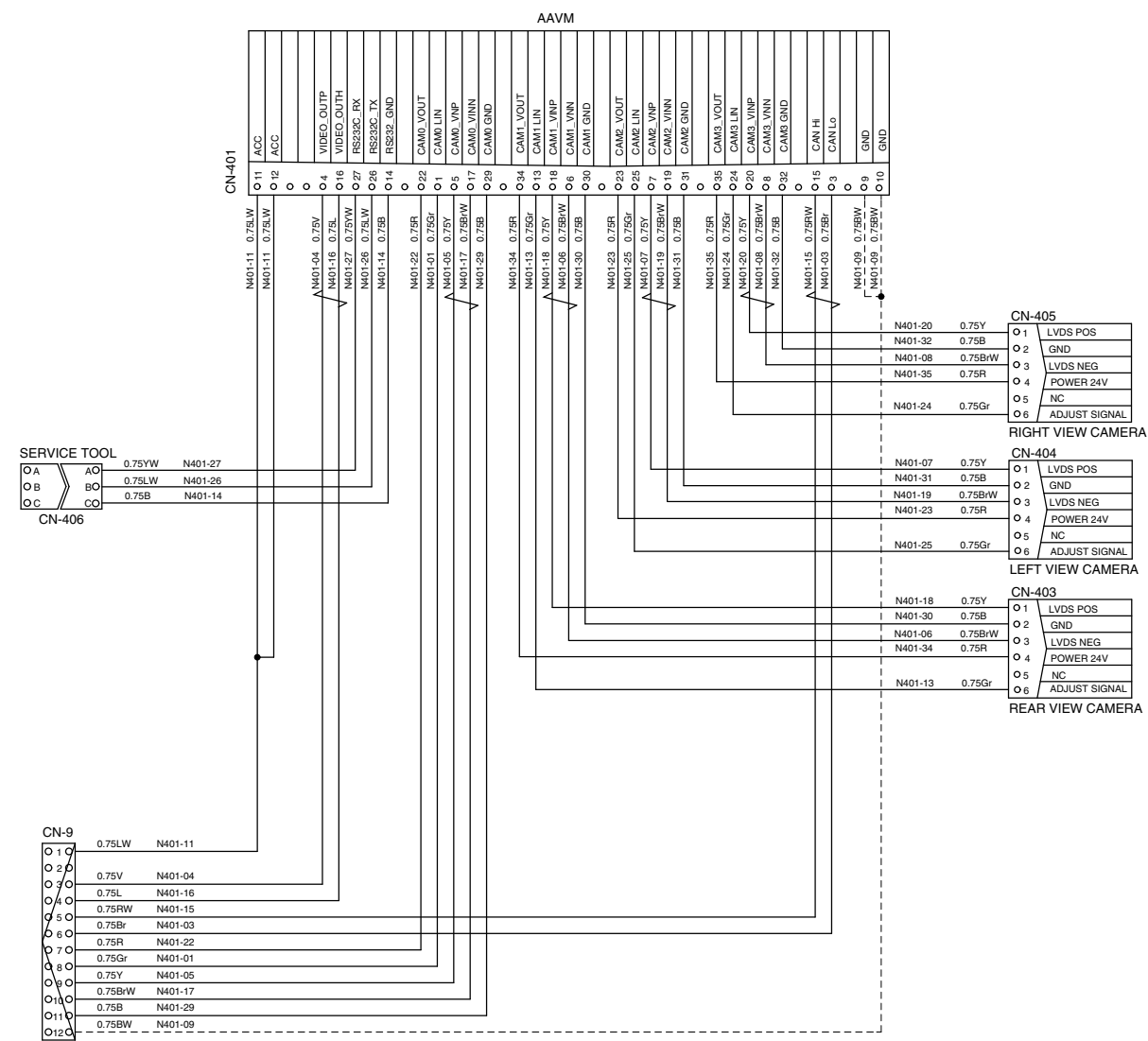
FRONT CAMERA HARNESS SIDE<=> HARNESS-RH SIDE



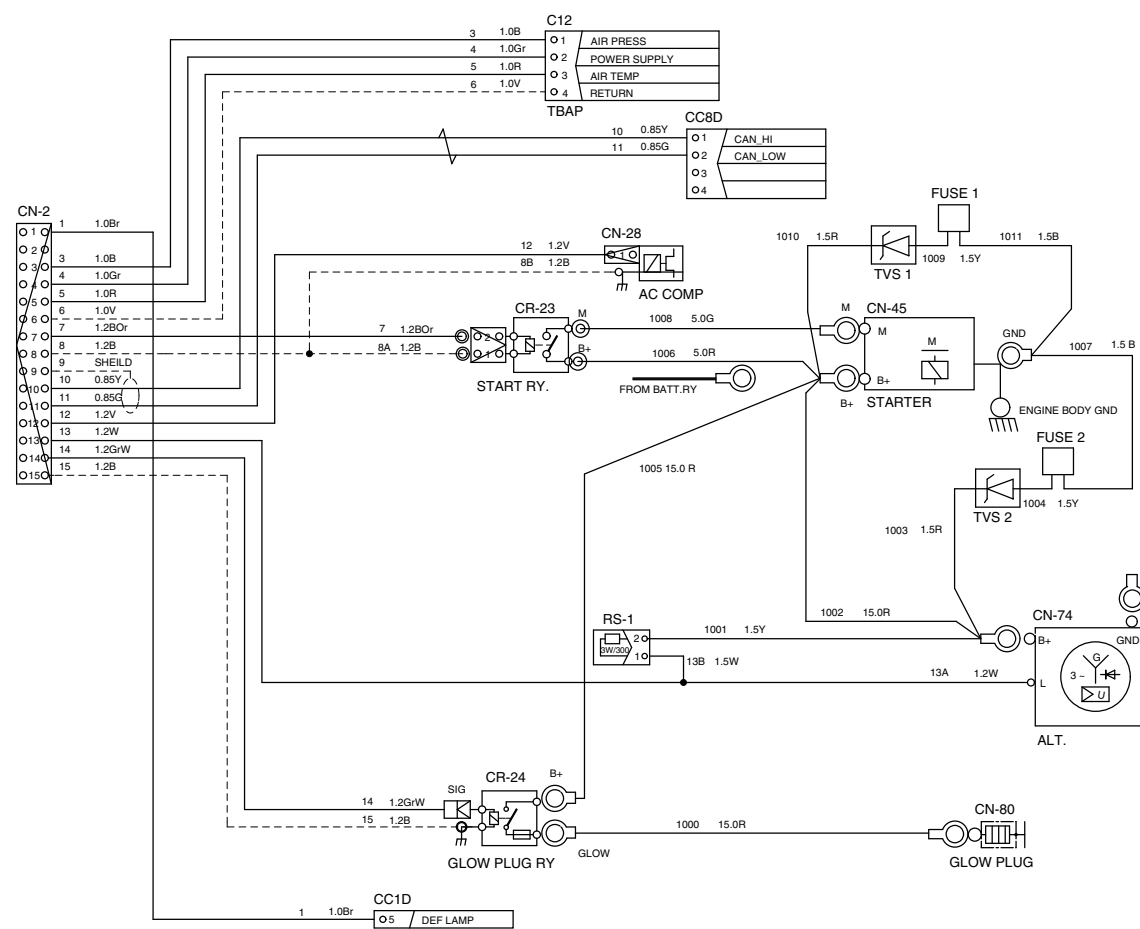
ELECTRICAL CIRCUIT (3/3)



Engine Block Heater



AAVM HARNESS



RH-SIDE VIEW CAMERA SYSTEM

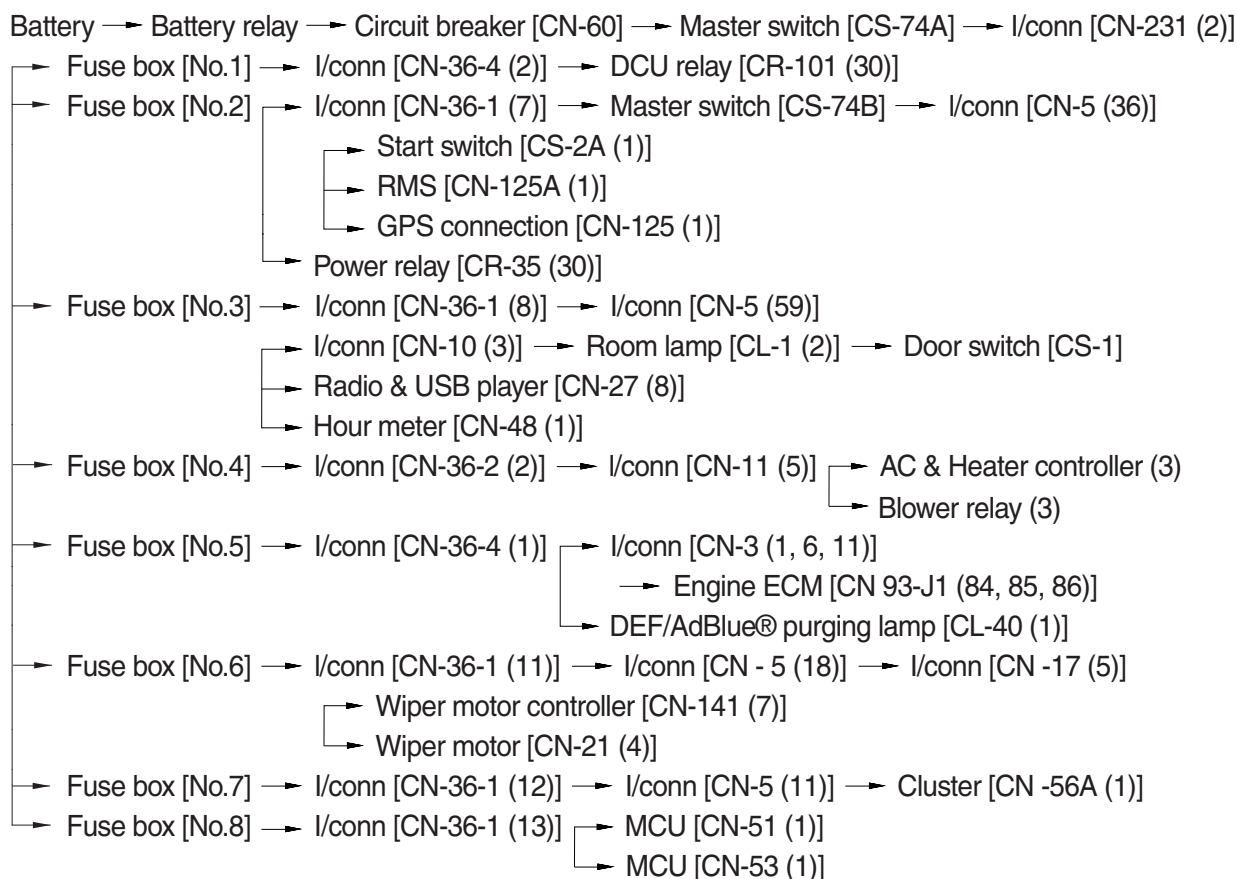
## MEMORANDUM

## 1. POWER CIRCUIT

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

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

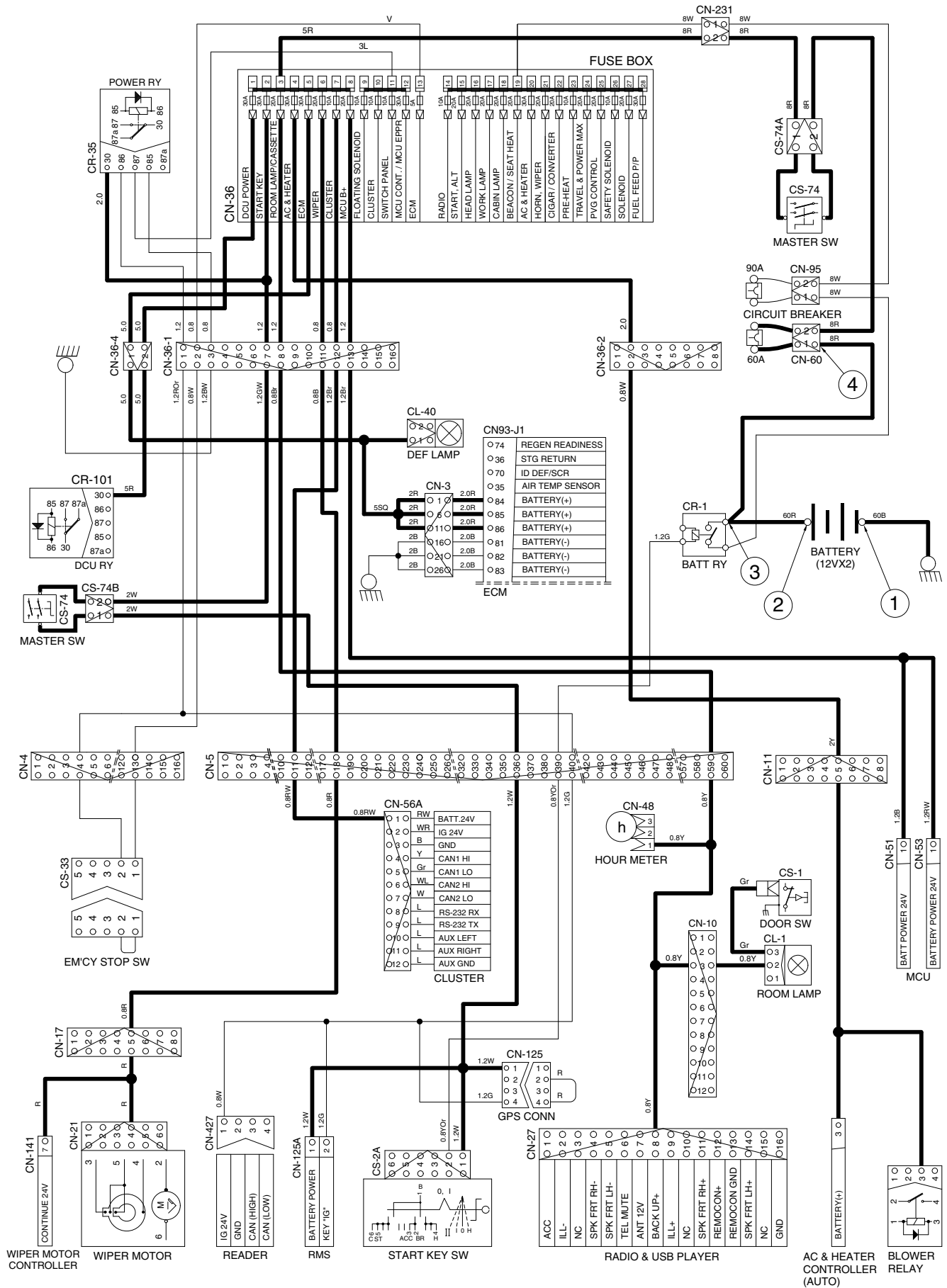
### 2) CHECK POINT

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

※ GND : Ground

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

# POWER CIRCUIT



145ZF4EL05

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

## 2. STARTING CIRCUIT

### 1) OPERATING FLOW

Battery (+) terminal → Battery relay [CR-1] → Circuit breaker [CN-60] → Master switch [CS-74A]  
 → I/conn [CN-231 (2)] → Fuse box [No.2] → I/conn [CN-36-1 (7)] → Master switch [CS-74B]  
 → I/conn [CN-5 (36)] → Start switch [CS-2A (1)]

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

→ Start switch ON [CS-2A (2)] → I/conn [CN-5 (39)]  
 → Battery relay [CR-1] → Battery relay operating (all power is supplied with the electric component)  
 → Start switch ON [CS-2A (3)] → GPS conn [CN-125 (2)→(4)]  
 → I/conn [CN-5 (40)] → I/conn [CN-36-1 (1)] → Power relay [CR-35 (86)→(87)]  
 → Fuse box [No.9~12]  
 → I/conn [CN-4 (4)] → Emergency engine stop sw [CS-33 (2)→(1)]  
 → I/conn [CN-4 (13)] → I/conn [CN-36-1 (2)] → Fuse box [No. 13]  
 → I/conn [CN-36-1 (6)] → I/conn [CN-2 (6)]  
 → Engine ECM [CN 93-J1 (69)]  
 → Reader [CN-427 (1)]  
 → RMS [CN-125A (2)]

