PERSONAL PLANE SERVICE, LTD.

WYCOMBE AIR PARK

MARLOW, BUCKS

HIGH WYCOMBE 29432 MARLOW 5140

## NOTES ON STAMPE AIRCRAFT SV4C.

These notes have been compiled as a result of our experience in operating and maintaining Stampe aircraft. The information is based on the makers instructions, Fiche de Navigabilite no. 6 and S.G.A.C. Bulletins.

Personal Plane Service hold the makers drawings for these aircraft.

## GENERAL DATA & PERFORMANCE

| | | | |
|---|---|---|---|
| Span | 27 ft. | | |
| Length | 22 ft. | | |
| Max. all up weight (SV4C) | | 1700 lbs. | |
| C of G limits | | 19.5" AFT | 36% fwd. M.A.C. |
| Max. RPM for take-off and continous cruise | | | 2400 |
| Max. RPM for continuous cruise | | | 2200 |
| Fuel consumption at 2400 | 11.4 GPH | | |
| Fuel consumption at 2200 | GHP | | |

Oil consumption average 2-3 pints/hr.
Oil grade. Aeroshell 80 & 100 straight.
Fuel grade 80 octane minimum.
Fuel capacity. 17½ IMP or 25 IMP.

## PERFORMANCE at 1700 lbs.

| | |
|---|---|
| V.N.E. | |
| Maximum speed at level flight. | 171 MPH. |
| Climbing speed. | 60-65 MPH. |
| Landing run. | 410 ft. |
| Take-off run. | 1250 |
| Range. Small tank. | 175 miles. |
| Range. Large Tank. | 260 miles. |

## PROPELLERS

The best for general use is the Merville 745, but, the following types are still available.

Merville 833. Legere 2.011 Regy 1984

The other types mentioned in Fiche no. 6 are no longer in production.

## TYRE SIZES

700 x 7½ Dunlop.
500 x 180 Dunlop.
Pressure 30 P.S.I.

## ENGINE TYPES

| | | | |
|---|---|---|---|
| RENAULT | 4 PE 1 | old type | SV4C |
| | 4 PO 2 | | " |
| | 4 PO 3 | Normal | " |
| | 4 PO 1 | | |
| | 4 PO 5 | SV4A | |

Only the 4PO 5 has oil system for inverted flight.

## RIGGING DATA

| | | |
|---|---|---|
| INCIDENCE | 4° | Lower wing. |
| | 3° 30' | UPPER WING. |
| DIHEDRAL | 2° 30' | UPPER WING. |
| | 3° 30' | LOWER WING. |
| STAGGER | 540 MM | at struts. |
| | 505 MM | at root. |

## CONTROL MOVEMENTS

| | | |
|---|---|---|
| AILERONS | 28° | up. |
| | 26° | down. |
| ELEVATOR | 28° | down. |
| | 25° | up. |
| RUDDER | 44° | port. |
| | 38° | Stbd. |
| TRIMMER | 35° | up. |
| | 30° | down. |

## WIRE TENSIONS

| | |
|---|---|
| Front lift wire | 380 kg. |
| Rear lift wire. | 320 |
| Front landing wire. | 270 |
| Rear landing wire. | 250 |
| Long stagger wire. | 360 |
| Short stagger wire. | 110 |
| C/S wires. | 370 |

## ENGINE

140 hp av 2400 RPM.
110 hp at 2200 RPM.

OIL PRESSURE Min. 2 KG/CM (2 HPZ)
OIL PRESSURE Normal 3.5 KG/ CM (3.5 HPZ)

ENGINE (cont'd)

OIL TEMP. Max. 75°
COMPRESSURE PRESSURE 30 HPZ.

Firing order 1.3.4.2.
Spark plug type. BG27A or S50-1.
Spark plug gap. .016"
Valve clearance cold inlet. .012"
Valve clearance cold exhaust. .012"
Magneto point clearance. .016"
Magneto timing. 35° BTDC.
Magneto type. SEV 210 impulse.
SEV 211 plain.
Compressor type. VIET.

FUEL PUMP PRESSURES

Full throttle one pump. 210 G.
Fulle throttle two pumps. 225 G.

Idling one pump. 205 G.
Idling two pumps. 225 G.

Valve spring length no load. outer. 50 MM
inner 48 MM

JET SIZES

Main jet 270
Starter jet. 200-250
Slow running jet. 130
Enrichment jet. 100

FUEL LEVEL 15 mm from parting face.

