PART 5 TACTICAL

LIST OF FIGURES (F Mk.3 aircraft - white leaves)

LIST OF FIGURES (T Mk.5 aircraft - coloured leaves)

continued...

LIST OF FIGURES (T Mk.5 aircraft - coloured leaves) - *continued*

High levels: isothermal atmospheres: full reheat - *continued*

5.20B	*-66.5°C*	*fuel*	*250-gal VT*
5.21A	*-36.5°C*	*time and distance*	*250-gal VT +2RT*
5.21B	*-36.5°C*	*fuel*	*250-gal VT +2RT*
5.22A	*-56.5°C*	*time and distance*	*250-gal VT +2RT*
5.22B	*-56.5°C*	*fuel*	*250-gal VT +2RT*
5.23A	*-66.5°C*	*time and distance*	*250-gal VT +2RT*
5.23B	*-66.5°C*	*fuel*	*250-gal VT +2RT*

Altitudes between 5,000 ft and 45,000 ft: full reheat

5.24A	*ICAO +20°C*	*time and distance*	*250-gal VT*
5.24B	*ICAO +20°C*	*fuel*	*250-gal VT*
5.25A	*ICAO +10°C*	*time and distance*	*250-gal VT*
5.25B	*ICAO +10°C*	*fuel*	*250-gal VT*
5.26A	*ICAO*	*time and distance*	*250-gal VT*
5.26B	*ICAO*	*fuel*	*250-gal VT*
5.27A	*ICAO -10°C*	*time and distance*	*250-gal VT*
5.27B	*ICAO -10°C*	*fuel*	*250-gal VT*
5.28	*ICAO -20°C*	*time, distance and fuel*	*250-gal VT*
5.29A	*ICAO +20°C*	*time and distance*	*250-gal VT +2RT*
5.29B	*ICAO +20°C*	*fuel*	*250-gal VT +2RT*
5.30A	*ICAO +10°C*	*time and distance*	*250-gal VT +2RT*
5.30B	*ICAO +10°C*	*fuel*	*250-gal VT +2RT*
5.31A	*ICAO*	*time and distance*	*250-gal VT +2RT*
5.31B	*ICAO*	*fuel*	*250-gal VT +2RT*
5.32A	*ICAO -10°C*	*time and distance*	*250-gal VT +2RT*
5.32B	*ICAO -10°C*	*fuel*	*250-gal VT +2RT*
5.33	*ICAO -20°C*	*time, distance and fuel*	*250-gal VT +2RT*

Turns

180° accelerated turns: full reheat: -56.5°C

5.34A	*1.4g*	*time, fuel and lateral displacement*	*250-gal VT*
5.34B	*1.4g*	*final Mach number and longitudinal displacement*	*250-gal VT*
5.35A	*2g*	*time, fuel and lateral displacement*	*250-gal VT*
5.35B	*2g*	*final Mach number and longitudinal displacement*	*250-gal VT*
5.36A	*3g*	*time, fuel and lateral displacement*	*250-gal VT*
5.36B	*3g*	*final Mach number and longitudinal displacement*	*250-gal VT*
5.37A	*4g*	*time, fuel and lateral displacement*	*250-gal VT*

continued...

LIST OF FIGURES (T Mk.5 aircraft - coloured leaves) - *continued*

Turns

180° accelerated turns: full reheat: -56.5°C - *continued*

180° accelerated turns: full reheat: varied temperatures

continued...

LIST OF FIGURES (T Mk.5 aircraft - coloured leaves) - *continued*

Turns

180° accelerated turns: full reheat: varied temperatures - *continued*

5.54A	*1.4g*	*ICAO*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.54B	*1.4g*	*ICAO*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*
5.55A	*1.4g*	*ICAO -10°C*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.55B	*1.4g*	*ICAO -10°C*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*
5.56A	*2g*	*ICAO +20°C*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.56B	*2g*	*ICAO +20°C*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*
5.57A	*2g*	*ICAO +10°C*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.57B	*2g*	*ICAO +10°C*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*
5.58A	*2g*	*ICAO*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.58B	*2g*	*ICAO*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*
5.59A	*2g*	*ICAO -10°C*	*time, lateral displacement and fuel*	*250-gal VT +2RT*
5.59B	*2g*	*ICAO -10°C*	*final Mach number and longitudinal displacement*	*250-gal VT +2RT*

Steady level turns

5.60	*fuel*	*30,000 ft*	*250-gal VT*
5.61	*fuel*	*30,000 ft*	*250-gal VT +2RT*
5.62	*fuel*	*40,000 ft*	*250-gal VT & 250-gal VT +2RT*

Boundaries at full reheat

5.63	*thrust*	*250-gal VT & 250-gal VT +2RT*
5.64	*manoeuvre*	*250-gal VT*
5.65	*manoeuvre*	*250-gal VT & 2RT*

Deceleration

5.66	*high levels*	*supersonic*	*time, fuel and distance*	*250-gal VT*
5.67	*high levels*	*supersonic*	*time, fuel and distance*	*250-gal VT + 2RT*

1. Acceleration

(a) *Low levels*

Data for low level accelerations, with and without reheat, are given in Fig. 5.1 - 5.8. These show time, distance, and fuel from 250 kts to 450 kts and to 0.9M over a range of OAT's and heights.

Example (A)

With 250-gal ventral tank
Initial conditions 250 kts, 0°C, 10,000 ft, final 0.9M

Fig. 5.3 gives:
time 0.89 min, fuel 280 lb, distance 6 anm.

(b) *High levels*

Time, distance, and fuel used in accelerating from 0.85M with full reheat are given in Fig. 5.9 - 5.14. The curves cover three isothermal atmospheres, -36.5°C, -56.5°C, and -66.5°C, and a range of heights starting from 27,500 ft.

Example (B)

With 250-gal ventral tank and two Red Tops.
Initial conditions 1.0M, -66.5°C, 45,000 ft, final 1.8M

Fig. 5.14 gives:

Time 4.2 min, fuel 1590 lb, distance 53.5 anm.

2. Turning performance

(a) *Accelerated turns*

Data for 180° accelerated turns with full reheat are given in Fig. 5.15 - 5.22. A range of heights is covered for several values of 'g'. Given the initial Mach number, the following conditions at the end of the 180° turn can be found: time elapsed, fuel used, final Mach number and the longitudinal and lateral displacements from the initial position *(that is, the anm along and across the initial flight path, after 180°, measured from the initial position)*.

Example (C)

With 250-gal ventral tank and two Red Tops.
3g turn at 45,000 ft, initial 1.6M

Fig. 5.18 gives:
Final 1.09M, fuel used 270 lb, time 0.75 min, longitudinal displacement +1.45 anm, lateral displacement 6.1 anm.
(The positive sign of the longitudinal displacement means that the aircraft is upstream of the initial position in the direction of the initial flight path).

(b) *Steady turns*

Fig. 5.23 and 5.24 are universal relationships; that is, they apply to all aircraft. This is because the curvature of any path or orbit depends only upon speed and acceleration and the radius of steady turn depends only upon TAS and the g load applied *(or the angle of bank)*. Since the TAS can be expressed in terms of Mach number and temperature, the relation between radius of steady turn, Mach No., g, and OAT can be plotted, *(Fig. 5.23)*. Also since the time taken in turning depends on the radius and the TAS it can be similarly expressed in terms of M, g, and OAT *(Fig. 5.24)*.

The fuel used for 180° depends upon the aircraft and upon the altitude. It is shown in Fig. 5.25 - 5.28.

Example (D)

At 1.3M, 2g, and -56.5°C

Fig. 5.23 gives:
A radius of turn of 4.6 anm

Fig. 5.24 gives:
a time for 180° of 1.2 min

Fig. 5.25 gives:
470 lb fuel used at a height of 30,000 ft by aircraft with 250-gal ventral tank.

These Figures do not show the limiting turns which can be made by a Lightning with full reheat. For this information refer to Fig. 5.29 - 5.31 which give the manoeuvre boundaries of the aircraft in the configurations with 250-gal ventral tank and with 250-gal ventral tank and two Red Tops. Manoeuvres are always limited by the thrust or control available. The thrust boundaries in Fig. 5.29 - 5.31 are the limits of manoeuvre in level flight.

Example (E)

With 250-gal ventral tank a 2g turn can be made at 1.2M up to 40,000 ft without deceleration. With 250-gal ventral tank and two Red Tops such a turn can only be made up to 38,500 ft.

The buffet regions to be expected if flying at low speeds are also indicated.

Fig. 5.30 and 5.31 give the same thrust boundary data as Fig. 5.29 with the addition of the trim or control limits.

For the aircraft with 250-gal ventral tank flying at 1.2M at 40,000 ft, up to 3.85g can be pulled with the control available compared with 2g in level flight. There will thus be a considerable margin of control in a level turn under these conditions.

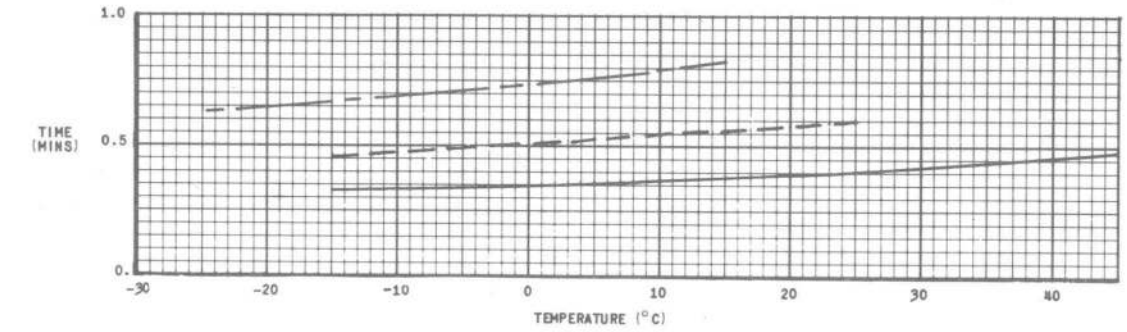
(c) *Nomogram of turning performance*

Fig. 5.32 reproduces for ready reference the Nomogram of Turning Performance from A.P. 129, Vol. 1, Part 1, Section 1, Chapter 12, Fig. 8. This is applicable to any aircraft and gives considerable information on turning performance. Some examples of the use of the Nomogram are given below.

If the TAS and bank angle are known, then the rate of turn can be found. Assume a TAS of 400 knots and an angle of bank of 60° and read off from the dashed line the rate of turn of 284°/min *(about rate 1½)*. The bank scale also shows the g realised in a sustained turn at that angle of bank *(in this example 2g)*.

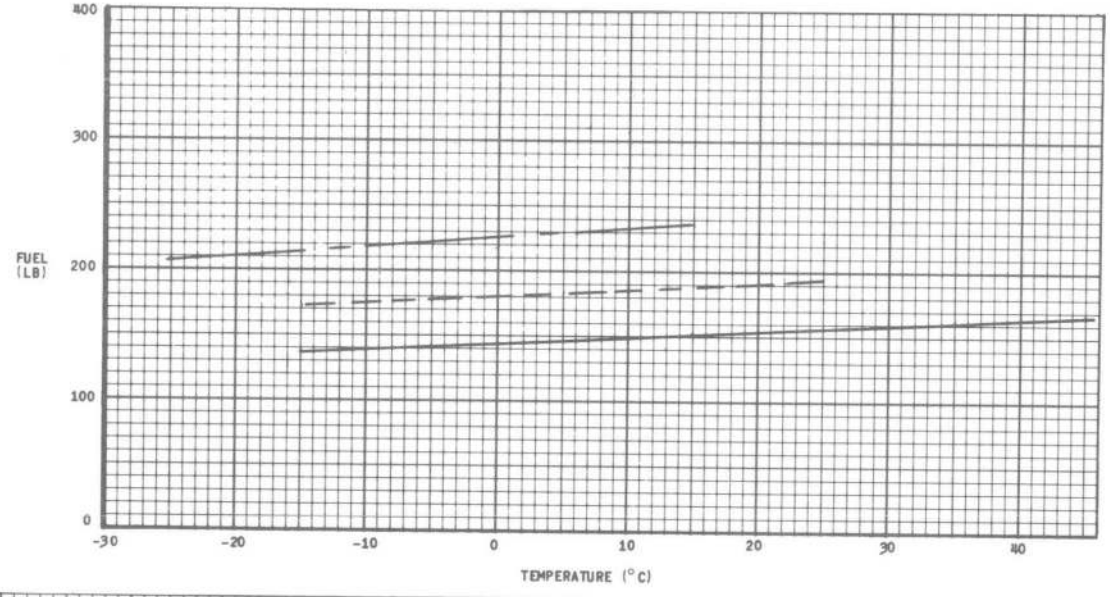
The Mach scale has no significance in this example. Any two known factors can be aligned to determine the unknown third factor.

The Nomogram shows clearly that as speed increases the angle of bank must be increased to maintain a constant rate of turn. It should be noted that the Nomogram is applicable to any atmosphere with the exception of the Mach number scale which applies to the standard *(ICAO)* atmosphere only.



NO REHEAT
MAX. RPM
34,000 LB

SEA LEVEL
5,000 FT.
10,000 FT.



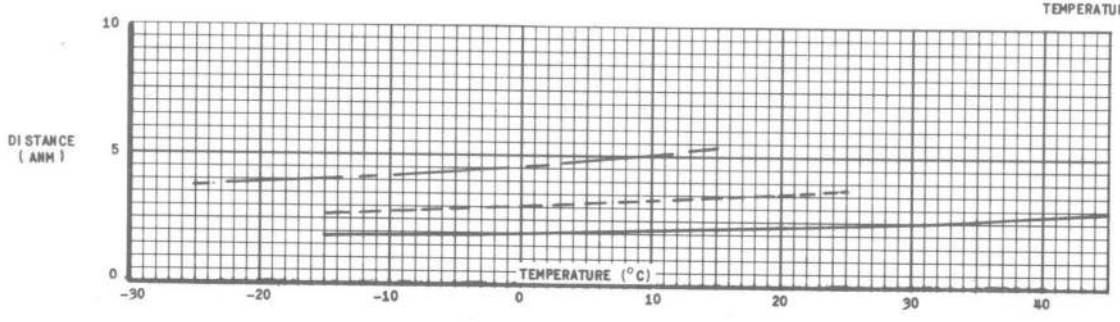
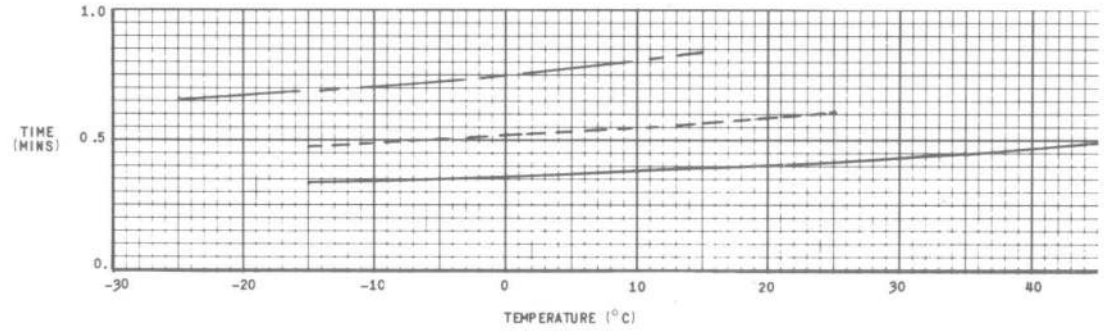
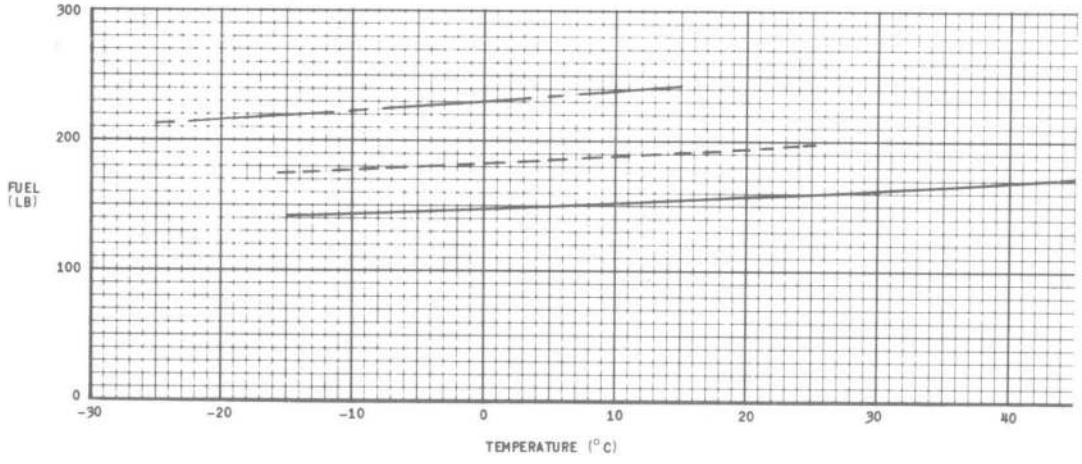


FIG. 5-1. ACCELERATION FROM 250K TO 450K IAS - LOW LEVEL



NO REHEAT
MAX. RPM
34,000 LB

SEA LEVEL
5,000 FT.
10,000 FT.



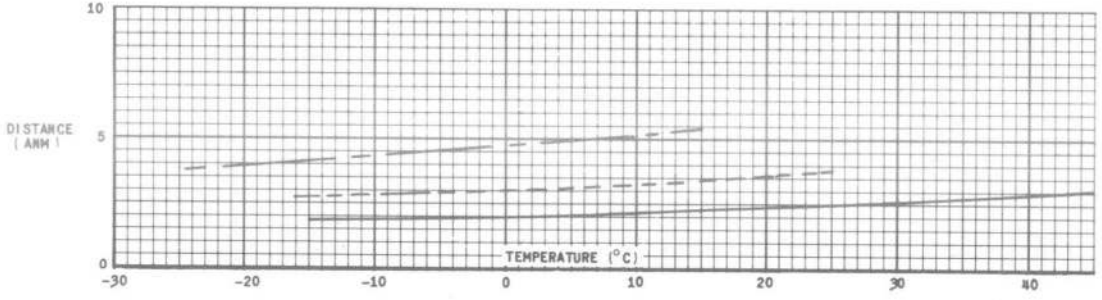
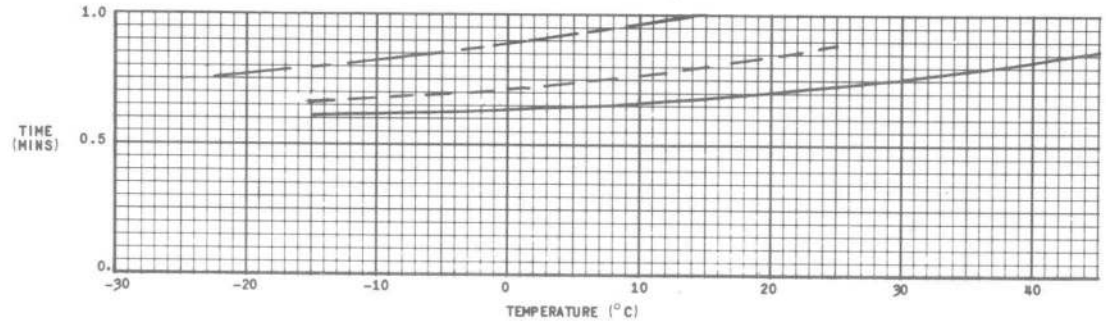
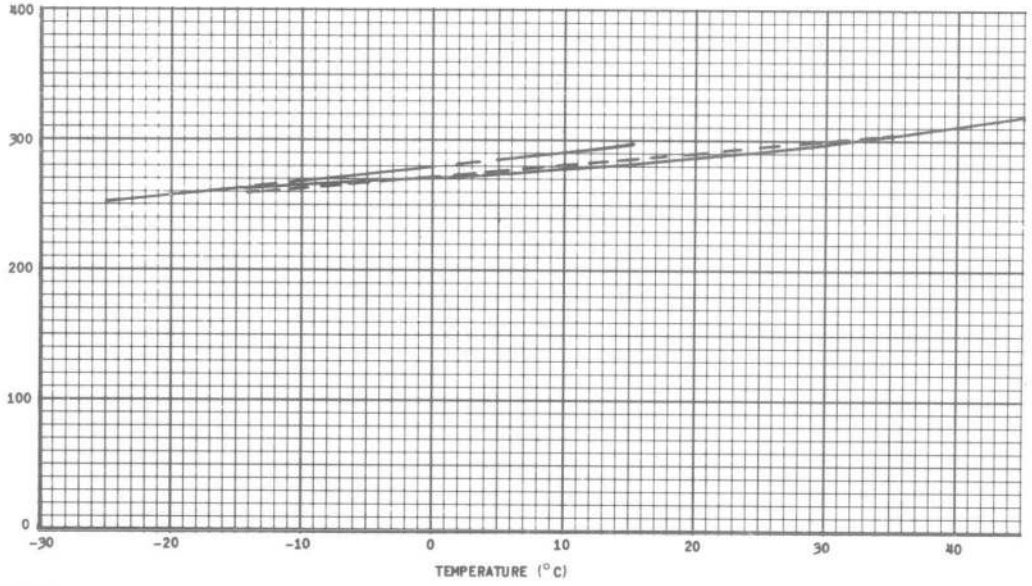


FIG. 5-2. ACCELERATION FROM 250K TO 450K IAS - LOW LEVEL



NO REHEAT
MAX. RPM
34,000 LB

SEA LEVEL
5,000 FT.
10,000 FT.



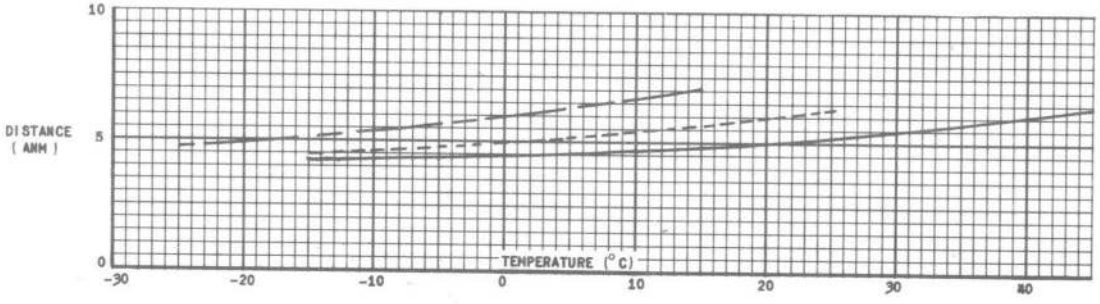


FIG. 5·3. ACCELERATION FROM 250K TO 0·9M - LOW LEVEL

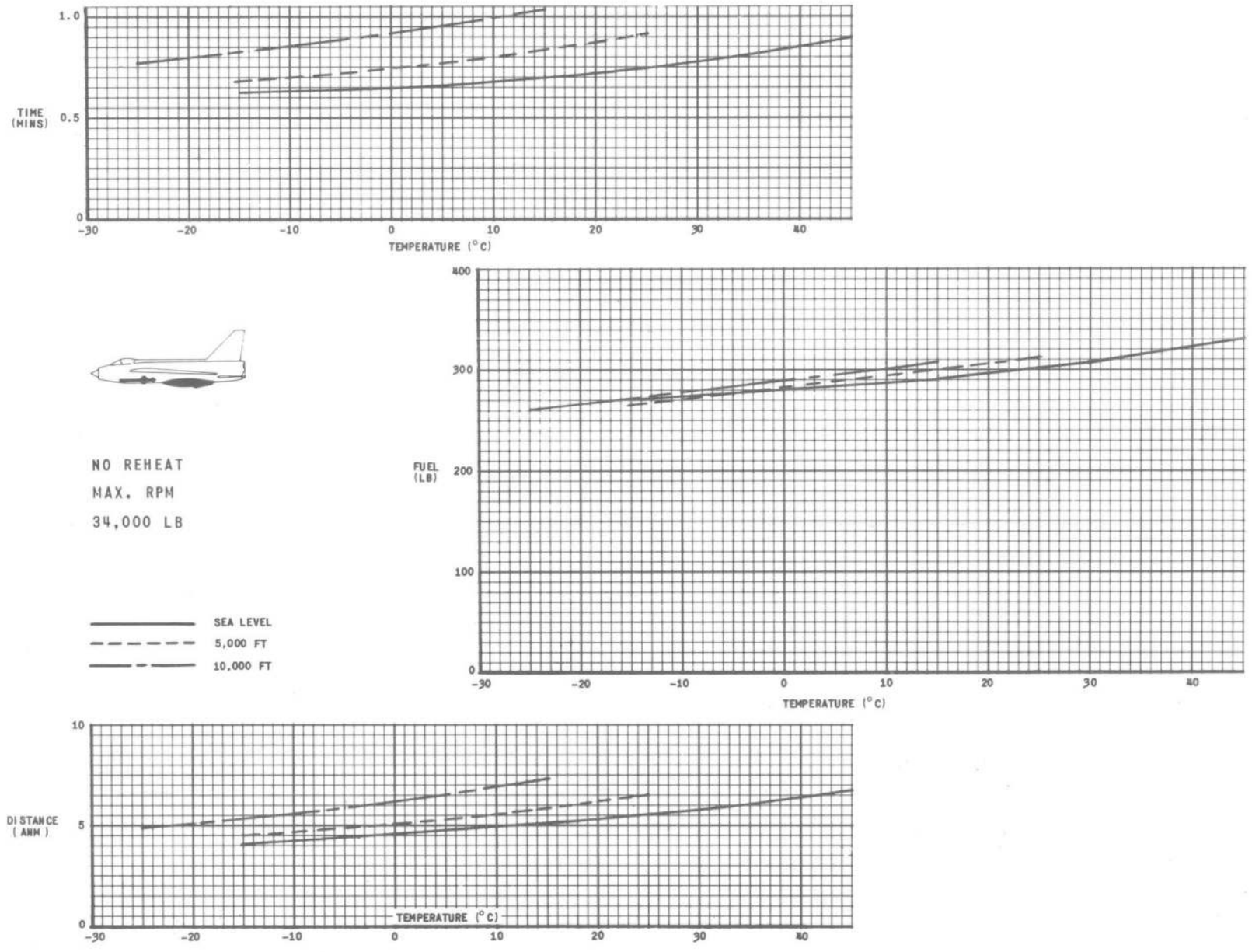
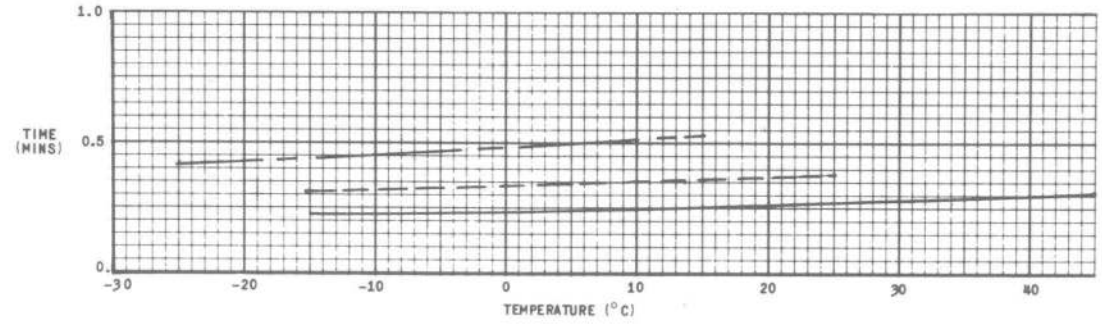


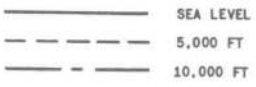
FIG. 5·4. ACCELERATION FROM 250K TO 0·9M - LOW LEVEL

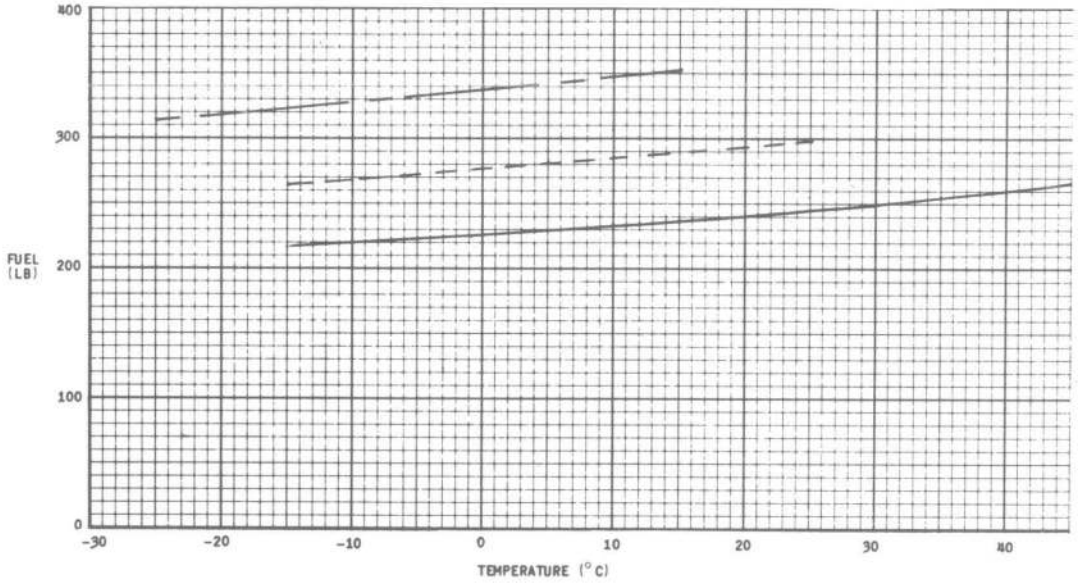


FULL REHEAT

MAX. RPM

34,000 LB





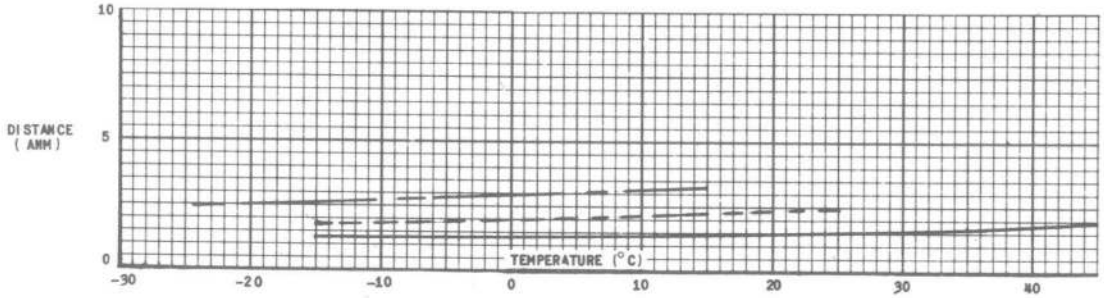
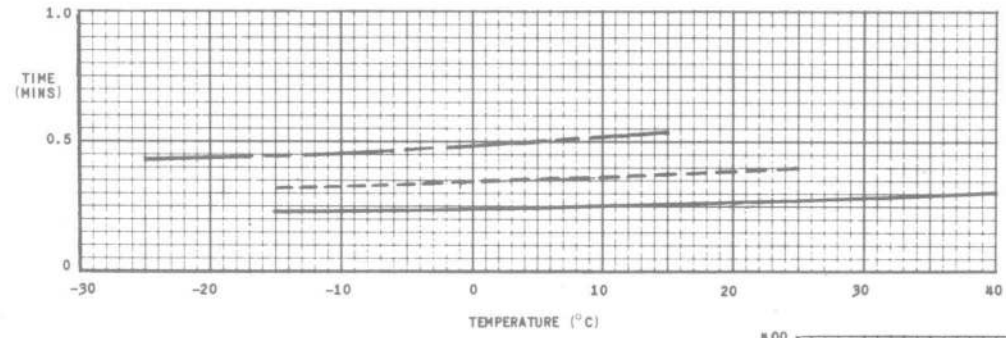
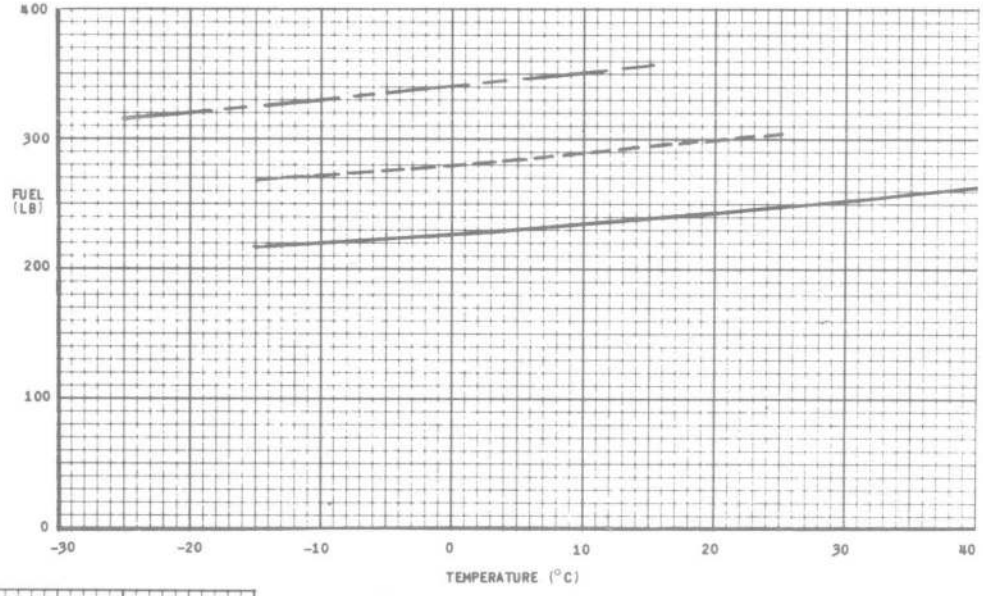


FIG. 5-5. ACCELERATION FROM 250K TO 450K IAS - LOW LEVEL



FULL REHEAT
MAX. RPM
34,000 LB

SEA LEVEL
5,000 FT.
10,000 FT.



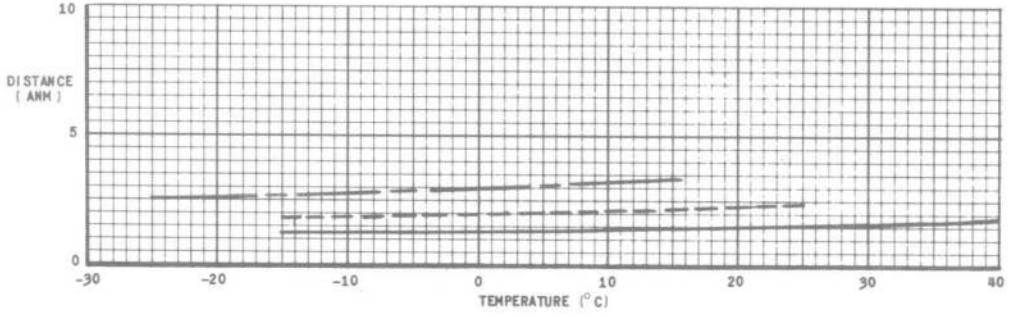
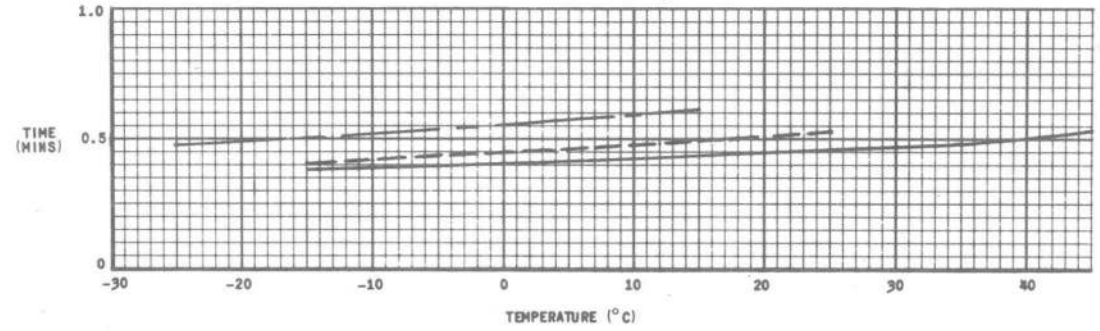


FIG. 5·6. ACCELERATION FROM 250K TO 450K IAS - LOW LEVEL



FULL REHEAT

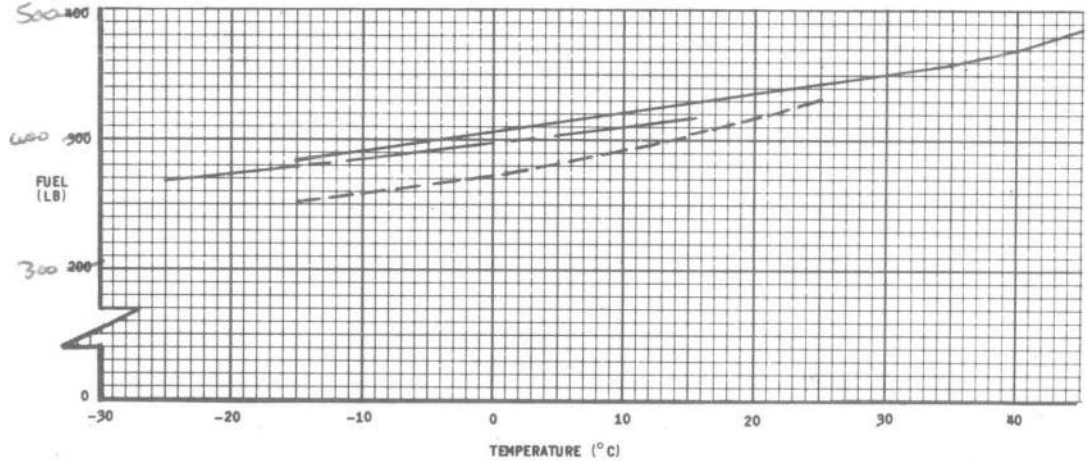
MAX. RPM

34,000 LB

SEA LEVEL

5,000 FT.

10,000 FT.



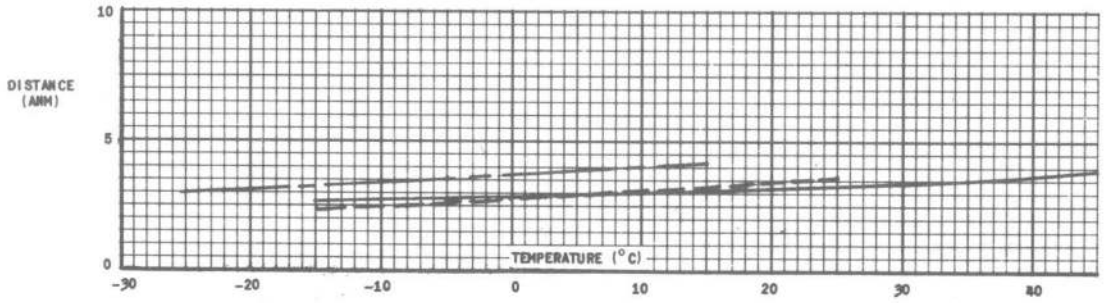
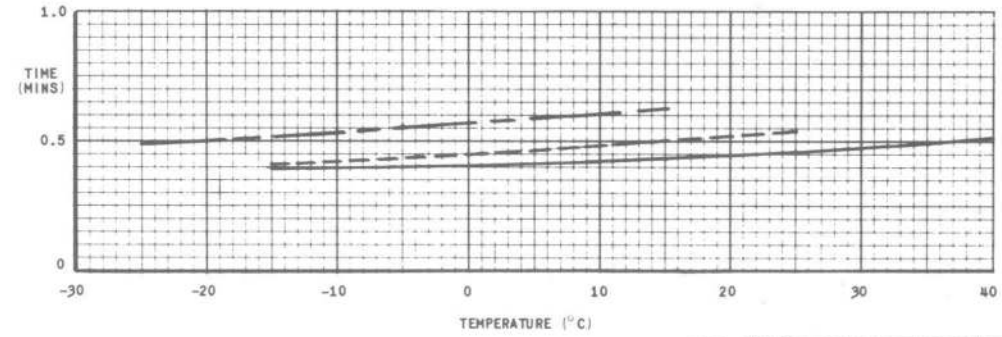
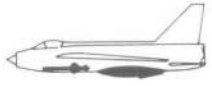


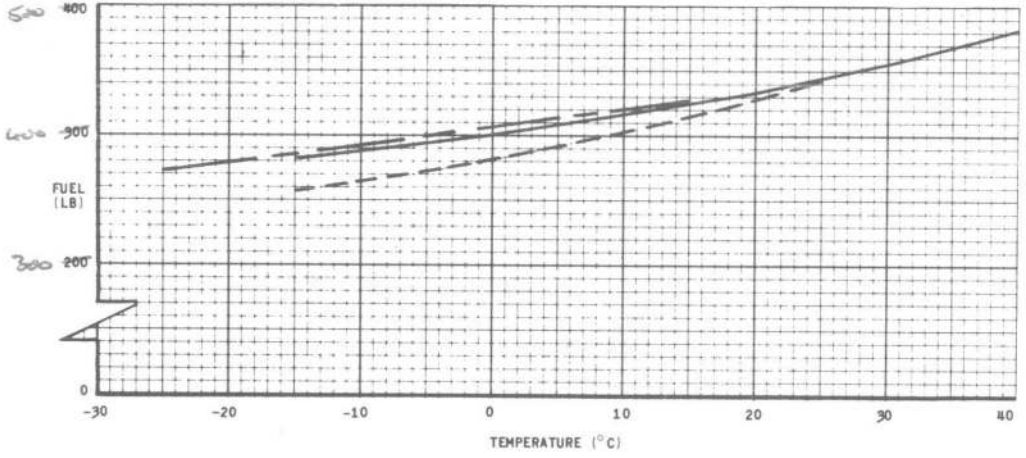
FIG. 5·7. ACCELERATION FROM 250K TO 0·9M - LOW LEVEL





FULL REHEAT
MAX. RPM
34,000 LB

SEA LEVEL
5,000 FT.
10,000 FT.



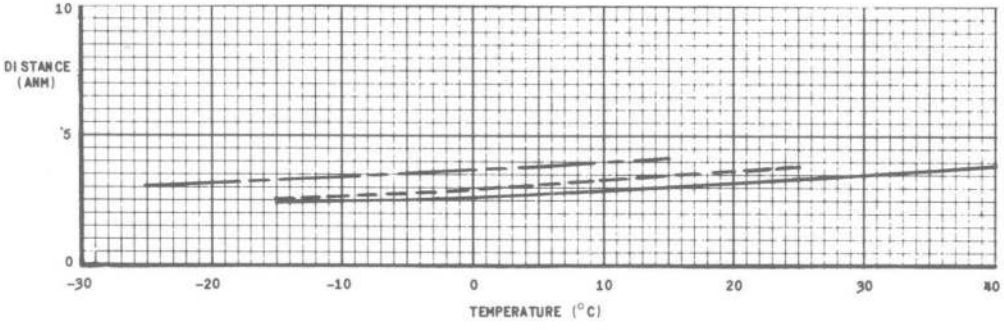
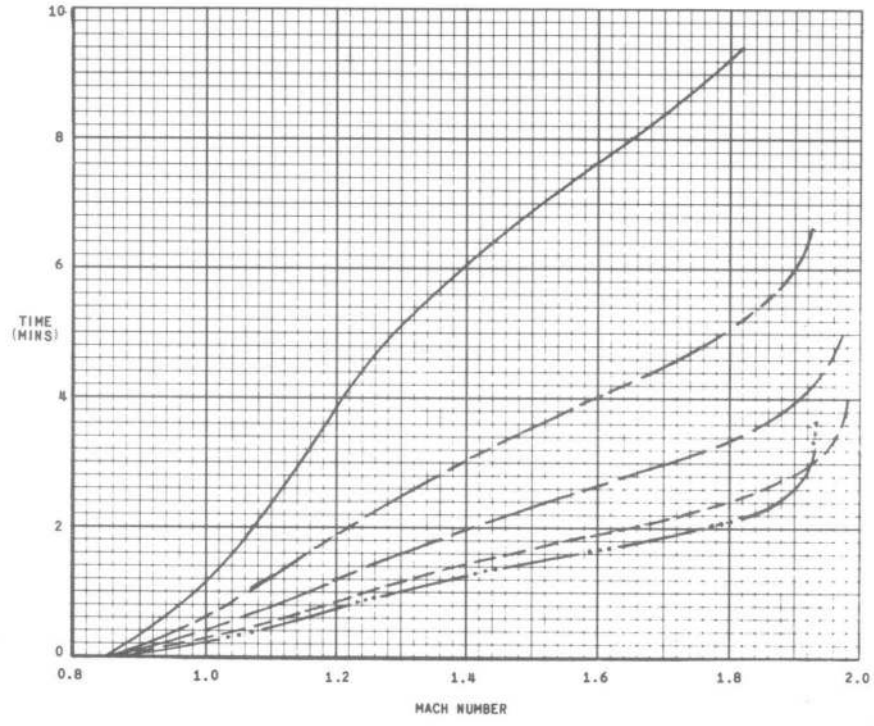
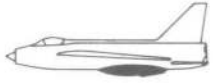
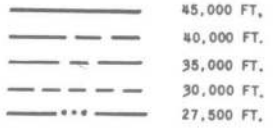


FIG. 5·8. ACCELERATION FROM 250K TO 0·9M - LOW LEVEL





MAX. RPM
32,000 LB



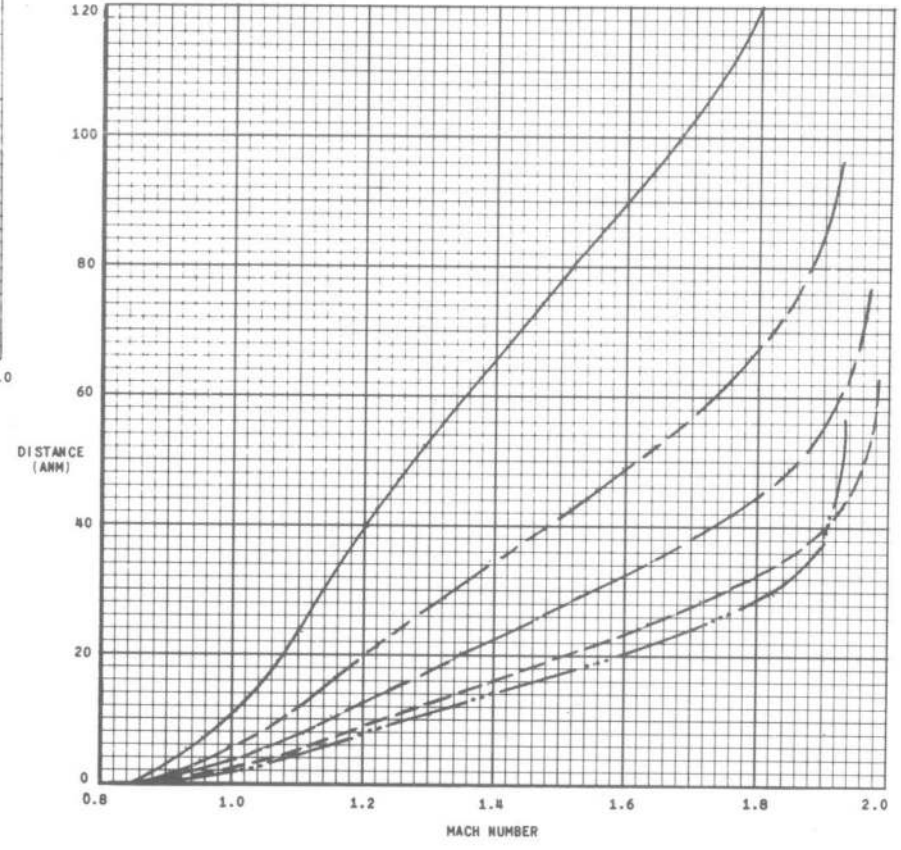
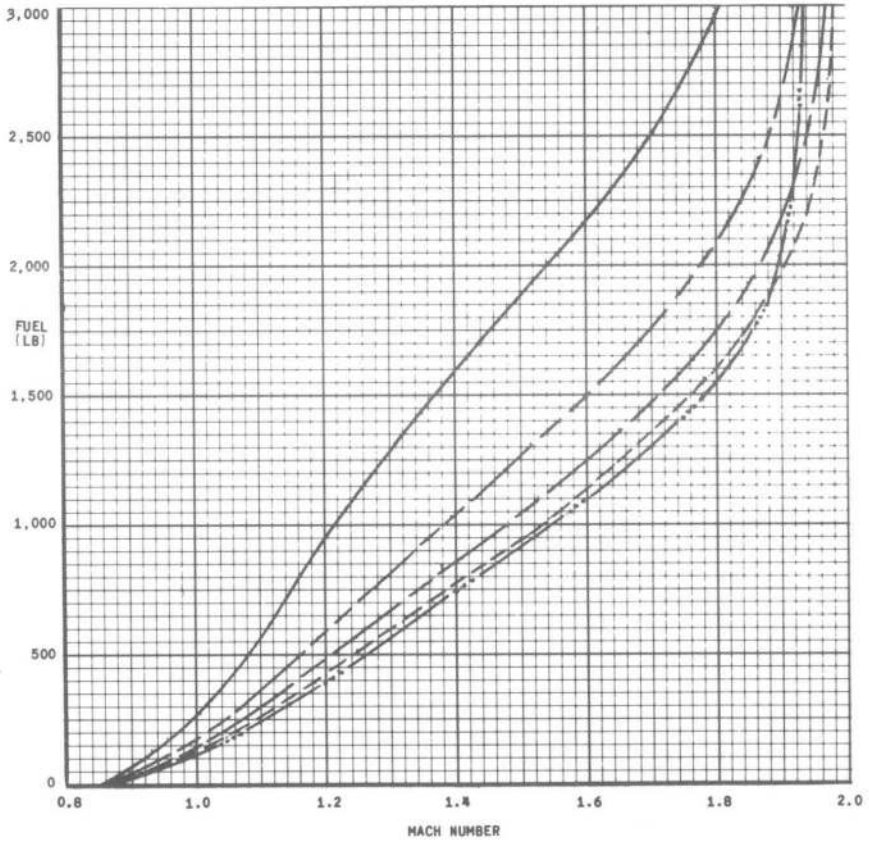


FIG. 5·9. FULL REHEAT ACCELERATION - -36·5°C



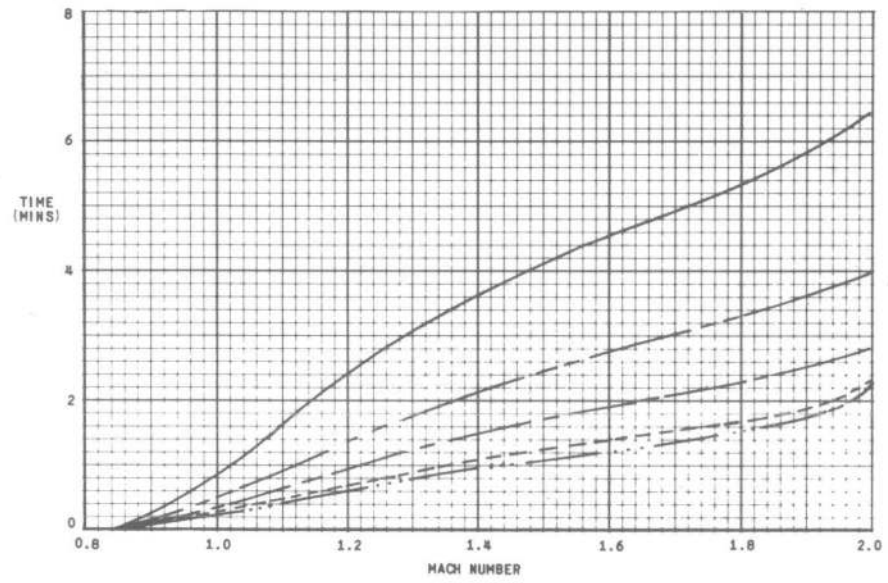
MAX. RPM
32,000 LB

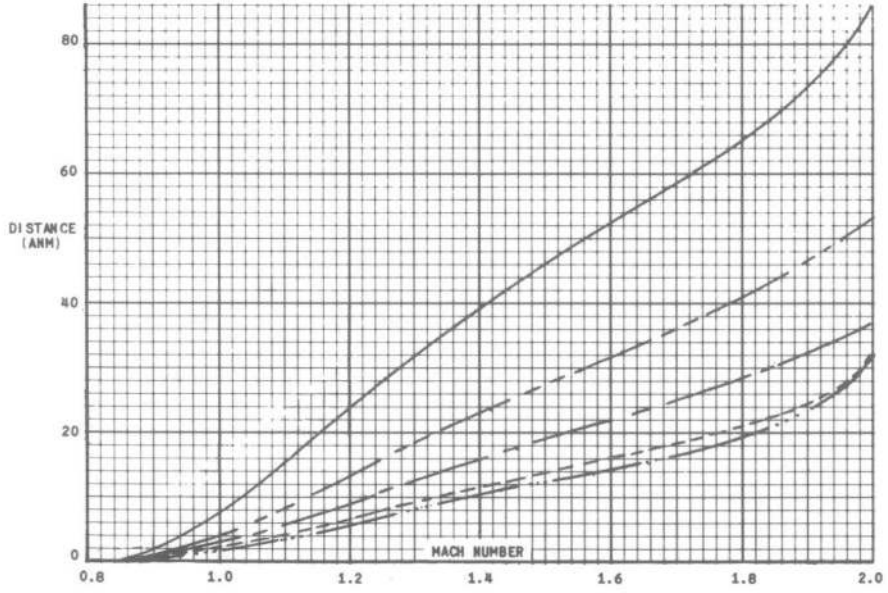
45,000 FT.
40,000 FT.
35,000 FT.
30,000 FT.
27,500 FT.

FIG. 5·9. FULL REHEAT ACCELERATION - -36·5°C

MAX. RPM

32,000 LB





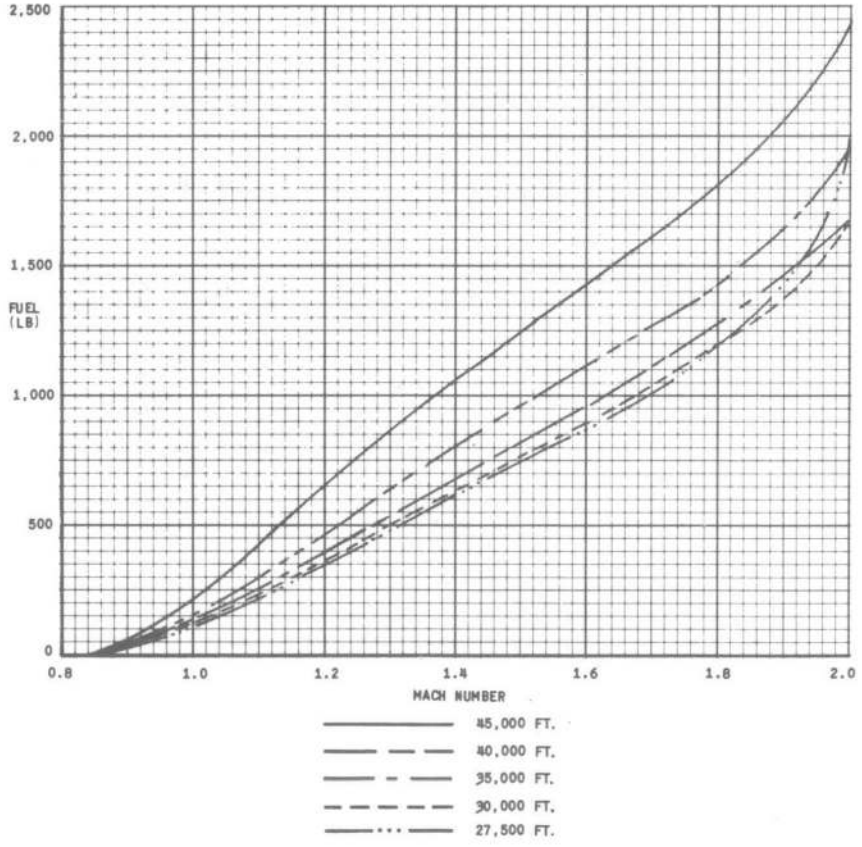
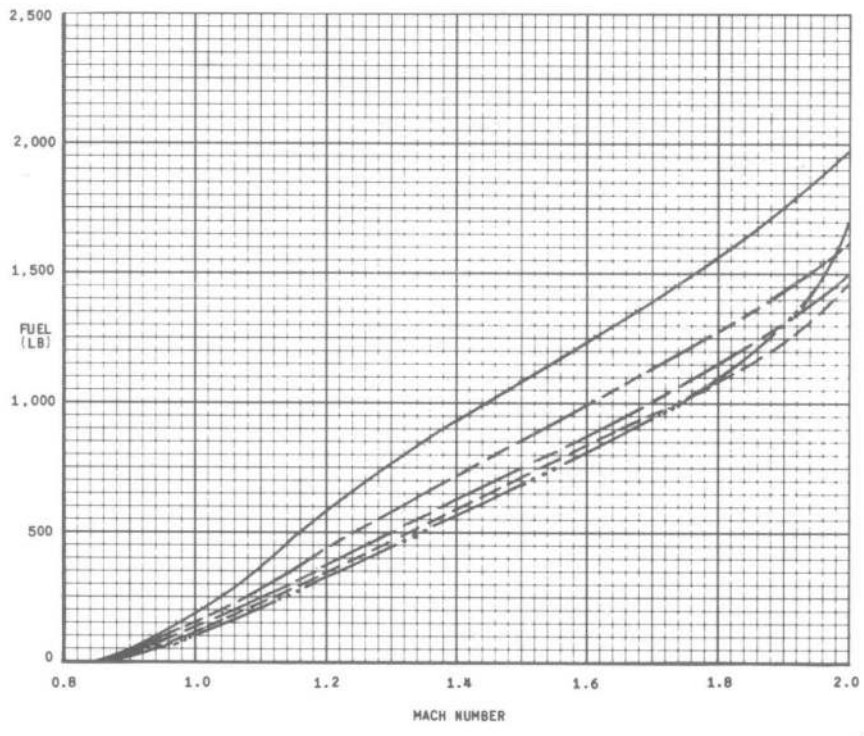
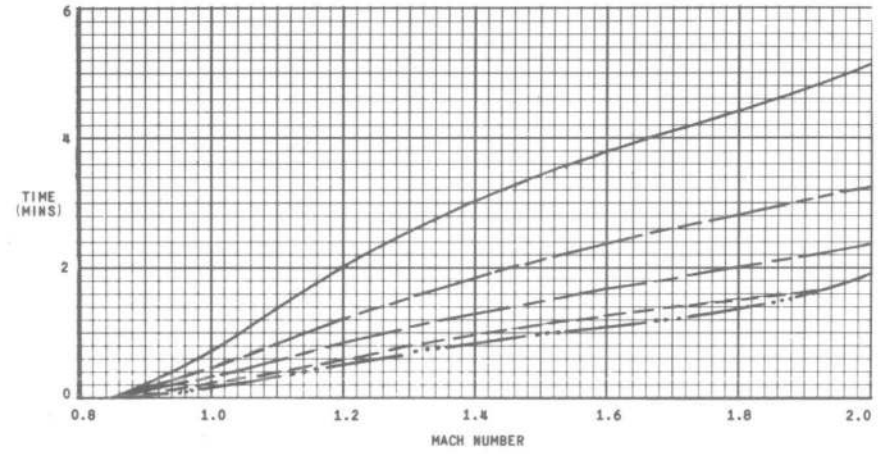
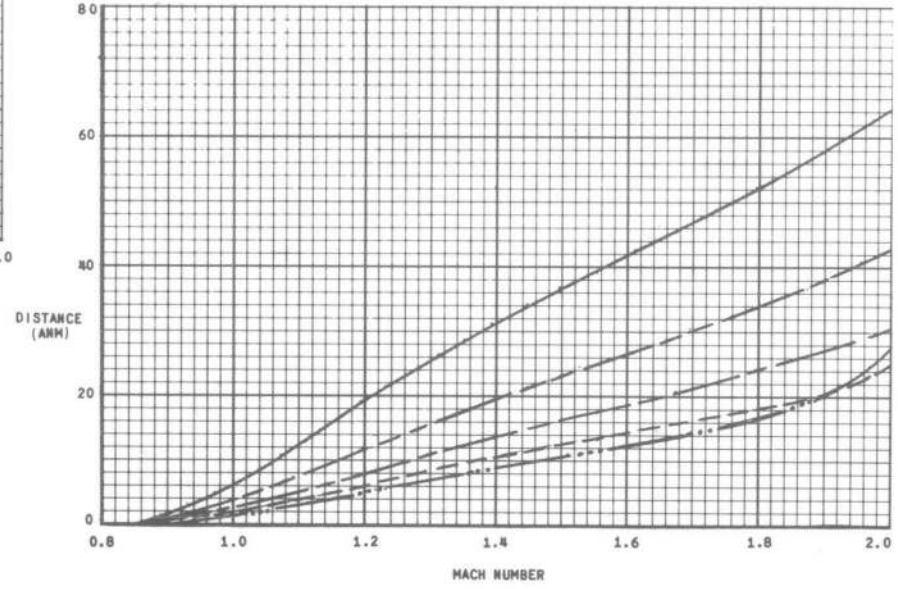


FIG. 5·10. FULL REHEAT ACCELERATION - -56·5°C

MAX. RPM
32,000 LB

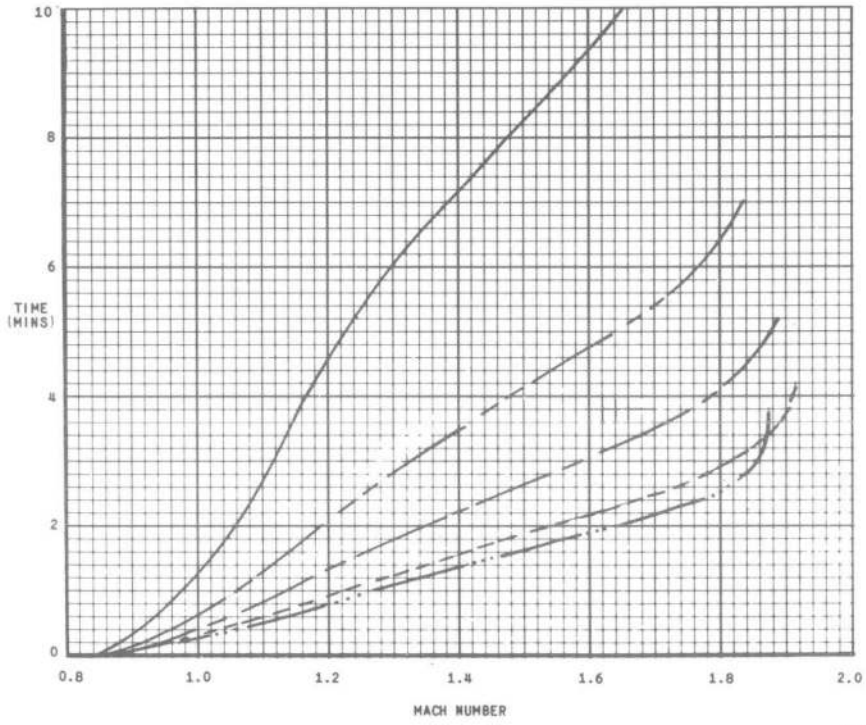




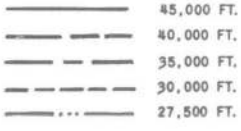


45,000 FT.
40,000 FT.
35,000 FT.
30,000 FT.
27,500 FT.

FIG. 5·11. FULL REHEAT ACCELERATION - -66·5°C



MAX. RPM
32,000 LB



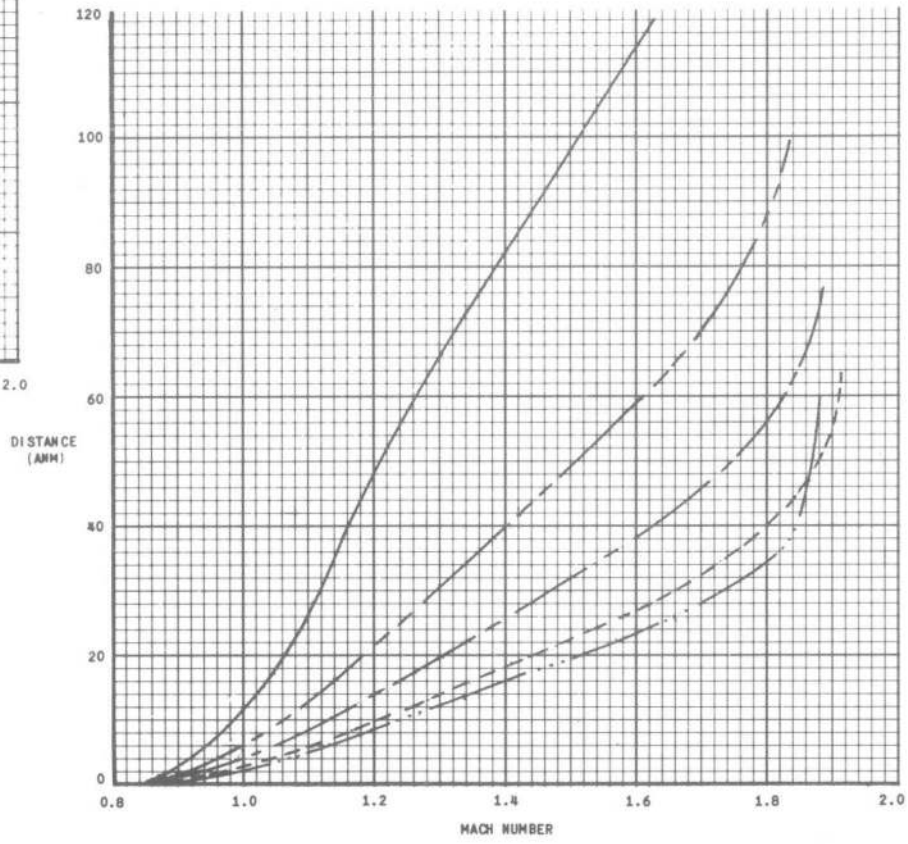
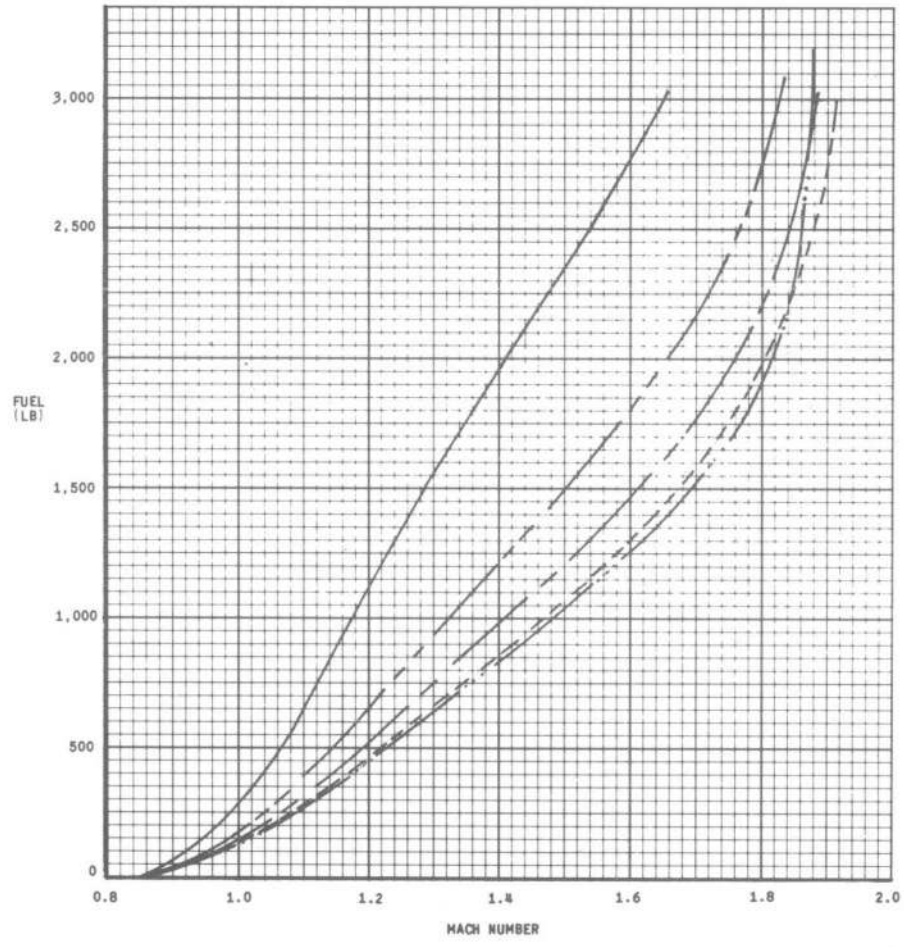


FIG. 5·12. FULL REHEAT ACCELERATION - -36·5°C



MAX. RPM
32,000 LB

45,000 FT.
40,000 FT.
35,000 FT.
30,000 FT.
27,500 FT.

FIG. 5·12. FULL REHEAT ACCELERATION - -36·5°C

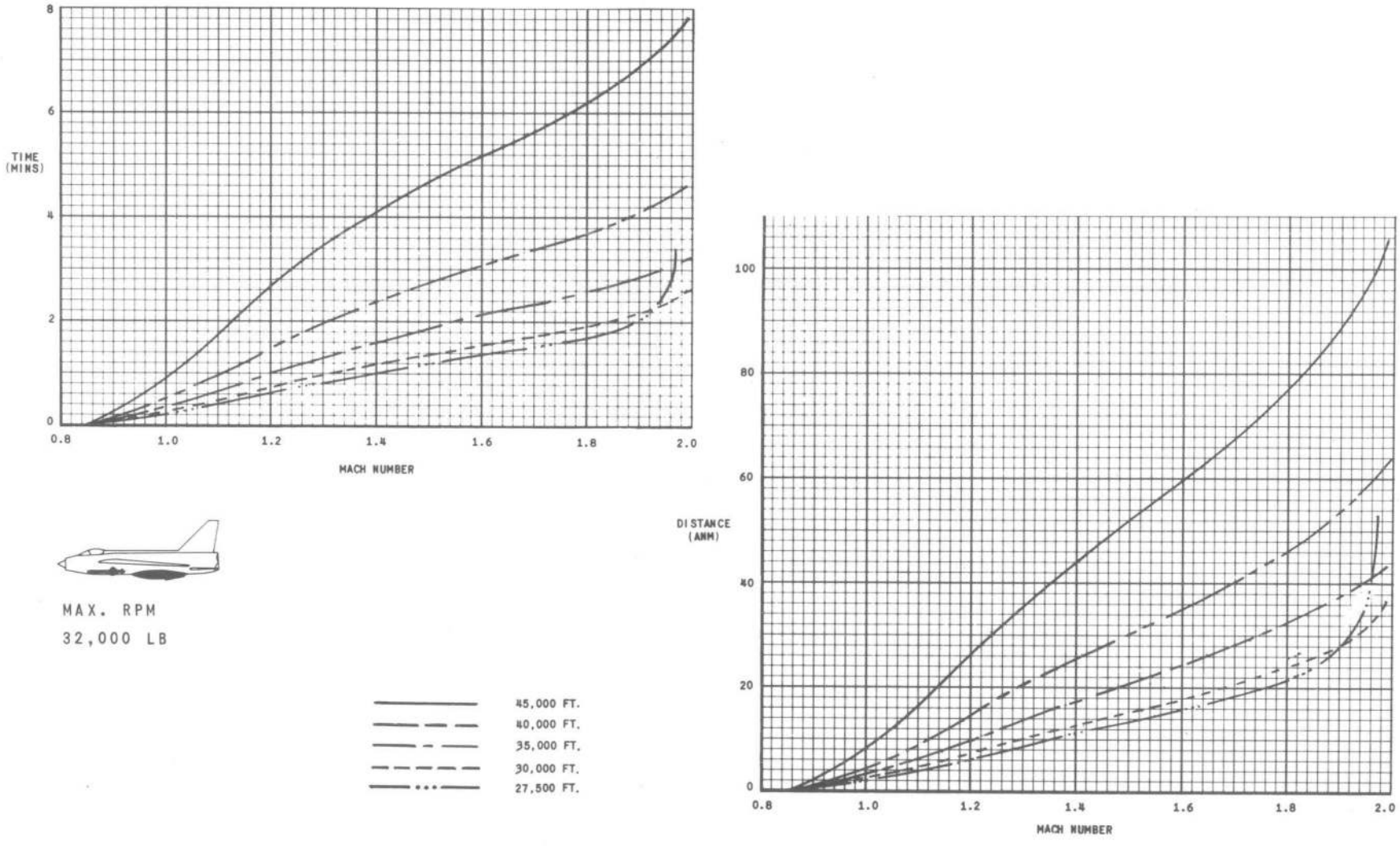
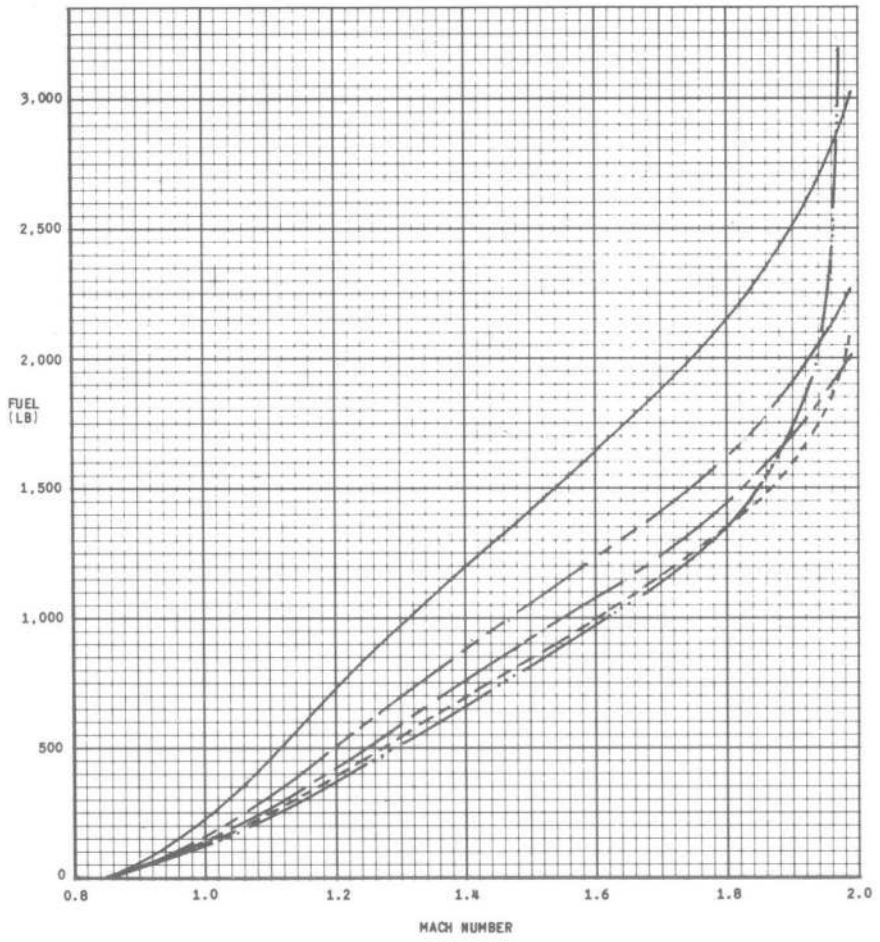


FIG. 5-13. FULL REHEAT ACCELERATION - -56·5°C

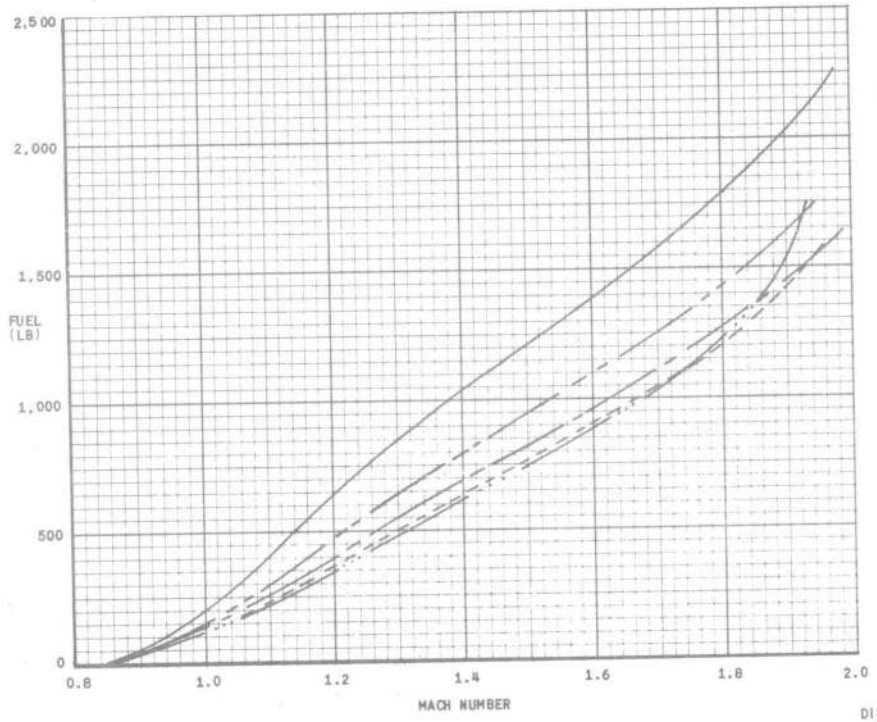


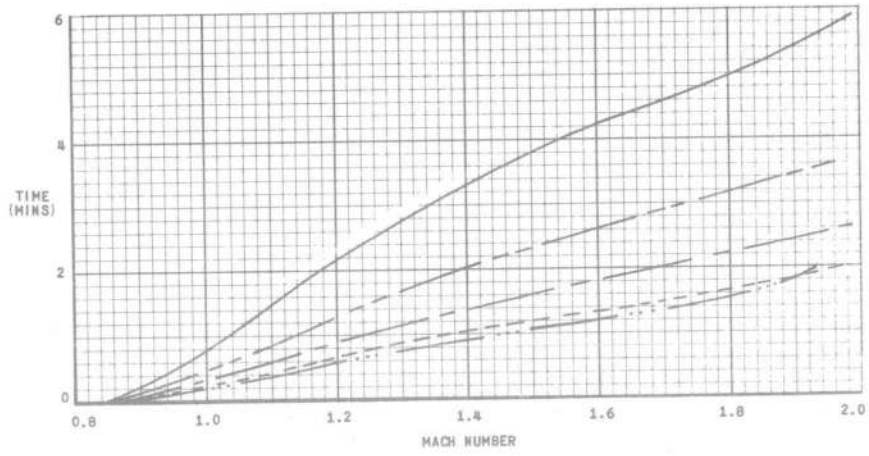
MAX. RPM
32,000 LB

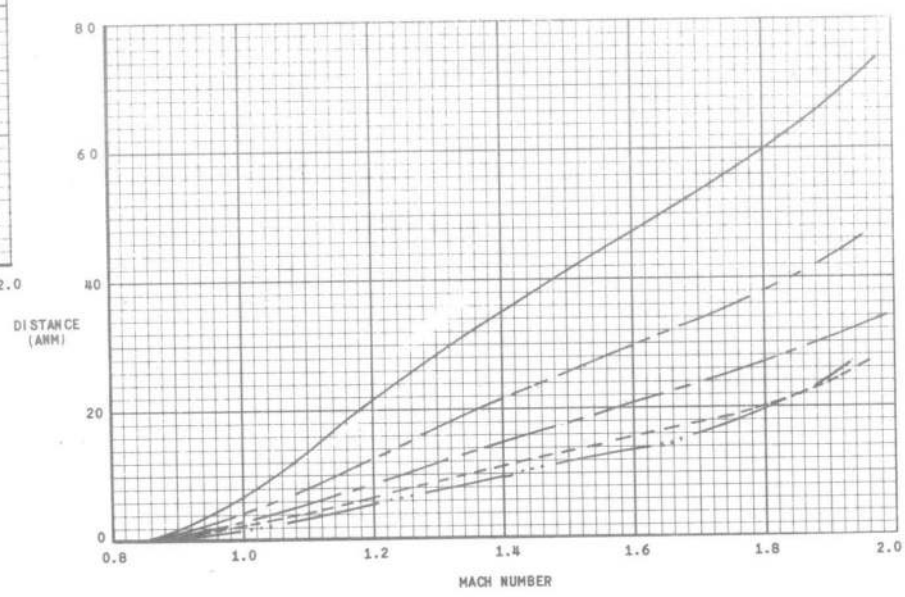
45,000 FT.
40,000 FT.
35,000 FT.
30,000 FT.
27,500 FT.

