

# Examination Report of Non Scalor Unit Against Calcium Scale Deposit

June 15, 2011

Japan System Planning Co., Ltd.  
(NMR Corporation)

1. <Examination Period>

From October 16, 2010 to May 31, 2011

2. <Examination Place>



Building Address: London, United Kingdom

Name of Building and Place

① For Non Scalor installation:

Level 3 West at N0.1 Tower Place, Tower Hill, London EC3R 5Bu

② Building without Non Scalor for comparing:

Mark Lane,

Details of Coffee/Tea Machine

• Name of vending machine

Wittenberg 7100 Series

• Supplier's name & address

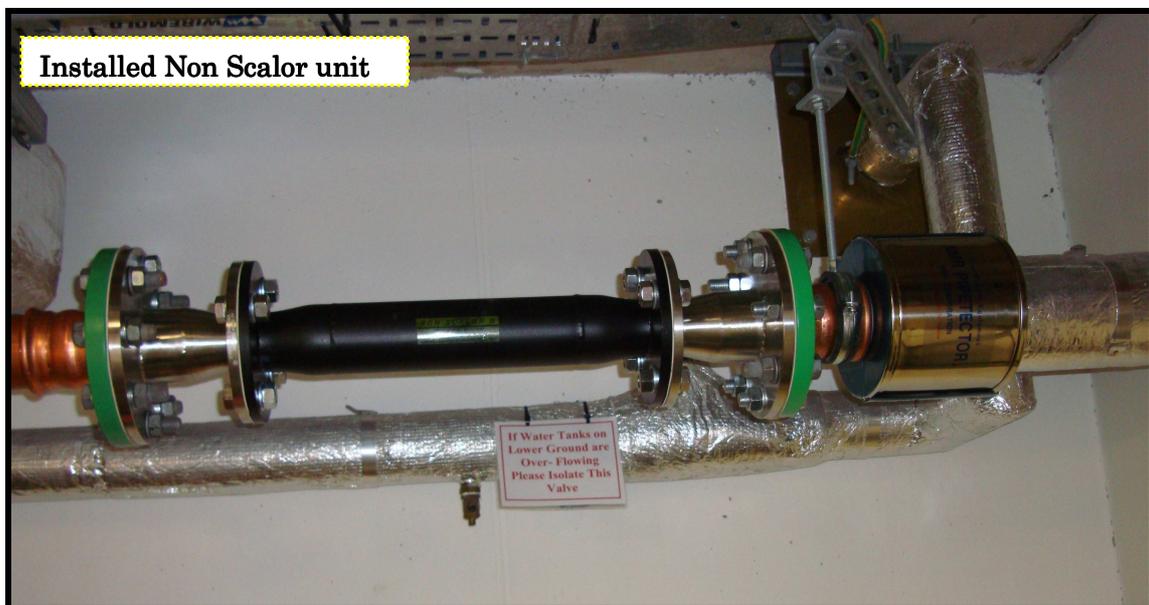
Bunzel, in York House 45 Seymour street, London.

3. <Examination Appliance and Installation Place>

①Appliance name: manufacture of Japan System Planning  
2 units of Non Scalor (NS-50)

②Installation Place:

Main water supply pipe (50mm diameter) installed directly in line.



