



FLIGHT OPERATIONS MANUAL

(Rev. 7)



DEPARTMENT OF AVIATION
MINNESOTA STATE UNIVERSITY, MANKATO



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REVISION CONTROL

Revisions will be prepared by the Chief Flight Instructor of North Star Aviation, Inc., and each revision will be submitted to the FAA for review prior to being implemented. Each revision will have a revision number, date, and page numbers being revised. Revisions will be consecutively numbered, and a record of any revisions will be kept on the Log of Revisions, page iii of this preface.

Revision control is accomplished in the upper right-hand corner of each page. The following is an explanation of the terms found.

Revision	Date
R-4	08/21/2017

R-4	Represents revision 4
08/21/2017	Represents the date the revision became effective



LOG OF REVISIONS

REV NO.	DATE	PAGE NUMBERS	SIGNATURE
R-0	06/05/2011	Original issue of entire manual	RLJ
R-1	03/10/2012	Revision to Sections A, B, & C	
R-2	10/10/2016	Revision of entire manual	JSP
R-3	12/05/2016	ii, iii, iv, v, vii, viii, ix, x, B-14, C-6	JSP
R-4	08/21/2017	Revision of entire manual	JSP
R-5	04/30/2018	iv, v, 2, 3, 8, 10, 12-14, 16, 17, 19, 20, 24, 25, 27-29, 31, 33, 35, 49	CJP
R-6	11/9/2018	i, ii, iv, v, 1, 5, 6, 8, 11, 12, 13, 14, 17, 18, 19, 20, 12, 24, 25, 28, 29, 33, 39, 55-65	CJP
R-7	11/01/2019	Revision of entire manual	CJP



EFFECTIVE PAGES

This list contains all pages and respective current revision numbers of North Star Aviation's Flight Operation Manual (FOM). This section is used to ensure current revisions have been updated in your FOM.

PAGE	REVISION	DATE	PAGE	REVISION	DATE
i	R-7	11/01/2019	34	R-7	11/01/2019
ii	R-7	11/01/2019	35	R-7	11/01/2019
iii	R-7	11/01/2019	36	R-7	11/01/2019
iv	R-7	11/01/2019	37	R-7	11/01/2019
v	R-7	11/01/2019	38	R-7	11/01/2019
1	R-7	11/01/2019	39	R-7	11/01/2019
2	R-7	11/01/2019	40	R-7	11/01/2019
3	R-7	11/01/2019	41	R-7	11/01/2019
4	R-7	11/01/2019	42	R-7	11/01/2019
5	R-7	11/01/2019	43	R-7	11/01/2019
6	R-7	11/01/2019	44	R-7	11/01/2019
7	R-7	11/01/2019	45	R-7	11/01/2019
8	R-7	11/01/2019	46	R-7	11/01/2019
9	R-7	11/01/2019	47	R-7	11/01/2019
10	R-7	11/01/2019	48	R-7	11/01/2019
11	R-7	11/01/2019	49	R-7	11/01/2019
12	R-7	11/01/2019	50	R-7	11/01/2019
13	R-7	11/01/2019	51	R-7	11/01/2019
14	R-7	11/01/2019	52	R-7	11/01/2019
15	R-7	11/01/2019	53	R-7	11/01/2019
16	R-7	11/01/2019	54	R-7	11/01/2019
17	R-7	11/01/2019	55	R-7	11/01/2019
18	R-7	11/01/2019	56	R-7	11/01/2019
19	R-7	11/01/2019	57	R-7	11/01/2019
20	R-7	11/01/2019	58	R-7	11/01/2019
21	R-7	11/01/2019	59	R-7	11/01/2019
22	R-7	11/01/2019	60	R-7	11/01/2019
23	R-7	11/01/2019	61	R-7	11/01/2019
24	R-7	11/01/2019	62	R-7	11/01/2019
25	R-7	11/01/2019	63	R-7	11/01/2019
26	R-7	11/01/2019	64	R-7	11/01/2019
27	R-7	11/01/2019	65	R-7	11/01/2019
28	R-7	11/01/2019	66	R-7	11/01/2019
29	R-7	11/01/2019			
30	R-7	11/01/2019			
31	R-7	11/01/2019			
32	R-7	11/01/2019			
33	R-7	11/01/2019			



INTRODUCTION

This Flight Operations Manual (FOM) contains the current operating procedures and practices for North Star Aviation, Inc., (NSA) including those items required per 14 CFR Part 141.93(a)(3). It will be revised as necessary by the Chief Instructor. Rules and procedures contained herein may be more restrictive, but not less, than current Federal Aviation Regulations (FARs) and aircraft manufacturer operating procedures.

You are responsible for the contents of this document, and you must keep a copy* of it in your possession, revised as necessary, during all your flight training activities. To obtain a copy visit www.flymankato.com/flight-school/student_documents, enter password "vor1615", and select "Flight Operations Manual-Rev X" ("X" being the most current revision.) All new revisions will be announced to each instructor, who will then be responsible for informing his/her students.

Throughout your training you will be tested on this document via written examination and oral quizzing. Failure to present this document or to answer questions regarding its contents during a stage check is grounds for failure. You should be able to recognize the difference between the rules contained herein and the FARs and answer accordingly. Example: If asked about fuel reserves answer 30 or 45 minutes per the FARs, or 1 hour per North Star Aviation policy (i.e. this FOM.)

Compliance with this FOM is mandatory. Questions about any information or policies contained herein should be directed to the Chief/Assistant Chief Flight Instructor. Approval to operate outside this manual may be granted on a case by case basis after speaking to the Chief/Assistant Chief Flight Instructor.

[*Note: As required in 14 CFR 141.93(a) a "copy" will be defined as a written copy, emailed copy, an electronic copy in a PDF format that may be distributed to the student through a central download site or delivered through an electronic means.]



RESPONSIBILITIES AND EXPECTATIONS

ALL PERSONNEL

General Policies

- Smoking is only permitted in designated areas outside of NSA facilities
- Leave the aircraft or simulator cleaner than you found it. Any trash left behind will be considered yours (whether you left it there or not.)
 - No eating or drinking in any aircraft (a water bottle is the only exception)
 - No eating or drinking in the simulators.
- Alcohol, illegal drugs, prescription drugs not belonging to you, or drugs banned by the FAA are NOT permitted on the premises
 - Possession of any of the items mentioned above will be subject to immediate dismissal from the program
 - Address all medication questions to your Aeromedical Examiner (AME).
- Alcohol is not permitted to be consumed within 12 hours of flight in an NSA aircraft.

Aircraft Usage

NSA aircraft are primarily used for MNSU Aviation student training. Non MNSU students may receive training in NSA aircraft if this training does not interfere with or displace a MNSU student's scheduled flight.

Only NSA-employed flight instructors, or the following permitted exceptions, may give flight instruction in an NSA flight school aircraft:

- 1) FAA Examiner or Designated Pilot Examiner (DPE)
- 2) Mankato State University FAR 141 trained flight instructors conducting a flight lesson.

Passengers

No passengers are allowed on training flights without Chief/Assistant Chief approval. This approval must be documented on the dispatch release. A verbal approval is permissible after normal training hours provided the dispatcher documents this approval on the dispatch release.

Absolutely no passengers are allowed on flights designated as "Solo" in the Training Course Outline (TCO). Students found to have violated this rule will pay for the flight time, re-fly the lesson, and be subject to disciplinary action. The payment will be "out of pocket" meaning it cannot come from the flight lab fee.

Long Distance or Overnight Flights

Cross country flights greater than 325NM and/or overnight flights require Chief/Assistant Chief approval. Complete the Overnight Request Form (Appendix B) in detail, including all planned fuel stops, and have it signed by the Chief/Assistant Chief Instructor prior to being dispatched.

If plans change EnRoute due to weather, mechanical difficulties, etc., you must notify Dispatch, who will in turn notify the Chief/Assistant Chief Instructor.



STUDENTS

Conduct

You must comply with this FOM, and you are expected to conduct yourself in a professional manner. The MNSU Aviation Department coordinator and/or the Chief Instructor may dis-enroll any student from training for any intentional violation of this FOM or for any gross misconduct.

Facilities

You are welcome to use North Star Aviation's facilities as a place to study, whether alone or with your fellow aviation students (highly encouraged!) The front lobby and conference room (if available) are excellent places for this. Areas within NSA that are off limits to students include the following:

- Flight Simulators, unless accompanied by a flight instructor or tutor
- Behind the front counter
- Behind the dispatch counter
- Inside a maintenance hangar, unless escorted by a flight instructor

Flight Lab Grading

Your flight lab performance will be graded like any other class at MNSU (i.e. A to F). When the MNSU Aviation Department grades your flight lab with advisement from NSA, the following will be considered:

1. Flight lab completion rate
2. Stage check and checkride performance
3. FAA written exam performance
4. Professionalism (this includes Promptness, Attendance, and Dress Code compliance)

Preflight Preparations

You must show up for each lesson *RESTED* and *PREPARED*

- Arrive **NO LATER THAN** 15 min. prior to the start of your training block (or 1 hour prior to the start of your checkride.) Example: if you are scheduled from 9:00 to 11:00 your *latest* arrival time is 8:45 (or 8:00 for a checkride.)
- Read and study the lesson contents ahead of time (see the "Required Reading/Study" section of your upcoming lesson in the TCO)
- Complete the required preflight planning per FAR 91.103 (i.e. check weather, NOTAMs, TFRs, runway performance, weight and balance, I'M SAFE, etc.)

Dress Code

The purpose of the North Star Aviation and MNSU Aviation dress code is to establish a professional training atmosphere. It is not intended to suppress the individuality of any student. Look professional to be professional.

- Preferred: MNSU Aviation collared shirt. (Note: one polo purple shirt is provided by the MNSU Aviation department; others may be purchased at NSA for a small fraction above cost.) For pants/shorts see the Business Casual guidelines below.
- Business Casual: If unable to wear an MNSU Aviation collared shirt you must dress in business casual attire. The following business casual guidelines allow for comfort while displaying a professional appearance. (Note: If the professionalism of your clothes is in question it is best to not wear them!) This list is not all inclusive:
 - Slacks, Khakis, cotton pants, jeans, skirts/dresses/walking shorts of appropriate length (no shorter than 2 inches above the knee)
 - Dress shirts, collared shirts, sleeveless blouses, blouses, sweaters, or turtlenecks
 - Quality closed toed shoes
- Items considered **not** acceptable include, but are not limited to:
 - Sweatpants, t-shirts, tank tops, spandex clothing, or gym clothes
 - Halter tops, mini-skirts or dresses, revealing shorts or skirts (more than 2 inches above the knee) and low-cut blouses
 - Clothing that is torn, ripped, frayed, or has holes

If you arrive for any lesson without following this dress code, you may be subject to a no-show fee on the grounds of being unprepared. Instructors and dispatchers will monitor your professionalism, and the consequences for not following this code will be as follows:

- 1) First occasion: You will be reminded of this dress code, and you may be required to wear appropriate attire provided by North Star Aviation.
- 2) Second occasion: You will be reminded of this dress code, and you may lose your scheduled airplane (if applicable) to a student on reserve. Additionally, you will lose points for “professionalism” on the grading rubric, which could affect your flight lab grade.
- 3) Third or more occasion(s): You will be sent home, and a no-show fee will be assessed following the scale prescribed in the “Attendance/No-Show Policy” of this manual.



Scheduling & Flight Training

To begin any flight training you must be registered for the flight lab with MNSU, and you must pay the lab fee. (See the Chief Instructor for exceptions.) The associated ground school is a pre or co-requisite (e.g. you can't begin Instrument flight training unless you are currently taking, or have taken, Instrument Ground School.) Other enrollment requirements include:

- FAA Medical (3rd class or higher)
- Appropriate Pilot Certificate (e.g. Private Pilot required to begin Instrument training)
- TSA Approval, if applicable

(See the appropriate TCO for a complete list of enrollment requirements)

You must provide NSA with your class schedule as soon as you receive it so NSA Dispatch can build your flight lab schedule. Every attempt will be made to schedule you with your instructor at least two to three times per week, including weekends. This is necessary to complete your lab within one semester (*note: inclement weather will greatly affect your ability to fly in the latter half of Fall Semester and the early half of Spring Semester. Fly as much as you can when the weather is good!*) If a lesson is cancelled for any reason attempt to reschedule that same lesson with your instructor within the week.

- The inability to complete a flight lab within one semester will affect your flight lab grade.
- The inability to complete a flight lab within the following 45 days (e.g. registered in the Fall and can't complete by the end of Spring) *will result in a failing grade.*
- **Do not register for a flight lab that you can't complete within that same semester!**

Flight lessons are assigned aircraft when you arrive for your flight block; however, they will not be assigned sooner than 30 minutes prior to the block. In order to increase the efficient use of resources, aircraft will be allocated based on the following priority scale. (The scale is ordered from highest priority to lowest priority.)

- Checkrides/Stage Checks
- Refresher flights for Checkrides/Stage Checks
- Last 3 flights in a stage. (1 lesson from stage check would have priority over 2 lessons from stage check, and 2 lessons would have priority over 3.)
- Private Solo Cross Countries
- Lower lessons have priority over higher lessons. (Ex. Private lesson 3 would have priority over Private lesson 6.)

Your initial flight instructor is assigned by Dispatch based on schedule availability; any subsequent assignments must go through the Director of Flight School Operations (DFS0). If you are experiencing training difficulties with your instructor, you must communicate this with the DFS0 or Chief/Assistant Chief Instructor. A new instructor may be in your best interest; however, we do not know there is a problem unless you tell us.



Attendance/No-Show Policy

Tardiness, arriving unprepared, or not showing up at all are serious offenses. Airplanes, simulators, and your flight instructor's time are limited resources. These are scheduled for your training, and when you fail to honor the schedule you demonstrate extreme unprofessionalism and disregard for your fellow students, your instructors, and NSA. *Repeated violations are grounds for dismissal from flight training and forfeiture of your remaining balance!*

You must arrive NO LATER THAN 15 minutes prior to the start of your lesson (or 1 hour prior to the start of your checkride.) If you cannot make it during a scheduled time (e.g. you are sick), you must contact your instructor to discuss canceling prior to the start of the lesson block.

Lessons can only be cancelled by the instructor. Students are not allowed to contact dispatch for this purpose.

Never assume you will not be able to fly until discussing it with your instructor (even for solo flights.) If it's safe to drive, come to the airport to meet your instructor at your scheduled time. Your lesson may be converted to a ground lesson, simulator lesson, tutor lesson, or your instructor may consider it safe enough to fly dual. NSA has at least one tutor available or on call to help students when lessons cannot be performed.

If you consistently request to cancel your lessons your instructor will notify the Chief Instructor. Lack of progress due to inactivity may be grounds for dismissal from training.

