Scotsman®
Ice Systems

NEW AC SERIES

SECOND HALF

Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE

Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE

It is good advice for owners cleaning time by time air filter (A/C version).

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NEW AC SERIES

MAINTENANCE

….and, according to the quality of the water, dumping the stored inside water sump which may contains solid impurities. To do that, turn ice maker OFF.

Remove clamp and silicon cap

Special care while re-installing the cap and spring back to avoid any water leakage

Scotsman® Ice Systems

NEW AC SERIES

MAINTENANCE

The most important program on the maintenance of the cubers is the cleaning/sanitizing to be done on regular base, as detailed here below:

- **Sanitizing:** **Every month**

- **Cleaning:** **Every six**

or when cleaning remind board signals it.

On next slides will be shown the procedure for cleaning and sanitizing.

Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

TOOLS REQUIRED

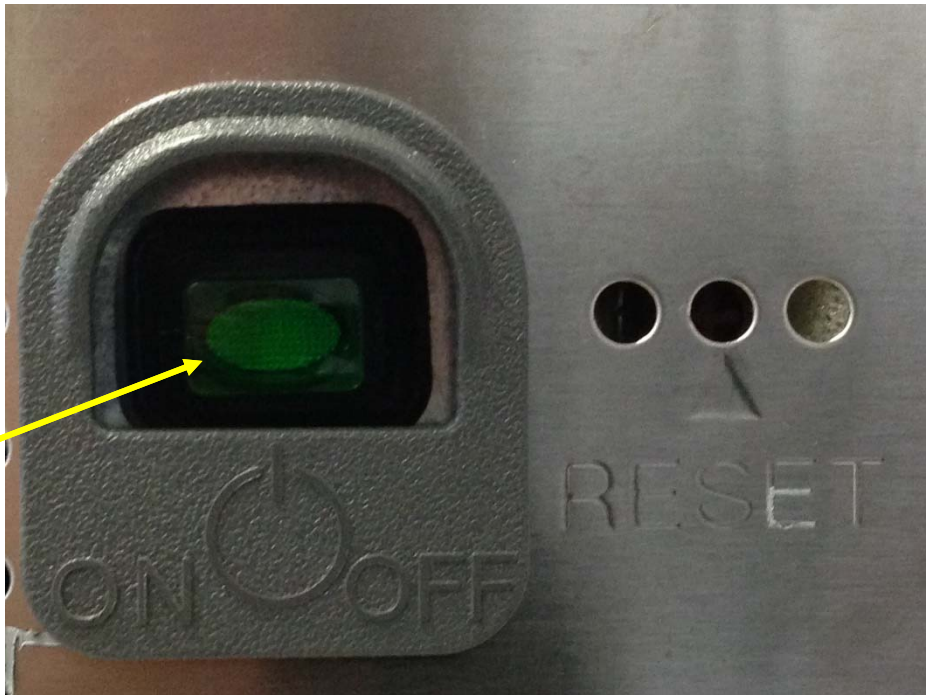
- Medium Phillips Screwdriver
- Medium Flat Screwdriver
- Pair of safety gloves
- Bucket
- Different types of brush
- Approved Cleaner/Sanitizer

Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE

Wait till the end of the defrost/harvest cycle then Switch OFF the machine at Push Button Master Switch.



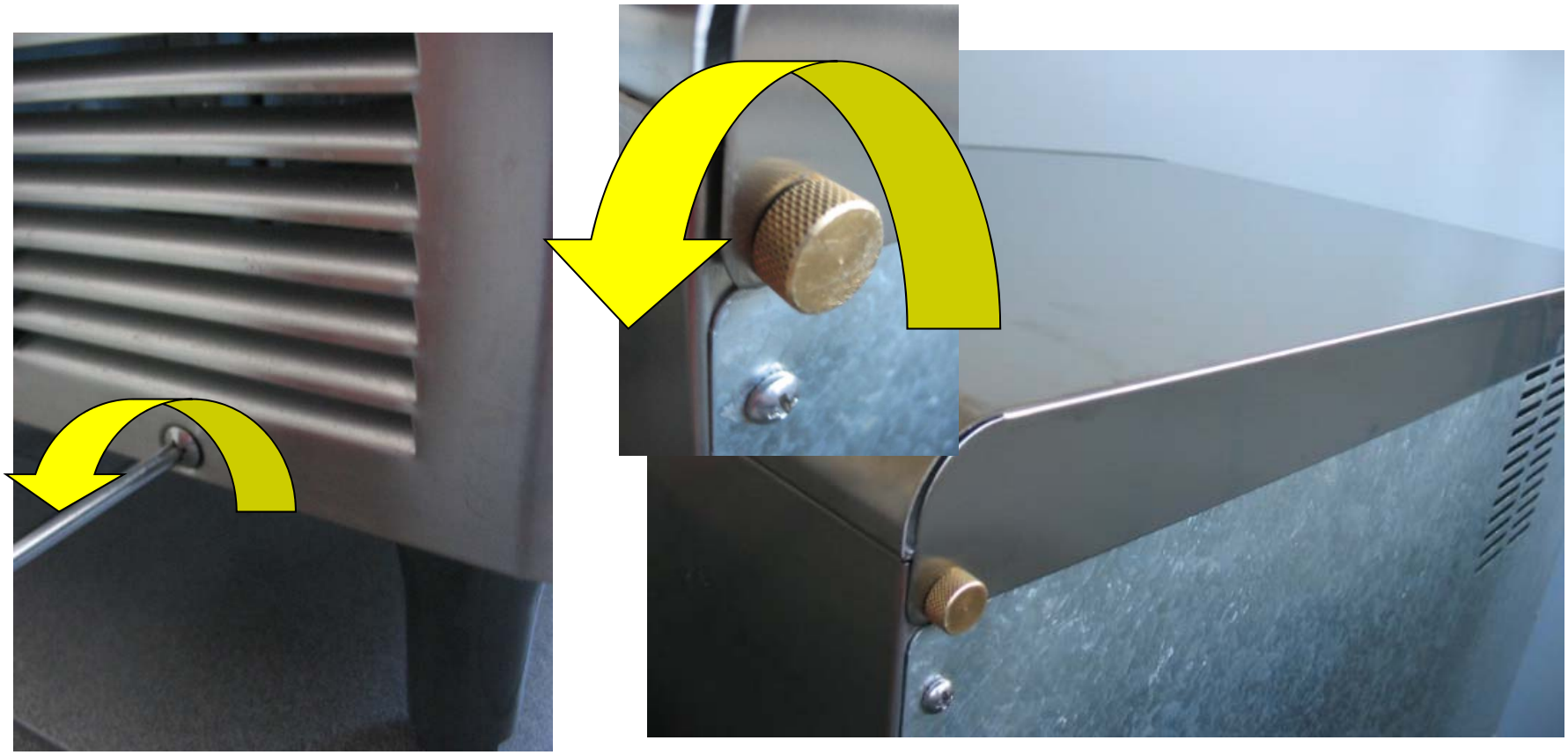
Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Remove the front….

….and top panel.



Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Scoop out all ice cubes stored into the bin so to prevent its contamination then...

….take out the S.S. spring holding the soft plastic plug to the bottom of the water sump ….

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Ice Systems

NEW AC SERIES

MAINTENANCE

….and remove the soft plastic plug by pulling it down so to drain out all water from the water sump.

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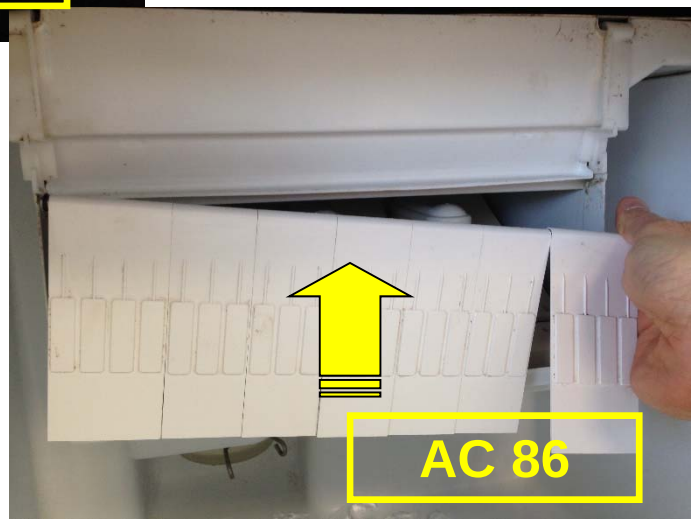
NEW AC SERIES

MAINTENANCE



…. Slip out

water curtain

from its

bracket seats

and remove

the same.

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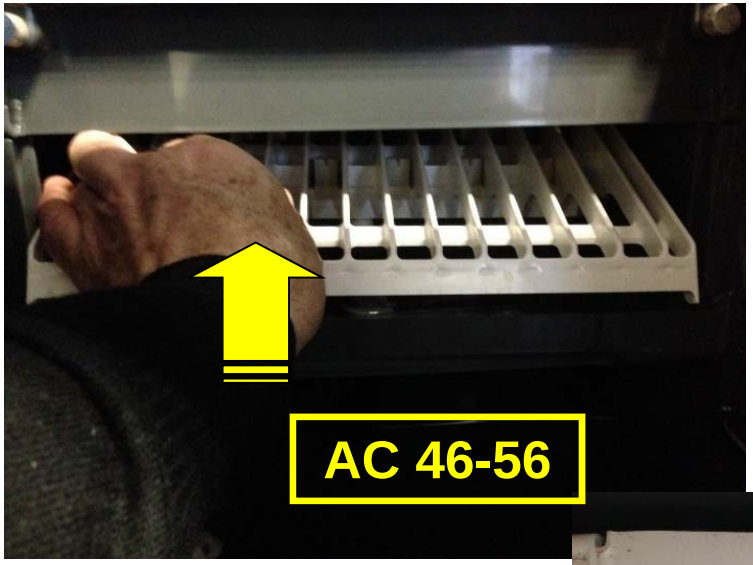
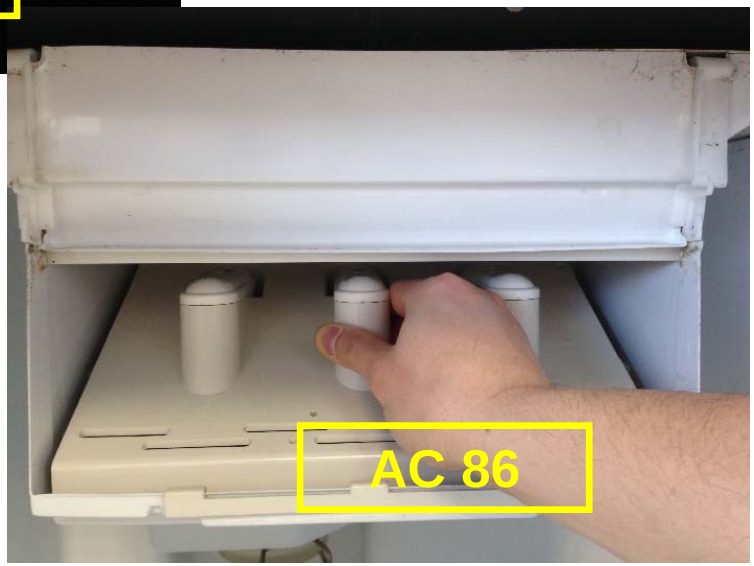
Ice Systems

NEW AC SERIES

MAINTENANCE





Grasp the spray platen assy on the center spray jet and lift it up so to have access to the water sump.

