# BYD 2023 Yuan PLUS EV Multifunction Video Controller Static Calibration

## Tested Model: BYD 2023 Yuan PLUS EV

# **Function Description:**

This function is used to perform static calibration of the front camera for Yuan PLUS EV. This function needs to be executed when the following situations occur:

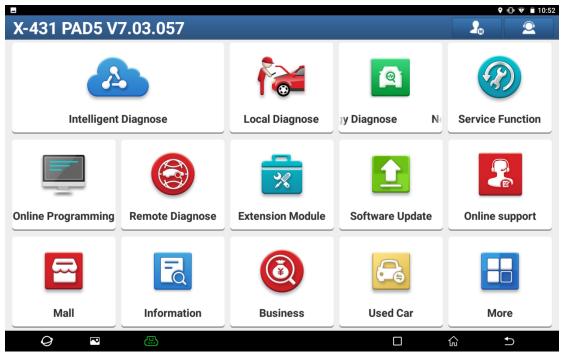
- 1. The front camera or multifunction video controller is replaced.
- 2. The front windshield is replaced.
- 3. The body structure is changed and the chassis is adjusted.
- 4. There are DTCs related to no-calibration.

# **Execution Conditions:**

- The ADAS device is activated.
- The target and target placement tool are available.
- The calibration site is suitable.
- The ignition switch is in the ON position.
- The diagnostic instrument is connected to the network.

# **Procedure:**

1. On an X-431 PAD 5, choose [Local Diagnose], and then choose [BYD] for testing.



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on Am	erican	European	Asian	Chinese	HD I	HD Reset	Can Bus	Pin Detection	Purchase	History
Diagnostics for		Diagnostics for		Diagnostics for		Diagnostics for		Diagnostics for	Diagnostics for	
EOBD	/OBDII	ВҰ	D	ECUA	D	МАХ	tus	SGMW	:	ZD
	by LAUNC	н	by LAUNCH		by LAUNCH		by LAUNCH	by LA	UNCH	by LAUNCH
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2. Choose the latest BYD software upgrade version V19.80 or later. Click OK.

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Vehicle Version Information		<b>(</b>	<b>î</b>		₽			
Software ID	Version #							
BYD	V19.80							
BYD Diagnosis Program V19.80								
UPDATE								
Summary:								
Added five models Toyota bZ3, T5, T5A, T5D and T5LC. Updated the front i	radar and front carr	era static calibra	ation target pl	acement for a	II models.			
New Functions:								
None								
Optimized Functions:								
<ul> <li>1) Added basic functions and special functions including version information, DTC reading, DTC clearing, data stream reading, actuation test, battery pack code calibration, motor zero position calibration, VIN writing, airbag decoding, dynamic calibration and static calibration of 36 systems for Toyota bZ3.</li> <li>2) Added functions of version information, DTC reading, DTC clearing, data stream reading and actuation test of 186 systems for four models BYD T5, T5A, T5D and T5LC.</li> <li>3) Updated the front radar and front camera static calibration target placement. Added the support of ADAS products such as ADAS PRO PLUS V2, ADAS ECO ADAS PADAB SINT ADAS MODEL US V2, ADAS ITE</li> </ul>								
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### 3. Choose [Automatically search car model].

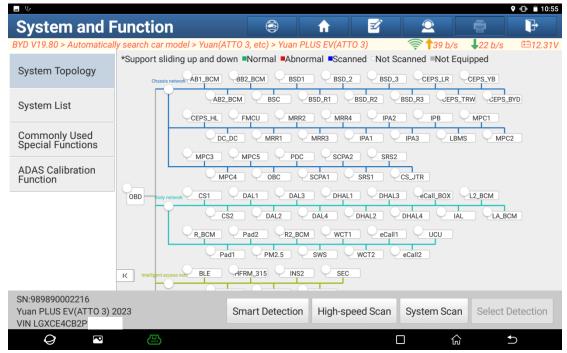
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Show Menu	6	<b>f</b>	<b>Z</b>	2		ŀ		
BYD V19.80 > Menu				🛜 🕇 746 l	b/s 🕹642 b/s	⊞12.30V		
Q Please enter keyword								
Automatically search car model								
Manually select car model								

SN:989890002 2023	216				
VIN LGXCE4CB	2P2 <sup>2</sup>				
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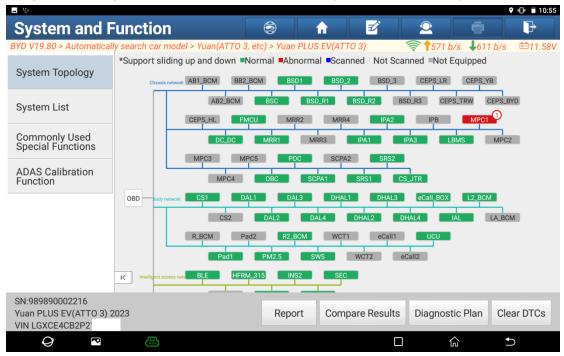
 Determine whether the identified model is consistent with the actual model. If they are consistent, click [Correct]. Otherwise, click [Manually select car model] to select the correct model for testing.

