Welcome!

This guide for first responders provides information on handling Toyota, Scion, and Lexus vehicles in an emergency.

This guide will also benefit tow truck drivers and dismantlers.
Select the Next button to begin.
## Course Sections

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Introduction

This guide supplements other Toyota emergency response resources.

Beginning with the 2014 Toyota Highlander, Toyota will no longer produce Emergency Response Guides (ERGs) for individual models. They will be replaced with:

- A single ERG for all models
- A 2-page Emergency Response Quick Reference Sheet for each model

The individual ERGs for older models will still be available.

Section 2 shows you how to access these resources using Toyota Techinfo.
First Responder Resources
To access emergency response resources:

1. Type [techinfo.toyota.com](https://techinfo.toyota.com) into your browser.

   This is an open site that does not require subscriber login.

2. Click the Manuals tab.

3. Using the dropdowns, select a Division, Model, and Model Year.

4. Click the Search button.

5. A list of results will be displayed. Click a document to open it in a browser window. Documents include:
   - Emergency Response Guide: Overall
   - Emergency Response Quick Reference
   - Individual ERGs for older models
SAE Standard J2990

Society of Automotive Engineers (SAE) standard J2990, "Hybrid and EV First and Second Responder Recommended Practice," provides first and second responders with the ability to avoid the hazards associated with the high voltage system, communicate hazard identification to other incident responders, and manage the risks in a manner consistent with the best practices utilized by first responders, second responders, vehicle manufacturers, and other responsible organizations.

You may purchase this standard from SAE International by:

- Calling 1-877-606-7323
- Ordering online at
  http://standards.sae.org/j2990_201211/
Toyota Emergency Response Guide
First Responder Resources

NHTSA

The National Highway Traffic Safety Administration (NHTSA) has released three variations of “Interim Guidance for Electric and Hybrid-Electric Vehicles:”
- Emergency Responders
- Tow/Recovery/Storage
- Owners

Select the image to open the version for first responders.
SRS Airbags
Operation

- Supplemental Restraint System (SRS) airbags supplement the seat belts to help reduce impacts to the driver and passengers in a collision.
- During a collision, the airbag Electronic Control Unit (ECU) uses information from airbag sensors and sends a deployment signal to the appropriate airbag assembly (or assemblies).
- The deployment signal ignites an inflator, which generates gas to inflate the airbag.
Warnings

- The SRS may remain powered for up to 90 seconds after the vehicle is shut off and disabled
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional airbag deployment causing serious injury or death
- Cutting an undeployed SRS airbag inflator may cause it to explode
- Immediately after airbag deployment, SRS components are extremely hot and may cause burns if touched
- If an SRS airbag deploys with all doors and windows closed, inflation gas may cause breathing difficulty
- If residue produced during SRS deployment contacts the skin, rinse it off immediately to prevent irritation
Warnings

- The SRS may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional airbag deployment causing serious injury or death.
- Cutting an undeployed SRS airbag inflator may cause it to explode.
- Immediately after airbag deployment, SRS components are extremely hot and may cause burns if touched.
- If an SRS airbag inflator is hot or difficult to remove, use caution.
- If residue produces irritation.

**Disable Vehicle**

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle’s Emergency Response Guide or Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Select the highlighted airbags to learn more.
Toyota Emergency Response Guide

SRS Airbags

Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Select the highlighted airbags to learn more.

Front Seat Cushion Airbag

- Mounted in the driver and front passenger seat cushions
- Activated in a frontal collision
Toyota Emergency Response Guide
SRS Airbags

Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Select the highlighted airbags to learn more.

Rear Window Curtain Shield Airbag

- Mounted in the upper rear back panel (back door mounting section)
- Activated in a rear collision

Front Seat Cushion Airbag

Rear Back Panel   Inflator  Bag

Front Seat Airbag
Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Driver Airbag
- Mounted in the steering wheel pad
- Activated in a frontal collision
Toyota Emergency Response Guide

SRS Airbags

Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s specific airbag and airbag inflator locations.

Front Passenger Airbag

- Mounted in the upper passenger-side instrument panel
- Activated in a frontal collision

A-A Cross Section
Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Curtain Shield Airbag

- Mounted between the front and rear pillars on both the driver and passenger side
- Activated in a side collision (and frontal collision on some models)
Toyota Emergency Response Guide

SRS Airbags

Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Select the highlighted airbags to learn more.

Rear Seat Cushion Airbag

- Mounted in select rear seat cushions
- Activated in a frontal collision
Rear Seat Airbag
- Mounted in the side of the rear seat frame or side garnish
- Activated in a side collision (and frontal collision on some vehicles)

Curtain Shield Airbag
- Mounted in the rear seat side garnish
- Activated in a side collision

Rear Seat Cushion Airbag
- Mounted in the rear seat frame
- Activated in a side collision

Consult the vehicle’s owner’s manual for inflator locations.
**Location**

**Front Seat Airbag**
- Mounted in the driver and front passenger seat frames
- Activated in a side collision (and frontal collision on some models)

About the cabin. Consult the vehicle’s airbag and airbag inflator locations.
Location

Depending on the model, multiple airbags may be located throughout the cabin. Consult the vehicle’s Emergency Response Guide/Quick Reference Sheet for specific airbag and airbag inflator locations.

Knee Airbag

- Mounted in the lower instrument panel on the driver and front passenger sides
- Activated in a frontal collision

![Knee Airbag Diagram]

A-A Cross Section

![Bag Diagram]

![Inflator Diagram]
Identification

Standard SRS identifiers are located near each airbag.

"SRS" is embossed on the steering wheel, dashboard, and overhead roof rails
Seat airbags are identified by Airbag tags in the seat cover seams
Identification

Standard SRS identifiers are located near each airbag.

