

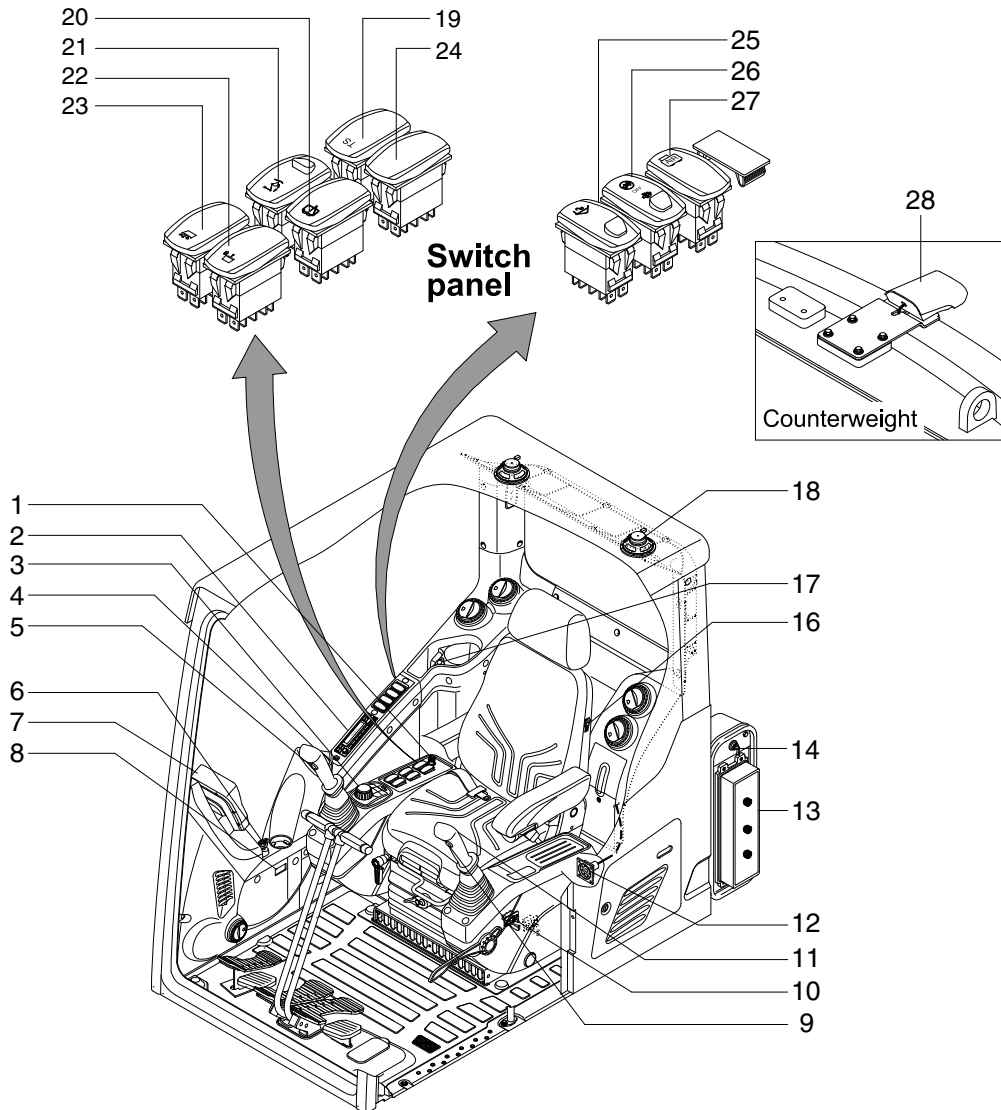
## SECTION 4 ELECTRICAL SYSTEM

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# SECTION 4 ELECTRICAL SYSTEM

## GROUP 1 COMPONENT LOCATION

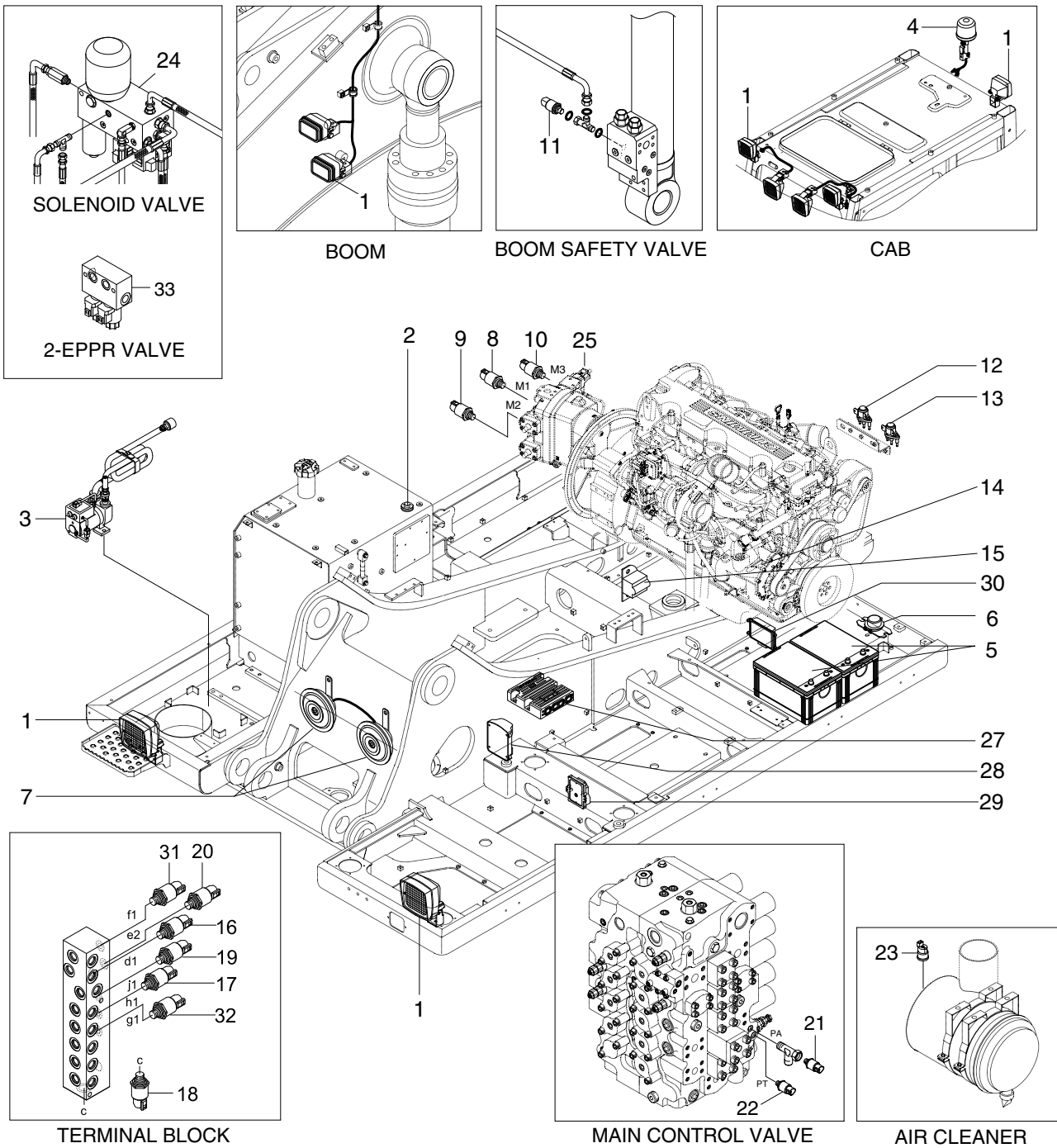
### 1. LOCATION 1



480A4EL01

- |                            |                                 |                                   |
|----------------------------|---------------------------------|-----------------------------------|
| 1 Cigar lighter            | 10 Emergency engine stop switch | 20 Lower wiper & washer switch    |
| 2 Radio & USB player       | 11 One touch decel switch       | 21 Boom floating switch           |
| 3 Jod dial module          | 12 RS232 & J1939 service socket | 22 Swing lock switch              |
| 4 Horn switch              | 13 Fuse & relay box             | 23 Free/fine swing switch         |
| 5 Cluster                  | 14 Master switch                | 24 Option attach switch (opt)     |
| 6 Breaker operation switch | 16 Seat heater switch           | 25 Quick clamp switch             |
| 7 Starting switch          | 17 Service socket               | 26 Exhaust system cleaning switch |
| 8 Service meter            | 18 Speaker                      | 27 Air compressor switch          |
| 9 Power max switch         | 19 Travel straight switch       | 28 Rear view camera               |

## 2. LOCATION 2

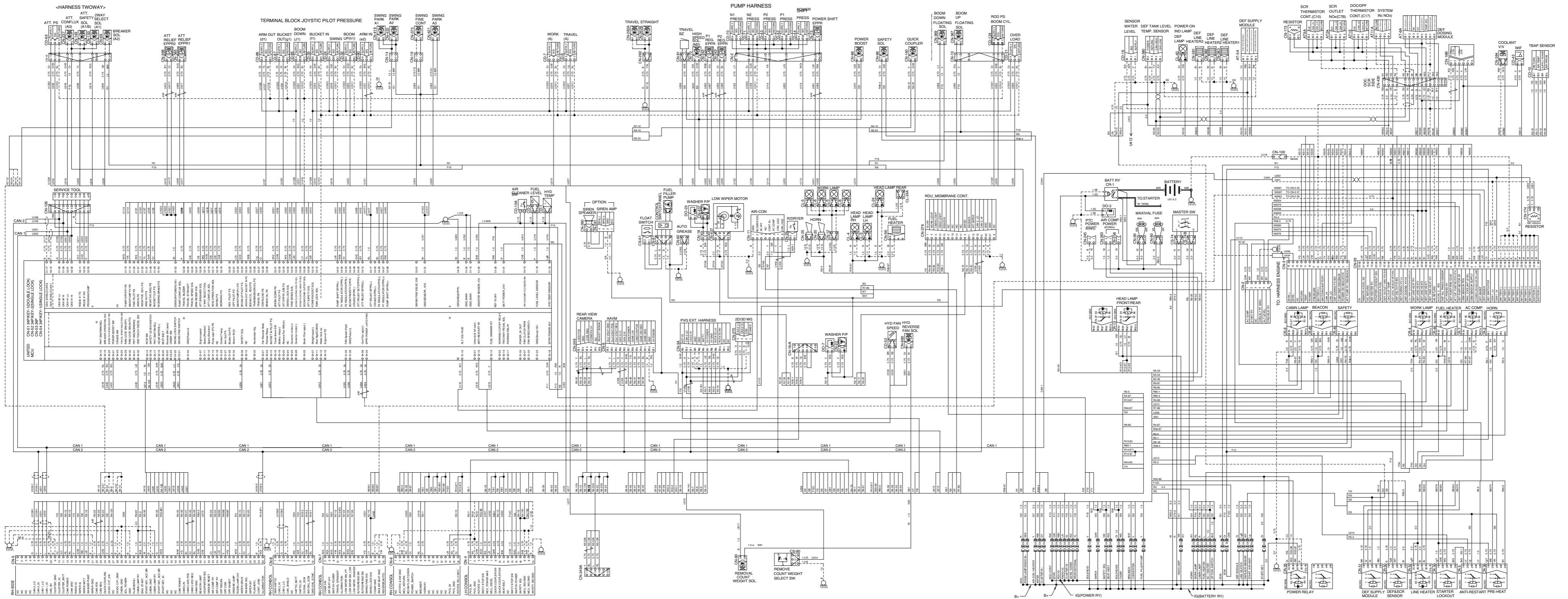


480A4EL02

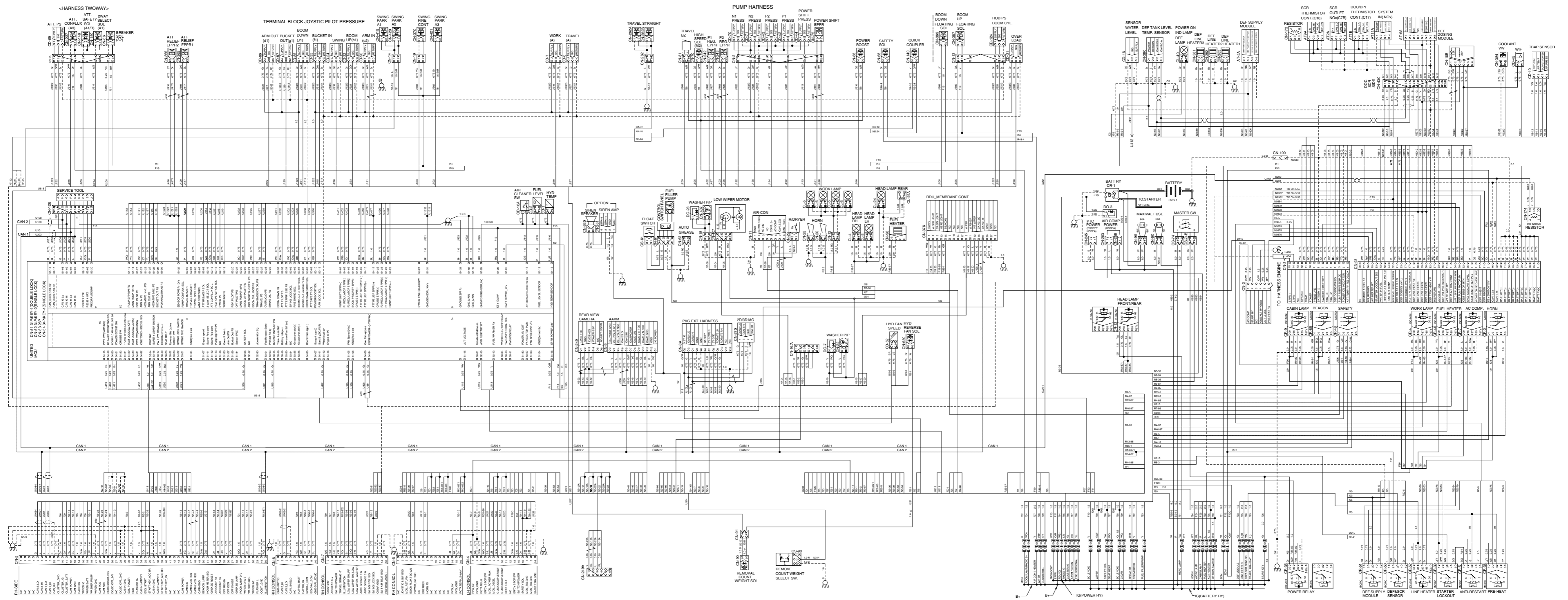
- |                             |                              |                               |
|-----------------------------|------------------------------|-------------------------------|
| 1 Lamp                      | 12 Start relay               | 23 Air cleaner sensor         |
| 2 Fuel sender               | 13 Heater relay              | 24 4 cartridge valve          |
| 3 Fuel filler pump          | 14 Alternator                | 25 Pump EPPR valve            |
| 4 Beacon lamp               | 15 Travel alarm buzzer       | 27 United MCU                 |
| 5 Battery                   | 16 Arm in pressure sensor    | 28 RMCU assy                  |
| 6 Battery relay             | 17 Boom up pressure sensor   | 29 RDU assy                   |
| 7 Horn                      | 18 Swing pressure sensor     | 30 View controller            |
| 8 A1 pump pressure sensor   | 19 Boom down pressure sensor | 31 Bucket in pressure sensor  |
| 9 A2 pump pressure sensor   | 20 Arm out pressure sensor   | 32 Bucket out pressure sensor |
| 10 EPPR pressure sensor     | 21 Attach pressure sensor    | 33 2 EPPR cartridge valve     |
| 11 Overload pressure sensor | 22 Travel pressure sensor    |                               |

GROUP 2 ELECTRICAL CIRCUIT

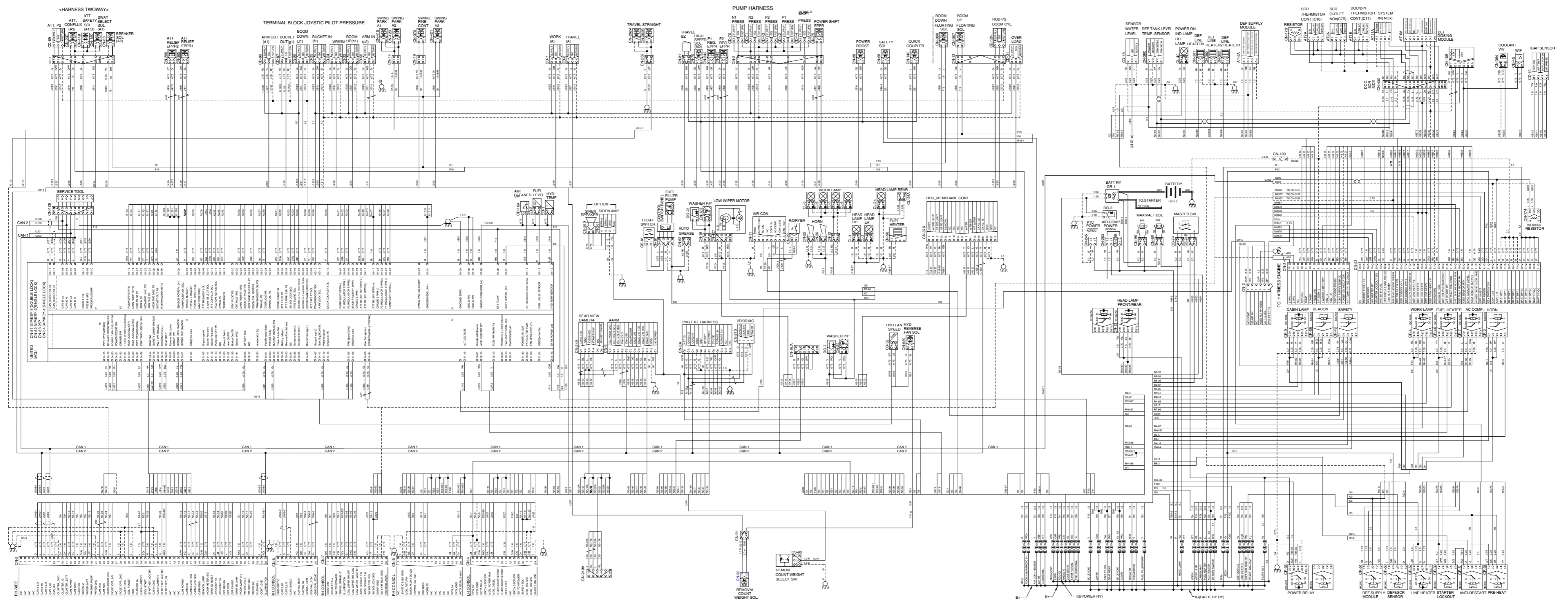
- ELECTRICAL CIRCUIT (1/3)
- MACHINE SERIAL NO.  
HX480A L : -#0002  
HX520A L : -#0002



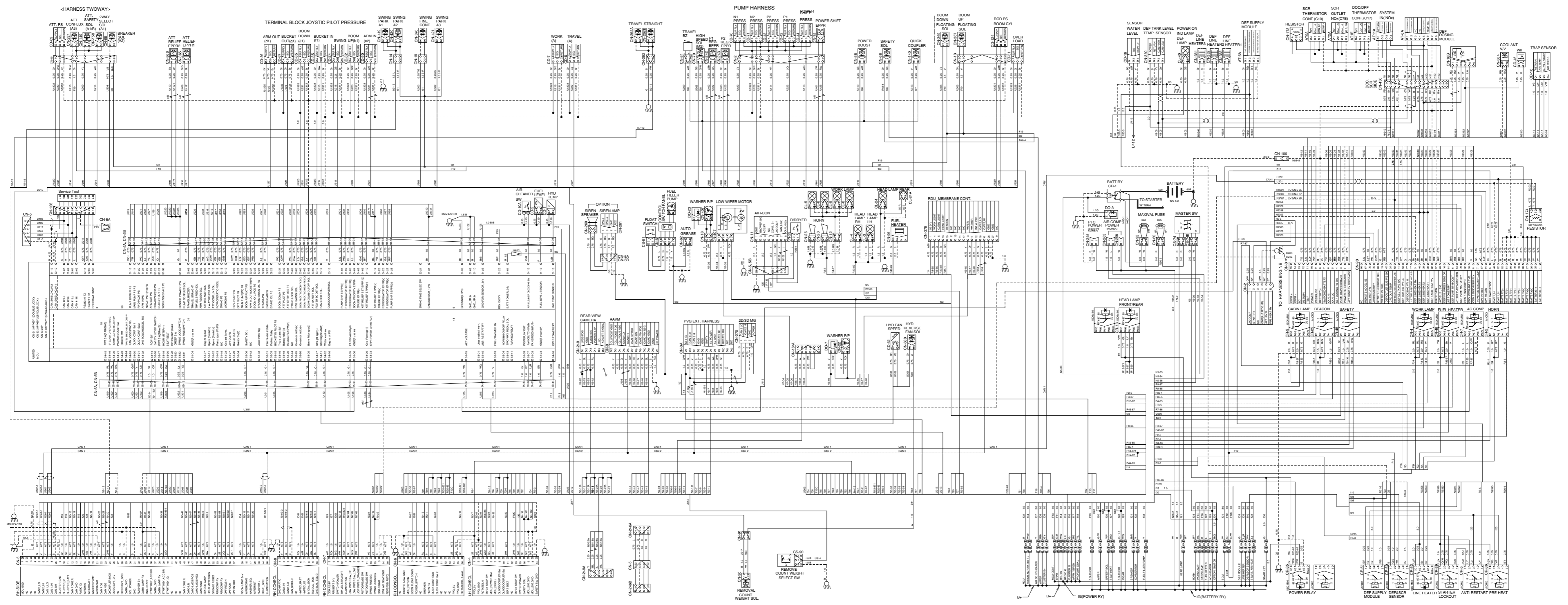
- MACHINE SERIAL NO.  
HX480A L : #003-#0061  
HX520A L : #003-#0099



- MACHINE SERIAL NO.  
HX480A L : #0062-#0107  
HX520A L : #0100-#0173

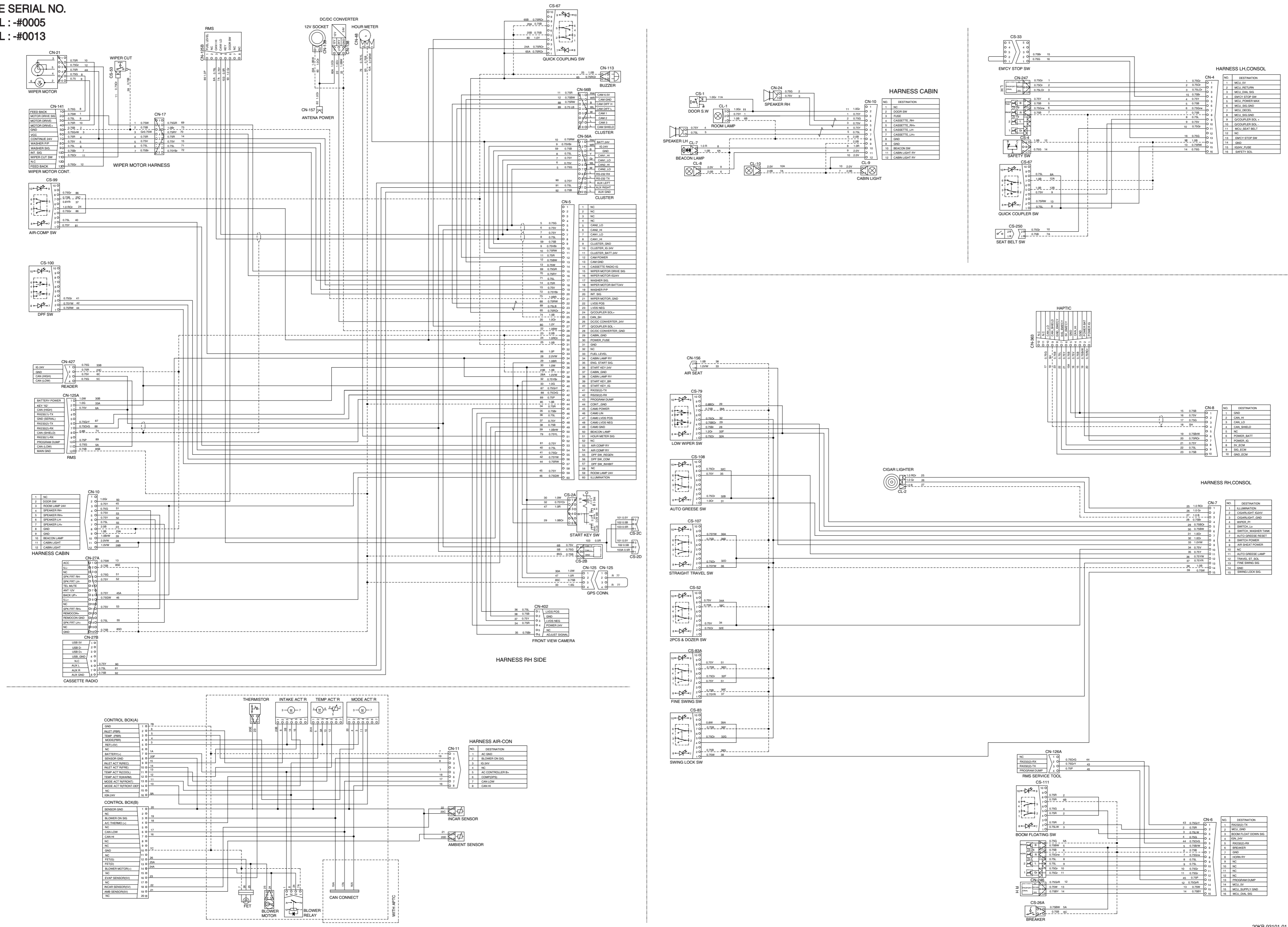


- MACHINE SERIAL NO.  
HX480A L : #0108-  
HX520A L : #0174-



ELECTRICAL CIRCUIT (2/3)

