LATCH 2019:
Vehicle Brandwide Information in the LATCH Manual Bullets

Presented by Denise Donaldson,
Owner, Safe Ride News Publications
Objectives

• Understand what LM vehicle “bullets” are, where they are, and why they exist.
• Learn where to find bullets, by topic.
• Explore specific LM bullets and related information.
• Raise awareness of other available resources.
Savvy CPSTs Use These Resources!

- CR instructions and labels
- Vehicle owner’s manual
- Manufacturer websites, including posted videos
Use only the current edition!

Does your kit look like this? YIKES!

The 2019 edition is thoroughly revised and includes many updates to older editions.
Sections of the LATCH Manual

Glossary

Chapter 1 — Introduction
Chapters 2/3 — Lower anchorage
Chapters 4/5 — Tether anchorage
Chapter 6 — Retrofitting TAs (w/ supplement)
Chapter 7 — Rear-facing tethering
Chapter 8 — Details of standards

App. A: Car Seats and LATCH
App. B: Vehicles and LATCH
App. C: LATCH in Center Positions
What is a vehicle “bullet?”

- In Appendix B.
- Information bulleted at the beginning of each vehicle brand entry.
- Applies to all models of a brand (with any exceptions noted).
Why are bullets needed?

- **Pragmatic reasons:**
  - Simply too wordy if repeated!
  - Think of them as an extension of a vehicle model’s notes section.

- **Informational reasons:**
  - Topics not found in OMs
  - Topics in new but not older OMs
Anchor weight limit bullets

- Always in the top left-hand corner.
- Three anchor types:
  - Lower
  - Factory TA
  - Retrofit TA
- Often, not in owner’s manual
Remember...

When checking the vehicle anchor weight limit bullet:

- Maximum child weight—LATCH system (CRs without a weight-limit label):
  - MY14 and newer: 65 pounds (29.5 kg) minus the CR weight. See Appendix A for the weight of the CR being installed. If the child-plus-CR weight is greater than 65 lbs. (29.5 kg), use a seat belt (and tether, if appropriate) to install the CR.
  - MY13 and older: Follow weight given by the CR manufacturer.
- Maximum child weight—factory-installed or retrofitted TA when used with the seat belt: Follow weight given by the CR manufacturer.

Also check CR instructions

- Labels
- CR maker’s Appendix A entry
Table B1: Vehicle Anchor Weight Limits

<table>
<thead>
<tr>
<th>Vehicle brand</th>
<th>Child weight limit (in lbs) for using LATCH SYSTEM</th>
<th>Child weight limit for TETHER ANCHORS (in lbs)</th>
<th>Factory-installed TA used with seat belt installation</th>
<th>Retrofit TA used with seat belt installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acura</td>
<td>Follow CR instructions. (Child must exceed a combined weight of 65 pounds.)</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
</tr>
<tr>
<td>Alfa Romeo</td>
<td>Not stated assume 45 min. CR weight.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Buick</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Cadillac</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Chevrolet</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Chrysler</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
</tr>
<tr>
<td>Coda</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Datsun</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Dodge</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
</tr>
<tr>
<td>Eagle</td>
<td>N/A, no vehicle listed.</td>
<td>N/A, no vehicle listed.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ferrari</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Fiat</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ford</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
</tr>
<tr>
<td>Genesis</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Geo</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>GeoX</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
</tr>
<tr>
<td>Honda</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Hummer</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Jeep</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
<td>65 lbs min. CR weight if needed is listed in Table B1.</td>
</tr>
<tr>
<td>Kia</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
<td>65 min. CR weight.</td>
</tr>
<tr>
<td>Land Rover</td>
<td>Follow CR instructions.</td>
<td>Follow CR instructions.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Lincoln</td>
<td>65 min. CR weight.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
<td>Follow CR instructions if needed is listed in Table B1.</td>
</tr>
</tbody>
</table>

*Changes from prior LATCH Manuals and/or owner's manuals are retroactive, unless noted. Be sure to also review the bulleted notes at the beginning of each brand entry.