“SRS” is embossed on the steering wheel, dashboard, and overhead roof rails

Seat airbags are identified by Airbag tags in the seat cover seams
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Seat airbags are identified by Airbag tags in the seat cover seams
Seatbelt Pretensioners
Seatbelt Pretensioners

Operation

- A pretensioner mechanism is integrated with the seatbelt retractors
- In a strong frontal impact, the seatbelts may retract to restrain the occupants
  - The airbag sensor assembly sends a signal to ignite the gas generator
  - Pressure rotates a gear that retracts the seatbelt
- Some models have rear seatbelt pretensioners
Warnings

- Seatbelt pretensioners may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional pretensioner actuation causing serious injury or death.
- To prevent serious injury or death from unintentional actuation, do not breach the seatbelt pretensioners.
Warnings

- Seatbelt pretensioners may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional pretensioner actuation causing serious injury or death.
- To prevent serious injury or death from unintentional actuation, do not breach the seatbelt pretensioners.

Disable Vehicle

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle’s Emergency Response Guide or Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Active Headrest System
Operation

Pushes the headrest forward, helping reduce the possibility of whiplash injuries in a rear impact.
- During a rear impact, the airbag sensor assembly sends an ignition signal to the inflator
- Pressure pushes a rod inside the headrest stay, releasing a lock
- A spring pushes the headrest forward

Location
- Built into the front headrests of some models
- Refer to the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet
Warnings

- Active headrests may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional active headrest actuation causing serious injury or death.
- To prevent serious injury or death from unintentional actuation, do not breach the active headrest inflators.
Warnings

- Active headrests may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
- After shutting off and disabling the vehicle, wait 90 seconds before performing emergency response procedures to avoid unintentional active headrest actuation causing serious injury or death.
- To prevent serious injury or death from unintentional actuation, do not breach the active headrest inflators.

Disable Vehicle

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle’s Emergency Response Guide or Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Gas-Filled Dampers
Toyoda Emergency Response Guide

Gas-Filled Dampers

Location

Nitrogen (N2) gas-filled dampers are used in the suspension and to hold body panels open.

Suspension
- Shocks
- Suspension tower dampers
- Performance dampers

Body Panels

Dampers are installed on both the left and right sides of the body panel.

Vehicles equipped with adjustable height control suspension use compressed air to automatically control vehicle height. The pneumatic cylinders are at a higher pressure than conventional shock absorbers. Select the link to learn more.
Toyota Emergency Response Guide

Gas-Filled Dampers

Location

Adjustable Height Control Suspension

- Front Shock Absorber Control Valve
- Front Suspension Control Valve
- Rear Shock Absorber Control Valve
- Shock Absorber
- Height Control Pump and Motor
- Relief Gas Chamber
- Suspension Control Center Cylinder
- No.1 Height Control Valve
- Shock Absorber

Diagram of car suspension system with labeled components.
Gas-Filled Dampers

**Warnings**

- Nitrogen expands when heated; in a vehicle fire, dampers may explode, possibly causing an injury
- Wear eye protection when cutting gas-filled dampers

**Note:** Nitrogen gas is colorless, odorless, and harmless.
Ultra High Strength Steel

- Approximately 1.3 times higher strength than standard high strength sheet steel
- Used on body structural components on some models
- Refer to the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of Ultra High Strength Steel

- It is difficult to cut through ultra high strength steel using conventional cutters
- Avoid cutting through structural reinforcements made of ultra high strength steel
Carbon Fiber Reinforced Plastic (CFRP)

- Lightweight and highly rigid
- Used on body structural components on certain models
- Can be cut and deformed using cutters during rescue

![Carbon Fiber Reinforced Plastic (CFRP)](image)

- Cutting CFRP creates carbon fiber dust and requires wearing protective equipment such as a dust mask, eye protection, and safety gloves
- CFRP is conductive and may cause a short circuit if carbon fiber dust lands on an electrical circuit
  - Keep electrical circuits free from carbon fiber dust when cutting CFRP
**Glass**

**Laminated Glass**
- Windshield (and some front door glass)
- Identified by “LAMISAFE” printed on the glass

- 2 layers of glass bonded with film
- Does not break easily even when struck
- Objects are less likely to penetrate the glass
- Glass shards tend to remain adhered to the film

**Tempered Glass**
- Door, roof, and back window glass
- Identified by “TEMPERLITE” printed on the glass

- 3 to 5 times stronger than conventional glass
- Breaks into very small pieces when broken
Body High Voltage Components
High Intensity Discharge (HID) Headlights

- Some vehicles use High Intensity Discharge (HID) headlights
- Emit light by creating an electric discharge between electrodes inside the bulbs
- When turned on, instantaneously generate 20,000 to 30,000 V
- Refer to the vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of high voltage components

⚠️ To prevent serious injury or death from electric shock, avoid touching, cutting, or breaching HID headlight bulbs, sockets, electric circuits, or components

⚠️ To prevent burns, avoid touching high voltage sockets or the metal parts on the back of the headlights while they are on and immediately after they are turned off
Electric Power Steering (EPS)

While Electric Power Steering is not considered high voltage, first responders should be aware of its higher arc potential.
- The EPS ECU boosts 12 V up to 46 V to drive an EPS assist motor
  - On some hybrid models, the DC/DC converter lowers voltage (up to 46 V) from the high voltage battery to drive the assist motor
- A wire carrying up to 46 V connects the EPS ECU to the EPS assist motor
- EPS component locations vary by model
  - The EPS assist motor is integrated with the steering gear box or steering column
  - The EPS ECU is located in the engine compartment or instrument panel
Accessory Outlet

Some HVs, EVs, and conventional gasoline engine vehicles may have an accessory outlet that uses its own inverter to convert DC voltage from the high voltage battery to AC voltage that can supply power to electronic devices.
Powertrain High Voltage System
Powertrain High Voltage System

Operation

High voltage electricity drives the electric motor in HVs, PHVs, and EVs. The high voltage system is:
- Deactivated when the ignition switch or Engine/Power switch is turned OFF
- Automatically disabled if SRS airbags deploy or if the hybrid computer detects a decrease in the high voltage system’s insulation resistance

The vehicle is shut off only when the READY indicator is Off. When the READY indicator is illuminated, the high voltage system is on. On HVs and PHVs, the gasoline engine may be silent but can start up at any time while the READY indicator is On.

