NTSB SART Testing

General Test Outline

Definitions

SART – The SART device to be tested

Vessel TX – The vessel containing the SART activation

Vessel RX – The vessel with the appropriate radar to receive the SART

Target – The radar return of the SART when activated

General

Test of the Tron SART20 is done using Vessel RX's own 3 cm X-band radar. The radar display will show different patterns depending on the range to the transponder. Radar images on Vessel RX will be documented by taking a photograph of the radar screen, or if possible, an export image from the radar screen itself.

The Jotron TRON SART20 User Manual described the activation of the device, and the activation will be in accordance with the user's manual. The user's manual is attached with this document.

Test Plan

The test plan is generally described in the user manual in section 5.3 on pages 22 and 23.

Vessel RX radar range rings are set to 10 nautical miles (nm).

<u>Test Point 1 – Inside 0.2nm</u>

1a. Vessel TX moves to a point midriver off of Hains Point

1b. Vessel RX moves to a point less than 0.2 nm south from vessel TX.

1c. SART is activated on Vessel TX at height near waterline.

1d. Radar images are examined and documented on Vessel RX. <u>Rings should be observed.</u>

1e. Document positions of both vessels when desired target is observed.

1f. Test is repeated with SART activation heights of 1m above waterline and 3m above waterline.

<u>Test Point 2 – At approx. 1nm</u>

2a. Vessel TX stays at a point midriver off of Haines Point

2b. Vessel RX moves to a point approximately 1 nm south from Vessel TX.

2c. SART is activated on Vessel TX at height near waterline.

2d. Radar images are examined and documented on Vessel RX. A cone should be observed.

2e. Document positions of both vessels when desired target is observed.

2f. Test is repeated with SART activation heights of 1m above waterline and 3m above waterline.

Note – positioning of Vessel RX may need to be varied nm range in order to observe a cone.

Test Point 3 – Greater than 2nm

3a. Vessel TX stays at a point midriver off of Haines Point

3b. Vessel RX moves to a point approximately greater than 2nm south from vessel TX.

3c. SART is activated on vessel TX at height near waterline.

3d. Radar images are examined and documented on Vessel RX. A dotted pointer should be observed.

3e. Document positions of both vessels when desired target is observed.

3f. Test is repeated with SART activation heights of 1m above waterline and 3m above waterline.

Note – Positioning of Vessel RX may need to be varied nm range in order to observe dotted pointer.