

APPROVED

AIRPLANE FLIGHT MANUAL

MODEL FUJI FA-200-180

G-BBRC

Ser. No. FA-200-235.



This is the Flight Manual which forms part of the
Certificate of Airworthiness for aircraft

G-BBRC

THIS AIRPLANE MUST BE OPERATED
WITH JCAB APPROVED AIRPLANE

~~This is the Flight Manual which forms part of
Certificate of Airworthiness Number 5777~~

APPROVED BY:


DIRECTOR OF CIVIL AVIATION
JAPAN CIVIL AVIATION AUTHORITY

DATE APPROVED

September 27, 1957

This replacement Flight Manual supersedes any previous
Flight Manual issued for this aircraft.

FUJI INDUSTRIES LTD.



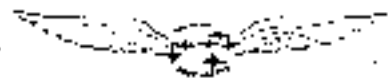
LIST OF EFFECTIVE PAGES

The airplane flight manual consists of following pages.

Page	Approved date	Page	Approved date
I	Sept. 17, 1973	33	Feb. 8, 1973
II	Sept. 17, 1973	34	Feb. 16, 1972
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AA ASSIMATES LTD. SUPPLEMENT N^o 1. 15WEA.

* Additional revised pages V-1, 1-1, 9-1, and 46-1 are applied at S/N FA-200-101, FA-200-244 and after.



LOG OF REVISIONS

Revision No.	Date	Revised Page	Description
Original	January 15, 1969		
Revision 1	October 22, 1969	I, II, 8-1, 12-1	Establishment of baggage room
Revision 2	January 26, 1970	I, III, 1, 9-1, 12-0, 12-2, 13-1, 15-1, 16-1, 18-1, 19-1, 20-1, 21-1, 30-1, 36	Due to JCAB Type Certification No. 22-4.
Revision 3	February 16, 1972	All pages.	Due to JCAB Type Certification No. 22-5. (1) Consolidation of manuals for applicability to all aircraft. (2) Simplification of description. (3) Addition of Appendix D "Acrobatic Maneuvers"
Revision 4	August 29, 1972	I, II, 17, 18, 29, 30, 62	(1) Addition of performance with speed fairings. (2) Revision of aileron roll caution. (3) Revision of cruising data
Revision 5	February 9, 1973	I, II, IV, 7, 12, 13, 15, 16, 19, 20, 23, 24, 25, 27, 32, 33, 36, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 60, 63, 64, 68	(1) Revision in emergency procedures. (2) Revision in normal procedure. (3) Addition and revision in equipments list. (4) Revision in performance chart. (5) Revision in acrobatic maneuvers. (6) List of supplementary flight manuals becomes out of JCAB approval.
Revision 6	June 4, 1973	I, II, 4, 51	Addition of suction gauge markings.
Revision 7	September 17, 1973	I, II + V-1, 1-1, 9-1, 28 + 29, 46-1	Due to JCAB Certification No. 22-6. Addition of revised pages for new FRP cowling.

CAA CHANGE SHEET 1. ISSUE 1. 17. NOV. 83 PAGE 7/8
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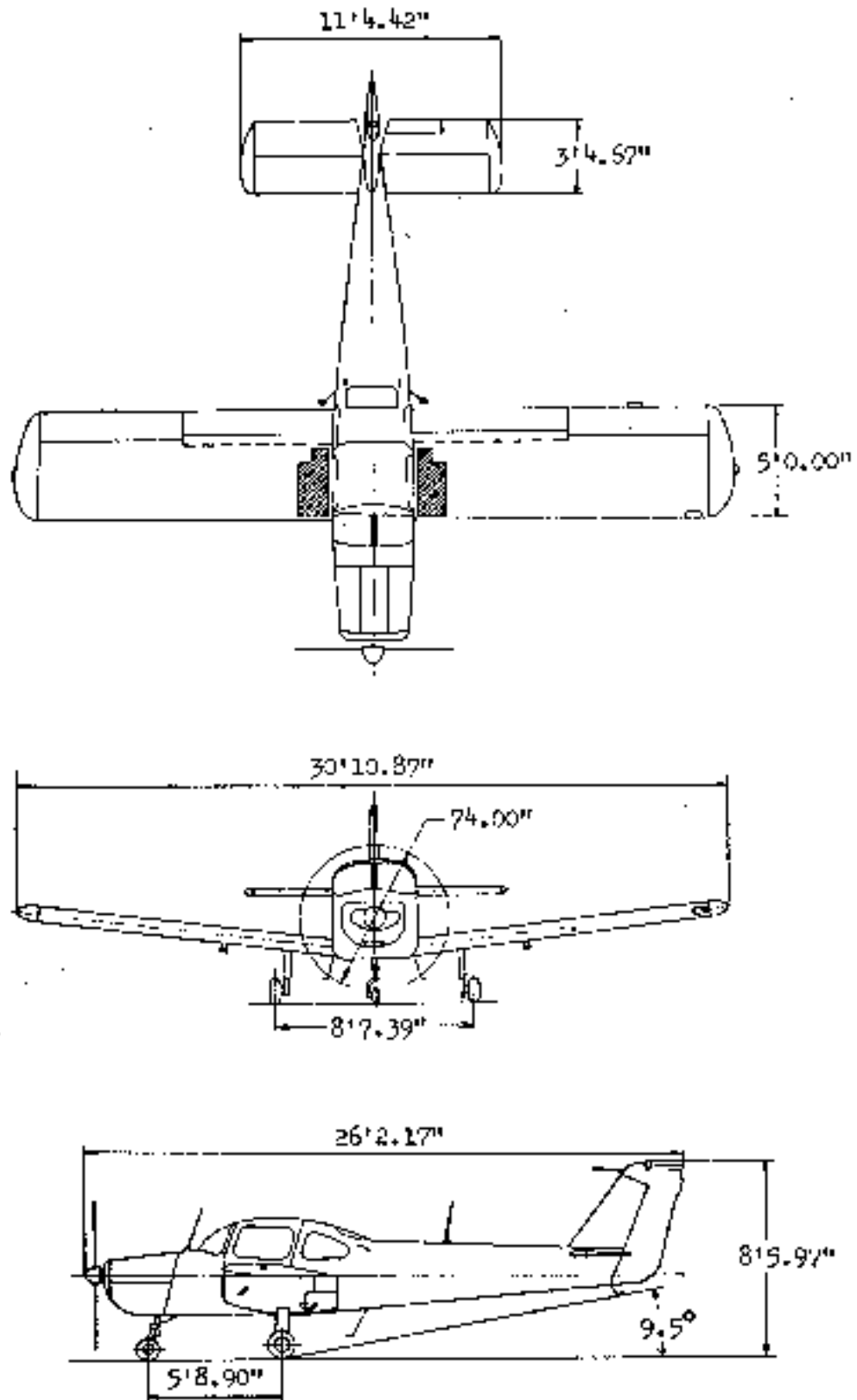
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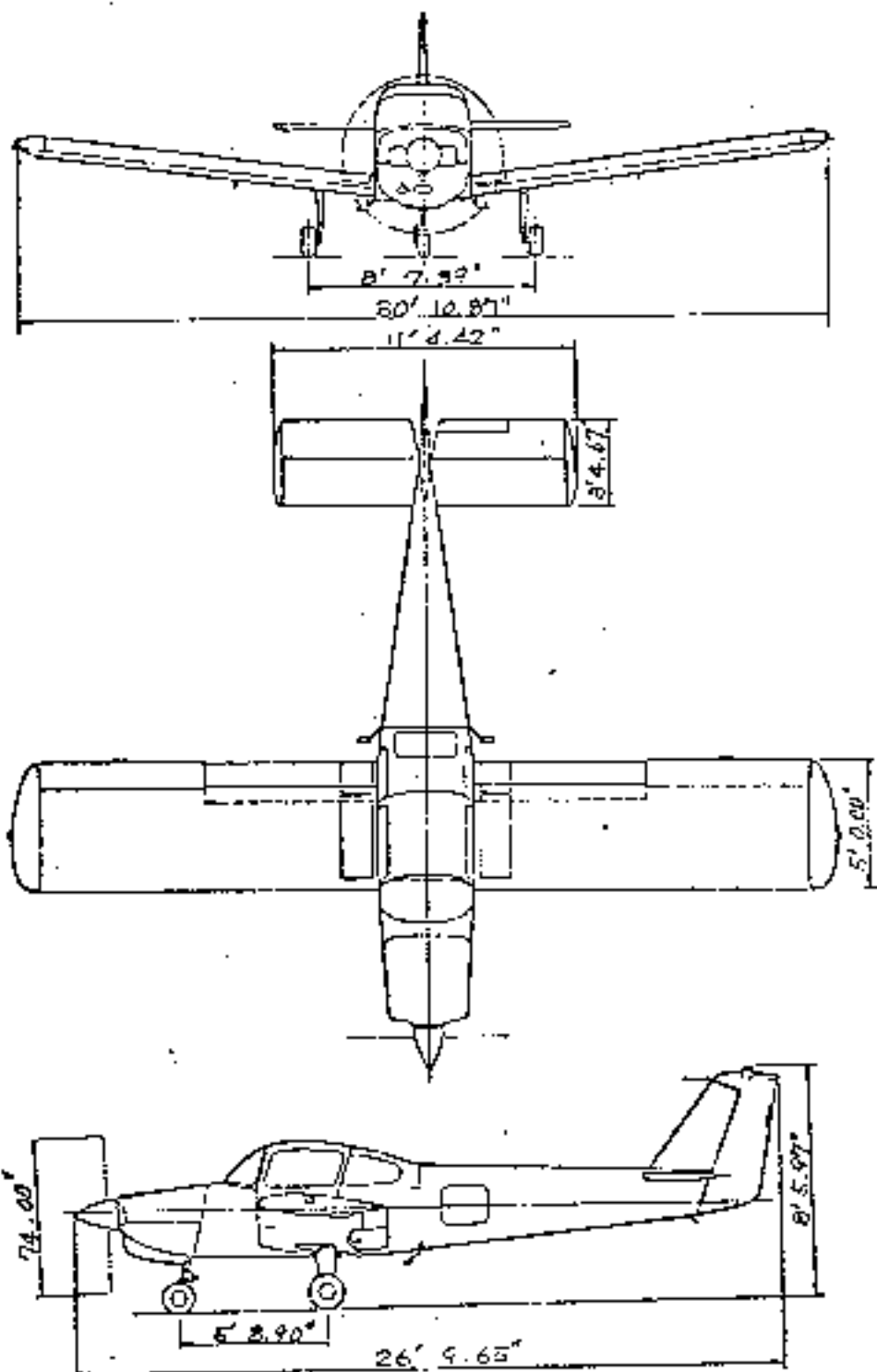


THREE VIEW





THREE VIEW





SECTION I LIMITATIONS

I-1 POWER PLANT LIMITATIONS

(1) ENGINE

Lycoming IO-360-B1B

(2) ENGINE LIMITATIONS

For all operations, 2700 rpm (180 hp)

(3) FUEL

100/130 minimum grade aviation gasoline.

(4) OIL

<u>Outside air temperature</u>	<u>Grade</u>
above 15.5°C (60°F)	SAE50
-1°C ~ 32°C (30°F ~ 90°F)	SAE40
-18°C ~ 21°C (0°F ~ 70°F)	SAE30
below -12°C (10°F)	SAE20

(5) PROPELLER AND PROPELLER LIMITATIONS

McCaughey B2D34053/74E-0

Diameter, not over 74 in., not under 72.5 in.

I-2. AIR SPEED LIMITATIONS (CAS)

Vne (Never Exceed Speed) :	182 mph (158 kt)
Vno (Maximum Structural Cruising Speed) :	156 mph (136 kt)
Vp (Design Maneuvering Speed) :	N or V Category 145 mph (126 kt) A Category 156 mph (136 kt)
Vfe (Flap Extended Speed 25° or 35°) :	120 mph (104 kt)
Vfe (Flap Extended Speed 15°) :	140 mph (122 kt) root
The demonstrated cross-wind velocity :	15.0 knots



SECTION I LIMITATIONS

1-1. POWER PLANT LIMITATIONS

(1) ENGINE

Lycoming IO-360-313

(2) ENGINE LIMITATIONS

For all operations, 2700 rpm (150 hp)

(3) FUEL

92/96 Minimum grade aviation gasoline

(4) OIL

<u>Outside air temperature</u>	<u>Grade</u>
above 15.5°C (60°F)	SAE50
-1°C ~ 32°C (30°F ~ 90°F)	SAE40
-18°C ~ 21°C (0°F ~ 70°F)	SAE30
below -12°C (10°F)	SAE20

(5) PROPELLER AND PROPELLER LIMITATIONS

McCaughey 82D54C53/74E-0

Diameter, not over 74 in., not under 72.5 in.

Static rpm at maximum permissible throttle setting and low pitch; not over 2700 rpm, not under 2650 rpm.

1-2. AIR SPEED LIMITATIONS (CAS)

V _{no} (Never Exceed Speed) :	182 mph (158 kt)
V _{no} (Maximum Structural Cruising Speed) :	156 mph (136 kt)
V _p (Design Manoeuvring Speed) :	N or U Category 145 mph (126 kt) A Category 156 mph (136 kt)
V _{fe} (Flap Extended Speed 25° or 35°) :	120 mph (104 kt)
V _{fe} (Flap Extended Speed 15°) :	140 mph (122 kt)
The demonstrated cross-wind velocity :	15.0 Knots



I-3. FLIGHT LOAD FACTOR

Normal Category

Flap Up + 3.8 ~ - 1.52 Flap Down + 2.0

Utility Category

Flap Up + 4.4 ~ - 1.76 Flap Down + 2.0

Acrobatic Category

Flap Up + 6.0 ~ - 3.0 Flap Down + 2.0

I-4. NUMBER OF CREW

MAXIMUM

Normal Category ----- 4

Utility Category ----- 4

Acrobatic Category ----- 2

MINIMUM ----- 1

In case of 3 crew, 2 front, 1 rear.

I-5. MAXIMUM WEIGHT

Normal Category 2535 lb.

Utility Category 2425 lb.

Acrobatic Category 2072 lb.

I-6. C. G. RANGE

Normal Category

<u>Fwd</u>	<u>Aft</u>	<u>Weight</u>
+ 98.19 (27.0% MAC)	+ 103.58 (36.0% MAC)	2535 lb.
+ 93.07 (18.5% MAC)	+ 103.58 (36.0% MAC)	2017 lb. or less

Straight line variation between points given.

Utility Category

<u>Fwd</u>	<u>Aft</u>	<u>Weight</u>
+ 97.09 (25.2% MAC)	+ 101.77 (33.0% MAC)	2425 lb.
+ 93.07 (18.5% MAC)	+ 101.77 (33.0% MAC)	2017 lb. or less

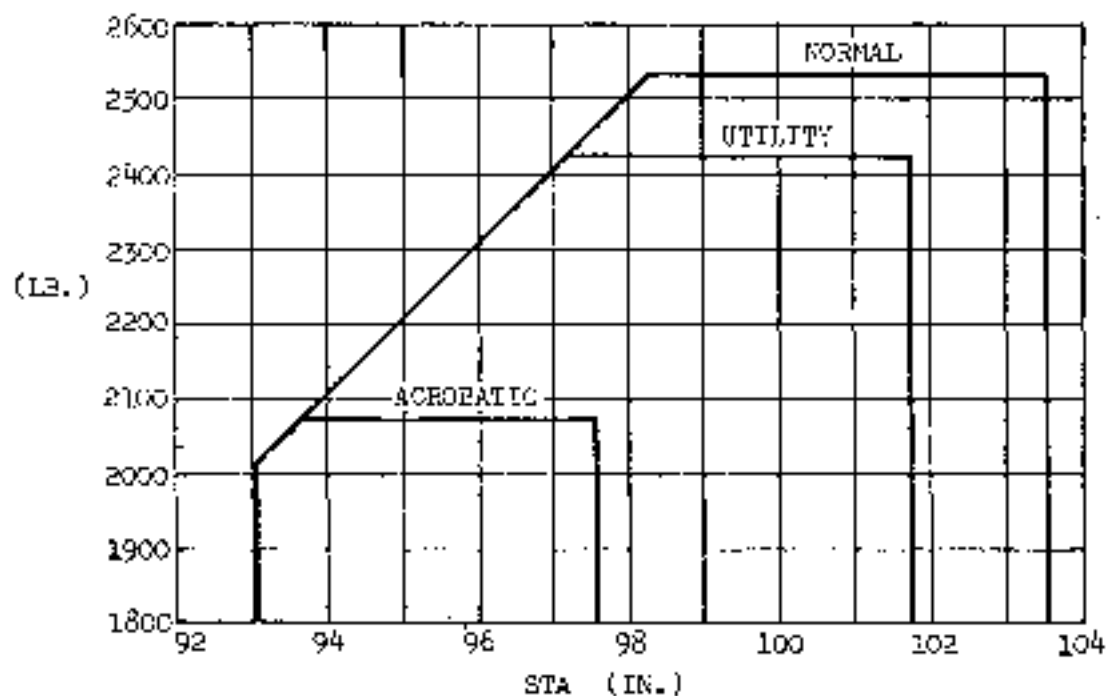
Straight line variation between points given.



Acrobatic Category

<u>Fwd</u>	<u>Aft</u>	<u>Weight</u>
+ 93.52 (19.4% MAC)	+ 97.58 (26.0% MAC)	2072 lb.
+ 93.07 (18.5% MAC)	+ 97.58 (26.0% MAC)	2017 lb. or less

Straight line variation between points given.



Datum: 51.97 IN. forward of front face of lower portion of firewall.