Cheat sheet for subtracting from 65 pounds
Other LM resources: CR weights

- Appendix A:

Find these at the end of CR brand entries for manufacturers that have FF-only, convertible, all-in-one, and combination CRs

<table>
<thead>
<tr>
<th>Graco—CR Weights (in pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use this product weight when needed to calculate the child weight limit for LATCH. Remember: For CRs made since February 2014, simply follow the LA attachment limit provided by labels and manuals.</td>
</tr>
<tr>
<td>4Ever, 4Ever DLX .......................... 22.80</td>
</tr>
<tr>
<td>4Ever DLX Platinum ...................... 23.00</td>
</tr>
<tr>
<td>4Ever Extend2Fit ......................... 23.80</td>
</tr>
<tr>
<td>4Ever Extend2Fit Platinum .......... 26.54</td>
</tr>
<tr>
<td>4Ever TrueShield ......................... 23.83</td>
</tr>
<tr>
<td>4Ever w/ Safety Surround .......... 22.75</td>
</tr>
<tr>
<td>Argos 65 and 70 ......................... 20.50</td>
</tr>
<tr>
<td>Argos 70 Elite ......................... 20.61</td>
</tr>
<tr>
<td>Argos 80 Elite ......................... 22.31</td>
</tr>
<tr>
<td>Atlas 65 ................................... 13.00</td>
</tr>
<tr>
<td>Classic Ride ............................. 13.13</td>
</tr>
<tr>
<td>ComfortSport ............................. 12.00</td>
</tr>
<tr>
<td>Contender 65 ............................ 15.20</td>
</tr>
<tr>
<td>Extend2Fit ................................ 18.50</td>
</tr>
<tr>
<td>Extend2Fit 3-in-1 ....................... 20.50</td>
</tr>
<tr>
<td>Extend2Fit Platinum .................... 19.82</td>
</tr>
<tr>
<td>Extend2Fit TrueShield ................. 21.56</td>
</tr>
<tr>
<td>Extend2Fit w/ Safety Surround ...... 19.95</td>
</tr>
<tr>
<td>Grow4Me ................................... 22.75</td>
</tr>
<tr>
<td>Head Wise (65 and 70) .................. 20.30</td>
</tr>
<tr>
<td>Milestone .................................. 19.30</td>
</tr>
<tr>
<td>My Ride 65 .................................. 15.80</td>
</tr>
<tr>
<td>My Ride 65 w/ Safety Surround ...... 15.80</td>
</tr>
<tr>
<td>My Ride 70 .................................. 15.80</td>
</tr>
<tr>
<td>Nautilus, Nautilus 65 LX .............. 20.00</td>
</tr>
<tr>
<td>Nautilus 80 Elite ....................... 22.00</td>
</tr>
<tr>
<td>Nautilus SnugLock ...................... 22.07</td>
</tr>
<tr>
<td>Nautilus SnugLock DLX ................ 22.77</td>
</tr>
<tr>
<td>Nautilus SnugLock LX .................. 22.55</td>
</tr>
<tr>
<td>Nautilus w/ Safety Surround, Nautilus 65 DLX 20.60</td>
</tr>
<tr>
<td>Ready Ride 50 .................. 13.13</td>
</tr>
<tr>
<td>Recline N' Ride ....................... 28.60</td>
</tr>
<tr>
<td>Sequel 65 ................................... 17.20</td>
</tr>
<tr>
<td>Sequence 65 ............................... 17.20</td>
</tr>
<tr>
<td>Sequence 65 Platinum .................. 18.32</td>
</tr>
<tr>
<td>Size4Me 65, MySize 65, Fit4Me 65 ..... 19.00</td>
</tr>
<tr>
<td>Size4Me 70, MySize 70 ................. 19.00</td>
</tr>
<tr>
<td>SlimFit 3-in-1 ......................... 19.00</td>
</tr>
<tr>
<td>SlimFit Platinum ...................... 19.47</td>
</tr>
<tr>
<td>Smart Seat .................. 33.00</td>
</tr>
<tr>
<td>Transitions .................. 14.50</td>
</tr>
<tr>
<td>Transitions 65 ......................... 15.20</td>
</tr>
<tr>
<td>Wayz ...................................... 14.50</td>
</tr>
</tbody>
</table>
Chapter 3, on lower anchorage

Vehicle Manufacturers’ Report of Lower Anchor Weight Limits, as of February 2014

<table>
<thead>
<tr>
<th>Manufacturer Name</th>
<th>Lower Anchor Weight Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>160 lbs</td>
</tr>
<tr>
<td>Honda</td>
<td>150 lbs</td>
</tr>
<tr>
<td>Nissan</td>
<td>250 lbs</td>
</tr>
</tbody>
</table>

