IL2 Cockpit Guide

Russian Plane

Version 2.1 19/11/19

SharpTiger

IL2 Cockpit Guide

Vous trouverez dans ce document des infos de conduite moteur et de performances vous permettant de piloter sans l'affichage du « techno tchat ».
Il existe beaucoup de différences dans les données techniques en fonction des sources. Le document officiel BOS a été pris comme référence à chaque fois qu'il y avait une incohérence.
https://forum.il2sturmovik.com/topic/25993-aircraft-flight-and-technical-specifications-and-operational/
Les vitesses d'approche sont données pour les masses les plus lourdes. En cas de variation importante elles sont également données pour les masses les plus faibles. En général elles sont calculées pour 1,25 Vs (Vitesse de décrochage en configuration atterrissage) ce qui est la norme pour un atterrissage court.
Pour toutes demandes de mise à jour contacter SharpTiger@gmail.com

IL2 Cockpit Guide

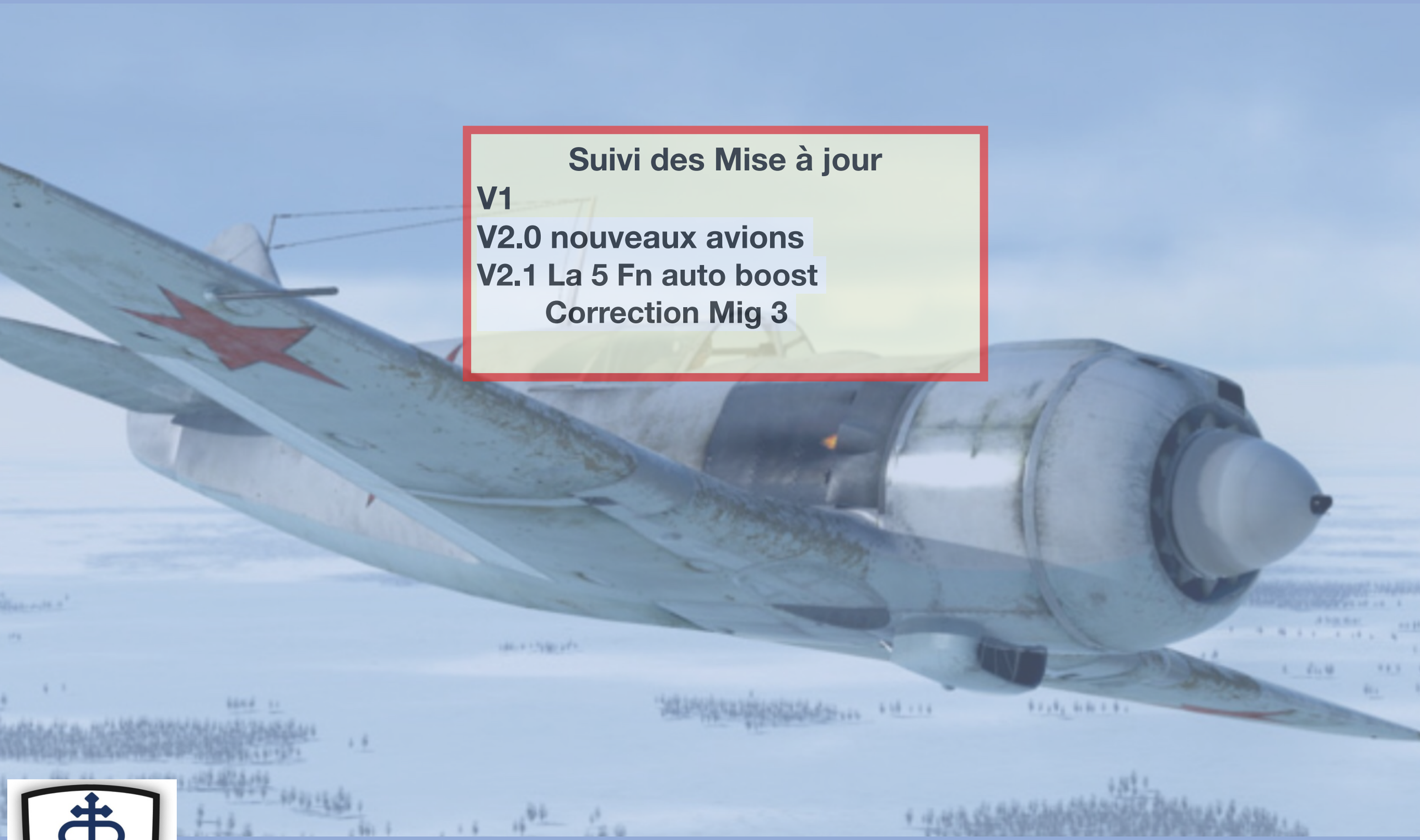
Classement des appareils

Vous trouverez les appareils classés dans l'ordre suivant

Fighters
Attackers
Bombers

Dans chaque section le classement se fait ensuite selon le numéro lié au nom par ordre de grandeur croissant
(ex Yack 1, Mig 3, Lagg, La 5…)

