



Technify Motors GmbH

Platanenstraße 14
D - 09356 St. Egidien

Tel. +49-(0)37204/ 696-0
Fax +49-(0)37204/ 696-2912
www.continentaldiesel.de
support@ccontinentaldiesel.de

Approved Airplane Flight Manual Supplement
for the
DA 40 D

Equipped with
TAE 125-02-114 Engine Installation

Issue 2/0

SERIAL No. _____

REGISTER No. _____

This supplement must be attached to the EASA approved Airplane Flight Manual when the TAE 125-02-114 engine has been installed in accordance with EASA STC 10036328.

The information contained in this supplement supersedes or adds to the EASA approved Airplane Flight Manual only as set forth herein.

For limitations, procedures, performance and loading information not contained in this supplement, consult the basic EASA approved Airplane Flight Manual.

This Airplane Flight Manual Supplement is approved with EASA STC 10036328.

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LOG OF REVISIONS

| Revision | Chapter | Description | Approved | |
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| - | All | Initial Issue 1 | Sept. 01, 2011 | EASA STC 10036328 |
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| | 2 | New gearbox oil New fuel, new specs | | |
| | 5 | splitted due to new specs | | |
| | 5a | New section | | |
| | 5b | new section | | |
| | 6 | Equipment list updated | | |

◆ Note: The parts of the text which changed are marked with a vertical line on the margin of the page.

LIST OF EFFECTIVE CHAPTERS

| Chapter | Issue/Revision | Date |
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| 1 | 2/0 | Aug., 2015 |
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APPROVAL

The content of approved chapters is approved by EASA. All other content is approved by TAE under the authority of EASA DOA No. EASA.21J.010 in accordance with Part 21.

GENERAL REMARK

The content of this AFM supplement is developed on basis of the EASA-approved AFM, DAI Document No. 6.01.05-E.

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CHAPTER 1 GENERAL

1.1 INTRODUCTION

This supplement must be attached to the EASA approved Airplane Flight Manual when the TAE 125-02-114 engine has been installed in accordance with EASA STC 10036328. The information contained in this supplement supersedes or adds to the EASA approved Airplane Flight Manual only as set forth herein.

For limitations, procedures, performance and loading information not contained in this supplement, consult the basic EASA approved Airplane Flight Manual.

1.2 CERTIFICATION BASIS

The certification basis for the TAE 125-02-114 engine installation is CS-23, dated November 14, 2003.

1.5 DEFINITIONS AND ABBREVIATIONS

(i) Miscellaneous

EASA: European Aviation Safety Agency

1.8 SOURCE DOCUMENTATION

UPDATE AND REVISION OF THE MANUAL

▲ **WARNING:** A safe operation is only assured with an up to date AFM supplement. Information about actual AFM, supplement issues and revisions are published in the Service Bulletin TM TAE 000-0004.

◆ **Note:** The Doc.-No of this AFM supplement is published on the cover sheet of this supplement.

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CHAPTER 2 OPERATING LIMITATIONS

2.4 POWERPLANT LIMITATIONS

a) Engine manufacturer: Technify Motors GmbH

b) Engine designation:TAE 125-02-114

c) RPM limitations (shown as propeller PRM)

Maximum: 2300 RPM

Maximum overspeed:..... 2500 RPM (max 20 sec)

d) Engine Power

Max. take-off power: 114 kW (155 HP) at 2300 RPM

Max. continuous power: 114 kW (155 HP) at 2300 RPM

Max. recommended cruise power:85%

e) Oil Pressure

Min. oil pressure:..... 1.2 bar

Min. oil pressure (at Take-off power):2.3 bar

Min. oil pressure (in flight):..... 2.3 bar

Max. oil pressure:..... 6.0 bar

Max. oil pressure (cold start < 20 sec.): 6.5 bar

g) Oil Temperature

Min. oil temperature (engine starting temp.):-32°C

Min. oil temperature (min. operating limit temp.):..... 50°C

Max. oil temperature: 140°C

h) Coolant Temperature

Min. coolant temp. (engine starting temp.):.....-32°C

Min. coolant temp. (min. operating limit temp.): 60°C

Max. coolant temperature: 105°C

j) Manufacturer: MT Propeller Entwicklung GmbH

k) Model: MTV-6-A/187-129
..... MTV-6-A/190-69

l) Propellerdiameter: 1.87 m (MTV-6-A/187-129)
..... 1.90 m (MTV-6-A/190-69)

m) Propeller pitch angle (0.75R): 13.5° to 28°

n) Oil Specification: AERO SHELL OIL DIESEL ULTRA
..... SHELL HELIX ULTRA 5W-30
..... SHELL HELIX ULTRA 5W-40
..... AERO SHELL OIL DIESEL 10W-40

o) Coolant: Water/Radiator Protection at a ratio of 50:50

Radiator Protection: BASF Glysantin Protect Plus/G48
..... Mobil Antifreeze Extra/G48
..... ESSO Antifreeze Extra/G48
..... Comma Xstream Green - Concentrate/G48
..... Zerex Glysantin G48

■ CAUTION: The use of water which does not meet the specifications according to the applicable OM-02-02 may cause engine damage.

■ CAUTION: If the coolant level is too low the reason must be determined and the problem must be corrected by authorized personnel.

p) Gearbox Oil: Shell Spirax S6 GXME75W-80
..... Shell Spirax S4 G 75W-90
..... Shell Getriebeöl EP 75W-90 API GL-4
..... Shell Spirax EP 75W-90

.....Shell Spirax GSX 75W-80 GL-4
 Shell Spirax S6 ATF ZM
Centurion Gearbox Oil N1

- CAUTION: Use approved oil with exact designation only!

- CAUTION: If the gearbox oil level is too low the reason must be determined and the problem must be corrected by authorized personnel.

q) Maximum restart altitude: 14000 ft

2.5 ENGINE INSTRUMENT MARKINGS

Engine instrument markings and their color code significance are shown in the tables below:

| Indi-cation | | Red arc/bar = lower prohibited range | Yellow arc/bar = caution range | Green arc/bar = normal operating range | Yellow arc/bar = caution range | Red arc/bar = upper prohibited range |
|---------------|-------|--------------------------------------|--------------------------------|--|--------------------------------|--------------------------------------|
| RPM | [RPM] | -- | -- | 0-2300 | -- | above 2300 |
| Oil pressure | [bar] | below 1.2 | 1.2 to 2.2 | 2.3 to 5.1 | 5.2 to 6.5 | above 6.5 |
| Oil temp. | [°C] | below -32 | -32 to 49 | 50 to 129 | 130 to 140 | above 140 |
| Coolant temp. | [°C] | below -32 | -32 to 59 | 60 to 100 | 101 to 105 | above 105 |
| Gearbox temp. | [°C] | -- | -- | below 115 | 115 to 120 | above 120 |
| Load | [%] | -- | -- | 0 - 100 | -- | -- |
| Fuel temp. | [°C] | below -30 | -30 to +4 | +5 to 69 | 70 to 75 | above 75 |
| Ammeter | [A] | -- | -- | below 85 | 85 to 90 | above 90 |

| Indi-cation | | Red arc/bar = lower prohibited range | Yellow arc/bar = caution range | Green arc/bar = normal operating range | Yellow arc/bar = caution range | Red arc/bar = upper prohibited range |
|-------------|----------|--------------------------------------|--------------------------------|--|--------------------------------|--------------------------------------|
| Volt-meter | [V] | below 11 | 11 to 12.5 | 12.6 to 14.9 | 15.0 to 15.5 | above 15.5 |
| Fuel qty. | [US gal] | below 0.45 | -- | 0.45 to 14 | -- | -- |

From -30 °C to -6 °C the lower yellow bar of the fuel temp bar flashes, from -5 °C to +4 °C the lower yellow bar of the fuel temp is continuously on. This applies only to conventional instrument panel versions.

2.9 APPROVED MANEUVRRES

Refer to basic AFM.

- CAUTION: Intentionally initiating negative G maneuvers is prohibited.

2.14 FUEL

Approved fuel grades:..... JET A-1 (ASTM D 1655)
 JET A (ASTM D 1655)
 JET Fuel No. 3 (GB6537-94)
JP-8 (MIL-DTL-83133E)
JP-8+100 (MIL-DTL-83133E)
 Diesel Fuel (DIN EN590)
 TS-1 (GOST 10227-86)
TS-1 (GSTU 320.00149943.011-99)
 SASOL GTL Diesel

- CAUTION: Additional temperature must be observed if the airplane is operated with Diesel Fuel or blends of Diesel Fuel with JET Fuel. If there is uncertainty about which fuel is in the tank, it must be assumed that it is Diesel.

2.16 OTHER LIMITATIONS

Fuel Temperature

The fuel temperature limitations applicable for the TAE 125-02-99 engine are valid for the TAE 125-02-114. Refer to basic AFM.

CHAPTER 3 EMERGENCY PROCEDURES

The emergency procedures included in this chapter supersede the procedures in the basic AFM.

For emergency procedures not included in this chapter refer to basic AFM.

3.2.4. RESTARTING THE ENGINE WITH WINDMILLING PROPELLER

- ◆ Note: As long as an airspeed of at least 70 KIAS is maintained, and there is no major mechanical engine defect, the propeller will continue to windmill. After a complete stop the propeller starts to windmill at airspeeds above 115 KIAS.

- CAUTION: The maximum airspeed for windmilling is 120 KIAS. Higher airspeeds may result in propeller overspeed.

- ◆ Note: Restarting the engine with windmilling propeller is possible at airspeeds between 70 and 110 KIAS and altitudes below 14000 ft pressure altitude.