FIG. 5-13. FULL REHEAT ACCELERATION - -56·5°C

MAX RPM
32,000 LB







45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·14. FULL REHEAT ACCELERATION - -66·5°C

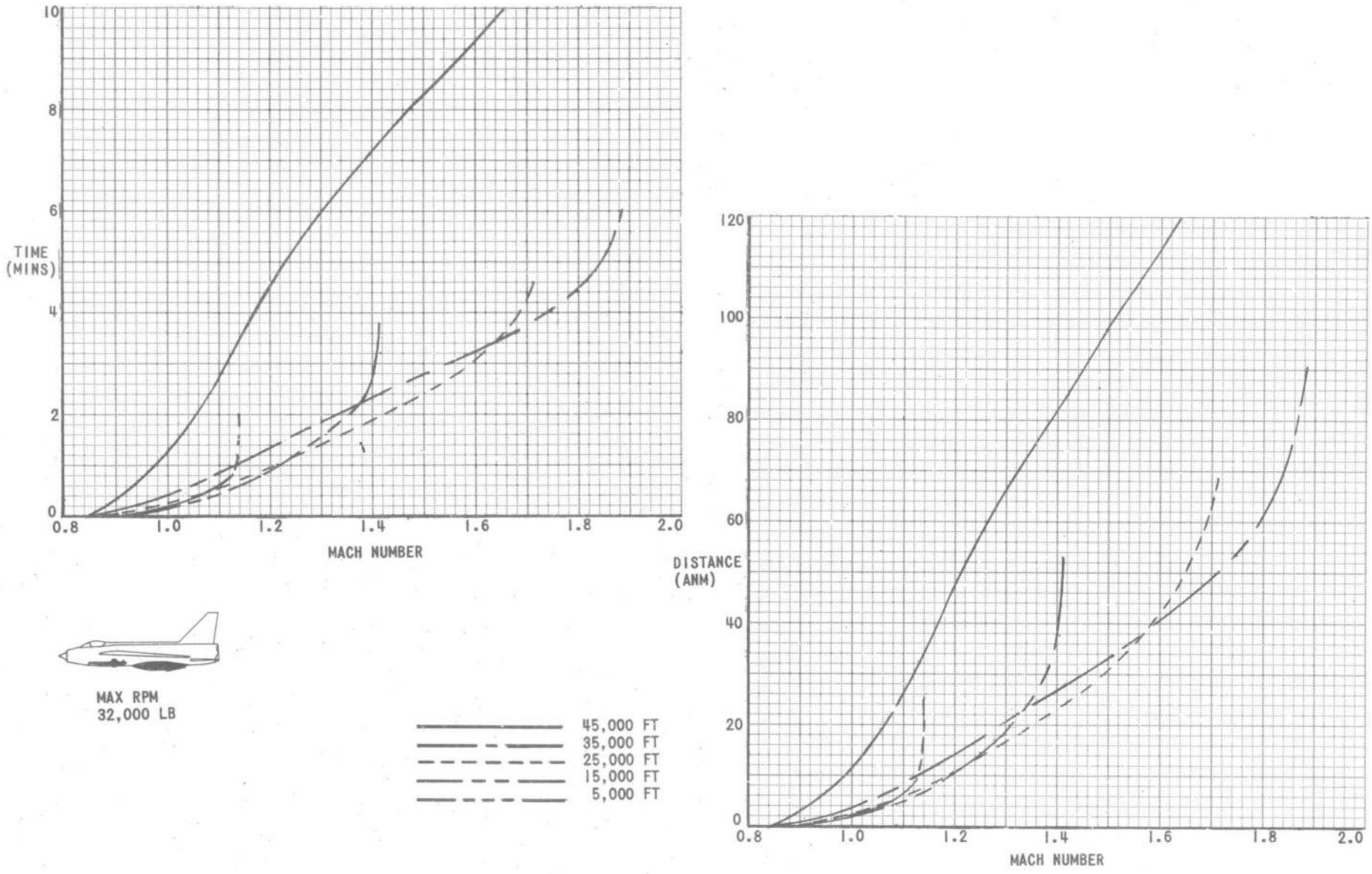


FIG.5.14/1. FULL REHEAT ACCELERATION - ICAO+20°C

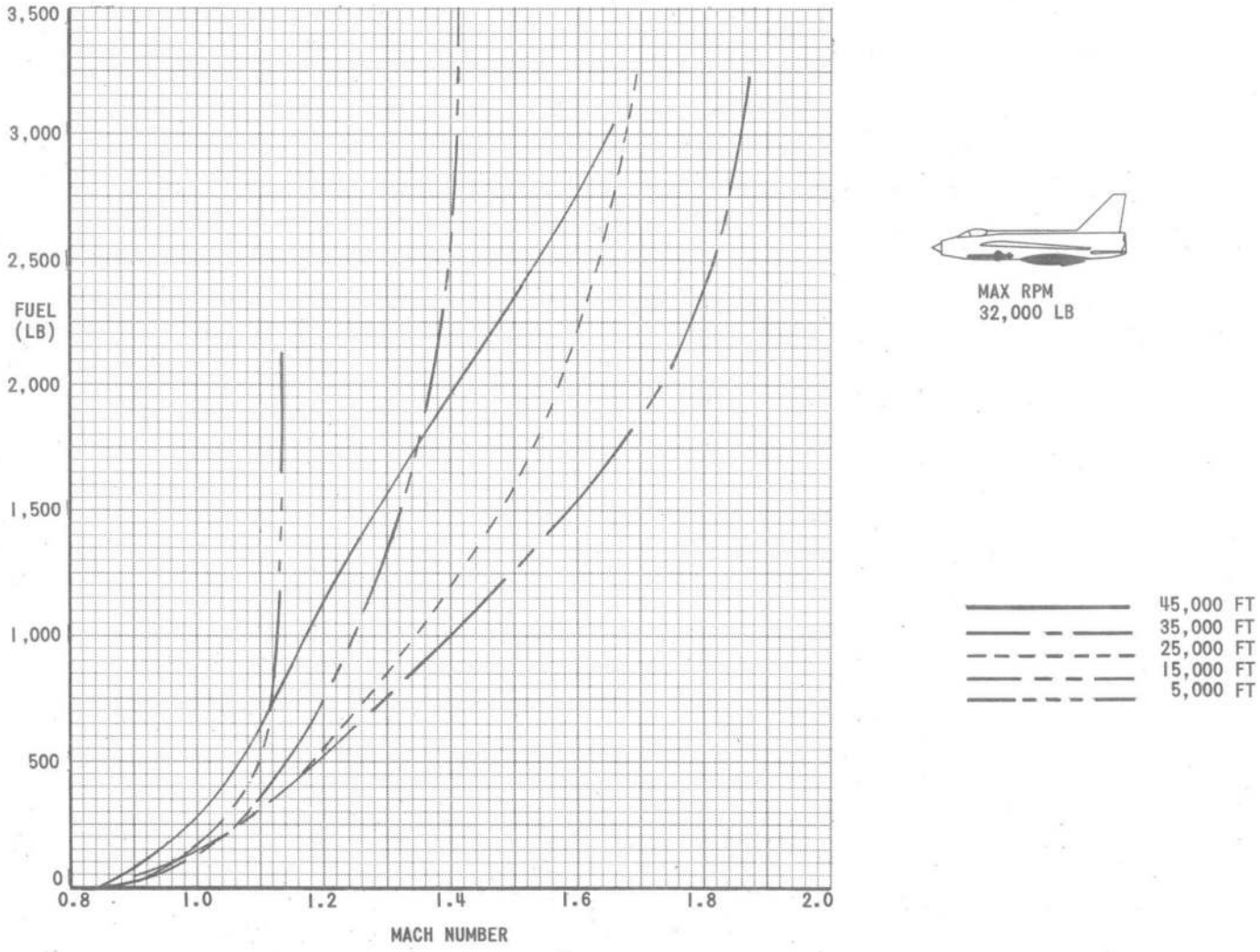
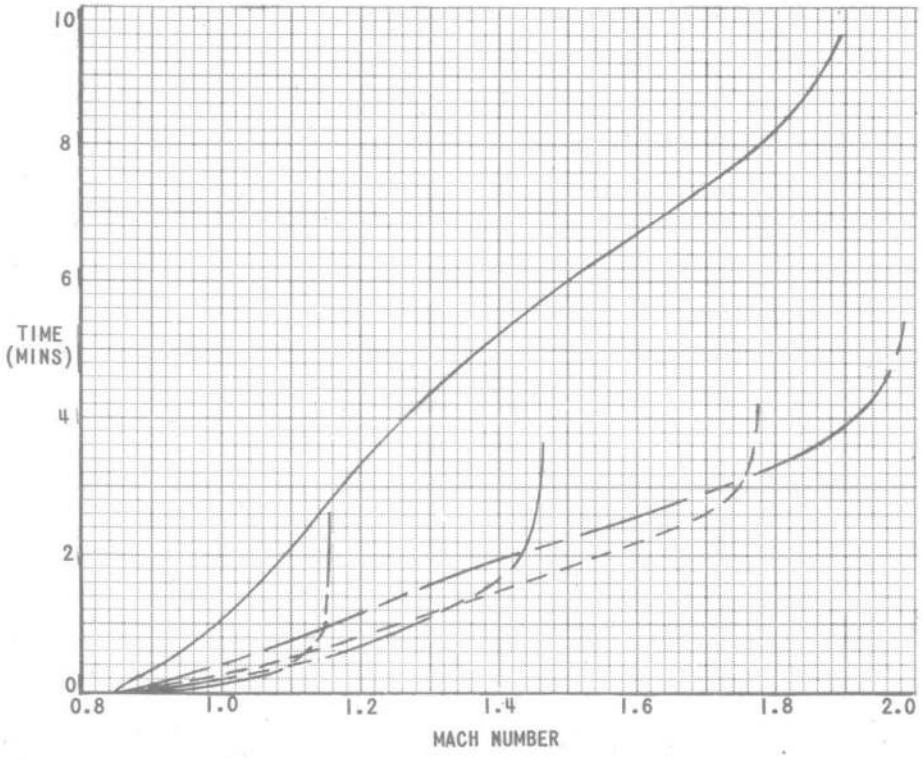


FIG.5.14/1. FULL REHEAT ACCELERATION - ICAO+20°C



MAX RPM
32,000 LB

45,000 FT
35,000 FT
25,000 FT
15,000 FT
5,000 FT

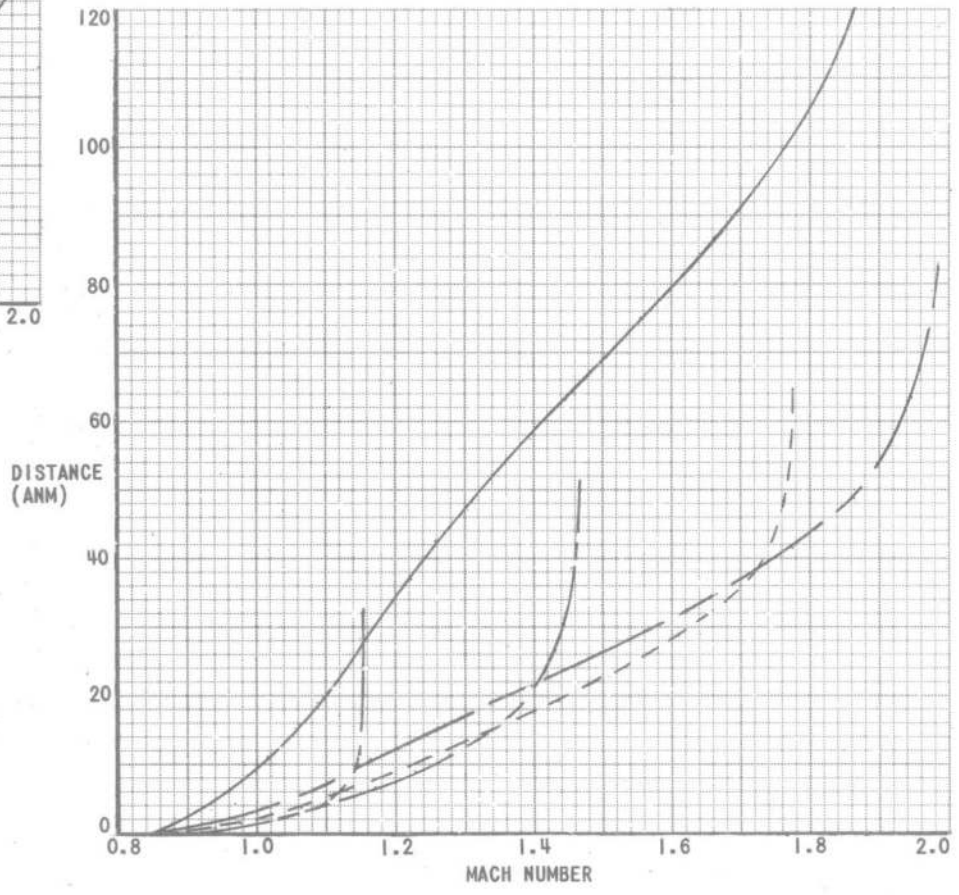


FIG.5.14/2. FULL REHEAT ACCELERATION - ICAO +10°C

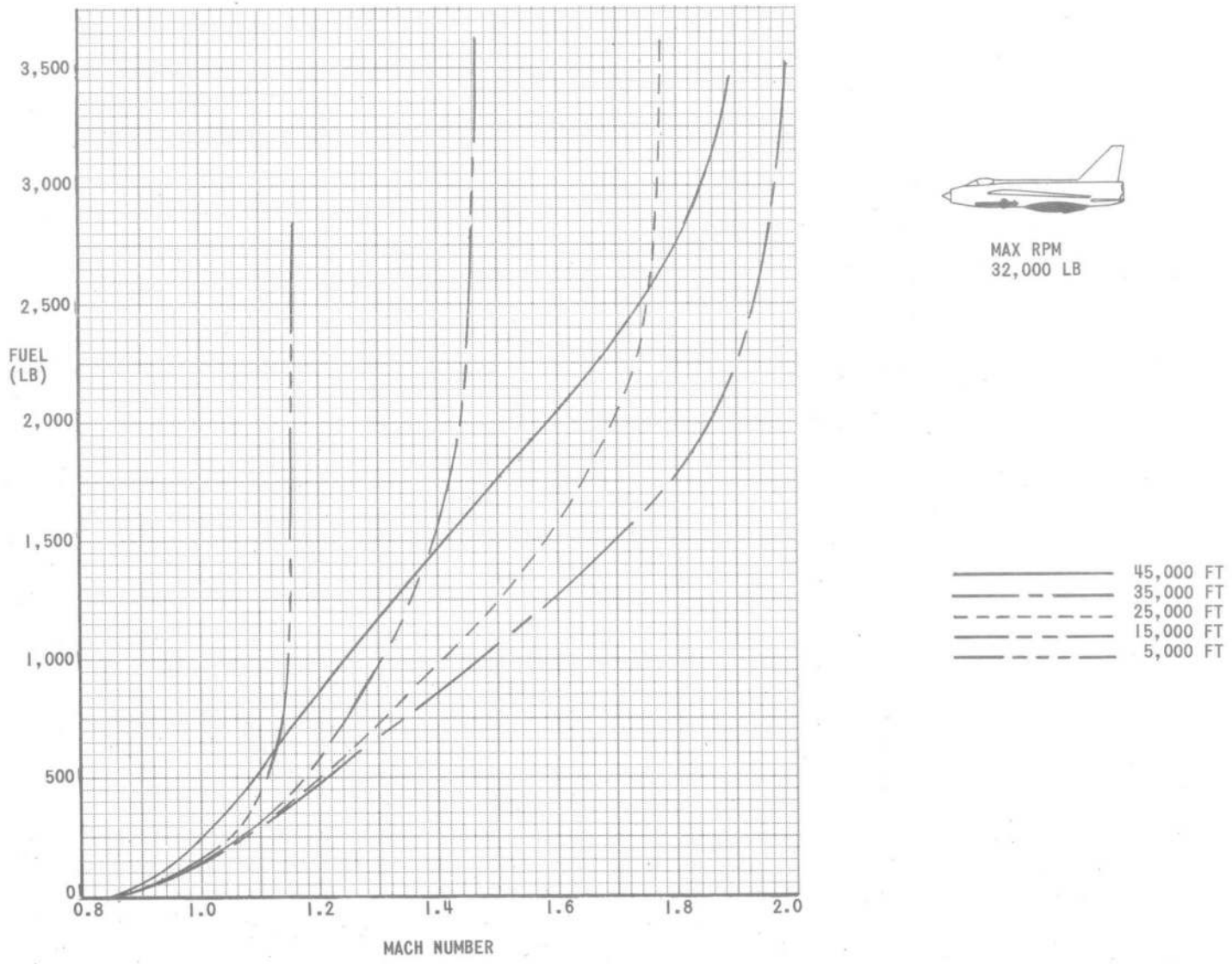
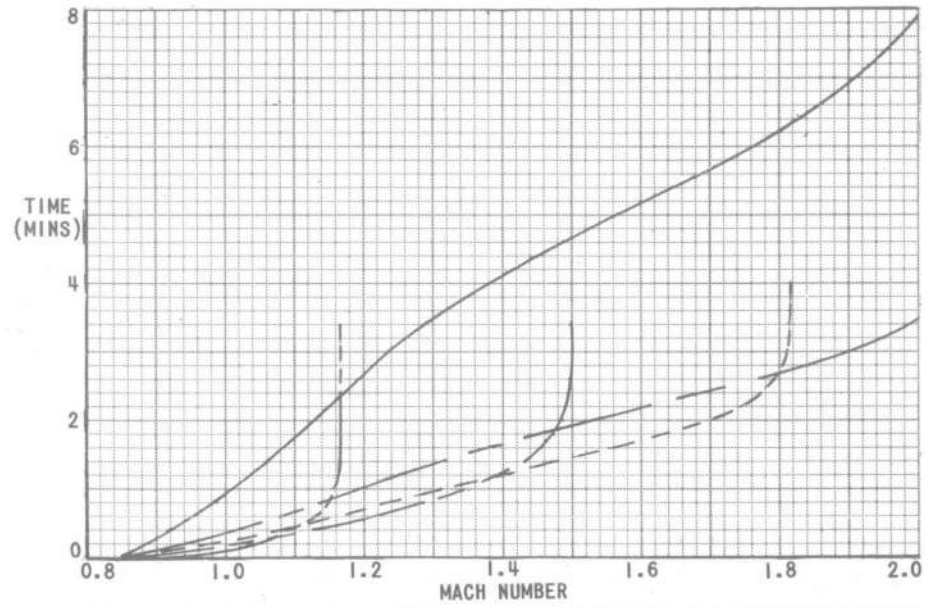
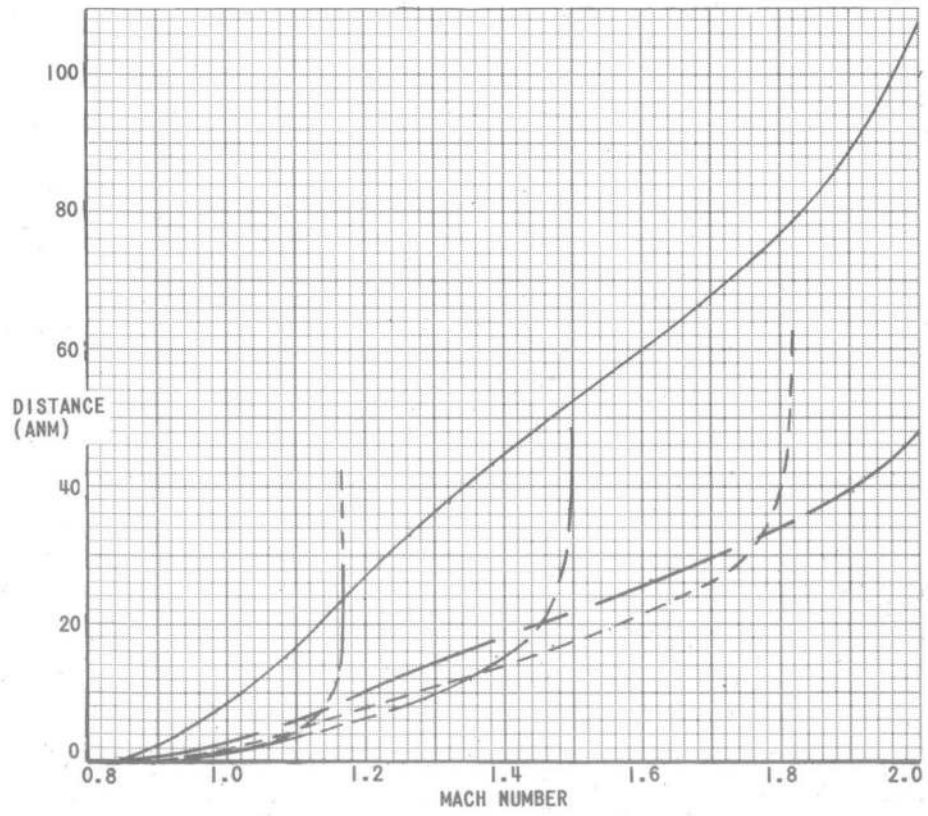


FIG.5.14/2. FULL REHEAT ACCELERATION - ICAO+10°C





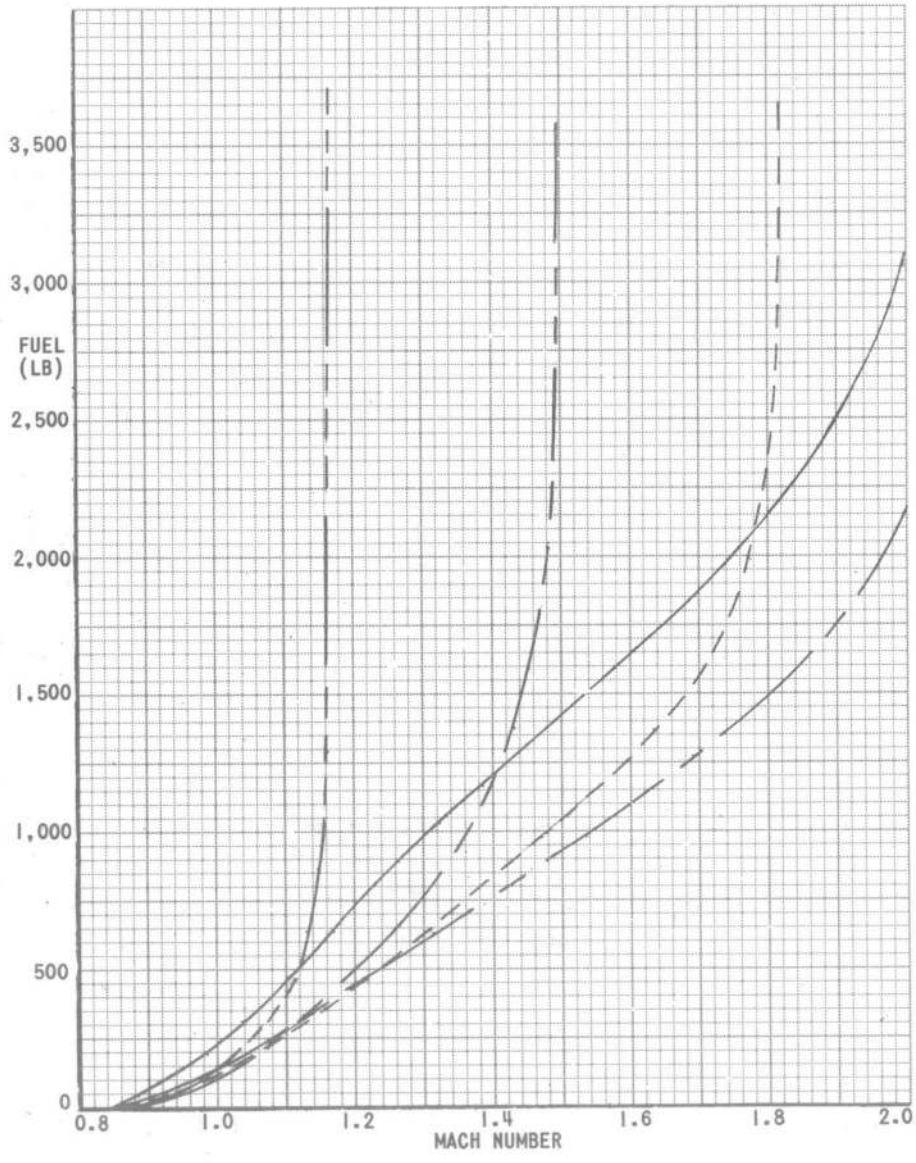


FIG.5.14/3. FULL REHEAT ACCELERATION - ICAO

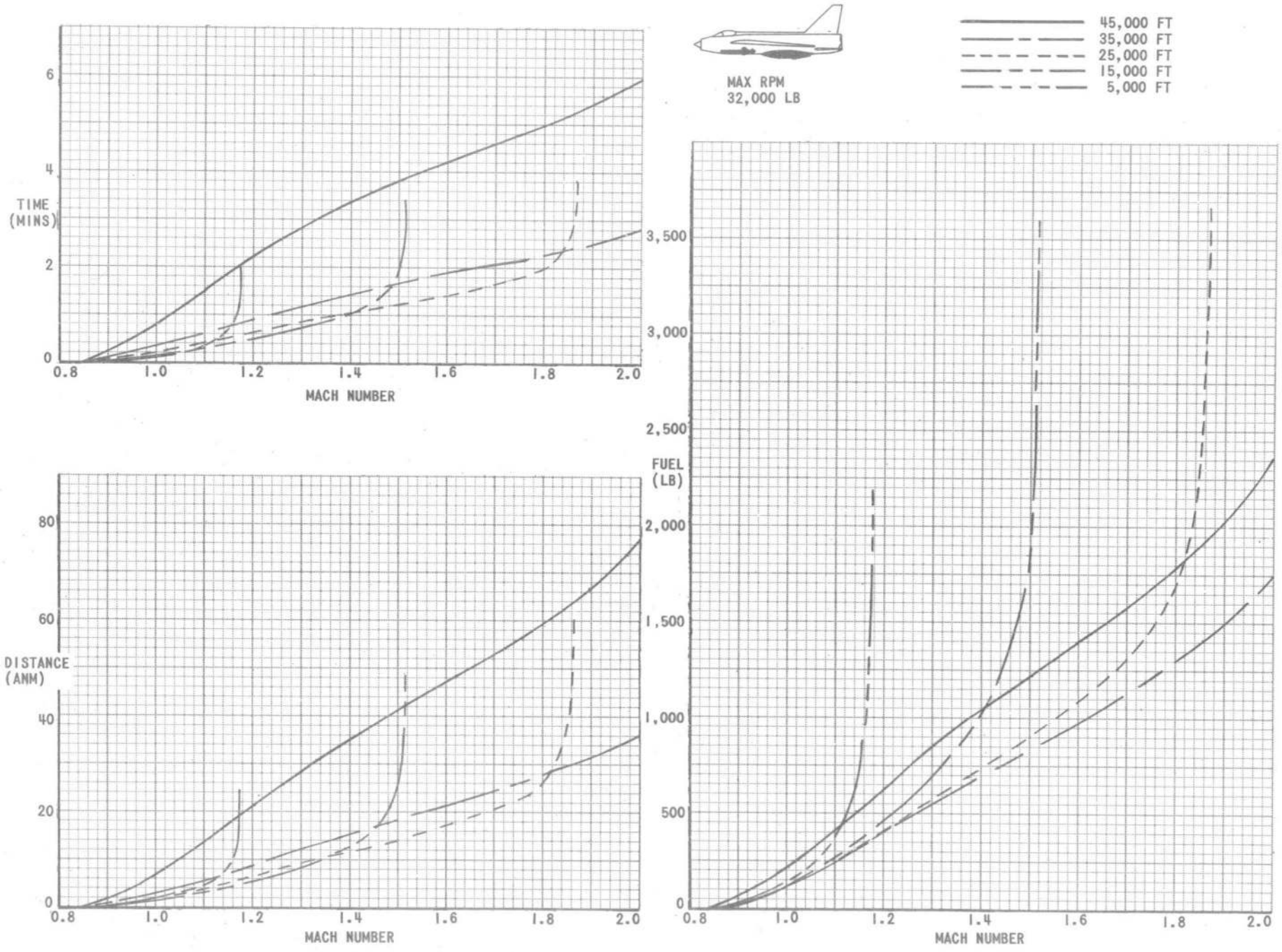


FIG. 5.14/4. FULL REHEAT ACCELERATION - ICAO —10°C

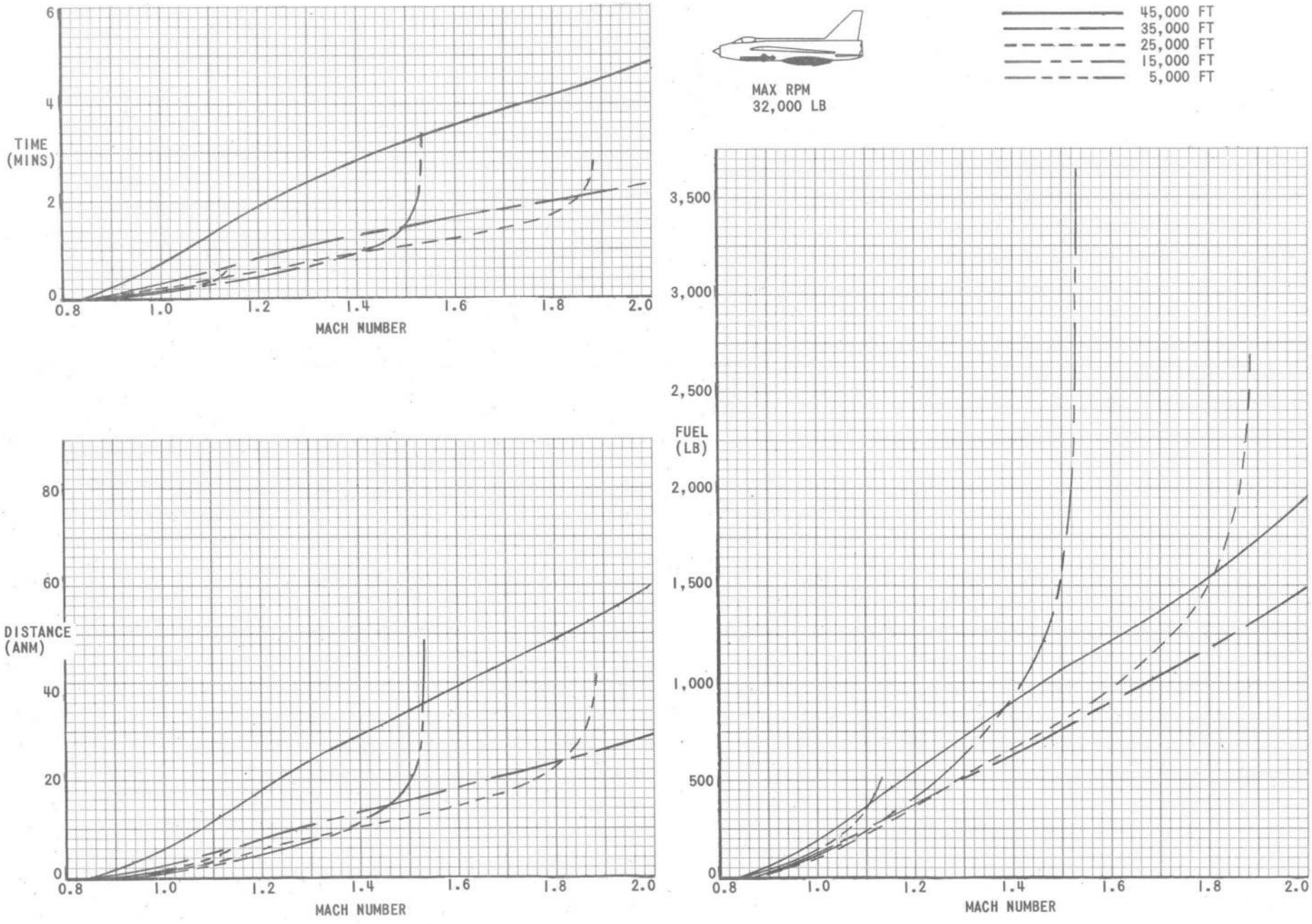


FIG.5.14/5. FULL REHEAT ACCELERATION - ICAO—20°C

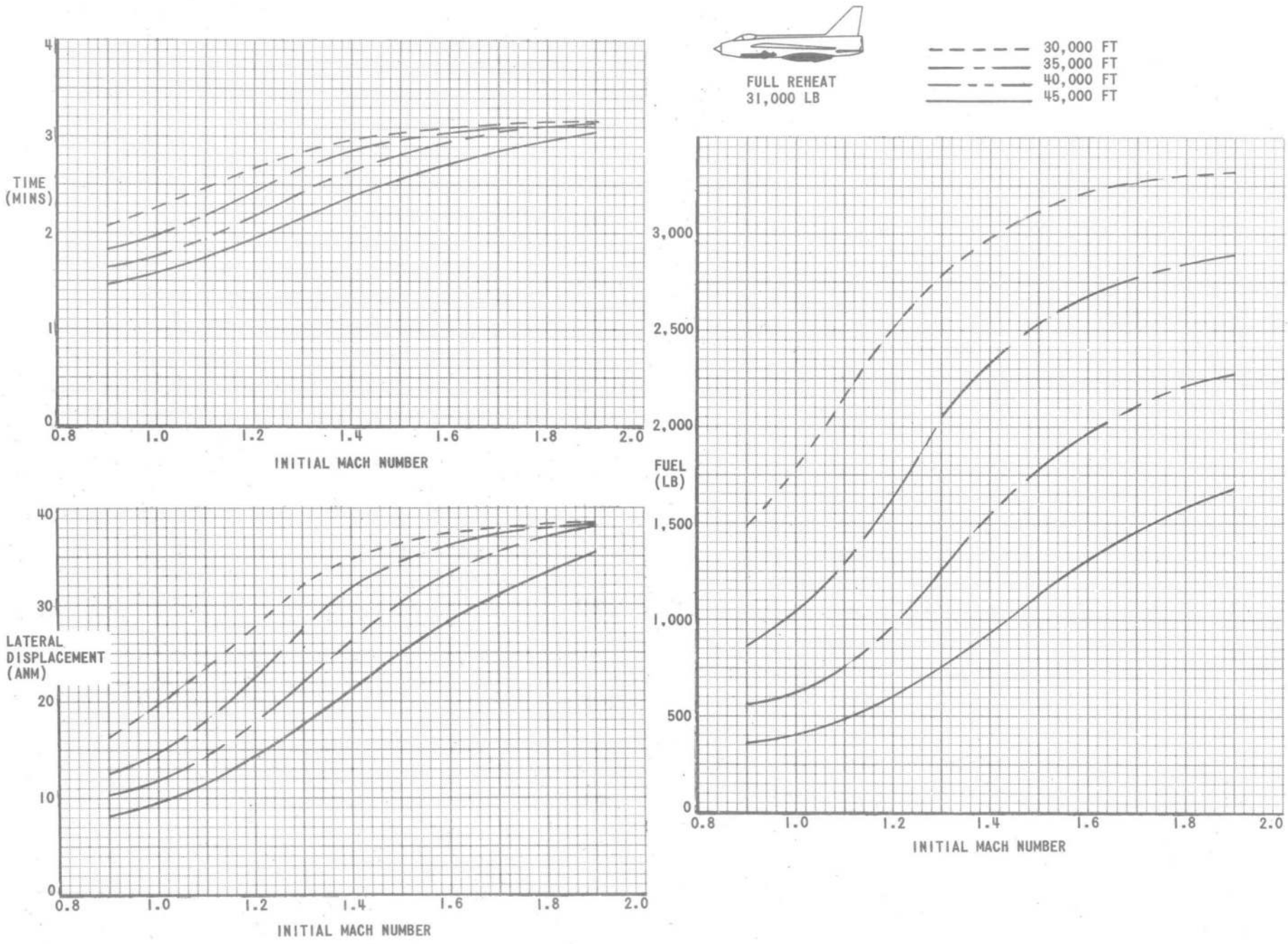
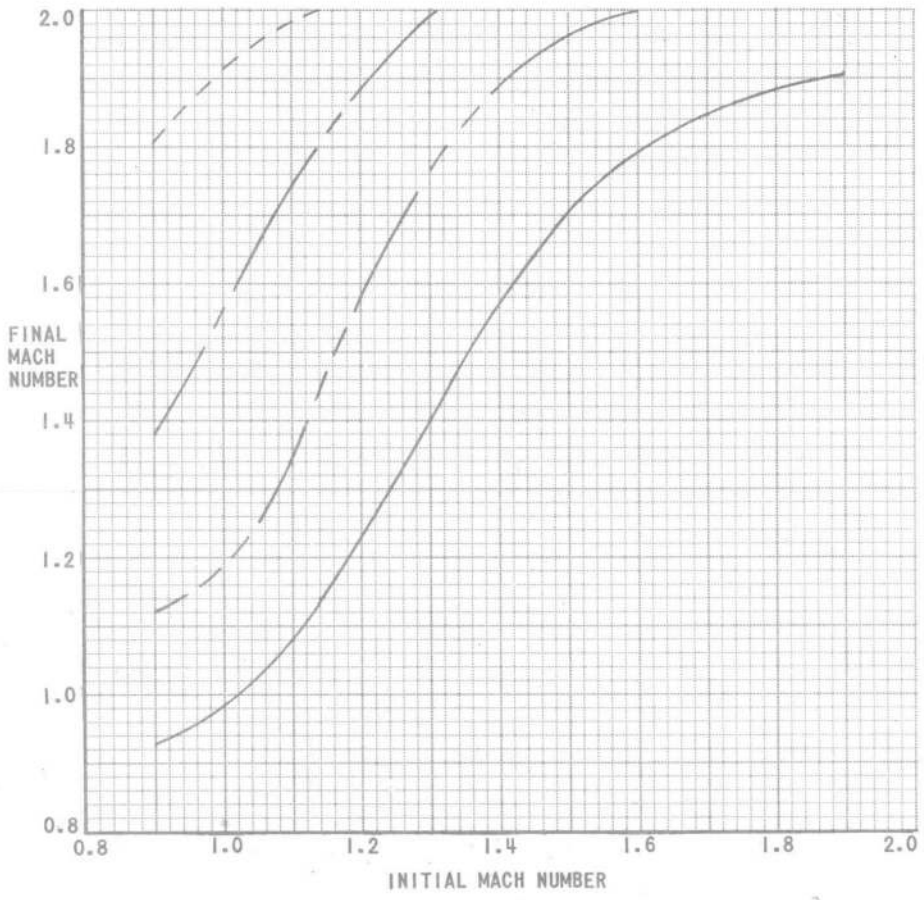


FIG.5.14/6. 180° ACCELERATED 1.4G TURN - —56.5°C



FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT
45,000 FT

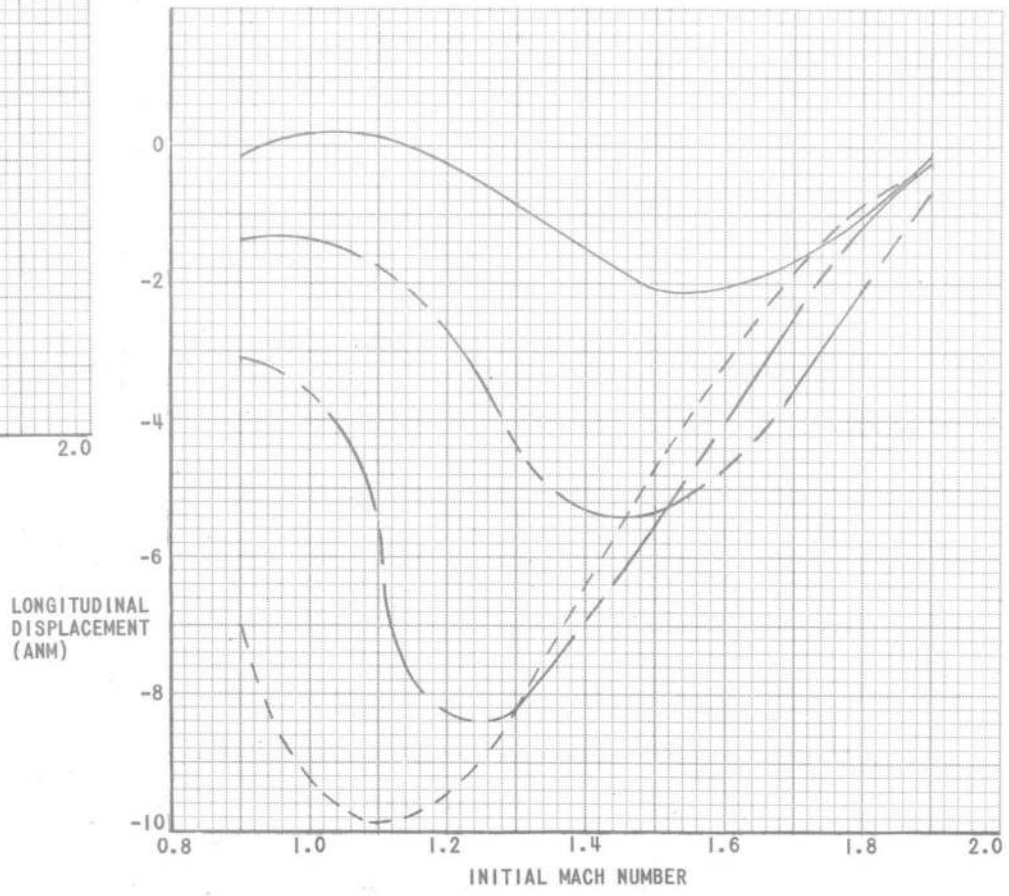
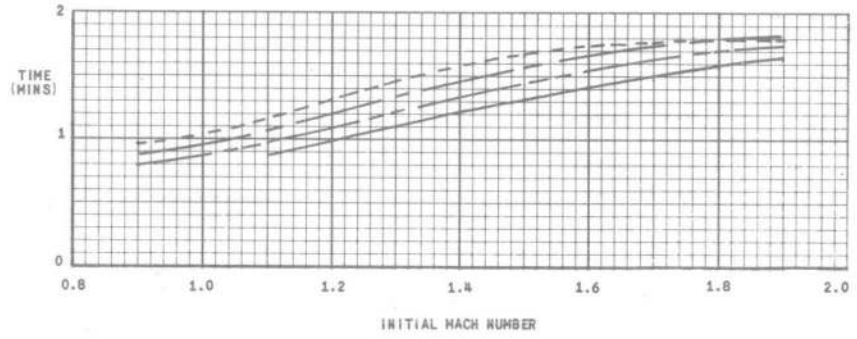
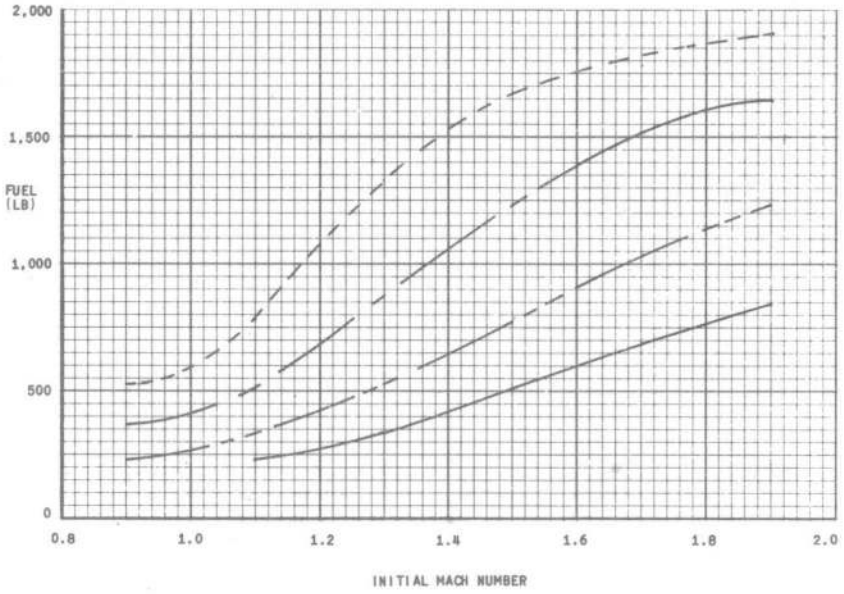


FIG.5.14/6. 180° ACCELERATED 1.4G TURN - −56.5°C



FULL REHEAT
31,000 LB



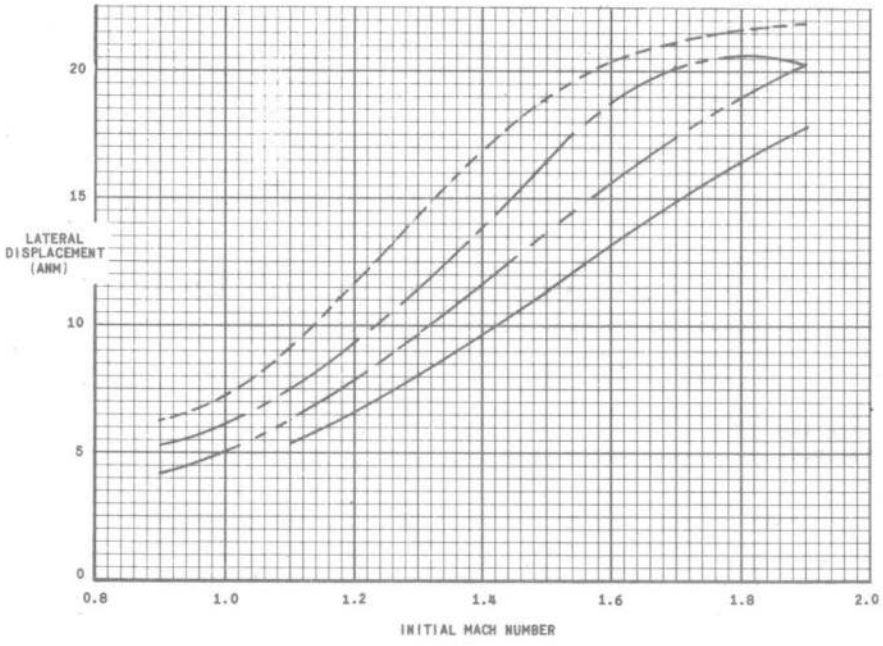
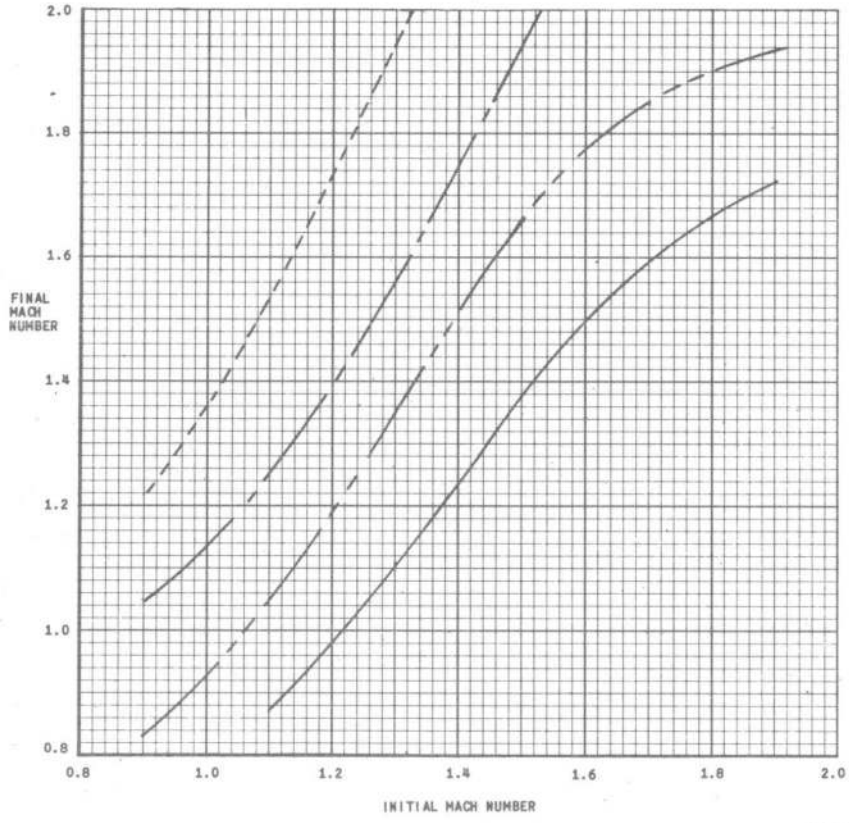


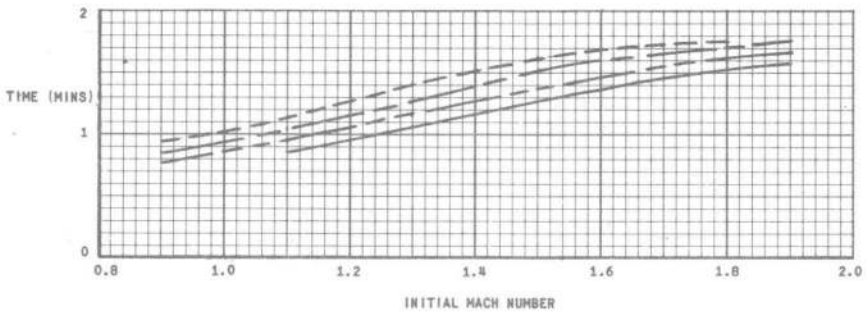
FIG. 5·15. 180° ACCELERATED 2G TURN - -56·5°C



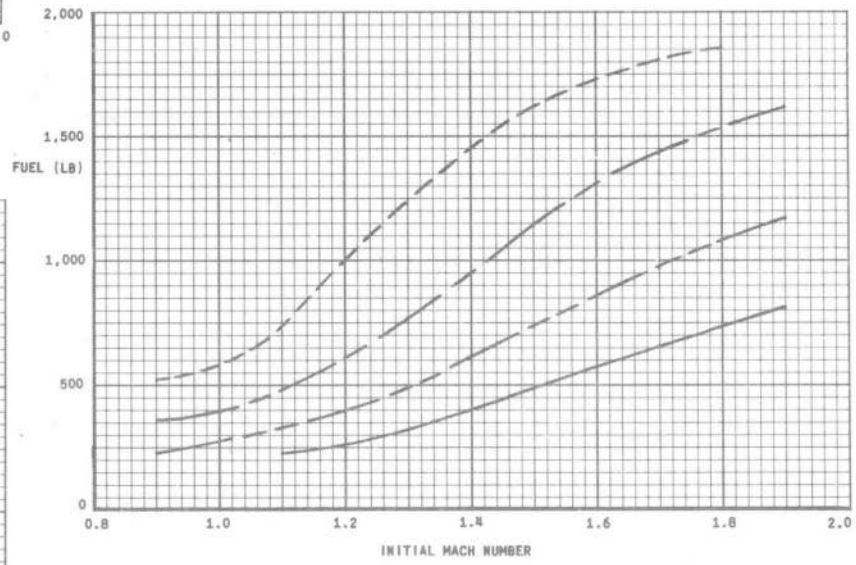
FULL REHEAT
31,000 LB

30,000 FT.
35,000 FT.
40,000 FT.
45,000 FT.

FIG. 5·15. 180° ACCELERATED 2G TURN - -56·5°C



FULL REHEAT
31,000 LB



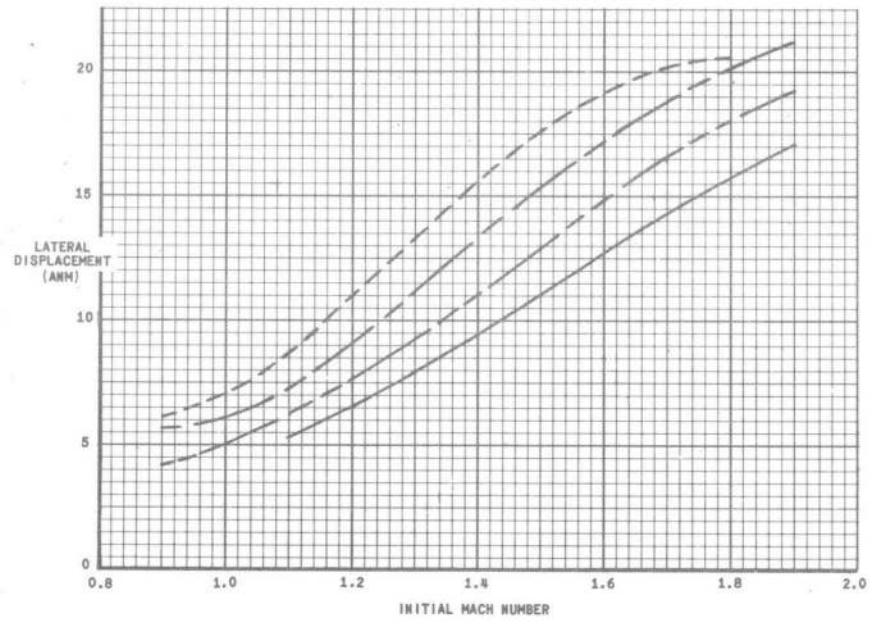


FIG.5.16. 180° ACCELERATED 2G TURN - —56.5°C

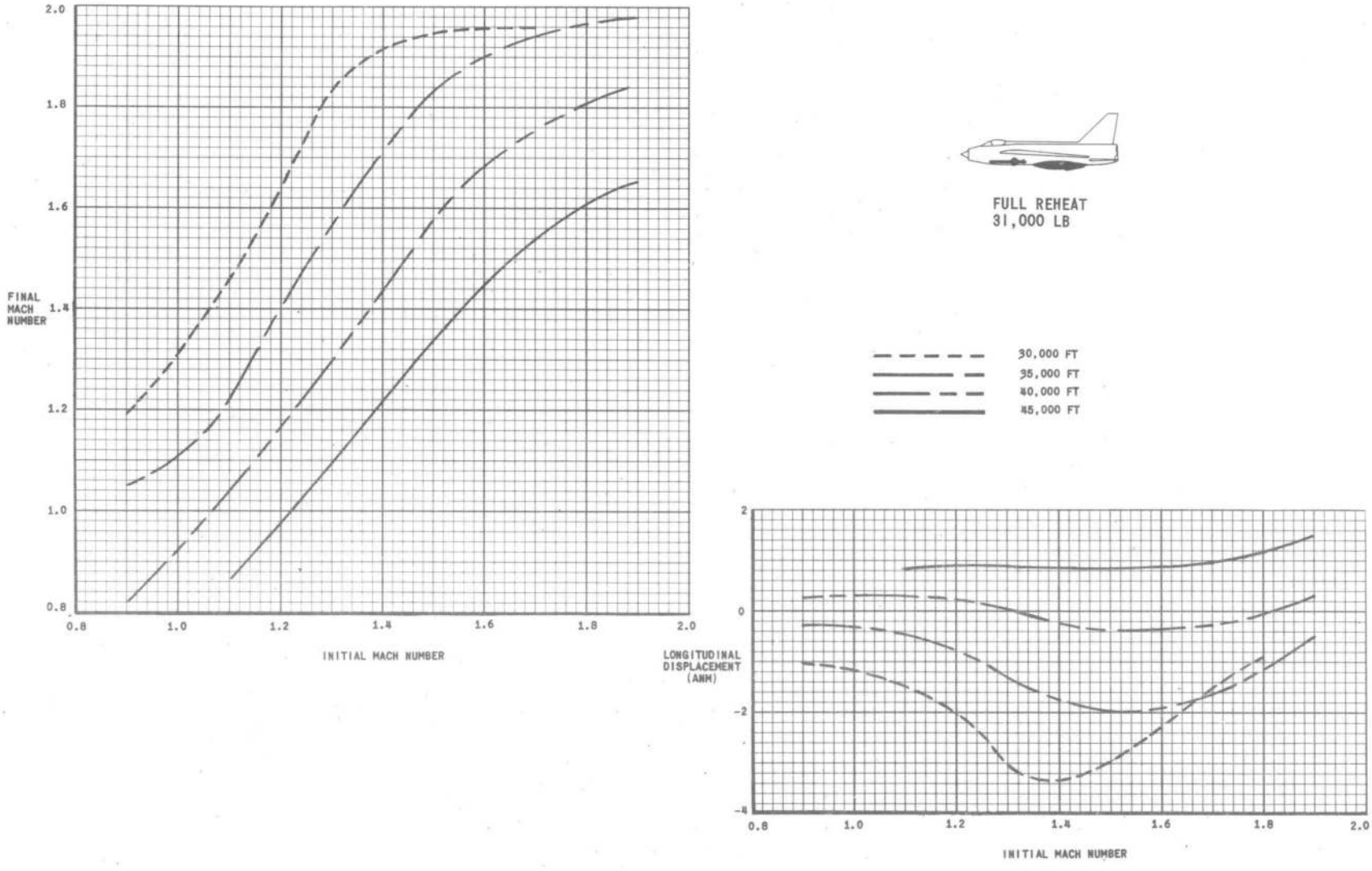
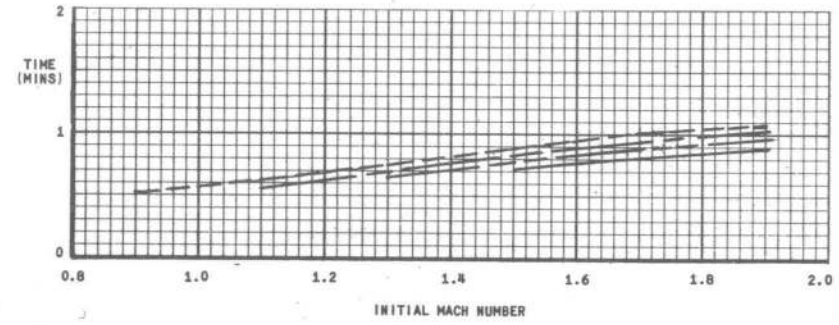
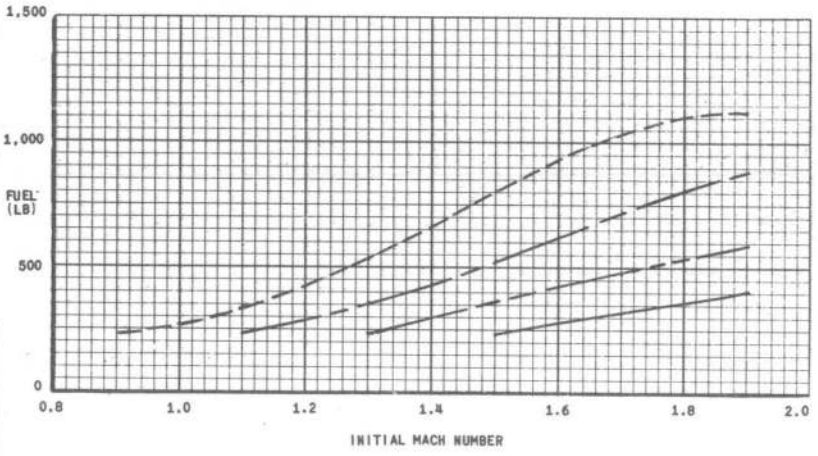
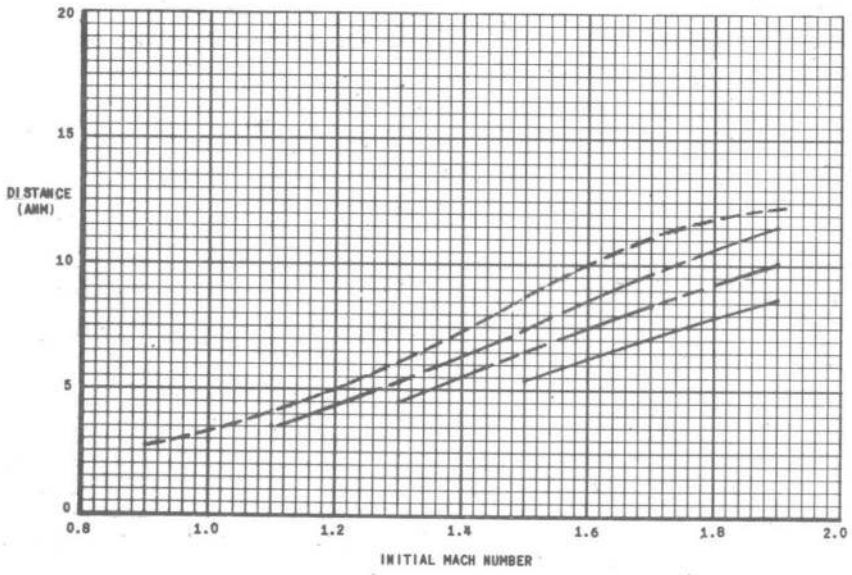


FIG.5.16. 180° ACCELERATED 2G TURN - —56.5°C



FULL REHEAT
31,000 LB





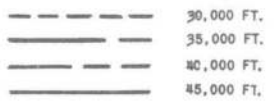


FIG. 5·17. 180° ACCELERATED 3G TURN - -56·5°C

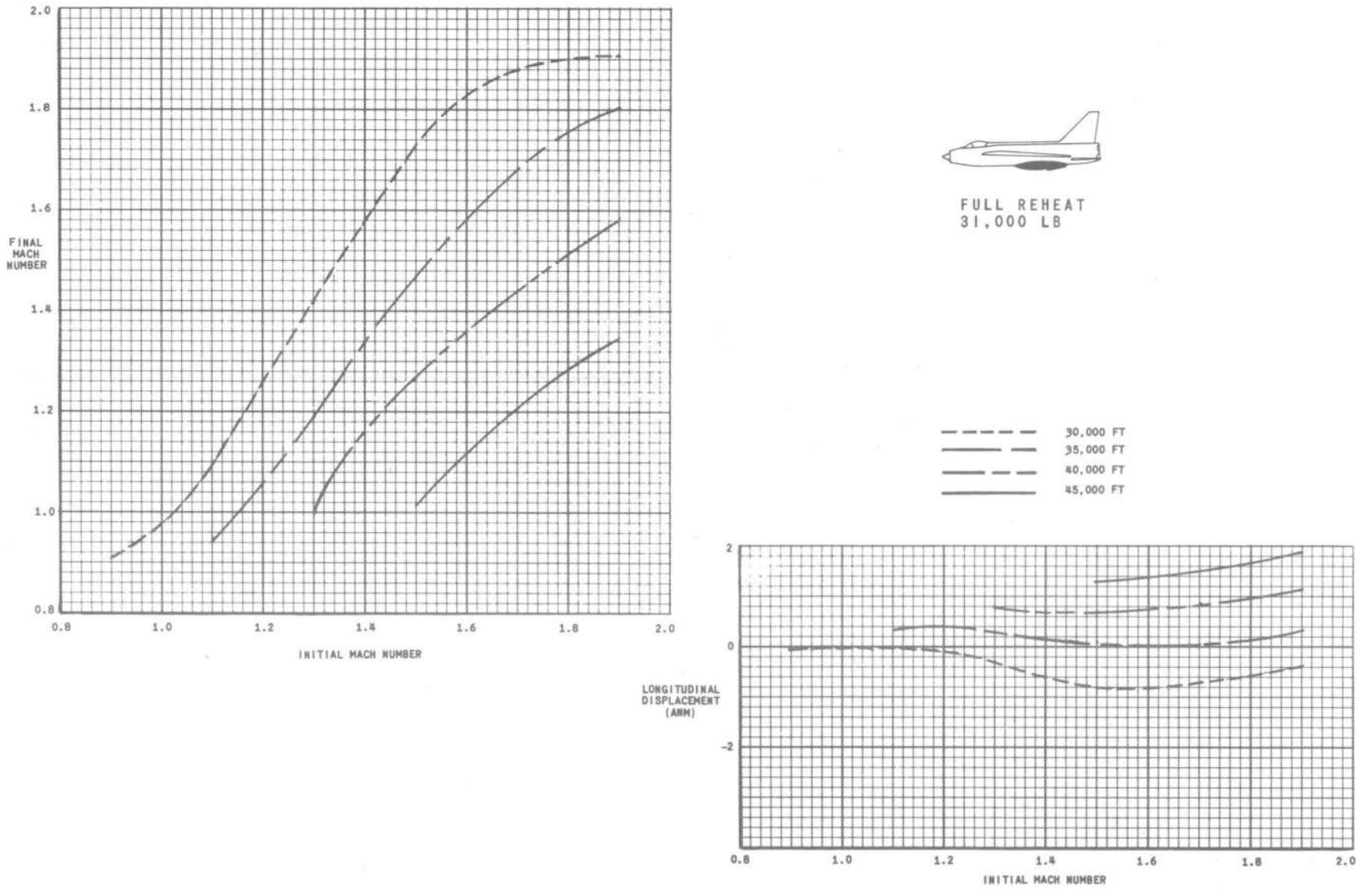
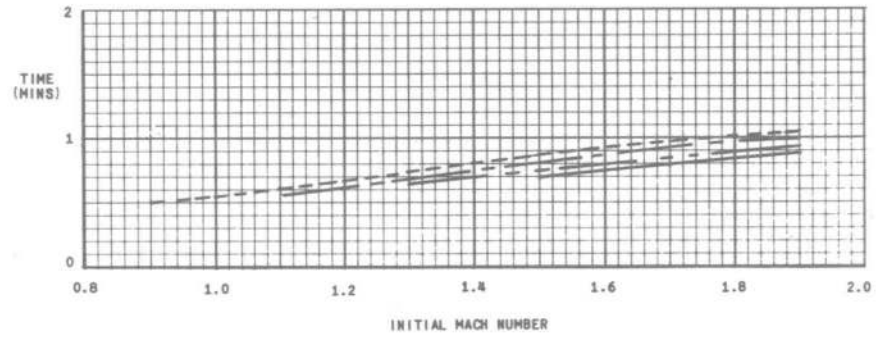
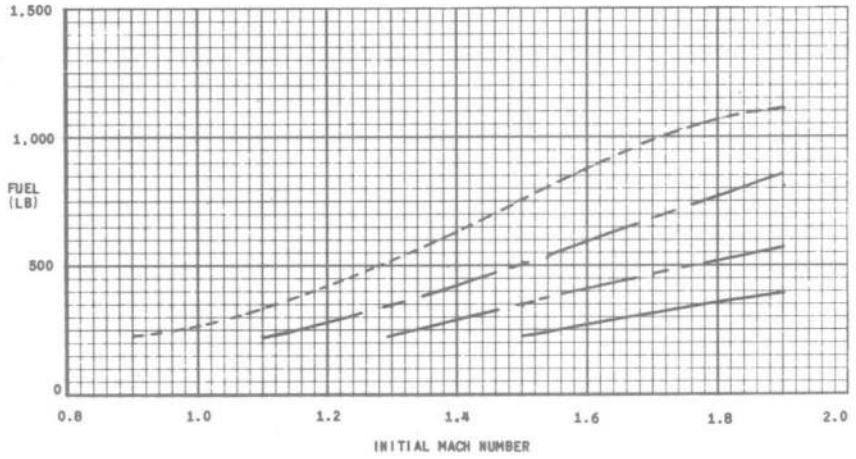


FIG. 5·17. 180° ACCELERATED 3G TURN - -56·5°C



FULL REHEAT
31,000 LB



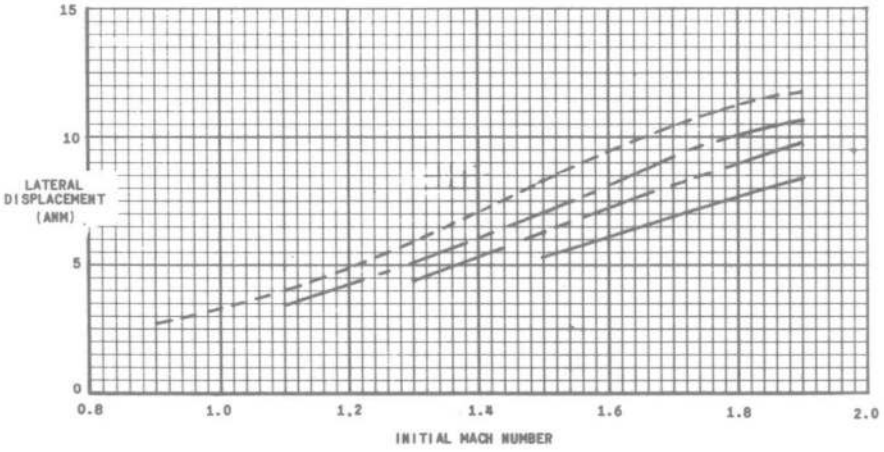


FIG. 5-18. 180° ACCELERATED 3G TURN - -56·5°C

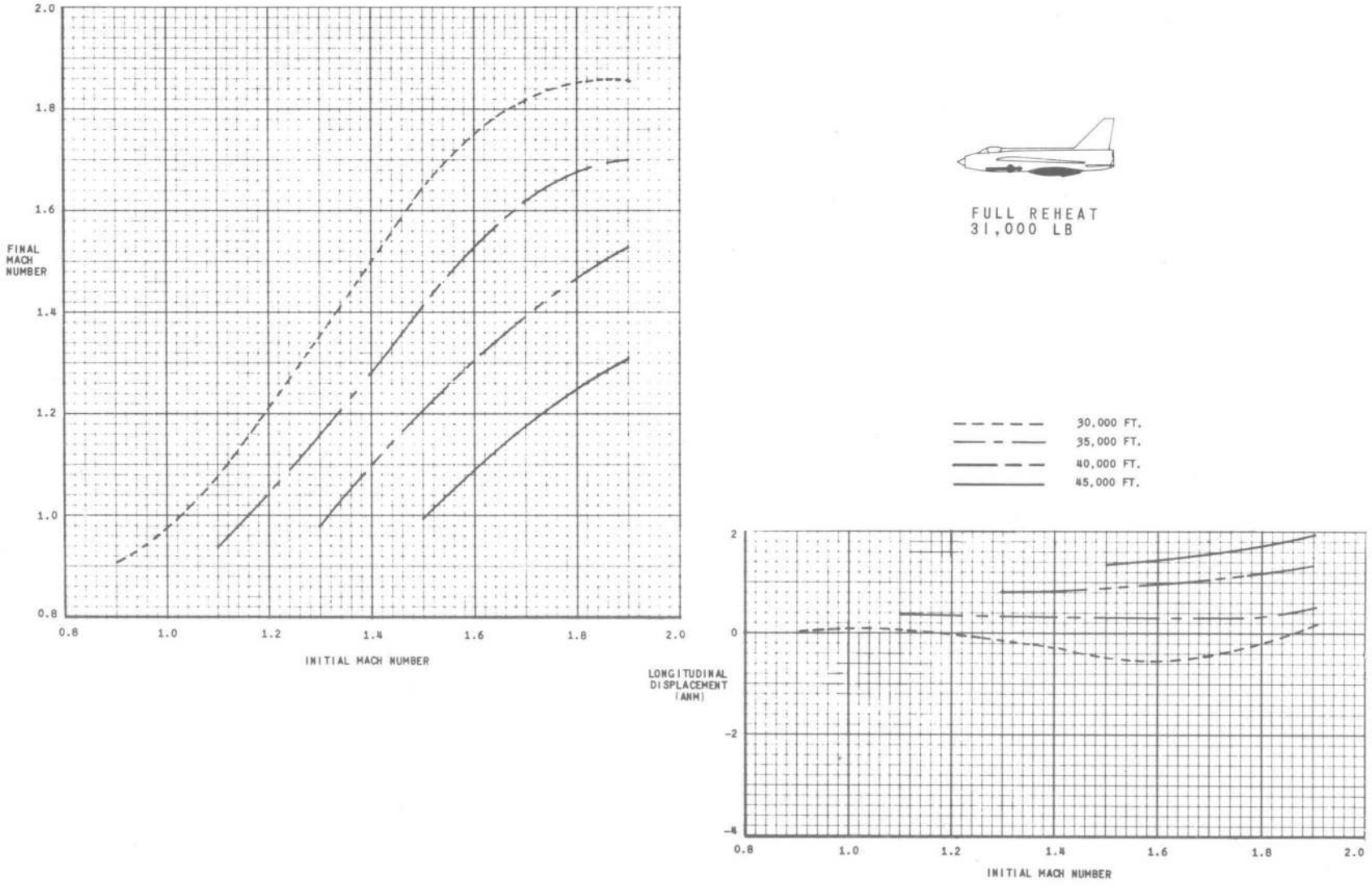


FIG. 5·18. 180° ACCELERATED 3G TURN - -56·5°C

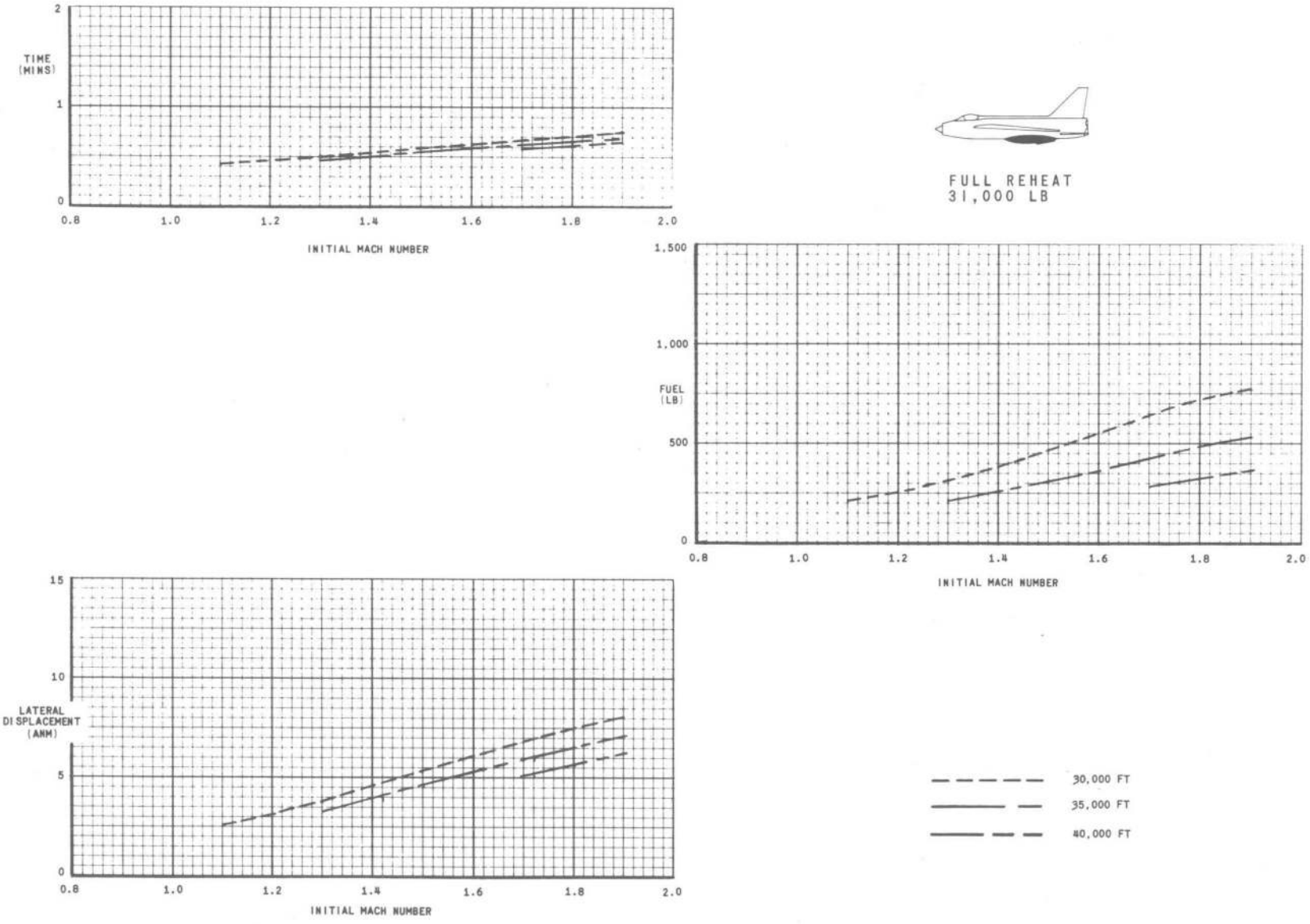


FIG. 5·19. 180° ACCELERATED 4G TURN - -56·5°C

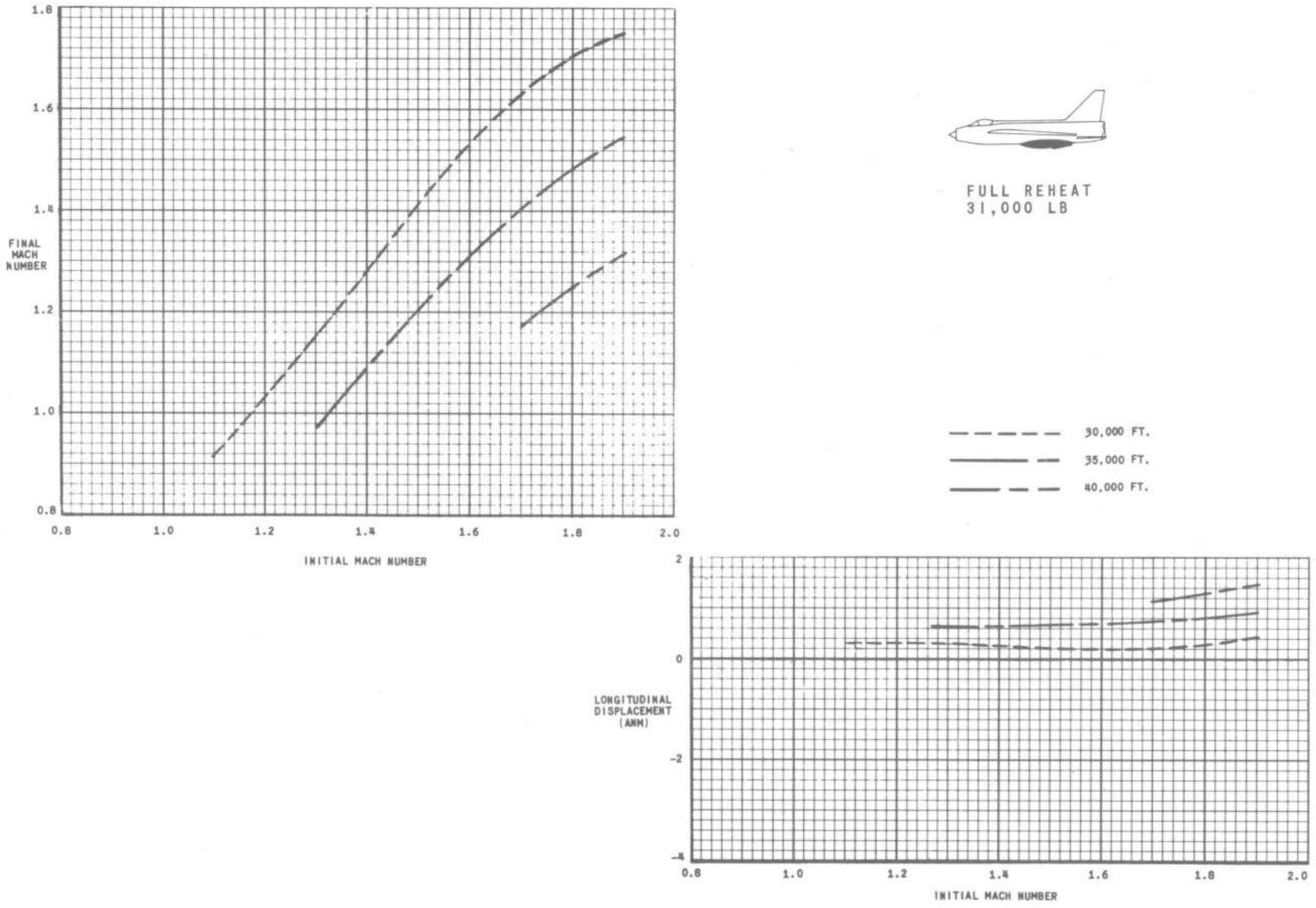
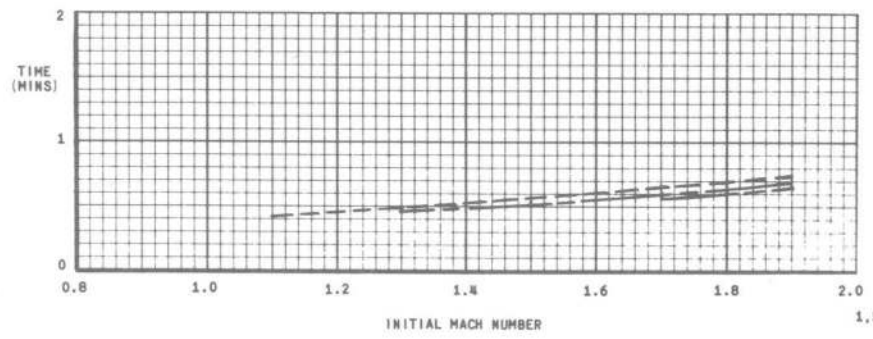
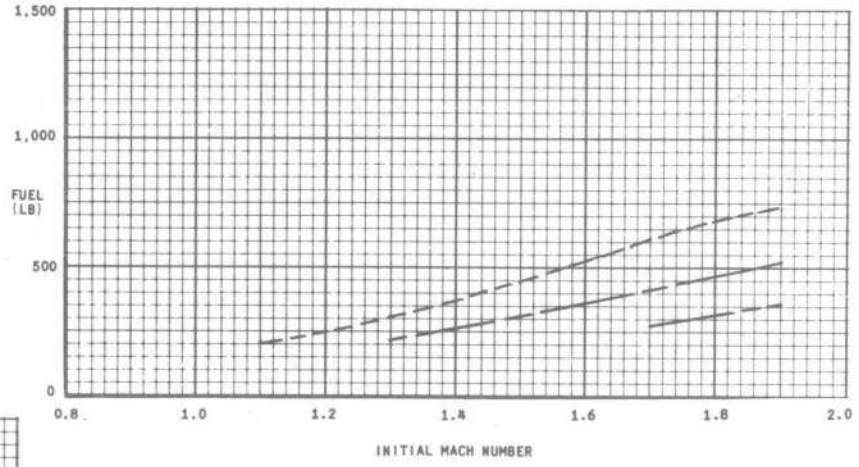


FIG. 5·19. 180° ACCELERATED 4G TURN - -56·5°C



FULL REHEAT
31,000 LB



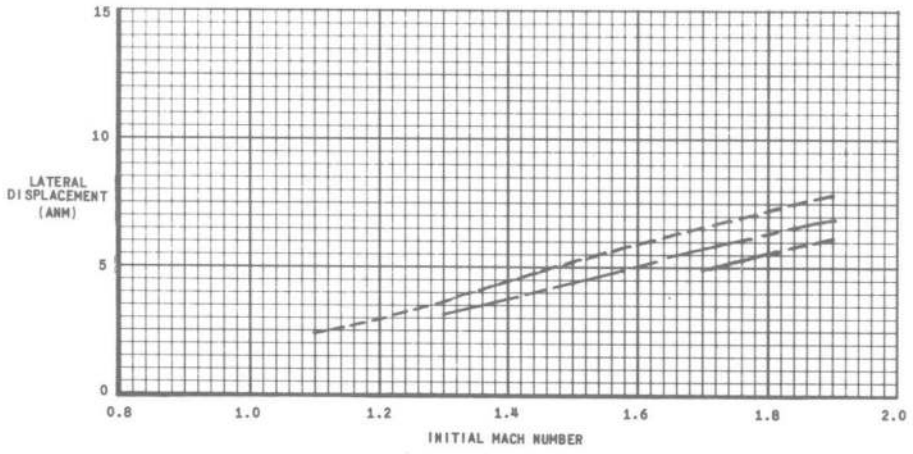


FIG. 5·20. 180° ACCELERATED 4G TURN - -56·5°C

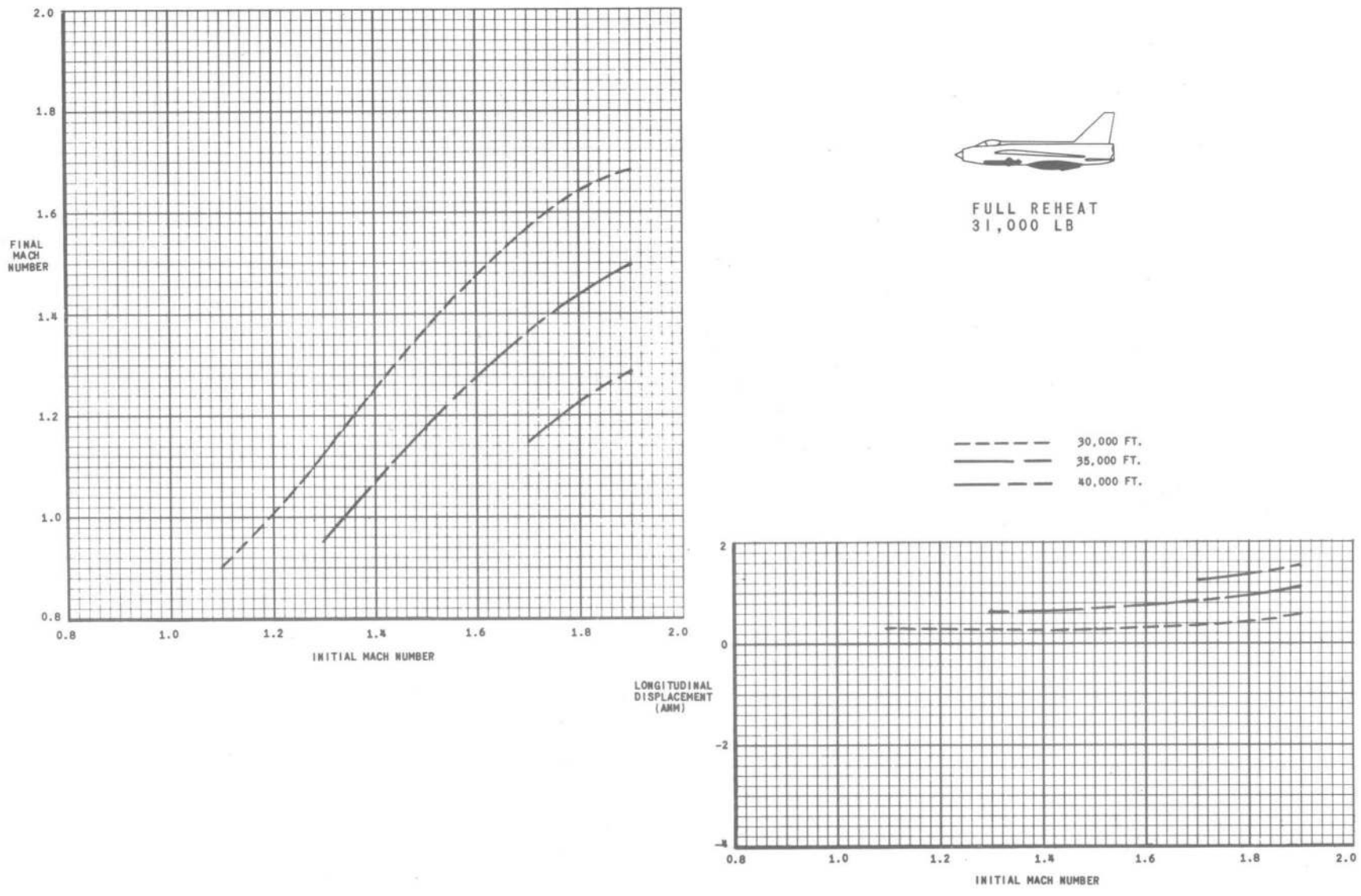
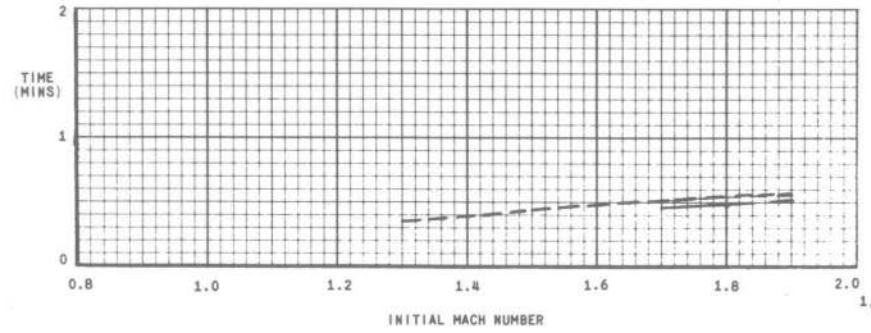
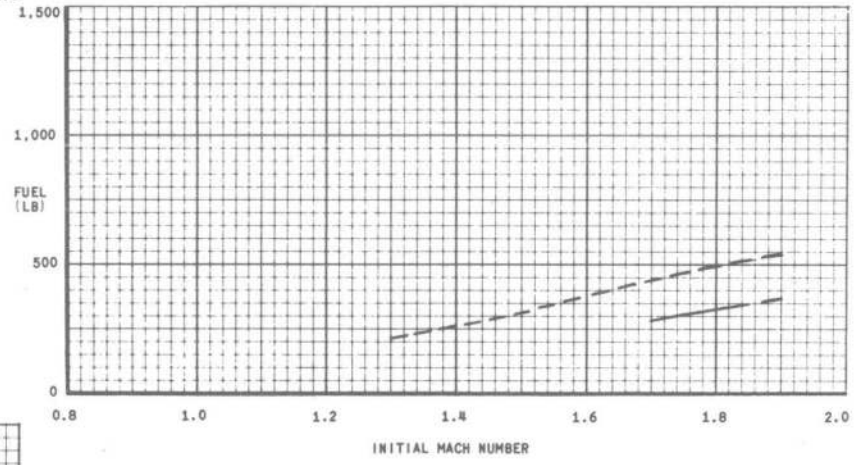
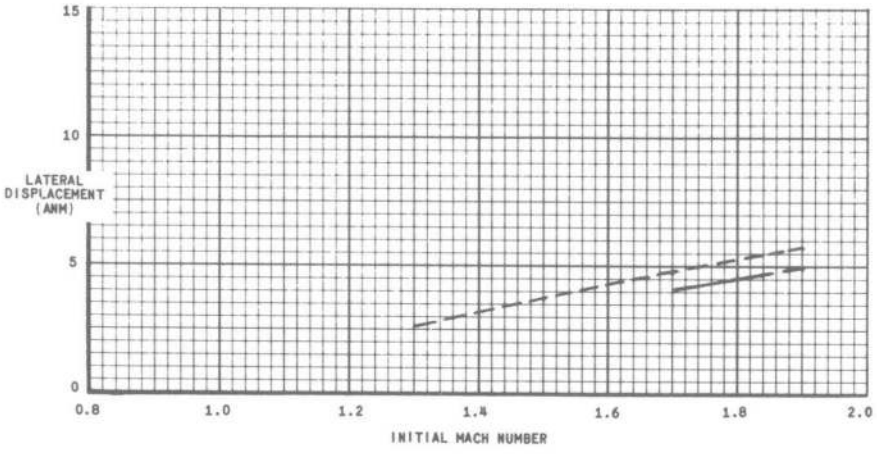


FIG. 5·20. 180° ACCELERATED 4G TURN - -56·5°C



FULL REHEAT
31,000 LB





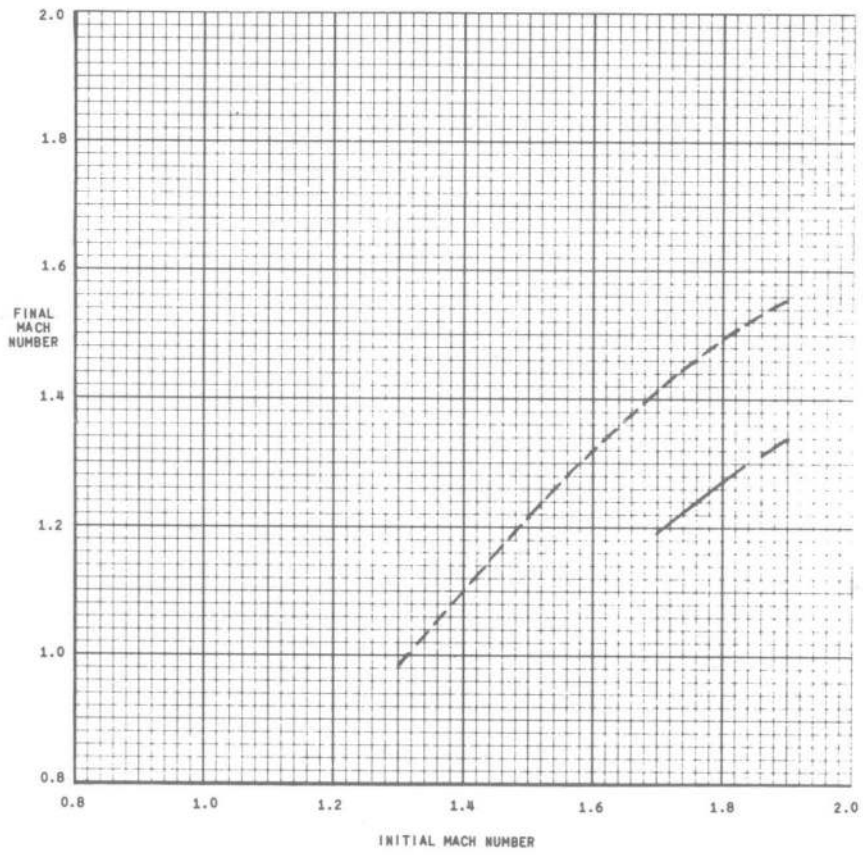
FULL REHEAT

31,000 LB

— — — — — 30,000 FT.

——— — 35,000 FT.

FIG. 5·21. 180° ACCELERATED 5G TURN - -56·5°C



FULL REHEAT
31,000 LB

30,000 FT.
35,000 FT.

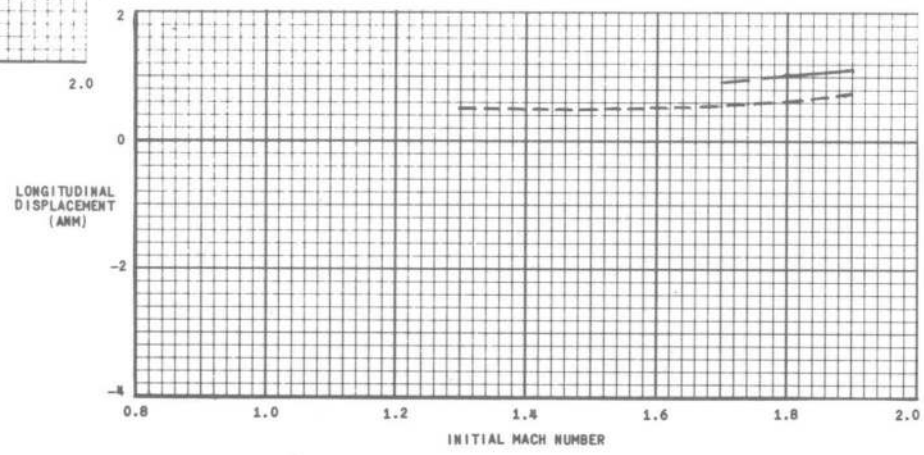


FIG. 5·21. 180° ACCELERATED 5G TURN - -56·5°C

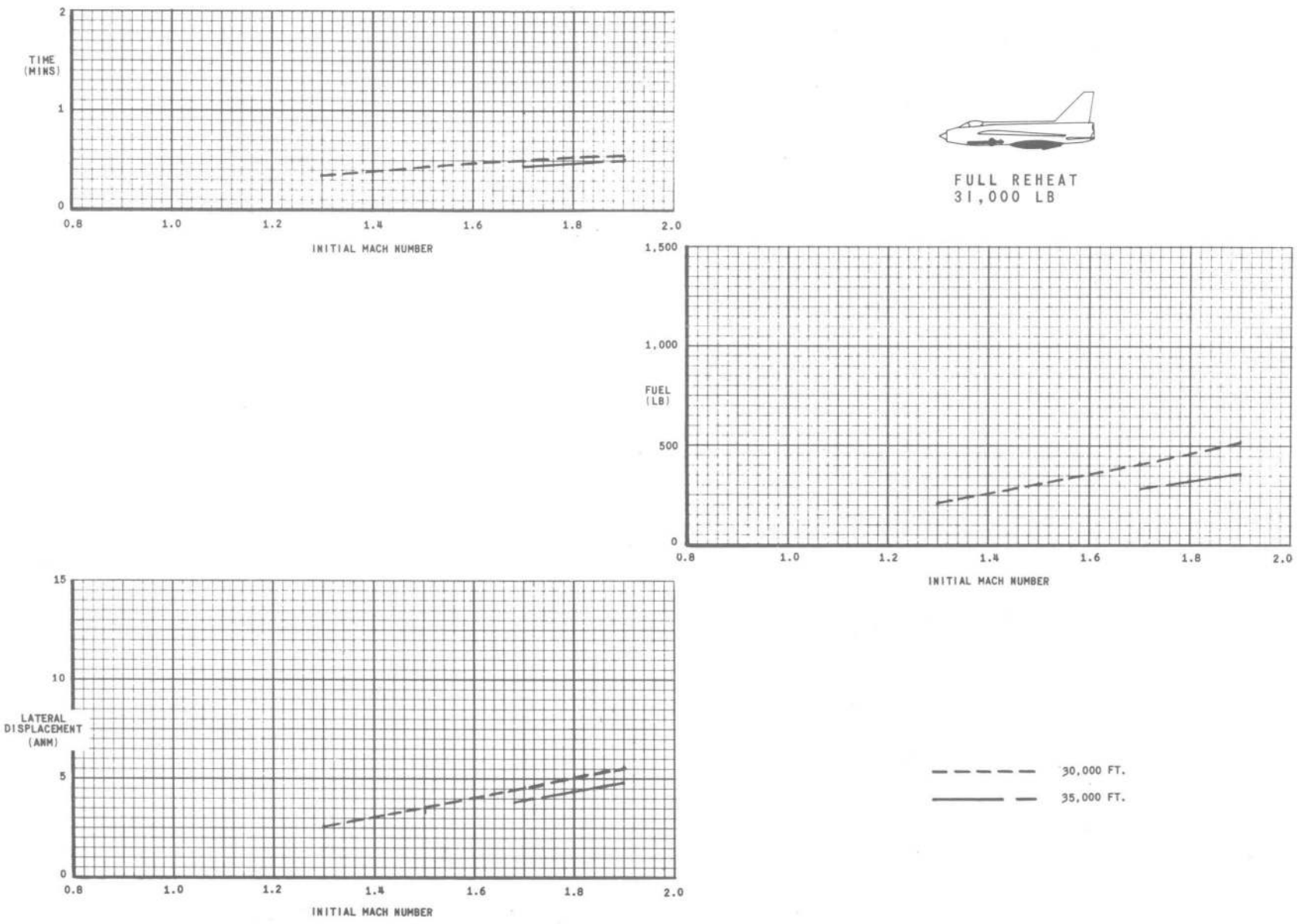


FIG. 5·22. 180° ACCELERATED 5G TURN - -56·5°C

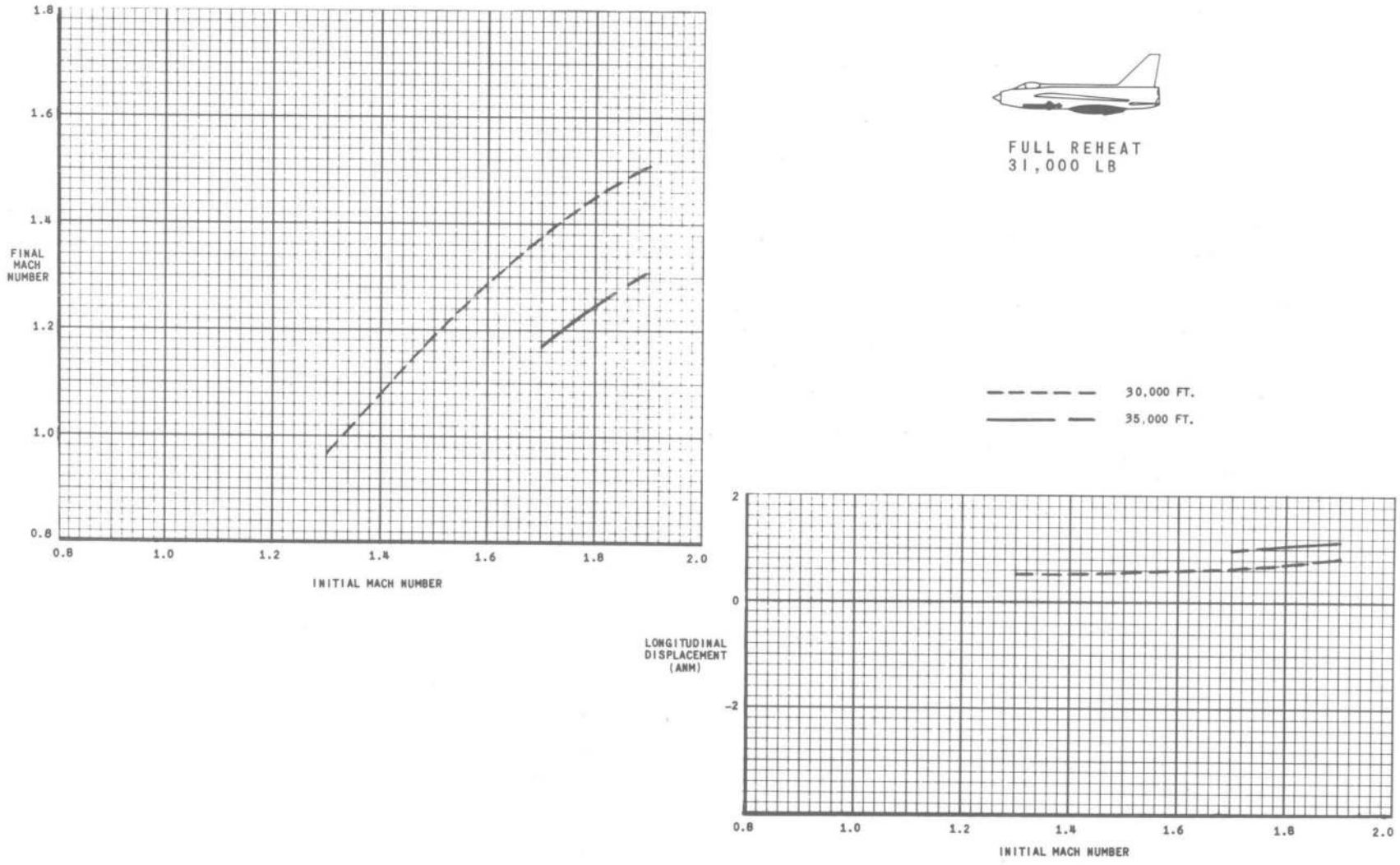


FIG. 5·22. 180° ACCELERATED 5G TURN - -56·5°C

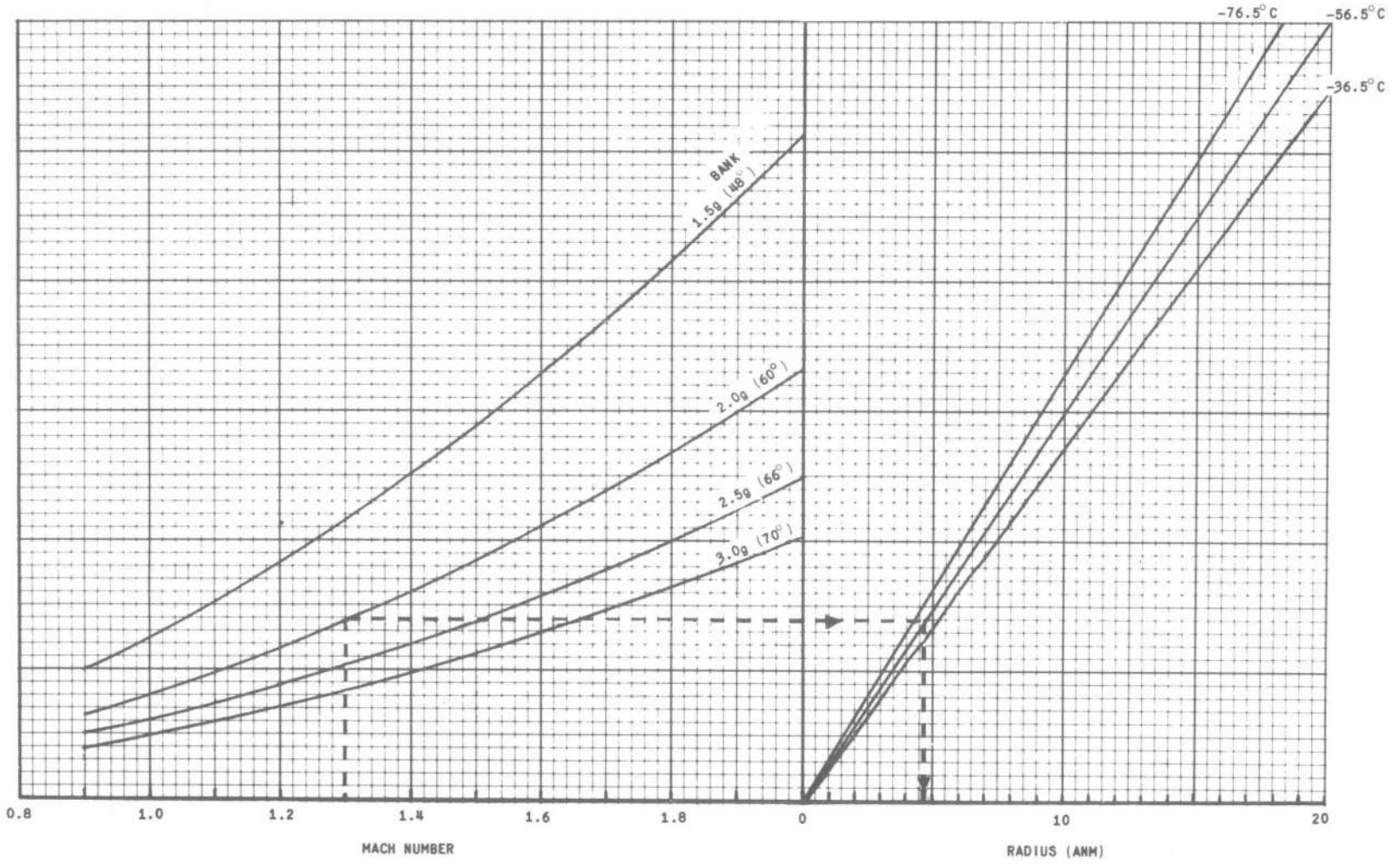


FIG. 5·23. STEADY LEVEL TURN - RADIUS

UNIVERSAL

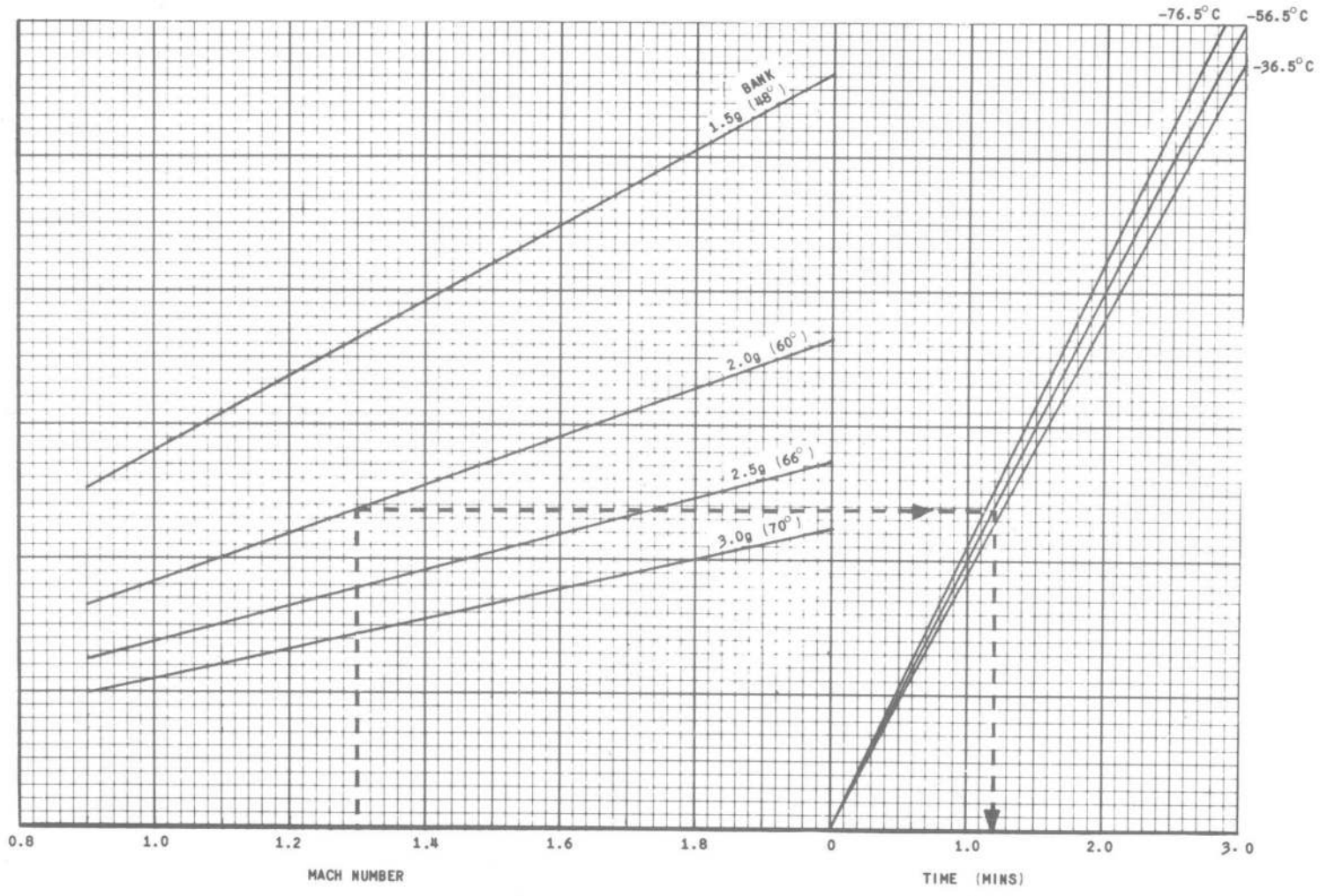
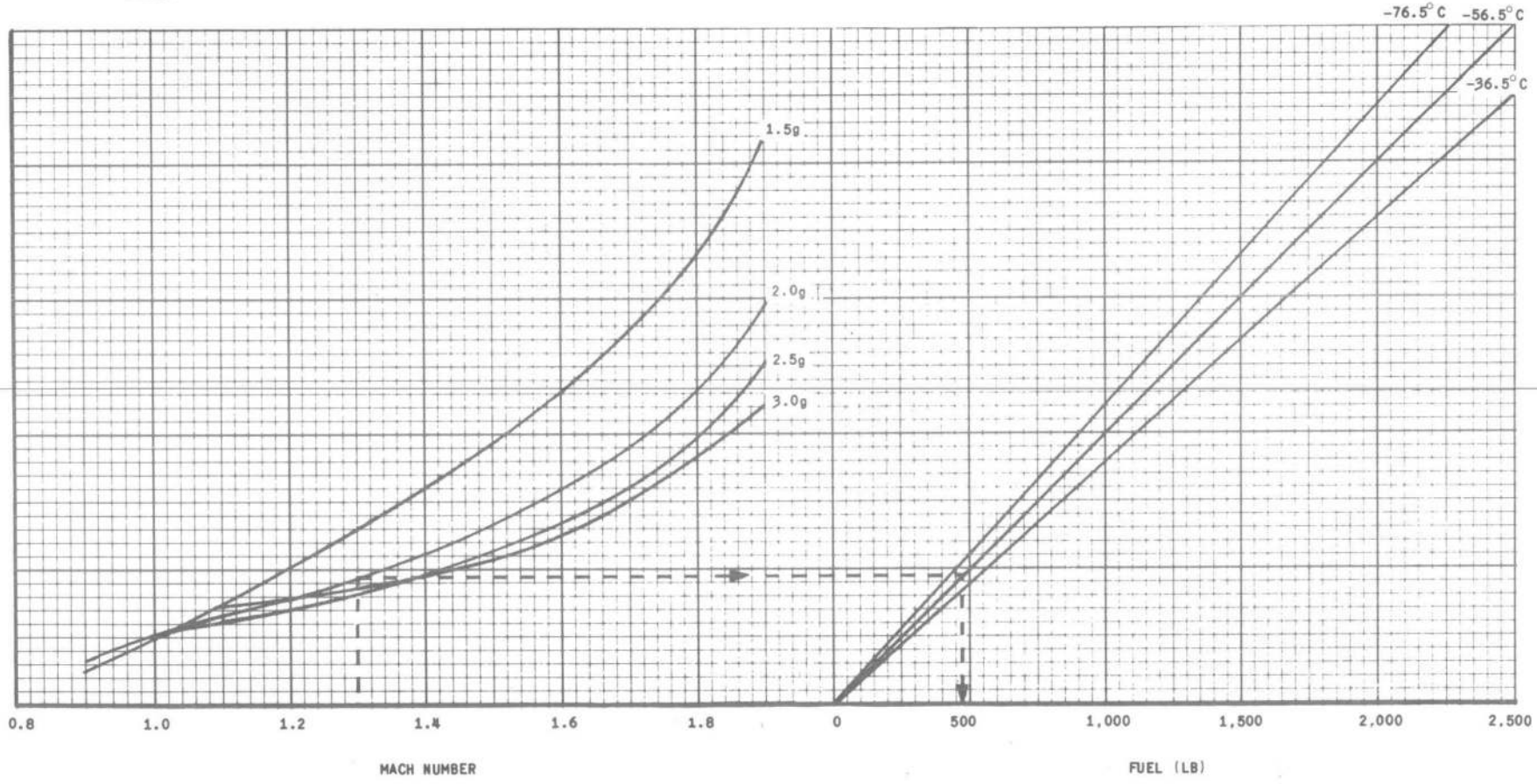