If you are tardy (including being unprepared to begin a lesson on time), or you fail to show up, you will be subject to the following consequences:

- Late fee based on the current pre/post cost equal to the time you were late, or the time it took you to become prepared
- Loss of the airplane, simulator, or instructor to any student on standby, if applicable
- Low flight lab grade
- No show fee imposed by Dispatch 5 minutes after the lesson block starts. This fee **will not** come out of your lab fee (i.e. it's an additional out-of-pocket fee), and it will be based on the following scale:
 - 1) **First offense:** \$1
 - 2) **Second offense:** \$75
 - 3) **Third offense:** \$150, and you will be removed from the schedule until a meeting with the Chief Dispatcher has taken place to discuss the issue
 - 4) **Fourth or more offenses:** \$200, you will be removed from the schedule until a meeting with the Chief Flight Instructor has taken place, and removal from part 141 training may occur.
- Placement on the "Do Not Fly" list until no show fees are paid



Training Records

You must possess and maintain a flight logbook during all or your training at NSA. This is your official record of flight hours, currency, etc. and it will follow you your entire career. Ask your instructor if you have questions about recording your flight time. It is your responsibility to fill out your logbook neatly and accurately.

NSA will also maintain electronic flight training records of all your training activity. These will be held for at least one year after your training is completed per FAR 141, and they will be transferred to your hiring airline, if applicable, per the Pilot Records Improvement Act (PRIA). You may also request a copy of all your records upon graduation, termination of the program, or transfer to another school.

After successful completion of the final stage check in any TCO you will receive a graduation certificate, signed by the Chief/Assistant Chief Instructor. This is an official document signifying course completion. NSA follows the *Student Training Record Certification* process in Appendix D of this FOM when certifying your records. The graduation certificate will not be signed until this process is complete.

TSA Student Training Document Requirements

To begin flight training NSA must verify that you are a US Citizen, or you have TSA clearance. See Appendix C *TSA Student Training Document Requirements* for more details of this process.



FLIGHT INSTRUCTORS

Qualifications

To fly as an employee for NSA flight instructors must meet the following minimum qualifications:

- CFI, CFII, and MEI ratings
- Commercial Pilot Certificate with an Instrument Rating for both ASEL and AMEL.
- Maintain instrument currency
- Hold a valid 2nd class medical or higher
- 19 years old or older
- American citizen, or permission to work (i.e. work visa)
- Pass a drug test, and be subject to random drug screening
- Complete TSA Security Awareness Training (initial and recurring)
- Complete NSA indoctrination training, and pass a proficiency check in the appropriate aircraft with the Chief/Assistant Chief Instructor
- Promotion to AMEL Instructor is merit, seniority, and student need based and is at the discretion of the Chief Instructor. A minimum of 75 hours dual given will be required before Seminole checkout.
- Chief/Assistant Chief and Check Instructor qualifications are further defined in FAR 141 and the TCOs.

Professionalism

Instructor pilots set the example for students to follow. To create a professional atmosphere CFIs must comply with the following rules of conduct:

- Report any unsafe or unusual activity
- Comply with all policies and procedures
- Be on time for student training lessons (exception: returning late from a previous student lesson)
- Attend all flight instructor meetings
- Discuss student training with other CFIs in private only

Duty Day

Instructor Pilots are expected to follow the 8 hours of dual instruction in a 24-hour period restriction of FAR Part 61.195. This rule not only increases safety, but it also ensures a high level of instruction is delivered to the student. In addition to the 8-hour rule, flight instructors must have at least 2 hours of break time in a 10-hour day, 4 hours in a 16-hour day, and at least 8 hours between duty day start and stop times. (ex. Starting at 7am on Monday and flying until 11pm on a night cross country would require 4 hours of off time throughout the day, and the instructor could not start the next day until 7am.) If an instructor will not meet these requirements, or they feel too fatigued to teach, they must call dispatch to fix their schedule.

Dress Code

CFIs must be well groomed, and they must present a professional image. The following dress code applies:

- NSA uniform shirt
- Khaki, gray, or black slacks
- Shorts appropriate for a golf course are allowed when average temperatures exceed 70°F
- Appropriate footwear (e.g. dress shoes or boots.)

Student Training

NSA's Certified Flight Instructors (CFIs) are primarily responsible for safe and effective student training. Student performance is an indicator of instructor ability. If an instructor's students consistently perform poorly on checkrides, or if they show lack of progress, the instructor may be subject to a performance review by the Chief Instructor, remedial training, or dismissal.

Each instructor should be a motivator for his/her students, monitoring their progress and keeping them on track to completion. If a student requests to cancel a lesson his/her CFI should make every attempt to reschedule that lesson in the same week. In order to provide quality training, instructors must adhere to the following principals:

- Comply with the TCO. Deviations (e.g. skipped lessons) require Chief/Assistant Chief approval.
- Immediately notify the Chief/Assistant Chief/Senior Instructor of any student training deficiencies (e.g. a student fails to progress beyond a lesson after two attempts)
- Maintain student records
 - All lessons must be graded and signed before leaving at the end of the day (exception: returning late from a night flight and/or cross country, in which case lessons must be graded and signed by the next day)
 - You may not have more than two open activities at a time
 - Lessons left un-graded are un-paid until the grade is entered.
 - Document training deficiencies in the 'remarks' section of the grade sheet. A supervisor or another instructor should see a clear picture of the student's progress from these remarks
- Audit each student's records using the appropriate *Student Training Record Certification* checklist (Appendix D) prior to each stage check
- CFIs are ultimately responsible for their students' preflight planning (weight and balance, performance, etc.)



Supervised Student Pilot Solo (Private Pilot training only)

- **Local Training**

- CFIs must be present at the airport when their students fly local solo lessons
- After the first solo flight any instructor who is present and remaining in the local training area may supervise the solo of any student, provided this is prearranged by the student's assigned instructor
- Supervising instructors must verify weather conditions, NOTAMs, TFRs, aircraft maintenance status, endorsements, photo ID, logbook, student pilot certificate, medical certificate, etc.
- Local solo lessons include flights to Waseca (KACQ) and/or New Ulm (KULM) provided the student has received the appropriate training and endorsements to fly solo to those airports

- **Solo Cross Country**

- For student solo cross-country lessons, the endorsing flight instructor must be available by phone or radio during the entire flight. (The student's assigned instructor should endorse the first solo cross-country flight)
- The instructor will sign the applicable endorsements after verifying weather conditions, NOTAMs, TFRs, aircraft maintenance status, photo ID, logbook, student pilot certificate, medical certificate and cross-country planning.
- The student must inform his/her instructor and/or Dispatch upon reaching each destination.
- The student must file and activate a VFR flight plan for each cross-country flight over 50NM, and he/she must cancel the flight plan upon completion of the flight.
- Flight Following is highly recommended whenever possible.
- The student must receive an updated weather briefing anytime he/she has been away from the initial solo cross-country departure airport for more than three hours

Chief Instructor

The Chief Instructor retains full responsibility for the overall operation of the flight school. It is the Chief Instructor's duty to help mentor students, flight instructors, check flight instructors, and Assistant Chief Instructors for future advancement within the company. The Chief Instructor will delegate duties to the Assistant Chief Instructor(s), Check Instructors, Director of Flight School Operations, Chief Dispatcher, dispatchers, and flight instructors as necessary.

The Chief Instructor will ensure certification of all student records using the *Student Training Record Certification* process (Appendix D). This requires extensive record audits by recommending CFIs, Dispatch, and the Chief/Assistant Chief Instructors prior to each stage check. The Chief/Assistant Chief Instructor will not sign a student's graduation certificate for any TCO until this process is complete.

Other specific duties of the Chief Instructor can be found in 14 CFR part 141.85.

Assistant Chief Instructor(s)

The Assistant Chief Instructor(s) will be responsible for delegated duties under the Chief Instructor's supervision. The delegated duties will be documented in his/her employee file. It is also the duty of the Assistant Chief Instructor(s) to help mentor students, check instructors, and flight instructors for future advancement within the company. Specific duties of the Assistant Chief Instructor(s) can be delegated per 14 CFR part 141.

DISPATCHERS

Director of Flight School Operations

The Director of Flight School Operations (DFS0) is responsible for the allocation of resources, monitoring student progress, professionalism, and ensuring accurate training records. He/She will assign/re-assign students to instructors as needed. The DFS0 will regularly contact students who are struggling to progress (e.g. Written exams, no shows, etc.). He/She will report to the Chief Flight Instructor and/or University officials as necessary to ensure student progression.

Chief Dispatcher

The Chief Dispatcher is responsible for the training of future dispatchers and the management of their schedules. The Chief Dispatcher will also perform other duties as delegated by the DFS0 and Chief Instructor.

Assistant Chief Dispatcher(s)

The Assistant Chief Dispatcher(s) will be responsible for delegated duties under the Chief Dispatcher's supervision. It is also the duty of the Assistant Chief Dispatcher(s) to help mentor dispatchers for future advancement within the company.

Dispatcher(s)

Dispatchers will check lessons in and out for students at the beginning of the lesson block. If a student arrives late or unprepared as defined in the Attendance/No-Show Policy above the dispatcher on duty will impose the proper fee/action. Dispatchers will not cancel lessons unless they hear from the instructor. Students cannot call Dispatch to cancel.

DISPATCH PROCEDURES

WEATHER MINIMUMS [141.93(3)(i)]

The following table prescribes weather minimums for dispatch. These weather minimums do not preclude a pilot from returning to the airport if conditions deteriorate below those listed, provided he/she complies with all FARs. If there is a conflict between these minimums and the FARs or POH, the FARs or POH take precedence. (Note: weather information must be obtained from a credible source, such as FSS (1-800-WX-BRIEF), www.aviationweather.gov/adds, or Foreflight)

	Minimum Visibility	Minimum Ceiling (AGL)	Maximum Wind with Gust	Maximum Crosswind Component	Temperature
<u>Student Pilot* Solo</u>					
Traffic Pattern	4	2,000'	15 kts	7 kts	-18° C
Local	5	3,000'	15 kts	7 kts	-18° C
Cross Country	6	4,000'	20 kts	9 kts	-18° C
<u>Rated Pilot VFR</u>					
Traffic Pattern	3	1,500'	25 kts	14 kts	-23° C
Local	4	3,000'	25 kts	14 kts	-23° C
Cross Country	4	3,000'	25 kts	14 kts	-23° C
<u>Rated Pilot IFR**</u>	+1	+500	25 kts	17 kts	-23° C
<u>Dual VFR</u>					
Pattern	3	1,500'	35 kts	Demonstrated	-23° C
Local	3	2,500'	35 kts	Demonstrated	-23° C
Cross Country	3	2,500'	35 kts	Demonstrated	-23° C
<u>Dual IFR**</u>	+1/2	+200	35 kts	Demonstrated	-23° C

*Student Pilot refers to a non-rated pilot (i.e. working on his/her Private Pilot certificate)

**IFR minimums for dispatch are based on the destination airport forecast at the ETA, plus or minus one hour. (Example: if the destination is KDLH, and the ETA at KDLH is 13:00, the forecast from 12:00 to 14:00 must be at least 400/1 for Dual IFR (ILS RWY 09 requires 200 and ½ or 1800 RVR))

**Visibility and ceilings minimums for IFR flights must be added to the minimums of the intended approach. (Example: if flying to KOWA and winds favor runway 12, the RNAV RWY 12 approach minimums apply (vs. the ILS RWY 30 approach.))

Additional Weather Minimums

- Flights may not be dispatched when thunderstorms are within 20NM of the airport (for the purpose of this part, distance will be judged using lightning strike data from <https://www.lightningmaps.org> or similar sources.)
- Flights may not be dispatched into any known or forecast icing conditions
- Student Pilot solo flights at night (sunset to sunrise) are prohibited

Waiver authority for all minimums prescribed above lies with the Chief/Assistant Chief Instructor. All waivers must be documented on the dispatch release. (Waivers below FAR or POH minimums are NEVER allowed.)

LESSON CHECK-OUT

Ops Check In

When you arrive for a lesson, you will first see a dispatcher. The dispatcher will perform a function called “Ops Check In” in Talon, and they will assign you a tail number. You will then fill out the appropriate paperwork, and you are expected to have it completed by the start of your flight block. **It is both the student and instructor’s responsibility to ensure any maintenance inspections are not over flown.** This is done by asking the dispatcher on duty how much time is left until the next inspection, writing it on the Weight and Balance sheet, and signing saying that your flight will not exceed the flight time remaining.

Activity Authorization

Your instructor must Authorize the lesson before the flight or sim can take place. During this process, the instructor will verify the correct lesson, time, and resource are scheduled. If discrepancies are found a dispatcher must be seen to edit the reservation.

Ramp Out

After your instructor has authorized the activity, you will bring your completed paperwork to a dispatcher to be “Ramped Out”. Before Ramping out any flight lesson, dispatchers will verify the following:

- Preflight planning complete per FAR 91.103 and local procedures (i.e. Weight and Balance, Performance, NOTAMs, TFRs, Weather, I’M SAFE, etc.)
- Pilot documents (pilot certificate, current medical, photo ID, logbook with current endorsements for student solo flights)
 - Pre-Solo open and closed book tests completed, if applicable
 - *Aircraft Rental Conditions* form (Appendix B) signed prior to the first solo
 - Current 90-day solo endorsement, if applicable
 - Initial solo cross-country endorsement, if applicable
 - Same day solo cross-country flight planning endorsement, if applicable



- Solo endorsement to satellite airports (KACQ and KULM), if applicable
- Flight Plans filed and Activated
 - Required for all cross-country flights >100NM
 - Required for all IFR flights
 - A destination alternate is required on all IFR flights, regardless of weather
 - “Practice Approaches” must be filed in the remarks section for IFR training flights where multiple approaches will be flown
 - Cross Countries to non-towered airports should have legs filed individually.
 - Cross Countries to towered airports should have one round robin flight plan filed. (KMKT-KMKT)
- TSA validation for foreign students
- CFI currency, including initial and/or recurring TSA security awareness training
Appropriate flight lesson to be conducted (i.e. not skipped unless preapproved by the Chief/Assistant Chief Instructor)
- Weather at or above minimums for the type of lesson being conducted
- Aircraft Hobbs/tach times and no maintenance due
- Chief/Assistant Chief Instructor approval for requested passengers (not valid for any solo flights)
- Chief/Assistant Chief Instructor signed *Overnight Request Form* (Appendix B) for long-distance cross-country flights (>325 NM) and/or overnight flights
- Local training area requested/assigned

Dispatch Release

After verifying all applicable items above the dispatcher will complete the “Ramp Out” process. Ramping out in Talon will show the dispatcher the maintenance times, and this is the last time to verify that no inspections will be overflowed. If no issues are encountered, the dispatcher will fill out the applicable areas in the aircraft binder, and then give the binder to the student. Before going to the airplane, you will need to select a practice area with the dispatcher on duty. Flight Instructors will assume dispatch duties when dispatcher is not available.

If passengers from outside the program are being taken, or the flight is being conducted outside of this manual, the Chief/Assistant Chief must sign the weight and balance.

Ramp In

When a flight is completed pilots must fill out the aircraft log (found in the binder) with the Hobbs and tach times. The binder will be given to the dispatcher on duty to enter the flight times. Any discrepancies found during flight must be relayed to dispatch so they can ground the aircraft. If the aircraft is at an airport other than Mankato, the procedure found on page 16 will be followed to get the aircraft back to Mankato.

Activity Completion

The lesson is not done until the Activity completion has been done. The student is required in this process to sign off on the grade sheet, notes, and activity times. Instructors must do this after every lesson unless they are running late for the next student; however, it still may be better to take care of it right away rather than scheduling another appointment with the student for this purpose.