IL2 Cockpit Guide



Suivi des Mise à jour

V1

V2.0 nouveaux avions

V2.1 La 5 Fn auto boost

Correction Mig 3

Engine Start
Close outlet cowl
Wait oil > 80°
water > 65°

Take off
160/190 kmh

Landing
One step flaps
Eng 35/2200
Speed < 220 for full flaps extension
Vapp 180 km/h
Touch 145 km/h

20mm SsVAK 120 rounds, 800 r/m, nose
2 x 7,62 mmShKAS, 750 rounds, 1800 r/m

Service ceiling: 10200 m
Climb rate at sea level: 16.9 m/s
Climb rate at 3000 m: 15.0 m/s
Climb rate at 6000 m: 9.4 m/s

Oil and Water rad

Unlimited 2700 RPM 1050 mm Hg

Speed in km/h

Dive	720
Max turn	270 19,2s
Glide	205
Vp max 582/4000m	

Oil 90 -100/115°

Water 70 - 85/100°

Flight endurance at 3000 m: 1.9 h, at 350 km/h IAS.

Yak 1 69

Service ceiling: 10600 m
Climb rate at sea level: 17 m/s
Climb rate at 3000 m: 15.0 m/s
Climb rate at 6000 m: 9,5 m/s

Take off
160/190 kmh

Landing
One step flaps
Eng 35/2200
Speed < 220 for full flaps extension
Vapp 180 km/h
Touch 145 km/h

20mm SsVAK 140 rounds, 800 r/m, nose
12,7 mm UB, 220 rounds, 1000 r/m

Oil and Water rad

Unlimited 2700 RPM 1050 mm Hg

Speed in km/h

Dive	720
Max turn	270 19s
Glide	205
Vp max 600/4500m	

Oil 90 -100/115°

Water 70 - 85/100°

Flight endurance at 3000 m: 2 h at 350 km/h IAS.

Yak 1 b 127

Engine Start
Close outlet cowl
Mix 50%
Wait oil in > 40 C
water > 70 C

Take off
180/200 kmh

Landing
Vi<220 km/h keep flaps lever
Eng 40//1600
pressed to extend the flaps.
Vapp 200 km/h
Touch 160 km/h

Service ceiling: 11800 m
Climb rate at sea level: 15,9 m/s
Climb rate at 3000 m: 14 m/s
Climb rate at 6000 m: 10,2 m/s

