

PRICE—\$0.75

TECHNICAL MANUAL  
ILLUSTRATED PARTS BREAKDOWN

# MODEL NA-S3A1

## FLOAT CARBURETOR

PARTS LIST NUMBERS

A18033-4

A18033-5

391090-1

391090-2

USED ON CONTINENTAL O-170 SERIES ENGINES

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**BENDIX PRODUCTS AEROSPACE DIVISION**  
**SOUTH BEND, INDIANA 46620**



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Section II  
Group Assembly Parts List

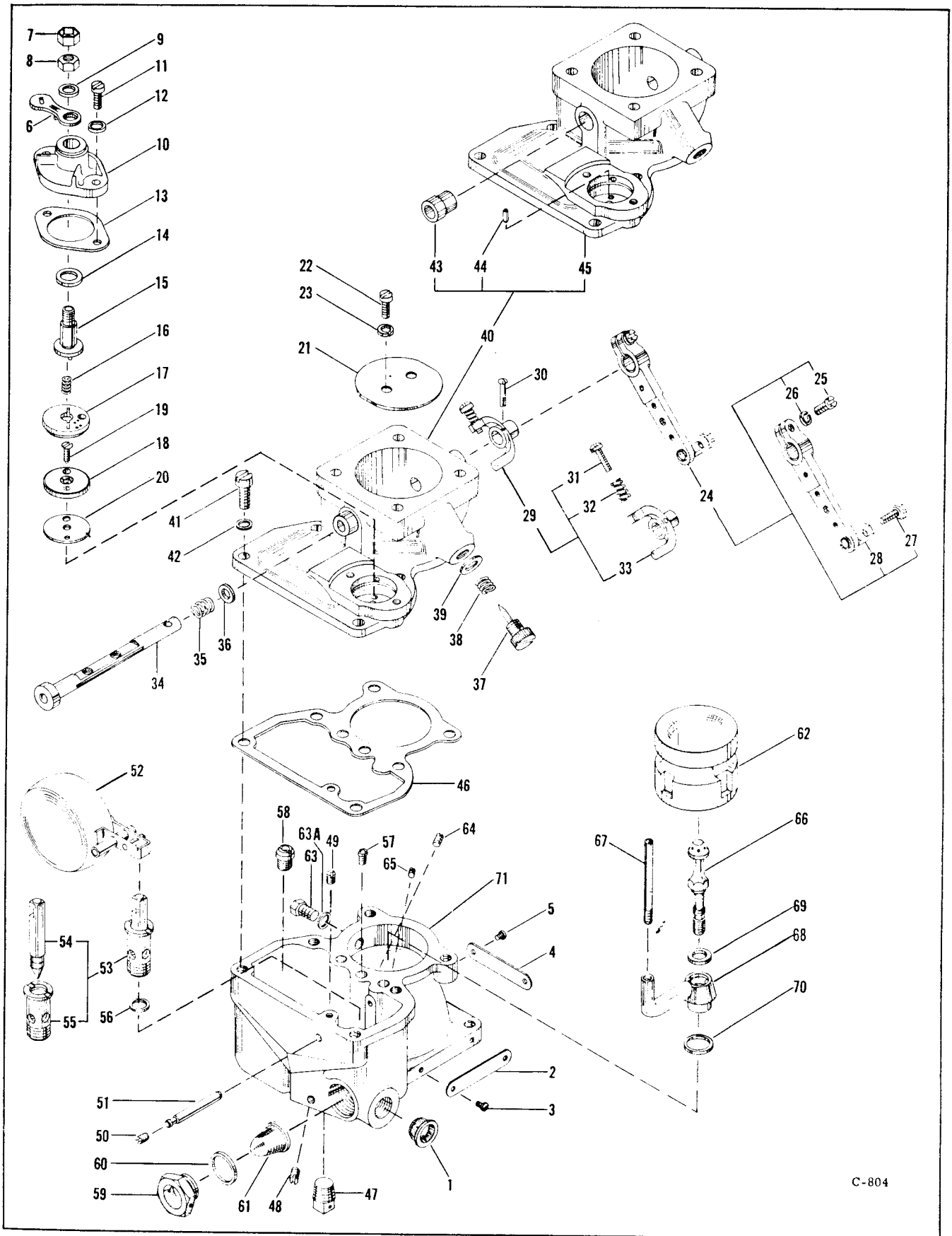


Figure 2 - NA-S3A1 Carburetor Assembly Exploded View

C-804

**SECTION II**  
**GROUP ASSEMBLY PARTS LIST**

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 -		A18033-5	CARBURETOR ASSEMBLY, . . . . NA-S3A1	1		NOTES NOTE 1 WHEN NECESSARY TO CHANGE FLOAT LEVEL, ONE OF THESE GASKETS MAY BE USED UNDER FLOAT NEEDLE SEAT IN PLACE OF P12999.
2 - 1		P19492	. PLUG, NEEDLE VALVE SEAT . . .	1		
2 - 2		384480	. PLATE, SPECIFICATION . . . .	1		
2 - 3		COML	ATTACHING PARTS . SCREW, THREAD FORMING . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2		
2 - 4		384480	. PLATE, SPECIFICATION . . . .	1		
2 - 5		COML	ATTACHING PARTS . SCREW, THREAD FORMING . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2		
2 - 6		P16289	. LEVER, AIR HORN . . . . .	1		CHANGES SERIAL 19 11-27-43 ISSUE 4 ISSUE 3 CHANGED TO ISSUE 4 SERIAL 20 12-6-43 REVISED NOMENCLATURE SERIAL 21 11-21-45 P21247 ASSY CHANGED TO 384244 ASSY SERIAL 22 6-19-47 P6588 CHANGED TO 399855 SERIAL 23 4-7-58 ISSUE 5 P16163 CHANGED TO 366940 P61202 ASSY CHANGED TO 366939 SERIAL 24 8-13-63 390077 CHANGED TO 2523047
2 - 7		AN356-1032	ATTACHING PARTS . PALNUT, NO. 10-32 06848, . . 188S20	1		
2 - 8		AN315-3R	. NUT, NO. 10-32 06848, . . . P60834	1		
2 - 9		AN960-10	. WASHER, FLAT 06840, . . . . 907237K1 -----*	1		
2 - 10		P61037	. COVER ASSEMBLY, MIXTURE . . CONTROL	1		
2 - 11		P21854	ATTACHING PARTS . SCREW, MACHINE NO. 10-24 . . BY 21/32 IN.	2		
2 - 12		P15350	. WASHER . . . . .	2		
2 - 13		P61033	. GASKET . . . . .	1		
2 - 14		384667	. WASHER, NONMETALLIC . . . .	1		
2 - 15		P61034	. STEM, MIXTURE CONTROL . . .	1		
2 - 16		P8770	. SPRING, COMPRESSION . . . . HELICAL	1		
2 - 17		P61030	. PLATE, MIXTURE CONTROL . . . VALVE UPPER	1		
2 - 18		P61031	. PLATE, MIXTURE CONTROL . . . VALVE LOWER	1		

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 - 19		AN505-8-6	ATTACHING PARTS •SCREW,NO. 8-32 BY 3/8 IN. 06848,P61038 ----*----	1		
2 - 20		P61035	•GASKET . . . . .	1		
2 - 21		P61385	•VALVE,THROTTLE . . . . .	1		
2 - 22		P16173	ATTACHING PARTS •SCREW,MACHINE NO. 8-32 BY 5/16 IN.	2		
2 - 23		AN935-8L	•WASHER,SPRING LOCK 06840, 901045K1 ----*----	2		
2 - 24		384244	•LEVER ASSEMBLY,THROTTLE .	1	21,22	
2 - 25		399855	•SCREW,MACHINE NO. 10-24 BY 19/32 IN.	1		
2 - 26		AN935-10	•WASHER,SPRING LOCK . . . . 06840,901004K1	1		
2 - 27		P21244	•SCREW,NO. 8-32 BY 3/8 IN	1		
2 - 28	*		•LEVER AND CONNECTION . . ASSEMBLY	NP		
2 - 29		384670	•STOP ASSEMBLY,THROTTLE .	1		
2 - 30		P21267	ATTACHING PARTS •PIN,PLAIN TAPERED NO. 4/0 STANDARD	1		
2 - 30		P21267-1	•PIN,PLAIN TAPERED NO. 4/0 0.005 IN. OS ON OD FIRST OS OF P21267	AR		
2 - 30		P21267-2	•PIN,PLAIN TAPERED NO. 4/0 0.010 IN. OS ON OD SECOND OS OF P21267 ----*----	AR		
2 - 31		P18288	•SCREW,MACHINE NO. 10-32 BY 3/4 IN.	1		
2 - 32		P15831	•SPRING,IDLE ADJUSTING . SCREW	1		
2 - 33	*	384671	•STOP,THROTTLE . . . . .	NP		
2 - 34		P16151	•SHAFT ASSEMBLY,THROTTLE .	1		
2 - 35		P16171	•SPRING . . . . .	1		
2 - 36		P16170	•WASHER . . . . .	1		
2 - 37		P16177	•VALVE ASSEMBLY,IDLE . . . .	1		
2 - 38		P11556	•SPRING,COMPRESSION . . . . HELICAL	1		
2 - 39		P15225	•WASHER . . . . .	1		
2 - 40		366939**	•BODY ASSEMBLY,THROTTLE . **366939-58-56-50-60	1	23	
2 - 41		P6550	ATTACHING PARTS •SCREW,MACHINE 1/4-20 BY . 5/8 IN.	6		
2 - 42		P15344	•WASHER . . . . . ----*----	6		
2 - 43		P16169	•BEARING,SLEEVE . . . . .	2		
2 - 44		P21410	•PIN,HEADLESS STRAIGHT .	1		
2 - 45	*	P61032	•BODY,THROTTLE . . . . .	NP		
2 - 46		P16155	•GASKET . . . . .	1		
2 - 47		MS20913-2	•PLUG,PIPE 06848,P8505 . . .	1		
2 - 48		P60138	•PLUG,HEADLESS SCREW . . . . 1/4-28	1		
2 - 49		P16161	•SCREW,HEADLESS SET NO. . 8-32 BY 7/32 IN.	1		

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 - 50		P6387	.SCREW, HEADLESS SET NO. . 10-32 BY 7/64 IN.	1		
2 - 51		P16160	.PIN, FULCRUM . . . . .	1		
2 - 52		P16156	.FLOAT AND LEVER ASSEMBLY	1		
2 - 53		383943	NOT USED	1		
2 - 54		2523047	.NEEDLE ,FLOAT . . . . .	1	24	
2 - 55		383911	.SEAT ,NEEDLE VALVE . . . .	1		
2 - 56		P16165	.WASHER, NONMETALLIC . . . . 1/64 IN. THICK SEE NOTE 1	AR		
2 - 56		P12999	.WASHER, NONMETALLIC . . . . 1/32 IN. THICK SEE NOTE 1	AR		
2 - 56		P16166	.WASHER, NONMETALLIC . . . . 3/64 IN. THICK SEE NOTE 1	AR		
2 - 56		P16167	.WASHER, NONMETALLIC . . . . 1/16 IN. THICK SEE NOTE 1	AR		
2 - 57		P16179-55	.REDUCER . . . . .	1		
2 - 58		P7881-49	.JET, METERING TYPE A . . . .	1		
2 - 59		P14220	.PLUG, HEX HEAD 3/4-20 . . . .	1		
2 - 60		174S22	.GASKET, COPPER . . . . .	1		
2 - 61		P12958	.STRAINER ASSEMBLY . . . . .	1		
2 - 62		P16176-1-1/4	.TUBE, VENTURI . . . . .	1		
			ATTACHING PARTS			
2 - 63		P16178	.SCREW, HEX PLAIN 1/4-20 BY 1/2 IN. -----	1		
2 - 63A		P12999	.WASHER, NONMETALLIC . . . .	1		
2 - 64		P60138	.PLUG, HEADLESS SCREW . . . . 1/4-28	1		
2 - 65		P21472	.PLUG, HEADLESS SCREW NO. . . R-32	1		
2 - 66		390222-22	.NOZZLE, MAIN DISCHARGE . . .	1		
2 - 67		P16154-68	.TUBE ASSEMBLY, IDLE . . . .	1		
2 - 68		P61057	.ARM ASSEMBLY, MAIN AIR PLEED	1		
2 - 69		P5329	.WASHER, NONMETALLIC . . . .	1		
2 - 70		P2885	.WASHER, NONMETALLIC . . . .	1		
2 - 71		366940	.BODY, MAIN . . . . .	1	23	

THIS PUBLICATION REPLACES FORM  
15-S91C DATED 1 AUGUST 1965

SUPPLEMENT TO  
TECHNICAL MANUAL OVERHAUL

# MODEL NA-S3A1

## FLOAT CARBURETOR

PARTS LIST NUMBERS  
A30177-5 380174-2  
380162-2 380231-3  
380167-4 391156-2  
380171-2 391229-2  
380172-2 391257-2  
391716-2

USED ON CONTINENTAL A50, A65, A75, A80, C75, C85, AND C90 SERIES ENGINES

THIS PUBLICATION SUPPLEMENTS THE INFORMATION FOUND IN THE CURRENT  
ISSUE OF THE BASIC MANUAL, FORM 15-S91C

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**ENERGY CONTROLS DIVISION**  
**717 N. BENDIX DRIVE**  
**SOUTH BEND, INDIANA 46620**

# LIST OF EFFECTIVE PAGES

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 26, CONSISTING OF THE FOLLOWING:

<i>Page No.</i>	<i>Issue</i>	<i>Page No.</i>	<i>Issue</i>
Title . . . . .	Original		
A . . . . .	Original		
Si thru Sii . . . . .	Original		
S1 thru S22 . . . . .	Original		

TABLE OF CONTENTS

	Page
INTRODUCTION . . . . .	Sii
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. A-30177-5 . . . . .	S1
SETTING SPECIFICATION . . . . .	S2
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380162-2 . . . . .	S3
SETTING SPECIFICATION . . . . .	S4
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380167-4 . . . . .	S5
SETTING SPECIFICATION . . . . .	S6
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380171-2 . . . . .	S7
SETTING SPECIFICATION . . . . .	S8
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380172-2 . . . . .	S9
SETTING SPECIFICATION . . . . .	S10
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380174-2 . . . . .	S11
SETTING SPECIFICATION . . . . .	S12
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380231-3 . . . . .	S13
SETTING SPECIFICATION . . . . .	S14
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391156-2 . . . . .	S15
SETTING SPECIFICATION . . . . .	S16
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391229-2 . . . . .	S17
SETTING SPECIFICATION . . . . .	S18
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391257-2 . . . . .	S19
SETTING SPECIFICATION . . . . .	S20
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391716-2 . . . . .	S21
SETTING SPECIFICATION . . . . .	S22



### **INTRODUCTION**

Overhaul and test procedures for the models included in this supplement are the same as the procedures outlined in the basic handbook for Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4, except for the specific differences noted in this supplement. Information contained in this supplement applies specifically to commercial parts lists.

This supplement must be used in conjunction with the basic handbook.

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. A-30177-5

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-30177-5 is used on the Continental A-75 Engine. It also has the following major differences from the carburetor described in Sections I, II, and III of this handbook. (Refer to figure 2-4.)

- a. Relocation of the idle air bleed in the throttle body is identified as issue 5. Refer to figure 2-7.
- b. The float mechanism has a different seat (55).
- c. Throttle lever (24) is a different part number.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4. Refer to the applicable Specification Sheet for variables (figure S-1). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, and Preparation for Storage and Packaging same as Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: A-75 (Stinson)  
ENGINE MFGR.: Continental

PARTS LIST NO.: A-30177-5  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-1/4 inches
2.	Jet, Metering	P7881	2.	No. 50
3.	Bleed, Air	P16179	3.	No. 65
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22 straight through
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE METERING SYSTEM			
1.	Bleed, Air		1.	No. 60 Drilled in Throttle Body
2.	Jet, Discharge		2.	
3.	Upper		3.	No. 58 Drilled in Throttle Body
4.	Lower		4.	No. 56 Drilled in Throttle Body
5.	Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle No. 50 hole drilled in throttle valve.
III	MIXTURE CONTROL (SUCTION TYPE)			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 Drilled in Throttle Body
IV	FLOAT MECHANISM			
1.	Seat	383912	1.	0.130 inch
2.	Float Level		2.	13/32 ± 1/64 inch using 0.710 spec. gravity fuel @ 2.0 to 4.0 lbs head. Minimum float needle travel 0.048 inch

NOTE: Sizes given in twist drill numbers unless otherwise specified.

NOTE: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

Figure S-1. Setting Specifications for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380162-2, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4. Refer to applicable Specification Sheet for variables (figure S-2). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFR.: Continental

PARTS LIST NO.: 380162-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-5/16 inches
2.	Jet, Main Metering	P7881	2.	No. 46
3.	Bleed, Air	P16179	3.	No. 60
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22 straight through
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE METERING SYSTEM			
1.	Bleed Air		1.	No. 60 drilled in throttle body
2.	Jet, Discharge		2.	
3.	Upper		3.	No. 58 drilled in main body
4.	Lower		4.	No. 56 drilled in main body
5.	Idle Tube Assembly	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle, No. 50 hole drilled in throttle valve.
III	MIXTURE CONTROL-SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 = 1/64 inch with 0.710 spec. gravity fuel <sup>15</sup> 1/2 psi head. Minimum float needle valve travel 0.048 inch.

NOTE: Sizes given in twist drill numbers unless otherwise specified.

NOTE: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

Figure S-2. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380167-4

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380167-4, is used on the Continental C-85-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4. Refer to applicable Specification Sheet for variables (figure S-3). Special Tools, Dissassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-85-12  
ENGINE MFR.: Continental

PARTS LIST NO.: 380167-4  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Main Metering	P7881	2.	No. 45
3.	Bleed, Main Air	P16179	3.	No. 60
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22 straight through
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 65
8.	Valve, Throttle		8.	20° angle - No. 50 hole drilled in throttle valve
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 ± 1/64 inch with 0.710 spec. gravity fuel @ 1/2 psi head. Minimum float needle travel 0.048 inch.

NOTE: Sizes given in twist drill numbers unless otherwise specified.

NOTE: Top edge of lower idle hole must be flush with throttle valve, in completely closed position.

Figure S-3. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380171-2, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-4). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.



SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFR.: Continental

PARTS LIST NO.: 380171-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-5/16 inches
2.	Jet, Main Metering	P7881	2.	No. 46
3.	Bleed, Main Air	P16179	3.	No. 60
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	No. 60 - Drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 - Drilled in throttle body
4.	Lower		4.	No. 56 - Drilled in throttle body
5.	Tube, Idle	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in valve
<b>III MIXTURE CONTROL-SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle	383585	1.	0.113 inch
2.	Float Level		2.	13/32 = 1/64 inch with 0.710 spec. gravity fuel @ 2.0 to 4.0 psi head. Minimum float needle travel 0.021 inch.

NOTE: Sizes given in twist drill numbers unless otherwise specified.

NOTE: Top of lower idle hole must be flush with bottom of throttle valve in completely closed position.

Figure S-4. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380172-2, is used on the Continental C-85-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-5). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-85-12  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380172-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Main Metering	P7881	2.	No. 45
3.	Bleed, Main Air	P16179	3.	No. 60
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Idle Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole in throttle valve
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	384585	1.	0.113 inch
2.	Float Level		2.	13/32 = 1/64 inch with 0.710 spec. gravity fuel @ 2.0 to 4.0 psi head. Minimum needle travel 0.021 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top edge of lower idle hole must be flush with throttle valve in completely closed position.

