8204K–01

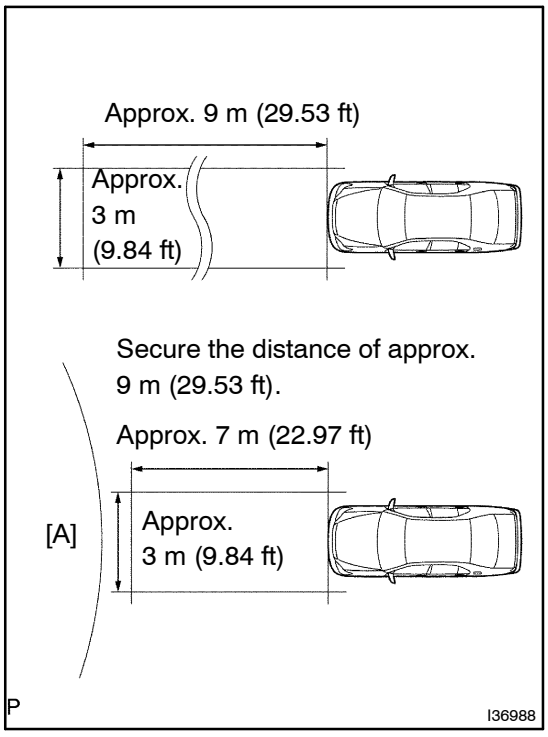
ADJUSTMENT

CAUTION:

- **Do not stare at the luminous portion of the laser during adjustment. The intensity of the laser light is low, but it may result in loss of sight.**
- **If the operation is not carried out as specified, there may be a risk of exposure to hazardous radiation.**

HINT:

- There is a limitation on laser optical axis adjustment.
- Since the laser sensor is installed in the bumper reinforcement, it is important that the laser sensor, bumper reinforcement, and other related parts are installed properly.
- When the sensor is removed from the vehicle for trouble diagnosis or repair, it is necessary to adjust the laser optical axis after the operation.



1. ADJUST LASER SENSOR

NOTICE:

- **Perform measurement indoors on a level ground and in front of a blank wall. Park the vehicle at least 9 m (29.53 ft) from the wall. When performing adjustment outdoors, make sure that it is not raining or snowing.**
- **Check that there are no reflective materials in the surroundings or on the ground.**
- **If you can not secure a distance of about 9 m (29.53 ft) in front of the vehicle, be sure to secure at least 7 m (22.97 ft) from the vehicle, and cover the area marked [A] with a black cloth. If not covered with a black cloth, the laser sensor may detect something other than the target and it will fail to adjust properly.**

(a) Preparation for adjusting the laser optical axis

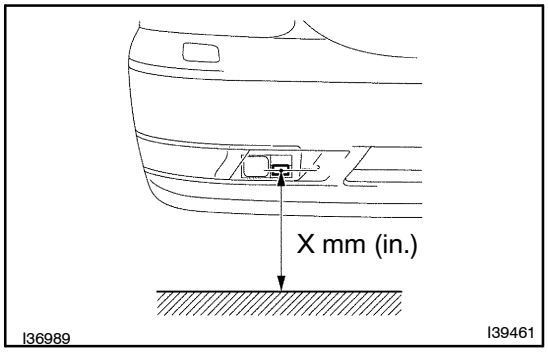
(1) Adjust the tire pressure properly (see page 28–1).

(2) Luggage in the vehicle, such as in the trunk, should be unloaded.

(3) Clean the light–luminous and light–receiving portions of the laser sensor.

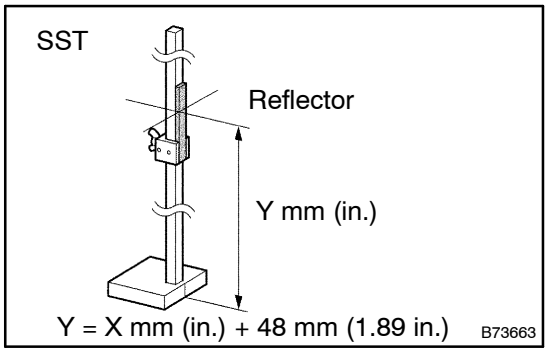
HINT:

Prepare a 10 m (32.81 ft) string, a string with a sharp–pointed weight (plumb bob), and a 5 m (16.41 ft) tape measure.



