

---

# CENTER FOR AUTO SAFETY

2001 S STREET, NW SUITE 410 WASHINGTON, DC 20009 202-328-7700

December 15, 1989

Jerry R. Curry, Administrator  
National Highway Traffic Safety  
Administration (NHTSA)  
400 7th Street SW  
Washington DC 20590

## PETITION FOR DEFECT INVESTIGATION AND RECALL

Dear Mr. Curry:

The Center for Auto Safety (CAS) and Consumer Action (CA) of San Francisco hereby petition the National Highway Traffic Safety Administration to conduct a defect investigation into and order a recall of all One Step child safety seats (models 401 and 402) made by Evenflo/Questor.

In a search of all child restraint cases reported to the Association of Trial Lawyers of America, the Institute for Injury Reduction and the Center for Auto Safety, the Center has identified fifteen automobile crashes where children in One Step seats have suffered severely debilitating or fatal injuries. No other child seat has an injury and fatality rate nearly as high as the One Step. The next highest seat -- another Evenflo/Questor product, the "Dyn-O-Mite" -- had six reported cases.

Injuries in at least thirteen of these cases resulted from inadequate crashworthiness or failure of the latch mechanism used to hold the movable shield in place. In some cases, the shell of the seat fractured. In others, the infants suffered injuries inflicted by components of the seat itself. In the most glaring defect, the latch holding the protective shield does not catch and releases in crashes with the infant being propelled about the interior of the car.

The One Step child seat has failed three FMVSS 213 compliance tests since 1983:

In test 213-CAL-82001, NHTSA found (1) the contactable surfaces of forward shield have radius of curvature less than 2 inches, which may aggravate the level of injury from concentration of crash forces on the child's body; and (2) the pretest buckle release force is less than the 12 pound minimum, allowing a child to open the release inadvertently.

In test 213-CAL-83007, NHTSA found (1) the harness webbing failed minimum [1.5 inch] width requirement, which could aggravate level of injury from concentration of crash forces

on the child's body; (2) underlying structure of forward shield has contactable surfaces with radius of curvature less than 2 inches; and (3) pre-test buckle release force less than 12 pounds minimum.

In test 213-CAL-85016, NHTSA found contactable surfaces of forward shield have radii of curvature less than 2 inches.

Each of these failures should have resulted in a Certification Information Request (CIR) by the agency, but NHTSA opened only one compliance investigation -- CIR 2617, in response to test 82001. Thus, the agency clearly violated its own rules and regulations which require an investigation to be opened when any vehicle or item of equipment fails a compliance test.

During the one investigation (CIR 2617) conducted on a One Step seat, tests revealed that the latches could open with as little as six pounds of force, clearly demonstrating their inherent danger. Although NHTSA began the investigation in June 1983 the case dragged on for five years before OVSC closed it on June 13, 1988 without ordering a recall for this non-compliance.

During this investigation and despite the two subsequent compliance failures, NHTSA never required Evenflo to produce all reports of deaths and injuries in accidents involving One Step seats.<sup>1</sup> If NHTSA had required production of such accident reports prior to the closing of CIR 2617 in June 1988, then NHTSA would have uncovered the terrible trail of unprecedented death and injury in the Evenflo One Step child seat which began at least as early as 1983. For NHTSA to never compel production of accident reports is a tragic dereliction of duty that led to more deaths and injuries.

### False Latch

The Institute for Injury Reduction (IIR) has conducted crash tests at 7-8 MPH of new Evenflo One Step child seats purchased in November 1989. In this low-speed impact testing, the shield repeatedly flew up and the test dummy flew out. IIR found that the protective shield failed because a false latch condition prevented the buckle from engaging properly. Attachment C is a copy of the IIR test report. A videotape is available from IIR.

---

<sup>1</sup>On June 17, 1983, NHTSA merely asked for "the number and substance of any complaints or reports . . . relating to deficiencies or failures in the subject child restraints" rather than accident reports and lawsuits. (Attachment A.) Questor/Evenflo responded by referencing earlier buckle complaints and selectively provided two letters on accidents wherein the One Step performed satisfactorily without providing accident reports where the One Step performed poorly. (Attachment B.) NHTSA made no subsequent requests for complaints and none for accidents or lawsuits.

Evenflo itself knew of the One Step's false latch failure but failed to take action to recall the seats or notify owners. For example, Evenflo produced its own demonstration film in 1987 which showed the false latch position and the amount of force (6 to 38 pounds) needed to reveal the false latch. In addition, Evenflo modified its instructions in 1987 to include a warning in boldface advising owners of One Step seats to "Check that buckle has engaged by vigorously pulling up on the shield." However, some owners following those instructions cannot exert enough force on the shield to reveal the false latch condition.

Every day, the parents who use the four million One Step seats sold by Evenflo/Questor place their children at risk. When parents attempt to secure the protective shield, they can inadvertently place it in the false latch position. If a crash occurs, the shield can pop open causing their precious child to be flung about like a rag doll. The following cases demonstrate that the One Step's false latching in use is fact, not theory.

Chris Brasher of Henderson TX was 9-months old when he suffered brain damage that left him partially paralyzed when the buckle on his One Step seat sprung open in a November 8, 1986, crash because it was in the false latch position. His attorney, Paul Colley of Tyler TX, 214-597-6436, won a \$250,000 judgment against Evenflo after the company produced the internal film showing the false latch position.

Jennifer Hudgens of Little Rock AR was two years old when she and her father were involved in a serious car accident. On May 17, 1986 an oncoming car hydroplaned into theirs. Because the buckle on her One Step safety seat was in a "false latch" position, it sprung open. Jennifer was partially ejected from the seat and struck her head, fracturing her skull. She suffered permanent brain damage. Jennifer is represented by attorney Winslow Drummond of Little Rock, 501-376-3021.

The Center is aware of four other Evenflo One Step cases that appear to involve an injury caused by false latching. In addition, the cases represent the inadequate crashworthiness of the One Step in crashes. The cases are outlined below.

Attorney George Morris of Charleston SC, 803-722-3218, represents a family whose 3 year, 9-month old son was able to push up the shield and get out of seat. The child fell out of the car and was struck by another vehicle on June 13, 1988. He so fractured his right femur as to require a body cast and will need surgery to correct potential height problem.