MAINTENANCE AND INSPECTIONS

DAILY

1. Check fuel and oil contents.
2. Check all surfaces, wings and fuselage for signs of damage.
3. Check that rudder is not restricted in travel by brakes. (With brake off wheels should be free with full rudder application.)
4. Rock aircraft and check undercarriage bolts for signs of wear and security.
5. Examine safety cable at U/C tripod (if fitted).
6. Check that oil tank relief valve is free.
7. Check aileron cables beneath perspex panels. Check universal trunnions at extremeties of aileron interconnecting wires are free and pins not worn.
8. Check the rudder pedals do not foul fuselage side or bottom longerons.
9. Make sure that the rudder pivot pins are tight and locked. This is most important.

10. On run up check fuel pressure on individual pumps and ensure there is no unusual drop in pressure.

11. Carry out all usual inspections called for in the relevant schedule.
12. Check plug leads for security.
13. Check inlet manifold for cracks around flanges at cylinder heads.
14. Check security of all ball ends, on engine controls.
15. Check locking of fuel pump cock behind engine on rear cover.
16. Check RPM drive gear box for signs of fuel stains indicating fuel pump leakage.

## 50 HOUR INSPECTION

### ENGINE

1. Remove and clean and adjust sprak plugs. Gap 016".
2. Inspect magneto parts and set to .016". Clean oil filter. Note: Presence of metal in filter is indicative of inverted flying without oil pressure and must be taken as a warning of further trouble if inverted flying is too protracted.
3. Check magneto drive complys for condition.
4. Check HT lead ends for security.
5. Check all control ball ends for security and lubricate.
6. Check throttle rods for wear where passing through firewall.
7. Check inlet manifold for cracks.
8. Check carburetor steady bracket studs for security in crankcase.
9. Remove valve covers. Check valve clearance. Clearance inlet .012". Exhaust .012"
10. Refill rocker covers, refit and lock.
11. Remove carburetor drain plug and flush carburetor.
12. Remove air intake and check venturi for security. This is frequently found loose.
13. Remove fuel filter and clean. Ensure correct fitting of bowl and valve.
14. Ensure fuel pump change over valve is securely locked (FT 8/SALS).
15. Check all contraction unions on fuel pipes are securely locked.
16. Check that starter valve goes to fully closed position.
17. Check that cut out ("ETOUFFOIR") goes to full off position.
18. Check airscrew for condition and security.
19. Check condition and security of heater box pipes.
20. Check relief valve on oil tank and condition of seat.
21. Check engine mounting U bolts for tension and rubbers for crazing.
22. Check compression pipes for leaks and cracks.
23. Clean down installation.
24. Inspect cowlings and bearers for cracks.
25. Check tension of engine mount bolts at bulkhead.
26. Drain and replace oil.

### AIRFRAME

1. Clean aircraft down and check all fabric surfaces for damage and condition of fabric.
2. Jack up aircraft and check U/C for wear and condition.
3. Check condition of safety cable if fitted.
4. Check hinges for wear and lubricate.

5. Check cleavage between aileron, shrouds and trailing edge for of mainplanes.
6. Slip aileron cables and inspect around pulleys. Ensure cables are fitted (FT 9/SALS). It is essential to unwind cables and check for internal failure.
7. Check trunnions and pins on aileron connecting streamline wires.
8. Check rudder bar pivot pins for security. Correct locking with stainless steel wire is important.
9. Check rudder pedals for adequate clearance between fuselage skin and chafing on longeron.
10. Check rudder bar pedals to ensure that they are not distorted.
11. Check operation of rudder pedal adjusting mechanism.
12. Check tension of flying wires, check for chafing where they cross. Clean off corrosion and reprotect.
13. Reprotect of required front of centre section struts.
14. Check correct operation of fuel cock and check for correct position of lever on filter/cock unit.
15. Check tension of engine mounting attachment bolts.through longerons
16. Clean down front fusleage and check for signs of oil soakage.
17. Check fin for signs of weakness and glue failure.
18. Check lower wings for signs of unglueing and damage to trailing edges.

19.

NOTE: The above is intended to indicate the main points likely to give trouble on the aircraft and engines and should be read in conjunction with the particular maintenance schedule in use.

As it is possible to impose very heavy loads on these aircraft during aerobatics, it is essential to carry out an inspectio of the machine after all aerobatic sessions.

Tension of all brace wires must be frequently ckecked but a special tensionmeter is required and as a general guide wires should be checked to ensure equal tension on both sides of the aircraft. Rigging is much tighter than a Tiger Moth for instance. Unequal or incorrect rigging may effect spin recovery. On the Continent fatal accidents may have been caused by lack of alteration to rigging and control movements.

