

Making Refined Cars for Everyone



Procedures after Control Module Replacement – KX11



- If you replaced the control modules of KX11 model, you need to do related operations through GLDS to complete the replacement work.
- This instruction shows you what you need to do by GLDS after you replaced the controllers.

Procedures after Control Module Replacement for KX11



Steps	Operation	CEM	ТСМ	TACM	SRS	SAS	PSCM	VDDM	DEM	FLC	FLR	SODL/ SODR	DDM/ PDM	SMD	PAS	POT	Other Module
1	Software Reload	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2	Set IMMO	•	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
3	Add Keys	•	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
4	Sunroof Calibration	•	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
5	Perform Initial Learning	×	•	×	×	×	×	×	×	×	×	×	×	×	×	×	×
6	Calibration (gear position sensor)	×	×	•	×	×	×	×	×	×	×	×	×	×	×	×	×
7	IMU Calibration	×	×	×	•	×	×	×	×	×	×	×	×	×	×	×	×
8	IMU & SAS Calibration	×	×	×	•	•	•	•	×	×	×	×	×	×	×	×	×
9	Bleeding of Brakes	×	×	×	×	×	×	•	×	×	×	×	×	×	×	×	×
10	EPB Calibration	×	×	×	×	×	×	•	×	×	×	×	×	×	×	×	×
11	AOC Bleeding	×	×	×	×	×	×	×	•	×	×	×	×	×	×	×	×
12	Dynamic or Static Calibration for FLC	×	×	×	×	×	×	×	×	•	×	×	×	×	×	×	×
13	Dynamic Calibration for FLR	×	×	×	×	×	×	×	×	×	•	×	×	×	×	×	×
14	Dynamic Calibration for SODL/SODR	×	×	×	×	×	×	×	×	×	×	•	×	×	×	×	×
15	Window Initialization	×	×	×	×	×	×	×	×	×	×	×	•	×	×	×	×
16	Seat Module Calibration	×	×	×	×	×	×	×	×	×	×	×	×	•	×	×	×
17	AVM Camera Calibration	×	×	×	×	×	×	×	×	×	×	×	×	×	•	×	×
18	POT Calibration	×	×	×	×	×	×	×	×	×	×	×	×	×	×	•	×

NOTE: The ● mark means need to operate, the × marks means don't need to operate

CEM replacing



Step 1: Turn off GLDS VIN decoding



CEM replacing



Step 2: Close GLDS and restart again, write the right VIN code and click "connect";

Step 3: Choose Software module, reload CEM software(if failed, restart the program and reload again);

Step 4: On "SET IMMO", write ESK code to new CEM.

Note:

- When reloading CEM software, connect a battery charger to ensure vehicle power supply;
- After finishing these steps, turn on the GLDS "VIN decoding" .

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Engine:	~	Transmission:	Steering:	Ŷ	Body Style:	~	Special Vehicle:	>	🕞 Select					
Clear A	All													



- Download software "Add/remove key" (operations are the same with other software upgrades and reload);
- Run the software program and a new interface will be opened, we can choose "add key" or "remove all keys";

Notes:

- All the keys will be removed when we choose
 " remove all keys", unable to select the number of keys to remove;
- When adding keys, only one key can be added at one time, put the key to be added on the storage box, and it's not allowed to add multiple keys at the same time;
- 12 Keys can be learnt in maximum.



Set IMMO



Steps:

防盗码状态检测 TCAM TCAM防盗写入 ECM ECM防盗码写入 CEM Close Note:

After replace CEM/ECM, match them through GLDS "Set IMMO" sequence, no need to apply and write ESK code manually.

- 1. Before replace CEM, remove all keys with the original CEM;
- 2. Replace new CEM;
- Reload CEM software (check steps on the CEM training course); 3.
- Match CEM (SET IMMO); 4.
- Add old keys to the new CEM. 5.

