



U.S. Department
of Transportation

**Federal Aviation
Administration**

Small Airplane Directorate
Chicago Aircraft Certification Office
2300 E. Devon Avenue, Room 107
Des Plaines, IL 60018

December 18, 2018

Gary Hanson (Dave Walko)
Operations Manager,
Rosen Sun Visor Systems LLC
4884 Franklin Blvd
Eugene, Oregon 97405

Dear Mr. Hanson,

We received your letter and data transmittal dated November 13, 2018 with your statement certifying your Rosen Sunvisors meet the design and performance requirements of FAA Policy PS-AIR-21.8-1602 for Non Required Safety Enhancing Equipment (NORSEE) and is produced under a quality system that satisfies the requirements of the same policy. The FAA requires you to have a quality manual that verifies your process and follows the guidance outlined in the NORSEE policy. In addition, we have communicated to the Seattle MIDO your intent to produce NORSEE and PMA articles in the same facility. Based on our acceptance of your statement and 14 CFR 21.8(d), we authorize manufacturing of your equipment as detailed by the part numbers listed in the following table:

| <u>Article Name</u> | <u>Part Number</u> | <u>Authorized Function</u> | <u>Approved Replacement for</u> | <u>FAA Approval Basis and Approved Design Data</u> | <u>Installation Eligibility:</u> |
|---------------------|--------------------|----------------------------|---------------------------------|--|--|
| RPNC-300-1 | R1480000-0 | Sunvisor | Alteration Part | FAA memorandum number PS-AIR-21.8-1602 and Drawing: 1480000 Rev.: C Date: 11/05/2018 or later FAA-approved revisions | Provided that the requirements of 14 CFR 1.1 and 14 CFR 43 Appendix A are met and the installation does not detrimentally obstruct the pilots view of required instrumentation, equipment may be installed as a minor alteration on a nonpressurized Aircraft Certified under 14 CFR 23 or precursor regulations, as outlined in FAA memorandum number PS-AIR-21.8-1602. |

It is critical for users of the above equipment to understand that NORSEE is considered secondary or non-essential to the required equipment. It is vital for the pilot in command to understand its functionality, limitations, and intent to provide only additional, non-contradictory information. It is the pilot's responsibility to use basic airmanship to operate the aircraft safely with or without the aid of NORSEE.

This approval is based on the authorized function as stated in the above table. Uses outside of this authorized function have not been reviewed by the FAA to comply with the requirements of FAA Policy PS-AIR-21.8-1602 and may require additional evaluation. It should also be noted that NORSEE production approval does not grant Installation Approval Product Manufacturer Authorization (PMA) or Technical Service Order Authorization (TSOA).

We also accept the statement that your quality system meets the requirements of FAA Policy PS-AIR-21.8-1602. We authorize production of this NORSEE equipment at your Rosen Sunvisor Systems LLC facility located at 4884 Franklin Blvd, Eugene Oregon, 97405.

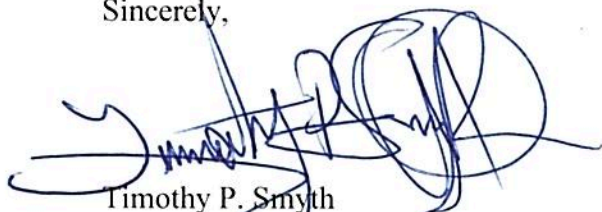
All major components of the articles produced under this approval must be permanently and legibly marked with the authorization holder's name, or trademark, or symbol, part number and "14 CFR 21.8(d)".

You must allow the FAA to inspect your quality system, facilities, technical data, and any manufactured articles and witness any tests, including any inspections or test at a supplier facility, necessary to investigate any service difficulty or possible non-compliance with FAA Policy PS-AIR-21.8-1602. Any service difficulties with the equipment should be reported to the ACO.

You must notify the FAA before making any changes to the location of any of your manufacturing facilities, company name or ownership. This approval is transferable to another U.S. manufacturer subject to the transferee complying with the NORSEE policy PS-AIR-21.8-1602 (or later policy revision) and design approval holders responsibilities stated in this letter of authorization.

