Child Passenger Safety Presentation

Cassandra Mulder BSN, RN, PHN, CPST

Safe Kids Kern Coordinator

Disclosure

None of the planners, presenters, and reviewers for this educational activity have relevant financial relationships with ineligible companies to disclose.

Objectives

- Explain the safety benefits of correctly installed car seats
  - Discuss the potential risks of improper installation.
- Differentiate between forward-facing, rear-facing, and booster seats.
- Explain the use of LATCH (Lower Anchors and Tethers for Children) systems and seat belts.
- Provide information on where to find additional resources and support for car seat installation.

Certified Passenger Safety Technician

- This training does not certify individuals to install car seats; it aims to provide comprehensive education on the importance of car seats and the challenges involved in installing them.
- To become a certified passenger safety technician, you must complete a 35-hour, weeklong course offered annually at Public Health. For more information, please contact mulderc@kerncounty.com.

Motor Vehicle Crash Injuries Among Occupants Ages 0–12 Years in 2023

Deaths in 2023

595

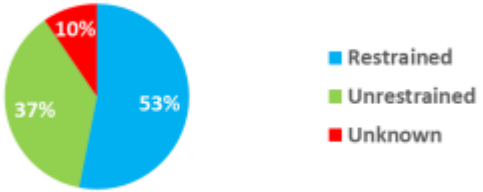
Hospitalizations in 2023

10,705

ER Treated & Released in 2023

102,841

More than 1 in 3 who died as an occupant in a MVC were unrestrained.*



**Available data do not indicate whether children were properly restrained.*

In 2023, MVC injuries among occupants ages 0–12 resulted in:

11 deaths per week

206 hospitalizations per week

1,978 ER treated & released in 2023

Car Seat Safety Facts



Source: NHTSA Crash Statistics 2020

According to AAA in 2024 67% of car seats checked we're installed incorrectly.

Source: AAA NewsRoom

Kids in car seats decrease the risk of fatal injury by 54% for toddlers and 71% among infants.



Source: NHTSA Image Library

Buckle Up: Every Ride, Every Time

Drivers Buckled, Kids Buckle



Source: NHTSA Image Library







Car Seat Registration Form

- Registration card
- Register on-line
- Recalls


Tear off and mail this part

Consumer: Just fill in your name and address. Please print.

Your first name

Your last name

Your street address

City

State

Zip Code –

CHILD RESTRAINT REGISTRATION CARD

BABY JOGGER®
MODEL NO:
SERIAL NO:
MANUFACTURED IN (YYYY/MM/DD):
DO NOT USE AFTER (YYYY/MM/DD):
Baby Jogger, LLC , Atlanta, GA 30328
1.800.241.1848 • www.babyjogger.com • Made In China

Learn the Basics

- Locate the information needed for using your car seat properly:
  - Selection
  - Direction
  - Location
  - Installation
  - Harness Fit

Selection

- The best car seat is the one that fits your child, budget, vehicle and the one you will use correctly every time
    - Rear-facing Only vs. Convertible
- American Academy of Pediatrics (AAP) recommends keeping children rear-facing until the highest weight or height of the car seat
- In CA children under 2 must be rear facing unless they weigh 40 or more pounds or are 40 or more inches tall.

Types of Rear-facing Car Seats

Rear-facing Infant Only (RFO)



Source: www.nunababy.com

Convertible



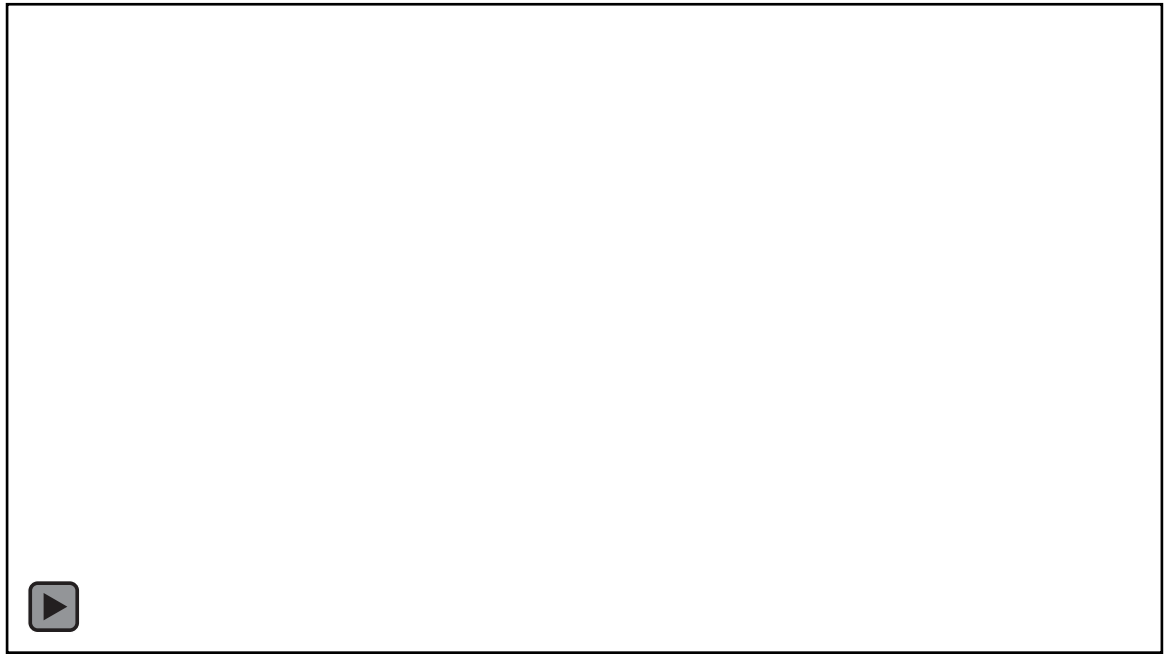
Direction and Location

- Rear-facing to the highest weight or height of the seat
- Children under 13 years of age should ride in the backseat
- Never in front of an airbag



Source: NHTSA Image Library

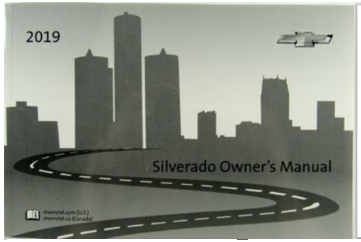
Rear-facing vs. Forward-facing Animation



Source: Children's Hospital of Philadelphia Institute

Installation

- Always follow the car seat manufacturers instructions
- Read car seat labels and manual
- Read your vehicle manual on car seat installation
- Learn the parts of your car seat





⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though the airbag is turned off.

