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**DRAFT REPORT OF THE
INVESTIGATION INTO THE
INCIDENT AT LOUGH MASK,
CO. MAYO,
WITH THE RESULTANT LOSS
OF LIFE ON 9th MAY 2007**

The Marine Casualty Investigation Board was established on the 25th March, 2003 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

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1. SYNOPSIS

- 1.1 On Wednesday evening, 9th of May 2007, Mr. Patrick O'Haire, while enjoying an evening of fun and adventure with a friend on Lough Mask, Co. Mayo, tragically lost his young life in a Jet Ski incident.

2. FACTUAL INFORMATION

2.1 Technical Description of Patrick O’Haire’s Jet Ski

Figure 1. Seadoo



Figure2. Engine Compartment



2.2 General Specification

Model	SEADOO XP 717
Hull Number	ZZN63063B959
Engine Number	MOT. NR 4437315
Engine Maker & Type	Bombardier - Rotax Powered
Bore:	2 x 82mm
Stroke:	68mm
Capacity:	718.20 cc
Power:	61KW / 83HP
Type:	717
Colour	White
Model Year	1995
Owner	Patrick O’Haire

2.3 Technical and Construction Specification

1. 718.2cc 2-stroke, 2 cylinder, Rotary valve controlled, liquid cooled.
2. The SEADOO XP 717 was not eligible for any safety recalls or service campaigns.
3. With reference to the seating capacity, 2 seater.
4. SMC (Sheet Moulding Compound), fibreglass sheet and resin pressed into a mould.

5. An Exemption was granted under CGB 88-001US Coast Guard which stated that the Boat was not required to comply with the USCG Safety Standards with respect to the following:
 - (a) Fuel Systems
 - (b) Display Capacity Information
 - (c) Safe Loading
 - (d) Flotation
 - (e) Powered Verification

2.4 Hull and Buoyancy

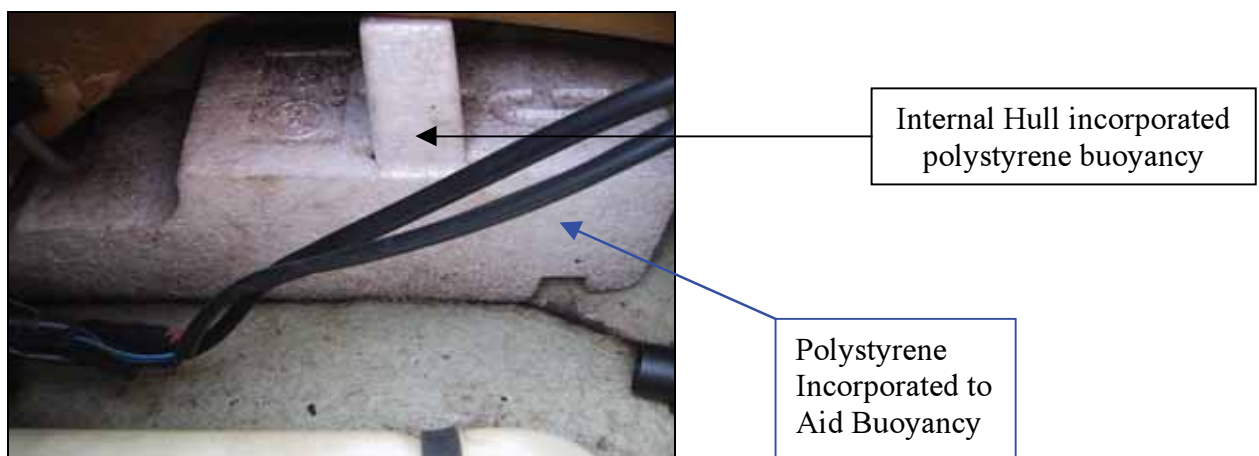
The crafts external shell construction material consisted of a process known as SMC (Sheet Moulding Compound), fibreglass sheet and resin which is then pressed into a mould.

On inspection of the crafts stern and main section, no indentation or structural damage was noted. The hull was in an intact state, with slight gel coat abrasion damage.

The compartments of the hull not used for storage, engine or pump components had either expandable foam or polystyrene incorporated to aid buoyancy. All securing straps were in place at the time of inspection.

The Forward compartment contained the fuel tank, which was integrated with the reserve fuel tank and was half full at the time of inspection.

Figure 3. Buoyancy



2.5 Operation and Control

A functional test was carried out on the following systems:

1. Steering System.
(Minimal play due to excessive wear on the connecting pinions)
2. Engine power management.
(Throttle cable connection from trigger to engine control.)
3. Dead man Switch
(Switch was not fitted to the craft at the time of inspection.)
4. Engine Operational run.
(With the assistance of external battery booster, the engine ran achieving average compression.)
5. Crafts Battery test.
(Incapable of retaining charge and unable to be recharged through the alternator charging system.)
6. Variable Trim System.
(The Variable Trim System was not in operation due to damage to the control rods.)