Figure S-5. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380174-2, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-6). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380174-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-5/16 inches
2.	Jet, Main Metering	P7881	2.	No. 46
3.	Bleed, Main Air	P16179	3.	No. 60
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Idle Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in throttle valve
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 - 1/64 inch with 0.710 spec. gravity fuel @ 1/2 psi head. Minimum needle travel 0.048 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top edge of lower idle hole must be flush with throttle valve, in completely closed position.

Figure S-6. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380231-3, is used on the Continental C-90-12F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure 2-7).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4. Refer to applicable Specification Sheets for variables (figure S-7). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-12F  
ENGINE MFR.: Continental

PARTS LIST NO.: 380231-3  
DATE ISSUED: 12-28-48 Revised 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Main Metering	P7881	2.	No. 45
3.	Bleed, Main Air	P16179	3.	No. 69
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Idle Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in throttle valve
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 hole drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 = 1/64 inch with 0.710 spec. gravity fuel @ 1/2 psi head. Minimum needle travel 0.048 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top edge of lower idle hole must be flush with throttle valve in completely closed position.

Figure S-7. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391156-2, is used on the Continental C-90 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of smaller size.
- d. The float mechanism has a different seat (55).
- e. The float level travel dimension is different (refer to figure S-9).
- f. Float pressure is increased (refer to figure S-9).
- g. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-8). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.



SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90  
ENGINE MFR.: Continental

PARTS LIST NO.: 391156-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Metering	P7881	2.	No. 44
3.	Bleed, Air	P16179	3.	No. 69
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	No. 50
II	IDLE METERING SYSTEM			
1.	Bleed, Air		1.	No. 60 drilled in throttle body
2.	Jet, Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle (Angle)	P61385	8.	20° angle - No. 50 hole drilled in throttle valve
III	MIXTURE CONTROL-SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat	384585	1.	0.113 inch
2.	Float Level		2.	13/32 ± 1/64 inch using 0.710 spec. gravity fuel @ 2.0 to 4.0 psi. Minimum float needle travel 0.021 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top of lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.

Figure S-8. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391229-2, is used on Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of the handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure 2-7).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-9). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391229-2, is used on Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of the handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure 2-7).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-9). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFGR.: Continental

PARTS LIST NO.: 391229-2  
DATE ISSUED: 8-31-49 Revised 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Main Metering	P7881	2.	No. 44
3.	Bleed, Main Air	P16179	3.	No. 55
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Idle Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in throttle valve.
III	MIXTURE CONTROL-SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 ± 1/64 inch with 0.710 spec. gravity fuel @ 1/2 psi head. Minimum needle travel 0.048 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top edge of lower idle hole must be flush with throttle valve, in completely closed position.

Figure S-9. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391257-2, is used on Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure 2-7).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-10). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFR.: Continental

PARTS LIST NO.: 391257-2  
DATE ISSUED: 12-29-53 Rev. 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-3/8 inches
2.	Jet, Main Metering	P7881	2.	No. 44
3.	Bleed, Main Air	P16179	3.	No. 55
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2-No. 50
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	No. 60 drilled in throttle body
2.	Jet, Idle Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Idle Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in throttle valve
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle Valve	384585	1.	0.113 inch
2.	Float Level		2.	13/32 ± 1/64 inch with 0.710 spec. gravity fuel @ 2.0 to 4.0 psi head. Minimum needle travel 0.021 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top edge of lower idle hole must be flush with throttle valve, in completely closed position.

Figure S-10. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391716-2

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391716-2, is used on the Continental A-50, A-65, A-75, A-80 Engines. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The main metering jet (58) is of larger size.
- b. The float mechanism has a different seat (55).
- c. The float level has a different dimension.
- d. The fuel inlet pressure is higher.
- e. The idle air bleed is in the throttle body. Refer to figure 2-7.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for variables (figure S-11). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: A-50, A-65, A-75, A-80  
ENGINE MFR.: Continental

PARTS LIST NO. 391716-2  
DATE ISSUED: 2-20-71

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-1/4 inches
2.	Jet, Metering	P7881	2.	No. 49
3.	Bleed, Air	P16179	3.	No. 65
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	No. 22
6.	Bleed Hole-Upper		6.	No. 70
7.	Bleed Hole-Center		7.	No. 60
8.	Bleed Holes-Lower		8.	2 - No. 50
<b>II IDLE METERING SYSTEM</b>				
1.	Bleed, Air		1.	No. 60 drilled in throttle body
2.	Jet, Discharge		2.	
3.	Upper		3.	No. 58 drilled in throttle body
4.	Lower		4.	No. 56 drilled in throttle body
5.	Tube	P16154	5.	
6.	Bore		6.	5/64 inch
7.	Restriction		7.	No. 68
8.	Valve, Throttle	P61385	8.	20° angle - No. 50 hole drilled in throttle valve
<b>III MIXTURE CONTROL (SUCTION TYPE)</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat	384585	1.	0.113 inch
2.	Float Level		2.	13/32 ± 1/64 inch using 0.710 spec. gravity fuel @ 2.0 to 4.0 psi head. Minimum float needle travel 0.021 inch.

NOTE: All sizes given in twist drill numbers unless otherwise indicated.

NOTE: Top lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.

Figure S-11. Setting Specification for Stromberg Float Carburetor Model NA-S3A1



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SUPPLEMENT TO  
TECHNICAL MANUAL  
OVERHAUL

# MODEL NA-S3A1

## FLOAT CARBURETOR

PARTS LIST NUMBERS  
380162-1      380231-3  
380167-3      391156-1  
380171-1      391229-1  
380172-1      391229-2  
380174-1      391257-1  
380231-2      391257-2  
391716-1

USED ON CONTINENTAL A50, A65, A75, A80, C75, C85, AND C90 SERIES ENGINES

THIS PUBLICATION SUPPLEMENTS THE INFORMATION FOUND IN THE CURRENT  
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# LIST OF EFFECTIVE PAGES

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 30. CONSISTING OF THE FOLLOWING.

<i>Page No.</i>	<i>Issue</i>	<i>Page No.</i>	<i>Issue</i>
Title . . . . .	Original		
A . . . . .	Original		
Si thru Sii . . . . .	Original		
S1 thru S26 . . . . .	Original		

TABLE OF CONTENTS

	Page
INTRODUCTION .....	S1
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380162-1 .....	S1
SETTING SPECIFICATION .....	S2
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380167-3 .....	S3
SETTING SPECIFICATION .....	S4
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST No. 380171-1 .....	S5
SETTING SPECIFICATION .....	S6
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380172-1 .....	S7
SETTING SPECIFICATION .....	S8
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380174-1 .....	S9
SETTING SPECIFICATION .....	S10
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380231-2 .....	S11
SETTING SPECIFICATION .....	S12
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 380231-3 .....	S13
SETTING SPECIFICATION .....	S14
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391156-1 .....	S15
SETTING SPECIFICATION .....	S16
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391229-1 .....	S17
SETTING SPECIFICATION .....	S18
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391229-2 .....	S19
SETTING SPECIFICATION .....	S20
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391257-1 .....	S21
SETTING SPECIFICATION .....	S22
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391257-2 .....	S23
SETTING SPECIFICATION .....	S24
MODEL NA-S3A1 FLOAT CARBURETOR PARTS LIST NO. 391716-1 .....	S25
SETTING SPECIFICATION .....	S26

#### INTRODUCTION

Overhaul and test procedures for the models included in this supplement are the same as the procedures outlined in the basic handbook for Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4, except for the specific differences noted in this supplement. Information contained in this supplement applies specifically to commercial parts lists.

This supplement must be used in conjunction with the basic handbook.

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380162-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380162-1, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.

- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-1). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List-No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFR.: Continental

PARTS LIST NO.: 380162-1  
DATE ISSUED: 11-7-46

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-5/16 inches
2.	Jet, Main Metering	P7881	2.	46
3.	Bleed, Air	P16179	3.	60
4.	Nozzle, Discharge	390222	4.	22, straight through
	Bore			70
	Bleed Hole - Upper			60
	Bleed Hole - Center			2-50
	Bleed Holes - Lower			
<b>II IDLE METERING SYSTEM</b>				
1.	Bleed Air		1.	60, drilled in main body
2.	Jet, Discharge		2.	58, drilled in main body
	Upper			56, drilled in main body
	Lower			
3.	Idle Tube Assembly	P16154	3.	5/64 inch
	Bore			68
	Restriction			
4.	Valve, Throttle (Angle)	P61385	4.	20° angle. 50 hole drilled in throttle valve, top of lower idle hole must be flush with bottom of throttle valve in completely closed position.
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	50, drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Needle Valve	383911	1.	0.1875 inches
2.	Float Level		2.	13.32" ± 1.64" with 0.710 spec. gravity fuel, @ 1 1/2 lb head. Minimum float needle valve travel - 0.048 inch.

NOTE  
Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 drilled idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge channels and a No. 50 mixture control suction channels.
- P61057 MAIN AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY

Figure S-1. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380167-3

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380167-3, is used on the Continental C-85-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.

- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-2). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-85-12  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380167-3  
DATE ISSUED: 3-10-51

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	45
3.	Bleed, Main Air	P16179	3.	60
4.	Nozzle, Discharge	390222	4.	
	Bore			22, straight through
	Bleed Hole - Upper			70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	60 - Drilled in main body
2.	Jet, Discharge		2.	
	Upper			58 - Drilled in throttle body
	Lower			56 - Drilled in throttle body
3.	Tube	P16154	3.	
	Bore			5/64 inch
	Restriction			65
4.	Valve, Throttle (Angle)			Angle 20°. No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction		2.	50 - Drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle	383911	1.	0.1875 inch
2.	Float Level		2.	13/32" = 1/64 with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum float needle travel 0.048 inch.

NOTE

Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed channel.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.
- P61057 MAIN AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-2. Setting Specification for Stromberg Float Carburetor Model NA-S3A1



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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380171-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380171-1, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-3). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380171-1  
DATE ISSUED: 3-18-46

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-5/16 inch
2.	Jet, Main Metering	P7881	2.	46
3.	Bleed, Main Air	P16179	3.	60
4.	Nozzle, Discharge	390222	4.	22
	Bore			70
	Bleed Hole - Upper			60
	Bleed Hole - Center			2-50
	Bleed Holes - Lower			
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	60 - Drilled in Main Body
2.	Jet, Idle Discharge		2.	58 - Drilled in throttle body
	Upper			56 - Drilled in throttle body
	Lower			
3.	Tube, Idle	P16154	3.	5/64 inch
	Bore			68
	Restriction			
4.	Valve, Throttle	P61385	4.	20° angle - No. 50 hole drilled in valve. Top of lower idle hole must be flush with bottom of throttle valve in completely closed position.
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle	384585	1.	0.113 inch
2.	Float Level		2.	13/32"±1/64" with 0.710 spec. gravity fuel @ 2-4 lb fuel head. Minimum float needle travel 0.021 inch.
NOTE				
Sizes given in twist drill numbers unless otherwise indicated.				

GENERAL REMARKS

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporating a No. 60 idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporating a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-3. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380172-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380172-1, is used on the Continental C-85-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.

- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-4). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-85-12  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380172-1  
DATE ISSUED: 3-18-46

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	<b>MAIN METERING SYSTEM</b>			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	45
3.	Bleed, Main Air	P16179	3.	60
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper			70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	<b>IDLE SYSTEM</b>			
1.	Bleed, Idle Air		1.	No. 60 - Drilled in main body
2.	Jet, Idle Discharge		2.	No. 58 - Drilled in throttle body
	Upper			No. 56 - Drilled in throttle body
	Lower			
3.	Idle Tube	P16154	3.	5/64 inch
	Bore			68
	Restriction			
4.	Valve, Throttle	P61385	4.	20° angle - 50 hole in throttle valve. Top edge of lower idle hole must be flush with throttle valve in completely closed position.
III	<b>MIXTURE CONTROL - SUCTION TYPE</b>			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
IV	<b>FLOAT MECHANISM</b>			
1.	Seat, Float Needle Valve	384585	1.	0.113 inch
2.	Float Level		2.	13/32" ± 1/64" with 0.710 spec. gravity fuel @ 2-4 lb fuel head. Minimum needle travel 0.021 inch.
<b>NOTE</b>				
All sizes given in twist drill numbers unless otherwise indicated.				

GENERAL NOTES

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed.  
P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.  
384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY  
P61057 MAIN AIR BLEED ARM ASSEMBLY  
384411 THROTTLE SHAFT ASSEMBLY

Figure S-4. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380174-1, is used on the Continental C-75-12 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-5). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-75-12  
ENGINE MFR.: Continental

PARTS LIST NO.: 380174-1  
DATE ISSUED: 3-18-46

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-5/16 inch
2.	Jet, Main Metering	P7881	2.	46
3.	Bleed, Main Air	P16179	3.	60
4.	Nozzle, Discharge	390222	4.	22
	Bore			70
	Bleed Hole - Upper			60
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	No. 60 - Drilled in main body
2.	Jet, Idle Discharge		2.	No. 58 - Drilled in throttle body
	Upper			No. 56 - Drilled in throttle body
	Lower			
3.	Idle Tube	P16154	3.	5/64 inch
	Bore			68
	Restriction			
4.	Valve, Throttle	P61385	4.	Angle 20°. No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32" ± 1/64" with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum needle travel 0.048 inch.
				NOTE
				All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.
- P61057 MAIN AIR BLEED ARM ASSEMBLY
- 384564 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-5. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 380231-2

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380231-2, is used on the Continental C-90-12F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.

- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-6). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-12F  
ENGINE MFGR.: Continental

PARTS LIST NO.: 380231-2  
DATE ISSUED: 12-28-48

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	45
3.	Bleed, Main Air	P16179	3.	69
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper			70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	No. 60 - Drilled in main body
2.	Jet, Idle Discharge		2.	
	Upper			No. 58 - Drilled in throttle body
	Lower			No. 56 - Drilled in throttle body
3.	Idle Tube	P16154	3.	
	Bore			5/64 inch
	Restriction			68
4.	Valve, Throttle	P61385	4.	Angle 20° - No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve in completely closed position.
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 hole drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32" + 1/64" with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum needle travel 0.048 inch.
NOTE				
All sizes given in twist drill numbers unless otherwise indicated.				

GENERAL NOTES

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.
- P61057 MAIN AIR BLEED ARM ASSEMBLY
- 384564 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-6. Setting Specification for Stromberg Float Carburetor Model NA-S3A1



THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

**GENERAL.** The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 380231-3, is used on the Continental C-90-12F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure S-7).

**NOTE**

If Parts List Number 380231-2 is modified to conform to issue 3, the yellow dot as mentioned in paragraph 2-14, j, is no longer needed and the specification plate should be reidentified with this issue number.

**OVERHAUL INSTRUCTIONS.**

**REASSEMBLY.** Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4 with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-8). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor Parts List No. A-18033-4.

**NOTE**

This carburetor is for use with a gravity feed fuel system.

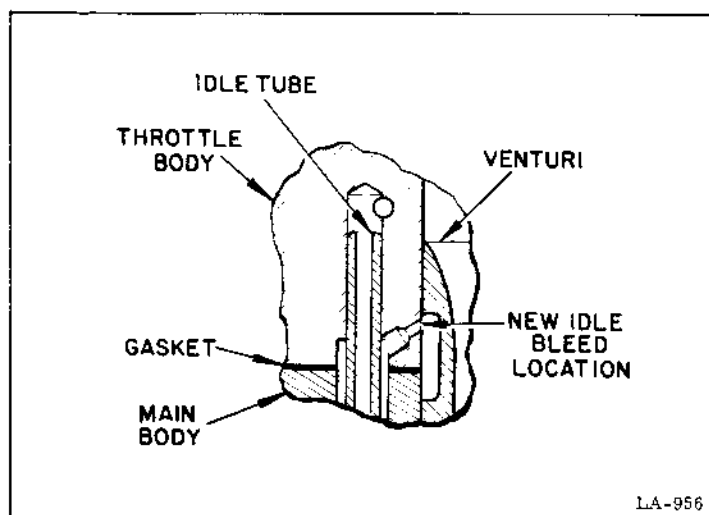


Figure S-7. New Idle Bleed Location

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-12F  
ENGINE MFR.: Continental

PARTS LIST NO.: 380231-3  
DATE ISSUED: 12-28-48

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	45
3.	Bleed, Main Air	P16179	3.	69
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper			70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 - Drilled in Throttle Body
2.	Jet, Idle Discharge		2.	
	Upper			No. 58 - Drilled in throttle body
	Lower			No. 56 - Drilled in throttle body
3.	Idle Tube	P16154	3.	
	Bore			5/64 inch
	Restriction			68
4.	Valve, Throttle	P61385	4.	Angle 20° - No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve in completely closed position.
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 hole drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32"±1/64" with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum needle travel 0.048 inch.
				NOTE
				All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- 366939 THROTTLE BODY ASSEMBLY incorporates two drilled channels for Idle Discharge Jets size #58 and #56. Mixture Control Suction channel is drilled to a #50 size. Idle air bleed is a #60 size.
- P61057 MAIN AIR BLEED ARM ASSEMBLY
- 384564 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-8. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391156-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391156-1, is used on the Continental C-90 Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of smaller size.
- d. The float mechanism has a different seat (55).
- e. The float level travel dimension is different (refer to Figure S-9).
- f. Float pressure is increased (refer to Figure S-9).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-9). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET NA-S3A1 391156-1

ENGINE MODEL: C-90  
ENGINE MFR.: Continental

DRAWING NUMBER: 380231  
DATE ISSUED: 7-18-58

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P-16176	1.	1-3/8"
2.	Jet, Metering	P-7881	2.	#44
3.	Bleed, Air	P-16179	3.	#69
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	#22
6.	Bleed Holes (Upper)		6.	1-#70
7.	Bleed Holes (Center)		7.	1-#60
8.	Bleed Holes (Lower)		8.	2-#50
<b>II IDLE METERING SYSTEM</b>				
1.	Bleed, Air		1.	#60 Drilled in Main Body
2.	Jet, Discharge		2.	
3.	Upper		3.	#58 Drilled in Throttle Body
4.	Lower		4.	#56 Drilled in Throttle Body
5.	Tube	P-16154	5.	
6.	Bore		6.	5/64"
7.	Restriction		7.	#68
8.	Valve, Throttle (Angle)	P-61385	8.	20° #50 hole drilled in Throttle Valve
<b>III MIXTURE CONTROL (SUCTION TYPE)</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	#50 Drilled in Throttle Body
<b>IV FLOAT MECHANISM</b>				
1.	Seat	384585	1.	.113" - .111"
2.	Float Level		2.	13/32"+1/64" using .710 spec. grav. fuel
3.	Pressure		3.	.021 minimum float needle travel 2-4 psi
<b>GENERAL NOTES</b>				
Top of lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.				

Figure S-9. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391229-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391229-1, is used on the Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.

- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-10). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFR.: Continental

PARTS LIST NO.: 391229-1  
DATE ISSUED: 8-31-49

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	<b>MAIN METERING SYSTEM</b>			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	44
3.	Bleed, Main Air	P16179	3.	55
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper		7	70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	<b>IDLE SYSTEM</b>			
1.	Bleed, Idle Air		1.	No. 60 - Drilled in main body
2.	Jet, Idle Discharge		2.	
	Upper			No. 58 - Drilled in throttle body
	Lower			No. 56 - Drilled in throttle body
3.	Idle Tube	P16154	3.	
	Bore			5/64 inch
	Restriction			68
4.	Valve, Throttle	P61385	4.	Angle 20° - No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
III	<b>MIXTURE CONTROL - SUCTION TYPE</b>			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
IV	<b>FLOAT MECHANISM</b>			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 ± 1/64" with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum needle travel 0.048 inch.
				NOTE
				All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge, and a No. 50 mixture control suction channels.
- P61057 IDLE AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-10. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391229-2

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391229-2, is used on Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of the handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure S-11).

