

**GRUMMAN AA5A  
Checklist**



*Koninklijke vliegclub De Wouw  
Royal Aéro Club Le Milan  
EBTN  
016 / 81.22.78*

# **GRUMMAN CHEETAH**

**AA5A  
( 150 HP )**

# **OO - OLI**



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## IMPORTANT

*This checklist is not an authoritative document. Full reference must be made to the individual aircraft flight Manual/Pilot Operating handbook as amended. Current ANO and AICs and Pilot Order book/Flying School Syllabus, local procedures, may also be relevant.*

## PRE-FLIGHT INSPECTION

<b>AIRCRAFT</b>	Documentation complete and satisfactory,
<b>DOCUMENTS</b>	Including valid Certificate of Maintenance if required.
<b>WEATHER</b>	Local, en-route and destination forecasts and actuals.
<b>FLIGHT PLANNING</b>	Current AIP/Flight Guide, NOTAMS, Amendments and bulletins. PPR, Daylight remaining, etc,
<b>FUEL</b>	Sufficient to destination and alternates, Contingency
<b>CHARTS</b>	Current and sufficient coverage for flight.
<b>WEIGHT &amp; BALANCE</b>	Load (passengers, baggage, fuel) within limits.
<b>PERFORMANCE</b>	Take-off, en-route and range, landing.
<b>PASSENGERS</b>	Comfort and safety briefing, emergency procedures.
<b>PILOT</b>	Licence and experience current and valid. Medical certificate valid, fitness for flight.
<b>SURVIVAL EQUIPMENT</b>	For over water flight - dinghy accessible, Lifejackets worn but not inflated, Flares, Transceiver, ELT.
<b>BOOK-OUT</b>	Departure ATC, airfield movements book, aircraft tech. log
<b>FLIGHT PLAN</b>	File for IFR and International Flights, flight across water and sparsely populated areas

## PRE-FLIGHT ACTION OF PILOT IN COMMAND

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## APPROACHING AIRCRAFT

Check	Access to taxiways, Obstructions, Level surface For fuel / oil spillages,
Remove	ANY ice or frost from ALL aircraft surfaces Tie downs and Towbar, External control locks, Pitot cover, Chocks

## IN CABIN

1	Control Locks & Covers	Remove and Stow
2	Parking Brake	
3	Magneto Switches	Check OFF, Key OUT
4	Master Switch	ON
5	Stall Warner	Check
6	Pitot Heat	Check, then OFF
7	Rotating beacon	Check, then OFF
8	Landing/Nav.Lights	Check as required, then OFF
9	Fuel	ON – Check contents
10	Master Switch	OFF
11	Throttle	Closed
12	Mixture	Idle Cut-Off
13	Trimmer	Check position
14	First Aid Kit	In Position - Secure
15	Fire Extinguisher	In Position - Secure

## PRELIMINARY

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## EXTERNAL

### Left Wing

1	Flap	Secure & undamaged
2	Aileron	Condition, Full and Free movement
3	Wing Tip	Condition, Security, Navigation. and Strobe lights
4	Aileron Counterweight Access	Unobstructed
5	Wing inspection plates	Secure
6	Wing Surface	Condition, Upper and Lower
7	Leading Edge	Dents, Stall Warner, Pitot Tube checked,
8	Fuel Tank	VISUALLY CHECK CONTENTS, Cap secure, Fuel drain, Vent Clear
9	Sump drain	Check

### Left Undercarriage

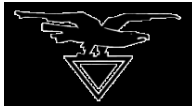
1	Tyre	Condition, inflation Creep marks aligned
2	Leg and Fairing	Condition

### Left Cowling

1	Windscreen	CLEAN, OAT probe secure
2	OAT probe	Secure, undamaged
3	Fuel pump overflow drain	Unobstructed
4	Air vent	Unobstructed
5	Air cleaner drain	Unobstructed
6	Oil breather vent	Unobstructed
7	Left Cowling	Open, Check baffles: secure, undamaged then Close cowl
8	Propeller	Condition, especially leading edge

## EXTERNAL / 1

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## Nose

1	Propeller & Spinner	Secure, undamaged
2	Cowling	Secure, undamaged
3	Landing light	Secure, undamaged
4	Carburettor Air intake	Unobstructed
5	Nose Leg & fairing	Undamaged, tire properly inflated, Mud scraper clear