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

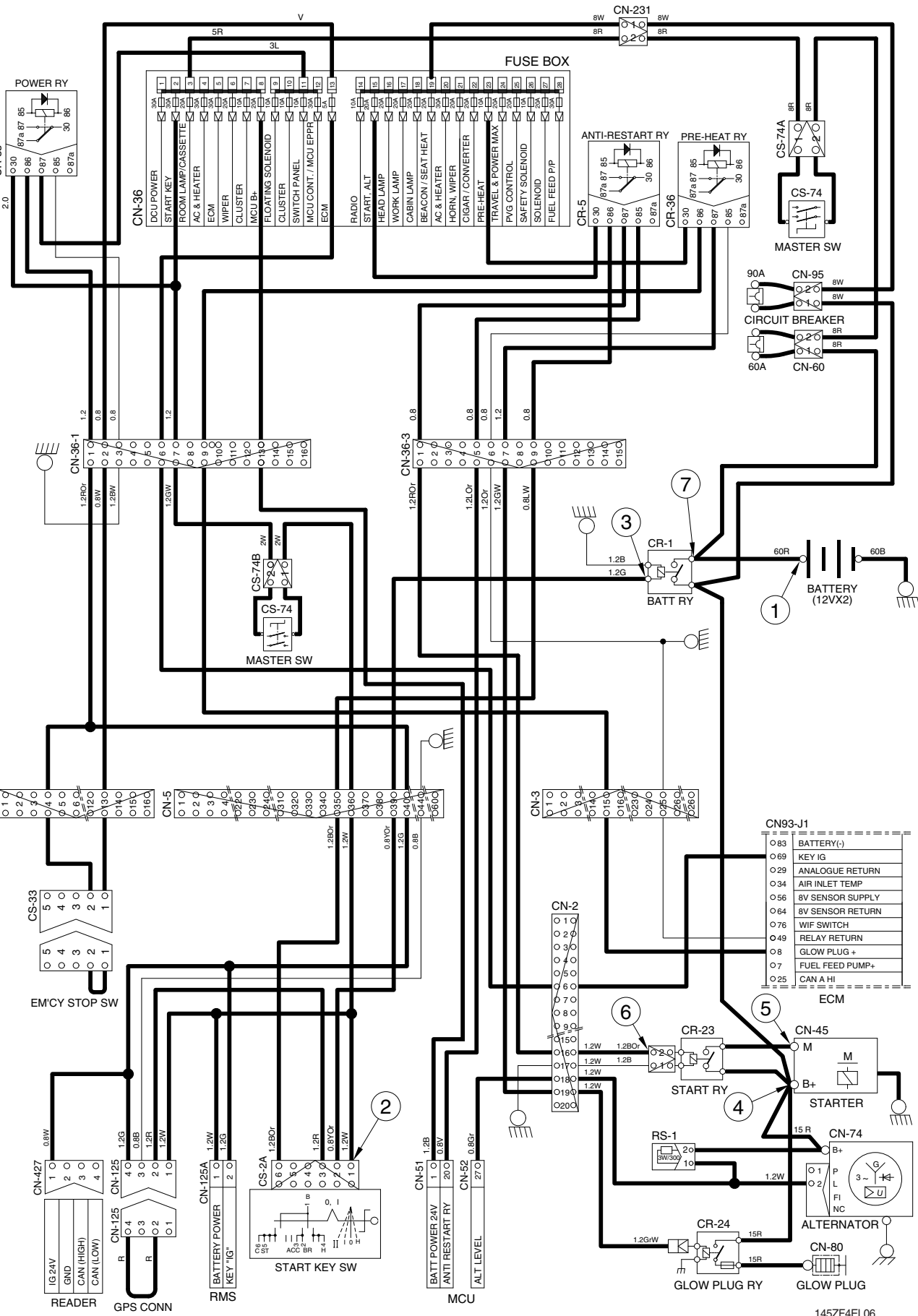
Start switch START [CS-2A (6)] → I/conn [CN-5 (35)] → I/conn [CN-36-3 (9)]  
 → Anti-restart relay [CR-5 (86)→(87)] → I/conn [CN-36-3 (1)] → I/conn [CN-2 (16)]  
 → Start relay [CR-23 (2)] → Starter motor operating

### 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  |

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

## STARTING CIRCUIT



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

### 3. CHARGING CIRCUIT

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

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

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

#### 1) OPERATING FLOW

##### (1) Warning flow

Alternator [CN-74 (2)] → I/conn [CN-2 (18)] → MCU alternator level [CN-52 (27)]  
→ Cluster charging warning lamp (via CAN interface)

##### (2) Charging flow

Alternator "B+" terminal → Starter motor [CN-45 (B+)]  
→ Battery relay  
    → Battery (+) terminal  
    → Circuit breaker [CN-60] → Master switch [CS-74A] → I/conn [CN-231 (2)]  
        → Fuse box [No. 1~8]  
    → Circuit breaker [CN-95] → I/conn [CN-231 (1)] → Fuse box [No. 14~28]

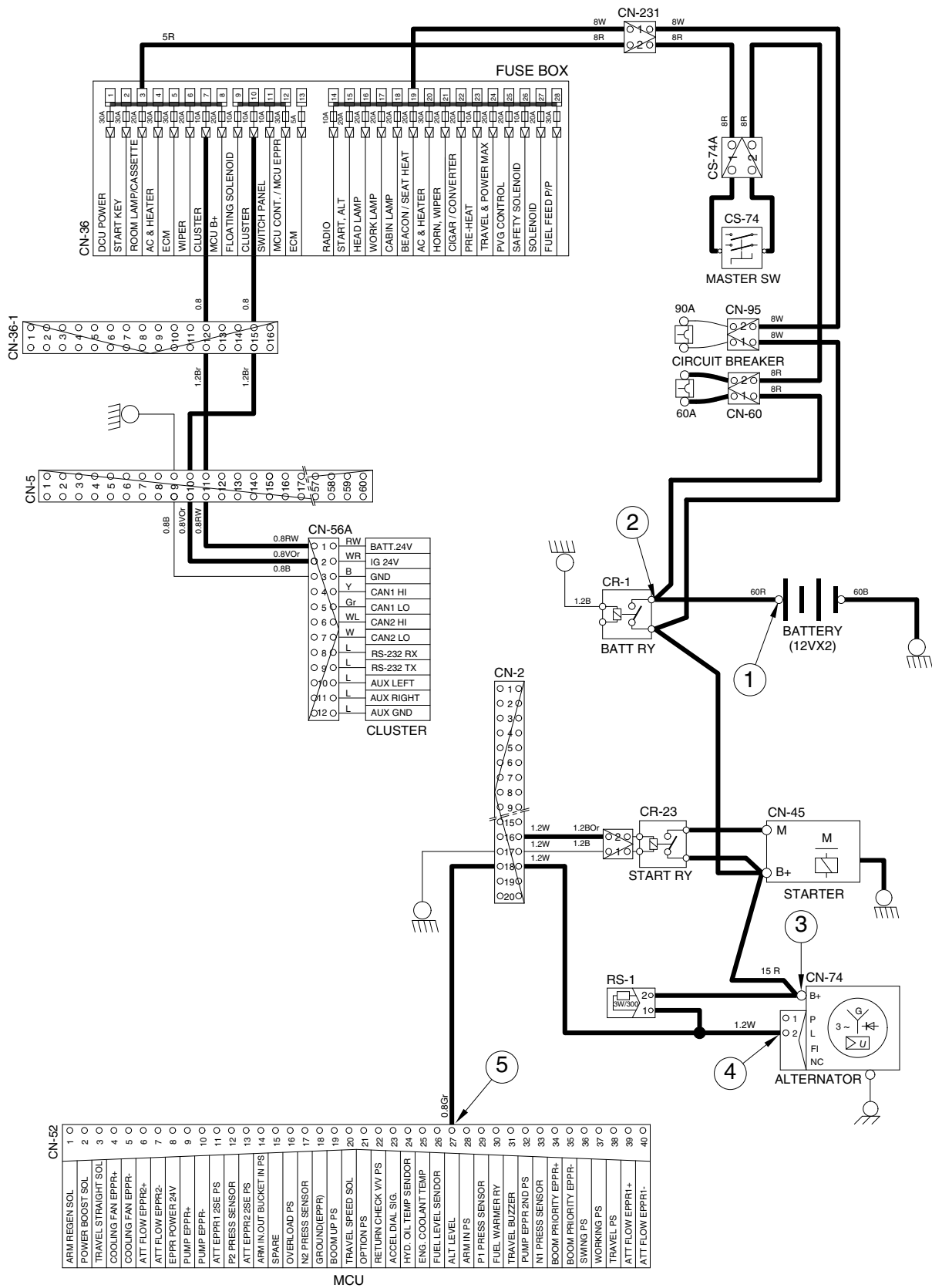
#### 2) CHECK POINT

| 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 L terminal)<br>⑤ - GND (MCU) | 20~25V  |

※ GND : Ground

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

## CHARGING CIRCUIT



145ZF4EL07

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

## 4. HEAD AND WORK LIGHT CIRCUIT

### 1) OPERATING FLOW

Fuse box (No.16) → I/conn [CN-36-2 (4)] → Head light relay [CR-13 (30, 86)]

Fuse box (No.17) → I/conn [CN-36-2 (5)] → Work light relay [CR-4 (30, 86)]

#### (1) Head light switch ON

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

→ Head light ON [CL-3 (2), CL-4 (2)]

→ I/conn [CN-7 (13)] → Accel dial LED ON [CN-267 (2)]

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

→ Remote controller illumination ON [CN-245A (9)]

→ USB & socket illumination ON [CN-246 (7)]

→ Cigar lighter [CL-2]

→ I/conn [CN-11 (8)] → AC & heater controller illumination ON (4)

#### (2) Work light switch ON

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

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

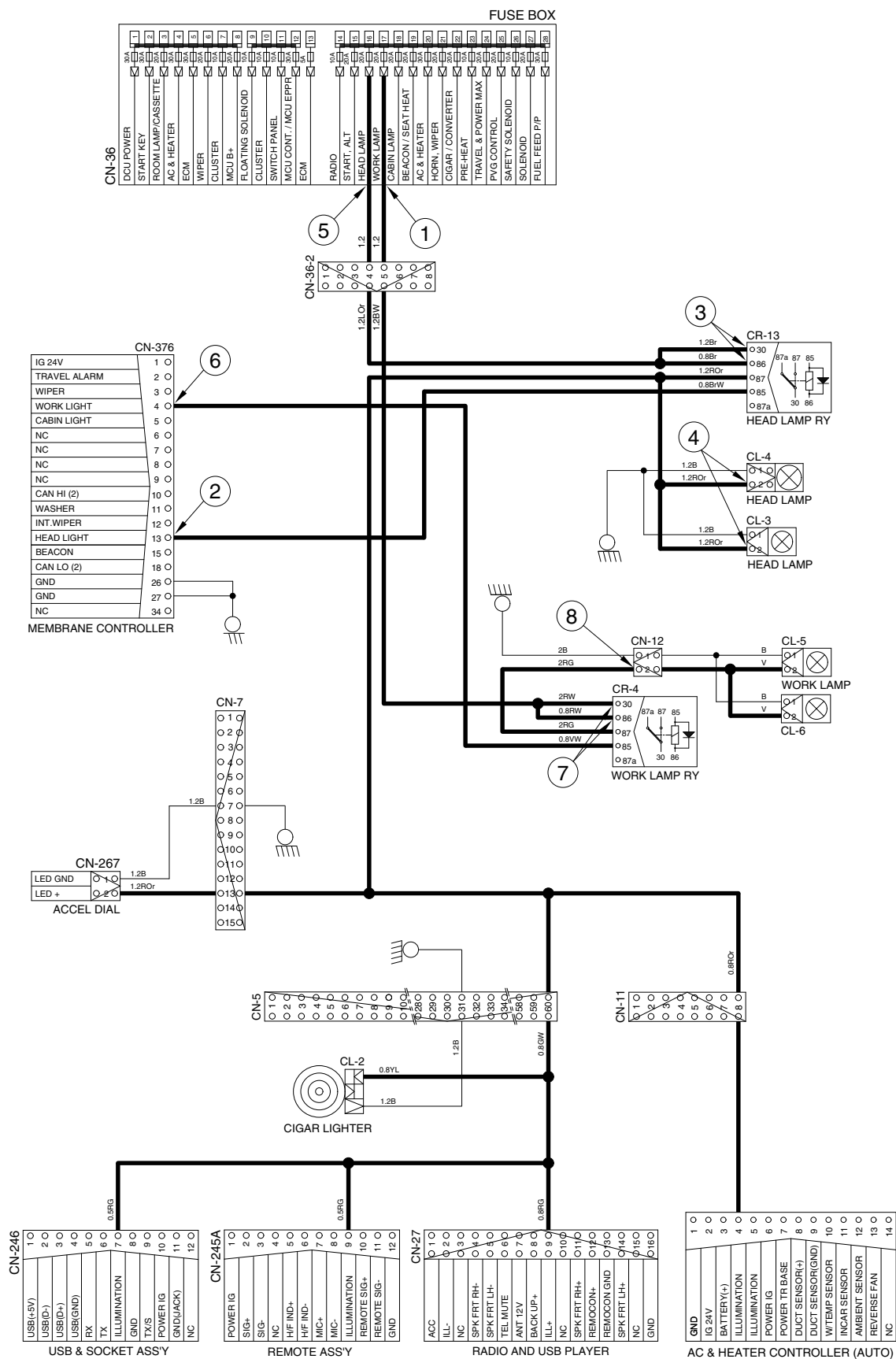
### 2) CHECK POINT

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

※ GND : Ground

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

# HEAD AND WORK LIGHT CIRCUIT



145ZF4EL08

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

## 5. BEACON LAMP AND CAB LIGHT CIRCUIT

### 1) OPERATING FLOW

Fuse box (No.19) → I/conn [CN-36-1 (5)] → Beacon lamp relay [CR-85 (30, 86)]

Fuse box (No.18) → I/conn [CN-36-2 (6)] → Cab light relay [CR-9 (30, 86)]

#### (1) Beacon lamp switch ON

Beacon lamp switch ON [CN-376 (15)] → Beacon lamp relay [CR-85 (85)→ (87)]

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

#### (2) Cab light switch ON

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

→ I/conn [CN-5 (34, 38)]

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

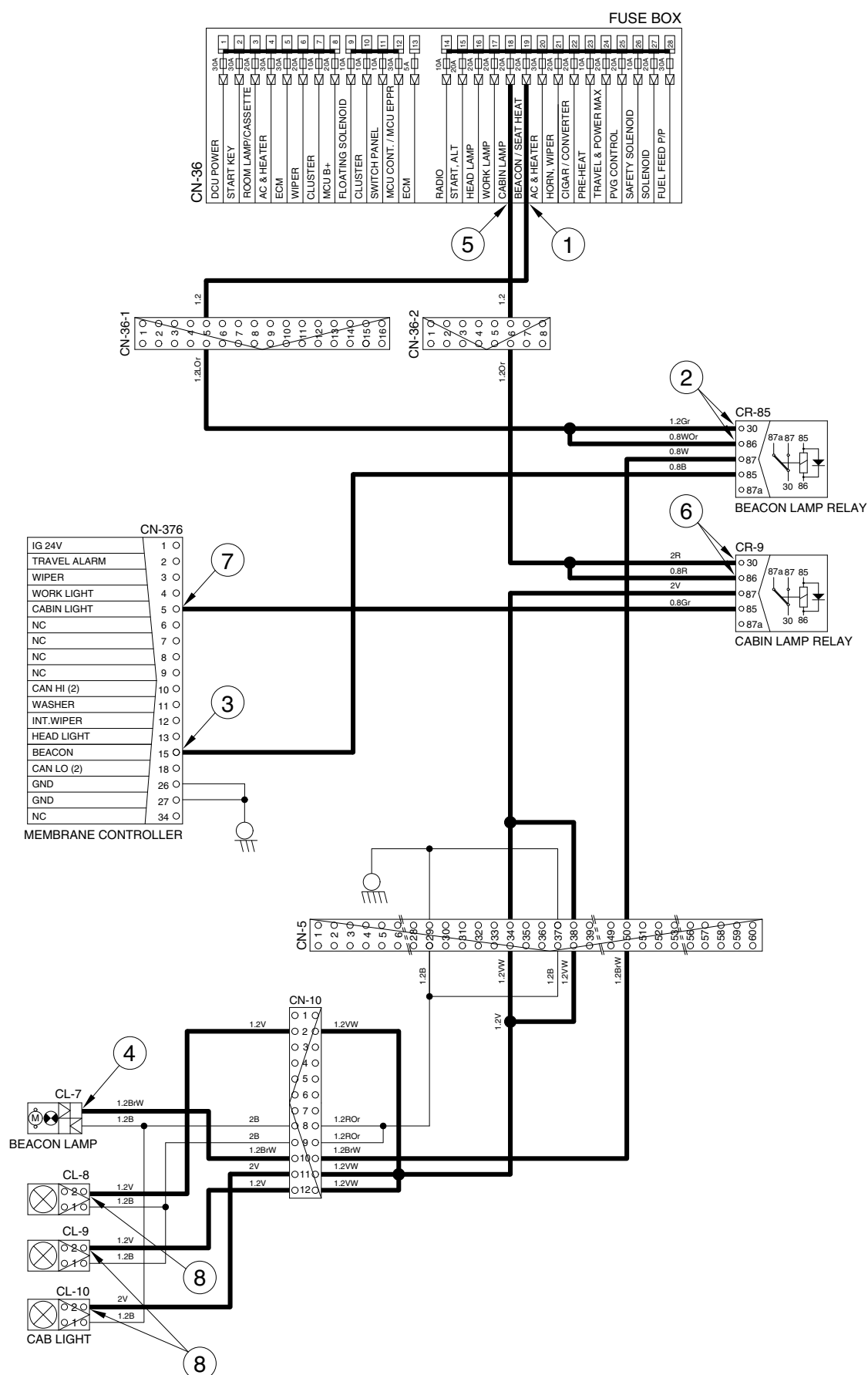
### 2) CHECK POINT

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

※ GND : Ground

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

## BEACON LAMP AND CAB LIGHT CIRCUIT



145ZF4EL09

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

## 6. WIPER AND WASHER CIRCUIT

### 1) OPERATING FLOW

#### (1) Key switch ON

Fuse box (No.11) → I/conn [CN-36-1 (16)] → Membrane controller [CN-376 (1)]  
 Fuse box (No.6) → I/conn [CN-36-1 (11)] → I/conn [CN-5 (18)] → I/conn [CN-17 (5)]  
 → Wiper motor controller [CN-141 (7)]  
 → Wiper motor [CN-21 (4)]  
 Fuse box (No.21) → I/conn [CN-36-1 (4)] → I/conn [CN-5 (16)] → I/conn [CN-17 (4)]  
 → Wiper motor controller [CN-141 (6)]  
 → Washer pump [CN-22 (2)]

#### (2) Wiper switch ON (Intermittent)

Wiper switch ON [CN-376 (12)] → I/conn [CN-5 (20)] → I/conn [CN-17 (8)]  
 → Wiper motor controller [CN-141 (10)→(3)] → Wiper motor [CN-21 (6)] → Intermittently operating

#### (3) Wiper switch ON (continual)

Wiper switch ON [CN-376 (3)] → I/conn [CN-5 (15)] → I/conn [CN-17 (2)]  
 → Wiper motor controller [CN-141 (2) → (4)] → Wiper motor [CN-21 (2)] → Continual operating

#### (4) Washer switch ON

Washer switch ON [CN-376 (11)] → I/conn [CN-5 (17)] → I/conn [CN-17 (7)]  
 → Wiper motor controller [CN-141 (9) → (8)] → I/conn [CN-17 (6)] → I/conn [CN-5 (19)]  
 → Washer pump [CN-22 (1)] → Washer operating  
 Wiper switch ON [CN-376 (3)] → I/conn [CN-5 (15)] → I/conn [CN-17 (2)]  
 → Wiper motor controller [CN-141 (2) → (4)] → Wiper motor [CN-21 (2)] → Continual operating

