GENESIS(BH) > 2012 > G 3.8 GDI > Body Electrical System

Body Electrical System > General Information > General Information

General Troubleshooting Information

Before Troubleshooting

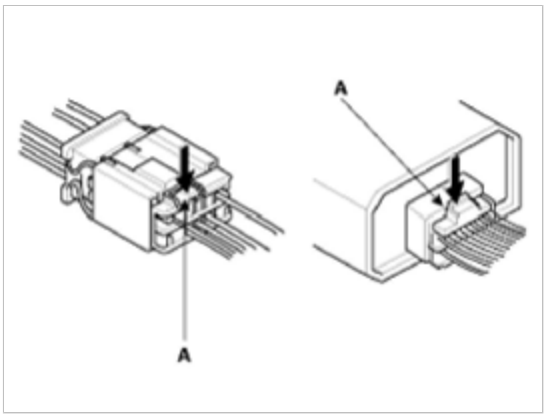
1. Check applicable fuses in the appropriate fuse/relay box.
2. Check the battery for damage, state of charge, and clean and tight connections.

> NOTE
>
> - Do not quick-charge a battery unless the battery ground cable has been disconnected, otherwise you will damage the alternator diodes.
> - Do not attempt to crank the engine with the battery ground cable loosely connected or you will severely damage the wiring.

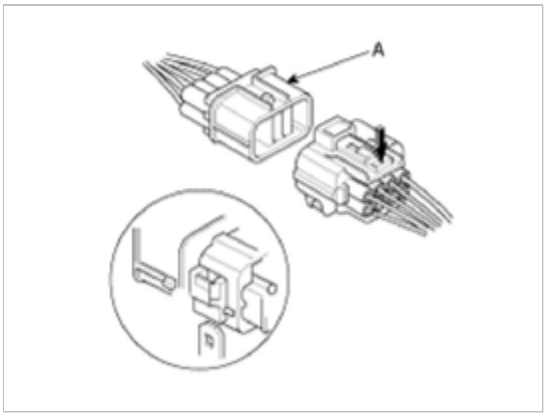
3. Check the alternator belt tension.

Handling Connectors

1. Make sure the connectors are clean and have no loose wire terminals.
2. Make sure multiple cavity connectors are packed with grease (except watertight connectors).
3. All connectors have push-down release type locks (A).

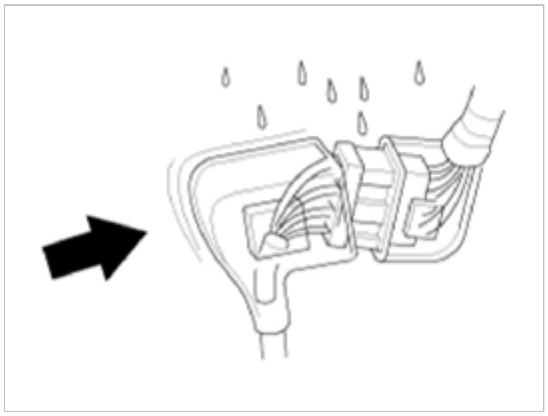


4. Some connectors have a clip on their side used to attach them to a mount bracket on the body or on another component. This clip has a pull type lock.
5. Some mounted connectors cannot be disconnected unless you first release the lock and remove the connector from its mount bracket (A).

