

CIRRUS SR20

Revision Date: 23 SEP 14

NORMAL CHECKLIST

PAGE 1

BEFORE START CHECK

Preflight Inspection.....COMPLETE
Emergency Equipment.....ON BOARD
Passenger Briefing:

- Door operation
- Egress hammer location
- Off-field landing discussion
- CAPS operation
- Sterile cockpit
- Traffic awareness
- No smoking
- Who controls aircraft in emergency
- Positive exchange of controls.....COMPLETE

Seats.....ADJUSTED & LOCKED
Seat Belts and Harnesses.....SECURE
Doors.....CLOSED and CHECKED (may be deferred)

STARTING ENGINE

Key.....IN IGNITION
Brakes.....HOLD
BAT Master Switches.....ON (Check Volts)
Strobe Lights.....ON
Mixture.....FULL RICH
Power Lever.....FULL FORWARD
Fuel Pump.....PRIME (count to 4) then BOOST
Propeller Area.....CLEAR
Power Lever.....OPEN 1/4 INCH
Ignition Switch.....START (Release after start)
Power Lever.....RETARD (to maintain 1000 RPM)
Oil Pressure.....CHECK IN GREEN
Alt Master Switches.....ON
Avionics Power Switch.....ON
Engine Parameters.....MONITOR
Amp Meter Indications.....CHECK

BEFORE TAXI CHECK

Flaps.....UP
Radios & Avionics.....SET AS REQUIRED
Cabin Heat/Defrost.....AS REQUIRED
Fuel Selector.....SWITCH TANK

TAXI CHECK

NOTE: Taxi over loose gravel at low RPM to avoid damage to propeller. Max engine speed during taxi is 1000 RPM.

Brakes.....CHECK
Directional Gyro.....CHECK
Attitude Gyro.....CHECK
Turn Coordinator.....CHECK

The POH remains the official source of information.

BEFORE TAKEOFF CHECK

CAPS Pin.....VERIFY REMOVED
Seat Belts and Harnesses.....SECURE
Fuel Quantity.....CONFIRM
Fuel Selector.....FULLEST TANK
Fuel Pump.....BOOST
Flaps.....SET 50% & CHECK
Transponder.....SET
Navigation Radios/GPS.....SET FOR DEPARTURE
Cabin Heat/Defrost.....AS REQUIRED
Brakes.....HOLD
Mixture.....RICH
Power Lever.....1700 RPM
Alternator.....CHECK

- Pitot heat.....ON
- Navigation Lights.....ON
- Landing Lights.....ON
- Annunciator Lights.....CHECK

Amp Meter Indication.....CHECK POSITIVE
Pitot Heat.....AS REQUIRED
Navigation Lights.....AS REQUIRED
Landing Light.....AS REQUIRED
Magnetos.....CHECK BOTH

- Ignition Switch.....R, check RPM, then BOTH
- Ignition Switch.....L, check RPM, then BOTH

Engine Parameters.....CHECK
Power Lever.....1000 RPM
Autopilot.....TEST, then DISCONNECT
Flight Instruments.....CHECK & SET

- Heading Bug.....RUNWAY HEADING
- Altitude Bug.....INITIAL ALTITUDE
- VSI Setting.....CLIMB RATE DESIRED

Trim.....SET IN T/O RANGE (aileron & elevator)
Flight Controls.....FREE & CORRECT
Doors.....CLOSED and CHECKED

BEFORE TAKEOFF BRIEFING

Determine Need for/Direction of Crosswind Correction
Type of Takeoff Planned (Normal, Soft, Short)
Direction of Departure or Initial Assigned Heading
Initial Planned or Assigned Altitude
Rotation Speed is 65-70 KIAS

Procedure if Engine Fails During Takeoff:

During Takeoff Roll.....ABORT ON RUNWAY
< 500' AGL.....LAND STRAIGHT AHEAD
500-1200 AGL.....AREA EXPANDS AHEAD
> 1200' AGL.....TURN INTO WIND IF RETURNING

NOTE: Returning to the field can only be accomplished once adequate altitude has been attained. A 45° bank turn into the wind is recommended at best glide speed.