1-7. INSTRUMENT MARKINGS

Airspeed Indicator ; (IAS)	Red Radial	278 mph (155 kt)
	Yellow Arc	154 ~ 278 mph (134 ~ 155 kt)
	Green Arc	68 ~ 154 mph (59 ~ 134 kt)
	White Arc	54 ~ 119 mph (47 ~ 103 kt)



Fuel Pressure Indicator;	Pressure port is in fuel pump outlet, Red Radials 14 psi, 45 psi Green Arc 14 ~ 45 psi
	Pressure port is in flow divider, Red Radial 10 psi Green Arc 0 ~ 10 psi
Oil Pressure Indicator;	Red Radials 25 psi, 90 psi Green Arc 60 ~ 90 psi Yellow Arc 25 ~ 60 psi (Idling operation)
Oil Temperature Indicator;	Red Radial 118°C (245°F) Green Arc 60 ~ 118°C (140°F ~ 245°F) Yellow Arc 38 ~ 60°C (100°F ~ 140°F)
Tachometer;	Red Radial 2700 rpm Green Arc 2200 ~ 2700 rpm
* Manifold Air Pressure Indicator;	Red Radial 29 in Hg Green Arc 14.5 ~ 29 in Hg
* Cylinder Head Temperature Indicator;	Red Radial 260°C (500°F) Green Arc 93 ~ 260°C (200°F ~ 500°F)
* Suction Gauge;	If FXE HA-3-1 Gyro Horizon and DA-2-1 Directional Gyro are installed. Red Radial 3.75 in Hg, 4.25 in Hg Green Arc 3.75 in Hg ~ 4.25 in Hg If EXO-AIRM MODEL 30003 Gyro Horizon and MODEL 4000R Directional Gyro are installed. Red Radial 4.0 in Hg, 5.0 in Hg Green Arc 4.0 in Hg ~ 5.0 in Hg If AIM 300-14 Gyro Horizon and AIM 200-5 Directional Gyro are installed. Red Radial 4.5 in Hg, 5.2 in Hg Green Arc 4.5 in Hg ~ 5.2 in Hg
* :	optional equipment

1-8. MANEUVERS

(1) Normal Category

Maximum Weight 2535 lb.

No Acrobatic maneuvers including spins are approved.

(2) Utility Category

Maximum Weight 2425 lb.



Acrobatic maneuvers are limited to the following.

<u>Maneuvers:</u>	<u>Entry Speed (IAS):</u>
Chandelle	135 mph (117 kt)
Lazy Eight	135 mph (117 kt)
Steep Turn	135 mph (117 kt)
Stall (except whip stall)	Slow Deceleration
Spins (flap up, engine idle)	Slow Deceleration

(3) Acrobatic Category

Maximum Weight 2072 lb.

Acrobatic maneuvers are limited to the following.

<u>Maneuvers</u>	<u>Entry Speed (IAS):</u>
Chandelle	135 mph (117 kt)
Lazy Eight	135 mph (117 kt)
Steep Turn	135 mph (117 kt)
Stall (except whip stall)	Slow Deceleration
Loop	155 mph (135 kt)
Cuban Eight	155 mph (135 kt)
Immelmann Turn	155 mph (135 kt)
Clover leaf	155 mph (135 kt)
Aileron Roll	130 mph (113 kt)
Barrel Roll	130 mph (113 kt)
Snap Roll	100 mph (87 kt)
Wing over	120 mph (104 kt)
Hammer head stall	120 mph (104 kt)
Spins (flap up, engine idle)	Slow Deceleration

1-9. TYPE OF OPERATION

This airplane is approved for VFR, DAY and for type of operation indicated in supplementary flight manual I, II and III of this flight manual if provided with specified equipment.



1-10. PLACARDS

The expression of the following placards show basic contents, and are not always consistent with actual placards. Refer to the placards on the particular airplane.

(1) In full view of pilot:

(a)

THIS AIRPLANE MUST BE OPERATED AS A NORMAL, UTILITY OR ACROBATIC CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKING AND MANUALS.

(b)

THE APPROVED ACROBATIC MANEUVERS

1. FUEL BOOSTER PUMP "ON" AND IN CASE OF FUEL SELECTOR VALVE SYSTEM, TURN IT TO "LEFT" DURING ACROBATIC FLIGHT.
2. DO NOT KEEP INVERTED ATTITUDE. INVERTED FLIGHT IS PROHIBITED.

ACROBATIC CATEGORY MAX. WEIGHT 2072 LB.

ACROBATIC MANEUVERS ARE LIMITED TO THE FOLLOWING.

<u>MANEUVERS:</u>	<u>ENTRY SPEED:</u>
CHANDÉLLE	155 MPH (117 KNOTS)
LAZY EIGHT	155 MPH (117 KNOTS)
STEEP TURN	135 MPH (117 KNOTS)
STALL (EXCEPT WHIP STALL)	SLOW DECELERATION
LOOP	155 MPH (135 KNOTS)
CUBAN RIGHT	155 MPH (135 KNOTS)
IMBRIKIAN TURN	155 MPH (135 KNOTS)
CLOVER LEAF	155 MPH (135 KNOTS)
AILERON ROLL	130 MPH (113 KNOTS)
BARREL ROLL	130 MPH (113 KNOTS)
SNAP ROLL	100 MPH (87 KNOTS)
WING OVER	120 MPH (104 KNOTS)
HAMMER HEAD STALL	120 MPH (104 KNOTS)
SPINS (FLAP UP, ENGINE IDLE)	SLOW DECELERATION

UTILITY CATEGORY MAX. WEIGHT 2425 LB.

ACROBATIC MANEUVERS ARE LIMITED TO THE FOLLOWING.

STALL (EXCEPT WHIP STALL), STEEP TURN, LAZY EIGHT, CHANDÉLLE, SPINS (FLAP UP, ENGINE IDLE)

NORMAL CATEGORY MAX. WEIGHT 2535 LB.

NO ACROBATIC MANEUVERS INCLUDING SPINS APPROVED.



(c)

THIS AIRPLANE IS APPROVED FOR
VFR DAY

or

THIS AIRPLANE IS APPROVED FOR
VFR DAY-NIGHT

or

THIS AIRPLANE IS APPROVED FOR
VFR-IFR DAY

or

THIS AIRPLANE IS APPROVED FOR
VFR-IFR DAY-NIGHT

(d)

THE DESIGN MANEUVERING SPEED NORMAL AND UTILITY CATEGORY	143 MPH (124 KNOTS)
ACROBATIC CATEGORY	154 MPH (134 KNOTS)
THE DEMONSTRATED CROSS WIND	15 KNOTS

(e)

DURING FLIGHT, AVOID CONTINUOUS
OPERATION FROM 2250 TO 2950
R.P.M WITH MANIFOLD PRESSURE
BELOW 15 INCHES MERCURY

(2) On flap handle:

FLAP EXTENDED SPEEDS	
15°	139 MPH (121 KNOTS)
25°, 35°	119 MPH (103 KNOTS)

(3) On baggage shelf:

MAXIMUM BAGGAGE WEIGHT 20kg OR 44 LBS
BAGGAGE SHELF
NO BAGGAGE IN ACROBATIC FLIGHT

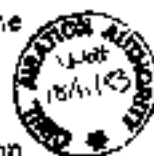
(4) On door of baggage room:

MAXIMUM BAGGAGE WEIGHT 80kg OR 176 LBS
BAGGAGE ROOM
NO BAGGAGE IN ACROBATIC FLIGHT

CIVIL AVIATION AUTHORITY

ADDITIONAL INFORMATION FOR BRITISH CERTIFICATION

CAA Change Sheet 1 Issue 1 to the Fuji FA-200-180 JCARB-approved Airplane
Flight Manual 200-010607E dated 17 September 1973.



Fuji
FA-200-180

Constructor's
Serial No. FA 200-235

Registration
Marks G-BBRC

The aeroplane is to be operated in accordance with the following information in addition to that contained in the Flight Manual and in any approved appendix, supplement or change sheet.

SECTION I - LIMITATIONS

The following information is applicable.

1 - 10. PLACARDS

There may be difficulty in opening the pilot's canopy in an emergency because the latch is spring-loaded and the handle must be turned fully for the hook to disengage.

Warning arcs of 120° must be painted in red on the inside and outside of the canopy adjacent the handle with the words TO UNLATCH, TURN HARD AGAINST SPRING and this marking is to have an additional arrow painted alongside.

To be inserted at the end of PLACARDS in Section I, Limitations, and the
CAA revision record sheet to be amended accordingly.



SECTION II NORMAL PROCEDURES

2-1. PREFLIGHT CHECK

2-1-1. EXTERIOR CHECK

Make sure the following items before the exterior check:

- (1) Check the maintenance conditions by the record.
- (2) Make sure that the master switch and the ignition switch "OFF"
- (3) Unlock the flight controls.

NOTE

Do not unlock them if high winds are present.

The check should be started from the trailing edge of the inboard part of the left wing. During the exterior check, make sure that all inspection hole covers are securely attached and check all airplane surfaces for twisting, depression, loose rivets, damage to skin and other remarkable defects.

- (4) Trailing Edge of L.H. Wing
 - (a) Check condition of flap and aileron.
 - (b) Move aileron to check for looseness.
- (5) Tip and Upper and Lower Surfaces of L.H. Wing
 - (a) Check general condition of wing tips, navigation light, landing and taxi light and wing leading edge. (Remove the pitot tube cover.)
 - (b) Check the fuel quantity. Fuel filler cap - LOCK.
 - (c) Drain water from the fuel drain valve.
 - (d) Check the inlet of syphon breaker of fuel tank for obstruction. (With syphon breaker system)
Check the vent hole of fuel tank for obstruction.
(Other than above)



- (6) L.R. Main Landing Gear
 - (a) Check the shock strut for damage, oil leak and proper extension.
 - (b) Check the brakes for damage, oil leak and sign of overheating.
 - (c) Check the wheel for damage and proper inflation. Inspect the slip mark to be aligned.
 - (d) Make sure that the chock is placed properly.
- (7) L.H. forward Fuselage and Engine Compartment
 - (a) Check the cowling for damage. See if it is positively locked.
 - (b) Inspect the ADF sense antenna (whip type) for security.
- (8) Airplane Nose Section
 - (a) Inspect propeller for nicks, cracks and security of installation.
 - (b) Check condition of propeller spinner.
 - (c) Check the air filler for obstructions.
- (9) Nose Landing Gear
 - (a) Check the shock strut for damage, oil leak and proper extension.



- (6) L.H. Main Landing Gear
 - (a) Check the shock strut for damage, oil leak and proper extension.
 - (b) Check the brake for damage, oil leak and sign of overheating.
 - (c) Check the wheel for damage and proper inflation. Inspect the slip mark to be aligned.
 - (d) Make sure that the chock is placed properly.
- (7) L.H. Forward Fuselage and Engine Compartment
 - (a) Check the baffles for loose attachment or damage.
 - (b) Inspect well for oil, fuel or exhaust gas leak in the engine compartment.
 - (c) Check the oil cooler and miscellaneous ducts for damage.
 - (d) Inspect the ignition plugs, ignition harness and engine control system for security.
 - (e) Check the engine assembly and its mount for damage and security.
 - (f) Check the cowling for damage. See if it is positively locked.
 - (g) Inspect the ADF sense antenna (whip type) for security.
- (8) Airplane Nose Section
 - (a) Inspect propeller for nicks, cracks and security of installation.
 - (b) Check condition of propeller spinner.
 - (c) Check the air filler for obstructions.
- (9) Nose Landing Gear
 - (a) Check the shock strut for damage, oil leak and proper extension.



- (b) Inspect the centering mechanism or the nose wheel steering for damage and proper installation.
 - (c) Check the wheel for damage and proper inflation. Inspect the slip mark to be aligned.
- (10) R.H. Forward Fuselage and Engine Compartment
- Accomplish the following, in addition to the items prescribed in (7) L.H. Forward Fuselage;
- (a) Inspect the fuel strainer for security. Drain water from the fuel strainer.
 - (b) Check the oil quantity. Oil filler cap --- CLOSED.
- (11) R.H. Main Landing Gear
- The same as (6) L.H. Main Landing Gear.
- (12) Tip and Upper and Lower Surfaces of R.H. Wing
- The same as (5) Tip and Upper and Lower Surfaces of L.H. Wing except pitot tube, landing and taxi light. And in addition to the items above mentioned, accomplish the following.
- (a) Inspect stall warning switch for security.
- (13) Trailing Edge of R.H. Wing
- The same as (4) Trailing Edge of L.H. Wing.
- (14) R.H. Aft Fuselage
- (a) Inspect R.H. Step and the VHF antenna for security.
 - (b) Check general condition of skin and check the static pressure hole for obstruction.
- (15) Empennage
- (a) Check general condition of control surfaces (elevator, rudder, elevator trim tab).
 - (b) Check operation of surfaces.



- (c) Check general condition of anti-collision light, tail light and VOR antenna for security.
- (16) L.E. Aft Fuselage
 - (a) Inspect the tail skid for security.
 - (b) Check general condition of skin and check the static pressure hole for obstruction.
 - (c) Check the vent holes of the fuel tanks and sump tank for obstruction. (With the siphon breaker system)
Check the vent hole of the sump tank for obstruction.
(With vent hole of the sump tank)
 - (d) Drain water from the sump tank drain.
 - (e) Inspect the ADF loop antenna for security.
 - (f) Check the lock of baggage room door.

2-1-2. INTERIOR CHECK

Accomplish the following checks immediately after boarding.

- (1) Baggage --- properly SECURED.
- (2) The first aid kit and emergency signal --- properly INSTALLED.
- (3) Check the pressure of the fire extinguisher.
- (4) Safety belts --- FASTENED. Check the belts and their attachments for damage.
- (5) Check the windshield for dirtiness or damage.
- (6) Sliding canopy --- CLOSED AND LOCKED.
- (7) The pilot check list --- CARRIED.
- (8) Flight controls --- check for freedom of movement and proper response.
- (9) Check the travel, smoothness of movement and locking mechanism of the engine control system.
- (10) Elevator trim tab --- TAKE-OFF position (NEUTRAL).



- (11) Rudder trim tab --- LEFT position.
- (12) All switches --- OFF.
- (13) Brakes --- check for travels.
- (14) Parking brake --- SET (Depress pedals fully and pull the parking brake knob fully.)
- (15) Alternate air --- COLD (push the knob fully.)
- (16) VHF switch --- OFF.
- (17) Flap handle --- 0°.
- (18) Mixture lever --- LEAN.
- (19) Throttle --- CLOSED.
- (20) Master switch --- ON.
- (21) Check the indication of the fuel quantity.
- (22) Pitot heater --- Turn it ON, and after the ground crew signs to be ON, turn it OFF.
- (23) Gyro horizon and directional gyro with cage mechanism --- CAGE.

Night Flight

Before conducting a night flight, accomplish the following checks in addition to the above-mentioned:

- (24) Instrument light, map light, cabin light and compass light --- ON.
- (25) Navigation lights, tail light --- ON.
- (26) Taxi lights, landing lights --- ON.
- (27) Anti-collision light --- ON.

2-2. ENGINE STARTING

Before starting the engine, have a ground crew posted and check the propeller area to be sure it is clear.

- (1) Fuel shut-off valve --- ON
or fuel selector valve --- Fullest tank.
- (2) Pitch lever --- INCREASE. (low pitch)



- (3) Mixture lever --- IDLE-CUT-OFF.
- (4) Throttle lever --- Push approximately scale one position.
- (5) Booster pump switch --- ON.
- (6) Mixture lever --- FULL RICH for 1 ~ 2 seconds, then return to IDLE-CUT-OFF.
- (7) Ignition switch --- BOTH.
- (8) Starter switch --- START PUSH.
- (9) As soon as engine starts, move mixture lever slowly and smoothly to FULL RICH.
- (10) Adjust the throttle to set the engine speed at 900 ~ 1000 rpm.
- (11) Check the oil pressure indicator. (Observe the rise of oil pressure)
- (12) Booster pump switch --- OFF.

CAUTION

If the oil pressure does not rise to 25 psi within 30 sec. after engine starting, shut down the engine and investigate the cause.

CAUTION

If engine does not start after continuous starting operation for 10 ~ 12 seconds, assume it to be over-primed, place mixture in IDLE-CUT-OFF, booster pump switch OFF and operate starter for 1 ~ 2 seconds until excess fuel is removed, then repeat above engine starting procedure.

2-3. WARM UP

Accomplish engine warm up run between 1000 and 1200 rpm until the oil temperature rises to a certain level and the oil pressure stabilizes. Do not open up the throttle before the oil temperature exceeds 38°C (yellow arc).

- (1) Throttle --- 1000 ~ 1200 rpm.



- (2) Check the engine instruments (including ammeter) for proper indication.
- (3) VHF Switch --- ON.
- (4) VHF sensitivity adjusting knob --- Adjust the volume.
- (5) Flap operation check --- Lower the flap to 15°, 25° and 35°. Then raise it to 0°.
- (6) Idle check --- Close the throttle to check the engine speed decreases between 650 and 750 rpm.
- (7) Ignition switch check --- Set the engine speed at 650 ~ 750 rpm, turn it OFF momentarily and return it to BOTH to see if engine should stop firing momentarily. Accomplish this check quickly to avoid back-fire.

2-4. TAXING

Before taxiing, check and confirm the following items.

- (1) Altimeter --- check setting with tower.
- (2) Gyro horizon and directional gyro with cage mechanism --- SET.
- (3) Wheel checks --- REMOVED.
- (4) Parking brake --- OFF (Push the knob fully).
- (5) Brake --- Open the throttle gradually to approximately 1000 rpm and roll the airplane straight - forward. As soon as the airplane rolls, check effectiveness of the brakes by using brake pressure smoothly and evenly.

2-5. ENGINE CHECK BEFORE TAKE-OFF

Before entering the runway, set the engine speed at 1400 ~ 1500 rpm, head the airplane to the wind, well clear of the runway, stop the airplane with its nose wheel straightened and accomplish the following check:

- (1) Parking brake --- SET.



- (2) Engine instruments --- Check for proper indication (including ammeter).
- (3) Ignition system check --- Set the engine speed at 2000 rpm, turn the ignition switch from BOTH to RIGHT and check the drop of engine speed by means of the tachometer (maximum permissible drop 175 rpm). Then, after returning the switch to BOTH, turn it to LEFT, check the drop of engine speed and return it to BOTH again. (Drop-off difference should not exceed 50 rpm.)
- (4) Alternate air control check --- Operate the alternate air knob to check for function.
- (5) Mixture check --- Operate the mixture lever and check its functions.
- (6) Propeller governor check --- Operate the pitch lever and check its functions. (between 2000 ~ 2200 rpm).
- (7) Idle check --- Close the throttle to check the engine speed decrease 650 ~ 750 rpm.
- (8) Maximum power check --- Push the throttle to FULL OPEN smoothly to see if the maximum engine speed reaches 2650 ~ 2700 rpm.
- (9) Acceleration and deceleration check --- Operate the throttles quickly to check the engine acceleration and deceleration functions. However, do not operate it so quickly as to cause back-fires, rough running or coughing.

2-6. CHECK BEFORE TAKE-OFF

Before take-off, check and confirm the following items.

- (1) Sliding canopy --- LOCKED.
- (2) Fuel shut-off valve --- ON
or fuel selector valve --- Fullest tank.
- (3) Fuel booster pump --- ON.
- (4) Elevator trim tab --- TAKE-OFF position (NEUTRAL).



