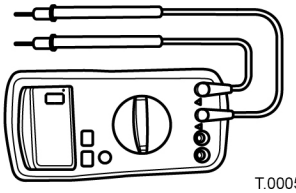
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Vehicle bridge and transmission shaft ..... AX
Carframe, hanger bracket and wheel ..... FR
Steering system ..... ST
Braking system ..... BR
Auto body ..... BW
Electrical system ..... EL

Project			Parameter
	pa-rame-ters	Power (KW)	81
		Torque (N · m)	280
		Fuel injection system	High pressure common rail
Post pro-cessing	Type		EGR+POC+DOC
	Model		WLDCJ4008
	Package manufacturer		Wuxi Weifu Lida Catalytic Purifier Co., Ltd.
Clutch	Main features		Single-disk type dry diaphragm spring
	Specification (mm)		ϕ265 × ϕ175
	Clutch operation		Vacuum assist – hydraulic control
Trans-mis-sion	Model		5G32
	Manufacturer		Zhejiang Wanliyang Co., Ltd.
Drive shaft	Drive shaft specification		One two-section, intermediate support with sliding spline
Frame	Type		Riveting
	Outer width(mm)		660/760/700
	Longitudinal beam sec-tion(Pre/medium/post)mm		110 × 60 × 4.5 180 × 60 × 4.5 140 × 60 × 4.5
Steer-ing gear	Steering gear type		Recirculating ball
	Boosting type		Hydraulic boost
	Specification (Cylinder diameter) mm		ϕ80
Service brake	Type of brake		Drum hydraulic brake ϕ300 × 75

Preparations

Recommended tool

Picture	Name	Applicable scope
 T.000502	Multimeter	Test voltage, resistance
 T.000503	Wire components	Detection line
	FT700 diagnostic tester	Reading fault code, clearing fault code, reading data flow, performing active test and reading the hardware or software version identification information of ECU control system

Main functions of engine control system

1	Pressure control
2	Fuel injection control
3	Fuel injection volume, fuel injection pressure, and fuel injection timing control
4	Fuel injection times control
5	Idle speed control

6	Fuel volume control of each cylinder
7	Start preheating control
8	Fault diagnosis function
9	Safety protection function
10	Exhaust gas recirculation control

DI

3. Check the grounding circuit of the high-pressure oil pump

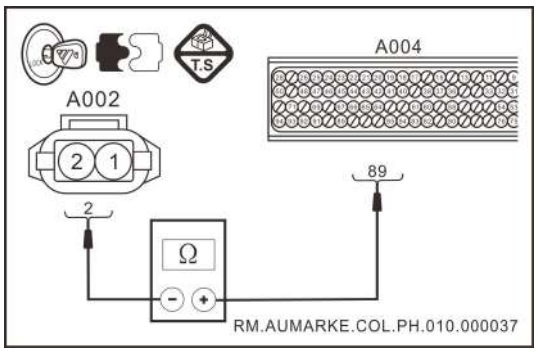
a. Ignition switch：LOCK.

Tip:

If the last state of the ignition switch is the ON gear, it should be installed after the LOCK gear. Further operation should be carried out after waiting for at least 2min in case of plugging / unplugging connectors with power available.

b. Disconnect from the negative electrode of the battery.

c. Disconnect the connector of the high-pressure oil pump.



d. Measure the resistance between the pin 2 of the high-pressure oil pump connector A002 and the pin 89 of the ECU connector A004.

Standard resistance：

Multimeter connection	Standard value
A002(2)-A004(89)	Conducting

Whether the inspection result is acceptable?

Yes > Go to Step 4.

No > Inspect and repair or replace the defective harness.

4. Check the high-pressure oil pump

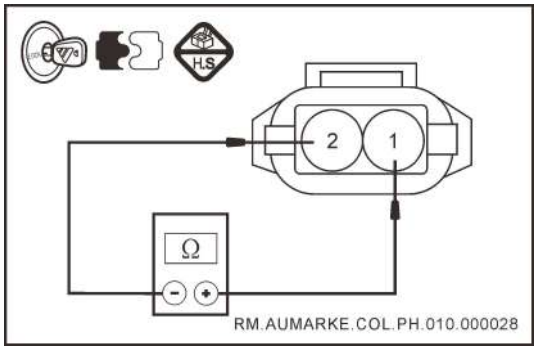
a. Ignition switch：LOCK.

