United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA01251SE

This certificate, issued to: Rosen Sunvisor Systems, LLC
86365 College View Road
Eugene, OR 97405

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part of the* Federal Aviation Administration *Regulations.* *Certification basis established in Type Certificate Data Sheet.

Original Product—Type Certificate Number: * See attached FAA Approved Model
Make: List (AML) No. SA01251SE for a list of approved models
Model: and applicable airworthiness regulations.

Description of the Type Design Change:

The manufacture of a Sunvisor System in accordance with Rosen Sunvisor Systems, LLC. Master Drawing List defined on attached AML.

Limitations and Conditions:

1. Compatibility of this design change with previously approved modifications must be determined by the installer.
2. The Sunvisor System must be installed and maintained in accordance with the Component Maintenance Manual With Illustrated Parts List document as noted on attached AML.
3. A copy of this certificate and FAA Approved Model List SA01251SE must be maintained as part of the permanent records of the aircraft.
4. If the holder agrees to permit another person to use this certificate, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application May 14, 2003
Date of issuance: August 6, 2003

Date reissued:
Date amended December 8, 2008 February 28, 2012

By direction of the Administrator

(Signature)
Greg Johnson, Acting Manager
Denver Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2(10-68)

FAA Approved Model List (AML) No. SA01251SE
Rosen Sunvisor Systems, LLC
For
Installation of Rosen Aircraft Sunvisor Systems

Issue Date: August 6, 2003

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	Drawing List	Installation and Continued Airworthiness Instructions	AML Amendment Date
1	Maule	Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-180C, M-4-180S, M-4-180T, M-4-210, M-4-210C, M-4-210S, M-4-210T, M-4-220-, M-4-220C, M-4-220-S, M-4-220-T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-5-220C, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-235, MX-7-180, MT-235, M-8-235, MX-7-160, MX-7-180A, MXT-7-180A, MX-7-420, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, M-7-420AC, MX-7-160C, MX-7-180AC, M-7-420A, MT-7-420, MXT-7-180	3A23	Title 14 CFR 23	R1710000-DL, Revision I, dated 8/26/08 or later FAA approved revision	Document 9051-0171-001, Revision B, dated March 10, 2008 and Document 9051-0171-002, Revision A, dated June 11, 2008, or later FAA accepted revision.	12/8/08
2	Aviat	Husky A-1, A-1A, A-1B	A22NM	Title 14 CFR 23	R1710000-DL, Revision I,	Document 9051-0171-001, Revision B,	12/8/08

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	Drawing List	Installation and Continued Airworthiness Instructions	AML Amendment Date
					dated 8/26/08 or later FAA approved revision	dated March 10, 2008 and Document 9051-0171-002, Revision A, dated June 11, 2008, or later FAA accepted revision.	
3	Piper	PA-11, PA-11S	A-691	CAR 4a	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
4	Piper	PA-12	A-780	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
5	Piper	PA-14	A-797	CAR 3, amendment 3-	R1710000-DL,	Document 9051-0171-001,	2/17/12

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	Drawing List	Installation and Continued Airworthiness Instructions	AML Amendment Date
				8	Revision K, dated 10/27/11 or later FAA approved revision	Revision D, dated February 16, 2012, or later FAA accepted revision.	
6	Piper	PA-15	A-800	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
7	Piper	PA-16, PA-16S	1A1	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
8	Piper	PA-17	A-805	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or	Document 9051-0171-001, Revision D, dated February 16, 2012, or	2/17/12

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	Drawing List	Installation and Continued Airworthiness Instructions	AML Amendment Date
					later FAA approved revision	later FAA accepted revision.	
9	Piper	PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special), PA-18A, PA-18 "125" (Army L-21A), PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-19 (Army L-18C), PA-19S	1A2	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
10	Piper	PA-20, PA-20S, PA-20 "115", PA-20S "115", PA-20 "135", PA-20S "135"	1A4	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
11	Piper	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	1A6	CAR 3, amendment 3-8	R1710000-DL, Revision K, dated 10/27/11 or	Document 9051-0171-001, Revision D, dated February 16, 2012, or	2/17/12

