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Coding Information

|                      |                               |                                                          |                             |                  |                             |                         |                             |
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**Title:** Cab and Windshield Water Leak Detection using Ultrasonic Sound Detector

**Applies To:** All International Truck Models

## CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

|                                      |
|--------------------------------------|
| 12/19/2025 - Initial Article Release |
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## DESCRIPTION

This document will guide the user through a step-by-step procedure for detecting water leaks in vehicle cabs and windshields using an ultrasonic sound detector.

Reference iKNOW Article: [IK1600131 - Cab Water Leak Troubleshooting Tips](#)

## SYMPTOM(s)

The customer indicates water leaking into the cab interior at a specific location.

**Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):**

| DTC/Light                                                  | Description |
|------------------------------------------------------------|-------------|
| N/A - There are no DTC/Indicator Lights for this condition |             |

**Customer Observations or Concerns:** Customer indicates water leaking into the cab interior.

## SPECIAL TOOL(s) / SOFTWARE

| Tool Description                                  | Tool Number | Comments                | Instructions                                   |
|---------------------------------------------------|-------------|-------------------------|------------------------------------------------|
| Equalizer - Ultrasonic Leak Detector (or similar) | ULF481      | Purchase Locally/Online | Follow the manufacturer's Instructions for use |



**Figure #1: Ultrasonic Sound - Leak Detector Examples**

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## **DIAGNOSTIC STEP(S)**

Ultrasonic Leak Detection: Step-by-Step Procedure

### 1. Gather Your Equipment

- Ultrasonic detector (transmitter, receiver + headphones).
- Marker or masking tape (to mark the detected leak locations).

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### 2. Prepare the Test Environment

- Clean the vehicle from dirt, debris, snow, and ice. Be sure the truck is clean and dry.
- Park the vehicle in a safe and quiet space to reduce background noise while performing the test.

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### 3. Setup & Calibration

- Following the manufacturer's instructions for the ultrasonic transmitter, familiarize yourself with its tones and/or display meter response by generating a reference tone (short burst of ultrasonic signal). There are YouTube videos that provide real-life examples for ultrasonic leak detection for cab and windshield leaks.
- Turn on the transmitter and place it inside the vehicle in a central location, such as the center dash console. Adjust the sound sensitivity as needed according to the directions provided by the detector being used. Be sure all doors and windows are completely closed during the scans to avoid false readings.

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### 4. Perform Detection Scan

- Slowly scan the cab features and interfaces that were noted as leak areas by the customer—especially seals, joints, gaskets, and seams. (See IK1600117 for common cab leak areas like windshields, roof marker lights, Sunshade mounting, Sleeper cap seams to metal cab roof, etc.) This article will help identify problem areas of the cab.
- When the ultrasonic sound escapes through any gap, it emits a high-frequency noise that the detector picks up. These locations can be marked during the test scanning for further investigation and repair after the entire test is completed. (Note: there can be multiple leak locations involved.) A leak at the top of the windshield may actually be coming from the roof marker light or exterior sunshade mount. The detector will help to pinpoint the leak quickly.
- Mark any spot showing increased intensity of audible ultrasonic tone with a marker or tape.

### **Specific Examples:**

- Windshields: On the exterior of the cab, using the detector receiver pointing at the perimeter of the windshield at 1-2" away, slowly move the detector and listen for leaks using the headphones. Start on the side/area where the customer has indicated a leak was seen.
- Roof Marker Lights: On the exterior of the cab, using the detector receiver pointing at the perimeter of each marker light at approximately 1-2" away, follow the entire perimeter of the light fixture and also over each mounting screw.
- Sleeper Roof Cap Seam: Place the transmitter inside the sleeper compartment, either on the sleeper cabinet countertop or on the upper bunk, using a flat, clean surface like a piece of cardboard or notebook to place the transmitter on to avoid blocking the speaker in the transmitter. From the exterior, approximately 1-2" from the sleeper cap seam, point the

detector towards the seam and move along the seam listening for a leak. If a leak is detected, mark the spot and continue to test the entire seam, as the seal may have more than one gap that leaks.

- Rubber Cab Door Seals: The detector can be used to find both water leaks and air (wind noise complaints) by scanning the door's perimeter seal from the outside with the door closed.

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## 5. Confirm & Document

- Double-check the areas marked for leakage and repair as required.

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Reference Links: [Equalizer ULF481 - Ultrasonic Leak Detector](#)



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## Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

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## OTHER RESOURCES

[Master Service Information Site](#)

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