Tip:

If the last state of the ignition switch is the ON gear, it should be installed after the LOCK gear. Further operation should be carried out after waiting for at least 2min in case of plugging / unplugging connectors with power available.

b. Disconnect from the negative electrode of the battery.

c. Disconnect the connector of the high-pressure oil pump A002.



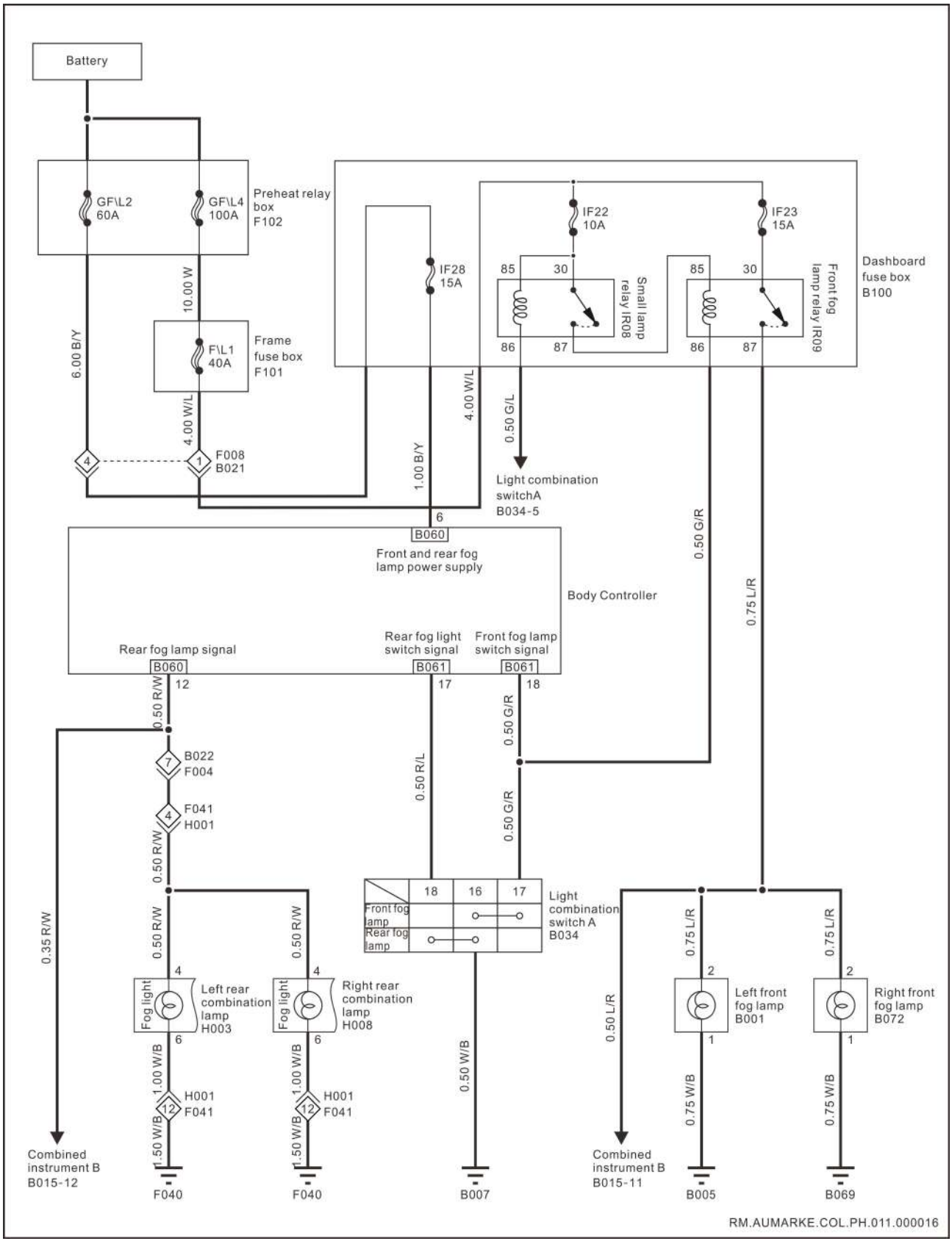
d. Measure the resistance between the pin 1 and 2 of the high-pressure oil pump connector A002.

