



Workbook SR22 Turbocharged

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Workbook

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1.1 Introduction

Each of the following sections corresponds to a section in the POH that is included at the end of this manual. In each section you will find: quiz questions, supplemental information, and operating tips.

The answers to the questions will be found in the provided generic POH (unless otherwise noted). These questions are required to be completed prior to the beginning of your training. If you have problems with the workbook or would like clarification on a question within it, you may use the forum titled "Q & A Forum" on HTMLLeZ.

1.2 General

This section will cover Section 1 (General) of the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. What is the wing span of the Cirrus SR22?
Tip: Consider this when hangering your aircraft.
2. What is the certified max gross weight of the aircraft?
3. In what ways does the weight of the aircraft affect aircraft performance?
4. How much clearance is between the tip of the propeller and the ground?
5. What is your engine model?
6. What is the definition of reference datum?
7. What is the definition of arm?
8. What is Moment?
9. How does center of gravity affect aircraft performance?

1.3 Limitations

This section will cover Section 2 (Limitations) of the Cirrus SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. Fill in the speeds and definitions of the following:

Vne	_____ KIAS	_____	(17,500)
Vne	_____ KIAS	_____	(25,000) turbo supplement
Vno	_____ KIAS	_____	(17,500)
Vno	_____ KIAS	_____	(25,000) turbo supplement
Vo	_____ KIAS	_____	3400lbs.
Vfe	_____ KIAS	_____	50% Flaps
Vfe	_____ KIAS	_____	100% Flaps
Vpd	_____ KIAS	_____	
Vso	_____ KIAS	_____	
Vs	_____ KIAS	_____	

2. What is the significance of V_{no} and how does it differ from V_{ne} ?
3. What is the significance of V_o ?
4. What is the significance of the green arc on the airspeed indicator?
5. What two speeds define the top and bottom of the green arc?
6. What two speeds define the top and bottom of the white arc?
7. During the engine break-in period what type of oil should be used?
8. What is the max takeoff altitude for the aircraft?

9. What is the max operating altitude of the aircraft (see Turbo supplement)?
10. Can you operate the aircraft at the max operating altitude without oxygen? (FAR 91.211)
11. Can you paint your airplane Navy Blue? Why?
12. Can you operate this aircraft out of un-paved runway surfaces?
13. Is the MFD approved as a primary navigation instrument?
14. Can CMax be used as primary source of approach information?
15. Are backup paper charts required for instrument flight if the aircraft is equipped with current CMax charts?
16. Can you fly VFR with ALT 2 INOP?
17. Can you fly IFR with ALT 2 INOP?
18. Can you fly VFR with one of the strobe lights out?
19. What is the significance of V_{pd} and why do you not see this in other aircraft?

- 20. Can you fly IFR with the NAV lights inoperative?

- 21. Can you fly with any of the engine instruments inoperative?

- 22. Is the aircraft approved for aerobatics/spins?

- 23. Can you operate your aircraft without removing the CAPS safety pin? (FAR 91.9)

24. Indicate the following Fuel Limits:

Approved Fuel _____

Total Fuel Capacity _____gals

Total Fuel Each Tank _____gals

Total Usable Fuel _____gals

Unusable Fuel _____gals

Maximum Allowable Fuel Imbalance _____gals

- 25. When does the BOOST pump need to be in operation?

- 26. What three annunciator lights are required to be operational for flight?
Tip: It is important to remember to check the annunciator lights panel each time. This item is not included in any other operational checklist.

27. Can you fly with the autopilot inoperative?

28. How does an inoperative autopilot affect your personal minimums or go/no-go decision for an IFR flight?

1.4 Emergency Procedures

This section will cover Section 3 (Emergency Procedures) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. Fill in the speeds and definitions of the following:
Vg _____ KIAS _____ 3400 lbs.
Vg _____ KIAS _____ 2900 lbs.
2. Emergency Landing Speeds:
Flaps Up _____ KIAS
50% Flaps _____ KIAS
100% Flaps _____ KIAS
3. In any emergency situation, what is the most important thing to remember and perform?
4. What is the procedure for a fire on engine start?
5. How many circuit breakers would you pull with runaway trim? What are these circuit breakers labeled?
6. What indicates the failure of an alternator?
7. Would you lose any equipment if you lost ALT 1? (Electrical Distribution Diagram in Section 3) If yes, what?
8. If taxiing at 1000 RPM, why would your ALT 2 caution light be on?