- (1) Airspeed for best glide angle ... 73 KIAS (1150 kg, 2535 lb)
..... 68 KIAS (1000 kg, 2205 lb)
..... 60 KIAS (850 kg, 1874 lb)
- (2) Power lever IDLE
- (3) Emergency fuel valve check NORMAL
- (4) Alternate air OPEN
- (5) Fuel transfer pump ON
- (6) AVIONIC MASTER OFF
- (7) ELECTRIC MASTER ON
- (8) Airspeed 70-110 KIAS

continued next page

(9) ENGINE MASTER OFF - ON

◆ Note: If it is not possible to start the engine:
- adopt glide configuration
- carry out emergency landing
Refer to basic AFM

■ CAUTION: Engine restart following an engine fire should only be attempted if it is unlikely that a safe emergency landing can be made. It must be expected that engine restart is impossible after an engine fire.

(10) AVIONIC MASTERON, if required

3.2.5. RESTARTING THE ENGINE WITH STATIONARY PROPELLER

◆ Note: Restarting the engine with stationary propeller is possible at altitudes below 14000 ft pressure altitude.

◆ Note: Restarting the engine with windmilling propeller is possible at airspeeds between 70 and 110 KIAS and altitudes below 14000 ft.

- (1) Airspeed for best glide angle ... 73 KIAS (1150 kg, 2535 lb)
..... 68 KIAS (1000 kg, 2205 lb)
..... 60 KIAS (850 kg, 1874 lb)
- (2) ENGINE MASTER OFF
- (3) Power lever IDLE
- (4) Emergency fuel valve check NORMAL
- (5) Alternate air OPEN
- (6) Fuel transfer pump ON
- (7) AVIONIC MASTER OFF
- (8) ELECTRIC MASTER ON
- (9) ENGINE MASTER ON

◆ Note: Only if the ENGINE MASTER is switched OFF and ON again, glowing will be initiated. Glowing must be initiated shortly before the restart attempt.

continued next page

(10) ELECTRIC MASTER START
(release when engine running)

◆ **Note:** By increasing the airspeed above approximately 115KIAS, the propeller will begin to rotate due to windmilling and the engine can thus be started. For this, the ELECTRIC MASTER should be set to ON (see 3.2.4 - RESTARTING THE ENGINE WITH WINDMILLING PROPELLER of this supplement). A loss of altitude of at least 1000 ft (300 meters) must be expected.

If it is not possible to start the engine:
- adopt glide configuration
- carry out emergency landing
Refer to basic AFM

■ **CAUTION:** Engine restart following an engine fire should only be attempted if it is unlikely that a safe emergency landing can be made. It must be expected that engine restart is impossible after an engine fire.

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CHAPTER 4A

NORMAL OPERATING PROCEDURES

4A.2 AIRSPEEDS FOR NORMAL OPERATING PROCEDURES

For take-off, climb, cruise climb and go-around the following airspeeds apply for the TAE 125-02-114 engine installation

| Flight Mass | 980 kg (2160 lb) | 1000 kg (2205 lb) | 1150 kg (2535 lb) |
|---|---------------------|----------------------|----------------------|
| Airspeed for rotation Take-off run (V_R) (Flaps T/O) | 54 KIAS | 55 KIAS | 59 KIAS |
| Airspeed for take-off climb (V_X) (Flaps T/O) | 59 KIAS | 60 KIAS | 66 KIAS |
| Airspeed for cruise climb Best rate of climb (V_Y) (Flaps UP) | 78 KIAS | 78 KIAS | 78 KIAS |
| Min. speed during go-around (Flaps T/O) | 59 KIAS | 60 KIAS | 66 KIAS |

For normal operating procedures refer to basic AFM.

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CHAPTER 4B ABNORMAL OPERATING PROCEDURES

For abnormal operating procedures refer to basic AFM.

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CHAPTER 5(a) PERFORMANCE

- ◆ Note: This chapter applies to aircraft with propeller **MTV-6-A/187-129**. The correct designation can be found on the blades.

- ◆ Note: The chapter not relevant to the respective propeller can be omitted.

5.3 PERFORMANCE TABLES AND DIAGRAMS

5.3.2 Diagram for setting engine performance

Not valid for TAE 125-02-114 engine installation.

5.3.7 Take-off distance

Take-off distance at 1150 kg, 2535 lb

| | | Weight: 1150 kg / 2535 lb | | | | Flaps: T/O | | | |
|-------------------|-------------|-------------------------------------|-------------|-------------------|-------------|---------------------------|-------------|-------------------|--|
| | | V _R : 59 KIAS | | | | Power: MAX | | | |
| | | Airspeed for initial climb: 66 KIAS | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | | |
| | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | |
| SL | 316 | 510 | 340 | 551 | 366 | 594 | 393 | 639 | |
| 1000 | 334 | 539 | 360 | 582 | 387 | 628 | 416 | 675 | |
| 2000 | 353 | 570 | 381 | 616 | 410 | 664 | 440 | 715 | |
| 3000 | 374 | 604 | 403 | 652 | 434 | 703 | 466 | 756 | |
| 4000 | 396 | 639 | 427 | 690 | 459 | 744 | 493 | 800 | |
| 5000 | 419 | 677 | 452 | 731 | 486 | 788 | 522 | 848 | |
| 6000 | 444 | 717 | 479 | 774 | 515 | 835 | 553 | 898 | |
| 7000 | 480 | 775 | 518 | 837 | 557 | 902 | 598 | 971 | |
| 8000 | 519 | 838 | 560 | 905 | 602 | 976 | 647 | 1050 | |
| 9000 | 567 | 917 | 611 | 990 | 658 | 1068 | 706 | 1149 | |
| 10000 | 620 | 1004 | 688 | 1084 | 718 | 1169 | 771 | 1258 | |

Table 5(a)-1 Take-off distance [m] at 1150 kg, 2535 lb

Take-off distance at 1150 kg, 2535 lb (continued)

| | | Weight: 1150 kg / 2535 lb | | | | Flaps: T/O | | | |
|--------------------------|--------------------|--|--------------------|---------------------------|--------------------|----------------------------------|--------------------|---------------------------|--|
| | | V_R: 59 KIAS | | | | Power: MAX | | | |
| | | Airspeed for initial climb: 66 KIAS | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | | |
| | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | |
| SL | 1037 | 1673 | 1116 | 1808 | 1201 | 1949 | 1289 | 2097 | |
| 1000 | 1096 | 1768 | 1181 | 1910 | 1270 | 2060 | 1365 | 2215 | |
| 2000 | 1158 | 1870 | 1250 | 2021 | 1345 | 2179 | 1444 | 2346 | |
| 3000 | 1227 | 1982 | 1322 | 2139 | 1424 | 2307 | 1529 | 2480 | |
| 4000 | 1299 | 2097 | 1401 | 2264 | 1506 | 2441 | 1618 | 2625 | |
| 5000 | 1375 | 2221 | 1483 | 2398 | 1595 | 2585 | 1713 | 2782 | |
| 6000 | 1457 | 2352 | 1572 | 2539 | 1690 | 2740 | 1814 | 2946 | |
| 7000 | 1575 | 2543 | 1700 | 2746 | 1827 | 2959 | 1962 | 3186 | |
| 8000 | 1703 | 2749 | 1837 | 2969 | 1975 | 3202 | 2123 | 3445 | |
| 9000 | 1860 | 3009 | 2005 | 3248 | 2159 | 3504 | 2316 | 3770 | |
| 10000 | 2034 | 3294 | 2257 | 3557 | 2356 | 3835 | 2530 | 4127 | |

Table 5(a)-2 Take-off distance [ft] at 1150 kg, 2535 lb

Take-off distance at 1000 kg, 2205 lb

| Pressure Altitude | | Weight: 1000 kg / 2205 lb | | | | Flaps: T/O | | | |
|-------------------------------------|-----|---------------------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|
| | | V _R : 55 KIAS | | | | Power: MAX | | | |
| Airspeed for initial climb: 60 KIAS | | Runway: dry, level, paved | | | | | | | |
| | | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | |
| | | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) |
| SL | 220 | 355 | 237 | 383 | 255 | 413 | 274 | 444 | |
| 1000 | 232 | 375 | 250 | 405 | 269 | 436 | 289 | 470 | |
| 2000 | 246 | 397 | 265 | 428 | 285 | 462 | 306 | 497 | |
| 3000 | 260 | 420 | 280 | 453 | 302 | 489 | 324 | 526 | |
| 4000 | 275 | 444 | 297 | 480 | 319 | 517 | 343 | 557 | |
| 5000 | 292 | 471 | 314 | 508 | 338 | 548 | 363 | 589 | |
| 6000 | 309 | 499 | 333 | 538 | 358 | 580 | 385 | 625 | |
| 7000 | 334 | 539 | 360 | 582 | 387 | 627 | 416 | 675 | |
| 8000 | 361 | 583 | 389 | 629 | 419 | 678 | 450 | 730 | |
| 9000 | 394 | 638 | 425 | 689 | 457 | 743 | 491 | 799 | |
| 10000 | 431 | 698 | 464 | 754 | 500 | 813 | 536 | 875 | |

Table 5(a)-3 Take-off distance [m] at 1000 kg, 2205 lb

Take-off distance at 1000 kg, 2205 lb (continued)

| Weight: 1000 kg / 2205 lb | | | | | Flaps: T/O | | | |
|--|--------------------|---------------------------|--------------------|---------------------------|----------------------------------|---------------------------|--------------------|---------------------------|
| V_R: 55 KIAS | | | | | Power: MAX | | | |
| Airspeed for initial climb: 60 KIAS | | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | |
| | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| SL | 722 | 1165 | 778 | 1257 | 837 | 1355 | 899 | 1457 |
| 1000 | 761 | 1230 | 820 | 1329 | 883 | 1430 | 948 | 1542 |
| 2000 | 807 | 1303 | 869 | 1404 | 935 | 1516 | 1004 | 1631 |
| 3000 | 853 | 1378 | 919 | 1486 | 991 | 1604 | 1063 | 1726 |
| 4000 | 902 | 1457 | 974 | 1575 | 1047 | 1696 | 1125 | 1827 |
| 5000 | 958 | 1545 | 1030 | 1667 | 1109 | 1798 | 1191 | 1932 |
| 6000 | 1014 | 1637 | 1093 | 1765 | 1175 | 1903 | 1263 | 2051 |
| 7000 | 1096 | 1768 | 1181 | 1910 | 1270 | 2057 | 1365 | 2215 |
| 8000 | 1184 | 1913 | 1276 | 2064 | 1375 | 2224 | 1476 | 2395 |
| 9000 | 1293 | 2093 | 1394 | 2261 | 1499 | 2438 | 1611 | 2621 |
| 10000 | 1414 | 2290 | 1522 | 2474 | 1640 | 2667 | 1759 | 2871 |

