REMOS

REMOS GX AVIATOR

Pilot Operating Handbook for Light Sport Aircraft

Airplane Registration Number _____

Airplane Serial Number _____

REMOS Order No. 104177, dated December 2017

Introduction

Light Sport Aircraft REMOS GX

The REMOS GX was manufactured in accordance with the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

The standards to be used for certification are given by FAA and can be obtained from the FAA's website. For this airplane the following standards have been used:

number	revision	purpose
ASTM F2245	16c	Design and Performance
ASTM F2245	16c	Required Equipment
ASTM F2245	16c	Aircraft Operating Instructions
ASTM F2972	15	Quality Assurance
ASTM F2295	06	Continued Airworthiness
ASTM F2483	12	Maintenance Manual
ASTM F2746	14	Pilot Operating Handbook

NOTE	This table is applicable only for newly delivered aircraft. It is not applicable in case the POH has been updated for existing aircraft.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

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Introduction

List of Content and Revisions

This POH consists of the following listed pages and sections. You will find a marking indicating the revision and date of issue at the top border of each page. Insert the latest changed pages.

Pilot Operating Handbook – Main Part

sect.	description	document-no.	revision
0	Introduction	G3-8 MA FM 1200	07
1	General Information	G3-8 MA FM 1201	07
2	Operating Limitations	G3-8 MA FM 1202	07
3	Emergency Procedures	G3-8 MA FM 1203	07
4	Normal Procedures	G3-8 MA FM 1204	07
5	Performance	G3-8 MA FM 1205	07
6	Weight and Balance	G3-8 MA FM 1206	06
7	Systems	G3-8 MA FM 1207	06
8	Handling and Servicing	G3-8 MA FM 1208	07

Pilot Operating Handbook – Supplement

sect.	description	document-no.	revision
9	Flight Training	G3-8 MA FM 1209	07
10	Glider Towing	G3-8 MA FM 1210	07
11	Banner Towing	G3-8 MA FM 1211	04
12	Continued Airworthiness	G3-8 MA FM 1212	03
13	Abbreviated Checklists	G3-8 MA FM 1213	01

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

Introduction

Remarks and Alterations

Please make a notation below if any changes have been made to this manual or to the plane. This manual is an important document for the pilot in command to ensure safe operation of the aircraft. Therefore it is recommended to keep this Operating Handbook updated with the newest information available. You can get the latest updates of this manual from your dealer or directly from the manufacturer's homepage.

no.	page	concern	date	sign

1 General Information

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1 General Information

1.1 Introduction

This Operating Handbook is designed to help enable a safe and successful completion of each flight with the REMOS GX. It provides you with all necessary information for regular maintenance and operation of the aircraft. Therefore we recommend that the pilot keep this Operating Handbook updated with the newest information available. You can get the latest version of this Handbook from your local dealer or directly from the manufacturer's homepage.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

1.2 Certification

The REMOS GX was manufactured in accordance with the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

1.3 Continued Airworthiness

Technical publications for continued airworthiness are released on the REMOS website www.remos.com and they may be downloaded free of charge.

Bombardier-Rotax releases technical publications on their website www.flyrotax.com from which they may be downloaded free of charge. Documentation update for avionics may be downloaded on www.dynonavionics.com and www.garmin.com.

It is the responsibility of the owner/operator of the aircraft to keep the aircraft and its documentation up to date and to comply with all technical publications.

1 General Information

1.4 Quick Reference

Type: Full composite carbon fiber aircraft with two seats.

Design: High wing design with struts, front mounted engine and propeller, traditional stabilizer concept, differential ailerons. Electrically operated flaps (0° to 40°), electric elevator trim, three-wheel landing gear with steerable nose wheel. Main gear with hydraulic disc brakes. The cabin is equipped with two seats side by side and can be entered and exited by doors on the left and right side of the fuselage.

Layout: Main components are built in half shells from composite fiber material, which are bonded together (carbon fiber, Kevlar and glass fiber).

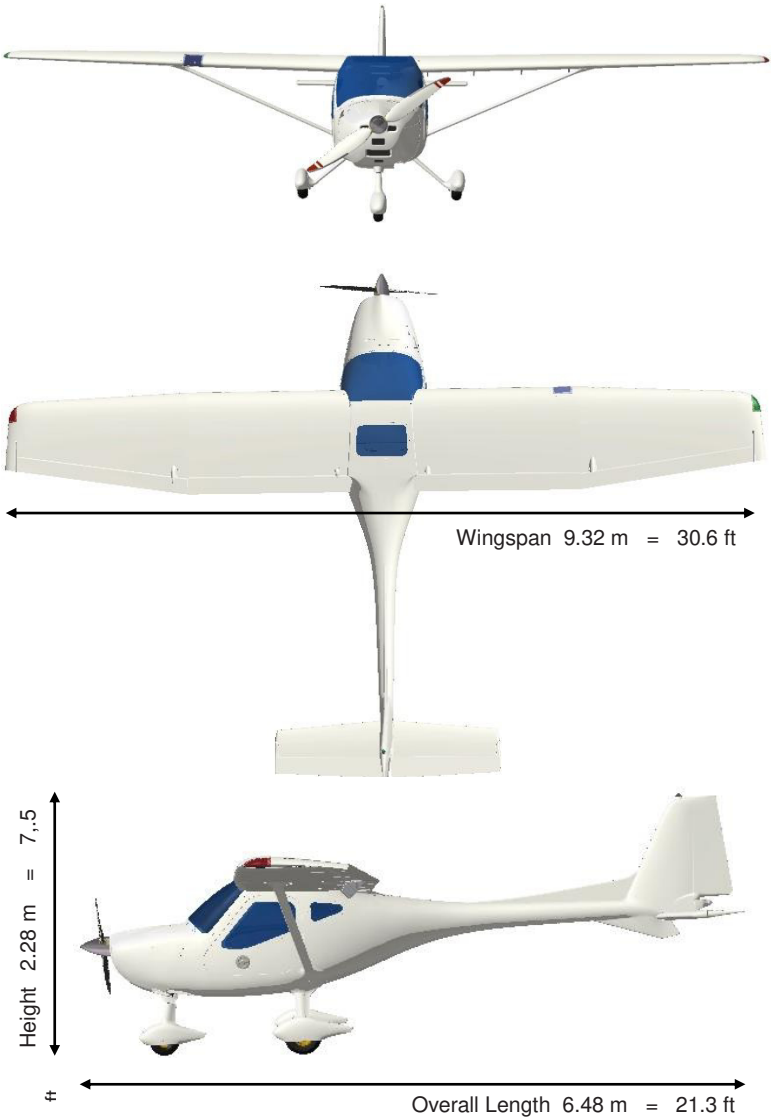
1.5 Technical Specifications

wingspan	9.32 m	=	30 ft 6 in
length	6.48 m	=	21 ft 3 in
height	2.28 m	=	7 ft 5 in
wing area	10.98 m^2	=	118 sq ft

MTOW	600 kg	=	1,320 lb
wing loading	55 kg/m^2	=	11 lb/sq ft

1 General Information

1.6 Views



1 General Information

1.7 Performance

This section shall give a summary of the performance of the REMOS GX. Detailed performance data is given in section 5 of this Pilot Operating Handbook.

top speed at 3,000 ft	115 kTAS	@° 5.500 rpm	(*)
cruise speed at 3,000 ft	102 kTAS	@° 5.000 rpm	(*)
range at 3,000 ft	347 nm	@° 5,000 rpm	(*)
endurance at 3,000 ft	3,4 h	@° 5.000 rpm	(*)
rate of climb at V_X	780 ft/min	@ V_X = 50 kIAS	(*)
rate of climb at V_Y	840 ft/min	@ V_Y = 60 kIAS	(*)
stall speed clean	44 kIAS		
stall speed flaps 40 deg	42 kIAS		

[*] Sensenich or Neuform propeller, range and endurance incl. 30min reserve

1.8 Engine

manufacturer		Bombardier-Rotax
engine type		912 UL-S2
max. power	**take-off**	73.6 kW / 100 HP
	max. cont.	69.9 kW / 95 HP
max. engine speed	**take-off**	5,800 rpm
	continuous	5,500 rpm
gear ratio		2.43 : 1
coolant	**type**	BASF Glysantin Protect Plus/G48
	mixing ratio	see section 7

1 General Information

1.9 Fuel

total fuel quantity	84 ltr = 22 US gallons
usable fuel quantity	80 ltr = 21 US gallons
fuel qualities	fuel released by latest revision of ROTAX service instruction SI-912-016, preferably free of ethanol.

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

1.10 Oil

engine oil	oil released by latest revision of ROTAX service instruction SI-912-016
oil rating	RON 424
engine oil capacity	min. 2.0 ltr = 2.1 qts max. 3.0 ltr = 3.1 qts
recommended oil	AeroShell Sport PLUS 4 10W-40

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

1 General Information

1.11 Propeller

manufacturer	type and number of blades
1. Flii. Tonini	1. GT-169,5/164 2-blade, wood
2. Woodcomp	2. SR38+1 2-blade, wood
3. Sensenich	3. 2A0R5R70EN 2-blade, composite
4. Neuform	4. CR3-65-47-101,6 3-blade, composite

1.12 ICAO Designator

ICAO Designator: GX (as per ICAO Doc. 8643)

1.13 Noise Certification

According to noise requirements for Ultralight aircraft (LS-UL) dated August 1996, the REMOS GX is certified to a noise level of 60 dB (A).

1 General Information

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2 Operating Limitations

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2 Operating Limitations

2.1 General

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

2.2 Reference Airspeeds

speed		IAS	description
V_{NE}	never exceed speed	135 kts	airspeed which shall never be exceeded
V_{NO}	maximum speed in turbulence	107 kts	airspeed which shall not be exceeded in gusty weather
V_O	operating maneuvering speed		maximum airspeed for all permissible maneuvers
		59 kts	with 880 lb (400kg) all up weight
		88 kts	with 1,320lb (600kg) all up weight
V_{FE}	max. speed with flaps fully extended	78 kts	airspeed which may never be exceeded with flaps down
V_{APP}	approach airspeed	60 kts	recommended airspeed for approach at gross weight
V_X	airspeed for best angle of climb	50 kts	airspeed for the steepest climb with flaps up
V_Y	airspeed for best rate of climb	60 kts	airspeed for the greatest altitude gain in the shortest time, flaps up
V_S	stall speed with flaps retracted (0°)	44 kts	stall speed at gross weight with flaps up
V_{S0}	stall speed with flaps extended (40°)	42 kts	stall speed at gross weight with flaps down

2 Operating Limitations

2.3 Airspeed Indicator Range and Markings

The following markings must be on the airspeed indicator at least. Additional markings are permissible, e.g. for recommended approach speed or for maneuvering airspeed.

marking	IAS	range	description
white arc	42…78 kts	V_{S0} - V_{FE}	airspeed range for flaps extended
green arc	44…107 kts	V_S - V_{NO}	normal use
yellow arc	107…135 kts	V_{NO} - V_{NE}	caution in gusty conditions
red line	135 kts	V_{NE}	maximum permissible airspeed

The yellow arc defines the “caution” range in which the aircraft should be flown with care as vertical gusts can damage the airframe structure. At V_{NO} the airframe is able to support a gust with 3.000 ft/min, at V_{NE} the vertical gust velocity is limited to 1.500 ft/min.

2.4 Stalling Speeds at Maximum Takeoff Weight

stall speed with flaps extended V_{S0} = 42 kts
stall speed with flaps retracted V_S = 44 kts

2 Operating Limitations

2.5 Flap Extended Speed Range

Flaps may be operated and the aircraft may be flown at airspeeds higher than V_{FE} as long as flap deflection is limited. Following restrictions apply as a function of airspeed:

δ [deg]	V_{FE} [kts]
10	133
15	113
20	99
30	86
40	78

With flaps set to any deflection the safe load factor is limited to 2.

2.6 Maneuvering Speed

operating maneuvering speed with 600kg all up weight — V_O = 88 kIAS

operating maneuvering speed with 400kg all up weight — V_O = 59 kIAS

For any weight between 400kg and 600kg, the operating maneuvering airspeed may be interpolated linearly.

At maneuvering speed one control, i.e. ***either*** aileron, ***or*** elevator ***or*** rudder control, may deflected until its stop ***once***. Above V_A permissible deflection is reduced, until at never exceed speed V_{NE} only one third of the deflection is permitted.

2 Operating Limitations

2.7 Never Exceed Speed

Due do the reduced density of air at altitude, true airspeed is higher than calibrated or indicated airspeed. Therefore, V_{NE} is limited to 135 kts true airspeed in order to prevent flutter. With increasing altitude V_{NE} is limited to lower values than indicated by redline according to the following table.

altitude [ft]	IAS [kts]
0	135
5,000	128
10,000	119
15,000	110

At never exceed speed V_{NE} only one third of the maximum control deflection (aileron, elevator, rudder) is permitted.

2.8 Service Ceiling

service ceiling 15,000 ft

2.9 Load Factors

safe load factors +4.0 g / -2.0 g

With flaps set to any deflection the safe load factor is limited to 2.

2 Operating Limitations

2.10 Approved Flight Maneuvers

The following maneuvers are permitted

- all non-aerobatic maneuvers,
  including stalls and departure stalls
- flight with the doors off

2.11 Prohibited Maneuvers

Flight maneuvers not permitted

- aerobatics
- spins
- flight in icing conditions

2.12 Crosswind and Wind Limitations

maximum demonstrated cross wind
component for take-off and landing 15 knots

The maximum demonstrated crosswind component is not a limitation. The pilot may exceed this demonstrated crosswind component on his or her own discretion. In case the pilot operates the aircraft in crosswind components higher than demonstrated he or she shall be aware of the fact that this flight regime has not been tested. A general wind limitation is not defined for the REMOS GX.

2.13 Maximum Parachute Deploy Airspeed

maximum parachute deploy airspeed 120 kts

2 Operating Limitations

2.14 Engine

manufacturer		Bombardier Recreational Products Rotax
engine type		912 UL-S2 or 912-S2
max. power	**take-off**	73.5 kW / 100 HP
	max. cont.	69.0 kW / 95 HP
max. engine speed	**take-off**	5,800 rpm
	continuous	5,500 rpm
gear ratio		2.43 : 1
exhaust gas temp	**max**	880°C = 1,616°F
coolant	**type**	BASF Glysantin Protect Plus G48
	mixing ratio	see section 7
coolant or CHT temp	**min**	not defined
	max	135°C = 275°F 120°C = 248°F with SB-012 complied

2.15 Fuel

usable fuel quantity		80 ltr = 21 US gallons
total fuel quantity		84 ltr = 22 US gallons
fuel qualities		Fuel released by latest revision of ROTAX service instruction SI-912-016, preferably free of ethanol.
fuel pressure	**min.**	0,15 bar = 2.2 psi
	max.	0,50 bar = 7.3 psi

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

2 Operating Limitations

2.16 Oil

engine oil		oil released by latest revision of ROTAX service instruction SI-912-016
oil rating		RON 424
oil quantity	**min.**	2.0 ltr = 2.1 qts
	max.	3.0 ltr = 3.1 qts
recommended oil		AeroShell Sport PLUS 4 10W-40
oil pressure	**min.**	0,8 bar = 12 psi (below 3500rpm) 2,0 bar = 29 psi (above 3500rpm)
	max.	7,0 bar = 102 psi
oil temperature	**min.**	50 °C = 120 °F
	max.	130 °C = 266 °F

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

2.17 Maximum Wind Velocity for Tie-Down

max. wind velocity for tie-down in the open V_R = 38 kts

2.18 Maximum Structure Temperature

max. certified structure temperature 54°C = 130°F

2 Operating Limitations

2.19 Weight and Balance

front limit of C.G.	245 mm	9.6 in
rear limit of C.G.	415 mm	16.3 in

maximum take-off weight (MTOW)	600 kg	1,320 lb
max. baggage in baggage compartment	30 kg	66 lb
max. baggage in each bin	2 kg	4.4 lb
max. fuel	57 kg	126 lb

2.20 Crew

The REMOS GX is certified to be operated with a minimum of 1 occupant (the pilot in command) and a maximum of 2 occupants.

If not otherwise defined by regulations or by the owner/operator, the pilot in command is seated on the left.

2 Operating Limitations

2.21 Flight Conditions and Minimum Equipment List

operation	minimum equipment
Day-VFR	as per D-VFR Minimum Equipment List
Night-VFR	as per N-VFR Minimum Equipment List
IFR in IMC	not approved
IFR in VMC	as per IFR/VMC Minimum Equipment List
Aerobatics	not approved

D-VFR minimum equipment list

- engine ROTAX 912 UL-S
- silencer
- airbox
- propeller as defined in chapter 2
- carburetor heating system
- compass with compass card
- altimeter
- airspeed indicator
- safety belts
- ELT
- electrical system including circuit breakers
- master, avionics and engine kill (ignition) switch
- engine instruments (one DYNON SkyView screen and the EMS module DYNON SV-EMS-220)

2 Operating Limitations

N-VFR Minimum equipment list

- as per D-VFR minimum equipment list, plus
- ADAHRS module DYNON SV-ADAHRS-200 in order to drive the integrated artificial horizon of the SkyView system)
- instrument panel lighting
- taillight
- navigation lights
- strobe lights
- landing light
- communication radio
- transponder

IFR/VMC Minimum equipment list

- as per N-VFR minimum equipment list, plus
- navigation radio
- audio panel or intercom

2 Operating Limitations

2.22 Placards and Markings Inside Cabin

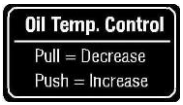
The placards and markings feature the following color codes.

Type	Inside
Information	white lettering on a black background - white framed 
Safety	white lettering on a black background - red framed 
Warning	white lettering on a red background - white framed 

The following list does not define the layout but the content and intent of the placards.

2 Operating Limitations

The following information placards are installed inside the cabin. Installation of these placards is ***mandatory***.

