

PARKING ASSIST SYSTEM INITIALIZATION SETTING (CALIBRATION)

id092000841000

- Launch the initialization setting mode for the park assist system initialization setting.
- If for the following, perform initialization setting. (See Initialization setting .)
 - If rear mount camera, liftgate replaced
 - Part replacement having large effect on vehicle height such as tires, suspension, and wheels

Initialization setting

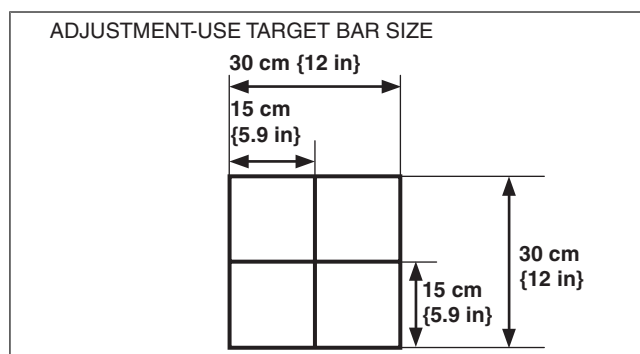
Preparation

1. Prepare two target bars each for adjustment and inspection as shown in the figure.

Note

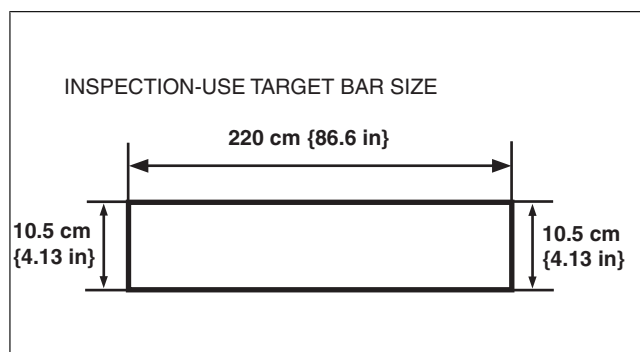
- Prepare target bars for adjustment which are easily recognized.

Adjustment target bar



ac5wzw00005626

Inspection target bar



ac5wzw00005904

Procedure

Caution

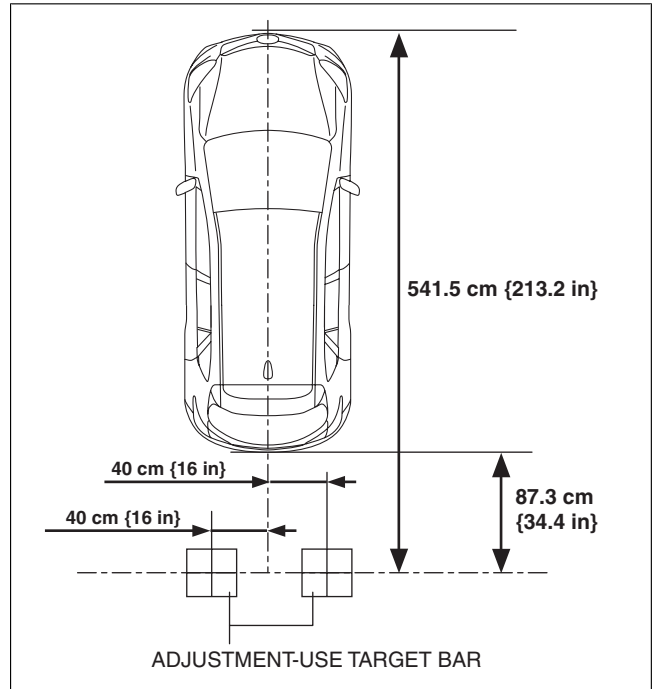
- If the initialization setting is performed on a sloping surface or if there is cargo loaded which largely changes the vehicle posture, the camera optical axis may not set to the correct position. When performing the initialization setting, park the vehicle on a flat surface and remove any cargo.

1. Adjust the wheel alignment, tire pressure. (See WHEEL AND TIRE SPECIFICATION.)

2. Attach the target bars for adjustment to the position (floor surface) shown in the figure.

Caution

- If the installation position of an adjustment target bar is deviated, the camera optical axis may not set to the correct position. The margin of error in the installation position of an adjustment target bar is 5 mm {0.2 in} or less.



