



CIRRUS SR22 TN – N4927

GVML - Gruppo Volo Motore Lugano



Version: 01.01.2019

TECHNICAL DATA

Model and Series No.	SR22 TN G3	Series 2598	Build 2007	First registration 2007	Aircraft Type for Flight Plan: S22T	
Category Airplane	Category: Airplane		Class: Single-Engine Land (SEP/L)		Approach Category: A (V _{APP} < 91 KIAS)	
	Noise Category: C		Performance: B (max. 9 seats, < 5700 Kg)		Airport Design Group: I (Wingspan < 15m)	
Engine	Continental IO-550-N, 6 cylinders fuel injected air cooled (9'013cm ³) 310 HP (Turbo Normalizing Tornado Alley, 29" 25'000ft) RPM 2'700 TBO: 2000h/12 years TSO: 800h (Last overhaul N/A) TSN: 800h EngineSeriesNo. 691188 Do not reduce Manifold Pressure below 15 InHg when above 18'000 ft. Outside Temperature Above: -40°C Avoid continuous operation with the fuel flow set between 18 GPH and 30 GPH with MP above 26" InHg					
Propeller	Type: Hartzell 3-blade constant speed		Model: PHC-J3YF-1N/N7605(B)		Diameter: 78.0"	
	Clearance (between Tip of propeller and Ground): 23 cm (9") at 3'400 lb					
Speed (KIAS) up to 17'500 ft (at 25'000ft, reduced linearly)	V_{ROT} 70-73 (obstacle: 78)		V_x 79		V_y 101	
	V_{CRUISE} PWR: 65%-85% (max. 2500 RPM)		V_{NE} 200 (at 25k ft: 170)		V_{CLIMB} 120 (above 7'500 ft: 130)	
	V_{O-2900lb} 123	V_{O-3400lb} 133	V_{FE-50%} 119	V_{FE-100%} 104	V_{PD} 133	
	V_{LAND-100%} 80-85	V_{LAND-50%} 85-90	V_{LAND-0%} 90-95	V_{DEM-CROSS-WIND} 20	V_{GLIDE-2900lb} 87	V_{GLIDE-3400lb} 88
	Best Glide: 8.5:1 (at 10'000 ft = ca 14 NM)			TAS = IAS + 2% each 1000 ft D.A.		GS = TAS+Wind
Stall speed (KIAS) 3400lb – Most Fwd C.G.	BANK 0°: 73 (0-flaps)		66 (50%-flaps)		62 (100%-flaps)	
	BANK 30°: 76 (0-flaps)		71 (50%-flaps)		66 (100%-flaps)	
	BANK 60°: 99 (0-flaps)		90 (50%-flaps)		84 (100%-flaps)	
	Horn sounds between 5 and 10 kts before the stall (full flaps and power off configuration). Do not use FLAP above 17'500 ft					
Measures	Length: 7.92 m (26.0')		Wingspan: 11.67 m (38.3')		Height: 2.71 m (8.9')	
Fuel Tanks	USABLE: 2 x 46 USG (92 USG = 348 l)		TAB: 30 USG (113 l)		Max fuel imbalance (between tanks): 10.0 USG (37.8 l)	
	AVGAS min grade 100LL (blue) or 100 Switch fuel tank only if boost pump ON/BOOST					
Weight & Balance	MTOM: 1'542 Kg (3'400 lb)		MLDM: 1'315 Kg (2'900 lb)		MinimumFuelBurned BeforeLandWithMaxLoad 17.3 USG (66 l)	
	Empty Mass: 1'085.5 Kg (2'393 lb)				Max Useful Load: 456.5 Kg (1'006 lb)	
	Full Fuel Payload: 212.5 Kg (468 lb)				Max baggages: 59 Kg (130 lb)	
W&B Setting	Center of gravity: 138.40		ARM: Fuel: 154.9		Pilot/FrontPax: 143.5 RearPax: 180.0 Baggage: 208.0	
	EnvelopeData: 137.8/953.0 - 139.1/1'225.0 - 142.3/1'542.0 - 148.1/1'542.0 - 148.1/953.0					
Takeoff Distance (Ground roll in m) (3400 lb / 2900 lb)	PA: SL 0° C: 280 / 186		20° C: 325 / 216		40° C: 375 / 249	
	PA: 2000 0° C: 340 / 227		20° C: 396 / 263		40° C: 456 / 303	
	PA: 4000 0° C: 416 / 277		20° C: 484 / 322		40° C: 557 / 371	
	Headwind: -10% each 12kts		Tailwind: +10% each 2kts		Grass (dry/wet): +20%/+30%	
Range	85%, BestPower, 17.6 USG/h		Endurance: 4.4 hours		Range: 758 NM (SL) - 781 NM (8'000 ft)	
	75%, BestPower, 16.0 USG/h		Endurance: 4.8 hours		Range: 797 NM (SL) - 821 NM (8'000 ft)	
	65%, BestPower, 14.0 USG/h		Endurance: 5.5 hours		Range: 865 NM (SL) - 903 NM (12'000 ft)	

