

SCHWEIZER MODEL 269C SERIES HELICOPTERS
CSP-C-1F

SCHWEIZER AIRCRAFT CORP.

Supplement to the Do-Approved
Rotorcraft Flight Manual

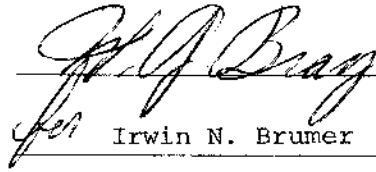
For

300C Model 269C Helicopters

(See Page 2 for Serial Number Effectivity)

ROTORCRAFT DUAL ENGINE OPERATION

Reissue #1 Approved By:


for Irwin N. Brumer

Manager, ANE-170
New York Aircraft Certification Office

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FAA APPROVED
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
FOR
ROTORCRAFT DUAL ENGINE RPM OPERATION
FOR
300C MODEL 269C HELICOPTERS

HELICOPTER SERIAL NO. EFFECTIVITY
269C Serial No. 0210 and subsequent or Aircraft
Serial No. 0004 thru 0209 having Kit
Part No. M10078 installed

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NOTE

The change bar (█) defines the latest FAA Approved changes.

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CONFIGURATION TABLE

Number Change	Date	Description
	Issued 18 Dec 1973	As noted per Drawing No. 269A4957
	Reissued 21 Sep 1988	Updated to reformat

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INTRODUCTION

The equipment in the 269A4957 dual rpm kit consists of a tachometer with modified markings, revised collective detent/guide and revised manifold pressure and V_{NE} placards. In addition, the blade tips and cooling scroll cut-offs may be modified for reduced noise.

This kit allows limited operation at low rpm for reduced rotor noise and is intended to be used in conjunction with the 269A8245 or 269A8801-5 engine exhaust muffler kits (operation with an engine exhaust muffler is not mandatory).

Except as modified by this Rotorcraft Flight Manual Supplement, operation in compliance with Section I of the basic Approved Rotorcraft Flight Manual applicable to serial numbered aircraft noted on page 1-2, is mandatory. Other sections of the RFM or Supplement are recommended procedures.

This Supplement must be carried in the applicable basic DO/FAA-Approved 300C Model 269C Rotorcraft Flight Manual when the rotorcraft is modified by the installation of the dual rpm kit in accordance with appropriate installation instructions. Refer to page 2 for list of helicopter models and serial numbers affected.

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SECTION I

OPERATING LIMITATIONS

1. Maximum Gross Weight

Same as basic except as follows:

- a. Single rpm operation; 2050 pounds (2030 pounds with 269A8245 muffler/resonator, 2000 pounds with 269A8245 muffler/resonator and blade abrasion tape)
- b. Dual rpm operation; 1925 pounds

2. Airspeed Limitations

- a. At sea level, never exceed speed (Vne)
 - 1) Single rpm operation; 109 mph IAS
 - 2) Dual rpm operation; 70 mph IAS (2800 to 2900 rpm)
102 mph IAS (3000 to 3200 rpm)
- b. Above sea level, reduce Vne in accordance with Figure 1-1 (basic RFM) for single rpm operation and items b, c, and d (this supplement) for dual rpm operation.
- c. Minimum airspeed at 2800 to 2900 rpm; 40 mph IAS.

3. Powerplant Limitations

- a. Maximum Continuous Power

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- 1) 3000 to 3200 rpm; 190 hp, 26.0 inch mp at seal level, varying linearly to 24.7 inch mp at 4200 feet altitude for standard day. Refer to mp placard, Item 7e, for nonstandard day.
 - 2) 2800 to 2900 rpm; 154 hp, 24.5 inch mp at seal level. Decrease mp 0.4 inch for each 1000 feet of altitude.
- b. Minimum rpm; 2800
4. Maximum Operating Altitude
- a. Single rpm operation
GW =1700 pounds or less - 14,600 feet
GW =more than 1700 pounds - 10,000 feet
 - b. Dual rpm operation - 12,000 feet (refer to Item 7b, c, and d)
5. Minimum Operating Altitude
- For dual rpm operation; 500 feet above terrain when operating at 2800 - 2900 rpm.
6. Engine Tachometer Marking
- | | |
|-----------------|--|
| Red radial line | 2800, 3000 and 3200 rpm |
| Green arc | 1200 to 1600, 2800 to 2900 and
3000 to 3200 rpm |

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7. Flight Limitation Placards

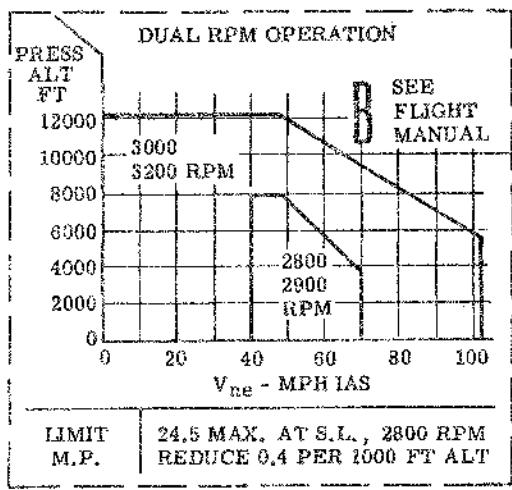
a.

