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2021 NISSAN Altima (Thailand) Service and Repair Manual

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4. Check that the steering operates automatically to take the vehicle toward the steering cut back guide box.
5. When the vehicle reaches the steering cut back guide box, check that the shift position automatically changes and the vehicle begins reversing.
6. When the vehicle reaches the parking guide box (red), check that it stops, the sound occurs, and parking control ends.
7. Check that the shift position changes to P and the electric parking brake engages.

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[GO TO 6.](#)

6. PARKING POSITION DETECTION FUNCTION

1. After performing Step 2 and Step 3, check that ProPILOT Park detects a parking position, that the color of the parking position detection indicator changes to light blue, and that the parking guide box and (P) (light blue) are displayed when the vehicle stops. For the parking position detection function, Refer to [System Description](#). For the ProPILOT Park screen displays, Refer to [Operation](#).
2. Perform Step 2, Step 4, and Step 5.

>>

[GO TO 7.](#)

7. OPERATION CHECK WHEN AN OBSTACLE IS PRESENT

Check that when an obstacle is present, the parking position and steering cut back positions are adjusted, or that parking control automatically ends.

CAUTION:

In some cases, the parking position and steering cut back position may not be adjusted correctly. If an obstacle is present, depress the brake pedal to stop the vehicle or perform other suitable driving operations.

>>

INSPECTION END

- Always perform the side radar alignment after performing the following work.
 - After removing and installing or replacing the side radar.
 - After removing and installing, replacing or repainting the rear bumper.
- Side radar alignment conditions are following;
 - The vehicle speed is 20 km/h (13 MPH) or higher.
 - The objects which reflect the wave of radar is located 2 m or more away from the vehicle.
 - The steering wheel is straight.



NOTE:

- **The side radar alignment process is reset (back to 0%) when key switch is OFF before completing.**
- **The side radar alignment process stops when the vehicle speed is 0 km/h (vehicle parked) and restarts when the alignment conditions are satisfied.**
- **Timeout occurs, if the side radar alignment conditions are not satisfied for 1 hour after the side radar alignment is started.**
- **The side radar irradiates radar and performs the alignment by receiving its reflected wave for certain fixed time.**
- **Because of not receiving the reflected wave, the side radar alignment may stop making progress under the following environment.**
 - **When reflected waves cannot be received correctly due to continuous walls such as tunnels and buildings.**
 - **When driving on a road with high snow banks on both sides.**
 - **When driving on a road that has no objects to reflect the radar waves, such as a coastline road.**
 - **When driving on the road that sits above the surrounding level surface, such as a road on top of a levee or on top of an earthen dam.**

1. SELECT WORK SUPPORT ITEM

1. Stop the vehicle.
2. Select “Work support” of “Side radar (Front left)”, “Side radar (Front right)”, “Side radar (Rear left)” or “Side radar (Rear right)”.



NOTE:

Whichever “Side radar (Front left)”, “Side radar (Front right)”, “Side radar (Rear left)” or “Side radar (Rear right)” is selected, the installation information can be written to any side radar.

3. Select “Side radar alignment”.

Is the screen to select the target side radar displayed?

YES>>

[GO TO 2.](#)

NO>>

When error message is displayed: [GO TO 4.](#)

2. START SIDE RADAR ALIGNMENT

Select "Start".

Is "Ready to start the side radar alignment." displayed?

YES>>

[GO TO 3.](#)

NO-1>>

When "Abnormal side radar installation." is displayed: [GO TO 5.](#)

NO-2>>

When "Detecting DTC." is displayed: [GO TO 6.](#)

NO-3>>

When "Stopped" is displayed: Perform side radar alignment again.

3. PERFORM SIDE RADAR ALIGNMENT

1. Drive the vehicle.

CAUTION:

- Always drive safely.
- Side radar alignment cannot be performed under the following conditions;
 - Heavy rain or snow
 - The bumper around the radar is contaminated.

2. Confirm that "Side radars alignment are completed." is displayed and select "End".

>>

WORK END.

4. CONFIRMATION OF UNDETECTED RADAR

1. Confirm undetected radar and repair the defective part.

2. Perform the side radar alignment again.

>>

WORK END.

5. CHECK THE CONNECTORS OF SIDE RADAR LH/RH

1. Confirm the description on CONSULT, check the concerned radar installing condition (installed location, tightening torque, bend of bracket etc.) and repair the defective part.