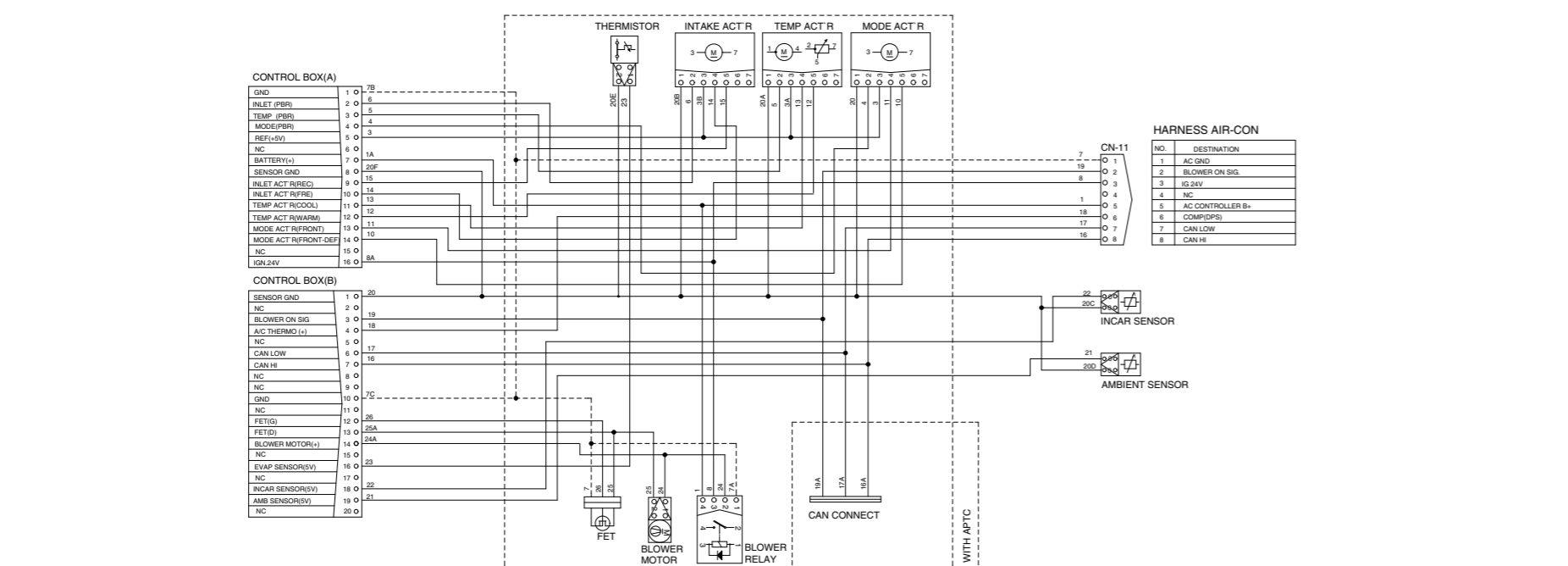
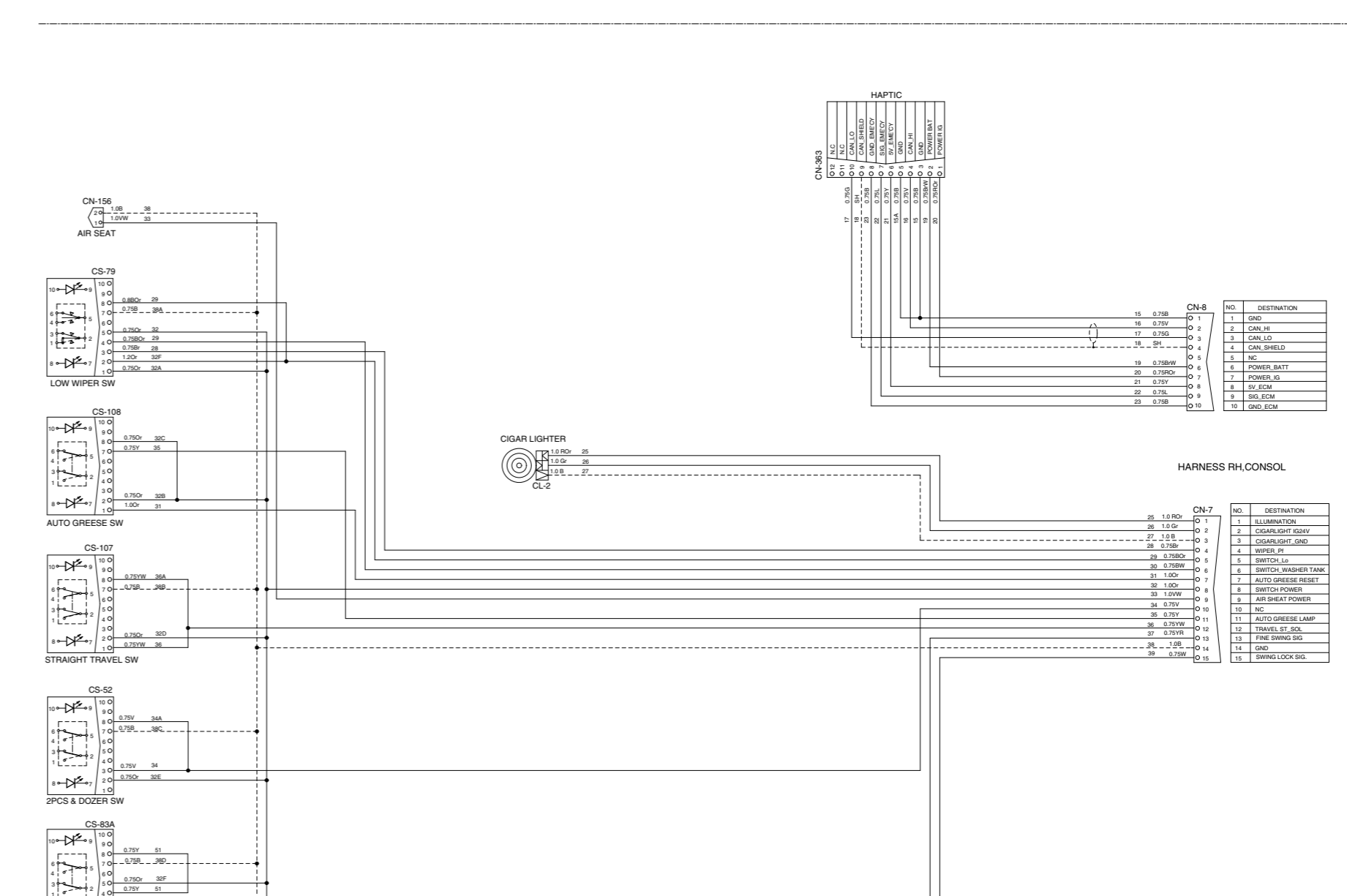
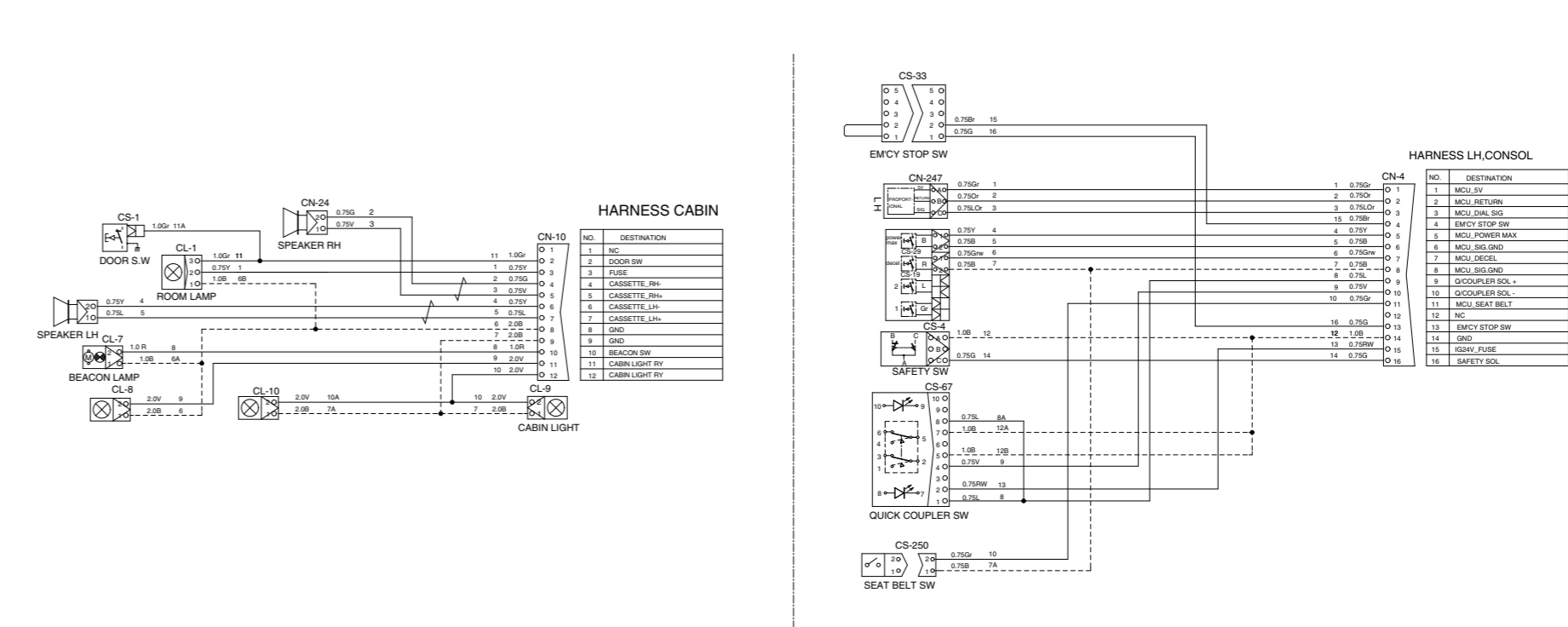
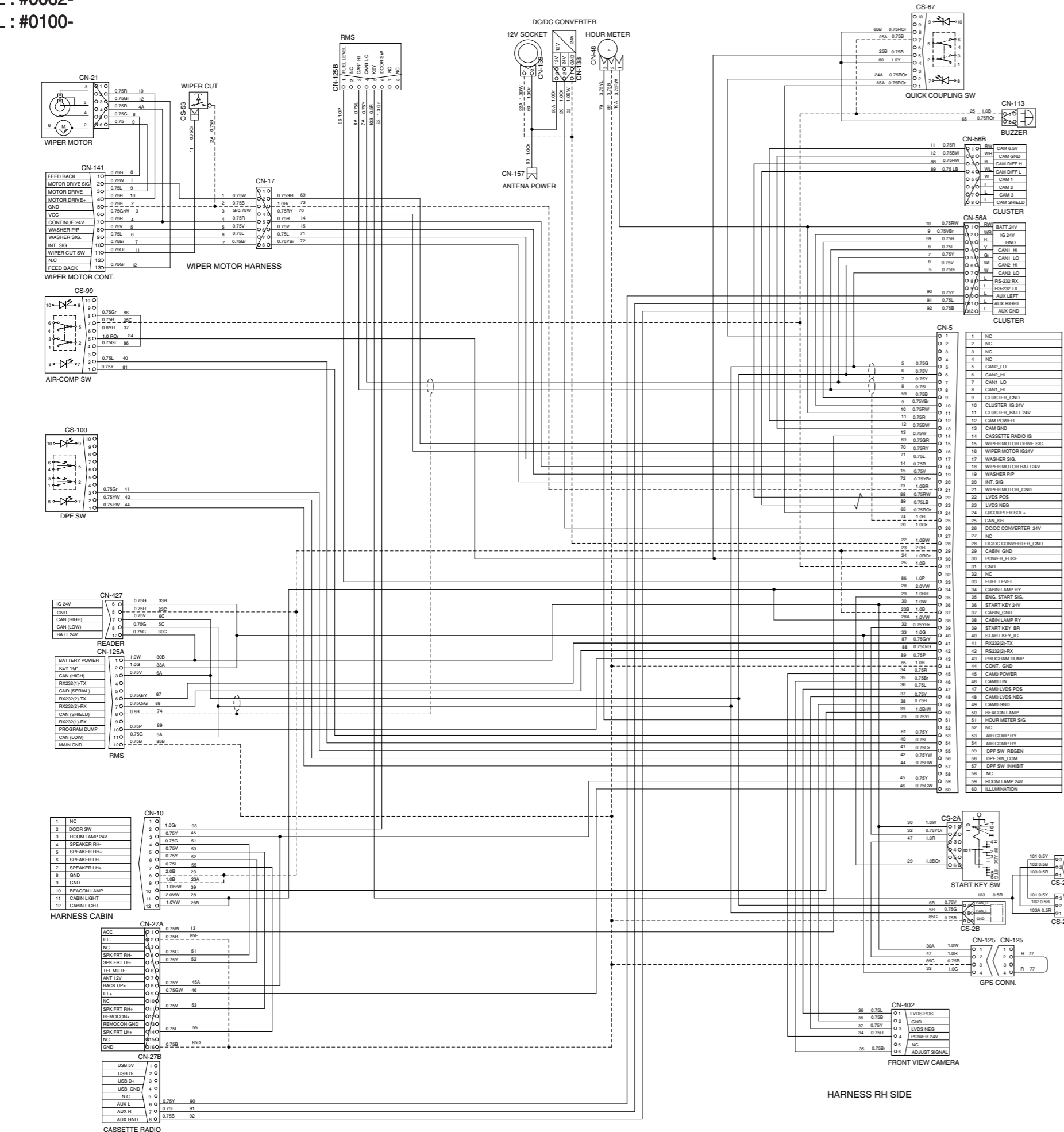
- MACHINE SERIAL NO.  
HX480A L : -#0005  
HX520A L : -#0013





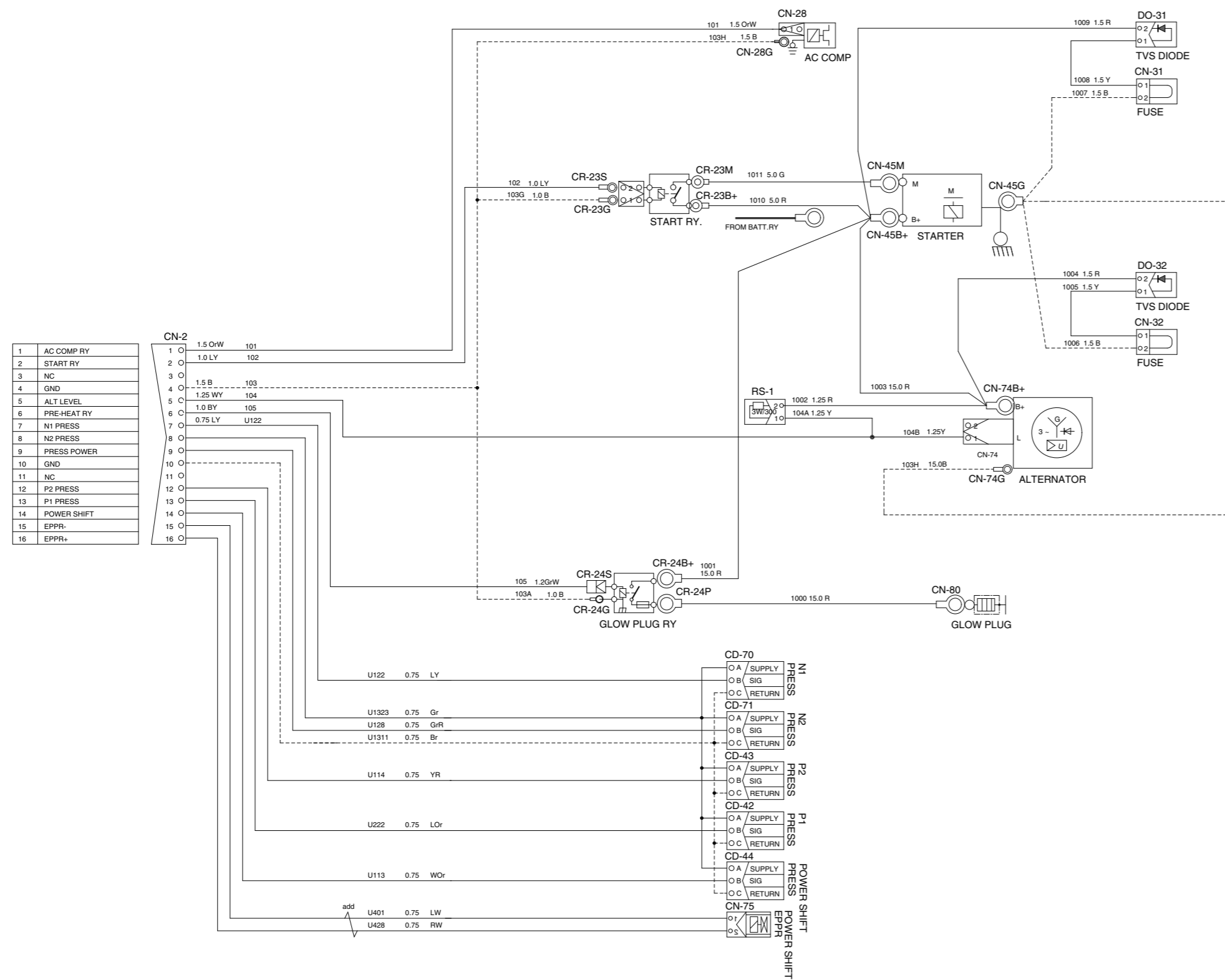
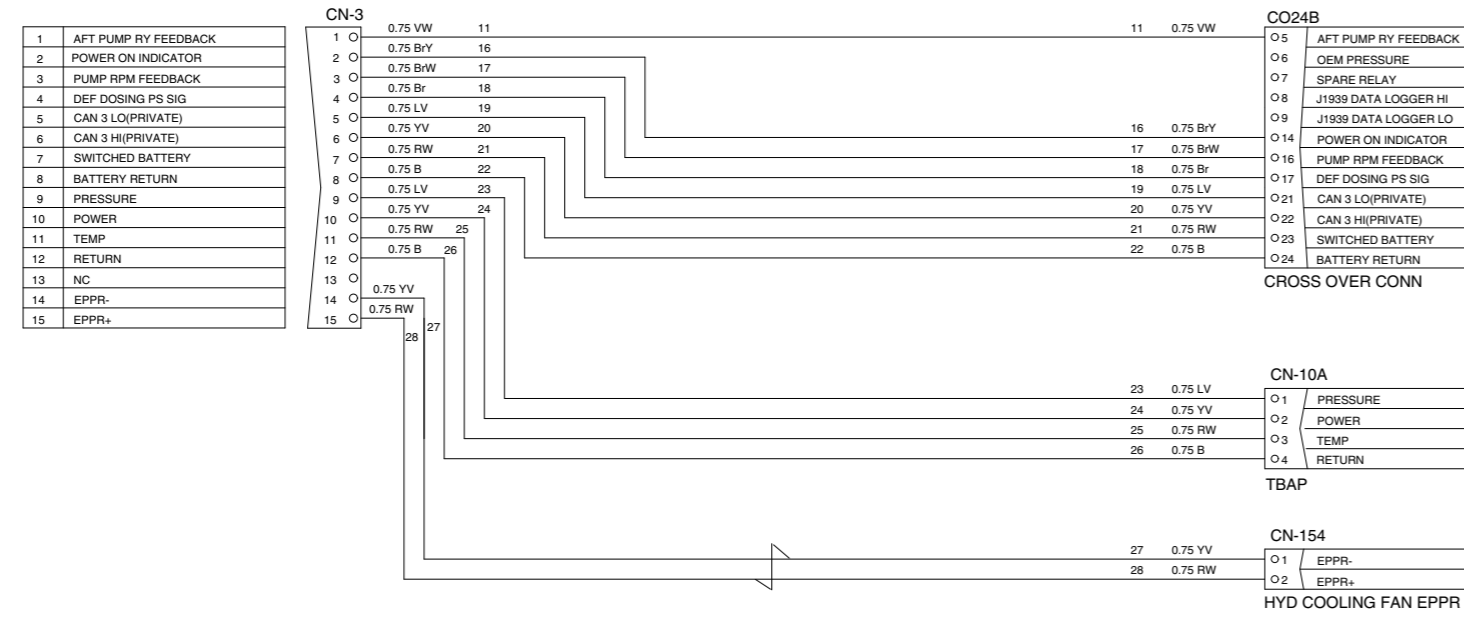