Unlimited	2050 RPM	1040 mmHg	Mix 50%
10 minutes	2050 RPM	1240 mmHg	Mix 100%

Oil and Water rad

Oil Out
< 120°

Oil intake
40-85°

Water 80/110° -120

7,62 ShKAS 500 rounds, 1800 r/m, nose
7,62 ShKAS 500 rounds, 1800 r/m, wing

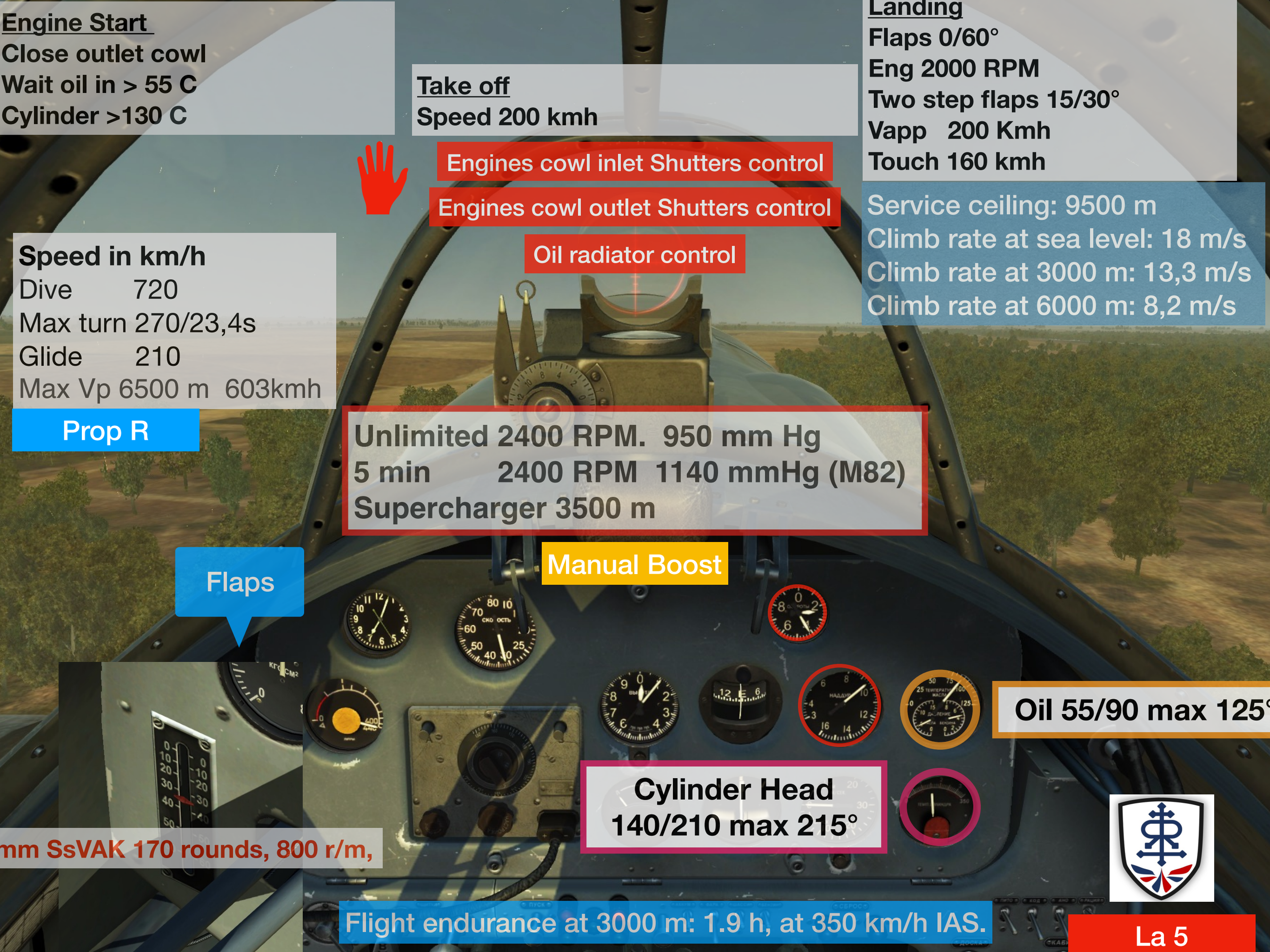
Speed in km/h

Dive.	750
Max turn	270 22,4s
Glide	195
Vp max 626/7600 m	

Flight endurance at 3000 m: 0.9 h, at 350 km/h IAS.

MIG 3


Engine Start
Close outlet cowl
Wait oil in > 80 C
water > 70 C
Take off
Speed 200 kmh
Flaps 0/60°
Recommended
Two step flaps 15/30°
Vapp 205
Touch 165 kmh
Service ceiling: 10500 m
Climb rate at sea level: 14,9 m
Climb rate at 3000 m: 13,3 m/s
Climb rate at 6000 m: 8 m/s
Speed in km/h
Dive 750
Max turn 280 22s
Glide 210
Vp max 4000m 573
Unlimited: 2700 RPM 1050 mm Hg
Supercharger 2500m
Oil 90 -100/115°
Flaps
20mm SsVAK 160 rounds, 800 r/m, nose
12,7 mm UB, 200 rounds, 1000 r/m nose
Water 70 - 85/100°
Flight endurance at 3000 m: 2.2 h, at 350 km/h IAS.
Lagg 3


Engine Start
Close outlet cowl
Wait oil in > 55 C
Cylinder >130 C
Take off
Speed 200 kmh
Landing
Flaps 0/60°
Eng 2000 RPM
Two step flaps 15/30°
Vapp 200 Kmh
Touch 160 kmh
Engines cowl inlet Shutters control
Engines cowl outlet Shutters control
Oil radiator control
Service ceiling: 9500 m
Climb rate at sea level: 18 m/s
Climb rate at 3000 m: 13,3 m/s
Climb rate at 6000 m: 8,2 m/s
Speed in km/h
Dive 720
Max turn 270/23,4s
Glide 210
Max Vp 6500 m 603kmh
Prop R
Unlimited 2400 RPM. 950 mm Hg
5 min 2400 RPM 1140 mmHg (M82)
Supercharger 3500 m
Manual Boost
Flaps
Oil 55/90 max 125°
Cylinder Head
140/210 max 215°
mm SsVAK 170 rounds, 800 r/m,
Flight endurance at 3000 m: 1.9 h, at 350 km/h IAS.
La 5

Service ceiling: 10500 m
Climb rate at sea level: 20 m/s
Climb rate at 3000 m: 16,5 m/s
Climb rate at 6000 m: 12,5 m/s

Take off
Speed 195 kmh

Flaps 0/60°
Recommended
Two step flaps 15/30°
Eng 2000RPM
Vapp 200 Kmh
Touch 160 kmh

Engines cowl inlet Shutters control

Engines cowl outlet Shutters control

Speed in km/h

Dive	720
Max turn	320/21s
Glide	210
Max Vp 6000 m	646

Prop R

Cylinder Head
180/215 max 250°

Oil 65/75 max 85°

Flaps

Unlimited 2400 RPM. 1000 mm Hg
10 min 2500 RPM 1180 mmHg
Supercharger 3500 m

Auto Boost

2 x 20 mm SsVAK 170 rounds, 800 r/m,

Flight endurance at 3000 m: 2 h, at 350 km/h IAS.