Standard resistance：

Measurement conditions	Standard value
At 20° C	2.6~3.15Ω

Front fog lamp is acceptable and two sides of fog lamps are not on

Circuit diagram



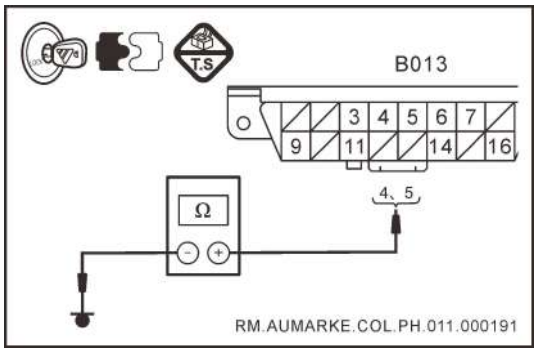
Whether the inspection result is acceptable?

DI

Yes > Go to Step 4.

No > Check whether the connector is disconnected, damaged or replace the fault connector or harness.

4. Check the ground circuit of diagnostic interface



a. Respectively measure the resistance between the No. 4, No. 5 terminals of the diagnostic interface B013 and ground with multimeter.

Standard resistance：

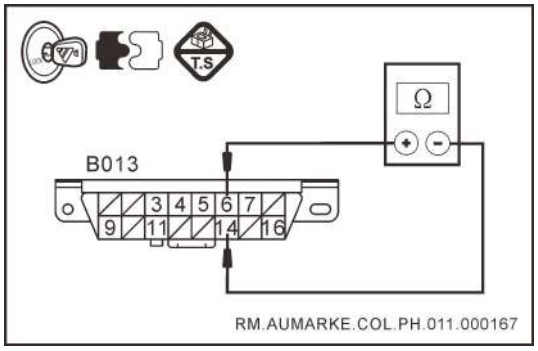
Multimeter connection terminal	Standard value
B013(4) - GND	Conducting
B013(5) - GND	Conducting

Whether the inspection result is acceptable?

Yes > Go to Step 5.

No > Check whether the grounding point is firm or replace the fault connector or harness.

5. Measure the CAN bus communication line



a. Measure the resistance between No.6 and No.14 of diagnostic interface B013.

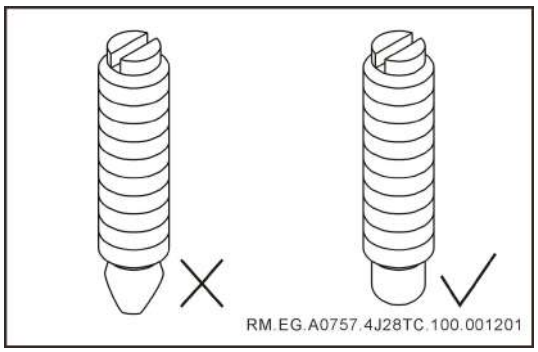
Standard resistance：

Multimeter connection terminal	Standard value
B013(6)-B013(14)	about 120Ω

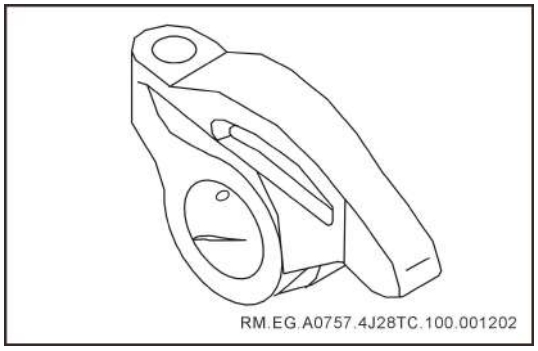
Whether the inspection result is acceptable?

Yes > Go to Step 6.

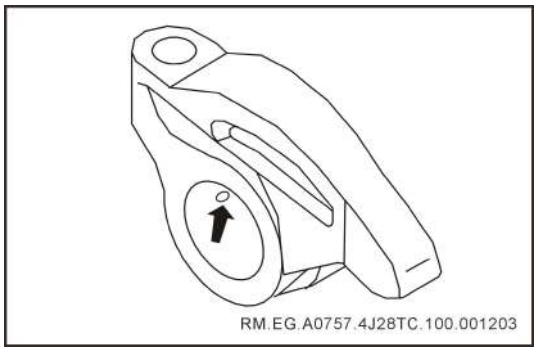
No > Check whether the terminal resistance that connected to each end of CAN bus is damaged and whether the CAN bus circuit is open.



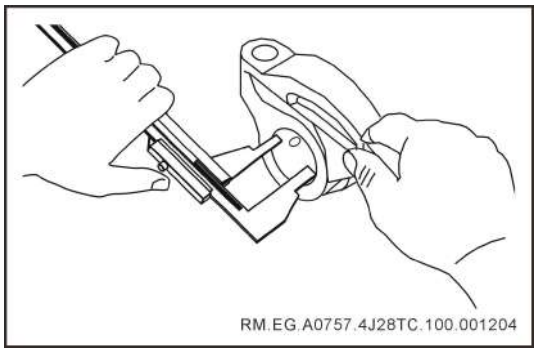
e. Inspect whether the threads of the valve clearance adjusting screw deform or its round head is worn, and replace if any.