- MACHINE SERIAL NO.  
HX480A L : #0062-  
HX520A L : #0100-

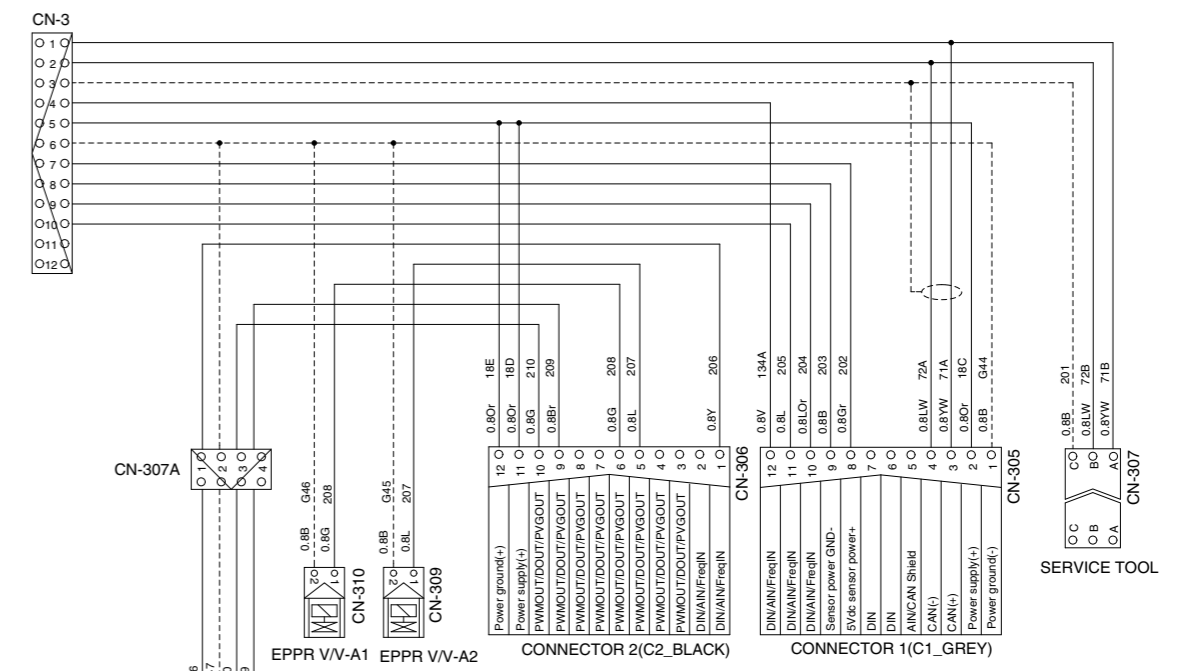




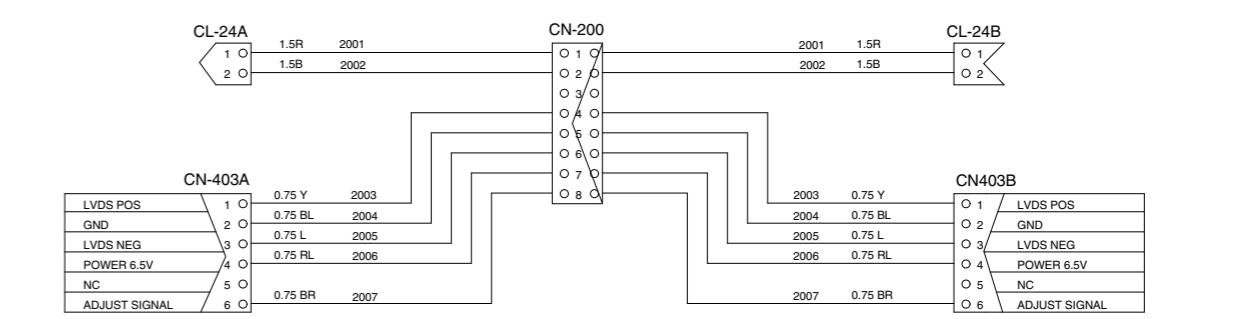
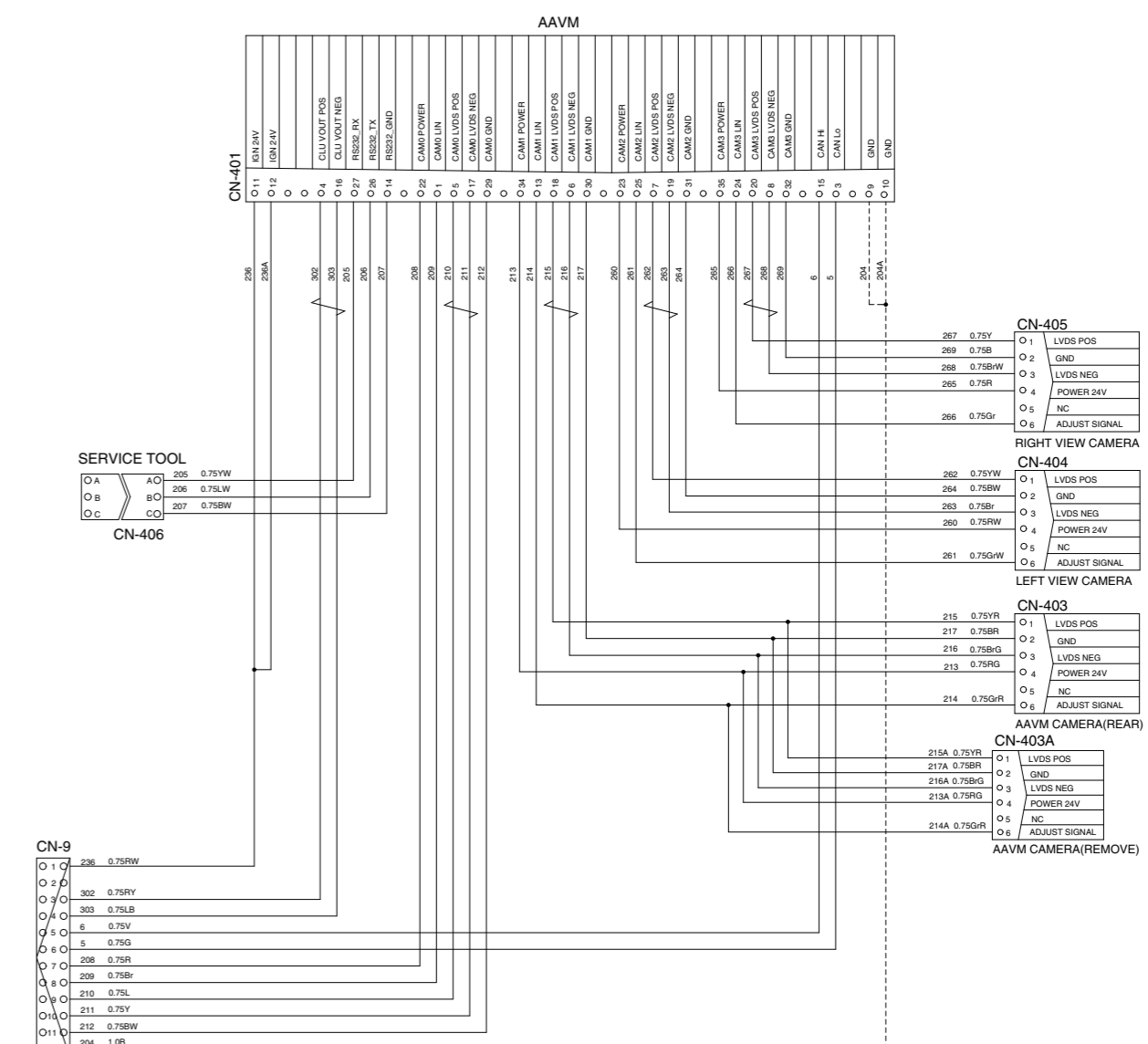
- MACHINE SERIAL NO.  
HX480A L : #0003-#0038  
HX520A L : #0003-#0072



ENGINE HARNESS

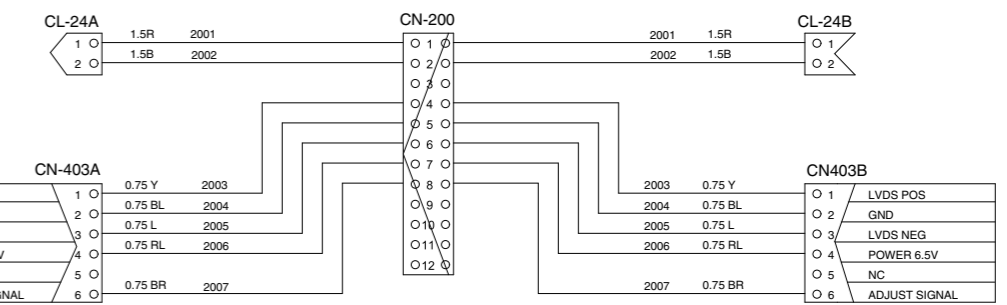
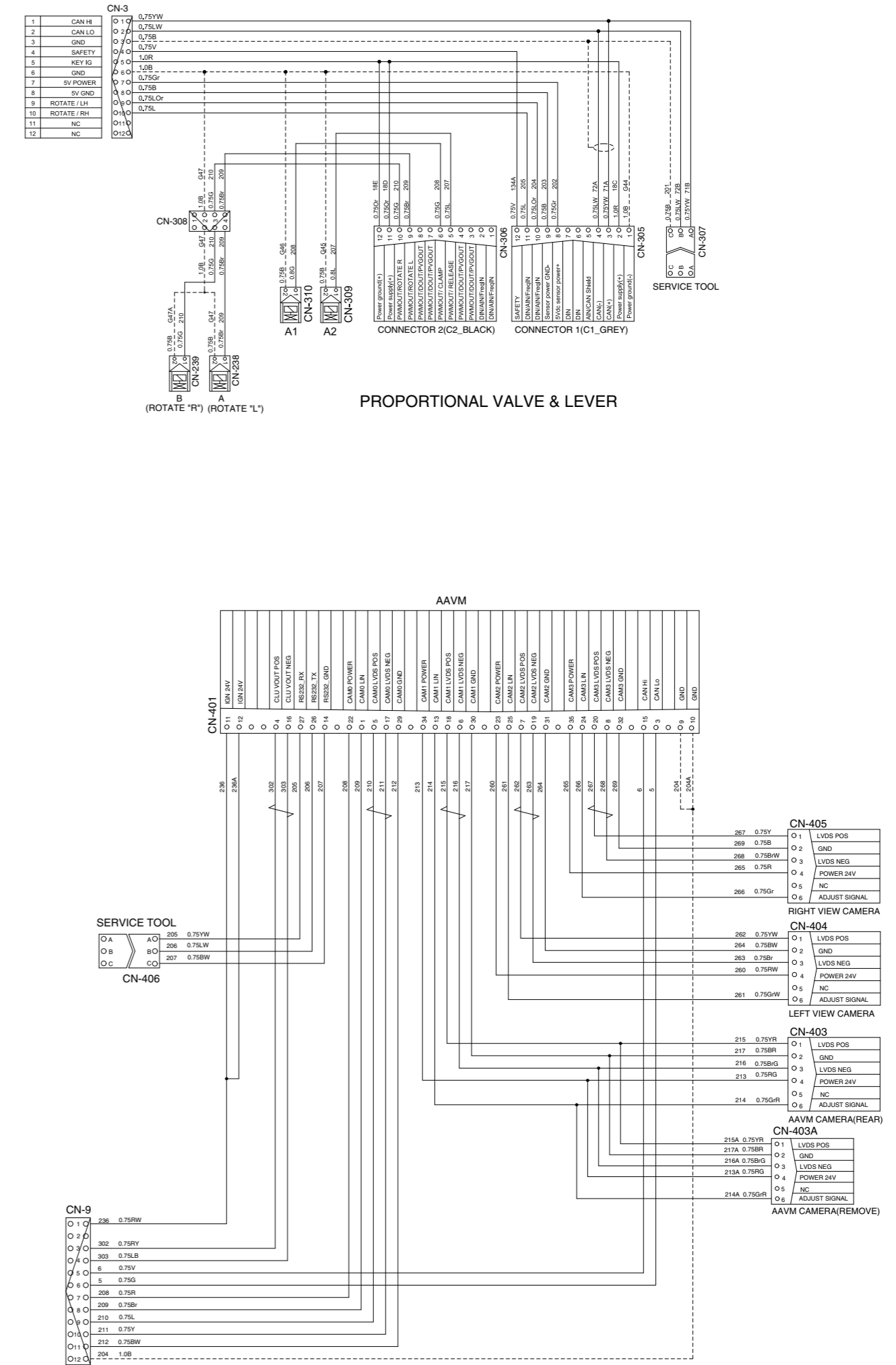
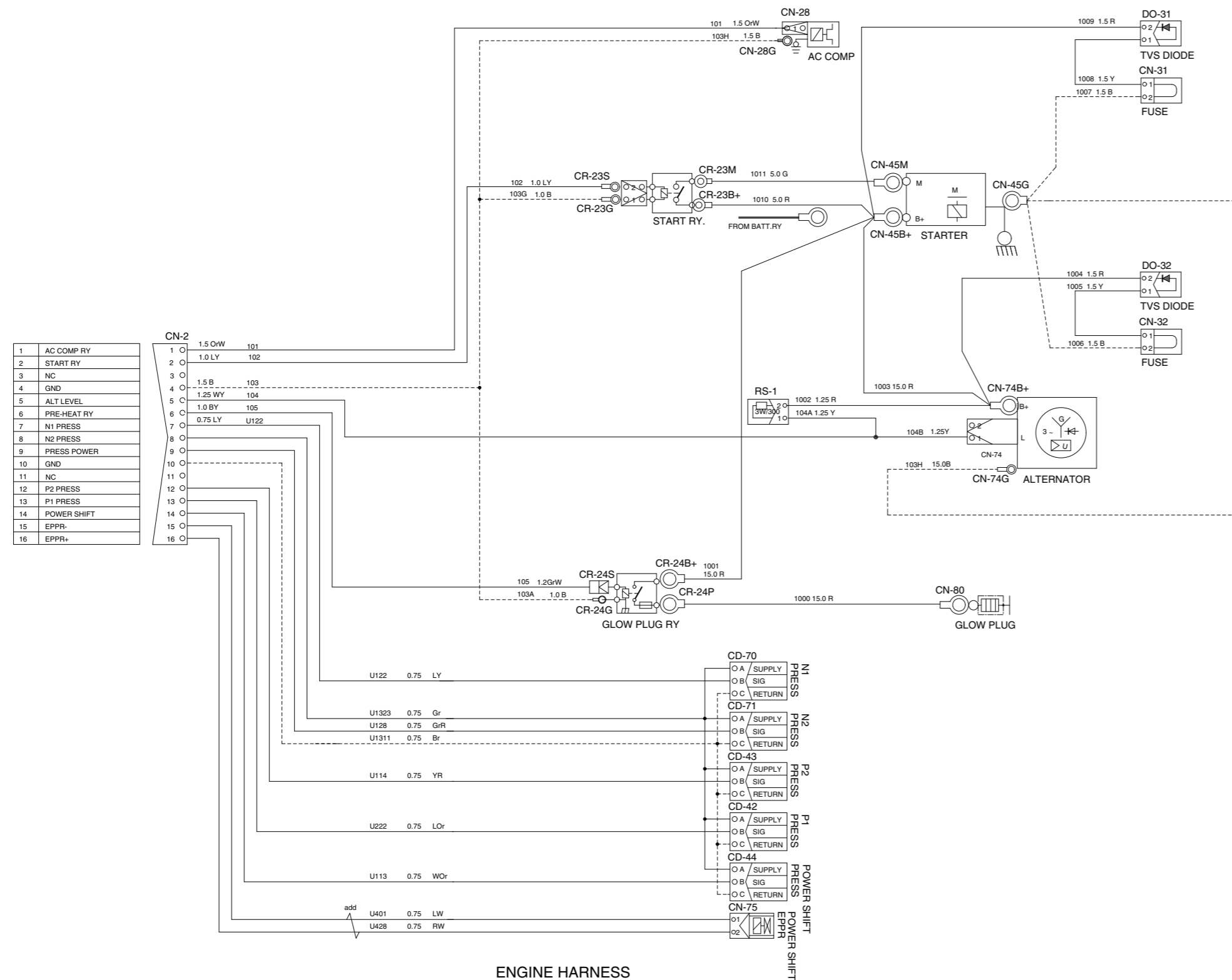
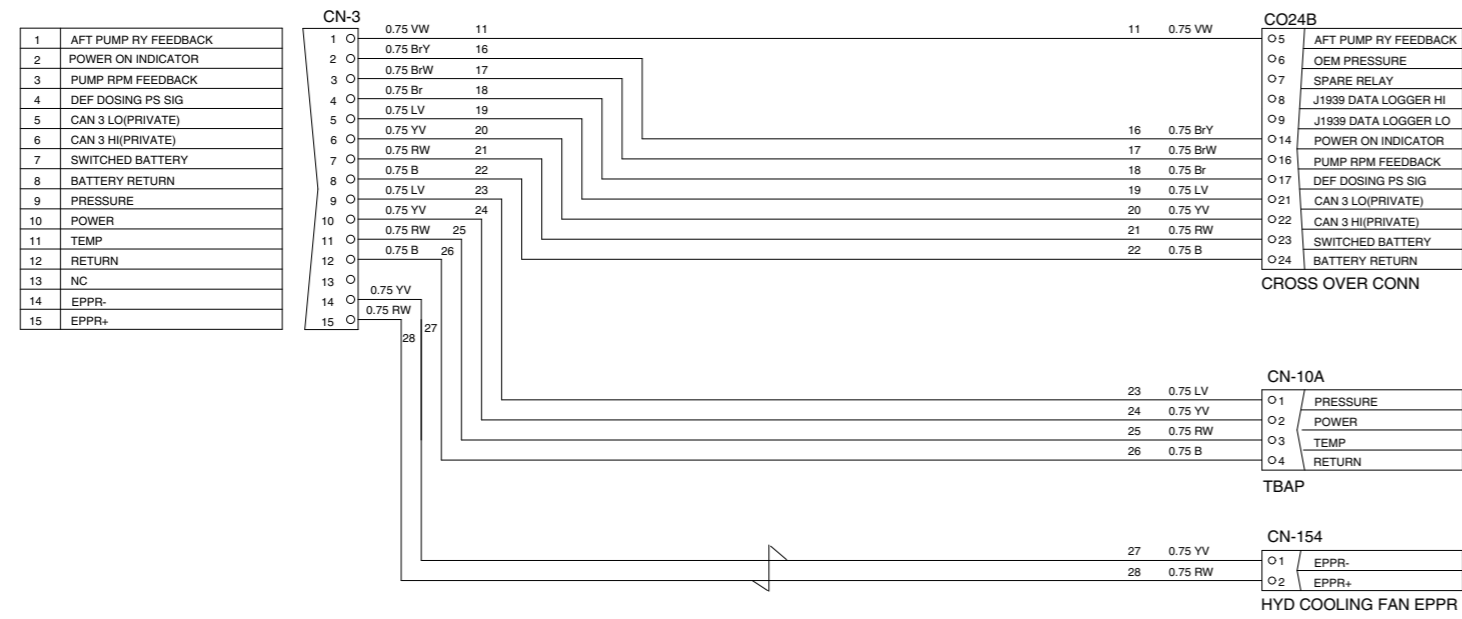


PROPORTIONAL VALVE & LEVER



REMOVEABLE COUNTER WEIGHT

- MACHINE SERIAL NO.  
HX480A L : #0039-  
HX520A L : #0073-



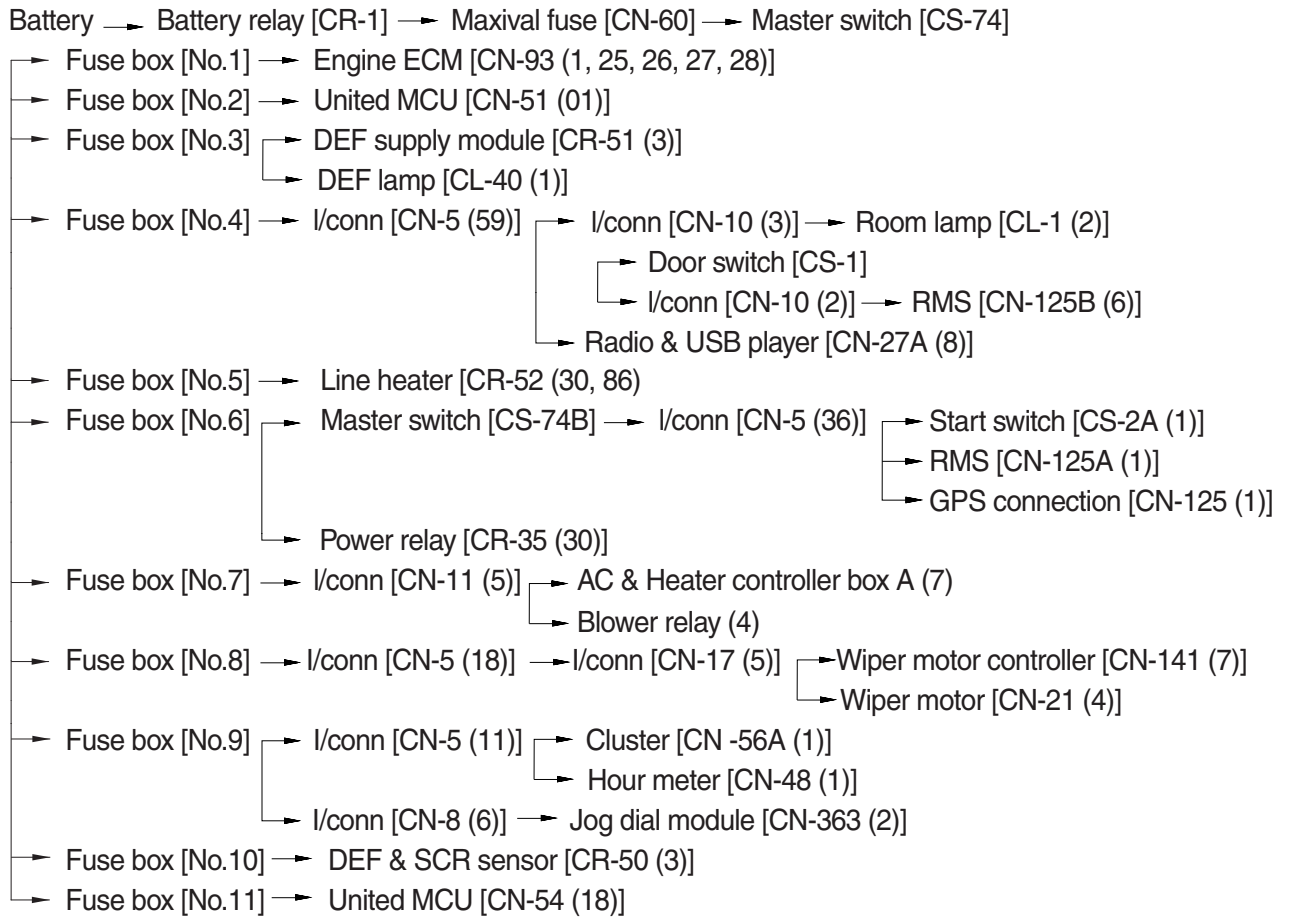
**MEMORANDUM**

## 1. POWER CIRCUIT

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

When the start switch is in the OFF position, the current flows from the positive battery terminal as shown below.