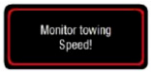
placards	location
	left cockpit not with oil thermostat installed
	center console actual callsign of aircraft
	switchboard
	switchboard
	switchboard
	switchboard
 	right cockpit labelling of CBs may vary with equipment installed

2 Operating Limitations

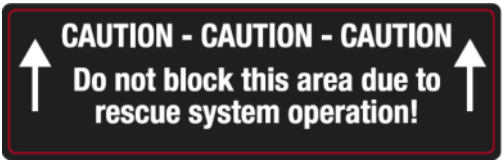
placards	location
	center console
	center console
 	on knob oil temp placard not with oil thermostat installed

2 Operating Limitations

The following safety placards are installed inside the cabin. Installation of these placards is ***mandatory***.

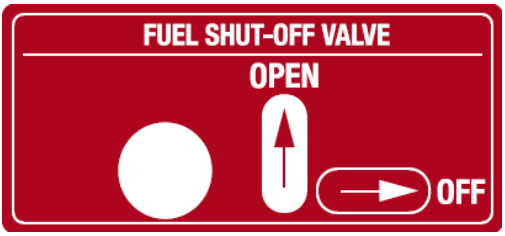
placard	location
	left cockpit above left cockpit screen
	left cockpit above left cockpit screen installed in combination with towing clutch only
	center stack on top of center stack
	right cockpit above right cockpit screen
	hatrack between baggage nets
	fuel tank sight hose indicating minimum fuel level
	cabin ceiling at recovery system release handle when recovery system is installed
	aileron pushrod

2 Operating Limitations

placard	location
	aileron pushrod cut out
	baggage compartment when recovery system is installed

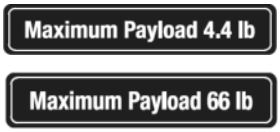
2 Operating Limitations

The following warning placards are installed inside the cabin. Installation of these placards is ***mandatory***.

placards	location
	center console
	door
	door

2 Operating Limitations

The following information placards and markings are found inside the cabin. Attaching these placards is not mandatory; these placards provide additional information to the pilot.

placards	location
	right cockpit
	baggage compartment metric units acceptable
	switchboard
	switchboard
	switchboard
	switchboard
	on knob

2 Operating Limitations

2.23 Placards and Markings Outside Cabin

The placards and markings feature the following color codes.

Type	Outside
Information	black lettering on a white background - black framed 
Safety	red lettering on a white background - red framed 
Warning	red lettering on a white background - red framed 

The following list does not define the layout but the content and intent of the placards.

2 Operating Limitations

The following information placards are installed outside the cabin. Installation of these placards is ***mandatory***.

placards	location
	fuel tank filler cap metric units acceptable

2 Operating Limitations

The following safety placards are installed outside the cabin. Installation of these placards is ***mandatory***.

placards	location
	center of elevator
	next to the opening for aileron pushrod, covered by wing if not folded
	center of fixed surface of elevator, covered if elevator is installed

The following warning placards are installed outside the cabin. Installation of these placards is ***mandatory***.

placards	location
	recovery system egress area when recovery system installed

2 Operating Limitations

The following information placards and markings are found outside the cabin. Attaching these placards is not mandatory; these placards provide additional information to the pilot.

placards	location
2,0 BAR MAX 29 PSI MAX 2,4 BAR MAX 34 PSI MAX	wheel fairings placard set with one unit only acceptable
KEEP CLEAN	static ports

The following safety placards and markings are found outside the cabin. Attaching these placards is not mandatory; these placards provide additional information to the pilot.

placards	location
! WARNING ! Before removing wing bolt disconnect aileron rod-connection!	wing main bolt
! WARNING ! Wing not foldable !	wing when wing folding mechanism not installed
Do not lift	strut

3 Emergency Procedures

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3 Emergency Procedures

3.1 Definitions

Procedures

are instructions that must be performed in the given sequence, as far as possible without interruption.

Checklists

are lists for items to be checked in the applicable phase of flight (taxi, take-off, climb, etc.). Timing and sequence of the steps to be executed may vary according to the individual flight.

Briefings

are guidelines for upcoming procedures. With the help of briefings, the pilot and passenger should recapitulate those procedures.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

3 Emergency Procedures

3.2 Jettison of Doors — Procedure

1.	door lock	OPEN
2.	hinge pin	PULL
3.	door	JETTISON

3.3 Spin Recovery — Procedure

1.	engine	IDLE
2.	aileron	NEUTRAL
3.	rudder	OPPOSITE SPIN DIRECTION
4.	elevator	PUSH
5.	after stopping of rotation	RECOVER

3.4 Recovery System — Procedure

1.	engine	STOP
2.	recovery system	RELEASE
3.	fuel valve	CLOSE
4.	declare emergency	MAYDAY MAYDAY MAYDAY
5.	master switch	OFF
6.	safety belts	TIGHTEN

3 Emergency Procedures

3.5 Emergency Descent Procedure

1.	engine	IDLE
2.	flaps	UP
3.	carburetor heat	PULL
4.	electric fuel pump	ON
5.	airspeed in rough air	107 kIAS
	airspeed in calm air	135 kIAS

3.6 Carburetor Icing Procedure

1.	carburetor heat	PULL
2.	electric fuel pump	ON
3.	power setting	FULL POWER

3.7 Inadvertent Icing Encounter Procedure

1.	engine	FULL POWER
2.	flaps	UP
3.	carburetor heat	PULL
4.	electric fuel pump	ON
5.	heading change	BACKTRACK
6.	descent	LEAVING ICING CONDITIONS
7.	altitude	KEEP SAFE ALTITUDE

3.8 Overvoltage Procedure

1.	overvoltage	IDENTIFY VOLTAGE > 15V
2.	master switch	OFF
3.	land on appropriate airfield	

3 Emergency Procedures

3.9 Generator Failure Procedure

1. alternator failure IDENTIFY (red alarm light)
2. non essential systems OFF
3. continue flight and land on appropriate airfield to determine the reason for the alternator failure

NOTE	During day VFR Operations, nonessential systems are all systems except for the radio and intercom. During night VFR or IFR operations, essential systems also include transponder, areal navigation (GPS or NAV/COMM), instrument lights, position lights, ACL and the artificial horizon (applies as well do the DYNON glass cockpit avionics instead of the artificial horizon).

3.10 Voltage Drop Procedure

1. engine speed MORE THAN 4.000 RPM
2. non essential systems OFF
3. continue flight and land on appropriate airfield to determine the reason for the voltage drop

NOTE	During day VFR Operations, nonessential systems are all systems except for the radio and intercom. During night VFR or IFR operations, essential systems also include transponder, areal navigation (GPS or NAV/COMM), instrument lights, position lights, ACL and the artificial horizon (applies as well do the DYNON glass cockpit avionics instead of the artificial horizon).

3 Emergency Procedures

3.11 Loss of Altimeter Procedure

for aircraft with more than one altimeter installed

1. AVIATE – NAVIGATE – COMMUNICATE
2. altimeter USE ALTERNATE ALTIMETER
3. in case of failure of all altimeters installed continue with procedure below

aircraft with just one altimeter and within airspace requiring clearance

1. radio communication INFORM ATC
2. instructions by ATC ACT ACCORDINGLY
3. continue flight and land on appropriate airfield to determine the reason for the altimeter failure

aircraft with just one altimeter but outside airspace requiring clearance

1. altitude KEEP SAFE ALTITUDE
2. instructions by ATC ACT ACCORDINGLY
3. continue flight and land on appropriate airfield to determine the reason for the altimeter failure

3 Emergency Procedures

3.12 Loss of Airspeed Indicator Procedure

for aircraft with more than one airspeed indicator installed

1. AVIATE – NAVIGATE – COMMUNICATE
2. airspeed indicator USE ALTERNATE ASI
3. in case of failure of all airspeed indicators installed continue with procedure below

for aircraft with one airspeed indicator installed or total failure of ASI

1. engine speed in cruise 4.200…4.600 rpm

landing without airspeed indicator

1. airfield APPROPRIATE RWY LENGTH
2. flaps UP
3. carburetor heat PULL
4. electric fuel pump ON
5. engine speed in decent 2.500…3.000 rpm
6. pitch KEEP WITHIN estd. +/-10 deg
7. short final approach POWER IDLE
8. flare AS APPROPRIATE
9. touch down on main wheels first with very little flare.
10. brakes IMMEDIATELY

NOTE	Landing distance with this procedure is significantly longer than a standard landing. Expect distances far in excess of 2.000 ft / 600m or even more. Select an airfield with sufficient runway length available.

3 Emergency Procedures

3.13 Loss of Elevator Control Procedure

aircraft equipped with recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. recovery system DEPLOY

aircraft without recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. power setting FOR LEVEL FLIGHT
4. elevator control USE TRIM SYSTEM
5. landing EMERGENCY LANDING

NOTE	With a failed elevator control the aircraft might be controlled with the trim system. Pitch control is extremely limited. Engine power control might support pitch control.

NOTE	**stuck/blocked elevator control** UP trim will result in a nose down response DOWN trim will result in a nose up response **disconnected/floating elevator control** UP trim will result in a nose up response DOWN trim will result in a nose down response

WARNING	Loss of elevator control is an extremely severe situation that might result in loss of control of the aircraft, serious injuries or even death.

3 Emergency Procedures

3.14 Loss of Aileron Control Procedure

aircraft equipped with recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. recovery system DEPLOY

aircraft without recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. power setting FOR LEVEL FLIGHT
4. control USE RUDDER CONTROL
5. landing EMERGENCY LANDING

NOTE	With a failed aileron control the aircraft might be controlled with the rudder control resulting in excessive sideslip conditions.

WARNING	Loss of aileron control is an extremely severe situation that might result in loss of control of the aircraft, serious injuries or even death.

3 Emergency Procedures

3.15 Loss of Rudder Control Procedure

aircraft equipped with recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. recovery system DEPLOY

aircraft without recovery system

1. AVIATE – NAVIGATE – COMMUNICATE
2. declare emergency MAYDAY MAYDAY MAYDAY
3. power setting FOR LEVEL FLIGHT
4. control USE AILERON CONTROL
5. landing EMERGENCY LANDING

NOTE	With a failed rudder control the aircraft might be controlled with the aileron control resulting in excessive sideslip conditions.

WARNING	Loss of rudder control is an extremely severe situation that might result in loss of control of the aircraft, serious injuries or even death.

3 Emergency Procedures

3.16 Loss of Trim System Procedure

pitch down trim runaway or stuck trim with lot of trim down

1. AVIATE – NAVIGATE – COMMUNICATE
2. expect nose down attitude
3. keep nose up with manual stick input
4. release trim circuit breaker
5. expect higher stick forces than usual
6. continue flight and land on appropriate airfield to determine the reason for the trim system failure

pitch up trim runaway or stuck trim with lot of trim up

1. AVIATE – NAVIGATE – COMMUNICATE
2. expect nose up attitude
3. keep nose level with manual stick input
4. release trim circuit breaker
5. expect higher stick forces than usual
6. continue flight and land on appropriate airfield to determine the reason for the trim system failure

NOTE	The aircraft is controllable even with a complete trim runaway. Keep your airspeed below V_{NO} to keep stick forces within reasonable limits.

3 Emergency Procedures

3.17 Loss of Flaps Control System Procedure

flaps stuck in deflected position or flaps down runaway

1. AVIATE – NAVIGATE – COMMUNICATE
2. max. flap speed V_{FE} = 78 kIAS
3. approach airspeed V_{APP} = 60 kIAS
4. return to airfield or continue flight and land on appropriate airfield to determine the reason of the failure

flaps stuck in retracted position or flaps up runaway

1. AVIATE – NAVIGATE – COMMUNICATE
2. stall speed V_S = 44 kIAS
3. approach airspeed V_{APP} = 60 kIAS
4. return to airfield or continue flight and land on appropriate airfield to determine the reason of the failure

NOTE	Keep in mind that landing distances presented in section 5 of this POH are applicable to the normal landing procedure. Landing with flaps up will result in longer landing distances.

3 Emergency Procedures

3.18 Loss of Oil Pressure Procedure

oil temperature not stable (constantly and rapidly rising)
smell of oil, oil fumes, oil on windscreen

5. AVIATE – NAVIGATE – COMMUNICATE
6. PERFORM PRECAUTIONARY LANDING

oil temperature stable (constant oil temperature)
no obvious oil leakage, engine running smooth

1. monitor oil temperature STABLE
2. coolant or CHT temp max. 135°C =275°F
   max. 120°C =248°F (w/ SB-012)
3. oil temperature 50…130°C =120…266°F
4. continue flight and land on appropriate airfield to determine the reason for the indicated oil pressure loss

WARNING	Loss of oil pressure may be a result of an oil leakage. This is an extremely dangerous situation as is implies the immediate danger of an in-flight fire. Be sensitive to any kind of abnormal smell or fire. Be prepared for an immediate precautionary landing, maybe emergency landing!

3 Emergency Procedures

3.19 High Oil Pressure Procedure

oil temperature not stable (constantly and rapidly rising)
smell of oil, oil fumes, oil on windscreen

1. AVIATE – NAVIGATE – COMMUNICATE
2. PERFORM PRECAUTIONARY LANDING

oil temperature stable (constant oil temperature)
no obvious oil leakage, engine running smooth

1. monitor oil temperature STABLE
2. coolant or CHT temp max. 135°C = 275°F
   max. 120°C = 248°F (w/ SB-012)
3. oil temperature 50…130°C = 120…266°F
4. continue flight and land on appropriate airfield to determine the reason for the indicated high oil pressure

WARNING	High oil pressure may result in an oil leakage. This is an extremely dangerous situation as is implies the immediate danger of an in-flight fire. Be sensitive to any kind of abnormal smell or fire. Be prepared for an immediate precautionary landing, maybe emergency landing!

3 Emergency Procedures

3.20 High Cylinder Head Temperature Procedure

1. AVIATE – NAVIGATE – COMMUNICATE
2. power setting REDUCE TO MIN. POSSIBLE
3. continue flight and land on appropriate airfield to determine the reason of the high cylinder head temperature
4. record max. observed temperature and duration

NOTE	The engine has water cooled cylinder heads. Therefore a failure of the cooling system does not imply immediate danger of engine failure.

NOTE	In case cylinder head temperature can be kept within limits (275°F = 135°C or 248°F = 120°C w/ SB-012) flight can be continued to planned destination.

NOTE	In case cylinder head temperature rises uncontrollable be prepared for precautionary landing, although the engine is not expected to stop suddenly.

NOTE	The ROTAX manual gives advice for inspection and release to service after such an occurrence.

3 Emergency Procedures

3.21 Engine Stoppage during Take-Off Procedure

during take-off run (aborted take-off)

1.	engine speed	IDLE
2.	brakes	AS REQUIRED
3.	engine	OFF

during climb out (altitude below 500ft)

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	engine speed	IDLE
3.	engine	OFF
4.	fuel valve	CLOSE
5.	declare emergency	MAYDAY MAYDAY MAYDAY
6.	master switch	OFF
7.	safety belts	TIGHTEN
8.	emergency landing	APPROPRIATE TERRAIN

NOTE	No course deviations should be made in excess of 30° to the left or right. Do not return to the airfield.

3 Emergency Procedures

3.22 Engine Stoppage in Flight Procedure

case 1: altitude not enough for engine re-start

1. AVIATE – NAVIGATE – COMMUNICATE
2. landing site IDENTIFY
3. engine OFF
4. fuel valve CLOSE
5. declare emergency MAYDAY MAYDAY MAYDAY
6. master switch OFF
7. safety belts TIGHTEN
8. emergency landing APPROPRIATE TERRAIN

case 2: altitude sufficient for engine re-start

1. AVIATE – NAVIGATE – COMMUNICATE
2. landing site IDENTIFY
3. electric fuel pump ON
4. choke OFF
5. starter ENGAGE
6. if engine does not start continue with case 1
7. if engine starts, continue flight and land on appropriate airfield to determine the reason for engine failure

3.23 Engine on Fire During Start-Up Procedure

1. fuel valve CLOSE
2. carburetor heat PULL
3. electric fuel pump OFF
4. power setting FULL until ENGINE STOPS
5. master switch OFF
6. if fire does not extinguish VACATE IMMEDIATELY

3 Emergency Procedures

3.24 Engine on Fire During Take-Off Procedure

during take-off run (aborted take-off)

1.	engine speed	IDLE
2.	brakes	FULL and SET
3.	fuel valve	CLOSE
4.	carburetor heat	PULL
5.	electric fuel pump	OFF
6.	power setting	FULL until ENGINE STOPS
7.	master switch	OFF
8.	if fire does not extinguish	VACATE IMMEDIATELY

during climb out (altitude below 500ft)

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	engine speed	IDLE
3.	engine	OFF
4.	fuel valve	CLOSE
5.	carburetor heat	PULL
6.	declare emergency	MAYDAY MAYDAY MAYDAY
7.	master switch	OFF
8.	safety belts	TIGHTEN
9.	emergency landing	APPROPRIATE TERRAIN

NOTE	No course deviations should be made in excess of 30° to the left or right. Do not return to the airfield.

WARNING	Never release the recovery system in case of fire.

3 Emergency Procedures

3.25 Engine on Fire in Flight Procedure

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	fuel valve	CLOSE
4.	carburetor heat	PULL
5.	electric fuel pump	OFF
6.	power setting	FULL until ENGINE STOPS
7.	declare emergency	MAYDAY MAYDAY MAYDAY
8.	master switch	OFF
9.	descent	EMERGENCY DECENT
10.	slip	AS REQUIRED
11.	safety belts	TIGHTEN
12.	emergency landing	APPROPRIATE TERRAIN

WARNING	Never release the recovery system in case of fire.