This approval is effective until surrendered, withdrawn or otherwise terminated by the FAA. If you have any questions, please call John Raspanti, at (847) 294-7379, fax (847) 294-7834, email john.raspanti@faa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy P. Smyth", is written over a circular stamp or seal. The signature is somewhat stylized and overlaps the stamp.

Timothy P. Smyth
Chicago ACO Branch, Manager -- AIR-7CO
Compliance and Airworthiness Division, FAA



Piper Navajo/Chieftain NSA
Sunvisor System

| | | |
|------|------------|----------|
| Rev. | Date | Approved |
| D | 11/13/2018 | GH |

Drawing List
RPNC-00 DL

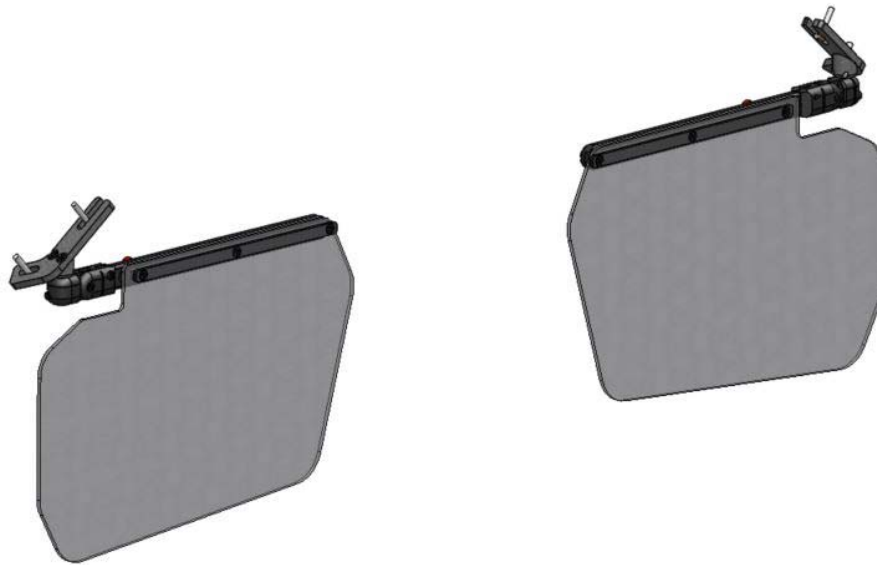
Doc. # 9050-0148-001

| Drawing | Reference | Description | Rev. |
|----------------|-------------------|-----------------------------|----------|
| 1480000 | RPNC-300-1 | Complete System | C |
| | R1480000-0 | | |
| 1480101 | RPNC-200-2 | Mounting Bracket | C |
| 1381102 | | Swivel, 40° | D |
| 1020100-001 | | NSA Modified Block Assembly | E |
| 1020002-001 | | Modified 'A' Block | P |
| 1020003-001 | | Modified 'B' Block | U |
| 1010000-5 | | Complete Slide Assembly | F |
| 1010001-5 | | Female Slide – Universal | M |
| 1010002-3 | | Male Slide – Universal | P |
| 1010003 | | Lens Strip | F |
| 1480201 | RPNC-200-1 | Navajo/Chieftain NSA Lens | D |
| 9051-0148-001 | | Navajo Chieftain PMM | A |



Piper Navajo Chieftain Sunvisor System

Rosen Kit Number R1480000-0



**Product Maintenance Manual
with Installation Instructions,
Instructions for Continued Airworthiness,
and Illustrated Parts List**

**Manual Number
Rosen 9051-1480-001
Revision A**

November 6, 2018

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

**Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001**

This Installation and ICA must be followed when the R1480000 Sunvisor system is installed in accordance with the associated documentation.

The information contained in this document supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this manual, consult the basic aircraft ICA or Maintenance Manual.

Record of Revisions

| Rev | Description | Date | Approved |
|-----|-----------------|-----------|----------|
| A | Initial Release | 11/6/2018 | GH |

Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001

Table of Contents

| | |
|--|------|
| Record of Revisions | 2 |
| Introduction | 4 |
| General | 4 |
| Revision Service | 4 |
| Fault Isolation | 5 |
| Product Description | 6 |
| Installation Instructions | 6 |
| Instructions for Continued Airworthiness | 7 |
| Airworthiness Limitations | 7 |
| Removal | 7 |
| Weight and Balance | 7 |
| Repair | 7 |
| Illustrations and IPC | 8-10 |
| Parts List | 11 |

Introduction

1. General

- a. This Rosen Component Maintenance Manual provides use, maintenance and airworthiness instructions for the cockpit Sunvisor system used on the Piper Navajo/Chieftain PA-31 Series 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

Current revision status and revisions to this document may be obtained from Rosen Sunvisor Systems' website: www.rosenvisor.com. We recommend that you periodically check to make sure you are using the most current version.

Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001

Fault Isolation

General

This section identifies Probable Causes and Corrections for possible faults.

| Problem | Probable Cause | Corrective Action |
|--|--|---|
| Visor assembly does not slide easily on arm. | Thumb knob too tight | Loosen knob and slide using knob |
| | Debris in arm assembly | Extend visor and carefully wipe arm track with a clean cloth. |
| Lens does not rotate smoothly on vertical axis | Vertical pivot tension incorrectly set | Re-tension vertical pivot |
| Lens does not rotate smoothly on horizontal axis | Horizontal pivot tension incorrectly set | Re-tension horizontal pivot |

Product Description

The Rosen Sunvisor System consists two arm and visor assemblies which have been designed to improve pilot comfort during standard cockpit operations. Each arm assembly is fastened to the aircraft hard points used for the original visor mount and an additional headliner attachment point for stability.

Installation Instructions for Piper Navajo/Chieftain NSA Sunvisor Systems

Please read through these instructions completely before beginning.

Hardware included:

- | | | |
|---|---------------|---|
| 2 | AN526C1032R16 | 10-32x1 Phillips Truss Head Stainless Steel Screw |
| 2 | AN526C832R16 | 8-32x1 Phillips Truss Head Stainless Steel Screw |
| 1 | 5/32 Hex Key | |
| 1 | 9/64 Hex Key | |

The Navajo/Chieftain NSA Sunvisor is an easy installation.

First remove the small padded visor by removing the 10/32 fastener at each end.

Now remove the first 8/32 trim screw inboard and above the 10/32 screw.

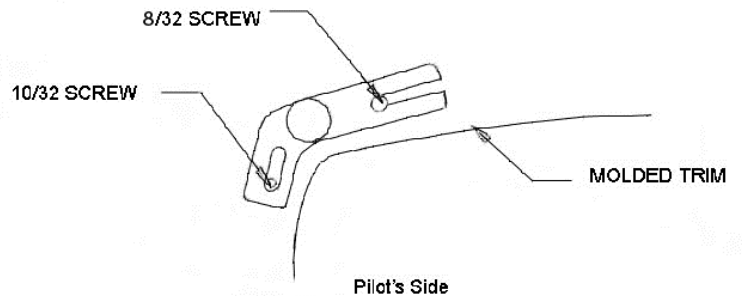
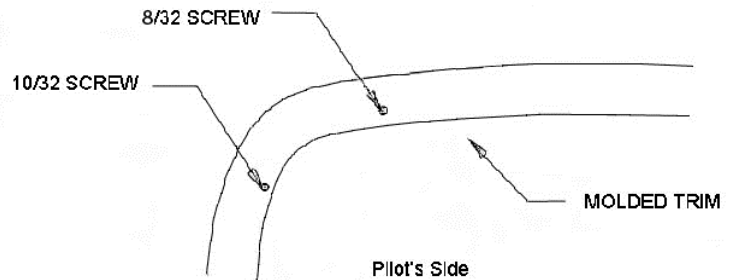
Now take your Rosen NSA unit, and using the AN526C1032R16 screw provided, install the pilot's visor with the enclosed slot of the bracket outboard and the open slot above and inboard, picking up the AN526C832R16 screw provided. The brackets are slotted to allow for differences on original screw locations as they are not always exact.

The swivel post mounting the visor arm should be nearly vertical when properly installed.

Secure the 10/32 and 8/32 screws and repeat for opposite side.

All tension movements on your Rosen NSA visor may be adjusted to your exact requirements with the Allen wrenches provided.

The visor may be stowed in several positions-- forward under the trim, or to the rear and then up on the side wall.



Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001

Instructions for Continued Airworthiness:

- **(On the ground only)**
 - Periodically clean the lenses with a soft cloth and Rosen Plastic Cleaner, Polisher and Protectant, or mild soap and water. Do not use abrasive cleaners on the lens.
 - Periodically adjust the pivot tensions on the visor assemblies.
- 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 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.