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	Drawing List	Installation and Continued Airworthiness Instructions	AML Amendment Date
					later FAA approved revision	later FAA accepted revision.	
12	Luscombe	8A, 8A, 8B, 8C, 8D, 8E, 8F, T-8F	A-694	CAR 4a	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12
13	Stinsen	108-1, 108-1, 108-2, 108-3, 108-4	A-767	CAR 4a	R1710000-DL, Revision K, dated 10/27/11 or later FAA approved revision	Document 9051-0171-001, Revision D, dated February 16, 2012, or later FAA accepted revision.	2/17/12

FAA Approved: _____

Acting Manager, Denver Aircraft Certification Office

Amended: February 28, 2012

U.S. Department
of Transportation
**Federal Aviation
Administration**

Transport Airplane Directorate
Aircraft Certification Service
Denver Aircraft Certification Office
26805 E. 68th Ave, Room 214
Denver, CO 80249

May 21, 2013

Quality Administrator
Rosen Sunvisor Systems, LLC
86365 College View Road
Eugene, Oregon 97405

Dear Ms. Skidmore:

This letter is in response to your submittal of minor design changes for Supplemental Type Certificate (STC) SA01251SE, on May 10, 2013. The Master Drawing List (MDL) updates include changes that Rosen has made as a design approval holder to meet current company standards.

We have completed our assessment of the design changes made in accordance with the FAA letter dated July 23, 2009, authorizing Rosen Sunvisor Systems to approve minor design changes, and find that they do not conflict with previously demonstrated compliance. Accordingly, Rosen Tube Mount NSA Sunvisor System Drawing List, R1710000-DL, Revision L, dated 5/8/13 his hereby Federal Aviation Administration (FAA) approved.

If you have any questions, please contact me at (303) 342-1085.

Sincerely,

Richard R. Thomas

Richard R. Thomas
Project Engineer

Tube Mount NSA Sunvisor System

Date	Revision	Approved
2/20/24	U	SYS

Drawing List
R1710000-DL

FAA STC SA01251SE | Kit R1710000- XXX | Doc. #9050-0171-001

R1710200-114	R1710000				Drawing	Reference	Description	Rev
	-011	-114 -214	-034 -134	-041 -144				
	1	1	1	1	1710000	R1710000	Complete System	H
1					1710200		Lens Assembly (Husky)	K
1	2	1			1710100-1		Mounting Assembly 3/4	H
			2 1		1710100-3		Mounting Assembly 5/8	H
				2 1	1710100-4		Mounting Assembly 7/8	H
1	2	1	2 1	2 1	1710102		Tube Mount – Swivel	G
1	2	1			1710103-1		Tube Mount – Bottom 3/4	M
			2 1		1710103-3		Tube Mount – Bottom 5/8	M
				2 1	1710103-4		Tube Mount – Bottom 7/8	M
1	2	1			1710104-1		Tube Mount – Top 3/4	L
			2 1		1710104-3		Tube Mount – Top 5/8	L
				2 1	1710104-4		Tube Mount – Top 7/8	L
1	2	1	2 1	2 1	1020100-001		NSA Mod Block Assembly	F
-	-	-	-	-	1020002-001		Modified ‘A’ Block	P
-	-	-	-	-	1020003-001		Modified ‘B’ Block	V
1	2	1	2 1	2 1	1010000-5		Complete Slide Assembly	G
-	-	-	-	-	1010001-5		Female Slide	M
-	-	-	-	-	1010002-3		Male Slide	U
	2				1710201		Lens	F
1	2	1	2 1	2 1	1010003		Lens Strip	H
1		1	2 1	2 1	1710202		Lens	D
1	1	1	1	1	9051-0171-001		Tube Mount PMM/IPC	E