Pressure Altitude 1000 FT °F OAT	V _{ne} - MPH IAS								A
	0	4	8	8	10	12	14		
0	159	158	155	84	51	-	-	-	GW More Than 1700 Lbs
20	160	159	64	75	48	-	-	-	
40	159	153	51	69	-	-	-	-	
60	159	51	70	46	-	-	-	-	
80	156	58	58	-	-	-	-	-	
100	159	72	49	-	-	-	-	-	
0	159	159	159	109	86	77	58		GW 1700 Lbs or Less
20	158	159	159	108	85	67	48		
40	169	159	158	84	75	57	-		
60	158	159	158	84	66	48	-		
80	159	158	85	76	57	-	-		
100	159	158	84	86	46	-	-		

Maximum V_{ne} Decrease Off - 100 mph IAS

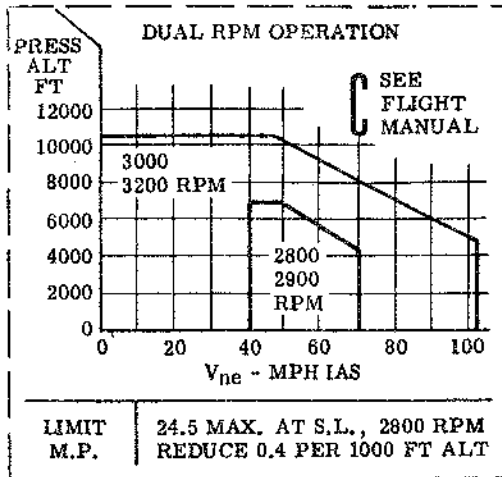
Placard a. to be used for single rpm operation (3000 to 3200 rpm)

b.

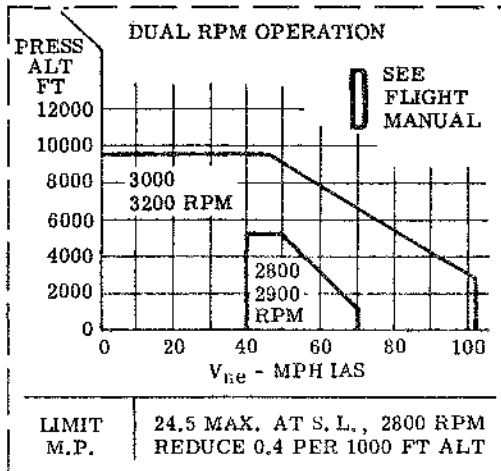


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c.



d.



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e.

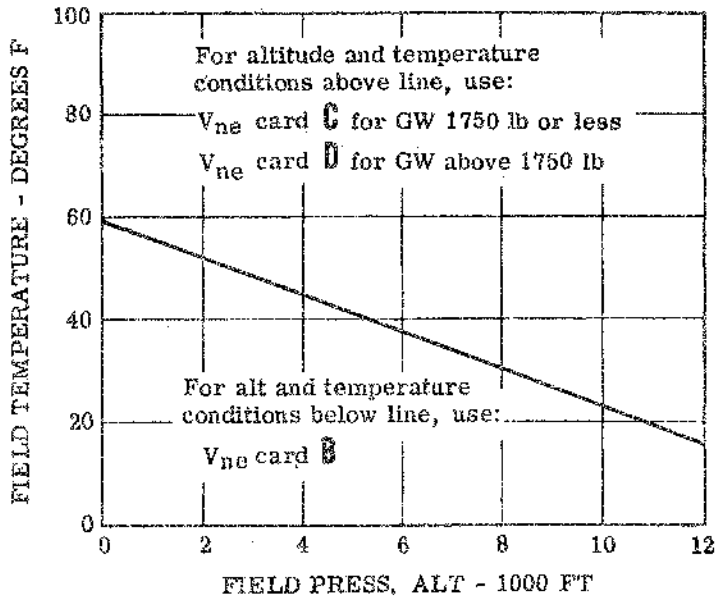


Figure 1. VNE Card Selection For Dual RPM Operation

f.

