

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SA00747DE

This certificate, issued to:

Rosen Sunvisor Systems
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 3 & 10 of the Civil Air Regulations. *Certification basis established in Type Certificate Data Sheet.*

Original Product—Type Certificate Number: A-815
Make: Viking
Model: DHC-3

Description of the Type Design Change:

Monorail sunvisor system installation in accordance with Rosen Single Otter Monorail Sunvisor System Drawing List, 1691000-DL, Revision A, dated 10/28/11, or later FAA approved revisions.

Limitations and Conditions:

- 1.) Compatibility of this design change with previously approved modifications must be determined by the installer.
- 2.) Rosen's "Component Maintenance Manual with Illustrated Parts List", manual number 9100-1691-000, revision A, dated 9/26/11, or later FAA accepted revision, required for this installation.
- 3.) A copy of this certificate 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: October 28, 2011

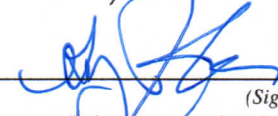
Date reissued:

Date of issuance: July 5, 2012

Date amended:



By direction of the Administrator



(Signature)
Gregory 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.



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Rosen Sunvisor Systems
86365 College View Road
Eugene, Oregon
United States of America 97405

Number: SA13-23

Issue No.: 1

Approval Date: March 08, 2013

Issue Date: March 08, 2013

Responsible Office:

Pacific

Aircraft/Engine Type or Model:

VIKING AIR LIMITED DHC-3

Canadian Type Certificate or Equivalent:

A-27

Description of Type Design Change:

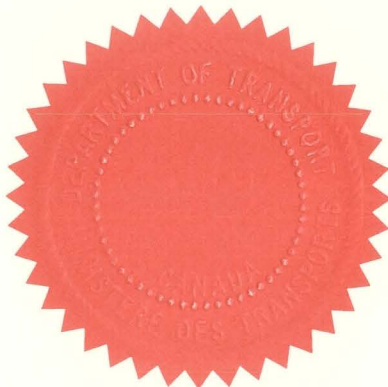
Installation of Monorail Sunvisor System per FAA STC SA00747DE

**Installation/Operating Data,
Required Equipment and Limitations:**

Installation of Monorail Sunvisor System per FAA STC SA00747DE, is to be carried in accordance with Rosen Sunvisor Systems, Single Otter Monorail Sunvisor System, Drawing List 1691000-DL, Rev. A, dated 10/28/11, or later FAA Approved revisions.

Maintenance of Rosen Sunvisor Systems, Otter Monorail Sunvisor System, is required to be done in accordance with Component Maintenance Manual With Illustrated Part List, Manual Number Rosen 9100-1691-000, Rev. A, dated 9/26/11, or later FAA accepted revisions.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.

