United States of America Department of Transportation Hederal Aviation Administration

# Supplemental Type Certificate

Number SA2650NM

This certificate, issued to Rosen Sunvisor S 86365 College Vie

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* 23 of the Federal Aviation *Regulations*. (See Type Certificate Data Sheets A25CE, A7CE, and A28CE for complete certification basis.)

Original Product—Type Certificate Number:	A25CE	A7CE	A28CE
Make:	Cessna	Cessna	
Model:	404	411, 414, 421, 425	441

Description of the Type Design Change: Cockpit Sun Visor installation in accordance with FAA approved Rosen Drawing List No. RC400-00DL, Revision A, dated August, 1984, or later FAA approved revision.

*Limitations and Conditions:* The approval of this change in type design applies basically to the above model aircraft only. This approval should not be extended to aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of the aircraft. A copy of this Certificate and FAA approved Drawing List Number RC400-00DL shall be maintained as part of the permanent records of the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, 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: June 29, 1984	Date reissued:	March 24, 2003
Date of issuance: September 7, 1984	Date amended:	March 24, 2003
TOMINISTRATION	By direction of the Ad	(Signature) (Signature) (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 Approved Model List (AML) No. SA2650NM Rosen Sunvisor Systems, LLC For Installation of Rosen Sunvisor Systems, LLC Sunvisor System

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							Date: June 4	, 2004
ltem	Aircraft Make	Aircraft Model	Original Certification Type Basis	FAA Approved Drawings			AML Amdt.	
			Certificate Number	For Alteration	Number	Revision	Date	Date
1	Cessna	404, 406	A25CE	CFR 23	RC400-00DL	A	8/84	6/4/2004
2	Cessna	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425	A7CE	CAR 3	RC400-00DL	A	8/84	6/4/2004
3	Cessna	441	A28CE	CFR23	RC400-00DL	A	8/84	6/4/2004

FAA Approved: Acting Manager, Seattle Aircraft Certification Office

JUN 4 2004

Amended:



# Monorail Sunvisor System for Cessna Model 400 **Series Aircraft**

Date	Revision	Aprv
2/18/22	L	SYS

Drawing List RC400-00 DL Doc.# 9040-0141-001			
Drawing #'s	Replaces	Description	Rev.
1410000	RC400-300-1	Monorail System	В
1410100	RC400-100	Rail Assembly	Е
1410101	RC-400-100-1	Rail	С
1410103	RC400-100-5	Bracket, Forward	С
1410105	RC400-100-7	Stand Off	Е
1410102	RC400-100-2	Bracket, Aft	С
1410400	R1410400 RC400-300-3	Visor Assembly	С
1120000-001	NC400-300-3	Clamping Block Assembly	К
1120101-001		Standard Nut Plate	L
1120102-001		Clamping Block Body	L
1120104		Thumb Knob – Standard	М
1120203	R1120203	Swivel, Clamping Block	Р
1410430		Visor Assembly 3 <sup>rd</sup> Axis	Α
1120000-003		3 <sup>rd</sup> Axis Clamping Block Assembly	К
1120200		3 <sup>rd</sup> Axis Assembly	D
1120220		Swivel Assembly	D
1120207		Sleeve, Body	С
1120208		Sleeve Leg	С
1110202		Swivel Nut Plate	Е
		Continued	

1410104	R1410104	Plate, Cover – Cessna 400 Ball Joint	D
1410106	RC400-100-6 R1410106	Plate, Pressure – Cessna 400	С
1410401	RC400-100-4 RC400-200-1	Lens	D
1410431	R1410401-1	3 <sup>rd</sup> Axis Lens	С
	KITS		
RCBS-300-11M		Kit, Standard Thumb Knob	D
1120104-002		Thumb Knob	М
RCBS-300-18		Spring	
PCS-1000-14-		E-Clip	
STZ			
RCBS-100		Clamping Block Assembly Kit	Е
1120000-001		Clamping Block Assembly	K
1110202		Swivel Nut Plate	Е
000/74050100000		Screw, 8-32 X7/16 Flat Socket Head 82°	
832X716FSHCSSBP 832X14BSHCSSBP		Screw, 8-32 X 1/4 Button Head Socket	
PCS-1000-14-STZ		E-Clip	
9041-0141-001		Installation Instructions for Cessna 400 Series Monorail System	D



### Installation Instructions for Cessna 400 Series **Monorail Sunvisor System**

This is an FAA STC'd installation requiring a log book entry upon completion.

Please read through these instructions completely before beginning.

#### Hardware:

- 4 AN526C832R10
- 4 AN526C832R16
- 2 AN526C832R5
- 4 AN960D9
- 4 A8K75
- 1 3/32 Hex Key
- 1 7/64 Hex Kev
- 2 PCS-1000-14-STZO
- 2 1410106
- 2 1410104
- E-Clips **Ball Joint Cover**

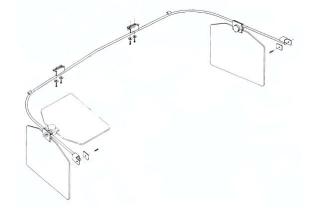
#8-32 x 5/8 Screw

#8-32 x 5/16 Screw Washer, Aluminium

#8-32 x 1 Screw

#8 Rivnut

Aft Pressure Plate



Refer to this drawing as an installation aid.