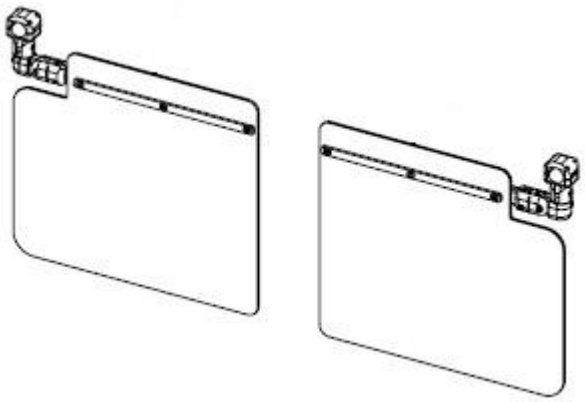
R1010000-KIT-5	**Kits**	**Universal Slide with Lens Strip Kit**	A
1010000-5		Complete Slide Assembly	G
1010003 MS24693-C48BP		Lens Strip #8-32 X .375 Flat Head Phillips SS Black Patch Screw	H
R1710201		**Universal Lens Kit**	F
R1710202		**Husky Lens Kit**	D

Rosen®
SUNVISOR SYSTEMS

Part Number/Aircraft Model Application Table						
R1710200	**R1710000**					
-114	**-011**	**-114**	**-034**	**-134**	**-041**	**-144**
Husky A-1, A-1A, A-1B	Maule Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-180C, M-4-180S, M-4-180T, M-4-210, M-4-210C, M-4-210S, M-4-210T, M-4-220, M-4-220C, M-4-220S, M-4-220T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-5-220C, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-235, MX-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-420, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, M-7-420AC, MX-7-l60C, MX-7-180AC, M-7-420A, MT-7-420, MXT-7-180 Luscombe 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F	Piper PA-12, PA-14, PA-18, PA-18S, PA-18 “105” (Special), PA-18S “105” (Special), PA-18A, PA-18 “125” (Army L-21A), PA-18S “125”, PA-18AS “125”, PA-18 “135” (Army L-21B), PA-18A “135”, PA-18S “135”, PA-18AS “135”, PA-18 “150”, PA-18A “150”, PA-18S “150”, PA-18AS “150”, PA-19 (Army L-18C), PA-19S Topcub Aircraft CC18-180 CC18-180A **-214** Cub Crafters CC19-180	Piper PA-20, PA-20S, PA-20 “115”, PA-20S “115”, PA-20 “135”, PA-20S “135”, PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	Piper PA-15, PA-16, PA-16S, PA-17	Stinson 108, 108-1, 108-2, 108-3, 108-4	Piper PA-11, PA-11S

Tube Mount NSA Sunvisor System

Rosen Kit Number 1710000-xxx



Component Maintenance Manual With Illustrated Parts List

Manual Number 9051-0171-001 Revision D

February 16, 2012

Rosen Sunvisor Systems LLC
86365 College View Road
Eugene, Oregon 97405 USA

Record of Revisions

Rev	Description	Date	Approved
A	As Released (9050-0171-001)	5/5/03	GH
B	Added Instructions for Continued Airworthiness, changed doc. number to 9051-0171-001	8/30/05	GH
C	Corrected hardware, illustration and install details	5/10/10	GH
D	Changed title to CMM/IPC, included weights, parts list, annual inspection recommendation for inspection	2/16/12	GH

Introduction

1. General

- **a.** This Rosen Component Maintenance Manual provides use, maintenance and supplemental airworthiness instructions for the R1710000-xxx cockpit sunvisor system used on various aircraft.
- **b.** Rosen reserves the right to revise this document for changed procedures, improved parts or changes to the system or components.
- **c.** All technical support, spare sales, repairs or modifications are to be directed directly to Rosen Sunvisor Systems LLC. RSS must be contacted for future revision of this document as it is possible this does not contain the latest revisions.

2. Revision Service

- **a.** Rosen Sunvisor Systems does not provide an automatic revision service.
- **b.** Please contact Rosen if there is any question regarding the revision status of this document.

Product Description

1. General

The typical Rosen NSA Sunvisor System consists of two identical, independent visor assemblies which have been designed to improve pilot comfort during standard cockpit operations. On Tandem aircraft installations there is only one visor assembly mounted on the left side of the cockpit. The assemblies are mounted on the tube frame of the aircraft and provide full coverage for the pilot and copilot.

2. Weights

Part Number	Weight
R1710000-011	2.54lb
R1710000-114	1.08lb
R1710000-034	2.20lb
R1710000-134	1.10lb
R1710000-041	2.63lb
R1710000-144	1.12lb

Fault Isolation

1. General

a. This section identifies Probable Causes and Corrections for possible faults.

