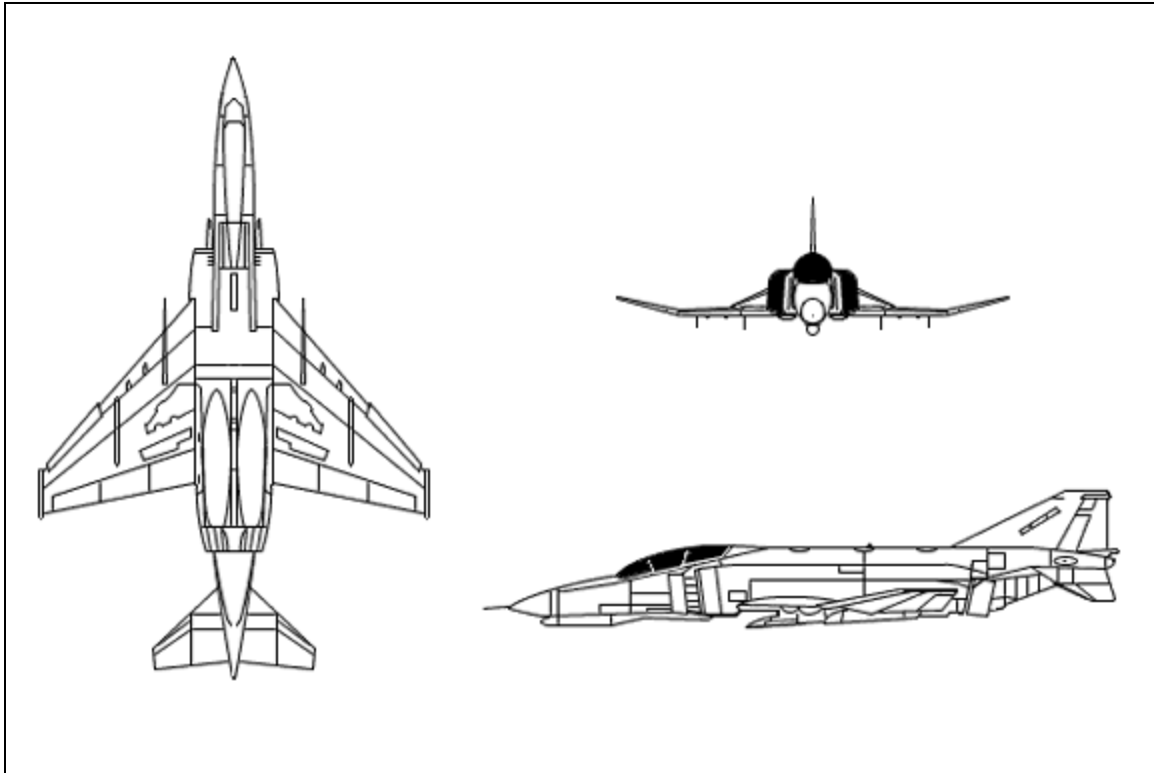


PERFORMANCE ANALYSIS



Mc Donnell Douglas F-4E Blk.41 Phantom II (J79-GE-17)

CAUTION STATEMENT : This document is to be use only for simulation. Do not try to apply the procedures and or advices contained in it if you have the opportunity to fly this plane in real life. By the way, if you had (or still have) flew this aircraft, your comments, criticism and more are welcome

LICENSE : This document has been created by J.M. LANGERON / TOPOLO, (<http://topolo.free.fr/>) all the values used to model the aircraft behavior have been computed by him, like all performance charts presented here. If you want to use these data, or part of it, please contact the author by personal message to TOPOLO on check-six forum: (<http://www.checksix-forums.com/>)

Level Flight Envelope

Level Flight Envelope

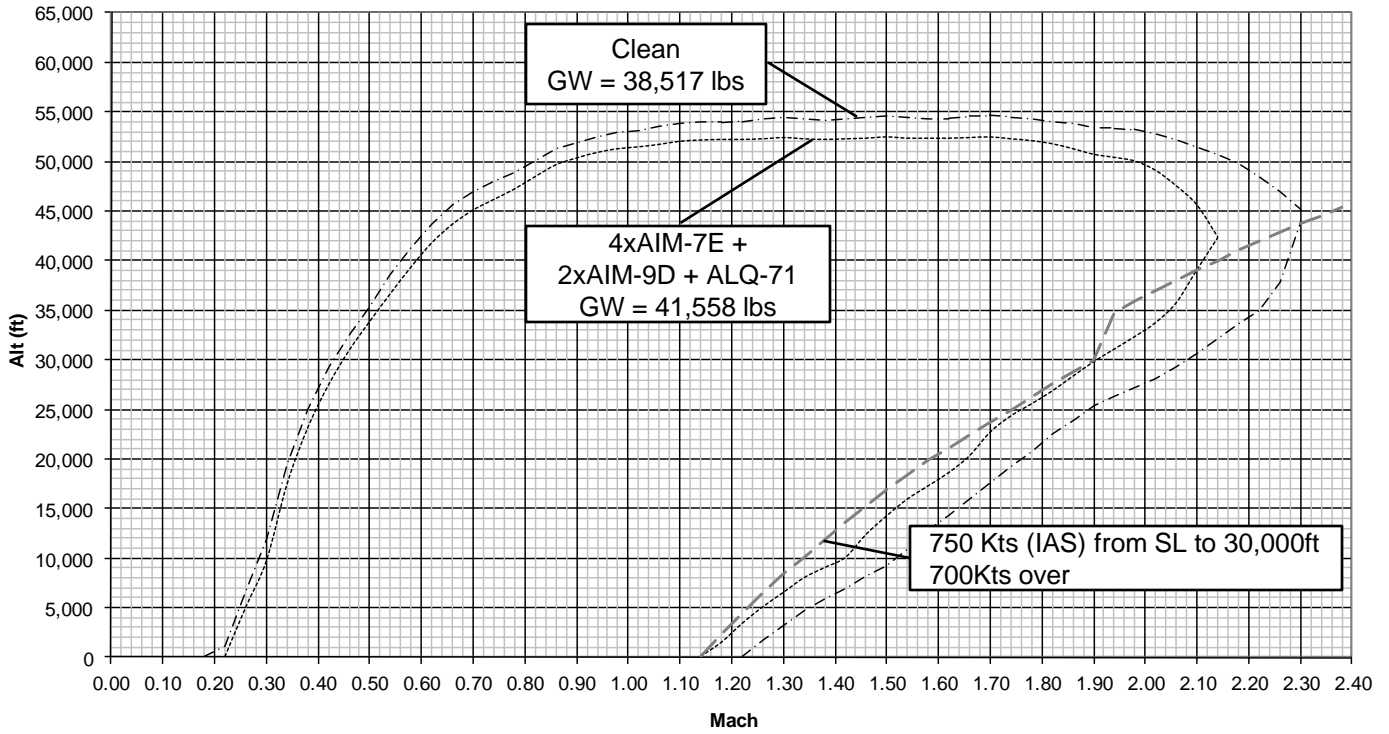
DATA BASIS : ESTIMATED

CONDITIONS:

- Standard Day
- Max AB

Aircraft : F-4E Blk.41

Engine :J79-GE-17



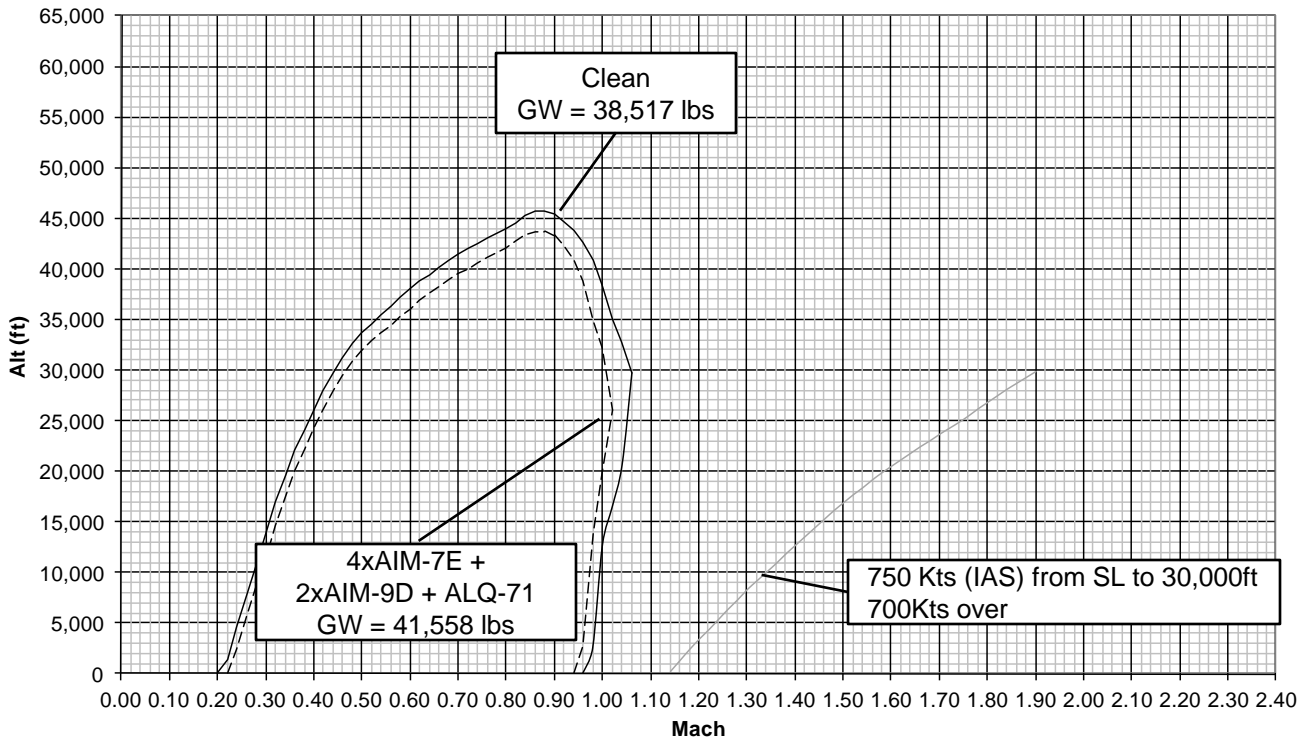
DATA BASIS : ESTIMATED

CONDITIONS:

- Standard Day
- MILL Power

Aircraft : F-4E Blk.41

Engine :J79-GE-17



Turn Performance

Aircraft : F-4E Blk.41

Engine : J79-GE-17

CONFIGURATIONS :

•4xAIM-7E + 2xAIM-9D + ALQ-71

•50% internal fuel

•GW= 41,558 lbs

Load Factor limited to 5.58G

(AIM-9 under LAU-7A/A on station 2)

IAS limited to 750Kts under 25,000ft,

650Kts over 40,000ft

(ALQ-71/QRC-160-1 on station 9)

Turn Rate – Summary

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine :J79-GE-17

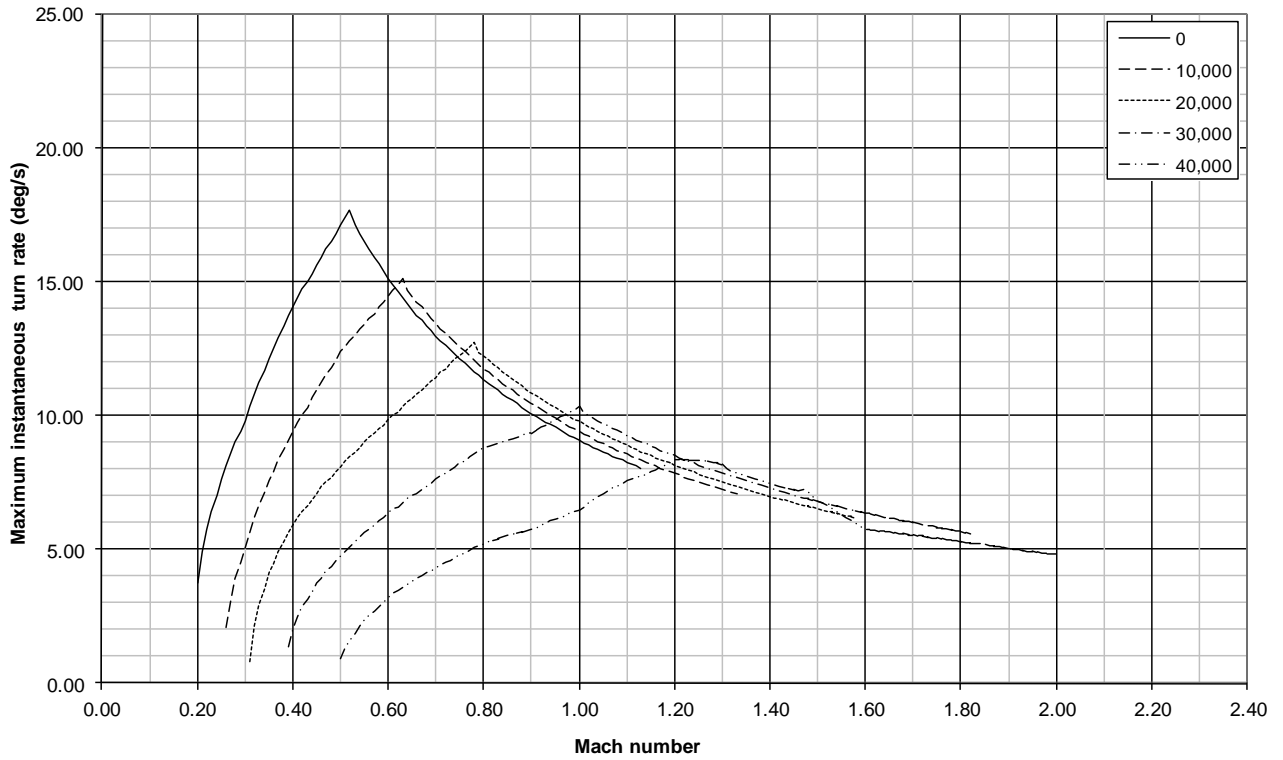
CONDITIONS:

- Standard Day
- Max AB

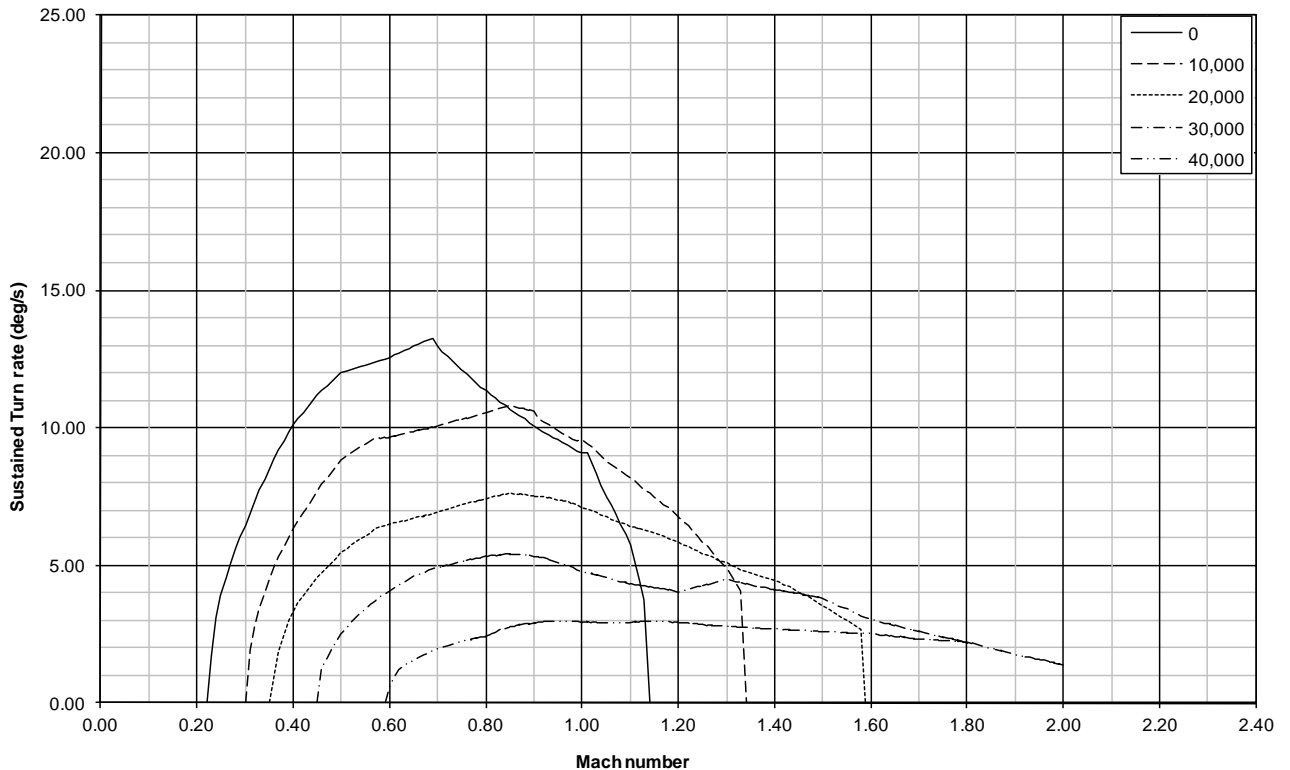
CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs

Maximum Available Turn Rate



Maximum Sustained Turn rate (deg/s)



Load Factor – Summary

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine :J79-GE-17

CONDITIONS:

•Standard Day

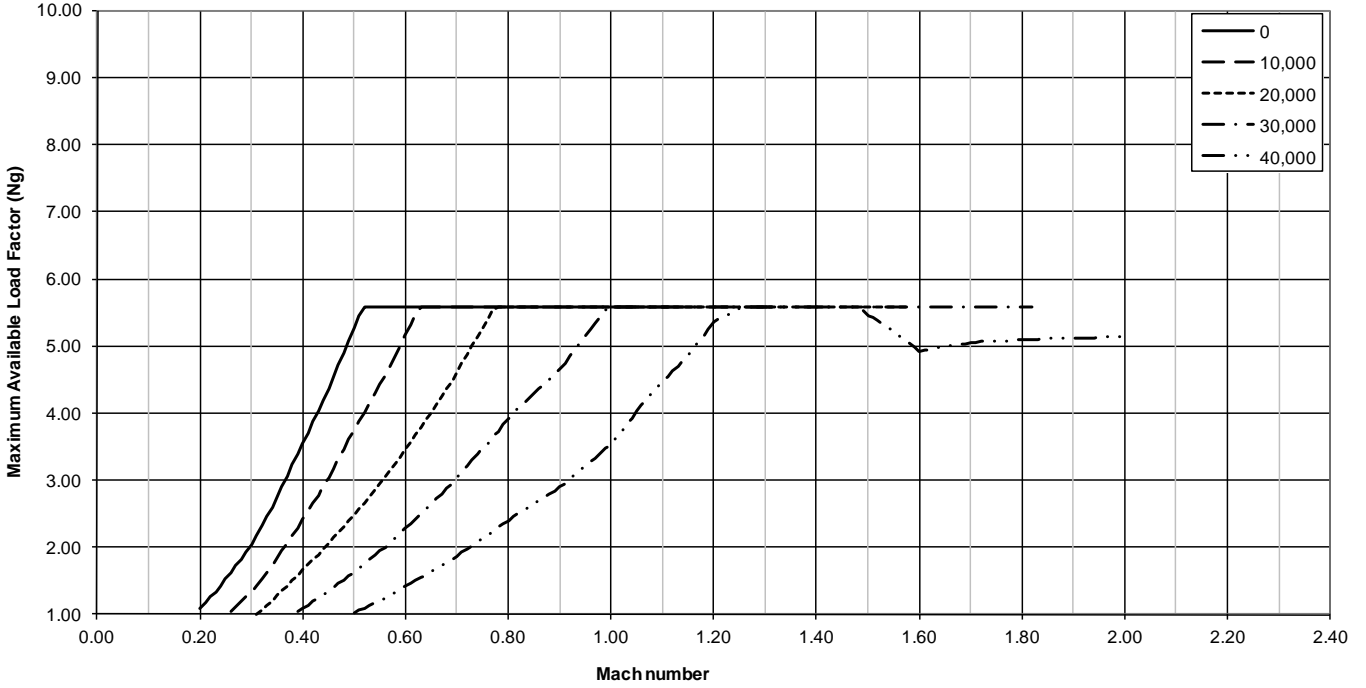
•Max AB

CONFIGURATIONS :

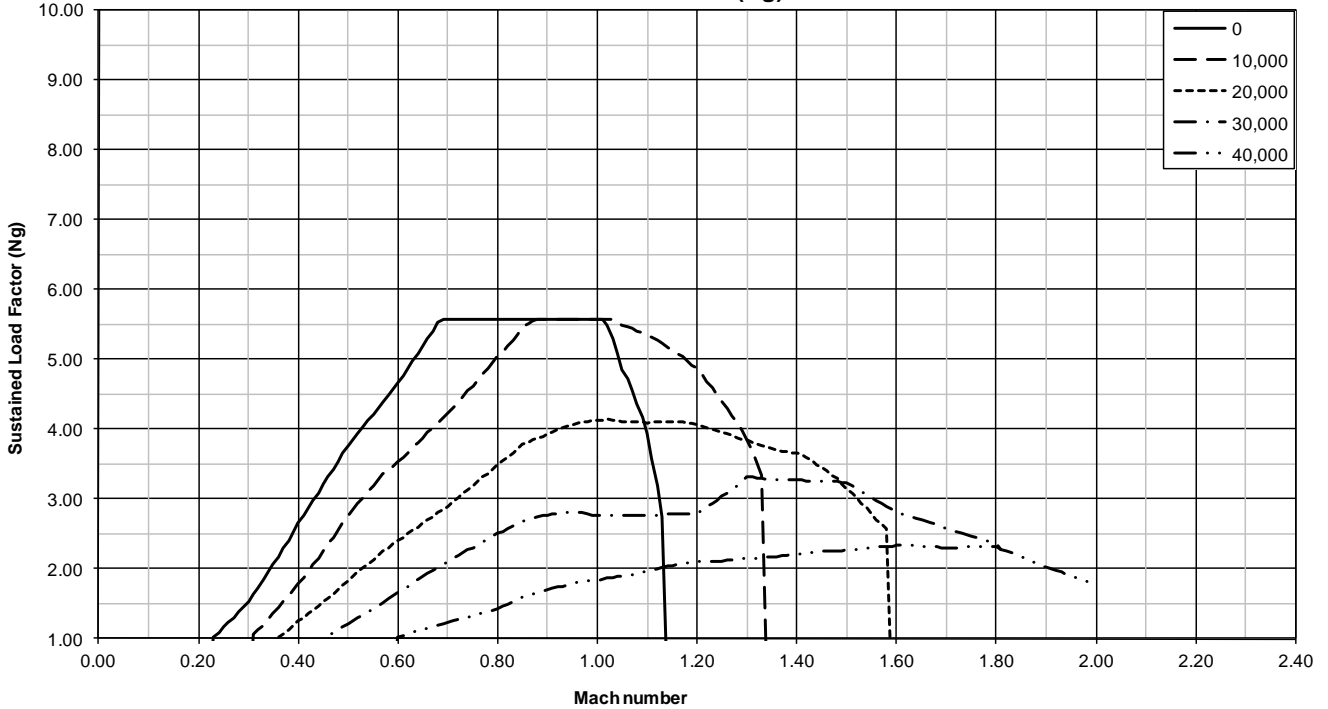
•4xAIM-7E + 2xAIM-9D + ALQ-71

•GW=41,558 lbs

Maximum Available Load Factor



Maximum Sustained Load Factor (Ng)



Turn Performance – Sea Level

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

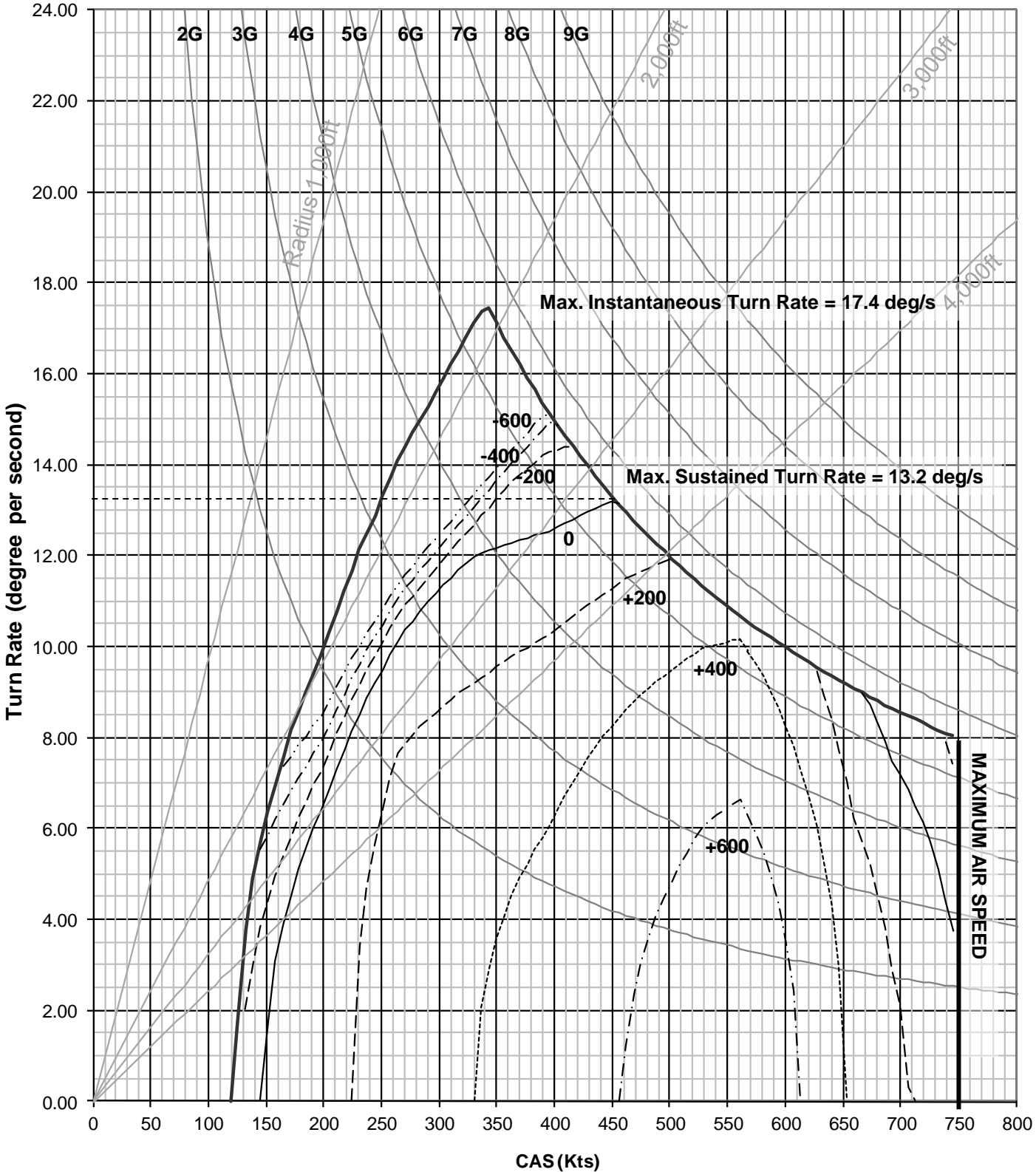
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 5,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

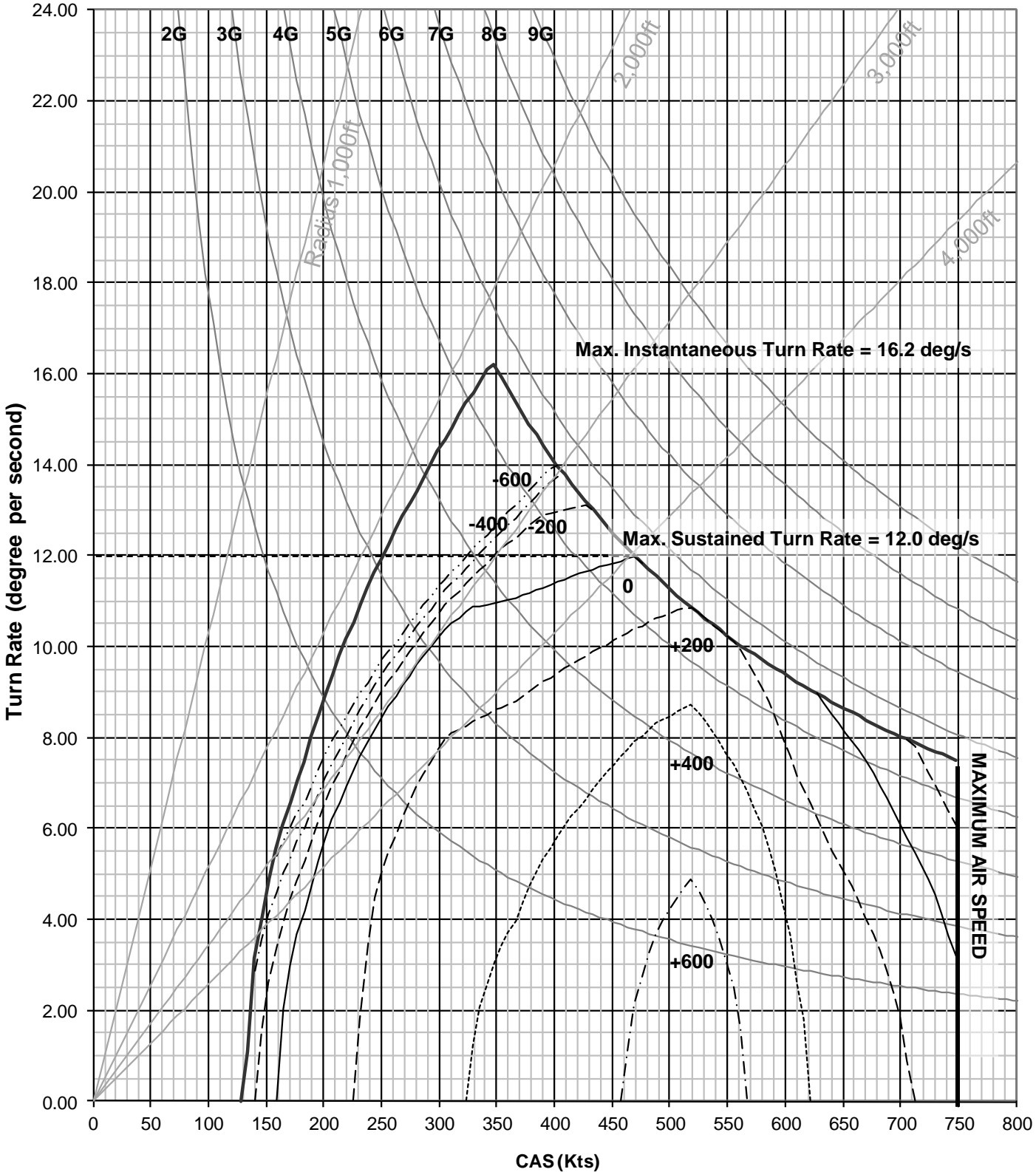
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 10,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

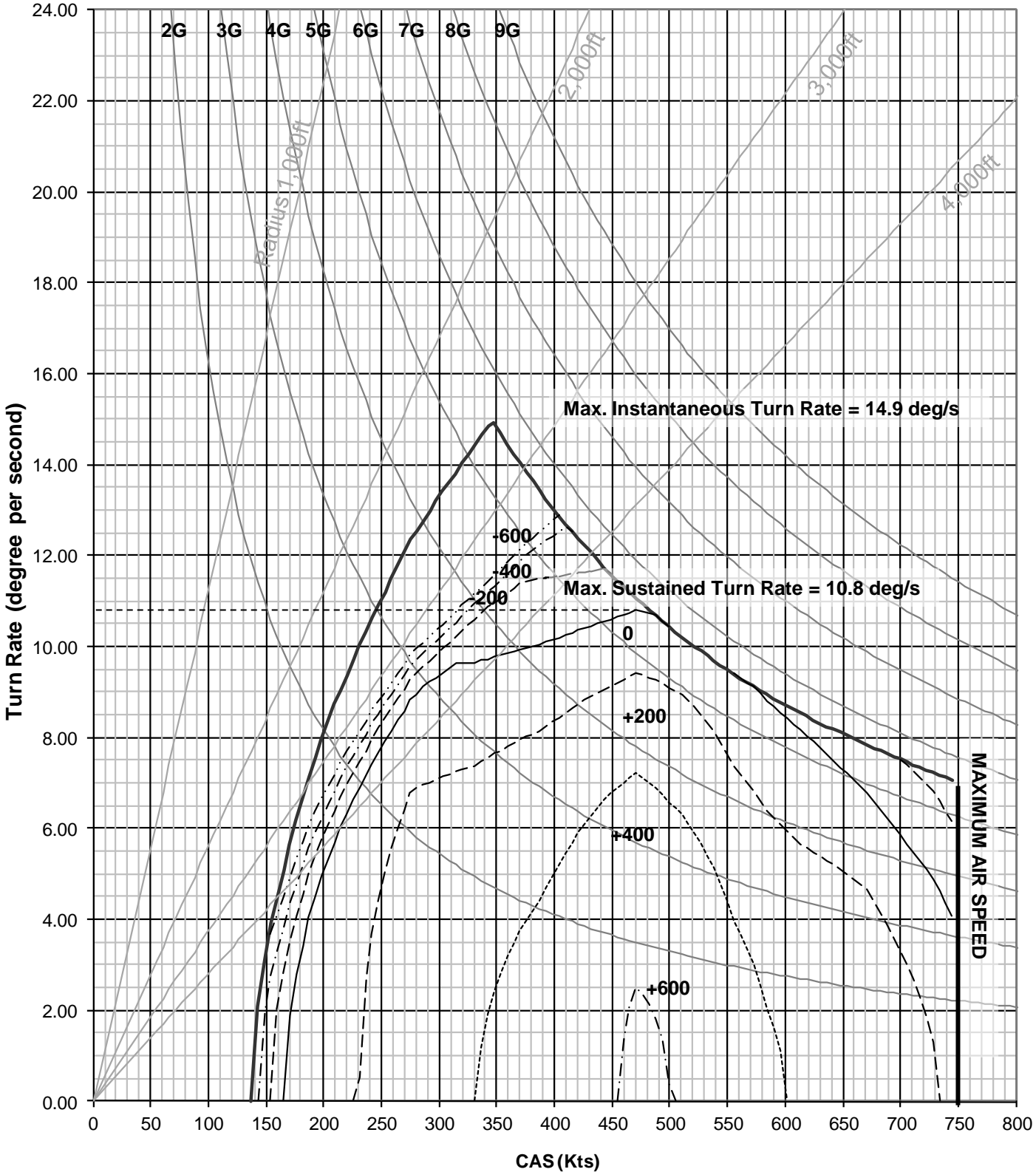
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 15,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