BYD V19.80 > Automatically search car model       Engra         List       Check Vehicle Information         Country       China         Make       BYD         Car model       Yuan PLUS EV(ATTO 3)         Manufacturing date       2023         VIN       LGXCE4CB2P2         Test suggestions       When the recognized vehicle model does not match with the actual model, please select the correct mo         Manually select car model       Correct       Back	<u>ч</u> У					🎗 🕕 📋 10:55		
List Check Vehicle Information   Country China   Make BYD   Car model Yuan PLUS EV(ATTO 3)   Manufacturing date 2023   VIN LGXCE4CB2P2   Test suggestions When the recognized vehicle model does not match with the actual model, please select the correct model	comatically se	arch car model		<b></b> ₹		₽		
Country       China         Make       BYD         Car model       Yuan PLUS EV(ATTO 3)         Manufacturing date       2023         VIN       LGXCE4CB2P2         Test suggestions       When the recognized vehicle model does not match with the actual model, please select the correct model         Manually select car model       Correct       Back	BYD V19.80 > Automatical	y search car model			-	⊞12.30V		
Make     BYD       Car model     Yuan PLUS EV(ATTO 3)       Manufacturing date     2023       VIN     LGXCE4CB2P2       Test suggestions     When the recognized vehicle model does not match with the actual model, please select the correct mo       Manually select car model     Correct     Back	List	Check Vehicle Information						
Car model     Yuan PLUS EV(ATTO 3)       Manufacturing date     2023       VIN     LGXCE4CB2P2       Test suggestions     When the recognized vehicle model does not match with the actual model, please sele       Manually select car model     Correct       SN:98980002216       2023	Country	China						
Manufacturing date     2023       VIN     LGXCE4CB2P2       Test suggestions     When the recognized vehicle model does not match with the actual model, please select the correct model       Manually select car model     Correct       SN:98980002216       2023	Make	BYD						
VIN       LGXCE4CB2P2         Test suggestions       When the recognized vehicle model does not match with the actual model, please sele the correct mo         Manually select car model       Correct       Back         SN:98980002216       2023	Car model	Yuan PLUS EV(ATTO 3)						
Test suggestions     When the recognized vehicle model does not match with the actual model, please selected the correct model       Manually select car model     Correct     Back       SN:98980002216     2023     2023	Manufacturing date	2023						
the correct motor the correct	VIN	LGXCE4CB2P2						
SN:989890002216 2023	Test suggestions		e model does not	match with the	actual model, pl	ease select		
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2023	Manually	select car model	Corr	ect	Bac	k		
	2023							
$Q \square \bigcirc \Box$	VIN LGXCE4CB2	<u></u>			$\wedge$	<b>*</b>		

#### 5. Click [High-speed Scan].



6. The correct front camera system is scanned out. Choose [MPC1] (VEONEER) multifunction video controller (MPC\_VEONEER).



#### 7. Click [ENTER].

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System and F	Function	<b>(</b>	fi l	<b>₹</b>	2	• •
BYD V19.80 > Automatical	lly search car model > Yuan(ATTO 3	, etc)		···		
System Topology	*Support sliding up and down	Norm (VEONE		function vio	leo controller (N	MPC_VEONEER)
System List	AB2_BCM CEPS_HL FN		1100	No calib	ration data	
Commonly Used Special Functions	DC_DC MPC3 MI	PC5 Cu	rrent			Code Search
ADAS Calibration Function	MPC4					Code Search
	OBD Body network CS1 D/					
	R_BCM Pa	ad2				
	K Intelligent access nets BLE HFR	M_315		EM	NTER	
SN:989890002216 Yuan PLUS EV(ATTO 3) 2 VIN LGXCE4CB2P	2023	Report	Compa	re Results	Diagnostic Pla	n Clear DTCs
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### 8. Click [Special Function].

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Show Menu 😂						
BYD V19.80 > Automatically search car model > Yuan(ATTO 3, etc) > Y	uan PLUS EV(ATTO 3) > (VEONEER) multifunction video co ⊞12.34V					
QPlease enter keyw						
Version Information	Read Fault Code					
Clear Fault Memory	Read Data Stream					
Special Function						

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### 9. Click [After-sales calibration].