Jorge Canal
Regional Engineer
For Minister of Transport



Single Otter Monorail
Sunvisor System

Date	Rev	Approved
2/18/22	J	SYS

Drawing List
1691000-DL

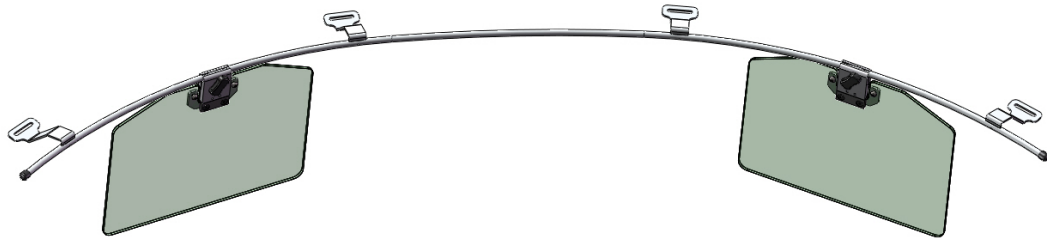
Doc. # 9040-0169-002

Drawing	Replaces	Description	Rev.
1691000		Complete Assembly	B
1691100		Rail Assembly	A
1691101		Rail, Slotted	C
1691105		Rail, Formed	B
1691104		Bracket	B
1350460		Visor Assembly, 2 Axis Soft Touch	A
1131000-001		Complete Assembly Clamping Block	C
1130100-008		Clamping Block Sub Assembly w/o Roller	B
1130103-002		Nut Plate, Clamp Block	N
1130101-004		Clamping Block Body, Universal	L
1130102-005		End Cap, Left	H
1130102-006		End Cap, Right	H
1130104-002		Rod	F
1120112		Knob, 2 Lobe, Soft Touch, 10-24	B
1120110		Thumb Knob Core	B
1120203		Swivel, Clamping Block	P
1110202		Swivel Nut Plate	E
1350401		Lens	K
R1350401		Lens Replacement Kit	K
9100-1691-000		Component Maintenance Manual With Illustrated Parts List	B



Otter Monorail Sunvisor System

Rosen Kit Number R1691000



**Component Maintenance Manual
With Illustrated Parts List**

**Manual Number
Rosen 9100-1691-000
Revision B**

September 26, 2011

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

Rosen Sunvisor Systems CMM / IPC for Sunvisor Assembly (p/n R1691000)

This ICA must be followed when the R1691000 Sunvisor system is installed in accordance with Supplemental Type Certificate, (STC) No. SA00747DE, dated July 5, 2012.

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.

STATEMENT OF Rev A CERTIFICATION

This manual complies with Federal Aviation Association (FAA) Airworthiness Requirements Part 23.

FAA Acceptance: STC SA00747DE Date: 7/5/12.

The above certification does not apply to revisions or amendments made after the date of initial certification by other Approved Organizations. Revisions or amendments made by other Approved Organizations must be separately certified and recorded on separate record sheets

Record of Revisions

Rev	Description	Date	Approved
A	Preliminary Release	09/16/2011	GH
B	Replaced Block Assy from 1350440	05/31/2012	GH

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Introduction

1. General

- a. This Rosen Component Maintenance Manual provides use, maintenance and supplemental airworthiness instructions for the cockpit sunvisor system used on the Viking Air Limited (formerly Bombardier and DeHavilland) DHC-3 Otter 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.

Fault Isolation

1. General

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

Problem	Probable Cause	Corrective Action
Visor assembly does not slide easily on rail	Thumb knob too tight	Loosen knob and slide using knob
Lens does not rotate smoothly on vertical axis	Vertical pivot tension incorrectly set	Re-tension vertical pivot
Visor clamp does not hold to rail	Moisture, dust, and lubricant on rail	Wipe rail and clamp surface with non-residual cleaner.

Product Description

General

- a. The Rosen Sunvisor System consists of one rail and two visor assemblies which have been designed to improve pilot comfort during standard cockpit operations. The rail assembly is fastened to the airframe on provided hard points to provide stability and support. The aft section of each rail is the stow location for the visor.

Installation Instructions

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

1. Rail installation

- a. With assistance position rail assembly in cockpit centered on cockpit features with rail mounting points on inner surface of upper windscreen.
- b. Locate and mark the center of mounting points on overhead lining.
- c. Refer to the OEM manual for removal of the lining. Transfer mounting points from lining material to aircraft structure behind lining.
- d. Install #10-32 fastener plates to structure at marked locations.
- e. Make a clearance hole in lining material for screw fastener.
- f. With assistance hold rail in place and attach with #10-32 fastener. Do not tighten fasteners until all are in place.
- g. Tighten all fasteners to full closure plus ¼ turn

2. Visor installation

- a. Loosen knob until visor clamp is open enough to slip over rail.
- b. Tighten screw knob to closure and install e-clip into groove on end of knob screw. See figure 3