Chapter 5, on tether anchorage

Vehicle Manufacturers’ Report of Tether Anchor Weight Limits, as of February 2014

<table>
<thead>
<tr>
<th>Manufacturer Name</th>
<th>Tether Anchor Weight Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>40 lbs</td>
</tr>
<tr>
<td>Honda</td>
<td>35 lbs</td>
</tr>
<tr>
<td>Nissan</td>
<td>50 lbs</td>
</tr>
</tbody>
</table>

Other LM resources: Ch. 3 and 5

Pre-February 2014 CIRs
- Only a few CIRs made before the February 2014 deadline in particular had new models that were
- Not all had the child weight limit

Chapter 3, on lower anchorage

Vehicle manufacturers are required to offer a tether anchor for all lower anchors that meet the child weight limit (as defined by the NHTSA).

CIRs since February 2015
- Manufacturers must ensure that all tether anchors are listed in their CIRs.
- The CIRs must specify the tether anchor weight limit.
- The CIRs must list the tether anchorage location.
- The CIRs must specify the tether anchor use.

Chapter 5, on tether anchorage

Warning labels are required on all models that have a tether anchor.

Weight limits for tether anchors
- The manufacturer must specify a weight limit for the tether anchor.
- The weight limit must be based on the maximum weight of the child restraint system.
- The weight limit must be listed in the CIRs.

Ways to reduce loads on tether systems
- Use a pre-attached tether with a weight limit.
- Use a pre-attached tether with a weight limit.
- Use a pre-attached tether with a weight limit.
- Use a pre-attached tether with a weight limit.
Center borrowing bullet

- Always in the top center.
- May say NO
- May say YES for certain models (in the table below)
- May say YES after a certain model year

### Vehicles with one or two rows—Nissan

<table>
<thead>
<tr>
<th>MODEL</th>
<th>BODY</th>
<th>YEAR</th>
<th>SECOND ROW</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 SX</td>
<td>2-door</td>
<td>99-90</td>
<td>(2) TA points</td>
<td>(3) TA points are 8-mm weld nuts on rear filler panel; see “Tether anchor retrofit” bullet.</td>
</tr>
<tr>
<td>240SX (S13)</td>
<td>Fastback &amp; Coupe</td>
<td>99-98</td>
<td>(2) TA points</td>
<td>(2) TA points are 8-mm weld nuts on cargo floor; see “Tether anchor retrofit” bullet.</td>
</tr>
<tr>
<td>300ZX (Z32)</td>
<td>2+2 Coupe</td>
<td>91-90</td>
<td>(2) TA points</td>
<td>(2) TA points are 8-mm weld nuts on cargo floor; see “Tether anchor retrofit” bullet.</td>
</tr>
<tr>
<td></td>
<td>Sport Coupe</td>
<td>03-06</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- *
- Front Seat: TA on luggage area floor
- Passenger-Side Air Bag: No on-off switch; do NOT transport children 12 and under unless an air bag on-off switch is installed and set to “OFF”.
- Front Seat: TA on luggage area floor
- Passenger-Side Air Bag: No on-off switch. Rear-facing CRs MAY NOT be installed; forward-facing CRs may be installed using a seat belt and tether with seat moved to the...
Center “borrowing”

• “Why don’t all vehicle manufacturers allow center borrowing?”
Background – FMVSS 225

• Lower Anchor Design:
  • Located in the seat bight
  • Not stowable/removable
  • 6mm wire
  • Between 25 and 60mm in width
  • **Spaced 280mm (11”) apart**
  • At least 120mm rearward of SRP
    (SRP=Seating Reference Point)
  • Less than 70mm rearward of CRF (CR Fixture) “Z” point
  • Labeled with 13+mm diameter symbol *if not visible*
STRENGTH: Testing in FMVSS 225

- Strength tests for LAs and TAs use **devices** to simulate car seats:

SFAD II

Used with lower anchors only OR lower anchors + tether anchor

SFAD I

Used with vehicle seat belt + tether anchor

SFAD=Static Force Application Device
Borrowing, cont.

- By regulation, LAs must all be 6mm wire
- But, *attachment method* to the vehicle seat or floor as well as strength characteristics may vary from anchor to anchor
Remember...