Problem	Probable Cause	Corrective Action
Lens does not rotate smoothly on swing axis	Swing pivot tension incorrectly set	Re-tension Swing pivot
Lens does not rotate smoothly on the horizontal (lens) axis	Lens rotation incorrectly set	Re-tension lens axis.
Lens tilt does not support lens weight	Lens tilt tension not correctly set	Re-tension lens tilt axis
Lens does not extend easily on arm	Visor extension screw not correctly set	Re-set extension screw

Installation Instructions and ICA

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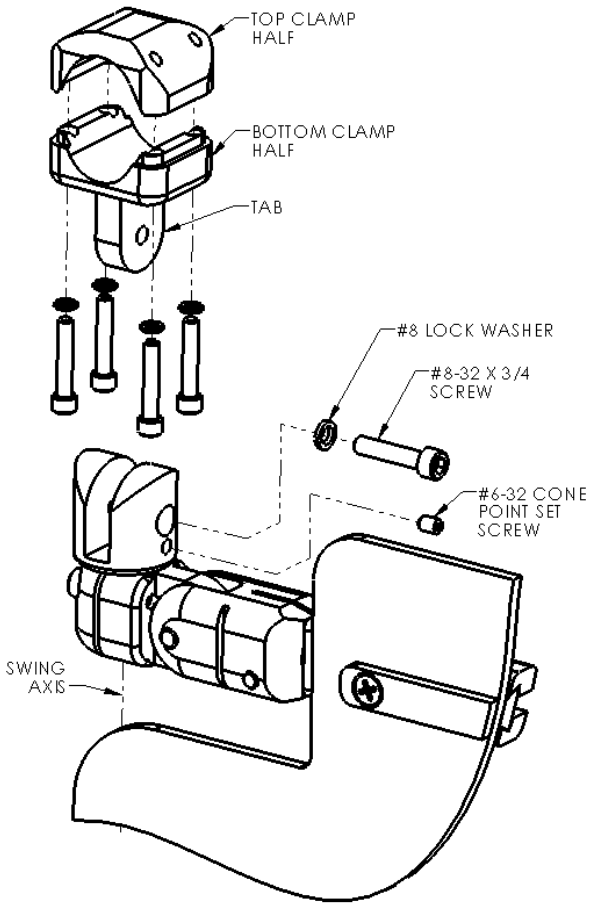
Install time: approximately 1/2 to 1 hour.

*Please read these short instructions **COMPLETELY** before starting*.

Installation Hardware (included)

Qty: (1) 1/16 Allen Key	for #6-32 Set Screw
Qty: (1) 7/64 Allen Key	for #6-32 Cap Screw
Qty: (1) 9/64 Allen Key	for #8-32 Cap Screw
Qty: (1) 5/32 Allen Key	for #10-32 Cap Screw
Qty: (1) MS16995-28B	#8-32 x 3/4 Socket Head Cap Screw
Qty: (1) 8HCLW	#8 Lock Washer
Qty: (1) AN565-AC6-4B	#6-32 X 1/4 Cone Point Set Screw

1. Remove (2) stock visors (as necessary).
2. Remove the 4 screws and lock washers from clamp assembly. Position top clamp half on diagonal tube just down and below the corner and any soft goods or cross tube. Consideration should be made for side window coverage as well as the front windscreen. The bottom of the visor must clear the instrument glare-shield.
3. Attach BOTTOM CLAMP HALF using the same 4 screws and lock washers. Do not tighten at this point.
4. Rotate clamp on tube until the TAB on BOTTOM CLAMP HALF is as near to vertical* as possible. Tighten the 4 clamp screws evenly.
5. Mount the visor on the clamp TAB by installing the #8-32 x 3/4" SCREW and #8 LOCK WASHER. Position the joint so the visor SWING AXIS is vertical*. See example installations on a Maule and Husky on pages 2 & 3, respectively.