- The vehicle body is insulated from high voltage
- High voltage components have insulated covers

Model-specific diagrams can be found in individual Emergency Response Guides
Warnings

- The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off and disabled.
  - Failure to shut off and disable the vehicle before performing emergency response procedures may result in serious injury or death from severe burns and electric shock.
- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component.
- Wear protective equipment including insulated gloves when there is a risk of touching a high voltage power cable or component.
- To avoid electrocution resulting in severe injury or death, display a sign on the roof of the damaged vehicle warning others not to touch the vehicle when the person in charge is away from it.
Warnings

- The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off and disabled.
  - Failure to shut off and disable the vehicle before performing emergency response procedures may result in serious injury or death from severe burns and electric shock.
- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component.
- Wear protective equipment including insulated gloves when there is a risk of touching a high voltage power cable or component.
- To avoid electrocution, keep at least 10 feet away from the high voltage components of the damaged vehicle.

**Disable Vehicle**

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle's Emergency Response Guide for the Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Identification

- High voltage electrical components are contained within insulated metal covers or cases
- High voltage power cables are color-coded orange, indicating high voltage

Consult the vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of components in the high voltage system.

Refer to the Assess Vehicle Section to learn how to identify HVs, PHVs, and EVs.
Nickel-Metal Hydride (Ni-MH) Battery

Most models use a nickel-metal hydride (Ni-MH) high voltage battery. Refer to the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet for the specific location.

- 20 or more modules contained in a metal case
- Each module has cells connected in series to obtain high voltage (144 to 288 V)
- A catastrophic crash breaching both the metal case and a metal battery module would be rare
- Even if a module cracks, the cell plates absorb the electrolyte and it will not normally leak
- Electrolyte leakage is unlikely due to the amount of electrolyte contained within the modules
- A Ni-MH electrolyte leak is not a hazardous material incident

- Ni-MH battery electrolyte is a caustic alkaline (pH 13.5) that damages human tissues
- To avoid injury, wear appropriate protective equipment (rubber gloves and eye protection) when there is a risk of touching electrolyte
- All responders in the hot zone should wear the proper Personal Protective Equipment (PPE) for fire fighting including Self Contained Breathing Apparatus (SCBA)
Lithium ion (Li-ion) Battery

To determine the high voltage battery type and location, refer to the individual Emergency Response Guide/Emergency Response Quick Reference Sheet.

- Li-ion batteries have multiple stacks, each with 14 or more cells contained in a metal case
- Stacks are connected in series to obtain high voltage (207 V)
- A catastrophic crash breaching the metal case, battery frame, and cells would be rare
- Even if a cell is crushed or cracked, the cell separators absorb the electrolyte and leakage is unlikely
- If any electrolyte leaks, it should only be a small amount
  - Electrolyte quickly evaporates
  - A small amount can irritate the eyes, nose, throat, and skin
Warnings

- Li-ion electrolyte is flammable and damages human tissues
- Evaporating electrolyte from a burning Li-ion battery may irritate the eyes, nose, and throat
- To avoid injury from coming into contact with Li-ion electrolyte or vapor, all responders in the hot zone should wear the proper Personal Protective Equipment (PPE) for fire fighting including rubber gloves, eye protection, protective mask, or Self Contained Breathing Apparatus (SCBA)
- Keep spilled Li-ion electrolyte away from fire and ensure the area is well ventilated
- Absorb spilled Li-ion electrolyte and store the absorption material in an airtight container until properly disposed of
High Voltage Power Cable

- Connects high voltage electrical components
- Located in the engine/motor compartment and running near the centerline of the vehicle

Orange distinguishes the cable as high voltage.

- High Voltage Battery
- Inverter/Converter
- Hybrid Transaxle
- A/C Compressor
**Inverter/Converter**

Boosts high voltage from the high voltage battery  
Changes DC to 3-phase AC to drive the electric motor

**DC-DC Converter**
- Steps high voltage down to approximately 14 V DC  
- Charges the 12 V battery and powers accessories  
- Integrated with the inverter/converter or located near the high voltage battery (depending on model)

Refer to the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of high voltage components.
**HV/EV Transmission/Transaxle**

- Has an electric motor/generator that drives the vehicle’s wheels and recharges the high voltage battery
- The inverter/converter powers the motor/generator with up to 650 V AC

**Rear Drive Motor**
AWD models also have a rear transaxle with an electric motor that drives the rear wheels. The rear drive motor is located above the rear drive shafts, and it is also powered by the inverter/converter.
A/C Compressor

HVxs and EVs use an electric air conditioning compressor that operates on voltages as high as 300 V. A dedicated inverter converts high voltage from the high voltage battery into 3-phase AC.
Charging Inlet

- PHVs and EVs have a charging inlet to charge the high voltage battery
- Current Toyota PHVs and EVs use SAE J1772 level 1 and level 2 protocol
- External power supply cable will be energized during charging

⚠️ If the vehicle, charge cable, or charger is submerged in water, shut off the utility circuit supplying power to the charge cable before disconnecting it to prevent serious injury or death from severe burns or electric shock.

