

# ABRITES DIAGNOSTICS FOR TOYOTA/LEXUS/SCION ONLINE





### Important notes

The Abrites software and hardware products are developed, designed and manufactured by Abrites Ltd. During the production process we comply to all safety and quality regulations and standards, aiming at highest production quality. The Abrites hardware and software products are designed to build a coherent ecosystem, which effectively solves a wide range of vehicle-related tasks, such as:

Diagnostic scanning; Key programming; Module replacement, ECU programming; Configuration and coding.

All software and hardware products by Abrites Ltd. are copyrighted. Permission is granted to copy Abrites software files for your own back-up purposes only. Should you wish to copy this manual or parts of it, you are granted permission only in case it is used with Abrites products, has "Abrites Ltd." written on all copies, and is used for actions that comply to respective local law and regulations.

### Warranty

You, as a purchaser of Abrites hardware products, are entitled of a two-year warranty. If the hardware product you have purchased has been properly connected, and used according to its respective instructions, it should function correctly. In case the product does not function as expected, you are able to claim warranty within the stated terms. Abrites Ltd. is entitled to require evidence of the defect or malfunction, upon which the decision to repair or substitute the product shall be made.

There are certain conditions, upon which the warranty cannot be applied. The warranty shall not apply to damages and defects caused by natural disaster, misuse, improper use, unusual use, negligence, failure to observe the instructions for use issued by Abrites, modifications of the device, repair works performed by unauthorized persons. For example, when the damage of the hardware has occurred due to incompatible electricity supply, mechanical or water damage, as well as fire, flood or thunder storm, the warranty does not apply.

Each warranty claim is inspected individually by our team and the decision is based upon thorough case consideration.

Read the full hardware warranty terms on our website.

### **Copyright information**

#### Copyright:

All material herein is Copyrighted ©2005-2021 Abrites, Ltd. Abrites software, hardware, and firmware are also copyrighted Users are given permission to copy any part of this manual provided that the copy is used with Abrites products and the "Copyright © Abrites, Ltd." statement remains on all copies "Abrites" as used in this manual synonymous with "Abrites, Ltd." And all it's affiliates The "Abrites" logo is a registered trademark of Abrites, Ltd.

#### Notices:

The information contained in this document is subject to change without prior notice. Abrites shall not be held liable for technical/editorial errors, or omissions herein.

Warranties for Abrites products and services are set forth in the express written warranty statements accompanying the product. Nothing herein should be construed as constituting any additional warranty.

Abrites assumes no responsibility for any damage resulting from the use, misuse, or negligent use of the hardware or any software application.

### Safety information

The Abrites products are to be used by trained and experienced users in diagnostics and reprogramming of vehicles and equipment. The user is assumed to have a good understanding of vehicle electronic systems, as well as potential hazards while working around vehicles. There are numerous safety situations that cannot be foreseen, thus we recommend that the user read and follow all safety messages in the available manual, on all equipment they use, including vehicle manuals, as well as internal shop documents and operating procedures.

#### Some important points:

Block all wheels of the vehicle when testing. Be cautious when working around electricity.

- Do not ignore the risk of shock from vehicle and building-level voltages.
- Do not smoke, or allow sparks/flame near any part of the vehicle fuel system or batteries.
- Always work in an adequately ventilated area, vehicle exhaust fumes should be directed towards the exit of the shop.
- Do not use this product where fuel, fuel vapours, or other combustibles could ignite.

In case any technical difficulties occur, please contact the **Abrites Support Team by email at** support@abrites.com.

# **Table of contents**

- 1. Introduction
- 2. Vehicle diagnostics with Abrites for Toyota
  - 2.1 Scope of the manual
  - 2.2 Getting Started
- 3. Using the Abrites Diagnostic for Toyota Online
  - 3.1 General Diagnostics read/clear DTCs
  - 3.2 Live Values Monitoring
- 4. Special Functions
- 5. Key Learning
  - 5.1 Additional Connections
  - 5.2 Deleting keys
- 6. Airbag

#### 7. Mileage Calibration

- 7.1 Connection:
- 7.2 Dashboard Calibration for Instrument Clusters with S6J3 Processors
- 7.3 Dashboard Calibration for Instrument Clusters with RH850 Processors

#### 8. ID Code Box Reset

- 8.1 Connections
- 8.2 ID Code Box Reset Procedure

#### 9. Smart System Synchronization

- 9.1 Required connections:
- 9.2 Procedure

#### 10. ECU Synchronization

- 10.1 Requirements:
- 10.2 Procedure

### List of revisions

Date	Chapter	Description	Revision
26.04.2022	ALL	Document created.	1.0
24.11.2022	3	Update	1.1
17.07.2023	ALL	General Update and added supported models	1.2
08.09.2023	ALL	TN014, TN015, TN016 support- ed models, Airbag, Diagnostic	1.3
01.10.2024	ALL	TN017 & TN018 related	1.4

### 1. Introduction

Congratulations on choosing our wonderful product!

