

## **COVER SHEET**

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*22*

**July 29, 2026**

**To:** National Highway Traffic Safety Administration (NHTSA)  
Office of Defects Investigation  
1200 New Jersey Avenue  
SE Washington, DC 20590

**From:** [REDACTED]  
[REDACTED]  
Spencer, OK [REDACTED]  
[REDACTED]  
[REDACTED]

**Vehicle Information:** 2012 Hyundai Genesis  
**VIN:** [REDACTED]  
**Mileage:** 234526

**Subject: Safety Defect Complaint – Coolant Reservoir Pressure Eruption**

I am submitting this complaint to report a **safety-related defect** involving my 2012 Hyundai Genesis. On [REDACTED], the coolant reservoir cap released pressure unexpectedly, causing boiling coolant to erupt upward. This resulted in **thermal burns** to the injured party, [REDACTED], affecting his **face, eyes, and arm**.

The coolant reservoir uses a **snap-on cap with no warning labels**, no pressure rating, and no “Do Not Open When Hot” marking. The cap resembles a non-pressurized washer-fluid cap, yet the reservoir is part of the **pressurized cooling system**. This design creates a **hidden hazard** that can cause sudden pressure release and serious injury.

I am requesting that NHTSA open a **safety investigation** into this issue to determine whether the coolant reservoir cap and reservoir design present a defect that could injure other vehicle owners.

I have included:

- A Safety Complaint Evidence Packet
- Photos of the injuries
- Photos of the coolant reservoir cap
- Photos of the engine bay and reservoir placement
- A short incident summary
- A short injury summary

Thank you for your attention to this matter.

Sincerely

Owner: [REDACTED] Signature: [REDACTED] Date: 7/29/26

Injured Party: [REDACTED] Signature: [REDACTED] Date: 7/29/26

## A. NHTSA Safety Complaint Evidence Packet

**Vehicle:** 2012 Hyundai Genesis

**Incident Date:** [REDACTED]

**Hazard:** Pressurized coolant eruption from snap-on reservoir cap

**Injuries:** Burns to face, eyes, and arm

**Submitted by:** [REDACTED]

**Location:** Spencer, OK [REDACTED]

## B. Incident Summary (Short Version)

On [REDACTED] a family member attempted to check the coolant level in a 2012 Hyundai Genesis. The coolant reservoir uses a **snap-on cap**, which normally indicates a **non-pressurized** overflow tank. There were **no visible warnings**, no pressure rating, and no "Do Not Open When Hot" label.

When the cap was lifted with his thumb, **boiling coolant erupted under pressure**, causing **multiple second degree burns** to the face, eyes and arm. The design is misleading and dangerous, creating a hidden hazard for consumers.

## C. Detailed Timeline of Events

- **Vehicle parked** after driving; engine warm but not overheating
- Family member opened hood to check coolant level
- Reservoir cap appeared to be a standard snap-on overflow cap
- No warning labels or pressure markings visible
- Cap lifted normally
- Pressurized coolant violently erupted
- Burns sustained to face, eyes and arm
- Medical treatment required
- Photos taken immediately after incident
- Hyundai notified (pending)
- NHTSA complaint filed: confirmation number pending

## D. Evidence List

Each item should be labeled clearly:

- **Photo Set 1:** Burns to face, eyes and arm (redness, blistering, swelling)
- **Photo Set 2:** Coolant reservoir cap (snap-on design, no warnings)
- **Photo Set 3:** Engine bay showing reservoir placement
- **Medical Documentation:** Treatment notes, burn care instructions
- **Vehicle Information:** [REDACTED] mileage 234526, registration
- **Hyundai Correspondence:** Pending
- **Photo Set 4:** 2012 Hyundai Genesis pressure system

# SERVICE KLAHOMA

Agent: 8829 - NICOMA PARK TAG AGENCY

SPENCER OK



Date Issued: August 9, 2024  
Letter ID [REDACTED]  
Certificate of Registration

|              |                |
|--------------|----------------|
| VIN          | [REDACTED]     |
| Title #      | [REDACTED]     |
| Class        | Automobile     |
| Year         | 2012           |
| Make         | HYUN           |
| Model        | GENESIS        |
| Color        | BLACK          |
| Plate        | [REDACTED]     |
| Plate Type   | Non-Commercial |
| Decal        | [REDACTED]     |
| Reg Commence | 8/9/2024       |
| Reg Expires  | 8/31/2026      |

