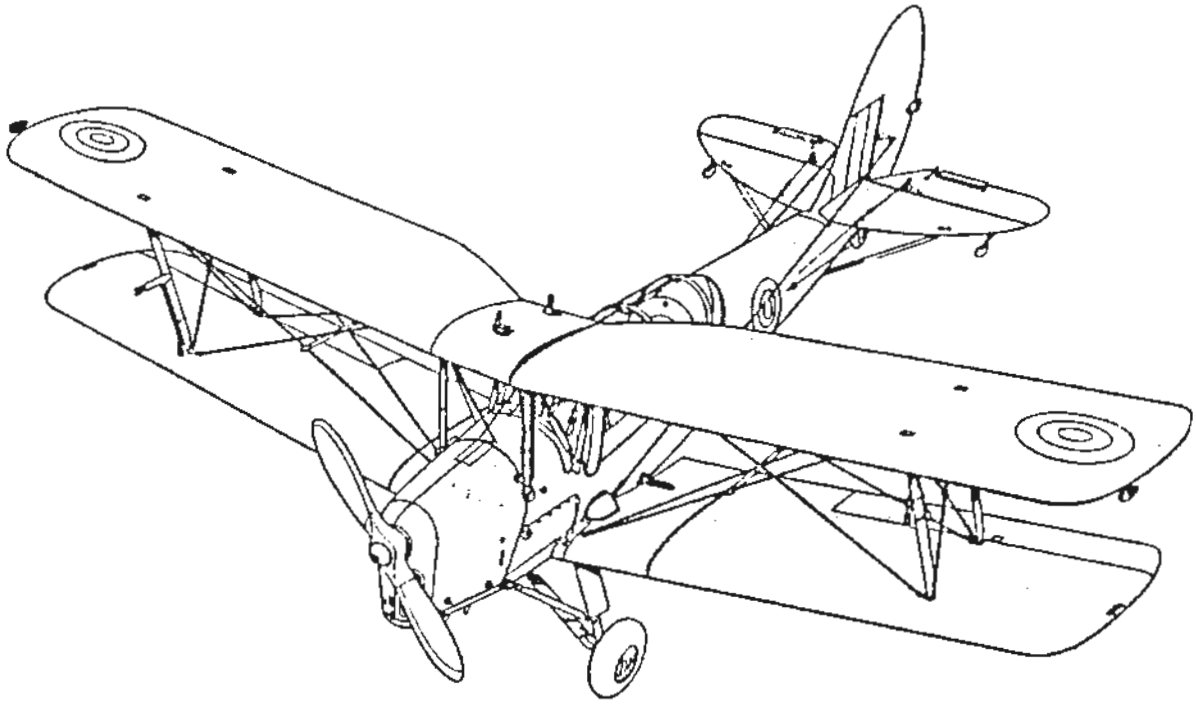
CANADIAN
HARVARD AIRCRAFT
ASSOCIATION

TIGER MOTH

D.H. 82C



PILOT'S NOTES

DESCRIPTION

The De Havilland Tiger Moth - D.H.82C is a two seat biplane. It is powered by the De Havilland Gypsy Major Series 1C Engine. The aircraft was used by the British Commonwealth Training Plan as an Elementary Pilot Trainer and Wireless Operator Trainer during WW II.

1. FUSELAGE

The fuselage is constructed in two parts of steel tubing, covered on the sides and bottom with fabric and a topside of plywood. The front half with the two cockpits and firewall contain longerons and diagonals which are welded with the joints reinforced by gusset plates. Each side is separately jig-welded, drilled and then assembled with bolted cross members. The rear fuselage section is a rigid, jig-welded unit. The front and rear sections are assembled with eight bolts.

A canopy of transparent plastic encloses the cockpits; consisting of front and rear sliding sections and a fixed windscreen. The sections can be locked in the open, partly open, or closed positions from inside the cockpit. For emergency operation, the two sliding sections may jettisoned from either inside or outside the cockpits.

2. WINGS

The upper and lower main plane contain a pronounced positive stagger and sweepback in order to provide the maximum amount of visibility from and access to, both cockpits. The planes consist of two strong, I-section spruce spars with lattice-work spruce ribs. The leading edges of the lower planes are reinforced with plywood. The wing tips are constructed form light metal tubing. The outer drag and center main struts are made of tubular steel. The main planes are completely stabilized by the braced center section and streamlined flying, landing, and incidence wires. The planes are fabric covered. Tread boards mounted over reinforced plywood panels are located on each side of the lower wing roots and protect the fabric and wing trailing edges. The lower main planes contain mass balanced ailerons.

3. TAILPLANE

The fin and stabilizer are constructed with spars and ribs made of spruce. The control surfaces consist of spruce ribs and tubular trailing edge bends. The rudder contains a fixed metal trim tab to compensate for engine torque. Trimming tabs are fitted to each elevator and are controllable from both cockpits.

4. CONTROLS

The standard flight controls are provided in each cockpit. Both control columns connect with the central shaft, lateral movement for the ailerons, fore and aft for the elevators. Rudder cables run from the rudder bar to horns on the rudder.

An elevator trim tab control lever is located on the right side in both cockpits. The left side of the cockpits contain the engine controls, consisting of fuel selector, mixture control (rear cockpit only) and throttle; below these is the wheel brake control lever. With the brake lever in the "OFF" position, no movement of the rudder bar is transmitted to the brake cables. By placing the brake lever partly "ON", the slackness in the brake cables is taken up and the brakes will operate with the movement of the rudder, giving differential braking for ground operation. If the brake is placed into the fully "ON" position where it may be locked, it serves as the parking brake. Each lever is fitted with a ratchet which may be engaged by pushing down on the collar at the bottom of the handle. To release the brake, pull slightly back on the handle and with the fingers lift the collar and move the lever forward.