Removal

Reverse installation procedure and replace fasteners into aircraft.

Weight and Balance

This system adds 2.04 lbs. at the visor mounting location. If installation includes the removal of factory installed visors they should be weighed and accounted for in the calculation of weight and balance.

Repair

All components that do not meet the requirements for continued use must be replaced.

Illustrations and IPC

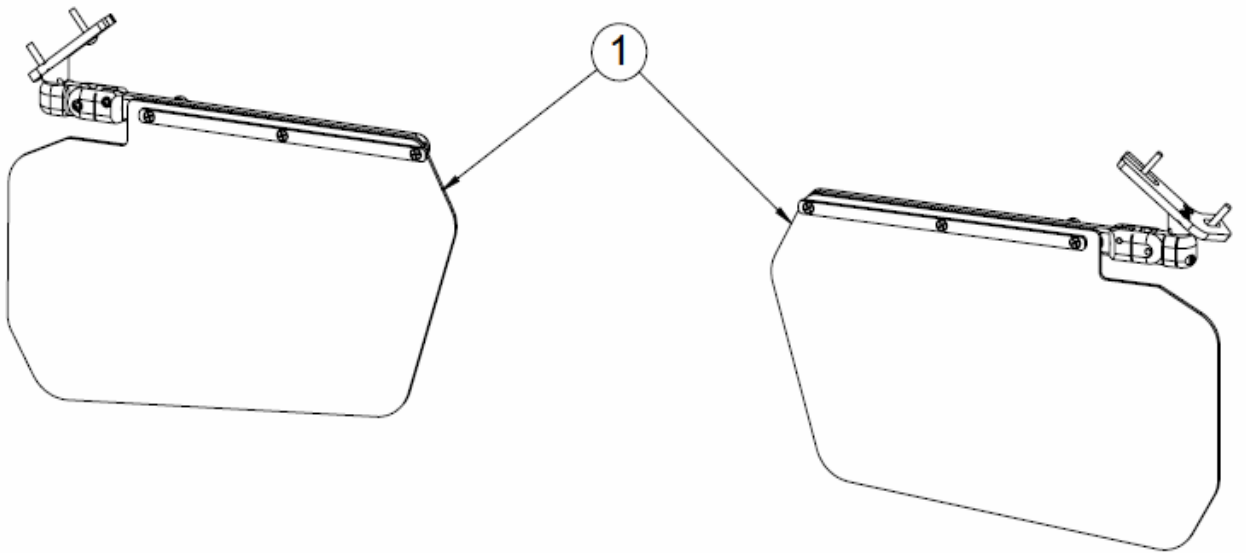


Figure 1

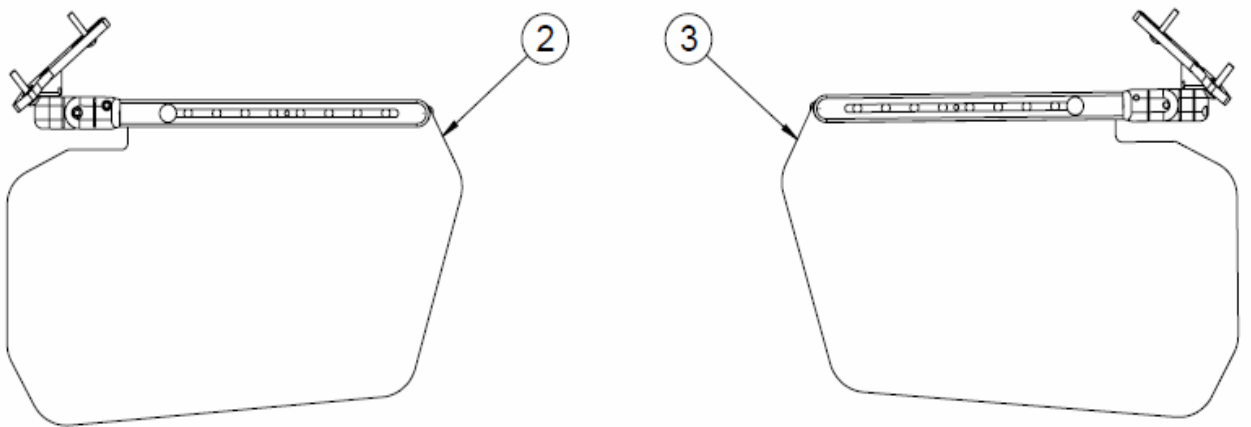


Figure 2

Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001

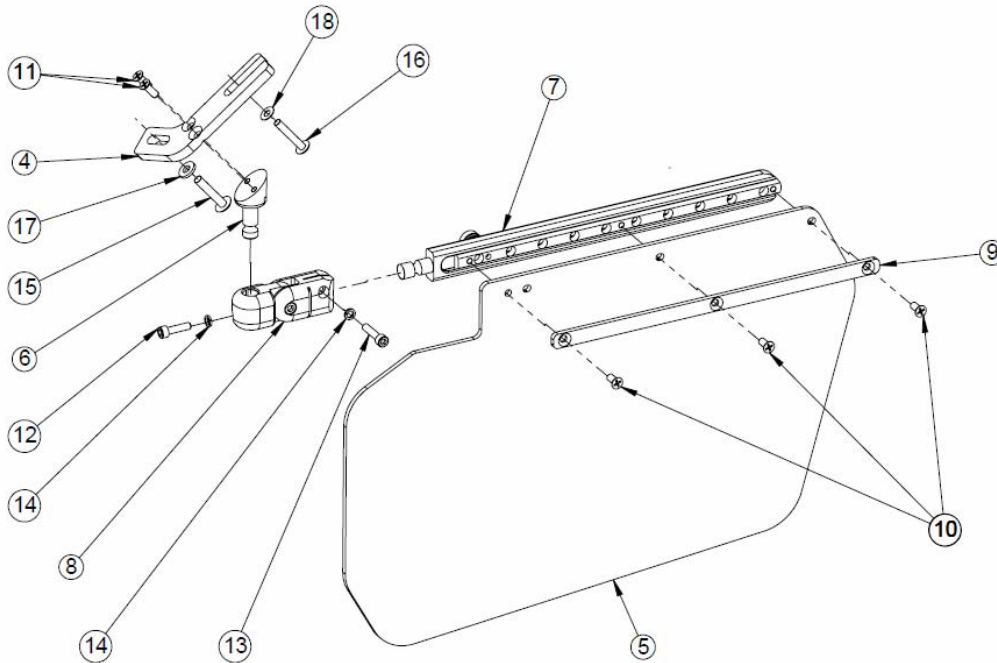


Figure 3 – Pilot Side Shown

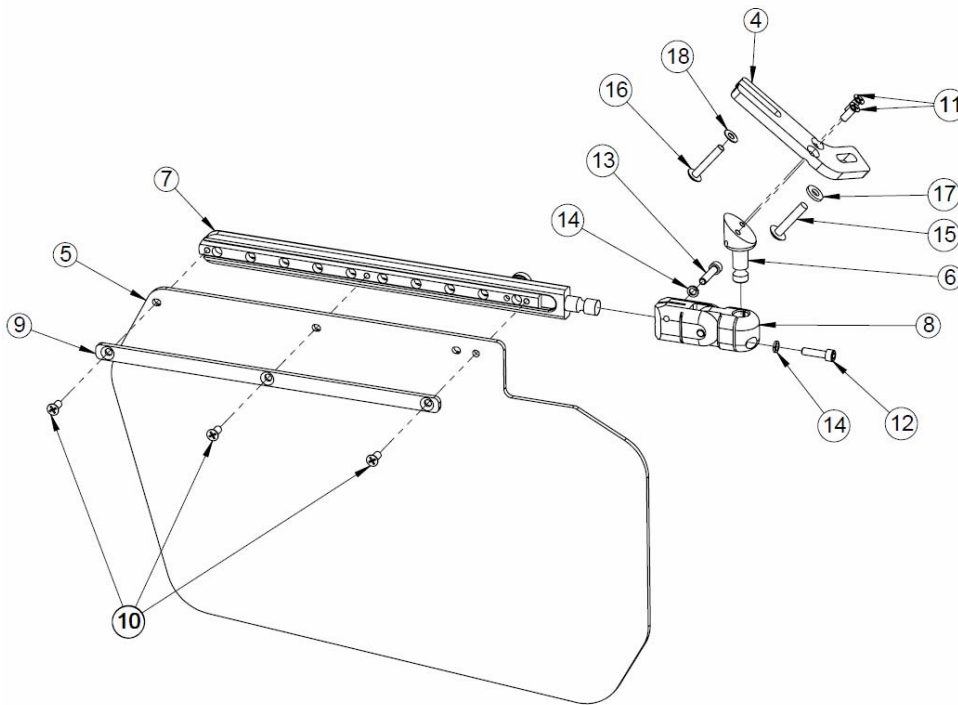


Figure 4 – Co-Pilot Side Shown

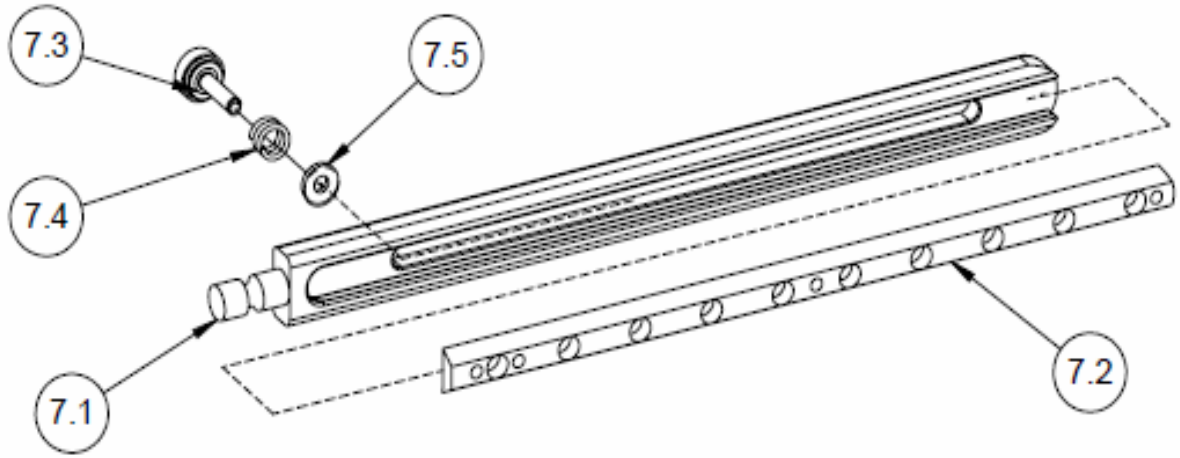