- (5) Rudder trim tab --- RIGHT position.
- (6) Mixture lever --- FULL RICH.
- (7) Pitch lever --- INCREASE. (low pitch)
- (8) Flight controls --- Check for freedom of movement and proper response.
- (9) Flap handle --- Set to 15° (or 0° as necessary)
- (10) Indications of instruments --- See if they are adequate.
- (11) Safety belt --- FASTEN.
- (12) Parking brake --- OFF (push in the parking knob fully.)

2-7. TAKE OFF

Take off in accordance with following steps.

- (1) Align the airplane with the runway, apply the brakes, maintain the engine speed at 1400 ~ 1500 rpm and check the instruments.
- (2) Release the brakes and advance the throttle gradually to accelerate the airplane.
- (3) Lift nose wheel at 60 mph (52 kt) IAS.
- (4) After lift-off, accelerate to 77 mph (67 kt) IAS to clear of obstacle.

Note: The airspeeds specified in this section are applicable to maximum weight. (2935 lbs.)

2-8. CLIMB

- (1) When the airplane is safely airborne, retract the flaps and set the airspeed to the best rate of climb speed of 92 mph (80 kt) IAS.



- (2) It is recommended that the climb speed is reduced by approximately 1 mph/2000 ft. (See para. 4-3.)
Pull the mixture lever to scale 7 at 5000 ft and adjust it as required.
- (3) Turn off the fuel booster pump.

CAUTION

Fuel booster pump ON in hot weather, when fuel pressure fluctuates over 1 psi on indicator which scale range is from 0 psi to 10 psi, or when over 2 psi on indicator which scale range is from 14 psi to 45 psi.

2-9. CRUISE

Selection of cruising speed depends on weight, altitude, flight distance, weather, time etc.

The typical relationship between power and range or endurance is as follows.

(For details, see para. 4-4.)

Altitude 5000 ft, 2200 lbs, 2200 rpm.
M.C. Scale 7, Fuel Reserve 45 min.

Power	MP in. Hg	True Airspeed	Range	Endurance
45% Power	16.9	98 mph (85 kt)	753 mile	7.6 hr
50 "	18.2	106 " (92 kt)	730 "	6.9 "
55 "	19.5	113 " (98 kt)	698 "	6.2 "
60 "	20.8	119 " (103 kt)	660 "	5.6 "
65 "	22.1	124 " (108 kt)	617 "	4.9 "
70 "	23.4	128 " (111 kt)	570 "	4.4 "



In case of fuel selector valve system, during cruise, fuel should be used from the left and right tanks alternately to avoid wing-heaviness. The difference of the fuel remaining in each tank should not exceed 1/8.

CAUTION

When increasing power, first increase the rpm with pitch lever and then increase manifold pressure with throttle lever.
When decreasing power, throttle back to desired manifold pressure and then change pitch lever to desired rpm.

CAUTION

In event of uneven running in cold weather, assume it to be icing of the air filter and use alternate air.

CAUTION

Fuel booster pump ON in hot weather, when fuel pressure fluctuates over 1 psi on indicator which scale range is from 0 psi to 10 psi, or when over 2 psi on indicator which scale range is from 14 psi to 45 psi.

2-10. ACROBAT

- (1) Refer to 1.8 about safety entry speed.
- (2) Before acrobatic maneuvers, fuel booster pump --- ON.
- (3) In case of fuel selector valve system, turn it to "LEFT".
- (4) Do not keep inverted attitude.
- (5) Before acrobatic maneuvers, gyro horizon and directional gyro with cage mechanism --- CAGE.
- (6) Before acrobatic maneuvers, exercise well appendix D, acrobatic manual, which indicates maneuvers, operations and cautions.



2-11. LETTING DOWN

- (1) Be careful not to overcool (below 100°C (212°F)) the cylinder during letting down.
- (2) Mixture lever --- FULL RICH.

2-12. CHECK BEFORE LANDING

Accomplish the following checks before the airplane flies along the circuit around the airfield:

- (1) Mixture lever --- FULL RICH.
- (2) Fuel shut-off valve --- ON
or fuel selector valve --- Fullest tank.
- (3) Pitch lever --- INCREASE. (low pitch)
- (4) Fuel booster pump --- ON.
- (5) Safety belt --- FASTENED.
- (6) Alternate air --- Use it as necessary.

2-13. LANDING

- (1) Set the flaps to 15° and maintain airspeed at 90 mph (78 kt) IAS during base leg.
- (2) After turning for the final approach, descend with the flaps set to 35° and maintain airspeed at 80 mph (70 kt) IAS.
- (3) Let the main wheels touch the ground at approximately 63 mph (55 kt) IAS.

2-14. GO-AROUND

- (1) Throttle --- FULL.
- (2) Flaps --- Retract flaps from 35° to 15° slowly.
- (3) Elevator trim tab --- NEUTRAL.
- (4) Rudder trim tab --- RIGHT.
- (5) Accelerate to 77 mph (67 kt) IAS to clear of obstacle.



- (6) When the airplane is safely airborne, retract the flaps to 0° slowly, set the airspeed to the best rate of climb speed of approximately 92 mph (80 kt) IAS and adjust the trimming.

2-15. AFTER LANDING

Accomplish the following checks after landing:

- (1) Fuel booster pump --- OFF.
- (2) Flap handle --- Retract.
- (3) Elevator trim tab --- NEUTRAL.
- (4) Rudder trim tab --- LEFT.
- (5) Gyro horizon and directional gyro with cage mechanism --- CAGE.

2-16. STOP

Stop the airplane and take the following procedures:

- (1) Parking brake --- SET.
- (2) Engine instruments --- Confirm all of them are within limits.
- (3) Cool-off run --- Stop the engine after cool-off run when the cylinder head temperature is high.
- (4) Mixture lever --- IDLE CUT OFF (Pull it fully).
- (5) Throttle --- CLOSED after the propeller has stopped completely.
- (6) Switches for electrical system and ignition switch --- OFF.
- (7) Fuel shut off valve --- OFF
or fuel selector valve --- OFF.
- (8) Master switch --- OFF.



2-17. BEFORE LEAVING AIRPLANE

- (1) Control wheel --- FIXED.
- (2) After placing the wheel chocks in position release the parking brake.



SECTION III EMERGENCY PROCEDURES

3-1. ENGINE FAILURE

3-1-1. ENGINE FAILURE DURING TAKE OFF.

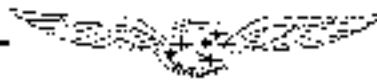
In case of engine failure during take-off run, close the throttle and apply brakes immediately.

If engine failure occurs when the remaining runway is insufficient for stopping, take the following procedure:

- (1) Throttle --- CLOSED.
- (2) Mixture Lever --- IDLE CUT OFF.
- (3) Fuel shut-off valve --- OFF
or fuel selector valve --- OFF.
- (4) If time permits, turn off the ignition switch and the master switch.
- (5) Avoiding obstacles, stop the airplane and leave it at once.

3-1-2. WHEN SUFFICIENT LENGTH OF RUNWAY IS NOT LEFT IN CASE OF ENGINE FAILURE AFTER LIFT-OFF.

- (1) Maintaining the airspeed, fly straight forward and look for a place for forced landing. Turn at low altitude should be avoided as far as possible.
- (2) Throttle --- CLOSED.
- (3) Mixture lever --- IDLE CUT OFF.
- (4) Fuel shut-off valve --- OFF
or fuel selector valve --- OFF.
- (5) Ignition switch --- OFF.
- (6) Master switch --- OFF.
- (7) Open the canopy, if possible.
- (8) Avoiding obstacles and selecting a place as flat as possible, make a forced landing.



3-1-3. ENGINE FAILURE DURING FLIGHT

- (1) Maintain the airspeed at 100 mph (87 kt) IAS with propeller in high pitch position.
- (2) If there is sufficient altitude and circumstances permit, re-start the engine as follows.
 - (a) Fuel shut-off valve --- Check ON
or fuel selector valve --- Check Fulllest tank.
 - (b) Master switch --- Check ON.
 - (c) Ignition switch --- Check BOTH.
 - (d) Pitch lever --- INCREASE (low pitch).
 - (e) Throttle lever --- Push slightly.
 - (f) Fuel booster pump --- ON.
 - (g) Mixture lever --- FULL RICH.
 - (h) Starter switch --- START PUSH. (as required)
 - (i) If icing is likely to take place,
Alternate air --- HOT.
- (3) If time does not permit engine re-starting, or engine fails to re-start, make a forced landing with following procedure maintaining the airspeed at 100 mph (87 kt) IAS and taking care of altitude.
 - (a) Mixture lever --- IDLE CUT-OFF.
 - (b) Throttle --- CLOSED.
 - (c) Ignition switch --- OFF.
 - (d) Master switch --- OFF.
 - (e) Fuel shut-off valve --- OFF
or fuel selector valve --- OFF.
 - (f) Open the canopy before landing.
 - (g) Avoid obstacles and selecting a place as flat as possible,
make a forced landing.



3-2. PROPELLER CONTROL SYSTEM FAILURE

If the propeller becomes uncontrollable, continue flight under reduced power keeping rpm from exceeding maximum limit.

3-3. FIRE

3-3-1. ENGINE FIRE DURING ENGINE START.

If fire occurs in exhaust or induction system, continue starting attempt.

If the start is unsuccessful, or engine starts and fire persists, take the following procedure.

- (1) Mixture lever --- IDLE CUT-OFF.
- (2) Fuel shut-off valve --- OFF
or Fuel selector valve --- OFF.
- (3) Ignition switch, Master switch --- OFF.
- (4) Get clear of aircraft and use fire extinguishers.

3-3-2. ENGINE FIRE DURING FLIGHT

- (1) Cabin heater knob --- Push fully.
- (2) Mixture lever --- IDLE CUT-OFF.
- (3) Fuel shut-off valve --- OFF
or fuel selector valve --- OFF.
- (4) Ignition switch, master switch --- OFF.
- (5) Maintain the airspeed at 100 mph (87 kt) IAS.
- (6) Open the canopy, if possible.
- (7) Avoid obstacles and selecting a place as flat as possible, make a forced landing.



3-3-3. CABIN FIRE DURING FLIGHT

- (1) Master switch --- OFF.
- (2) If necessary to stop the engine;
Mixture lever --- IDLE CUT-OFF,
Fuel shut-off valve --- OFF or Fuel selector valve --- OFF,
Ignition switch --- OFF.
- (3) Use fire extinguisher.

CAUTION

After the use of fire extinguisher, open the canopy and canopy air intake as soon as possible.

- (4) When fire extinguished and if there is sufficient altitude and circumstances permits, re-start the engine following 3.1.3 (2).
- (5) If engine fails to re-start, make a forced landing following 3.1.3 (3).

3-4. BAIL-OUT

: Handling the parachute shall be exercised previously.

- (1) Reduce airplane speed as much as possible with full flaps.
- (2) Canopy --- OPEN.
- (3) Safety belt and shoulder harness --- UNFASTENED.
- (4) Crawl out on the wing and dive off the trailing edge head first.



SECTION IV PERFORMANCE

The following performance charts were obtained from flight test data and may be realized under conditions indicated with the airplane and engine in good condition, and with average piloting techniques.

CIVIL AVIATION AUTHORITY
ADDITIONAL LIMITATIONS AND INFORMATION
FOR UNITED KINGDOM CERTIFICATION

CAA Change Sheet 2 Issue 1 to the Fuji-200-180 JCAB approved Airplane Flight Manual 200-010007E dated 17 September 1973.

FUJI	Constructor's	Registration
<u>FA-200-180</u>	<u>Serial No FA 200-235</u>	<u>Mark G-BBRC</u>

The aeroplane is to be operated in accordance with the following information in addition to that contained in the Flight Manual and in any approved appendix, supplement or change sheet.

SECTION 4 - PERFORMANCE

The following information is applicable:

- 4 - 1 Take-Off Performance: Increase take-off run and distance to 50 ft by 15%.
- 4 - 2 Reduce climb rate by 200 ft/min.

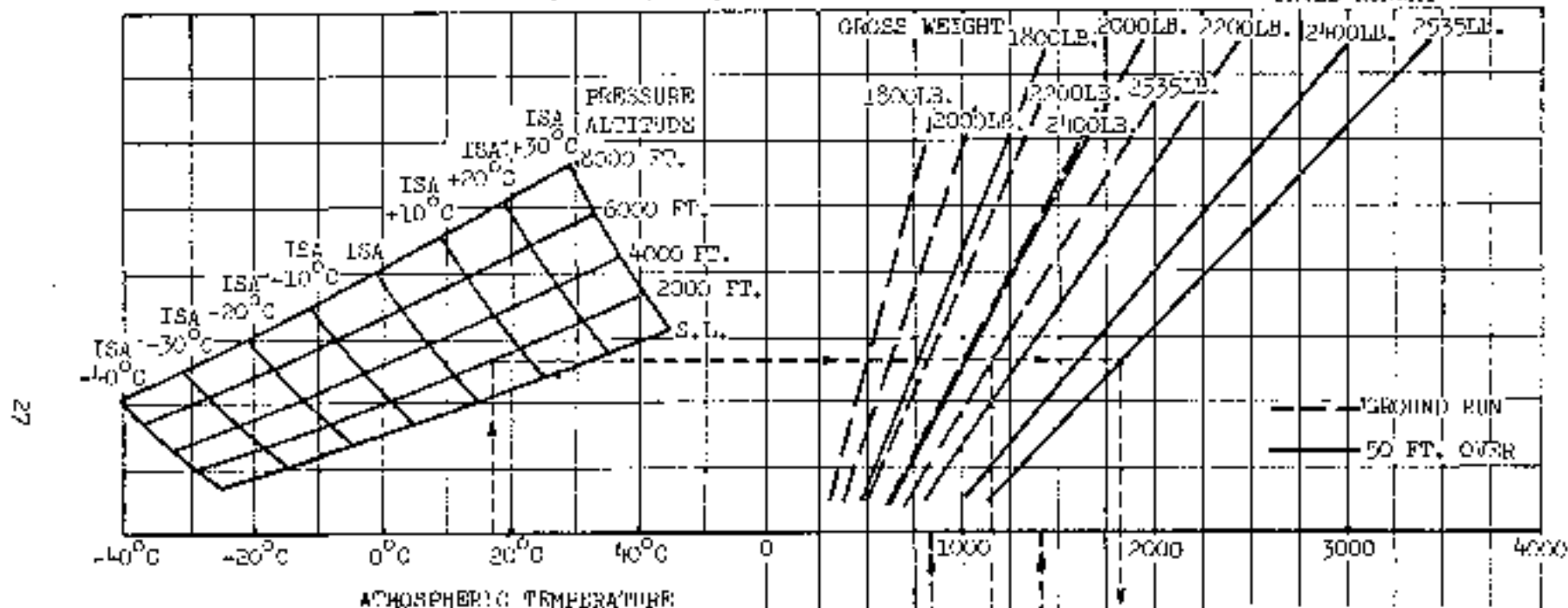
To be inserted facing existing page 27 and the CAA revision sheet to be amended accordingly.



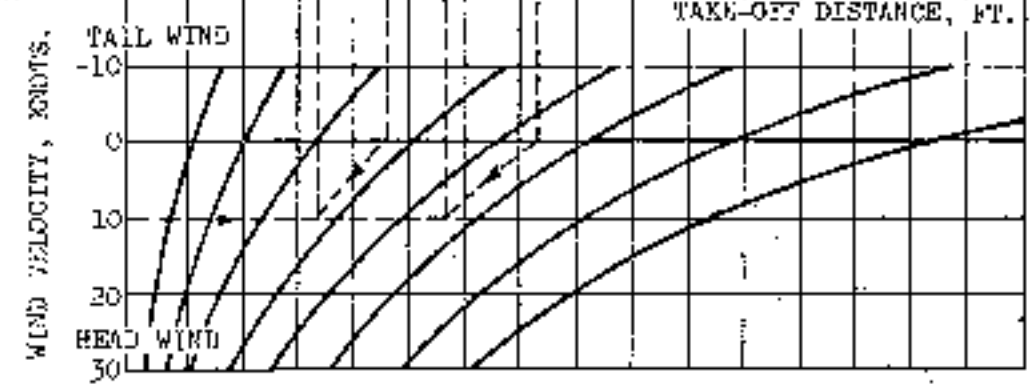
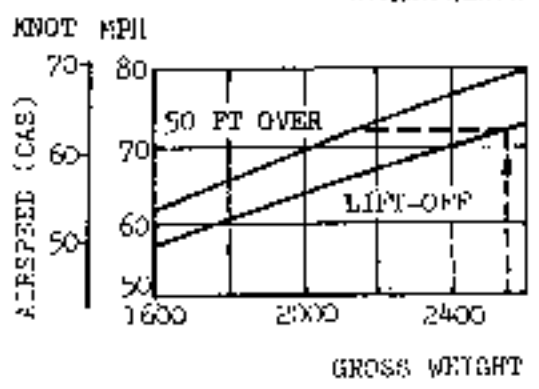
4-1. TAKE-OFF PERFORMANCE

For flap up take-off, increase distances by 15% and airspeeds by 6 mph.