# SERVICE KLAHOMA

Agent: 8829 - NICOMA PARK TAG AGENCY



Date Issued: August 9, 2024  
Letter ID [REDACTED]  
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| VIN          | [REDACTED]     |
| Title #      | [REDACTED]     |
| Class        | Automobile     |
| Year         | 2012           |
| Make         | HYUN           |
| Model        | GENESIS        |
| Color        | BLACK          |
| Plate        | [REDACTED]     |
| Plate Type   | Non-Commercial |
| Decal        | [REDACTED]     |
| Reg Commence | 8/9/2024       |
| Reg Expires  | 8/31/2026      |

### **E. Injury Summary**

**Injured Party** [REDACTED]

**Incident Date** [REDACTED]

**Injury Summary** [REDACTED] sustained **thermal burns** to his **face, eyes, and right arm** when the coolant reservoir cap on the 2012 Hyundai Genesis released pressure unexpectedly and caused **boiling coolant to erupt upward**. The burns were treated through **medically advised home-care**, including cleansing, burn ointment application, swelling management, and monitoring for infection. The injury photographs included in this packet document the severity and progression of the burns.

# MEDICAL DOCUMENTATION SUMMARY

**Injured Party:** [REDACTED]

**Incident:** Coolant Reservoir Pressure Eruption – 2012 Hyundai Genesis

**Injury Type:** Thermal burns to face, eyes, and arm

## **Injury Description**

Photographs document visible **redness, blistering, swelling**, and burn patterns consistent with sudden exposure to **hot pressurized coolant**. Life-time injuries were sustained when the coolant reservoir cap released pressure unexpectedly.

## **Medical Consultation**

Mark did not seek in-person medical treatment. Instead, he consulted medical advice remotely and followed professional guidance regarding:

- Burn cleansing procedures
- Application of burn-care ointments
- Swelling and blister management
- Monitoring for infection
- Pain management
- Healing progression and follow-up care

This approach was consistent with standard treatment for **superficial and partial-thickness burns** when medical professionals determine home care is appropriate.