RE-DISPATCH PROCEDURES [141.93(3)(iv)]

Re-dispatch may be required should a training flight experience any of the following (note: student pilots are not allowed to continue solo flights past sunset):

- Aircraft mechanical problems
- Weather conditions exceeding those defined in this FOM
- Solo cross-country flight not completed on the day of the endorsement
- Landing at an airport other than scheduled
- Off-airport landing

Delayed Return, or Landing at an Airport Other than Scheduled

If a flight cannot return, or if it lands at an airport other than scheduled due to mechanical, weather, or other problems, the pilot should notify NSA Dispatch, who will in-turn notify the Chief/Assistant Chief Instructor. NSA will develop a plan to re-dispatch the flight that may include:

- Dispatching a rescue flight (i.e. flying out a mechanic and/or CFI)
- Seeking help from a local mechanic
- Dispatching the flight on a new lesson to a different airport
- Waiting it out (in the case of weather, illness, etc.)

Pilots should consider the extra expenses involved if an overnight stay is required. In the case of inclement weather, the aircraft should be hangared. NSA may reimburse the hangar fee up to \$30.00/night.

If a student solo cross-country flight is delayed a new endorsement may be required for the return (e.g. returns on a different day or to a different airport.) The endorsing CFI must communicate with the student and thoroughly understand the circumstances before issuing a new endorsement. Once the CFI and student agree on a new course of action, the CFI can scan and email the endorsement, so the student has it in possession before flying.

Off-Airport Landing

In the event of an off-airport landing pilots and passengers should first attend to their own safety and then to the safety of others. The ELT should be turned on, or allowed to continue activating, if help is required. Otherwise it should be turned off. **IN NO CASE SHOULD AN ATTEMPT BE MADE TO MOVE THE AIRCRAFT.** It must be left secured and in place for NSA, the FAA, and the NTSB to investigate.



Once all pilots and passengers are safe and the airplane is secure, an immediate notification must be made to NSA Dispatch and the Chief/Assistant Chief Instructor. Pilots involved in an off-airport landing will also file the appropriate safety reports (NSA's local safety report and NASA's Aviation Safety Reporting System (ASRS)).

AIRCRAFT DISCREPANCIES AND RETURN TO SERVICE [141.93(3)(v)]

Before a student is given the aircraft binder, he/she must sign the dispatch release acknowledging that the flight will not overfly a maintenance inspection. Even though the pitot-static system must be checked for IFR flight only, it is NSA's policy to not overfly any inspection (exception: the 50-hour inspection is an oil change, and it is not required by the FAA.) In addition to the maintenance times, a list of resolved and unresolved squawks will be reviewed before signing. It is the student and instructor's responsibility to determine that open squawks have been or will be fixed prior to flight.

During the preflight inspection any equipment found to be inoperative while in Mankato must be fixed or deactivated and placarded by maintenance. If equipment is found to be inoperative while at another airport, the below procedure will be followed.

Preapproval has been given to defer maintenance on the following equipment:

- Recognition lights
- Landing light (day only)
- Position/Nav lights (day only)
- Pitot Heat if not required for flight

If maintenance will be deferred a **rated pilot** will:

- Pull the appropriate circuit breaker
- Placard the cockpit control as inoperative with the provided sticker
- Ground the aircraft and squawk the discrepancy upon arrival in Mankato

Inoperative placards can be found in the aircraft binder. If equipment found to be inoperative is not listed above, a call to NSA maintenance or a Chief/Assistant Chief flight instructor is required to determine a course of action.

During flight static wicks may fall off. VFR flight with a missing static wick is approved to continue; however, flight into actual IMC conditions requires all static wicks to be attached.

STANDARD OPERATING PROCEDURES

EMERGENCY PROCEDURES

Emergency Contacts

All personnel should call 911 for any emergency requiring an immediate response. If an aircraft is involved in an emergency during normal business hours NSA Dispatch and/or the Chief/Assistant Chief Instructor should be notified immediately. After normal business hours contact the Chief/Assistant Chief Instructor or the Director of Flight School Operations. If appropriate, NSA will also notify the MNSU Department of Aviation and/or the Dean of the College of Education.

In the event of an accident or incident that attracts news media attention a statement will be made by the General Manager of North Star Aviation, Inc. after consulting with Minnesota State University Mankato on what information can be released. In order to minimize the possibility of inaccurate, confidential, or otherwise inappropriate information from being published or disclosed, students should not make any statements to the news media about any incident or accident.

Following is a list of immediate call numbers. A more complete directory is in Appendix A:

- NSA Dispatch: 507-386-2355
- Director of Flight School Operations – Cody Howe (cell): 507-621-0440
- Chief Instructor – Chris Plasek (cell): 218-251-0205
- General Manager – Rob McGregor (cell): 507-995-7075
- Director of Safety – Brian Rutt (cell): 952-456-1711

In Flight Emergency

Pilots experiencing an inflight emergency should exercise their Pilot in Command privileges to get the aircraft safely on the ground. Squawk 7700 and contact ATC on 121.5 if appropriate. Pilots should also contact Dispatch on 122.725 if able. After landing, record the details of the situation in case follow-up is required by the FAA, NTSB, or NSA.

Pilot Deviation

If Air Traffic Control asks a student to contact them by phone upon landing the student will write down the phone number, contact the controller, and listen to what the controller has to say. The student should note the controller's name and inform him/her that the incident will be reported to the North Star Aviation, Inc. Chief Instructor, who will also contact the Air Traffic Controller for a briefing on the incident. Upon return to Mankato Airport the student will submit a NASA (ASRS) form and retain a copy for his/her training file. Should a deviation be filed by the Air Traffic Controller this NASA report will provide protection for unintentional violation of an FAR. (Refer to Advisory Circular 00-46E and FAR 91.25 for more information on the process of filing and keeping proof of filing NASA report.)

The student and his/her instructor will review the incident with the Chief/Assistant Chief Instructor, and together they will develop a remedial training plan. This plan will be documented and must be adhered to. In most cases if there is follow-up action by the FAA this retraining plan will suffice, and the case will be closed.

Security Awareness

Security is everyone's responsibility. Due to the ongoing potential threats to our country those who work at airports and flight schools should be on the lookout for suspicious activity. Security awareness implies that individuals take mindful and conscious measures to reduce the risks associated with suspicious behaviors that could lead to unlawful activity. Security awareness also assumes basic knowledge of what to look for and how to report suspicious activity. In today's world, it is better to question a situation than to wait for someone else to respond.

To enhance the security at NSA a few rules have been implemented (note: these are derived from TSA guidelines):

- Comply with the school's dress code policy.
- Use proper entrances and exits and close all security gates.
- If witnessing signs of suspicious behavior or activity take action by:
 - 1) Questioning the individual if it seems safe doing so
 - 2) Reporting the suspicious activity to a supervisor or one of the flight school managers
 - 3) Contacting the General Aviation Hotline (800)-GA-SECURE or Transportation Security Operations Center at (703) 563-3240

SAFETY REPORTING

NSA employs a Safety Management System (SMS) that includes comprehensive reporting and follow-up. Pilots who experience or witness a situation that could compromise safety (e.g. close call in the traffic pattern; mag switches found in the 'on' position; runway incursion) should report the incident using NSA's SMS. These reports are confidential, and NSA uses them to compile data and/or establish new policies and procedures designed to enhance safety. More information on how to report and examples of reportable topics can be found in Appendix E of this manual.

Pilots involved in a safety incident are also encouraged to use the Aviation Safety Reporting System (ASRS) facilitated by NASA. This is also an anonymous, non-punitive report used by the FAA and NTSB to enhance safety in the National Airspace System (NAS).



GENERAL

Compliance with all STANDARD OPERATING PROCEDURES listed immediately below and in the following sections will ensure a safe, legal, and effective training operation. Pilots should never deviate from these procedures unless required for safety of flight.

- All aircraft must be operated in accordance with the Pilot Operating Handbook (POH)
- Aerobatic flight in any NSA aircraft is prohibited and is grounds for dismissal
- Spins will only be accomplished in spin-approved aircraft (e.g. C 152), and only for the purpose of receiving an initial CFI spin training endorsement from an approved CFI
- Hand propping to start an aircraft is prohibited
- All pilots should monitor 121.5 on the second radio when not operating in the traffic pattern
- Practice emergencies (e.g. engine failure, unusual attitudes) are prohibited in Instrument Meteorological Conditions (IMC)
- VFR cross country flights will not be performed above an overcast layer of clouds
- For fuel economy on cross country flights the mixture may be leaned...
 - To Best Power per the Warrior POH
 - To Best Performance per the Seminole POH (i.e. 125° rich of peak)
 - Never lean below these settings unless required for safety of flight

Cold Weather Operations

Temperatures below 40°F:

- Students should be ready to start the engine at the start of the first block of the day. Students that are not ready to go may have to preflight outside, and they run the risk of having trouble starting the engine or having frost accumulate on the wings. Both of these issues cause significant delays that could result in not being able to fly.
- Ensure Engine blanket and oil heater plug is removed before starting the engine
- While in flight, throttle changes should be made slower to avoid engine roughness
 - Use carburetor heat to aid in engine responsiveness.
- Extreme caution should be used when performing touch and goes in the Seminole. Ensure both engines are responding before applying full throttle.
- While parking and securing the aircraft after flight cover the cowling with the supplied blankets if available.
 - See the Parking and Securing section for more cold weather parking procedures.

Simulated engine failure in flight:

- During training it is permissible to shut down one engine (Seminole Only). However, if the temperature is below 0°F, the engine must be restarted before initiating an emergency descent.



Preflight

Fuel Requirements [141.93(a)(3)(vii)]

Students and instructors will ensure that enough fuel is available to complete each flight. NSA requires its pilots to plan for the following minimum fuel reserves:

- VFR (Day or Night): Plan for enough fuel to reach the destination or a planned fuel stop, plus 1 hour
- IFR:
 - Always file an alternate regardless of the weather
 - Plan for enough fuel to reach the destination *and* the alternate, plus 1 hour.

Pilots should always monitor their fuel status in flight. If delays could result in excessive fuel burn below the planned minimums pilots should exercise their PIC prerogative and sound Aeronautical Decision Making (ADM) to land safely. Declaring minimum or emergency fuel with ATC are always available as options.

During cross country flights fuel may be purchased off station. Each aircraft binder contains a fuel card that can be used to purchase fuel. When planning fuel stops, pilots must verify that the fuel station is a Shell service station, or a station connected to the Shell network. If the fuel stop is not connected, the card will not work. Pilots should save all receipts and turn them in with the dispatch release. Additionally, they should retain a copy for their own records. **If fuel purchased away from Mankato costs more than the NSA full-service retail fuel price on the day of purchase, students will be liable to pay the difference. You must pay this difference prior to your next lesson to avoid being grounded.**

When refueling an aircraft, the PIC must monitor the process. He/she will ensure the aircraft is chocked, grounded, and the battery master switch is off before adding fuel. After the aircraft has been refueled at an airport other than Mankato, the pilot will wait a minimum of 15 minutes before sumping the fuel. The 15-minute wait time allows for an accurate sample after sediment or other contaminants settle.

Weight and Balance

The weight and balance form, including all information (such as aircraft performance and I'M SAFE), must be completed before being dispatched (see Dispatch Procedures above.) During the preflight inspection the pilot must ensure the aircraft's empty weight matches the number used on the form for calculations. This number is typically found in the POH Section 6: Weight and Balance.

A ballast may be required in the baggage compartment to avoid extreme forward CG's (most common on the Seminole with only two pilots.)

Preflight Inspection

Each aircraft must receive a thorough preflight inspection before every flight. Refer to *Aircraft Discrepancies and Return to Service* above for inoperative equipment discovered during this inspection.

- Instructors are expected to preflight with their student unless they have a good reason not to (e.g. Meeting with Chief/Asst. Chief Flight Instructor or Chief Dispatcher about training matter, satisfying physiological needs, etc.).
- No personnel should walk along the flight line or anywhere near other aircraft while using a cell phone. Cell phones are only allowed on the flight line for preflight purposes (e.g. ordering fuel; calling maintenance)
- Cross-check Hobbs and Tach times with the aircraft binder and report discrepancies to Dispatch before flight
- Students must carry and use the checklist for all preflight inspections
- A flashlight is required at night
- Do not touch the propellers until verifying the magneto switches are 'off'
- The following additional preflight procedures apply to cold weather operations:
 - Wear gloves and a hat to avoid a hurried preflight in cold weather
 - Check the oil breather tubes for snow and ice buildup
 - Preheat the engine(s) if outside temperature is below 32° F (n/a if the oil heater is plugged in, or the engine is warm from a previous flight)
 - Remove all snow and/or frost before each flight
 - **Return any Ballast (sandbags) to the Line Service Hangar, or call Line to come pick them up.** Never leave Ballast on the ramp or along the fence/hangar. Snowplows have been known to hit them if they are misplaced.

FIRE PRECAUTIONS AND PROCEDURES [141.93(a)(3)(iii)]

- At Mankato fueling of flight school aircraft will only be done by line service personnel
- Pilots will ensure the aircraft is grounded during all refueling operations
- Each aircraft is equipped with a halon fire extinguisher
 - Pilots must brief all passengers on use of the extinguisher prior to engine start
 - Additional fire extinguishers are in each hangar and at the fuel pumps
- Smoking is not permitted within 50 feet of an aircraft, fuel truck, or fueling station
- During cold weather operations (<40 degrees) aircraft must be covered with its cowl blanket to keep the engine warm and prevent difficult starts that may lead to over priming
- Instructors must teach Engine Fire During Start procedures to their students; and all pilots should anticipate a fire when starting the engine

STARTING AND TAXIING [141.93(a)(3)(ii)]

Starting

- Remove chocks before engine start
- The aircraft battery must be removed before it may be charged
- Starting using external power:
 - Follow POH procedures
 - Only trained line service personnel or a trained pilot can unplug the external power receptacle with the engine running
 - One pilot must remain at the controls
- Prior to start and taxi-out check behind the aircraft to ensure nothing will be damaged from the propwash

Taxiing

- Do not perform a run-up in the parking area
- Do not taxi through a line of parked aircraft
- The airport diagram (paper or MFD) must be displayed for all taxi operations
- Taxi no faster than 15 knots along taxiways, and avoid excessive braking
- Taxi no faster than a walking pace in the parking area and near hangars
 - Never trust the yellow lines
 - Keep a close eye on both wingtips
 - When in doubt of clearance stop the aircraft
- In the winter beware of snowbanks on the edge of taxiways and runways that the wing may strike.
- Position the flight controls according to wind direction during taxi when wind speed exceeds 5 knots



- Come to a complete stop prior to entering any runway
 - If crossing a runway, make a radio call and watch for traffic
 - Turn on all lights before crossing runways
 - Scan the base and final legs prior to entering an active runway for takeoff
 - NSA pilots will NOT use *Line-Up-and-Wait* procedures; the runway must be clear of all aircraft before entering for takeoff
- After landing taxi clear of the runway and stop. Perform the 'After Landing' checklist before continuing to the ramp.

IN-FLIGHT PROCEDURES

Runway Procedures

Pilots must check density altitude and verify aircraft performance prior to operating on any runway. Minimum runway length is governed by aircraft performance chart results.