Never put a rear-facing child restraint in the front seat, even if the airbag is off. If securing a forward-facing child restraint in

(Continued)

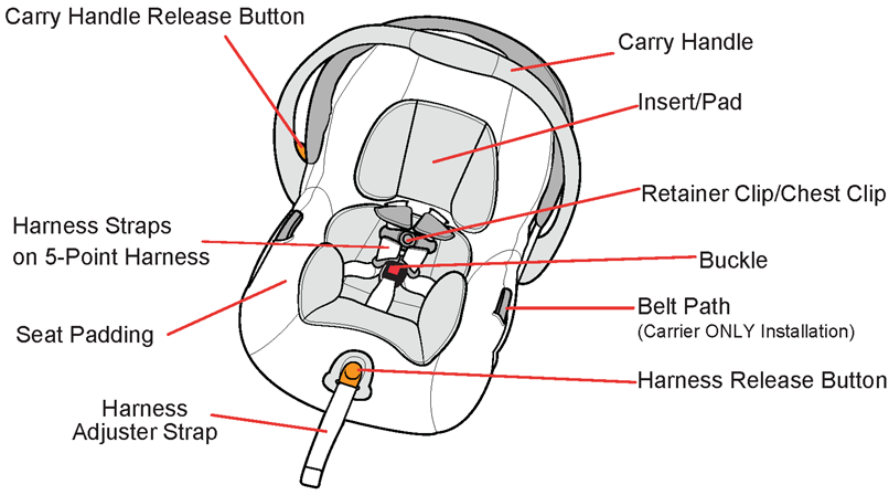


Warning (Continued)

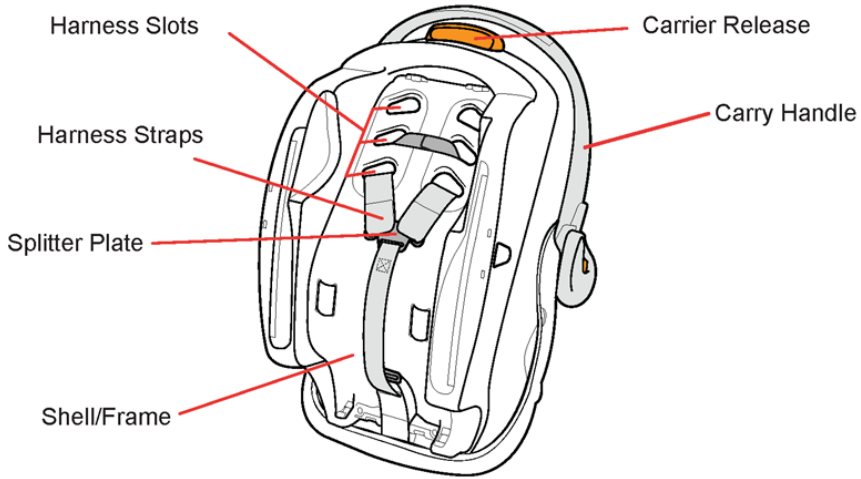
the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure child restraints in the rear seat. Consider using another vehicle to transport the child when a rear seat is not available.

