

Installing Your Child's Car Seat Tightly

LATCH, Tethers, and Seat Belts Explained

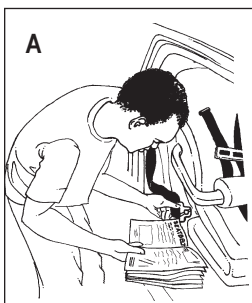
Tight Installation = Better Protection

It is very important that your child's car safety seat (car seat) is tightly secured in the car with the seat belt or LATCH system. If the LATCH straps or seat belt do not stay tight or the car seat slides around on the vehicle seat, your child could be seriously injured in a crash.

Always read the instructions that come with the car seat (A). **Also** read the section on seat belts and car seats in your car owner's manual.

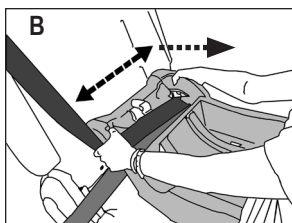
To check for a tight fit, hold the car seat where the LATCH straps or seat belt go through the car seat (B). Pull forward and from side to side. If the car seat moves more than one inch, it is not tightly secured.

For help with installing your car seat, contact a local child passenger safety technician (see Resources).



A. Always read the car and car seat instructions.

B. To check tightness, hold the car seat at the belt path, pull side to side and forward. It should not move more than 1 inch.



The LATCH System

LATCH (Lower Anchors and Tethers for Children) is another way to install car seats in cars. It can make installation easier, if both car and car seat have the LATCH parts.

The parts of LATCH:

1. On car seats: Lower LATCH straps are on most car seats made after Sept. 1, 2002. Forward-facing car seats also have a top tether strap. A few car seats have rigid lower LATCH connectors.

Some car seat makers sell add-on LATCH lower straps and/or tether strap kits that can be used for older car seats.

2. In cars: All 2004 and newer cars, and many 2001–03 cars, come with tether and lower LATCH anchors. Tether anchors have been required in most cars since 2000. Symbols will help you find most hidden anchors (C and D, below). There will be at least two sets of LATCH lower anchors and three tether anchors. Some seat positions will not have LATCH. Check owner's manual for locations.

Using the LATCH lower anchors is not always safer than using a seat belt to install a car seat. The key is proper installation. Sometimes lower anchors will provide a better fit. Sometimes the seat belt may work better. Always choose the method that works best for you to get the car seat in tightly.

C. Symbol for a tether anchor



D. Symbol for a lower anchor



Back Seat is Safest

The back seat is the safest place for children under 13 with or without a front air bag.

NEVER put a rear-facing infant or toddler in the front seat of a car with a front air bag that has not been turned off. Infants must always ride in the back seat facing the rear of the car.

Basics of Using LATCH (E)

ALWAYS read and follow the instructions for the car seat and the car.

Always tighten LATCH straps after connecting them to the anchors in the car. In most cases, tighten the lower LATCH straps before tightening the tether strap.

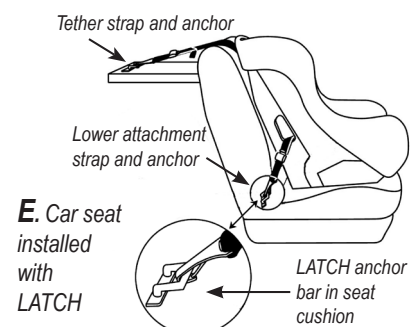
Use the seat belt if the lower LATCH straps do not hold the car seat tightly. Do not use both the seat belt and lower LATCH straps unless the car AND the car seat instructions say it is okay.

Do NOT use the lower LATCH anchors in the center seat position to install a car seat UNLESS the car AND the car seat instructions allow it. Use the seat belt in the center instead.

Never attach two car seats to one LATCH or tether anchor.

Use add-on LATCH straps only for the specific car seat models listed by the strap maker.

Make sure children do not play with the shoulder belts (see page 4).



ALWAYS Use a Tether!

A top tether strap (F) adds extra protection to a forward-facing car seat. In a severe crash, it holds the top of the car seat back (G and H). This helps prevent serious head and neck injuries. The tether must be connected to a tether anchor in the car. This may be the only way to install a car seat tightly if belts are anchored too far forward.

Forward-facing car seats made since September 1999 have tether straps attached. Some makers have tether kits for their older forward-facing seats. Do not try to use a tether on a car seat not made to use one.

Cars made since model year 2000 have tether anchors already in place. Read the car owner's manual and look for the symbol (page 1, C).

For an older car, a tether anchor kit may be available. Check the car owner's manual for more information, or contact a car dealer.