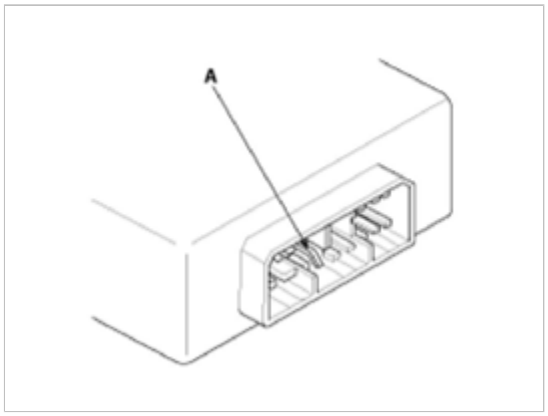


6. Never try to disconnect connectors by pulling on their wires; pull on the connector halves instead.

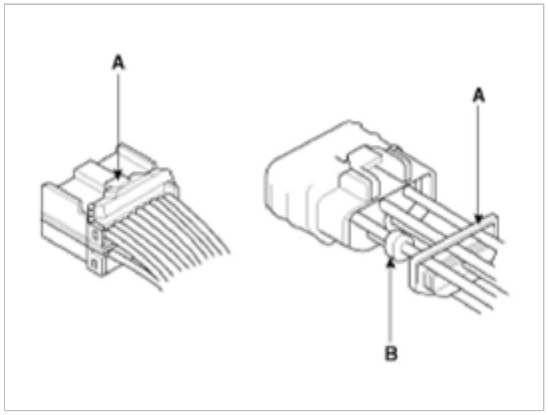
7. Always reinstall plastic covers.



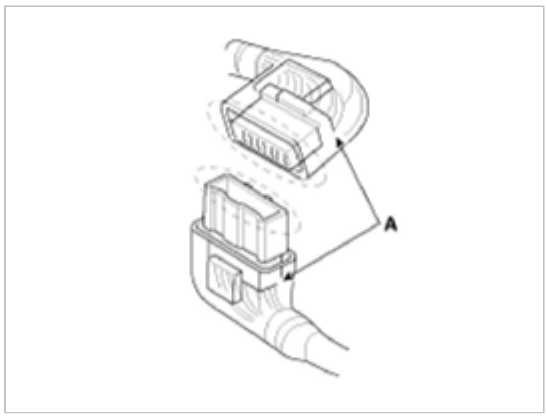
8. Before connecting connectors, make sure the terminals (A) are in place and not bent.



9. Check for loose retainer (A) and rubber seals (B).

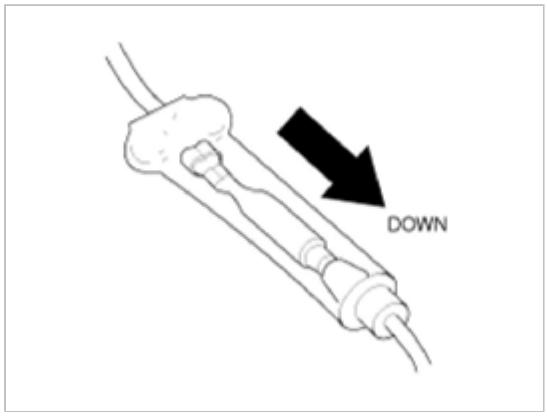


10. The backs of some connectors are packed with grease. Add grease if necessary. If the grease (A) is contaminated, replace it.



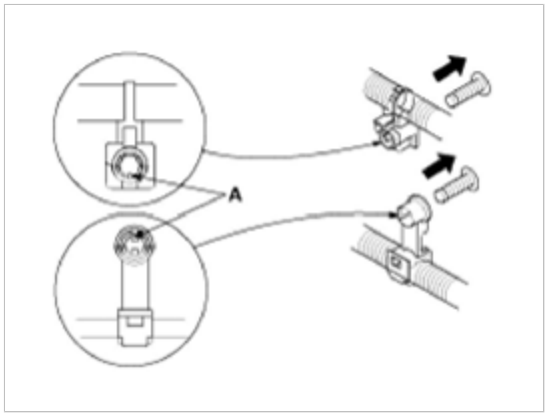
11. Insert the connector all the way and make sure it is securely locked.