ac5wzw00005627

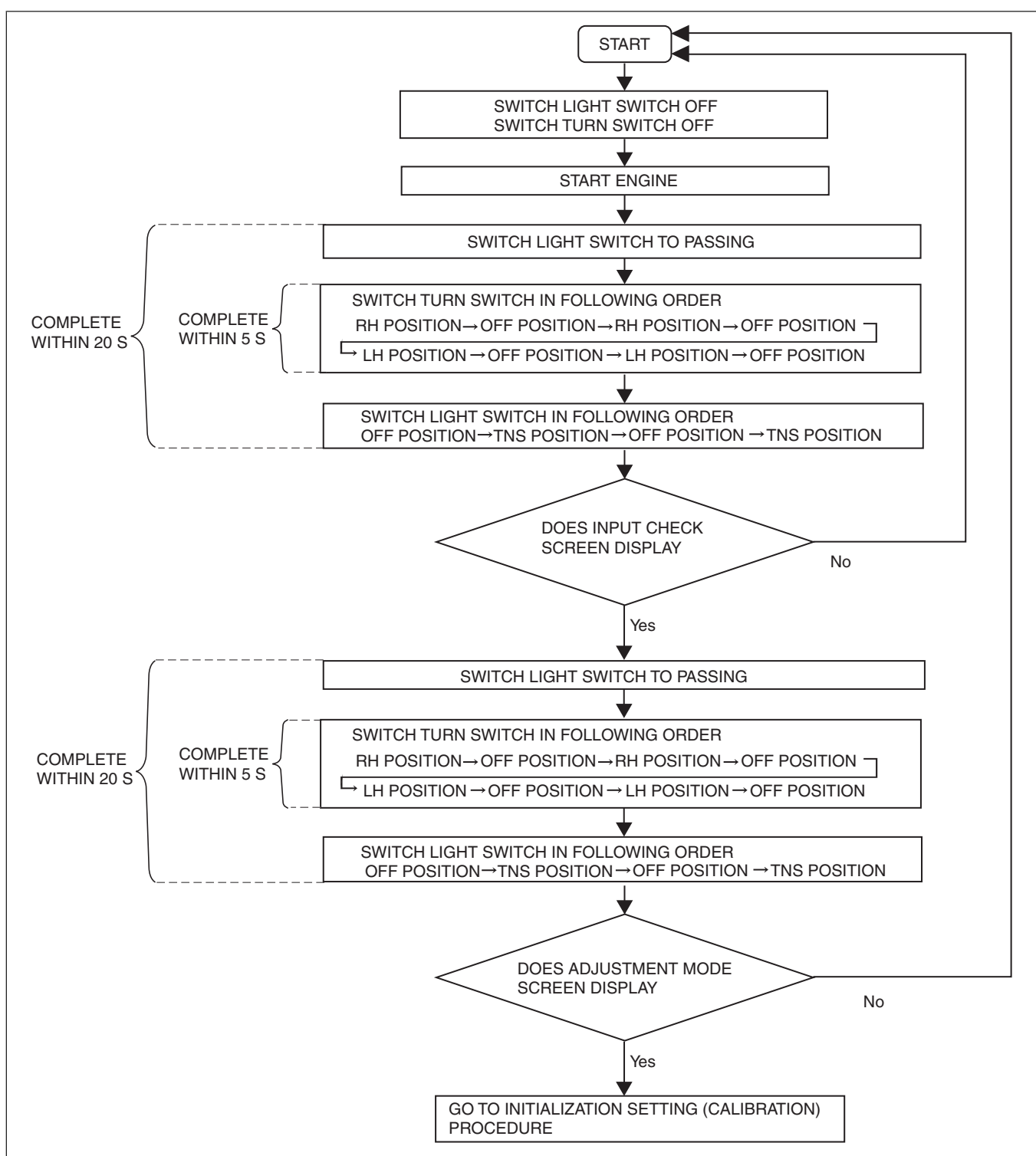
3. Launch the initialization setting (calibration) mode using the following procedure.

Caution

- If the initialization setting (calibration) is not implemented, the initialization setting mode is force-launched when the ignition is switched ON, and the adjustment mode No.1 screen is displayed, therefore, the procedure shown in the figure is not required.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



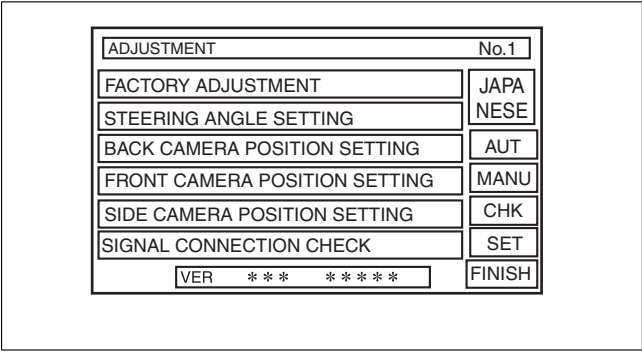
ac5wzw00005630

Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

4. Select the adjustment mode No.1 screen MANU.

- Note**
- The initialization setting (calibration) is not available for the touch panel operation. Select the screen using the turn switch or light switch as follows. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)

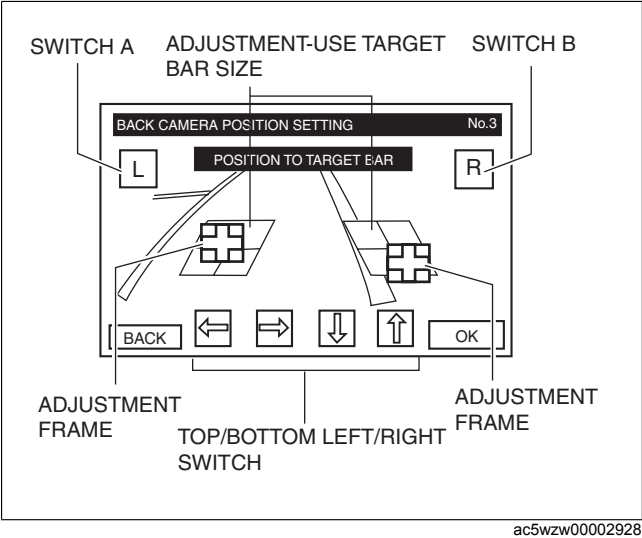


| Screen cursor | Used switch | Switch operation |
|-------------------|--------------|------------------|
| Move to right | turn switch | RH position |
| Move to left | turn switch | LH position |
| Selects (decides) | light switch | TNS position |

5. Select the adjustment mode No.1 screen FACTORY ADJUSTMENT.

6. Operate switch A, B and the up/down switch of the back camera optical axis adjustment screen and center the target bar for adjustment in the adjustment frame.
7. Select the back camera optical axis adjustment No. 3 screen OK.

- Note**
- The rear mount camera stores the adjustment value after OK is selected. The image at the rear of the vehicle taken by the rear mount camera is displayed on the screen while the adjustment value is stored. When storage of the adjustment value is completed, the screen switches to the adjustment mode No.1 screen.



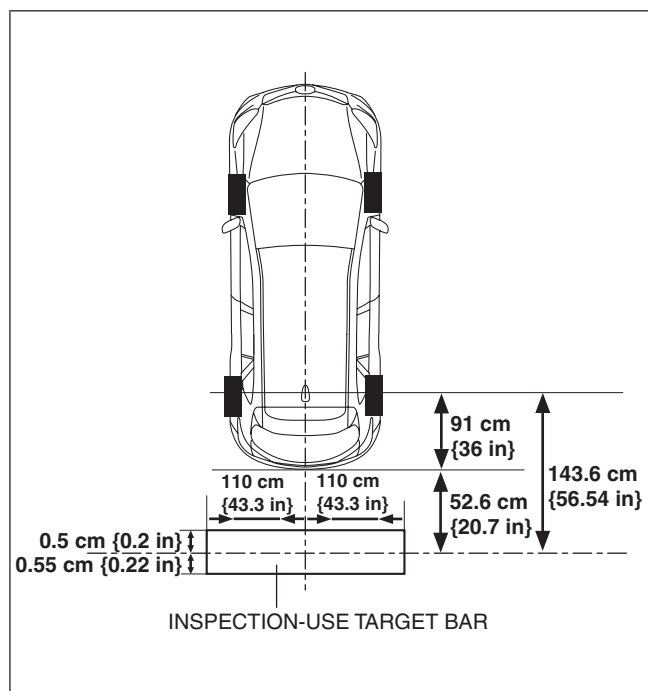
8. Verify that the adjustment mode No.1 screen is displayed.
- If it does not display, repeat procedure from Step 3.
 - If the adjustment mode No.1 screen is not displayed even if the procedure is repeated from Step 3, a rear mount camera malfunction can be considered. Replace the rear mount camera and perform the initialization setting again (calibration).

