



Battery and E-motor cooling hoses update

This instruction refers to other documents that are necessary to do the procedure.

Koenigsegg demands that precautions are made to prevent risk of contamination, refer to **SER-00018**.

Situation

The coolant can decrease the performance of the coolant hoses.

Action

Replace the coolant hoses.

**WARNING**

Always refer to the manufacturer's safety data sheet for the coolant. The coolant can cause injury to personnel.

**CAUTION**

Make sure that no contamination enters the cooling system. If water or particles enter the system, it can cause malfunction when you drive the vehicle.

**CAUTION**

Containers and tools that come in contact with the e-motor coolant must not be used with other fluids. Contamination can cause malfunction when you drive the vehicle.

**CAUTION**

Always refer to local regulations when you discard chemicals. Chemicals can cause damage to the environment.

PPE	REFERENCE	QUANTITY
Chemical resistance gloves	–	1 pair
Safety goggles	–	1

Rear End – E-Motor Coolant Hoses

PARTS	REFERENCE	QUANTITY
EPDM 4-way hot-side assy	170-393-2280	1
EPDM 4-way cold-side assy	170-393-2270	1
Hose pump to motor cooler	170-393-2212	1
Hose Pipe to motor pump	170-393-2210	1
Hose motor cooler to pipe	170-393-2215	1

Front End – HV Battery Coolant-Hoses

PARTS	REFERENCE	QUANTITY
Battery EPDM hose	170-393-2294	1
Battery EPDM tank hose	170-393-2295	1
Battery manifold locking plate	170-393-0041	1





PARTS	REFERENCE	QUANTITY
Battery outlet fitting	170-393-0043	1
Copper washer*	130-198-6080	2
Hose out battery pump	170-393-0004	1
Hose clamp 17	130-195-1017	1
Hose Clamp WF 16-27_12 W4	130-195-3200	1
M5x20 Torx	130-145-1520	1
O-ring 20.35x1.78 EPDM 70	130-199-3325	4

TOOLS	SPECIFICATION	QUANTITY
Expanding tool	170-393-0046	1
General mechanical tools	–	–

CONSUMABLES	REFERENCE	QUANTITY
Cable Tie Ty-Rap	130-195-9010	2
E-motor Coolant	<i>WOM-00005</i>	4.5 L
HV battery Coolant	<i>WOM-00005</i>	3.5 L
Permanent marker	Black	1
Zip ties	–	–

*Only necessary if you remove the battery bleed hose.