3 Emergency Procedures

3.26 Precautionary Landing Procedure

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	direction of wind	IDENTIFY
4.	landing direction	INTO THE WIND or UPHILL
5.	landing site inspection	PERFORM LOW APPROACH
6.	approach airspeed	V_{APP} = 60 kIAS
7.	max. flap speed	V_{FE} = 78 kIAS
8.	declare emergency	OWN DISCRETION
9.	safety belts	TIGHTEN
10.	flaps	DOWN
11.	landing light	RECOMMENDED
12.	engine power	AS REQUIRED
13.	elevator trim	AS REQUIRED
14.	electric fuel pump	ON
15.	carburetor heat	RECOMMENDED
16.	oil cooler flap	AS REQUIRED
17.	coolant or CHT temp	max. 135°C =275°F max. 120°C =248°F (w/ SB-012)
18.	oil temperature	50…130°C =120…266°F
19.	touch down on main wheels first with very little flare.	
20.	brakes	IMMEDIATELY
21.	avionics switch	OFF
22.	landing light	OFF
23.	position lights	OFF
24.	engine	OFF
25.	ACL	OFF
26.	cockpit lights	OFF
27.	master switch	OFF
28.	recovery system	SECURED
29.	parking brake	SET

3 Emergency Procedures

3.27 Emergency Landing on Land Procedure

1. AVIATE – NAVIGATE – COMMUNICATE
2. landing site IDENTIFY
3. direction of wind IDENTIFY
4. approach airspeed V_{APP} = 60 kIAS
5. max. flap speed V_{FE} = 78 kIAS
6. flaps DOWN
7. trim AS REQUIRED
8. declare emergency MAYDAY MAYDAY MAYDAY
9. master switch OFF
10. safety belts TIGHTEN
11. landing direction INTO THE WIND
    or UPHILL
12. touchdown with full elevator on main wheels first
13. after landing, release safety belts and vacate aircraft

3 Emergency Procedures

3.28 Emergency Landing on Water Procedure

1. AVIATE – NAVIGATE – COMMUNICATE
2. direction of wind IDENTIFY
3. approach airspeed V_{APP} = 60 kIAS
4. max. flap speed V_{FE} = 78 kIAS
5. flaps DOWN
6. trim AS REQUIRED
7. declare emergency MAYDAY MAYDAY MAYDAY
8. master switch OFF
9. safety belts TIGHTEN
10. doors JETTISON
11. touchdown with full elevator on water surface
12. after landing release safety belts and vacate aircraft

4 Normal Procedures

Table of Content

4 Normal Procedures

4.1 Definitions

Procedures

are instructions that must be performed in the given sequence, as far as possible without interruption.

Checklists

are lists for items to be checked in the applicable phase of flight (taxi, take-off, climb, etc.). Timing and sequence of the steps to be executed may vary according to the individual flight.

Briefings

are guidelines for upcoming procedures. With the help of briefings, the pilot and passenger should recapitulate those procedures.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

4 Normal Procedures

4.2 Fuel Draining Procedure

Since auto fuel contains a significant amount of ethanol nowadays, draining of the fuel system is more and more important. Draining of the aircraft must be performed before moving the aircraft at all. After re-fueling the aircraft, draining is also required. Give the fuel several minutes to rest after filling it up and do not move the aircraft prior to draining.

The drainer is located underneath the belly, just behind the main landing gear. From the outside only a plastic hose with 0.5 in diameter is visible. To drain the fuel tank, press on the plastic hose. Capture the released fuel and analyze it for water.

If AVGAS or MOGAS is used, water will clearly deposit underneath the fuel. Continue draining until no more water can be detected.

In the case of auto fuel containing ethanol, water can be absorbed by the fuel up to a certain amount, so no water will be detected during draining. If the fuel looks like a milky dispersion, the fuel is saturated with water. In this case dump all of the fuel, do not use this fuel for flying! After dumping fuel, fill up the fuel tank completely with fuel without ethanol.

To dump fuel, press in the plastic drainer hose and turn it counter-clockwise (as seen from bottom) about ¼ of a turn. To close the drainer, turn the plastic hose back. Be sure the drainer is properly closed. If dust or dirt particles get inside the drainer, the drainer will not close properly. In this case, open the drainer again to clean the drainer.

When draining the aircraft take care that no fuel contaminates the environment. Dispose of drained or dumped fuel in an environmental correct manner.

For further information about fuel containing ethanol please refer to the REMOS Notification NOT-001-ethanol-fuel.

4 Normal Procedures

4.3 Preflight Check Checklist

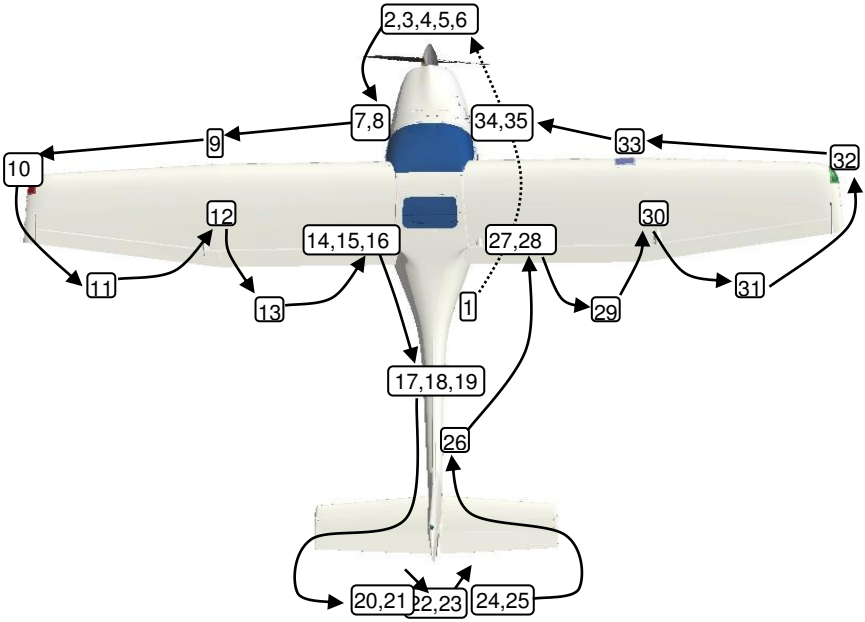
Checks outside the aircraft

1. fuel system drained before moving the aircraft at all
2. engine oil level (between min. and max. markings)
3. level of engine coolant (between min. and max. markings)
4. cowling is closed and properly secured
5. propeller has no damage or wear
6. nose gear and wheel/tire have no damage or wear, air pressure is correct and suspension is free
7. static port is clean
8. main wing bolt properly secured with Fokker needle
9. pitot tube is clean and properly fixed
10. wingtip and cover glass are securely mounted and not damaged
11. aileron, linkage and hinges have free travel and no damage, counterweights are securely fixed
12. upper wing strut attachment is secured
13. flap, linkage and hinges have no damage, rubber stops (flutter damper) on outer hinges are in place
14. lower wing strut attachment is secured
15. belly top antennas are securely mounted and free of damage
16. left main gear and wheel/tire have no damage or wear, air pressure is correct and suspension is free
17. cover of ejection opening has no damage
18. top antennas are securely mounted and free of damage
19. fuselage has no damage
20. horizontal tail, elevator, linkage and hinges have free travel and no damage
21. trim actuator linkage securely mounted and not damaged
22. elevator quick-fastener is securely locked
23. rudder linkage and hinges have free travel and no damage
24. horizontal tail attachment bolts are secured
25. horizontal tail, elevator, linkage and hinges have free travel and no damage

4 Normal Procedures

26. fuselage has no damage
27. right main gear and wheel/tire have no damage or wear, air pressure is correct and suspension is free
28. lower wing strut attachment is secured
29. flap, linkage and hinges have no damage, rubber stops (flutter damper) on outer hinges are in place
30. upper wing strut attachment is secured
31. aileron, linkage and hinges have free travel and no damage , counterweights are securely fixed
32. wingtip and cover glass are securely mounted and not damaged
33. landing light glass is not damaged
34. static port is clean
35. main wing bolt properly secured with Fokker needle

It is suggested to perform the outside check according to the following flow diagram:



Insecurely connected, improper operation of control surfaces or insecurely locked fasteners will lead to loss of control of the aircraft!!

4 Normal Procedures

Checks inside the aircraft

1. aileron quick-fasteners are securely locked

2. enough fuel on board for the flight
3. both seats are properly secured in intended position
4. both doors can be locked
5. check proper functioning of the flap drive and gauge

Insecurely connected, improper operation of control surfaces or insecurely locked fasteners will lead to loss of control of the aircraft!!

4 Normal Procedures

4.4 Before Start-Up Checkliste

1.	doors	LOCKED
2.	safety belts	FASTENED
3.	parking brake	SET
4.	recovery system	ARMED
5.	fuel valve	OPEN

4.5 Engine Start Procedure

cold engine

1.	master switch	ON
2.	anti-collision-light (ACL)	ON
3.	oil cooler flap	CLOSED
4.	electric fuel pump	ON
5.	engine power	CRACKED OPEN
6.	choke	PULL
7.	propeller	FREE
8.	starter	ENGAGE max.10 sec.

warm engine

1.	master switch	ON
2.	anti-collision-light (ACL)	ON
3.	oil cooler flap	AS REQUIRED
4.	electric fuel pump	ON
5.	engine power	CRACKED OPEN
6.	choke	OFF
7.	propeller	FREE
8.	starter	ENGAGE max.10 sec.

NOTE	Do not hold the key in the “START” position for more than 10 seconds, in order to avoid overheating the starter. If the engine does not start, release the key to position "0", wait 2 minutes and repeat the procedure.

4 Normal Procedures

4.6 After Start-Up Procedure

1.	engine has started	STARTER DISENGAGE
2.	choke	OFF
3.	oil pressure	OK
4.	position-lights	ON
5.	avionics switch	ON
6.	intercom	ON
7.	radios	ON and FREQUENCY SET
8.	transponder	AS REQUIRED
9.	electric fuel pump	OFF
10.	engine speed for warm-up	2,500 rpm

NOTE	By having the electric fuel pump switched off after starting the engine, only the mechanical pump is providing the engine with fuel. Make sure that the engine is running without the electric pump for at least two minutes. In that time, the engine burns all fuel in the fuel system behind the mechanical fuel pump. If the engine keeps running, the mechanical fuel pump is operational.

4.7 Engine Run Up Checklist

1.	oil temperature	min. 50°C / 120°F
2.	engine speed	4,000 rpm
3.	magneto check	max. 300 rpm DROP
4.	carburetor heat	TEMPERATURE RISES
5.	engine speed	IDLE
6.	electric fuel pump	ON

4 Normal Procedures

4.8 Taxi Procedure

1.	landing light	RECOMMENDED
2.	parking brake	RELEASE
3.	engine speed	AS REQUIRED
4.	control on ground	VIA PEDALS
5.	min. turn radius	ca. 20 ft = 7 m
6.	braking	AS REQUIRED
7.	taxi speed	APPROPRIATE

4.9 Departure Briefing

1.	wind, weather, visibility	OK
2.	ATIS	CHECKED
3.	runway	CORRECT DIRECTION
4.	traffic pattern	ALTITUDE and ROUTING

4 Normal Procedures

4.10 Take-Off Procedure

standard take-off

1.	oil cooler flap	AS REQUIRED
2.	carburetor heat	OFF
3.	electric fuel pump	ON
4.	flaps	UP
5.	elevator trim	2/3 UP
6.	rudder and aileron	NEUTRAL
7.	engine power	FULL POWER
8.	rotate	45 kIAS
9.	lift-off	50 kIAS
10.	steepest climb	50 kIAS
11.	best climb	60 kIAS

NOTE	Take-off distances given in chapter 5 have been determined with this procedure. Take-off distance varies significantly with precise handling and condition of the runway.

NOTE	It is recommended to keep the electric fuel pump switched on during the entire flight.

NOTE	Take-off with reduced power is possible, though not recommended. No take-off shall be performed with engine speed lower than 4,000 rpm. A drastically reduced take-off performance must be taken into account.

NOTE	Take-off with flaps 15deg is possible and permitted. Take-off distance is presented in section 5. In order to reduce pilot workload, it is recommended to take-off with flaps on grass only (soft or short field take-off).

4 Normal Procedures

short field take-off

1.	oil cooler flap	AS REQUIRED
2.	carburetor heat	OFF
3.	electric fuel pump	ON
4.	brakes	SET
5.	flaps	15 deg
6.	elevator trim	2/3 UP
7.	rudder and aileron	NEUTRAL
8.	engine power	FULL POWER
9.	brakes	RELEASE
10.	rotate and lift-off	45 kIAS
11.	steepest climb	50 kIAS
12.	best climb	60 kIAS
13.	retract flaps	SAFE ALTITUDE
14.	best climb	60 kIAS

NOTE	Take-off distances given in chapter 5 have not been determined with this procedure, but with the procedure for standard take-off. Take-off distance with the short field technique varies significantly with precise handling and condition of the runway.

NOTE	Take care not to stall the aircraft during this maneuver.

NOTE	It is recommended to keep the electric fuel pump switched on during the entire flight.

4 Normal Procedures

soft field take-off

1.	oil cooler flap	AS REQUIRED
2.	carburetor heat	OFF
3.	electric fuel pump	ON
4.	brakes	SET
5.	flaps	15 deg
6.	elevator trim	2/3 UP
7.	rudder and aileron	NEUTRAL
8.	engine power	FULL POWER
9.	brakes	RELEASE
10.	rotate	IMMEDIATELY
11.	lift-off	35 kIAS
12.	accelerate	IN GROUND EFFECT
13.	steepest climb	50 kIAS
14.	best climb	60 kIAS
15.	retract flaps	SAFE ALTITUDE
16.	best climb	60 kIAS

NOTE	Take-off distances given in chapter 5 have not been determined with this procedure, but with the procedure for standard take-off. Take-off distance with the soft field technique varies significantly with precise handling and condition of the runway.

NOTE	Take care not to stall the aircraft during this maneuver.

NOTE	It is recommended to keep the electric fuel pump switched on during the entire flight.

4 Normal Procedures

4.11 Best Angle of Climb Speed (V_X) Checklist

1.	flaps	15deg or CLEAN
2.	electric fuel pump	ON
3.	steepest climb	V_X = 50 kIAS
4.	engine power	FULL POWER
5.	carburetor heat	OFF
6.	oil cooler flap	AS REQUIRED
7.	coolant or CHT temp	max. 135°C = 275°F
		max. 120°C = 248°F (w/ SB-012)
8.	oil temperature	50…130°C =120…266°F

NOTE	Best angle of climb is achieved with flaps 15deg.

4.12 Best Rate of Climb Speed (V_Y) Checklist

1.	flaps	15deg or CLEAN
2.	electric fuel pump	ON
3.	best climb	V_Y = 60 kIAS
4.	engine power	FULL POWER
5.	carburetor heat	OFF
6.	oil cooler flap	AS REQUIRED
7.	coolant or CHT temp	max. 135°C = 275°F
		max. 120°C = 248°F (w/ SB-012)
8.	oil temperature	50…130°C =120…266°F

NOTE	Best rate of climb is achieved with flaps up.

4 Normal Procedures

4.13 Cruise Checklist

1.	flaps	CLEAN
2.	landing light	ON (recommended)
3.	engine speed	AS REQUIRED
4.	maneuvering speed	V_O = 88 kIAS
5.	normal operating speed	V_{NO} = 107 kIAS
6.	never exceed speed	V_{NE} = 135 kIAS
7.	max. cont. engine speed	5,500 rpm
8.	carburetor heat	OFF
9.	oil cooler flap	AS REQUIRED
10.	coolant or CHT temp	max. 135°C = 275°F max. 120°C = 248°F (w/ SB-012)
11.	oil temperature	50…130°C =120…266°F

NOTE	It is recommended to keep the electric fuel pump switched on during the entire flight.

reasonable cruise configurations

with Tonini or Woodcomp fixed pitch propeller:

With an engine speed of 4,800 rpm, a true airspeed of 86 kts = 99 mph is achieved at 3,000ft. Fuel consumption is approx. 4.8 US gal.

with Sensenich ground adjustable propeller:

With an engine speed of 4,800 rpm, a true airspeed of 97 kts = 112 mph is achieved at 3,000ft. Fuel consumption is approx. 4.8 US gal.

with Neuform ground adjustable propeller:

With an engine speed of 4,800 rpm, a true airspeed of 97 kts = 112 mph is achieved at 3,000ft. Fuel consumption is approx. 4.8 US gal.

4 Normal Procedures

4.14 Flying in Rain Checklist

1.	electric fuel pump	ON
2.	carburetor heat	ON
3.	engine speed	AS REQUIRED
4.	oil cooler flap	AS REQUIRED
5.	coolant or CHT temp	max. 135°C = 275°F
		max. 120°C = 248°F (w/ SB-012)
6.	oil temperature	50…130°C =120…266°F

NOTE	• visibility to the front is very limited • windscreen may need defogging • flight performance is reduced • fuel consumption increases • stall speed increases • braking efficiency during landing is reduced

4 Normal Procedures

4.15 Flying Without Doors Procedure

1. door lock — OPEN
2. gas spring on door — DETACH
3. hinge pin — PULL
4. door — TAKE OUT CAREFULLY

NOTE	V_{NE} is reduced to 100 kIAS when flying without doors.

NOTE	Flying without doors leads to high wind velocities inside the cabin.

NOTE	For flight without doors, either one door or both doors must be taken out before flight.

NOTE	Unlocking and opening doors in flight is prohibited.

It is not required to prepare a separate weight and balance report and/or equipment list for operation without doors in case the detachment of the door(s) has been taken into consideration during flight preparation. A logbook entry is not required after the door(s) have been taken out or installed again.

Following data shall be used for the flight's individual weight and balance:

weight of door	3,350 g	=	7.7 lbs	(each)
station of door	150 mm	=	5.9 in	

4 Normal Procedures

4.16 Recovery from Stall Procedure

1.	stick back pressure	RELEASE
2.	rudder	OPPOSITE to BANK
3.	aileron	NEUTRAL
4.	engine power	AS REQUIRED

4.17 Descent Checklist

1.	flaps	CLEAN
2.	engine speed	AS REQUIRED
3.	electric fuel pump	ON
4.	maneuvering speed	V_O = 88 kIAS
5.	normal operating speed	V_{NO} = 107 kIAS
6.	never exceed speed	V_{NE} = 135 kIAS
7.	max. cont. engine speed	5,500 rpm
8.	carburetor heat	RECOMMENDED
9.	oil cooler flap	AS REQUIRED
10.	coolant or CHT temp	max. 135°C = 275°F max. 120°C = 248°F (w/ SB-012)
11.	oil temperature	50…130°C =120…266°F

4 Normal Procedures

4.18 Approach Checklist

1.	wind, weather, visibility	OK
2.	ATIS	CHECKED
3.	runway	CORRECT DIRECTION
4.	traffic pattern	ALTITUDE and ROUTING
5.	radios	ON and FREQUENCY SET
6.	transponder	AS REQUIRED
7.	carburetor heat	AS REQUIRED
8.	oil cooler flap	AS REQUIRED
9.	electric fuel pump	ON
10.	coolant or CHT temp	max. 135°C = 275°F max. 120°C = 248°F (w/ SB-012)
11.	oil temperature	50…130°C =120…266°F
12.	full flaps airspeed	V_{FE} = 78 kIAS
13.	approach airspeed	V_{APP} = 60 kIAS
14.	flaps	AS REQUIRED
15.	landing light	RECOMMENDED

NOTE	In windy and gusty conditions increase approach airspeed as appropriate and take care for increased landing distances.