## **Home-Care Treatment Followed**

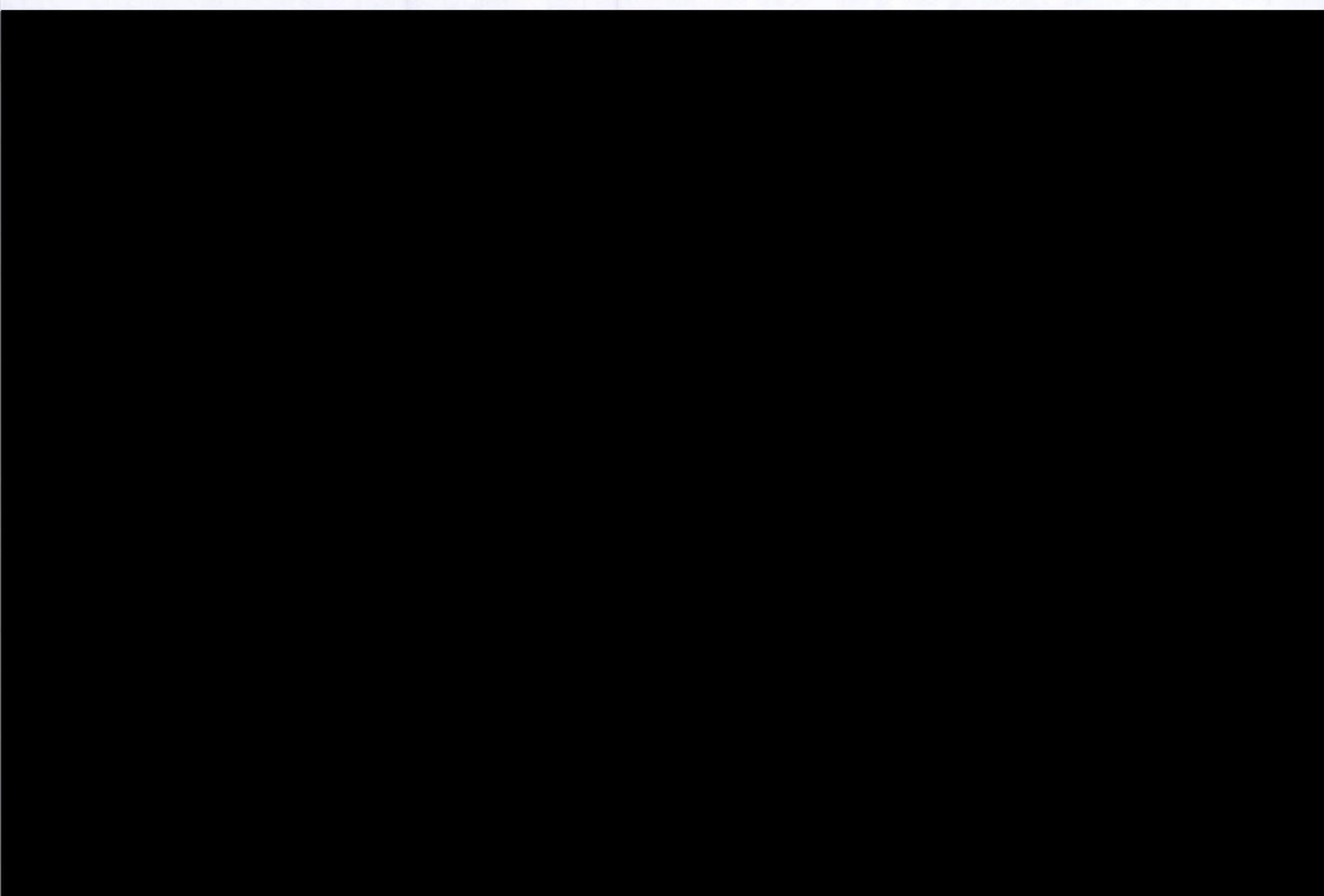
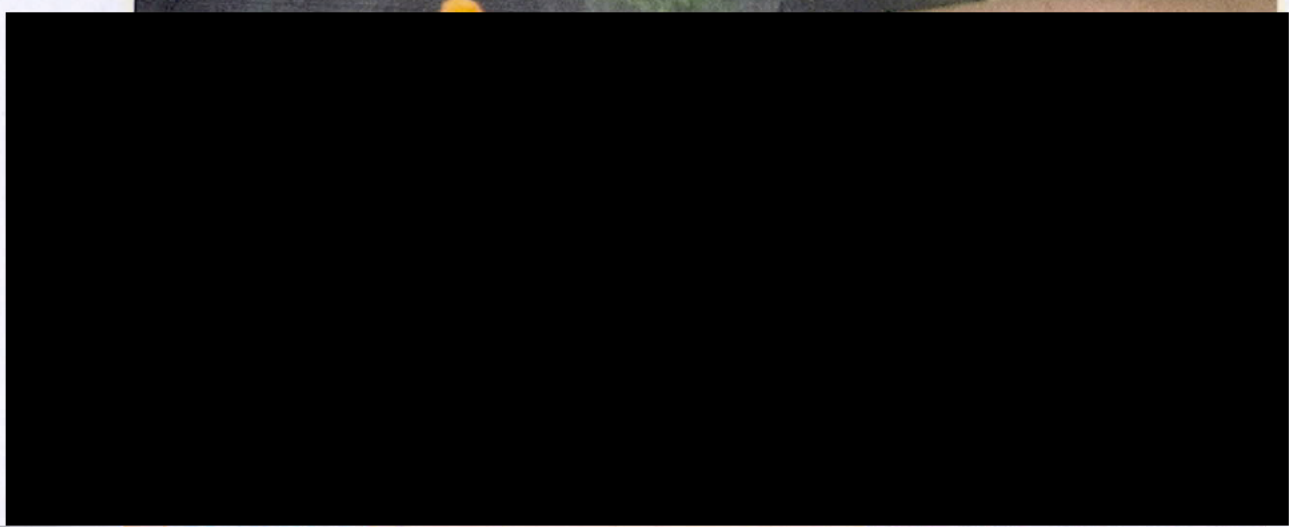
Mark followed recommended home-care steps, including:

- Gentle washing of affected areas
- Application of topical burn ointments
- Use of sterile dressings as needed
- Avoiding sun exposure to healing skin
- Monitoring for signs of infection
- Adhering to medical advice throughout recovery

## Photo Set 1 — Burns to Face, Eyes, and Arm

**Description:** Images document visible **redness, blistering, and swelling** to the face, eyelid area, and forearm following sudden exposure to hot pressurized coolant.

