

[REDACTED]
Parrish, FL [REDACTED]
October 4, 2021

U.S. Department of Transportation
National Highway Traffic Safety Administration
Office of Defects Investigation
1200 New Jersey Avenue, SE
Washington, DC 20590

Attention: Mr. Chris LaMance

Dear Mr. LaMance:

This is in response to your email (attached to this page) dated September 23, 2021, in which you asked for additional information regarding my vehicle complaint, VOQ 11428721, 2021 Toyota Rav4, 4T3B6RFV3MU [REDACTED]. I am providing hard copies. Attachment numbers are at the top of the page and are circled in red.

- Your first and third requests: Please see attachment #1 from Toyota.
- Also in your first request: Please see attachment #2 from Travelers Insurance Company.
- Your second request: A copy of the Event Data Recorder is attachment #3.
- The answer to your fourth request asking if I experienced any warning messages on the dash prior to or during the loss of vehicle brake incidents is: NO. HOWEVER, AFTER GOING THROUGH THE RED LIGHT AT THE INTERSECTION, THERE WERE SOME MESSAGES ON THE DASH. I DID NOT HAVE TIME TO READ THEM SINCE I WAS TRYING TO CONTROL AND STOP THE VEHICLE. WHEN THE CAR FINALLY STOPPED, I SAW THE FOLLOWING MESSAGES: "CRUISE CONTROL INOPERATIVE", "BRAKE FAILURE," AND "LANE DEPARTURE INOPERATIVE" (because the driver's side mirror was knocked off when the car hit a post going through the intersection).
- The answer to your fifth request as to how the pedal felt when I attempted to depress it, whether it was hard, soft, or had a normal feeling: NORMAL
- The answer to your sixth request for the GPS coordinate of the intersection where I was unable to stop the out-of-control car is at the top of the last page as attachment #4.

- The answer to your seventh request asking for a copy of the police accident report is on the same page as the GPS coordinate and is attachment #5.

Attachments 6, 7, and 8 are the additional documents that I was able to print from the thumb drive provided by Mr. Don Heirholzer who conducted the inspection.

If I can provide you with additional information, please call me at [REDACTED] or email me at [REDACTED]

Sincerely,

[REDACTED]

Subject 2021 Toyota Rav4 Loss of Brakes Allegation

From Lamance, Frederick (NHTSA)
<frederick.lamance@dot.gov>

To: [REDACTED]
[REDACTED]

Date Sep 23 at 5:50 PM

Mr. or Mrs. [REDACTED]

Thank you for filing the vehicle complaint with the NHTSA Office of Defects Investigation. I read your allegation and wanted to follow up with you for additional information on the incident.

Please provide the following:

1. • You stated that a Toyota dealer was inspecting your vehicle, please provide a status update as well as service invoices from that repair.
2. • Please provide a copy of the Event Data Recorder (EDR)
3. • Is the condition repeatable? If so, please describe the steps to recreate this condition.
 - Did you experience any warning messages on the dash prior to or during the loss of vehicle brake incidents?
 - When you attempted to depress the pedal, was the pedal hard, soft, normal feeling?
4. • Please provide the GPS coordinate of the intersection where you were unable to stop (go to GoogleMaps, zoom into the intersection, click in the center of the screen. A small box will open at the bottom of the screen with the GPS coordinates. Copy/paste those coordinates into your response to this email)
5. • Was a police accident report filed? If so, please provide a copy of that police accident report.

VOQ: 11428721

2021 Toyota Rav4

4T3B6RFV3MU [REDACTED]



Chris LaMance
General Engineer

U.S. Department of Transportation
National Highway Traffic Safety Administration
Office of Defects Investigation
1200 New Jersey Avenue SE., Washington, DC
20590
W48-219

#1
TOYOTA

Sandee Estrada
Direct Phone (469) 292-4369

Toyota Motor North America, Inc.
6565 Headquarters Drive
Plano, TX 75024

September 20, 2021

Via email to [REDACTED]
[REDACTED]
[REDACTED]
Parrish, FL [REDACTED]

RE: Date of Loss: August 10, 2021
Vehicle: 2021 Toyota RAV4 Hybrid
VIN: 4T3B6RFV3MU [REDACTED]

Dear Mr. [REDACTED]:

Thank you for contacting our Brand Engagement Center regarding the incident that occurred on August 10, 2021.

You reported that you had the cruise control set to 71 MPH while you were driving on a highway. When you attempted to exit the highway on an off ramp, you stated that the vehicle would not slow down. You hit the cancel button and applied the brake pedal, but the cruise control wouldn't disengage. The vehicle hit a pole and kept going for about 1/2 a mile. You stated that you attempted to turn off the engine by pressing the stop/start button but the engine wouldn't turn off. You turned onto a grassy area and finally stopped the vehicle by forcing the transmission into "Park". The vehicle coasted while in "Park" until it came to a stop.

In response to your concerns, a vehicle inspection a readout of the electronic data from the vehicle were completed on August 18, 2021 at DeLuca Toyota by one of our field technicians. Due to the impact damage, the vehicle could only be test driven in the dealer's parking lot area and into the service department. The accelerator pedal was depressed several times to the wide open throttle position with the engine running, while in "Drive" and in "Reverse". Each time the pedal was released, it returned to the idle position. When the brake pedal was applied, it held the vehicle stationary with the accelerator at the wide open throttle position in both "Drive" and "Reverse". The parking brake was applied and it also held the vehicle firmly in place. Numerous stopping, accelerating, parking and turning maneuvers were performed with no abnormal or unexpected behaviors.

The cruise control "On" lamp illuminated when the cruise control button was pushed, then turned off when the button was pushed again. The cruise control system could not be tested due to the collision damage. Per the electronic data, cruise control was not engaged or operational at the time of the incident. Based on our inspection and review of the electronic data, we found no evidence that this incident was the result of a defect in your vehicle.

We are very sorry to hear about this unfortunate incident and we do appreciate the opportunity to address your concerns.

Sincerely,



Sandee Estrada
Legal Claims Analyst

TRAVELERS - THE STANDARD FIRE INSURANCE COMPANY

#2

Florida Claim Center (PI-297)
 Email Supplements:
 supplementrequest@travelers.com
 By phone: (888) 299-7456
 PO Box 430
 Buffalo, NY 14240
 Phone: (800) 842-5609

Claim #:
 Workfile ID:

Estimate of Record

Written By: KEN MAHONEY, 9/7/2021 10:39:58 AM
 Adjuster: VERDI-BRILL, ROSSANA, (813) 357-0237 Business

Insured: [REDACTED] Owner Policy #: [REDACTED] Claim #: [REDACTED]
 Type of Loss: Collision Date of Loss: 08/10/2021 12:00 AM Days to Repair: 19
 Point of Impact: 11 Left Front Deductible: 500.00

Owner (Insured): [REDACTED] Inspection Location: DELUCA TOYOTA
 [REDACTED] 1719 SW COLLEGE RD
 PARRISH, FL 34471-0000 Appraiser Information: kjmahone@travelers.com
 [REDACTED] Cellular Field (352) 536-0231
 (352) 732-0770 Day Repair Facility: DELUCA TOYOTA
 1719 SW COLLEGE RD
 OCALA, FL 34471
 (352) 732-0770 Business

VEHICLE

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

VIN: 4T3B6RFV3MU [REDACTED] Production Date: 06/2021 Interior Color: Gray
 License: [REDACTED] Odometer: 1115 Exterior Color: Blue
 State: FL Condition: Good

TRANSMISSION	Intermittent Wipers	Auxiliary Audio Connection	SEATS
Automatic Transmission	Tilt Wheel	Satellite Radio	Bucket Seats
4 Wheel Drive	Cruise Control	SAFETY	Reclining/Lounge Seats
POWER	Rear Defogger	Drivers Side Air Bag	Leather Seats
Power Steering	Keyless Entry	Passenger Air Bag	Heated Seats
Power Brakes	Alarm	Anti-Lock Brakes (4)	WHEELS
Power Windows	Message Center	4 Wheel Disc Brakes	Aluminum/Alloy Wheels
Power Locks	Steering Wheel Touch Controls	Traction Control	PAINT
Power Mirrors	Rear Window Wiper	Stability Control	Clear Coat Paint
Heated Mirrors	Telescopic Wheel	Front Side Impact Air Bags	Metallic Paint
Power Driver Seat	Heated Steering Wheel	Head/Curtain Air Bags	OTHER
Memory Package	Climate Control	Communications System	Fog Lamps
DECOR	Backup Camera	Hands Free Device	Rear Spoiler
Dual Mirrors	Intelligent Cruise	Xenon or L.E.D. Headlamps	Signal Integrated Mirrors
Aftermarket Film Tint	RADIO	Blind Spot Detection	California Emissions
Console/Storage	AM Radio	Lane Departure Warning	TRUCK
Overhead Console	FM Radio	ROOF	Power Trunk/Liftgate

Claim #:
Workfile ID:



Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

CONVENIENCE
Air Conditioning

Stereo
Search/Seek

Luggage/Roof Rack
Electric Glass Sunroof

Claim #:
Workfile ID:



Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

Line	Oper	Description	Qty	Extended Price \$	Labor	Paint
1		INFORMATION LABELS				
2	Repl	Emission label NAM built w/hybrid	1	4.02	0.2	
3	Repl	AC label NAM built w/hybrid	1	2.08	0.2	
4	Repl	Label battery location NI-MH	1	5.09	0.2	
5	* Repl	Ready Lamp Label	1	1.70	0.2	
6		FRONT BUMPER & GRILLE				
7	Repl	Bumper cover NAM built w/o park snsr	1	199.32	2.6	3.0
8		Add for Clear Coat				1.2
9		Add for fog lamps			0.3	
10	Repl	Prep unprimed bumper	1			0.7
11	Repl	LT Side retainer	1	63.33	Incl.	
12	Repl	Bumper guard NAM built LE, XLE	1	258.65	incl.	
13	Repl	LT Hole cover w/fog lamps w/o XSE	1	53.47	Incl.	
14		FRONT LAMPS				
15	Repl	LT Headlamp assy	1	1,134.68	0.5	
16		Aim headlamps			0.5	
17	R&I	RT R&I headlamp assy			0.3	
18	Repl	LT Fog lamp assy NAM built	1	210.61	0.2	
19		Aim fog lamps			0.3	
20	R&I	RT Fog lamp assy NAM built			0.2	
21		RADIATOR SUPPORT				
22	Repl	LT Support bracket	1	57.85 s	1.0	0.4
23	R&I	Sight shield w/hybrid			0.3	
24	Repl	Under cover	1	166.22	0.3	
25		HOOD				
26	Repl	Hood (ALU)	1	594.86	1.8	3.0
27		Add for Underside(Complete)				1.5
28	R&I	Insulator			Incl.	
29	Repl	RT Hinge assy NAM built	1	40.57	0.3	0.4
		NOTE: LABOR: Time is after hood and fender are removed.				
30	Repl	LT Hinge assy NAM built	1	40.57	0.3	0.4
		NOTE: LABOR: Time is after hood and fender are removed.				
31		FENDER				
32	R&I	RT R&I fender assy			1.4	
33	* Rpr	RT Fender (ALU)			0.5	2.0
		NOTE: Partial retinish with full clearcoat				
34		Overlap Major Adj. Panel				-0.4
35	# Refn	Partial Retiish Adjustment				-0.2
36	Repl	LT Fender (ALU)	1	308.30	2.0	2.0
37		Overlap Major Adj. Panel				-0.4
38		Add for Edging				0.5