The "Abrites Diagnostics for Toyota/Lexus/Scion Online" is an Online server based Abrites software for Toyota, Lexus and Scion vehicles.

With the help of this software you can perform key learning operations of many Toyota vehicles, produced after 2018, including vehicles equipped with Tokai Rika Smart System with BA type HT-AES keys and vehicles equipped with a Denso Smart System with BA type DST-AES keys.

For proper operation of your diagnostic software you will need a corresponding interface for connection between your PC and vehicle named "AVDI".

AVDI is an interface produced by Abrites Ltd. intended to act as an interface between the PC and the electronic control units.

AVDI should be used with ABRITES software produced by Abrites Ltd.

ABRITES is a trade mark of Abrites Ltd

### 2. Vehicle diagnostics with Abrites for Toyota

#### 2.1 Scope of the manual

This document describes the usage of Abrites Diagnostics for Toyota / Lexus / Scion Online. The document is applicable for the latest software version. In this manual we suppose that the software for your AVDI interface is already installed. Please refer the "AVDI Common User's Manual" in case it is not.

#### System requirements:

Minimum system requirements – Windows 7 SP1 + 2GB RAM (recommended 4GB)



#### 2.2 Getting Started

You can start Abrites Diagnostics for Toyota/Lexus/Scion Online by starting the Abrites Quick Start application and selecting Toyota. On the 2nd page of the Toyota option, you need to select the following button.

When the Abrites Diagnostics for Toyota/Lexus/Scion Online application is started the main screen of the application will appear where you can select the brand desired- Toyota or Lexus:



If Toyota is selected, you will have the possibility to select the model you're working on:



If Lexus is selected, the following models will appear for selection:



### 3. Using the Abrites Diagnostic for Toyota Online

The latest software version of the Toyota Online introduces diagnostic procedures.

When starting the software it is recommended to have the vehicle connected to an external power source in order to be sure that the vehicle does not loose power during the time spent working on it. When the software is started the vehicle can be selected, and than the software checks is the selection is correct and makes a suggestion for the correct vehicle. Then the General Diagnostics screen will be displayed and you can select the "Scan" button to start the diagnostic scan, which will also display the list of modules.



#### 3.1 General Diagnostics - read/clear DTCs

Once started, the software will go through all available protocols and will identify all available modules in the vehicle you are working on. You could then enter each module and you will see all available options for it - identification, live/measured values, actuator testing, clearing DTCs. In order to read and clear the DTCs of a module you have to enter it, and open the "Fault Codes" menu on the left side. You are able to get details about each DTC, save the scan report to a file, and clear the DTCs by pressing the "Clear Faults" button.