Source: NHTSA Image Library

Rear-facing Carrier

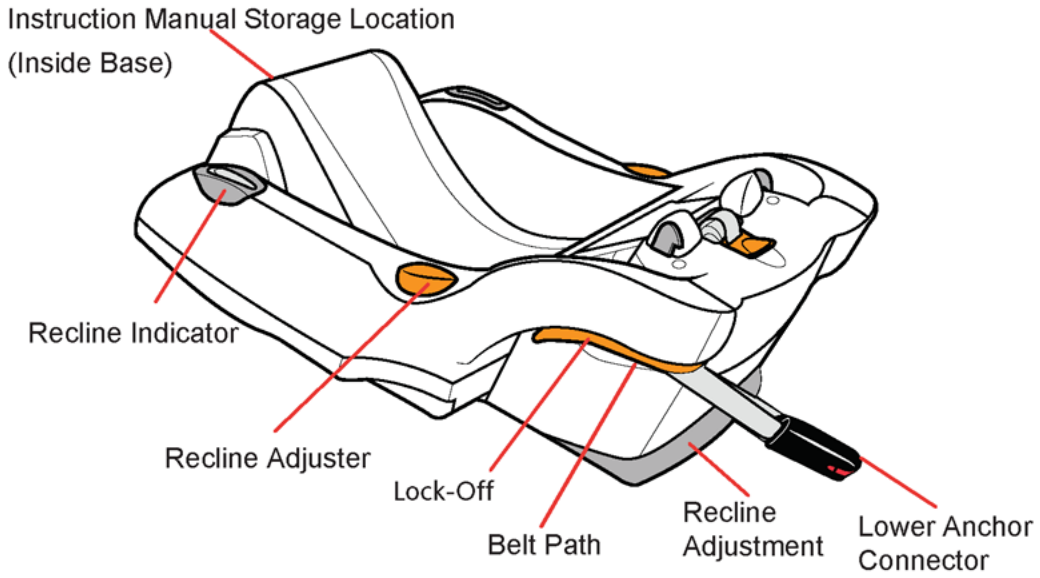






Source: National Child Passenger Safety Certification Curriculum

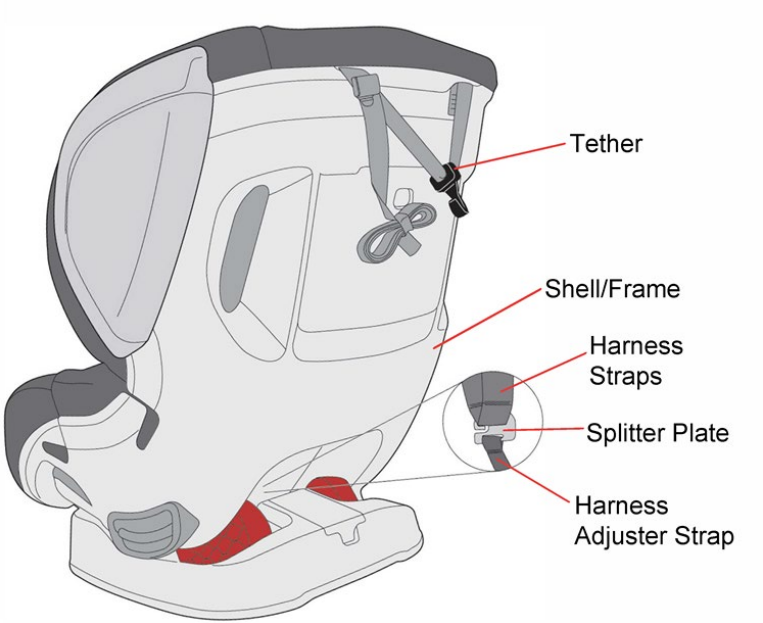
Detachable Infant Base

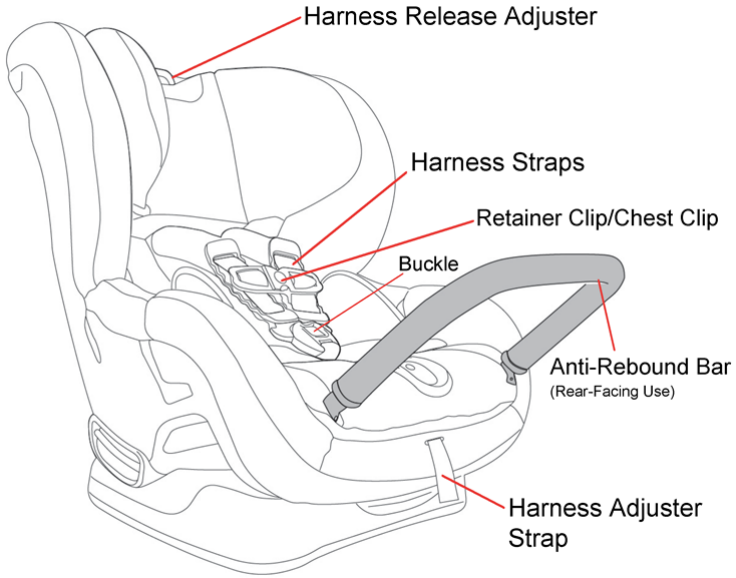




Source: National Child Passenger Safety Certification Curriculum

Rear-facing Convertible



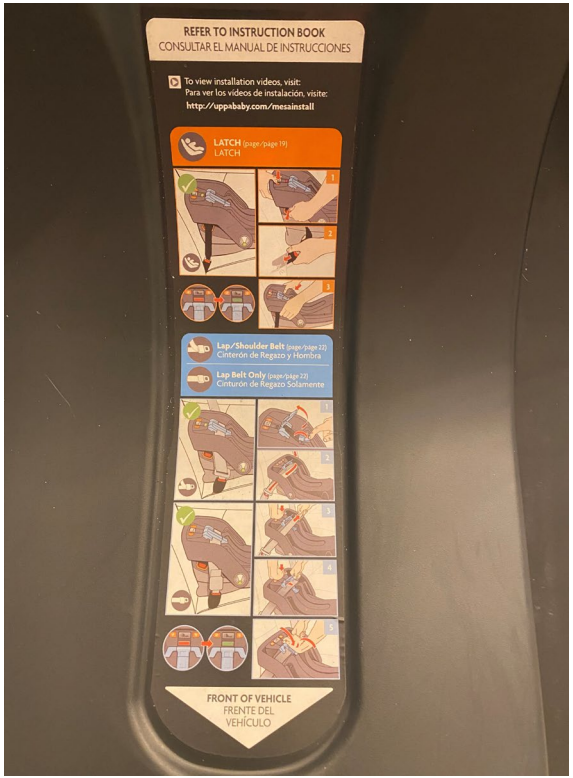


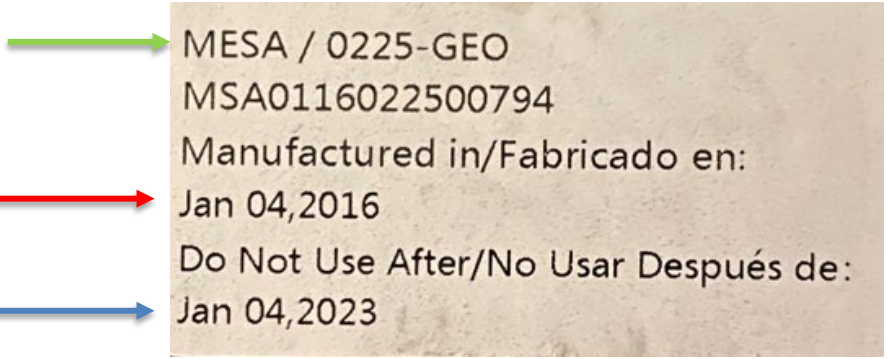
Source: National Child Passenger Safety Certification Curriculum

Labels

Infant seat

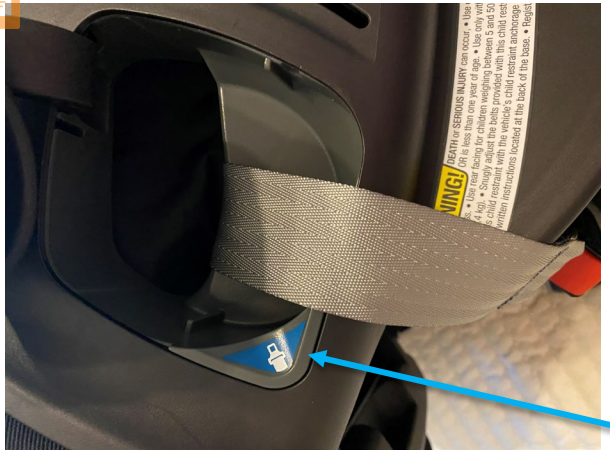
Install using base





Install w/o base





Labels

Convertible

Installation

- Seat belt **OR** Lower anchors
- Tether
- Angle (angle indicators)
- Inch test

Source: NHTSA Image Library

Belt Paths

(Rear-facing Infant Only and Convertible)



Infant Seat Only (No Base)



