



Countries: AUSTRALIA, CANADA, TAIWAN, UNITED STATES, PUERTO RICO, GUAM, KOREA, SOUTH KOREA
Availability: ISIS, FleetSIS, IsSIR
Major System: ELECTRICAL SYSTEM
Current Language: English
Other Languages: NONE
Viewed: 17831

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Coding Information

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Title: SART Module Diagnostics

Applies To: 2010 and later ProStar / LoneStar / TranStar / WorkStar / PayStar equipped with MaxxForce® 11/13/15 engines or N13 with feature 0508051

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

11/26/2019 - Updated service part number from BDT858487 to 2512511C1. Added image of 2512511C1 with side contact.
 11/29/2018 - Updated service part number for internal battery. Noted this is a direct ship part.
 03/28/2018 - Revised troubleshooting steps to state replace battery if fault 524285-14 is present
 03/23/2018 - Updated the "Applies To:" section to include N13 powered vehicles with feature 0508051. Added screenshot from NED. Added WorkStar wiring diagram link
 04/27/2017 - Updated diagnostic software to Navistar Engine Diagnostics™.
 08/09/2016 - Updated SRT information.
 06/24/2014 - Troubleshooting procedures for the SART module have been reinstated. In addition, the ECM calibration will now address the SART fault.

DESCRIPTION

The technician may notice this code is active or inactive. The customer might not mention a warning light for this code alone.

Diagnostic information and procedures for SART module related codes are explained.

- The SART module broadcasts its time information on the vehicle SAE J1939 datalink upon request from other modules. This time and date information is maintained when the vehicle's battery is disconnected.
- If the ECM determines that it's time / date information from the SART module is corrupt or missing, it shall substitute engine hours for the time / date information.
- A fault or failure of the SART module will not inhibit any functions of the truck.

SYMPTOMS

Diagnostic Trouble Codes & Dashboard Indicator Lights:

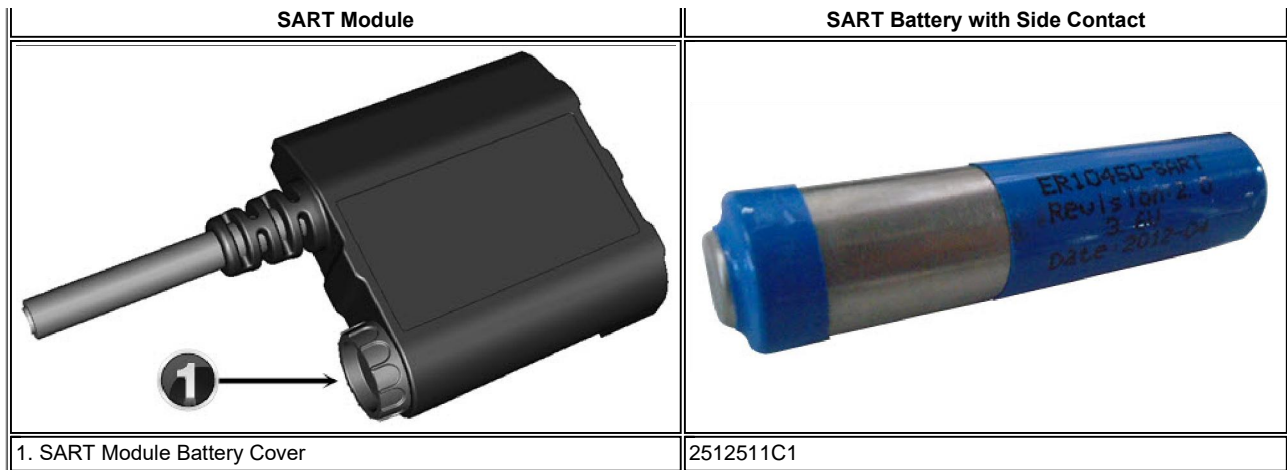
SPN	FMI	Module	Description
251	19	ECM	ECM not detecting CAN message for real-time clock
524285	14	SART	Unknown Fault

SERVICE PARTS INFORMATION

Part #	Description	Qty	Notes
3714874C1	Module, Real Time Clock	1	
2512511C1	3.6 VOLT 750 MAH LITHIUM SART BATTERY	1	Direct Ship Part

