

TYP : SAAB 37 VIGGEN

BY TOERTCHEN KID

REV 1

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Suggestions for improvement to:

[Toertchen](#)

Thanks for your help with translating

drPhibes, Goblin, renhanxue, SnorreSelmer, Vladinsky

Special Thanks to renhanxue for sharing the manuals.

Applies to AJSH37 and AJSF37. Elements which only apply to one or two varieties are marked as follows:

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VISUAL INSPECTION

1. VERTICAL STAB PITOT COVER ... REMOVED
2. VERTICAL STAB, DOORS FIN RAISED, CLOSED
3. STARBOARD EQUIPMENT CHECK SETTINGS
COMPARTMENT
4. STARBOARD AIR INTAKE FREE
5. NOSE GEAR TORQUE LINK CONNECTED
6. NOSE PITOT COVER REMOVED
7. ANGLE OF ATTACK SENSOR ROTARY
8. PORT AIR INTAKE FREE

BEFORE ENGINE START

A/C PREPARED FOR FLIGHT

1. EJECTION SEAT DISARMED
2. DATA CARTRIDGE INSERT INTO SLOT
3. HUD CAMERA/FOREHEAD FIXED IN POSITION
COVER
4. TRIGGER SAFETY SAFE
5. MAIN POWER ON
6. PEDALS ADJUST
7. PARKING BRAKE SET
8. LEG RESTRAINTS FASTENED
9. WARNING LIGHTS AS REQUIRED
10. LOW PRESSURE FUEL VALVE ON
11. MASTER CAUTION RESET
12. COCKPIT ILLUMINATION ADJUST
13. MASTER MODE SELECTOR BER
14. STRAP IN
15. SEAT ADJUST
16. LANDING GEAR LEVER OUT, LOCKED
17. BRAKES, AUTO THROTTLE ADJUST, OFF
18. VENTILATION:
 - TEMP AS REQUIRED
 - MODE SWITCH AUT
 - EMERGENCY SWITCH ON
19. THROTTLE GROUND IDLE (MTG)
20. LANDING LIGHTS OFF
21. EMERGENCY LIGHTS OFF
22. * BACKUP INSTRUMENT CHECK
ILLUMINATION
23. WARNING LIGHTS CHECK
24. * ROLL TRIM CHECK, CENTERED
25. GENERATOR ON, CHECK
26. AUTOPILOT YAW CORRECTION ... SET TO 0
27. * YAW TRIM CHECK, CENTERED
28. G RADAR ILLUMINATION MIDDLE POSITION
STRENGTH
29. FR24 RADIO NORMAL + GUARD
30. FLIGHT RECORDER AS REQUIRED
31. F RECONNAISSANCE MODE AS REQUIRED
SWITCH
32. G RADAR STICK PARKED
33. G RADAR PANEL NORMAL SETTING
34. RADAR ALTIMETER SETTING AS REQUIRED
LAND/SEA
35. FR22 RADIO BASE, CHANNEL, FM/AM
36. THRUST REVERSER OFF
37. * ALTITUDE DIRECTOR CHECK PROPER
INDICATOR FLI 37 ALIGNMENT
38. F I-IND/SIKTE SWITCH AS REQUIRED
39. HUD LANDING POSITION
40. H CI LIGHT HOOD FIXED
41. HUD SLAVE SWITCH SLAV SI OFF
42. ALTITUDE SOURCE SELECTOR LD
43. * BACKUP ARTIFICIAL HORIZON .. FAST ERECT
44. BACKUP ALTIMETER RESET, CHECK
MAX 3 HPA DIFFERENCE
45. * BACKUP COURSE INDICATOR FAST ERECT
LAMP EXTINGUISHES
46. ENGINE PRESSURE RATIO AROUND 1.0
47. * FUEL INDICATOR CHECK
48. H RECONNAISSANCE MODE AS REQUIRED
SWITCH
49. H FREQUENCY CONTROL AS REQUIRED
50. H RADAR SERIES/BOX AS REQUIRED
51. U22 AS REQUIRED
52. KB COUNTERMEASURES POD ON, RF SET TO R
AND APP-27 RADAR
WARNING RECEIVER
53. EXTERIOR LIGHT AS REQUIRED
54. PN-79 (IFF) ON
55. GPU-POWERED FLIGHT SUIT AS REQUIRED
VENTILATION TEMPERATURE
56. GAS MASK STOWAGE BIN LOCKED
57. COURSE CORRECTION SET LOCAL MAGNETIC
DECLINATION
58. SELF TEST SWITCH A OTHER ELECTRONICS
59. SELF TEST SWITCH B SET 0
60. WINDSHIELD/CANOPY DEFROST .. OFF
61. TILS SELECTOR MODE A (AUTOMATIC)
62. RADAR ALTIMETER ON
63. G WEAPON SELECTOR AS REQUIRED
64. AIMING SELECTOR AS REQUIRED
65. G RB 04/15-SELECTOR AS REQUIRED
66. TRANSPONDER OFF
67. CIRCUIT BREAKERS IN
68. EMERGENCY PANEL ALL SWITCHES DOWN
69. * DATA INPUT
70. OXYGEN MIN 90, CHECK, ON
71. * INDICATOR SYSTEM CHECK PRESS BUTTON
CHECK:
 - HIGH ALPHA WARNING TWO SHORT BURSTS
 - FIRE WARNING LIT
 - LANDING GEAR DONT LIT
 - ALTITUDE WARNING LIGHT LIT (SOLID)
 - FUEL INDICATOR 29 ± 3 %AND
INDICATOR RETURNS TO
PREVIOUS SETTING
- DATA INDICATOR PANEL SHOWS 1 AND
CURRENT CK-PROGRAMM
NUMBER
- FK-LIGHT GREEN
72. CANOPY CLOSE, CHECK LOCKED