Attorney Courtney Hughes of Carbondale IL, 618-457-6985, represents the Shelton family whose 11-month old son, Joseph, was injured in a crash April 16, 1989. The properly secured boy was ejected from seat and from car. He sustained a fractured skull and brain contusion and has needed surgery on several occasions.

He has some paralysis and a "clawing" condition of right hand.

Attorney Nick Nichols of Houston TX, 713-222-7211, represents a 6-week-old infant who died after being ejected from a One Step seat and thrown into the car's windshield during a frontal crash. The One Step seat in this case had been correctly adjusted to the rear-facing position.

Attorney Eugene Fahrenkrog of St. Louis MO, 314-421-5111, represents a properly-secured, less than one-month-old boy in a One Step seat who was ejected from the seat into the vehicle's roof during a crash into a ditch on May 1, 1987. This child sustained a fractured skull and brain damage.

### Inadequate Crashworthiness

FMVSS 213 specifies that child seats must have protective features such as gently contoured parts (as measured by their radii of curvature) to protect against injury in crashes. Although NHTSA's compliance test found that the One Step had inadequate crash protection as demonstrated by its failing radius of curvature for the protective shield, NHTSA failed to order a recall. Evenflo pressured NHTSA to drop its investigation on the grounds that in the real world, children would not hit the shield or be injured in crashes. Yet these same real world cases demonstrate a shocking lack of crashworthiness in One Step seats.

On February 27, 1988, 14 month old Colt Friberg was properly strapped into a One Step seat when the car in which he was riding was involved in a head on collision in Texas County MO. Upon impact the seat, properly facing rearward, slid forward bending the seat frame and allowing Colt's head to strike the front tray. The baby died on March 7, 1988. Attachment B is a copy of the accident report in this case with photos of the bent frame of the One Step that failed to protect little Colt. Jeffrey Bates of Springfield MO, 417-887-4300, represents the Friberg family.

Carrie Billings, age 11 months, sustained a fractured skull and severe brain damage during a crash on August 30, 1983 while she was riding in a One Step seat. Her attorney is Wesley Blakeslee of Westminster MD, 301-848-6655.

14-month-old Sarah Vogt was properly restrained in a One Step seat and riding in her mother's Chevrolet Celebrity on December 7, 1987 when the car struck a pickup truck that made a U-turn in front of them. During the ensuing crash, the One Step's pass-through in the plastic shell for the left safety harness failed, causing Sarah's body to be thrown abruptly forward and backward while remaining in car seat. Sarah tore the tendons of her neck and spine requiring spinal fusion surgery and the use of a "halo brace" immobilizing device to prevent further damage. She has since recovered from paralysis of her right side, but will continue to have problems on her left side, specifically, gait problems, continued paralysis, and no use of

her left arm. Her neck vertebrae are no longer attached to the rest of her body. Attorneys Les Mendelsohn and Chuck Goldman of San Antonio TX, 512-222-2271 represent the Vogt family.

Attorney Bill Wagner of Tampa FL, 813-223-7421, represents a child who was injured in a side impact when a One Step seat tipped over during a crash on August 31, 1987. The mother had relatively minor injuries. The child struck her head and suffered a fractured skull, requiring surgery; she received permanent brain damage.

Attorney Cam Cope of Bryan TX, 409-775-2020, represents an 18-month old boy who hit the back or arm section of a One Step seat during an accident. He received closed-head injuries. The seat was bought during 1985 or 1986.

Attorney John Murray of Sandusky OH, 419-627-9700, represents two children, a 21-month old child seated in One Step and a 6-month old child in Dyn-O-Mite seat. During a side impact crash on the right side of a Chevrolet Chevette on June 22, 1984, both children received severe head injuries, which were fatal to the child in the One Step seat.

Attorney Alan Cantor of Boston MA, 617-742-1900, represents a family whose vehicle struck a temporary guardrail along a highway on June 24, 1984. During the crash, one of the car's doors was torn off. Possibility that child was ejected from One Step seat.

### Conclusion

The Center for Auto Safety and Consumer Action petition the National Highway Traffic Safety Administration, under Section 124 of the National Traffic and Motor Vehicle Safety Act of 1966, to open a safety defect investigation and order the recall of all four million Evenflo/Questor One-Step child safety seats for poor crashworthiness and a defective safety latch and low buckle release force which have contributed to the known deaths of 3 infants and severe injury to 10 others.

Respectfully submitted,



Russell J. Shew  
for Petitioners:

Center for Auto Safety  
Consumer Action

JUN 17 1983

CERTIFIED MAIL

NEF-32RJa  
CIR 2617

Mr. Joseph Mitchell  
President  
Questor Juvenile Furniture Company  
1801 Commerce Drive  
Piqua, OH 45356

Dear Mr. Mitchell:

The National Highway Traffic Safety Administration (NHTSA) is in possession of test data which indicate that child restraint system model Kantwet 401 One Step, manufactured by the Questor Juvenile Furniture Company, is not in conformance with the radius of curvature (S5.2.2.1(c)) requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 213, "Child Restraint Systems." Enclosed find one copy of NHTSA Compliance Test Report No. 213-CAL-82-001.

Pursuant to sections 108(a)(1)(B) and 112(a)(1)(A) of the National Traffic and Motor Vehicle Safety Act of 1966 (the Act) (15 USC 1397(a)(1)(B) and 15 USC 1401(a)(1)(A)), the Questor Juvenile Furniture Company is required to provide the NHTSA with the following information:

1. All test data and reports, including both passing and failing results, and other information to support your certification that the subject child restraint system complies with the applicable requirements of FMVSS No. 213 mentioned above.
2. A description of the quality control procedures and process control procedures, including details of any sample testing plan, followed to assure continuing compliance of the subject child restraint system with the requirements of FMVSS No. 213.
3. Copies of actual data and reports, including both passing and failing results, generated from the above-mentioned quality control procedures.
4. The number and substance of any complaints or reports from distributors, retailers, owners, or other sources relating to deficiencies or failures in the subject child restraint system.

5. A description of any notification or recall campaign regarding the subject child restraint system that has been initiated to date, or is presently contemplated.
6. The number of subject child restraint systems, along with other models you consider substantially similar, manufactured on or after January 1, 1981.