NOTE

If Parts List Number 391229-1 is modified to conform to issue 2, the yellow dot as mentioned in paragraph 2-14, j, is no longer needed and the specification plate should be reidentified with this issue number.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-12). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4.

NOTE

This carburetor is for use with a gravity feed fuel system.

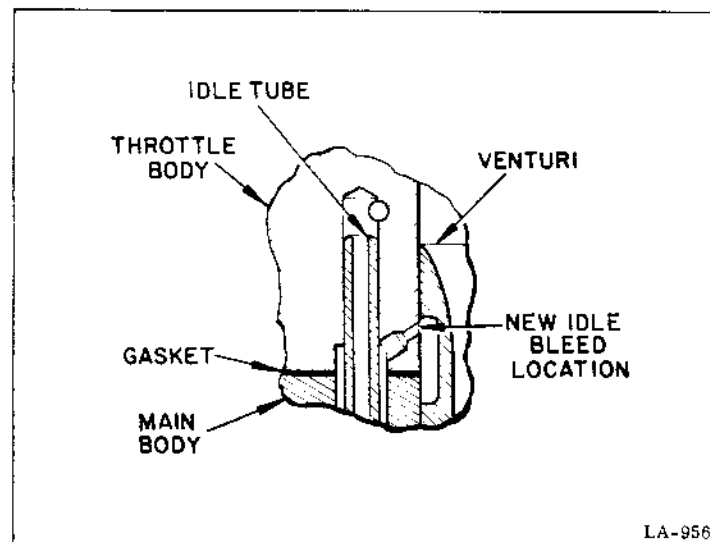


Figure S-11. New Idle Bleed Location

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFR.: Continental

PARTS LIST NO.: 391229-2  
DATE ISSUED: 8-31-49

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	<b>MAIN METERING SYSTEM</b>			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	44
3.	Bleed, Main Air	P16179	3.	55
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper		7	70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	<b>IDLE SYSTEM</b>			
1.	Bleed, Idle Air		1.	No. 60 - Drilled in Throttle Body
2.	Jet, Idle Discharge		2.	
	Upper			No. 58 - Drilled in throttle body
	Lower			No. 56 - Drilled in throttle body
3.	Idle Tube	P16154	3.	
	Bore			5/64 inch
	Restriction			68
4.	Valve, Throttle	P61385	4.	Angle 20° - No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
III	<b>MIXTURE CONTROL - SUCTION TYPE</b>			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
IV	<b>FLOAT MECHANISM</b>			
1.	Seat, Float Needle Valve	383911	1.	0.1875 inch
2.	Float Level		2.	13/32 - 1/64" with 0.710 spec. gravity fuel @ 1/2 lb fuel head. Minimum needle travel 0.048 inch.

NOTE

All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- 366939 THROTTLE BODY ASSEMBLY incorporates two drilled channels for Idle Discharge Jets size #58 and #56. Mixture Control Suction channel is drilled to a #50 size. Idle air bleed is a #60 size.
- P61057 IDLE AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-12. Setting Specification for Stromberg Float Carburetor Model NA-S3A1



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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391257-1

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THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391257-1, is used on the Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-13). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFR.: Continental

PARTS LIST NO.: 391257-1  
DATE ISSUED: 12-29-53

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	44
3.	Bleed, Main Air	P16179	3.	55
4.	Nozzle, Discharge	390222	4.	22
	Bore			70
	Bleed Hole - Upper			60
	Bleed Hole - Center			2-50
	Bleed Holes - Lower			
<b>II IDLE SYSTEM</b>				
1.	Bleed, Idle Air		1.	No. 60 - Drilled in main body
2.	Jet, Idle Discharge		2.	No. 58 - Drilled in throttle body
	Upper			No. 56 - Drilled in throttle body
	Lower	P16154	3.	5/64
3.	Idle Tube			6 <sup>R</sup>
	Bore			
	Restriction	P61385	4.	Angle 20°. No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
4.	Valve, Throttle			
<b>III MIXTURE CONTROL - SUCTION TYPE</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
<b>IV FLOAT MECHANISM</b>				
1.	Seat, Float Needle Valve	384585	1.	0.113 inch
2.	Float Level		2.	13/32" ± 1/64" with 0.710 spec. gravity fuel @ 2.0 to 4.0 lb fuel head. Minimum needle travel 0.021 inch.

NOTE

All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- P16163 MAIN BODY ASSEMBLY incorporates a No. 60 idle air bleed.
- P61202 THROTTLE BODY ASSEMBLY incorporates a No. 58 and a No. 56 idle discharge and a No. 50 mixture control suction channels.
- P61057 IDLE AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-13. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391257-2

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391257-2, is used on Continental C-90-14F Engine. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The venturi (62) is of larger size.
- b. The main metering jet (58) is of larger size.
- c. The main air bleed (57) is of larger size.
- d. The float mechanism has a different seat (55).
- e. The idle air bleed has been relocated to the throttle body (refer to figure S-14).

NOTE

If Parts List Number 391257-1 is modified to conform to issue 2, the yellow dot as mentioned in paragraph 2-14, j, is no longer needed and the specification plate should be reidentified with this issue number.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-15). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List Number A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

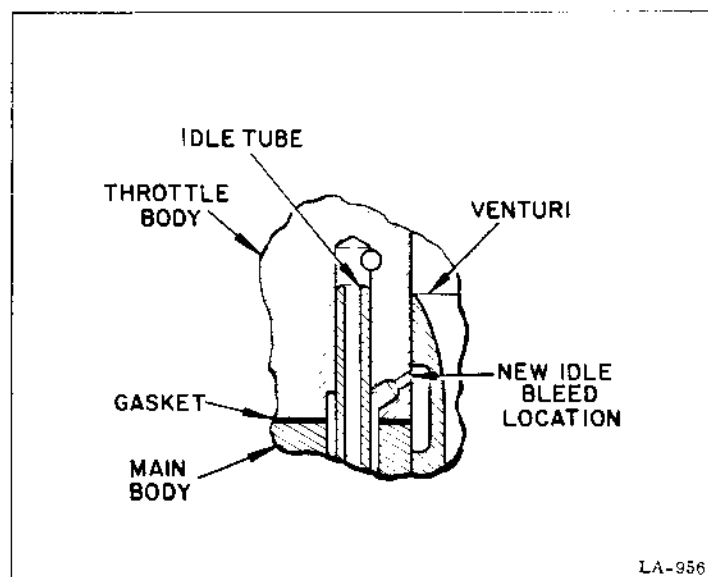


Figure S-14. New Idle Bleed Location

SETTING SPECIFICATIONS FOR STROMBERG FLOAT CARBURETOR MODEL NA-S3A1

ENGINE MODEL: C-90-14F  
ENGINE MFGR.: Continental

PARTS LIST NO.: 391257-2  
DATE ISSUED: 12-29-53

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P16176	1.	1-3/8 inch
2.	Jet, Main Metering	P7881	2.	44
3.	Bleed, Main Air	P16179	3.	55
4.	Nozzle, Discharge	390222	4.	
	Bore			22
	Bleed Hole - Upper			70
	Bleed Hole - Center			60
	Bleed Holes - Lower			2-50
II	IDLE SYSTEM			
1.	Bleed, Idle Air		1.	No. 60 - Drilled in Throttle Body
2.	Jet, Idle Discharge		2.	
	Upper			No. 58 - Drilled in throttle body
	Lower			No. 56 - Drilled in throttle body
3.	Idle Tube	P16154	3.	
	Bore			5/64
	Restriction			68
4.	Valve, Throttle	P61385	4.	Angle 20°. No. 50 hole drilled in throttle valve. Top edge of lower idle hole must be flush with throttle valve, in completely closed position.
III	MIXTURE CONTROL - SUCTION TYPE			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	No. 50 - Drilled in throttle body
IV	FLOAT MECHANISM			
1.	Seat, Float Needle Valve	384585	1.	0.113 inch
2.	Float Level		2.	13/32" ± 1/64" with 0.710 spec. gravity fuel @ 2.0 to 4.0 lb fuel head. Minimum needle travel 0.021 inch.

NOTE

All sizes given in twist drill numbers unless otherwise indicated.

GENERAL NOTES

Use the following special parts.

- 366939 THROTTLE BODY ASSEMBLY incorporates two drilled channels for Idle Discharge Jets size #58 and #56. Mixture Control Suction channel is drilled to a #50 size. Idle air bleed is a #60 size.
- P61057 IDLE AIR BLEED ARM ASSEMBLY
- 384244 THROTTLE LEVER WIRE CONNECTOR ASSEMBLY
- 384411 THROTTLE SHAFT ASSEMBLY

Figure S-15. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

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MODEL NA-S3A1 FLOAT CARBURETOR

PARTS LIST NO. 391716-1

---

THE INSTRUCTIONS CONTAINED IN THE BASIC HANDBOOK APPLY  
EXCEPT FOR THE DIFFERENCES LISTED IN THIS SUPPLEMENT.

GENERAL. The Stromberg Model NA-S3A1 Float Carburetor, Parts List Number 391716-1, is used on the Continental A-50, A-65, A-75, A-80 Engines. It also has the following major differences from the carburetor described in Sections I, II and III of this handbook (refer to figure 2-4).

- a. The main metering jet (58) is of larger size.
- b. The float mechanism has a different seat (55).
- c. The float level has a different dimension.
- d. The fuel inlet pressure is higher.

OVERHAUL INSTRUCTIONS.

REASSEMBLY. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List A-18033-4, with the exception of float mechanism. Refer to applicable Specification Sheet for dimensions (figure S-16). Special Tools, Disassembly, Cleaning, Inspection, Testing, Repair or Replacement, Lubrication, Test Procedure, Preparation for Storage and Packaging. Same as Stromberg Model NA-S3A1 Float Carburetor, Parts List No. A-18033-4.

NOTE

This carburetor is for use with a pressurized fuel system of 2 to 4 psi.

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET NA-S3A1 391716-1

ENGINE MODEL: A-50, A-65, A-75, A-80  
ENGINE MFR.: Continental

DRAWING NUMBER:  
DATE ISSUED: 3-17-58, REVISED: 4-3-58

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P-16176	1.	1-1/4"
2.	Jet, Metering	P-7881	2.	#49
3.	Bleed, Air	P-16179	3.	#65
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	#22
6.	Bleed Holes (Upper)		6.	1-#70
7.	Bleed Holes (Center)		7.	1-#60
8.	Bleed Holes (Lower)		8.	2-#50
II	IDLE METERING SYSTEM			
1.	Bleed, Air		1.	#60 Drilled in Main Body
2.	Jet, Discharge		2.	
3.	Upper		3.	#58 Drilled in Throttle Body
4.	Lower		4.	#56 Drilled in Throttle Body
5.	Tube	P-16154	5.	
6.	Bore		6.	5/64"
7.	Restriction		7.	#68
8.	Valve, Throttle (Angle)	P-61385	8.	20° #50 hole drilled in Throttle Valve
III	MIXTURE CONTROL (SUCTION TYPE)			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	#50 Drilled in Throttle Body
IV	FLOAT MECHANISM			
1.	Seat	384585	1.	.113" - .111"
2.	Float Level		2.	13/32"±1/64" using .710 spec. gravity fuel
3.	Pressure		3.	2-4 psi .021 min. float needle travel
GENERAL NOTES				
Top lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.				
This setting similar to A-18033B except 384585 Float Needle Valve Seat instead of 383911 Seat and Fuel Inlet Pressure 3 psi instead of 1/2 psi.				

Figure S-16. Setting Specification for Stromberg Float Carburetor Model NA-S3A1

THIS PUBLICATION REPLACES FORM  
15-103B DATED 1 NOVEMBER 1958

PRICE—\$0.75

TECHNICAL MANUAL  
ILLUSTRATED PARTS BREAKDOWN

# MODEL NA-S3A1

## FLOAT CARBURETOR

PARTS LIST NUMBERS

A18033-4  
A18033-5  
391090-1  
391090-2

USED ON CONTINENTAL O-170 SERIES ENGINES

PUBLISHED BY  
PRODUCT SUPPORT PUBLICATIONS

**BENDIX PRODUCTS AEROSPACE DIVISION**  
**SOUTH BEND, INDIANA 46620**



FORM 15-103C

1 AUGUST 1965

**LIST OF EFFECTIVE PAGES**

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 18, CONSISTING OF THE FOLLOWING:

<i>Page No.</i>	<i>Issue</i>	<i>Page No.</i>	<i>Issue</i>
Title . . . . .	Original		
A . . . . .	Original		
i thru ii . . . . .	Original		
1 thru 7 . . . . .	Original		
8 blank . . . . .	Original		
9 thru 11 . . . . .	Original		
12 blank . . . . .	Original		
13 . . . . .	Original		
14 blank . . . . .	Original		



Section		Page
I	INTRODUCTION .....	1
II	GROUP ASSEMBLY PARTS LIST .....	5
	A18033-5 NA-S3A1 Carburetor Assembly .....	5
	391090-2 NA-S3A1 Carburetor Assembly .....	9
III	NUMERICAL INDEX .....	13

Figure		Page
1	NA-S3A1 Carburetor Assembly External View .....	ii
2	NA-S3A1 Carburetor Assembly Exploded View .....	4

## SECTION I INTRODUCTION

### 1-1. GENERAL.

1-2. This Illustrated Parts Breakdown lists, describes and illustrates all other the procurable parts for the NA-S3A1 Carburetor Assembly as manufactured by The Bendix Corporation, Bendix Products Aerospace Division, South Bend, Indiana 46620. This equipment is used on the Continental O-170 Engine Models.

### 1-3. GROUP ASSEMBLY PARTS LIST.

1-4. The group assembly parts lists included in Section II divides the equipment covered into its various assemblies, subassemblies and detail parts. Component parts are listed in their order of disassembly. Each parts list is accompanied by an appropriate exploded view illustrating the component parts and their relationship to each other.

1-5. The "Figure and Index Number" column provides the necessary cross reference between the parts list and the representative exploded view.

1-6. The "Part Number" column lists the manufacturer's or AN part number. In cases of vendor or AN part numbers appearing in the "Part Number" column, the corresponding Bendix part number will appear following the description and/or vendor name code. Part numbers suffixed with a double asterisk (\*\*) are incomplete; when ordering, refer to the complete part number which is listed following the description of the part and indicated with a double asterisk (\*\*) preceding it.

1-7. The "Description" column gives the basic noun name of each part together with any descriptive or dimensional information required to completely describe the part listed. The descriptions are indented under the number subcolumn headings to show the relationship of the parts to their assemblies and subassemblies. When a vendor item is listed the name or code of the vendor will appear following the description of the part. The codes and their respective vendor name and address will be found following this introduction. The description column may make reference to a note containing pertinent information (e.g., see Note 3).

1-8. The "Units per Assembly" column lists the number required per assembly, subassembly or sub-subassembly as applicable.

1-9. The "Usable on Code" column has been omitted from this publication because of the interchangeable usage of the subassembly parts lists between the various equipment covered herein.

1-10. The "Change Serial Number" column provides cross reference between the part changed and the corresponding parts list change.

1-11. The "Notes" appearing in the column at the right hand side of the page contain pertinent information. This column also indicates all changes made to the parts list since its release for production. Each change is identified by a parts list change serial number. A major change will also be identified by an issue number or letter.

### NOTE

The parts list change serial number is not to be confused with the serial number of the complete control assembly, which is stamped on the specification plate in its designated place.

### 1-12. NUMERICAL INDEX.

1-13. The numerical index in Section III contains all the parts listed in the Group Assembly Parts List, Section II.

1-14. The "Class Code or Stock Number" column will indicate those codes and numbers supplied by the Procuring Department. Refer to S-00-1 for class code of USAF stock numbers not listed.

1-15. The "Part Number" column contains all the parts which appear in the Group Assembly Parts List. Commercial parts not having a part number are listed alphabetically by an identifying noun in the "Part Number" column preceding the numerical listing. Part numbers suffixed with a double asterisk (\*\*) are incomplete. Refer to proper figure and index for the complete number listed following the description of the part.

1-16. The "Source Code" column when applicable contains source coding assigned by the Procuring Department.

### 1-17. SOURCE CODE DEFINITIONS.

### 1-18. CODE "P" - PARTS UNDER INVENTORY STOCK CONTROL.

1. CODE "P" is applied to parts which are procured in view of relatively high usage. Code "P" parts may be requisitioned and installed by any maintenance level, unless followed by the letter "D", which restricts requisition and replacement to De-

Section I

Paragraphs 1-19-1-29

pot (O & R) level only. Restricted service manufacture is considered practicable but only after an attempt has been made to procure from Supply Sources. In lieu of Procurement of "P" Coded parts, the Department may designate a Depot (O & R) level activity to manufacture supply requirements for the Program.

2. CODE "P1" is applied to parts which are very difficult or uneconomical to manufacture. Service manufacture is considered impracticable. Code P1 parts may be requisitioned and installed by any maintenance level, unless followed by the letter - "D" which restricts requisition and replacement to Depot (O & R) level only.

1-19. CODE "M" MANUFACTURE, PARTS NOT PROCURED.

1. CODE "M" is applied to parts which are within the facilities of any activity to manufacture. Procurement and stocking is not justified in view of the relatively low usage, or storage and installation factors, of these parts. Needs are to be met by local manufacture as required.
2. CODE "M1" is applied to parts which can be manufactured only by utilizing the facilities of the Depot (O & R) activity. Procurement and stocking of these parts are not justified in view of their relatively low usage and installation factors. The needs of all activities are to be met through or by Depot (O & R) level manufacture.

1-20. CODE "A" ASSEMBLY - ASSEMBLY NOT PROCURED.

1. CODE "A" is applied to assemblies made up of two or more units each of which carry individual part numbers and description, and which may be assembled by any Maintenance level.
2. CODE "A1" is applied to assemblies made up of two or more parts each of which carry individual part numbers and descriptions, and which may be assembled only by activities having Depot (O & R) facilities.

1-21. CODE "X" PARTS CONSIDERED IMPRACTICABLE FOR MANUFACTURE OR PROCUREMENT.

1. CODE "X" is applied to Main Structural Members or similar parts which if required, would suggest extensive aircraft or equipment reconditioning. The need of a part, or parts, coded "X" should normally result in a recommendation to retire equipment from Service.
2. CODE "X1" is applied to parts for which procurement of the next larger assembly is justified; e.g., an integral detail part, such as welded segments, inseparable from its

assembly: a part machined in a matched set or a part of an assembly which, if required, would suggest extensive reconditioning of each assembly.

3. CODE "X2" is applied to parts which are neither procured nor stocked. Activities requiring such parts shall attempt to obtain from salvage; if not obtainable from salvage, such parts shall be requisitioned through normal supply channels with supporting justification.

1-22. CODE PARTS NOT PROCURED, MANUFACTURED OR STOCKED.

1. CODE \* applies to installation drawings, diagrams, instructions or field service drawings, basic drawing numbers which cannot be procured or manufactured and obsolete parts.

1-23. The "Figure and Index Number" column contains the figure and index numbers illustrating applicable parts. When an assembly, subassembly, or detail part has not been assigned an index number, only the figure number will appear in this column.

1-24. The "Quantity per Article" column contains the total parts required per equipment, regardless of the number of times illustrated.

1-25. Microfilm Index numbers are given when supplied by the Procuring Department; otherwise, this column will remain blank.

1-26. ABBREVIATIONS.

1-27. The abbreviations and their equivalents used in the Illustrated Parts Breakdown are as follows:

AR	- As Required
ASSY	- Assembly
BLK	- Blank
COML	- Commercial
ID	- Inside Diameter
In.	- Inch (es)
No.	- Number
NP	- Not Procurable
OD	- Outside Diameter
OS	- Oversize
PD	- Pitch Diameter
Ref	- Reference

1-28. SYMBOLS.