When checking the center borrowing bullet:

- Center position installation using LAs with nonstandard spacing: MAY NOT borrow the inner LAs from standard outboard LATCH positions to install a CR in the center. Use the seat belt (and tether, if appropriate) instead.

If borrowing in center positions is allowed by VM...

Also check CR instructions

- Owner’s manual
- Appendix A
Other LM resources: Table C1

### Table C1: Using Center LAs With Nonstandard Spacing

<table>
<thead>
<tr>
<th>Vehicle make</th>
<th>Vehicle model (All years, unless MY noted)</th>
<th>Space between LAs (inches)</th>
<th>11 or more inches</th>
<th>11-22 inches</th>
<th>11-16 inches</th>
<th>11-16 inches</th>
<th>11 in.</th>
<th>Any CR brand not listed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acura</strong></td>
<td>ILX (MY14-17), TLX (MY15)</td>
<td>15.6, 15.4</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RLX (MY16-19)</td>
<td>16.3, 16.9</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Chrysler</strong></td>
<td>200 (MY11-16), PT Cruiser 4-door (MY10-11), Sebring 4-door (MY04)</td>
<td>15.4</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300 (MY11-17)</td>
<td>17.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pacifica (MY20-21)</td>
<td>19.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Dodge</strong></td>
<td>Journey (MY09-14), Caliber, PT Cruiser (MY04-06), Nitro</td>
<td>15.9, 15.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dart</td>
<td>17.3</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Ford</strong></td>
<td>Focus (MY14-15), Expedition</td>
<td>12.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>Taurus (MY08)</td>
<td>15.4</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Escape (MY15-16)</td>
<td>15.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus (all MY11+, all other)</td>
<td>17.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C-Max, Escape (MY13-19), Edge, Fusion</td>
<td>18.1</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explorer (MY13-19), Flex (second row), Police Interceptor Utility (MY12-19), Taurus (all MY13+, all other)</td>
<td>20.5</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Honda</strong></td>
<td>Civic (MY11-19), Civic Si (MY11-14), Civic Coupe (MY17-19)</td>
<td>22.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>CR-V (MY16-19)</td>
<td>16.5</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR-V (MY17-19), Fr (MY19)</td>
<td>15.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pilot (MY13-19), Passport (MY14-19)</td>
<td>15.1, 15.4</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Odyssey (3rd row, all)</td>
<td>16.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Jeep</strong></td>
<td>Compass, Liberty, Patriot</td>
<td>15.3, 16.2</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wrangler (MY13-17)</td>
<td>15.9, 16.1</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Cherokee, Jk, Nitro (MY11-12)</td>
<td>18.9</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wrangler Unlimited, Wrangler (J)</td>
<td>19.1</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Leaves</strong></td>
<td>156</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kia (MY11-14, all MY15+, all MY16+)</td>
<td>15.6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sorento, Soul, Optima, Rio, Rio5</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cerato (MY10-11)</td>
<td>18.6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Lincoln</strong></td>
<td>MKS, MKT, MKZ, Continental (MY14-17), MKC, MKS (MY14-19), MKZ (MY17-19)</td>
<td>19.1</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td><strong>Mazda</strong></td>
<td>CX-9 (MY13-14)</td>
<td>16.5</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CX-5 (MY11-13)</td>
<td>16.5</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mazda6 (MY11-17), Mazda3 (all MY14+)</td>
<td>16.1, 17.4</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mazda6 all MY13+, all MY12-13</td>
<td>16.2</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
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<tr>
<td><strong>Mercury</strong></td>
<td>Milan, Milan (MY14-17), Milan (MY14-17)</td>
<td>19.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
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<tr>
<td></td>
<td>Milan (MY14-17)</td>
<td>19.7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td><strong>Scion</strong></td>
<td>FR-S (MY13-19), FR-S, FR-S, FR-S, FR-S</td>
<td>22.0</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td><strong>Subaru</strong></td>
<td>Crosstrek (MY11-17)</td>
<td>14.2</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
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<tr>
<td><strong>Toyota</strong></td>
<td>Corolla, Prius, Highlander, Avalon, Highlander (MY19-21), Sienna (MY17-19), Camry (MY17-19)</td>
<td>15.6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Venza (MY10-12)</td>
<td>15.6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4Runner (MY16-19), Rav4 (MY16-19)</td>
<td>16.1</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Venza (MY10-12)</td>
<td>15.6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
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<tr>
<td><strong>Any vehicle not listed on page C-2 or C-3: NO</strong></td>
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</table>

**Notes:**
1. CR brands that say "YES" are now listed in Table C1 (cont.).
2. CR brands that say "NO" are not listed in Table C1 (cont.).
3. CR brands that say "NO" are not listed in Table C1 (cont.).