* If starting without Ground Power on, items will be performed AFTER engine start as they cannot be performed without AC power.

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ENGINE START

1. HAND SIGN FOR ENGINE START
2. START SWITCH ON (HOLD 2 s),
START CHRONO
3. CHECK:
• STARTSYS LIT WITHIN 5 s
IF NOT:
START SWITCH OFF
• EGT MAX 400 °C
IF EXCEEDED, QUICK ACCELERATION PAST
GROUND IDLE (MTG) OR RPM < 50 %
THROTTLE CUT-OFF
START SWITCH OFF
4. CHECKS AT GROUND IDLE (MTG):
• RPM 55 - 64 %
• ENGINE PRESSURE RATIO AROUND 1.0
• EGT MAX 350 °C
• WARNING LIGHTS OFF
(OIL PRESSURE, DROP
TANK FUEL, CANOPY AND
SEAT)
5. SPAK CHECK
AUTOMATICALLY ON
6. ENGINE DE-ICE ON (IF RISK OF ENGINE
ICING)

BEFORE TAXI

1. CONTROL SURFACES CHECK MOVEMENT
2. PITCH TRIM CHECK, POSITION 0/-3
3. AIRBRAKES CHECK
4. BRAKE PRESSURE 200 - 270 kp/cm²
5. EJECTION SEAT ARM
6. ALTIMETER CHECK, MAXIMUM
DEVIATION OF 2 HPA
7. MASTER CAUTION, WARNING OFF (DROP TANK FUEL
LIGHTS
DISAPPEARS FIRST
AFTER 70 %RPM)
8. AUTOPILOT EMERGENCY
DISCONNECT, SPAK ON
(CHECK POD
OVERHEATING)
- H
9. TRANSPONDER CODE - OFF
10. WHEEL CHOCKS REMOVE

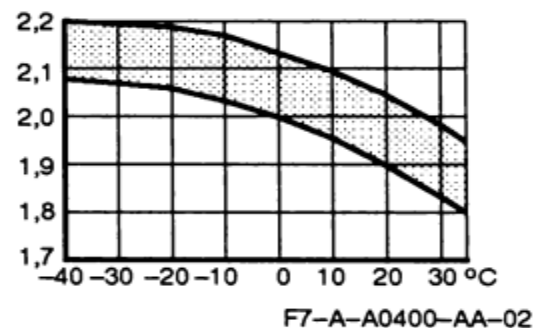
BEFORE TAKE OFF

1. ALIGN A/C WITH RUNWAY
2. TRANSPONDER ON
3. CHECK:
MAIN COURSE, BACKUP COURSE
BACKUP ARTIFICIAL HORIZON (RESET IF NECESSARY)
ALTIMETER (0 - SET IF NECESSARY)
4. MASTER MODE SELECTOR NAV (AT THE EARLIEST
2 MINUTES BEFORE
THROTTLE UP)
5. COURSE MANUAL INITIAL SETUP
6. SPAK ON CHECK
7. MASTER CAUTION, WARNING OFF (DROP TANK FUEL
LIGHTS
DISAPPEARS FIRST
AFTER 70 %RPM)
8. HUD CHECK
9. LANDING LIGHT ON
10. FLIGHTTIME RESET, START CHRONO