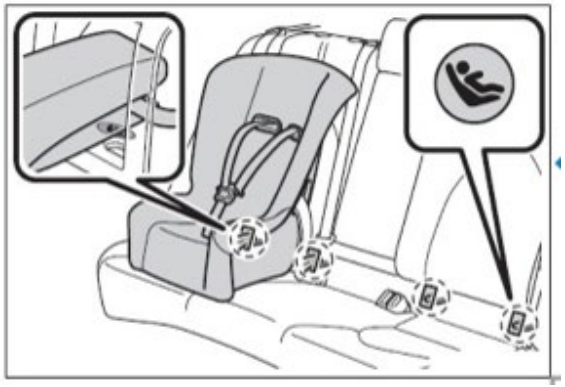
Infant Seat Base

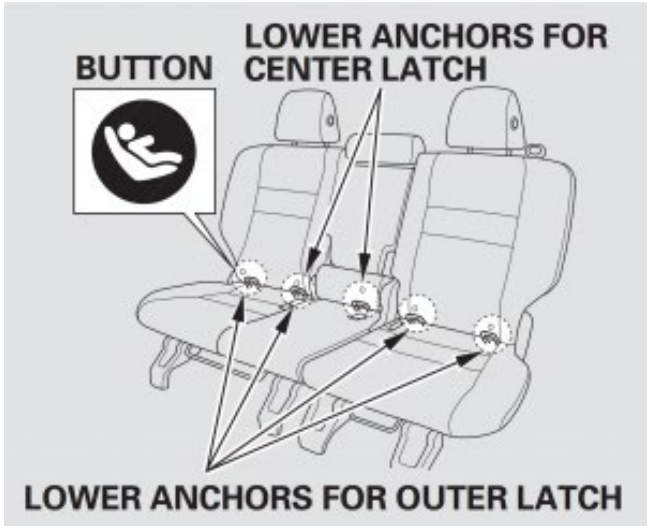


Convertible

Lower Anchors



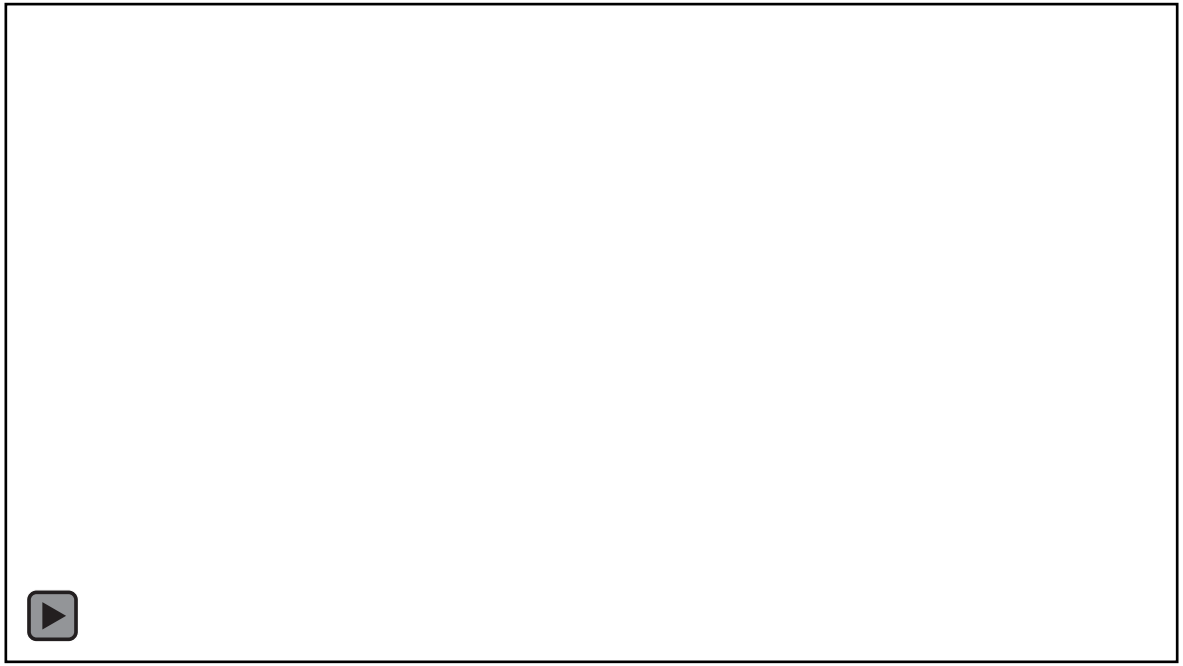






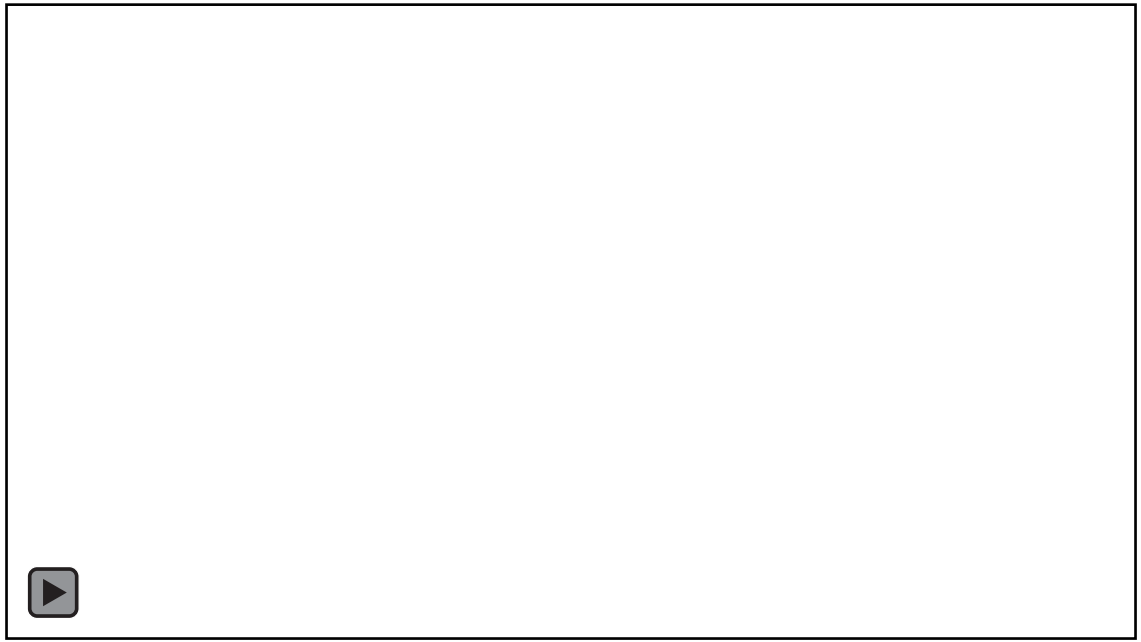


Rear-facing Only Installation Using Seatbelt Video



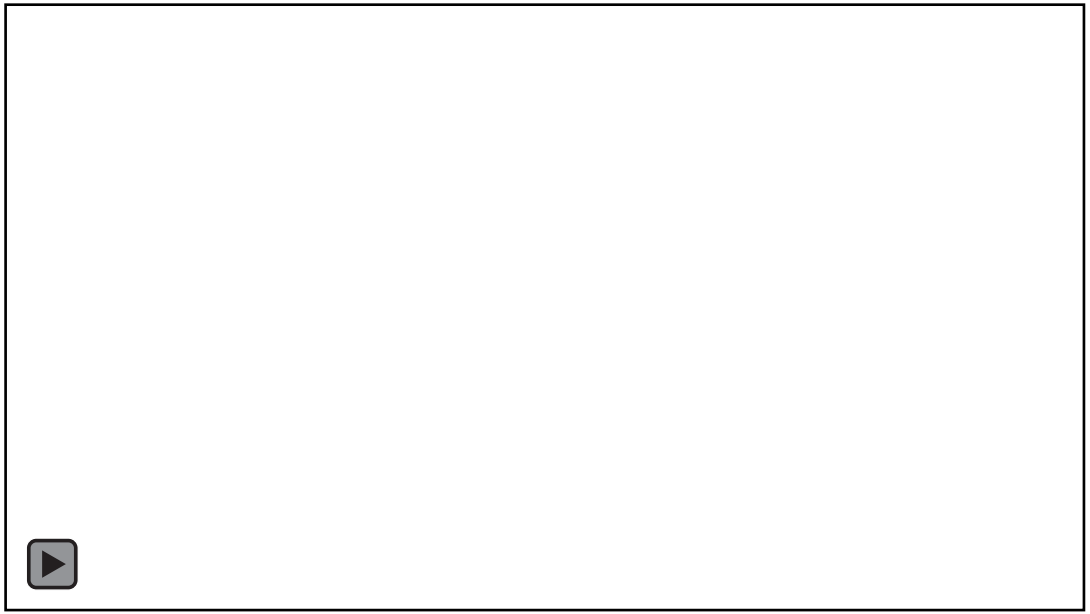
Source: National Highway Traffic Safety Administration