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

39	Repl	LT Upper seal	1	52.72	Incl.	
40	R&I	RT Upper seal			Incl.	
41	Repl	LT Protector	1	58.79	Incl.	
42	R&I	RT Protector			Incl.	
43	R&I	RT Fender liner w/o Prime Plug-In			Incl.	
44	Repl	LT Fender liner w/o Prime Plug-In	1	129.38	Incl.	
45	Repl	LT Fender liner grommet	1	1.32		
46	Repl	LT Fender liner screw type 1	1	1.32		
47	Repl	LT Fender liner screw type 2	1	0.75		
48	Repl	LT Splash shield w/o Prime Plug-In	1	21.66	Incl.	
49	Repl	LT Splash shield screw NAM built	1	0.75		
50	Repl	LT Splash shield grommet	1	0.98		
51	R&I	RT Wheel opng mldg gray w/o Adventure, TRD			0.3	
NOTE: PARTS: Order by application. Part has components that cannot be reused/reinstalled; retainer clips and pads. LABOR: Time for R&I does not include removing or replacing double-sided tape.						
52	Repl	LT Wheel opng mldg gray w/o Adventure, TRD	1	85.28	Incl.	
NOTE: PARTS: Order by application. Part has components that cannot be reused/reinstalled; retainer clips and pads. LABOR: Time for R&I does not include removing or replacing double-sided tape.						
53	Repl	RT Wheel opng mldg retainer clip type 1	1	5.92		
54	Repl	RT Wheel opng mldg retainer clip type 2 NAM built	1	1.52		
55	Repl	RT Wheel opng mldg pad type 1, gray molding w/o Adventure, TRD	1	1.06		
56	Repl	RT Wheel opng mldg pad type 2, gray molding w/o Adventure, TRD	1	3.94		
57	#	Rpr Clean/Retape RT Wheel Opening Mldg			0.5	
58	Repl	RT Nameplate "HYBRID"	1	34.45	0.2	
59	Repl	LT Nameplate "HYBRID"	1	34.45	0.2	
60	R&I	RT Protector gray			Incl.	
61	Repl	LT Protector gray	1	108.38	Incl.	
62	Repl	LT Apron assy (HSS)	1	780.40 s	4.5	1.2
63	ELECTRICAL					
64	*	Rpr Battery		m	0.3	
NOTE: Disconnect battery for welding						
65	*	R&I RT Fuse & relay box w/hybrid			0.5	
66	ENGINE / TRANSAXLE					
67	R&I	Air cleaner assy		m	0.4	
68	WINDSHIELD					
69	R&I	Windshield Toyota, w/o de-icer, w/hybrid			3.1	
NOTE: Part has related components that cannot be reused/reinstalled; reveal molding, stopper. LABOR: Time includes R&R windshield and reveal molding.						
70	Repl	Windshield stopper #1	1	2.82		
71	Repl	Windshield stopper #2	1	2.87		
72	Repl	Reveal molding upper	1	144.49	Incl.	
73	Repl	Reveal molding lower	1	67.12	Incl.	
74	COWL					

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

75	R&I	Cowl grille				0.6	
76	Repl	RT Side seal NAM built	1	29.36	Incl.		
77	Repl	LT Side seal NAM built	1	30.31	Incl.		
78	INSTRUMENT PANEL						
79	R&I	R&I instrument panel				6.1	
		NOTE: PARTS: Vin required for ordering. LABOR: Time is after console assembly is removed.					
80	CONSOLE						
81	R&I	R&I console assy				1.2	
82	ROOF						
83	Blnd	LT Roof rail					1.0
84	R&I	LT Drip molding				0.3	
85	R&I	LT Luggage rack				0.4	
		NOTE: LABOR: Time is after headliner is removed.					
86	R&I	R&I headliner				4.2	
87	PILLARS, ROCKER & FLOOR						
88	Sect	LT Hinge pillar (HSS) cut below window opng	1	282.07	7.0		1.6
89		Overlap Major Non-Adj. Panel					-0.2
90	Repl	LT Rocker molding	1	285.83	0.7		
91	R&I	LT Wndshld plr trim w/o speaker			Incl.		
92	R&I	LT Cowl trim			Incl.		
93	R&I	LT Surround w'strip front door			0.4		
94	R&I	LT Front sill plate			Incl.		
95	FRONT DOOR						
96	Repl	LT Door shell (HSS)	1	821.66	4.8		3.1
97		Overlap Major Adj. Panel					-0.4
98	Repl	LT Black out tape front	1	7.01	0.1		
99	Repl	LT Black out tape center	1	30.71	0.2		
100	Repl	LT Black out tape rear	1	16.75	0.2		
101	R&I	LT Reveal molding			0.3		
102	Repl	LT Reveal molding rivet	7	5.60			
103	Repl	LT Belt molding	1	73.38	Incl.		
		NOTE: LABOR: Time is after door glass and mirror assembly are removed.					
104	Repl	LT Applique	1	36.66	Incl.		
		NOTE: PARTS: Part cannot be reused/reinstalled. LABOR: Time is after belt molding and run channel are removed.					
105	Repl	LT Applique fastener	2	2.42			
106	Repl	LT Lower molding w/o body stripe	1	190.18	0.3		
107	Repl	LT Mirror assy w/heat, w/o puddle lamp, w/o pano view dark blue	1	387.75	Incl.		0.6
108		Overlap Minor Panel					-0.2
109		Dis/reassmble to refn			0.6		
110	Repl	LT Door glass Toyota, NAM built	1	229.91	Incl.		
111	R&I	LT Run channel NAM built			Incl.		
112	R&I	LT Window regulator NAM built			Incl.		
113	R&I	LT Fixed glass Toyota all			Incl.		

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

114	Repl	LT Handle, outside NAM built, w/smart entry, w/o chrome dark blue	1	224.37	Incl.	0.5
115		Overlap Minor Panel				-0.2
116	Repl	LT Handle, outside pad NAM built	1	10.43		
117	Repl	LT Cover pad NAM built	1	10.43		
118	Repl	LT Upper hinge	1	53.84	0.3	0.3
119	Repl	LT Lower hinge	1	61.43	0.3	0.3
120	R&I	LT Door check NAM built			Incl.	
121	R&I	LT R&I trim panel			Incl.	
122	REAR DOOR					
123	Repl	LT Door shell (HSS)	1	744.45	4.8	3.1
124		Overlap Major Adj. Panel				-0.4
125		Clear Coat				2.5
126	Repl	LT Black out tape front	1	16.75		
127	Repl	LT Black out tape center	1	19.48		
128	Repl	LT Black out tape rear	1	13.96		
129	R&I	LT Reveal molding			0.3	
130	R&I	LT Rear molding			0.2	
131	Repl	LT Reveal molding rivet	4	3.20		
132	Repl	LT Rear molding rivet	3	2.40		
133	R&I	LT Belt molding			Incl.	
134	Repl	LT Applique	1	36.66	Incl.	
		NOTE: PARTS: Part cannot be reused/reinstalled. LABOR: Time is after belt molding and run channel are removed.				
135	Repl	LT Applique fastener	2	2.42		
136	Repl	LT Lower molding w/o body stripe	1	117.17	0.3	
137	Repl	LT Wheel opng mldg black	1	82.23	0.3	
138	Repl	Nameplate "AWD"	1	30.00	0.2	
139	R&I	LT Moveable glass Toyota			Incl.	
140	R&I	LT Run channel NAM built			Incl.	
141	R&I	LT Division bar			Incl.	
142	R&I	LT Window regulator NAM built			Incl.	
143	R&I	LT Fixed glass Toyota			Incl.	
144	R&I	LT Handle, outside NAM built, w/o smart entry, w/o chrome cyan			Incl.	
145	R&I	LT R&I trim panel			Incl.	
146	QUARTER PANEL					
147	Blnd	LT Quarter panel NAM built				1.2
148	R&I	Fuel door			0.3	
149	Blnd	Fuel door				0.2
150	R&I	LT Wheelhouse liner			0.3	
151	R&I	LT Inner molding			0.4	
152	R&I	LT Wheel opng mldg gray w/o Adventure, TRD			0.4	
		NOTE: PARTS: Part has related components that cannot be reused/reinstalled: clip				
153	Repl	LT Wheel opng mldg clip	7	9.66		

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

154		Repl	LT Upper molding NAM built black	1	36.63	0.2
			NOTE: PARTS: Part cannot be reused/reinstalled.			
155	*	Rpr	LT Quarter glass Toyota			<u>0.3</u>
			NOTE: Back Tape Glass			
156	REAR LAMPS					
157		R&I	LT Tail lamp			0.3
158	REAR BUMPER					
159		R&I	LT Side panel w/o Adventure, TRD Off-Road			0.3
			NOTE: LABOR: Time is after bumper cover is removed. Time included with bumper cover R&R and overhaul.			
160		R&I	R&I bumper cover			1.0
161	VEHICLE DIAGNOSTICS					
162	*		Pre-repair scan	1	<u>85.00</u> m	
163	*		Post-repair scan	1	<u>85.00</u> m	
164	#	Subl	Millimeter Wave Recalibration	1	357.00	
165	MISCELLANEOUS OPERATIONS					
166	**	Repl	A/M Flex Additive	1	5.00 T	
167	**	Repl	A/M Glass Installation Kit	1	25.00 T	
168	**	Repl	A/M Pinstripes- Tape	1	15.00 T	0.5
169	**	Repl	A/M Weld Thru Primer	1	5.00 T	0.2
170	**	Repl	A/M Restore Corrosion Protection	1	5.00 T	0.2
171	**	Repl	A/M Car cover	1	5.00 T	0.2
172	**	Repl	A/M Seam Sealer/Caulking	1	30.00 T	<u>Incl.</u>
173	#	Subl	Four Wheel Alignment	1	79.95	
174	#	Rpr	Welder Deconstruct Test			1.5
175	#	Subl	Window Tint	1	50.00	
			NOTE: LT Frt Glass			
SUBTOTALS					9,333.75	63.8
						28.3

Estimate of Record

2021 TOYO RAV4 Hybrid XLE Premium AWD 4D UTV 4-2.5L Hybrid Port/Direct Injection Blue

ESTIMATE TOTALS

Category	Basis		Rate	Cost \$
Parts				9,243.75
Body Labor	63.8 hrs	@	\$ 44.00 /hr	2,807.20
Paint Labor	28.3 hrs	@	\$ 44.00 /hr	1,245.20
Paint Supplies	29.3 hrs	@	\$ 26.00 /hr	761.80
Miscellaneous				90.00
Subtotal				14,147.95
Sales Tax	Tier 1	\$ 5,000.01	@ 7.0000 %	350.00
Sales Tax	Tier 2	\$ 9,147.94	@ 6.0000 %	548.88
Total Cost of Repairs				15,046.83
Deductible				500.00
Total Adjustments				500.00
Net Cost of Repairs				14,546.83

All supplements must be pre-approved by Travelers.

Supplement repair charges may be subject to rejection unless approved by Travelers prior to repairs.

This instrument is a damage estimate only and not an acceptance of liability or authorization to repair.

Repair must be pre-authorized by the vehicle owner.

Vehicle owner maintains the right to repair vehicle at a repair facility of their choice.

Please present this estimate to the repair facility prior to repairs.

Necessary Information for Photograph and Video Estimates (READ CAREFULLY):

This estimate may have been completed based wholly or in part using photographs and/or video. Because of the use of photographs and video, this estimate may not be complete, as there could be hidden damage. You should provide this estimate to the shop of your choice prior to commencement of work. If your shop finds additional damages or undiscovered damages, Travelers will work with your repairer to assess the appropriate scope of work. Your shop is instructed in this estimate to contact Travelers through its supplement process and the damages they discover must be reviewed and approved prior to repairing the vehicle. In the event that you are not repairing your vehicle and believe that our estimate does not account for all of your damages, please contact your Claim professional to discuss and address your concerns and options.

#3



08/18/2021

[REDACTED]
Parrish, FL. [REDACTED]

Re: 2021 Toyota Rav4 (HV) vin: 4T3B6RFV3MU [REDACTED]

Dear Mr. [REDACTED]

Enclosed is the flash drive containing the Event Data Recorder (EDR) results for your Toyota vehicle.

Toyota will contact you directly regarding your vehicle inspection results. If you have any further questions, please contact Toyota at 800-331-4331.

Sincerely,

Don Heirholzer
EAA Field Coordinator

IMPORTANT NOTICE: Robert Bosch LLC and the manufacturers whose vehicles are accessible using the CDR System urge end users to use the latest production release of the Crash Data Retrieval system software when viewing, printing or exporting any retrieved data from within the CDR program. Using the latest version of the CDR software is the best way to ensure that retrieved data has been translated using the most current information provided by the manufacturers of the vehicles supported by this product.

