

TATA TOYO	STANDARD PROCEDURE FOR CLEANING OF ALUMINIUM BRAZED HEAT EXCHANGER	TTR-02-05-006
		Issued on:10.05.09
		Rev: 01

1.0 Scope:

This standard covers the procedure for cleaning of aluminium radiator and intercooler.

2.0 Method:

Heat Exchanger should be cleaned at regular interval to achieve optimum performance. The OEM's should advise end customer regarding the frequency of cleaning based on application. Improper cleaning would lead to adverse effect; hence it is recommended that the following procedure be adopted.

A) Internal Cleaning of Heat Exchanger:

I. Cleaning of Radiator:

1. Remove the coolant from the radiator and store it.
2. Close all ports of heat exchanger except inlet and outlet.
3. Prepare the solution of **Instaklin liquid of PS Auto Pvt. Ltd.** and water with mixing ratio of 1: 20. (Mix 250 ml of instaklin with 5 lit of plain water). Fill the radiator with this solution.
4. Run the engine for 10-15 minutes and drain it.
5. Pour plain water in the radiator for rinsing purpose. Run the engine for 10 minutes and drain again. Repeat this procedure till clear drain comes out.
6. Allow complete drying of radiator before installation on vehicle.

II. Cleaning of Intercooler:

1. Remove the intercooler from the vehicle.
2. Prepare the solution of **Instaklin liquid** and water with mixing ratio of 1: 20. (Mix 250 ml of instaklin with 5 lit of plain water).
3. Circulate the solution under pressurised condition (0.5-1.0 Bar) for 15-20 minutes and drain it.
4. Circulate plain water in the intercooler for 10 minutes (rinsing purpose). Repeat the recirculation with fresh water till clear water comes out.
6. Allow complete drying of intercooler before installation on vehicle.

Safety Precaution:

Avoid direct contact of Instaklin with skin. In case of irritation wash thoroughly with water.

Prepared By: Abhijit Dhalpe	Checked & Approved By: Rajiv Kulkarni
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B) External Cleaning of Heat Exchanger:

1. Blow pressurised air at 6 bar for 2 minutes across the core without damaging the tubes and fins.
2. Immerse the core in mild soap water (pH>9) for 30 minutes with all openings closed. If possible agitate / shake the radiator for 10 times. If the core has deposits of grease/oil, it is advisable to immerse the core in kerosene bath before the soap water solution.
3. Spray water jet at 50~70 psi pressure across the core at a distance of 2 meters without damaging the tubes & fins.
4. Ensure that dust/mud/grease is removed in totally.
5. Allow complete drying of heat exchanger before installation on vehicle

Note: The practice of using reversibly rotating cooling fan is also employed for cleaning accumulated dirt/dust on radiator core surface abroad.

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