- Warrior: Takeoff/landing distance over 50' obstacle (whichever is greater) plus 1,000'
- Seminole: Accelerate/Stop Distance plus 1,000'

For Touch and Go or Stop and Go operations the above lengths must be remaining *prior to the application of takeoff power*. Seminole pilots may only use Touch and Go procedures following normal landings (i.e. single-engine landings and short-field landings must come to a full stop.)

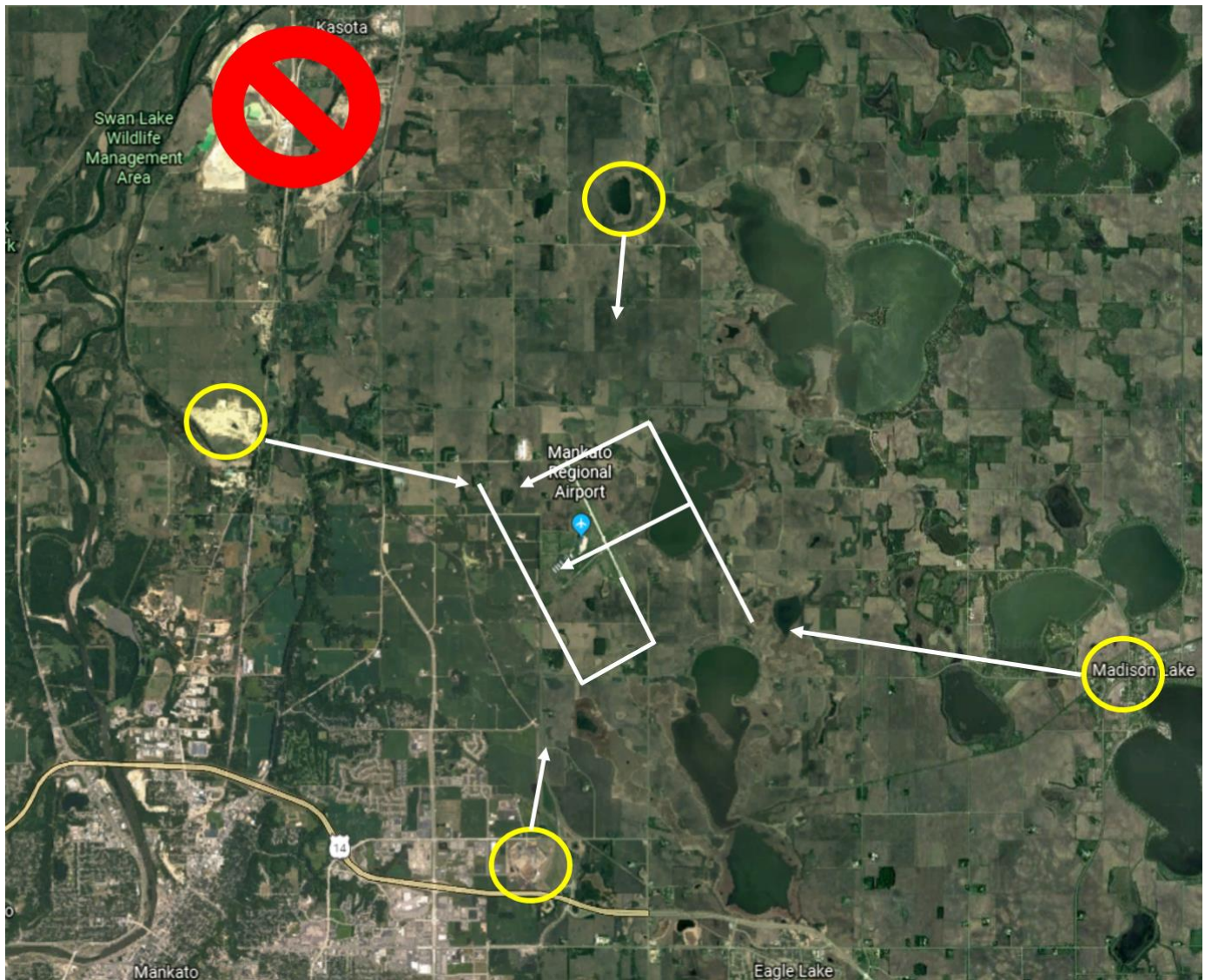
Grass Operations

Pilots are prohibited from landing or taxiing on grass strips unless required by an emergency. It is NSA's belief that the risks associated with grass operations (uneven surfaces, intersecting runways, typically shorter runway lengths) are not worth assuming in our professional pilot training atmosphere. Pilots found to have violated this policy may be dismissed from the program, or have their employment terminated.



Collision Avoidance/Traffic Pattern Procedures [141.93(a)(3)(viii)]

- The following traffic pattern procedures must be used to avoid a collision:
 - Scan in all directions prior to any turn
 - Switch on all lights within 10NM of the airport (day and night)
 - Adhere to FAR 91.113 right-of-way rules
 - Make standard radio calls, beginning 10NM from the airport when inbound
 - Adhere to strict sterile cockpit rules; instruction might have to cease in order to hear the radios
 - Solo student pilots will NOT perform Touch and Go or Stop and Go landings
- Mankato-specific pattern procedures include the following:
 - Solo student pilots will use the call sign “Solo” whenever a position report is made (e.g. “Solo 282MK”)
 - Enter the pattern on a 45° to Downwind (same side) or a 45° to Upwind (opposite side.) Entry to these legs for runways 15 and 33 will begin over the Quarry or Madison Lake. Runways 04 and 22 will begin over the Walmart Distribution Center or the Pond just West of the North West corner of Lake Washington (See picture on next page).
 - The Downwind leg should be entered abeam the numbers on the DER, and the Upwind leg should be entered abeam the numbers on the AER.
 - Aircraft established in the traffic pattern (Downwind, Base, Final, or Crosswind) have the right-of-way over aircraft entering the pattern. Traffic on the 45° Downwind has the right-of-way over traffic on the Upwind and 45° to Upwind.
 - Pilots established on the Upwind leg must use sound aeronautical decision making to decide when to turn crosswind. Crosswind may be turned anywhere beyond mid-field; however, the upwind leg should not be extended beyond the DER. Caution should be used to avoid departing aircraft.
 - If added spacing is needed traffic will depart the pattern and re-enter on the appropriate entry leg. At no time should a 360° maneuver be performed in the pattern.
 - Care should be taken to avoid extended downwind legs over 2.5NMs. If a conflict arises on the downwind, break out and re-enter on the 45° downwind.
 - If the conflict arises on the base leg plan to fly a low approach and continue with the pattern.
- Mankato-specific pattern departure procedures:
 - All North Star Training flights will adhere to the AIM specified pattern departure procedure.
 - Depart the pattern either straight out (runway heading) or 45° to the left of runway heading (e.g. heading 285° when departing runway 33).
 - Turn enroute to the applicable practice area or cross-country course as soon as practical when clear of pattern airspace. (2,500’ MSL Recommended)
 - Continue climbing until reaching 3,000’ (There is no need to fly runway heading to 3,000’. Traffic returning from practice areas will be at 2,000’, so continuing to climb to 3,000’ until in the practice area will provide separation.)



*The Quarry entry point is a topic of extreme confusion. When in doubt, remember this is still a 45° entry. The large quarry in Kasota, is a very visible point from the air; however, flying over this quarry sets the pilot up for an extended downwind rather than a 45° angle.



Practice Areas [141.93(a)(3)(x)]

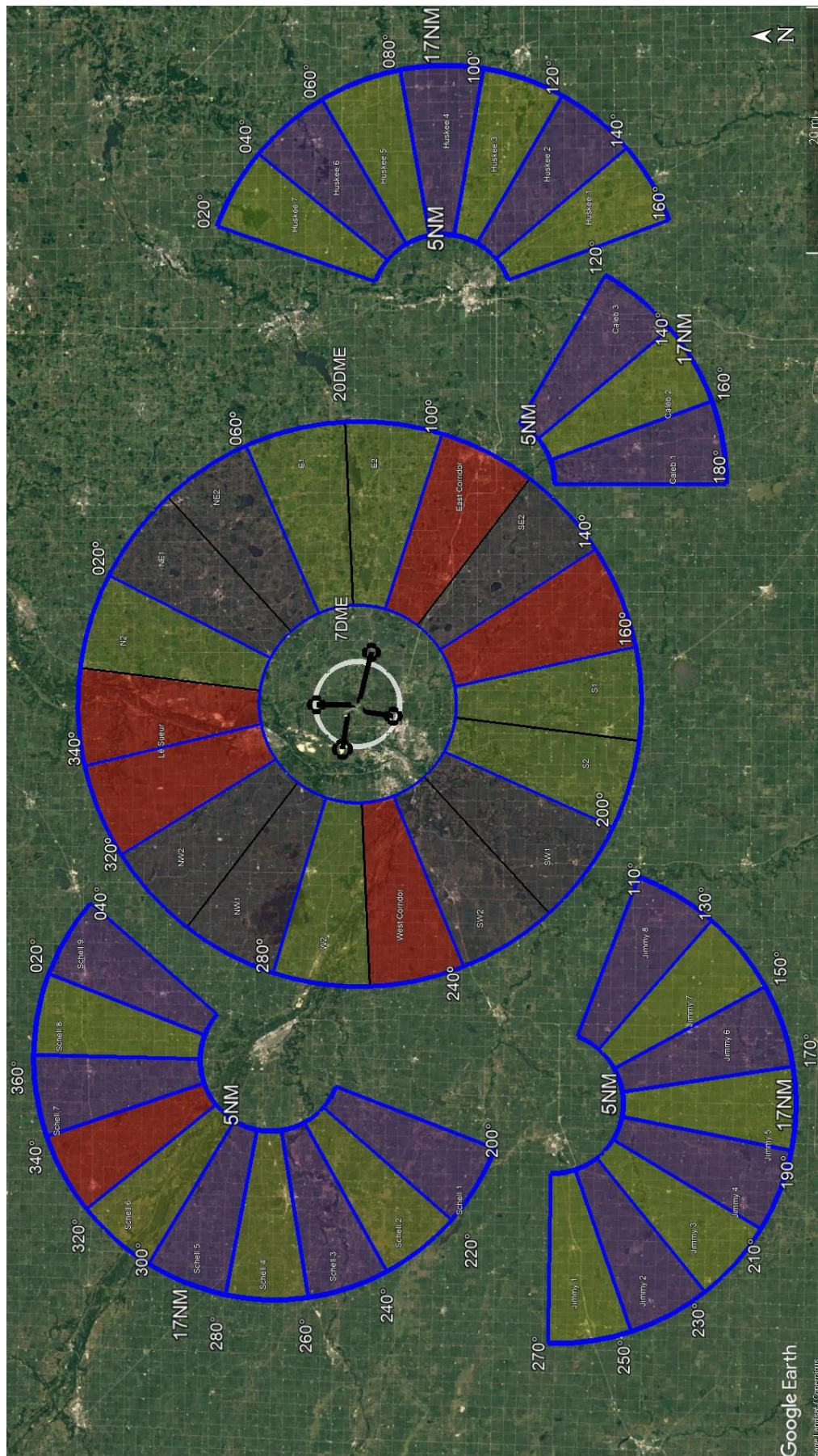
During the dispatch process students must request a practice area.

The core practice areas form a circle around the Mankato VOR from 7 to 20 DME, with each area occupying a 20° section, excluding those areas along the departure and arrival paths of Runway 15/33, the section over Le Sueur airport, the section over Waseca airport, and the 240-260 degree section. In times of low congestion two practice areas may be reserved to allow more room for maneuvering (e.g. N1 and N2 can be combined to make the North Practice area). During periods of high congestion, dispatch may divide areas into high and low practice areas.

Low Practice areas will go from the surface to 4,000' MSL, and High Practice areas will be 5,000' MSL and above. The 1,000' separation adds a buffer for transitioning through the area as well as for maneuvers that may extend outside the boundaries of the area.

Due to extreme congestion in the vicinity of the Mankato airport, training flights are encouraged to use satellite airports as much as possible. Le Sueur is available for takeoff and landing practice, and practice areas have been developed around the New Ulm, St. James, Waseca, and Owatonna airports. Because the satellite airports do not have VOR's on the field, the practice areas are based off the OBS radials from the airport.

All pilots must remain within the lateral boundaries of their assigned practice area when performing maneuvers. Pilotage should be used as the primary means of navigation (i.e. look out the window), backed up by radial and DME information displayed on the HSI. Each aircraft binder will contain a map of the practice areas (next page.) Perform clearing turns prior to beginning maneuvers in the practice area and maintain a constant listening watch on the appropriate CTAF frequencies.



Minimum Altitudes and Simulated Emergency Landing Practice [141.93(a)(3)(ix)]

- Simulated emergency landings will be terminated no lower than 500' AGL unless over an airport.
- During simulated emergency landings avoid prolonged engine idle operations followed by rapid throttle advancement
 - Advance the throttle slightly during simulated engine failures at least every 2nd turn, and then return to idle
 - Advancing the throttle after simulated engine failure must be done quickly but smoothly
- Further restrictions for solo pilots include the following:
 - Simulated emergency approaches to a landing at an airport are not authorized on solo flights
 - Minimum altitude for ground reference maneuvers is 800' AGL
 - Practice maneuvers must be completed at or above 2000' AGL (exceptions: ground reference maneuvers, simulated emergency landings, and maneuvering in the traffic pattern)
- Full engine shutdown maneuvers must be complete (the engine must be restarted) by 5,000' AGL.
- Per the Seminole POH, V_{MC} demonstrations must be complete at or above 4,000' AGL.