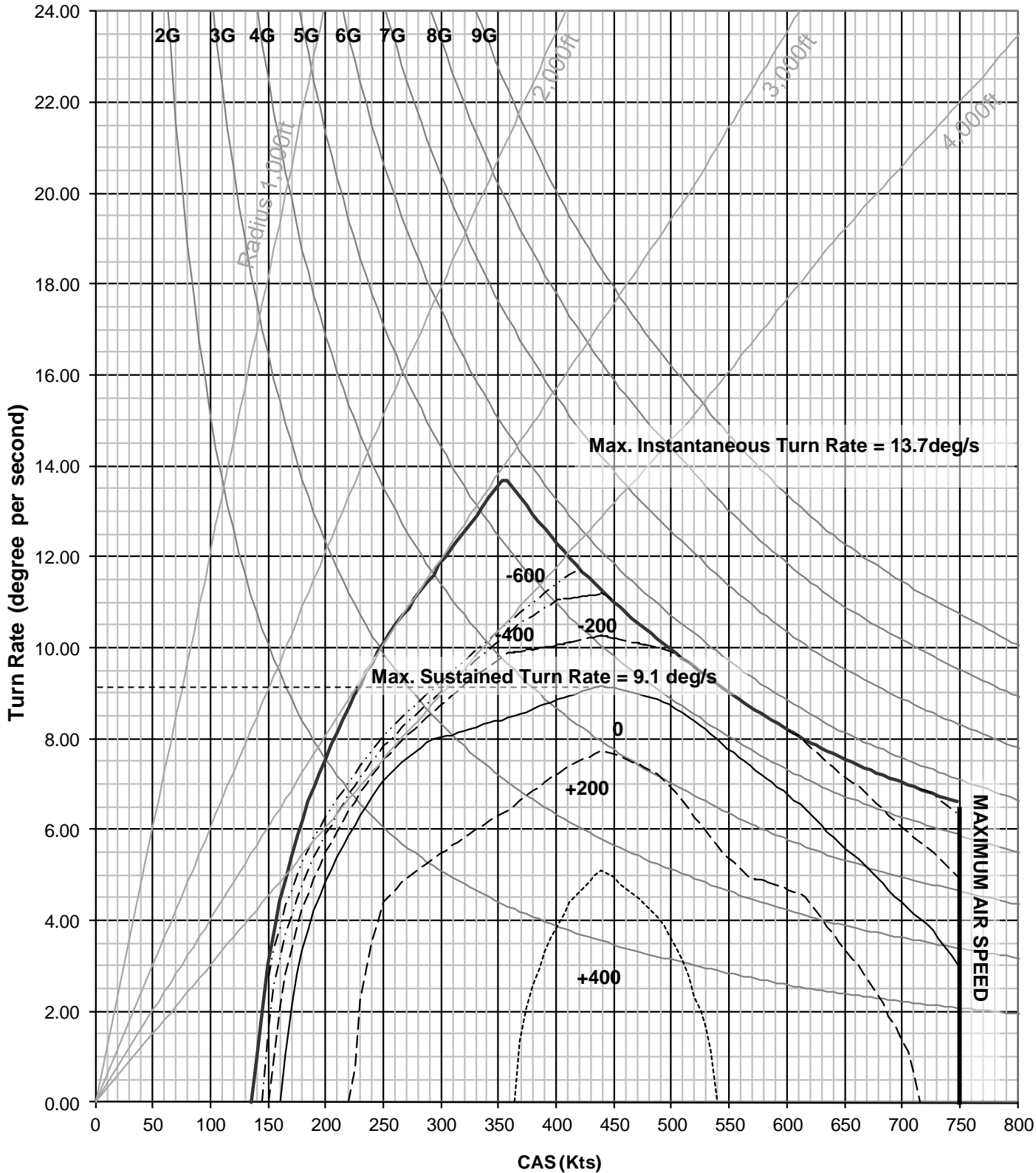
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 20,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

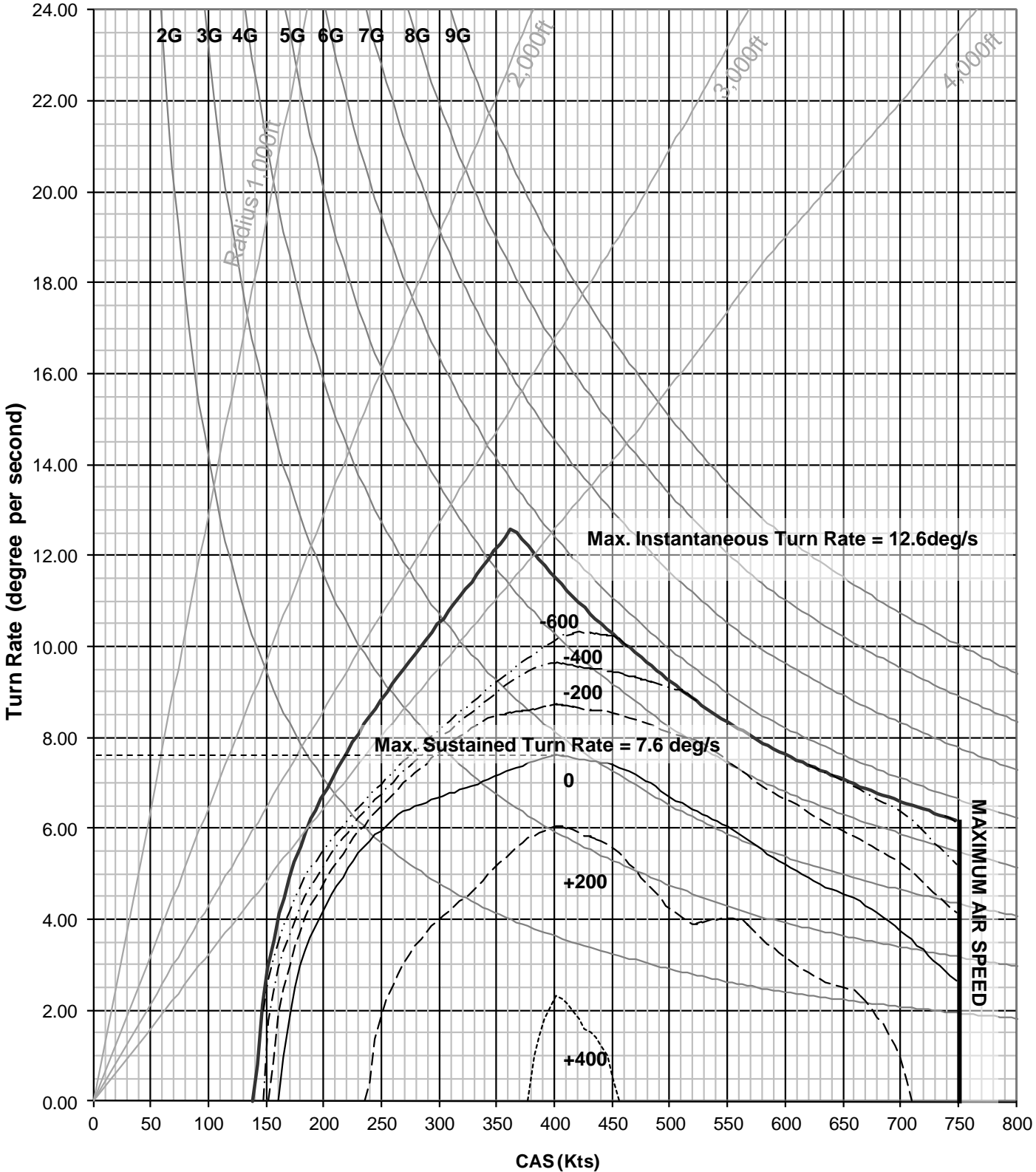
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 25,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

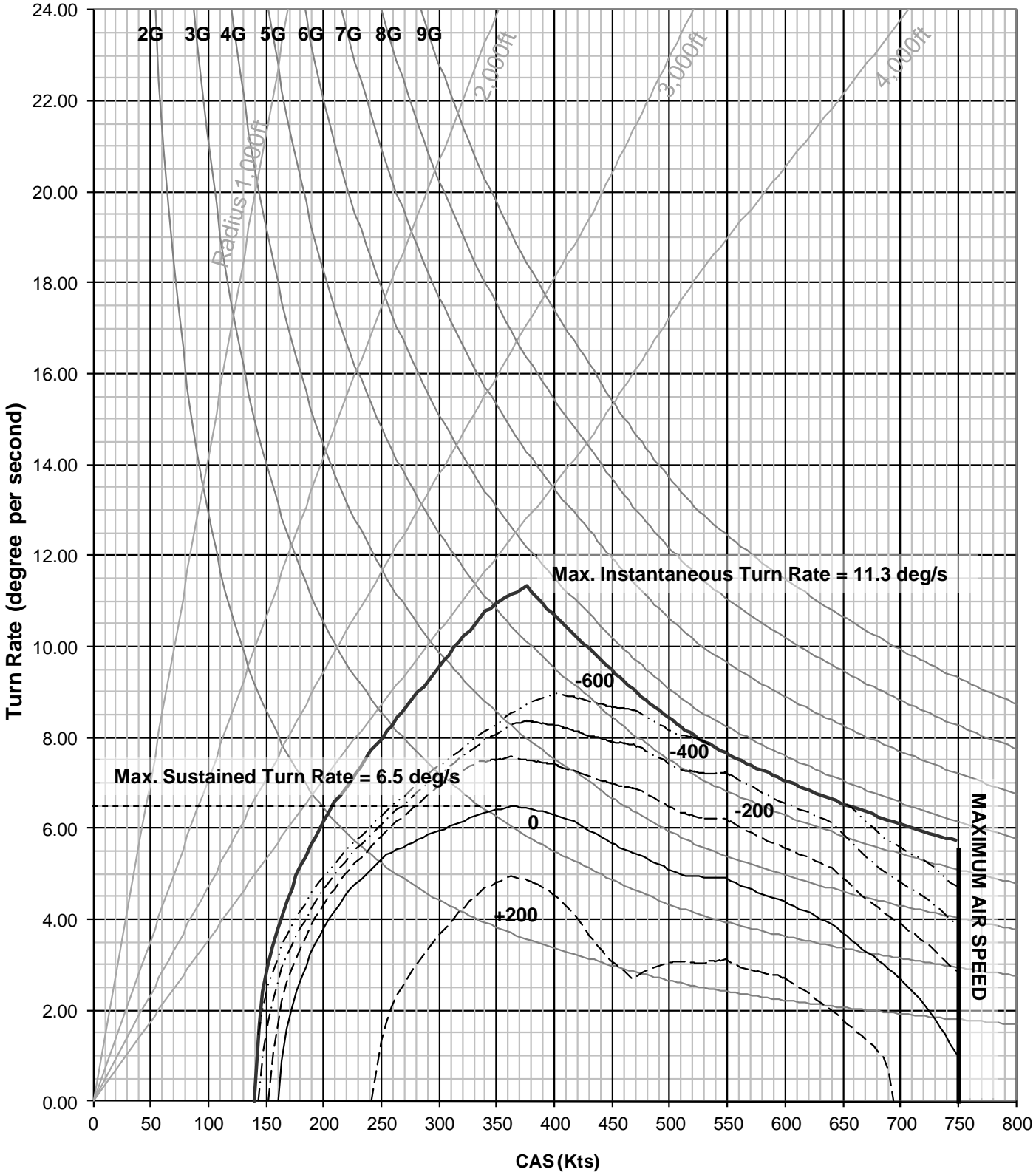
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 30,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

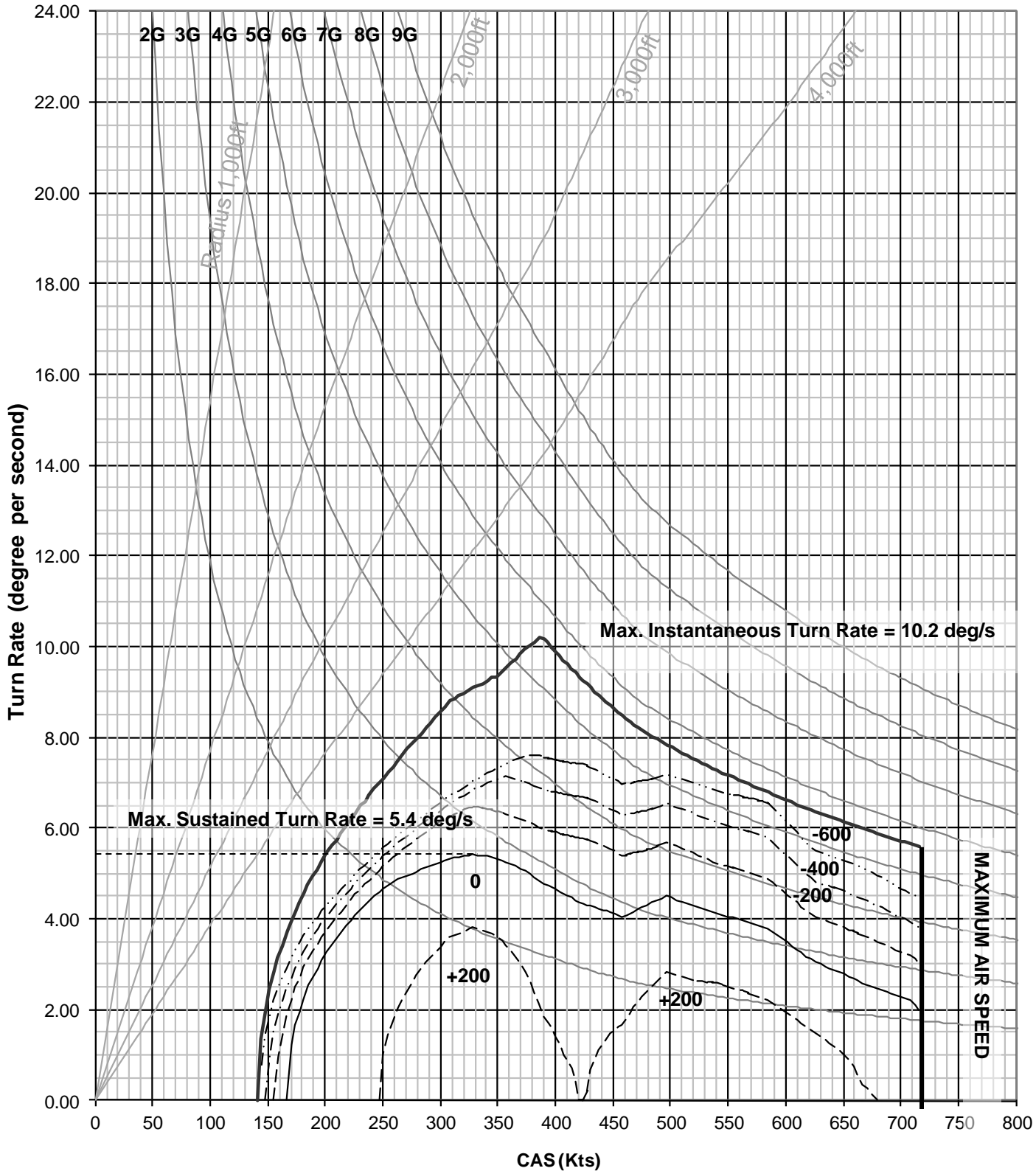
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Turn Performance – 35,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