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BYD V19.80 > Automatically search car model > Yuan(ATTO 3	3, etc) > Yua	an PLUS EV(AT	TO 3) > (VEO	6		⊞12.34V	
				Q	Please ent	er keyword	
After-sales calibration		Write to SC	2E (domes	tic version)			
Write to SC2EM (Australia)	Write to SC	2EM (New	Zealand)				
Write to SC2ES (Netherlands)		Write to SC2ER (UK)					
Write to SC2EN (Japan)		Write SC2EK					
Write to SC2EZ (United Arab Emirates)		Write to SC2E (overseas version)					
MPC Controller Configuration Write							
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2P							
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Show Menu BYD V19.80 > Automatically search car	Prompt Message	Q         P         P				
After-sales calibration	Calibration prompt: 1. Ensure that the relative position of the vehicle and the calibration plate is adjusted in place (completed during	Please enter keyword				
Write to SC2EM (Australia)	four-wheel alignment) 2. Drive the vehicle to the designated position	Zealand)				
Write to SC2ES (Netherlands)	<ol> <li>Prepare calibration equipment</li> <li>Measure all parameters required for</li> </ol>					
Write to SC2EN (Japan)	offline detection and calibration 5. Start calibration 6. Tooling positioning parameters:The					
Write to SC2EZ (United Arab En	distance from the center of the front axle to the camera calibration plate is	s version)				
MPC Controller Configuration V	6000mm, and the height from the center point of the camera calibration plate to the ground is 1449mm					
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2P!	CANCEL					
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#### 10. Drive the vehicle to a location suitable for calibration and click OK.

11. Taking the ADAS ECO product as an example, update the FLYER\_ADAS\_ECO configuration file to the latest version. If it has been updated, it does not need to be updated.

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		Configuration	on file updat	e			er keyword
After-sale	Name	Version		Sta	te		
	ADAS_ECO	10.04			Download	ing II	
Write to S			]				
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				file updat				er keyword
After-sale	Name	sion		Sta	ite			
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Write to S		Software has installed.	been suc	cessfully				
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MPC Con								
SN:9898900 Yuan PLUS I VIN LGXCE4	EV(AT <u>TO 3) 202</u> 3							
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### 12. The configuration file is updated successfully. Click OK.

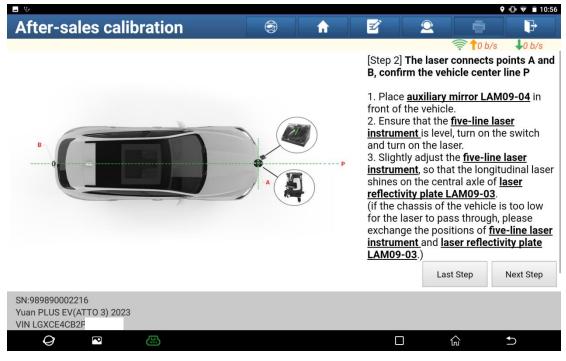
### 13. After the preparation before calibration is completed, click OK.

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Show Menu	After-sales calibration	2	ē	F			
BYD V19.80 > Automatically search car	Calibration is required in the following cases:	↑0 b/s ↓0 b/s ₩12.3   • Please enter keywork					
After-sales calibration	- The front camera/multifunction video controller has been replaced. - The front windshield has been	ic version)	ic version)				
Write to SC2EM (Australia)	replaced. - Structure changed/chassis adjusted	Zealand)					
Write to SC2ES (Netherlands)	- The horizontal sensor has been replaced. - Related DTCs exist.						
Write to SC2EN (Japan)	Calibration preparations:						
Write to SC2EZ (United Arab En	- The vehicle is parked on a flat ground. There is no load on the vehicle. The steering angle is 0.	s version)					
MPC Controller Configuration V	- All doors of the vehicle have been closed.						
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023	- Vehicle tire pressure is normal. - The vehicle headlights are OFE CANCEL OK						
VIN LGXCE4CB2P			ì	<b>•</b>			