1-29. The symbols and their equivalents used in the Illustrated Parts Breakdown are as follows:

- C - Variable parts, refer to the setting Parts List.
- S - Special parts, refer to the setting Parts List.
- \* - Parts, so identified, are not procurable.
- # - Parts matched in assembly are not procurable.

1-30. HOW TO USE THE ILLUSTRATED PARTS BREAKDOWN.

1-31. The parts list number, model designation and issue number or letter will be found on the specification plate. The issue number or letter will be stamped as a suffix to the parts list number. In general, it is recommended that the equipment be overhauled and rebuilt to the same configuration, (i.e., issue numbers or letters as received) unless directed otherwise by specific technical orders.

1-32. All parts listed in the parts list should be ordered by number and name. When ordering parts, refer to the parts list and exploded view and order accordingly. In the case of special (S) and variable (C) parts refer to the applicable setting parts list.

1-33. When the part number is known:

1. Find the part number in Section III and note the figure and index number of that part.
2. Locate figure and index number on designated Group Assembly Parts List in Section II.
3. Use index number to find detail part on the exploded view.

1-34. When the part number is not known:

1. Locate the part on the exploded view in Section II by its physical appearance or relation to other known parts.
2. Refer to the index number in the Group Assembly Parts List associated with that figure to ascertain either part number or description.

FEDERAL SUPPLY CODE FOR MANUFACTURERS

CODE	NAME AND ADDRESS	CODE	NAME AND ADDRESS
06840	The Bendix Corporation Detroit, Michigan	45722	Parker Kalon Corp. Division of General American Transportation Clifton, New Jersey
06848	Bendix Products Aerospace Div. The Bendix Corporation South Bend, Indiana 46620		

Section II  
Group Assembly Parts List

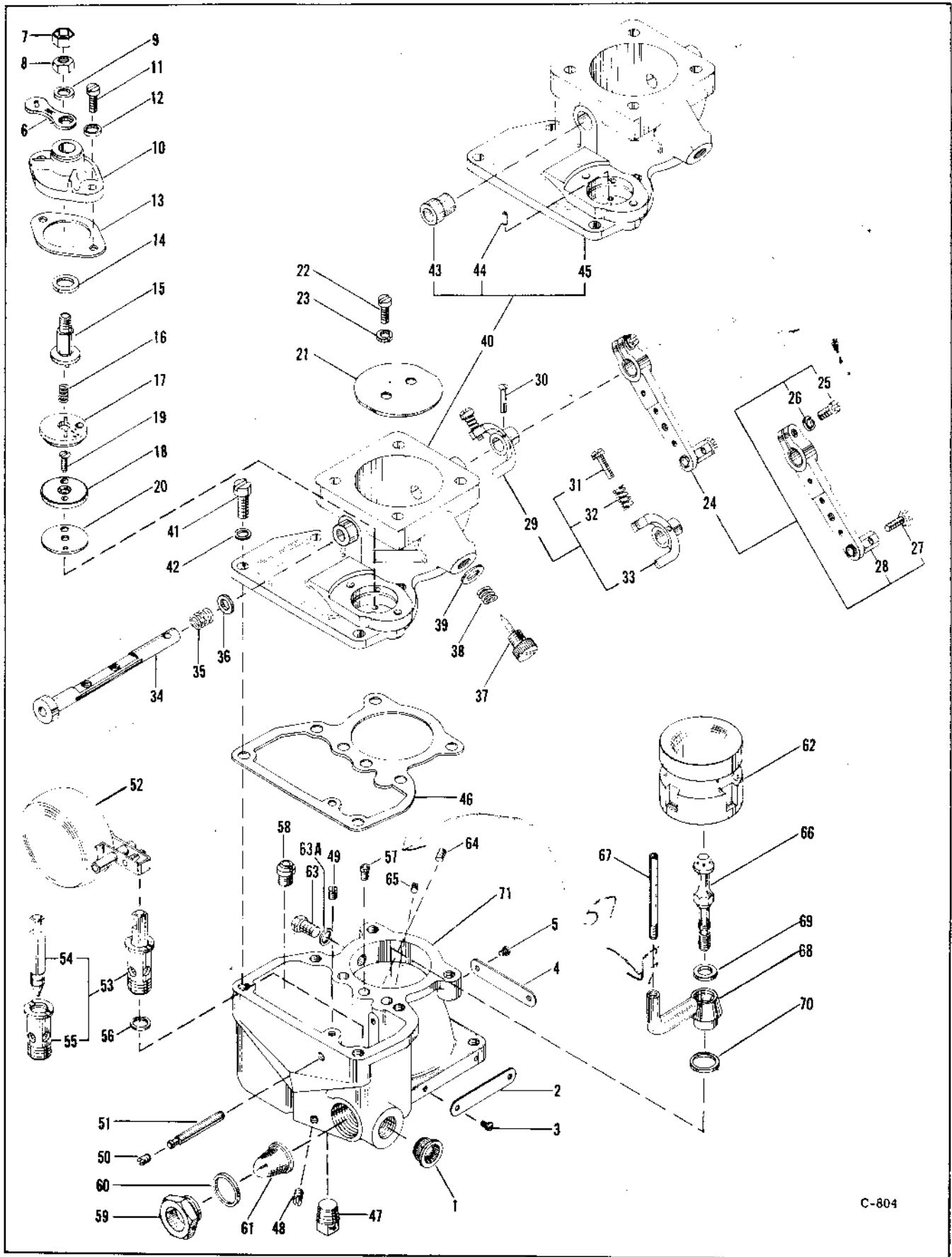


Figure 2 - NA-S3A1 Carburetor Assembly Exploded View

C-804

**SECTION II**  
**GROUP ASSEMBLY PARTS LIST**

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 -	A18033-5		CARBURETOR ASSEMBLY, . . . . NA-S3A1	1		<p style="text-align: center;">NOTES</p> <p>NOTE 1 WHEN NECESSARY TO CHANGE FLOAT LEVEL, ONE OF THESE GASKETS MAY BE USED UNDER FLOAT NEEDLE SEAT IN PLACE OF P12999.</p> <p style="text-align: center;">CHANGES</p> <p>SERIAL 19 11-27-43 ISSUE 4 ISSUE 3 CHANGED TO ISSUE 4 SERIAL 20 12-6-43 REVISED NOMENCLATURE SERIAL 21 11-21-45 P21247 ASSY CHANGED TO 384244 ASSY SERIAL 22 6-19-47 P6588 CHANGED TO 399855 SERIAL 23 4-7-58 ISSUE 5 P16163 CHANGED TO 366940 P61202 ASSY CHANGED TO 366939 SERIAL 24 8-13-63 390077 CHANGED TO 2523047</p>
2 - 1	P19492		. PLUG, NEEDLE VALVE SEAT . . .	1		
2 - 2	384480		. PLATE, SPECIFICATION . . . .	1		
2 - 3	COML		ATTACHING PARTS . SCREW, THREAD FORMING . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2		
2 - 4	384480		. PLATE, SPECIFICATION . . . .	1		
2 - 5	COML		ATTACHING PARTS . SCREW, THREAD FORMING . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2		
2 - 6	P16289		. LEVER, AIR HORN . . . . .	1		
2 - 7	AN356-1032		ATTACHING PARTS . PALNUT, NO. 10-32 06848, . . 188S20	1		
2 - 8	AN315-3R		. NUT, NO. 10-32 06848, . . .	1		
2 - 9	AN960-10		. WASHER, FLAT 06840, . . . . 907237K1 -----*	1		
2 - 10	P61037		. COVER ASSEMBLY, MIXTURE . . CONTROL	1		
2 - 11	P21854		ATTACHING PARTS . SCREW, MACHINE NO. 10-24 . . BY 21/32 IN.	2		
2 - 12	P15350		. WASHER . . . . .	2		
2 - 13	P61033		. GASKET . . . . .	1		
2 - 14	384667		. WASHER, NONMETALLIC . . . .	1		
2 - 15	P61034		. STEM, MIXTURE CONTROL . . .	1		
2 - 16	P8770		. SPRING, COMPRESSION . . . . HELICAL	1		
2 - 17	P61030		. PLATE, MIXTURE CONTROL . . . VALVE UPPER	1		
2 - 18	P61031		. PLATE, MIXTURE CONTROL . . . VALVE LOWER	1		

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 - 19		AN505-8-6	ATTACHING PARTS •SCREW, NO. 8-32 BY 3/8 IN. 06848, P61038 ---*---	1		
2 - 20		P61035	•GASKET . . . . .	1		
2 - 21		P61385	•VALVE, THROTTLE . . . . .	1		
2 - 22		P16173	ATTACHING PARTS •SCREW, MACHINE NO. 8-32 BY 5/16 IN.	2		
2 - 23		AN935-8L	•WASHER, SPRING LOCK 06840, 901045K1 ---*---	2		
2 - 24		384244	•LEVER ASSEMBLY, THROTTLE .	1	21, 22	
2 - 25		399855	•SCREW, MACHINE NO. 10-24 BY 19/32 IN.	1		
2 - 26		AN935-10	•WASHER, SPRING LOCK . . . 06840, 901004K1	1		
2 - 27		P21244	•SCREW, NO. 8-32 BY 3/8 IN	1		
2 - 28	*		•LEVER AND CONNECTION . .	NP		
2 - 29		384670	ASSEMBLY •STOP ASSEMBLY, THROTTLE .	1		
2 - 30		P21267	ATTACHING PARTS •PIN, PLAIN TAPERED NO. 4/0 STANDARD	1		
2 - 30		P21267-1	•PIN, PLAIN TAPERED NO. 4/0 0.005 IN. OS ON OD FIRST OS OF P21267	AR		
2 - 30		P21267-2	•PIN, PLAIN TAPERED NO. 4/0 0.010 IN. OS ON OD SECOND OS OF P21267 ---*---	AR		
2 - 31		P18286	•SCREW, MACHINE NO. 10-32 BY 3/4 IN.	1		
2 - 32		P15831	•SPRING, IDLE ADJUSTING . SCREW	1		
2 - 33	*	384671	•STOP, THROTTLE . . . . .	NP		
2 - 34		P16151	•SHAFT ASSEMBLY, THROTTLE .	1		
2 - 35		P16171	•SPRING . . . . .	1		
2 - 36		P16170	•WASHER . . . . .	1		
2 - 37		P16177	•VALVE ASSEMBLY, IDLE . . .	1		
2 - 38		P11556	•SPRING, COMPRESSION . . . HELICAL	1		
2 - 39		P15225	•WASHER . . . . .	1		
2 - 40		366939**	•BODY ASSEMBLY, THROTTLE . **366939-58-56-50-60	1	23	
2 - 41		P6550	ATTACHING PARTS •SCREW, MACHINE 1/4-20 BY . 5/8 IN.	6		
2 - 42		P15344	•WASHER . . . . . ---*---	6		
2 - 43		P16169	•BEARING, SLEEVE . . . . .	2		
2 - 44		P21410	•PIN, HEADLESS STRAIGHT . .	1		
2 - 45	*	P61032	•BODY, THROTTLE . . . . .	NP		
2 - 46		P16155	•GASKET . . . . .	1		
2 - 47		MS20913-2	•PLUG, PIPE 06848, P8505 . .	1		
2 - 48		P60138	•PLUG, HEADLESS SCREW . . . 1/4-28	1		
2 - 49		P16161	•SCREW, HEADLESS SET NO. . 8-32 BY 7/32 IN.	1		

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			<b>1234567</b>			
2 - 50		P6387	.SCREW, HEADLESS SET NO. . . . . 10-32 BY 7/64 IN.	1		
2 - 51		P16160	.PIN, FULCRUM . . . . .	1		
2 - 52		P16156	.FLOAT AND LEVER ASSEMBLY	1		
2 - 53		38343	NOT USED	1		
2 - 54		2523047	.NEEDLE, FLOAT . . . . .	1	24	
2 - 55		383911	.SEAT, NEEDLE VALVE . . . . .	1		
2 - 56		P16165	.WASHER, NONMETALLIC . . . . . 1/64 IN. THICK SEE NOTE 1	AR		
2 - 56		P12999	.WASHER, NONMETALLIC . . . . . 1/32 IN. THICK SEE NOTE 1	AR		
2 - 56		P16166	.WASHER, NONMETALLIC . . . . . 3/64 IN. THICK SEE NOTE 1	AR		
2 - 56		P16167	.WASHER, NONMETALLIC . . . . . 1/16 IN. THICK SEE NOTE 1	AR		
2 - 57		P16179-65	.REDUCER . . . . .	1		
2 - 58		P7881-49	.JET, METERING TYPE A . . . . .	1		
2 - 59		P14220	.PLUG, HEX HEAD 3/4-20 . . . . .	1		
2 - 60		174S22	.GASKET, COPPER . . . . .	1		
2 - 61		P12958	.STRAINER ASSEMBLY . . . . .	1		
2 - 62		P16176-1-1/4	.TUBE, VENTURI . . . . .	1		
			ATTACHING PARTS			
2 - 63		P16178	.SCREW, HEX PLAIN 1/4-20 BY 1/2 IN. -----*	1		
2 - 63A		P12999	.WASHER, NONMETALLIC . . . . .	1		
2 - 64		P60138	.PLUG, HEADLESS SCREW . . . . . 1/4-28	1		
2 - 65		P21472	.PLUG, HEADLESS SCREW NO. . . . . 8-32	1		
2 - 66		390222-22	.NOZZLE, MAIN DISCHARGE . . . . .	1		
2 - 67		P16154-68	.TUBE ASSEMBLY, IDLE . . . . .	1		
2 - 68		P61057	.ARM ASSEMBLY, MAIN AIR . . . . . BLEED	1		
2 - 69		P5329	.WASHER, NONMETALLIC . . . . .	1		
2 - 70		P2885	.WASHER, NONMETALLIC . . . . .	1		
2 - 71		366940	.BODY, MAIN . . . . .	1	23	



Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes	
			1234567				
2 -		391090-2	CARBURETOR ASSEMBLY, . . . . NA-33A1	1		NOTES	
2 - 1		P19492	.PLUG, NEEDLE VALVE SEAT . . . .	1		NOTE 1 WHEN NECESSARY TO CHANGE FLOAT LEVEL, ONE OF THESE GASKETS MAY BE USED UNDER FLOAT NEEDLE SEAT IN PLACE OF P12999.	
2 - 2		384480	.PLATE, SPECIFICATION . . . .	1			
2 - 3		COML	ATTACHING PARTS .SCREW, THREAD FORMING . . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2			
2 - 4		384480	.PLATE, SPECIFICATION . . . .	1			
2 - 5		COML	ATTACHING PARTS .SCREW, THREAD FORMING . . . . TAPPING NO. 2 BY 3/16 IN. 45722-06848, P16630 -----*	2			
2 - 6		P16289	.LEVER, AIR HORN . . . . .	1			
2 - 7		AN356-1032	ATTACHING PARTS .PALNUT, NO. 10-32 06848, . . . . 188520	1			
2 - 8		AN315-3R	.NUT, NO. 10-32 06848, . . . . P60834	1			
2 - 9		AN960-10	.WASHER, FLAT 06840, . . . . 907237K1 -----*	1			
2 - 10		P61037	.COVER ASSEMBLY, MIXTURE . . . . CONTROL	1			CHANGES
2 - 11		P21854	ATTACHING PARTS .SCREW, MACHINE NO. 10-24 . . . . BY 21/32 IN.	2			SERIAL 2 5-25-48 ISSUE 1 RELEASED FOR PRODUCTION
2 - 12		P15350	.WASHER . . . . .	2			SERIAL 3 10-4-49 P6588 CHANGED TO 399855 SERIAL 4 4-7-58
2 - 13		P61033	.GASKET . . . . .	1			ISSUE 2 P61202 ASSY CHANGED TO 366939
2 - 14		384667	.WASHER, NONMETALLIC . . . .	1			P16163 CHANGED TO 366940
2 - 15		P61034	.STEM, MIXTURE CONTROL . . . .	1			SERIAL 5 8-13-63
2 - 16		P8770	.SPRING, COMPRESSION . . . . HELICAL	1			390077 CHANGED TO 2523047
2 - 17		P61030	.PLATE, MIXTURE CONTROL . . . . VALVE UPPER	1			
2 - 18		P61031	.PLATE, MIXTURE CONTROL . . . . VALVE LOWER	1			
2 - 19		AN505-8-6	ATTACHING PARTS .SCREW, NO. 8-32 BY 3/8 IN. 06848, P61038 -----*	1			
2 - 20		P61035	.GASKET . . . . .	1			
2 - 21		P61385	.VALVE, THROTTLE . . . . .	1			
2 - 22		P16173	ATTACHING PARTS .SCREW, MACHINE NO. 8-32 BY 5/16 IN.	2			
2 - 23		AN935-8L	.WASHER, SPRING LOCK 06840, 901045K1 -----*	2			

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			<b>1234567</b>			
2 - 24		384244	•LEVER ASSEMBLY, THROTTLE •	1		
2 - 25		399855	••SCREW, MACHINE NO. 10-24 BY 19/32 IN.	1	3	
2 - 26		AN935-10	••WASHER, SPRING LOCK • • • 06840, 901004K1	1		
2 - 27		P21244	••SCREW, NO. 8-32 BY 3/8 IN	1		
2 - 28	*		••LEVER AND CONNECTION • • ASSEMBLY	NP		
2 - 29		384670	•STOP ASSEMBLY, THROTTLE •	1		
			ATTACHING PARTS			
2 - 30		P21267	•PIN, PLAIN TAPERED NO. 4/0 STANDARD	1		
2 - 30		P21267-1	•PIN, PLAIN TAPERED NO. 4/0 0.005 IN. OS ON OD FIRST OS OF P21267	AR		
2 - 30		P21267-2	•PIN, PLAIN TAPERED NO. 4/0 0.010 IN. OS ON OD SECOND OS OF P21267 -----*	AR		
2 - 31		P18288	••SCREW, MACHINE NO. 10-32 BY 3/4 IN.	1		
2 - 32		P15831	••SPRING, IDLE ADJUSTING • SCREW	1		
2 - 33	*	384671	••STOP, THROTTLE • • • • •	NP		
2 - 34		384411	•SHAFT ASSEMBLY, THROTTLE •	1		
2 - 35		P16171	•SPRING • • • • •	1		
2 - 36		P16170	•WASHER • • • • •	1		
2 - 37		P16177	•VALVE ASSEMBLY, IDLE • • •	1		
2 - 38		P11556	•SPRING, COMPRESSION • • • HELICAL	1		
2 - 39		P15225	•WASHER • • • • •	1		
2 - 40		366939**	•BODY ASSEMBLY, THROTTLE • **366939-58-56-50-60	1	4	
			ATTACHING PARTS			
2 - 41		P6550	•SCREW, MACHINE 1/4-20 BY • 5/8 IN.	6		
2 - 42		P15344	•WASHER • • • • •	6		
			-----*			
2 - 43		P16169	••BEARING, SLEEVE • • • • •	2		
2 - 44		P21410	•PIN, HEADLESS STRAIGHT •	1		
2 - 45	*	P61032	••BODY, THROTTLE • • • • •	NP		
2 - 46		P16155	•GASKET • • • • •	1		
2 - 47		M520913-2	•PLUG, PIPE 06848, P8505 •	1		
2 - 48		P60138	•PLUG, HEADLESS SCREW • • • 1/4-28	1		
2 - 49		P16161	•SCREW, HEADLESS SET NO. • 8-32 BY 7/32 IN.	1		
2 - 50		P6387	•SCREW, HEADLESS SET NO. • 10-32 BY 7/64 IN.	1		
2 - 51		P16160	•PIN, FULCRUM • • • • •	1		
2 - 52		P16156	•FLOAT AND LEVER ASSEMBLY	1		
2 - 53		385043	NOT USED	1		
2 - 54		2523047	•NEEDLE, FLOAT • • • • •	1	5	
2 - 55		383911	•SEAT, NEEDLE VALVE • • •	1		
2 - 56		P16165	•WASHER, NONMETALLIC • • • 1/64 IN. THICK SEE NOTE 1	AR		
2 - 56		P12999	•WASHER, NONMETALLIC • • • 1/32 IN. THICK SEE NOTE 1	AR		
2 - 56		P16166	•WASHER, NONMETALLIC • • • 3/64 IN. THICK SEE NOTE 1	AR		