4 Normal Procedures

4.19 Landing Procedure

1. full flaps airspeed V_{FE} = 78 kIAS
2. approach airspeed V_{APP} = 60 kIAS
3. flaps DOWN
4. target airspeed AS RECOMMENDED
5. engine power AS REQUIRED
6. elevator trim AS REQUIRED
7. touch down on main wheels first
8. brakes IMMEDIATELY

The target airspeed (airspeed on short final, app. 50ft above threshold) differs with actual aircraft weight. Please refer to the following table to select the correct approach airspeed.

aircraft weight	recommended target airspeed
1,000 lb	45 kIAS
1,100 lb	47 kIAS
1,200 lb	50 kIAS
1,320 lb	52 kIAS

NOTE	Landing distances given in chapter 5 have been determined with approach airspeeds given above. Landing with partial flaps or clean is possible and permitted, but landing distance will be significantly longer due to higher approach speeds required by higher stall speed.

NOTE	In high wind or gusty conditions less than full flap setting or clean flaps might be appropriate.

4 Normal Procedures

advise

In landing configuration, the airplane is very draggy and the propeller provides additional braking. Therefore, airspeed bleeds off quickly during flare.

It is easy to misjudge altitude during flare. When flare is initiated too high and airspeed bleeds away the airplane may stall or bounce.

In doubt or without an urge to achieve shortest landing distance as possible, keep a higher target airspeed.

rule of thumb

Keep it at sixty knots!
Or use all your guts.

4 Normal Procedures

4.20 Balked Landing Procedure

1.	engine power	FULL POWER
2.	carburetor heat	OFF
3.	initial climb	50 kIAS
4.	flaps retract	SAFE ALTITUDE
5.	steepest climb	50 kIAS
6.	best climb	60 kIAS
7.	oil cooler flap	AS REQUIRED
8.	coolant or CHT temp	max. 135°C = 275°F
		max. 120°C = 248°F (w/ SB-012)
9.	oil temperature	50…130°C =120…266°F

4.21 After Landing Checklist

1.	landing light	RECOMMENDED
2.	flaps	UP
3.	electric fuel pump	OFF
4.	radio and transponder	AS REQUIRED

4 Normal Procedures

4.22 Shutdown Checklist

1.	avionics switch	OFF
2.	landing light	OFF
3.	position lights	OFF
4.	engine	OFF
5.	ACL	OFF
6.	cockpit lights	OFF
7.	master switch	OFF
8.	recovery system	SECURED
9.	parking brake	SET

NOTE	It is permissible to switch avionics (GPS, radio, transponder, intercom) together with the avionics switch rather than separately.

NOTE	It is permissible to switch lights and fuel pump together with the master switch rather than separately.

NOTE	The engine may only be switched off on ground. Engine shut-down in flight is not an approved procedure. Without technical reason (see section 3 – emergency procedures), engine shut-down in flight shall be avoided.

5 Performance

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5 Performance

5.1 General

NOTE	All flight performances given in this section (speed, range, fuel flow, rate of climb, etc.) are reference values. Tolerances of engine and propeller as well as deviations from standard temperature and density of air may reveal divergent performances.

NOTE	The aircraft may be operated without fairings on wheels and/or landing gear legs. Performance is reduced by app. 5% on any of the following criteria: climb, cruise, range

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

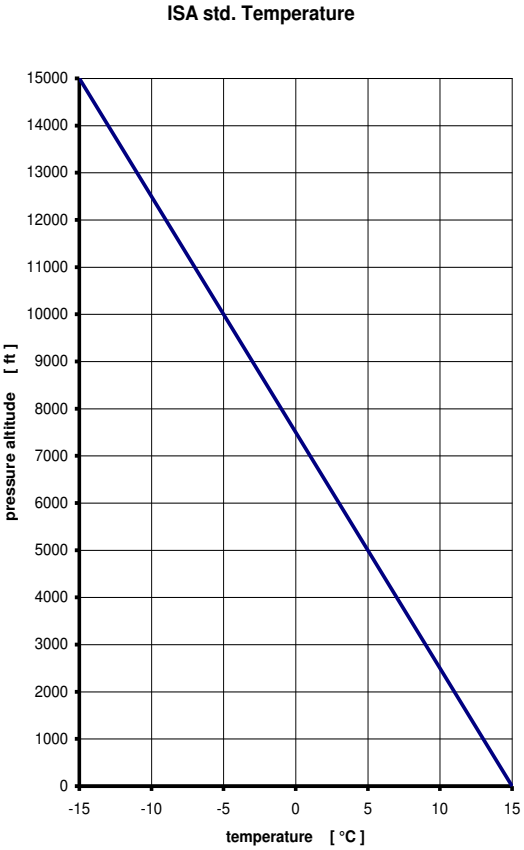
5.2 Summary of Flight Performances

V_{S0} (stallspeed flaps 40°)	kIAS	42	
V_S (stallspeed flaps 0°)	kIAS	44	
V_X (any flap setting)	kIAS	50	
V_Y (flaps clean)	kIAS	60	
rate of climb at MSL flaps clean	ft/min	840	
best glide	kIAS	60	
take-off roll distance (flaps 0°)	m (ft)	234	(770)
take-off air distance	m (ft)	128	(421)
take-off distance	m (ft)	362	(1.191)
take-off roll distance (flaps 15°)	m (ft)	187	(615)
take-off air distance	m (ft)	134	(441)
take-off distance	m (ft)	321	(1.056)
landing air distance (flaps 40°)	m (ft)	140	(461)
landing roll distance	m (ft)	93	(306)
landing distance	m (ft)	233	(766)

5 Performance

5.3 ISA Atmosphere

All flight performance data are given for ISA standard atmosphere at sea level and standard temperature. To determine temperature in relation to ISA conditions please refer to the following chart:



Flight performance can vary significantly due to tolerances, setting of propeller and engine, flight without doors, deviation of temperature and air density from standard ISA conditions, etc.

5 Performance

5.4 Take-Off Distances

For take-off with max. take-off weight on an even, dry, paved runway with ISA conditions on sea level, dry aircraft and wind calm the following take-off distances apply:

take-off ***flaps 0°***

Sensenich or Neuform propeller

take-off roll distance	234 m 770 ft
take-off air distance over 50ft	128 m 421 ft
take-off distance over 50ft	362 m 1.191 ft

take-off ***flaps 15°***

Sensenich or Neuform propeller

take-off roll distance	187 m 615 ft
take-off air distance over 50ft	134 m 441 ft
take-off distance over 50ft	321 m 1.056 ft

Tonini or Woodcomp propeller

take-off roll distance	230 m 757 ft
take-off air distance over 50ft	129 m 424 ft
take-off distance over 50ft	345 m 1.134 ft

5 Performance

NOTE	Take-off distances have been determined at ISA standard conditions at mean sea level and over a virtual 50ft obstacle.

NOTE	Standard procedures apply. Diverting from the standard procedures defined in section 4 will lead to different take-off distances.

Performance data apply under ISA conditions on an even, dry, hard runway surface. Various circumstances have an effect on take-off performance. According to CAA-circular AIC 127-2006, it is recommended to use following add-ons on roll- and air distances:

add-ons on take-off roll distance	
for dry grass	+ 20%
for wet grass	+ 30%
for soft surface	+ 60%
per 5 knots tailwind component	+ 20%
per 2% uphill slope	+ 10%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

add-ons on take-off air distance	
for dirty or wet wings	+ 30%
per 5 knots tailwind component	+ 20%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

NOTE	Reduction of take-off distances due to downhill slope or headwind must not be taken into account.

5 Performance

example calculation:

Take-off with a REMOS GX equipped with Neuform propeller in 2.000ft at 35°C from wet grass runway, 5kt tailwind, wet wing, take-off with flaps 0°. Standard wheels are mounted with wheel fairings.

1.	temperature acc. to ISA diagram	12°C
	real temperature	30°C
	temperature above ISA:	18°C
	add-on acc. to table	18%
2.	add-on for 2.000ft	20%
3.	add-on for tailwind	20%
4.	add-on for wet grass runway	30%
5.	add-on for wet wing	30%

take-off roll distance = 234m (770ft) + 18% (temperature)
+ 20% (altitude)
+ 20% (tailwind)
+ 30% (wet grass runway)
= 517m (1.701ft)

take-off air distance = 128m (421ft) + 18% (temperature)
+ 20% (altitude)
+ 20% (tailwind)
+ 30% (wet wing)
= 283m (931ft)

take-off distance = 800m (2.632ft)

NOTE	Take-off distance has more than doubled compared to ideal conditions!

NOTE	Real-life take-off distance can be even higher.

5 Performance

5.5 Landing Distances

Landing is to be done with full flaps (40 deg). After touchdown, brake to the max for shortest landing distance, but do not block the wheels.

For landing with max. take-off weight on an even, dry, paved runway with ISA conditions on sea level, dry aircraft and wind calm the following landing distances apply:

landing ***flaps 40°***
all propellers

landing roll distance	93 m 306 ft
landing air distance over 50ft	140 m 461 ft
landing distance over 50ft	233 m 766 ft

NOTE	Landing distances have been determined at ISA standard conditions at mean sea level and over a virtual 50ft obstacle.

NOTE	Standard procedures apply. Diverting from the standard procedures defined in section 4 will lead to different landing distances.

5 Performance

Performance data apply under ISA conditions on an even, dry, hard runway surface. Various circumstances have an effect on take-off and landing performance. According to CAA-circular AIC 127-2006, it is recommended to use following add-ons on roll- and air distances:

add-ons on landing roll distance	
for dry grass	+ 15%
for wet grass	+ 35%
for soft or slippery surface	+ 60%
per 5 knots tailwind component	+ 20%
per 2% downhill slope	+ 10%
for high temperatures above standard	+ 5% per 10°C
for altitude above sea level (density altitude)	+ 5% per 1,000 ft

add-ons on landing air distance	
for dirty or wet wings	+ 30%
per 5 knots tailwind component	+ 50%
for high temperatures above standard	+ 5% per 10°C
for altitude above sea level (density altitude)	+ 5% per 1,000 ft

NOTE	Reduction of landing distances due to uphill slope or headwind must not be taken into account.

5 Performance

example calculation:

Landing on soft surface with 2.000ft field elevation at 22°C, 5kt tailwind, wet wing and 2% downhill slope

1.	temperature acc. to ISA diagram	12°C
	real temperature	22°C
	temperature above ISA:	10°C
	add-on acc. to table	10%
2.	add-on for 2.000ft	10%
3.	add-on for downhill slope	10%
4.	add-on for soft runway	60%
5.	add-on for wet wing	30%

landing air distance	= 140m (306ft)	+ 10% (temperature)
		+ 10% (altitude)
		+ 30% (wet wing)
	= 220m (724ft)	
landing roll distance	= 93m (306ft)	+ 10% (temperature)
		+ 10% (altitude)
		+ 10% (slope)
		+ 60% (soft runway)
	= 198m (651ft)	
landing distance	= 418m (1.375ft)	

NOTE	Landing distance has almost doubled compared to ideal conditions!

NOTE	Real-life landing distance can be even higher.

5 Performance

5.6 Cruise Speed, RPM, Fuel Consumption, Range

Rotax 912 UL-S, 100 hp engine, Woodcomp or Tonini propeller

engine speed [rpm]	fuel flow [gph]	fuel flow [ltr/h]	true airspeed [kTAS]	endurance [h]	range [nm]
5.400	6,7	25.4	98	3,1	304
5.200	6,0	22.7	95	3,5	333
5.000	5,4	22.4	91	3,9	355
4.800	4,9	18.5	87	4,3	374
4.600	4,4	16.7	83	4,8	398
4.400	3,9	14.8	79	5,4	427
4.200	3,5	13.2	75	6,0	450

Rotax 912 UL-S, 100 hp engine, Sensenich or Neuform propeller

engine speed [rpm]	fuel flow [gph]	fuel flow [ltr/h]	true airspeed [kTAS]	endurance [h]	range [nm]
5.400	6,7	25.4	113	3,1	350
5.200	6,0	22.7	107	3,5	375
5.000	5,4	22.4	102	3,9	398
4.800	4,9	18.5	97	4,3	417
4.600	4,4	16.7	91	4,8	437
4.400	3,9	14.8	85	5,4	459
4.200	3,5	13.2	80	6,0	480

NOTE	endurance and range based on 80ltr/21gal usable fuel, no reserve included

NOTE	Performance may be reduced due to tolerances, atmospheric conditions, age and cleanliness of aircraft, propeller and engine.

NOTE	Expect a performance loss of about 5% when flying without wheel fairings.

NOTE	Expect a performance loss of about 10% when flying without doors

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5.7 Rate of Climb

Propeller		Woodcomp or Tonini	Sensenich	Neuform
best angle of climb airspeed V_X	kIAS	50	50	50
best rate of climb airspeed V_Y	kIAS	60	60	60
best rate of climb at MSL	ft/min	600	840	840

NOTE	Climb is flown with flaps retracted, see section 4

NOTE	Expect a performance loss of about 5% when flying without wheel fairings.

5 Performance

5.8 Low Airspeed and Stall

If the center of gravity is within the permissible range, the aircraft will be fully controllable until reaching the stall speed. As the aircraft approaches the stall speed, this will be indicated by slight aerodynamic buffeting. The stall speed is reached when the aircraft drops the nose or the elevator control comes to a stop. Once stall speed is reached, the pilot should lower the nose of the aircraft to re-establish a safe airspeed. Only release of the back pressure of the elevator is required, a significant “push” input is not required. When staling the aircraft while in a turn the stall speed will increase.

stall speeds in level flight with engine idle

CG at most forward position

flap position	**deg**	**0**	**15**	**40**
stall speed	kIAS	44	42	42

CG at most rearward position

flap position	**deg**	**0**	**15**	**40**
stall speed	kIAS	43	39	39

Stalling the aircraft with engine at full power and/or in turns is possible and permissible. Expect airspeed indication outside the reliable range of the airspeed indicator. A significant stall break will occur. Without experience a mentionable altitude loss shall be considered for safe recovery.

5 Performance

5.9 Safe Glide Ratio

Airspeed for best glide is 60kIAS. Safe glide ratio of the airplane with wind milling propeller is approximately 1:11. This will result in following glide distances:

airspeed for best glide	[kIAS]	60
glide ratio	[--]	1 : 11
flaps	[deg]	0

altitude	[ft]	2,000	4,000	6,000	8,000	10,000
glide range	[nm]	3.6	7.2	10.9	14.5	18.1

NOTE	Glide performance is given for a clean airframe with flaps retracted, airspeed for best glide is 60kIAS. Deflected flaps, dirty airframe or other airspeeds will lead to lower glide ratio.

5 Performance

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8 Aircraft Ground Handling and Servicing

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8 Aircraft Ground Handling and Servicing

8.1 Introduction

This section gives guidance how to service the aircraft and how to handle it on ground. This section does not provide maintenance instructions.

Maintenance procedures are defined in the maintenance manual that is specific to the individual aircraft. All maintenance shall be performed according to the REMOS Service and Maintenance Checklist, available directly at REMOS or on the website www.remos.com

8.2 Checking and Servicing Coolant

The REMOS GX is designed to be easily serviceable. A flap in the upper cowling allows checking the coolant level in the overflow bottle without removing the cowling. Make sure there is at least 1 inch of coolant liquid visible in the overflow bottle.

In case coolant must be added, remove upper cowling and add coolant into the overflow bottle. This can be done with a cold or hot engine.

Approved coolant grade and specification can be obtained from section 8.5 of this manual.

8.3 Checking and Servicing Oil

The REMOS GX is designed to be easily serviceable. Access to all components which have to be lubricated or checked regularly is possible without detaching any panels. A flap in the upper cowling allows access to the oil bottle in order to check and add oil without removing the cowling.

For checking the oil remove the oil tank cap. Prior to oil check turn the propeller by hand in the direction of engine rotation several times to pump oil from the engine into the oil tank. It is essential to build up

8 Aircraft Ground Handling and Servicing

compression in the combustion chamber. Maintain the pressure for a few seconds to allow the pressure flow around the piston rings into the crankcase. The speed of rotation is not important for the pressure transfer into the crankcase. This process is finished when air is returning back to the oil tank and can be noticed by a murmur from the open oil tank.

The oil level should be between the minimum and maximum marking on the oil dipstick. Avoid oil levels exceeding the maximum mark as excess oil will be poured through the venting line.

Difference between “min” and “max” marking is app. 0.5 quarts.

Approved oil grade and specification can be obtained from section 8.6 of this manual.

8.4 Servicing with Fuel

fueling the aircraft

The fuel system is grounded to the aircraft engine and its subsystems. Before fueling have the aircraft grounded on the exhaust pipe underneath the front belly.

The filler cap is not locked. To open the filler cap (on fuselage shoulder behind right wing root) open lid and rotate about 1/8 turn, then pull filler neck out of fuel tank inlet. The filler cap is not connected with the aircraft, stow it separately while fueling the aircraft. The filler neck is sufficient in size to accommodate an AVGAS gas pump nozzle and the venting of the fuel tank allows quick filling.