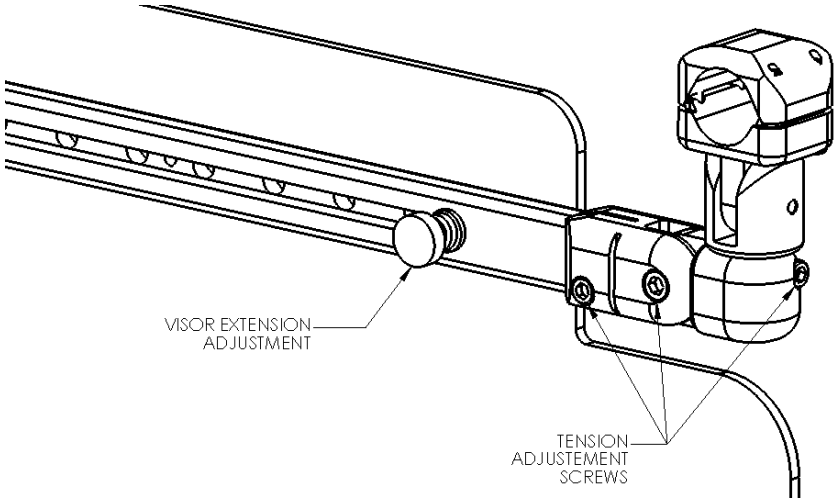
*In normal horizontal flight

6. Tighten the 8-32 x 3/4 SCREW
7. Tighten the #6-32 x 1/4 CONE POINT SET SCREW. The cone of the set screw will drive into the tab – locking it in place.
8. Repeat for the other side (if applicable).
9. Installation is now complete. Proceed to adjust the visor tension in the next section.

Removal

Removal is a reverse of installation.

Visor Tension Adjustments:



The three pivots of the Rosen NSA System are independently adjustable with the provided Hex Keys. Adjust the tension in each axis to your preference. All motions should be smooth, but not loose. The thumb screw on the VISOR EXTENSION ADJUSTMENT will allow you to make adjustments at anytime.

To stow, the unit can be rotated straight to the overhead while in front, or moved to the side of the aircraft and rotated overhead. While in the forward position the NSA visor stows nicely overhead.

Place the FAA STC and AML (if appropriate) in the Aircraft Maintenance Log and make an installation entry.

Continued Airworthiness Instructions:

- (**On the ground only)**
    - Periodically clean the lenses with a soft cloth using Rosen Plastic Cleaner, Polisher and Protectant, or mild soap and water. Do not use abrasives on the lens.
    - Periodically adjust the pivot tensions on the visor assemblies.
    - Periodically (at minimum on annual inspections) inspect attaching hardware for security.
- Updates to this continued airworthiness section are available on the Rosen Website. (www.rosenvisor.com)

The most up to date version of this document is available on the Rosen Website. (www.rosenvisor.com) We recommend that you periodically look to make sure you are using the most current version.

Airworthiness Limitations:

The Airworthiness Limitations Section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

There are no airworthiness limitations associated with this installation.

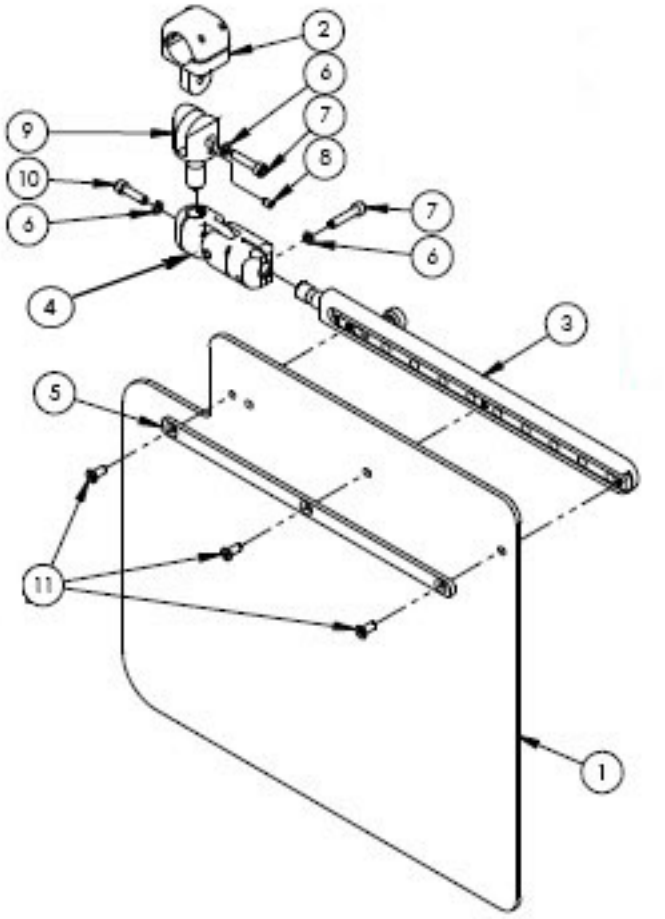
Maule Installation Example: Image showing measurement from corner soft goods