**Purpose:** To show the severity and pattern of burn injuries consistent with a coolant-system pressure failure.



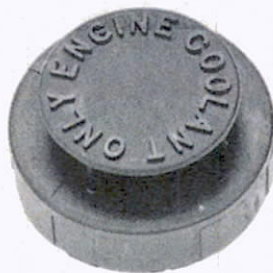
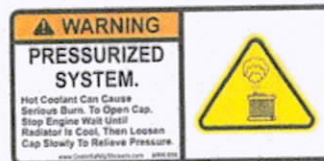
## Photo Set 2 — Coolant Reservoir Cap

**Description:** Photographs of the **snap-on coolant reservoir cap**, showing **no warning labels**, no pressure rating, and no “Do Not Open When Hot” markings.

**Purpose:** To demonstrate the misleading appearance of a non-pressurized overflow tank despite internal pressure buildup. The **snap-on, non-threaded plastic cap** used on the 2012 Hyundai Genesis coolant reservoir. This is the style that looks like a harmless overflow tank but can actually hold **15–20 psi** of pressure. Here is a **clear visual reference** showing the *exact type of coolant reservoir cap* that caused Mark’s injury — the **snap-on, non-threaded plastic cap** used on the 2012 Hyundai Genesis coolant reservoir. This is the style that looks like a harmless overflow tank but can actually hold **15–20 psi** of pressure.

- A smooth plastic snap-on cap,
- No threads, No pressure rating
- No “Do Not Open When Hot” warning
- Appears similar to a windshield-washer cap
- Misleads even experienced mechanics into thinking it’s safe to open

This cap design **does not visually indicate pressure**, yet the Genesis reservoir can contain **boiling coolant under pressure**.



## Photo Set 3 — Engine Bay & Reservoir Placement

**Description:** Images showing the reservoir's placement within the engine bay, including surrounding components and absence of warning signage.

**Purpose:** To provide context for reservoir accessibility and design-hazard evaluation

*See Attached*

# Engine Bay and Coolant Reservoir Placement

## Overview

This page provides a clear, printable diagram-style layout of the 2012 Hyundai Genesis engine bay with labeled components, focusing on the coolant reservoir placement relevant to the coolant eruption incident.

## Engine Bay Layout (Text-Based Diagram)



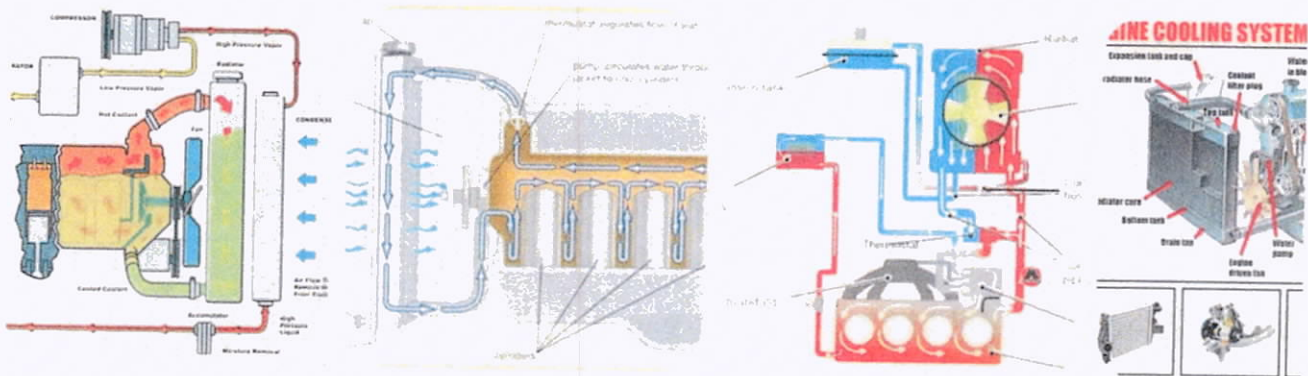
## Photo Set 4 — Pressurized Coolant System

### System Overview

The 2012 Hyundai Genesis uses a **pressurized coolant reservoir**, meaning the reservoir is part of the active cooling loop and can hold **15–20 psi** during normal operation. The reservoir cap is a **snap-on design with no warnings**, creating a misleading appearance of a non-pressurized overflow tank.

### Printable Diagram — Pressurized Coolant System

Below is a clear, printable visual of a typical pressurized coolant system layout. This shows how pressure builds, how coolant circulates, and where the reservoir sits in the loop.