## Right Cowling

1	Right Cowling	Open
2	Baffles	Unobstructed, undamaged
3	Cooling openings	Unobstructed
4	Oil level	Normal level = 6 quarts
5	Oil dipstick	Secure (finger tight)
6	Vacuum pump vent	Unobstructed
7	Battery	Secure
8	Alternator belt	Proper tension
9	Cowling	Close, latch secure
10	Windshield	Clean, undamaged

## Right undercarriage

1	Tyre	Condition, inflation Creep marks aligned
2	Leg and Fairing	Condition

**EXTERNAL / 2**

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## Right Wing

1	Fuel Tank	VISUALLY CHECK CONTENTS, Cap secure, Fuel drain, Vent Clear
2	Sump drain	Check
3	Leading Edge	Condition, check for dents,
4	Wing Surface	Condition, Upper and Lower
5	Wing Tip	Condition, Security, Navigation. and Strobe lights
6	Aileron counterweight Access	Unobstructed
7	Wing inspection plates	Secure
8	Aileron	Full and Free movement
9	Flap	Secure & undamaged

## Right Fuselage

2	Windows	Clean
3	Skin	Condition
4	Aerials	Secure
5	Static Vent	Clear

## Tail Unit

1	Tailplane/Elevator	Full and free movement
2	Rudder	Full and free movement
3	Trim tabs	Secure, undamaged
4	Tail cone & light	Secure, undamaged

## Left Fuselage

1	Skin	Condition
2	Aerials	Secure
3	Static Vent	Clear
4	Windows	Clean
5	Door	Latches and Hinges Secure

**EXTERNAL / 3**

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## ELECTRICAL SYSTEMS PRE-FLIGHT ( NIGHT )

### Cabin

1	Master switch	ON
2	Instrument lights	Check rheostat, OFF
3	Navigation lights	ON
4	Flashing beacon	ON
5	Pitot heat	ON
6	Landing light	ON

### Left wing

1	Navigation light	Illuminated (RED)
2	Pitot Tube	Check for heat

### Nose

1	Landing light	Illuminated
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### Right Wing

1	Stall warning vane	Lift, check if warning horn sounds
2	Navigation light	Illuminated (GREEN)

### Empennage

1	Navigation light	Illuminated (WHITE)
2	Flashing beacon	Operating (ROTATING RED)

### Cabin

1	Master switch	OFF
2	Navigation lights	OFF
3	Flashing beacon	OFF
4	Pitot heat	OFF
5	Landing light	OFF

EXTERNAL / 4

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## INTERNAL

1	Seats	Adjusted and <b>LOCKED</b>
2	Hatches & Harnesses	Adjusted and secure
3	Parking Brake	ON
4	Radios	OFF
5	Instruments	Legible, Serviceable Readings within limit
6	Controls	Full and free movement, Correct sense
7	Trimmer	Check through full range, Set neutral
8	Cabin Air Control	Closed (OFF)
9	<del>Alternate Static</del>	<del>OFF</del>
10	Carb. Heat.	Full and free movement, Set Cold
11	Throttle	Full and free movement, Set <b>0.5 cm</b> open
12	Throttle Friction	Checked and Loose
13	Mixture	Full and free movement. Set Rich
14	Master Switch	ON
15	Circuit Breakers/Fuses	In / Secure
16	Fuel	OPEN, tank with fullest contents
17	Fuel Pump	ON, check press 0.5 - 8 psi
18	Primer	Prime as required and lock
19	<b>LOOKOUT</b>	Good look round, call " <b>CLEAR PROP</b> "
20	Magnetos	Keys in, Operate starter

## INTERNAL & STARTING



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## AFTER START

1	RPM	Set to 1200
2	Fuel pump	OFF
3	Oil Pressure	Rising to green arc within 30 secs
4	Ammeter	Charging
5	Suction	Registering, press. 4.6 to 5.4 "Hg
6	Magnetos	Check for dead cut
7	Instruments	Set as required
8	Radios	Tuned and checked as required, <b>Taxi clearance</b>

## TAXIING

1	Brakes	Checked before taxiing
2	Rudder	Movement and steering checked
3	Instruments	Check in turns DI, Compass Turn Co-ordinator, Attitude indicat.