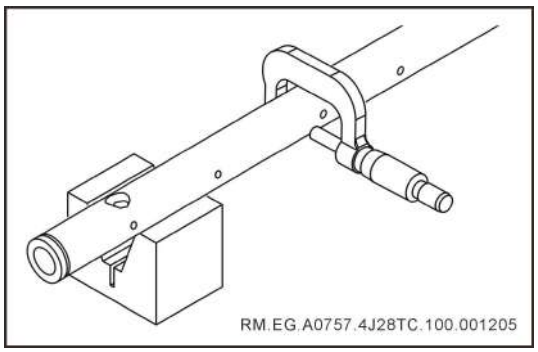
f. Inspect whether there are cracks or excessive wear in the hole.



g. Inspect whether the oil hole on the rocker arm is blocked, and blow with compressed air if any.



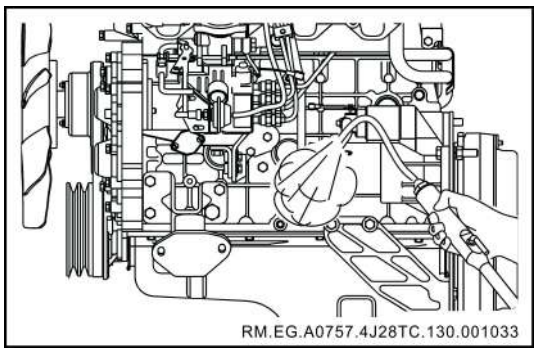
h. Measure the inside diameter of the rocker arm by a vernier caliper or dial indicator.



i. Measure the outside diameter of the rocker arm at the swinging position on the rocker arm shaft by a micrometer.

Oil scale

Overhaul



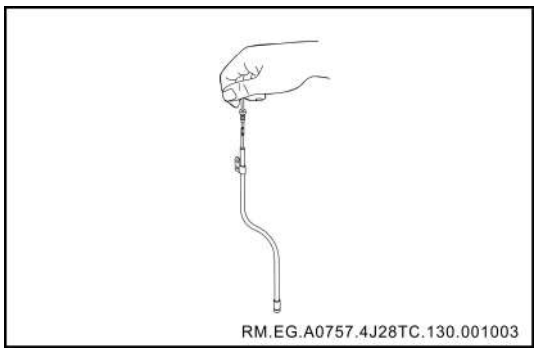
1. Overhaul the oil dipstick

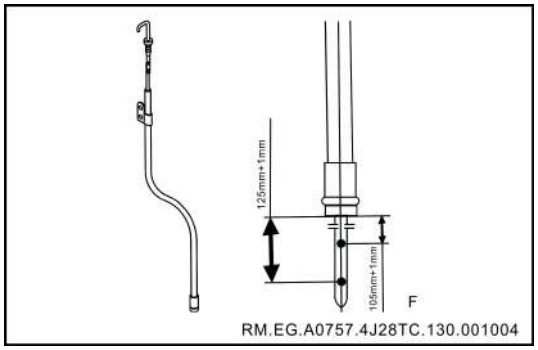
a. Blow away dust around the oil dipstick with compressed air.

Tip:

The oil system shall be clean. Remove the dust around the oil dipstick pipe to prevent foreign matters such as debris from going into the oil system.

b. Take out the oil dipstick.





c. There are upper and lower round holes processed on the oil dipstick, and the oil level shall not be lower than the lower round hole. Under this condition, it is common that the oil pump sucks no oil. It is improper if the oil exceeds the upper round hole. Under this condition, the crank of the crankshaft will hit the oil surface to cause excessive oil mist and splashed oil droplets in the crankcase, so that there is heavy carbon deposit on the piston top and combustion chamber wall. Meanwhile, the piston ring will be coked and bonded to cause the faults such as white smote from the diesel engine, oil leakage of the oil seal, and increased oil consumption. Therefore, besides paying attention to the oil pressure at any moment, inspect

Repair

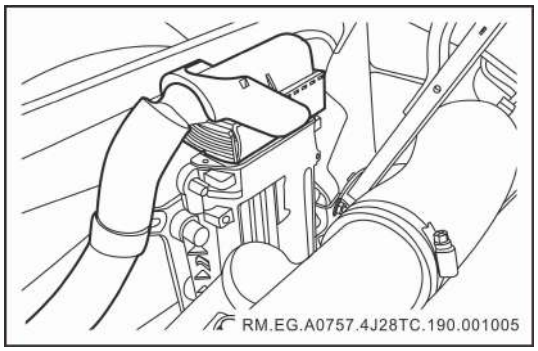
1. Remove ECM.

a. Stop the vehicle on a flat road.