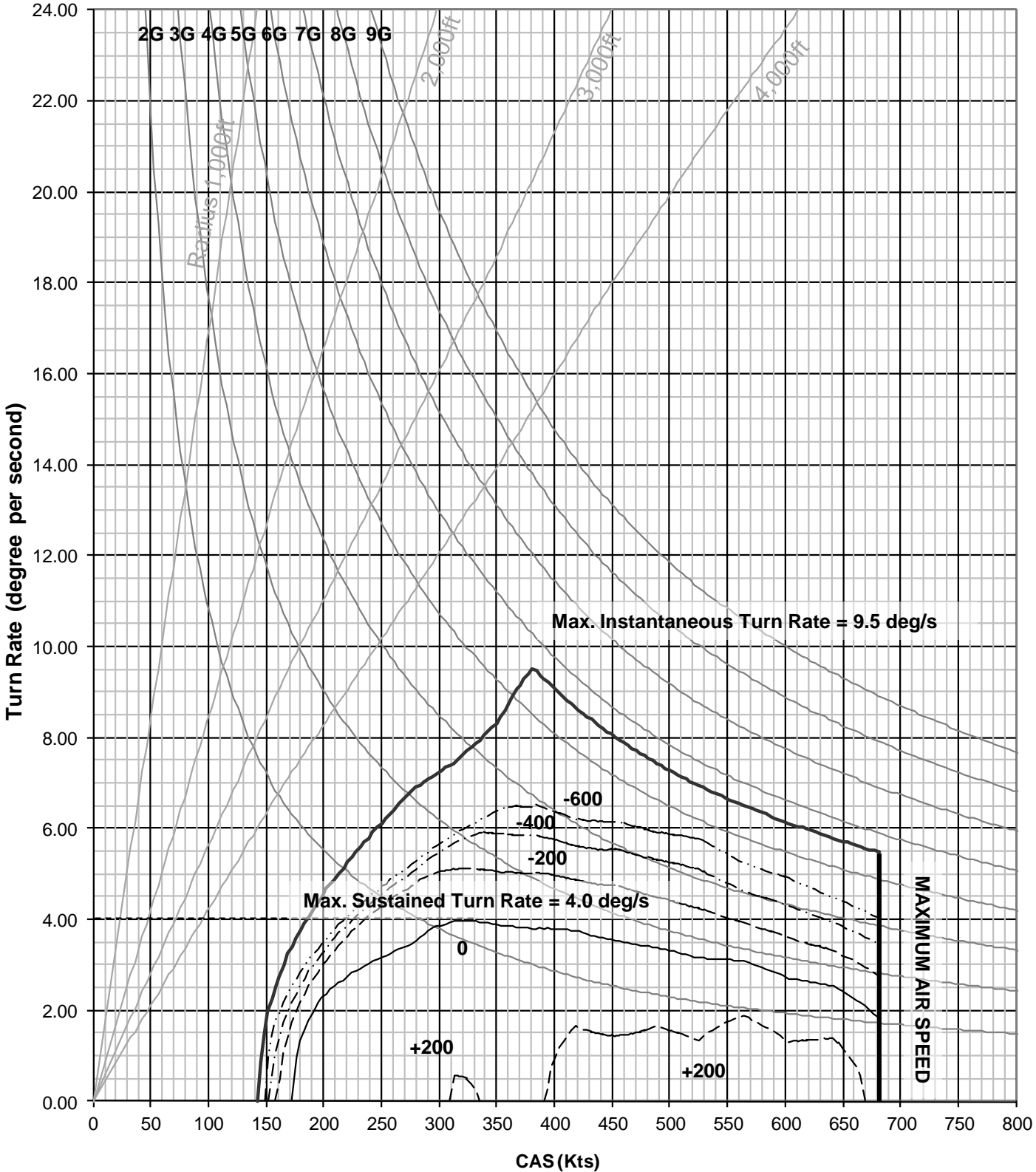
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs



Climb Performance

Aircraft : F-4E Blk.41

Engine :J79-GE-17

CONFIGURATIONS :

•4xAIM-7E + 2xAIM-9D + ALQ-71

•50% internal fuel

•GW= 41,558 lbs

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine : J79-GE-17

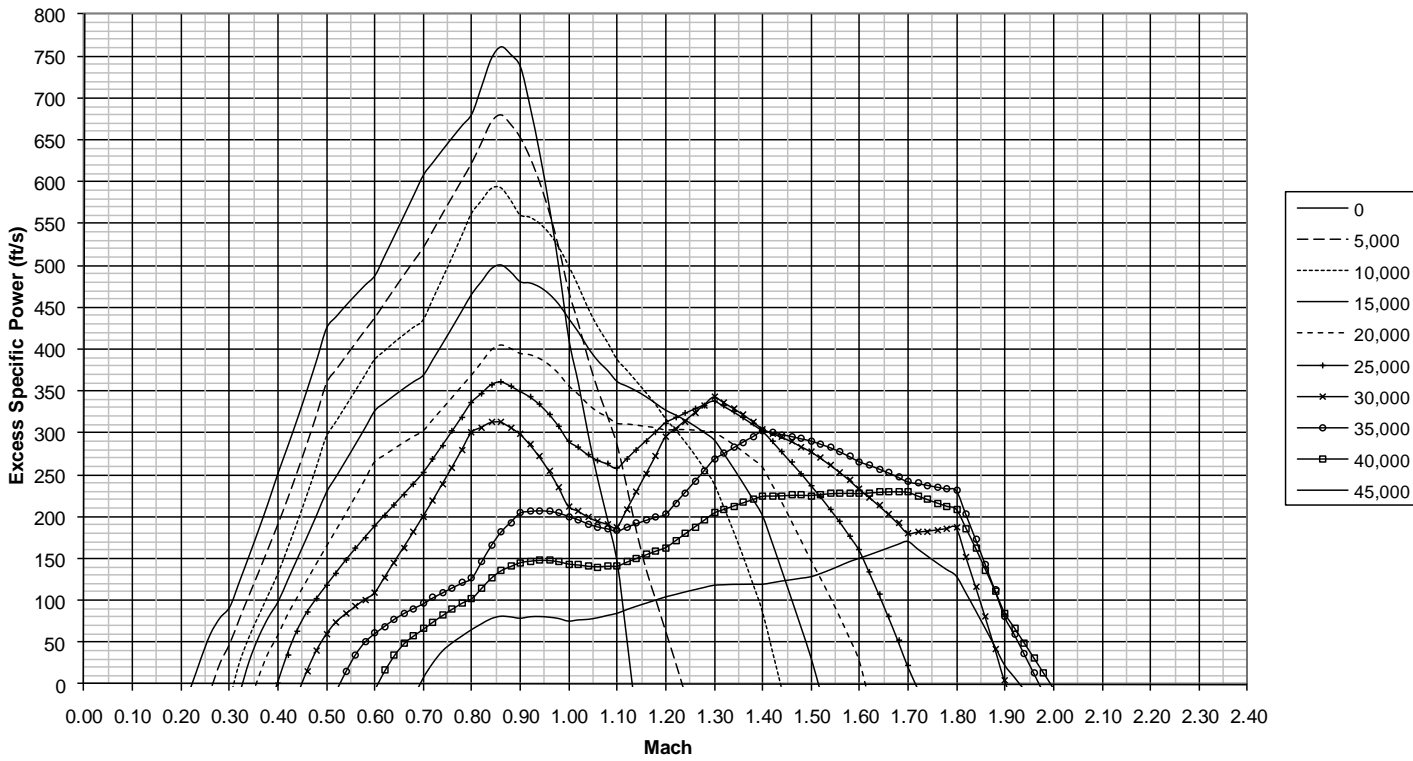
CONDITIONS:

- Standard Day
- Max AB

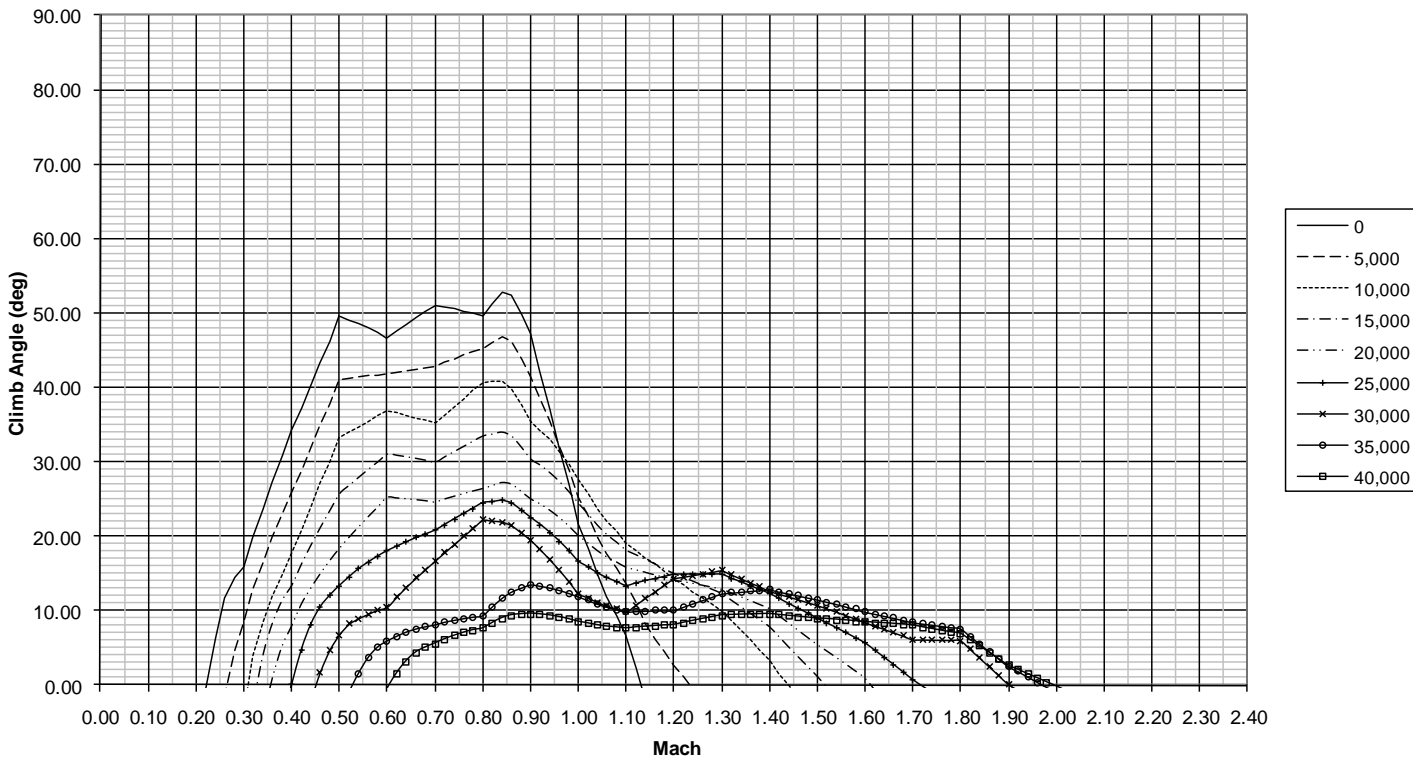
CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs

Instantaneous Constant Speed Climb Rate



Constant Speed Climb Angle



DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine :J79-GE-17

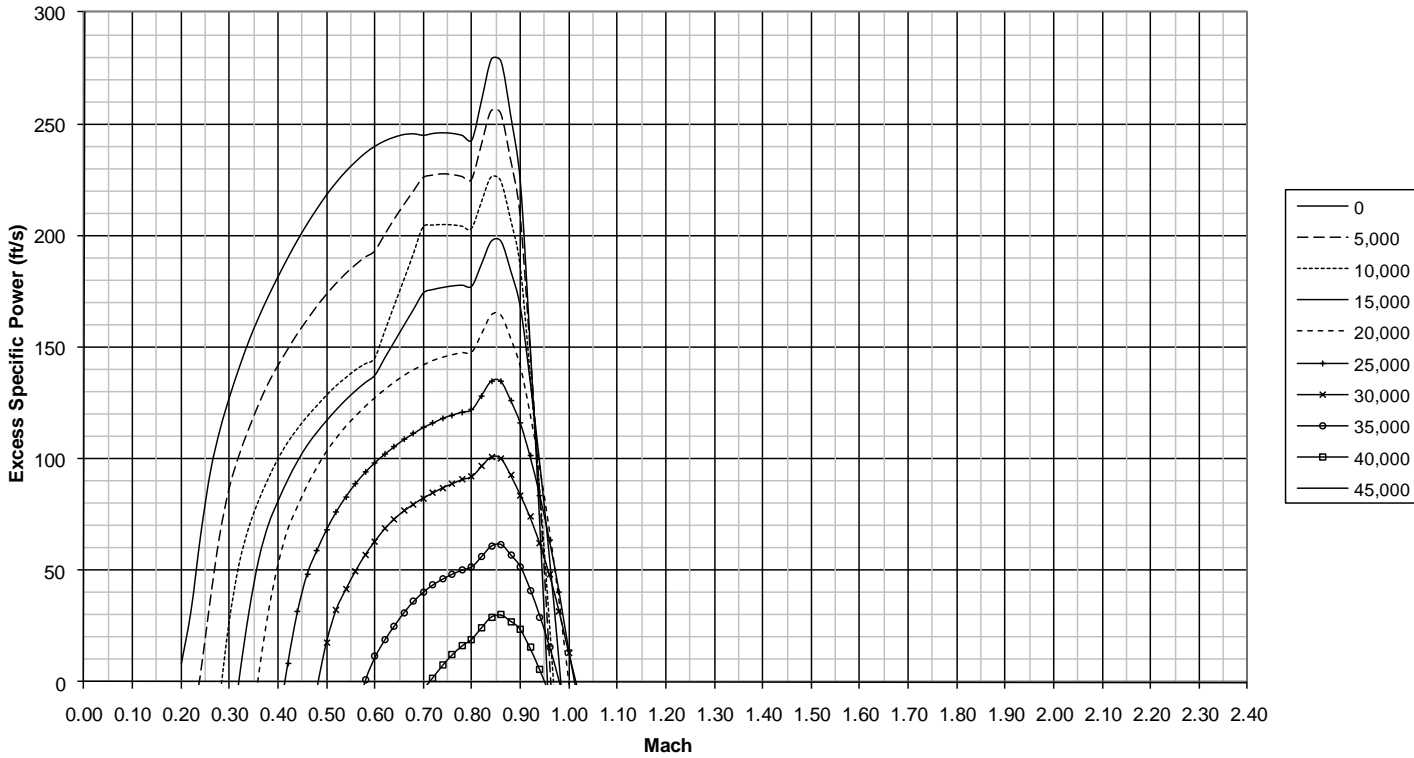
CONDITIONS:

- Standard Day
- MIL Power

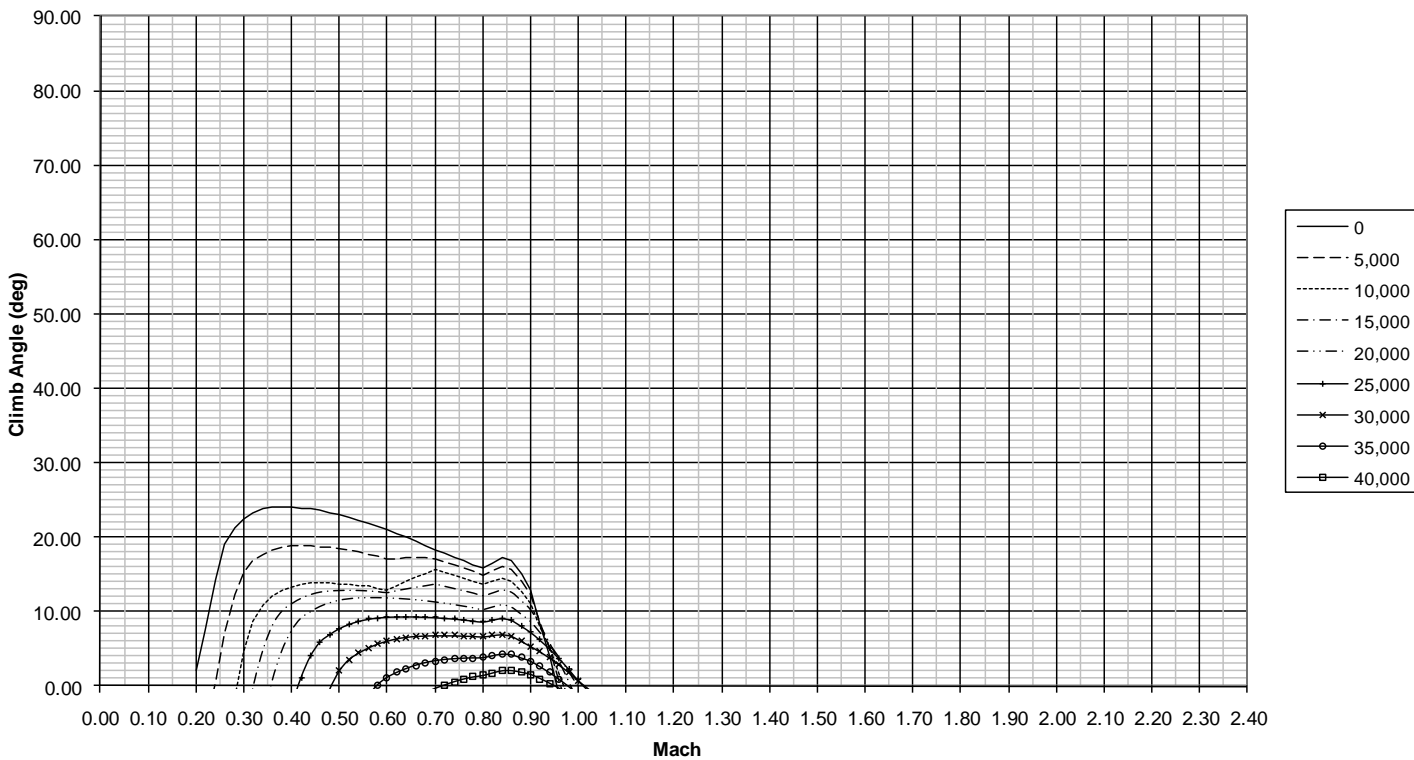
CONFIGURATIONS :

- 4xAIM-7E + 2xAIM-9D + ALQ-71
- GW=41,558 lbs

Instantaneous Constant Speed Climb Rate



Constant Speed Climb Angle



Acceleration Performances

Aircraft : F-4E Blk.41

Engine :J79-GE-17

CONFIGURATIONS :