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NORMAL CHECKLIST

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NORMAL TAKEOFF

Power Lever.....FULL FORWARD
Engine Instruments.....CHECK
Brakes.....RELEASE
Elevator Control.....ROTATE Smoothly at 65-70 KIAS
At 85 KIAS, Flaps.....UP
Initial Climb.....96 KIAS

SHORT FIELD TAKEOFF

Flaps.....50%
Brakes.....HOLD
Power Lever.....FULL FORWARD
Engine Instruments.....CHECK
Brakes.....RELEASE
Elevator Control.....Rotate Smoothly at 65 KIAS
Airspeed at Obstacle.....77 KIAS
Transition to Normal Climb.....96 KIAS

CLIMB CHECK (above 1000 AGL)

Enroute Climb.....105 KIAS
Throttle.....FULL OPEN
Mixture.....FULL RICH
Engine Parameters.....CHECK
Fuel Pump.....OFF

CRUISE CHECK

Landing Light.....OFF
Cruise Power.....SET 55% to 75%
Mixture.....SEE QRC
Engine Parameters.....MONITOR
Fuel Flow and Balance.....MONITOR
COM 2.....Monitor 121.5

Note: The Fuel Pump *must* be used for switching from one tank to another to avoid engine restart delays should engine quit due to fuel starvation.

Cruise Leaning if Desired:

Best Power = 75° Rich of Peak EGT
75% Power or Less

Best Economy = 50° Lean of Peak EGT
65% Power or Less

Approach Settings:	MP	KIAS	FLAPS
Prior to FAF:	22	100	50%
Glideslope:	12	100	50%
NP Decent:	10	100	50%

ARRIVAL AREA CHECK

ATIS/AWOS/Local Weather.....RECEIVED
Approach Briefing.....COMPLETE
Altimeter.....SET
Cabin Heat/Defrost.....AS REQUIRED
Landing Light.....ON
Fuel System.....CHECK
Mixture.....AS REQUIRED
Brake Pressure.....CHECK

BEFORE LANDING CHECK

Seat Belts and Harnesses.....SECURE
Fuel Pump.....BOOST
Mixture.....FULL RICH
Flaps.....AS REQUIRED
Autopilot.....OFF BELOW 500' AGL

NORMAL LANDING

Downwind.....100 KIAS, FLAPS 50%
Base.....90 KIAS, FLAPS 100%
Final Approach.....*80 KIAS, FLAPS 100%
Touchdown.....MAIN WHEELS FIRST
Nosewheel.....GENTLY LOWER
Braking.....MINIMUM REQUIRED

* Airspeed on final approach should be increased at least 5 KIAS in turbulent conditions.

AFTER LANDING CHECK

Power Lever.....1000 RPM
Fuel Pump.....OFF
Wing Flaps.....UP
Transponder.....STBY
Lights.....AS REQUIRED
Mixture.....LEAN
Pitot Heat.....OFF

SHUTDOWN CHECK

Fuel Pump.....OFF
Throttle.....IDLE
Ignition Switch.....CHECK GROUNDING
Avionics Power Switch.....OFF
Mixture.....IDLE CUTOFF
All Switches (right to left).....OFF
Magnetos.....OFF
ELT.....TRANSMIT LIGHT OUT
CAPS Pin.....INSTALL
Chocks, Tie-Downs, Pitot Cover.....AS REQUIRED
Brake Sensors.....INSPECT

QRC

CIRRUS SR20 QUICK REFERENCE CARD

BRIEF

SHORT-FIELD LANDING

Wing Flaps.....100%
 Airspeed.....MAINTAIN 75 KIAS UNTIL FLARE
 Trim.....ADJUST
 Power.....USE TO CONTROL GLIDE PATH
 Clear of Obstacles.....SLOWLY REDUCE POWER
 Attitude.....NOSE DOWN TO MAINTAIN 75 KIAS
 Touchdown.....MAIN WHEELS FIRST
 Brakes.....APPLY AS NEEDED
 Wing Flaps..RETRACT (improves brake effectiveness)

Power should *slowly* be reduced once clear of obstacles, reaching idle just prior to touchdown.

Do NOT lock-up the brakes as this will flat spot the tires and increase the stopping distance.

CRUISE LEANING

Power Lever.....SET 65-75% POWER
 Fuel Pump.....VERIFY OFF
 Lean Assist.....PRESS BUTTON

BEST POWER: Lean until "Peak Detected" then slowly enrich the mixture until "Peak Detected (Rich)" shows. "Best Power" will display at optimal mixture.

BEST ECONOMY: Use 65% or less power for BEST ECONOMY settings
 Lean until "Last Peak Detected" is shown. Continue leaning until "Best Economy" is shown.