		-		
5 100	Topia CAOLA INGRE.H		- 41	٥
	Electronic Control Unit identificatio	m .		
ALANY	ler-thyles			
Live Values	Subset emin	896636278039		
Test Close	teret			
Common Research				
BRITES				
ABRITIS Diag	rotio 347 www.defec.com Teyria COROLA (INGRE.PS Const	-	•	×
ABRITIS Diag	Topic 317 weaderbocom Topics COROLA DISIDE_PS Take Date Utit of Fault Codes	-	4	×
ABRITIS Diag	Topics 347 www.ubritec.com Topics Topics COROLLA INGRE_PI Int Color List of Fault Codes Topi A Constant Pauloe Rook 1 Court Core	-ue Fector	-	×
ABRITIS Diag	Turnia COROAA (INGRE_P) Table Turnia COROAA (INGRE_P) Table List of Fault Codes for A Campbell Reaton Robuste Resk 1 Ontal Open Rass of Valence Al Ress Sensor "2" Creat Sheet In Costant or Open	rom PRESES PRODUCT	-	×
ABATTIS Diago	rotelio 347 www.adefrec.com Transa 00804A (1962PL.P) (2004 List of Fault Codes Tran A Campitel Restor Roteles Bank 1 Onial Open Resis in Values Ade Reis Sensor 'A' Onial Sheft Is Grand or Open Manfred Adecks Ressure Tennents: Tensor Sensor Onial Sheft to Bettery or Open	Total PRESICE PROPER	4	×
ABRITIS Diago	Tomia COROLA (INSPEC.P) Tomia COROLA (INSPEC.P) List of Fault Codes Tomi A Constant Pastor Robusta Rais 1 Circuit Open Hass in Valence All Rise Sensor 'A' Circuit Shert to Crown or Open Manifed Absolute Resource/Saronettic Resource Sensor Circuit Short to Battary or Open Intellier An Temperature Sensor 1 Sant 1 Circuit Short to Battary or Open	ras PREMO PSUMO PS	0	×
ABRITIS Diago	notics 34.7 www.defree.com Topics COROLA (INSIDE_P) State List of Fault Codes Topic A Constant Restor Robusta Rank 1 Disul Open Hass in Values AF Raw Sensor 'V' Ontal Short to Dates Manfeld Absolute Ressarc[larometric Ressure Sensor Orsult Short to Battery or Open Disker Ar Temperature Sensor 'I Short Short to Battery or Open Disker Ar Temperature Sensor 1 Short Short to Battery or Open Disker Ar Temperature Sensor 1 Short Short to Battery or Open	ram PRENDS PRENDS PRENDS PRENDS PRENDS PRENDS	4	×
ABRITS Dag C Teles Securite Der Fade Red Fade	notics 34.7 www.uktrise.com Toyles COROLA (INGRE_M State List of Fault Codes Tori A Constant Robon Robuste Resk 1 Onal Open Robo Volume At New Server 'V' Onal Sheet to Count or Open Martise Atophate Result/Server 'V' Onal Sheet to Count or Open Martise Atophate Result/Server 'S Bests 1 Onal Sheet to Bettery or Open Intele At Temperature Server 'S Bests 1 Onal Sheet to Bettery or Open Intele At Temperature Server 1 Bests 1 Onal Sheet to Bettery or Open Intele At Temperature Server 1 Bests 1 Onal Sheet to Bettery or Open Intele At Temperature Server 1 Bests 1 Onal Sheet to Bettery or Open	rum PRESES PEORES PEORES PEORES PEORES	4	×
ABRITS Dag	notics 347 www.uktrise.com Tearing COROLA (INGINE_PE) Fig. List of Fault Codes For A Constant Robon Robuste Resk 1 Direct Open Mathial Accides Proceedings 'A' Origit Deal to Origit of Open Mathial Accides Proceeding Server 'A' Origit Deal to Origit of Open Mathial Accides Proceedings (Internetic Process Server Origit Server to Battery or Open Internet Ar Temperature Server 1 Barls 1 Origit Server to Battery or Open Internet Temperature Server 1 Barls 1 Origit Server to Battery or Open Internet Temperature Server 1 Barls 1 Origit Server to Battery or Open Internet Temperature Server 1 Barls 1 Origit Server to Battery or Open Internet Temperature Server 1 Origit Server to Battery or Open Interchip Preside Instance Server, Server 5 'V' Occut Server to Battery or Open		4	×
ABRITS Dag C Term	notici 347 www.uktrisc.com Teyrin OROLA (1963/96_14) Fack Computer Robotic Robustie Resk 1 Direct Open A Computer Robotic Robustie Resk 1 Direct Open Robotic Pathone Add Rises Sensor 'W' Orold Sheet to Orole A Short to Bettary or Open Intelse An Temperature Sensor 'W' Orold Sheet to Direct or Open Intelse An Temperature Sensor 'W' Orold Sheet to Bettary or Open Intelse An Temperature Sensor 'W' Occub Short to Bettary or Open Intelse An Temperature Sensor 1 Bank 1 Occub Short to Bettary or Open Intelse An Temperature Sensor 1 Bank 1 Occub Short to Bettary or Open Intelse An Temperature Sensor 1 Direct Short to Bettary or Open Intelse An Temperature Sensor 1 Direct Short to Bettary or Open Intelse An Temperature Sensor 1 Direct Wester to Bettary or Open Intelse An Temperature Sensor 1 Direct Wester to Bettary or Open		0 41	×
ABRITS Dag	notics 347 www.uktrino.com Teyrin GRANA BRANE, H Teach List of Fault Codes From A Constant Reaton Robusta Bank, 1 Ontal Open Mainted Abooksis Resource Dana Grane Grand or Open Mainted Abooksis Resource Dana Stream Ontal Short to Battary or Open Interind Abooksis Resource Dana 1 Ontal Short to Battary or Open Interind Abooksis Resource Dana 1 Ontal Short to Battary or Open Interind Abooksis Resource Dana 1 Ontal Short to Battary or Open Interind Abooksis Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Resolution Resource Dana 1 Ontal Short to Battary or Open Depart Case 1 Samparature Barner 1 Depart Science Ontal Short to Battary or Open		0	8