START

ENGINE CONTROL

1. MIL POWER (MS)
• ENGINE PRESSURE RATIO IN THE GRAY FIELD



- EGT MAX 590 °C
+ OAT

2. AFTERBURNER (EBK)
• ZONE INDICATOR
• EXHAUST NOZZLE INDICATOR
• ENGINE PRESSURE RATIO:

ZONE 2	< + 15 °C	≥ 1.9
	≥ + 15 °C	≥ 1.8
ZONE 3		=MS

AFTER LANDING

1. MASTER MODE SELECTOR BER
2. FLIGHTTIME READ OFF
3. LANDING LIGHTS AS REQUIRED
4. RADAR ALTIMETER OFF
5. TRANSPONDER OFF

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SHUTDOWN

1. EJECTION SEAT DISARM
2. MAX ALPHA AND G-LOAD CHECK
3. AUTOTHROTTLE (AFK) OFF
4. GENERATOR OFF
5. THROTTLE CUT-OFF
(1 MIN ≤ FLIGHT IDLE)
6. RADAR WARNING REVEIVER, OFF
PN-79 (IFF),
EXTERNAL ILLUMINATION,
LANDING LIGHTS
7. OXYGEN OFF
8. LOW PRESSURE FUEL VALVE OFF
9. GENERATOR ON (> 10 s AFTER 5)
10. CANOPY OPEN
11. MAIN POWER OFF (> 5 s AFTER 8)
12. REMOVE STRAPS
13. DATA CARTRIDGE REMOVE
14. HAND SIGN FOR ENGINE SHUTDOWN

G RADAR PANEL NORM POS

1. RADAR MODE SWITCH A0
2. AUTOMATIC AIMING MODE (AS) . POSITION 1
3. PASSIVE RADAR MODE OFF
SELECTOR
4. PULS LENGHT SELECTOR NORMAL
5. LIN/LOG SWITCH LOG
6. ANTENNA ELEVATION (AHV)/ SNAP POSITION
MANUAL SENSITIVITY CONTROL
(MKR)

VENTILATION

1. IGNITION OFF
2. THROTTLE CUT-OFF
3. LOW PRESSURE FUEL VALVE, ON, EXTINGUISHES
LAMP
4. START SWITCH ON (HOLD 2 s)
5. START SWITCH OFF (AFTER 40 s)

DATA INPUT

1. WARNING LIGHT "CK" OFF
2. RENSA
3. IN/OUT SELECTOR IN
4. REF LOLA
ENTER COORDINATES/REFERENCE NUMBERS
STARTBASE ON LS, IF NECESSARY LANDINGBASE AND
ALTERNETIV LANDINGBASE (99XX) ON L
5. BANA/GRÄNS
RUNWAY DIRECTION/TILS-CHANNEL
FLIP RUNWAY DIRECTION TO OPPOSITE DIRECTION IF
NECESSARY
INGRESS/EGRESS BORDER(S) FOR EACH WAYPOINT
6. VIND/RUTA/MÅL
CURRENT WIND ON LS FORECAST WIND
COORDINATES FOR RUTA
COORDINATES FOR 'RED M' WAYPOINT ON TARGET +
DESIRED NUMBER 1 - 9
(ONE PRESS EACH ON LON/LAT RESPECTIVELY)

7. TID
ENTER CURRENT TIME LS
ENTER TIME ON TARGET B1 - B9
ENTER INGRESS SPEED B1 - B9
ENTER TIMESTAMPS FOR DESIRED NUMBER 1 - 9
RECONNAISSANCE TARGETS
8. TAKT
G DISABLE TARKET MOTION ADRESS 22, VALUE 1
MEASURMENT PRESS LS
G DISABLE RADAR LOCK ADRESS 25, VALUE 3
PRESS LS
RB24/24J ADRESS 24,
VALUE 1 OR 2
PRESS LS
9. ID-NR
MISSION AND SQUADRON ON B1
NUMBER
DATUM ON B2
10. AKT POS
11. IN/OUT SELECTOR OUT
12. CHECK REQUIRED FUEL
13. PLAUSIBILITY CHECK
FIX ON LS, PRESS B1
CHECK:
• DESTINATION INDICATOR
• DISTANCE
• BEARING
FIX ON B1, PRESS B2 etc.
14. VIND/RUTA/MÅL
CHECK THE ENTERED DATA
PLAUSIBILITY CHECK 'RUTA'
FIX ON B1. CHECK POSITION
PRESS B2 (=SELECT R2)
CHECK:
• BEARING
• DISTANCE
FIX ON R2
SELECT R3 etc.
15. TID
CHECK TIME TO THROTTLE UP
CHECK TIME TO TARGET
16. TAKT
CHECK ENTERED DATA
17. ID-NR
CHECK ENTERED DATA
READING TARGET DATA: PRESS MÅL AND DESIRED
NUMBER. READ TID
PRESS T1 - T0, READ LATITUDE
REPEAT T1 - T0, READ LONGITUDE
READING OUT SHADOWING DATA: PRESS SKU
AND THE DESIRED NUMBER. PRESS T1 - T0 FOR
LATITUDE, REPEAT FOR LONGITUDE, SAME AGAIN
FOR COURSE AND SPEED.
18. AKT POS
FIX ON LS