•4xAIM-7E + 2xAIM-9D + ALQ-71

•50% internal fuel

•GW= 41,558 lbs

Acceleration Diagram

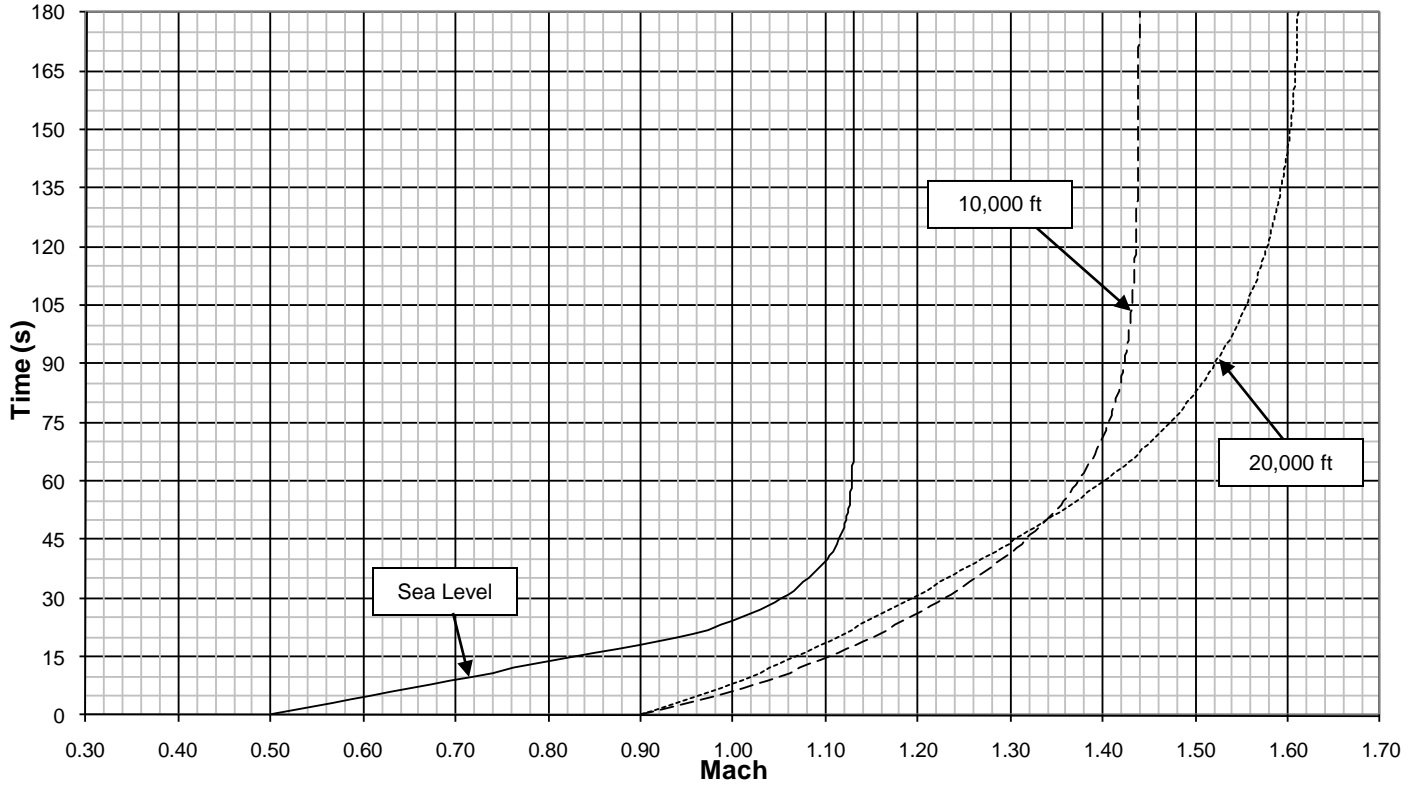
DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41
Engine : J79-GE-17

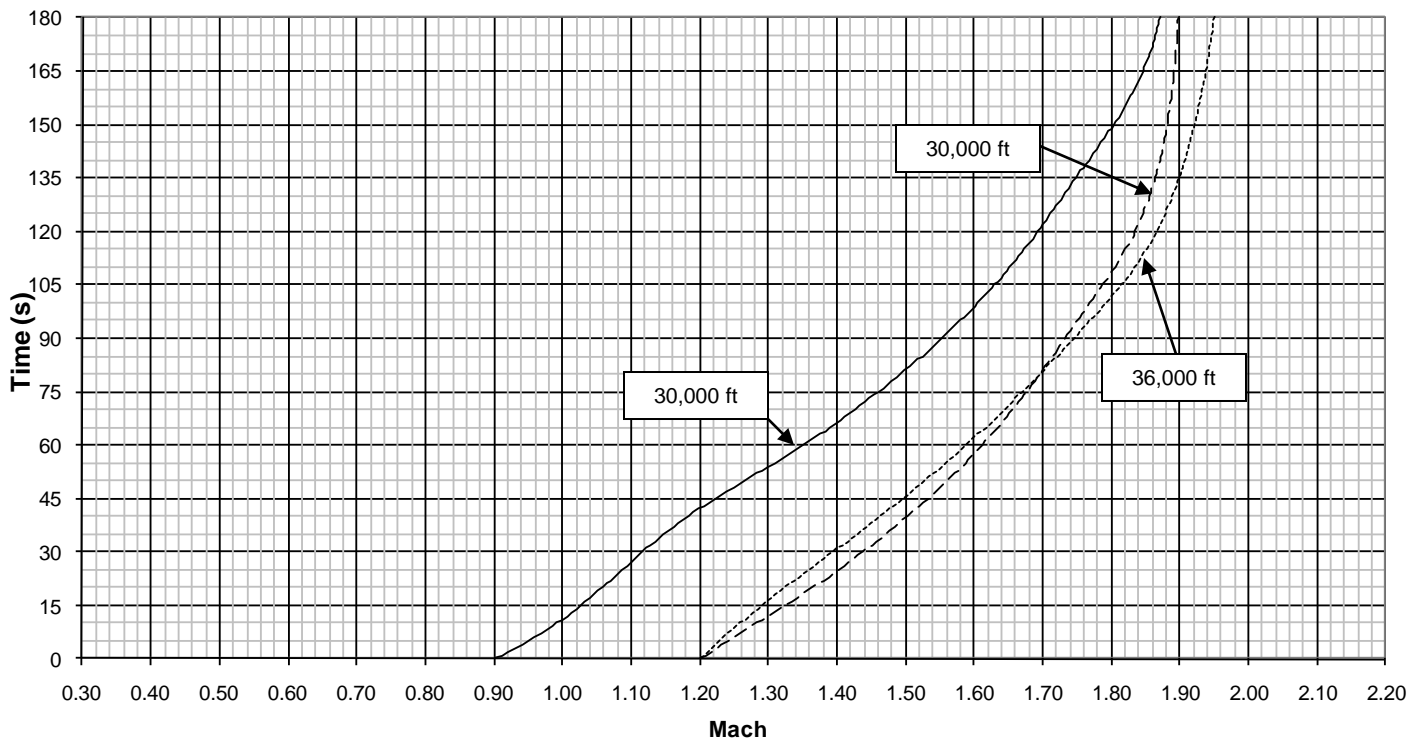
CONDITIONS:
•Standard Day
•Max AB

CONFIGURATIONS :
•4xAIM-7E + 2xAIM-9D + ALQ-71
•GW=41,558 lbs

Acceleration (Max Thrust AB)



Acceleration (Max Thrust AB)



Turn Performance

Aircraft : F-4E Blk.41

Engine : J79-GE-17

CONFIGURATIONS :

•4xAIM-7E

•50% internal fuel

•GW= 40,337lbs

Turn Rate – Summary

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine :J79-GE-17

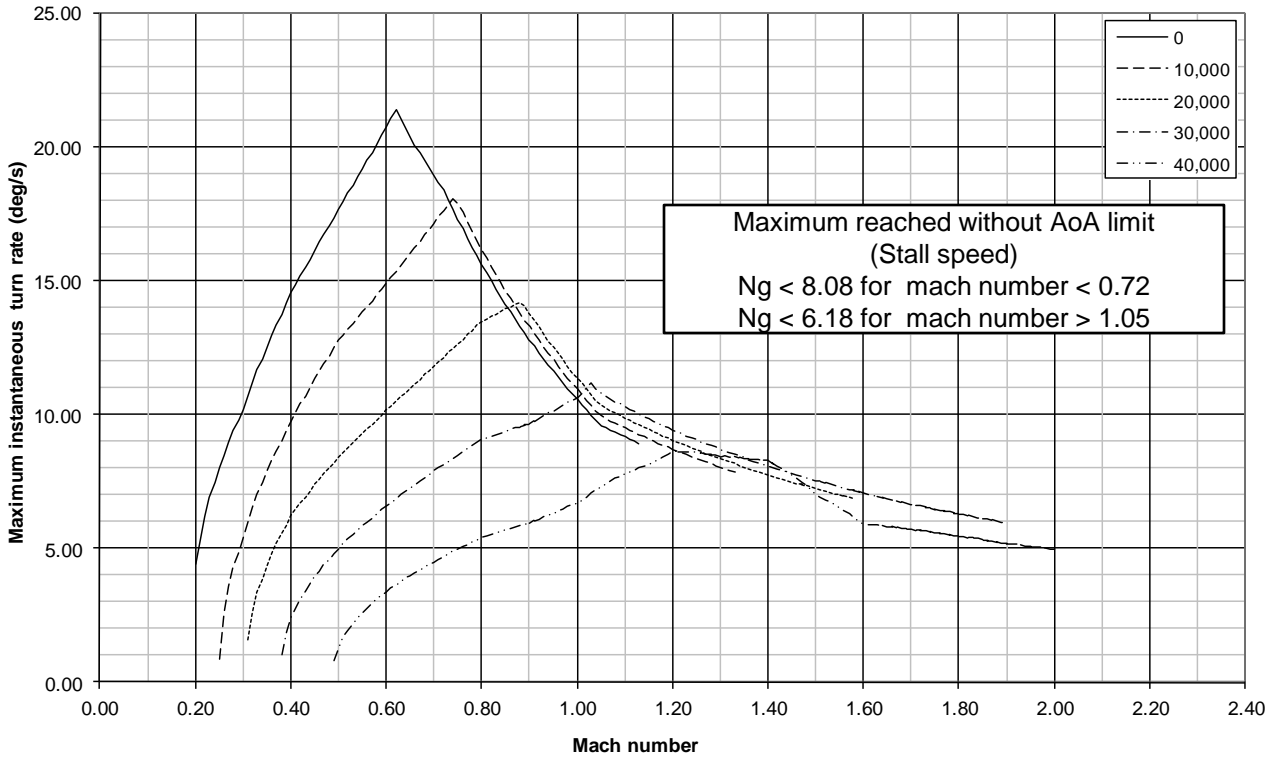
CONDITIONS:

- Standard Day
- Max AB

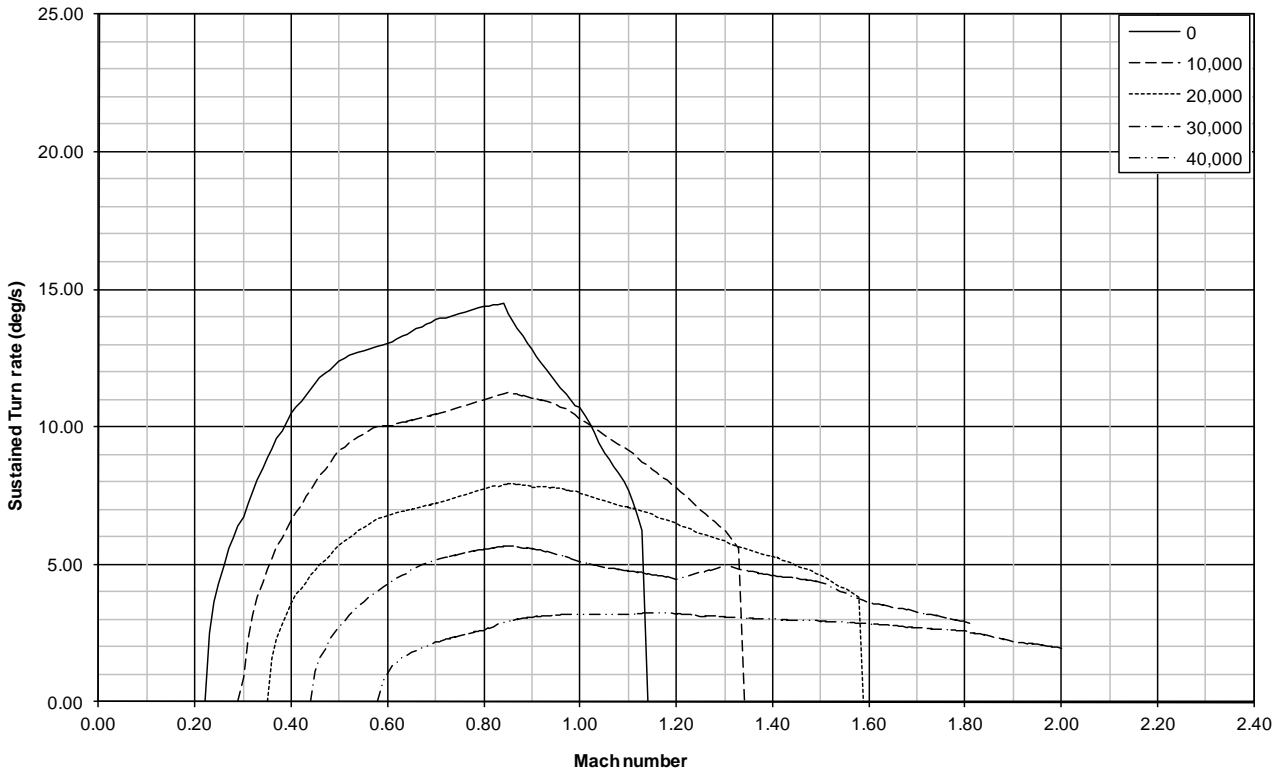
CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs

Maximum Available Turn Rate



Maximum Sustained Turn rate (deg/s)



Load Factor – Summary

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine :J79-GE-17

CONDITIONS:

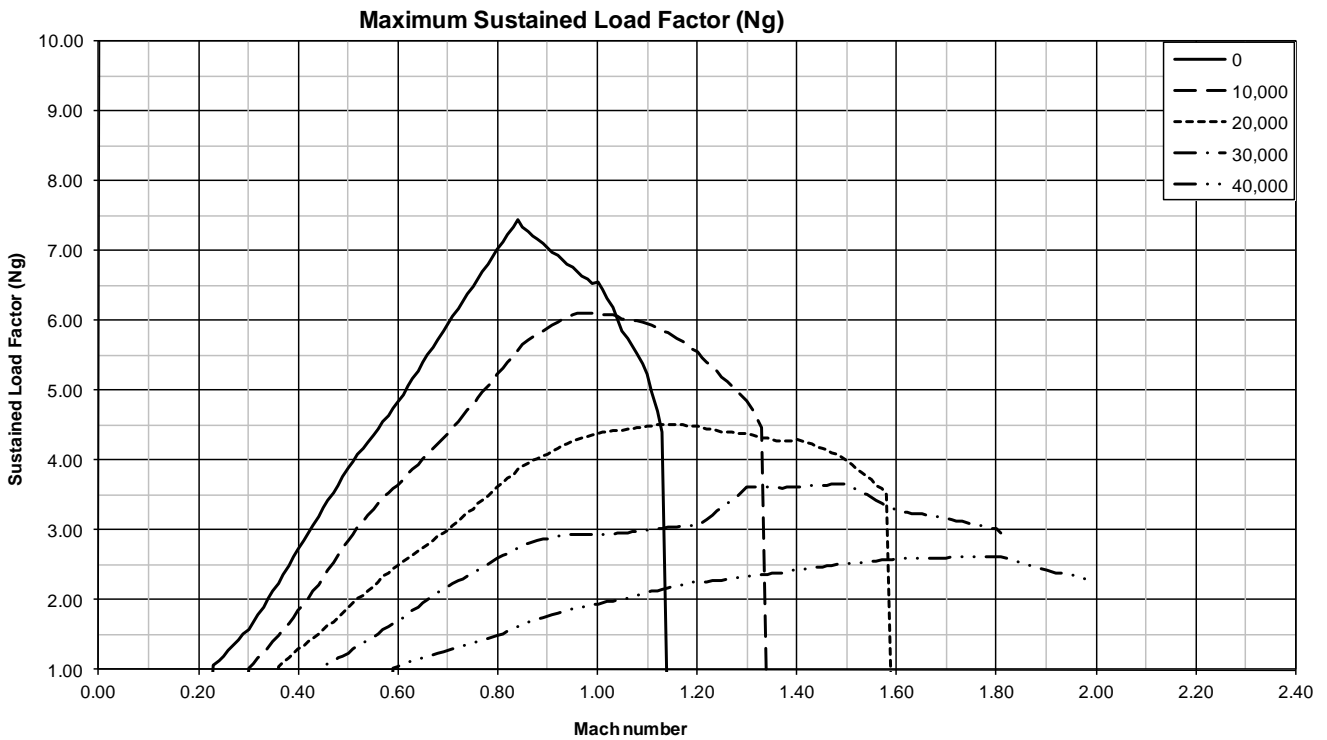
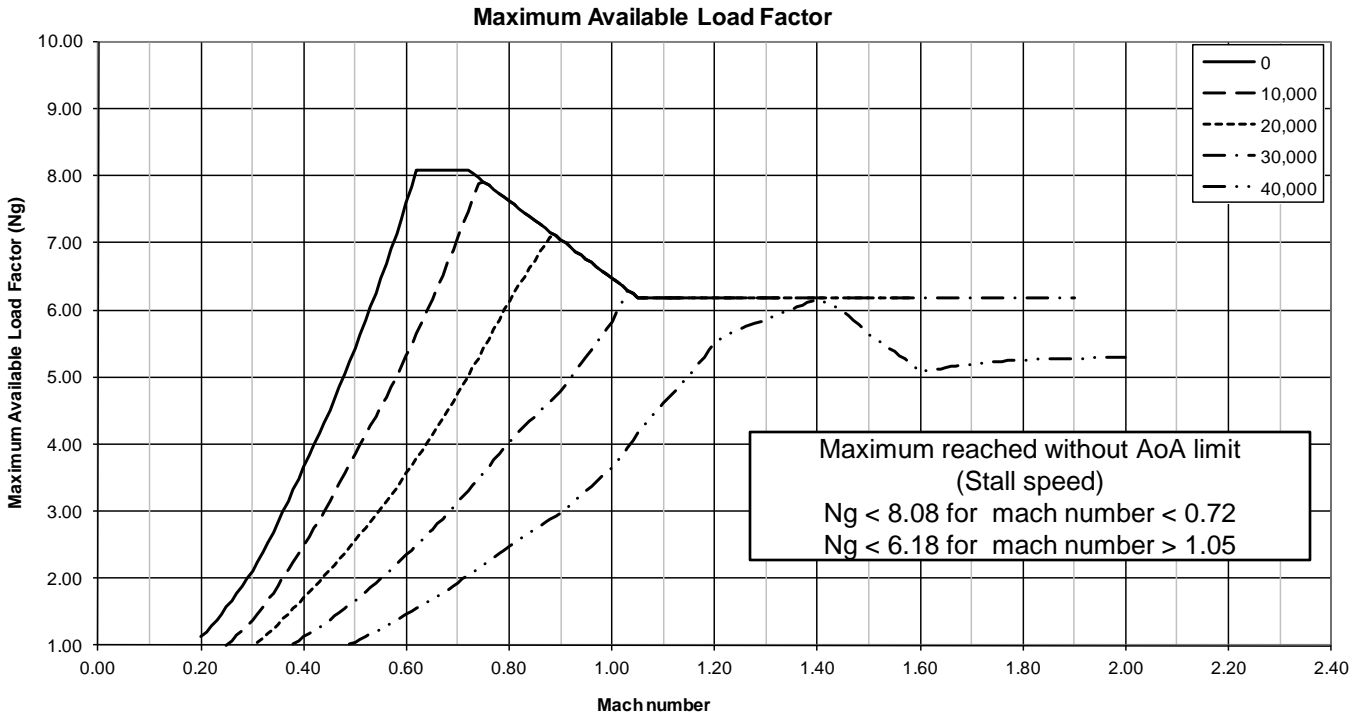
•Standard Day