EQUIPMENT

PFD	Avidyne Entegra FlightMax EXP5000 R6.2	S/N P/N: 530-00183—000_REV02
MFD	Avidyne Entegra EX5000C R6.2.1 CMAX	530-00180—100 REV 04
GPS / Radio / NAV	Dual Garmin GNS430W (GPS WAAS/COM/NAV) – Precision: 1m H / 2m V Antenna - COM1+GPS: Top-center COM2: Underside-center 2 x NAV: Vertical stabilizer	
Transponder	Garmin GTX 330 - Mode S with ADS-B Out	Transponder Antenna: Nose underside (small) SW Ver. 4.06
ELT	406 Mhz	
Audio Panel	Garmin GMA340	
Oxygen System	Fixed Oxygen System: Precise Flight Inc. - ConstantFlowMeter: A4 or A5 Bottle: 77 cu - 12'/15'/18'000 ft (hrs): 1 pers.: 25/17/14 2 pers: 13/9/6 3 pers: 8/7/4 4 pers: 6/4/3 Cannulas: 0 - 18'000 ft - Mask until 25'000 ft - Capacity: 2'000 PSI - Check with Oxymeter (%SpO2 > 90)	
Autopilot	S-TEC 55X (Two-Axis autopilot and Altitude selector/alerter). Max 185 KIAS. < 95 KIAS set flaps 50%. Minimum engage altitude: 400 ft. Not permitted with 100% flaps and during TakeOff/Landing. Disconnect in moderate or severe turbulence and when speed is less than V _{STALL} + 20%.	

Stormscope	L-3 Avionics System WX500
Traffic Advisory System	L-3 Avionics System SkyWatch 497 Traffic Advisory System
Terrain	Honeywell KGP 560 Terrain Awareness/Warning System (TAWS)
Weather System	XM Satellite Weather System
Ice Protections System	Basic I.P.S. - Delcing Fluid: DTD 406B (British) 3.5 USG (13.2 L) – Duration: Normal/Maximum: 80/40 min
CAPS	Parachute (TBO 10 years, Last: December 2015). In case of emergency below 2000 ft AGL deploy it immediately. Minimum engage altitude: 400 ft.
Alternators and Batteries	Alternator 1: 28V – 60A – Main buses (FuelPump, TurnCoord.2, Attitude2, PFD2) Alternator 2: 28.75V – 20A - Essential buses (Engine instr., TurnCoordin.1, Attitude1, COM1, Avionics, PFD1, Bat2) Battery 1: 1x"12-cell" 24V 10A/h Battery 2: 2x12V=24V 7A/h - Duration: 30 min only PFD

ASSURANCE AND COVERAGE

Assurer	Aviabel <i>via</i> Hudson Sky Holding (Martin Accola). Expiration: 31.03.2018	No.: 14.021.558/17
Uses and Pilots	Private business and pleasure, Industrial AID and Rental/Club uses. Type rated PPL subject being individually checked by appointed flight instructor.	
Coverages	Liability Third Party: 12 mio, Hull agreed value: 320'000.- (PIC Deductible: 3'000.- only for partial loss) Pers. Accident (Death/PTD): 100'000/100'000 (PIC+PAX). Geographical limitations: Yes, details on site.	

MOVEMENT AND PARKING

Towbar	Towbar always in the airplane baggage area. Don't leave it in the hangar.
Parking	Always put the pitot cover and the nose air inlet cover on, inside and outside the hangar. Outside the hangar: use chocks. In case of wind risk, use anchor points for wing tiedowns.
Movements	Use Aircraft tug (with remote control) for movements into/from the hangar. Otherwise manually, using the towbar (pushing or pulling only on the <i>Wing base</i> or on the <i>Propeller base</i> (never from ogive).