FIG. 5·24. STEADY LEVEL TURN - TIME

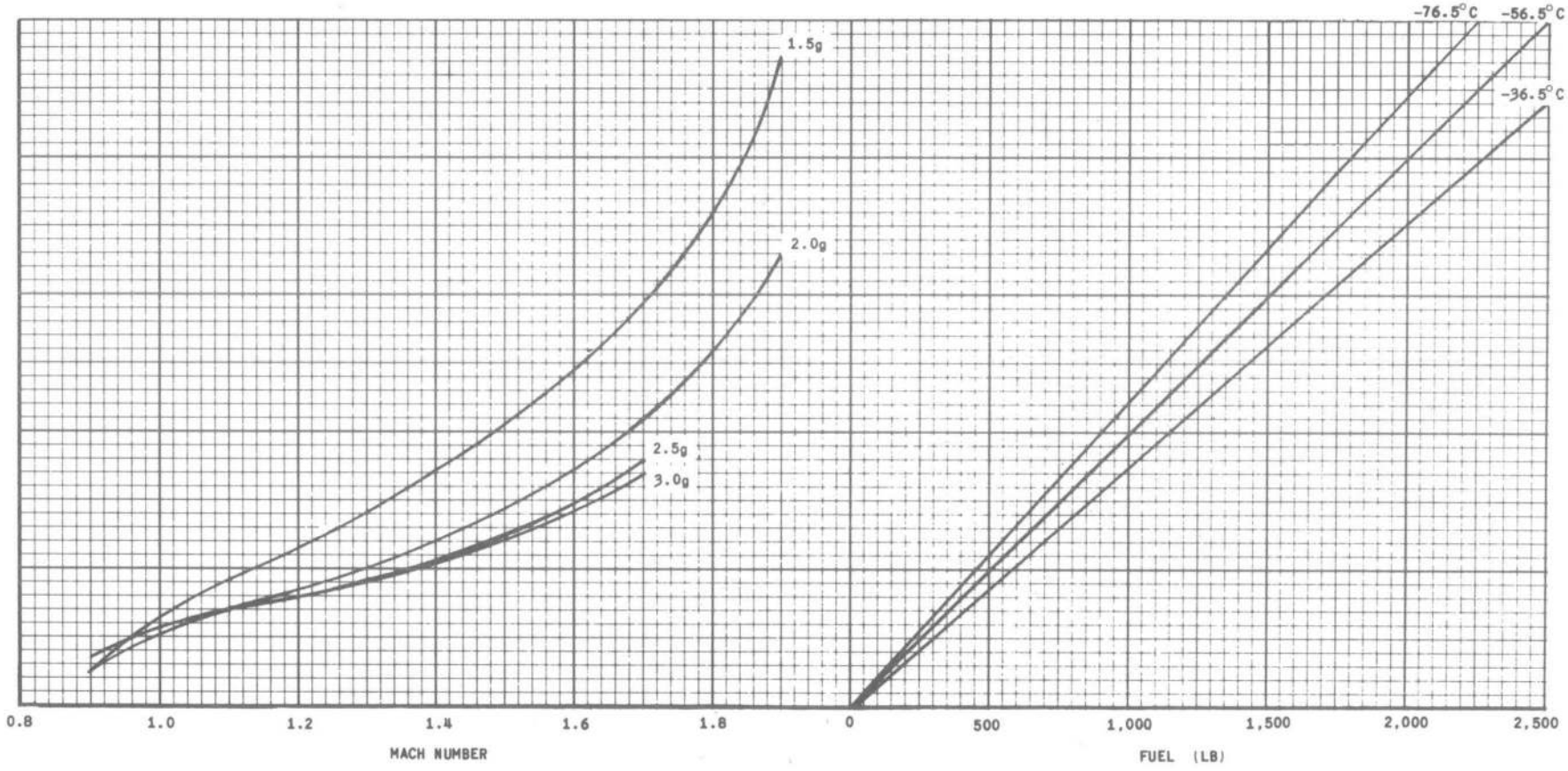
WEIGHT 32,000 LB



FUEL USED FOR 180° TURN

FIG. 5·25. STEADY LEVEL TURN - FUEL 30,000 Ft

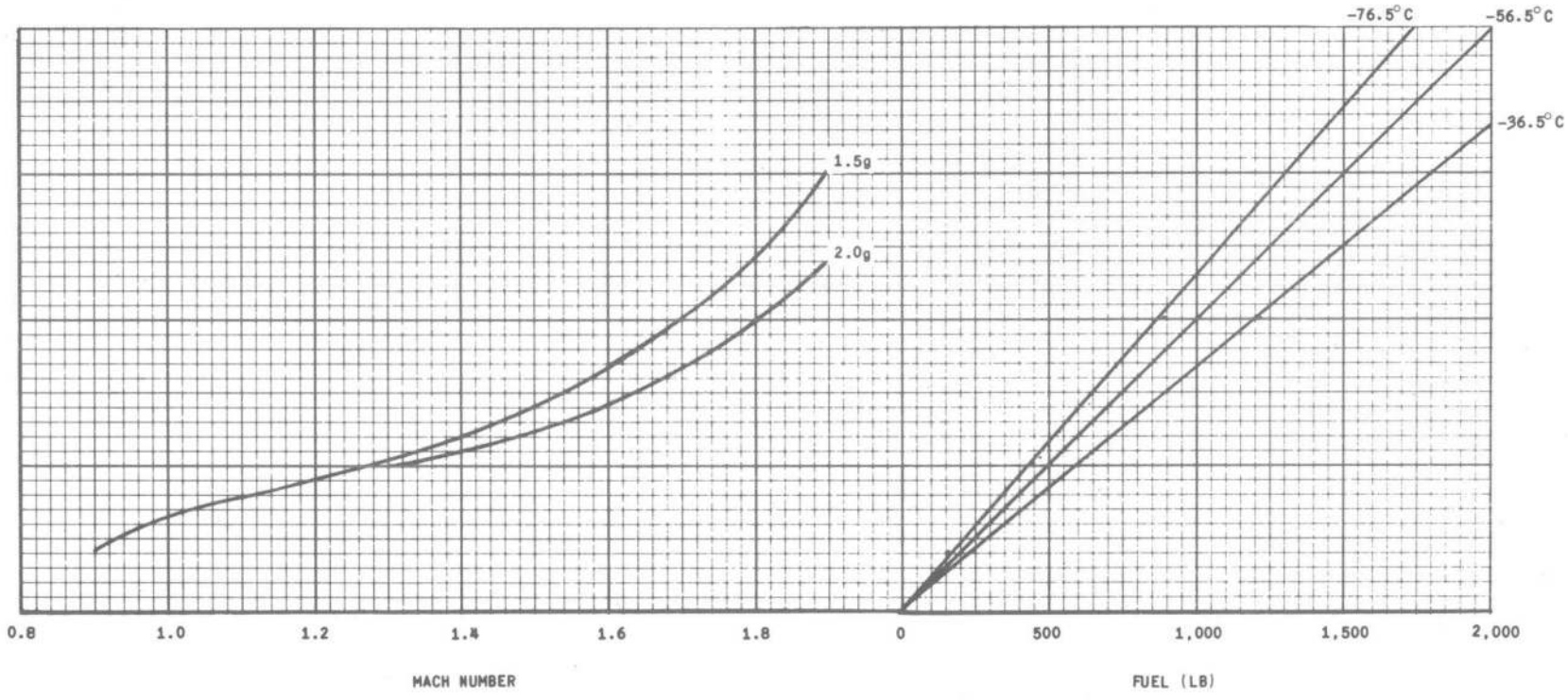
WEIGHT 32,000 LB



FUEL USED FOR 180° TURN

FIG. 5·26. STEADY LEVEL TURN - FUEL 30,000 Ft

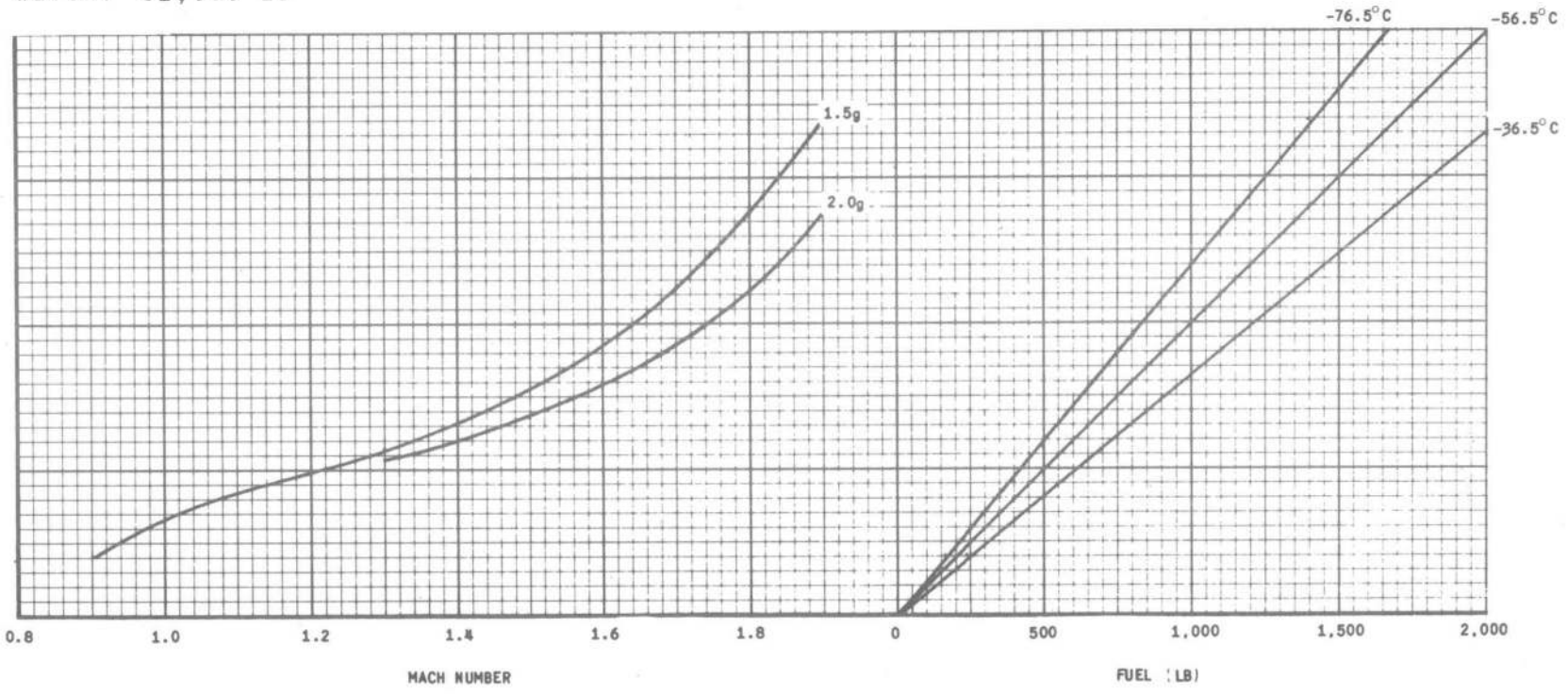
WEIGHT 32,000 LB



FUEL USED FOR 180° TURN

FIG. 5·27. STEADY LEVEL TURN - FUEL 40,000 Ft

WEIGHT 32,000 LB



FUEL USED FOR 180° TURN

FIG. 5·28. STEADY LEVEL TURN - FUEL 40,000 Ft

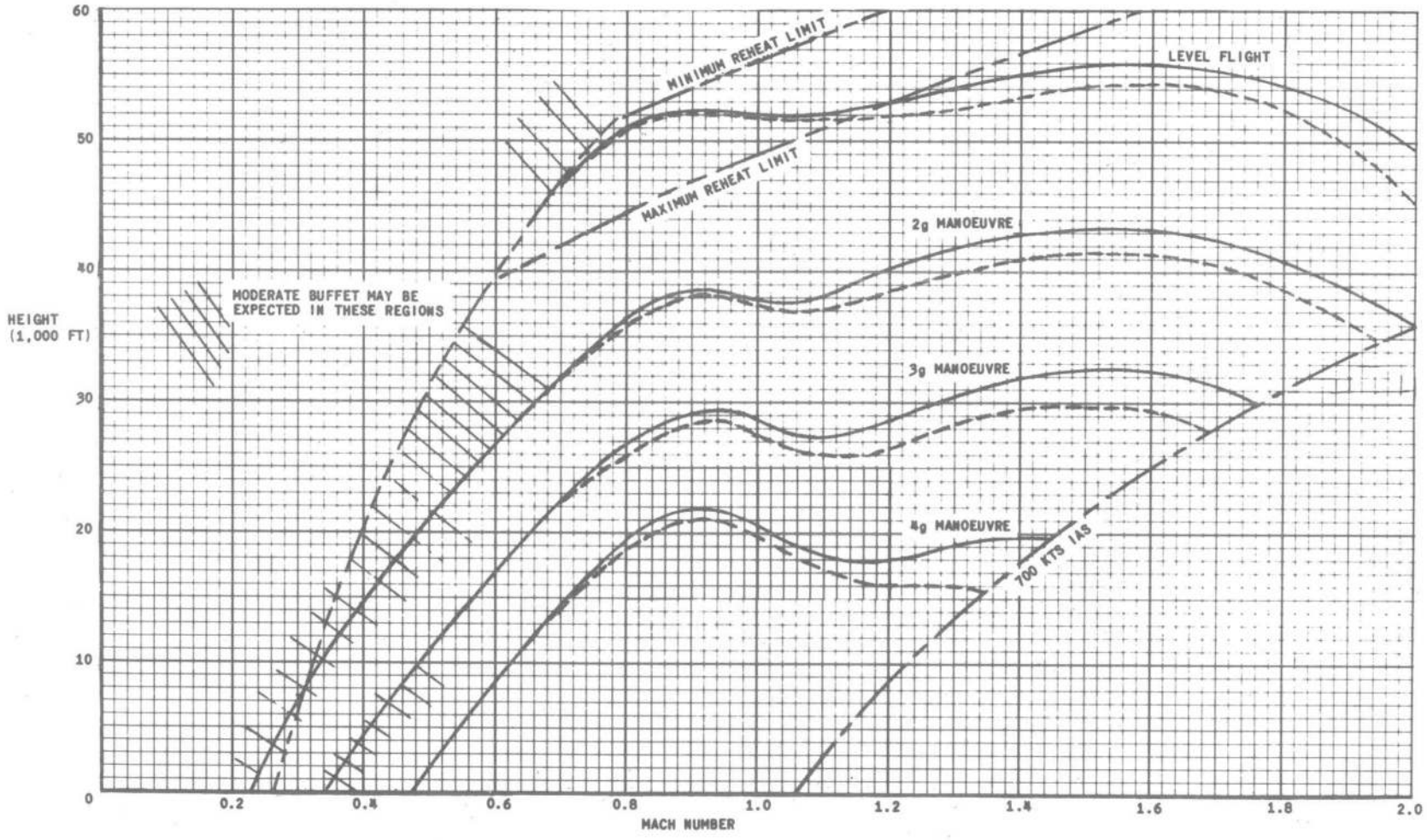
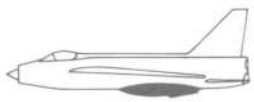


FIG. 5·29. THRUST BOUNDARIES AT FULL REHEAT



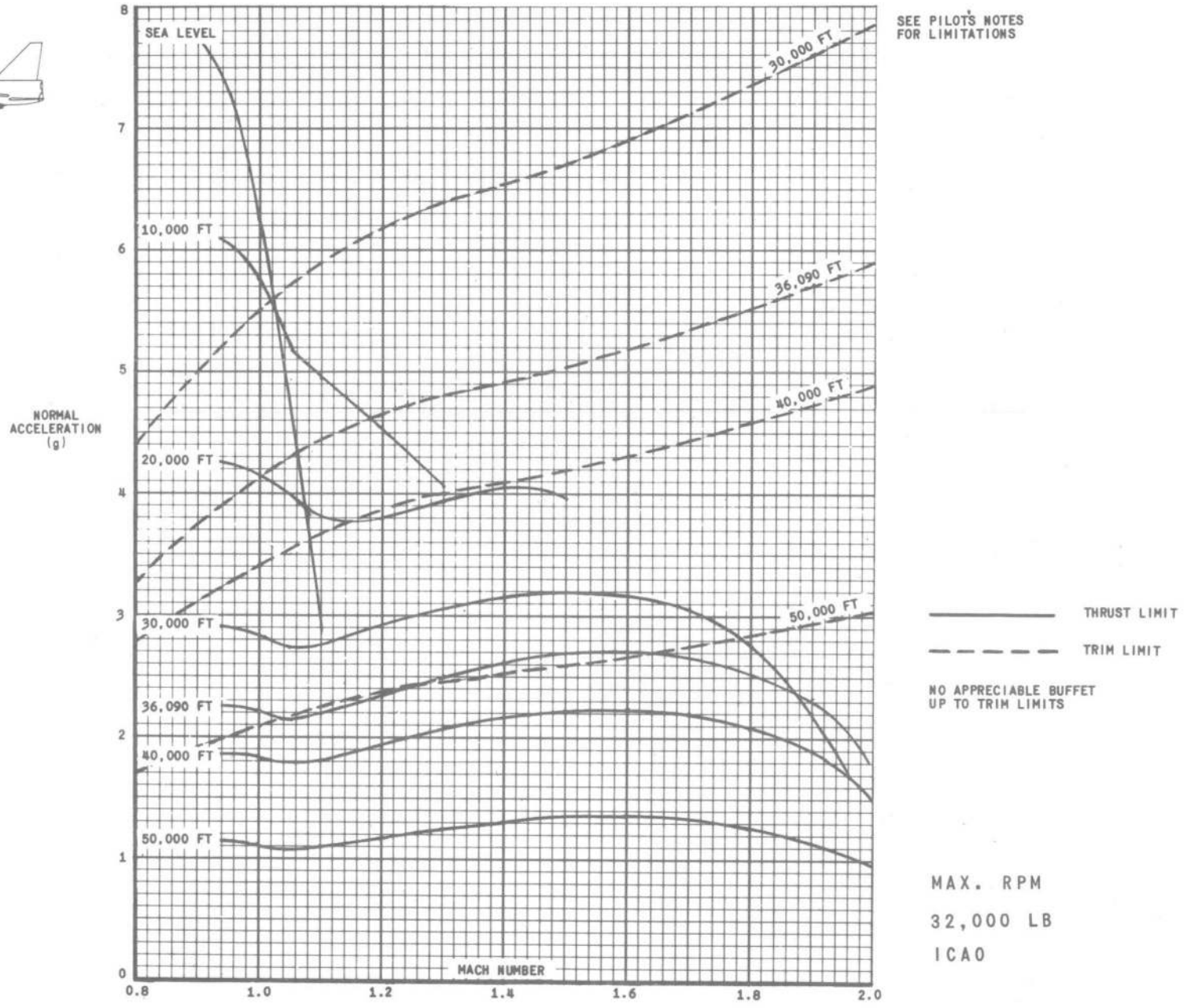


FIG. 5·30. MANOEUVRE BOUNDARIES AT FULL REHEAT

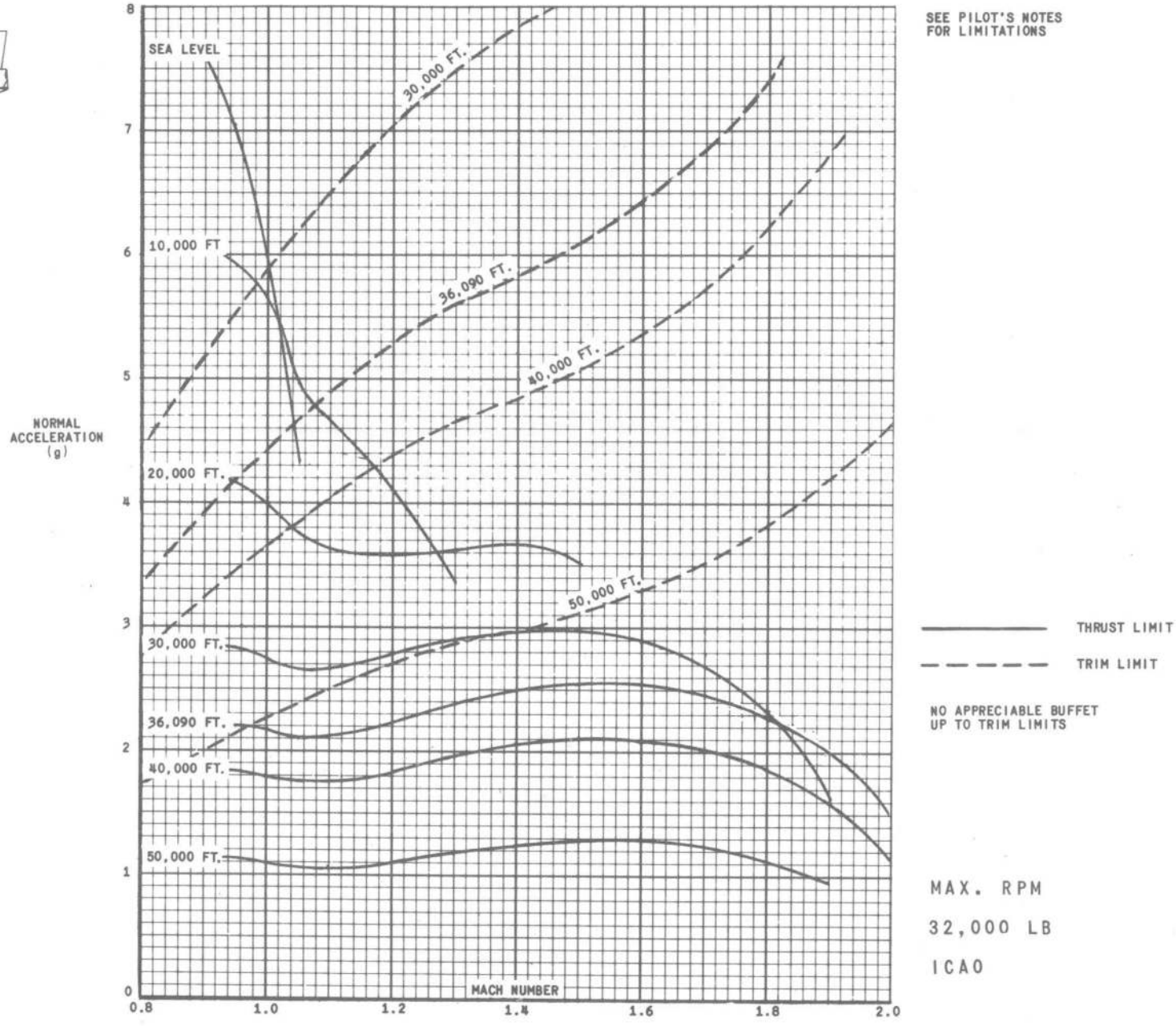


FIG. 5·31. MANOEUVRE BOUNDARIES AT FULL REHEAT

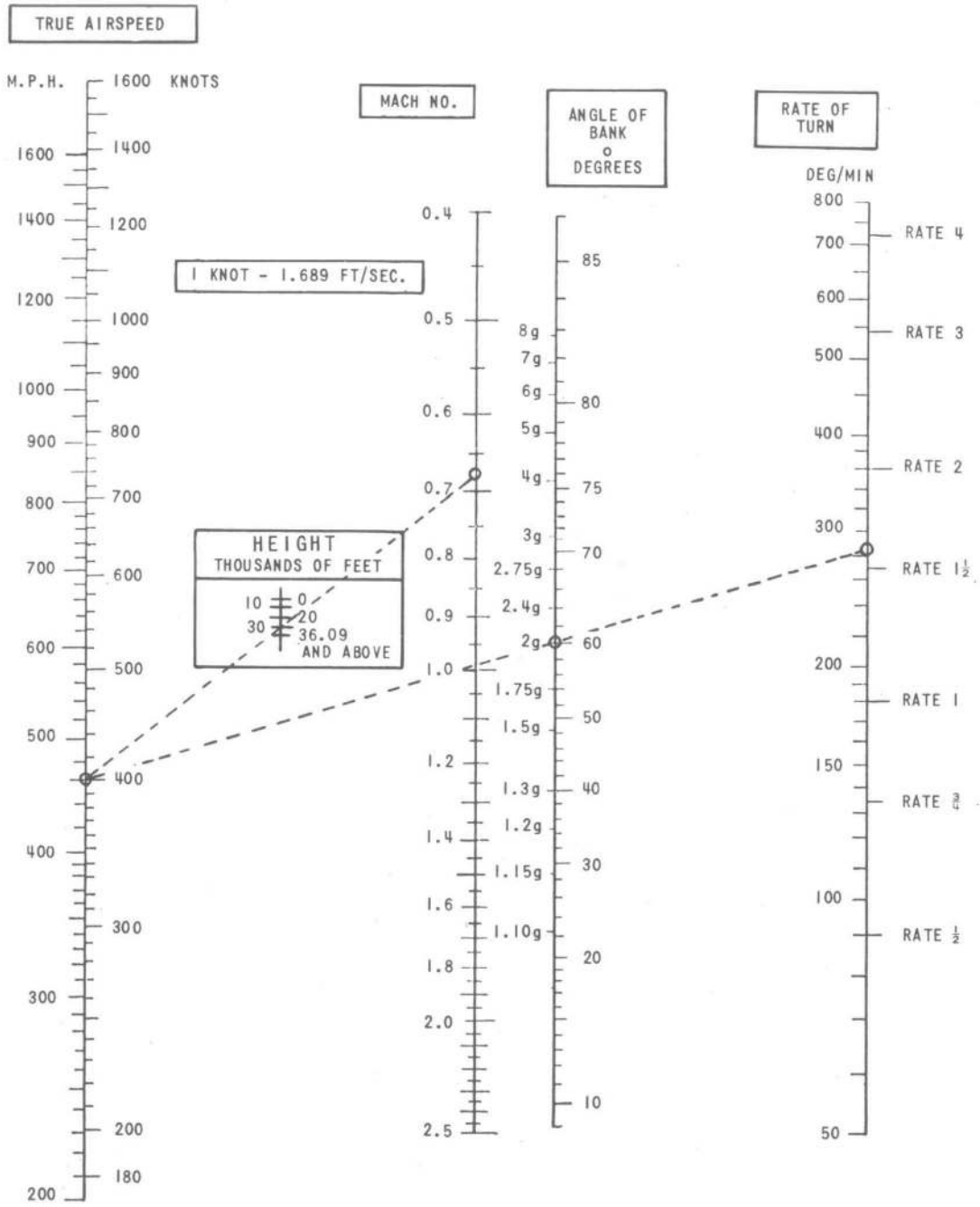
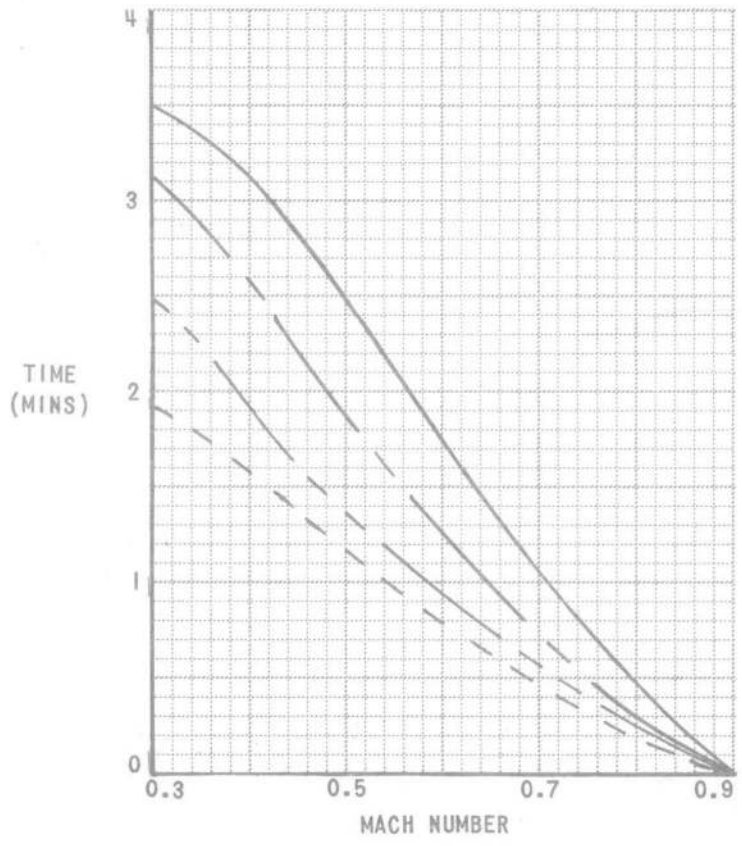


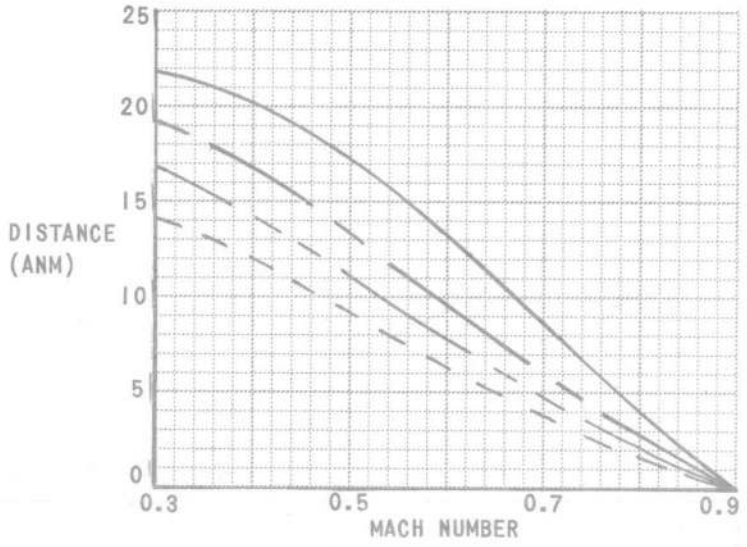
FIG. 5·32. NOMOGRAM OF TURNING PERFORMANCE

IDLE/FAST IDLE
AIRBRAKES IN
31,000 LB

SEA LEVEL
5,000 FT
10,000 FT
20,000 FT



SUBSONIC
ICAO



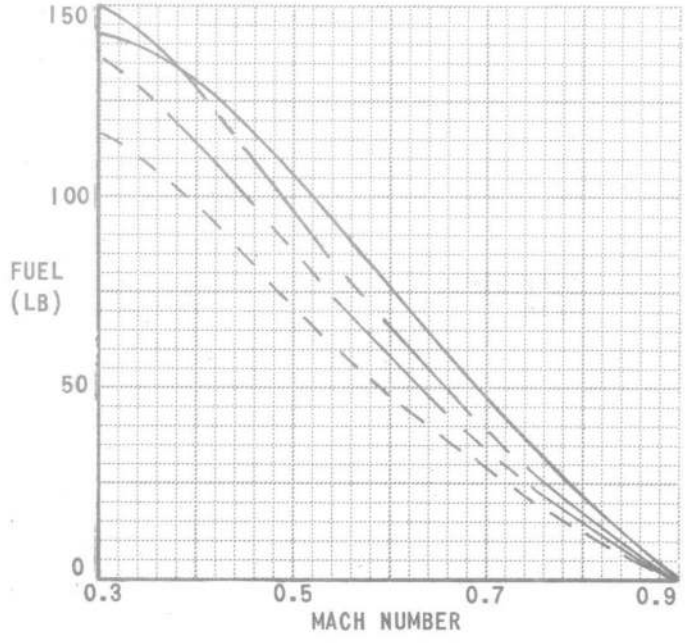
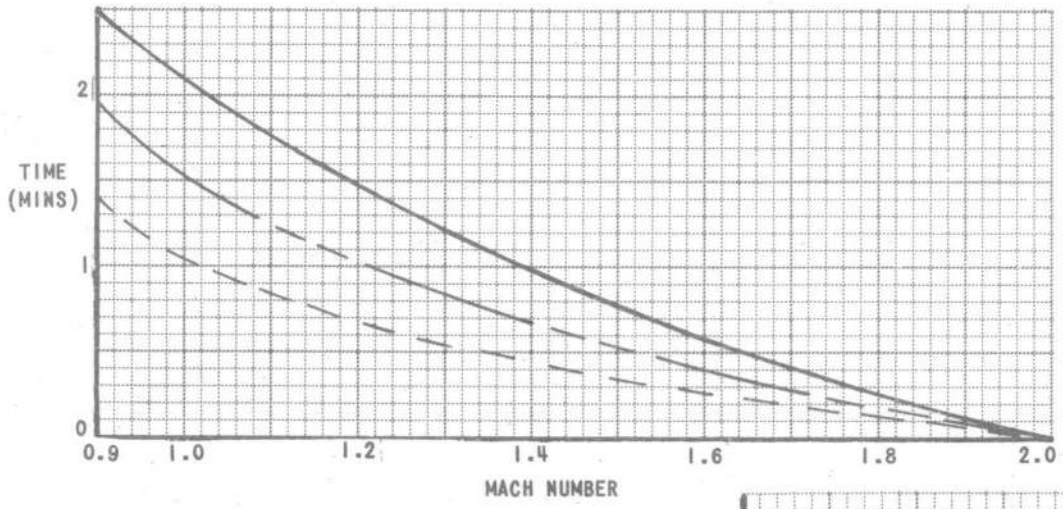


FIG.5.33. DECELERATION IN LEVEL FLIGHT



IDLE/FAST IDLE
AIRBRAKES IN
32,000 lb

{ AL_4 }

50,000 FT
40,000 FT
30,000 FT

SUPERSONIC
ICAO

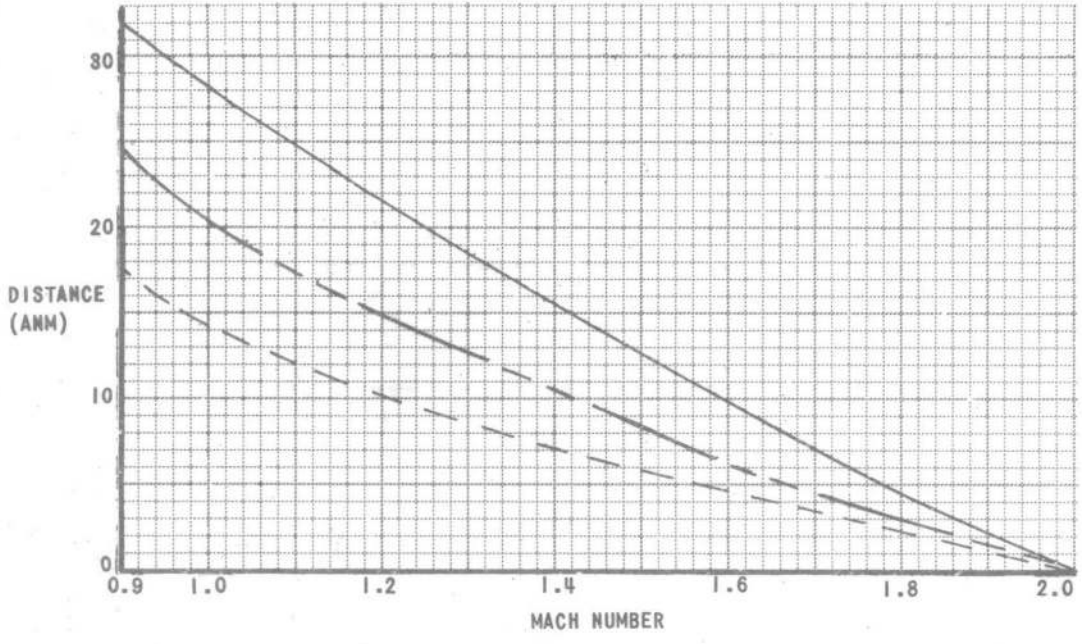


FIG.5.34. DECELERATION IN LEVEL FLIGHT

IDLE/FAST IDLE
AIRBRAKES IN
32,000 lb

(A.L.4)

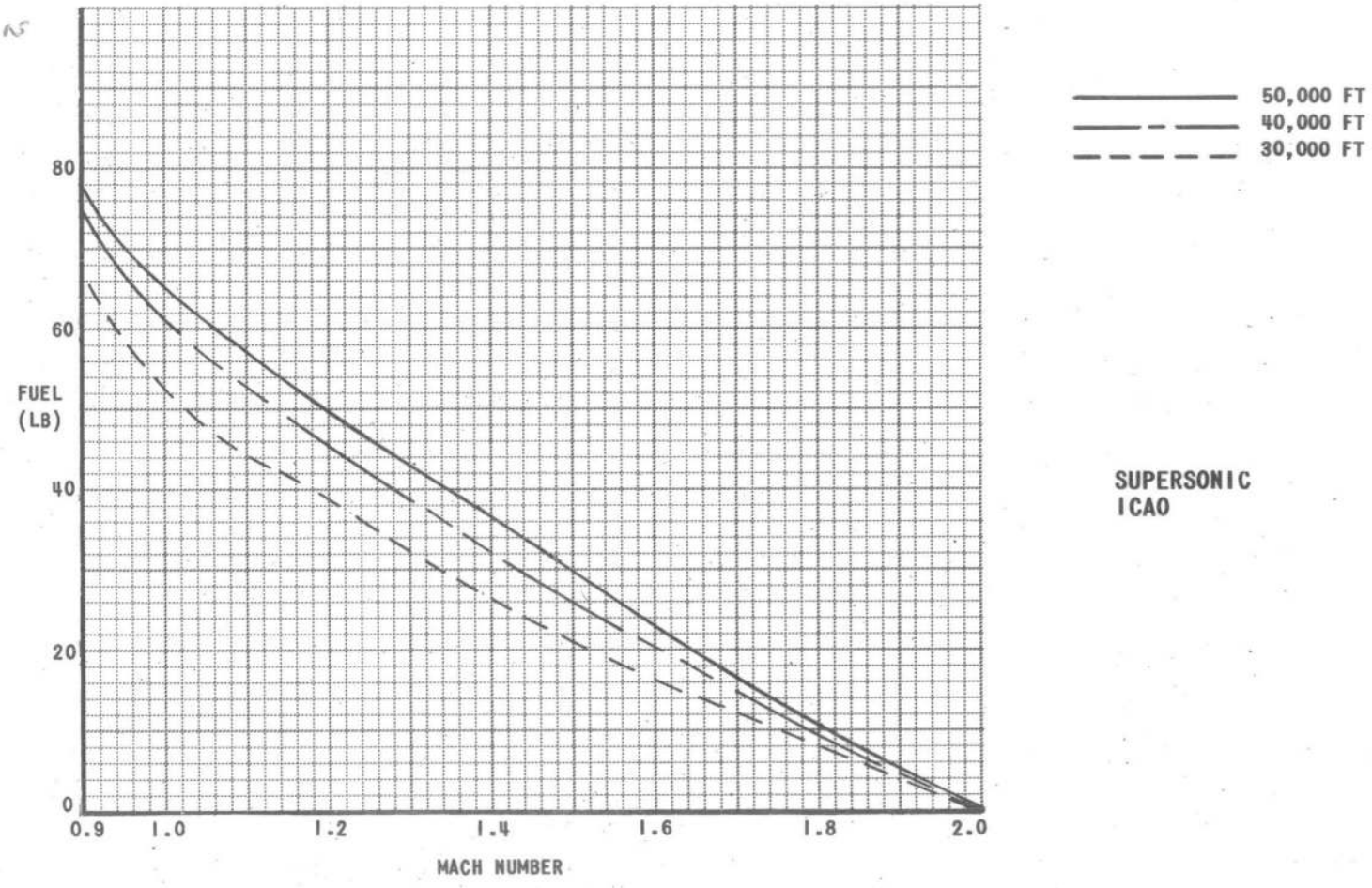
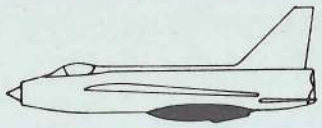
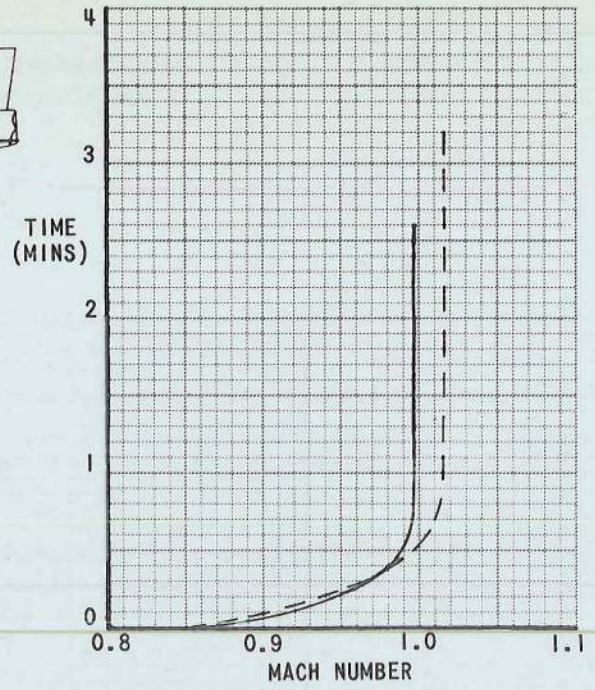


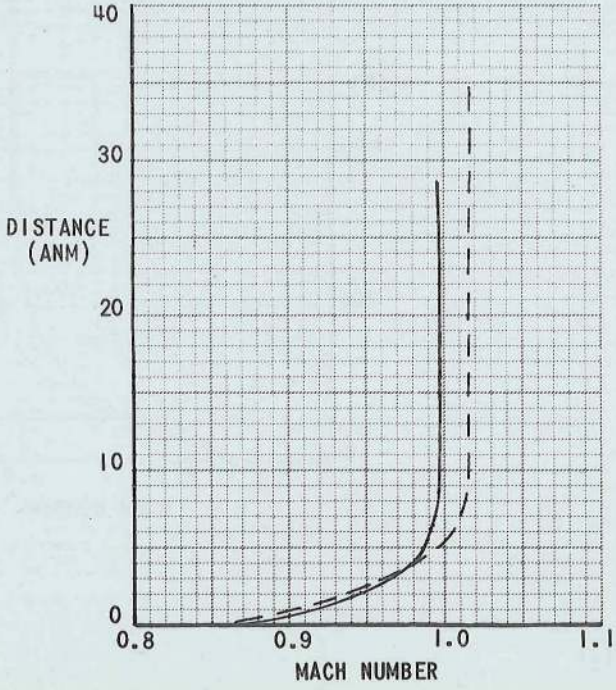
FIG.5.34. DECELERATION IN LEVEL FLIGHT



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





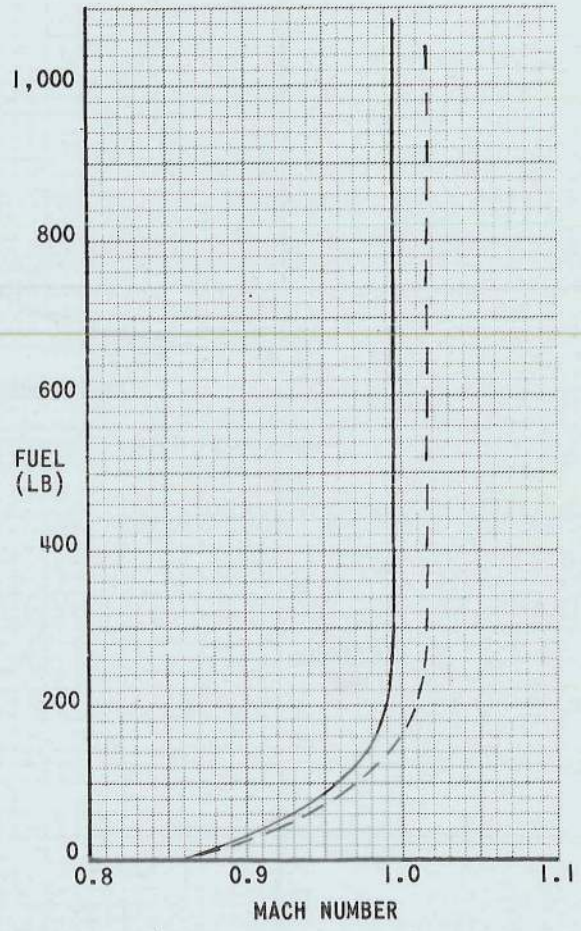
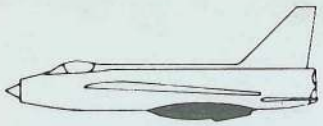
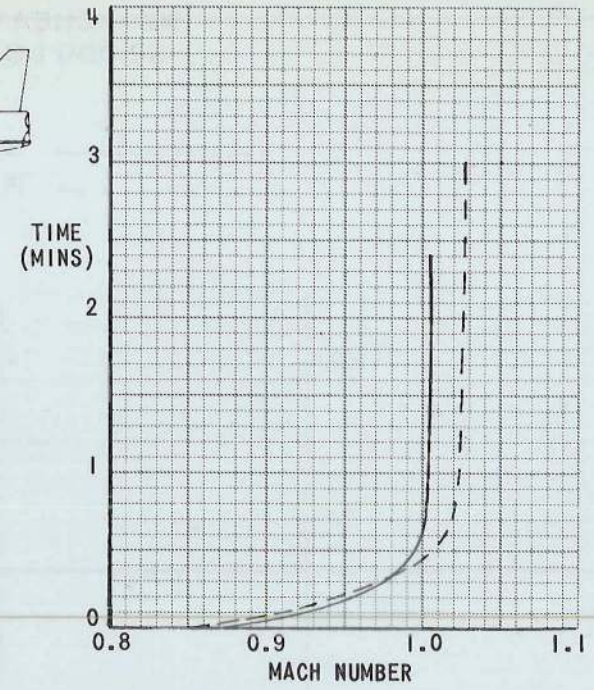


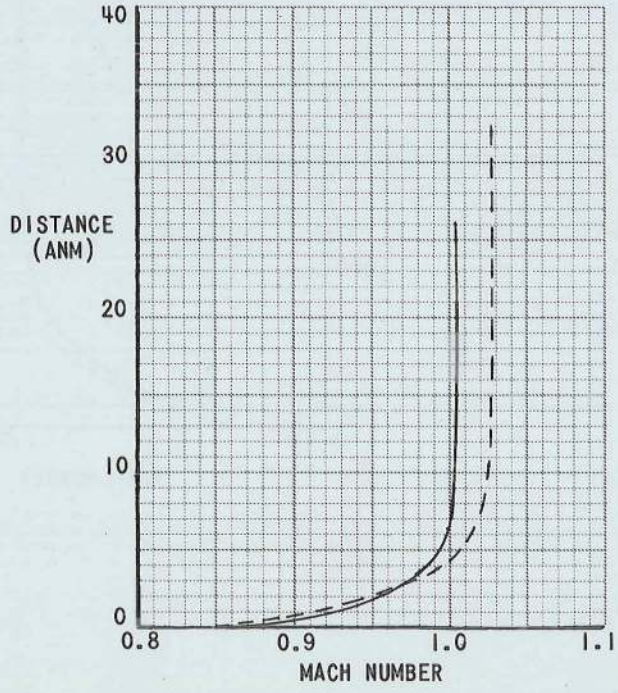
FIG. 5.1 LOW LEVEL ACCELERATION ICAO + 20°C



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





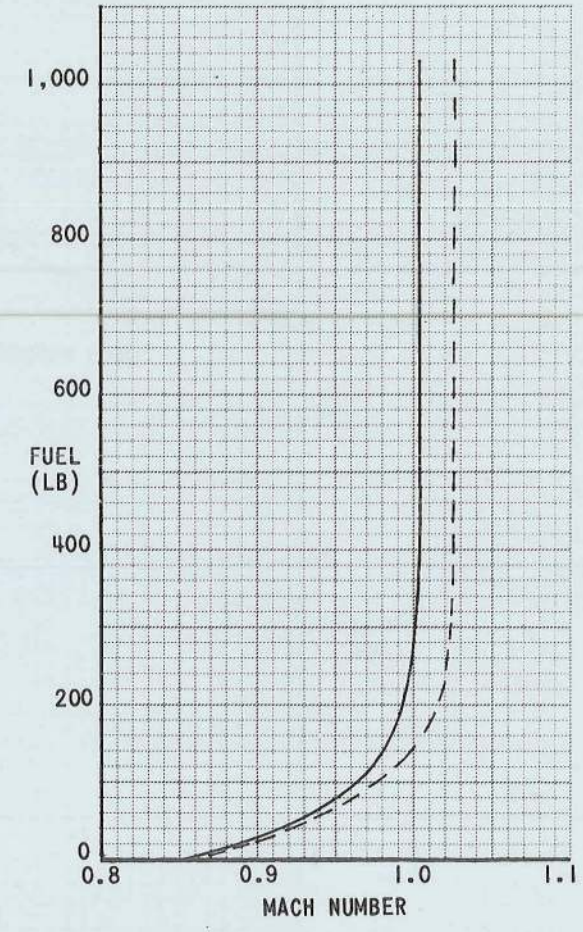
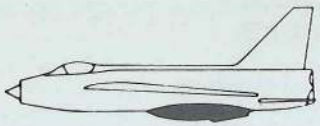
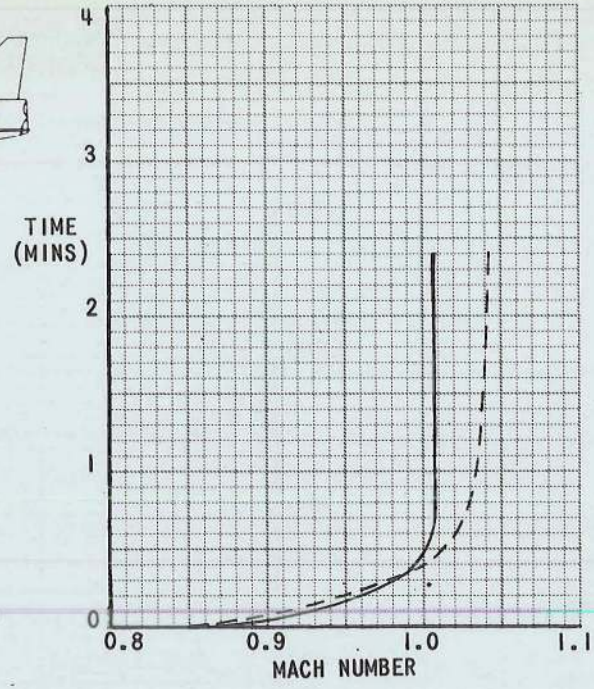


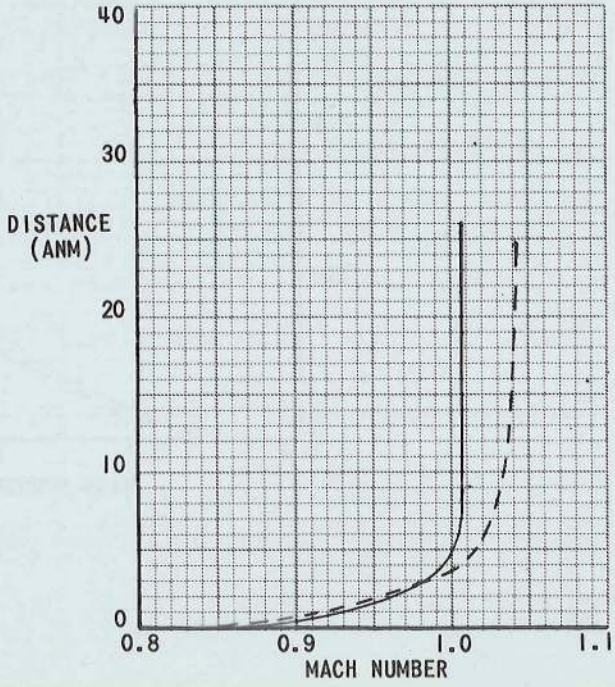
FIG. 5.2 LOW LEVEL ACCELERATION ICAO + 10°C



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





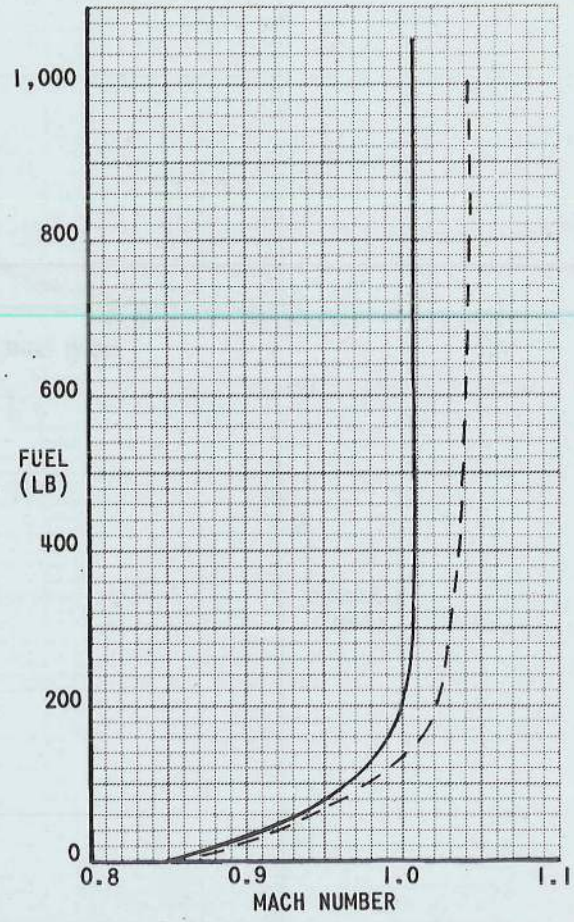
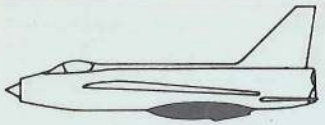
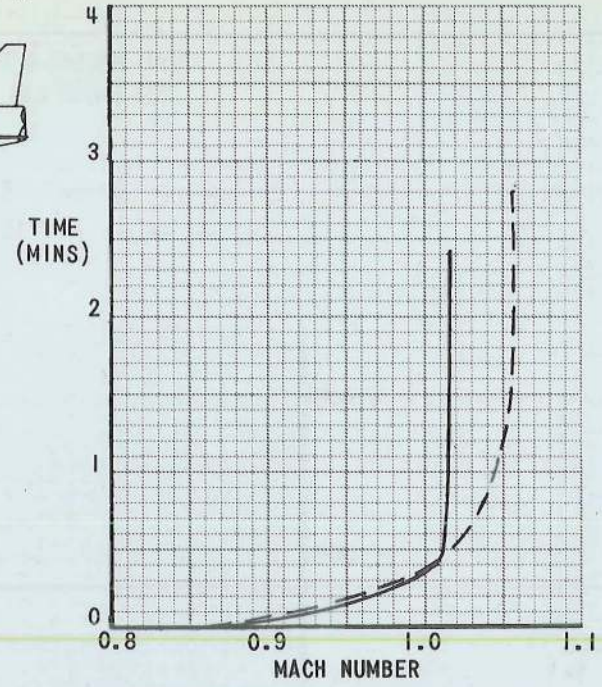
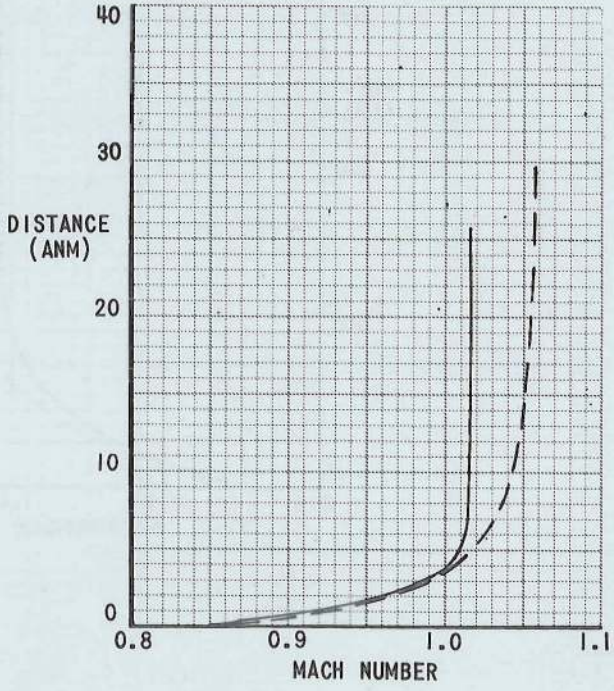


FIG. 5.3 LOW LEVEL ACCELERATION ICAO







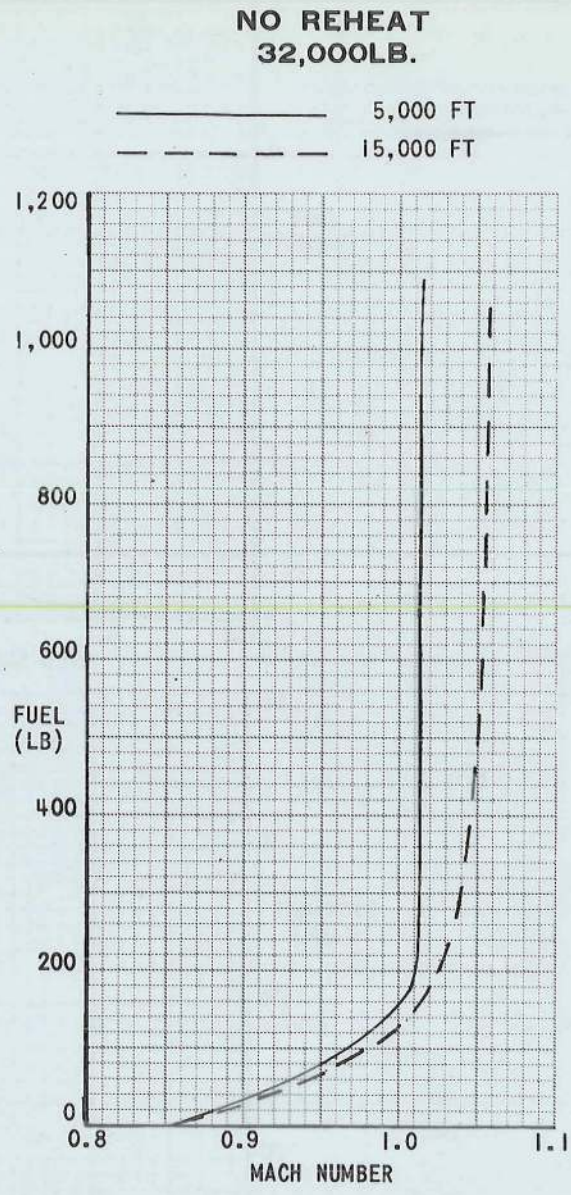
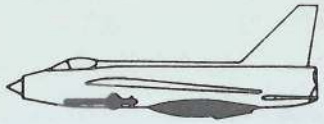


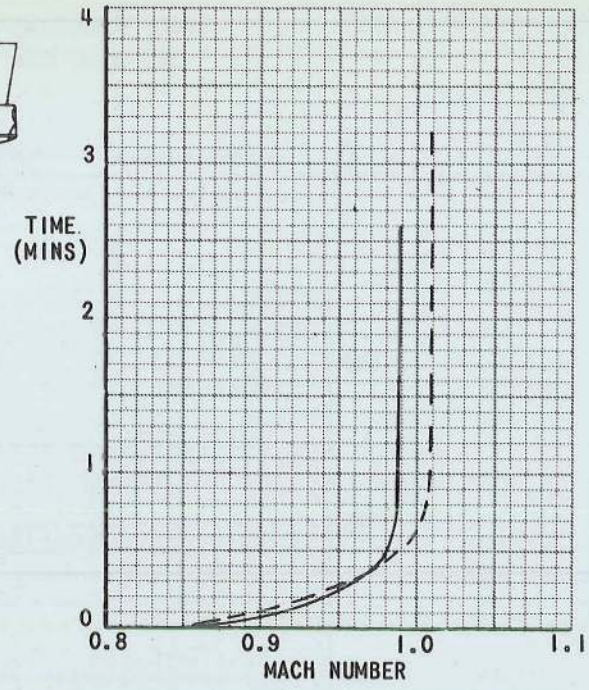
FIG. 5.4 LOW LEVEL ACCELERATION ICAO-10°C

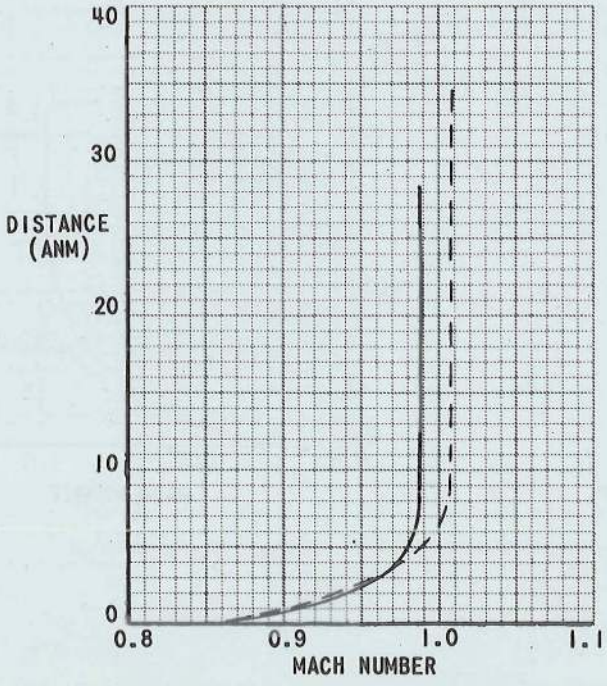
T Mk.5



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





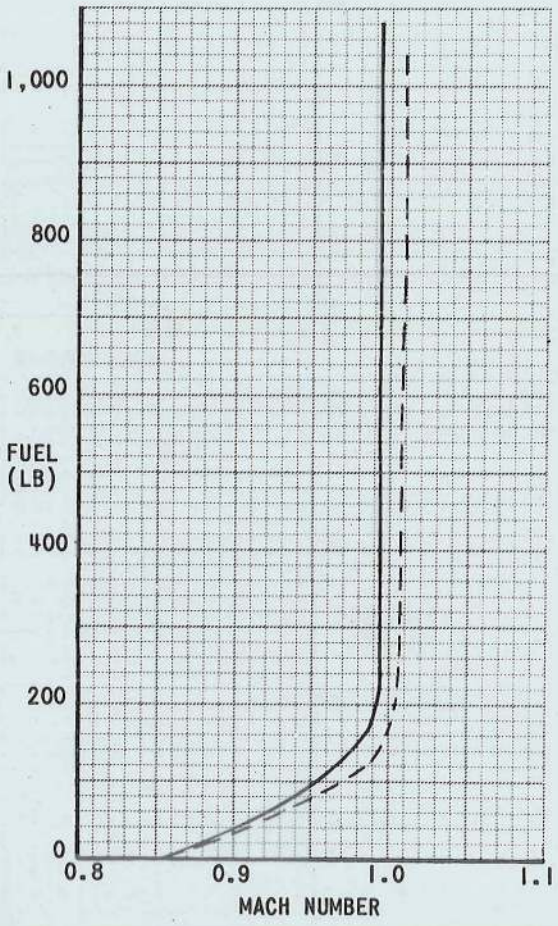
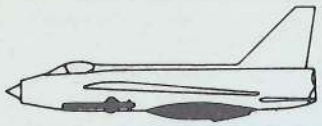
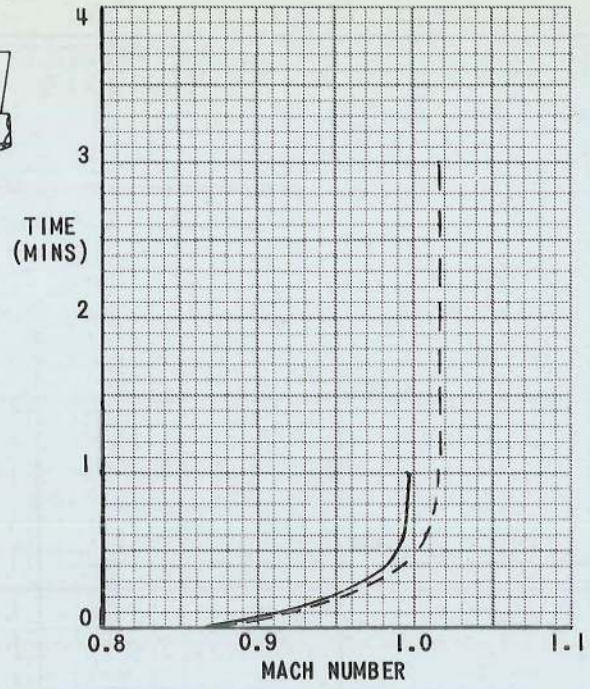


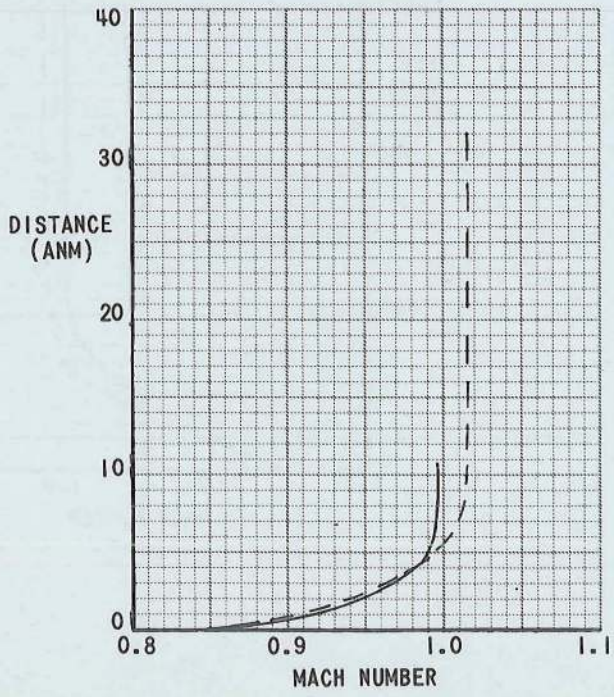
FIG. 5.5 LOW LEVEL ACCELERATION ICAO+20°C



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





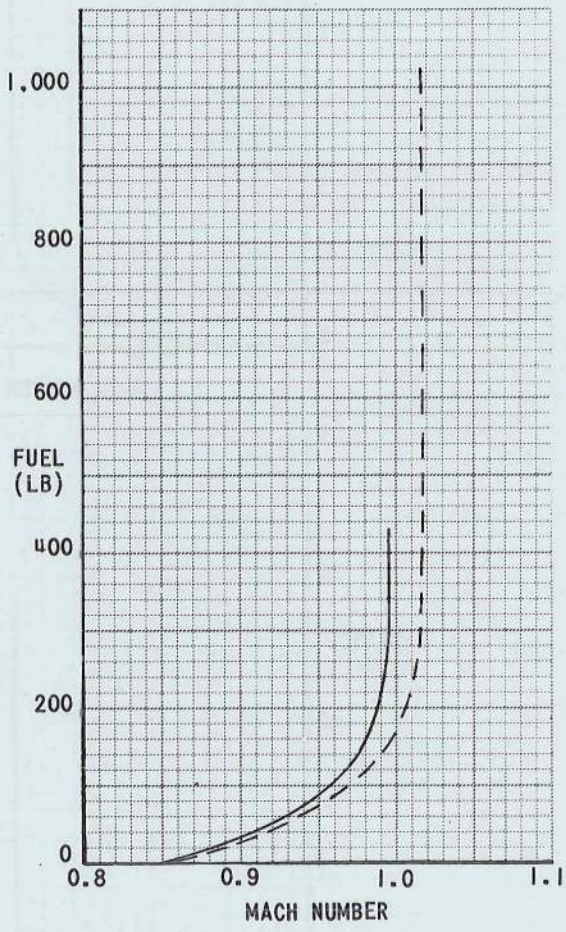
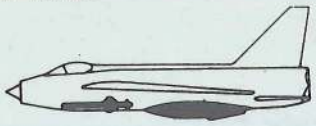
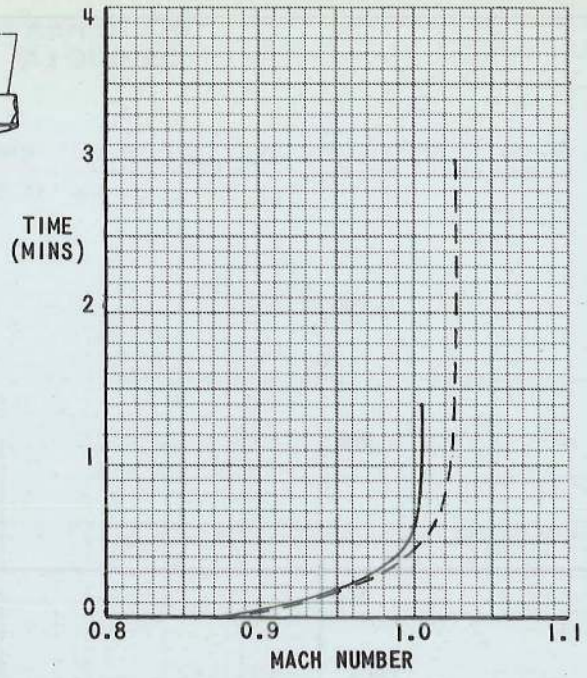


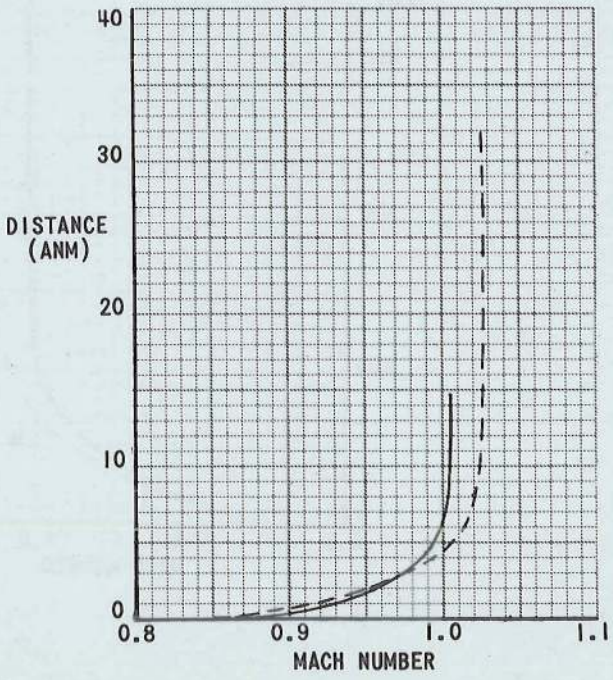
FIG. 5.6 LOW LEVEL ACCELERATION ICAO + 10°C



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





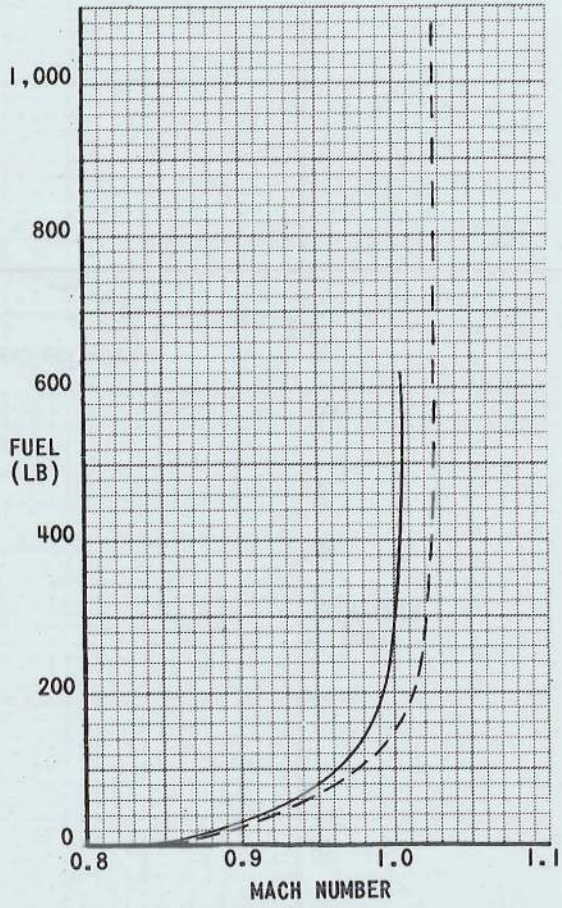
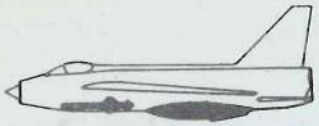


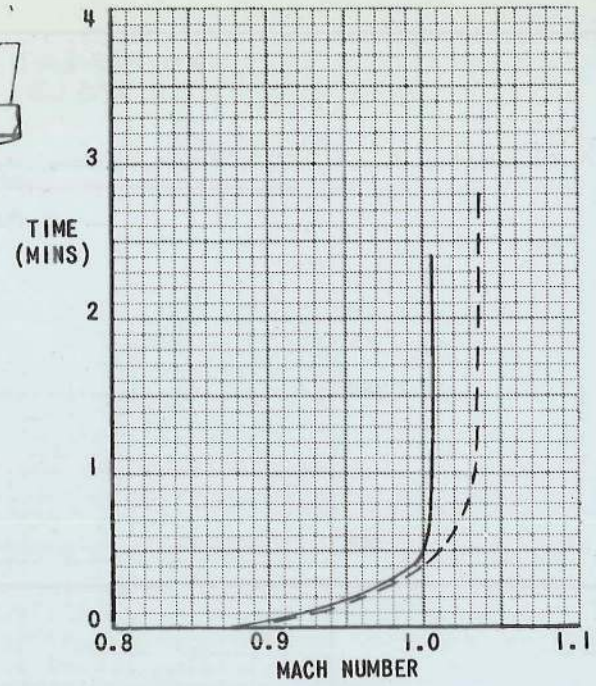
FIG. 5.7 LOW LEVEL ACCELERATION ICAO

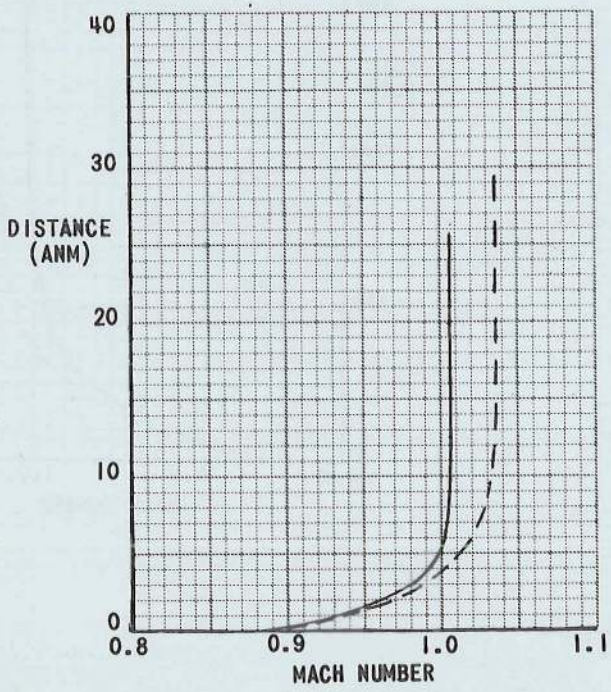
T Mk.5



NO REHEAT
32,000 LB.