**Manufacturer footnotes:** (1) Source: Baby Jogger. (2) Infiniti (Jaguar, Land Rover) is now part of the Ford Motor Company.

**Manufacturer footnotes:** See prior page for important notes for Citroen, Baby Jogger, Bibo, Kidde, Mattress Manufacturing, and Diana.
**Tether anchor retrofit bullet**

- Always in the top right-hand corner.
- A redirect to Chapter 6

---

**Vehicles with one or two rows—Nissan**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>BODY</th>
<th>YEAR</th>
<th>CENTER</th>
<th>SECOND ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 SX</td>
<td>2-door</td>
<td>95-90</td>
<td>TA point</td>
<td>TA points</td>
</tr>
<tr>
<td>240SX (S13)</td>
<td>Fastback &amp; Coupe</td>
<td>89-98</td>
<td>N/A</td>
<td>(2) TA points</td>
</tr>
<tr>
<td>300ZX (232)</td>
<td>2+2 Coupe</td>
<td>91-90</td>
<td>N/A</td>
<td>(2) TA points</td>
</tr>
<tr>
<td>350Z</td>
<td>Sport Coupe</td>
<td>93-96</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- **Tether anchor retrofit:** Some pre-MY00 vehicles, including those listed with a TA point noted, may be retrofitted with TAs. See Chapter 6 for brand/model-specific details from Nissan, as well as general advice for retrofitting vehicles with TAs.
Remember...

When checking the retrofit bullet:

- **Tether anchor retrofit**: Some pre-MY00 vehicles, including those listed with a TA point noted, may be retrofitted with TAs. See Chapter 6 for brand-model-specific details from Nissan, as well as general advice for retrofitting vehicles with TAs.

See Chapter 6 supplement

**MITSUBISHI**

- **Retrofit TA kits**: Mitsubishi’s TA kit is called Fitting-Child restraint.
- Use part #937361-000 for: Mitsubishi 3000GT (MY 91–99)
  - Expo 6-passenger (MY 95)
  - Expo LRV 5-passenger (MY 92–94)
  - Galant (MY 89–93 and MY 94–98, center)
  - Mirage (MY 93–99)
  - Montero, 7-passenger (MY 97–99)
  - Montero Sport (MY 97–00)

- **Maximum child weight—retrofitted TAs when CR installed using a seat belt**: 65 pounds (29.5 kg) minus the CR weight. (See Appendix A for CR weights.)

- **Unavailable parts**: Parts for these models/MYs are out of stock and cannot be ordered:
  - *Diamante (pre-MY 98)*
  - Galant (MY 88–98)
  - Eclipse (MY 90–01)
  - Galant (MY 94–95, 01)
  - Minica (MY 99–00)
  - Precix (MY 92–94)
  - Sigma (MY 88–91)
  - Telica (MY 83–88)
  - Instead, use a generic kit, if possible. See next bullet.

- **Generic kit**: A generic TA kit (with an 8-mm bolt) from a CR manufacturer may be used. See the Tether Anchor Retrofit page at www.nhtsa.gov for additional guidance.

- **Diamante 4-dr., MY 92–96**: TA point concealed by brake light. See dealer for assistance.

**OLDSMOBILE**

- **TA retrofit program**: Since Oldsmobile is a former GM brand, owners may take advantage of GM’s free TA retrofit program. Refer dealers to service bulletin 99-09-40-0044, which can be found on page 72.

- **Retrofit parts and availability**: A GM dealer will provide and install one retrofit TA (called CR Top; Tether Hardware Package) for a forward-facing CR used in a rear seating position in most MY 97–02 vehicles. For availability of parts, contact a GM dealer.

- **Maximum child weight—retrofitted TA when CR installed using a seat belt**: 65 pounds (29.5 kg) minus the CR weight. (See Appendix A for CR weights.)