Press the "Normalize" button after leaning the mixture.

SERVICING

Oil Type Used.....AEROSHELL OIL W 15w50
 Oil Quantity (Normal).....MINIMUM 6 QTS.
 Oil Quantity (Long-Distance).....7 QTS.
 Fuel at Tabs.....26 GALS. USEABLE
 Fuel to Top.....56 GALS. USEABLE
 Nose Tire Pressure.....40 +2/-0 PSI
 Main Tire Pressure.....53 +2/-0 PSI

CIRCUIT BREAKERS

Three rows of circuit breakers are located near the pilots right leg. This checklist series describes them by row (Front, Center, Aft) and number from the top down (1-13).

EXAMPLE: F4 is Front row, 4th breaker from the top.

The POH remains the official source of information.

INSTRUMENT APPROACH

AWOS/ATIS.....OBTAINED
 Altimeter.....SET
 Localizer / VOR / NDB Frequency.....SET
 Approach Course.....SET
 Runway Length (Rwy Ldg).....NOTE
 Touchdown Zone Elevation (TDZ).....NOTE
 Airport Elevation.....NOTE
 Approach Lighting.....NOTE
 Missed Approach Procedure.....REVIEW
 Approach Control Frequency.....SET
 Tower Frequency.....SET IN STANDBY
 Minimum Safe Altitude in Sector.....NOTE
 MDA/DH (Minimums).....BUG (if able)
 Missed Approach Point (MAP).....DETERMINE
 Direction of Turn Off Runway After Landing.....NOTE

Note: For a non-precision approach determine how the Missed Approach Point will be identified, either using timing or DME distance as published.

RECOMMENDED AIRSPEEDS

Instrument Approach.....105 KIAS/FLAPS 50%
 Downwind.....100 KIAS/FLAPS 50%
 Base.....90 KIAS/FLAPS 100%
 Final.....*80 KIAS/FLAPS 100%

*Reduce airspeed to 75 KIAS on short final.
 Use 85-90 KIAS for No Flap Landing.

Approach Settings:	MP	KIAS	FLAPS
Prior to FAF:	17	100	50%
Glideslope:	12	100	50%
NP Decent:	10	100	50%

V SPEEDS

Vne / Never Exceed.....200 KIAS
 Vno / Maximum Structural Cruise.....165 KIAS
 Vo / Operating Maneuvering. (3000 lbs.).....131 KIAS
 Vfe / Max. Speed w/flaps 50%.....120 KIAS
 Vfe / Max. Speed w/Flaps 100%.....100 KIAS
 Vpd / Max. Demo'd Chute Deployment.....135 KIAS
 Vy / Best Rate of Climb.....96 KIAS
 Vx / Best Angle of Climb.....81 KIAS
 Vr / Rotate.....67 KIAS
 Vs1 / Stall in Cruise Configuration.....65 KIAS
 Vso / Stall in Landing Configuration.....56 KIAS

Normal Climbout.....96 KIAS
 Enroute Climb.....105 KIAS
 Best Glide (at 3000 lbs.).....96 KIAS

CIRRUS SR20 ABNORMAL PROCEDURES

ADDITIONAL ABNORMAL PROCEDURES ARE LOCATED IN THE PILOT'S OPERATING HANDBOOK

ALT 1 LIGHT STEADY

VERIFY CONDITION: Prior to conducting the following procedure verify that ALT 1 is offline by checking the voltage meter indication for ALT 1. If the indication is near 28 volts the problem is a bad ALT 1 current sensor and you should NOT proceed with the following procedure.

If ALT 1 Current is Near 24 Volts

ALT 1 Master Switch.....OFF
ALT 1 Circuit Breaker (C5).....CHECK and RESET
ALT 1 Master Switch.....ON

If alternator does not reset

ALT 1 Master Switch.....OFF
Autopilot.....ENGAGE

Reduce Loads

Audio Panel.....OFF
GPS/COM 2.....OFF
Fuel Pump.....OFF
Panel and Overhead Lights.....OFF
Landing Light.....OFF
Strobe Lights.....OFF
Pitot Heat.....OFF

Pull Circuit Breakers

Skywatch/TAWS (F1).....PULL
WX/Stormscope (F5).....PULL
MFD (F6).....PULL

Use the Autopilot to fly the aircraft.
Avoid use of manual trim.