Removal

1. Visor Assembly

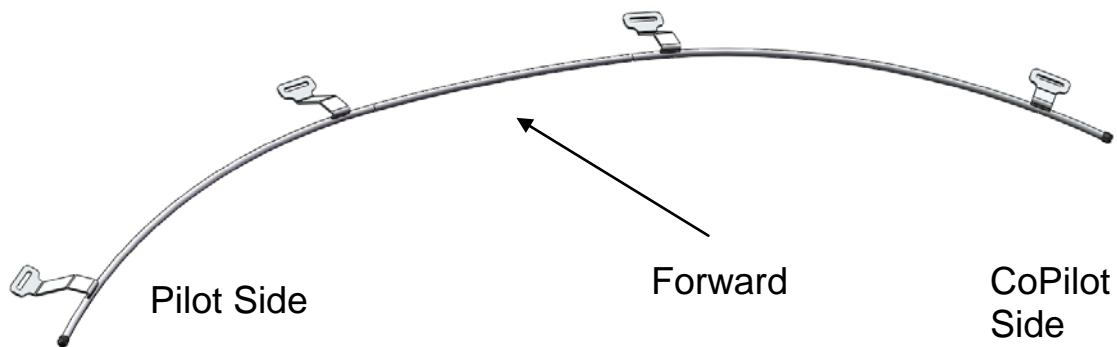
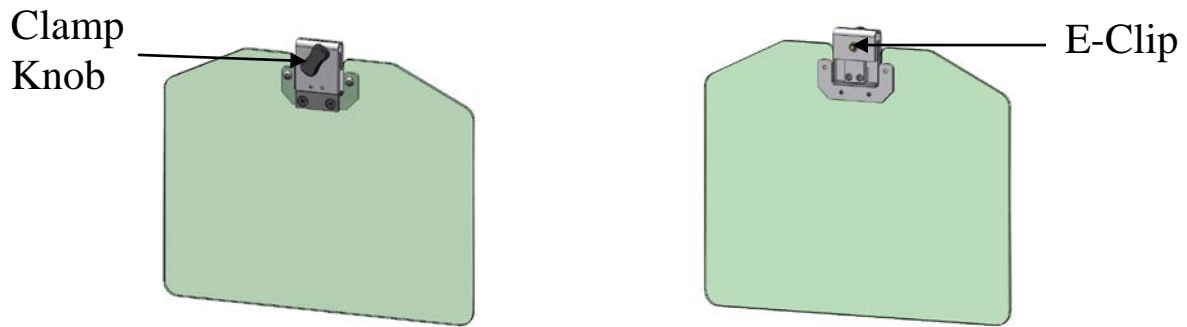
- a. Remove and retain e-clip from back of clamp block.
- b. Loosen the clamp screw until the clamp opens enough to remove from rail.
- c. Pull down to detach from the rail
- d. Reverse procedure to re-attach.

2. Rail Disassembly

- a. Remove Visor Assemblies from the Rail. (See above)
- b. Remove 4 screws.

Weight and Balance

This system adds 2.01 lbs. at station 96 to the aircraft with visors at station 96.



Repair

General

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

Continued Airworthiness Instructions

- **(On the ground only)**
 - Periodically clean the lenses with a soft cloth, mild soap and water or Rosen Cleaner, Polisher and Protectant. Do not use abrasives on the lens.
 - Periodically adjust the pivot tensions on the visor assemblies.
 - Periodically clean rail with a no residue alcohol based cleaner and inspect for wear and damage.

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.

