

# Supplemental Type Certificate

Number SA3687NM

This certificate, issued to Rosen Product Development Inc.

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 3 of the Civil Air Regulations.

Original Product — Type Certificate Number: 3A24  
Make: Cessna  
Model: 185

Description of Type Design Change: Cockpit Sun Visor installation in accordance with FAA-approved Rosen Drawing List Number RCS-00DL, dated December 17, 1986, or later FAA-approved revisions.

Limitations and Conditions: The approval of this change in type design applies basically to the above aircraft model only. This approval should not be extended to other aircraft of this model on which previously approved modifications are incorporated, unless it is determined that the interrelationship between this change and any other previously approved modifications will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate and FAA-approved Drawing List Number RCS-00DL shall be maintained as part of the permanent records of the modified aircraft.

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: January 23, 1987

Date issued:

Date of issuance: February 12, 1987

Date amended:



By direction of the Administrator

*D. P. Ruggan*  
(Signature)

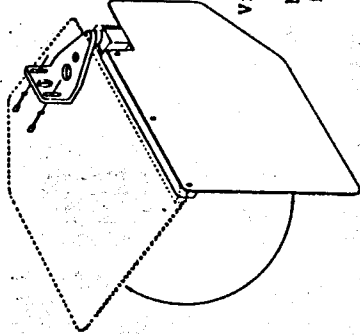
Assistant  
Manager, Seattle Aircraft  
Certification Office, ANM-100S  
(Title)

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.



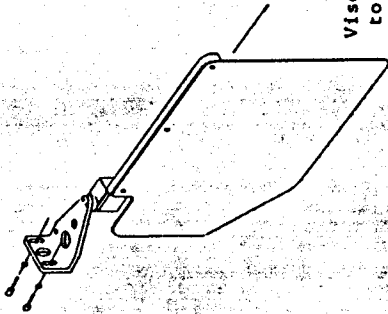
ROSEN PRODUCT DEVELOPMENT, INC.  
503-342-3802  
P.O. BOX 21636  
EUGENE, OR 97402



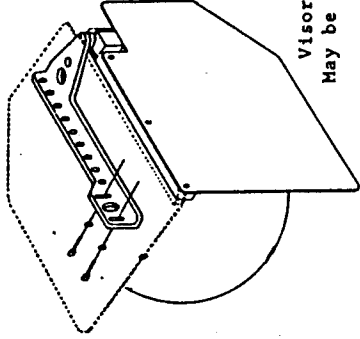
Visor rotates up to stow  
May be stowed forward or aft

**COMPLETE ASSEMBLY -1**

Replaces older visors  
Mounting to side of visor



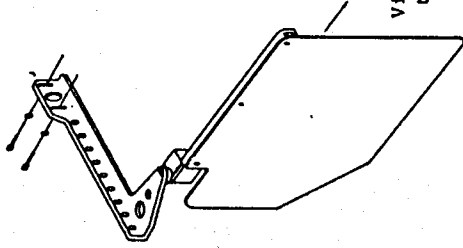
Visor slides aft on swivel arm to provide complete coverage



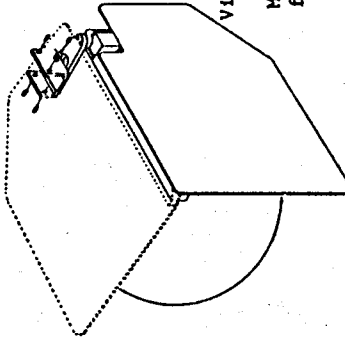
Visor rotates up to stow  
May be stowed forward or aft