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

Switch OFF [CN-376 (3, 12)] → Wiper motor parking position by wiper motor controller

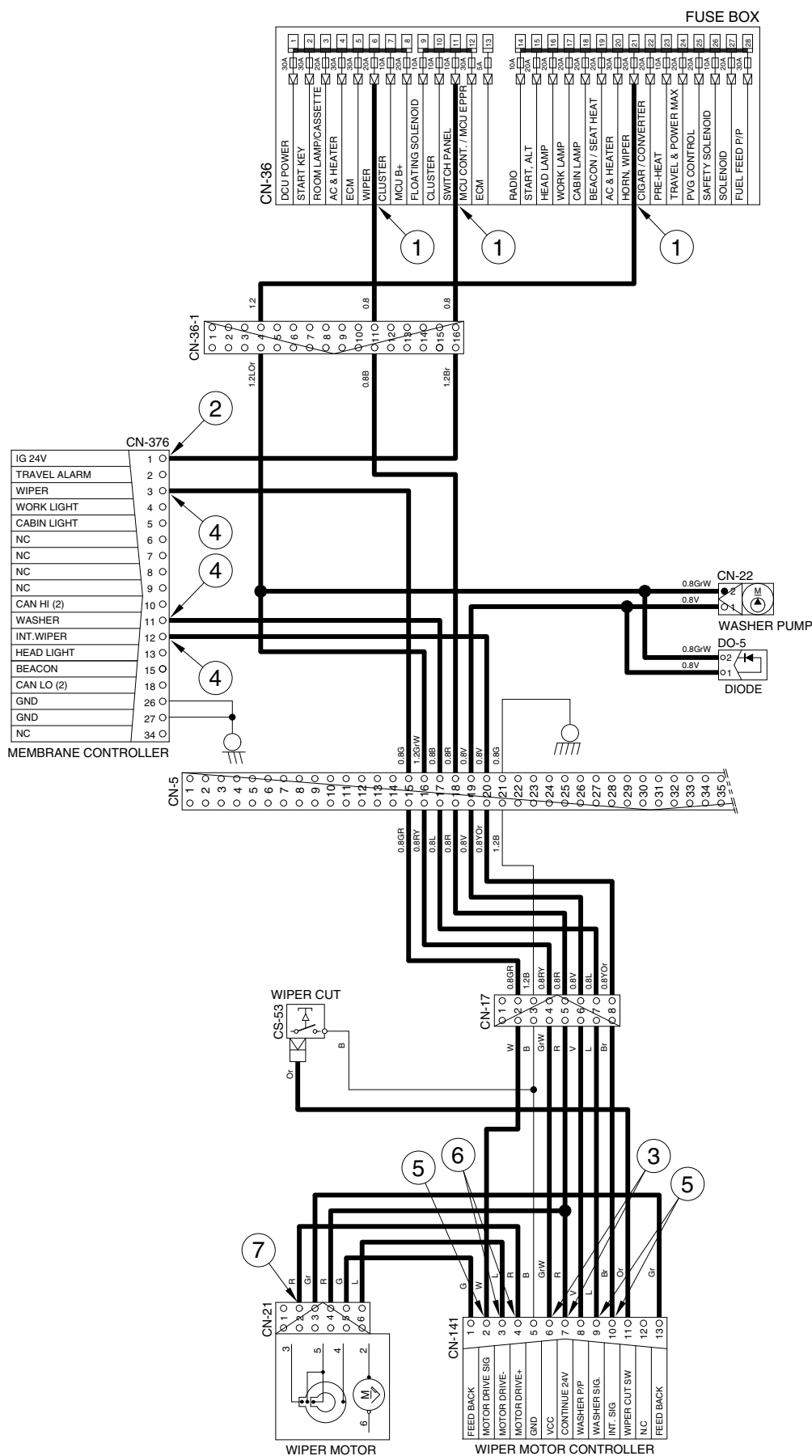
### 3) CHECK POINT

| Engine | Start switch | Check point                   | Voltage  |
|--------|--------------|-------------------------------|----------|
| STOP   | ON           | ① - GND (fuse box)            | 20~25V   |
|        |              | ② - GND (switch power input)  |          |
|        |              | ③ - GND (wiper power input)   |          |
|        |              | ④ - GND (switch power output) | 0 ~ 5V   |
|        |              | ⑤ - GND (wiper power input)   |          |
|        |              | ⑥ - GND (wiper power output)  | 24V      |
|        |              | ⑦ - GND (wiper motor)         | 0 or 24V |

※ GND : Ground

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

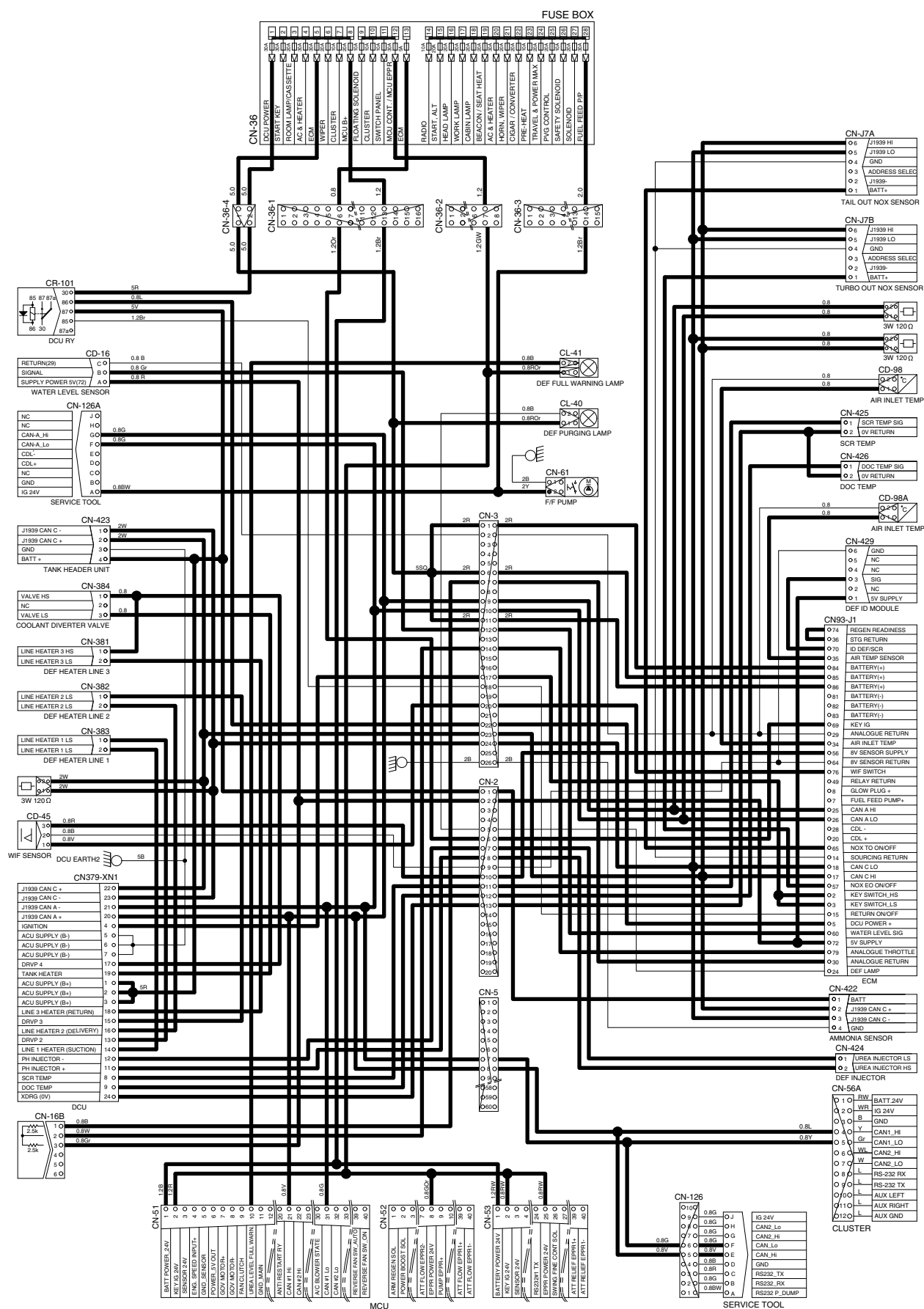
# WIPER AND WASHER CIRCUIT



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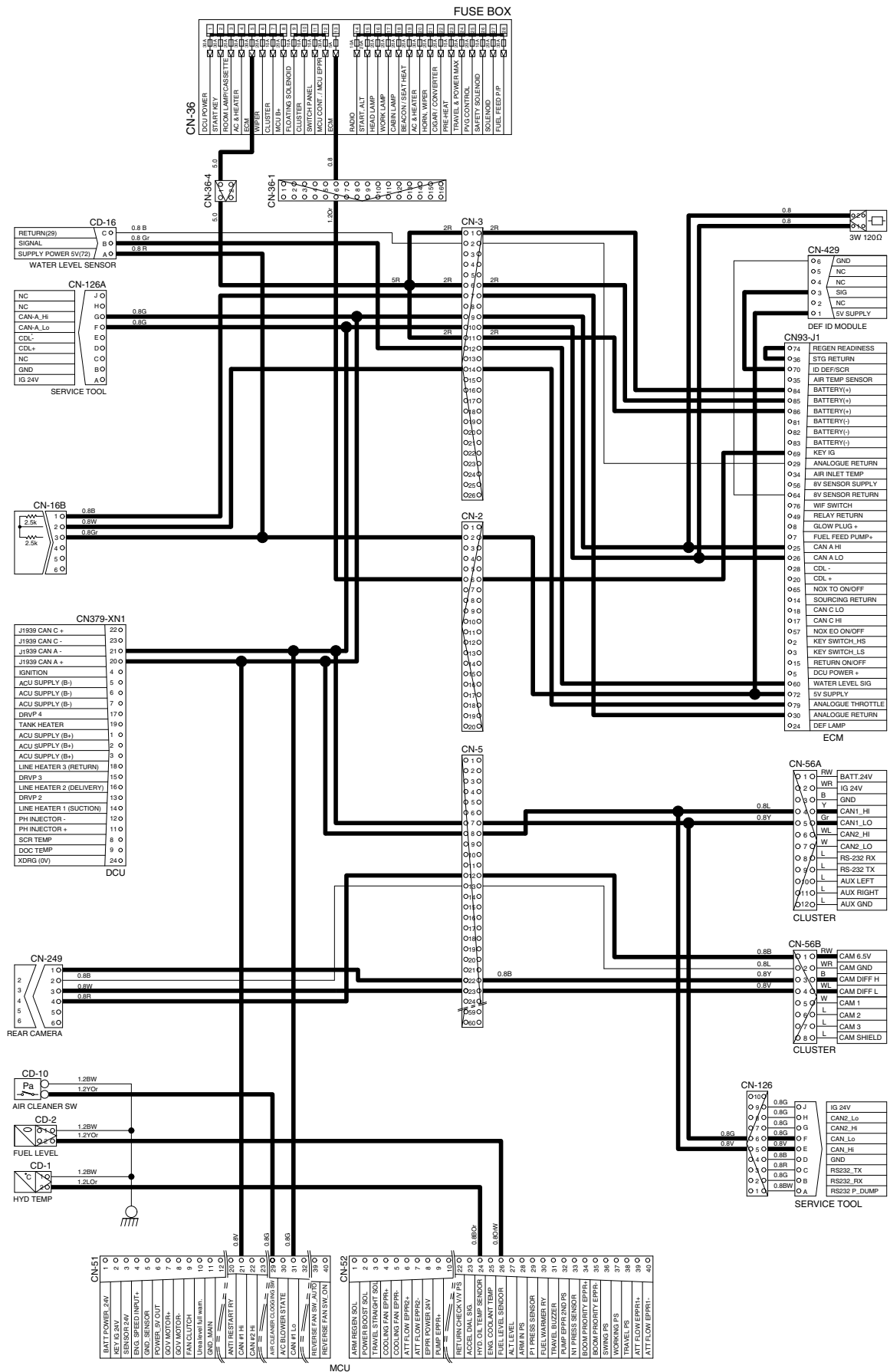
※ The circuit diagram may differ from the equipment, so please check before a repair.

## CONTROLLER CIRCUIT



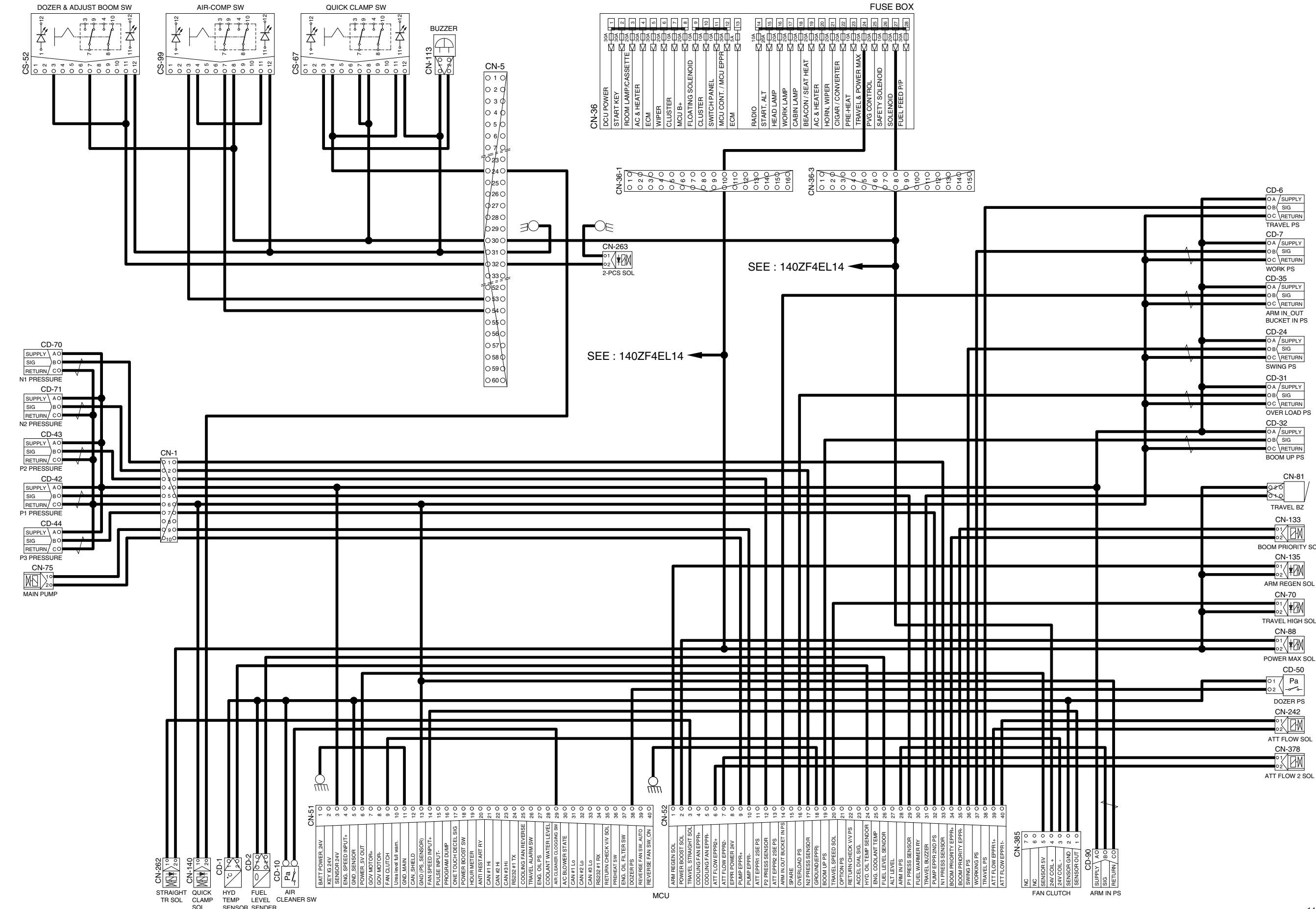
※ The circuit diagram may differ from the equipment, so please check before a repair.

# MONITORING CIRCUIT



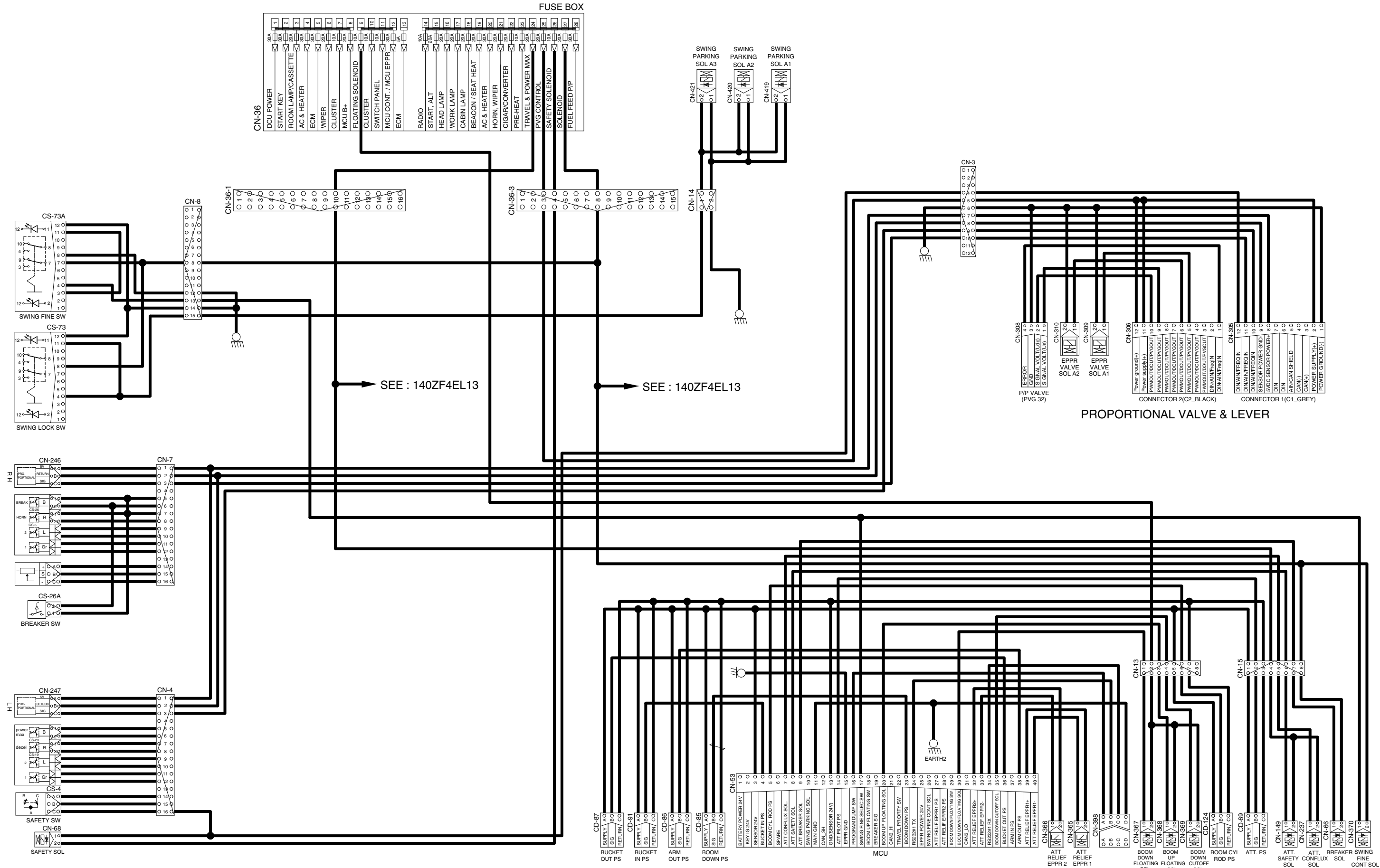
※ The circuit diagram may differ from the equipment, so please check before a repair.

