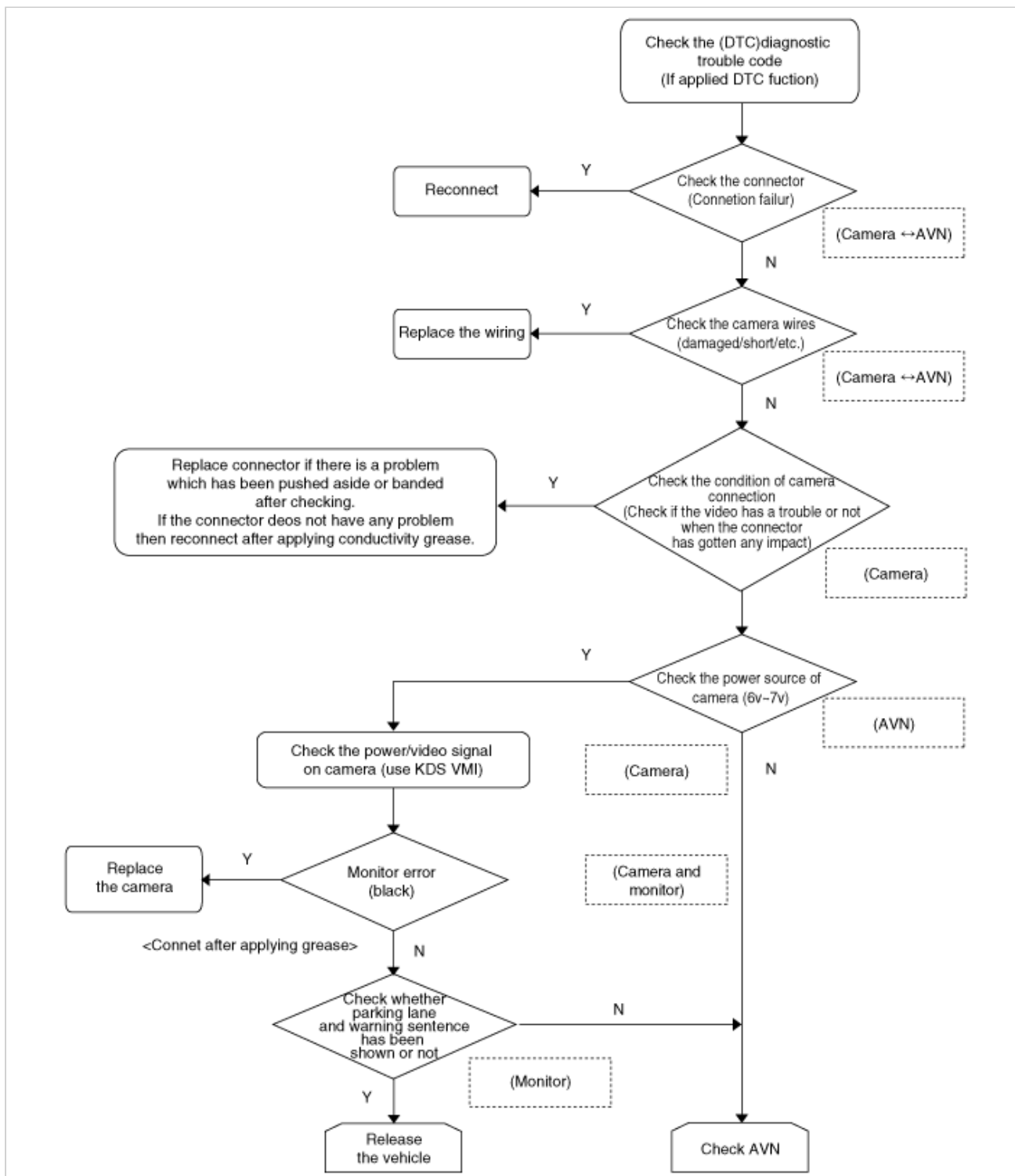


Troubleshooting

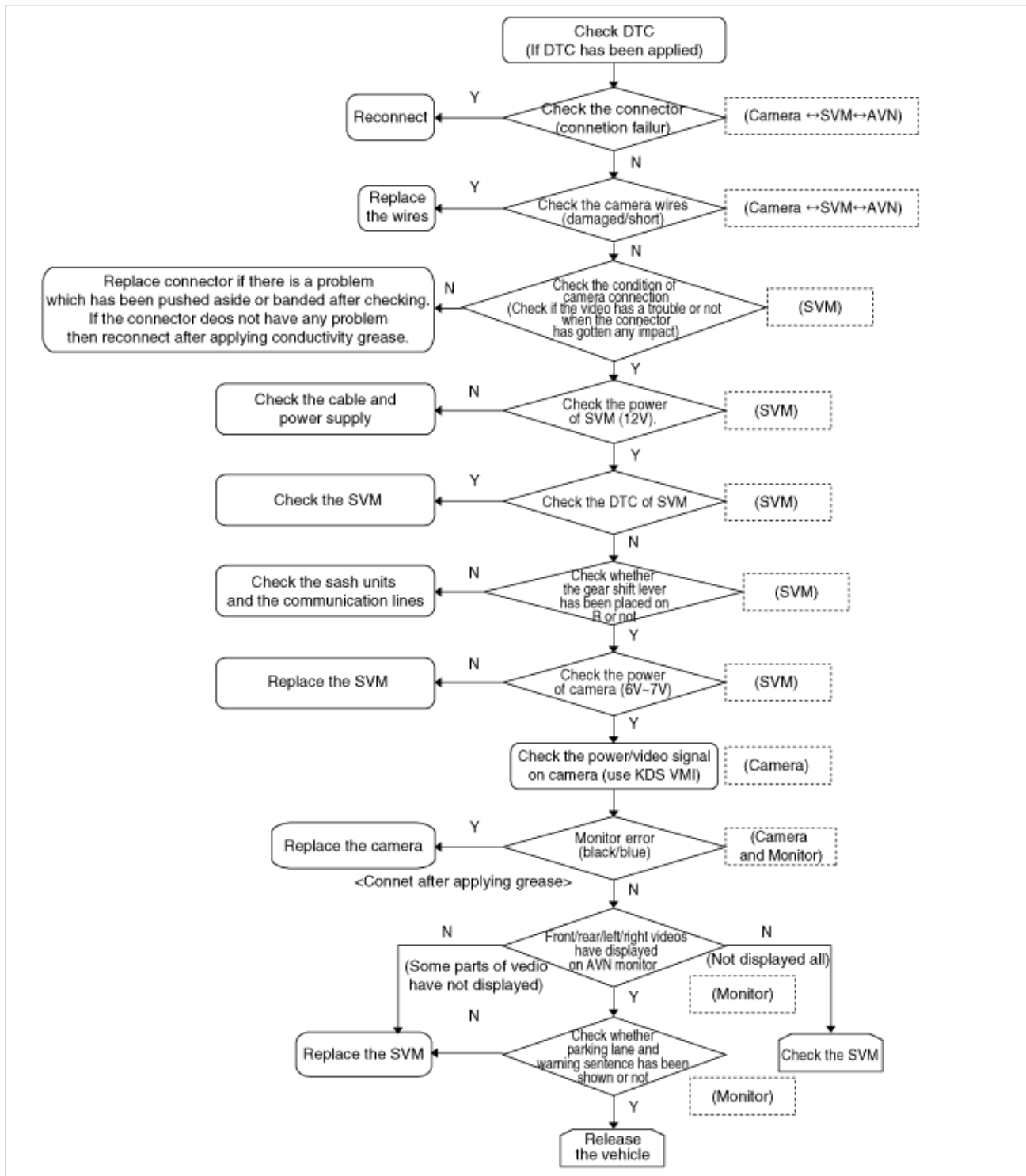
Diagnosis procedure of each symptom

No.	Symptom	Repairment
1	AVN monitor turns to black/blue	R-1, R-2, R-3
	Parking guide line and notification word have not shown	
2	Vehicle has been slanted/leaned during parking	R-4, R-5
	Trouble on the shown angle	
	Difference of right/left bumper visible sight	
	Parking guidance line has been leaned (left/right deviation happened)	