La 5 Fn

Service ceiling: 12000 m M46
Climb rate at sea level: 12,9 m/s
Climb rate at 3000 m: 13,1 m/s
Climb rate at 6000 m: 12 m/s

Service ceiling: 11200 m M45
Climb rate at sea level: 14.5 m/s
Climb rate at 3000 m: 14.7 m/s
Climb rate at 6000 m: 11.4 m/s

Take off
Speed 105 mph

Landing
One step flaps
Flaps 150 mph
Vapp 105 mph
Touch 83 mph

Unlimited	2650 RPM, boost +7
30 minutes	2850 RPM, boost +9
3 minutes	3000 RPM, boost +16

oil radiator multiple fixed positions.

Oil 70/85 max 105°

Water 105/115 max 125°

1mph=1.6 kmh

Speed in mph

Dive	450
Max turn	167
Glide	100
Vp max	375/3000m

2 x 20 Hispano 60 rounds, 650 r/m, wing
4 x 7,92 Browning 350 rounds 1150 r/m

Flight endurance at 3000 m: 1 h 45 m, at 350 km/h IAS.

Spitfire VB

Service ceiling: 10600 m
Climb rate at sea level: 16,9 m/s
Climb rate at 3000 m: 14,3 m/s
Climb rate at 6000 m: 8,6 m/s

Take off
175 kmh

Landing
One step flaps
Speed < 250 for full flaps extension
Vapp 200 km/h
Touch 165 km/h

20mm SsVAK 120 rounds, 800 r/m, nose
2 x 12,7 mm UB, 400 rounds, 900 r/m

Unlimited 2700 RPM 1050 mm Hg

Oil and Water rad

Oil 90 -100/115°

Water 70 - 85/100°

Speed in km/h

Dive	740
Max turn	310 19s
Glide	200
Vp max	586/4000m

Flight endurance at 3000 m: 1.9 h at 350 km/h IAS.

Yak 7b 36

M66 Service ceiling: 12500 m
Climb rate at sea level: 21,5 m/s
Climb rate at 3000 m: 18,6 m/s
Climb rate at 6000 m: 15,5 m/s

M70 Service ceiling: 13000 m
Climb rate at sea level: 18,5 m/s
Climb rate at 3000 m: 17,5 m/s
Climb rate at 6000 m: 14,1 m/s

1mph=1.6 kmh

Take off
Speed 120 mph

Landing
Eng 2000tr/mln
One step flaps
Flaps 140 mph
Vapp 120 mph
Touch 100 mph

Unlimited 2650 RPM, boost +7
60 minutes 2850 RPM, boost +12
5 minutes 3000 RPM, boost +18
Manual Supercharger if 150 grad

Speed
Dive 725/450mph
Max turn 167 mph 17,7 s
Glide 110 mph
VP max 0m 542 M66 /532 M70
Vp max 664(412)/6850m M66
Vp max 677(420)/8500m M70

Oil 90º max 105°

Water 105/115 max 135°

2 x 20 Hispano 120 rounds, 650 r/m, wing
2 x 12,7 Browning 250 rounds 850 r/m

Flight endurance at 3000 m: 1 h 40 m, at 350 km/h IAS.

Spitfire MkIX

Engine Start
Close outlet cowl
Wait oil in > 40 C
Cylinder > 100 C

Take off
Flaps 20°
Speed 145/175 kmh

Landing
Flaps 0/53°
Vapp 180 km/h
Landing 145 km/h

Service ceiling: 10500 m
Climb rate at sea level: 16,7 m/s
Climb rate at 3000 m: 13,8 m/s
Climb rate at 6000 m: 8,8 m/s

Unlimited 2200 RPM 915 mmHg
5 minutes 2300 RPM 1065 mmHg
Boost available - Supercharger 3000

Engines cowl inlet Shutters control
Engine oil radiator control

Cylinder Head
120/200 max 205°

Flaps

Speed in km/h

Dive	620
Max turn	230 19s
Glide	195
Vp max 490/4500	

Oil 55 - 90/125

2 x 7,62 ShKAS 500 rounds, 1800 r/m, nose
2 x 7,62 ShKAS 900 rounds, 1800 r/m, wing

Flight endurance at 3000 m 0,9 h at 350 km/h IAS.

I 16

Service ceiling: 12350 m
Climb rate at sea level: 20,4 m/s
Climb rate at 3000 m: 19,1 m/s
Climb rate at 6000 m: 15 m/s

one step flaps for air manoeuver

Take off

On break until 54 inHg

Landing

Unlimited	2700 RPM	45 inHg
15 minutes	3000 RPM	54 inHg
5 minutes	3000 RPM	60 inHg

Auto rich 70%
Auto lean 30%

TURBOCHARGER

5 minutes	26400 RPM
Unlimited	24000 RPM

peed in kmh/mph

ive. 725/450
Max turn 310/195 20s
Glide. 210/130
p max 674-419/7260m

20 мм "M2", 150 rounds, 150 r/m, nose
4 x 12,7мм "M2.50", 300 rounds, 850 r/m, nose
Possible to increase to 500 rounds

Flight endurance at 3000 m 5,8 h at 350 km/h IAS.