ELECTRIC CIRCUIT FOR HYDRAULIC (1/2)



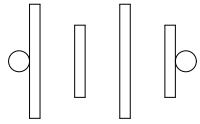
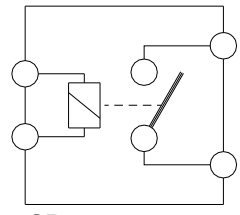
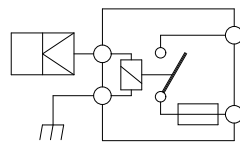
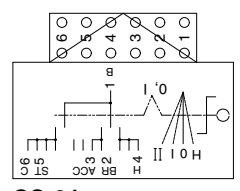
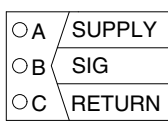
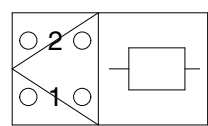
※ The circuit diagram may differ from the equipment, so please check before a repair.

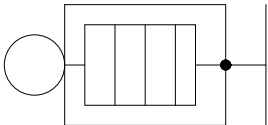
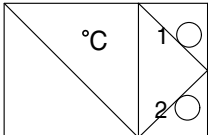
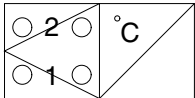
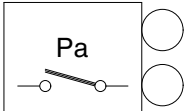
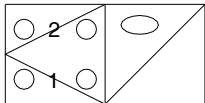
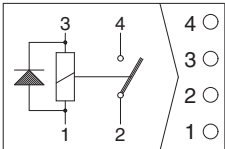
ELECTRIC CIRCUIT FOR HYDRAULIC (2/2)

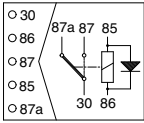
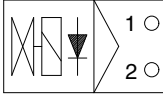
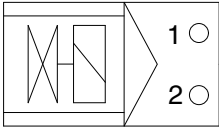
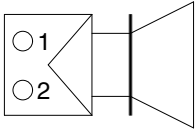
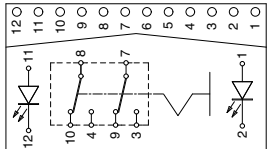
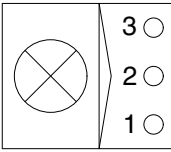


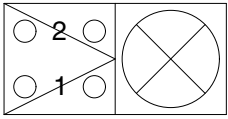
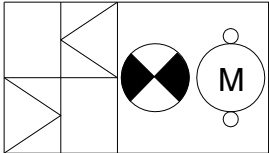
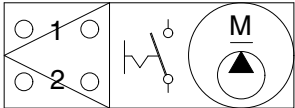
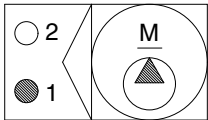
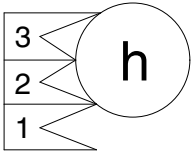
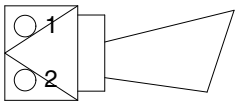
※ The circuit diagram may differ from the equipment, so please check before a repair.

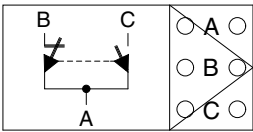
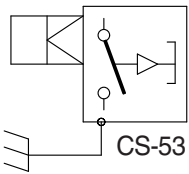
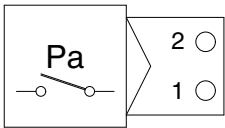
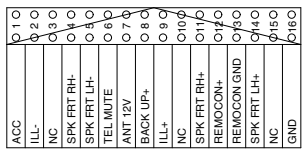
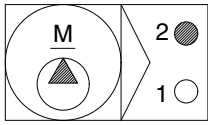
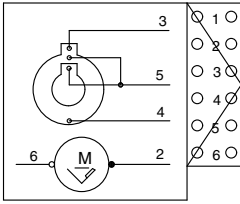
## GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

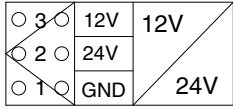
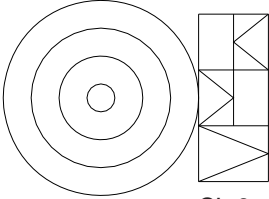
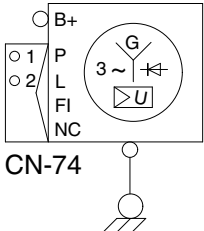
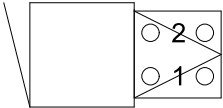
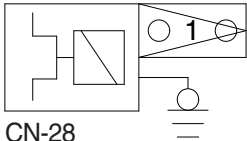
| Part name       | Symbol                                                                                                                                                                                                        | Specifications                                                    | Check                                                                                                                  |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Battery         |                                                                                                                              | 12V × 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<br>(30 seconds) | ※ Check coil resistance(M4 to M4)<br>Normal : About 50Ω<br>※ Check contact<br>Normal : ∞Ω                              |
| Glow plug relay | <br>CR-24                                                                                                                   | 24V 200A                                                          | ※ Check contact<br>Normal : 0.942Ω<br>(For terminal 1-GND)                                                             |
| Start key       | <br>CS-2A                                                                                                                  | B-BR : 24V 1A<br>B-ACC : 24V 10A<br>B-C : 24V 40A                 | ※ Check contact<br>OFF : ∞Ω (for each terminal)<br>ON : 0Ω (for terminal 1-3 and 1-2)<br>START : 0Ω (for terminal 1-6) |
| Pressure sensor | <br>CD-6 CD-7 CD-24 CD-31<br>CD-32 CD-35 CD-42 CD-43<br>CD-44 CD-69 CD-70 CD-71<br>CD-85 CD-86 CD-87 CD-90<br>CD-91 CD-124 | 8~30V                                                             | ※ Check contact<br>Normal : 0.1Ω                                                                                       |
| Resistor        |                                                                                                                            | 3W 120Ω                                                           | ※ Check resistance<br>1-2 : 120Ω                                                                                       |

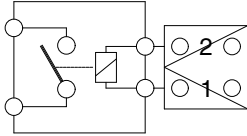
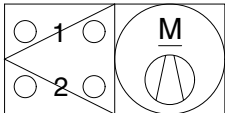
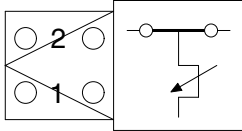
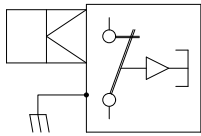
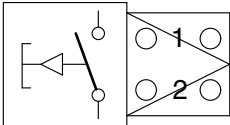
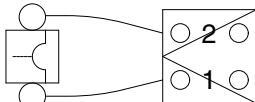
| Part name                      | Symbol                                                                                            | Specifications | Check                                                                                                                                                                                                                                |
|--------------------------------|---------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Glow plug                      | <br>CN-80        | 24V 200A       | ※ Check resistance<br>0.25~0.12Ω                                                                                                                                                                                                     |
| Temperature sensor (hydraulic) | <br>CD-1         | -              | ※ Check resistance<br>50°C : 804Ω<br>80°C : 310Ω<br>100°C : 180Ω                                                                                                                                                                     |
| Air inlet temperature sensor   | <br>CD-98 CD-98A | -              | -                                                                                                                                                                                                                                    |
| Air cleaner pressure switch    | <br>CD-10      | N.O TYPE       | ※ Check contact<br>High level : ∞Ω<br>Low level : 0Ω                                                                                                                                                                                 |
| Fuel level sender              | <br>CD-2       | -              | ※ Check resistance<br>Full : 50Ω      6/12 : 350Ω<br>11/12 : 100Ω    5/12 : 400Ω<br>10/12 : 150Ω    4/12 : 450Ω<br>9/12 : 200Ω     3/12 : 500Ω<br>8/12 : 250Ω     2/12 : 550Ω<br>7/12 : 300Ω     1/12 : 600Ω<br>Empty warning : 700Ω |
| Relay (air con blower)         |                | 24V 16A        | ※ Check resistance<br>Normal : About 200Ω<br>(for terminal 1-3)<br>∞Ω<br>(for terminal 2-4)                                                                                                                                          |

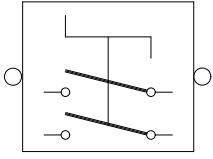
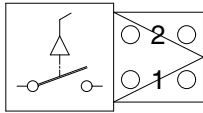
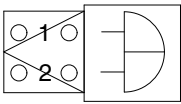
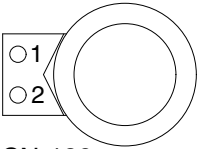
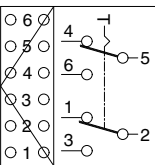
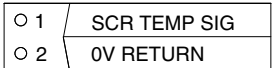
| Part name                | Symbol                                                                                                                                                                                                                          | Specifications  | Check                                                                                                                                                      |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relay                    |  <p>CR-2 CR-4 CR-5 CR-7<br/>CR-9 CR-13 CR-35 CR-36<br/>CR-85 CR-95 CR-101</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-135 CN-140<br/>CN-149 CN-237 CN-262<br/>CN-263 CN-367 CN-368<br/>CN-369 CN-370 CN-419<br/>CN-420 CN-421</p> | 24V 1A          | ※ Check resistance<br>Normal : 15~25 Ω<br>(for terminal 1-2)                                                                                               |
| EPPR valve               |  <p>CN-75 CN-133 CN-242<br/>CN-309 CN-310 CN-365<br/>CN-366 CN-378</p>                                                                        | 700mA           | ※ Check resistance<br>Normal : 15~25 Ω<br>(for terminal 1-2)                                                                                               |
| Speaker                  |  <p>CN-23(LH) CN-24(RH)</p>                                                                                                                  | 20W<br>86 ± 2dB | ※ Check resistance<br>Normal : A few Ω                                                                                                                     |
| Switch<br>(locking type) |  <p>CS-52 CS-67 CS-73<br/>CS-73A CS-99</p>                                                                                                   | 24V 1.5A        | ※ Check contact<br>Normal<br>ON : 0 Ω (for terminal 7-3)<br>∞ Ω (for terminal 7-9)<br>OFF : ∞ Ω (for terminal 7-3)<br>0 Ω (for terminal 7-9)               |
| Room lamp                |  <p>CL-1</p>                                                                                                                                 | 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) |

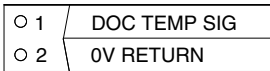
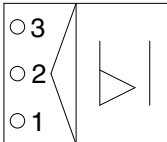
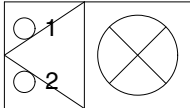
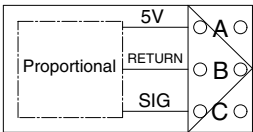
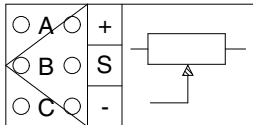
| Part name                            | Symbol                                                                                                                      | Specifications                          | Check                                                                                              |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------|
| Head lamp,<br>Work lamp,<br>Cab lamp | <br>CL-3 CL-4 CL-5 CL-6<br>CL-8 CL-9 CL-10 | 24V 65W<br>(H3 Type)                    | ※ Check disconnection<br>Normal : 1.2Ω                                                             |
| Beacon lamp                          | <br>CL-7                                   | 24V<br>70W (H1 Type)<br>2.4W (LED Type) | ※ Check disconnection<br>Normal : A fewΩ                                                           |
| Fuel filler pump                     | <br>CN-61                                 | 24V 10A<br>35 ℓ /min                    | ※ Check resistance<br>Normal : 1.0Ω                                                                |
| Fuel feed pump                       | <br>CN-145                               | 24V                                     | -                                                                                                  |
| 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                          | 22~28V 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 : 1.0Ω<br>ON : 0Ω (for terminal A-B)<br>∞Ω (for terminal A-C)<br>OFF : ∞Ω (for terminal A-B)<br>0Ω (for terminal A-C) |
| Wiper cut switch   |  <p>CS-53</p>   | 24V<br>(N.O TYPE)      | ※ Check contact<br>Normal : 0Ω (one pin to ground)                                                                                              |
| Receiver dryer     |  <p>CN-29</p>  | 24V 2.5A<br>(N.O TYPE) | ※ Check contact<br>Normal : ∞Ω                                                                                                                  |
| Radio & USB 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 : 10.7Ω (for terminal 1-2)                                                                                            |
| Wiper motor        |  <p>CN-21</p> | 24V 2A                 | ※ Check disconnection<br>Normal : 7Ω (for terminal 2-6)                                                                                         |

| Part name                  | Symbol                                                                                       | Specifications         | Check                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| DC/DC Converter            | <br>CN-138  | 24V 3A                 | ※ Check voltage<br>24V (for terminal 1-2)<br>12V (for terminal 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 100A | ※ Check contact<br>Normal : 0 $\Omega$ (for terminal B <sup>+</sup> -2)<br>Normal : 24~27.5V                                     |
| Starter                    | <br>CN-45 | 24V 4.5kW              | ※ Check contact<br>Normal : 0.1 $\Omega$                                                                                         |
| Travel alarm               | <br>CN-81 | 24V 0.5A               | ※ Check contact<br>Normal : 5.2 $\Omega$                                                                                         |
| Air conditioner 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 : 0.94Ω (for terminal 1-2)                                                         |
| Blower motor                                                   |                                     | 24V 14A                    | ※ Check resistance<br>Normal : 2.5Ω (for terminal 1-2)                                                       |
| Air conditioner duct sensor (switch)                           |                                    | 1°C OFF<br>4°C ON          | ※ Check resistance<br>Normal : 0Ω (for terminal 1-2),<br>the atmosphere temp :<br>Over 4°C                   |
| Door switch                                                    | <br>CS-1                          | 24V 2W                     | ※ Check resistance<br>Normal : About 5MΩ                                                                     |
| Switch<br>(power max,<br>one touch<br>decel, horn,<br>breaker) | <br>CS-5   CS-19<br>CS-26   CS-29 | 24V 6A                     | ※ Check resistance<br>Normal : ∞Ω                                                                            |
| Circuit breaker                                                | <br>CN60   CN-95                  | CN-60 : 60A<br>CN-95 : 90A | ※ Check disconnection<br>Normal : 0Ω<br>(connect ring terminal and check<br>resist between terminal 1 and 2) |

| Part name                    | Symbol                                                                                             | Specifications       | Check                                              |
|------------------------------|----------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------------|
| Master switch                | <br>CS-74A CS-74B | 6-36V                | ※ Check disconnection<br>Normal : 0.1Ω             |
| Breaker pedal switch         | <br>CS-26A        | -                    | -                                                  |
| Quick clamp buzzer           | <br>CN-113       | 24V 80mA<br>Min 65dB | -                                                  |
| 12V Socket                   | <br>CN-139      | 12V 10A              | -                                                  |
| Engine emergency stop switch | <br>CS-33       | 24V                  | ※ Check contact<br>Normal<br>0Ω (for terminal 1-2) |
| SCR temperature sensor       | <br>CN-425      | -                    | -                                                  |

| Part name                              | Symbol                                                                                                       | Specifications | Check                                        |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------|
| DOC temperature sensor                 | <br>CN-426                  | -              | -                                            |
| DEF/AdBlue® line heater                | <br>CN-381 CN-382 CN-383    | -              | -                                            |
| WIF sensor                             | <br>CD-45                  | -              | ※ Check disconnection<br>Normal : 68.8~4.94Ω |
| DEF/AdBlue® fill up warning lamp (LED) | <br>CL-40                 | -              | -                                            |
| Proportional valve sensor              | <br>CN-246(RH) CN-247(LH) | -              | -                                            |
| Accel dial                             | <br>CN-142                | 5V, 8mA        | -                                            |

