

MT-Propeller Entwicklung GmbH  
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GERMANY

## AIRPLANE FLIGHT MANUAL SUPPLEMENT

**Doc. No. E-1487**

FOR

**Diamond Aircraft Industries Inc.  
DA 20-C1**

WITH

**MT 175 R 150 - 2Ca  
2-Blade Wood Composite Fixed Pitch Propeller**

**Serial No.** \_\_\_\_\_

**Registration No.** \_\_\_\_\_

This supplement must be attached to the Transport Canada Airplane Flight Manual when the MT 175 R 150 -2Ca propeller has been installed in accordance with **STC No. SA07-41**.

The information contained in this document supplements or supersedes the information of the basic Airplane Flight Manual only in those areas listed For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Airplane Flight Manual.

**This AFMS is approved by EASA on behalf of Transport Canada.**

Approved: \_\_\_\_\_

A circular stamp from the European Aviation Safety Agency (EASA) is positioned to the right of a handwritten signature. The signature is written in black ink over a horizontal line. The stamp contains the text 'European Aviation Safety Agency' around the perimeter and 'Confidence in the future' at the bottom.

Date: \_\_\_\_\_

08. MAI 2007

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Original Issue - 01 March 2007

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**AFMS Doc. No. E-1487**  
DA 20-C1  
MT 175 R 150 - 2Ca  
Propeller Installation

Airplane Flight Manual Supplement  
Log of revisions

Rev. No.	Description	Pages Revised	Approved by / Date

## **SECTION 1 - GENERAL**

The information contained in this document, together with the basic Airplane Flight Manual or later approved versions is applicable and must be carried in the airplane.  
For further information concerning the MT 175 R 150 - 2Ca propeller refer to Section 2 and Section 7.

## **SECTION 2 - LIMITATIONS**

Engine Limits: No change.

Propeller: MT 175 R 150 - 2Ca

Note: Static rpm at full throttle, ISA, SL, no wind (carburator heat off and mixture leaned to max. rpm) : 2000 to 2200 rpm

Diameter: 175 cm (68.9 in)  
No cut-off approved.

Propeller Pitch: At station 65.6 cm (25.8 in): 150 cm (59.1 in)

Tachometer: No change.

Placards: Markings and signs concerning other propellers are obsolete.

## **SECTION 3 - EMERGENCY PROCEDURES**

No change.

## **SECTION 4 - NORMAL PROCEDURES**

No change.

## SECTION 5 - PERFORMANCE

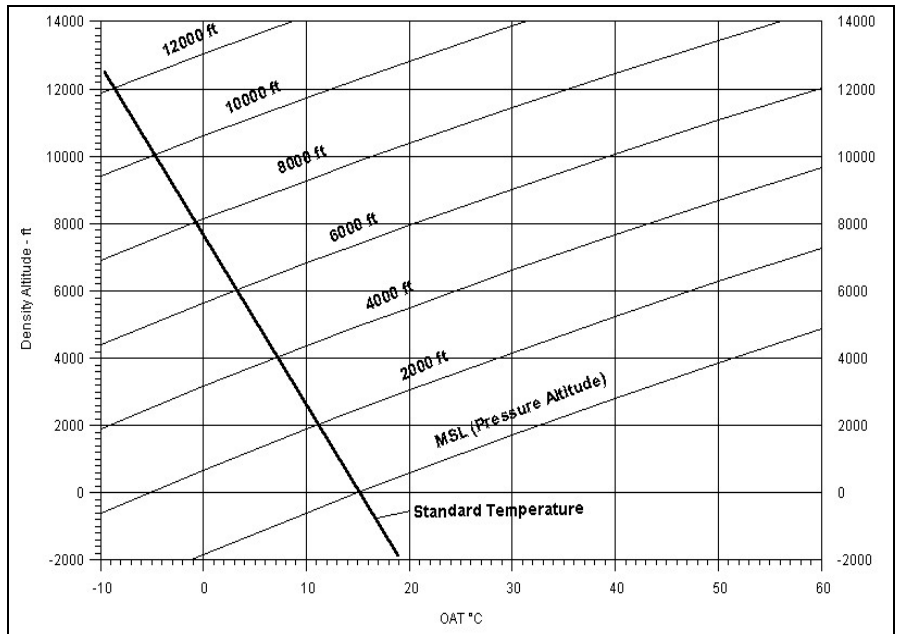
Noise Data:

Noise Measurement Method	Noise Value	Maximum Allowable
ICAO Annex 16, Vol. 1, Part 2, Chapter 10	68.0 dBA	75.3 dBA

No change to the basic airplane except Cruise Performance.

