

SERVICE BULLETIN

Title: XT 912 Engine Coolant

Identification	SB-017
Status	Active
Issue	1
Issue Date	07-05-14
Applicability	All XT 912 series trike bases inclusive unless previously accomplished.
Compliance	Prior to next flight and incorporated in pre flight inspection.

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Approved by: Rick Duncan – AirBorne Windsports.

Summary of Changes:
First issue

Introduction

This service bulletin is issued to help Edge XT-912 owners identify, select and use appropriate coolant for 912 UL engines used in Airborne Windsports aircraft.

Earlier Airborne trikes had a silicate free type high quality and long life antifreeze coolant (which is red), Airborne Part Number 106644, installed in the radiator.

Rotax then issued a mandatory directive changing to EVANS NPG+ waterless coolant from the 23rd February 2005. The NPG+ waterless coolant is named as such on the cap and is a brownish clear liquid.

On September 23, 2013, BRP Rotax Aircraft Engines re-issued a Service Instruction on selection of suitable operating fluids for 912 series engines.

The publication of Rotax' latest **Service Instruction SI-912-016R6 .. 4) Coolant 4.1) General** now states:

"In principle, 2 different types of coolant are permitted:

- Conventional coolant based on ethylene glycol with 50% (distilled) water content (♦ NOTE: Coolant should be a low silicate and nitrite free formula.)
- Waterless coolant based on propylene glycol"

The **912 Operators Manual (OM Edition 3 / Rev. 0 September 01-2012) .. 2.3) Operating media-Coolant .. Conventional Coolant** states "Conventional coolant mixed with water has the advantage of a higher specific thermal capacity than water-less coolant." and **Application** states "When correctly applied, there is sufficient protection against vapor bubble formation, freezing or thickening of the coolant within the operating limits. Use the coolant specified in the manufacturers documentation."

It also gives excellent corrosion protection, especially for aluminium, and protection against freezing.

Rotax have directed that coolant type be specified by the aircraft manufacturer.

Airborne Windsports have decided to change back to conventional coolant based on ethylene glycol with 50% distilled water content for aircraft with base serial number commencing XT-912-0445, March 11, 2014 until further notice.

Owners and maintainers of Airborne Windsports 912 powered aircraft are not required to change coolant, but be aware that different coolants are available, and that mixing of coolants must not occur.

NOTE: The aircraft engine maintainer is required to be aware that if changing coolants then the coolant system must be changed as per the Rotax 912 Maintenance Manual, further detail is provided in Section 9.2) Replacing the coolant, and Section 9.3) Flushing the coolant system.

Table of Contents

Introduction.....	1
Table of Contents	3
Action	3
Skills	3
Tools.....	3
Documentation	3
Instruction.....	4
Figure 1. Checking coolant type.	4
Replacement coolant.....	5
Figure 2. Conventional coolant.....	5
Figure 3. Waterless coolant.....	5
End of Service Bulletin.	6

Action

Comply with the instructions provided within this bulletin.

Skills

Maintenance shall be carried out as defined on the XT 912 Maintenance Manual. Typically, inspection and top-up of existing fluid may be carried out by the owner. Changing the coolant is typically done at 200 hour intervals and/or overhaul.

Tools

No tools required for this Service Bulletin.

Documentation

Record any changes in cooling liquid used, including type, when changed, in the maintenance records for the aircraft - ie. maintenance manual, engine log book.

Instruction

NOTE: Conduct inspection on a cold or cool engine to avoid the risk of burns.

To establish the type of coolant in your trike:

1. Locate the coolant expansion tank.
2. If the coolant is red, conventional coolant is being used.
3. If the coolant is a clear light brown, water-less coolant is being used.
4. Check the coolant level and type. Newer expansion tanks have an inspection glass on the side of the tank to aid inspection. If your engine doesn't have one the radiator cap must be removed to check the coolant.

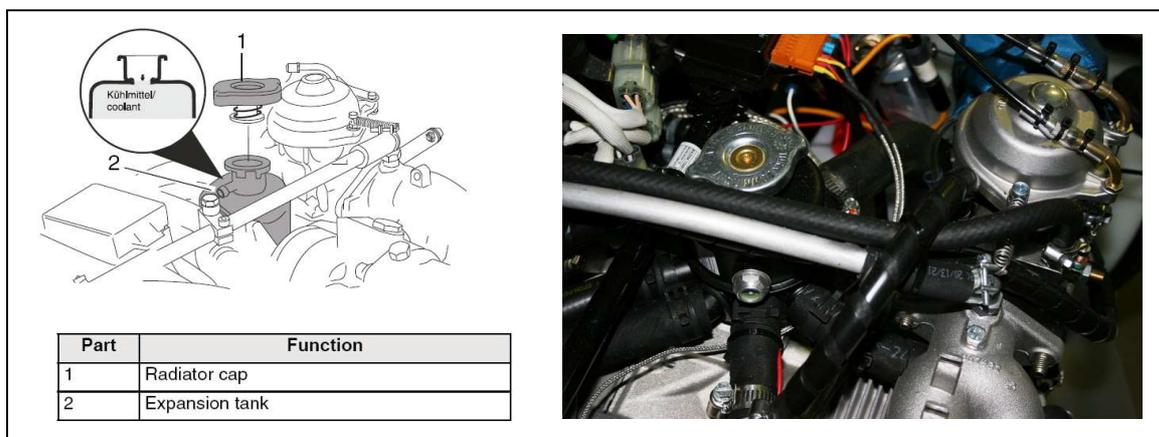


Figure 1. Checking coolant type.

Replacement coolant

Coolants by brand name that are recommended by Airborne Windsports are:

Conventional Coolant

Nulon - Red Long Life Coolant, Nulon Part No. RLL20 or RLL5



Figure 2. Conventional coolant.

Water-less coolant

Evans NPG+

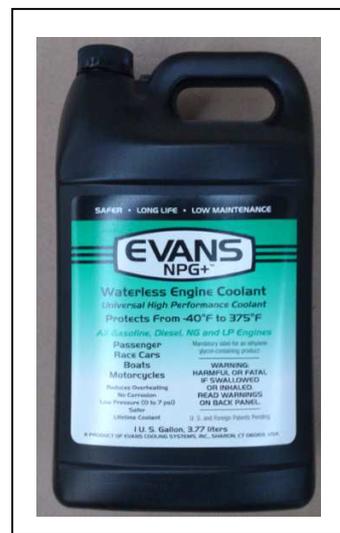


Figure 3. Waterless coolant.

Airborne Windsports stock conventional and waterless coolant and are available for purchase. Part information is:

Conventional coolant.

Part # 106644

Part name RADIATOR COOLANT RED - LONG LIFE

Water-less coolant

Part # 106769

Part name RADIATOR COOLANT EVANS NPG+

If these coolants aren't available to you, refer to Rotax Service Instruction SI-912-019R6, Section 4.2) Conventional Coolant and 4.3) Waterless coolant for engine types 912/914 Series and your distributor.

End of Service Bulletin.