

Lower Anchors & Tethers for Children

OBJECTIVES

- Describe lower anchors and tether anchors.
- Recognize lower anchor and tether anchor symbols and locations.
- Explain lower anchor and tether anchor best practices to caregivers.

DESCRIPTION OF LATCH SYSTEM

LATCH stands for Lower Anchors and Tethers for Children.

- LATCH is an alternative system to install car seats in vehicles using two lower anchors and one tether. For rear-facing car seats, only the two lower anchors are used unless the manufacturer allows rear-facing tethering.
- If you are referring to the lower anchors and tether it is a LATCH system.
- In LATCH use, the car seat must have a set of lower anchor connectors that attach to the vehicle's set of lower anchors and tether anchors.
- Each LATCH set in the vehicle is made up of two lower anchor bars and one tether anchor. If there are lower anchors in a vehicle seating position, there is usually a tether anchor for that seating position. Use a tether when forward-facing.



LATCH symbol

- LATCH attaches the car seat or booster seat to the vehicle through anchor points installed in the vehicle and connectors on the seat. Most vehicles made after 2002 have at least two complete LATCH systems (lower and tether anchors) and one additional tether anchor.
- Only seating positions that have a standard LATCH system, as defined in the vehicle owner's manual, should be used for lower anchor installation unless otherwise specified in both the manufacturer and car seat or booster seat owner's manuals. Many caregivers install their seat with lower connectors in the rear-center seating position when the vehicle manufacturer may not allow it.
- Some vehicles offer standard LATCH in the center, and some vehicle and child restraints manufacturers allow LATCH in the center, even if it is not a standard LATCH position. Remember, two lower connectors should never be attached to one lower anchor.
- **NEVER** install a car seat or booster seat using lower anchors and the seat belt at the same time unless specifically allowed by both the seat and vehicle manufacturers. It should be one system or the other because that is how the car seat was crash tested.
- **ALWAYS** look in the owner's manual to determine if a vehicle has lower anchors and tether anchors, and to see which seating positions have a LATCH system or only a tether anchor.

A seating position with a tether anchor only and no lower anchors is NOT called LATCH. That seating position would use the tether and seat belt to secure a car seat.

Tethers

A **tether connector** holds the back of the car seat and some booster seats against the vehicle seat to reduce the amount of forward and side movement.

A tether connector can reduce the distance that the child's head moves forward in a crash by 4 to 6 inches. This lessens the risk of head injuries in a crash.

- Tether anchors have upper weight limits that vary by vehicle manufacturer.
- Tethers may be used with lower anchors or seat belts.
- Contact the vehicle manufacturer customer service help line to determine the actual tether and lower anchor weight limits approved for that particular vehicle.
- Tether anchors have been required in three vehicle positions since September 2000, but many vehicle manufacturers provided them or marked the tether anchor location in older vehicles so that tether anchors could be installed at a later date.
- Tether anchors are sometimes listed under straps in owner's manuals and are frequently the last item discussed under the car seat or booster seat section.
- Tether anchors may look very different in pickup trucks. Refer to the vehicle owner's manual to ensure correct use.
- Encourage caregivers to use tether connectors for forward-facing children whenever possible. Also, encourage caregivers with young children and older vehicles to have tether anchors installed in their vehicles.
- Car seats can be secured using lower anchors and tether or a seat belt and tether.



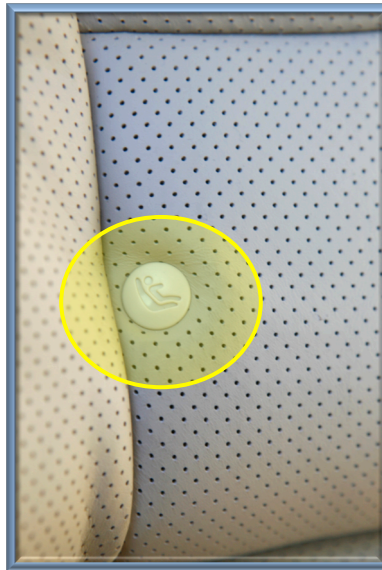
Car seat held in place by tether

Exceptions

- Convertibles, sports cars, school buses, and some heavy trucks (over 10,000 pounds gross vehicle weight/GVW) are not required to have tether anchors, though some of these vehicles are still required to have lower anchors.
- When a vehicle has lower anchors, but there is no tether anchor, consult the car seat owner's manual to see if installing the seat with only lower anchors and no tether is allowed. If the owner's manual says you must use both lower and upper connectors, or if you do not know or cannot find out, then use the seat belt to secure the seat.
- An approved integrated (or built-in) car seat may take the place of one of the LATCH positions NHTSA requires.