## POWER CHECKS

1	Position	Into wind, clear all around
2	Parking Brake	ON
3	Fuel	Change to fullest tank,
4	Oil Temp. and Press	Within limits,
5	Magnetos	Check
6	RPM	Set 1800 - Brakes holding
7	Carb. Heat.	Set HOT, max. drop 100 RPM Set COLD
8	Magnetos	Check LEFT & RIGHT Max drop 175 RPM, diff. 50 RPM
9	Suction	4.6" - 5.4"Hg
10	Ammeter	Charging
11	Oil temp. and Press	Within limits
12	RPM	To idle, 500 - 700 RPM Reset to 1200 RPM

## AFTER START / TAXIING / POWER

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## PRE TAKE-OFF CHECKS - VITAL ACTIONS

1	<b>T</b>	Trimmer	Set for take off
2		Throttle friction	Finger tight
3	<b>M</b>	Mixture	RICH
4		Magnetos	On BOTH, Master Switch ON
5	<b>P</b>	Pitot heather	As required
6		Primer	Locked
7	<b>F</b>	Fuel	On tank with highest contents, Fuel pump ON
8		Flaps	Check full range, Set UP
9	<b>I</b>	Instruments	Checked and set, Directional gyro Altimeter, Engine T° & Pressure.
10	<b>H</b>	Hatches	Doors and windows secure
11		Harness	Secure
12	<b>C</b>	Carb. Heat	COLD
13		Controls	Full and free movement

## PRE-TAKE OFF CHECKS

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## TAKE OFF

1	LOOKOUT	Runway, approach and departure paths visually checked ATC clearance
2	RPM	Full power
3	Engine	Temp / Press, steady within limit
4	Airspeed	Increasing
5	Elevator Control	Raise nose at 58 Mph – 50 Kts
	Climb speed	<b>Best angle : 80 Mph</b> (78 Mph – 68 Kts) <b>Best rate : 90 Mph</b> (91 Mph – 79 Kts) <b>Normal : 100 Mph</b> (98 Mph – 85 Kts)

## AFTER TAKE-OFF

1	Engine	Temp / Press, steady within limit
2	Radios	Set, ATC clearance as necessary
3	Altimeter	Check
4	Fuel pump	Off above 1000' AGL

## CRUISE / RE-JOIN CHECKS (F R E D A)

1	<b>F</b>	Fuel	"ON" and sufficient pump "ON" if necessary, tanks even
2	<b>R</b>	Radio	"ON" and correct frequency set joining instructions if required
3	<b>E</b>	Engine	Temp / Press, mixture Check for carb. Ice
4	<b>D</b>	DI	Synchronized with compass
5	<b>A</b>	Altimeter	QNH set as required

## TAKE-OFF / CRUISE

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## PRE-LANDING CHECKS

1	<b>B</b>	Brakes	“OFF”
2	<b>U</b>	Undercarriage	Fixed
3	<b>M</b>	Mixture	Rich
4	<b>F</b>	Fuel	On fullest tank, Sufficient Fuel pump “ON”
5		Flaps	As required below 119 Mph (103 Kts)
6	<b>P</b>	Pitch	Fixed
7	<b>I</b>	Instruments	Engine temp & press checked, Altimeter set
8	<b>C</b>	Carb. Heat	Checked, return Cold
9	<b>H</b>	Hatches	Secure
10		Harness	Secure and fastened
Speed		Clean : <b>80 Mph</b> - Flaps DN : <b>75 Mph</b> Full flaps landing = <b>70 Mph</b>	

## GO-AROUND

1	Throttle	Full power, correct for yaw
2	Carb. Heat	COLD
	Speed	<b>70 –75 Mph</b> ( 60 –65 Kts )
3	Flaps	Retract in stages at safe height
4	Radio	'Go-around' call, ATC instructions

## AFTER LANDING

Vacate active runway and stop

1	Carb. Heat	Cold (if necessary)
2	Flaps	UP
3	Trimmer	Neutral
4	Throttle Nut	Loosen
5	Fuel pump	OFF
6	Anti-collision lights	OFF
7	Electrics	Non-essential OFF
8	Radios	Non-essential OFF

## RE-JOIN / LANDING

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## SHUT DOWN

1	Position	Into wind, nose wheel straight
2	Parking brake	
3	RPM	1200 for 30 secs
4	Magnetos	Check for dead cut
5	Radio	OFF
6	Throttle	Close
7	Mixture	Idle Cut Off (fully lean)

### After engine stops

8	Magnetos	<b>OFF, KEY OUT</b>
9	Electrics	OFF
10	Master Switch	OFF
11	Fuel	
12	Harness	Left tidy
13	Hatches	Doors and windows closed.

