Model: All **Vehicle System:** 92 - Tools and Equipment **Region:** All

Tech Note: Using the OmiSonic Ultrasound Diagnostic System

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The OmiSonic Ultrasound Diagnostic System (Figure 1) is a tool that can be used to detect water and/or air leaks, or diagnose noisy mechanical components. The transmitter fills the vehicle with ultrasonic sound waves, allowing technicians to diagnose potential leaks by listening for escaping sound waves coming from seals or enclosures with the receiver.

Figure 1

Preparing the Tool

1. Park the vehicle in a quiet, indoor location with the windows and all closures closed.

2. Turn on the tool by pressing and holding the “Tone” button for a few seconds until a green LED illuminates.

3. Select the appropriate tone (“Constant”, “Chirp”, or “Warble”).

NOTE: Internal testing has found the “Warble” tone to be the most distinctive and effective in diagnosing leaks on Tesla vehicles.

4. Place the transmitter inside the vehicle on top of the center armrest (Figure 2).

Figure 2

TIP: Increase the effectiveness of the transmitter by pointing it directly at the door or closure with the suspected leak.

5. Connect the headphones to the receiver.

6. Set up the receiver for listening to the leak.

NOTE: Increase what you can hear by using a wide and narrow bandwidth, increasing and decreasing the gain, and by adjusting the volume.

Detecting Water or Wind Noise Ingress

1. Attach the acoustic probe to the receiver.

NOTE: The acoustic probe provides increased accuracy when listening for leaks from door and window seals.

2. Move around the entire vehicle, listening for leaks coming from all of the window and door seals.

NOTE: If the ultrasonic sound can be heard clearly and easily, it is likely that water or wind noise is penetrating the vehicle from that location. Inspect these areas for damage or obstructions.

TIP: Sometimes better results are achieved by transmitting the sound from outside the car, and listening for the ultrasonic sound from inside the cabin.

Detecting Leaks in the Liftgate

When listening for leaks in the liftgate, it is more effective to place the transmitter inside the surround trim.

1. Remove the pull handle from the liftgate trim and insert the transmitter into the cavity.

2. Reinstall the pull handle and close the liftgate.

3. Use the receiver to listen for air leaks around the glass.

Detecting a Noisy Bearing, Motor, Pump, etc.

1. Attach the solid probe to the receiver.

NOTE: The solid probe provides increased accuracy when listening for noisy mechanical components.

2. With the vehicle on, place the tip of the solid probe close to the suspect component and listen for any abnormal sounds.

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