12. Position wires so that the open end of the cover faces down.

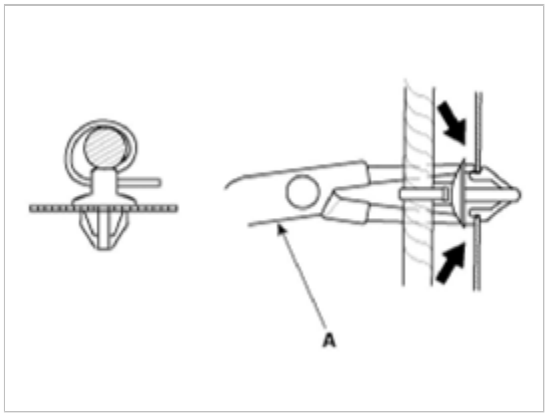


Handling Wires And Harnesses

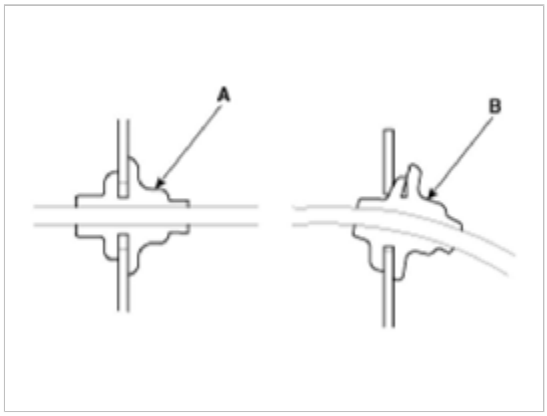
1. Secure wires and wire harnesses to the frame with their respective wire ties at the designated locations.
2. Remove clips carefully; don't damage their locks (A).



3. Slip pliers (A) under the clip base and through the hole at an angle, and then squeeze the expansion tabs to release the clip.

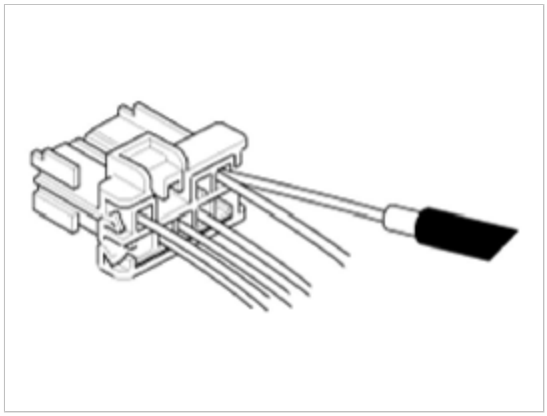


4. After installing harness clips, make sure the harness doesn't interfere with any moving parts.
5. Keep wire harnesses away from exhaust pipes and other hot parts, from sharp edges of brackets and holes, and from exposed screws and bolts.
6. Seat grommets in their grooves properly (A). Do not leave grommets distorted (B).

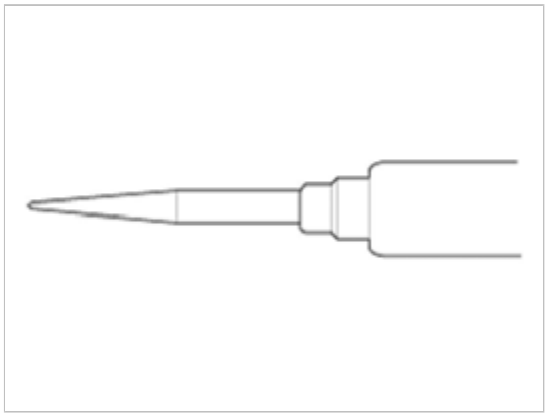


Testing And Repairs

1. Do not use wires or harnesses with broken insulation.
   Replace them or repair them by wrapping the break with electrical tape.
2. After installing parts, make sure that no wires are pinched under them.
3. When using electrical test equipment, follow the manufacturer's instructions and those described in this manual.
4. If possible, insert the probe of the tester from the wire side (except waterproof connector).