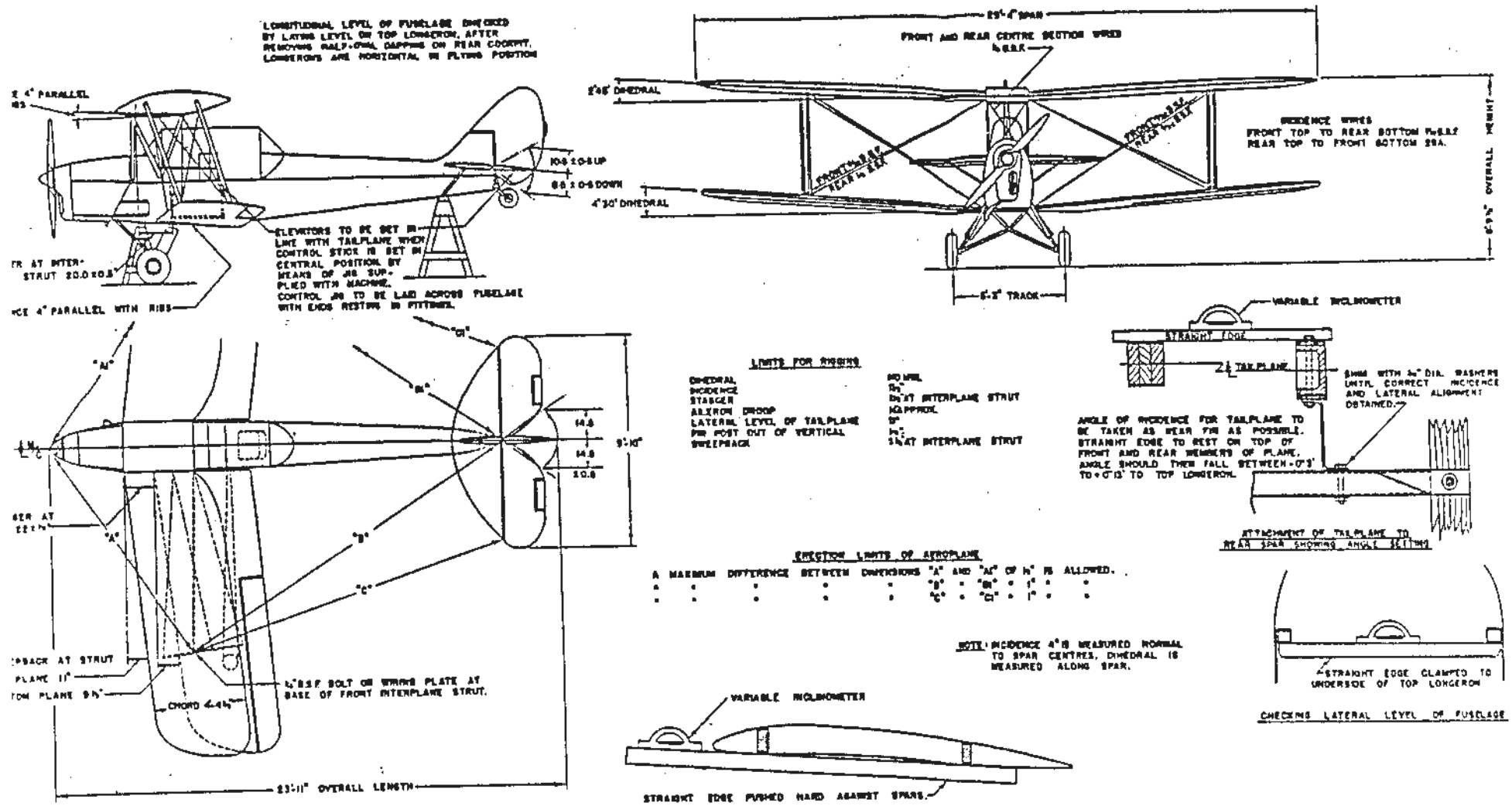
5. LANDING GEAR

The undercarriage is of the divided axle type, on which most of the landing shock is absorbed by steel springs and bronze friction dampers in each of the two main compression legs. To permit full braking without nose over, the wheels are set well forward with the individual brake cables leading up the compression legs for differential braking.

The tailwheel is provided with a pneumatic tire and rubber compression shock absorber, and is free castering through 360 degrees.