It is our practice to urge notification and remedy in noncompliance cases. Section 151 of the Act (copy enclosed) requires that if a manufacturer determines in good faith that his product fails to comply with any applicable FMVSS, he must issue to the owners a notification of safety warnings required by section 153, and remedy the noncompliance in accordance with section 154. If you determine that a noncompliance exists with respect to the subject child restraint system, you are required to issue the notification to the purchasers required by the Act. A copy of Title 49, Code of Federal Regulations, Part 577, "Defect and Noncompliance Notification," is enclosed to provide direction for the preparation of an acceptable defect notification letter. The failure on the part of the manufacturer to make such a determination may oblige the NHTSA to commence proceedings under section 152 of the Act in order that a formal determination of the existence or nonexistence of a noncompliance can be finally determined by the agency.

The required information shall be submitted, in triplicate, to the National Highway Traffic Safety Administration, Enforcement, Office of Vehicle Safety Compliance, 400 Seventh Street, S.W., Washington, DC 20590, within 20 working days from the receipt of this letter. A timely response is required.

Sincerely,

Original Signed By  
Francis Armstrong

Francis Armstrong  
Director  
Office of Vehicle Safety Compliance  
Enforcement

3 Enclosures

NEF-32Rjasinski:vgw:6/15/83:62834

cc:

NEF-01 Chron

CIR Master/Dup/PY files

**QUESTOR**

117 212-8997

**FILE**

Questor Juvenile Furniture Company  
1801 Commerce Drive  
Piqua Ohio 45356  
513 773 3971

**O/P-OCC**

July 13, 1983

Francis Armstrong, Director  
Office of Vehicle Safety Compliance Enforcement  
National Highway Traffic Safety Administration  
400 Seventh Street, SW  
Washington, DC 20590

Dear Mr. Armstrong:

RE: NEF-32RJa  
CIR 2617

This letter is written in response to your letter addressed to Mr. Mitchell of Questor Juvenile Furniture Company (QJFC) regarding the subject.

Responses are provided in the same order as the questions as follows:

1. Over 83 dynamic tests have been conducted on the One Step and child restraints similar to the One Step. Rather than reproducing all test reports, we have included copies of Test Reports Q58325, Q58333 and Q58334. These tests are representative of all tests and were conducted at the University of Michigan's Transportation Research Center on May 6, 1983.

Discussion regarding the One Step's compliance with the radius of curvature (S5.2.2.1(c)) requirements of FMVSS 213 follow the numbered responses.

2. Quality control procedures followed to insure continuing compliance of the One Step with the requirements of FMVSS 213 include specifications for raw materials and processing of those raw materials, certification by suppliers and processors that they comply with specifications, requirement that suppliers

**RECLASSIFIED PUBLIC**

Mr. Francis Armstrong  
Page 2  
July 13, 1983

O/P-OCC

and processors provide independent laboratory tests to verify their compliance to specifications. Our own audit of suppliers' and processors' conformance to specifications by auditing materials through independent laboratory testing of incoming goods and by periodically subjecting our child restraints to dynamic testing.

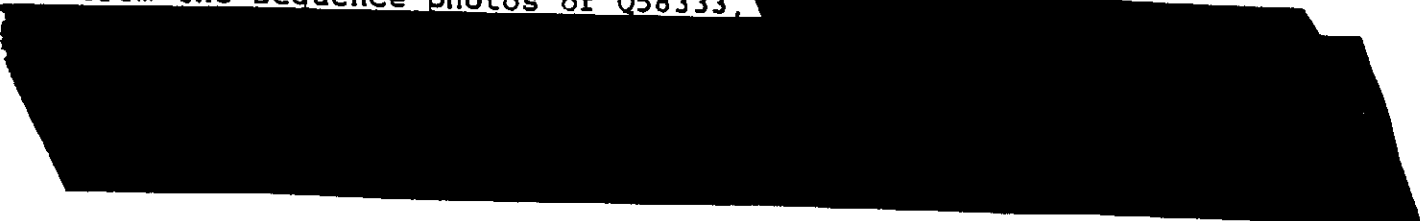
3. Please refer to the comments under 1. above.
4. We do not have a complete file on all complaints received regarding the One Step. For the most part, complaints have been made regarding the difficulty of operating the buckle release and the degree of confinement the One Step affords the child occupant. A number of letters regarding the difficulty of operating the buckle release had been sent to Mr. Vladislav Radovich of NHTSA in 1982. These along with similar complaints received by other child restraint manufacturers undoubtedly had led NHTSA to propose reducing the buckle release forces on child restraints.

Without taking the time to search all our files, we are taking this opportunity to forward for your information copies of two letters recently received wherein the One Step is described as performing satisfactorily in serious auto accidents.

5. We have not now a notification or recall campaign in effect nor do we contemplate initiating such a campaign.

6. 

Section S5.2.2.1(c) of FMVSS 213 states in part "each system surface designed to restrain forward movement of the child's torso shall be ...". Furthermore, the Preamble to an Amendment to Motor Vehicle Safety Standard No. 213, (Docket No. 74-9; Notice 7) discusses radius of curvature and re-emphasizes the minimum radius of curvature has been established "for surfaces designed to restrain the forward movement of a child".

Reference is made to the enclosed blueprint of drawing 2424401 Rev. 10 for the frontal impact shield of the One Step child restraint and to the sequence photos of dynamic test Q58333. As can be seen from the sequence photos of Q58333, 

Mr. Francis Armstrong  
Page 3  
July 13, 1983

O/P-OCC

[REDACTED]

defines torso as a body without head and limbs. Webster [REDACTED]

[REDACTED]

We call your attention again to the previously mentioned preamble to FMVSS 213 and the last paragraph under the section titled Radius of Curvature. This paragraph states in part "Prototypes of new restraints shown to the agency by some manufacturers indicate that they are voluntarily incorporating sufficient surface areas in their designs". Since the One Step incorporated many departures from then available child restraints, QJFC visited with NHTSA Staff periodically to discuss, review and demonstrate the One Step during its design and development. At no time during these visits was the subject radius of curvature suggested to conflict with the proposed revisions to FMVSS 213.

We are most willing and anxious to discuss the One Step in greater detail and provide additional data and information should NHTSA believe it to be necessary; we would however, believe it to be best accomplished by a personal visit to NHTSA's offices. Please advise us if this can be arranged.