	Vehicle has been slanted during parking	
3	Inflow of water in lens	R-6
	Blurred video	
	Damaged of lens coating	
	Showed red colored video	

R-1. Inspect in following order when black screen has been occurred(camera - AVN direct connection specification)



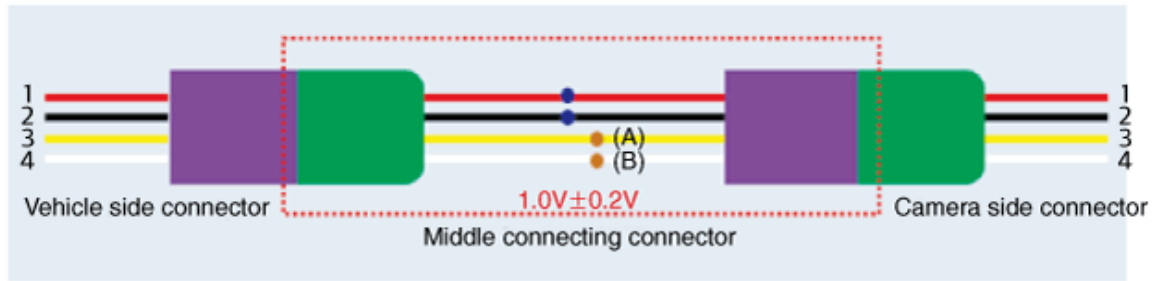
R-2. Inspect in following order when the screen turns to black/blue (camera - PGS/SVM - AVN specification)



R-3. Check the camera

Connector	No.	Option	Description	Color
	1	Standard (4pins)	Power of camera supply (+)	Red