P38

Service ceiling: 9300 m
Climb rate at sea level: 16,7 m/s
Climb rate at 3000 m: 13,5 m/s
Climb rate at 6000 m: 7,2 m/s

1mph=1.6 kmh

Take off
Take off 93/110 mph
Trim Rud 4R Nose up 3

Landing
Eng 2000 RPM
Flaps 0/43°
Vapp 120 mph
Landing 100 mph

Unlimited	2600 RPM	37.2 inHg
15 minutes	3000 RPM	42 inHg
5 minutes	3000 RPM	51 inHg
2 minutes	3000 RPM	60 inHg

> 20 IN.HG. DURING A DIVE.

37 мм "M4", 30 rounds, 150 r/m, nose
2 x 12,7мм "M2.50", 200 rounds, 850 r/m, wing
4 x 7,62мм "M2.30", 300 or 1000 rounds, 1350 r/m, wing

Oil and Water rad

Oil > 60 T/O
70 - 85°/ 90°

Water > 90 T/O
105 -115° / 125°

peed in kmh/mph
ive. 841/522
Max turn 270/167 21,5s
Glide. 210/130
Max climb 162
p max 600-372/2850m

Flight endurance at 3000 m: 1.6 at 350 km/h IAS.

P39 L1

Engine Start
Close outlet cowl
Set mixture to 66% or third mark
RPM to roughly 80%

Take off
Set flaps to 20 deg
Open radiators and cooling cowl
Take off 121mph

Landing
Flaps 0/45°
Vapp 125 mph
Landing 93 mph

1mph=1.6 kmh

6x 12,7 mm M2.50, 235 rounds, 8

Service ceiling: 9200 m
Climb rate sea level: 12,5 m/s
Climb rate 3000 m: 10 m/s
Climb rate 6000 m: 3,7 m/s

Engines cowl outlet Shutters control

Unlimited	2600 RPM	37.2 inHg
5 minutes	3000 RPM	42 inHg
2 minutes	3000 RPM	45,5 inHg

Prop R

Never reduce rpm before manifold pressure.

Water > 90 T/O
105 -115° / 125°

Flaps

Oil > 60 T/O
70 - 85°/ 90°

Speed in mph

Dive.	534
Max turn	168 24,3s
Glide.	140
Vp max	373/5000m

Flight endurance at 3000 m: 2.8 h, at 350 km/h IAS.

P40

Service ceiling: 11580 m
Climb rate at sea level: 18,1 m/s
Climb rate at 3000 m: 17,6 m/s
Climb rate at 6000 m: 16,4 m/s

Take off
Speed 115/125 mph

Landing
2550 rpm
Vapp 140 mph
Landing 110/120 mph

Speed in kmh/mph
Dive. 805/500
Max turn 320/200 27,5s
Glide. 210/130
Vp max 700-435/7000m

Unlimited	2550 RPM	42 inHg
15 minutes	2700 RPM	52 inHg
5 minutes	2700 RPM	64 inHg

8 x 12.7mm "M2.50", 267 rounds, 850 r/m, wing-

Carb temp / outlet turbo°

mph=1.6 kmh

Oil 70 - 100°

TURBOCHARGER
15 minutes 22000 RPM
Unlimited 20000 RPM

Cylinder head°/Eng outlet

Climb 160/170 mph 42, Hg 2550 rpm Cyl <260°
Eco 2250/32 Auto lean Cyl 232° 105 gal/h

Flight endurance at 3000 m: 2.4 h at 350 km/h IAS.

Service ceiling: 12680 m
Climb rate at sea level: 18,1 m/s
Climb rate at 3000 m: 15,7 m/s
Climb rate at 6000 m: 12,4 m/s

1mph=1.6 kmh

Take off
Flaps 20
Rudder trim 5 R
Elevator trim 3/6
Thrust 61 inHg
Rotate 100 mph

Landing
Flaps 20 then full on short final
Vapp 150 mph
Landing 130/120mph

Unlimited	2700 RPM	46 inHg
15 min	3000 RPM	61 inHg
5 min	3000 RPM	67 inHg
5 min(fuel 150 grad)	3000 RPM	75 inHg