9. Peel off the attached target bars for the adjustment in Step 2 and attach the target bar for the inspection to the position (floor surface) shown in the figure.

Caution

- If the installation position of an inspection target bar is deviated, the camera optical axis may not set to the correct position. The margin of error in the installation position of an inspection target bar is 5 mm {0.2 in} or less.

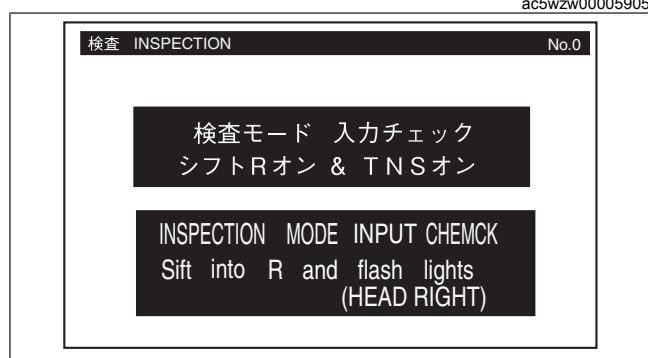
10. Select the adjustment mode No.1 screen CHK.
11. Verify that the parking brake is applied correctly.



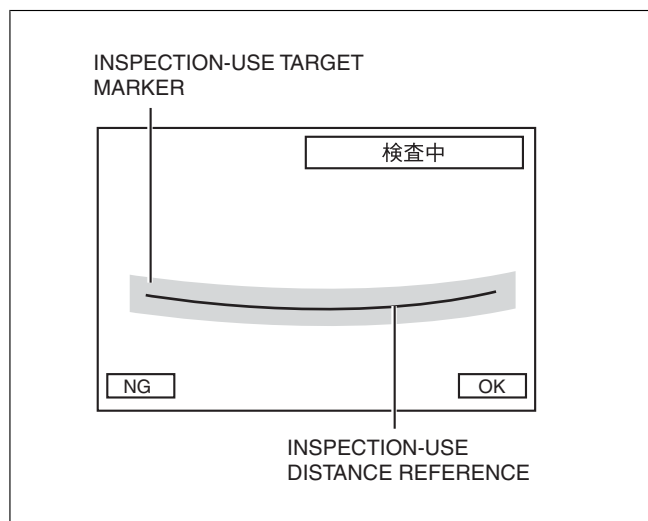
12. Input the following inspection password after displaying the inspection screen.
 - Shift the selector lever to the R position (ATX)/ put in reverse (MTX).
 - Switch the light switch from the OFF position to the TNS position, and then OFF again.

Warning

- When inputting the inspection password, keep the brake pedal depressed so that the vehicle does not unexpectedly move and cause an accident.



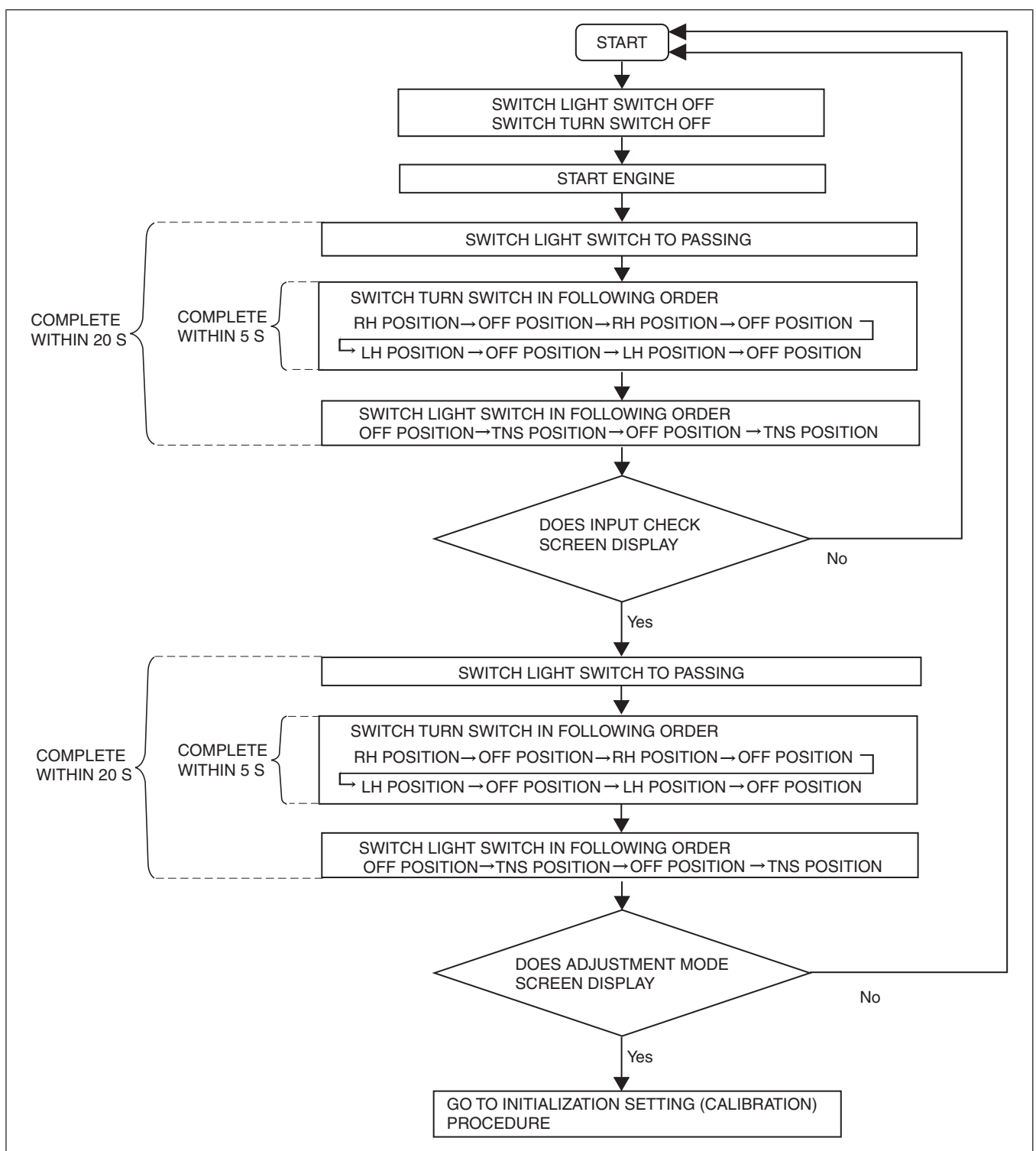
13. Verify that the distance reference line for the inspection is above the inspection-use target marker, and select OK.
 - If it is not above the inspection-use target marker, select NG and perform the initialization again.
14. Switch the ignition OFF (LOCK).



