



**NEW FLYER**

## ***SERVICE MANUAL BULLETIN***

This Service Manual Bulletin is prepared by the Publications Department of New Flyer Industries Canada ULC. Refer to details below.

### **SMB-125**

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<b>APPLICABILITY</b>					
<b>VEHICLE LENGTH</b>	<input type="checkbox"/> 30ft.	<input checked="" type="checkbox"/> 35ft.	<input checked="" type="checkbox"/> 40ft.	<input checked="" type="checkbox"/> 60ft.	<input type="checkbox"/> ALL
<b>VEHICLE TYPE</b>	<input type="checkbox"/> High Floor	<input checked="" type="checkbox"/> Low Floor	<input type="checkbox"/> Invero	<input checked="" type="checkbox"/> Xcelsior	<input type="checkbox"/> ALL
<b>FUEL TYPE</b>	<input type="checkbox"/> Diesel	<input type="checkbox"/> Electric	<input type="checkbox"/> CNG	<input type="checkbox"/> LNG	<input checked="" type="checkbox"/> ALL
	<input type="checkbox"/> Diesel/Electric	<input type="checkbox"/> Gas/Electric	<input type="checkbox"/> Fuel Cell		
<b>SUBJECT</b>	<b>S-1 GARD</b>				
<b>SECTION TITLE</b>	<b>PM - PREVENTIVE MAINTENANCE 13 - EXTERIOR PANELS &amp; APPLIED PARTS</b>				
<b>DETAILS</b>	<p>This bulletin provides additional information on preventive maintenance and servicing of the S-1 Gard used on your New Flyer vehicles.</p> <p>This bulletin supersedes all prior information on this subject already provided in your New Flyer Service Manuals. Make this Service Bulletin available to service personnel to inform them of changed information.</p>				



**1. S-1 GARD**

**1.1. Preventive Maintenance**

**1.1.1. Daily Preventive Maintenance**

As part of the exterior vehicle inspection, ensure the S-1 Gard is securely in place, is installed level to the ground and is undamaged. Make note of any damage, such as twists or tears in the S-1 Gard material.

**1.1.2. 12,000 Miles (19,300 km) Preventive Maintenance**

Every 12,000 miles, inspect the Gard and receiver as follows:

- Raise the vehicle. Refer to the General Information Section of your New Flyer Service Manual for procedure.
- Inspect S-1 Gard material for excessive damage. Normal wear of the material does not impair its functionality, however excessive damage indicates that the minimal ground clearance is not being maintained.
- Excessive wear of S-1 Gard material may be an indication of suspension problems, such as incorrect ride height adjustment, shock absorber wear, or air spring leaks. Correct suspension problems as required.

**NOTE:**

*Before setting S-1 Gard clearances, ensure vehicle air system is fully charged and the ride height is correctly set according to your New Flyer Service Manual.*

- Replace or adjust S-1 Gards which are worn or do not meet this specification. Refer to "1.3. S-1 Gard Specifications" for clearance dimension "A". See "Fig. 1: Required S-1 Gard to Street Clearance". The S-1 Gard entire lower edge must be level with and not contact the ground in order for it to function correctly.

**1.2. Description**

The S-1 Gards are protective molded deflectors mounted in front of the rear and center curbside wheels of the vehicle. The S-1 Gards fit into a receiver channel and are retained there with mounting bolts.

**1.3. S-1 Gard Specifications**

Material.....Molded Polyurethane

Inboard Distance  
..... approx. 0.5" from first tire tread

<b>New Flyer Parts Manual Part #</b>	<b>Min. Dimension "A" (in)**</b>	<b>Max. Dimension "A" (in)**</b>
214667*	4.0 ± .06	6.11 ± .06
283378	4.0 ± .06	6.83 ± .06
344487	4.0 ± .06	6.83 ± .06
433237	4.0 ± .06	4.40 ± .06
481524	4.0 ± .06	4.30 ± .06
489308	4.0 ± .06	4.88 ± .06
511142	4.0 ± .06	4.87 ± .06

\* Exception:  
As a result of bus build specification differences, the Dimension "A" clearance is 4.0 inches for SR877 & SR905

\*\* Dimension "A":  
Is the clearance required from the underside of the S-1 Gard to the top of the street.