Admits Dag Controller Gen Hulle Read hulle	notics 34.7 www.uktrino.com Team COROLA DEGRE_PS TAKE List of Fault Codes List of Fault Codes For A Computer Robuste Relet 1 Onset Open Manifol Abookste Ressure Barners 'A' Onset Street to Device or Open Manifol Abookste Ressure Barners' A' Onset Street to Device or Open Manifol Abookste Ressure Barners' Device Street to Bettery or Open Index Ar Temperature Sensor 'A' Onset Street to Bettery or Open Index Ar Temperature Sensor 1 Device Street to Bettery or Open Index Ar Temperature Sensor 1 Device Street to Bettery or Open Restle, Read Restlem Sensor (Better V Device Street to Bettery or Open Restle, Read Restlem Sensor (Better V Device Street to Bettery or Open Restle, Read Restlem Sensor 1 Device Street to Bettery or Open Restle, Read Restlem Sensor 1 Device Street to Bettery or Open Restle, Read Restlem Sensor 1 Device Street Votes Street to Bettery or Open Restlem Restlem Sensor 'W Bark 1 or Single Sensor Orise Street to Bettery or Open Genetisch Restlem Sensor 'W Bark 1 or Single Sensor Open Elected Street to Bettery or Open		4	×
ABRITS Dag Sec to Re Der fluide Red fluide	notics 34.7 www.uktrine.com Teenson Control 14.7 www.uktrine.com Teenson Control 14.7 www.uktrine.com Lists of Fault Codes Lists of Fault Lists of Code Lists of Fault Codes Lists of Fault Lists of Code Lists of Fault Lists of Code Lists of Codes			×
ABRITS Dag Securite Der fulle	notics 34.7 www.uktrise.com Teyrin COROLA DISARC.FS TAXA List of Fault Codes List of Fault Codes Teir A Commut Proton Robusta Bank 1 Onuel Open Named A Robusta Robusta Bank 1 Onuel Short to Battary or Open Distair Robusta Robusta Bank 1 Onuel Short to Battary or Open Distair Robusta Robusta Banks 1 Onuel Short to Battary or Open Protoc/Robust Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 Onuel Short to Battary or Open Robusta Robusta Robusta Banks 1 or Single Soner Oruel Short to Battary or Open Robusta R			×
ABRITS Dag Seru Re Der fuße Recthulte	notics 31.7 www.uktrino.com Territoria Collecture Coll			×
Admits Dag	notics 31.7 www.uktrine.com Terris COROLA DISARC.FI TAKE List of Fault Codes For A Constant Proton Robusta Rais 1 Onuil Open Manfold Abooks Prosecular Series 'A' Onuil Steri to Grand or Open Manfold Abooks Prosecularization forward Series Could Steri to Battery or Open Interior Networks Freezer 1 Bank 1 Onuil Steri to Battery or Open Interior Networks Process 1 Bank 1 Onuil Steri to Battery or Open Interior Networks Process 1 Bank 1 Onuil Steri to Battery or Open Interior Networks Process 1 Bank 1 Onuil Steri to Battery or Open Interior Networks Process 1 Bank 1 Onuil Steri to Battery or Open Interior Networks Series (Without Sterier 1 Battery or Open Interior Networks Series 'W' Onuil Steri to Battery or Open Depre Context Temperature Series 'D Could Steri to Battery or Open Series Process Temperature Series 'W' Onuil Steri to Battery or Open System Intelage Could Stort to Council and Open Actuator Natery Vitage 'N' Onuil Steri to Series Specified Performant Network Series 'W' Onuil Steri to Series Specified Performant Network Vitage 'N' Onuil Steri to Series Specified Performant Resider Series 'W' Onuil Steri to Series Specified Performant Resider Series 'W' Onuil Steri to Series Specified Steries Specified Performant Theorem Specified Performant Specified Performant Specified Performant Concert Specified Performant Specified Performant Specified Performant Specified Performant Specified Performant Concert Specified Performant Speci			×
ABRITE Dag	Incided 34.7 www.uktime.com True and COROLAL (INSUE, M. State, M. State List of Fault Codes Ford A Constant Router Rotates Resk 1 Deal Open Rates of Valence AF Res Sensor 'V' Oriel Sheet to Grant of Open Manhod Abades Result/Barenetic Result Sensor Cruit Sheet to Battery or Open Interior Names and Research Result Sensor Cruit Sheet to Battery or Open Interior Names Research Sensor 1 Barls 1 Grant Sheet to Battery or Open Interior Names Research Sensor 1 Barls 1 Grant Sheet to Battery or Open Interior Names Research Sensor 1 Barls 1 Grant Sheet to Battery or Open Interior Research Sensor/Select W Cruit Sheet to Battery or Open Rescale Reads Readow Sensor/Select W Cruit Watage Out at Range Rescale Reads Readow Sensor/Select W Cruit Watage Out at Range Rescale Reads Readow Sensor/Select W Cruit Watage Const Sheet to Battery or Open System Integer Cruit Sheet to Sensor 6 could ar Open Assame Reads Watage 'W' Cruit Sheet to Sensor 6 could Sheet to Battery or Open Rescale Reads Readow Sensor(Select W Cruit Watage Constations Septial Deal Open Rescale Reads Readow Sensor(Select S 'W' Year Watage Constations Sensor Grant State Rescale Read Readow Sensor(Select S 'W' Year Watage Constations Sensor Grant Sensor Grant Sheet to Battery or Open Rescale Reads Readow Sensor 'W' Oncut Sheet to Battery or Open Rescale Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Context Reads Readow Sensor 'W' Occut Sheet to Battery or Open Contex		0	×