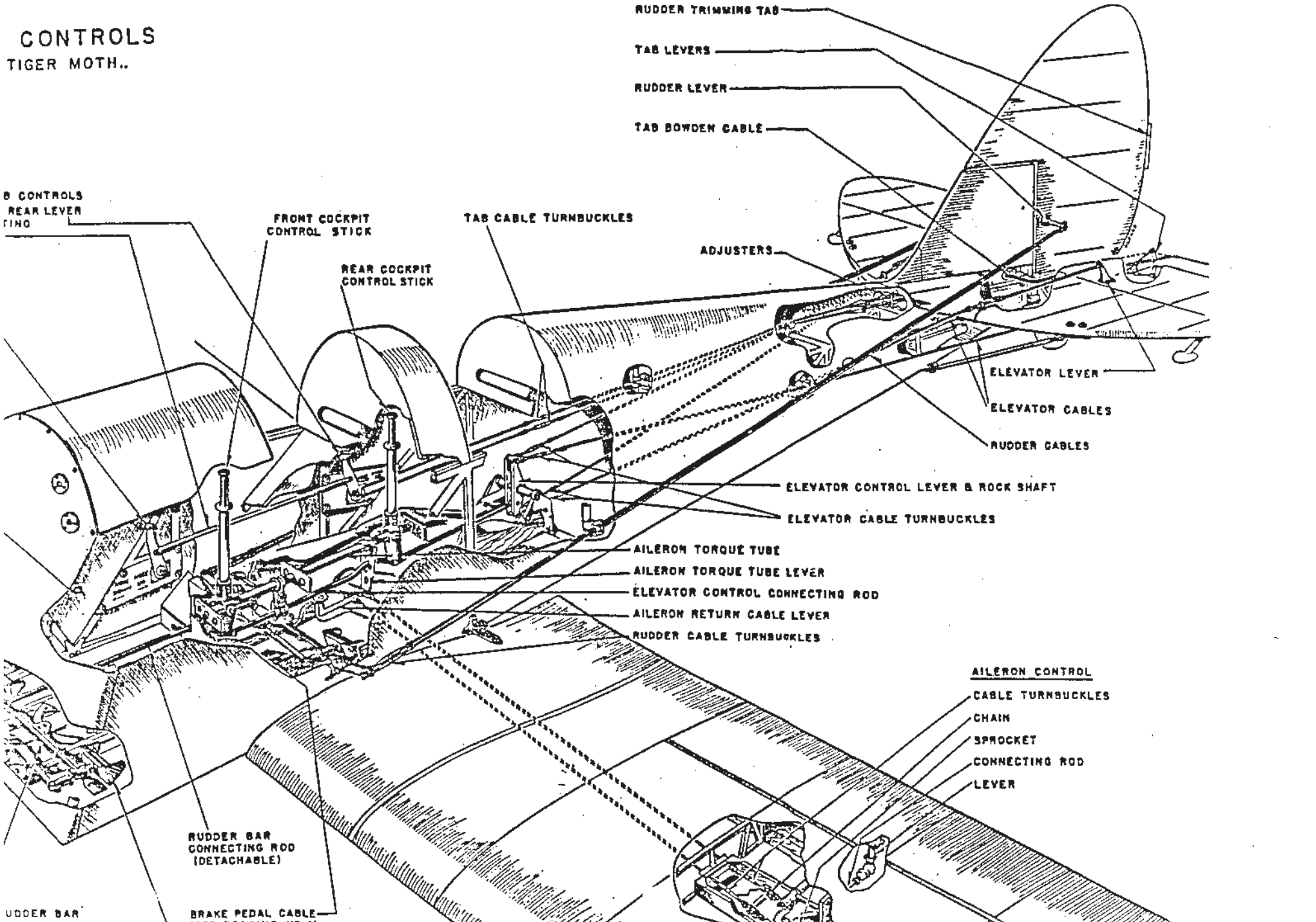
6. ENGINE

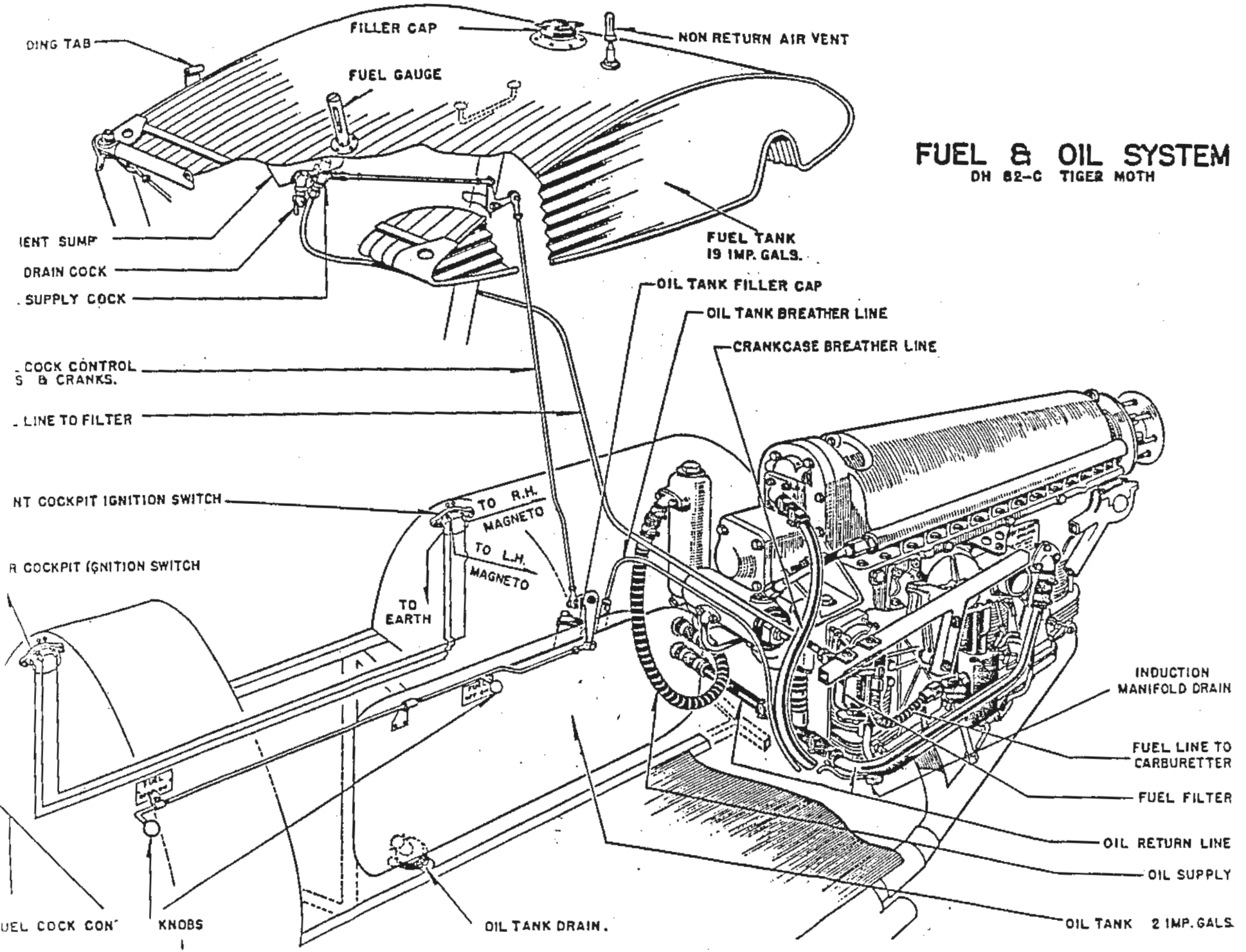
The power plant is a four cylinder, inverted, air cooled, direct drive De Havilland Gypsy Major which develops 140 hp at 2,400 RPM., and rotates to the left. The engine mount is square section steel tubing with the exception of the round tubular diagonal bracing. This engine mount is bolted to the fuselage. The engine is mounted in rubber on aluminum castings bolted to the frame. Since there are not rigid connections between the engine and the airframe, transmission of ordinary engine vibrations and roughness to the airframe is minimized.



RIGGING GRAM

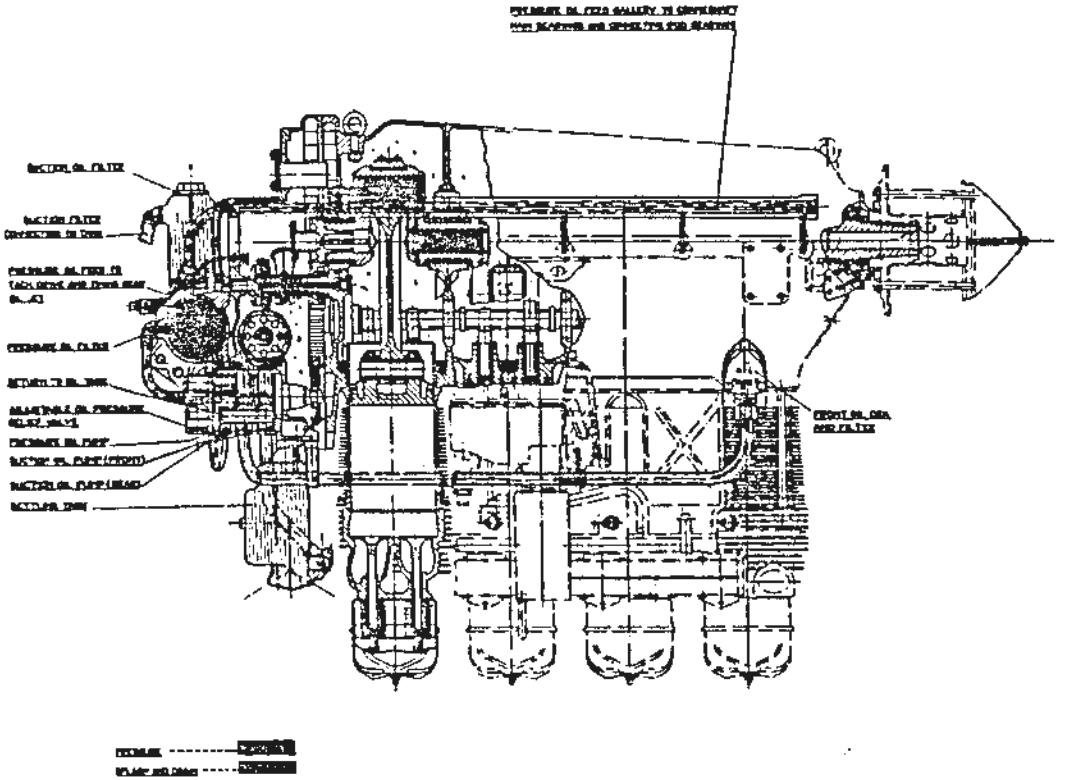
CONTROLS
TIGER MOTH..