Note

After stopping the vehicle, shut down the engine, shift the transmission into the neutral gear, use the parking braking system and disconnect the battery negative cable.

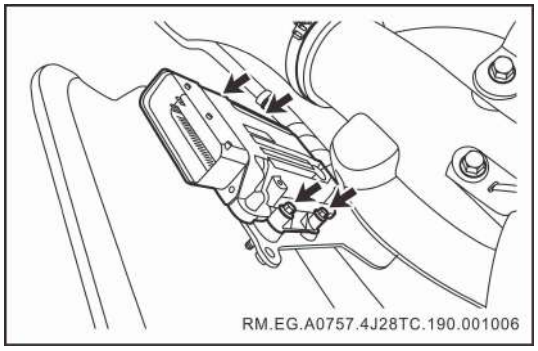
b. Tilt the cab.



c. Remove the ECU connector cover and pull out the ECU connector.

Note

First, lift the fixing clip of the ECU connector and then pull out the ECU connector.



d. Remove the fixing bolts for ECU assembly.

e. Remove the ECU assembly.

Note

When removing the ECU assembly, be careful not to make ECU collided to avoid damage to the ECU.

2. Check of wire plugs and sockets

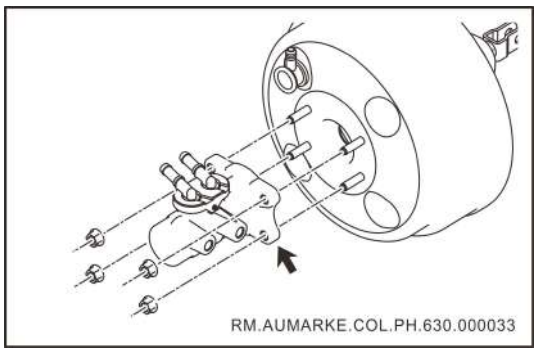
a. The harness connects the ECU, sensor and actuator through the plugs and sockets on them to form the engine electronic control system. The quality of the wire plug and socket, especially the quality of the wire plug and socket on the ECU, directly affects the normal operation of the ECU.

b. Check the wire plugs and sockets connecting with ECU, so as to ensure they correctly and closely coordinate with each other and there is no corrosion for internal contact chip. When checking, gently shake the plug on the socket to see if it is loose. Unplug the loosening plug, and check the contact chip for corrosion, and replace the plug in case of corrosion. Check if the pins are bent and ensure the good contact with all contacts. Check all ground wires on the ECU for corrosion and make sure they are fastened, clean and secure.

Symptom table

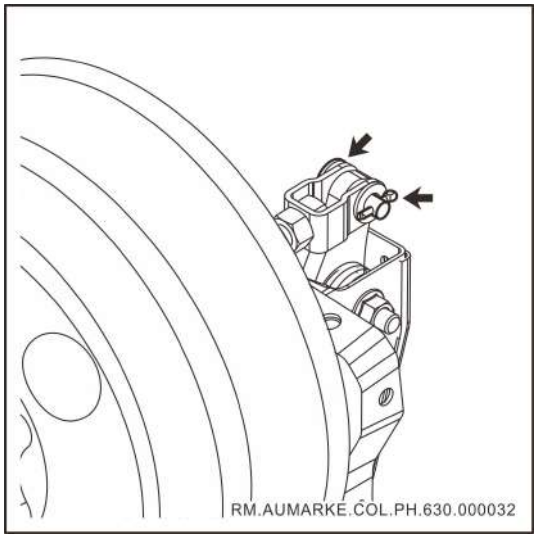
Refer to following table to help you to find out the cause of fault. Serial number indicates the order of possibility of a failure cause. Check each part according to orders, replace as required.