2. Perform the side radar alignment again.

>>

WORK END.

6. CHECK SELF-DIAGNOSIS RESULTS OF SIDE RADAR

1. Perform "All DTC Reading".

2. Check if the DTC is detected on the self-diagnosis results of following.

- Side radar (Front left): Refer to [DTC Index](#).
- Side radar (Front right): Refer to [DTC Index](#).
- Side radar (Rear left): Refer to [DTC Index](#).
- Side radar (Rear right): Refer to [DTC Index](#).

3. Perform trouble diagnosis for the detected DTC, and repair or replace the identified malfunctioning parts.

4. Power switch OFF to ON, and perform the side radar alignment again.

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WORK END.

Sample

- Always adjust the camera aiming after removing and installing or replacing the front camera unit.
- Always adjust the camera aiming after removing and installing or replacing the windshield glass.

CAUTION:

- **Place the vehicle on level ground when the camera aiming adjustment is operated.**
- **Be sure to place the target correctly according to work procedures because the system may not operate normally.**
- **Follow the CONSULT when performing the camera aiming. (Camera aiming adjustment cannot be operated without CONSULT.)**

Preparation

1. PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of front camera unit.

Is any DTC detected?

YES>>

Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [DTC Index](#).

NO>>

[GO TO 2.](#)

2. PREPARATION BEFORE CAMERA AIMING ADJUSTMENT

1. Perform pre-inspection for diagnosis.
2. Adjust the tire pressure to the specified pressure value.
3. Maintain no-load in vehicle.
4. Check if coolant and engine oil are filled up to correct level and fuel tank is full.
5. Shift the selector lever to “P” position and release the parking brake.
6. Clean the windshield.
7. Completely clear off the instrument panel.

**NOTE:**

If any fixed object is put on instrument panel, cover the upper of the instrument panel with black cloth to prevent an object from reflecting in the windshield.

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[GO TO 3.](#)

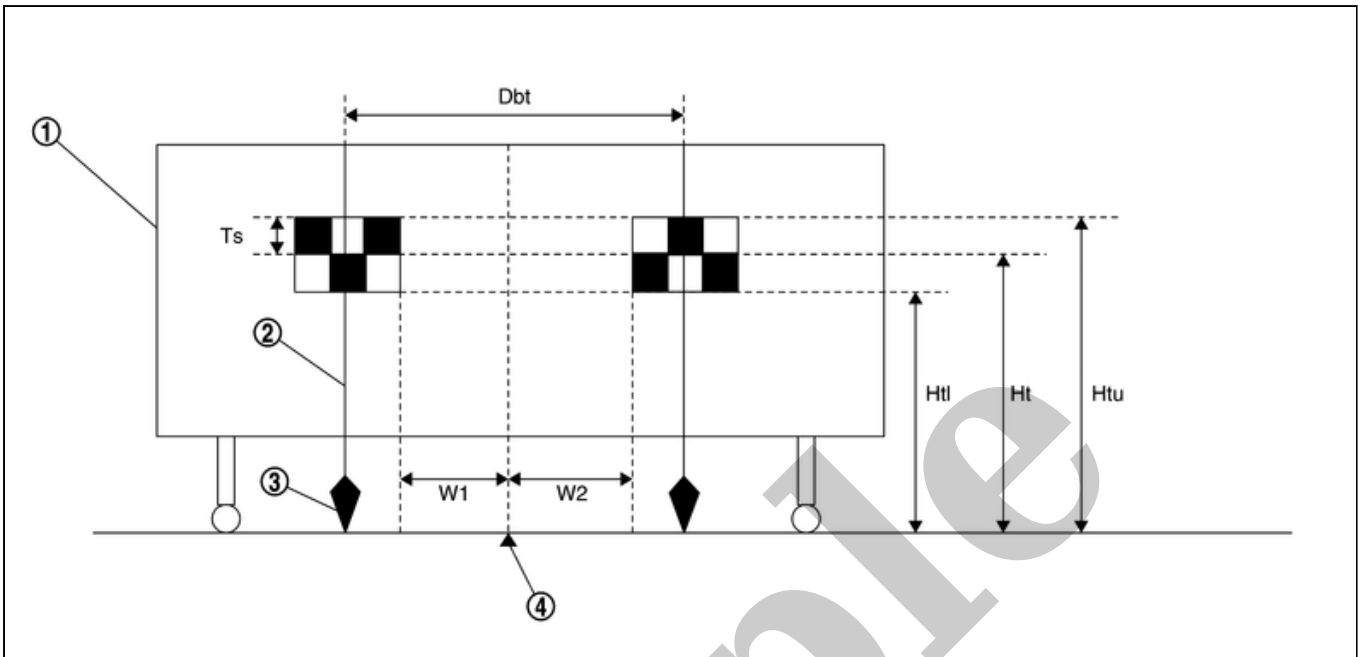
3. PREPARATION OF J-52266-2 ALIGNMENT TARGET