5,000 FT
15,000 FT





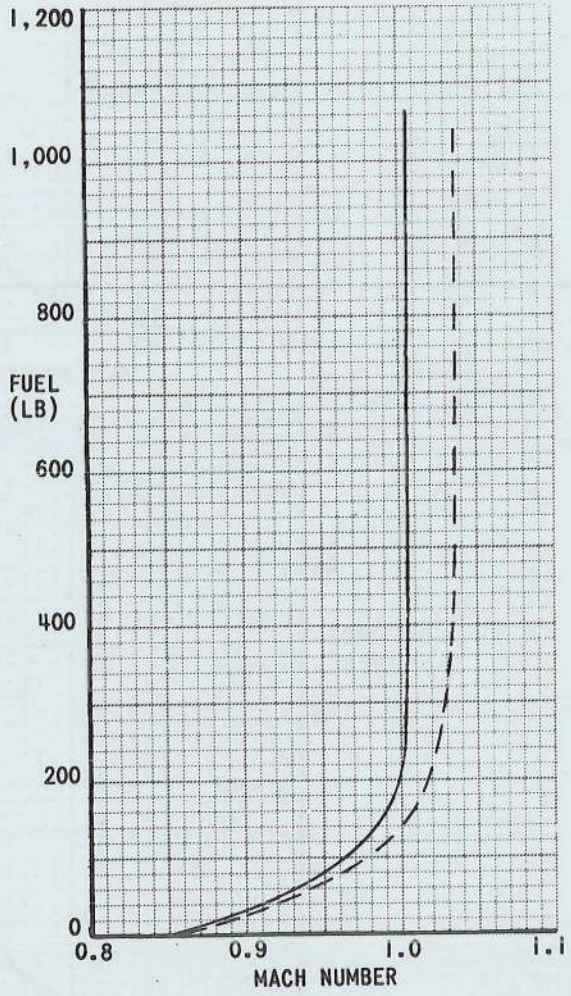
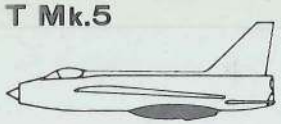


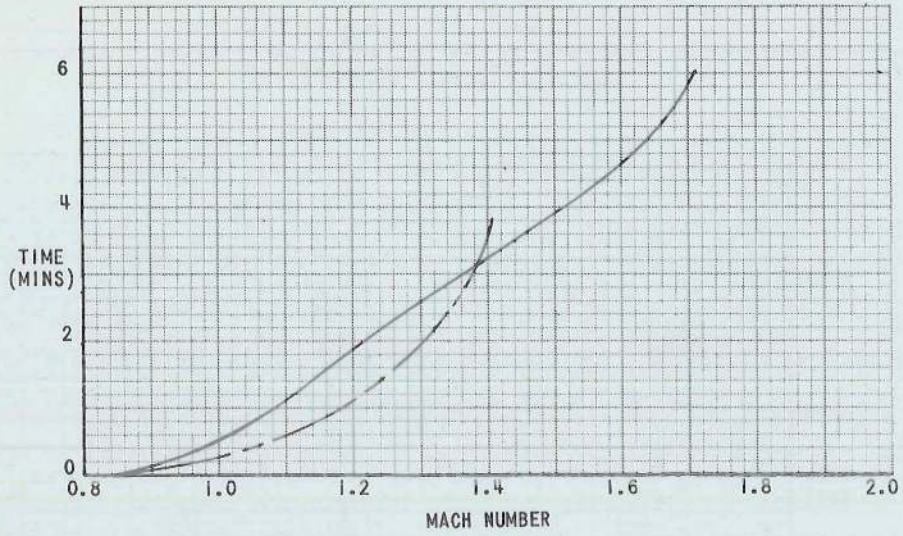
FIG. 5.8 LOW LEVEL ACCELERATION ICAO–10°C

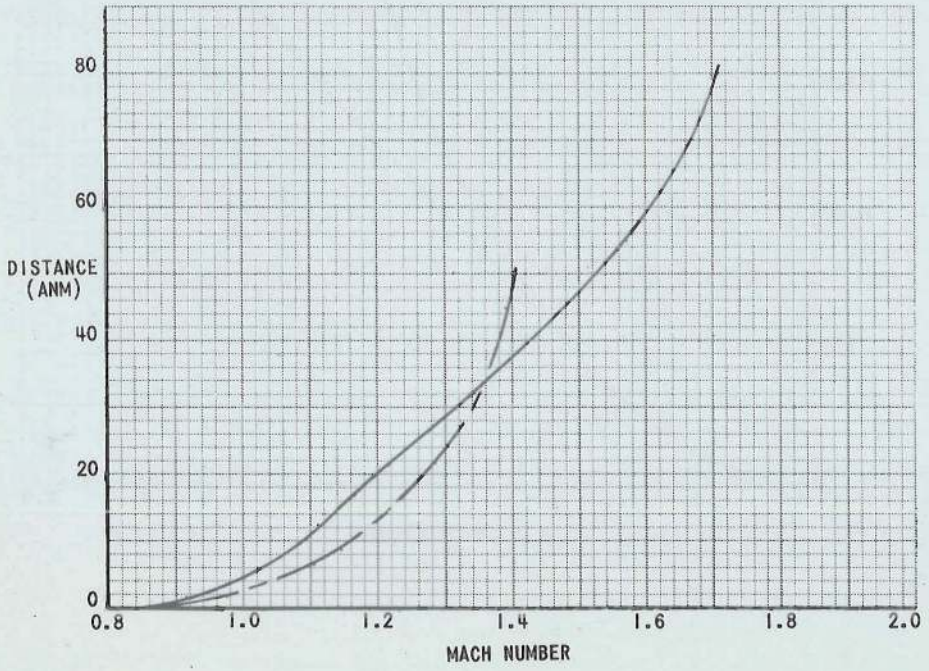
T Mk.5



FULL REHEAT
32,000LB

36,000 FT
20,000 FT





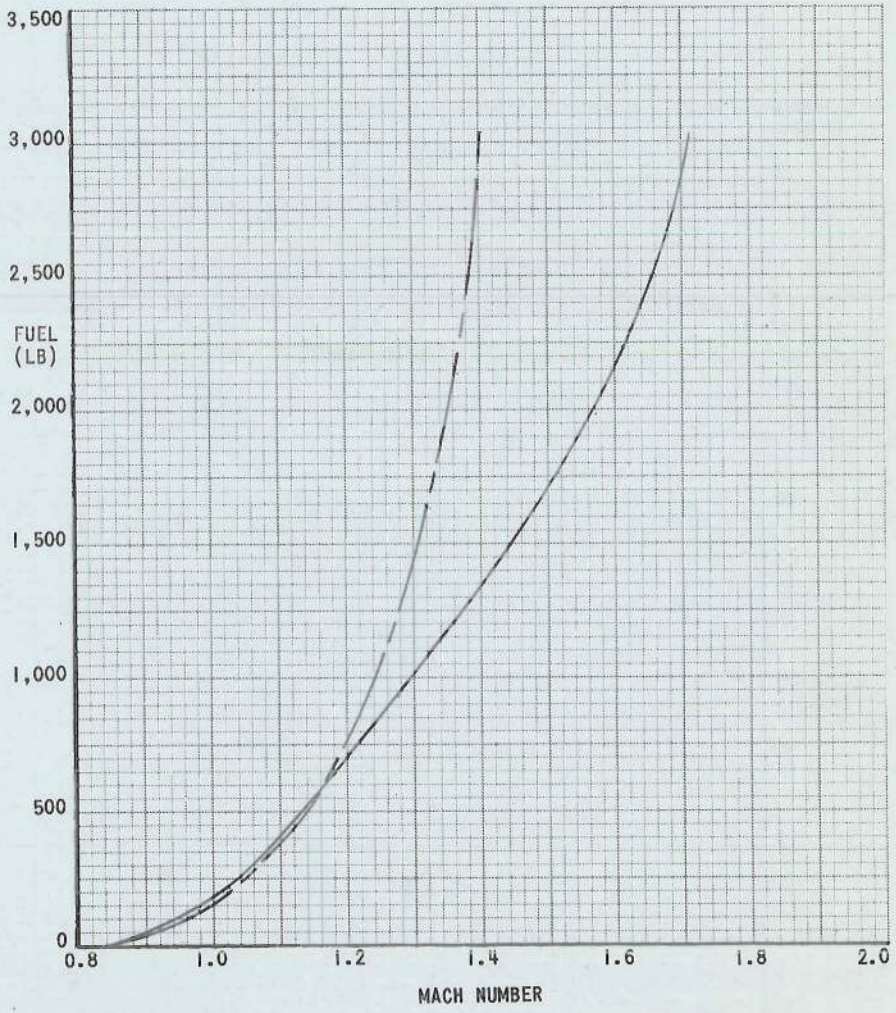
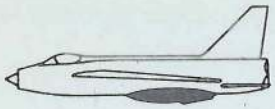
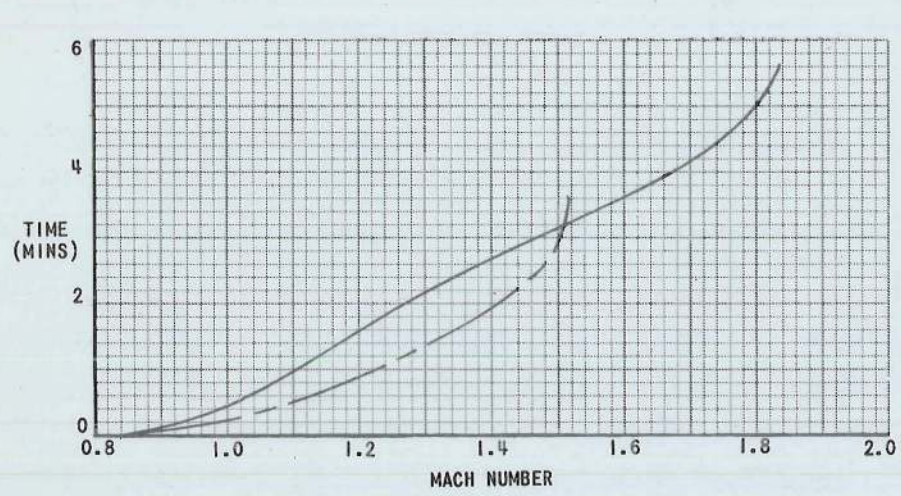
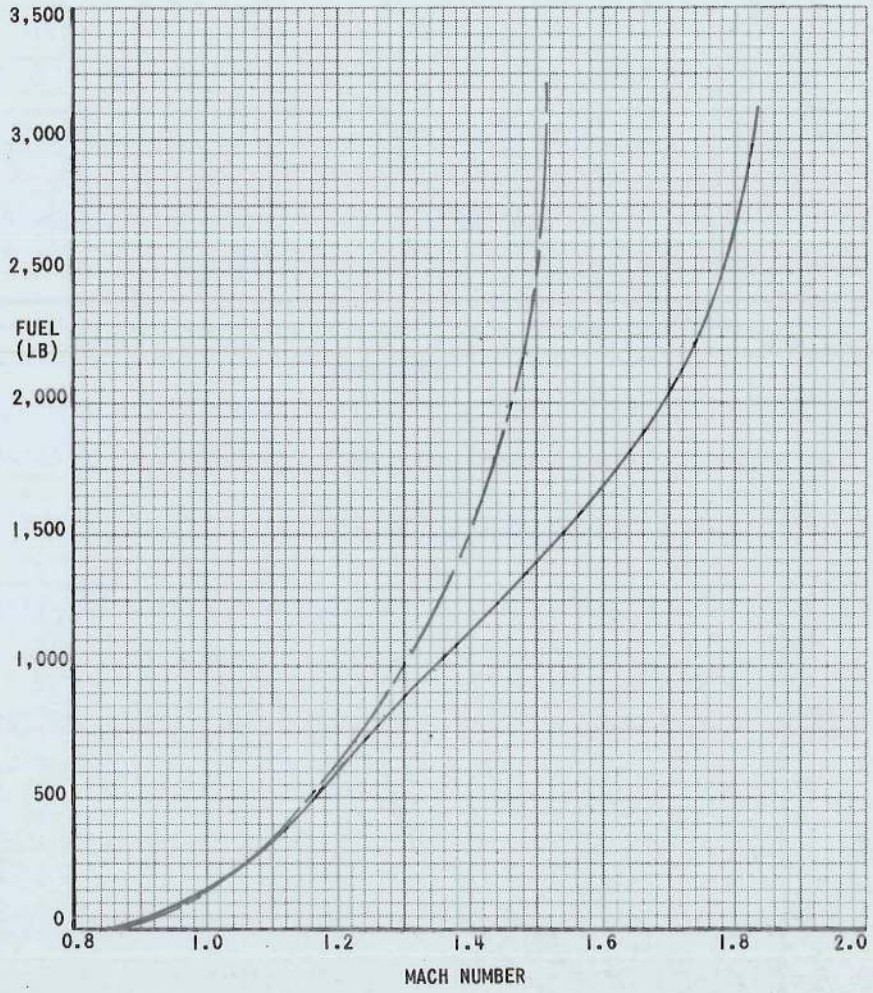


FIG. 5.9 FULL REHEAT ACCELERATION ICAO + 20°C



FULL REHEAT
32,000LB





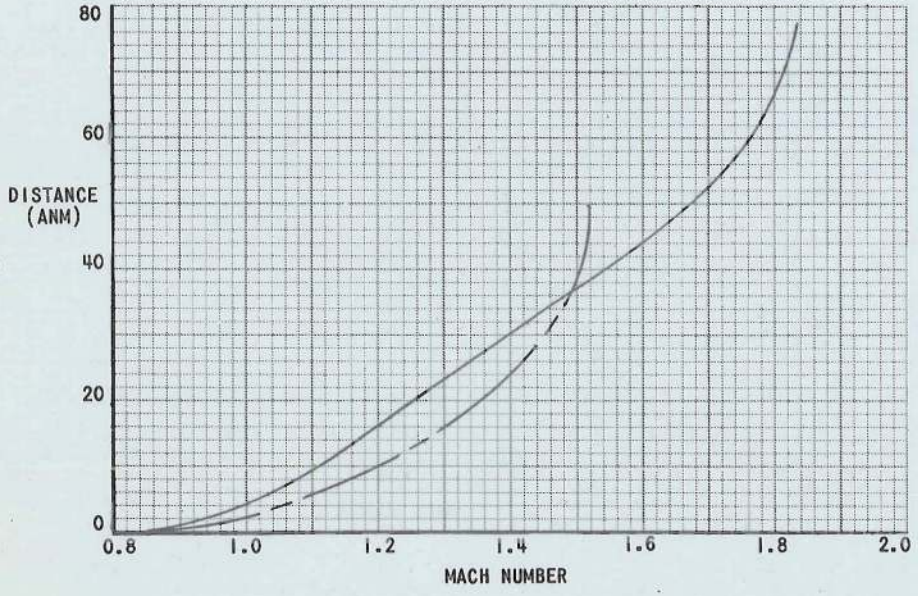


FIG. 5.10 FULL REHEAT ACCELERATION ICAO +10°C

FULL REHEAT
32,000LB

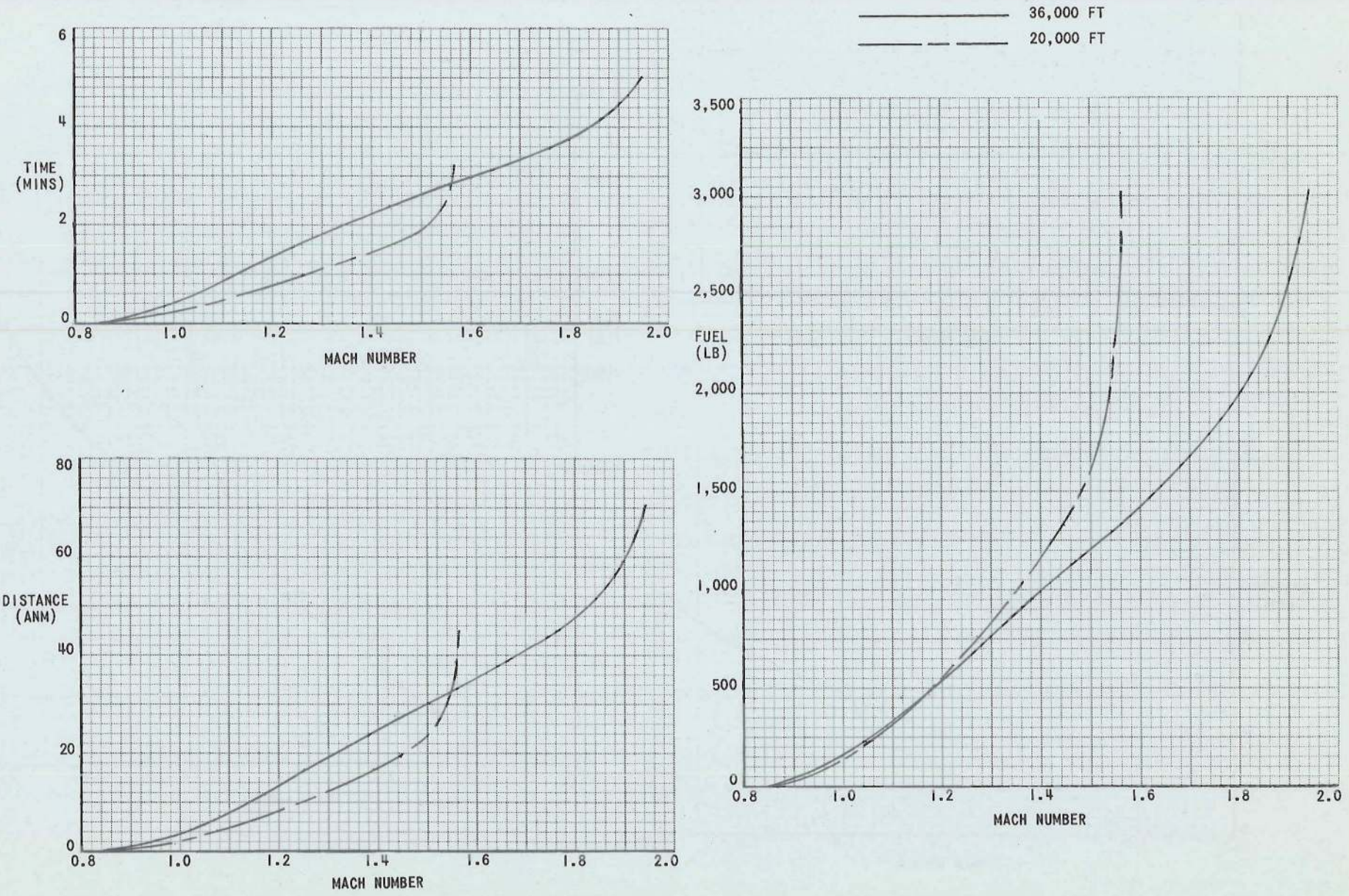
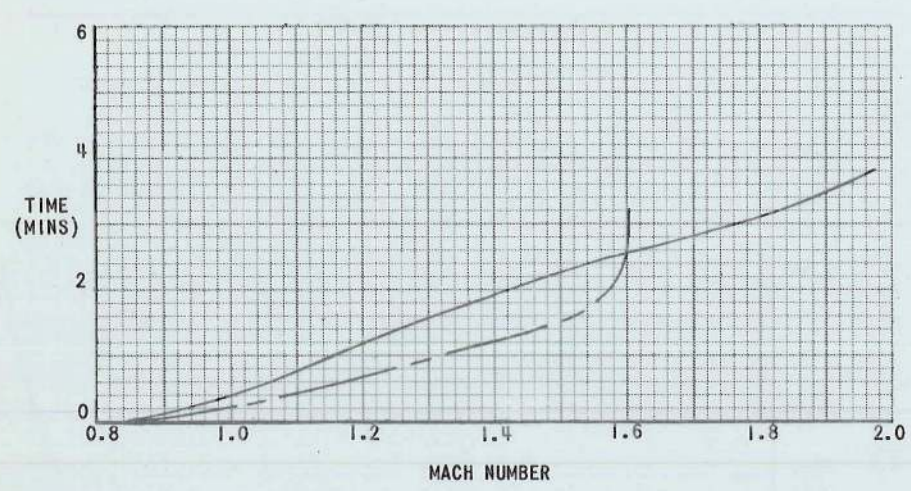
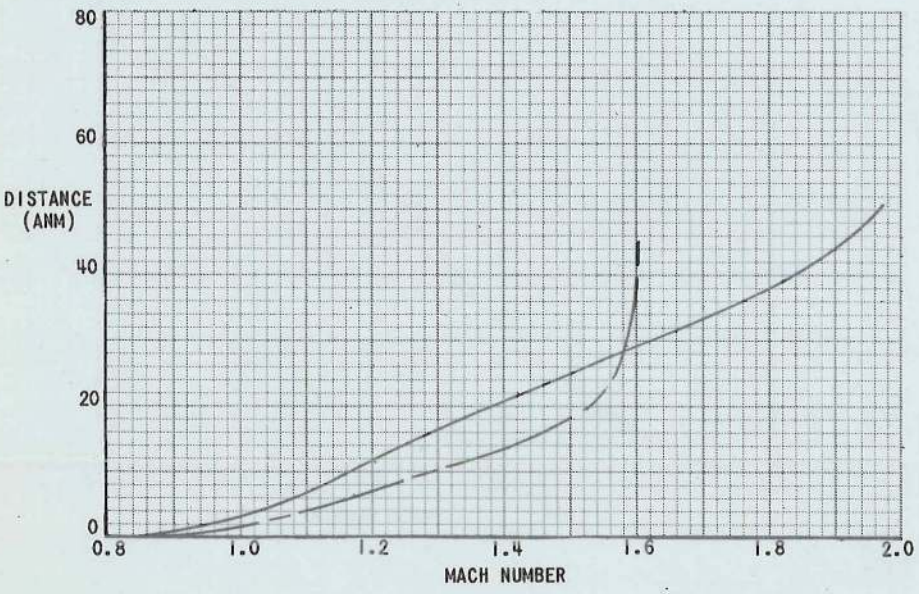


FIG.5.11 FULL REHEAT ACCELERATION ICAO

FULL REHEAT
32,000LB





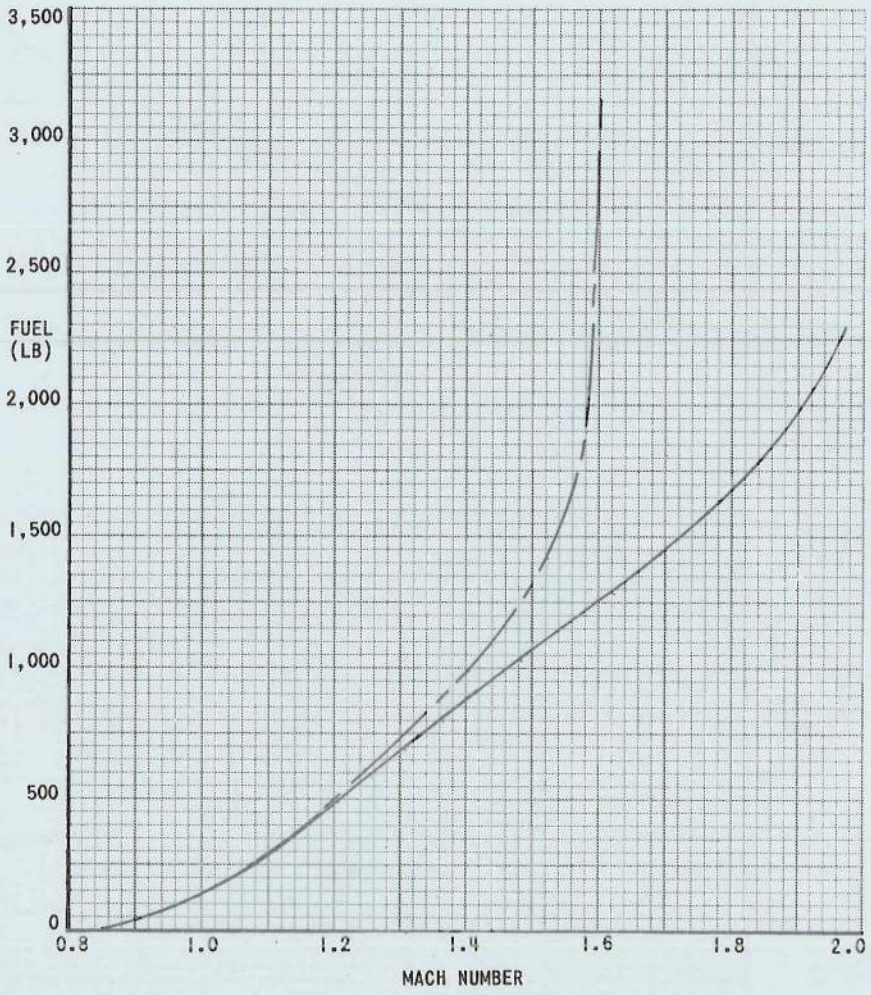
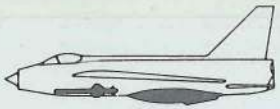
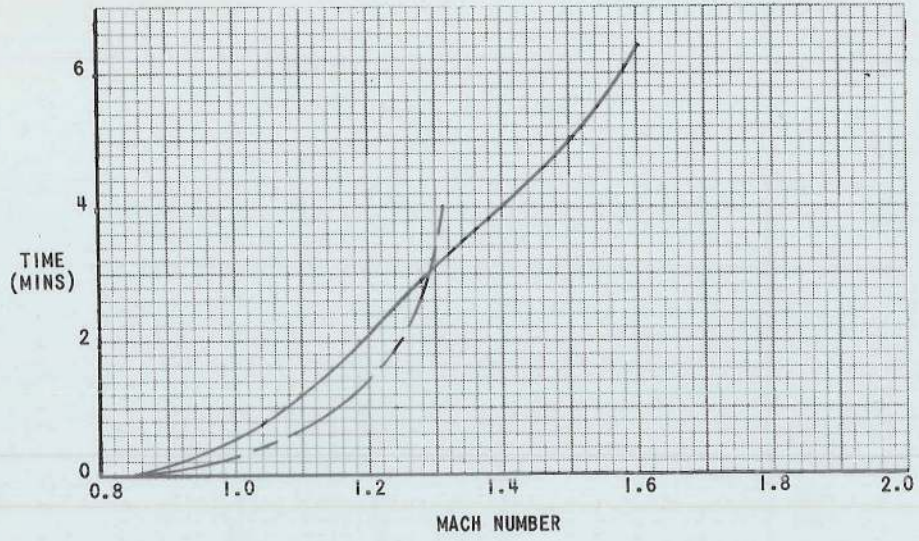


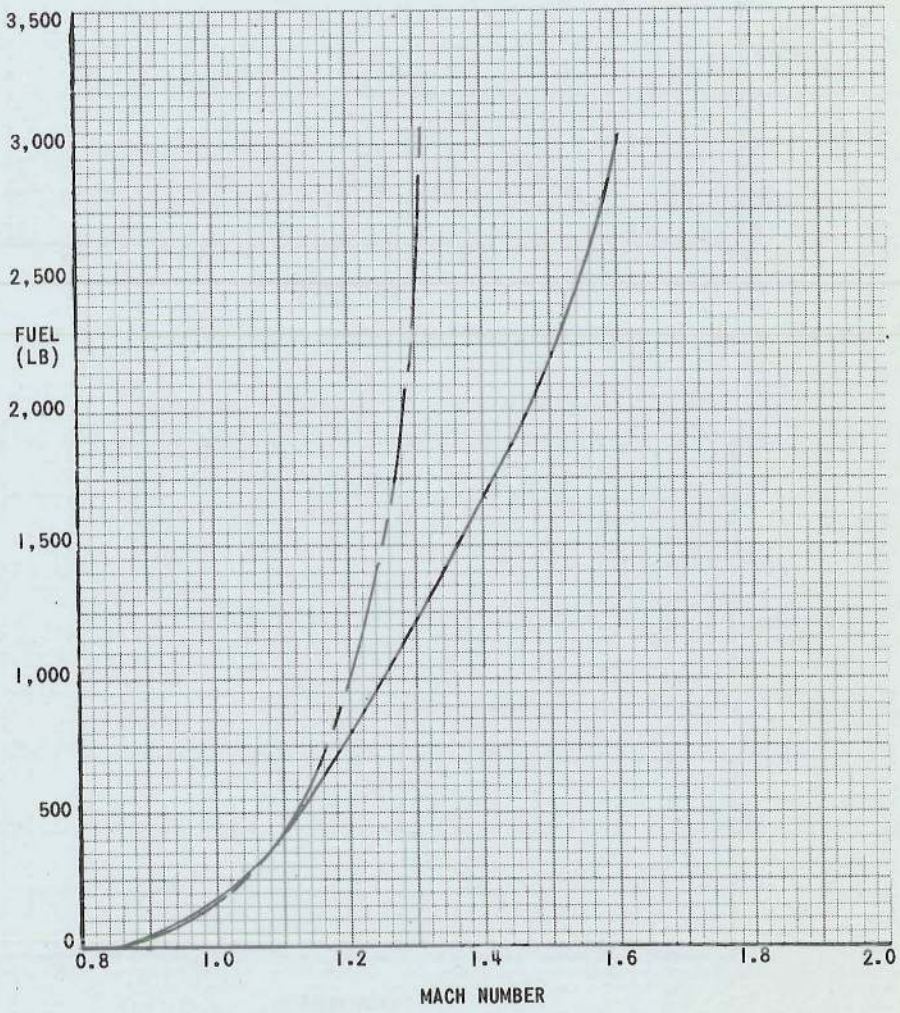
FIG. 5.12 FULL REHEAT ACCELERATION ICAO – 10°C



FULL REHEAT
32,000LB

36,000 FT
20,000 FT





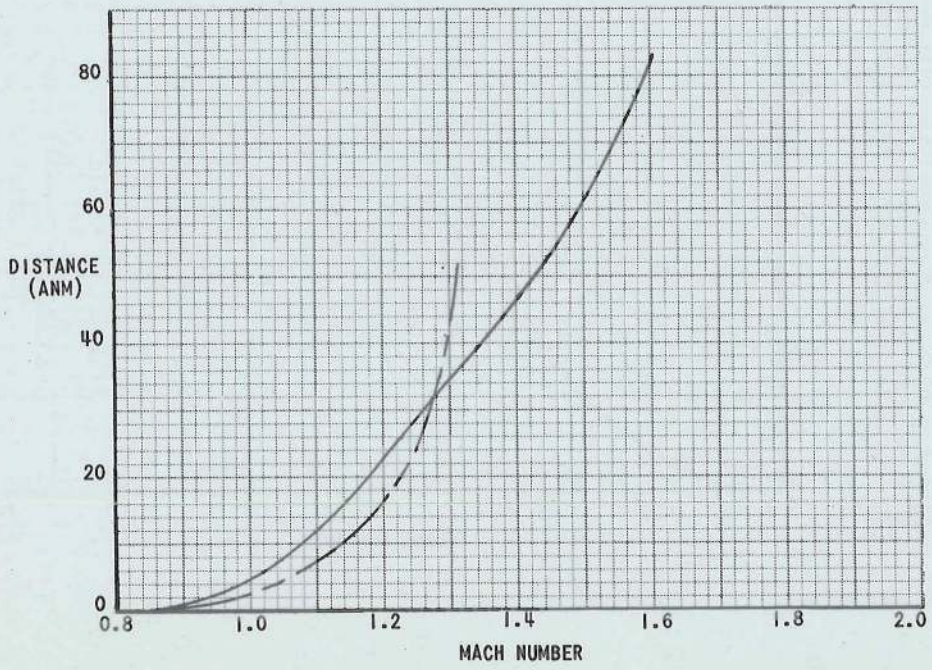
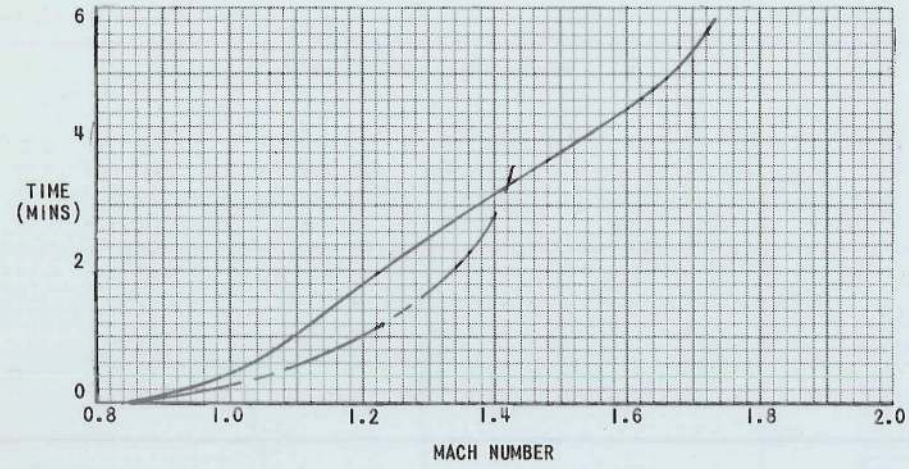
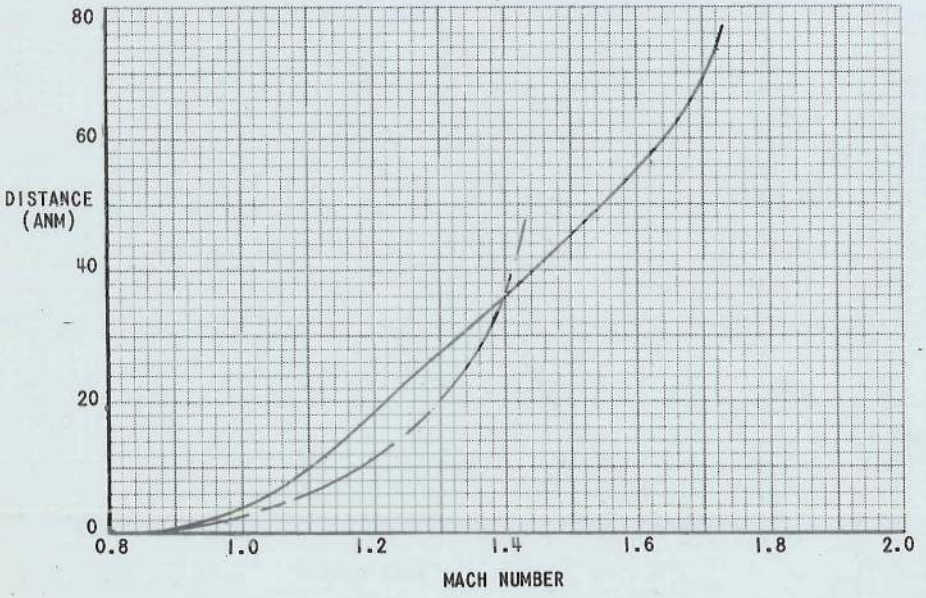


FIG. 5.13 FULL REHEAT ACCELERATION ICAO + 20°C

FULL REHEAT
32,000 LB





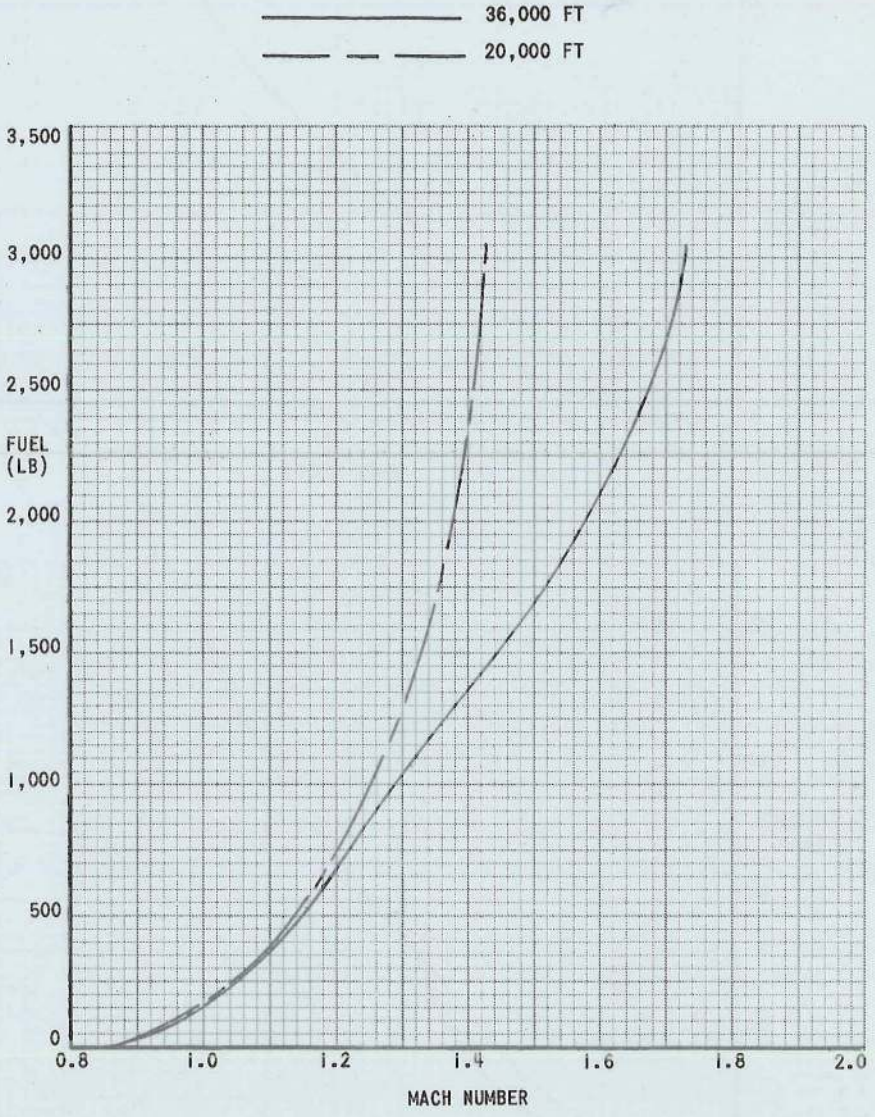
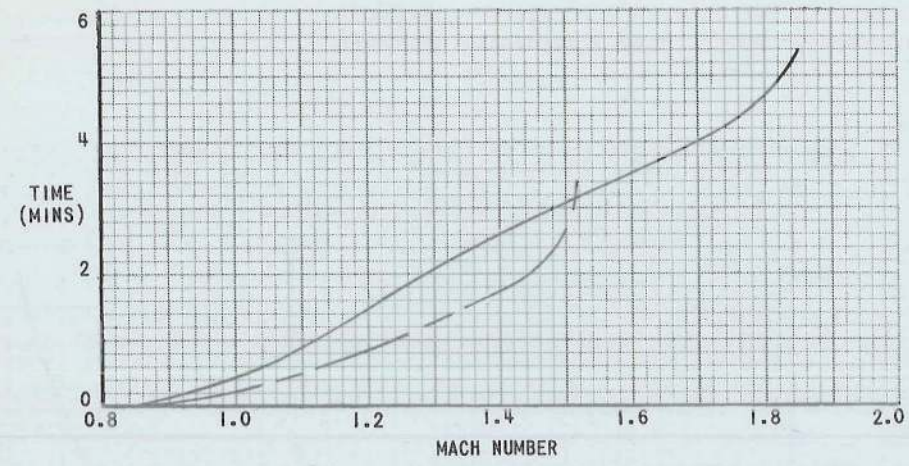
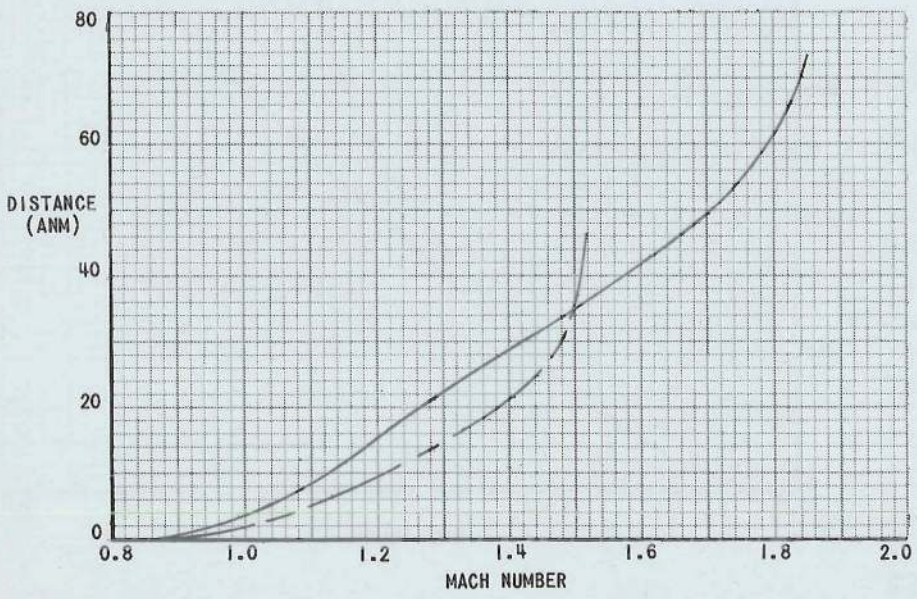


FIG. 5.14 FULL REHEAT ACCELERATION ICAO + 10°C

FULL REHEAT
32,000 LB





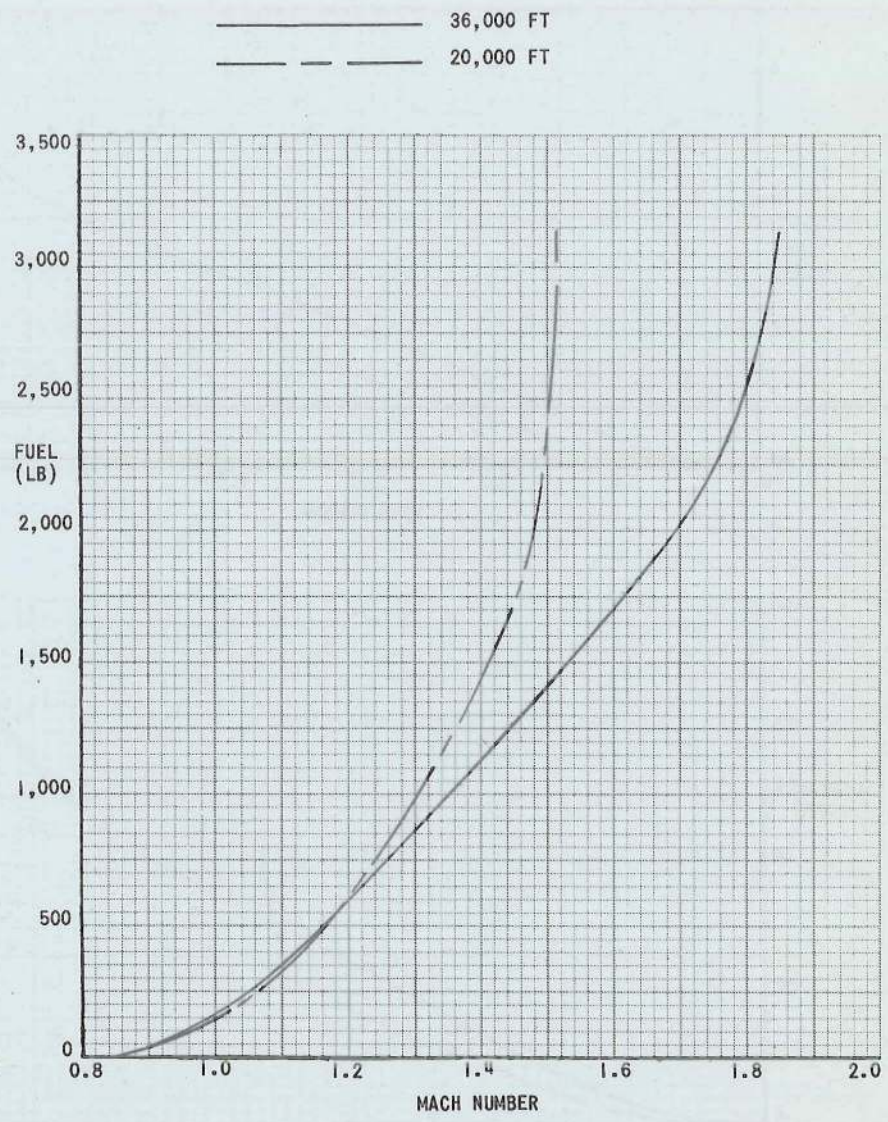
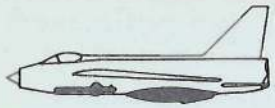
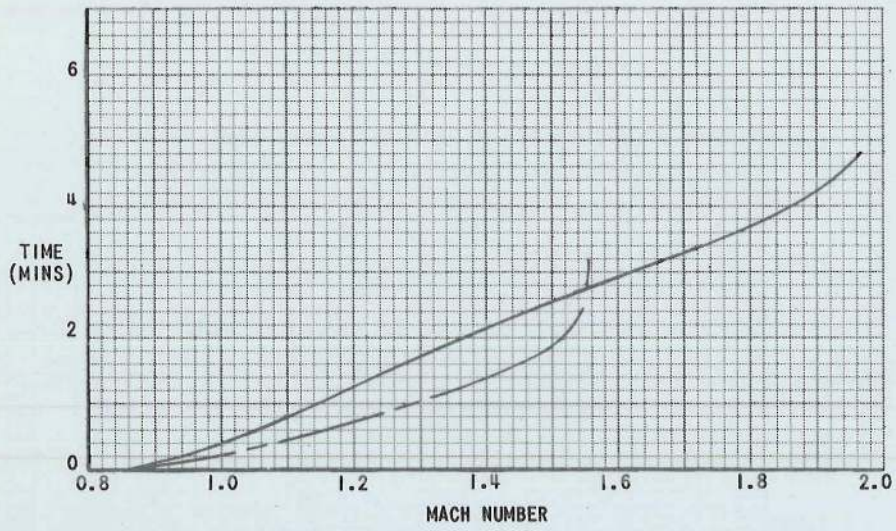


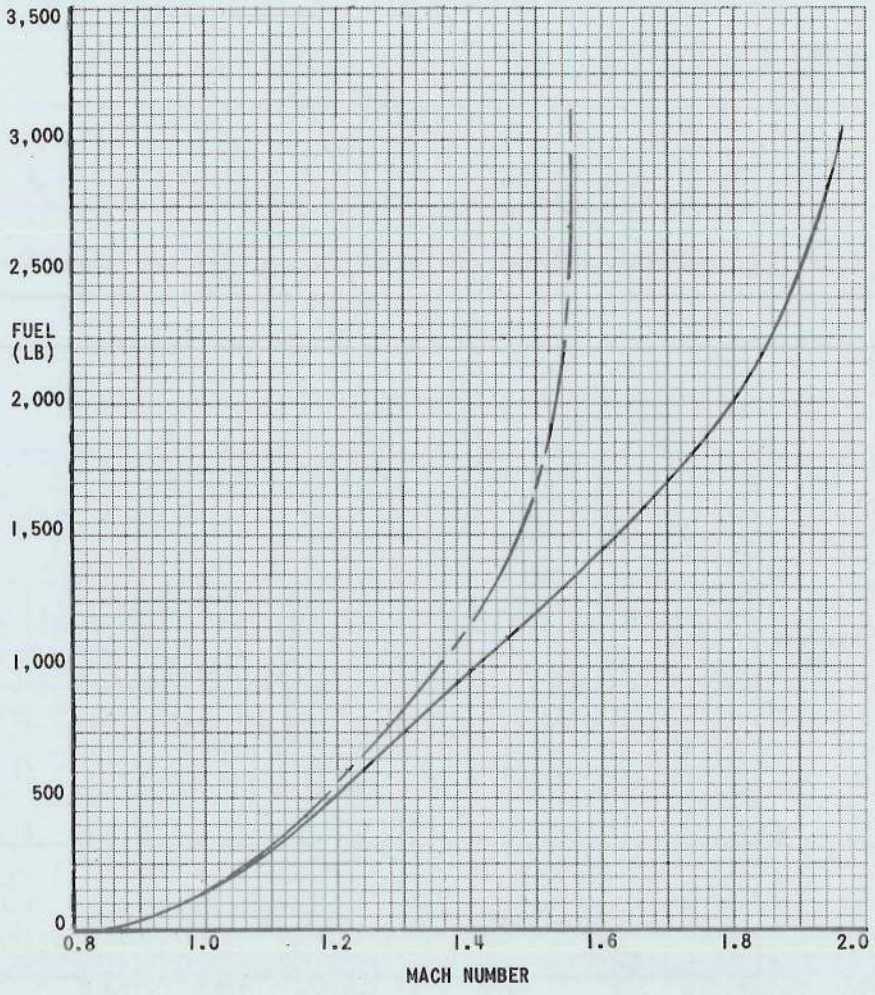
FIG. 5.15 FULL REHEAT ACCELERATION ICAO



FULL REHEAT
32,000LB

36,000 FT
20,000 FT





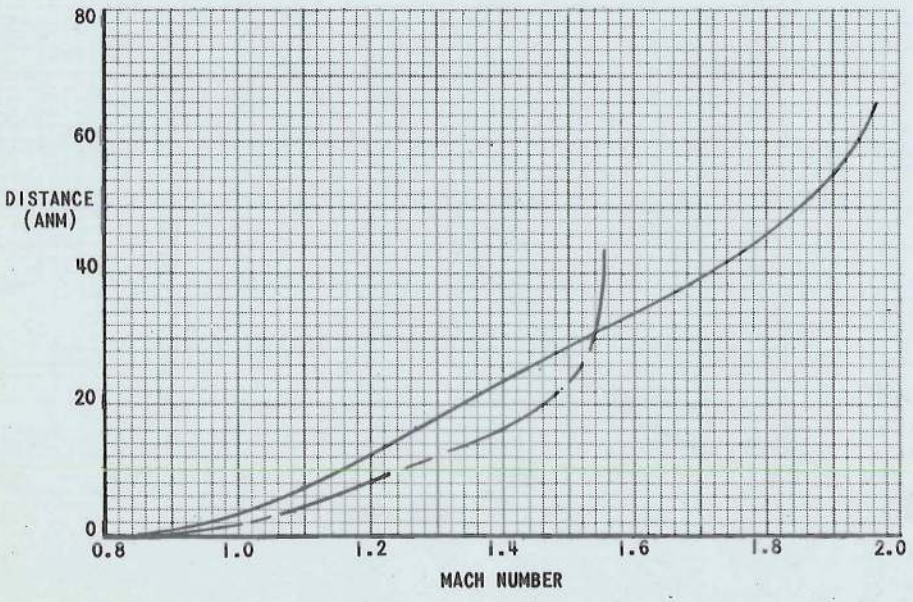


FIG. 5.16 FULL REHEAT ACCELERATION ICAO - 10°C

T Mk.5

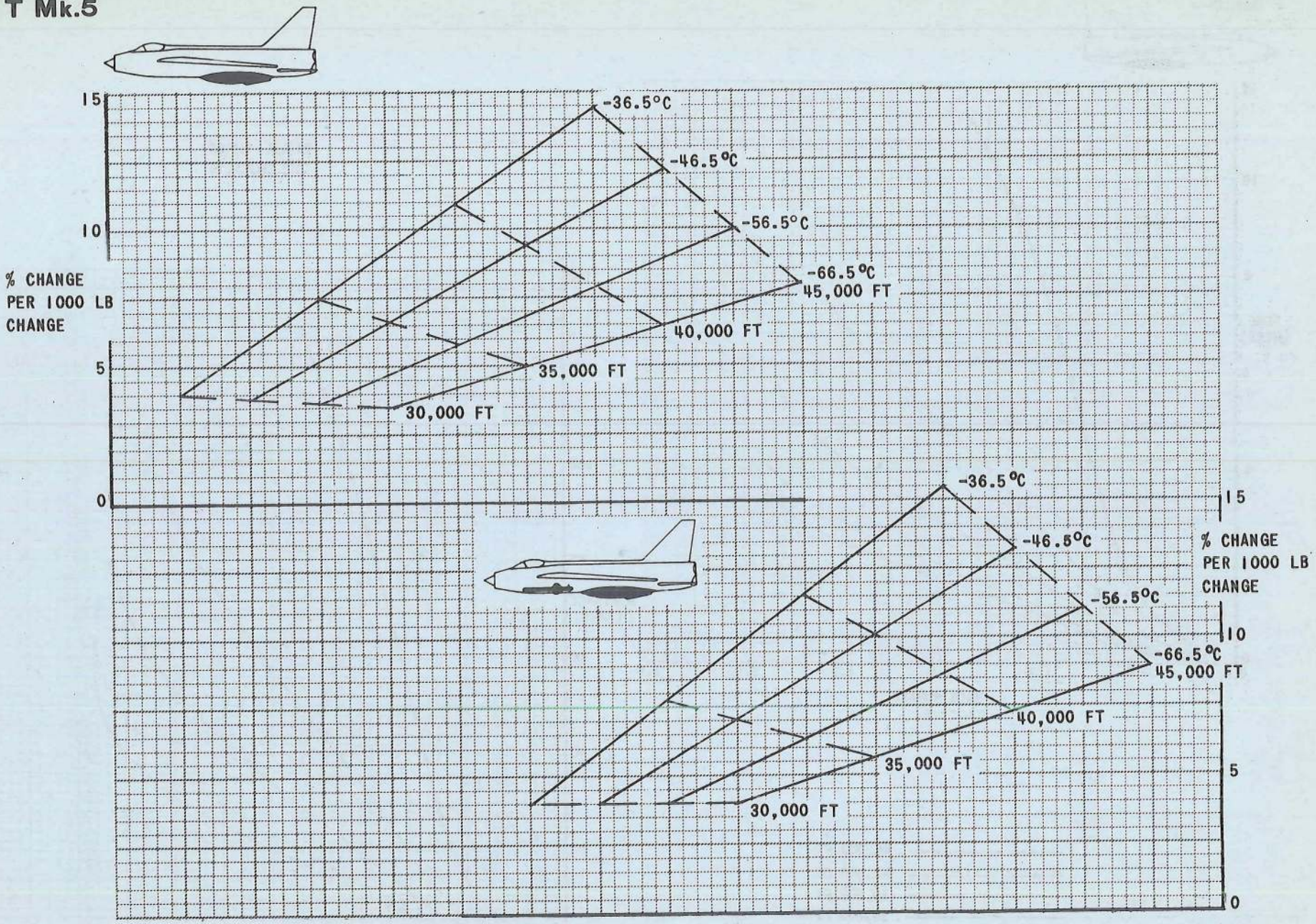
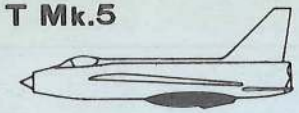
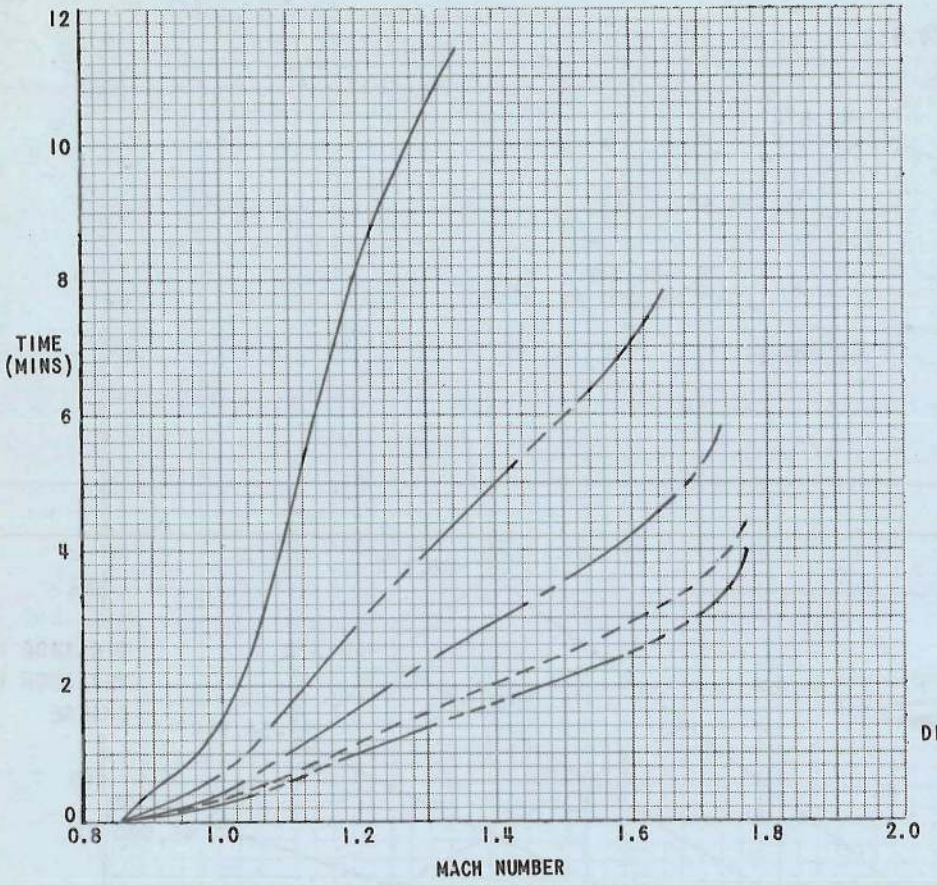
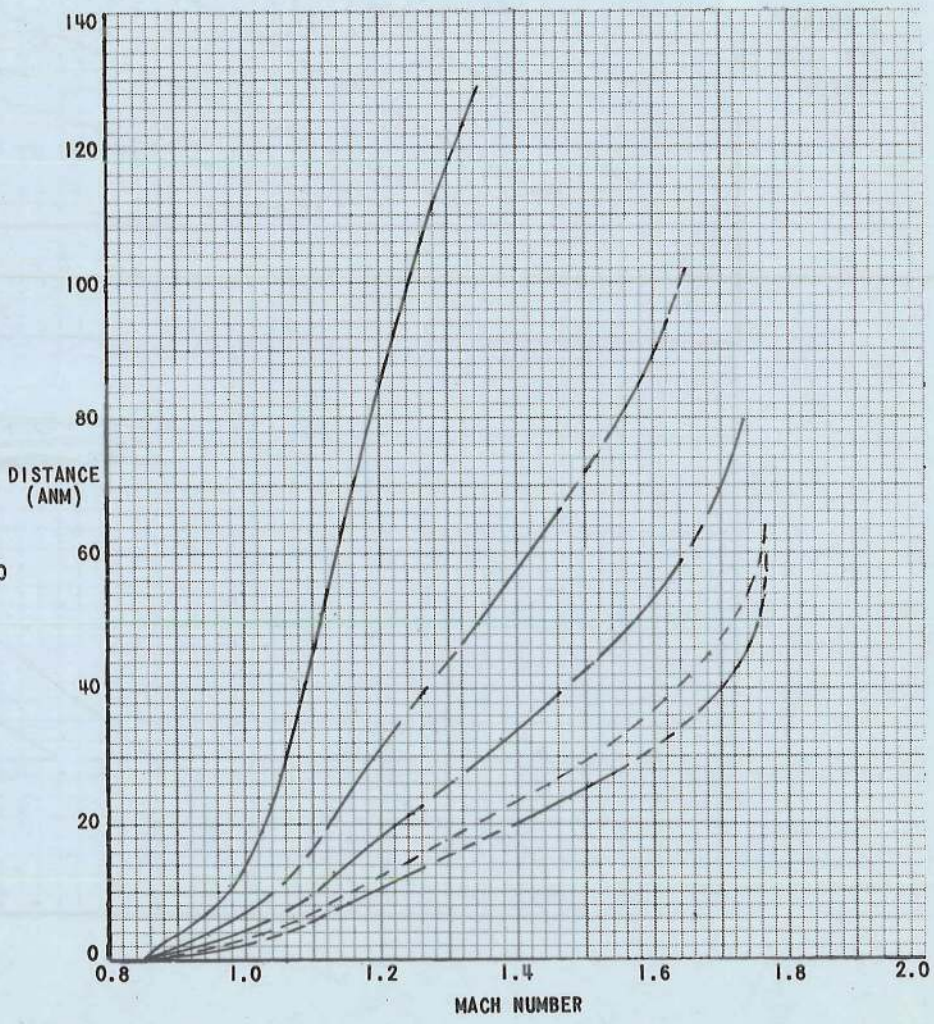


FIG. 5-17 EFFECT OF WEIGHT ON TIME, DISTANCE AND FUEL



MAX RPM
32,000LB

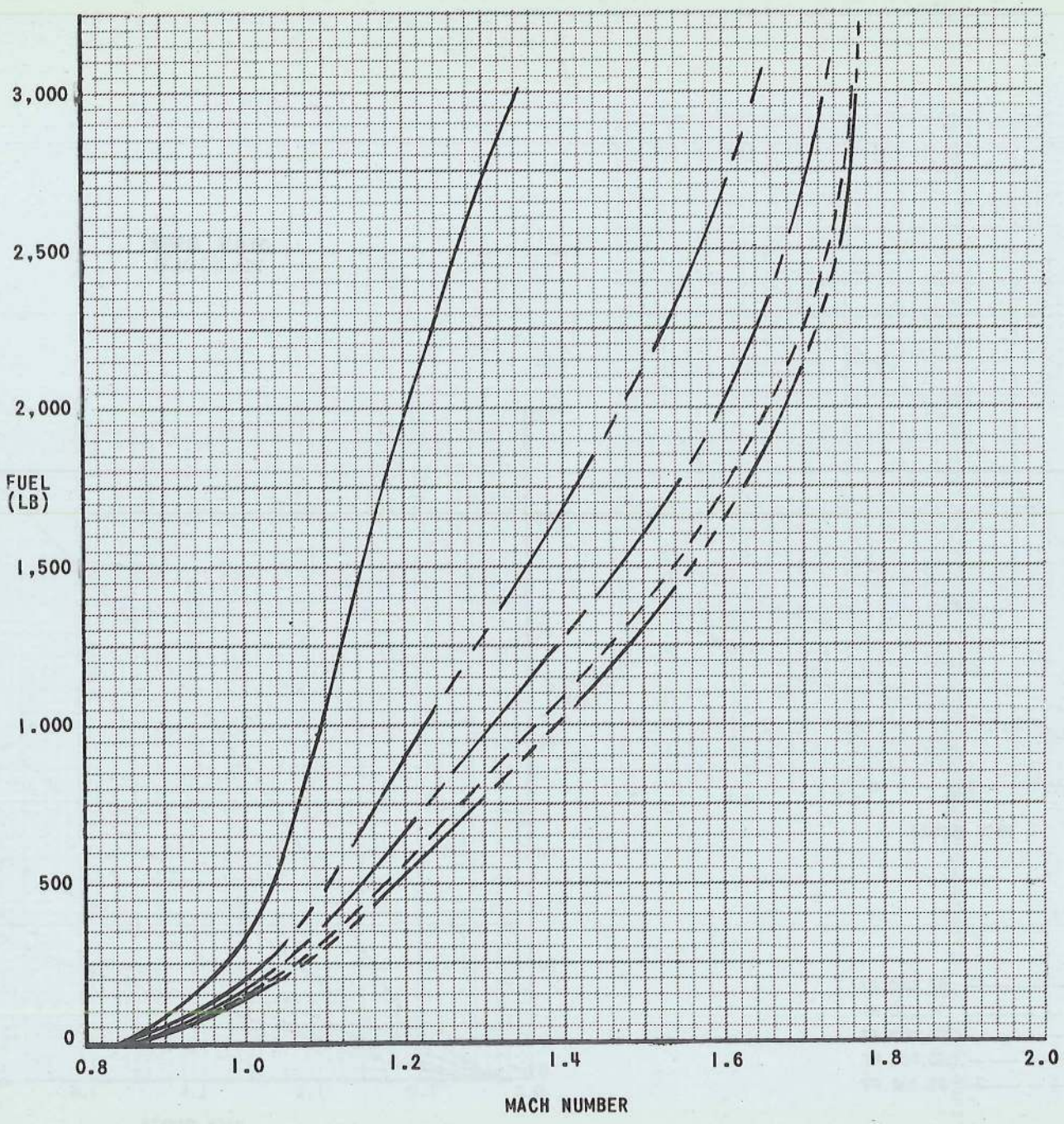


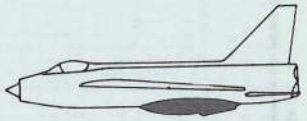


45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·18A FULL REHEAT ACCELERATION - 36·5°C

T Mk.5

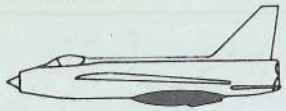




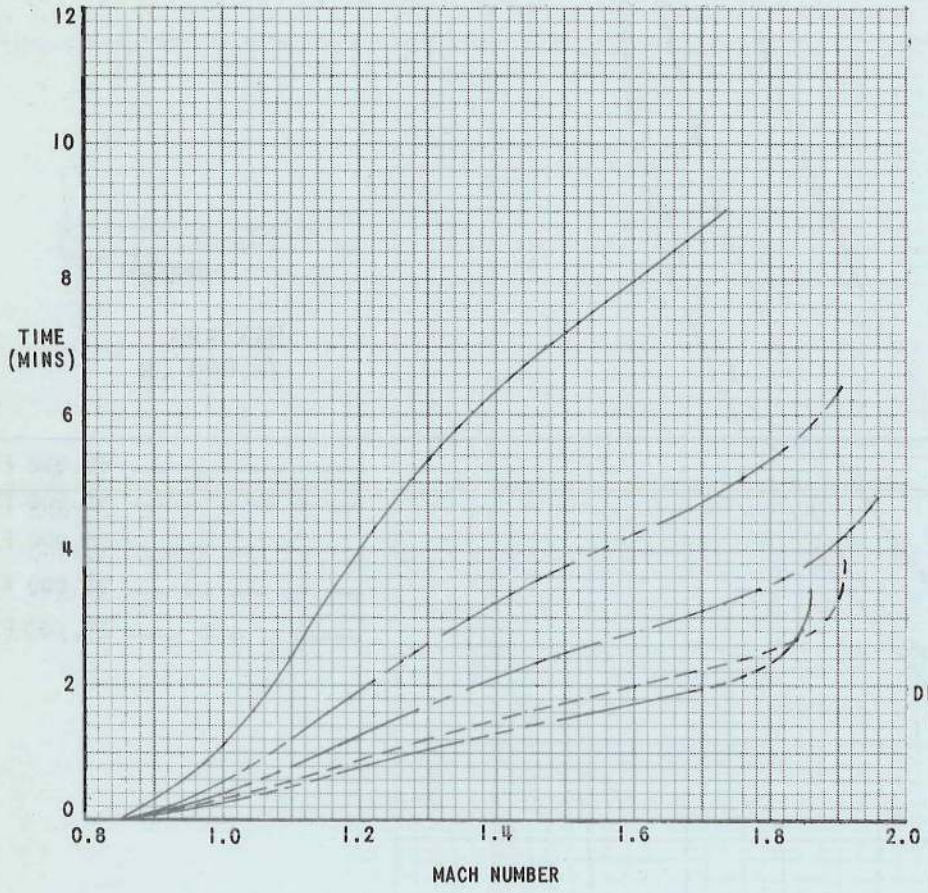
MAX RPM
32,000 LB

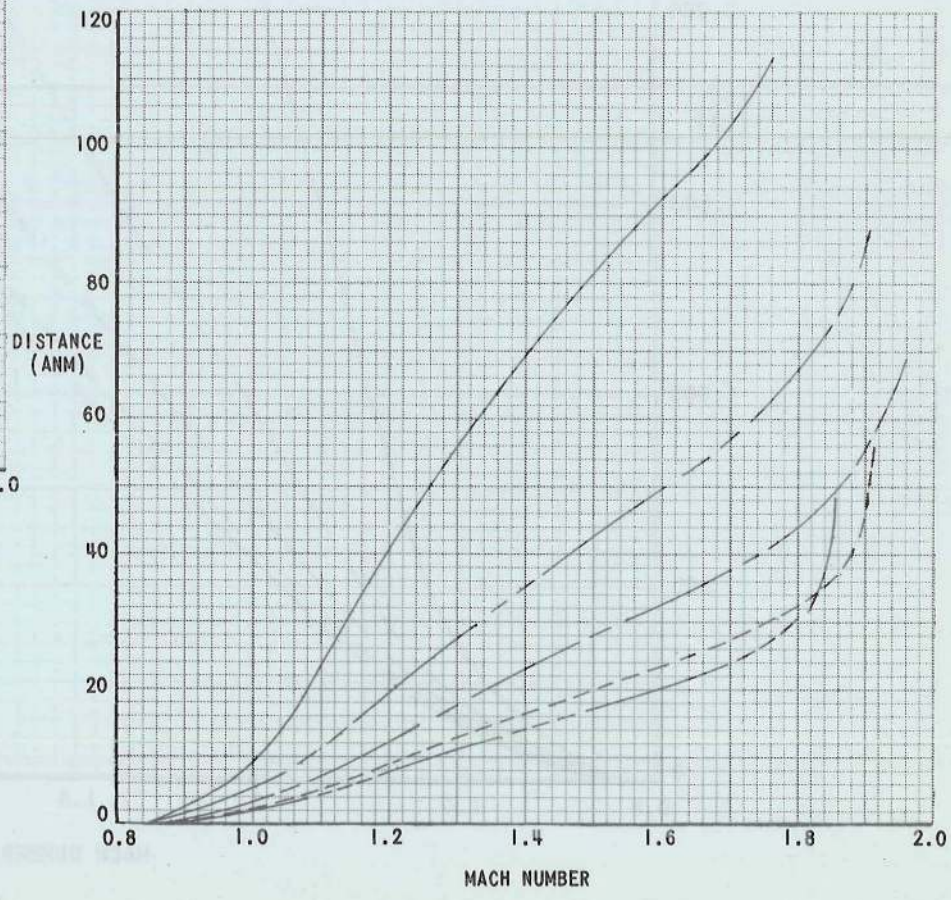
45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·18B FULL REHEAT ACCELERATION - 36·5°C



MAX RPM
32,000LB





45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·19A FULL REHEAT ACCELERATION - 56·5°C

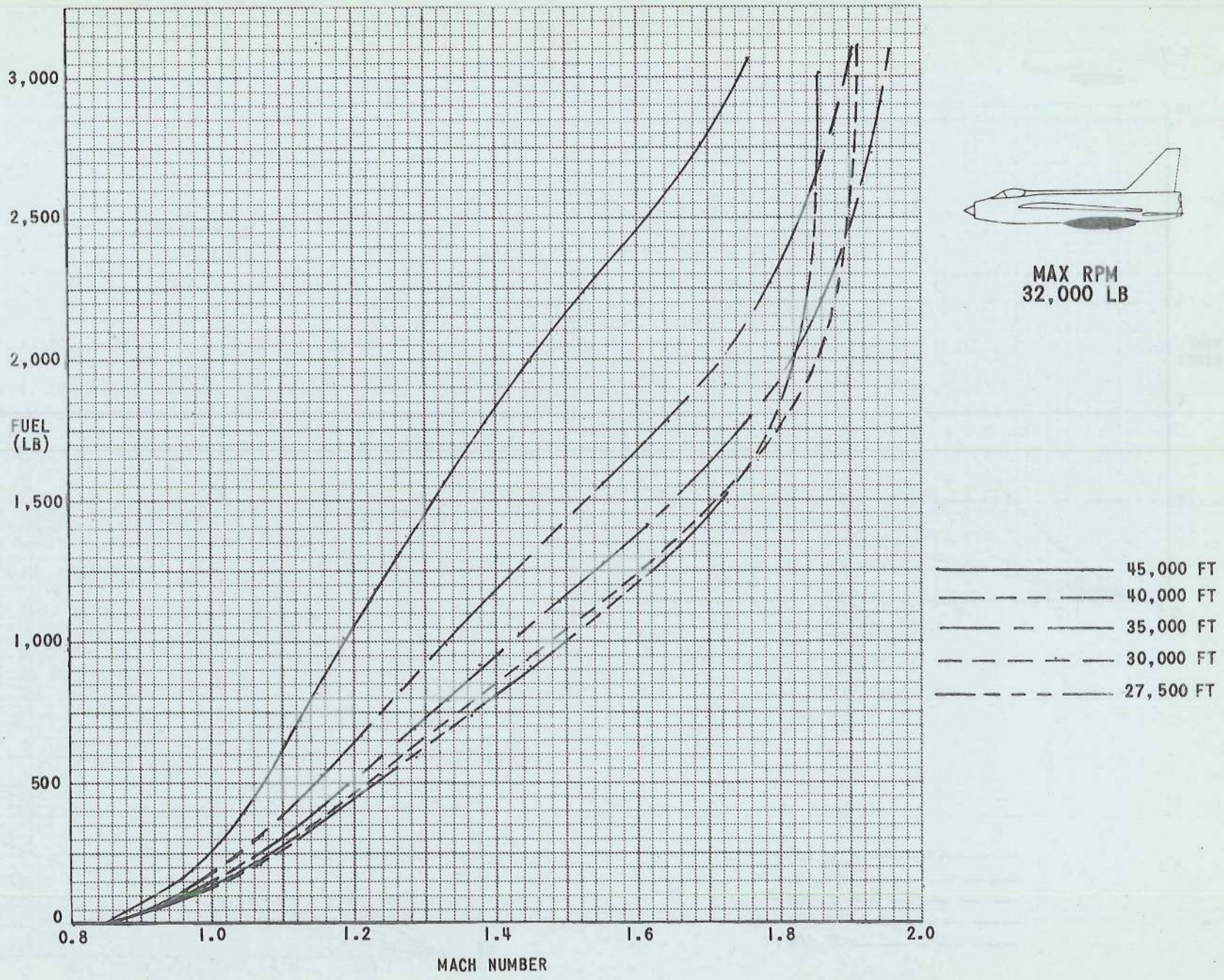
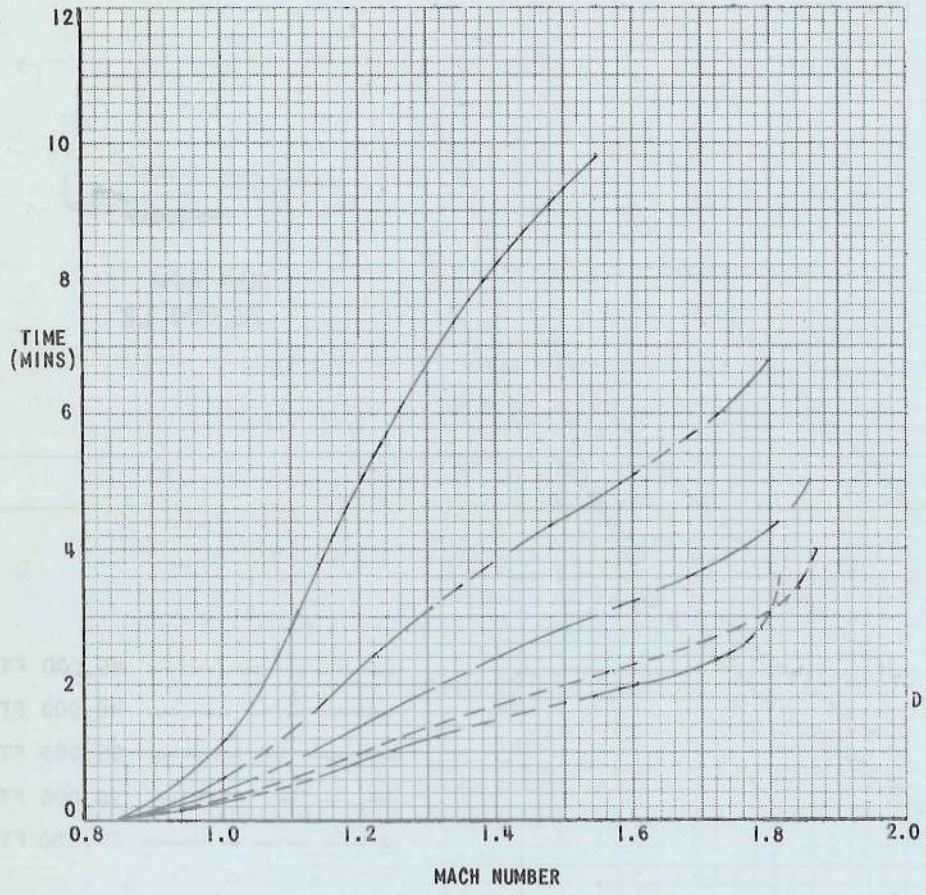
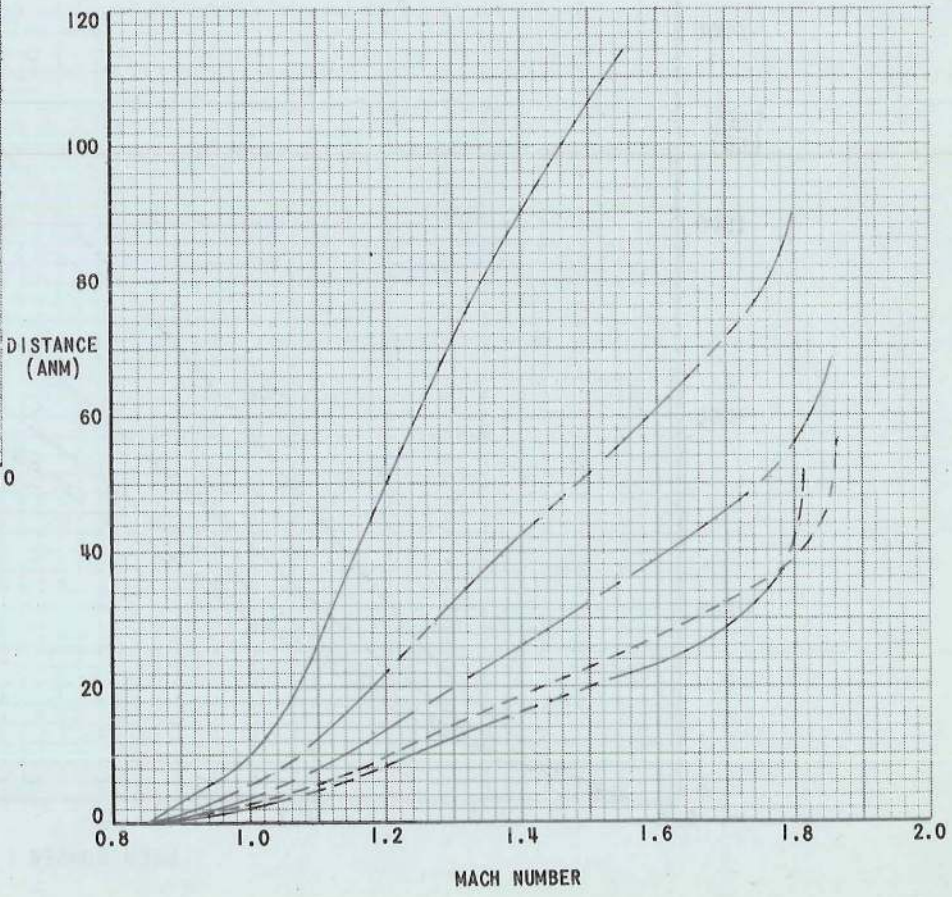


FIG. 5·19B FULL REHEAT ACCELERATION - 56·5°C



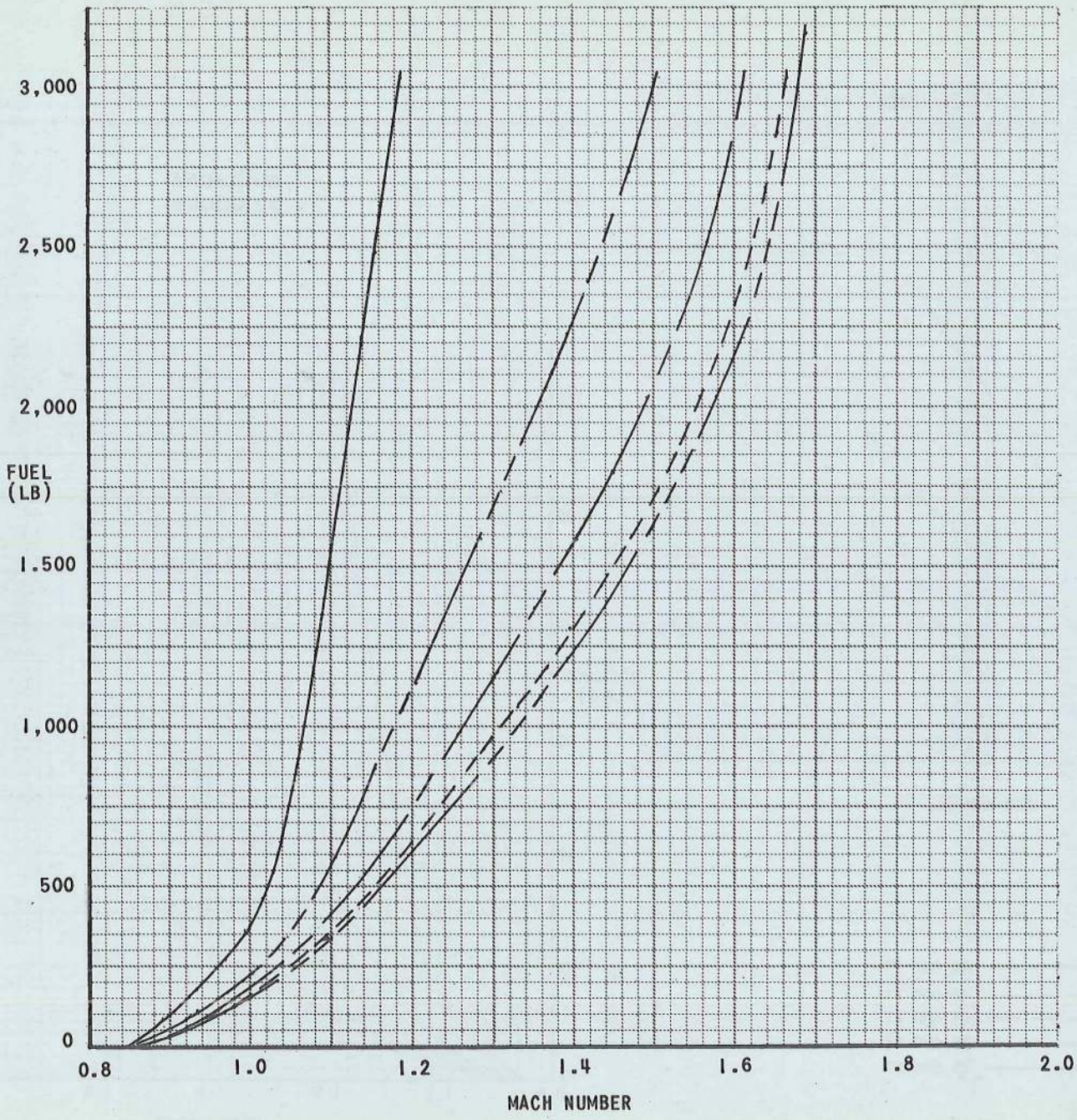
MAX RPM
32,000LB

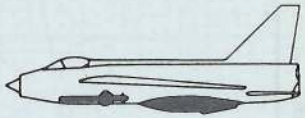


45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·21A FULL REHEAT ACCELERATION - 36·5°C

T Mk.5

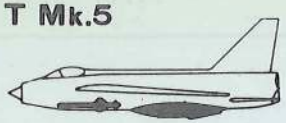




MAX RPM
32,000 LB

45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·21B FULL REHEAT ACCELERATION - 36·5°C



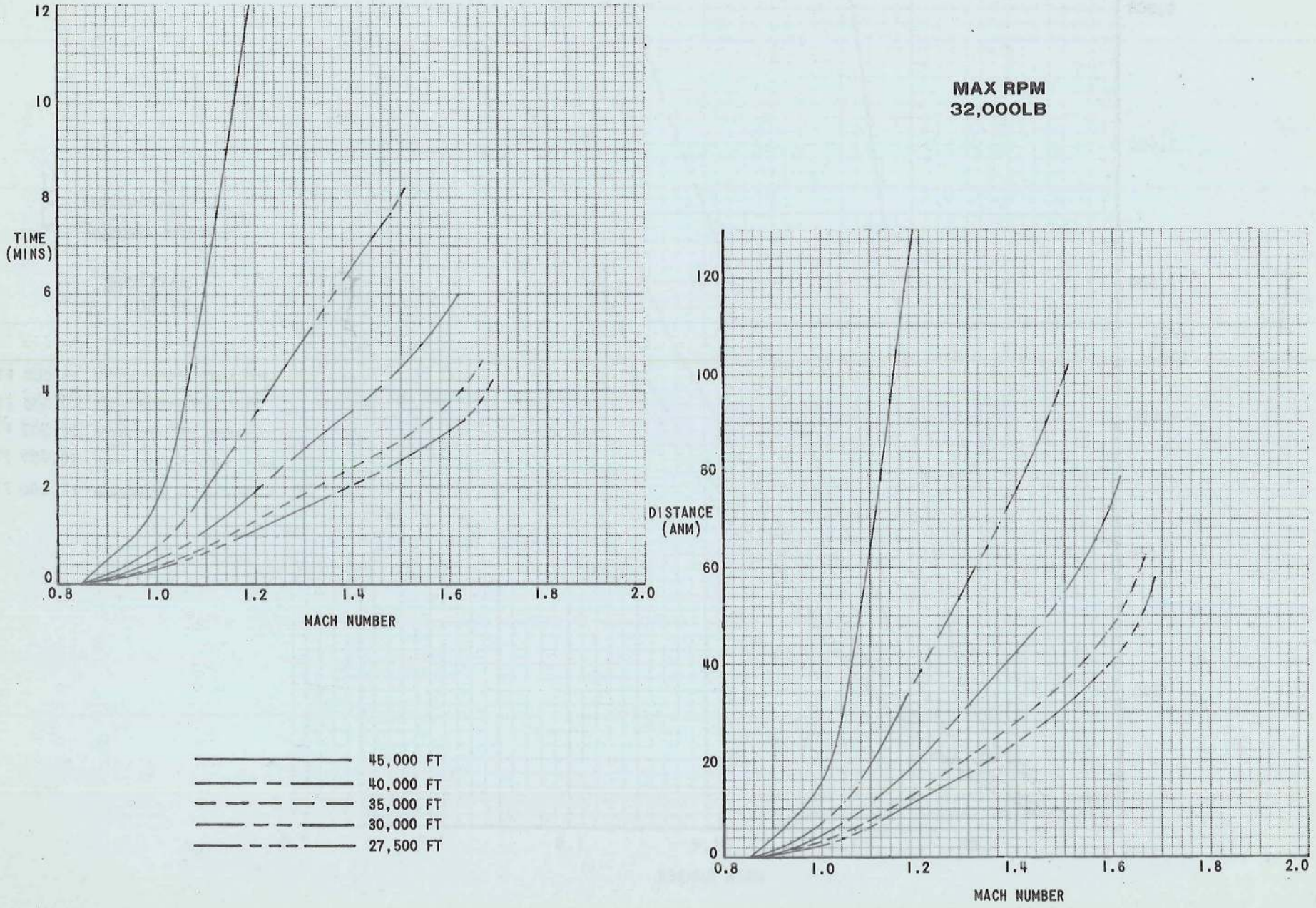


FIG. 5·22A FULL REHEAT ACCELERATION - 56·5°C

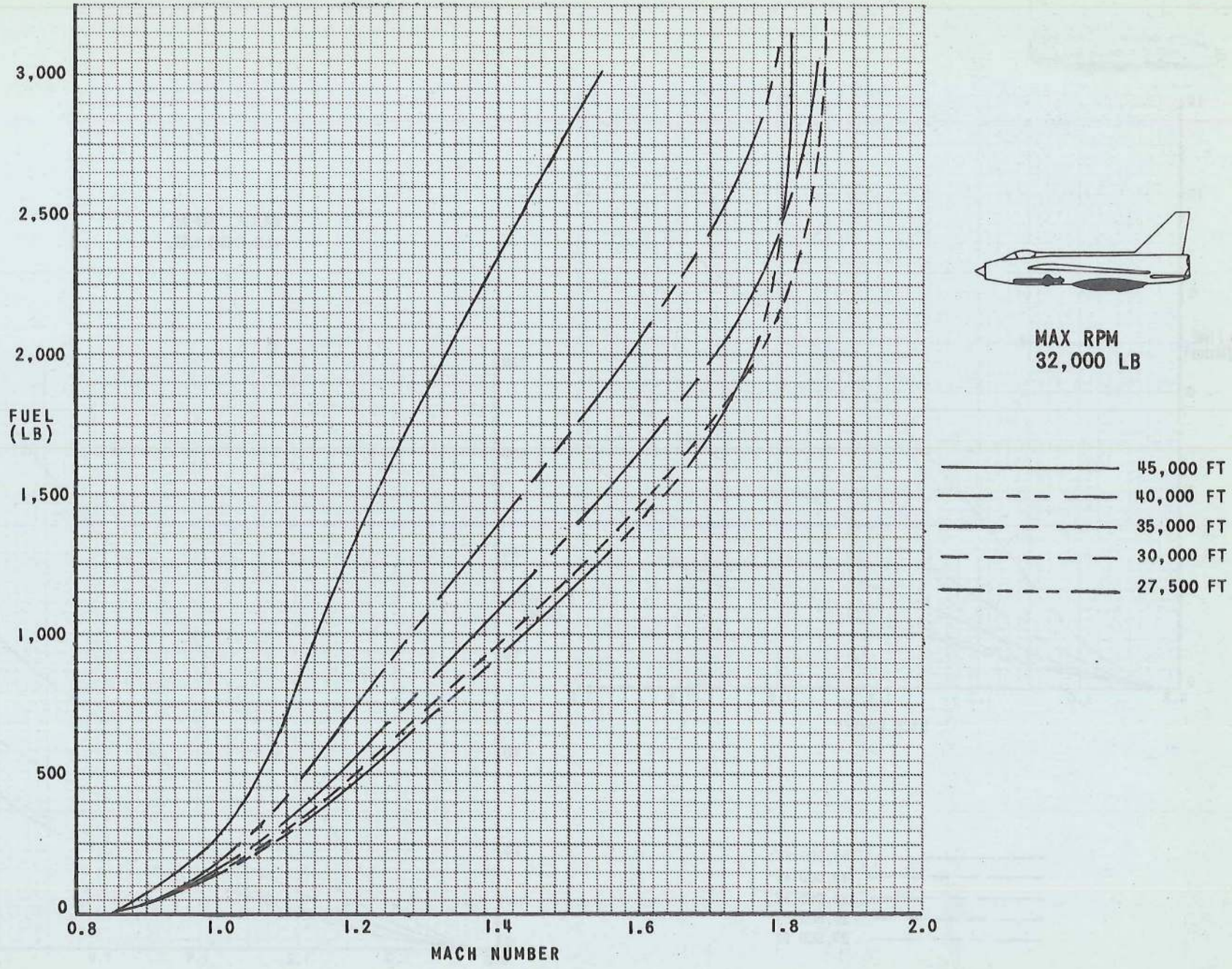
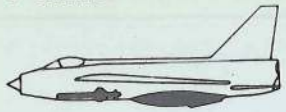
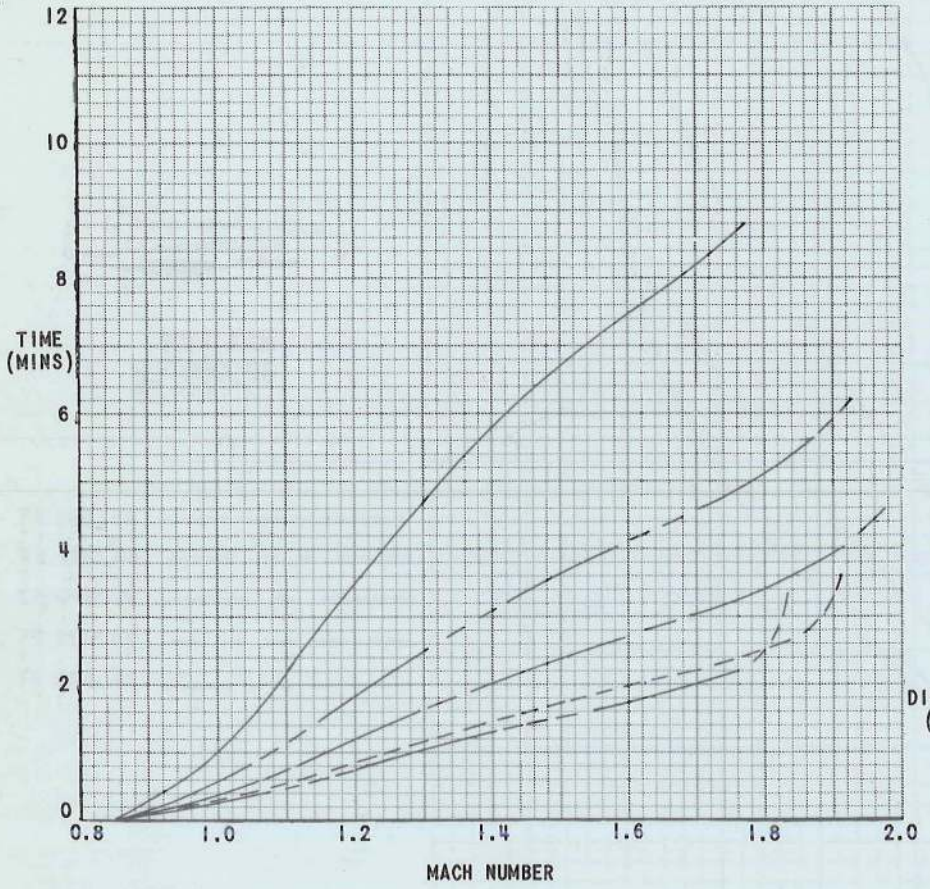
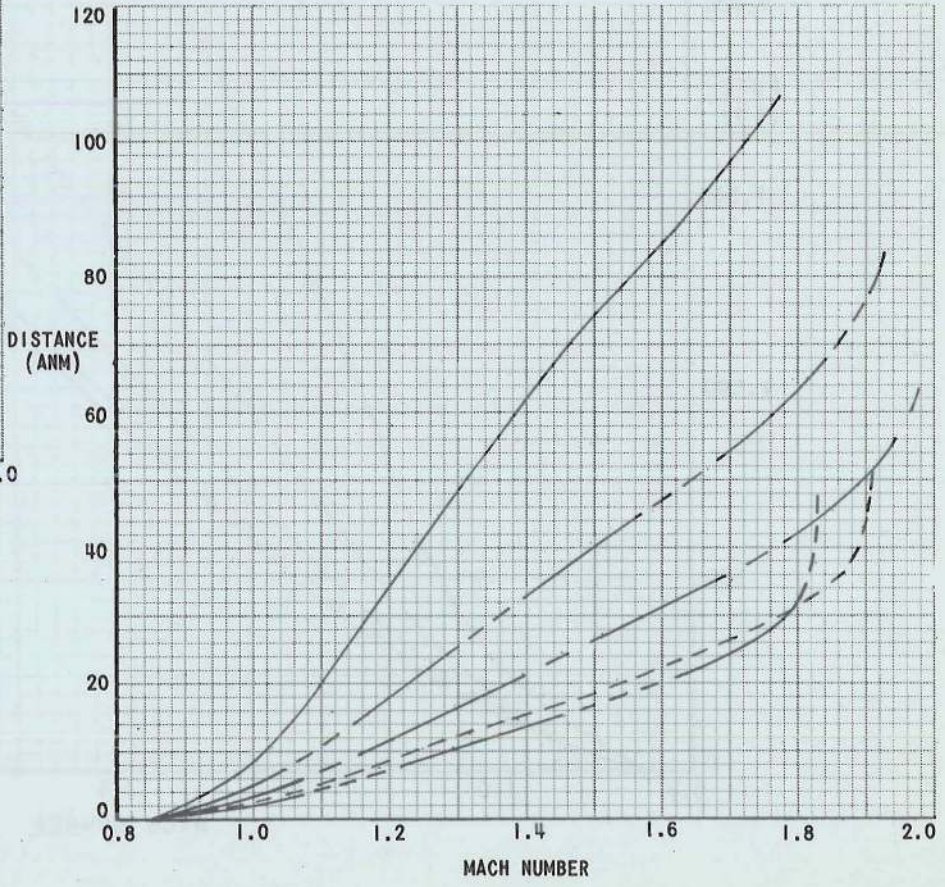


FIG. 5·22B FULL REHEAT ACCELERATION —56·5°C





MAX. RPM
32,000 LB.