- **Canada**: Retrofit program not authorized in Canada.
Hang in there!

Next: Additional bullets that require comparison to CR-manufacturer instructions
Entanglement risk bullet

- Seat belt strangulation hazard.
- Included in LM because use of LATCH leaves an unused seat belt.
Remember...

When checking entanglement risk bullet:

- Shoulder belt entanglement: Nissan has not provided steps to reduce this risk.

Also check CR instructions

- Appendix A

---

HARMONY
2435 Crescent St, Montreal, Quebec, Canada H4H 2G3
U.S. or Canada 877-706-1665  www.harmonyinc.com

All Harmony CRs

- Carrier installations: Borrowing the lower LA bars of outboard LATCH positions is allowed if also allowed by the vehicle manufacturer and the bars are spaced at least 11 inches apart. Applies to CRs and boosters.
- Maximum child weight for LA attachment use:
  - **Defender** CRs made in March 2014 and after:
    - The LA attachment may be used to install the CR up to a child weight of 46 pounds. If the CR is used above the LA attachment level, both the seat belt and tether are required.
  - **Defender** CRs made before March 2014:
    - The LA attachment may be used to install the CR up to a child weight of 46 pounds or 25 kg, whichever is lower. If using the CR above that weight, install with a seat belt and tether. See vehicle owner's manual and/or Appendix B for vehicle anchor weight limits.
- HARMONY CRs do not apply to 986s.

Combination CRs

**Defender 360**
Use from 22 to 65 pounds and 27 to 57 inches with the harness; use from 30 to 100 pounds and 34 to 57 inches at 90%

**Optima** (Canada only)
Use from 10 to 65 pounds and 27 to 57 inches with the harness; use from 35 to 100 pounds and 34 to 57 inches at 90%

**LA Attachments**
- **Design:** Single LA strap with hook-on connectors and a push-button adjuster.
- **Seat belt and LA attachment:** Do not use the seat belt and LA attachment at the same time.
- **Storage:** Hook connectors to traps on the top edge of the CR frame.

**Tethers**
- Harmony strongly recommends tethering anyway the CR is used in harness mode.
- **Defender** CRs: The LA hanger (Defender 360) or the Optima (Optima) strap with push-button adjuster.
- **Maximum child weight for tether use:** Tether use is allowed at all agreed CR range weights.
- **Tether hook orientation:** May be hooked onto LA backboards (180-degree back) of necessary and allowed by vehicle manufacturer.
Vehicle manufacturers have statements on BPBs and LATCH.

One issue is that some LAs are not aligned with seat belts.

Others?
Remember...

When checking the LATCH With Boosters bullet:

- **Use of LATCH with belt-positioning boosters:** MAY attach a BPB to LAs and/or TA if doing so does not interfere with proper seat belt use and is allowed by the CR manufacturer.

If LATCH use is allowed with BPB by VM...

Also check CR instructions

- **Owner’s manual**

  - Do not use this booster seat if the tops of your child's ears are above the top of the booster seat's headrest.
  - Use only the vehicle's lap and shoulder belt system when restraining the child in this booster seat.
  - Do not use only the lap belt when using this seat as a booster seat.
  - The shoulder belt must always be adjusted snugly across the child's chest. NEVER place the shoulder belt under the child's arms.
  - Do not use the LATCH system when using as a booster seat. Secure lower anchor belt and tether strap to their storage locations. Failure to follow these warnings can result in serious injury or death.

- **Appendix A**

  **Belt-Positioning Boosters**

  - **BPB use with LATCH:** Do not use the LA attachment or tether on any Dorel CR used as a BPB.  
    **Exception:** Maxi-Cosi RodiFix has optional rigid LA connectors. Attach only to standard-width LATCH positions; do not attach connectors if doing so interferes with proper vehicle belt fit. Weight limits do not apply to booster seats. (Also, Cosco Grand Explorer shield BPB had LA strap for use with shield. This BPB is expired; do not use.)
Other LM resources: Table A2

- Page A-3
- Includes policies on LATCH-with-BPB use for all conventional brands that sell BPBs, by BPB type.
Tethering to a seat belt bullet

- Huh?????
- Pre-LATCH, a popular way to tether in some vehicles
  - Three-row
  - Vehicles with a back seat, but unsuitable to CR use.
- Occasionally useful today.
Remember...