⚠️ If the charge cable assembly connector lock cannot be released, turn the external charger OFF, unplug it, or turn its main breaker OFF
- The charge cable assembly connector lock cannot be released during quick charging
- If charging does not stop even when the charger is turned OFF, turn its main breaker OFF
Onboard Charger

PHVs and EVs have an onboard charger that converts AC power from an external power source to DC, boosts it, and then uses it to charge the high voltage battery. Orange on-board charger cabling is energized during charging.

The onboard charger may be located in the engine/motor compartment or in the HV battery assembly. Refer to the vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the specific location of the onboard charger.
Assess Vehicle
Exterior

If a vehicle uses a high voltage electrical system, badges and other exterior cues help you identify it as a hybrid or electric vehicle. The individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet shows the specific location of badges.

Select the links to see the badges.
Toyota

- Some models may have blue tinted headlamps
- PHVs and EVs have a charge inlet door (refer to the Powertrain High Voltage System section)
Lexus
- Blue tinted headlamps and taillamps

Blue-trimmed Brand Logo

Model Designation “h”

Blue Hybrid Badging
To identify a hybrid or electric vehicle from the interior, look for the following:

- Instrument cluster READY indicator (illuminated when the vehicle is ON and operational)
- Hybrid system indicator in place of a tachometer (may be blacked out if the vehicle is shut off)
- May have a “B” shift lever position
Toyota Emergency Response Guide

Assess Vehicle

Engine/Motor Compartment

You can identify a vehicle as an HV, PHV, or EV from the orange high voltage power cables and the cover in the engine/motor compartment.

Hybrid models have an under hood label that identifies battery locations and type of high voltage battery.
Vehicle Inspection

SAE standard J2990, “Hybrid and EV First and Second Responder Recommended Practice,” includes a useful flow chart for on scene inspection of high voltage vehicles.

You may purchase this standard from SAE International by calling 1-877-606-7323 or by ordering online at http://standards.sae.org/j2990_201211/.

On Scene High Voltage Vehicle Inspection Flow Chart

SAE standards help ensure the safety, quality, and effectiveness of products and services across the mobility engineering industry.

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Toyota Emergency Response Guide

Immobilize Vehicle
Immobilize Vehicle

On arrival, immobilize the vehicle following these steps:

1. Chock the wheels and set the parking brake
   The vehicle may have a lever, foot pedal, or switch-type parking brake.

2. Shift the vehicle into park
   Some models use an electronic gearshift selector:
   - Press the P position switch near the gearshift selector
   - This switch also sets the parking brake on some models

3. Enable Access
   Before shutting the vehicle down:
   - Lower windows
   - Open back door (if equipped)
   - Unlock doors
   - Move seats and steering wheel
   Once the 12 V battery is disconnected, power controls will not operate.

- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component
- Wear protective equipment including insulated gloves when there is a risk of touching a high voltage power cable or component
Disable Vehicle
Confirm Vehicle Status

The purpose of disabling the vehicle is to shut off the fuel supply, high voltage supply, and electrical power to the SRS.

The vehicle is on if any of these conditions are met:
- Engine is running
- Ignition switch is in ACC, ON, or START position
- Meters are illuminated
- Air conditioning, audio system, or wipers are operating
- Navigation or other displays are on
Warnings

- Never assume a vehicle is off because it is silent
  - The vehicle may be equipped with an idling stop system

- Always observe the instrument cluster for the [READY] indicator status to verify whether the high voltage system is on or off

- When the vehicle is equipped with a remote air conditioning system and the meters are illuminated, high voltage may be applied to the air conditioning system even though the [READY] indicator is off
  - Shut off and disable the vehicle and ensure the meters are off

- Failure to shut off and disable the vehicle before performing emergency response procedures may result in serious injury or death from unintentional deployment of the SRS or unintentional actuation of the seatbelt pretensioners or active headrests

- Hint: If the vehicle is shut off, the instrument cluster gauges will be “blackened out” (not illuminated)
Shut Vehicle Off

1. Press the Engine/Power switch once or turn the ignition switch to the LOCK (OFF) position.

If equipped with an Engine/Power switch, the vehicle is shut off when all of the following conditions are met:
- Engine is not running
- Meters are not illuminated
- A/C, audio system, or wipers are not operating
- Navigation or other displays are off

Operating the Engine/Power Switch
With the brake pedal depressed, pressing the switch toggles between Stop and Start. If the brake pedal is not depressed, the vehicle will not start.

With the brake pedal released, pressing the switch toggles between Accessory, Ignition-On, and Off.

Click here to see a diagram of the ignition mode sequence.

2. When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

If the electrical key transmitter is in the cabin or near the vehicle, it could start unexpectedly.

3. Disconnect the 12 V battery’s negative terminal.

The 12 V battery location varies. Refer to each vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the specific location.

Shutting off the power to the electrical system helps prevent electrical fires and keeps the vehicle from starting.

Click the links to learn more.
**Ignore mode sequence**

**Brake pedal depressed:**
Pressing the Engine/Power switch toggles between Stop and Start.

**Brake pedal released:**
Pressing the Engine/Power switch toggles between Accessory, Ignition-On, and Off.

In Accessory mode, the radio and other components operate.

In Ignition-On mode, the power windows, wipers, HVAC, and SRS are operational.
12 V Battery Locations

In trunk

Depending on the model, the 12 V battery is located in the engine compartment, the luggage compartment, or under the rear seat.
Shut Vehicle Off – Alternate Procedure

If the ignition switch or Engine/Power switch is inaccessible or inoperative, follow this alternate procedure to disable the vehicle:

1. Open the engine compartment fuse box cover and remove the appropriate fuse. Refer to each vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of the fuse box.

