

Event Data Recorder Use in Traffic Crash Reconstruction Level 1 MITSUBISHI Data Retrieval

Version Dec 2021



MITSUBISHI (0.5% market share)

- Mitsubishi is now mostly covered by Bosch CDR using the CDR900 interface. A few models are not covered in 21.3 (may be covered soon) and may require use of their proprietary EDR tool, a derivative of their dealer scan tool. Software is loaded on a Panasonic Toughpad. Cost \$6380 + tax. They no longer update the software in anticipation of full Bosch coverage.
- The kit is made to work only on vehicles with a functioning electrical system thru the DLC.
- Mitsubishi uses the interior fuse box (ETACS module) as a gateway. Direct to module cable rigs with an ETACS can be built if module mating connectors can be located. Mitsu & Brad Muir have one.

Mitsubishi EDR's Dec 2021

Most now supported by CDR, as of Dec '21 some not

Model	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Delica D5 (Japan)	839 Bosch CDR												839/837	837			
Eclipse (PS Platform)		Part MU141170 4/2005 to 8/2011				Proprietary EDR Tool	Production ends 8/2011										
Eclipse Spyder Conv.			?			Data in deployments only?											
Eclipse Cross (SUV)											837 Bosch CDR						
EK Wagon/EK Space (Japan)							840	Bosch CDR									
Endeavor SUV (PS Platform)			?			Production ends 8/2011 replaced by Outlander											
Expander (Phillipines)												853					
Galant Fortis	839 Bosch CDR																
iMiEV			Not sold in US			838	838										
Lancer		839 Bosch CDR									839				839		
Lancer Evolution & Evo X		839 Bosch CDR									839				839		
Lancer Sportback		839 Bosch CDR															
Mirage, Attrage (subcompact)	Not in production							838 Bosch CDR		838 US, 853 ROW							
Outlander SUV & PHEV			A208 Read w/CDR A208/A304 mix. A208 as 09 Caliber 226						839 838 Bosch CDR		???????		828 (Nissan)				
Outlander Sport, RVR, ASX					838 Bosch CDR												
Pajero/Montero (SE Asia only)											853/838 Triton Platform						
Raider pickup (Dodge Dakota sister)	228 CAN+ Bosch				Not in production												
Triton pickup (non-US)											838 EU, 853 WW						

The source of this data is the Mitsubishi EDR tool flyer from Bosch Diagnostics and CDR help file version 21.1 & other available industry data - best info available, not guaranteed

Acknowledgement to Brad Muir of Crash Data Specialists for providing many details on models and data available

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Help file cable links suggest some Mitsubishi listed in help file as supported are not (yet) – possibly in 21.4?

MITSUBISHI ACM CABLE - P/N: 1699200783 / CABLE ID# 837

This CDR cable is required for direct-to-module imaging of 2018 and newer Eclipse Cross vehicles sold into the various markets. This cable will be available end of June 2019.

MITSUBISHI ACM CABLE - P/N: 1699200784 / CABLE ID# 838

This CDR cable is required for direct-to-module imaging of 2011 and newer Mitsubishi vehicles (see below) sold into the various markets. This cable will be available end of June 2019.

2011 - 2019 ASX, Outlander Sport & RVR

2014 - 2019 Outlander

2018 - 2019 Outlander PHEV

*2014 and newer Mirage

*2017 and newer Attrage

*2012 and newer iMiEV

* not currently supported in CDR software, support planned for a future release

MITSUBISHI ACM CABLE - P/N: 1699200785 / CABLE ID# 839

This CDR cable is required for direct-to-module imaging of 2007 and newer Mitsubishi vehicles (see below) sold into the various markets. This cable will be available end of June 2019.

*2008 and newer Galant Fortis

*2007 and newer Delica-D5

*2009 and newer Lancer Evolution

*2007 - 2013 Outlander

* not currently supported in CDR software, support planned for a future release

Using the Proprietary tool

- Mitsubishi has assisted law enforcement with DTM readouts in the past. Ask for help.
- I am only aware of two other organizations who have this tool besides Ruth Consulting.
- The Mitsubishi software license agreement is VERY restrictive – it excludes renting, or even loaning, the kit to another party.
- There is an instruction guide included on the toughpad.

Mitsubishi EDR Kit



BOSCH

Event Data Recorder Kit

The authentic Mitsubishi Motors North America, Inc. tool for retrieving information* related to vehicle crashes or accidents. For use on 2013 models and future Mitsubishi vehicles**.

Features:

- **Fast Vehicle Scan**
- **Ten-point glove multi touch 10.1" HD display**
- **MIL-STD-810G, 4' drop & all weather IP65 dust and water resistant**



resistant

- **USB 3.0, 2nd USB port & HDMI port**
- **802.11a/b/g/n/ac Wi-Fi**

**The MUT-III Tool Package Kit
MITFZG101-EDR includes the following:**

	Part No.	QTY
MUT-III Scan Tool Kit	MUT3AMKIT	1
Panasonic Toughpad®		1
Vehicle Communication Interface (VCI-Lite)		1
EDRS software		1
MUT-III Main Harness A-L		1
MUT-III Main Harness B-L		1
Mini USB Cable (S)		1
Attachment Kit - Velcro		2
MUT-III 1 Year Update Subscription		1
		\$6,372.00

* In accordance with US regulation, Part 563.

** Can be used on 2011 and 2012 Outlander and 2012 IMiEVs.

Promotion # MI15-177

Proper placement
of VCI-Lite on
backside of
Toughpad®



Please Note:

- Additional yearly subscriptions, (MITFZG101-EDR-SUB) are available for purchase for the Panasonic FZ-G1 Toughpad®
- MUT-III supports CAN vehicle protocol
- MUT-III updates via update USB Thumb Drive
- Mitsubishi Motors North America reserves the right to change to internet subscription at a later date

Order Today

Toll Free 1.888.727.6672

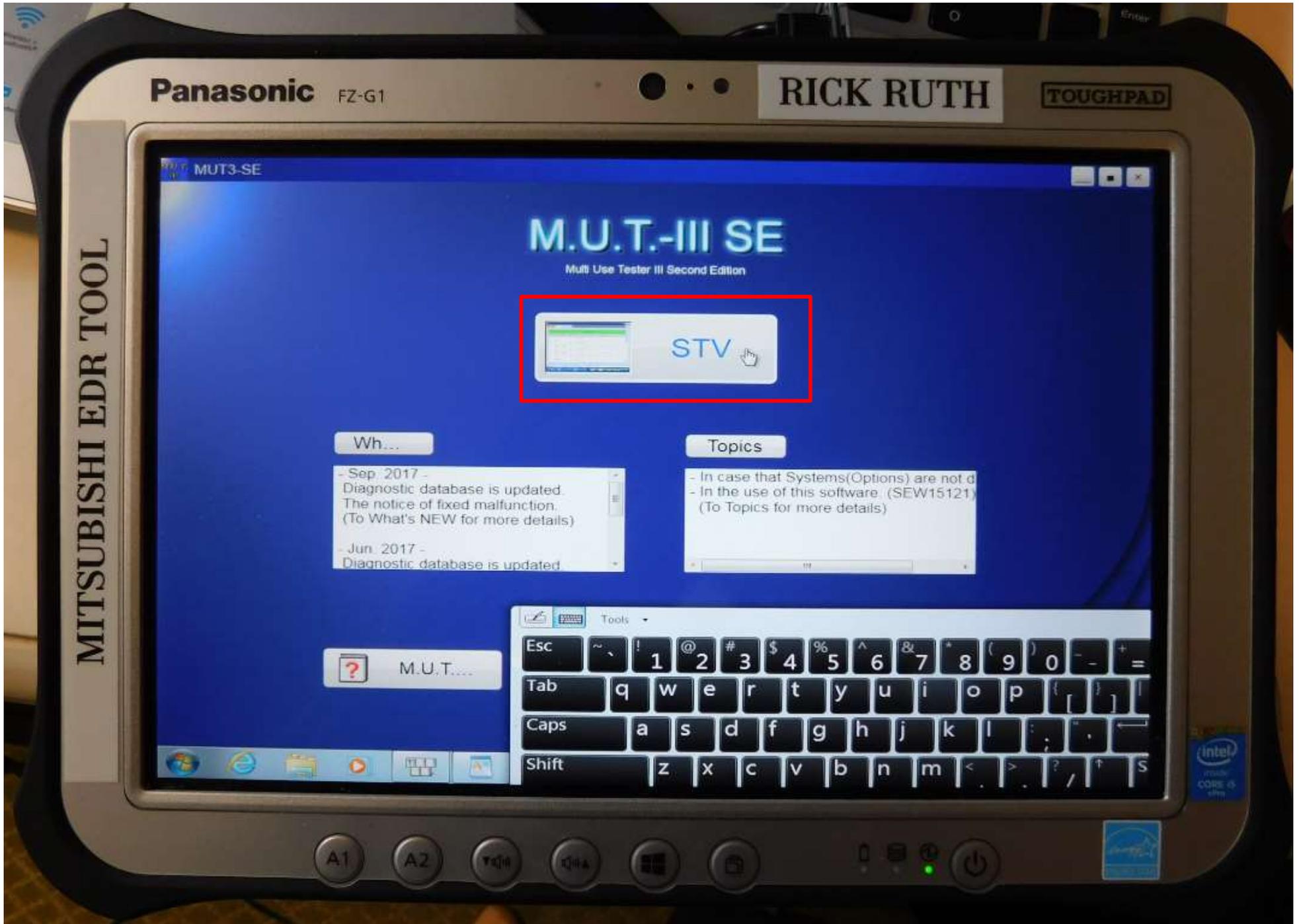
**Bosch Automotive
Service Solutions**

655 Eisenhower Drive
Owatonna, MN 55060-0995
Phone 888-727-6672
Fax 586-578-7375

Select MUT3-SE (NOT MUT-3)



Select STV



EULA (end-user license agreement)

Be sure to carefully read and understand all of the rights and restrictions described in this End User License Agreement ("EULA"). You will be asked to review and either accept or not accept the terms of the EULA.

This product will not set up on your computer unless or until you accept the terms of the EULA.

IMPORTANT NOTICE:

Mitsubishi Motors Corporation ("MMC") urges end users to use the latest production release of the software. Using the latest version of the software is the best way to ensure that retrieved data has been translated using the most current information provided by MMC.