### 1) OPERATING FLOW



※ I/conn : Intermediate connector

### 2) CHECK POINT

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

※ GND : Ground





## 2. STARTING CIRCUIT

### 1) OPERATING FLOW

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

#### (1) When start 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)] → Power relay [CR-35 (86) → (87)]  
 → Fuse box [IG (power relay)]  
 → I/conn [CN-4 (4)]  
 → Emergency engine stop sw [CS-33 (2) → (1)]  
 → I/conn [CN-4 (13)] → Fuse box [No. 12]  
 → Engine ECM [CN-93 (5)]  
 Reader [CN-427 (1)]  
 RMS [CN-125A (2)]

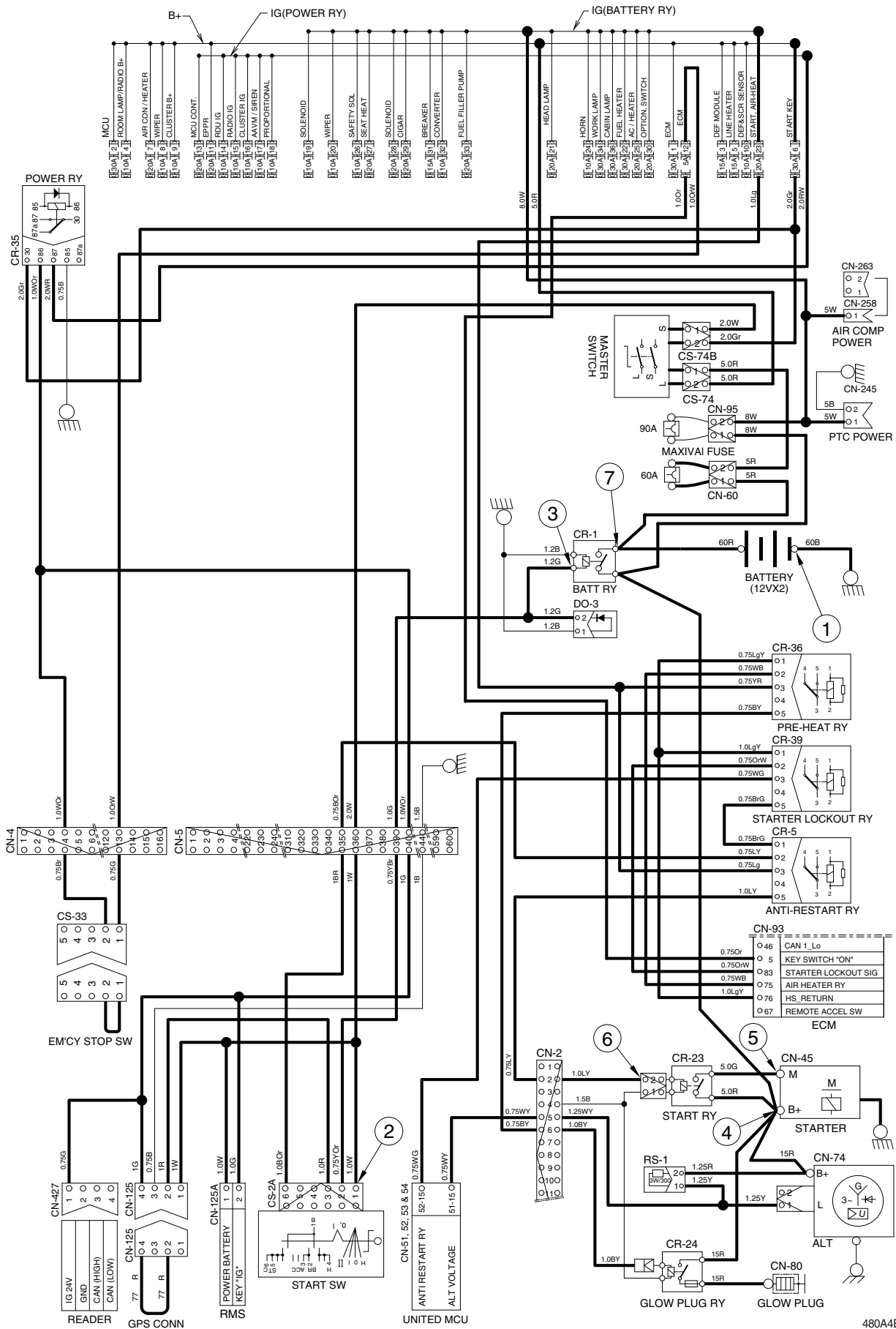
#### (2) When start switch is in START position

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

### 2) CHECK POINT

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

# STARTING CIRCUIT



### 3. CHARGING CIRCUIT

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

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

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

#### 1) OPERATING FLOW

##### (1) Warning flow

Alternator "L" terminal → I/conn [CN-2 (5)] → United MCU alternator voltage [CN-51 (15)]  
 → Cluster charging warning lamp (Via CAN interface)

##### (2) Charging flow

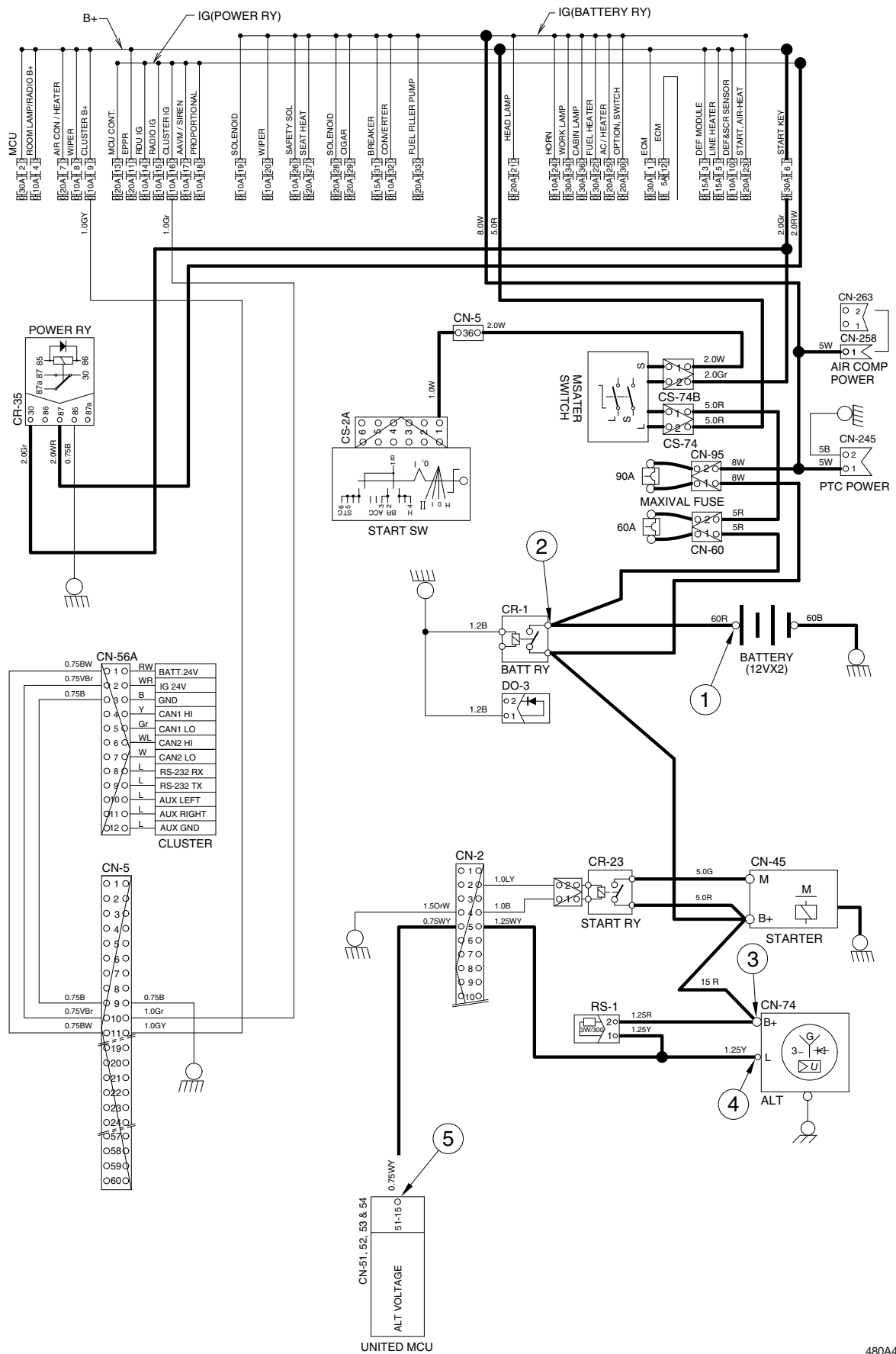
Alternator "B+" terminal → Starter [CN-45 (B+)] → Battery relay (CR-1)  
 → Battery (+) terminal  
 → Maxival fuse [CN-60] → Master switch [CS-74] → Fuse box [B+]  
 → Maxival fuse [CN-95] → Fuse box [IG, battery] → Power relay [CR-35 (30)→(87)]  
 → Fuse box [IG, power]

#### 2) CHECK POINT

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

※ GND : Ground

# CHARGING CIRCUIT



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## 4. HEAD AND WORK LIGHT CIRCUIT

### 1) OPERATING FLOW

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

Fuse box (No.34) → Work light relay [CR-4 (30, 86)]

Fuse box (No.14) → RDU membrane controller [CR-376 (1)]

#### (1) Head light switch ON

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

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

→ I/conn [CN-7 (1)] → Cigar lighter [CL-2]

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

#### (2) Work light switch ON

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

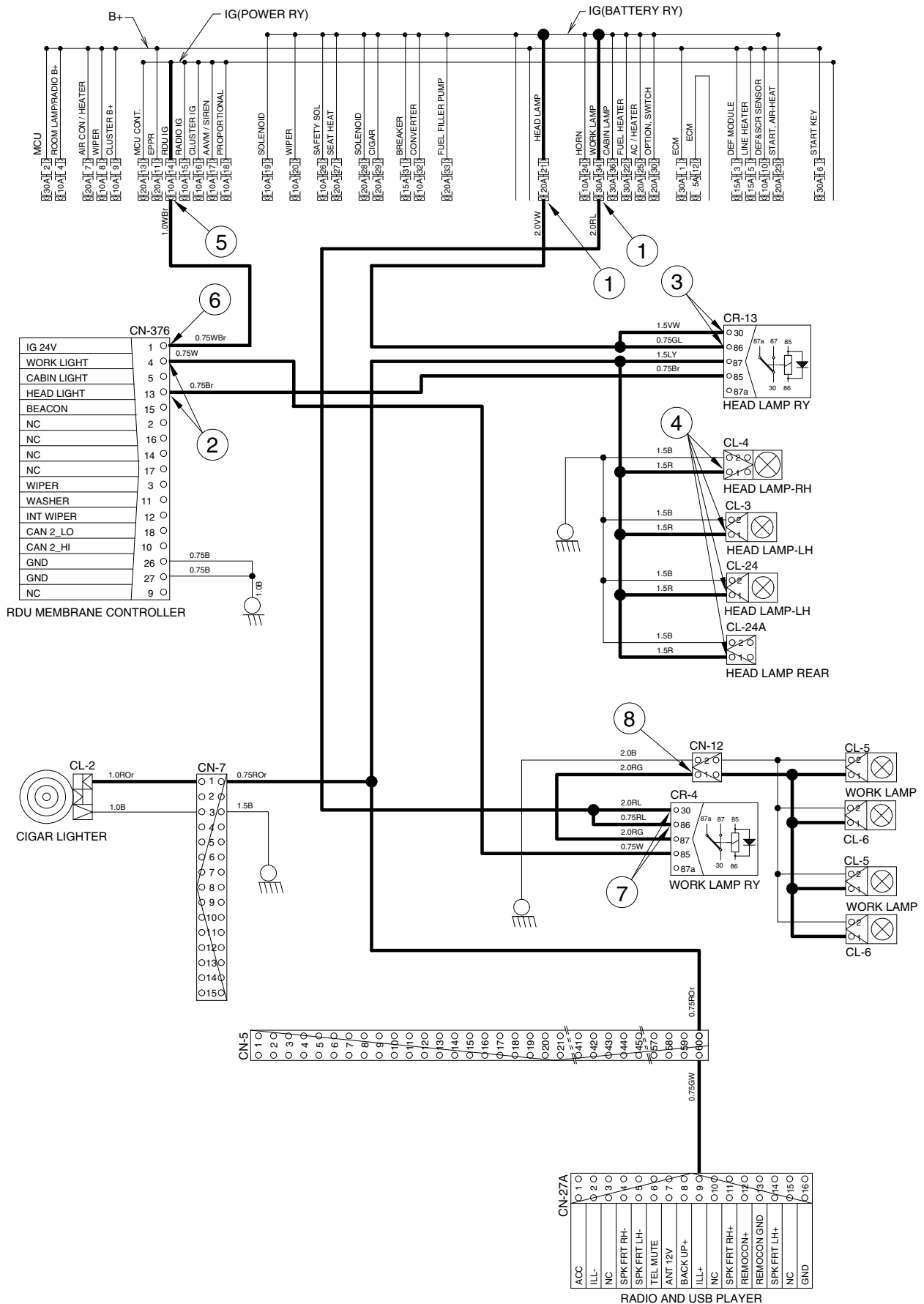
→ I/conn [CN-12 (1)] → Work light ON [CL-5 (1), CL-6 (1)]

### 2) CHECK POINT

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

※ GND : Ground

# HEAD AND WORK LIGHT CIRCUIT



## 5. BEACON LAMP AND CAB LIGHT CIRCUIT

### 1) OPERATING FLOW

Fuse box (No.30) → Beacon lamp relay [CR-85 (2, 3)]

Fuse box (No.36) → Cab light relay [CR-9 (30, 86)]

Fuse box (No.14) → RDU membrane controller [CN-376 (1)]

#### (1) Beacon lamp switch ON

Beacon lamp switch ON [CN-376 (15)] → Beacon lamp relay [CR-85 (1)→ (5)]

→ I/conn [CN-5 (50)] → I/conn [CN-10 (10)] → Beacon lamp ON [CL-7 (2)]

#### (2) Cab light switch ON

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

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

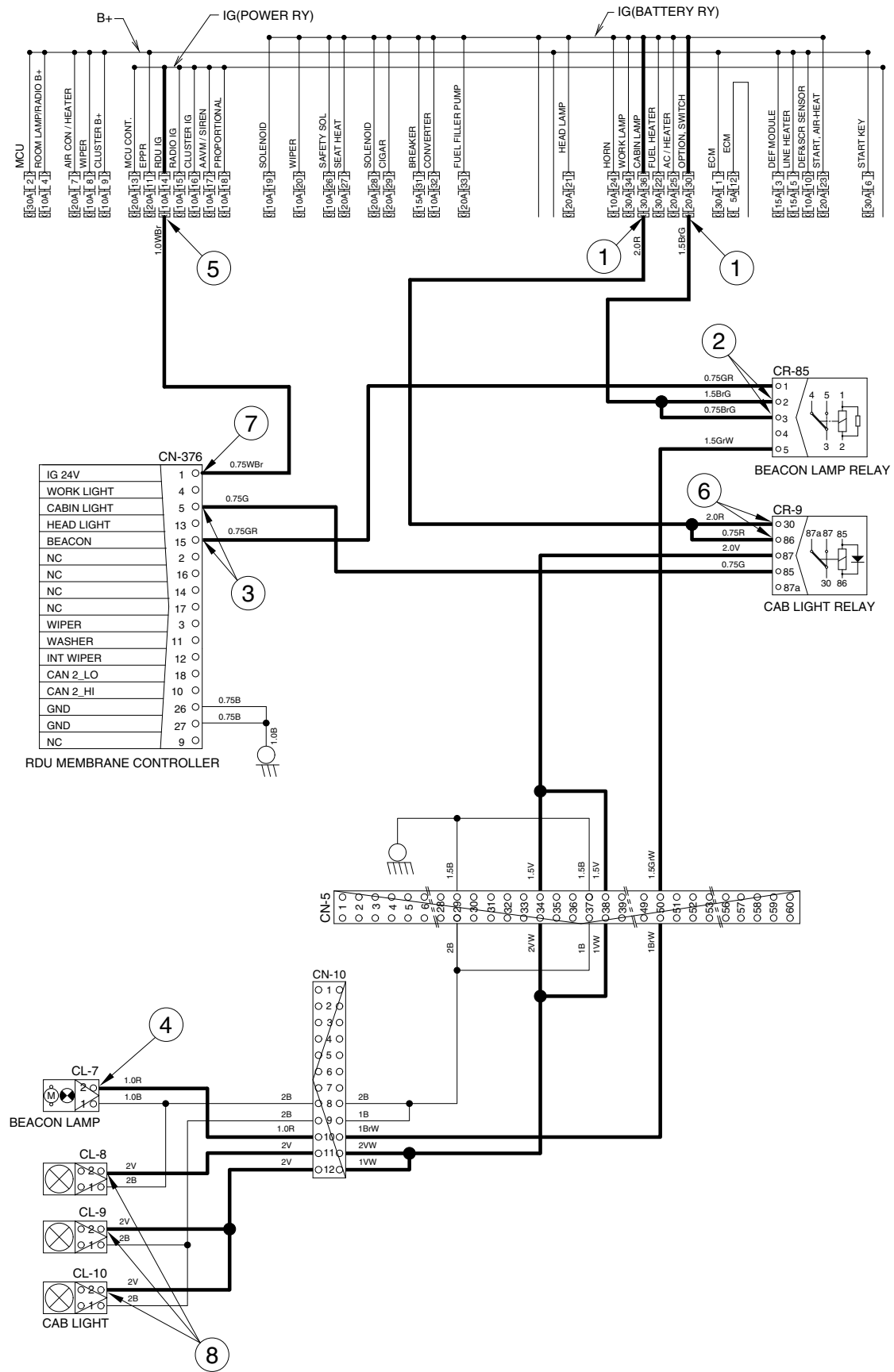
→ I/conn [CN-10 (12)] → Cab light ON [CL-9 (2), CL-10 (2)]

### 2) CHECK POINT

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

※ GND : Ground

# BEACON LAMP AND CAB LIGHT CIRCUIT



480A4EL09



## 6. WIPER AND WASHER CIRCUIT

### 1) OPERATING FLOW

#### (1) Start switch ON

Fuse box (No.14) → RDU membrane controller [CN-376 (1)]

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

Fuse box (No.20) → I/conn [CN-5 (16)] → I/conn [CN-17 (4)] → Wiper motor controller [CN-141 (6)]  
 → Low wiper motor [CN-407 (3)]  
 → 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

### 2) OPERATING FLOW (LOW WIPER)

#### (1) Start switch ON

Fuse box (No. 30) → I/conn [CN-7 (8)] → Low wiper switch [CS-79 (1, 5)]

#### (2) Wiper switch ON (1st)

Wiper switch ON [CS-79 (1 → 2)] → I/conn [CN-7 (5)] → Wiper motor [CN-407 (4)] → Wiper operating

#### (3) Wiper switch ON (2nd)

Wiper switch ON [CS-79 (5 → 4)] → I/conn [CN-7 (6)] → I/conn [CN-18 (2)] → Washer pump [CN-407 (2)]

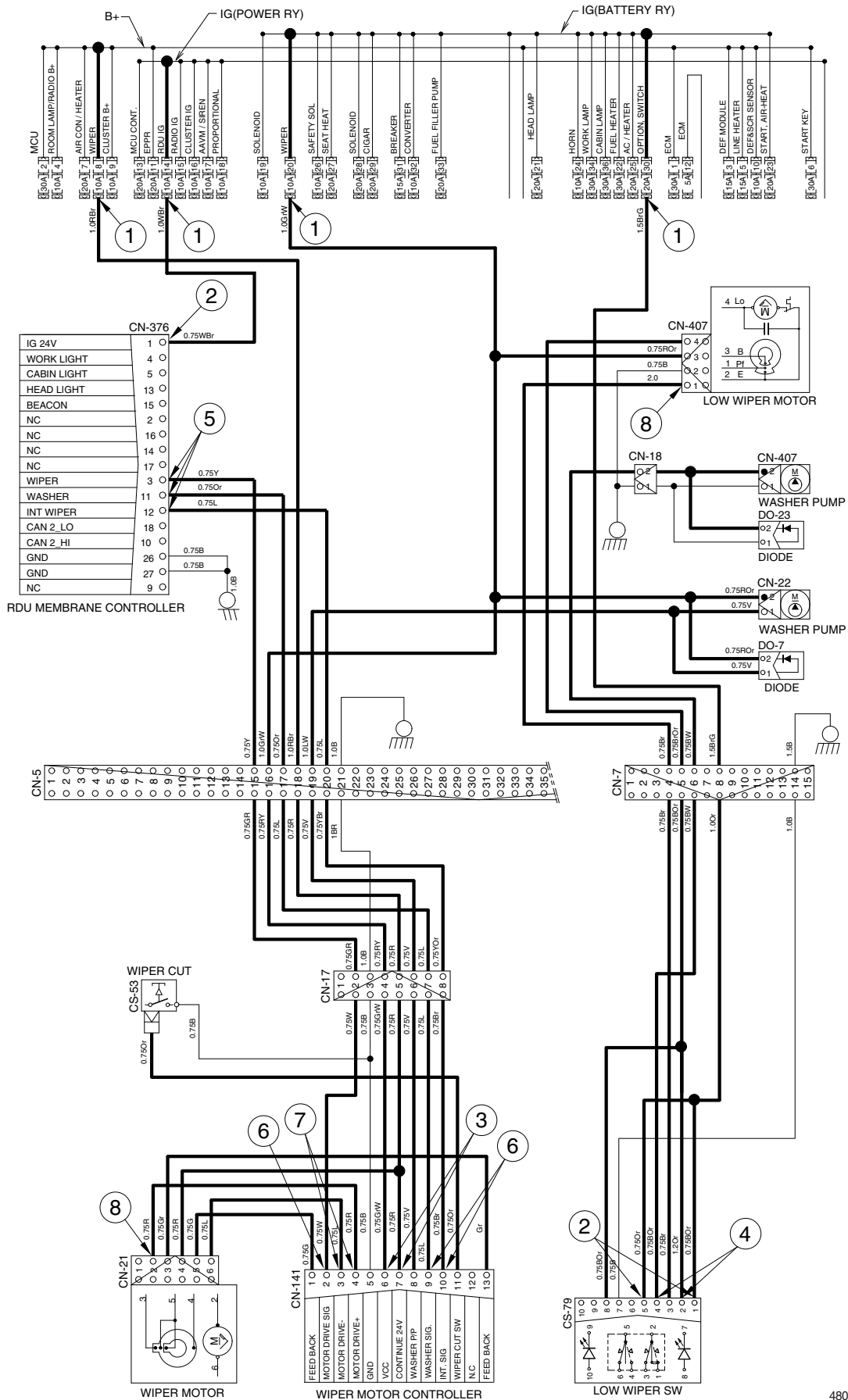
→ Washer operating

### 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)	
		⑤ - GND (switch power output)	0 ~ 5V
		⑥ - GND (wiper switch power input)	
		⑦ - GND (wiper power output)	
		⑧ - GND (wiper motor)	
			0 or 24V