5. Use a probe with a tapered tip.



Five-step Troubleshooting

1. Verify the complaint
   Turn on all the components in the problem circuit to verify the customer complaint. Note the symptoms. Do not begin disassembly or testing until you have narrowed down the problem area.
2. Analyze the schematic
   Look up the schematic for the problem circuit.
   Determine how the circuit is supposed to work by tracing the current paths from the power feed through the circuit components to ground. If several circuits fail at the same time, the fuse or ground is a likely cause.

Based on the symptoms and your understanding of the circuit operation, identify one or more possible causes of the problem.

3. Isolate the problem by testing the circuit.
   Make circuit tests to check the diagnosis you made in step 2. Keep in mind that a logical, simple procedure is the key to efficient troubleshooting.
   Test for the most likely cause of failure first. Try to make tests at points that are easily accessible.
4. Fix the problem
   Once the specific problem is identified, make the repair. Be sure to use proper tools and safe procedures.
5. Make sure the circuit works
   Turn on all components in the repaired circuit in all modes to make sure you've fixed the entire problem. If the problem was a blown fuse, be sure to test all of the circuits on the fuse. Make sure no new problems turn up and the original problem does not recur.

Installation of the transmitting device.

Electronic-controlled computers are designed not to interrupted by other radio signal but it could be effected even less 25W output of remote-cont roll by wiring an antenna of it or the cables near the computer. Should follow below directions.

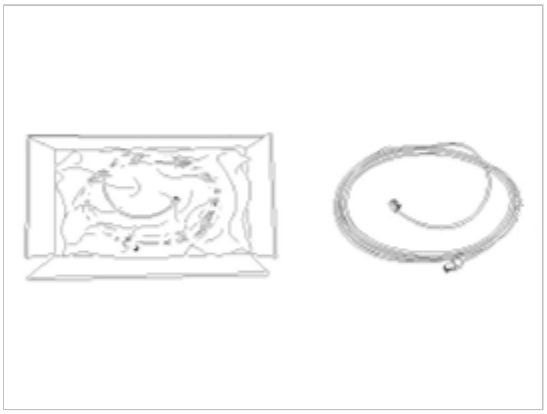
1. equip an antenna at the roof or rear-bumber.
2. Antenna cables should keep away over 200mm from the computer or wiring harness because the antenna cables transmit radio signals.
3. decrease the standing-wave ratio by using proper antennas and cables.
4. Not to install remote-controll with a high output.
5. check the status of a engine by generating radio signals with Idling.

> NOTE
>
> The standing-wave ratio : Input impedance Zi can be changed by the length of cables and signals of the remote controll under condition inpedance connects with other cables, antennas and changeable also voltage range.
> This rate of the maximum and the minimum voltage is called the standing-wave ratio.
> This means that the rate of the antenna impedance and cable impedance.
> The volume of radio signals from cables is propotioned to the standing-wave ratio volume so that possibility which have an influence to the electronic part increses.

Warning For Treating Cables

1. Follow permitted bending (over 25°) - don't bend or curve.
2. Follow permitted temperature (-40° C ~ 85° C)
3. Prevention input dust
   A. Just before assemble each unit and a inline connetor. Remove a dust cap.
4. Prevention pollution
   A. Don't touch and polluted at the end part of the Perul.
5. Prevention damage
   A. Not to throw and tread on.
   B. Don't pull the cables excessively.
6. Prevention damage
   A. Don't twist.