15. Launch the initialization setting (calibration) mode using the following procedure.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00005630

Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

16. Verify that the adjustment No.1 screen **FACTORY ADJUSTMENT** item is not displayed in black.

Note

- Adjustment items that have been completed are displayed in black on the screen. If the factory adjustment item is displayed in green, perform the procedure from Step 3 again because the adjustment has not been completed.

17. Shift the selector lever to the R position (ATX)/put in reverse (MTX).

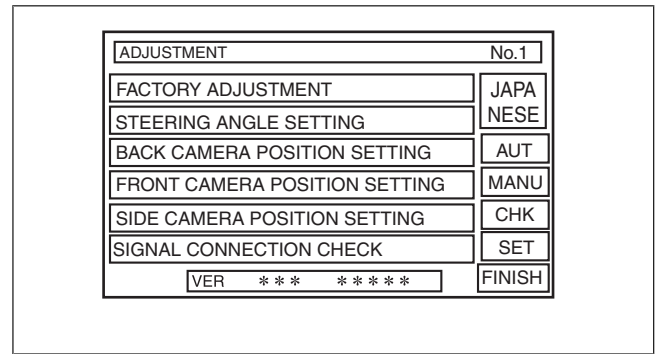
Warning

- When operating the selector lever, keep the brake pedal depressed so that the vehicle does not unexpectedly move and cause an accident.**

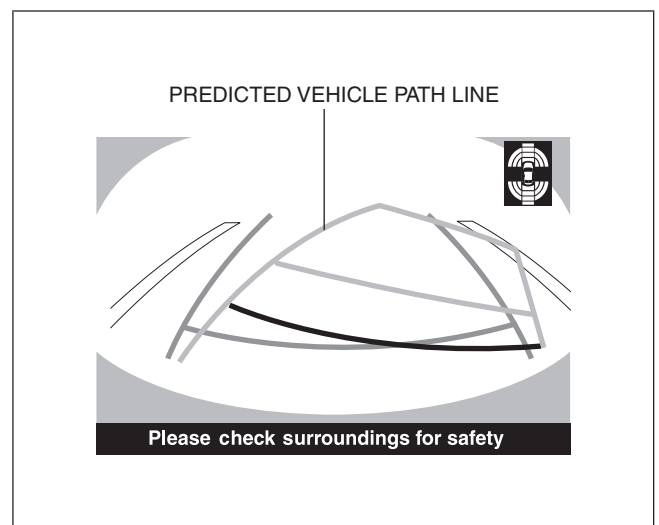
18. Turn the steering wheel left and right until it locks, and verify that the predicted vehicle path line movement is synchronized to the operation..
- If the predicted vehicle path lines do not link, or they do not move prior to locking the steering wheel, the steering angle signal will not be received correctly, therefore, perform signal connection verification. (See Guide Line Display Setting Change.)

Caution

- The predicted vehicle track is displayed only if the guide line display setting is SET1. If the guide line display setting is other than SET1, change the guide line display setting. (See Guide Line Display Setting Change.)**