Rear-facing Convertible Installation Video



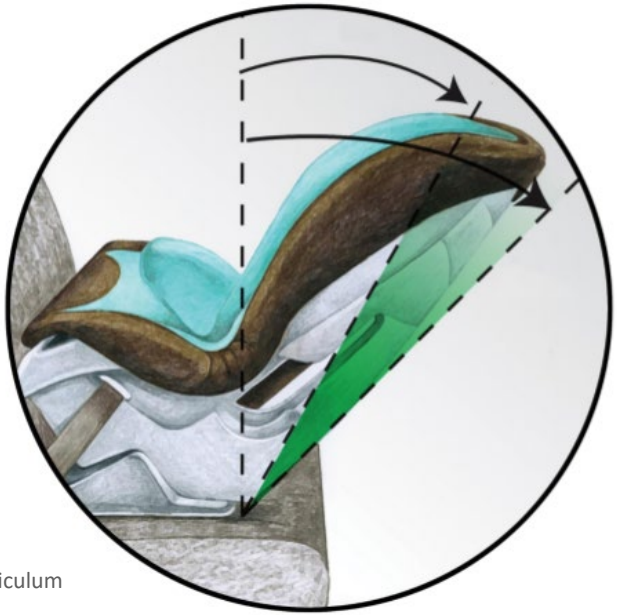
Source: National Highway Traffic Safety Administration

Inch Test



Source: Safe Kids Worldwide

Recline Angle



Source: National Child Passenger Safety Certification Curriculum

Recline Indicators



Bubble Level



Wheel



Line Level

Safe Sleep and Car Seats

- According to the American Academy of Pediatrics 3% of sleep related deaths occurred in sitting devices with the majority being car seats. [1]
- 90% of those car seats were not being used as directed and the median age of death was 2 months. [1]
- While this includes infant carriers being used when not installed in cars it also include incorrectly installed car seats including improper recline angles. This can lead to positional asphyxiation.
- For sleep infants should be:
  - Alone- No other people or objects
  - On their backs
  - In a crib or bassinet with a firm flat mattress

[1] https://publications.aap.org/aapnews/news/11688/Large-study-sheds-light-on-infant-deaths-in?autologincheck=redirected

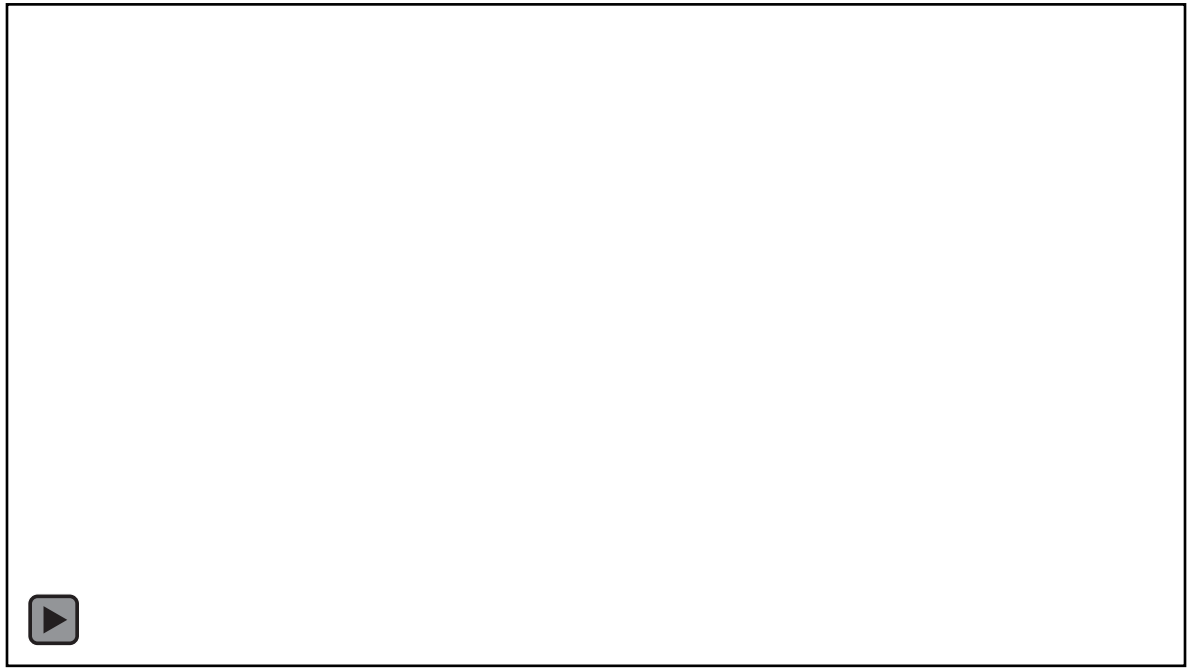
Harnessing

- Harness height
- Adjusting harnesses
- Tightening/loosening harnesses
- Harness snugness (Pinch Test)



Source: NHTSA Image Library

Pinch Test Video



Source: Safe Kids Worldwide

Additional Information

- Your seat may have features not discussed
- Hand-me-down car seat/used
- When to change from rear-facing to forward-facing

Types of Forward-facing Seats

Convertible



Forward-facing ONLY



All-in-One



Selection and Direction

- Move forward-facing once child outgrows their rear-facing seat by height or weight
- Forward-facing seats may have a starting age requirement
- Keep the child forward-facing to the highest weight or height of the car seat
  - Always meets or exceeds state law

Location

- Forward-facing to the highest weight of the seat
- In the back seat until 13 years of age
- Location
  - Center
  - Outboard



Source: NHTSA Image Library

Forward-facing Semi Recline Angle

Recline Use

This Child Restraint has 10 recline positions. Recline can be changed for child's comfort or to improve installation of Child Restraint.

1 - Positions 1–5 (BLUE) are for rear facing use with children 5–50 lbs.

If infant's head falls forward, Child Restraint must be reclined more. Use Infant Insert with infants 5–11 lbs (2.3–5 kg) to improve the recline angle for smaller infants.

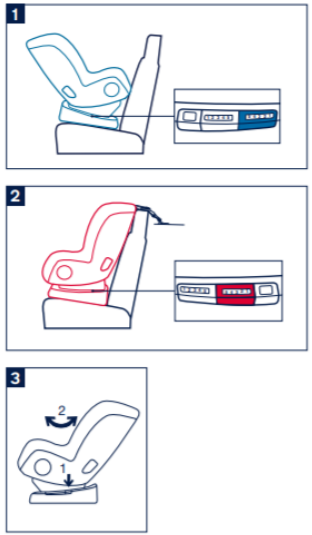
2 - Positions 1–5 (RED) are for forward facing use with children 25–65 lbs.