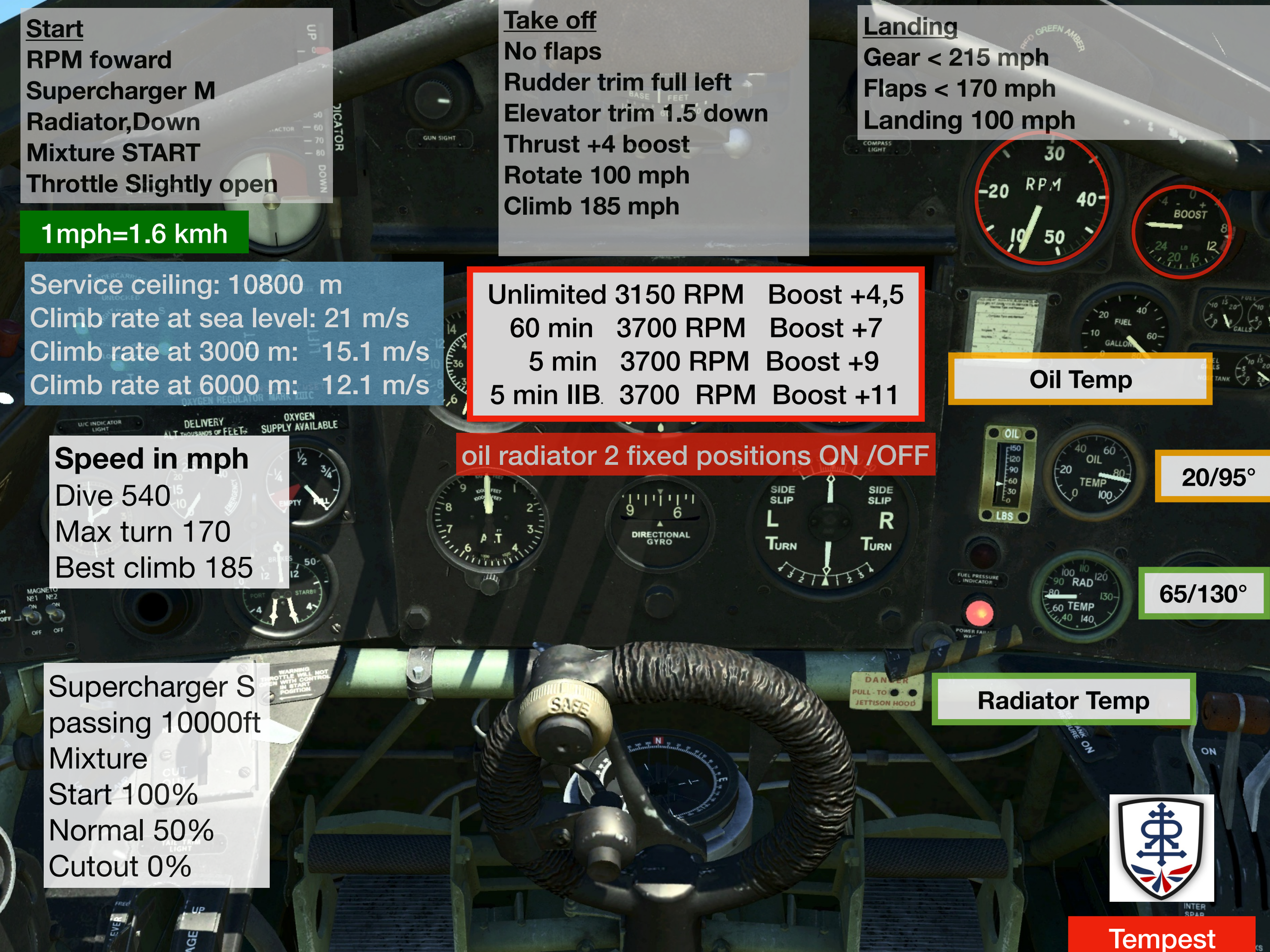
Speed in kmh/mph
Dive. 812/505
Max gear 170 mph
Max full flaps 165 mph
Max turn 290/180 20s
Best climb 170 mph
Glide. 210/130
Vp max 718-446/7000m

Unstable if more 75% fuel
Auto mix 70%
Control stick back lock tail wheel

6 x 12.7mm "M2.50", 400/270 rounds, 850 r/m, wing-

Flight endurance at 3000 m: 4,3 h at 350 km/h IAS.

P51


Start
RPM foward
Supercharger M
Radiator,Down
Mixture START
Throttle Slightly open
1mph=1.6 kmh
Service ceiling: 10800 m
Climb rate at sea level: 21 m/s
Climb rate at 3000 m: 15.1 m/s
Climb rate at 6000 m: 12.1 m/s
Take off
No flaps
Rudder trim full left
Elevator trim 1.5 down
Thrust +4 boost
Rotate 100 mph
Climb 185 mph
Landing
Gear < 215 mph
Flaps < 170 mph
Landing 100 mph
Unlimited 3150 RPM Boost +4,5
60 min 3700 RPM Boost +7
5 min 3700 RPM Boost +9
5 min IIB. 3700 RPM Boost +11
oil radiator 2 fixed positions ON /OFF
Oil Temp
20/95°
65/130°
Radiator Temp
Speed in mph
Dive 540
Max turn 170
Best climb 185
Supercharger S
passing 10000ft
Mixture
Start 100%
Normal 50%
Cutout 0%
Tempest

Engine Start
Close outlet cowl
Wait oil in > 40 C
water > 80 C

Take off
Speed 150/190 kmh

Landing
1800 RPM 600 mmHg
Flaps 1 steps
220 km/h max for full flaps
Vapp 180 km/h
Touch 145 km/h

Service ceiling: 6000 m
Climb rate at sea level: 7,1 m/s
Climb rate at 3000 m: 5,6 m/s

20mm SsVAK 210 rounds, 800
2 x 7,62 mm UB, 750 rounds, 180

Speed in km/h

Dive	570
Max turn	250 23s
Glide	195
Vp max	414/2500m

Unlimited	2050 RPM	1180 mmHg	50% mix
10 min	2150 RPM	1280 mmHg	100% mix

Water 80/110°
Max 120°

Oil Out
< 115°

Oil intake
40-80°/85°

Flight endurance at 3000 m: 1.7 h, at 300 km/h IAS.