There have been several factory sunvisor installations in the 400 series aircraft and although they are basically all the same, the exact location of their mounting positions has been different. To install your new Rosen Sunvisor System you will

either fasten the front mounting brackets directly to the nut plates used for the plastic clips from the original visor **OR** you will use the rivnuts provided. To determine which fastening method you will use, please note the clip location diagram below.

Forward

- If the aircraft you are installing the visor system into has the original clip in position 'A' skip to Instruction A.
- If the clip is in position 'B' you will need to use the four (4) A8K75 rivnuts and the four (4) AN526C832R10 (#8-32 x 5/8) Screws provided to fasten the front mounts to the overhead. The only difference in using the rivnuts to fasten the front brackets is that instead of having the rail positioning predetermined, you must locate its position to insure the correct location of the rivnuts. The

monorail must be far enough forward so the standoffs on each corner hold the rail off the Royalite overhead trim. By 'hooking' the rear bracket over the trim at the rear of the cockpit on

Forward both sided the monorail can be slid fore and aft to locate the correct position for the front mounts.

Remove the existing sun visors at the mounting pivot. If you remove the visor retaining clips replace the screws in order to retain the added rigidity to the Royalite trim.

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Overhead Trim

nal Visor

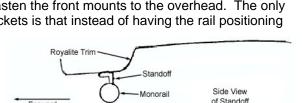
Side View

Clip 'A'

Origi

# (Kit RC400-300-1)

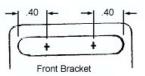
-		/		
Doc: 9041-0141-001				
Rev	Date	Approved		
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Original Visor

Clip 'B'

• After centering the monorail and getting the correct forward position mark the Royalite trim for the rivnut installation which will secure the front of the monorail. Each forward bracket has a 1.40 inch slot. The Rivnut placement should be ~.40 inch in from each side of the slot.



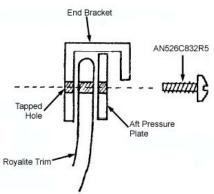
- Drill 4 holes for the rivnut installation in the Royalite only. <u>Do Not Drill Into</u> <u>The Aircraft Structure.</u> Carefully install the rivnuts into the Royalite. Do not over compress the rivnut as excess stress on the Royalite can cause it to fracture.
- Using the AN526C832R10 screws provided, fasten the monorail front brackets to the rivnuts just installed.
- Proceed to Instruction 'B'.

#### Instruction A

- Remove the present visors by unscrewing the two (2) #10 fasteners which secure the ball joint cover on both sides of the aircraft. Remove the visor plastic clips from the overhead.
- Install the monorail by 'hooking' the rear brackets over the trim to support the back of the monorail and fasten the front brackets to the nut plates that held the plastic clips using the AN526C832R16 (#8-32 x 1) screws and AN960D9 aluminium washers provided. The front brackets have been made wide enough that they should accommodate the variations in spacing found with the original plastic clip mounting. If this is the case it is acceptable to mount the front brackets with just one fastener per mounting bracket. (Two screws were used to prevent the clip from rotating. If only one fastener is used, and the remaining screw hole is visible beside the bracket, fill it with the second fastener.
- Proceed to Instruction 'B'.

#### Instruction B

- Hold the rear bracket slightly above the Royalite trim line and mark the center position of the tapped mounting hole. The Royalite will be sandwiched between the aft pressure plate and the threaded rear bracket. Mark both sides approximately 3/8 of an inch from the top of the Royalite.
- Reposition the monorail to allow clearance to drill a 3/16 diameter hole in the Royalite. <u>Do Not Drill Into The Aircraft</u> <u>Structure.</u>



- Replace the end bracket over the Royalite Trim aligning the tapped hole with the hole in the trim. Use the Aft Pressure Plate to sandwich the Royalite and secure with the AN526C832R5 (#8-32X5/16) fasteners. Apply a small amount of Loctite to these rear screws.
- Monorail installation is now complete.

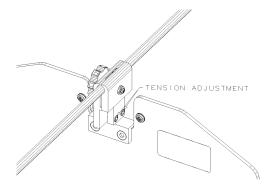
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#### Installing the visor assemblies

- Install both visor assemblies by unscrewing the thumb tension knobs until the clamping blocks can be slipped over the rails. Tighten the thumb tension knobs until the snap ring can be installed onto the snap ring groove on the back. Install the provided e-clip. This e-clip prevents inadvertent over loosening of the tensioning knob and acts as a tactile indicator that further loosening must not be attempted.
- When the visor is on the rail the tensioning knob should face the pilots.
- To move the visors loosen the thumb tensioning knob until the clamp is loose enough to be slid along the monorail while holding the thumb knob. To move past the mounting brackets the visor must be positioned so the clamps pass over the brackets.
- Your monorail system is equipped with a swivel design that allows rotation about the axis of the lens. Rotational tension can be adjusted by adjusting one or both of the hex socket head cap screws on the back side of the clamp block and below the thumb knob screw.
- The visor should be aligned with the clamp block before sliding along the monorail.



#### **Continued Airworthiness Instructions:**

- (On the ground only)
  - Periodically clean the lenses with a soft cloth and Rosen Cleaner, Polisher and Protectant or mild soap and water. Do not use abrasives on the lens.
  - o Periodically adjust the pivot tensions on the visor assemblies.
  - Periodically clean rail.
- 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. (<u>www.rosenvisor.com</u>) 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.

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