4. <Conditions of Installation Place for Verifying Effect>

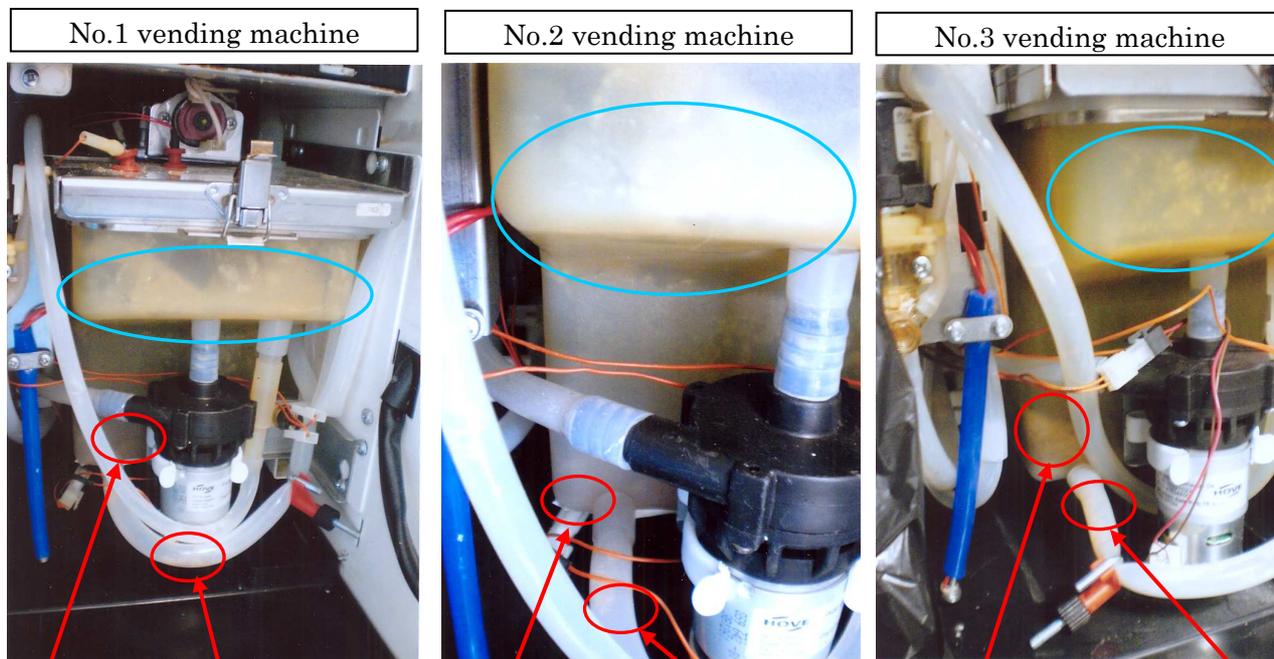
- "No.1 vending machine"  
With installing Non Scalor and a water filter.
- "No.2 vending machine"  
With installing Non Scalor. (With no water filter.)
- "No.3 vending machine"  
With no protection at all. (No Non Scalor or Water Filter.)



5. <Pictures of Calcium Scale Deposit after 6months from Installing Non Scalor>

(Confirmed on May 31, 2011 at 10:30am)

: The calcium scale deposit on the side of water tank is not eligible as a comparison between before and after installation of Non Scalor since it was there before installation.



Plastic tube  
No scale deposit.

Plastic tube  
No scale deposit.

Plastic tube  
75% scale blockage:  
40mm long

Lower water tank  
Small amount of scale.

Lower water tank  
Small amount of scale.

Lower water tank  
Big scale deposit:  
more than 40mm

Vending Machine Inspection Place	No.1-Vending Machine (with NS and filter)	No.2-Vending Machine (with NS)	No.3-Vending Machine (without NS)
Inside of Tube (Decreased by NS)	There is almost no scale adhered.	There is almost no scale adhered.	More than 50% of inner-diameter of the plastic tube is blocked by 40mm long calcium scale.
Lower Water Tank (Decreased by NS)	There is about 5~10mm high and long calcium scale, forming a triangle, in a corner at the bottom of the water tank.	Same as on the left	There is about 40mm high and long calcium scale, shaping a triangle, in a corner at the bottom of the water tank.
Upper Water Tank (No change)	-There is no change of yellow colored calcium scale along the side of the water tank before and after the examination.	Same as on the left	Same as on the left

## 6 <Examination Result of Reducing Calcium Scale by Non Scalor Unit & Consideration>

Effect of reducing calcium scale deposits by Non Scalor was examined by confirming the amount of calcium scale that was deposited in water tanks and the connected plastic tubes of the Coffee/Tea Machine, as mentioned in the above section 5, 6months after installing the appliance.

- (1) In No.1 and No.2 vending machines with Non Scalor installed, there was no calcium scale seen inside of the plastic tubes. On the other hand; in No.3 vending machine without the protection of the Non Scalor, there was more than a 40mm long calcium scale deposit, and it blocked more than 50% of the inner diameter of the plastic pipe.
  
- (2) In No.1 and No.2 vending machines with Non Scalor installed, there were triangular calcium scale deposits, about 5~10mm high and long, in a corner at the bottom of the lower water tank. On the other hand; in No.3 vending machine without Non Scalor, a 40mm high and long calcium deposit that also formed a triangle arose in a corner of the water tank.  
With these results above, it is verified that the Non Scalor is able to reduce more than 75% of calcium scale deposits.
  
- (3) There was no difference between the amount of calcium scale deposits in the lower water tanks of No.1 and No.2 vending machines; therefore, it is verified that there is almost no effect from a water filter.