## SHUT DOWN CHECKS

### PRE STALL / AEROBATIC CHECKS (H A S E L L)

1	<b>H</b>	Height	Sufficient to recover by 3000' AGL (if spinning see POH)
2	<b>A</b>	Airframe	Gyros caged, brakes off Flaps as required (see POH)
3	<b>S</b>	Security	Hatches and harnesses tight and secure, no loose articles
4	<b>E</b>	Engine	Temp / Press, Check for Carb ice, mixture RICH Fuel pump on
5	<b>L</b>	Location	Clear of cloud, controlled airspace built up areas and airfields
6	<b>L</b>	<b>LOOKOUT</b>	360° turn to check for aircraft especially below

### CONTINUED STALL / AEROBATICS (H E L L)

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## Miscellaneous.

### WEIGHT & BALANCE

FUEL				
lbs	G US	Lts	Kg	Time
<b>6</b>	<b>3,785</b>		<b>0,72</b>	<b>32 l/h</b>
8	1,3	<b>5</b>	4	<b>9'</b>
16	2,6	<b>10</b>	7	<b>19'</b>
24	4,0	<b>15</b>	11	<b>28'</b>
32	5,3	<b>20</b>	14	<b>38'</b>
40	6,6	<b>25</b>	18	<b>TOff</b>
48	7,9	<b>30</b>	22	<b>9'</b>
55	9,2	<b>35</b>	25	<b>19'</b>
63	10,6	<b>40</b>	29	<b>28'</b>
71	11,9	<b>45</b>	32	<b>38'</b>
79	13,2	<b>50</b>	36	<b>47'</b>
87	14,5	<b>55</b>	40	<b>56'</b>
95	15,9	<b>60</b>	43	<b>1h06</b>
103	17,2	<b>65</b>	47	<b>1h15</b>
111	18,5	<b>70</b>	50	<b>1h24</b>
119	19,8	<b>75</b>	54	<b>1h34</b>
127	21,1	<b>80</b>	58	<b>1h43</b>
135	22,5	<b>85</b>	61	<b>1h53</b>
143	23,8	<b>90</b>	65	<b>2h02</b>
151	25,1	<b>95</b>	68	<b>2h11</b>
159	26,4	<b>100</b>	72	<b>2h21</b>
166	27,7	<b>105</b>	76	<b>2h30</b>
174	29,1	<b>110</b>	79	<b>2h39</b>
182	30,4	<b>115</b>	83	<b>2h49</b>
190	31,7	<b>120</b>	86	<b>2h58</b>
198	33,0	<b>125</b>	90	<b>3h08</b>
206	34,3	<b>130</b>	94	<b>3h17</b>
214	35,7	<b>135</b>	97	<b>3h26</b>
222	37,0	<b>140</b>	101	<b>3h36</b>

230	38,3	<b>145</b>	104	<b>3h45</b>
238	39,6	<b>150</b>	108	<b>3h54</b>
246	41,0	<b>155</b>	112	<b>4h04</b>
254	42,3	<b>160</b>	115	<b>4h13</b>
262	43,6	<b>165</b>	119	<b>4h23</b>
269	44,9	<b>170</b>	122	<b>4h32</b>
277	46,2	<b>175</b>	126	<b>4h41</b>
285	47,6	<b>180</b>	130	<b>4h51</b>
293	48,9	<b>185</b>	133	<b>5h00</b>
301	50,2	<b>190</b>	137	<b>5h09</b>
309	51,5	<b>195</b>	140	<b>5h19</b>
316	52,6	<b>199</b>	144	<b>5h28</b>

Fuel calculation and endurance estimated on :  
Reserve = 45 min at 50% BHP (2000ft/2100rpm)  
Cruise at 70-75 % BHP = 8,5 USG lhr = 32 l/hr  
( 3000 ft – 2500 rpm ) ( 8000 ft – 2700 rpm ).

