



**“North River Aviation” Model 8400  
brake booster assemblies and  
modification of Scott Aviation Model B-  
711 Brake Master Cylinders**

# Installation Instructions



## **Addendum to Installation Instructions on Drawing No 8400**

A1. After completing the installation of the brake booster, it is necessary to fill out FAA-Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), in addition to making the logbook entry specified in Instruction 4 on Page 2 of Drawing No. 8400. Make the following notation in Item 8 of the Form 337 (Description of Work Accomplished) : “Installed Northern Piper Aviation brake booster in accordance with Northern Airframes Drawing No. 8400 and STC No. \_\_\_\_\_. Weight change is negligible.”

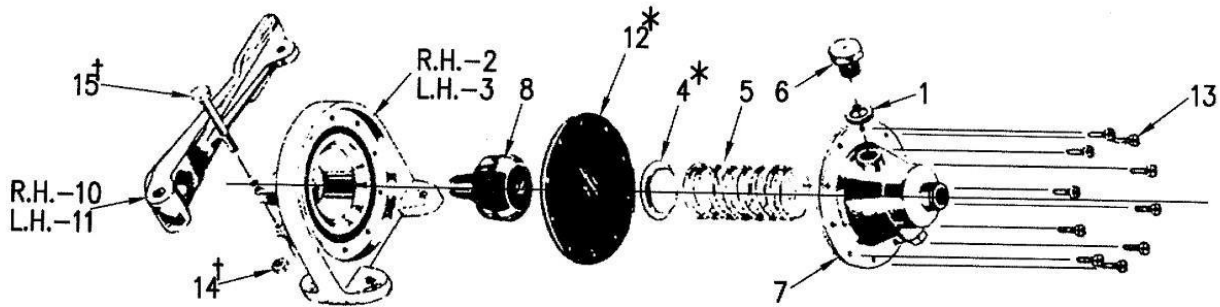
A2. To be eligible for installation of the brake booster, the airplane must be equipped with FAA approved high-pressure brake lines. “FAA approved high-pressure brake lines” are brake lines which the FAA has found to be sufficiently flexible for their intended purpose, compatible with MIL-H-5606BB (red) hydraulic fluid, and capable of sustaining an ultimate hydraulic pressure of 2547 PSA for at least 3 seconds without failure or leakage; and which the FAA has approved for installation on the airplane. Any wheel/brake assembly installed on an airplane equipped with the brake booster must have a brake FAA approved for a maximum available hydraulic pressure of at least 1698 PSI as defined by the brake’s original certification basis (TSO-c26, TSO-C26a, TSO-C26b, or TSO-C26c; or the airplane’s certification basis if the brakes were approved as part of the airplane type design).

A3. The STC Number to be entered in the airplane logbook and in Item 8 of the FAA form 337 must be the correct one for the make and model of airplane modified, as shown on the following list:

<b>Airplane Make and Model</b>	<b>Supplemental Type Certificate No.</b>
Piper PA-18, PA-18A, PA-18 “125” (Army L-21A), PA-18 “135” (Army L-21B), PA-18A “135”, PA-19 (Army L-18C), PA-18 “150”, and PA-18A “150”	SA2318NM
Piper PA-12	SA3633NM
Piper PA-14	SA3634NM
Piper J5C	SA3635NM
Piper J3C-40, J3C-50, J3C-65 (Army L-4, L-4B, L4H, L-4J; Navy NE-1, NE-2) and PA-11	SA4629NM
Piper PA-22 “150”, PA-22 “160”, PA-22 “108”	SA4653NM

Drawing No. 8400A	Date 8-13-85
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Revision B	Rev Date: 6-29-90
Revision C	Rev Date: 11-19-91
Revision C	Rev Date: 8-1-04
Revision E	Rev Date: 3-13-08



## SCOTT, MODEL B-711

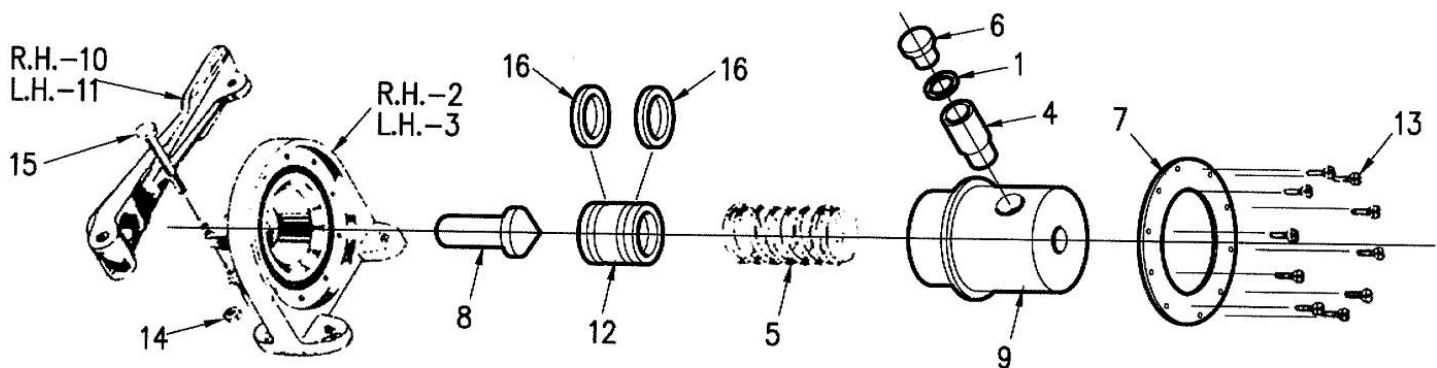
### PARTS LIST

REF. NO.	PART NO.	NAME	NO. REQ.	REF. NO.	PART NO.	NAME	NO. REQ.
1	1159	GASKET-VENT SCREW	1	8	1383	PISTON	1
2	1220	BRACKET - R.H. UNIT	1	10	1712	PEDAL - R.H. UNIT	1
3	1232	BRACKET - L.H. UNIT	1	11	1714	PEDAL - L.H. UNIT	1
4*	2003	PAD-DIAPHRAGM	1	12*	1751	DIAPHRAGM	1
5	1256	SPRING	1	13	AN500-8-8	SCREW	10
6	1258	SCREW-VENT	1	14†	AN356-1032	LOCK NUT	1
7	2728	COVER-COMPRESSION	1	15†	AN3-15A	BOLT-AIRCRAFT	1