Prepare

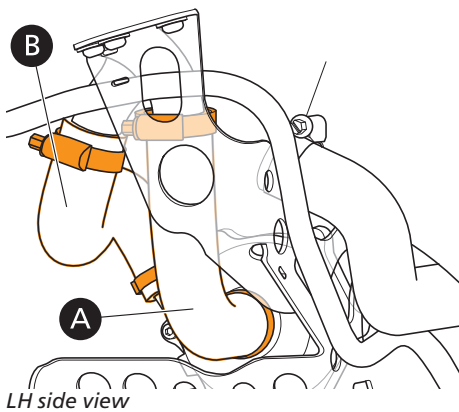
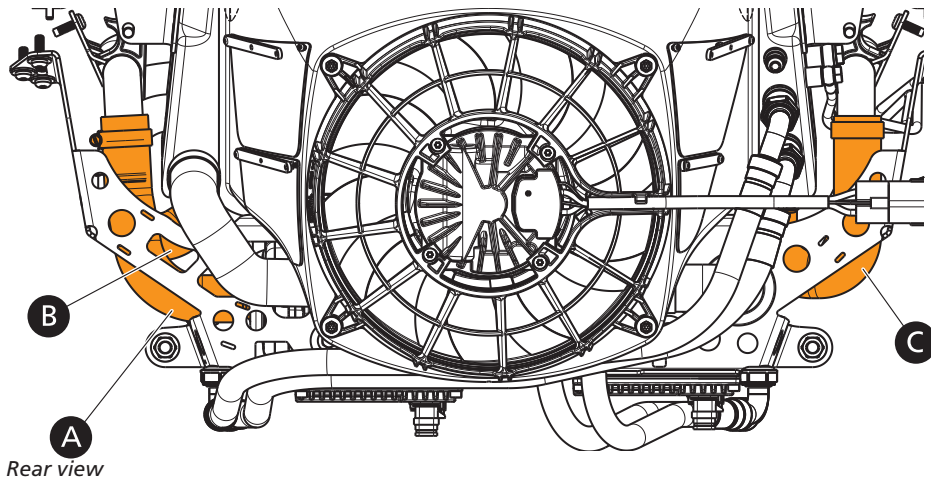
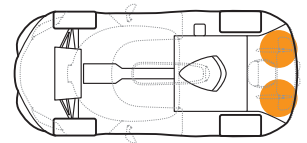
1. Open the front hood with the key fob or from the center console.
2. Fully open the rear hood, refer to *WOM-00015*.
3. Disconnect the 12 V system, refer to *WOM-00007*.
4. Disconnect the HV system, refer to *WOM-00021*.
5. Lift and put the vehicle on jack stands, refer to *WOM-00031*.
6. Prepare the vehicle for the e-motor coolant hoses:
 - 6.1 Remove the venturi, refer to *WOM-00043*.
 - 6.2 Remove the engine mudpan, refer to *WOM-00029*.
 - 6.3 Remove the airbox, refer to *WOM-00062*.
 - 6.4 Remove the rear dampers, refer to *WOM-00079*.
 - 6.5 Remove the cross brace, refer to *WOM-00088*.
 - 6.6 Remove the stabilizer bar, refer to *WOM-00153*.
 - 6.7 Remove the engine cover, *WOM-00160*.
 - 6.8 Remove the rear-frame top, refer to *WOM-00089*.
 - 6.9 Put drain pans on the floor below the hoses.
 - 6.10 Put protective cloths around the hose connections to prevent spills on the adjacent areas.
 - 6.11 Drain the e-motor coolant expansion tank, refer to *WOM-00063*.
7. Prepare the vehicle for the battery coolant hoses:
 - 7.1 Disconnect the HV battery, refer to *WOM-00117*.
 - 7.2 Remove the luggage plate, refer to *WOM-00047*.
 - 7.3 Remove the front mudpan, refer to *WOM-00030*.
 - 7.4 Put drain pans on the floor below the hoses.
 - 7.5 Drain the HV battery coolant expansion tank, refer to *WOM-00006*.





Replace the E-Motor Coolant Pump Hoses

1. Remove the e-motor coolant expansion tank cap.
2. Put drain pans below the hoses **A**, **B** and **C**.



3. Loosen 2x hose clamps on the hose **A**.
4. Remove the hose **A** and let the coolant drain.
5. Remove the hose clamps and keep them for the installation.
6. Loosen 2x hose clamps on the hose **B** and keep them for the installation.
7. Remove the hose **B** and let the coolant drain.
8. Remove the hose clamps and keep them for the installation.
9. Loosen the hose clamps on the hose **C** and keep them for the installation.
10. Remove the hose **C** and let the coolant drain.
11. Remove the hose clamps and keep them for the installation.
12. Discard the hoses **A**, **B** and **C**.
13. Install the new hose **A** with the old hose clamps. Put the hose so that the longer end points up.