To Adjust Recline

3 - Press Recline Button **(1)** on either side of the Child Restraint and move seat to desired recline position. **(2)**

Release Recline Button, and check that Child Restraint is locked in desired recline position.

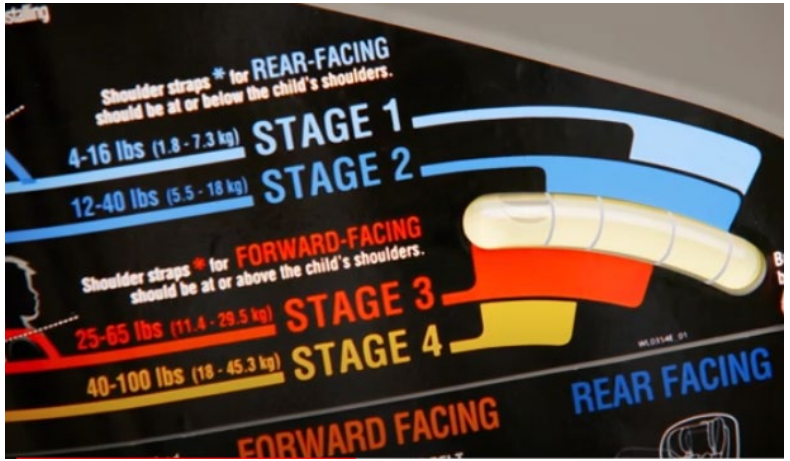
To change recline position after installation, uninstall Child Restraint, select new recline position, and reinstall Child Restraint.



38 RAVA instructions

RAVA instructions 39

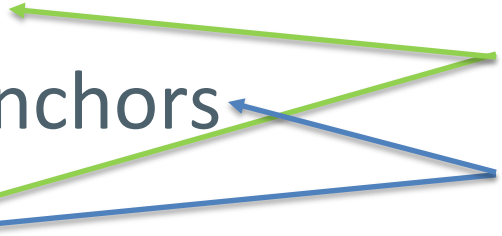
Source: Nuna Rava manual



Source: Chicco Fit 4

Installation

- Seatbelt
- Lower anchors
- Tether

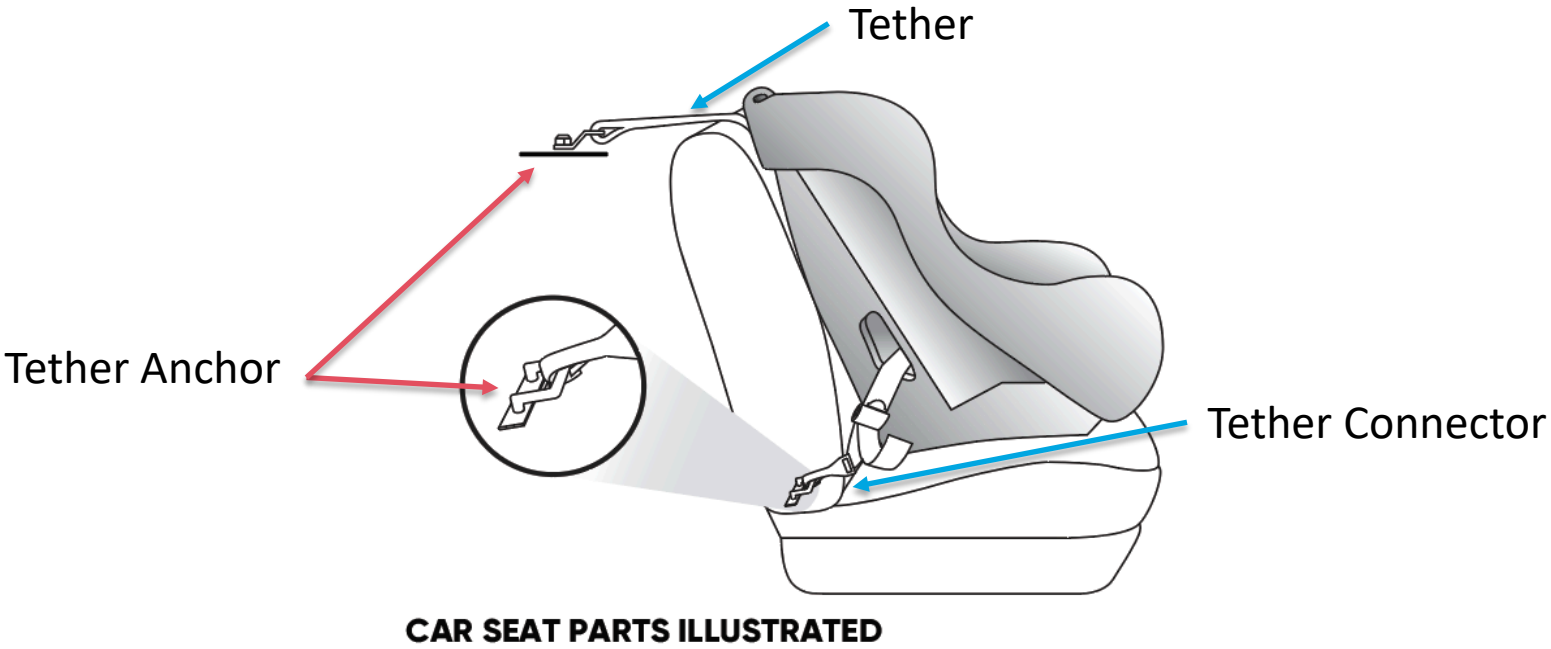


LATCH

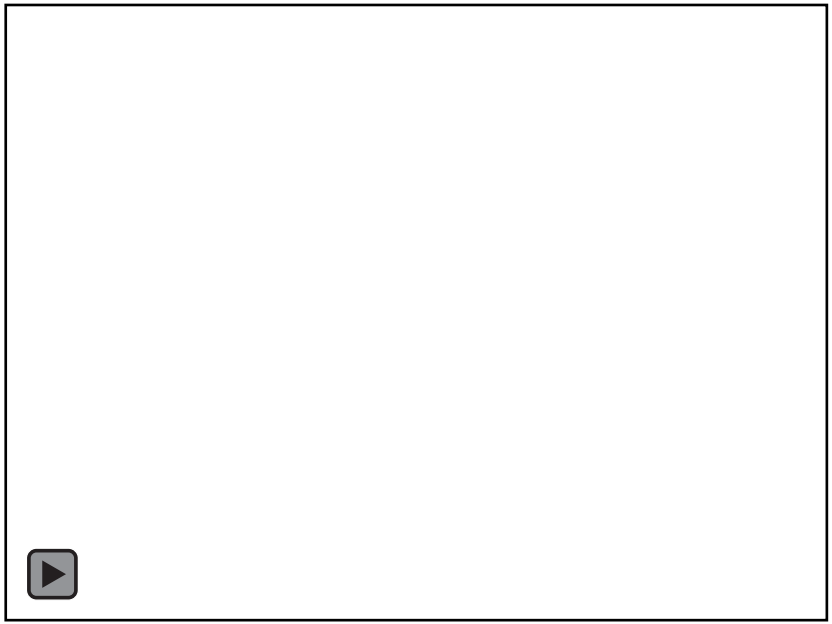
- Semi-Reclined position (only if allowed)
- Inch test