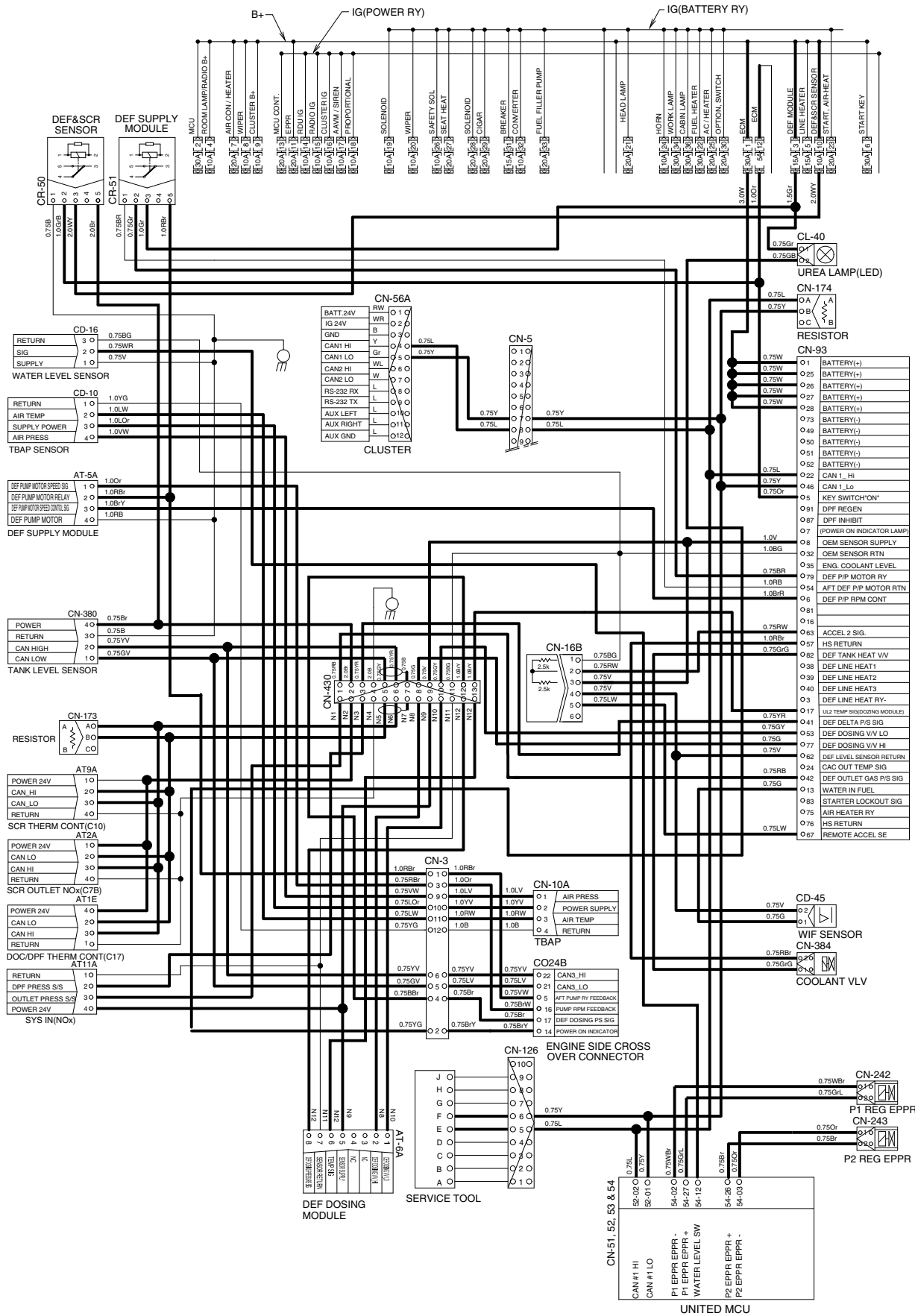
※ GND : Ground

# WIPER AND WASHER CIRCUIT

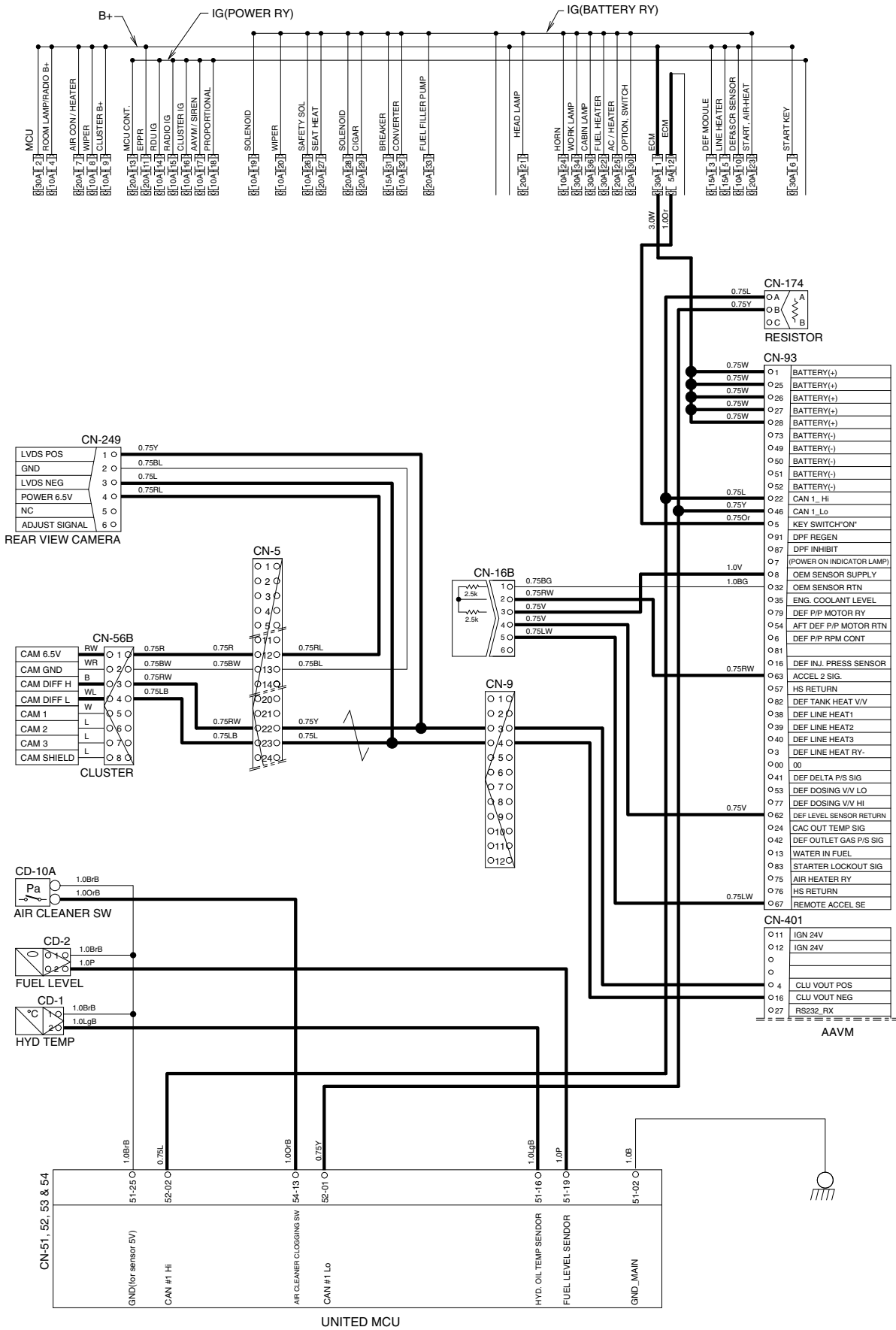


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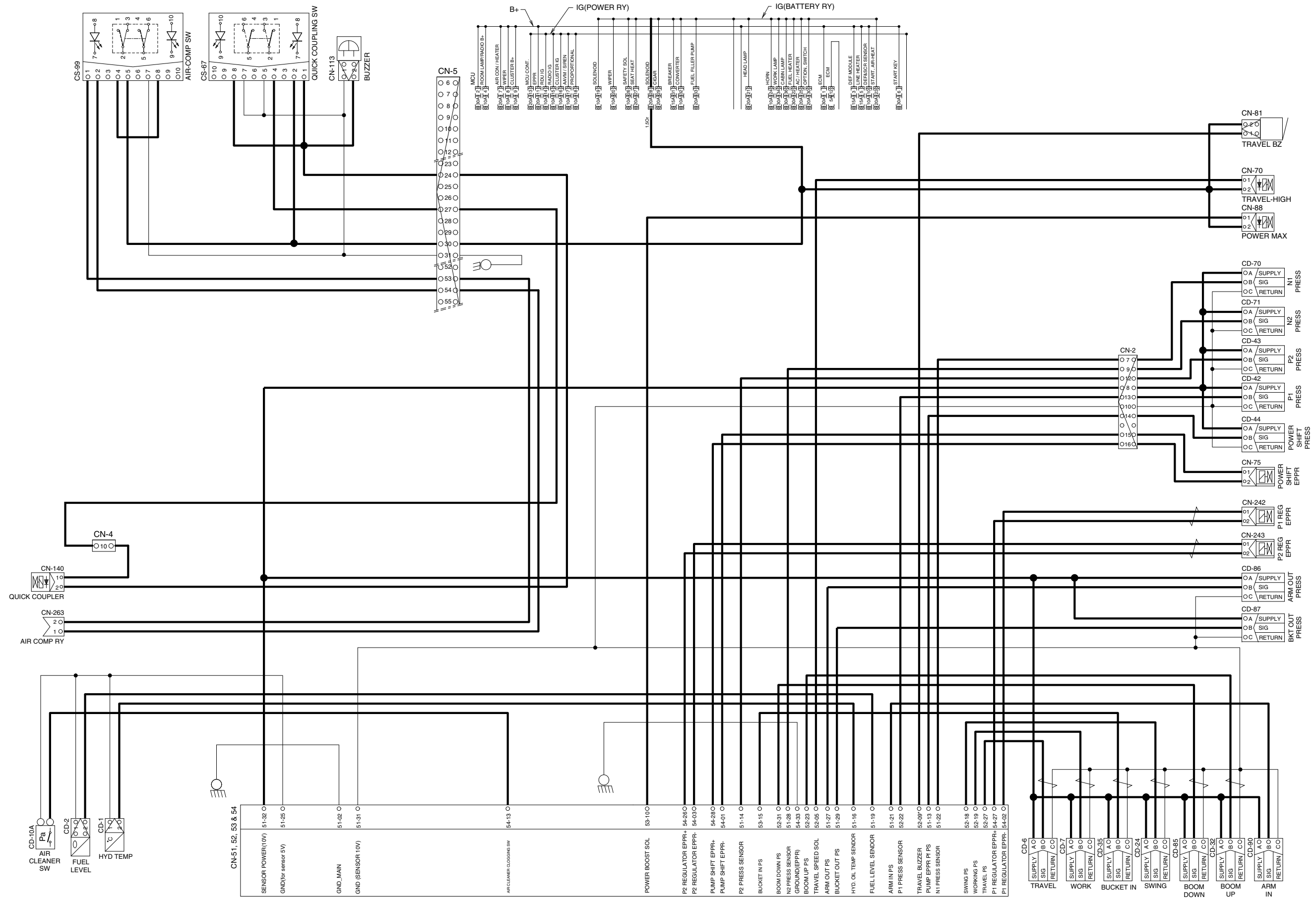
# CONTROLLER CIRCUIT



# MONITORING CIRCUIT

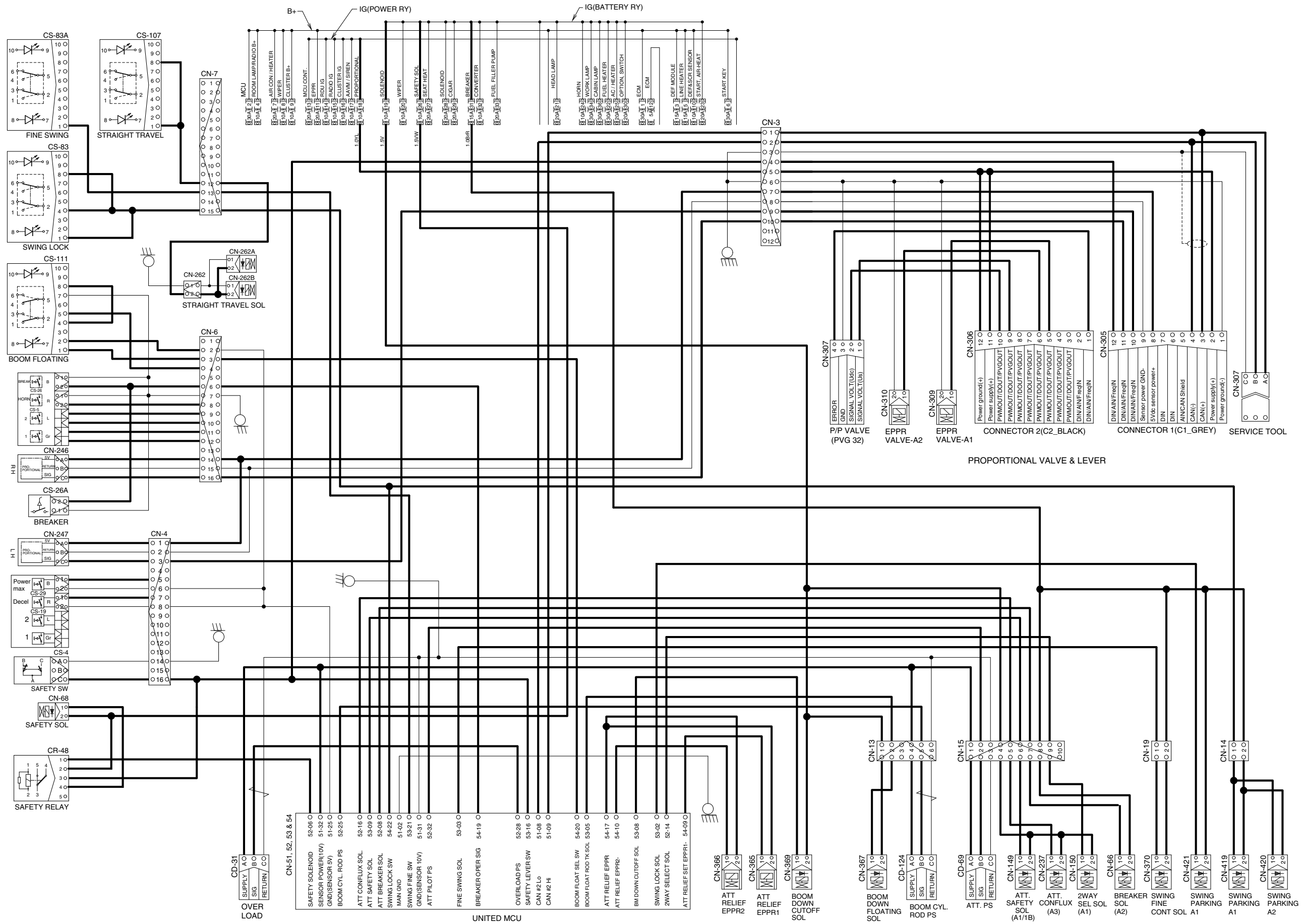


# ELECTRIC CIRCUIT FOR HYDRAULIC (1/2)

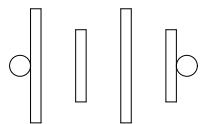
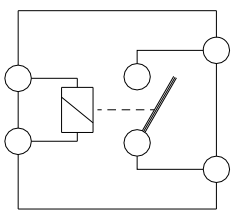
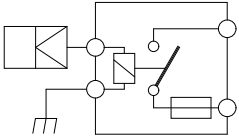
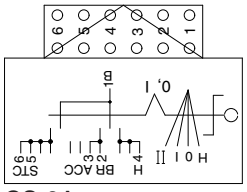
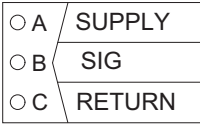
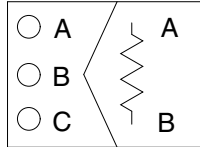


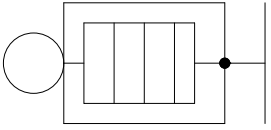
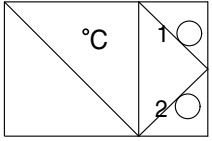
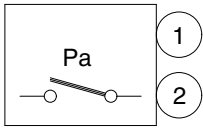
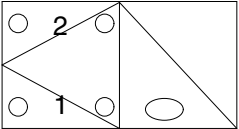
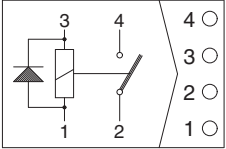
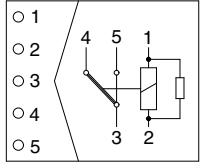
UNITED MCU

# ELECTRIC CIRCUIT FOR HYDRAULIC (2/2)

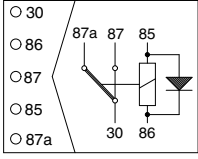
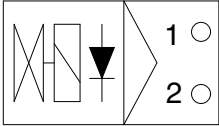
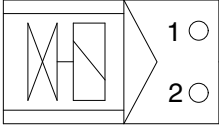
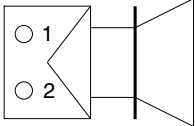
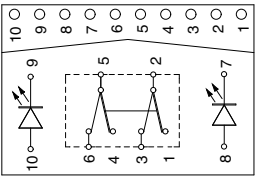
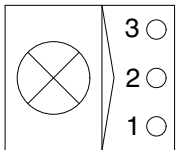


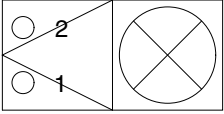
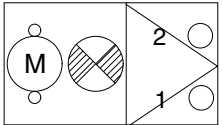
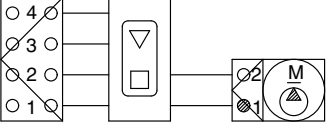
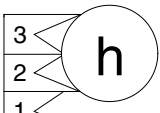
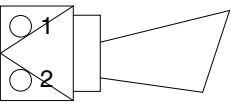
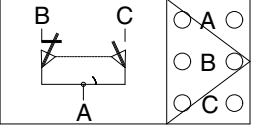
## GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

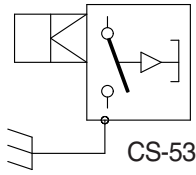
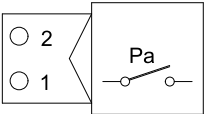
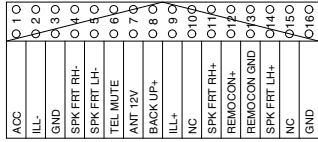
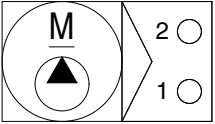
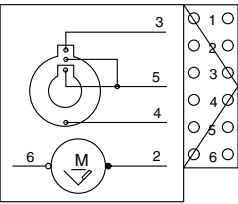
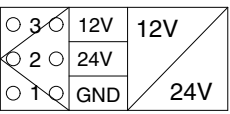
Part name	Symbol	Specifications	Check
Battery		12V × 160Ah (2EA)	※ Check specific gravity 1.280 over : Over charged 1.280 ~ 1.250 : Normal 1.250 below : Recharging
Battery relay	 <p style="text-align: center;">CR-1</p>	Rated load : 24V 100A (continuity) 1000A (30seconds)	※ Check coil resistance(M4 to M4) Normal : About 50Ω ※ Check contact Normal : ∞Ω
Glow plug relay	 <p style="text-align: center;">CR-24</p>	24V 200A	※ Check contact Normal : 0.942Ω (for terminal 1-GND)
Start key	 <p style="text-align: center;">CS-2A</p>	B-BR : 24V 1A B-ACC : 24V 10A B-ST : 24V 40A	※ Check contact OFF : ∞Ω (for each terminal) ON : 0Ω (for terminal 1-3 and 1-2) START : 0Ω (for terminal 1-6)
Pressure sensor	 <p style="text-align: center;">                     ○ A SUPPLY                      ○ B SIG                      ○ C RETURN                 </p> <p>                     CD-6 CD-7 CD-16 CD-24 CD-31                      CD-32 CD-35 CD-42 CD-43 CD-44                      CD-69 CD-70 CD-71 CD-85 CD-86                      CD-87 CD-90 CD-124                 </p>	8~30V	※ Check contact Normal : 0.1Ω
Resistor	 <p style="text-align: center;">                     ○ A      A                      ○ B      B                      ○ C      B                 </p> <p style="text-align: center;">CN-173    CN-174</p>	3W	※ Check resistance A-B : 120Ω

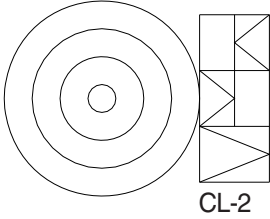
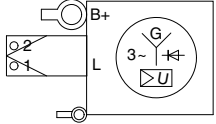
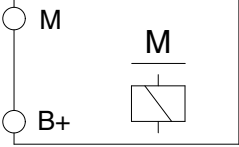
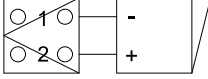
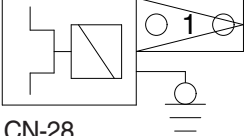
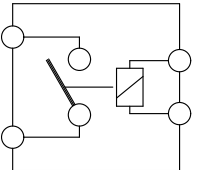
Part name	Symbol	Specifications	Check
Glow plug	 CN-80	24V 200A	※ Check resistance 0.25~0.12Ω
Temperature sensor (hydraulic)	 CD-1	-	※ Check resistance 50°C : 804Ω 80°C : 310Ω 100°C : 180Ω
Air cleaner pressure switch	 CD-10A	(N.O TYPE)	※ Check contact High level : ∞Ω Low level : 0Ω
Fuel sender	 CD-2	-	※ Check resistance Full : 50Ω      6/12 : 350Ω 11/12 : 100Ω    5/12 : 400Ω 10/12 : 150Ω    4/12 : 450Ω 9/12 : 200Ω     3/12 : 500Ω 8/12 : 250Ω     2/12 : 550Ω 7/12 : 300Ω     1/12 : 600Ω Empty warning : 700Ω
Relay (air con blower)		24V 20A	※ Check resistance Normal : About 200Ω (for terminal 1-3) 0Ω (for terminal 2-4)
Relay	 CR-2 CR-5 CR-36 CR-39 CR-48 CR-50 CR-51 CR-85	24V 16A	※ Check resistance Normal : About 160Ω (for terminal 1-2) 0Ω (for terminal 3-4) ∞Ω (for terminal 3-5)

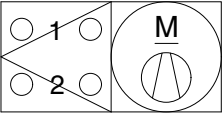
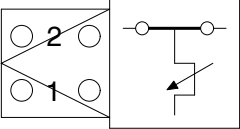
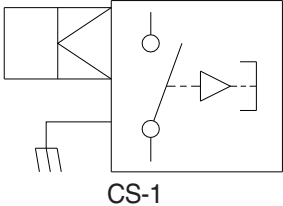
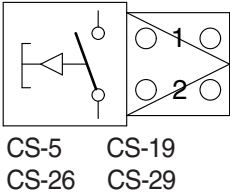
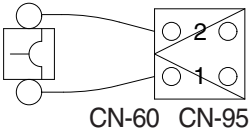
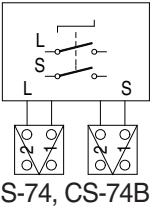


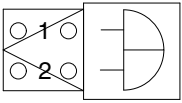
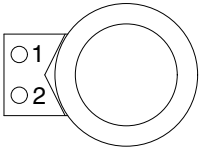
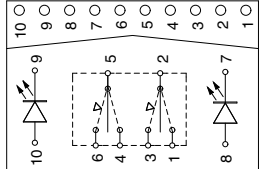
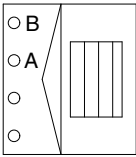
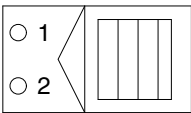
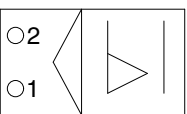
Part name	Symbol	Specifications	Check
Relay	 <p>CR-4 CR-7 CR-9 CR-13 CR-35 CR-46 CR-52</p>	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 85-86) 0 Ω (for terminal 30-87a) ∞ Ω (for terminal 30-87)
Solenoid valve	 <p>CN-66 CN-68 CN-70 CN-88 CN-90 CN-135 CN-140 CN-149 CN-150 CN-237 CN-262A CN-262B CN-367 CN-369 CN-370 CN-419 CN-420 CN-421 CN-680</p>	24V 1A	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
EPPR valve	 <p>CN-75 CN-133 CN-154 CN-242 CN-243 CN-309 CN-310 CN-365 CN-366</p>	700mA	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
Speaker	 <p>CN-23(LH) CN-260 CN-24(RH)</p>	20W	※ Check resistance Normal : A few Ω
Switch (locking type)	 <p>CS-52 CS-67 CS-83 CS-83A CS-99 CS-107 CS-108 CS-111</p>	24V 8A	※ Check contact Normal ON : ∞ Ω (for terminal 2-3, 5-6) 0 Ω (for terminal 2-1, 5-4) OFF : 0 Ω (for terminal 2-3, 5-6) ∞ Ω (for terminal 2-1, 5-4)
Room lamp	 <p>CL-1</p>	24V 10W	※ Check disconnection Normal : 1.0 Ω ON : 0 Ω (For terminal 1-2) ∞ Ω (For terminal 1-3) OFF : ∞ Ω (For terminal 1-2) 0 Ω (For terminal 1-3)

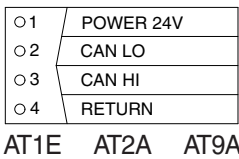
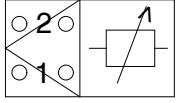
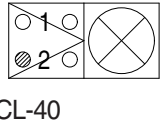
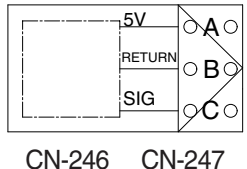
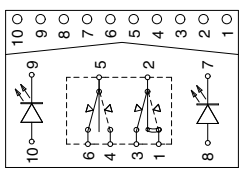
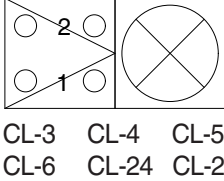
Part name	Symbol	Specifications	Check
Cab lamp	 <p>CL-8 CL-9 CL-10</p>	24V 65W (H3 Type)	※ Check disconnection Normal : 1.2Ω
Beacon lamp	 <p>CL-7</p>	24V 70W (H1 Type)	※ Check disconnection Normal : A few Ω
Fuel filler pump	 <p>CN-61</p>	24V 10A 35 l /min	※ Check resistance Normal : 1.0Ω
Hour meter	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

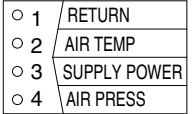
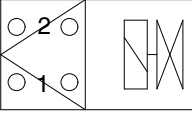
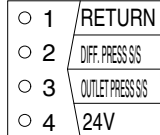
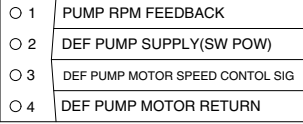
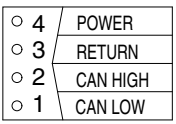
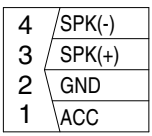
Part name	Symbol	Specifications	Check
Wiper cut switch	 <p>CS-53</p>	24V (N.O TYPE)	※ Check contact Normal : 0Ω (one pin to ground)
Receiver dryer	 <p>CN-29</p>	24V 2.5A (N.O TYPE)	※ Check contact Normal : ∞Ω
Radio & USB player	 <p>CN-27A</p>	24V 2A	※ Check voltage 20~25V (for terminal 1-3, 3-8)
Washer pump	 <p>CN-22 CN-408</p>	24V 3.8A	※ Check contact Normal : 10.7Ω (for terminal 1-2)
Wiper motor	 <p>CN-21</p>	24V 2A	※ Check disconnection Normal : 7Ω (for terminal 2-6)
DC/DC Converter	 <p>CN-138</p>	12V 3A	※ Check voltage 24V (for terminal 1-2) 12V (for terminal 1-3)

