

# PENN YAN AERO SERVICE, INC.

2499 BATH ROAD  
AIRPORT  
PENN YAN, N.Y. 14527-9599

**180 H.P. SUPERHAWK**

(315) 536-2333

*The Engine People*

FAA APPROVED

SUPPLEMENTAL AIRPLANE FLIGHT MANUAL

FOR

CESSNA 172N

REG. NO. N75898

SER. NO. 17268024

This Supplement must be carried in the aircraft when it is modified by the installation of a 180 HP engine and the gross weight is increased in accordance with STC SA703GL. The information contained herein supplements or supersedes the basic placards and markings only in those areas listed.

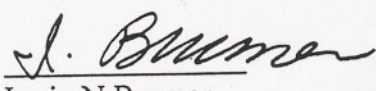
FAA APPROVED:

*W. F. Horn*  
FOR W. F. Horn, Manager  
Chicago Aircraft  
Certification Office  
FAA Central Region

DATE: June 11, 1985

PENN YAN AERO SERVICE INC.  
FAA APPROVED  
SUPPLEMENTAL AIRPLANE FLIGHT MANUAL  
FOR  
CESSNA 172 SERIES AIRCRAFT

LOG OF REVISIONS

<u>Rev.</u> <u>No.</u>	<u>Page</u> <u>No.</u>	<u>Description</u>	<u>FAA Approved</u>	<u>Date</u>
A	4	Added performance information to section 5 for clarification		
		Renumbered pages	 Irwin N Brumer Manager, NYACO	APR 13 1994

Penn Yan Aero Service, Inc.  
2499 Bath Road, Airport  
Penn Yan, NY 14527-9599

Supplemental Airplane  
Flight Manual for  
Cessna 172N

## SECTION I - Limitations

- A. The following placard must be displayed in full view of the pilot:

THIS AIRCRAFT HAS BEEN MODIFIED BY THE INSTALLATION OF A 180 HP ENGINE PER STC SA703GL. IT MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS AS STATED IN THE FORM OF PLACARDS, MARKINGS AND MANUALS.

- B. For the N model aircraft the following placard must be displayed adjacent to the flap position selector switch:

MAXIMUM FLAP TRAVEL IS 30°

- C. The following limits apply to the normal category only.

Maximum Gross Weight - 2550 lbs.

C.G. Range - 41.0" to 47.3" at 2550 lbs.

35.0" to 47.3" at 1950 lbs. or less

Straight line variation between points given.

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Section 3      Emergency Procedures

NO CHANGE

Section 4      Normal Procedures

NO CHANGE

Section 5      Performance

Performance of the Cessna 172 series aircraft, when it is modified by the installation of a 180 HP engine and the gross weight is increased, in accordance with STC SA703GL, will be equal to or better than the basic airplane

CAUTION: -

The fuel consumption and range/endurance information originally presented for this model do not apply to this STC modification; increased fuel consumption and reduced range/endurance can be expected with the 180 hp engine installed.

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DATE:

Revised: **APR 13 1994**

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FUEL FLOW vs. PERCENT RATED POWER  
AVCO LYCOMING O-360, 180HP SERIES  
COMPRESSION RATIO 8.50:1  
SPARK ADVANCE 25° BTC

FUEL FLOW - U.S. GAL./HR.

