



## Equipment Affected

This field service bulletin applies to all **HydroCAT-EP pH modules purchased or serviced after May 2017.**

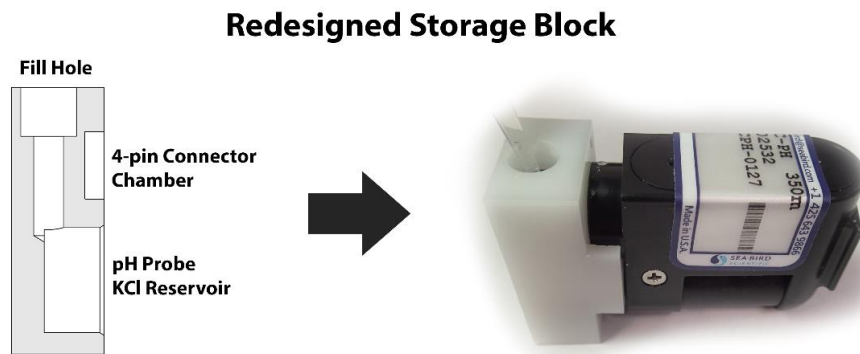
## Problem Description

The HydroCAT-EP's removable pH module (HC-PH) requires storage in a 4 M KCl solution to prevent the sensor's electrolyte from drying out. A plastic storage block (PN 235369) is provided with the pH module to soak the pH sensor in the KCl soaker solution. This block encloses the pH module's sensor in a KCl filled reservoir and houses the module's 4-pin connector in a separate chamber.

The original design of the storage block allowed KCl solution to spill into the 4-pin connector's holding chamber if the storage block is installed and removed improperly. This could result in corrosion of the connector's pins during storage.

## Solution

Sea-Bird has redesigned the storage block, adding a fill hole that connects to the KCl storage reservoir. This allows users to fill the KCl storage reservoir after the pH module has been secured in the block, avoiding exposure of the 4-pin connector to KCl solution.



A plastic screw caps the fill hole. Contact Sea-Bird for a replacement if you have the old storage block design.

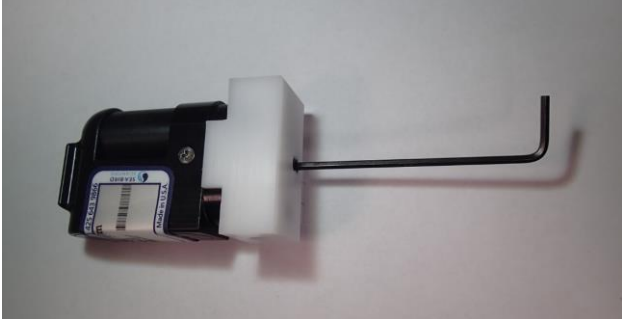
To refill the redesigned storage block. You will need the following:

- 4 M KCl solution
- Thin-tipped syringe
- 3/32 inch Allen wrench
- 3/16 inch Allen wrench
- HC-PH module
- Redesigned storage block
- Paper towels
- Canned air



### Installing the pH module in the storage block:

1. Ensure the pH storage block is clean and dry.
2. Fill the syringe with a small volume of KCl solution ( $\frac{1}{4}$  full is sufficient).
3. Remove the HC-PH module from the HydroCAT-EP using the  $\frac{3}{32}$ " Allen wrench. **Do not expose the HC-PH module to air for more than 10 minutes.**
4. Ensure the HC-PH connector is clean and dry. Rinse with high-purity alcohol and canned air to remove any water droplets. Remaining droplets can result in corrosion of the connector pins.
5. Install the HC-PH module in the dry storage block. Tighten the bottom screw with the  $\frac{3}{32}$ " Allen wrench.



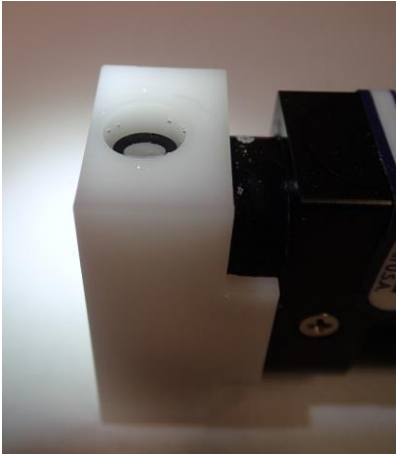
6. Orient the HC-PH module and storage block so the plastic screw is facing upwards.
7. Remove the plastic screw from the storage block with a  $\frac{3}{16}$ " Allen wrench.



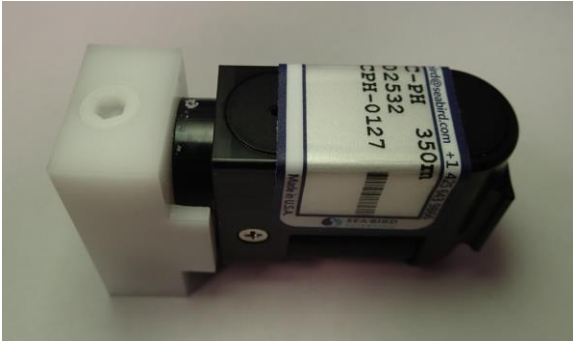
8. Insert the syringe so the tip is below the O-ring



9. Dispense KCl solution until the reservoir is filled above the O-ring. Excess will be displaced by the plastic screw.



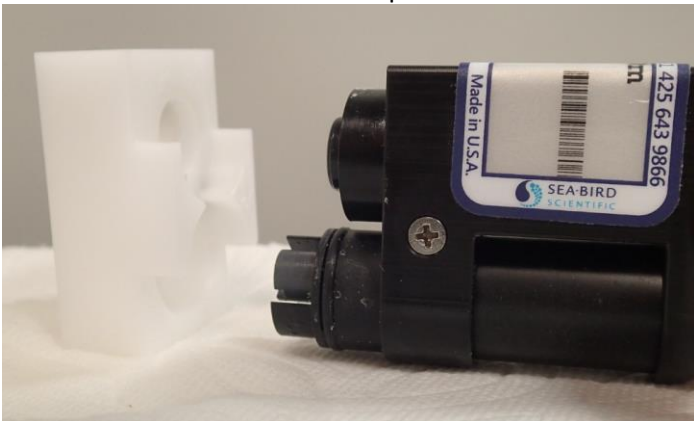
10. Reinstall the plastic screw with the 3/16" Allen wrench.



11. Clean up any excess KCl solution.

#### Removing the pH module from the storage block:

1. Place a towel on the work surface to catch any KCl solution.
2. Orient the HC-PH module and storage block so the plastic screw is facing upwards.
3. Remove the plastic screw from the storage block with a 3/16" Allen wrench.
4. Loosen the 3/32" screw securing the HC-PH in the storage block.
5. Remove the HC-PH module from the storage block, pulling the HC-PH module straight back and allowing the KCl solution to fall downwards. This prevents KCl solution from contacting the connector.



6. Ensure the HC-PH connector is clean and dry. If wet, rinse with high-purity alcohol and canned air to remove water droplets.
7. Install the HC-PH module in the HydroCAT-EP.
8. Recalibrate the pH sensor before deployment.