We request the above information to be accorded confidential treatment because market information, design characteristics and test data on industry or individual car seats is not available at this time to members of this industry. Disclosure of this information could be detrimental, commercially and financially to our company. Additionally, disclosure of sales information on a single model of a QJFC car seat would give specific information on unit sales to competitors. We believe that singularity of disclosure by QJFC on their car seat sales, design and testing could aid our competitors and, potentially, injure our company.

Yours truly,

QUESTOR FURNITURE-EAST

*J. S. Koziatek*  
J. S. Koziatek, P.E.  
Director, Mechanical Engineering

**INSTITUTE FOR INJURY REDUCTION**  
POST OFFICE BOX 375  
DUNKIRK MARYLAND 20754

—  
(301) 855-2474  
800-544-3094  
FAX: (301) 855-2065

REPORT OF STATIC, DYNAMIC TESTS,  
'FALSE LATCH' DEFECT,  
EVENFLO MODEL 401 CHILD RESTRAINT  
NOVEMBER 18, 1989, DUNKIRK, MD.  
INSTITUTE FOR INJURY REDUCTION

December 14, 1989

## Purpose

A reported defect of the Evenflo One Step Models 401/402 Child Restraint involves the failure of the unit's harness latch-buckle to fully engage, resulting in a "false latch" condition. In this condition the latch-buckle can appear to be engaged and will resist separation under manual tugging or pulling conditions such as a parent or other adult might use to check that the latch-buckle is in fact securely closed.

As a result, in a vehicle crash the "false latch" condition may allow the unit's protective shield and harness to open, permitting a supposedly "restrained" child to be ejected from the seat and as a result, to be exposed to severe or fatal injury.

The purpose of this test program was to determine (1) the nature of the "false latch" defect and (2) the defect's effect on children meant to be restrained by the Evenflo One Step Models 401/402 in a car crash.

## Test Background, Specifications

An Evenflo One Step Child Restraint with 'Model 401' embossed on its plastic shell was purchased at retail from the Sears store in Parole, Maryland on November 30, 1989, for \$59.94 plus tax. The unit bears the serial number Model 401114A, and a manufacturing date of June 19, 1989.

The seat, its packaging and the accompanying user instruction manual were examined for warnings and instructions concerning the latching of the unit's belt latch-buckle, including any warnings concerning a "false latch" problem. (A copy of the user's instruction manual is attached.) No warnings concerning a "false latch" problem were found.

A 50th percentile 3-year-old anthropomorphic child dummy weighing 34 pounds was placed in the Evenflo 401 child restraint, and the restraint's harness webbing and protective shield were adjusted and positioned according to the manufacturer's instructions.

A Chatillon DPP50 gauge was used to measure the force necessary to disengage the latchplate from the buckle component while pushing upward on the shield portion of the child restraint. The Chatillon gauge is designed to record the highest force measurement reached, which is registered on the inside white portion of its dial. It can record a maximum of 50 pounds of force by 1/2 pound increments.

The impact test apparatus was an inclined seat belt "Convincer" sled. The apparatus consists of a seat, with a three point lap-shoulder belt, mounted on a movable sled riding an inclined track. The seat can be winched up manually or electrically to the top of the inclined sled. When released it travels down the track, propelled by gravity, on two sets of wheels set against tracks, until it is stopped by an immovable bumper. The speed is variable depending on the angle of the incline and the coefficient of friction of the wheels against the tracks.

#### Nature of 'False Latch' Problem

Instructions (see attachment) for latching the harness of the 401 read as follows: "Put child in seat. Lower shield; fasten buckle. Squeeze 'push' button on crotch strap buckle as you insert metal tongue. Check that buckle has been engaged by vigorously pulling up on shield."

No positive feedback is provided to confirm that the buckle has been latched when this procedure has been followed. Standard buckling procedure for auto seat belts involves pushing the latch plate into the buckle without depressing the buckle release button, so that an audible "click" is heard when the buckle engages the latch plate. Because the 401/402 user is instructed to "squeeze" or depress the release button when inserting the latch into the buckle, no "click" is heard at the completion of the process.

It therefore is possible to insert the latchplate partially into the buckle, short of engagement, yet think that engagement has taken place. Since the plate meets increasing resistance as it is inserted deeper into the buckle, a user might think that the latchplate is pushed in fully, to the "engaged" position, when it actually is not.

Possibly the instruction reflects the fact that the buckle presents considerable resistance when the latchplate is inserted without depressing the button. In any event, the buckle's resistance coupled with the user instructions create a situation with high potential for "false latching" of the latch-buckle.

The additional instruction, "Check that buckle has engaged by vigorously pulling up on the shield," would require that the falsely-latched plate disengage from the buckle when given a tug of reasonable force within the range of capability of, for instance, a mother involved in getting small children seated and restrained in a car.

As shown by the test results below, the force required to disengage the falsely-latched plate was far in excess of that range, and well above even that of our test personnel. In the "false latch" position the plate-buckle apparatus gave every appearance and response of being securely engaged.

### Test Protocol

Three sets of tests were performed.

1. In the first set, the Evenflo child restraint seat Model 401 was secured into the seat portion of the test apparatus and the anthropomorphic child dummy was placed in the seat as indicated in the manufacturer's instruction booklet. In order to test the child seat while in the false latch position, the buckle associated with the Evenflo child seat was fastened by depressing the "push" button on the latch while inserting the buckle as recommended by the manufacturer's instruction booklet, meaning that no audible sound indicated proper latching had taken place. The insertion was stopped just short of engagement.

If the performance of the child seat in its properly latched position was to be tested, the buckle was inserted into the latch without depressing the "push" button on the latch until an audible click indicated that the latch was secure.

In order to determine the amount of force needed to cause the buckle to come apart, thus allowing the shield to release and move upward when the child restraint seat was in the false latch position, the Chatillon force measuring gauge was placed below and against the shield and pressure was increasingly exerted upward until the latch-buckle separated. The appropriate maximum readings were recorded from the inner white dial of the gauge.

2. In the second set of tests, the Evenflo child restraint seat model 401 was placed in the test apparatus and again secured to the sled seat as indicated in the manufacturer's instruction booklet. The buckle was then false-latched and the seat brought up the inclined ramp of the test apparatus. It was then released and traveled down the track, propelled by gravity, until it reached the end of the track and struck the bumper. Opening of the buckle and movement of the dummy were recorded.