**-2**

**COMPLETE ASSEMBLY**  
Replaces new visors  
Mounting in center of visor



Visor slides aft on swivel arm to provide complete coverage

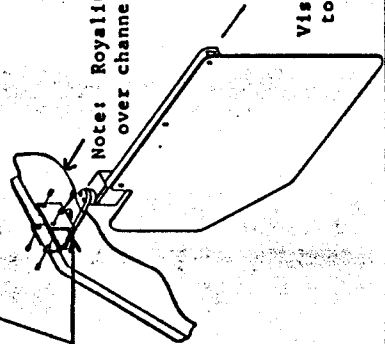


Visor rotates up to stow  
May be stowed forward or aft

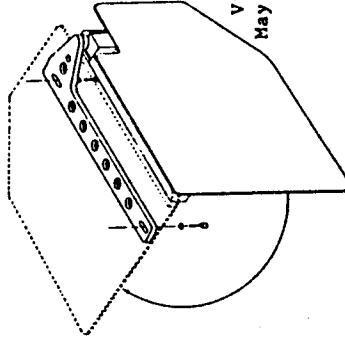
**COMPLETE ASSEMBLY -3**

210's without pressure

Royalite is trimmed to accommodate system  
See instructions for details



Visor slides aft on swivel arm to provide complete coverage



Visor rotates up to stow  
May be stowed forward or aft

**COMPLETE ASSEMBLY -4**

P 210's

Visor slides aft on swivel arm to provide complete coverage

ROSEN PRODUCT DEVELOPMENT, INC.			
CESSNA SERIES NSA			
MODEL	DATE	REVISION	ISSUE
			RCS-500
DESIGNED BY	CHECKED BY	DATE	SCALE
			1/8"



**ROSEN PRODUCT  
DEVELOPMENT INC.**

P.O. BOX 21636, EUGENE, OR 97402(503) 342-3802

Rosen NSA Sunvisor System  
For Single Engine Cessnas\*

DRAWING LIST

RCS-00 DL

Drawing #	Description	Sheet #	Rev Level	DCN #'s
RCS-100	Mounting Brackets	1	---	---
RCS-100 PL	Lens & Brackets Parts List	2 1	---	---
RNSA-100	Slides & Swivels	1	---	---
RNSA-100 PL	Parts List	1	---	---
RCS-300	Assembly Drawing			
	(-1 System)	1	---	---
	(-2 System)	2	---	---
	(-3 System)	3	---	---
	(-4 System)	4	---	---
RCS-300 PL	Parts List			

December 17, 1986

\* Except 177



# ROSEN PRODUCT DEVELOPMENT INC.

P.O. BOX 21636, EUGENE, OR 97402 (503) 342-3802

## INSTALLATION INSTRUCTIONS

for

ROSEN NSA SUNVISOR SYSTEM <sup>T.M.</sup>

CESSNA SINGLE ENGINE AIRCRAFT SERIES  
(Except 177)

Drawing #RCS-400

- The sunvisor has been a neglected piece of equipment in most aircraft and especially in the smaller models such as the Cessna single engine line. Rosen Product Development has worked very diligently to produce the best possible sunvisor systems for these aircraft.
- There are five basic visors in the original Cessna line as shown below and primarily determine which Rosen NSA System is to be used. With the exception of the 210 (non-pressurized) and 152's with the factory system that looks like Figure E, it is a simple matter of unbolting the original visor and bolting on the Rosen unit. With the majority of 210's (non-pressurized) the unit will take approximately one to one and a half hours to install. The 152's mentioned above will take Part #RCS-300-1 but since there are no fasteners to pick up, a mechanic will need to install the rivnuts that are supplied. (Note: Aircraft with air conditioning will require Part #RCS-300-4.)
- Please review the following diagrams to insure that you have received the correct part number and then proceed to your particular instructions.

### Original Visor Mounting Locations Correct Rosen Replacement Part Numbers

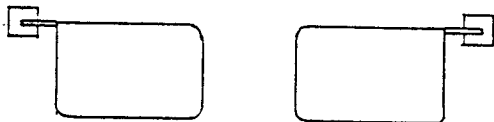


Figure A--Side Mount  
#RCS-300-1



Figure B--Newer Center Mount  
#RCS-300-2

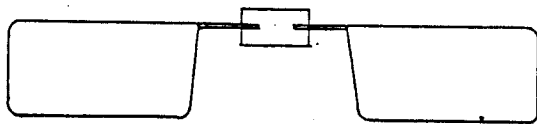


Figure C--210 Console Mount  
#RCS-300-3

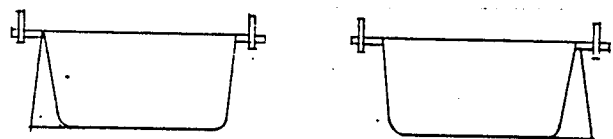


Figure D--P210 Both End Mount  
#RCS-300-4

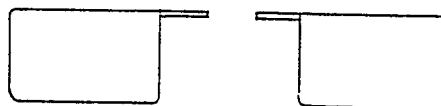


Figure E--152 Center Mount  
#RCS-300-1

Continued . . . . .

Installation of Rosen NSA Sunvisor System  
Part #RCS-300-1

Tools Required: Short Phillips screwdriver.