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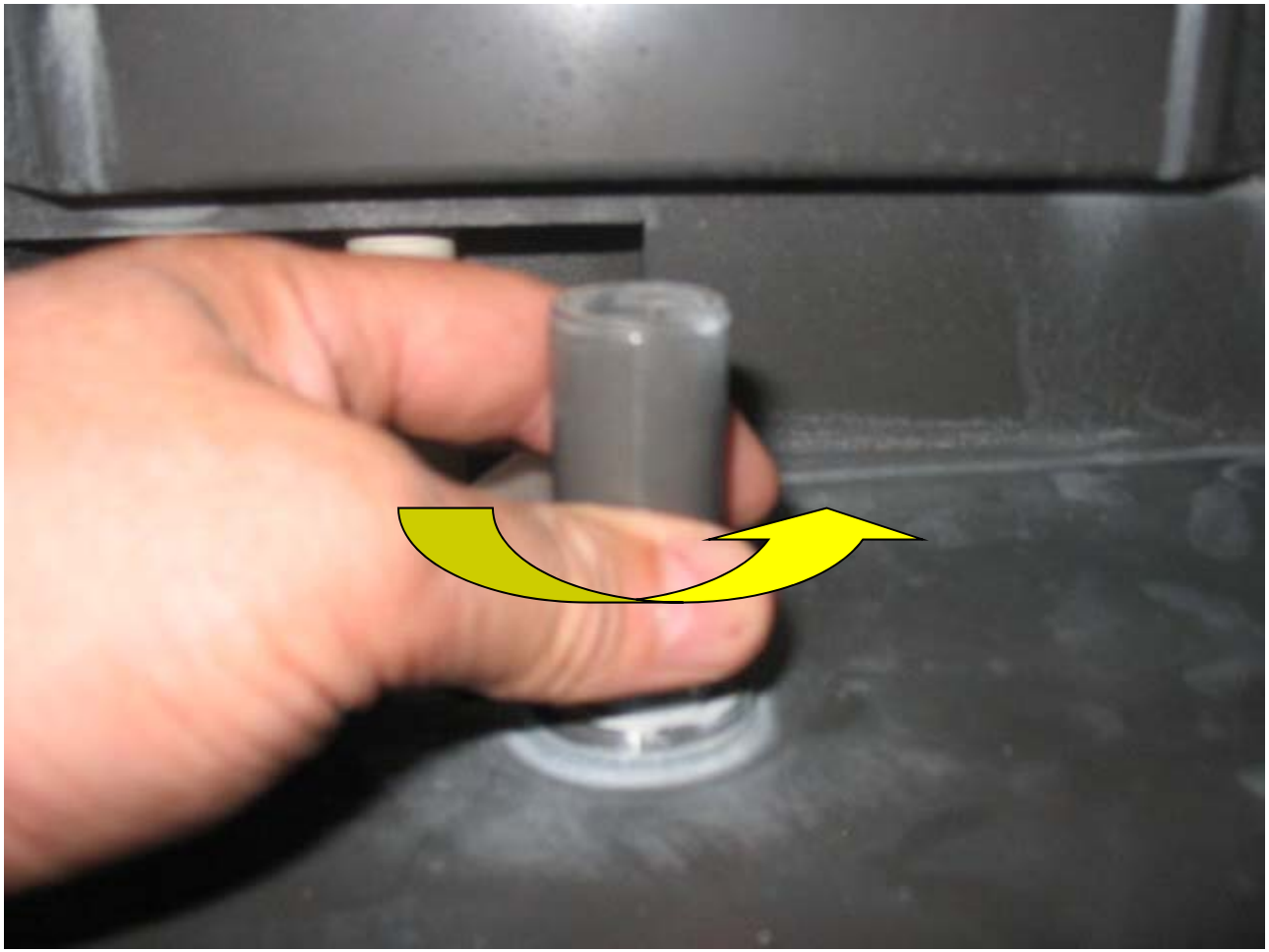
NEW AC SERIES

MAINTENANCE



Turn

counterclockwise

the spray platen

seat and …

Scotsman® Ice Systems

NEW AC SERIES

MAINTENANCE

… remove it

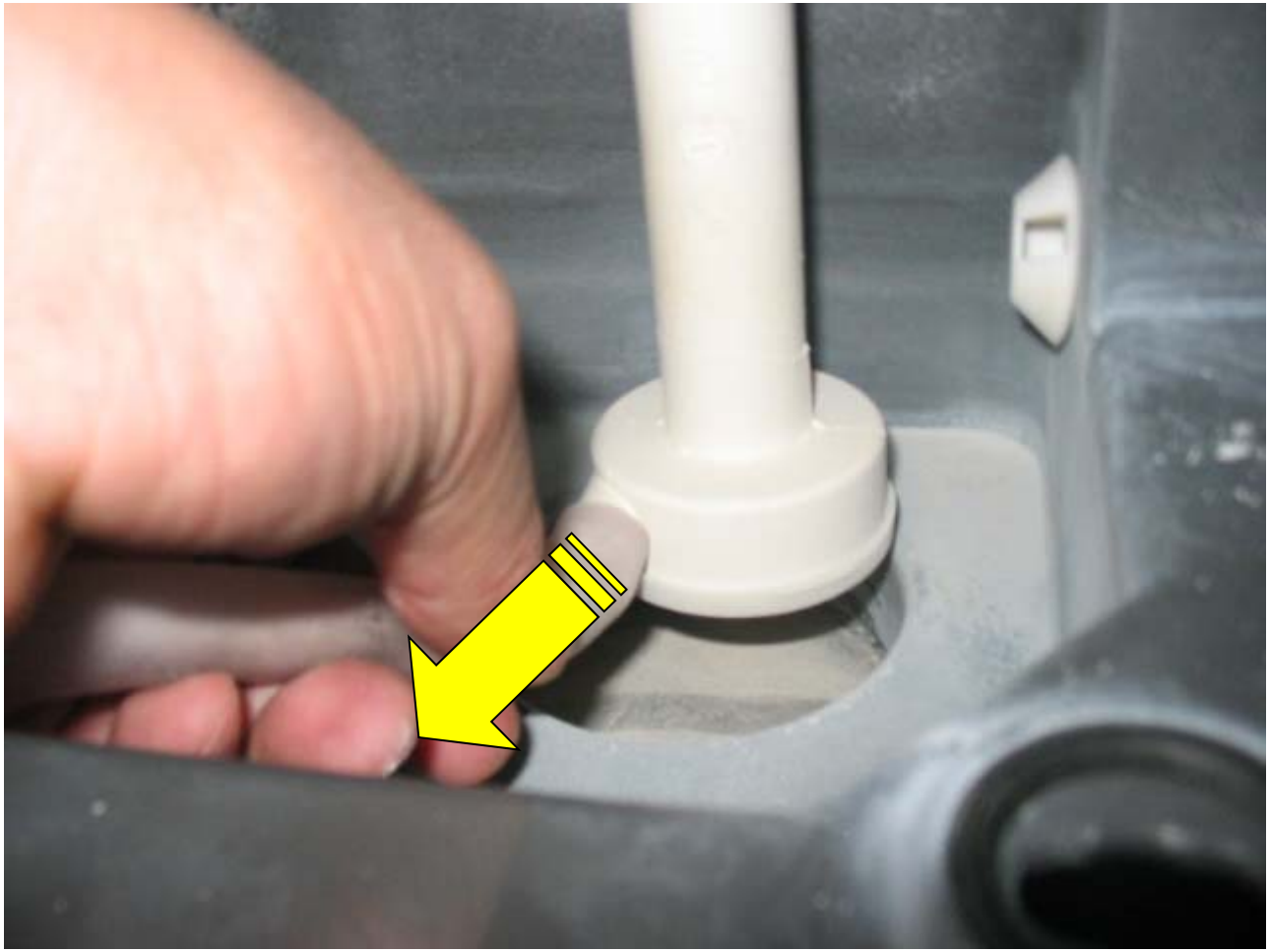
from its

bottom hole.

Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE



Disconnect the plastic hose from the water pump outlet port.

Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Prepare the cleaning solution by diluting in a plastic bucket two liters of lukewarm water (max 40ºC) with 200 cc of **SCOTSMAN Ice Machine Cleaner**.

Scotsman® Ice Systems

NEW AC SERIES

MAINTENANCE

Prepare, in a suitable basin, a second cleaning solution by diluting two liters of lukewarm water (max 40ºC) with 200 ml of **SCOTSMAN Ice Machine Cleaner**.

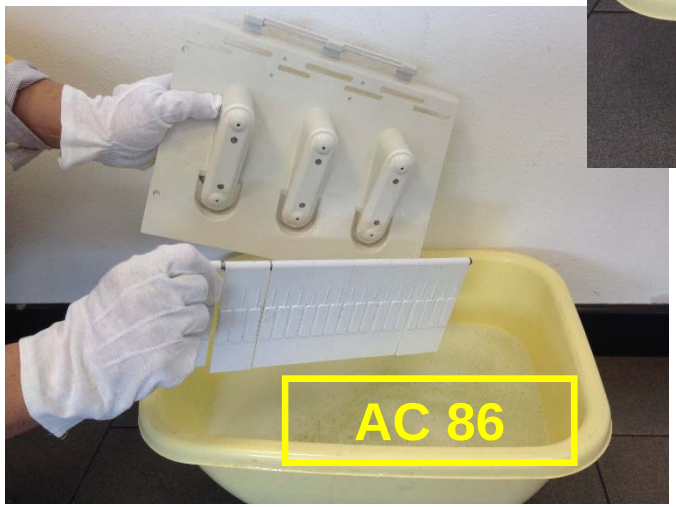
Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Poor into the cleaning solution all parts previously removed from the water system i.e.:

- Spray platen
- Curtain assy
- Spray platen seat
- Soft Plastic plug



Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Leave them into the cleaning solution for about 10 minutes then, with an help of a plastic brush, remove all scale deposit then…

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NEW AC SERIES

MAINTENANCE

….wash them under tap water.

When finish, install again all removed parts following the procedure on reverse.

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NEW AC SERIES

MAINTENANCE

Remove the evaporator cover then….

….slowly pour onto the evaporator the cleaning solution.

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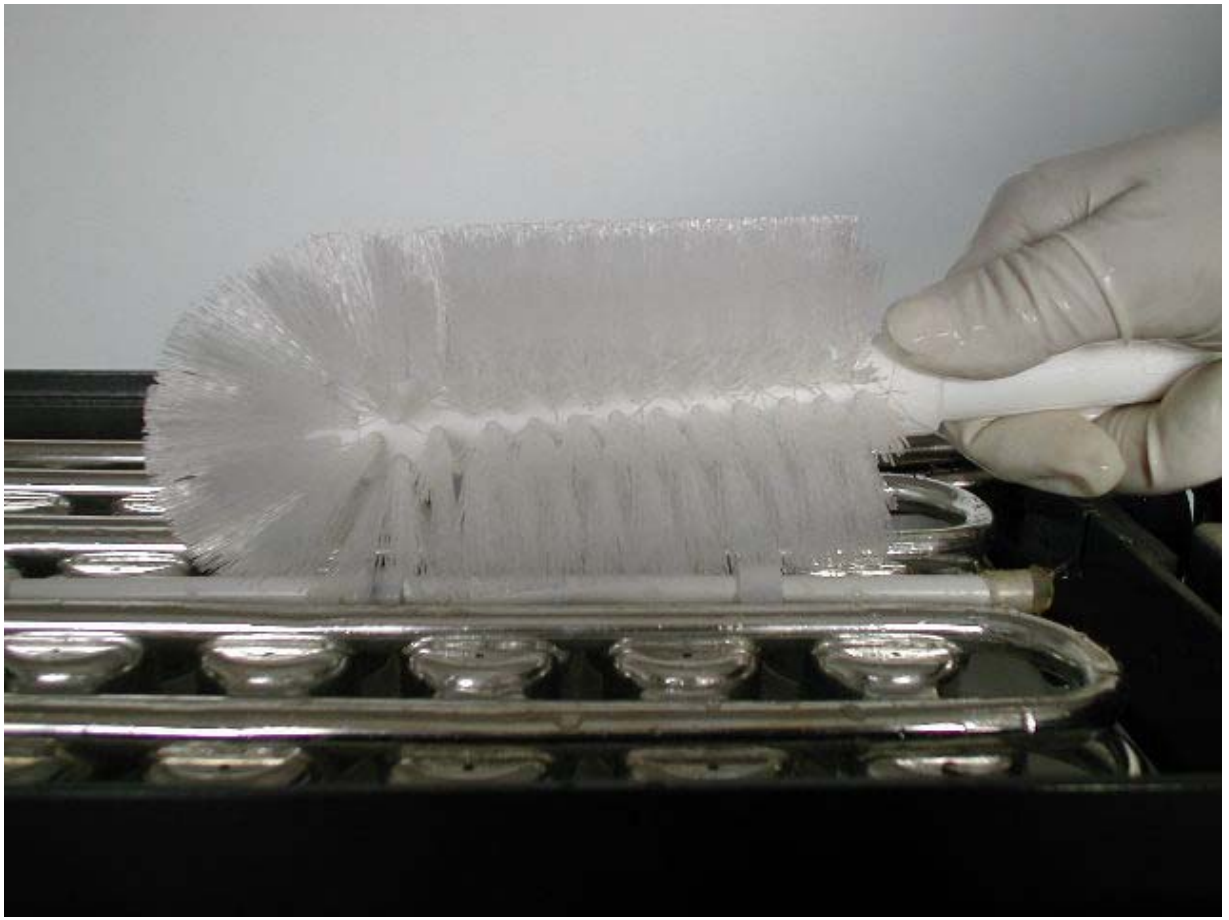
NEW AC SERIES

MAINTENANCE

With the help of a brush dissolve the most resistant and remote scale deposits in the plastic platen.

