

EASA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT

Doc. No. E-1255

FOR

Diamond Aircraft Industries Inc.
DA 20-C1 KATANA

WITH

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

WITH OR WITHOUT

Heggemann DA 20-C1 exhaust system

Serial No. _____

Registration No. _____

This supplement must be attached to the Airplane Flight Manual upon installation of the MT 175 R 150 -2Ca propeller and the Heggemann DA 20-C1 exhaust system. .
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.

Approved: _____



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MT-Propeller Entwicklung GmbH
Flugplatzstr.1
94348 Atting
GERMANY

AFMS Doc. No. E-1255
DA 20-C1 Katana
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 <u>Note:</u> Static rpm at full throttle, ISA, SL, no wind (carburetor 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

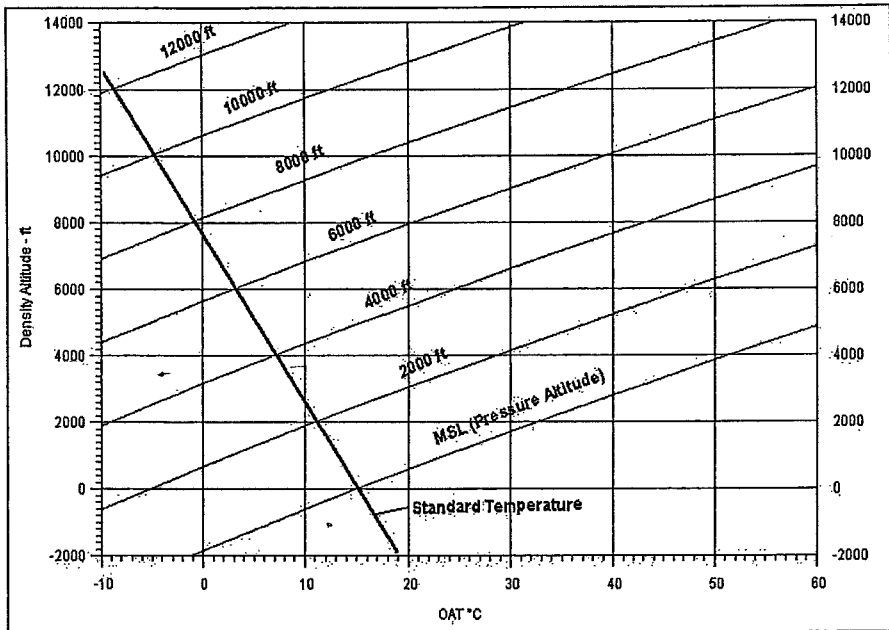
No change.

SECTION 5 - PERFORMANCE

No change to the basic airplane except Cruise Performance.

The installation of the Heggemann DA 20-C1 exhaust system does not change the performance of the airplane.

Figure 1: Density Altitude Chart:

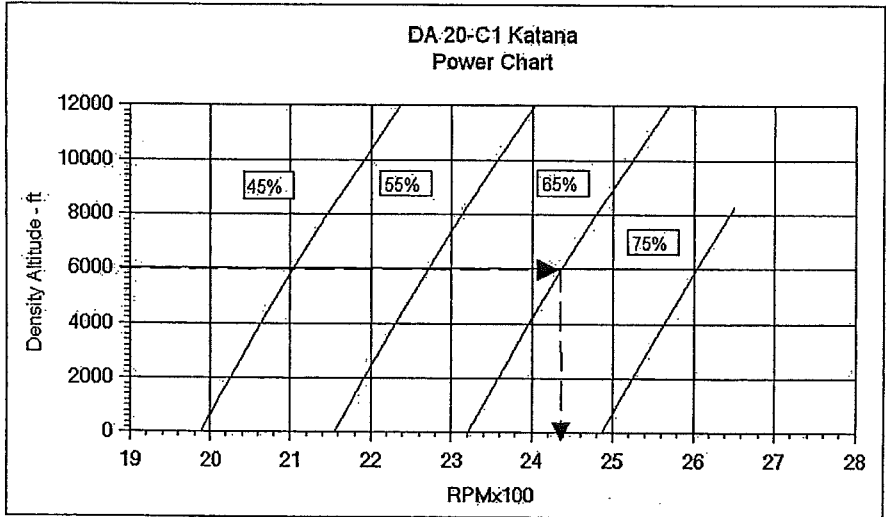


Example: Pressure Altitude: 6000 ft
Outside Air Temperature: 15 °C
Density Altitude: 7391 ft

SECTION 5 - PERFORMANCE

Maximum propeller speed: 2800 RPM

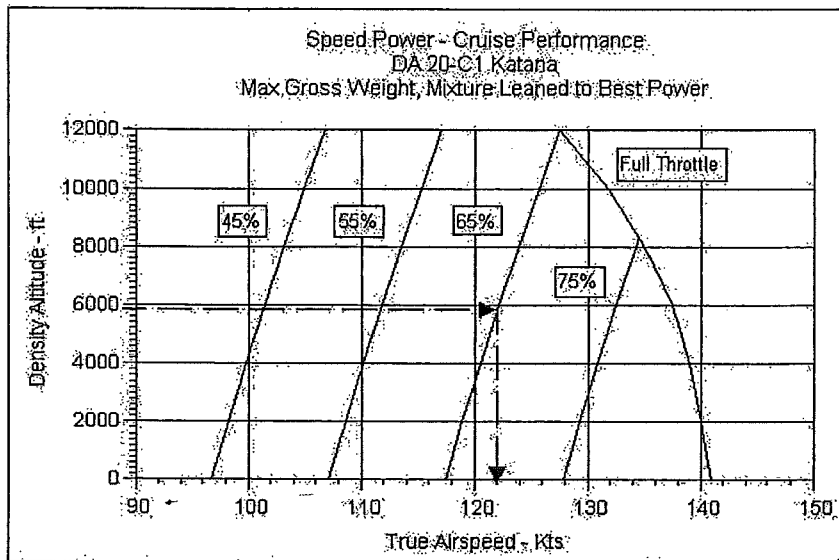
Figure 2: Power Chart



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

SECTION 5 - PERFORMANCE

Figure 3: Speed Power – Cruise Performance



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.

Density Altitude ft	RPM	Standard Temperature		
		% BHP	KTAS	GPH
2000	2700	85	140	8.7
2000	2600	79	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	2850	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.