

RX-8 FLOATLESS COOLANT LEVEL SENSOR INSTALLATION GUIDE

Please note that the installation is recommended to be performed carefully by someone who has basic technical and electrical skills with automotive hands-on experience.

Please go through the installation details before beginning the installation.

CAUTION!

**HANDLE THE SENSOR WITH CARE
DO NOT ATTEMPT TO PULL THE ELECTRODES**

Kit Contents

- Floatless Level Sensor Interface Module
- Sensor Electrodes with Teflon Washer and Nylon Bolt
- Cable Harness with 20Amp Fuse and Grounding Cable Lug
- Cable Ties
- Installation Guide

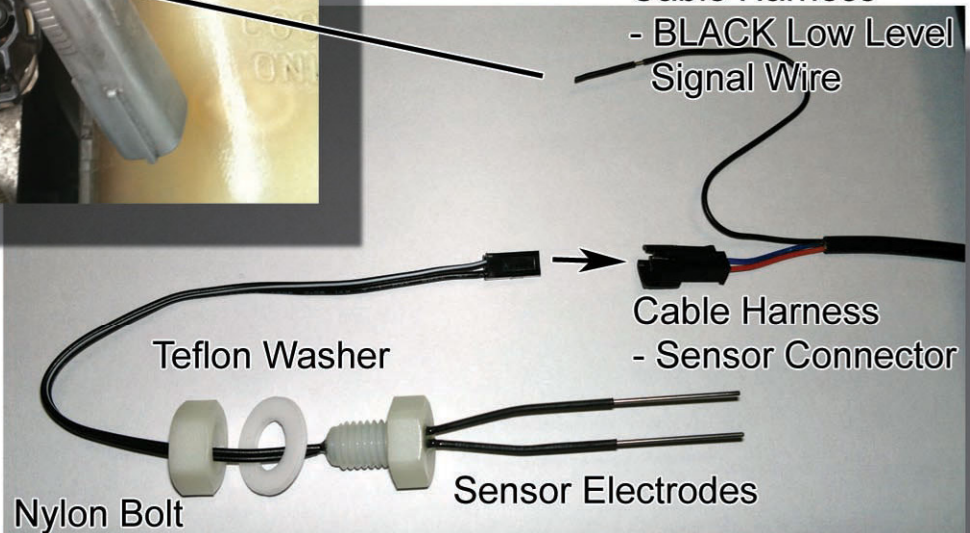
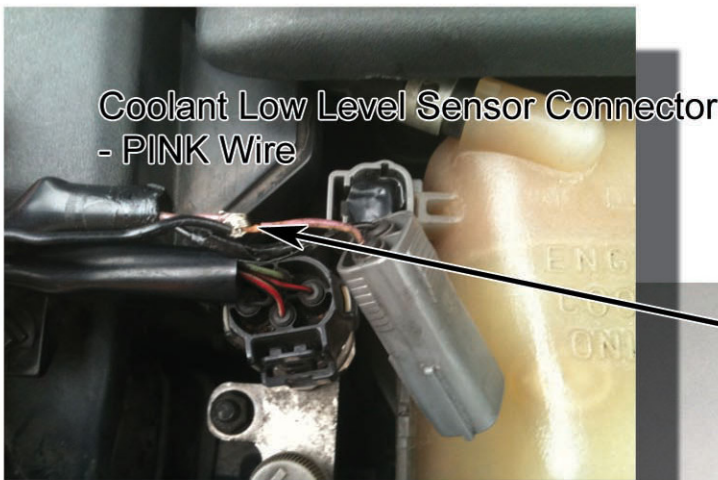
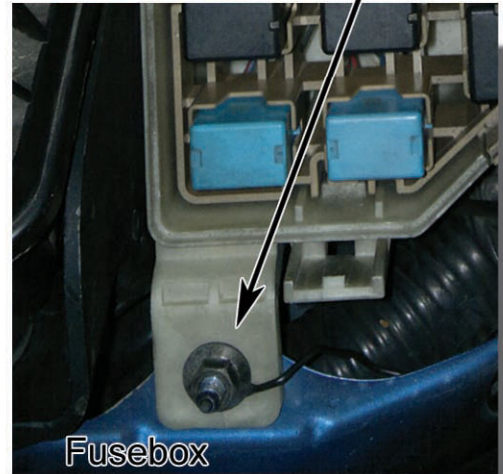
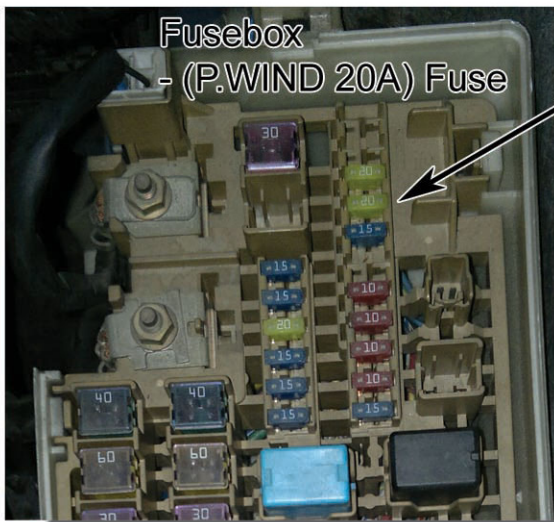
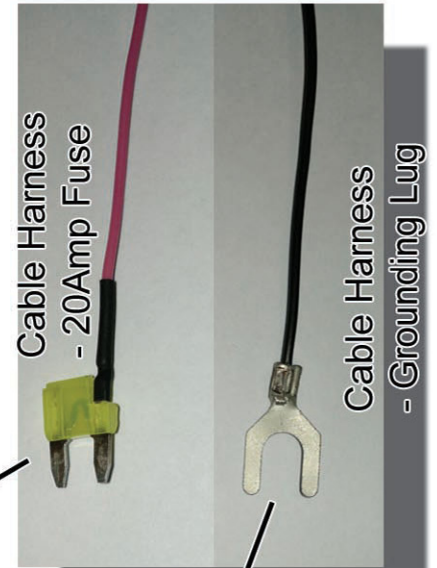
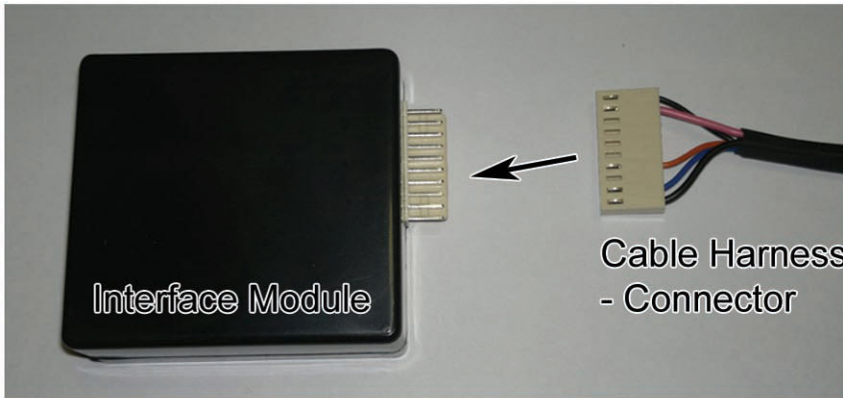
Required Material and Tools.