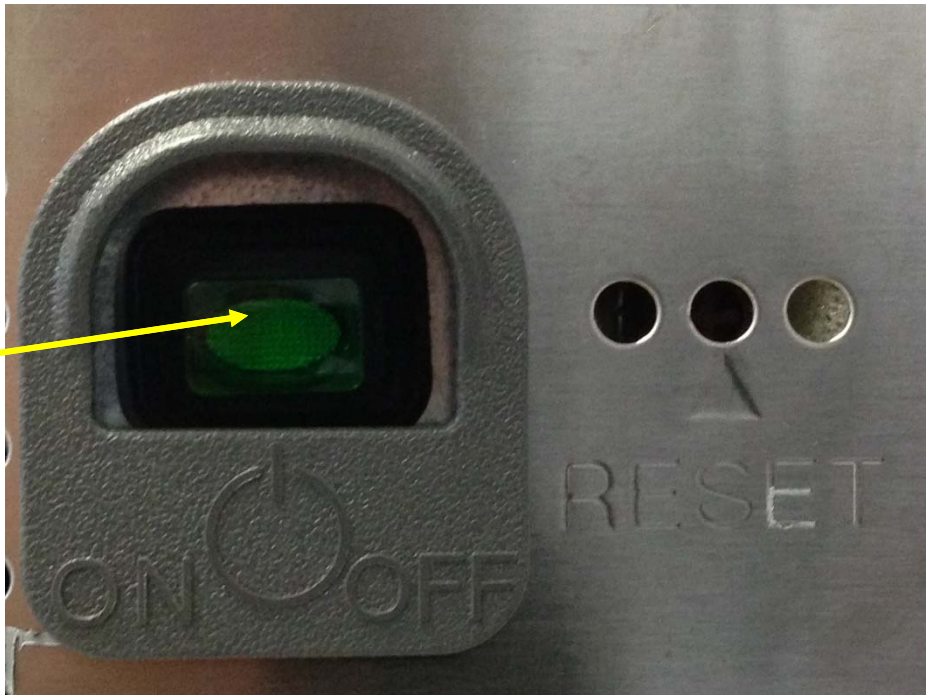


Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE

Switch ON the machine at Push Button Master Switch.



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NEW AC SERIES

MAINTENANCE

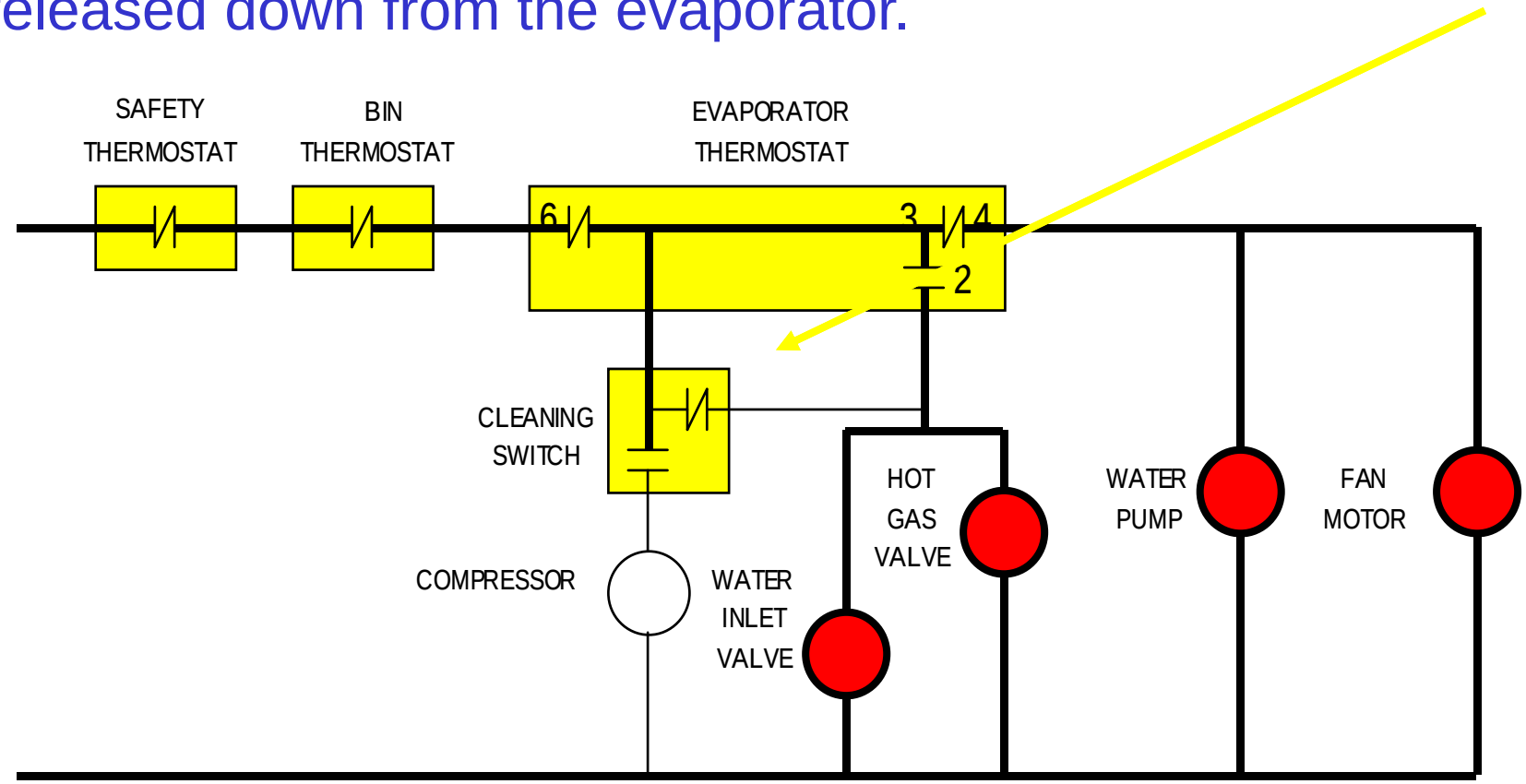
Let the unit remain in the freezing mode for about 20 minutes then move the Cleaning Switch on the Cleaning position (II) for about four-five minutes till…

Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

… all the ice cubes produced with the cleaning solution are released down from the evaporator.



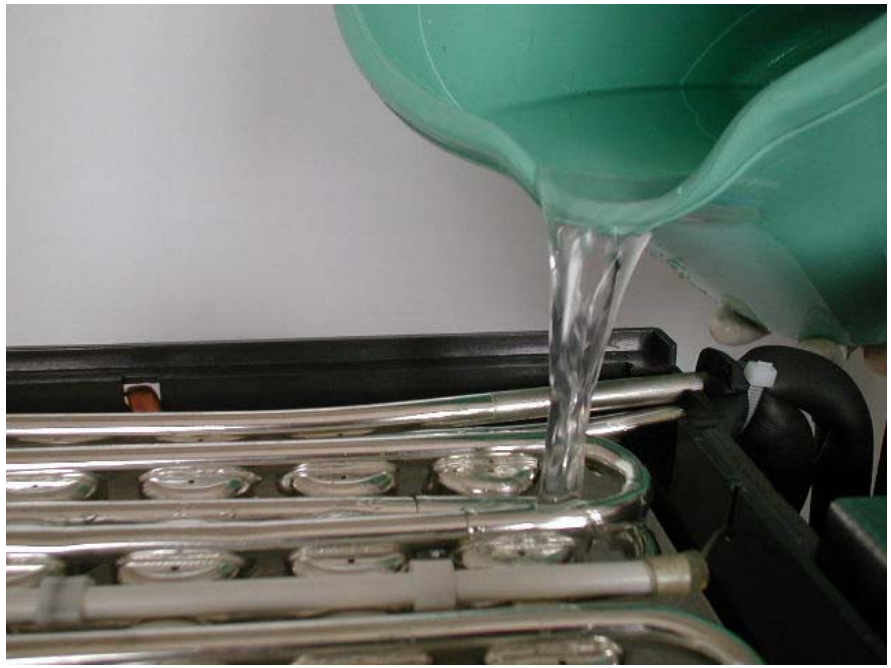
Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Flush out the cleaning solution from the sump by removing clamp and the soft plastic cap then….

… pour onto the evaporator cavity three liters of fresh water to rinse the molds and the platen.



Scotsman®
Ice Systems

NEW AC SERIES

MAINTENANCE

Turn again the Cleaning Switch on Operating position (I) so to leave the water pump circulating the fresh water and rinse the water system

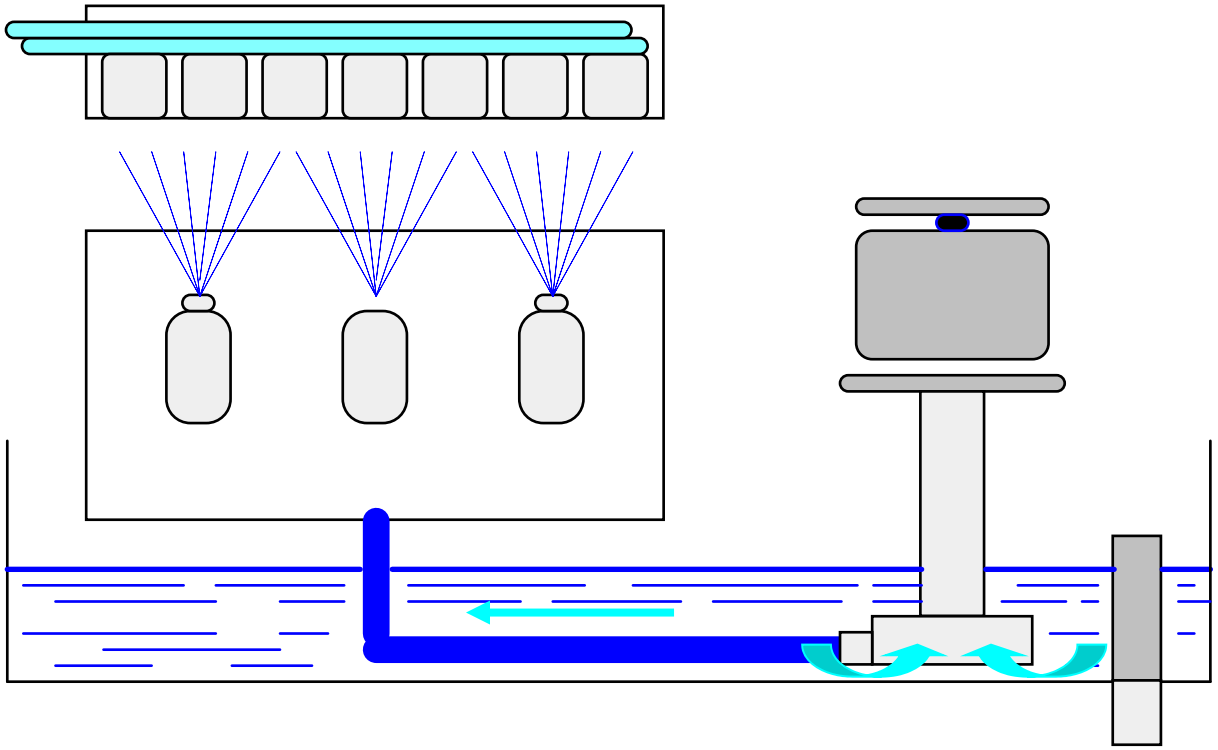
Do it twice so to be sure no more trace of descaling/cleaning solution remains into the sump.

Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

With the water pump in operation the cleaning solution in kept in circulation through the entire water system.