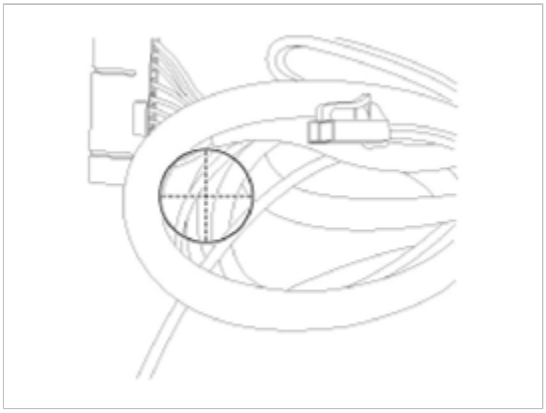
Long-term Storage Way Of Cables



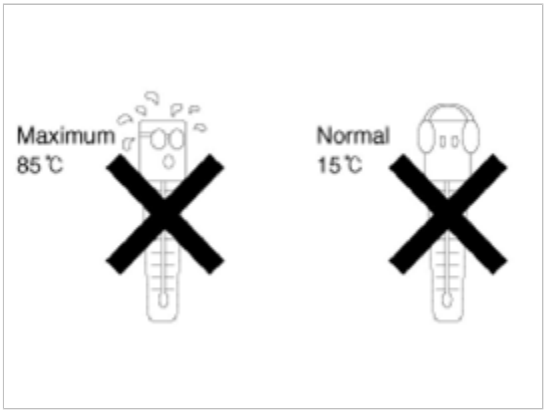
1. Follow permitted bending (over 25°) - not to storage by bending/curving status.
2. Follow permitted temperature (-40° ~ 85°) - follow keeping place, temperature option
3. Prevention input dust - packing cables in a plastic bag.
4. Prevention pollution - not storage cables with other stuffs.
5. Prevention damage - not to lay other boxes on the cable box.

Detailed warning when a worker treats

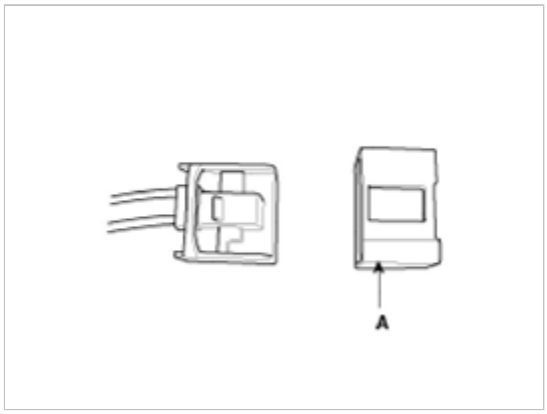
1. Manage cables to be over an angle of 25° (occurs optical damages when less an angle of 25°)



2. Maintain proper temperature when storage cables. → SPEC (-40° ~ 85°)



3. Remove a dust cap just before assembling at the unit. (to prevent exposing at dust and polluted by touching)

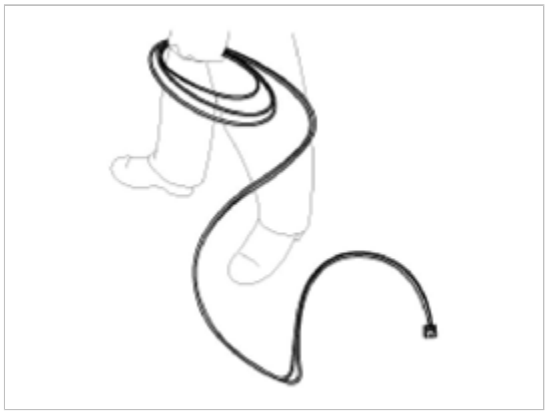


4. Not to touch and contact at the end part of Ferrule.
   (could be occurred optical damage by water or pollutions)

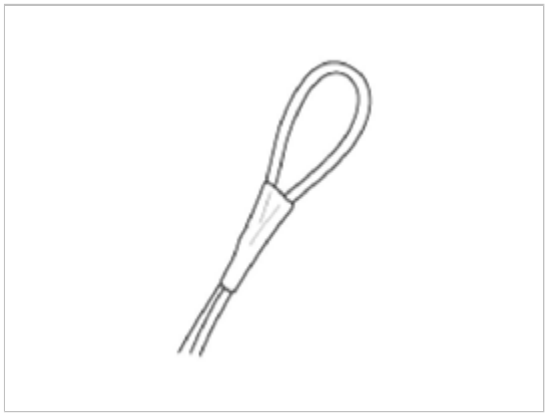
5. Not to step on cables. (damage of cables and connectors)