MTOW : ≤ 999 Kg (2200 lbs)  
BEW : 654 Kg (1442 lbs)  
Fret : ≤ 54 Kg (120 lbs)  
Fuel + Pax & Pilots : ≤ 415 Kg  
( ± 4 POB & 150 Lts (40 G US) )

### SPEEDS

**Emergency : 75 Mph 65 Kts**  
**Vx = Best Angle : 80 Mph (78 → 81) 68 Kts**  
**Best glide : 83 Mph 72 Kts**  
( with windmilling propeller )  
**Vy = Best Rate : 90 Mph (91 → 85) 79 Kts**  
**Vb : 119 Mph 103 Kts**  
( Vb = Turbulent Air penetration speed. )  
**Va = manoeuvring 121 Mph 105 Kts**  
**App speed : Flaps Up 80 Mph 70 Kts**  
**: Flaps DN 75 Mph 65 Kts**  
**Landing : 70 Mph 61 Kts**  
**Crosswind : 16 Kts**



## **EMERGENCY**

# **FIRE**

### **FIRE ON THE GROUND**

If taxiing, stop clear of other aircraft, fuel trucks/stations, etc

1	Throttle	Closed
2	Mixture	Idle Cut Off (fully lean)
3	Fuel	OFF, pump OFF
4	Magnetos	OFF
5	Master Switch	OFF
6	Brakes	Parking brake ON

Evacuate to a safe distance upwind, taking fire extinguisher

### **CABIN FIRE IN THE AIR**

1	Master Switch	OFF if electrical fire
2	Electrical circuits	OFF as required
3	Fire extinguisher	Use as necessary

Forced landing procedure or diversion as applicable

### **ENGINE FIRE IN THE AIR**

1	Throttle	Close
2	Mixture	Idle Cut Off (fully lean)
3	Fuel	OFF, fuel pump OFF
4	Magnetos	OFF
5	Cabin heater/Defrost	OFF

Forced landing (without power) procedure

**DO NOT ATTEMPT TO RESTART**

**EMERGENCY / FIRE**



## **EMERGENCY**

# **ELECTRICS**

### **RADIO FAILURE**

1	Radio	Check freq, volume, squelch Check avionics selector/switches
2	Headset	Check plugs secure, change Headsets, try hand microphone
3	Electrics	Check ammeter, Master Switch Circuit breakers – reset once only
4	Transponder	Set 7600

Speechless / Transmit blind / Non-radio procedure as appropriate

### **ELECTRICAL FAILURE**

1	Electric load	Reduce (non-essential electrics/radio only)
2	Field/Output Circuit Breaker	Check / Reset
3	Ammeter/Low voltage Warning light	Check
4	If NO OUTPUT Reset Master Switch (off for 2 secs, then on)	IF OUTPUT RESTORED Restore essential electrics singly

IN THE EVENT OF REPEATED/CONTINUED ELECTRICAL failure : select only essential electrical services, divert if applicable,

Note : radio transmission makes a particularly heavy drain on the battery

## **EMERGENCY / ELECTRICS**





## EMERGENCY

# ENGINE

### ENGINE FAILURE AFTER TAKE-OFF ( E F A T O )

Immediate actions

Lower nose to maintain emergency airspeed : **75 Mph ( 65 Kts)**

Select landing area ahead - Use flap as necessary

1	Fuel	OFF
2	Magnetos	OFF
3	Master Switch	OFF

Brief passengers/tighten harness/unlatch door as time permits

**NEVER ATTEMPT TO TURN BACK**

### ENGINE FAILURE AT ALTITUDE (Forced landing without power)

Immediate actions

Attain and maintain best glide speed – TRIM : **83 Mph ( 72 Kts)**

Assess surface wind - Select suitable landing area

Plan approach pattern - Check for Cause of failure

1	Carb Heat	ON
2	Fuel	Change tanks, check sufficient, Fuel pump on
3	Mixture	Check
4	Primer	LOCKED
5	Magnetos	On BOTH
6	Throttle	Check

If engine does not restart, R/T MAYDAY call, Committed checks

1	Fuel	OFF
2	Magnetos	OFF
3	Harness	Tight
4	Doors	Unlatched
5	Crew / passengers	Briefed, as time permits
6	Master Switch	OFF

**EMERGENCY / ENGINE**



## EMERGENCY

# DITCHING AT SEA

### **DITCHING PROCEDURE (without power)**

Establish glide, head for coast line or any shipping area, check for causes of failure as time permits.

1	Radio	MAYDAY call
2	Transponder	7700
3	Harnesses	Tight
4	Doors	Unlatched, DV window open
5	Crew / passengers	Briefed

Large swell / Light wind : land along swell, tail down stalled

Light swell / Strong wind : Landing into wind, tail down stalled

After ditching, use survival equipment

### **DO NOT INFLATE LIFE JACKETS IN CABIN**

Emergencies by their nature are not standard, and this checklist can only provide a guide to the appropriate actions - in an emergency :

**PILOT JUDGEMENT SHOULD DICTATE PILOT ACTIONS**