Notice:

An Event Data Recorder ("EDR") is an on-board mechanism capable of monitoring, recording, storing and later displaying certain pre-crash, crash and post-crash data from a vehicle. The data captured on an EDR is the property of the vehicle owner and should not be accessed by anyone without owner consent or a court order. Please consult applicable laws/regulations for your state and obtain the necessary consent before retrieving EDR data.

MMC takes no responsibility for any problems with or damage to the EDR data experienced as a result of using this manual and the download tool.

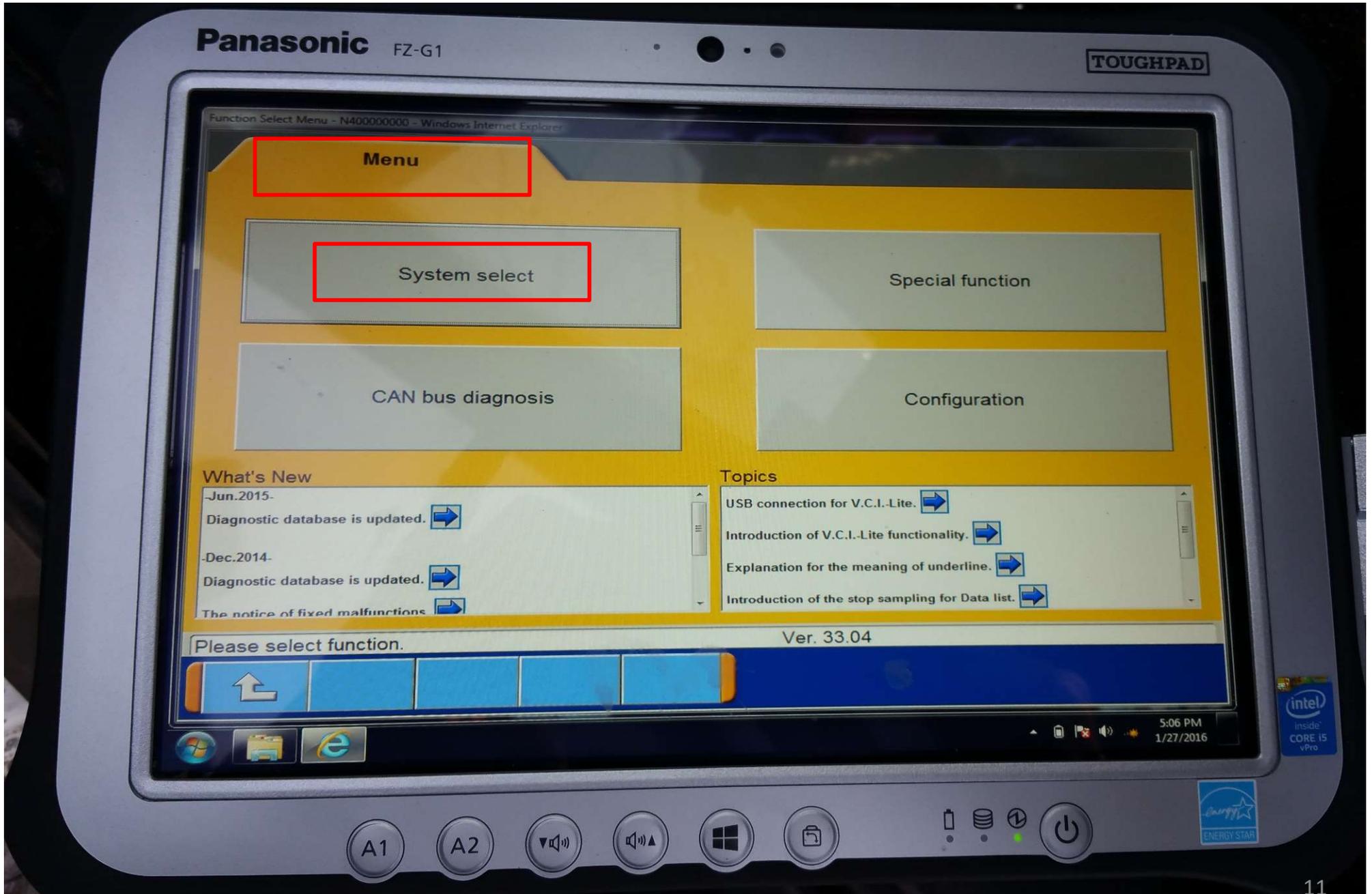
Do you agree with the above conditions?

Agree

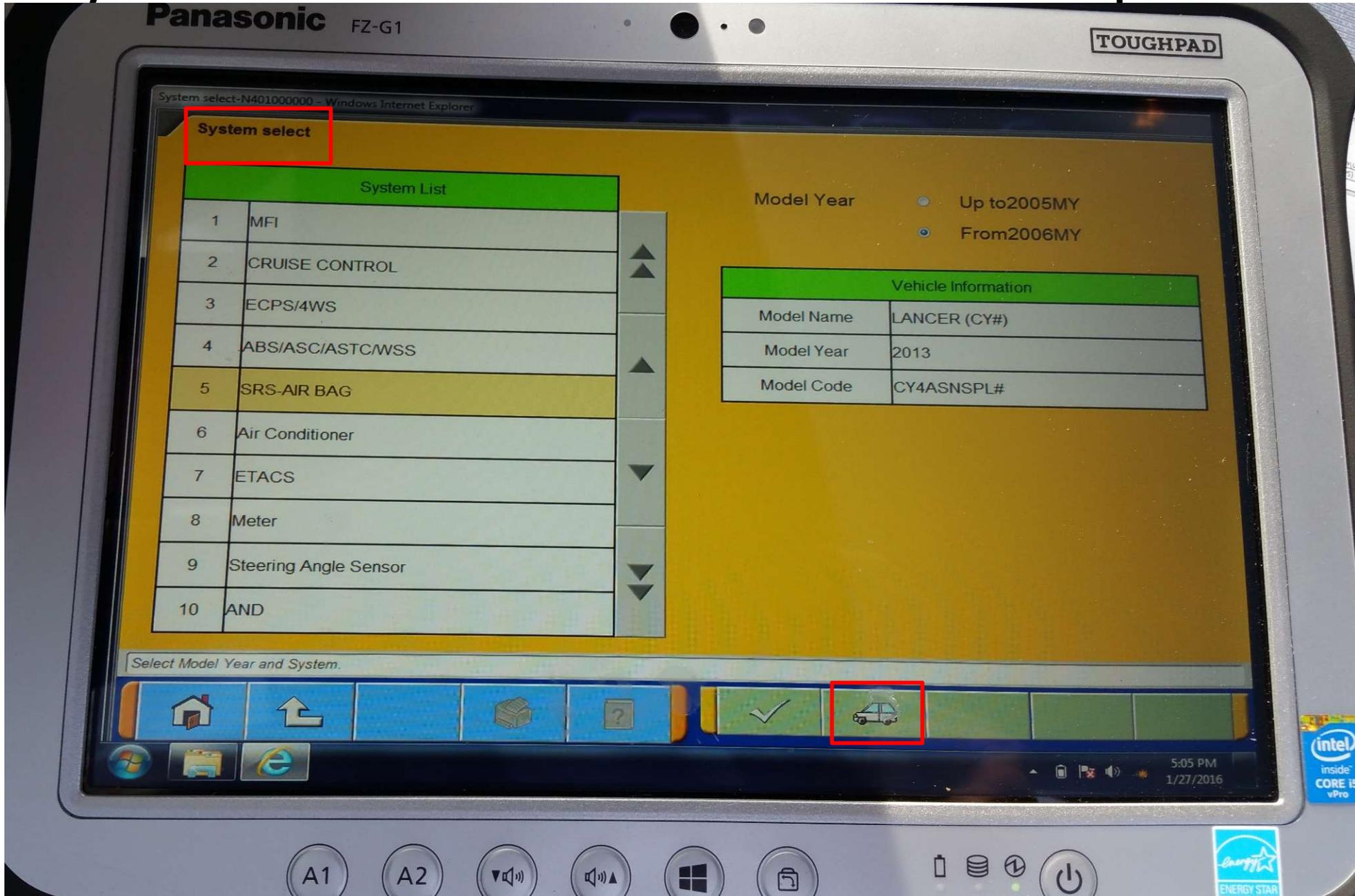
Don't Agree (cancel)