| Part name                                                   | Symbol                                                                                                                                                                                                                                      | Specifications | Check                                     |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------|
| Accel dial LED                                              | <div><div><div><div><div>○ 1 ○</div><div>○ 2 ○</div></div><div><div>LED GND</div><div>LED +</div></div></div></div><div>CN-267</div></div> <div></div> <td>24V</td> <td>-</td>                                                              | 24V            | -                                         |
| DEF/AdBlue® full lamp                                       | <div><div><div><div><div>○ 2 ○</div><div>○ 1 ○</div></div><div><div><div>○</div><div>○</div></div></div></div></div><div>CL-41</div></div> <div></div> <td>-</td> <td>-</td>                                                                | -              | -                                         |
| Temperature sensor<br>(A/C incar,<br>A/C ambient,<br>water) | <div><div><div><div><div>○ 2 ○</div><div>○ 1 ○</div></div><div><div><div>○</div><div>○</div></div></div></div><div><div><div>○</div><div>○</div></div></div></div><div></div><td>-</td><td>-</td></div>                                     | -              | -                                         |
| Coolant diverter valve                                      | <div><div><div><div><div>○ 1</div><div>○ 2</div><div>○ 3</div></div><div><div>VALVE HS</div><div>NC</div><div>VALVE LS</div></div></div></div><div>CN-384</div></div> <div></div> <td>-</td> <td>-</td>                                     | -              | -                                         |
| Proportional valve sensor                                   | <div><div><div><div><div>○ 1</div><div>○ 2</div><div>○ 3</div><div>○ 4</div></div><div><div>SIG. V(Us)</div><div>SIG. V(Udc)</div><div>GND</div><div>ERROR</div></div></div></div><div>CN-308</div></div> <div></div> <td>-</td> <td>-</td> | -              | -                                         |
| Dozer act pressure switch                                   | <div><div><div><div><div><div>Pa</div><div><div>○ 2 ○</div><div>○ 1 ○</div></div></div></div></div><div>CD-50</div></div><div></div><td>N.O type</td><td>※ Check resistance<br/>Normal : ∞ Ω (open)</td></div>                              | N.O type       | ※ Check resistance<br>Normal : ∞ Ω (open) |

| Part name                           | Symbol                                                                                                                                                                                                                                                             | Specifications | Check            |     |                  |     |                     |           |               |     |        |     |               |          |   |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|-----|------------------|-----|---------------------|-----------|---------------|-----|--------|-----|---------------|----------|---|
| Water level sensor                  | <table><tr><td>○ C</td><td>RETURN(29)</td></tr><tr><td>○ B</td><td>SIGNAL</td></tr><tr><td>○ A</td><td>SUPPLY POWER 5V(72)</td></tr></table><br>CD-16                                                                                                              | ○ C            | RETURN(29)       | ○ B | SIGNAL           | ○ A | SUPPLY POWER 5V(72) | 5V 12.5mA | -             |     |        |     |               |          |   |
| ○ C                                 | RETURN(29)                                                                                                                                                                                                                                                         |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ B                                 | SIGNAL                                                                                                                                                                                                                                                             |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ A                                 | SUPPLY POWER 5V(72)                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| DEF/AdBlue® injector                | <table><tr><td>○ 1</td><td>UREA INJECTOR LS</td></tr><tr><td>○ 2</td><td>UREA INJECTOR HS</td></tr></table><br>CN-424                                                                                                                                              | ○ 1            | UREA INJECTOR LS | ○ 2 | UREA INJECTOR HS | -   | -                   |           |               |     |        |     |               |          |   |
| ○ 1                                 | UREA INJECTOR LS                                                                                                                                                                                                                                                   |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 2                                 | UREA INJECTOR HS                                                                                                                                                                                                                                                   |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| Camera                              | <table><tr><td>○ 1</td><td>LVDS POS</td></tr><tr><td>○ 2</td><td>GND</td></tr><tr><td>○ 3</td><td>LVDS NEG</td></tr><tr><td>○ 4</td><td>POWER 24V</td></tr><tr><td>○ 5</td><td>NC</td></tr><tr><td>○ 6</td><td>ADJUST SIGNAL</td></tr></table><br>CN-249           | ○ 1            | LVDS POS         | ○ 2 | GND              | ○ 3 | LVDS NEG            | ○ 4       | POWER 24V     | ○ 5 | NC     | ○ 6 | ADJUST SIGNAL | 7V 100mA | - |
| ○ 1                                 | LVDS POS                                                                                                                                                                                                                                                           |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 2                                 | GND                                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 3                                 | LVDS NEG                                                                                                                                                                                                                                                           |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 4                                 | POWER 24V                                                                                                                                                                                                                                                          |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 5                                 | NC                                                                                                                                                                                                                                                                 |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 6                                 | ADJUST SIGNAL                                                                                                                                                                                                                                                      |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| NOx sensor<br>(tail out, turbo out) | <table><tr><td>○ 6</td><td>J1939 HI</td></tr><tr><td>○ 5</td><td>J1939 LO</td></tr><tr><td>○ 4</td><td>GND</td></tr><tr><td>○ 3</td><td>ADDRESS SELEC</td></tr><tr><td>○ 2</td><td>J1939-</td></tr><tr><td>○ 1</td><td>BATT+</td></tr></table><br>CN-J7A    CN-J7B | ○ 6            | J1939 HI         | ○ 5 | J1939 LO         | ○ 4 | GND                 | ○ 3       | ADDRESS SELEC | ○ 2 | J1939- | ○ 1 | BATT+         | -        | - |
| ○ 6                                 | J1939 HI                                                                                                                                                                                                                                                           |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 5                                 | J1939 LO                                                                                                                                                                                                                                                           |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 4                                 | GND                                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 3                                 | ADDRESS SELEC                                                                                                                                                                                                                                                      |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 2                                 | J1939-                                                                                                                                                                                                                                                             |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 1                                 | BATT+                                                                                                                                                                                                                                                              |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| Ammonia sensor                      | <table><tr><td>○ 1</td><td>BATT +</td></tr><tr><td>○ 2</td><td>J1939 CAN C +</td></tr><tr><td>○ 3</td><td>J1939 CAN C -</td></tr><tr><td>○ 4</td><td>GND</td></tr></table><br>CN-422                                                                               | ○ 1            | BATT +           | ○ 2 | J1939 CAN C +    | ○ 3 | J1939 CAN C -       | ○ 4       | GND           | -   | -      |     |               |          |   |
| ○ 1                                 | BATT +                                                                                                                                                                                                                                                             |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 2                                 | J1939 CAN C +                                                                                                                                                                                                                                                      |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 3                                 | J1939 CAN C -                                                                                                                                                                                                                                                      |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 4                                 | GND                                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| DEF/AdBlue® Id module               | <table><tr><td>○ 6</td><td>GND</td></tr><tr><td>○ 5</td><td>NC</td></tr><tr><td>○ 4</td><td>NC</td></tr><tr><td>○ 3</td><td>SIG</td></tr><tr><td>○ 2</td><td>NC</td></tr><tr><td>○ 1</td><td>5V SUPPKY</td></tr></table><br>CN-429                                 | ○ 6            | GND              | ○ 5 | NC               | ○ 4 | NC                  | ○ 3       | SIG           | ○ 2 | NC     | ○ 1 | 5V SUPPKY     | -        | - |
| ○ 6                                 | GND                                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 5                                 | NC                                                                                                                                                                                                                                                                 |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 4                                 | NC                                                                                                                                                                                                                                                                 |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 3                                 | SIG                                                                                                                                                                                                                                                                |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 2                                 | NC                                                                                                                                                                                                                                                                 |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |
| ○ 1                                 | 5V SUPPKY                                                                                                                                                                                                                                                          |                |                  |     |                  |     |                     |           |               |     |        |     |               |          |   |

| Part name         | Symbol                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Specifications | Check      |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|-----|------------|-----|------------|-----|------------|-----|-----------|-----|-----|-----|----------|-----|--------|-----|-------------|------|------------|------|----|------|----|---|---|
| Fan clutch        | <table><tr><td>○ 1</td><td>SENSOR OUT</td></tr><tr><td>○ 2</td><td>SENSOR GND</td></tr><tr><td>○ 3</td><td>24V COIL -</td></tr><tr><td>○ 4</td><td>24V COIL +</td></tr><tr><td>○ 5</td><td>SENSOR 5V</td></tr><tr><td>○ 6</td><td>NC</td></tr><tr><td>○ 7</td><td>NC</td></tr></table> <p>CN-385</p>                                                                                                                                                                         | ○ 1            | SENSOR OUT | ○ 2 | SENSOR GND | ○ 3 | 24V COIL - | ○ 4 | 24V COIL + | ○ 5 | SENSOR 5V | ○ 6 | NC  | ○ 7 | NC       | -   | -      |     |             |      |            |      |    |      |    |   |   |
| ○ 1               | SENSOR OUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 2               | SENSOR GND                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 3               | 24V COIL -                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 4               | 24V COIL +                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 5               | SENSOR 5V                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 6               | NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 7               | NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| PVG 32 controller | <table><tr><td>○ 1</td><td>CAN HI</td></tr><tr><td>○ 2</td><td>CAN LO</td></tr><tr><td>○ 3</td><td>GND</td></tr><tr><td>○ 4</td><td>SAFETY</td></tr><tr><td>○ 5</td><td>KEY IG</td></tr><tr><td>○ 6</td><td>GND</td></tr><tr><td>○ 7</td><td>5V POWER</td></tr><tr><td>○ 8</td><td>5V GND</td></tr><tr><td>○ 9</td><td>ROTATE / LH</td></tr><tr><td>○ 10</td><td>ROTATE /RH</td></tr><tr><td>○ 11</td><td>NC</td></tr><tr><td>○ 12</td><td>NC</td></tr></table> <p>CN-3A</p> | ○ 1            | CAN HI     | ○ 2 | CAN LO     | ○ 3 | GND        | ○ 4 | SAFETY     | ○ 5 | KEY IG    | ○ 6 | GND | ○ 7 | 5V POWER | ○ 8 | 5V GND | ○ 9 | ROTATE / LH | ○ 10 | ROTATE /RH | ○ 11 | NC | ○ 12 | NC | - | - |
| ○ 1               | CAN HI                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 2               | CAN LO                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 3               | GND                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 4               | SAFETY                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 5               | KEY IG                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 6               | GND                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 7               | 5V POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 8               | 5V GND                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 9               | ROTATE / LH                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 10              | ROTATE /RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 11              | NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |
| ○ 12              | NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |            |     |            |     |            |     |            |     |           |     |     |     |          |     |        |     |             |      |            |      |    |      |    |   |   |

## 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       | 20         | I/conn (Frame harness-Engine harness)        | 936777-2           | 936780-2         |
| CN-3             | -         | 26         | I/conn (Frame harness-Engine harness)        | 1897009-2          | 1897013-2        |
| CN-3A            | AMP       | 12         | PVG controller harness                       | 174661-2           | 368537-1         |
| CN-4             | AMP       | 16         | I/conn (Console harness LH-Frame harness)    | 368047-1           | 368050-1         |
| CN-5             | DEUTSCH   | 60         | I/conn (Side harness RH-Frame harness)       | DRB16-60SAE-L018   | DRB14-60PAE-L018 |
| CN-7             | AMP       | 16         | I/conn (Console harness RH-Frame harness)    | 368047-1           | 368050-1         |
| CN-8             | AMP       | 15         | I/conn (Console harness LH-Frame harness)    | 2-85262-1          | S816-112002      |
| CN-10            | TYCO      | 12         | I/conn (Cab harness-Side harness RH)         | 368542-1           | 368507-1         |
| CN-11            | DEUTSCH   | 8          | I/conn (Frame harness-Aircon harness)        | DT06-8S            | -                |
| CN-12            | DEUTSCH   | 2          | I/conn (Frame harness-Boom wire harness)     | DT06-2S-EP06       | DT04-2P-E005     |
| CN-13            | AMP       | 8          | I/conn (Frame harness-Boom floating harness) | 174982-2           | 174984-2         |
| CN-14            | DEUTSCH   | 2          | I/conn (Frame harness-Swing parking harness) | DT06-2S-EP06       | DT04-2P          |
| CN-15            | AMP       | 8          | I/conn (Frame harness-2 way harness)         | 174982-2           | 174984-2         |
| CN-16            | AMP       | 6          | Emergency engine start & speed control       | -                  | S816-106002      |
| CN-16A           | AMP       | 6          | Emergency engine start & speed control       | S816-006002        | -                |
| CN-16B           | AMP       | 6          | Emergency engine start & speed control       | S816-006002        | S816-106002      |
| CN-17            | DEUTSCH   | 8          | I/conn (Side harness RH-Wiper harness)       | DT06-8S-EP06       | DT04-8P          |
| CN-20            | MOLEX     | 2          | Horn                                         | 36812-0211         | -                |
| CN-21            | AMP       | 6          | Wiper motor                                  | S810-006202        | -                |
| CN-22            | KET       | 2          | Washer tank                                  | MG640605           | -                |
| CN-23            | KET       | 2          | Speaker-LH                                   | MG610070           | -                |
| CN-24            | KET       | 2          | Speaker-RH                                   | MG610070           | -                |
| CN-25            | MOLEX     | 2          | Horn                                         | 36812-0211         | -                |
| CN-27            | KUM       | 16         | Radio & USB player                           | PK145-16017        | -                |
| CN-27A           | AMP       | 8          | Radio & USB player                           | -                  | S816-108002      |
| CN-28            | KUM       | 1          | Air conditioner compressor                   | NMWP01F-B          | -                |
| CN-29            | KET       | 2          | Receiver dryer                               | MG640795           | -                |
| CN-36-1          | AMP       | 16         | To fuse box                                  | 368047-1           | -                |
| CN-36-2          | KET       | 8          | To fuse box                                  | MG610051           | -                |
| CN-36-3          | -         | 26         | To fuse box                                  | 1897009-2          | -                |
| CN-36-4          | KET       | 2          | To fuse box                                  | MG610557-5         | -                |
| CN-45            | RING-TERM | -          | Starter motor B <sup>+</sup>                 | S820-108000        | -                |
| CN-48            | KET       | 1          | Hour meter                                   | 2-520193-2         | -                |

| Connector number | Type        | No. of pin | Destination                         | Connector part No. |              |
|------------------|-------------|------------|-------------------------------------|--------------------|--------------|
|                  |             |            |                                     | Female             | Male         |
| CN-51            | DEUTSCH     | 40         | MCU                                 | DRC26-40SA         | -            |
| CN-52            | DEUTSCH     | 40         | MCU                                 | DRC26-40SB         | -            |
| CN-53            | DEUTSCH     | 40         | MCU (option)                        | DRC26-40SA         | -            |
| CN-56A           | AMP         | 12         | Cluster                             | -                  | 174663-2     |
| CN-56B           | AMP         | 8          | Cluster                             | -                  | 174984-2     |
| CN-60            | YAZAKI      | 2          | Circuit breaker                     | -                  | 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       | -            |
| CN-74            | RING-TERM   | 2          | Alternator "L" terminal             | -                  | S820-108000  |
| CN-75            | AMP         | 2          | Pump EPPR valve                     | S816-002002        | -            |
| CN-80            | RING-TERM   | -          | Glow plug                           | S820-306000        | -            |
| CN-81            | DEUTSCH     | 2          | Travel buzzer                       | DT06-2S-EP06       | DT04-2P-E005 |
| CN-88            | DEUTSCH     | 2          | Power max solenoid                  | DT06-2S-EP06       | -            |
| CN-93-J1         | DEUTSCH     | 86         | ECM                                 | DRCP28-86SA        | -            |
| CN-95            | -           | 2          | Circuit breaker                     | -                  | S813-130201  |
| CN-113           | KET         | 2          | Buzzer                              | MG651205-5         | -            |
| CN-125           | Econoseal J | 4          | GPS connector                       | S816-004002        | S816-104002  |
| CN-125A          | DEUTSCH     | 12         | RMS                                 | DT06-12S-EP06      | DT04-12P     |
| CN-126           | AMP         | 10         | I/conn (Service tool-Frame harness) | S816-010002        | S816-110002  |
| CN-126A          | -           | 9          | Service tool                        | -                  | HD10-9-96P   |
| 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                          | 172434-2           | -            |
| CN-140           | DEUTSCH     | 2          | Quick clamp solenoid                | DT06-2S-EP06       | DT04-2P-E005 |
| CN-141           | AMP         | 13         | Wiper motor controller              | 172498-1           | -            |
| CN-142           | DEUTSCH     | 3          | Accel dial                          | DT06-3S-EP06       | -            |
| CN-144A          | KET         | 20         | Handsfree                           | MG610240           | -            |
| CN-144E          | -           | 8          | Handsfree                           | 175964-2           | -            |
| CN-145           | DEUTSCH     | 2          | Fuel filler pump                    | DT06-2S-EP06       | -            |
| CN-149           | DEUTSCH     | 2          | Attach safety solenoid              | DT06-2S-EP06       | -            |
| CN-156           | -           | 2          | Air seat heat                       | -                  | S816-102002  |
| CN-157           | AMP         | 1          | Antena power                        | S822-014002        | -            |
| CN-231           | -           | 2          | To fuse box                         | S813-030201        | -            |
| CN-237           | DEUTSCH     | 2          | Attach conflux solenoid             | DT06-2S-EP06       | -            |
| CN-242           | DEUTSCH     | 2          | Attach EPPR 1                       | DT06-2S-EP06       | -            |

| Connector number | Type    | No. of pin | Destination                 | Connector part No. |              |
|------------------|---------|------------|-----------------------------|--------------------|--------------|
|                  |         |            |                             | Female             | Male         |
| CN-245           | FCI     | 2          | PTC power                   | -                  | -            |
| CN-245A          | AMP     | 12         | Remote controller assy      | 368542-1           | -            |
| CN-245E          | AMP     | 12         | Remote controller assy      | 174045-2           | -            |
| CN-246           | AMP     | 12         | USB & socket assy           | 174045-2           | -            |
| CN-246           | DEUTSCH | 3          | Proportional valve-RH       | DT06-3S            | DT04-3P      |
| CN-247           | DEUTSCH | 3          | Proportional valve-LH       | DT06-3S            | DT04-3P      |
| CN-249           | DEUTSCH | 6          | Rear view camera            | -                  | DT04-6P      |
| CN-259           | AMP     | 6          | Camera                      | S816-006002        | S816-106002  |
| CN-262           | DEUTSCH | 2          | Straight travel solenoid    | DT06-2S-EP06       | DT04-2P-E005 |
| CN-263           | DEUTSCH | 2          | 2 Piece solenoid            | DT06-2S-EP06       | DT04-2P-E005 |
| CN-267           | AMP     | 2          | Accel dial LED              | S816-002002        | -            |
| CN-305           | DEUTSCH | 12         | To PVG controller           | DTM06-12SA         | -            |
| CN-306           | DEUTSCH | 12         | To PVG controller           | DTM06-12SB         | -            |
| CN-307           | DEUTSCH | 3          | Proportional-Service tool   | DT06-3S-EP06       | DT04-3P-E005 |
| CN-308           | AMP     | 4          | Proportional-PVG32          | 2-967059-1         | -            |
| CN-309           | DEUTSCH | 2          | Proportional-EPPR valve A1  | DT06-2S-EP06       | -            |
| CN-310           | DEUTSCH | 2          | Proportional-EPPR valve A2  | DT06-2S-EP06       | -            |
| CN-365           | DEUTSCH | 2          | Attach relief EPPR valve 1  | DT06-2S-EP06       | -            |
| CN-366           | DEUTSCH | 2          | Attach relief EPPR valve 2  | DT06-2S-EP06       | DT04-2P-E005 |
| CN-367           | DEUTSCH | 2          | Boom down floating solenoid | DT06-2S-E005       | -            |
| CN-368           | DEUTSCH | 2          | Boom up floating solenoid   | DT06-2S-E005       | -            |
| CN-369           | DEUTSCH | 2          | Boom down cut off solenoid  | DT06-2S-E005       | -            |
| CN-370           | DEUTSCH | 2          | Swing fine control solenoid | DT06-2S-EP06       | DT04-2P-E005 |
| CN-376           | AMP     | 34         | Membrane controller         | 4-1437290-1        | -            |
| CN-378           | DEUTSCH | 2          | Attach EPPR 2               | DT06-2S-EP06       | -            |
| CN-379-XN1       | DEUTSCH | 24         | DCU module                  | HDP24-24-31ST      | -            |
| CN-381           | DEUTSCH | 2          | DEF/AdBlue® line heater 2   | DT06-2S-EP06       | -            |
| CN-382           | DEUTSCH | 2          | DEF/AdBlue® line heater 1   | DT06-2S-EP06       | -            |
| CN-383           | DEUTSCH | 2          | DEF/AdBlue® line heater 3   | DT06-2S-EP06       | -            |
| CN-384           | AMP     | 3          | Coolant diverter valve      | 1-1418448-1        | -            |
| CN-385           | -       | 7          | Fan clutch                  | 965570             | -            |
| CN-398           | DEUTSCH | 4          | Service tool                | DT06-4S            | -            |
| CN-398           | DEUTSCH | 4          | Service tool                | DT06-4S            | DT04-4P      |
| CN-419           | DEUTSCH | 2          | Swing parking solenoid-A1   | DT06-2S-EP06       | -            |
| CN-420           | DEUTSCH | 2          | Swing parking solenoid-A2   | DT06-2S-EP06       | -            |
| CN-421           | DEUTSCH | 2          | Swing parking solenoid-A3   | DT06-2S-EP06       | -            |
| CN-422           | AMP     | 4          | Ammonia sensor              | 1-1418390-1        | -            |