**Note:** Performance Data is not TCCA Approved.

Figure 1: Density Altitude Chart:



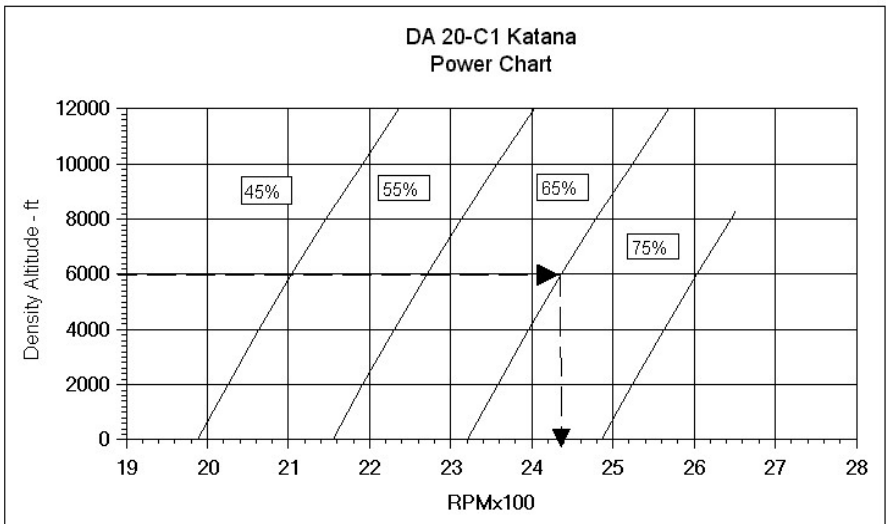
Example: Pressure Altitude: 6000 ft  
 Outside Air Temperature: 15 °C  
 Density Altitude: 7391 ft

## SECTION 5 - PERFORMANCE

Maximum propeller speed: 2800 RPM

**Note:** Performance Data is not TCCA Approved.

Figure 2: Power Chart

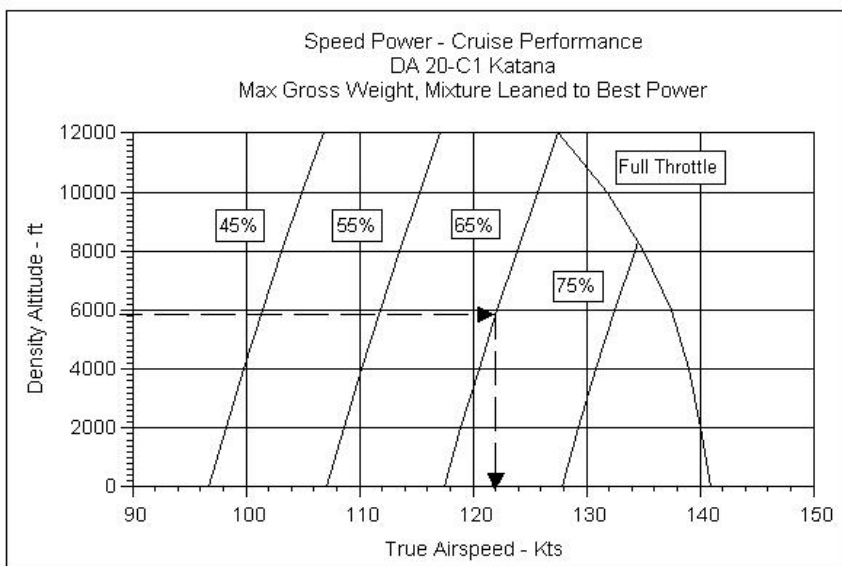


Example: Density Altitude: 6000 ft  
Desired BHP: 65%  
Engine RPM: 2440 RPM

## SECTION 5 - PERFORMANCE

Figure 3: Speed Power – Cruise Performance

**Note:** Performance Data is not TCCA Approved.



Example: Density Altitude: 6000 ft  
Desired BHP: 65%  
True Airspeed: 122 knots

Note:

The cruise performance while not a certification requirement, are based on actual flight tests. The actual performance attained will vary from airplane to airplane depending on age and condition of the airframe and powerplants, aircraft rigging and operator technique.

## SECTION 5 - PERFORMANCE

Figure 4: Cruise Performance

Table to calculate maximum endurance and range depending on the available fuel.

**Note:** Performance Data is not TCCA Approved.

Density Altitude ft	RPM	Standard Temperature		
		% BHP	KTAS	GPH
2000	2700	85	140	8.7
2000	2600	78	134	8.4
2000	2500	73	128	7.3
2000	2400	67	121	6.2
2000	2300	61	115	5.7
2000	2200	55	109	5.4
4000	2700	83	139	8.8
4000	2600	77	133	8.0
4000	2500	71	127	6.9
4000	2400	65	120	6.0
4000	2300	59	114	5.6
4000	2200	53	108	5.3
6000	2700	80	139	8.7
6000	2600	74	132	7.6
6000	2500	68	126	6.5
6000	2400	63	120	5.9
6000	2300	57	114	5.6
6000	2200	51	107	5.0

Density Altitude ft	RPM	Standard Temperature		
		% BHP	KTAS	GPH
8000	2650	75	135	7.7
8000	2600	72	132	7.1
8000	2500	66	125	6.2
8000	2400	60	119	5.7
8000	2300	54	113	5.4
8000	2200	48	107	4.4
10000	2550	66	127	6.2
10000	2500	63	124	5.9
10000	2400	57	118	5.6
10000	2300	51	112	5.1
10000	2200	45	105	3.3
12000	2450	58	120	5.7
12000	2400	55	117	5.5
12000	2300	49	111	4.6
12000	2200	43	104	1.7

## SECTION 6 - WEIGHT AND BALANCE AND EQUIPMENT LIST

Refer to the latest revised empty weight and center of gravity data for effect on loading instructions.

## SECTION 7 - DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

Propeller:

The MT 175 R 150 - 2Ca is a 2-blade wood composite fixed pitch propeller.

**Note:**

The airplane may be operated without a spinner but in this case the front plate must cover the central bore of the propeller completely.