Figure 5 – Slide Assembly – Universal

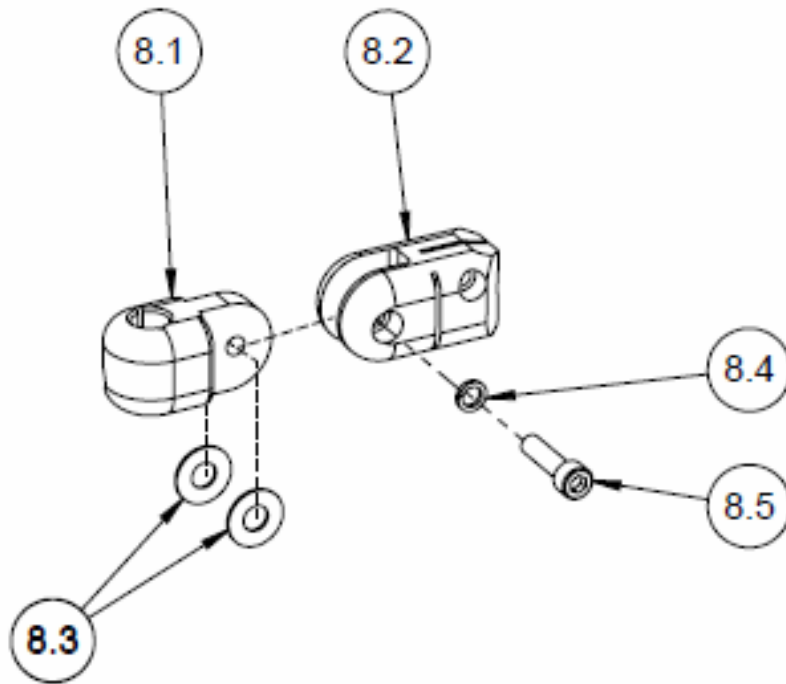


Figure 6 – Assembly, MOD Block, NSA

**Rosen Sunvisor Systems PMM / IPC for Sunvisor Assembly (p/n R1480000)
Document #9051-1480-001**

PARTS LIST

| FIG NO. | ITEM NO. | PART NUMBER | DESCRIPTION | QTY |
|---------|----------|---------------|--|-----|
| 1 | 1 | 1480000-0 | COMPLETE SYSTEM - BOTH SIDES | 1 |
| 2 | 2 | 1480000-1 | COMPLETE ASSEMBLY, PILOT SIDE | 1 |
| 2 | 3 | 1381102 | COMPLETE ASSEMBLY, COPILOT SIDE | 1 |
| 3, 4 | 4 | 1480101 | MOUNTING BRACKET | 2 |
| 3, 4 | 5 | 1480201 | LENS | 2 |
| 3, 4 | 6 | 1381102 | SWIVEL, 40° | 2 |
| 3, 4 | 7 | 1010000-5 | SLIDE ASSEMBLY - UNIVERSAL (RED KNOB) | 2 |
| 5 | 7.1 | 1010001-5 | FEMALE SLIDE | 1 |