45,000 FT
40,000 FT
35,000 FT
30,000 FT
27,500 FT

FIG. 5·23A FULL REHEAT ACCELERATION - 66·5°C

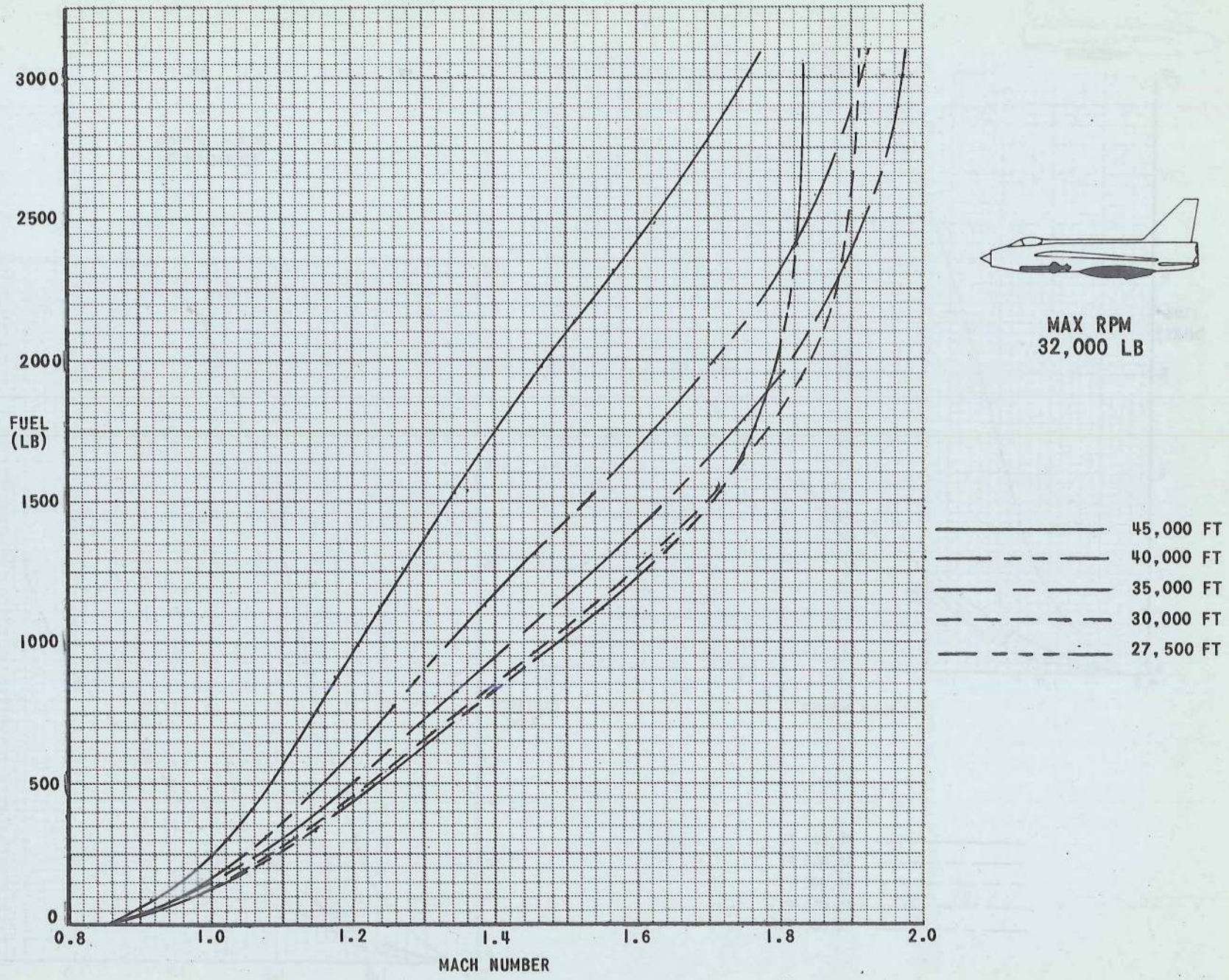
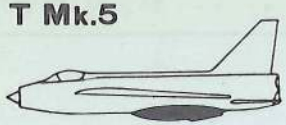


FIG. 5·23B FULL REHEAT ACCELERATION - 66·5°C



MAX RPM
32,000LB

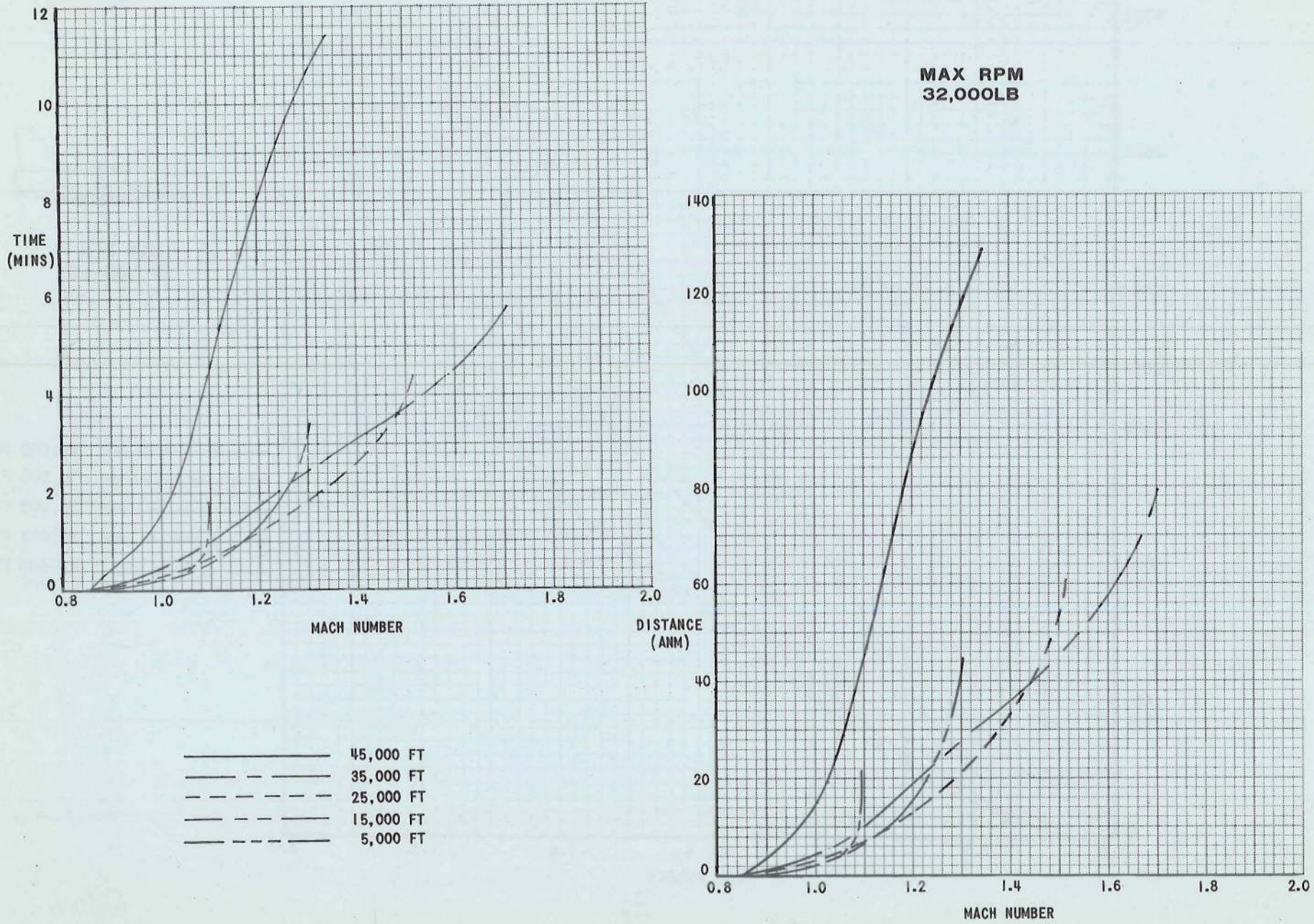


FIG. 5·24A FULL REHEAT ACCELERATION ICAO + 20°C

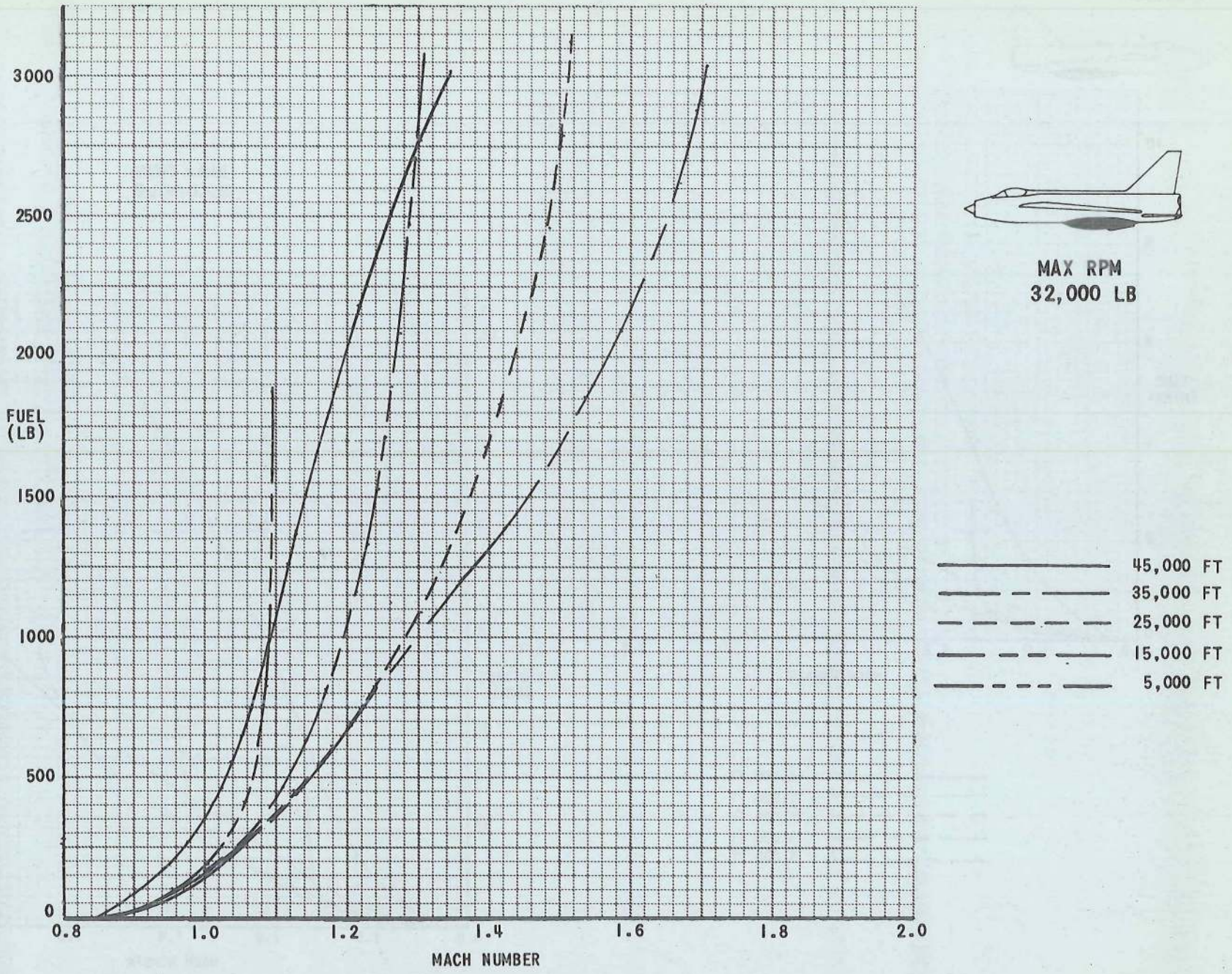
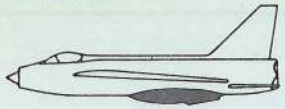


FIG. 5·24B FULL REHEAT ACCELERATION ICAO + 20°C



MAX RPM
32,000LB

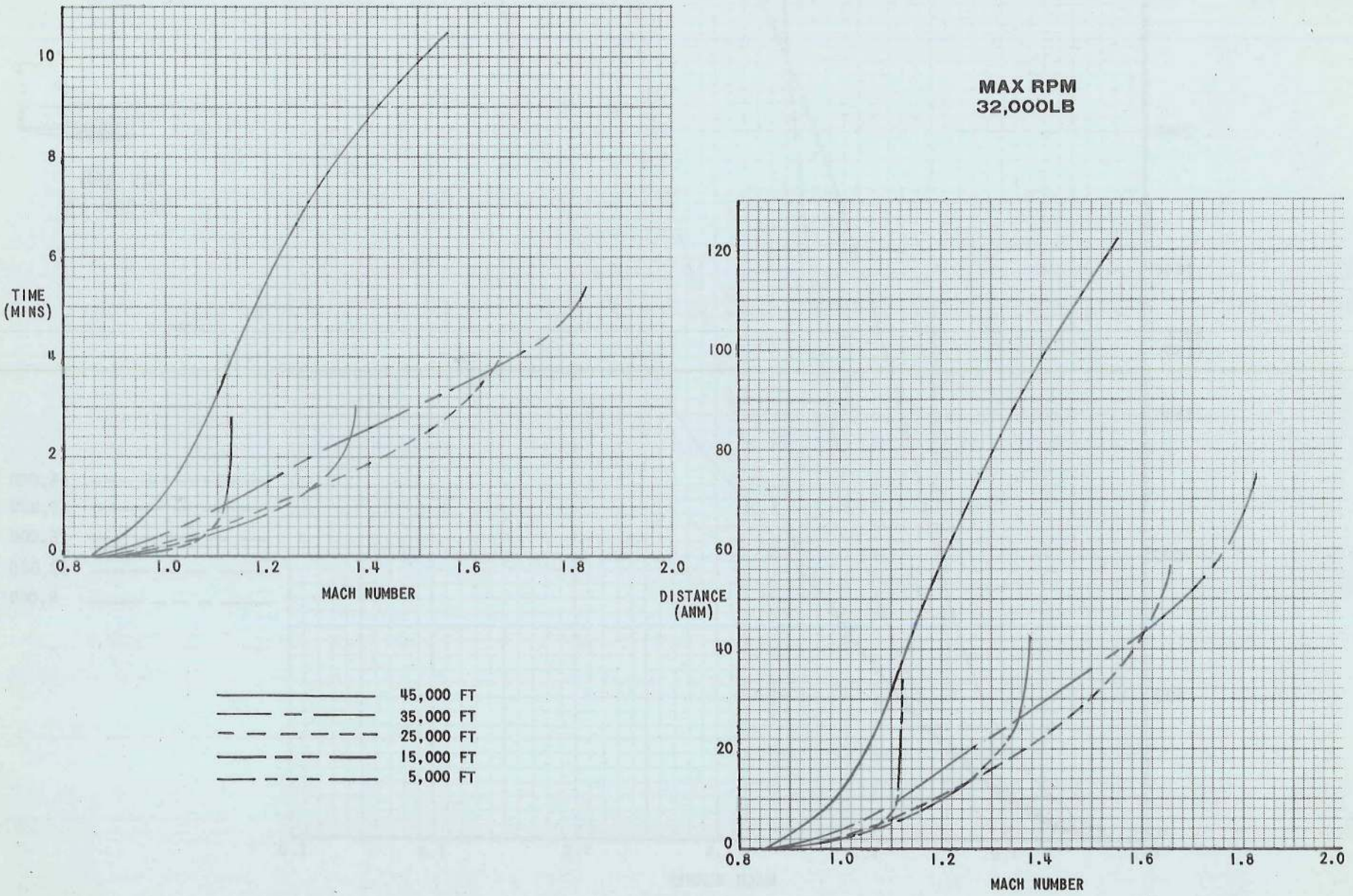


FIG. 5·25A FULL REHEAT ACCELERATION ICAO + 10°C

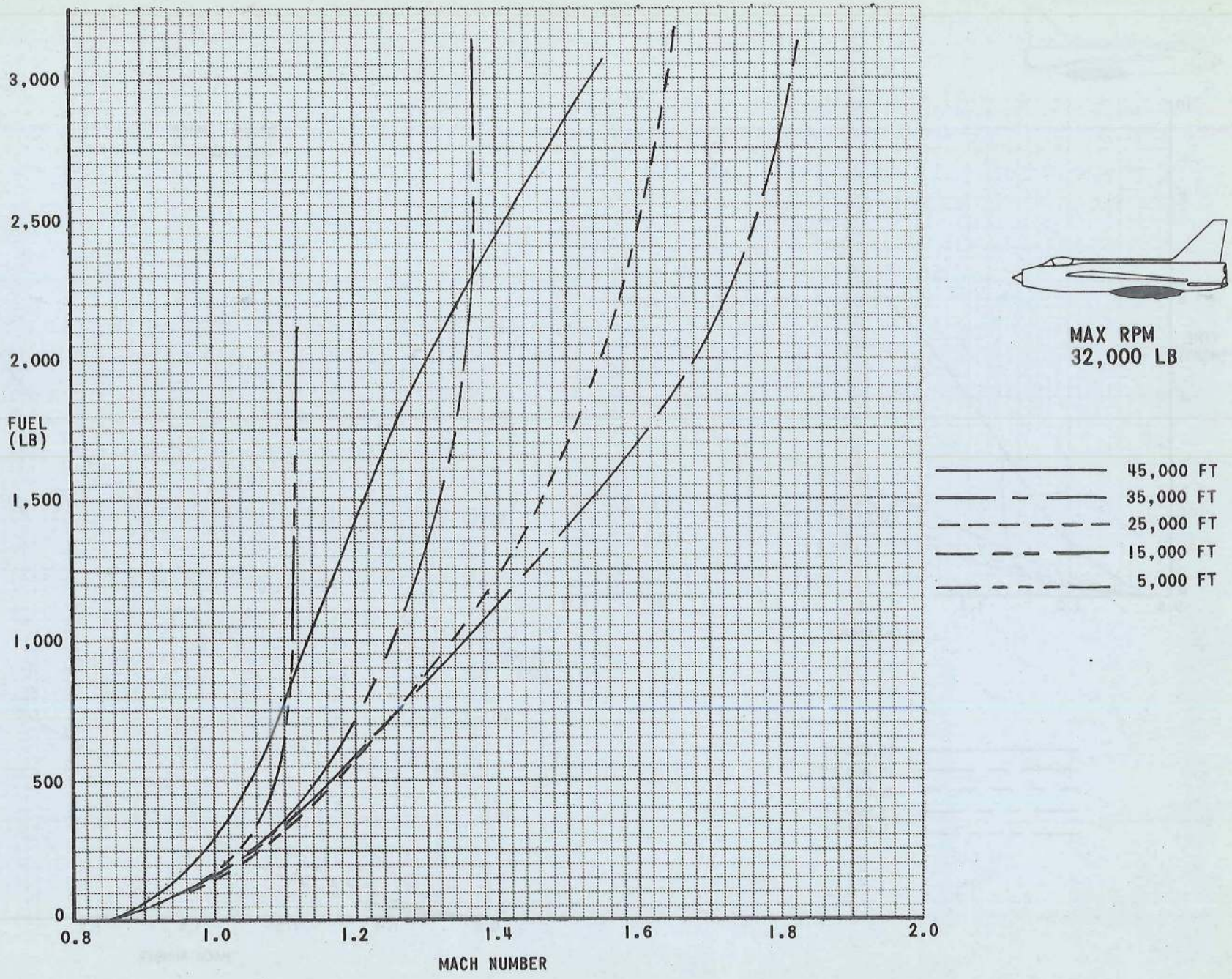
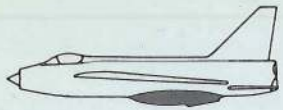
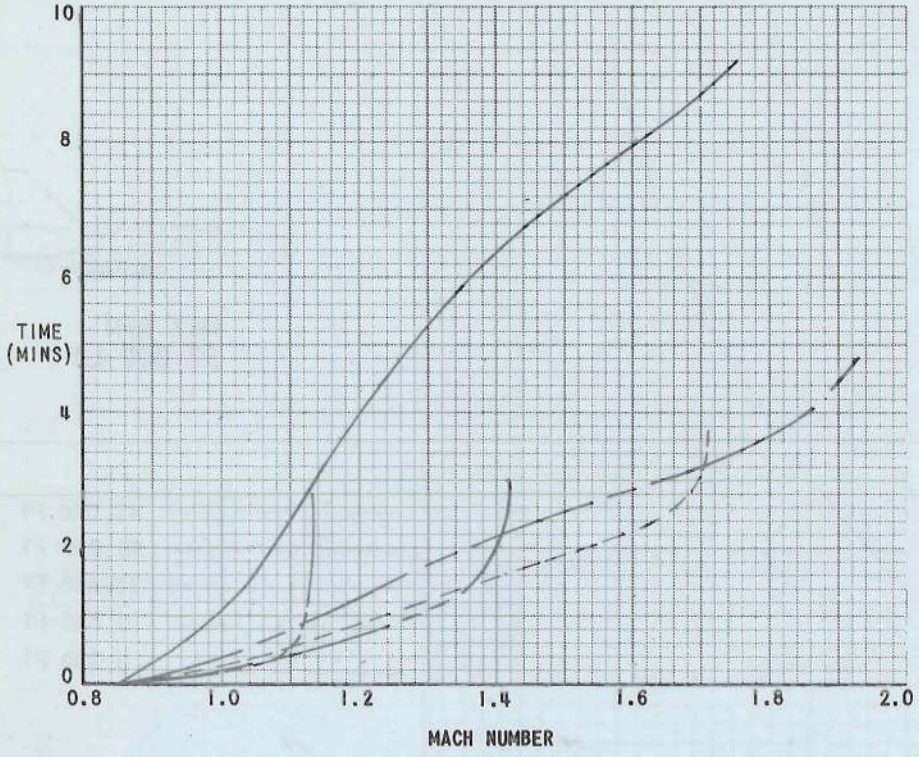


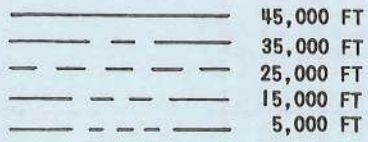
FIG. 5.25B FULL REHEAT ACCELERATION ICAO+10C

T Mk.5



MAX RPM
32,000LB





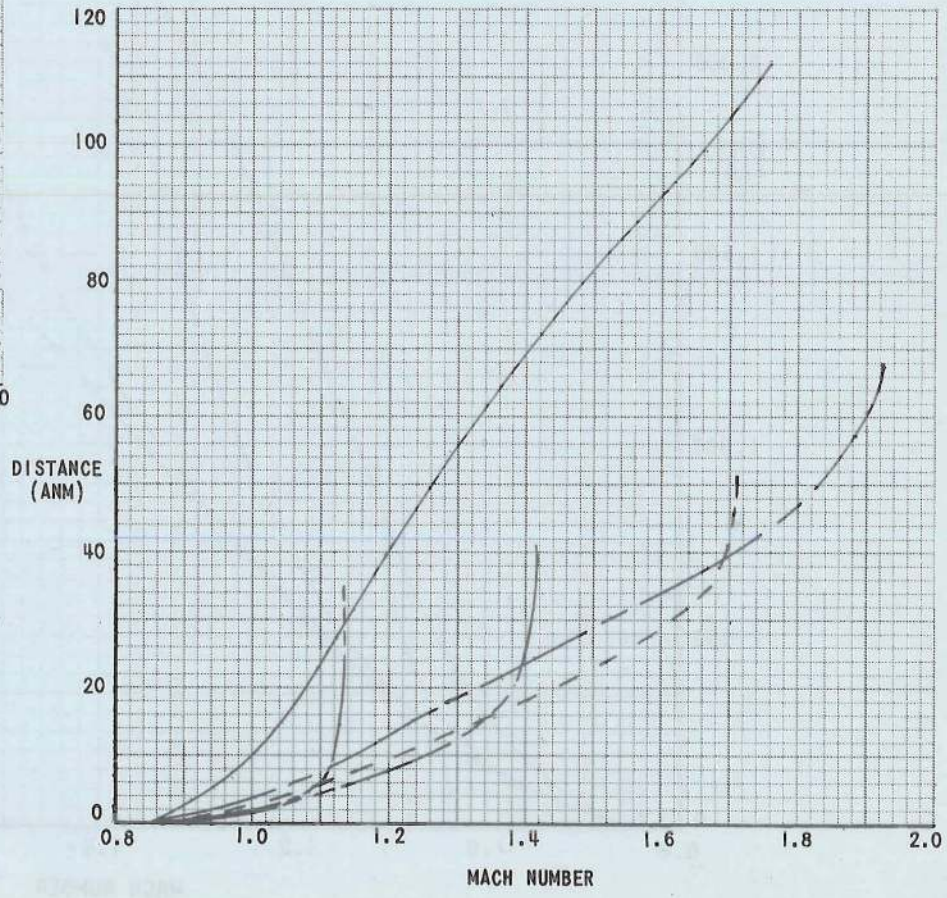


FIG. 5·26A FULL REHEAT ACCELERATION ICAO

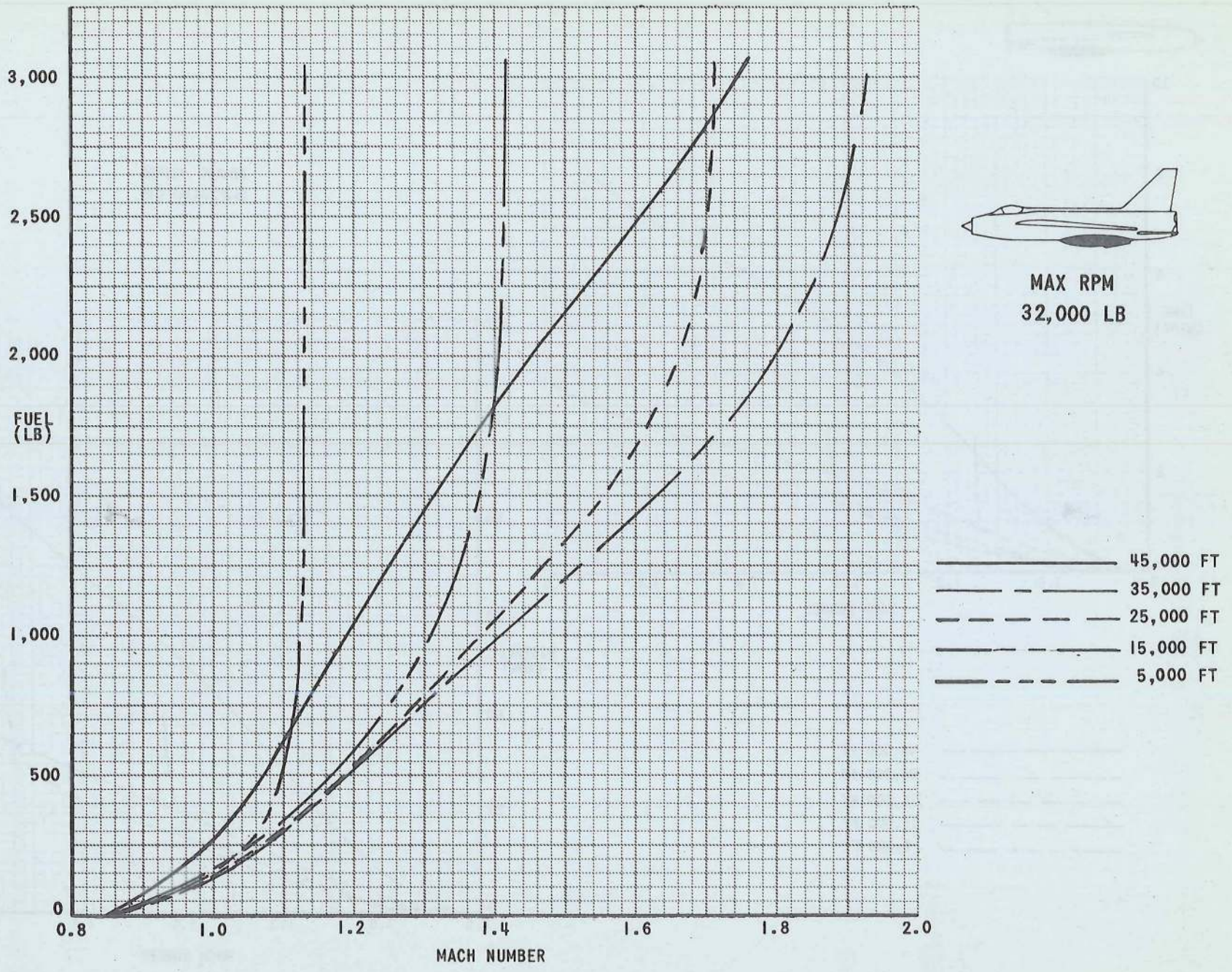
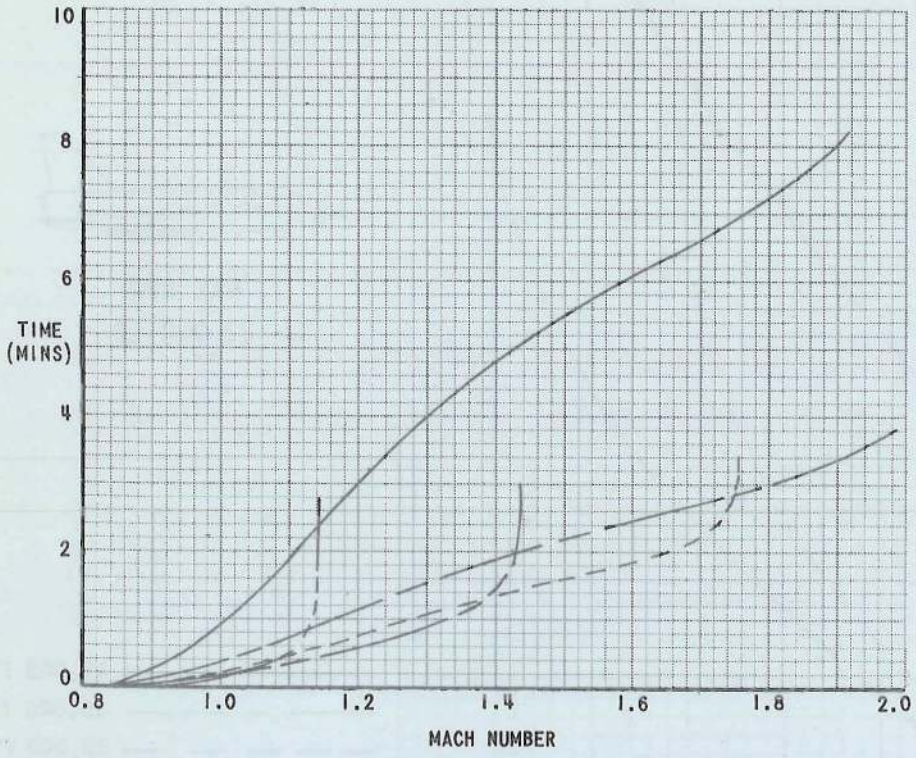
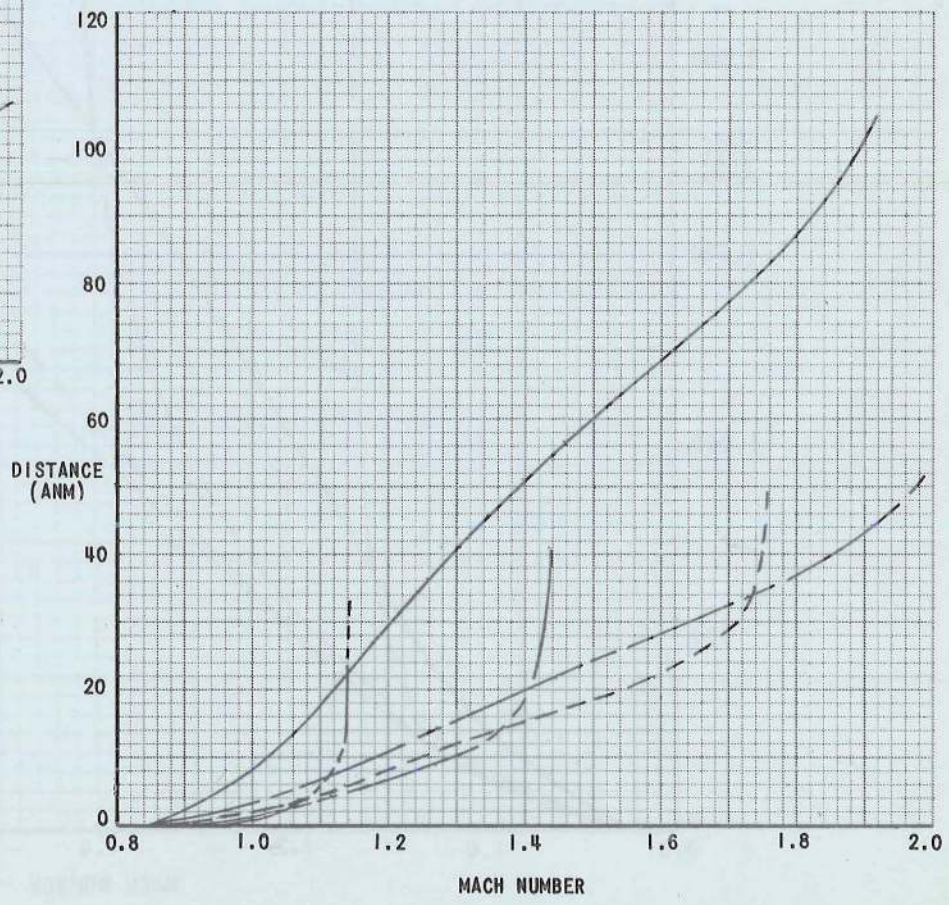


FIG. 5.26B FULL REHEAT ACCELERATION ICAO



MAX RPM
32,000 LB.



45,000 FT
35,000 FT
25,000 FT
15,000 FT
5,000 FT

FIG. 5.27A FULL REHEAT ACCELERATION ICAO-10°C

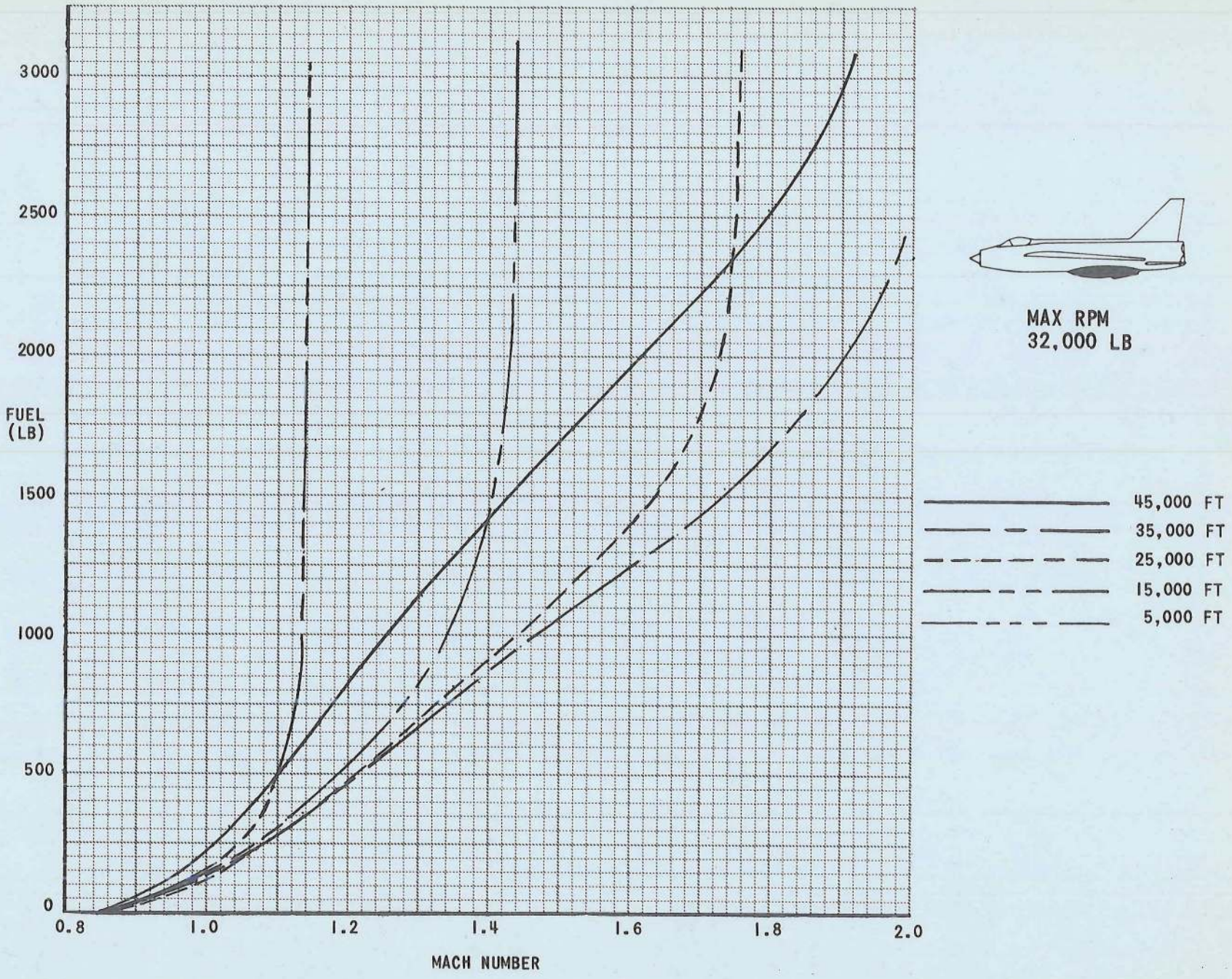
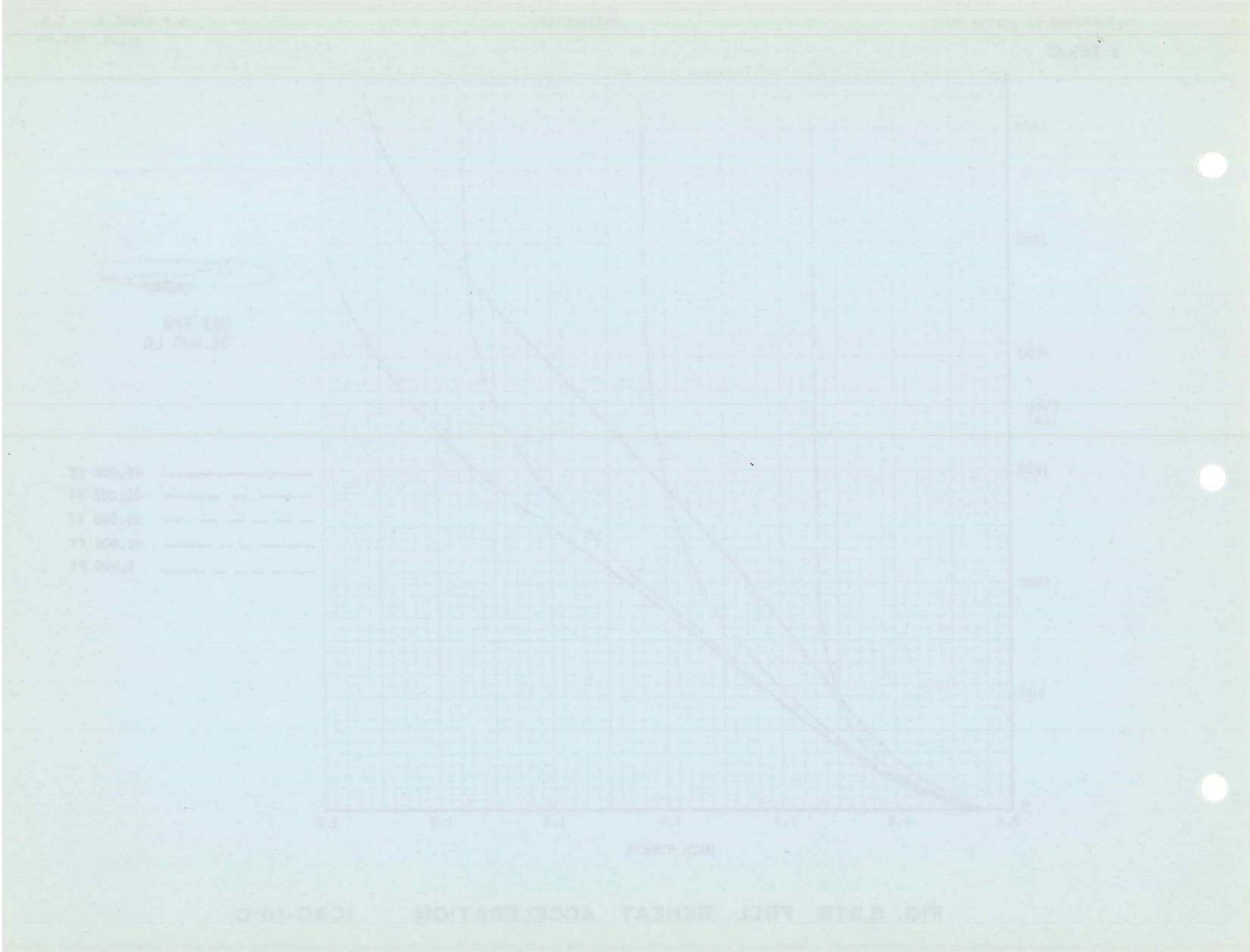
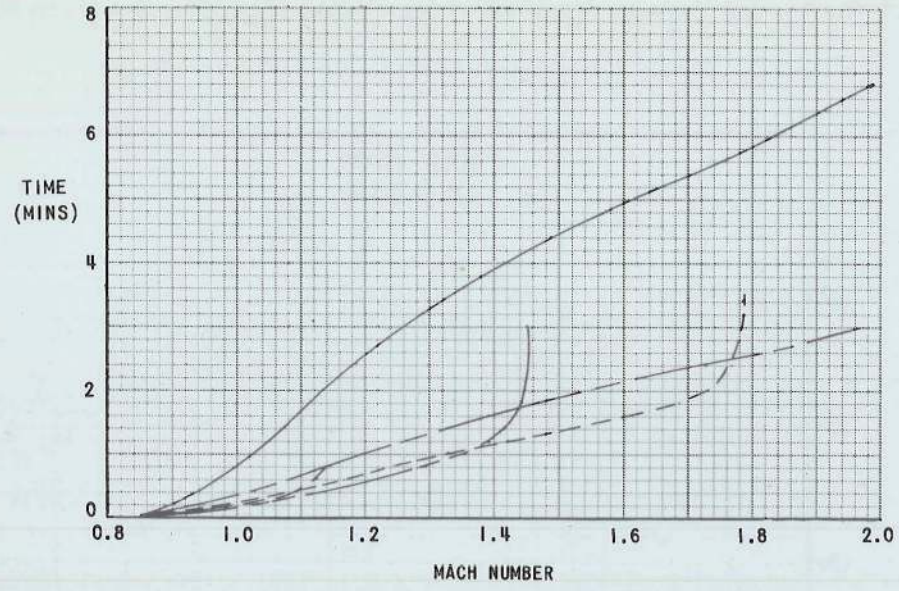
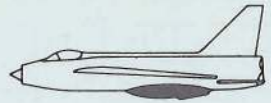


FIG. 5.27B FULL REHEAT ACCELERATION ICAO-10°C

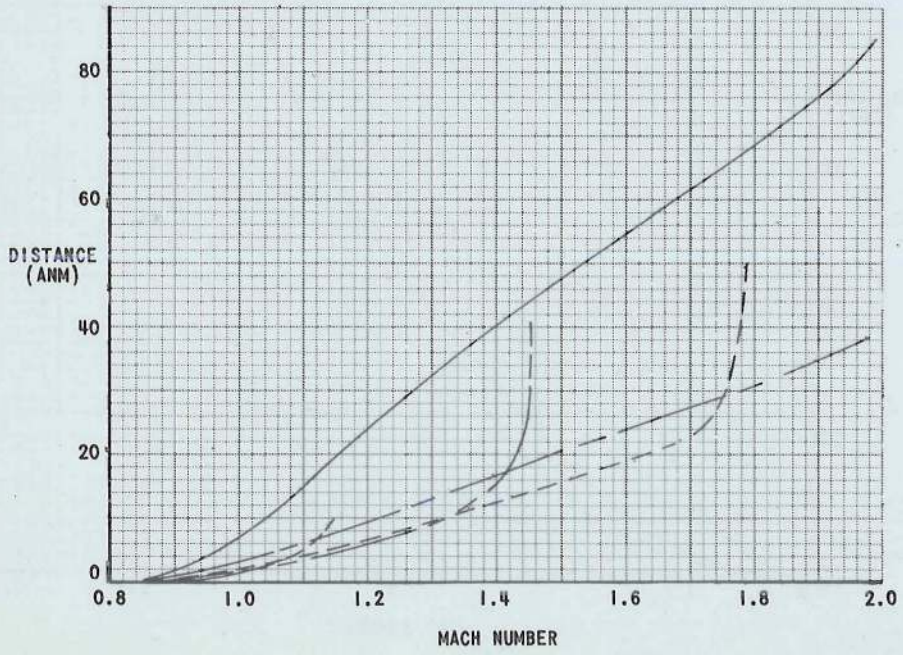






MAX RPM
32,000LB

45,000 FT
35,000 FT
25,000 FT
15,000 FT
5,000 FT



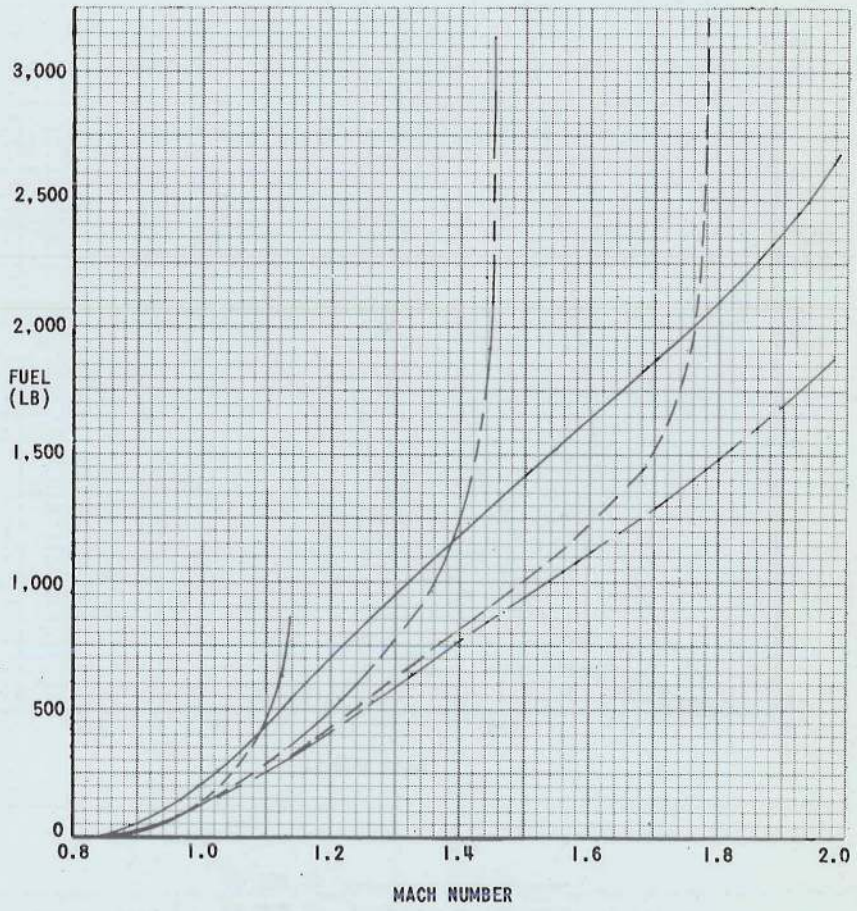
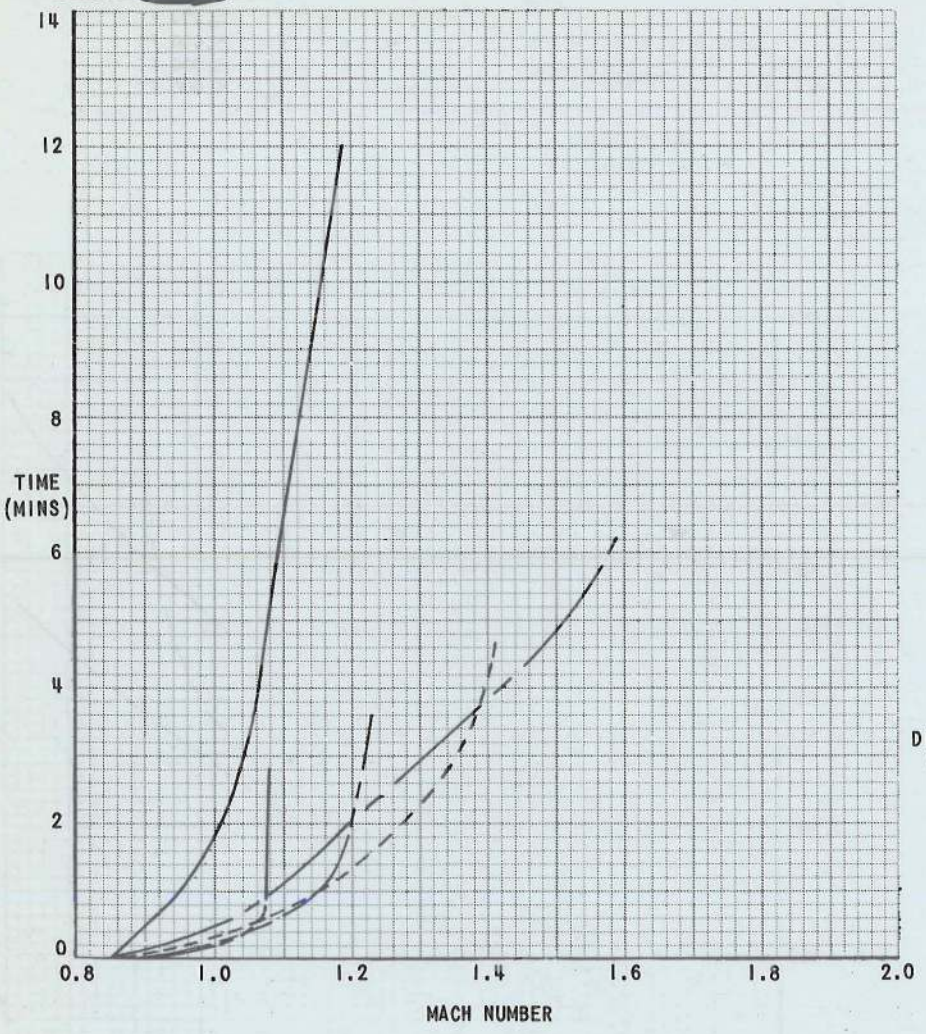


FIG. 5·28 FULL REHEAT ACCELERATION ICAO - 20°C



MAX RPM
32,000LB

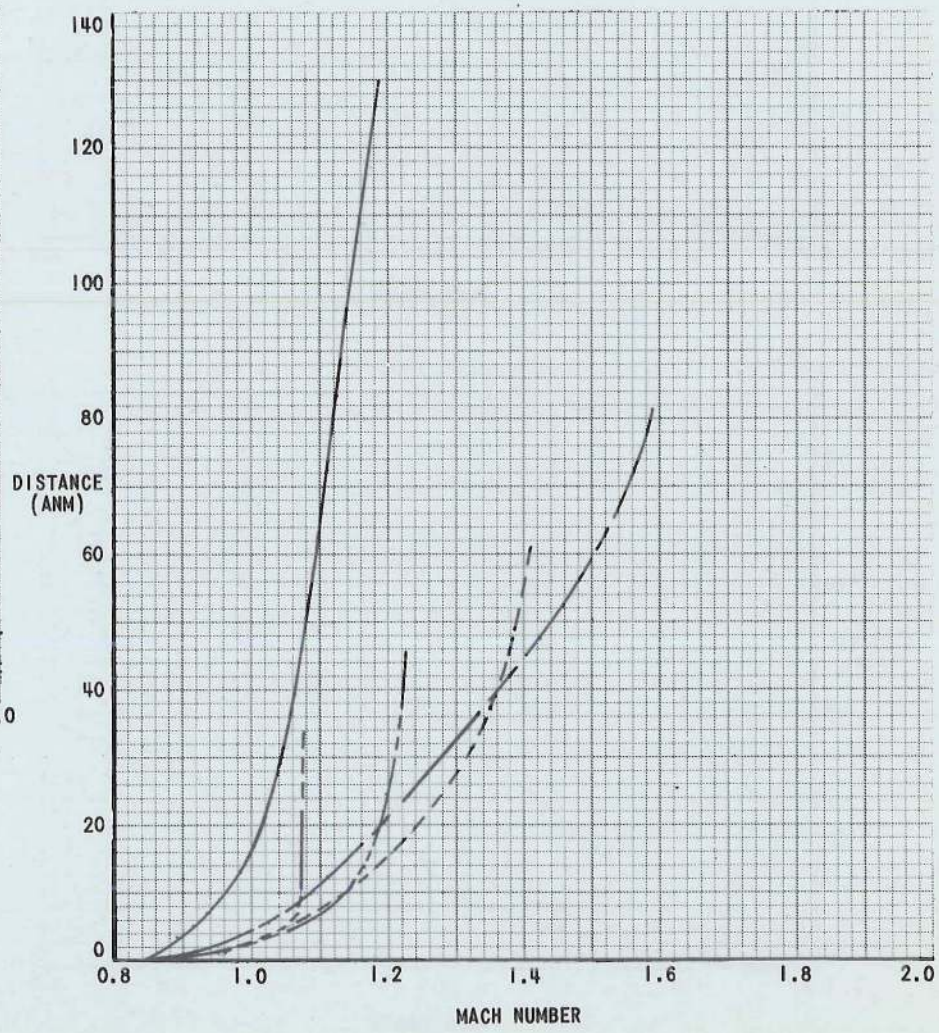


FIG.5.29A FULL REHEAT ACCELERATION ICAO+10°C

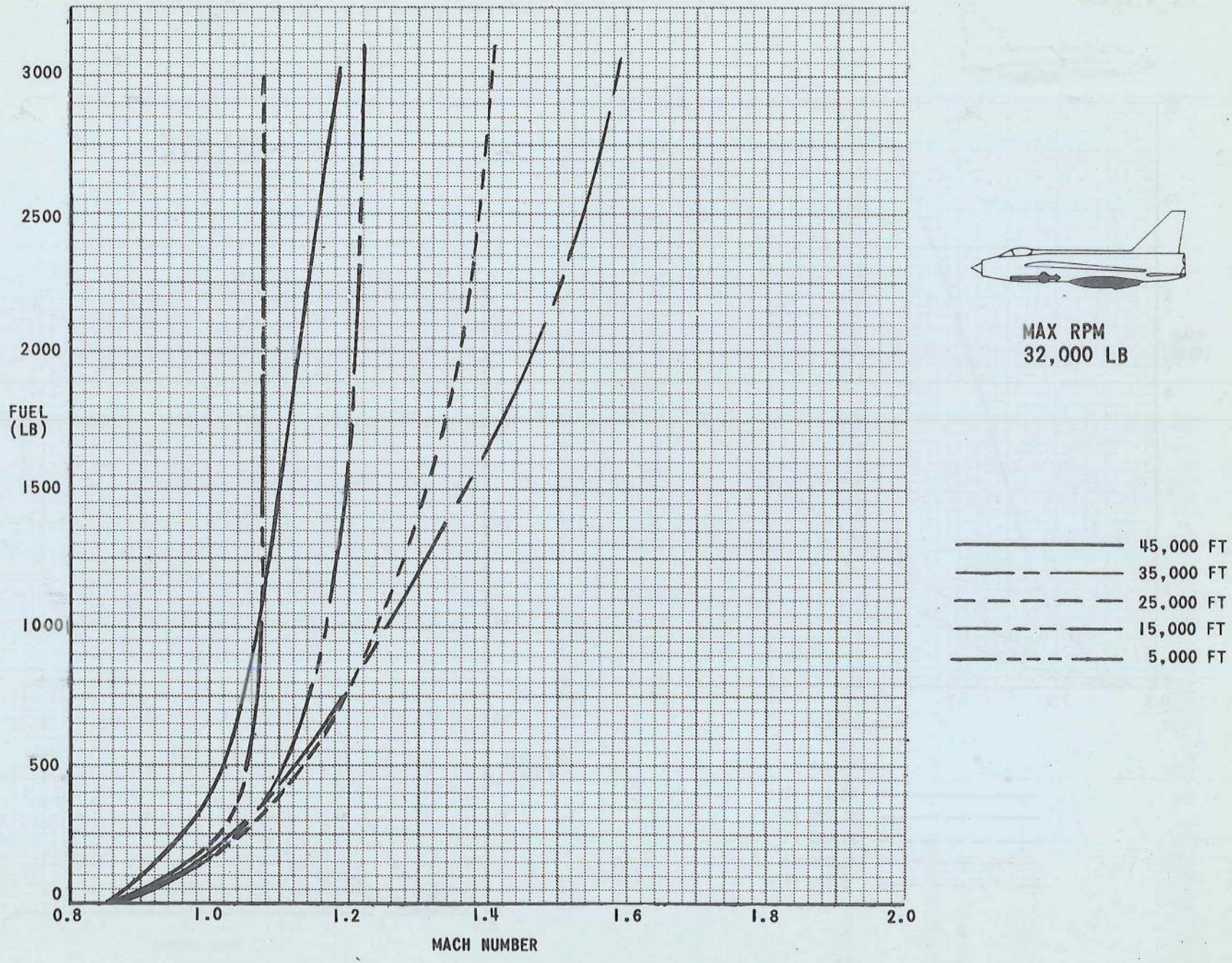
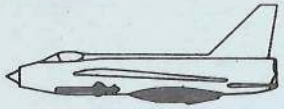
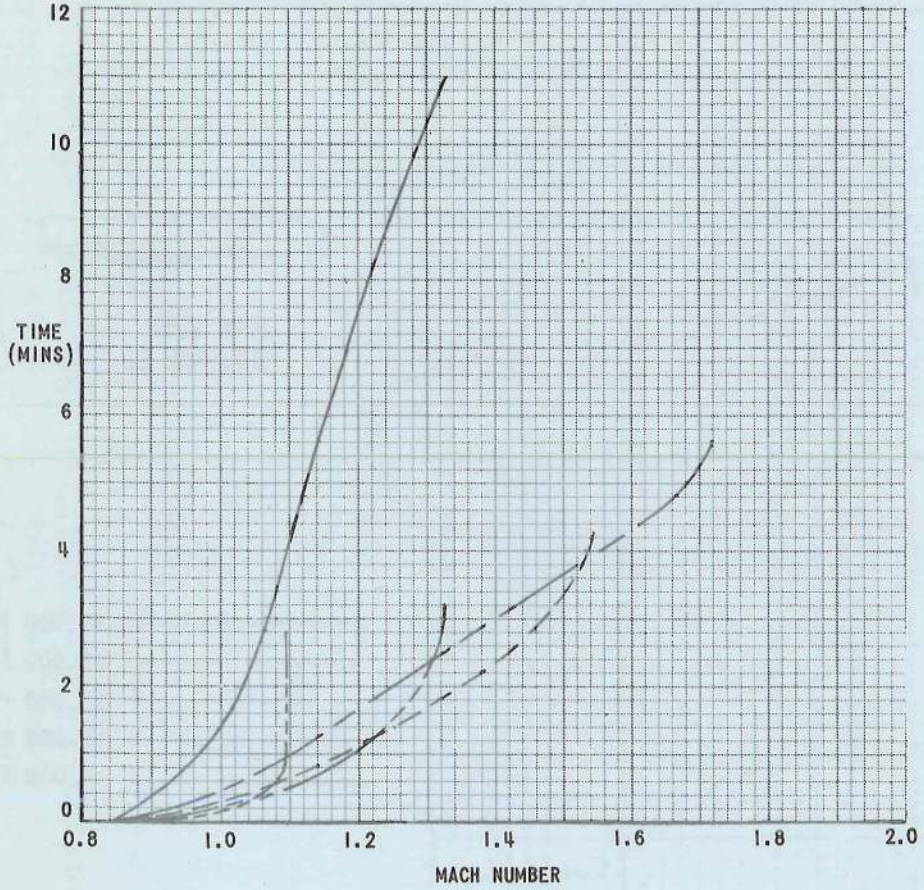


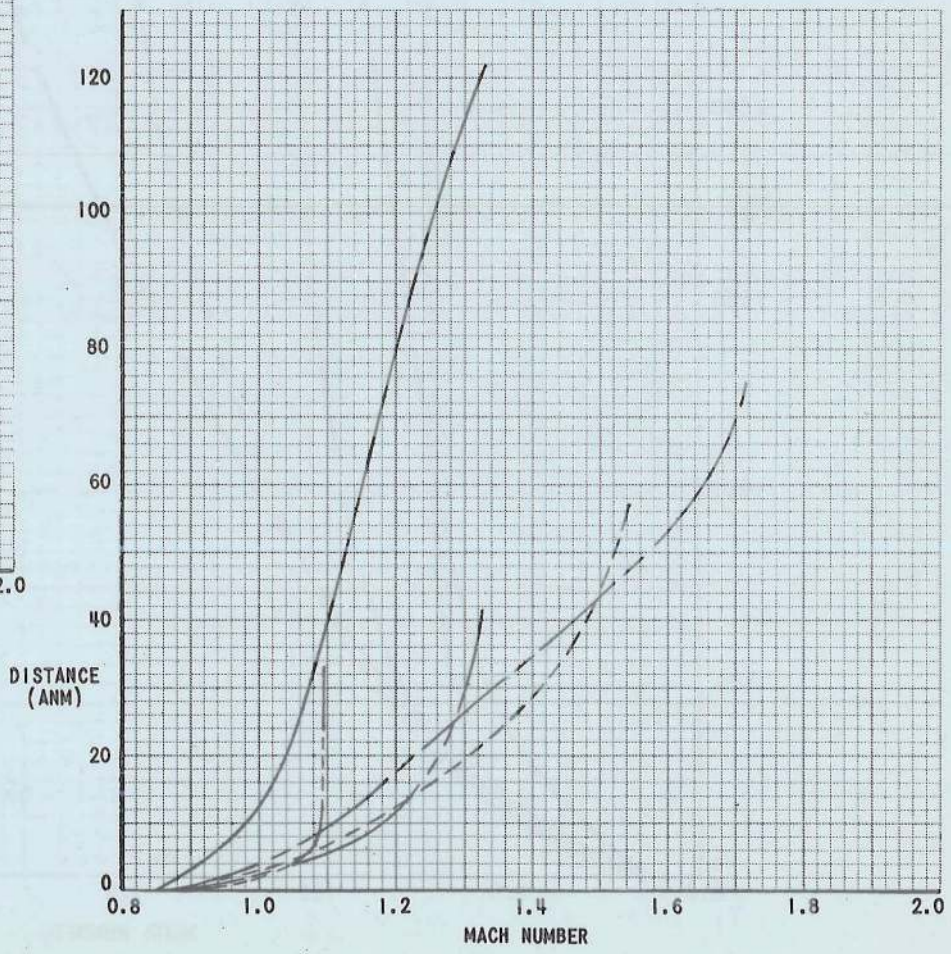
FIG. 5.29B FULL REHEAT ACCELERATION ICAO+20°C

T Mk.5



MAX. RPM
32,000LB





45,000 FT
35,000 FT
25,000 FT
15,000 FT
5,000 FT

FIG. 5.30A FULL REHEAT ACCELERATION ICAO+10°C

T Mk.5

MAX RPM
32,000 LB

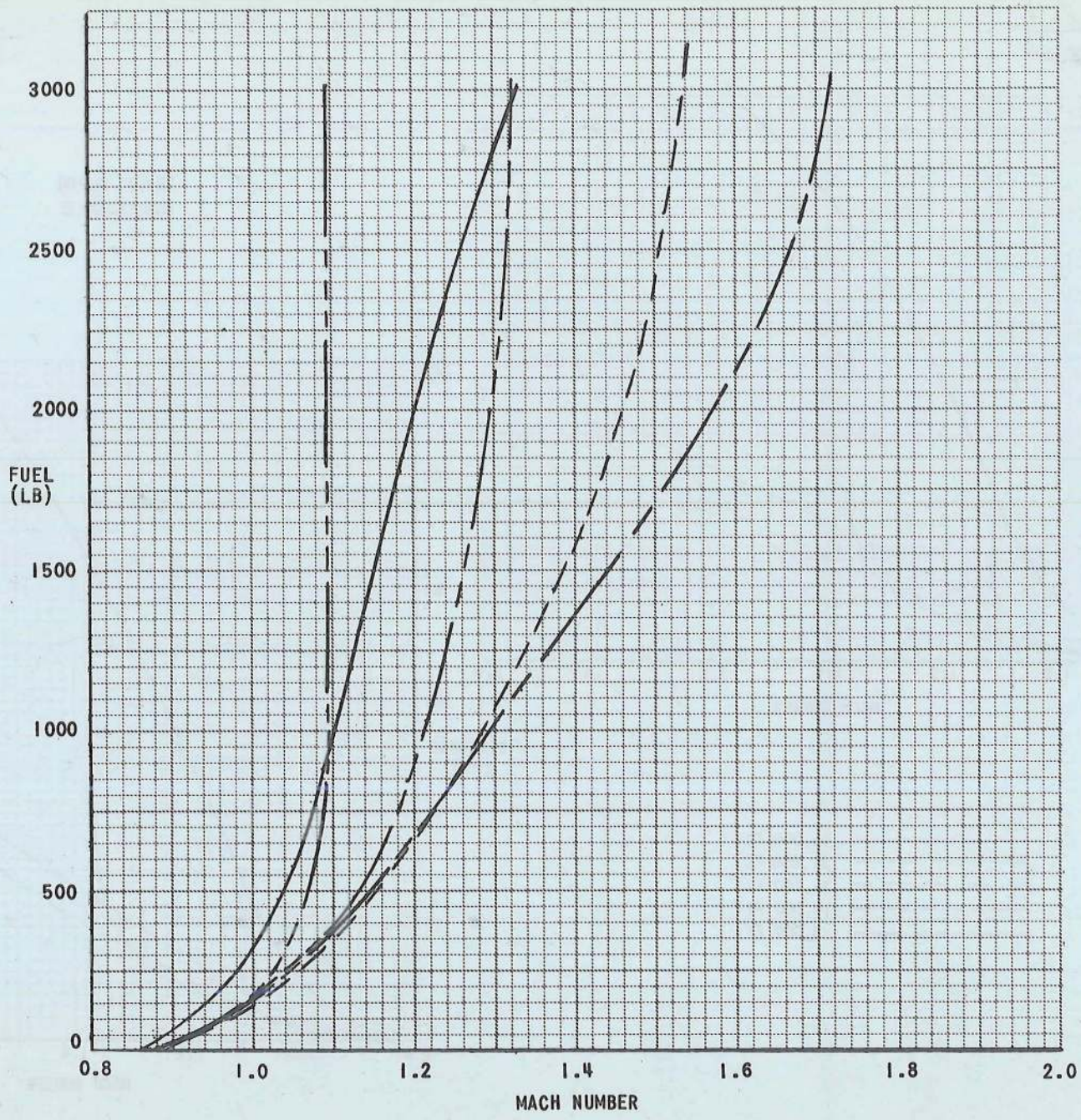
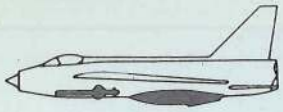


FIG. 5.30B FULL REHEAT ACCELERATION ICAO +10°C



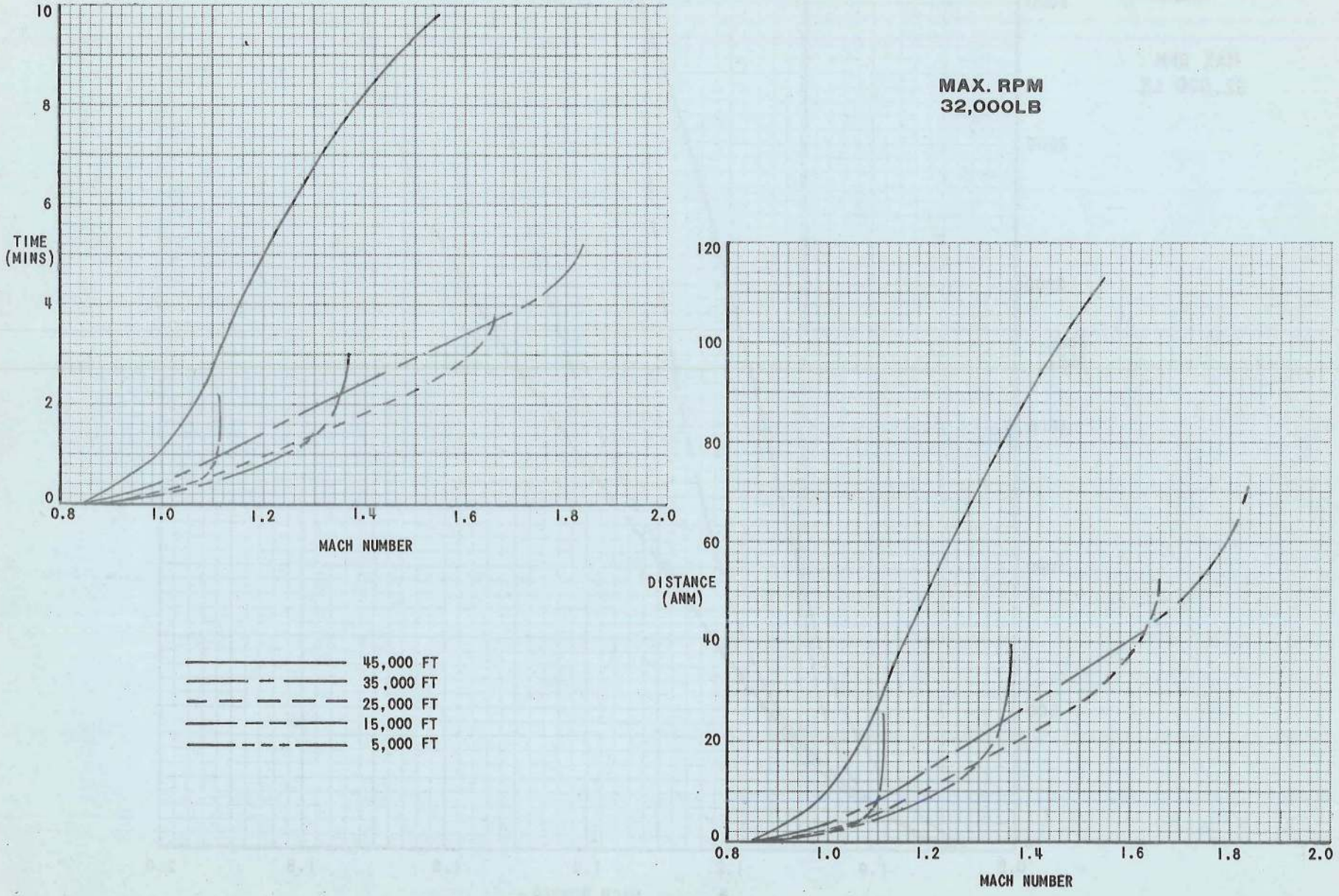


FIG. 5.31A FULL REHEAT ACCELERATION ICAO

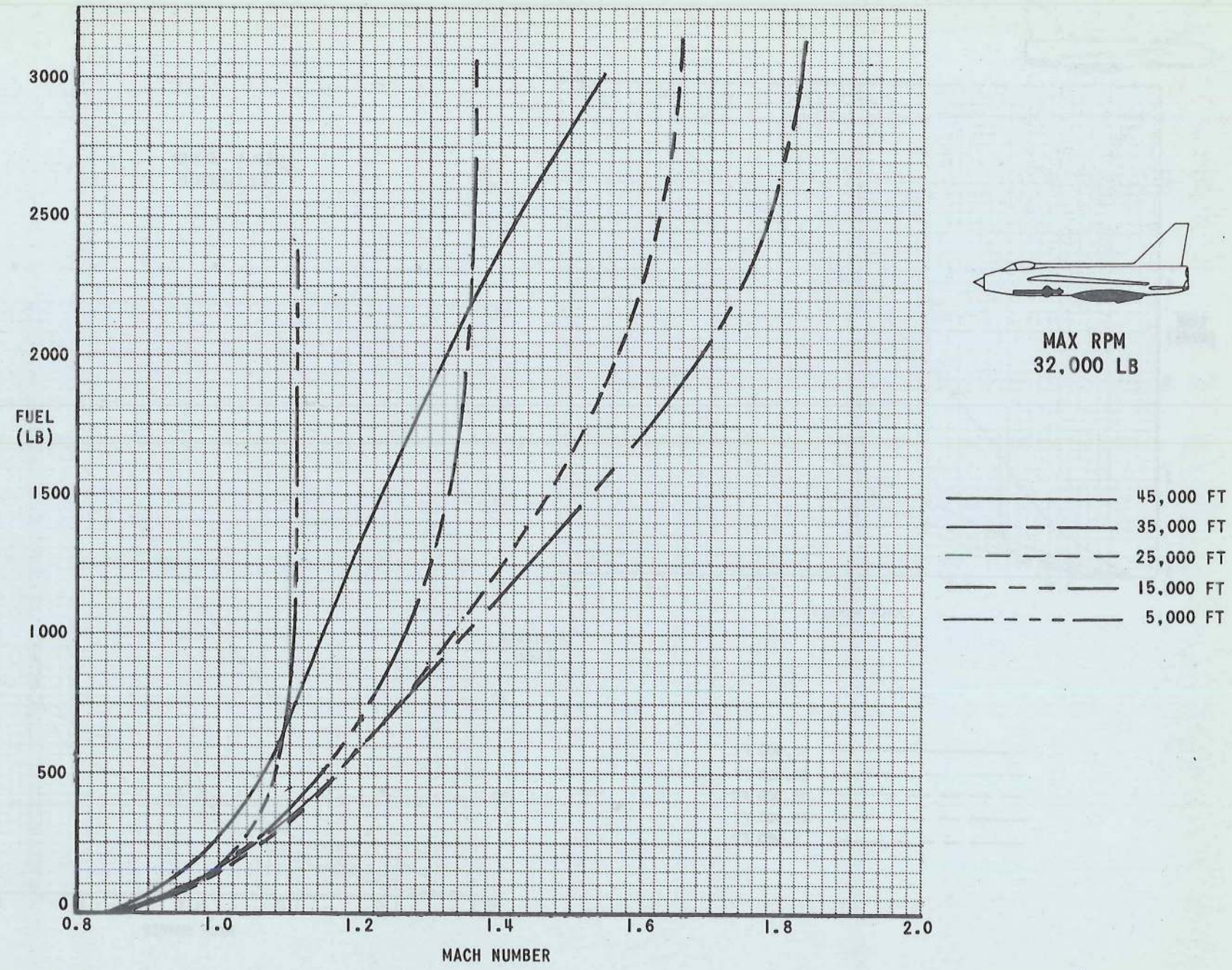
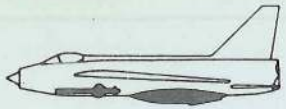
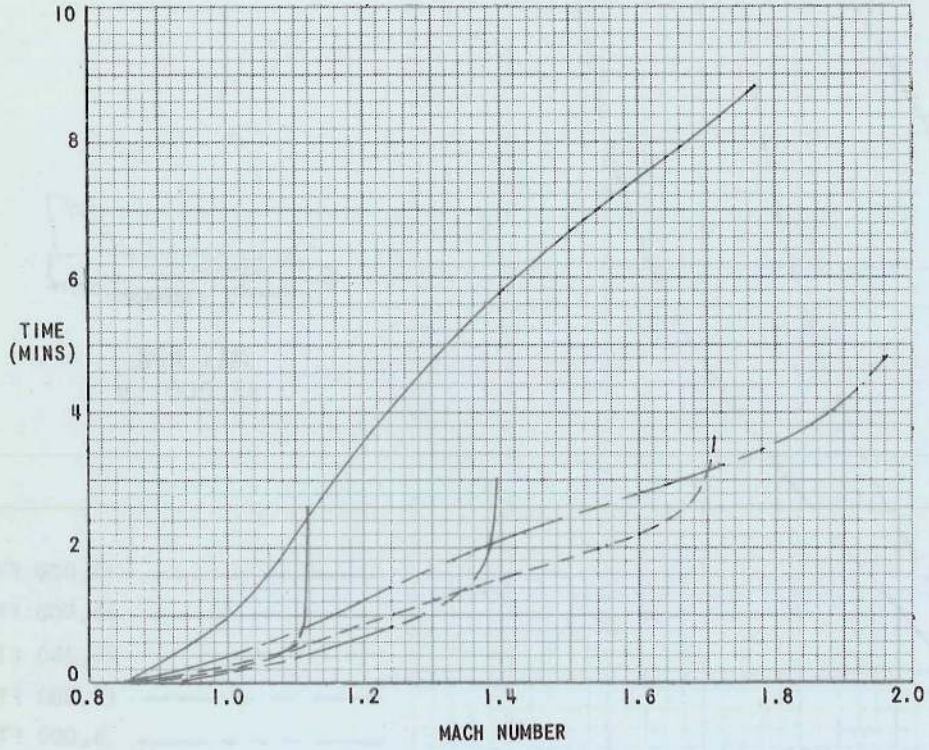
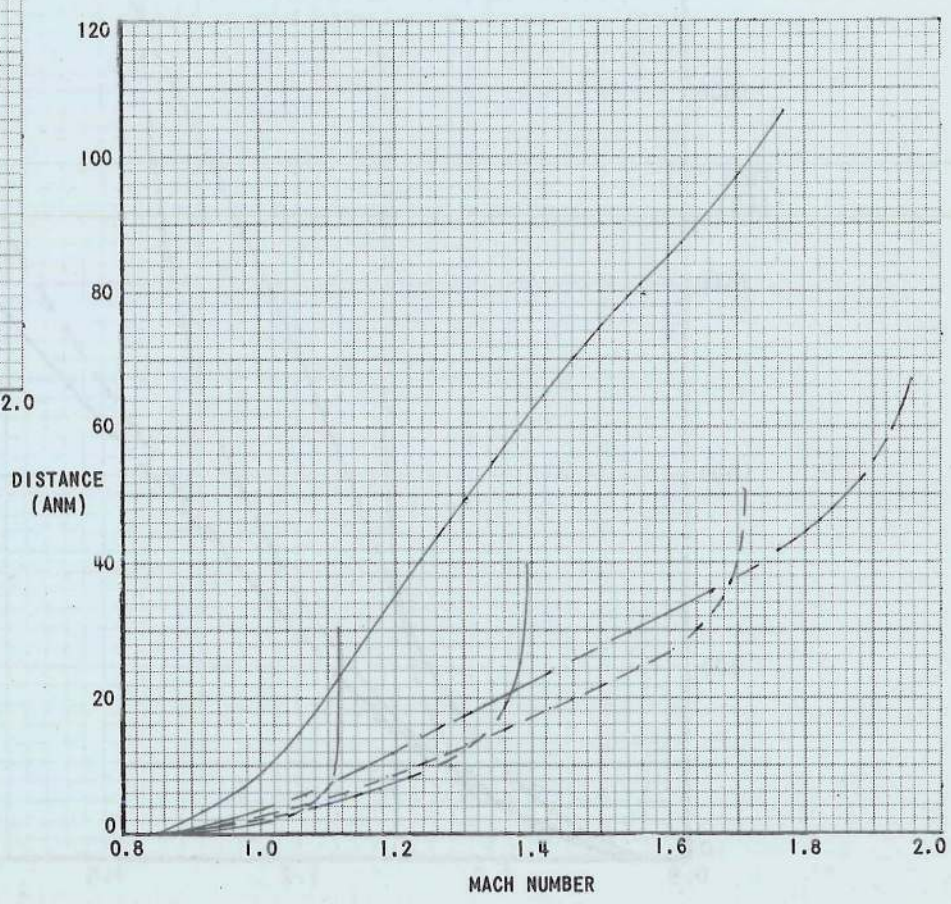


FIG. 5.31B FULL REHEAT ACCELERATION ICAO





MAX RPM
32,000LB



45,000 FT
35,000 FT
25,000 FT
15,000 FT
5,000 FT

FIG 5.32A FULL REHEAT ACCELERATION ICAO - 10° C

T Mk.5

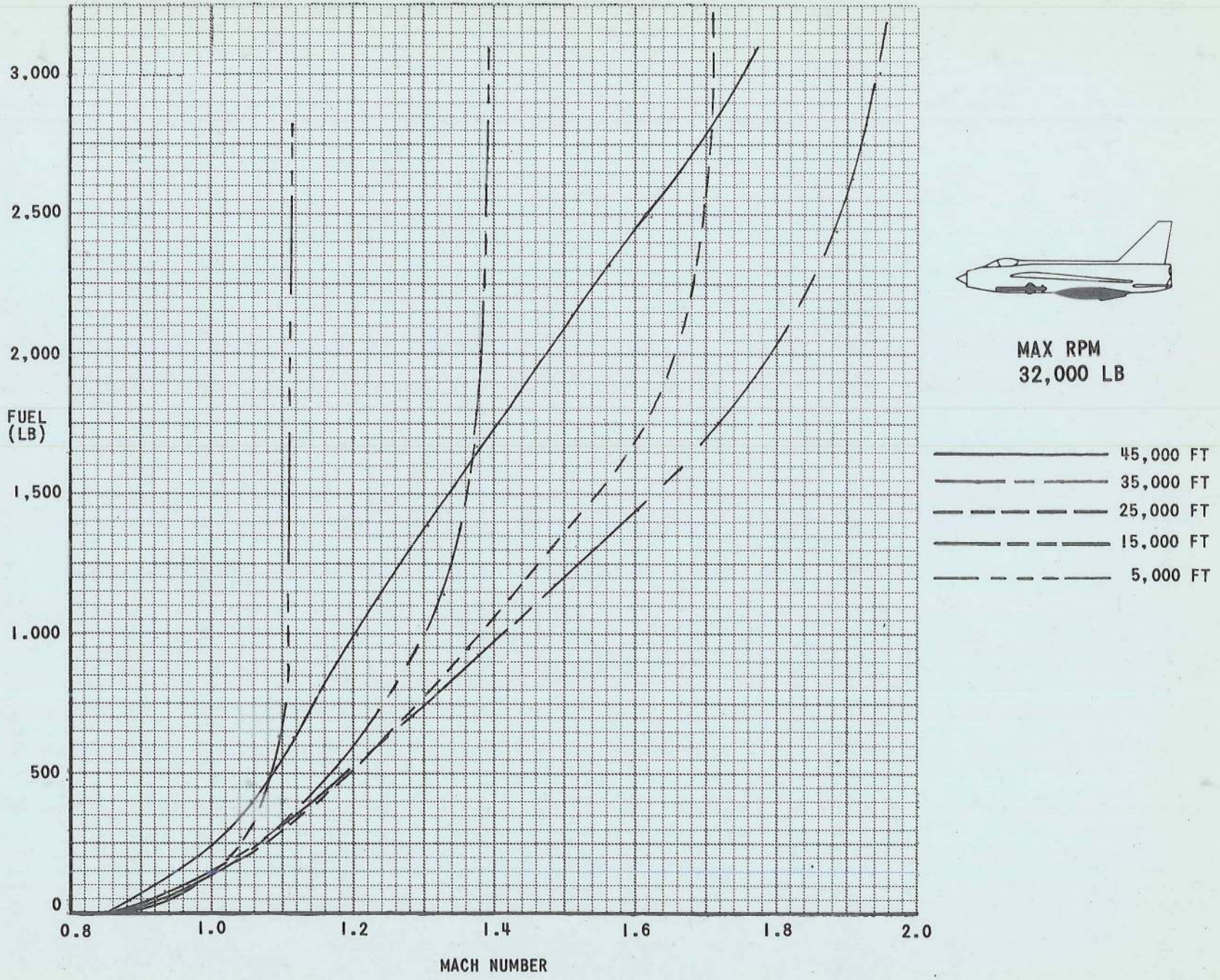
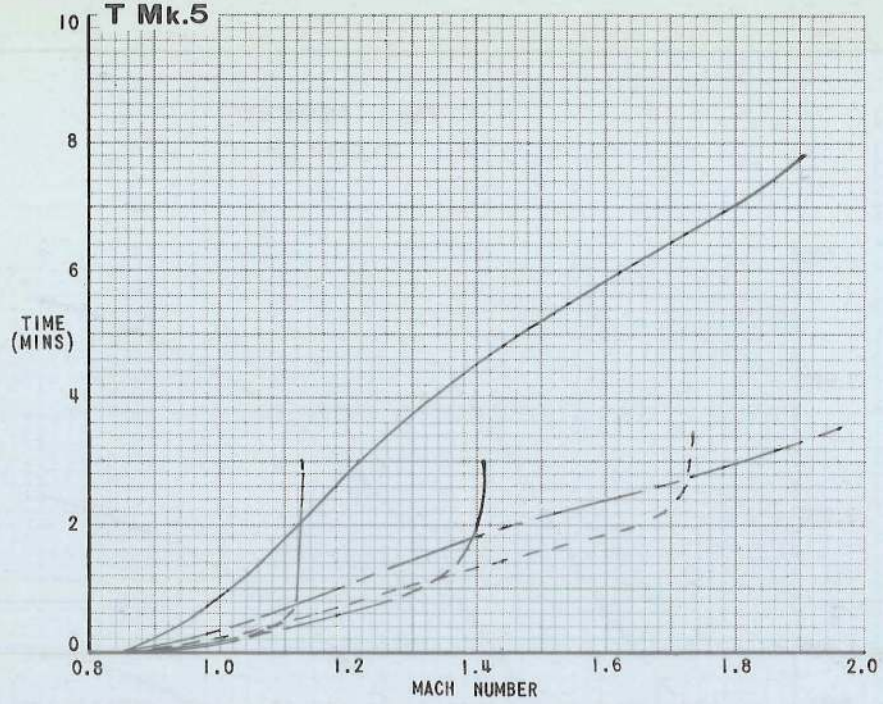
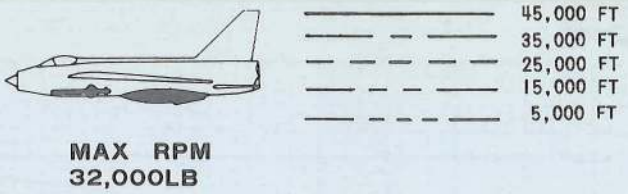
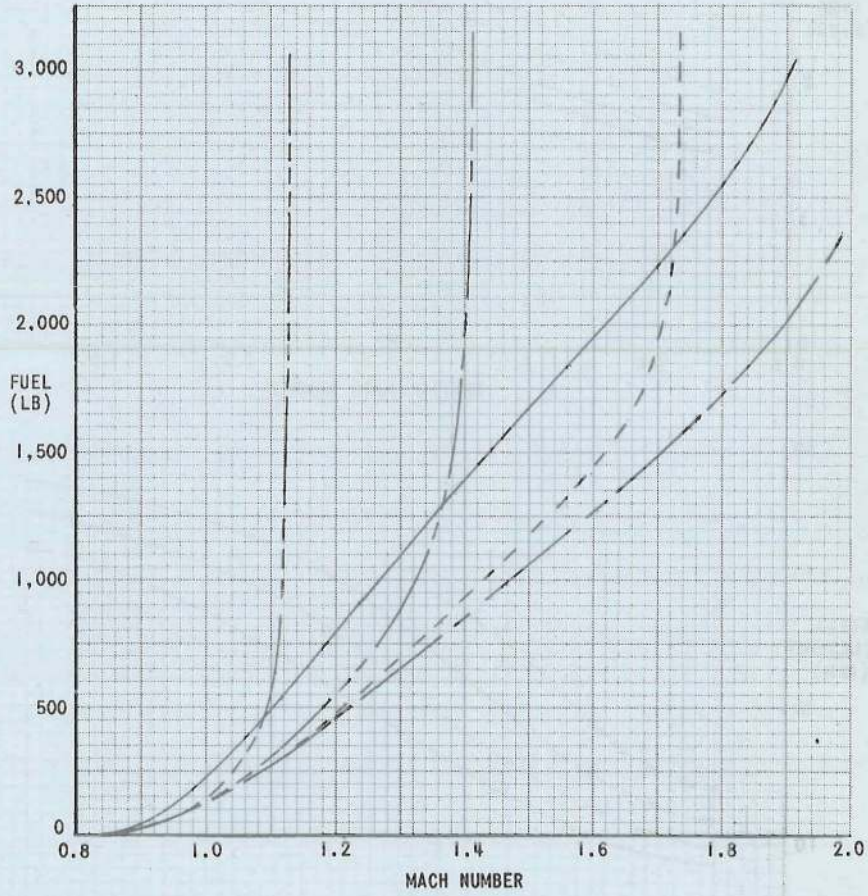


FIG. 5.32B FULL REHEAT ACCELERATION ICAO-10°C





MAX RPM
32,000LB



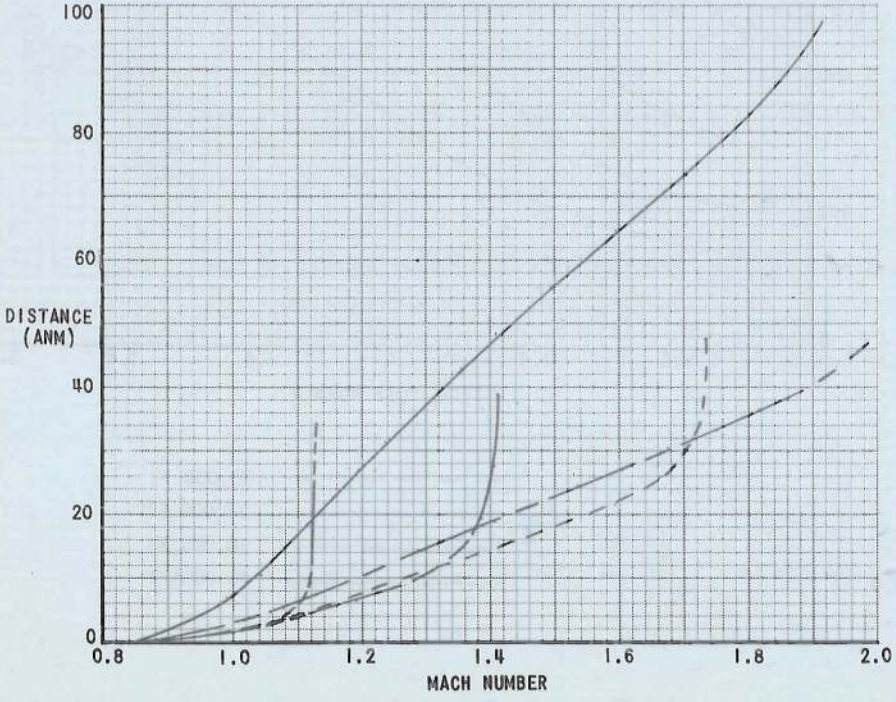
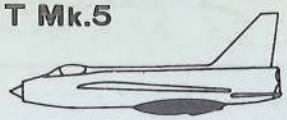
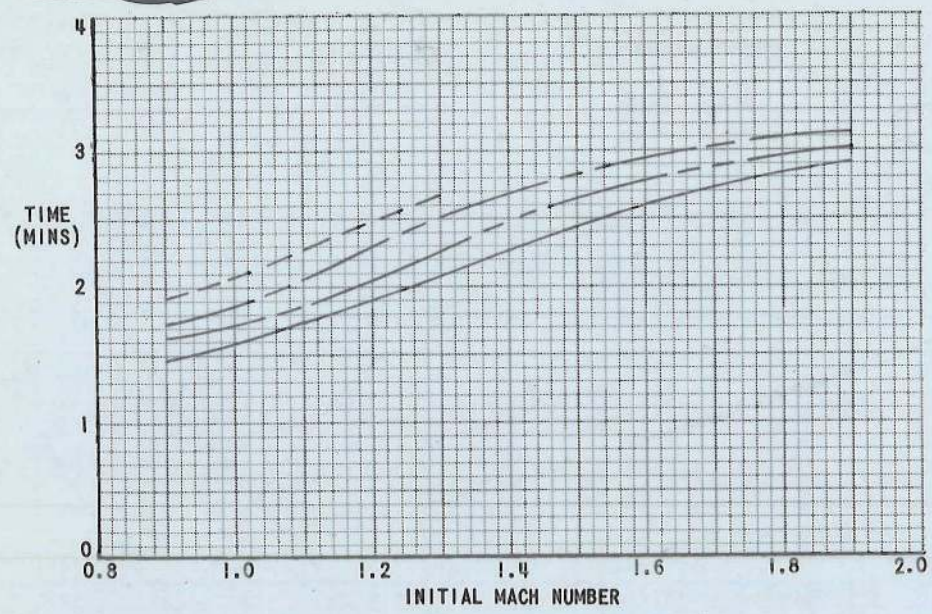
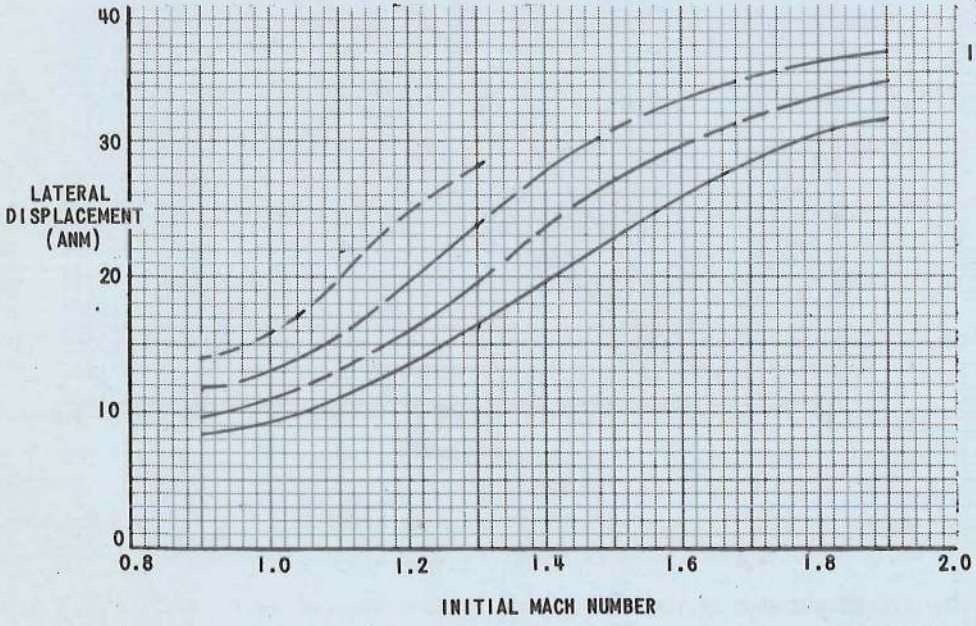


FIG. 5·33 FULL REHEAT ACCELERATION ICAO - 20°C







FULL REHEAT
31,000 LB

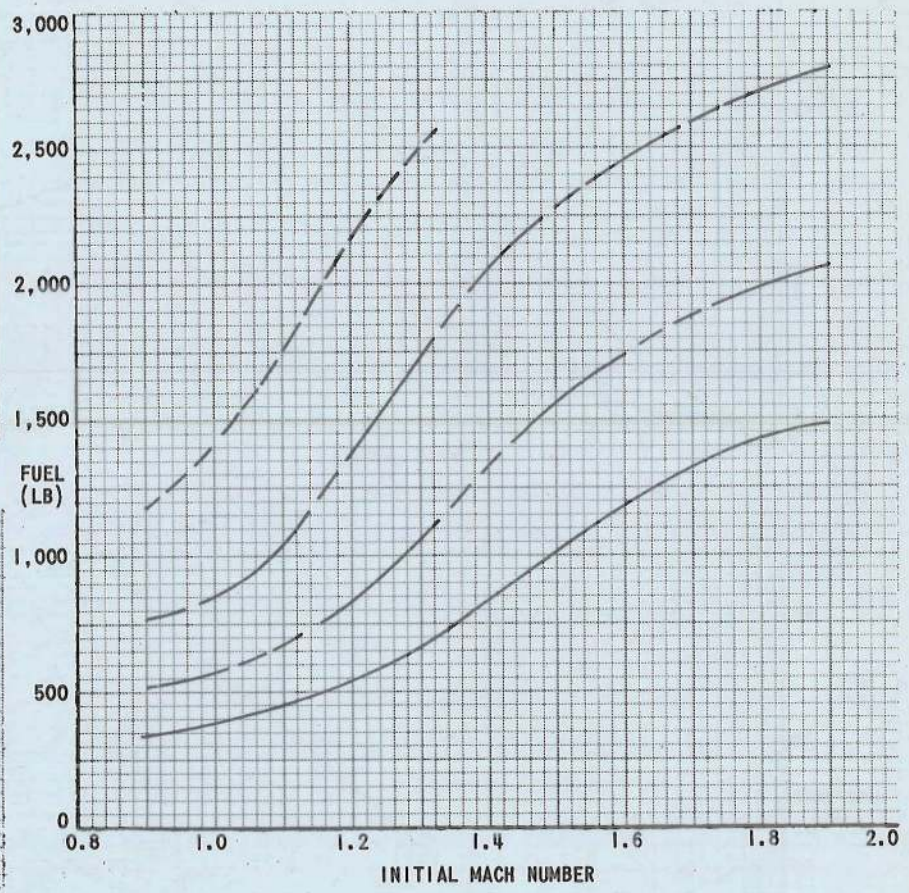
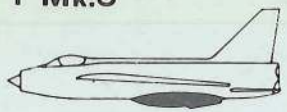
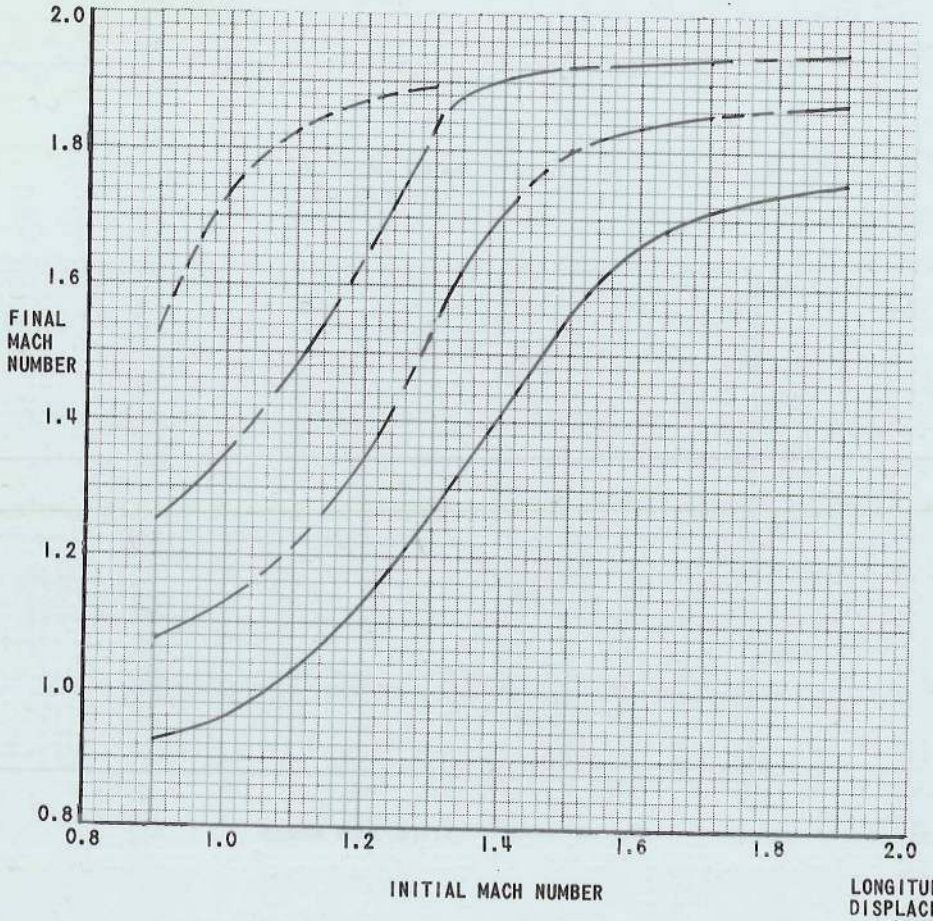
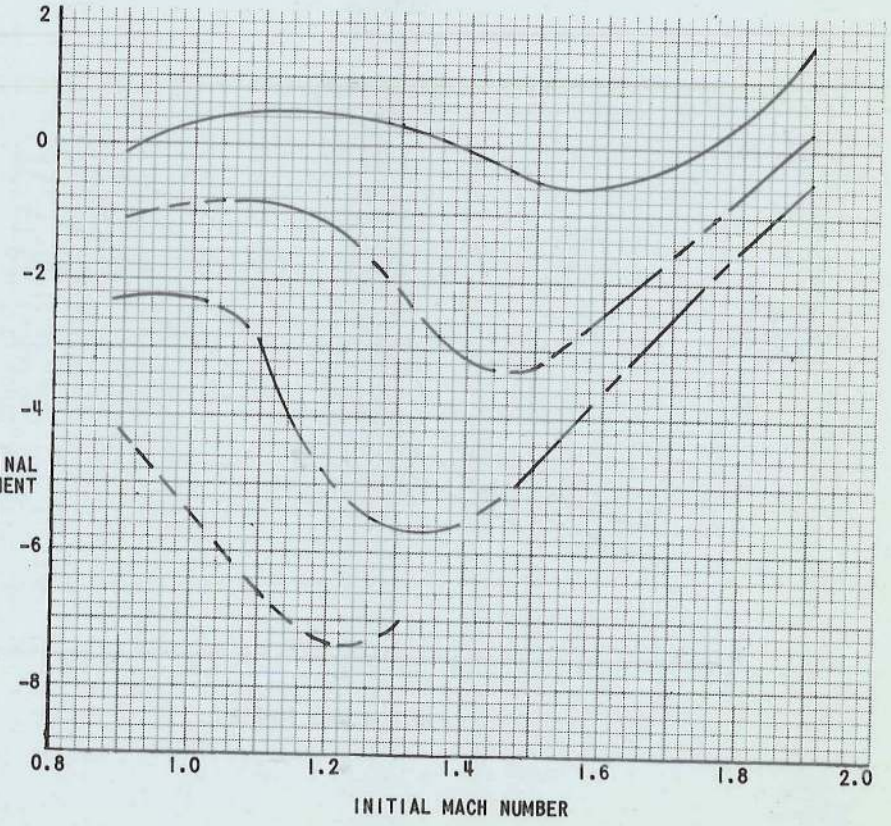


FIG. 5·34A 180° ACCELERATED 1·4G TURN - 56·5°C



FULL REHEAT
31,000 LB

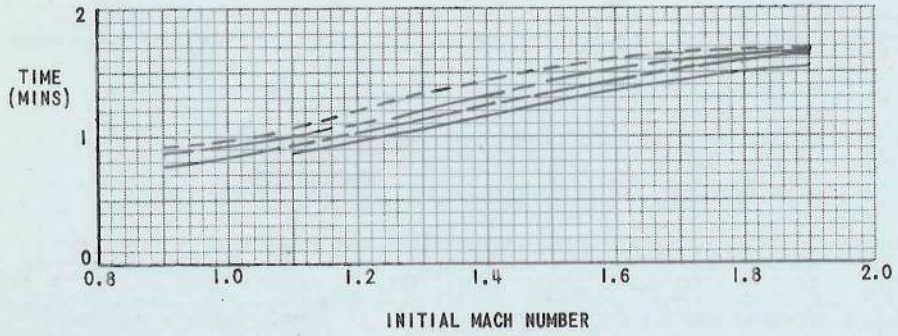




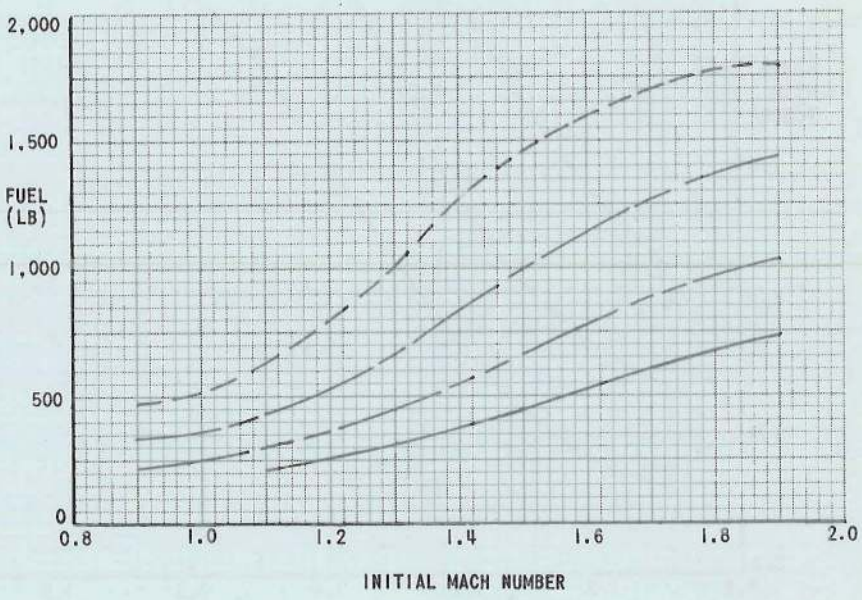
30,000 FT
35,000 FT
40,000 FT
45,000 FT

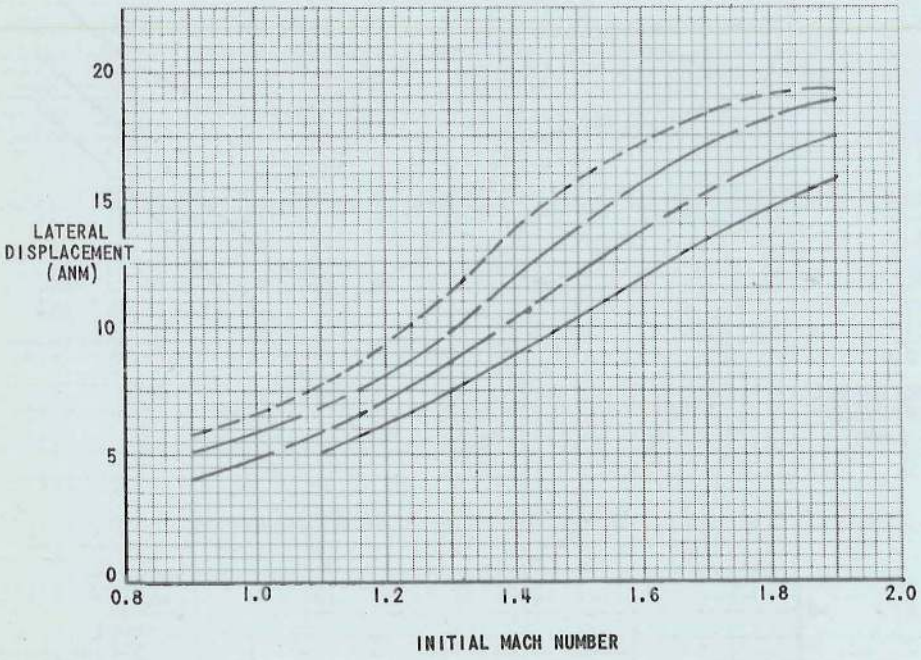
FIG. 5·34B 180° ACCELERATED 1·4G TURN - 56·5°C

