



**SPC**  
Secretariat  
of the Pacific  
Community



## REGIONAL MARITIME PROGRAMME TECHNICAL ADVISORY

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### Throttle Failure off the Rocks

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A harbour cruise vessel with 31 passengers on board was manoeuvring just 50 meters from shore when the throttle failed.

As the skipper put both engines astern to allow passengers to get a better view of some seals, only the port engine responded. The starboard engine continued to idle ahead. When the skipper re-engaged the starboard engine to astern, the vessel leapt forward with full ahead power on the starboard engine. As the skipper tried unsuccessfully to turn the vessel away from the shore using full port throttle, it impacted on a rock ledge. The skipper hit the emergency stop on the starboard engine and moved the bow off the rock using the port engine. As he did so, the vessels stern quarter smacked onto the rocks.

Aided by a light breeze and the swell, the skipper freed the vessel and positioned it in clear water. The void spaces were inspected, and no water was found. Throughout the slow trip back to port, the skipper repeatedly checked the vessel to ensure it was not taking on water. The passengers were shaken, but there were no serious injuries and none were admitted to hospital.

On investigation, metallurgists found the throttle failure was due to a broken gear-select Morse cable. It had broken due to metal fatigue caused by cyclic unidirectional bending when the gear was operated.

The vessel sustained damage to the starboard hull, the starboard propeller and shaft.

#### Lookout Points:

1. The control Morse cables were replaced with a more robust cable. Emergency stop buttons were also installed on each bridge wing.
2. It is possible to reduce stress on gear cable by supporting it horizontally for about 100 to 150 mm from the actuator box cable fastening. Securely clamping Morse cables at least 100mm past the fastening will ensure the filament does not rub against the outer sheath and will minimize metal fatigue. The vessel's owner installed a system after the accident to reduce unidirectional bending.

**RMP Goal: Safe & secure shipping, cleaner seas, improved social and economic well-being of seafaring communities within the Pacific islands region.**