- 2003-2011 Mazda RX-8 Floatless Coolant Level Sensor Kit
- Drill with 10mm Twist Drill Bit
- Wire Stripper or Cutter for stripping wire
- Black Insulating Tape
- Adjustable Spanner
- Size 10 Spanner

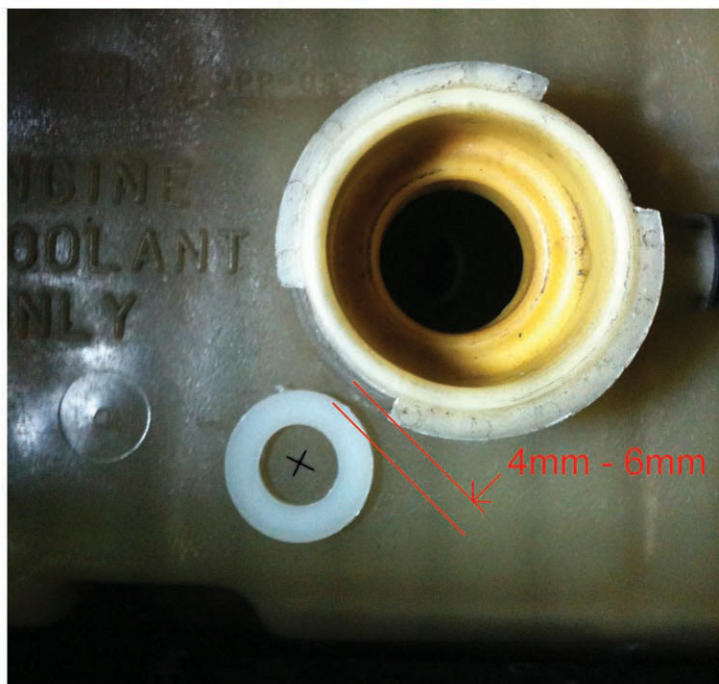
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1. CONNECTION DETAILS

