

# ATA Associates, Inc.



1301 Gemini  
Houston, Texas 77058  
(281) 480-9847 FAX: (281) 480-0319  
email: [ata@ataassociates.com](mailto:ata@ataassociates.com)

September 24, 2014

Mr. Robert Belt  
3210 Bingle Rd.  
Suite 300  
Houston, Texas 77055

Re: 2014 Sea Doo GTX 155S

Mr. Belt,

Thank you for your inquiry for an investigation into the malfunction and eventual partial sinking of your Personal Water Craft. This report summarizes my opinions which are based upon an inspection of the vessel and a review of the maintenance manual and an internet search of other user problems with this PWC. My analysis may continue if new information becomes available. I reserve the right to modify this report in receipt of any new information.

Regards,

A handwritten signature in blue ink, appearing to read "Jay Barthelme", written over a horizontal line.

Jay Barthelme  
Accident Investigator  
ATA Associates, inc.

## SUMMARY INSPECTION REPORT

### INTRODUCTION

ATA Associates, Inc. was called about failure and eventual partial sinking of a 2014 Sea Doo GTX 155S personal water craft. Information from the owner, Mr. Robert Belt, indicates that the vessel, on its maiden voyage, ingested a foreign object into the impeller. Shortly thereafter, a plastic exhaust component called a resonator melted and allowed water to fill the hull of the vessel. The vessel quickly sank and was permanently damaged.

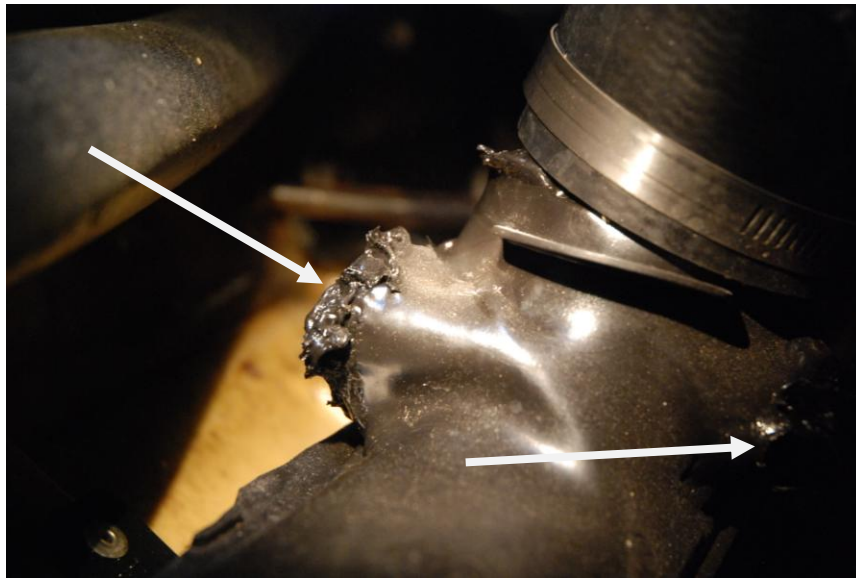


**Vessel Inspection.**

The Vessel, a 2014 Sea Doo GTX 155S, was inspected on 8/19/2014 at Wild West Honda in Katy, Texas. The unit was stored outside. Information from the Owner indicated that he drained the hull of water and transported the vessel to Wild West Honda the day after the incident. The service manager informed me that the only service performed on the vessel was to remove the hatches and drain any remaining water from the hull. No other maintenance was reportedly performed on the vessel.