Part name	Symbol	Specifications	Check
Cigar lighter	 <p>CL-2</p>	24V 5A 1.4W	※ Check coil resistance Normal : About 1MΩ ※ Check contact Normal : ∞Ω Operating time : 5~15sec
Alternator	 <p>CN-74</p>	24V 110A	※ Check contact Normal : 0Ω (for terminal B <sup>+</sup> -L) Normal : 24~27.5V
Starter	 <p>CN-45</p>	24V 7.5kW	※ Check contact Normal : 0.1Ω
Travel alarm	 <p>CN-81</p>	24V 0.5A	※ Check contact Normal : 5.2Ω
Aircon compressor	 <p>CN-28</p>	24V 79W	※ Check contact Normal : 13.4Ω
Start relay	 <p>CR-23</p>	24V 300A	※ Check contact Normal : 0.94Ω (for terminal 1-2)

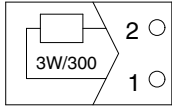
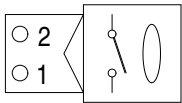
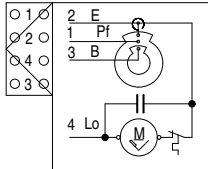
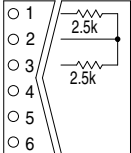
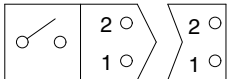
Part name	Symbol	Specifications	Check
Blower motor		24V 9.5A	※ Check resistance Normal : 2.5Ω (for terminal 1-2)
Thermistor (switch)		1°C OFF 4°C ON	※ Check resistance Normal : 0Ω (for terminal 1-2), the atmosphere temp : Over 4°C
Door switch		24V 2W	※ Check resistance Normal : About 5MΩ
Switch (power max, one touch decel, horn, breaker)		24V 6A	※ Check resistance Normal : ∞Ω
Maxival fuse		60A (CN-60) 90A (CN-95)	※ Check disconnection Normal : 0Ω (connect ring terminal and check resist between terminal 1 and 2)
Master switch		6-36V	※ Check disconnection Normal : 0.1Ω

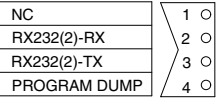
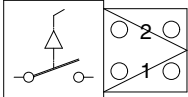
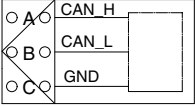
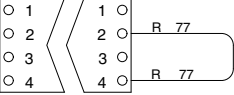
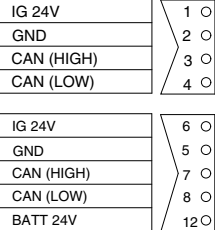
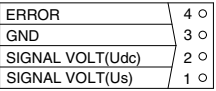
Part name	Symbol	Specifications	Check
Quick clamp buzzer	 <p data-bbox="496 443 592 472">CN-113</p>	24V 200mA 107±4dB	
Socket	 <p data-bbox="507 745 603 775">CN-139</p>	12V 10A	
Switch	 <p data-bbox="459 1043 555 1072">CS-100</p>	24V 8A	<p data-bbox="1002 898 1185 927">※ Check contact</p> <p data-bbox="1031 936 1110 965">Normal</p> <p data-bbox="1031 974 1369 1003">ON : 0Ω (for terminal 2-1, 2-3)</p> <p data-bbox="1031 1012 1369 1041">OFF : ∞Ω (for terminal 2-1, 2-3)</p>
Fuel heater	 <p data-bbox="528 1305 608 1335">CN-96</p>	-	
DEF/AdBlue® line heater	 <p data-bbox="448 1597 743 1626">CN-381 CN-382 CN-383</p>	-	
WIF sensor	 <p data-bbox="496 1877 576 1906">CD-45</p>	-	

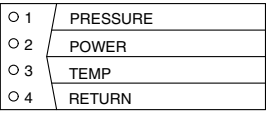
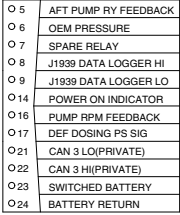
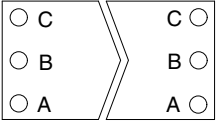
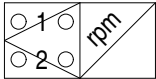
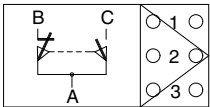
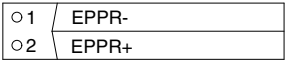
Part name	Symbol	Specifications	Check
DEF/AdBlue® sensor		-	
Temperature sensor (A/C)		-	
DEF/AdBlue® fill up warning lamp (LED)		-	
Proportional valve sensor		-	
Switch		24V 8A	※ Check disconnection Normal ON 1st step : 0Ω (for terminal 1-2) 2nd step : 0Ω (for terminal 1-2, 4-5) OFF 0Ω (for terminal 2-3, 5-6)
Head lamp Work lamp		24V 65W (H3 Type)	※ Check disconnection Normal : 1.2 Ω

Part name	Symbol	Specifications	Check
<p>TBAP sensor</p>	 <p>CD-10</p>	-	
<p>Coolant valve</p>	 <p>CN-384</p>	-	
<p>System in pressure sensor (NOx)</p>	 <p>AT11A</p>	-	
<p>DEF supply module</p>	 <p>AT-5A</p>	-	
<p>Tank level sensor</p>	 <p>CN-380</p>	-	
<p>Siren AMP</p>	 <p>CN-261</p>	-	



Part name	Symbol	Specifications	Check												
Resistor	 <p>RS-1</p>	3W	※ Check resistance Normal : 300Ω												
Float switch	 <p>CS-61</p>	-													
Low wiper motor	 <p>CN-407</p>	-													
Camera (front, rear, side)	<table border="1" data-bbox="491 1176 651 1305"> <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 6.5V</td></tr> <tr><td>○ 5</td><td>NC</td></tr> <tr><td>○ 6</td><td>ADJUST SIGNAL</td></tr> </table> <p>CN-249 CN-402 CN-403 CN-403A CN-404 CN-405</p>	○ 1	LVDS POS	○ 2	GND	○ 3	LVDS NEG	○ 4	POWER 6.5V	○ 5	NC	○ 6	ADJUST SIGNAL	-	
○ 1	LVDS POS														
○ 2	GND														
○ 3	LVDS NEG														
○ 4	POWER 6.5V														
○ 5	NC														
○ 6	ADJUST SIGNAL														
Resistor	 <p>CN-16B</p>	-													
Seat belt sw	 <p>CS-250</p>	-													

Part name	Symbol	Specifications	Check
RMS service tool	 <p>CN-126A</p>	-	
Breaker switch	 <p>CS-26A</p>	-	
Start button	 <p>CS-2B</p>	-	
GPS connector	 <p>CN-125</p>	-	
Reader	 <p>CN-427</p>	-	
Proportional valve	 <p>CN-307</p>	-	

Part name	Symbol	Specifications	Check
TBAP	 <p>CN-10A</p>	-	
Engine side cross over connector	 <p>CO24B</p>	-	
Service tool	 <p>CN-307 CN-407</p>	-	
Fan speed	 <p>CD-52</p>	-	
Remove count weight select SW	 <p>CS-90</p>	-	
Hydraulic cooling fan EPPR	 <p>CN-154</p>	-	

Part name	Symbol	Specifications	Check																
DEF dosing module	<table border="1" data-bbox="475 273 683 479"> <tr><td>○ 1</td><td>DEF DOSING V/V_LO</td></tr> <tr><td>○ 2</td><td>DEF DOSING V/V_HI</td></tr> <tr><td>○ 3</td><td>NC</td></tr> <tr><td>○ 4</td><td>NC</td></tr> <tr><td>○ 5</td><td>SENSOR SUPPLY</td></tr> <tr><td>○ 6</td><td>TEMP SIG</td></tr> <tr><td>○ 7</td><td>SENSOR RETURN</td></tr> <tr><td>○ 8</td><td>DEF DOSING PRESSURE SIG</td></tr> </table> <p data-bbox="475 488 542 515">AT-6A</p>	○ 1	DEF DOSING V/V_LO	○ 2	DEF DOSING V/V_HI	○ 3	NC	○ 4	NC	○ 5	SENSOR SUPPLY	○ 6	TEMP SIG	○ 7	SENSOR RETURN	○ 8	DEF DOSING PRESSURE SIG	-	
○ 1	DEF DOSING V/V_LO																		
○ 2	DEF DOSING V/V_HI																		
○ 3	NC																		
○ 4	NC																		
○ 5	SENSOR SUPPLY																		
○ 6	TEMP SIG																		
○ 7	SENSOR RETURN																		
○ 8	DEF DOSING PRESSURE SIG																		

## GROUP 4 CONNECTORS

### 1. CONNECTOR DESTINATION

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-2	AMP	16	l/conn (Frame harness-Engine harness)	1-368047-1	368050-1
CN-3	AMP	15	l/conn (Frame harness-Engine harness)	2-85262-1	368301-1
CN-3A	TE	12	l/conn (Frame harness-Pro vlv harness)	174661-2	368537-1
CN-4	TE	16	l/conn (Console harness LH-Frame harness)	368047-1	368050-1
CN-5	DEUTSCH	60	l/conn (Side harness RH-Frame harness)	DRB16-60SAE-L018	DRB12-60PAE-L018
CN-6	TE	16	l/conn (Console harness RH-Frame harness)	368047-1	368050-1
CN-7	TE	15	l/conn (Console harness RH-Frame harness)	2-85262-1	368301-1
CN-8	TE	10	l/conn (Console harness RH-Frame harness)	S816-010002	174657-2
CN-9	DEUTSCH	12	l/conn (Frame harness-AAVM harness)	DT06-12SA-P021	DT04-12PA-P021
CN-10	DEUTSCH	12	l/conn (Cab harness-Side harness RH)	DT06-12S-EP06	DT04-12PA-P021
CN-11	DEUTSCH	8	l/conn (Frame harness-Aircon harness)	DT06-8S-EP06	-
CN-12	DEUTSCH	2	l/conn (Frame harness-Boom wire harness)	DT06-2S-EP06	DT04-2P-E005
CN-13	AMP	6	l/conn (Frame harness-Boom floating)	174262-2	174264-2
CN-14	TE	2	l/conn (Frame harness-Swing parking control)	174352-2	174354-2
CN-15	TE	10	l/conn (Frame harness-Breaker sol)	174655-2	174657-2
CN-16	TE	6	Emergency engine start & speed control	174262-2	174264-2
CN-16B	TE	6	Emergency engine start	174262-2	21NB-10710
CN-17	AMP	8	l/conn (Side harness RH-Wiper harness)	S816-008002	S816-108002
CN-18	TE	2	l/conn (Frame harness-Low washer pump)	174352-2	174354-2
CN-19	DEUTSCH	2	l/conn (Frame harness-Swing fine harness)	DT06-2S-EP06	DT04-2P-E005
CN-20	DEUTSCH	2	Horn	DT06-2S-EP06	-
CN-21	AMP	6	Wiper motor	S810-006202	-
CN-22	KET	2	Washer pump	MG640605	-
CN-23	KET	2	Speaker-LH	MG610070	-
CN-24	KET	2	Speaker-RH	MG610070	-
CN-25	DEUTSCH	2	Horn	DT06-2S-EP06	-
CN-27A	KUM	16	Radio & USB player	PK145-16017	-
CN-27B	AMP	8	Radio & USB player	-	174984-2
CN-28	KET	2	Aircon compressor	PB625-01027	-
CN-28G	RING TERM	1	Aircon compressor ground	ST710286-2	-
CN-29	KET	2	Receiver dryer	MG640795	-
CN-31	AMP	2	Fuse	174352-2	-
CN-32	AMP	2	Fuse	174352-2	-
CN-36	-	-	Fuse & relay box	21Q7-10910	21WD-00240
CN-45B+	RING-TERM	1	Starter motor B+	S820-406001	-
CN-45G	RING-TERM	1	Starter motor ground	S820-406001	-

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-48	KET	1	Hour meter	2-520193-2	-
CN-51	TE	34	United MCU	2-1437285-3	3-6437285-0
CN-52	TE	34	United MCU	4-1437290-1	6473427-1
CN-53	TE	26	United MCU	1473416-1	6473427-1
CN-54	TE	34	United MCU	4-1437290-0	6437288-1
CN-56A	AMP	12	Cluster	-	174663-2
CN-56B	AMP	8	Cluster	-	174984-2
CN-60	YAZAKI	2	Maxival fuse	MG630778-4	21K9-03270
CN-61	DEUTSCH	4	Fuel filler pump	DT06-4S-EP06	-
CN-62	DEUTSCH	2	Auto grease connector	DT06-2S-EP06	DT04-2P-E005
CN-62	DEUTSCH	2	l/conn (Auto grease harness-Frame harness)	DT06-2S	-
CN-62A	DEUTSCH	2	Auto grease	DT06-2S	-
CN-66	DEUTSCH	2	Breaker solenoid	DT06-2S-EP06	-
CN-68	DEUTSCH	2	Safety solenoid (A1)	DT06-2S-EP06	-
CN-70	DEUTSCH	2	Travel high solenoid (A4)	DT06-2S-EP06	-
CN-74	-	2	Alternator	1-967412-2	-
CN-74B+	RING-TERM	1	Alternator "B+" terminal	S820-408001	-
CN-74G	RING-TERM	1	Alternator ground	S820-412001	-
CN-75	AMP	2	Power shift EPPR	85202-1	-
CN-80	RING-TERM	1	Glow plug	S820-406001	-
CN-81	DEUTSCH	2	Travel buzzer solenoid	DT06-2S-EP06	-
CN-88	DEUTSCH	2	Power max solenoid (A2)	DT06-2S-EP06	-
CN-90	DEUTSCH	2	Removable CWT solenoid	DT06-2S-EP06	DT04-2P-E005
CN-93	DELPHI	96	ECM	13964572	-
CN-95	YAZAKI	2	Maxival fuse	MG630778	21K9-03270
CN-96	-	2	Fuel heater	15300027	-
CN-100	KET	1	ECM ground	MG640944-5	-
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-P021	DT04-12PA-P021
CN-125B	DEUTSCH	8	RMS	DT06-8S	DT04-8P
CN-126	AMP	10	Service tool	174655-2	S816-110002
CN-126A	DEUTSCH	4	RMS Service tool	DT06-4S	DT04-4P
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-149	DEUTSCH	2	Attach safety solenoid (A1)	DT06-2S-EP06	-
CN-150	DEUTSCH	2	2 way select solenoid (B)	DT06-2S-EP06	-

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-154	DEUTSCH	2	Hydraulic cooling fan	DT06-2S	-
CN-156	DEUTSCH	2	Seat heat	DT06-2S	DT04-2P
CN-157	AMP	1	Antena power	S822-014002	-
CN-173	DEUTSCH	3	Resistor	DT06-3S-EP06	-
CN-174	DEUTSCH	3	Resistor	DT06-3S-EP06	-
CN-200	DEUTSCH	8	Removable CWT main connector	-	DT04-8PD
CN-237	DEUTSCH	2	Attach confluent solenoid (A3)	DT06-2S-EP06	-
CN-242	DEUTSCH	2	P1 regulator EPPR	DT06-2S-EP06	-
CN-243	DEUTSCH	2	P2 regulator EPPR	DT06-2S-EP06	-
CN-245	KET	2	PTC power	MG620558	-
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	DT06-6S-EP06	DT04-6P-E005
CN-258	KET	1	Air compressor power	MG640944-5	MG650943-2
CN-260	AMP	2	Siren speak	174352-2	174354-2
CN-261	KET	4	Siren AMP	MG610047	MG620046
CN-262	DEUTSCH	2	l/conn (Frame harness - Straight travel solenoid harness)	DT06-2S-EP06	DT04-2P-E005
CN-262A	DEUTSCH	2	Travel solenoid 1 (A2)	DT06-2S-EP06	-
CN-262B	DEUTSCH	2	Travel solenoid 2 (A1)	DT06-2S-EP06	-
CN-263	DEUTSCH	2	Air compressor relay	DT06-2S-EP06	-
CN-305	DEUTSCH	12	Proportional-Connector-1	DTM06-12SA	-
CN-306	DEUTSCH	12	Proportional-Connector-2	DTM06-12SB	-
CN-307	DEUTSCH	3	Proportional-Service tool	DT06-3S-EP06	DT04-3P-E005
CN-307A	DEUTSCH	4	Proportional valve connector	DT06-4S	DT04-4P-E005
CN-308	AMP	4	Proportional-PVG32	2-967059-1	-
CN-309	DEUTSCH	2	Proportional-EPPR valve A2	DT06-2S-EP06	-
CN-310	DEUTSCH	2	Proportional-EPPR valve A1	DT06-2S-EP06	-
CN-363	AMP	12	Jog dial module	174045-2	-
CN-365	DEUTSCH	2	Attach relief EPPR valve1	DT06-2S-EP06	DT04-2P-E005
CN-366	DEUTSCH	2	Attach relief EPPR valve2	DT06-2S-EP06	DT04-2P-E005
CN-367	DEUTSCH	2	Boom up floating solenoid	DT06-2S-EP06	-
CN-369	DEUTSCH	2	Boom down floating solenoid	DT06-2S-EP06	-
CN-370	DEUTSCH	2	Swing fine control solenoid	DT06-2S-EP06	-
CN-376	TE	34	Membrane controller	4-1437290-1	-
CN-380	DEUTSCH	4	DEF/AdBlue® tank level sensor	DT06-4S-EP06	-
CN-381	DEUTSCH	2	DEF line heater 1	DT06-2S-EP06	-
CN-382	DEUTSCH	2	DEF line heater 2	DT06-2S-EP06	-
CN-383	DEUTSCH	2	DEF line heater 3	DT06-2S-EP06	-
CN-384	TE	2	Coolant valve	-	1-967325-3

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-401	TE	35	AAVM controller	776164-1	-
CN-402	DEUTSCH	6	Front view camera	DT06-6S-P021	DT04-6P-P021
CN-403	DEUTSCH	6	Rear view camera	DT06-6S-EP06	DT04-6P-P021
CN-403A	DEUTSCH	6	To removable CWT harness	DT06-6S-EP06	DT04-6P-EP04
CN-403B	DEUTSCH	6	Rear view camera	DT06-6S-EP06	DT04-6P-EP04
CN-404	DEUTSCH	6	LH view camera	DT06-6S-EP06	DT04-6P-EP14
CN-405	DEUTSCH	6	RH view camera	DT06-6S-EP06	DT04-6P-EP14
CN-406	DEUTSCH	3	Service tool	DT06-3S-EP06	DT04-3P-E005
CN-407	DEUTSCH	4	Low wiper motor	DT06-4S-EP06	DT04-4P-E005
CN-419	DEUTSCH	2	Swing parking-A1	DT06-2S-EP06	-
CN-420	DEUTSCH	2	Swing parking-A2	DT06-2S-EP06	-
CN-421	DEUTSCH	2	Swing parking-A3	DT06-2S-EP06	-
CN-427	MOLEX	4	Reader-RMS	039012040	026013096
		12		5557-12R	5559-12P
CN-430	TE	15	l/conn (Frame harness-Aftertreatment harness)	2-85262-1	368301-1
CN-680	DEUTSCH	15	Hydraulic reverse fan solenoid	DT06-2S-EP06	-
AT1E	TYCO	4	DOC/DPF thermistor	4-1418390-1	-
AT2A	TYCO	4	SCR Outlet Nox sensor	1-1418390-1	-
AT-5A	TYCO	4	SCR supply module	2-1418390-1	-
AT-6A	TYCO	8	DEF/AdBlue® dosing module	1-141-8479-1	-
AT9A	TYCO	4	SCR thermistor cont sensor	3-1418390-1	-
AT11A	FRAMATOME	4	System in NOx sensor	F715600	-
CO24B	-	24	Engine side cross over connector	PPI0000656	-
· Relay					
CR-1	RING-TERM	-	Battery relay	ST710289-2	-
CR-2	-	5	Horn relay	-	-
CR-4	-	5	Working lamp relay	-	-
CR-5	-	5	Anti restart relay	-	-
CR-7	-	5	Aircon compressor relay	-	-
CR-9	-	5	Cabin lamp relay	-	-
CR-13	-	5	Head lamp relay	-	-
CR-23	KET	2	Start relay	S814-002001	S814-102001
CR-23S	RING TERM	1	Start relay	ST710286-2	-
CR-24B+	RING TERM	1	Preheat relay B+	S820-406001	-
CR-24G	RING TERM	1	Preheat relay	ST710287-2	-
CR-24P	RING TERM	1	Preheat relay	S820-406001	-
CR-24S	RING TERM	1	Preheat relay	ST730018-3	-
CR-35	-	5	Power relay	-	-
CR-36	-	5	Preheat relay	-	-



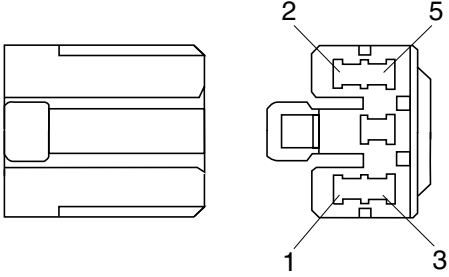
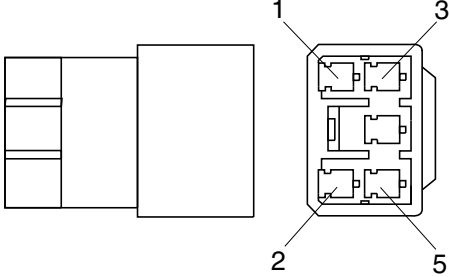
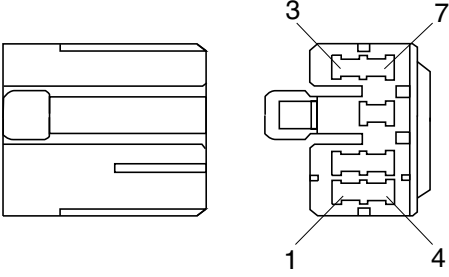
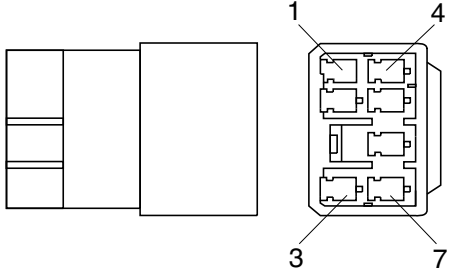
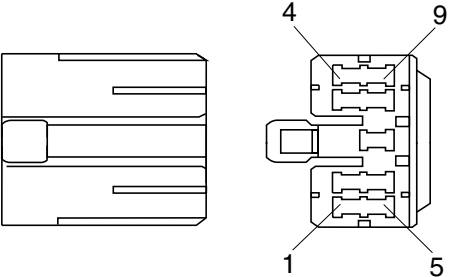
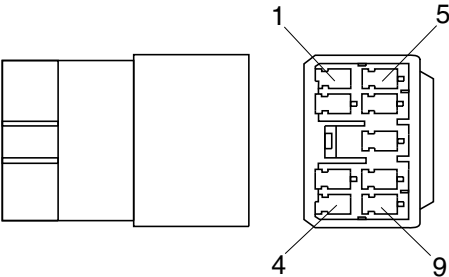
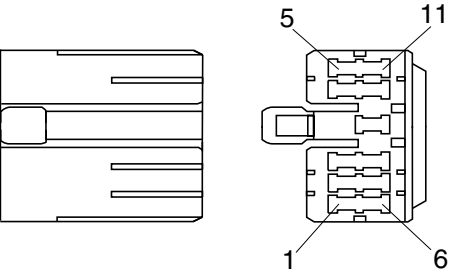
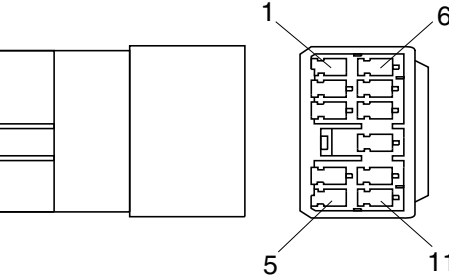
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CR-39	-	5	Starter lock out relay	-	-
CR-46	-	5	Fuel warmer relay	-	-
CR-48	-	5	Safety relay	-	-
CR-50	-	5	DEF&SCR sensor relay	-	-
CR-51	-	5	DEF/AdBlue® module relay	-	-
CR-52	-	5	Line heater relay	-	-
CR-85	-	5	Beacon lamp relay	-	-
· Switch					
CS-1	SHUR	1	Door switch	S822-014002	S822-114002
CS-2A	WP	6	Start switch	S814-006100	-
CS-2B	DEUTSCH	3	Start button	DT06-3S-EP06	DT04-3P-E005
CS-2C	KET	3	Button start	MG651032	-
CS-2D	KET	3	Button start key	-	MG641035
CS-4	DEUTSCH	3	Safety switch	DT06-3S	-
CS-5	DEUTSCH	2	Horn switch	-	DT04-2P
CS-19	DEUTSCH	2	One touch decel switch	-	DT04-2P
CS-26	DEUTSCH	2	Breaker switch	DT06-2S	-
CS-26A	AMP	2	Breaker pedal switch	S816-002002	S816-102002
CS-29	DEUTSCH	2	Power max switch	DT06-2S	-
CS-33	AMP	6	Emergency engine stop switch	S816-006002	S816-106002
CS-52	CARLING	10	2 Piece switch	VC2-01	-
CS-53	AMP	1	Wiper cut switch	S822-014002	-
CS-61	TE	2	Floating switch	174352-2	-
CS-67	CARLING	10	Quick clamp switch	VC2-01	-
CS-73	CARLING	10	Swing lock switch	VC2-01	-
CS-73A	CARLING	10	Swing fine switch	VC2-01	-
CS-74	KET	2	Master switch	MG610557-5	-
CS-74B	DEUTSCH	2	Master switch	DT06-2S-EP06	-
CS-79	CARLING	10	Lower wiper switch	VC2-01	-
CS-83	CARLING	10	Swing lock switch	VC2-01	-
CS-83A	CARLING	10	Fine swing switch	VC2-01	-
CS-90	TE	6	Removable CWT select switch	174262-2	174264-2
CS-99	CARLING	10	Air compressor switch	VC2-01	-
CS-100	CARLING	10	Exhaust system cleaning switch	VC2-01	-
CS-107	CARLING	10	Travel straight switch	VC2-01	-
CS-108	CARLING	10	Auto grease switch	VC2-01	-
CS-111	CARLING	10	Boom floating switch	VC2-01	-
CS-250	DEUTSCH	2	Seat switch	DT06-2S	-
· Light					

