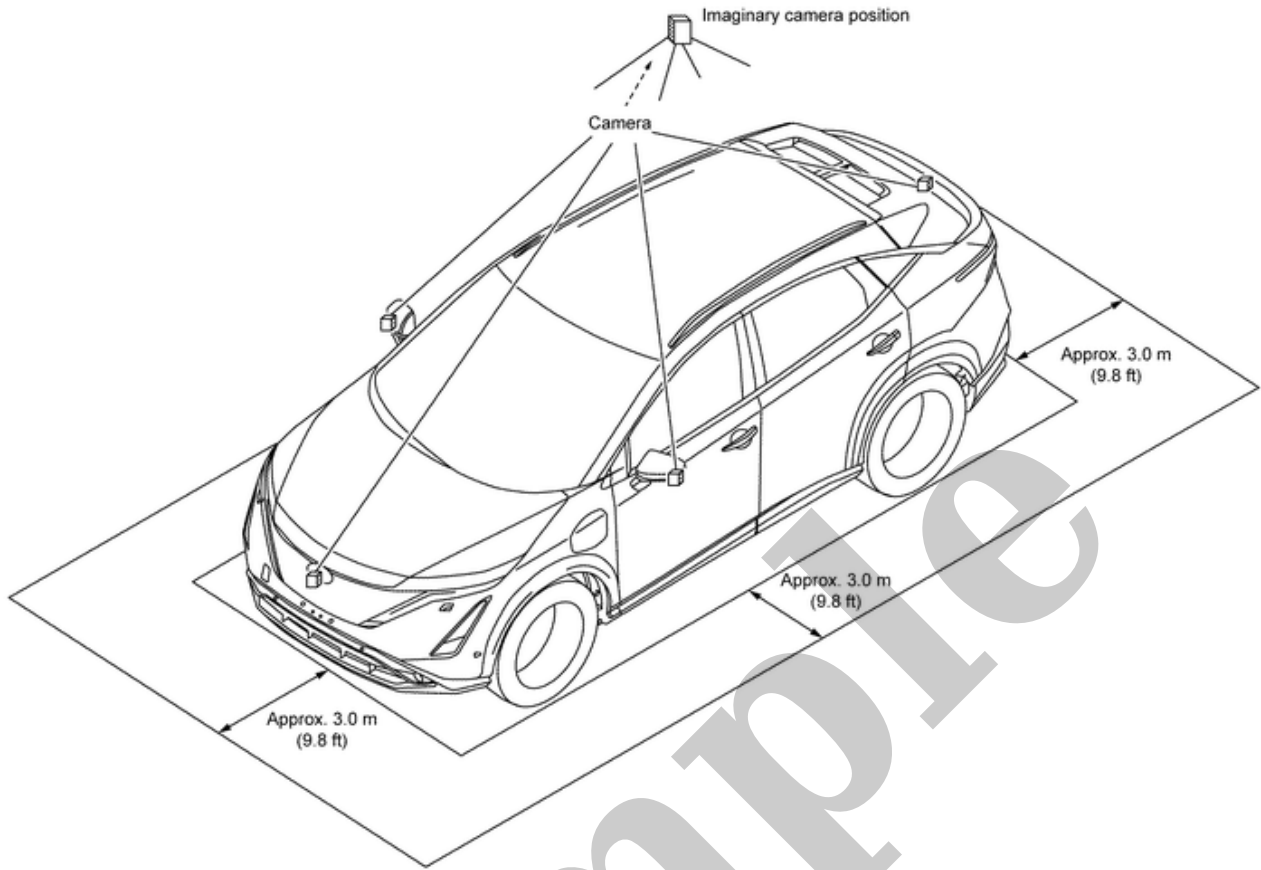


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FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

