



### 2.3.3 Temporary Storage of the Power-Plant

If the aircraft is not operated for a protracted period, observe the storage instructions under Section 4 of the engine manual.

#### **Storage up to 30 days:**

No special treatment is necessary for this period.

#### **Storage over 30 up to 90 days:**

Proceed as detailed in Section 4.6 through 4.10 in the engine manual. The following exceptions / deviations apply:

- The engine is not dismantled.
- The air intake filter [20] is removed and the throttle is moved to Wide Open Setting. Connect an oil can to a thin silicone tube which is inserted into the ram pipe [21] as far as on a length of 520 mm, and then inject 2 cc engine oil directly into the engine. Now proceed as prescribed under points 4.8(d) through (j) in the engine manual, injecting the oil - as described before - through the carburettor.
- The air intake filter [20] is not re-assembled, the air intake is sealed by a plastic foil and rubber band. The same is done with the ram pipe end of the exhaust.
- When the propeller has been retracted, verify the transmission belt for even loops in its fold-area. Where necessary, support the belt loop by a hard foam rubber or similar material at the inside of the loop.

**Storage over 90 days:**

The same treatment as described before is done and in addition the following:

- The fuselage tank must be emptied through the drainer and the engine should have used up completely any fuel remaining in the lines and in the carburettor. Do NOT close the tank vent beneath to the drainer! On this occasion test the drainer for leaks and where necessary screw it out and clean.
- The engine outside needs no special protection as described in the engine manual under 4.9(d) on the condition that the engine compartment doors are airtight sealed by tape, in dry air. In regions with very humid climate in addition dry salt - as sold for caravan need - may be put into the barograph box inside the engine compartment.

**Returning to service from storage**

Proceed in accordance with the instructions in the engine manual. The following actions must be done in addition or differently from what is described in the engine manual.

- Open manually the engine compartment doors and check the belt loops in the fold-area for kinks. This is advised as a precaution, as no experience is so far available with storage time longer than 6 months.
- Air intake and exhaust are re-opened and the air intake filter re-assembled. If the engine has been stored for more than six months, than the engine inside requires oiling as described under paragraph "Storage over 30 up to 90 days".
- Where the spark plugs were left screwed in, they need not be removed, if the engine starts after a few tries. A distinct formation of smoke for a short time is normal.

- Carry out a full engine ground run according to the instructions in Section 6 in the engine manual and record the results in the form contained in the engine manual.

### **2.3.4 Dismantling and Re-Assembling the Power-Plant**

The following paragraphs describe how to dismantle and re-fit the power-plant. This may become necessary for maintenance, repair or weight reduction or compliance with competition rules. The only component groups left in the fuselage are the fuel system, and all cockpit engine controls.

**Removal** of the power-plant may be done by a competent person and is regarded as a maintenance job. A special re-inspection is therefore not necessary in that case.

The re-installation of the power-plant must be followed by an inspection by an organisation approved to do so.

#### **Dismantling the Power Unit**

1. Propeller must be completely extended.
2. Unhook elastic tensioning cords of the engine bay doors and dismantle both doors.
3. Detach Bowden cable off the propeller stop block [26].
4. Detach Bowden cable off the throttle linkage [27].
5. Remove the locking wire at the fuel hose connection and loosen connector [28].



AE50R  
AE50RA  
AE50RAB



Engine Manual

## 9.7 Storage

General (installed engine).

Proper steps must be taken, on engines used infrequently, to lessen the possibility of corrosion. This is especially true if the aircraft is based near the sea coast or in areas of high humidity.

In all geographical areas the best method of preventing corrosion of internal parts of the engine is to fly the aircraft at least once a week. Alternatively the engine should be run long enough to reach normal operating temperatures.

### 9.7.1 Storage up to 90 Days

No special treatment is required for storage periods of up to 90 days.  
The aircraft should be protected from the weather and excessively damp conditions.

### 9.7.2 Storage over 90 Days

#### **NOTE !**

**The following procedures may require that the engine is removed from the aircraft – see aircraft manufacturer's instructions.**

#### **CAUTION !**

**Never rotate the engine with the oil can nozzle still in the spark plug or exhaust / inlet ports!**

- 1) To protect the internals of the engine it is recommended that additional engine oil be introduced. This can, for example, be via the spark plug holes, the throttle body or the exhaust and is determined by the aircraft manufacturer.
- 2) Where appropriate, ensure all electrical circuits are off, and then manually rotate the propeller shaft and engine.
- 3) Inject 5cc of the prescribed engine lubricating oil through either spark plug hole in the rotor housing. (See CAUTION ! above).
- 4) Rotate the engine through 1/3 revolution of the flywheel (by turning the propeller or propeller shaft and hence the eccentric shaft, by hand).
- 5) Repeat (3 & 4) five times.
- 6) Rotate the engine through 6 revolutions of the flywheel then refit the spark plugs.
- 7) Seal all inlets and exhaust openings to prevent moisture ingress.

- 8) To protect the bearings and associated parts, engine oil should be introduced into the area. The aircraft manufacturer describes the method by which this is achieved and the instructions must be followed carefully.
- 9) Blank off all open holes.
- 10) To protect the outside of the engine, anti corrosion oils of well-known oil companies are recommended, such as:

Anticorit 5 of Messrs FUCHS, D-6600 Mannheim, Germany  
Lubrication Oil MTL – L - 644 B of MOBIL-OIL  
Shell ENSIS Fluid 2360 of SHELL  
RUST BAN 395 of ESSO

It is also ESSENTIAL that the fuel system be drained.  
Items (1) to (3) should be carried out every 90 days.

### 9.7.3 Returning to Service from Storage

- 1) Restore the engine to operation according to the Aircraft Manufacturers instructions.
- 2) If the aircraft been laid-up for more than 6 months, please carry out 9.7.2 ((1) to (6)).
- 3) Rotate the engine by hand several times to ensure that all excess oil is drained via the spark plug holes.
- 4) Clean and refit, or replace, the spark plugs.
- 5) Check the engine for external damage or deterioration suffered during storage, and rectify as necessary.
- 6) Clean engine to remove inhibitor and remove all storage blanks.
- 7) Refit engine in accordance with aircraft manufacturer's instructions.

### **CAUTION !**

**Stale fuel must NOT be reused!**