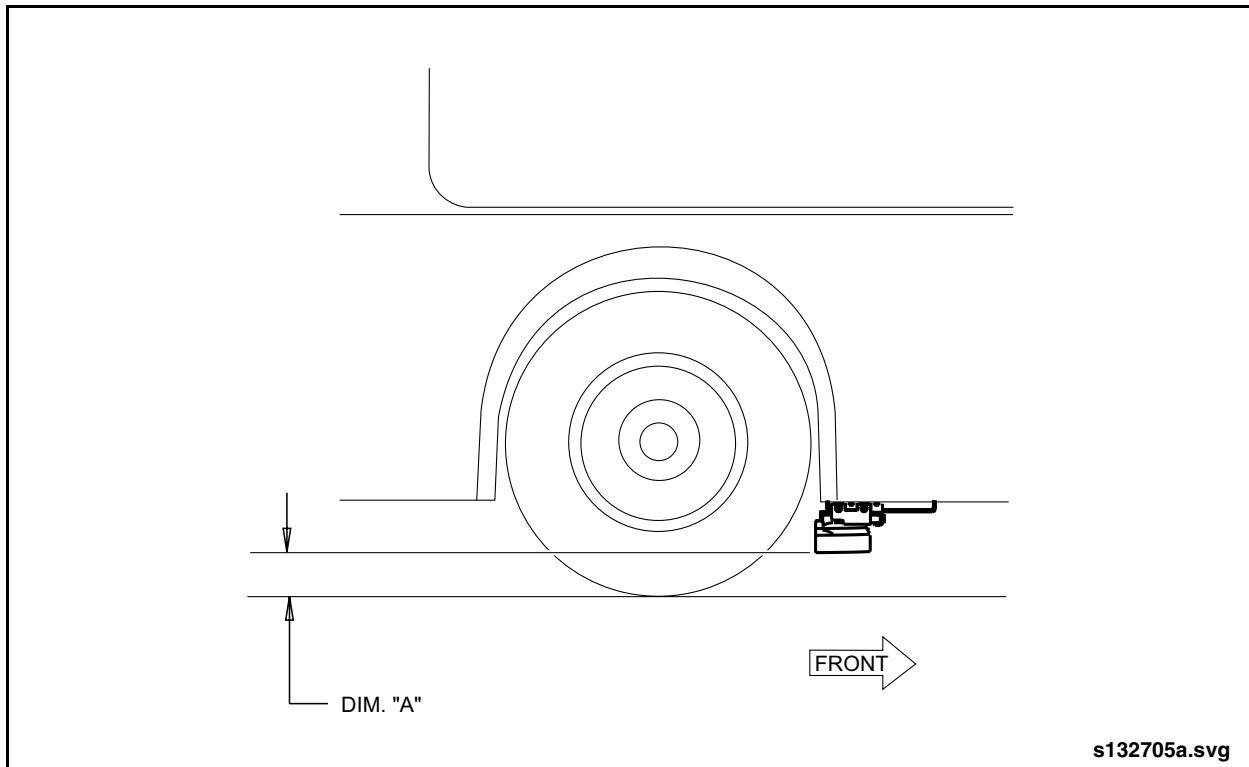


Fig. 1: Required S-1 Gard to Street Clearance

#### 1.4. Operation

The S-1 Gard is designed as a contoured deflector shield that reduces the space between the bottom of the vehicle and the curb or road surface in front of the curbside wheels. Should an object fall in the proximity of the rear (or center) curbside wheels, the reduced gap created by the S-1 Gard contour is designed to reduce the possibility of the object being run over by the wheels of the vehicle.

#### 1.5. Maintenance

Refer to "1.1. Preventive Maintenance" for scheduled maintenance procedures and intervals.

#### 1.6. Removal

**NOTE:**

The S-1 Gard can be removed from the vehicle while the receiver remains attached for proper alignment. See "Fig. 2: S-1 Gard Removal & Installation."

1. Raise the vehicle. Refer to the General Information Section of your New Flyer Service Manual for procedure.
2. Remove the two bolts and washers (Item 1) which secure the rear S-1 Gard to the receiver channel.
3. Slide the S-1 Gard out of the receiver channel.
4. On vehicles with a center axle, remove the bolt and washer (Item 2) that secures the S-1 Gard into the receiver and the two bolts and washers (Item 3) which secure the outer receiver bracket to the receiver

**NOTE:**

The nuts for the outer receiver bracket mounting are welded to the receiver.