Table 5(a)-4 Take-off distance [ft] at 1000 kg, 2205 lb

Take-off distance at 980 kg, 2161 lb

| Weight: 980 kg / 2161 lb | | | | | Flaps: T/O | | | |
|-------------------------------------|-------------|-------------------|-------------|-------------------|---------------------------|-------------------|-------------|-------------------|
| V_R : 54 KIAS | | | | | Power: MAX | | | |
| Airspeed for initial climb: 59 KIAS | | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | |
| | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) |
| SL | 208 | 336 | 225 | 363 | 242 | 392 | 260 | 421 |
| 1000 | 220 | 356 | 237 | 384 | 256 | 414 | 274 | 446 |
| 2000 | 233 | 376 | 251 | 406 | 270 | 438 | 290 | 471 |
| 3000 | 247 | 398 | 266 | 430 | 286 | 464 | 307 | 499 |
| 4000 | 261 | 422 | 281 | 455 | 303 | 491 | 325 | 528 |
| 5000 | 277 | 447 | 298 | 482 | 321 | 520 | 344 | 559 |
| 6000 | 293 | 473 | 316 | 511 | 340 | 551 | 365 | 593 |
| 7000 | 317 | 511 | 341 | 552 | 367 | 595 | 395 | 641 |
| 8000 | 343 | 553 | 369 | 597 | 397 | 644 | 427 | 693 |
| 9000 | 374 | 605 | 403 | 653 | 434 | 705 | 466 | 758 |
| 10000 | 409 | 663 | 441 | 715 | 474 | 771 | 509 | 830 |

Table 5(a)-5 Take-off distance [m] at 980 kg, 2161 lb

Take-off distance at 980 kg, 2161 lb (continued)

| Weight: 980 kg / 2161 lb | | | | | Flaps: T/O | | | |
|--|--------------------|-------------------------------|--------------------|-------------------------------|----------------------------------|-------------------------------|--------------------|-------------------------------|
| V_R: 54 KIAS | | | | | Power: MAX | | | |
| Airspeed for initial climb: 59 KIAS | | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | |
| | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| SL | 682 | 1102 | 738 | 1191 | 794 | 1286 | 853 | 1381 |
| 1000 | 722 | 1168 | 778 | 1260 | 840 | 1358 | 899 | 1463 |
| 2000 | 764 | 1234 | 824 | 1332 | 886 | 1437 | 951 | 1545 |
| 3000 | 810 | 1306 | 873 | 1411 | 938 | 1522 | 1007 | 1637 |
| 4000 | 856 | 1385 | 922 | 1493 | 994 | 1611 | 1066 | 1732 |
| 5000 | 909 | 1467 | 978 | 1581 | 1053 | 1706 | 1129 | 1834 |
| 6000 | 961 | 1552 | 1037 | 1677 | 1116 | 1808 | 1198 | 1946 |
| 7000 | 1040 | 1677 | 1119 | 1811 | 1204 | 1952 | 1296 | 2103 |
| 8000 | 1125 | 1814 | 1211 | 1959 | 1303 | 2113 | 1401 | 2274 |
| 9000 | 1227 | 1985 | 1322 | 2142 | 1424 | 2313 | 1529 | 2487 |
| 10000 | 1342 | 2175 | 1447 | 2346 | 1555 | 2530 | 1670 | 2723 |

Table 5(a)-6 Take-off distance [ft] at 980 kg, 2161 lb

5.3.8 Climb Performance - Take-off climb

Take-off at 1150 kg, 2535 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1150 kg / 2535 lb | | Flaps: T/O | | |
|--|--|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 66 KIAS | | Power: MAX | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | |
| | Temperature (°C/ °F) | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F |
| SL | 646 | 630 | 614 | 598 |
| 1000 | 645 | 629 | 613 | 597 |
| 2000 | 643 | 627 | 612 | 596 |
| 3000 | 642 | 626 | 610 | 594 |
| 4000 | 641 | 625 | 609 | 593 |
| 5000 | 640 | 624 | 608 | 592 |
| 6000 | 638 | 622 | 606 | 590 |
| 7000 | 637 | 621 | 605 | 589 |
| 8000 | 636 | 619 | 603 | 587 |
| 9000 | 614 | 598 | 582 | 567 |
| 10000 | 587 | 572 | 557 | 541 |

Table 5(a)-7 Take-off climb performance at 1150 kg, 2535 lb

5.3.9 Climb Performance - Cruise climb

Cruise climb at 1150 kg, 2535 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | |
|--|--|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | |
| | Temperature (°C / °F) | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F |
| SL | 815 | 785 | 754 | 723 |
| 1000 | 810 | 779 | 748 | 717 |
| 2000 | 804 | 773 | 742 | 711 |
| 3000 | 798 | 766 | 735 | 704 |
| 4000 | 792 | 760 | 729 | 697 |
| 5000 | 785 | 754 | 722 | 691 |
| 6000 | 779 | 747 | 715 | 684 |
| 7000 | 772 | 740 | 708 | 677 |
| 8000 | 765 | 733 | 701 | 669 |
| 9000 | 725 | 693 | 661 | 630 |
| 10000 | 675 | 644 | 613 | 583 |
| 11000 | 626 | 595 | 565 | 535 |
| 12000 | 576 | 546 | 517 | 487 |
| 13000 | 526 | 497 | 468 | 439 |
| 14000 | 476 | 448 | 420 | 391 |
| 15000 | 426 | 398 | 371 | 343 |

Table 5(a)-8 Cruise climb performance at 1150 kg, 2535 lb

Cruise climb at 1000 kg, 2205 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1000 kg / 2205 lb | | Flaps: UP | | |
|--|--|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | |
| | Temperature (°C/ °F) | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F |
| SL | 1023 | 989 | 955 | 921 |
| 1000 | 1018 | 983 | 949 | 915 |
| 2000 | 1012 | 978 | 944 | 909 |
| 3000 | 1006 | 972 | 938 | 903 |
| 4000 | 1001 | 966 | 932 | 897 |
| 5000 | 995 | 960 | 925 | 891 |
| 6000 | 989 | 954 | 919 | 884 |
| 7000 | 983 | 948 | 913 | 878 |
| 8000 | 976 | 941 | 906 | 871 |
| 9000 | 931 | 896 | 862 | 827 |
| 10000 | 876 | 842 | 808 | 775 |
| 11000 | 821 | 787 | 754 | 722 |
| 12000 | 765 | 733 | 701 | 669 |
| 13000 | 709 | 678 | 646 | 615 |
| 14000 | 654 | 623 | 592 | 562 |
| 15000 | 597 | 567 | 538 | 508 |

Table 5(a)-9 Cruise climb performance at 1000 kg, 2205 lb

Cruise climb at 980 kg, 2161 lb

Conditions:

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 980 kg / 2161 lb | | Flaps: UP | | |
|--|--|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | |
| | Temperature (°C/ °F) | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F |
| SL | 1055 | 1020 | 986 | 952 |
| 1000 | 1050 | 1015 | 980 | 946 |
| 2000 | 1044 | 1009 | 975 | 940 |
| 3000 | 1039 | 1004 | 969 | 934 |
| 4000 | 1033 | 998 | 963 | 928 |
| 5000 | 1027 | 992 | 957 | 922 |
| 6000 | 1021 | 986 | 950 | 915 |
| 7000 | 1015 | 979 | 944 | 909 |
| 8000 | 1009 | 973 | 937 | 902 |
| 9000 | 963 | 928 | 893 | 858 |
| 10000 | 907 | 872 | 838 | 804 |
| 11000 | 850 | 817 | 784 | 750 |
| 12000 | 794 | 761 | 729 | 696 |
| 13000 | 737 | 705 | 674 | 642 |
| 14000 | 681 | 650 | 619 | 588 |
| 15000 | 624 | 593 | 563 | 533 |

Table 5(a)-10 Cruise climb performance at 980 kg, 2161 lb

5.3.10 Cruise Performance

Cruise performance, standard tanks

Conditions:

Weight 1150 kg, 2535 lb
Standard Tanks..... 106 l, 28 US gal usable fuel
Flaps UP

Notes:

1. Endurance information is based on standard tanks with 106 l (28 US gal) usable fuel.
2. Endurance time of this table is reduced by the time for startup and taxi, time, fuel and distance to climb and 45 min reserve.
3. The range data of this table take into account the distance to climb and are reduced by 45 min reserve.
4. Increase true airspeed (KTAS/mph) and maximum range (NM) by 1% per 10°C above ISA temperature.
5. Cruise Power above 75% not recommended. For economic cruise set load 70% or less.