Illustrations and IPC

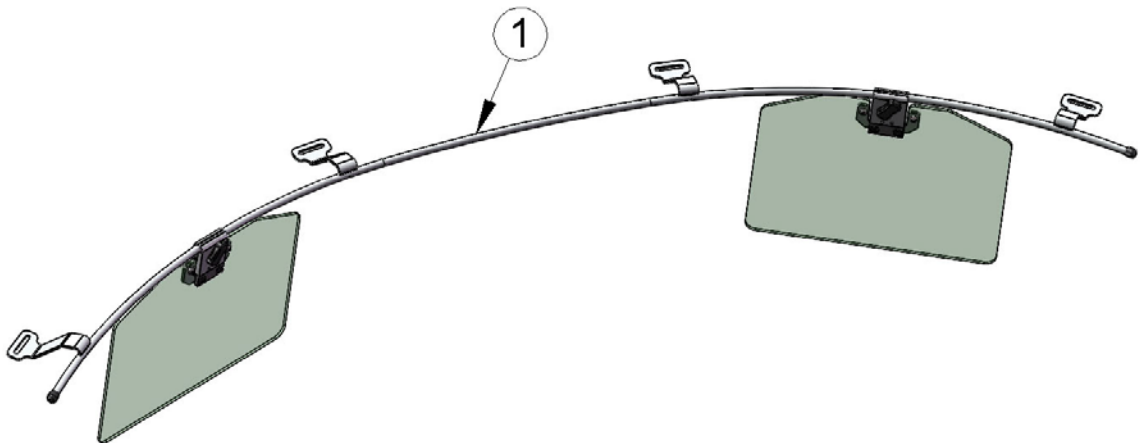


Fig 1

Rosen Sunvisor Systems CMM / IPC for Sunvisor Assembly (p/n R1691000)

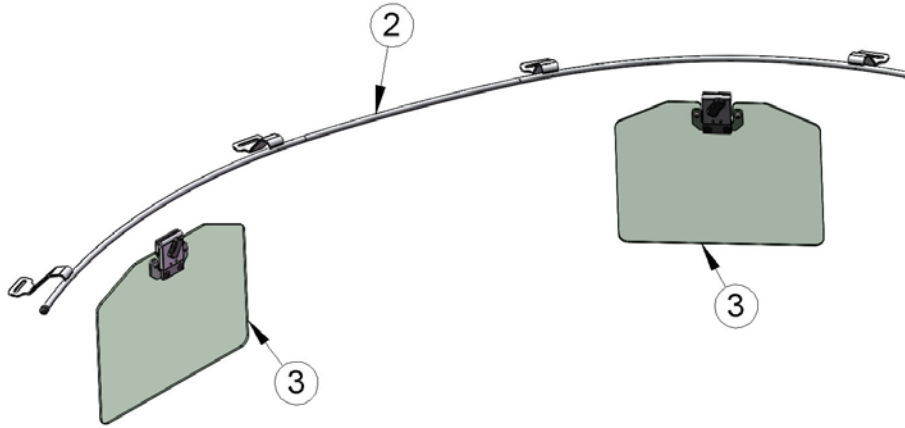


Fig 2

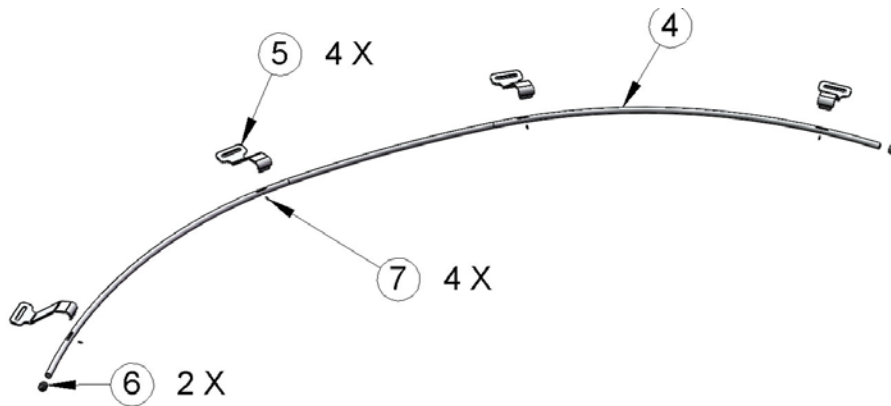


Fig 3

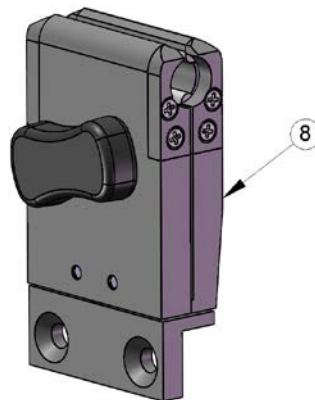


Fig 4

Rosen Sunvisor Systems CMM / IPC for Sunvisor Assembly (p/n R1691000)