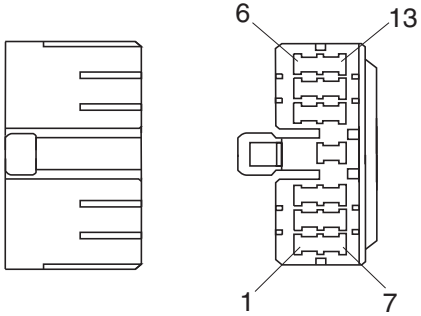
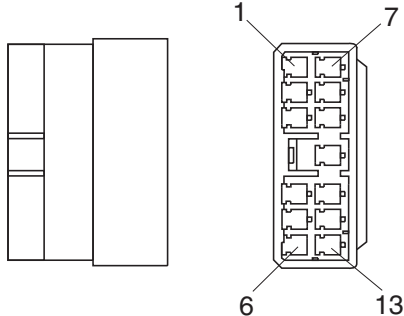
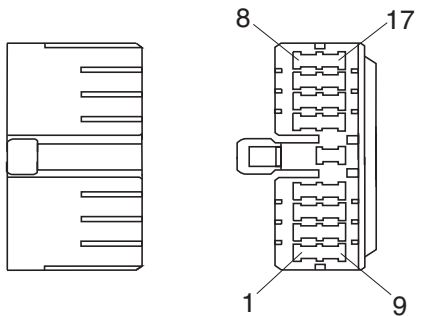
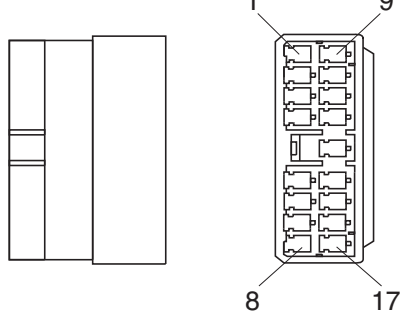
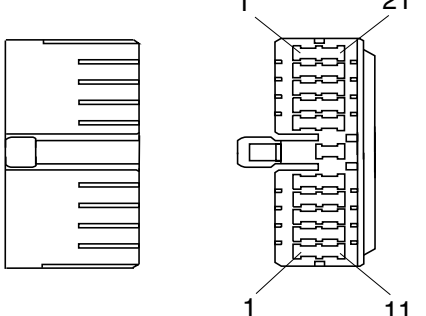
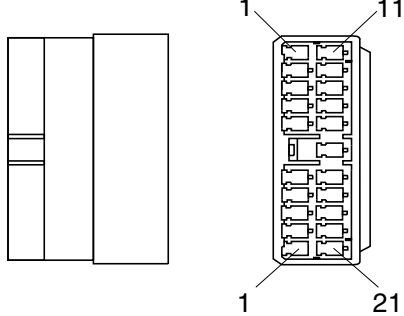
Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CL-1	KET	3	Room lamp	MG651032	-
CL-2	AMP	1	Cigar lighter	S822-014002	S822-114002
				S822-014002	-
CL-3	DEUTSCH	2	Head lamp-LH	DT06-2S-EP06	-
CL-4	DEUTSCH	2	Head lamp-RH	DT06-2S-EP06	-
CL-5	DEUTSCH	2	Work lamp-LH	DT06-2S-EP06	DT04-2P
CL-6	DEUTSCH	2	Work lamp-RH	DT06-2S-EP06	DT04-2P
CL-7	DEUTSCH	2	Beacon lamp	DT06-2S-EP06	DT04-2P
CL-8	DEUTSCH	2	Cab lighter-LH	DT06-2S-EP06	DT04-2P
CL-9	DEUTSCH	2	Cab lighter-RH	DT06-2S-EP06	DT04-2P
CL-10	DEUTSCH	2	Cab lighter - RH	DT06-2S-EP06	DT04-2P
CL-24	DEUTSCH	2	Head lamp-rear	DT06-2S-EP06	DT04-2P-E005
CL-24A	DEUTSCH	2	Head lamp-rear	DT06-2S-EP06	DT04-2P-E005
CL-24B	DEUTSCH	2	Head lamp-rear (removable CWT)	DT06-2S-EP06	DT04-2P-E005
CL-36	DEUTSCH	2	Work lamp - LH	DT06-2S-EP06	-
CL-37	DEUTSCH	2	Work lamp - RH	DT06-2S-EP06	-
CL-40	DEUTSCH	2	DEF/AdBlue® lamp	DT06-2S-EP06	-
· Sensor, sender					
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	SUMITOMO	4	TBAP sensor	6098-0144	-
CD-10A	AMP	2	Air cleaner switch	85202-1	-
CD-16	-	2	Water level sensor	E-5931	-
CD-24	DEUTSCH	3	Swing pressure sensor	DT06-3S-EP06	-
CD-31	DEUTSCH	3	Overload pressure sensor	DT06-3S-EP06	DT04-3P-E005
CD-32	DEUTSCH	3	Boom up pressure sensor	DT06-3S-EP06	-
CD-35	DEUTSCH	3	Bucket in pressure sensor	DT06-3S-EP06	-
CD-42	DEUTSCH	3	Pump pressure 1 (M1)	DT06-3S-EP06	-
CD-43	DEUTSCH	3	Pump pressure 2 (M2)	DT06-3S-EP06	-
CD-44	DEUTSCH	3	Power shift pressure 3 (M3)	DT06-3S-EP06	-
CD-45	DEUTSCH	2	WIF sensor	DT06-2S-EP06	-
CD-52	TE	2	Fan speed sensor	174352-2	-
CD-69	DEUTSCH	3	Attach pressure sensor	DT06-3S-EP06	-
CD-70	DEUTSCH	3	N1 pressure sensor (X1)	DT06-3S-EP06	-
CD-71	DEUTSCH	3	N2 pressure sensor (X2)	DT06-3S-EP06	-
CD-85	DEUTSCH	3	Boom down pressure sensor	DT06-3S-EP06	-
CD-86	DEUTSCH	3	Arm out pressure sensor	DT06-3S-EP06	-

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CD-87	DEUTSCH	3	Bucket out pressure sensor	DT06-3S-EP06	-
CD-90	DEUTSCH	3	Arm in pressure sensor	DT06-3S-EP06	-
CD-124	DEUTSCH	3	Boom cylinder rod pressure snensor	DT06-3S-EP06	-

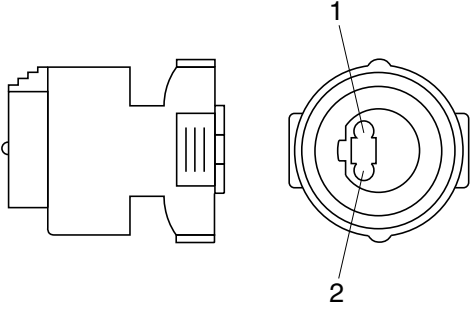
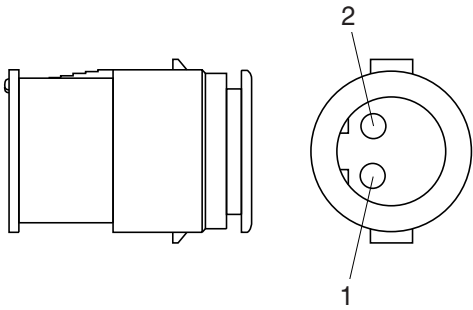
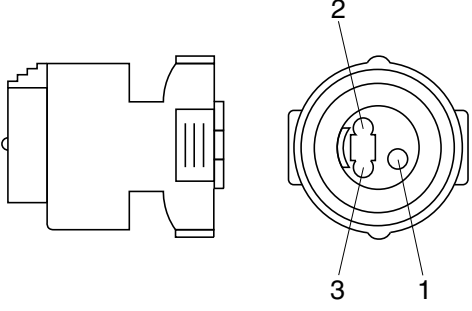
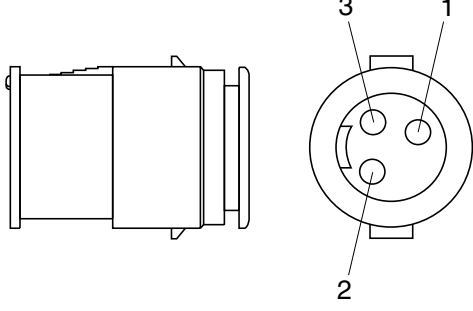
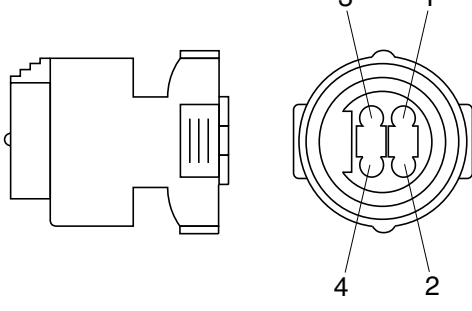
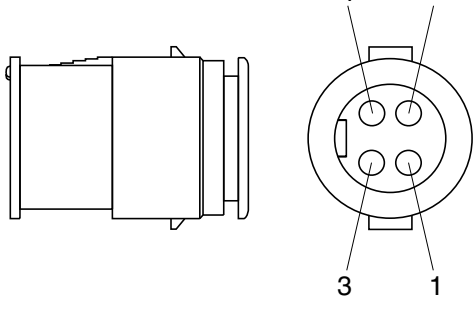
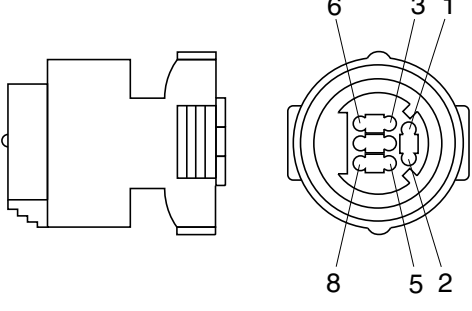
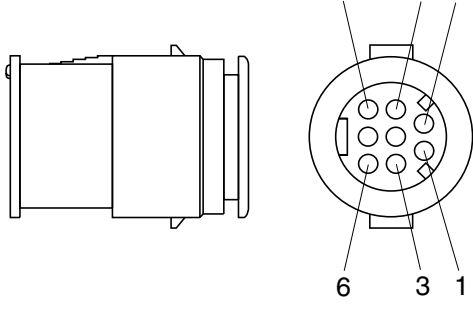
## 2. CONNECTION TABLE FOR CONNECTORS

### 1) PA TYPE CONNECTOR

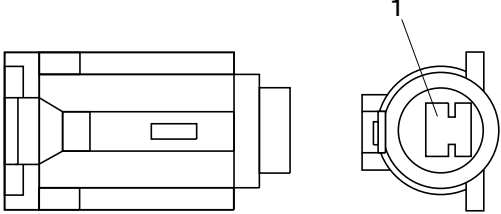
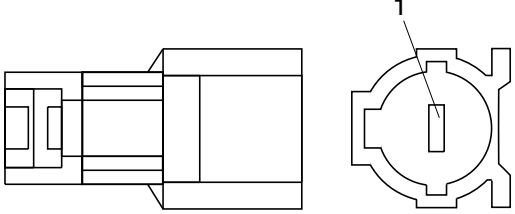
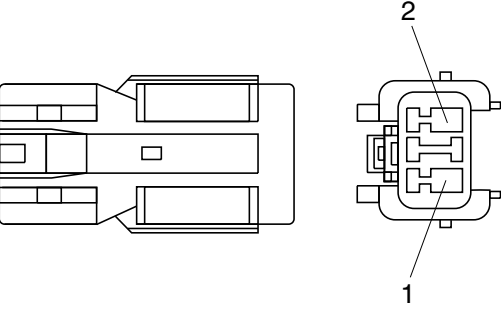
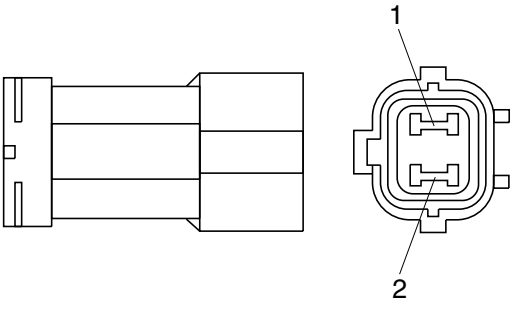
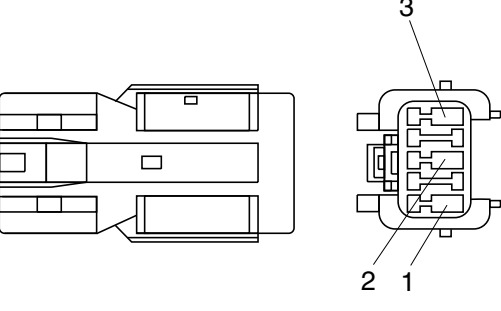
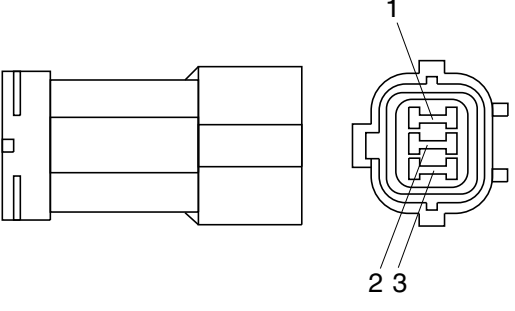
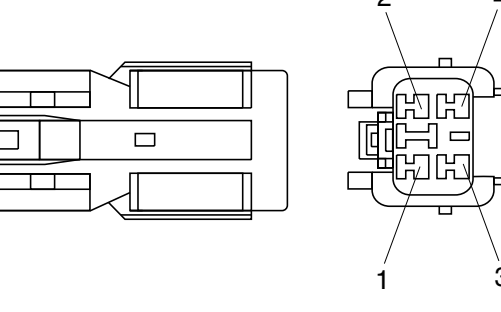
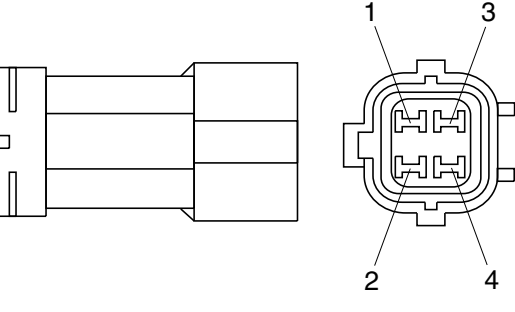
No. of pin	Receptacle connector (female)	Plug connector (male)
5	 <p style="text-align: center;">S811-005002</p>	 <p style="text-align: center;">S811-105002</p>
7	 <p style="text-align: center;">S811-007002</p>	 <p style="text-align: center;">S811-107002</p>
9	 <p style="text-align: center;">S811-009002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

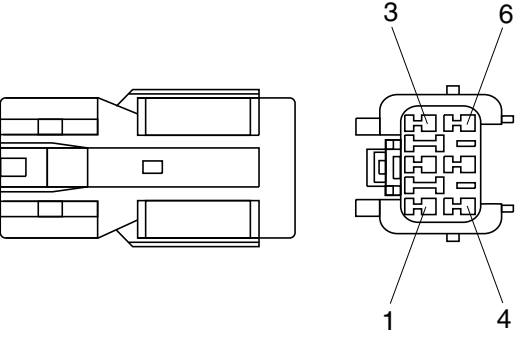
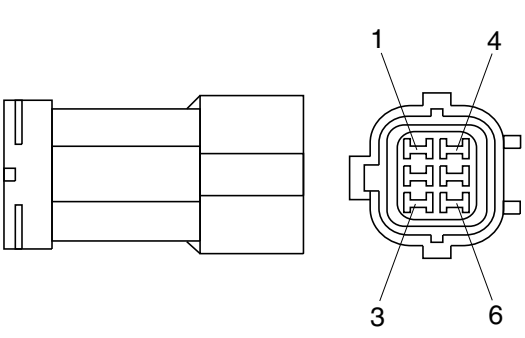
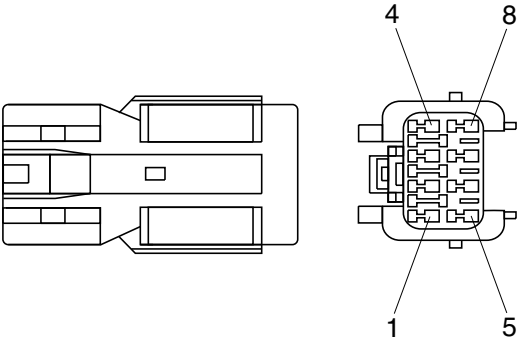
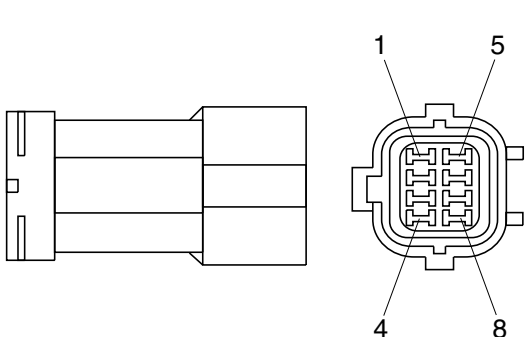
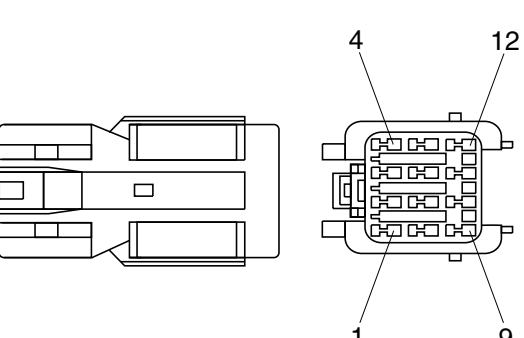
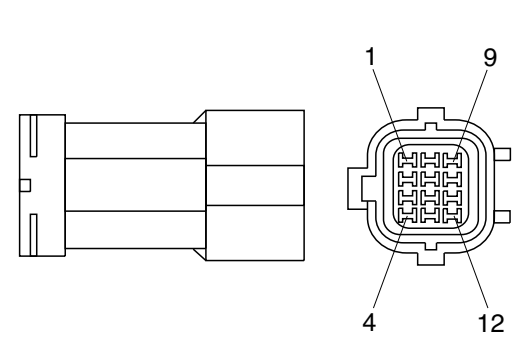
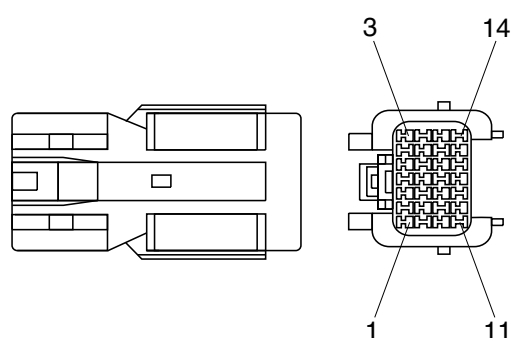
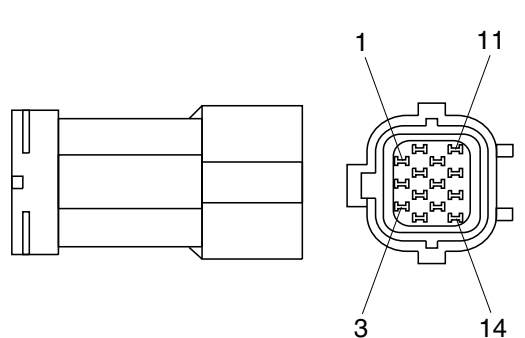
No. of pin	Receptacle connector (female)	Plug connector (male)
13	 <p style="text-align: center;">S811-013002</p>	 <p style="text-align: center;">S811-113002</p>
17	 <p style="text-align: center;">S811-017002</p>	 <p style="text-align: center;">S811-117002</p>
21	 <p style="text-align: center;">S811-021002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

## 2) J TYPE CONNECTOR

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

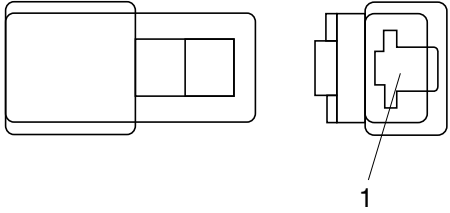
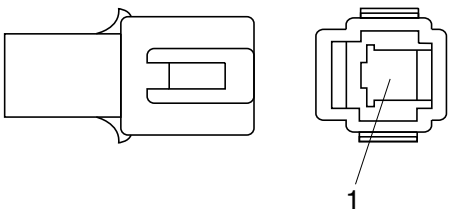
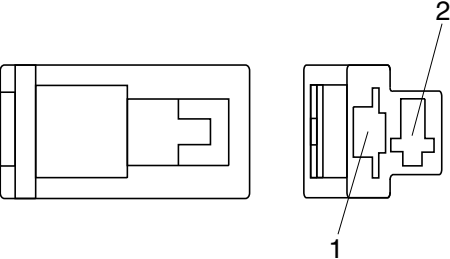
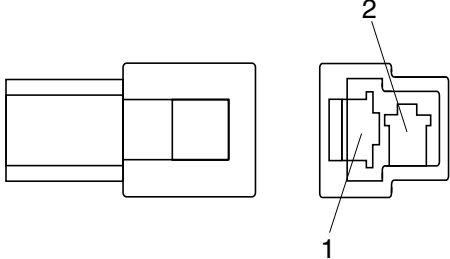
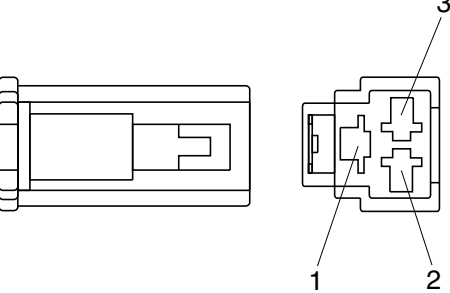
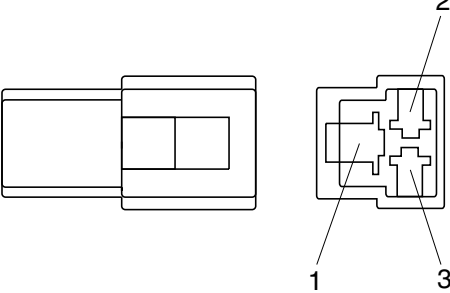
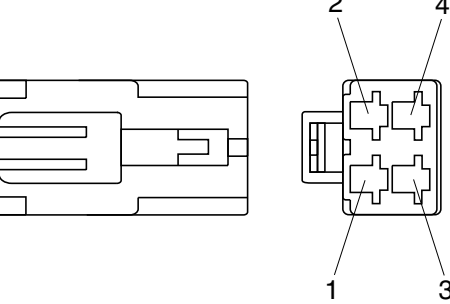
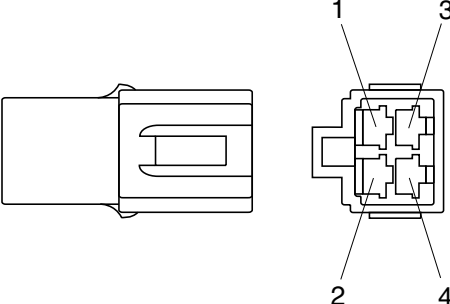
### 3) SWP TYPE CONNECTOR

