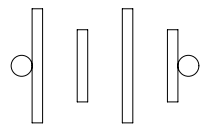
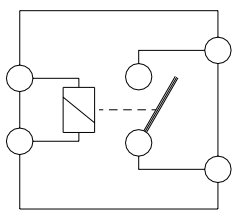
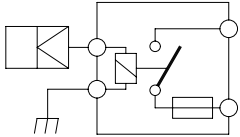
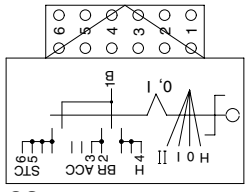
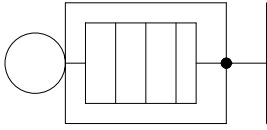
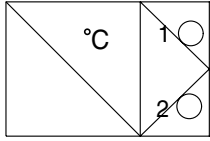
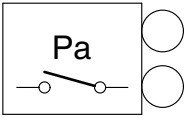
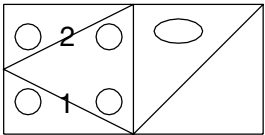
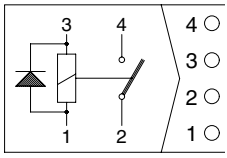
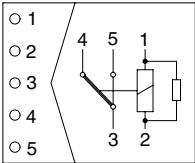
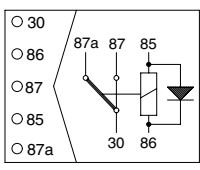
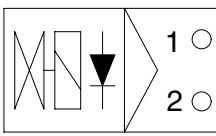
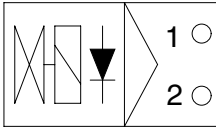
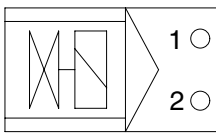
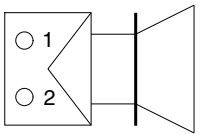
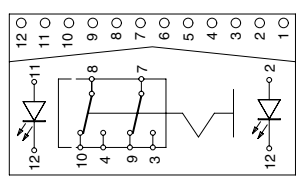
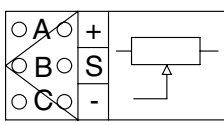
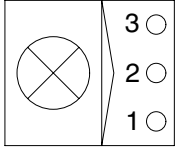
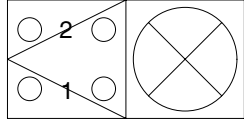
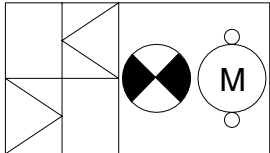
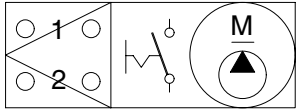
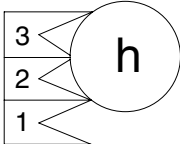
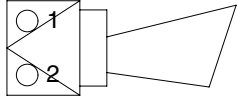


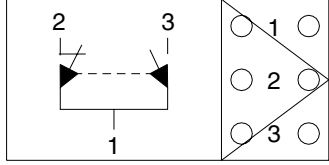
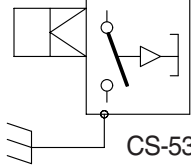
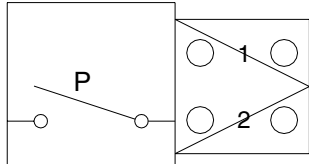
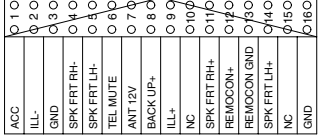
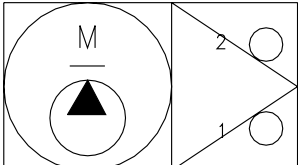
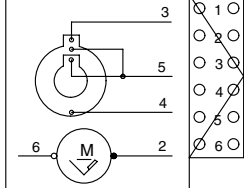
## GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