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 - 56		P16167	• WASHER, NONMETALLIC . . . . 1/16 IN. THICK SEE NOTE 1	AR		
2 - 57		P16179-60	• REDUCER . . . . .	1		
2 - 58		P7881-46	• JET, METERING TYPE A . . . .	1		
2 - 59		P14220	• PLUG, HEX HEAD 3/4-20 . . . .	1		
2 - 60		174522	• GASKET, COPPER . . . . .	1		
2 - 61		P12958	• STRAINER ASSEMBLY . . . . .	1		
2 - 62		P16176-1-3/8	• TUBE, VENTURI . . . . .	1		
			ATTACHING PARTS			
2 - 63		P16178	• SCREW, HEX PLAIN 1/4-20 BY 1/2 IN. ---*---	1		
2 - 63A		P12999	• WASHER, NONMETALLIC . . . .	1		
2 - 64		P60138	• PLUG, HEADLESS SCREW . . . . 1/4-28	1		
2 - 65		P21472	• PLUG, HEADLESS SCREW NO. . . . 8-32	1		
2 - 66		390222-22	• NOZZLE, MAIN DISCHARGE . . . .	1		
2 - 67		P16154-68	• TUBE ASSEMBLY, IDLE . . . . .	1		
2 - 68		P61057	• ARM ASSEMBLY, MAIN AIR . . . . BLEED	1		
2 - 69		P5329	• WASHER, NONMETALLIC . . . .	1		
2 - 70		P2885	• WASHER, NONMETALLIC . . . .	1		
2 - 71		366940	• BODY, MAIN . . . . .	1	4	

Section II  
Group Assembly Parts List

Figure and Index Number	Symbol	Part Number	Description	Units per Assy.	Change Serial Number	Notes and Changes
			1234567			
2 - 56		P16167	• WASHER, NONMETALLIC . . . . 1/16 IN. THICK SEE NOTE 1	AR		
2 - 57		P16179-60	• REDUCER . . . . .	1		
2 - 58		P7881-46	• JET, METERING TYPE A . . . .	1		
2 - 59		P14220	• PLUG, HEX HEAD 3/4-20 . . . .	1		
2 - 60		174522	• GASKET, COPPER . . . . .	1		
2 - 61		P12958	• STRAINER ASSEMBLY . . . . .	1		
2 - 62		P16176-1-3/8	• TUBE, VENTURI . . . . .	1		
			ATTACHING PARTS			
2 - 63		P16178	• SCREW, HEX PLAIN 1/4-20 BY 1/2 IN. ---*---	1		
2 - 63A		P12999	• WASHER, NONMETALLIC . . . .	1		
2 - 64		P60138	• PLUG, HEADLESS SCREW . . . . 1/4-28	1		
2 - 65		P21472	• PLUG, HEADLESS SCREW NO. . . . 8-32	1		
2 - 66		390222-22	• NOZZLE, MAIN DISCHARGE . . . .	1		
2 - 67		P16154-68	• TUBE ASSEMBLY, IDLE . . . . .	1		
2 - 68		P61057	• ARM ASSEMBLY, MAIN AIR . . . . BLEED	1		
2 - 69		P5329	• WASHER, NONMETALLIC . . . .	1		
2 - 70		P2885	• WASHER, NONMETALLIC . . . .	1		
2 - 71		366940	• BODY, MAIN . . . . .	1 4		

SECTION III  
NUMERICAL INDEX

CLASS CODE OR STOCK NUMBER	PART NUMBER	AF SOURCE CODE	FIGURE AND INDEX NUMBER	QTY. PER ARTICLE	MICROFILM INDEX
4305-208-0815	SCREW		2 - 3	4	
5310-167-1343	AN315-3R		2 - 5		
6700	AN356-1032		2 - 28	1	
5305-150-9761	AN505-8-6		2 - 19	1	
5310-167-1664	AN935-10		2 - 26		
5310-167-1659	AN935-8L		2 - 23	2	
5310-167-0818	AN960-10		2 - 9	1	
4305-2915	A16032-5		2 - 1	1	
4730-167-2180	MS20913-2		2 - 47		
4305-2915-522-5261	F11556		2 - 35		
4305-P12958	F12958		2 - 61	1	
4305-5330-265-7982	P12949		2 - 56	2	
			2 - 63		
4305-2915-484-7659	P14220		2 - 59		
4305-5310-484-7686	P15225		2 - 39		
4305-5310-637-2093	P15344		2 - 42	6	
4305-5310-637-2069	P15350		2 - 12	2	
4305-2915-365-9843	P16171		2 - 32	1	
4305-2915-307-5015	P16151		2 - 34	1	
4305-2915	P16154-58		2 - 67	1	
4305-2915-310-3518	P16155		2 - 46	1	
4305-2915-307-5016	P16156		2 - 52	1	
4305-5315-484-7716	P16160		2 - 51	1	
4305-P16161	P16161		2 - 49	1	
4305-5330-268-3441	P14165		2 - 56	1	
4305-5330-290-5091	P16166		2 - 56	1	
4305-5330-290-4826	P16167		2 - 56	1	
4305-2915-484-7729	P16169		2 - 43	2	
4305-5310-511-9065	P16170		2 - 36	1	
4305-2915-484-7725	P16171		2 - 35	1	
4305-P16173	P16173		2 - 22	2	
4305-2915-307-5012	P16175-1-1/4		2 - 62	1	
4305-2915-516-3927	P16175-1-3/8		2 - 62	1	
4305-2915-307-5010	P16177		2 - 37	1	
4305-P16178	P16178		2 - 63	1	
4305-2915-568-8923	F16179-50		2 - 57		
4305-P16179-55	F16179-55		2 - 57		
4305-2915-307-5021	P16289		2 - 6	1	
	P16630				
	SEE SCREW				
4305-P18288	P18288		2 - 31	1	
4305-P19492	P19492		2 - 1	1	
4305-5305-484-7916	P21244		2 - 27	1	
4305-2915-484-7920	P21267		2 - 30	1	
4305-5315-267-2464	P21267-1		2 - 30	1	
4305-5315-292-0718	P21267-2		2 - 30	1	
4305-5315-484-7927	P21410		2 - 44		
4305-4730-484-7936	P21470		2 - 65		
4305-P21854	P21854		2 - 11	2	
4305-5330-366-6330	P2855		2 - 70		
4305-5330-292-3320	P5329		2 - 69	1	
4305-P60138	P60138		2 - 48	2	
	P60834		2 - 64		
	SEE AN315-3R				
4305-2915-307-5152	P61050		2 - 17	1	
4305-2915-307-5153	P61031		2 - 18	1	
	P61032		2 - 45	1	
4305-2915-336-8303	P61033		2 - 13	1	
4305-2915-484-8157	P61034		2 - 15	1	
4305-2915-310-3522	P61035		2 - 20	1	
4305-2915-307-5154	P61037		2 - 10	1	
	P61038				
	SEE AN505-8-6				
4305-2915-484-8161	P61057		2 - 68	1	
4305-2915-307-5150	P61355		2 - 21	1	
4305-4730-484-8198	P6387		2 - 50	1	
4305-P6550	P6550		2 - 41	6	
4305-P7881-46	P7881-46		2 - 58	1	
4305-2915-307-5254	P7881-49		2 - 58	1	
	P8505				
	SEE MS20913-2				
4305-2915-484-8683	P8770		2 - 16		
4305-5310-266-0575	174522		2 - 60	1	
	188520				
	SEE AN356-1032				
	2523047		2 - 54	1	

CLASS CODE OR STOCK NUMBER	PART NUMBER	AF SOURCE CODE	FIGURE AND INDEX NUMBER	QTY. PER ARTICLE	MICROFILM INDEX
4305-2915	366939**		2 - 40	1	
4305-2915	366940		2 - 71	1	
4305-2915-512-4375	383911		2 - 55		
4305-383943	383943		2 - 53		
4305-2915-484-0135	384244		2 - 34		
4305-2915-326-4339	384411		2 - 34		
	384480		2 - 2	2	
			2 - 1		
4305-5330-265-6016	384667		2 - 14	1	
4305-2915-484-0148	384670		2 - 29		
	384671		2 - 33		
4305-2915	390222-22		2 - 66	1	
4305-2915	391050-2				
4305-5305-090-2049	399855		2 - 25		
	901004K1				
	SEE AN935-10				
	901045K1				
	SEE AN935-8L				
	907237K1				
	SEE AN960-10				

# Service Bulletin

## Fuel Systems

No. ACSB-84Rev. No. 1Issued 8.1.64Revised 7.15.72Page 1 of 4

Published By Product Support Department

**SUBJECT:** CARBURETOR, BENDIX-STROMBERG MODELS NA-S3A1, NA-S3B AND NA-S03A1 - FLOAT NEEDLE VALVE P/N 390077 - REPLACEMENT OF.

**REFERENCE:** Letter, Continental (R. J. Powell) to Bendix (J. E. Hartzler) dated 26 June 1963.

**PUBLICATIONS AFFECTED:**

- |                       |  |
|-----------------------|--|
| (a) Form No. 15-91B   | Handbook Overhaul Instructions, Float Carburetor Model NA-S3A1 dated 15 December 1958.               |
| (b) Form No. 15-S91B  | Supplement to Handbook Overhaul Instructions, Float Carburetor Model NA-S3A1 dated 15 December 1963. |
| (c) Form No. 15-103B  | Illustrated Parts Breakdown, Float Carburetor Model NA-S3A1 dated 1 November 1958.                   |
| (d) Form No. 15-S103B | Supplement to Illustrated Parts Breakdown, Float Carburetor Model NA-S3A1 dated 1 November 1958.     |

**REASON FOR BULLETIN:** To provide a float needle valve made of Delrin, an ivory colored acetal plastic, in lieu of the rubber tipped stainless steel needle. Material change made to remove rubber age control requirement, reduce cost and provide an improved service life material. Reason for Revision:

1. To add instructions for float lever weight.
2. To add seat part number under application.

**APPLICATION:**

<u>Engine</u>	<u>Carburetor Model</u>	<u>Parts List</u>	<u>Seat P/N</u>
A-65, 0-170-3, -5, -7	NA-S3A1	A-18033(B)-5	383911
A-75		A-30177(B)-5	383912
C-75		380162-2	383911
C-85-12		380167-4	383911
C-75-12		380171-2	384585
C-85-12		380172-2	384585
C-75-12		380174-2	383911
C-90-12F		380231-3	383911
C-90-8F		391090-2	383911
C-90-12F		391156-2	384585
C-90-14F		391229-2	383911
C-90-14F		391257-2	384585
A-65-8		391716-2	384585
A-65-8	NA-S3B	380155-2	383911
A-65-8		380158-1	383911
A-65-8		380206-1	384585
A-100-1	NA-S03A1	380168-2	383911
A-100-1		380175-1	384585



**Energy Controls  
Division**

717 N. Bendix Dr., South Bend, Indiana 46620

February 8, 1943

AIRCRAFT CARBURETOR SERVICE BULLETIN #55

PREPARATION OF STROMBERG "FLOAT TYPE" AIRCRAFT  
CARBURETORS FOR STORAGE AND RECONDITIONING  
THESE CARBURETORS FOR USE AFTER STORAGE

It is important that aviation personnel who may have occasion to handle Stromberg "Float Type" Aircraft Carburetors, know the proper cleaning and flushing oils to use, and the correct method of preparing these carburetors for storage and for reconditioning them after storage.

CORRECT CLEANING AND FLUSHING FLUIDS

The only compounds which should be used for cleaning Stromberg "Float Type" Aircraft Carburetors are unleaded aviation gasoline and naphtha. The only oil which can be recommended for flushing these carburetors is Grade 1065A oil conforming to Army-Navy Aeronautical Specification AN-VV-O-446.

DETRIMENTAL FLUIDS

The following fluids have been tested and found to be detrimental to the life of synthetic rubber parts and should not be used in cleaning any carburetor parts as the porous aluminum absorbs some of the less volatile elements of these compounds.

Carbon Tetrachloride - found in most cleaning fluids.

Alox Anti-Rust Compounds

"Bendix Cleaner"

Fatty Acids - found in some cutting oils and high pressure lubricating oils.

Chlorinated Hydrocarbons such as Ethylene Dichloride and Tri-Chloro-Ethylene which are frequently used as vapor cleaners for parts.

Turpentine

Acetone

Kerosene

Paint removers and thinners

No vegetable oil or oils containing any of the previously mentioned compounds should be used for flushing the carburetor prior to storage.

Tests have been made which show that gasoline which becomes stale due to prolonged storage absorbs oxygen rapidly. This stale or oxidized gasoline, which has a very distinct varnish-like odor, causes rapid deterioration of synthetic rubber parts and causes a "gummy" deposit on metal parts.

IMPORTANT: Any oil which does not meet the Army-Navy Aeronautical Specification "AN-VV-O-446: Oil; Lubricating, Aircraft Engine" must not be used in flushing Stromberg Aircraft Carburetors. Most other oils are known to contain constituents or additives which have a detrimental effect on synthetic rubber parts; and whatever their efficiency as lubricants, these other oils cannot be approved for flushing purposes.

#### TREATMENT OF CARBURETOR

It is strongly recommended that the following steps be taken when whenever a Stromberg "Float Type" Aircraft Carburetor is to be placed in storage.

##### A. Preparation for Storage

1. Remove the complete carburetor from the engine. Then place a clean cover plate over the flange of the engine from which the carburetor was removed. This will close off the engine induction system. Be sure that the studs which project from the engine flange are protected from rust and other injury.

2. Remove the drain plug in the bottom of the float bowl and drain all gasoline from the carburetor through this opening and the carburetor fuel inlet. Rotate the carburetor to insure complete drainage. A few strokes of the throttle lever will pump out any gasoline that may have collected in the Accelerating Pump system.

3. After the carburetor has drained thoroughly, turn the carburetor over so that it rests on its top flange (bottom flange facing upward). Install a fitting in the carburetor drain and to this fitting attach an oil line. Pump in Grade 1065A oil conforming to Army-Navy Aeronautical Specification AN-VV-O-446 until this oil flows from the discharge nozzle. If a pump is not available, the oil may be flowed in from an overhead tank about ten feet high. As a last resort, the oil may be poured in if extra precautions are taken to insure complete flushing.

After oil has flowed from the main discharge nozzle, disconnect the oil line and replace the drain plug. Set the carburetor upright and operate the throttle lever until oil is discharged from the Accelerating Pump discharge nozzle.

The oil pressure applied to the carburetor should not exceed 3 to 4 pounds per square inch.

In flushing Stromberg "Float Type" Aircraft Carburetors which have Automatic Mixture Control Units, care should be taken that the overflowing oil does not come in contact with this unit. The presence of oil on the Automatic Mixture Control Unit, while having no corrosive effect, will tend to alter the setting or calibration of this unit.

4. To drain the flushing oil from the carburetor, repeat the process described under Step 2, above. Replace the plug in the bottom of the float bowl and install a plug in the fuel inlet.



5. With the throttle valve in the closed position, adjust the throttle stop to obtain the maximum throttle opening. Then lockwire the throttle valve in this position against the stop.

6. If the carburetor is to be shipped over salt water or to be stored near salt water, spray the outside of the carburetor and the inside of the throttle bore with the approved flushing oil. Set the carburetor aside and allow any excess oil to drain off. Do not spray the Automatic Mixture Control Unit.

7. The carburetor should now be packed in a dustproof container and given such protection against moisture as climatic conditions at the point of storage will require. In ordinary cases, this will consist of storing the carburetor in as dry a location as possible, but where the carburetor is to be shipped over salt water or stored near salt water the usual practice calls for wrapping the dustproof sealed container in waterproof paper and then placing the packed carburetor, so wrapped, in a strong wooden box.

It is recommended that a cloth bag containing 1/2 pound of Silica Gel crystals be placed in the dustproof container in such a way that the cloth bag does not come in actual contact with the carburetor.

#### B. Reconditioning for Use After Storage

1. Remove the plug from the fuel inlet and flush the carburetor thoroughly as described under Step 3, above, using fresh gasoline of the type to be used in service instead of the flushing oil. This gasoline should then be drained from the carburetor by removing the drain plug in the bottom of the float bowl.

2. On carburetors having Automatic Mixture Control Units, this unit should be removed and inspected to make certain that no oil is on the unit needle. If oil has reached the unit, it should be cleaned and adjusted before being installed. The cleaning may be accomplished by loosening the spanner locknut and unscrewing the base from the housing. Clean and polish the needle with a crocus cloth. Sparingly lubricate the groove nearest the tapered end with Gredag Graphite Grease No. 32. Clean and polish the bushing with a crocus cloth. Reassemble the unit and test it according to the "Instructions on Bendix-Stromberg Automatic Mixture Control Units" Form 10-257.

3. After replacing the plug in the bottom of the float bowl, the carburetor should then be completely lockwired before being installed on an engine.

If the carburetor is not to be removed from the engine during the period of storage, the draining and flushing process described above should be followed except that the carburetor must be flushed in the upright position. The carburetor should then be afforded maximum protection against climatic conditions. This will, of course, depend entirely upon the manner in which the engine is to be protected during the storage period.

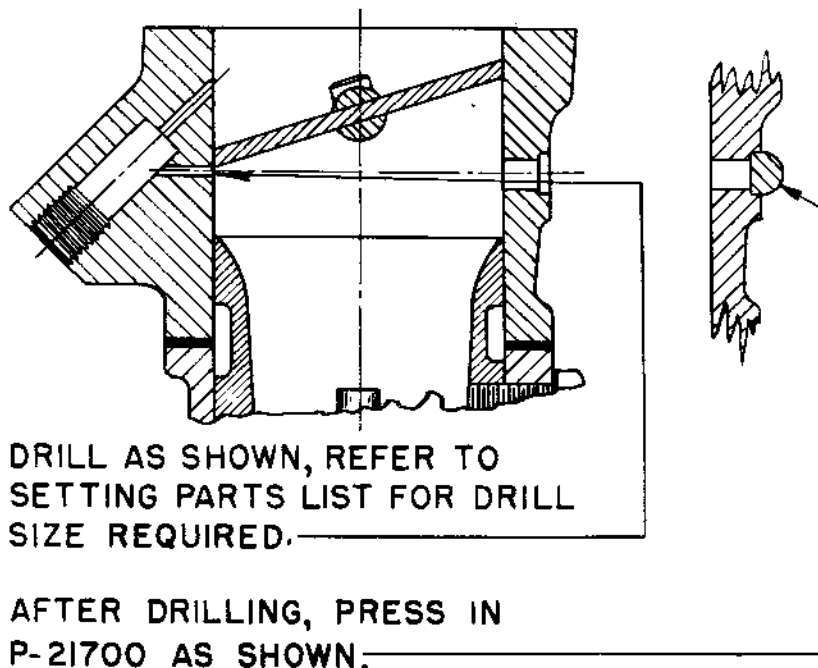
# AIRCRAFT CARBURETOR SERVICE BULLETIN NO. 66

## Drilling Lower Idle Discharge Channel in Stromberg NA-S3A1 Aircraft Carburetors

The lower idle discharge channel is not drilled on replacement throttle bodies because of the difference in engine settings. This channel can be drilled as follows:

Drill the lower idle discharge channel flush with the throttle valve when this valve is in a closed

position. The drill can be inserted thru the small hole on the opposite side of the throttle body. Drill thru until the drill makes contact with the main idle discharge channel. It is advisable to use an air hose to remove any chips left in the channel after drilling.