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Standard | | | | | | |
| Tanks: 106 l (28 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| SL | 100 | 140 | 33.6 | 8.9 | 320 | 2.3 |
| SL | 90 | 135 | 29.6 | 7.8 | 363 | 2.7 |
| SL | 80 | 129 | 25.8 | 6.8 | 412 | 3.2 |
| SL | 70 | 122 | 22.1 | 5.8 | 470 | 3.9 |
| SL | 60 | 114 | 18.6 | 4.9 | 538 | 4.7 |
| SL | 50 | 104 | 15.3 | 4.0 | 614 | 5.9 |
| | | | | | | |
| 2000 | 100 | 143 | 33.6 | 8.9 | 323 | 2.3 |
| 2000 | 90 | 137 | 29.6 | 7.8 | 365 | 2.7 |
| 2000 | 80 | 131 | 25.8 | 6.8 | 415 | 3.2 |
| 2000 | 70 | 124 | 22.1 | 5.8 | 473 | 3.8 |
| 2000 | 60 | 115 | 18.6 | 4.9 | 541 | 4.7 |
| 2000 | 50 | 105 | 15.3 | 4.0 | 617 | 5.8 |
| | | | | | | |
| 4000 | 100 | 146 | 33.6 | 8.9 | 325 | 2.2 |
| 4000 | 90 | 140 | 29.6 | 7.8 | 367 | 2.6 |
| 4000 | 80 | 133 | 25.8 | 6.8 | 417 | 3.1 |
| 4000 | 70 | 126 | 22.1 | 5.8 | 474 | 3.7 |
| 4000 | 60 | 117 | 18.6 | 4.9 | 541 | 4.6 |
| 4000 | 50 | 107 | 15.3 | 4.0 | 617 | 5.7 |
| | | | | | | |
| 6000 | 100 | 148 | 33.6 | 8.9 | 326 | 2.1 |
| 6000 | 90 | 142 | 29.6 | 7.8 | 369 | 2.5 |
| 6000 | 80 | 135 | 25.8 | 6.8 | 418 | 3.0 |
| 6000 | 70 | 128 | 22.1 | 5.8 | 475 | 3.6 |
| 6000 | 60 | 119 | 18.6 | 4.9 | 542 | 4.5 |
| 6000 | 50 | 109 | 15.3 | 4.0 | 616 | 5.6 |
| | | | | | | |
| 8000 | 90 | 145 | 29.6 | 7.8 | 371 | 2.4 |
| 8000 | 80 | 138 | 25.8 | 6.8 | 419 | 2.9 |
| 8000 | 70 | 130 | 22.1 | 5.8 | 476 | 3.5 |
| 8000 | 60 | 121 | 18.6 | 4.9 | 542 | 4.3 |
| 8000 | 50 | 110 | 15.3 | 4.0 | 615 | 5.4 |

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Standard | | | | | | |
| Tanks: 106 l (28 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| | | | | | | |
| 10000 | 90 | 148 | 29.6 | 7.8 | 372 | 2.4 |
| 10000 | 80 | 140 | 25.8 | 6.8 | 421 | 2.8 |
| 10000 | 70 | 132 | 22.1 | 5.8 | 477 | 3.4 |
| 10000 | 60 | 123 | 18.6 | 4.9 | 541 | 4.2 |
| 10000 | 50 | 112 | 15.3 | 4.0 | 613 | 5.3 |
| | | | | | | |
| 12000 | 90 | 150 | 29.6 | 7.8 | 375 | 2.3 |
| 12000 | 80 | 143 | 25.8 | 6.8 | 422 | 2.7 |
| 12000 | 70 | 134 | 22.1 | 5.8 | 477 | 3.3 |
| 12000 | 60 | 125 | 18.6 | 4.9 | 541 | 4.1 |
| 12000 | 50 | 113 | 15.3 | 4.0 | 611 | 5.1 |
| | | | | | | |
| 14000 | 80 | 145 | 25.8 | 6.8 | 424 | 2.6 |
| 14000 | 70 | 137 | 22.1 | 5.8 | 478 | 3.2 |
| 14000 | 60 | 127 | 18.6 | 4.9 | 540 | 3.9 |
| 14000 | 50 | 115 | 15.3 | 4.0 | 608 | 4.9 |
| | | | | | | |
| 16000 | 80 | 148 | 25.8 | 6.8 | 425 | 2.5 |
| 16000 | 70 | 139 | 22.1 | 5.8 | 478 | 3.0 |
| 16000 | 60 | 129 | 18.6 | 4.9 | 539 | 3.8 |
| 16000 | 50 | 117 | 15.3 | 4.0 | 605 | 4.7 |

Table 5(a)-11 Cruise performance, standard tanks

Cruise performance, long range tanks

Conditions:

Weight 1150 kg, 2535 lb
Long Range Tanks..... 147.6 l, 39 US gal usable fuel
Flaps UP

Notes:

1. Endurance information is based on long-range tanks with 147.6 l (39 US gal) usable fuel.
2. Endurance time of this table is reduced by the time for startup and taxi, time, fuel and distance to climb and 45 min reserve.
3. The range data of this table take into account the distance to climb and are reduced by 45 min reserve.
4. Increase true airspeed (KTAS/mph) and maximum range (NM) by 1% per 10°C above ISA temperature.
5. Cruise Power above 75% not recommended. For economic cruise set load 70% or less.

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Long Range | | | | | | |
| Tanks: 147.6 l (39 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| SL | 100 | 140 | 33.6 | 8.9 | 494 | 3.5 |
| SL | 90 | 135 | 29.6 | 7.8 | 552 | 4.1 |
| SL | 80 | 129 | 25.8 | 6.8 | 620 | 4.8 |
| SL | 70 | 122 | 22.1 | 5.8 | 699 | 5.7 |
| SL | 60 | 114 | 18.6 | 4.9 | 792 | 7.0 |
| SL | 50 | 104 | 15.3 | 4.0 | 897 | 8.6 |
| | | | | | | |
| 2000 | 100 | 143 | 33.6 | 8.9 | 500 | 3.5 |
| 2000 | 90 | 137 | 29.6 | 7.8 | 558 | 4.1 |
| 2000 | 80 | 131 | 25.8 | 6.8 | 626 | 4.8 |
| 2000 | 70 | 124 | 22.1 | 5.8 | 706 | 5.7 |
| 2000 | 60 | 115 | 18.6 | 4.9 | 799 | 6.9 |
| 2000 | 50 | 105 | 15.3 | 4.0 | 903 | 8.6 |
| | | | | | | |
| 4000 | 100 | 146 | 33.6 | 8.9 | 505 | 3.4 |
| 4000 | 90 | 140 | 29.6 | 7.8 | 563 | 4.0 |
| 4000 | 80 | 133 | 25.8 | 6.8 | 631 | 4.7 |
| 4000 | 70 | 126 | 22.1 | 5.8 | 711 | 5.6 |
| 4000 | 60 | 117 | 18.6 | 4.9 | 804 | 6.8 |
| 4000 | 50 | 107 | 15.3 | 4.0 | 908 | 8.4 |
| | | | | | | |
| 6000 | 100 | 148 | 33.6 | 8.9 | 510 | 3.4 |
| 6000 | 90 | 142 | 29.6 | 7.8 | 568 | 3.9 |
| 6000 | 80 | 135 | 25.8 | 6.8 | 637 | 4.6 |
| 6000 | 70 | 128 | 22.1 | 5.8 | 716 | 5.5 |
| 6000 | 60 | 119 | 18.6 | 4.9 | 808 | 6.7 |
| 6000 | 50 | 109 | 15.3 | 4.0 | 911 | 8.3 |
| | | | | | | |
| 8000 | 90 | 145 | 29.6 | 7.8 | 574 | 3.9 |
| 8000 | 80 | 138 | 25.8 | 6.8 | 642 | 4.5 |
| 8000 | 70 | 130 | 22.1 | 5.8 | 721 | 5.4 |
| 8000 | 60 | 121 | 18.6 | 4.9 | 812 | 6.6 |
| 8000 | 50 | 110 | 15.3 | 4.0 | 914 | 8.2 |

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Long Range | | | | | | |
| Tanks: 147.6 l (39 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| 10000 | 90 | 148 | 29.6 | 7.8 | 580 | 3.8 |
| 10000 | 80 | 140 | 25.8 | 6.8 | 647 | 4.4 |
| 10000 | 70 | 132 | 22.1 | 5.8 | 726 | 5.3 |
| 10000 | 60 | 123 | 18.6 | 4.9 | 816 | 6.5 |
| 10000 | 50 | 112 | 15.3 | 4.0 | 916 | 8.0 |
| 12000 | 90 | 150 | 29.6 | 7.8 | 585 | 3.7 |
| 12000 | 80 | 143 | 25.8 | 6.8 | 653 | 4.3 |
| 12000 | 70 | 134 | 22.1 | 5.8 | 730 | 5.2 |
| 12000 | 60 | 125 | 18.6 | 4.9 | 820 | 6.3 |
| 12000 | 50 | 113 | 15.3 | 4.0 | 918 | 7.8 |
| 14000 | 80 | 145 | 25.8 | 6.8 | 658 | 4.2 |
| 14000 | 70 | 137 | 22.1 | 5.8 | 735 | 5.1 |
| 14000 | 60 | 127 | 18.6 | 4.9 | 823 | 6.2 |
| 14000 | 50 | 115 | 15.3 | 4.0 | 920 | 7.6 |
| 16000 | 80 | 148 | 25.8 | 6.8 | 664 | 4.1 |
| 16000 | 70 | 139 | 22.1 | 5.8 | 740 | 4.9 |
| 16000 | 60 | 129 | 18.6 | 4.9 | 827 | 6.0 |
| 16000 | 50 | 117 | 15.3 | 4.0 | 922 | 7.4 |

Table 5(a)-12 Cruise performance, long range tanks

5.3.15 Approved Noise Data

With TAE 125-02-114 engine and Muffler LA50 Installed:

ICAO Annex 16 Chapter X.....69.6 dB(A)

CHAPTER 5(b) PERFORMANCE

- ◆ Note: This chapter applies to aircraft with propeller **MTV-6-A/190-69**. The correct designation can be found on the blades.

- ◆ Note: The chapter not relevant to the respective propeller can be omitted.

5.3 PERFORMANCE TABLES AND DIAGRAMS

5.3.2 Diagram for setting engine performance

Not valid for TAE 125-02-114 engine installation.

