Ford F-150 2019 Lane Departure Warning System Camera

Calibration

Supported Model/Model Year:

2019 Ford F-150

Features:

When removing or replacing the rearview mirror, front windshield, camera, IPM-A module or guided by TSB (Technical Service Briefing) maintenance manual, this function is needed to perform; If IPM-A is replaced, PMI (Programmable Module Installation) is needed to perform. This procedure requires driving the vehicle for about 10 minutes to align the camera. Function execution is unsuccessful, you can try multiple times.

Requirements:

Communication is normal, and battery voltage is between 12V and 15V. This function requires driving the vehicle at a speed of more than 64 kilometers per hour on a marked lane for about 10 minutes to align the camera. Try to avoid driving across lanes, steering too much, and sudden changes in speed.

To perform this function, please choose a sunny day and a well-lit road, avoid direct sunlight to the camera and ensure that the camera lens is unobstructed.

Software Version:

Select Ford V48.50 or above.

Product Requirements:

X431 PRO series, PAD series products.

Steps:

1. Select [Auto Search] (Figure 1, Figure 2).

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Vehicle Version Information		f		ŀ	
Software ID	Version #				
FORD	V48.65				
Ford Diagno	osis V48.65				
What 's New					
Summary:					
 1) Added functions of Module Initialization, Reset the Knock Sensor Learned Values 2) Optimized the special function of PATS (Passive Anti-Theft System); 3) Optimized basic functions for Ford Kuga, Ford New Kuga, Continental, Fusion, F-1 4) Optimized functions of ETB (Electronic Throttle Body) Check, Data Reset, DPF (Di 	50, MKZ, Fiesta, Focus, EcoSport and				
New Functions:					
Added functions of Module Initialization, Reset the Knock Sensor Learned Values and	nd more;				
Optimized Functions:					
 1) Optimized the special function of PATS (Passive Anti-Theft System); 2) Optimized basic functions for Ford Kuga, Ford New Kuga, Continental, Fusion, F-1 3) Optimized functions of ETB (Electronic Throttle Body) Check, Data Reset, DPF (Di 					
Fixed Bugs:					
None					
	Vehicle Covera	ge Search	Bluetooth	ОК	
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	Figure 1				

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Show Menu	↑ 🕞
FORD V48.65 > Menu	🖻 12.52V
Automatically Search	Manually Select
Manually Reset Service	Manually Reset Keyfob
Cummins And Caterpillar Diesel Engine Systems Test Specification	

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Figure 2

2. Confirm current vehicle information (Figure 3).

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FORD V48.65 > Menu					🖽 12.22V
Automatically Search		Manually Select			
	Vehicle Sp	ecification			
Manually Reset Service		****			
Cummins And Caterpillar Diesel Eng Specification	VIN :1FTFW1RG8KFA**** Model Year:2019 Vehicle = F-150 Capacity = 3.5L Engine Type = EcoBoost - Gas Turbocharged Direct Injection Fuel Type = Gasoline Transmission = Automatic Is The Vehicle Information Correct?				
	NO	YES			
Ford					
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Figure 3

3. Select [Special Features] (or select ADAS (Advanced Driver Assistance System) Calibration) (Figure 4).

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Show Menu				
FORD V48.65 > Automatically Search	🖽 12.17V			
Health Reports	System Scan			
System Selection	Special Functions			
Module Programming	ADAS (Advanced Driver Assistance System) Calibration			
Vehicle Information				

Ford F-150 VIN 1FTFV) 2019 V1RG8KFA****						
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			Figure 4				

4. Select [Body] (Figure 5).

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FORD V48.65 > Automatically Search > Special Functions		🗄 12.17V
Body	Chassis	
Electrical	Powertrain	

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Figure 5

5. Select [IPMA (Image Processing Module A) Camera Alignment] (Figure 6).

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Show Menu	
FORD V48.65 > Automatically Search > Special Functions > Body	Ē 12.47V
Security	Restraints
Service Functions	BMS (Battery Monitoring System) Reset
IPMA(Image Processing Module A) Camera Alignment	RF KeyPad Learn Process