Figure 4. Consol



The choke cable was disconnected

Engine control switch electrically shorted

Figure 5. Engine and exhaust manifold



Exhaust damage due to loose retaining bolts

Figure 6. Manifold

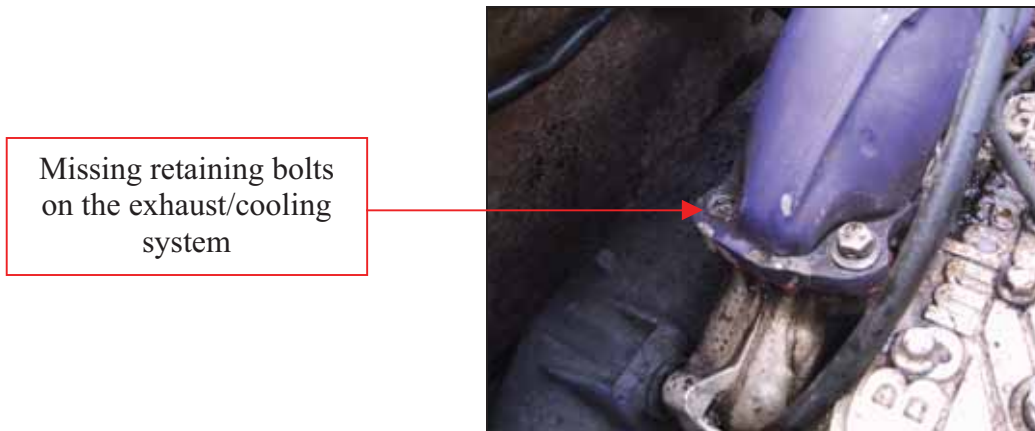


Figure 7. Kawasaki



2.6 Conclusions

The technical evaluation concludes that one or other or a combination of the faults listed at below, resulted in engine failure on Patrick O’Haire’s Jet Ski.

- A. Excessive exhaust fumes in the engine bay entering the air intake thus reducing the effective components constituents necessary for combustion, i.e. air mixture not correct to support combustion, thus stopping the engine. (Figure 5)
- B. Water from exhaust manifold entering the engine through the exhaust ports due to the manifold being loose, causing the engine to hydraulically lock thus stopping the engine. (Figure 6)
- C. The condition of the crafts electrical system, with respect to the control system associated with combustion. (Figure 4)

After examination of Shane Mulroe’s Kawasaki, it was impossible to determine the cause of failure due to the ingress of water to engine and electrical systems. (Figure 7)

3. EVENTS PRIOR TO THE INCIDENT

- 3.1 On Wednesday the 9th of May 2007, Mr. Mulroe returned from Westport, Co. Mayo where he had purchased a wet suit and associated equipment and arrived home at 18.00 hrs.
- 3.2 Mr. Mulroe travelled to Gortmore, Tourmakeady, to the house of Mr. Ferrick, where Mr. Mulroe had stored his Jet Ski. Mr. Mulroe asked if Mr. Ferrick would join him to go jet-skiing on Lough Mask. Mr. Ferrick replied that he had the 'flu and would not be joining him, but suggested that Mr. O'Haire might go out.
- 3.3 Mr. O'Haire had arrived at this stage and had agreed to go jet-skiing. He then returned to his own house to prepare. There was no one else at home.
- 3.4 Mr. Mulroe changed cars with his brother as his did not have a ball hitch to tow the Jet Ski and arrived back to Mr. O'Haire's house where both changed into their wet suits. Both men went outside to jump-start both Jet Skis and refuelled them. Both Jet Skis started.
- 3.5 Mr. O'Haire had a jeep which he towed his Jet Ski to Gortmore Bay and Mr. Mulroe followed. Gortmore Bay was no more that 10 minutes from Mr. O'Haire's house. The time was now 20.00 hrs.
- 3.6 Both Jet Skis were backed into the water from their respective trailers. Mr. O'Haire's Jet Ski was started with the aid of an external battery and jump leads, which were returned to shore by Mr. Mulroe. Mr. Mulroe then assisted Mr. O'Haire to re-secure the seat on his Jet Ski.
- 3.7 Both men were wearing wet suits and buoyancy aids.

