



Technical Service Bulletin

GROUP	NUMBER
BODY ELECTRICAL	20-BE-012H
DATE	MODEL(S)
DECEMBER, 2020	All Vehicles

SUBJECT: BACKUP AND/OR AROUND VIEW CAMERA CARE AND CLEANING

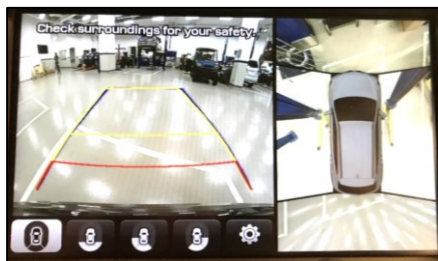
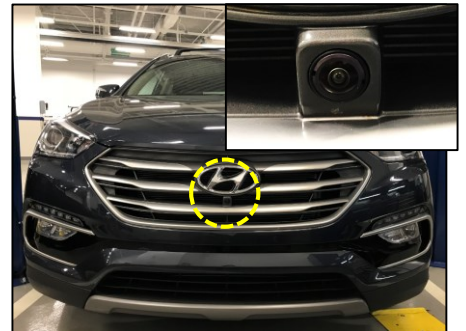
This TSB supersedes TSB #17-BE-010 to include more information relating to the camera lens care.

*** IMPORTANT**

Before any service or maintenance is performed on the backup and/or around view camera lens, use this informational guide to ensure that a proper cleaning agent was used that did not result in damage to the camera lens.

DESCRIPTION: This bulletin is intended to identify and help prevent possible damage to the camera lens coating caused by the improper use of harsh cleaning agents.

The camera lens surface is coated in order to increase the penetration ratio of light. Universal car cleaning detergents and waxes should not affect the operation of the camera lens. However, if the camera lens is treated with a strong cleaning agent (too acidic/too much alkaline), this may result in damage to the coating and operation of the lens.



Applicable Vehicles:

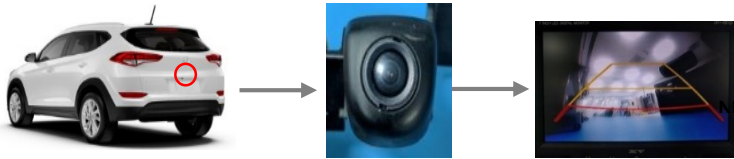
- All vehicles that are equipped with a rear backup and/or around view camera

WARRANTY INFORMATION: Damage to the camera lens caused by the improper use of a harsh cleaning agent is NOT covered under warranty.

Camera Lens Care Information

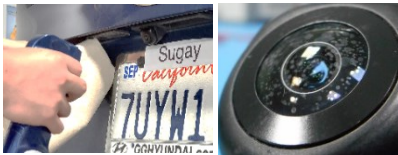
If the camera lens coating is damaged, the camera image will appear blurry.

- ❖ When the camera lens coating is damaged, the light transmitted to the lens will be out of focus causing a blurry image.



Lens coatings can be damaged by the use of cleaner and fabric.

- ❖ Usage of chemical cleaner during washing/polishing.



- ❖ Usage of a cleaning cloth to scrub dirt/stain/dust.