FLAP 15°
PAVED RUNWAY



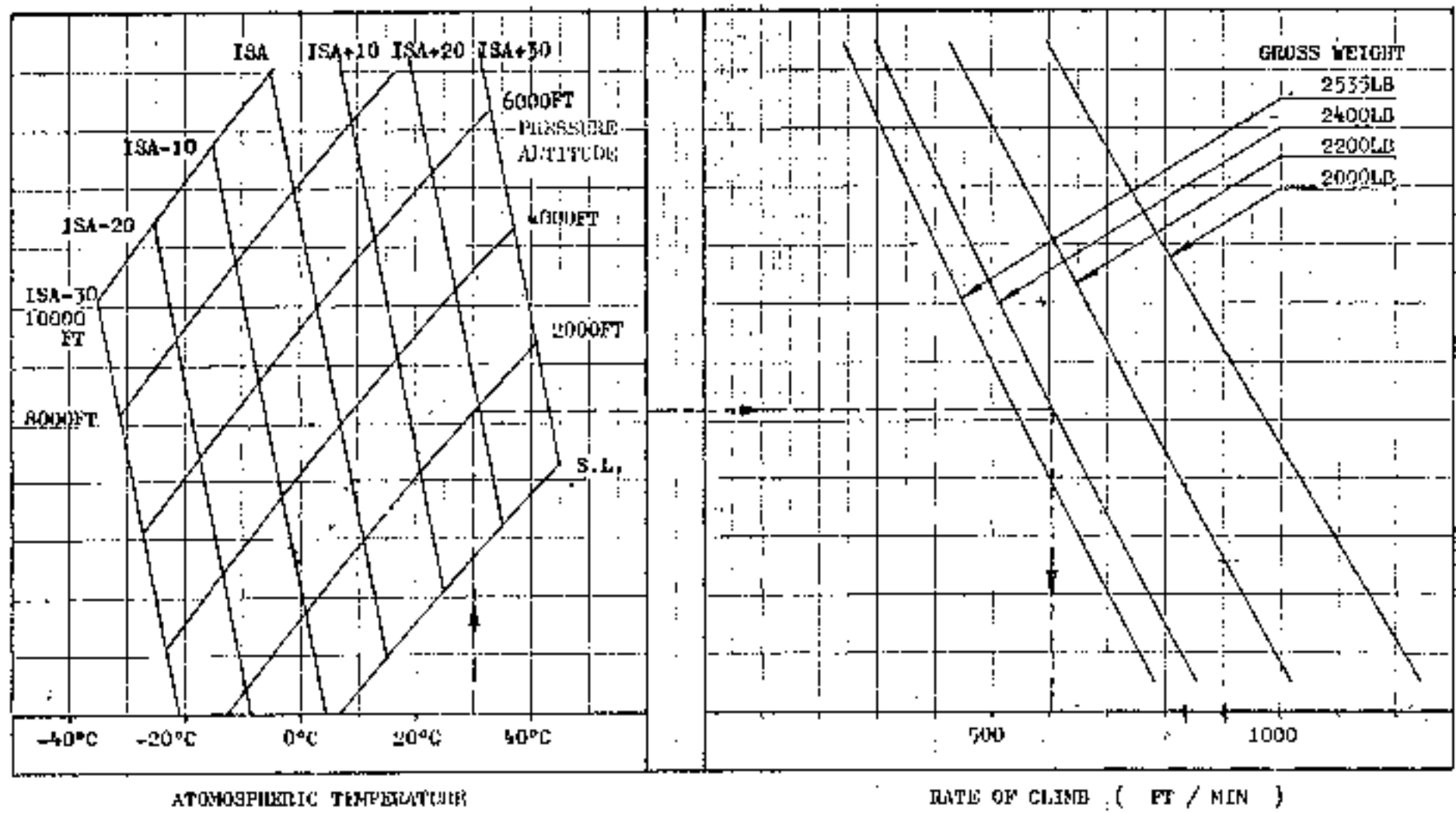
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PL 14-003-150
DOA APPROVED,
February 5, 1973

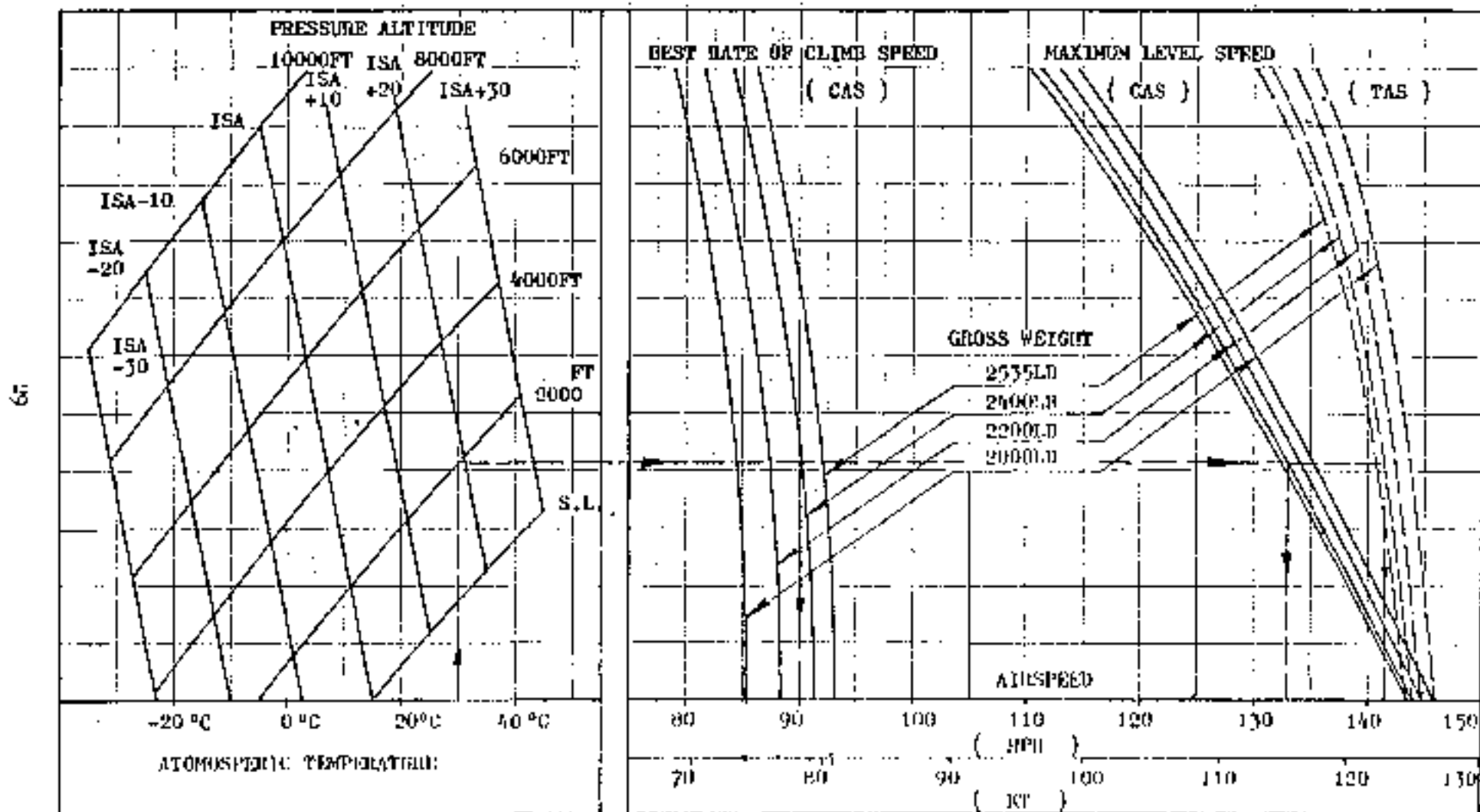
SECTION IV
PERFORMANCE

4-2 CLIMB PERFORMANCE



28

A-3 BEST RATE OF CLIMB SPEED AND MAXIMUM LEVEL SPEED



Maximum level speed increment with speed fairing is 3mph.

FIG 1 FA-381-180
 JCAD APPROVED
 SEPTEMBER 17, 1977



SECTION IV
 PERFORMANCE

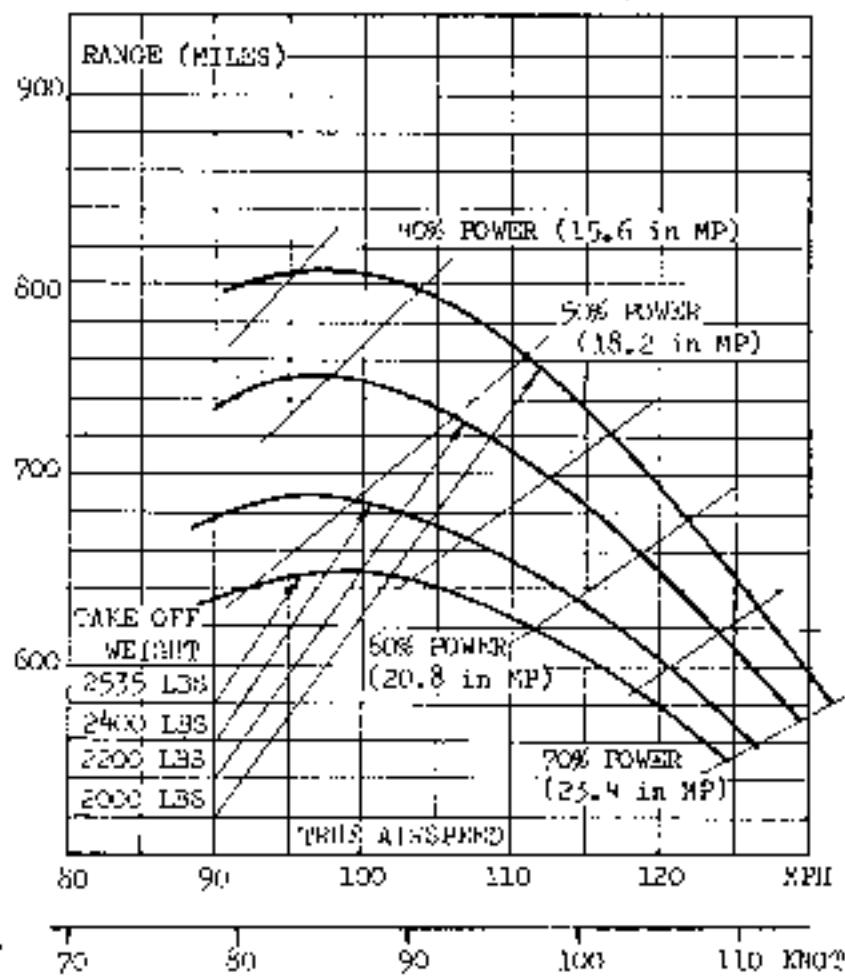
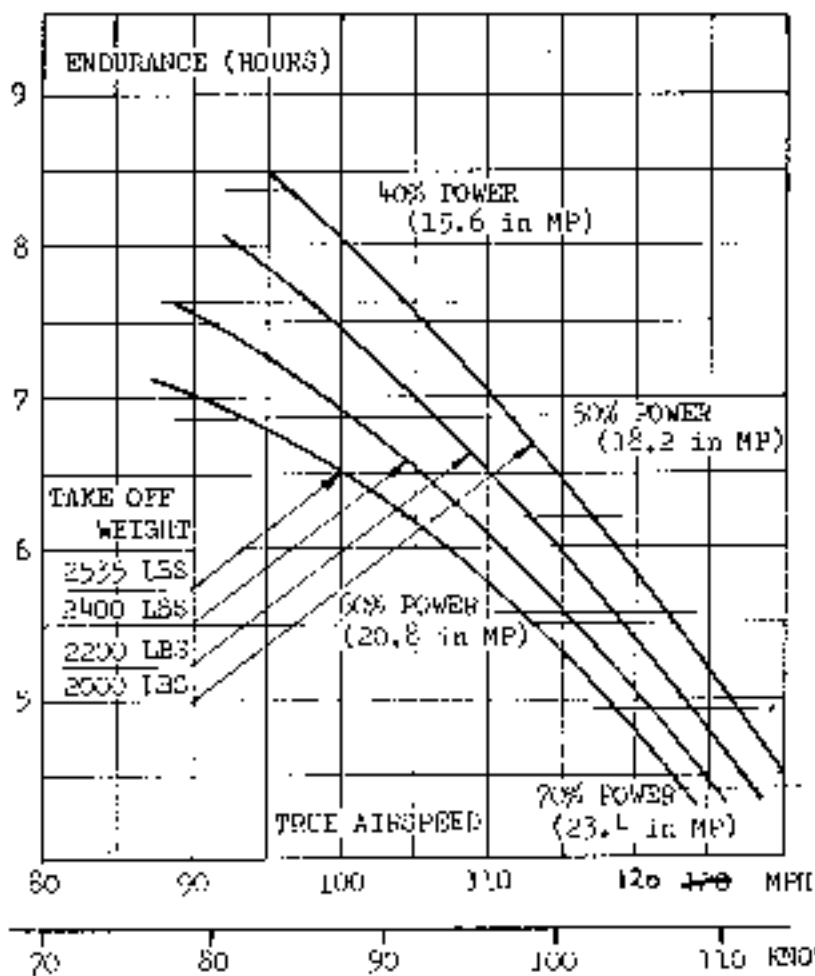
4-4-1. CRUISING PERFORMANCE (I)

AT 5000 FT
 2200 rpm
 M.C. Scale 7
 FUEL RESERVE 45 min.

FIG 7A-200-180
 JCSB APPROVED,
 August 23, 1972



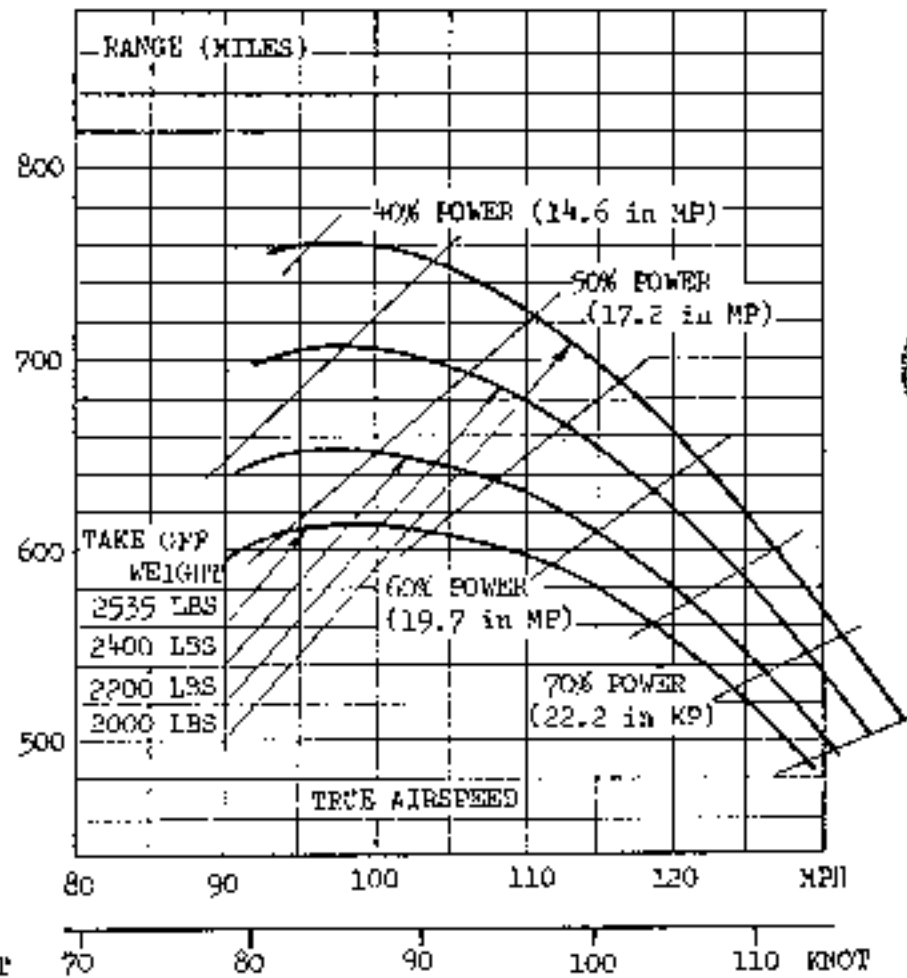
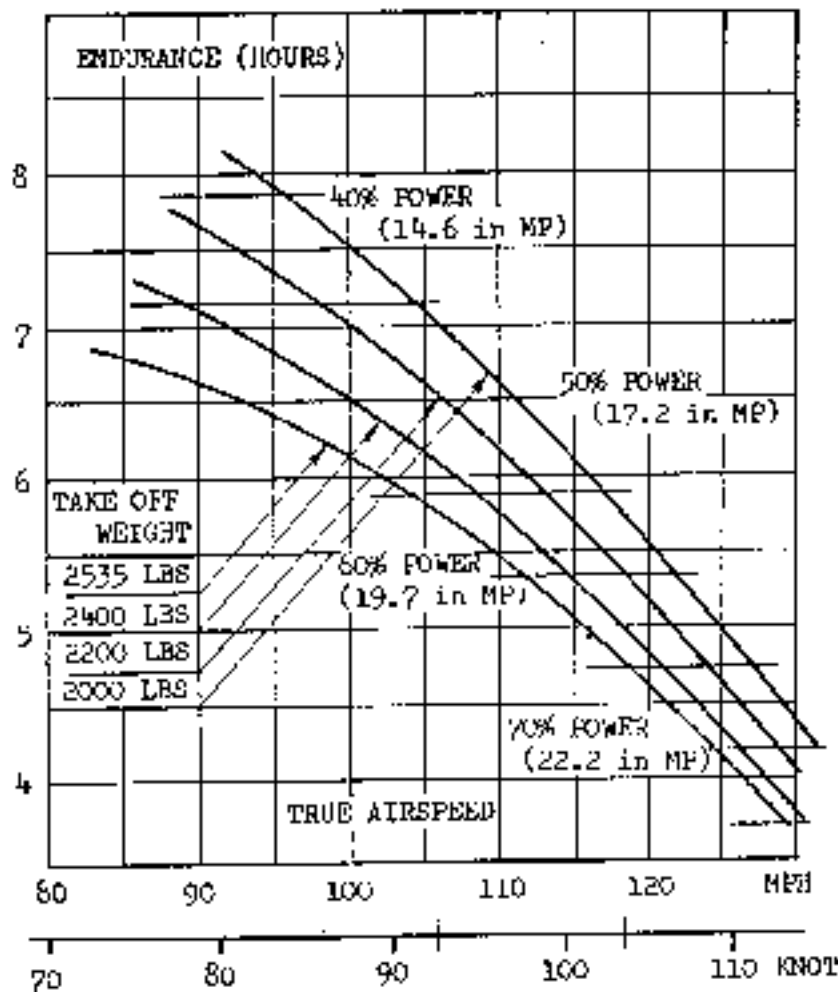
SECTION IV
 PERFORMANCE



4-4-2. CRUISING PERFORMANCE (2)

AT 5000 FT
 2400 rpm
 M.C. Scale 7
 FUEL RESERVE 45 min.