•Max AB

CONFIGURATIONS :

•4xAIM-7E

•GW=40,337 lbs



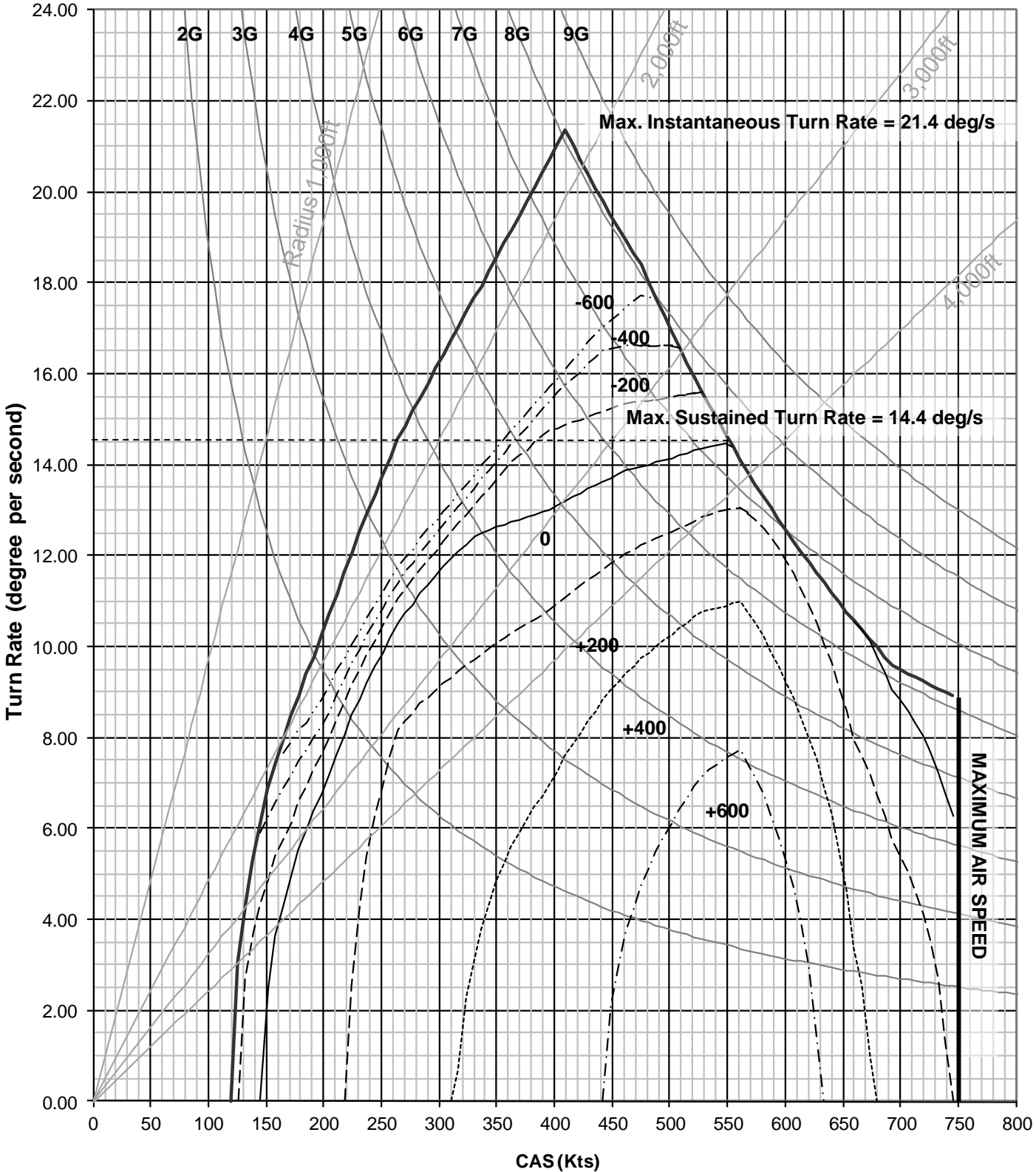
Turn Performance – Sea Level

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41
Engine :J79-GE-17

CONDITIONS:
 •Standard Day
 •Max AB

CONFIGURATIONS :
 •4xAIM-7E
 •GW=40,337 lbs



Turn Performance – 5,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

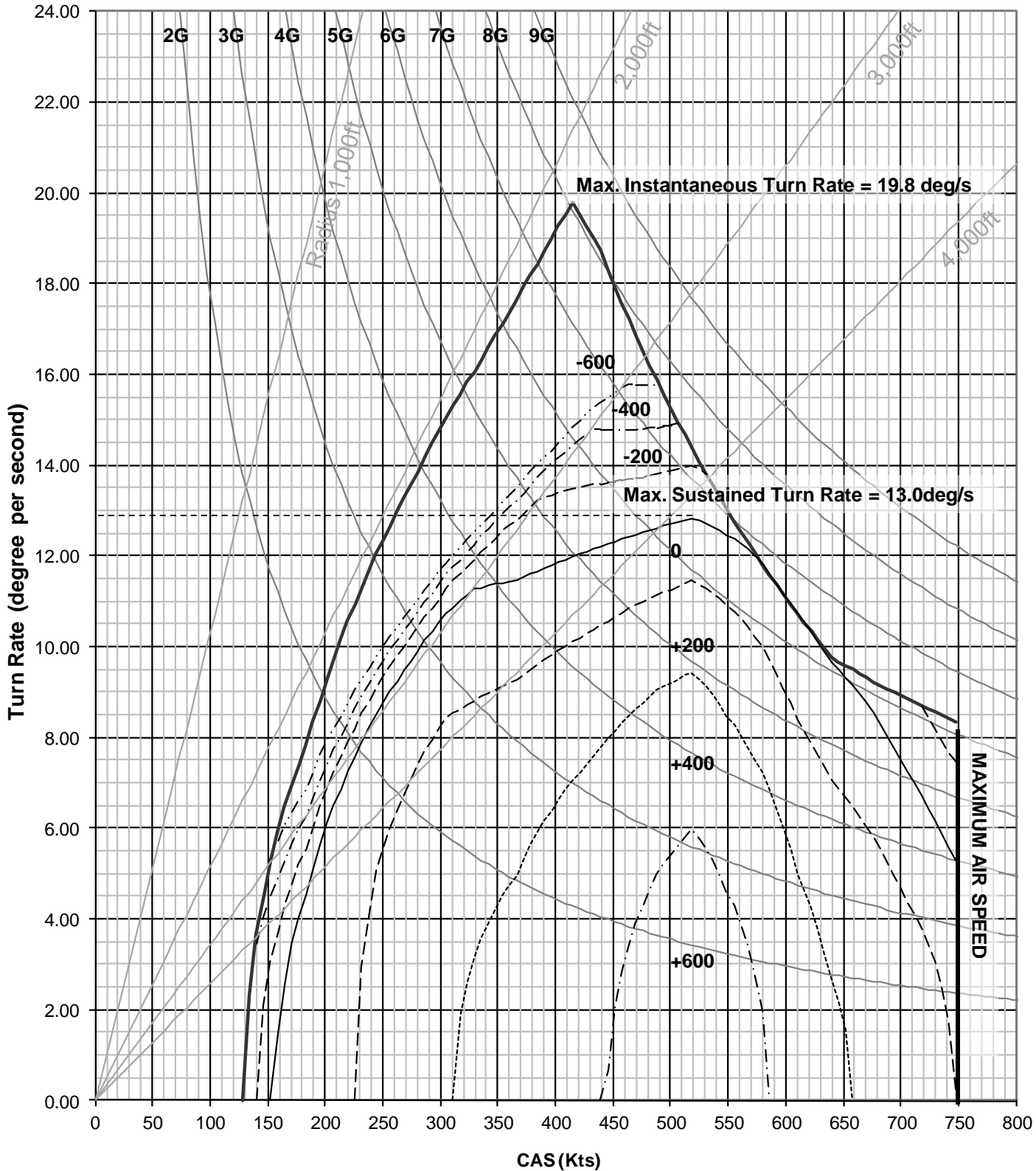
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



Turn Performance – 10,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

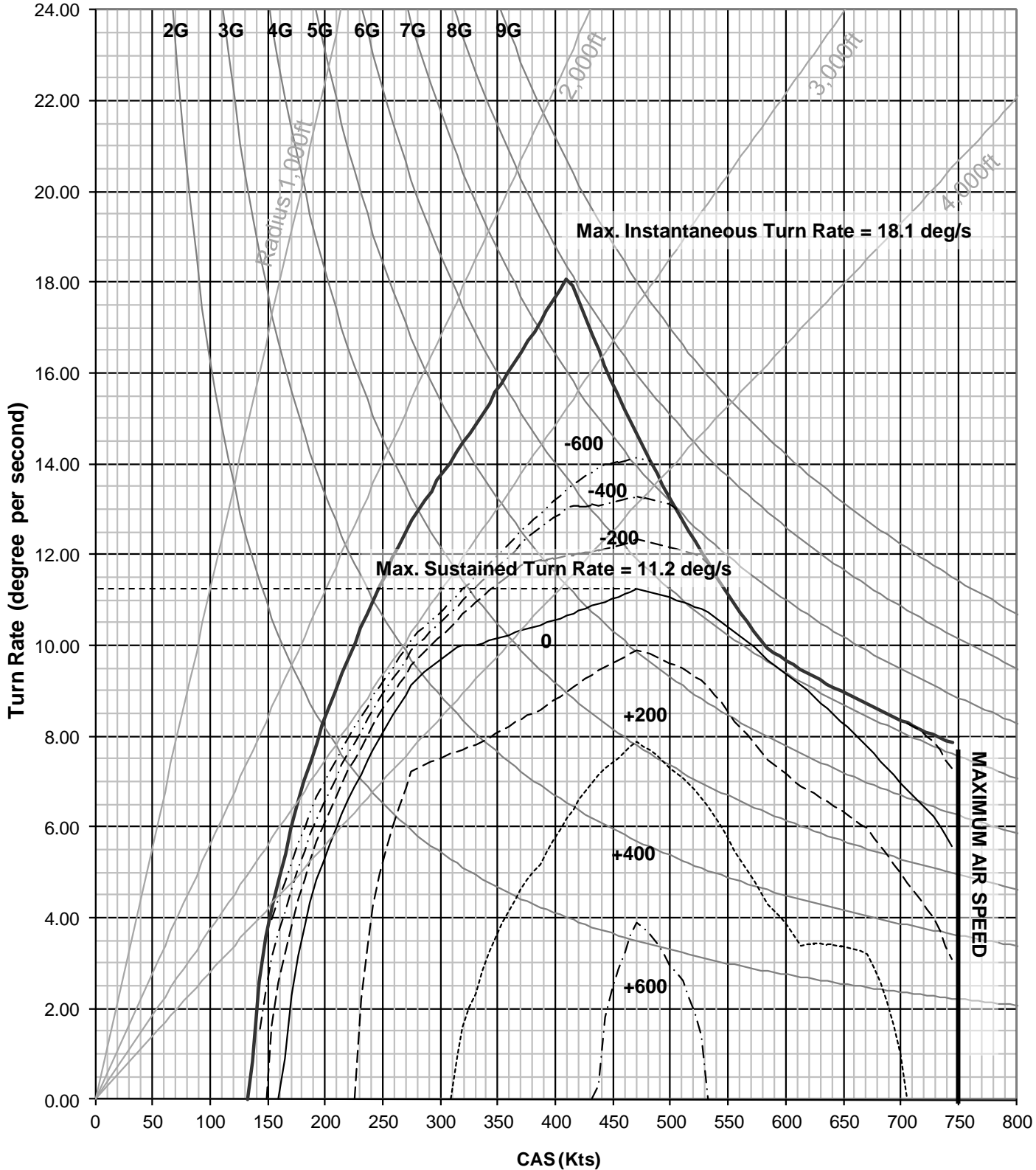
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



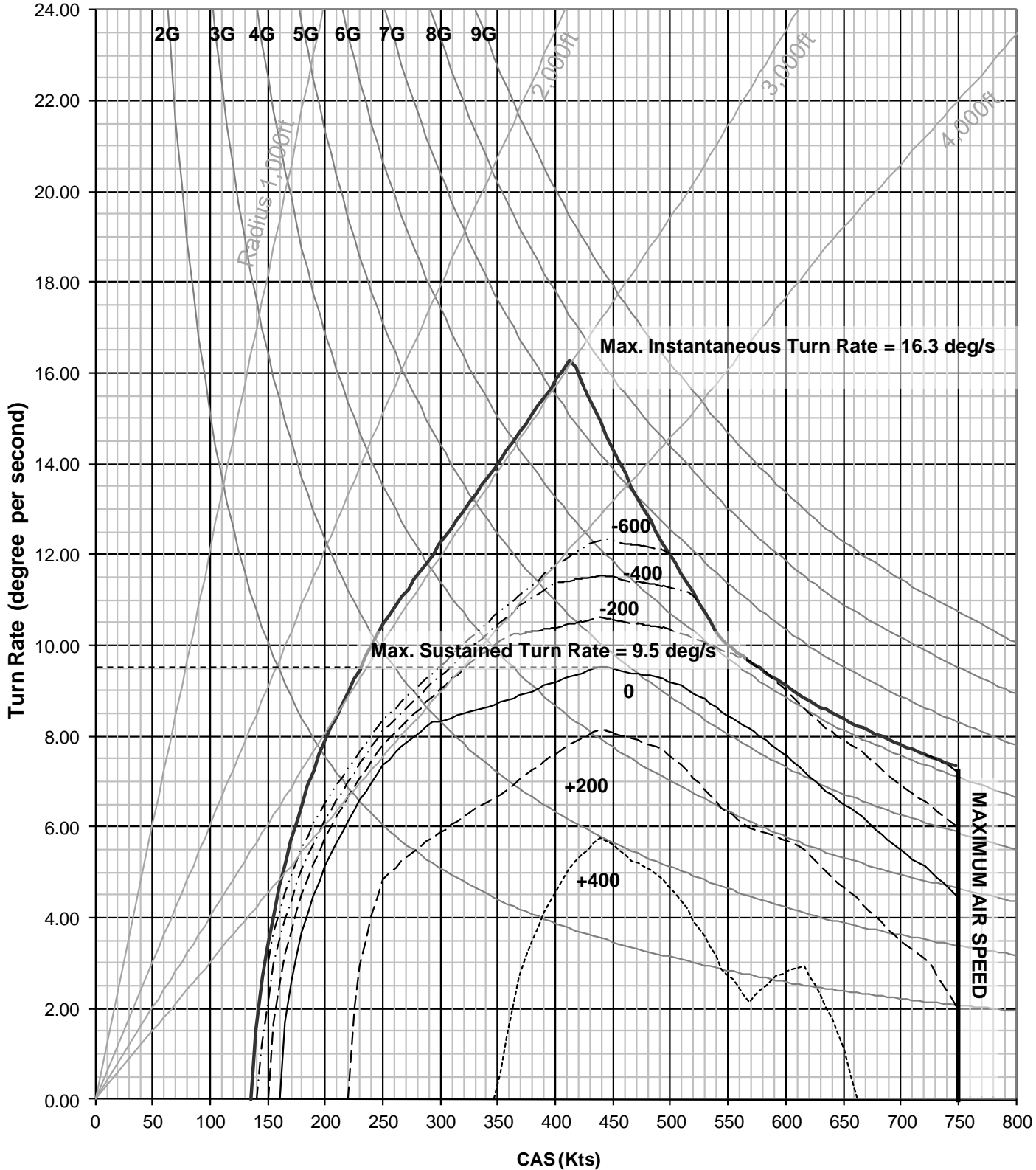
Turn Performance – 15,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41
Engine : J79-GE-17