DIAGNOSTIC STEPS

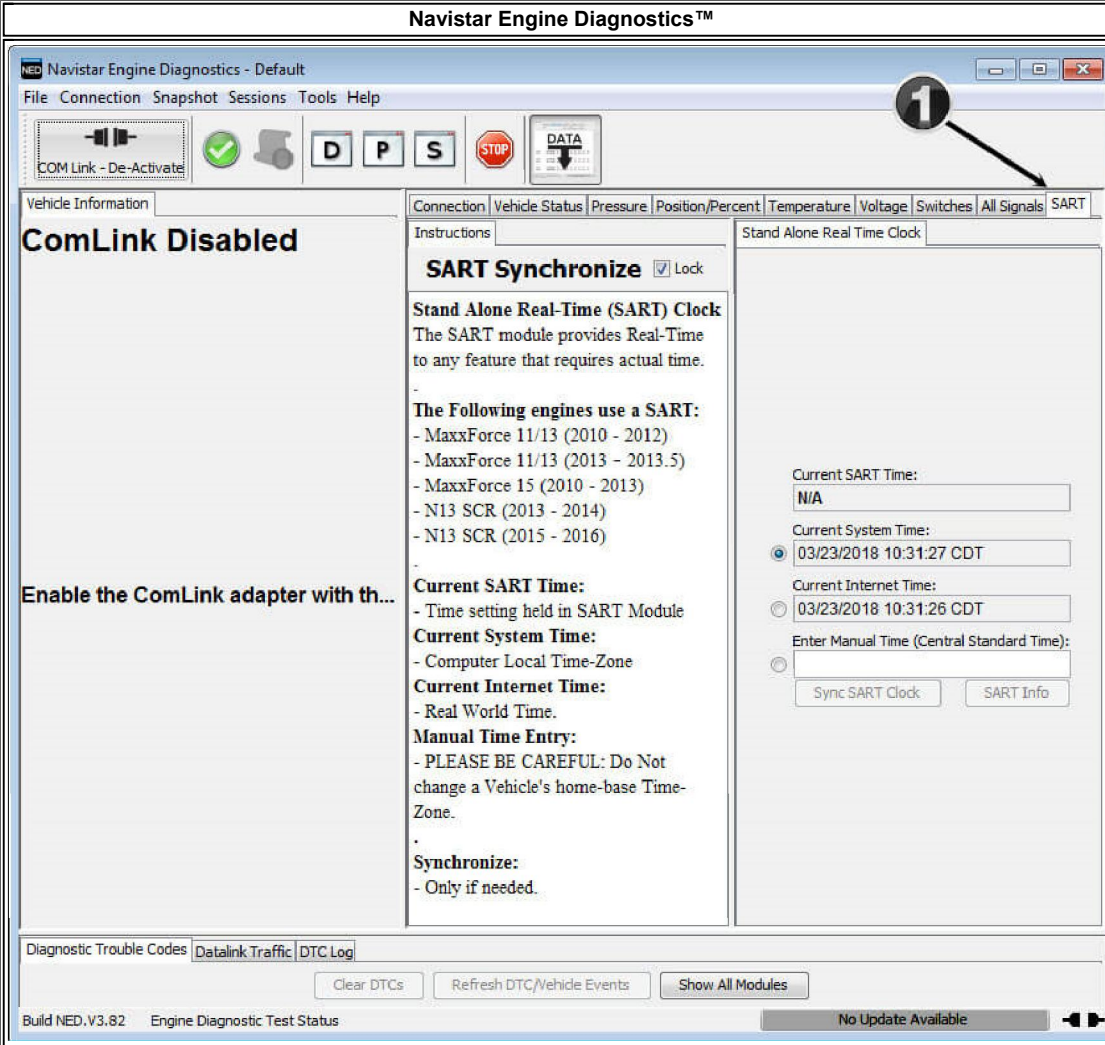
1. Review the Vehicle Health Report. If fault 524285-14 is present, replace the SART Module battery with BDT858487. The internal battery has failed.



2. The SART Module will need to be synchronized after the battery is replaced

The Status of fault 251-19(whether the code is active or inactive) will determine the next troubleshooting steps.

3. Open Navistar Engine Diagnostics™ and check to see if the code 251-19 is active.
 - Use the data link sniffer in Navistar Engine Diagnostics™ to see if SART module is communicating.
4. If code 251-19 is **ACTIVE**, and the SART is communicating, follow the steps below:
 - Check status of the SART and Resync



Navistar Engine Diagnostics™

NEED Navistar Engine Diagnostics - Default

File Connection Snapshot Sessions Tools Help

COM Link - De-Activate

Vehicle Information | Connection | Vehicle Status | Pressure | Position/Percent | Temperature | Voltage | Switches | All Signals | **SART**

ComLink Disabled

Enable the ComLink adapter with th...

SART Synchronize Lock

Stand Alone Real-Time (SART) Clock
The SART module provides Real-Time to any feature that requires actual time.

The Following engines use a SART:

- MaxxForce 11/13 (2010 - 2012)
- MaxxForce 11/13 (2013 - 2013.5)
- MaxxForce 15 (2010 - 2013)
- N13 SCR (2013 - 2014)
- N13 SCR (2015 - 2016)

Current SART Time:
- Time setting held in SART Module

Current System Time:
- Computer Local Time-Zone

Current Internet Time:
- Real World Time.

Manual Time Entry:
- PLEASE BE CAREFUL: Do Not change a Vehicle's home-base Time-Zone.

Synchronize:
- Only if needed.

Stand Alone Real Time Clock

Current SART Time:
N/A

Current System Time:
 03/23/2018 10:31:27 CDT

Current Internet Time:
 03/23/2018 10:31:26 CDT

Enter Manual Time (Central Standard Time):

Sync SART Clock: SART Info

Diagnostic Trouble Codes | Datalink Traffic | DTC Log

Clear DTCs Refresh DTC/Vehicle Events Show All Modules

Build NED.V3.82 Engine Diagnostic Test Status No Update Available

1. SART tab

- If clock resyncs, the code clears and does not return, release the vehicle to customer
 - If the code will not clear, but the module is communicating, the module will need to be replaced.
 - If the module is not communicating, check for power, ground and data link to the module.
5. If code 251-19 is **INACTIVE**, follow the steps below:
- Check power, ground and data link to module.
 - If no trouble found, clear the code and release the truck to the customer.

NOTE:

DO NOT OPEN THE SART MODULE

CIRCUIT DIAGRAMS

- [ProStar LoneStar \(EPA 2010\) Circuit Diagram](#)
- [PayStar MaxxForce® 11L / 13L / 15L](#)
- [WorkStar Circuit Diagram](#)

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

- [SART LOCATION](#)
- [IK0800080 - J1939 Data Link Troubleshooting](#)
- [Master Service Information Site](#)

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Feedback Information

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