

**Engineering Note: EN0066 When to replace a Hydro-Mix Ceramic Retaining Ring**

Summary: How to inspect a Hydro-Mix Ceramic Retaining Ring

Products affected: Hydro-Mix VI (HM06) and Hydro-Mix VII (HM07)

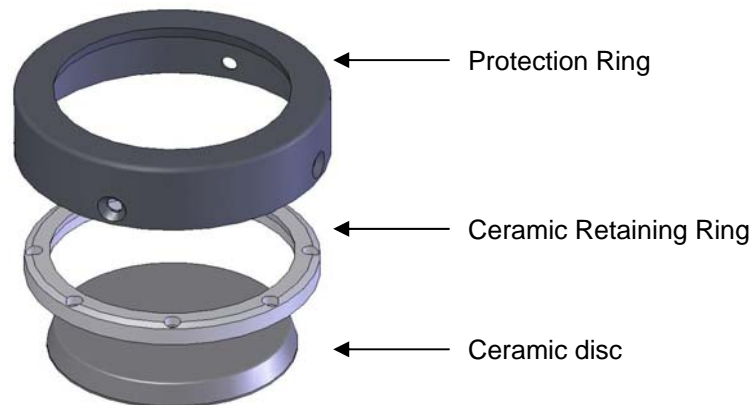
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## 1 Summary

The Hydro-Mix sensor has been designed so that in cases of wear or damage, the Ceramic Disc can be easily replaced. The Ceramic Disc is held securely in place by the Ceramic Retaining Ring. This is protected in turn by a hardened Protection Ring. The Ceramic Retaining Ring will need to be removed if the Ceramic Disc requires replacing. This document describes how to check the integrity of the Ceramic Retaining Ring for determining whether it should be replaced.

**NOTE: If the Ceramic Retaining Ring is damaged it must be replaced.**



### Ceramic Protection Components

The quality of the Ceramic Retaining Ring is vital to the stability and performance of the Hydro-Mix. Any damage or wear to this ring may result in water ingress and erratic sensor readings. It should therefore be regularly inspected for any signs of wear or damage.

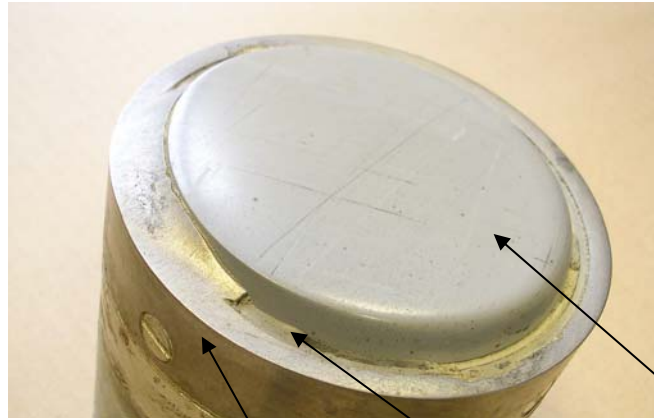
In order to ensure continued protection of the Ceramic Retaining Ring, the Protection Ring must also be regularly checked and replaced when worn (details of when replacement is necessary are described in Engineering Note EN0057). If these instructions are not followed, the Protection Ring may wear through to the Ceramic Retaining Ring.



**Hydro-Mix VI  
Ceramic Retaining Ring**



**Hydro-Mix VII  
Ceramic Retaining Ring**

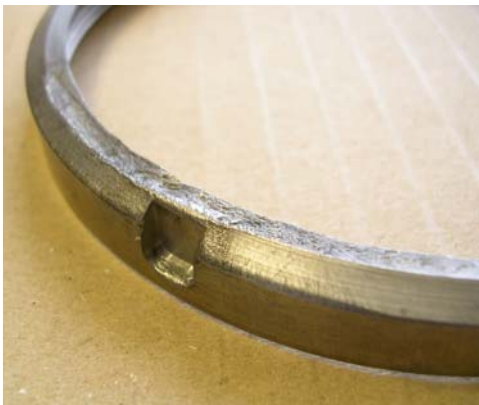


**Figure 1: A very badly worn HM06 Protection Ring, Ceramic Retaining Ring and Ceramic Disc**

The following checks must be conducted:-

### **1.1 External Wear**

The Ceramic Retaining Ring must be replaced if there is any external wear or damage resulting from the Protection Ring having worn through. For Hydro-Mix VII's the Ceramic Retaining Ring screws must also be replaced if they are damaged.



### **1.2 Circularity**

The Ceramic Retaining Ring must be replaced if is out-of-round.

### **1.3 Flatness**

The Ceramic Retaining Ring must be replaced if is not flat, is bent or twisted.

### **1.4 Internal Faces**

The Ceramic Retaining Ring must be replaced if the internal faces are damaged.



### **1.5 Hydro-Mix VI Threads**

The Ceramic Retaining Ring must be replaced if the internal threads are damaged.

### **1.6 Hydro-Mix VI Spanner Slots**

The Ceramic Retaining Ring must be replaced if the spanner slots are damaged.