LATCH Symbols and Locations

If a lower anchor or tether anchor is hidden behind fabric or a cover in the vehicle, a symbol near the anchor location will identify its position.



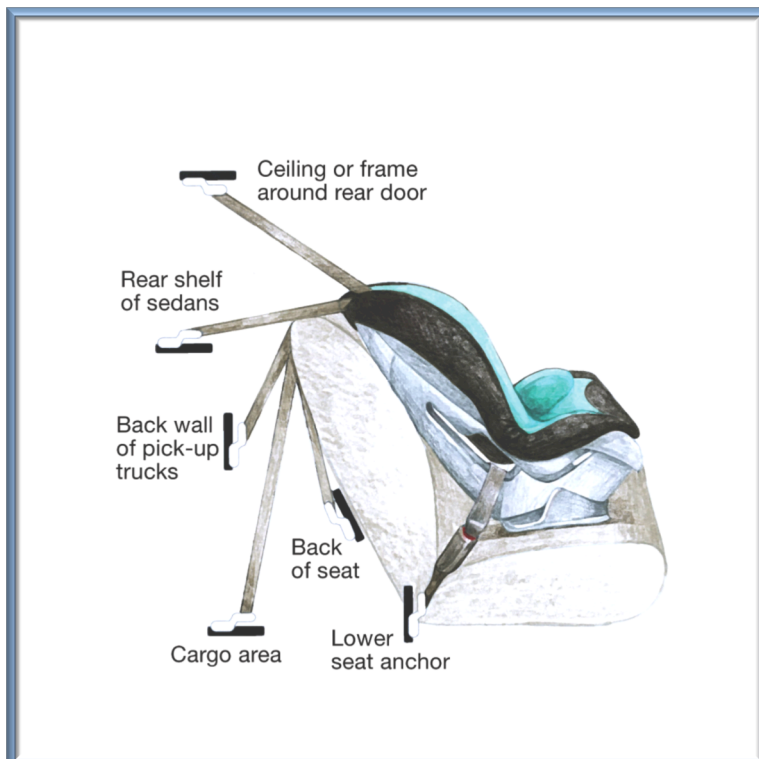
LATCH universal symbol

TIPS FOR DISCUSSING LATCH SYSTEMS

- Anchor weight limits are not always stated in the vehicle or car seat owner's manual. If the manufacturer offers no weight limit, do not use lower anchors or the tether anchor if child + car seat weight is more than 65 pounds.
- If a caregiver wants to use the center rear seating position that does not have a LATCH system, they should use the seat belt to secure the car seat. They should also use the tether anchor if there is one for the middle seat.
- Whenever possible, have the caregiver locate the tether anchor and lower anchors in their vehicle.
- Use the current LATCH Manual (Safe Ride News) for information on installing LATCH.

Tether anchor possible locations include:

- Ceiling above rear seating positions
- Rear window shelf
- Back of vehicle seat
- Floor of rear cargo area
- Under vehicle seat
- Under a flap or door



Some vehicle tether anchor locations for forward-facing installations

LATCH Symbols and Locations (continued)



Routing tether straps in vehicles with head restraints



Tether on lower back



Tether anchor on seat back accessed through rear cargo area

Lower anchor positions can be visible or hidden:

- Labels, buttons, or tags identify lower anchor locations when they are hidden.
- Most vehicles cannot be retrofitted with lower anchors.