Source: NHTSA Image Library

Tether


Tether
Tether Anchor
Tether Connector
CAR SEAT PARTS ILLUSTRATED

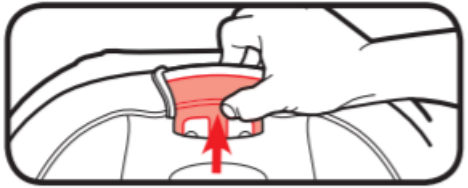
With and Without Tether



Source: University of Michigan Transportation Research Institute

Harnessing

- Harness height
- Adjusting harnesses
- Tightening/loosening harnesses
- Harness snugness (Pinch Test)

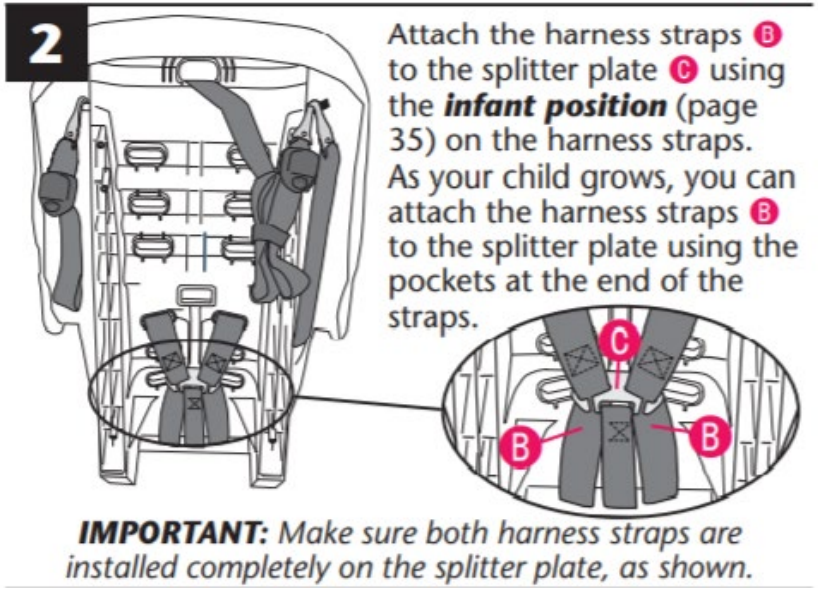


Raise/lower headrest



Source: NHTSA Image Library

Rethread Harness



Source: Evenflo Titan Manual



a. *Pull Harness Out of Shell From the Front*



b. *Rethread Harness Into Correct Harness Location*

Make sure harness does not twist.



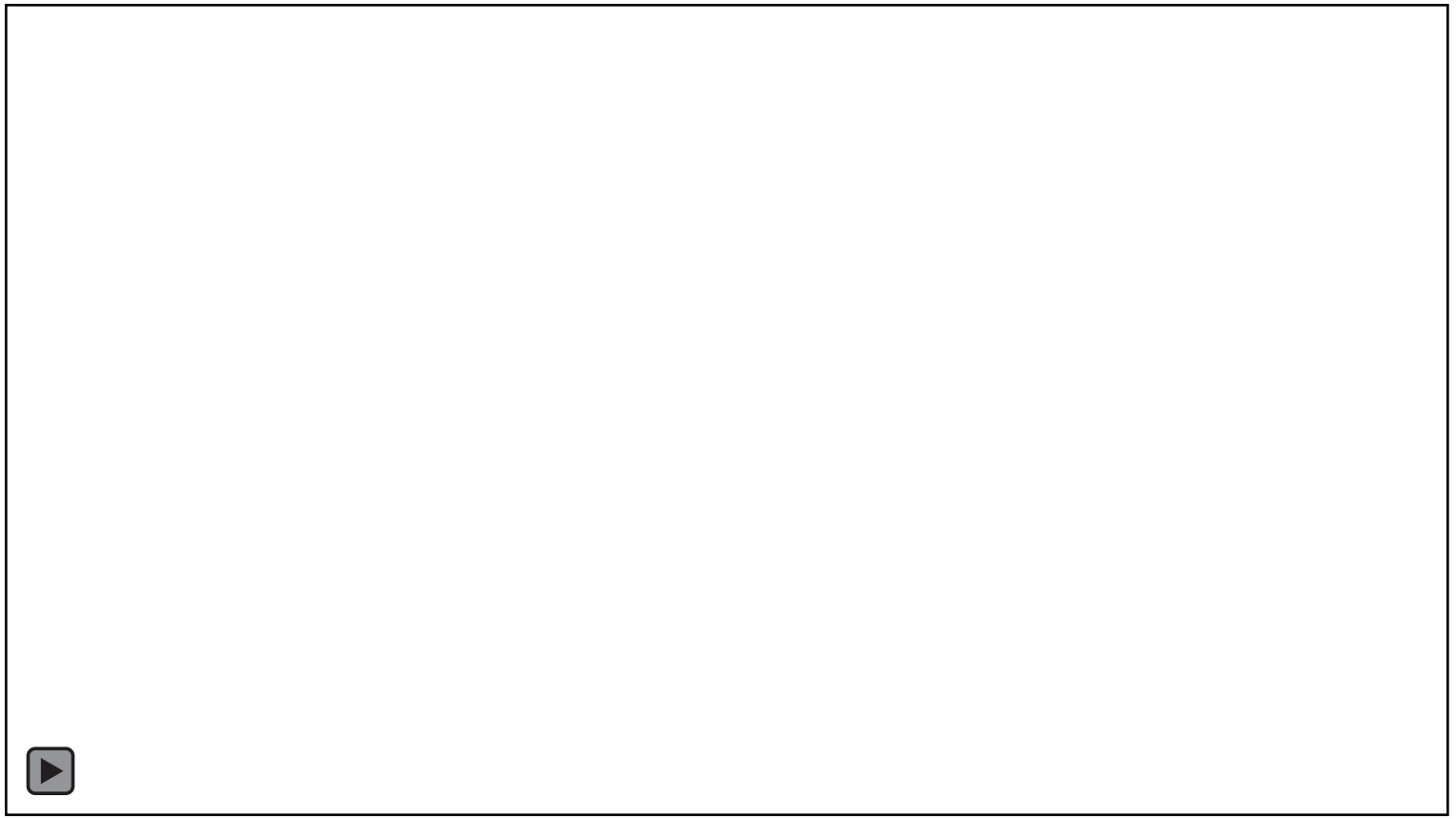
c. *Attach Harness Straps to Splitter Plate*

From the back of the child restraint, fit the harness strap loops onto the splitter plate.