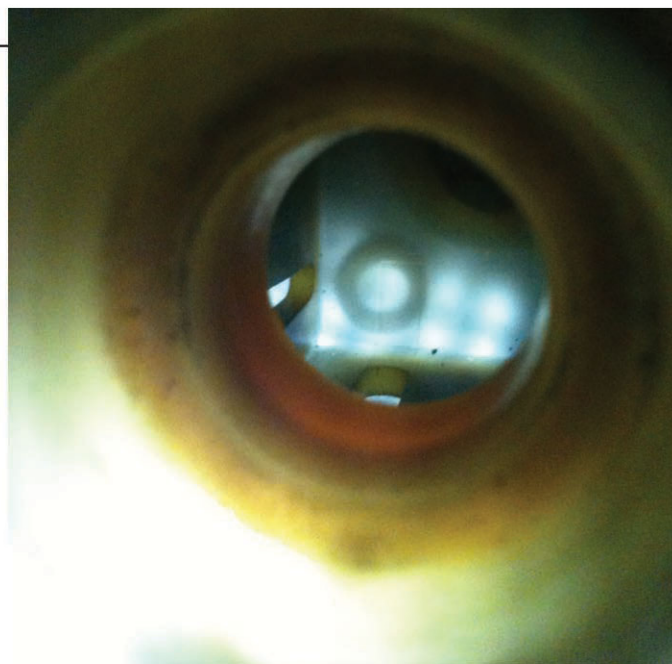


2. DRILLING THE HOLE ON THE COOLANT RESERVOIR



1. Position the Teflon Washer about 4 - 6mm away diagonally from the radiator cap neck.
2. Mark an 'x' at the center of the hole.

3. Shine a torch through top of the teflon washer into the tank.
4. Peeping into the radiator cap opening and observe the reflection on the coolant.
5. Ensure that the whole of the teflon washer can be seen unobstructed.



6. Drill a hole through the 'x' mark with a size 10 Twist Drill Bit.
7. Dispose off surrounding plastic shavings.

3. INSTALLING THE FLOATLESS SENSOR ELECTRODES



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1. Wind a loop with the sensor wire near the connector.