Visible anchor position



Hidden anchor position



Practice Activity: Locate Lower Anchors and Tether Anchors in Owner's Manuals/Vehicles

- Using the owner's manual section provided, find the information listed below about LATCH in the owner's manual.
- Locate lower anchor and tether information in two different vehicle owner's manuals.

| Vehicle 1: _____ | Vehicle 2: _____ |
|---------------------------------|---------------------------------|
| LATCH symbol found? Y N | Lower anchor symbol found? Y N |
| LATCH locations found? Y N | LATCH locations found? Y N |
| Tether anchor found? Y N | Tether anchor found? Y N |
| Tether anchor symbol found? Y N | Tether anchor symbol found? Y N |
| Page # _____ | Page# _____ |

Now locate LATCH in three different vehicles. Remember, some LATCH parts are easy to use and find while others are not so obvious.

- Inspect three vehicles to see some differences in the locations of LATCH systems and the words/symbols to describe them. Keep in mind that the LATCH system has two lower anchors and one tether anchor.
- Document the number of seat belts, number of LATCH seating positions, and tether anchors in the three vehicles on the table below.
- At the end of this activity, an instructor will install a car seat using LATCH.

| LATCH | Vehicle 1 | Vehicle 2 | Vehicle 3 |
|------------------------------|-----------|-----------|-----------|
| # of seat belts in back seat | | | |
| # of LATCH seating positions | | | |
| # of tether anchors | | | |

COMMON LOWER ANCHOR AND TETHER ANCHOR MISUSE

Any product can be misused. Misuse rates increase when instructions are not read.

- Your job is to help people use their car seat or booster seat according to the manufacturer instructions and encourage caregivers to use the vehicle owner’s manual whenever they transport children.
- The only way to know for certain that lower anchors and tether anchors are being used correctly is to use the vehicle and car seat owner’s manuals for guidance.
- Both lower anchors and tether anchors have weight limits set by the vehicle and car seat/booster seat manufacturers. To determine the limits of these systems, you must refer to both the car seat and vehicle owner’s manual.
- If there are different weight limits listed, the lower limit must be used. If there is no stated weight limit for the vehicle lower anchors or tether anchors, and the car seat lower anchors or tether anchors, you **MUST** assume that they may be used until the total weight of the child and car seat equals 65 pounds.

PREVENTING TETHER ERRORS

- Head restraints may make it hard to use tethers the right way.
- Some head restraints cannot be removed to allow for a tether strap installation.
- Tether straps generally go straight back from the seat to the tether anchor and go under adjustable head restraints or over or around non-adjustable head restraints. Check the vehicle owner’s manual for model specific information.

Common Lower Anchor and Tether Anchor Errors

| Lower Anchors | Tether Anchors |
|---|--|
| <ul style="list-style-type: none"> • Lower anchor connectors not firmly attached to bars • Using a non-approved vehicle seating position • Using seat belt and lower connectors at the same time (unless allowed by manufacturer) • Securing 2 car seats or booster seats on 1 anchor bar | <ul style="list-style-type: none"> • Not using tether when available • Not attaching tether via the vehicle manufacturer instructions (routing the strap incorrectly) • Connecting to the wrong tether anchor • Tether strap too loose • Tether strap used over the vehicle manufacturer weight limit |



Explain Best Practices About LATCH to Caregivers

There are key questions to answer related to LATCH. Explain and demonstrate best practices to caregivers.

Key Questions

- Does the caregiver’s vehicle have LATCH?
- Which seating positions allow the use of LATCH?
- What is the importance of tethers?
- Where can you find lower anchors in a vehicle?
- What might indicate lower anchors in the vehicle?
- Which is safe and preferable to use for a car seat – lower anchor connectors or the seat belt?

Best Practices

Answer the following questions to prepare for conversations you will have with caregivers to educate them about LATCH.

1. What should you tell caregivers regarding where to find all the tether anchors and lower anchors in their car, van, SUV, or truck?

2. What can you tell a caregiver who has a 1998 Chrysler 4-door Sebring with no tether anchor and who wants to have one installed?

3. The vehicle has a lower anchor and tether anchor weight limit of 40 pounds. The car seat is rated to 65 pounds. At what weight limit would you need to install the seat using a seat belt instead of lower connectors?