5.3.7 Take-off distance

Take-off distance at 1150 kg, 2535 lb

| | | Weight: 1150 kg / 2535 lb | | | | Flaps: T/O | | Power: MAX | | Runway: dry, level, paved | |
|-------------------|-------------|-------------------------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|---------------------------|--|
| | | Airspeed for initial climb: 66 KIAS | | | | | | | | | |
| Pressure Altitude | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | | ISA + 35°C | | |
| | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | |
| SL | 275 | 458 | 294 | 488 | 314 | 522 | 343 | 571 | 362 | 605 | |
| 1000 | 291 | 484 | 311 | 516 | 332 | 552 | 363 | 605 | 383 | 640 | |
| 2000 | 308 | 512 | 329 | 547 | 351 | 584 | 384 | 641 | 406 | 678 | |
| 3000 | 326 | 542 | 348 | 579 | 372 | 619 | 407 | 679 | 430 | 719 | |
| 4000 | 345 | 573 | 369 | 613 | 394 | 656 | 432 | 720 | 456 | 762 | |
| 5000 | 365 | 607 | 390 | 649 | 418 | 695 | 458 | 763 | 484 | 808 | |
| 6000 | 387 | 643 | 414 | 688 | 443 | 737 | 486 | 810 | 513 | 858 | |
| 7000 | 418 | 696 | 448 | 744 | 479 | 798 | 526 | 877 | 556 | 929 | |
| 8000 | 452 | 752 | 484 | 805 | 519 | 863 | 569 | 949 | 602 | 1006 | |
| 9000 | 494 | 822 | 529 | 881 | 567 | 944 | 623 | 1039 | 659 | 1101 | |
| 10000 | 540 | 899 | 578 | 963 | 620 | 1034 | 681 | 1137 | 721 | 1206 | |

Table 5(b)-1 Take-off distance [m] at 1150 kg, 2535 lb

Take-off distance at 1150 kg, 2535 lb (continued)

| Pressure Altitude | | Weight: 1150 kg / 2535 lb | | | | Flaps: T/O | | | | |
|-------------------|--------------------|-------------------------------------|--------------------|-------------|--------------------|---------------------------|--------------------|-------------|--------------------|------------|
| | | V _R : 59 KIAS | | | | Power: MAX | | | | |
| (ft) | | Airspeed for initial climb: 66 KIAS | | | | Runway: dry, level, paved | | | | |
| | | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | | ISA + 63°F |
| Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | |
| SL | 903 | 1501 | 963 | 1601 | 1028 | 1711 | 1124 | 1874 | 1187 | 1984 |
| 1000 | 954 | 1587 | 1019 | 1694 | 1088 | 1810 | 1190 | 1984 | 1257 | 2101 |
| 2000 | 1009 | 1679 | 1078 | 1793 | 1152 | 1916 | 1261 | 2102 | 1332 | 2225 |
| 3000 | 1068 | 1776 | 1141 | 1898 | 1220 | 2030 | 1336 | 2227 | 1412 | 2358 |
| 4000 | 1131 | 1881 | 1209 | 2010 | 1293 | 2151 | 1416 | 2361 | 1496 | 2500 |
| 5000 | 1198 | 1992 | 1281 | 2130 | 1371 | 2280 | 1501 | 2503 | 1587 | 2652 |
| 6000 | 1269 | 2110 | 1358 | 2258 | 1453 | 2418 | 1593 | 2656 | 1684 | 2814 |
| 7000 | 1372 | 2281 | 1468 | 2442 | 1573 | 2616 | 1724 | 2875 | 1824 | 3047 |
| 8000 | 1483 | 2466 | 1588 | 2641 | 1702 | 2831 | 1867 | 3113 | 1975 | 3299 |
| 9000 | 1620 | 2696 | 1736 | 2889 | 1861 | 3098 | 2042 | 3407 | 2160 | 3612 |
| 10000 | 1770 | 2948 | 1897 | 3160 | 2035 | 3390 | 2234 | 3730 | 2364 | 3956 |

Table 5(b)-2 Take-off distance [ft] at 1150 kg, 2535 lb

Take-off distance at 1050 kg, 2315 lb

| | | Weight: 1050 kg / 2315 lb | | | | Flaps: T/O | | | | |
|--------------------------|--------------------|--|--------------------|--------------------------|--------------------|----------------------------------|--------------------|--------------------------|--------------------|--------------------------|
| | | V_R: 55 KIAS | | | | Power: MAX | | | | |
| | | Airspeed for initial climb: 60 KIAS | | | | Runway: dry, level, paved | | | | |
| Pressure Altitude | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | | ISA + 35°C | |
| | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) |
| SL | 217 | 361 | 232 | 385 | 247 | 412 | 255 | 425 | 286 | 477 |
| 1000 | 230 | 382 | 245 | 408 | 262 | 436 | 269 | 449 | 303 | 506 |
| 2000 | 243 | 404 | 259 | 431 | 277 | 461 | 285 | 476 | 321 | 535 |
| 3000 | 257 | 428 | 275 | 457 | 294 | 488 | 302 | 504 | 340 | 567 |
| 4000 | 272 | 453 | 291 | 484 | 311 | 518 | 320 | 534 | 360 | 602 |
| 5000 | 288 | 479 | 308 | 513 | 330 | 549 | 339 | 566 | 382 | 638 |
| 6000 | 305 | 508 | 327 | 543 | 350 | 582 | 360 | 600 | 405 | 677 |
| 7000 | 330 | 549 | 353 | 588 | 378 | 630 | 389 | 649 | 439 | 733 |
| 8000 | 357 | 594 | 382 | 636 | 410 | 681 | 421 | 703 | 475 | 794 |
| 9000 | 390 | 649 | 418 | 695 | 448 | 745 | 461 | 769 | 520 | 869 |
| 10000 | 426 | 709 | 457 | 761 | 490 | 816 | 504 | 841 | 569 | 952 |

Table 5(b)-3 Take-off distance [m] at 1050 kg, 2315 lb

Take-off distance at 1050 kg, 2315 lb (continued)

| | | Weight: 1050 kg / 2315 lb | | | | Flaps: T/O | | | | |
|-------------------|-------------|-------------------------------------|-------------|--------------------|-------------|---------------------------|-------------|--------------------|-------------|--------------------|
| | | V _R : 55 KIAS | | | | Power: MAX | | | | |
| | | Airspeed for initial climb: 60 KIAS | | | | Runway: dry, level, paved | | | | |
| Pressure Altitude | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | | ISA + 63°F | |
| | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| SL | 712 | 1185 | 760 | 1264 | 812 | 1350 | 835 | 1393 | 937 | 1566 |
| 1000 | 753 | 1253 | 804 | 1337 | 859 | 1429 | 884 | 1474 | 993 | 1658 |
| 2000 | 797 | 1325 | 851 | 1415 | 909 | 1513 | 936 | 1560 | 1051 | 1756 |
| 3000 | 843 | 1402 | 901 | 1498 | 963 | 1602 | 991 | 1652 | 1114 | 1861 |
| 4000 | 893 | 1484 | 954 | 1587 | 1021 | 1698 | 1050 | 1751 | 1181 | 1973 |
| 5000 | 945 | 1572 | 1011 | 1681 | 1082 | 1800 | 1113 | 1856 | 1253 | 2093 |
| 6000 | 1002 | 1666 | 1072 | 1782 | 1147 | 1908 | 1180 | 1968 | 1329 | 2221 |
| 7000 | 1083 | 1801 | 1159 | 1928 | 1241 | 2065 | 1277 | 2130 | 1440 | 2405 |
| 8000 | 1171 | 1947 | 1254 | 2085 | 1343 | 2235 | 1382 | 2305 | 1559 | 2604 |
| 9000 | 1279 | 2128 | 1370 | 2280 | 1469 | 2445 | 1511 | 2522 | 1705 | 2851 |
| 10000 | 1397 | 2327 | 1498 | 2495 | 1606 | 2676 | 1653 | 2760 | 1866 | 3122 |

Table 5(b)-4 Take-off distance [ft] at 1050 kg, 2315 lb

Take-off distance at 980 kg, 2161 lb

| | | Weight: 980 kg / 2161 lb | | | | | Flaps: T/O | | | |
|--------------------------|--------------------|--|--------------------|--------------------------|--------------------|--------------------------|----------------------------------|--------------------------|--------------------|--------------------------|
| | | V_R: 54 KIAS | | | | | Power: MAX | | | |
| | | Airspeed for initial climb: 59 KIAS | | | | | Runway: dry, level, paved | | | |
| Pressure Altitude | ISA | | ISA + 10°C | | ISA + 20°C | | ISA + 30°C | | ISA + 35°C | |
| | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle | Ground Roll | Over 15m obstacle |
| (ft) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) | (m) |
| SL | 182 | 302 | 194 | 322 | 207 | 344 | 213 | 355 | 239 | 399 |
| 1000 | 192 | 319 | 205 | 341 | 219 | 364 | 225 | 376 | 253 | 422 |
| 2000 | 203 | 338 | 217 | 361 | 232 | 385 | 238 | 398 | 268 | 448 |
| 3000 | 215 | 357 | 230 | 382 | 245 | 408 | 253 | 421 | 284 | 474 |
| 4000 | 227 | 378 | 243 | 404 | 260 | 433 | 268 | 446 | 301 | 503 |
| 5000 | 241 | 401 | 258 | 428 | 276 | 459 | 284 | 473 | 319 | 533 |
| 6000 | 255 | 424 | 273 | 454 | 292 | 486 | 301 | 502 | 339 | 566 |
| 7000 | 276 | 459 | 295 | 491 | 316 | 526 | 326 | 543 | 367 | 613 |
| 8000 | 298 | 496 | 319 | 531 | 342 | 569 | 352 | 587 | 397 | 664 |
| 9000 | 326 | 542 | 349 | 581 | 374 | 623 | 385 | 643 | 435 | 726 |
| 10000 | 356 | 593 | 382 | 636 | 409 | 682 | 421 | 703 | 475 | 796 |