- Remove the #10 screws holding the original Cessna visor on the side of the front spar. The screws may be difficult to remove if the aircraft has been stored outside but a short Phillips screwdriver and a little elbow grease should prove successful.
- Take the visor assembly marked "pilot's side" and, using the #10 sockethead cap screws and black anodized washers, install the unit so that the bracket fits tight up against the overhead. The same hard points are used as the original visor. (An Allen wrench is provided for your convenience.) You will notice that the cap screws are much easier to work with than the old screws that were just removed.
- Securely tighten the unit.
- Repeat the same procedure for the copilot's side.
- Installation is now complete and, if you were looking aft through the front windshield, the visors should appear the same as in Figure F.
- Now turn to the Operating Instructions on page 8.

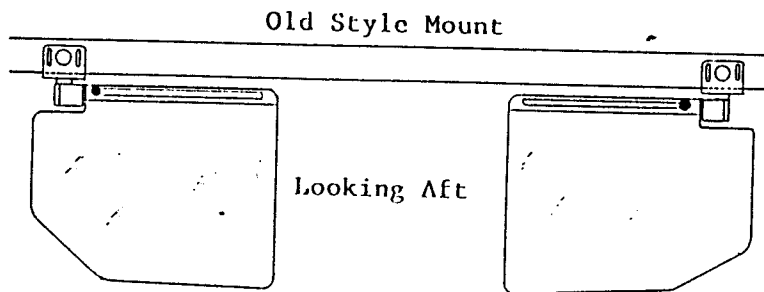


Figure F

Installation of Rosen NSA Sunvisor System

For 152's as Shown in Figure E

Part #RCS-300-1

Tools Required: Drill, #8 bit, #8 rivnut puller, Phillips screwdriver.

- Remove the original visors from the center mount and, taking the unit marked "pilot's side," slide the bracket as far outboard on the front spar as possible. Mark the outline of the bracket on the overhead trim as the bracket comes aft as shown in Figure G.
- Holding the front bracket in that same position, rotate the visor to the side and extend it to the rear. This is to ensure that the bracket position is not so far outboard that there is a problem moving the visor to the side position.
- Now move the visor to the front and retracted position (keeping the bracket in the same marked position). Rotate the visor as if you were going to stow it to the rear and make sure it will not hit the top center console.
- When the visor is positioned correctly, mark the two 3/16" holes in the bottom of the bracket and install the A10K80 rivnuts provided. After installation of the rivnuts, install the pilot's visor assembly with the sockethead cap screws provided.
- Repeat this same procedure for the copilot's side.
- Turn to the Operating Instructions on page 8.

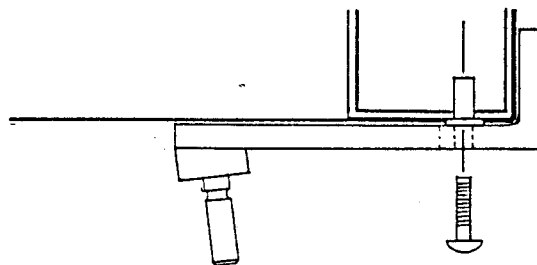


Figure G

Continued . . . . .

Installation of Rosen NSA Sunvisor System

Part #RCS-300-2

Tools Required: Short Phillips screwdriver.

- The main difference between the -2 part and the -1 part is the length of the bracket which picks up the Cessna visor mounting holes. Since these are newer aircraft it will be less of a problem removing the screws securing the present system. Do so at this time. A short Phillips screwdriver will make fast work of removing the #10 fasteners from the center of the plastic type Cessna visor.
- Using the #10 sockethead cap screws, washers and 5/32" Allen wrench provided, attach the visor assembly marked "pilot's side" by inserting the screws through the slots at the end of the bracket.
- Insure that the bracket fits tight against the overhead.
- Repeat the same procedure for the copilot's visor assembly.
- The installation is now complete and, if you were to look aft through the front windshield, the -2 part number should appear as it does in Figure H.
- Now turn to the Operating Instructions on page 8.

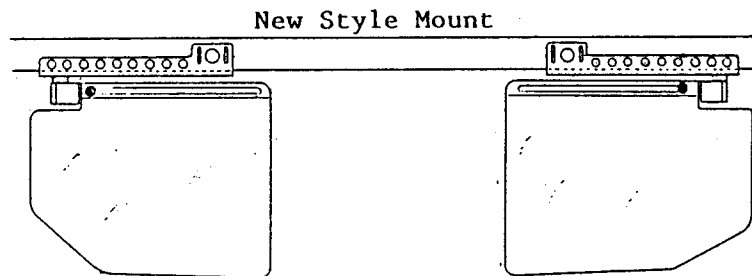


Figure H

Installation of Rosen NSA Sunvisor System

Part #RCS-300-3

Tools Required: Phillips screwdriver, drill, 3/16" bit, razor blade, hacksaw, file.