CONDITIONS:
 •Standard Day
 •Max AB

CONFIGURATIONS :
 •4xAIM-7E
 •GW=40,337 lbs



Turn Performance – 20,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

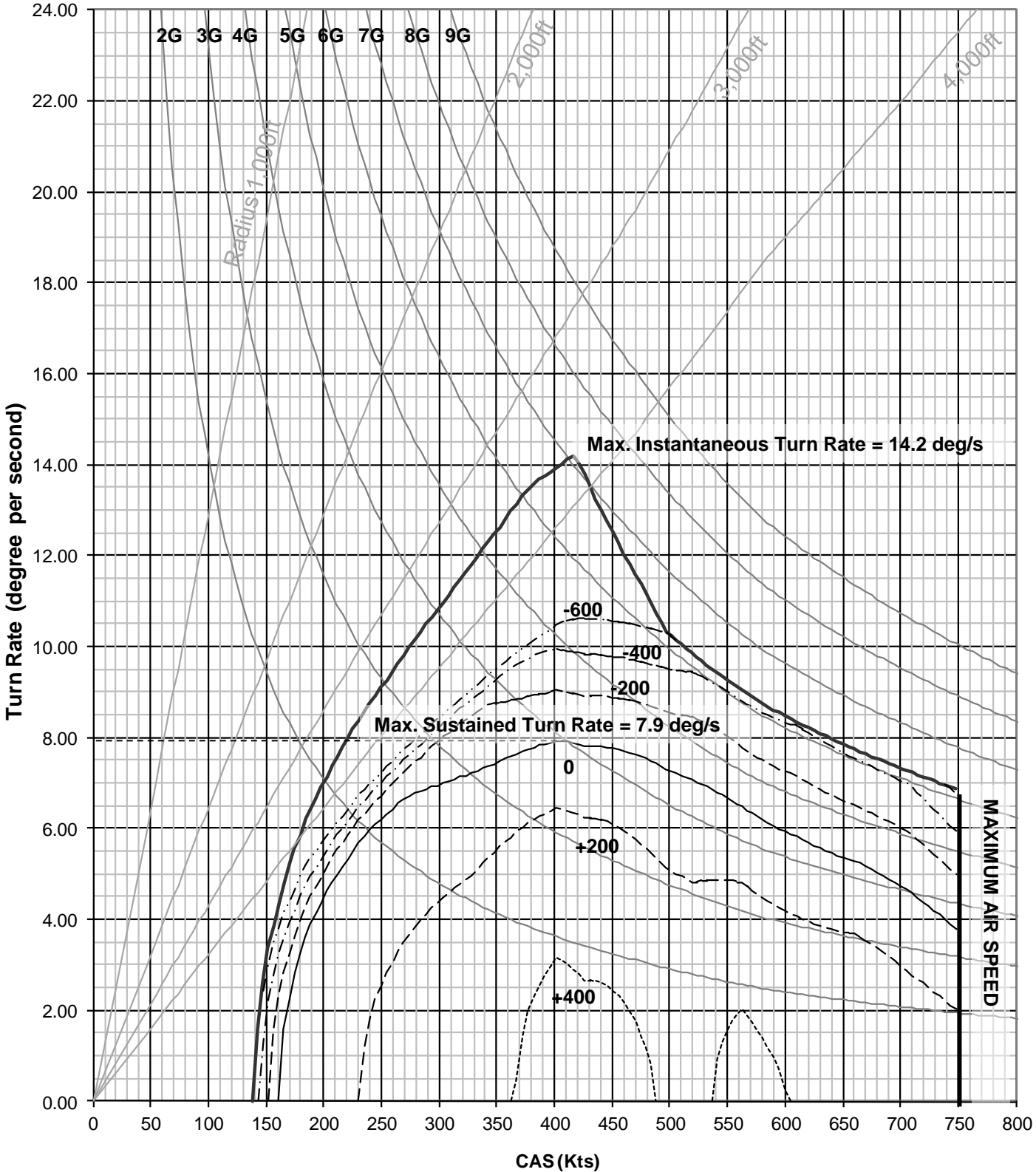
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



Turn Performance – 25,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

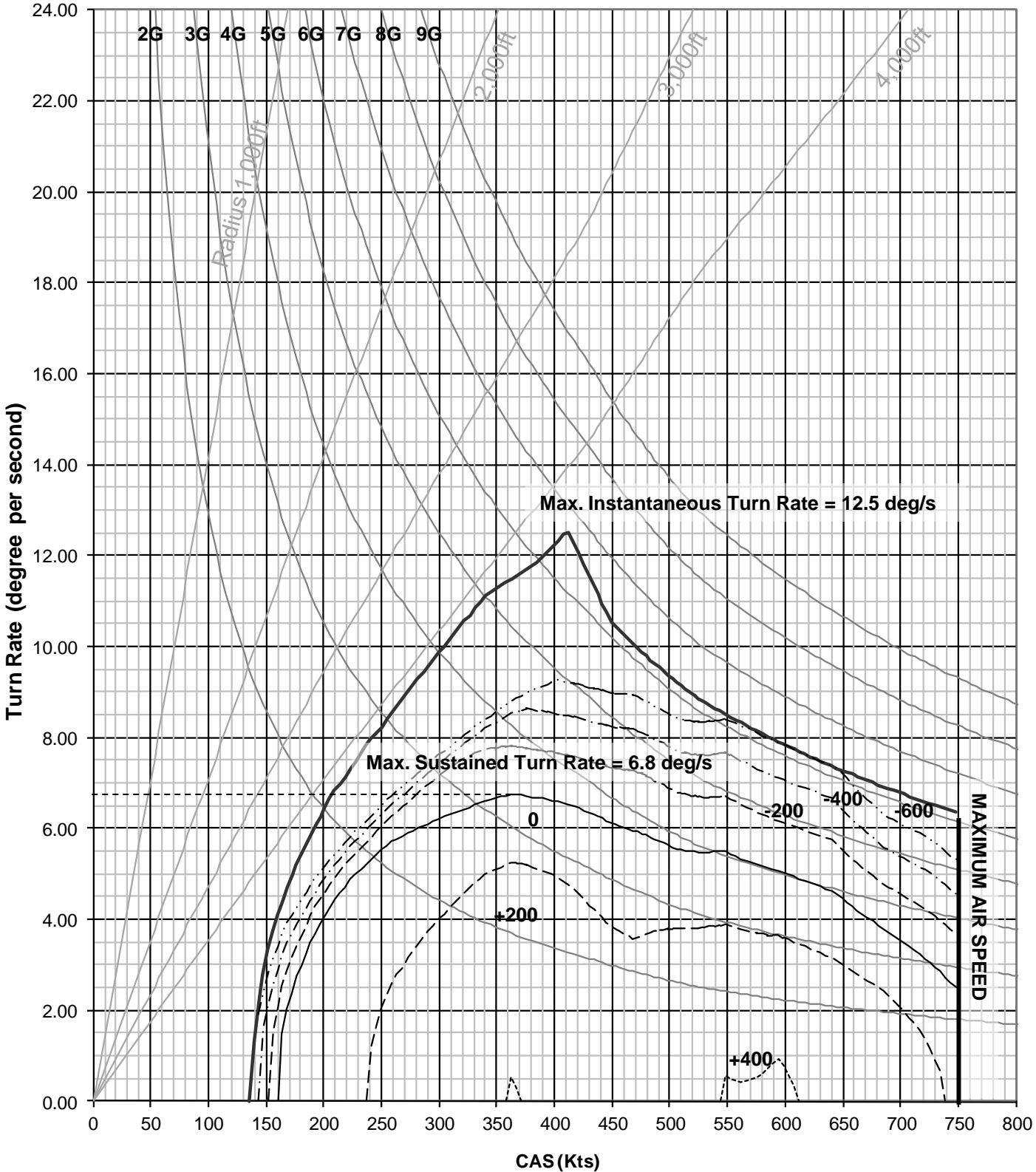
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



Turn Performance – 30,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

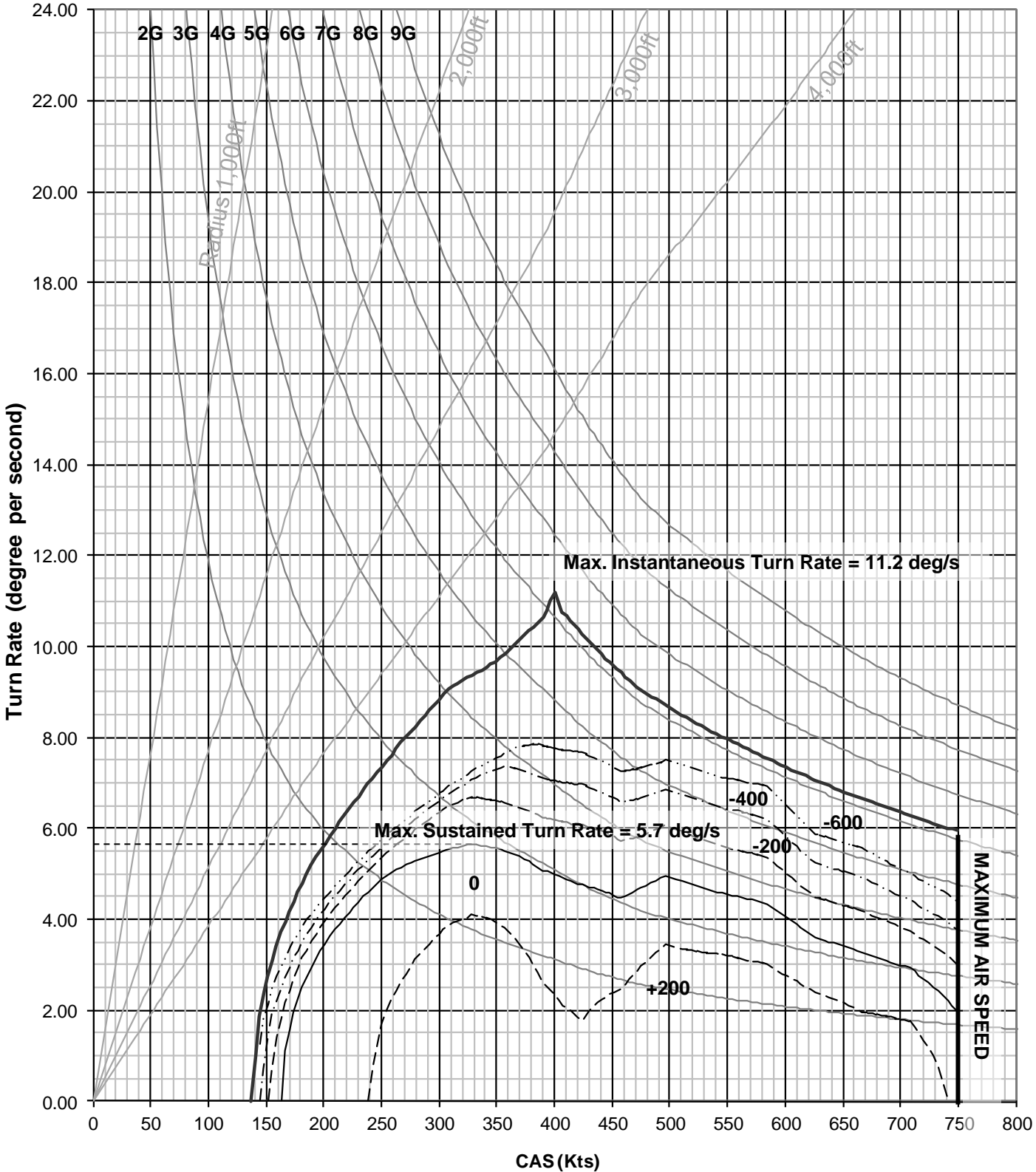
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



Turn Performance – 35,000 ft

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

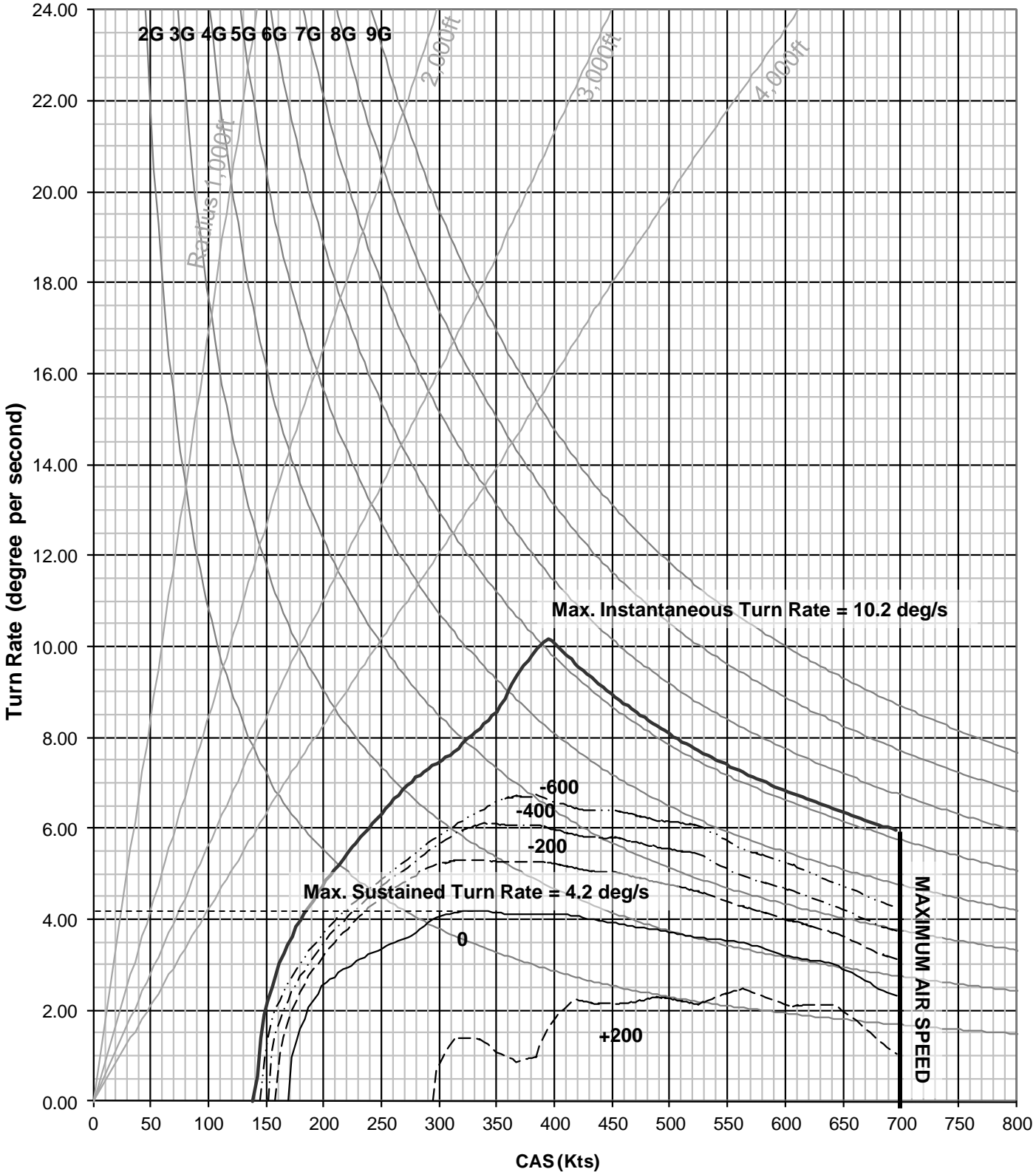
Engine :J79-GE-17

CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs



Climb Performance

Aircraft : F-4E Blk.41

Engine : J79-GE-17

CONFIGURATIONS :