9. Would you lose any equipment if you lost ALT 2? (Electrical Distribution Diagram in Section 3) If yes, what?

10. What is your aircraft glide ratio?

11. What is your best glide distance if you were at 6,000' AGL?

12. A propeller governor failure can be the cause of what two situations?

13. Is it advisable to unlatch the cabin doors with smoke or fumes in the cabin?

14. What are 2 causes of an unexplained loss of manifold pressure? (turbo supplement)

15. Is an unexplained loss of manifold pressure an emergency? (turbo supplement)

16. What is the procedure for an emergency descent?

17. In what situation would you use an emergency descent?

18. What is the procedure if you have an engine failure in flight?

19. Is flight into known icing conditions prohibited?

20. What is the procedure for an inadvertent icing encounter?

21. The temperature at sea level is 30 degrees Celsius. Assuming the standard temperature lapse rate of 2 degrees / 1000', where do you expect the freezing level to be?

22. In an engine failure situation with the prop wind milling, how can you gain additional glide distance?

23. What is the only approved and demonstrated method for spin recovery?

24. If only the airspeed indicator is giving erroneous information, what kind of malfunction can you expect?

25. What is the corrective action for erroneous airspeed indications?

26. Will the auxiliary fuel pump provide enough fuel to power the engine in the event of an engine driven fuel pump failure?

27. What 2 conditions will turn the oil annunciator light on?

28. What is the procedure for a propeller overspeed?

29. What is the procedure for a cabin fire in flight?

30. What procedure would you use to try and get ALT 1 back online in the case of an ALT 1 failure? What would your next step be if you could not get the alternator back online?

31. What is the approximate expected impact from a parachute drop?

32. If activation of the CAPS system is necessary, what kind of motion do you want to use when pulling the handle?

33. With an engine out will full flaps increase or decrease your glide distance?

34. (True or False?) If you lose the audio panel you have lost all communications with ATC

35. When landing without elevator control what speed should you trim the airspeed for?

36. Your ALT 1 light illuminates 30 minutes from your destination at night. What equipment would you turn off to reduce the load on Battery 1?

37. What is the procedure for a brake failure during taxi?

38. What is the procedure for single and dual brake failures in flight?

39. If you suspect a brake failure, how wide and long should the landing runway be? (i.e. what are your personal minimums)

40. List 5 possible symptoms of hypoxia. (Customer CD)

41. List 3 factors that affect an individuals response to hypoxia (Customer CD)

42. What are 3 possible causes for hypoxia? (Customer CD)

43. (True or False) The onset of hypoxia is easy to identify. (Customer CD)

44. (True or False) Symptoms of hypoxia are identical for everybody. (Customer CD)

45. What is the proper treatment for hypoxia? (Customer CD)

46. At 22,000' MLS, you recognize symptoms of hypoxia. The oxygen system flow meter indicates no flow of oxygen from the oxygen tank to your mask. The quantity indicator on the oxygen indicates zero PSI.

What is the proper way to treat hypoxia for the given scenario?

Is the above scenario an emergency?

What is the possible result if no action is taken with the above scenario?