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Ice Systems

NEW AC SERIES

MAINTENANCE

Pour on the upper side of the evaporator 2 liters of fresh water with 10-15 drops of **Scotsman Antialgae Solution** then….

…. turn again the Cleaning Switch in Operating Position (I) so to have the water pump circulating the sanitation solution for 10 minutes.

NOTE. Do not mix delimer with sanitizing solution to avoid the generation of a very aggressive acid.

Scotsman Ice Systems

NEW AC SERIES

MAINTENANCE

Flush out the sanitizing solution from the sump then….

… turn the Cleaning Switch to Cleaning Position (II) for 2-3 minutes….

…. and then again in Operating Position (I).

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Ice Systems

NEW AC SERIES

MAINTENANCE

Place again the evaporator cover and the service panels previously removed.

At completion of the freezing and harvest cycle make sure of proper texture and clearness of the ice cubes and that they do not have any acid taste.

ATTENTION. In case the ice cubes are cloudy-white and have acid taste, melt them immediately by pouring on them some warm water so to prevent that anybody can use them.

Scotsman® Ice Systems

NEW AC SERIES

MAINTENANCE

Wipe clean and rinse the inner surface of the storage bin.

REMEMBER. To prevent the accumulation of undesirable bacteria it is necessary to sanitize the interior of the storage bin with a sanitizing solution every week.

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Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

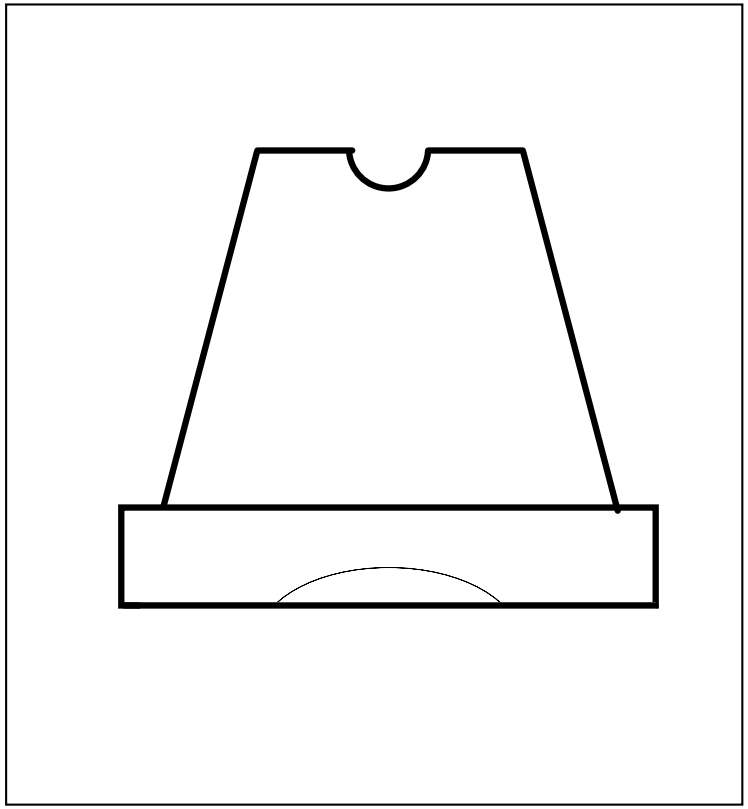
Scotsman®
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

This is a **Scotsman Ice Cube.**

It must be clear, solid with a small depression on its bottom rim of about 3-4 mm.



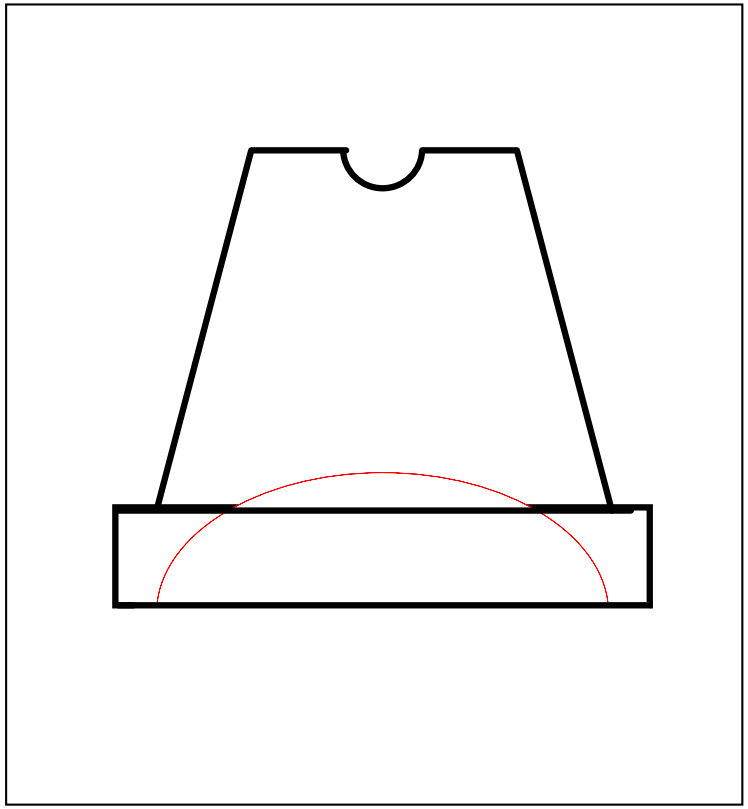
Scotsman®
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

This ice cube is clear, solid but it has a deep depression on its bottom rim due to a too short freezing cycle.

It is necessary to extend the length of the freezing cycle by turning the…..



Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

….. Evaporator

Thermostat a little bit

clockwise.

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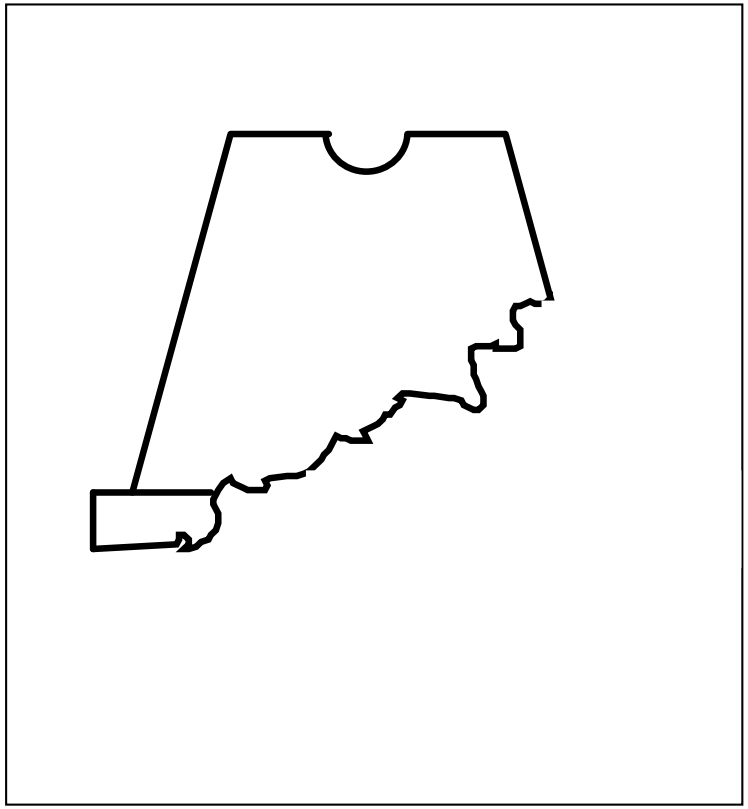
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

This is a typical ice cube clear on its upper left side and white and corroded on its bottom right side.

The reason is that the water doesn’t reach in correctly the inside of some of the tin cooper molds.

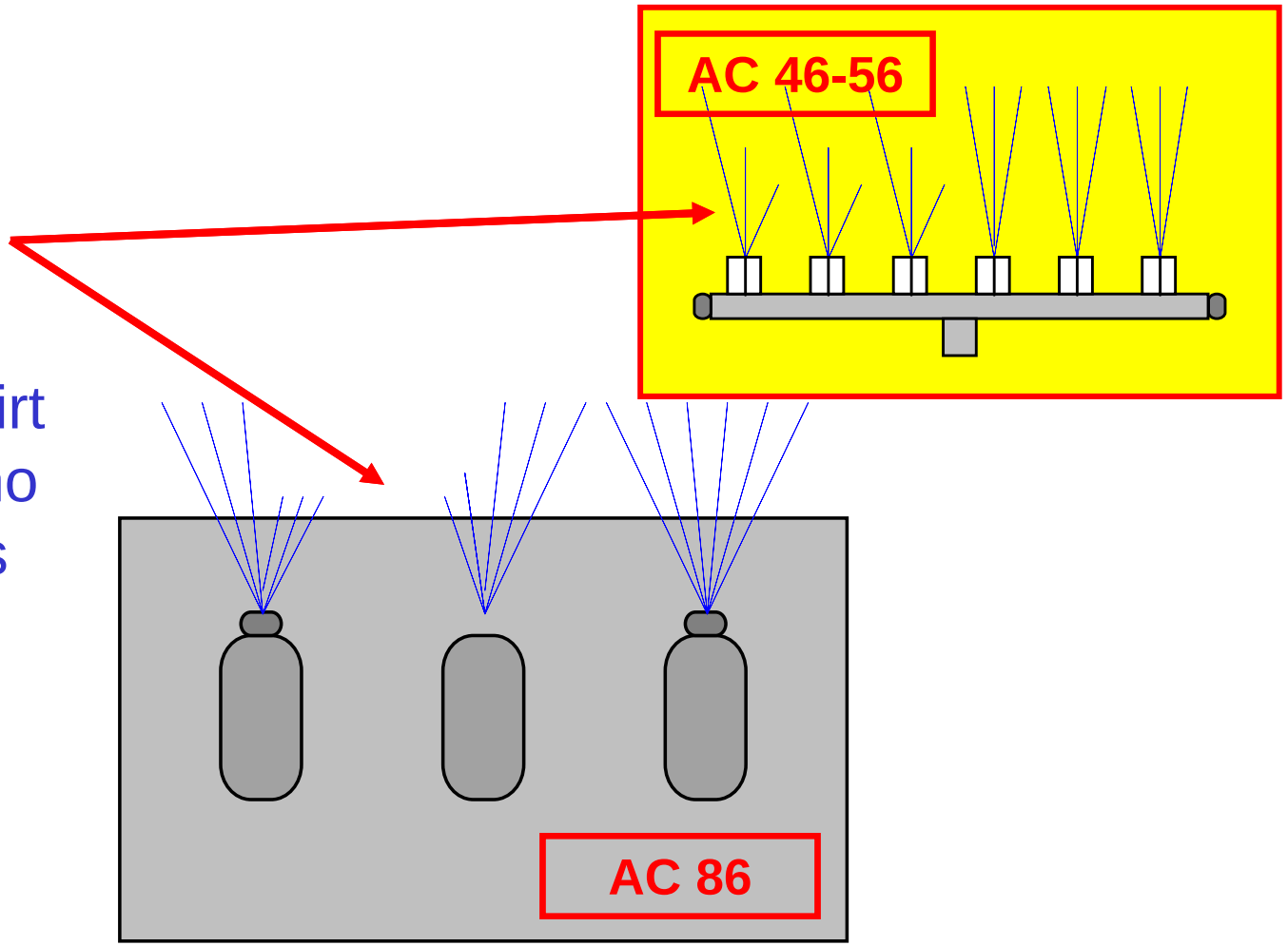


Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

Probably one or more of the spray jets of the spray platen is partially looked by scale/dirt and the water is no longer sprayed as a complete inverted water cone.