Part: 170-393-2210

Torque: 3 Nm

14. Install the new hose **B** with the old hose clamps.

Part: 170-393-2212

Torque: 3 Nm





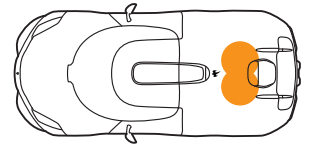
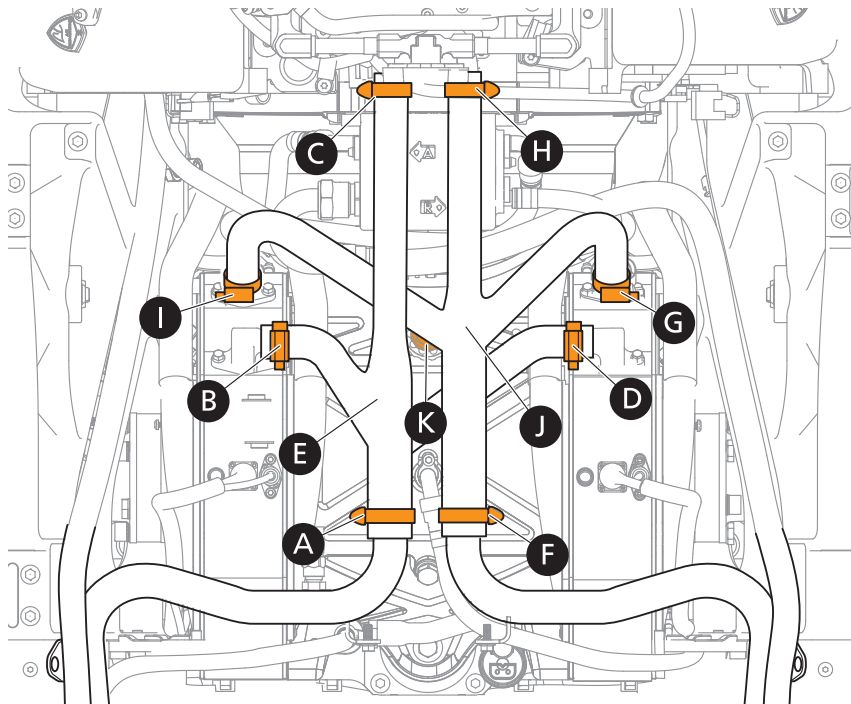
15. Install the new hose **C** with the old hose clamps.

Part: 170-393-2215

Torque: 3 Nm

16. Use brake cleaner to clean areas from unwanted coolant.

Replace the E-Motor Coolant Hoses



1. Remove the hose clamp **A**.
2. Remove the hose clamp **B**.
3. Remove the hose clamp **C**.
4. Remove the hose clamp **D**.
5. Remove the LH e-motor coolant hose **E**.
6. Remove the hose clamp **F**.
7. Remove the hose clamp **G**.
8. Remove the hose clamp **H**.
9. Remove the hose clamp **I**.
10. Remove the RH e-motor coolant hose **J**.
11. Put the new EPDM 4-way hot-side assy in position **E**.
Part: 170-393-2280
12. Install the 4x hose clamps **A**, **B**, **C** and **D**. Do not tighten.



CAUTION

Do not let hose clamps or hoses touch other parts. This can cause damage to the hoses or other parts.

13. Make sure that the EPDM 4-way hot-side assy and hose clamps are in the correct position:
 - No part of the hose can rub against each other or other parts.
 - Turn the hose clamps so that the screw housing does not touch other parts.
14. Do a check of the hose closest to the hydracoup breather **K**:
 - If the hose is very close to the hydracoup breather, or rubbing against it, install the Cable Tie -Ty-Rap as protection.
Consumable: 130-195-9010