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A SELF TEST (FK) RB 75

1. WEAPON SELECTOR RB 75
2. SELF TEST SWITCH A COUNTERMEASURE
3. SELF TEST SWITCH B 10
4. MASTER MODE SELECTOR SELF TEST (FK)
5. AWAIT GREEN FK LIGHT
(= TARGETING GYRO SPEED OK)
6. SELF TEST SWITCH B 11
7. CHECK THAT THE TRACKER CAN BE OPERATED AND READ
IN THE DIFFERENT MODES. PRESS T1 - T0
8. STEP IF NECESSARY UNTIL THE NEXT RB. REPEAT 7
9. MASTER MODE SELECTOR BER
10. SELF TEST SWITCH A OTHER ELECTRONICS
11. SELF TEST SWITCH B 0

G SELF TEST (FK) RB 15

1. WEAPON SELECTOR ATTACK
2. SELF TEST SWITCH A COUNTERMEASURE
3. SELF TEST SWITCH B 09
4. MASTER MODE SELECTOR SELF TEST (FK)
5. WAIT AROUND 40 s
APPROVED RB:
 RED FK LIGHT EXTINGUISHES
 GREEN FK LIGHT ON
 DATA INDICATOR: NUMBER 1
NOT APPROVED RB:
 RED FK LIGHT REMAINS ON
 DATA INDICATOR: —
6. MASTER MODE SELECTOR BER
7. SELF TEST SWITCH A OTHER ELECTRONICS
8. SELF TEST SWITCH B 0

Also applies to AJSH37 and AJSF37

STANDBY

BEFORE MISSION

ENGINE READINESS

HIGHEST READINESS

BATTERY READINESS

BEFORE START ORDER

1. ACTION ACCORDING TO "BEFORE ENGINE START"
OXYGEN MASK OFF
OXYGEN OFF
2. THROTTLE CUT-OFF
3. LOW PRESSURE FUEL VALVE OFF
4. EXCHANGE CONTACT HANDSIGNAL WITH GROUND CREW
5. REPORT READY FOR HIGHEST OR
BATTERY READINESS
ENGINE READINESS:
ACTION WITH A * ACCORDING TO THE "AFTER START
ORDER"
REPORT READY FOR ENGINE
READINESS

CHANGE OF READINESS LEVEL

HIGHEST READINESS TO

ENGINE READINESS

1. CHECK THAT GROUND CREW PERCEIVED LEVEL CHANGE
2. ACTIONS WITH A * ACCORDING TO THE "AFTER START
ORDER"
3. REPORT READY FOR ENGINE
READINESS

ENGINE READINESS TO

HIGHEST READINESS

1. WAIT FOR SIGNAL FROM GROUND CREW
2. GENERATOR OFF
3. THROTTLE CUT-OFF
4. LOW PRESSURE FUEL VALVE OFF
5. GENERATOR ON (> 10 s AFTER
ITEM 3)
6. EJECTION SEAT DISARM
7. EXCHANGE CONTACT HANDSIGNAL WITH GROUND CREW
8. REPORT READY FOR HIGHEST
READINESS

EMERGENCY START

ACTIONS ACCORDING TO "AFTER START ORDER"

EMERGENCY START ORDER FOR CLARIFICATION

1. CHECK THAT GROUND CREW PERCEIVED EMERGENCY
TAKEOFF ORDER
2. GROUND CREW ABORTS TURNAROUND AS SOON AS POSSIBLE
DELAY 30 - 90 s
3. ACCORDING TO "BEFORE START ORDER"
4. GROUND CREW GIVES HAND SIGN FOR ENGINE START
5. ACT ACCORDING TO "AFTER START ORDER"

IF THE AUTOMATIC ENGAGEMENT OF SPAK IS NOT ACHIEVED:

- EMERGENCY START MAY BE PERFORMED WITHOUT FLIGHT
CONTROL STABILIZER IN CASE OF APPARENT DANGER
- MANUAL SELECTION OF SA 06 IS NOT ALLOWED