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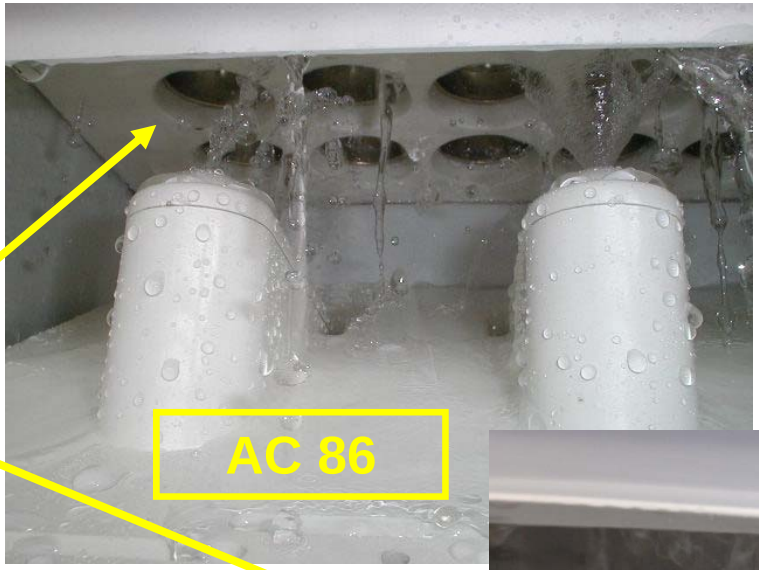
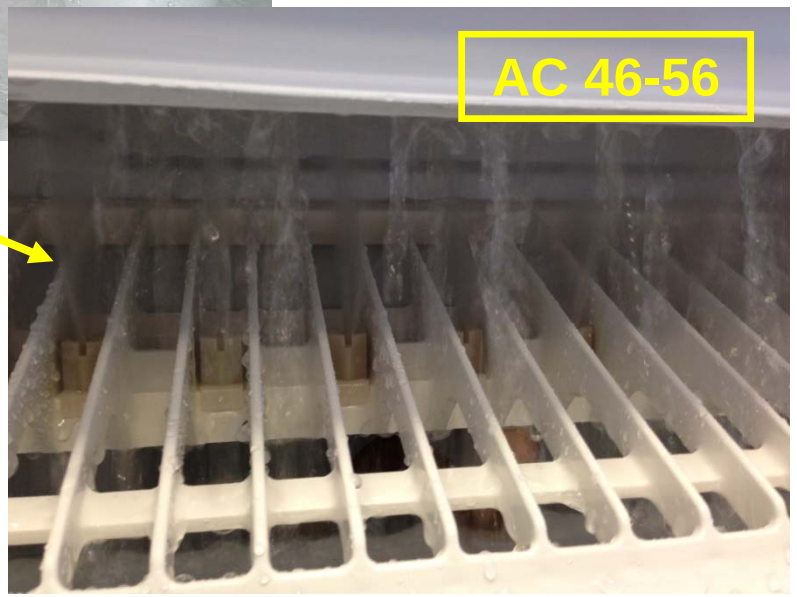
NEW AC SERIES

SERVICE ANALYSIS

To overcame the problem it is necessary first to find out which of the spray jets doesn't spray water in the correct way then remove the complete spray assembly from the sump and ….

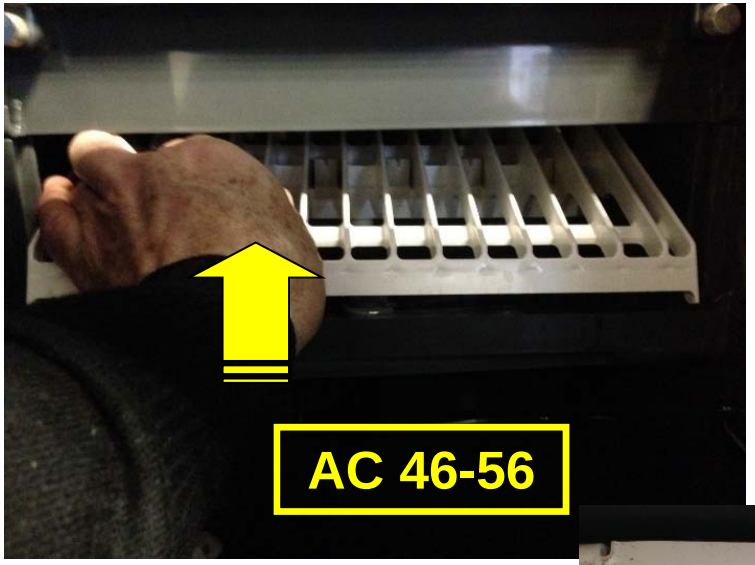




Scotsman Ice Systems

NUOVA SERIE AC

ANALISI GUASTI



then remove the complete spray platen from the sump and ….

Scotsman Ice Systems

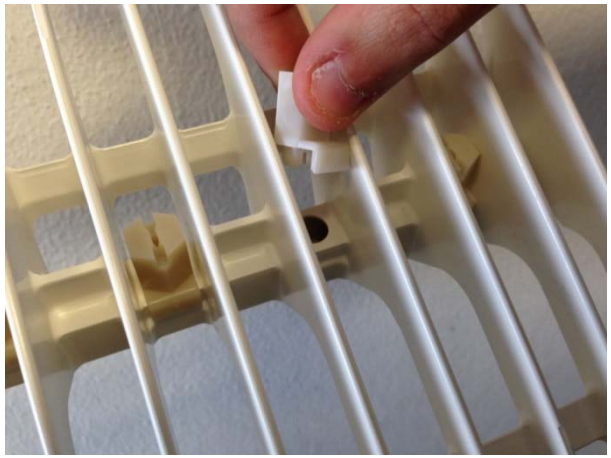
NUOVA SERIE AC

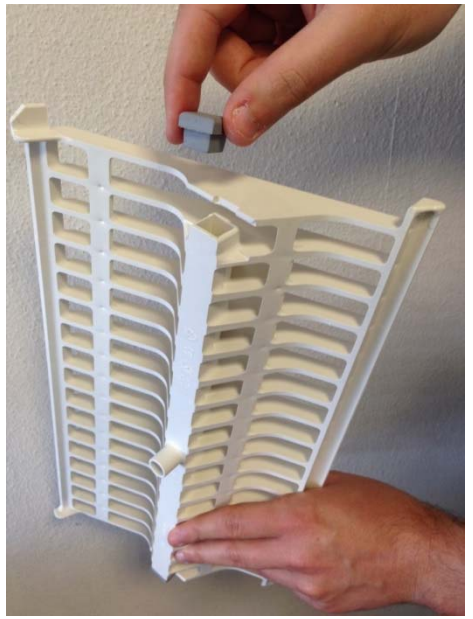
ANALISI GUASTI

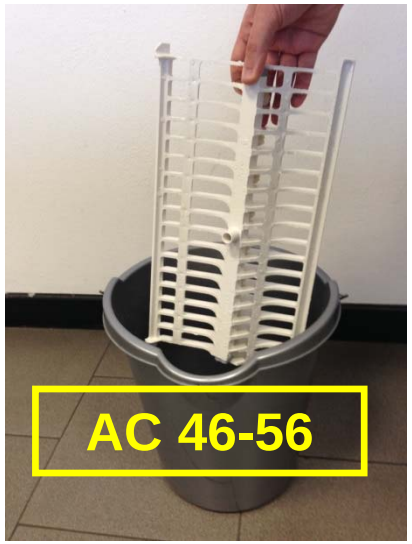
On models **AC 46-56** remove and clean each spray jet and the side plugs of the spray assembly.

Poor into the cleaning solution all parts previously removed from the water system and Leave them into the cleaning solution for about 10 minutes then, with an help of a plastic brush, remove all scale deposit then….

Finally , rinse these parts with fresh water and reinstall on the machine





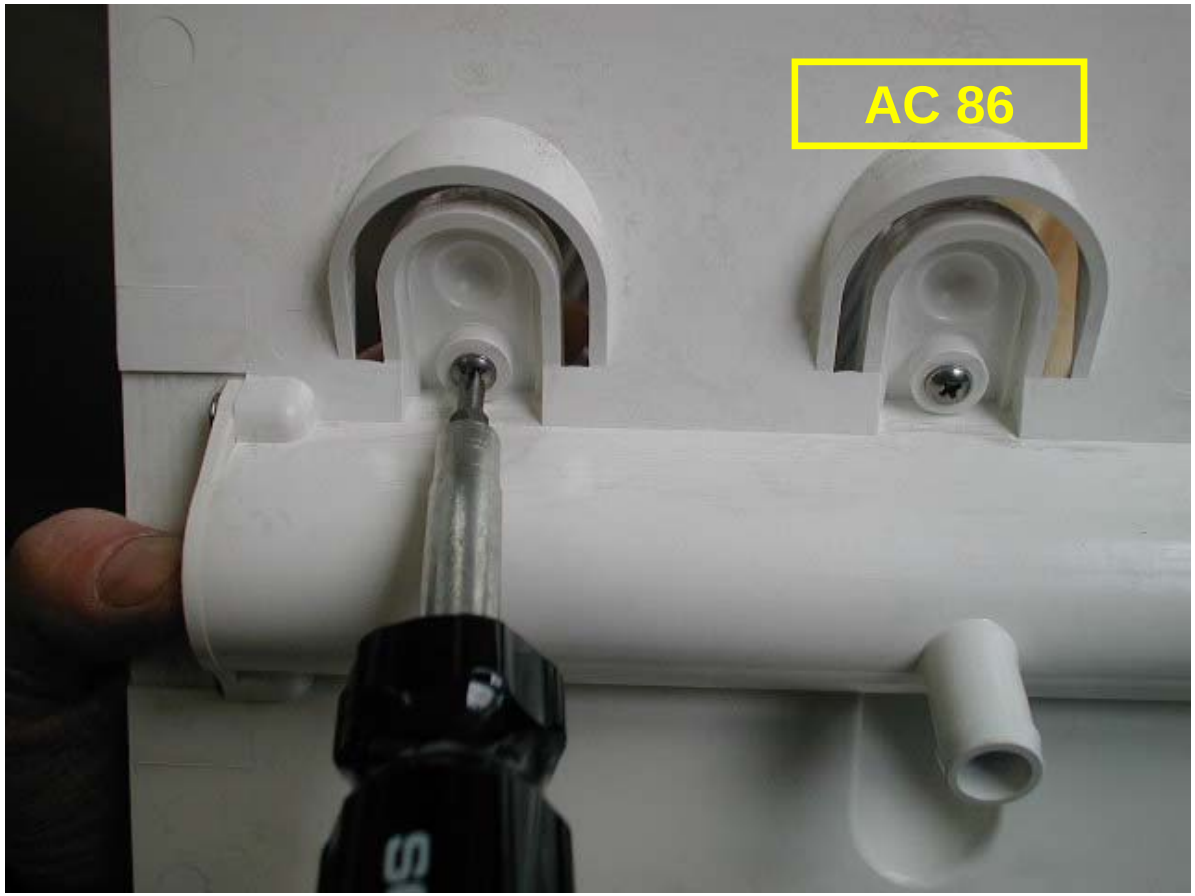


Scotsman® Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

On model **AC 86** unloose the two screws securing the plastic spray cover to clean it or replace it with a new one.

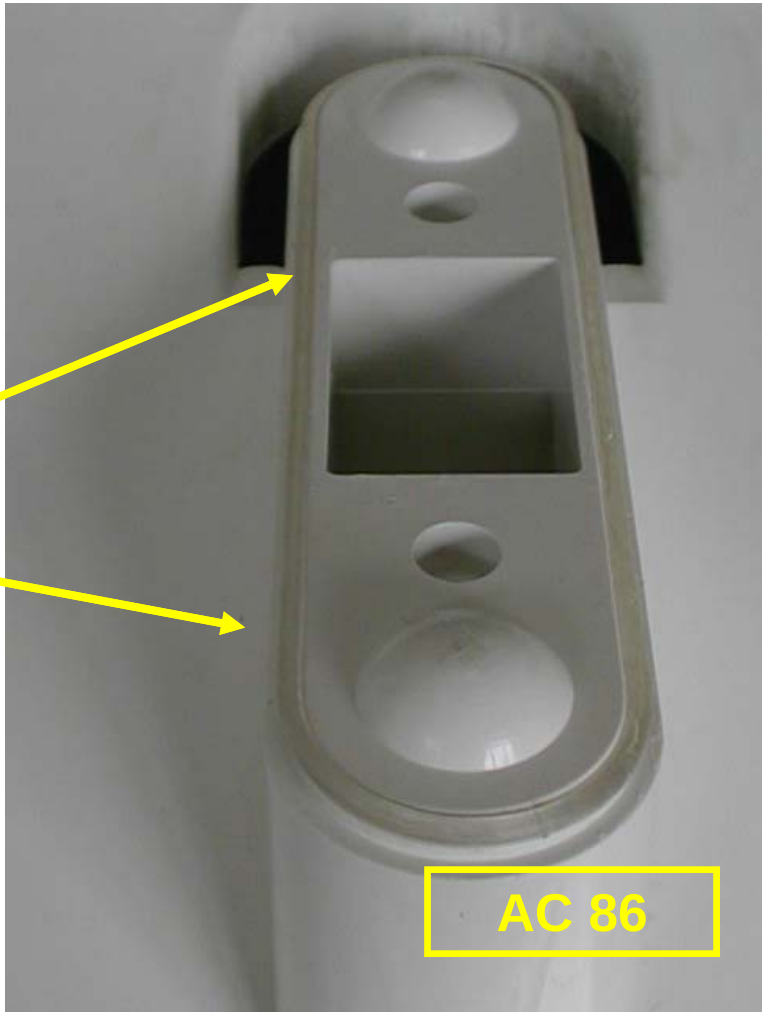


Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

When refit it on the spray platen be careful in correctly install the O ring between the spray cover and its bottom seat.