LIMIT MP	OAT °F		0	20	40	60	80	100
	Altitude FT							
SL			34.1	34.7	35.4	36.0	36.6	37.2
2000			23.1	24.3	25.0	25.8	26.5	F.T.
3000			23.5	24.1	24.8	25.4	F.T.	F.T.
4000			23.3	24.0	24.6	F.T.	F.T.	F.T.

3000 RPM Minimum Below 500 Feet Above Terrain

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SECTION II

OPERATING PROCEDURE

1. Preflight Requirements:
 - a. Have a thorough understanding of dual rpm operating limitations (refer to Section I).
 - b. Determine that the resonator exhaust pipe (if installed) is free from obstructions (snow, ice, etc).
 - c. Check muffler, resonator and pipes (if installed) for security and freedom from damage or deterioration.
2. Cockpit Check:
 - a. Select and position proper Vne card for aircraft takeoff gross weight, altitude and temperature (refer to Section I, figure 1).
3. Cruise Operation:
 - a. Caution should be exercised when reducing rpm from 3000 - 3200 to 2800 - 2900 so as not to exceed manifold pressure limitations for low rpm mode.
 - b. Operate within height, speed and power limits for low rpm mode when at 2800 to 2900 rpm.
4. Engine Cooling and Shutdown:
 - a. Caution following engine shutdown should be exercised by persons in vicinity of hot exhaust pipe.

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SECTION III

PERFORMANCE DATA

1. Hover ceiling with the 269A8245 muffler/resonator is shown in Figure 2 and 3.

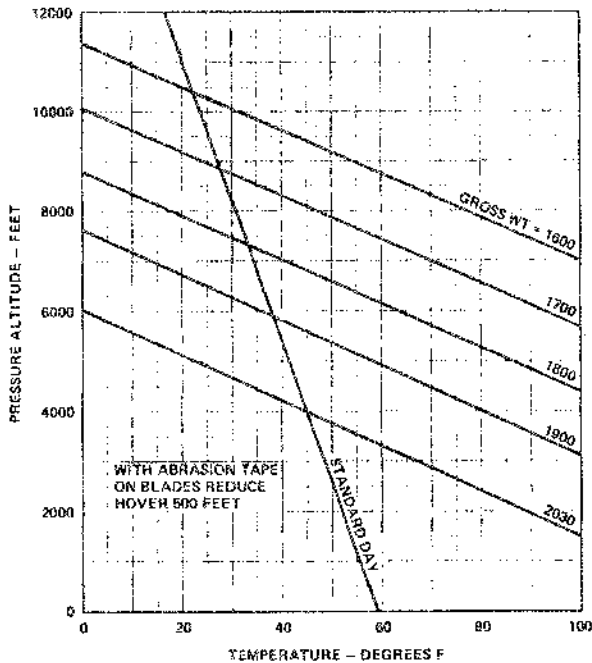


Figure 2. In Ground Effect Hover Ceiling with the 269A8245 Muffler / Resonator Versus Temperature (2-foot Skid Height, 3,200 rpm)

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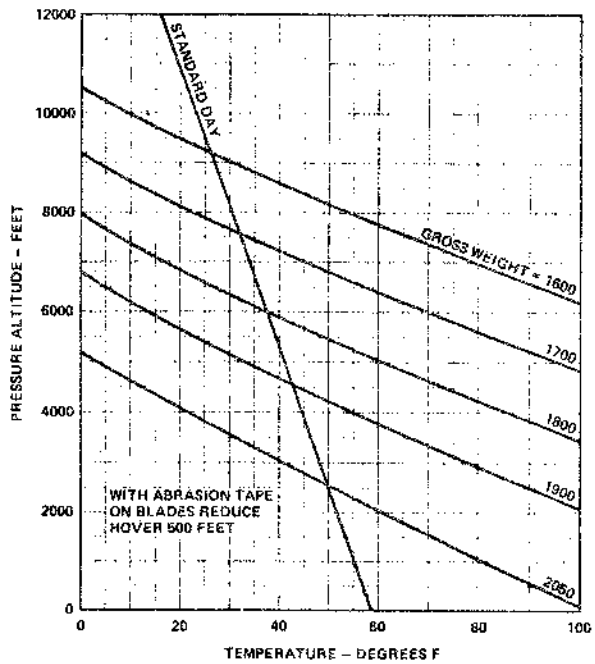


Figure 3. In Ground Effect Hover Ceiling with the 269A8245 Muffler / Resonator Versus Temperature (2-foot Skid Height, 3,000 rpm)

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