- This system should take approximately one to one and a half hours to install but is probably one of the best looking installations as long as you do not try to hurry.
- Remove the old Cessna visors that go into the overhead center console.
- Remove the screws from the Royalite trim piece that covers the vertical post on the pilot's side between the windshield and the door. The stall warning horn will need to be removed; this is an easy task by unscrewing the cover cap.
- Lower the Royalite trim piece that runs from the center of the aircraft to either side and covers the front spar.
- Now, by looking up by the top of the windshield, you will find a strip of fabric hooks riveted to the top of the forward spar. The headliner fabric has been stretched and then hooked on these, much like the installation of a carpet.
- Pull up on the fabric on the left side corner of the cockpit to release it and to expose the front spar.
- Sitting in the pilot's seat and looking up at the front spar, you will notice a gusset or angle coming out of the top side structure and running into the front spar. Measure 3/4" inboard of the gusset and make a pencil mark on the bottom of the spar. Now take one channel clamp with the short side forward and slip it over the front spar. The left side of the clamp should line up with the pencil mark. Proceed to uniformly tighten the front and rear cone point set screws with the 1/8" Allen wrench provided. (Insure the channel clamp is pushed up as tight as possible on the spar.) See Figure I.

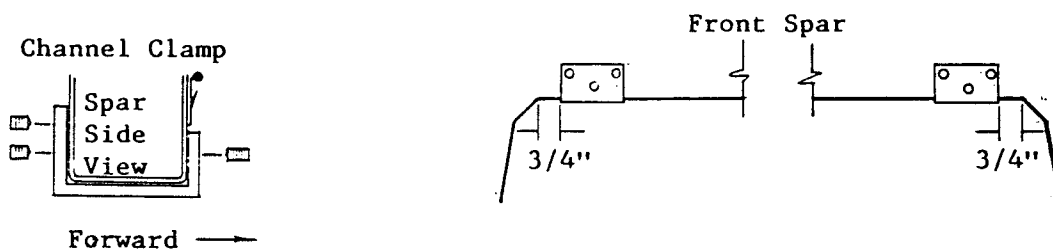


Figure I

- Insure all set screws are tight.
- Take the three #8 set screws with the sharp point down and, with your fingers, screw them into the two inboard and front outboard holes in the channel clamp. These are to mark the Royalite trim piece so that holes can be drilled in the right location. The correct hole pattern for the three set screws are shown below in Figure J.

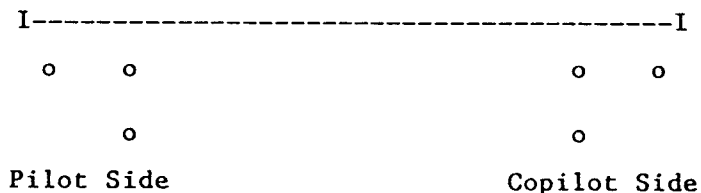


Figure J

Continued . . . . .



- Carefully re-align the Royalite trim piece that runs across the top of the cockpit and when it is in its original position, push up firmly against the set screws that are sticking out of the channel clamp. These marks can now be drilled with a 3/16" drill bit. Drill only the trim and make sure you do not try to drill the fabric as it will twist around the bit and stretch or tear the material.
- Remove the three set screws and save them for the copilot's side.
- Now stretch the overhead fabric back over the fabric hooks. Then take a razor blade and cut a small piece of fabric from in front of the three holes that you will be using in the channel clamp. (These three holes are used to attach the bracket to the channel clamp.)
- Take the visor assembly marked "pilot's side" and, using the 8/32" flathead socket screws provided, attach it with all three screws through the holes in the trim and into the channel clamp. Use the 3/32" Allen wrench provided to insure the screws are securely fastened.
- The last installation item on the pilot's side is to re-install the vertical Royalite trim piece. Care at this point will insure that the installation is professional in every detail.
- Fit the vertical trim piece on the post and you will notice that the top left corner will not quite fit over the anodized bracket. See Figure K.
- Carefully mark the trim piece with a pencil in the position that it needs to be trimmed. It is easy to cut too much material off, so cut less than you think is necessary. Take a hacksaw and cut the Royalite, leaving extra material where you have marked. Smooth the cut with a file and try to fit the piece in place again. Remember, it is better to repeat this procedure several times and have a nice tight fit of trim to bracket, then to get in a hurry and have a bad fit.