Choose System Select

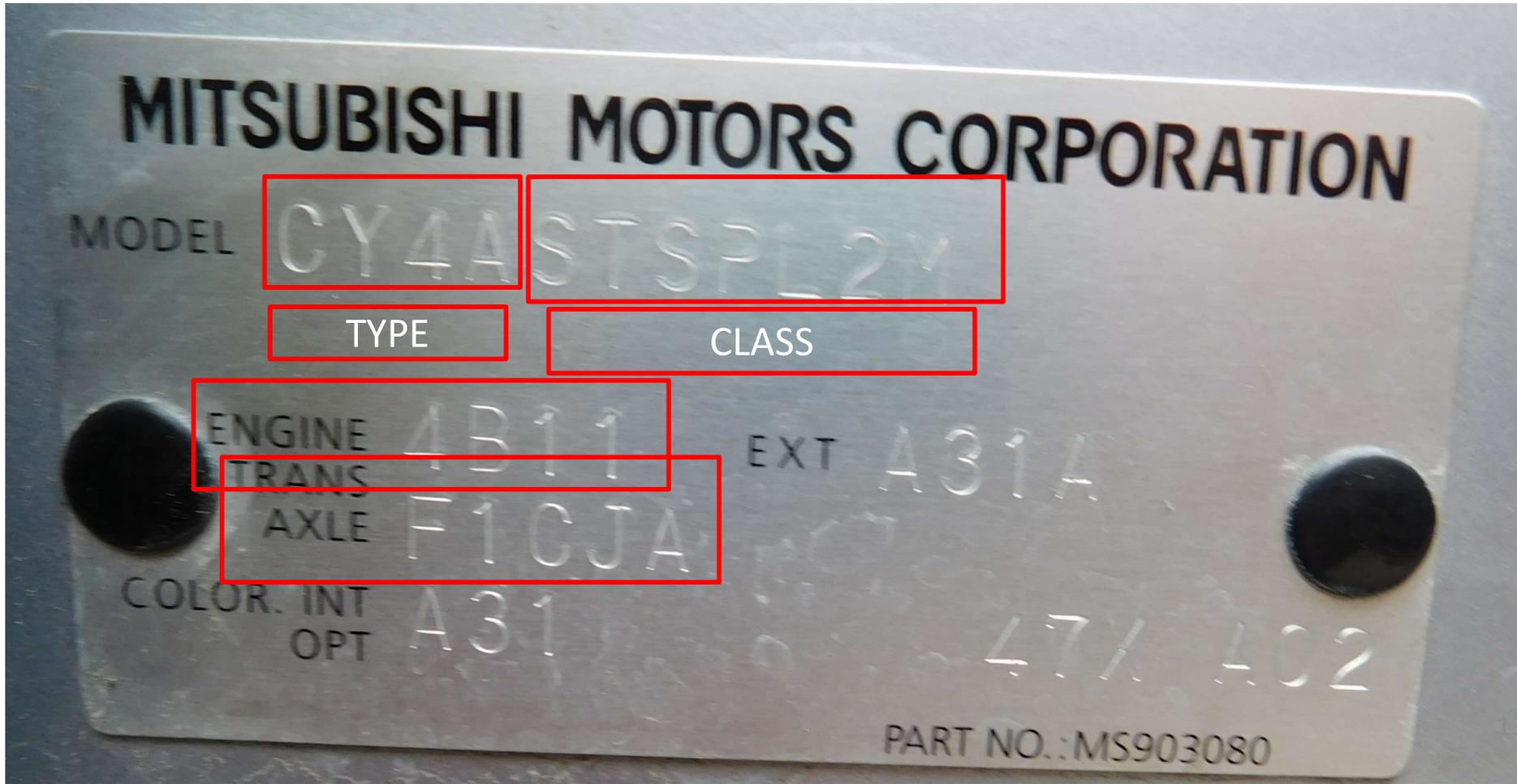


System select – select Vehicle Description

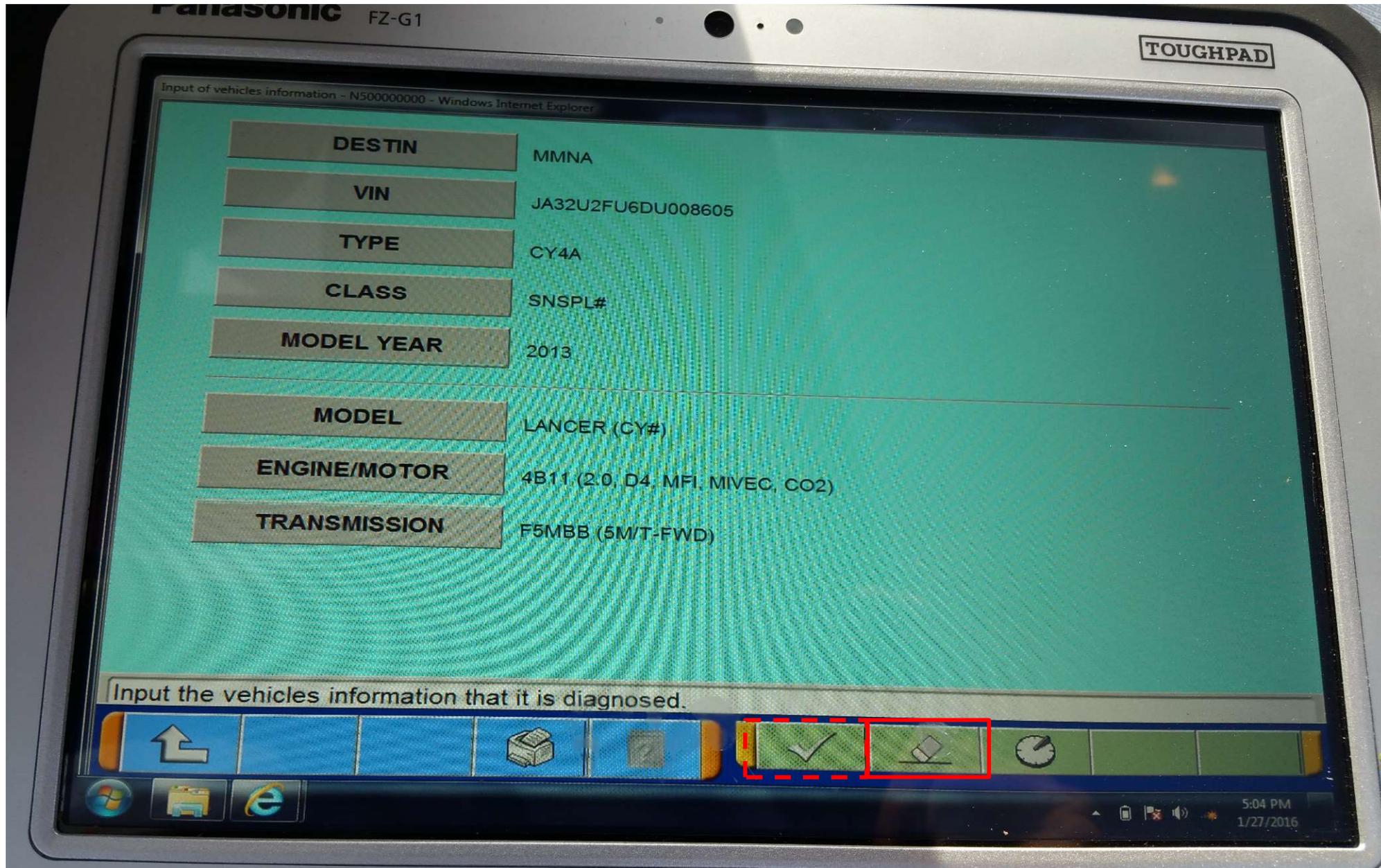


Find Vehicle Description plate on passenger B pillar front door side

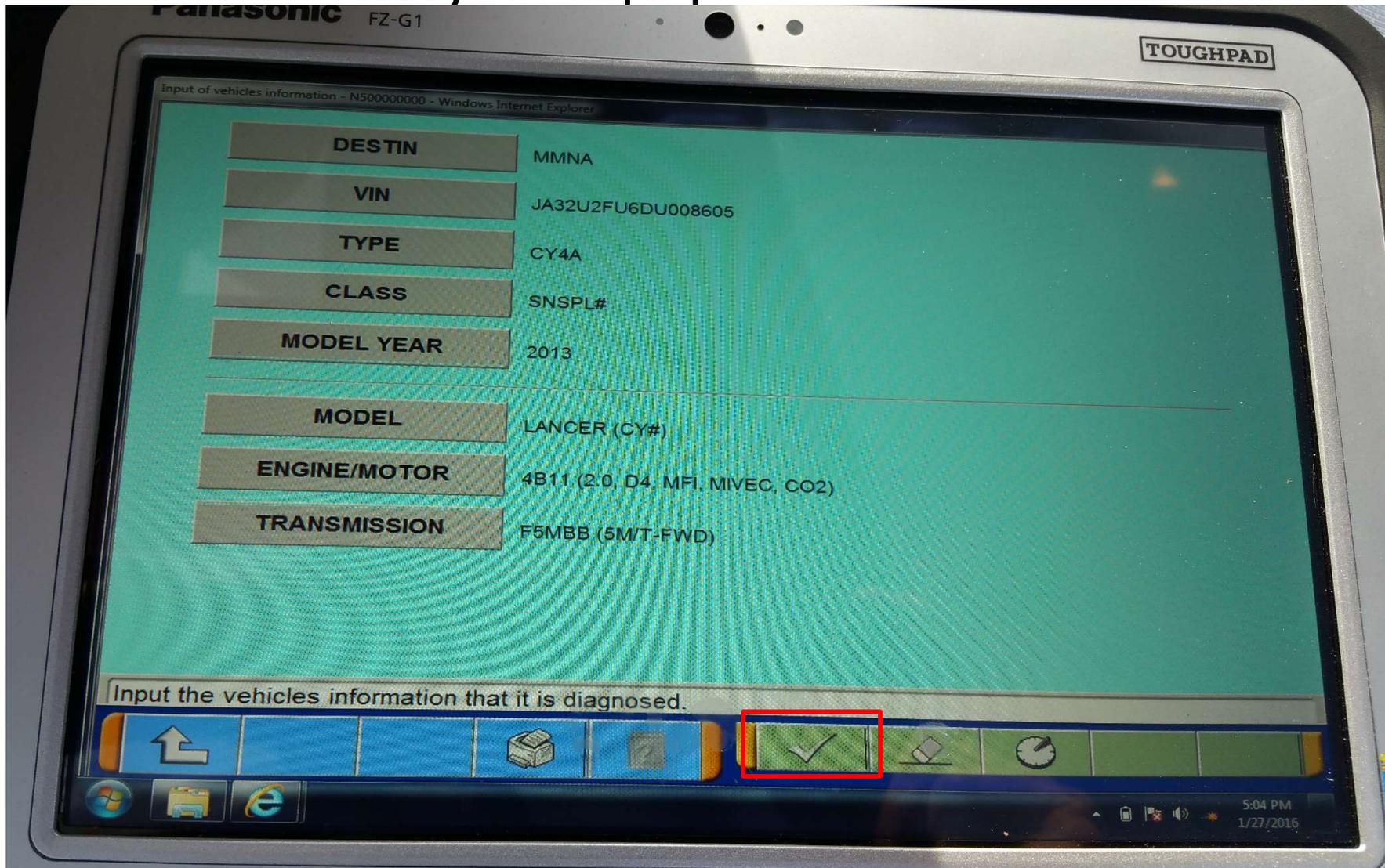
Note Model Code & eng/trans codes



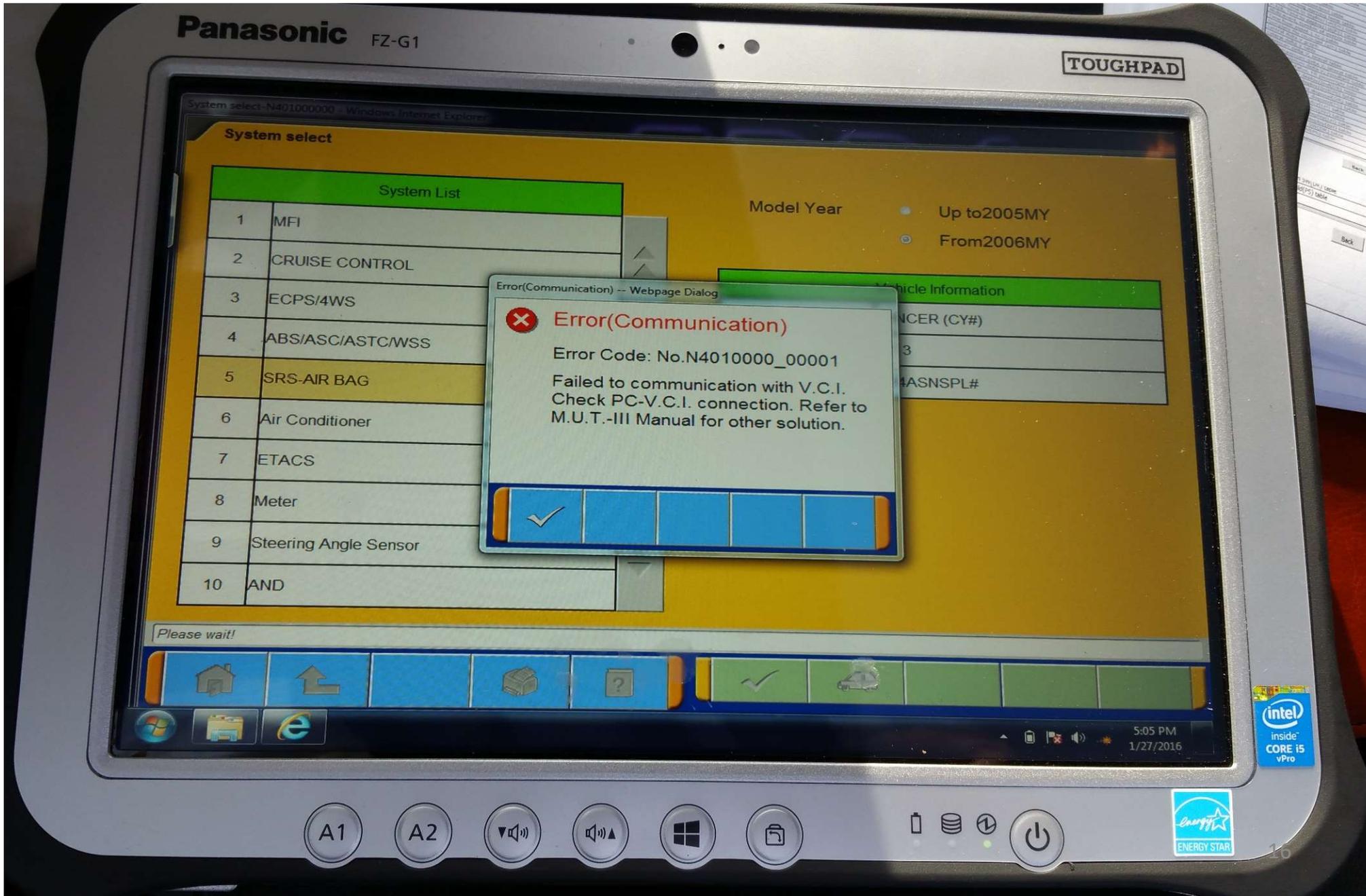