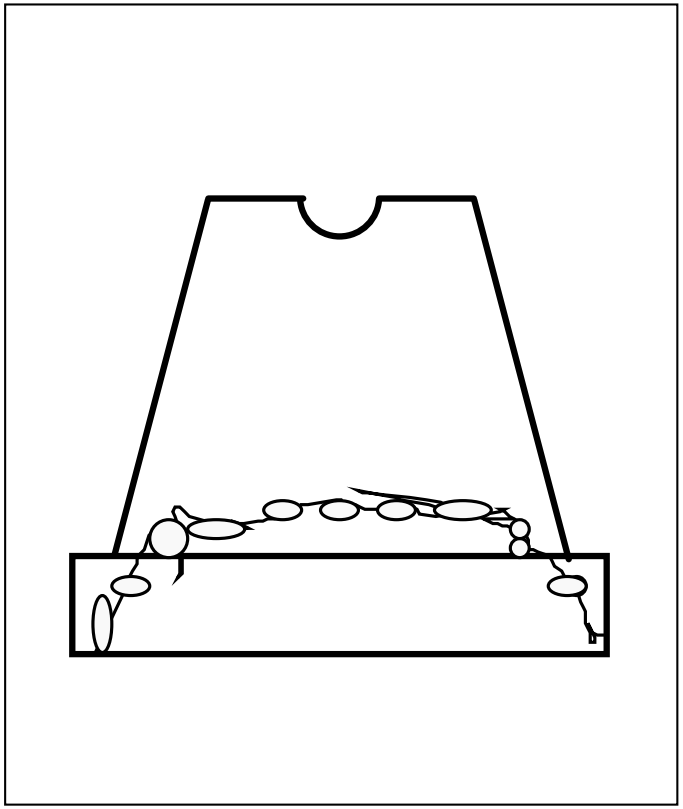
Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

This is a typical ice cube; clear on its upper side and white and corroded on its bottom side.

The water is sprayed in the correct way and under the right pressure only during the first portion of the freezing cycle while on the second half the level of the water in the sump is not enough to assure the proper spray of the water pump (cavitation).



Scotsman®
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

Scotsman® Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

The reason is the too low water level into the sump during the harvest cycle that could be related to:

- **Too low water inlet pressure**
- Clogged water filter
- Clogged water inlet strainer
- Clogged water flow control
- Water leak through the front curtain
- Water leak through the overflow stand pipe

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NEW AC SERIES

SERVICE ANALYSIS

- **Clogged water filter**

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NEW AC SERIES

SERVICE ANALYSIS

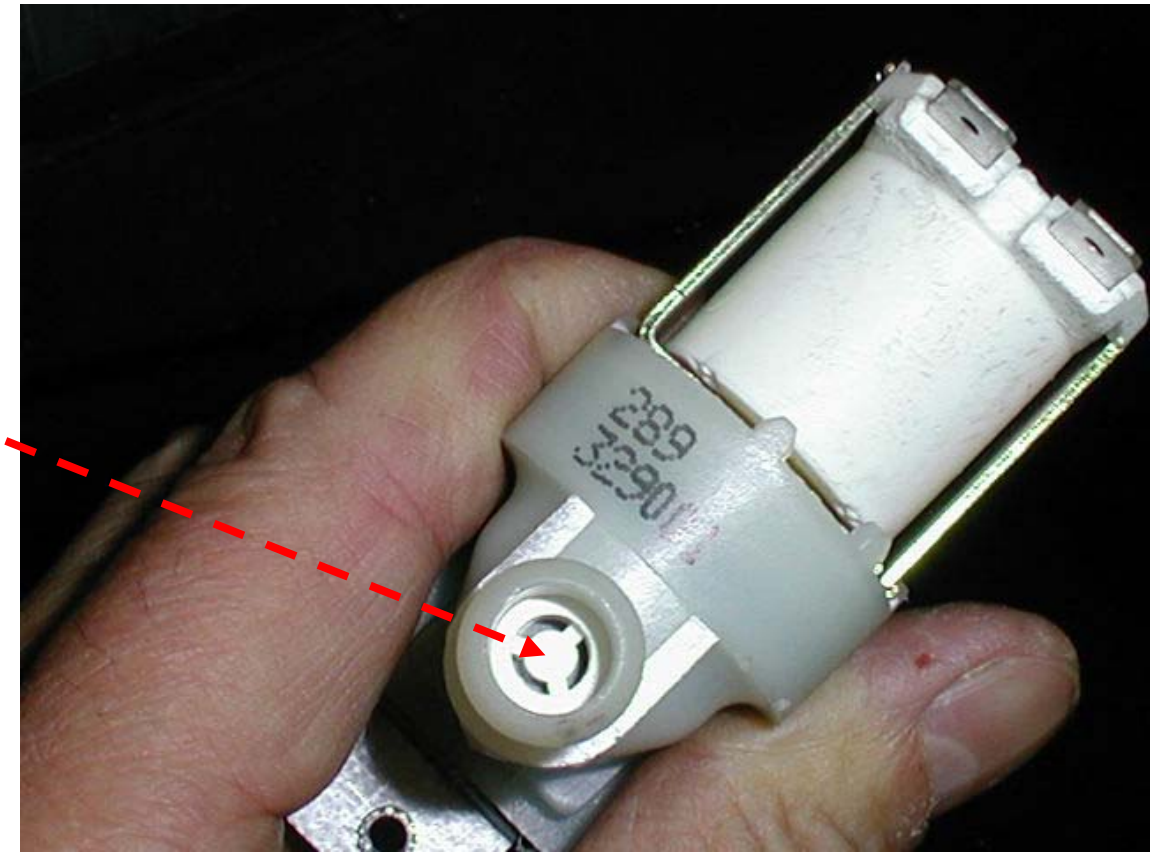
- Clogged water inlet strainer

Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- Clogged water flow control

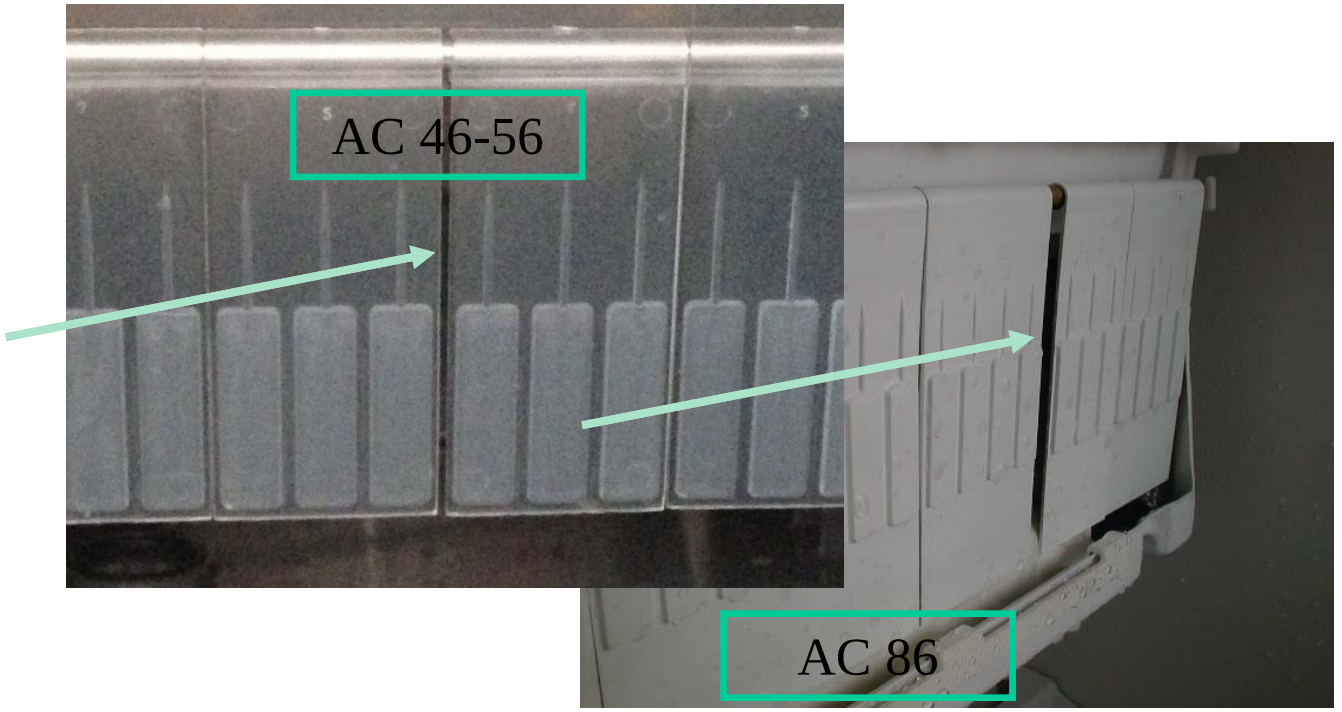


Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- **Water leak through the front curtain**



Scotsman® Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- Water leak through the soft plastic plug.
- Check also clamp plug

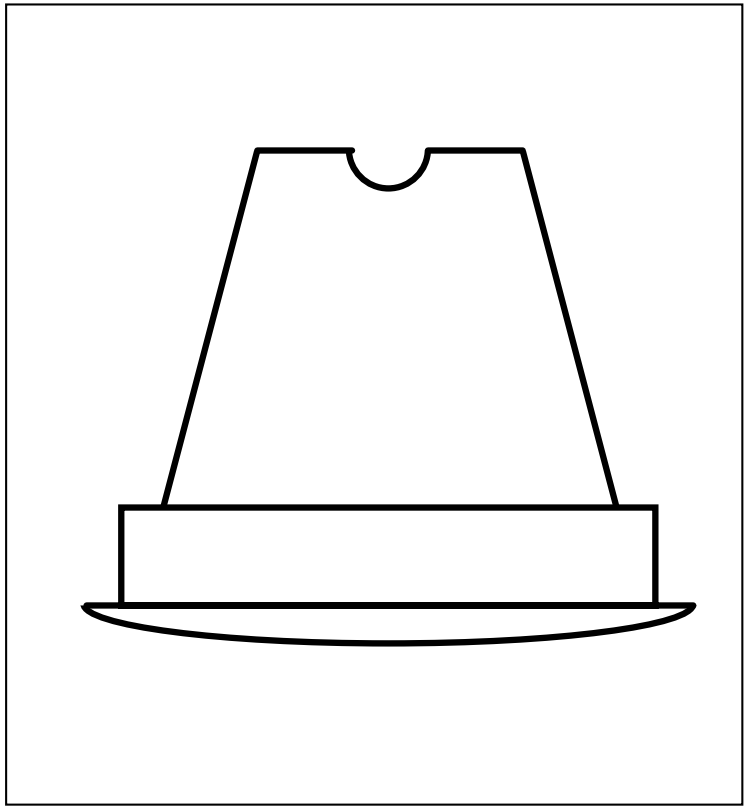
Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

This ice cube is clear, solid but it is oversized.