T Mk.5



FULL REHEAT
31,000 LB





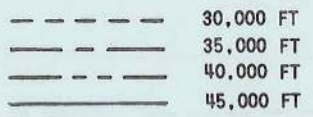
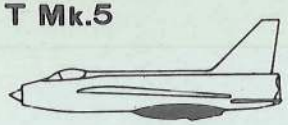
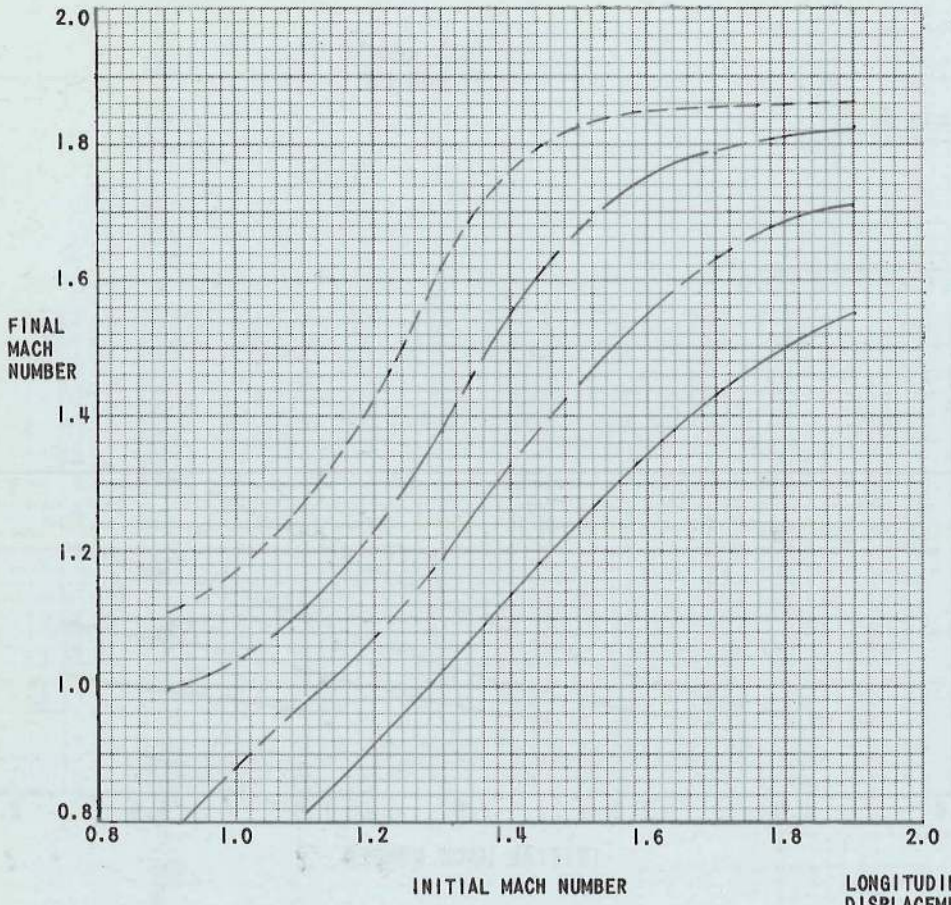


FIG. 5·35A 180° ACCELERATED 2G TURN - 56.5°C





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT
45,000 FT

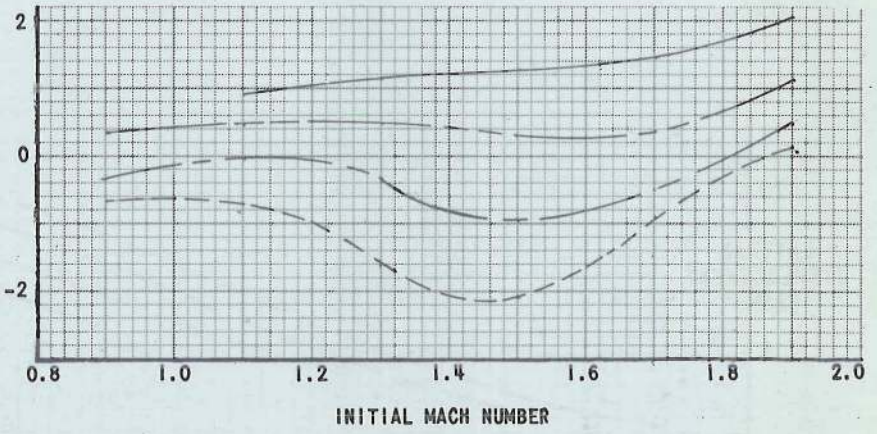
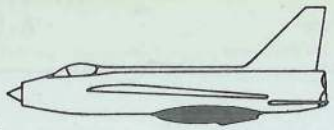
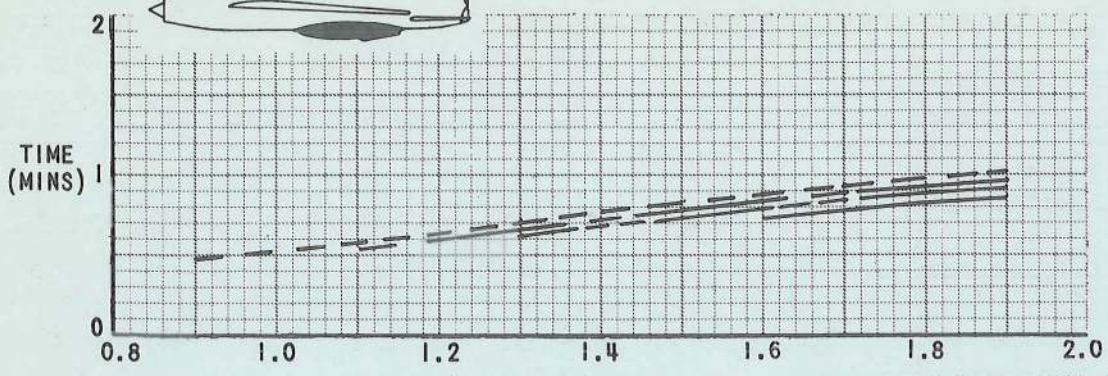
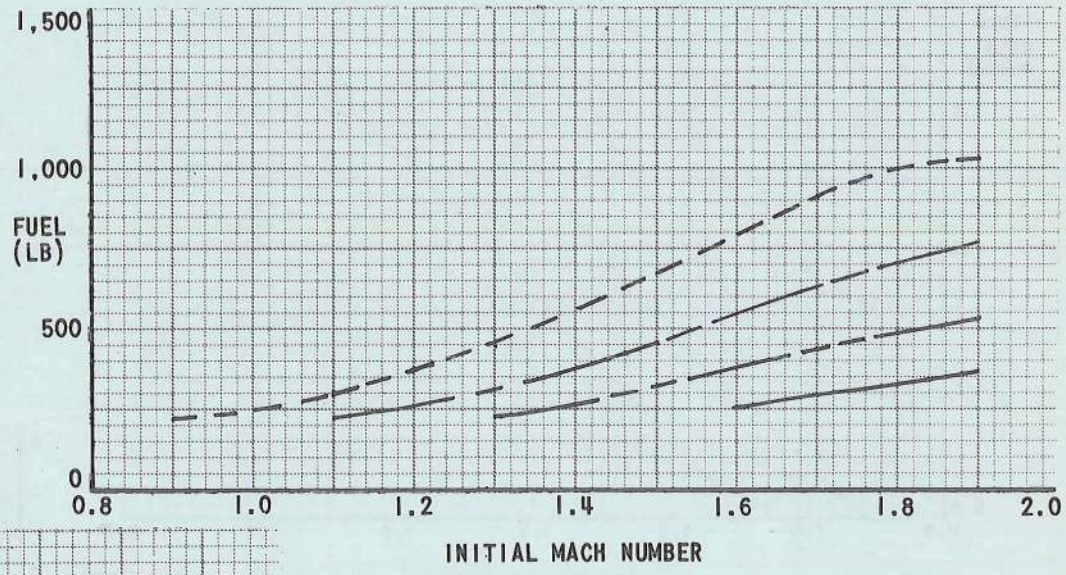


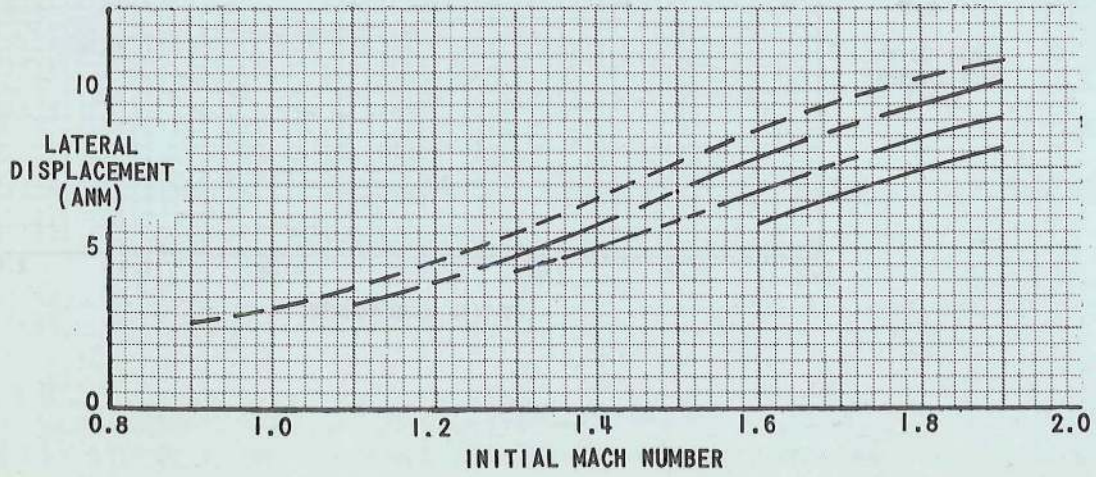
FIG. 5·35B 180° ACCELERATED 2 G TURN - 56·5°C





FULL REHEAT
31,000 LB





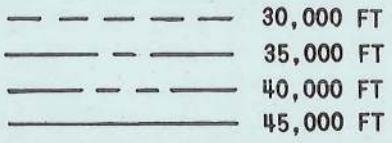
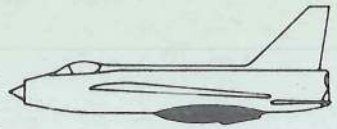
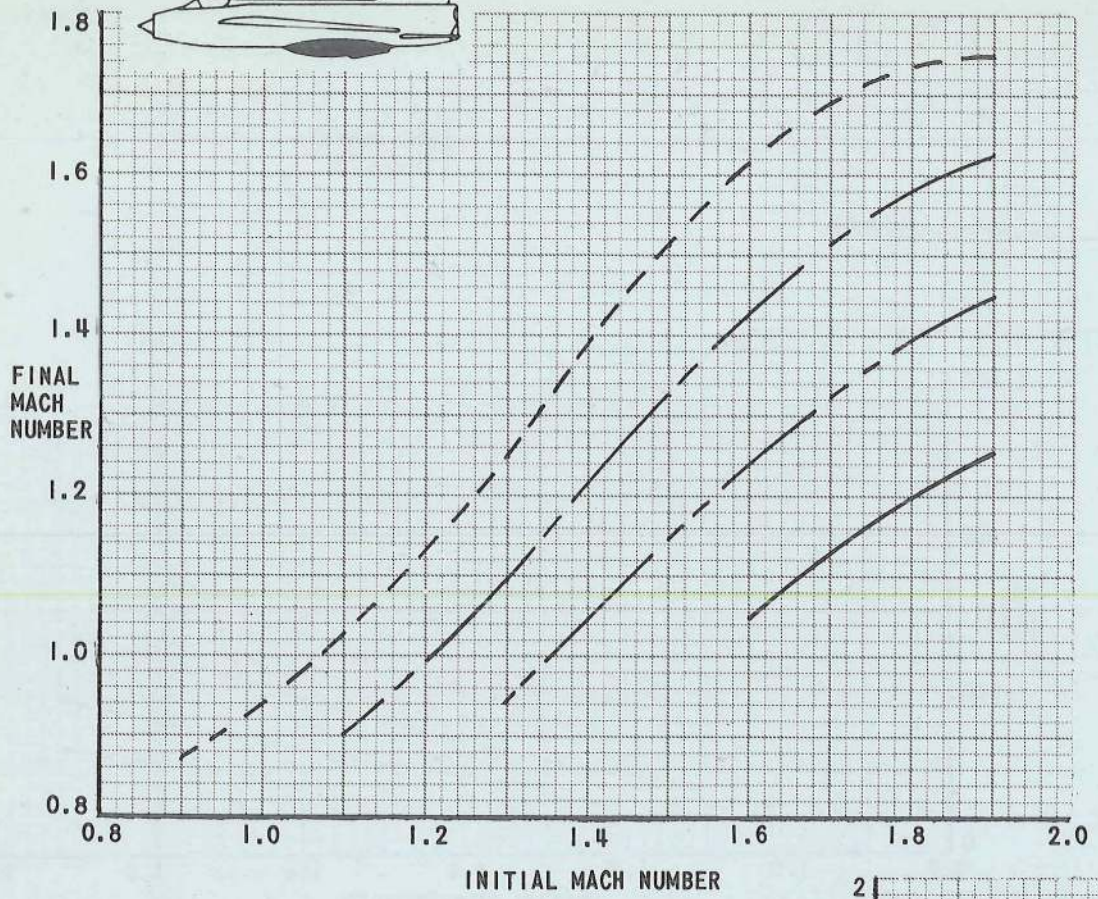


FIG. 5·36A 180° ACCELERATED 3G TURN - 56·5°C





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT
45,000 FT

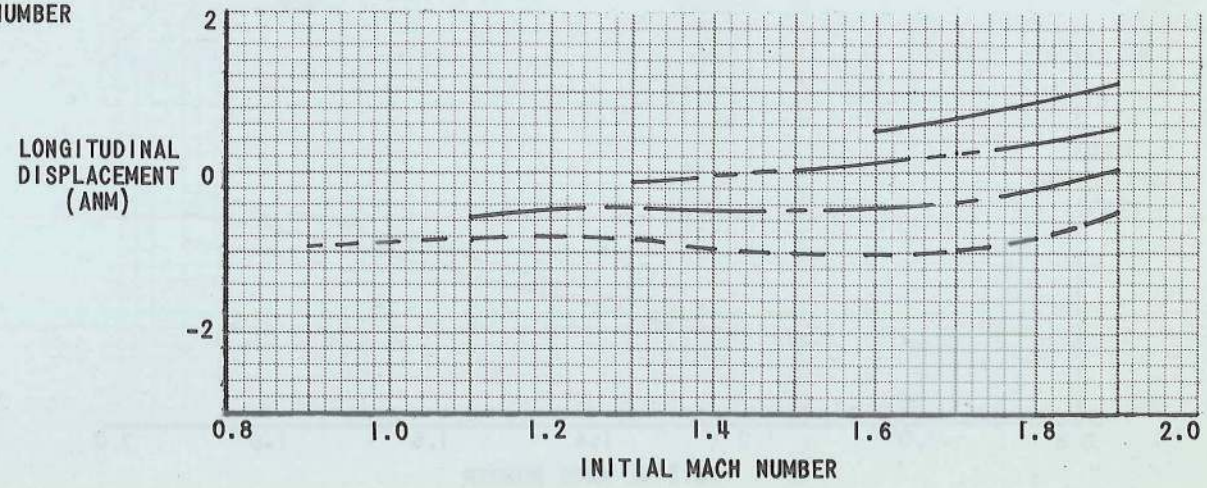
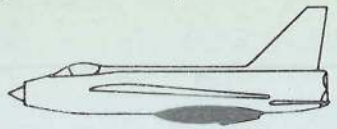
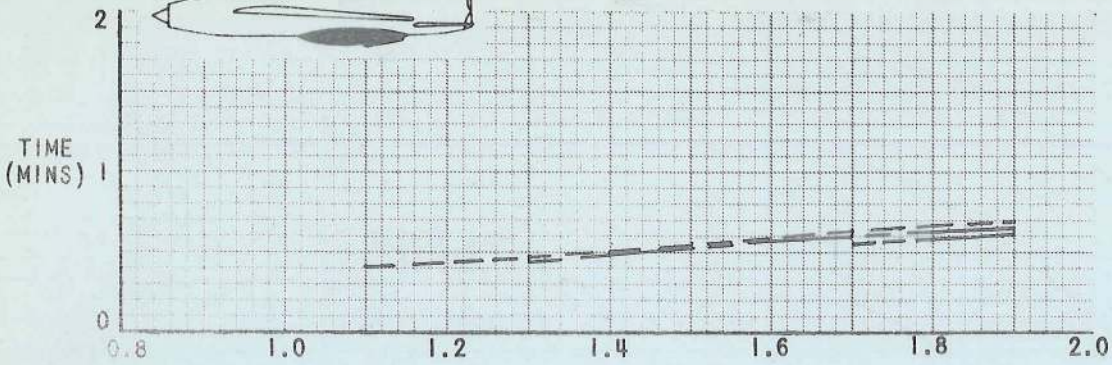


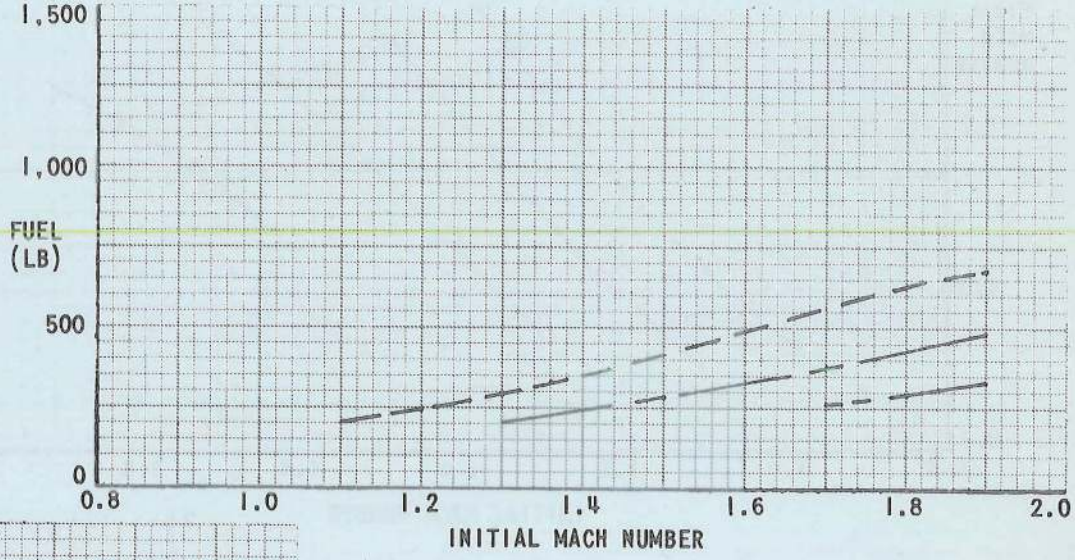
FIG. 5.36B 180° ACCELERATED 3G TURN

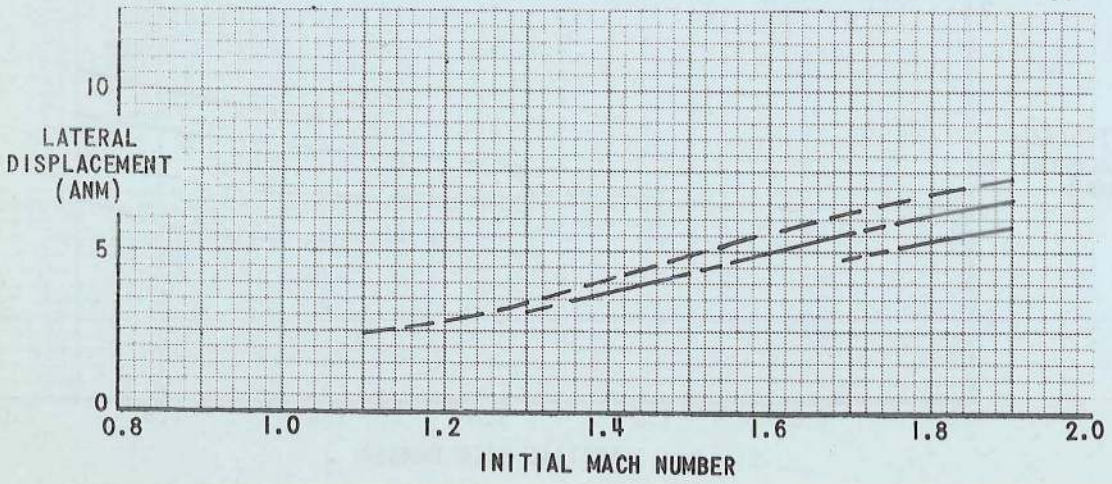
- 56·5°C





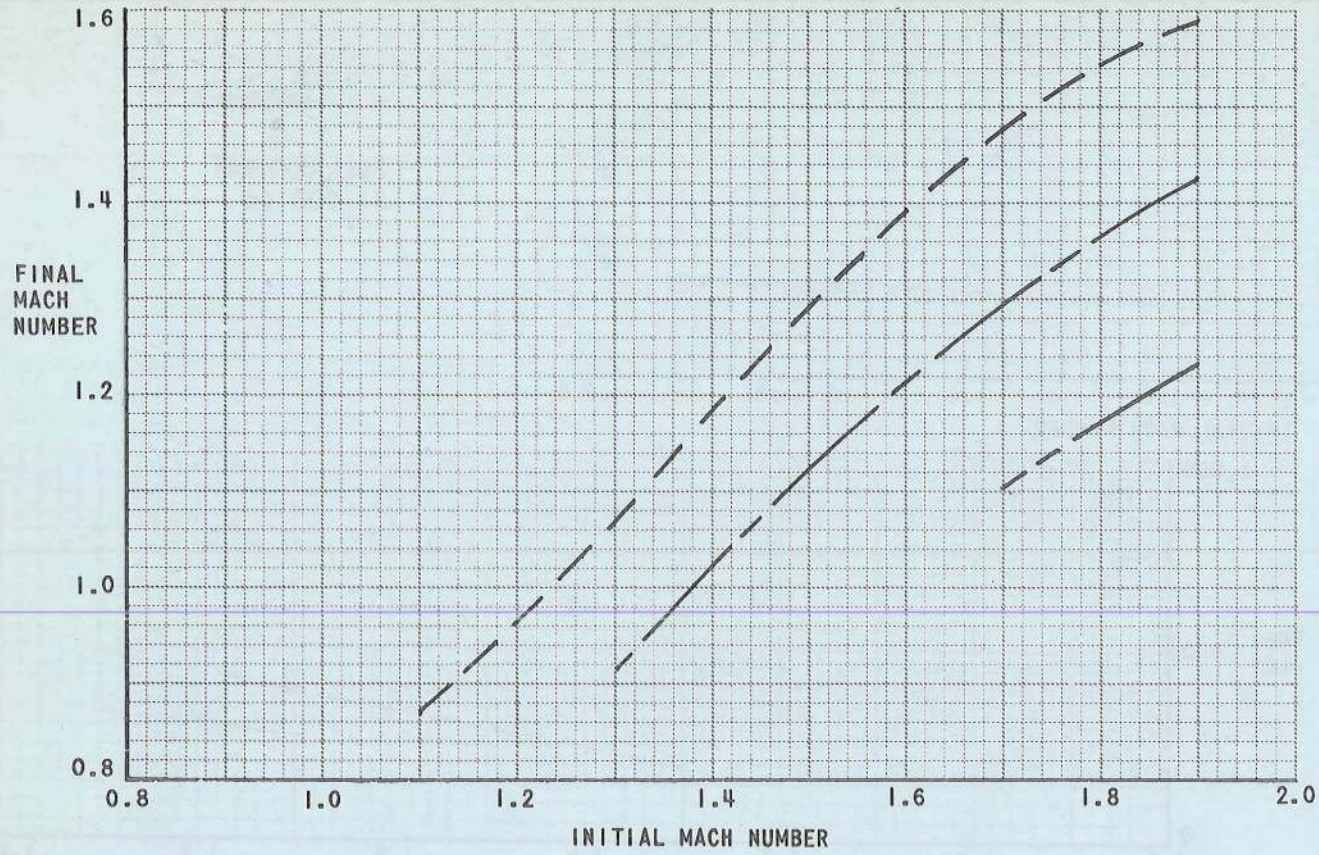
FULL REHEAT
31,000 LB

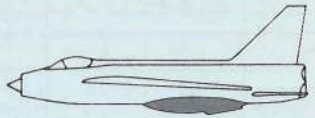




30,000 FT
35,000 FT
40,000 FT

FIG. 5-37A 180° ACCELERATED 4G TURN -56·5°C





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT

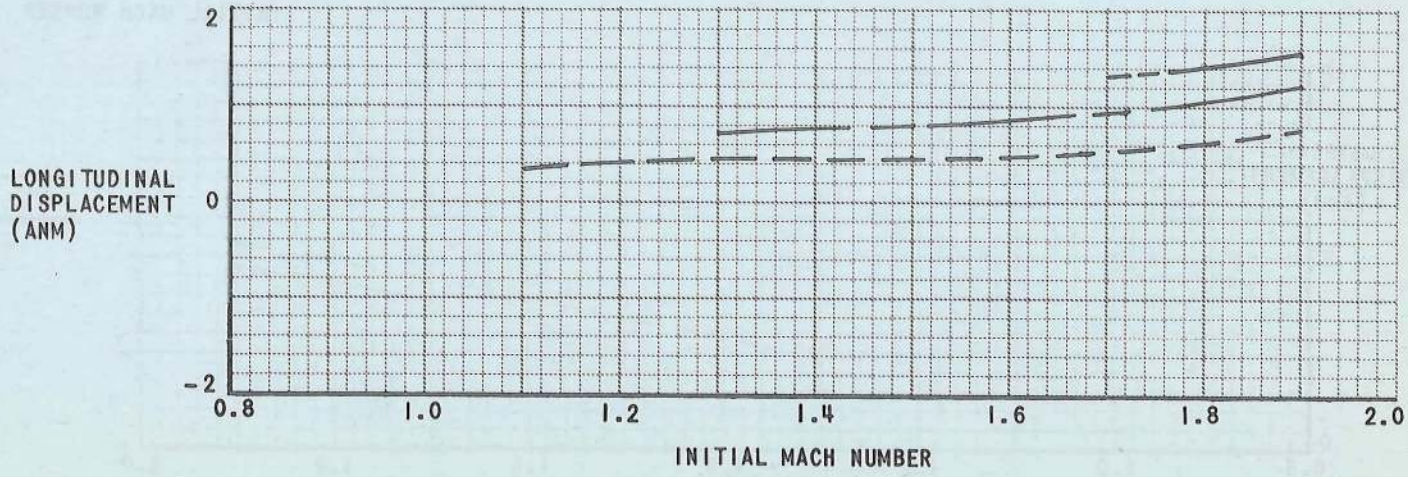
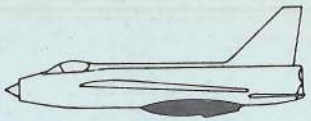
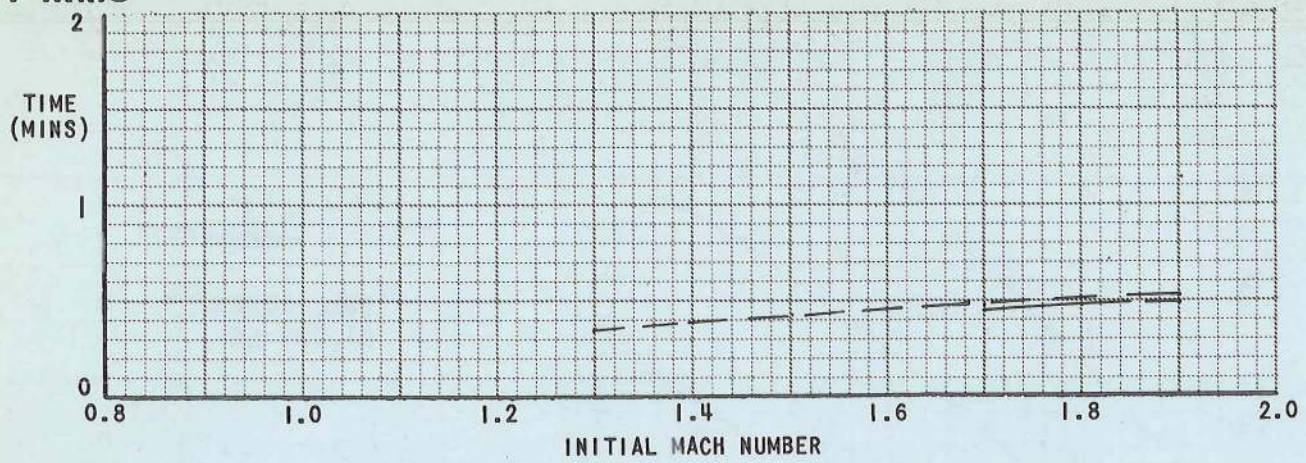
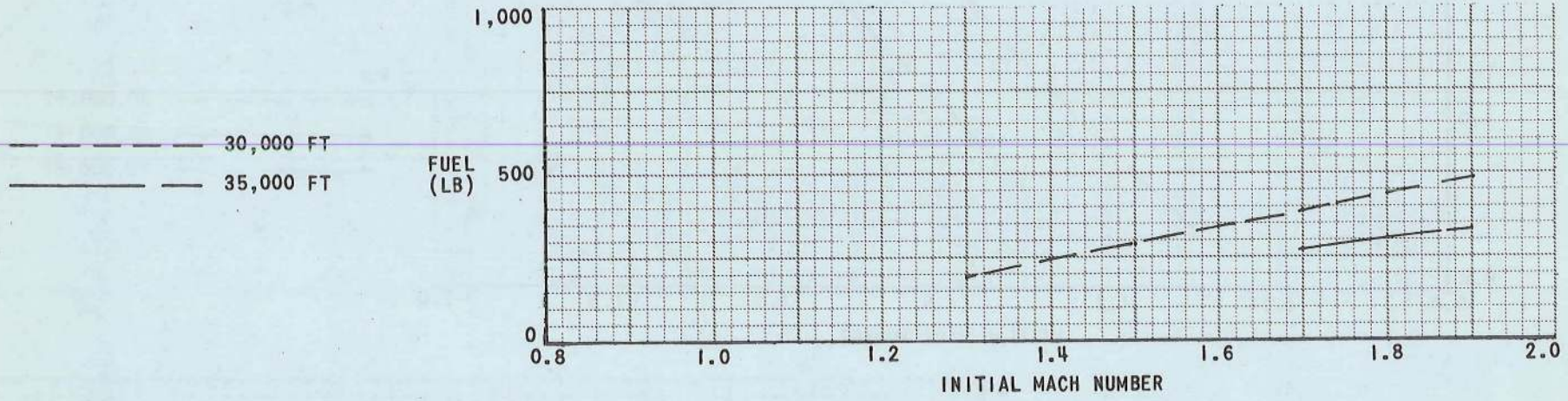


FIG. 5·37B 180° ACCELERATED 4G TURN - 56·5°C



FULL REHEAT
31,000 LB





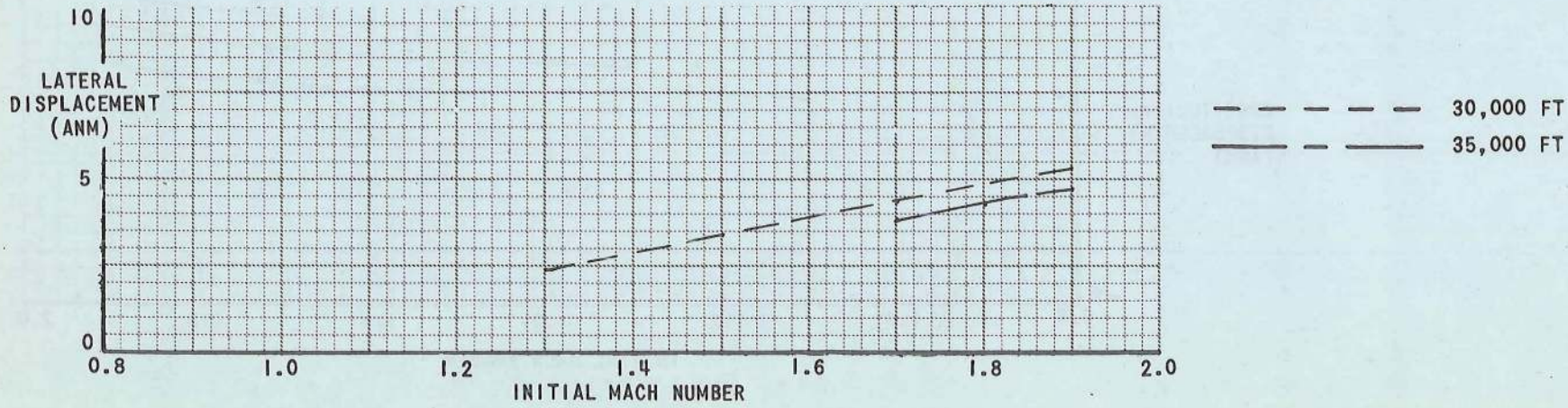
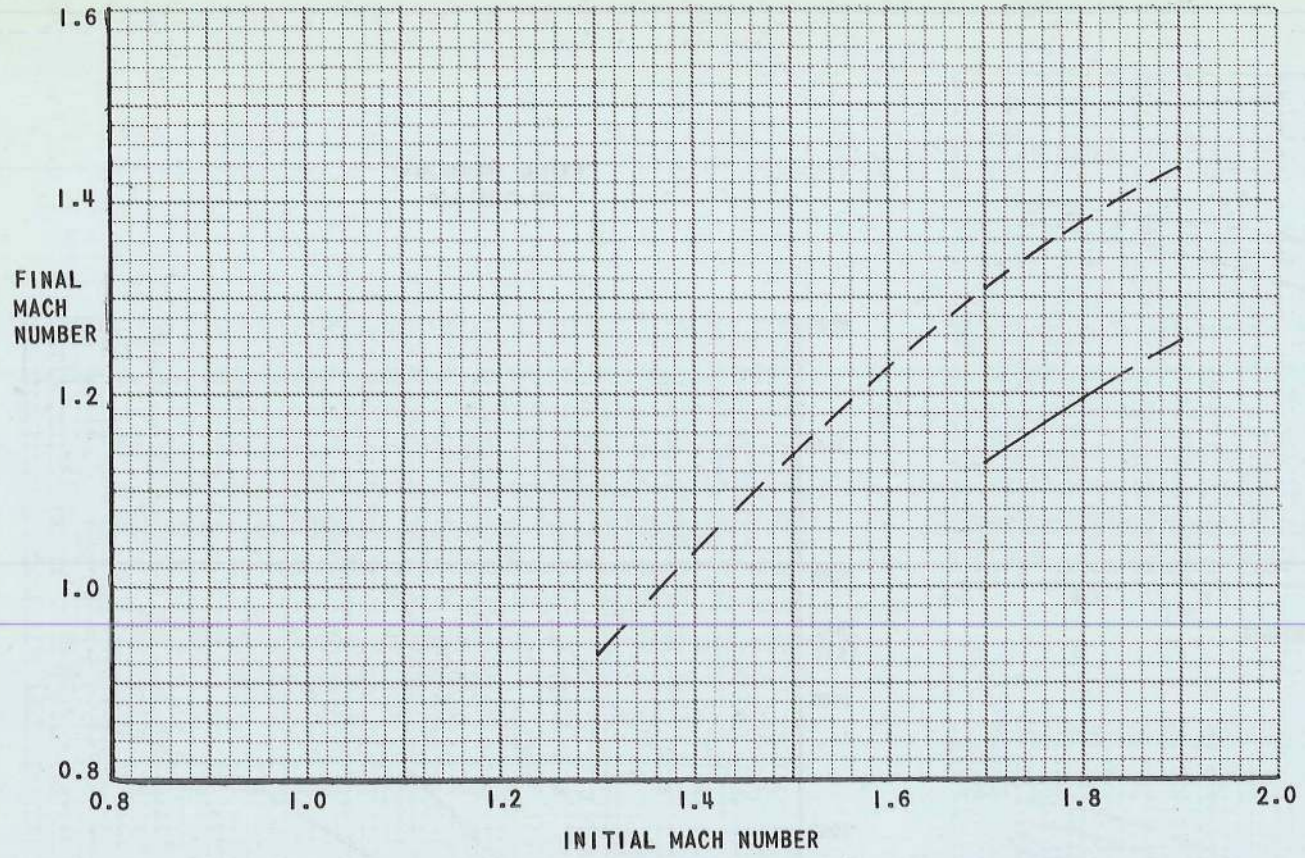
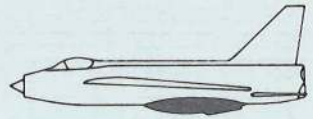


FIG. 5·38A 180° ACCELERATED 5G TURN - 56·5°C





FULL REHEAT
31,000 LB

30,000 FT

35,000 FT

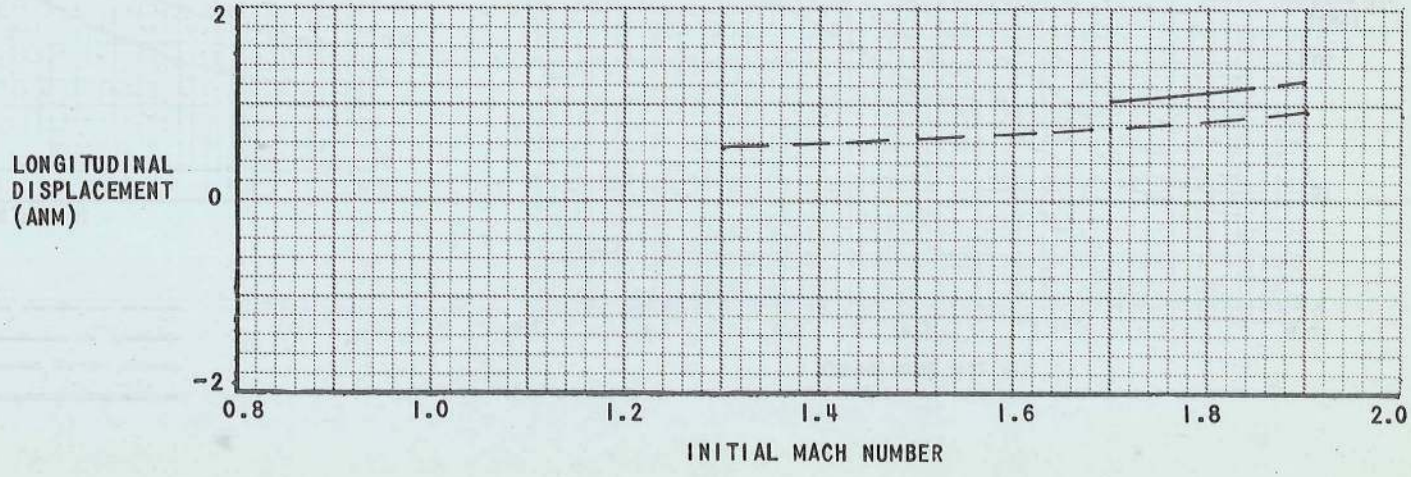
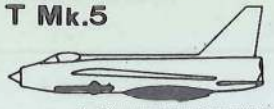
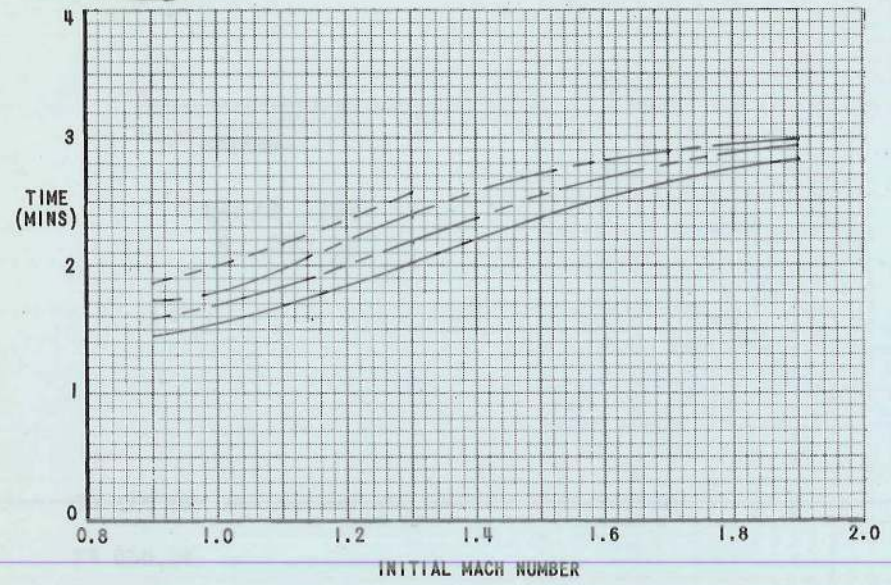
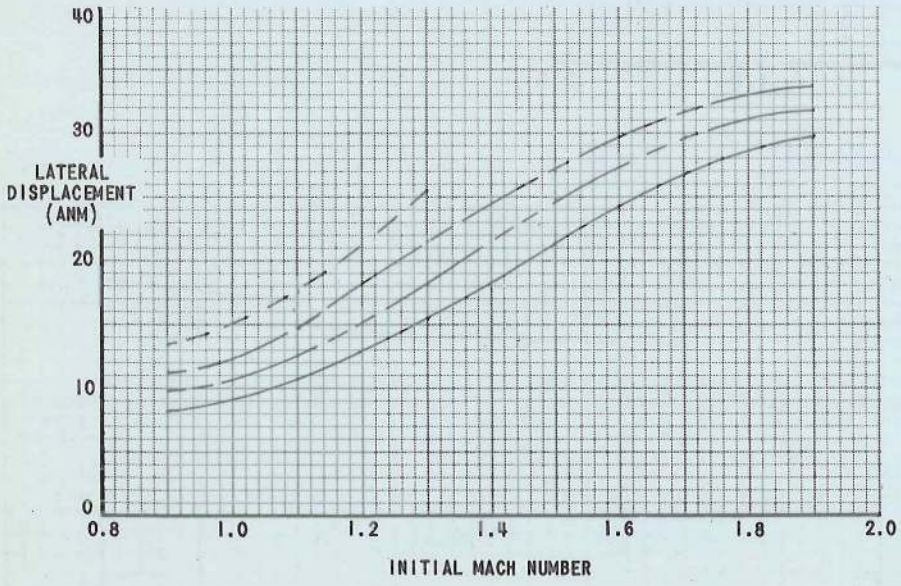


FIG. 5·38B 180° ACCELERATED 5G TURN - 56·5°C







FULL REHEAT
31,000 LB

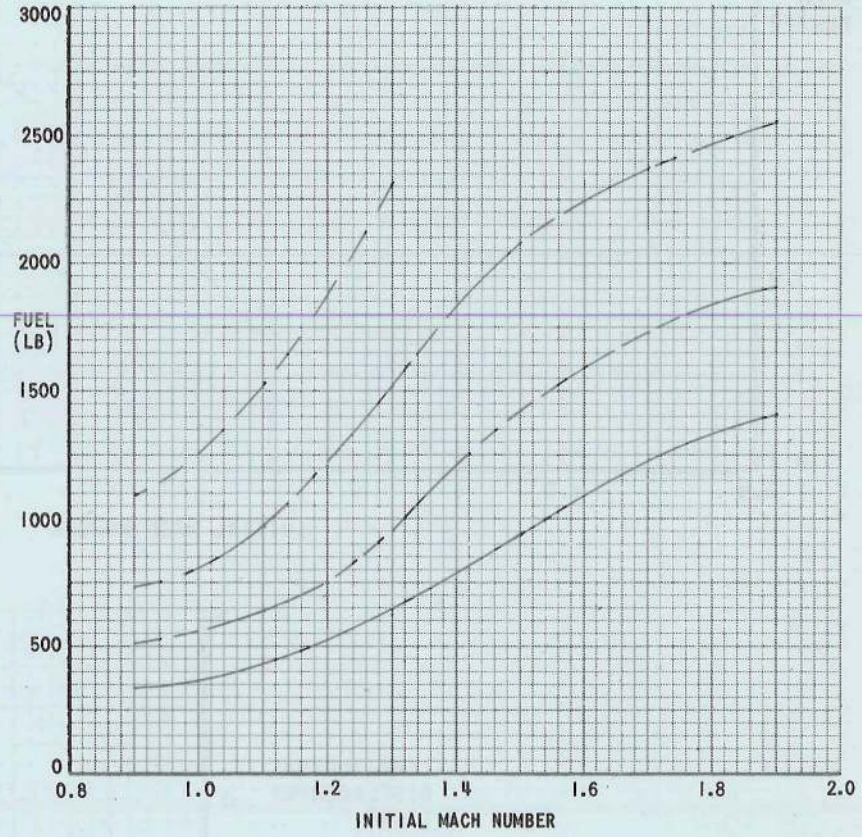
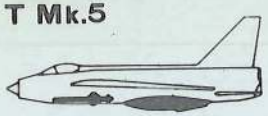
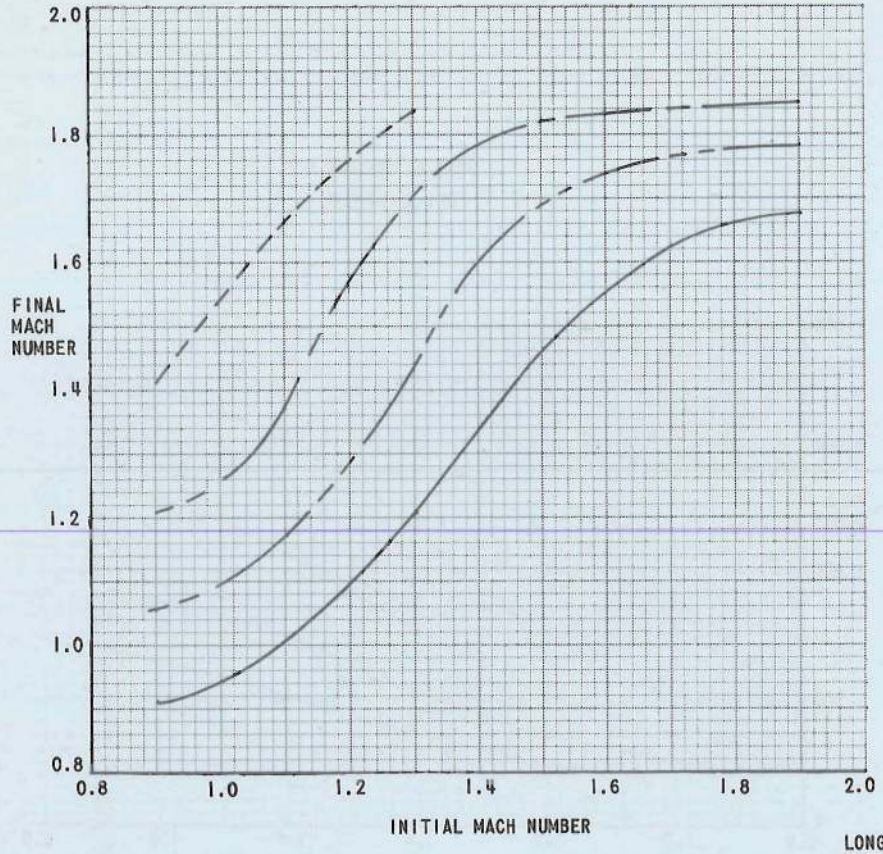
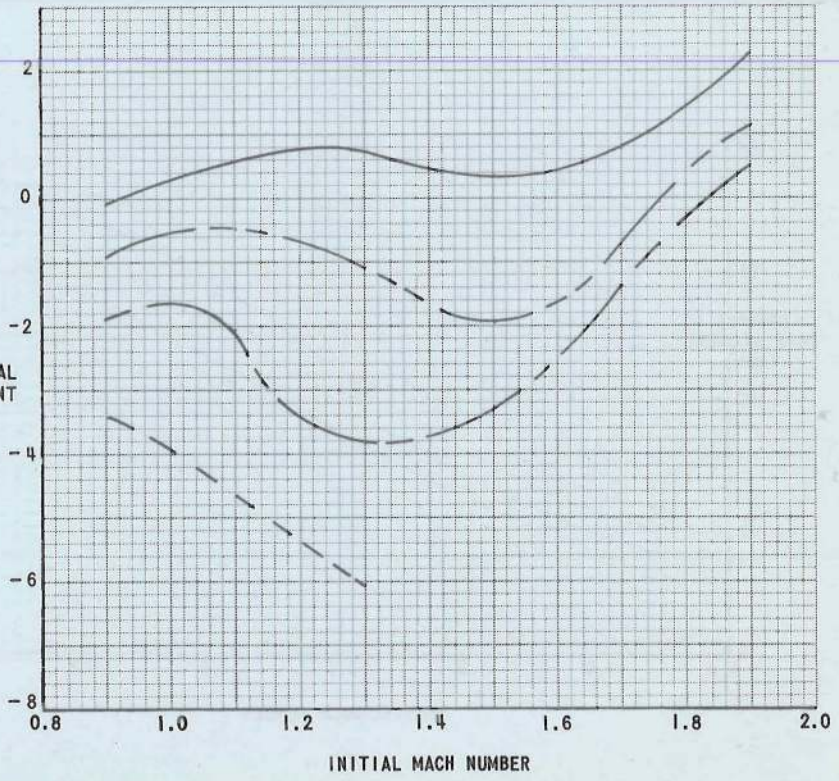


FIG. 5·39A 180° ACCELERATED 1·4G TURN - 56·5°C



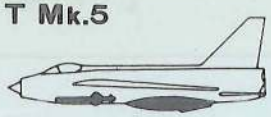
FULL REHEAT
31,000 LB

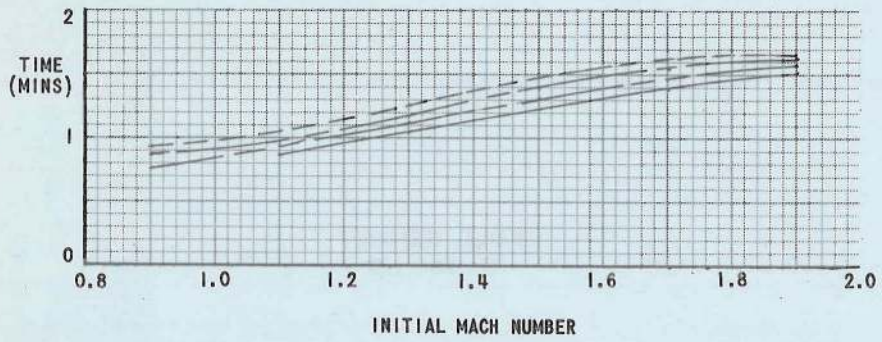




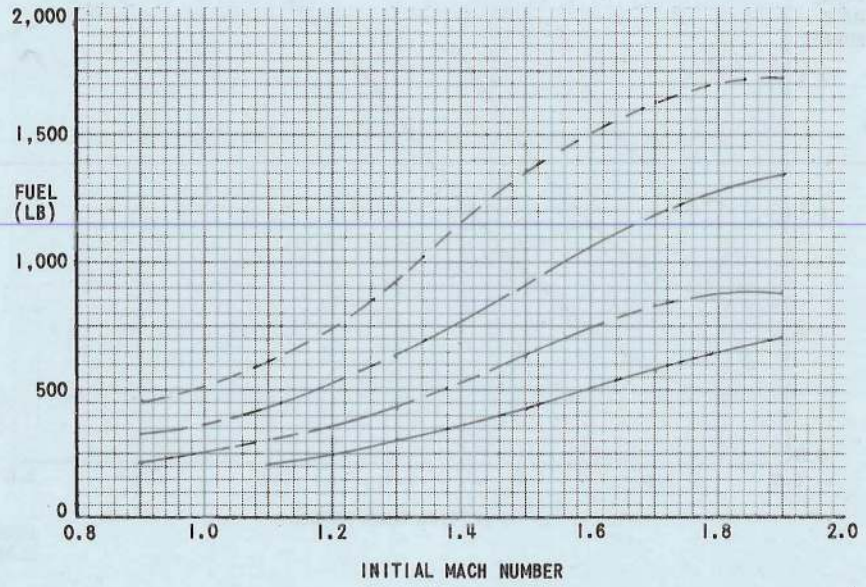
30,000 FT
35,000 FT
40,000 FT
45,000 FT

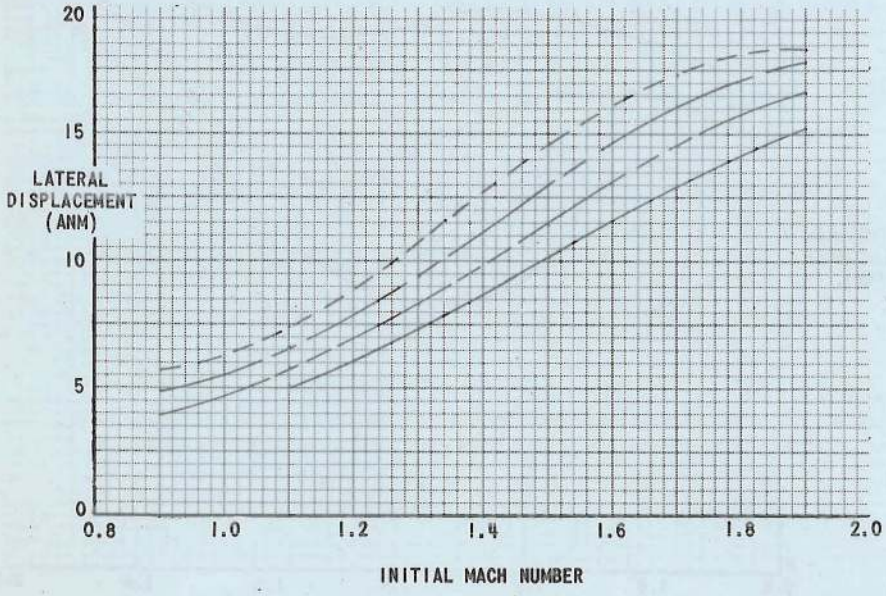
FIG. 5·39B 180° ACCELERATED 1·4G TURN - 56·5°C





FULL REHEAT
31,000LB





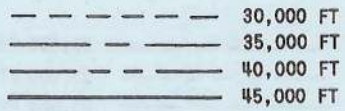
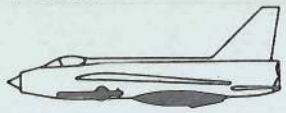
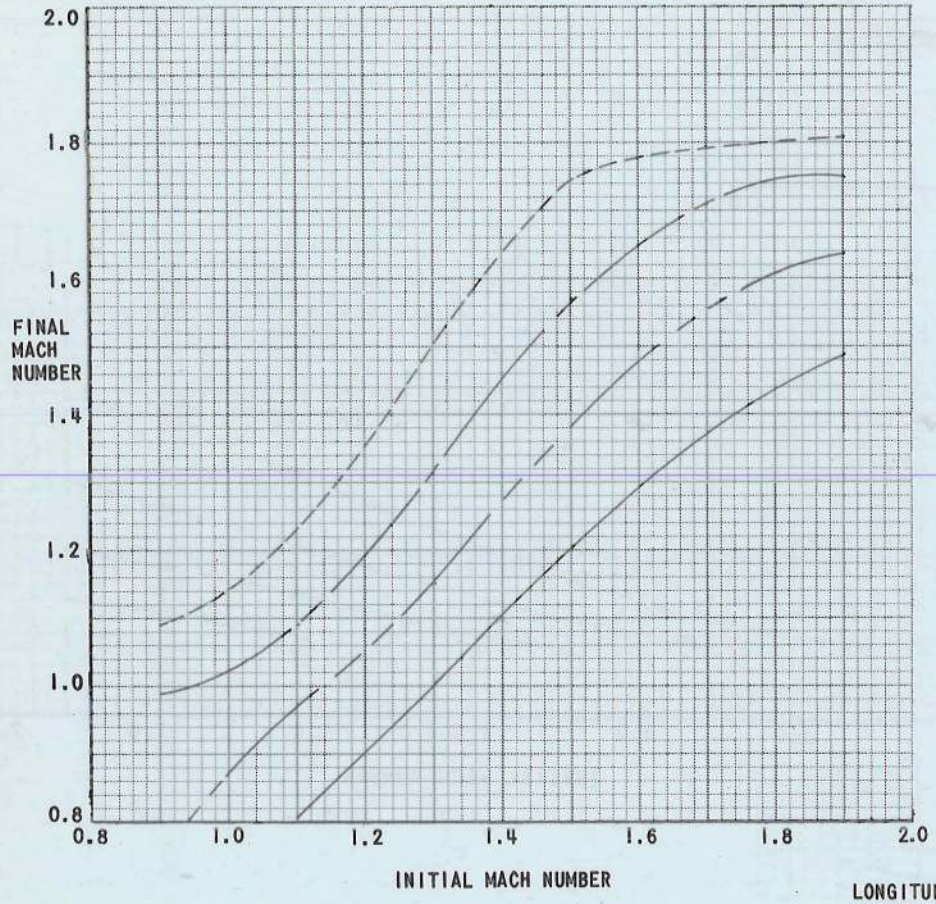


FIG. 5·40A 180° ACCELERATED 2G TURN - 56·5°C





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT
45,000 FT

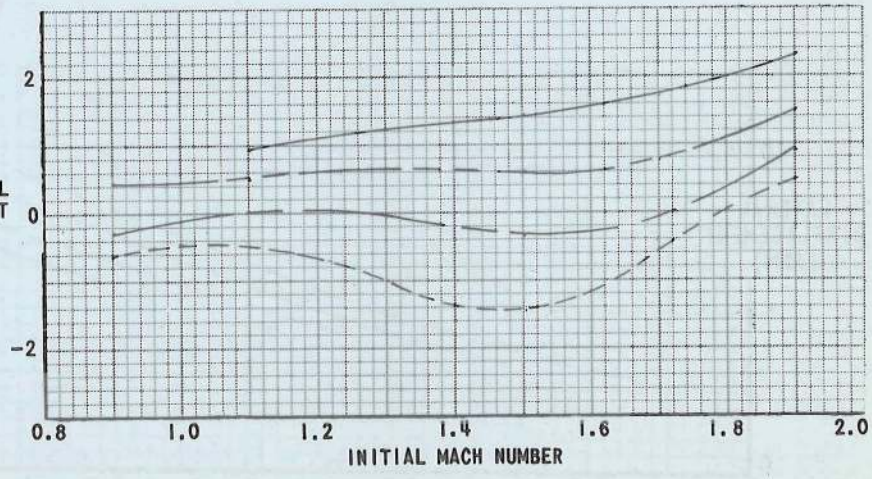
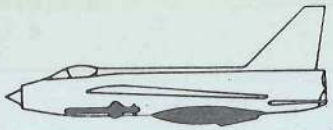
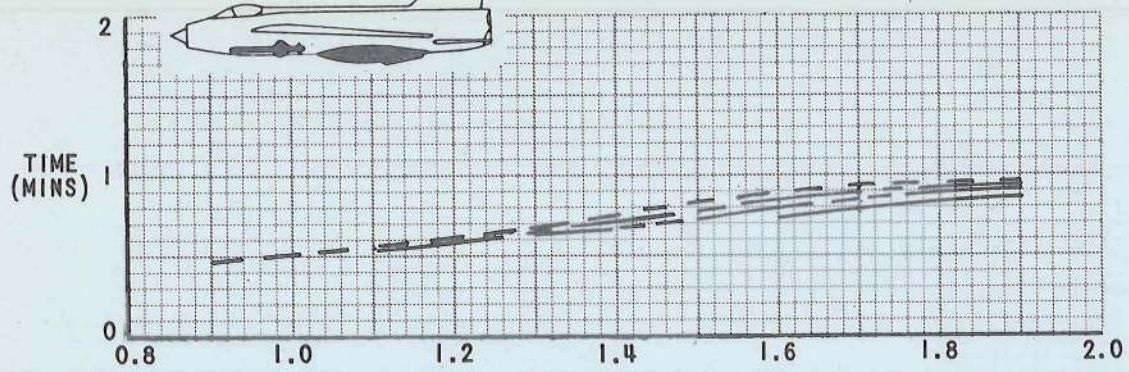
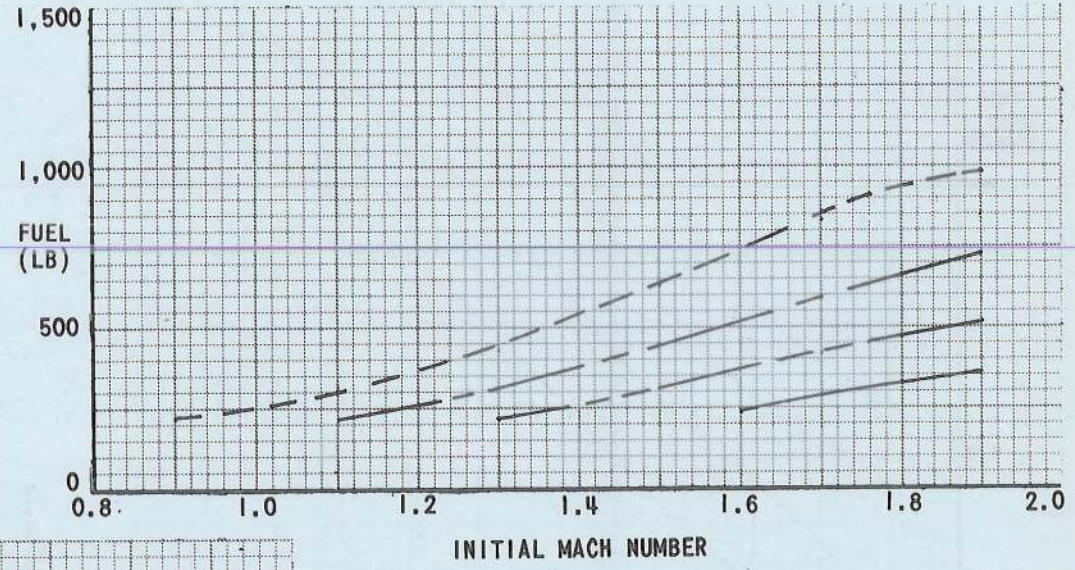


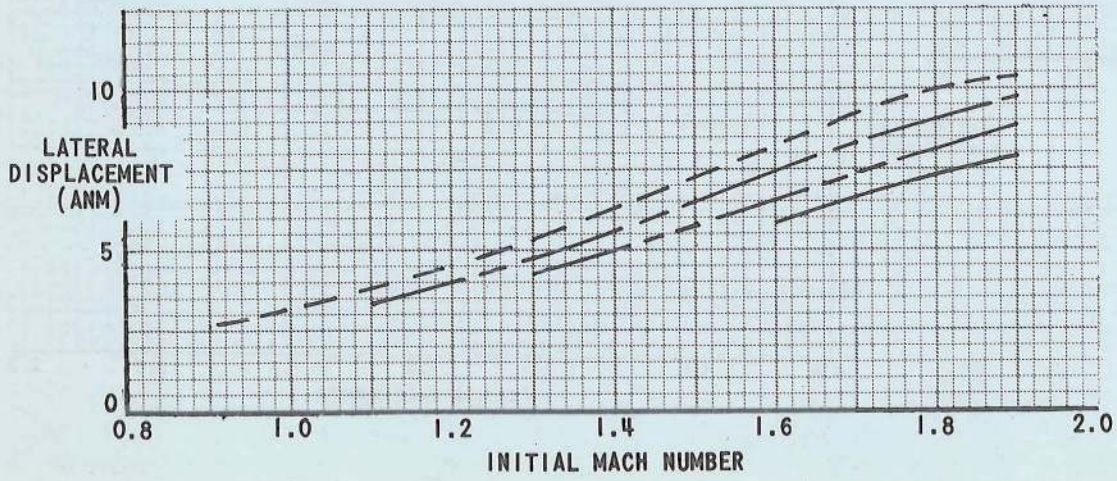
FIG. 5·40B 180° ACCELERATED 2G TURN - 56·5°C





FULL REHEAT
31,000 LB





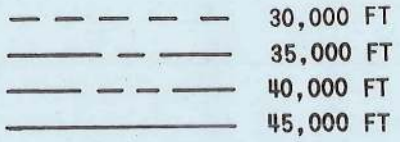
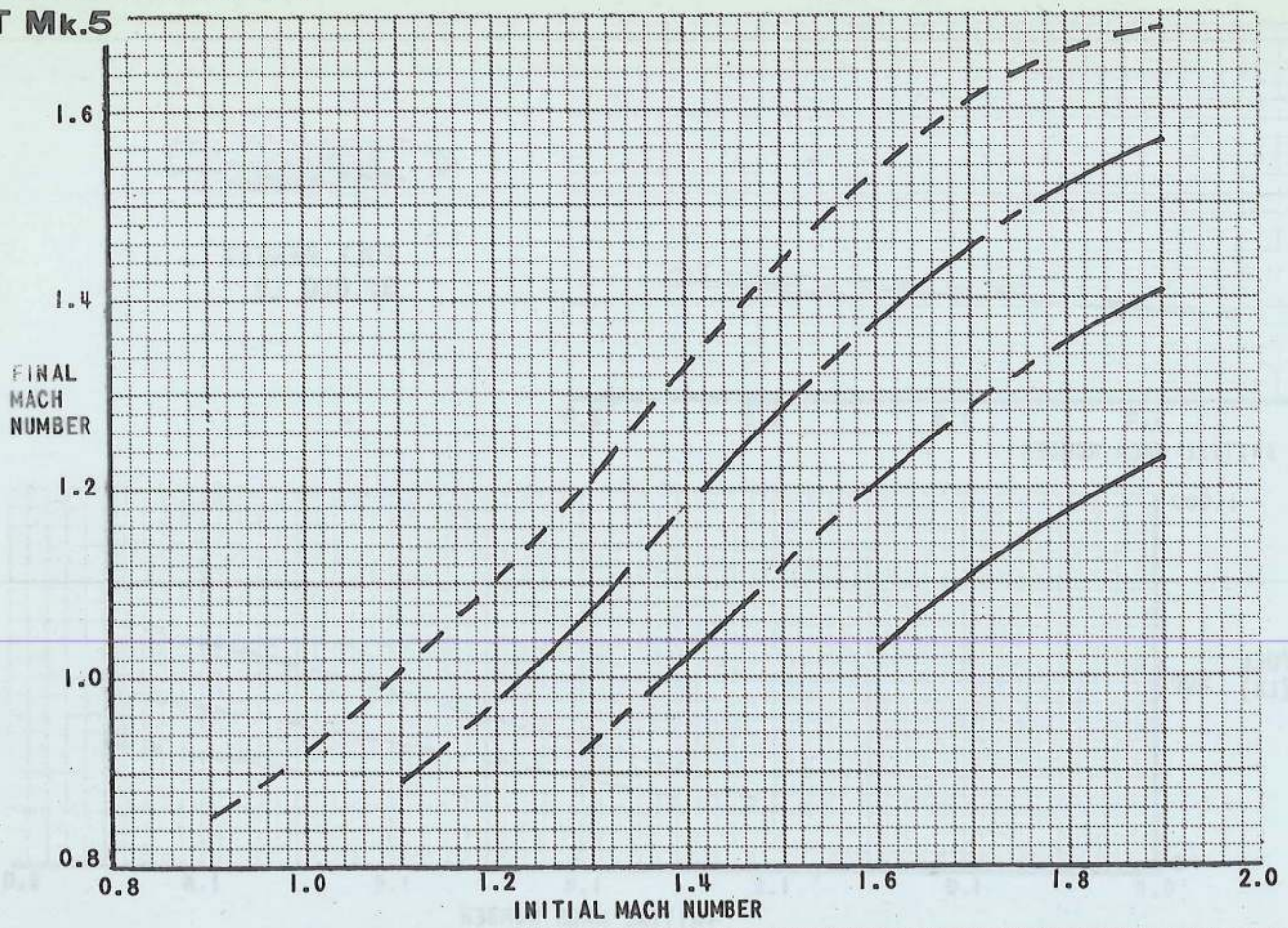
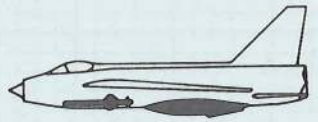


FIG. 5.41A 180° ACCELERATED 3G TURN - 56·5°C

T Mk.5





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT
40,000 FT
45,000 FT

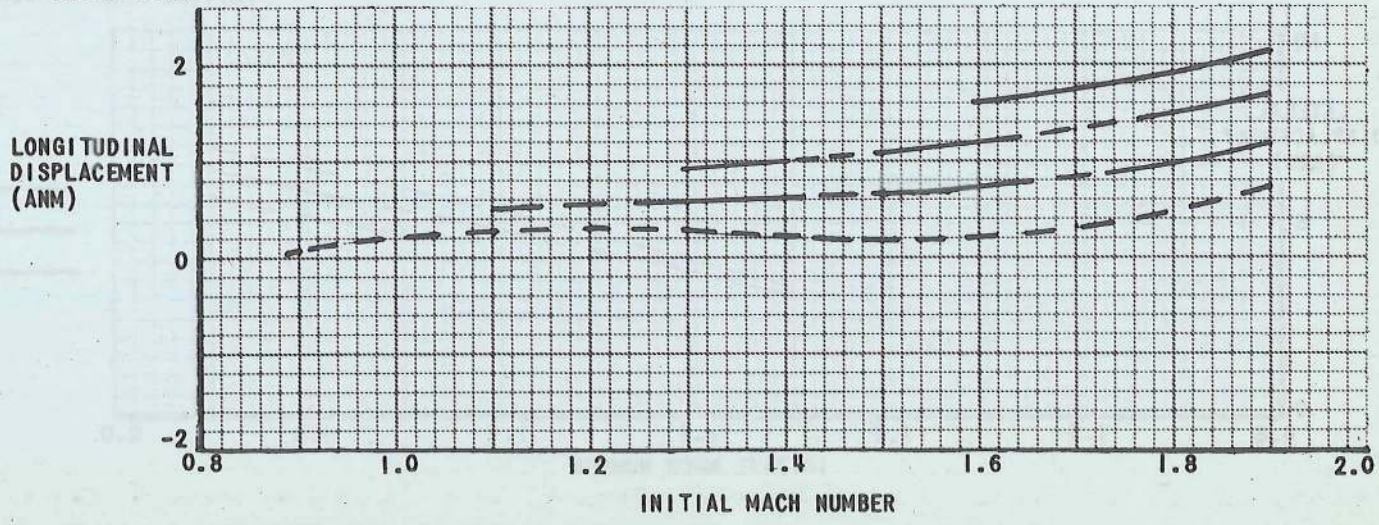
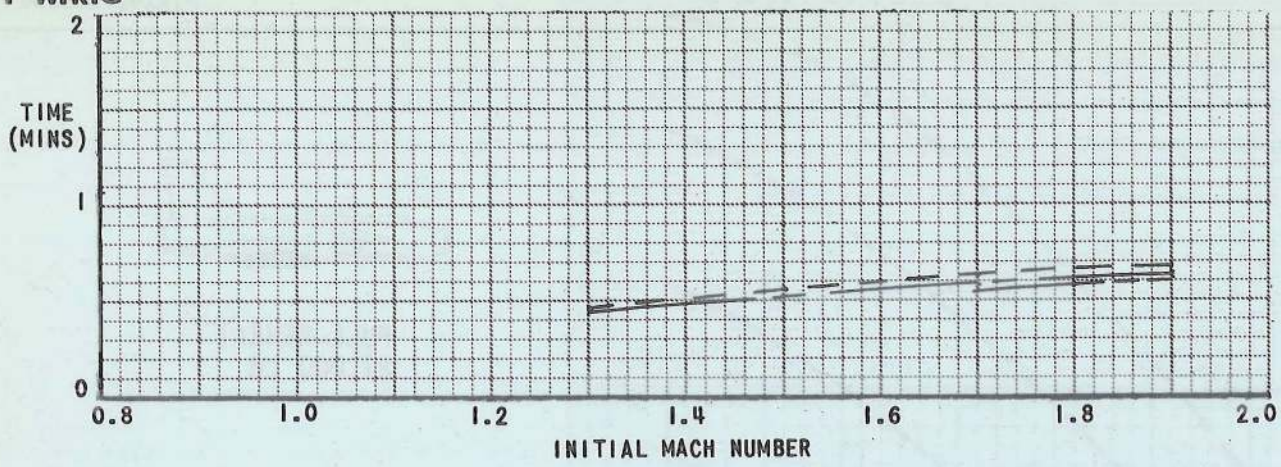
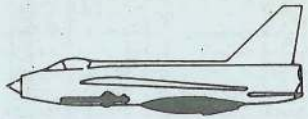
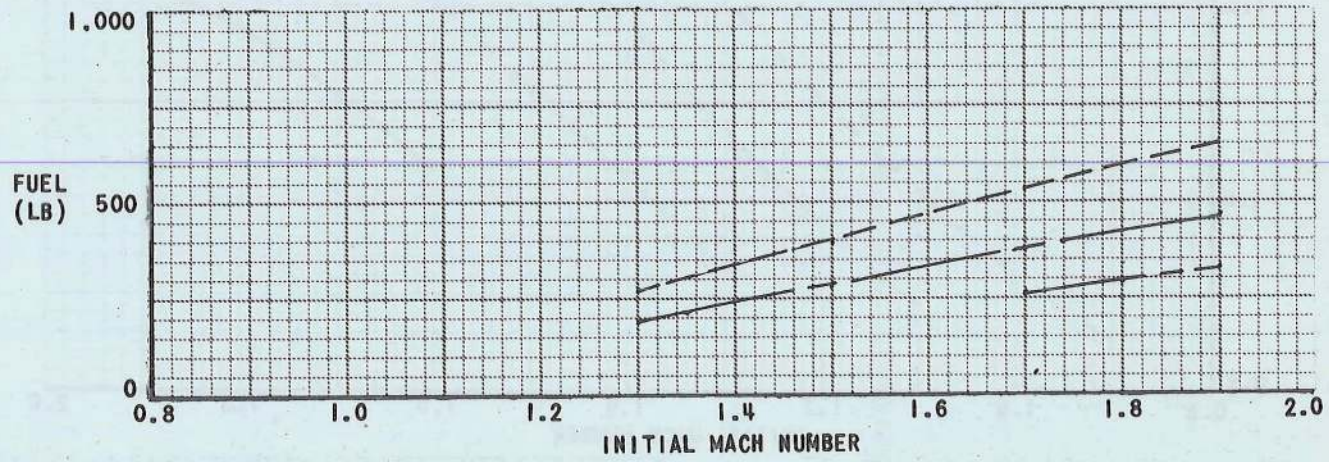


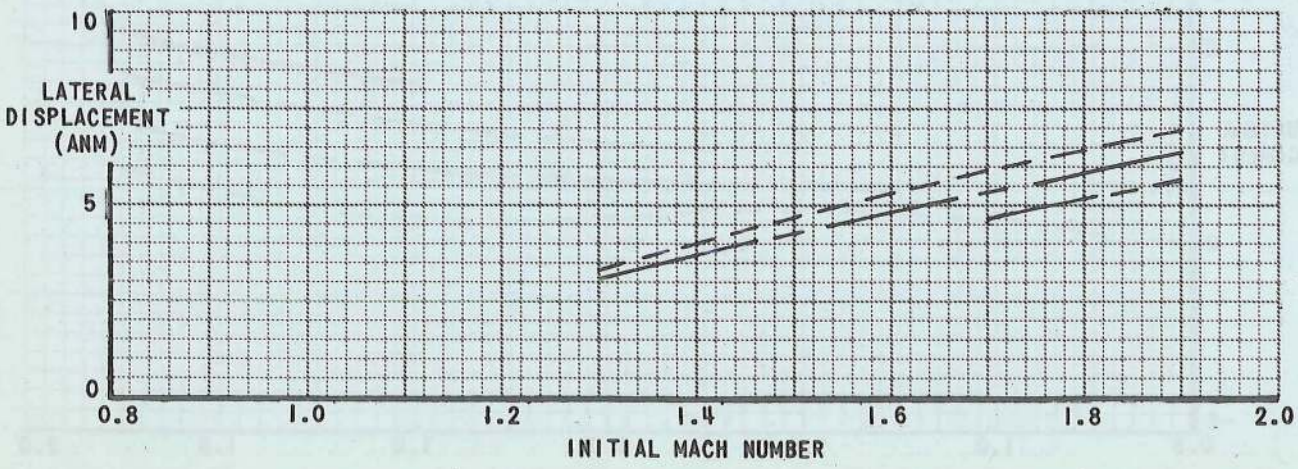
FIG. 5·41B 180° ACCELERATED 3G TURN - 56·5°C





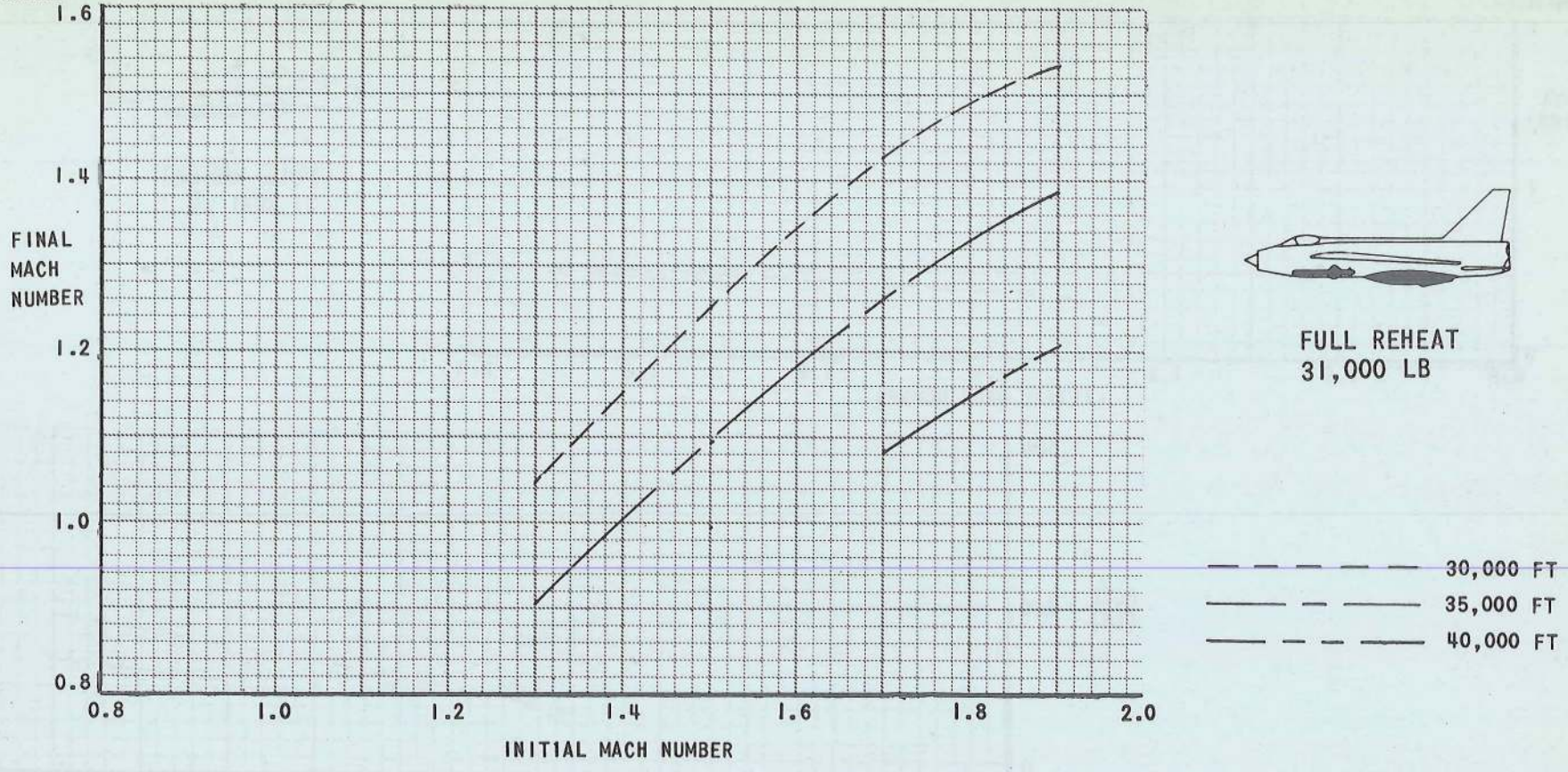
FULL REHEAT
31,000 LB





30,000 FT
35,000 FT
40,000 FT

FIG. 5·42A 180° ACCELERATED 4G TURN - 56·5°C



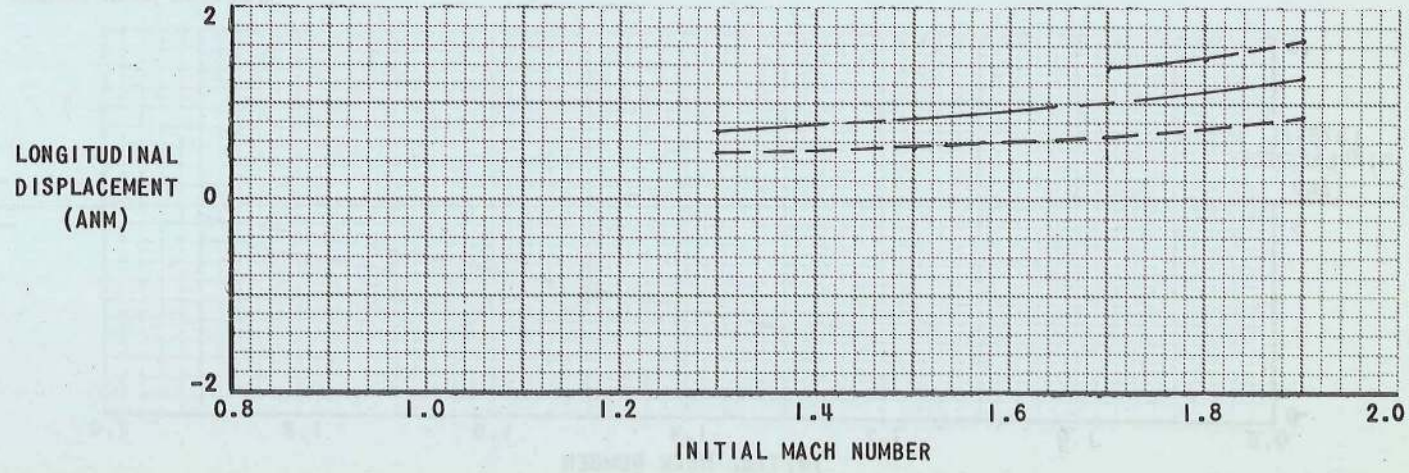
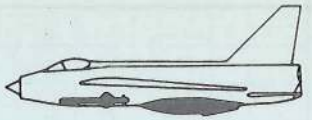
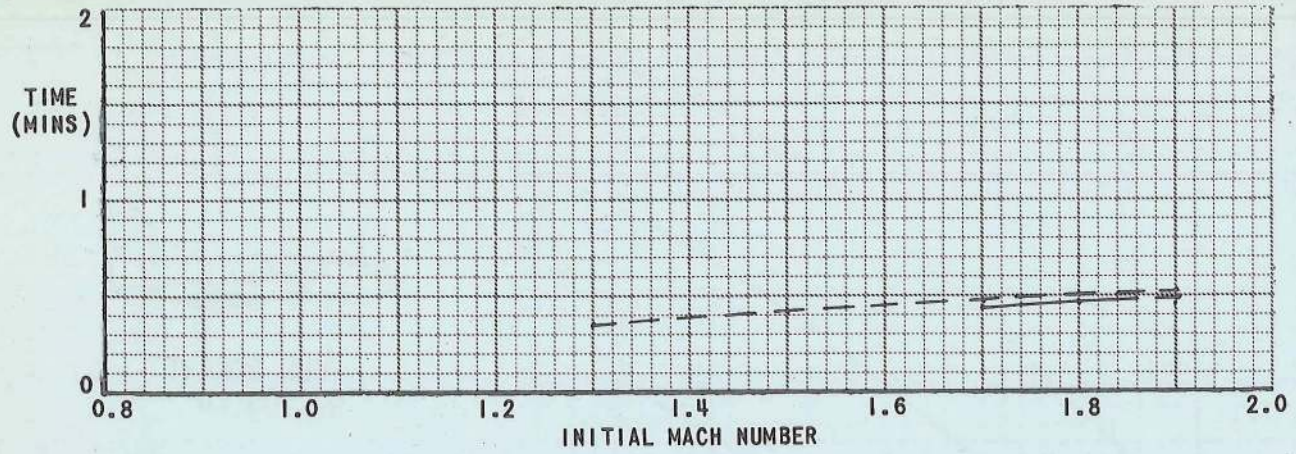
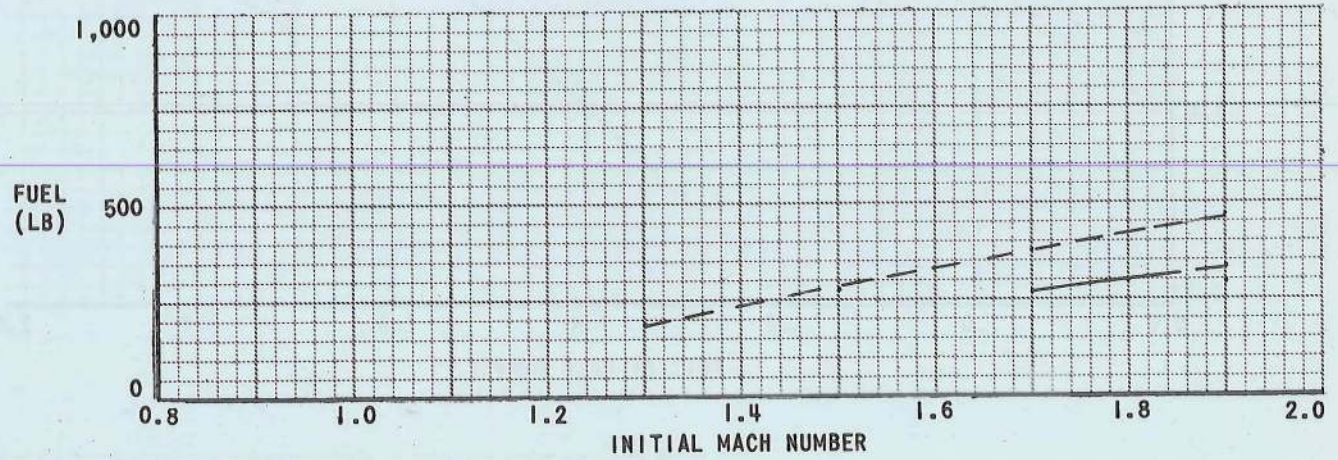


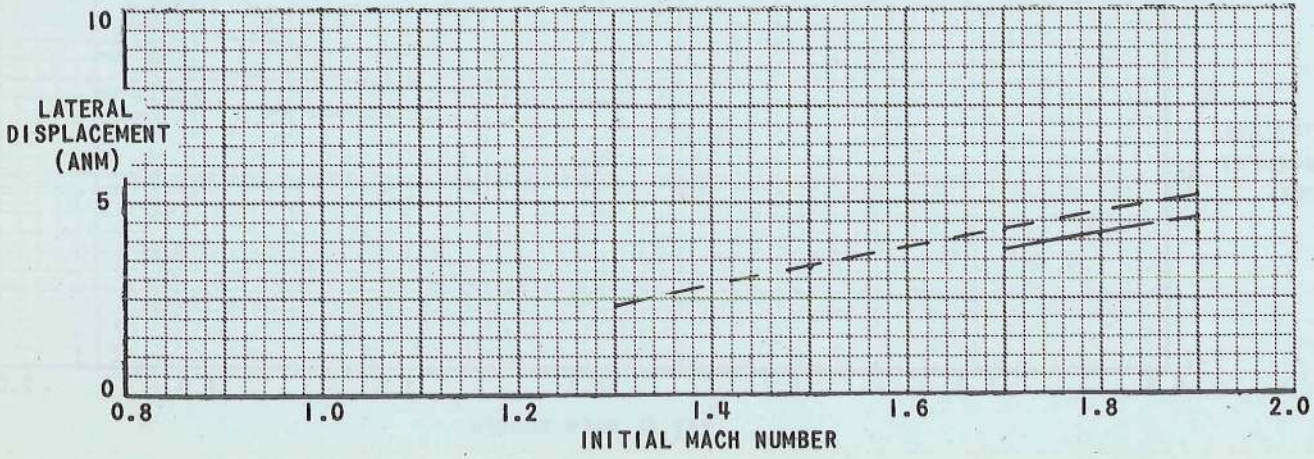
FIG. 5·42B 180° ACCELERATED 4G TURN - 56·5°C



FULL REHEAT
31,000 LB

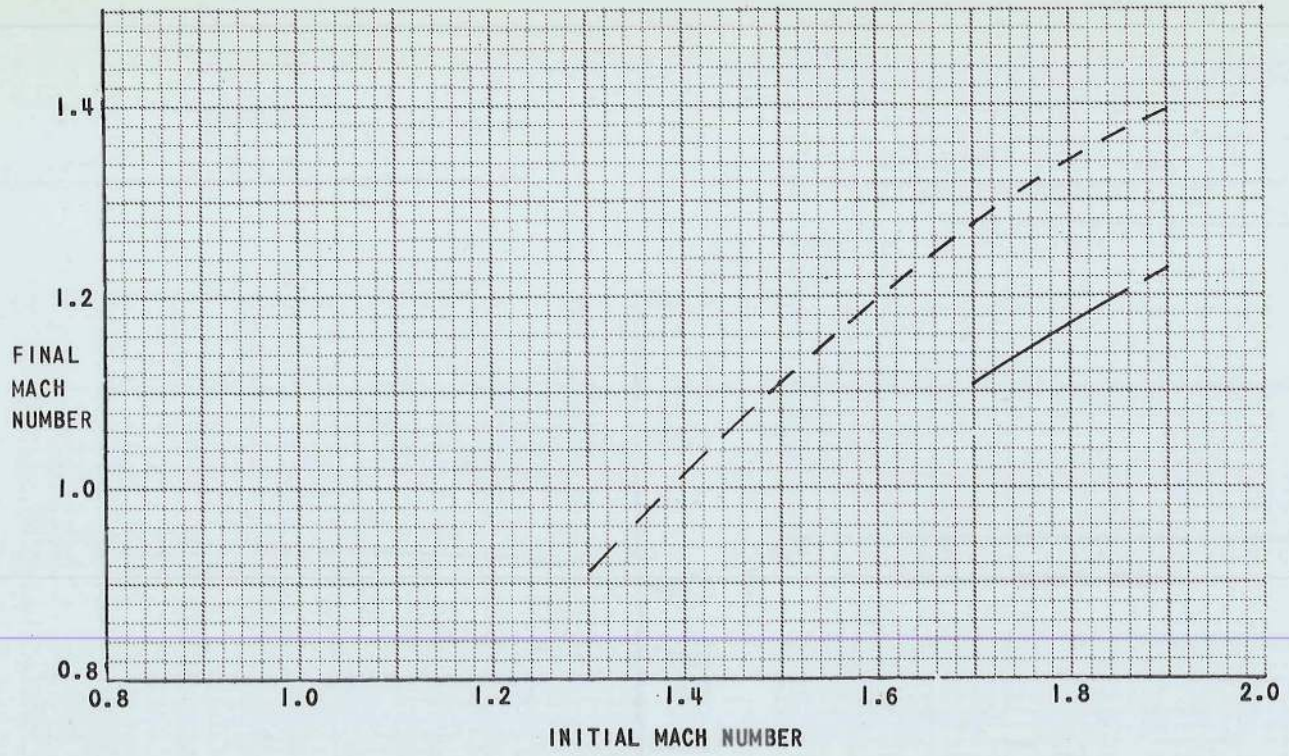


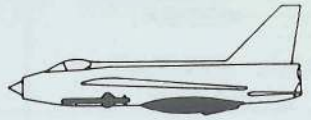




30,000 FT
35,000 FT

FIG. 5·43A 180 ACCELERATED 5G TURN - 56·5°C





FULL REHEAT
31,000 LB

30,000 FT
35,000 FT

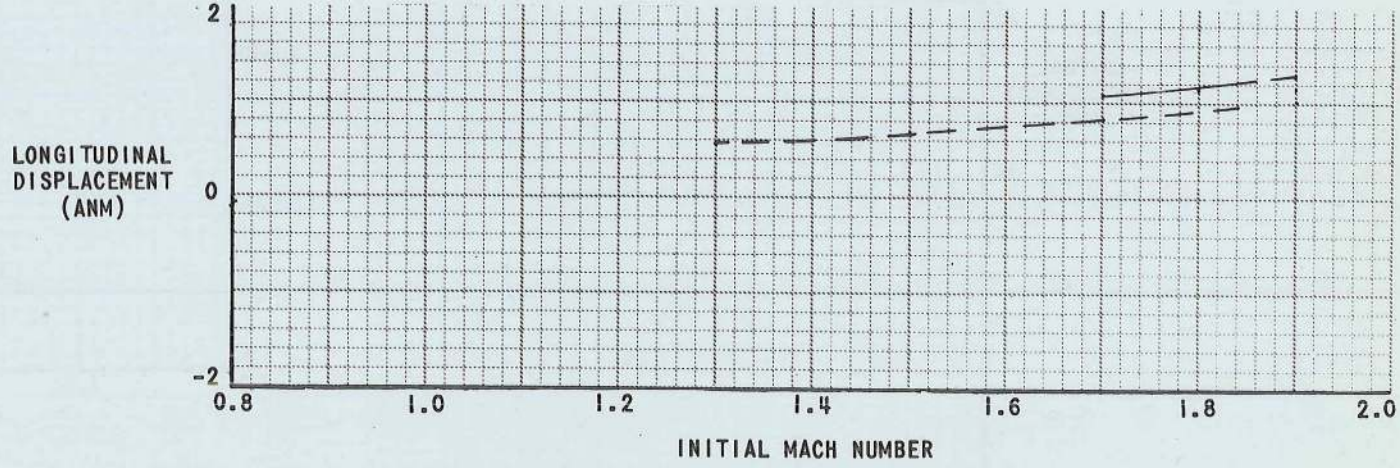
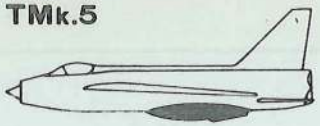
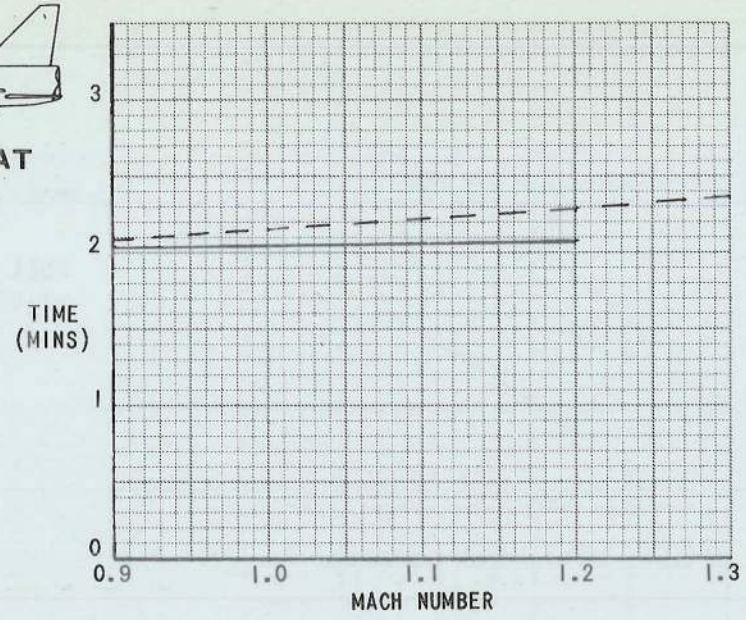