3. In the third test set, the seat was properly latched, i.e., with the buckle button undepressed and the latchplate inserted until a "click" denoting engagement was heard. The seat was brought up the inclined ramp of the test apparatus. It was then released and traveled down the track, propelled by gravity, until it reached the end of the track and struck the bumper. The buckle's closed position and the retention of the dummy in the restraint were recorded.

### Test Results

All tests were conducted by the Institute for Injury Reduction on November 18, 1989 in Dunkirk, Maryland. All tests were filmed. Dynamic sled tests were conducted at clocked speeds of 7-8 mph.

1. Static measure of force necessary to open a false latched buckle:

Three measured trials: 38 lbs  
                                     32 lbs  
                                     40 lbs

2. Dynamic "False-Latch" Tests:

--Eight false-latched sled runs: buckle opens allowing shield to release eight times.

--Anthropomorphic child dummy displaced in seat eight times.

--Anthropomorphic child dummy slides under and substantially out of the seat five of eight times.

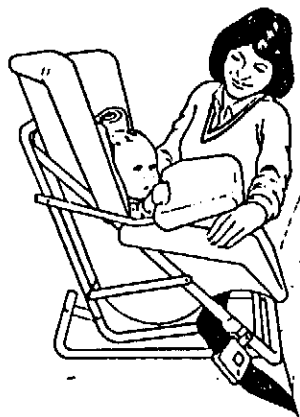
3. One Dynamic Properly-Latched Run: Buckle remains closed, shield in place, child dummy upright in seat.

#### Test Footage

1. Evenflo 401, Test Dummy	22 sec.
2. True Latch/False Latch Comparison Demo (two sequences)	39 sec.
3. False Latch Release Force Demo	26 sec.
4. False Latch Sled Test, 7-8 MPH (two sequences)	70 sec.
5. True Latch Sled Test, 7-8 MPH	22 sec.

# evenflo® ONE STEP™

Model 401 Vinyl Pad  
Model 402 Cloth Pad



No Tether Strap Required

## INSTRUCTIONS KEEP WITH SEAT

## THANK YOU 1

for caring enough about the safety and health of your child to use the One Step car seat.

The One Step meets all the requirements of Federal Motor Vehicle Safety Standard 213. If correctly used, it is designed to protect children weighing less than 43 lbs. and standing less than 43 inches in height.

The One Step also is one of the easiest and most convenient of all car seats to use.

No child car safety seat can guarantee absolute protection from injury in every possible crash. However, to ensure that your child gets all the protection designed into the One Step, you must:

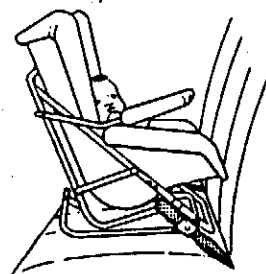
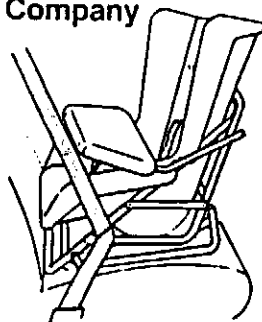
- Read and follow exactly these instructions. We have tried to make them simple and easy to understand. If you have questions, write or call:

Evenflo Juvenile Furniture Company  
1801 Commerce Drive  
Piqua, OH 45356

Eastern U.S. (513) 773-3971

Western U.S. (213) 759-9191

- Always anchor the One Step with the vehicle seat belt, even when not occupied. In a crash, an unrestrained car seat may injure someone.
- Always buckle the shield down and adjust the harness snugly.
- For infants up to 20 lbs., always face the One Step toward the rear.
- Use the One Step only on vehicle seats with seat backs that lock into place.



We also recommend that...

- For maximum safety protection, child restraint systems should be installed in a rear seating position in vehicles with two rear seating positions and in the center rear seating position in vehicles with such a seating position.
- Do not change the seating angle of the One Step with your child in the seat.
- When using the One Step as an infant seat, put the vehicle seat's adjustable head rest in its lowest position. The vehicle seat back against which the One Step is placed should be fully padded and free of hard objects.
- In hot or sunny weather, always check the fabric and metal buckles for heat before putting a child into the seat.
- Use the One Step only on forward-facing vehicle seats. Do not use rear- or side-facing vehicle seats.

To clean your One Step's vinyl pads, use mild soap and water. If you need to remove the pads, simply unhook them from the edges of the shell. Then, use a blunt instrument to remove any buttons which anchor them. Do this very carefully to prevent tearing the vinyl.

Cloth car seat pads with a vinyl backing may be sponged lightly with a mild detergent or dry cleaning fluid.

All other cloth pads may be machine washed—cold water, delicate cycle, tumble dry 10–15 min. on low heat.

## WARNING

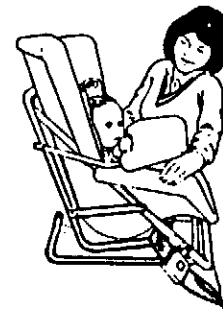
Failure to follow each of the installation instructions can result in your child striking the vehicle's interior during a sudden stop or crash.

## TRAVEL TIPS 3

With a little extra attention and planning, you can make every trip with your infant or toddler safe and pleasant.

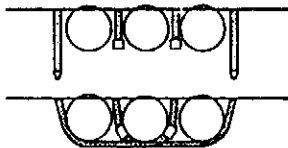
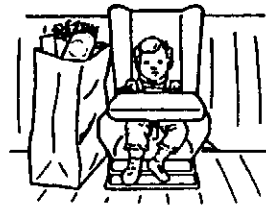
The first and most important thing to do is make a firm family rule: **Everyone rides buckled up or the car doesn't go.** Make no exceptions for adults or children. If someone unbuckles, stop the car. Being firm and consistent right from the start will mean fewer discipline problems as children get older. Besides, an unrestrained child or adult can be thrown into and injure other passengers.

- An infant or toddler with dry pants and a full tummy always is a better passenger.
- If someone else is driving, ride in the back seat with your baby. The back seat is safer.

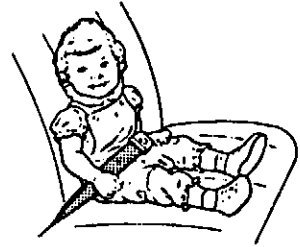


- Babies have a short attention span. They enjoy having you sing, talk, and play with them. Keep a bag of small, soft toys where you can reach it easily. A stuffed animal, teething ring, and pacifier are good for infants. Older children will like a cloth book and "do you see" games. Avoid toys that are heavy or sharp and could hurt someone in a crash.
- If your One Step has a vinyl pad, travel in hot weather could be uncomfortable for your baby. Buy or make a fabric cover with **holes for the harness**. Also, cover the seat with a light-colored blanket when you leave the car. This will keep the metal parts from getting too hot. Feel the seat before you put your baby back in it.