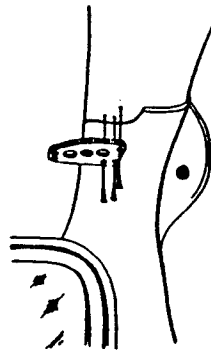


Figure K

- Re-install the stall warning horn and secure the side trim with original fasteners.
- Repeat this same procedure with the copilot's side.
- Now, turn to the Operating Instructions on page 8.

Installation of Rosen NSA Sunvisor System

Part #RCS-300-4

Tools Required: Phillips screwdriver.

- This P210 system replaced the original visor that is mounted with two screws as shown in Figure D (see page 1). This installation requires only a Phillips screwdriver and the Allen wrenches supplied with the kit.
- Remove both pilot's and copilot's original Cessna visor with a Phillips screwdriver.
- Take out the visor assembly marked "pilot's side" and, using two #8 sockethead cap screws and black anodized washers, attach the mounting bracket to the original hard points. The slots in the bracket allow for mismounting of the original visor screws.
- Tighten the pilot's side securely using the 5/32" Allen wrench supplied in the kit.
- Repeat the same procedure for the copilot's visor assembly.
- This installation should take approximately 10 minutes.
- Now turn to the Operating Instructions on page 8.
- **NOTE:** If at any point in the future you feel there is too much flex in the bracket when the visor is extended to the rear, a rivnut and fastener are included to mount to the spar using the extra 3/16" hole in the black anodized bracket.

### Operating Instructions

- The Rosen NSA Sunvisor System<sup>™</sup> for the Cessna single engine line has two axis pivot and, although level when placed across the front windshield, it rotates down at about a 10° incline as you rotate it to the side. This incline is to give the Cessna pilot more coverage low on the sides for that late or early morning sun.
- Rotational tension can be adjusted by turning the set screws in the side or front of the main swivel block as shown in Figure L. The side set screw increases tension as you rotate the lens up or down.

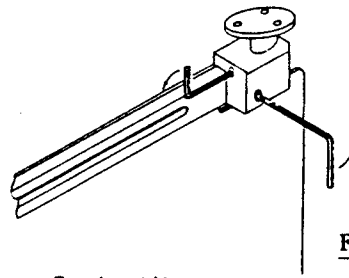


Figure L

Tension Adjustments

- When installed correctly, the slide tension knob is located inboard when the visors are rotated to either side of the aircraft. Tension can be adjusted on the slide to make it easier or more difficult to operate.
- Standard visor placements are shown in Figure M.

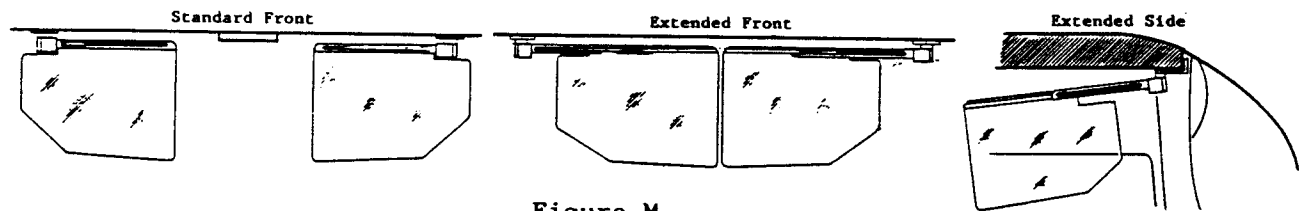


Figure M

- To stow your visors, either rotate them to the rear or to the front as shown in Figure N.

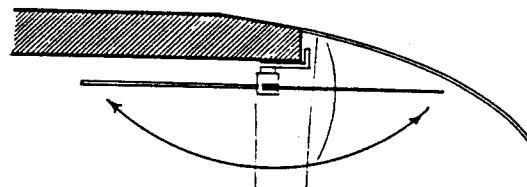


Figure N

- After using your new visors you will wonder why the factory could not have done this in the first place. The optics are very good, so shield the sun while you fly with the confidence of seeing your traffic and terrain. You are also eliminating 95% of harmful ultra violet light from your face.
- We welcome any comments that you may have on our visors or any product ideas you might have for your aircraft. Remember, we pride ourselves in no unhappy customers, so call if there is a problem, no matter how small. Enjoy your new Rosen visors.