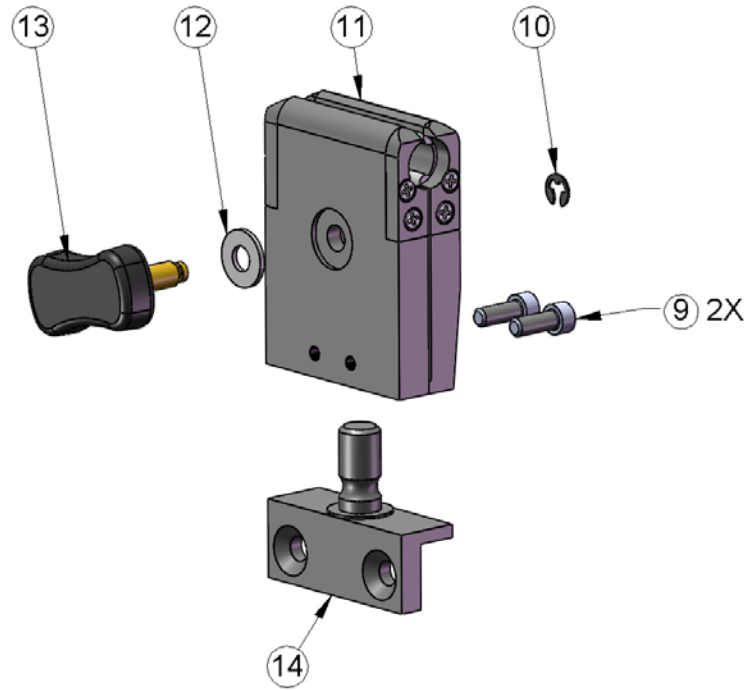


Fig 5

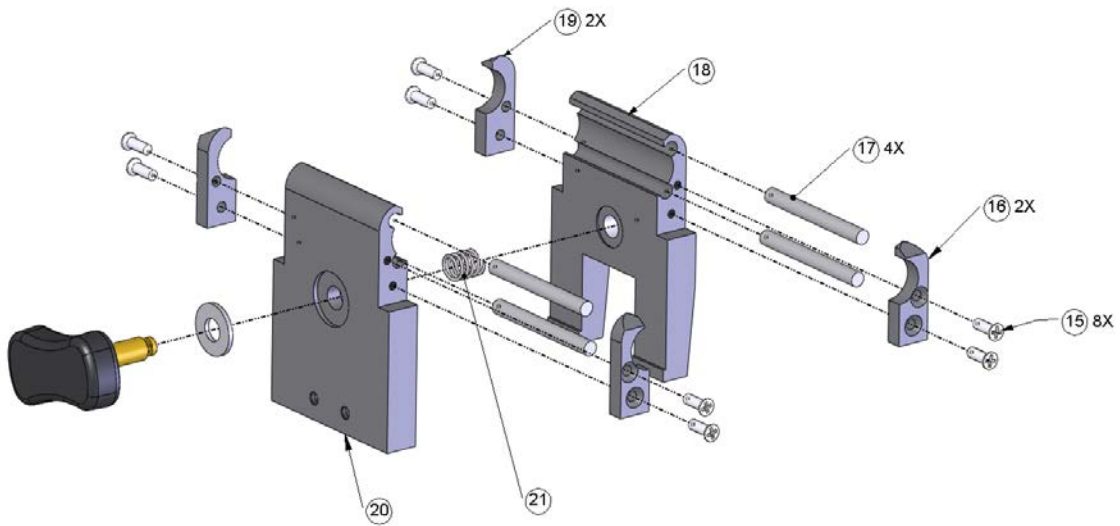


Fig 6

Rosen Sunvisor Systems CMM / IPC for Sunvisor Assembly (p/n R1691000)