Do NOT reset a circuit breaker more than one time.

Land within ONE hour. Plan on a flaps up or flaps 50% landing. Do NOT extend flaps to 100% for landing. You may not have sufficient power to retract flaps should a go-around be necessary.

ALT 2 LIGHT STEADY

NOTE: ALT 2 will not come on line at low RPM settings.

VERIFY CONDITION: Prior to conducting the following procedure verify that ALT 2 is offline by checking the voltage meter indication for ALT 2. If the indication is higher than the ALT 1 voltage then the problem is a bad ALT 2 current sensor and you should NOT proceed with the following procedure.

If ALT 2 Voltage is the Same as ALT 1 Voltage

ALT 2 Master Switch.....OFF

Discontinue IFR Flight as soon as practical. Redundant electrical power is no longer available.

HOT START

1. Prime engine until 15 GPH is obtained:
 - Power Lever FULL FORWARD
 - Mixture FULL FORWARD
 - Boost pump switch to PRIME
2. Follow quickly with MIXTURE IDLE CUTOFF (power lever remains full forward).
3. Boost pump switch to BOOST.
4. Clear prop and START engine.
5. If no start within 15 seconds repeat procedure but turn OFF boost pump after priming.
6. At engine start RETARD POWER LEVER followed by FULL RICH mixture.
7. Lean mixture as required.

DOOR OPEN IN FLIGHT

Airspeed.....REDUCE TO 80-90 KIAS
Flaps.....SET 50%
Land.....AS SOON AS PRACTICAL

COMMUNICATIONS FAILURE

NOTE: With electrical failure the audio panel connects COM 1 to the pilot's headset and speakers .

Switches, Controls.....CHECK
Frequency.....CHANGE
Circuit Breakers.....CHECK
Headset.....CHECK CONNECTIONS / CHANGE
Hand Held Microphone.....CONNECT
Transponder.....CODE 7600

TRIM / AUTOPILOT FAILURE

Any trim or autopilot failure can be overridden by use of the control yoke.

Airplane Control.....MANUALLY
Autopilot.....DISENGAGE

If Problem Not Corrected:

Circuit Breakers.....PULL AS REQUIRED
PITCH TRIM (F11)
ROLL TRIM (F12)
AUTOPILOT (A9)

Power Lever.....AS REQUIRED
Control Yoke.....MANUALLY HOLD PRESSURE

ENGINE INSTRUMENTS RESET

Circuit Breaker (A1).....PULL AND RESET

EMERGENCY CHECKLIST

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FLY THE AIRPLANE - IDENTIFY EMERGENCY - READ CHECKLIST - DO NOT HURRY!

PAGE 1

ENGINE FAILURE

DURING TAKEOFF ROLL

Throttle.....**IDLE**
Brakes.....**APPLY**
Wing Flaps.....**RETRACT**
Mixture.....**CUTOFF**
Master Switch.....**OFF**

IMMEDIATELY AFTER LIFTOFF

Best Glide or Landing Speed....**ESTABLISH**
Mixture.....**IDLE CUTOFF**
Fuel Selector Valve.....**ROTATE TO OFF**
Ignition Switch.....**OFF**
Wing Flaps.....**AS REQUIRED**
If time permits:
Power Lever.....**IDLE**
Fuel Pump.....**OFF**
Bat-Alt Master Switches.....**OFF**
Seat Belts.....**ENSURE SECURED**

DURING FLIGHT (ATTEMPT RESTART)

Airspeed.....**96 KIAS**
Mixture.....**RICH**
Fuel Selector Valve.....**SWITCH TANKS**
Fuel Pump.....**BOOST**
Alternate Air.....**ON**
Ignition.....**BOTH**

EMERGENCY LANDING

WITHOUT ENGINE POWER

Airspeed.....**96 KIAS (flaps up)**
Radio.....**TRANSMIT MAYDAY**
Transponder.....**SQUAWK 7700**
If off airport.....**ACTIVATE ELT**
Power Lever.....**IDLE**
Mixture.....**CUTOFF**
Fuel Selector Valve.....**ROTATE TO OFF**
Ignition Switch.....**OFF**
Fuel Pump.....**OFF**
Flaps (when landing assured).....**100%**
Master Switch.....**OFF**
Seatbelts.....**SECURE**
Exit Aircraft.....**MEET PAX UPWIND**