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Sunroof Calibration



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吉利浸车 GEELYAUTO	Diagnostics Software)												≣	ŝ	Ċ
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Service Func	tions	ID Name CEM 4/56 Central Electronic Module (CEM)					iagnos A B C C S S	stic Sequences mbient light mo rake Pedal Sen alibration of WM change vehicle r unroof Calibrati	dule ALMCalibration sor Position Calibrat MM before mounting node to Normal mod	n ation g wiper blades. ide or Transport mode						
CEM –	→ Diagnostic	Seq	uen	ces → Sun	roof Calibra	tion		-			VIRTUAL (VCC-801687-1 Information Start sunroof calibration Warning! Switch on t	version 1.2) by pressing the bi ne ignition (usage	uttons below e mode Active	e). the sunro	of is closed.	

Sunroof Calibration

Close



If the automatic transmission or the TCM are replaced, or the TCM software is reloaded, be sure to perform initial learning.





Step 1: warm-up (ATF temperature is between 40°C and 110 °C. Caution: if the ATF temperature is not between 40°C and 110 °C, initial learning cannot be performed)

Step 2: garage shift learning

with the vehicle stationary, depress the brake and keep the shift lever in "N" position for 3 seconds. Then, shift from "N" into

"D" position, and maintain this condition for 3 seconds. Repeat this procedure 5 times. Then repeat 5 times in the same way for "R" position.

Step 3: gear shift control learning

in "D" position, with the throttle opening angle between 25% and 35%, drive until 8th gear. and Then, release the accelerator pedal and coast, and bring the vehicle to a stop within 60 seconds, repeat this procedure 10 times.

Step 4: check learning results

check that variable speed shock and shift shock have decreased compared to the conditions before learning.



TACM - Transmission actuator control module

Once TACM disassembled from transmission, you need do the TACM calibration on GLDS.



SRS Replacing



IMU calibration on SRS

When replacing the Supplementary Restraint System Module (SRS) or when the Supplementary Restraint Module (SRS) has been removed for some reason, the internal sensors must be calibrated. The SRS warning light is lit and a text message appears in the combined instrument display as long as no calibration has been carried out.

The Supplementary Restraint System Module (SRS) functionality is active even without calibration, but other systems in the vehicle which use the signals from the internal sensors will not have full functionality unless calibration is performed.

Instructions

- 1. Park the vehicle on a flat surface.
- 2. Empty the vehicle of cargo and occupants, including the driver.
- 3. Check the tire pressure.
- 4. The vehicle must be in usage mode Active.
- 5. Turn off the ignition. Wait 20 seconds.
- Turn on the ignition. Wait 20 seconds.
- Start the calibration procedure by clicking Start. Provided that you follow the instructions above, the SRS warning message and the text message in the combined instrument display disappear when calibration is complete.

Start calibration

Close

SAS & IMU calibration on VDDM

Information

The test will calibrate the following sensor in the Vehicle Dynamics Domain Master (VDDM).

 Steering Angle Sensor Module (SAS) (located in the Steering Wheel Module (SWM))

The test will calibrate the following sensors located in the inertial measurement unit (IMU), which is physically located in the Supplemental Restraint System Module (SRS).

- Lateral acceleration sensor
- Longitudinal acceleration sensor
- Yaw rate sensor

Preconditions

Before running this test it is important to check the control module for internal errors. The test cannot be started if any DTCs concerning internal errors are set.

Instructions

- Park the vehicle on a level surface with the wheels pointing straight ahead.
- Release the brake pedal (no braking).
- Turn on the ignition.
- Press "Calibrate".

Steering Angle Sensor Module (SAS) calibration status

Calibrating the inertial measurement unit (IMU)

SAS/PSCM/SWM/VDDM Replacing



SAS & IMU calibration on VDDM

Information

The test will calibrate the following sensor in the Vehicle Dynamics Domain Master (VDDM).

 Steering Angle Sensor Module (SAS) (located in the Steering Wheel Module (SWM))

The test will calibrate the following sensors located in the inertial measurement unit (IMU), which is physically located in the Supplemental Restraint System Module (SRS).