CDR File Information

User Entered VIN/Frame Number	4T3B6RFV3MU
User	EAA Don Heirholzer
Case Number	
EDR Data Imaging Date	08/18/2021
Crash Date	
Filename	4T3B6RFV3MU ACM.CDRX
Saved on	Wednesday, August 18 2021 at 09:10:54
Imaged with CDR version	Crash Data Retrieval Tool 21.2
Imaged with Software Licensed to (Company Name)	Engineering Analysis Associates
Reported with CDR version	Crash Data Retrieval Tool 21.2
Reported with Software Licensed to (Company Name)	Engineering Analysis Associates
EDR Device Type	Airbag Control Module
Event(s) recovered	Side Events (1), Rollover Events (1)

Comments

No comments entered

Data Limitations

CDR Record Information:

- Due to limitations of the data recorded by the airbag ECU, such as the resolution, data range, sampling interval, time period of the recording, and the items recorded, the information provided by this data may not be sufficient to capture the entire crash.
- Pre-Crash data is recorded in discrete intervals. Due to different refresh rates within the vehicle's electronics, the data recorded may not be synchronous to each other.
- Airbag ECU data should be used in conjunction with other physical evidence obtained from the vehicle and the surrounding circumstances.
- If any of the front passenger seat airbags, side airbags, or Curtain Shield Airbags have deployed, data will not be overwritten or deleted by the airbag ECU following that event. If none of the airbags have deployed, the data of that event may be overwritten by a following event even if other airbags (pretensioner, rear seat airbag, etc.) have deployed.
- If power supply to the airbag ECU is lost during an event, all or part of the data may not be recorded.
- "Diagnostic Trouble Codes" are information about faults when a recording trigger is established. Various diagnostic trouble codes could be set and recorded due to component or system damage during an accident.
- The airbag ECU records only diagnostic information related to the airbag system. It does not record diagnostic information related to other vehicle systems.
- The TaSCAN, Global Tech Stream, or Intelligent Tester II devices (or any other Toyota genuine diagnostic tool) can be used to obtain detailed information on the diagnostic trouble codes from the airbag system, as well as diagnostic information from other systems. However, in some cases, the diagnostic trouble codes of the airbag system recorded by the airbag ECU when the event occurred may not match the diagnostic trouble codes read out when the diagnostic tool is used.

General Information:

- The data recording specifications of Toyota's airbag ECUs are divided into the following categories. The specifications for 12EDR or later are designed to be compatible with NHTSA's 49CFR Part 563 rule.
- 00EDR / 02EDR / 04EDR / 06EDR / 10EDR / 12EDR / 13EDR / 15EDR / 17EDR / 19EDR
- The airbag ECU records data for all or some of the following accident types: frontal crash, rear crash, side crash, and rollover events. Depending on the installed airbag ECU, data for side crash and/or rollover events may not be recorded.
- The airbag ECU has the following recording pages (memory maps) for each accident type to store event data: four pages for frontal/rear/side crash, four pages for a side crash, and two pages for rollover event.
- When a crash impact for a lateral direction is occurred, data may be recorded in a page for frontal/rear/side crash. And additional data may be recorded in a page for side crash.
- The data recorded by the airbag ECU includes correlating information between each previously occurring event (i.e., information that clarifies the collision event sequence. This correlation information consists of the following items.
- Time from Previous TRG
- TRG Count
- Previous Crash Type
- In frontal/rear/side crash events, earlier point in the following is regarded as time zero for the recorded data.
- the first point where a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached
- the first point where a lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached
In side crash event and rollover event, the point in time at which the recording trigger is established is regarded as time zero for the recorded data.
- The recording trigger judgment threshold value differs depending on the collision type (i.e., frontal crash, rear crash, side crash, or rollover event).
- Some of the data recorded by the airbag ECU is transmitted to the airbag ECU from various vehicle control modules by the vehicle's Controller.

Area Network (CAN).

- In some cases, the airbag ECU part number printed on the ECU label may not match the airbag ECU part number that the CDR tool reports. The part number retrieved by the CDR tool should be considered as the official ECU part number.
- In frontal/rear/side collision events, the record time varies depending on the period during which a longitudinal and lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached, and time series data is recorded for up to 250 ms. The record time described above is indicated as "Length of Delta-V". "Delta-V, Longitudinal" outside the record time is indicated by area shaded in the table, and not indicated in the graph.

Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report.

Data Element Name	Positive Sign Notation Indicates
Maximum Delta-V, Longitudinal	Forward
Delta-V, Longitudinal	Forward
Delta-V, Lateral	Left to Right
Lateral Acceleration, Side Satellite Sensor 1	Left to Right
Lateral Acceleration, Side Satellite Sensor 2	Left to Right
Lateral Acceleration, Side Satellite Sensor 3	Left to Right
Lateral Acceleration, Side Satellite Sensor 4	Left to Right
Rate of Change of Pressure, Side Satellite Sensor 1	The pressure of a door interior is applied
Rate of Change of Pressure, Side Satellite Sensor 2	The pressure of a door interior is applied
Rate of Change of Pressure, Side Satellite Sensor 3	The pressure of a door interior is applied
Rate of Change of Pressure, Side Satellite Sensor 4	The pressure of a door interior is applied
Lateral Acceleration for Side Crash, Floor Sensor	Left to Right
Roll Angle Peak	Clockwise Rotation
Roll Angle at the Time of TRG	Clockwise Rotation
Roll Rate	Clockwise Rotation
Lateral Acceleration for Rollover, Floor Sensor	Left to Right
Longitudinal Acceleration, VSC Sensor	Forward
Yaw Rate	Left Turn
Steering Input	Left Turn

Data Definitions:

- After "Freeze Signal" has been turned ON, subsequent events will not be recorded in the recording page.
- "Recording Status" indicates a state in which all recorded event data has been written into the non-volatile memory, or a state in which this process was interrupted and not fully written into the non-volatile memory. If "Recording Status" is "Incomplete", recorded event data may not be valid.
- "Engine RPM" indicates the number of engine revolutions, not the number of motor revolutions. The recorded value has an upper limit of 12,800 rpm. Resolution is 100 rpm and the value is rounded down and recorded. For example, if the actual engine speed is 799 rpm, the recorded value will be 700 rpm.
- If the electric vehicle is using a calculated/virtual engine RPM for drivetrain control, "Engine RPM" may be recorded, but should not be used during data analysis.
- The upper limit for the recorded "Vehicle Speed" value is 200 km/h (125mph). Resolution is 1km/h (0.6mph) and the value is rounded down and recorded. The accuracy of the "Vehicle Speed" value can be affected by various factors. These include, but not limited, to the following:
 - Significant changes in the tire's rolling radius
 - Wheel lock and wheel slip
- "Accelerator Pedal" value is recorded as a percentage. The percentage increases as the driver depresses the accelerator.
- If M/T transmission vehicle of some limited model, "Shift Position" may display "Drive" regardless of the actual shift position.
- Depending on the type of occupant sensor installed in the vehicle, one of the following three recording formats for "Occupant Size Classification, Front Passenger" will be utilized:
 - Occupied / Not Occupied
 - AM50 / AF05 / Child / Not Occupied
 - AM50 / AF05 / Child or Not Occupied
- "Cruise Control Status" indicates whether the cruise control system is actuated or not. OFF indicates that the cruise control system is not actuated, but can also indicate that the vehicle is not equipped with the system.
- "Air Bag Warning Lamp, On/Off", "Ignition Cycle, Crash", "Seat Track Position Switch, Foremost, Status, Driver", "Occupant Size Classification, Front Passenger", "Safety Belt Status, Driver", "Safety Belt Status, Front Passenger", "Frontal Air Bag Suppression Switch Status, Front Passenger", and "RSCA Disable Switch" indicate the state approximately 1 second before time zero. They may not always indicate the state at the moment of collision.
- The upper and lower limits for the recorded value of "Motor RPM" is 17,500 rpm and -7,500 rpm respectively. Resolution is 100 rpm and the value is rounded down and recorded.
- "Brake Oil Pressure" has an upper limit of 12.14 Mpa. In the case of the vehicle that has not VSC system, "0 Mpa" or "Invalid" may be displayed.
- "Longitudinal Acceleration, VSC Sensor" has upper and lower limits for the recorded value of 8.973 m/s² and -8.973 m/s² respectively. This acceleration sensor does not sense collisions.
- "Sequential Shift Range" displaying "Undetermined" indicates the shift range is undetermined or was not being used.
- Some vehicles will not be equipped with all "Drive Mode" types indicated in the "Drive Mode" table. If some or all drive modes are not applicable to vehicle, "OFF" or "Invalid" may be displayed. The item in the "Drive Mode" table may not match the name of switch or indicator that equipped the vehicle.
- The upper and lower limits for the recorded value of "Steering Input" is 375 deg and -375 deg respectively. Resolution is 1.5 deg and the value is rounded down and recorded.
- Resolution of the "Air Bag Warning Lamp ON Time Since DTC was Set" is 15 minutes, and the value is rounded down and recorded.
- "Delta-V, Longitudinal" indicates the change in forward speed after time zero. This does not refer to vehicle speed, and it does not include the change in speed during the period from the start of the actual collision to establishment of the time zero.
- "Location of Side Satellite Sensor" shows the outline of a typical sensor position. Sensory location can be confirmed using the repair manual.

- "TRG Count" indicates a calculated value of the number of times recording triggers have been established for all crash types. The sequence in which each event occurred can be verified from the "TRG Count". The smaller the "TRG Count" value, the older the data. The upper limit for the recorded value is 65,533 times. When more than one event reaches the upper limit, the actual "TRG Count" may be greater than what is displayed for that event.
- Resolution of the "Time from Pre-Crash to TRG" is 50 [ms], and the value is rounded up and recorded.
- "Time from Previous TRG" indicates the time between the establishment of a most recent event's recording trigger to the establishment of a latest event's recording trigger. The upper limit for the recorded value is 32,767 milliseconds. In the event of establishment of the first recording trigger after the ignition is switched ON, the upper limit value(max value) is recorded.
- "Roll Angle at the Time of TRG" and "Roll Angle Peak" do not represent the actual roll angle of the vehicle. These values are used internally by the airbag ECU for sensing a rollover.
- Depending on the type of satellite sensor installed in the vehicle, "Lateral Acceleration" or "Rate of Change of Pressure" is displayed as Side satellite sensor. "Rate of Change of Pressure" indicates that of a door interior. 0% is displayed when the pressure of a door interior is equal with the outside air pressure.
- Depending on the type of satellite sensor installed in the vehicle, "Clipping Time, Lateral Acceleration" or "Clipping Time, Rate of Change of Pressure" is displayed.
- "VSC Control Status" displaying "OFF+ (disable)" indicates VSC is disable (a part of the behavior stabilization control is operated).
- "Trip count" indicates the number of ignition power applying to a vehicle. The upper limit for the recorded value is 65534 times. When trip count reaches the upper limit value, trip count is reset at the next counting up.
- "Time count input system" indicates a count method of "Time count" and "Trip count".
 - Normal: Airbag ECU correct the count value with vehicle common value and count it up.
 - IG: ECU uniquely counts up regardless of vehicle common value. (In case of IG system ECU.)
 - ACC: ECU uniquely counts up regardless of vehicle common value. (In case of ACC system ECU.)
 - +B: ECU uniquely counts up regardless of vehicle common value. (In case of +B system ECU.)
- "Time count" indicates time from ignition power applying. The upper limit for the recorded value is 1,677,721,400ms. The resolution is 100ms and the value is rounded down and recorded.