- In the winter, try to warm up the car and the One Step before taking your baby to the car.
- Expect that sometimes you will need to make a "baby stop," even on short trips. If a baby needs to be fed, changed, or comforted, he or she isn't going to understand about waiting. Find a safe place to stop. **Never** try to tend to a crying baby's needs while driving. **Never** take a baby out of the One Step for comforting while the car is moving.
- On long trips, infants, older children, and especially the driver need to get out of their seats to stretch. A 10-minute break at least every two hours will make the trip safer and more pleasant.
- Always lock all car doors. Teach your children not to play with the locks or door handles.
- Don't allow a child to have anything like a lollipop or ice cream on a stick. A bump or swerve could jam the stick down the throat.
- Do not feed child with bottle while riding in the One Step.
- Don't allow sharp or heavy objects to be loose in the car. Put groceries in the trunk. Anything loose can be deadly in a crash.
- Agree to carry no more passengers than you have seat belts. There should be only one person for each belt. In an "emergency," three children can be protected by two seat belts in the back seat as shown.



- If a toddler has to ride in a car without the One Step or other safety seat, use the vehicle lap belt. It must be worn low and as snug as possible. A safety seat is best, of course, but a lap belt is much better than not being restrained at all.

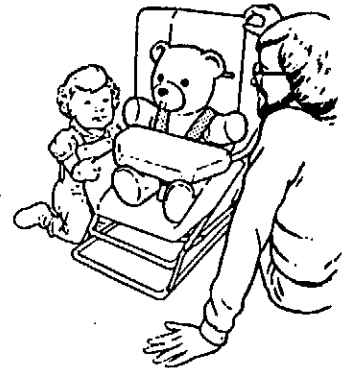


### **"Special handling" for toddlers**

If your baby has been riding in the One Step from birth, there should be little trouble getting used to the forward-facing position.

Babies who have been riding in an infant-only seat like the Dyn-O-Mite, or who have not been protected at all, need more help.

If you think your child may need to get used to the One Step, let him or her play with the seat in the house **before** taking that first ride. Tell your child how nice and comfortable the seat is and how it keeps little children snug and safe. Explain how it will help him or her see better. Practice buckling up, first with dolls or a teddy bear, then with the child.



# Tether Strap

Make sure your child hears many times that "everybody rides buckled up."

For the first ride in the seat, choose a time when your child is happy and cooperative. Keep the trip short.

Give your child lots of praise on every trip for good behavior in the One Step.

**Terrible twos.** Sometimes between one and two years of age, most toddlers try hard to get out of their safety seats. What do you do?

While it is unlikely that a child actually could get out of a correctly adjusted One Step, a child could slip off the shoulder straps. If this happens, stop the car. Say: "Mary, you learned how to do that all by yourself? That was hard, wasn't it? Now, let's put the straps back on so the seat will take good care of you while I drive."

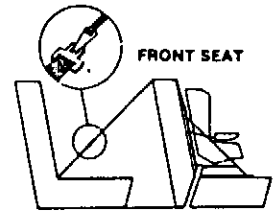
Always give praise when your child learns something new, but be very firm about riding buckled up. Stop as often as you must to put your child back in the seat. Soon, your child will turn his or her attention to other skills.

**Never, never, make an exception and let your child ride unrestrained.** This will lead to many discipline problems... and your child could be hurt in a sudden stop or crash.

INSTRUCTIONS

A top tether strap provides an extra anchor point for a child car seat in the forward-facing position. By holding back the top of the seat, it prevents extreme movement forward or to the side in a serious crash.

OPTIONAL  
TOP TETHER  
AND ANCHOR



FRONT SEAT

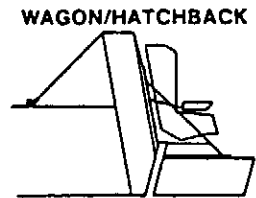
The One Step meets government standards without a top tether strap.

Many parents may want to use a top tether strap with their One Step because it can offer extra protection for a child in a serious side or frontal crash.



BACK SEAT

**Note:** If you want to use your One Step with a lap belt that will not lock except in a sudden stop or crash, you must have a top tether to keep the seat from wobbling out of place.



WAGON/HATCHBACK

The optional top tether strap and anchor assembly for your One Step may be ordered from Evenflo. Use the enclosed order form.

## ONE STEP CAR SEAT Replacement Parts List Order Form

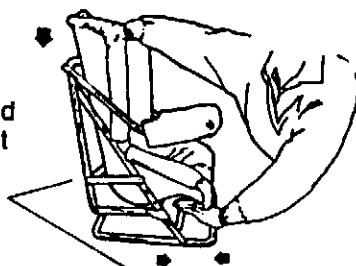
Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_  
Model # \_\_\_\_\_ Date Purchased (Mo/Yr) \_\_\_\_\_

Send to: Evenflo Juvenile Furniture Company  
ATTN: Replacement Parts Department  
1801 Commerce Drive  
Piqua, Ohio 45356

# INFANTS weight: birth to 20 lbs. height: to 26 inches

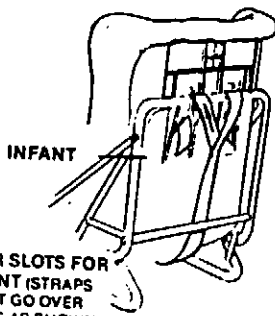
## Getting the One Step ready for your infant

**1.** Put One Step in reclined position. (Squeeze front two bars together while pushing down on back of seat.)

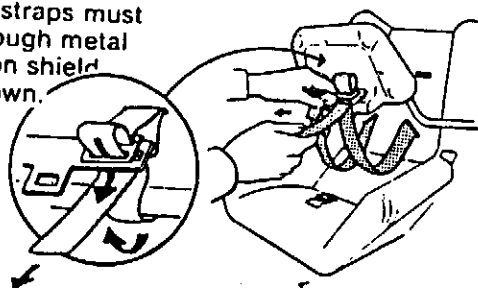


**2.** Put harness straps through lower slots in seat back. (If One Step is new, straps should be in lower slots already.)