2. Disconnect the 12 V battery’s negative terminal. Depending on the model, the 12 V battery is located in the engine compartment, the luggage compartment, or under the rear seat. Refer to each vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for the specific location.

Shutting off the power to the electrical system helps prevent electrical fires and keeps the vehicle from starting.

If you can’t identify the correct fuse, pull all the fuses until all of the following conditions are met:

- Engine is not running
- Meters are not illuminated
- Air conditioning, audio system, or wipers are not operating
- Navigation or other displays are off
When Charging – Vehicle With Plug-in Charge System

An external power source charges the high voltage battery in PHVs and EVs. If a charge cable is connected to the vehicle’s charging inlet, disconnect the cable to stop charging:

1. Push the latch release button on top of the charge cable connector and pull it away from the vehicle’s charging inlet.

   If you can’t release the charge cable assembly connector lock, turn off the external power source. If the lock is still not released:
   - Unplug the external charger or turn the main breaker off
   - Disconnect the charge cable assembly from the charge inlet

2. Close the charging inlet cap and charging port lid.

3. Turn off the external power source by unplugging it or turning its main circuit breaker off.

If the vehicle, charge cable, or charger is submerged in water, shut off the utility circuit supplying power to the charge cable before disconnecting it to prevent serious injury or death from severe burns or electric shock.
**Overview**

- Immobilize and disable the vehicle
- Open or remove windows and doors to access patients
- Secure the necessary space by adjusting the position of the steering wheel and seats and removing the head rests
- Crib the vehicle to stabilize it
- Cut the vehicle to gain access to the patient
Overview

- **Immobilize** and disable the vehicle
- Open or remove windows and doors to access the patient
- Secure the necessary space by adjusting the steering wheel and seats and removing the keys
- Crib the vehicle to stabilize it
- Cut the vehicle to gain access to the patient

**Immobilize Vehicle**

On arrival, immobilize the vehicle following these steps:

1. **Check the wheels and set the parking brake**
2. **Shift the vehicle into Park**
   Some models use an electronic gearshift selector:
   - Press the P position switch near the gearshift selector
   - This switch also sets the parking brake on some models
3. **Enable access**
   Before shutting the vehicle down:
   - Lower windows
   - Open back door (if equipped)
   - Unlock doors
   - Move seats and steering wheel

Once the 12 V battery is disconnected, power controls will not operate.
Overview

- Immobilize and disable the vehicle
- Open or remove windows and doors to access patient
- Secure the necessary space by adjusting the position of the steering wheel and seats and removing the head restraints
- Crib the vehicle to stabilize it
- Cut the vehicle to gain access to the patient

Disable Vehicle

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle's Emergency Response Guide or the Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Warnings

- The SRS, seatbelt pretensioners, and active headrests may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
  - Wait 90 seconds after shutting off and disabling the vehicle.
  - Failure to shut off and disable the vehicle before performing emergency response procedures may result in unintentional airbag deployment or unintentional actuation of seatbelt pretensioners or active headrests, causing serious injury or death.

- Cutting an undeployed SRS airbag, seatbelt pretensioner, or active headrest inflator may cause it to explode.

- Immediately after SRS airbag deployment, seatbelt pretensioner actuation, or active headrest actuation, the components are extremely hot and may cause burns if touched.

- If an SRS airbag deploys with all doors and windows closed, inflation gas may cause breathing difficulty.

- If residue produced during SRS deployment, seatbelt pretensioner actuation, or active headrest actuation contacts the skin, rinse it off immediately to prevent irritation.

- The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off and disabled.

- Failure to shut off and disable the vehicle before performing emergency response procedures may result in serious injury or death from severe burns and electric shock.

- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component.
Warnings

- The SRS, seatbelt pretensioners, and active headrests may remain powered for up to 90 seconds after the vehicle is shut off and disabled.
  - Wait 90 seconds after shutting off and disabling the vehicle.
  - Failure to shut off and disable the vehicle before performing emergency response procedures may result in unintentional airbag deployment or unintentional actuation of seatbelt pretensioners or active headrests, causing serious injury or death.
- Cutting an undeployed SRS airbag, seatbelt pretensioner, or active headrest inflator may cause it to explode.
- Immediately after SRS airbag deployment and actuation, the components are extremely hot.
- If an SRS airbag deploys with all doors closed, there may be difficulty.
- If residue produced during SRS deployment actuation contacts the skin, rinse it off immediately.
- The high voltage system may remain powered disabled.
- Failure to shut off and disable the vehicle may result in serious injury or death from burns or electrical shock.
- To prevent serious injury or death from burns or electrical shock, avoid contact with any orange high voltage power cable or high voltage component.

Disable Vehicle

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle’s Emergency Response Guide or Emergency Response Quick Reference Sheet for the location of the 12 V battery.
Stabilize Vehicle

Crib at four points directly under the front and rear pillars.

- Cribbing under the exhaust system, fuel system, high voltage battery, or high voltage power cables may generate heat, burst air lifting bags, or damage the high voltage power cables.
- This may result in a vehicle fire, crushing accident, or electrical shock, possibly leading to serious injury or death.
Cut Vehicle

When cutting, pay attention to the location of:
- Ultra high strength steel
- Fuel system
- SRS
- High voltage electrical system components

**Note:** If the SRS airbag, seatbelt pretensioners, or active headrests have already been activated, the inflator can be cut.

Consult the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet for locations.