IL 2 41/42

Service ceiling: 5600 m
Climb rate at sea level: 7,5 m/s
Climb rate at 3000 m: 4,2 m/s

Take off
Flaps available on TO position
Speed 160/200kmh

Landing
Flaps 220 km/h for full flaps
2 flaps positions TO /17°
Vapp 180/190 km/h
Touch 145/155 km/h

20mm SsVAK 250 rounds, 800 r/m
2 x 7,62 mm UB, 750 rounds, 180

Speed in km/h

Dive	570
Max turn	250 26,6s
Glide	195
Vp max	407/0m

Unlimited	2050 RPM	1200 mmHg	50% mix
10 min	2350 RPM	1360 mmHg	100% mix

Water 80/110°
Max 120°

Oil intake
40-80°/85°

Oil Out
< 120°

Flight endurance at 3000 m: 1.4 h at 300 km/h IAS.

IL 2 43

Pe35 Service ceiling: 9100 m
Climb rate at sea level: 9,3 m/s
Climb rate at 3000 m: 8,4 m/s
Climb rate at 6000 m: 5,6 m/s

Pe 87 Service ceiling: 8000 m
Climb rate at sea level: 10,4 m/s
Climb rate at 3000 m: 7,8 m/s
Climb rate at 6000 m: 3 m/s

Take off
Max flaps 20°
Speed 200 kmh

RPM/Oil/Water rad (35)

Water rad (87)

Landing
Flaps 0/50° forbiden > 35°
Recommended
Two step flaps 15/30°
Vapp 200 Kmh
Touch 165 kmh

Unlimited 2700 RPM 1050 mmHg (Pe 2 87)

Unlimited 2700 RPM 910 mmHg (Pe 2 35)

Oil 90 -100/115°

Water 70 - 85/100°

Speed in km/h

Dive	790
Max turn	270 30,5s
Glide	240
Vp max	521/5000m (35)
	498/5000m (85)

Fuel 0,9 l/Km + 5 l min climb
Max fuel 1500 l

Pe 2

A20 Service ceiling: 8700 m
Climb rate at sea level: 10 m/s
Climb rate at 3000 m: 8,2 m/s
Climb rate at 6000 m: 5,0 m/s

Take off

Speed 170/195 kmh 105/120 mph

Landing

Flaps 0/50°
Vapp 110/130 mph
Touch 100/110 mph

Engines cowl inlet and outlet Shutters control

Inlet cowl flaps closed during flight.

Cruise	1705 RPM	27,5/30	inHg
Unlimited	2300 RPM	36/40	inHg
5 minutes	2300 RPM	41/43	inHg
	Supercharger 2900m		