When fueling the airplane, fuel will spill out of the venting line on the belly of the fuselage once the fuel tank is full. To avoid or minimize environmental pollution, put a vat underneath the venting line. Alternatively, fill up fuel until the sight gauge indicates full and do not add more than two US gallons beyond this point.

8 Aircraft Ground Handling and Servicing

shifting of CG

The fuel tank is located behind the CG, which in return travels aft when filling the tank. Due to the CG shift during fueling it is possible that the aircraft settles on its tail. This might happen especially with the baggage compartment loaded up to its limit and without an occupant. This does not indicate a CG out of range. Nevertheless, always have your weight and balance checked before take-off.

drainining

Since auto fuel contains a significant amount of ethanol nowadays, draining of the fuel system is more and more important. Draining of the aircraft must be performed before moving the aircraft at all. After re-fueling the aircraft, draining is also required. Give the fuel several minutes to rest after filling it up and do not move the aircraft prior to draining.

The drainer is located underneath the belly, just behind the main landing gear. From the outside, only a plastic hose with 0.5 in diameter is visible. To drain the fuel tank, press on the plastic hose. Capture the released fuel and analyze it for water.

If AVGAS or MOGAS is used, water will clearly deposit underneath the fuel. Continue draining until no more water can be detected.

In the case of auto fuel containing ethanol, water can be absorbed by the fuel up to a certain amount, so no water will be detected during draining. If the fuel looks like a milky dispersion, the fuel is saturated with water. In this case, dump all of the fuel, do not use this fuel for flying! After dumping fuel, fill up the fuel tank completely with fuel without ethanol.

To dump fuel, press in the plastic drainer hose and turn it counter-clockwise (as seen from bottom) about ¼ of a turn. To close the drainer, turn the plastic hose back. Be sure the drainer is properly closed. If dust or dirt particles get inside the drainer, the drainer will not close properly. In this case, open the drainer again to clean the drainer.

8 Aircraft Ground Handling and Servicing

When draining the aircraft, take care that no fuel contaminates the environment. Dispose of drained or dumped fuel in an environmental correct manner.

further information

For further information about fuel containing ethanol please refer to the REMOS Notification NOT-001-ethanol-fuel and the ROTAX Service Instruction SI-912-016 in its latest revision.

8 Aircraft Ground Handling and Servicing

8.5 Approved Coolant Grade and Specification

Coolant liquid consists of a mixture of water and Glysantin Protect Plus/G48. There are several coolant fluids on the market and some of them have been released by ROTAX as being suitable. However, REMOS has tested and therefore released only one specific coolant:

specification		conventional coolant with silicate-based corrosion inhibitor mixed with plain water
coolant quantity	**min.**	2.2 ltr = 2.4 qts
	max.	2.3 ltr = 2.5 qts
approved coolant		BASF Glysantin Protect Plus/G48

Under all normal operation conditions this cooling system and coolant should be sufficient. Should cooling temperature be in the critical range, the amount of water may be increased. This reduces coolant temperatures.

Pure water shall never be used as the coolant is not only protection against freezing, but also against corrosion and delays boiling. The content of Glysantin G48 shall never be less than 33% and never more than 60%.

Following mixing ratios shall be kept:

frost-proof up to	for ambient temperatures up to	share Glysantin G48	share water
-4°F (-20°C)	+100°F (+40°C)	1	2
-17°F (-27°C)	+95°F (+35°C)	1	1,5
-36°F (-38°C)	+86°F (+30°C)	1	1

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 latest revision for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

8 Aircraft Ground Handling and Servicing

8.6 Approved Oil Grade and Specification

Due to high stresses in the reduction gears, oils with gear additives such as AeroShell Oil Sport Plus 4 are highly recommended. Because of the incorporated friction clutch, oils with friction modifier additives are unsuitable because this could result in clutch slipping during standard operation.

Avoid oils strictly specified for use in Diesel engines. These may not be suitable due to insufficient high temperature properties and additives that may affect the operation of the slipper clutch in the gear box.

There are several oils on the market and some of them have been released by ROTAX as being suitable. However, REMOS has tested and therefore released only one specific oil:

specification		RON 424		
viscosity		10W-40		
oil quantity	**min.**	2.0 ltr	=	2.1 qts
	max.	3.0 ltr	=	3.1 qts
approved oil		AeroShell Sport PLUS 4		

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 latest revision for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

8 Aircraft Ground Handling and Servicing

8.7 Approved Fuel Grade and Specification

The use of automotive fuel, including such with up to 10% ethanol, is approved for the REMOS GX. Premium automotive fuel without ethanol is recommended, though. Such fuel is often referred as MOGAS.

The use of AVGAS, with or without lead, is approved on the REMOS GX, though fuel without lead shall be preferred as prevailing use of 100LL reduces oil change interval from 100h to 50h.

Fuel additives under the names of Decalin® and Alcor TCP®, which aid the scavenging of lead deposits, have not been tested by ROTAX or REMOS. Field experience shows that these products have no detrimental effect on the engine, when used in the recommended manner. Always follow the additive's manufacturer instructions especially with regard to health and safety precautions. ROTAX only has field experience with Decalin Runup® and Alcor TCP® brands. Other similar additives are not recommended as ROTAX cannot comment on their suitability.

fuel quantity	**total**	84 ltr = 22 US gal
	usable	80 ltr = 21 US gal
fuel qualities		fuel released by latest revision of ROTAX service instruction SI-912-016, preferably free of ethanol.

NOTE	Please refer to REMOS notification NOT-001 and ROTAX SI-912-016 latest revision for further information on suitable engine fluids (fuel, oil, cooling liquid, additives, etc). Have a frequent look on www.flyrotax.com and on www.remos.com for the latest information.

8 Aircraft Ground Handling and Servicing

At the time of releasing this POH, following fuels have been found suitable by ROTAX and have been approved by REMOS. This list may be revised by a REMOS NOTIFICATION.

minimum fuel grade	RON 95 (research octane number) MON 87 (motor octane number) AKI 91 (anti knock index)

MOGAS	**European standard**	EN 228 Super EN 228 Super plus
	Canadian standard	CAN/SGSB-3.5 Quality 3
	Russian standard	R 51105-97 Premium 95 Super 98 R51866-2002 Premium Euro 95 Super Euro 98
	South African standard	SANS 1598:2006 Clean Fuels (CF2)
	US standard	ASTM D4814 min. AKI91)
	Ukrainian standard	DSTU 4839-2007 A-95 Euro A-98 Euro
	Indian standard	IS 2796:2008 MG95
	unleaded brand (*)	GAZPROM B-92 GAZPROM B-92/115

8 Aircraft Ground Handling and Servicing

AVGAS	**leaded**	ASTM D910 (AVGAS 100LL)
	unleaded	ASTM D7547 (AVGAS UL91)
	unleaded brand (*)	HJELMCO 91/96 UL HJELMCO 91/98 UL TOTAL AVGAS UL91

(*) Fuels were verified as good by ROTAX at the time of release of this handbook. REMOS and ROTAX reject any liability if the fuel manufacturer changes the composition of the fuel.

8.8 Towing

Due to the low weight of the REMOS GX, it is very easy to move the aircraft by hand on the ground. That's why there is no special equipment for towing provided. Do not attempt under any circumstances to tow the aircraft by attaching any kind of towing equipment to the nose wheel!

Grab the aircraft at the propeller roots just outside the spinner to pull it forward. For pushing the aircraft backward it is recommended to push at the root of the horizontal tail. Bushing backward is also permitted at the strut. If this is done with open doors, one can grab the rudder pedal to steer backward.

8.9 Tie-Down

To tie down the aircraft we recommend the use of at least three ropes (left wing, right wing, and tail). Tie down each wing by attaching the rope to the lug located on the upper strut bracket. Another rope connection point is provided on the tail skid of the aircraft. When necessary, a fourth rope can be slid around the propeller/gear drive shaft at the nose of the aircraft.

8 Aircraft Ground Handling and Servicing

Aircrafts from SN380 are equipped with a metric M8 thread on the lower side of the wing near the wingtips and are provided with bolt-in lugs. If required, bolt in the lugs and tie down the aircraft there. Do not fly with the tie-down lugs installed!

An additional rope may be applied to the propeller. Wrap the rope around the spacer between spinner and prop flange of the engine, accessible through the gap between cowling and spinner. In order to avoid damages to the spinner do not wrap the rope around the prop blade roots.

Secure the control stick by use of the safety belt to prevent the control surfaces from being slammed from stop to stop by the wind.

NOTE	The maximum wind velocity to leave a tied down aircraft in the open is 38 kts.

8.10 Rigging a Folded Aircraft

The REMOS GX is manufactured to the highest quality standards. All components are very precise and provide the maximum aerodynamic quality. It is therefore strongly recommended that you be very careful when assembling or disassembling components such as the wings, stabilizer and other parts. The following instructions will provide you with all the necessary information.

NOTE	Folding or unfolding the wings and attaching or detaching the horizontal tail is a two person procedure. Do not to try this alone. Severe damage to the aircraft may result.

tools and equipment

- bolt release tool (provided with the aircraft)
- screwdriver (Philips head)
- grease for bolts

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connecting folded wings to the fuselage

1. Withdraw the main wing securing bolt from the wing and place it nearby. Ensure that the bolt stays clean until remounted.
2. Remove the wing support aid bracket while a second person supports the wing at the wing tip.
3. Now the second person at the wing tip moves the wing slowly forward while ensuring that the wing does not spin around its axis. The weight of the wing is supported by its strut, therefore, the wing must never be lifted or pushed down from the top.
4. When the wing has reached its maximum forward position, the person at the fuselage position must rotate the wing to align both connection latches. Care must be taken that the surface of the wing is not damaged by the fuselage connecting latches.
5. When the connecting latches between the fuselage and wing are aligned, the wing must be lifted by the person at the wing tip. The person at the fuselage must ensure that the flap drive connection fits correctly into the bushing on the fuselage.
6. If all latches have engaged and the wing fits properly to the fuselage, the main bolt can be pushed into its support tube. To install the main bolt correctly, please use the special installation tool which comes with the aircraft. Now secure the bolt with the securing pin. The person at the wing tip can now release the pressure supporting the wing tip.

7. Inside the cabin, the pushrod quick fasteners MUST properly be connected and secured.

   Insecure connection, improper operation of control surfaces or insecurely locked fasteners will lead to loss of control of the aircraft!! When in doubt contact your local REMOS dealer or service center.

8. Proceed in the same order with the second wing.

8 Aircraft Ground Handling and Servicing

installing the horizontal tail

1. Hold the horizontal tail in place so that the bushings in the fuselage match up with those in the horizontal tail.
2. Apply the attachment bolts from left to right into their bushings. The forward bolt is marked by a "V", the rearward bolt by "H".
3. Align the hole of the attachment bolt with the one in the right bushing and secure the bolts with Fokker needles.
4. Connect the cable plug for the electric trim actuator
5. The pushrod quick fastener MUST be connected properly and secured.

   Insecure connection, improper operation of control surfaces or insecurely locked fasteners will lead to loss of control of the aircraft!! When in doubt contact your local REMOS dealer or service center.

6. Attach the tail cover and secure it with the screws provided. Connect the electric jack for the taillight.

After rigging the aircraft perform a thorough preflight check.

8.11 Folding a Rigged Aircraft

To disassemble the aircraft, perform the above described procedures in reverse order.

8 Aircraft Ground Handling and Servicing

8.12 Transportation of the Aircraft

If you intend to store the aircraft with the wings folded, we recommend using REMOS folding wing supports (ask your local dealer). With these supports mounted, the wings are secured properly and handling of the aircraft will be much easier.

When the aircraft has to be moved by trailer, please ask your authorized REMOS dealer for advice. When placed on a trailer in a wrong way, serious damage could result.

8.13 Cleaning and Care

After every day of flight, it is recommended that you clean the surface of the aircraft using pure water and a soft cotton towel only. Take special care when cleaning the windows to use lots of water to loosen and rinse away bugs and dirt and use only a soft cotton towel, or otherwise you will create scratches. If cleaned regularly, you may not need to use any special cleaning products. If for any reason special cleaning products need to be used, please contact your dealer for advice. For polishing you can use almost any car polish but be sure that no silicone is used in that product.

8 Aircraft Ground Handling and Servicing

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Imprint

Pilot Operating Handbook REMOS GX

ASTM Edition

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REMOS GX

POH Supplement – Flight Training

Supplement Flight Training

Table of Content

1 Introduction

This chapter should enable you to familiarize yourself with the flight performance and flight characteristics of the REMOS GX. To complete these instructions, please refer to the appropriate sections in the POH.

The following pages describe flight characteristics experienced during various flight configurations and weather conditions:

- Take-off
- Climb
- Cruise
- Stall
- Slip
- Glide
- Descent
- Approach
- Touch down

NOTE	This chapter was introduced as an additional guide to experience the capabilities of the aircraft. It is not a substitute for flight school training! If you are not yet familiar with the aircraft, we strongly recommend that you follow these instructions only when accompanied by a skilled flight instructor.

NOTE	This supplement does not provide checklists or substitutes checklists given in the main part of the pilot operating handbook. This supplement gives additional information on how to handle the aircraft.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

2 Take-Off

Take-off under normal conditions

1. After the pre-flight check has been completed, buckle up, warm up the engine and line up on the active runway. Keep flaps up. Take-off may also be performed with flaps 15deg, but this leads to higher pilot workload and the slightly shorter take-off distance with flaps 15deg is often not a limiting criterion.
2. Ensure that the elevator trim is in the correct position (green line on the trim indicator or about mid position).
3. Whenever possible, take-off directly into the wind. The maximum demonstrated crosswind component is 15 kts.
4. Smoothly apply full throttle (fully forward) and maintain runway heading.
5. As the aircraft accelerates, gently pull back on the control stick to raise the nose slightly until the aircraft becomes airborne at about 50 kIAS.
6. Once airborne, slowly release the back pressure on the control stick to allow the airspeed to increase to airspeed of best rate of climb, i.e. 60 kIAS. Maintain this speed and avoid making any climbing turns until a sufficiently safe altitude has been reached.
7. When at safe altitude, retract the flaps (if they were deployed).

Take-off under tailwind conditions

Similar to normal take-off except that the take-off distance will be significantly longer and the climb angle will be drastically reduced. Ensure that you determine the take-off distance required to ensure you have sufficient runway length prior to take-off.

Take-Off in rain or with a dirty aircraft

Surface conditions, high density altitude and temperatures, raindrops and bugs affect the performance of the aircraft. Be aware that in these conditions the performance figures will not meet the published figures, as they apply to a clean aircraft under standard atmospheric conditions. Expect a significant drop in performance.

3 Climb

Climb with Best Angle of Climb

With engine set to full power, establish V_X = 50 kIAS for all flap settings. At this airspeed the aircraft will achieve the steepest angle of climb. During climb it is essential to monitor oil and water (CHT) temperatures. Adjust the oil temperature regulation flap as required.

Climb with Best Rate of Climb

With engine set to full power, establish V_Y = 60 kIAS for all flap settings. At this airspeed the aircraft will achieve the best rate of climb. During climb it is essential to monitor oil and water (CHT) temperatures. Adjust the oil temperature regulation flap as required.

Climb while in cruise

If you wish to climb in cruise, select an airspeed between 70 to 80 kIAS. At these speeds, the aircraft will climb between slower than best rate of climb due to the higher airspeed.

NOTE	It is strongly recommended that you monitor oil and water (CHT) temperatures. Under no circumstances should any of the engine temperature limits be exceeded, otherwise, an engine failure may result.

Climb in rain or with a dirty aircraft

Raindrops and bugs affect the performance of the aircraft. Be aware that in these conditions the performance figures will not meet the published figures, as they apply for a clean aircraft under standard atmospheric conditions. Expect a performance loss of 10% to15%.

4 Cruise

Normal cruise

An economical cruise is flown at engine speeds of 4,400 RPM to 5,000 RPM. With the Sensenich or Neuform propeller this will result in airspeeds between 85 kTAS and 100 kTAS with a fuel flow between 4 and 5.5 gph

High speed cruise is done with engine speeds between 5,000 RPM and 5,400 RPM. With the Sensenich or Neuform propeller this will result in airspeeds between 100 kTAS and 115 kTAS with a fuel flow between 5 and 7 gph.

If required, the aircraft is capable of achieving an airspeed up to 115 kTAS at full power. If doing so, always monitor the engine speed. The maximum continuous engine speed is 5,500 RPM and may only be exceeded for 5 minutes. Never exceed the maximum engine speed of 5,800 RPM.

Cruise in gusty conditions

When flying in gusty weather conditions, the normal operating airspeed V_{NO} = 107 kIAS should not be exceeded for safety reasons. The REMOS GX offers very stable flight characteristics even in heavy weather conditions.

Cruise in rain or with dirty aircraft

Raindrops and bugs affect the performance of the aircraft. Be aware that in these conditions the performance figures will not meet the published figures, as they apply for a clean aircraft under standard atmospheric conditions. Expect a performance loss of 10% to15%. When flying in rain always activate the carburetor heat.

5 Stall

The REMOS GX is fully controllable when flying at a wide range of airspeeds. At airspeeds below the lower speed limit, the aircraft will display very stable stall characteristics. If the airspeed is reduced by the pilot gradually pulling back on the control stick, aerodynamic buffet will occur, indicating that the aircraft is approaching the stall speed. Should the aircraft then be allowed to stall, the aircraft will still remain controllable. The aircraft can be stalled with flaps both extended or retracted.

Performing a stall maneuver does not require special skills. However, if you are not yet familiar with the aircraft, we recommend you do this exercise only when accompanied by an experienced flight instructor.

6 Slip

The slip is a very stable flight condition and is also very easy to perform. This maneuver is used to increase aerodynamic drag to enable a high rate of descent.

Before establishing a slip, you have to ensure that the airspeed is within the required limits. The operating maneuvering speed V_A = 88 kIAS (valid for max. take-off weight, see section 2) may not be exceeded.

When performing a slip with flaps extended, a maximum indicated airspeed of V_{FE}= 78 kIAS may not be exceeded. You will achieve the maximum rate of descent when slipping with flaps fully extended and flying at V_{FE}.

Conducting a slip does not require special skills. However, if you are not yet familiar with the aircraft, we recommend to do this exercise only when accompanied by an experienced flight instructor.

