Global Positioning System Rollover week – 06 April 2019

Purpose
This Marine Notice advises Global Positioning System (GPS) users of potential issues that may occur with older GPS receiver time and positional accuracy as a result of the scheduled GPS week counter roll over on 06 April 2019.

NAVAREA X 012/19 has been issued to inform shipping of potential issues.

Background
The GPS system transmits time to GPS receivers using a format of time and weeks from a start date of 06 January 1980. GPS Rollover week occurs when the data field in the navigational message sent by GPS satellites reaches the maximum limit of 1023 weeks and ‘rolls over’ to week zero. This last occurred in August 1999.

Some older GPS receivers are unable to make the transition from week 1023 back to week zero. If your GPS receiver is outdated or has not had a software update, it may revert to reading the week zero as August 1999. When this happens, the internal clocks of these GPS receivers will experience a lack of absolute reference and may give incorrect time or position information, or may lock up permanently. Some GPS receivers may experience issues and disruptions prior to or after the rollover date.

Some GPS receivers are repairable with upgrades, but others may become unusable. Newer receivers that are fully compliant with GPS ICD-200 should not encounter any issues.

Considerations
You should check with your GPS manufacturer regarding the status of your receiver. If you have any doubt as to whether your receiver is compliant you should contact the manufacturer or supplier.

AMSA advises that GPS users should navigate with caution, having due regard for the potential errors that may occur with GPS receivers.

Further information


Cancellation
This Marine Notice will be cancelled on 13 April 2019.

Gary Prosser
Deputy Chief Executive Officer
Australian Maritime Safety Authority
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GPO Box 2181
CANBERRA ACT 2601