Erase prior vehicle selection



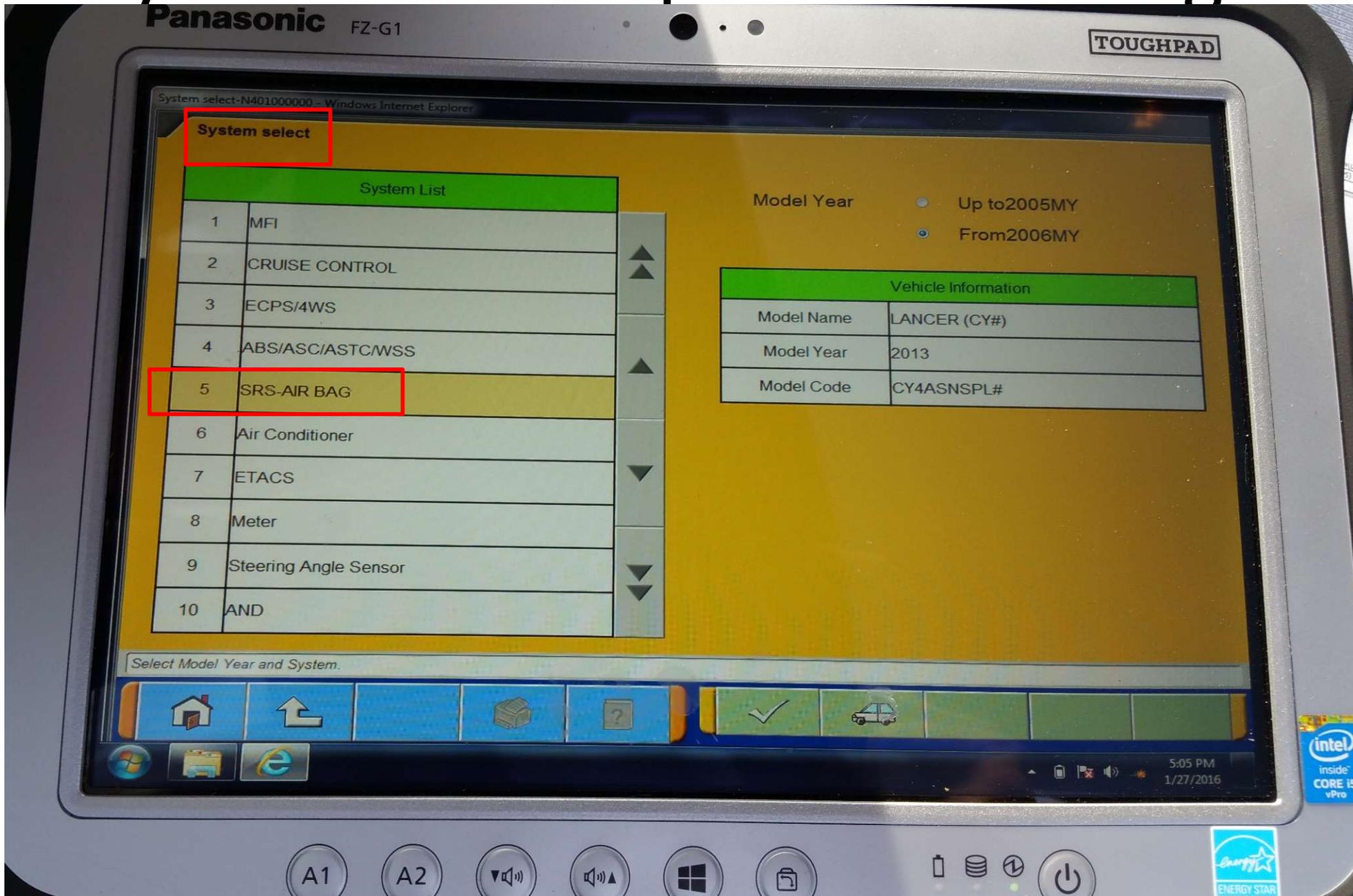
Insert VIN first some will populate
Enter remainder then accept
May auto populate from ECM



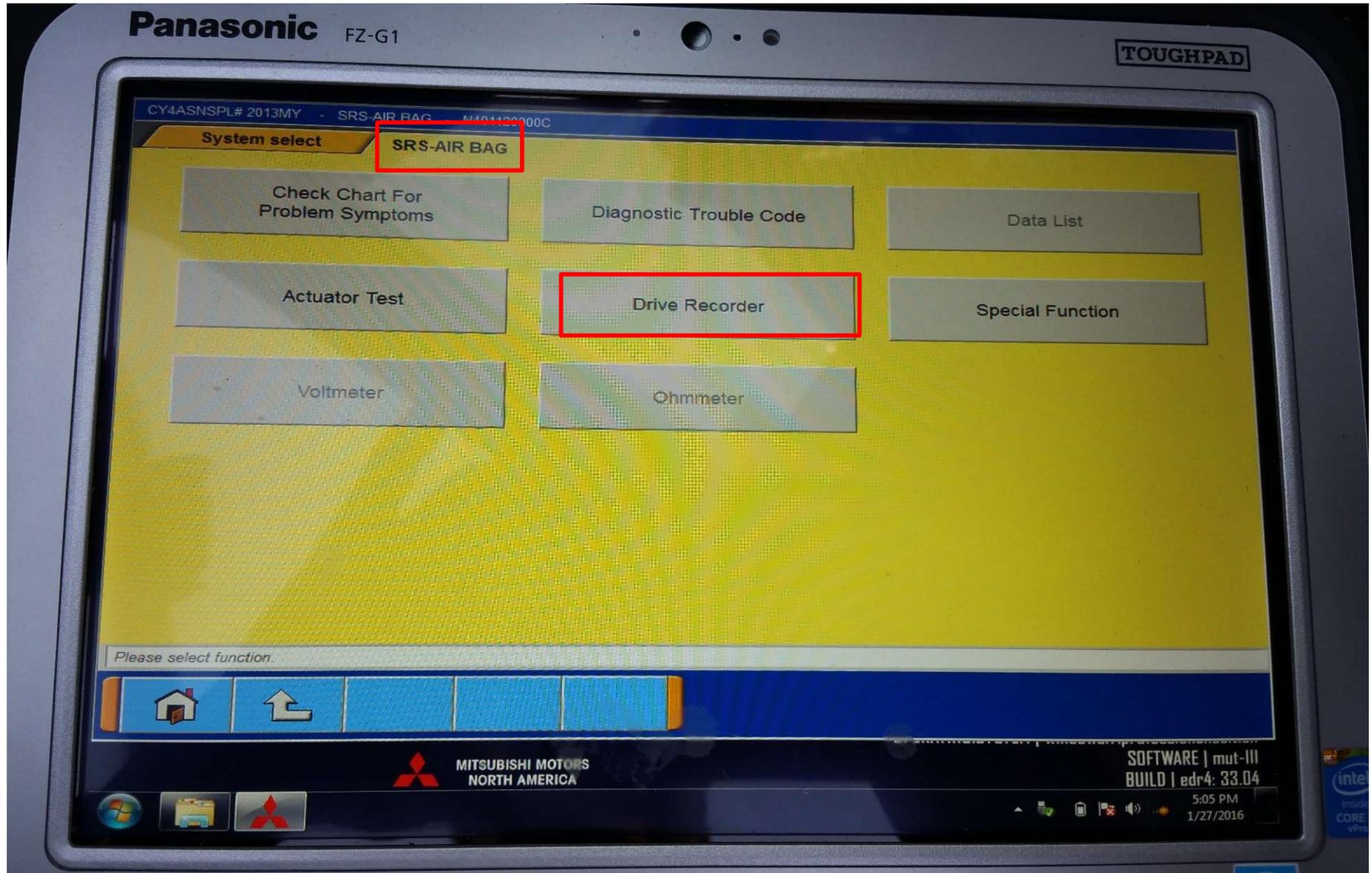
Debug if necessary. 12V needed in DLC & Ignition to ACM.
Make sure you are in MUT3-SE not MUT3 software