(b) Reflector (SST) placement

(1) Measure the height to the center of the laser luminous portion.

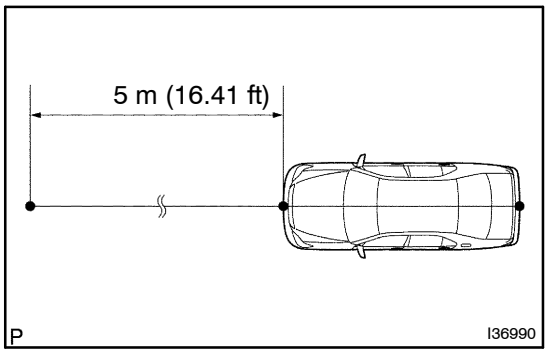


(2) Adjust the center height of the reflector 48 mm (1.89 in.) higher than the center of the laser luminous portion.

SST 09870–60000 (09870–60010, 09870–60020)

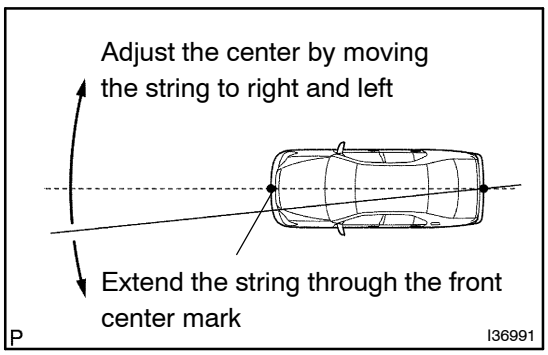
NOTICE:

Adjust it as precise as possible.



(3) From the center (center of the emblem) of the front and rear bumpers, hang down the string with the plumb bob and mark the center points (both front and rear) of the vehicle on the ground.

(4) Extend the 10 m (32.82 ft) string from the rear center mark forward through the front center mark. Make a mark 5 m (16.41 ft) forward of the front marked point.