ac5wzw00003258

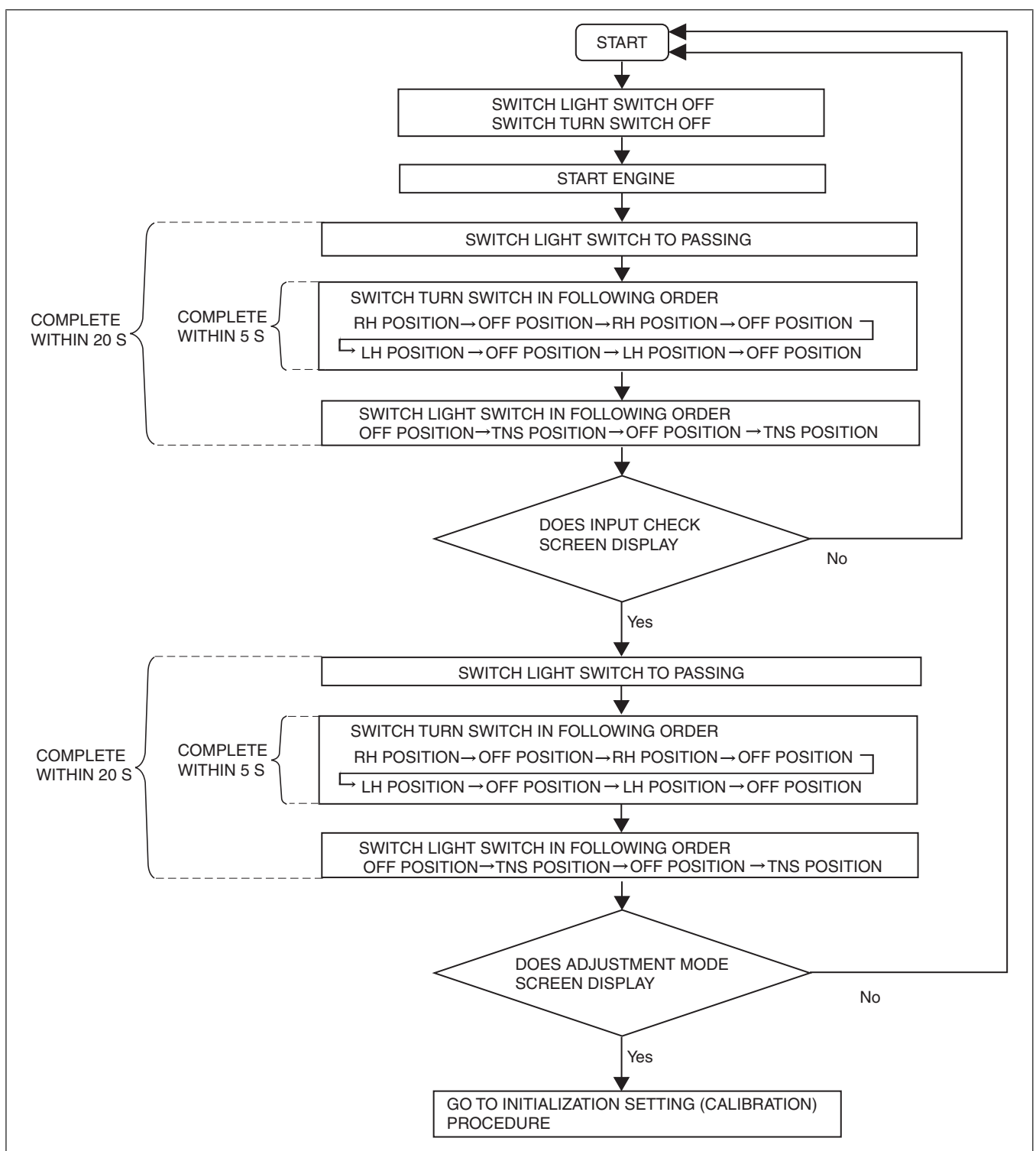


ac5wzw00005573

19. Launch the initialization setting (calibration) mode using the following procedure.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00005630

Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

20. Select the adjustment mode No.1 screen SIGNAL CONNECTION CHECK.

Note

- The initialization setting (calibration) is not available for the touch panel operation. Select the screen using the turn switch or light switch as follows. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)

ac5wzw00003258

| Screen cursor | Used switch | Switch operation |
|-------------------|--------------|------------------|
| Move to right | turn switch | RH position |
| Move to left | turn switch | LH position |
| Selects (decides) | light switch | TNS position |

21. Verify the input signal status displayed on the screen.

ac5jjw00001710

| Item | OPERATION |
|--------------------|--|
| CAN shift signal | The signal connection verification is performed automatically. |
| CAN Steering angle | The signal connection verification is performed automatically. |

- Items displaying OK: Signal input normal
- Items not displaying OK: Verify connection status of vehicle wiring harnesses, parts and the CAN signal communication status.

Guide Line Display Setting Change

Note

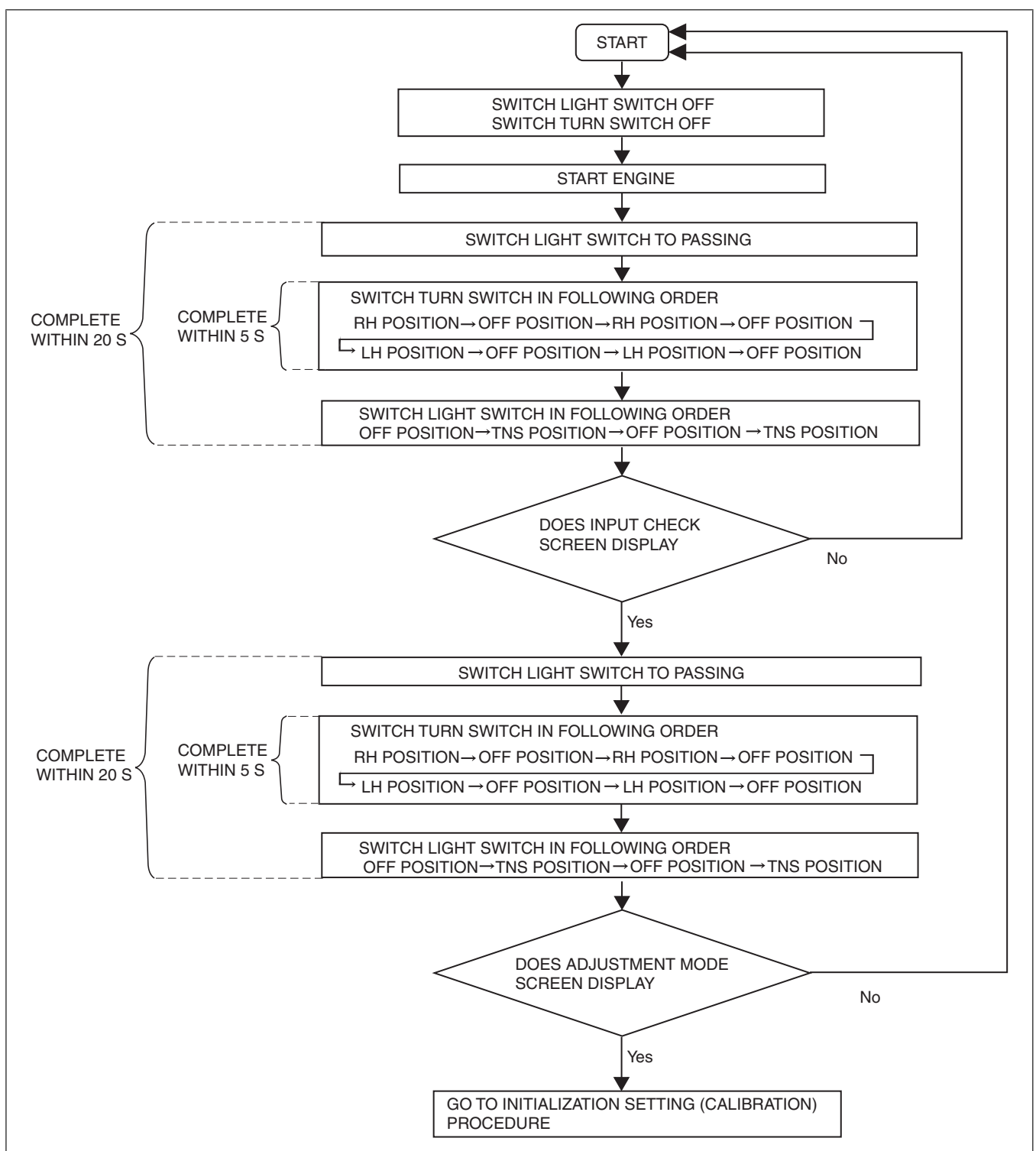
- The setting for the guide lines displayed in the image from the rear mount camera can be changed as follows:
 - predicted vehicle track display (SET1)
 - Fixed line display (SET2)
 - No guide line display (SET3)
- The guide line setting can only be changed if the initialization (calibration) has been completed.

