

NOTICE: GPS Date Rollover to begin in 2019 and can affect IMO required equipment

Mackay Marine has identified equipment in your fleet that potentially will be affected by the rollover

What is the 2019 GPS Rollover?

Since the implementation of GPS Satellites in the early 1980s; GPS time / date has been defined by a standardized format of counting. This counting format has a finite period and resets every 1024 weeks, or 19.7 years. The first event (or Epoch) where the finite period ended was back in 1999 and was widely known as Y2k.

The next reset of the counting period is 06 APRIL 2019 and represents the end of the second finite period. Most modern IMO equipment has been designed to account for this reset of date / time. However, some older legacy IMO GPS, AIS, and Sat C equipment have GPS receiver chips that will not take into account the reset of the date and will cause the display to show the incorrect date as well as transmit the incorrect date to connected equipment.



Popular Equipment Models Impacted by the GPS Rollover:

- JRC JLR-7700 MK2 GPS
- JRC JLR-4330 GPS
- JRC JLR-4330W GPS
- JRC JLR-4331 GPS
- JRC JLR-4331W GPS
- JRC JHS-180 AIS
- JRC JHS-182 AIS
- JRC JLR-10 Sat Compass
- JRC JLR-10T Sat Compass
- JRC JUE-75A Sat C
- JRC JUE-75C Sat C
- Furuno GP31/GP80 GPS
- Furuno GP36 GPS
- Furuno GP1650 GPS
- Furuno GP1850 GPS
- Furuno Felcom 12 Sat C

How this event impacts vessel operations:

Certain IMO mandated equipment are crucially reliant on having the correct date transmitted by the connected GPS:

- ECDIS relies on the date for critical IMO approved weekly chart updates; an incorrect date may invalidate all licensed ENC Charts.
- GMDSS systems need the correct date in the event of needing to transmit a distress message.
- The VDR requires the correct date; an incorrect date will impact the reliability and authenticity of incident recordings by authorities.
- ODME equipment on Tankers rely on the GPS for correct date information in order to keep appropriate and accurate discharge logs.
- Other varieties of ships equipment are dependent on the time and date typically derived from the GPS.

This list is not inclusive of all equipment affected. Contact your Mackay agent for a more comprehensive list

**Certain legacy GPS, AIS, and Sat C systems will be impacted.
Action must be taken for equipment to continue proper operation.**



Each model of equipment affected requires a different remedy to correct the problem.

- Certain models of equipment will require a software upgrade, some will need replacement.
- Certain manufacturers will not evaluate equipment deemed obsolete, the rollover affect will be unknown in this instance.
- In certain cases, the equipment can be reprogrammed by the user with the correct date; however, manufacturers recommend continuous monitoring of the date as power outages and fluctuations can reset the date.

Many of the equipment remedy requirements are serial number specific.

**Please provide the following equipment information on your GPS / AIS / Sat C systems.
This will enable Mackay to assist in providing the correct solution for your affected equipment.**

Please return this completed PDF to GPC@MACKAYMARINE.COM

DATE: _____ GPS #1

VESSEL NAME: _____ MAKER / MODEL: _____

IMO # _____ S/N: _____

GPS #2 GPS #3

MAKER / MODEL: _____ MAKER / MODEL: _____

S/N: _____ S/N: _____

GPS #4 SAT C #1

MAKER / MODEL: _____ MAKER / MODEL: _____

S/N: _____ S/N: _____

SAT C #2 SAT C #3

MAKER / MODEL: _____ MAKER / MODEL: _____

S/N: _____ S/N: _____

AIS

MAKER / MODEL: _____

S/N of Processor: _____

Model of Transponder: _____

S/N of Transponder: _____

To better assist, please provide primary contact information for service /sales related matters for your company.

Contact Name: _____

Contact E-mail: _____

Contact Phone #: _____

References for 2019 GPS rollover [2019 US Bulletin Homeland Security](#)



Thank you for choosing Mackay!