Symptom	Possible cause	Troubleshooting
Body sinking	1. Vehicles (overload)	Loading according to the rated load
	2. Spring (powerless)	Replace front leaf spring
	3. Shock absorber (worn)	Replace front shock absorber
The leaf spring is broken or there is noise.	1. Overload, or the vehicle was running on the uneven road at high speed and lead to the leaf spring broken.	Load the vehicle as rated load and adjust the vehicle speed
	2. The U-bolts are loose or the leaf spring pin and the bushing are worn severely and the front wheel alignment is broken or the wheel bases at the left and the right are wrong, and the braking deviation or heavy steering occur.	Tighten the U-bolts as per specified torque when the leaf spring is pressed flat, repair or replace worn parts
	3. Among each plate and the leaf springs lack of lubricating oil	Lubricate the leaf spring again or replace the parts
	4. The elasticity decay of each leaf spring is not uniform or the individual leaf spring is broken and the car body is inclined.	Inspect and replace the broken leaf spring or replace the assembly
	5. The leaf spring is broken or the shock absorber fails, or the buffer stopper is lost and the smoothness of the vehicle is damaged	Replace the broken leaf spring or the shock absorber or the buffer stopper

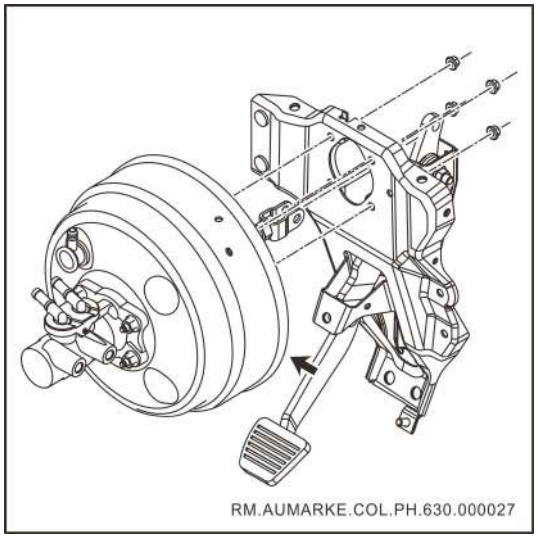


2. Install the vacuum booster

a. Install the brake master cylinder onto the vacuum booster and install and tighten the fixing nuts.



b. Install the vacuum booster push rod onto the brake pedal and install and lock the shaft pin and split pin.



c. Install the vacuum booster and brake master cylinder onto the brake pedal and install and tighten the fixing nuts.

d. Install the brake pedal assembly with vacuum booster. (Refer to " Chapter BR: Brake system – (Hydraulic) Service brake– Brake pedal, Replacement")

Coating

1. Painting operation procedure

a. Damage confirmation.

Clean the damaged parts and confirm the damage and range to determine the repair method.

b. Polish feather edge.

Grind a buffered slope at the connection position of damaged part and periphery paint film to make a better connection between the newly sprayed paintwork and the original paintwork.

c. Apply the epoxy primer.

Clean the damaged surface and apply oil. Apply the epoxy primer and dry it for rust prevention.

d. Apply putty by scraping.

After slightly grinding the damaged sheet metal part coated with epoxy primer and the oil is removed, apply putty. After putty is dried in the air, polish the putty, and confirm the punch-line.

e. Apply a primer when painting.

After polishing of putty, clean and remove oil, start to spray middle coating, and dry it by a fire. During coating, pay attention not to take reserve adhesion on the part needs no spraying when coating the primer.

f. Polish middle coating.

Polish the inter-coat primer until it has the same level with the original primer, and confirm the flatness.

g. Paint mixing.

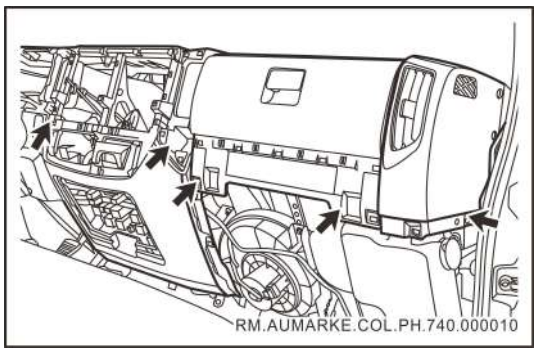
The topcoat color is different from the OEM topcoat color because the vehicle is used for a long time, then the painting personnel shall adjust the paint manually.

h. Spray finish coat.