6. Not to throw cables to the floor in the line process. (damage connetors)

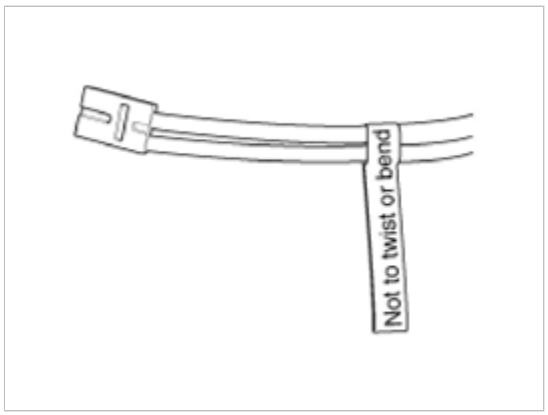
7. Not to drag cables on the floor. (damage cables and connectors)

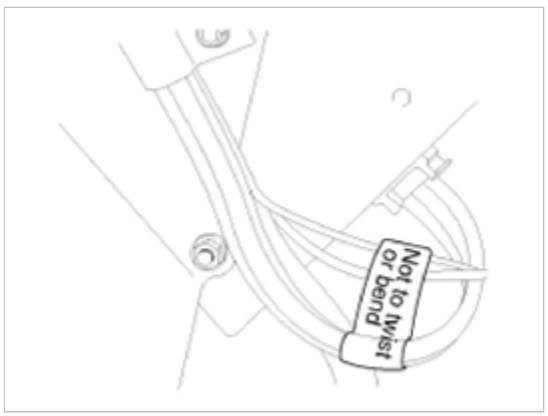


8. Not to twist or bend exccesively when treats extra length.

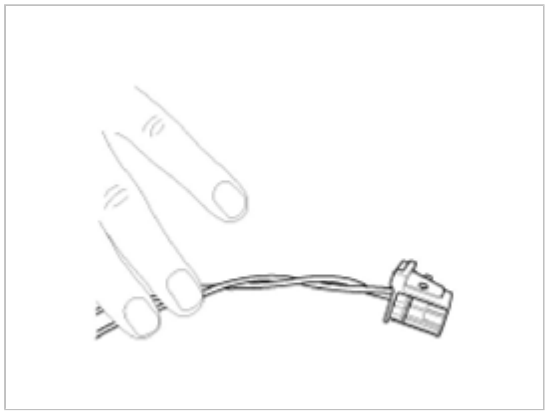


9. Not to bend or snap the cables indicated parts like the picture in the line process.

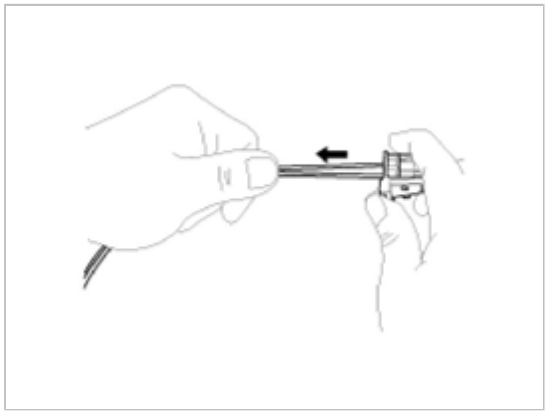




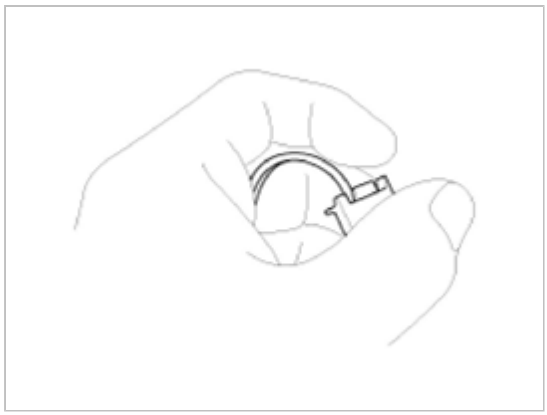
10. Not to twist cables. (cable stress occuring : damage optical output)



11. Not to pull cables excessively. (prevent damages at the connected part of cables and Ferrule)



12. Not to bend cable at the end part of connector. (to avoid optical output damage due to over cable bending)



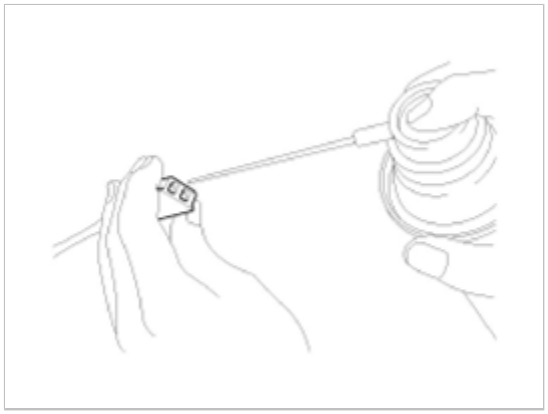
Dusting Way On The Grinding Surface Of Cables.

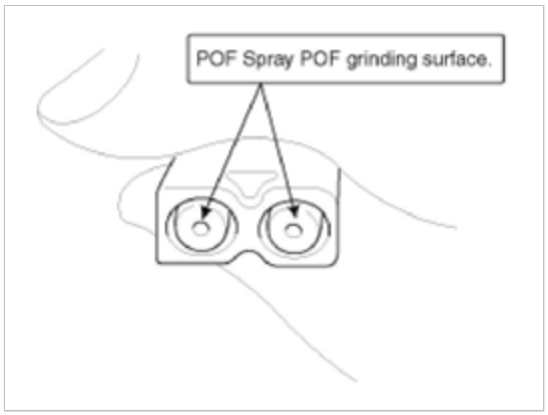