The following engine failure in flight checklist should be committed to memory:

Airspeed - Best glide speed

Landing

Area – Find a suitable field and descend towards it

Restart – Attempt. Check the following from left to right:

- Fuel Selector – ON
- Mags – Both
- Fuel Boost Pump – ON
- Mixture – Rich
- Carb Heat – ON

“Mayday” – Make an Emergency Call on 121.5 if altitude permits

Shutdown – if no restart, secure the engine by shutting off all fuel sources

(Note: Use the memory aid “ALARMS”)

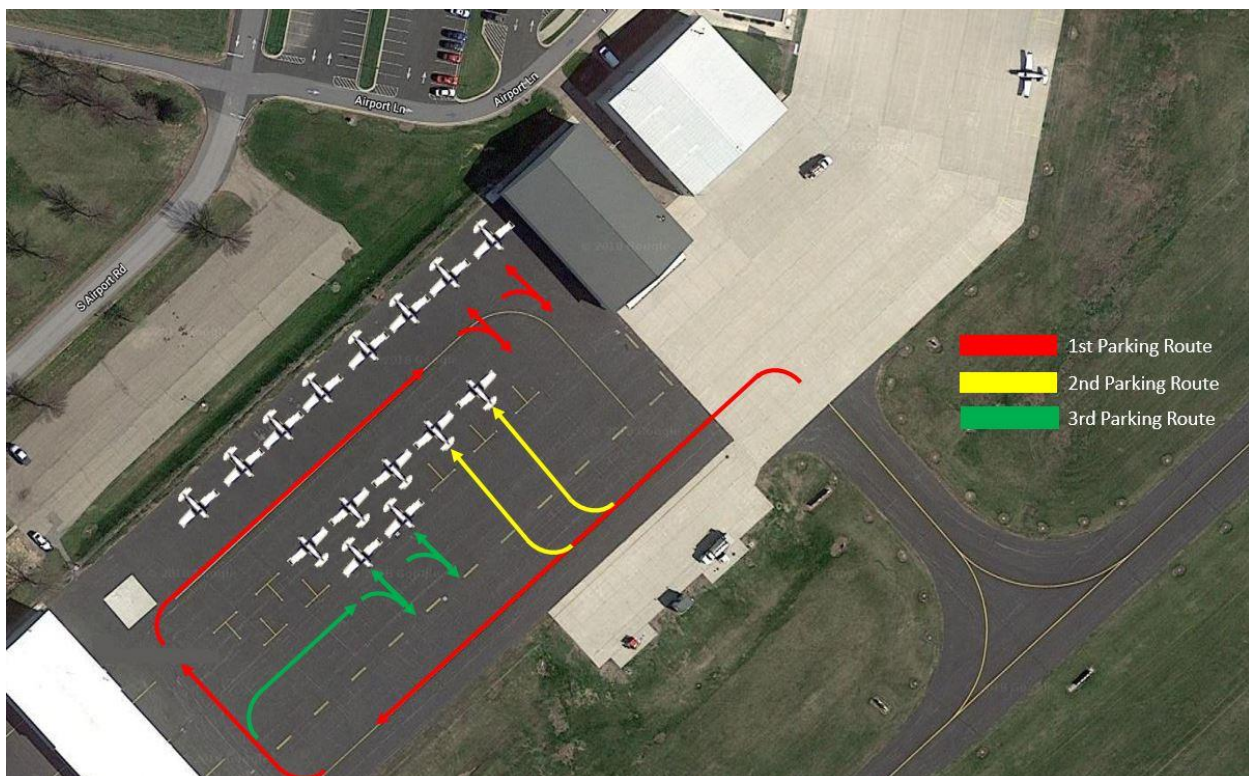
PARKING AND SECURING [141.93(a)(3)(vi)]

- Park into the wind when able
- Conduct a post-flight inspection at the completion of each flight
 - Check for damage (e.g. tail strike; flat tire), missing parts, or leaking fluid

- Report discrepancies to Dispatch immediately to prevent the airplane from flying again
- All aircraft will be chocked after shutdown
- If inclement weather is forecasted hangar the aircraft on flights away from Mankato (reimbursement up to \$30.00 per day)
- Leave the aircraft cleaner than you found it. Any trash left behind will be considered yours (whether you left it there or not).
- If able, lock the aircraft when left unattended at an airport other than Mankato
- When parking at airports with line service follow the marshalling instruction of the lineman to your parking location. Never park an aircraft on a taxiway, runway or in a runup area.
- Use the engine blankets when the temperature is 40° F (5° C) or below

Due to increasing fleet sizes, NSA has developed parking procedures to reduce ramp congestion.

- **Parking spaces along the fence should be used first.**
- After T-spots along the fence are full, taxi into the T-spots facing the fence. **T-spots facing the fence will be filled in second.**
- When/if the above spaces are occupied, **push** aircraft back into the T-spots facing runway 4-22.
- To avoid traffic jams, parking spaces should always be filled starting closest to the line hangars and working towards the T-hangars.
- Instructors and students must work together to push back the airplane using the tow bar. Both the student and instructor should be outside during pushback to ensure the wings and tail are clear of any surrounding obstacles.





APPDENDIX A – CONTACT INFORMATION and FLOW CHART

GENERAL INFORMATION

North Star Aviation, Inc.

North Star Aviation, Inc.
3030 Airport Road North
Mankato, MN 56001

Phone Directory (507)625-6006
Fax (507)625-6130
Web www.flymankato.com

General Manager

Rob McGregor
Office (507)625-6006 ext. #344

Flight School

Chief Flight Instructor

Christopher Plasek*
Office (507)625-6006 ext. # 343
Cell (218)251-0205
Email cplasek@flymankato.com

Assistant Chief Flight Instructors

Zach Crowe
Cell (763)331-5846
Email zcrowe@flymankato.com

Jessica Adams
Cell (641)590-5731
Email jadams@flymankato.com

Stuart Blank
Cell (641)860-1554
Email sblank@flymankato.com

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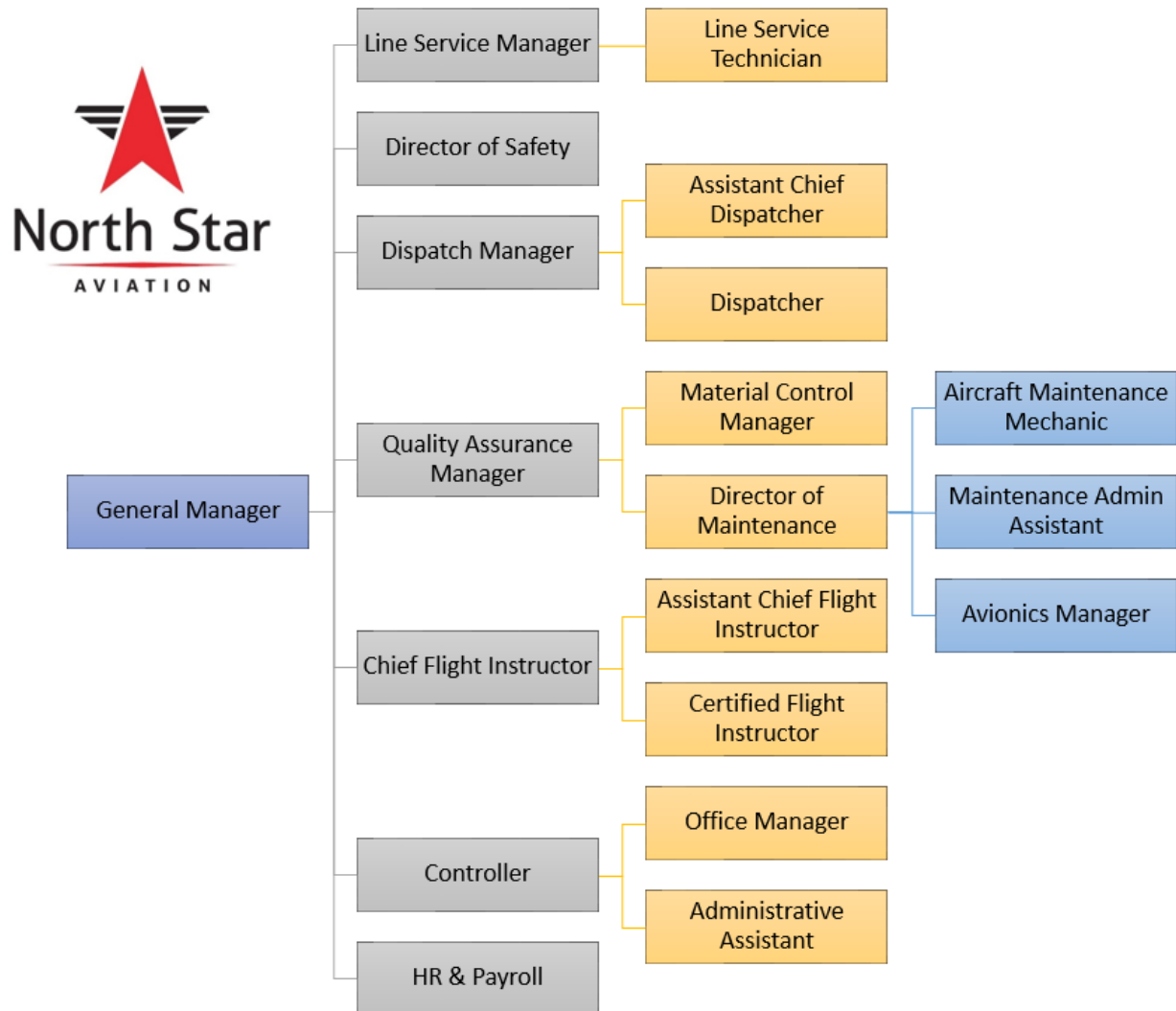
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*Indicates member of the SRB.



COMPANY FLOW CHART





APPENDIX B – FORMS AND DOCUMENTS

Stage Check Request Form

(Attach the completed end of stage checklist from Appendix C)

Student: _____

Stage Check: _____

“I have audited all lessons for TCO compliance using the appropriate North Star Aviation auditing checklist, and I have added this statement to the student’s electronic records.”

Primary/Recommending Instructor: _____
(Signature)

Total Flight/Sim Hours Stage: _____ Total Course Flight/Sim Hours: _____

Total Pre/Post: _____

Requested Aircraft: _____

Any areas the instructor would like emphasized on the stage check:

The Stage check will be scheduled at the soonest available time.

Student Availability: _____

FLIGHT PLANS (The Stage Check pilot may alter)

- Private Stage 2: KDLH/KGRB/KMKE/KDSM
- Instrument Stage 2: (Contact the check pilot for your scenario)
- Commercial Stage 1: KANE/KMIC/KSTP/KFCM (VFR/IFR)
- Commercial Stage 3: KDLH/KGRB/KDSM/KMKE (VFR/IFR)



Checkride/ACR Request Form

This form follows multiple steps to ensure the applicant is ready for his/her checkride/ACR appointment, and each step must be followed before the next one can be started. After all steps have been completed, this form will be given to the Chief Dispatcher for scheduling.

Applicant Name: _____
Date: _____
Phone #: _____
Pilot Cert #: _____
Knowledge Test ID #: _____

Email: _____
Aircraft Requested: _____
FTN: _____
Checkride Requested: _____

Instructor:

- **Complete Form 8710-1** (IACRA.faa.gov)
 - A Chief/Asst. Chief Instructor must associate the curriculum before the Instructor can sign.
 - For Private and Commercial students, the date of recommending endorsements must match the date the 8710 is signed.
- **Verify student has and instruct them to bring the following documents:**
 - Photo ID
 - Current Pilot Certificate (Address must match ID)
 - Current Medical
 - **Original** Knowledge Test Report
 - Pilot Logbook
 - Check ride endorsements
 - Current solo endorsement if applicable
 - Letter of discontinuance/disapproval (if applicable)

Name: _____ CFI #: _____ Cell #: _____

Signature: _____ Date: _____

Chief/Asst. Chief Flight Instructor:

- **Form 8710-1** (IACRA.faa.gov)
 - Associate curriculum
 - Associate and sign for Instrument students
- **Graduation Certificate** (Date Must Match 8710)
 - Add statement and graduate in Talon **AND** Paperless (if applicable)
 - Print/sign a copy of the certificate (Must give to the student to bring to the checkride)
- **ACR Records**
 - Aircraft: _____
 - Ground Time: _____
 - Flight Time: _____

Signature: _____ Date: _____

Chief Dispatcher:

- **Ensure appropriate signatures have been received**
- **Schedule student for Check ride/ACR Appointment**



Overnight or Extended Flight Request Form

Name of Pilot in Command _____

PIC's Cell Phone Number (_____) _____

Flight Instructor's Name _____

First Destination Contact Number (_____) _____

Second Destination Contact Number (_____) _____

PIC's Ratings (Select all that apply):

- ☐ Private ASEL
- ☐ Commercial ASEL
- ☐ Commercial AMEL
- ☐ Instrument

Attached Documents:

- ☐ Weight & Balance
- ☐ Performance Calculation
- ☐ Weather Briefing (an extended
accuweather forecast may work)
- ☐ NOTAMs

Passenger Name	Phone Number	Emergency Contact Name & Phone Number
1.		
2.		
3.		

Type of Flight:

- ☐ 141
- ☐ Solo
- ☐ IFT
- ☐ 61
- ☐ Dual
- ☐ VFR

Estimated Total Flight Time: _____

141 Syllabus Lessons: _____

Destination & Fuel Stops

Airport ID	FBO Name	FBO Hours	Fuel Price	Phone Number	Hangar
1.					
2.					
3.					
4.					

Departure Date _____ Return Date & Time _____

Route of flight _____

Chief/Asst. Chief Signature _____



Part 141 Instructor Proficiency Check

Date: _____

Aircraft: _____

Instructor: _____

Dual Instruction: _____

Check Pilot: _____

Ground Instruction: _____

TCO(s) applicable: _____

- ☐ Initial Checkout (141.79(d)(1)(i) and (ii))
☐ Recurrent Checkout (141.79(d)(2))

- ☐ Check Instructor Proficiency
(141.37(a)(1) and (2))

Type of Training Given: *(In the space provided below, please include topics covered in the training session. Refer to 141.37(a)(1) for check instructor qualifications.)*

Ground: _____

Flight: _____

"I certify that I have given the above-named instructor the training required by 14 CFR Part 141.79(d)(1)(i) including a briefing on the objectives and completion standards of the above-named course of training. I find the instructor proficient and approved to instruct in this FAA approved TCO."

Signature of Check Pilot: _____

"I certify that I have administered the test required by 14 CFR Part 141.37(a)(1), and I find the above-named instructor qualified to administer tests in the above named TCO(s)."

Signature of Chief/Asst. Chief: _____



Aircraft Rental Conditions

The following statement must be signed, or the student will be liable for any or all aircraft damage:

I agree to comply with all federal and state laws. I agree to comply with the applicable Federal Aviation Administration Regulations, Aeronautical Information Manual recommended procedures, and North Star Aviation, Inc's Policies, Procedures, and Practices Manual (a.k.a. Flight Operations Manual). I have read and understand North Star Aviation, Inc's Policies, Procedures, and Practices Manual. If no Instructor is onboard with me, I agree to pay damage up to the amount of the North Star Aviation, Inc's deductible in effect and to the extent damages are not covered by applicable insurance at the time of any accident, incident, or damage to this aircraft. A finance charge of 18% will be incurred on all outstanding balances with North Star Aviation, Inc. I understand that I may obtain my own renters' insurance for the deductible.

Note: The North Star Aviation Inc. current deductible is \$5,000

Student Name: _____ Date: _____

Student Signature: _____

APPENDIX C – TSA STUDENT TRAINING DOCUMENT REQUIREMENTS

US Citizenship Verification

NSA must verify original documents of every student before they begin training. TSA requires NSA to maintain a copy of citizenship records for 5 years. The following documents may be used to prove US Citizenship:

- 1) Original birth certificate of the United States, American Samoa, or Swains Island, and government-issued picture ID.
- 2) Original certification of birth abroad with raised seal (Form FS-545 or DS-1350) and government-issued picture ID.
- 3) Original certificate of U.S. citizenship with raised seal (Form N-560 or N-561), or a Certificate of Repatriation (Form N-581), and government-issued picture ID.
- 4) Original U.S. Naturalization Certificate with raised seal (Form N-550 or N-570) and a government issued picture ID.

Foreign Student TSA Clearance Process

If the prospective student is not a US citizen or national, the following process must be completed prior to flight training. This process is primarily for verifying the student has no criminal or other undesirable background. However, TSA will also review the immigration requirements for any applicant who requires a VISA to enter the country for flight training.