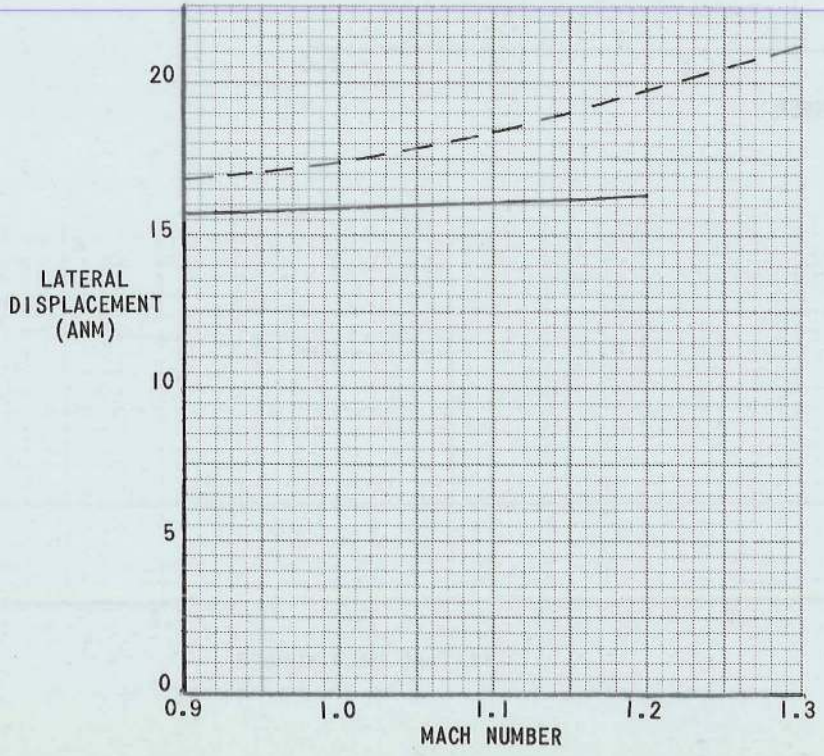
FIG. 5·43B 180° ACCELERATED 5G TURN - 56·5°C

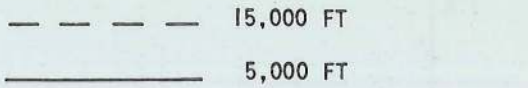
TMk.5



FULL REHEAT
31,000LB







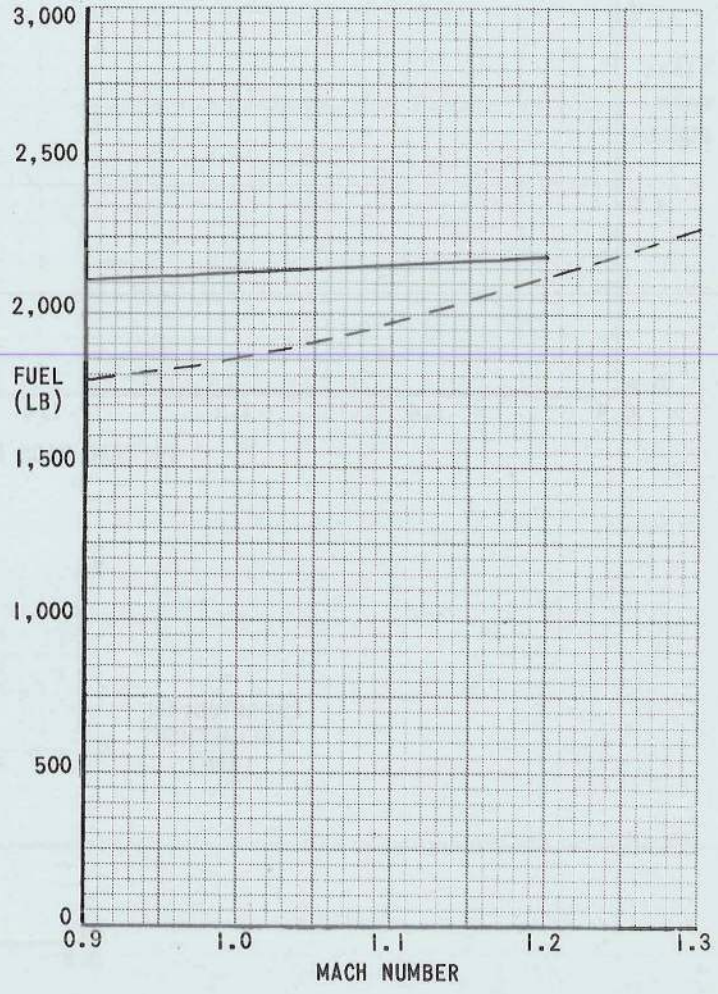
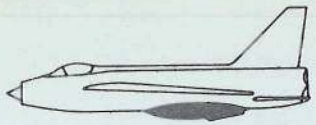


FIG. 5.44A 180° ACCELERATED 1·4G TURN ICAO+20°C



31,000LB

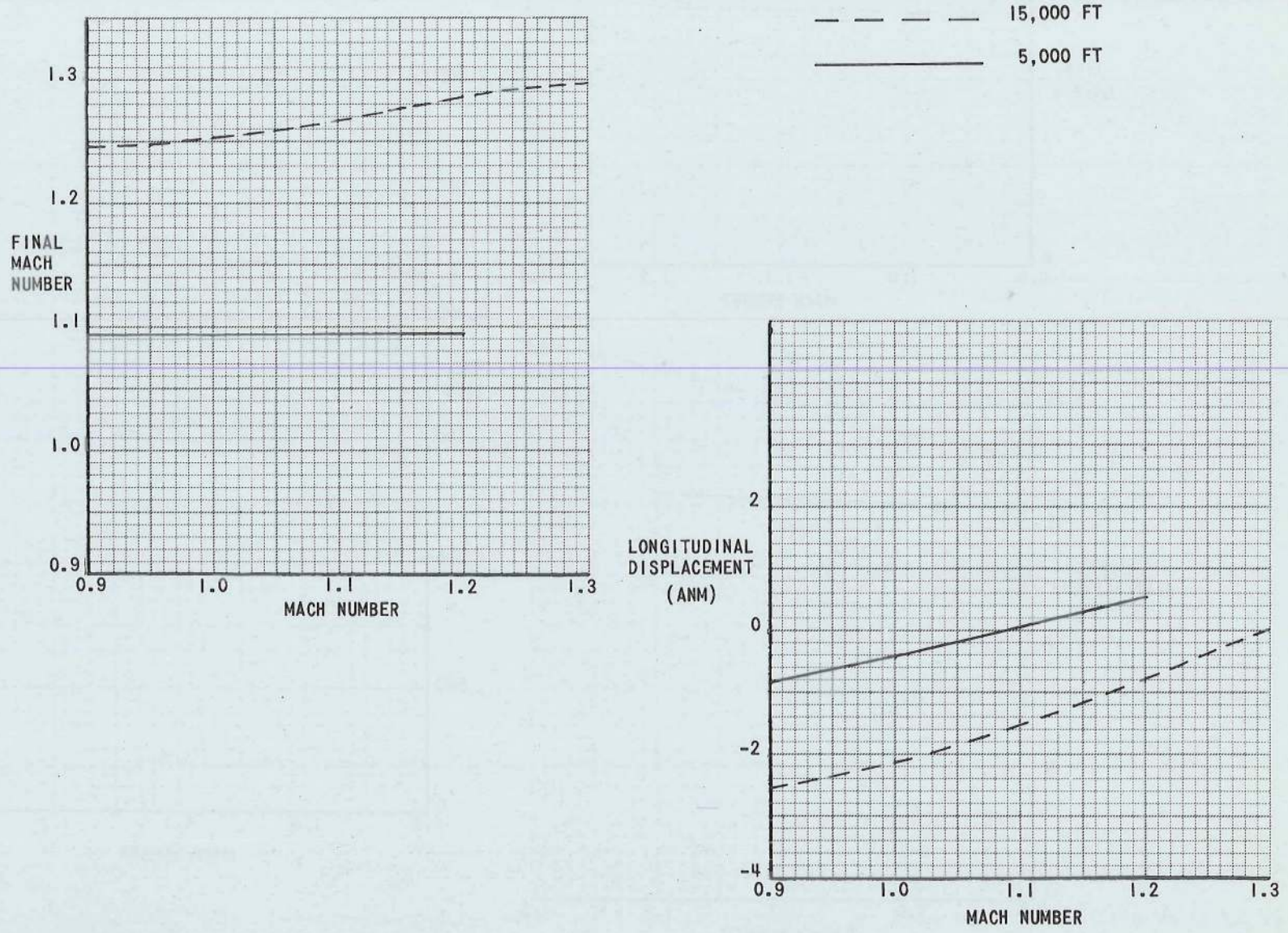
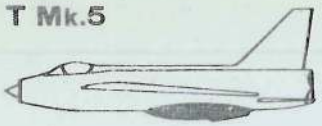
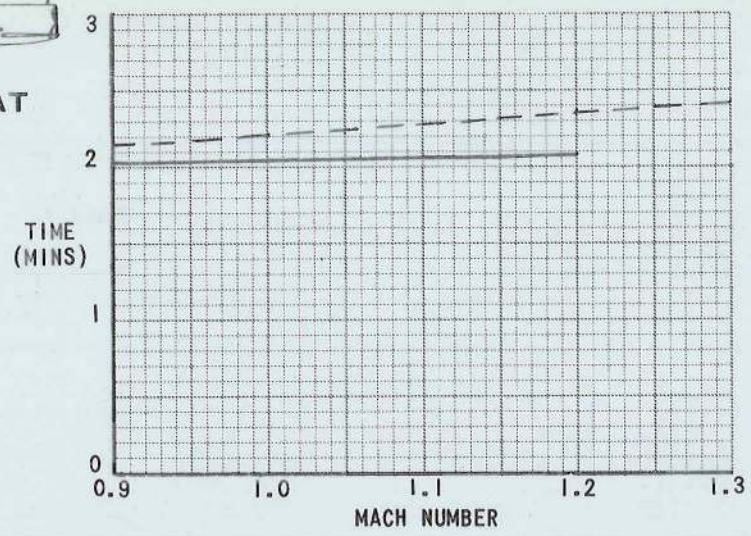


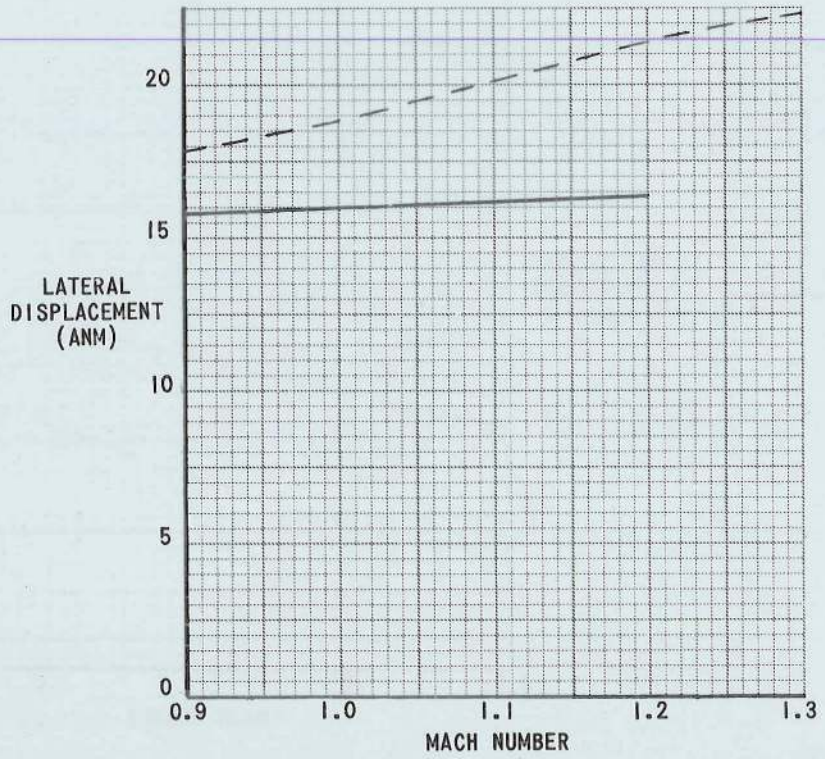
FIG. 5.44B 180° ACCELERATED 1·4G TURN ICAO+20°C

T Mk.5



FULL REHEAT
31,000LB





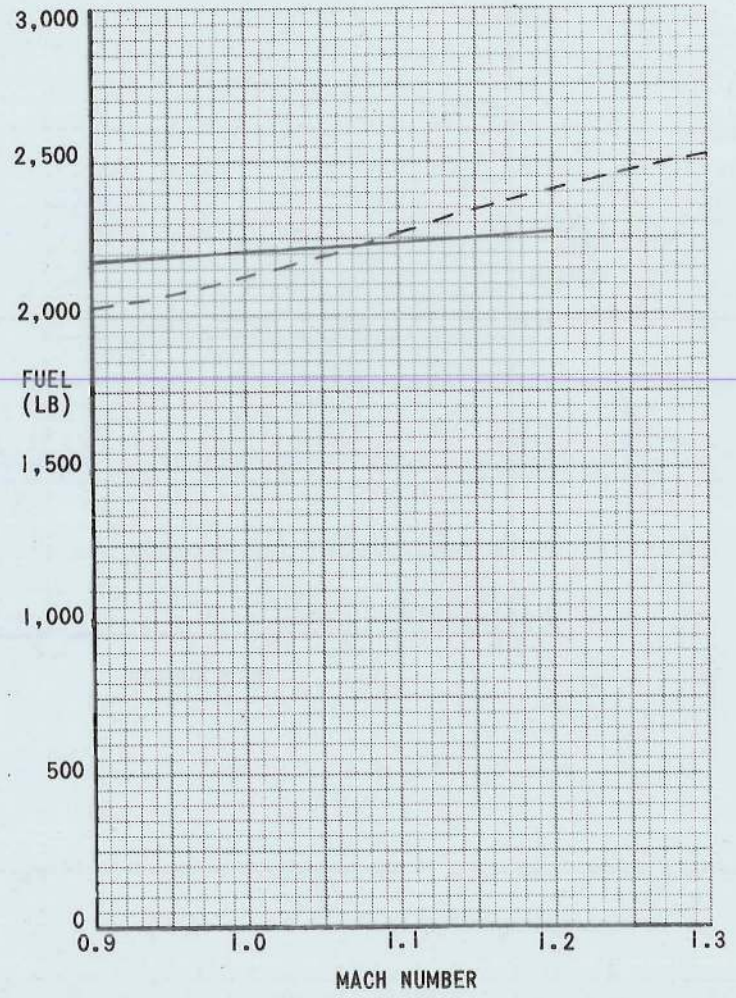
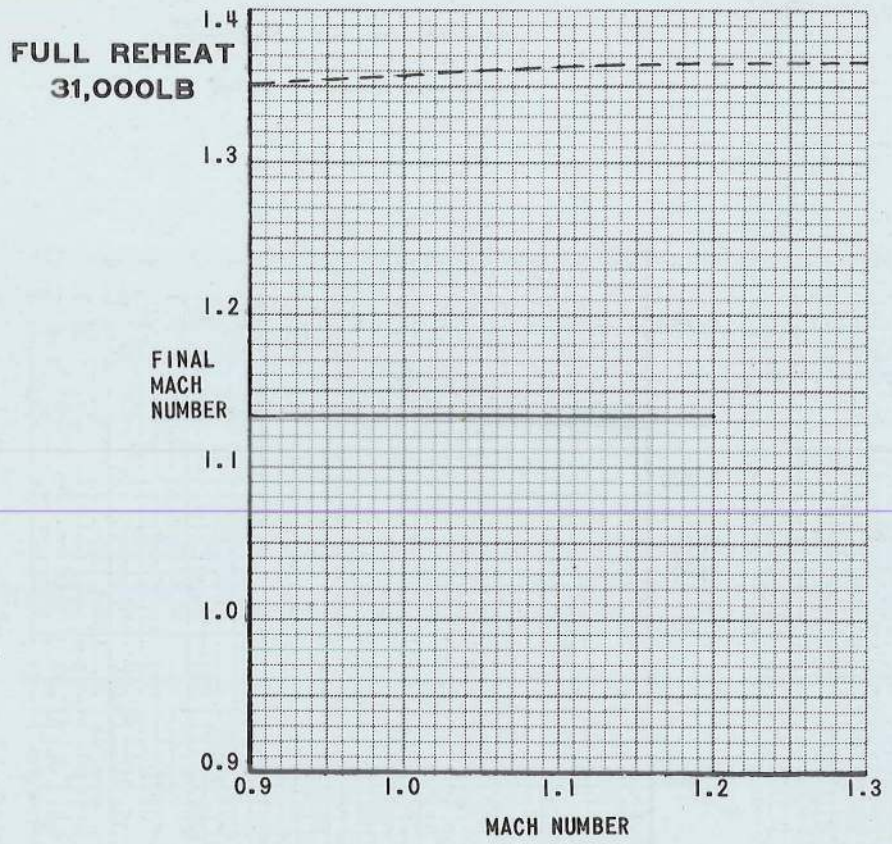


FIG. 5.45A 180° ACCELERATED 1·4G TURN ICAO+10°C



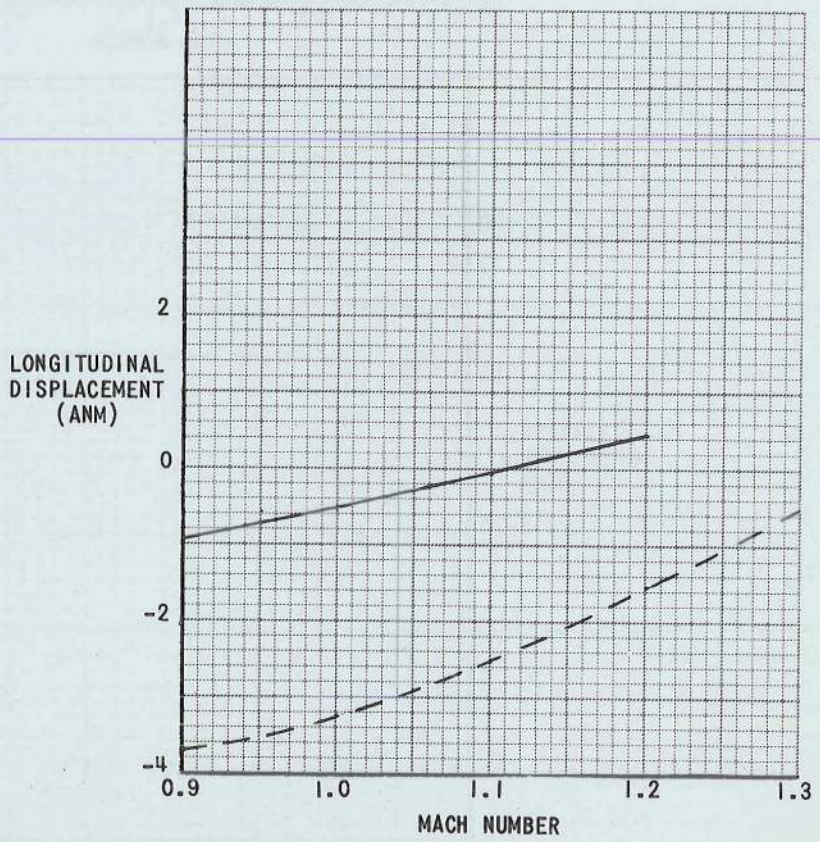
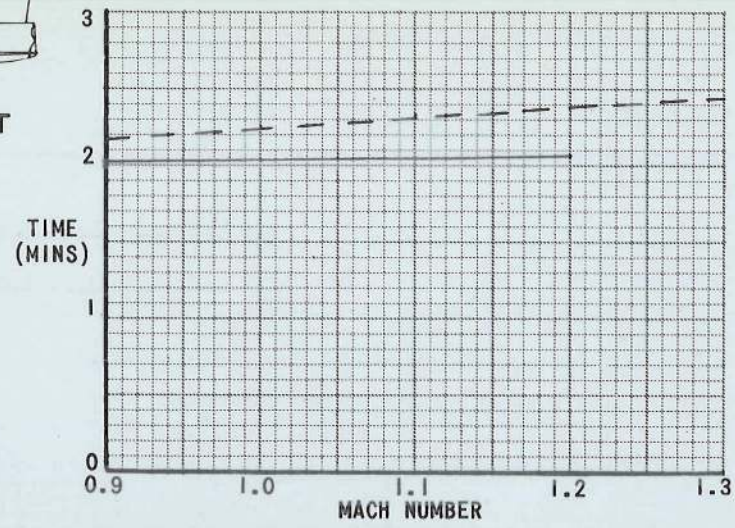
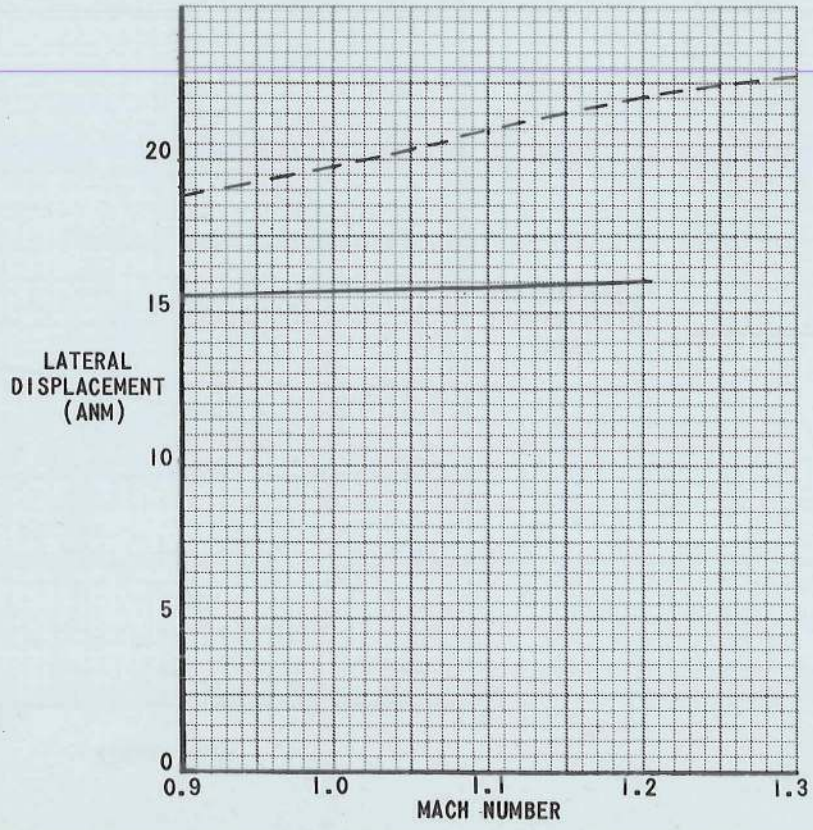
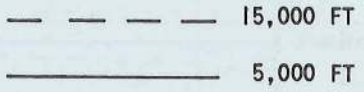


FIG. 5.45B 180° ACCELERATED 1·4G TURN ICAO+10°C

FULL REHEAT
31,000LB







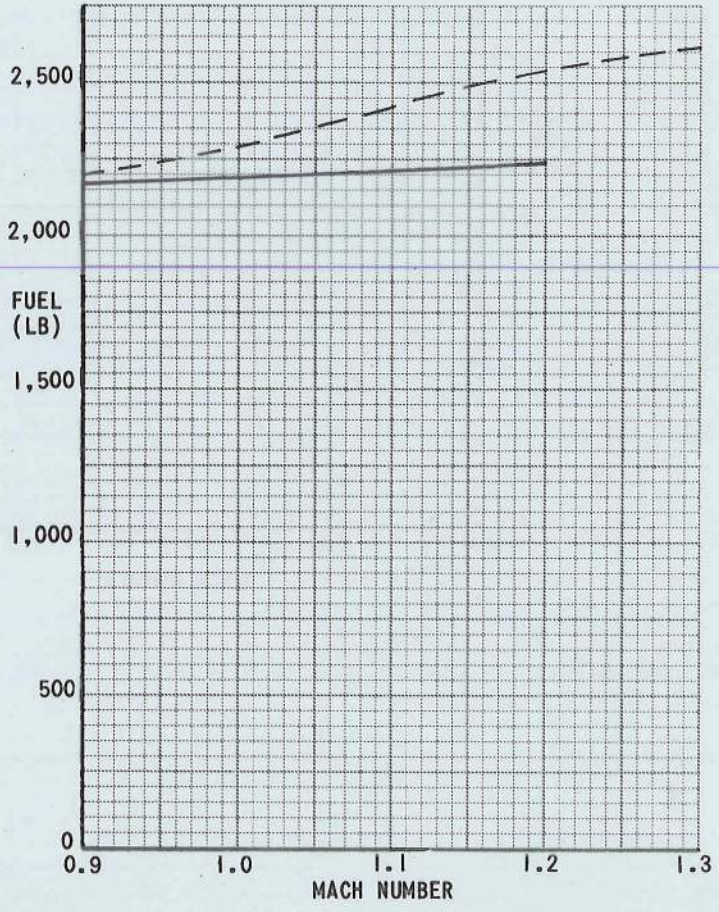
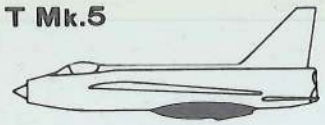
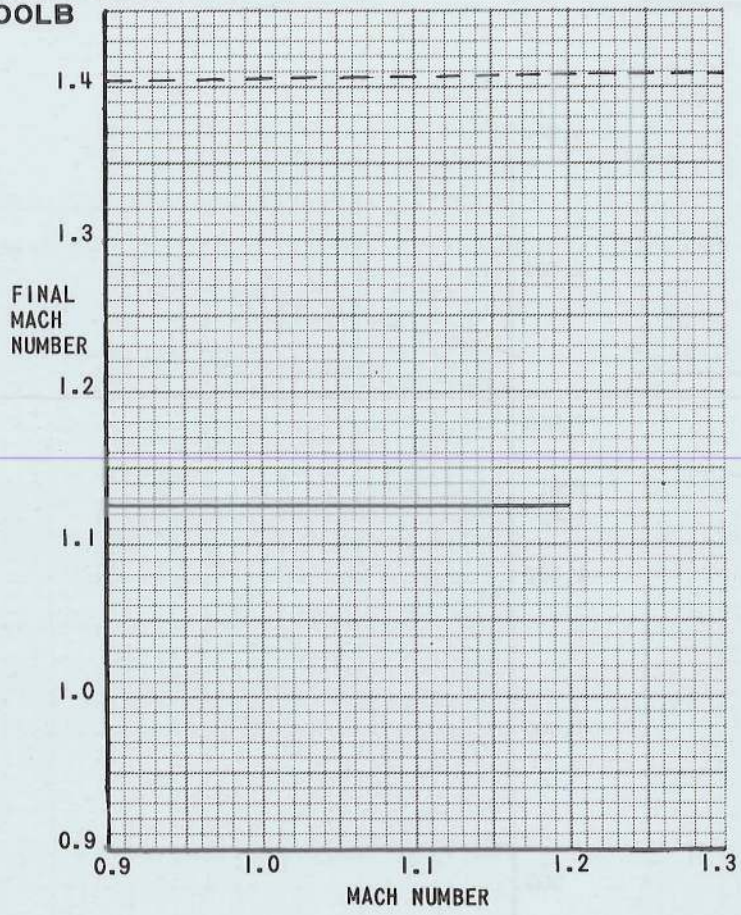


FIG. 5.46A 180° ACCELERATED 1·4G TURN ICAO



FULL REHEAT
31,000LB



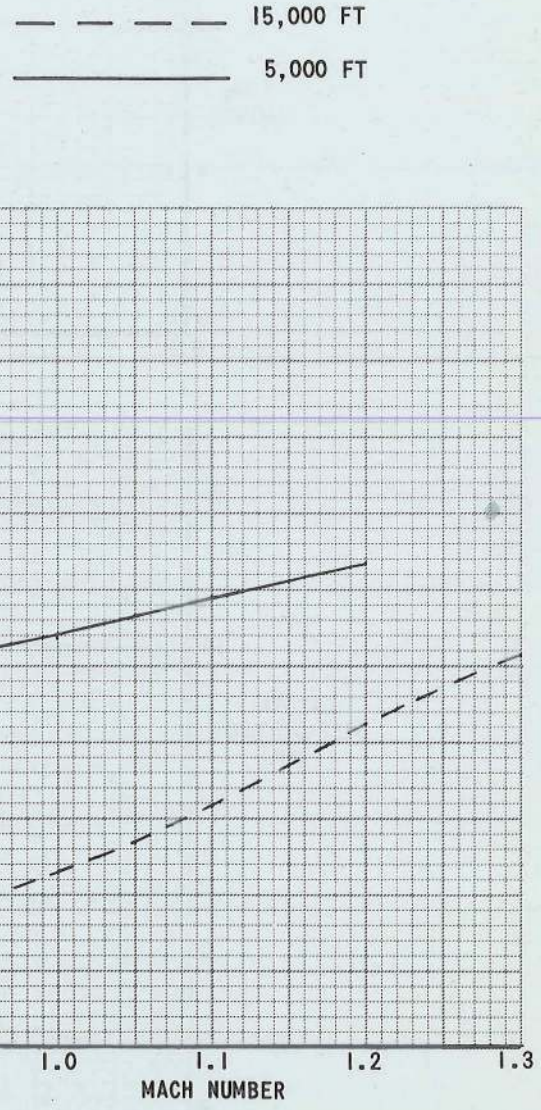
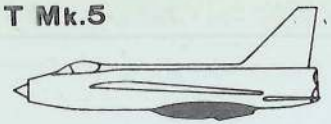
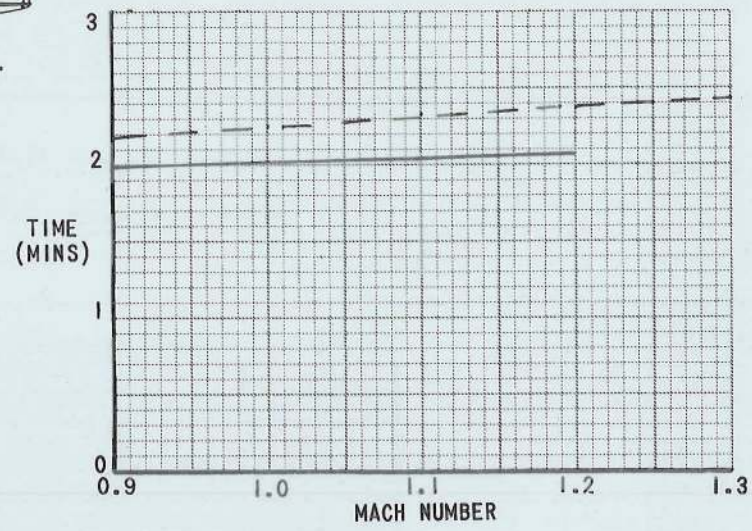
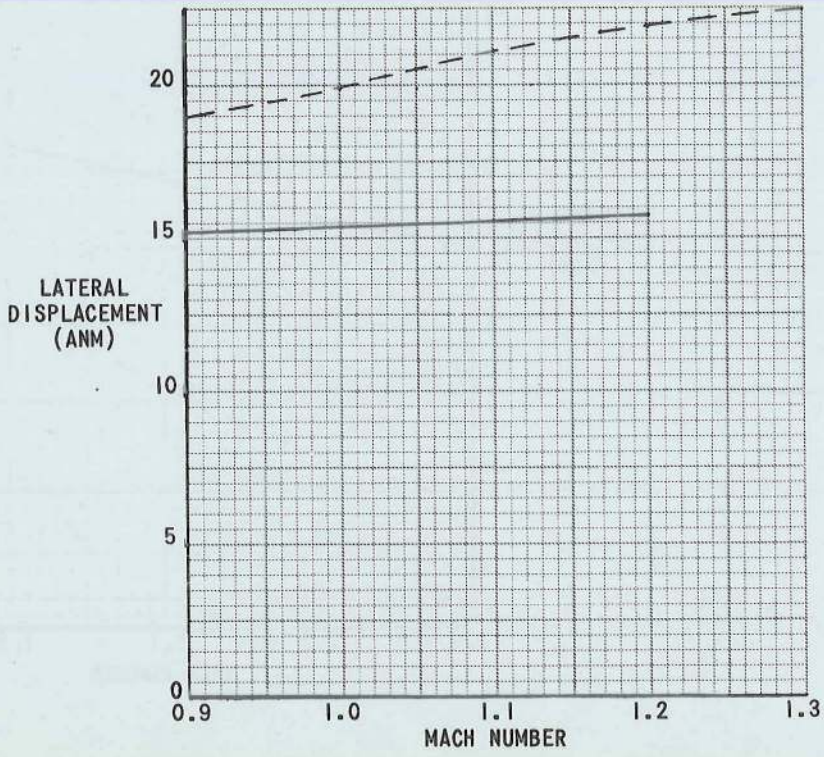


FIG. 5.46B 180° ACCELERATED 1·4G TURN ICAO



FULL REHEAT
31,000LB





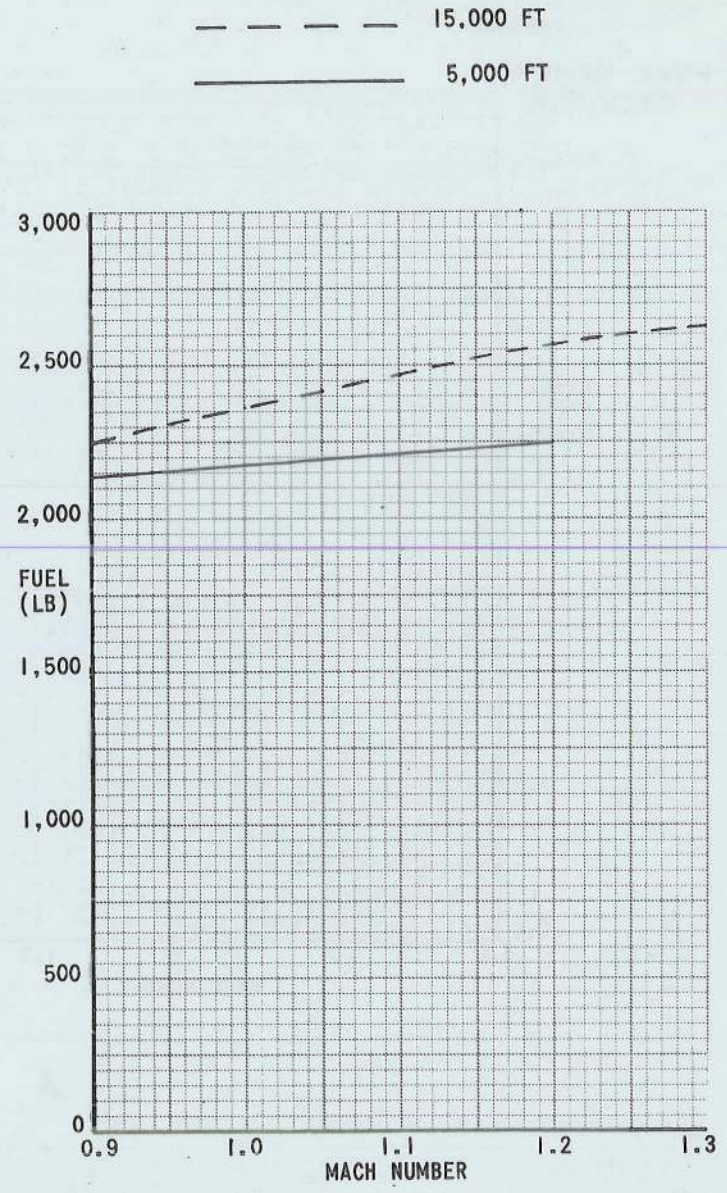
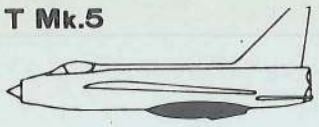


FIG. 5.47A 180° ACCELERATED 1·4G TURN ICAO-10°C



FULL REHEAT
31,000LB

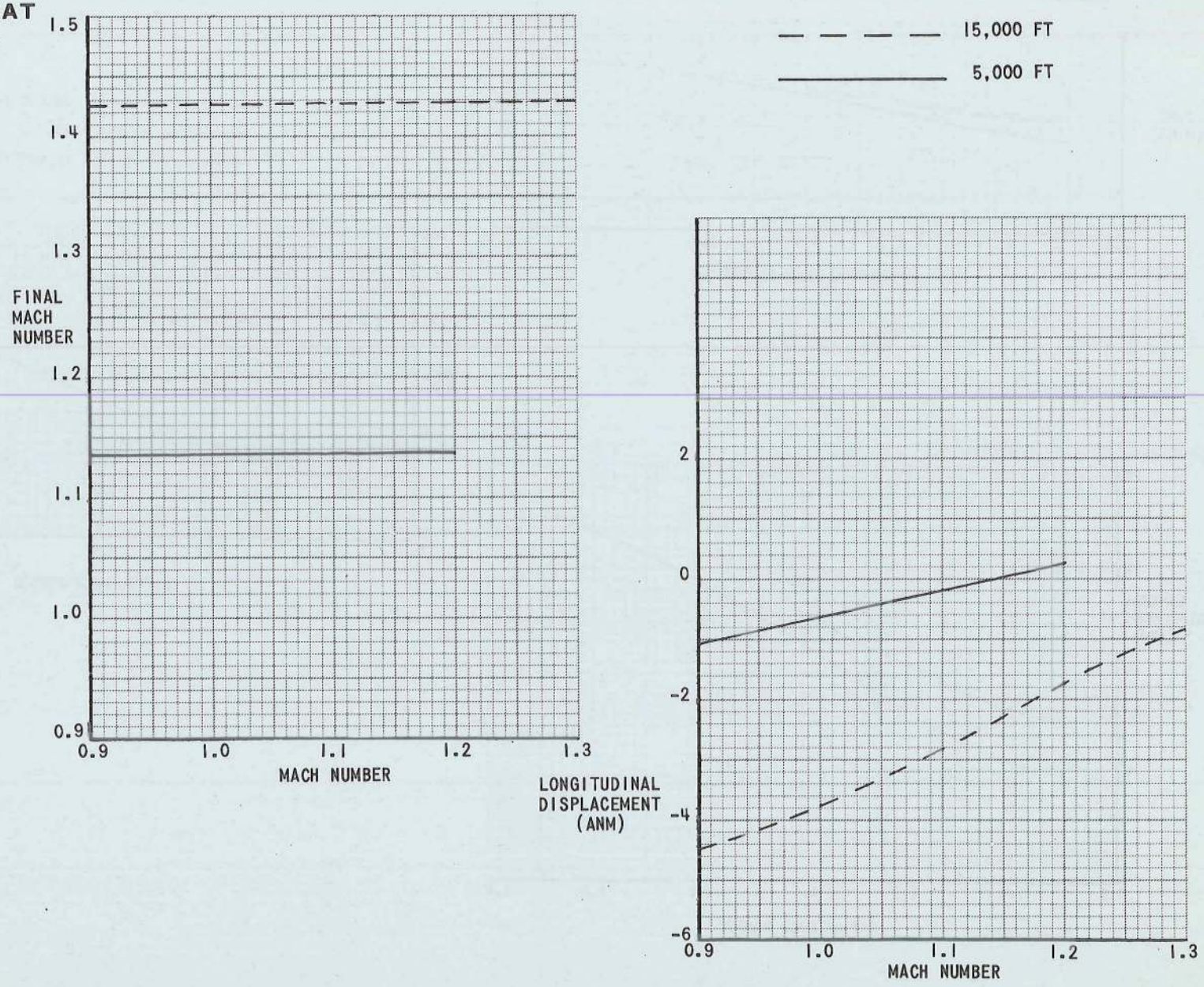
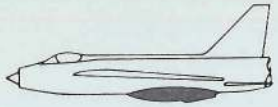
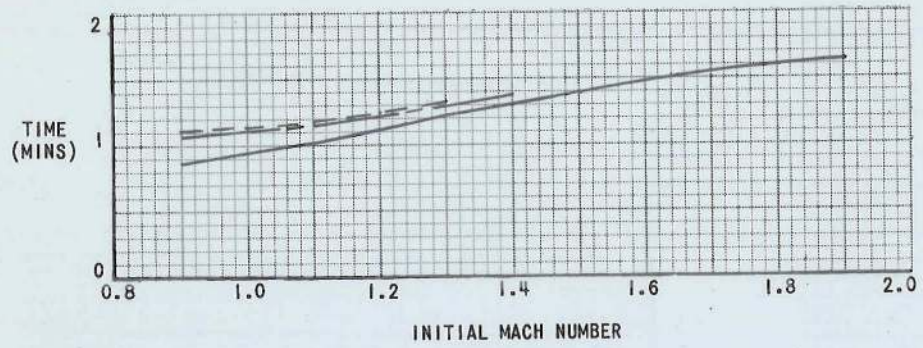
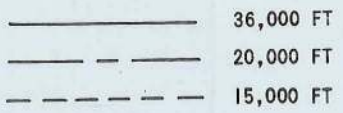


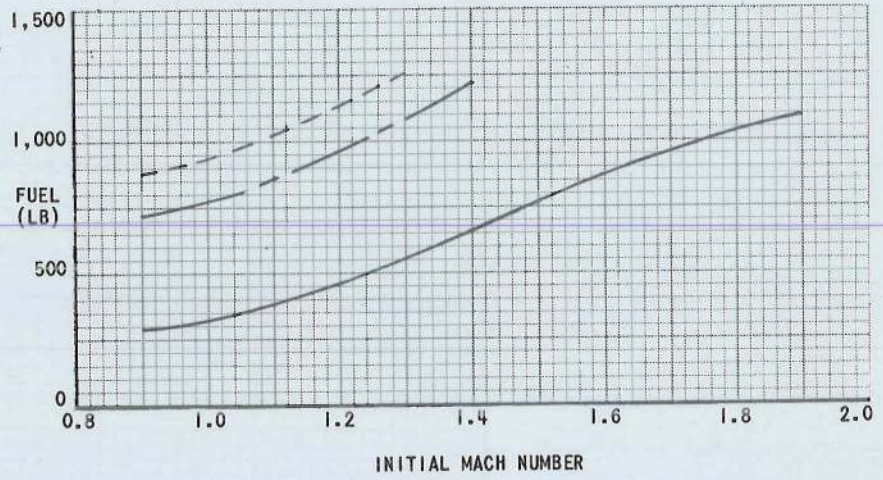
FIG. 5.47B 180° ACCELERATED 1·4G TURN ICAO-10°C



FULL REHEAT
31,000LB







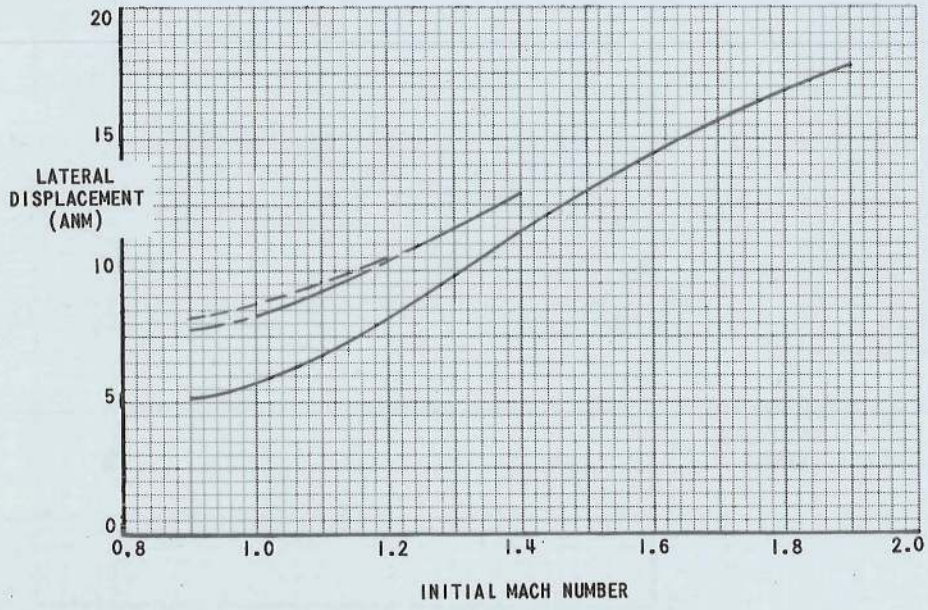
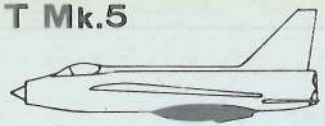


FIG. 5.48A 180° ACCELERATED 2G TURN ICAO + 20°C



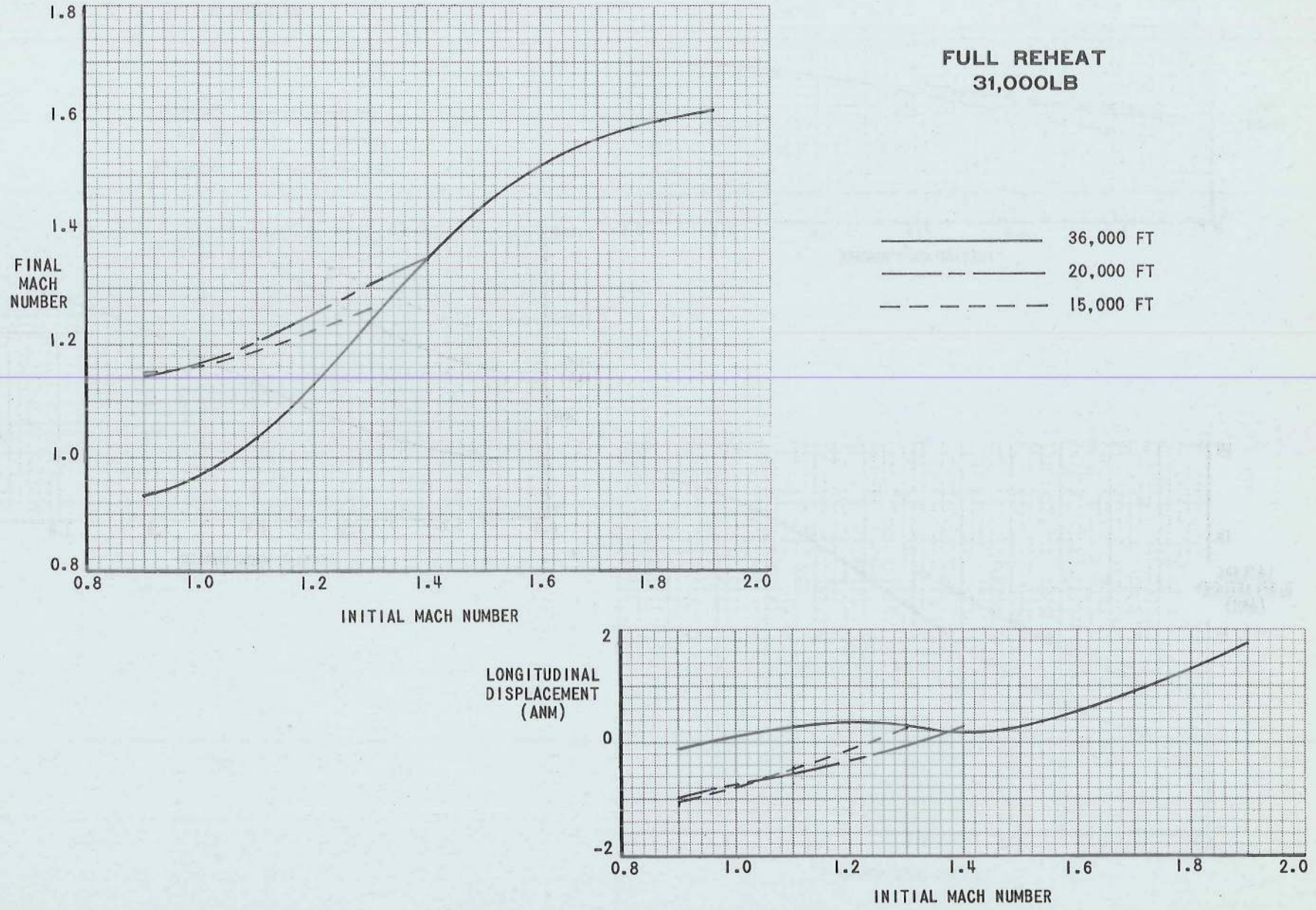
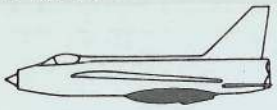
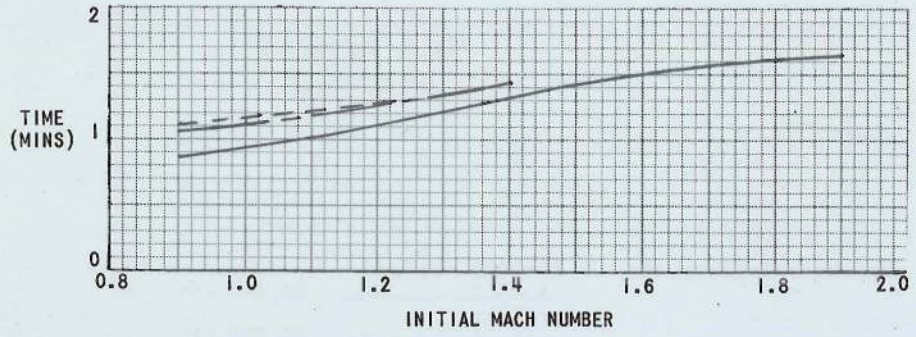
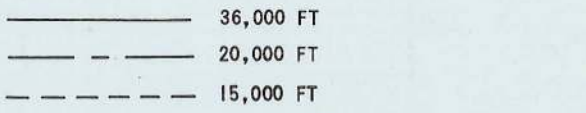


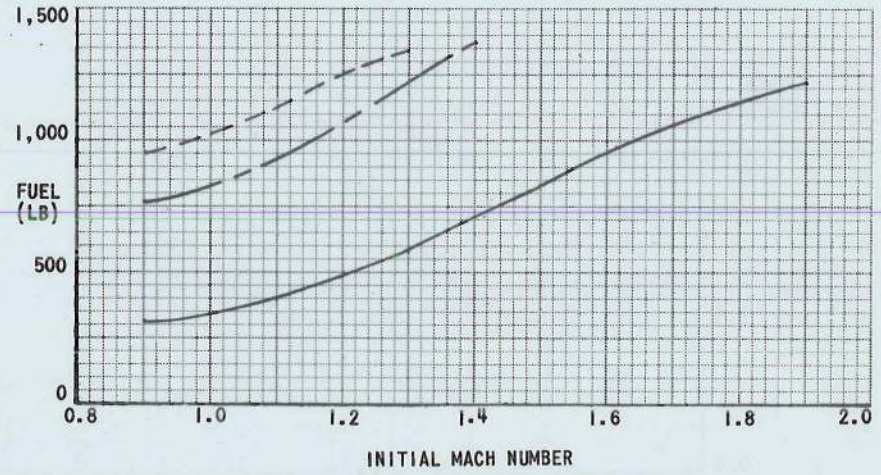
FIG. 5.48B 180° ACCELERATED 2G TURN ICAO + 20°C



FULL REHEAT
31,000LB







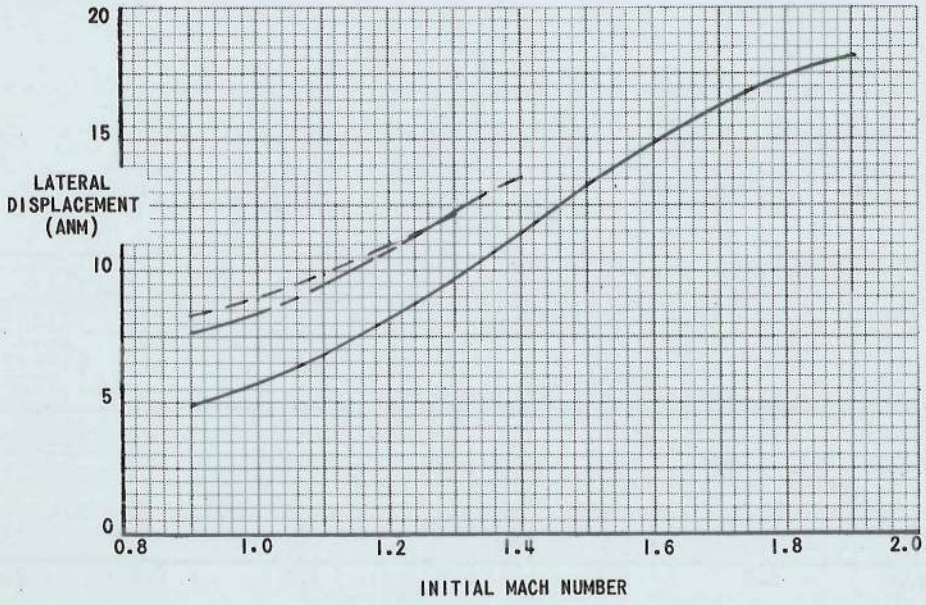
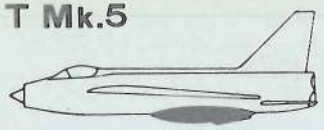
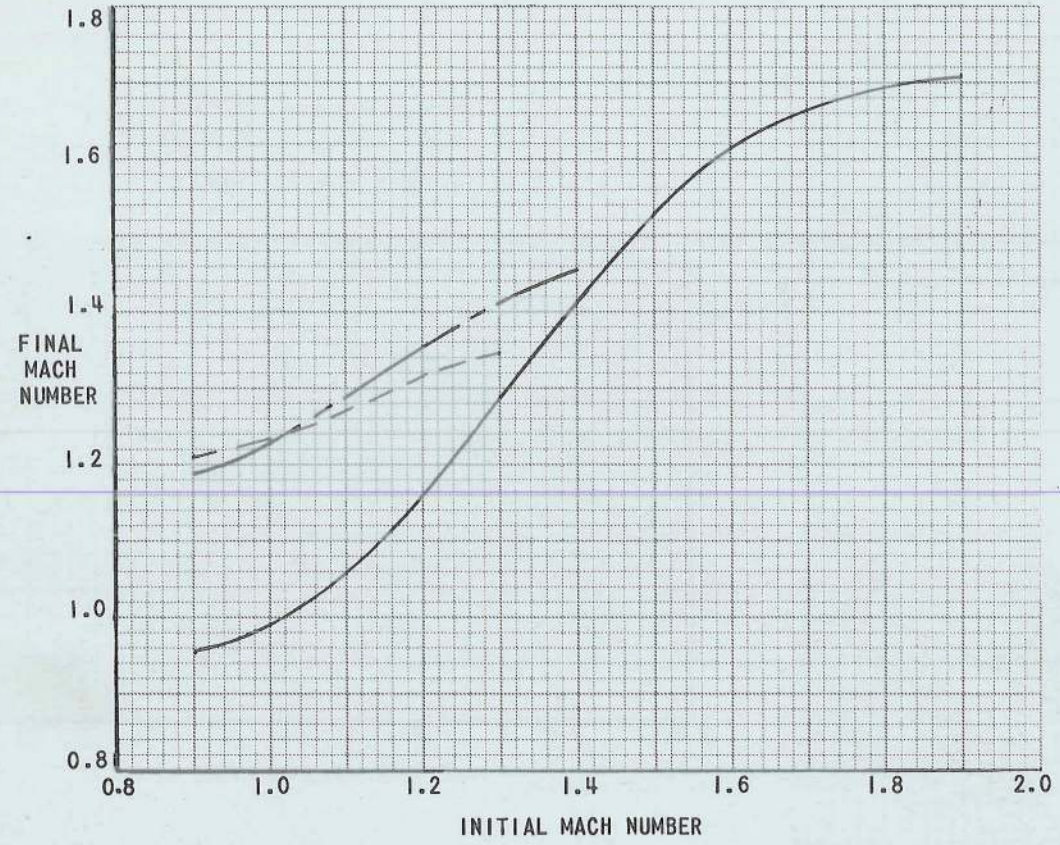


FIG. 5.49A 180° ACCELERATED 2G TURN ICAO + 10°C

T Mk.5





FULL REHEAT
31,000LB

36,000 FT
20,000 FT
15,000 FT

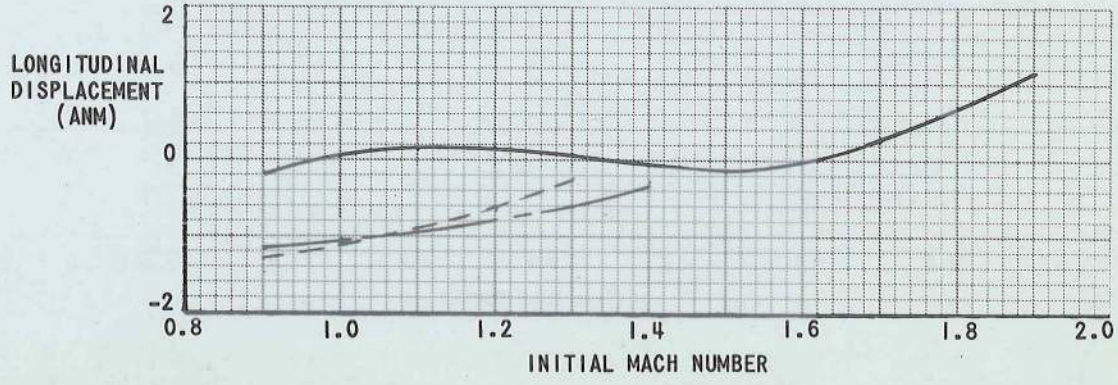
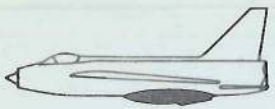
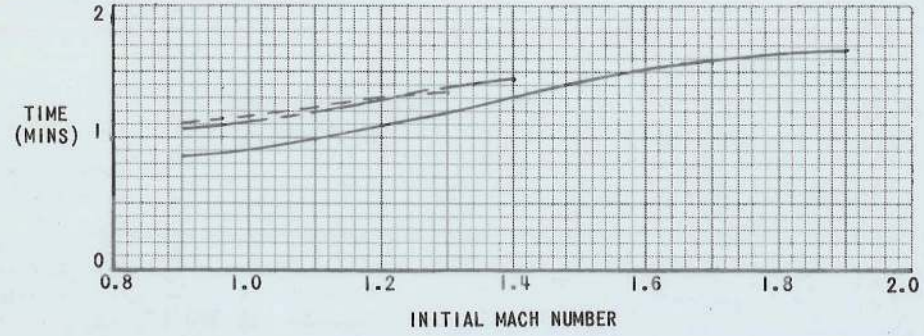
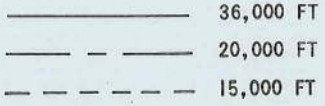


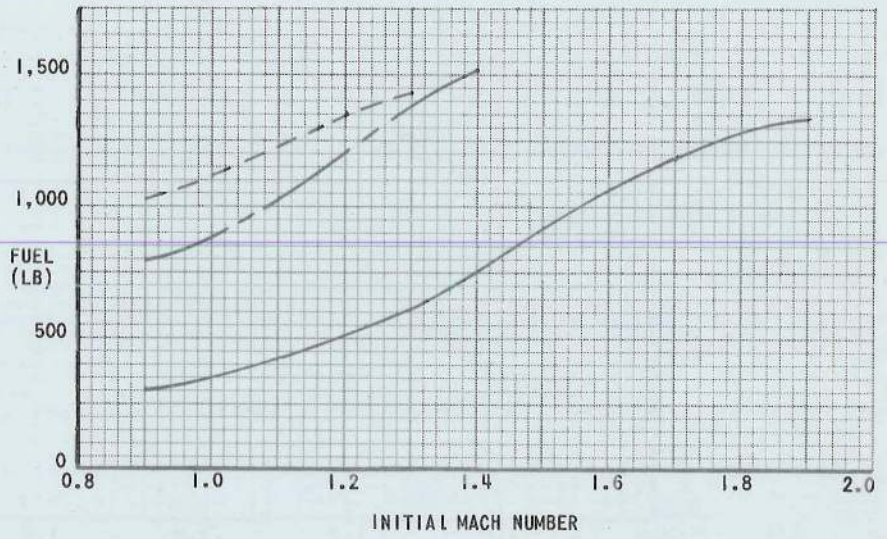
FIG. 5.49B 180° ACCELERATED 2G TURN ICAO + 10°C



FULL REHEAT
31,000LB







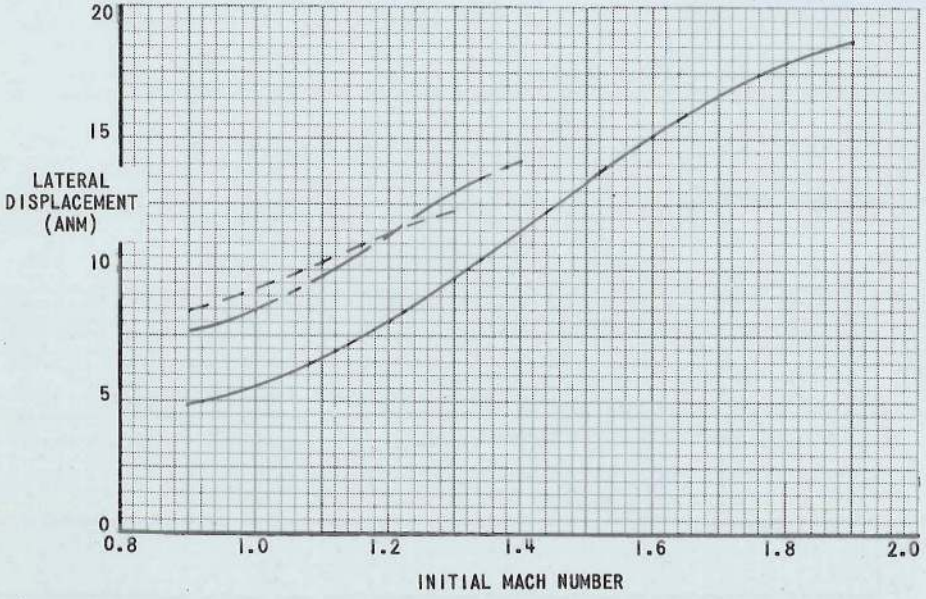
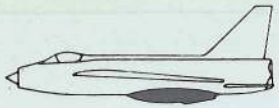
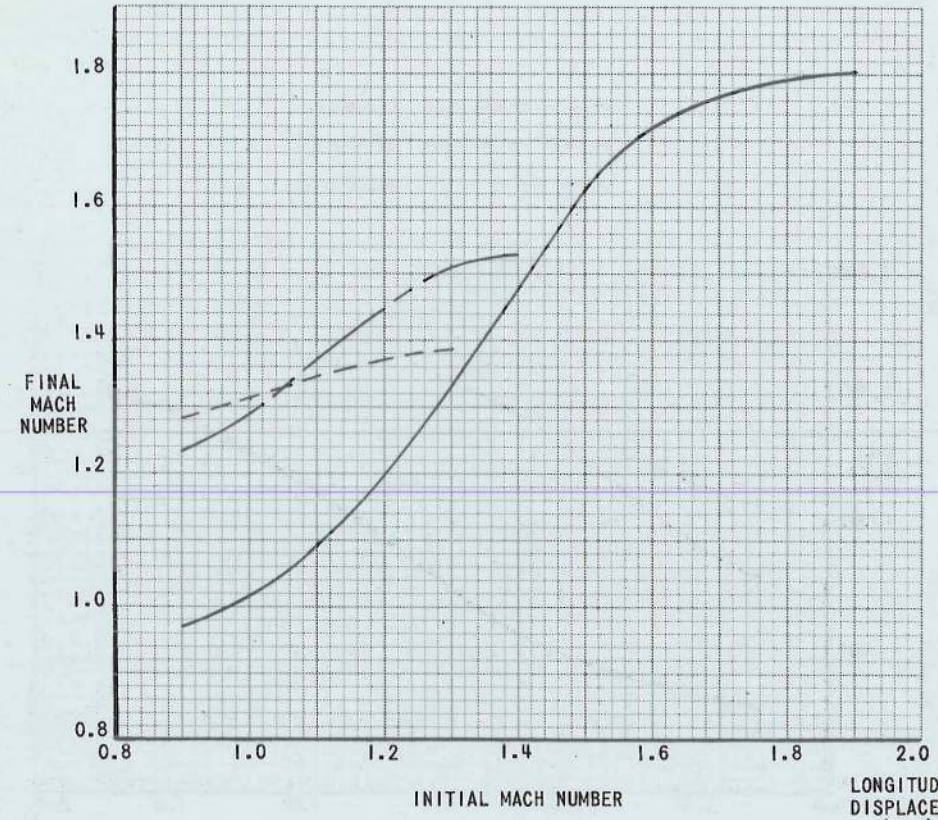


FIG. 5.50A 180° ACCELERATED 2G TURN ICAO





FULL REHEAT
31,000LB

36,000 FT
20,000 FT
15,000 FT

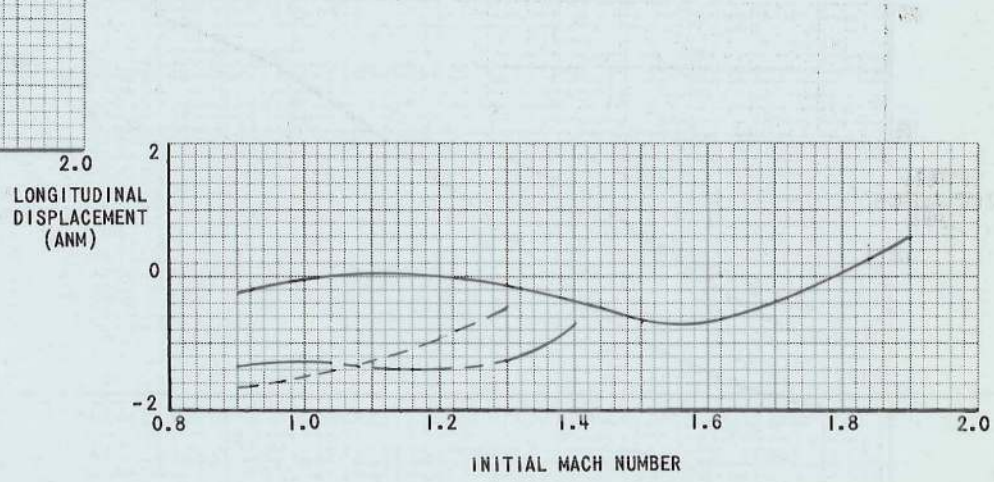
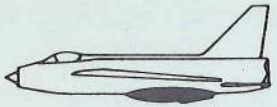
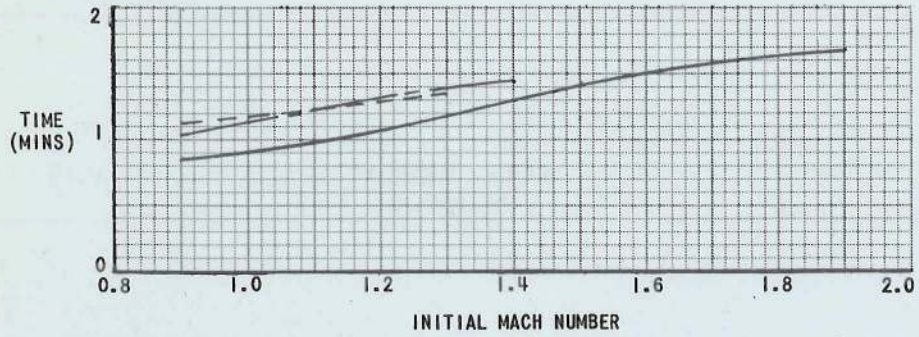
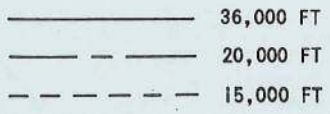


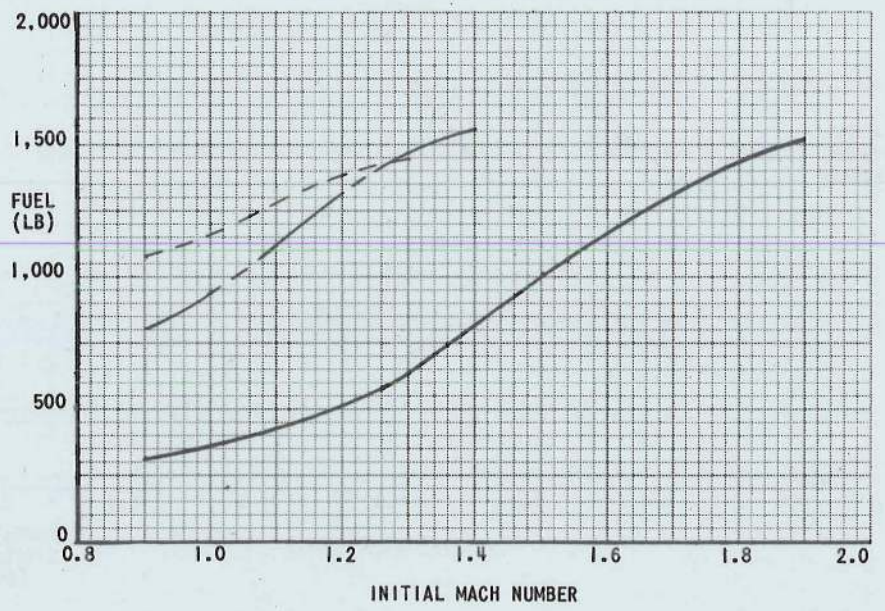
FIG. 5.50B 180° ACCELERATED 2G TURN ICAO



FULL REHEAT
31,000LB







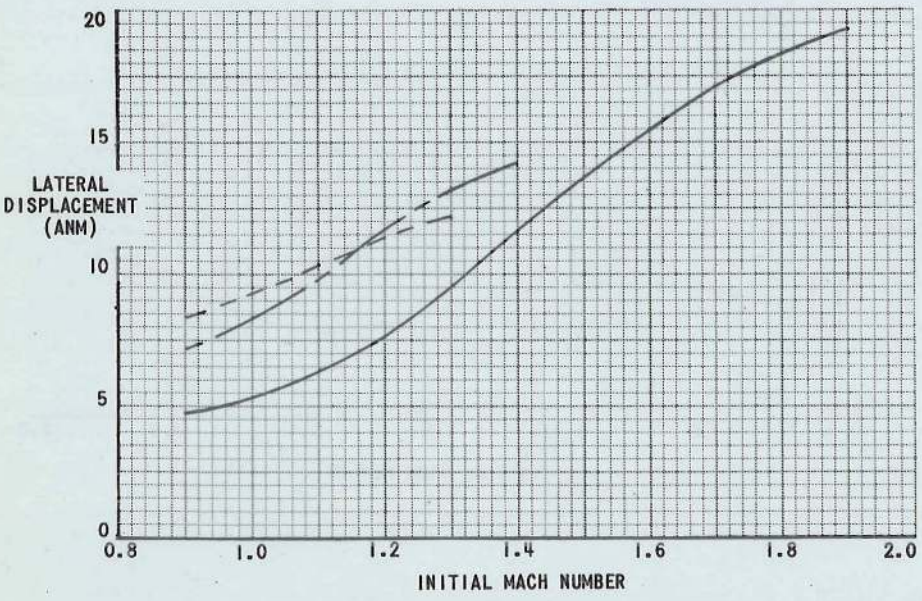
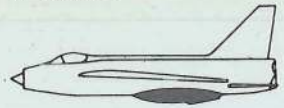
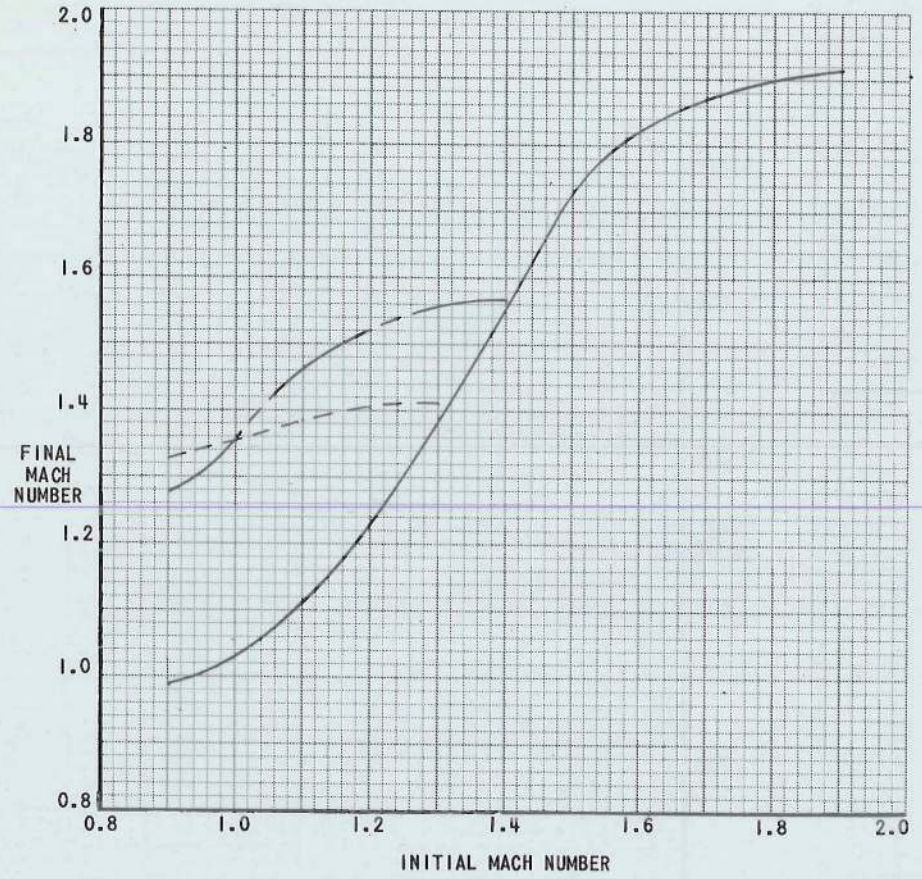


FIG. 5.51A 180° ACCELERATED 2G TURN ICAO — 10°C





FULL REHEAT
31,000LB

36,000 FT
20,000 FT
15,000 FT

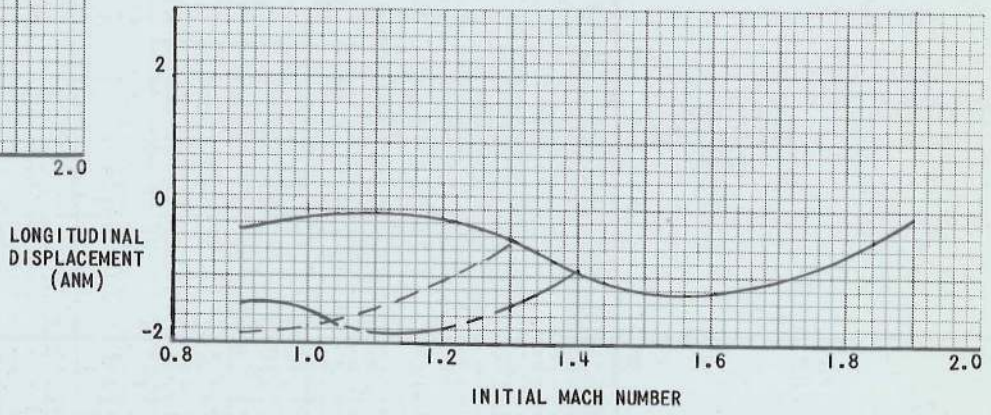
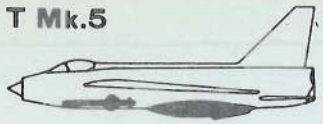
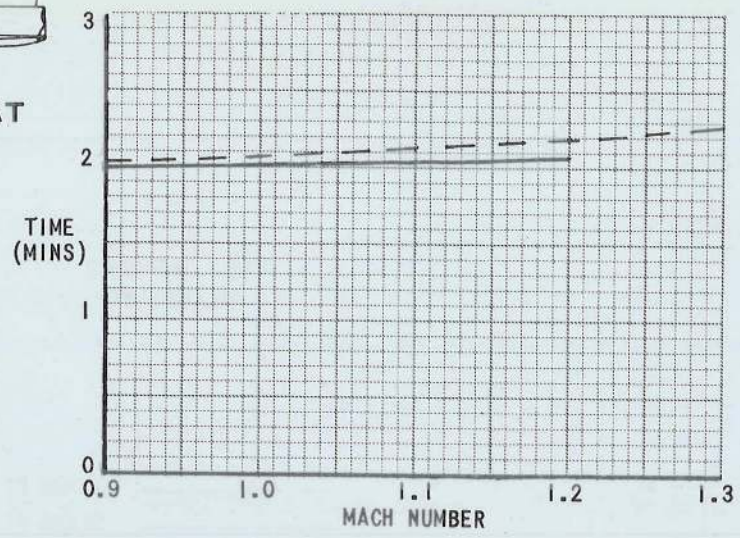


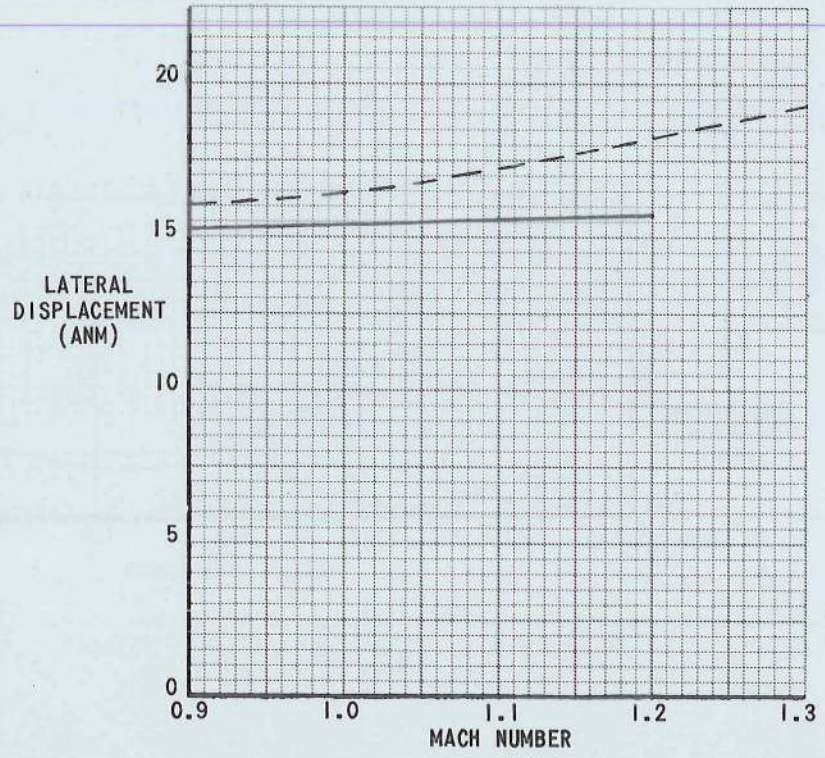
FIG. 5.51B 180° ACCELERATED 2G TURN ICAO — 10°C

T Mk.5



FULL REHEAT
31,000LB





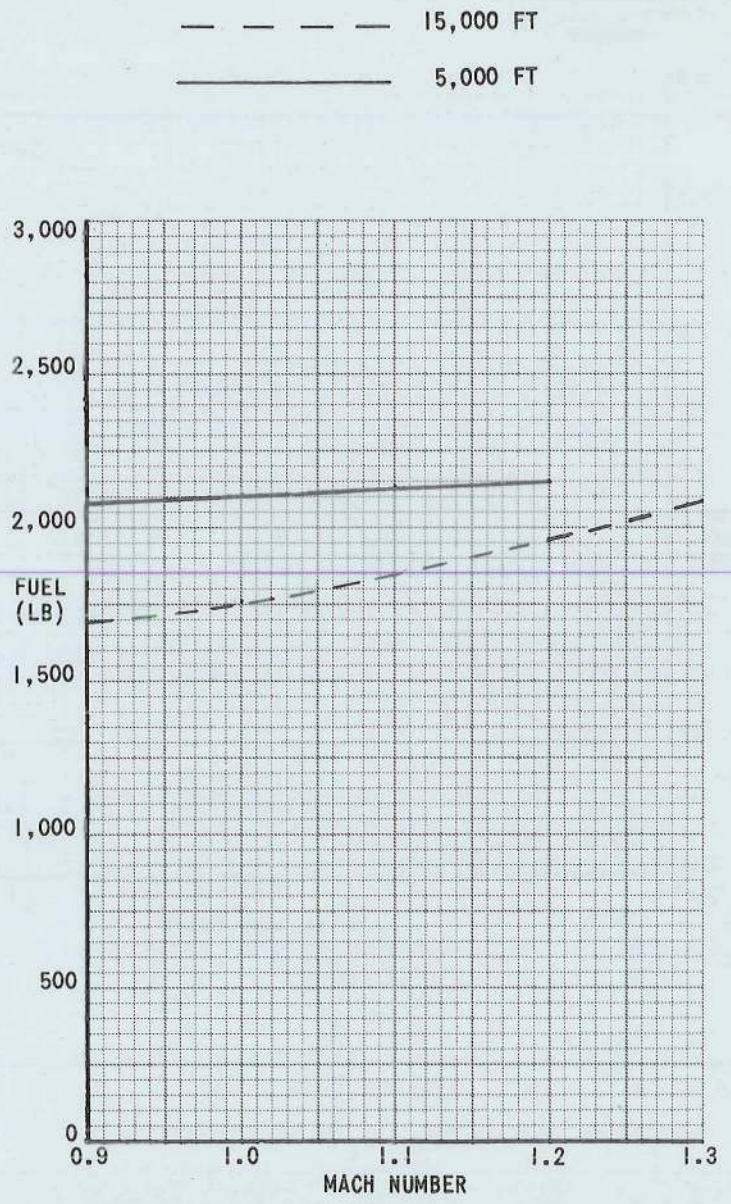
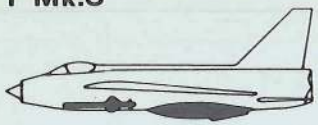
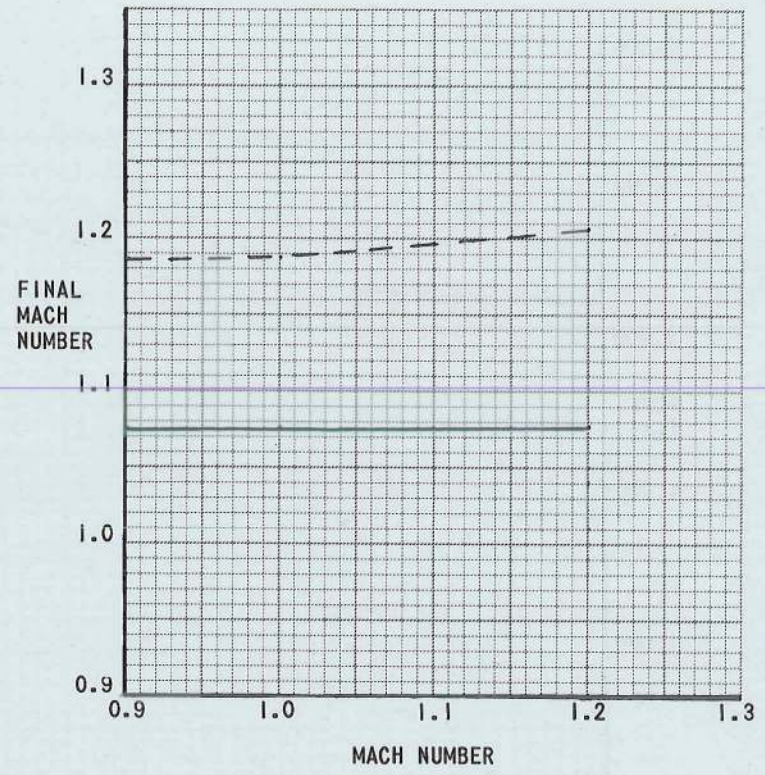


FIG. 5.52A 180° ACCELERATED 1·4G TURN ICAO+20°C



FULL REHEAT
31,000LB



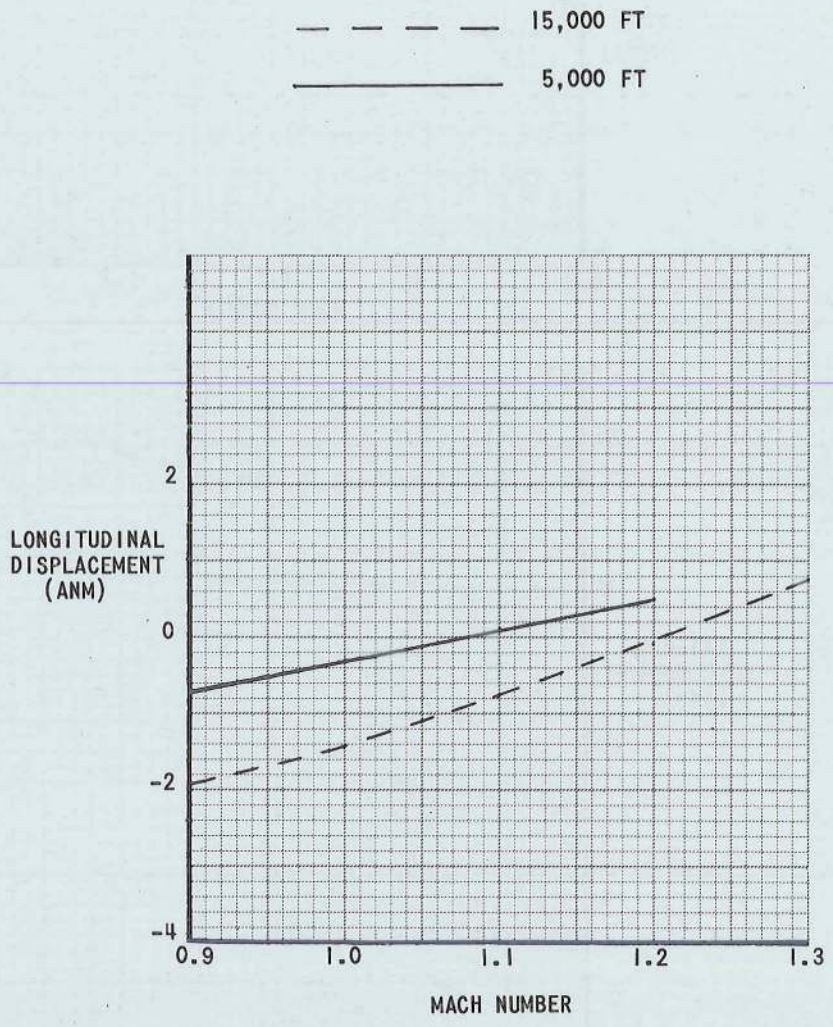
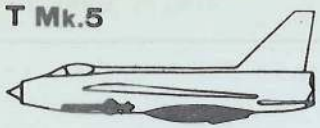
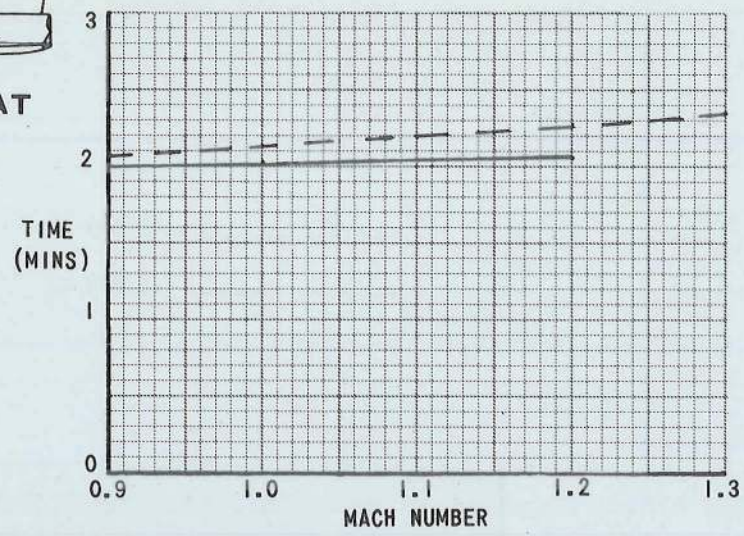
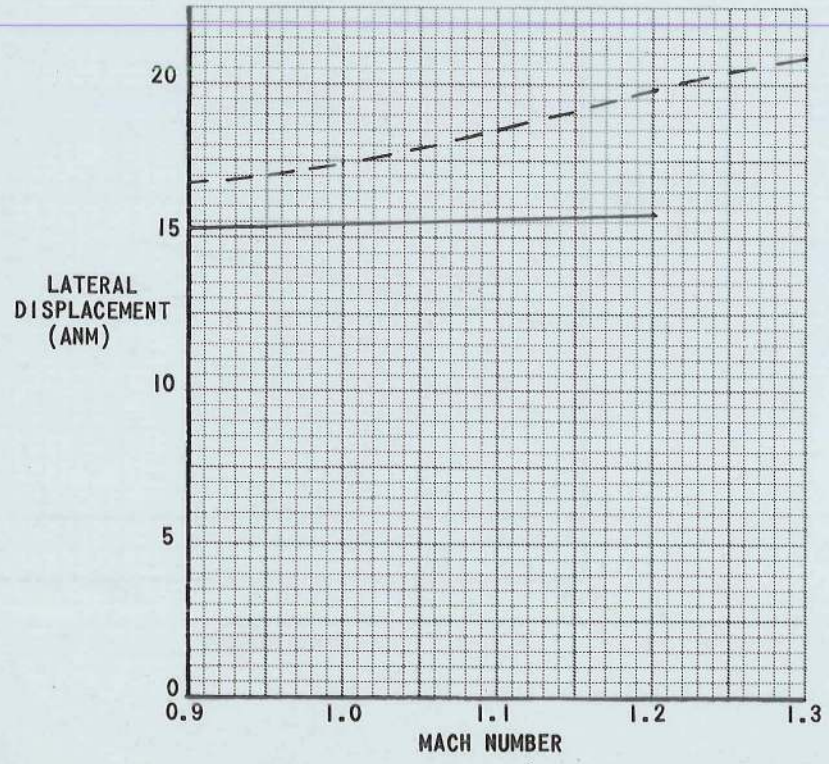


FIG. 5.52B 180° ACCELERATED 1·4G TURN ICAO+20°C



FULL REHEAT
31,000LB





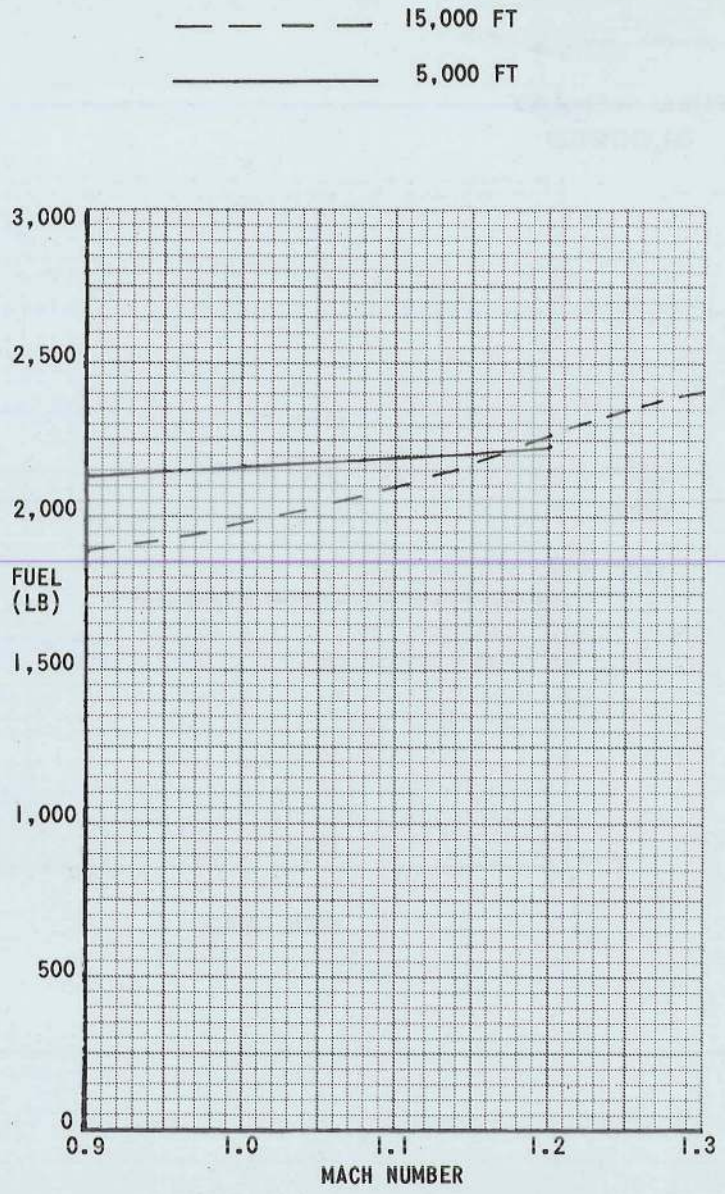
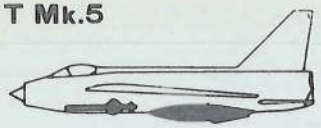