Completed Maule Installation

Husky Installation Example: Image showing measurement from cross tube.

Husky Completed Installation: Side window coverage.

Figure 1



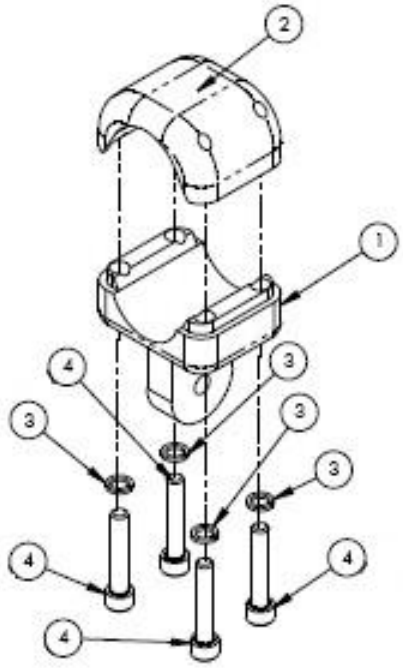


Figure 2

Part Listing

Figure No	Figure Item	Part Number	Description	Reference	Eff	QTY
1		R1710000-011	Complete Tube Mount System, ¾" Mount and Universal Lens			System
1		R1710000-114	Tube Mount Visor Assembly, Pilot Side, ¾" Mount and Husky Lens (not shown)			System
1		R1710000-034	Complete Tube Mount System, 5/8" Mount and Husky Lens (not shown)			System
1		R1710000-134	Tube Mount Visor Assembly, Pilot Side, 5/8" Mount and Husky Lens (not shown)			System
1		R1710000-041	Complete Tube Mount System, 7/8" Mount and Universal Lens			System
		R1710200-114	Husky Visor Assembly, Pilot Side Only, ¾" Mount and Husky Lens (not shown)			System
1	1	1710201 1710202	Lens, Universal Lens, Maule			1(pilot assy) 2 (system)
1	2	1710100-x	Mounting Assembly			1(pilot assy) 2 (system)
1	3	1010000-5	Slide Assembly			1(pilot assy) 2 (system)
1	4	1020100-001	Mod Block Assembly			1(pilot assy) 2 (system)
1	5	1010003	Lens Strip			1(pilot assy) 2 (system)
1	6	8HCLW	#8 High Collar Lock Washer			3(pilot assy) 6 (system)
1	7	MS16995-28B	#8-32 X .750 Hexagon Socket Cap Screw(Black)			2(pilot assy) 4(system)
1	8	AN565-AC6-4B	#6-32 x.25 Set Screw (Cone Point)			1(pilot assy) 2 (system)
1	9	1710102	Tube Mount - Swivel			1(pilot assy) 2 (system)
1	10	MS16995-27B	#8-32 x.625 Hexagon Socket Cap Screw (Black)			1(pilot assy) 2 (system)

1	11	MS24693-C48BP	#8-32 x.375 Phillips Flathead Screw 100 (Black/Patch)			3(pilot assy) 6(system)
2		1710100-x	Mounting Assembly			1(pilot assy) 2 (system)
2	1	1710103-x	Tube Mount - Bottom			1(pilot assy) 2 (system)
2	2	1710104	Tube Mount - Top			1(pilot assy) 2 (system)
2	3	6HCLW	#6 High Collar Lock Washer			2(pilot assy) 4(system)
2	4	MS16995-20B	#6-32 x .75 Hexagon Socket Head Cap Screw			2(pilot assy) 4(system)