Table 5(b)-5 Take-off distance [m] at 980 kg, 2161 lb

Take-off distance at 980 kg, 2161 lb (continued)

| | | Weight: 980 kg / 2161 lb | | | | Flaps: T/O | | | | |
|--------------------------|--------------------|--|--------------------|---------------------------|--------------------|----------------------------------|--------------------|---------------------------|--------------------|---------------------------|
| | | V_R: 54 KIAS | | | | Power: MAX | | | | |
| | | Airspeed for initial climb: 59 KIAS | | | | Runway: dry, level, paved | | | | |
| Pressure Altitude | ISA | | ISA + 18°F | | ISA + 36°F | | ISA + 54°F | | ISA + 63°F | |
| | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle | Ground Roll | Over 50ft obstacle |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| SL | 595 | 990 | 635 | 1057 | 678 | 1129 | 698 | 1164 | 783 | 1309 |
| 1000 | 630 | 1047 | 672 | 1118 | 718 | 1194 | 739 | 1232 | 830 | 1386 |
| 2000 | 666 | 1108 | 711 | 1183 | 760 | 1264 | 782 | 1304 | 879 | 1468 |
| 3000 | 705 | 1172 | 753 | 1252 | 805 | 1339 | 828 | 1381 | 931 | 1556 |
| 4000 | 746 | 1241 | 797 | 1326 | 853 | 1419 | 878 | 1463 | 987 | 1649 |
| 5000 | 790 | 1314 | 845 | 1405 | 904 | 1504 | 930 | 1551 | 1047 | 1749 |
| 6000 | 837 | 1392 | 896 | 1489 | 959 | 1595 | 987 | 1645 | 1111 | 1856 |
| 7000 | 905 | 1505 | 969 | 1611 | 1038 | 1726 | 1068 | 1780 | 1203 | 2010 |
| 8000 | 978 | 1627 | 1048 | 1743 | 1123 | 1868 | 1155 | 1926 | 1303 | 2176 |
| 9000 | 1069 | 1779 | 1145 | 1906 | 1228 | 2044 | 1263 | 2108 | 1425 | 2383 |
| 10000 | 1168 | 1945 | 1252 | 2085 | 1342 | 2237 | 1381 | 2307 | 1560 | 2610 |

Table 5(b)-6 Take-off distance [ft] at 980 kg, 2161 lb

5.3.8 Climb Performance - Take-off climb

Take-off at 1150 kg, 2535 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1150 kg / 2535 lb | | Flaps: T/O | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 66 KIAS | | Power: MAX | | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | | |
| | Temperature (°C/ °F) | | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F | ISA+35°C ISA+63°F |
| SL | 769 | 766 | 758 | 705 | 661 |
| 1000 | 766 | 764 | 756 | 702 | 659 |
| 2000 | 764 | 761 | 753 | 700 | 656 |
| 3000 | 762 | 759 | 751 | 697 | 654 |
| 4000 | 759 | 757 | 748 | 695 | 651 |
| 5000 | 757 | 754 | 746 | 692 | 649 |
| 6000 | 754 | 751 | 743 | 689 | 646 |
| 7000 | 752 | 749 | 740 | 687 | 643 |
| 8000 | 749 | 746 | 738 | 684 | 640 |
| 9000 | 728 | 725 | 716 | 664 | 621 |
| 10000 | 707 | 704 | 695 | 643 | 601 |

Table 5(b)-7 Take-off climb performance at 1150 kg, 2535 lb

5.3.9 Climb Performance - Cruise climb

Cruise climb at 1150 kg, 2535 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | | |
| | Temperature (°C/ °F) | | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F | ISA+35°C ISA+63°F |
| SL | 918 | 913 | 901 | 829 | 918 |
| 1000 | 914 | 909 | 896 | 824 | 914 |
| 2000 | 909 | 904 | 891 | 819 | 909 |
| 3000 | 905 | 899 | 887 | 814 | 905 |
| 4000 | 900 | 894 | 882 | 809 | 900 |
| 5000 | 895 | 889 | 877 | 804 | 895 |
| 6000 | 890 | 884 | 871 | 798 | 890 |
| 7000 | 885 | 879 | 866 | 793 | 885 |
| 8000 | 880 | 874 | 861 | 787 | 880 |
| 9000 | 850 | 844 | 831 | 759 | 850 |
| 10000 | 821 | 814 | 801 | 730 | 821 |
| 11000 | 791 | 784 | 771 | 701 | 791 |
| 12000 | 761 | 754 | 740 | 672 | 761 |
| 13000 | 730 | 723 | 710 | 643 | 730 |
| 14000 | 700 | 693 | 680 | 614 | 700 |
| 15000 | 670 | 662 | 649 | 584 | 670 |
| 16000 | 639 | 632 | 618 | 554 | 639 |

Table 5(b)-8 Cruise climb performance at 1150 kg, 2535 lb

Cruise climb at 1050 kg, 2315 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 1050 kg / 2315 lb | | Flaps: UP | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | | |
| | Temperature (°C/ °F) | | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F | ISA+35°C ISA+63°F |
| SL | 1048 | 1043 | 1030 | 952 | 888 |
| 1000 | 1044 | 1038 | 1026 | 947 | 884 |
| 2000 | 1039 | 1034 | 1021 | 942 | 879 |
| 3000 | 1035 | 1029 | 1016 | 938 | 874 |
| 4000 | 1030 | 1025 | 1012 | 933 | 869 |
| 5000 | 1026 | 1020 | 1007 | 928 | 864 |
| 6000 | 1021 | 1015 | 1002 | 923 | 859 |
| 7000 | 1016 | 1010 | 997 | 917 | 854 |
| 8000 | 1011 | 1005 | 991 | 912 | 848 |
| 9000 | 979 | 973 | 960 | 882 | 819 |
| 10000 | 947 | 941 | 928 | 851 | 789 |
| 11000 | 915 | 909 | 895 | 820 | 760 |
| 12000 | 883 | 877 | 863 | 789 | 730 |
| 13000 | 851 | 844 | 831 | 758 | 700 |
| 14000 | 819 | 812 | 798 | 727 | 670 |
| 15000 | 786 | 779 | 766 | 696 | 640 |
| 16000 | 753 | 746 | 733 | 664 | 609 |

Table 5(b)-9 Cruise climb performance at 1050 kg, 2315 lb

Cruise climb at 980 kg, 2161 lb

Notes:

1. For operation in air colder than provided, use coldest data
2. For operation in air warmer than provided, use extreme caution

| Weight: 980 kg / 2161 lb | | Flaps: UP | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Airspeed for initial climb: 78 KIAS | | Power: MAX | | | |
| Pres. Alt. | RATE OF CLIMB (feet per minute) | | | | |
| | Temperature (°C/ °F) | | | | |
| (ft) | ISA | ISA+10°C ISA+18°F | ISA+20°C ISA+36°F | ISA+30°C ISA+54°F | ISA+35°C ISA+63°F |
| SL | 1153 | 1148 | 1135 | 1051 | 984 |
| 1000 | 1149 | 1144 | 1131 | 1047 | 979 |
| 2000 | 1144 | 1140 | 1126 | 1042 | 975 |
| 3000 | 1140 | 1135 | 1122 | 1038 | 970 |
| 4000 | 1136 | 1131 | 1117 | 1033 | 965 |
| 5000 | 1131 | 1126 | 1112 | 1028 | 960 |
| 6000 | 1127 | 1121 | 1108 | 1023 | 955 |
| 7000 | 1122 | 1117 | 1103 | 1018 | 950 |
| 8000 | 1117 | 1112 | 1098 | 1013 | 945 |
| 9000 | 1084 | 1078 | 1064 | 981 | 914 |
| 10000 | 1050 | 1044 | 1030 | 949 | 883 |
| 11000 | 1017 | 1010 | 996 | 916 | 852 |
| 12000 | 983 | 976 | 962 | 884 | 821 |
| 13000 | 949 | 942 | 928 | 851 | 789 |
| 14000 | 915 | 908 | 894 | 818 | 758 |
| 15000 | 880 | 874 | 860 | 785 | 726 |
| 16000 | 846 | 839 | 825 | 752 | 694 |

Table 5(b)-10 Cruise climb performance at 980 kg, 2161 lb

5.3.10 Cruise Performance

Cruise performance, standard tanks

Conditions:

Weight 1150 kg, 2535 lb
Standard Tanks..... 106 l (28 US gal) usable fuel
Flaps UP

Notes:

1. Endurance information is based on standard tanks with 106 l (28 US gal) usable fuel.
2. Endurance time of this table is reduced by the time for startup and taxi, time, fuel and distance to climb and 45 min reserve.
3. The range data of this table take into account the distance to climb and are reduced by 45 min reserve.
4. Increase true airspeed (KTAS/mph) and maximum range (NM) by 1% per 10°C above ISA temperature.
5. Cruise Power above 75% not recommended. For economic cruise set load 70% or less.

