

**SUPPLEMENT A27**  
**TO THE AIRPLANE FLIGHT MANUAL DA 40**  
**GROUND COM #2 SWITCH**

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## 1. GENERAL

This Supplement supplies the information necessary for the efficient operation of the airplane when the Ground COM #2 switch is installed. The information contained in this Supplement is to be used in conjunction with the complete AFM.

This Supplement is a permanent part of this AFM and must remain in this AFM at all times when the Ground COM #2 switch is installed.

## 2. LIMITATIONS

The Ground COM #2-switch is limited to use on the ground.

**3. EMERGENCY PROCEDURES**

**3.2 ENGINE PROBLEMS**

**3.2.2 ENGINE PROBLEMS DURING TAKE-OFF**

(a) Take-off can still be abandoned (sufficient runway length available)

*land straight ahead:*

- 1. Throttle ..... IDLE

*on the ground:*

- 2. Brakes ..... as required

**CAUTION**

If sufficient time is remaining, the risk of fire in the event of a collision can be reduced as follows:

- Fuel tank selector ..... OFF
- Mixture control lever ..... LEAN  
shut engine off
- Ignition switch ..... OFF
- Master switch ..... OFF
- Ground COM #2 switch ..... check OFF

### **3.2.5 DEFECTIVE ENGINE CONTROLS**

#### Defective Mixture Control Cable

##### *(b) Engine shut-down:*

1. Parking brake . . . . . set
2. Engine instruments . . . . . check
3. Avionics master switch . . . . . OFF
4. All electrical equipment . . . . . OFF
5. Throttle . . . . . IDLE
6. Ignition switch . . . . . OFF
7. Master switch . . . . . OFF
8. Ground COM #2 switch . . . . . check OFF

### **3.2.6 RESTARTING THE ENGINE WITH STATIONARY PROPELLER**

#### **NOTE**

Restarting the engine is possible at all airspeeds above 80 KIAS up to  $v_{NE}$  and up to the maximum demonstrated operating altitude.

1. Airspeed . . . . . 80 KIAS
2. Electrical equipment . . . . . OFF
3. Avionics master switch . . . . . OFF
4. Ground COM #2 switch . . . . . check OFF
5. Master switch (BAT) . . . . . check ON
6. Mixture control lever . . . . . check
7. Fuel tank selector . . . . . check
8. Electrical fuel pump . . . . . check ON
9. Alternate air . . . . . OPEN
10. Ignition switch . . . . . START

**NOTE**

By increasing the airspeed above approximately 130 KIAS, the propeller will begin to rotate and the engine can thus be started. For this, the ignition switch should be set at BOTH (see AFM, 3.2.4 RESTARTING THE ENGINE WITH WINDMILLING PROPELLER). An altitude loss of at least 1000 ft (300 meters) must be allowed for.

*If it is not possible to start the engine:*

- adopt glide configuration as in AFM, 3.4 - GLIDING
- carry out emergency landing as in AFM, 3.5.1 - EMERGENCY LANDING WITH ENGINE OFF.

**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.



### **3.3 SMOKE AND FIRE**

#### **3.3.1 SMOKE AND FIRE ON THE GROUND**

##### (a) Engine fire when starting on the ground

1. Fuel tank selector ..... OFF
2. Cabin heat ..... OFF
3. Brakes ..... apply

##### *after standstill:*

4. Throttle ..... MAX PWR
5. Master switch (BAT) ..... OFF
6. Ground COM #2 switch ..... check OFF

##### *when the engine has stopped:*

7. Ignition switch ..... OFF
8. Canopy ..... open
9. Airplane ..... evacuate immediately

##### (b) Electrical fire with smoke on the ground

1. Master switch (BAT) ..... OFF
2. Ground COM #2 switch ..... check OFF

##### *if the engine is running:*

3. Throttle ..... IDLE
4. Mixture control lever ..... LEAN - shut off engine

*when the engine has stopped:*

- 5. Ignition switch . . . . . OFF
- 6. Canopy . . . . . open
- 7. Airplane . . . . . evacuate immediately

**3.3.2 SMOKE AND FIRE DURING TAKE-OFF**

(b) If take-off cannot be abandoned

- 1. Cabin heat . . . . . OFF
- 2. If possible, fly along a short-cut traffic circuit and land on the airfield.

**WARNING**

If, in the event of an engine problem occurring during take-off, the take-off can no longer be abandoned and a safe height has not been reached, then a straight-ahead emergency landing should be carried out. Turning back can be fatal.

- 3. Airspeed . . . . . 73 KIAS (1150 kg, 2535 lb)  
68 KIAS (1000 kg, 2205 lb)  
60 KIAS (850 kg, 1874 lb)

*after climbing to a height from which the selected landing area can be reached safely:*

4. Fuel tank selector ..... OFF
5. Electrical fuel pump ..... OFF
6. Cabin heat ..... OFF
7. Master switch (BAT) ..... OFF
8. Ground COM #2 switch ..... check OFF
9. Emergency window(s) ..... open if required
10. Carry out emergency landing with engine off. Allow for increased landing distance due to the flap position.

### CAUTION

In case of extreme smoke development, the front canopy may be unlatched during flight. This allows it to partially open, in order to improve ventilation. The canopy will remain open in this position. Flight characteristics will not be affected significantly.