To prevent serious injury from a fire caused by sparks, use a hydraulic cutter or other tools that do not produce sparks when cutting.
Introduction

- When attacking an HV, PHV, or EV fire, use copious amounts of water to extinguish the fire and cool the high voltage battery
- The high voltage battery is difficult to access in some vehicles
- If it is difficult to apply copious amounts of water to the high voltage battery, allow the battery to burn itself out
- Refer to the individual vehicle Emergency Response Guide/Emergency Response Quick Reference Sheet for the location of the high voltage battery

⚠️ To avoid serious injury or death from severe burns or electric shock, never breach or remove the high voltage battery assembly cover under any circumstances, including fire

- If only a small amount of water is used to extinguish a fire, a short circuit may occur in the high voltage battery, causing the fire to reignite
- Because toxic gases are by-products of combustion, all responders in the hot zone should wear the proper Personal Protective Equipment (PPE), including Self Contained Breathing Apparatus (SCBA)
Ni-MH Battery

To attack a Ni-MH battery fire, use copious amounts of water at a safe distance or let the fire burn itself out.

**Normally**, flooding a Ni-MH high voltage battery with water controls battery fires by cooling adjacent modules below the ignition temperature. Remaining modules not extinguished by water will burn out.

However, flooding the Avalon Hybrid high voltage battery pack is not recommended. The battery case design and location prevent responders from safely applying water through the vent openings. We recommend letting the Avalon Hybrid high voltage battery pack burn itself out.

**Defensive Fire Attack**
In a defensive attack, pull back a safe distance and allow Ni-MH battery modules to burn out. During this defensive operation, fire crews may use a water stream or fog pattern to protect exposures or control the path of smoke.
Li-ion Battery

To attack a Li-ion battery fire, use copious amounts of water at a safe distance or let the fire burn itself out.

This is particularly true for large format Li-ion batteries like those in the Prius Plug-in Hybrid and second generation RAV4 EV. It is nearly impossible to extinguish burning high voltage batteries in these vehicles.

⚠️ There is a potential for delayed ignition or re-ignition of a Li-ion battery fire even after it is believed to be extinguished. This may remain an issue until the Li-ion battery is properly discharged.
Vehicle Submersion
Introduction

- If an HV, PHV, or EV is fully or partially submerged in water, pull it out as much as possible
- **Immobilize** and **disable** the vehicle before performing emergency response procedures
- To prevent a vehicle fire, do not turn a submerged vehicle’s ignition switch to ACC or ON or set the Engine/Power switch to Ignition-On
- A submerged HV, PHV, or EV does not have high voltage potential on the vehicle body and is safe to touch
- It is safe to enter the water as the vehicle and water have the same electrical potential
- After some time has passed, electrical corrosion may cause a short circuit leading to a vehicle fire

⚠️

- Touching exposed orange high voltage power cables or high voltage components may cause electrical shock due to a change in electrical potential
- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component
- Wear protective equipment such as **insulated gloves** when there is a risk of touching high voltage power cables or high voltage components
Introduction

- If an HV, PHV, or EV is fully or partially submerged in water, pull it out as much as possible.

- **Immobilize** and disable the vehicle before emergency response procedures.

- To prevent a vehicle fire, do not turn a submerged HV, PHV, or EV with the ignition switch to ACC or ON or set the Engine to Ignition-On.

- A submerged HV, PHV, or EV does not have a live or high electrical potential on the vehicle body and is safe to enter the water as the vehicle has the same electrical potential as the water.

- After some time has passed, electrical components can develop a short circuit leading to a vehicle fire.

\[\text{\textbf{Immobilize Vehicle}}\]

On arrival, immobilize the vehicle following these steps:

1. **Chock the wheels and set the parking brake**
2. **Shift the vehicle into Park**
   - Some models use an electronic gearshift selector:
     - Press the P position switch near the gearshift selector
     - This switch also sets the parking brake on some models
3. **Enable access**
   - Before shutting the vehicle down:
     - Lower windows
     - Open back door (if equipped)
     - Unlock doors
     - Move seats and steering wheel

\[\text{Once the 12 V battery is disconnected, power controls will not operate.}\]

- Touching exposed orange high voltage power cables may cause electric shock due to a change in electrical potential.

- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component.

- Wear protective equipment such as **insulated gloves** when there is a risk of touching high voltage power cables or high voltage components.
Introduction

- If an HV, PHV, or EV is fully or partially submerged in water, pull it out as much as possible

- **Immobilize** and **disable** the vehicle before performing any emergency response procedures

- To prevent a vehicle fire, do not turn a submerged vehicle's ignition switch to ACC or ON or set the Engine/Power switch to Ignition-On

- A submerged HV, PHV, or EV does not have high voltage potential on the vehicle body and is safe to touch

- It is safe to enter the water as the vehicle and water have the same electrical potential

- After some time has passed, electrical corrosion may cause a short circuit leading to a vehicle fire

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**Disable Vehicle**

To shut the vehicle off, press the Engine/Power switch once or turn the ignition switch to the Lock (OFF) position.

When equipped with an Engine/Power switch, keep the electrical key transmitter outside the detection area (16 ft. or more away from the vehicle).

Disconnect the negative terminal of the 12 V battery. Refer to each vehicle's Emergency Response Guide or Emergency Response Quick Reference Sheet for the location of the 12 V battery.