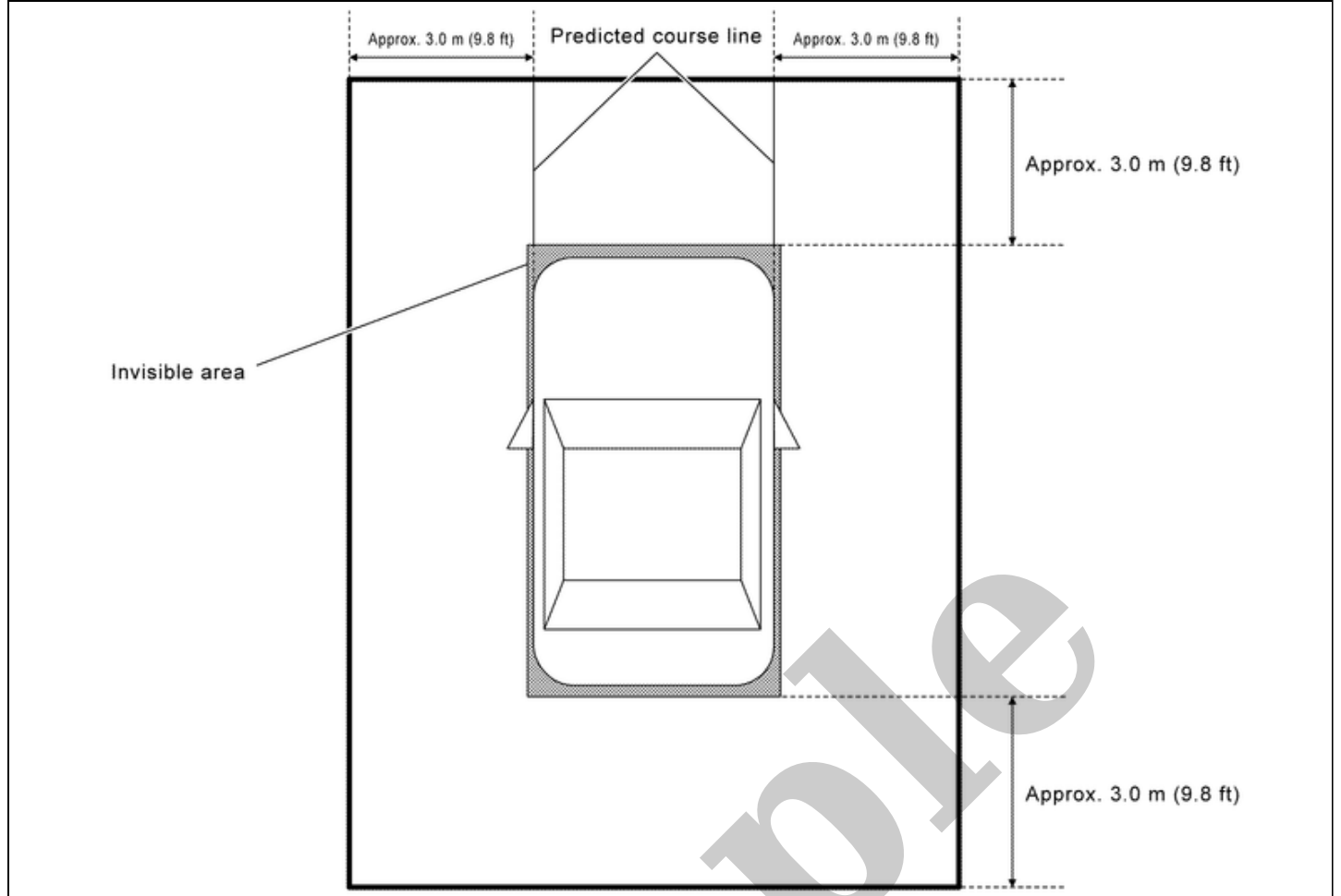
2016 NISSAN Patrol OEM Service and Repair Workshop Manual

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SIEMD-7110403-09-000357811

Birds-Eye view display area



SIEMD-7110403-08-000357813

Moving Object Detection (MOD)

- Moving Object Detection (MOD) is a function that notifies the driver of the presence of moving objects in the area around the vehicle. MOD detects moving objects from camera image, illuminates frame of view in yellow whenever “MOD” icon is displayed in green, and sounds buzzer.
- MOD detects moving objects while camera image is displayed on AV control unit.
- Around view monitor control unit performs the following process when moving objects are detected.
 - Superimposes yellow frame line on camera image signal and outputs them to AV control unit by LVDS.
 - Transmits MOD beep sound output request signal to combination meter via CAN communication.
 - Combination meter that receives the MOD beep sound output request signal from around view monitor control unit, and outputs buzzer drive signal to buzzer.
- Around view monitor control unit detects moving objects from camera image according to an image recognition method called optical flow.
- MOD does not detect a background as a moving object when the vehicle moves (when whole screen moves), but detects a moving object when an actual moving object is displayed on screen.
- MOD can be set to permanent OFF by the following operation.
 - Permanent OFF: Settings can be performed on the information display of the combination meter.
- Color of “MOD” icon indicates whether or not MOD is operative. “MOD” icon is displayed as shown in the following table. when MOD is operative, “MOD” icon is displayed in green. when MOD is not operative, “MOD” icon is displayed in gray. MOD icon is not displayed when MOD is OFF by “Settings”.