05017_ToyotaS00std_r028

System Status at Retrieval

ECU Part Number	89170-0R360
EDR Generation	17EDR
Complete File Recorded	Yes
Ignition Cycle Download (times)	347
Multi-Event, Number of Events (times)	N/A
Time from Event 1 to 2 (sec)	N/A
Diagnostic Trouble Codes Exist	No
Location of Side Satellite Sensor 1, L	front door
Location of Side Satellite Sensor 2, L	B-Pillar
Location of Side Satellite Sensor 3, L	Not Equipped
Location of Side Satellite Sensor 4, L	Not Equipped
Location of Side Satellite Sensor 1, R	front door
Location of Side Satellite Sensor 2, R	B-Pillar
Location of Side Satellite Sensor 3, R	Not Equipped
Location of Side Satellite Sensor 4, R	Not Equipped
Location of Floor Sensor	Airbag ECU

Event Record Summary at Retrieval

Events Recorded	TRG Count	Crash Type	Time (msec)	Pre-Crash Recording Status	Diagnostic Data Recording Status	Occupant Data Recording Status	Crash Info Recording Status	Time Series Recording Status
Most Recent Event	2	Rollover	0	Complete	Complete	Complete	Complete	Complete
1st Prior Event	1	Side Crash	N/A	N/A	Complete	N/A	N/A	Complete

System Status at Event (Most Recent Event, TRG 2)

TRG Count (times)	2
Event Type	Rollover
Previous Crash Type	Side Crash
Time from Previous TRG (msec)	182.5
Freeze Signal	OFF
Freeze Signal Factor	None
Recording Status, Rollover Crash Info	Complete
Odometer signal (miles [km])	1.114 [1.793]
Trip count (times)	359
Time count (msec)	2,753,000
Time count input system	Normal

Deployment Command Data (Most Recent Event, TRG 2)

Pretensioner Deployment, Time to Fire, 1st Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 1st Seat, Passenger (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Passenger (msec)	No
Side Curtain Airbag Deployment, Time to Deploy, Driver (msec)	No
Side Curtain Airbag Deployment, Time to Deploy, Passenger (msec)	No

DTCs Present at Time of Event (Most Recent Event, TRG 2)

Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

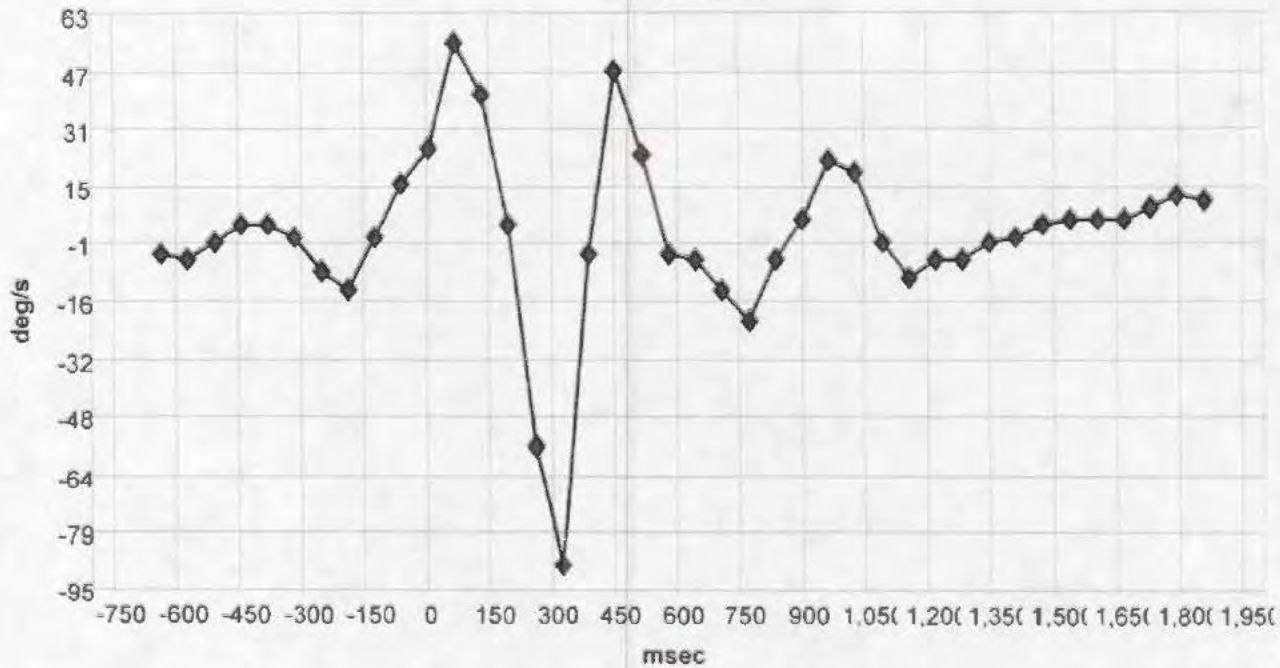
Pre-Crash Data, 1 Sample (Most Recent Event, TRG 2)

Recording Status, Occupant	Complete
Recording Status, Pre-Crash	Complete
Time from Pre-Crash to TRG (msec)	300
Safety Belt Status, Driver	ON
Safety Belt Status, Front Passenger	ON
Occupant Size Classification, Front Passenger	AM50 (Not Child)
Frontal Airbag Suppression Switch Status, Front Passenger	SNA
RSCA Disable Switch	SNA
Seat Track Position Switch, Foremost, Status, Driver	No
Airbag Warning Lamp, On/Off	OFF
Ignition Cycle, Crash (times)	335

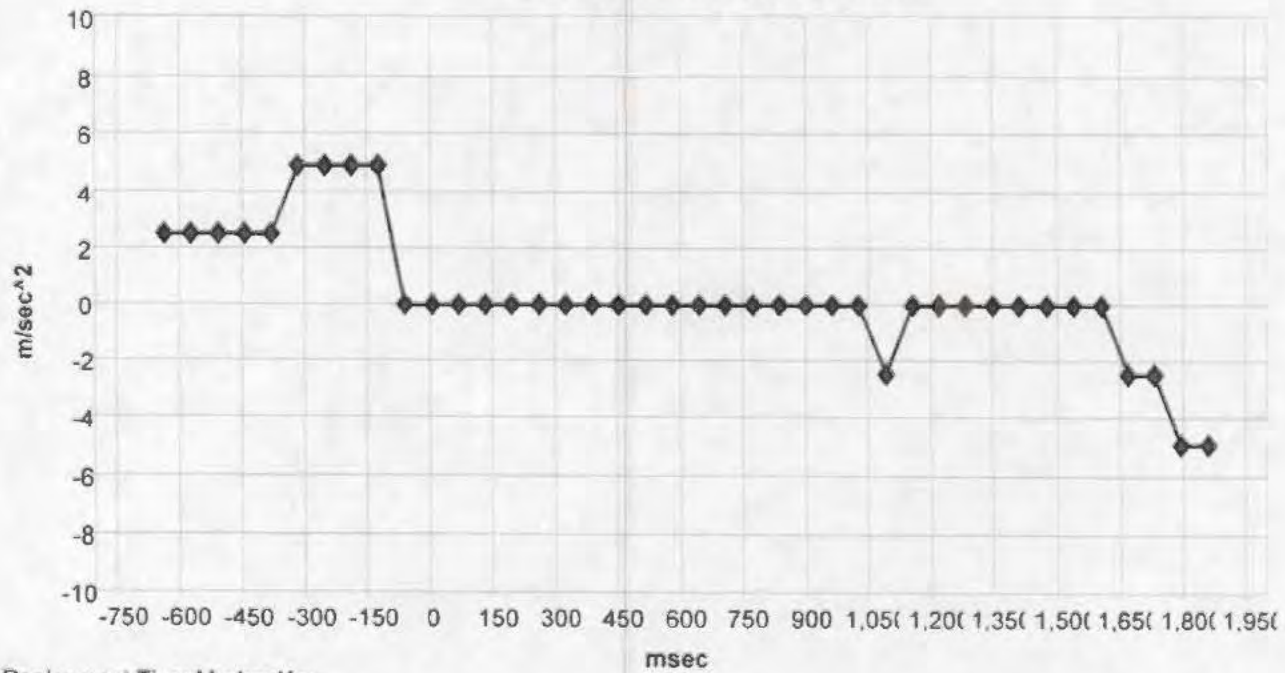
Rollover Crash Pulse (Most Recent Event, TRG 2)

Recording Status, Time Series Data	Complete
Time from TRG to Next Sample (msec)	4
Roll Angle Peak (degrees)	7.2
Roll Angle at the Time of TRG (degrees)	0.5

Roll Rate



Lateral Acceleration for Rollover



Deployment Time Marker Key

1	Driver CSA
2	Passenger CSA
3	Driver Pretensioner Deployment
4	Passenger Pretensioner Deployment

Rollover Crash Pulse (Most Recent Event, TRG 2)

Time (msec)	Roll Rate (deg/s)	Lateral Acceleration for Rollover (m/s ²)
-636	-3.3	2.5
-572	-4.9	2.5
-508	0.0	2.5
-444	4.9	2.5
-380	4.9	2.5
-316	1.6	4.9
-252	-8.1	4.9
-188	-13.0	4.9
-124	1.6	4.9
-60	16.3	0.0
4	26.1	0.0
68	55.4	0.0
132	40.7	0.0
196	4.9	0.0
260	-55.4	0.0
324	-88.0	0.0
388	-3.3	0.0
452	47.2	0.0
516	24.4	0.0
580	-3.3	0.0
644	-4.9	0.0
708	-13.0	0.0
772	-21.2	0.0
836	-4.9	0.0
900	6.5	0.0
964	22.8	0.0
1028	19.5	0.0
1092	0.0	-2.5
1156	-9.8	0.0
1220	-4.9	0.0
1284	-4.9	0.0
1348	0.0	0.0
1412	1.6	0.0
1476	4.9	0.0
1540	6.5	0.0
1604	6.5	0.0
1668	6.5	-2.5
1732	9.8	-2.5
1796	13.0	-4.9
1860	11.4	-4.9

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 2) - Table 1 of 4

Time (sec)	Vehicle Speed (MPH [km/h])	Accelerator Pedal, % Full (%)	Percentage of Engine Throttle (%)	Fuel Injection Quantity (mm ³ /st)	Engine RPM (RPM)	Motor RPM (RPM)	Service Brake, ON/OFF
-4.80	57.2 [92]	0.0	Invalid	Invalid	0	8,400	OFF
-4.30	57.2 [92]	0.0	Invalid	Invalid	0	8,300	OFF
-3.80	56.5 [91]	0.0	Invalid	Invalid	0	8,200	OFF
-3.30	55.9 [90]	0.0	Invalid	Invalid	0	8,200	OFF
-2.80	54.7 [88]	0.0	Invalid	Invalid	0	8,000	OFF
-2.30	54.1 [87]	0.0	Invalid	Invalid	0	7,900	OFF
-1.80	53.4 [86]	0.0	Invalid	Invalid	0	7,800	OFF
-1.30	52.2 [84]	0.0	Invalid	Invalid	0	7,600	OFF
-0.80	51.6 [83]	0.0	Invalid	Invalid	0	7,500	OFF
-0.30	47.2 [76]	0.0	Invalid	Invalid	0	6,900	OFF
TRG(0)	42.9 [69]	0.0	Invalid	Invalid	0	6,000	OFF

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 2) - Table 2 of 4

Time (sec)	ABS Control Status	BOS Control Status	Brake Oil Pressure (Mpa)	Longitudinal Acceleration, VSC Sensor (m/s ²)	Yaw Rate (deg/s)	Steering Input (degrees)	Shift Position
-4.80	OFF	OFF	0.00	-0.431	0.98	3.0	D
-4.30	OFF	OFF	0.00	-0.502	0.49	4.5	D
-3.80	OFF	OFF	0.00	-0.287	0.00	7.5	D
-3.30	OFF	OFF	0.00	-0.502	1.95	15.0	D
-2.80	OFF	OFF	0.00	-0.861	4.39	9.0	D
-2.30	OFF	OFF	0.00	-0.646	-9.76	-36.0	D
-1.80	OFF	OFF	0.00	-1.005	-7.81	13.5	D
-1.30	OFF	OFF	0.00	-1.077	5.37	0.0	D
-0.80	OFF	OFF	0.00	-1.148	-14.64	-81.0	D
-0.30	OFF	OFF	0.00	-2.441	-24.89	-153.0	D
TRG(0)	OFF	OFF	0.00	-8.973	10.25	-75.0	D