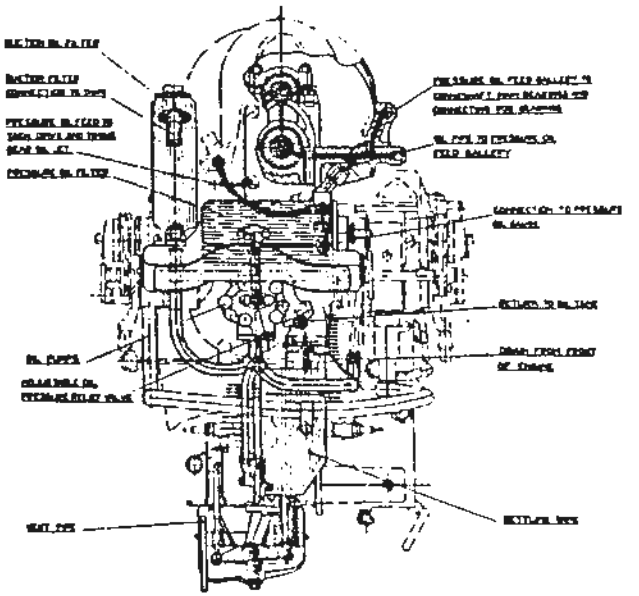




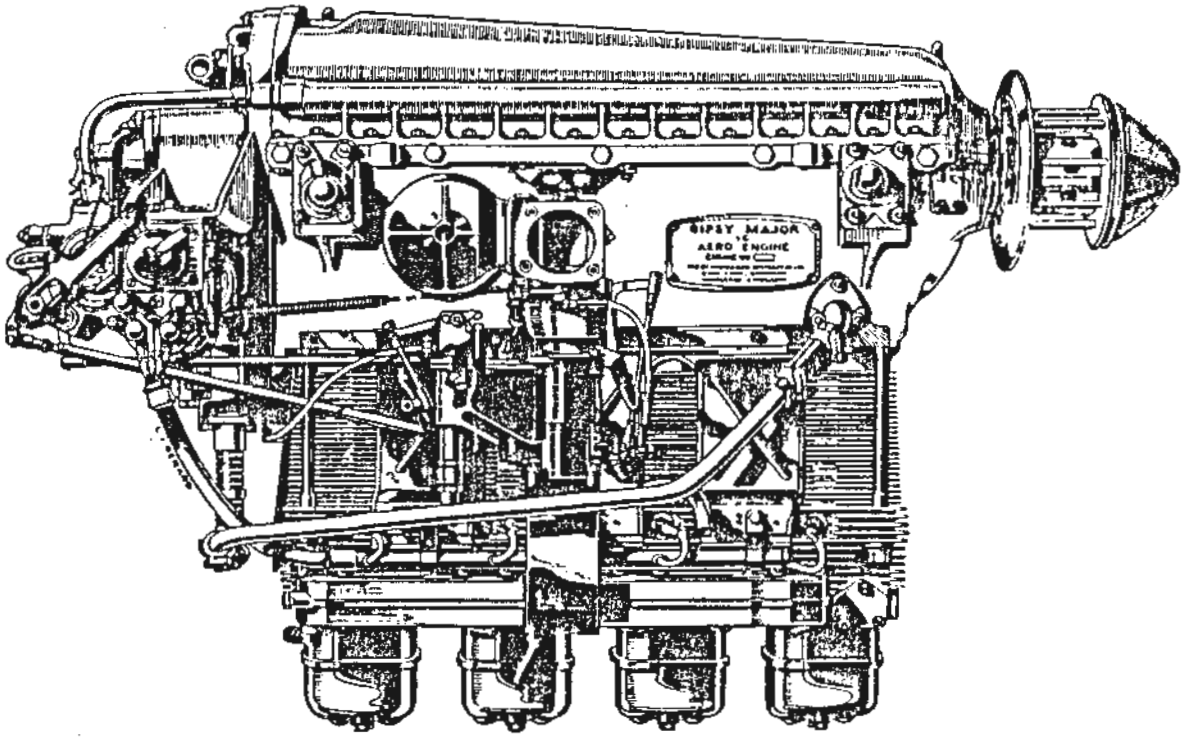
FUEL & OIL SYSTEM

DH 82-C TIGER MOTH



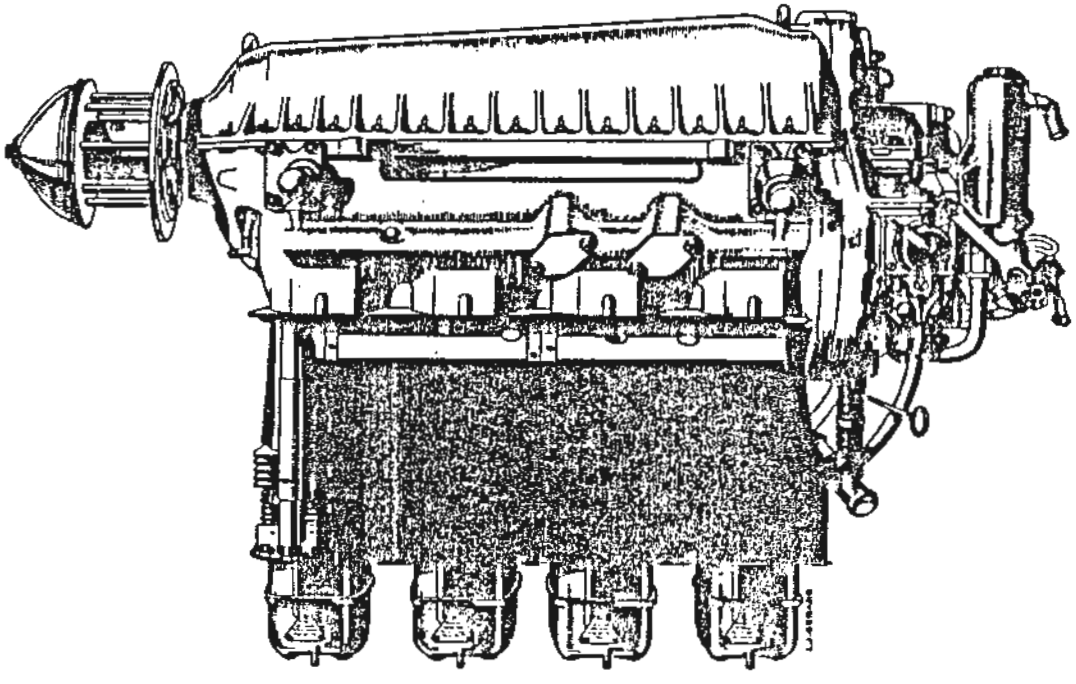


LUBRICATION DIAGRAM OF
THE DE HAVILLAND GIPSY MAJOR AERO ENGINE.
SERIES I. DOUBLE SUCTION PUMPS.