	2		Power of camera grounding (-)	Black
	3		Video display output (+)	Yellow
	4		Video display grounding (-)	White
	5	Steering (6pins)	C_CAN HIGH	Orange
	6		C_CAN LOW	Gray

1. Measure the video display waveform and output voltage of rear camera (using KDS VMI).
Connect connector 3 - connector 4.

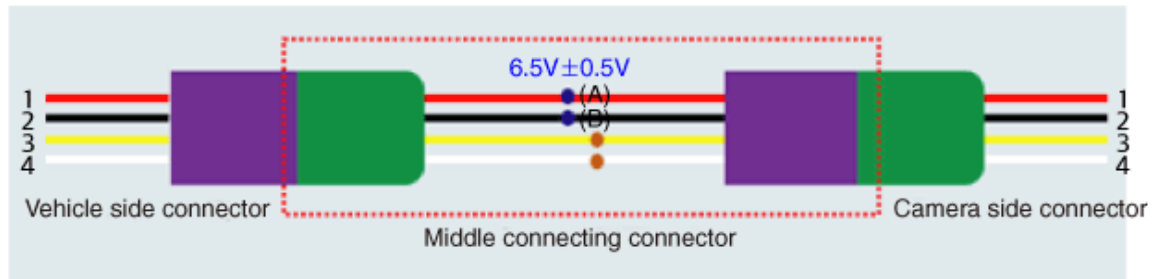


– Spec : 0.8V ~ 1.2V



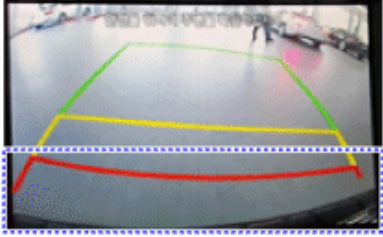
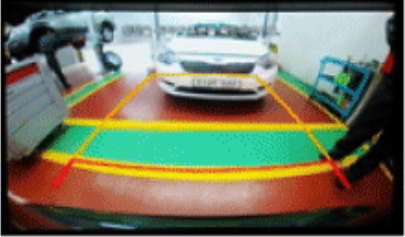
<Normal waveform>