5. Slide the S-1 Gard out of the receiver channel.

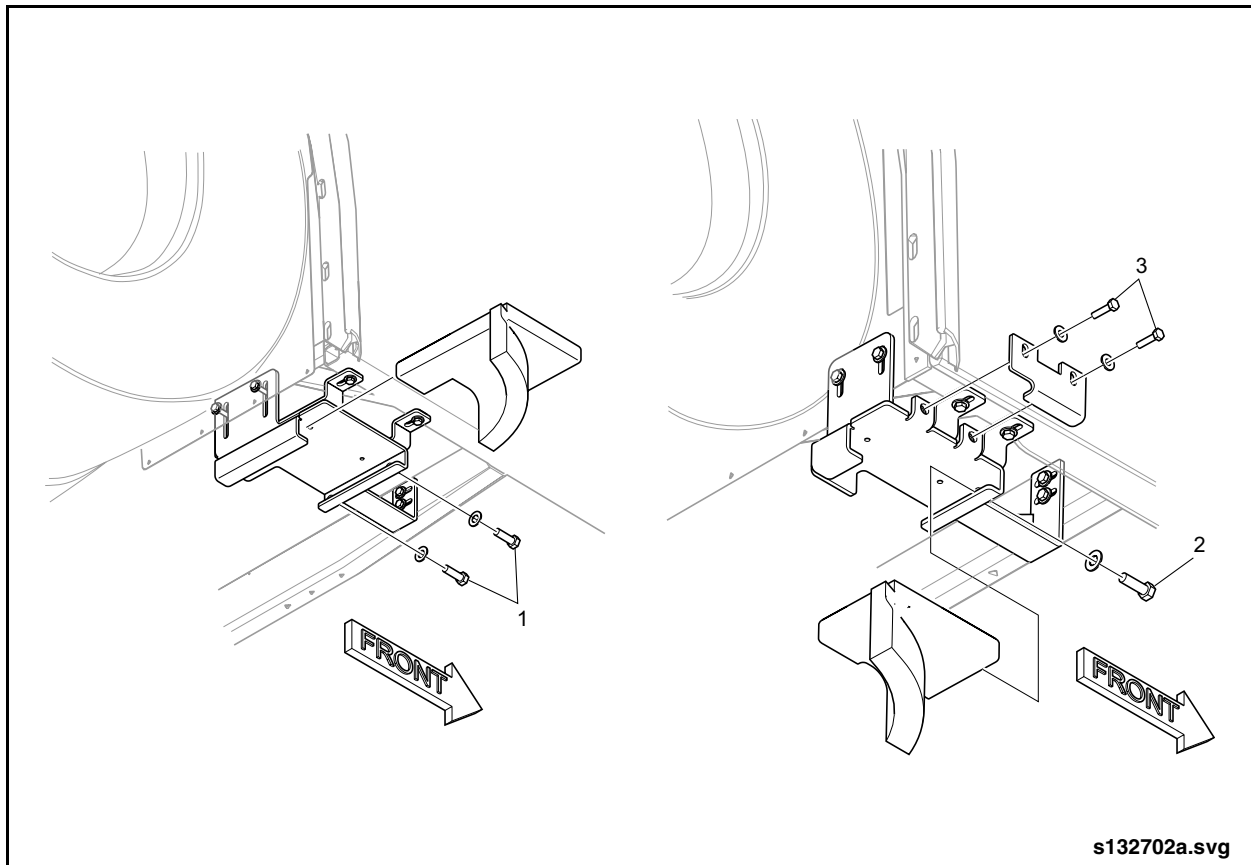


Fig. 2: S-1 Gard Removal & Installation

### 1.7. Installation

1. Slide the S-1 Gard into the receiver channel.
2. Apply Loctite-242 to one or two threads on the mounting bolts
3. Secure the S-1 Gard to the channel at the rear wheel with 1/2" bolts and washers (Item 1). The S-1 Gard is correctly positioned when the outer edge is approximately 0.5" inboard of the first tire tread.
4. Torque bolts to  $87 \pm 3$  ft-lb. ( $117 \pm 4$  Nm)
5. On vehicles with a center axle, secure the center S-1 Gard to the receiver channel with one bolt (Item 2).
6. Torque to  $87 \pm 3$  ft-lb. ( $117 \pm 4$  Nm).
7. Install the outer receiver bracket to the receiver using the two bolts and washers (Item 3).

8. Tighten bolts to standard torque specification. Refer to your New Flyer Service Manual.
9. Lower vehicle to the ground.

**NOTE:**

*Before setting S-1 Gard clearances, ensure vehicle air system is fully charged and the ride height is correctly set according to your New Flyer Service Manual.*

10. Measure ground clearance to match specified dimensions. Refer to "1.3. S-1 Gard Specifications" for clearance dimension "A". See "Fig. 1: Required S-1 Gard to Street Clearance."
11. The S-1 Gard entire lower edge must be level with and not contact the ground in order for it to function correctly.