

Red Warning in the Instrument Cluster: Occupant Seat Belt not Fastened

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Panamera	As of 2017	971	N/A	N/A
Cayenne	As of 2019	9YA, 9YB		
911	As of 2020	992		
Taycan	As of 2020	Y1A, Y1B		

Revision History

Revision	Release Date	Changes
0	July15, 2021	Original document

Condition

The customer complains of a red warning message in the instrument cluster that reads, "Occupant seat belt not fastened. Fasten seat belt." This message appears despite all seat belts being fastened.



Figure 1:
Red warning in the instrument cluster

Technical Background

The red warning message may appear for one of three reasons:

1. The belt buckle is faulty,
2. The vehicle is moving at a speed greater than 18 mph (30 km/h) and an occupant does not have their seat belt fastened, or
3. The vehicle detects improper use of the seat belt by the driver (e.g., use of a dummy belt buckle).

The airbag control unit (CU) counts the number of drive cycles where the seat belt is not disconnected after the cycle is complete (i.e., the vehicle is shut off). Once the threshold of 5 cycles is reached, the warning light shown in Figure 1 appears in the instrument cluster.

Note: The count is decreased by 1 each time that the seat belt is disconnected after a drive cycle. Therefore, more than 5 drive cycles may be required to set the red warning in the instrument cluster.

Service Information

1. Document the presence of any “dummy” seat belt buckles in the vehicle **with pictures**.

Please present the following questions to the customer and document their answers:

- a) Is a “dummy” (fake) seat belt buckle ever used in the vehicle?
- b)
 - i. Is the seat belt ever handled in a unique way? (e.g., sitting on top of buckled seat belt, placing seat belt behind seat, inserting passenger seat belt into driver belt buckle)
 - ii. Does the seat belt remain permanently fastened while the vehicle is driven?
- c) Is the vehicle ever parked for a longer period (more than a couple minutes) with the door open?
- d) Do you ever remain in the vehicle with the belt buckled and engine off (e.g., during a phone call)?
- e) What is the typical seat belt buckle fastening procedure when the operator enters the vehicle?
- f) What is the typical seat belt buckle unfastening procedure when the operator exits the vehicle?

2. Before attempting any repairs to the vehicle, take a service VAL (Pre-VAL) to document any fault codes present in the vehicle.
 - a. Note: If the red warning (Figure 1) is present in the instrument cluster upon the vehicle's arrival for service, continue to Step 3. If no warnings are present at the time of arrival, begin with Step 4.
3. Clear all relevant fault codes from the fault memory. If the relevant fault codes will not clear via the PIWIS tester and the red warning message from Figure 1 is still present in the instrument cluster, follow the procedure outlined in steps (a) through (g) below.
 - a. Unlock and enter the vehicle with the seat belt buckled.
 - b. With the seat belt unbuckled, start the vehicle.
 - c. Buckle the seat belt.
 - d. Safely accelerate to a speed of **18 mph/30 kmh**, then find a safe location and park the vehicle.
 - e. Unbuckle the seat belt, exit the vehicle, and lock all doors.
Wait 30 seconds.



Figure 2:
Example of dummy seat belt buckles

- f. Repeat steps (a) through (c).
 - i. If the warning message is no longer in the instrument cluster, the fault codes are passive and can now be cleared.
 - ii. If the warning message is still present in the instrument cluster, please repeat steps (a) through (e) until the warning message is cleared from the instrument cluster.
- g. After the warning message is cleared from the instrument cluster, clear all relevant fault codes from the fault memory.

Take a service VAL (During-VAL) to document the absence of any fault codes.
- 4. Check the resistance of the wires at both sides of the belt lock electrical connector. Please refer to *WM 692419 – Removing and installing front belt lock*, to determine the location of the driver's belt lock connector.
 - a. The resistance from the connector to the belt lock should be between 320-480 Ohms (0.320-0.480 kΩ). Take a photo of the resistance measurement and attach it to the PCSS job.
 - i. The belt lock should be replaced if the resistance is outside of the specified range.
 - b. The resistance from the connector to the airbag CU (female side) should be 0.2-0.4 Ohms. Take a photo of the resistance measurement and attach it to the PCSS job.
 - i. If the resistance is outside of the specified range, check for continuity in the wires from the electrical connector to the airbag CU. If continuity is verified, replace the airbag CU. If no continuity is verified, inspect the wires in the wire harness from the electrical connector to the airbag CU.
 - c. If all measurements are within specification, continue to Step 5. If any repairs were made during Step 4, verify that all components are functioning as designed.

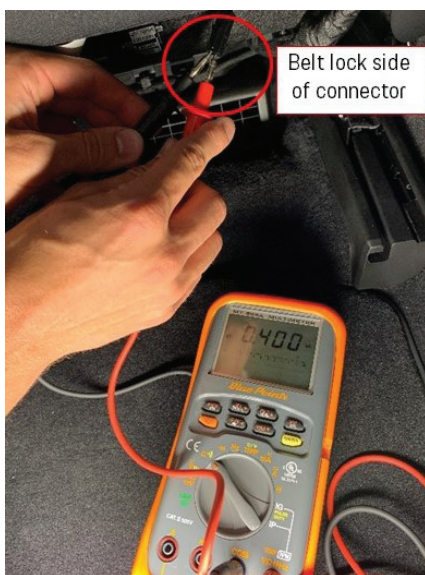


Figure 3:
Resistance check for (4a)

5. Perform the drive cycle outlined below to set the red warning in Figure 1.
 - a. Unlock and enter the vehicle with the seat belt unbuckled.
 - b. Buckle the seat belt and start the vehicle. Let the engine run for 1 minute.
 - c. Turn the vehicle off. **Leaving the seat belt buckled**, exit and lock the vehicle. Wait 30 seconds.
 - d. Unlock and enter the vehicle. Start the engine and let it run for 1 minute. **Ensure that the seat belt remains buckled.**
 - e. Repeat steps (c) and (d) until the red warning in Figure 1 appears in the instrument cluster. The warning typically appears within 5-8 cycles.
 - f. **Take a service VAL (During-VAL) to document the presence of the warning in the instrument cluster.**
6. Perform the instruction in Steps (3a) through (3g) to clear the warning (Figure 1) from the instrument cluster. **Take a service VAL (Post-VAL).**
7. If the red warning (Figure 1) is manually set and subsequently cleared by performing the instructions in Steps (5a) through (5f), the system operates as designed.

Warranty

As always, be sure to document the repair completely in PCSS.

For this repair, please code the "cause" as follows:

Cause location:	69240	Front belt lock
Cause symptom:	4045	Warning activated

Use the following troubleshooting labor operation:

03350000	On board diagnostic (Main work) Fault memory read out and battery charger connect
69241901	Front belt lock remove and reinstall (Main work)
03350053	On board diagnostic (Composite work) Create VAL

Search Items

Seat belt, belt lock, 911, Taycan, Panamera, Cayenne

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