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Figure 6

6. Prompt the conditions of performing the function (Figure 7).

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Show Menu	LDWS Camera Alignment	A P
FORD V48.65 > Automatically Search > Specie Security	Introduction This Procedure Should Be Performed Following	iii 12.22V 12.22V
Service Functions	*Camera Replacement *Windshield Replacement *Change In Tire Size *Suspension Work Or An Alignment	Bystem) Reset
IPMA(Image Processing Module A)	Pre-Conditions: *Make Sure All IPMA(Image Processing Module A) Components Are In Place And Ready For Calibration *If Image Processing Module 'A' IPMA Was Replace, PMI(Programmable Module Installation) Inhale/Exhale Must Have Been Performed Prior To Calibration Procedure And Configured Properly For Vehicle *Perform Self-Test And Make Repairs For DTCs Found That May Prevent The Calibration From Completing *This Procedure Will Require The Vehicle To	
Ford F-150 2019 VIN 1FTFW1RG8KFA*****	CANCEL	
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Figure 7

 Prompt to perform the function, the conditions required by vehicle and external conditions (Figure 8).

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Show Menu	LDWS Camera Alignment		f	F	
FORD V48.65 > Automatically Search > Speci. Security	Vehicle Conditions *Ensure The Camera View Is Clear *Remove Any Contamination / Obstructions,			E 12.22	V
Service Functions	E.G. Condensation, Water, Snow, Stickers *Note: Due To The Variability With Aftermarket Windshield Quality, Tint, Material, And Bracket Placement, Ford Is Unable To	System) Reset			
IPMA(Image Processing Module A)	Guarantee A Successful Camera Calibration If The Vehicle Is Fitted With An Aftermarket Windshield That Does Not Meet The Original Factory Installed Windshield Standards. Drive Cycle Route Planning *Select A Route Where The Road Is As Straight As Possible And Has Clear Uninterrupted Lines On Both Sides Of The Lane Outside Conditions *To Assist The Process Conduct The Drive Cycle When The Following Conditions Exist *It Is A Clear And Dry Day. (No Fog, Rain, Spour Etc.)				
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Figure 8

8. Prompt to switch ignition ON and do not start engine (Figure 9).

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Security		Restraints			
Service Functions		BMS (Battery Monitoring Sy	vstem) Rese	t	
IPMA(Image Processing Module A)	mage Processing Mod	lule A IPMA Alignment			
	Turn Ignition To The Or Engine Not Running	n Position			
	0	к			
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Figure 9

9. Read vehicle data (Figure 10);

Select 'Yes' will not change the value. Enter <u>Step13;</u>

Select 'No' to measure manually entered values. Go to the next step.

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Show Menu		A	P
FORD V48.65 > Automatically Search > Specie	al Functions > Body		🗄 12.24V
Security	Restraints		
Service Functions	Image Processing Module A IPMA Alignment system) Res	set	
IPMA(Image Processing Module A)	Wheel Arch Heights Currently Configured In The IPMA(Image Processing Module A) Module.		
	Left Front:1055 mm[41.5 in] Right Front:1055 mm[41.5 in]		
	Do You Wish To Keep These Values?		
	NO YES		
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Figure 10

10. Prompt to measure the height of front left wheel and front right wheel and wheel arches (Figure 11).

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FORD V48.65 > Automatically Search > Special Fun	ictions > Body				🖽 12.24V
Security		Restraints			
Service Functions		BMS (Battery Monitorin	ng System) Res	set	
IPMA(Image Processing Module A)	ont Left And Right H	eight Measurement Is	·		
*Park The Vehicle On A *Make Sure That The N Operating Height And N		Vehicle Is At Normal			
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Figure 11

11. Prompt the measurement position (Figure 12).

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Image Processing Module A IPMA Alignment	1	ŀ
FORD V48.65 > Automatically Search > Special Functions > Body > IPMA(Image Processing Module A) Camera Measure The Height Of The Front Wheel Arches From The Ground To The Wheel Arch. Press OK To Continue.		
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Figure 12