Changing to predicted vehicle track display

- Launch the initialization setting (calibration) mode using the following procedure.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00005630

Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

2. Select the adjustment mode No.1 screen SET.

Note

- The initialization setting (calibration) is not available for the touch panel operation. Select the screen using the turn switch or light switch as follows. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)

| | | |
|-------------------------------|--------|------|
| ADJUSTMENT | | No.1 |
| FACTORY ADJUSTMENT | JAPA | NESE |
| STEERING ANGLE SETTING | AUT | |
| BACK CAMERA POSITION SETTING | MANU | |
| FRONT CAMERA POSITION SETTING | CHK | |
| SIDE CAMERA POSITION SETTING | SET | |
| SIGNAL CONNECTION CHECK | FINISH | |
| VER *** ***** | | |

ac5wzw00003258

| Screen cursor | Used switch | Switch operation |
|-------------------|--------------|------------------|
| Move to right | turn switch | RH position |
| Move to left | turn switch | LH position |
| Selects (decides) | light switch | TNS position |

3. Select setting screen SET1.

- Verify that "SET1" on the setting screen is displayed in red.

4. Select setting screen OK.

| | |
|-------------|-------|
| KD 45 | OK |
| BACK CAMERA | |
| SET 1 | SET 2 |
| SET 3 | |

ac5ijw00002679

5. Select the adjustment mode No.1 screen FINISH.

| | | |
|-------------------------------|--------|------|
| ADJUSTMENT | | No.1 |
| FACTORY ADJUSTMENT | JAPA | NESE |
| STEERING ANGLE SETTING | AUT | |
| BACK CAMERA POSITION SETTING | MANU | |
| FRONT CAMERA POSITION SETTING | CHK | |
| SIDE CAMERA POSITION SETTING | SET | |
| SIGNAL CONNECTION CHECK | FINISH | |
| VER *** ***** | | |

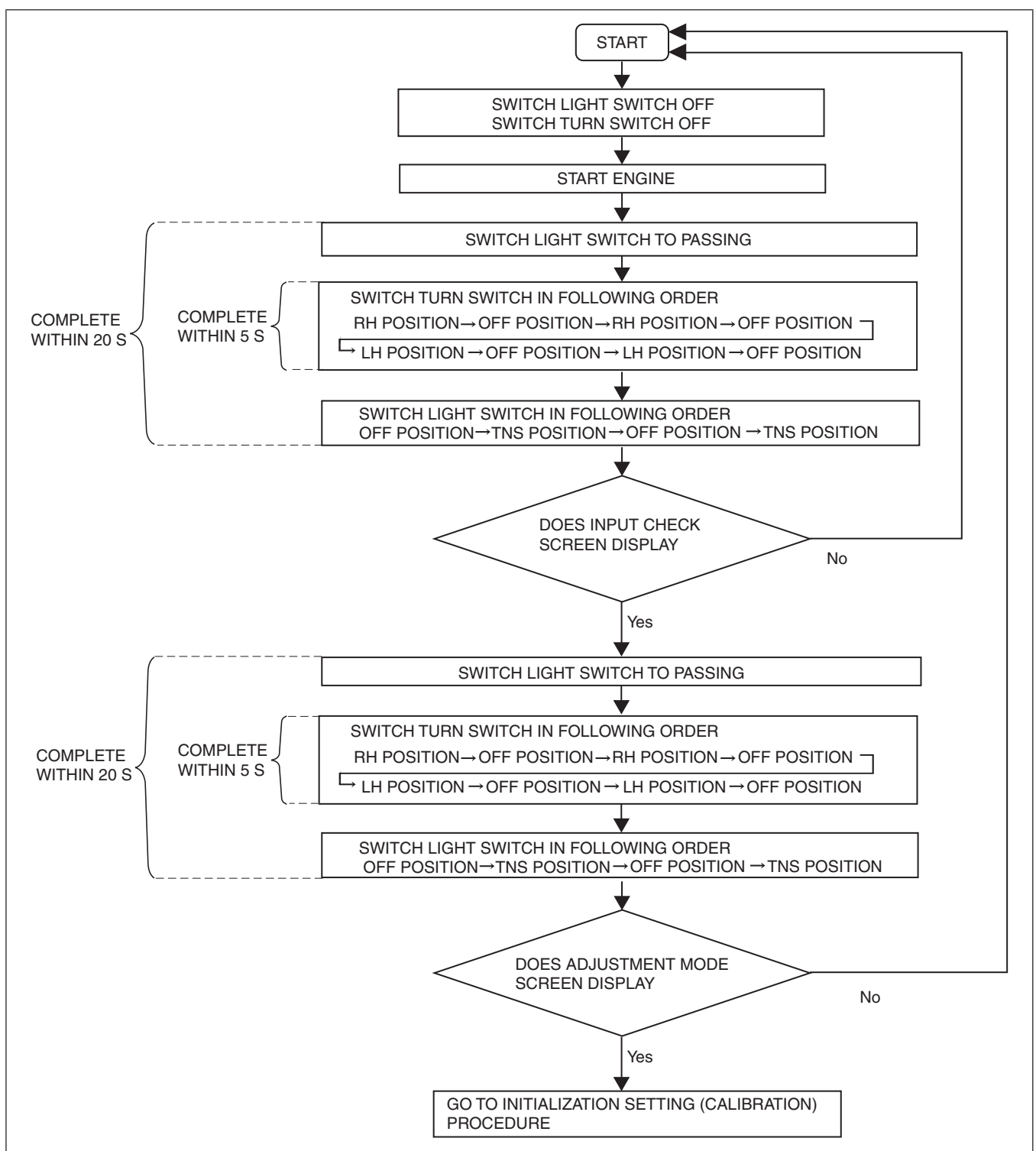
ac5wzw00003258

Guide lines not displayed

1. Launch the initialization setting (calibration) mode using the following procedure.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00005630