1. REMOVE AND DISCARD THE FOLLOWING SCOTT PARTS: REF. NO. 4, 5, 7, 8 AND 12.
2. FOR INSTALLATION, REFER TO PAGE 2.

- † (A) NOTE: SOME SCOTT MOD. B-711 ASSYS. MAY HAVE AN393-51 CLEVIS PIN, AN380-2-2 COTTER AND AN960-10 WASHER SUBSTITUTED FOR ITEMS 14 & 15.
- \* (B) NOTE: NEWER SCOTT MODEL B-711 ASSYS. HAVE PIN 2844 DIAPHRAGM AND PIN 2003-1 DIAPHRAGM PAD.

THIS DATA IS PROPERTY OF NORTHERN AIRFRAMES, LLC. UNAUTHORIZED REPRODUCTION, TRANSFER OR POSSESSION IS PROHIBITED.		D 03-13-2008 CHANGE COMPANY NAME CJW	AS LISTED	AS LISTED	AS LISTED	AS LISTED	PER PART NO.
<b>TOLERANCES UNLESS OTHERWISE SPECIFIED</b> SCALE=FULL UNDIMENSIONED= ± .015 ANGLES = ± 1' .00 = ± .030 .000 = ± .005		C 07-21-1985 CHANGE COMPANY NAME PJM	PART NO.	NO. REQ.	SIZE	DESCRIPTION	SPECIFICATION
		B 07-21-1985 ADDED NOTE PJM					
<b>BEND LINES</b> OUTSIDE DIM. _____ BEND LINE - - - - - <b>NOTE</b> ALL BEND RADII ARE INSIDE UNLESS OTHERWISE NOTED.		A 07-02-1985 ADDED NOTE PJM	PAGE: 1 OF 2		FINISH: BARE		
		NO. DATE REVISIONS BY	BRAKE BOOSTER INSTAL, ASS'Y				
NORTHERN AIRFRAMES LLC. CHUGIAK, ALASKA 99587		DWG: PETER J. MAUS	CHECK: CJW	APPROVED: DICK ROBERTS JR.		DRAWING NUMBER 8400	
		DATE: 08-01-2004	DATE: 03-13-08	DATE: 03-13-2008			



## MODIFIED BRAKE BOOSTER ASSEMBLY

### PARTS LIST

REF. NO.	PART NO.	NAME	NO. REQ.	REF. NO.	PART NO.	NAME	NO. REQ.
1	SCOTT 1159	GASKET-VENT SCREW	1	9	8404	CYLINDER	1
2	SCOTT 1220	BRACKET - R.H. UNIT	1	10	SCOTT 1712	PEDAL - R.H. UNIT	1
3	SCOTT 1232	BRACKET - L.H. UNIT	1	11	SCOTT 1714	PEDAL - L.H. UNIT	1
4	8406	ADAPTER	1	12	8402	PISTON	1
5	8403	SPRING	1	13	AN500-8-8	SCREW	10
6	SCOTT 1258	SCREW-VENT	1	14	AN356-1032	LOCK NUT	1
7	8405	RETAINER-CYLINDER	1	15	AN3-15A	BOLT-AIRCRAFT	1
8	8401	PLUNGER	1	16	MS28775-020	"O" RING	2

### INSTALLATION INSTRUCTIONS:

1. INSTALL THE FOLLOWING PARTS AS SHOWN: REFERENCE PARTS LIST NUMBER 4, 5, , 8, 9, 12 AND 16. (CAUTION) REF. NO. 5 SPRING MUST BE CENTERED AT BOTH ENDS IN THE PISTON AND CYLINDER DURING ASSEMBLY. THIS CAN BE VISIBLY CHECKED AFTER ASSEMBLY BY LOOKING THROUGH THE HOLE IN THE END OF THE CYLINDER.
2. BLEED THE BRAKE SYSTEM AND FILL THE RESERVOIR WITH MIL-H-5606 (RED FLUID).
3. CHECK THE BRAKES FOR PROPER OPERATION.
4. MAKE THE FOLLOWING LOGBOOK ENTRY: "INSTALLED NORTHERN AIRFRAMES BRAKE BOOSTER IN ACCORDANCE WITH DRAWING No. 8400 AND STC # \_\_\_\_\_, WEIGHT CHANGE NEGLIGIBLE."

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		C 07-21-1985	CHANGE COMPANY NAME	PJM	PART NO.	NO. REQ.	<b>MATERIAL</b>			
		B 07-21-1985	ADDED NOTE	PJM	PAGE: 2 OF 2		FINISH: BARE			
		A 07-02-1985	ADDED NOTE	PJM	<b>BRAKE BOOSTER INSTAL, ASS'Y</b>					
NORTHERN AIRFRAMES LLC. CHUGIAK, ALASKA 99567					DRAWN: PETER J. MAUS DATE: 08-01-2004	CHECKED: CJW DATE: 03-13-08	APPROVED: DICK ROBERTS JR. DATE: 03-13-2008	DRAWING NUMBER 8400		