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FUJI FA-200-180
 JCAB APPROVED,
 February 16, 1972

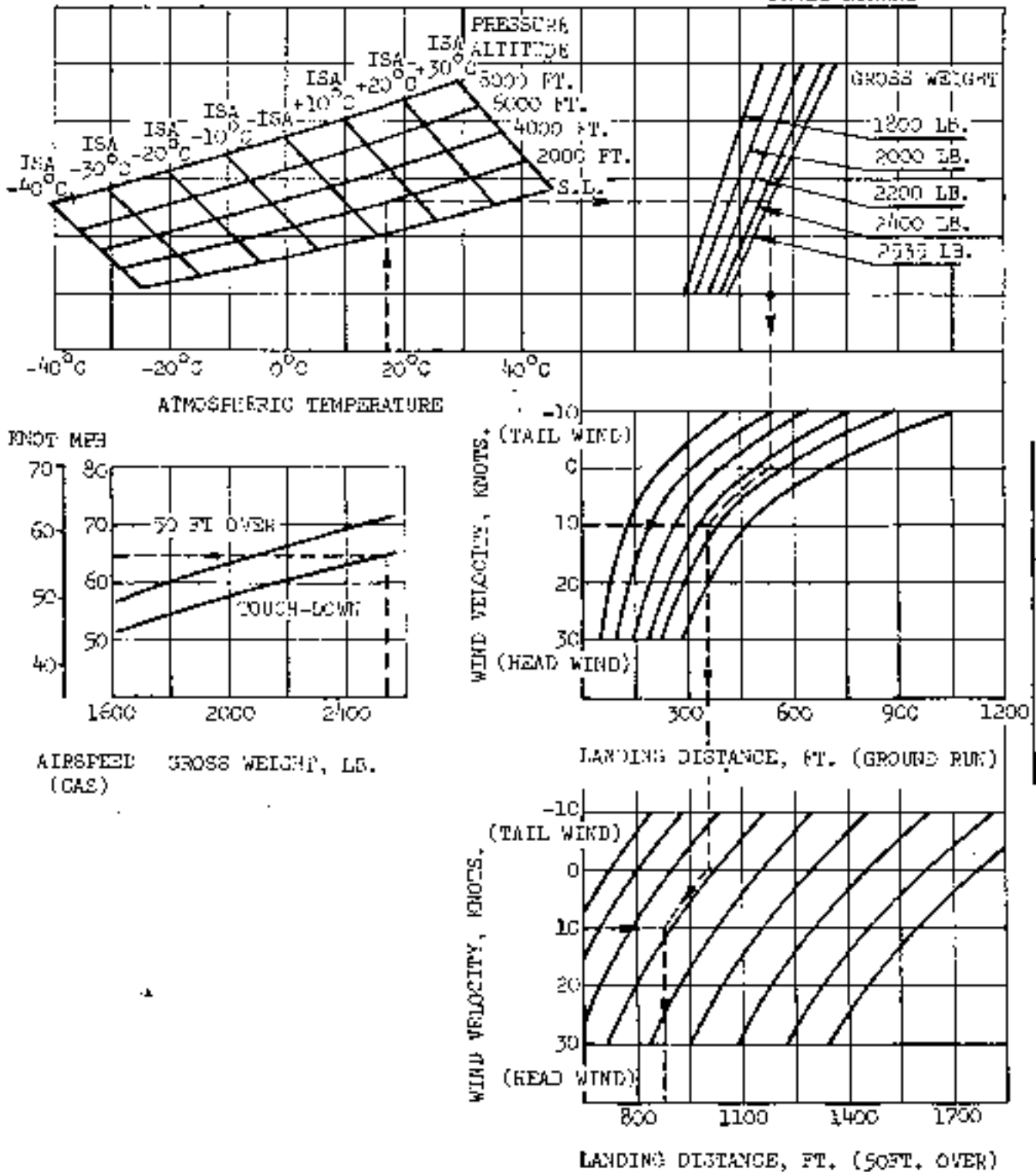


SECTION IV
 PERFORMANCE



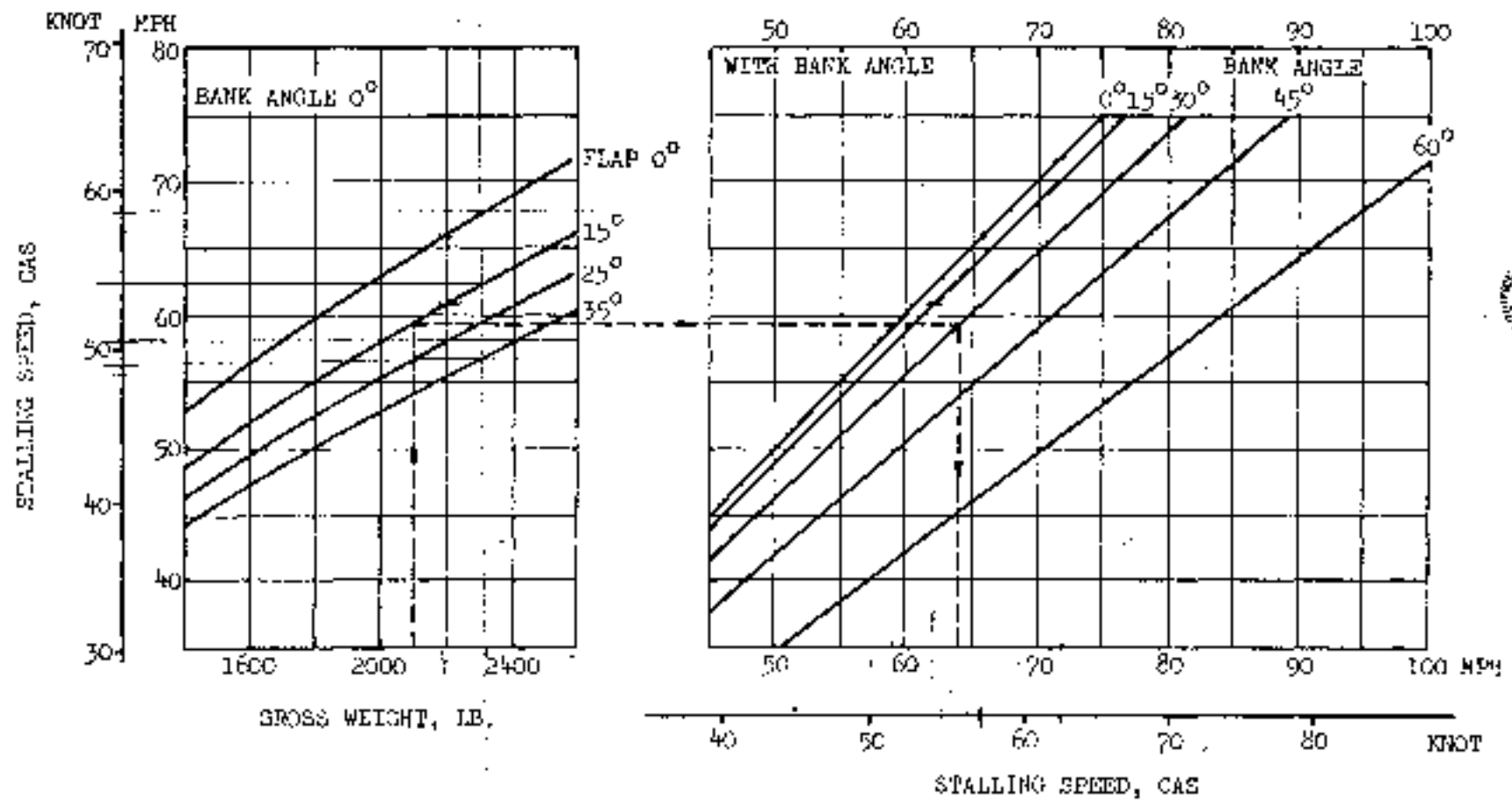
4-5. LANDING PERFORMANCE

FLAP 35°
 PAVED RUNWAY



4-6. STALLING SPEED

FUJI FA-206-180
 JOAB APPROVED,
 February 8, 1975



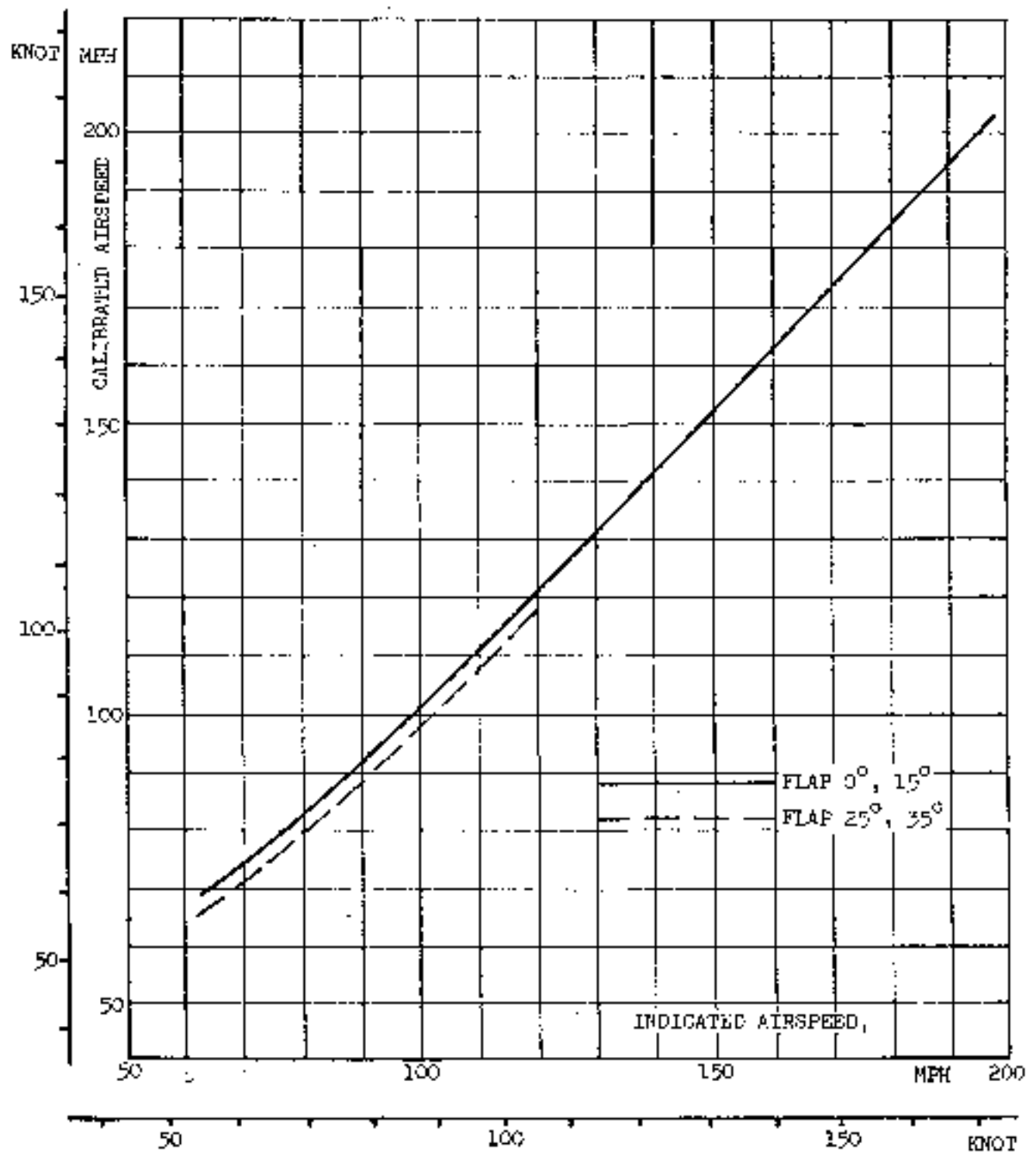
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SECTION IV
 PERFORMANCE

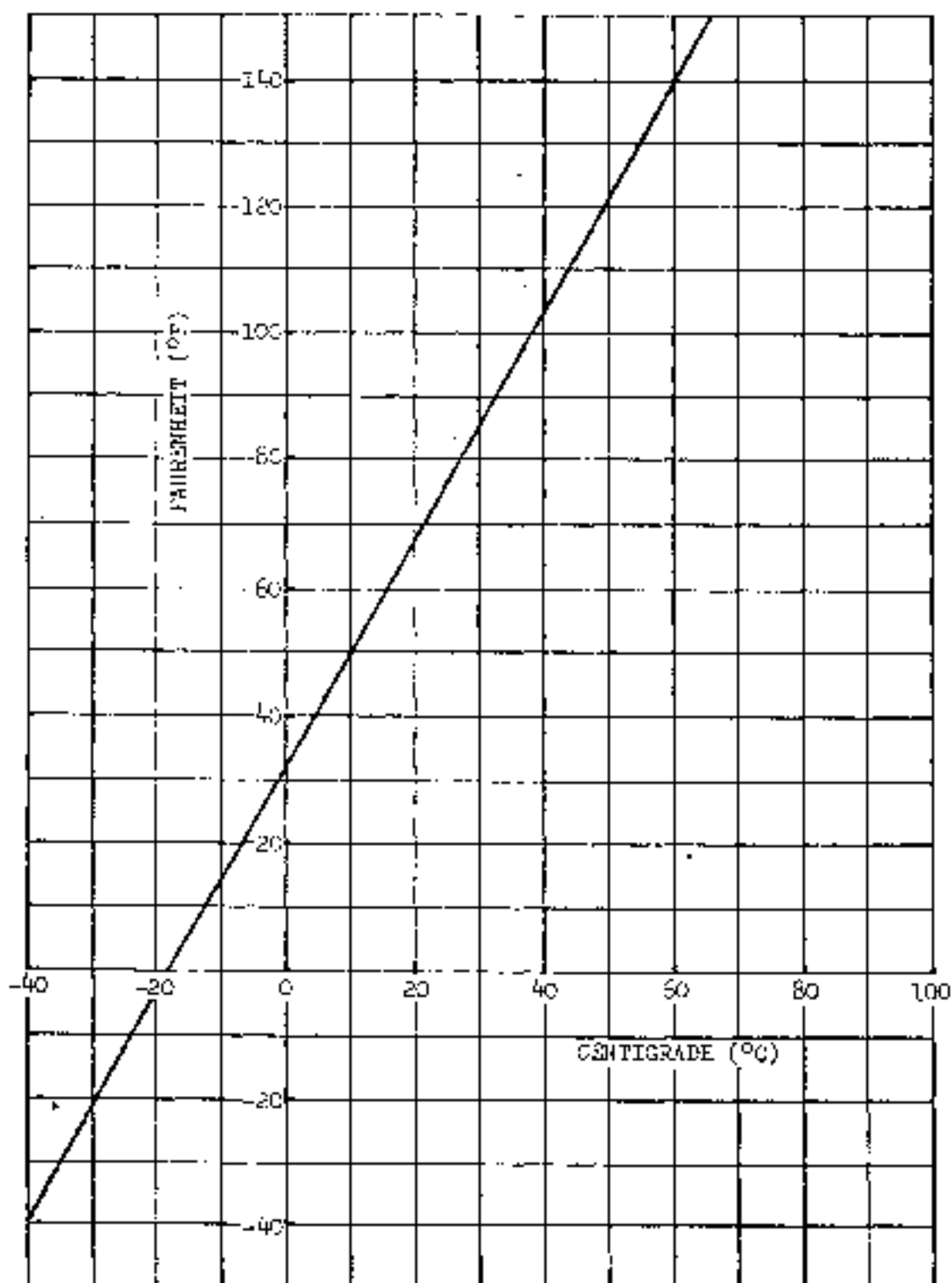


4-7. AIRSPEED CORRECTION TABLE





APPENDIX A TEMPERATURE CONVERSION TABLE





APPENDIX B EMPTY WEIGHT AND CENTER OF GRAVITY

Model : FUJI FA-200-180

Serial No. :

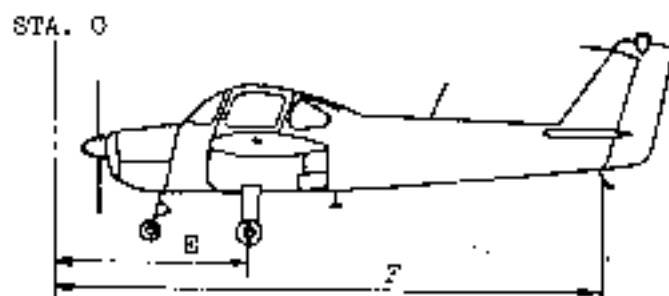
Registration No. :

Observer

Date of Measurement

Inspector

Measuring Equipment



E = 113.19 in.

F = 280.51 in.

Measurement	Scale Reading	Tare	Net Weight	Arm(STA)	Moment
L.H. main gear	lb.	lb.	lb.	---	---
R.H. main gear	lb.	lb.	lb.	---	---
Sub Total	---	---	lb.	113.19 in.	in-lb.
Tail skid	lb.	lb.	lb.	280.51 in.	in-lb.
Total	---	---	lb.	in.	in-lb.
Correction					
Undrainable oil	---	---	1.1 lb.	38.20 in.	42.0 in-lb.
Unusable fuel	---	---	12.0 lb.	101.30 in.	1215.6 in-lb.
Grand Total (Empty weight and C.G.)			_____ lb.	_____ in.	_____ in-lb.
				_____ % MAC	

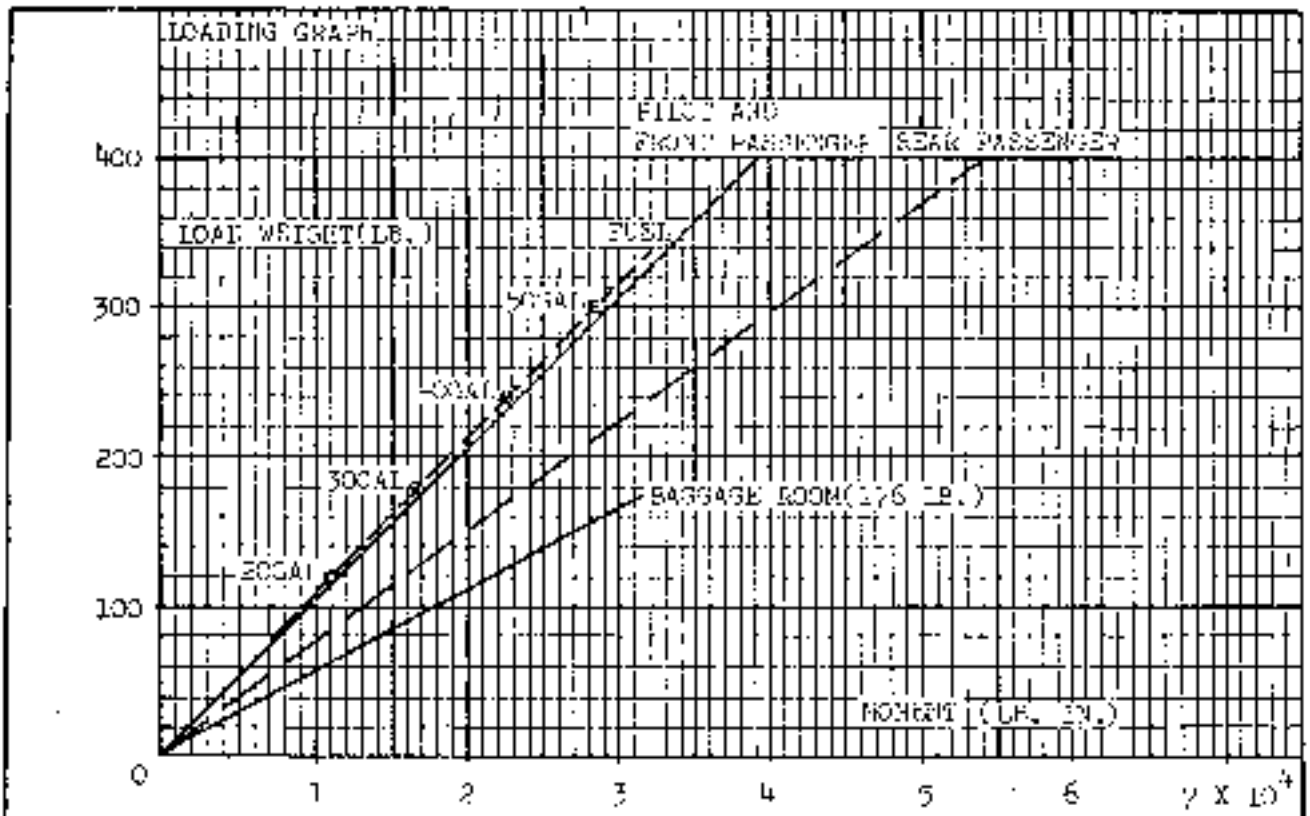
Conversion Formula for C.G.

$$\text{C.G. (\% MAC)} = \frac{\text{C.G. (in.)} - 81.97}{60} \times 100$$

NOTE: Mean Aerodynamic Chord : 60 in.