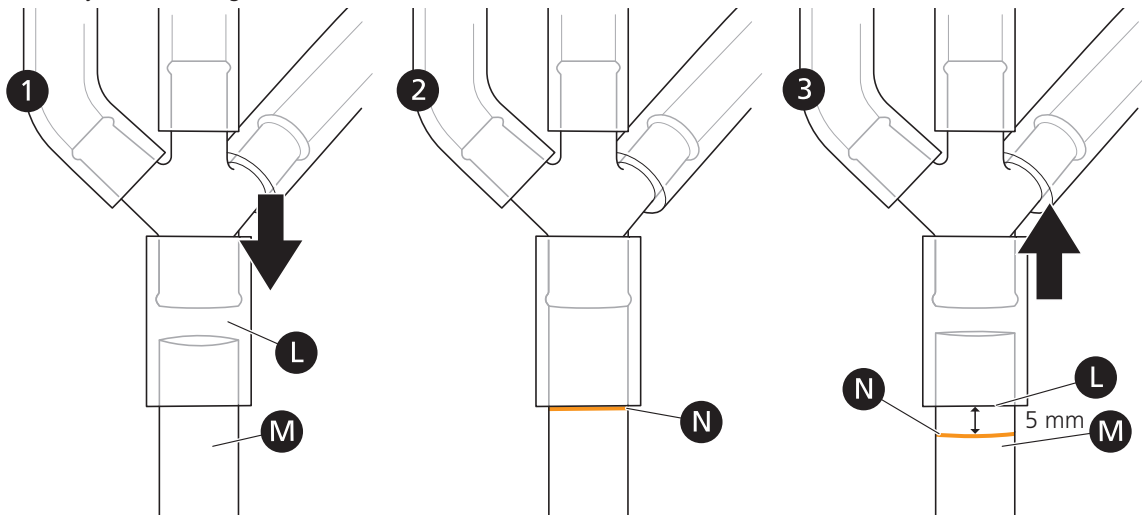




CAUTION

The clearance between the 4-way connection and the pipe must be sufficient. If the clearance is not sufficient, it can cause contamination of the e-motor coolant.

15. Make a 5 mm clearance between hose in the 4-way connection **L** and the pipe **M**, so that they do not rub against each other:



- 15.1 Push the 4-way connection **L** as far in as possible, until the hose in the 4-way connection touches the hose **M**.
- 15.2 Put a mark at the indicated location **N**.
- 15.3 Pull the 4-way connection **L** out 5 mm. Measure from the mark **N** on the pipe **M** to the 4-way connection **L**.
16. Tighten the 4x hose clamps **A**, **B**, **C** and **D**.
Torque: 3 Nm
17. Put the new EPDM 4-way cold-side assy in position **J**.
Part: 170-393-2270
18. Install the 4x hose clamps **F**, **G**, **H** and **I**. Do not tighten.



CAUTION

Do not let hose clamps or hoses touch other parts. This can cause damage to the vehicle.

19. Make sure that the EPDM 4-way cold-side assy and hose clamps are in the correct position:
- No hoses must rub against each other or other parts.
 - Turn the hose clamps so that the screw housing does not touch other parts.
20. Tighten the 4x hose clamps **F**, **G**, **H** and **I**.
Torque: 3 Nm
21. Do a check of the new hoses and the hose clamps and adjust if:
- The hose clamps are too close to other parts.
 - The hose clamps rub on other parts.
 - The hoses are too close to other parts of the vehicle.
22. If you are not able to adjust the hoses or the hose clamps you must install a zip tie protector on the hose or hose clamp at the necessary position.





23. Install the rear dampers, refer to [WOM-00079](#).
24. Install the rear-frame top, refer to [WOM-00089](#).
25. Put the coolant expansion tanks on some cloths on top of the rear-frame top.
 - Make sure the coolant expansion tanks are stable.



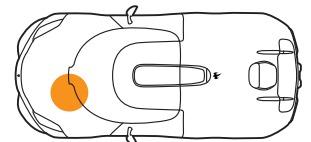
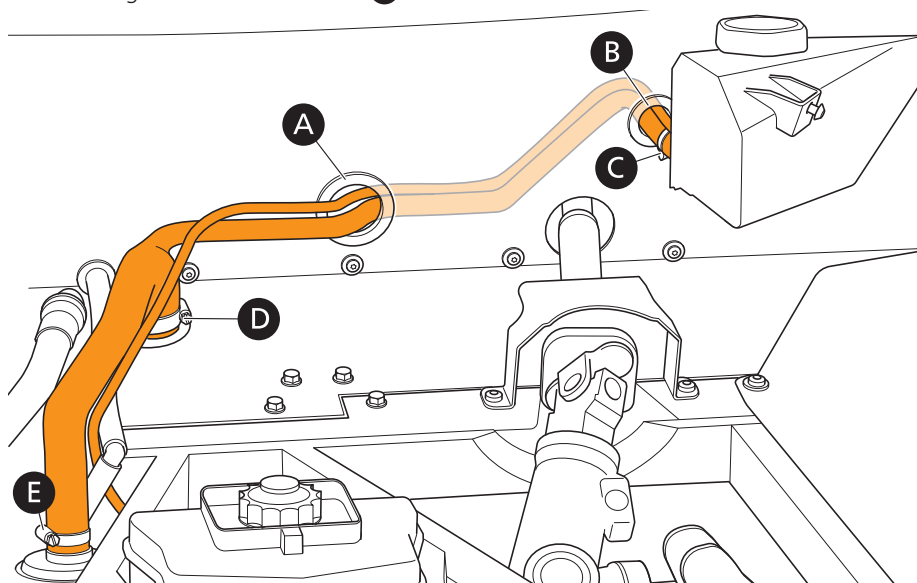
CAUTION