When checking the Tethering to a Seat Belt bullet:

- Tethering CRs to a seat belt: MAY NOT use a seat belt from the row behind a CR as a TA. (However, see MY97–99 Quest notes for an exception.)

If doing so is by VM...

Also check CR instructions

- Appendix A

<table>
<thead>
<tr>
<th>Tethers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum child weight for tether use:</strong> When forward facing, Evenflo recommends tether use at all allowed CR usage weights.</td>
</tr>
<tr>
<td><strong>Tethering using a tether extender:</strong> If a tether is too short to reach the designated TA, or if the tether's adjuster is too large to fit through a router or between a vehicle head restraint's legs (posts), a tether extender may be added to improve compatibility. (See LATCH Parts, below, and Volvo/Tethering in the LATCH Gallery at <a href="http://www.saferidenews.com">www.saferidenews.com</a>.)</td>
</tr>
<tr>
<td><strong>Tether hook orientation:</strong> Tether connector hooks may be turned backwards (180-degree twist) to accommodate vehicle tether anchor location or space issues.</td>
</tr>
<tr>
<td><strong>Tethering rear facing:</strong> Not allowed.</td>
</tr>
</tbody>
</table>
Other Methods of Limiting Head Excursion

Securing the top of a forward-facing CR with a tether is the most common and effective method for limiting head excursion (a major cause of serious injury) in a crash. However, as described in the previous sections of this chapter, tethering is sometimes not possible, due to problems like CR/vehicle incompatibility, lack of TAs in the vehicle, and TAs with a maximum weight limit that is too low for the child. Finding a solution to these problems may take effort and resources, but it is worthwhile. First, see if it is feasible to:

- Change where the child sits in the vehicle.
- Use a different CR.
- Retrofit the vehicle with a TA.
- Use a different car.

Because some problems that prevent tethering in the typical manner cannot be easily solved, keep in mind the alternative methods for limiting head excursion discussed in the following sections.

Tethering a CR to a seat belt

In the years before LATCH, a tethering method that was employed in some vehicles was to hook the tether to a seat belt from the row directly behind the CR. This method is rarely recommended today, but can sometimes be a useful alternative for tethering.

When to consider using a seat belt for tethering

If the vehicle has TAs or can be retrofitted using an approved TA kit, attachment to either of these is preferable to tethering to a seat belt. However, in some situations, attachment to a seat belt is the only option for tethering. Such circumstances might include:

- When an older vehicle lacks TAs, cannot be retrofitted, and the vehicle instructions specify this method as the recommended means for tethering.
- When the child must ride in a particular vehicle position that lacks a TA, even if TAs are elsewhere in the vehicle.
- When the child weighs more than the TA weight limit.

A seat belt meets federal standards for adult restraint, so it offers an anchorage option that’s stronger than a TA. However, using a seat belt this way eliminates a seating position, which is only possible when there is a row behind the CR, and must be approved by both manufacturers.

Where to consider using a seat belt for tethering

- In the second row of a three-row vehicle.
- In the front seat of any car if there is no alternative to this less-than-ideal seating position.
- On school buses when the child must ride in a CR and a regular TA is not present.

Check manufacturer policies on using a seat belt to anchor a tether

After LATCH was retired, most manufacturers that had formerly allowed tethering to a seat belt gradually reversed their policy. Many CR manufacturers have also revoked such permission. So scenarios in which both the CR and a vehicle manufacturer allow this technique are now rare. See appendices A and B for manufacturer-specific information.

Most CR manufacturers (25 of 31 that sell CRs with tethers) reported that they allow tethers to be attached to a seat belt in the row behind a CR, but usually only if this method is stated in vehicle instructions and regular tethering is not an option. Manufacturers of CRs for children with special needs are likely to allow this technique as a way to continue tethering use for children who weigh more than a vehicle’s TA limit. Other CR makers allow this method, as well, given the circumstances described above.

Vehicle manufacturers limit this option much more than CR manufacturers do. In the latest survey, only seven brands answered that they allow this practice—usually only in select models (see bullets in Appendix B). Nissan allows this technique only in its MY 97–99 Quest minivan. The Ford brands allow this practice in more models, but all are from model year 2000 and earlier (and usually for CRs in the front seat of pickup trucks). Chrysler and Dodge extend permission to use this tethering method to all three-row models as necessary and allowed by the CR manufacturers.