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- Touching exposed orange high voltage power cables or high voltage components may cause electrical shock due to a change in electrical potential

- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component

- Wear protective equipment such as **insulated gloves** when there is a risk of touching high voltage power cables or high voltage components
Spills
12 V Battery Electrolyte

- Dilute sulfuric acid may irritate the skin if contacted
- Wear appropriate protective equipment such as rubber gloves and eye protection when there is a risk of touching electrolyte
- Contact the OEM for Safety Data Sheets for battery electrolyte in case of spills
- Reference Safety Data Sheets for proper Personal Protection Equipment and disposal instructions
Ni-MH battery electrolyte is a caustic alkaline (pH 13.5) that damages human tissues

To avoid injury, wear appropriate protective equipment (rubber gloves and eye protection) when there is a risk of touching electrolyte
Lithium ion (Li-ion) Battery

- Even if a cell is crushed or cracked, the cell separators absorb the electrolyte and leakage is unlikely
  - If any electrolyte leaks, it should only be a small amount
  - Electrolyte quickly evaporates
- A small amount can irritate the eyes, nose, throat, and skin
- Refer to Powertrain High Voltage System section for more information about Lithium ion (Li-ion) high voltage batteries

- Li-ion electrolyte is flammable and damages human tissues
- Burning Li-ion batteries may irritate the eyes, nose, and throat
- Li-ion electrolyte vapor may irritate the nose and throat
- To avoid injury by coming into contact with Li-ion electrolyte or vapor, wear appropriate protective equipment (rubber gloves, eye protection, protective mask, or SCBA) when there is a risk of touching electrolyte
- Keep spilled Li-ion electrolyte away from fire and ensure the area is well ventilated
- Absorb spilled Li-ion electrolyte and store the absorption material in an airtight container until disposed of
Second Responder Resources
Dismantling Manuals

Dismantling Manuals assist dismantlers in the safe handling of Toyota and Lexus vehicles with high voltage electrical systems.

To access the Dismantling Manuals:

1. Type techinfo.toyota.com into your browser.
   - This is an open site that does not require subscriber login.
2. Click the Manuals tab.
3. Using the dropdowns, select a Division, Model, and Model Year.
4. Click the Search button.
5. A list of results will be displayed. Click Dismantling Manual to open the document in a browser window.
SAE Standards

SAE standard J2990, "Hybrid and EV First and Second Responder Recommended Practice"
Provides first and second responders with the ability to avoid hazards associated with the high voltage system, communicate hazards to other responders, and manage risks.

SAE standard J2950, "Recommended Practices for Shipping, Transport, and Handling of Automotive-Type Battery System - Lithium Ion"
Helps you identify, handle, and ship lithium-ion batteries, and provides information about U.S. and International hazardous materials (dangerous goods) transportation regulations.

You may purchase these standards from SAE International by:
• Calling 1-877-606-7323
• Ordering online at http://standards.sae.org/
NHTSA

The National Highway Traffic Safety Administration (NHTSA) has released three variations of "Interim Guidance for Electric and Hybrid-Electric Vehicles:"

- Emergency Responders
- Tow/Recovery/Storage
- Owners

Select the image to open the version for Tow/Recovery/Storage.
Towing
Preferred Method

Tow all HVs, PHVs and EVs on a flat bed with all four wheels off the ground:
- Before loading the vehicle, disconnect the 12 V battery’s negative terminal
- Refer to each vehicle’s Emergency Response Guide/Emergency Response Quick Reference Sheet for towing information and the location of the 12 V battery

Only front-wheel drive vehicles may be towed with the rear wheels on the ground.

Consult with the responding fire department on the actions it took.
First responders must inform tow operators of HV, PHV, and EV hazards during transit and storage:
- High voltage
  - To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component
  - Wear protective equipment such as insulated gloves when there is a risk of touching high voltage power cables or high voltage components
- Potential for the high voltage battery to re-ignite after a vehicle fire
- Leaking high voltage battery electrolyte
  - Wear appropriate protective equipment
    - Ni-MH battery: rubber gloves and eye protection
    - Li-ion battery: rubber gloves, eye protection, protective mask, or Self Contained Breathing Apparatus (SCBA)
Alternate Method

Use this alternate towing method only when towing with all four wheels on the ground is unavoidable:

1. Release the parking lock
   Move the shift lever from P to N while pressing and holding the lock release button.

2. Unlock the steering wheel
   Press the Engine/Power switch until in Ignition-On mode or turn the ignition switch to any position other than LOCK.
   If equipped with the electrical key transmitter, the steering wheel can’t be unlocked if the 12 V battery is disconnected
   • Use wheel dollies to move the vehicle

3. Tow the vehicle in a forward direction at a low speed (under 20 mph) only for a short distance (up to 50 miles)

Make sure the vehicle is in “Ignition-On” mode.

• If the vehicle is in “Off” mode, the steering wheel may lock, making steering inoperative

Towing with all four wheels on the ground may damage the:

• Transmission when exceeding the speed or distance limit, or when the vehicle being towed is facing backward
• High voltage electrical system
• Idling stop system (if equipped)
Storage
Before Storing

Before storing a wrecked HV, PHV, or EV:

- Disconnect the negative 12 V battery terminal
- Drain fuel and oil
- Remove the service plug

Refer to the vehicle's Dismantling Manual for service plug location and removal steps.

Once you remove the service plug, place it in a secure location.

Only certified Hybrid Technicians should handle high voltage battery packs.

If a vehicle was submerged

Select the link to learn more

- To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component
- The service plug is a high voltage component
- Wear protective equipment including insulated gloves when there is a risk of touching a high voltage power cable or component
- Touching the service plug without appropriate protective equipment may result in serious injury or death from severe burns and electric shock from the high voltage electrical system
Before Storing

Before storing a wrecked HV, PHV, or EV:

- Disconnect the negative 12 V battery terminals
- Drain fuel and oil
- Remove the service plug

Refer to the vehicle owner’s manual for removal steps.
Once you remove the service plug, dispose of the vehicle.
Only certified Hybrid Vehicle technicians are allowed to work on these vehicles.