47. What is the recommended altitude for use of oxygen for day and night time? (AIM Chapter 8)
48. When are pilots required to use oxygen? (FAR 91.211)
49. When must oxygen be made available to passengers? (FAR 91.211)

1.5 Normal Procedures

This section will cover Section 4 (Normal Procedures) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. Fill in the speeds and definitions of the following:
- | | | | |
|----|------------|-------|-----------|
| Vr | _____ KIAS | _____ | Normal |
| Vy | _____ KIAS | _____ | S.L. |
| Vy | _____ KIAS | _____ | 10,000' |
| Vx | _____ KIAS | _____ | S.L. |
| Vx | _____ KIAS | _____ | 10,000' |
| Vo | _____ KIAS | _____ | 3400 lbs. |
| Vo | _____ KIAS | _____ | 2900 lbs. |

- | | |
|-----------------------------|-------------|
| Final Approach Flaps Up | _____ KIAS |
| Final Approach 50% Flaps | _____ KIAS |
| Final Approach 100% Flaps | _____ KIAS |
| Vref Short Field 100% Flaps | _____ KIAS |
| Max Demonstrated X-Wind | _____ Knots |

2. During the cabin preflight, what should be the normal voltage indication on the SR22?
3. How many points are you able to drain fuel from?
4. What items would you brief your passengers on during a passenger briefing?
5. After start up, how soon should you see a change in oil pressure?

6. What are the max cranking intervals for the starter?

7. During taxi, the taxi checklist has you check three pieces of equipment. What are these three pieces of equipment and what are you checking for?

8. (True or False?) Directional control during taxi operations is best achieved by differential braking where full rudder authority is used before brakes are applied.

9. (True or False?) Excess use of the brake can result in overheated brakes which may result in brake failure or system failure.

10. (True or False?) You need to maintain at least 1000 RPM while taxiing the aircraft.

11. Before doing your taxi run-up you want the oil temperature to reach what temperature?

12. Within what RPM range should the ALT 2 caution light turn off?

13. If no drop in RPM is noted on the magneto check, what is the probable cause?

14. (True or False?) The mixture should be leaned for maximum power when taking off from high altitude airports.

15. Normal takeoffs can be performed with what flap setting(s)?
Short and soft field takeoffs?

16. Flaps retraction after takeoff from 50% to 0% is done at or above what minimum speed?
17. What is the recommended cruise climb airspeed?
18. What is the corrective action if the manifold pressure exceeds 32 inches during takeoff? (turbo supplement)
19. List the procedures for a Rich of Peak (ROP) climb. (turbo supplement)
20. List the procedure for a Lean of Peak (LOP) climb. (turbo supplement)
21. (True or False) Leaning the mixture control when operating lean of peak EGT will cause the CHT's to increase. (turbo supplement)
22. What is the corrective action of CHT's exceed 380° F during a LOP climb? (turbo supplement)
23. What is the maximum altitude a Lean of Peak (LOP) climb can be used? (turbo supplement)
24. The climb checklist should be completed no lower than what altitude? (Section 4, Standardization)
25. List the procedure for setting cruise power to 85% (turbo supplement)
Throttle_____

Mixture _____

Boost pump _____

26. When should the boost pump be turned off during cruise? (turbo supplement)

27. (True or False?) The fuel BOOST must be used when switching tanks?

28. CHT's should be kept above what temperature during descent? (turbo supplement)

29. List 3 factors that affect CHT cooling during descent?

30. What power setting can be used during descent?

31. The descent checklist should be completed by what point? (Section 4, Standardization)

32. What distance from the destination airport should you start a descent from 17,500 AGL to a traffic patten of 2,500 AGL when using:
 - 500 ftp descent
 - 1000 fpm descent

33. (True or False?) The mixture should be full rich and boost pump on before landing.
34. (True or False?) Normal landings are not allowed with 0% or 50% flaps?
35. On a crosswind landing, at what point will you transition from a wings-level crab angle into a sideslip?
36. Power goes to what setting on a balked landing/go-around?
37. When do you perform the after landing checklist? (Section 4, Standardization)
38. (True or False?) The mixture should be leaned for taxi.
39. Why is the use of a paper checklist for shutdown necessary?
40. (True or False?) Turbo cool down is necessary before engine shutdown. (turbo supplement)
41. At what point should you hear the stall warning horn?
42. What is the priming procedure for start for; normal, cold, hot and flooded starts?

43. Below what temperature should external preheat or external power be used for start?

44. On start up the engine has intermittent firing and small puffs of black smoke rise from under the aircraft. What is the probable cause and corrective action?