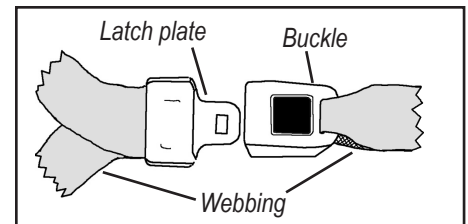
ALWAYS follow the car seat instructions and the car owner's manual when using a tether.

Installing with a Seat Belt

- 1) Put the seat belt through or around the correct belt path (I) on the car seat. Use the path shown on the car seat labels and instructions. (If the car seat is a convertible, the kind that can be used rear facing and forward facing, there are two different belt paths.)
- 2) The lap part of the belt must be tight. To make it tight, push the car seat down into the vehicle seat cushion while you tighten the belt. Use your full weight if needed (I).
- 3) Know how to make the lap part of the belt stay locked around the car seat. (Follow this sheet, car seat instructions, and car owner's manual.)
- 4) Follow the instructions for attaching the tether strap for forward-facing car seats (page 4).
- 5) To check for a tight fit, hold the car seat close to the seat belt and pull forward and from side to side (page 1, B). If the car seat moves more than one inch or the belt stays loose (J), the car seat is not tightly secured.

Parts of a Seat Belt

- Anchor:** the hardware that attaches the lap and shoulder belts to the car; usually attached to the floor, side wall, or vehicle seat.
- Buckle:** the part of the seat belt system that the latchplate goes into.
- Lap belt:** The strap that goes over the hips.
- Lap-only belt:** A lap belt with no shoulder belt attached.
- Latch plate:** the flat metal "tongue" that clicks into the buckle.
- Retractor:** the device that pulls in slack on a seat belt. It usually is not visible. Many lap-only belts do not have a retractor and must be tightened by pulling on the strap.
- Shoulder belt:** The strap that goes over one shoulder. Usually the lap and shoulder belts are connected (a lap-shoulder belt).
- Webbing:** the heavy fabric part of the seat belt.



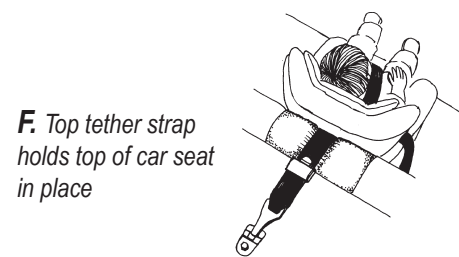
All seat belts have these basic parts. The anchors and retractor may not be visible.

Can I use an automatic seat belt to install a car seat?

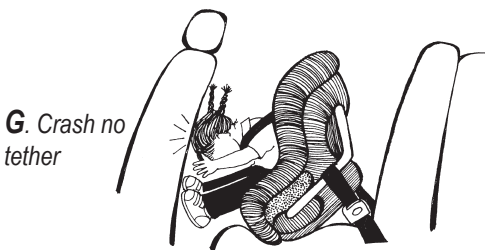
Automatic belts are attached to the front door in older cars. Some have a motor that moves them along a track (K).

These can cause problems when installing car seats. **The best way to avoid problems is to buckle up children in the back seat.**

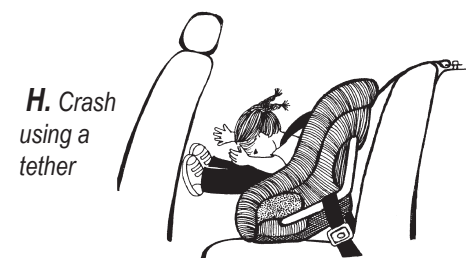
If you have no option and must put a child's car seat in front with this kind of belt, be sure to read the car owner's manual carefully. A special part may be needed. See SBS USA (page 4, Resources) for a list of special parts.



F. Top tether strap holds top of car seat in place

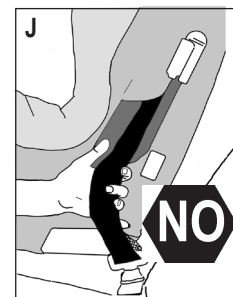
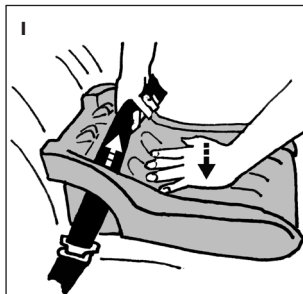


G. Crash no tether



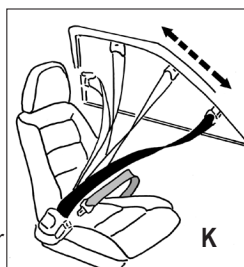
H. Crash using a tether

I. Put seat belt through the belt path. Tighten while pushing down on the car seat.



J. Belt too loose

K. Automatic shoulder belt on track above door



Seat Belt Retractors

Emergency locking retractor

This kind locks only during a crash or sudden stop. It can be on a lap-shoulder belt or a lap-only belt. It allows the belt to be pulled out during normal driving. If your car seat does not have a built-in lock-off (see car seat instructions), you will need a locking clip (page 4, T) to secure a car seat.