These requirements are best determined by Bureau of Citizenship and Immigration Services (BCIS) at 800-375-5283, or www.uscis.gov, or the State Department Consular Affairs Office for assistance. The Alien Flight Student Program (AFSP) will deny flight training requests from candidates who are present in the United States illegally or who do not have an appropriate VISA for flight training. *Fees paid for denied applications are not refundable.*

Steps:

- 1) The Flight School or independent CFI registers as a Provider with TSA by visiting https://www.flightschoolcandidates.gov/afsp2/?acct_type=p§ion=WN
- 2) Candidate visits www.flightschoolcandidates.gov and submits flight training request online with AFSP. Training request includes background information submitted on-line and a scanned passport, also submitted on-line. During this process, the name of the training provider and the level of training is also specified as Category 3, which pertains to flight training in aircraft less than 12,500 pounds. The course ID field must be completed with Private, Instrument, Recreational, Light Sport, or Multi Engine as appropriate.



- 3) After AFSP accepts the application, an e-mail is sent to Provider requesting validation of Candidate via the AFSP website.
- 4) After Provider validates student, the candidate is notified by e-mail and may then pay the \$130 nonrefundable fingerprint processing fee.
- 5) After payment is confirmed, AFSP e-mails Candidate fingerprint instructions. Candidate then follows fingerprint instructions and mails AFSP the fingerprints. NOTE: Fingerprints must not be submitted before the fingerprint instructions are e-mailed or fingerprints will not be accepted. Fingerprint locations can be found at <http://www.tsc-csc.com/printoffices/>
- 6) AFSP e-mails both Provider and Candidate an e-mail confirmation that fingerprints have been received, usually within 7 days of receiving them. Flight training for Category 3 students may begin as soon as this confirmation is received.
- 7) A photograph must be taken of the foreign student before beginning flight training and uploaded to the www.flightschoolcandidates.gov website. A photo taken on the first day of training with a simple camera phone will suffice.
- 8) All training requests only stay active for 365 days from the date of approval, which means training must be completed by then. Students who receive security approval from TSA are bound to complete their training with the same Provider as in the original application. If the student wishes to switch Providers, a new application process and fee is required. Any records required under 1552.3 must be retained for 5 years.



APPENDIX D—STUDENT TRAINING RECORD CERTIFICATION

North Star Aviation, Inc. Student Training Record Certification

This document sets forth North Star Aviation’s student training record certification process, as required by 14 CFR 141.85:

§141.85 Chief instructor responsibilities.

(a) A chief instructor designated for a pilot school or provisional pilot school is responsible for:

(1) Certifying each student's training record, graduation certificate, stage check and end-of-course test reports, and recommendation for course completion, unless the duties are delegated by the chief instructor to an assistant chief instructor or recommending instructor;

As specified below the responsibilities identified in 141.85 (a)(1) are delegated, in part, to the Assistant Chief Instructor and/or Recommending Instructor. Stage check pilots and the Chief Dispatcher (and Assistant Chief Dispatcher, if applicable) also play an important role in record certification. This process is designed to ensure that 100% of all student training records receive thorough audits before final certification is made by the Chief or Assistant Chief Instructor.

Intermediate Stage Checks (Private Stage 1; Instrument Stage 1; Commercial Stages 1 and 2)

Recommending Instructor: During a portion of the pre/post ground lesson immediately preceding an intermediate stage check (e.g. Private Lesson 18) the recommending instructor, with his/her student present, will run the appropriate auditing checklist and resolve all errors. Once the ground lesson is complete and the student’s training record has been audited with all errors resolved the recommending instructor will award the appropriate “Currency” in Talon. The Currency will contain the following statement, and it will require the instructor to sign it:

“I have audited all lessons for TCO compliance using North Star Aviation’s [Course Name and Stage (e.g. Private Pilot Stage One)] auditing checklist.”

The recommending instructor will enter their PIN certifying the above statement. This process informs those reviewing a student’s training record that at least one audit was previously completed for the stage. Additionally, the instructor will complete a Stage Check Request Form (Appendix B) and submit it to the Chief Dispatcher.



Chief Dispatcher: Once the recommending instructor completes his/her audit the Chief Dispatcher will conduct a second audit or delegate this responsibility to the Assistant Chief Dispatcher (if applicable) or a stage check pilot (including the Chief or Assistant Chief Instructor.) Delegation is required to avoid a backlog of stage check requests and to share the workload. The purpose of this second step is to ensure two audits are performed for every intermediate stage. A second “Currency” will be awarded following the procedures outlined above for the recommending instructor (i.e. awarding the appropriate currency and entering their PIN). This process informs those reviewing a student’s training record that at least two audits were previously completed for the stage.

When the two Currencies have been awarded signifying two separate audits were performed, and when the Stage Check Request Form is completed, the student is ready for stage check. Thus, for every intermediate stage check there should be at least two audits. If these currencies are not awarded, Talon will not allow the stage check to be scheduled.

Final Stage Checks (Private Stage 2; Instrument Stage 2; Commercial Stage 3)

Recommending Instructor: During a portion of the pre/post ground lesson immediately preceding a final stage check (e.g. Private Lesson 35) the recommending instructor, with his/her student present, will run the appropriate auditing checklist and resolve all errors. Once the ground lesson is complete and the student’s training record has been audited with all errors resolved the recommending instructor will award the appropriate currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s [Course Name and Stage (e.g. Private Pilot Stage Two)] auditing checklist.”

The recommending instructor will enter their PIN certifying the above statement. This process informs those reviewing a student’s training record that at least one audit was previously completed for the stage. Additionally, the instructor will complete a Stage Check Request Form (Appendix B) and submit it to the Chief Dispatcher.

Chief Dispatcher: Once the recommending instructor completes his/her audit the Chief Dispatcher will conduct a second audit or delegate this responsibility to the Assistant Chief Dispatcher (if applicable) or a stage check pilot (including the Assistant Chief Instructor.) Delegation is required to avoid a backlog of stage check requests and to share the workload. The purpose of this second step is to ensure two audits are performed for every final stage. A second “Currency” will be awarded following the procedures outlined above for the recommending instructor (i.e. awarding the appropriate currency and entering their PIN). This process informs those reviewing a student’s training record that at least two audits were previously completed for the stage. If these currencies are not awarded, Talon will not allow the stage check to be scheduled.



Chief Instructor/Assistant Chief Instructor: After successful completion of a final stage check the Chief Instructor or Assistant Chief Instructor* will perform a final audit of the student's training record using the appropriate checklist(s). Since each stage has already received two thorough audits this final audit need only consist of a random sampling of required TCO items (e.g. number of landings in Private Lesson 28.) Once this final audit is complete the Chief or Assistant Chief Instructor will award a final currency containing the following statement:

"I have audited all lessons in this course using North Star Aviation's [Course Name and Stage (e.g. Private Pilot Stage Two)] auditing checklist. I certify that this student has successfully completed all requirements of 14-CFR-Part 141 Appendix (X), and I find them prepared to graduate."

This final certifying remark, in addition to a signed graduation certificate, fulfills the requirement identified above in 14 CFR 141.85 (a)(1).

*Final audit and certification can be performed by either the Chief Instructor or Assistant Chief Instructor, unless the second auditor of a student's final stage lesson log is the Assistant Chief Instructor, in which case the Chief Instructor must conduct the final audit. Only the Chief Instructor can certify a commercial student's records until an Assistant Chief Instructor is designated for the Commercial TCO.



Stage Check and End of Course Audit Checklists

Private Pilot Stage One:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “PVT S1 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Private Pilot Stage One auditing checklist, and I have corrected all errors”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist thoroughly and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “PVT S1 DSP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Private Pilot Stage One auditing checklist, and I have notified the Instructor of any errors.”

- ☐ Private Pilot ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 19 to go without everything complete)
- ☐ Hours (approximate for intermediate stage)
 - ☐ 18.1 total
 - ☐ 17.8 dual
 - ☐ 0.5 solo
 - ☐ 1.0 simulator
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate (date matches electronic records)
 - ☐ Endorsements (Solo and Test)
 - ☐ Signed Terms of Agreement (TOA)
 - ☐ Medical (Current)
 - ☐ Student Pilot Certificate
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)
 - ☐ Pre-Solo open and closed book exams
 - ☐ FOM (SOP) test
 - ☐ VA Student: account statement matches flight/lesson log
- ☐ Student Contact Info is up to date
- ☐ Lesson 15: FOM and pre-solo tests (open and closed book) corrected to 100%
- ☐ Lesson 16: Solo; check logbook for solo endorsement
- ☐ When complete, award the appropriate currency mentioned above.

NOTES:



Private Pilot Stage Two:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “PVT S2 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Private Pilot Stage Two auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “PVT S2 DSP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Private Pilot Stage Two auditing checklist, and I have notified the Instructor of any errors.”

CHIEF/ASSISTANT CHIEF INSTRUCTOR: Run this checklist and have the recommending instructor, student, and/or Chief Dispatcher correct all errors. Certify completion and graduation by awarding the “PVT GRAD STMT” currency containing the following statement:

“I have audited all lessons in this course using North Star Aviation’s Private Pilot Stage One and Two auditing checklists. I certify that this student has successfully completed all requirements of 14-CFR-Part 141 Appendix B, and I find them prepared to graduate.”

- ☐ Private Pilot ground school complete (required for final record certification*.)
- ☐ All line items/lessons complete (Talon won’t allow lesson 36 to go without everything complete)
- ☐ Hours >= (Times can be found in the Pilot log, or by referencing the “Course Minimums”. Search the student in “Personnel”, select “Course Details” on the left side menu, then select “Course Minimums”)
 - ☐ 44.9 total (35 minimum per 14 CFR 141 Appendix B)
 - ☐ 34.4 dual (20 minimum per 14 CFR 141 Appendix B)
 - ☐ 10.5 solo (5 minimum per 14 CFR 141 Appendix B)
 - ☐ 7.2 dual cross country (3 minimum per 14 CFR 141 Appendix B)
 - ☐ 5.5 solo cross country
 - ☐ 3.0 night (3 minimum per 14 CFR 141 Appendix B)
 - ☐ 3.0 Inst (3 minimum per 14 CFR 141 Appendix B)
- ☐ Cross country lessons 25, 27, 28, 29, and 30 include destination airports and distances between them in the comments section (Destination airports logged in the pilot log are not attached to the grade sheet unless they are in the comments).
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate (date matches electronic records)
 - ☐ Endorsements (Solo and Test)
 - ☐ Signed Terms of Agreement (TOA)
 - ☐ Medical (Current)
 - ☐ Student Pilot Certificate
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)



- ☐ Pre-Solo open and closed book exams
- ☐ FOM (SOP) test
- ☐ VA Student: account statement matches flight/lesson log
- ☐ Endorsements (Solo X/C and Written Test)
- ☐ FAA Written Test results
- ☐ Lesson 25: Cross Country \geq 50NM
- ☐ Lesson 27: Cross Country \geq to an active control tower
- ☐ Lesson 28: Night Cross Country \geq 100NM total distance with 3 hours and 10 landings (can be repeated to achieve the hour and landing totals.)
- ☐ Lesson 29: Solo Cross Country to meet FAR 141 Appendix B requirements (**can be accomplished on Lesson 30)
 - ☐ \geq 100NM total distance**
 - ☐ At least one segment \geq 50NM**
 - ☐ At least one landing at three different points (can include KMKT)**
 - ☐ At least three patterns and landings at a tower-controlled airport**
 - ☐ Logbook endorsed for solo cross country, and cross-country planning
- ☐ Lesson 30: Solo Cross Country \geq 50NM (**This lesson must meet 141 Appendix B requirements if not accomplished on Lesson 29.)
- ☐ When complete, award the appropriate currency mentioned above.

Chief/Assistant Chief Instructor Only: After successful completion of the stage check:

- ☐ Conduct a final audit.
- ☐ Check attendance and successful completion of the ground school*
- ☐ Print and sign a Graduation Certificate; upload to the student's documents
- ☐ When complete, award the "PVT GRAD STMNT" currency mentioned above.
- ☐ Log into IACRA as School Administrator and associate the Private Pilot Curriculum to the student.
- ☐ Ensure flight times are correct in the student's 8710
- ☐ Do **Not** "Complete" the course in Talon until the Checkride is completed. Signing the paper certificate is the official graduation record to send a student to Checkride.

*Note: Students who progress quickly through their flight training may complete the final stage check before completing the ground school. In these cases, an NSA CFI or MNSU ground instructor should teach the remaining lessons and ensure all topics have been covered in at least the hours specified in the TCO. With permission from the student's ground school instructor successful completion of the FAA Private Pilot written exam may substitute the ground school final exam.

NOTES:



Instrument Stage One:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “INST S1 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Instrument Stage One auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “INST S1 DSP Adt.” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Instrument Stage One auditing checklist, and I have notified the instructor of any errors.”

- ☐ Instrument ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 15 to go without everything complete)
- ☐ Hours (approximate for intermediate stage)
 - ☐ 15.1 total ☐ 2.8 ATD
 - ☐ 15.1 dual ☐ 13.3 Inst
 - ☐ 12.3 ASEL
- ☐ All flight and simulator lessons should log ACTUAL or SIMULATED instrument time
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate (date matches electronic records)
 - ☐ Signed Terms of Agreement (TOA) (Needs to be updated each Semester)
 - ☐ Medical (Current)
 - ☐ Private Pilot Graduation Certificate
 - ☐ Private Pilot Certificate
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)
 - ☐ Instrument Basic Exam (70% or Greater Score)
 - ☐ FOM (SOP) test (Check date to ensure it was taken during Inst. Training.)
 - ☐ VA Student: account statement matches flight/lesson log
- ☐ **Approaches must be logged in the grade sheet remarks for this audit to be satisfied**
 - ☐ Lesson 10: Should log 4 approaches ((2 VOR and 2 GPS)
 - ☐ Lesson 11: Should log 2 approaches (VOR and GPS)
 - ☐ Lesson 12: Should log at least 1 VOR approach
 - ☐ Lesson 13: Should log at least 1 GPS approach
 - ☐ Lesson 15: Should log at least 1 approach (VOR or GPS)
- ☐ When complete, award the appropriate currency mentioned above.

NOTES:



Instrument Stage Two:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “INST S2 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Instrument Stage Two auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “INST S2 DSP Adt.” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Instrument Stage Two auditing checklist, and I have notified the Instructor of any errors.”

CHIEF/ASSISTANT CHIEF INSTRUCTOR: Run this checklist and have the recommending instructor, student, and/or Chief Dispatcher correct all errors. Certify completion and graduation by awarding the “INST GRAD STMNT.” currency containing the following statement:

“I have audited all lessons in this course using North Star Aviation’s Instrument Stage One and Two auditing checklists. I certify that this student has successfully completed all of 14-CFR-Part 141 Appendix C, and I find them prepared to graduate.”