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 2) - Table 3 of 4

Time (sec)	Sequential Shift Range	Cruise Control Status	VSC Control Status	READY Signal	Drive Mode, Power Train	Drive Mode, Snow	Drive Mode, EV
-4.80	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-4.30	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-3.80	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-3.30	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-2.80	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-2.30	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-1.80	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-1.30	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-0.80	Undetermined	OFF	ON (enable)	ON	Normal	OFF	OFF
-0.30	Undetermined	OFF	Engaged	ON	Normal	OFF	OFF
TRG(0)	Undetermined	OFF	Engaged	ON	Normal	OFF	OFF

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 2) - Table 4 of 4

Time (sec)	Drive mode select signal
-4.80	Normal
-4.30	Normal
-3.80	Normal
-3.30	Normal
-2.80	Normal
-2.30	Normal
-1.80	Normal
-1.30	Normal
-0.80	Normal
-0.30	Normal
TRG(0)	Normal

System Status at Event (1st Prior Event, TRG 1)

TRG Count (times)	1
Event Type	Side Crash
Previous Crash Type	No Event
Time from Previous TRG (msec)	32767 or greater
Freeze Signal	OFF
Freeze Signal Factor	None
Odometer signal (miles [km])	1,114 [1,793]
Trip count (times)	359
Time count (msec)	2,752,900
Time count input system	Normal

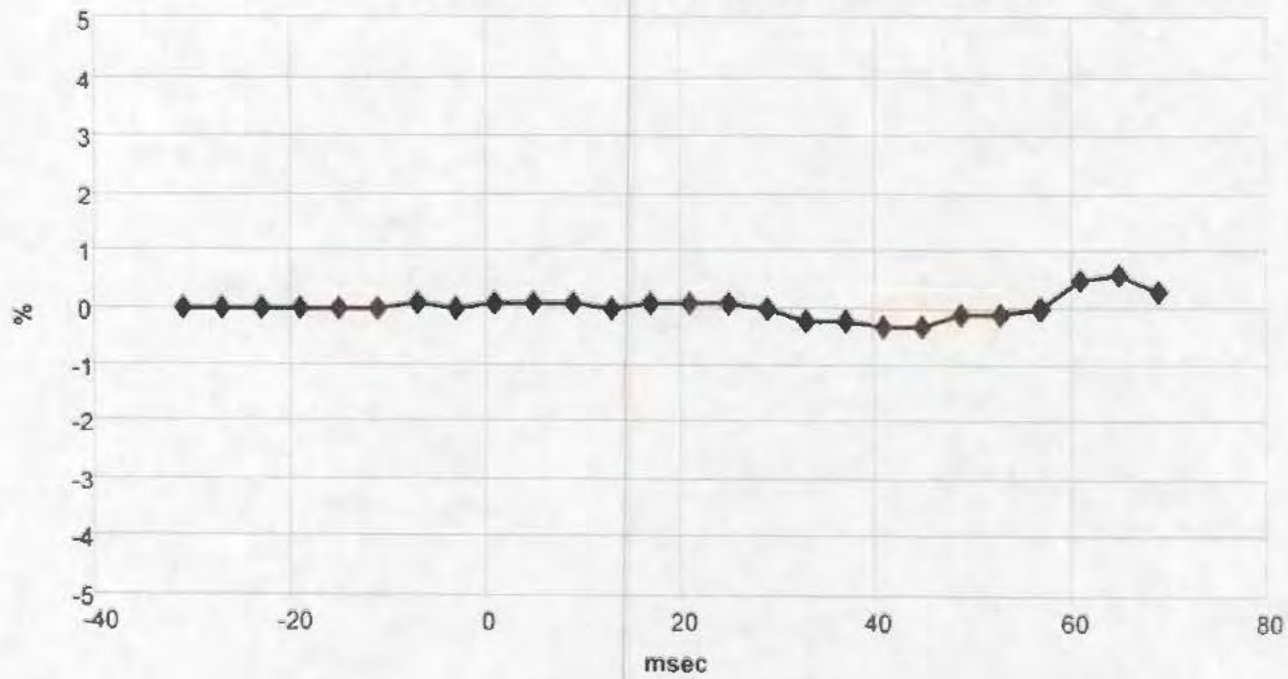
DTCs Present at Time of Event (1st Prior Event, TRG 1)

Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

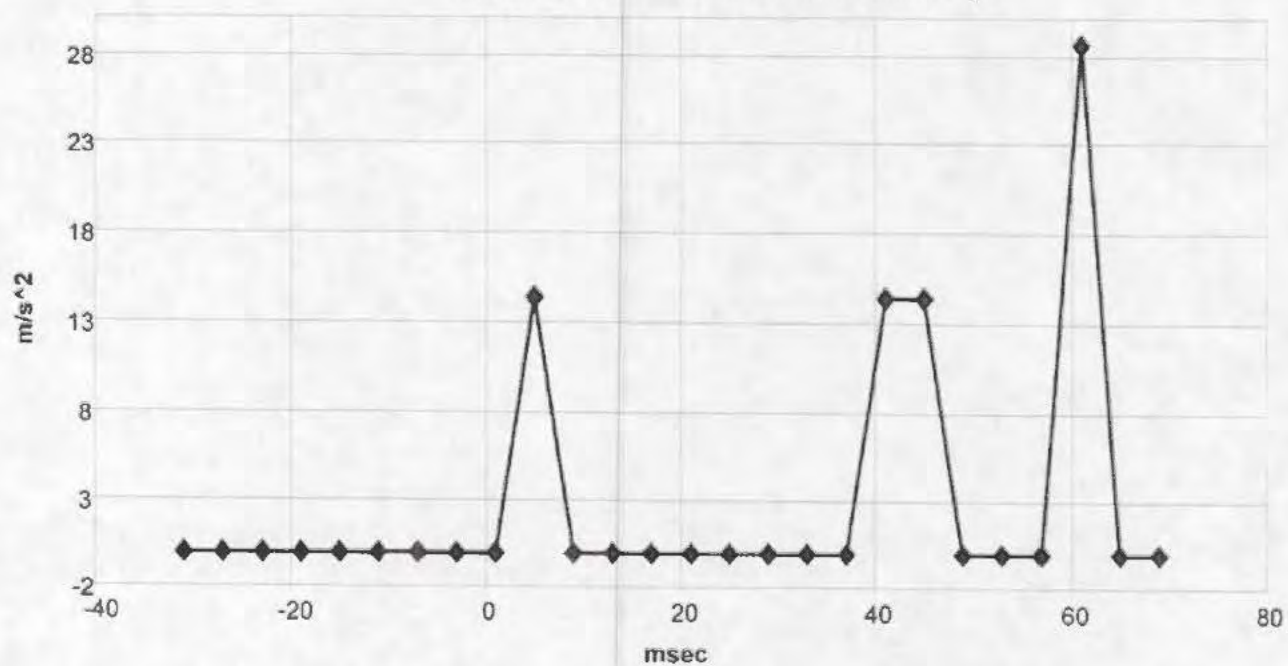
Lateral Crash Pulse (1st Prior Event, TRG 1)

Recording Status, Time Series Data	Complete
Time from TRG to Next Sample (msec)	1
Clipping Time, Rate of Change of Pressure, Side Satellite Sensor 1, L (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 2, L (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 3, L (msec)	SNA
Clipping Time, Lateral Acceleration, Side Satellite Sensor 4, L (msec)	SNA
Clipping Time, Rate of Change of Pressure, Side Satellite Sensor 1, R (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 2, R (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 3, R (msec)	SNA
Clipping Time, Lateral Acceleration, Side Satellite Sensor 4, R (msec)	SNA
Clipping Time, Lateral Acceleration, Floor Sensor (msec)	No

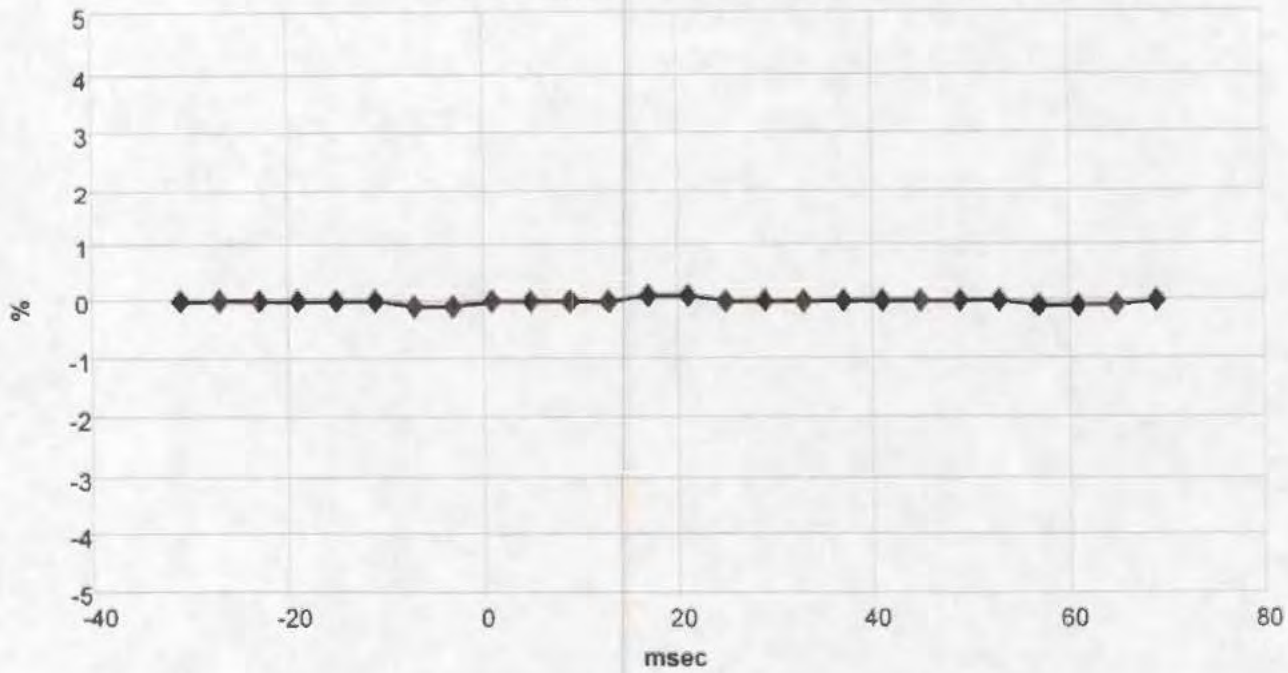
Rate of Change of Pressure, Side Satellite Sensor 1, L



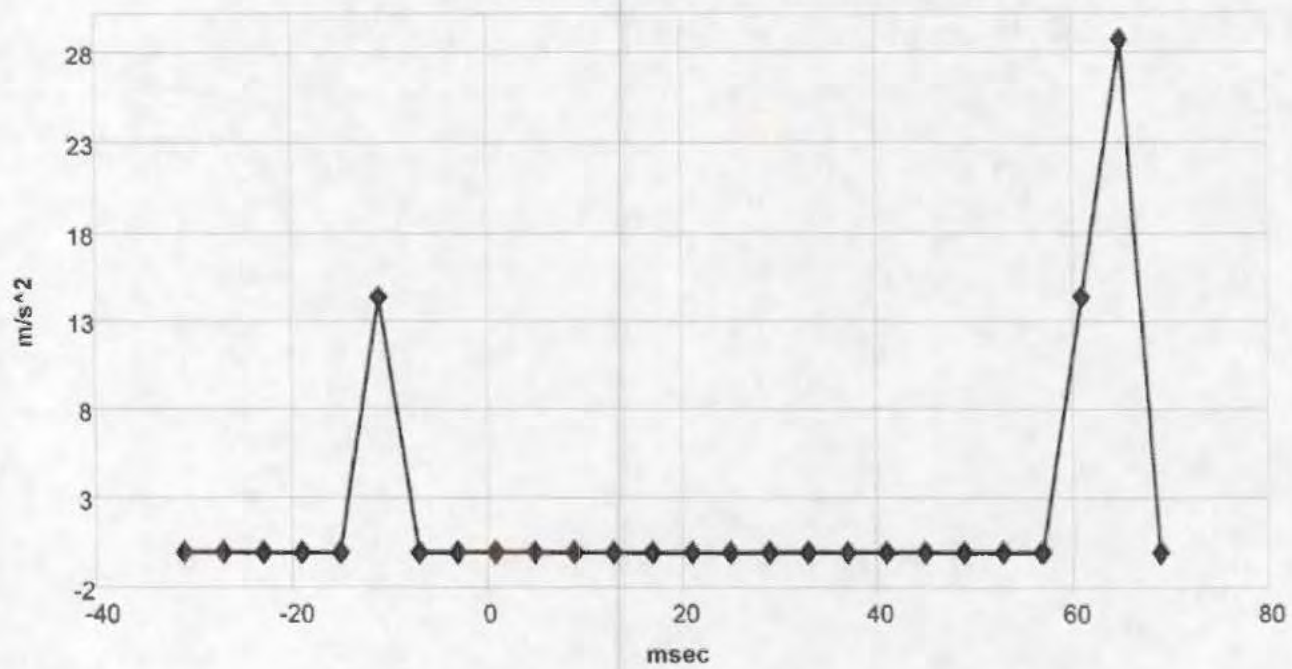
Lateral Acceleration, Side Satellite Sensor 2, L