| 5 | 7.2 | 1010002-3 | MALE SLIDE | 1 |
| 5 | 7.3 | KNOB RED | ø1/2 KNURLED RED KNOB 8-32 x.75 | 1 |
| 5 | 7.4 | B-19679 | SPRING, COMPRESSION, .312 OD, .047 WD, .025 FL, 380 SR, .184 SH, CLOSED ENDS, MW PER ASTM A228, ZP PER ASTM B633 | 1 |
| 5 | 7.5 | 90295A110 | NYLON WASHER .06 x .405 OD - .175 ID | 1 |
| 3, 4 | 8 | 1020100-001 | ASSEMBLY, MOD BLOCK - NSA | 2 |
| 6 | 8.1 | 1020003-001 | MODIFIED "B" BLOCK | 1 |
| 6 | 8.2 | 1020002-001 | MOD BLOCK A | 1 |
| 6 | 8.3 | 2801-0010 | WSHR, FLAT, 1/4, .255 ID X .566 OD X .030, SST (SEASTROM 5710-61-30) | 2 |
| 6 | 8.4 | 10HCLW | LKWASH, HLCL SPR, ASME B18.21.1, #10, HIGH COLLAR, CS, BLK OXD | 1 |
| 6 | 8.5 | MS16996-12B | SCR, HEXSOCH CAP, 10-32 X .750, CRES, BLK OXD | 1 |
| 3, 4 | 9 | 1010003 | LENS STRIP | 2 |