Automatic locking retractor

This retractor locks whenever you stop pulling it out. To check for an automatic locking retractor, pull the lap belt part way out and stop. When you pull on it again, you will find it is locked. This kind of belt will hold the car seat tightly. After buckling the belt, push all the slack back into the retractor.

Switchable retractor

This kind is made to hold car seats tightly. It is an emergency locking retractor that can be switched to an automatic locking retractor. It may be on either a lap belt or a lap-shoulder belt. The belt usually has a label on it telling you how it works (L). You can also read about it in the car owner's manual.

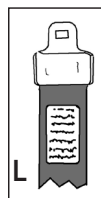
In most cases, you switch the retractor by pulling the belt slowly all the way out. You will hear a click. When the belt rolls back in, you will hear a click-click-click. That means it will lock and stay tight around a car seat.

Shoulder belts with this type of retractor should be kept out of reach of children (see page 4).

Check your owner's manual

The car manual usually has details about using the seat belt to install a child safety seat.

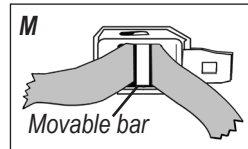
L. Label on safety belt



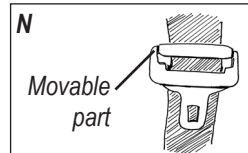
Latch plates in Your Car

Seat belts with locking latch plates

Locking latch plates (M & N) usually work well with car seats. They are found on lap-only belts in most center rear seats. In many cars, the lap-shoulder belts will also have them. A movable bar or other moving part keeps the belt snug after it is tightened.



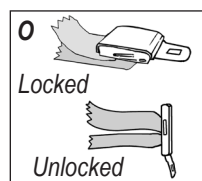
M. Locking latch plate with movable bar (back side)



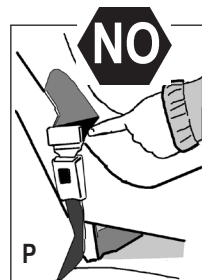
N. Locking latch plate with movable part (front side)

To tighten this kind of latch plate, pull on the free end of the lap-only belt, or pull up on the shoulder part of the lap-shoulder belt.

This kind of latch plate does not stay tight if it is in the unlocked position (O). Check to see if the buckle rests on the edge of the belt path or frame of the car seat (P). In this position, the latch plate will not hold the belt tightly. To fix, first tighten the belt, then unbuckle it, turn the latch plate one-half or one full turn, and buckle it (Q) again. This may keep it tightly locked. If that does not keep it tight, you can twist the buckle end up to three times to shorten it.

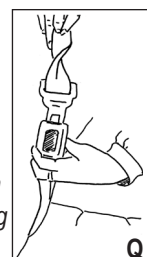


O. Locking latch plate in locked position and unlocked position



P. Locking latch plate in unlocked position

Q. One twist in belt with locking latchplate



Some locking latch plates (N) may loosen slowly over time. A locking clip (page 4, T) may be needed to keep them tight.

Lap-shoulder belt with a free-sliding latch plate

Many lap-shoulder belts have a latch plate that allows the belt webbing to slide through even when the belt is buckled (R). This kind of seat belt will have a retractor that pulls in slack.

First check to see if the belt has a switchable retractor.

If it does not have a switchable retractor, you will need a locking clip (page 4, T) to lock the belt around a car seat. Some belts are labeled to tell you the locking clip is needed (L).

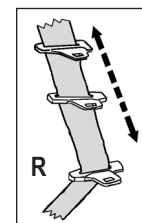
Sewn-on latch plate

This latch plate is permanently stitched to the belt webbing (S). It can be on a lap-only belt or a lap-shoulder belt. This type of seat belt cannot be adjusted at this point. Check to see if the belt is attached to a switchable retractor.

If this is not possible, it is best to use another seating position in the car. It may be necessary to use a special heavy-duty clip to shorten the lap part of the belt (see page 4).