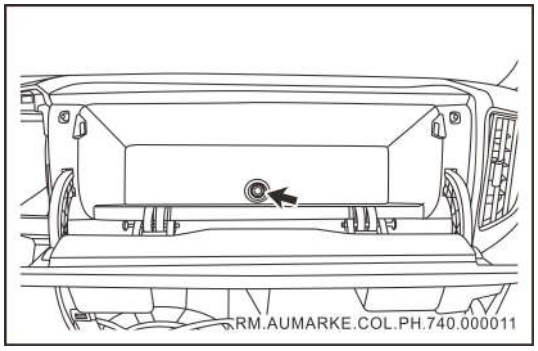
Add the adjusted finish paint into spray gun. Regulate the pressure, paint amount and spraying width of spray gun and begin to spray the finish paint on the metal sheet. Different finish paints have different spraying procedures.

i. Polishing.

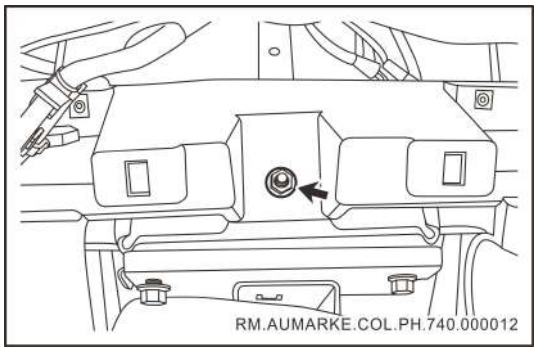
Remedy and add luster to defective finish paint.



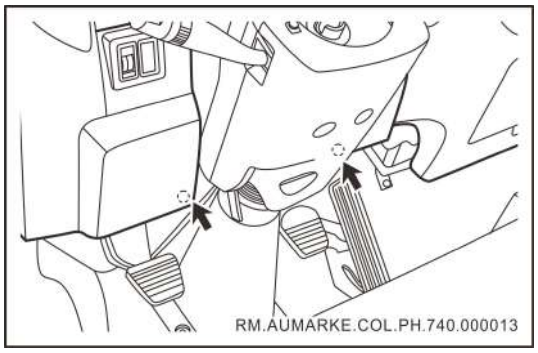
c. Remove the front fixing bolts and nuts of instrument panel.
d. Remove the fixing screws at both sides of the instrument panel.



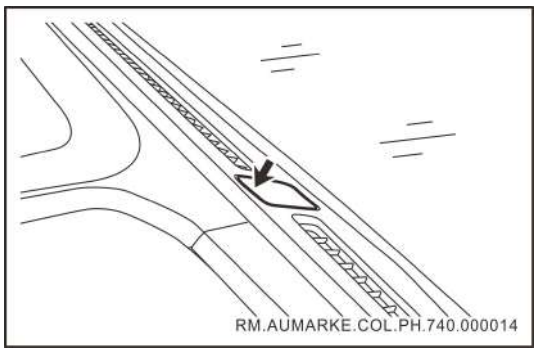
e. Open the glove box and remove the fixing bolts inside the box.



f. Dismantle the fixed nuts at the back of the combination instrument.



g. Remove the lower expansion buckle from the instrument panel.

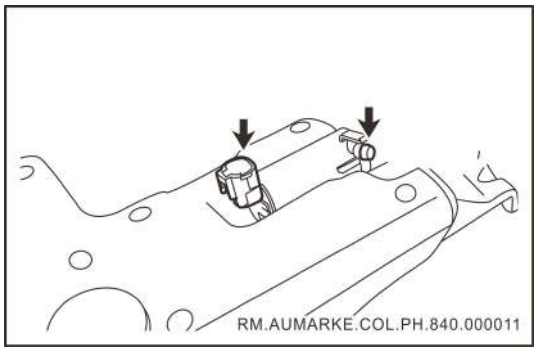


h. Pry up the left plug of the defroster panel.

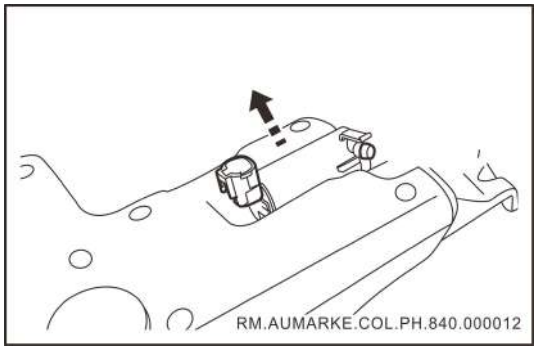
Washer

Replacement

1. Disconnect from the negative cable of battery
2. Remove front passenger lower skirt plate assembly
3. Remove the wiper tank (Refer to "Chapter EL Electrical Device – Wiper and Washer – Wiper Tank, Replacement")