It is necessary to reduce the length of the freezing cycle by turning the Evaporator Thermostat Knob…



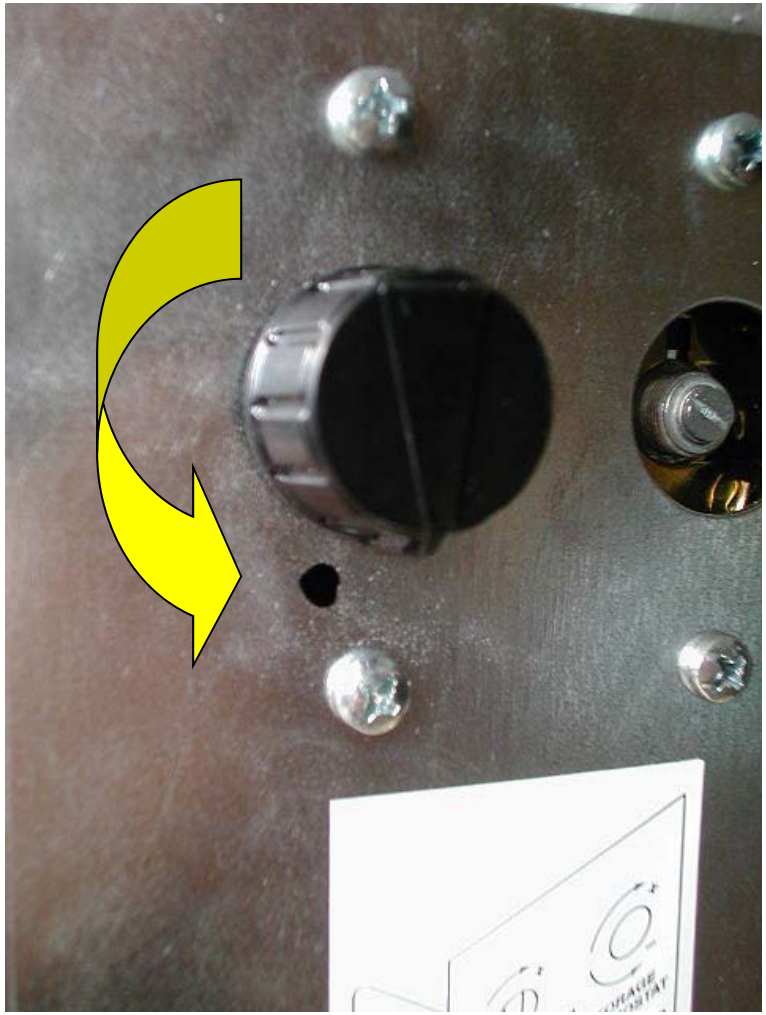
Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

….. a little bit

counter-clockwise.



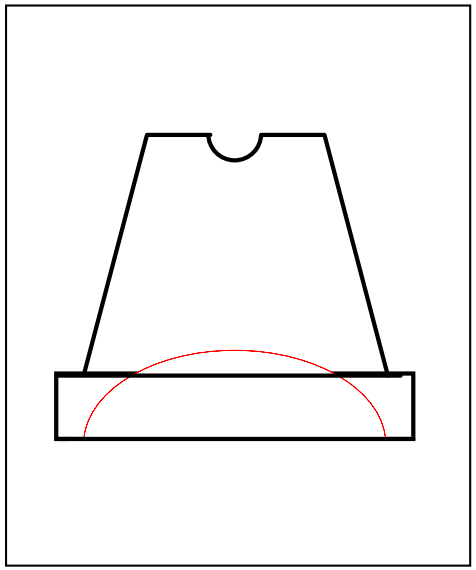
Scotsman Ice Systems

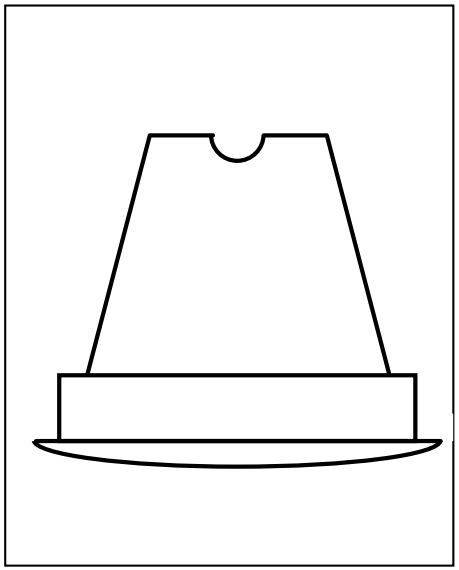
NEW AC SERIES

SERVICE ANALYSIS

These ice cubes are both clear, solid but some are oversized and some other are undersized.

If so the possible reason is an incorrect charge of refrigerant in the system (too low).





Scotsman® Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

Looking the upper side of the evaporator after 15-20 minutes in the freeze the serpentine is properly frosted mainly on the first portion of the same (inlet of refrigerant) while on the second portion (outlet) the frost is very thin (no exchange of heat between refrigerant - already in vapor state - and sprayed water).

Scotsman Ice Systems

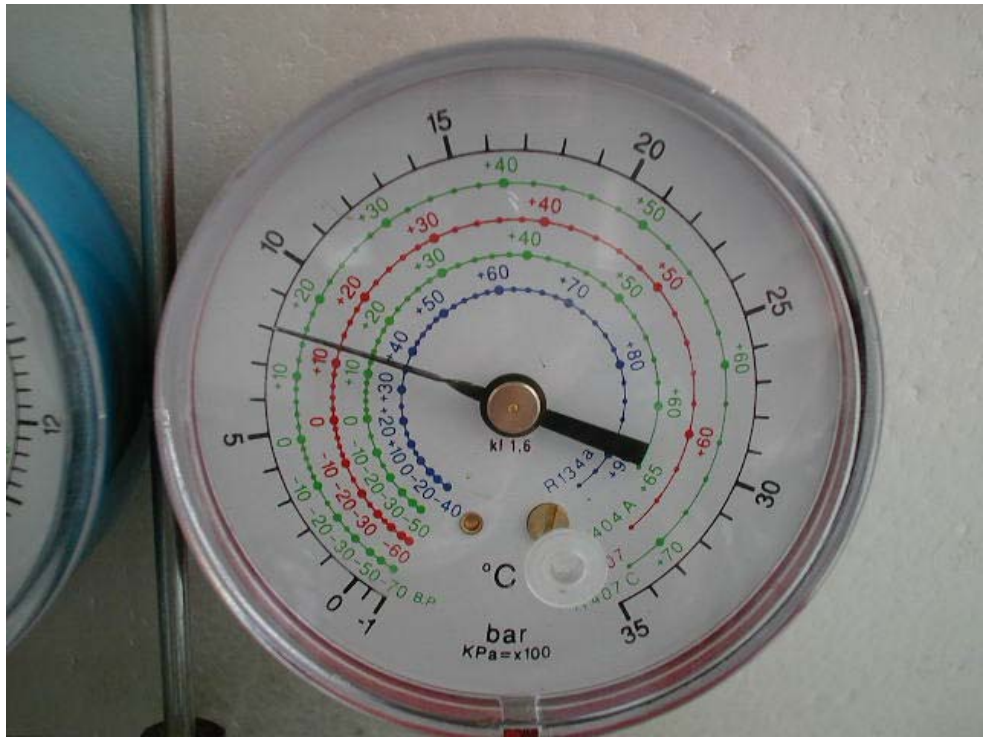
NEW AC SERIES

SERVICE ANALYSIS

Check the operating pressures of the refrigerant system connecting the gauges on hi and low service valve.

The operating pressures at the end of the freezing cycle with unit at 21ºC ambient must be:

Hi pressure (air): 8 bar (110 PSI)



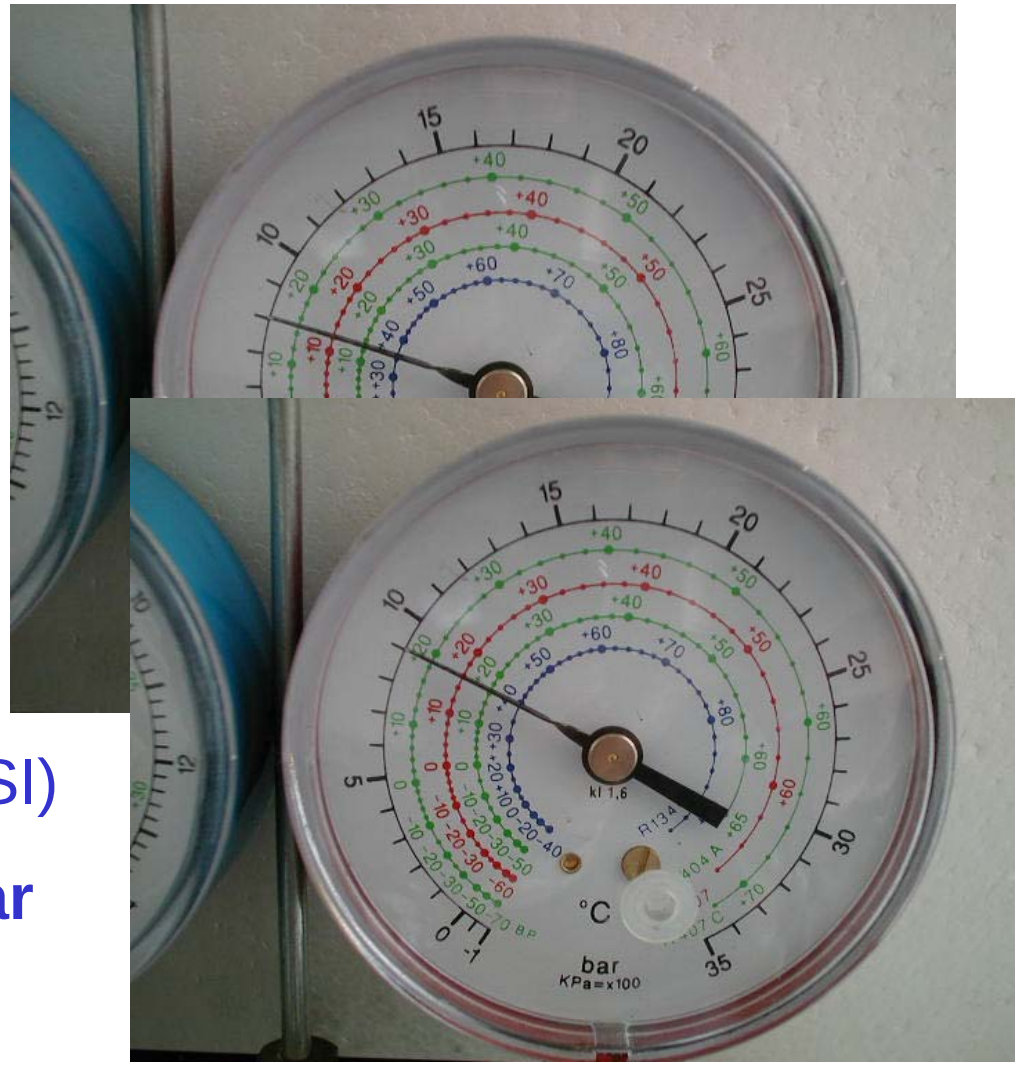
Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

Check the operating pressures of the refrigerant system connecting the gauges on hi and low service valve.

The operating pressures at the end of the freezing cycle with unit at 21ºC ambient must be:



Hi pressure (air):8 bar (110 PSI)

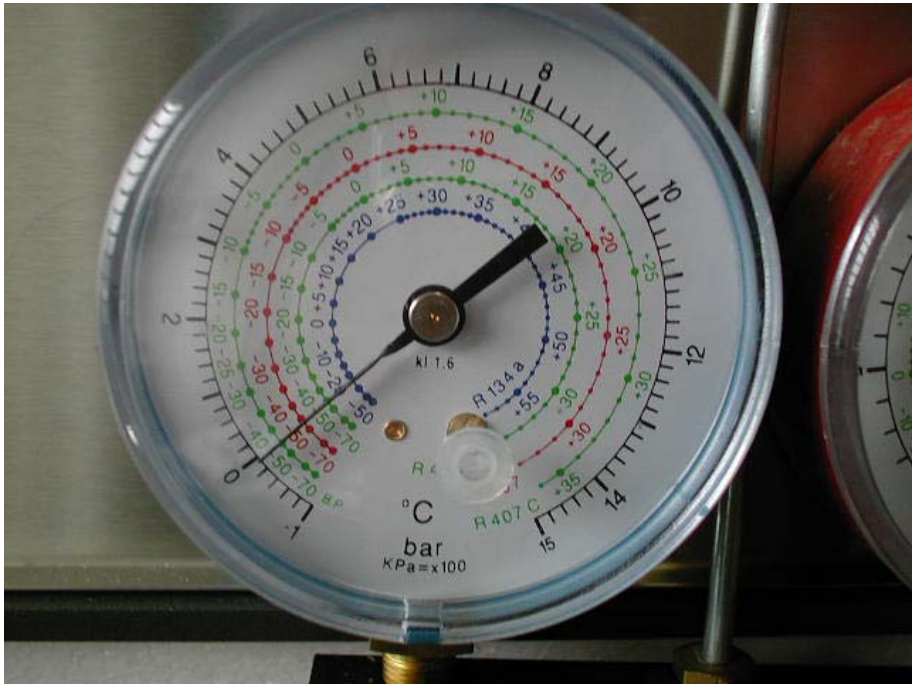
Hi pressure (water): 7-10 bar (100-145 PSI)

Scotsman®
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

Check the operating pressures of the refrigerant system connecting the gauges on hi and low service valve.