GIPSY MAJOR IC

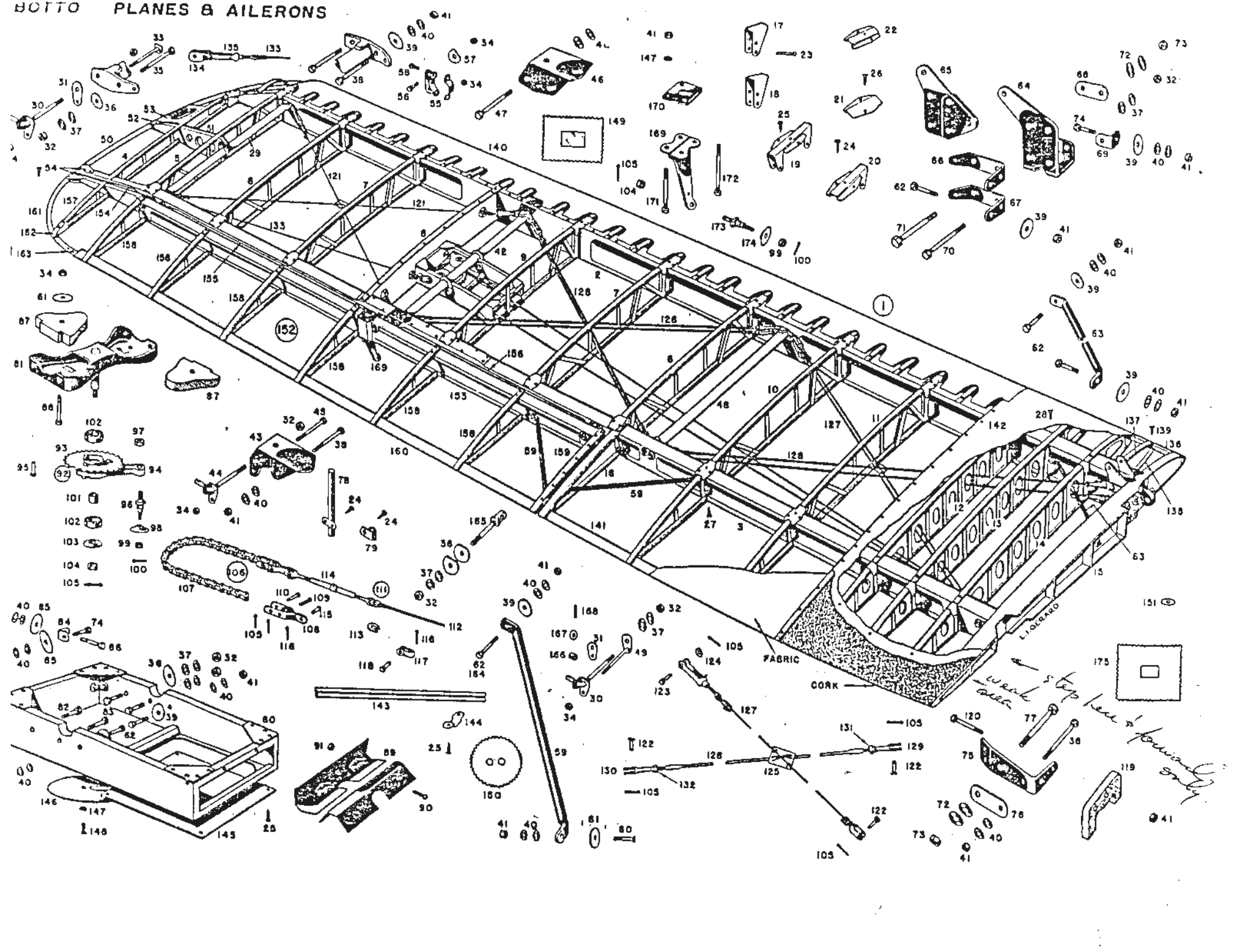
RIGHT SIDE VIEW



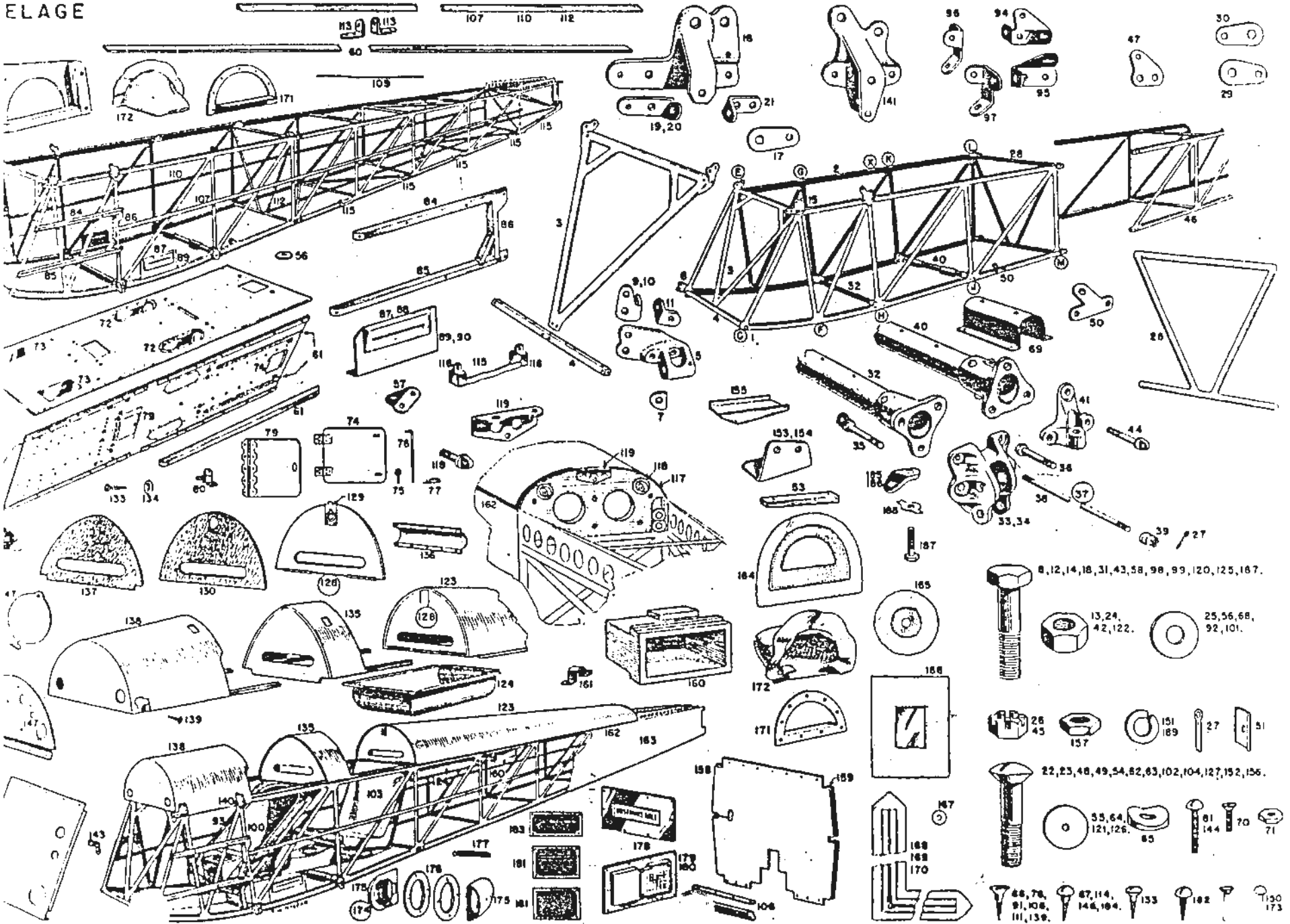
GIPSY MAJOR IC

LEFT SIDE VIEW

BOTTO PLANES & AILERONS



ELAGE


8,12,14,18,31,43,58,98,99,120,125,167.
13,24,42,122.
25,56,68,92,101.
26,43
157
151,189
27
51
22,23,48,49,54,82,83,102,104,127,152,156.
55,64,121,126.
65
61,144
70
71
66,78,91,108,111,139.
67,114,144,164.
133
182
130,173

SPECIFICATIONS and LIMITATIONS

1. DIMENSIONS

Span	29 ft. 4 in.
Length	23 ft. 11 in.
Height	8 ft. 10 in.
Wheel Track	5 ft. 0 in.
Prop	6.33 ft.

2. WEIGHTS

Empty		1,200 lb.
Fuel (19 Imperial gallons)	86 l	135 lb.
Oil (2 Imperial gallons)	9 l	18 lb.
Pilot		170 lb.
Passenger		170 lb.
Baggage		40 lb.
Total weight		1,733 lb.
Maximum permissible normal weight		1,825 lb.
Maximum aerobatic weight		1,770 lb.