7 Glide

The aircraft can glide well with the engine off. Best glide ratios are achieved within an indicated airspeed of 60 kIAS. These speeds will establish a glide ratio of about 1:11 with the flaps retracted (0° position).

8 Descent

When descending from level flight it is important to monitor engine temperatures. During descent, the temperatures will decrease, which could cause engine failure or carburetor icing to develop. Therefore we strongly recommend that you not exceed the lower limits of these temperatures. Engage carburetor heat before beginning the descent.

9 Approach

Approach under normal conditions

Always land on the most suitable runway, taking into consideration wind direction, length of runway, obstacles on the approach, etc. It is recommended to fly the approach at 60 kIAS. The recommended target airspeed (airspeed on short final in app. 50ft altitude) for approach at MTOW is 52 kIAS.

In landing configuration, the airplane is very draggy and the propeller provides additional braking. Therefore, airspeed bleeds off quickly during flare. It is easy to misjudge altitude during flare. When flare is initiated too high and airspeed bleeds away the airplane may stall or bounce.

In doubt or without an urge to achieve shortest landing distance as possible, keep a higher target airspeed. Rule of thumb: Keep it at sixty knots! Or use all your guts.

Approach under tailwind conditions

When on final approach with a tailwind component, the REMOS GX does not require different approach or flare procedures than those used in calm or headwind conditions. However, you do have to keep in mind that the landing distance will increase significantly.

Approach in crosswind conditions

Crosswinds do not have a big effect on the flight characteristics of the REMOS GX, as long as the cross-wind component stays within the maximum demonstrated speed of up to 15 kts. Performing a crosswind landing does not require above-average piloting skills. Nevertheless, if not yet familiar with the aircraft, we recommend that you perform crosswind landings only when accompanied by an experienced flight instructor until sufficient experience has been gained.

9 Approach

Approach in turbulent weather conditions

It is recommended to fly the entire approach at 60 kIAS. This will give you a reserve airspeed to balance any unexpected deviations in altitude and heading.

In more gusty conditions it may be beneficial to stabilize the glide slope by keeping the flap setting to the 15° position.

Approach in rain showers

Raindrops on the wing surfaces influence the aerodynamic characteristics of the airfoil; drag will increase while lift decreases. The airfoil used on the REMOS GX features stable flight characteristics in rainy conditions. Therefore, there are no special advisories for flights within rain. we recommend that you operate the aircraft as you would in turbulent weather conditions (see "Approach in turbulent weather conditions). When flying in rain always activate the carburetor heat.

Approach in the slip configuration

If a high descent rate is required on final, we recommend that you conduct a slip maneuver. Conducting an approach in the slip configuration does not require special skills, however, if you are not yet familiar with the aircraft we recommend that you do this exercise only when accompanied by an experienced flight instructor.

10 Touchdown

The aircraft has very good low speed characteristics and as such is easily controllable all the way through the landing phase. After a good approach has been conducted, the REMOS GX does not require much action to land with a perfect touch down. It is important to establish a safe and stable airspeed during the approach.

Imprint

Pilot Operating Handbook REMOS GX
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REMOS GX

POH Supplement – Glider Towing

Supplement Glider Towing

Table of Content

1 General Information

1.1 Introduction

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NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

1.2 Certification

The REMOS GX is manufactured in compliance with the rules of the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

1.3 Quick Reference

For use as a glider towing aircraft, the REMOS GX is equipped with the TOST E85 tow release clutch, which is connected to the fuselage tail by a specially developed mounting frame. To release the tow rope a release lever is located on the left hand side of the pilot seat (colored yellow). Additionally, a rear view mirror must be installed inside the aircraft, above the pilot seat.

2 Operating Limitations

2.1 Towing Speed

max. towing speed	V_T of glider
min. towing speed	$1{,}3V_{S1}$ of glider, at least 50 kIAS

2.2 Tow Ropes

length of tow rope	130 to 200 ft
weak link	max. 300 dN

2.3 Maximum Glider Take-Off Weight

The maximum permissible take-off weight of the glider to be towed varies with the propeller mounted to the REMOS GX. The following operating limitations may not be exceeded:

Propeller	Glider	
Tonini GT-2	1,210 lb	[550 kg]
Woodcomp SR38+1	1,210 lb	[550 kg]
Sensenich R70EN	1,580 lb	[720 kg]
Neuform CR3-65	1,580 lb	[720 kg]
Rospeller	1,430 lb	[650 kg]

2.4 Crew

During glider towing operations the REMOS GX must be operated only by one pilot (no passenger allowed, except for training/instruction). In all cases, the total take-off weight (towing aircraft + glider) must not exceed 2,900 lb [1,315 kg].

2 Operating Limitations

2.5 Minimum Equipment List

- as per D-VFR minimum equipment list, plus
- TOST tow release clutch type E85
- REMOS mounting frame for tow release clutch
- yellow colored release handle
- rear view mirror placed on main spar carrythrough

2.6 Flying Without Doors

not permitted during towing operations

2.7 Required Placards and Markings

Adjacent to the airspeed indicator:

Adjacent to the tow release handle:

At the release clutch bracket:

3 Emergency Procedures

3.1 Engine Failure Procedure

Case 1: altitude not enough for engine re-start

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	glider pilot	NOTIFIED
4.	glider pilot	RELEASE ROPE
5.	engine	OFF
6.	fuel valve	CLOSE
7.	declare emergency	MAYDAY MAYDAY MAYDAY
8.	master switch	OFF
9.	safety belts	TIGHTEN
10.	tow rope	RELEASE
11.	emergency landing	APPROPRIATE TERRAIN

Case 2: altitude sufficient for engine re-start

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	glider pilot	NOTIFIED
4.	glider pilot	RELEASE ROPE
5.	carburetor heat	PULL
6.	electric fuel pump	ON
7.	choke	OFF
8.	starter	ENGAGE
9.	if engine does not start continue with case 1	
10.	if engine starts, continue flight and land on an airfield	

3 Emergency Procedures

3.2 Abnormal Flight Attitude Procedure

1. AVIATE – NAVIGATE – COMMUNICATE
2. glider pilot NOTIFIED
3. engine REDUCE POWER
4. glider pilot RELEASE ROPE
5. recover gently and return to an airfield

NOTE	If the glider pilot cannot recover from the abnormal flight attitude and does not or cannot release the tow rope, the REMOS GX pilot must release the tow rope to recover from the abnormal flight attitude.

NOTE	If the abnormal flight attitude cannot be recovered from at all, the tow rope cannot be released, or the weak link does not break, activate the recovery system.

3.3 Failure of the Release Clutch Procedure

1. approach airspeed V_{APP} = 60 kIAS
2. full flaps airspeed V_{FE} = 78 kIAS
3. flaps DOWN
4. variable pitch prop 5,600 rpm
5. engine power AS REQUIRED
6. elevator trim AS REQUIRED
7. electrical fuel pump ON
8. touchdown on main wheels first with elevator fully held back.

NOTE	The rope will hang down significantly from the aircraft due to its own weight. Therefore it can become tangled with obstacles, plants, wires, vehicles, persons, etc.

4 Normal Procedures

4.1 Preflight Check Checklist

1. Perform standard preflight check
2. Check tow release clutch and test-release a tow rope

4.2 Take-Off Procedure

1.	oil cooler flap	OPEN
2.	carburetor heat	OFF
3.	electric fuel pump	ON
4.	landing light	RECOMMENDED
5.	flaps	15 degrees
6.	elevator trim	2/3 UP
7.	rudder and aileron	NEUTRAL
8.	taxi forward	ROPE STRAIGHT
9.	engine power	FULL POWER
10.	rotate	45 kIAS
11.	lift-off	50 kIAS
12.	best climb	60 kIAS
13.	flaps	RETRACT

NOTE	During take-off, special care must be taken that the climb rate and airspeed are compatible with the required values of the towed glider. Watch your rate of climb immediately after take-off (do not exceed the glider's climb capability).

NOTE	To maintain permissible water and oil temperatures during climb and descent, the aircraft must be equipped with an oil temperature regulation flap. During climb the operating lever of this flap should be in the "open/cooler" position.

4 Normal Procedures

4.3 Climb Briefing

Flight tests have been conducted with various glider airplanes. These tests revealed that modern composite gliders, especially when loaded with water ballast, must be towed faster than older wooden sailplanes.

The modern gliders are usually towed with airspeeds of 75 mph = 65 kts or possibly above that with flaps retracted. Older sailplanes can be towed with airspeeds as low as 48 mph = 56 kts; in that case select the 15 degrees flap setting.

4.4 Descent Checklist

1.	flaps	CLEAN
2.	engine speed	AS REQUIRED
3.	electric fuel pump	ON
4.	maneuvering speed	V_A = 88 kIAS
5.	normal operating speed	V_{NO} = 107 kIAS
6.	never exceed speed	V_{NE} = 135 kIAS
7.	max. cont. engine speed	5,500 rpm
8.	carburetor heat	RECOMMENDED
9.	landing light	RECOMMENDED
10.	oil cooler flap	AS REQUIRED
11.	CHT or coolant temp.	max. 275°F = 135°C max. 248°F = 120°C (w/ SB-012)
12.	oil temperature	120…266°F = 50…130°C

NOTE	Special care must be taken to keep all temperatures within the permissible range. To keep temperatures within the proper operation levels, the throttle may be left at a setting just above the idle position. Do not allow the oil temperature to drop rapidly.

4 Normal Procedures

4.5 Approach Checklist

1.	wind, weather, visibility	OK
2.	ATIS	CHECKED
3.	runway	CORRECT DIRECTION
4.	traffic pattern	ALTITUDE and ROUTING
5.	radios	ON and FREQUENCY SET
6.	transponder	AS REQUIRED
7.	carburetor heat	AS REQUIRED
8.	oil cooler flap	AS REQUIRED
9.	electric fuel pump	ON
10.	CHT or coolant temp.	max. 275°F = 135°C max. 248°F = 120°C (w/ SB-012)
11.	oil temperature	120…266°F = 50…130°C
12.	full flaps airspeed	V_{FE} = 78 kIAS
13.	approach airspeed	V_{APP} = 60 kIAS
14.	flaps	AS REQUIRED
15.	landing light	RECOMMENDED

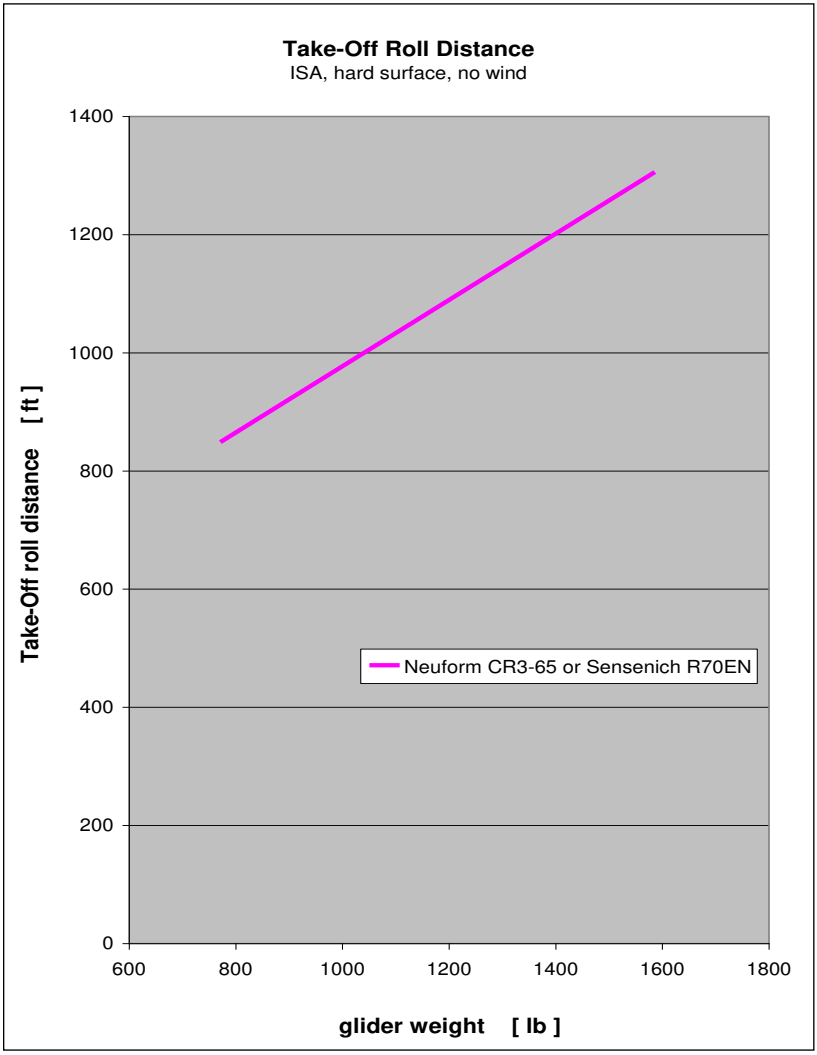
4.6 Landing Procedure

1.	full flaps airspeed	V_{FE} = 78 kIAS
2.	approach airspeed	V_{APP} = 60 kIAS
3.	flaps	DOWN
4.	target airspeed	V_T = 50 kIAS
5.	engine power	AS REQUIRED
6.	elevator trim	AS REQUIRED
7.	tow rope	RELEASE ON THRESHOLD
8.	touchdown on main wheels first	
9.	brakes	AS REQUIRED

5 Performance

5.1 Take-Off Roll Distance

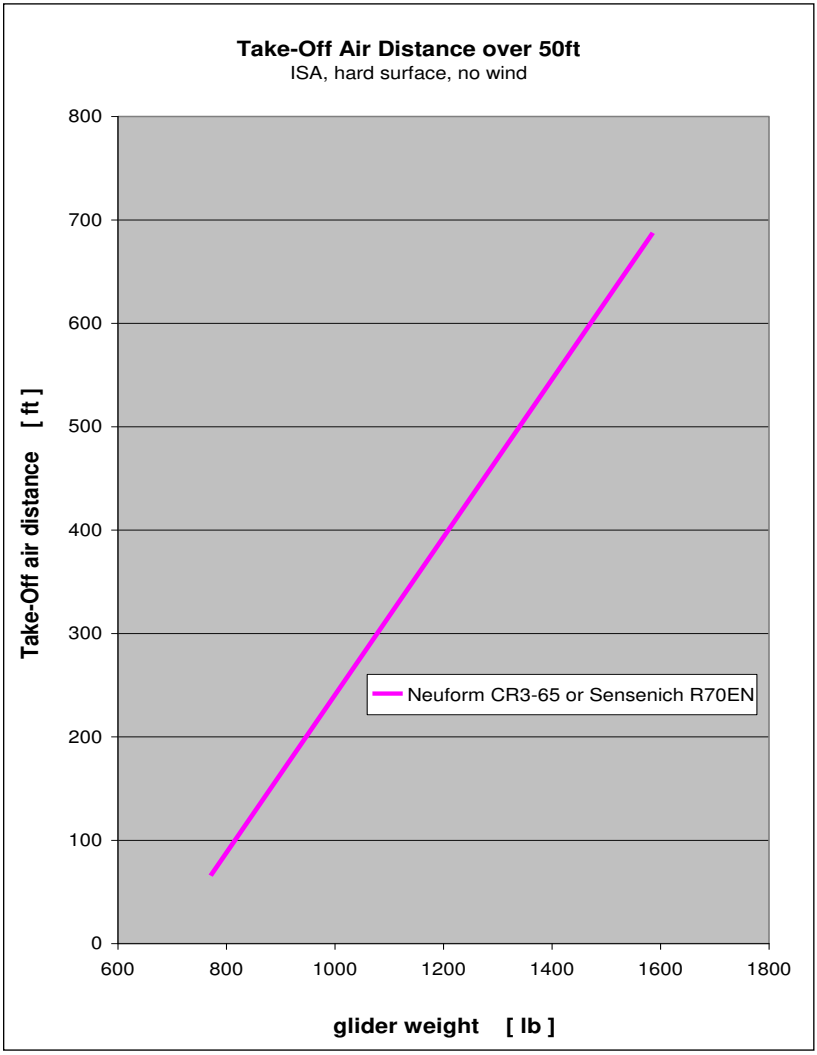
If the REMOS GX is equipped with a Sensenich R70EN or a Neuform CR3-65 propeller, the following take-off roll distances apply (under the conditions of a hard surface runway, ISA conditions, no wind and lift-off at 50 kIAS.



5 Performance

5.2 Take-Off Air Distance

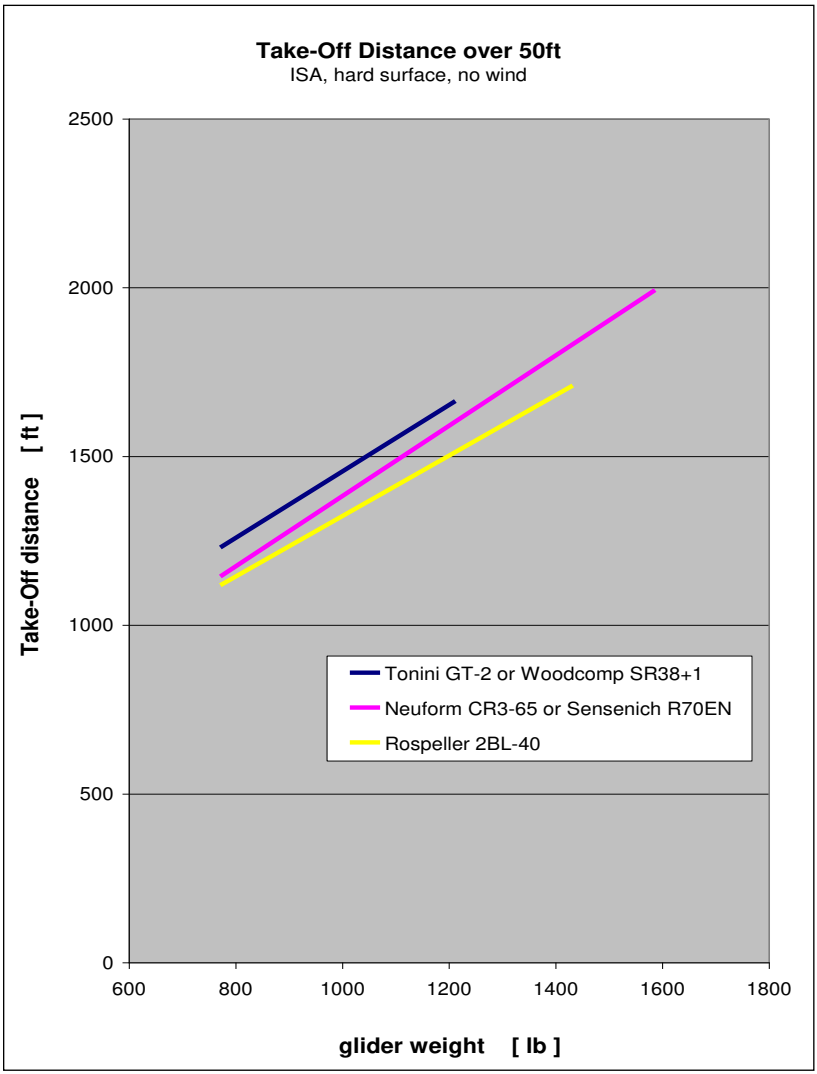
If the REMOS GX is equipped with a Sensenich R70EN or a Neuform CR3-65 propeller, the following take-off air distances apply (under the conditions of a hard surface runway, ISA conditions, no wind and lift-off at 50 kIAS.