- ☐ Instrument ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 33 to go without everything complete)
- ☐ Hours >= (Times can be found in the Pilot log, or by referencing the “Course Minimums”. Search the student in “Personnel”, select “Course Details” on the left side menu, then select “Course Minimums”)
 - ☐ 43.8 total
 - ☐ 43.8 dual
 - ☐ 33.0 ASEL
 - ☐ 13 dual cross country
 - ☐ 10.8 ATD (14 maximum credit per 14 CFR 141 Appendix C)
 - ☐ 40.1 Inst (35 minimum per 14 CFR 141 Appendix C)
- ☐ All flight and simulator lessons should log ACTUAL or SIMULATED instrument time
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate (date matches electronic records)
 - ☐ Signed Terms of Agreement (TOA) (Needs to be updated each Semester)
 - ☐ Medical (Current)
 - ☐ Private Pilot Graduation Certificate
 - ☐ Private Pilot Certificate
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)
 - ☐ Instrument Basic Exam (70% or Greater Score)
 - ☐ FOM (SOP) test (Check date to ensure it was taken during Inst. Training.)
 - ☐ VA Student: account statement matches flight/lesson log
 - ☐ FAA Written Test results



- ☐ **Approaches/Destinations must be logged in the grade sheet remarks for this audit to be satisfied**
 - ☐ Lesson 17: Should log at least 2 approaches (ILS and LOC BC)
 - ☐ Lesson 18: Should log at least 2 approaches (ILS and LOC)
 - ☐ Lesson 20: Should log at least 3 approaches (ILS; VOR; GPS) and holding
 - ☐ Lesson 21: Should log at least 3 approaches (Prec; Non-prec) and X/C to towered airport
 - ☐ Lesson 22: Should log at least 2 approaches (LOC; ILS)
 - ☐ Lesson 23: Should log at least 2 approaches (Prec; Non-prec) and holding
 - ☐ Lesson 25: Should log at least 3 approaches (Prec; Non-prec), holding, and X/C to towered airport
 - ☐ Lesson 26: Should log at least 2 approaches (Prec; ASR)
 - ☐ Lesson 27: Should log at least 3 approaches (Prec; Non-prec), holding, and X/C to towered airport
 - ☐ Lesson 28: Should log at least 3 approaches (ILS; GPS; VOR/LOC) and holding. Part 141 Appendix C requirement: *IFR X/C consisting of a distance of at least 250 nautical miles along airways or ATC-directed routing, and with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports. At least one instrument approach will be flown at each airport, and at least 3 different kinds of approaches with the use of navigation systems (ILS, VOR/LOC, GPS) will be performed*
 - ☐ Lesson 29: Should log at least 3 approaches (GPS; ILS; VOR) and holding
 - ☐ Lesson 30: Should log at least 3 approaches (GPS; ILS; VOR) and holding
 - ☐ Lesson 31: Should log at least 2 approaches (Prec; Non-prec) and holding
- ☐ When complete, award the appropriate currency mentioned above.

Chief/Assistant Chief Instructor Only: After successful completion of the stage check:

- ☐ Conduct a final audit.
- ☐ Check attendance and successful completion of the ground school
- ☐ Print and sign a Graduation Certificate; upload to the student's documents
- ☐ When complete, award the "INST GRAD STMNT" currency mentioned above.
- ☐ Log into IACRA as School Administrator and associate the Instrument Curriculum to the student.
- ☐ Ensure flight times are correct in the student's 8710
- ☐ Log into IACRA as Chief/Assistant Chief pilot and sign the 8710
- ☐ Instruct the student to visit the ACR for his/her Temporary Certificate

NOTES:



Commercial Stage One:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “COM S1 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Stage One auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “COMM S2 DSP Adt.” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Stage One auditing checklist, and I have notified the Instructor of any errors.”

- ☐ Commercial Pilot ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 21 to go without everything complete)
- ☐ Hours (approximate for intermediate stage)
 - ☐ 54.2 total
 - ☐ 27.2 dual
 - ☐ 27 solo
 - ☐ 48 cross country
 - ☐ 4 night cross country
 - ☐ 3.2 simulator
 - ☐ 15.5 Inst
- ☐ Flight Lessons include destination airports and distances between them in the remarks section. (Destination airports logged in the pilot log are not attached to the grade sheet unless they are in the comments).
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate
 - ☐ Instrument Graduation Certificate
 - ☐ Signed Terms of Agreement (TOA)
(Needs to be updated each Semester)
 - ☐ Medical (Current)
 - ☐ Private Pilot Certificate **with Instrument Rating**
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)
 - ☐ VA Student: account statement matches flight/lesson log
- ☐ Lessons 2 and 6 logged at least 2 hours night each
- ☐ Lesson 12: dual cross country; three approaches at three airports; 1 leg >100NM; 2 legs >50NM
- ☐ Lessons 9 and 14 recommended dual cities loop; three approaches at three airports; 1 leg >50NM
- ☐ Lesson 17: solo cross country
 - ☐ One leg at least 250NM
 - ☐ One tower-controlled airport is recommended
 - ☐ At least 2 airports different than point of departure
 - ☐ At least 3 landings (1 at each airport)
- ☐ Lesson 19: VFR dual cross country; one leg at least 100NM with 3 points of landing.
- ☐ When complete, award the appropriate currency mentioned above.

NOTES:



Commercial Stage Two:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “COM S2 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Pilot Stage Two auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “COM S2 DSP Adt.” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Pilot Stage Two auditing checklist, and I have notified the Instructor of any errors.”

- ☐ Commercial Pilot ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 36 to go without everything complete)
- ☐ Hours (approximate for intermediate stage)
 - ☐ 72.7 total
 - ☐ 41.2 dual
 - ☐ 31.5 solo
 - ☐ 69.5 ASEL
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate
 - ☐ Instrument Graduation Certificate
 - ☐ Signed Terms of Agreement (TOA) (Needs to be updated each Semester)
 - ☐ Medical (Current)
 - ☐ Private Pilot Certificate **with Instrument Rating**
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License
 - ☐ Birth Certificate
 - ☐ TSA Authorization (if applicable)
 - ☐ VA Student: account statement matches flight/lesson log
- ☐ Flight Lessons include destination airports in the remarks section. (Destination airports logged in the pilot log are not attached to the grade sheet unless they are in the comments).
- ☐ Lesson 23 has at least 2 landings logged, and all other flight lessons have at least 3 Landings.
- ☐ When complete, award the appropriate currency mentioned above.

NOTES:



Commercial Stage Three:

RECOMMENDING INSTRUCTOR: Run this checklist thoroughly and correct all errors. Certify completion by awarding the “COM S3 IP Audit” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Stage Three auditing checklist, and I have corrected all errors.”

CHIEF DISPATCHER or CHECK PILOT: Run this checklist and have the recommending instructor and/or student correct all errors. Certify completion by awarding the “COM S3 DSP Adt.” currency containing the following statement:

“I have audited all lessons for TCO compliance using North Star Aviation’s Commercial Stage Three auditing checklist, and I have notified the Instructor of any errors.”

CHIEF/ASSISTANT CHIEF INSTRUCTOR: Run this checklist and have the recommending instructor, student, and/or Chief Dispatcher correct all errors. Certify completion and graduation by awarding the “COM GRAD STMNT” currency containing the following statement:

“I have audited all lessons in this course using North Star Aviation’s Commercial Stage One, Two, and Three auditing checklists. I certify that this student has successfully completed all requirements of 14-CFR-Part 141 Appendix D, and I find them prepared to graduate.”

- ☐ Commercial Pilot ground school complete or in progress
- ☐ All line items/lessons complete (Talon won’t allow lesson 66 to go without everything complete)
- ☐ Hours >= (Times can be found in the Pilot log, or by referencing the “Course Minimums”. Search the student in “Personnel”, select “Course Details” on the left side menu, then select “Course Minimums”)
 - ☐ 120 total ((120 minimum per 14 CFR 141 Appendix D) Must be met by end of stage check)
 - ☐ 78.5 dual (55 minimum per 14 CFR 141 Appendix D)
 - ☐ 41.5 solo (10 supervised solo in AMEL per 14 CFR 141 Appendix D)
 - ☐ 70 cross country
 - ☐ 11 night cross country
 - ☐ 12.2 FTD (maximum 24 allowed per the Red Bird FAA Authorization Letter)
 - ☐ 11 night (5 minimum per 14 CFR 141 Appendix D)
 - ☐ 30.4 Inst (10 minimum (5 minimum in AMEL) per 14 CFR 141 Appendix D)
 - ☐ 38.3 AMEL (10 minimum per 14 CFR 141 Appendix D)
 - ☐ 69.5 ASEL
- ☐ The following documents are on file:
 - ☐ Enrollment Certificate
 - ☐ Instrument Graduation Certificate
 - ☐ Signed Terms of Agreement (TOA) (Needs to be updated each Semester)
 - ☐ Medical (Current)
 - ☐ Private Pilot Certificate **with Instrument Rating**
 - ☐ Passport with Visa (if applicable)
 - ☐ Driver’s License



- ☐ Birth Certificate
- ☐ TSA Authorization (if applicable)
- ☐ VA Student: account statement matches flight/lesson log
- ☐ FAA Written Test results
- ☐ FTN (IACRA)
- ☐ NSA Written Test (Not required per the TCO)
- ☐ **Approaches/Destinations must be logged in the grade sheet remarks for this audit to be satisfied**
 - ☐ Lessons 46 must be DAY cross country; at least 2 hours; more than 100NM on one leg
 - ☐ Lesson 47 must be NIGHT cross country; at least 2 hours; more than 100NM on one leg
 - ☐ Lesson 48: simulator; at least three approaches
 - ☐ Lesson 50: at least two approaches
 - ☐ Lesson 53: dual cross country; at least 3 approaches; can combine with #54
 - ☐ Lesson 54: dual cross country; at least 3 approaches; can combine with #53
 - ☐ Lesson 55: solo (supervised) cross country; one leg at least 250NM; at least 3 landings (3 airports)
 - ☐ Lessons 56, 57 must be NIGHT solo (supervised) cross country's; total combined flight time at least 5 hours NIGHT; at least 10 takeoffs and landings at tower-controlled airports (therefore 11 landings minimum if both lessons are combined.)
 - ☐ Lesson 66: should log at least 1 instrument approach
- ☐ All lessons with instrument approach requirements should have Instrument time logged
- ☐ When complete, award the appropriate currency mentioned above

Chief/Assistant Chief Instructor Only: After successful completion of the stage check:

- ☐ Conduct a final audit.
- ☐ Check attendance and successful completion of the ground school
- ☐ Print and sign a Graduation Certificate; upload to the student's documents
- ☐ When complete, award the "COM GRAD STMNT" currency mentioned above.
- ☐ Log into IACRA as School Administrator and associate the Commercial Curriculum to the student.
- ☐ Ensure flight times are correct in the student's 8710
- ☐ Do **Not** "Complete" the course in Talon until the Checkride is completed. Signing the paper certificate is the official graduation record to send a student to Checkride.

NOTES:

APPENDIX E NSA AVIATION SAFETY PROGRAM

SCOPE

This chapter outlines the Aviation Safety Program in use at North Star Aviation's training campus in conjunction with Minnesota State University's Department of Aviation. The following information has been extracted from the North Star Aviation Safety Management System Manual. The Safety Management System Manual describes in full scope and detail North Star Aviation safety policy, processes and programs. This section is designed for students and instructors to understand how the system will be used and as a reference for using its programs.

PHILOSOPHY AND PURPOSE

The North Star Aviation Safety Management System is founded on the idea that safety culture is the cornerstone to continuous accident prevention. The idea of a strong safety culture is so important that the senior leadership of North Star Aviation have established the foundation of this culture in their commitment to safety.

CHARACTERISTICS

The Aviation Safety Program is characterized by the following elements:

Safety Policy;

Safety policy is a statement of set objectives, assignment of responsibilities and set standards for which the organization operates. It is also where management conveys a commitment to the safety and safety performance of the organization and its employees. As Safety Risk Management and Safety Assurance Programs are developed and put in place, the Safety Policy is where organizations come back to ensure that the commitments of the policy are being realized and standards are upheld.

Safety Risk Management;

The Safety Risk Management (SRM) component of Safety Management System (SMS) provides a formal process for identifying hazards and mitigating risks based on an understanding of the organizations systems and operating environment. SRM includes decision making regarding management acceptance of risk to operations and when mitigation strategies must be employed. The SRM component is the organization's way of fulfilling its commitment to consider risk in their operations and to reduce it to an acceptable level (mitigation). In this sense, the SRM component of a SMS becomes a design process that incorporates risk controls into other processes or redesigns controls where existing ones are not meeting the organizations commitment and/or needs. SRM acts a living process that continuously examines the safety goals and performance of an organization.

Safety Assurance;

Safety assurance provides you the necessary processes and programs to give the organization confidence that the system is meeting the organization's safety objectives and that mitigations and risk controls developed under the SRM are working. In safety assurance, the organizations goal is to watch



what is going on and review what has happened to ensure that objectives are met. Safety assurance requires monitoring and measuring safety performance of operational programs and continuously improving the level of safety performance within the operation. Strong safety assurance will yield information used to maintain the performance of risk controls on a proactive and reactive basis. Safety assurance, therefore, is a means of assuring safety performance of the organization, keeping it on track, correcting it when and where needed, and identifying needs for redesigning processes proactively or reactively.

Safety Promotion;

Safety promotion is designed to ensure that an organization employees, customers and students have a solid foundation regarding their safety responsibilities, the organizations safety policies and expectations, reporting procedures and a familiarity with risk and hazard controls. Thus, training and communication are the two largest areas of safety promotion.

Continuous Improvement;

The last element of a robust and efficient SMS or Safety Program is continuous improvement. This is a pillar of safety programs that is a commitment of the users and designers, as well as a process within the system itself to always find room for improving the system. This means that changes to the system will arise as trends and performance information is uncovered with Safety Risk Management, Safety Assurance and Safety Promotion. The safety system must always strive to be better and adapt to changing environments.

AUTHORITY AND RESPONSIBILITY

Oversight and Control of the Aviation Safety Program is the responsibility of the Director of Safety at North Star Aviation. The President of North Star Aviation has final approval authority for all North Star Aviation safety directives and The Director of Safety has responsibility for all safety programs. The Director of Safety will ensure that appropriate directives and policies are issued as a result of known safety trends.

The President, Director of Safety, Chief Flight Instructor, Director of Maintenance, Line Service manager and Chief Dispatcher are responsible for the implementation of and compliance with the North Star Aviation Program in their respective departments. All North Star Employees, students and any contract personnel are responsible for hazard identification and incident/accident prevention.

APPLICABILITY

North Star Aviation's Aviation Safety Program is administered by the Director of Safety and is responsible for the safety oversight in the following areas, which include but are not limited to

1. Flight Training
2. Line Service
3. Aircraft Maintenance



REPORTING OF ACCIDENTS, INCIDENTS AND HAZARDS/HAZARDOUS EVENTS

All accidents/incident, accident damage to aircraft equipment, injury to employees, students or observers, damage to North Star Aviation Property, injury to the general public as a result of flight school operations will be reported to the Director of Safety. The Director of Safety will notify the Safety Review Board. Investigators will be assigned by the Director of Safety as necessary for accidents and safety-related events requiring investigation.

North Star Aviation's policy regarding internal accident and incident investigations is that all investigations will be conducted under the authority of the General manager or Director of Safety. All investigations are conducted through a follow-up procedure either by the department manager or Director of Safety.


Any student, employees or contract personnel observing a hazardous or potential hazardous situation is encouraged to report it to the Director of Safety. Safety Concerns of an urgent nature may be communicated verbally to the Chief Flight Instructor or Assistant Chief Flight Instructor on Duty. The Chief Flight Instructor or Assistant Chief Flight Instructor will communicate these concerns to the Director of Safety and immediate mitigation tactics will be employed. Anyone can file event reports electronically at <https://apps3.talonsystems.com/SMS/SMS?c=005773419085325601&cl=408>. The Director of Safety, Safety Managers, and assigned investigators are the only individuals who may view event reports. Upon receiving reports of potentially hazardous conditions, an investigation will begin to provide root cause, contributing factors, and recommendations for mitigation.