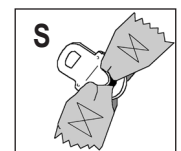
Switchable latch plate

This type normally acts as a sliding latch plate but can be switched to lock on the belt webbing by sliding a button or turning a dial to the "child" position.



R. Sliding latch plate on lap-shoulder belt

S. safety belt with webbing sewn to latch plate



How to use a locking clip on a lap-shoulder belt

A metal locking clip (T) is used to keep a seat belt tight. It is **only** used on a lap-shoulder belt with a sliding latch plate (page 3, R) if the belt does **not** have a switchable retractor (page 3) and the car seat does not have a built-in lock-off (see car seat instructions).

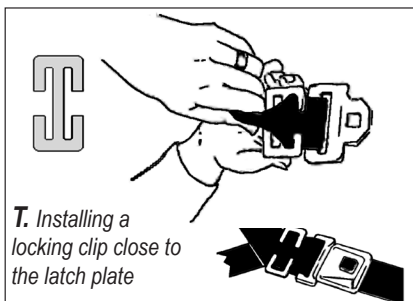
A locking clip comes with most new car seats. If you do not have one, you can buy one from a car seat company and some stores.

Some car seat models have “lock-offs” built in. Lock-offs take the place of a regular locking clip (see the car seat instructions).

Using a locking clip

1. Put the belt through the correct belt path on the car seat and buckle it. Pull on the shoulder belt to tighten the lap part.
2. Hold the two parts of the webbing together at the latch plate and unbuckle the belt.
3. Put both pieces of webbing through the locking clip together, close to the latch plate (T).
4. Buckle the belt again, and make sure the car seat is installed tightly. If not, start again, and take up a little more slack.
5. Remember to remove the locking clip when the belt is not holding a car seat.

The regular locking clip that comes with car seats must NEVER be used on a lap-only seat belt.



How do I use a lap belt with retractors that do not lock?

Many cars made before 1996 have seat belts with emergency locking retractors (page 3) on the lap belt. Most of these have sewn-on latch plates (page 3,S). If this kind of belt does not have a switchable retractor (page 3), the only way to tighten it is with a special belt-shortening clip.

This special clip, looks just like a regular locking clip but is made from extra-strong metal. Some versions are a little bigger, about three inches long.

WARNING: You should **never** use a regular locking clip to shorten a belt. Doing so would put your child in serious danger in a crash. The regular clip could bend and release the belt, leading to possible serious injury.

You can **only** get belt-shortening clips from Ford, GM, Nissan, or Toyota. Your car owner’s manual may explain how to use it. If the manual does not have instructions, order the belt-shortening clip from Toyota.

If you have questions about how to use belt-shortening clips, contact a local child passenger safety technician (see Resources).

Part numbers for belt-shortening clips are:

- Ford: F03Z-5461249
- General Motors: 94844571
- Nissan: H8010-89970
- Toyota: 73119-22010 (has instructions)

Can I use one of those special seat belt tightening products?

Use of seat belt tightening products is **NOT** recommended by car makers and most car seat makers. Using them may void your warranty on your car or car seat. Tighten belts by following the car and car seat instructions.

Some makers of these products say they have crash tested them. There is no safety agency that has a crash test for these types of products.

My car has scooped out seat cushions. How can I install my child’s car seat?

Some vehicle seats have hollows and humps that prevent the base of the car seat from resting flat on the cushion. Use a position with a flat cushion if possible, or find a car seat with a base that fits better in your car.

Why do loose objects and car booster seats need to be secured?

In a crash, anything loose in the car can fly around and hurt people in the car. Sometimes serious injuries occur from even very small objects hitting a person in the head. It is very important to keep loose objects in the trunk or secure them in the cargo area. When a child’s car booster seat is not being used, the seat belt should still be put on it and buckled.

WARNING: Keep unused seat belts away from children

A child could be seriously injured if a shoulder belt wrapped around his or her neck and got locked. Teach children not to play with seat belts. Keep unused seat belts away from them. One way to do this is to buckle the belt before installing the car seat with LATCH. For unused belts next to a child or when a child is in a booster, you could lock the retractor after buckling the seat belt (see page 3).

Resources

- NHTSA: 888-327-4236, 800-424-9153 (tty), www.nhtsa.gov
- List of child passenger safety technicians, inspection stations: 866-732-8243, www.seatcheck.org
- SBS USA - Parent information; list of special belts, buckles, parts, Technical Encyclopedia: www.carseat.org
- Individual help: 800-745-7233
- Partners for Child Passenger Safety (The Children’s Hospital of Philadelphia): www.chop.edu/carseat