Only use the e-motor coolant that is approved by Koenigsegg. If you use other types of coolant, it can cause damage to the vehicle.

26. Fill with e-motor coolant that is approved by Koenigsegg, refer to [WOM-00063](#), section Fill.
27. Bleed the e-motor coolant system, refer to [WOM-00063](#), section Bleed.
 - Ignore the fault code about the air flow sensors that are not installed.
28. Make sure that there are no leaks from the new hoses.
29. Install in the reverse order.
 - Install the parts that you removed to do the e-motor coolant hoses update.
30. Clear the fault codes, refer to [SAH-00004](#).

Replace Battery Coolant Pump Hoses

1. Loosen the grommet from the hole **A** in the firewall.



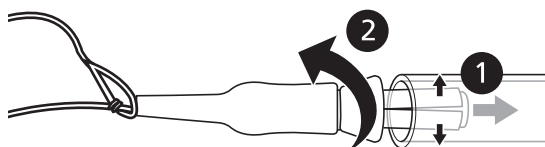
2. Loosen the grommet from the hole **B** in the firewall.
3. Remove the hose clamp **C** from the battery-to-pump hose.
4. Remove the battery-to-pump hose from the battery expansion-tank.



CAUTION

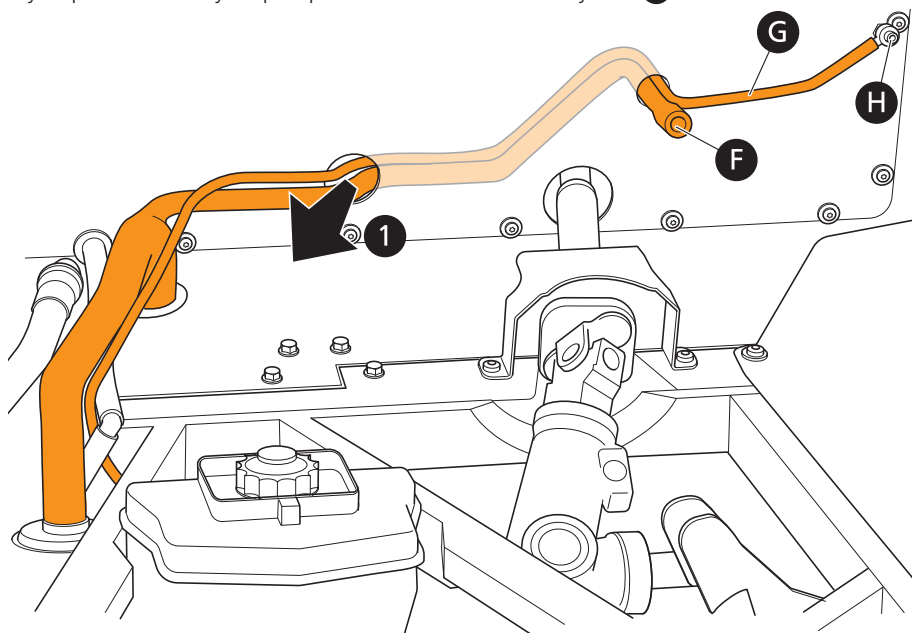
Do not tighten the expanding tool too much. If you tighten it too much it can cause damage to the expanding tool.