The operating pressures at the end of the freezing cycle with unit at 21ºC ambient must be:

Hi pressure (air):8 bar (110 PSI)

Hi pressure (water): 7-10 bar (100-145 PSI)

Low pressure: 0-0,1 bar (0-2 PSI)

Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

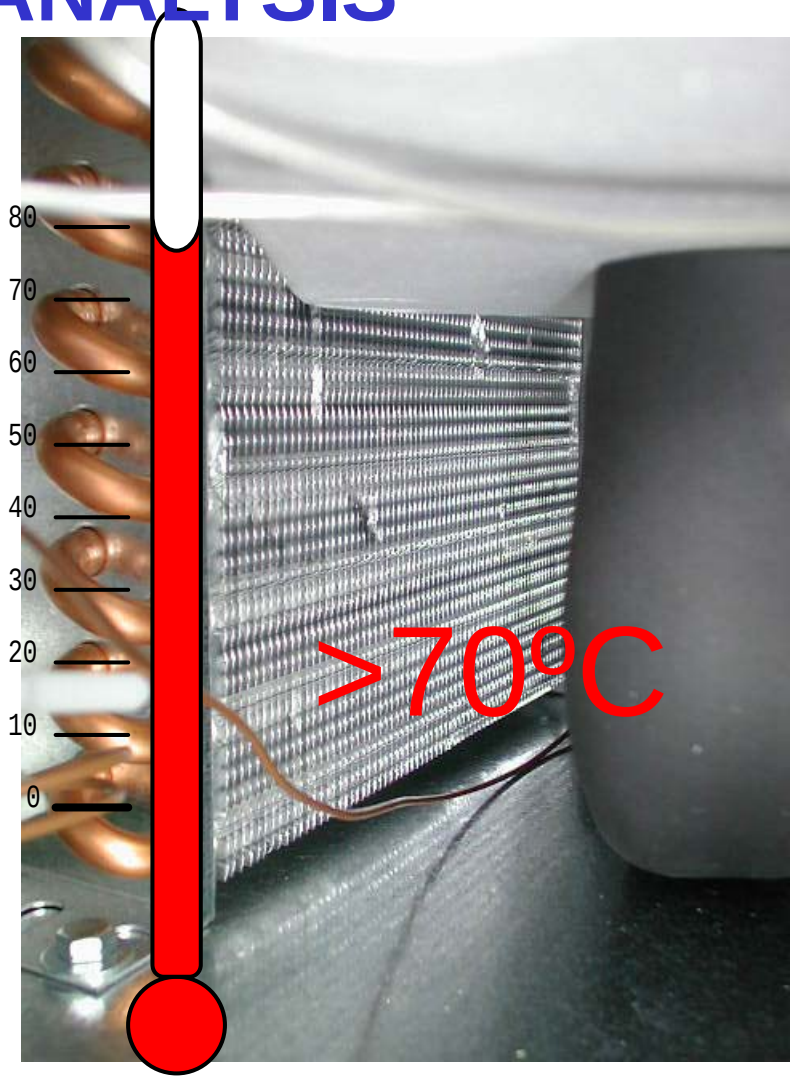
The unit is OFF

due to a high

condensing

temperature

(>70ºC).



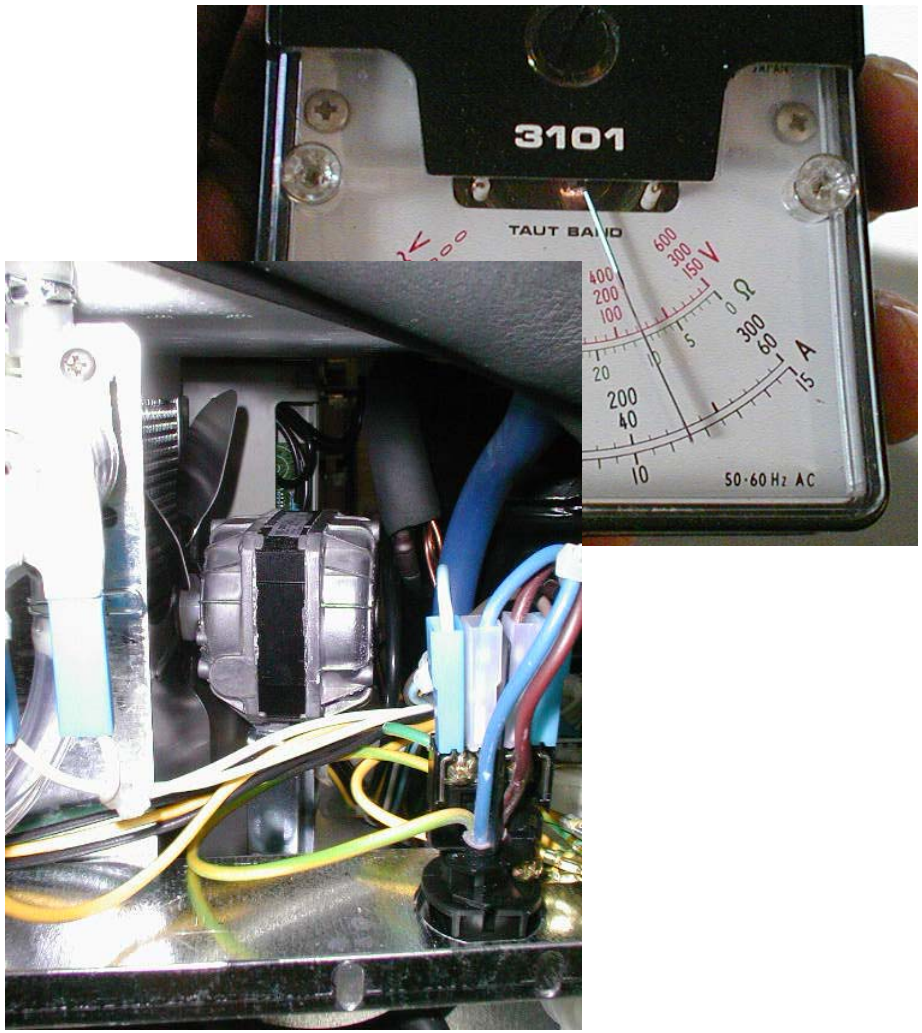
Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

The possible reasons are:

- **Fan motor (air cooled version) inoperative**



Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- No water to the water cooled condenser (water cooled version)

Scotsman®
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- **Hi pressure control (water cooled version) inoperative**

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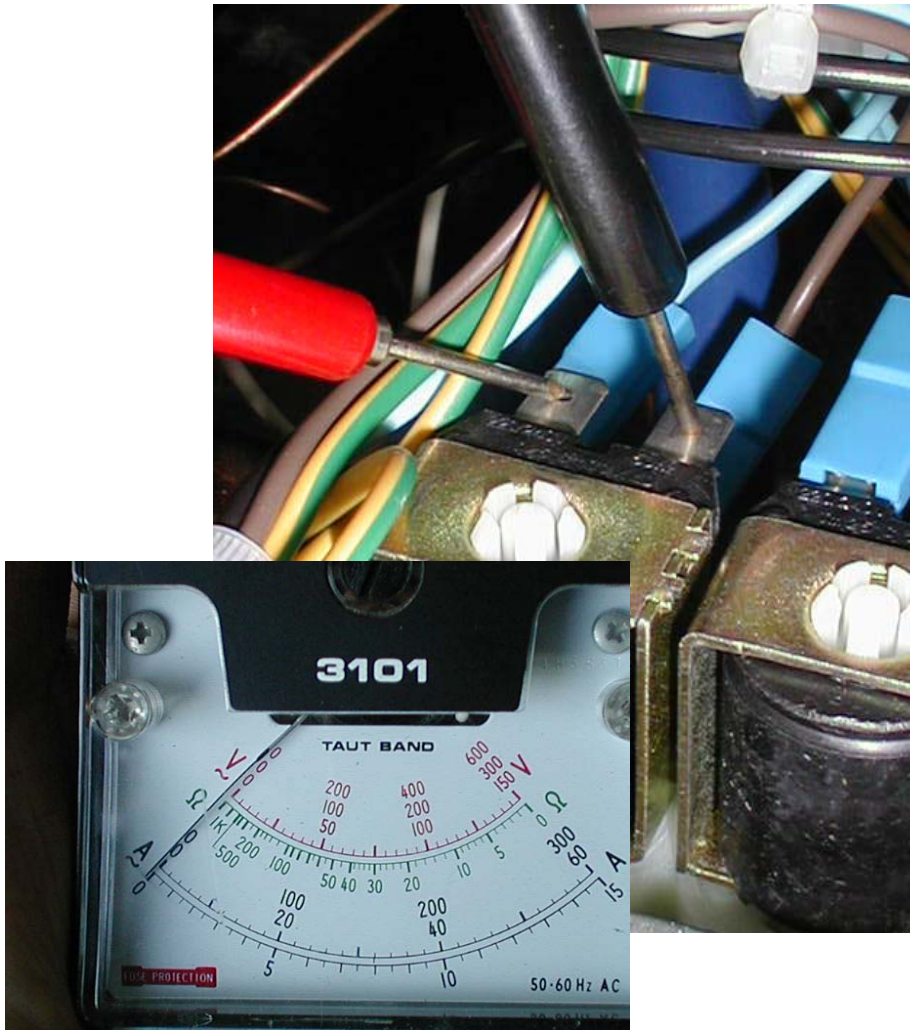
Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

- **Water inlet solenoid valve to condenser inoperative**

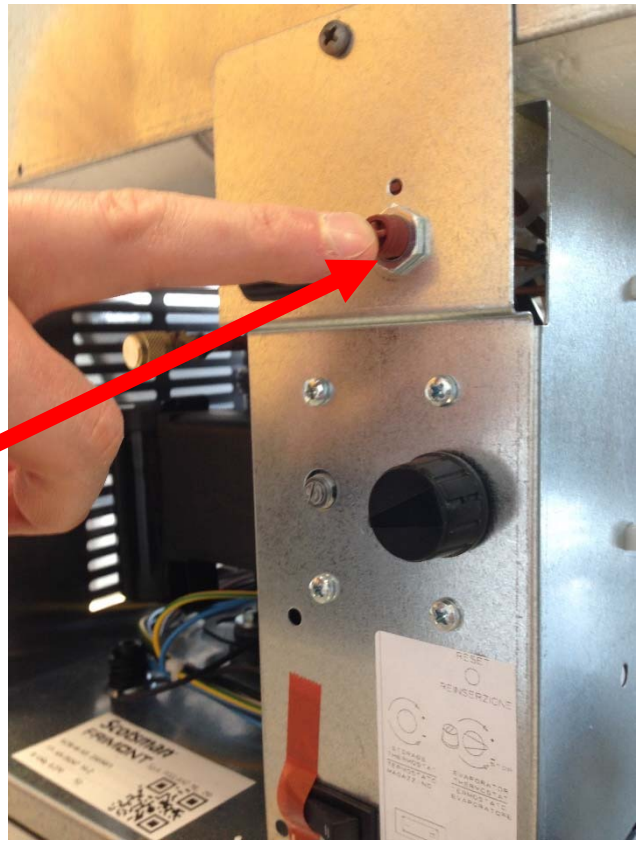


Scotsman Ice Systems

NEW AC SERIES

SERVICE ANALYSIS

To restart the operation of the machine it is necessary to push and release the reset RED button.

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END