Prepare the alignment target according to the following procedure and the figure.

1. Attach the J-52266-2 alignment target to a movable board.

**NOTE:**

- Use the board that peripheral area of the target is monochrome such as a whiteboard.
- Notice that the cross of the target is horizontal and vertical.



SIEMD-7109398-01-SOIA1661ZZ

①	White wall	②	String	③	Cone
④	Center between two targets				

Side of a target (Ts)	: 120 mm (4.72 in)
Height of a target lower end (Htl)	: 1,180 mm (46.46 in)
Height of a target center (Ht)	: 1,300 mm (51.18 in)
Height of a target upper end (Htu)	: 1,420 mm (55.91 in)
Width between a right target center from a left target center (Dbt)	: 720 mm (28.35 in)
W1	: 180 mm (7.09 in)
W2	: 180 mm (7.09 in)

>>

Proceed to Target Setting.

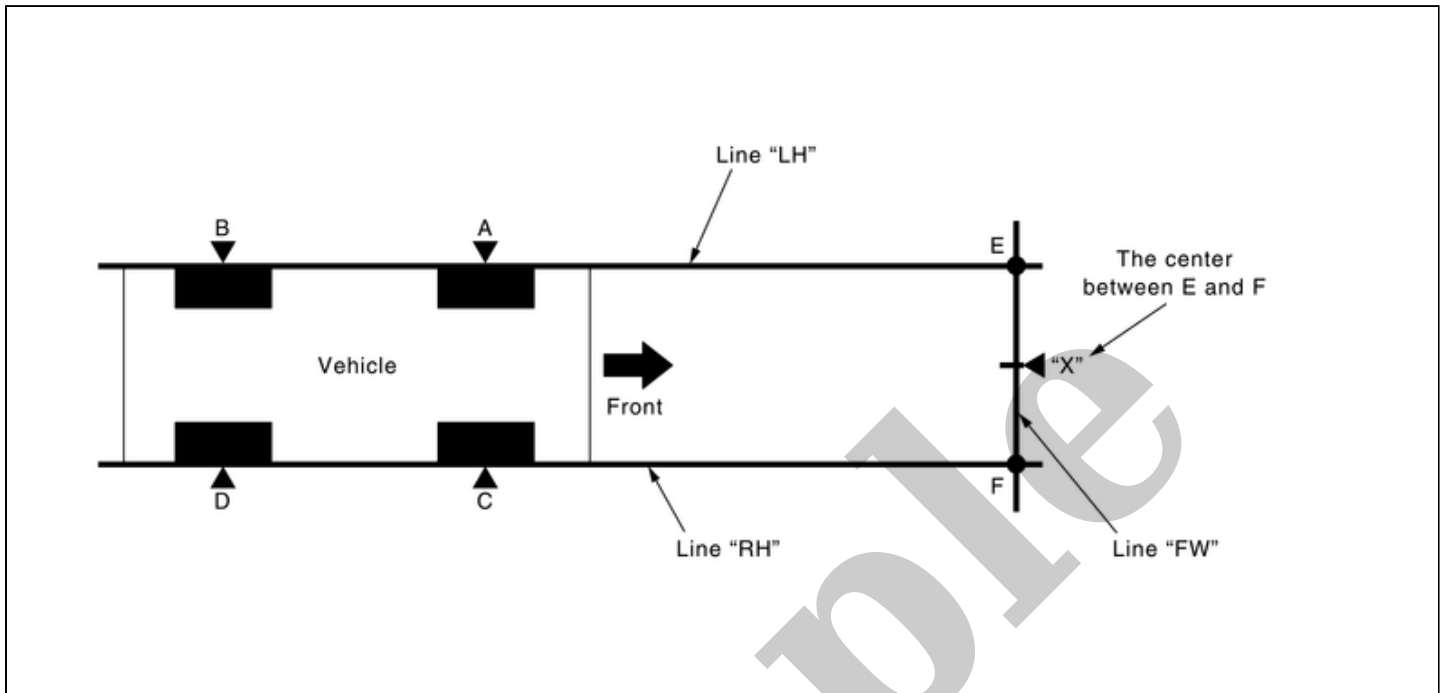
Target Setting

CAUTION:

- Be sure to place the target correctly according to work procedures because the system may not operate normally.
- Perform this operation in a horizontal position where there is a clear view for 5 m (16.4 ft) forward and 3 m (9.84 ft) wide.
- Place the target in a well-lighted location. (Poor lighting may make it hard to adjust.)
- The target may not be detected when there is a light source within 1.5 m (4.92 ft) from either side and within 1 m (3.28 ft) upward/downward from the target.
- Check the location of the sun. (Sunlight should not shine directly on the front of the vehicle.)

- The target may not be detected when there is the same pattern of black and white as the target is within 1 m (3.28 ft) from either side and upward/downward position from the target. (It is desirable that the vehicle is positioned on the opposite side of a single-color wall.)

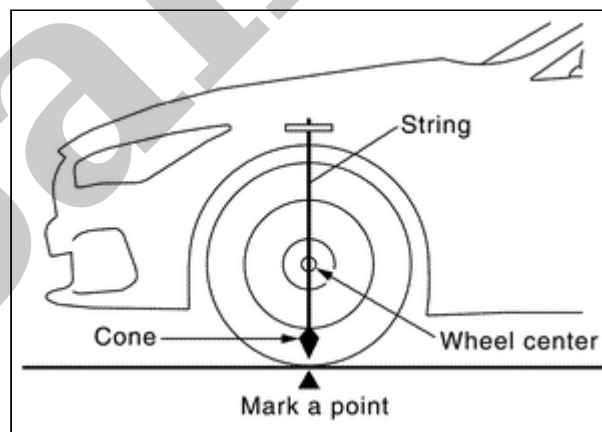
1. TARGET SETTING



SIEMD-7109398-03-SOIA1662GB

A – E (C – F) : 3,000 mm (118.11 in)

1. Mark points “A”, “B”, “C” and “D” at the center of the lateral surface of each wheels.



SIEMD-7109398-05-SOIA1043GB



NOTE:

Hang a string with a cone from the fender so as to pass through the center of wheel, and then mark a point at the center of the lateral surface of the wheel.

2. Draw line “LH” passing through points “A” and “B” on the left side of vehicle.



NOTE:

Approximately 4 m (13.12 ft) or more from the front end of vehicle.

3. Mark point “E” on the line “LH” at the positions 3,000 mm (118.11 in) from point “A”.
4. Draw line “RH” passing through points “C” and “D” on the right side of vehicle in the same way as step 2.



NOTE:

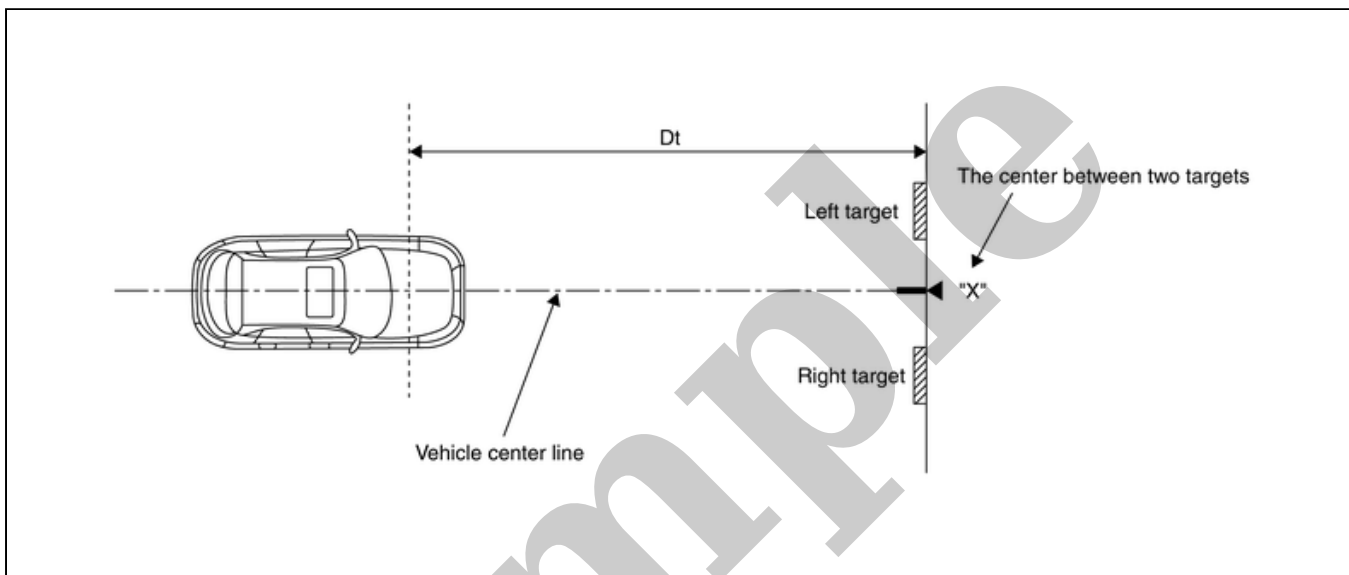
Approximately 4 m (13.12 ft) or more from the front end of vehicle.

5. Mark point “F” on the line “RH” at the positions 3,000 mm (118.11 in) from point “C”.
6. Draw line “FW” passing through the points “E” and “F” on the front side of vehicle.
7. Mark point “X” at the center of point “E” and “F” on the line “FW”.

CAUTION:

Make sure that “E” to “X” is equal to “F” to “X”.

8. Center the J-52266-2 alignment target at point "X" facing the vehicle.



SIEMD-7109398-02-SOIA1663GB

Dt

: 3,000 mm (118.11 in)

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Proceed to Camera Aiming Adjustment.

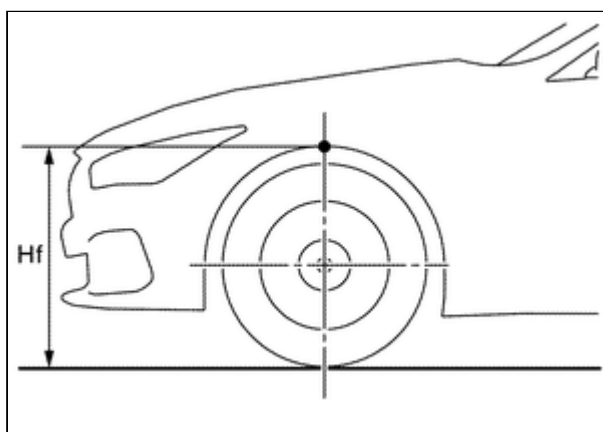
Camera Aiming Adjustment

CAUTION:

Perform the adjustment under unloaded vehicle condition.

1. CHECK VEHICLE HEIGHT

Measure the wheelarch height.



Hfl: Front left wheelarch height [mm]

Hfr: Front right wheelarch height [mm]

CAUTION:**Be sure to measure wheelarch height correctly.**

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[GO TO 2.](#)

2. CAMERA AIMING ADJUSTMENT

 With CONSULT**CAUTION:****Operate CONSULT outside the vehicle, and close all the doors. (To retain vehicle attitude appropriately)**

1. Select "Work Support" on "LANE CAMERA" with CONSULT.
2. Select "AUTO AIM".
3. Confirm the following items;
 - The target should be accurately placed.
 - The vehicle should be stopped.
4. Select "Start" to perform camera aiming.

CAUTION:

- **Never select "Start" when the J-52266-2 alignment target is not accurately placed.**
- **Wait 5 seconds or more after selecting "Start".**

5. Input the following parameters, and then select "Start".

Hfl	: Measured value
Hfr	: Measured value
Vehicle Reference Value	: 789
VP	: 0
Dt	: 3,000 mm
Dbt	: 720 mm
Htu	: 1,420 mm
Htl	: 1,180 mm
Ts	: 120 mm

6. Confirm the displayed item.

- "Normally Completed": Select "Completion".

**NOTE:**