MAINTENANCE, CONTROLS AND CHECKS

Cleaning	Clean the airplane after every flight using the specific products available in the hangar: " <i>blue liquid</i> " for fuselage and wings, " <i>pink liquid</i> " for windows, otherwise water only.
Oil type	< 4° C: SAE 30 or 10W-30 > 4° C: SAE 50. All temperatures: SAE 15W-50 or 20W-50.
Oil quantity	Capacity: 8 quarts (7.6l) Operation: min. 6 QTS, max. 7 QTS Always check oil quantity before each flight!!
Oil on board	Before each flight, assure to have the necessary Oil reserve in the baggage compartment. Never let empty oil boxes in the baggage compartment. Remember to fill in the <i>Oil form</i> located in the case.
Emergency key	An emergency airplane key is available inside the GPU compartment (unscrew the external small door).
Next inspection	Before each flight, remember to check the remaining hours available before the next inspection. Inform a member of the GVML committee in case of insufficient hours remaining.
Fuel Flow	During TakeOff check if the FF is 35-36 USG/h or more (reference pressure altitude 0 - 1'000ft).
Fuel measuring	The analog Fuel level indicators (left and right tank) are quite inaccurate, particularly when indicating low fuel. When departing with full tanks, the preferential indication is the <i>Fuel Flow (FF)</i> indicator on the MFD, instead. If tank is below ¼ capacity, pay attention to extreme turns.

USES AND BEST PRACTICES

Engine start (Warm start)	In case of "warm" engine (restart after few minutes) follow the standard checklist without "Prime" or "Boost". In any case engage start-key during max. 20 sec., then wait minimum 20 sec. before retrying.
Engine start (Hot start)	With the throttle full open and the mixture cutoff, run the fuel pump on <i>Boost</i> for a full 20 seconds. (This circulates cool fuel through the fuel lines, fuel pump and fuel control unit, purging them of vapor. No fuel flow to the cylinders). Then mixture full rich until a metered fuel flow indication is present. Try "Warm start" again (no prime or just a touch).
Engine start (Cold start)	If engine doesn't start, it probably needs more <i>prime</i> (check FF). Prime only when you are really ready for ignition. With temperature below -7°C for 2 hours or more, engine <i>Pre-heating</i> is needed to prevent damage caused by frozen oil. Put the airplane in a hangar (min. 4 hours) and activate the pre-heating system.
Leaning	Taxi: Lean to "X" of "miXture". <i>RunUp, TakeOff, Climb always "Mixture full rich"</i> . At Cruise level: power 78%, Manifold Pressure: 28.5 InHg, lean to FF 16.5 USG. Maintain Mixture full rich if CHT is 420° F or more. Best Power: 85% power or less (reach 1 st EGT peak. Than +75°F) Best Economy: 65% or less (reach Last EGT peak. Than +50°F)
GPU	BAT 1 set to ON before connecting external GPU (needed to close the <i>relay</i>). Use the checklist.
Engine cold caution	During a fast/steep descent, do not cool down the engine too much, avoiding a possible thermal shock. A possible Go-around requires maximum power (Manifold Pressure > 16-17 InHg, CHT > 240°)
EGT e CHT	Maintain CHT (Cylinder Head Temperature) always below 420° F (better if below 380° F), particularly during TakeOff. Verify EGT rising (6x) during magnetos check (left and right).
Taxiing	Lean to "X" of "miXture". Max. 1000 RPM. More power permitted only to start motion and for short time.
Refueling	Refueling in Lugano is at PIC's discretion prior flight, contacting C-Office or GND staff. Write name of PIC on the copy of the receipt and join it to the " <i>Rapporto di volo</i> ". After refueling on other aerodromes, join the receipt to the " <i>Rapporto di volo</i> " for reimbursement (write/highlight fuel quantity). Never refuel after the landing in Lugano (next PIC decides the amount of fuel, based on his/her W&B).
Check-list	The only permitted Check-list is the Cirrus SR22 TN G3 official one, available on the airplane. The use of a personalized check-list is at own risk.
Hour Meter	There's an "Hour-Meter" installed on the airplane. Its data is used for filling in the " <i>Rapporto di volo</i> " and for "billing" purposes. Track the start and end value for each single trip. It starts when speed is more than 30 KIAS.

All information on this card is given without any warranty. Refer in any case to the Cirrus SR22 TN G3 POH and others official documents.