

The School Bus Safety Handbook

Choosing and Using Child Safety Restraint Systems and Wheelchairs



Dedication: To Pupil Transporters	vi
Part I: Planning for Students Who Need CSRS	I
How This Handbook Will Serve Intended Readers	2
■ Ch. 1. Preparing for the Occupant Protection Needs of All Students.....	3
Assess the Student Population	3
Provide Adequate Staffing, Utilize Local Resources.....	4
Train Staff in Child Passenger Safety.....	5
Participate in IEP, IFSP, and 504 Plan Development	6
■ Ch. 2. Equipping School Buses for CSRS	7
Federal Standards and CSRS, Compartmentalization.....	7
Types of School Transportation Vehicles.....	8
Maximizing Compatibility With CSRS	10
Considerations for CSRS: Seating Space.....	11
Considerations for CSRS: Seat Frame Strength.....	12
Considerations for CSRS: Anchor Systems.....	13
Lap-Shoulder Belts.....	13
Lap-Only Belts	14
LATCH.....	15
Built-In CSRS.....	16
Table 2-1. Built-In CSRS.....	16
Cam Wraps	17
Considerations for Using Special Needs CSRS.....	18
A CSRS Specifications Checklist for New Buses	19
Existing Seating Not Meeting Your CSRS Needs?.....	20
Table 2-2. Troubleshooting School Bus Seating Incompatibility	20
Table 2-3. Bus Seating Options/Features Available as of July 2018.....	22
■ Ch. 3. Selecting CSRS for Use on Buses	23
Four Steps of CSRS Selection.....	23
Step 1: Determine the Child's Stage	24
Stage Identification Flow Chart	25
Step 2: Identify CSRS Types Suitable for the Child	27
Table 3-1. CHILD Considerations, by CSRS Type	29
Table 3-2. SCHOOL BUS Considerations, by CSRS Type.....	29
Step 3: Identify CSRS Types Suitable for the Bus <i>and</i> Child.....	30
Table 3-3. CSRS for Use on Any Type of Bus Seating	34
Table 3-4. CSRS That Require Reinforced Seating	35
Table 3-5. Summary of CSRS and Anchor Types	36
Step 4: Evaluating and Selecting CSRS Models	37
Table 3-6. Special Needs CSRS Models as of July 2018	40
Inventory Management.....	42
Table 3-7. Management of CSRS Inventory.....	42

Part II: Proper Use of CSRS on School Buses	43
Training Suggestions for Practicing CSRS Skills	44
■ Ch. 4. Installing CSRS on School Buses	45
Four Steps of CSRS Installation	46
Step 1: Location: Select Where to Place the CSRS.....	47
Step 2: Direction: Face the CSRS Rearward or Forward.....	48
Step 3: Angle: Set the CRSS to Be Reclined or Upright.....	49
Step 4: Anchoring: Secure the CSRS to the Bus, General Process for Installation.....	50
Using Lap-Only Belts to Anchor CSRS	51
Using Lap-Shoulder Belts to Anchor CSRS	52
Using LATCH to Anchor CSRS	53
Using Tethers to Anchor CSRS	54
Using Cam Wraps to Anchor CSRS	55
Table 4-1. Considerations for Seating Occupants Behind Rows With CSRS	55
General Process for Anchoring a Cam Wrap	56
■ Ch. 5. Using and Maintaining CSRS	59
Three Aspects of Proper CSRS Use.....	60
Aspect 1: Conduct Pretrip Checks	61
Aspect 2: Proper Harness and Seat Belt Use, General Process for Using a Five-Point Harness..	62
Using the Harness of Conventional and Special Needs CSRS	63
Securement in Built-In, School-Bus-Only, and Belt-Conversion Safety Harness CSRS	65
General Process for Using a Safety Vest.....	66
Adjusting a Safety Vest to Fit a Child.....	67
Wearing Seat Belts on School Buses.....	68
Aspect 3: CSRS Maintenance and Care.....	70
Maintaining an Evacuation Plan That Considers CSRS	72
Part III: Wheelchairs on School Buses	75
Transporting Students Who Ride in Wheelchairs: A Summary of Best Practices	76
■ Ch. 6. Equipping Buses for Wheelchairs	77
Three Aspects of Preparation for Transporting Occupants in Wheelchairs	77
Aspect 1: Equipping School Buses for Wheelchairs	78
Aspect 2: Wheelchair Securement and Occupant Restraint Systems: WTORS	79
Securement for the Wheelchair: Tiedowns	80
Protection for the Passenger: Occupant Restraint Systems	81
Aspect 3: Training and Accessories for Wheelchair Securement	82
■ Ch. 7. Transporting Students Who Ride in Wheelchairs	83
Follow Documentation, Transfer Students to CSRS.....	83
Voluntary Standards for Transit-Ready Wheelchairs	84
Four Steps to Properly Transport Students in Wheelchairs	85
Step 1: Perform Pretrip Wheelchair Checks	86
Step 2: Load the Wheelchair and Occupant Using the Lift.....	87
Step 3: Secure the Wheelchair and Equipment	88
Step 4: Protect the Wheelchair-Seated Occupant.....	90
Appendices: Resources and References	93
Appendix A. Occupant Protection Terms and Concepts for School Buses	93
Appendix B. Basic Child Safety Restraint System Types	97
Appendix C. Resources	99
Appendix D. Manufacturer Contacts	101
Index	103