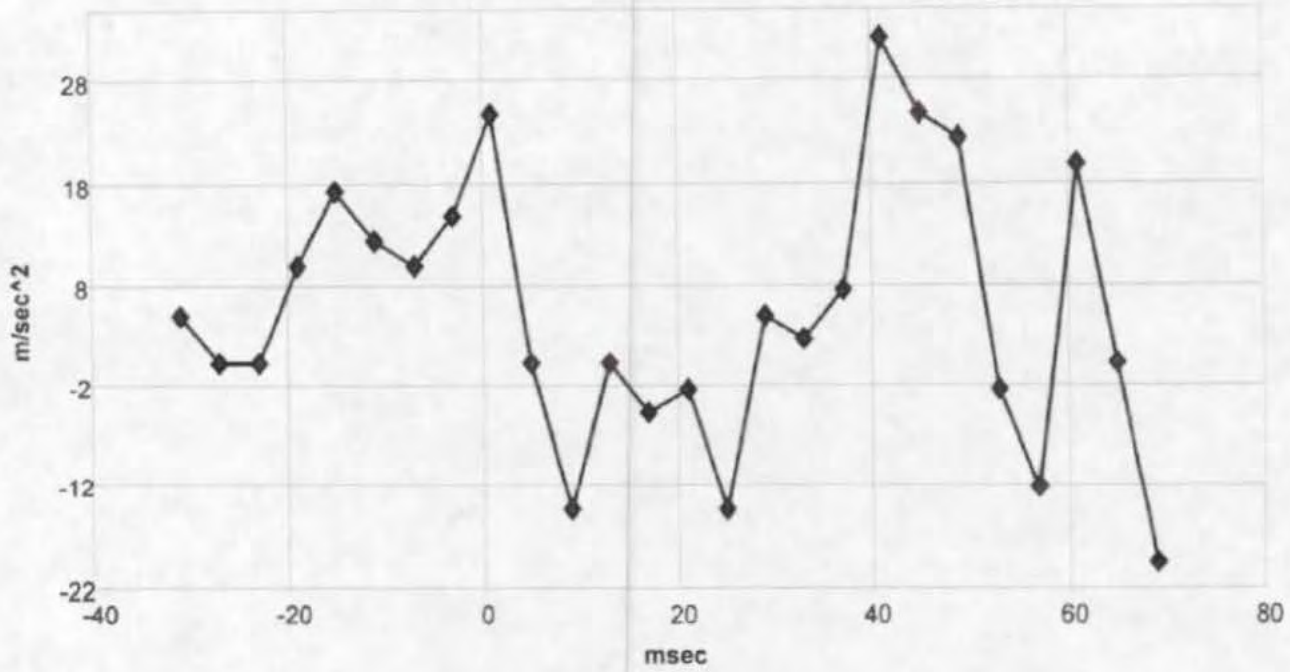
Rate of Change of Pressure, Side Satellite Sensor 1, R



Lateral Acceleration, Side Satellite Sensor 2, R



Lateral Acceleration for Side Crash Addition, Floor Sensor



Lateral Crash Pulse (1st Prior Event, TRG 1) - Table 1 of 2

Time (msec)	Rate of Change of Pressure, Side Satellite Sensor 1, L (%)	Lateral Acceleration, Side Satellite Sensor 2, L (m/s^2)	Lateral Acceleration, Side Satellite Sensor 3, L (m/s^2)	Lateral Acceleration, Side Satellite Sensor 4, L (m/s^2)	Rate of Change of Pressure, Side Satellite Sensor 1, R (%)	Lateral Acceleration, Side Satellite Sensor 2, R (m/s^2)	Lateral Acceleration, Side Satellite Sensor 3, R (m/s^2)	Lateral Acceleration, Side Satellite Sensor 4, R (m/s^2)
-31	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-27	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-23	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-19	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-15	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-11	0.0	0.0	SNA	SNA	0.0	14.4	SNA	SNA
-7	0.1	0.0	SNA	SNA	-0.1	0.0	SNA	SNA
-3	0.0	0.0	SNA	SNA	-0.1	0.0	SNA	SNA
1	0.1	0.0	SNA	SNA	0.0	0.0	SNA	SNA
5	0.1	14.4	SNA	SNA	0.0	0.0	SNA	SNA
9	0.1	0.0	SNA	SNA	0.0	0.0	SNA	SNA
13	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
17	0.1	0.0	SNA	SNA	0.1	0.0	SNA	SNA
21	0.1	0.0	SNA	SNA	0.1	0.0	SNA	SNA
25	0.1	0.0	SNA	SNA	0.0	0.0	SNA	SNA
29	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
33	-0.2	0.0	SNA	SNA	0.0	0.0	SNA	SNA
37	-0.2	0.0	SNA	SNA	0.0	0.0	SNA	SNA
41	-0.3	14.4	SNA	SNA	0.0	0.0	SNA	SNA
45	-0.3	14.4	SNA	SNA	0.0	0.0	SNA	SNA
49	-0.1	0.0	SNA	SNA	0.0	0.0	SNA	SNA
53	-0.1	0.0	SNA	SNA	0.0	0.0	SNA	SNA
57	0.0	0.0	SNA	SNA	-0.1	0.0	SNA	SNA
61	0.5	28.7	SNA	SNA	-0.1	14.4	SNA	SNA
65	0.6	0.0	SNA	SNA	-0.1	28.7	SNA	SNA
69	0.3	0.0	SNA	SNA	0.0	0.0	SNA	SNA

Lateral Crash Pulse (1st Prior Event, TRG 1) - Table 2 of 2

Time (msec)	Lateral Acceleration for Side Crash Addition, Floor Sensor (m/s^2)
-31	4.9
-27	0.0
-23	0.0
-19	9.8
-15	17.2
-11	12.3
-7	9.8
-3	14.7
1	24.5
5	0.0
9	-14.7
13	0.0
17	-4.9
21	-2.5
25	-14.7
29	4.9
33	2.5
37	7.4
41	31.9
45	24.5
49	22.1
53	-2.5
57	-12.3
61	19.6
65	0.0
69	-19.6

Hexadecimal Data

Data that the vehicle manufacturer has specified for data retrieval is shown in the hexadecimal data section of the CDR report. The hexadecimal data section of the CDR report may contain data that is not translated by the CDR program. The control module contains additional data that is not retrievable by the CDR system.

PIDs	PID	Data
	00	BC F5 00 01
	01	00
	03	30 52 33 36 30 30 30 30 34 36 30 30 30 34 36
	04	02 03 01 01
	05	01
	06	00 00
	09	30 30 30 34 37 30 30 30 34 37
	0A	06
	0B	00
	0C	30 30 30 42 39 30 30 30 42 39
	10	00
	20	E8 00 00 01
	21	02 A0
	22	00 00 00 00 00 00
	23	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	25	00 00 00 00 00 00 00 00 00
	40	00 00 00 01
	60	F7 77 00 01
	61	02 09 05 00 04 E2 00 00 00 00 00 00 03 55 03 55 00 00 00 00 00 00 00 00 13 88 29 B1 85 5F 13 88 00 00 00 00 00 FF FE 00 00 81 00 81 00 80 00 FF C0 01 5B 00 00 00 00
	62	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	63	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
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	68	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	6A	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	6B	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	6C	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
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	80	00 00 00 01
	A0	0C 0C FF FD
	A5	55 3F FE 3F FE 3F FE 3F FE 3F FE 3F FE 3F FE 55 C4 FE FD 00 03 03 01 FB F8 01 0A 10 22 19 03 DE CA FE 1D 0F FE FD F5 F3 FD 04 0E 0C 00 FA FD FD 00 01 03 04 04 06 08 07 00 00 00 00
	A6	FF FF FF FF FE FE FE FE 00 00 00 00 00 00 00 00 00 00 00 00 00 00

#4

Subject 29.406894, -82.247616

GPS COORDINATES

From

To:

Date Today at 9:48 PM

Sent from my iPad

#5

TRAFFIC CRASH
DRIVER INFORMATION EXCHANGE

This Traffic Crash Report can be purchased online at

Crash Number	Reporting Agency		
	FLORIDA HIGHWAY PATROL		

CRASH IDENTIFIERS

County of Crash	City or Place of Crash	☐ City Limits	Crash Date/Time	Reported Date/Time
MARION	UNINCORPORATED		08/10/2021 12:04 PM	08/10/2021 12:09 PM
Address (or Location of Occurrence)				

VEHICLE

V01	Year	Make	Model	Color	State	Number	Registration Expires	☐ Permanent Registration	VIN
	2021	TOYOTA	RAV4	BLU	FL		10/2021		4T3B9RFV3U
Driver Name		Insurance Name		Owner Name		Owner Suffix		Owner Business (if not Person)	
Address		Address Other		City		State		Zip Code	
				DARRICH		FL			
Owner Phone Number		Owner Phone Number (other)		Insurance Company		Insurance Policy Number			
				THE STANDARD FIRE INSURANCE					
Trailer One	License Number	State	Reg. Expires	Permanent Reg	VIN	Year	Make	Length	Axis
				NO					
Trailer Two	License Number	State	Reg. Expires	Permanent Reg	VIN	Year	Make	Length	Axis
				NO					

PERSON RECORD

Person Type	Name	Vehicle	Address	City	State	Zip Code
DRIVER		V01				
Address		Address Other		City	State	Zip Code
				DARRICH	FL	
Phone Number	Phone Number (other)	Other Comments (Write in)				

PERSON RECORD

Person Type	Name	Vehicle	Address	City	State	Zip Code
PASSENGER		V01				
Address		Address Other		City	State	Zip Code
				DARRICH	FL	
Phone Number	Phone Number (other)	Other Comments (Write in)				

REPORTING OFFICER

ID Number	Rank	Name	Group / Post	Office Agency	Phone Number
	TOR	N. WILLIAMS	B	FLORIDA HIGHWAY PATROL	

Event Data Recorder - Reference Document

An Event Data Recorder (EDR) is a part of the Supplemental Restraint System (SRS) ECU that records data for some types of collision events for future safety research or analysis. The EDR will record data when the vehicle experiences a rapid change in speed that exceeds a specified threshold. The threshold to start recording is above changes in speeds that are considered normal driving use. For example, stopping hard with the brakes would not cause a recording, but hitting a curb may. EDRs were installed on Toyota/Lexus/Scion vehicles because they have the capability to serve several purposes, such as assisting in vehicle development, quality control and/or safety research. An EDR is also helpful in determining the circumstances that caused an airbag to be deployed or not deployed.

EDR Generations

Starting with the 2001 Lexus LS400, EDRs were incorporated into to all Toyota, Lexus and Scion vehicles by 2007. SRS ECUs with EDRs were typically installed at full model change years, which generally occur every 4 to 6 years, depending on the model. The chart below outlines the three generations of EDRs installed on Toyota, Lexus, and Scion vehicles and what each EDR generation is capable of recording.