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Standard | | | | | | |
| Tanks: 106 l (28 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| SL | 100 | 143 | 33.6 | 8.9 | 326 | 2.3 |
| SL | 90 | 137 | 29.6 | 7.8 | 370 | 2.7 |
| SL | 80 | 131 | 25.8 | 6.8 | 420 | 3.2 |
| SL | 70 | 124 | 22.1 | 5.8 | 480 | 3.9 |
| SL | 60 | 117 | 18.6 | 4.9 | 552 | 4.7 |
| SL | 50 | 107 | 15.3 | 4.0 | 635 | 5.9 |
| | | | | | | |
| 2000 | 100 | 145 | 33.6 | 8.9 | 330 | 2.2 |
| 2000 | 90 | 140 | 29.6 | 7.8 | 374 | 2.6 |
| 2000 | 80 | 133 | 25.8 | 6.8 | 424 | 3.1 |
| 2000 | 70 | 126 | 22.1 | 5.8 | 485 | 3.8 |
| 2000 | 60 | 118 | 18.6 | 4.9 | 556 | 4.6 |
| 2000 | 50 | 109 | 15.3 | 4.0 | 639 | 5.8 |
| | | | | | | |
| 4000 | 100 | 148 | 33.6 | 8.9 | 334 | 2.1 |
| 4000 | 90 | 142 | 29.6 | 7.8 | 378 | 2.5 |
| 4000 | 80 | 136 | 25.8 | 6.8 | 428 | 3.0 |
| 4000 | 70 | 129 | 22.1 | 5.8 | 489 | 3.7 |
| 4000 | 60 | 120 | 18.6 | 4.9 | 561 | 4.5 |
| 4000 | 50 | 111 | 15.3 | 4.0 | 642 | 5.7 |
| 6000 | 100 | 151 | 33.6 | 8.9 | 337 | 2.1 |
| 6000 | 90 | 145 | 29.6 | 7.8 | 382 | 2.5 |
| 6000 | 80 | 138 | 25.8 | 6.8 | 432 | 2.9 |
| 6000 | 70 | 131 | 22.1 | 5.8 | 494 | 3.6 |
| 6000 | 60 | 123 | 18.6 | 4.9 | 565 | 4.4 |
| 6000 | 50 | 112 | 15.3 | 4.0 | 646 | 5.6 |
| | | | | | | |
| 8000 | 100 | 154 | 33.6 | 8.9 | 341 | 2.0 |
| 8000 | 90 | 148 | 29.6 | 7.8 | 386 | 2.4 |
| 8000 | 80 | 141 | 25.8 | 6.8 | 437 | 2.9 |
| 8000 | 70 | 133 | 22.1 | 5.8 | 498 | 3.5 |
| 8000 | 60 | 125 | 18.6 | 4.9 | 569 | 4.3 |
| 8000 | 50 | 114 | 15.3 | 4.0 | 649 | 5.4 |

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Standard | | | | | | |
| Tanks: 106 l (28 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| 10000 | 90 | 150 | 29.6 | 7.8 | 390 | 2.3 |
| 10000 | 80 | 144 | 25.8 | 6.8 | 441 | 2.8 |
| 10000 | 70 | 136 | 22.1 | 5.8 | 502 | 3.4 |
| 10000 | 60 | 127 | 18.6 | 4.9 | 573 | 4.2 |
| 10000 | 50 | 115 | 15.3 | 4.0 | 652 | 5.3 |
| 12000 | 90 | 153 | 29.6 | 7.8 | 394 | 2.2 |
| 12000 | 80 | 146 | 25.8 | 6.8 | 446 | 2.7 |
| 12000 | 70 | 138 | 22.1 | 5.8 | 507 | 3.3 |
| 12000 | 60 | 129 | 18.6 | 4.9 | 577 | 4.1 |
| 12000 | 50 | 117 | 15.3 | 4.0 | 654 | 5.2 |
| 14000 | 80 | 149 | 25.8 | 6.8 | 450 | 2.6 |
| 14000 | 70 | 141 | 22.1 | 5.8 | 512 | 3.2 |
| 14000 | 60 | 131 | 18.6 | 4.9 | 582 | 4.0 |
| 14000 | 50 | 118 | 15.3 | 4.0 | 656 | 5.1 |
| 16000 | 80 | 152 | 25.8 | 6.8 | 455 | 2.5 |
| 16000 | 70 | 143 | 22.1 | 5.8 | 516 | 3.1 |
| 16000 | 60 | 133 | 18.6 | 4.9 | 586 | 3.9 |
| 16000 | 50 | 120 | 15.3 | 4.0 | 657 | 4.9 |

Table 5(b)-11 Cruise performance, standard tanks

Cruise performance, long range tanks

Conditions:

Weight 1150 kg, 2535 lb
Long Range Tanks..... 147.6 l (39 US gal) usable fuel
Flaps UP

Notes:

1. Endurance information is based on long-range tanks with 147.6 l (39 US gal) usable fuel.
2. Endurance time of this table is reduced by the time for startup and taxi, time, fuel and distance to climb and 45 min reserve.
3. The range data of this table take into account the distance to climb and are reduced by 45 min reserve.
4. Increase true airspeed (KTAS/mph) and maximum range (NM) by 1% per 10°C above ISA temperature.
5. Cruise Power above 75% not recommended. For economic cruise set load 70% or less.

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Long Range | | | | | | |
| Tanks: 147.6 l (39 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| SL | 100 | 143 | 33.6 | 8.9 | 503 | 3.5 |
| SL | 90 | 137 | 29.6 | 7.8 | 562 | 4.1 |
| SL | 80 | 131 | 25.8 | 6.8 | 631 | 4.8 |
| SL | 70 | 124 | 22.1 | 5.8 | 714 | 5.7 |
| SL | 60 | 117 | 18.6 | 4.9 | 812 | 7.0 |
| SL | 50 | 107 | 15.3 | 4.0 | 927 | 8.6 |
| | | | | | | |
| 2000 | 100 | 145 | 33.6 | 33.6 | 510 | 3.5 |
| 2000 | 90 | 140 | 29.6 | 29.6 | 570 | 4.0 |
| 2000 | 80 | 133 | 25.8 | 25.8 | 639 | 4.7 |
| 2000 | 70 | 126 | 22.1 | 22.1 | 723 | 5.7 |
| 2000 | 60 | 118 | 18.6 | 18.6 | 821 | 6.9 |
| 2000 | 50 | 109 | 15.3 | 15.3 | 935 | 8.5 |
| | | | | | | |
| 4000 | 100 | 148 | 33.6 | 33.6 | 517 | 3.4 |
| 4000 | 90 | 142 | 29.6 | 29.6 | 577 | 3.9 |
| 4000 | 80 | 136 | 25.8 | 25.8 | 647 | 4.6 |
| 4000 | 70 | 129 | 22.1 | 22.1 | 731 | 5.6 |
| 4000 | 60 | 120 | 18.6 | 18.6 | 830 | 6.8 |
| 4000 | 50 | 111 | 15.3 | 15.3 | 943 | 8.4 |
| | | | | | | |
| 6000 | 100 | 151 | 33.6 | 33.6 | 524 | 3.3 |
| 6000 | 90 | 145 | 29.6 | 29.6 | 585 | 3.9 |
| 6000 | 80 | 138 | 25.8 | 25.8 | 655 | 4.6 |
| 6000 | 70 | 131 | 22.1 | 22.1 | 740 | 5.5 |
| 6000 | 60 | 123 | 18.6 | 18.6 | 839 | 6.7 |
| 6000 | 50 | 112 | 15.3 | 15.3 | 951 | 8.3 |
| | | | | | | |
| 8000 | 100 | 154 | 33.6 | 33.6 | 532 | 3.2 |
| 8000 | 90 | 148 | 29.6 | 29.6 | 593 | 3.8 |
| 8000 | 80 | 141 | 25.8 | 25.8 | 664 | 4.5 |
| 8000 | 70 | 133 | 22.1 | 22.1 | 749 | 5.4 |
| 8000 | 60 | 125 | 18.6 | 18.6 | 848 | 6.6 |
| 8000 | 50 | 114 | 15.3 | 15.3 | 958 | 8.2 |

| Weight: 1150 kg / 2535 lb | | Flaps: UP | | | | |
|---|-------------|------------------|------------------|-------------------|--------------|------------------|
| Long Range | | | | | | |
| Tanks: 147.6 l (39 US gal) usable fuel | | | | | | |
| Pres. Alt. | Load | KTAS | Fuel Flow | | Range | Endurance |
| (ft) | (%) | (kt) | (l/h) | (US gal/h) | (NM) | (hrs) |
| 10000 | 90 | 150 | 29.6 | 29.6 | 601 | 3.7 |
| 10000 | 80 | 144 | 25.8 | 25.8 | 673 | 4.4 |
| 10000 | 70 | 136 | 22.1 | 22.1 | 758 | 5.3 |
| 10000 | 60 | 127 | 18.6 | 18.6 | 857 | 6.4 |
| 10000 | 50 | 115 | 15.3 | 15.3 | 965 | 8.0 |
| 12000 | 90 | 153 | 29.6 | 29.6 | 610 | 3.6 |
| 12000 | 80 | 146 | 25.8 | 25.8 | 681 | 4.3 |
| 12000 | 70 | 138 | 22.1 | 22.1 | 767 | 5.2 |
| 12000 | 60 | 129 | 18.6 | 18.6 | 866 | 6.3 |
| 12000 | 50 | 117 | 15.3 | 15.3 | 972 | 7.9 |
| 14000 | 80 | 149 | 25.8 | 25.8 | 691 | 4.2 |
| 14000 | 70 | 141 | 22.1 | 22.1 | 777 | 5.1 |
| 14000 | 60 | 131 | 18.6 | 18.6 | 874 | 6.2 |
| 14000 | 50 | 118 | 15.3 | 15.3 | 978 | 7.8 |
| 16000 | 80 | 152 | 25.8 | 25.8 | 700 | 4.1 |
| 16000 | 70 | 143 | 22.1 | 22.1 | 786 | 5.0 |
| 16000 | 60 | 133 | 18.6 | 18.6 | 883 | 6.1 |
| 16000 | 50 | 120 | 15.3 | 15.3 | 983 | 7.6 |

Table 5(b)-12 Cruise performance, long range tanks

5.3.15 Approved Noise Data

With TAE 125-02-114 engine and Muffler LA50 Installed:

ICAO Annex 16 Chapter X..... 70.5 dB(A)

CHAPTER 6

MASS AND BALANCE / EQUIPMENT LIST

6.3 MASS AND BALANCE REPORT

After installation of the TAE 125-02-114 engine installation, the empty mass and empty mass moment must be established. Refer to the basic AFM and basic AMM for the DAI DA 40 D.