Harness tie must be used at all times. Refer to step 5—Using the One Step with your infant.

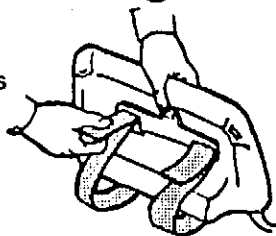


**3.** Harness straps must pass through metal buckle plate on shield exactly as shown.

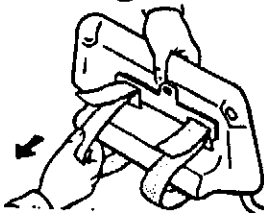


**Adjust harness length for snug fit.** Both straps must be equal in length.

To shorten shoulder harness strap, lift metal plate with thumb, pull end of strap toward you.

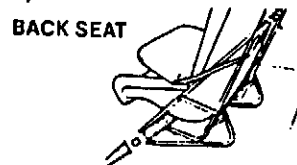


To lengthen shoulder strap, lift metal plate with thumb. Pull strap as shown.



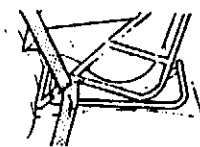
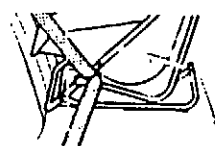
**5.** Put One Step in car, facing backwards. Buckle seat belt as shown.

Infants always must ride facing backwards. In a crash, the back of the One Step protects the baby and absorbs crash forces.



Do not face the One Step forward with an infant.

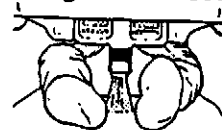
Place the vehicle seat belt exactly as shown. If you put the belt anywhere else, the One Step may not protect your baby in a crash. Be certain the seat belt is pulled as tight as possible.



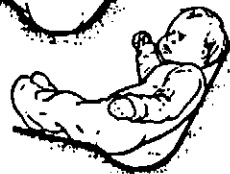
## Using the One Step with your infant

**1.** Dress baby in clothing with legs. This allows the crotch strap to pass between baby's legs.

Do not use a sack sleeper or a bulky blanket. The crotch strap must pass between baby's legs.



**2.** Put baby into One Step. Baby's bottom and back should be flat against the seat. If you leave a gap, baby will not be comfortable.



Support baby's head. For about the first three months, a baby's head needs extra support. Use a rolled blanket, towels, or diapers on each side.

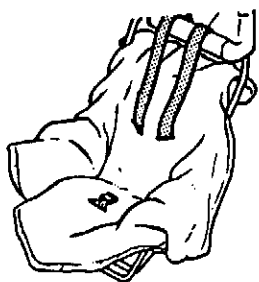
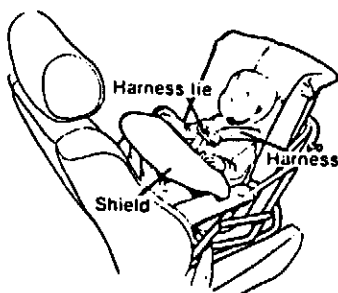
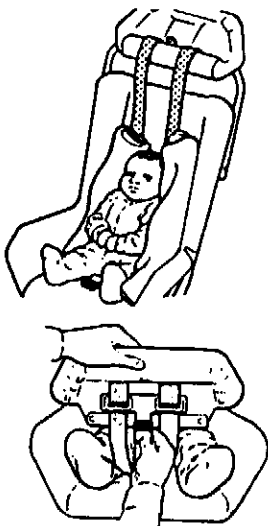
Lower shield. Fasten buckle. The One Step buckles easily if you squeeze the "push" button on the crotch strap as you insert the metal tongue. Check that buckle has engaged by vigorously pulling up on the shield.

Check vehicle seat belt and One Step harness. Seat belt must be tight and in the right place. Harness must be snug with no more than two finger-widths of slack between strap and child.

Shield should be snug against child's lap. Position harness tie between each strap at chest height to your infant. This will help keep straps on child's shoulders.

6. In cold weather, baby may need a blanket for extra warmth.

- Cut holes in blanket for harness and crotch straps. (A fleece blanket won't ravel and needs no sewing.)
- Put blanket in seat; pull straps through holes.
- Tuck blanket around baby under shield.



This card is to be removed and returned when ordering a parts list.

### To Install Cloth Car Seat Pad (402 Only)

Remove shoulder straps from shield, paying close attention to how they are threaded so they can be rethreaded properly. Partially draw up slack and loosely tie knot in draw string at top of cloth car seat pad. Drape boxing over top and bottom of car seat shell with vinyl pad in place and route straps through cloth pad. Tuck cloth pad into inside corners (Figure A).

Wrap and tuck left and right sides of boxing under lip of seat shell at areas indicated by arrows (Figure B). Tighten draw string and knot. Tuck loose ends of draw string under edges of boxing.

Place cloth shield cover over shield with vinyl pad in place. Knot draw string on one side making sure back and front strings encircle shield tubing (Figure C). Tighten draw string on opposite side of shield, again encircling shield tubing, and knot. Then tuck loose ends of draw string under boxing. Rethread shoulder straps onto shield as they were originally (Figure D).



Figure A



Figure B

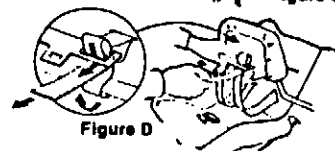


Figure D

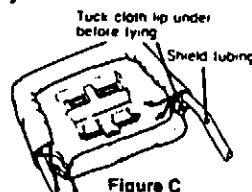


Figure C

### When to use the forward position

Keep your infant in the backward-facing position as long as possible.

It is time to switch when your baby

- acts very restless and struggles to sit up and look around in the One Step;
- is sitting up alone and playing with toys in the house;
- is at least 20 lbs. in weight and 26 inches in length.

# TODDLERS weight: 20 - 43 lbs. height: to 43 inches

## Getting the One Step ready for your toddler

**1.** Put One Step in upright position. (Hold base and pull up on seat back as shown. Fig. A. Push second bar over first bar and continue to pull up on back seat. Fig. B.) The One Step also may be used in reclined position facing forwards for toddlers, but do not change positions with child in seat.