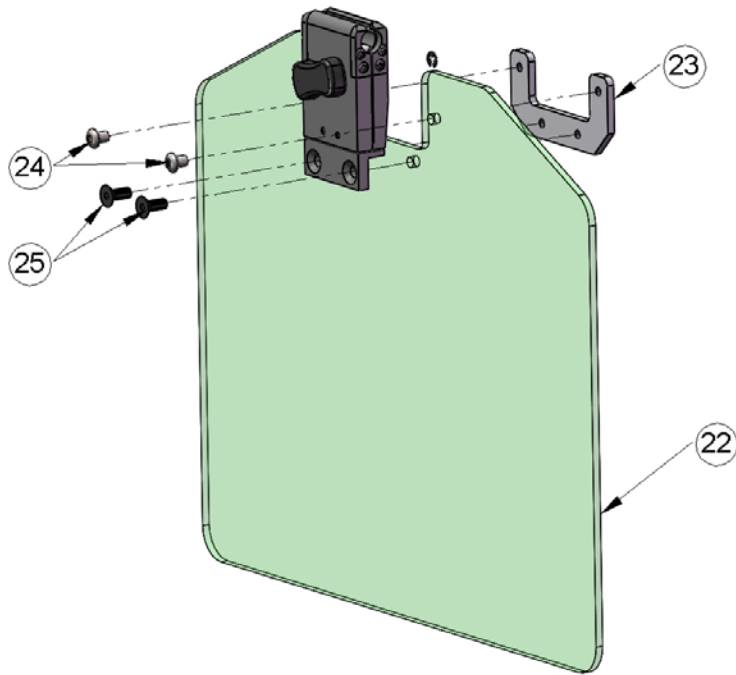


Fig 7

Rosen Sunvisor Systems CMM / IPC for Sunvisor Assembly (p/n R1691000)

Part List

Fig. No	Fig. Item	Part Number	Description	Reference	Eff	QTY
1	1	R1691000	Otter Monorail System w/ 2 Visors; Complete System			System
2	2	1691100	Rail Assembly			1
2	3	1350460	Visor Assembly, 2 Axis, Soft Touch			2
3	4	1691101	Rail Slotted			1
3	5	1691104	Bracket			4
3	6	2819-0005	Vinyl Cap - Black			2
3	7	MS16562-190	Roll Pin (1/16x1/4 SS)			4
4	8	1131000-001	Complete Clamping Block			2
5	9	MS16995-17B	#6-32 X .375 Socket Head Cap Screw (Black)			4
5	10	PCS-1000-14-STZO	Clamping Block E-Clip			2
5	11	1130100-008	Clamping Block Sub Assembly			2
5	12	8HCLW	Washer #10 Brass*			2
5	13	1120112	Knob, 2 Lobe, Soft Touch, 10-24*			2
5	14	1120203	Swivel Clamping Block*			2
6	15	256X14FHPSSBLKOX	Scr #2-56 X .25 FLH Phil 100 SST Blk*			16
6	16	1130102-005	End Cap, Left*			4
6	17	1130104-002	Rod*			8
6	18	1130103-002	Nut Plate, Clamp Block*			2
6	19	1130102-006	End Cap, Right*			4
6	20	1130101-004	Clamp Block Body*			2
6	21	RCBS-300-18	Clamping Block Spring*			2
7	22	1350401	Lens			2
7	23	1110202	Swivel, Nut Plate			2
7	24	832X14BSHCSSBP	#8-32 X .25 Button Head Socket Screw (Black Patch)			4
7	25	832X716FSHCSSBP	#8-32 X .4375 Flat Socket Screw (Black Patch)			4

*- Items 15 through 21 are part of item 11 Clamping Block Sub Assembly