Record the data in the Mass and Balance Report of the basic AFM.

6.5 EQUIPMENT LIST AND EQUIPMENT INVENTORY

The following equipment is approved for the TAE 125-02-114 engine installation.

| Description | Type | Part No. | Manufacturer | s/n | in- stalled |
|---|---|------------------------|----------------------|-----|----------------|
| ENGINE | | | | | |
| Engine | TAE 125-02-114 | | Technify Motors GmbH | | |
| Engine Control Unit „xx“ refer to Service Bulletin TM TAE 000-0007 latest Rev. | ECU (D48) | 05-7610-E0001 02 | Technify Motors GmbH | | |
| | ECU Firmware TAE 125 mx.xx | 02-7610-55101Rxx | | n/a | |
| | Mapping P14CxxxDA40 (Clutch) | | | n/a | |
| | Mapping P14DxxxDA40 (Dual Mass Fly Wheel) | | | | |
| | ECU (D4) | 05-7611-E0019 04 | Technify Motors GmbH | | |
| | ECU Firmware D4-vx.xx | 05-7610-E0010 xx | | n/a | |
| | Mapping G14CxxxDA40 (Clutch) | | | n/a | |
| | Mapping G14DxxxDA40 (Dual Mass Fly Wheel) | | | | |
| EXHAUST SYSTEM | | | | | |
| Muffler | LA50 | 50-7810-H0003 01 | Technify Motors GmbH | n/a | |
| ENGINE INDICATING | | | | | |
| Compact Engine Display | TAE CED-125 | 02-7730-5501-(06)-(02) | Technify Motors GmbH | | |
| PROPELLER | | | | | |
| Propeller | MTV-6-A/187-129 | | mt-Pro- peller | | |
| | MTV-6-A/190-69 | | | | |
| AIRPLANE FLIGHT MANUAL | | | | | |
| AFM Supplement | | 50-0310-50022 | Technify Motors GmbH | n/a | |

CHAPTER 7

DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

7.9.1 ENGINE, GENERAL

The TAE 125-02-114 engine has the same general characteristics as the TAE 125-02-99 engine, except for the continuous and maximum power.

Max. power: 114 kW (155 DIN-HP) at 2300 RPM, ISA, SL
Max. cont. power: 114 kW (155 DIN-HP) at 2300 RPM, ISA, SL

There is no difference in operation between the different TAE 125 engine variants.

7.9.6 COOLING SYSTEM

The cooling system of the TAE 125-02-114 installation consists of 1 large and 1 small water-cooler. The engine oil is cooled using an oil/water-heat exchanger as part of engine. A Cabin Heat heat-exchanger is part of the liquid cooling system as well as a gearbox oil heat-exchanger. The gearbox oil heat-exchanger is part of the TAE 125-02-114 engine, but connected to the aircraft liquid cooling system. Refer to Figure 7-1 for a schematic.

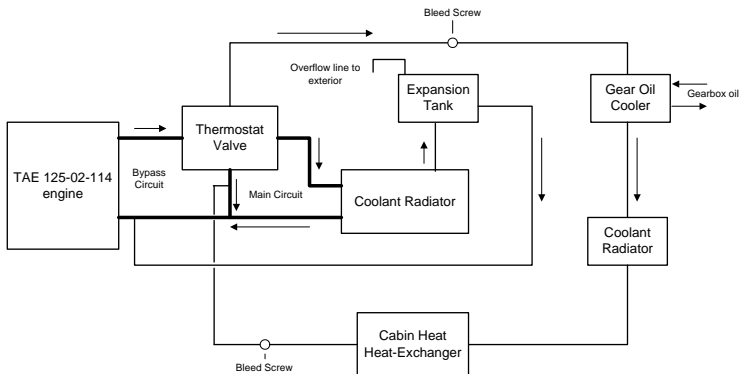


Figure 7-1 Liquid Cooling System

7.9.8 OIL SYSTEMS

Lubrication system (engine and turbocharger)

The engine oil is cooled using a oil/water heat exchange which is part of the engine. There is no separate oil cooler as provided in the unmodified engine installation.

Gearbox and propeller governor system

This oil system is independent of the engine lubrication system. To cool the gearbox a heat exchanger is connected the liquid cooling system.

Refer to Figure 7-1.

Page 7-2

Issue 2

Revision -, Aug. 2015

CHAPTER 8 AIRPLANE HANDLING, CARE AND MAINTENANCE

8.1 INTRODUCTION

For proper ground handling and servicing refer to the basic AFM.

The supplement to the Airplane Maintenance Manual AMM-50-02 describes the maintenance practices that apply to the TAE 125-02-114 engine installation. It supersedes or adds to the basic DAI Airplane Maintenance Manual only as set forth therein.

8.2 AIRPLANE INSPECTION INTERVALS

Refer to supplement to the Airplane Maintenance Manual AMM-50-02 and the basic DAI Airplane Maintenance Manual.

8.3 AIRPLANE ALTERATIONS AND REPAIRS

Alterations and repairs to the STC installation may be carried out only according to the supplement to the Airplane Maintenance Manual AMM-50-02 or i.a.w. a repair scheme which has been approved by Technify Motors GmbH or by the competent Airworthiness Authority.

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CHAPTER 9 SUPPLEMENTS

9.1 INTRODUCTION

This chapter lists the supplements to the basic AFM that are affected by the TAE 125-02-114 engine installation. For the affected supplements, a supplement has been created which adds or supersedes the affected supplements as described.

9.2 LIST OF SUPPLEMENTS

| Sup. No | Title | Issue | applicable | |
|---------|---|-------|--------------------------|--------------------------|
| | | | yes | no |
| 1 | Garmin G1000 Avionic System for VFR Operation | 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Garmin G1000 Avionic System for IFR Operation | 1 | <input type="checkbox"/> | <input type="checkbox"/> |

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Supplement
for the
DA 40 D
with
Garmin G1000 Avionic System for VFR Operation
equipped with
TAE 125-02-114 Engine Installation

This supplement must be attached to the EASA approved Airplane Flight Manual when the TAE 125-02-114 engine has been installed in accordance with EASA STC 10036328.

The information contained in this supplement supersedes or adds to the EASA approved Airplane Flight Manual and supplement A31 only as set forth herein.

For limitations, procedures, performance and loading information not contained in this supplement, consult the basic EASA approved Airplane Flight Manual and supplement A31.

This supplement is approved with EASA STC 10036328.

| Issue | Pages | Description | Approved | |
|-------|-------|----------------------------------|------------------|---------------------------------|
| | | | Date | Endorsed |
| 2/0 | All | New Issue Change of Ownership | Aug. 15, 2015 | EASA STC 10036328, Rev. 3 |

Remark: The parts of the text which changed are marked with a vertical line on the margin of the page.

1. General

This supplement contains the required information for operation of the airplane with a TAE 125-02-114 engine installation and the Garmin G1000 avionic system installed.

This supplement must be used in conjunction with the basic DAI AFM incl. supplement A31 and the supplement for the TAE 125-02-114 engine installation.

2. Limitations

No change

The engine limitations and engine instrument marking applicable to the TAE 125-02-99 engine are valid for the TAE 125-02-114.

Refer to supplement A31 of the basic AFM.

3. Emergency Procedures

No change.

Refer to supplement A31 of the basic AFM.

4A. Normal Operating Procedures

No change.

Refer to supplement A31 of the basic AFM.

4B. Abnormal Operating Procedures

No change.

Refer to supplement A31 of the basic AFM.

5. Performance

No change.

Refer to supplement A31 of the basic AFM.

6. Mass and Balance

No change.

Refer to supplement A31 of the basic AFM.

7. Description of the airplane and its systems

No change.

Refer to supplement A31 of the basic AFM.

8. Airplane Handling, Care and Maintenance

No change.

Refer to supplement A31 of the basic AFM.

Supplement
for the
DA 40 D
with
Garmin G1000 Avionic System for IFR Operation
equipped with
TAE 125-02-114 Engine Installation

This supplement must be attached to the EASA approved Airplane Flight Manual when the TAE 125-02-114 engine has been installed in accordance with EASA STC 10036328.

The information contained in this supplement supersedes or adds to the EASA approved Airplane Flight Manual and supplement A32 only as set forth herein.

For limitations, procedures, performance and loading information not contained in this supplement, consult the basic EASA approved Airplane Flight Manual and supplement A32.

This supplement is approved with EASA STC 10036328.

| Issue | Pages | Description | Approved | |
|-------|-------|----------------------------------|------------------|---------------------------------|
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Remark: The parts of the text which changed are marked with a vertical line on the margin of the page.

1. General

This supplement contains the required information for operation of the airplane with a TAE 125-02-114 engine installation and the Garmin G1000 avionic system installed.

This supplement must be used in conjunction with the basic DAI AFM incl. supplement A32 and the supplement for the TAE 125-02-114 engine installation.

2. Limitations

No change

The engine limitations and engine instrument marking applicable to the TAE 125-02-99 engine are valid for the TAE 125-02-114.

Refer to supplement A32 of the basic AFM.

3. Emergency Procedures

No change.

Refer to supplement A32 of the basic AFM.

4A. Normal Operating Procedures

No change.

Refer to supplement A32 of the basic AFM.

4B. Abnormal Operating Procedures

No change.

Refer to supplement A32 of the basic AFM.

5. Performance

No change.

Refer to supplement A32 of the basic AFM.

6. Mass and Balance

No change.

Refer to supplement A32 of the basic AFM.

7. Description of the airplane and its systems

No change.

Refer to supplement A32 of the basic AFM.

8. Airplane Handling, Care and Maintenance

No change.

Refer to supplement A32 of the basic AFM.