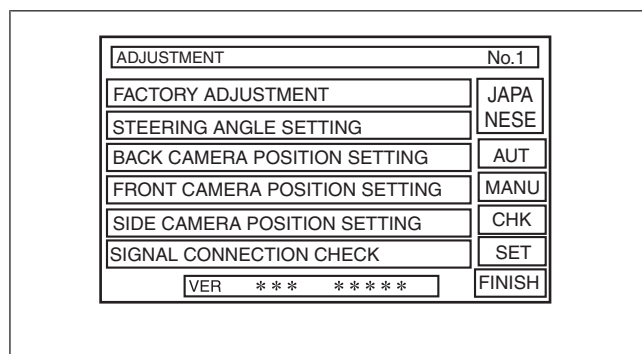
Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

2. Select the adjustment mode No.1 screen SET.

Note

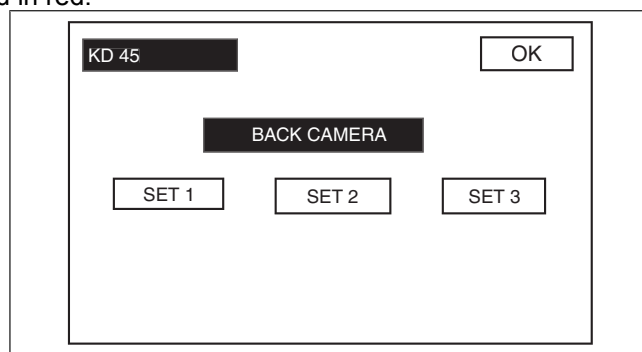
- The initialization setting (calibration) is not available for the touch panel operation. Select the screen using the turn switch or light switch as follows. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00003258

| Screen cursor | Used switch | Switch operation |
|-------------------|--------------|------------------|
| Move to right | turn switch | RH position |
| Move to left | turn switch | LH position |
| Selects (decides) | light switch | TNS position |

3. Select setting screen SET2.
 - Verify that "SET2" on the setting screen is displayed in red.
4. Select setting screen OK.



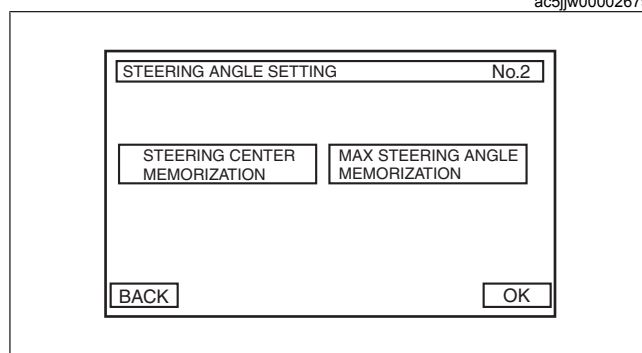
ac5jw00002679

5. Turn the steering wheel left/right until it locks.

Note

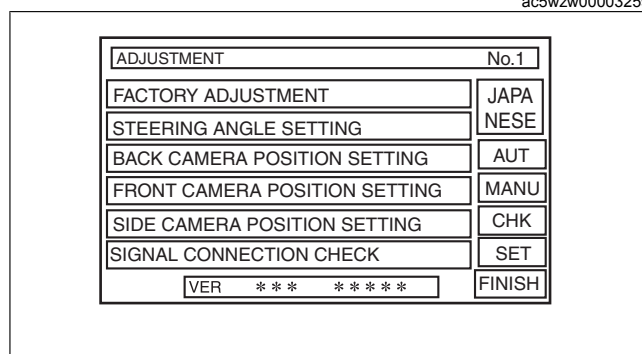
- The steering wheel can be turned first to the left or right.
- If the steering wheel is turned in the opposite direction before it locks, the correct steering angle will not be stored in memory.