2. Release the loop to get a the shape of a hook. Insert hook into the tank and find its way out of the 10mm hole.



3. Insert the sensor into the tank with its electrode entering the hole first.



4. Carefully pull the threaded head of the sensor through the 10mm hole.

3. INSTALLING THE FLOATLESS SENSOR ELECTRODES (con't)



5. Insert the teflon washer first and then the nylon bolt.

6. Hand tighten the bolt.

7. Use the adjustable spanner to further tighten the nylon bolt one quarter round only (i.e. 90 degrees clockwise).



8. Replace radiator cap.



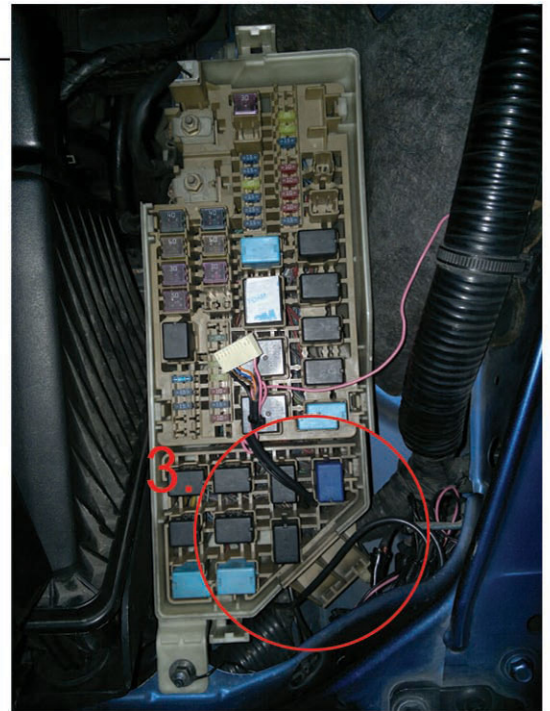
4. LAYING THE CABLE



1. Remove Fusebox Cover.

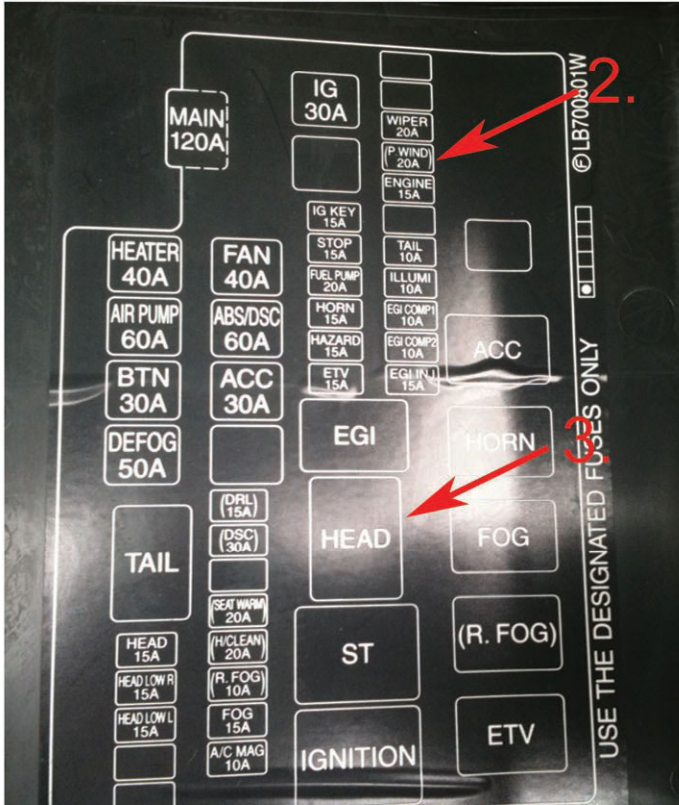
2. Find the 2-pin male black connector end of the supplied Cable Harness.

3. Insert the black connector end through one of the gaps between the relays and route it out of the fusebox from the bottom towards the front of the car. Do the same for the BLACK Grounding wire (with a spade cable lug attached).



4. Route the cable from point 'A' to point 'B' preferably hidden via the red line under the plastic trim (which can be removed by unplugging the studs indicated by the white arrows)

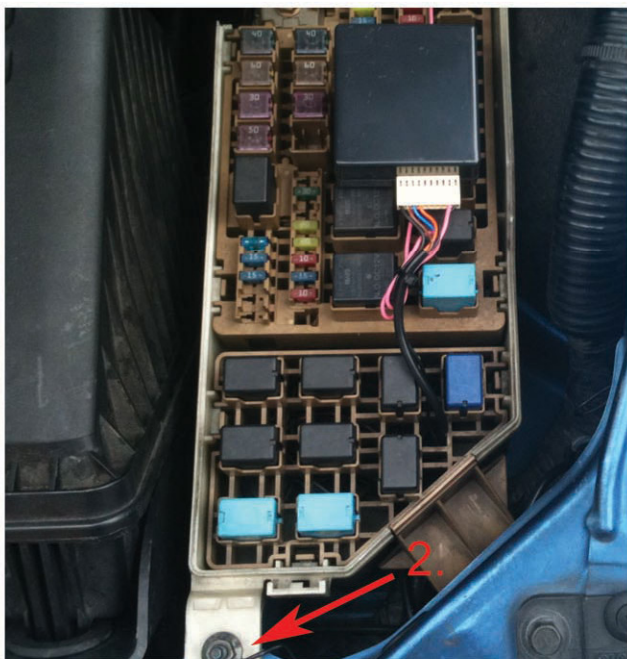
5. THE CONNECTIONS



1. Obtain the fuse removal tool stowed on the cover of the fusebox.(see above pic)
2. Remove the Yellow 20Amp fuse at the 'P.WIND 20A' slot.
3. Paste one of the supplied heavy-duty mounting tape onto the relay 'HEAD'.
4. Insert the supplied 20Amp fuse attached to the cable into the 'P.WIND 20A' slot with the black insulation sleeve positioned away from the engine.
5. Mount the supplied Interface Module onto the mounting tape.