Datum point (STA = 0) : 107.17 in. ahead of center of main spar.

Leading edge location of mean aerodynamic chord : STA 81.97





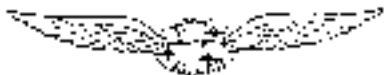
APPENDIX C EQUIPMENT LIST

NOTE:

1. Status of equipment

o : Installed in the airplane at the factory.

X : Not installed on the airplane at the factory.



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Altimeter	TKK LA-10-1	1.3	72.4
	Altimeter	TKK LA-10-1A	1.3	72.4
	Altimeter	TKK LA-71-11	1.5	72.4
	Altimeter	TKK LA-71-11A	1.5	72.4
	Compass, Magnetic	TKK MC-5	0.9	66.5
	Indicator, Turn and Bank	TKK TB-3	1.5	72.4
	Indicator, Turn and Bank	TKK TB-3	1.5	72.4
	Gyro, Horizon	TKK HA-3-1	3.3	72.4
	Gyro, Directional	TKK DA-2-1	3.9	72.4
	Gage, Cylinder Head Temp.	HEW PT14-N1	0.9	72.4
	Gage, Cylinder Head Temp.	HEW PT14-N4	0.9	72.4
	Indicator, Free Air Temp.	TKK OB-11-1A	0.2	78.4
	Indicator, Fuel Quantity	TKK QF-2	0.4 ea	72.4



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Indicator, Airspeed	TKK SA-40-1R	0.4	72.4
	Indicator, Airspeed	TKK SA-40-1RA	0.4	72.4
	Indicator, Rate of Climb	TKK CA-52-1	0.9	72.4
	Indicator, Fuel Press	TKK PF-5-1	0.4	72.4
	Indicator, Fuel Press	TKK PF-60-1	0.4	72.4
	Indicator, Oil Temp.	TKK OT-4	0.9	72.4
	Tachometer	TKK RE-5	0.9	72.4
	Tachometer	TKK RE-51-1	0.9	72.4
	Drive Shaft, Tachometer	TKK FX-1	0.9	56.3
	Drive Shaft, Tachometer	TKK FX-11-6	0.9	56.3
	Gage, Oil Press.	TKK FO-3	0.4	72.4
	Gage, Manifold Air Press.	TKK PM-41-1	1.1	72.4



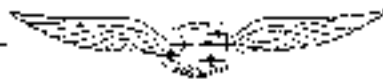
STA- TMS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	SEA (in.)
	Gage, Suction	TKK PS-1-1	0.9	72.4
	Transmitter, Fuel Quantity	TKK QF-32-1	1.3	106.7
	Transmitter, Fuel Quantity	TKK QF-32-2	1.3	106.7
	Transmitter, Fuel Quantity	TKK QF-32-1A	1.3	106.7
	Transmitter, Fuel Quantity	TKK QF-32-2A	1.3	106.7
	Seat, Front	FUJI 200-534210	13.2 ea	100.4
	Seat, Front	FUJI 200-534330	14.5 ea	100.4
	Seat, Rear (Bench)	FUJI 200-534250	8.8	126.0
	Seat, Rear (Bench)	FUJI 200-534335	8.8	126.0
	Seat, Rear (Back Rest)	FUJI 200-534260	8.4	143.7
	Seat, Rear (Back Rest)	FUJI 200-534275	9.5	143.7
	Seat, Rear (Back Rest)	FUJI 200-534337	8.4	143.7
	Headrest	FUJI 200-534301	1.3 ea	110.2
	Belt, Safety (Front Seat)	TKK FSB-6	2.9 ea	97.2



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Belt, Safety (Rear Seat)	TAKATA TK-1200BB	0.9 ea	131.9
	Harness, Shoulder (Front Seat)	FKK 33H-3	0.9 ea	110.2
	Fire Extinguisher, Hand Type	27 TYPE 28	4.6	84.6
	Flashlight	SUIRJKU TYPE 802	0.4	151.6
	First Aid Kit	FUJI 200-534131	1.3	84.6
	Box, Emergency Signal	FUJI 200-534140	5.7	64.2
	Battery	FUJI 200-383600	59.7	150.0
	Battery	FUJI 200-383602	33.1	150.0
	Light, Stall Warning	AN3157-2	0.1	74.0
	VHF Receiver Transmitter	MELC MAR-6Y	10.3	90.2



STA- TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Voltmeter, D.C.	HBM PS04 (AX 3203V-30)	0.9	72.4
	Amplifier, Outside Speaker	DENON NT-600	9.9	157.9
	Amplifier, Outside Speaker	DENON NB-800	9.5	157.9
	Amplifier, Outside Speaker	DENON NT-800	13.2	156.3
	Amplifier, Outside Speaker	TOA CA-800B	22.0	154.7
	Driver Unit	DENON P-35	4.4 ea	173.2
	Driver Unit	TOA TU-253	2.6 ea	173.2
	Straight Horn	DENON H-17L	7.9	175.2
	Horn	FUJI 200-460055	32.6	174.0
	Strainer, Fuel	TSC FIF-40000	0.9	51.2
	Filter, Charge Air	KEC 200-589012	0.9	29.1
	Oil Cooler	FUJI 200-914070	2.4	25.6
	Oil Separator	FUJI 200-914146	1.1	53.6

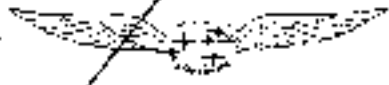


STA- TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Tire and Tube, Main L/G	SRI 5.00-6, 4PLY TT	8.4 ea	113.6
	Tire and Tube, Nose L/G	SRI 5.00-5, 4PLY TT	5.5	43.5
	Speed Fairing, Nose L/G	FUJI 200-82E011	2.4	43.5
	Speed Fairing, Main L/G	FUJI 200-81E016	2.6 ea	113.6
	Speed Fairing, Main L/G	FUJI 200-814011	2.6 ea	113.6
	Amplifier, ICS	FUJI 200-383400	1.1	72.4
	Pitot Tube, Heated	AEI PH502-12	0.9	87.0
	Indicator, Free Oil Temp.	SCI 2716	0.2	74.8
	Ammeter	SCI PNE0962-1	0.4	72.4
	Clock	EDO-AIRE 22-101-05-A	0.9	72.4
	Clock	WW W-33-7510-ET	0.9	72.4
	Gage, Suction	EDO-AIRE 22-880-01-A	0.9	72.4

STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Pump, Vacuum	ARB 200CC	3.9	45.3
	Valve, Relief	AGD 133A3	0.7	59.1
	Filter, Air	ARB 1L6-1	0.4	66.9
	Filter, Air	ARB 1J7-1	0.4	66.9
	Gyro, Horizon	EDO-AIRE MODEL 3000B	2.0	72.4
	Gyro, Horizon	AIM AIM 5000C (14)	3.3	72.4
	Gyro, Directional	EDO-AIRE MODEL 4000B	2.6	72.4
	Gyro, Directional	AIM AIM 2000C (14)	3.7	72.4
	Compass, Magnetic	EDO-AIRE 26-101-01-1(12V)	0.9	66.5
	Compass, Magnetic	AIRPATH C-2300-1/11	0.9	66.5
	Accelerometer	EDO-AIRE 22-580-05A	0.9	72.4
	Accelerometer	EDO-AIRE 22-580-05-1A	0.9	72.4
	Indicator, Airspeed	EDO-AIRE EA-5171-1	0.2	72.4
	Indicator, Rate of Climb	EDO-AIRE 22-201-01-1A	0.9	72.4



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Gage, Manifold Air Press.	EDG-AIRE 22-260-01-1A	1.1	72.4
	Indicator, Turn and Bank	EDG-AIRE 25-324-01	1.3	72.4
	Engine Unit Gage	EDG-AIRE 22-804-054	1.3	72.4
	Turn Coordinator	BRITAIN MODEL TC-100(12)	2.4	72.4
	Buzzer, Stall Warning	CES 0511062-10	0.7	59.5
	Light, Landing	GE 4509	0.5	25.0
	Light, Taxiing	GE 4509	0.5	46.0
	Light, Wing Tip (L.H.)	GMC A-1285-E-12	0.2	104.7
	Light, Wing Tip (R.H.)	GMC A-1285-G-12	0.2	104.7
	Light, Tail	GMC A-2064-12	0.3	121.0



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Gage, Manifold Air Press.	EDO-AIRE 22-260-C1-1A	1.1	72.4
	Indicator, Turn and Bank	EDO-AIRE 22-324-C1	1.3	72.4
	Engine Unit Gage	EDO-AIRE 22-804-C34	1.3	72.4
	Turn Coordinator	BRITAIN MODEL TC-100(12)	2.4	72.4
	Buzzer, Stall Warning	SES 0511062-10	0.7	59.5
	Light, Landing	GE 4509	0.5	85.0
	Light, Taxiing	GE 4509	0.5	85.0
	Light, Wing Tip (L.H.)	GMC A-1285-R-12	0.2	104.7
	Light, Wing Tip (R.H.)	GMC A-1285-G-22	0.2	104.7
	Light, Tail	GMC A-2064-12	0.3	521.0

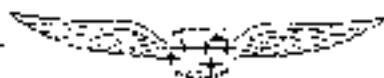
STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Light, Instrument	GMC MS25027-1	0.2	78.7
	Light, Cabin	GMC B-3555A-93	0.5	127.2
	Light, Map	GMC A-1425A-1-12	0.2	80.7
	Light, Anti-Collision	GMC D-7080A-3-12	1.5	508.3
	Starter	DLR 1109519	17.9	24.4
	Starter	PHS 10-4206	17.9	24.4
	Magneto (L.H.)	IX 10-163005-2(S4JN-200)	5.1	45.3
	Magneto (R.H.)	IX 10-163045-3(S4JN-204)	5.1	45.3
	VHF NAV/COMM Unit	KRC KX-160	8.4	68.9
	VHF NAV/COMM Unit	KRC KX-170	6.4	69.3
	VHF NAV/COMM Unit	KRC KX-173	7.0	69.3
	VHF NAV/COMM Unit	KRC APC-352A	8.6	94.0
	VHF NAV/COMM Unit	KRC KX-175UE	7.0	69.3



STA- TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	ADF Unit	KRC KR-80	3.5	72.4
	ADF Receiver	ARC ARC-21B	13.0	140.1
	ADF Receiver	ARC ARC-318G	11.8	92.9
	ADF Receiver	ARC ARC-324A	6.9	69.7
	ADF Receiver	KRC KR-85	3.9	71.6
	ADF Receiver	COLLINS DF-203	13.0	139.7
	VHF NAV Receiver	ARC ARC-542	3.2	69.7
	ADF Indicator	ARC IN-21C	1.9	72.1
	ADF Indicator	ARC IN-324C-3	1.2	73.2
	ADF Indicator	KRC KI-225	1.2	73.6
	ADF Indicator	BENDIX ID-91B	2.2	72.4
	VOR Indicator	ARC IN-522A-1	2.0	70.9
	VOR Indicator	KRC KI-201	2.5	72.0
	VOR Indicator	KRC KI-201B	2.5	72.0
	VOR/ILS Indicator	KRC KI-211	3.0	72.0
	VOR/ILS Indicator	KRC KI-211C	3.2	72.0

STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	SPA (in.)
	VHF NAV Unit	RCA AVN-211	3.1	70.1
	VHF COMM Unit	HENDIX RT-211	4.4	68.9
	VHF COMM Unit	ADC ADC-532A(J)	5.9	105.6
	MET Receiver	KMC RI-21	0.6	72.4
	Alternator (12V, 40A)	FIS ALS-8406	13.0	25.2
	Alternator (12V, 50A)	FIS ALZ-8401	13.0	25.2
	Alternator (12V, 60A)	FIS ALY-8403	13.0	25.2
	Alternator (12V, 70A)	FIS ALX-8405	13.0	25.2
	Regulator, Voltage (12V)	FIS VSP-7201	0.7	56.3
	Regulator, Voltage (12V)	FIS VSP-7203	0.7	56.3
	Wheel, Main	USGY 9532673	5.3 ea	113.6
	Wheel, Main	USGY 9532522	5.3 ea	113.6
	Wheel, Main	CLEV 40-86	5.5 ea	113.6
	Wheel, Main	MCL. D-30291-4	6.4 ea	113.6
	Wheel, Nose	USGY 9532669	3.3	43.5
	Wheel, Nose	USGY A9532926	3.3	43.5
	Wheel, Nose	MCL. C-30174-1	3.5	43.5

STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Tire, Main (Tubeless)	USGY 15 x 6.00-6 4 ply	6.4 ea	113.6
	Tire, Nose (Tubeless)	USGY 5.00-5 4 ply S.W.I.	5.3	43.3
	Brake Assy	USGY 9332181	3.1 ea	113.2
	Brake Assy	CLEV. 30-55	1.3 ea	113.2
	Brake Assy	MCL. C-30015-1	1.8 ea	113.2
	Engine (* includes Fuel Injector, Fuel Pump, Magneto, Spark Plug, Starter, Alternator etc.)	LYC IO-360-B1B	291.0*	33.1
	Pump, Booster	DLK 4140-00-1	2.9	52.0
	Oil Cooler	STEWART 8406F	1.8	25.2
	Oil Cooler	STEWART 8406E	1.8	25.2
	Propeller	MCL B2D34C53/74E-0	50.7	18.1
	Governor, Propeller	WEN B210452	3.1	50.0



STA-TUS	ITEM DESCRIPTION	TYPE or PART NO.	WEIGHT (lb.)	STA (in.)
	Injector, Fuel	BX 2524147-3	7.7	38.6
	Injector, Fuel	BX 2524147-5	7.7	38.6
	Pump, Fuel (E/G Driven)	A-C 40296 (JYC P/N 75247 75506)	2.8	44.1
	VOR Indicator	KRC KI-2010	2.5	72.0
	ICS AMP/TKR Receiver	KRC KMA-20	0.9	72.4
	ATC Transponder	KRC KI-75R	7.0	137.8
	Gyro Horizon	AIM300-14	2.7	72.4
	Directional Gyro	AIM200-5	2.9	72.4



APPENDIX D ACROBATIC MANEUVERS

This appendix contains standard instructions to perform the acrobatic maneuvers approved in this FA-200-180 Flight Manual.

I GENERAL PRECAUTIONS PERTAINING TO ACROBATIC MANEUVERS

1. Prior to attempting any of the approved acrobatics, the pilot should be thoroughly familiar with precautions and controlling procedures by careful study of this manual.
2. The pilot should be in good physical condition and mentally alert.
3. No acrobatic maneuvers should be attempted without first having received dual instruction from a qualified acrobatic instructor.
4. The selection of acrobatic practice areas should be in accordance with government regulations and in some cases, after consulting local aviation authorities.
5. The pilot should be familiar with government regulations pertaining to acrobatic flight and areas. It is best to start at least 3000 feet above the ground. In any event, the pilot should be recovered at least 2000 above the surface.
6. Parachutes must be worn during acrobatic flight. The parachute must be inspected for the packing dates and general condition.
7. Back pack parachutes are recommended.
8. The seat belts and shoulder harness should be adjusted to provide proper restraint during all anticipated flight conditions. However, care should be taken to ensure that the pilot can easily reach the flight controls and produce maximum control travel.



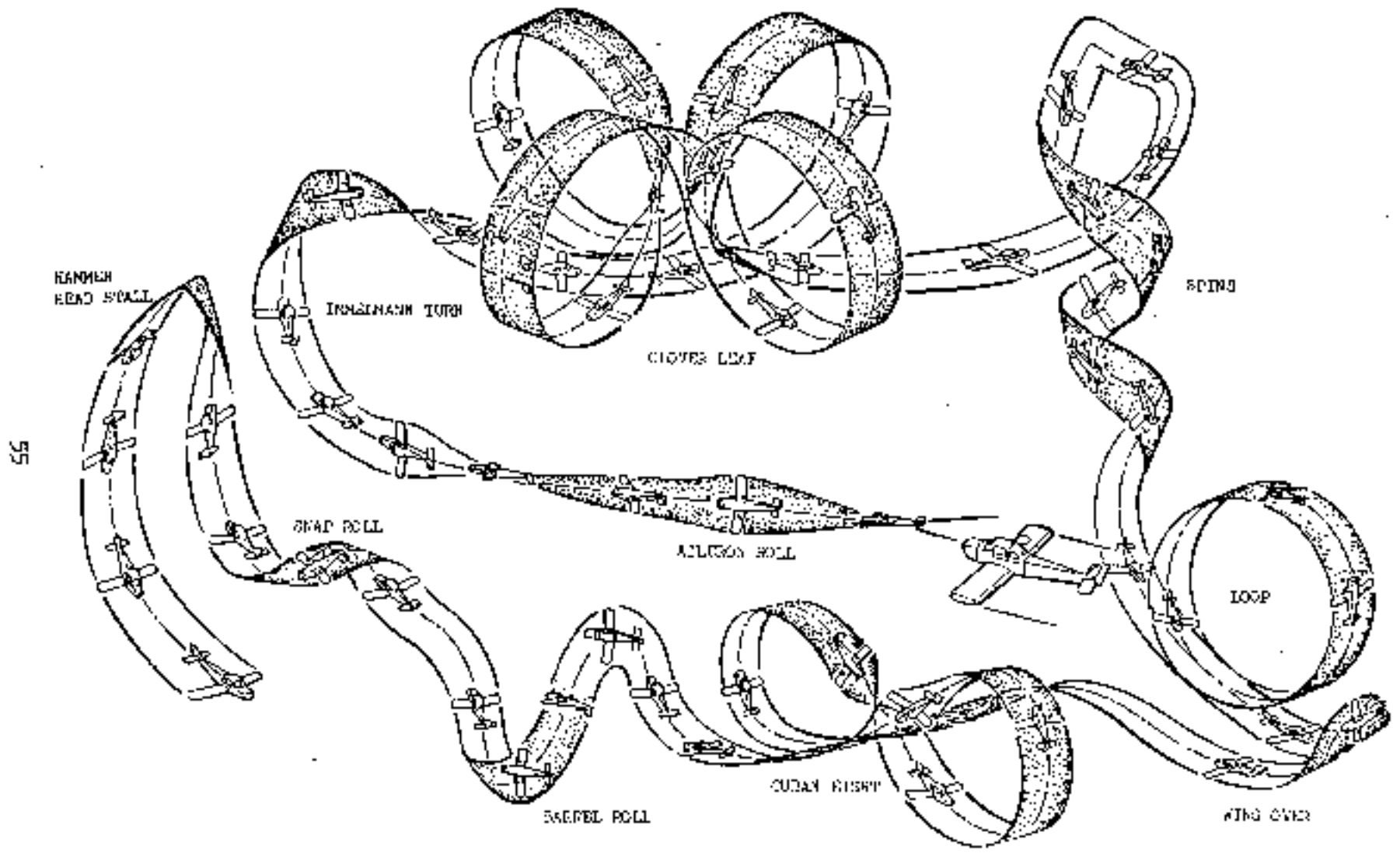
9. The pilot should be familiar with the emergency bail-out procedures (Refer to para. 3.3 of this manual).
10. Installation of an accelerometer is recommended when performing acrobatic flight.
11. Before attempting acrobatic flight, make sure that the acrobatic practice areas are sufficiently clear.