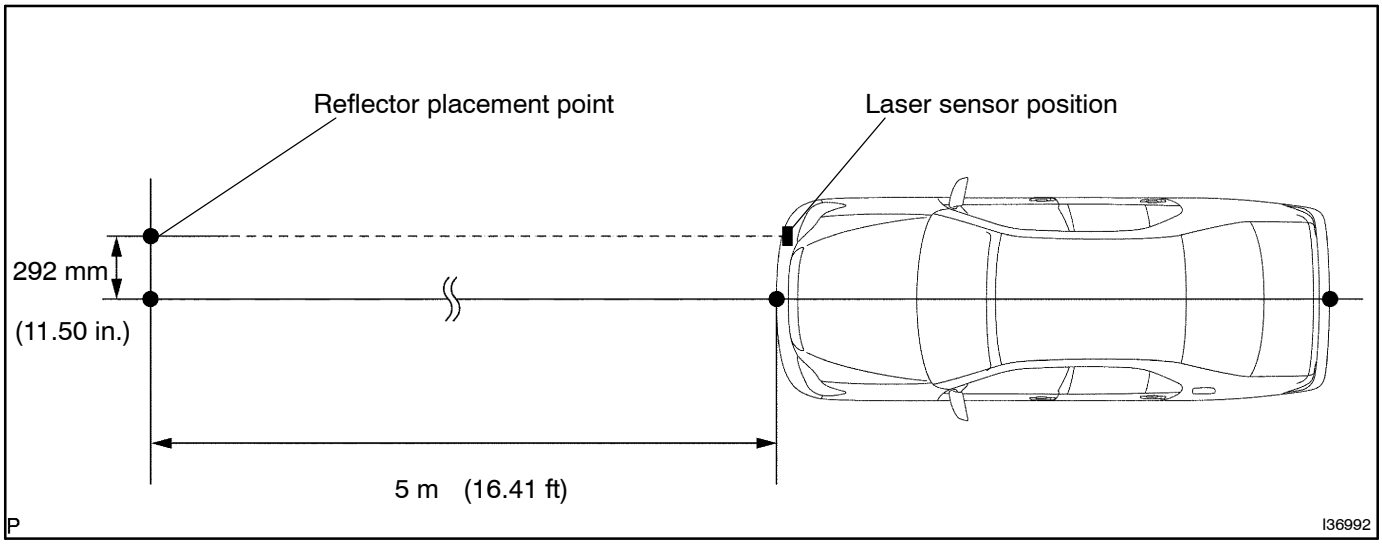


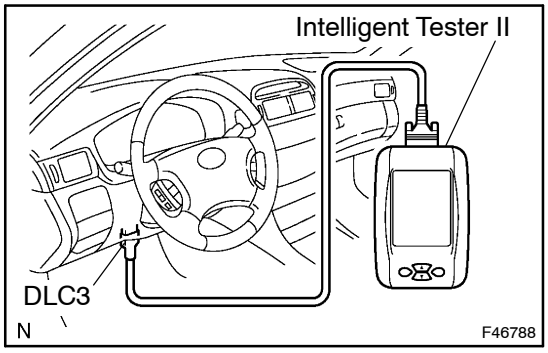
HINT:

Fix one end of the string to the rear center mark and move the other end right and left at a point 5 m from the front of the vehicle. Make a 5 m (16.41 ft) mark when the string and the front vehicle center mark intersect.

(5) From the 5 m (16.41 ft) marked position, measure 292 mm (11.50 in.) to the right and place the reflector there.

NOTICE:
Perform it as precise as possible.

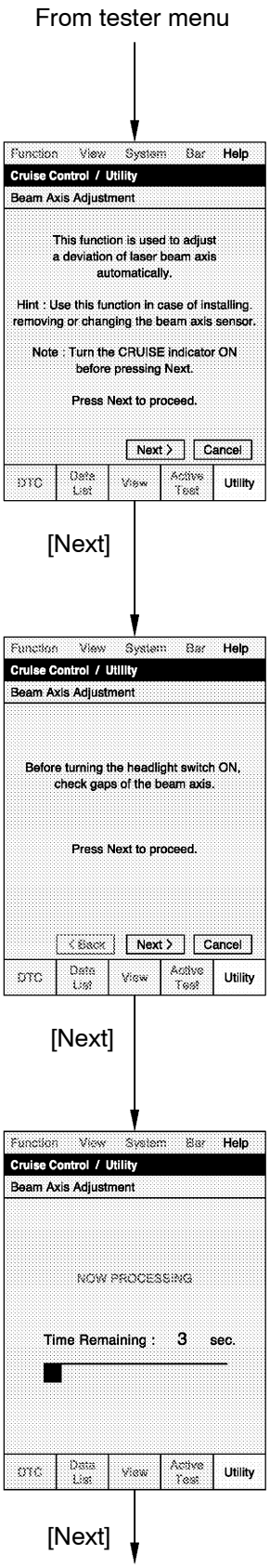




(c) Adjust the laser beam axis.
(1) Turn the ignition switch to the ON position.
(2) Push the cruise control main switch ON–OFF button on.
(3) Connect the intelligent tester II to the DLC3, and turn the power ON.
(4) Operate by following the screen menu and select ”BEAM AXIS ADJUST” of the Laser Cruise Control, then press the ”ENTER” key.

HINT:
- Pressing the ”ENTER” key will make the ECM transfer to BEAM AXIS ADJUSTMENT MODE.
- When the ECM transfers to BEAM AXIS ADJUSTMENT MODE, the buzzer sounds for 1 second.