#### 3.2 Live Values Monitoring

The software gives you the option to monitor live values for diagnostic purposes. Live values are accessed by opening the module you want to work with from the main screen, and selecting the "Live Values" button on the left side. Then you will see a list of options you can select for monitoring as in the screenshots below:

ABRITES Diag	rootis 147 w	ere abritati a				-	0	×
5	Toyota	CORONAA	INDR.PT	Values			4	٥
					Values			
Ques	Preserv			10	Total Detance Traveed			- 2
_	Expres Canton	4 C			Tutal Datarce Traveed			- 1
Solid Al	Phil General				Version Pump			
Select None	Pri / Grin			10	VSV Tor Veril Value			
	RIMORE	1045			Rust Rump Duty Rates			
	PULW CE 14			16	Dual Humo Dury Batte			
	Per Teorda			10	(19) Tellinetical Restores Machines Contain Time in the Rest i			
	Philippine Ca	ritrol .		1	OF DESCRIPTION POINT PRESENCED THE WITH BEST			
	Ptol Nativa Com	esi .		14	GP Offerential Pressure Hastnam Update Trise Ar Flow Bank2			
	75176484				OFF Differential Pressure Nasimum Bank1			
	Pol Starting				OFF Officeratel Prevale Mailman Beng			
	Pot Rough 10				GPF Variance Determination Threshold Servici			
	Per Degende	le.			CPF Variance Bank1			
	Million W				GPF Variance Determination Threshold Bank2			
	PUICAT Core	enie			GPF Variance Bank2			
	People Fuel is	-			Tutal Datase Traveled			
	Const General			- 0	Tata Datavia Travend - Unit			
ABRITES	Conveion Ital			- 6	New Carlo			
	damage and	-			and show			

ABNTIS Diagnostics 347 www.abnins.com	– a ×
S Nove Topics CROAM INSIDE_PT Comy	<u>ai</u> 0
Values	
Current Fuel Tape	Gedrepetra A
349 Imaty Ar Few Average Tanai	E-42 (protect)
10 Server votage 1052	8.000 (V)
long FF REEL	-04202 [94]
A.F. Losse's Yolges Lifes Barrie 1	-(83.94)
ALP Lance Visitar Line Bank 1	47/94
4/F (see Take McHu ) Bell (	44.64
UP Laser Value Pacific 2 Back 1	47(%)
A/F (see "Volar High Bork (	43791
(wind Tangatatus	400
97 they blends house recyclicity	-100.30 (MN)
IT Summiner Auto Band	101
Aut Department Rates Ranks	151

### 4. Special Functions

The ABRITES Diagnostics for Toyota/ Lexus/ Scion Online is a powerful tool for vehicles of these brands. In the current version the software offers the following special functions:

- Key Learning
- Airbag 2020+ clear crash
- Read/write DFLASH
- Dashboard (Mileage) Calibration
- ID Code box reset

Please, note that depending on the version you have purchased some of these functions may not be available in your configuration. In this case a message will inform you that you need to acquire an additional software license.

Each special function is described in a dedicated section of this user manual

AR	ITES Diagnostica	350 www.abrite	1.00 <b>m</b>	- 0	×
	Home	Toyota	8404	AMS wild unit 09 Feb 2020 cliff	۲
Enter, F	Rim			General Diagnostics	
2	Scan				
Cle	er fæðis				
Vehic	cle Report				
say	Learning				
4	labag .				
Dash	Calibration				
	D Box				
ABI	RITES				

### 5. Key Learning

When the "Key learning" special function is selected it is very important to follow the exact directions of the application.

Required Hardware:

Depending on the type of key the vehicle is using you will need a DST AES or a HITAG AES transponder emulator:

TA64 HITAG-AES transponder emulator

TA68 DST-AES transponder emulator

<u>CB012 - Cable set for direct can-bus connection</u> - required for the latest Toyota and Lexus models CB031 - Extension Cable for Direct Connecting to Toyota/Lexus Smart System with B9/BA Key (recommended)

TA71 - Key for TOYOTA - "BA" (recommended)

Once the model is selected, you have the option to learn keys under the "Key Learning" menu:



The Key Learning functionality for Toyota supports both spare key programming and when all working keys are lost. This software covers models listed below, regardless of the market on which they are offered - all versions of the models are supported (US, European, UK, Asia). Smart system reset is NOT needed, nor a connection to Toyota servers. Depending on the transponder type in the vehicle, either a DST-AES or a HITAG-AES emulator will be required.

TA71 - Key for TOYOTA - "BA" type is a key developed by Abrites for vehicles using HT-AES BA-Type key. It can be learned to Toyota vehicles 2021+ with Tokai Riki smart system, with the use of TN014 license.