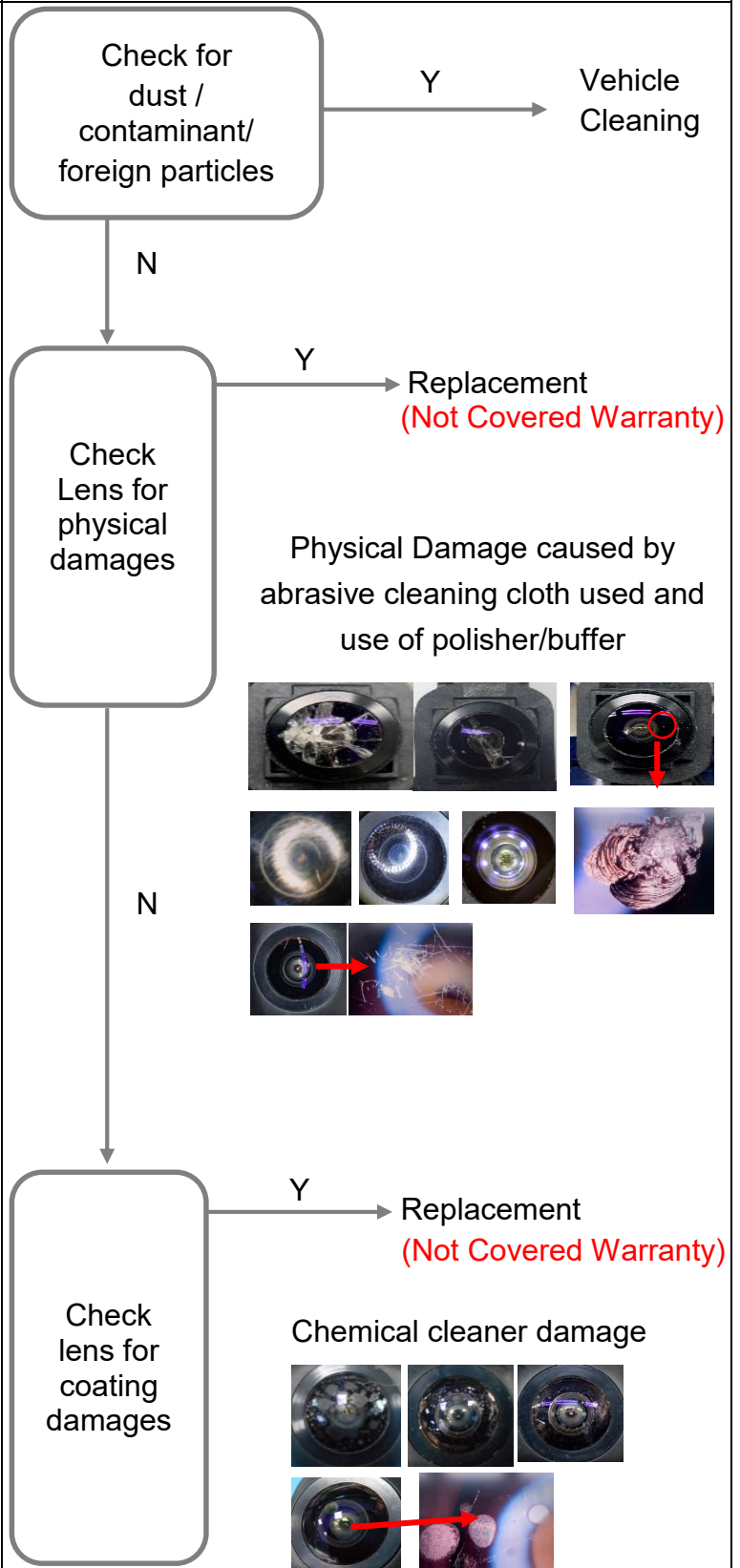





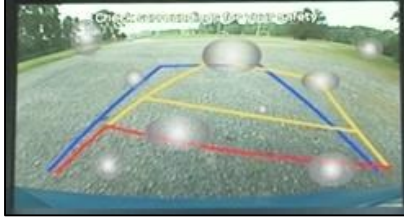


Additional Note:

- ❖ Chemical cleaner should be used sparingly. Instead, water(non-chlorine base) should be used to remove any contamination.



Camera Lens Troubleshooting Guide



Symptom(s)	Lens Appearance	Camera Image
1. Normal Lens Condition		
2. Spot Damage <ul style="list-style-type: none"> A damaged lens coating due to the indirect application of a strong cleaning agent results in local image distortions. 		
3. Complete Surface Damage <ul style="list-style-type: none"> A damaged lens coating during the direct application of a strong cleaning agent results in a cloudy camera image. 		

⚠ WARNING

The following car cleaning detergents (in the table below) are known to cause camera lens coating damage and **SHOULD NOT BE USED**. Fluorine- containing acid detergents can damage the camera lens coating surface.

Detergent Type	Use (Manufacturer)	pH Value
Metal Cleaner	AK (Metalklinox)	pH<1 (Very Strong acidity)
Wheel Cleaner	Chrome Wheel Cleaner (Mother's)	pH=1 (Strong acidity)
Glass Water Coat	Glass water repellent (RainX)	pH=9.5 (Strong alkalinity)
Car Shampoo	Auto Wash (Zymol)	pH=8.0 (Strong alkalinity)
Tire Cleaner	Bleche-black (Black Magic)	N/A
Bug Tar Cleaner	Bug & Tar (RainX)	N/A
Multi-purpose Cleaner	PB1	pH=12.5 (Strong alkalinity)

⚠ CAUTION

Lens coating damage does not mean that the camera is defective. If the lens surface is stained by the use of a strong cleaning agent, remove it immediately using clean water and fabric. Camera performance degrades overtime and is likely due to exposure to harsh chemical treatments. Cleaning the camera should be handled with distilled water or non-chlorinated water, and microfiber should be the type of cloth used for cleaning.