Attaching a tether to a buckled seat belt

Some vehicle manuals say to clip the tether hook onto the webbing of a buckled lap or lap/shoulder belt (illustration, previous page). Roll the seat belt webbing to make it easier to clip the tether hook around it. The hook-retainer spring should close fully around the webbing. Some vehicle manuals that allow this method don’t offer detailed instructions. Follow these guidelines for seat belts with:

- A retractable retractor: Buckle the belt and switch it to locked mode. Hook the tether to the belt webbing and tighten the tether. (Don’t let so much webbing go back into the retractor that the belt returns to unlocked mode. Check that the belt is locked.)
- An ELR and free-sliding latchplate: Buckle the seat belt, then pull all the webbing out of the emergency locking retractor (vehicle instructions may specify using the lap or shoulder portion). Hook the tether to the belt that’s pulled out, and tighten the tether. If it is not possible to tighten the tether because the fully extended seat belt is too close to the CR, do not use this method.
- An ELR and locking latchplate: Buckle the seat belt, then tighten the lap portion of the belt as much as possible by pulling up on the shoulder belt. Hook the tether to the lap part of the belt, and tighten the tether. Make sure the lap part of the webbing stays locked.

Attaching a tether to a seat belt latchplate

Some vehicle owner’s manuals suggest using a lap belt latchplate as a tether anchor (illustration, below). First, shorten the webbing of the lap belt as much as possible by either pulling the strap of a belt that has a locking latchplate or by activating an automatic locking retractor. If the lap belt has an emergency locking retractor, pull the belt out to its full length instead.

Then, clip the tether hook through the latchplate hole and tighten the tether. The tether hook may be difficult to get through the latchplate hole, depending on the hook size and seat belt design. The hook-retainer spring must close fully around the latchplate.

A CR installed in the second row of a van, tethered to a third-row latchplate.
You still with me?

Next: Bullets that are relevant to the vehicle-side only
Head restraint bullet

- Also check the vehicle model notes.
- Can be helpful to know what can be done with HR for tethering purposes.
- Also, interference with top of FF CR.

---

Also, interference with top of FF CR.

---

Head restraints (HRs): Nonadjustable HRs: Route a 2-point (single-strap) tether over the center of the HR and a 3-point (V-shaped) tether around either side. Adjustable HRs: HR may be moved upward (and, if removable, removed and securely stowed) to accommodate a CR. Replace a removed HR when the CR is uninstalled. Some models have specific HR information in the notes that follow.

---

<table>
<thead>
<tr>
<th>Vehicles with one or two rows—Nissan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL</strong></td>
</tr>
<tr>
<td>200 SX</td>
</tr>
<tr>
<td>240SX/S (S13)</td>
</tr>
<tr>
<td>300ZX (232)</td>
</tr>
<tr>
<td>350Z</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

---

Front Seat: TA on luggage area floor
Passenger-Side Air Bag: No air bag or on-off switch; do not install
Forward-facing CRs may not be installed; rear-facing CRs MAY NOT be installed; CR must be installed using a seat belt and tether with seat moved to the...
Some cargo covers affect tether use.

Becoming more common.
Seating position limitations bullet

- Misc. seating position information
- Sometimes a general warning.
- Sometimes specific
- Can clarify and/or modify vehicle seating position warnings.
AAB suppression system bullet

- How air bag sensor type is affected by pressure on or under seatback.
- Driver- and/or passenger-side
- See air bag section of OM for more information.
Coming down the home stretch, gang!

Next: Manufacturer/brand-specific bullets
Nissan’s seatback angle bullet

- Bullets that allow manufacturer to clarify OM information.
Nissan’s after a crash bullet

- Bullets that allow manufacturer to clarify OM information.
Nissan’s Snug Kids bullet

- Snug Kids™ safety seat fit guide: Nissan lists CR models that fit well in each of its current models at www.nissansusa.com/snugkids. In Canada, go to www.nissan.ca/en/owners/my-nissan/child-safety. If the harness weight limit for the CR mode is 40 pounds or less, only LATCH installation is checked in vehicle positions that have LATCH.
Free LATCH resources at www.saferidenews.com

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Contact Denise Donaldson:

- Email questions/comments to info@saferidenews.com
- Call 800-403-1424