45. You have misjudged your approach to landing due to winds, and it appears you will land longer than you anticipated. What is your best course of action?

1.6 Performance

This section will cover Section 5 (Performance) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

Use the following information to answer the questions, for a flight from Rapid City, SD (KRAP) to Duluth, MN (KDLH). Assume max gross weight on takeoff, full fuel and 75% “best power” setting for cruise.

Distance 487 NM
 Magnetic Course 254 degrees

Weather Conditions:

KDLH 101250Z 33020KT 10SM SCT010 20/10 A2982

KRAP 101250Z 22026KTG35 10SM FEW010 SCT020 30/17 A2975

Winds aloft

FD	3000	6000	9000	12000	18000
DLH	2925	253415	253704	264201	2754 -03
GFK	302610	263309	253708	254205	2650001
FSD	2923	263214	272907	283502	2841-01
RAP		283417	303309	304003	314900

Airport Information:

KRAP Elevation 3202ft.
 RWY 23/05 3600ft.
 RWY 32/14 8701ft.

KDLH Elevation 1420ft.
 RWY 27/09 10152ft.
 RWY 03/21 5699ft.

1. What will be your takeoff distance (ground roll) departing KRAP?
2. What is your x-wind component for runway 32 at KRAP?
3. What will be your average climb rate out of KRAP to your selected cruise altitude?

4. What altitude will you use and why?
5. In addition to winds aloft, what other factors should be considered when selecting a cruise altitude?
6. What will be your endurance for today's flight?
7. What is the O2 duration for 15,000ft with 3 persons onboard?
8. What will be your calculated KTAS and fuel flow for cruise flight?
9. How much fuel will you have once you reach your destination?
10. Will you be able to make your destination non-stop? SAFELY?
(Difference between FARs vs. personal minimums)
11. What will be your landing distance (ground roll) at KDLH?
12. What will your ground roll be upon arrival at KDLH?
13. What is the KCAS at 100 KIAS with 100% flaps?
14. What will your KIAS stall speed be on departure with 50% flaps and an AFT C.G.?
15. What is the difference between takeoff rate of climb vs. en route rate of climb?

7. Where is the aircraft Datum?

**You may use the following table to aid in calculations.
For Moment/1000, refer to loading table.**

Description	Weight	Moment/1000
1. Empty Weight Includes unusable fuel & full oil		
2. Front Seats Occupants Pilot and Passenger		
3. Rear Seats Occupants		
4. Baggage 130 Lb maximum		
5. Zero Fuel Condition Sub total items 1 thru 4		
6. Fuel Load 81 Gallon @6.0 lb/gal. maximum		
7. Ramp Weight Sub total items 5 and 6		
8. Fuel for Start, taxi, and runup Normally 9 lb at average Moment of /1394		
9. Takeoff Weight Subtract Item 8 for item 7		

1.8 Airplane and Systems Description

This section will cover Section 7 (Systems) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. What are the three flap settings?

_____ %	_____ °
_____ %	_____ °
_____ %	_____ °

2. (True or False?) The horizontal stabilizer is a two piece unit attached at empennage.

3. The rudder-aileron interconnect does what to the aileron when full right rudder is applied?

4. (True or False?) It is possible to have an asymmetrical flap deployment in a Cirrus aircraft.

Hint: Take a look at the flap control diagram.

5. Why is the Cirrus not equipped with gust locks?

6. (True or False?) The autopilot also uses the electric roll trim.

7. The landing gear struts are made of what?

8. How many master brake cylinders are there?

9. Below what temperature does the oil bypass the oil cooler?

10. What is the recommended extended flight oil level for the engine?

11. Where is the alternate air control knob?

12. What will cause the OIL warning light to illuminate?

13. Describe when oil is metered into and out of the prop hub.

14. What pulls the fuel from the collector tanks?

15. How much fuel is held in each collector tank?
(PowerPoint™ slides on Customer Resource CD)

16. What situation will cause the FUEL caution light to illuminate?

17. True or False? If one tank is at 10 gallons, and the other tank is at 17 gallons the FUEL caution light will illuminate.