12. Prompt to enter the measured values of front left and front right wheel arches (Figure 13, Figure 14).

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Image Processing Module	A IPMA Alignment	A	ēP
FORD V48.65 > Automatically Search > Specia	l Functions > Body > IPMA(Image Processing Module A) Camera A	lignment	🖽 12.24V
Measure The Height Of The Front Arch. Press OK To Continue.	Wheel Arches From The Ground To The Wheel Image Processing Module A IPMA Alignmen Left Front Enter The Height Of The Left Front Wheel Arch In Millimeters CANCEL OK	nt	
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Figure 13

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Image Processing Modu	le A IPMA Alignment		A		F
FORD V48.65 > Automatically Search > Sp Measure The Height Of The Fro Arch. Press OK To Continue.	ecial Functions > Body > IPMA(Image	Ground To The Wheel			E 12.24V
Ford F-150 2019 VIN 1FTFW1RG8KFA*****					ОК
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Figure 14

13. Prompt to start engine, do not switch ignition OFF before the calibration is completed, vehicles with intelligent Start/Stop function need to manually turn off the Start/Stop function (Figure 15).



Figure 15

14. Start camera alignment and wait for the countdown to end (Figure 16).

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Image Processing Module	A IPMA Alignment	A	P
FORD V48.65 > Automatically Search > Special	Functions > Body > IPMA(Image Processing Module A) Camera	Alignment	🖽 12.24V
Measure The Height Of The Front Arch. Press OK To Continue.	Wheel Arches From The Ground To The Wheel Image Processing Module A IPMA Alignme Operation In Progress. Please Wait 2s / 30s 6%	nt	
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Figure 16

15. Prompt that the function is executed successfully and the vehicle is in camera alignment mode. (Figure 17).

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FORD V48.65 > Automatically Search > Specia	I Functions > Body > IPMA(Image Processing Module A) Camera Alig	nment		🗄 12.46V
Security	Restraints			
	Image Processing Module A IPMA Alignment			
Service Functions	The IPMA Is In Alignment Mode:	System) Res	et	
IPMA(Image Processing Module A)	*Drive The Vehicle On A Road With Visible Lane Markers. Drive In A Steady Manner Over Avoiding Lane Crossing, Excessive Steering			
	Angle Changes, Or Sudden Changes In Vehicle Speed.			
	*Do Not Key Off Until The Calibration Is Complete			
	Select OK To Monitor Calibration Completion			
	Progress			
	ок			
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Figure 17

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16. Display the progress of calibration completion. At this time, please drive the vehicle on a clearly marked lane. Turn on the Lane Keeping System, vehicle speed exceeds 60 KPH, and the calibration completion percentage is 100% (Figure 18), then the alignment is successfully completed. A fault code will be generated if the ignition is switched OFF when calibration is not completed.

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Image Processing Module A IPMA Alignment		n	Ē	ŀ
FORD V48.65 > Automatically Search > Special Functions > Body > IPMA(Image Pr	rocessing Module A) Camera Aligr	nment		🗄 12.41V
Datastream		Value		
Calibration Percentage Complete		100 %		
Exit		ОК		
Ford F-150 2019 VIN 1FTFW1RG8KFA****				
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17. The function operation is successful (Figure 19).

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Image Processing Module	A IPMA Alignment		A		P
FORD V48.65 > Automatically Search > Speci	al Functions > Body > IPMA(Image Pr	rocessing Module A) Camera A	lignment		🟥 12.54V
Datastream			Value		
Calibration Percentage Complete			100 %		
	Image Processing Modu	ule A IPMA Alignmer	it		
	Procedure Completed Procedure Successful. *Confirm That 'Front Ca Service Required' Popup Cleared *Confirm That Front Ca Keeping System Are Fur *It Is Recommended Th Test To Identify Any Dtc	Message Has mera And/Or Lane actioning Properly at You Carry Out Self That May Be Present			
Exit					
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18. Exit the function, and return to the menu to clear the fault code.