2. Measure the output voltage of rear camera power source.
Connect connector1-connector2.



– Spec : 6.0V ~ 7.0V

R-4. Check the symptom related to place of camera installation

Install the camera on left side	Install the camera on left side of tail gate switch in center	Install the camera on the center
		
		
Visible camera angle and parking line have been slanted	Difference on amount of visible bumper and length of parking line	equal amount of visible left/right side
Normal	Normal	Normal

R-5. Slanted/leaned during parking

1. Check the condition of installing camera.

OK	Camera has been operating normally.
NG	Check number 2.

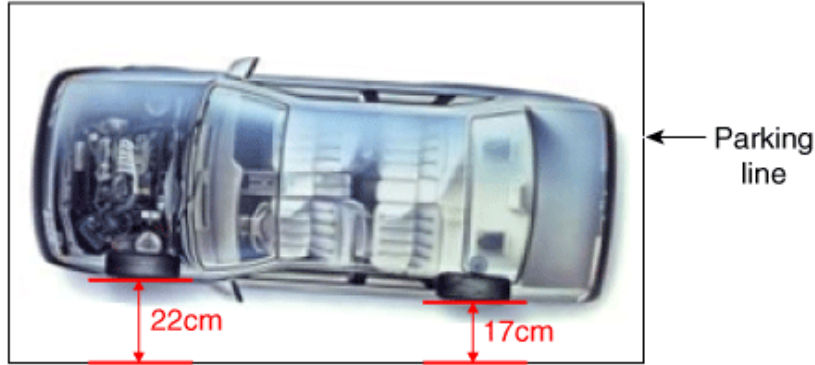
2. Measure the deviation of slanted/leaned during parking.

– SPEC : $\pm 10\text{cm}$ (Front Wheel-Rear Wheel)

OK	Camera is operating normally.
NG	Replace the camera.

Information

- Check the different distance between front/rear wheel and parking line.



It is normal range that front wheel/
rear wheel have been slanted in 5cm.

- Being slanted and leaned can be happened depending on driver.

R-6. Check monitor quality

Symptom	Cause		
	Something on the lens	Damaged lens	Airtightness failure
 [Blur and display quality trouble]	 [Exterior stain]	 [Lens coating peeled] Clean with strongly acid cleaner	 [Inflow of water in lens]
 [Any object or line on monitor]		 [Lens crack] Impacted by pebble and etc. during driving	 [Crack and inflow of water]
Countermeasure	• Clean the exterior of lens ; Clean the exterior of lens with water or clean cloth (fabric)	• Replace camera	• Replace camera

⚠ CAUTION

- Check the vehicle has installed genuine camera because the monitor output quality could be bad or have functioning problem if the vehicle has installed customizing camera.
- Not available to use warranty repair on replacement of camera caused by careless using(cleaned with unathuorized cleaner and damaged from foreign object) or installing customized goods.

i Information

- Must use water or clean cloth to clean the exterior of camera lens.
- Check whether the same problem has been occurred or not after checking the condition on surface of camera lens and get rid of foreign object
- The phenomenon that the camera lens coating has peeled out can be happened If the vehicle has cleaned with strong acidity cleaner.

- The phenomenon that the camera lens crack can be happened if the vehicle has gotten damaged from foreign object such as pebble.

** Information**

- Red light has been displayed caused of applying rear tail lamp luminous surface led design.
- It can be happened because of the red light that comes out of rear tail lamp and break light flows into rear camera in sealed space at night.