# 2025 Abrites Dia

#### Supported models:

Toyota:

- Corolla 2018+ AA HT-AES
- Camry 2018+ A9 DST-AES
- Highlander 2018+ AA DST-AES
- Mirai 2020+ AA DST-AES
- CH-R 2018+ A9 DST-AES
- Prius 2018+ A9 DST-AES
- Avalon 2018+ AA DST-AES
- RAV4 2018+ AA DST-AES
- Yaris 2020+ (XP210) BA HT-AES
- Yaris Cross 2021+ (XP210) BA HT-AES
- Corolla Facelift 2022+ (E210) BA HT-AES
- Corolla Cross Facelift 2022+ (XG10) BA HT-AES
- Sienna 2020+ (XL40) BA DST-AES
- Harrier/Venza 2020+ (XU80) BA DST-AES
- Tundra 2021+ (XK70) BA DST-AES
- Land Cruiser 2021+ (J300) BA DST-AES
- RAV4 Facelift 2022+ (XA50) BA DST-AES
- Aygo X 2022+
- Yaris GR 2021+
- Prius WX60 2022+
- BZ4X 2022+

#### Lexus

- Lexus RX DST-AES
- Lexus RXL DST-AES
- Lexus ES DST-AES
- Lexus LS DST-AES
- Lexus UX DST-AES
- Lexus RX 2022+ B9 DST-AES
- Lexus NX 2021+ B9 DST-AES
- Lexus LX 2021+



Starting the Key Learning procedure is executed via OBDII, and consists of the following easy steps. These steps are the same when using any of the available Toyota Licenses. The only difference is the key transponder type used:

1. Press and hold the START button to begin the procedure



2. Switch IGN ON and then OFF while leaving hazard lights ON





3. Confirm whether you want to prepare a Master Key emulator



4. Reading and modifying the required data









6. TA64 has been detected and is being prepared as Master Key





7. Use the prepared TA64 to switch IGN ON

URITES Dias	proting \$1	1 mm dat	-						
-	1.00	CROIA	-	-Lance					4
					Master key	prepared. Turn ign	tion ON with it.		
						Provide law			
						10000			
						500			
					Property lines			1000 PM	

8. Leave IGN to the ON position and open the driver's door

ABR/10) Chap	nation 22.5 mercadari	No. 1999			- d X
3	100 000A	tian interes			<u>a</u> 0
			Keep ignb	on ON and open the driver's door. Press NEXT to continue	
				Paper in sale	
				5109	
£			C. Average and	and the second se	 



#### 9. Touch the START button with the TA64

Touch the start button with the MASTER key	
STOP	

#### 10. TA64 detected as Master Key

ABR/101 Diagon	manufation and the second				- 0	8
3	Ture INDA eas					4 0
		N	STER key detector	đ		
			STOP			
5	(Sector)	Complete Complete State		Concentration for		1.3



11. Use the new key to touch the START button and learn it

Touch the start button with the NEW key	Aller You Chagonalisa 2013 - anno Aller You Chagonalisa 2013 Aller You Chagonalisa 2013 - Anno Anno Anno Anno Anno Anno Anno An		
		Touch the start button with the NEW key	
STOP		STOP	

12. The new key is detected





13. The key is now learned and the procedure has successfully finished

	Rec	Toyota	COROLLA	Keys	Loaming		<u>a</u> 0
ben	Table 1			and a			
				The NE	W key lear	ned successfully	
				Le	arri another	Finish	
					CT	20	
					510	<i>n</i> -	
<				-		Proper Name Key	2

# 2025 Abrites Diagnostics for Toyota/Lexus/Scion Online User Manual

#### **5.1 Additional Connections**

The software used to require Internal CAN Connection with the use of CB012, which is not required anymore for the majority of the models. In some rare cases the software might ask for internal CAN Connection using CB012. Models covered by TN014, TN015, and TN016 require the CB012 connection:

- Yaris 2020+ (XP210) BA HT-AES
- Yaris Cross 2021+ (XP210) BA HT-AES
- Corolla Facelift 2022+ (E210) BA HT-AES
- Corolla Cross Facelift 2022+ (XG10) BA HT-AES
- Sienna 2020+ (XL40) BA DST-AES
- Harrier/Venza 2020+ (XU80) BA DST-AES
- Tundra 2021+ (XK70) BA DST-AES
- Land Cruiser 2021+ (J300) BA DST-AES
- RAV4 Facelift 2022+ (XA50) BA DST-AES
- Aygo X 2022+
- Yaris GR 2021+
- Prius WX60 2022+
- BZ4X 2022+
- Lexus RX 2022+ B9 DST-AES key
- Lexus NX 2021+ B9 DST-AES key
- Lexus LX 2021+

All of the Toyota/Lexus models that are covered by the TN011, TN012 and TN013 licenses share the same Smart System pin out when connecting to the internal CAN BUS where pin 1 is the CAN H and PIN 2 is CAN L.

This is what the connector looks like and what pins to connect to when working with CB012:



CB031 - Extension Cable for Direct Connecting to Toyota/Lexus Smart System with B9/BA Key - will let you make the connection to vehicles Toyota/Lexus equipped with Smart System with B9/BA Key. The connection to the smart system of the vehicle much easier, without the need to search for the CAN wires and puncture them. It helps in All Keys lost situation, when you need to read the Smart System Module.

In order to use CB031:

- Disconnect the smart system connector
- Connect CB031 to the smart system and to the wire (connector) from the vehicle it works as a bypass
- Connect dedicated slots to the CB012 CAN connectors (Red and Blue)



#### 5.2 Deleting keys

Toyota Online software gives you the option to delete lost keys from the memory of the vehicle. In order to complete the task, you have to open the "Key Learning" special function and select "Delete Keys" menu. You then need to follow the on-screen instructions.