### Key Components

- **Pressurized Reservoir** — Stores coolant under pressure; contains the snap-on cap involved in the incident.
- **Radiator** — Cools hot coolant returning from the engine.
- **Radiator Cap** — Sets system pressure; in this design, pressure is also held at the reservoir.
- **Engine Coolant Passages** — Circulate coolant through the engine to absorb heat.
- **Thermostat** — Controls coolant flow based on temperature.
- **Coolant Hoses** — Carry coolant between components under pressure.

### How Pressure Builds

- Coolant heats as the engine runs.
- Pressure increases as temperature rises.
- The reservoir becomes part of the **pressurized loop**.
- The snap-on cap does **not** warn of pressure buildup.
- Opening the cap while hot causes **instant pressure release**.

## TECHNICAL REFERENCE — PRESSURIZED COOLANT SYSTEM

**Vehicle:** 2012 Hyundai Genesis

**Subject:** Cooling System Pressure Behavior & Reservoir Function

**Purpose:** Technical explanation supporting defect investigation

### System Overview

The 2012 Hyundai Genesis uses a **closed, pressurized cooling system** designed to operate between **15–20 psi** during normal engine temperature. Pressure increases as coolant heats, raising the boiling point and preventing overheating. This pressure is maintained throughout the **radiator, hoses, thermostat housing, engine block passages, and the coolant reservoir.**

The coolant reservoir in this model is **not a passive overflow tank**. It is part of the **active pressure loop**, meaning it holds the same pressure as the rest of the system.

### Key Components

- **Radiator** — Dissipates heat from coolant returning from the engine.
- **Radiator Cap** — Sets system pressure; in this design, pressure is also held at the reservoir.
- **Coolant Reservoir (Pressurized)** — Stores coolant under pressure; uses a **snap-on cap** with **no warnings**.
- **Thermostat** — Regulates coolant flow based on temperature.
- **Engine Block Passages** — Circulate coolant through the engine to absorb heat.
- **Coolant Hoses** — Carry coolant between components under pressure.

### Pressure Behavior

As the engine warms:

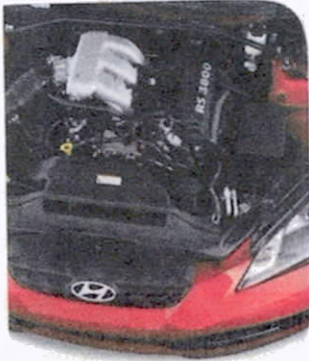
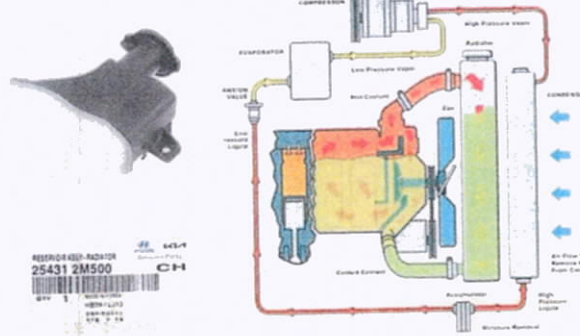
- Coolant temperature rises
- Pressure increases proportionally
- The reservoir becomes part of the **pressurized loop**
- Pressure remains trapped until released through a cap or leak

Because the Genesis reservoir uses a **non-threaded snap-on cap**, pressure can release **instantly and vertically** when opened while hot.

This is the exact mechanism that caused the eruption and  injuries.

## Pressurized Coolant System

Below is a visual reference showing the pressure loop and reservoir location.