5 Performance

5.3 Take-Off Distance over 50ft

The following diagram presents the total take-off distance over 50ft (under the conditions of a hard surface runway, ISA conditions, no wind and lift-off at 50 kIAS.



5 Performance

5.4 Effects on Take-Off Distance

Performance data apply under ISA conditions on an even, dry, hard runway surface. Various circumstances have an effect on take-off performance. According to CAA-circular AIC 127-2006, it is recommended to use following add-ons on roll- and air distances:

add-ons on take-off roll distance	
for dry grass	+ 20%
for wet grass	+ 30%
for soft surface	+ 60%
per 5 knots tailwind component	+ 20%
per 2% uphill slope	+ 10%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

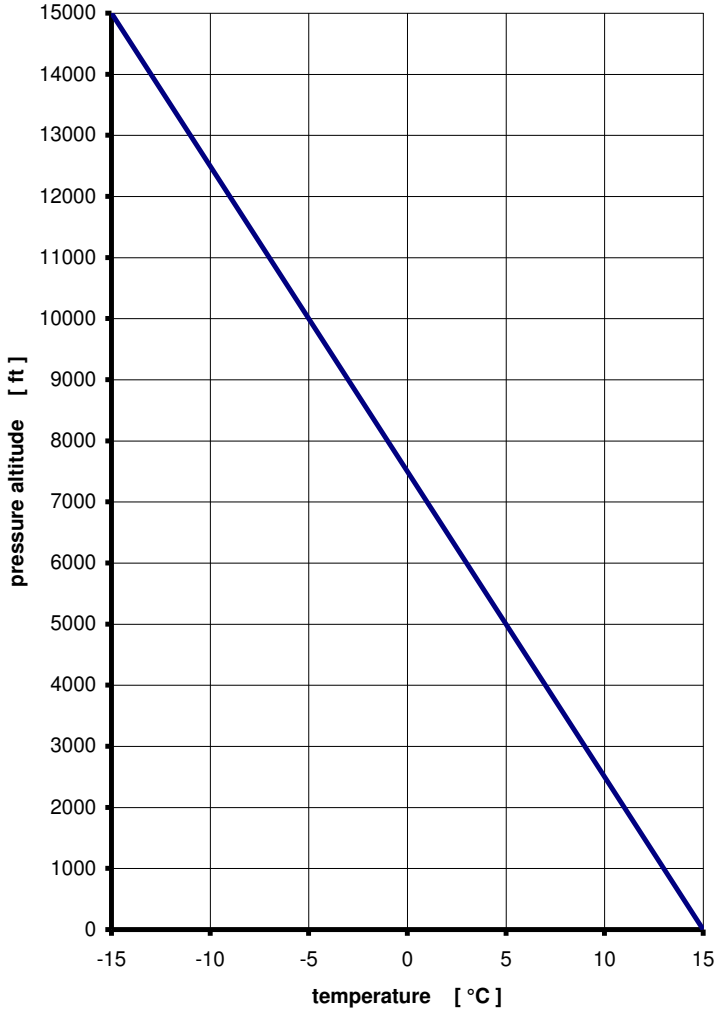
add-ons on take-off air distance	
for dirty or wet wings	+ 30%
per 5 knots tailwind component	+ 20%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

NOTE	Reduction of take-off distances due to downhill slope or headwind must not be taken into account.

NOTE	Especially in glider towing the take-off distances can vary significantly with precise flying habits and the drag of the glider.

5 Performance

ISA std. Temperature



5 Performance

5.5 Tested Glider Configuration

The following gliders have been towed during flight tests:

LS-1, LS-4, Baby-III, Astir and Twin Astir, Hornbach, Junior, Jantar, Pirat, Puchacz, Discus and DuoDiscus, Blanik, DG-100/300/500, DG-1000, ASK-21 and ASW-24, Nimbus and Cirrus, Cobra, PIK-20.

5.6 Remarks

Based on the rules of the Light Sport Aircraft airworthiness standards, the maximum dimension is defined by the weight of the glider to be towed, without consideration of glider aerodynamics. During the flight test with the DG-1000T, a maximum permissible glider weight of 1,580 lb has been demonstrated.

For gliders with a maximum permissible glider weight of 1,580lb, but less favorable aerodynamics than the DG-1000T, a lower climb rate and significantly longer take-off distance are to be expected.

NOTE	Inexperienced pilots should start with a single seat lightweight glider and increase the glider weight step by step.

6 Weight and Balance

6.1 General

When the aircraft is used for glider towing, the weight and balance calculations for the standard configuration are valid also for towing operations. Concerning payload, there are some restrictions which have to be observed, see also Section 3 within this supplement.

6.2 Required Equipment

The following additional equipment is required to use aircraft for glider towing, and must be taken into account in the weight and balance:

- TOST tow release clutch, type E 85
- REMOS mounting frame for tow release clutch
- release handle (colour yellow)
- REMOS oil temperature regulation flap
- rear view mirror

The following equipment is not part of the center of gravity calculation, but is also necessary for glider towing:

- towing rope with ring connector
- weak link 300 daN (green)

NOTE	The pilot has to ensure that the required weak link is attached to the tow rope; otherwise the structure of the aircraft may be overloaded!

7 Systems

The tow release handle is installed inside the cabin of the REMOS GX. The handle is located on the left hand side of the pilot seat, colored yellow. Pulling the handle releases the tow rope. The handle should provide a free play of 1/2 to 1 inch.

8 Aircraft Ground Handling and Service

During regular servicing intervals, the tow release clutch must be cleaned, lubricated and checked to assure proper operation.

A general overhaul of the release clutch must be conducted every 4 years or 4,000 towing operations, whatever comes first. For further information refer to the separate operator's manual of the manufacturer.

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POH Supplement – Banner Towing

Supplement Banner Towing

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1.3 Quick Reference

For use as a banner towing aircraft, the REMOS GX is equipped with the TOST E85 tow release clutch, which is connected to the fuselage tail by a specially developed mounting frame. To release the tow rope a release lever is located on the left hand side of the pilot seat (colored yellow). Additionally, a rear view mirror must be installed inside the aircraft, above the pilot seat.

2 Operating Limitations

2.1 Towing Speed

max. towing speed	65 kIAS

2.2 Tow Ropes

length of tow rope	130 to 200 ft
weak link	max. 300 dN

2.3 Banner

When towing banners, the drag of the banner is relevant and not its size. Low drag banners up to 216m^2 have been tested.

max. drag	700 N at 73 kCAS
max. weight	20 kg

Approved banners should be used.

2.4 Crew

During banner towing operations, the REMOS GX must be operated only by one pilot (no passenger allowed, except for training/instruction).

2.5 Minimum Equipment List

- as per D-VFR minimum equipment list, plus
- TOST tow release clutch type E85
- REMOS mounting frame for tow release clutch
- yellow colored release handle
- rear view mirror placed on main spar carrythrough

2 Operating Limitations

2.6 Flying Without Doors

not permitted during towing operations

2.7 Required Placards and Markings

Adjacent to the airspeed indicator:

Adjacent to the tow release handle:

At the release clutch bracket:

3 Emergency Procedures

3.1 Engine Failure Procedure

Case 1: altitude not enough for engine re-start

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	engine	OFF
4.	fuel valve	CLOSE
5.	declare emergency	MAYDAY MAYDAY MAYDAY
6.	master switch	OFF
7.	safety belts	TIGHTEN
8.	tow rope	RELEASE
9.	emergency landing	APPROPRIATE TERRAIN
10.	banner	RELEASE BEFORE LANDING

Case 2: altitude sufficient for engine re-start

1.	AVIATE – NAVIGATE – COMMUNICATE	
2.	landing site	IDENTIFY
3.	carburetor heat	PULL
4.	electric fuel pump	ON
5.	choke	OFF
6.	starter	ENGAGE
7.	if engine does not start continue with case 1	
8.	if engine starts, continue flight and land on an airfield	

3 Emergency Procedures

3.2 Failure of the Release Clutch Procedure

1. approach airspeed 60 kIAS
2. full flaps airspeed 78 kIAS
3. max. airspeed with banner 65 kIAS
4. flaps DOWN
5. engine power AS REQUIRED
6. elevator trim AS REQUIRED
7. electrical fuel pump ON
8. touchdown on main wheels first with elevator fully held back.

NOTE	The banner will hang down significantly from the aircraft due to its own weight. Therefore it can become tangled with obstacles, plants, wires, vehicles, persons, etc. Keep the approach as steep as possible so that banner and aircraft are on the ground at the same time.

4 Normal Procedures

4.1 Preflight Check Checklist

1. Perform standard preflight check
2. Check tow release clutch and test-release a tow rope

4.2 Take-Off Procedure

1.	oil cooler flap	OPEN
2.	carburetor heat	OFF
3.	electric fuel pump	ON
4.	landing light	RECOMMENDED
5.	flaps	15 degrees
6.	elevator trim	2/3 UP
7.	rudder and aileron	NEUTRAL
8.	taxi forward	ROPE STRAIGHT
9.	engine power	FULL POWER
10.	rotate	45 kIAS
11.	lift-off	50 kIAS
12.	best climb	60 kIAS
13.	max. airspeed with banner	65 kIAS
14.	flaps	retract

NOTE	During take-off, special care must be taken that the climb rate and airspeed are adjusted to the characteristics of the banner. Watch your rate of climb immediately after take-off.

NOTE	To maintain permissible water and oil temperatures during climb and descent, the aircraft must be equipped with an oil temperature regulation flap. During climb the operating lever of this flap should be in the "open/cooler" position.

4 Normal Procedures

4.3 Approach Checklist

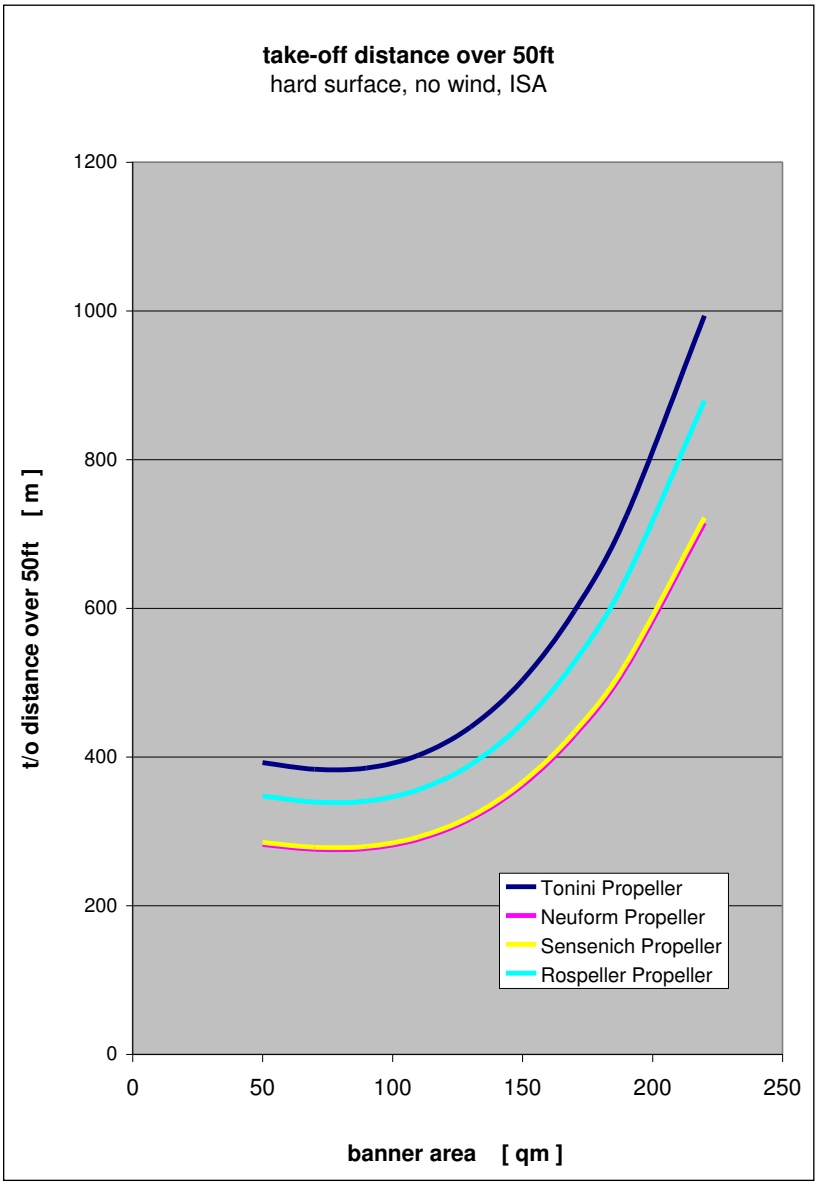
1.	wind, weather, visibility	OK
2.	ATIS	CHECKED
3.	runway	CORRECT DIRECTION
4.	traffic pattern	ALTITUDE and ROUTING
5.	radios	ON and FREQUENCY SET
6.	transponder	AS REQUIRED
7.	carburetor heat	AS REQUIRED
8.	oil cooler flap	AS REQUIRED
9.	electric fuel pump	ON
10.	CHT or coolant temp.	max. 275°F = 135°C max. 248°F = 120°C (w/ SB-012)
11.	oil temperature	120…266°F = 50…130°C
12.	full flaps airspeed	V_{FE} = 78 kIAS
13.	approach airspeed	V_{APP} = 60 kIAS
14.	flaps	AS REQUIRED
15.	landing light	RECOMMENDED

4.4 Landing Procedure

1.	full flaps airspeed	V_{FE} = 78 kIAS
2.	approach airspeed	V_{APP} = 60 kIAS
3.	flaps	DOWN
4.	target airspeed	V_T = 50 kIAS
5.	engine power	AS REQUIRED
6.	elevator trim	AS REQUIRED
7.	tow rope	RELEASE ON THRESHOLD
8.	touchdown on main wheels first	
9.	brakes	AS REQUIRED

5 Performance

5.1 Take-Off Distance



5 Performance

5.2 Effects on Take-Off Distance

Performance data apply under ISA conditions on an even, dry, hard runway surface. Various circumstances have an effect on take-off performance. According to CAA-circular AIC 127-2006, it is recommended to use following add-ons on roll- and air distances:

add-ons on take-off roll distance	
for dry grass	+ 20%
for wet grass	+ 30%
for soft surface	+ 60%
per 5 knots tailwind component	+ 20%
per 2% uphill slope	+ 10%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

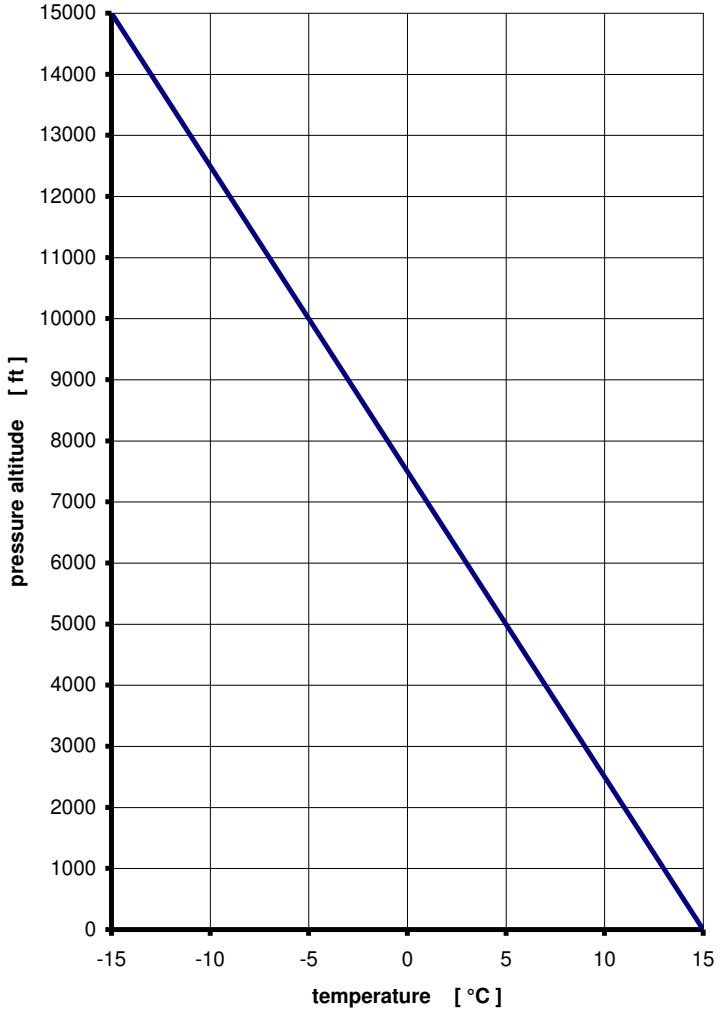
add-ons on take-off air distance	
for dirty or wet wings	+ 30%
per 5 knots tailwind component	+ 20%
for high temperatures above standard	+ 10% per 10°C
for altitude above sea level (density altitude)	+ 10% per 1,000 ft

NOTE	Reduction of take-off distances due to downhill slope or headwind must not be taken into account.