18. Alternator #1 is rated for how many amps?
How many volts?

19. Alternator #2 is rated for how many amps?
How many volts?

20. Battery #1 is rated for how many amps?
How many volts?

21. Battery #2 is rated for how many amps?
How many volts?

22. Output from alternator #1 is connected to which bus?

23. Output from alternator #2 is connected to which bus?

24. How are the main distribution bus and essential distribution bus connected?

25. What does the diode between the two distribution buses do?

26. You are on the ground with BAT 2 on. What indication do you get if the isolation diode has failed?

27. When battery #1 is turned on, which buses are energized?

28. When battery #2 is turned on which buses are energized?

29. A steady ALT 1 / ALT 2 light denotes what?
30. A flashing ALT 1 / ALT2 light denotes what?
31. The back seat passengers are cold. How do you go about setting the heat and ventilation knobs to direct the maximum amount of warm air to your passengers?
Hint: Look at the heating & ventilation diagram.
32. What kind of stall warning system is installed on the Cirrus?
33. When practicing power off stalls with full flaps, at what IAS would you expect to hear the stall horn?
34. What causes the 'Pitot Heat' annunciation light to illuminate?
35. How many square feet is the parachute?
36. What kind of pull on the handle works best when activating the CAPS system?
37. What kind of descent rate can you expect with a parachute deployment?

1.9 Handling Service & Maintenance

This section will cover Section 8 (Service and Handling) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

1. What are the five documents required by the FAA to be onboard the aircraft at all times?
2. What are the two recommended procedures for you to verify if your airplane conforms to all Airworthiness Directives?
Hint: It is also possible to get this information from <http://www.faa.gov> on the web.
3. If an annual inspection was done on your aircraft May 16, 2005, when will the next inspection be due?
4. After completing any of the work described as preventative maintenance in the POH, what are the required logbook entries you must make?
5. Should you use external power to start the airplane if it has a “dead” battery?
Tip: In most cases you can't even connect external power to the airplane unless there are enough volts and amps remaining in battery 1 to energize the relay in the MCU.
6. How often should the brake fluid be inspected and replenished?
7. How often should the brake linings be inspected and replaced?

8. While taxiing, how is steering is accomplished?

Tip: In the event of a brake failure it is possible to use rudder for directional control, however, this procedure will only work if you are carrying enough power on the engine to produce enough induced airflow over the rudder. This procedure should only be used in an emergency! When applying power you may gain directional control but you will also gain a considerable amount of groundspeed.

9. When moving your Cirrus around on the ground you should ALWAYS use a _____.

Tip: When flying into an unfamiliar FBO that wants to move your aircraft with mechanical tow bars, be sure to check if the tow hook fits your aircraft. Some tow bars appear to fit, but once pressure is applied they may slip out of position. This may result in the pressure being applied to the nose wheel fairing instead, possibly damaging it.

Mechanical dollies that lift the nose wheel off the ground should also be avoided due to the clearance of the nose wheel fairing. Also, the strap used to secure the aircraft on these types of systems wraps around the nose wheel strut fairing and will crack or possibly destroy the fairing.

10. Where is the hydraulic brake fluid reservoir located?

11. What is the proper tire pressure?

Nose Gear –

Main Gear -

12. After the engine break in period, what is the recommended time between oil changes?

13. The fuel filtration screen in the gascolator must be cleaned every _____ hours of operation.

Tip: In order to get the most accurate fuel readings, when flying a Cirrus with engine monitoring, make sure that the fuel tanks are “topped off.” Many times, FBO’s will leave fuel levels an inch or two from the top and in the Cirrus that could equate to several gallons that may be used for reserve purposes.

14. True or False? A fuel sample is not required to be taken prior to each flight.

15. True or False? Battery 1 is located aft of the baggage compartment.

16. What should you use when washing the exterior of the aircraft?

17. When cleaning any of the windows, what do you not want to use?

1.10 Supplements

This section will cover Section 9 (Supplements) from the SR22 Pilots Operating Handbook, unless otherwise noted.