4. THE INCIDENT

- 4.1 Mr. O'Haire ventured out into the lake and travelled about 100 metres. Mr. Mulroe then started his Jet Ski and headed out after Mr. O'Haire.
- 4.2 Both men headed towards Tourmakeady about 500 metres outside Annagh Island. Ten minutes had passed when Mr. Mulroe's Jet Ski shut down. Mr. Mulroe turned around to look for Mr. O'Haire who was 100 metres away to the west. Mr. O'Haire was signalling that his Jet Ski had also shut down. (Appendix 8.1 Lough Mask Chartlet)
- 4.3 Mr. Mulroe tried to re-start his Jet Ski but it would not do so. He signalled to Mr. O'Haire that he would swim to shore. Mr. O'Haire entered the water at the same time and both started to swim to shore.
- 4.4 Mr. Mulroe could not see Mr. O'Haire while he was in the water. Mr. Mulroe arrived at the shore after approximately 30 minutes. He sighted Mr. O'Haire and signalled to him by waving his hands over his head and that he was going for help. Mr. O'Haire did the same and resumed swimming. Mr. O'Haire was 150 metres from shore at this stage.
- 4.5 Mr. Mulroe was exhausted at this stage and headed back to his car and contacted Mr. Ferrick by mobile phone. Mr. Ferrick said he would be there in 5 minutes. Mr. Mulroe got a lifebuoy and returned to where he had left the water, which took 15 minutes.
- 4.6 There was no sign of Mr. O'Haire or the Jet Ski. Mr. Mulroe walked the shoreline expecting to see Mr. O'Haire, but he was nowhere to be seen.

5. EVENTS FOLLOWING THE INCIDENT

- 5.1 Mr. Mulroe saw Mr. Ferrick leaving Gortmore Bay on his Jet Ski heading out onto the Lough heading in the Finney direction.
- 5.2 At this stage it was beginning to get dark. Mr. Mulroe started walking back to the location of the cars and switched on the headlights. The lights were fixed onto the lake.
- 5.3 Mr. Ferrick returned with Mr. O'Haire's Jet Ski, but did not see Mr. O'Haire or Mr. Mulroe's Jet Ski. At this stage both Mr. Mulroe and Mr. Ferrick were not panicking as they thought Mr. O'Haire had made it ashore further down the road. They drove towards Tourmakeady searching the shoreline, but there was no sign of Mr. O'Haire.
- 5.4 The light was almost gone at this stage so Mr. Mulroe and Mr. Ferrick headed back to Gortmore Bay and raised the alarm. At 21.53 hrs., emergency services and neighbours living in the vicinity of Gortmore Bay were alerted.
- 5.5 Emergency Services were assisted by around 15 local people who took part in the search between shoreline and lake.
- 5.6 Mr. O'Haire's body was recovered at approximately 06.00 hrs. on the 10th of May 2007 and taken by Coastguard Helicopter to Mayo General Hospital and was pronounced dead at approximately 07.00 hrs.
- 5.7 Subsequent medical autopsy considered cause of death was asphyxia due to drowning.

6. CONCLUSIONS

6.1 Mr. O'Haire and Mr. Mulroe ventured out on Jet Skis for what should have been nothing more than an exciting thrill.

- a) They had little or no familiarisation training of Jet skis.
- b) Mr. O'Haire was considered to be a very poor swimmer.
- c) Mr. O'Haire wore a buoyancy aid rather than a life jacket.
- d) Both Jet skis were in extremely poor mechanical condition.
- e) They ventured out in poor weather.
- f) They ventured out in poor light.

A culmination of the above factors led to this tragedy.

7. RECOMMENDATIONS

- 7.1 The Department of Transport's Code of Practice for the Safe Operation of Recreational Craft contains guidance on the safe use of personal watercraft (PWC) - Jet Skis. This Code of Practice should be made freely and widely available.
- 7.2 Due to the escalating incidence of Jet Ski accidents it is recommended that users of Jet Skis undertake training as recommended by the Department of Transport's Code of Practice.
- 7.3 It is the opinion of the MCIB that craft should be registered and a registration number affixed to the Jet Ski, which should be visible from a reasonable distance.
- 7.4 The Department's Code of Practice recommends that if in difficulty that you should remain with the craft as this gives the best chance of survival.
- 7.5 A further recommendation is that all such craft should be regularly serviced and carry a minimum of life saving equipment as outlined in the "Code of Practice for the Safe Operation of Recreational Craft".
- 7.6 Under the provision of the Maritime Safety Act of 2005, local authorities, harbour authorities and fishery harbours have been granted clear powers to make bye-laws to regulate and control the use of Jet Skis and other fast powered recreational craft. This is granted with the intention of protecting other water users, property, wildlife and areas of historical significance. The introduction of such bye-laws should in the first instance identify areas within the jurisdiction of the authorities where such water craft can safely operate without harm to public safety or the environment.

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Appendix 8.1: Lough Mask Chartlet.