NOTE	Especially in banner towing the take-off distances can vary significantly with precise flying habits and the drag of the banner.

5 Performance

ISA std. Temperature



6 Weight and Balance

6.1 General

When the aircraft is used for banner towing, the weight and balance calculations for the standard configuration are valid also for towing operations. Concerning payload, there are some restrictions which have to be observed, see also Section 3 within this supplement.

6.2 Required Equipment

The following additional equipment is required to use aircraft for banner towing, and must be taken into account in the weight and balance:

- TOST tow release clutch, type E 85
- REMOS mounting frame for tow release clutch
- release handle (colour yellow)
- REMOS oil temperature regulation flap
- rear view mirror

The following equipment is not part of the center of gravity calculation, but is also necessary for glider towing:

- towing rope with ring connector
- weak link 300 daN (green)

NOTE	The pilot has to ensure that the required weak link is attached to the tow rope; otherwise the structure of the aircraft may become overloaded!

7 Systems

The tow release handle is installed inside the cabin of the REMOS GX. The handle is located on the left hand side of the pilot seat, colored yellow. Pulling the handle releases the tow rope. The handle should provide a free play of 1/2 to 1 inch.

8 Aircraft Ground Handling and Service

During regular servicing intervals, the tow release clutch must be cleaned, lubricated and checked to assure proper operation.

A general overhaul of the release clutch must be conducted every 4 years or 4,000 towing operations, whatever comes first. For further information refer to the separate operator's manual of the manufacturer.

Imprint

Pilot Operating Handbook REMOS GX
Supplement Banner Towing

ASTM Edition

REMOS GX

POH Supplement – Continued Airworthiness

Supplement Continued Airworthiness

Table of Content

1 Purpose

Continued Airworthiness is everything that is required to keep an aircraft in a safe condition to fly. This does not only include the technical part like maintenance and annual condition inspection. It also includes update of documentation, e.g. Pilot Operating Handbook, issuing repair instructions and repair approvals, change on equipment and feedback of the customer to the manufacturer. Especially the latter one is really important as this is the only way that the manufacturer gets to know of potential issues of safety of flight.

In some areas, the procedures of the continued airworthiness system of an LSA differ significantly from the ones of a standard category aircraft. This POH supplement shall give guidance to the customer how to act correctly in the continued airworthiness system and how to keep his aircraft airworthy and legal to fly.

2 Continued Airworthiness System

REMOS AG shall be informed about potential issues of safety of flight or service difficulties by means of the Customer Feedback Form G3-8 MA CA 0050. This document is attached to the maintenance manual and is also available on the website www.remos.com. If a customer does not inform the manufacturer by means of this form, REMOS AG also accepts any other way of information as long as it contains at least the following information:

- aircraft make and model
- serial number and callsign
- propeller make and model
- total time of aircraft and engine
- use of aircraft: private or commercial
- name and contact data of reporting person
- description of potential issue of safety or service difficulty

Once the customer has notified REMOS AG, the information will be forwarded immediately to the Head of Design by means of the customer feedback form.

Shall the customer opt for e-mail notification via info@remos.com then this e-mail will immediately be forwarded to the Head of Design.

Based on the information given in the customer feedback form, the Head of Design will perform a risk assessment. In most cases, the Head of Design will contact the customer to collect more and precise information. This includes eventual cooperation with authorities, e.g. in case of an accident.

2 Continued Airworthiness System

A risk assessment consists of:

- cause of accident/incident by pilot error or technical background
- safety effect determination
- risk assessment evaluation
- decision of required alerting of the public
- decision of corrective action

The continued airworthiness system of REMOS AG does not only cover events that have occurred during operation of the aircraft. Proposals for improvements or corrections, service difficulties, findings during maintenance events or annual condition inspections are also covered by the continued airworthiness system. In case that service staff identifies a potential safety of flight issue or a real service/maintenance problem, a customer feedback form must be filled out and handed forward to the Head of Design.

The customer shall not be afraid of consequences like revoking licenses. This is not the intention and not the job of an aircraft manufacturer. If there is no immediate danger for other customers or the flying public, REMOS AG will never notify authorities.

3 Owner/Operator Responsibilities

During handover of the aircraft, the owner/operator is introduced into the continued airworthiness system of REMOS AG. The customer is informed about the following:

- The maintenance handbook provides all information that the customer needs to comply with the regulations, especially with continued airworthiness and maintenance.
- It is the owner/operator's responsibility to provide the manufacturer with current contact information. Only with current contact information the manufacturer is able to contact the customer in case service bulletins or safety alerts need to be sent out.
- In case a safety of flight issue or significant service difficulty reveals, it is the responsibility of the owner/operator to inform the manufacturer. The owner/operator shall not seek for solutions on his own and/or modify the aircraft in a way that is not covered by the maintenance manual.
- Shall the manufacturer release a notice of corrective action, it is the responsibility of the owner/operator to comply with it. Furthermore, the owner/operator has the responsibility to comply with all applicable aviation authority regulations in regard to maintaining the airworthiness of the LSA airplane.
- In case the manufacturer has released a notice of corrective action, the owner must comply with it within the timeframe defined in the notice. If there is no timeframe defined, then the latest time to comply with it is the next annual condition inspection.
- In case the owner/operator does not comply with the maintenance manual and/or releases of corrective action, the LSA is not in compliance with the accepted ASTM consensus standards. This means that the aircraft is not airworthy and operating this aircraft is not legal. In case the responsible aviation authority (in case of the USA this is the FAA) gets to know about this, the owner/operator may be subject to regulatory action by the authority.

3 Owner/Operator Responsibilities

This information is provided by means of the customer commitment form, which is part of the maintenance manual. The owner/operator shall sign this form and send it to REMOS AG. On this form the owner/operator shall also provide the manufacturer with current contact data.

If the aircraft is sold to another customer, a new customer commitment form needs to be signed. This form will have the identical document number added by a dash and a counting number starting with 1 to make clear that this new form is a new revision.

4 Releases of Notices to the Public

There are three different levels of notices to the public, each representing a different level of importance:

- SAFETY ALERT
  will be issued in case of an urgent safety of flight situation. Potentially an emergency safety of flight action is required in this case. All safety alerts will be published on the website www.remos.com which is the central means of communication of REMOS AG to its customers.

- SERVICE BULLETIN
  will be issued in case a corrective action, a mandatory inspection or a modification of the aircraft is required. An immediate action is not required but a future action is required or recommended. All service bulletins will be published on the website www.remos.com which is the central means of communication of REMOS AG to its customers.

- NOTIFICATION
  will be issued in case service information is required. The public is notified via the website www.remos.com which is the central means of communication of REMOS AG to its customers.

5 Documentation Update

Any documentation update will be released on the website www.remos.com. Owner/operators will not be informed by postal mail, unless such a documentation update is mandatory for safety of flight and is released by a safety alert or a service bulletin. Examples for documentation updates are new revisions of:

- Pilot Operating Handbook
- Service and Maintenance Checklist
- Annual Condition Inspection Checklist
- Type Design Datasheet

For copyright reasons, a new revision of the maintenance handbook is not available on the website, but only on request as hardcopy.

6 Maintenance and Annual Cond. Inspection

Maintenance intervals of all REMOS aircraft are 25h for the first maintenance event, followed by 100h inspections. In case that AVGAS 100LL is used for more than 30% of the time, oil change interval is reduced to 50h.

REMOS AG hereby defines the following persons that may perform maintenance and repair as defined in the Maintenance Manual including 25h and 100h inspection:

- Owner/operator: with Sport Pilot Certificate or higher: preventative maintenance, or line maintenance.
- LSA Repairman Maintenance: preventative maintenance, line maintenance, or heavy maintenance.
- A&P Mechanic: preventative, maintenance, line maintenance, or heavy maintenance.
- Part 145 Repair Station with appropriate ratings: preventative maintenance, line maintenance, or heavy maintenance

REMOS AG hereby defines the following persons that may perform the annual condition inspection:

- LSA Repairman Maintenance
- A&P Mechanic
- Part 145 Repair Station with appropriate ratings

Always use REMOS documents for your maintenance events and the annual condition inspection. These documents are available on the website www.remos.com.

7 Modifications or Change of Equipment

Certified equipment is listed in the maintenance manual. Only listed equipment may be installed on the aircraft without notifying REMOS AG. In case equipment that is described in the maintenance manual shall be exchanged on the aircraft, it is required to:

- update equipment list
- update weight and balance

Modifying the aircraft or changing equipment may be performed by any competent person. Updating the equipment list and the weight and balance report may only be performed by

- LSA Repairman Maintenance
- A&P Mechanic
- Part 145 Repair Station with appropriate ratings

Any change that is not documented may not be performed on the aircraft without having it certified by REMOS AG. Nevertheless, it is possible to do so. Notify REMOS AG prior to the intended change of the aircraft. Engineering department will then decide which kind of documentation is required and will either prepare them or will ask the customer to have this documentation prepared. Followed by this, a Letter of Approval (LOA) will be prepared that needs to be signed by either an A&P Mechanic or a Part 145 Repair Station with appropriate ratings after the work is accomplished. Then this LOA will be signed by the Head of Design of REMOS AG and handed out to the customer. This procedure will be performed by e-mail.

The extent of work cannot generally be defined; it is always an individual project. Working hours of the engineering department will be charged by the hour according to actual pricelists.

This procedure is not intended and built up for the manufacturer to make money of it. In contrary, due to running projects within engineering department it usually costs more to prepare the documentation than it is charged for. This procedure is defined in the regulations, in this case ASTM F2483.

7 Modifications or Change of Equipment

Without having updated the equipment list and weight and balance or not having changes that are not part of the maintenance manual approved by the manufacturer, the aircraft is considered not airworthy and unsafe to fly. It is not legal to operate an aircraft without a current equipment list and weight and balance and required approvals by the manufacturer. Make sure the change of equipment is signed off in the aircraft's logbook and is entered in the aircraft's permanent record.

8 Repairs

Repairs are handled similarly as change of equipment. Any repair that is performed with standard tools by replacing damaged parts may be performed by any competent person. To release the aircraft back to service the repair must be signed off by

- Owner/Operator with at least a Sport Pilot License
- LSA Repairman Maintenance
- A&P Mechanic
- Part 145 Repair Station with appropriate ratings

It is recommended to perform a standard maintenance event and an annual condition inspection once a repair has been performed that could affect safety of flight.

Structural repairs that are described in the maintenance manual are handled identically. In case the damage exceeds the described ones, an individual repair instruction is required. In this case notify REMOS AG by means of the customer feedback form. Engineering will then prepare individual and precise repair instructions. Repairing a composite aircraft is completely different from repairing a metal aircraft or a composite boat. Therefore only competent persons may perform the work. REMOS AG hereby defines the following persons that may perform the repair:

- LSA Repairman Maintenance with composite knowledge
- A&P Mechanic with composite knowledge
- Part 145 Repair Station with appropriate ratings

Notify REMOS AG prior to the intended repair. Engineering department will then decide which kind of repair and documentation is required and will either prepare them or will ask the customer to have this documentation prepared. Followed by this a Repair Approval (LOA) will be prepared that needs to be signed by either an A&P Mechanic or a Part 145 Repair Station with appropriate ratings after the work is accomplished. Then this Repair Approval will be signed by the Head of Design of REMOS AG and handed out to the customer. This procedure will be performed by e-mail.

8 Repairs

The extent of work cannot generally be defined; it is always an individual project. Working hours of the engineering department will be charged by the hour according to actual pricelists.

This procedure is not intended and built up for the manufacturer to make money of it. In contrary, due to running projects within engineering department it usually costs more to prepare the documentation than it is charged for. This procedure is defined in the regulations, in this case ASTM F2483.

Without having the repair performed and approved according to the manufacturer's instruction, the aircraft is considered not airworthy and unsafe to fly. It is not legal to operate an aircraft without current documentation and required approvals by the manufacturer. Make sure the repair is signed off in the aircraft's logbook and is entered in the aircraft's permanent record.

9 Contact Data

The manufacturer of the REMOS aircraft and the only responsible entity for continued airworthiness is

REMOS AG

Franzfelde 31
D-17309 Pasewalk

G E R M A N Y

Tel: +49-3973-225519-0
Fax: +49-3973-225519-99

Email: service@remos.com
Web: www.remos.com

Imprint

Pilot Operating Handbook REMOS GX
Supplement Continued Airworthiness

ASTM Edition

REMOS GX

POH Supplement – Abbreviated checklists

Supplement Abbreviated Checklists

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Supplement Abbreviated Checklists

Purpose

No matter if the airplane is operated according to non-commercial or commercial operating regulations, the pilot is obliged to use cockpit checklists.

The checklists provided in the POH sections 3 (emergency procedures) and 4 (normal procedures) are very comprehensive and therefore sometimes a bit inconvenient to use. Therefore, third parties often offer abbreviated checklists that are often used in the cockpit. These checklists are neither approved nor controlled by the airplane manufacturer and therefore not necessarily complete or correct.

NOTE	REMOS encourages the pilot NOT to use third party abbreviated checklists, but checklists released by REMOS only.

This POH supplement section 13 offers abbreviated checklists released by REMOS. By using these abbreviated checklist, the pilot in command acknowledges that the content is abbreviated and might be incomplete. Always refer to sections 3 and 4 for full version of these checklists.

NOTE	Always refer to POH sections 3 and 4 for full version of these checklists.

NOTE	This POH may only be used for aircraft SN429 or higher or with REMOS notification NOT-014 implemented.

Supplement Abbreviated Checklists

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Supplement Abbreviated Checklists

CHECK BEFORE ENGINE START
preflight check ..... OK
seat belts ..... FASTENED
brake ..... SET

ENGINE START
master switch ..... ON
external lights ..... ON
electric fuel pump ..... ON
choke..... AS REQUIRED
starter ..... ENGAGE
oil pressure..... min. 2.0 bar
avionic switch ..... ON

ENGINE RUN-UP
oil temperature ..... min. 50°C
engine speed..... 4.000 rpm
magneto check... max. 300 rpm drop

TAKE-OFF
departure..... BRIEFED
flaps..... CLEAN
engine ..... FULL POWER
lift-off ..... 45 kIAS
climb..... 60 kIAS

CLIMB
flaps..... CLEAN
engine ..... FULL POWER
best climb ..... 60 kIAS

CRUISE
power setting..... AS R'QRD
engine parameters ..... OK

DESCENT
flaps..... CLEAN
power setting..... AS R'QRD

LANDING
approach..... BRIEFED
flaps ..... DOWN
approach speed..... 60 KIAS

SHUTDOWN
brake..... SET
avionic switch ..... OFF
ignition key..... OFF
master switch..... OFF

AIRSPEED LIMITATIONS for MTOW
demonstrated x-wind ..... 15 kts
stallspeed flaps 40° ..... 42 kIAS
stallspeed flaps clean ..... 44 kIAS
best angle of climb..... 50 kIAS
best rate of climb ..... 60 kIAS
max. flap extended ..... 78 kIAS
max. maneuvering ..... 88 kIAS
max. turbulence ..... 107 kIAS
never exceed speed ..... 135 kTAS

FUEL
total..... 84 ltr
usable..... 80 ltr
grade ..... AVGAS, MOGAS, E10

ENGINE PARAMETERS
RPM warmup..... 2.000 rpm
max. cont. speed. ..... 5.500 rpm
max. speed ..... 5.800 rpm
max. cooling temp..... 120/135°C
min oil temp. ..... 50°C
max. oil temp. ..... 130°C
max. EGT ..... 890°C
oil pressure ..... 2.0 … 5.0 bar
fuel pressure..... 2.8 … 3.2 bar

THIS IS AN ABBREVIATED CHECKLIST! REFER TO PILOT OPERATING HANDBOOK SECTION 4 FOR FULL VERSION!

Supplement Abbreviated Checklists

ABBREVIATED EMERGENCY CHECKLIST

AVIATE – NAVIGATE - COMMUNICATE

DECLARE EMERGENCY

SPIN RECOVERY
engine ..... IDLE
aileron ..... NEUTRAL
rudder..... OPPOSITE SPIN
elevator ..... PUSH

RECOVERY SYSTEM RELEASE
Engine..... STOP
Recovery system ..... RELEASE
Fuel valve .....CLOSE
Master switch.....OFF
Safety belts ..... TIGHTEN

EMERGENCY DESCENT
engine ..... IDLE
flaps .....CLEAN
max. turbulence ..... 107 kIAS
never exceed speed ... 135 kTAS

ENGINE STOPPAGE ON TAKE-OFF
brakes .....AS R'QRD
ignition key.....OFF

ENGINE STOPPAGE IN FLIGHT
landing site..... IDENTIFY
electric fuel pump.....ON
starter..... ENGAGE
landing ..... EMERGENCY LDG

GENERATOR FAILURE
non-essentials.....OFF
system ..... TROUBLESHOOT

ENGINE FIRE ON GROUND
ignition key.....OFF
brakes .....AS R'QRD
vacate aircraft .... IMMEDIATELY

ENGINE FIRE IN FLIGHT
ignition key.....OFF
sideslip.....AS R'QRD
landing ..... EMERGENCY LDG

CARBURETOR ICING
carburetor heat ..... PULL
electric fuel pump.....ON
power setting ..... FULL POWER

EMERGENCY LANDING
landing site..... IDENTIFY
direction of wind..... IDENTIFY
flaps .....DOWN
master switch.....OFF
approach speed.....60 KIAS
vacate aircraft .... IMMEDIATELY

THIS IS AN ABBREVIATED CHECKLIST! REFER TO PILOT OPERATING HANDBOOK SECTION 3 FOR FULL VERSION!

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Pilot Operating Handbook REMOS GX
Abbreviated Checklists

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