Figure A

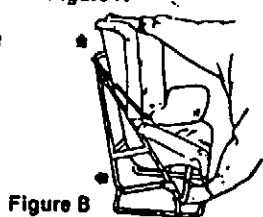
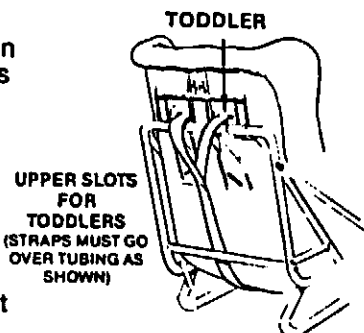
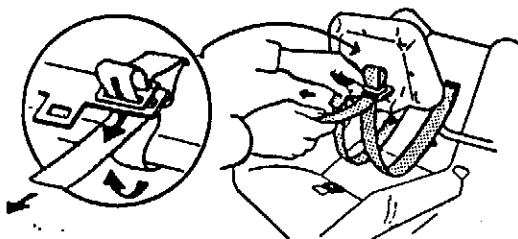


Figure B

**2.** Put harness straps in upper slots. Harness tie must be used at all times. Refer to step 2—Using the One Step with your toddler.



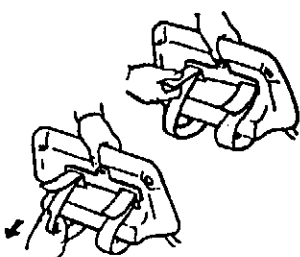
**3.** Harness straps must pass through metal buckle plate on shield exactly as shown.



**4.** Adjust harness length for snug fit. Both straps must be equal in length.

To shorten shoulder harness strap, lift metal plate with thumb. Pull strap as shown.

To lengthen shoulder strap, lift metal plate with thumb. Pull strap as shown.



**5.** Put One Step in car, facing forward. Place the vehicle seat belt exactly as shown.

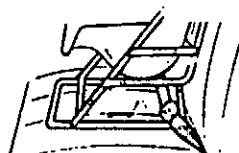
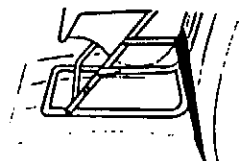
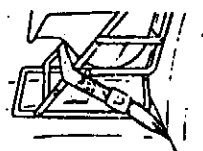


BACK SEAT

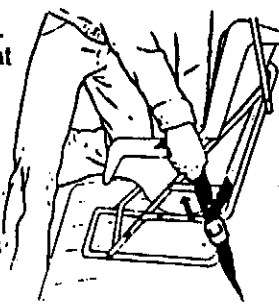


FRONT SEAT

It is very important to put the seat belt in the right place. If the belt is put anywhere else, the One Step may not protect your child in a crash.

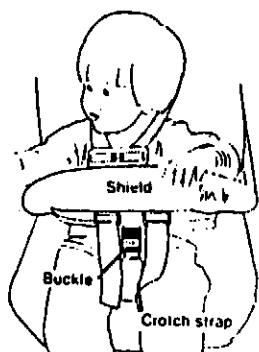


The seat belt must be as tight as possible. Using your knee, put your full weight on the seat as you tighten the belt. For manually adjustable seat belts that are not automatically tightened by a retractor, always test your seat installation by forcibly tilting it from the side. Make sure that the seat belt holds the seat securely in place. If the belt slips, turn the adjustable end of the belt upside down before buckling it. This procedure defeats the adjustment mechanism and prevents the belt from loosening. Again, test to make sure that it is secure.



## Using the One Step with your toddler

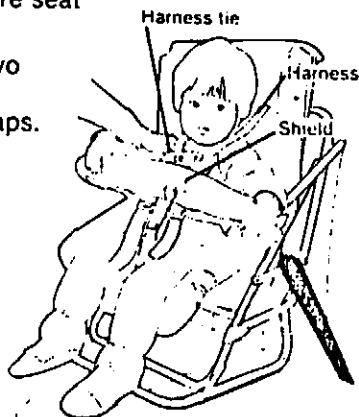
Put child in seat. Lower shield; fasten buckle. Squeeze "push" button on crotch strap buckle as you insert metal tongue. Check that buckle has engaged by vigorously pulling up on shield.



Check the harness for snug fit; make sure seat belt is tight.

Allow no more than two finger-widths of slack between child and straps. Shield should be snug against child's lap.

Position harness tie between each strap at chest height to your toddler. This will help keep straps on child's shoulders.

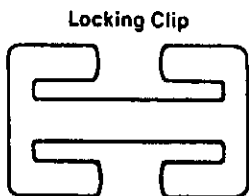


## LOCKING CLIP:

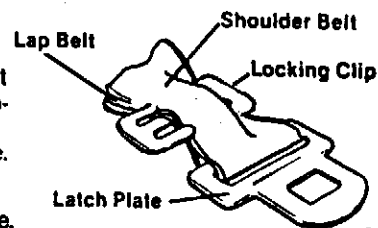
**USAGE**—Should be used in vehicles equipped with latch plates having a slot that the webbing passes through, which in turn, allows the latch plate to slide freely along the webbing. See Figures 1 & 2.

**PURPOSE**—To securely install a child car seat in certain vehicles.

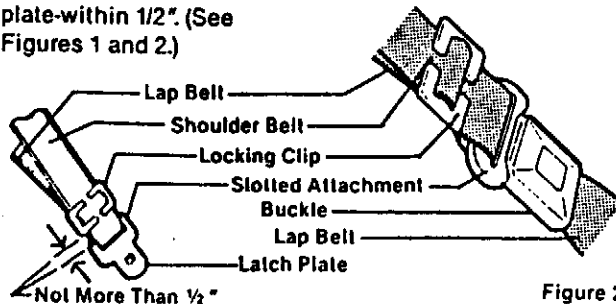
**INSTALLATION**—Install car seat in the vehicle per instructions.



Pull shoulder belt through latch plate to remove all slack webbing from lap belt. Grasp the webbing and latch plate to prevent it from sliding along the webbing and disconnect the latch plate from the buckle.



Fold webbing, then thread onto clip, one side at a time. Keep clip close to latch plate-within 1/2". (See Figures 1 and 2.)



Snug locking clip against the latch plate.

Insert latch plate within buckle and make certain car seat is secure, all slack webbing removed from lap belt.

Once properly installed, this adjustment is designed to be retained until clip is removed or vehicle seat is repositioned.

A locking clip is included.