**Important:** Make sure you have a working key for the vehicle so that the procedure can be completed with success - the car will remain with the working key learned to the vehicle, and the rest of the keys deleted.

A REAL PROPERTY AND A REAL	I MARKAN AND		Louise to and	plarman a		-
n Am6 wakt watt (1) Say 2024 📶 🦉	Erector keys	Kayn	CHORE	Teyette	182710	5

You are about to delete all keys except last used master key

Continue

### 6. Airbag

The latest update of the Toyota Online software introduces the option to read/write Dflash and clear Crash Data of Airbag modules 2020+. This option is access from the main screen, on the left hand side you will see a button "Airbag", which will open the menu and the functionality. The software is intuitive, from the buttons you are able to read the Dflash, clear the crash data, and then write the file back to the unit.

ADDIT[1.01	sponoi 14.7 w		÷						0	к
5 100	Taute	10101.4	Overlinen						4	0
					Select operat	tion				
			Read DPL	AGH	Write DPLAS		Cear Draft			

### 7. Mileage Calibration

The Toyota/Lexus Online software provides the mileage calibration option for instrument clusters using S6J3 unlocked MCUs or RH850 MCUs. Under the "Dash Calibration" menu there are 4 options:

- "Read" to read dashboard and display the current odometer value (During this procedure a back-up file is created)
- "Write" to write the new value of the odometer. Write procedure will also create a back-up file.
- "Restore" to restore the original file to the unit, by selecting a file from a drop down menu

#### **Required Hardware:**

- AVDI
- CB012 or CB031 when internal CAN is required

#### 7.1 Connection:

Procedures are executed via OBDII and in some cases additional internal CAN connection via CB012 or CB031.



#### 7.2 Dashboard Calibration for Instrument Clusters with S6J3 Processors

- Procedure is executed via OBDII for vehicles with old type of gateway
- For vehicles with a new type of gateway you will need internal CAN connection via CB012 or CB031. A message in the software will let you know if this connection is needed.

Once connection is established, you can proceed with the procedure:

**Read:** Reads the dashboard and displays the current mileage. You can always restore the unit, backup is automatically created, and you can select the file you need from a drop down menu.

Constantion (1)	- 0.4
A Here Series COROLIN Californiae	alatt valit vord 16 May 1920 📶 🚳
Backup file saved in Documents/Abritas.soft S6/3_dumg_20250114_05456	ware for ID 1753C0/Toyota/ 100000km/bin
THE NAMES AND ADDRESS OF THE OWNER	a transit SAN Mar.
The State of State of State	
Application of the control of the co	Street of street, or other street, or other
Odsingter value 1000	20 km
Ok	
ABBITES	
Second second	

**Write**: The software will re-read the dashboard and notify you that a backup file will be created. Once the backup is complete, you can set the new odometer value and write it into the Instrument panel.



**Restore**: Restores the dashboard using an already read/saved backup file. The software will visualize all created backup files.

Selecting the correct backup file is essential. The backup file's name typically includes the processor type as well as the date and time it was created.

		61						
	Load rec	overy file:						
	2002_0000p_coc4.coo_1343	00_000,00000000000000000000000000000000						
	\$6J3_dump_20241206_135111_30050km.bin							
	S6J3_dump_20241206_1406	54_30050km.bin						
	\$6J3_dump_20250114_0844	56_100000km.bin						
<	56J3_dump_20250114_0845	59_100000km.bin						
	RH850_dump_20250114_083	3110_75000km.bin						
	RH850_dump_20250114_08	3259_75000km.bin						
	Load	Cancel						
AR-211 (mg	and the second sec		11.7 ×					
<u>.</u>	e hyde 00401.14 Califration	AM3 upod urest 10 Mag 2020	1 0					
		Dash Calibration						
feet	This function requires connection to the OBD	R port or the internal CAN bus.						
-	Log Converting by dieth inver OBD1.							
Name of Street	Connection associated over Q808 Dash calibration completed soccessfully!							

ABRITES

#### 7.3 Dashboard Calibration for Instrument Clusters with RH850 Processors

For vehicles equipped with dashboard units with RH850 processor you will need to connect to the OBDII port and to the internal CAN Bus of the vehicle, with the use of CB012 or CB031.

The procedure is identical to the one explained above in section <u>7.2 Dashboard Calibration for Vehicle Instrument Clusters with S6J3 Processors</u>- you can read, write and restore, for details refer to the section above

### 8. ID Code Box Reset

ID Code box reset is necessary if the smart system, the ECU, or the ESL is replaced. The replacement module should be paired with the ID Code Box. For this synchronization, a "virgin" or new ID Code Box is needed.

ID-Code Box 2021+ reset and adaptation functionality helps in immobilizer module replacement situations in all Toyota and Lexus models, produced until 2024.