5. Attach the expanding tool to the battery expansion-tank end of the battery-to-pump hose:
Tool: 170-393-0046

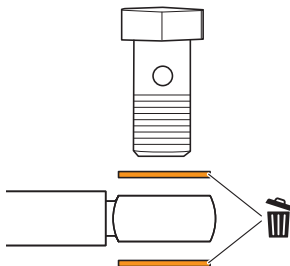




- 5.1 Put the end **1** of the expanding tool into the hose.
- 5.2 Turn the screw counterclockwise **2** to expand the tool.
- 5.3 Pull the expanding tool while you hold the hose, to make sure that it is tightly attached in the hose.
6. Remove the hose clamp **D** from the battery-to-pump hose.
7. Remove the battery-to-pump hose **D**.
8. Remove the hose clamp **E** from the battery-to-pump hose.
9. Remove the battery-to-pump hose **E**.
10. Try to pull the battery-to-pump hose out from the battery side **1**.



- If it works, pull the hose out through the hole **A** and continue to step **13**.
 - If it does not work, continue to step **11**.
11. It is possible that the battery-to-pump hose is attached to the battery-bleed hose **G**. It is then necessary to remove them at the same time:
 - 11.1 Remove the 12 mm banjo bolt **H** from the battery-bleed hose.
 - 11.2 Discard 2x copper washers.



- 11.3 Disconnect the battery-bleed hose from the battery expansion-tank.
- 11.4 Remove the recovery string from the expanding tool and attach it to the banjo fitting.
- 11.5 Pull out the battery-to-pump hose **F** and the battery-bleed hose **G** at the same time.
 - If it works, turn the screw on the expanding tool clockwise to release it from the hose and continue to step **16**.
 - If it does not work, continue to step **12**.
12. Pull the hoses back into position with the help of the string.
 - If you are a dealer, contact Koenigsegg Support to continue with this instruction.

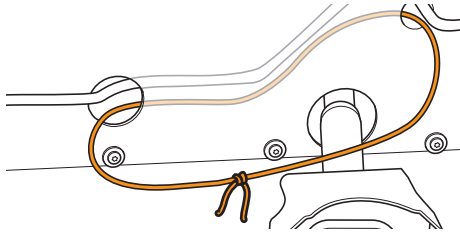




13. Turn the screw on the expanding tool clockwise to release it from the hose.
14. Remove the recovery string from the expanding tool.



15. Attach the two ends of the recovery string to each other to make a loop.



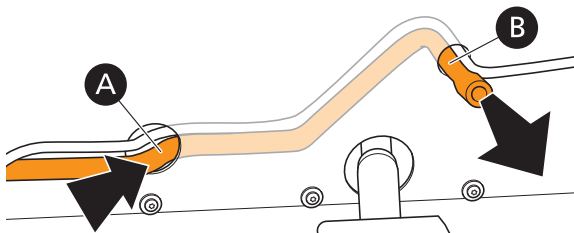
Note

If the expanding tool comes loose you can attach it to the recovery string and use the recovery string to pull the expanding tool back and try again.

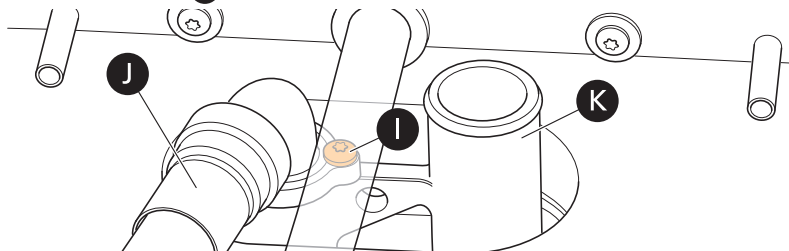
16. Remove the old battery-to-pump hose from the vehicle.

Battery hoses installation

1. Attach the expanding tool to the new battery EPDM tank hose.
Part: 170-393-2295
2. If you pulled out the battery bleed hose **G**, pull it back with the help of the recovery string.
3. Put the end of the hose with the expanding tool into the hole **A**.