| 3, 4 | 10 | MS24693-C48BP | SCR, FLH PHILLIPS MACH, 8-32 X .375, 100 DEG, CRES, BLK OXD, PATCH | 6 |
| 3, 4 | 11 | MS24693-C49B | SCR, FLH PHILLIPS MACH, 8-32 X .438, 100 DEG, CRES, BLK OXD | 4 |
| 3, 4 | 12 | MS16995-27B | SCR, HEXSOCH CAP, 8-32 X .625, CRES, BLK OXD | 2 |
| 3, 4 | 13 | MS16995-28B | SCR, HEXSOCH CAP, 8-32 X .750, CRES, BLK OXD | 2 |
| 3, 4 | 14 | 8HCLW | LKWASH, HLCL SPR, ASME B18.21.1, #8, HIGH COLLAR, CS, BLK OXD | 4 |
| 3, 4 | 15 | AN526C1032R16 | SCR, TYPE II PHILLIPS, TRS HD MACH, 10-32 X 1.000, CRES | 2 |
| 3, 4 | 16 | AN526C832R16 | SCR, TYPE II PHILLIPS, TRS HD MACH, 8-32 X 1.000, CRES | 2 |
| 3, 4 | 17 | AN960-C10 | WSHR, FLAT, #10, .203 ID X .438 OD X .063, CRES | 2 |
| 3, 4 | 18 | AN960-C8L | WSHR, FLAT, #8, .174 ID X .375 OD X .016, CRES | 2 |