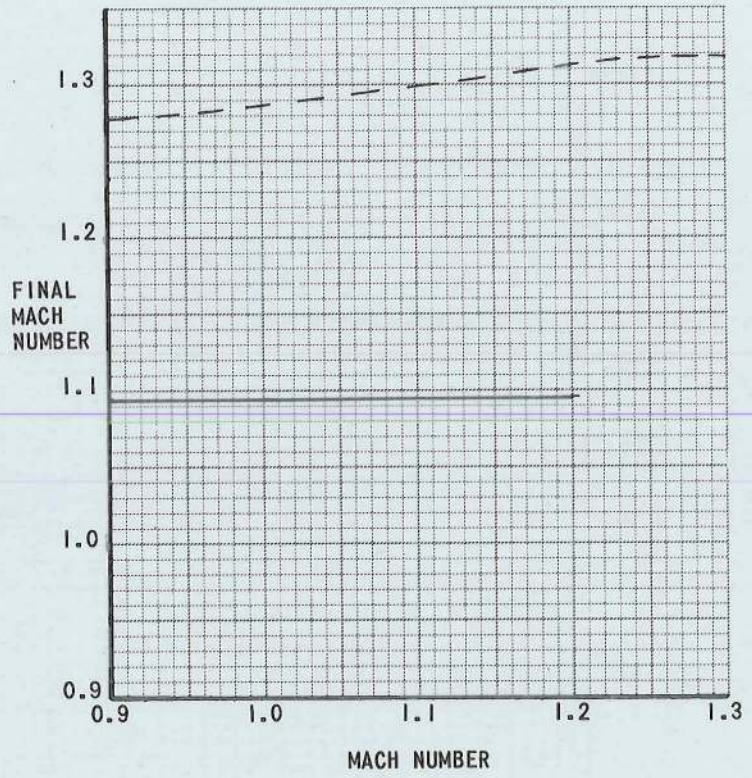
FIG. 5.53A 180° ACCELERATED 1·4G TURN ICAO+10°C



FULL REHEAT
31,000LB

— — — — 15,000 FT

——————— 5,000 FT



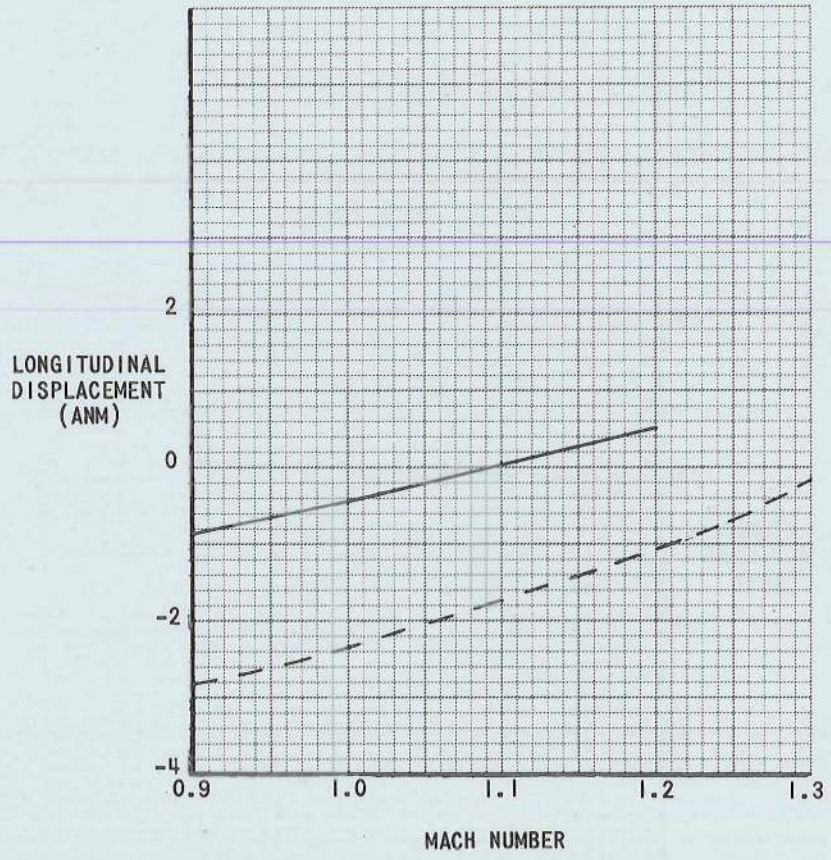
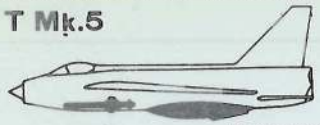
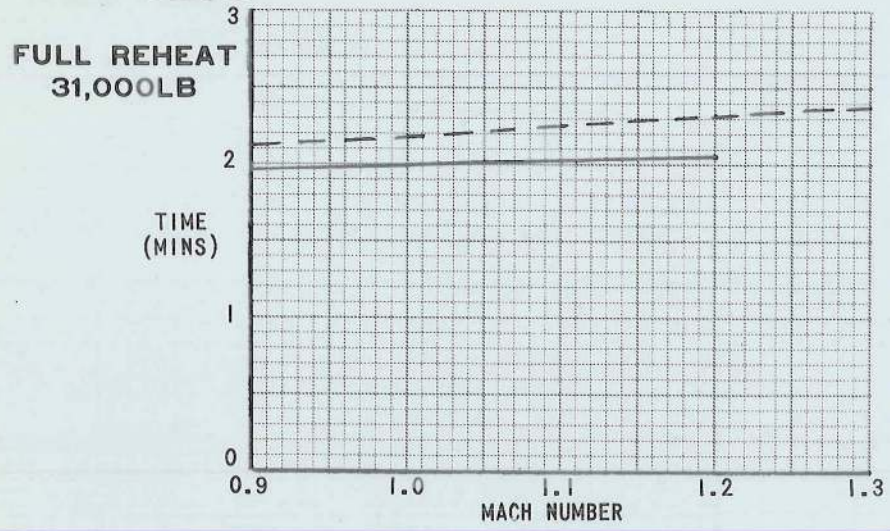
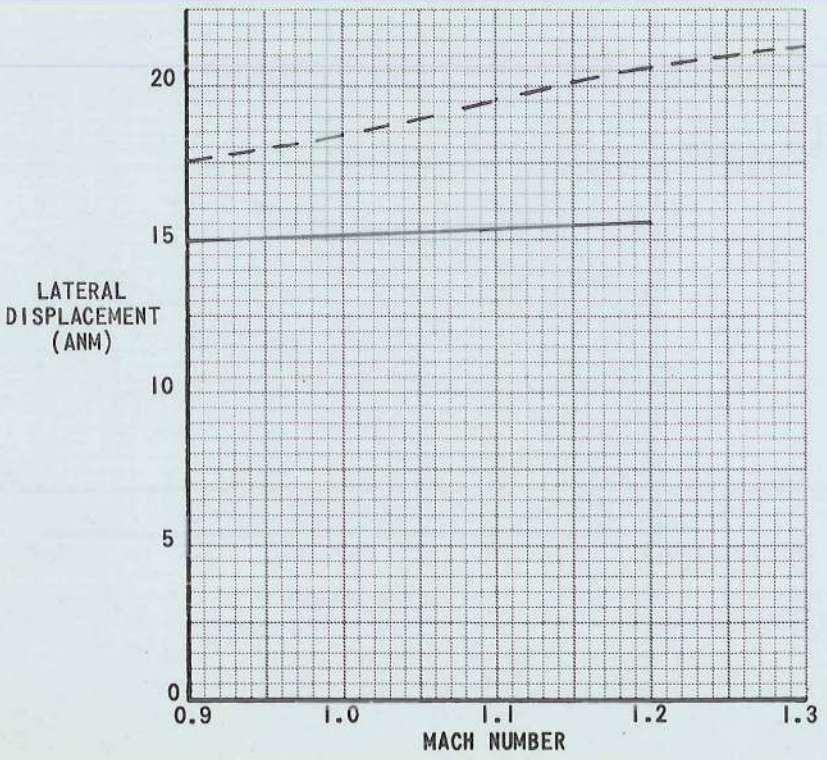


FIG. 5.53B 180° ACCELERATED 1·4G TURN ICAO+10°C







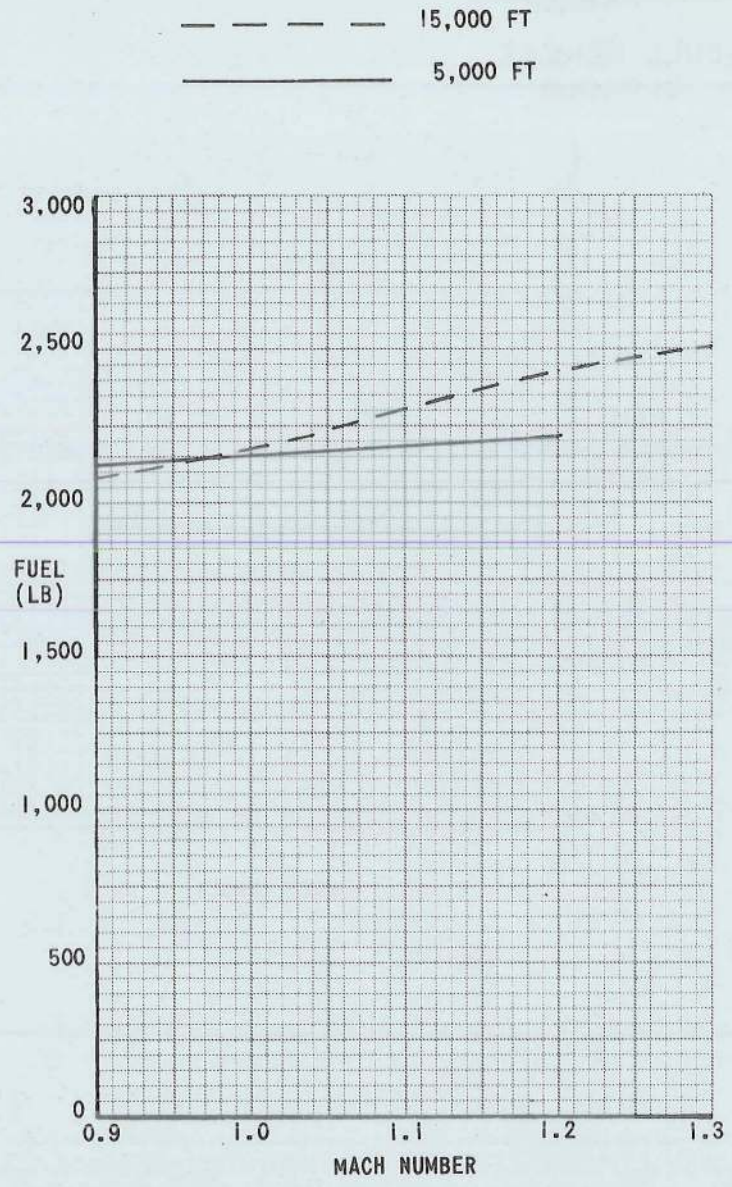
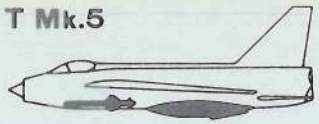
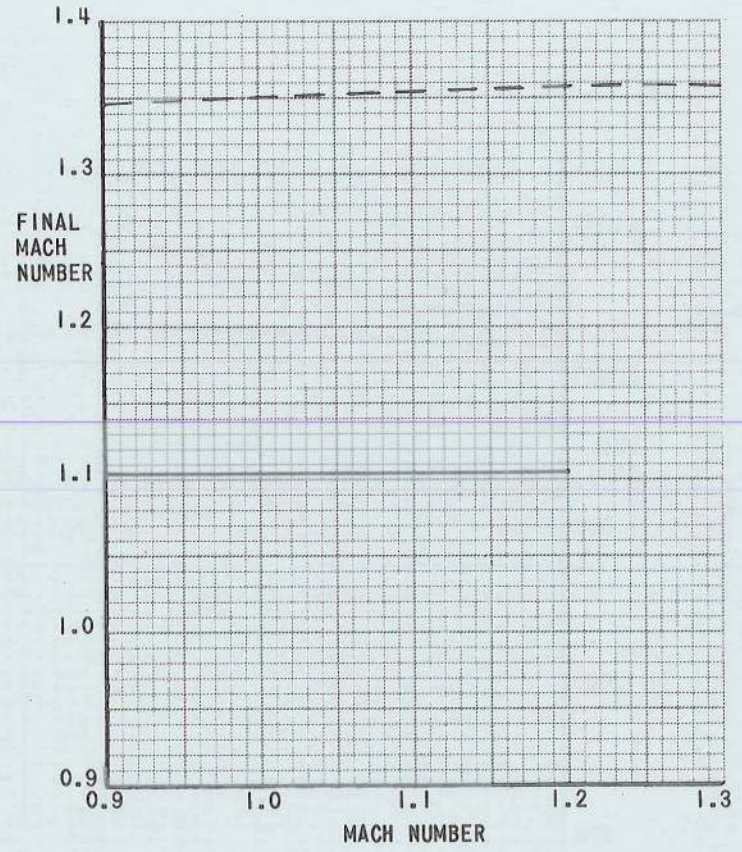


FIG. 5.54A 180° ACCELERATED 1·4G TURN ICAO

T Mk.5



FULL REHEAT
31,000LB



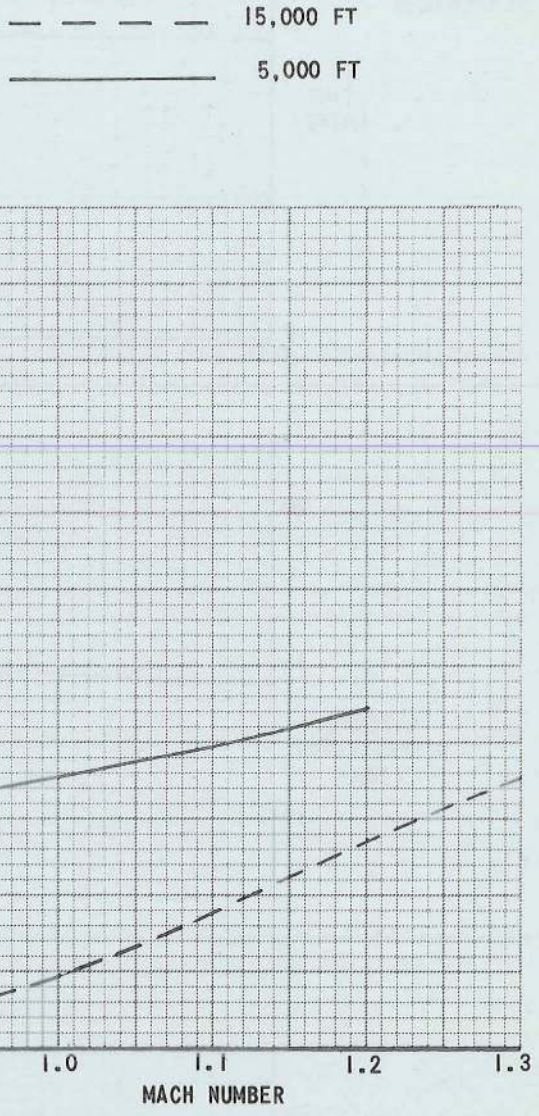
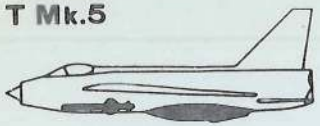
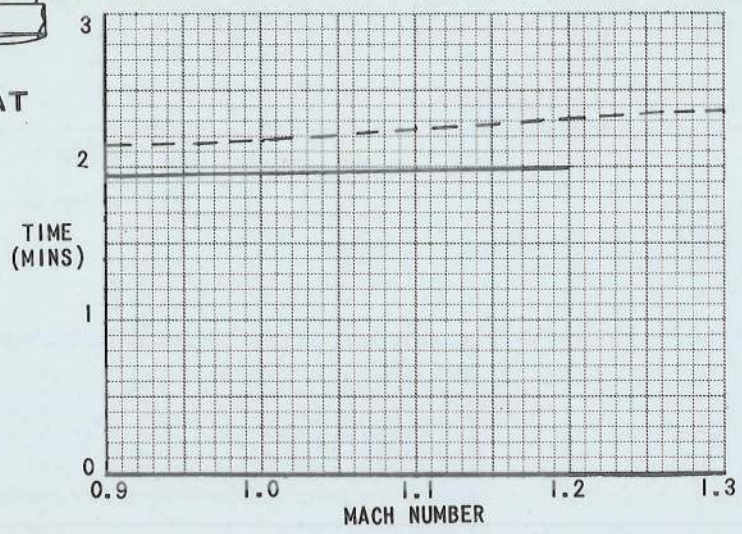
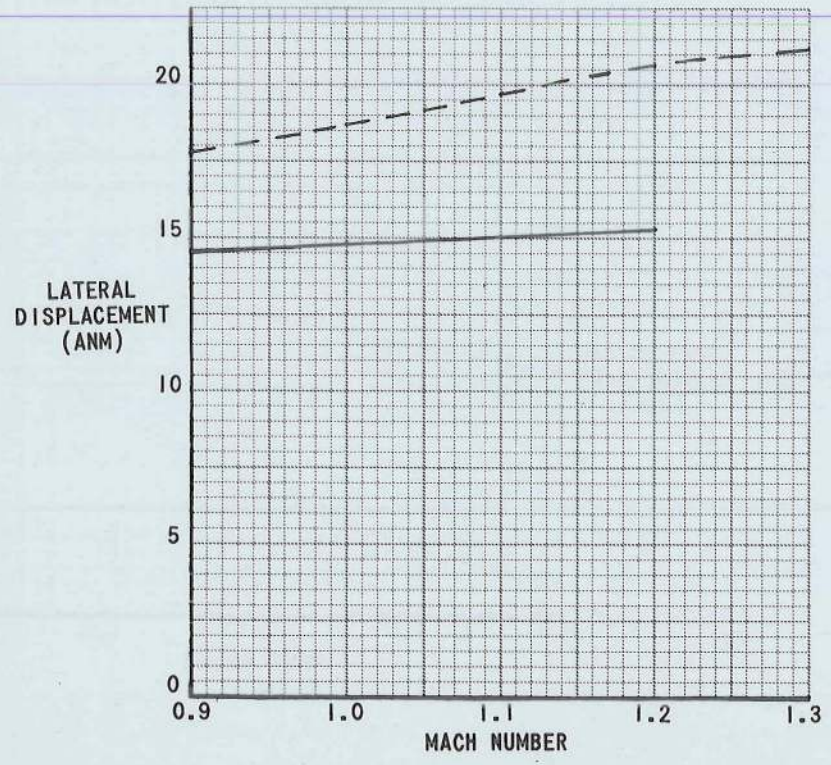


FIG. 5.54B 180° ACCELERATED 1·4G TURN ICAO



FULL REHEAT
31,000LB





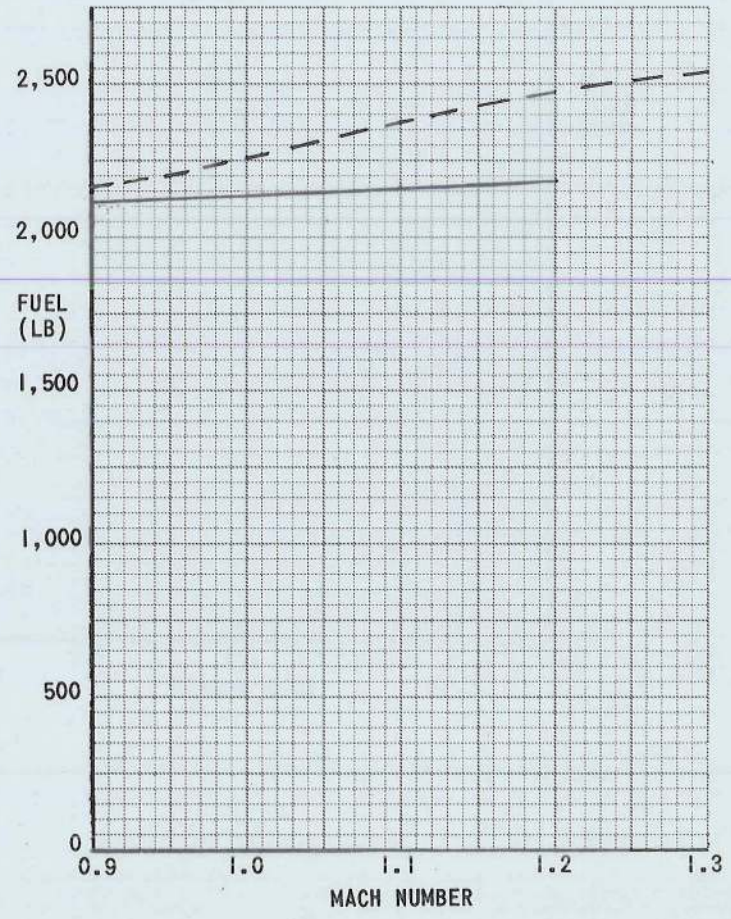
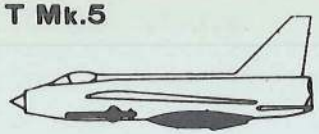


FIG. 5.55A 180° ACCELERATED 1·4G TURN ICAO-10°C



FULL REHEAT
31,000LB

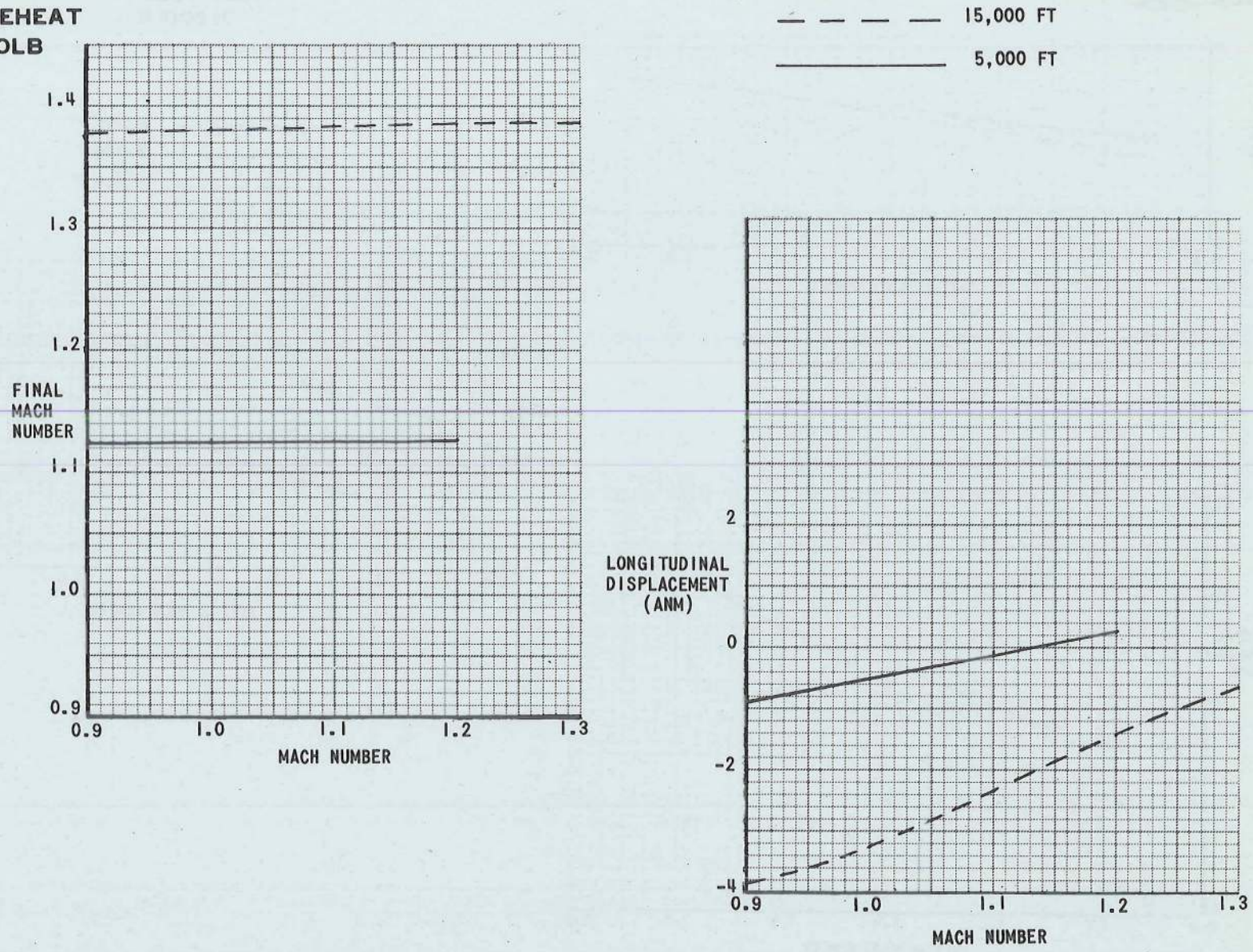
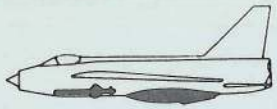
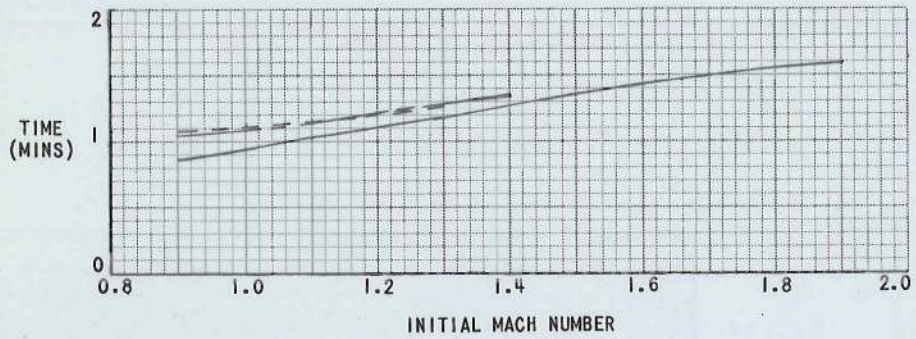
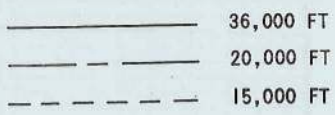


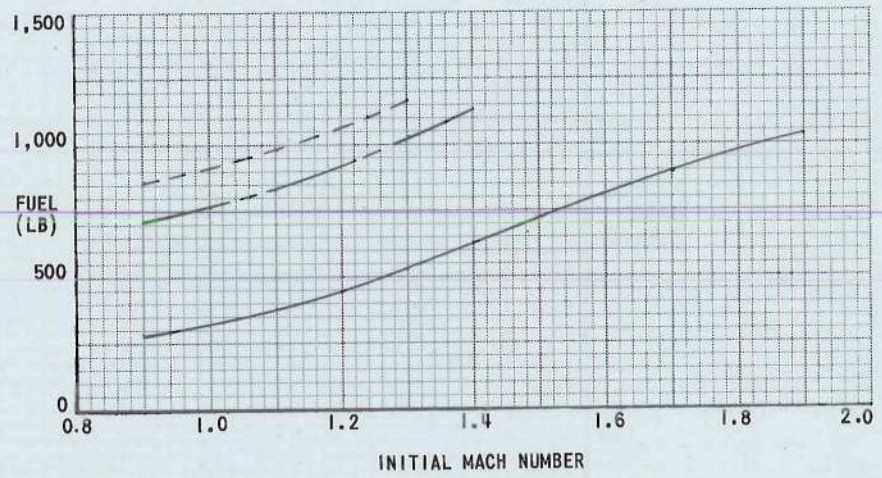
FIG. 5.55B 180° ACCELERATED 1·4G TURN ICAO-10°C



FULL REHEAT
31,000LB







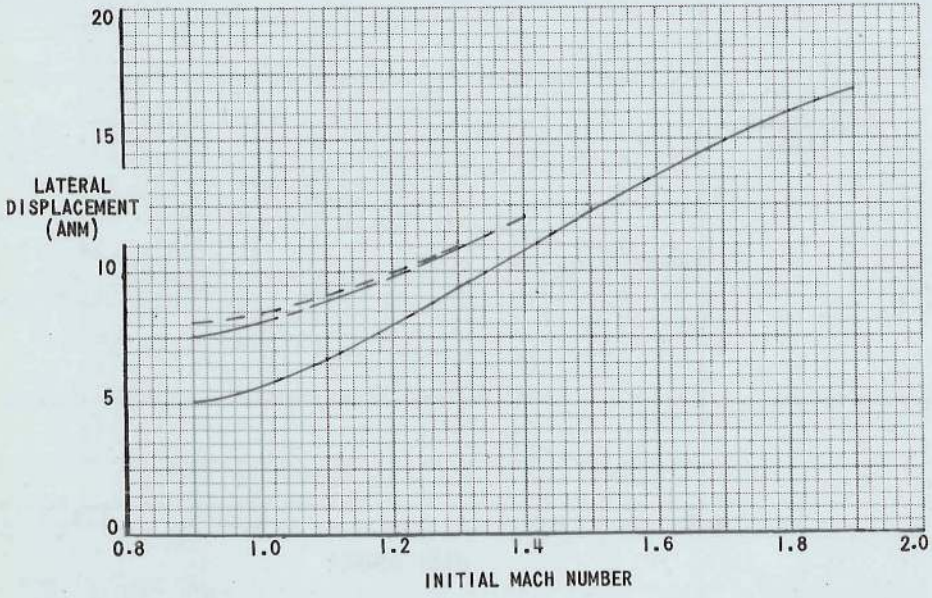


FIG. 5.56A 180° ACCELERATED 2G TURN ICAO + 20°C

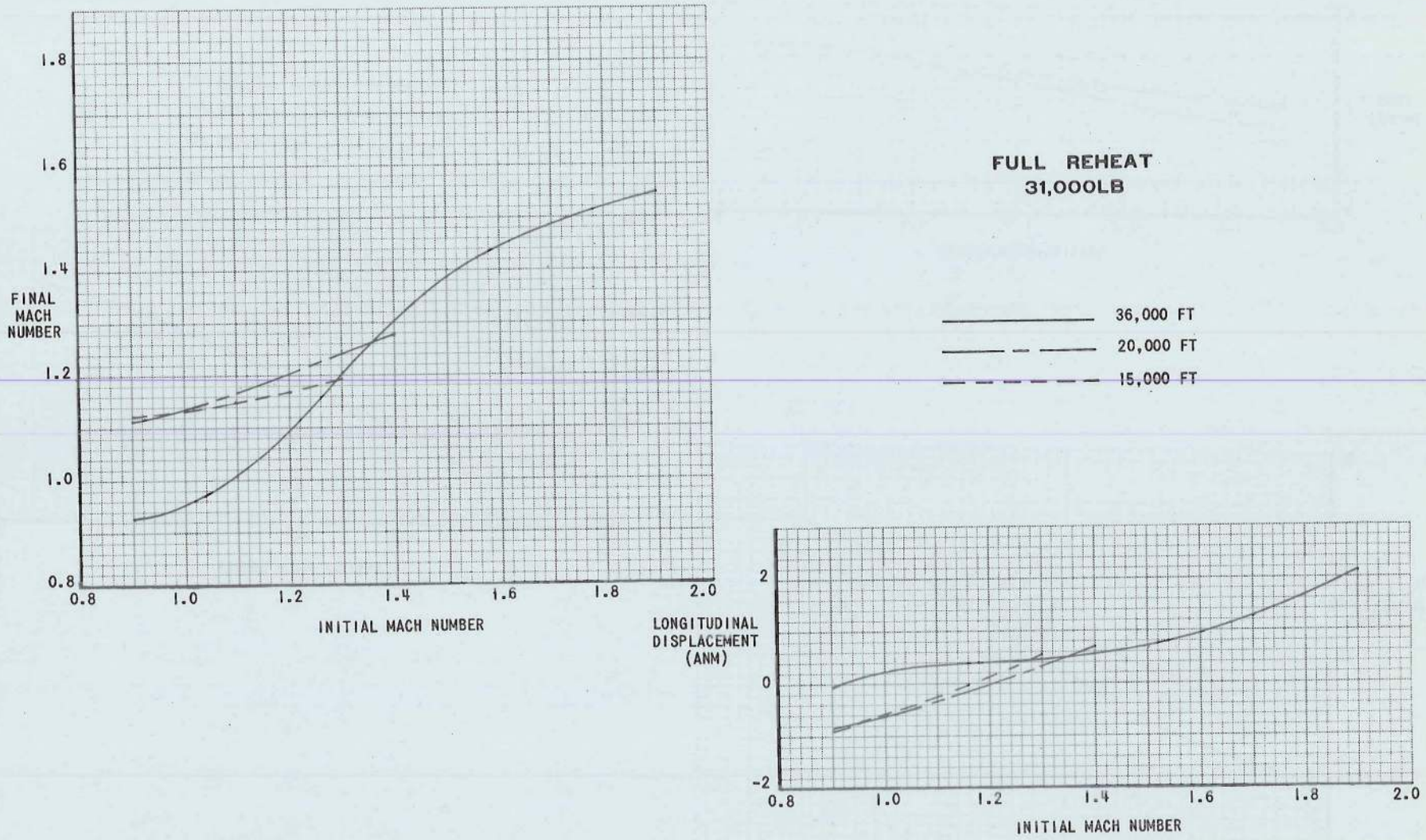
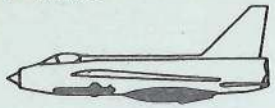
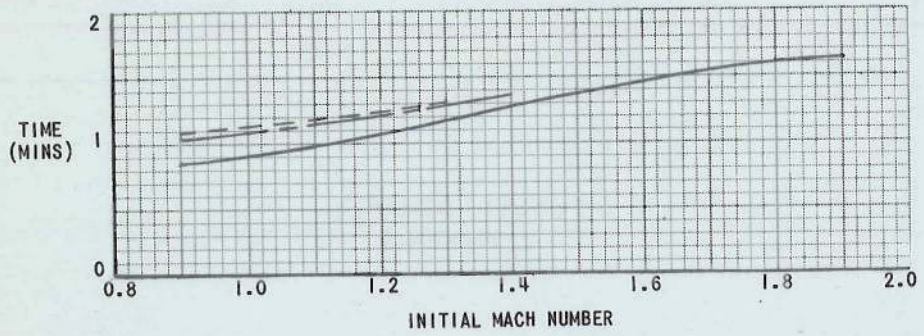
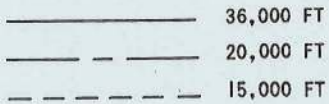


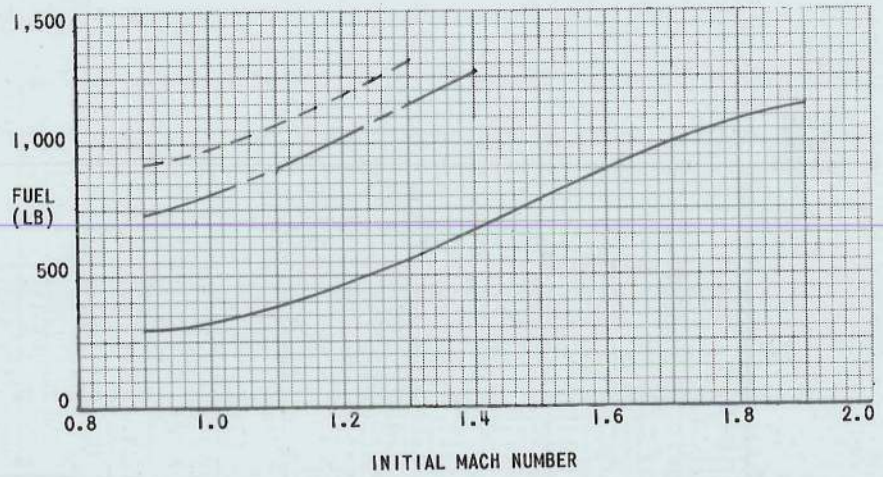
FIG. 5.56B 180° ACCELERATED 2G TURN ICAO + 20°C



FULL REHEAT
31,000LB







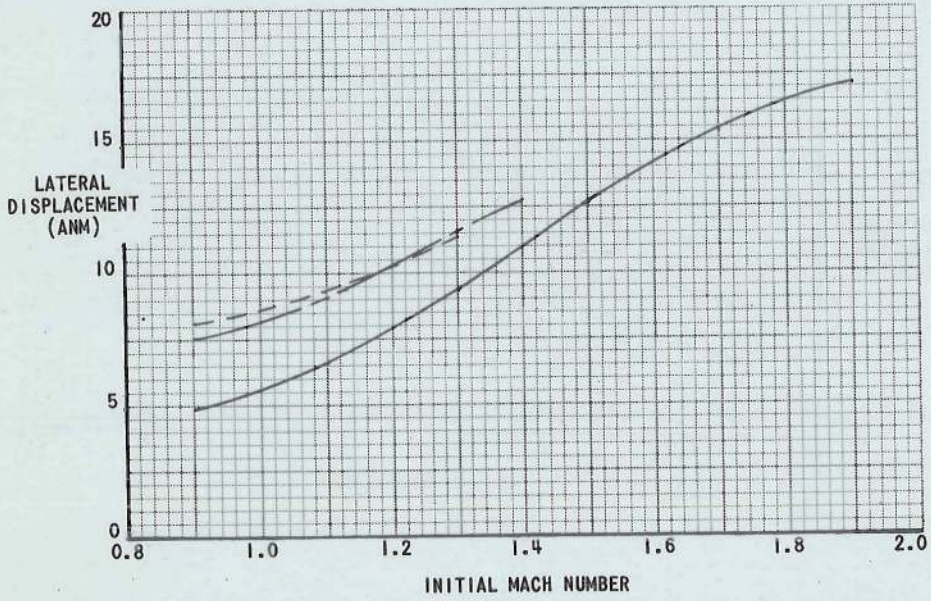
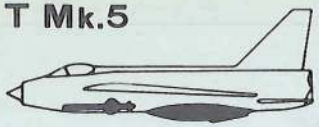


FIG. 5.57A 180° ACCELERATED 2G TURN ICAO + 10°C



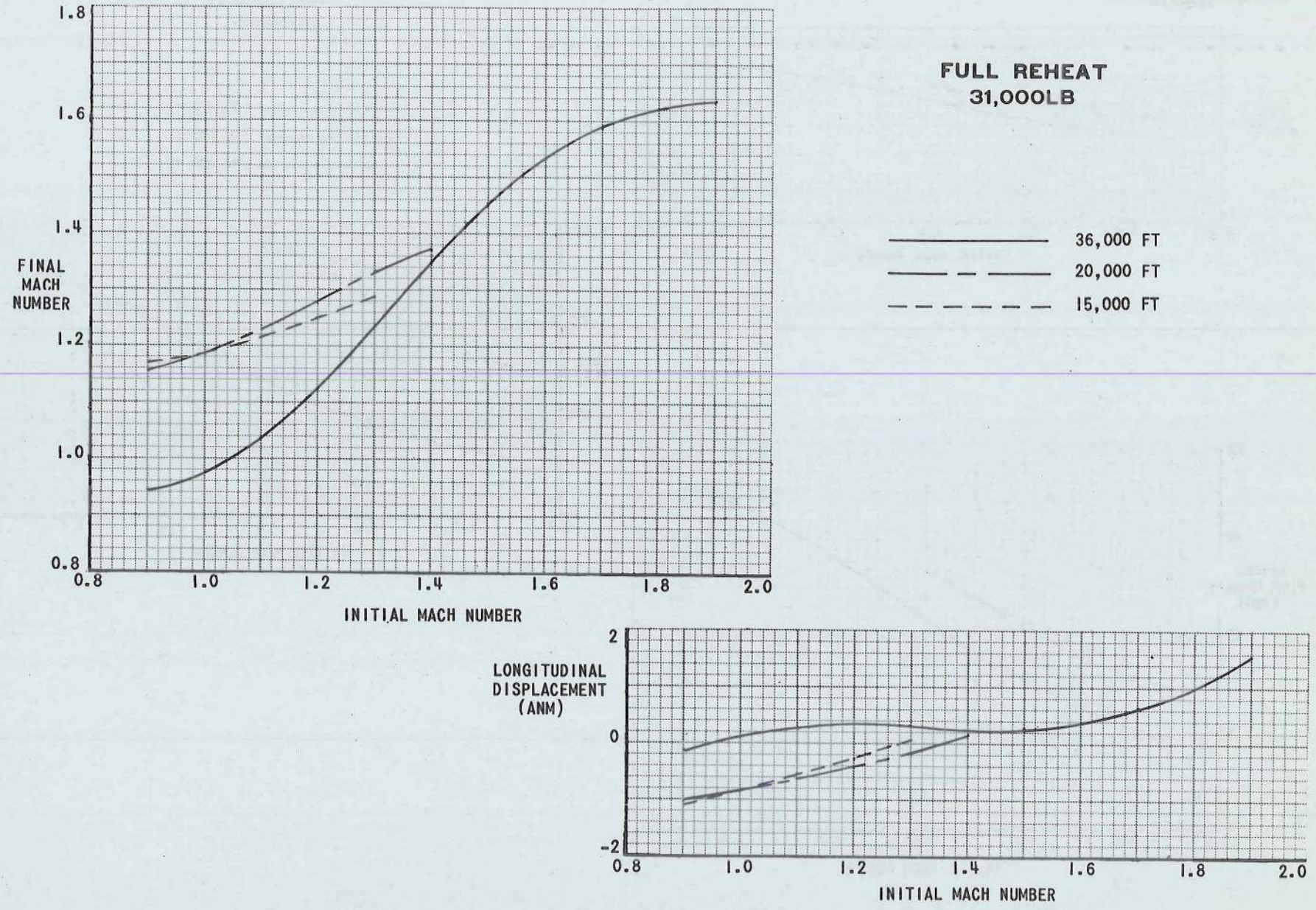
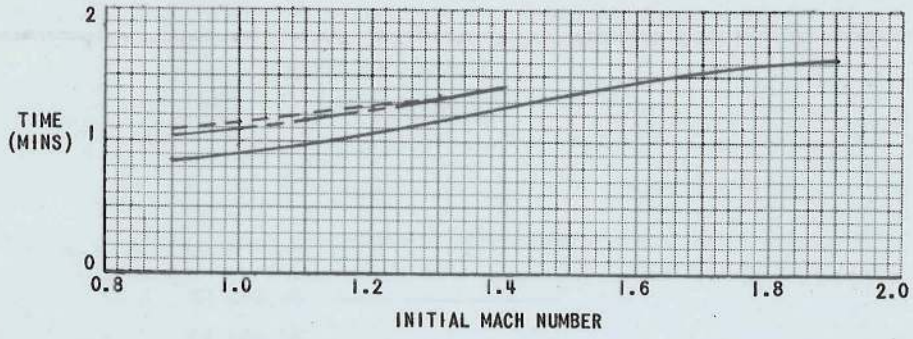
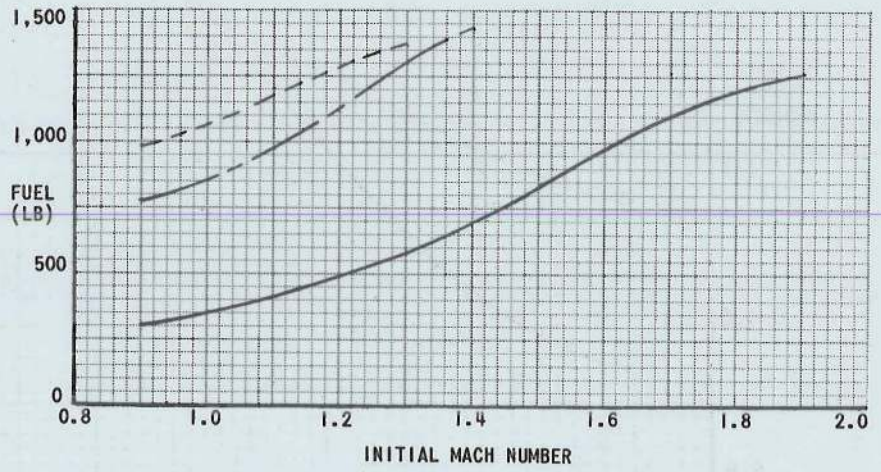


FIG. 5.57B 180° ACCELERATED 2G TURN ICAO + 10°C

FULL REHEAT
31,000LB





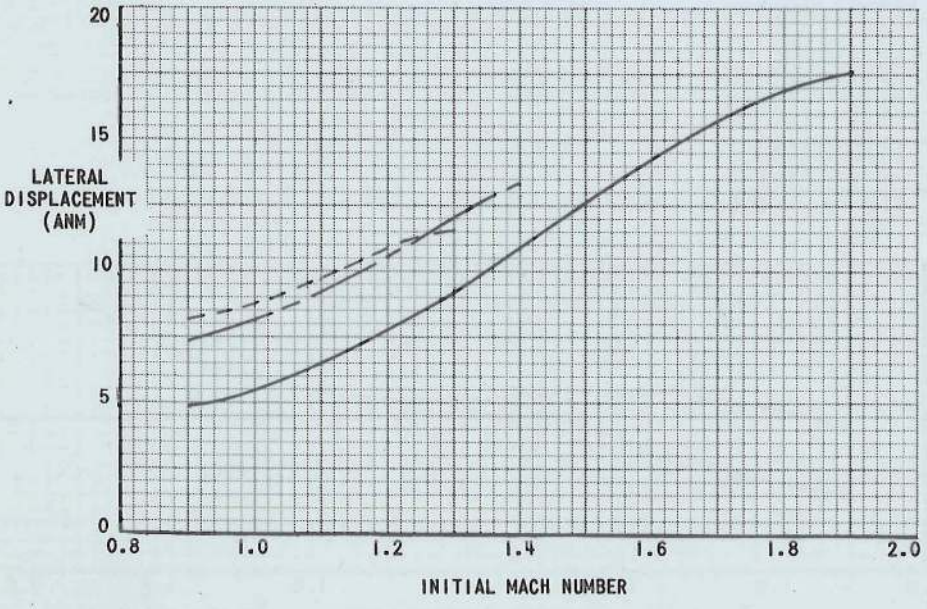
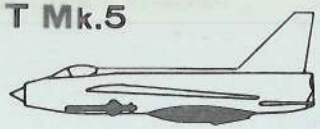
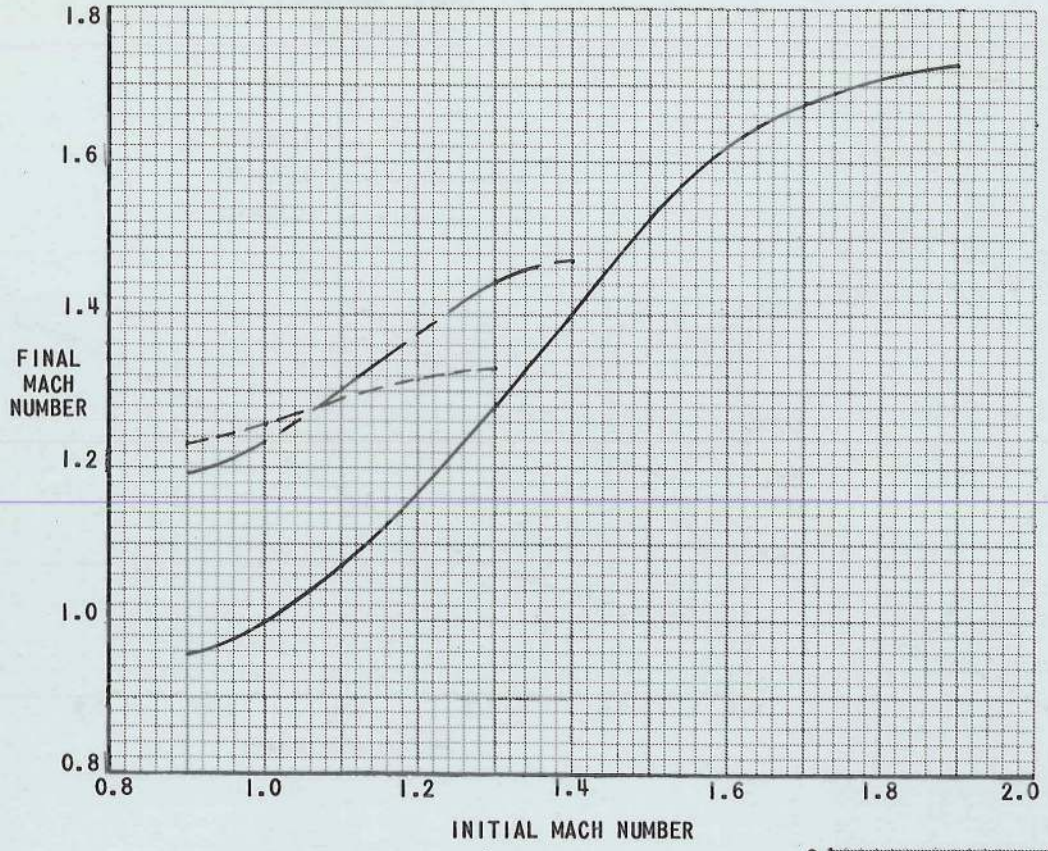


FIG. 5.58A 180° ACCELERATED 2G TURN ICAO





FULL REHEAT
31,000LB

36,000 FT
20,000 FT
15,000 FT

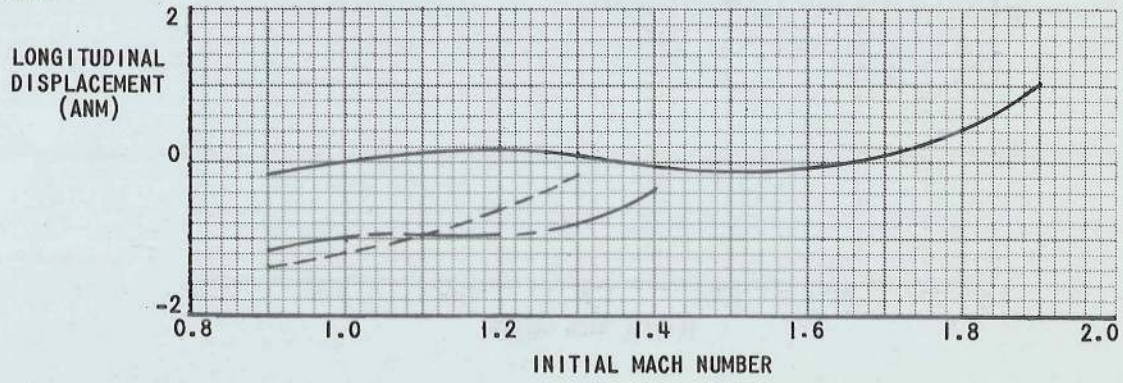
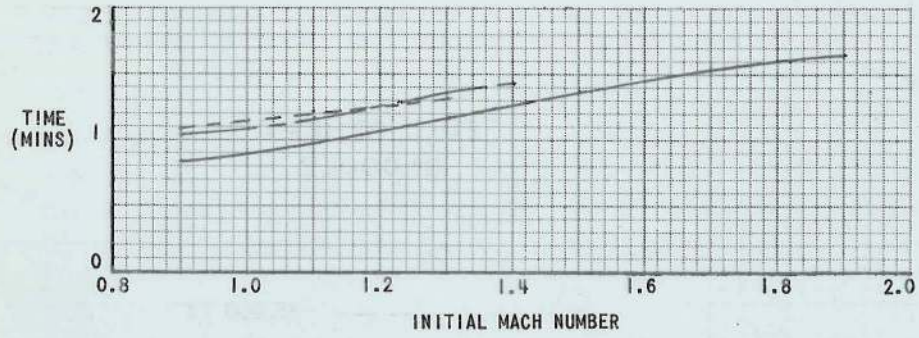
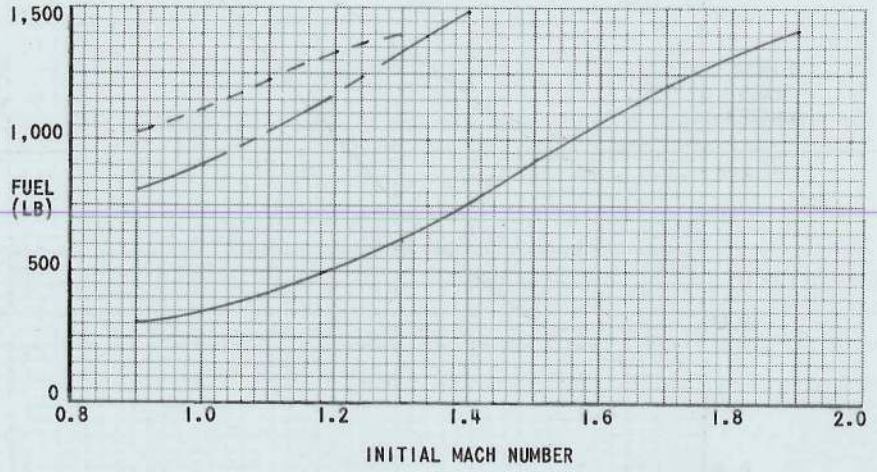


FIG. 5.58B 180° ACCELERATED 2G TURN ICAO

FULL REHEAT
31,000LB





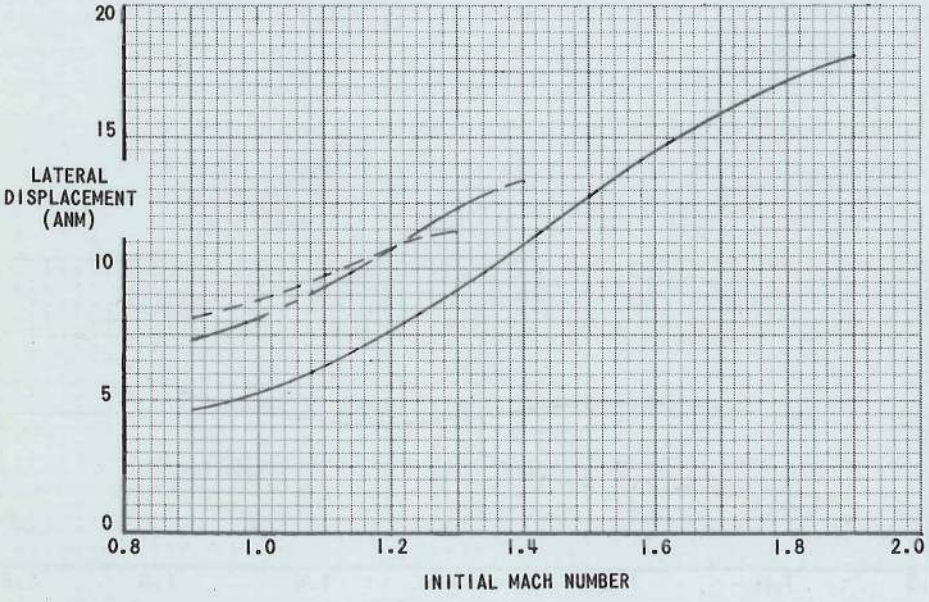
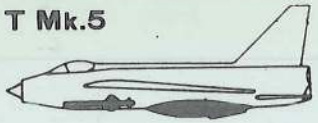


FIG. 5.59A 180° ACCELERATED 2G TURN ICAO — 10°C



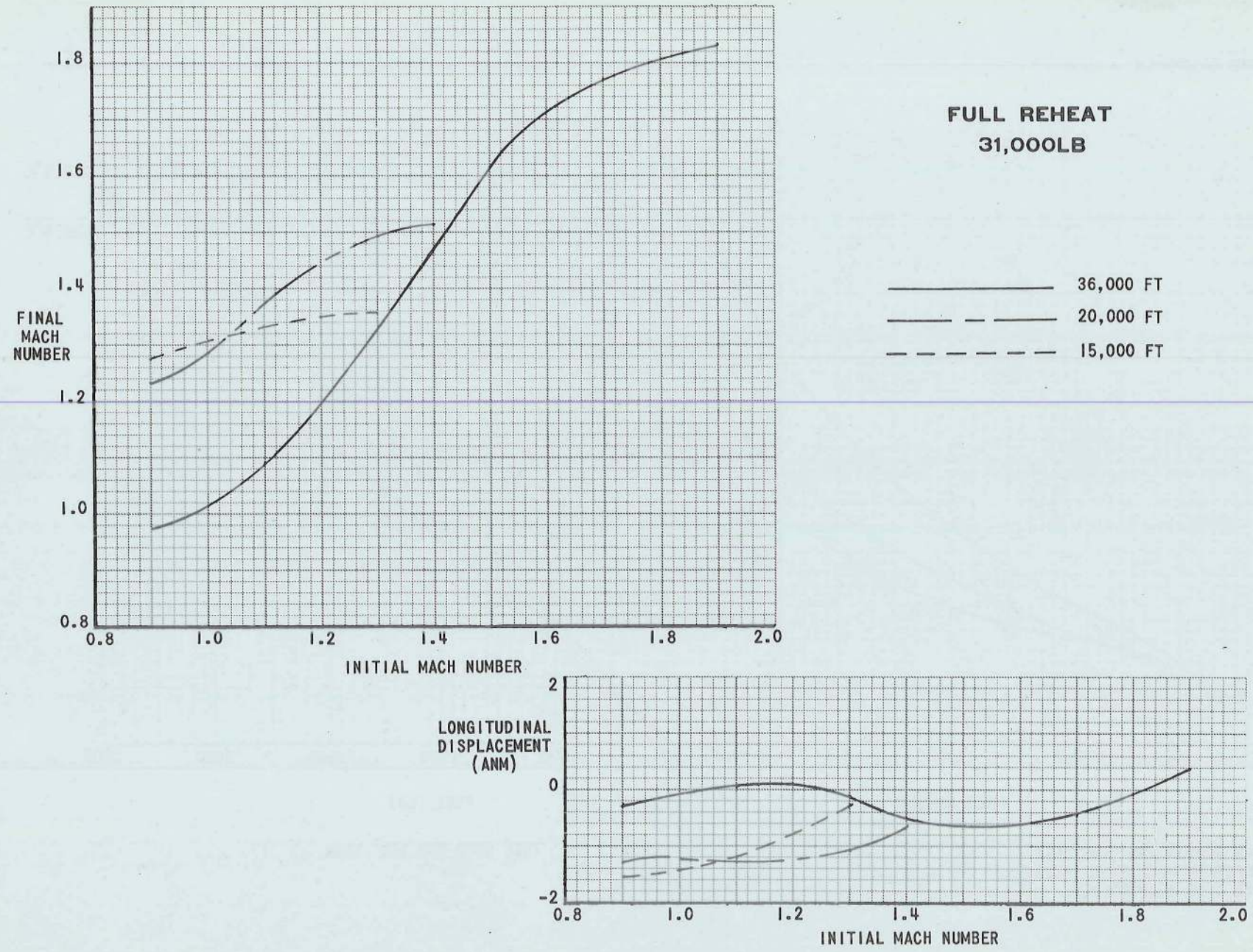
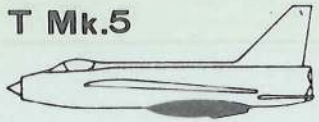
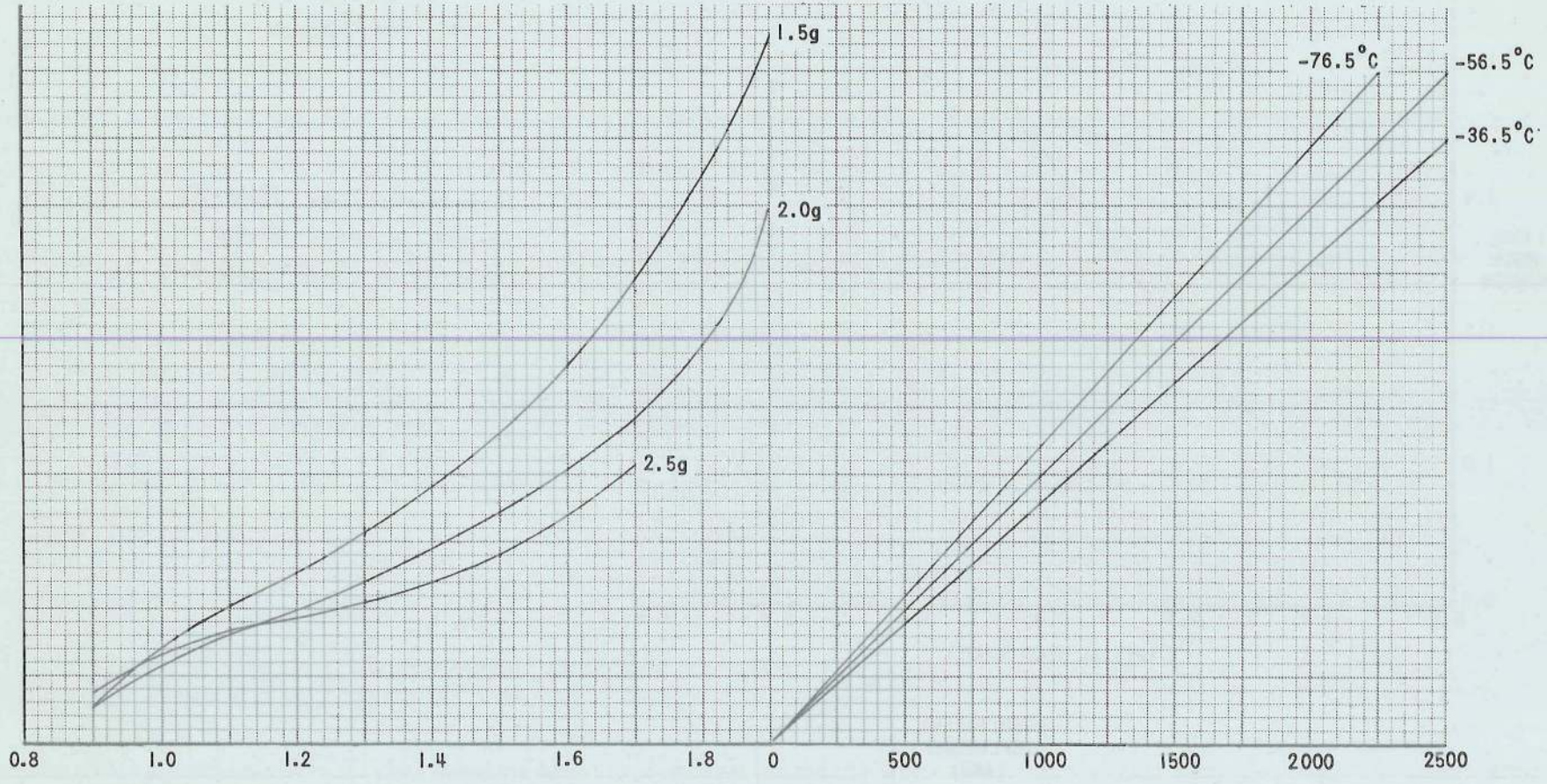


FIG. 5.59B 180° ACCELERATED 2GTURN ICAO — 10°C

T Mk.5

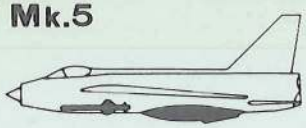


WEIGHT 32,000 LB

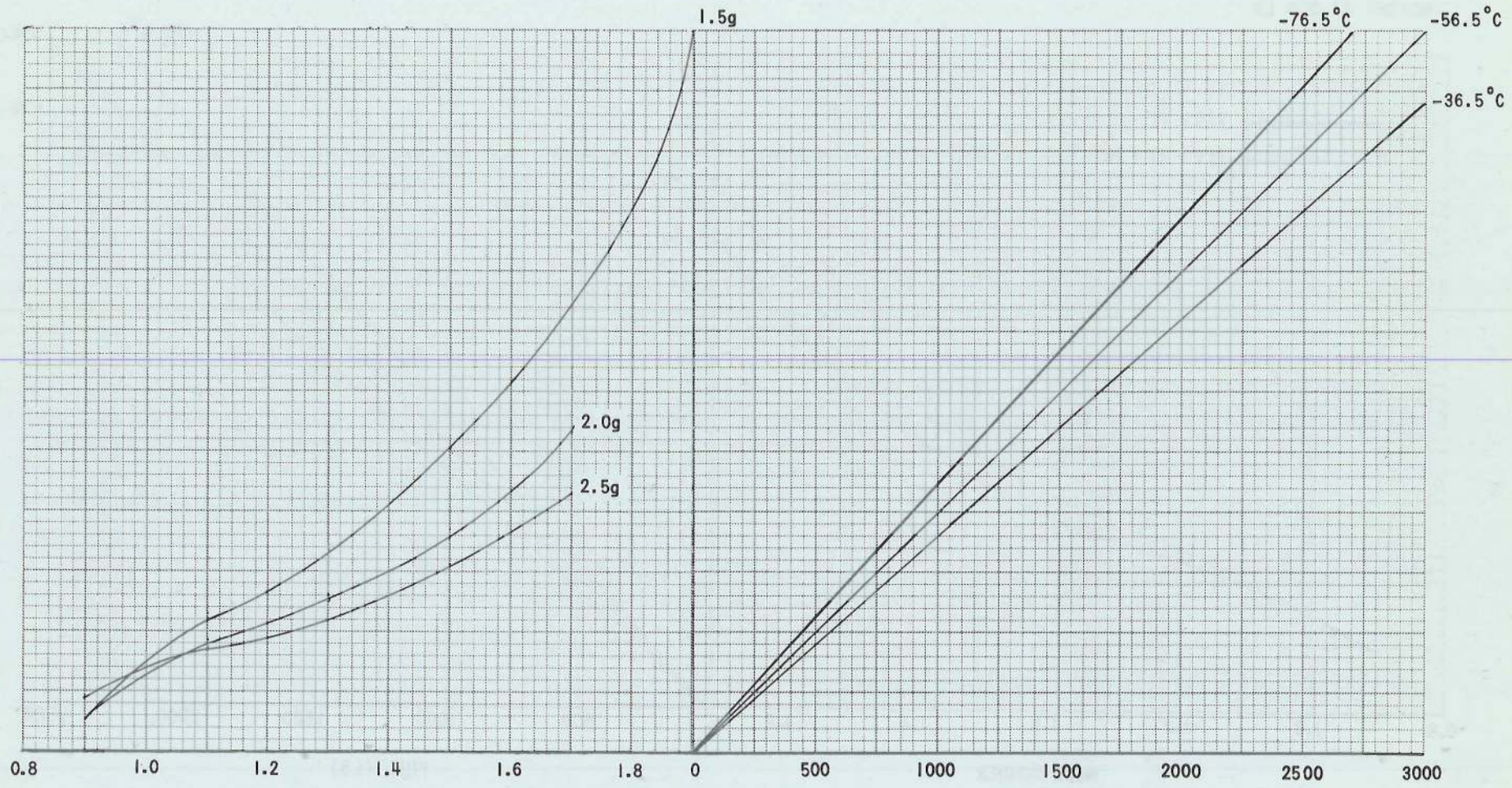


FOR RADIUS AND TIME DATA
REFER TO MK.3 FIGS. 5.23
AND 5.24 RESPECTIVELY

FIG. 5·60 STEADY LEVEL TURN - FUEL 30,000 FT



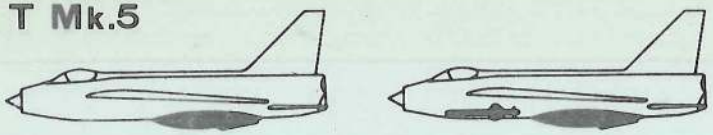
WEIGHT 32,000 LB



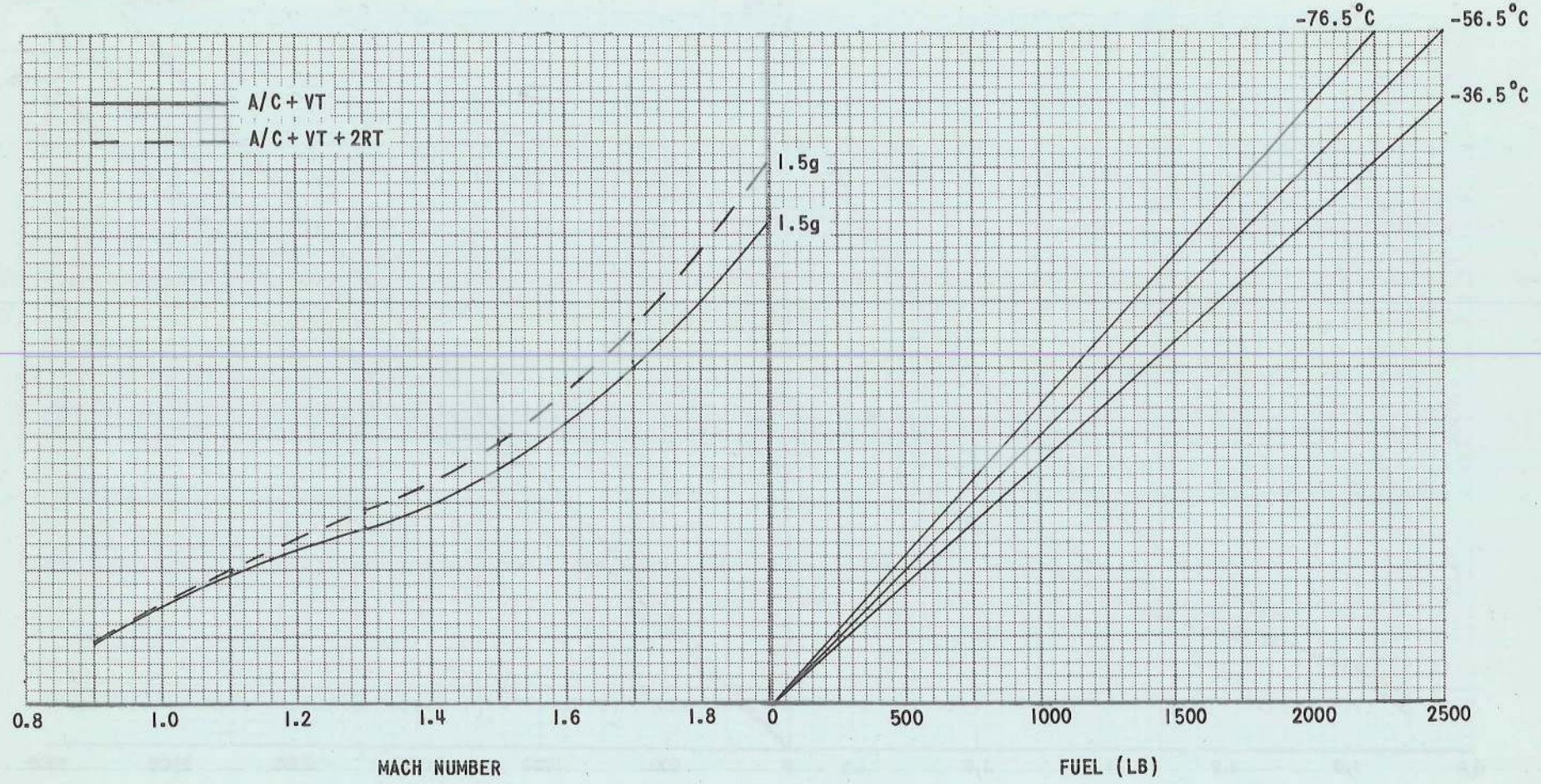
FOR RADIUS AND TIME DATA
REFER TO MK.3 FIGS. 5.23
AND 5.24 RESPECTIVELY

FIG. 5.61 STEADY LEVEL TURN – FUEL 30,000FT

T Mk.5



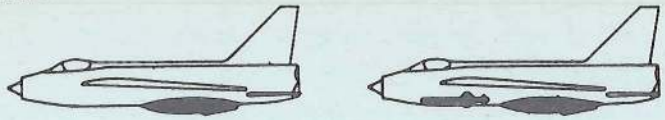
WEIGHT 32,000 LB



FUEL USED FOR 180° TURN

FOR RADIUS AND TIME DATA
REFER TO MK.3 FIGS. 5.23
AND 5.24 RESPECTIVELY

FIG. 5·62 STEADY LEVEL TURN - FUEL 40,000 FT



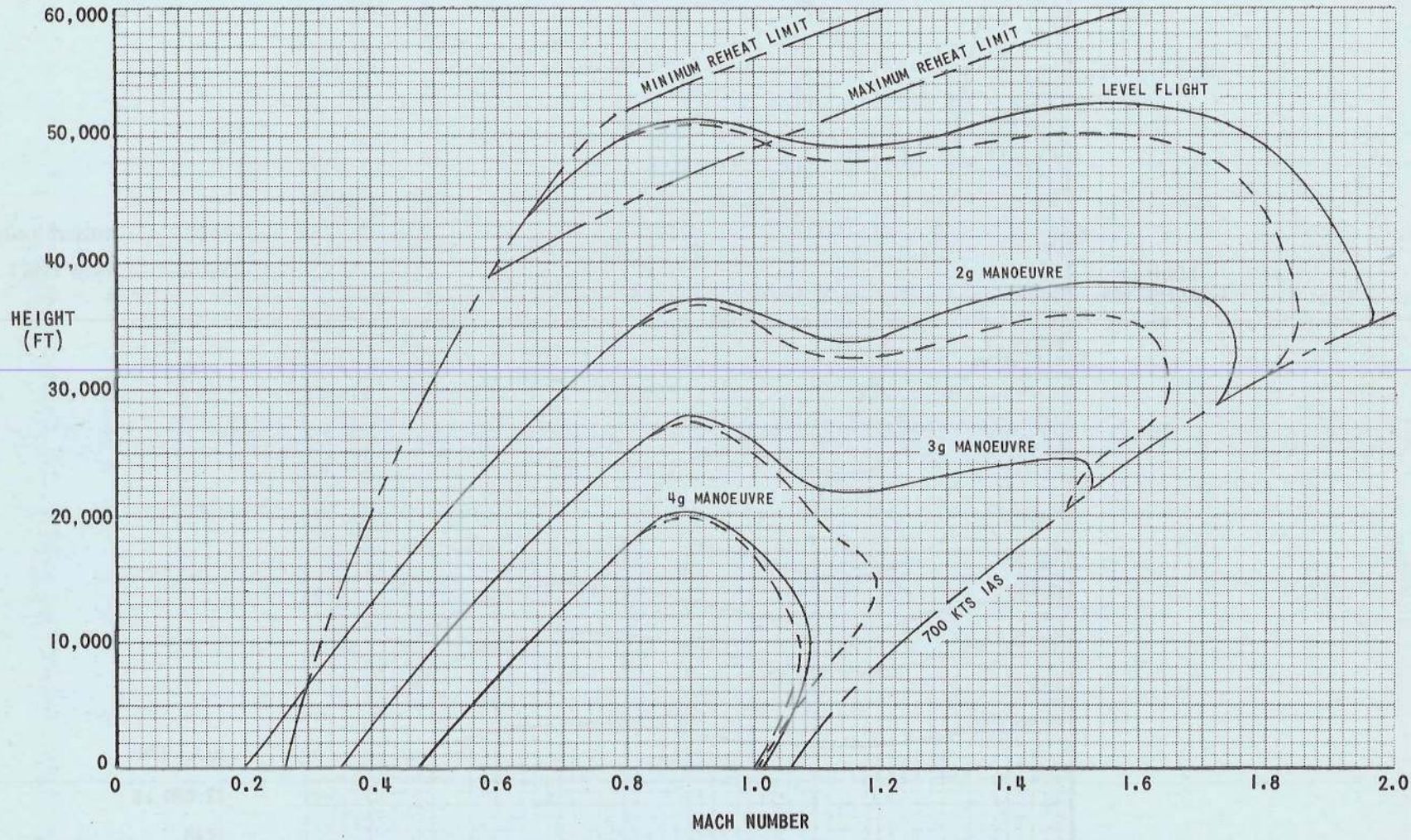


FIG. 5.63 THRUST BOUNDARIES AT FULL REHEAT

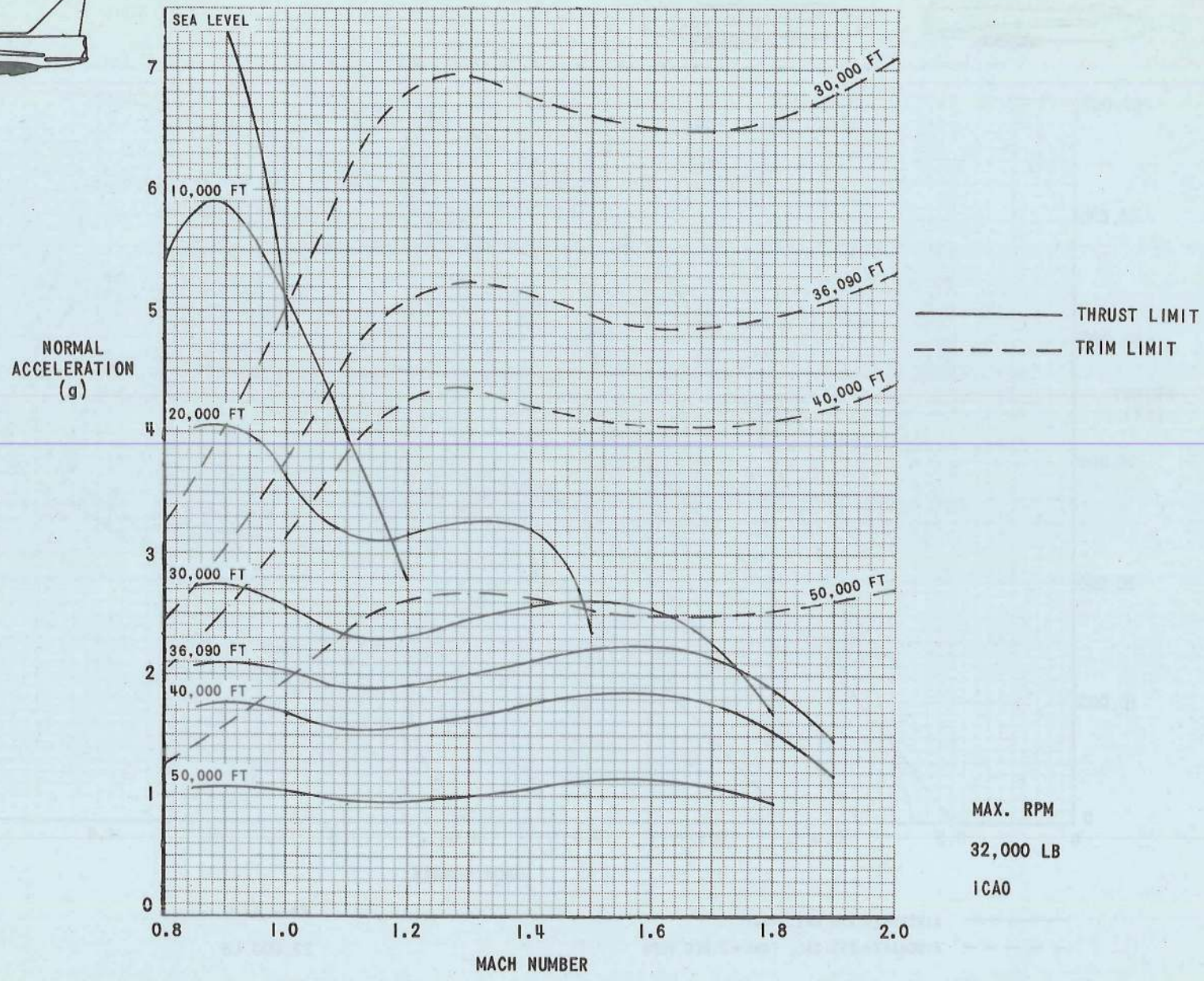
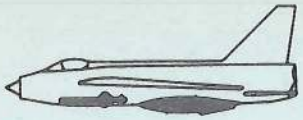


FIG. 5.64 MANOEUVRE BOUNDARIES AT FULL REHEAT



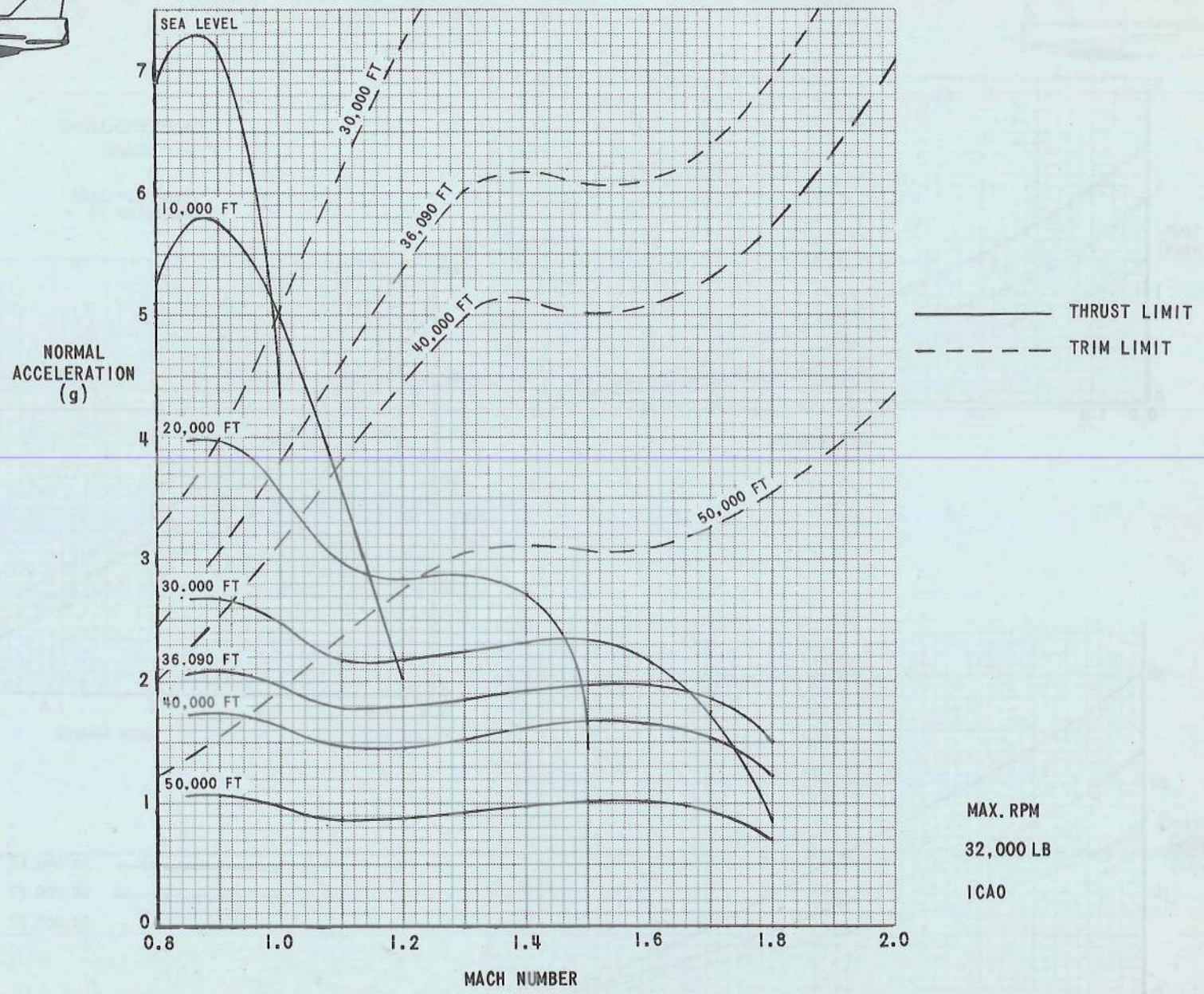
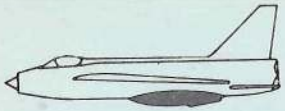
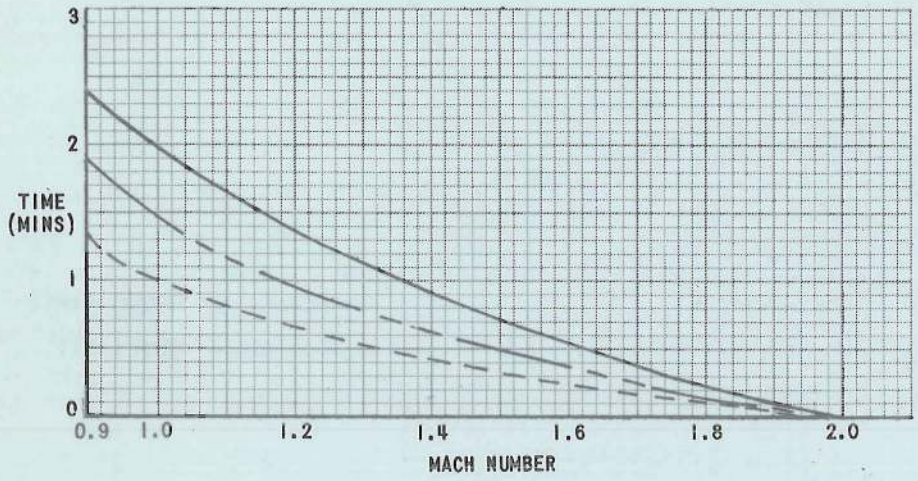


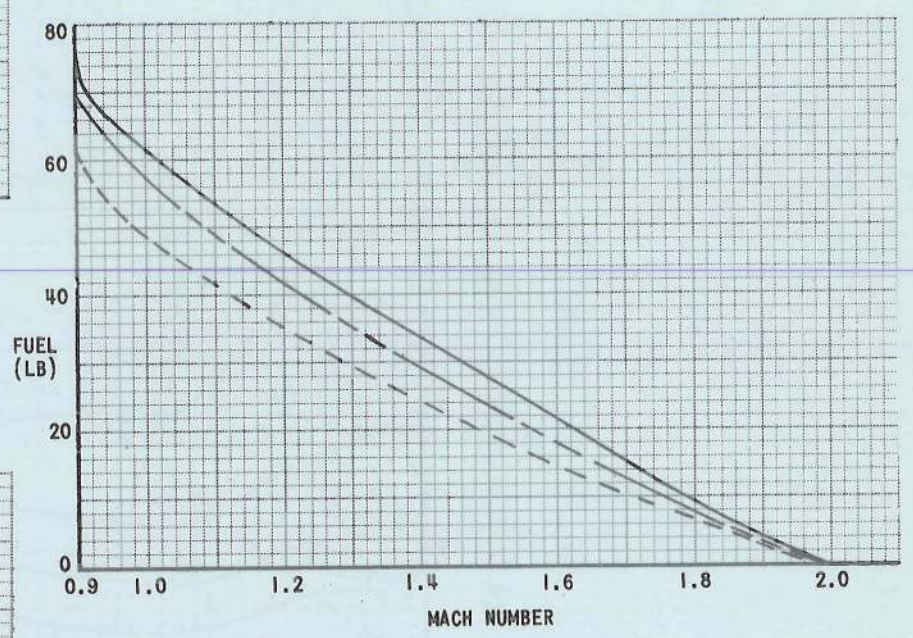
FIG. 5.65 MANOEUVRE BOUNDARIES AT FULL REHEAT

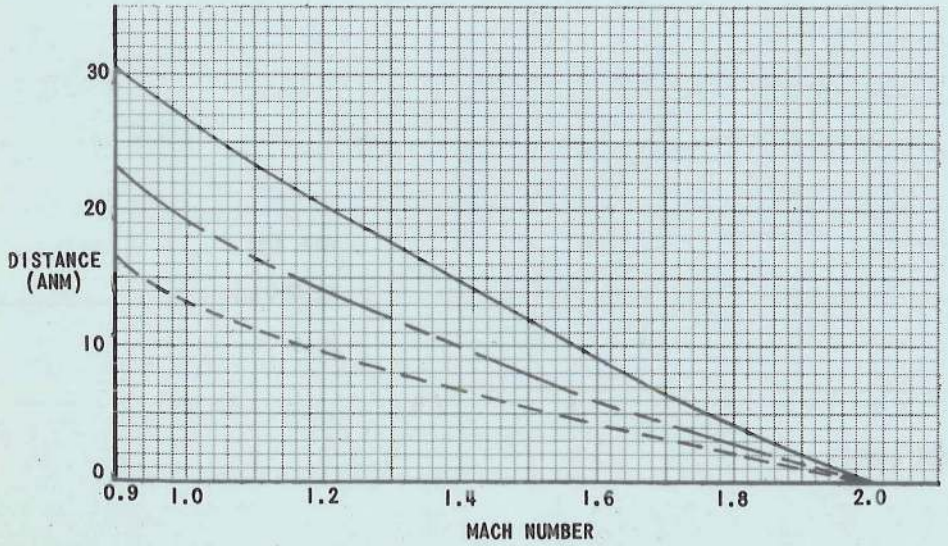




SUPERSONIC
ICAO

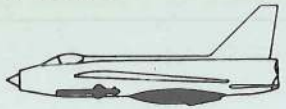
IDLE/FAST IDLE
AIRBRAKES IN





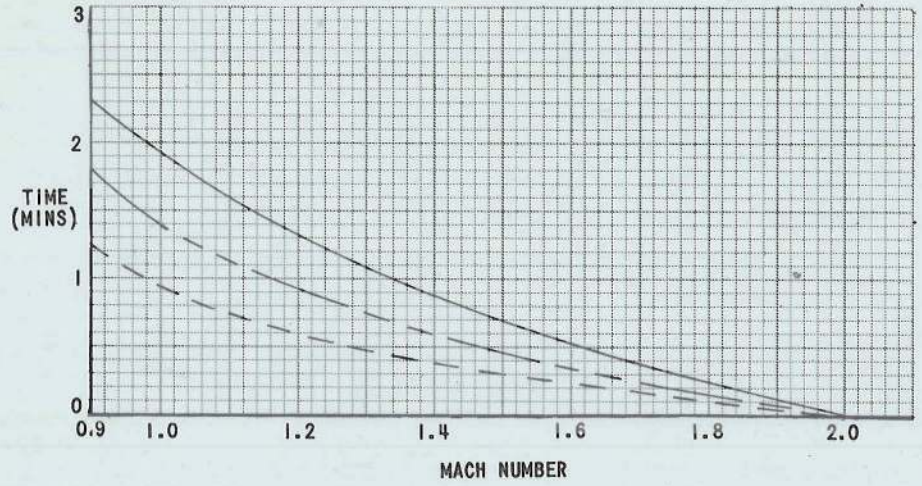
50,000 FT
40,000 FT
30,000 FT

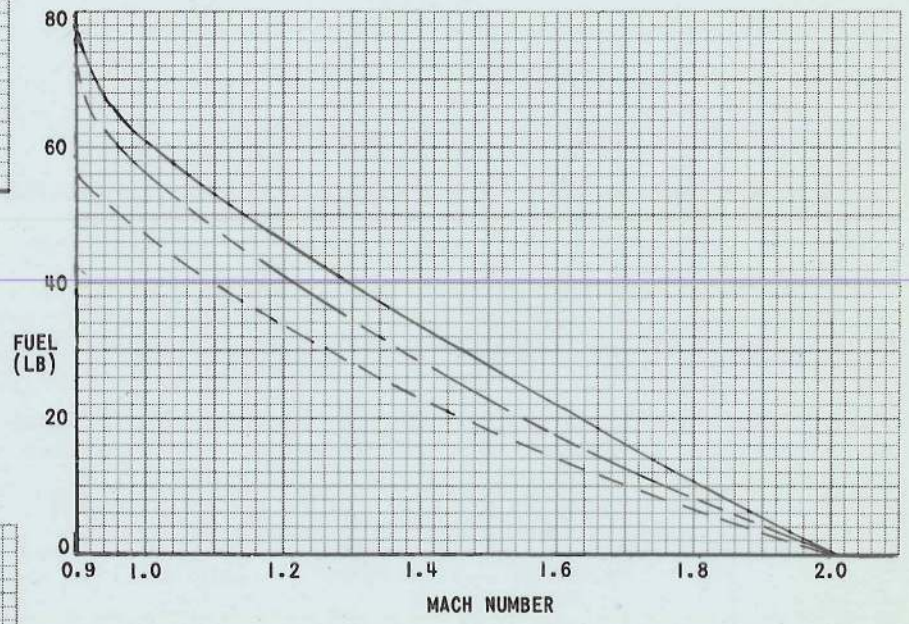
FIG. 5.66 DECELERATION IN LEVEL FLIGHT

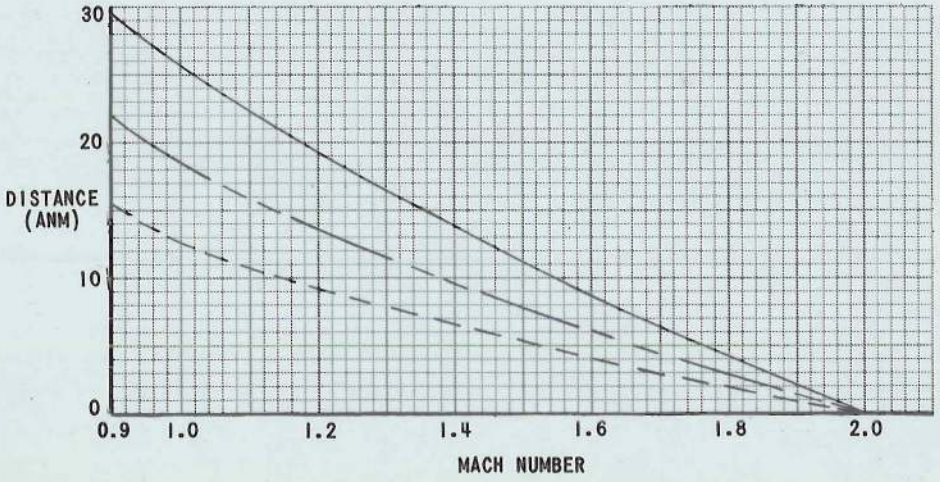


SUPERSONIC
ICAO

IDLE/FAST IDLE
AIRBRAKES IN







50,000 FT
40,000 FT
30,000 FT

FIG. 5.67 DECELERATION IN LEVEL FLIGHT