Tester menu flow:



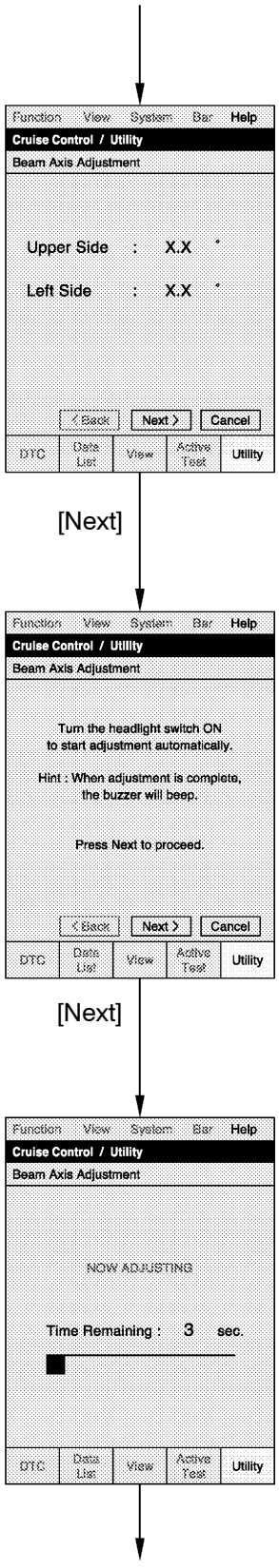
HINT:
Count down from 10 seconds to 0.

I40236

Confirm the current value of the laser beam. (The default reading is 6.3° when the reflector position is out of range.)

Move the reflector either right or left by 100 mm (3.937 in.) and check that the value changes.

NOTICE:
When the values do not change, it is possible that the direction of the laser sensor is greatly off target, and that the laser sensor is aiming at something different. Check the installation condition of the laser sensor.



The direction and angle that actually deviate from the spec are displayed in the multi–information display on the combination meter when starting the optical axis adjustment mode with the intelligent tester II.

Return the reflector to the original position and read the current angle.

Standard:
UPPER/ LOWER SIDE: less than –2° to +2°,
RIGHT/ LEFT SIDE: less than –4° –to+4°

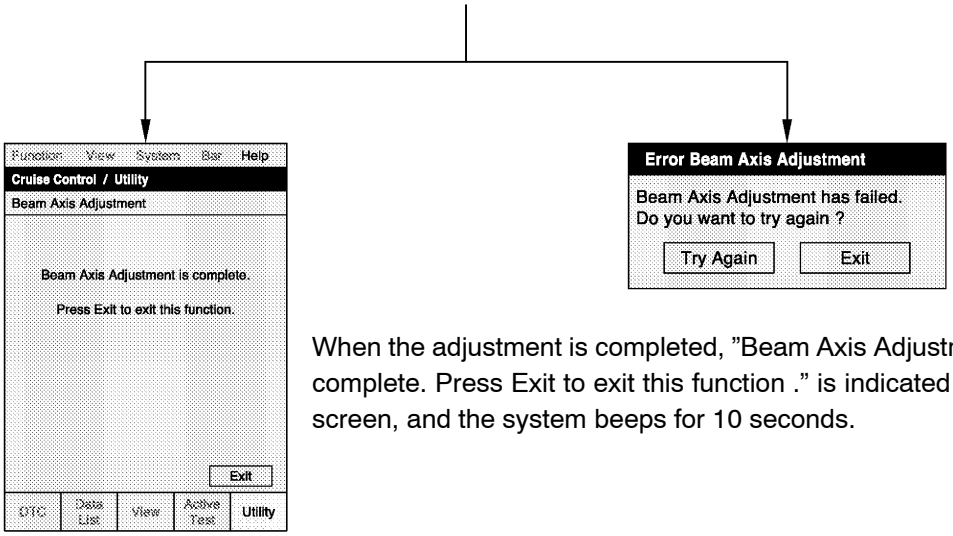
If the values displayed on the screen are normal, the values are within the above ranges. If the value is out of range, check the installation condition of the bumper reinforcement, etc.

HINT:
Count down from 3 seconds to 0.

I39279

I39314

Branches automatically



When the adjustment is completed, ”Beam Axis Adjustment is complete. Press Exit to exit this function .” is indicated on the screen, and the system beeps for 10 seconds.

N

I39280