Make sure sewn ends of the harness strap loops face towards you. DO NOT twist harness straps or harness tightening strap and make sure the harness straps are COMPLETELY ON the splitter plate.

Source: Cosco


Forward-facing
Harnesses At or Above



How to Transport Your Child Booster Seats







No products in this presentation are product endorsement by SKW, used for educational examples only

Booster Seat and Seat Belt Safety Facts

- Booster seat use reduces the risk for serious injury by 45% for children aged 4-8, when compared with seat belt use alone.

  Source: Pediatrics 2009

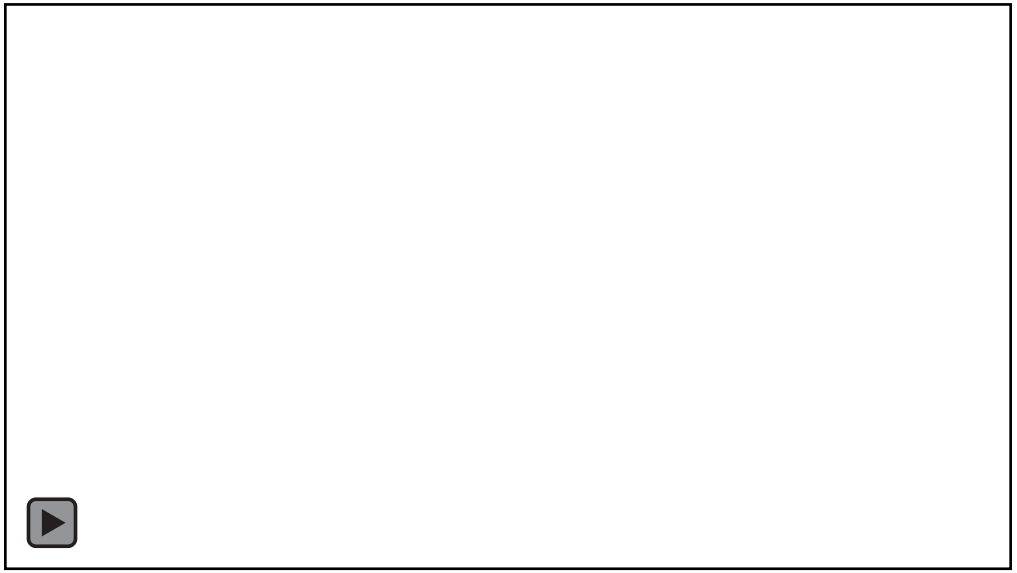
- For older children and adults, seat belt use reduces the risk for death and serious injury by approximately half.

  Source: National Highway Traffic Safety Administration. Traffic safety facts, 2017 data



Source: NHTSA Image Library

Why Boosters Are Safer

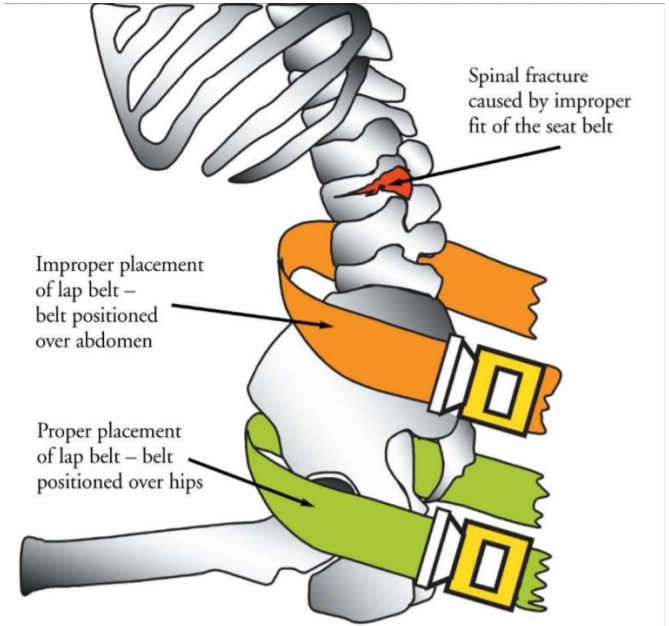


Source: Center for Injury Research and Prevention at Children's Hospital of Philadelphia

Seat Belt Syndrome



Source: National CPS Certification Curriculum



Booster Seats

2 Stage
High Back and Backless



Source: Britax

Combination Seat



Source: Evenflo

LABELS



Weight and Height

Harnessing

Installation

Source: National CPS Certification Curriculum

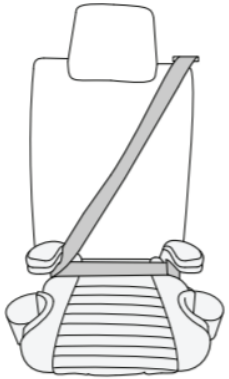
Direction and Location

- Booster seats are installed forward-facing
- All children under age 13 should be in the back
- Booster seats REQUIRE a lap-and-shoulder belt



Source: NHTSA Image Library

Locate Seat Belt Guide









Proper Use

- Locate your seat belt guide
- Always use a lap-and-shoulder belt
- Lap belt should lie on the top of the legs or low on the hips, not across the stomach.
- Shoulder belt should fit across the chest and on the shoulder, not across the face or neck.
- May need to use a vehicle seat belt adjuster to achieve proper shoulder belt fit on a backless booster.



Safety Belt Fit Test

When can my child move from a booster seat to a seat belt?

- Your child's knees bend at the edge of the seat when her back and bottom are against the vehicle seat back. Her feet should touch the floor for comfort and stability.
- The vehicle lap belt fits snugly across the hips or upper thighs.
- The shoulder belt fits across the shoulder and chest, NOT across the face or neck.
- If your child does NOT meet all three conditions, your child should continue to use a car seat or booster seat. You can do the test again when your child grows a little.

Additional Information

- Buckle your booster when not in use
- Secure your booster with lower anchors to secure the seat to the vehicle

Resources

- Safe Kids Worldwide
- National Child Passenger Safety Board
- NHTSA
- Car Seat Manufacturers
- Vehicle manufacturers

Local Resources for Car Seat Checks

- Bakersfield Police Department
  (661) 326-3053

- Bakersfield Pregnancy Center
  (661) 326-1907

- California Highway Patrol Offices
  (661) 396-6600

- Kern County Public Health
  https://kernpublichealth.com/car-seat-safety/

SAFE KIDS WORLDWIDE™

safekids.org

Thank you.