If a vehicle was submerged:
- Drain the water
- Disconnect the 12 V battery and the high voltage battery service plug
- Store in an outdoor location, at least 50 feet away from other vehicles, buildings, and combustibles
  - Electrical corrosion may cause a short circuit leading to a vehicle fire
- Do not turn the ignition switch to ACC or ON or set the Engine/Power switch to Ignition-On

To prevent serious injury or death from severe burns and electric shock, do not touch, cut, or breach any orange high voltage power cable or high voltage component

- The service plug is a high voltage component
- Wear protective equipment including insulated gloves when there is a risk of touching a high voltage power cable or component
- Touching the service plug without appropriate protective equipment may result in serious injury or death from severe burns and electric shock from the high voltage electrical system
Toyota Emergency Response Guide

Vehicle Storage

Storing

Li-ion Batteries
Vehicles with a Li-ion battery must be stored outdoors, at least 50 feet away from other vehicles, buildings, and combustibles. Always assume the high voltage battery is energized and fully charged.

After some time has passed, a short circuit due to impact or electrical corrosion in the high voltage battery may cause a fire. Call 911 if electrolyte fluid appears to be leaking from the high voltage battery, if you observe sparks, smoke, or flames, or hear gurgling, bubbling, popping, or hissing sounds.

Ni-MH Batteries
Fire will largely consume most Ni-MH batteries. Pay particular attention to the large format Ni-MH battery in the first generation RAV4 EV. If this battery smolders, store it at least 50 feet away from other vehicles, buildings, and combustibles, and monitor it closely.

Select the icons to print each warning sign
Inspecting Lithium ion (Li-ion) Batteries

Li-ion batteries require special handling to help avoid battery re-ignition after a fire has been extinguished on a Plug-in Hybrid Vehicle with a Lithium ion high voltage battery.

- To determine the high voltage battery type and location, refer to the individual Dismantling Manual
- Read the warning label on the high voltage battery cover

Procedure
If accessible, inspect the Lithium-ion battery for thermal runaway:

- Hold thermometer approximately 12-18 inches above the battery case and scan in the pattern shown
- Scan to the edges of the battery case
- Record the highest temperatures
- Repeat the procedure after approximately 1 hour

Recorded high temperatures should have changed towards ambient temperature, or remain near ambient.

If temperatures are changing away from ambient, move the battery to a safe area, preferably outside. It may have to be completely discharged by authorized recovery personnel using specialized equipment.

This procedure requires you to handle a damaged vehicle. Specialized training, tools, and protective equipment are required to perform these steps. Contact Toyota or authorized service personnel for proper procedures and resources.

Use an infrared thermometer:
- Capable of accuracy within ± 4°F
- Distance to spot ratio ≥ 10:1
- Capable of temperature readings from -4°F to +212°F
Lithium-ion Battery Warning Label

High Voltage Parts Inside / Contains Organic Electrolyte

DANGER
Failure to observe the following may result in fire, electrical shock, or, in the worst case, may result in death. Leakage of organic electrolyte from this battery unit may cause blindness or skin problems if the electrolyte comes into contact with the eyes, skin or clothes. In case of accidental contact, rinse the affected area with a large quantity of water and seek medical attention immediately. Never attempt to remove, disassemble, or modify this unit or use it for other than its intended purpose. (Please have your dealer or a qualified technician handle the battery.) Do not dispose of this unit illegally. It may result in pollution or serious injury due to a third party touching the unit. Do not subject this unit to physical impact that may cause damage. Keep this unit away from fire. Do not pour water on this unit. Keep children away from this unit.

To Qualified (EV or HV) Technicians: Be sure to read the Repair Manual when servicing or replacing this unit. Please perform battery diagnostics to correct ECU data after replacing this battery.

To Haulers and Dismantlers: Please consult with your dealer or your national distributor when hauling or dismantling this unit.

HV Battery Recycling Information: Please transport this unit in accordance with all applicable laws. Please contact your nearest dealer or national distributor for inquiries or to request disposal of this unit.

DISTR. BY TOYOTA MOTOR SALES U.S.A., INC. TORRANCE, CAL. 90501 Phone: 1-800-331-4331
DISTR. BY SERVCO PACIFIC INC. HONOLULU, HAWAII 96813 Phone: 808-839-2273
DISTR. BY TOYOTA DE PUERTO RICO HATO REY, PUERTO RICO Phone: 787-751-1000
Recycling High Voltage Batteries

- Follow the warning label on the high voltage battery cover when recycling
- Only certified Hybrid Technicians should handle high voltage battery packs
- For information about recycling, contact:
  - Toyota/Lexus dealer
  - Toyota customer assistance (800) 331-4331
  - Lexus customer assistance (800) 255-3987
Shipping

**Li-ion**
- A Li-ion high voltage battery that has been removed from the vehicle is a Class 9 hazardous material and must be packed and shipped accordingly.

- Transportation regulations for shipping Li-ion batteries is provided in SAE standard J2950, "Recommended Practices for Shipping, Transport, and Handling of Automotive-Type Battery System - Lithium Ion”

- Failure to follow current international, federal, and local hazardous materials transportation regulations may result in fines and/or penalties

**Ni-MH**
- Ni-MH high voltage batteries are not hazardous materials; shipping them as such is a DOT violation.

To identify Li-ion and Ni-MH high voltage batteries, refer to the individual Emergency Response Guide/Emergency Response Quick Reference Sheet and the warning label on the battery cover.
Thank you for taking the time to review the Toyota Emergency Response Guide. This guide is available at techinfo.toyota.com.

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