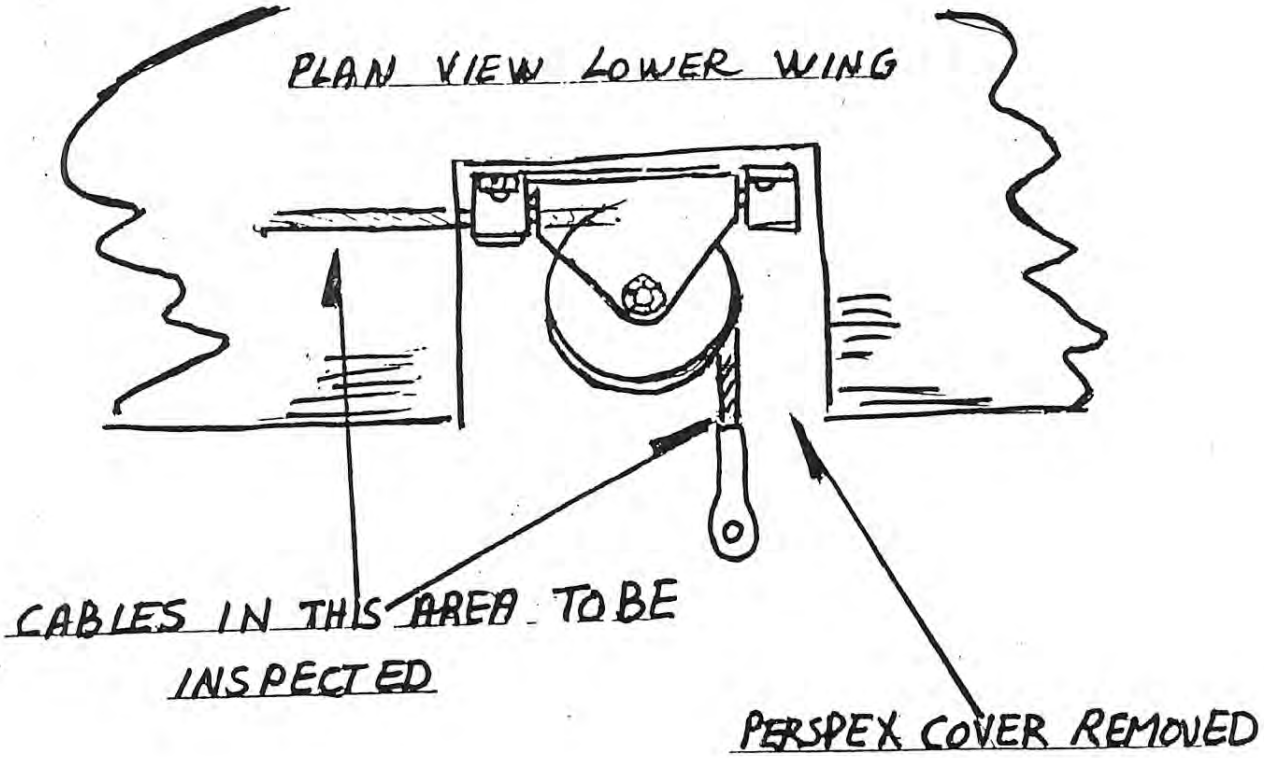
Frequent inspection of rudder bar assemblies should be carried out as there is a possibility of fouling due to small clearances.

NOTE: FICH DE NAVIGABILITE says flick manoeuvres and inverted spins are forbidden and aerobatics are forbidden completely on SV4A.

STAMPE SERVICE BULLETIN NO. 1. INSPECTION OF AILERON CABLES.

Every 100 hours it is essential to slip the aileron cables at the outer pulleys and inspect for fraying. It is necessary to unwind the cables in the area where they pass over the pulleys as fraying takes place in the inner strands. The pulleys must articulate freely and must be free of grooving.

Cables should be 3/32" dia. to Spec. MIL-C-1511 of 7 x 7 construction. Care must be taken not to over tension these cables of the aileron connecting wires.

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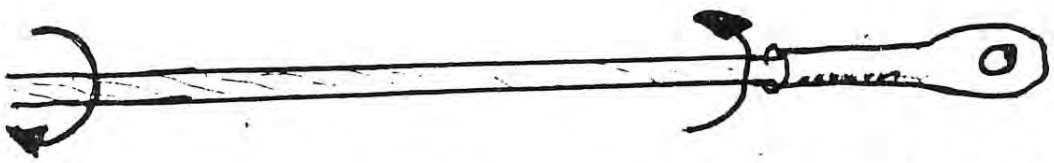

LIFT OUT CABLE AND UNWIND TO INSPECT INSIDE

Based on S.V. instruction dated 8.2.59 and RAF/TNS/SV4B/1.