- Purpose : cleaning up POF grinding surface due to breakaway of a dust cap or by others. (recovering optical damage)
- Method : spray POF grindng surface with strong dusting spray after separate the cable connector from the

unit.

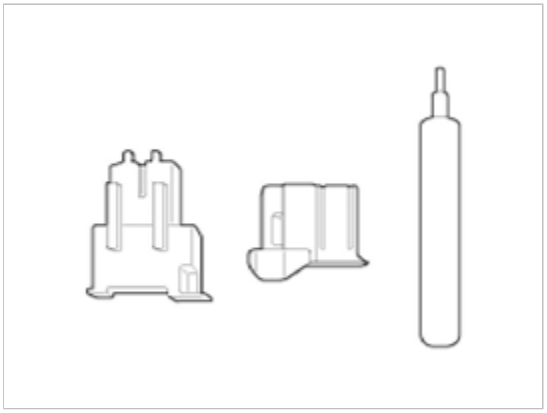
- Needed tools : strong dusting spray 1EA

1. Prepare tools for the work.
2. Separate the cable connector from the unit.
3. Reassemble them after jet a strong dusting spray on the POF grinding surface.





Changing Way Of The Cable Connector



- Purpose : changing single connector due to outer shock or unskilled treatment.
- Method : change the connector after divide by lifting damaged connector up using rework key.
- Needed tools : rework key 1EA, one single connector for change.

1. Prepare tools for the work.
2. Separate the connector for the unit.
3. Divide the locked part of the cable connector lifting it up by rework key.