View		Shift position		
		P or N position	D position	R position
		“MOD” icon display		
Birds-Eye view and rear view	Birds-Eye view	Green	—	Gray
	Rear view	Gray		Green
Birds-Eye view and front view	Birds-Eye view	Green	Gray	—
	Front view	Gray	Green	
Side view and rear view	Side view	×	—	×
	Rear view	Gray		Green
Side view and front view	Side view	×	×	—
	Front view	Gray	Green	
Rear wide view		Gray	—	Green
Front wide view		Gray	Green	—

×: Icon is not displayed.

—: View is not displayed in each shift position (P or N position, D position and R position).

- MOD illuminates frame of view in yellow and sounds buzzer, when any of the conditions in the following table are satisfied.

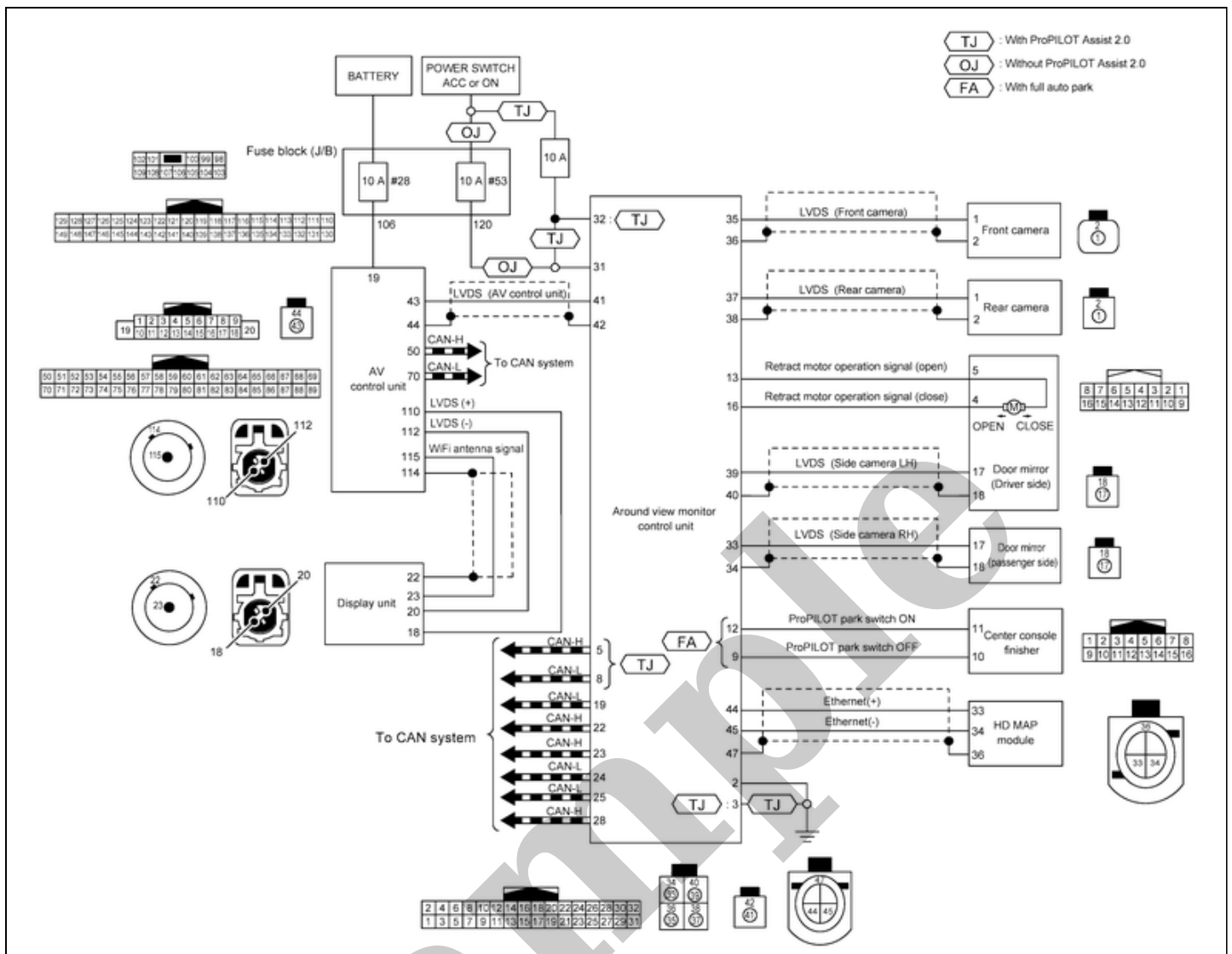
Operation Condition		View where MOD is operative
Shift position	Vehicle speed	
P or N position	0 km/h (0 MPH)	Birds-Eye view
D position	0 km/h (0 MPH) or more - less than 8 km/h (5 MPH)	- Front view - Front wide view
R position	0 km/h (0 MPH) or more - less than 8 km/h (5 MPH)	- Rear view - Rear wide view

- MOD does not operate or stops operation when any of the conditions in the following table are satisfied.