3. PERFORMANCE (at 1,825 lb. weight)

Engine power maximum	136-142 h.p. at 2,400 RPM.
(Not used for CHAA operation to preserve engine.)	
Take off power	130 h.p. at 2,100 RPM
Engine power, normal continuous	125-130 h.p. at 2,100 RPM
Recommended cruising	80-85 ~~85-95 h.p.~~ at 2,050 RPM to 1950 RPM
Maximum speed (140 h.p.)	107 m.p.h.
Cruising speed (90 h.p.)	90 m.p.h.
Climbing speed	65 m.p.h.
Take off run	300 ft.
Landing run	400 ft.
Rate of climb (initial)	750 ft./min.
Time of climb to 5,000 ft. (65 m.p.h.)	8.5 min.
Time to climb to 10,000 ft.	23 min.
Service ceiling	14,600 ft.
Absolute ceiling	16,500 ft.
Cruising range (90 h.p.)	275 miles
Fuel consumption at cruising speed	6 Imp. gals./hr. (15.5 m.p.g.)

4. ENGINE

Normal brake horsepower	130 at 2,100 RPM
Maximum brake horsepower	140 at 2,400 RPM
Compression ratio	~~6.0:1~~ ~~(5.25:1)~~ 4.5:1 or 6:1
Weight complete with airscrew boss	305 lb.
Fuel consumption	- 75-80 mph - 1950 RPM - 6-6.5 gal./hr. (2.5 hr. range)
	- 80-85 mph - 2050 RPM - 7-7.5 gal./hr. (2.25 hr. range)
	- 85-90 mph - 2100 RPM - 7.75-8 gal./hr. (2.00 hr. range)
Cruising RPM.Normal	1900 - 2050 RPM
Maximum (30 mins.)	2100 RPM
Oil consumption - normal RPM	0.25 gal./hr. (1 l/hr).
Oil pressure - Normal	40-45 p.s.i.
- Minimum	35 p.s.i. ← @ cruise & idle.
- Maximum	60 p.s.i.
Oil Capacity	2 Imp. gallons (DRY SUMP)
Oil Type	Mil spec 3-GP-4 grades 100 and 120 for summer, grade 80 for winter. (non detergent oil only used in C-GCOE)
Carburetor	Claudel-Hobson AI.48 - downdraft type
Fuel type	3-GP-5 / or 60. 80 octane
Capacity	19 Imp. gals.

5. TIRES (tube type)

Main wheels - Dunlop 7.00 X 7.5 - air pressure 15 p.s.i. - Honda tube fits nicely.
Tailwheel - Firestone 2.50 - 4 - air pressure 45 p.s.i.

6. PROPELLER

Type - wooden fixed pitch
Size - 6.33 ft. - 52.7 degrees of pitch (55"/rev)
Ground clearance - 1 ft. 11 in.

7. FLIGHT LIMITATIONS

Maximum diving speed	160 m.p.h.
Maximum speed - sea level	109 m.p.h.
- 5000 ft.	105 m.p.h.
- 10,000 ft.	99 m.p.h.
Maximum all-up weight	1,825 lb.
Maximum aerobatic weight	1,770 lb.
Stalling speed - normal weight - 1700 lb.	45 m.p.h.
- max. weight - 1825 lb.	47 m.p.h.

7. FLIGHT LIMITATIONS cont'd

Engine -

Take off	2,100 RPM
Minimum take off	1,825 RPM
Climbing RPM	2,050 RPM
Maximum cruising (not exceed 30 min)	2,100 RPM
Maximum dive (not ~~less~~ more than 1/3 throttle)	2,400 RPM
NOT to exceed 20 secs.	
Oil pressure - Min. 30 p.s.i. (max. 5 mins.)	
- Max. 60 p.s.i. (max. 5 mins.)	
- Normal 40/45 p.s.i.	
Oil temperature - Maximum climb (30 mins.)	80 degrees C
- Minimum T/O	30 degrees C
- Normal cruise	60-70 degrees C
- Max. Cruise (30 mins.)	70 degrees C

NOTE: Mixture control must NOT be used below 5,000 ft.

8. PROHIBITED MANOEUVRES

Snap rolls, inverted spins, hammer head stall, intentional spins until future clearance obtained, aerobatics until future clearance obtained. Ground loops.

CHECKS

1. PRE FLIGHT

1. Check Aircraft Documents on board and L-14. - INSTALL RADIO & HEADSETS
2. Remover control column lock and store in luggage compartment.
3. Check freedom of movement of control column and look at ailerons and elevators, checking operation.
4. Movement of elevator trim and set to "Neutral".
5. Fuel selector - "OFF", Fuel gauge - contents (upper wing)
   - Throttle closed
   - Mixture back to full rich
6. Magneto switches "OFF", loosen FRONT throttle friction.
7. Left aileron - fabric condition, no warping
   - hinge - secure, no damage, movement
8. Upper and lower left wing - fabric for tear and warping
   - "N" strut secure
9. Left wing tip - condition
   - move wing up and down, upper wing movement
   - Nav light for damage

#1 MAG ON FWD SWITCH IS RIGHT MAG AND HAS BOOSTER COIL FOR STARTING.

PREFLIGHT cont'd

10. Leading edge - left wing - damage
    - flying and landing wires - taut and secure
11. Oil tank - secure, leaks and contents. Replace cap securely.
12. Windscreen and bracing wires - cleanliness and secure
    - fuel tank and lines for leaks
13. Engine cowls secure and safety pins installed
14. Prop for damage and tightness
    - nose cone - damage and security
15. Exhaust system - damage and security
16. Underside of fuselage - condition – COND OF COCKPIT HEAT DUCT
17. Oleos - condition and level
    - brake cables secure
18. Tires - inflation, creep and condition
    - chocks in position for start
19. Leading edge - right wing - condition
    - flying and landing wires - taut and secure
20. Pitot head - secure and condition, cover removed
    - "N" strut secure
21. Right wing tip - condition and warping
    - move up and down - upper wing movement
    - right Nav light for damage
22. Right wings - upper and lower - fabric - condition and warp
23. Right aileron - movement and condition
    - hinge - security and movement
24. Right side of fuselage - fabric condition
    - rudder and elevator cables - condition, tension
    - canopies - right side - clean and tracking
    - " Emergency Release" safety wired
    - stop bolt secure
25. Fin and rudder - REMOVE rudder lock
    - condition and security
    - rudder - freedom of movement and horn
    - cable movement
    - Nav light - condition and wiring
    - drain holes clear
26. Stabilizer and elevators - condition and movement
    - cables and connections
    - stabilizer struts secure
    - trim tabs - equally set, linkage
    - drain holes clear
27. Tail wheel - oleo - secure and condition
    - wheel - inflation and condition

PREFLIGHT cont'd

28. ~~Right~~ LEFT side of fuselage - fabric condition
    - rudder and elevator cables - condition, tension
    - Canopies - left side - clean and tracking
    - stop bolt secure
    - release linkage operating
    - "Emergency Release" safety wired
29. Underside of fuselage - condition
30. Luggage compartment - all locks stored, first aid kit
    - all contents secure
    - door securely closed
31. Fire extinguisher - secure left side rear seat.

1.(b) SOLO FLIGHT:

NOTE: Solo flight is always flown form the rear seat.

1. Radio headset removed and placed in luggage compartment.
2. Remove and stow seat cushions
3. Safety harness is securely fastened - to prevent fouling any controls
4. Throttle friction nut is loosened
5. Check for loose articles in cockpit and on floor
6. Close and secure front canopy.