II CAUTIONS AND LIMITATIONS TO BE OBSERVED DURING ACROBATIC FLIGHT

1. The airplane weight must be within the limits specified in para. 1-8 of this manual.
2. Gyro horizon and directional gyro with cage mechanism incorporated should be caged, and all loose equipment should be stowed securely.
3. Before entry of acrobatic maneuvers, set fuel booster pump "ON" and (if installed) set fuel selector valve "LEFT".
4. The use of flaps in the execution of approved acrobatic maneuvers is prohibited.
5. The safety entry speed specified in para. 1-8 of this manual should be strictly observed.
6. The flight load factor specified in para. 1-3 of this manual should be strictly observed.
7. Care should be exercised to prevent the engine speeds from exceeding 2700 rpm (max).
8. Continuous diving should be avoided not to exceed 178 mph IAS (V_{nc}).
9. Continuous inverted flight maneuvers are prohibited.
10. Proper control technique should be performed for airplane attitude change due to effect of propeller stream during acrobatic maneuver.



11. If a spin is entered inadvertently from an acrobatic maneuver, it is important to close the throttle to idle promptly and to take the spin recovery procedure.





SPINS

MANEUVER

The spin is a prolonged stall that result in a rapid, constant nose-down rotation about the airplane longitudinal axis.

In order to spin, the airplane must be stalled and an imbalance of lift must exist. One wing is stalled, while the other still has some lift. The stalled wing drops and the other, having more lift, "chases" it so that a rotational motion starts as the nose drops. Nearly constant speed is maintained by proper control.

PROCEDURE

First you must observe such landmarks as road, river, etc. When you arrive just above the selected landmark, set the engine power-off and slowly pull the elevator control until nose-up of 20 to 30 degrees is obtained. Keeping the nose-up attitude, apply full rudder deflection, just prior to reaching stall (approximately 10 mph before), in the desired direction of the spin rotation simultaneously with full aft application of the elevators. With nose-down caused, the airplane enters spinning rotation. Both elevator and rudder controls should be held full during the spin.

The normal spin recovery technique is as follows:

- (1) Apply full opposite rudder against the direction of rotation.
- (2) Immediately following rudder application, move the elevator control slightly forward of neutral in a brisk motion.
- (3) As the rotation stops, neutralize rudder and elevator control, roll the wings level, and make a smooth recovery from the resulting dive.



CAUTIONS

- (1) Power should not be reapplied from spin entry until the airplane is near a level flight attitude. The use of engine power in the spin will tend to prolong the spin recovery. It is, therefore, necessary to close the throttle promptly and to take the spin recovery procedure if a spin is entered inadvertently from an acrobatic maneuver.
- (2) An inadvertent relaxation of control wheel could increase spin spiral speed and result in the development of a nose-down spiral.
- (3) If rudder and elevators are not neutralized when the spin is stopped during recovery, the airplane will enter a spin again.
- (4) Spin should be always practiced with flaps retracted.
- (5) The following should be remembered as a guide for selecting spin practicing altitude.
 - (a) Altitude drop by one spinning spiral is approximately 300 feet.
 - (b) Altitude required for spin recovery from the final spinning is approximately 800 feet.
- (6) If the airplane has not entered normal spin, it is necessary to take the spin recovery procedures promptly.

LOOP

MANEUVER

The normal loop is basically a 360 degree turn executed in the vertical plane.

Such acrobatic maneuvers as Immelman, Cuban eight and clover leaf are based on this "loop".



PROCEDURE

Maintain the airplane level attitude with throttle full open, and enter a shallow dive of 20 to 30 degrees, observing a ground reference line (such as a straight road, or river). At this time, adjust throttle to prevent engine speed from exceeding the maximum rpm. When an airspeed of 155 mph is reached, initiate an approximately 3.0 g pullup, and climb as if drawing a circle. Set the throttle full open after the airplane has passed through vertical position.

As the airplane approaches the inverted position, relax the back pressure slightly to maintain constant radius. Observing the ground reference line, initiate a constant 3.0 g (approx) pullout, and during dive, adjust throttle to prevent engine speed from exceeding maximum rpm. The loop finish speed should be less than the entry speed.

CAUTIONS

- (1) The throttle should be adjusted so that the maximum engine speed (2700 rpm) is not exceeded during maneuvers of entry dive, climb just before inverted attitude and recovery dive.
- (2) During entry climb pullup and recovery dive pullout, care should be exercised not to pull the control wheel so much as to cause excessive g on the airplane.
- (3) During inverted flight, care shall be exercised not to relax control wheel so excessively as to cause negative g on the airplane.



IMMELMANN TURN

MANEUVER

The maneuver consists of a loop with a half roll at the top so that the flight path is changed 180 degrees with a gain in altitude.

PROCEDURE

Maintain the airplane level attitude with throttle full open, and enter a shallow dive of 20 to 30 degrees, observing a ground reference line (such as a straight road or river). At this time, adjust the throttle to prevent engine speed from exceeding the maximum rpm. When an airspeed of 155 mph is reached, initiate an approximately 3.0 g pullup, and climb as if drawing a circle.

As the airplane passes through vertical position, set the throttle full open and accomplish a slight relaxation of elevator back pressure. Apply smooth control of ailerons and rudder in the desired direction of turn, execute a half roll by application of a flight control forward pressure, and recover to level flight.

CAUTIONS

- (1) The throttle should be adjusted so that the maximum engine speed (2700 rpm) is not exceeded during maneuver of entry dive.
- (2) During entry climb pullup, care shall be exercised not to pull control wheel so much as to cause excessive positive g on the airplane.
- (3) During half roll, care shall be exercised not to relax control wheel so excessively as to cause negative g on the airplane.



CUBAN EIGHT

MANEUVER

The Cuban eight consists of approximately three-fourths of a normal loop and a diving half-roll followed in the opposite direction by another three-fourths of a loop and a half-roll. The trace of the Cuban eight, as the name implies, is like the figure "8" drawn laterally in the vertical plane.

PROCEDURE

Maintain the airplane level attitude with throttle full open, and enter a shallow dive of 20 to 30 degrees, observing a ground reference line (such as a straight road, or river). At this time, adjust the throttle to prevent engine speed from exceeding the maximum rpm. When an airspeed of 155 mph is reached, initiate an approximately 3.0 g pullup, and climb as if drawing a circle. As the airplane passes through a vertical position, set the throttle full open and maintain a positive g level through the inverted portion of the maneuver to a point where the nose of the airplane is approximately 45 degrees below the horizon. At this time, relax the back pressure slightly and initiate half roll by prompt application of ailerons and rudder in the desired direction.

Observing the ground reference line, continue to dive until an airspeed of 155 mph is obtained. At this time, adjust the throttle to prevent engine speed from exceeding the maximum rpm. Immediately following this dive, repeat the same procedure in the opposite direction, and gradually recover from dive to level flight. The finish speed shall be less than the entry speed.



CAUTIONS

- (1) Cautions as stated previously in the loop and Immelman should be observed.
- (2) Since too delayed initiation of roll is apt to make the following loop entry speed too great, care shall be exercised to initiate roll at a proper time.

AILERON ROLL

MANEUVER

The aileron roll is accomplished by application of ailerons only. The airplane is rolled 360 degrees around the longitudinal axis of the airplane.

PROCEDURE

First, a reference point (such as a mountain) should be selected on the horizontal line. With engine power set to 2500 rpm, enter a shallow dive of approximately 20 degrees from level flight and maintain the same attitude. When an airspeed of 130 mph is reached, initiate gradual climb and continue until the nose of the airplane is approximately 30 degrees above the horizon, pointing to the selected object. At this point, apply prompt and full aileron control in the desired direction of roll simultaneously with relaxation of control wheel. Holding full aileron deflection, continue to roll until the airplane reaches an attitude of 30 to 45 degrees. Then, relax aileron control gradually to recover to level flight.



CAUTIONS

- (1) Aileron control shall never be relaxed during roll. An inadvertent relaxation of aileron control, particularly during inverted flight, will cause the prolonged inverted attitude of the airplane. This condition should be avoided as much as possible to prevent oil loss due to wet sump engine oil system. If an inverted attitude is entered inadvertently, take prompt recovery procedure by application of aileron control.
- (2) No power adjustment is required during the roll.

SNAP ROLL

MANEUVER

The snap roll is an accelerated 360 degree roll in imbalance of lift due to prompt and simultaneous application of elevator and rudder. This results in a "spin" in a horizontal direction.

PROCEDURE

First, an object (such as mountain) should be selected on the horizontal line. With cruising power established, initiate a shallow climb of approximately 20 degrees. Maintaining an airspeed of 100 mph, pull back control wheel abruptly to the full aft position while simultaneously applying full rudder in the desired direction of roll. Then, the airplane enters spinning. At about $3/4$ of the roll completion (270 degrees of rotation), apply full opposite rudder followed by the addition of forward elevator control. As the rotation stops (the airplane attitude becomes level), neutralize the rudder, and recover to level flight.



CAUTIONS

- (1) On the entry, aileron may be used as well as rudder.
- (2) Care shall be taken not to exceed the entry speed of 100 mph.
- (3) If a spin is entered during snap roll practice, the throttle should be promptly closed and the spin recovery procedures should be taken.
- (4) If a normal roll is not obtained, the throttle should be closed and the airplane should be recovered to level flight by rolling out.
- (5) The snap roll requires a timely, prompt controlling technique, but rough control should be avoided.
- (6) No power adjustment is required during the roll.

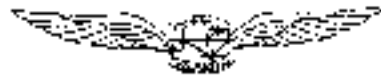
BARREL ROLL

MANEUVER

The barrel roll is a coordinated maneuver in which the airplane is rolled 360 degrees around the longitudinal axis of the airplane while maintaining a constant radius around a point on the horizon. The name, "barrel roll", originates from the fact that the airplane appears from behind as flying around the outside of a barrel.

PROCEDURE

Set the power to 2500 rpm and 21 inHg, and when an airspeed of 130 mph is reached, select a reference point (such higher point as a mountain is preferable) on the horizontal line approximately 30 degrees side of the nose of the airplane. Then initiate turn, holding this relation as is.



At a point where 90 degree turn is completed (just above the selected object), the airplane should be positioned in a vertical plane and the nose at its highest point. Where further 90 degree turn is completed (just side of the object), the airplane should be in a horizontal, inverted attitude. At a point where the third turn of 90 degrees is finished (just under the object), the airplane should be in a vertical position with the nose at its lowest point. Continue further turning, pull up the nose gradually, and recover to level flight just at the side of the object. Since airspeed varies with the airplane attitude such control should be applied as to maintain a constant rate of roll.

CAUTIONS

- (1) Ball should be centered throughout.
- (2) No power adjustment is required during the roll.

WINGOVER

MANEUVER

The wingover is basically a climbing turn followed by a diving turn in the same direction with a 180 degree change in direction, and airspeed and altitude change continuously during turn. At a point of 180 degree turn, the altitude should be highest with a minimum airspeed (slightly greater than stall speed). Recovery should be completed at the same speed and altitude as entry.

PROCEDURE

Maintain cruise rpm and initiate a shallow dive to pick up airspeed of 120 mph, observing a ground reference line (such as a straight road, or river).



Pull up the nose gradually and continue a climb of 70 to 80 degrees. When an airspeed of 70 to 75 mph is reached, apply ailerons in the desired turning direction to initiate turn. At a point where the airplane is rolled approximately 30 degrees, apply full rudder simultaneously with aileron application in the opposite direction to prevent rolling. The airplane, turning on a plane of 70 to 80 degrees, goes down following the same trace as climb, and completes 180 degree turn. Then the airplane should recover to level attitude at the same altitude and speed as entry.

CAUTIONS

- (1) Proper control shall be applied to coordinate continuously changing airspeed.
- (2) Smooth controlling technique is required particularly at a low speed. Rough control should be avoided, as it could result in a spin.

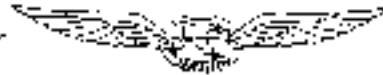
HAMMER HEAD STALL

MANEUVER

The hammer head stall is a maneuver consisting of vertical climb, subject half roll by spin, descent and pull up. The finishing altitude is considerably lower than the beginning.

PROCEDURE

Maintain cruise rpm (2300 rpm) and initiate a shallow dive to pick up an airspeed of 120 mph, observing a ground reference line (such as a straight road or river).



Close the throttle to idle, pull up the nose and continue climb of 60 to 70 degrees. At an airspeed of 70 to 75 mph, apply smooth and full rudder control in the desired direction of turn to initiate spinning. Take recovery control to stop spinning at a point where the nose is turned 180 degrees.

The airplane should turn on a plane of 60 to 70 degrees, and perform dive and pull up similar to the latter half maneuver of the loop.

The airplane regains level attitude at an altitude lower than the entry altitude.

CAUTIONS

- (1) Proper control shall be applied to coordinate continuously changing airspeed.
- (2) Since excessive altitude drop is involved in the maneuver, care shall be exercised for proper recovery of the airplane attitude.

CLOVER LEAF

MANEUVER

At a point where three-fourths of a loop is completed the airplane performs a quarter-roll, and enters the following three-fourths loop and a quarter-roll in the direction 90 degrees from entry. After repeating such maneuvers four times, the airplane returns to the first entry direction. The maneuver is called "clover leaf" because the trace of airplane describes four vertical circles contacting at one point which suggest a four-leaf clover.



PROCEDURE

Maintain the airplane level attitude with throttle full open, and enter a dive of 20 to 30 degrees, observing a ground reference object (preferably, such an intersection as a straight road meets at right angles with a straight road). At this time, adjust throttle to prevent engine speed from exceeding the maximum rpm. When an airspeed of 155 mph is reached (at this time, the airplane should be just above the selected intersection), initiate smooth pullup of an approximately 3.0 g and climb as if drawing a circle

As the airplane passes through vertical position, set the throttle full open and then maintain a positive g during inverted flight to a point where the nose is approximately 70 degrees below the horizon. At this point, relax control wheel slightly and apply aileron and rudder control promptly in the desired direction for a quarter-roll. Then, perform turn of 90 degrees from the entry direction and make descent, observing the ground object (intersection). At this time, adjust the throttle to prevent engine speed from exceeding the maximum rpm. Next, enter the following three-fourths loop and a quarter-roll in the direction 90 degrees from entry, and after repeating such maneuvers four times, return to the direction of the first entry.

CAUTIONS

- (1) Cautions as stated previously in the loop and Cuban eight shall be observed.
- (2) The slower leaf should be attempted after fully practicing one time three-fourths loop and a quarter-roll.



LIST OF SUPPLEMENTARY FLIGHT MANUAL

NO.	ITEM	INSTALLED DATE	REMARKS
I	NIGHT FLIGHT EQUIPMENT		
II	INSTRUMENT FLIGHT EQUIPMENT		
III	INSTRUMENT & NIGHT FLIGHT EQUIPMENT		
IV	OUTSIDE LOUD SPEAKER EQUIPMENT		
V	FLIGHT WITH CANOPY OPEN		

J C A B A P P R O V E D

S U P P L E M E N T A R Y F L I G H T M A N U A L

M O D E L F U J I F A - 2 0 0 - 1 8 0

(I)

N I G H T F L I G H T E Q U I P M E N T

A P P R O V E D B Y :

O. Nagasawa

DIRECTOR, AIRWORTHINESS DIVISION
JAPAN CIVIL AVIATION BUREAU

D A T E A P P R O V E D : F e b r u a r y 1 6 , 1 9 7 2

F U J I H E A V Y I N D U S T R I E S L T D .



LIST OF EFFECTIVE PAGES

The supplementary flight manual (I) consists of following pages.

Page	Approved Date
I-I	Feb. 16, 1972
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I-III	Feb. 16, 1972
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Original	February 16, 1972		



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1. NAME AND TYPE OF THE EQUIPMENT

MODEL FUJI FA-200-180
NIGHT FLIGHT EQUIPMENT

2. TYPE OF AIRPLANE APPLICABLE

MODEL FUJI FA-200-180

3. FUNCTION

Night flight is made possible with following equipment;
Instrument light, Map light, Cabin light, Navigation light,
Taxiing light, Landing light, Anti-collision light.

4. AIRCRAFT CATEGORY

Normal, Utility and Acrobatic

5. LOCATION OF EQUIPMENT

EQUIPMENT	LOCATION
Instrument light	Above instrument panel
Map light	Right side of instrument panel
Cabin light	Above rear seat
Navigation light	Both main wing tip and Rudder upper portion
* Taxiing light	Left main wing tip portion
Landing light	Left main wing tip portion
* Anti-collision light	Rudder top

* Though anti-collision light is not specified in JCAB regulation,
in view of safeness it is recommended to install.