6. Select steering angle adjustment screen MAX STEERING ANGLE MEMORIZATION.



ac5wzw00003259

7. Select the adjustment mode No.1 screen FINISH.



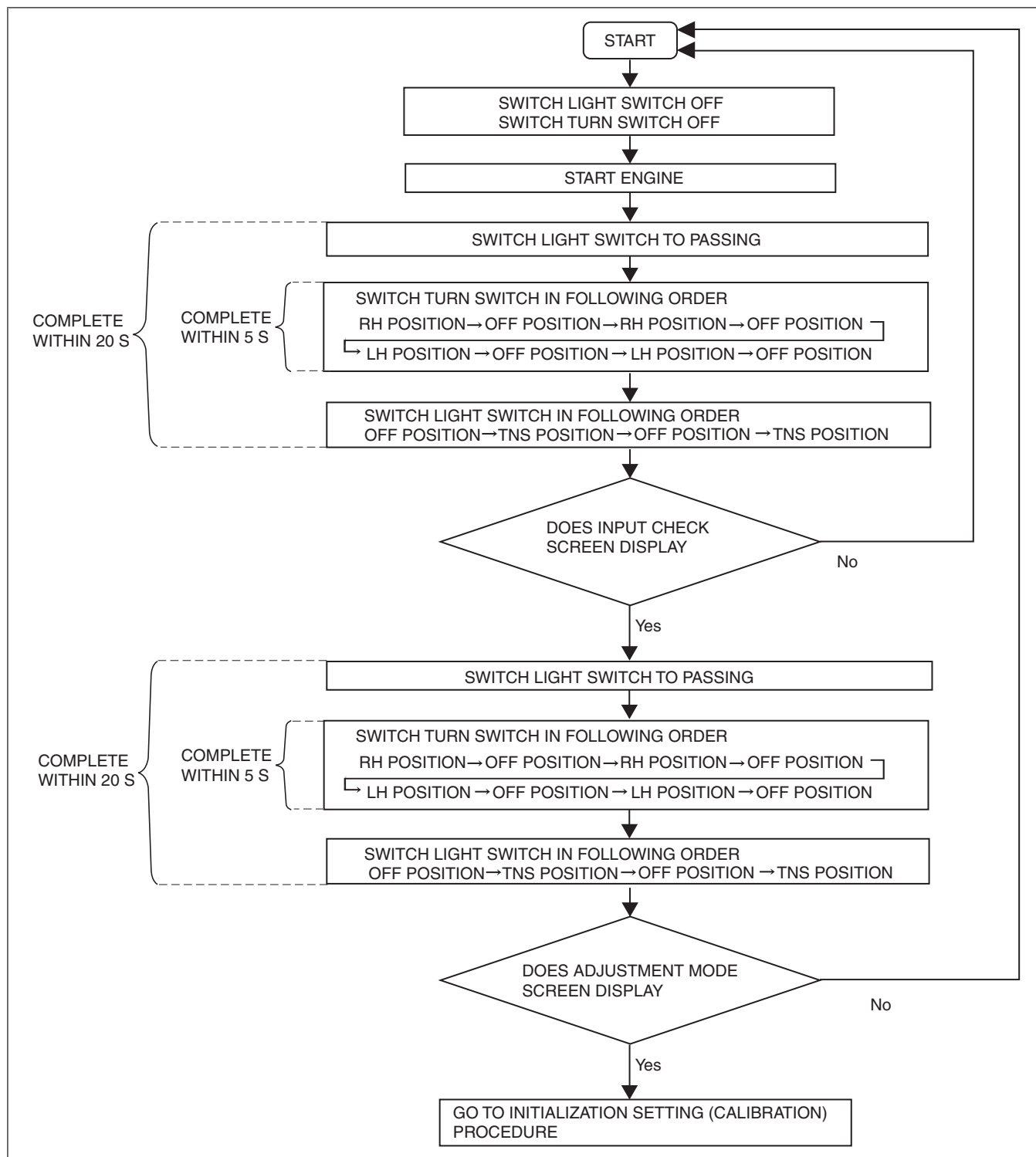
ac5wzw00003258

Changing to display without guide lines

1. Launch the initialization setting (calibration) mode using the following procedure.

Note

- The initialization setting (calibration) mode is launched using the light switch and turn switch. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)



ac5wzw00005630

Note

- If it does not change to the adjustment mode No.1 screen and the the screen turns black, a malfunction in the rear mount camera can be considered. Verify the connection status of the rear mount camera.

2. Select the adjustment mode No.1 screen SET.

Note

- The initialization setting (calibration) is not available for the touch panel operation. Select the screen using the turn switch or light switch as follows. The operation method for the light switch and turn switch, refer to the switch operation method. (See Switch Operation Method.)

| | | |
|-------------------------------|--------|-----------|
| ADJUSTMENT | | No.1 |
| FACTORY ADJUSTMENT | JAPA | NESE |
| STEERING ANGLE SETTING | AUT | MANU |
| BACK CAMERA POSITION SETTING | CHK | SET |
| FRONT CAMERA POSITION SETTING | VER | *** ***** |
| SIDE CAMERA POSITION SETTING | FINISH | |
| SIGNAL CONNECTION CHECK | | |

ac5wzw00003258

| Screen cursor | Used switch | Switch operation |
|-------------------|--------------|------------------|
| Move to right | turn switch | RH position |
| Move to left | turn switch | LH position |
| Selects (decides) | light switch | TNS position |

3. Select setting screen SET3.

- Verify that "SET3" on the setting screen is displayed in red.

4. Select setting screen OK.

| | |
|-------------|-------|
| KD 45 | OK |
| BACK CAMERA | |
| SET 1 | SET 2 |
| SET 3 | |

ac5jjw00002679

5. Select the adjustment mode No.1 screen FINISH.

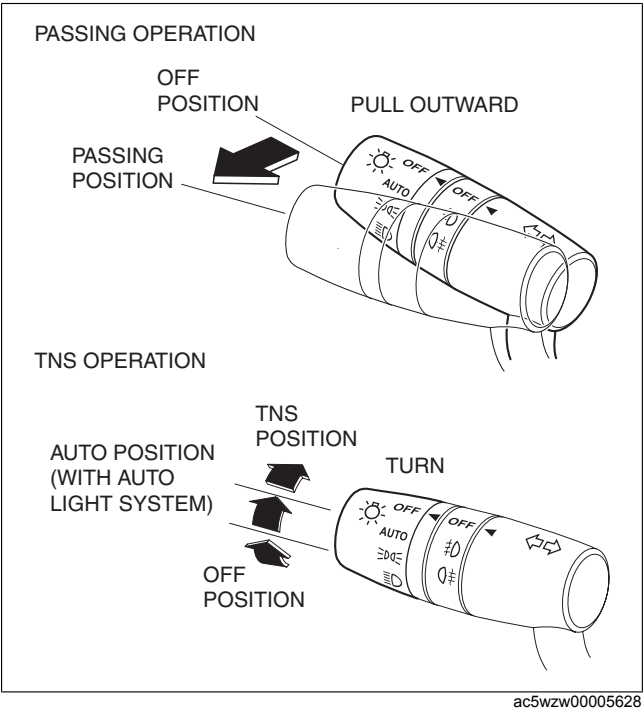
| | | |
|-------------------------------|--------|-----------|
| ADJUSTMENT | | No.1 |
| FACTORY ADJUSTMENT | JAPA | NESE |
| STEERING ANGLE SETTING | AUT | MANU |
| BACK CAMERA POSITION SETTING | CHK | SET |
| FRONT CAMERA POSITION SETTING | VER | *** ***** |
| SIDE CAMERA POSITION SETTING | FINISH | |
| SIGNAL CONNECTION CHECK | | |

ac5wzw00003258

Switch Operation Method

- The operation method for the light switch and turn switch is indicated as follows:

Light switch operation method



Turn switch operation method