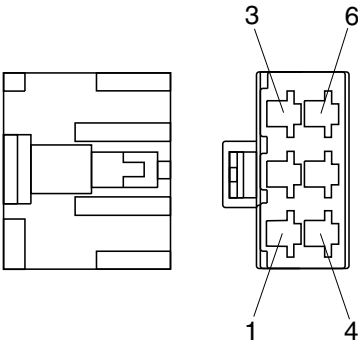
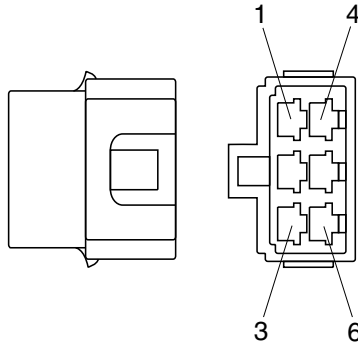
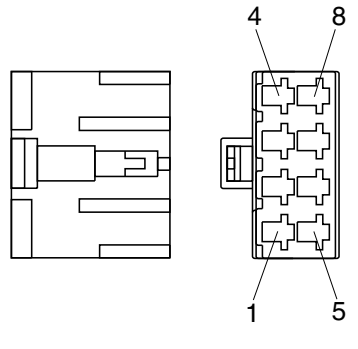
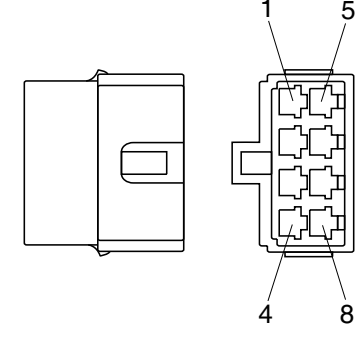
No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p data-bbox="687 680 836 712">S814-001000</p>	 <p data-bbox="1241 680 1390 712">S814-101000</p>
2	 <p data-bbox="687 1088 836 1120">S814-002000</p>	 <p data-bbox="1241 1088 1390 1120">S814-102000</p>
3	 <p data-bbox="687 1498 836 1529">S814-003000</p>	 <p data-bbox="1241 1498 1390 1529">S814-103000</p>
4	 <p data-bbox="687 1908 836 1939">S814-004000</p>	 <p data-bbox="1241 1908 1390 1939">S814-104000</p>

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p data-bbox="686 638 837 672">S814-006000</p>	 <p data-bbox="1236 638 1388 672">S814-106000</p>
8	 <p data-bbox="686 1041 837 1075">S814-008000</p>	 <p data-bbox="1236 1041 1388 1075">S814-108000</p>
12	 <p data-bbox="686 1444 837 1478">S814-012000</p>	 <p data-bbox="1236 1444 1388 1478">S814-112000</p>
14	 <p data-bbox="686 1848 837 1881">S814-014000</p>	 <p data-bbox="1236 1848 1388 1881">S814-114000</p>

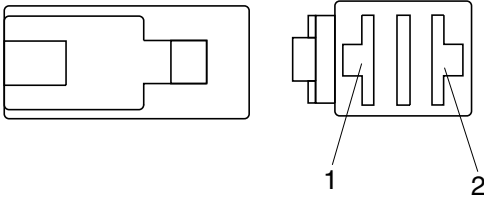
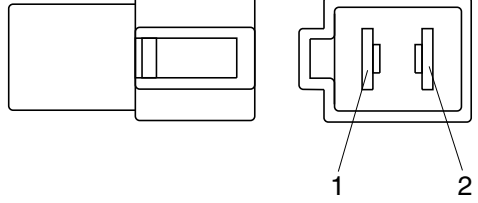


#### 4) CN TYPE CONNECTOR

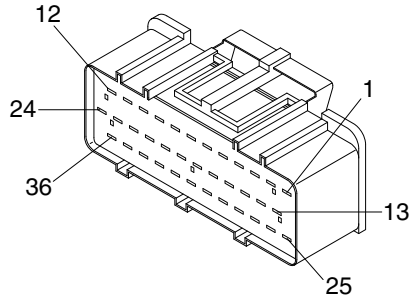
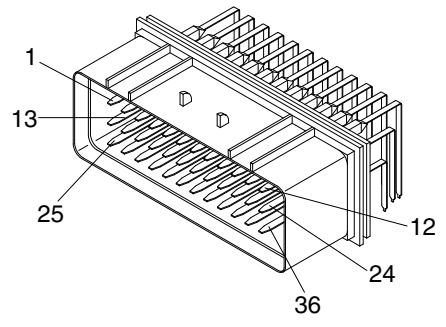
No. of pin	Receptacle connector (female)	Plug connector (male)
1	 <p style="text-align: center;">S810-001202</p>	 <p style="text-align: center;">S810-101202</p>
2	 <p style="text-align: center;">S810-002202</p>	 <p style="text-align: center;">S810-102202</p>
3	 <p style="text-align: center;">S810-003202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

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

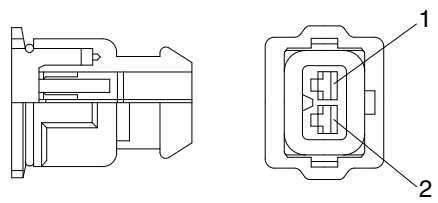
### 5) 375 FASTEN TYPE CONNECTOR

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

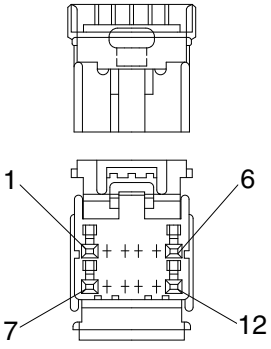
### 6) AMP ECONOSEAL CONNECTOR

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

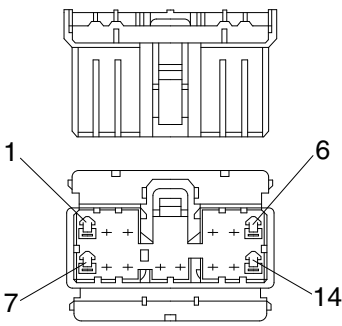
### 7) AMP TIMER CONNECTOR

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

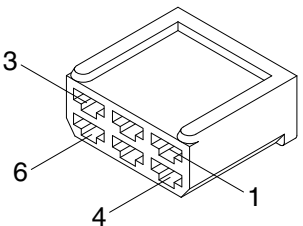
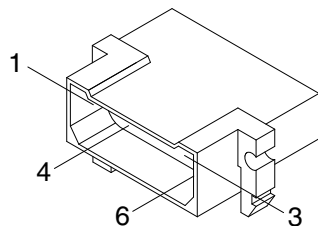
### 8) AMP 040 MULTILOCK CONNECTOR

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

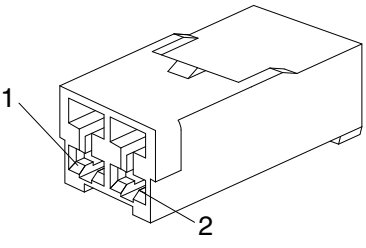
### 9) AMP 070 MULTILOCK CONNECTOR

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

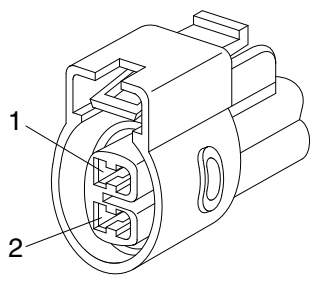
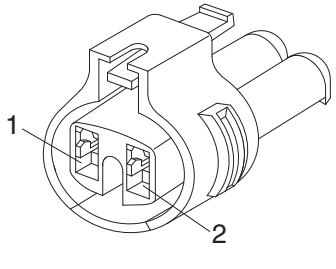
### 10) AMP FASTIN - FASTON CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p style="text-align: right;">925276-0</p>	 <p style="text-align: right;">480003-9</p>

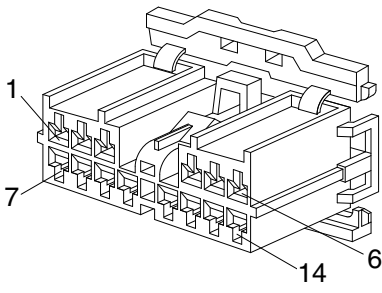
### 11) KET 090 CONNECTOR

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

### 12) KET 090 WP CONNECTORS

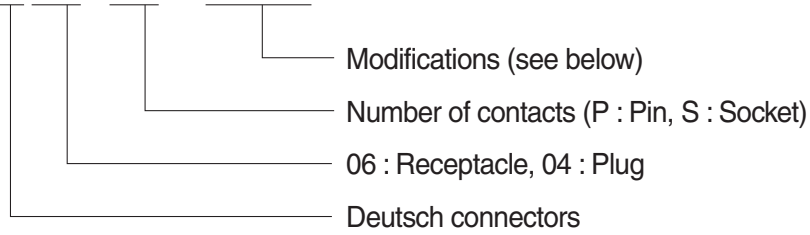
No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: right;">MG640605</p>	
2	 <p style="text-align: right;">MG640795</p>	

### 13) KET SDL CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
14	 <p style="text-align: center;">MG610406</p>	

## 14) DEUTSCH DT CONNECTORS

DT 06 - 3S - ★★☆☆



※ Modification

E003 : Standard end cap - gray

E004 : Color of connector to be black

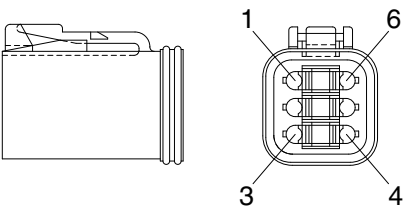
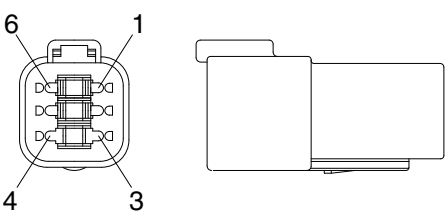
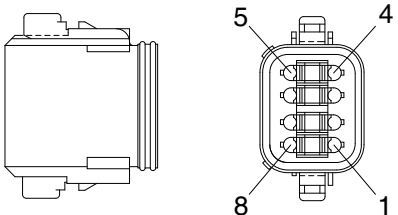
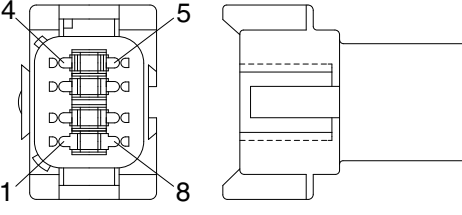
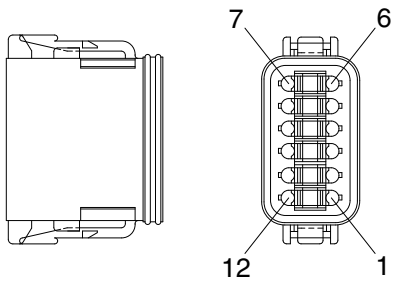
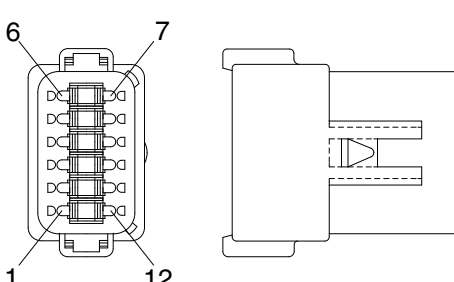
E005 : Combination - E004 & E003

EP04 : End cap

EP06 : Combination P012 & EP04

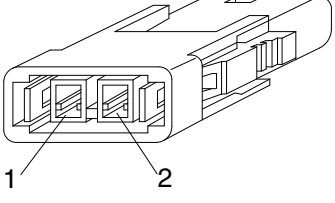
P012 : Front seal enhancement - connectors color to black for 2, 3, 4 & 6pin

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>

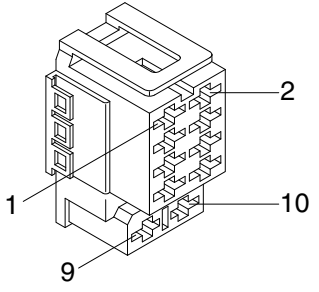
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p style="text-align: center;">DT06-6S</p>	 <p style="text-align: center;">DT04-6P</p>
8	 <p style="text-align: center;">DT06-8S</p>	 <p style="text-align: center;">DT04-8P</p>
12	 <p style="text-align: center;">DT06-12S</p>	 <p style="text-align: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



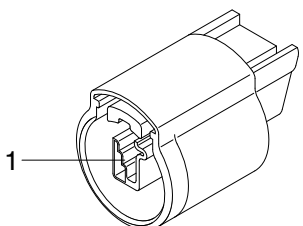
### 15) MOLEX 2CKTS CONNECTOR

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

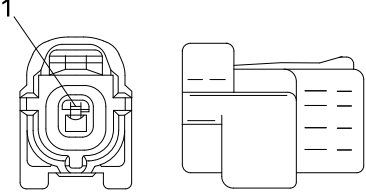
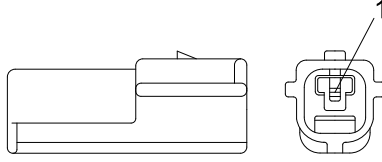
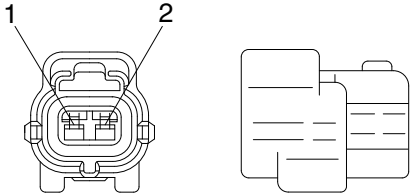
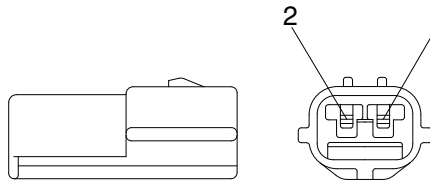
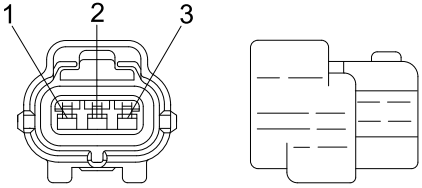
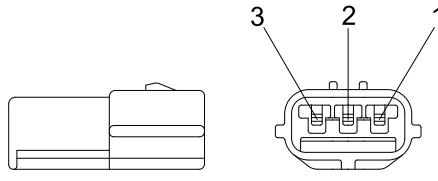
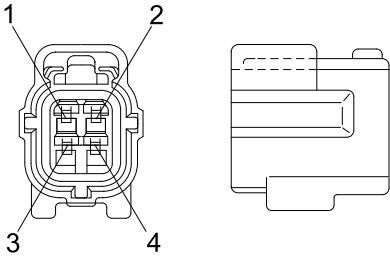
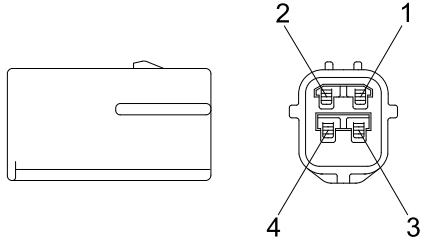
### 16) ITT SWF CONNECTOR

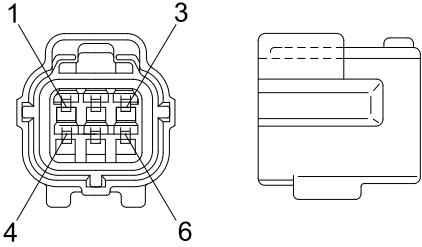
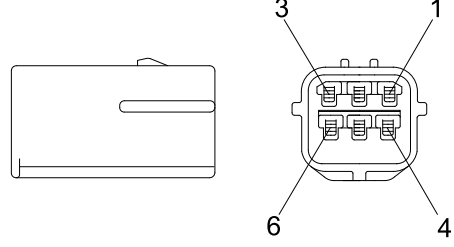
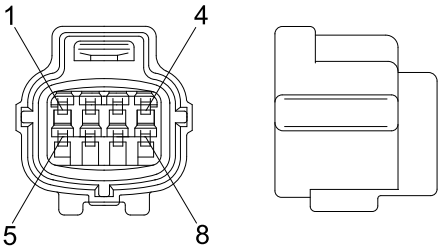
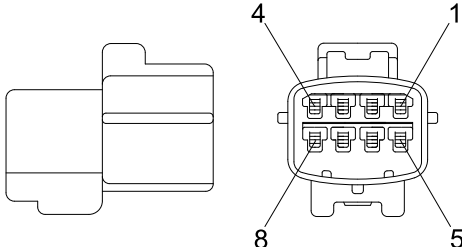
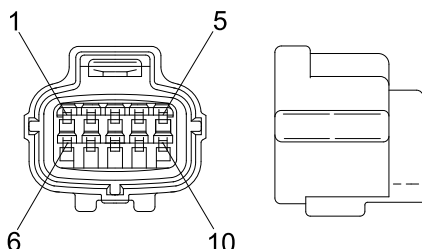
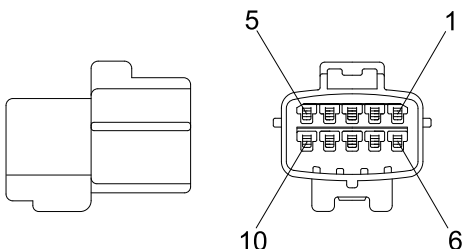
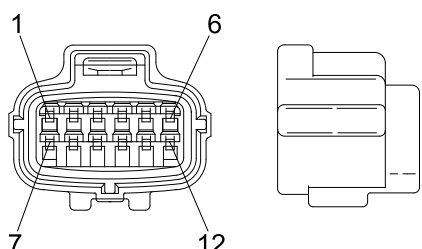
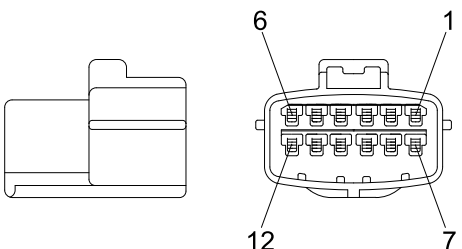
No. of pin	Receptacle connector (female)	Plug connector (male)
10	 <p data-bbox="694 1288 837 1310">SWF593757</p>	

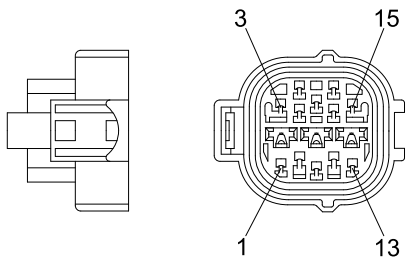
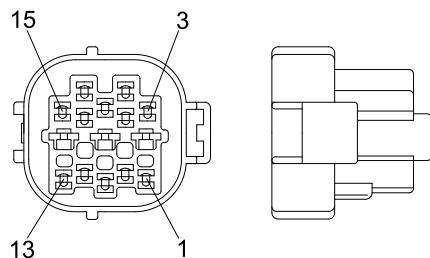
### 17) MWP NMWP CONNECTOR

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

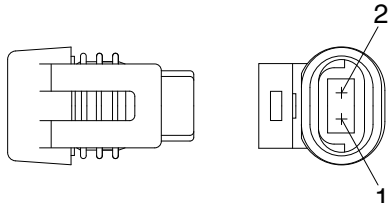
### 18) ECONOSEAL J TYPE CONNECTORS

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

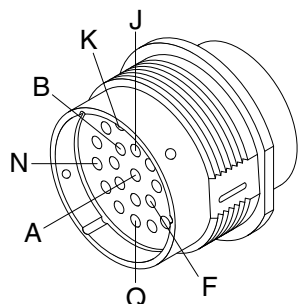
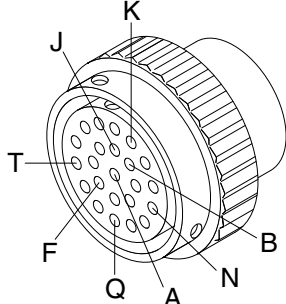
No. of pin	Receptacle connector (female)	Plug connector (male)
6	 <p data-bbox="686 638 837 672">S816-006002</p>	 <p data-bbox="1236 638 1388 672">S816-106002</p>
8	 <p data-bbox="686 1041 837 1075">S816-008002</p>	 <p data-bbox="1236 1041 1388 1075">S816-108002</p>
10	 <p data-bbox="686 1444 837 1478">S816-010002</p>	 <p data-bbox="1236 1444 1388 1478">S816-110002</p>
12	 <p data-bbox="686 1848 837 1881">S816-012002</p>	 <p data-bbox="1236 1848 1388 1881">S816-112002</p>

No. of pin	Receptacle connector (female)	Plug connector (male)
15	 <p style="text-align: right;">368301-1</p>	 <p style="text-align: right;">2-85262-1</p>

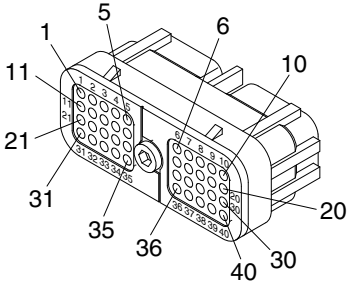
### 19) METRI-PACK TYPE CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
2	 <p style="text-align: right;">12040753</p>	

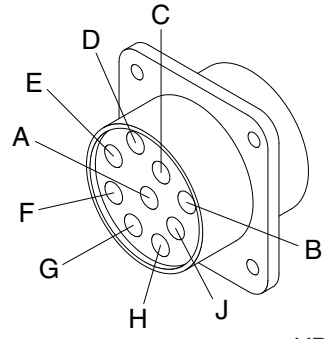
### 20) DEUTSCH HD30 CONNECTOR

No. of pin	Receptacle connector (female)	Plug connector (male)
23	 <p style="text-align: right;">HD36-24-23SN</p>	 <p style="text-align: right;">HD34-24-23PN</p>

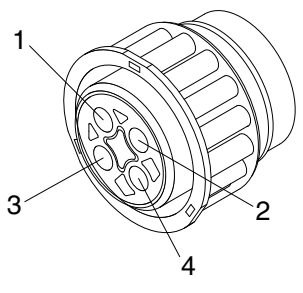
### 21) DEUTSCH MCU CONNECTOR

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

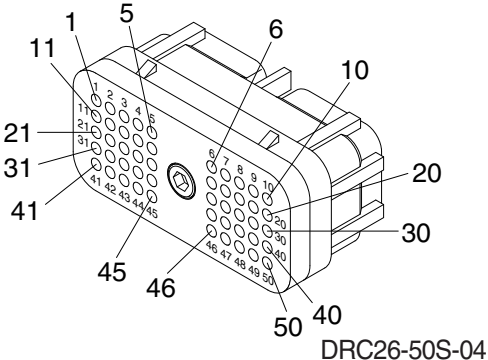
### 22) DEUTSCH SERVICE TOOL CONNECTOR

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

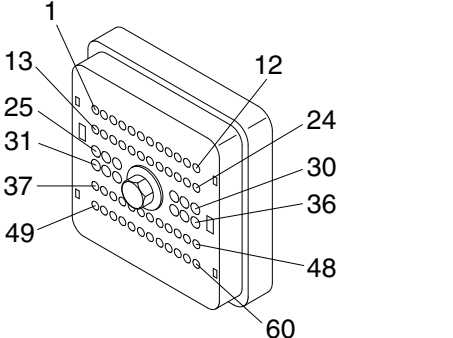
### 23) AMP FUEL WARMER CONNECTOR

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

### 24) DEUTSCH ENGINE ECM CONNECTOR

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

### 25) DEUTSCH INTERMEDIATE CONNECTOR

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