6. LIMITATION

6.1 Type of Operation

This airplane is approved for following type of operation
besides specified in basic flight manual 1-9.

VFR - NIGHT

7. EMERGENCY OPERATING PROCEDURE

Same as basic flight manual.

8. NORMAL OPERATING PROCEDURE

Same as basic flight manual.

9. PERFORMANCE

Same as basic flight manual.

10. OTHER DESCRIPTION

None

J C A B A P P R O V E D

S U P P L E M E N T A R Y F L I G H T M A N U A L

M O D E L F U J I F A - 2 0 0 - 1 8 0

(I)

I N S T R U M E N T F L I G H T E Q U I P M E N T

A P P R O V E D B Y ; *Tsutomu Kawai*

DIRECTOR, AIRWORTHINESS DIVISION
JAPAN CIVIL AVIATION BUREAU

D A T E A P P R O V E D ; F e b r u a r y 8 , 1 9 7 3

F U J I H E A V Y I N D U S T R I E S L T D .



LIST OF EFFECTIVE PAGES

The supplementary flight manual (II) consists of following pages.

Page	Approved Date
II-I	Feb. 8, 1973
II-II	Feb. 8, 1973
II-III	Feb. 16, 1972
II-1	Feb. 8, 1973
II-2	Feb. 16, 1972

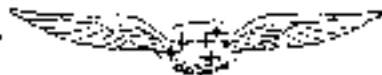


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1. NAME AND TYPE OF THE EQUIPMENT

MODEL FUJI FA-200-180

INSTRUMENT FLIGHT EQUIPMENT

2. TYPE OF AIRPLANE APPLICABLE

MODEL FUJI FA-200-180

3. FUNCTION

Instrument flight is made possible with following equipment;
Free air temp. indicator, Clock with second hand, Rate of
climb indicator, VHF receiver and transmitter, ADF
receiver.

4. AIRCRAFT CATEGORY

Normal, Utility and Acrobatic

5. LOCATION OF EQUIPMENT

EQUIPMENT	LOCATION
Free air temp. indicator	Front windshield
Turn & bank indicator	Instrument panel
Clock with second hand	Instrument panel
Rate of climb indicator	Instrument panel
VHF receiver and transmitter	Instrument panel radio rack
ADF receiver	Instrument panel or/and after rear seat



6. LIMITATION

6.1 Type of Operation

This airplane is approved for following type of operation besides specified in basic flight manual 1-9.

IFR - DAY

7. EMERGENCY OPERATING PROCEDURE

Same as basic flight manual.

8. NORMAL OPERATING PROCEDURE

Same as basic flight manual

9. PERFORMANCE

Same as basic flight manual.

10. OTHER DESCRIPTION

None

J C A B A P P R O V E D

S U P P L E M E N T A R Y F L I G H T M A N U A L

M O D E L F U J I F A - 2 0 0 - 1 8 0

(B)

I N S T R U M E N T A N D N I G H T F L I G H T E Q U I P M E N T

A P P R O V E D B Y : *Tsutomu Kawai*

DIRECTOR, AIRWORTHINESS DIVISION
JAPAN CIVIL AVIATION BUREAU

D A T E A P P R O V E D : F e b r u a r y 8 , 1 9 7 3

F U J I H E A V Y I N D U S T R I E S L T D .



LIST OF EFFECTIVE PAGES

The supplementary flight manual (III) consists of following pages.

Page	Approved Date
III-I	Feb. 8, 1973
III-II	Feb. 8, 1973
III-III	Feb. 16, 1972
III-1	Feb. 8, 1973
III-2	Feb. 8, 1973



LOG OF REVISIONS

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Original	February 16, 1972		
Revision 1	February 8, 1973	III-1, III-II, III-1, III-2	Deletion of voltmeter.



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9. PERFORMANCE	III-2
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1. NAME AND TYPE OF THE EQUIPMENT

MODEL FUJI FA-200-180

INSTRUMENT AND NIGHT FLIGHT EQUIPMENT

2. TYPE OF AIRPLANE APPLICABLE

MODEL FUJI FA-200-180

3. FUNCTION

Instrument and night flight is made possible with following equipment:

Instrument light, Map light, Cabin light, Navigation light, Taxiling light, Landing light, Anti-collision light.

Free air temp. indicator, Clock with second hand, Rate of climb indicator, VHF receiver and transmitter, ADF receiver.

4. AIRCRAFT CATEGORY

Normal, Utility and Acrobatic.

5. LOCATION OF EQUIPMENT

EQUIPMENT	LOCATION
Instrument light	Above instrument panel
Map light	Right side of instrument panel
Cabin light	Above rear seat
Navigation light	Both main wing tip and Rudder upper portion
Taxiling light	Left main wing tip portion
Landing light	Left main wing tip portion
* Anti-collision	Rudder top

- * Though anti-collision light is not specified in JCAB regulation, in view of safeness it is recommended to install.



5. LOCATION OF EQUIPMENT (continued)

Free air temp. indicator	Front windshield
Turn & bank indicator	Instrument panel
Clock with second hand	Instrument panel
Rate of climb indicator	Instrument panel
VHF receiver and transmitter ...	Instrument panel radio rack
ADF receiver	Instrument panel or/and after rear seat

6. LIMITATION

6.1 Type of Operation

This airplane is approved for following type of operation
besides specified in basic flight manual 1-9.

VFR - NIGHT
and IFR - DAY or NIGHT

7. EMERGENCY OPERATING PROCEDURE

Same as basic flight manual.

8. NORMAL OPERATING PROCEDURE

Same as basic flight manual.

9. PERFORMANCE

Same as basic flight manual.

10. OTHER DESCRIPTION

None

J C A B A P P R O V E D

S U P P L E M E N T A R Y F L I G H T M A N U A L

M O D E L F U J I F A - 2 0 0 - 1 8 0

(IV)

O U T S I D E L O U D S P E A K E R E Q U I P M E N T

A P P R O V E D B Y :

O. Nagasawa

DIRECTOR, AIRWORTHINESS DIVISION
JAPAN CIVIL AVIATION BUREAU

D A T E A P P R O V E D : F e b r u a r y 1 6 , 1 9 7 2

F U J I H E A V Y I N D U S T R I E S L T D .



LIST OF EFFECTIVE PAGES

The supplementary flight manual (IV) consists of following pages.

Page	Approved Date
IV-I	Feb. 16, 1972
IV-II	Feb. 16, 1972
IV-III	Feb. 16, 1972
IV-1	Feb. 16, 1972
IV-2	Feb. 16, 1972



LOG OF REVISIONS

Revision No.	Date	Revised Page	Description
Original	February 16, 1972		



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8. NORMAL OPERATING PROCEDURE	IV-2
9. PERFORMANCE	IV-2
10. OTHER DESCRIPTION	IV-2



1. NAME AND TYPE OF THE EQUIPMENT

MODEL FUJI FA-200-180

OUTSIDE LOUD SPEAKER EQUIPMENT

2. TYPE OF AIRPLANE APPLICABLE

MODEL FUJI FA-200-130

3. FUNCTION

Outside loud speaker system are equipped with amplifier,
driver unit and trumpet horn.

4. AIRCRAFT CATEGORY

Normal

5. LOCATION OF EQUIPMENT

EQUIPMENT	LOCATION
Amplifier	Baggage shelf
Driver unit	Baggage room
Trumpet horn	Baggage room



6. LIMITATION

6.1 In case that outside loud speaker system is equipped, the maneuvers for utility category and acrobatic category are prohibited.

6.2 In night flight never make use of outside loud speaker system.

7. EMERGENCY OPERATING PROCEDURE

Same as basic flight manual.

8. NORMAL OPERATING PROCEDURE

Same as basic flight manual.

9. PERFORMANCE

Same as basic flight manual.

10. OTHER DESCRIPTION

None

J C A B A P P R O V E D

S U P P L E M E N T A R Y F L I G H T M A N U A L

M O D E L F U J I F A - 2 0 0 - 1 8 0

(V)

F L I G H T W I T H C A N O P Y O P E N

A P P R O V E D B Y ; Tsutomu Kawai
D I R E C T O R , A I R W O R T H I N E S S D I V I S I O N
J A P A N C I V I L A V I A T I O N B U R E A U

D A T E A P P R O V E D ; F e b r u a r y 8 , 1 9 7 3

F U J I H E A V Y I N D U S T R I E S L T D .



LIST OF EFFECTIVE PAGES

The supplementary flight manual (V) consists of following pages.

Page	Approved Date
V-I	Feb. 8, 1973
V-II	Feb. 8, 1973
V-III	Feb. 8, 1973
V-1	Feb. 8, 1973



LOG OF REVISIONS

Revision No.	Date	Revised Pages	Description
Original	February 8, 1973		



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7. NORMAL PROCEDURES	V-1
8. PERFORMANCE	V-1



1. SUBJECT
MODEL FUJI FA-200-180
FLIGHT WITH CANOPY OPEN

2. MODEL OF AIRCRAFT APPLICABLE
MODEL FUJI FA-200-180

3. DESCRIPTION
Flight with canopy open is approved within limits specified in this manual.
No additional equipment is required.

4. AIRCRAFT CATEGORY
Normal

5. LIMITATIONS
Maximum weight ; 2315 lbs.
Refer to basic flight manual for limitations other than specified above.

6. EMERGENCY PROCEDURES
Refer to basic flight manual.

7. NORMAL PROCEDURES
Refer to basic flight manual.

8. PERFORMANCE
Only stalling speed and airspeed correction table of basic flight manual are applicable to this specific operating condition.

AIR ASSOCIATES LIMITED

FUJI FA200-160

LOG OF REVISIONS.

REVISION No.	DATE.	REVISED PAGES.	DESCRIPTION.
SUPPLEMENT No.1. Issue 4.	3rd. January 1975.	1,2,3.	Information to comply with U.K. certification in General Purpose Category.

F 10 Griffiths

AIR ASSOCIATES LIMITED

DIRECTORS: F. W. BRIDGES, M. B. GRIFFITHS

TELEPHONE 01 748 0222
CABLES AIRASSATES LONDON
TELEX NUMBER AIRASSATES LON

40 ST PETERS ROAD
HAMMERSMITH
LONDON W6 0HH

3rd. January 1975.

Page 1 of 3.

SUPPLEMENT NO.1 ISSUE 4.
FUJI FA200-180 FLIGHT MANUAL.

AIRCRAFT Ser. No. FA-200-235.

The following additional information and limitations form part of the Flight Manual and this aircraft must be operated in accordance with the Flight Manual and this Supplement without which the Flight Manual cannot be approved for U.K. Certification. The Fuji FA200-180 flight manual is approved in its entirety by the Japanese Authorities and no amendment, replacement page or appendix will be issued without such approval. The information for United Kingdom certification of the Fuji FA200-180 aircraft given on this supplement is authorized by Fuji Heavy Industries Ltd and is approved by the United Kingdom Civil Aviation Authority.

The Fuji FA200-180 is eligible for certification in the United Kingdom in the General Purpose Category. It may however be restricted to the Special Category and to a particular use and this will be stated on the Certificate of Airworthiness.

ADDITIONAL INFORMATION & LIMITATIONS

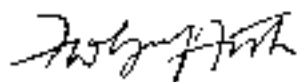
1. The total number of occupants (excluding children under 3 years old that are carried in the arms of passengers) must not exceed the lesser of four or the number of seats fitted, save that when aerobatic manoeuvres are to be performed, the total number of occupants must not exceed two and they must occupy the front seats.
2. The minimum crew required to fly the aircraft is one pilot.
3. The maximum landing weight is 2535 lb and is the same as the maximum Normal Category take-off weight stated on page 2 Section 1-5.
4. The aircraft is not equipped for preventing or clearing ice accretion. Intentional flight into known icing conditions is prohibited.
5. The aircraft must not be flown at night or in IFR conditions unless it is equipped as prescribed in Fuji supplements I-1, I-2 or II-1 as appropriate and as required by the Air Navigation Order.
6. The aircraft is classified in the Air Navigation (General) Regulations Performance Group E.
7. The gliding distance for each 1,000 feet loss of altitude in zero wind conditions is 1.4 miles in the following configuration:- weight 2,535 lb, flaps 'UP', windmilling propeller, I.A.S. 100 mph.

8. The landing distances given in this flight manual are based on an approach speed of less than 1.3 VSO at 50 feet. When the aircraft is flown in compliance with Performance Group E of the Air Navigation (General) Regulations, an approach speed of 80 mph must be achieved at 50 feet and the landing distances obtained from page 32 must be increased by 25%. VSO is the stalling speed in the landing configuration. Stalling speeds for various weights are stated on page 33.
9. Take-off distances on page 27 and the landing distances on page 32 are for dry, paved runways. When taking off from or landing on short, dry grass these distances must be increased by 15%.

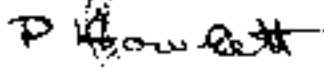
This increment to the landing distance is in addition to that required by paragraph 8 above.

10. The rates of climb and associated climb speed information given on pages 28 and 29 shall not be used for the purpose of establishing compliance with the Air Navigation (General) Regulations. The rates of climb given by the figure on page 3 of this supplement shall be used. This information is based on a climb speed of 90 mph (78 knots) I.A.S. which is not varied for altitude or aircraft weight.
11. The performance data in this manual are for aircraft without wheel fairings. The maximum level speed is increased by 3 mph when wheel fairings are fitted. The chart on page 29 has the speed increment statement.
12. Altimeter position errors are not significant being below 10 feet between 90 mph and 140 mph and 13 feet near stalling speed.
13. The true airspeed to assumed for the purpose of complying with the Air Navigation legislation governing flights over water is 110 mph.
14. The wearing of parachutes during aerobatic manoeuvres is not mandatory in aircraft registered in the United Kingdom, although it is recommended. Item 6 of Appendix D, page 52 of the flight manual may be disregarded.

Signed:


AIR ASSOCIATES LIMITED
Date: 3rd June 1975.

Signed:


CIVIL AVIATION AUTHORITY
AIRWORTHINESS DIVISION

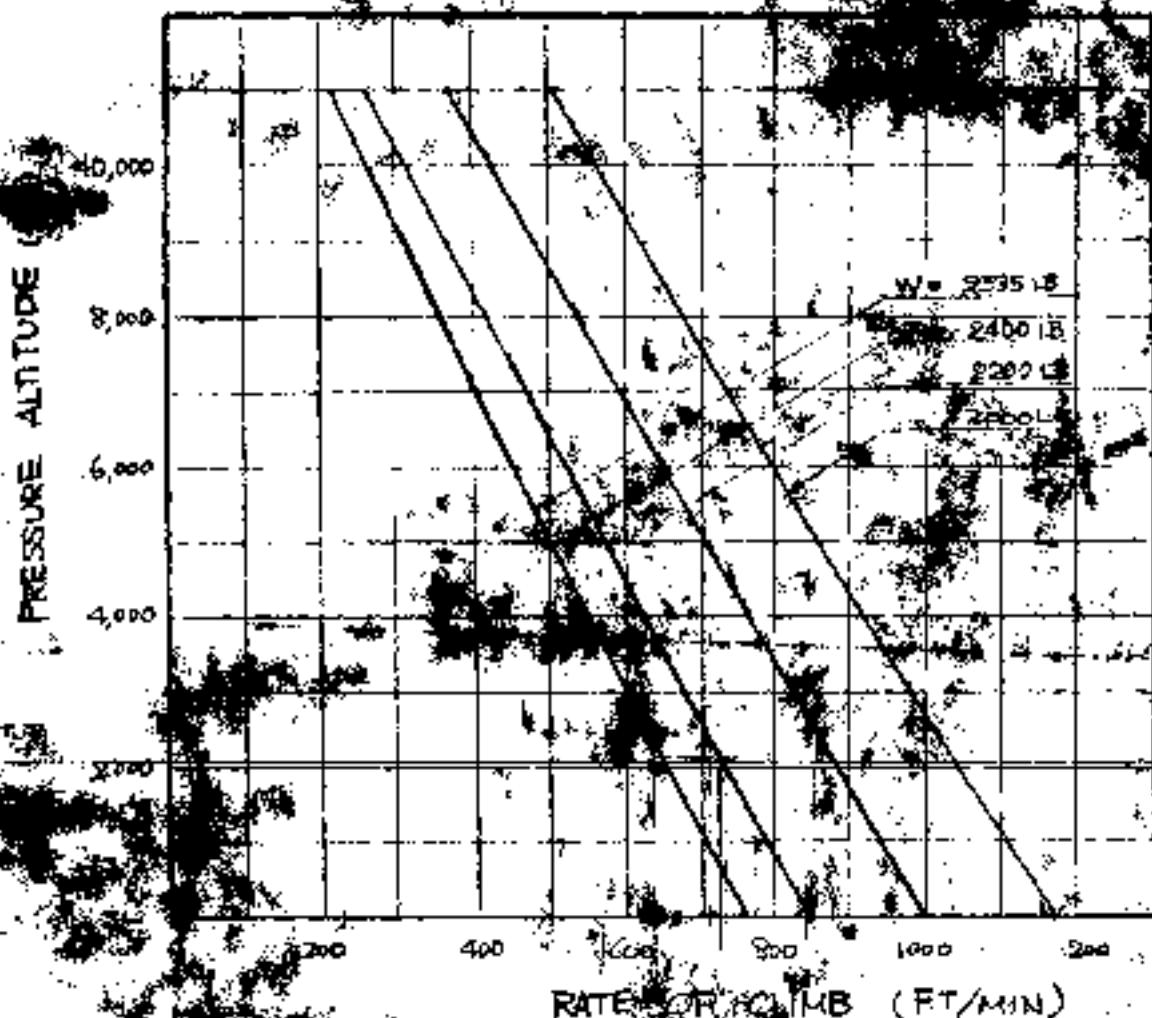
Date: 16th January 1975

CLIMB PERFORMANCE FOR FUJI ZERO-100

CLIMB

90 MPH

CLIMB PERFORMANCE



- NOTES:
- Flaps up, Full throttle, Full rich mixture
 - For hot weather, decrease rate of climb 30%
 - for each 10°F above standard day temperature at particular altitude.

G-BERC

SUPPLEMENTAL AIRCRAFT QNE

AIRWORTHINESS NOTICE No 82

A steady/flashing warning light is notified when voltage fluctuate if the generator/alternator output reduces to a level where the battery supplies power to the bus bar.

Before engine start

Check battery voltage ON

After engine start

Check battery voltage OFF

If warning illuminates during flight

Reduce power to low

Batteries must supply 30 Amps

Land as soon as possible

* NOTE: Warning may illuminate with low engine RPM. Check it goes out when RPM is increased