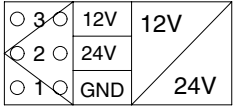
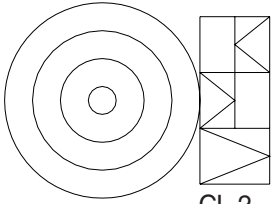
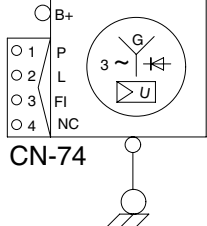
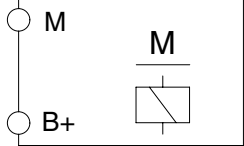
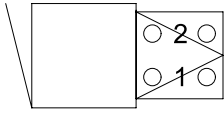
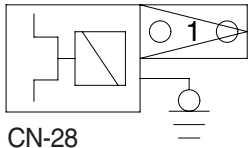
Part name	Symbol	Specifications	Check						
Battery		12V × 100Ah (2EA)	※ Check specific gravity 1.280 over : Over charged 1.280 ~ 1.250 : Normal 1.250 below : Recharging						
Battery relay	 <p style="text-align: center;">CR-1</p>	Rated load : 24V 100A (continuity) 1000A (30seconds)	※ Check coil resistance(M4 to M4) Normal : About 50 Ω ※ Check contact Normal : ∞ Ω						
Pre-heat relay	 <p style="text-align: center;">CR-24</p>	24V 200A	※ Check contact Normal : 0.942 Ω (For terminal 1-GND)						
Start key	 <p style="text-align: center;">CS-2</p>	B-BR : 24V 1A B-ACC : 24V 10A B-ST : 24V 40A	※ Check contact OFF : ∞ Ω (for each terminal) ON : 0 Ω (for terminal 1-3 and 1-2) START : 0 Ω (for terminal 1-5)						
Pressure sensor (cluster type 1)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>○ A</td><td>SUPPLY</td></tr> <tr><td>○ B</td><td>SIG</td></tr> <tr><td>○ C</td><td>RETURN</td></tr> </table> <p>CD-6 CD-7 CD-24 CD-31 CD-32 CD-42 CD-43 CD-44 CD-69</p>	○ A	SUPPLY	○ B	SIG	○ C	RETURN	8~30V	※ Check contact Normal : 0.1 Ω
○ A	SUPPLY								
○ B	SIG								
○ C	RETURN								
Pressure sensor (cluster type 2)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>○ A</td><td>SUPPLY</td></tr> <tr><td>○ B</td><td>SIG</td></tr> <tr><td>○ C</td><td>RETURN</td></tr> </table> <p>CD-6 CD-7 CD-31 CD-42 CD-43 CD-44</p>	○ A	SUPPLY	○ B	SIG	○ C	RETURN	8~30V	※ Check contact Normal : 0.1 Ω
○ A	SUPPLY								
○ B	SIG								
○ C	RETURN								

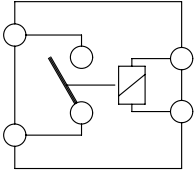
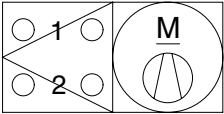
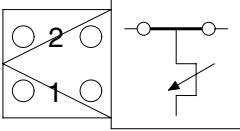
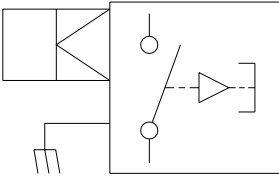
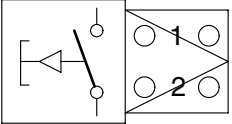
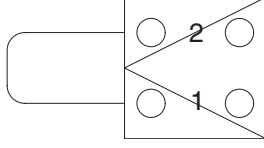
Part name	Symbol	Specifications	Check
Pre-heat plug	 CN-80	24V 200A	※ Check resistance 0.25~0.12Ω
Temperature sensor (hydraulic, coolant)	 CD-1 CD-8	-	※ Check resistance 50°C : 804Ω 80°C : 310Ω 100°C : 180Ω
Air cleaner pressure switch	 CD-10	(N.O TYPE)	※ Check contact High level : ∞Ω Low level : 0Ω
Fuel 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-36 CR-62 Cluster type 2 only (CR-52)	24V 16A	※ Check resistance Normal : About 160Ω (for terminal 1-2) 0Ω (for terminal 3-4) ∞Ω (for terminal 3-5)