2. PRE-START CHECK

1. Strapped in, intercom set connected and checked
2. Elevator trim set to full tail heavy (back)
3. Magneto switches "OFF", (down to left)
4. Fuel selector to OFF
5. Throttle "CLOSED"
6. Prop crewman in position and visible

3. START

NOTE: Crewman shall always be in front of prop for swinging.

CREWMAN ACTION	PILOT ACTION
1. Check chocks in place	
2. Calls "switches OFF - fuel ON - may see slight leakage - ok! - Throttle CLOSED	3. Checks switches OFF, fuel ON, throttle CLOSED. Calls - "switches OFF, fuel ON, throttle CLOSED.
4. Floods Carb and pulls prop 4 half turns. Calls "Throttle set"	5. Checks throttle lever cracked slightly and calls "Throttle set".
6. Calls "CONTACT" #1 MAG (RT MAG) IS ON (FWD SWITCH)	7. Holding stick fully back with right hand, places impulse mag switch (front knob) on contact (UP position), calls "CONTACT", then places left hand on the throttle.
8. Standing well clear of prop, checks to see if elevators in "up" position, pulls through prop with one hand until engine fires.	9. When engine fires, places rear mag switch on contact (up). Throttle adjustment as necessary.

NOTE: If engine fails to start, carry out the following actions:

10. Possibly due to over prime. Call "switches OFF, throttle wide open for blow out".	11. Both mag switches OFF, throttle wide open and calls "switches OFF, throttle wide open, blow out.
12. Turns prop backwards until cylinders clear of rich mixture, calls "throttle set, CONTACT".	13. Sets throttle, sets front mag switch to ON (up) and calls "Throttle set, CONTACT".
14. Flicks over prop until engine starts.	15. When engine fires, place rear mag switch ON (up) and set throttle.

4. PRE-TAXI CHECK

1. Check oil pressure has settled, set throttle for 900-1000 RPM. (engine should be run for a minimum of 4 mins. before runup).
2. Tail trim moved through full movement, works freely and returned to tail heavy position for taxiing.
3. Adjust throttle tension for taxiing.
4. Mixture control full "RICH".
5. Check instruments as far as possible, set altimeter.
6. Oil pressure normal at 35 p.s.i. at 1000 RPM, oil temp. minimum 20C to taxi.
7. Fuel selector fully "ON" (forward), fuel gauge shows full or sufficient for the flight.
8. Both mag switches "ON" (up).
9. Test aileron and elevator controls for correct movement.
10. Select radio frequency and check operation.
11. Taxi clearance.
12. Release brakes and check operation.
13. While taxiing, check control operation and rudder operation.
14. Avoid taxiing or idling for prolonged periods at low RPM.

NOTE: While taxiing, utilize the elevator and aileron controls to aid in ground control considering wind conditions.

5. RUN UP

NOTE: Engine is ready for run up after 4 mins. of running and the oil pressure is 35 p.s.i., temp. 30 C minimum. Position aircraft into wind as much as possible, checking behind for clearance of other aircraft and area for possible loose objects.

1. Brakes set.
2. Hold control column fully back.
3. Open throttle to 1600 RPM and test mags independently. (any drop in RPM must not exceed 100 RPM)
4. Carb heat ON, check drop in RPM, reselect heat OFF.
5. Open throttle fully, RPM should be 1825 RPM minimum and normally 2100 RPM.
6. Check oil pressure 40-45 p.s.i. and oil temp. of 30 C.
7. Throttle fully back to check idle of 550-600 RPM.
8. Set idle at 900 RPM.

6. TAKE OFF CHECK

H - Harness tight.
T - Trim - Elevator trim set at neutral, (central position).
T - Tension - Throttle tension adjusted for take off.
M - Mixture fully back to RICH position.
P - Pressures and temperatures check in limits.
F - Fuel selector fully ON (forward) and fuel contents.
C - Carb heat OFF.
S - Both mag switches ON, (up position).
C - Canopy locked in desired position.
B - Brakes fully released.

Request take off clearance, if prolonged, position aircraft into wind as much as possible and set throttle at 900 RPM.

7. TAKE OFF

1. Line up on take off path, rolling a short distance to straighten tailwheel.
2. Smoothly move throttle while rolling to 2100 RPM and,
3. Slowly raise the tail to the flying position.
4. Use left rudder to maintain directional control.
   NOTE: If the throttle is advanced too rapidly combined with fast forward movement of control column, the effect of torque could cause difficulty in keeping straight.
5. Smoothly lifting aircraft off, establish a slight climbing attitude and attain an initial climb speed of 70 mph. This speed is maintained up to 200-300 ft., after which normal climb power of 2050 RPM is selected and the normal climb speed of 65 mph is maintained.

8. CLIMBING

1. Normal climbing power is 2050 RPM maintaining an airspeed of 65 mph.
2. In a climbing turn maintain the same power setting, but lower the nose slightly to maintain the same airspeed, (65).
3. Check oil temperature and pressure: 65-70C at 40-45 p.s.i.
4. Max. climb (2100 RPM) not to exceed 30 mins may be used, but within the following limits: Max. oil pres. 55 psi and temp. 70 C.

9. CRUISING

1. Correct power for normal cruise is 1950 RPM at 75-80 mph.
2. Safe endurance at these settings is 2 1/2 hours.
3. Higher settings may be used if required but must be kept within the following limits:

   Maximum cruise - 2100 RPM. Max. oil pres. 50 psi and max. oil temp. 70 C. NOTE: Max. cruise NOT to exceed 30 mins.

10. STALLS and SPINS

NOTE: Be sure to take a good look around for other aircraft before stalls or spins as well checking harness tight and no loose objects in the cockpit. Minimum altitude for practicing stalls is 3000 ft. AGL. For spins, recovery must be able to be completed by 3000 ft. AGL.

1. Normal stall from straight glide - Engine idle - 40 mph.
   - Engine on - 30 mph.
2. Aircraft unstalls very quickly with forward control movement. During stall airframe vibration may be noticed.

NOTE: Until authorized at a future date, intentional spinning of the aircraft is PROHIBITED.

3. In the event that an incipient spin is encountered, the normal spin recovery is carried out. i.e.
   (a) close throttle
   (b) full opposite rudder to the direction of rotation
   (c) at the same time move the control column, smoothly, steadily forward until the spinning stops.
   (d) centralize the rudder, (if too slow the aircraft could snap into a spin in the opposite direction)
   (e) ease the aircraft out of the dive, add power as desired taking care not too overspeed the engine. Too tight on the pull out could induce a high speed stall condition

11. RESTARTING THE ENGINE IN FLIGHT

NOTE: It is possible for the prop to stop rotating during a practice stall or spin.

It may be caught in time if observed before it stops by gently opening throttle, care to be taken not to overspeed engine. If stopped, complete the following actions:

1. Throttle back to idle
2. Fuel selector "ON"
3. Mag switches "ON", (both up)
4. Set throttle 1/4 open

11. RESTARTING THE ENGINE IN FLIGHT cont'd

5. Put aircraft into 45-60 degree dive building speed to 110-115 mph. If the engine has not started, apply a slight back pressure on control column to increase the angle of attack on the prop blades
6. Pull out of the dive and set throttle
7. Care must be taken not to exceed max allowable airspeed or overspeed engine.
8. Be conscious of the altitude, leave enough height to set up a forced landing procedure should the engine not start.