PRECAUTIONARY LANDING

WITH ENGINE POWER (off-field)

Seatbelts.....**SECURE**
Flaps.....**50%**
Airspeed.....**95 KIAS**
Selected Field.....**FLY OVER TO OBSERVE**
Selected Field.....**LINE UP FOR FINAL**
Avionics Power Switch.....**OFF**
Wing Flaps.....**100%**
Airspeed.....**75 KIAS**
Master Switch.....**OFF**
Doors...**UNLATCH PRIOR TO TOUCHDOWN**
Touchdown.....**SLIGHTLY TAIL LOW**
Ignition Switch.....**OFF**
Brakes.....**APPLY HEAVILY**

ENGINE FIRE

IN FLIGHT

Mixture.....**CUTOFF**
Fuel Pump.....**OFF**
Power Lever.....**IDLE**
Airflow Selector.....**OFF**
Fuel Selector.....**ROTATE TO OFF**
Ignition.....**OFF**
Cabin Door.....**OPEN RIGHT DOOR**
If fire fails to extinguish increase glide speed to incombustible mixture speed.
Emergency Landing**EXECUTE**

DURING START

Mixture.....**IDLE CUTOFF**
Fuel Pump.....**OFF**
Fuel Selector.....**OFF**
Power Lever.....**FORWARD**
Starter.....**CRANK**
Fire Extinguisher.....**OBTAIN AND USE**
If flames persist:
Power Lever.....**IDLE**
Fuel Pump.....**OFF**
Mixture.....**CUTOFF**
Fuel Selector.....**OFF**
Ignition Switch.....**OFF**
Bat-Alt Master Switches.....**OFF**
Exit Aircraft.....**MEET PAX UPWIND**

IMMEDIATE ACTION ITEMS ARE IN BOLD PRINT

EMERGENCY CHECKLIST

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FLY THE AIRPLANE - IDENTIFY EMERGENCY - READ CHECKLIST - DO NOT HURRY!

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CABIN FIRE

IN FLIGHT

Bat-Alt Master Switch.....OFF
Vents/Cabin Air/Heater.....CLOSED
Fire Extinguisher.....ACTIVATE

WARNING: Ventilate cabin by opening vents and opening doors if needed after use of fire extinguisher.

Avionics Power Switch.....OFF
All Other Switches (except ignition).....OFF

If fire appears to be out and electrical power is required for continued safe flight (IFR flight):

Bat-Alt Master Switch.....ON
Circuit Breakers.....CHECK for faulty circuit

DO NOT RESET if breaker has tripped.

Individual Radio Switches.....OFF
Avionics Power Switch.....ON
GPS-COM/Electrical Switches.....ON one at a time until the short circuit is localized.

WING FIRE

Pitot Heat Switch.....OFF
Navigation Light Switch.....OFF
Landing Light Switch.....OFF
Strobe Light Switch.....OFF

Perform a sideslip to keep flames away from fuel tank and cabin.

Putting the airplane into a dive may blow out the fire. Do not exceed Vne (200) during the dive.

Land ASAP using wing flaps only as required for final approach and touchdown.

IMMEDIATE ACTION ITEMS ARE IN BOLD PRINT

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ICING ENCOUNTER

Pitot Heat Switch.....ON
Time.....NOTED
Heading and/or Altitude.....CHANGE

A heading change of 180° should return you to ice free conditions. Lower altitudes are normally warmer. Advise ATC if under IFR control.

Cabin Heat.....MAXIMUM
Windshield Defrost.....FULL OPEN
Alternate Induction Air.....ON

WARNING: With extremely rapid ice buildup select a suitable off-airport landing site.

Stall Speed will be significantly higher with ice accretion of 1/4 inch or more.

Wing Flaps Use flaps 50% or no flaps as wing wake airflow change with flaps down could result in loss of elevator effectiveness.

Forward Slip to land if needed for improved forward visibility.

Approach: If ice is suspected to be adhering to the tail use higher approach speeds.

No-Flap use 95-100 KIAS
Flaps 50% use 90-95 KIAS

Land in a level attitude.

OTHER EMERGENCIES

SEE POH SECTION 3

This checklist was created to deal with most, but not all, emergency situations. Additional information is available in Section 3 of the Pilot Operating Handbook (POH). The POH is the definitive source of information concerning operation of this aircraft. The Pilot in Command is responsible for complying with all items in the POH and applicable STC's.