The sketch illustrates the position of this channel. The correct drill size to be used can be determined by referring to the setting parts list for the

particular carburetor being drilled.

After the drilling operation, press in a P-21700 lead ball as shown in above figure.

**STROMBERG AIRCRAFT CARBURETOR SERVICE**  
BENDIX PRODUCTS DIVISION  
South Bend, Indiana  
U. S. A.

# AIRCRAFT CARBURETOR SERVICE BULLETIN NO. 71

SUBJECT: USE OF CORRECT FLOAT NEEDLES AND FLOAT NEEDLE SEATS IN THE FOLLOWING LISTED STROMBERG FLOAT-TYPE AIRCRAFT CARBURETOR:

NA-H1E	NA-S3A1	NA-R4A
NA-S2	NA-R3	NA-R4B
NA-S2A1	NA-R3A	NA-R4D
NA-S3	NA-R4	

1. All production carburetors in the above group are being built to incorporate a synthetic-rubber tipped float needle and a float needle seat having a rounded edge at the seating surface.

2. However, there are in use in the field, carburetors in this group equipped with a P-14221 all-steel float needle and a float needle seat having a sharp edge at the seating surface. These all-steel needles and sharp edged seats are no longer in production and are, therefore, not procurable as replacement parts.

3. The following table lists the correct float needle and float needle seat to be used as replacement parts in the subject carburetors:

Carb. Model	Float Needle	Float Needle Seat
NA-H1E	390077	390297
NA-S2	390077	383911
NA-S2A1	390077	383911
NA-S3	390077	383911
NA-S3A1	390077	383911
NA-R3	390077	383929
NA-R3A	390077	383929
NA-R4	390077	383929
NA-R4A	390077	383929
NA-R4B	390077	383929
NA-R4D	390077	383929

4. The difference between the seats having a rounded edge at the seating surface and those having a sharp edged seat is illustrated in figure 1.

5. When it becomes necessary to replace the float needle, the float needle seat, or both, the following procedure is to be followed.

a. In all cases it is recommended that the needle and seat designated in the foregoing table be used as replacement parts.

b. In cases involving the replacement of a synthetic rubber tipped needle, assuming that the seat is satisfactory for further use, only the needle need be replaced. However, be certain that the seat has a rounded edge at the seating surface. (See "B" or "D", figure 1). **DO NOT USE A SYNTHETIC-RUBBER TIPPED NEEDLE IN A SEAT HAVING A SHARP EDGE AT THE SEATING SURFACE.** Use of the rounded seat with the rubber tipped needle will eliminate any possibility of the needle sticking in the seat or being cut by the seat.

c. If it is desired to continue the use of the all-steel needle in order to use up parts now in stock, both the needle and seat must be replaced as matched pair. It is impractical to fit an old needle to a new seat or a new needle to an old seat. If the all-steel needle is in the carburetor and is fit for further service it must be used with the seat having a sharp edge at the seating surface. (See "A" or "C", figure 1).

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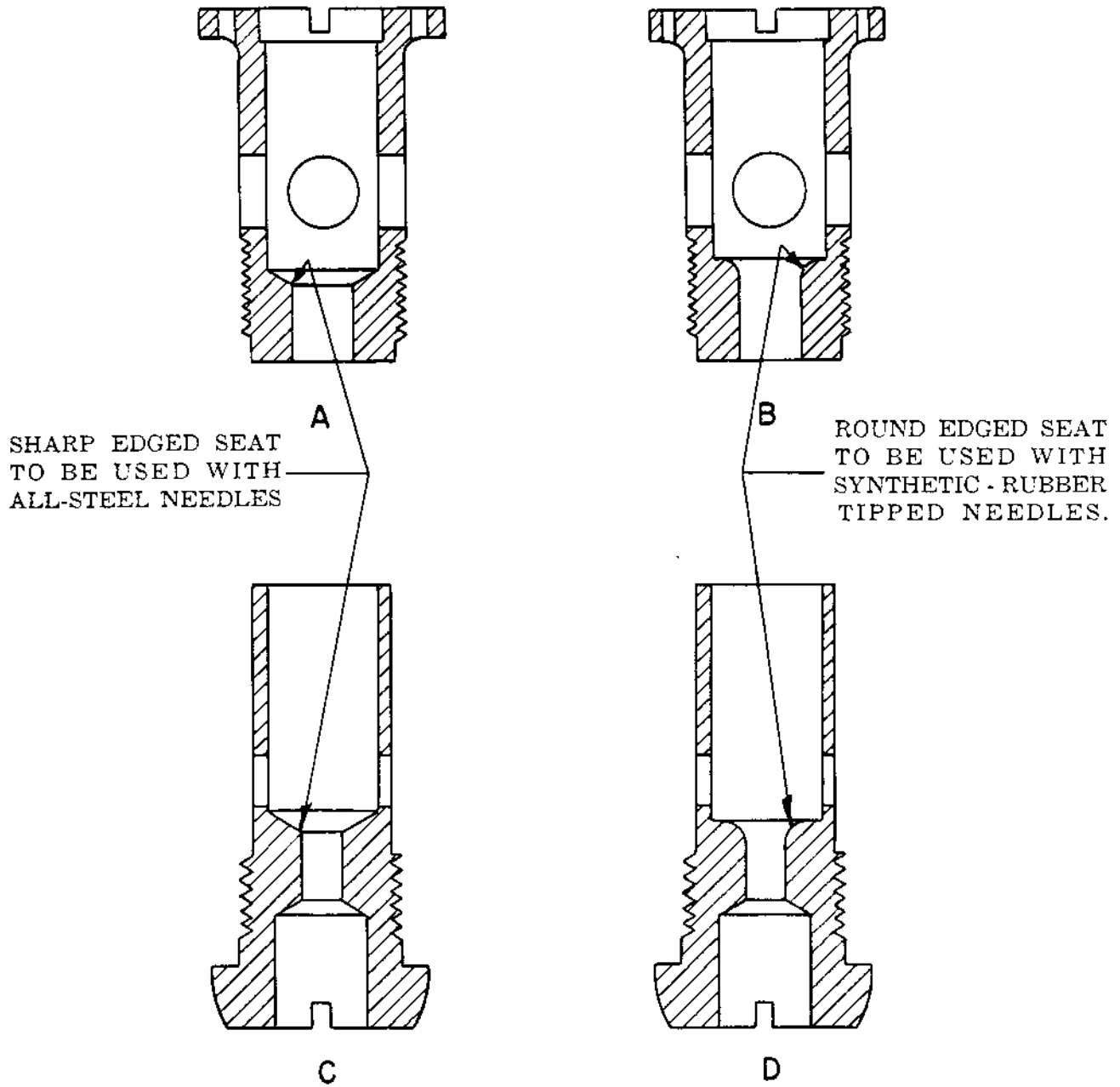
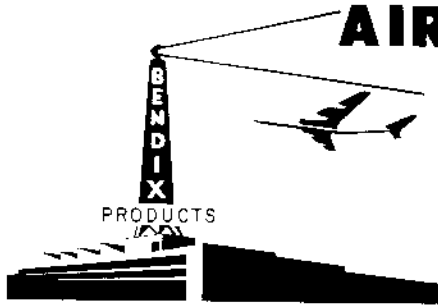


FIGURE I

**STROMBERG AIRCRAFT CARBURETOR SERVICE**  
**BENDIX PRODUCTS DIVISION**  
South Bend, Indiana  
U. S. A.



# AIRCRAFT CARBURETOR SERVICE BULLETIN

Revision No. 1 to  
No. 73

Published By  
AIRCRAFT FUEL SYSTEMS  
TECHNICAL SERVICE DEPARTMENT

**BENDIX PRODUCTS DIVISION**

SOUTH BEND 20, *Bendix* INDIANA, U. S. A.

Page 1  
Total Pages 2

June 13, 1958

**SUBJECT:** CARBURETOR, BENDIX-STROMBERG, MODELS NA-S3A1 AND NA-S3B, REWORK TO PREVENT FLOODING OF FUEL FROM THE IDLE AIR BLEED WHILE THE AIRPLANE IS PARKED.

**PUBLICATIONS AFFECTED:**

- (a) Form 15-91A Handbook Overhaul Instructions, Float Carburetor, Model NA-S3A, dated 1 February 1957.
- (b) Form 15-103A Illustrated Parts Breakdown, Float Carburetor, Model NA-S3A, dated 15 August 1956, revised 15 December 1956.
- (c) This revision No. 1 cancels and supersedes Aircraft Carburetor Service Bulletin No. 73 in its entirety.

**REASON FOR BULLETIN:** In certain airplane installations a condition exists where the fuel level in the carburetor is above the present idle air bleed location while the airplane is parked. It is possible for the fuel to drain from the fuel tank through the carburetor and out of the idle air bleed onto the ground if the fuel supply line is left open in these installations. This bulletin furnishes instructions for the plugging of the present bleed and the drilling of another to eliminate this flooding condition.

**REASON FOR REVISION:** To list additional information and revise related text for greater clarity.

**APPLICATION:** All Model NA-S3A1 and NA-S3B carburetors.

**COMPLIANCE:**

**Operating Activities:** For information only.

**Overhaul Activities:** Compliance with the provisions of this bulletin is recommended where the flooding condition exists.

**DETAILED INSTRUCTIONS:**

1. Plug the #30 drill size hole at entrance to the idle air bleed in the main body. A P19983 lead ball may be used to plug this hole.
2. Drill 0.250 inch deep at a 36° angle using a #42 (0.0935) drill. Then drill through with the correct size drill for the applicable parts list as shown below. See figure 1 for rework details.

NS-S3A1 Carburetor Model				NS-S3B Carburetor Model	
Parts List No.	Idle Air Bleed Drill Size	Parts List No.	Idle Air Bleed Drill Size	Parts List No.	Idle Air Bleed Drill Size
A-18033	#60	380172	#60	380155	#60
A-18043	#60	380174	#60	380156	#60
A-30177	#60	380231	#60	380206	#60
A-30187	#55	391090	#60		
A-30188	#55	391229	#60		
380162	#60	391257	#60		
380167	#60	392458	#60		
380171	#60	395730	#60		

**SUBJECT:** CARBURETOR, BENDIX-STROMBERG, MODELS NA-S3A1 AND NA-S3B, REWORK TO PREVENT FLOODING OF FUEL FROM THE IDLE AIR BLEED WHILE THE AIRPLANE IS PARKED.

**DETAILED INSTRUCTIONS:** (Continued)

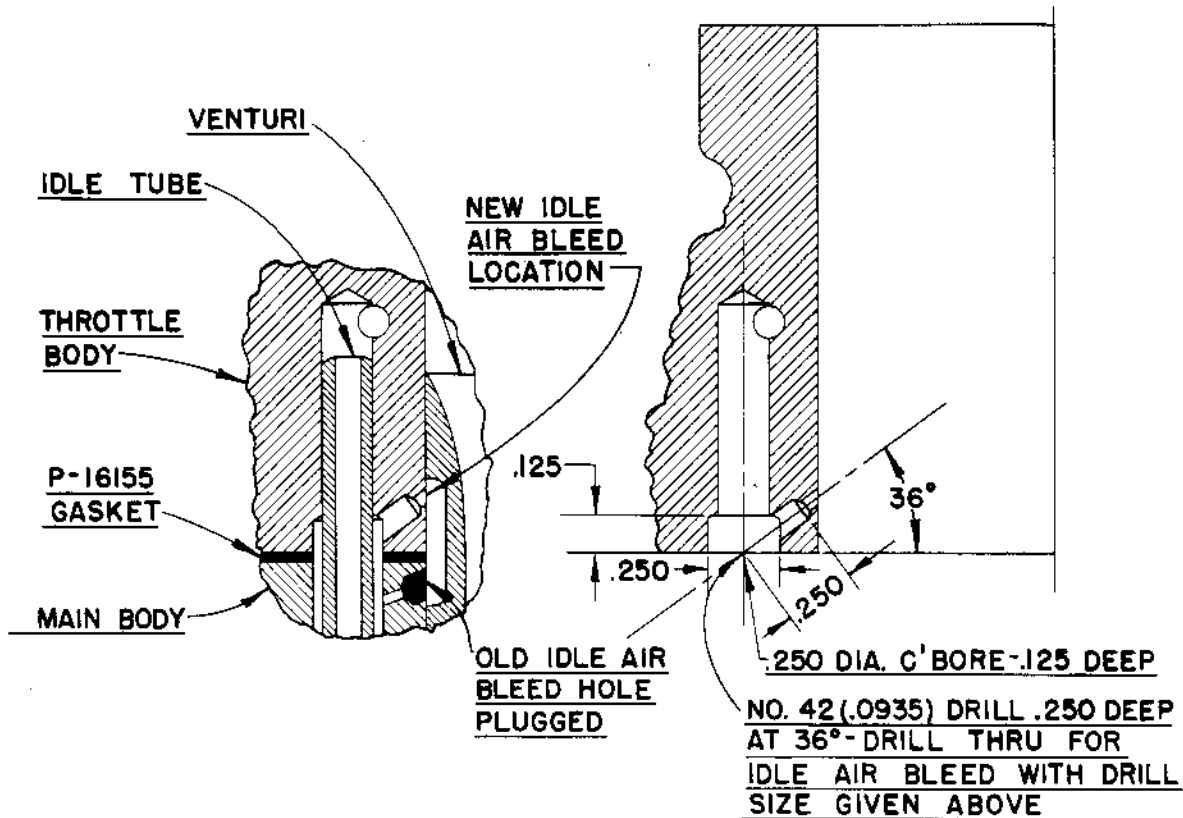


Figure 1

3. Current production parts lists are identified by an issue change as shown below:

<u>Model</u>	<u>Parts List and Issue</u>
NA-S3A1	391090-2
	391229-2
	391257-2

4. Carburetors previously modified in the field were identified by a 1 inch diameter yellow dot painted on the main body directly below the throttle lever and just touching the top of the plug boss. Continue to use this identification when modifying parts lists which have not been assigned an issue change number.

**PARTS REQUIRED:**

<u>Name of Part</u>	<u>Bendix Part No.</u>	<u>Unit/Quantity</u>
Ball - Lead	P19983	1

**PARTS REMOVED:** None.

**SOURCE OF PARTS:** Requisition through regular channels.

**SPECIAL MATERIALS REQUIRED:** None.

**SPECIAL TOOLS REQUIRED:** None.

**MAN HOURS REQUIRED:** Undetermined.

**WEIGHT AND BALANCE DATA:** No effect.

# AIRCRAFT CARBURETOR SERVICE BULLETIN NO. 74

SUBJECT: RECOMMENDED MAINTENANCE PROCEDURE FOR STROMBERG NAS-SERIES FLOAT TYPE AIRCRAFT CARBURETORS, AND SPECIFIC REFERENCE TO OVERHAUL PROCEDURES APPLICABLE TO THESE MODELS.

REASON FOR BULLETIN: To provide information designed to reduce the possibility of carburetor trouble, or apparent fuel metering inconsistencies, which could result in engine stoppage during flight idling operation.

APPLICATION: All Stromberg NAS-Series carburetors, as used on Continental A- and C- Series engines.

COMPLIANCE: The information contained in this bulletin applies to both overhaul and operating activities.

GENERAL INFORMATION:

## NOTE

The general information included in this bulletin is for brief theoretical purposes only. The engine and aircraft manufacturer's instructions must be adhered to at all times.

1. Maintenance of idling engine operation in flight, particularly under adverse conditions involving cold weather, extended un-interrupted use of idle during prolonged glide, and under conditions involving sudden throttle movement, is difficult if correct carburetor overhaul, adjustment and maintenance procedures are not closely adhered to at all times, and if recommended operating procedures for the engine and aircraft are not followed. The following general information should be helpful in promoting a better understanding of carburetor action under the above outlined conditions:

a. The primary cause of engine stoppage, on a normal engine, under the conditions referred to, is the inability of the engine to receive adequate operational fuel/air mixture ratios. This can occur under each or all of the following conditions:

(1) During idling in flight, propeller windmilling induces an engine rpm which is higher than the ground idling rpm for which the mixture adjustment of the carburetor was set. This will tend to produce a lean fuel/air mixture ratio, because the carburetor is conscious only of throttle position and does not directly respond to the mixture requirements of the increased air volume being pumped into the engine by the windmilling propeller.

(2) During a prolonged glide, at idle, the engine cools down somewhat, thus reducing the vaporization of available fuel; as a result, the effective fuel/air mixture ratio becomes more critical.

(3) Subsequently, if the engine is accelerated rapidly for power recovery (carburetor throttle opened suddenly) the fuel lag that accompanies the first onrush of air through the carburetor will further lean the available mixture as the subject carburetor does not incorporate an acceleration pump.

(4) Obviously, cold weather operation will further tend to retard fuel vaporization, resulting in additional fuel leaning, if not counteracted by proper use of carburetor air heat.

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South Bend 20, Indiana

SUBJECT: RECOMMENDED MAINTENANCE PROCEDURE FOR STROMBERG NA-SERIES FLOAT TYPE AIRCRAFT CARBURETORS, AND SPECIFIC REFERENCE TO OVERHAUL PROCEDURES APPLICABLE TO THESE MODELS.

2. From this brief theoretical outline of flight idle conditions it is apparent that slightly lean mixtures which, during normal power operation may be of no apparent significance can become accentuated to critical proportions under certain phases of flight idling operation. For this reason the following instructions, pertaining to the carburetor, should be closely adhered to.

DETAILED INSTRUCTIONS:

Operating Activities:

1. Refer to "Instructions on Stromberg NA-S2 and NA-S3 Series Aircraft Carburetors", Form 10-409B, and the following additional instructions:

a. Consult the engine manufacturer's instructions for setting the carburetor idle speed and idle mixture adjustments, and check these adjustments periodically to make certain they are satisfactory for the seasonal temperature requirements and the altitude of the operating airfield.

b. Check tightness and lockwiring of carburetor mounting bolts. Air leakage at the gasket between the carburetor and engine mounting pad will result in a leaning of the mixture reaching the engine.

c. Remove and clean the carburetor fuel strainer at regular intervals. If inspection discloses damage to the strainer, replace with a new part. When reinstalling, make certain to properly tighten and lockwire the strainer retaining plug.

d. Remove the drain plug located at the bottom of the float chamber at regular intervals, and drain out any sediment or water which may have accumulated in the bottom of the float chamber. When re-installing, be certain this plug is properly tightened and lockwired.

e. Check for freedom of movement and complete positive travel range of both the throttle and mixture control levers and connecting linkage.

f. Make certain the throttle lever idle speed stop screw is locked and lockwired in position in order that engine vibration will not result in any change in the idle speed setting after this setting has once been correctly established.

g. Inspect the main fuel feed line to the carburetor to be certain it does not contain any restrictions which might impede the normal flow of fuel to the carburetor.

h. Whenever replacing or installing a carburetor on an engine, exercise normal precautions to prevent entrance of dirt or other extraneous matter into the carburetor or fuel lines. The same precautions apply whenever a plug or line is removed from the carburetor; for example, when removing the main fuel strainer for cleaning and inspection. The entrance of particles of dirt into the carburetor can seriously interfere with carburetor metering, and might remain unnoticed until agitated in flight and carried into the idle metering system during flight idling operations.

i. Overhaul the carburetor at each engine overhaul.