12. STEEP TURNS

1. Increase power from cruise to 2100 RPM
2. Do not allow airspeed to drop below 70 mph.
   NOTE: This same airspeed applies to steep gliding turns. When entering a turn of any type, it is necessary to lead rudder to keep the ball centered. Without this technique, momentary adverse yaw caused by the aileron will cause the ball to fall to the inside. The same is applicable when rolling out of the turn.

13. AEROBATICS

1. Aerobatics are **PROHIBITED** until such time a clearance is obtained.

14. DESCENDING

1. For an engine assisted descent reduce throttle to 1100-1200 RPM and a speed of 65 mph.
2. Gliding without engine, reduce throttle to idle using the same airspeed of 65 mph.
3. For descending turns, lower the nose slightly to maintain a minimum of 65 mph.
4. For gliding turns, lower the nose and increase speed to70 mph depending on the steepness of the turn.

15. SIDE SLIPPING

The aircraft does not have any flap surfaces but an easy way to lose excess altitude on the landing approach is by use of the sideslip or slipping turn. this can also be of benefit for forced landings.

1. Apply aileron for the steepness of the slip at the same time applying sufficient opposite rudder to maintain the direction of flight.
2. Lower nose and increase airspeed to a minimum of 70 mph. Speed is increased with the increase of bank and rate of descent to maintain control and not stall the aircraft.
3. For a slipping turn less rudder is applied which will allow the aircraft to turn as desired to line up on the landing path at which time additional rudder is applied, maintaining the landing path and stopping the turn. Once again the airspeed should not fall below 70 mph or higher if the slipping turn is steep. Some vibration of the aircraft will be encountered.
4. CAUTION - it is important that a slipping manoeuvre not be carried too low to allow recovery to normal descent and airspeed for flare out.

16. LOW FLYING

1. Check fuel supply, temperatures and pressures
2. Use the same power as is used for normal cruise, 1950 RPM with airspeed of 75-80 mph.
3. Increase power during turns.
4. CAUTION - be observant of wind effect especially when turning into and downwind.

17. APPROACH and LANDING

Maintaining circuit height of 1000 ft. AGL., on downwind leg at cruise speed of 75-80 mph, complete the following vital actions check:

1. **B** - Brakes, ensure brake lever fully "OFF" (forward)
   M - Mixture in full "RICH" (back)
   P - Pressures and temperatures - 40-45 psi and 60-70C
   S - Both mag switches "ON" (up)
   F - Fuel selector "ON" (forward), sufficient contents for another circuit.
2. With wing tip opposite end of runway, turn base leg, reducing airspeed to 65-70 mph, throttle as required, descend to 500 ft. turning onto final and set up speed of 65 mph. with throttle as required to reach touch down point of runway.
3. Prior to or during flare bring throttle to idle, holding aircraft off and attain three point landing attitude just above the ground to the point of stall at which time it will touch three point. It is important that the wings are level at touch down.

17. APPROACH AND LANDING cont'd

4. Maintain directional control with rudder, continuing roll out, gently applying brake as necessary.
5. It is important to be alert to any directional swing as a wing may drop and cause a ground loop. Due to ineffective aileron control at slow speed do not attempt to raise wing with aileron, if in the down position it will strike the ground first. Attempt to pick up the downed wing by use of rudder. Sometimes a touch of throttle may help by increasing airflow over rudder. Watch for overcontrolling.
6. For a wheel landing, do not bring aircraft to the three point attitude after the flare, touching down on the main gear and slowly flying the tail down to the ground, ensuring power is fully off. As the tail is being lowered be alert on directional control as this is the point where a groundloop may take place.

18. PRECAUTIONARY APPROACH and LANDING

1. Carry out the same circuit except 250-300 ft. AGL.The approach speed is 55 mph.with sufficient power to control the rate of descent. Throttle off on flare and touch down in the three point attitude.
2. Maintain directional control and use brakes taking care not to nose aircraft over. If running out of landing run, switch off mag switches and fuel selector. Consideration may be given to a groundloop to avoid collision with ground obstructions.

19. CROSS WIND LANDINGS

1. Due to the light weight of the aircraft, consideration must be given to the crosswind and strength of the wind. Attempt to land into wind as much as possible even if it requires selecting a different runway.
2. On final establish a crab or wing down or a combination of both to line up on the runway to eliminate drift.
3. Depending on wind strength and/or gustiness increase final approach speed.
4. Touchdown may be either three point or wheel type. Be sure aircraft is straight at toucbdown and be prepared to counter any swing caused by the crosswind with the use of rudder.
5. Crosswind landings with the Moth are more forgiving on a grass surface.

10 kts @ 15°
5 kts @ 45°

20. OVERSHOOT

1. At point of decision to over shoot, establish take off power of 2100 RPM and climb angle to maintain 70 mph.
2. At 200-300 ft. throttle back to climb power, 2050 RPM and climb speed of 65 mph.

20. OVERSHOOT cont'd

3. At 500 ft. and at least past end of runway, establish a climbing turn in the direction of the circuit.
4. Enter downwind at 1000 ft. levelling off at circuit speed 75-80 mph and carry out the downwind check in preparation for another approach and landing.

21. FORCED LANDING

1. If on take off, establish a glide speed of 65 mph., check fuel / switches "ON"
2. Maintaining glide speed attempt to land straight ahead altering direction only slightly for the best landing run or to miss ground obstacles.
3. Check harness tight and turn off fuel and mag switches
4. Open canopies
5. NEVER! NEVER! attempt to turn back to make the airfield.
6. At altitude - set up glide speed of 65 mph.
7. Note wind direction, select a suitable landing field, positioning aircraft on downwind side, establish an "S" pattern to position on final at 500-700 ft.
8. Check for cause of engine failure - fuel contents, fuel and mag switches "ON", mixture full "RICH"
9. Check harness tight and open canopies when desired.
10. Establish final glide speed of 65 mph.
11. Use side slip and slipping turn to remove excess altitude.
12. Attempt to flare before touchdown and carry out a three point landing, using brake to shorten the landing roll but be careful not to nose the aircraft over. As a last resort the aircraft may be groundlooped to avoid obstacles.
13. In the event of engine fire attempt to side slip the aircraft to keep flames away from cockpit and fabric areas.
14. For a practice forced landing, apply carb heat and open up engine to 1500 RPM every 800-1000 ft. to clear engine. Close carb heat for overshoot.

22. ENGINE SHUT DOWN

1. Tail trim in full tail heavy position
2. Brakes set
3. Throttle set to 900-1000 RPM
4. Hold stick fully back
5. Switches "OFF" and open throttle fully. Keep throttle fully open until prop stops rotating.
6. Return throttle to fully closed position
7. Fuel selector "OFF"
8. Radio "OFF"
9. Chocks in position
10. Control locks in position
11. Enter flight time in log and report unservicabilities on L-14.

23. EMERGENCY EXIT

In flight when parachutes worn:

1. Captain to order occupant to exit first
2. Pull emergency release handles on each side of front and rear canopies
3. Disconnect radio cords and release seat harness
4. Slide from cockpit headfirst, facing tail.

ANYONE CAN FLY A TIGER MOTH ,BUT TO FLY IT WELL TAKES SKILL AND PRECISION, PATIENCE ,AND VIGILANCE.

Compiled by Wing Commander Lou Hill