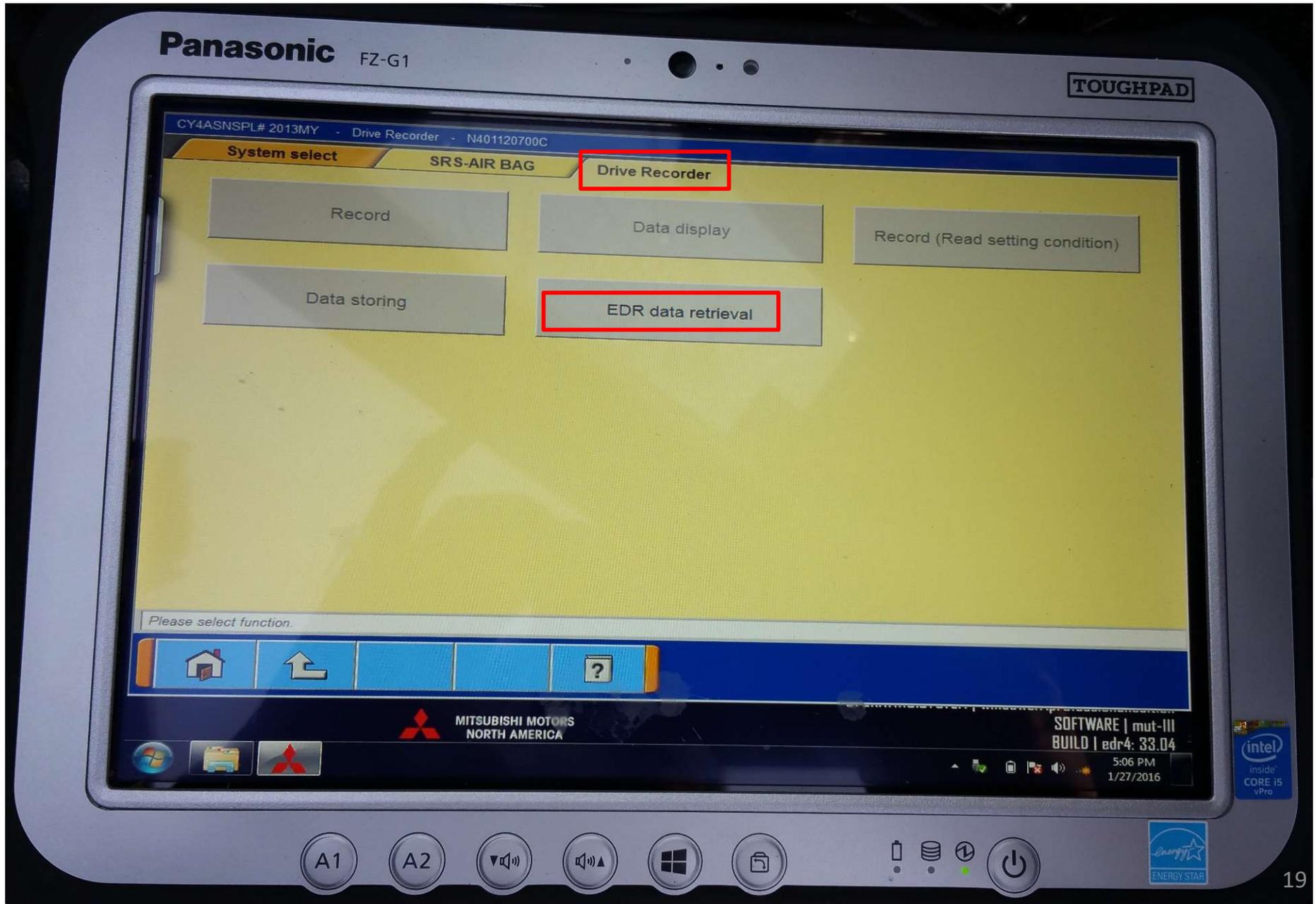
System select – pick SRS Air Bag



Within Air Bag, select drive recorder



Within drive recorder, select EDR



Events captured shown

Panasonic FZ-G1 TOUGHPAD

CY4ASNSPL# 2013MY - EDR data retrieval - N4011208C9C

SRS-AIR BAG Drive Recorder EDR data retrieval

ECU recording area	
(1)	Incomp. Record
(2)	No Rec.(Default)
(3)	Blank
(4)	Blank
(5)	Blank

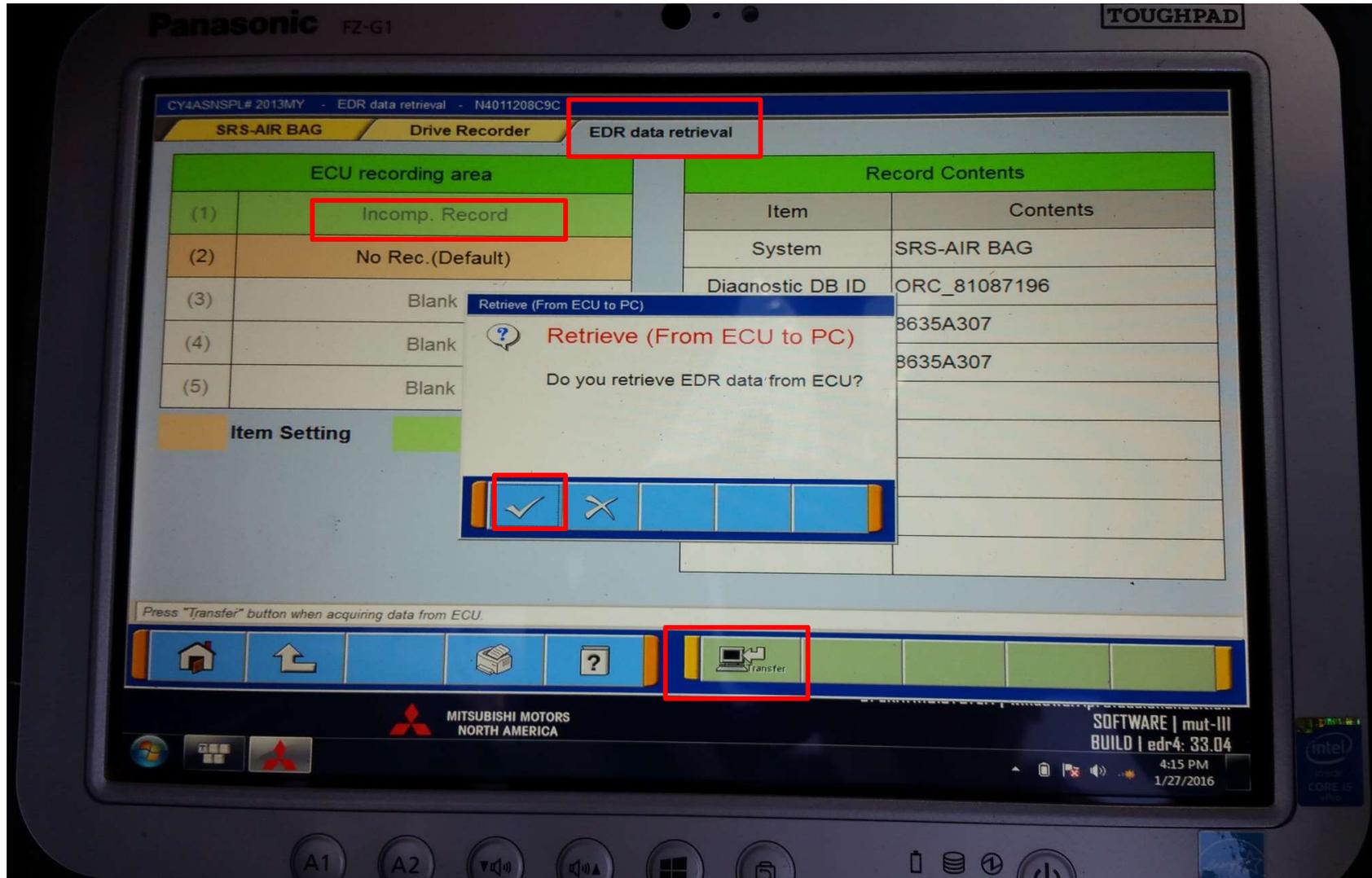
Item Setting Select

Record Contents	
Item	Contents
System	SRS-AIR BAG
Diagnostic DB ID	ORC_81087196
PART-NUMBER	8635A307
Software Part Number	8635A307