Legacy functionality of TN009 is also included, and it works for resetting ID Code Box units of vehicle up to 2020, with or without an ELS.

A working key for the vehicle is needed!

In case of a Smart System replacement, you will most probably have no working key for the replacement smart system. At this point you will have to first execute a key learning procedure, and continue with the ID Code box reset once a working key is present.

NOTE: Without the ID Code Box reset functionality, replacing any immobilizer-related module in Toyota vehicles would require swapping the entire immobilizer system - the Smart System, ID Code Box, Engine Control Unit (ECU), and ESL (if present). This would mean extensive disassembly and significant costs for both labor and replacement parts. However, with the ID Code Box reset functionality, you can simply reset the ID Code Box and synchronize a used module. This allows for seamless integration without the need to replace additional system components, saving time and reducing overall costs.

When a virgin ID-code box is installed in the vehicle, synchronization with the ECU and Smart system is required!

#### Supported vehicles:

All Toyota and Lexus models up to 2024

**N.B**. In case the ID-Code-Box reset function is not possible for the module you are working with, please contact us at support@abrites.com

# 2025 Abrites Diagnostics for Toyota/Lexus/Scion Online User Manual

#### 8.1 Connections

In order to perform ID-Code-Box reset procedure, internal LIN-BUS connections is needed. For the purpose use the CB012 (mandatory) and CB031 (recommended) cables for this purpose.

- 1. CB012 needs to be connected between the AVDI and the CB106, the red connector of the CB012 is connected to the green connector of the CB031.
- 2. Disconnect the Smart System (SMT)
- 3. CB031 is connected to the wiring installation connector that goes normally into the smart system.. (If CB031 is not available, please connect the red cable of CB012 with the use of the needle pinch to the wire that goes to PIN 8 (LIN) of the Smart System Module (SMT),
- N.B. Make sure the SMT is disconnected and do not connect the other side of the CB031 to the SMT

Address Degravites (1.8) analysis area			- 0 ×
1 - Parts   120014	All has a little		al ©
	_		
	Rese Discover() the Smart Box using	Tystem and connect to the ID the ID the ID the ID to	
	Reset	Cancel	
	Ameri ICI Rosc Sans	SMT Systempine	



#### 8.2 ID Code Box Reset Procedure

Once the connections are done, the procedure is very simple and fast.

- 1. Open the Toyota Online software
- 2. Select "ID Code Box" special function
- 3. Press "Reset"

ALB-1911 (maj)	den 16.0 mens aber						- B. X
4	Topta	004034.4	to the				ە 🔝
town 1							1111 V
				(man)			
				1			
			10	(	1		
			1		1		
				-			
			Res	etting the ID I	bax.		
-							
N-SPR							
			Repet ID Dox	Second	Suric anoi	ine.	
			Second Second		Veranti Contra		

# 2025

### 9. Smart System Synchronization

ID-Code-Box adaptation (synchronization) procedure in vehicle (new or virgin second-hand module) to the Smart System via OBDII is needed after the ID code box reset procedure.

#### 9.1 Required connections:

Procedure is executed via OBDII Connect AVDI to CB106 and CB106 to the OBDII port of the vehicle.

#### 9.2 Procedure

Once the connections are done, the procedure is very simple and fast.

- 1. Open the Toyota Online software
- 2. Select "ID Code Box" special function (at this point you will need IGN ON with a working key)
- 3. Press "Sync SMT"

Once complete, you will have the Smart System and ID Code Box synchronized. ECU still needs to be synchronized at this point.

California (id. min.defector)			- 0	
The second states and the second seco			4	0
( 10 mpc				
	Finance for	laster (N		
5				
	Start	Cancel		
		-		
Also .				
		CSMT Sysceropine		

### **10. ECU Synchronization**

ID-Code-Box adaptation (synchronization) with the Engine Control Unit via OBDII is needed after if you are exchanging the ID Code Box or the Engine Control Unit (ECU/HV)

If the synchronization of the ECU is lost you will get the following DTC: "**B279986**" which will also point you to the necessity of executing the ECU Sync procedure.

#### 10.1 Requirements:

External power supply is strongly recommended, as the procedure takes about 40 min. Procedure is executed via OBDII Connect AVDI to CB106 and CB106 to the OBDII port of the vehicle.

#### 10.2 Procedure

Once the connections are done, the procedure is very simple and it takes about 40 min.

- 1. Open the Toyota Online software
- 2. Select "ID Code Box" special function
- 3. Press "Sync Engine"
- 4. N.B. "do not touch anything in the vehicle during the procedure"

At this point you should have the vehicle fully functional.

Address Degravited (5.8) analyzinter.com			- 0 X
T term term (2001)	ates 2		@ hb
al and			
		1	
	The MUST connect external	preserve augusty 12 Voltage to the	
	DO NOT TOXOL arythic	tion of the procedural og is the webicle during the	
	Quin		
	Start	Cancel	
	-		
alas .			
		CSMT Systempine	
		<u></u>	