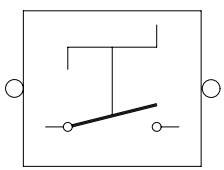
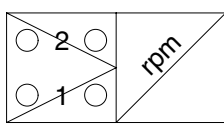
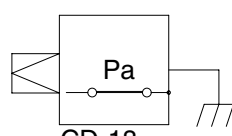
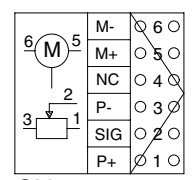
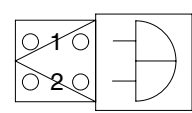
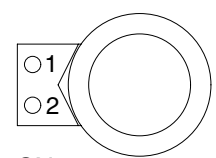
Part name	Symbol	Specifications	Check
Relay	 <p>CR-4 CR-5 CR-7 CR-9 CR-13 CR-35 CR-46</p>	24V 16A	※ Check resistance Normal : About 160 Ω (for terminal 85-86) 0 Ω (for terminal 30-87a) ∞ Ω (for terminal 30-87)
Solenoid valve (cluster type 1)	 <p>CN-66 CN-68 CN-70 CN-88 CN-135 CN-140 CN-149 CN-236 CN-237</p>	24V 1A	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
Solenoid valve (cluster type 2)	 <p>CN-66 CN-68 CN-70 CN-88 CN-140 CN-133</p>	24V 1A	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
EPPR valve (cluster type 1)	 <p>CN-75 CN-133 CN-242</p>	700mA	※ Check resistance Normal : 15~25 Ω (for terminal 1-2)
Speaker	 <p>CN-23(LH) CN-24(RH)</p>	20W	※ Check resistance Normal : A few Ω
Switch (locking type)	 <p>CS-23 CS-50 CS-52 CS-67 CS-82 CS-83 CS-99 CS-100</p>	24V 8A	※ Check contact Normal ON : 0 Ω (for terminal 3-7, 4-8) ∞ Ω (for terminal 7-9, 8-10) OFF : ∞ Ω (for terminal 3-7, 4-8) 0 Ω (for terminal 7-9, 8-10)
Accel dial	 <p>CN-142</p>	-	※ Check resist Normal : About 5k Ω (for terminal A-C) ※ Check voltage Normal : About 5V (for terminal A-C) : 2~4.5V (for terminal C-B)

Part name	Symbol	Specifications	Check
Room lamp	 <p>CL-1</p>	24V 10W	※ Check disconnection Normal : 1.0Ω ON : 0Ω (For terminal 1-2) ∞Ω (For terminal 1-3) OFF : ∞Ω (For terminal 1-2) 0Ω (For terminal 1-3)
Head lamp, Work lamp, Cab lamp	 <p>CL-3 CL-4 CL-5 CL-6 CL-8 CL-9</p>	24V 65W (H3 Type)	※ Check disconnection Normal : 1.2Ω
Beacon lamp	 <p>CL-7</p>	21V 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.2 and connect terminal No.1 and ground
Horn	 <p>CN-20 CN-25</p>	DC22~28V 2A	※ Check operation Supply power(24V) to each terminal and connect ground.

Part name	Symbol	Specifications	Check
Safety switch	 <p>CS-4</p>	24V 15A (N.C TYPE)	※ Check contact Normal : 0Ω (for terminal 1-2) ∞Ω (for terminal 1-3) Operating : ∞Ω (for terminal 1-2) 0Ω (for terminal 1-3)
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	※ Check contact Normal : ∞Ω
Radio & USB player	 <p>CN-27</p>	24V 2A	※ Check voltage 20~25V (for terminal 1-3, 3-8)
Washer pump	 <p>CN-22</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)

Part name	Symbol	Specifications	Check
DC/DC Converter	 <p>CN-138</p>	12V 3A	24V (1-2) 12V (1-3)
Cigar lighter	 <p>CL-2</p>	24V 5A 1.4W	※ Check coil resistance Normal : About 1M $\Omega$ ※ Check contact Normal : $\infty \Omega$ Operating time : 5~15sec
Alternator	 <p>CN-74</p>	Delco Remy 24V 50A	※ Check contact Normal : 0 $\Omega$ (for terminal B <sup>+</sup> -I) Normal : 24~27.5V
Starter	 <p>CN-45</p>	Denso 24V 4.5kW	※ Check contact Normal : 0.1 $\Omega$
Travel alarm	 <p>CN-81</p>	24V 0.5A	※ Check contact Normal : 5.2 $\Omega$
Aircon compressor	 <p>CN-28</p>	24V 79W	※ Check contact Normal : 13.4 $\Omega$

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

Part name	Symbol	Specifications	Check
Master switch	 <p>CS-74 CS-74B</p>	6-36V	※ Check disconnection Normal : 0.1Ω
Speed sensor	 <p>CD-17</p>	-	※ Check resistance Normal : 300Ω (for terminal 1.2)
Pressure switch (engine oil)	 <p>CD-18</p>	0.5 kgf·m <sup>2</sup> (N.C TYPE)	※ Check resistance Normal : ∞Ω (CLOSE)
Accel actuator	 <p>CN-76</p>	-	※ Check resistance Normal : 10Ω (for terminal 5-6) 5KΩ (for terminal 1-3)
Travel alarm	 <p>CN-113</p>	24V 200mA 107 ± 4dB	-
Socket	 <p>CN-139</p>	12V 10A	-