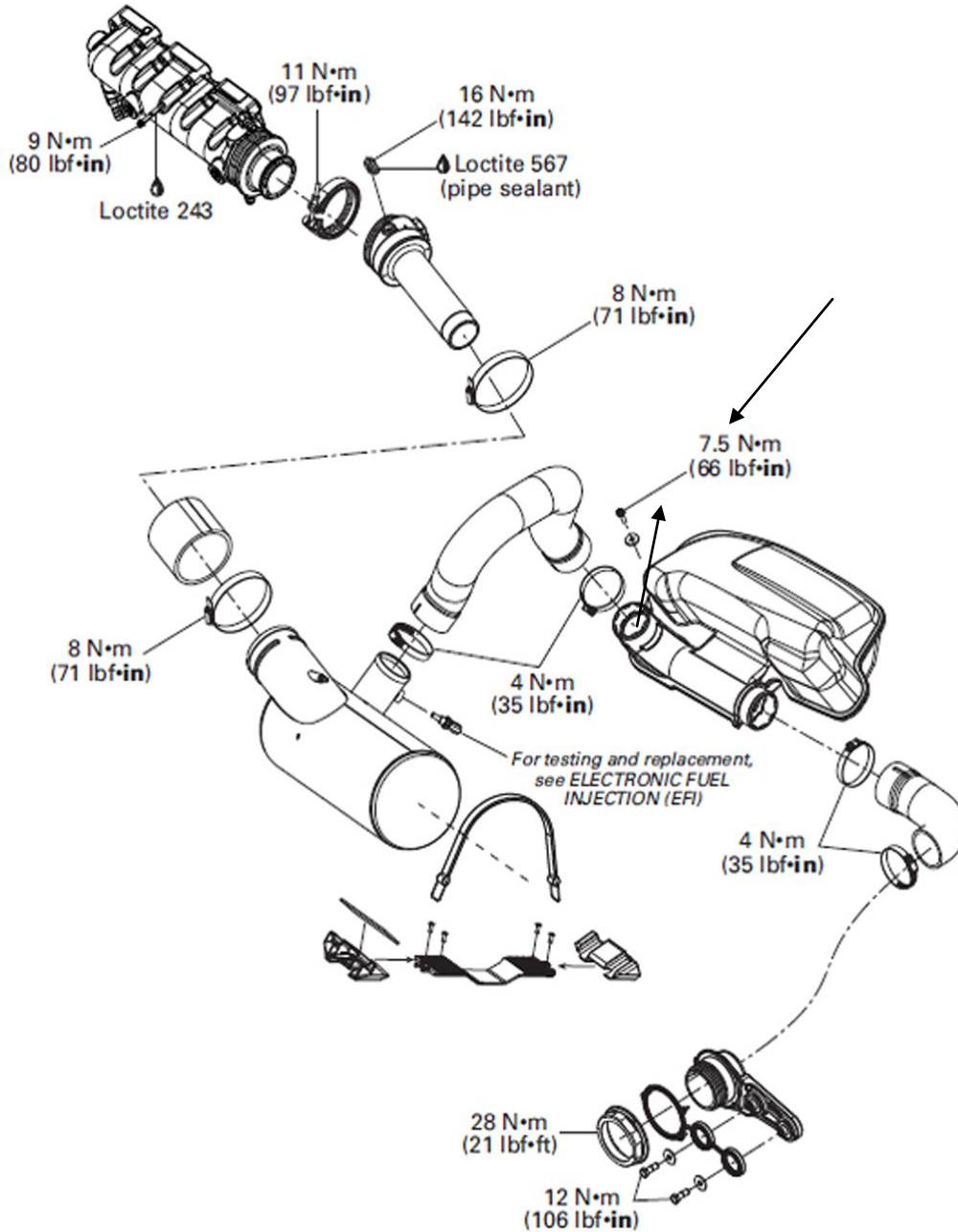
The inspection revealed that the plastic resonator, a component of the exhaust system, had two melted holes in it.