01MY	02MY	03MY	04MY	05MY	06MY
Gen 1		Gen 2		Gen 3	
EDR		☆		☆	
Frontal		Frontal Roll Over		Current EDR	
				Frontal Rollover Side Impact Multiple Events	

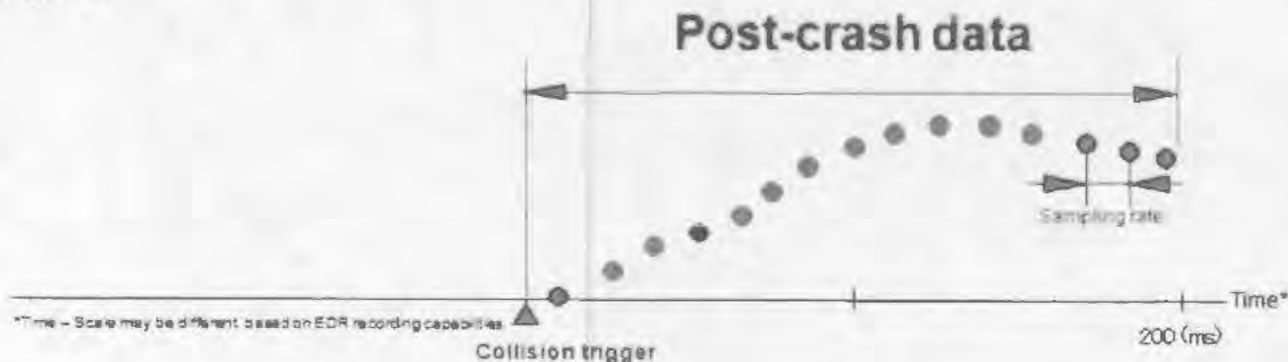
Note: MY stands for model year

Post-Crash & Pre-Crash data

Post-Crash Data - All vehicles equipped with an EDR will record post-crash data

If an impact occurs that has exceeded the rapid change in speed threshold, the EDR system will begin to record data for varying lengths of time depending on the parameters it is capable of recording. Figure 1 shows a collision 'trigger' and the data sampling rate recorded in the EDR.

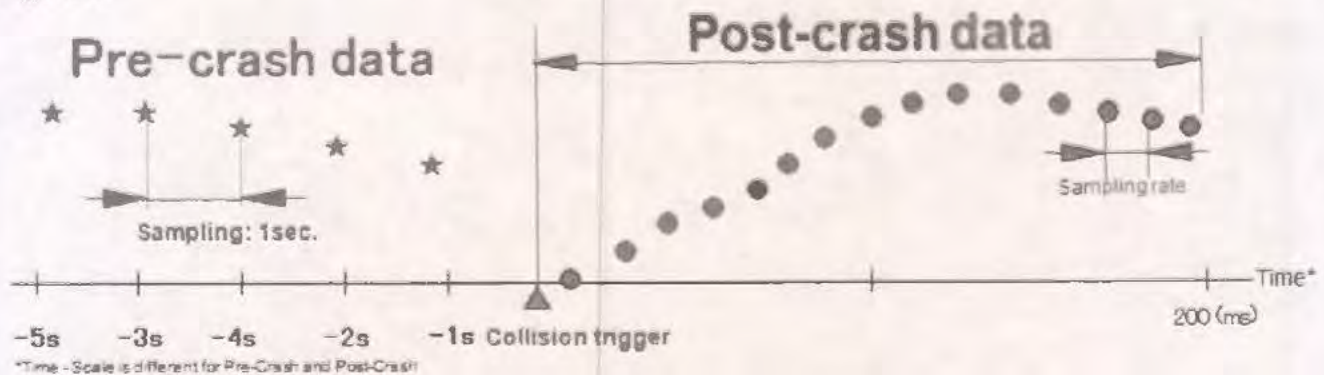
Figure 1



Pre-Crash Data - Not all models have an EDR capable of recording pre-crash data

As explained in the Post-crash section, the EDR System begins recording data when an impact exceeds the rapid change in speed threshold. On certain models, the EDR will also record about 5 seconds of data that took place before the impact. Figure 2 shows the sampling rate of Pre-Crash data is different than Post-Crash data.

Figure 2



Post Crash & Pre-Crash Applicability Chart

The chart below provides EDR capability of each model and the corresponding calendar year (CY) it was built. Vehicles and the corresponding year that have a yellow bar are equipped with EDR that have the ability to record post-crash data only. Vehicles and the corresponding year that have a red bar, are equipped with EDRs capable of pre & post-crash data recording.

		Post-crash data only				Pre- & Post-crash data							
	Model Name	2000CY	2001CY	2002CY	2003CY	2004CY	2005CY	2006CY	2007CY	2008CY	2009CY	2010CY	
Lexus	LS												
	LS HV												
	GS												
	GS HV												
	SC												
	ES												
	LX												
	GX												
	RX												
	RX HV												
	IS												
	IS-F												
	IS-C												
	HS												
	CT												
	LFA												
Toyota	Avalon												
	Camry												
	Camry Solara												
	Corolla												
	Echo												
	4Runner												
	Land Cruiser												
	RAV4												
	Sienna												
	Prius												
	Highlander												
	Highlander HV												
	Tacoma												
	Tundra												
	SEQUOIA												
	SCION	Yaris											
Yaris Sedan													
FJ Cruiser													
Venza													
Matrix													
tc													
xA													
xB													
xD													

EDR - Frequently Asked Questions

What is an EDR? An Event Data Recorder (EDR) is part of the Supplemental Restraint System (SRS) ECU that records data for some types of collision events for future safety research or analysis. An event is a change in vehicle speed that is more than typical of everyday use. For example, stopping hard with the brakes would not cause a recording, but hitting a curb may cause the EDR to record an event.

Are EDRs required in cars? They are currently not required.

Is the EDR a black box? No, the EDR is not a black box like on an airplane. It does not record sounds or conversations and does not have the capacity like an airplane blackbox. The EDR is simply part of the Supplemental Restraint System (SRS) ECU that only records certain vehicle data for a short period of time before or during a collision.

What causes the EDR to record? The EDR starts to record when the vehicle experiences a rapid change in speed (like acceleration or deceleration) that exceeds a specified threshold higher than normal use. Hard braking will not cause an EDR to record, because that may be considered normal use. Impacting a curb hard may cause a recording as the vehicle body may change speed much quicker than normal use.

Why were EDRs installed in Toyota/Lexus/Scion vehicles? EDRs have the capability to serve several purposes, such as assisting in vehicle development, quality control or safety research. Airbag deployment occurs very rapidly and it may be difficult to determine exactly what occurred during a collision. Although indirect methods may be used to determine airbag deployment circumstances, an EDR is a more direct method to understand airbag deployment circumstances.

Do all EDRs record the same information? No. Due to different vehicle designs and changes in equipment, the information recorded varies by model and model year.

Were there other recording systems before EDR in Toyota vehicles? Yes, some vehicles in the past had some impact recording capabilities, but these were not considered reliable for field use. There is no current capability to read these predecessors to EDRs.

How accurate is the EDR data? The accuracy of the data from the EDR depends on the collision and the EDR capabilities. Government studies of Toyota EDRs indicate that Toyotas EDRs have similar capabilities to other vehicle manufacturers.

What has Toyota done to validate its EDRs and EDR tools? Toyota has been analyzing data from vehicles since they were first introduced to ensure the reliability of the EDR technology. Toyota performs imaging of our own vehicles as part of crash testing. Toyota also performs EDR imaging from U.S. Government crash testing and investigations, and when requested, in law enforcement investigations.

How does the EDR record information? During a collision, the EDR calculates the delta V based on accelerometer data every 10 milliseconds and puts it into the permanent memory. During the intervals, other data is also placed into memory. If all the data is not transferred into the permanent memory, a writing flag is put on the report. If all data is successfully transferred, the report states 'Finished writing'. In some very severe impacts, electrical connections or internal EDR components may be damaged, resulting in incomplete data transfer to the permanent memory.

How long is an event stored in the EDR? If the airbags are deployed in a collision, the EDR data is locked and cannot be erased or overwritten. If the airbags have not been deployed in previous EDR events, an event that causes the vehicle to experience a rapid change in speed (example: hitting a curb) that exceeds a specified threshold will overwrite previous EDR events.

Why is a signed consent form required before performing imaging? Various states have privacy regulations that require consent before performing an EDR image.

How is EDR data retrieved and does the retrieval process affect/change the data contained in the EDR? Depending on the vehicle's condition, data can be imaged in one of two ways. The EDR tool is either connected through the vehicle's DLC port, or the EDR is removed from the vehicle and the EDR tool is connected directly to the SRS ECU. Neither method alters or erases EDR data during the process. In some rare circumstances such as water immersions- the EDR data may not be able to be imaged.

What will I receive after the EDR image process has taken place on my vehicle? After the imaging has been completed, the EDR report and other reference documents will be provided.

What is the difference between vehicle speed and delta V? Vehicle speed is how fast the vehicle moves relative to the ground - usually in miles per hour. It is understood that vehicle speed is the straight line speed of the entire vehicle. Delta V is the change in vehicle speed over milliseconds and is usually discussed as longitudinal, lateral or total delta V.

Is there more than one delta V? In some EDR reports there are longitudinal and lateral delta V data.

Why can't the EDR tool operator just tell the customer what the report says? Crashes can be very complex events. The EDR report is just one piece of information and without knowing other critical crash information, the EDR data could be misinterpreted with the context for the overall crash.

Can the EDR tell me the date and time of collision? No, the EDR does not have a time stamp function.

[SRS Airbag]