16

14

12

10

8

6

MINIMUM ALLOWABLE FUEL FLOW

50

60

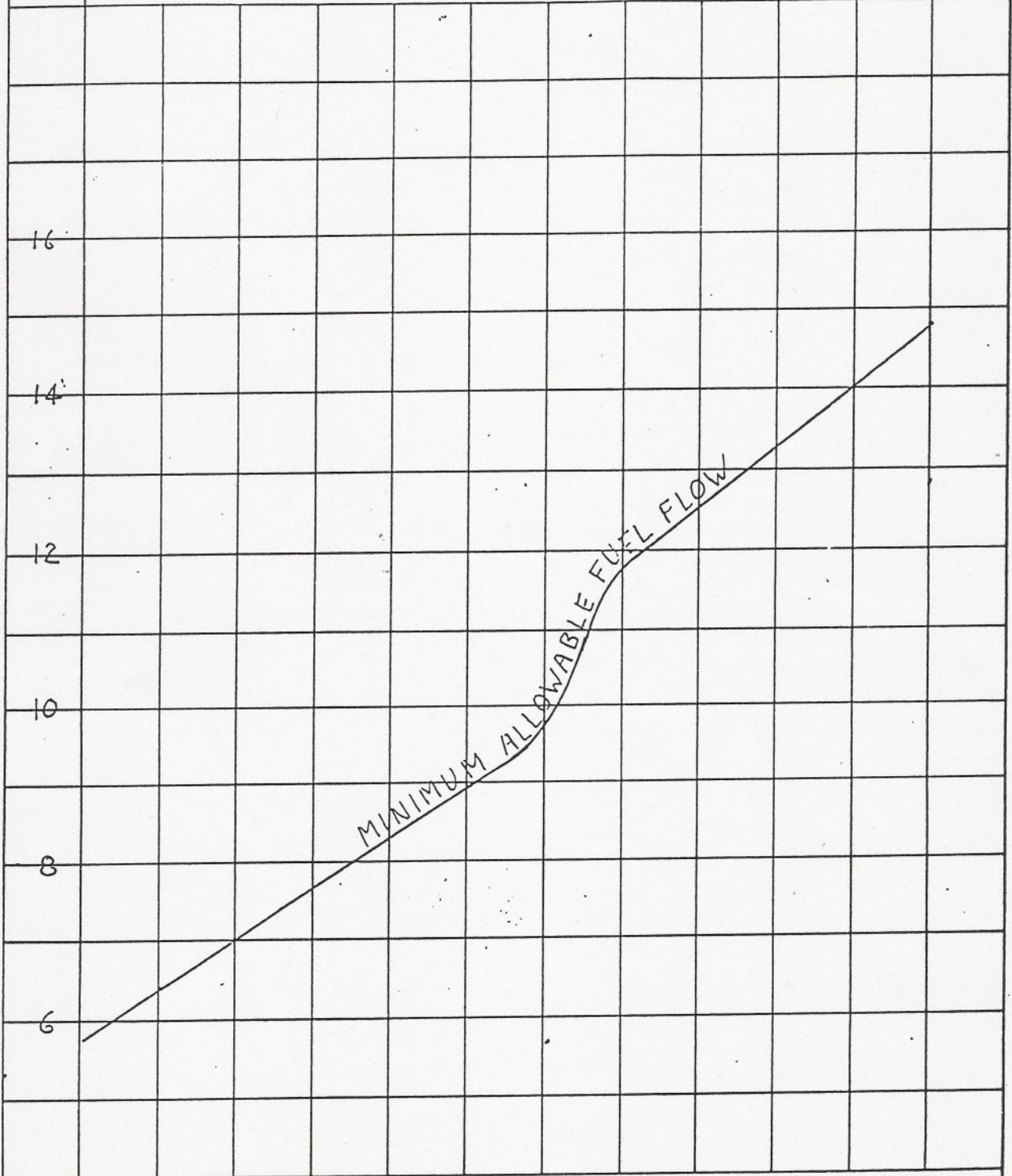
70

80

90

100

PERCENT RATED POWER





**180 H.P. SUPER-HAWK  
BY PENN YAN AERO**

**Power Chart**

<b>Press. Alt.</b>	<b>Std. Alt. Temp. °F</b>	<b>108 HP 60% Power RPM</b>	<b>117 HP 65% Power RPM</b>	<b>126 HP 70% Power RPM</b>	<b>135 HP 75% Power RPM</b>	<b>Press. Alt.</b>
SL	59	2290	2370	2440	2500	SL
1,000	55	2310	2390	2460	2520	1,000
2,000	52	2330	2410	2480	2540	2,000
3,000	48	2350	2430	2500	2560	3,000
4,000	45	2370	2450	2520	2580	4,000
5,000	41	2390	2470	2540	2600	5,000
6,000	38	2410	2490	2560	2620	6,000
7,000	34	2430	2510	2580	2640	7,000
8,000	31	2450	2530	2600	—	8,000
9,000	27	2470	2550	2620	—	9,000
10,000	23	2490	2570	—	—	10,000
11,000	19	2510	2590	—	—	11,000
12,000	16	2530	—	—	—	12,000