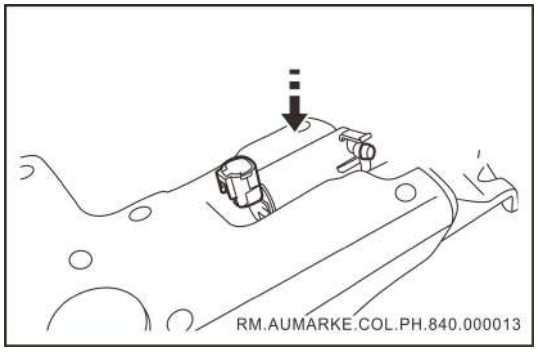


4. Remove the washer
   a. Disconnect from the scrubber connector.
   b. Disconnect from the washer pot water pipe.

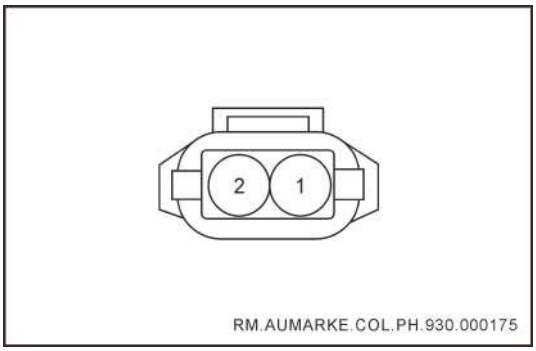


   c. Pull out the washer.

5. Check the washer motor for any following phenomenon, and repair or replace it if any.
   a. Washer motor circuit is short.
   b. Poor contact of washer motor contacts.
   c. Washer motor makes abnormal noise.



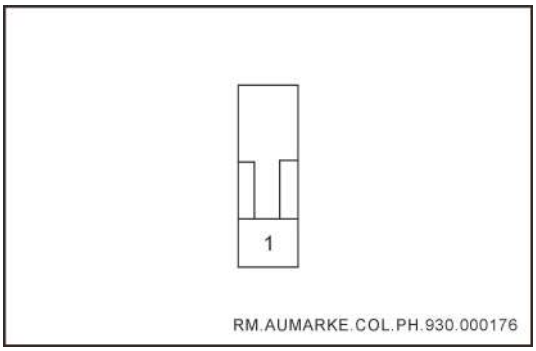
6. Install the washer
   a. Install the washer on the wiper fluid reservoir.



1 928 403 874

A006 Coolant temperature sensor

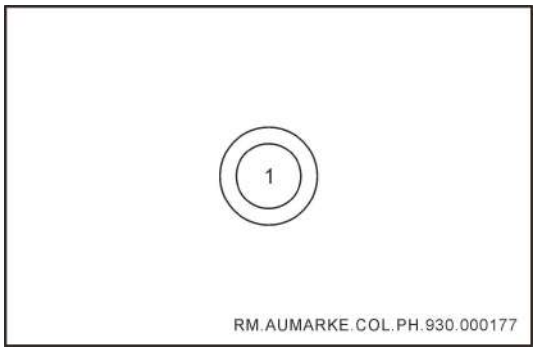
Terminal	Color/Wire	Function
1	0.50 G/Y	Coolant temperature sensor ground
2	0.50 Y/G	Coolant temperature sensor signal



DJ7014－6.3－21

A007 Water thermometer

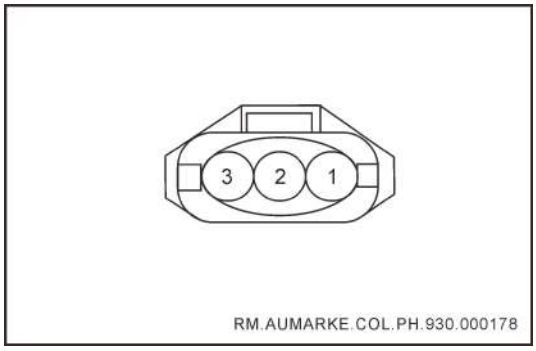
Terminal	Color/Wire	Function
1	0.50 R	Water thermometer



7283－1113－40

A008 Compressor

Terminal	Color/Wire	Function
1	0.75 Br	Compressor electromagnetic clutch control signal



1 928 403 966

A009 Cam Phase Sensor

Terminal	Color/Wire	Function
1	0.50 Gr/R	Cam Phase Sensor-
2	0.50 Gr	Cam Phase Sensor signL
3	0.50 Gr/G	Cam Phase Sensor+