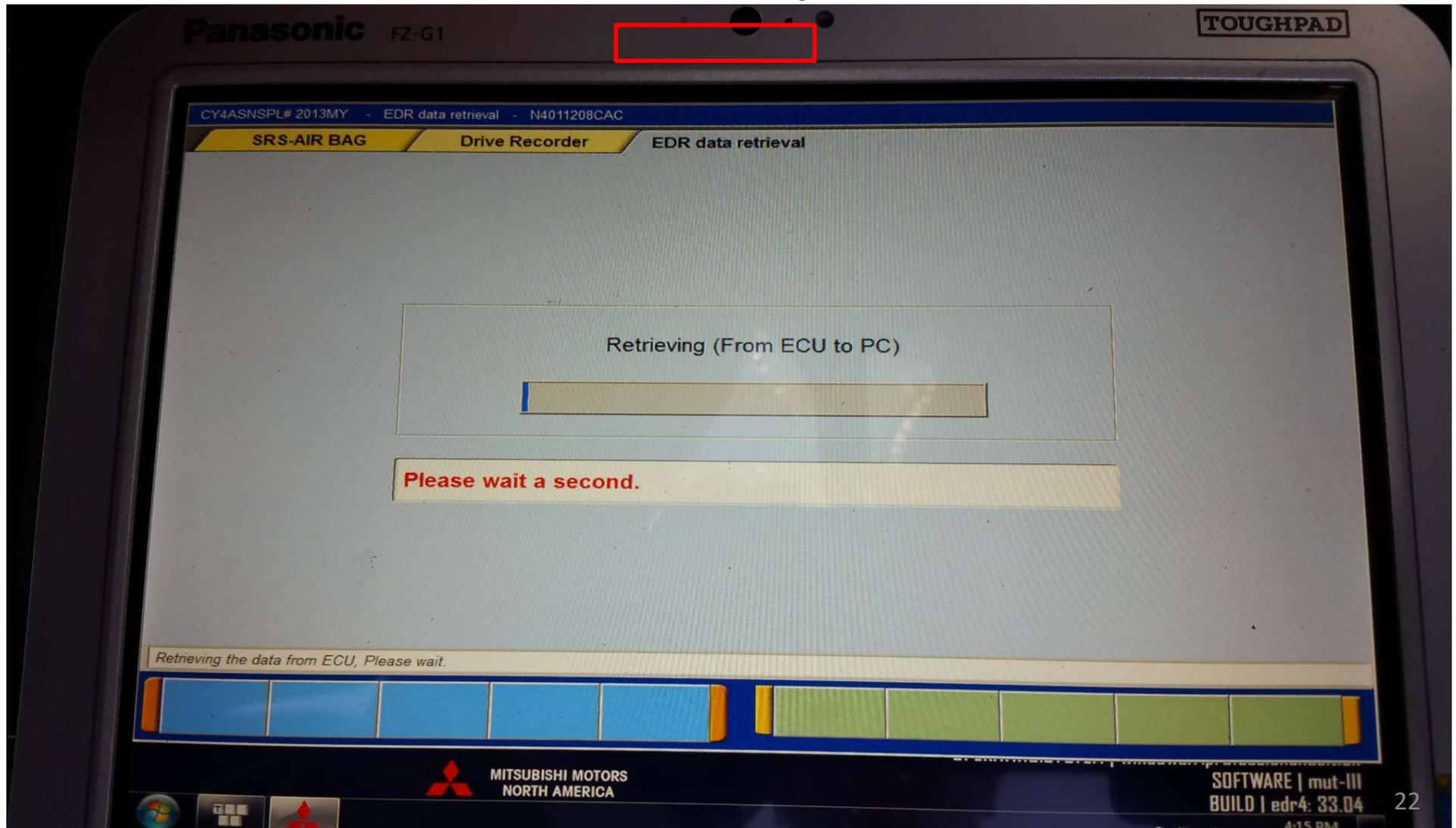
Press "Transfer" button when acquiring data from ECU.

Home Up Printer ? Transfer

Select Record, Select Transfer to get popup in center, click check

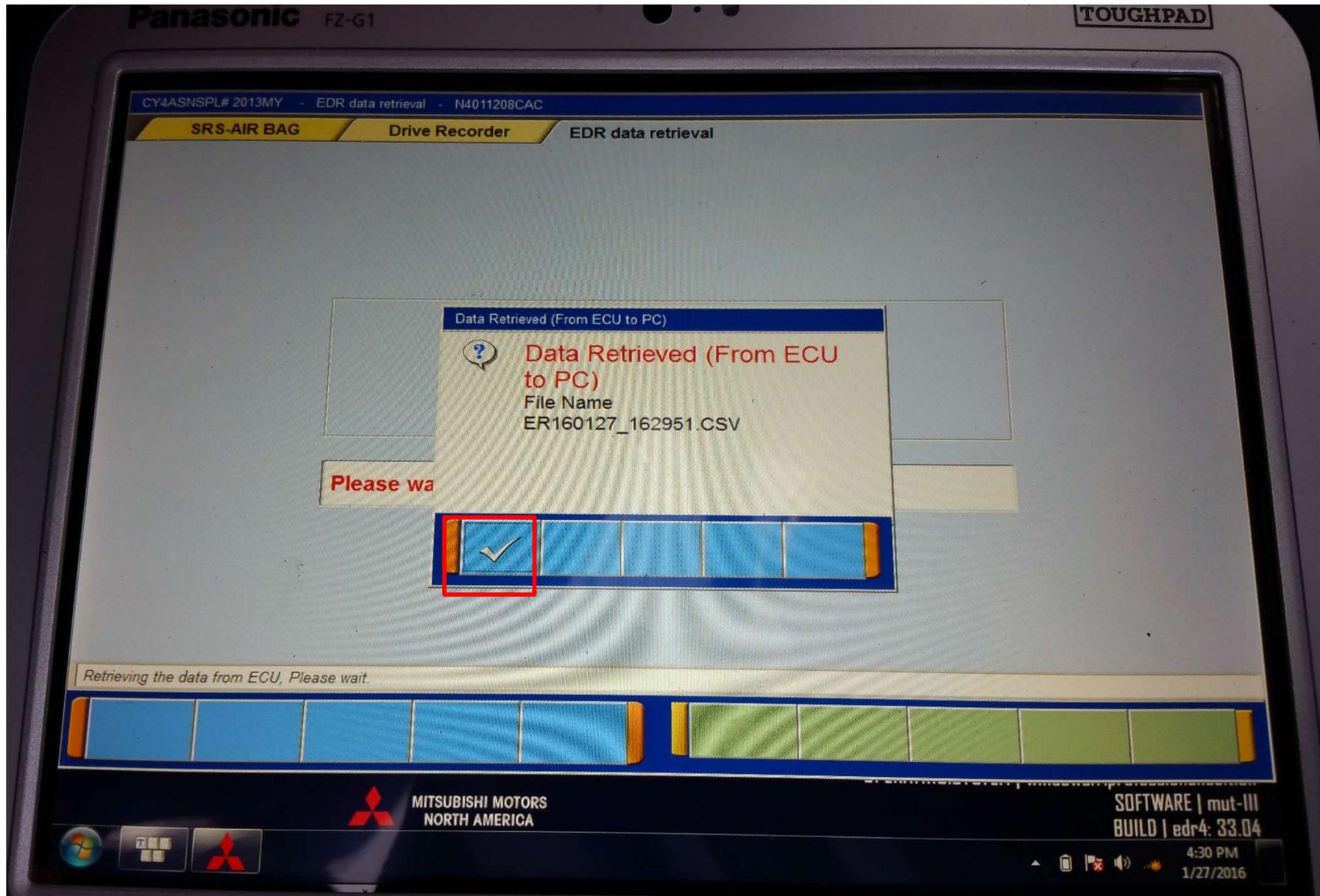


Scroll Bar during data retrieve
Early Software took up to 15 min
After recent software update, much faster



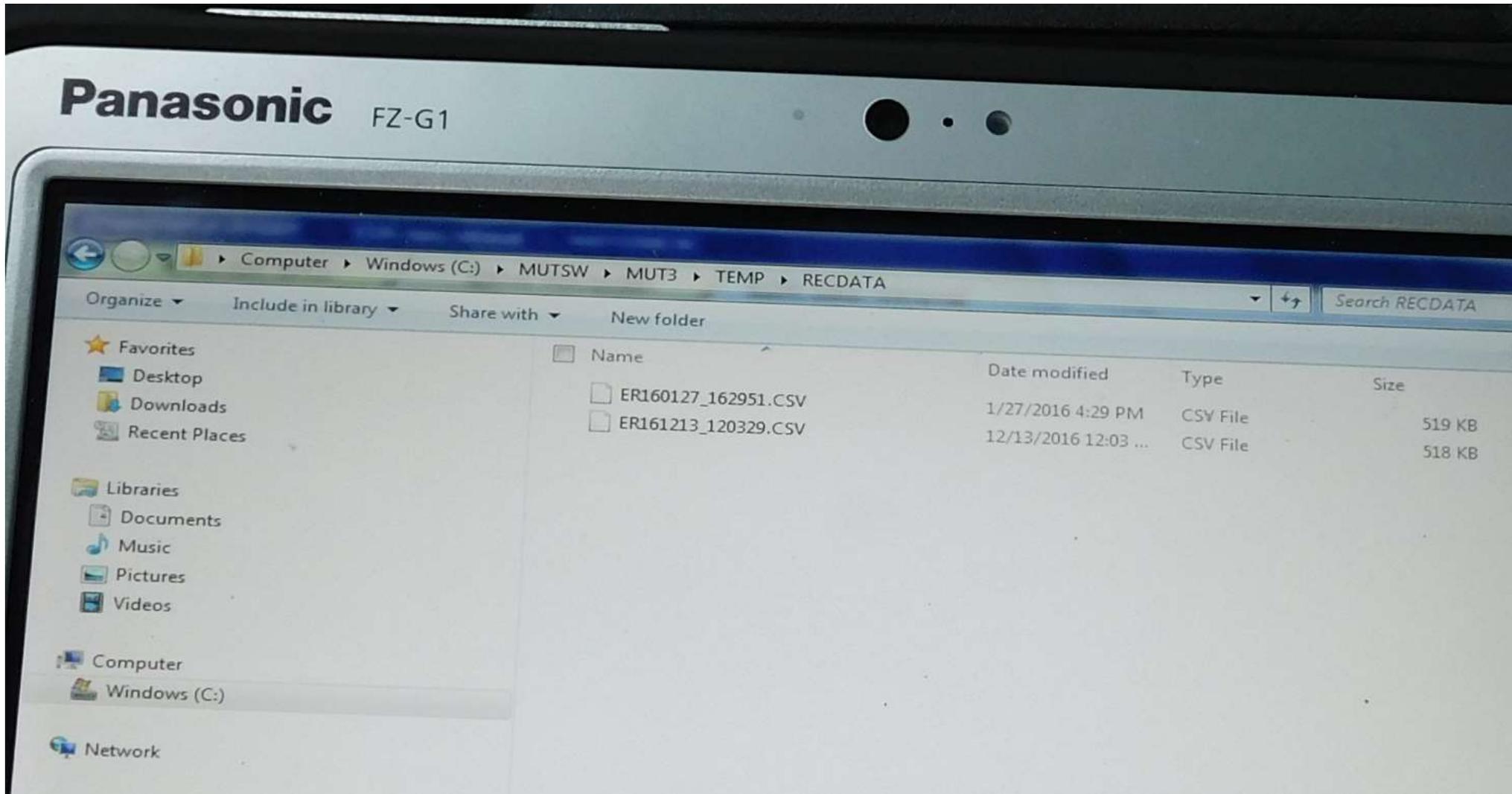
Accept or change recommended file name.