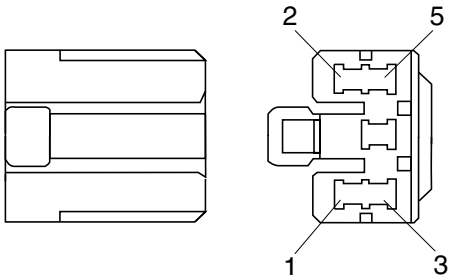
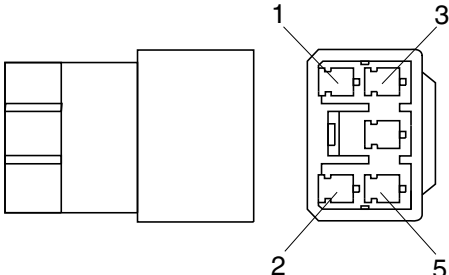
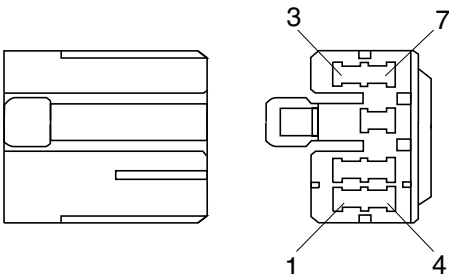
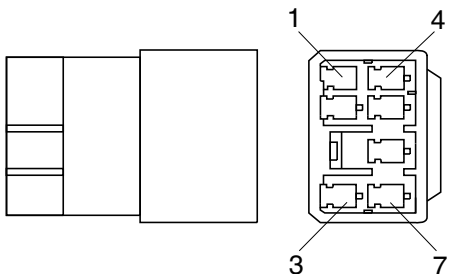
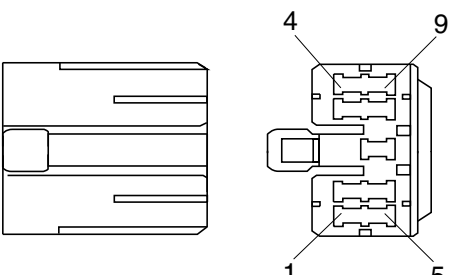
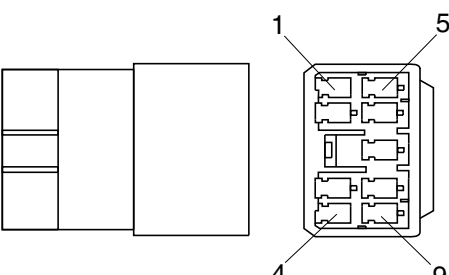
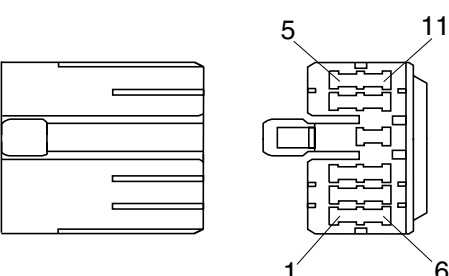
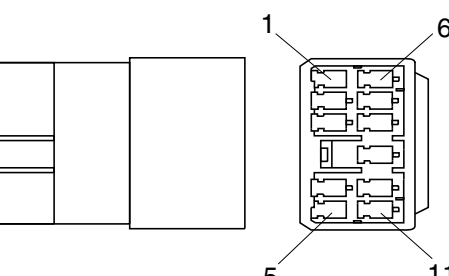
| Connector number | Type      | No. of pin | Destination                             | Connector part No. |              |
|------------------|-----------|------------|-----------------------------------------|--------------------|--------------|
|                  |           |            |                                         | Female             | Male         |
| CN-423           | DEUTSCH   | 4          | Tank header unit                        | DT06-4S            | -            |
| CN-424           | AMP       | 2          | DEF/AdBlue® injector temperature sensor | 2098557-1          | -            |
| CN-425           | AMP       | 2          | SCR temperature sensor                  | 282080-1           | -            |
| CN-426           | AMP       | 2          | DOC temperature sensor                  | 282080-1           | -            |
| CN-427           | MOLEX     | 4          | Reader-RMS                              | 039012040          | 026013096    |
| CN-429           | AMP       | 6          | DEF/AdBlue® ID module sensor            | 776433-3           | -            |
| CN-J7A           | AMP       | 6          | NOx sensor (tail)                       | 776433-2           | -            |
| CN-J7B           | AMP       | 6          | NOx sensor (turbo out)                  | 776433-1           | -            |
| · Relay          |           |            |                                         |                    |              |
| CR-1             | RING-TERM | -          | Battery relay                           | ST710289-2         | -            |
| CR-2             | -         | 5          | Horn relay                              | -                  | -            |
| CR-4             | -         | 5          | Work lamp relay                         | 8JA 003 526-001    | -            |
| CR-5             | -         | 5          | Anti restart relay                      | -                  | -            |
| CR-7             | -         | 5          | Aircon compressor relay                 | -                  | -            |
| CR-9             | -         | 5          | Cabin lamp relay                        | 8JA 003 526-001    | -            |
| CR-13            | -         | 5          | Head lamp relay                         | 8JA 003 526-001    | -            |
| CR-23            | KET       | 2          | Start relay                             | -                  | MG640322     |
| CR-24            | RING TERM | 1          | Preheat relay                           | S822-014000        | -            |
| CR-35            | -         | 5          | Power relay                             | -                  | -            |
| CR-36            | -         | 5          | Preheat relay                           | -                  | -            |
| CR-85            | -         | 5          | Beacon lamp relay                       | 8JA 003 526-001    | -            |
| CR-95            | -         | 5          | Feed pump relay                         | 8JA 003 526-001    | -            |
| CR-101           | -         | 5          | DCU relay                               | 8JA 003 526-001    | -            |
| · Switch         |           |            |                                         |                    |              |
| CS-1             | SHUR      | 1          | Door switch                             | S822-014002        | -            |
| CS-2A            | WP        | 6          | Start key switch                        | S814-006100        | -            |
| CS-2B            | DEUTSCH   | 3          | Start button                            | DT06-3S-EP06       | DT04-3P-E005 |
| CS-4             | AMP       | 3          | Safety switch                           | S816-003002        | -            |
| CS-5             | DEUTSCH   | 2          | Horn switch                             | -                  | DT04-2P-E005 |
| CS-19            | DEUTSCH   | 2          | One touch decel switch                  | -                  | DT04-2P-E005 |
| CS-26            | DEUTSCH   | 2          | Breaker switch                          | DT06-2S-EP06       | -            |
| CS-26A           | AMP       | 2          | Breaker pedal switch                    | S816-002002        | S816-102002  |
| CS-29            | DEUTSCH   | 2          | Power max switch                        | DT06-2S-EP06       | -            |
| CS-33            | AMP       | 6          | Emergency engine stop switch            | S816-006002        | S816-106002  |
| CS-52            | SWF       | 12         | Adjust & dozer switch                   | SWF589790          | -            |
| CS-53            | AMP       | 1          | Wiper cut switch                        | S822-014002        | -            |
| CS-67            | SWF       | 12         | Quick clamp switch                      | SWF589790          | -            |
| CS-73            | SWF       | 12         | Swing lock switch                       | SWF589790          | -            |
| CS-73A           | SWF       | 12         | Swing fine switch                       | SWF589790          | -            |

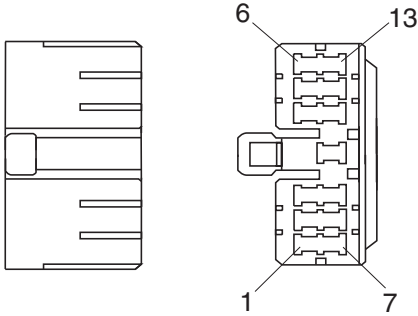
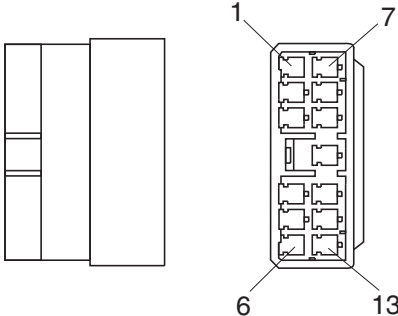
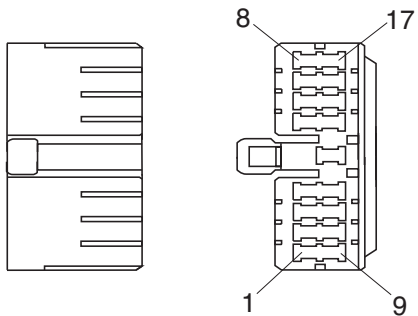
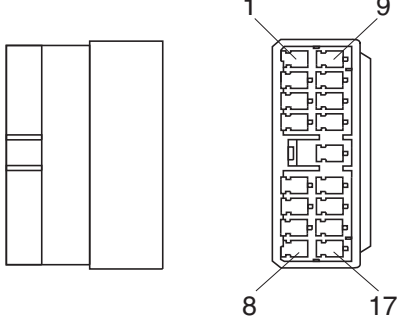
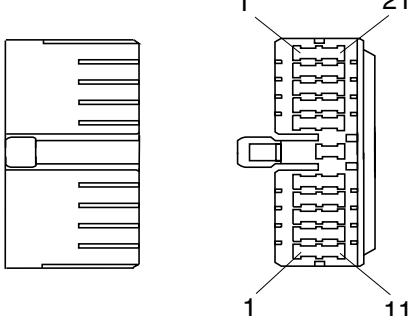
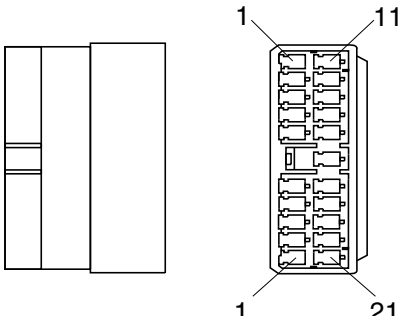
| Connector number | Type    | No. of pin | Destination                | Connector part No. |              |
|------------------|---------|------------|----------------------------|--------------------|--------------|
|                  |         |            |                            | Female             | Male         |
| CS-74A           | AMP     | 2          | Master switch              | S813-030201        | -            |
| CS-74B           | AMP     | 2          | Master switch              | S813-030201        | -            |
| CS-83            | SWF     | 12         | Spare switch               | SWF589790          | -            |
| CS-99            | SWF     | 12         | Air compressor switch      | SWF589790          | -            |
| CS-100           | SWF     | 12         | Spare switch               | SWF589790          | -            |
| CS-107           | SWF     | 12         | Travel straight switch     | SWF589790          | -            |
| CS-111           | SWF     | 12         | Boom floating switch       | SWF589790          | -            |
| · Light          |         |            |                            |                    |              |
| CL-1             | KET     | 3          | Room lamp                  | MG651032           | -            |
| CL-2             | AMP     | 1          | Cigar lighter              | S822-014002        | S822-114002  |
| CL-3             | DEUTSCH | 2          | Head lamp-LH               | DT06-2S-EP06       | -            |
| CL-4             | DEUTSCH | 2          | Head lamp-RH               | DT06-2S-EP06       | -            |
| CL-5             | DEUTSCH | 2          | Work lamp-LH               | DT06-2S-EP06       | -            |
| CL-6             | DEUTSCH | 2          | Work lamp-RH               | DT06-2S-EP06       | -            |
| CL-7             | SHUR    | 1          | Beacon lamp                | S822-014002        | S822-114002  |
| CL-8             | DEUTSCH | 2          | Cab light-LH               | DT06-2S-EP06       | DT04-2P      |
| CL-9             | DEUTSCH | 2          | Cab light-RH               | DT06-2S-EP06       | DT04-2P      |
| CL-10            | DEUTSCH | 2          | Cab light-rear             | DT06-2S-EP06       | DT04-2P      |
| CL-40            | DEUTSCH | 2          | DEF/AdBlue® purging lamp   | DT06-2S-EP06       | DT04-2P      |
| CL-41            | AMP     | 1          | DEF/AdBlue® F/warning lamp | S822-010400        | S822-101400  |
| · Sensor, sensor |         |            |                            |                    |              |
| 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            | AMP     | 2          | Air cleaner switch         | 85202-1            | -            |
| CD-16            | DELPHI  | 3          | Water level sensor         | 12110293           | -            |
| CD-24            | DEUTSCH | 3          | Swing pressure sensor      | DT06-3S-EP06       | -            |
| CD-31            | DEUTSCH | 3          | Overload pressure sensor   | DT06-3S-EP06       | DT04-3P-E004 |
| CD-32            | DEUTSCH | 3          | Boom up pressure sensor    | DT06-3S-EP06       | -            |
| CD-35            | DEUTSCH | 3          | Arm in/out pressure sensor | DT06-3S-EP06       | -            |
| CD-42            | DEUTSCH | 3          | Pump pressure sensor 1     | DT06-3S-EP06       | -            |
| CD-43            | DEUTSCH | 3          | Pump pressure sensor 2     | DT06-3S-EP06       | -            |
| CD-44            | DEUTSCH | 3          | Pump pressure sensor 3     | DT06-3S-EP06       | -            |
| CD-45            | AMP     | 3          | WIF sensor                 | 776429-3           | -            |
| CD-50            | KET     | 2          | Dozer pressure sensor      | MG640795           | -            |
| CD-69            | DEUTSCH | 3          | Attach pressure sensor     | DT06-3S-EP06       | -            |
| CD-70            | DEUTSCH | 3          | N1 pressure sensor         | DT06-3S-EP06       | -            |

| Connector number | Type    | No. of pin | Destination                        | Connector part No. |      |
|------------------|---------|------------|------------------------------------|--------------------|------|
|                  |         |            |                                    | Female             | Male |
| CD-71            | DEUTSCH | 3          | N2 pressure sensor                 | DT06-3S-EP06       | -    |
| CD-85            | DEUTSCH | 3          | Boom down sensor                   | DT06-3S-EP06       | -    |
| CD-86            | DEUTSCH | 3          | Arm out pressure sensor            | DT06-3S-E005       | -    |
| CD-87            | DEUTSCH | 3          | Bucket out pressure sensor         | DT06-3S-E005       | -    |
| CD-90            | DEUTSCH | 3          | Arm in pressure sensor             | DT06-3S-EP06       | -    |
| CD-91            | DEUTSCH | 3          | Bucket in pressure sensor          | DT06-3S-E005       | -    |
| CD-98            | AMP     | 2          | Air inlet temperature sensor       | 776427-1           | -    |
| CD-98A           | AMP     | 2          | Air intake temperature sensor      | 776427-1           | -    |
| CD-124           | DEUTSCH | 3          | Boom cylinder rod pressure snensor | DT06-3S-E005       | -    |