Management No. for DDR Specification,8,Maximum Number of Overwrite of the Recording Area,30000,Memory Efficiency Improving Function,1,System Presence/Absence Determination Information,5,Number of Overwrite of the Recording Area 6 at PCS Presence Confirmation,0,Time Stamp at PCS Presence Confirmation (Trip Counter),6,Time Stamp at PCS Presence Confirmation (Time Counter),13194,Number of Overwrite of the Recording Area 9 at ICS Presence Confirmation,16777214,Time Stamp at ICS Presence Confirmation (Trip Counter),65535,Time Stamp at ICS Presence Confirmation (Time Counter),536870910,Number of Overwrite of the Recording Area 10 at Rear FHL Presence Confirmation,0,Time Stamp at Rear FHL Presence Confirmation (Trip Counter),2,Time Stamp at Rear FHL Presence Confirmation (Time Counter),34,Time Stamp at Factory Inspection (Trip Counter),20,Time Stamp at Factory Inspection (Time Counter),2706
Current Key Cycle,00437,Current key Cycle Elapsed Time,00000:43:28,Current Time and Date,2021/08/18 09:39:57
Time,Data ID,Trigger ID,Trigger ID (Sub),Trigger Time Information,Detection Counts of Certain Level of Acceleration,Detection Counts of Certain Level of Acceleration,Number of Overwrite of the Recording Area,Time and Date,Key Cycle,Clock Type,Elapsed Time,ODO,Odometer Unit Signal,HV Recognition Flag_Header,Diesel Flag_Header,Number of Trigger Success in the Same Trip Area,Writing Completion Flag,Successive Trigger Time Information,Latitude,Longitude,Altitude,Vehicle Speed,Accelerator Opening Ratio,Engine RPM Data,Cruise Control,Shift Position Signal,Brake SW,Brake Oil Pressure,Yaw Rate Sensor Signal,Longitudinal G Sensor Signal,Lateral G Sensor Signal,Throttle Opening Ratio,Command Value of Fuel Injection Amount,Steering Signal,HV Recognition Flag,HV Recognition Flag,HV Recognition Flag,Diesel Flag,Diesel Flag,Diesel Flag,Sensor Type Identification (Security),Sensor Type Identification (Security),Sensor Type Identification (G Sensor Layout),Sensor Type Identification (G Sensor Layout),Sensor Type Identification (G Sensor),Sensor Type Identification (G Sensor),Sensor Type Identification (Yaw Rate Sensor),Sensor Type Identification (Yaw Rate Sensor),Yaw G Sensor Installation Information,Yaw G Sensor Installation Information,Shift Gear,Power Train Mode,SNOW Mode,Valid/Invalid of Driving Mode,VSC OFF Lamp,TRC OFF Lamp,Valid/Invalid of TRC/VSC OFF Lamp,EV Mode,Valid/Invalid of EV Mode,Drive Mode Select Signal,Engine Load Factor,READY Signal,Gear Position Signal,Gear Position Signal,Turbine RPM/Input Shaft RPM,Under DSC Control,Under BOS Control,Under SCB Control,Under VSC Control,Under ABS Control,Under VDM Control,Under TRC Operation Flag,FR Wheel Speed,FL Wheel Speed,RR Wheel Speed,RL Wheel Speed,Cruise System,Driving Force Demand Judgment Flag,Cruise Control Master Switch Flag,DSS Judgment Flag,Cruise Control Res/Accel SW,Cruise Control Set/Coast SW,Cruise Control Cancel SW,Cruise Control Brake SW,Cruise Control D Signal,Cruise Control Main SW,Cruise Control Set Speed,Vehicle Speed (during Cruise Control),Cruise Control Request Value,Cruise Control Request Value,ACC Target Distance,ACC Target Condition,ACC Relative Speed,PCS Reception Data Invalid Flag,ALM Request Flag,ALM Request Flag 2,ABK Request Flag,PBA Request Flag,FPB Request Flag,PB Request Flag,PSB Request Flag,Prefill Request Flag,Stop Lamp Lighting Request Flag,PCS Brake Hold Request Flag,Collision Avoidance Assist Request Flag 1,Collision Avoidance Assist Request Flag 2,Collision Avoidance Assist Request Flag 3,PCS SW,PCS Display (Diag Condition),PCS Display (Milli Wave Dirt),PCS Display (Temporarily not available),PCS Display (Sensor Recognition Status),PCS Display (Milli-Meter Wave Radar Low Voltage Status),PCS Display (Camera Backlight Status),PCS Display (Milli-Meter Wave Radar Alignment Flag),PCS Display (Object Recognition Status),PCS Display (Control Status 1),PCS Display (Control Status 2),Target Distance,Target Relative Velocity,Target Lateral Position,Target Object Number,Relative Acceleration for Control Target,Predicted Time to Collision 1 for Control Target,Predicted Time to Collision 2 for Control Target,Predicted Time to Collision Status for Control Target,Sensor Recognition Status for Control Target,Type of the Object for Control Target,PCS ALM Mode Status,PCS ALM Status,PCS Guard Status A,PCS Guard Status B,PCS Guard Status

C, Sensor Recognition Status (Vertical Axis Offset Status of Milli-Meter Wave Radar), Sensor Recognition Status (Horizontal Axis Offset Status of Milli-Meter Wave Radar), Estimated Curve Radius, Over Constant Longitudinal G Sensor Signal Value Detection, Over Constant Lateral G Sensor Signal Value Detection, Over Constant RR or RA Value Detection, ASP-PCS Reception Data Invalid Flag, PST Request Flag, CAU Request Flag, PST Target Lateral Position, PST Target Distance, PST Target Collision Lateral Position, Rear Side Object Status, Kind of PCS System, Outside Lane Status, SCS Steering Angle, PST ETTC, Camera Load Face Detection, PST Obstacle Status, Time to Lane Crossing, Side Radar Target Object Number, CAU Operation Pattern, PCS Status2, Predicted Time to Collision for Side Radar Control Target, Type of the Object for Side Radar Control Target, Estimated Cross Time for Side Radar Control Target, Caution SW, Side Radar Target Relative Velocity X, Caution Display, Side Radar Target Relative Velocity Y, Side Radar Target Distance X, Side Radar Target Distance Y, Collision Point, SDV Request Flag, Pedestrian Protection System Record Trigger Signal, Pedestrian Protection System Maximum Pressure Ratio (LH), Pedestrian Protection System Maximum Pressure Ratio (RH), Pedestrian Protection System Vehicle Speed for Calculation, Rear Pop-Up Hood ECU Judgment Status, Front Pop-Up Hood ECU Judgment Status, Pedestrian Protection Airbag ECU Judgment Status, LKA DDR Trigger Signal, Invalid of LKA DDR Data, Steering Wheel Release Condition, Steering Operation of LKA, Steering Operation of LDA, LKA Control Condition (EPS Control), LKA Control Condition, Turn Signal Operation, EPS Torque Sensor Value, LTA Trigger Signal, LTA DDR Reception Status, LTA Steering Wheel Hold Condition, Steering Operation of LTA, LTA Control Condition, LTA EPS Pinion Angle, LTA Leading Vehicle Following, LTA Leading Vehicle Departure, LCA Trigger Signal, LCA Data Reception Status, LCA Steering Override Trigger, LCA Proximity Warning Trigger, LCA Brake Override Trigger, LCA Distance of Adjacent Forward Vehicle, LCA Relative Speed of Adjacent Forward Vehicle, LCA Distance of Adjacent Backward Vehicle, LCA Relative Speed of Adjacent Backward Vehicle, LCA Distance of Forward Vehicle, LCA Relative Speed of Forward Vehicle, LCA Control State, LCA Judgment (RH), LCA Judgment (LH), Turn Signal State, LCA Left Lane Marker Kind, LCA Right Lane Marker Kind, LCA Left Lane Marker Position, LCA Right Lane Marker Position, LCA Yaw Angle, LCA Curvature, ICS Received Data Invalid Flag, ICS Trigger Flag, ICS Temporarily Not Available (Low Voltage), ICS Temporarily Not Available (Dirt), ICS Request Driving Force Control Flag, ICS Request Braking Control Flag, ICS Controlled Object Distance, ICS Controlled Object 1 Position (X), ICS Controlled Object 1 Position (Y), ICS Recognition Sensor (Controlled Object 1), ICS Recognition Level (Controlled Object 1), ICS Controlled Object 2 Position (X), ICS Controlled Object 2 Position (Y), ICS Recognition Sensor (Controlled Object 2), ICS Recognition Level (Controlled Object 2), ICS Controlled Object 3 Position (X), ICS Controlled Object 3 Position (Y), Operation Function, ICS Recognition Level (Controlled Object 3), FHL Request Flag, FHL Status, FHL1 Object Distance Y, FHL1 Object Distance X, FHL1 Relative Speed Y, FHL1 Relative Speed X, FHL1 RCS Level, FHL1 TTC, FHL1 (New Target Flag), FHL1 (Detecting Radar), FHL1 (Operating Trigger Flag), FHL1 (Ghosting Flag), FHL1 (Extrapolating Flag), FHL1 (Radar Blockage Ratio Flag), FHL1 (Radar Distortional Flag), FHL1 (Adjacent Reflection Flag), FHL1 (CAN Received Data), FHL1 ID, FHL2 Object Distance Y, FHL2 Object Distance X, FHL2 Relative Speed Y, FHL2 Relative Speed X, FHL2 RCS Level, FHL2 TTC, FHL2 (New Target Flag), FHL2 (Detecting Radar), FHL2 (Operating Trigger Flag), FHL2 (Ghosting Flag), FHL2 (Extrapolating Flag), FHL2 (Radar Blockage Ratio Flag), FHL2 (Radar Distortional Flag), FHL2 (Adjacent Reflection Flag), FHL2 (CAN Received Data), FHL2 ID, FHL3 Object Distance Y, FHL3 Object Distance X, FHL3 Relative Speed Y, FHL3 Relative Speed X, FHL3 RCS Level, FHL3 TTC, FHL3 (New Target Flag), FHL3 (Detecting Radar), FHL3 (Operating Trigger Flag), FHL3 (Ghosting Flag), FHL3 (Extrapolating Flag), FHL3 (Radar Blockage Ratio Flag), FHL3 (Radar Distortional Flag), FHL3 (Adjacent Reflection Flag), FHL3 (CAN Received Data), FHL3 ID, Stop Assist Steering Wheel Release Condition, Stop Assist Horn Request, Stop Assist Hazard Request, Stop Assist Helpnet Connection, Stop Assist Door Unlock Request, Stop Assist System Phase, Stop Assist Brake State, Stop Assist Speed Restraint Phase Counter, Stop Assist Shift to Deceleration Phase, Stop Assist Shift to Stop Phase, Stop Assist User Cancel, Stop Assist Automatic Cancel, Stop

THERE WERE SOME ADDITIONAL (OVER 50) PAGES OF THIS DOCUMENT. THEY HAD DOT WITH AN OCCASIONAL CONSONANT IN THEM SO I DIDN'T PRINT THEM.



#8

Toyota Motor Sales, U.S.A., Inc.
19001 S. Western Avenue
Torrance, CA 90501

TOYOTA EDR DATA IMAGING INVESTIGATION RECORD

2021

Toyota

Rav4 HV

4 T 3 B 6 R F V 3 M U

(MY)

(Make)

(Model)

VIN

Purpose: Use this form to record circumstances of obtaining an EDR image or accessing VCH data. Attach it to any report when sending it back to Toyota Motor Sales, U.S.A., Inc. Where noted below, do not disclose owner identification information (name or full VIN). Contact TMS Legal Department if you have questions.

CONSENT HISTORY (check box that applies)

OWNER CONSENT

- ☒ From a person having all the incidents of ownership, including legal title, of a motor vehicle, whether or not the person lends, rents, or creates a security interest in the motor vehicle.
- ☐ From a person entitled to the possession of a motor vehicle as the purchaser under a security agreement.
- ☐ From a person entitled to possession of a motor vehicle as a lessee pursuant to a written lease agreement for a period of more than three months).
- ☐ **For Arkansas** [written consent is not consent to release owner identification information]: From all owners of the subject vehicle. [Where the subject vehicle has been involved in an accident] From all owners of the subject vehicle at the time the data was recorded on, _____.
- ☐ **For California and Connecticut:** From a registered owner of the subject vehicle.
- ☐ **For Oregon:** From all owners of the subject vehicle.
- ☐ **For New Hampshire:** From an owner of the subject vehicle at the time the data was recorded on, _____.
- ☐ **For Washington** [where Toyota is a third party in a suit where data is being imaged after a crash]: From an owner of the subject vehicle at the time of the crash on _____.
- ☐ **For Utah,** "owner" does not include lienholder unless the lienholder gains possession of the motor vehicle as a result of purchaser's default.

OWNER REFUSED CONSENT

- ☐ The Owner refused to allow imaging. [You may only proceed with readout (after getting consent from Toyota's counsel) if other circumstances below apply.]

Notes:

*** CONFIDENTIAL

OTHER CIRCUMSTANCES (consent not obtained)
REQUIRES PRIOR CONSENT FROM TOYOTA'S COUNSEL

A.	☐	I imaged the data under a court or administrative order.
B.	☐	I imaged the data with permission of Toyota's counsel in a legal proceeding.
C.	☐	I imaged the data on behalf of and at the request of the following <u>law enforcement officer</u> : [For use only in Arkansas, Maine, Utah and Virginia]. _____ (Name, Position, Date)
D.	☐	I imaged the data <u>for the purpose of improving motor vehicle safety</u> : [For use in California, Connecticut, Maine, Nevada, New York, North Dakota, Oregon, Texas and Washington.] [Do not provide owner identification information (name or full VIN; providing VIN is ok if last 6 digits removed)]. _____ (Name, Position, Date)
E.	☐	I imaged the data on behalf of and at the request of the following emergency medical responder who, in the course of responding to a motor vehicle crash, including injury, requested the data to determine the need for, or to facilitate, emergency medical response: [For use only in Arkansas, Maine, New Hampshire, New York, Oregon, Texas, Utah, Virginia and Washington]. _____ (Name, Position, Date)
F.	☐	I imaged the data from an EDR that was installed after the manufacture date of the subject motor vehicle [for use only in Colorado]. _____ (Name, Position, Date)
G.	☐	I imaged the data permitted by, and pursuant to, a subscription service contract or agreement [for use only in Nevada and Virginia]. _____ (Name, Position, Date)

Don Heirholzer: 08/14/2021

(Toyota Representative and Date)