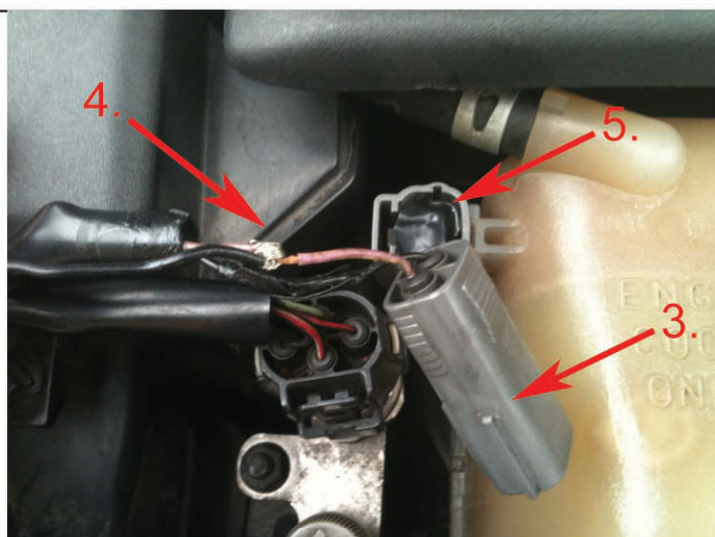
5. THE CONNECTIONS (con't)



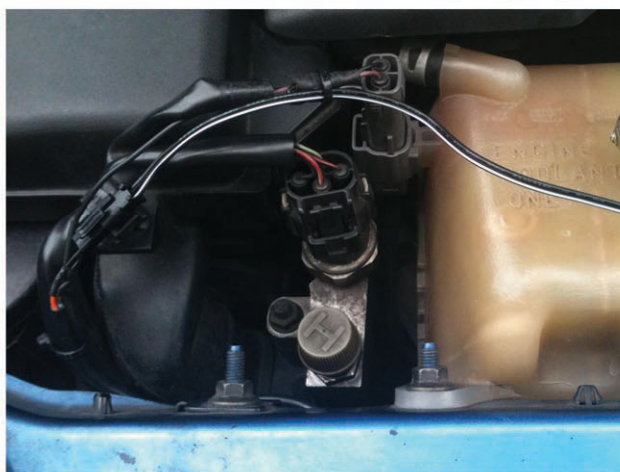
1. Loosen the fusebox mounting bolt with a size 10 socket wrench or spanner.
2. Insert the black colour GROUND wire (supplied with a spade cable lug attached) between the bolt and the fusebox mounting bracket and retighten the bolt.

3. Disconnect the coolant level float sensor connector.

4. Strip small portion of the PINK wire, connect the BLACK Low Level Signal wire (refer to Connection List) to it and wrap it up with some insulation tape.



5. Cut a small piece of insulating tape and place it on top of the bottle-side connector before placing the connector back (without pushing it down to lock).



6. Connect the supplied sensor connector to the floatless sensor electrodes connector.
7. Tidy up the wires with the cable ties supplied.

6. FUNCTIONAL CHECK



- Coolant Low Level Indicator

Low Level Test

Disconnect sensor connector to simulate low level condition.

Turn Ignition to 'ON' position and observe the Coolant Low Level Indicator on the dash.

- Lights up 2 seconds,
- goes off 0.5 second,
- lights up 2 seconds,
- goes off approx. 7 seconds,
- lights up until sensor connector is reconnected.

Normal Level Test

Ensure sensor connector is connected and secured.

Turn Ignition key to 'ON' position and observe the Coolant Low Level Indicator.

- Lights up 2 seconds,
- goes off 0.5 second,
- lights up 2 seconds, < This light up shows that the system has powered up
- goes off until a low level condition occurs.

- Notes: 1) The sensor is designed to trigger the Coolant Low Level Indicator Light a few seconds after detecting a low level condition to ensure that the system does not give false indication during hard accelerations.
- 2) Normal Level Test will be automatically performed in every startup to inform the driver that the system is powered up.
- 3) Depending on the quality of the coolant/water mixture, the electrodes may be coated with contaminants in future. Low Level Indicator lights up even with sufficient coolant.
- Remedy will be removing the electrodes and cleaning it with a soft cloth.

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Congratulations!

Your Mazda RX-8 is now equipped with a reliable Floatless Coolant Level Sensor that last.

Please contact dexter@ehdex.com for enquiries and technical support.
www.ehdex.com