AFTER START ORDER

- 1.* LOW PRESSURE FUEL VALVE ON
- 2.* THROTTLE GROUND IDLE (MTG)
- 3.* ACCORDING TO "ENGINE START"
4. OXYGEN MASK ON
OXYGEN ON
- 5.* ACCORDING TO "BEFORE TAXI"
- 6.* CHECK GROUND CREW SIGN "READY TO MOVE"
- 7.* START ACCORDING TO "BEFORE START" AND "START"

* AT ENGINE READINESS, THESE ACTIONS ARE PERFORMED
BEFORE START ORDER

AFTER MISSION

1. ACCORDING TO "AFTER LANDING"
2. BRAKES SET
3. ACCORDING TO "SHUTDOWN" KEEP MAIN POWER ON
4. NOTIFY THE GROUND CREW OF UNLOADING CAN BEGIN

REFUELLING DURING ENGINE STANDBY: SEE FAST
REFUELING

USE OF LIGHTS AND EXTERIOR LIGHTS DURING
STANDBY NOT REGULATED

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QUICK REFUELING

PREREQUISITES

- | | |
|--|--|
| 1. NO LOAD OR UNLOAD OF AMMUNITION | 5. WARNING PANEL FUNCTION CHECK |
| 2. OXYGEN NEED NOT BE FILLED | 6. SPARK ON CHECK |
| 3. NO NOTE THAT CAUSES ACTION | 7. * HAND SIGNAL FROM GROUND CLEAR TO MOVE |
| 4. MAXIMAL 2 QUICK FUELLINGS IN SEQUENCE | CREW RECEIVED |

ENTER REFUELING STATION

1. MASTER MODE SELECTOR BER
2. **G** RADAR MODE SWITCH AO
3. VERIFY THE PREREQUISITES ABOVE ARE MET. REPORT TO ATC OR THE GROUND CREW IF QUICK REFUELING CANNOT BE CARRIED THROUGH.

AT REFUELING STATION

BEFORE REFUELING

1. THROTTLE GROUND IDLE (MTG)
2. BRAKES SET IF NOT OVERHEATED
3. * CHECK THE CONNECTION WITH THE GROUND CREW
NOTIFY ANY CHANGE IN DISERED FUEL AMOUNT
4. * HAND SIGN FOR CONNECTING THUMBS UP
5. * WAIT FOR THE THUMBS UP FROM GROUND CREW
6. * CONFIRM READY TO REFUEL THUMBS UP
7. OXYGEN OFF

REFUELING

1. * CHECK THAT THE WARNING LIGHTS BRÄ UPPF AND TANKPUMP ARE LIT
2. * MAINTAIN (EYE-)CONTACT WITH THE GROUND CREW.
IF NECESSARY, CALL ON GROUND CREWS ATTENTION BY CAREFULLY CHANGING THE RPM.
NEED TO STOP REFUELING BOTH PALMS TOWARDS
THE HOOD INSIDE
3. PITCH TRIM 0/-3
4. DATA INPUT

AFTER REFUELING

1. * WHEN GROUND CREW CONFIRM WITH
INDICATES COMPLETE THUMBS UP
REFUELING (THUMBS UP)
2. CHECK WARNING LIGHTS BRÄ UPPF AND TANKPUMP
EXTINGUISHES
3. * WHEEL CHOCKS REMOVE
4. MASTER MODE SELECTOR NAV (ACCORDING TO
ROUTINE)

EMERGENCY TAKE OFF UNDER QUICK REFUELING

1. CHECK THAT GROUND CREW PERCEIVED EMERGENCY
START ORDER
2. GROUND CREW INTERRUPTS THE REFUELING.
DELAY 20 - 30 s
3. CHECK WARNING LIGHTS BRÄ UPPF AND TANKPUMP
EXTINGUISHES
4. HAND SIGNAL FROM GROUND CLEAR TO MOVE
CREW RECEIVED
5. START ACCORDING TO "BEFORE START" AND "START"

SAFETY REGULATIONS

AT HANDSIGNAL

1. THROTTLE CUT-OFF
2. KEEP LOW PRESSURE FUEL VALVE AND MAIN POWER ON

FIRE ON THE GROUND UNDER THE AIRCRAFT

1. DRIVE STRAIGHT AHEAD AT LEAST 50 METERS
2. CUT OFF ENGINE
3. BE PREPARED TO GET OUT THE AIRCRAFT QUICKLY

FIRE IN THE AIRCRAFT (ON THE GROUND)

1. CUT OFF ENGINE
2. GET OUT AIRCRAFT AS SOON AS POSSIBLE

* OPERATIONS CARRIED OUT AT FAST REFUELING WHEN ENGINE IN STANDBY