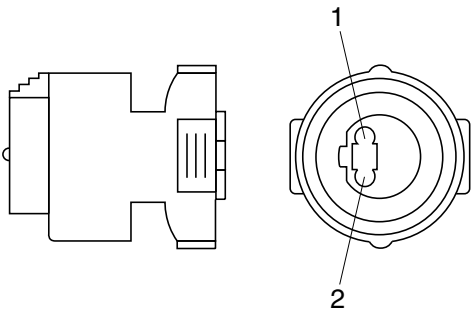
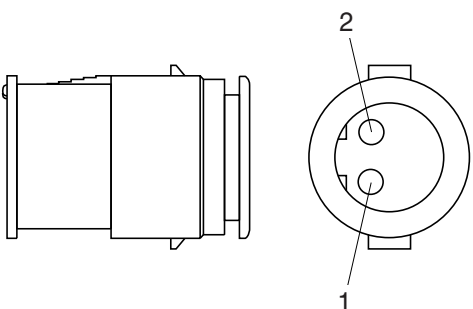
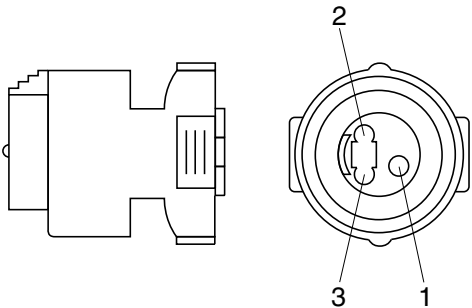
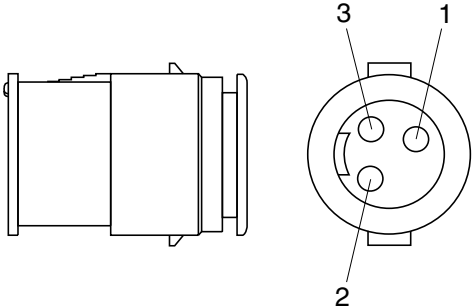
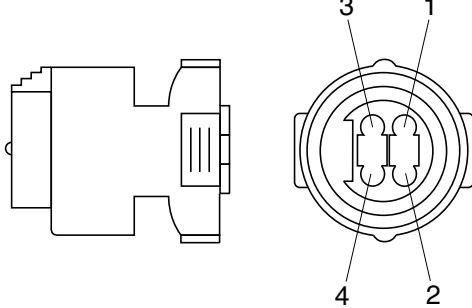
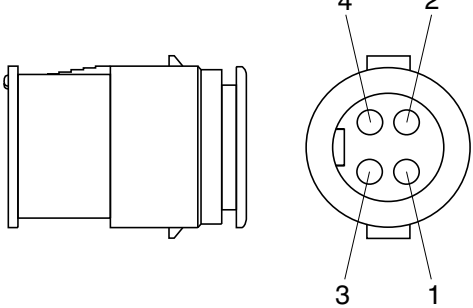
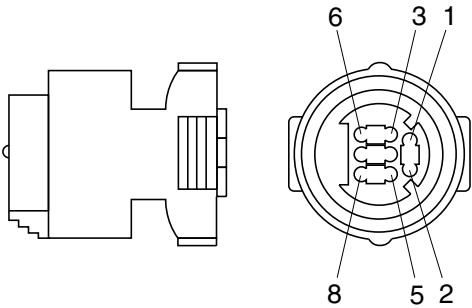
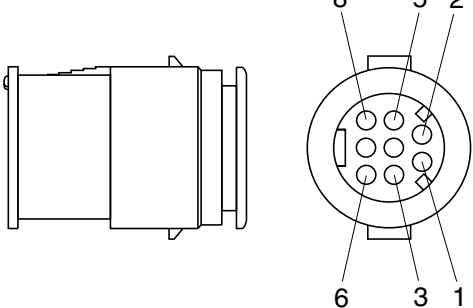
## 2. CONNECTION TABLE FOR CONNECTORS

### 1) PA TYPE CONNECTOR

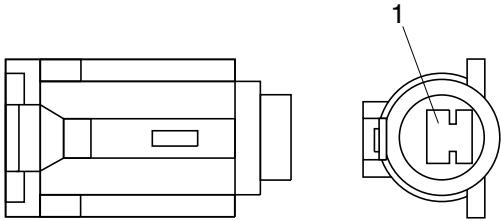
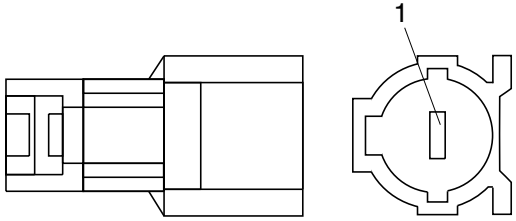
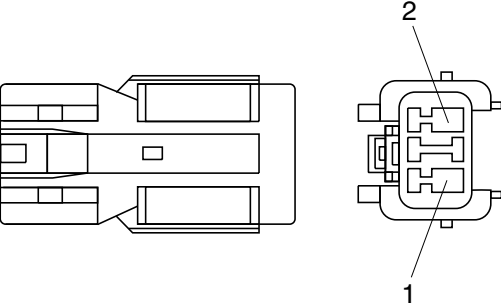
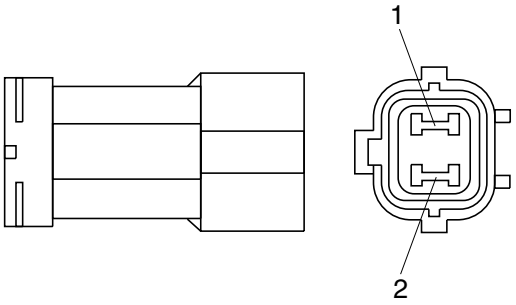
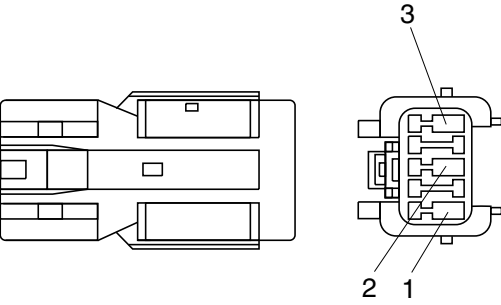
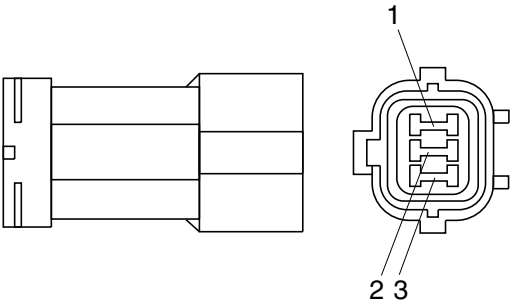
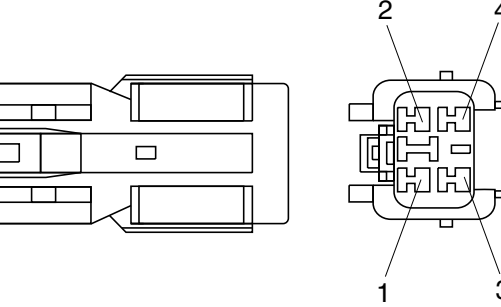
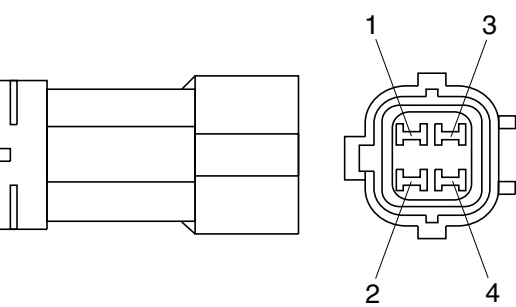
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                    |
|------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 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>  |

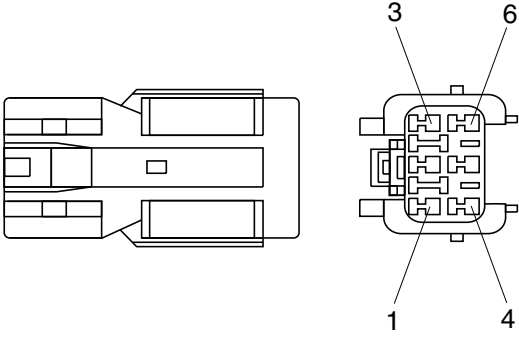
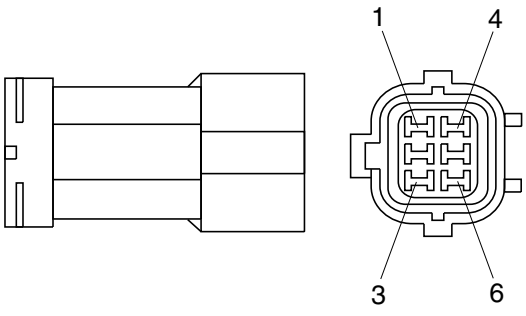
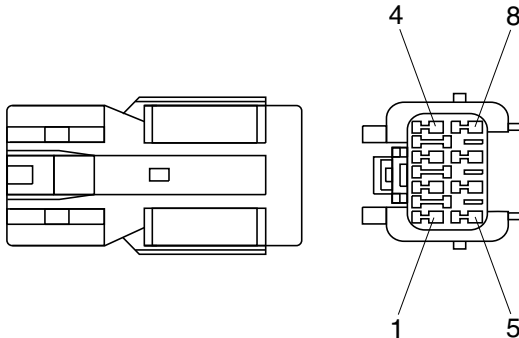
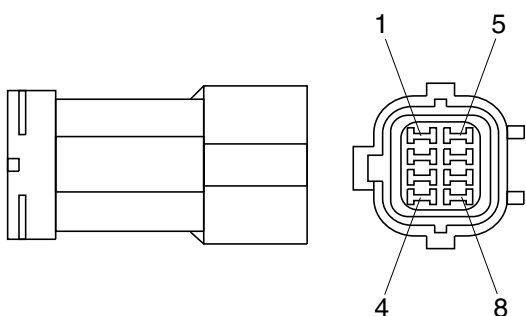
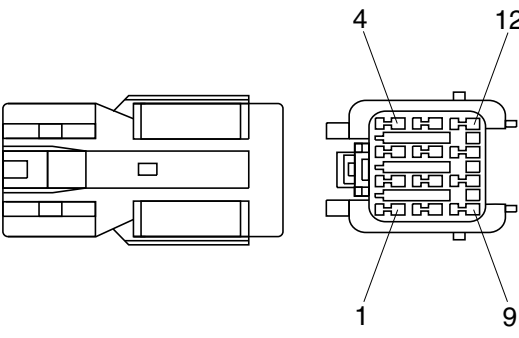
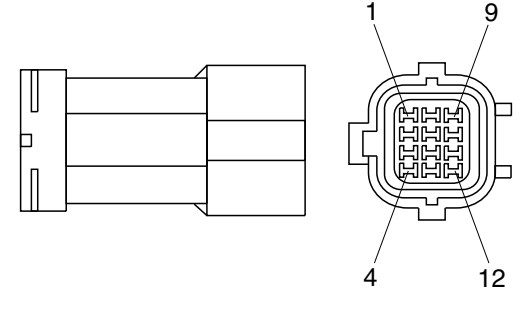
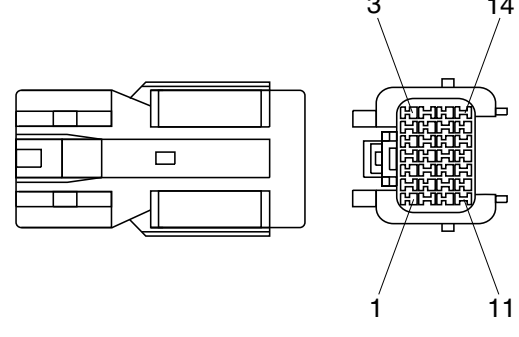
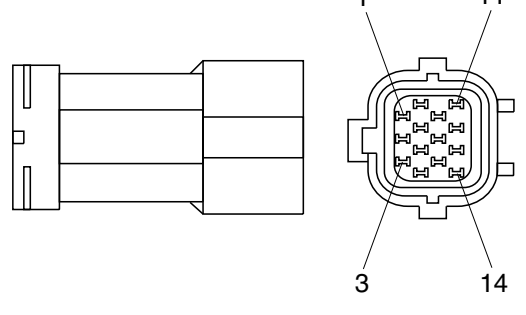
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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

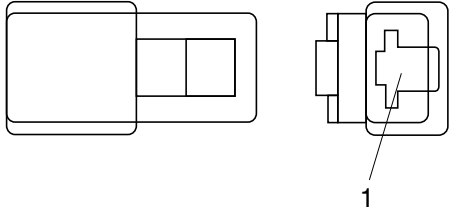
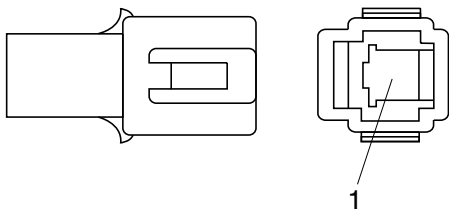
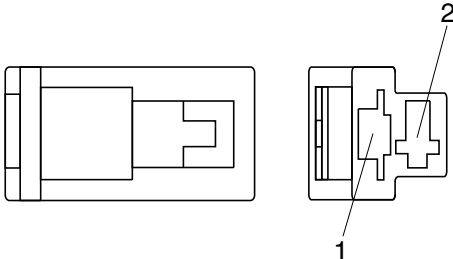
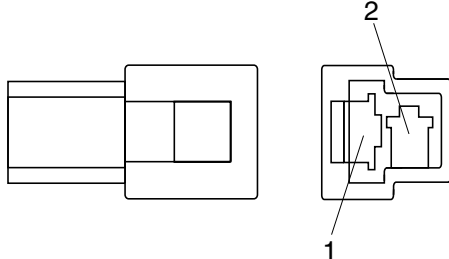
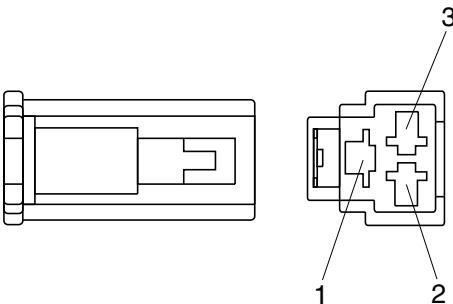
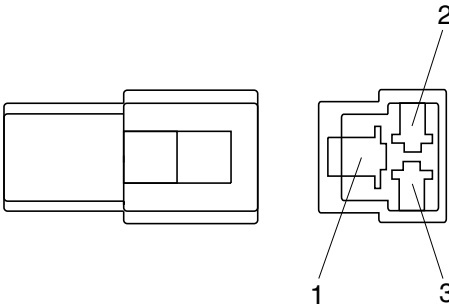
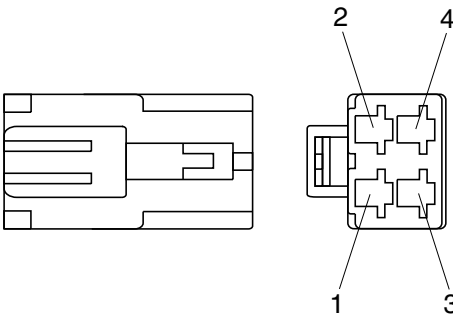
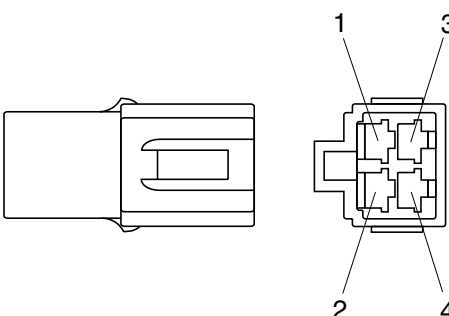
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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> |

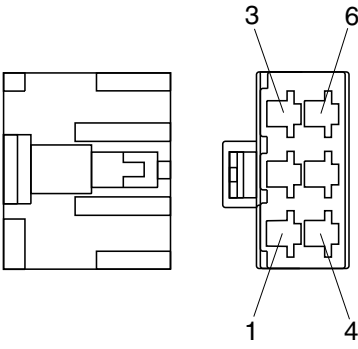
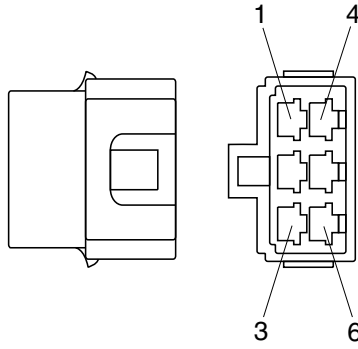
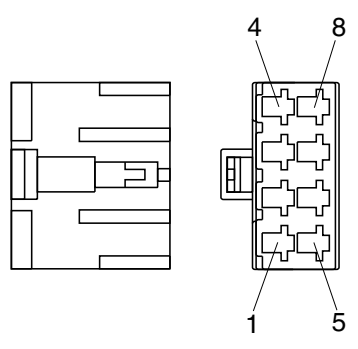
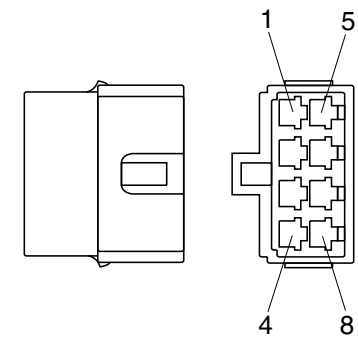
### 3) SWP TYPE CONNECTOR

| 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> |

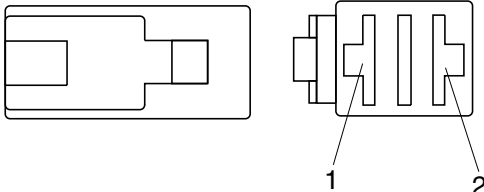
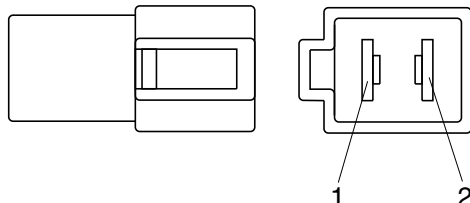
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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

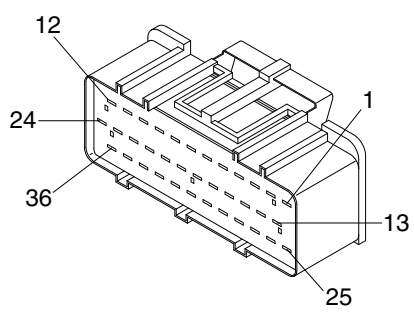
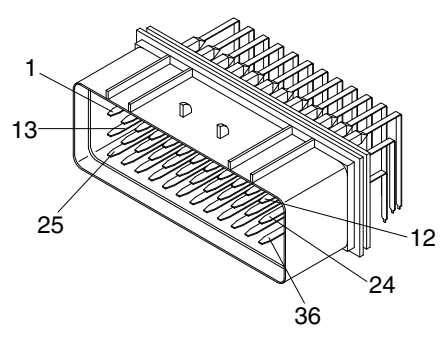
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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 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> |