Default is year/month/day_time from computer clock

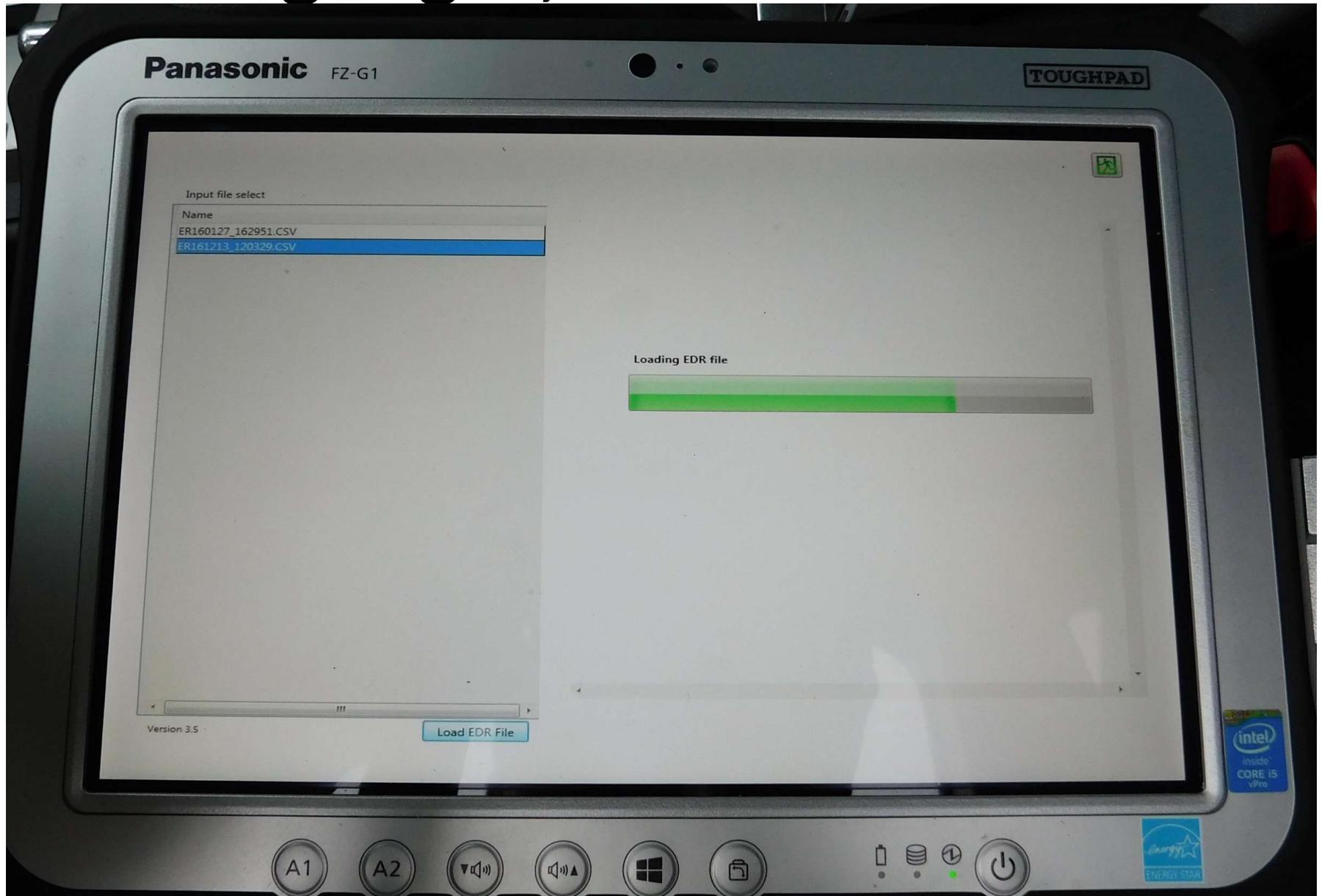


Use file explorer to navigate to CSV file just saved

New software may be different



Highlight, Click Load File



View Data Output by data element

Panasonic FZ-G1 **RICK RUTH** **TOUGHPAD**

MITSUBISHI EDR TOOL

Preview select

Friday, October 19, 2018 8:17 AM 2017 Outlander(GF)
ER181019-081710.csv

Longitudinal delta V graph

MPH

Longitudinal delta V graph

Milliseconds

Version 4.0.1 [Back](#) [Create Report File](#)

The screenshot displays the Mitsubishi EDR Tool interface. On the left, a list of data elements is shown, with 'Longitudinal delta V graph' selected. On the right, a graph titled 'Longitudinal delta V graph' plots velocity change in MPH against time in milliseconds. The graph shows a steady decrease from 0 to approximately -11 MPH over 140 milliseconds. The interface also includes a 'Preview select' section, a date and time stamp, and a file name.

Milliseconds	MPH
0	0
20	-2
40	-3
60	-5
80	-7
100	-9
120	-10
140	-11

View Data by Output element

TOUGHPAD

Panasonic FZ-G1

Wednesday, January 27, 2016 4:29 PM 2013 Lancer(CY)
ER160127_162951.CSV

Preview select

- Name
- Longitudinal delta V graph
- Longitudinal delta V table
- Maximum delta V, longitudinal table
- Time, maximum delta V, long. table
- Pre-crash data table**
- Ignition cycle, crash table
- Ignition cycle, download table
- Safety belt status, driver(CAN) table
- Frontal air bag warning lamp table
- F-A/B, Time to deploy/1st(DR) table
- F-A/B, Time to deploy/1st(PS) table
- Multi-event, number of events table
- Time from event 1 to 2 table
- Complete file recorded (y/n) table
- Lateral delta V graph
- Lateral delta V table
- Maximum delta V, lateral table
- Time, maximum delta V, lateral table
- Time, maximum delta V, resultant table
- Safety belt status, FR passenger table
- F-A/B, Time to deploy/2nd(DR) table
- F-A/B, Time to deploy/2nd(PS) table
- F-A/B deploy, 2nd disposal(DR) table
- F-A/B deploy, 2nd disposal(PS) table
- S-A/B, Time to deploy(LH) table
- S-A/B, Time to deploy(RH) table
- S.C.-A/B, Time to deploy(LH) table
- S.C.-A/B, Time to deploy(RH) table
- Seat track position SW(DR) table

Pre-crash data table

Times (sec)	Speed, vehicle indicated (MPH) (km/h)	Accelerator pedal percent full
-4.9	318.1 (511.99)	133
-4.8	318.1 (511.99)	133
-4.7	318.1 (511.99)	133
-4.6	318.1 (511.99)	133
-4.5	318.1 (511.99)	133
-4.4	318.1 (511.99)	133
-4.3	318.1 (511.99)	133
-4.2	318.1 (511.99)	133
-4.1	318.1 (511.99)	133
-4.0	318.1 (511.99)	133
-3.9	318.1 (511.99)	133
-3.8	318.1 (511.99)	133
-3.7	318.1 (511.99)	133
-3.6	318.1 (511.99)	133
-3.5	318.1 (511.99)	133
-3.4	318.1 (511.99)	133
-3.3	318.1 (511.99)	133
-3.2	318.1 (511.99)	133
-3.1	318.1 (511.99)	133
-3.0	318.1 (511.99)	133
-2.9	318.1 (511.99)	133
-2.8	318.1 (511.99)	133
-2.7	318.1 (511.99)	133
-2.6	318.1 (511.99)	133
-2.5	318.1 (511.99)	133
-2.4	318.1 (511.99)	133
-2.3	318.1 (511.99)	133
-2.2	318.1 (511.99)	133
-2.1	318.1 (511.99)	133
-2.0	318.1 (511.99)	133
-1.9	318.1 (511.99)	133
-1.8	318.1 (511.99)	133
-1.7	318.1 (511.99)	133
-1.6	318.1 (511.99)	133
-1.5	318.1 (511.99)	133
-1.4	318.1 (511.99)	133
-1.3	318.1 (511.99)	133
-1.2	318.1 (511.99)	133
-1.1	318.1 (511.99)	133
-1.0	318.1 (511.99)	133
-0.9	318.1 (511.99)	133
-0.8	318.1 (511.99)	133
-0.7	318.1 (511.99)	133
-0.6	318.1 (511.99)	133
-0.5	318.1 (511.99)	133
-0.4	318.1 (511.99)	133
-0.3	318.1 (511.99)	133
-0.2	318.1 (511.99)	133
-0.1	318.1 (511.99)	133
0.0	318.1 (511.99)	133