Oil 90 - 95/105°

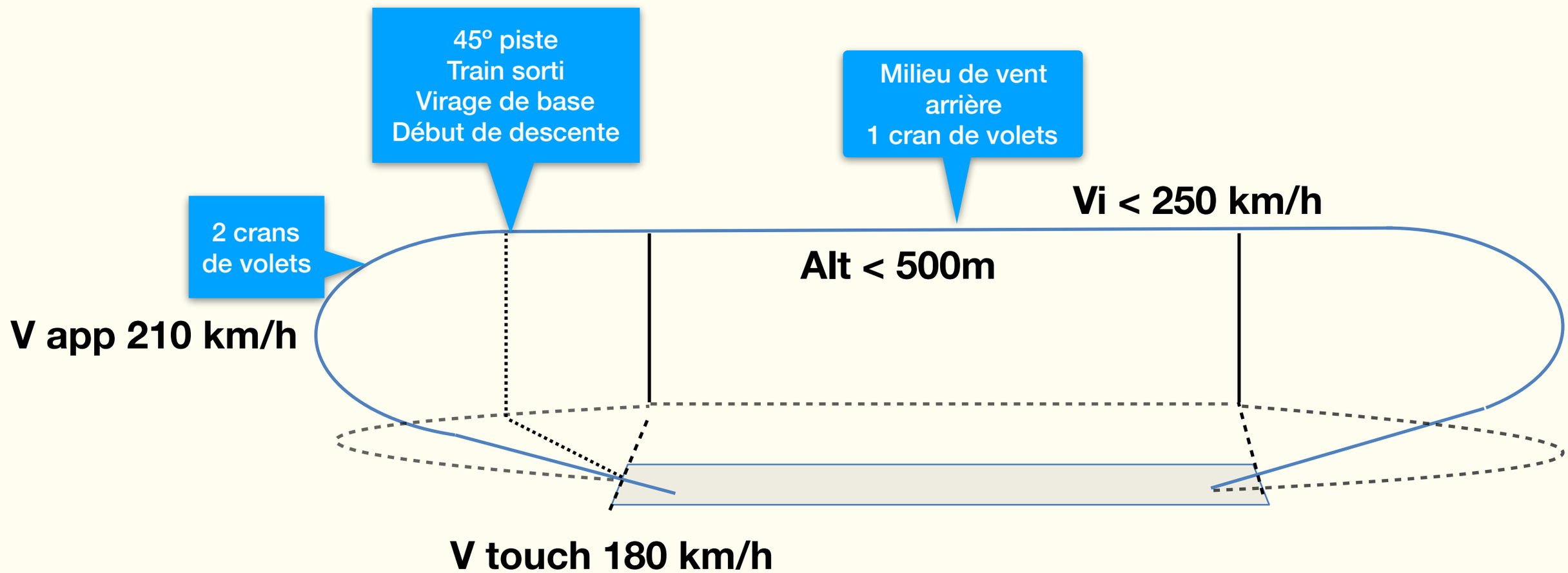
Cylinder Head
140/240 max 260°

Speed	mph/kmh
Dive	412/665
Max turn	167/270 24,5s
Glide	115-140/185-225
Vp max.	338/544/5000m

Fuel endurance 3000m 3.4h 350 kmh
140L / 100 km

A20 B

Tour de piste avion rapide

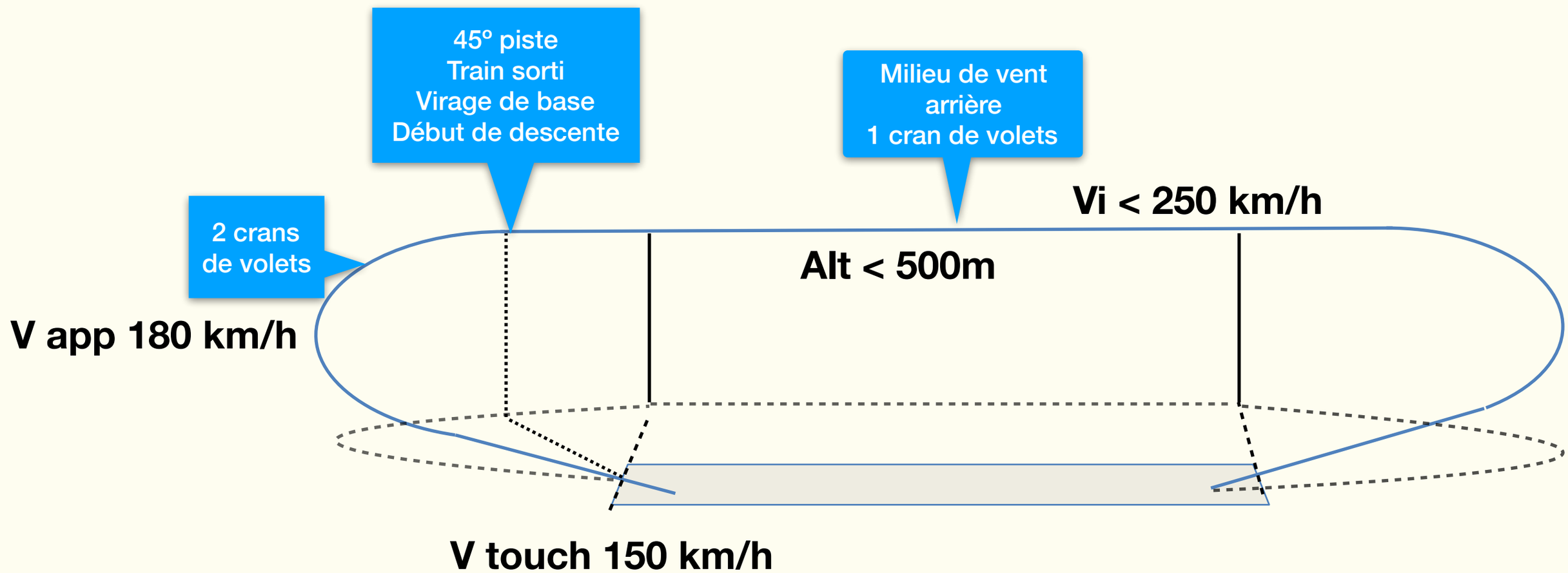


Sortie du premier cran de volet

- Pour les volets à multiple positions (ex Bf 109 / Pe 2) sélectionner 50% de la configuration finale choisie.
- Pour les volets à un seul cran (ex Yak 1 / Spitfire) sortir les volets après la sortie du train à une vitesse inférieure à 220 km/h

Avions concernés
Yak 1 / Spit V / I16 / P40 /P39 / Il2
Bf 109 E7 - F2 / Ju87/ He111/Hs129

Tour de piste avion lent



Sortie du premier cran de volet

- Pour les volets à multiple position (ex Bf 109 / Pe 2) sélectionner 50% de la configuration finale choisie.
- Pour les volets avec une seule position de sortie (ex Yak 1 / Spitfire) sortir les volets après la sortie du train à une vitesse inférieure à 220 km/h.