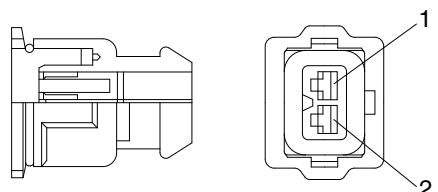
### 5) 375 FASTEN TYPE CONNECTOR

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

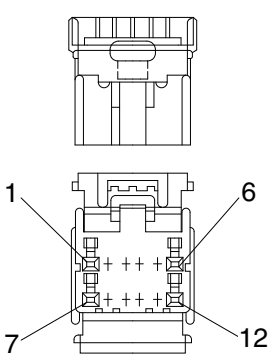
### 6) AMP ECONOSEAL CONNECTOR

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

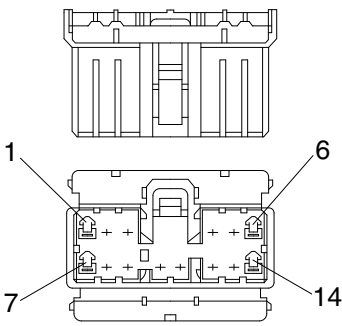
### 7) AMP TIMER CONNECTOR

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

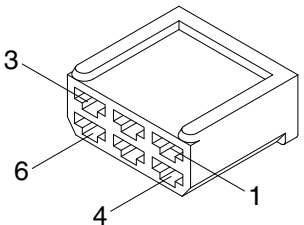
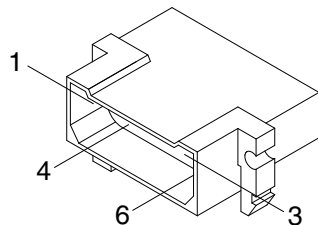
### 8) AMP 040 MULTILOCK CONNECTOR

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

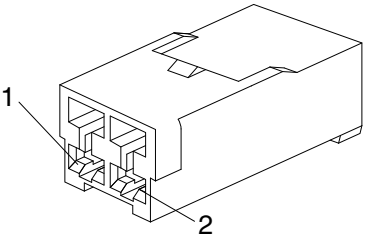
### 9) AMP 070 MULTILOCK CONNECTOR

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

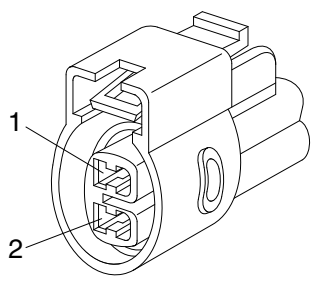
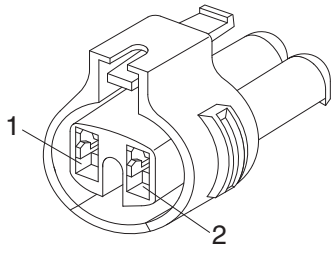
### 10) AMP FASTIN - FASTON CONNECTOR

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

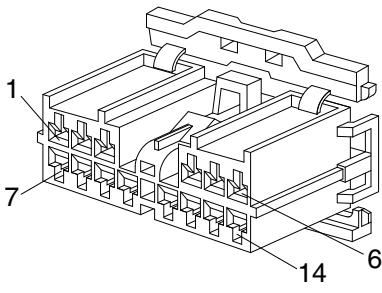
### 11) KET 090 CONNECTOR

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

### 12) KET 090 WP CONNECTORS

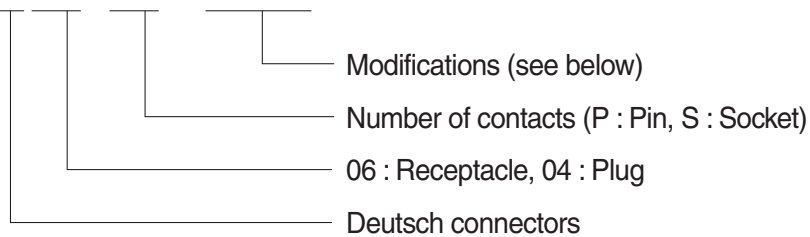
| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male) |
|------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| 2          |  <p>MG640605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

### 13) KET SDL CONNECTOR

| No. of pin | Receptacle connector (female)                                                                                                 | Plug connector (male) |
|------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 14         |  <p data-bbox="710 672 837 705">MG610406</p> |                       |

## 14) DEUTSCH DT CONNECTORS

DT 06 - 3S - ★★☆☆



### ※ Modification

E003 : Standard end cap - gray

E004 : Color of connector to be black

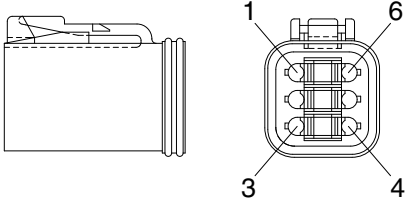
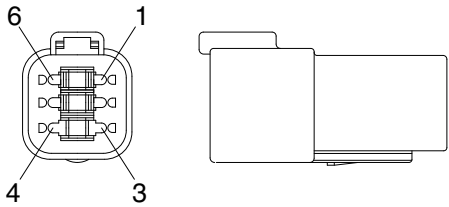
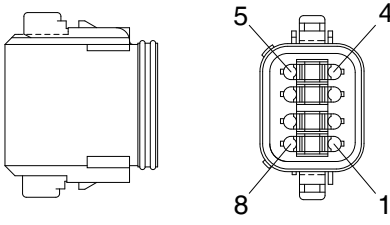
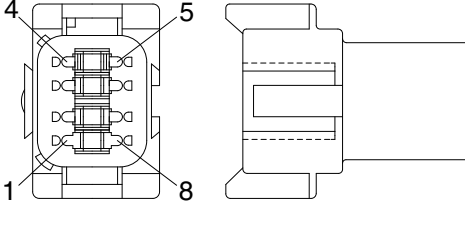
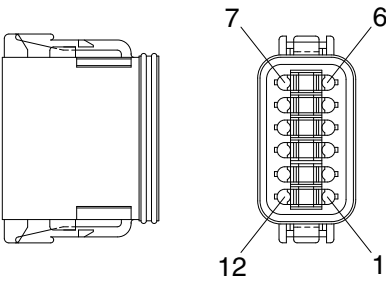
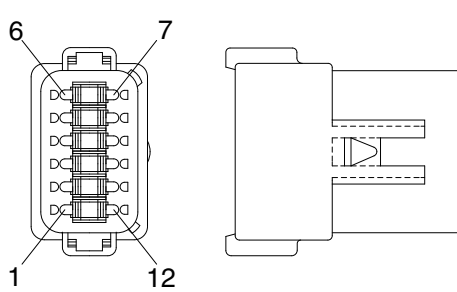
E005 : Combination - E004 & E003

EP04 : End cap

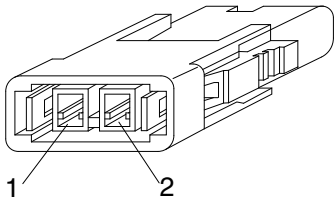
EP06 : Combination P012 & EP04

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

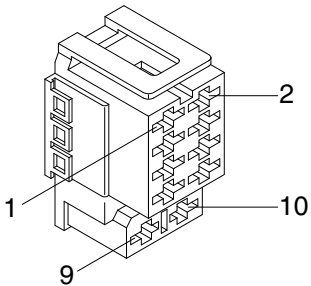
| No. of pin | Receptacle connector (female) | Plug connector (male) |
|------------|-------------------------------|-----------------------|
| 2          | <p>DT06-2S</p>                | <p>DT04-2P</p>        |
| 3          | <p>DT06-3S</p>                | <p>DT04-3P</p>        |
| 4          | <p>DT06-4S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

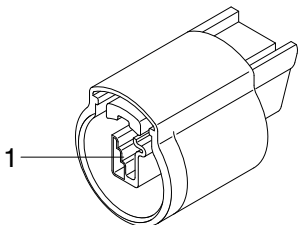
### 15) MOLEX 2CKTS CONNECTOR

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

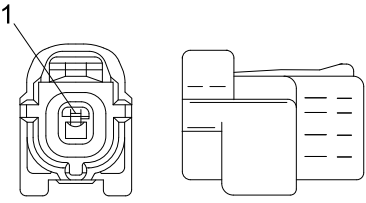
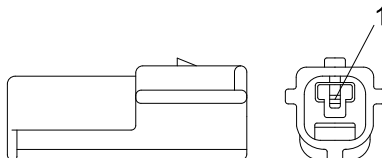
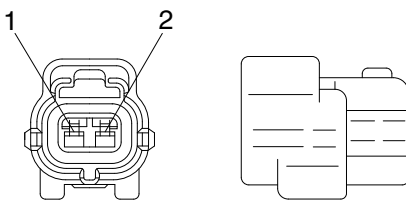
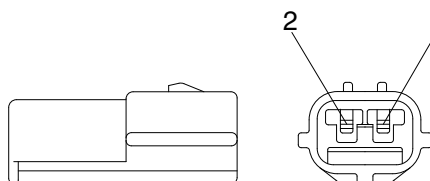
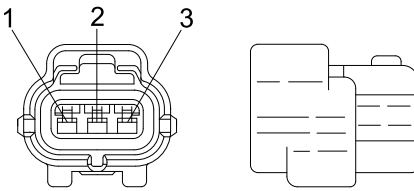
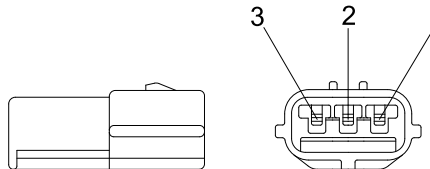
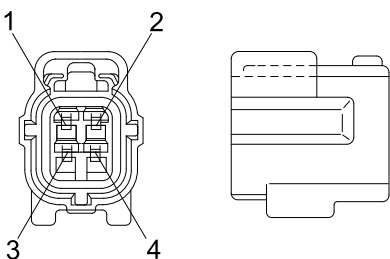
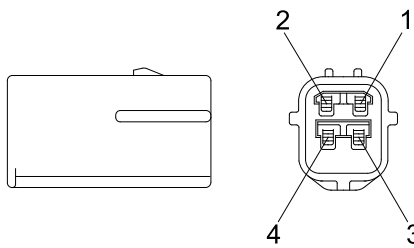
### 16) ITT SWF CONNECTOR

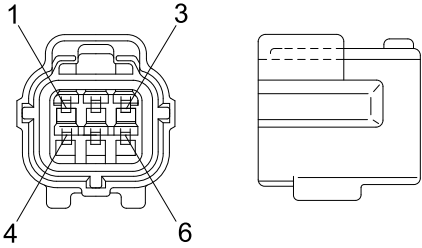
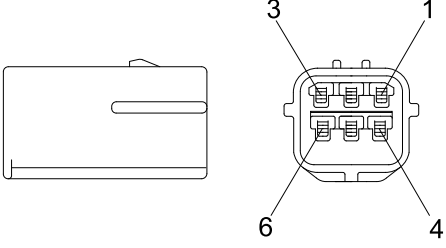
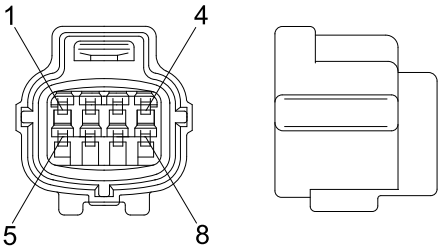
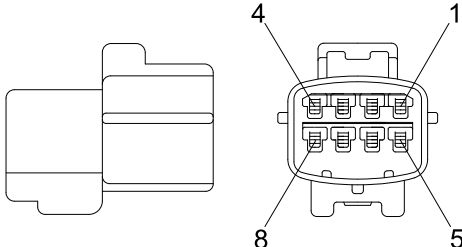
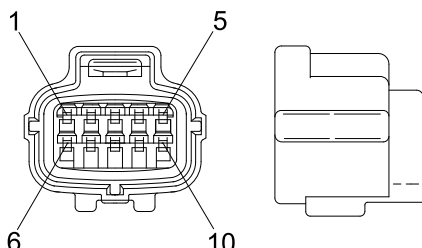
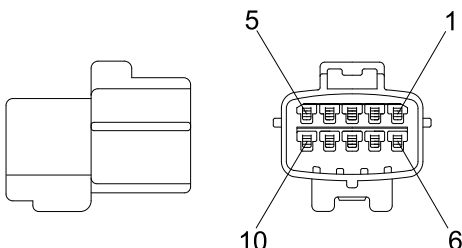
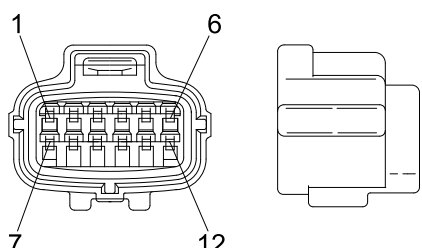
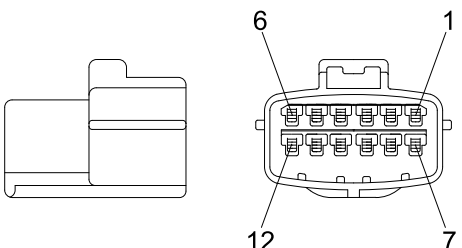
| No. of pin | Receptacle connector (female)                                                                       | Plug connector (male) |
|------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| 10         |  <p>SWF593757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

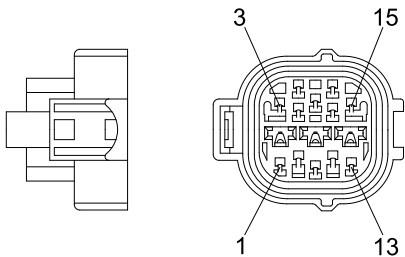
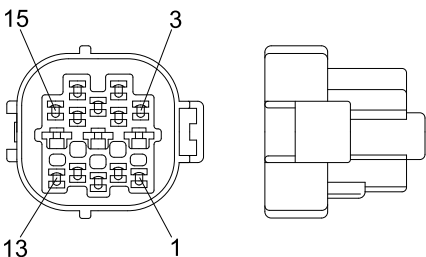
### 17) MWP NMWP CONNECTOR

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

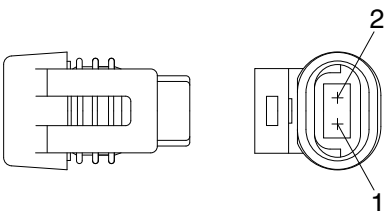
## 18) ECONOSEAL J TYPE CONNECTORS

| No. of pin | Receptacle connector (female)                                                                                                        | Plug connector (male)                                                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1          |  <p data-bbox="686 683 837 712">S816-001002</p>     |  <p data-bbox="1236 683 1388 712">S816-101002</p>     |
| 2          |  <p data-bbox="686 1086 837 1115">S816-002002</p>  |  <p data-bbox="1236 1086 1388 1115">S816-102002</p>  |
| 3          |  <p data-bbox="686 1489 837 1518">S816-003002</p> |  <p data-bbox="1236 1489 1388 1518">S816-103002</p> |
| 4          |  <p data-bbox="686 1892 837 1921">S816-004002</p> |  <p data-bbox="1236 1892 1388 1921">S816-104002</p> |

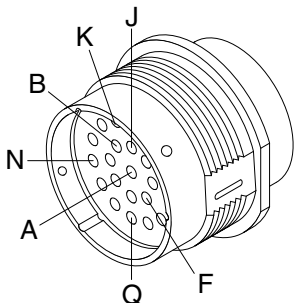
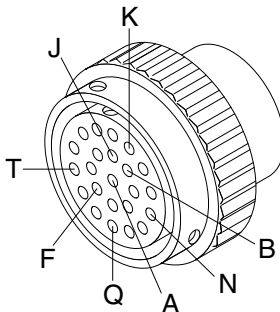
| No. of pin | Receptacle connector (female)                                                                          | Plug connector (male)                                                                                   |
|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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> |

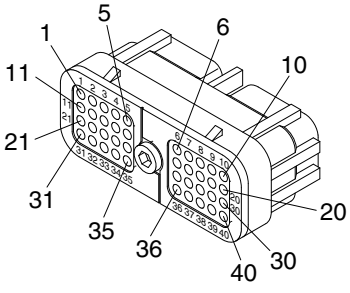
### 19) METRI-PACK TYPE CONNECTOR

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

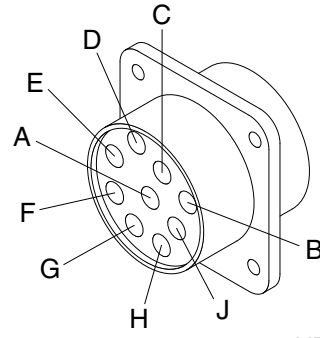
### 20) DEUTSCH HD30 CONNECTOR

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

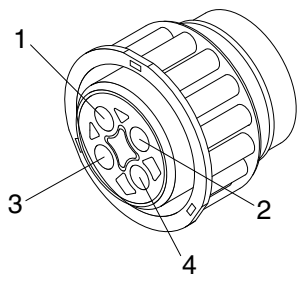
## 21) DEUTSCH MCU CONNECTOR

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

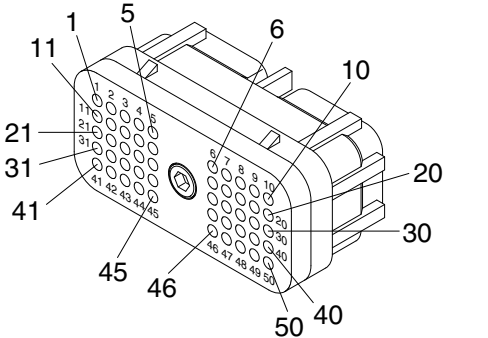
## 22) DEUTSCH SERVICE TOOL CONNECTOR

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

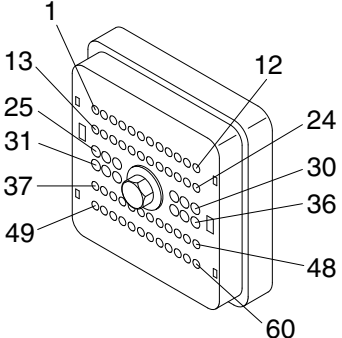
## 23) AMP FUEL WARMER CONNECTOR

| 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> |                       |