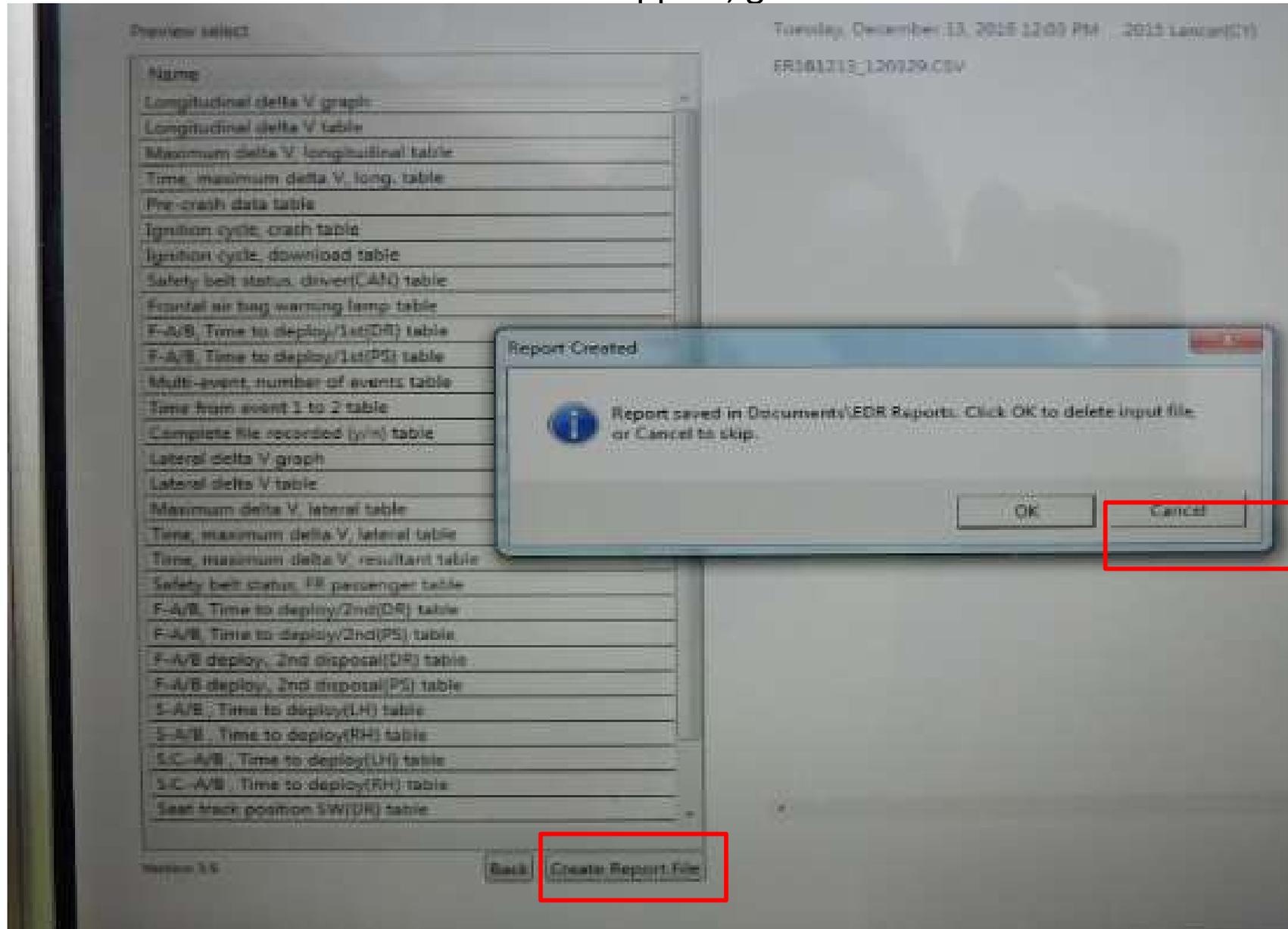
Version 3.5

Back Create Report File

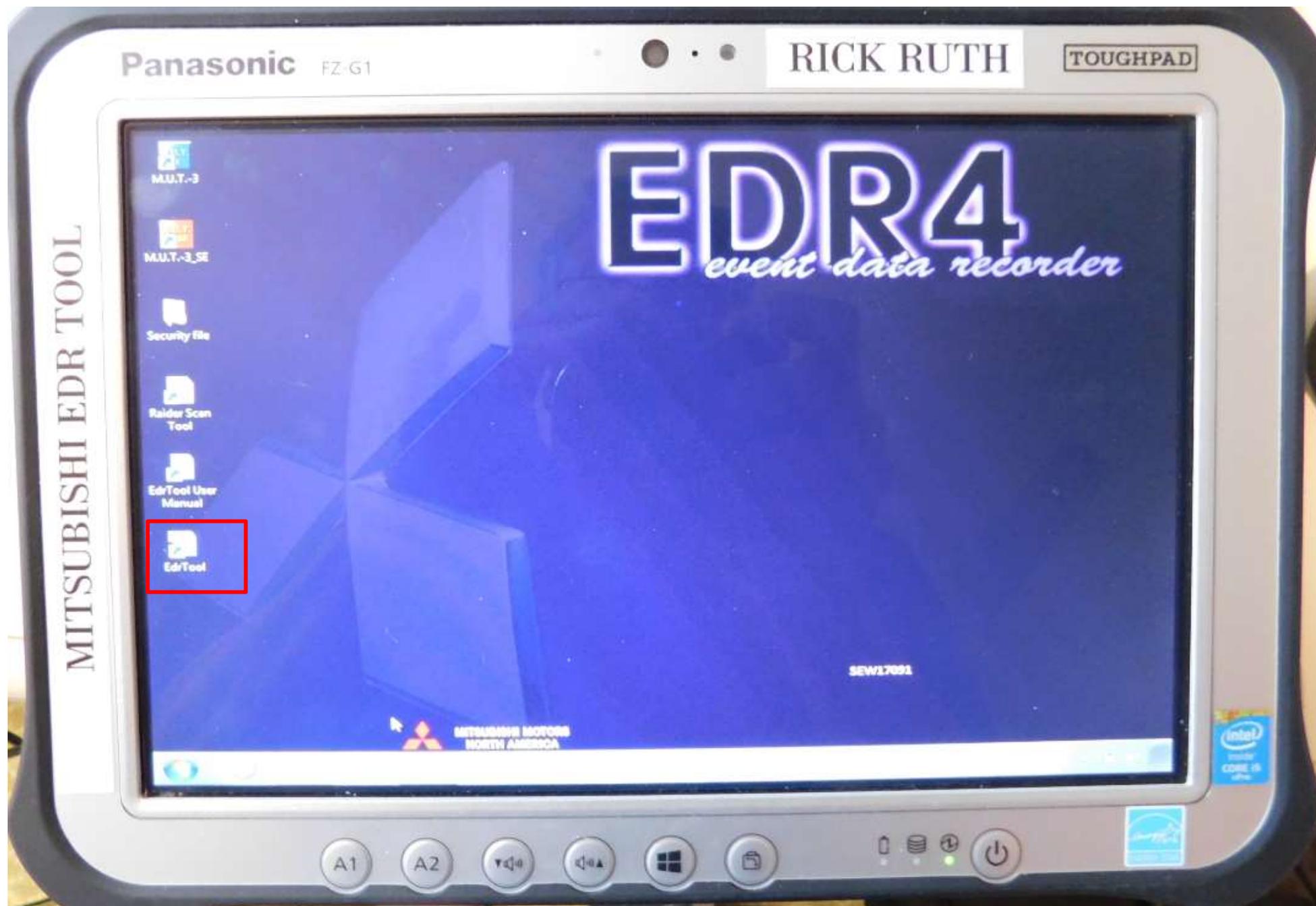
Click Create Report File.

Cancel deleting input file.

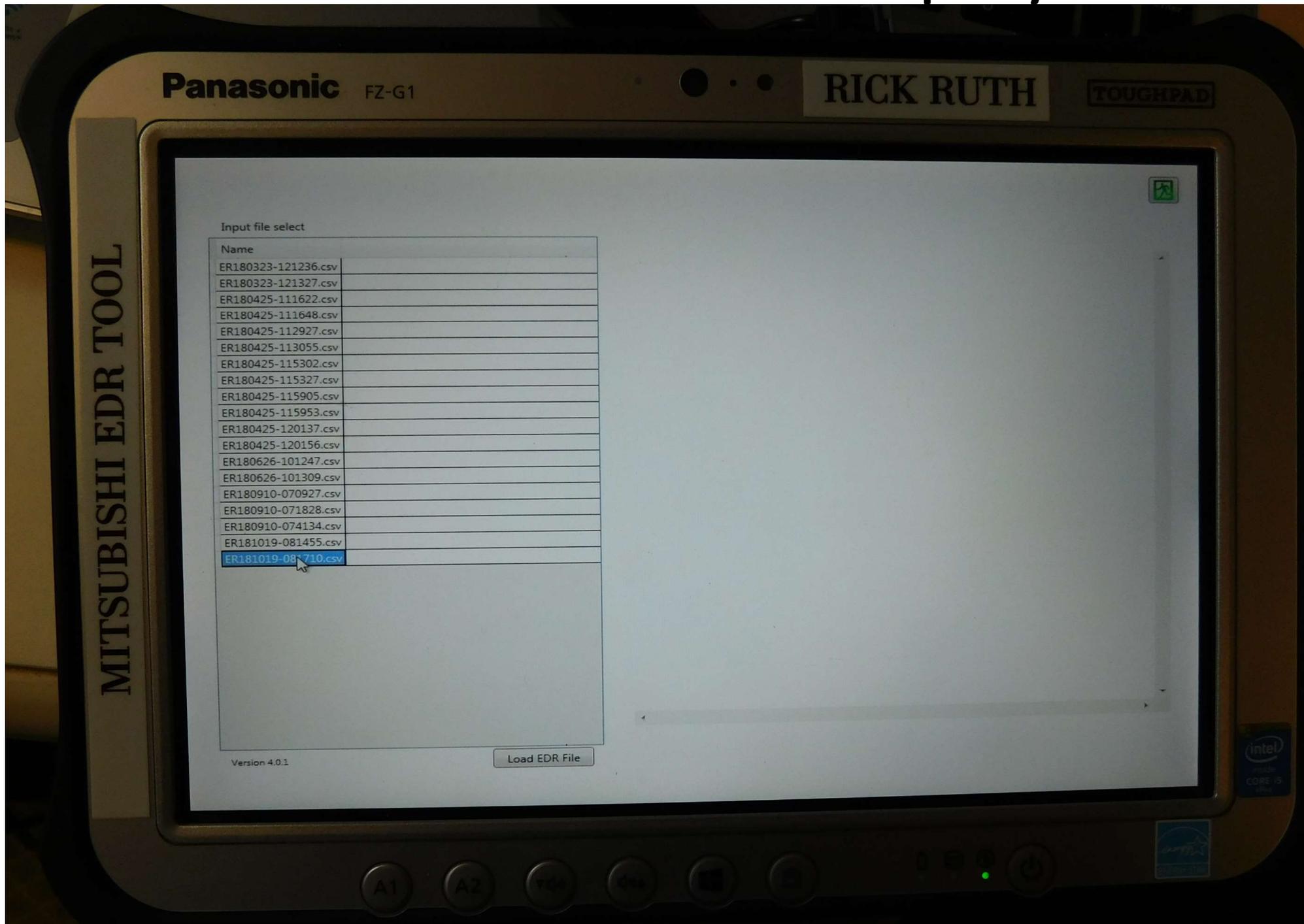
If this button does not appear, go to next slide



New: Select “EDR Tool” (PDF Maker)



Newer software will display list



Navigate to saved PDF and open
File name same as CSV except extension
Insert thumb drive into Toughbook and
save to thumb drive

EdrTool

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File Information

EDR Data Download Date	Tuesday, December 13, 2016 12:03 PM
EDR Part Number	8635A307
EDR Data Area	1
Software Build Date	Tuesday, August 05, 2014

Comments

Vehicle: 2015 Lancer(CY)

Notice

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Tool Use Field Feedback

- The total number of files collected is still very small.
- About half of the files said they were interrupted recordings and had no useful data in them. This seems unusual for a part 563 recorder that must make recordings after a 30 mph barrier crash. More experience is needed before reaching any conclusions.
- Default data is 318.1 mph (511.99 kph), 65535 rpm, 30720 steering, and brake off.

Anomalies

- A 2015 Lancer file read with software version 33 had longitudinal and lateral Delta V and steering polarities backwards, and accel pedal displayed 114% for some data points.
- Another 2015 Lancer read with software version 34 had the polarities correct. A 2014 Mirage had polarities correct.
- Review data against physical evidence before reaching any conclusions

Mitsubishi Recap

- A proprietary tool may still be needed for a few models before full Bosch coverage is available