Overhaul Activities:

1. Refer to "Instructions on Stromberg NA-S2 and NA-S3 Series Aircraft Carburetors", Form 10-409B, for overhaul instructions, and the following additional instructions:

a. Make certain the float needle seat is properly tightened and lockwired in place, as any tendency of this part to loosen in service will cause corresponding variations in carburetor float level.

b. Make certain the correct float level and proper needle travel is established under the same fuel pressure (or head) and type fuel as that used in service. Specific information is contained in the above listed reference publication.

c. During overhaul, make certain all channels, jets, bleeds and ports of the carburetor are thoroughly cleaned and that such cleanliness is maintained during subsequent reassembly of the unit. Small particles of extraneous matter can be carried in the fuel and could restrict the idle metering jet or main air bleed, in operation, thus materially affecting idle mixtures.

d. The only compounds which should be used for cleaning Stromberg float-type aircraft carburetors are unleaded aviation gasoline and naphtha.



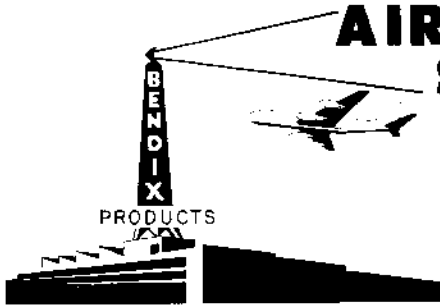
# AIRCRAFT CARBURETOR SERVICE BULLETIN

Published By  
AIRCRAFT FUEL SYSTEMS  
TECHNICAL SERVICE DEPARTMENT  
BENDIX PRODUCTS DIVISION

SOUTH BEND 20, *Bendix* INDIANA, U. S. A.

Page 1  
Total Pages 2

November 29, 1957



**SUBJECT:** CARBURETOR, BENDIX-STROMBERG, MODEL NA-S3A1, THROTTLE LEVER WIRE CONNECTOR, REMOVAL OF.

**REFERENCE:** None.

**PUBLICATIONS AFFECTED:**

Form 15-91A Handbook Overhaul Instructions, Float Carburetor, Model NA-S3A1.

Form 15-103A Illustrated Parts Breakdown, Float Carburetor, Model NA-S3A1.

**REASON FOR BULLETIN:** Reported service failures of the throttle lever and wire connector indicate the present configuration to be inadequate to withstand prolonged engine vibration.

**APPLICATION:**

Engine	Model	Parts List No.
C90-12F	NA-S3A1	391229-1

**COMPLIANCE:**

Operating Activities: Comply.

Overhaul Activities: For information only.

**DETAILED INSTRUCTIONS:** Prior to attachment of the aircraft throttle linkage to the carburetor throttle lever on all Champion Model 7EC aircraft, modify in accordance with the following instructions:

1. Remove the throttle lever wire connector P/N P-21245 from the throttle lever assembly P/N 384244 by filing off the connector rivet head. (See figure 1).
2. Next, attach the aircraft throttle linkage by inserting the link rod end through the rivet hole in the carburetor throttle lever with a washer installed on both sides of the throttle lever. (See figure 2).

**NOTE**

If aircraft has a linkage rod with a straight end, it will be necessary to replace it with a linkage rod incorporating a 90° bend in the rod end before making this modification.

3. The link rod end must then be drilled and cotter pinned securely.
4. Reidentification is not necessary.

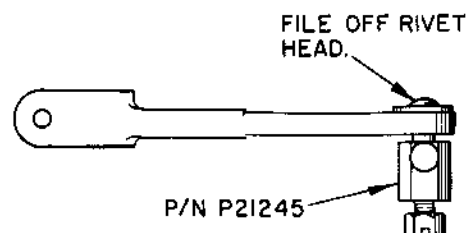


Figure 1.

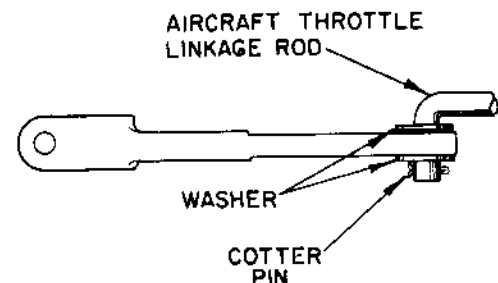


Figure 2.

SUBJECT: CARBURETOR, BENDIX-STROMBERG, MODEL NA-S3A1, THROTTLE LEVER WIRE CONNECTOR,  
REMOVAL OF.

PARTS REQUIRED: Not applicable.

PARTS REMOVED:

<u>Name of Part</u>	<u>Bendix Part No.</u>	<u>Unit/Quantity</u>	<u>Disposition</u>
Connector (Throttle Lever Wire)	P21245	1	(1) (2)

SOURCE OF PARTS: Not applicable.

SPECIAL MATERIALS REQUIRED: None.

SPECIAL TOOLS REQUIRED: None.

MAN HOURS REQUIRED: Undetermined.

DISPOSITION OF PARTS REMOVED: (1) Scrap.

DISPOSITION OF LIKE PARTS IN STOCK: (2) Scrap.

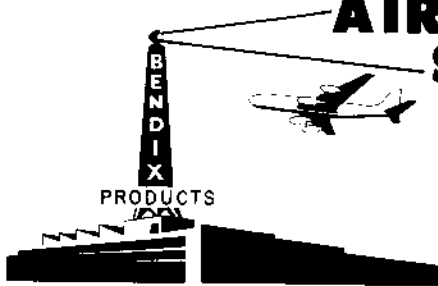
WEIGHT AND BALANCE DATA: Negligible.

# AIRCRAFT CARBURETOR SERVICE BULLETIN

No. 84

Page 1  
Total Pages 2

1 June 1964



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AIRCRAFT TECHNICAL SERVICE DEPARTMENT

THE *Bendix* CORPORATION  
BENDIX PRODUCTS AEROSPACE DIVISION  
SOUTH BEND 20, INDIANA

**SUBJECT:** CARBURETOR, BENDIX-STROMBERG MODELS NA-S3A1, NA-S3B AND NA-S03A1 - FLOAT NEEDLE VALVE P/N 390077 - REPLACEMENT OF.

**REFERENCE:** Letter, Continental (R. J. Powell) to Bendix (J. E. Hartzler) dated 26 June 1963.

**PUBLICATIONS AFFECTED:**

- (a) Form No. 15-91B Handbook Overhaul Instructions, Float Carburetor Model NA-S3A1 dated 15 December 1958.
- (b) Form No. 15-S91B Supplement to Handbook Overhaul Instructions, Float Carburetor Model NA-S3A1 dated 15 December 1963.
- (c) Form No. 15-103B Illustrated Parts Breakdown, Float Carburetor Model NA-S3A1 dated 1 November 1958.
- (d) Form No. 15-S103B Supplement to Illustrated Parts Breakdown, Float Carburetor Model NA-S3A1 dated 1 November 1958.

**REASON FOR BULLETIN:** To provide a float needle valve made of Delrin, an ivory colored acetal plastic, in lieu of the rubber tipped stainless steel needle. Material change made to remove rubber age control requirement, reduce cost and provide an improved service life material.

**APPLICATION:**

<u>Engine</u>	<u>Carburetor Model</u>	<u>Parts List</u>
A-65-8, 0-170-3, -5, -7	NA-S3A1	A-18033(B)-5
A-75		A-30177(B)-5
C-75		380162-2
C-85-12		380167-4
C-75-12		380171-2
C-85-12		380172-2
C-75-12		380174-2
C-90-12F		380231-3
C-90-8F		391090-2
C-90-12F		391156-2
C-90-14F		391229-2
C-90-14F		391257-2
A-65-8		391716-2
A-65-8	NA-S3B	380155-2
A-65-8		380156-1
A-65-8		380206-1
A-100-1	NA-S03A1	380168-2
A-100-1		380175-1

**COMPLIANCE:**

Operating Activities: For information only.

Overhaul Activities: Comply at time of carburetor overhaul when stock of float needle P/N 390077 has been exhausted.

**SUBJECT:** CARBURETOR, BENDIX-STROMBERG MODELS NA-S3A1, NA-S3B AND NA-S03A1 - FLOAT NEEDLE VALVE P/N 390077 - REPLACEMENT OF.

**DETAILED INSTRUCTIONS:**

1. At time of carburetor overhaul, replace the rubber tipped stainless steel float needle valve P/N 390077 with the new Delrin plastic needle valve P/N 2523047.
2. The needle seat, P/N 383911, 383912 or 384585 as applicable, need not be replaced unless the valve contact area on the seat has been damaged or deformed to the extent that the seat is no longer considered to be serviceable.
3. Continue assembling the carburetor in the usual manner.
4. The Delrin material is not readily affected by the usual cleaning agents used during normal carburetor overhaul; however, it is recommended that the needle not be subjected to cleaning in a trichlorethylene degreaser or by use of acetone. It is suggested that the material used for needle cleaning be confined to the usual naphtha type cleaning solvents.
5. Carburetor reidentification is not required.
6. The existing calibration test and limits are not affected by this bulletin.

**PARTS REQUIRED:**

<u>Name of Part</u>	<u>Bendix P/N</u>	<u>Quantity/Unit</u>	<u>Source</u>
Valve, Float Needle	2523047	1	(1)

**NOTE**

Effective with the introduction of the Delrin needle valve, it will no longer be necessary to procure the float needle valve and seat assembly as a matched assembly. However, once in service use, the valves and seats should not be indiscriminately interchanged with other used parts. Valve P/N 2623047 and seat P/N 383911, 383912 or 384585, as applicable, may be procured as separate items.

**SOURCE OF PARTS:**

- (1) Procure through the normal supply channels.

**PARTS REMOVED:**

<u>Name of Part</u>	<u>Bendix P/N</u>	<u>Quantity/Unit</u>	<u>Disposition</u>
Valve, Float Needle	390077	1	(1) (2)

- (1) Scrap.

**DISPOSITION OF LIKE PARTS IN STOCK:**

- (2) Use until exhausted.

**SPECIAL MATERIALS REQUIRED:** None.

**SPECIAL TOOLS REQUIRED:** None.

**MAN HOURS REQUIRED:** No effect.

**WEIGHT AND BALANCE DATA:** No effect.

# STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET A-18033B-4

NA-S3A1

ENGINE MODEL: A-50, A-65, A-75, A-80  
 ENGINE MFGR.: Continental  
 ENGINE MFGR. SETTING NO.: 3628

CARBURETOR MODEL: NA-S3A1  
 PARTS LIST NO.: A-18033B-4  
 DATE ISSUED: 6-1-47

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-1/4"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#49	F-7881	
5.	Bleed, Air	#65	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>Upper</del> Upper	#58		Drilled in Throttle Body
17.	<del>Lower</del> Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore			
20.	Restriction	5/64"		
21.	Valve, Throttle (Angle)	#68 20°	P-61385	#50 hole drilled in Thro. Valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes On			Completely
41.	Nozzle Bore			
42.	<del>Bushing</del> Suction Hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	3/16"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		
49.	Pressure	1/2 lb.		Using .710 Specific Gravity fuel. .048 Minimum float needle travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

**GENERAL REMARKS**

Use the following special parts instead of standard parts:

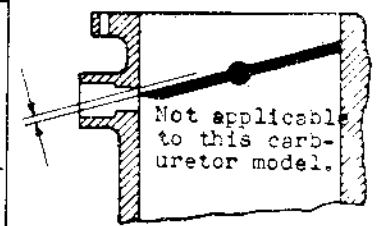
P-16163 MAIN BODY ASS'Y incorporating a #60 drilled channel for an Idle Air Bleed.

P-61202 THROTTLE BODY ASS'Y incorporating #58 and #56 drilled channels for Idle Discharge and a #50 drilled channel for Mixture Control Suction.

F-61057 Assembly, Main Air Bleed Arm (Instead of P-16537)

384244 Assembly, Throttle Lever and Wire Connector (Instead of P-14710)

**THROTTLE VALVE LOCATION**



Note: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

ENGINE MODEL: A-75 (Special for Stinson)	CARBURETOR MODEL: NA-S3A1
ENGINE MFRG.: Continental	PARTS LIST NO.: A-30177B-4
ENGINE MFRG. SETTING NO.: 4621	DATE ISSUED: 6-19-47

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-1/4"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#50	P-7881	
5.	Bleed, Air	#65	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		Straight through
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>Right</del> Upper	#58		Drilled in Throttle Body
17.	<del>Left</del> Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 Hole drilled in Thro.valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes <del>xxx</del>			Completely
41.	Nozzle Bore			
42.	<del>Bushing</del> Suction hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	.130"	383912	
47.	By-Pass Holes			
48.	Float Level	13/32"		
49.	Pressure	50" Gas		Using .710 Spec. Gravity fuel. .048" Minimum float needle travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

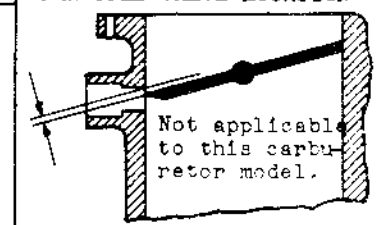
GENERAL REMARKS

Use the following special parts instead of standard parts:

- P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.
- P-61202 THROTTLE BODY ASSY. incorporating #58 and #56 drilled channels for Idle Discharge Jets and a #50 drilled channel for Mixture Control Suction.
- P-61057 Main Air Bleed Arm Assembly (Instead of P-16537)
- P-21247 Throttle Lever Assembly (Instead of P-14710)

Note: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

THROTTLE VALVE LOCATION



# STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET A-18033B-4

NA-S3A1

ENGINE MODEL: A-50, A-65, A-75, A-80  
 ENGINE MFGR.: Continental  
 ENGINE MFGR. SETTING NO.: 3628

CARBURETOR MODEL: NA-S3A1  
 PARTS LIST NO.: A-18033B-4  
 DATE ISSUED: 5-1-47

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-1/4"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#49	P-7881	
5.	Bleed, Air	#65	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>Jet</del> Upper	#58		Drilled in Throttle Body
17.	<del>Jet</del> Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore			
20.	Restriction	5/64"		
21.	Valve, Throttle (Angle)	#68 20°	P-61385	#50 hole drilled in Thro. Valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes <del>On</del>			Completely
41.	Nozzle Bore			
42.	<del>Bushing</del> Suction Hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	3/16"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		
49.	Pressure	1/2 lb.		Using .710 Specific Gravity fuel. .048 Minimum float needle travel.
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

**GENERAL REMARKS**

Use the following special parts instead of standard parts:

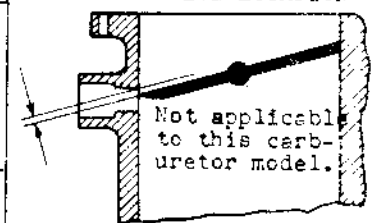
P-16163 MAIN BODY ASS'Y incorporating a #60 drilled channel for an Idle Air Bleed.

P-61202 THROTTLE BODY ASS'Y incorporating #58 and #56 drilled channels for Idle Discharge and a #50 drilled channel for Mixture Control Suction.

P-61057 Assembly, Main Air Bleed Arm (Instead of P-16537)

364244 Assembly, Throttle Lever and Wire Connector (Instead of P-14710)

**THROTTLE VALVE LOCATION**



Note: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

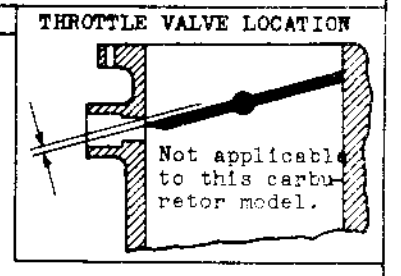
STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

ENGINE MODEL: A-75 (Special for Stinson)	CARBURETOR MODEL: NA-S3A1
ENGINE MFGR.: Continental	PARTS LIST NO.: A-30177B-4
ENGINE MFGR. SETTING NO.: 1531	DATE ISSUED: 6-19-47

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-1/4"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#50	P-7881	
5.	Bleed, Air	#65	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1-#70		Straight through
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>Right</del> Upper	#58		Drilled in Throttle Body
17.	<del>Left</del> Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 Hole drilled in Thro. valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes <del>fast</del>			Completely
41.	Nozzle Bore			
42.	<del>Back</del> Suction hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	.130"	383912	
47.	By-Pass Holes			
48.	Float Level	13/32"		
49.	Pressure	50" Gas		Using .710 Spec. Gravity fuel. .048" Minimum float needle travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

**GENERAL REMARKS**  
 Use the following special parts instead of standard parts:  
 P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.  
 P-61202 THROTTLE BODY ASSY. incorporating #58 and #56 drilled channels for Idle Discharge Jets and a #50 drilled channel for Mixture Control Suction.  
 P-61057 Main Air Bleed Arm Assembly (Instead of P-16537)  
 P-21247 Throttle Lever Assembly (Instead of P-14710)



Note: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.



STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

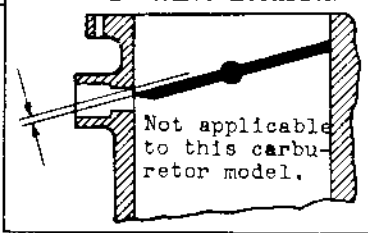
ENGINE MODEL: C-75	CARBURETOR MODEL: NA-S3A1
ENGINE MFR.: Continental	PARTS LIST NO.: 380162-1
ENGINE MFR. SETTING NO.: 40059	DATE ISSUED: 11-7-46

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-5/16"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#46	P-7881	
5.	Bleed, Air	#50	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		Straight through
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#50		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	Right Upper	#58		Drilled in Throttle Body
17.	Left Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 hole drilled in Thro.Valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes <del>for</del>			Completely
41.	Nozzle Bore			
42.	<del>Enlarged</del> Suction hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	.1835"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		Using .710 Spec. Gravity fuel
49.	Pressure	1/2#		.048" Minimum float needle travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

THROTTLE VALVE LOCATION

**GENERAL REMARKS**  
 Use the following special parts instead of standard parts:  
 P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleeder.  
 P-61202 THROTTLE BODY ASSY. incorporating #58 and #56 drilled channels for Idle Discharge Jets and a #50 drilled channel for Mixture Control Suction.  
 P-61057 Main Air Bleed Arm Assembly (Instead of P-16537)  
 384244 Throttle Lever and Wire Connector Assembly (Instead of P-14710)



Note: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

ENGINE MODEL: C-85	CARBURETOR MODEL: NA-S3A1
ENGINE MFGR.: Continental	PARTS LIST NO.: 380167-3
ENGINE MFGR. SETTING NO.: 40390	DATE ISSUED: 3-30-51

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-3/8"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#45	P-7881	
5.	Bleed, Air	#60	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60	Drilled in Main Body	
15.	Jet, Discharge			
16.	<del>Right</del> Upper	#58	Drilled in Throttle Body	
17.	<del>Left</del> Lower	#56	Drilled in Throttle Body: Top of lower idle hole must	
18.	Tube		P-16154	be flush with bottom of throttle valve
19.	Bore	5/64"		in completely closed position.
20.	Restriction	#65		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 hole drilled thru Throttle Valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes	Completely		
41.	Nozzle Bore			
42.	<del>Restriction</del> Suction Hole	#50	Drilled in Throttle Body	
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	3/16"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		Using fuel of .710 Specific Gravity .048 Minimum
49.	Pressure			float needle <i>TRAVEL</i>
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

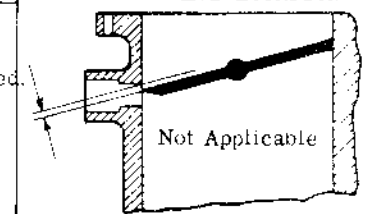
NOTE: Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

Use the following special parts instead of standard parts:

- P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.
- P-61202 THROTTLE BODY ASSY. incorporating #58 and #56 drilled channels for Idle Discharge and a #50 drilled channel for Mixture Control Suction.
- P-61057 Main Air Bleed Arm Assy. (instead of P-16537)
- 384244 Throttle lever and wire conn. assy. (instead of P-14710)
- 384411 Throttle shaft assy. (instead of P-16151)

THROTTLE VALVE LOCATION



ENGINE MODEL: C-75		CARBURETOR MODEL: NA-S3A1		
ENGINE H.P.:		PARTS LIST NO.: 300171-1		
ENGINE R.P.M.:		ENGINE MFR.: Continental		
DATE ISSUED: 5-18-46		ENGINE MFRS. SETTING NO.: 36019		
NO.		SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-5/16"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#46		
5.	Bleed, Air	#60	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1 - #70		
11.	Bleed Holes (Center)	1 - #60		
12.	Bleed Holes (Lower)	2 - #50		
13.	Stud, Discharge Nozzle			
14.	Bore			
15.	Bleed Holes (Upper)			
16.	Bleed Holes (Center)			
17.	Bleed Holes (Lower)			
18.	Screw, Discharge Nozzle			
19.	Bore			
20.	Idle Feed Holes			
<b>IDLE SYSTEM</b>				
21.	Jet, Metering			
22.	Bleed, Air	#60	Drilled in Main Body	
23.	Jet, Discharge			
24.	<del>XXXX</del> Upper	#58	Drilled in Throttle Body	
25.	<del>XXXX</del> Lower	#56	Drilled in Throttle Body ; Top of lower Idle hole must be flush with bottom of throttle valve in completely closed position. #50 hole drilled through throttle valve.	
26.	Tube		P-16154	
27.	Bore	5/64"		
28.	Restriction	#68		
29.	Valve, Throttle (Angle)	20°	P-61385	
<b>ECONOMIZER (SUCTION TYPE)</b>				
30.	Jet, Metering			
31.	Nozzle, Discharge			
32.	Bore			
33.	Bleed Holes			
34.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
35.	Jet, Metering			
36.	Seat			
37.	Link, Control			
	Center Distance			
	Between Holes			
38.	Needle (Included Angle)			
39.	Setting			
40.	Rate			
<b>MIXTURE CONTROL (NEEDLE)</b>				
41.	Needle			
42.	Angle (Included)			
43.	Altitude Metering Jet			
44.	Travel			
45.	Seat			
46.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION)</b>				
47.	Valve Closes <del>OK</del>	Completely		
48.	Nozzle Bore			
49.	<del>XXXXXX</del> Suction hole	#50	Drilled in Throttle Body	
<b>ACCELERATING PUMP</b>				
50.	Valve, Holes			
51.	Reducer, Fuel			
52.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
53.	Seat		384585	
54.	By-Pass Holes			
55.	Float Level	13/32"		
56.	Pressure	3 lbs.		
<b>CRUISE SYSTEM</b>				
57.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

Use the following special parts instead of standard parts;

- P-16163 MAIN BODY ASS'Y Incorporating a #60 drilled hole for an Idle Air Bleed
- P-61202 THROTTLE BODY ASS'Y incorporating #58 and #56 drilled holes for Idle Discharge and a #50 hole for Mixture Control Suction.
- 384244 Throttle Lever and Wire Conn. Ass'y. (instead of P-14170)
- 384411 Throttle Shaft Ass'y. (instead of P16151)

ENGINE MODEL: C-85		CARBURETOR MODEL: NA-S3A1		
ENGINE H.P.:		PARTS LIST NO.: 380172-1		
ENGINE R.P.M.:		ENGINE MFR.: Continental		
DATE ISSUED: 3-18-46		ENGINE MFRS. SETTING NO.: 40636		
NO.		SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-3/8"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#45	P-7881	
5.	Bleed, Air	#60	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1 - #70		
11.	Bleed Holes (Center)	1 - #60		
12.	Bleed Holes (Lower)	2 - #50		
13.	Stud, Discharge Nozzle			
14.	Bore			
15.	Bleed Holes (Upper)			
16.	Bleed Holes (Center)			
17.	Bleed Holes (Lower)			
18.	Screw, Discharge Nozzle			
19.	Bore			
20.	Idle Feed Holes			
<b>IDLE SYSTEM</b>				
21.	Jet, Metering			
22.	Bleed, Air	#60		Drilled in Main Body
23.	Jet, Discharge			
24.	<del>Right</del> Upper	#58		Drilled in Throttle Body
25.	<del>Left</del> Lower	#56		Drilled in Throttle Body; Top edge of lower idle hole must be flush with throttle valve in completely closed position.
26.	Tube		P-16154	
27.	Bore	5/64"		
28.	Restriction	#68		
29.	Valve, Throttle (Angle)	20°	P-61385	#50 hole drilled thru throttle valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
30.	Jet, Metering			
31.	Nozzle, Discharge			
32.	Bore			
33.	Bleed Holes			
34.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
35.	Jet, Metering			
36.	Seat			
37.	Link, Control			
	Center Distance			
	Between Holes			
38.	Needle (Included Angle)			
39.	Setting			
40.	Rate			
<b>MIXTURE CONTROL (NEEDLE)</b>				
41.	Needle			
42.	Angle (Included)			
43.	Altitude Metering Jet			
44.	Travel			
45.	Seat			
46.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION)</b>				
47.	Valve Closes <del>xxx</del>	Completely		
48.	Nozzle Bore			
49.	<del>xxxxxxx</del> Suction hole	#50		Drilled in Throttle Body
<b>ACCELERATING PUMP</b>				
50.	Valve, Holes			
51.	Reducer, Fuel			
52.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
53.	Seat	.113	384585	
54.	By-Pass Holes			
55.	Float Level	13/32"		Using fuel of .710 Specific Gravity
56.	Pressure	3 lbs.		.048 Minimum float needle travel
<b>CRUISE SYSTEM</b>				
57.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

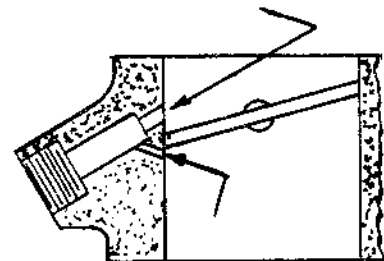
Use the following special parts instead of standard parts;

- P-16163 MAIN BODY ASSY, incorporating a #60 drilled hole for an Idle Air Bleed.
- P-61202 THROTTLE BODY ASSY, incorporating #58 and #56 drilled holes for Idle Discharge and a #50 drilled hole for Mixture Control Suction.
- 384244 Throttle Lever and Wire Conn. Assy. (instead of P-14710)
- P-61057 Main Air Bleed Arm Assy. (instead of P-16537)
- 384411 Throttle Shaft Assy. (instead of P-16151)

Engine Model: C-90  
 Engine Mfgr.: Continental  
 Engine Mfgr. Setting No.: 530625

Carburetor Model: NA-S3A1  
 Parts List No.: 380231-1  
 Date Issued: 1-23-48

Item No.	Part Name	P/N	Size and Remarks
<b>MAIN METERING SYSTEM</b>			
1.	Venturi	P-16176	Size: 1-3/8"
2.	Main Metering Jet	P-7881	Size: #45
3.	Main Air Bleed	P-16179	Size: #69
4.	Main Discharge Nozzle Nozzle Bleed Holes	390222	Size: Bore #22 Size: (Upper) #70, (Center) #60, (Lower) 2-#50
<b>IDLE METERING SYSTEM</b>			
5.	Idle Air Bleed		Size: #60 drilled in main body
6.	Idle Discharge Holes		Size: (Upper) #58 drilled in throttle body (Lower) #56 drilled in throttle body
7.	Idle Tube	P-16154	Size: Bore 5/64"; Restriction #68
8.	Throttle Valve	P-61385	Angle: 20°; #50 hole drilled in throttle valve
<b>MIXTURE CONTROL SYSTEM</b>			
9.	M. C. Suction Hole		Size: #50 drilled in throttle body
<b>FLOAT MECHANISM</b>			
10.	Needle Valve Seat Needle Valve Needle Travel	383911 390077	Size: 3/16" Needle and Seat Assy. 383943 .048" Minimum
11.	Float Level		13/32" using .710 Spec. Gravity Fuel
12.	Fuel Pressure		0.5 pounds per square inch
<b>USE THE FOLLOWING SPECIAL PARTS INSTEAD OF STANDARD PARTS</b>			
	Main Body Assembly	P-16163	Incorporating a #60 drilled hole for an Idle Air Bleed
	Throttle Body Assembly	P-61202	Incorporating #58 and #56 drilled holes for Idle Discharge and a #50 drilled hole for Mixture Control Suction
	Main Air Bleed Arm Assy. Throttle Lever and Wire Connector Assembly	P-61057 384244	Instead of P-16537 Instead of P-14710
	Throttle Shaft Assy.	384411	Instead of P-16151



Note 1 Top of lower idle hole must be drilled flush with bottom of throttle valve in completely closed position.

Note 2 Mixture control valve closes completely.

**STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET**

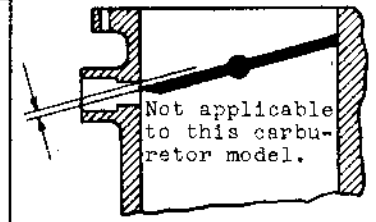
ENGINE MODEL: C-90	CARBURETOR MODEL: NA-S3A1
ENGINE MFGR.: Continental	PARTS LIST NO.: 391090-1
ENGINE MFGR. SETTING NO.:	DATE ISSUED: 10-4-49

NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-3/8"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#16	P-7881	
5.	Bleed, Air	#60	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		Straight through
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	Upper	#58		Drilled in Throttle Body
17.	Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 hole drilled in thro.valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes			Completely
41.	Nozzle Bore			
42.	<del>XXXXXX</del> Suction Hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	.1835"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		Using .710 Specific Gravity fuel.
49.	Pressure	1/2#		.048" Minimum Float Needle Travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

**THROTTLE VALVE LOCATION**

**GENERAL REMARKS**  
 Use the following special parts instead of standard parts:  
 P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.  
 P-61202 THROTTLE BODY ASSY. incorporating a #58 and #56 drilled channels for Idle Discharge Jets and a #50 drilled channel for Mixture Control Suction.  
 P-61057 Main Air Bleed Arm Assembly (Instead of P-16537)  
 384244 Throttle Lever and Wire Connector Assembly (Instead of P-14710)  
 384411 Throttle Shaft Assembly (Instead of P-16151)  
 384670 Throttle Stop Assembly (Instead of P-15237)



NOTE: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET NA-S3A1 391156-1

ENGINE MODEL: C-90  
ENGINE MFR.: Continental

DRAWING NUMBER: 380231  
DATE ISSUED: 7-18-58

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
I	MAIN METERING SYSTEM			
1.	Venturi	P-16176	1.	1-3/8"
2.	Jet, Metering	P-7881	2.	#44
3.	Bleed, Air	P-16179	3.	#69
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	#22
6.	Bleed Holes (Upper)		6.	1-#70
7.	Bleed Holes (Center)		7.	1-#60
8.	Bleed Holes (Lower)		8.	2-#50
II	IDLE METERING SYSTEM			
1.	Bleed, Air		1.	#60 Drilled in Main Body
2.	Jet, Discharge		2.	
3.	Upper		3.	#58 Drilled in Throttle Body
4.	Lower		4.	#56 Drilled in Throttle Body
5.	Tube	P-16154	5.	
6.	Bore		6.	5/64"
7.	Restriction		7.	#68
8.	Valve, Throttle (Angle)	P-61385	8.	20° #50 hole drilled in Throttle Valve
III	MIXTURE CONTROL (SUCTION TYPE)			
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	#50 Drilled in Throttle Body
IV	FLOAT MECHANISM			
1.	Seat	384585	1.	.113" - .111"
2.	Float Level		2.	13/32"±1/64" using .710 spec. grav. fuel .021 minimum float needle travel
3.	Pressure		3.	3 ± 1 psi
				GENERAL NOTES
				Top of lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.

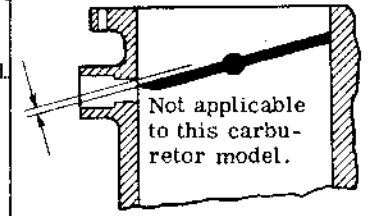
STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

ENGINE MODEL: C-90 ENGINE MFGR.: Continental ENGINE MFGR. SETTING NO.:		CARBURETOR MODEL: NA-S3A1 PARTS LIST NO.: 391229-1 DATE ISSUED: 8-31-49		
NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi		P-16176	
2.	Right			
3.	Left			
* 4.	Jet, Metering	#44	P-7881	
* 5.	Bleed, Air	#55	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxiliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		Straight through
10.	Bleed Holes (Upper)	1-#70		
11.	Bleed Holes (Center)	1-#60		
12.	Bleed Holes (Lower)	2-#50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>Edge</del> Upper	#58		Drilled in Throttle Body
17.	<del>Edge</del> Lower	#56		Drilled in Throttle Body
18.	Tube		P-16154	
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	#50 hole drilled in throttle valve
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes			Completely
41.	Nozzle Bore			
42.	<del>Restriction</del> Suction Hole	#50		Drilled in throttle body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	.1835"	383911	
47.	By-Pass Holes			
48.	Float Level	13/32"		Using .710 Specific Gravity Fuel.
49.	Pressure	1/2#		.048" Minimum Float Needle Travel.
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

THROTTLE VALVE LOCATION

**GENERAL REMARKS**  
 Use the following special parts instead of standard parts:  
 P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.  
 P-61202 THROTTLE BODY ASSY. incorporating a #58 and #56 drilled channels for Idle Discharge Jets and a #50 drilled channel for Mixture Control Suction.  
 P-61057 Main Air Bleed Arm Assembly (Instead of P-16537).  
 384244 Throttle Lever and Wire Connector Assembly (Instead of P-14710).  
 384411 Throttle Shaft Assembly (Instead of P-16151).  
 384670 Throttle Stop Assembly (Instead of P-15237).



NOTE: Top of lower idle hole must be flush with bottom of throttle valve with the throttle valve in the completely closed position.

\* Denotes difference between P/L 391229-1 and 380231-2.



STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET

ENGINE MODEL: C-90-14F ENGINE MFGR.: Continental ENGINE MFGR. SETTING NO.: 531157		CARBURETOR MODEL: NA-S3AI PARTS LIST NO.: 391257-1 DATE ISSUED: 12-20-53		
NO.	PART NAME	SIZE	PART NO.	REMARKS
<b>MAIN METERING SYSTEM</b>				
1.	Venturi	1-3/8"	P-16176	
2.	Right			
3.	Left			
4.	Jet, Metering	#44	P-7881	
5.	Bleed, Air	#55	P-16179	
6.	Jet, Distributing			
7.	Jet, Auxilliary			
8.	Nozzle, Discharge		390222	
9.	Bore	#22		
10.	Bleed Holes (Upper)	1 - #70		
11.	Bleed Holes (Center)	1 - #60		
12.	Bleed Holes (Lower)	2 - #50		
<b>IDLE METERING SYSTEM</b>				
13.	Jet, Metering			
14.	Bleed, Air	#60		Drilled in Main Body
15.	Jet, Discharge			
16.	<del>High</del> Upper	#58		Drilled in Throttle Body
17.	<del>Low</del> Lower	#56		Drilled in Throttle Body; Top of lower idle hole must be flush with bottom of throttle valve in completely closed position.
18.	Tube		P-16154	#50 hole drilled through throttle valve
19.	Bore	5/64"		
20.	Restriction	#68		
21.	Valve, Throttle (Angle)	20°	P-61385	
<b>ECONOMIZER (SUCTION TYPE)</b>				
22.	Jet, Metering			
23.	Nozzle, Discharge			
24.	Bore			
25.	Restriction			
26.	Setting			
<b>ECONOMIZER (NEEDLE TYPE)</b>				
27.	Jet, Metering			
28.	Seat			
29.	Link, Control			
30.	Center Distance Between Holes			
31.	Needle (Included Angle)			
32.	Setting			
33.	Rate			
<b>MIXTURE CONTROL (NEEDLE TYPE)</b>				
34.	Needle			
35.	Angle (Included)			
36.	Altitude Metering Jet			
37.	Travel			
38.	Seat			
39.	Altitude Metering Jet			
<b>MIXTURE CONTROL (SUCTION TYPE)</b>				
40.	Valve Closes On	Completely		
41.	Nozzle Bore			
42.	<del>Restriction</del> Suction hole	#50		Drilled in Throttle Body
<b>ACCELERATION PUMP</b>				
43.	Valve, Holes			
44.	Reducer, Fuel			
45.	Jet, Discharge			
<b>FLOAT MECHANISM</b>				
46.	Seat	384576	384585	
47.	By-Pass Holes			
48.	Float Level	13/32"		Using fuel of .710 Specific Gravity
49.	Pressure	1/2 lb.		.048 Minimum float needle travel
<b>CRUISE SYSTEM</b>				
50.	Jet, Metering			

NOTE: Sizes given in twist drill numbers unless otherwise indicated.

GENERAL REMARKS

Use the following special parts instead of standard parts:

P-16163 MAIN BODY ASSY. incorporating a #60 drilled channel for an Idle Air Bleed.

P-61202 THROTTLE BODY ASSY. incorporating #58 & #56 drilled channels for Idle Discharge & a #50 drilled channel for Mixture Control Suction

P-61057 Idle Air Bleed Arm Assembly

384244 Throttle lever and wire Conn. Assembly (Instead of P-14710)

384411 Throttle Shaft Assembly (Instead of P-16151)

STROMBERG FLOAT CARBURETOR SPECIFICATION SHEET NA-S3A1 391716-1

ENGINE MODEL: A-50, A-65, A-75, A-80  
ENGINE MFGR.: Continental

DRAWING NUMBER:  
DATE ISSUED: 3-17-58, REVISED: 4-3-58

ITEM NO.	DESCRIPTION	PART NUMBER	ITEM NO.	SIZE, SETTING OR REMARKS
<b>I MAIN METERING SYSTEM</b>				
1.	Venturi	P-16176	1.	1-1/4"
2.	Jet, Metering	P-7881	2.	#49
3.	Bleed, Air	P-16179	3.	#65
4.	Nozzle, Discharge	390222	4.	
5.	Bore		5.	#22
6.	Bleed Holes (Upper)		6.	1-#70
7.	Bleed Holes (Center)		7.	1-#60
8.	Bleed Holes (Lower)		8.	2-#50
<b>II IDLE METERING SYSTEM</b>				
1.	Bleed, Air		1.	#60 Drilled in Main Body
2.	Jet, Discharge		2.	
3.	Upper		3.	#58 Drilled in Throttle Body
4.	Lower		4.	#56 Drilled in Throttle Body
5.	Tube	P-16154	5.	
6.	Bore		6.	5/64"
7.	Restriction		7.	#68
8.	Valve, Throttle (Angle)	P-61385	8.	20° #50 hole drilled in Throttle Valve
<b>III MIXTURE CONTROL (SUCTION TYPE)</b>				
1.	Valve Closes		1.	Completely
2.	Suction Hole		2.	#50 Drilled in Throttle Body
<b>IV FLOAT MECHANISM</b>				
1.	Seat	384585	1.	.113" - .111"
2.	Float Level		2.	13/32" using .710 specific gravity fuel
3.	Pressure		3.	3 psi .048 minimum float needle travel
<b>GENERAL NOTES</b>				
Top lower idle hole must be flush with bottom of throttle valve with the throttle in the completely closed position.				
This setting similar to A-18033B except 384585 Float Needle Valve Seat instead of 383911 Seat and Fuel Inlet Pressure 3 psi instead of 1/2 psi.				