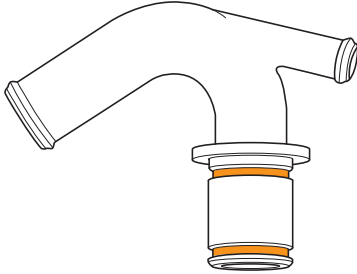


4. Put the hose in position behind the firewall:
 - 4.1 Use one hand to push on the battery EPDM tank hose at position **A** and at the same time pull the string at position **B**.
 - 4.2 Push and pull the battery EPDM tank hose through the hole **B**.
5. Turn the screw on the expanding tool clockwise to release it from the hose.
6. Put the grommet on the battery EPDM tank hose and on to the hole **A**.
7. Put the grommet on the battery EPDM tank hose and on to the hole **B**.
8. Install the battery EPDM tank hose to the battery expansion tank with the hose clamp **C**.
Torque: 3 Nm
9. If you removed the battery bleed hose **G**, install the hose with the 12 mm banjo bolt.
10. Part: 2x 130-198-6080
11. Remove the screw **I** that holds the filter-to-battery hose **J** in position.
12. Discard the screw **I**.





13. Install one o-ring on each of the two grooves on the battery outlet fitting.
Part: 170-393-0043, 130-199-3325

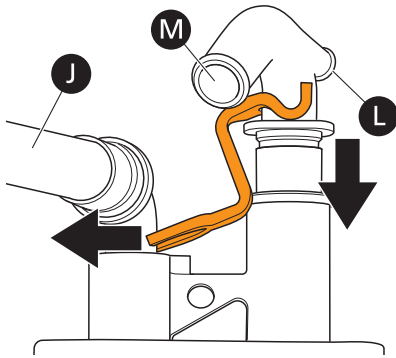


14. Lubricate the o-rings of the new battery outlet fitting with e-motor coolant. This will help the installation into the battery outlet manifold **K**.

Consumable: E-motor coolant

15. Put the A/C Drainage hose above the battery manifold locking plate.
16. Put the battery outlet fitting together with the battery manifold locking plate.

Part: 170-393-0041



CAUTION

Do not pinch the o-ring between the bore of the battery outlet manifold and the fitting groove when you do the installation. This can cause damage to the o-rings.

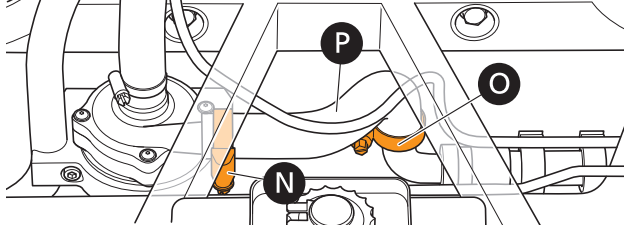
17. Install the battery outlet fitting into the battery outlet manifold **K**.
18. Connect the manifold locking plate to the filter-to-battery hose **J**.
19. Install the new M5x20 screw **I** in the battery manifold locking plate to hold the filter-to-battery hose **J** in position. Screw it in fully, but do not tighten.
Part: 130-145-1520
20. Attach the other end of the battery EPDM tank hose to the small tube **L** on the battery outlet fitting with a hose clamp.
Part: 130-195-1017
Torque: 3 Nm
21. Install the new Battery EPDM hose to the battery hose connection **M** with a hose clamp.
Part: 130-195-3200, 170-393-2294
Torque: 3 Nm
22. Adjust the position of the battery hose connection so that the connected hoses are in the correct position.
23. Make sure that the hoses or the hose clamps are not too close to, or rub against another part.
24. Tighten the mounting screw **I**.





Replace the Pump Outlet Hose

1. Remove the hose clamp **N**.



2. Remove the hose clamp **O**.
3. Remove the pump outlet hose **P**.
4. Install the new battery pump out hose with the hose clamps **N** and **O**.

Part: 170-393-0004

Torque: 3 Nm

Final Installation

1. Install in the reverse order.



CAUTION

Only use the HV battery coolant that is approved by Koenigsegg. If you use other types of coolant, it can cause damage to the vehicle.

2. Fill the HV battery coolant expansion tank with the HV battery coolant that is approved by Koenigsegg, refer to [WOM-00006](#).
 - Make sure that there are no leaks from the new hoses.

Warranty Information

If the repair is covered by the warranty terms, refer to Koenigsegg Warranty Process.

OPERATION

KWO492054

PART NO

Refer to the invoiced kit number