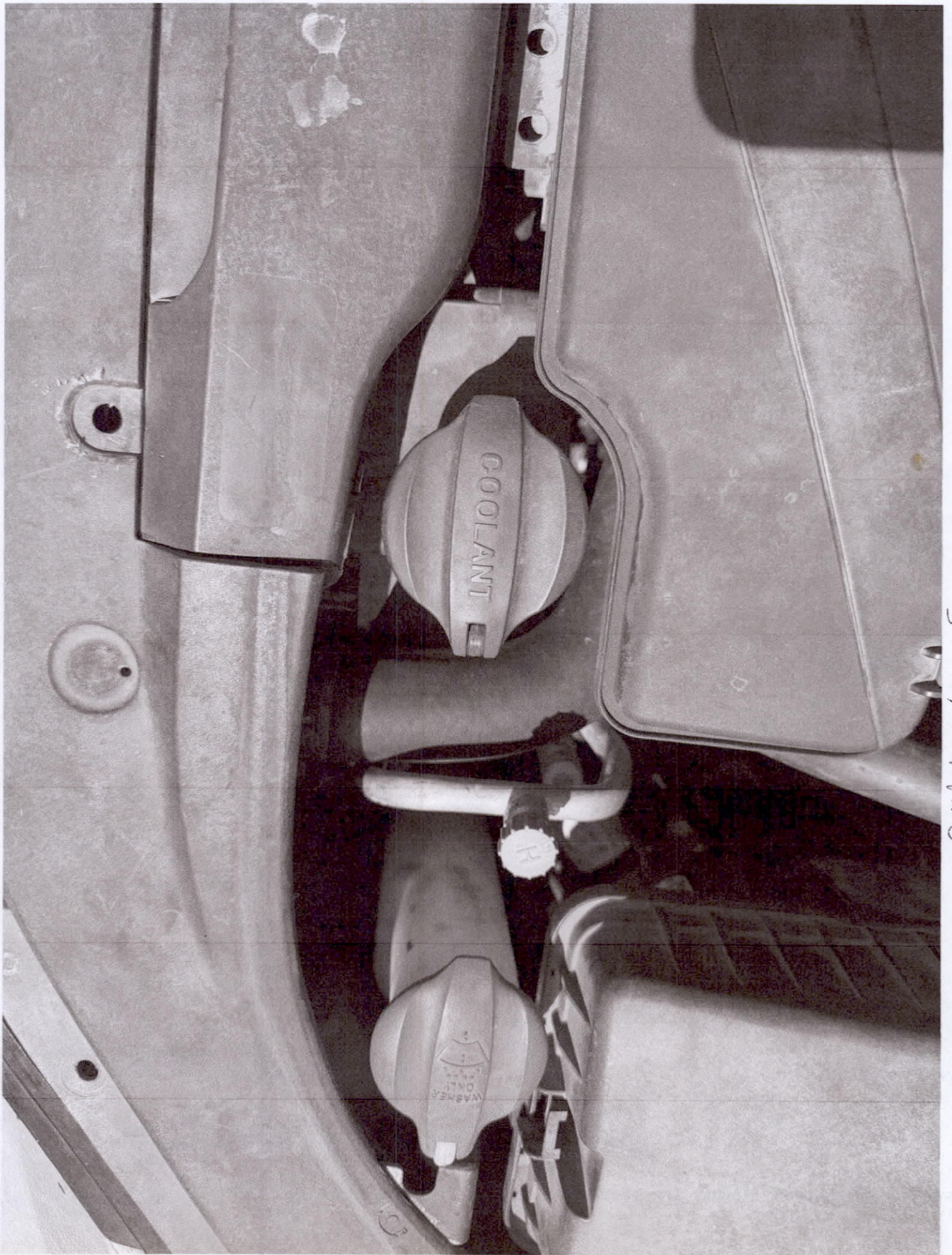


## Reservoir Cap Hazard

Reservoir cap design is a critical factor:

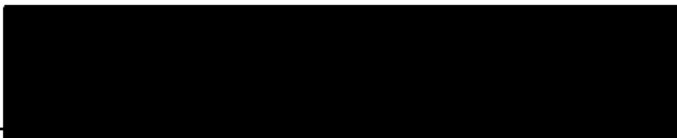
- Smooth snap-on cap
- No pressure markings
- No "Do Not Open When Hot" warning
- No threads or locking mechanism
- Appears similar to a washer-fluid cap

This design **misleads users** into believing the reservoir is non-pressurized, despite being part of a high-pressure system.



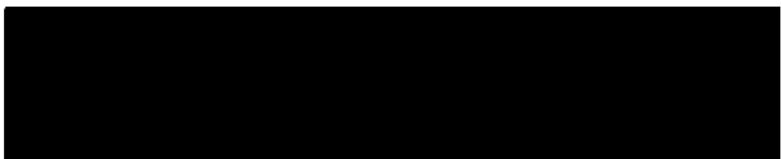
WASHER FLUID SYSTEM

Picture



Thu, Jul 30 at 2:30 PM

 Gmail



Spencer, OK

WVX-226

National Highway Traffic Safety Adm.  
Office of Defects Investigation  
1200 New Jersey Avenue  
SE Washington, DC 20590