•4xAIM-7E

•50% internal fuel

•GW= 40,337 lbs

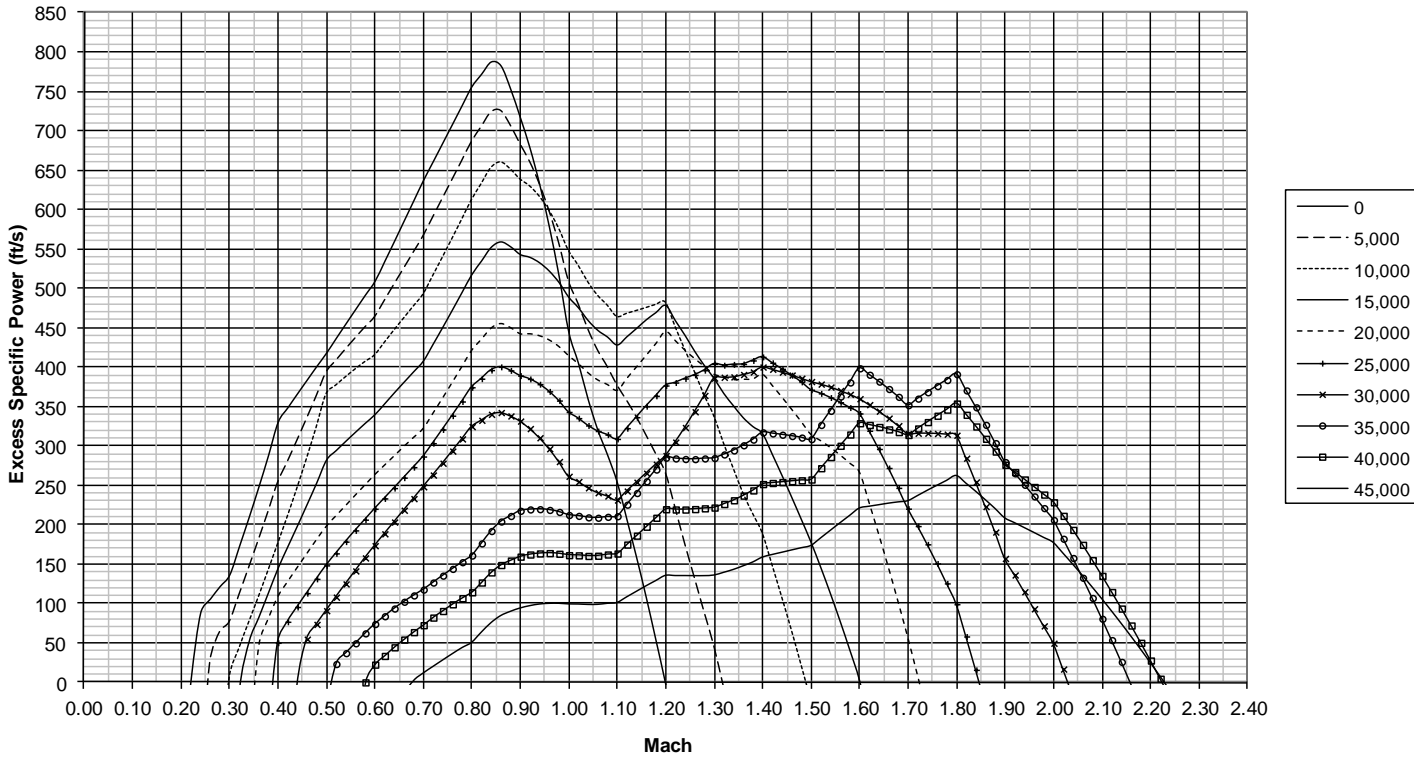
DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41
 Engine : J79-GE-17

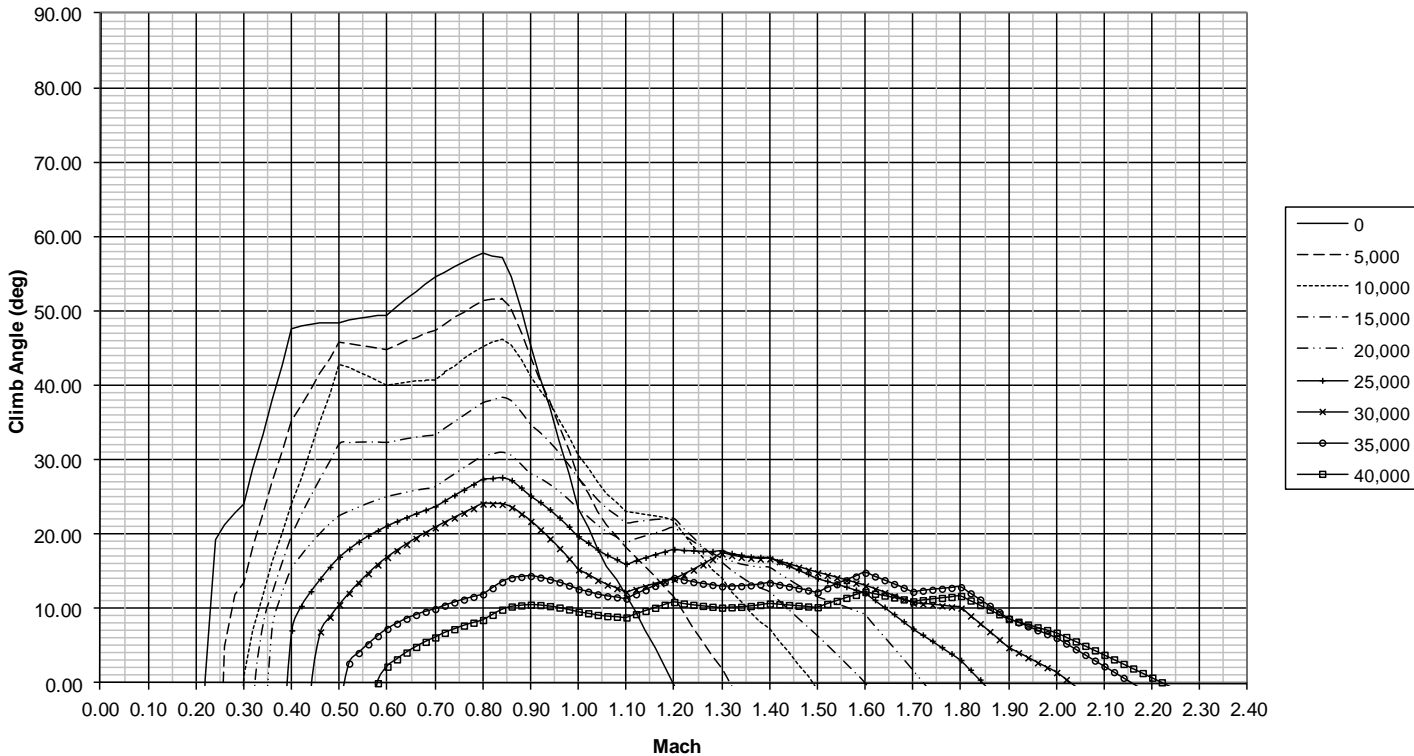
CONDITIONS:
 •Standard Day
 •Max AB

CONFIGURATIONS :
 •4xAIM-7E
 •GW=40,337 lbs

Instantaneous Constant Speed Climb Rate



Constant Speed Climb Angle



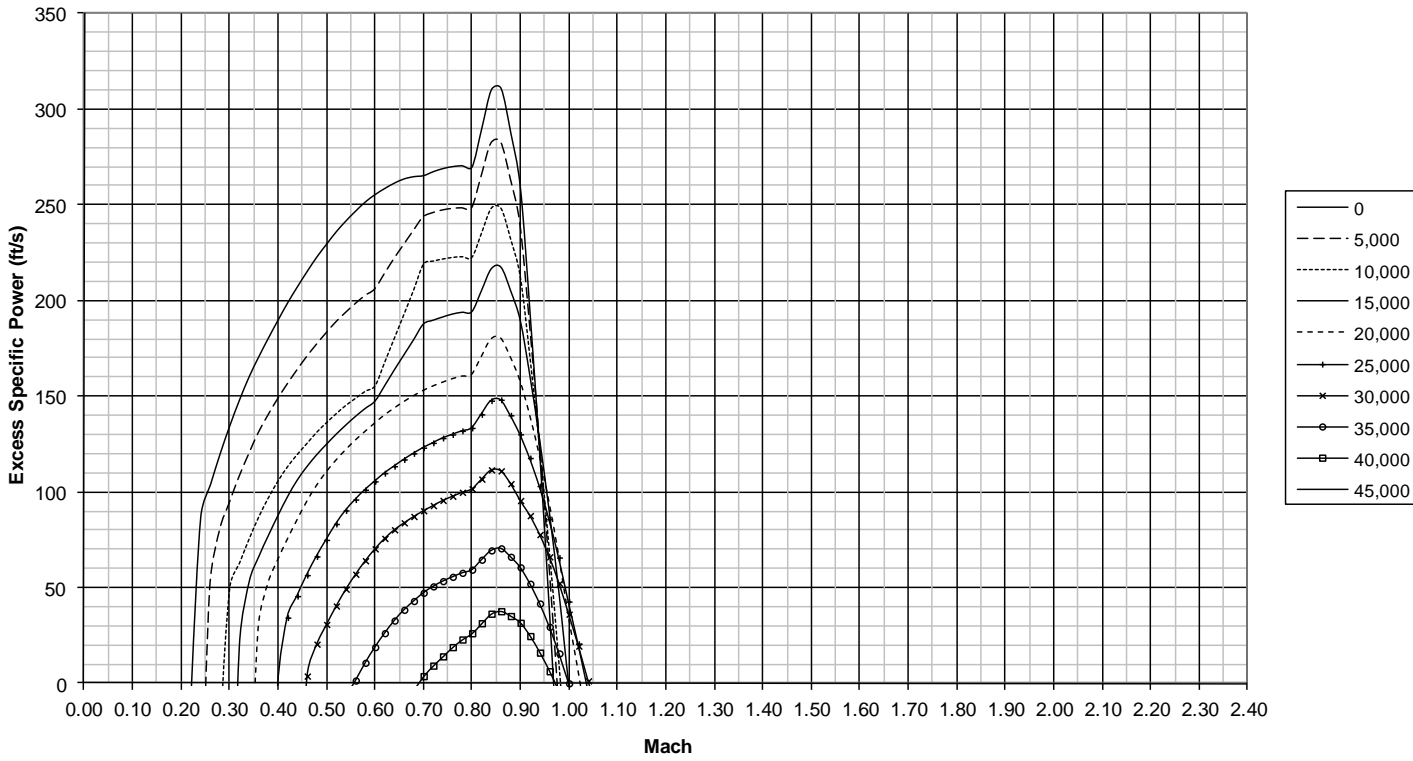
DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41
 Engine : J79-GE-17

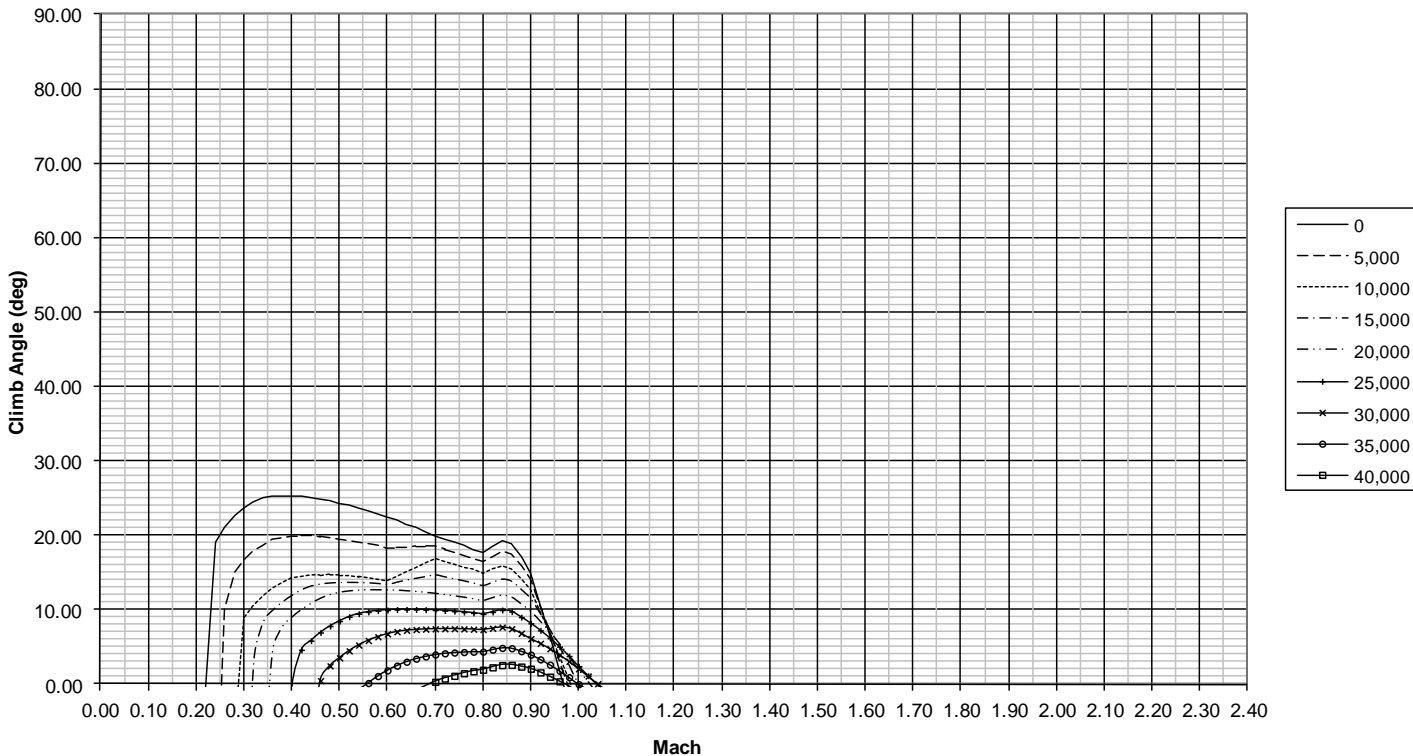
CONDITIONS:
 •Standard Day
 •MIL Power

CONFIGURATIONS :
 •4xAIM-7E
 •GW=40,337 lbs

Instantaneous Constant Speed Climb Rate



Constant Speed Climb Angle



Acceleration Performances

Aircraft : F-4E Blk.41

Engine : J79-GE-17

CONFIGURATIONS :

•4xAIM-7E

•50% internal fuel

•GW= 40,337 lbs

Acceleration Diagram

DATA BASIS : ESTIMATED

Aircraft : F-4E Blk.41

Engine : J79-GE-17

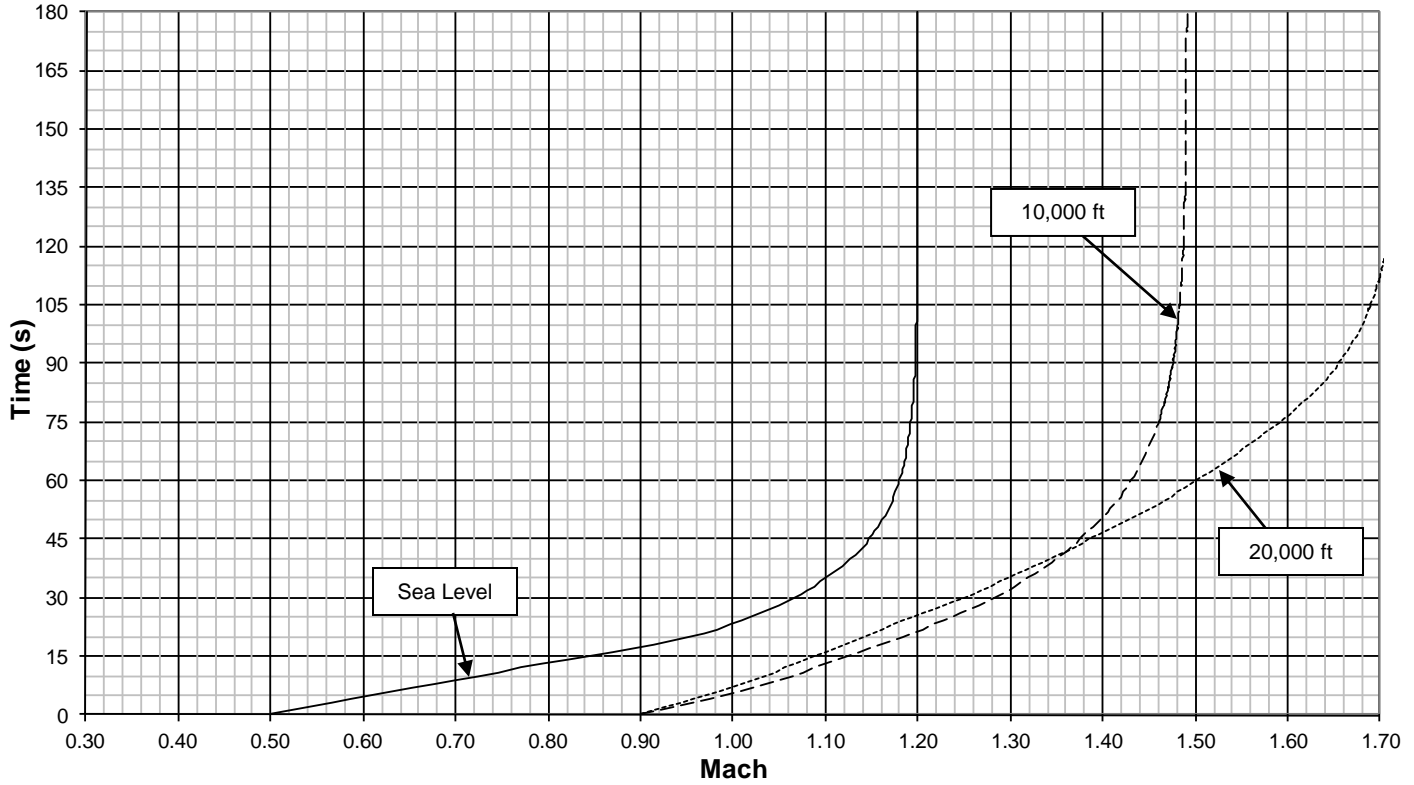
CONDITIONS:

- Standard Day
- Max AB

CONFIGURATIONS :

- 4xAIM-7E
- GW=40,337 lbs

Acceleration (Max Thrust AB)



Acceleration (Max Thrust AB)