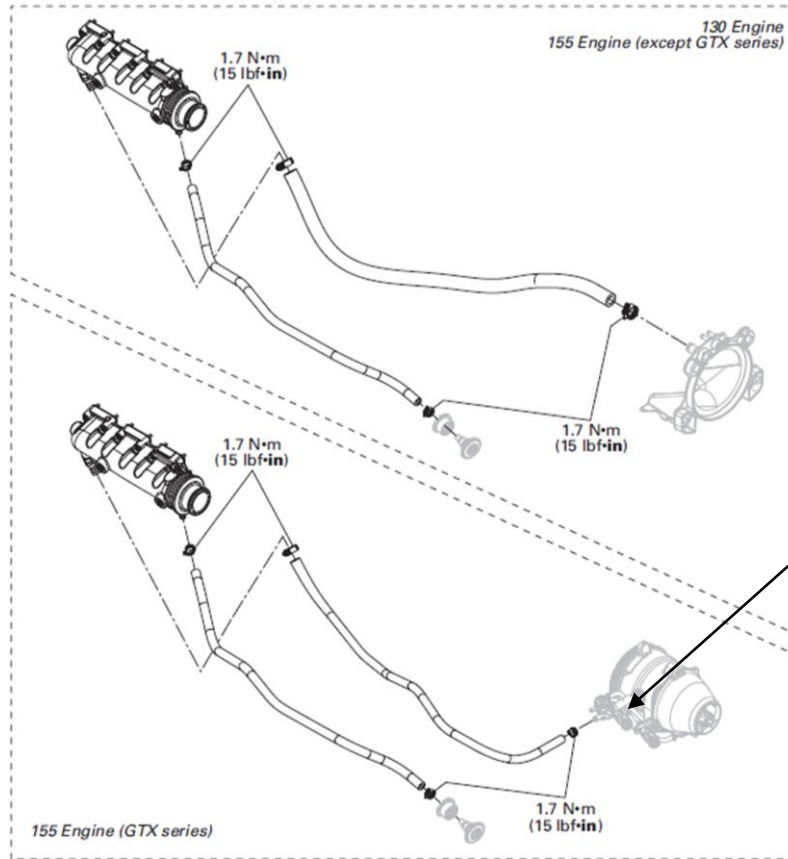
**Analysis**

Information gathered from the inspection and the Sea Doo maintenance manual indicates that the plastic resonator failed due to the absence of cooling water flowing through the exhaust.

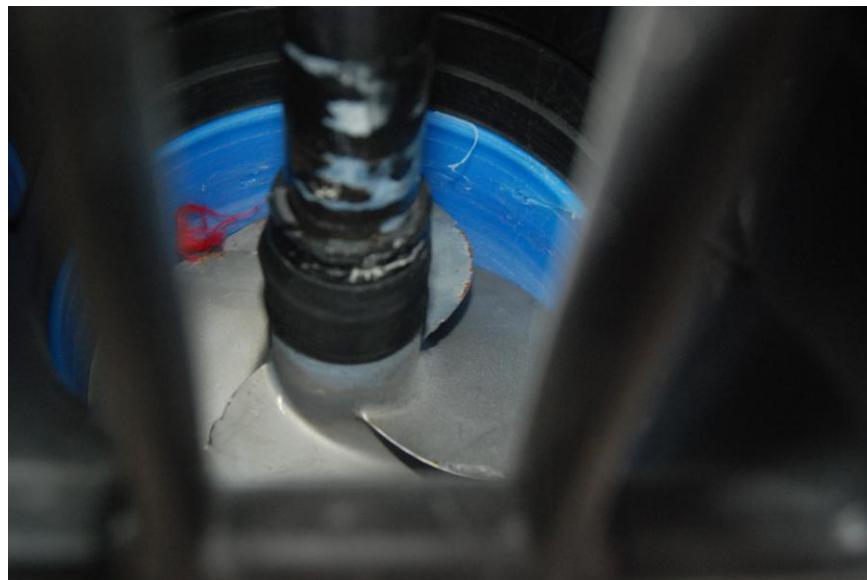
The exhaust system, shown below, requires an outside water source to flow through it and keep it cool.



On the model 155S, this cooling water is obtained through the use of a pressure port taken off of the main propulsion system.



Inspection of the vessel showed debris in the impeller.



- A) Analysis of the exhaust and cooling system indicates that if for any reason the impeller should become inoperable or the cooling water pressure port becomes plugged the engine will not receive any cooling water and the non-metallic components in the exhaust system will fail.
- B) There are no check valves or flappers in line with the exhaust to prevent water from entering the hull if any part of the exhaust system is breached.
- C) There is no shut down system on the vessel that will prevent the user from operating the engine when cooling water is prevented from flowing through the exhaust system.
- D) Other Sea Doo PWC models incorporate a separate pump mounted to the drive shaft of the engine to circulate cooling water through the engine and exhaust. This eliminates the need for jet propulsion to keep the engine and exhaust cool.
- E) AN internet search revealed that this is not an isolated incident with this model of PWC. Printed excerpts from internet blogs are included with this report as Enclosure 1.

### **Conclusions**

1. The exhaust system on the Model GTX 155S contains plastic components that can fail without warning and cause the vessel to sink.
2. The cooling system relies on impeller jet pressure to operate correctly. Without this pressure, plastic components in the exhaust system can fail.
3. There are no safeguards built into the exhaust system to stop or slow the flow of water into the hull in the event of an exhaust component failure.
4. The use of plastic components in the high temperature environment of the exhaust system could be considered a design defect.
5. Sea Doo knew or should have known that the design of the system was defective.