We recommend that you download the specific information manual for each piece of equipment because of the diversity and complexity of the various avionics utilized in Cirrus aircraft.

Additional training information on specific avionics can be found on our web page at: <http://www.aero.und.edu/cirrus>.

5.10.1 Internet Hyperlinks

Pilot Operating Handbooks and supplements can be downloaded from the following websites:

- UND Aerospace Cirrus Factory Training Provider (follow links to HTMLeZ)
 - <http://www.aero.und.edu/cirrus>
- Cirrus Design Corporation for service publications updates
 - <http://www.cirrusdesign.com>
- COPA
 - <http://www.cirruspilots.org>
- Avidyne Avionics
 - <http://www.avidyne.com>
- Teledyne Continental Motors
 - <http://www.tcmlink.com>
- Garmin Avionics
 - <http://www.garmin.com>
- L-3 Avionics Systems
 - <http://www.as.l-3com.com>
- S-Tec/Meggitt
 - <http://www.s-tec.com>
- Sandel
 - <http://www.sandel.com>
- TKS
 - <http://www.flightice.com/tks.html>
- AOPA
 - <http://www.aopa.org>
- Federal Aviation Administration
 - <http://www.faa.gov>

- *Turbocharger*
 - *<http://www.taturbo.com>*
- *Approved Oxygen System*
 - *<http://www.preciseflight.com>*

NOTE: Only answer the questions for the avionics that are in your aircraft.

1.10.2 Garmin GMA 340 Audio System

Before conducting your training you will need to know how to accomplish the following basic functions:

- Volume and squelch adjustments
 - Com/Nav selectivity transmit and receive functions
 - Crew isolation features
 - Operation of Marker Beacon Annunciator
1. What will happen if the audio panel fails?

1.10.4 Garmin GNS 430 Global Positioning System (GPS)

Before conducting your training you will need to know how to accomplish the following basic functions. Please note this is the most difficult piece of avionics to operate. Please take the time to learn the basic functions listed below. We recommend purchasing a tutorial to aid in learning this system, such as V-flight. They will send a free demo disk to you upon request; find them online at: <http://www.vflight.com>.

- Turn Garmin unit ON and OFF.
- Tune in communications frequencies (manually with knob and frequency standby switch button) and adjust the volume.
- Direct-To Function (D → button) and input the airport name and/or identifier.
- Select nearest airport and navigate GPS direct-to the desired airport.
- Emergency frequency 121.5 MHz (communications standby switch held).
- Clear (CLR) Button – Default to Nav 1 page.
- Recommended: How to create, save and activate a flight plan (not required).

Recommended for Instrument Rated Pilots (Required for IPC)

- VOR/Localizer frequencies and how to identify them (manually with knob and the standby frequency switch) and adjust the volume.
 - How to load and activate an approach
 - How to create and edit a flight plan
 - Understand when and where to use the cursor and enter buttons.
 - Change the CDI between GPS and V/LOC mode and understand when it is appropriate to do so.
 - Understand and know the function of the OBS button.
1. True or False? The GNS 430 Pilot's Guide and Reference can be stored outside the reach of the pilot during flight.

1.10.6 Approved Oxygen Systems

Training on oxygen systems is not covered in the standard training. Questions regarding oxygen systems should be directed to Cirrus Design or the supplier indicated in the Pilots Operating Handbook.

NOTE: You will need to add this to your pre-flight briefing for your passengers.

Note: It is recommended that you utilize a Pulse Oximeter for high altitude operations to ensure the proper blood oxygen saturation and prevent hypoxia.

1.10.8 Goodrich SkyWatch SKY497 Traffic Advisory System

Before conducting training you will need to be familiar with the following:

- How and where information is displayed for the SkyWatch system
 - Limitations of the system
-
1. True or False? If advised to disable your transponder by ATC, you need to turn off your Sky Watch System.

1.10.11 Ice Protection System

Before conducting training you will need to be familiar with the following:

- Limitations of the system
1. Is flight into known icing approved for the Cirrus?