- Lateral acceleration sensor
- Longitudinal acceleration sensor
- Yaw rate sensor

Preconditions

Before running this test it is important to check the control module for internal errors. The test cannot be started if any DTCs concerning internal errors are set.

Instructions

- Park the vehicle on a level surface with the wheels pointing straight ahead.
- Release the brake pedal (no braking).
- Turn on the ignition.
- Press "Calibrate".

Steering Angle Sensor Module (SAS) calibration status

VDDM Diagnostic Sequences

	Documents	Wiring Diagrams	Parameters	Activations	Diagnostic Sequences							
Diag	nostic Sequence	\$										
5	Bleeding of brak	es										
	Brake Plate Maintenance Mode Switch											
J	Calibration of the Steering Angle Sensor Module (SAS) and sensors in the IMU											
J	EPB Calibration (Left ECU)											
J	Height Sensors Calibration											
J	Pump Motor Slow Down Test											

Maintenance and repair



Disassembly and assembly procedure of AOC(DEM)







The disassembly steps are shown on the left:

- Remove the connector and wiring harness
- Remove the bolts connecting the propshaft to the torque manager flange
- Remove the 4 bolts connecting the torque manager to the rear main reducer
- Remove the torque manager (Be careful that there will be some lubricating oil flow out)

The installation steps are reversed.

Notes:

- The bolts connecting the propshaft and AOC should be tightened diagonally
- After the torque manager is assembled, refill some oil (habot 311)
- During installation, the white spot on the rear end of the propshaft should be within the two white lines on the rear main reduction flange
- After replacing the AOC, do "bleeding" by the following methods:

Do "bleeding" automatically Start the vehicle, keep the speed above 20Km/h and drive straight, hold the accelerator pedal driving for 10 minutes, then stop and turn off the engine; repeat the above operation 4-5 times





FLR Dynamic Calibration



Network 🚝	Source 3/25/2022 3:22:08 PM V
Fault Tracing 🛤	ECUs Other I Documents Wiring Diagrams Parameters Activations Diagnostic Sequences
Service Functions	ID Name FLR Diagnostic Sequences 4/291 Forward Looking Radar (FLR)
	P2P (VCC-801804-1, version 1.5) Calibration of the Forward Looking Radar(FLR) The Badar Module needs to be calibrated if one or more of the following criteria are
	fulfilled: New module hardware has been installed Drive the vehicle on the road. The radar calibrates itself when the following conditions are fulfilled: • The module has been removed from its original position and remounted The wolcle speed is at least above 10 km/h, but preferably above 30 km/h. The lower the speed maintained, the longer the calibration takes. • Note! Sensor Determination Lock Control It must be performed after the new radar is replaced Drive that the module is correctly mounted before calibration • Note! Make sure that the module is correctly mounted before calibration Drive calibration such as snow or heavy rain may prolong the calibration time.
	Start radar calibration The time the calibration takes depends on how often the above conditions are fulfilled during the driving cycle. Start radar calibration Close

SODL/SODR Calibration



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Service Functions	ID Name SODL Diagnostic Sequences Side Obstacle Detection Control Module Left (SODL)Calibration										
	/245 Side Obstacle Detection Control Module Left (SODL)										
	Side Obstacle Detection Control Module Left (SODL) Calibration										
	The Radar Module needs to be calibrated if one or more of the following criteria are Driving instructions fulfilled:										
Caution:	 New module hardware has been installed Drive the vehicle on the road. The radar calibrates conditions are fulfilled: 										

The module has been removed from its original position and remounted

Note! Sensor Determination Lock Control It must be performed after the new

Note! Make sure that the module is correctly mounted before calibration

- The vehicle speed is at least above 10 km/h, but preferably above 30 km/h. The lower the speed maintained, the longer the calibration takes.
- Drive straight ahead as much as possible in areas with many visible objects close to the road. Winding roads require longer calibration time. Avoid tunnels during calibration.
- Drive in lanes closest to fixed objects, such as guard rails and signs. It is preferable to have road markings visible on both sides of the road.
- Weather conditions such as snow or heavy rain may prolong the calibration time.