Operation stop condition	Note
Door open	- MOD does not stop operation for front view and front wide view. - Operation stops for rear view and rear wide view while back door is open. - Operation stops for Birds-Eye view when any door is open.
Door mirror expanding/retracting	Expanding/retracting status of door mirror is judged according to operation signal of door mirror motor transmitted from door mirror (driver side) to around view monitor control unit.

MAC (Message Authentication Code)

MAC (Message Authentication Code) is a function that prevents unauthorized communication from other than the ECU with MAC function by secure authentication communication. Around view monitor control unit can write a MAC key required for communication between the ECUs and perform MAC diagnosis.



DTC	Fail-safe condition
Display contents of CONSULT	
B2A00-52: Left camera	—
B2A01-52: Right camera	
B2A02-52: Rear camera	
B2A03-52: Front camera	
B2A04-51: Around view monitor control unit	- Unmatched icon  display (red) is displayed (applicable for unmatched camera only). - MOD (Moving Object Detection) function is stopped.
B2A05-44: Around view monitor control unit	- MOD (Moving Object Detection) function is stopped. - Camera image may not be displayed.
B2A05-45: Around view monitor control unit	
B2A05-46: Around view monitor control unit	
B2A05-49: Around view monitor control unit	
B2A05-55: Around view monitor control unit	- On applicable camera screen  marking (Red) is displayed. - Calibration cannot be performed
B2A07-86: Steering angle sensor	- Predicted course line is not displayed. - MOD (Moving Object Detection) function is cancel.
B2A0A-86: Sonar control unit	Parking sensor error is displayed.
B2A0B-86: Vehicle speed sensor	MOD (Moving Object Detection) function is stopped.
B2A0C-86: TCM	
B2A1A-31: Rear camera	Camera image not displayed.
B2A1B-31: Side camera right-hand	
B2A1C-31: Front camera	
B2A1D-31: Side camera left-hand	
B2A1F-16: Camera power supply	
B2A2C-A2: Power supply	
B2A2C-A3: Power supply	
B2A2D-23: ProPILOT Park switch	The following systems are canceled. ProPILOT Park
B2A2E-51: Programing error	- Unmatched icon displayed - MOD (Moving Object Detection) function is cancel.
C21F0-46: Variant code error	The following systems are canceled. - Vehicle-to-vehicle distance control mode - Lane keep function ^{*1}

DTC Display contents of CONSULT	Fail-safe condition
	• Lane keep function ^{*2} • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-LI • I-BSI • TSR • I-DA *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F1-72:Stop lamp relay	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function ^{*1} • Lane keep function ^{*2} • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F2-04:ABS actuator and electric unit	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function ^{*1} • Lane keep function ^{*2} • Lane change support function • Overtaking support function • Route driving support function • AEB

DTC Display contents of CONSULT	Fail-safe condition
	• RAB • I-FCW • I-LI • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F2-04: ABS actuator and electric unit	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function ^{*1} • Lane keep function ^{*2} • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-LI • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F6-49: Camera	The following systems are canceled. • Lane keep function ^{*1} • Lane keep function ^{*2} • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-LI • I-BSI • TSR

DTC Display contents of CONSULT	Fail-safe condition
	*1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F6-54: Camera	The following systems are canceled. • Lane keep function *1 • Lane keep function *2 • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-LI • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F6-98: Camera	The following systems are canceled. • Lane keep function *1 • Lane keep function *2 • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-LI • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F7-62: Electric parking brake system	None
C21F8-04:Steering angle sensor	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function *1

DTC Display contents of CONSULT	Fail-safe condition
	• Lane keep function *2 • Lane change support function • Overtaking support function • Route driving support function *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F8-62: Steering angle sensor	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function *1 • Lane keep function *2 • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue
C21F8-64: Steering angle sensor	The following systems are canceled. • Vehicle-to-vehicle distance control mode • Lane keep function *1 • Lane keep function *2 • Lane change support function • Overtaking support function • Route driving support function • AEB • RAB • I-FCW • I-BSI • TSR *1: ProPILOT Assist 2.0 display is green *2: ProPILOT Assist 2.0 display is blue