### **3.3.3 SMOKE AND FIRE IN FLIGHT**

#### **(b) Electrical fire with smoke in flight**

1. Emergency switch . . . . . ON if installed
2. Master switch (BAT) . . . . . OFF
3. Ground COM #2 switch . . . . . check OFF
4. Cabin heat . . . . . OFF
5. Emergency window(s) . . . . . open if required
6. Land at an appropriate airfield as soon as possible

### **CAUTION**

Switching OFF the master switch (BAT) will lead to total failure of all electronic and electric equipment. Also affected from this are - if installed - the attitude gyro (artificial horizon) and the directional gyro.

However, by switching the emergency switch ON (only installed in the IFR model), the emergency battery will supply power to the attitude gyro (artificial horizon) and the flood light.

In case of extreme smoke development, the front canopy may be unlatched during flight. This allows it to partially open, in order to improve ventilation. The canopy will remain open in this position. Flight characteristics will not be affected significantly.

### **3.5 EMERGENCY LANDINGS**

#### **3.5.3 LANDING WITH DEFECTIVE BRAKES**

In general, a landing on grass is recommended in order to reduce the landing run by virtue of the greater rolling resistance.

#### **CAUTION**

If sufficient time is remaining, the risk of fire in the event of a collision can be reduced as follows:

Fuel tank selector	.....	OFF
Mixture control lever	.....	LEAN
		shut off engine
Ignition switch	.....	OFF
Master switch	.....	OFF
Ground COM #2 switch	.....	check OFF

### **3.7 OTHER EMERGENCIES**

#### **3.7.2 FAILURES IN THE ELECTRICAL SYSTEM**

##### (c) Starter malfunction

If the starter does not disengage from the engine after starting (starter warning light (START) on the annunciator panel remains illuminated or flashing after the engine has started):

1. Throttle ..... IDLE
2. Mixture control lever ..... LEAN - shut off engine
3. Ignition switch ..... OFF
4. Master switch ..... OFF
5. Ground COM #2 switch ..... check OFF

Terminate flight preparation!

##### (d) Overvoltage

If a voltage in the upper red sector (above 32 volts) is indicated:

1. Essential bus ..... ON, if installed
2. Master switch (ALT) ..... OFF
3. Ground COM #2 switch ..... check OFF

### **WARNING**

Leave master switch (BAT) ON!

4. Equipment that is not needed,  
in particular Pitot heat ..... OFF
5. Land on the nearest appropriate airfield.

## **4A. NORMAL PROCEDURES**

### **4A.3 CHECKLISTS FOR NORMAL OPERATING PROCEDURES**

#### **4A.3.2 BEFORE STARTING ENGINE**

1. Pre-flight inspection . . . . . complete
2. Rudder pedals . . . . . adjusted and locked
3. Passengers . . . . . instructed
4. Safety harnesses . . . . . all on and fastened
5. Rear door . . . . . closed and locked
6. Door lock (if installed) . . . . . unblocked, key removed
7. Front canopy . . . . . Position 1 or 2 (“cooling gap”)
8. Canopy lock (if installed) . . . . . unblocked, key removed
9. Parking brake . . . . . set
10. Flight controls . . . . . free movement
11. Trim wheel . . . . . T/O
12. Throttle . . . . . IDLE
13. RPM lever . . . . . HIGH RPM
14. Mixture control lever . . . . . LEAN
15. Friction device, throttle quadrant . . . . . adjusted
16. Alternate Air . . . . . CLOSED
17. Alternate Static Valve . . . . . CLOSED, if installed
18. Avionics master switch . . . . . OFF

- 19. Essential Bus switch ..... OFF, if installed

**CAUTION**

When the essential bus is switched ON, the battery will not be charged.

- 20. Ground COM #2 switch ..... check OFF
- 21. Master switch (BAT) ..... ON
- 22. Annunciator panel ..... test (see AFM, Section 7.11)
- 23. Fuel tank selector ..... on full tank

**WARNING**

Never move the propeller by hand while the ignition is switched on, as it may result in serious personal injury.

Never try to start the engine by hand.

**4A.3.15 ENGINE SHUT-DOWN**

- 1. Parking brake ..... set
- 2. Engine instruments ..... check
- 3. Avionics master switch ..... OFF
- 4. All electrical equipment ..... OFF
- 5. Throttle ..... 1000 RPM
- 6. Ignition check ..... OFF until RPM drops noticeably,  
then immediately BOTH again
- 7. Mixture control lever ..... LEAN - shut engine off
- 8. Ignition switch ..... OFF
- 9. Master switch ..... OFF
- 10. Ground COM #2 switch ..... check OFF



#### **4A.3.16 POST-FLIGHT INSPECTION**

1. Ignition switch . . . . . OFF, remove key
2. Master switch . . . . . ON
3. Avionics master switch . . . . . ON
4. ELT . . . . . check activated:  
listen on 121.5 MHz
5. Avionics master switch . . . . . OFF
6. Master switch . . . . . OFF
7. Ground COM #2 switch . . . . . check OFF
8. Parking brake . . . . . release, use chocks
9. Airplane . . . . . moor, if unsupervised for extended  
period

#### **NOTE**

If the airplane is not operated for more than 5 days, the long-term parking procedure should be applied. If the airplane is not operated for more than 30 days, the storage procedure should be applied. Both procedures are described in the Airplane Maintenance Manual (Doc. No. 6.02.01) in Chapter 10.

**4B. ABNORMAL PROCEDURES**

No change.

**5. PERFORMANCE**

No change.

**6. MASS AND BALANCE**

No change.

**7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS****7.14 AVIONICS**

The Ground COM #2 switch is located on the instrument panel, to the left of the Annunciator Panel.

It is used to make the COM #2 available on the ground, without switching the Master Switch ON.

**8. AIRPLANE HANDLING, CARE AND MAINTENANCE**

No change.