 2. What is the definition of “known icing”?

NOTE: This answer is not in the POH. This is an important issue; Cirrus recommends that you do further reading about icing at the following websites:

- Aircraft Owners and Pilots Association: Safety Advisors
 - <http://www.aopa.org/asf/publications/advisors.html>
- NASA GRC Icing Branch
 - <http://aircrafticing.grc.nasa.gov/>
- AVWeb: Aviation Magazine and News Service
 - <http://www.avweb.com/news/airman/181877-1.html>
- Aeronautical Newsletter of the Seattle Flight Standards District Office – Issue November-December 2003
 - http://www.faa.gov/fsdo/seattle/pdf/aerosafe11_12_03.pdf

Hint: Pre-flight procedures for the ice protection system are not listed on the standard paper or MFD checklists, but are in the supplements section of the POH. Additional attention should be given to operation and pre-flight of the system ensuring it is primed, especially when flying into instrument conditions or precipitation.

1.10.13 Turbocharged System

Before conducting training you will need to be familiar with the following: The answers to these questions can be found in your Turbocharged system supplement and presentation found on your resourced CD.

1. What is the pressure of the upper deck?
2. What are two key components of the upper deck?
3. What does the intercooler do and what is the pressure after the intercooler?
4. What could cause an over boost situation?
5. What is the maximum Turbo Inlet Temperature (TIT)?
6. What is the maximum certification altitude?
7. A Closed waste gate sends more exhaust through the turbo? (True or False)
8. An open waste gate allows exhaust to bypass the turbo and be dumped overboard. (True or False)
9. The fuel injectors, engine driven fuel pump and magnetos are pressurized. (True or False) Why?

10. Engine is idling on the ground is the waste gate open or closed?
Why?

11. The mixture should be leaned for take off at higher density altitudes to compensate for the decreased pressure. (True or False)

12. The aircraft climbs to 25,000 from SL what happens to the waste gate? Will the waste gate be fully closed at 25,000 MSL?

13. When flying at higher altitudes what is the minimum level of oxygen saturation you should see when using a pulsoxymeter?

14. CHT's should be kept below ____ F

15. Avoid continuous operations with the fuel flow set between.
 - a. 18-28 gph and above 25" MP
 - b. 17-29 gph and above 24" MP
 - c. 19-30 gph and above 26" MP
 - d. 20-30 gph and above 26" MP

16. After completing the climb checklist boost pump should remain on for ____ min. Why?

17. Leaning the engine will cause the CHT's to rise when operating lean of peak? (True or False)

18. While climbing at 130 KIAS, during a lean of peak climb the CHT's exceed 380 F
What is the appropriate response?
What if that does not work?

19. What if the CHT's cool below 380 F but the climb performance is not acceptable? What is the appropriate action?

20. After setting cruise power at 85% (2500 rpm /Max MP and 17.6 GPH) the CHT's remain at 395 F. What is the appropriate action?

21. What is the appropriate course of action in the event of an unexplained loss of manifold pressure?

22. Shortly after leveling out at 22,000 you set cruise power, lean the mixture and turn your boost pump off and your engine fails.
What do you do?
Why did the engine fail?

1.11 Safety Information

This section will cover Section 10 (Safety Information) from the SR22 Pilots Operating Handbook. Answers to all questions will be found in the appropriate section of the POH, unless otherwise noted.

Regarding the Cirrus Airframe Parachute System (CAPS):

1. What is the significance of the V_{pd} or max parachute deployment speed and what is the numerical value?
2. What factors do you need to take into account if the parachute is to be deployed?
3. List scenarios when activation of the CAPS might be appropriate?

Tip: There is no minimum deployment altitude. This is because the actual altitude loss during a particular deployment depends upon the airplane's speed, altitude and attitude at deployment as well as other environmental factors. As a guideline, the demonstrated altitude loss from entry into a one-turn spin until under a stabilized parachute is 920 ft. Altitude loss from level flight deployments has been demonstrated at less than 400 ft. The recommended cut-off decision altitude is 2,000' AGL

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