The time the calibration takes depends on how often the above conditions are fulfilled during the driving cycle.

Actually SODL & SODR are the same (same part number), but if you disassembled them from the vehicle, you shall make sure that they are not mixed up and assemble them to the original location; otherwise there will be DTC and SODL/SODR will lose communication.



A relevant DTC for missing calibration is set.

radar is replaced

FLC Static Calibration



Network 🚝	Source 3/25/2022 3:22:08 PM ×	4
Fault Tracing 🛤		
Components	ECUs Other	Þ
Service Functions	ID Name Diagnostic Sequences	
	Calibration of the Forward Looking Camera (FLC)	
	4/290 Forward Looking Camera (FLC)	

P2P (VCC-801790-1, version 1.5)

Calibration	of	the	Forward	Looking	Camera	(FLC)	
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The Forward Looking Camera (FLC) needs to be calibrated if one or more of the following conditions are present:

- New hardware for the Forward Looking Camera (FLC) has been installed.
- · The control module has been removed from its original position and remounted.
- A DTC for missing calibration is set.

按照如下提示放置标靶:

- Place the calibration plate as follow:
- The plate is placed directly in front of the vehicle;
 - The plate is placed 6m away from the front axel of the vehicle;
- 标靶中心距离地面1.45m The center of plate is 1.5m from the ground.

Start camera calibration

靶距廠车辆前轴6m

巴正对车辆





Close

FLC Dynamic Calibration



Network 🚝		Source 3/25/2022 3:22:08 PM V									
Fault Tracing 🚝											
Components	ECUs Other	Documents Wiring Diagrams Parameters Activations Diagnostic Sequences									
Service Functions	ID Name	Diagnostic Sequences									
	FLC	Calibration of the Forward Looking Camera (FLC)									
	4/290 Forward Looking Camera (FLC)	Calibration of the Forward Looking Camera (FLC)									

Calibration of the Forward Looking Camera (FLC)

The Forward Looking Camera (FLC) needs to be calibrated if one or more of the following conditions are present:

- New hardware for the Forward Looking Camera (FLC) has been installed.
- The control module has been removed from its original position and remounted.
- A DTC for missing calibration is set.

Calibration can be performed at any time of day or night, but should be avoided in the following circumstances:

- Heavy rain.
- Snowfall.
- Fog.
- On wet roads at night.
- On dark roads without visible or with narrow road markings.

Start camera calibration



If window automatic closing or anti-pinch function can not work normally, you need do the **window self-learning** as follow:

- Operate the switch, pull up the window to fully close, continue to pull the window switch up and hold it for 3 seconds, release the switch;
- Operate the switch, pull down the window to fully open, continue to pull the window switch down and hold it for 3 seconds, release the switch;

You can also operate window initializing through GLDS, door

module:

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直動流畅	Diagnostics Software									=	00	٥
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Network	4							Source	3/24/2022 9	21:46 AM	¥	10
Componen	ts	ECUs Ot	her	9 🔽	4	Documents	Wiring Diagrams	Parameters	Activations	Diagnostic S	equences	•
Service Fu	nctions	1D 4/184	Name DM Active Safety Domain Master (ASDM)		Dia	gnostic Sequent Front Control I Initializing the	ces Unit Self-Test window in the front door					
		4/468 4/469	Driver Door Module (DDM) Passenger Door Module (PDM)		5	Mirror FOLD/U Window contro	INFOLD al test					
	i	4/539 4/540	Rear Left Door Module (RLDM) Rear Right Door Module (RRDM)									
		4/163	Vehicle Dynamics Domain Master (VDDM)									

Seat Module Calibration





Using GLDS, Diagnostics, Components: SMD/SMP \rightarrow Diagnostic Sequences \rightarrow Seat module calibration

Calibrate

Close

POT Calibration



- Using GLDS, purchase "POT CAL" software;
- Click "continue" to start the calibration;
- > After finished calibration, check the functions of power operated tailgate.





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