14. Place the target according to the prompts. Step 1: Confirm point A and point B, and click [Next Step].



15. Step 2: Connect points A and B with laser, confirm the vehicle center line P, and click [Next Step].



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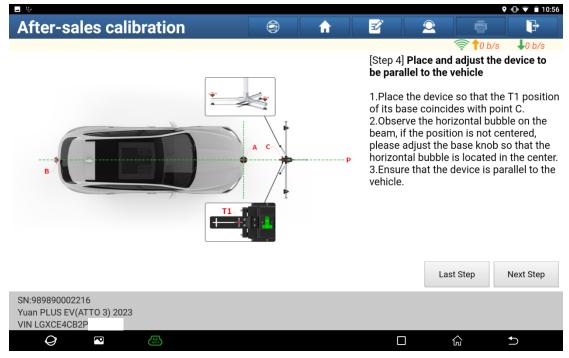
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#### **After-sales calibration** 3 ♠ Ż $\mathbf{Q}$ Ъ **↓**0 b/s **1**0 b/s [Step 3] Confirm point C 1.Place positioning bracket LAM09-05 at the vehicle front wheel hub center. 2.Place Cross positioning sticker on the central horizontal laser line of five-line laser instrument, and mark point A1, it's suggested that the distance from point A A to point A1 is 1000mm/39.37inch; 3 Move five-line laser instrument to point A1, so that its horizontal laser line passes through point A. Measure the distance from D to positioning bracket LAM09-05 on the longitudinal laser line D A1 P1, L=6000mm/236.22inch. Last Step Next Step SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2P ្រ 0 P G Ð � •□• ▼ 🖬 10:56 -After-sales calibration 3 A Ż 2 ₽ 10 b/s 10 b/s 4.Move five-line laser instrument to point D, so that its longitudinal laser line passes through point A1, place Cross positioning sticker on the center line P, and mark it as point C, it is suggested that the distance from D to C is 1000mm/39.37inch. A C P1 D A1 Last Step Next Step SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2P

#### 16. Step 3: Confirm point C and click [Next Step].

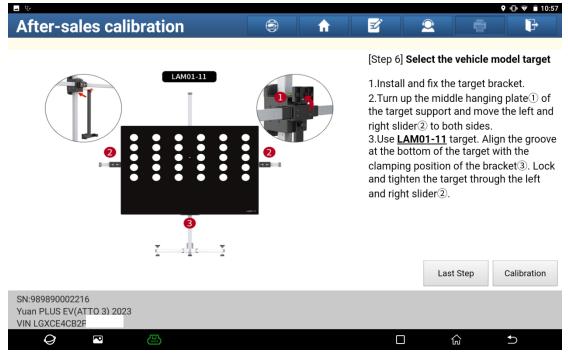
17. Step 4: Set and adjust the device to be parallel to the vehicle, and click [Next Step].



#### 18. Step 5: Set the height and click [Next Step].

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After-sales calibration		<b>f</b>	<u>z</u>	2	ē	ŀ
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			[Step 5	] Set the he	ight	
				ck the fixed		
	-					
				Las	t Step	Next Step
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2P						
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19. Step 6: Select the vehicle model target. BYD uses the Romeo target (LAM01-11). Click [Calibration] to start calibration.



20. Read the calibration results. If the "Calibration Result 1: Completed, Calibration Result 2: Normal" is displayed, the calibration is successful. If it fails, adjust according to the failure prompt, and you can re-calibrate for multiple times. Click [Back] to exit the calibration.

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After-sales calibration	😁 fi 🗾 오 🖷 F				
BYD V19.80 > Automatically search car model > Yuan(A	TTO 3, etc) > Yuan PLUS EV(ATTO 3) > (VEO 🛜 ↑1.11 kb ↓864 b/s 🛛 🖽 12.36V				
Procedure	Result				
VIN writing	VIN writing successful				
Read Vehicle Identification Number (VIN)	Vehicle Identification Number (VIN): LGXCE4CB3P2				
Write SCN parameters	Writing SCN parameters succeeded				
Start the calibration	Return Calibration Result: Running				
Read calibration result	Calibration Result 1: Completed Calibration Result 2: Normal				
Clear DTC	DTC was successfully cleared				
ECU Reset	ECU reset succeeded				
Back					
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2F					
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Procedure		Result					
VIN writing		VIN writing s	uccessful				
Read Vehicle Identification Nun	Vehicle Identification Number (VIN): LGXCE4CB3P2						
Write SCN parameters		Note	s		d		
Start the calibration	Please confirm whether to save the ADAS report?						
Read calibration result	NO		OK	(			
Clear DTC		DTC was suc	ccessfully c	leared			
ECU Reset		ECU reset su	icceeded				
Back							
SN:989890002216 Yuan PLUS EV(ATTO 3) 2023 VIN LGXCE4CB2F							
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#### 21. Click OK to save the ADAS report or click NO to exit.

22. Save the ADAS report, showing that the calibration was successful.

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Report		<b>↑</b>	ē	F				
Vehicle Information								
<b>Year:</b> 2023								
Make:BYD								
Model:Yuan PLUS EV(ATTO 3)								
VIN:LGXCE4CB2P2								
Odometer:19712 km								
Vehicle Software Version:V19.80								
Diagnostic Application Version: V7.03.057								
<b>Diagnostic path:</b> Automatically search car model > Yuan(ATTO 3, etc) > Y multifunction video controller (MPC_VEONEER)	/uan PLUS I		→ (VEO	Authorized				
ADAS diagnosis result								
(Veoneer) Multifunctional Video Controller Success —— After-sales calibration	Static calibration							
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# Statement:

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