In North Star Aviation's Just Culture, no student or employee will be persecuted for submitting a safety report or performing any action self-disclosed in a report except for reports that include;

1. Criminal Activity
2. Substance Abuse
3. Use of Controlled Substances
4. Use of Alcohol
5. Falsification of Records
6. Intentional Violation of the Code of Federal Regulations
7. Careless or Reckless behavior

Filing a Safety Report

Submitting a Safety Report is accomplished using North Star Aviation's Safety Management System Talon Safety Management and Reporting Tracker. The reporting form can be found at <https://apps3.talonsystems.com/SMS/SMS?c=005773419085325601&cl=408>.

For those with access to Talon ETA, a report may be submitted by clicking the yellow and black icon  to access Talon SMART.

Talon SMART may be used to report actual or potential hazards, incidents and accidents; however, the use of this form does not replace the requirements of 49 CFR Part 830 accident/incident reporting.



When reporting an incident or hazard, ensure that you have selected the appropriate category for which the event would be classified under.

At North Star Aviation, confidentiality of the report is guaranteed. Reports forwarded to department managers will not include names; and if necessary, aircraft tail numbers, and exact dates and times. The identity of the submitter will NEVER be disclosed, even if known to the Director of Safety and/or any other management. The identity of any person implicated in the report will not be disclosed without their permission or unless this is required by law. The online reporting and tracking system will protect employee's identity and keep all reports confidential. If printed for review all identifying information will be removed. Through details in a report, individuals with access to the report may become aware of the identity of the submitter. This knowledge must not be distributed unless there is an immediate safety risk, at which point the Director of Safety will be notified. It is a violation of company policy to conduct any unauthorized investigation into a report.

If an event may be subject to FAA investigation, it is recommended to submit a NASA form. 14 CFR 91.25 prohibits reports filed with NASA from being used for FAA enforcement purposes.

Below is a list of events that should be reported, however **submitting reports is voluntary**.

- System Malfunctions – Which adversely affects the aircraft or safety of the operation
- Declaring an Emergency
- Landing without Company or FAA required fuel reserves
- Safety Equipment or procedures are defective or inadequate
- Deficiencies in Operating Procedures or Manuals
- Ground Damage occurs
- Non-Training related rejected takeoff
- All runway or taxiway incursions (Any vehicle)
- Significant handling or weather difficulties are experienced
- Any navigation error involving a serious deviation
- All altitude excursions of more than 500 feet or if a NASA Form is filed
- Flights that exceed loading or limitations of aircraft certification
- Communications fail or are impaired
- A stall warning alarm, except when expected
- When a heavy landing or hard landing inspection is required.
- Security Procedures are breached
- Any and all Bird Strikes and Foreign Object Damage (FOD)
- Any VFR or IFR Approach unstable under 500 feet AGL (FAA AC 120-71A, Appendix 2)
- Failure of any facility and procedures used during operations
- Aircraft is evacuated under any emergency or precautionary means
- Any and All TCAS events or ATC incidents, including Wake Turbulence
- Collisions between aircraft and vehicles or any ground equipment
- Collisions between vehicles and other vehicles or ground equipment
- Fuel Spillage
- Apron jet blast incident
- Breaches of ramp driving rules, which effect aircraft.

AVIATION SAFETY REVIEW BOARD

The Aviation Safety Review Board is a companywide convening body and has been formed to promote university safety culture and to identify and eliminate potential hazards and their associate risk. The Safety Review Board has final approval authority for all North Star Aviation and associated Minnesota State University Department of Aviation flight program safety directives and meet once per month to review aviation safety issues that have been reported or discovered within North Star Aviation or the Department of Aviation. Issues, trends and changes will be communicated with the student body, North Star Aviation employees and university representatives through the most effective means. The Safety Review Board consists of the following members:

- North Star Aviation, Director of Safety - Chairman
- North Star Aviation, VP
- Minnesota State University, Mankato, Aviation Program Representative
- North Star Aviation, Chief Flight Instructor
- North Star Aviation, Director of Maintenance
- North Star Aviation, Line Service Manager
- North Star Aviation, Aviation Safety Representative(s)
- North Star Aviation, General Manager
- Mankato Regional Airport Manager

The Aviation Safety Review Board's responsibilities include;

1. Review the status of current incidents and accidents, including the review of actions contemplated.
2. Review the status of the current hazard reports as needed
3. Review of safety audit reports
4. Review and resolve any safety matters that may be presented to the Board
5. Approve and assure the implementation of safety programs throughout the organization.

JUST CULTURE

One key to the successful implementation of safety regulation is to attain a “just culture” reporting environment within aviation organizations, regulators and investigation authorities. This effective reporting culture depends on how those organizations handle blame and punishment.

Only a very small proportion of human actions that are unsafe are deliberate (e.g. criminal activity, substance abuse, use of controlled substances, reckless noncompliance, sabotage, etc.) and as such deserve sanctions of appropriate severity. A blanket amnesty on all unsafe acts would lack credibility in the eyes of employees and could be seen to oppose natural justice. A “no-blame” culture per se is therefore neither feasible nor desirable.

What is needed is a “just culture”, an atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety-related information - but in which they are also clear about where the line must be drawn between acceptable and unacceptable behavior.

There is a need to learn from accidents and incidents through safety investigation so as to take appropriate action to prevent the repetition of such events. In addition, it is important that even apparently minor occurrences are investigated, in order to prevent catalysts for major accidents. Safety analysis and investigation is a necessary and effective means of improving safety, by learning the appropriate lessons from safety occurrences and adopting preventative actions. It is therefore important that an environment exists where occurrences are reported, the necessary processes are in place for investigation and for the development of necessary preventative actions such as re-training, improved supervision etc.

Conditions for Just Culture

Under “Just Culture” conditions, individuals are not blamed for ‘honest errors’, but are held accountable for willful violations and gross negligence.

People are less willing to inform the organization about their own errors and other safety problems or hazards if they are afraid of being punished or prosecuted. Such lack of trust of employees prevents the management from being properly informed of the actual risks. Managers are then unable to make the right decisions in order to improve safety. However, a totally “no-blame” culture is neither feasible nor desirable. Most people desire some level of accountability when a mishap occurs.

A Just Culture supports learning from unsafe acts in order to improve the level of safety awareness through the improved recognition of safety situations and helps to develop conscious articulation and sharing of safety information. Consequently, a Just Culture can be regarded as an enabler, and even indicator of (a good) Safety Culture.

Confidentiality

People are reluctant to draw attention to errors made by themselves or their colleagues, due to personal embarrassment or fear of reprimand. They must be confident that their identity, or the identity of any person implicated in the report will not be disclosed without their permission or unless this is required by law. An assurance should also be given that any subsequent safety action taken will, as far as possible, ensure the anonymity of the persons involved.

Punitive Action

A person who breaks the law or breaches a regulation or company procedure through a deliberate act or gross negligence cannot expect immunity from prosecution. However, if the offence was unpremeditated and unintentional, and would not have come to light except for the report, he/she should be protected from punishment or prosecution.

Loss of rating

The circumstances of a report may indicate that the performance of an individual is below the acceptable level. This may indicate the need for further training, or even cancellation of an individual's privilege(s). Such action must never be punitive.



AVIATION SAFETY TEAM

The Aviation Safety Team is a team assembled by the North Star Aviation Director of Safety that is designed to; implement, operate and maintain the Aviation Safety Program and Safety Management System, promote aviation safety at all levels of the organization on a day to day basis, identify hazards and recommend risk mitigation controls by investigating incident and hazard reports, develop safety programs, write and maintain safety manuals and communicate safety data and trends to the student body and North Star Aviation employees. The safety team is comprised of the Director of Safety and Safety Representatives appointed by the Director of Safety based on need. Aviation safety teamwork and projects will be discussed and receive final approval at Aviation Safety Review Board Meetings.

The Aviation Safety Team's Responsibilities include;

1. Development and Maintenance of Aviation Safety Program Manuals and Policy
2. Maintenance of Aviation Safety communication
3. Maintenance and Management of the North Star Aviation Safety Management System
4. Investigation of accident and incident reports, root cause analysis and safety action recommendations
5. Investigation of hazard reports, root cause analysis and safety action recommendations
6. Conduct self-audits with the use of applicable checklists for each program/process within the Aviation Safety Program
7. Organize and conduct quarterly safety training seminars for the student body and North Star Employees
8. Accept confidential reports from students or employees of safety concerns
9. Advise students or North Star Aviation Employees on safety concerns
10. Act as a liaison on behalf of flight school on safety concerns stemming from other operators or uses of the Mankato Airport.

AVIATION SAFETY PROMOTION

The Director of Safety is responsible for obtaining and distributing pertinent safety information to the student body and North Star Aviation Employees. Furthermore, instructors and supervisors are tasked with ensuring all students and employees respectively are informed of safety related information. Aviation Safety Team publications, semester publication and safety alerts will be distributed. Safety Alerts will be disseminated to North Star Aviation employees and MSU students and faculty.

AVIATION SAFETY TRAINING

Safety Training seminars will be made available to flight students, instructors and North Star employees on a regular basis. Training seminars may include FAA WINGS credit towards biennial flight review and may include invitations to the general public. Training events will be a proactive means of providing education and accident prevention information. Students and instructor will receive specific examples of lessons learned and hazards identified by reports or accidents/incidents experienced in the past and other pertinent information to the safety of general aviation as a whole. Attendance to Safety meetings will be highly encouraged for all students, instructors, or employees who have been invited to attend. Periodically, North Star Aviation employees will have required safety training.



AVIATION SAFETY ANALYSIS

The Director of Safety will maintain an analysis system using data received from North Star Aviation accident, incident and hazard reports. The purpose of data analysis is to identify trends and areas requiring mitigation or management action. Results of the analysis program will be distributed to as necessary after removing an identifiable information.

The effectiveness of the safety analysis program relies on the unrestricted flow of information between instructors, students, employees and the safety department. Participation in the reporting program is critical to the continued safety of the University flight environment. Honest and completely detailed reports are vital for root cause analysis and the discovery of trends that will affect each pilot's safety on the line. Please report any and all unusual or hazardous conditions. Safety Team members will respond in some way to each incident reported, no event may be too little to uncover potentially dangerous trends.

Hazard and trend identification are the foundation to basic accident prevention and safety awareness. This program is designed to aid in the identification of actual or potential hazards, track hazardous occurrences and provide a knowledge base for making decisions, changes and designing programs to improve aviation safety. The Director of Safety is responsible for establishing a system for collecting and analyzing information concerning hazardous situations and events. This information will be used to recommend changes and improvements to the Aviation Safety Program.

FLIGHT DATA MONITORING

North Star Aviation has implemented a Flight Data Monitoring (FDM) program for the express purpose of enhancing the safety of its operations. The goal of the FDM program and the use of the data is to identify potential hazards, threats, and accident precursors prior to experiencing an organizational accident, incident, or serious safety risk.

This policy defines the use of flight data which is recorded onboard an aircraft. This policy does not pertain to the collection of publicly transmitted data such as ATC recordings, feeds on www.liveATC.com, or data from an ADS-B transmitter or transponder.

IDENTIFICATION OF FLIGHT DATA

- a. The identification of sole-source flight data (the action of identifying the pilot and/or aircraft associated with a piece of flight data) by the SRB, can only occur when one of the following circumstances exists:
 - i. An aircraft accident or aircraft incident.
 - ii. The direct consent and authorization is given by all forward seat occupants of an aircraft who are crewmembers. (In the case of a tandem aircraft, all occupants who are crewmembers)
 - iii. An aircraft may have been operated (unintentionally or otherwise) outside of its approved operating limits, and the SRB or FDM Analyst has reason to believe the aircraft should undergo a mechanical inspection to ensure the aircraft has not been damaged. Such identification shall only occur under the following circumstances:

1. The FDM Analyst or SRB unanimously believes an aircraft exceedance requires a mechanical inspection, and
 2. Only the aircraft identification (not any occupant identification) may be released, and only the Director of Maintenance, and
 3. The SRB Chair or FDM Analyst shall forward the aircraft identification to the Director of Maintenance with a description of why the SRB or FDM Analyst has determined maintenance involvement is necessary. The Director of Maintenance will have the final authority to decide the proper course of action concerning what maintenance action, if any, is required.
- iv. The SRB concludes that an intentional or reckless act has occurred. In this event, the procedure set forth below will apply.
1. The SRB may conclude that an intentional or reckless act has occurred only with a unanimous vote of the team members present.
 2. In the event of a unanimous SRB vote, the SRB Chairman or FDM Analyst shall forward the findings that an intentional or reckless act occurred to the Dean, copying the Director of Safety, NSA Vice President, NSA General Manager, NSA Chief Flight Instructor and an MSU Aviation Program faculty member.
 3. If the Dean concurs that an intentional or reckless act has occurred, then identification of the aircraft occupants and aircraft N-number will ensue, if such capability exists. The identified data will be referred to the NSA General Manager for disposition.
- v. The Gatekeeper(s) determine that the MSU/NSA pilot poses a risk of potential danger or an increased risk to themselves or others and the only reasonable action is to identify sole-source flight data (i.e. MSU/NSA pilot identity) so that further action can be considered.
1. The SRB may concur that identification of sole-source data at the recommendation of the Gatekeeper(s) is appropriate only with a unanimous vote of the team members present.
 2. In the event of a unanimous SRB vote, the Gatekeeper may share pertinent information with the SRB and with the Dean.
- b. Identification of Non-Sole-Source Flight Data by the NSA Director of Safety.
- i. Non-sole-source data may be identified by the NSA Director of Safety and used for investigative purposes pursuant to any of the following conditions:
 1. An aircraft accident or incident occurs.
 2. With the direct consent and authorization by all forward seat occupants of an aircraft who are crewmembers.
 3. A credible safety report (anonymous reports excluded) has been submitted describing an event in which:
 - a. An aircraft has been operated (unintentionally or otherwise) outside of its approved operating limits,
 - b. A reckless or intentionally bad act occurred in an aircraft; or
 - c. Obtaining the FDM data related to the safety report may reduce or eliminate the risk of an organizational accident or incident.



4. Other credible safety-related reports (anonymous reports excluded) of reckless or intentional acts identified by eyewitnesses, air traffic control, or other parties are submitted.
- c. Non-Sole-Source Flight Data used to assist in investigating aircraft discrepancies.
 - i. A review of an individual flight may be requested by the NSA General Manager, the NSA Chief Flight Instructor, or NSA Director of Maintenance in direct connection to an aircraft discrepancy to help determine the sequence of events and whether any aircraft limits were exceeded. In this case, the data will be analyzed by an FDM analyst, and provided to the flight crew upon request.
 1. Example: if a flight crew documents a tail strike on landing, a flight data review may be requested to help determine the pitch attitude on landing.
 - ii. A review of multiple flights looking for specific crew actions shall be considered “sole-source” flight data, and falls under sections A. or B., above. Example: if maintenance discovers a bent firewall during a 100-hour inspection, the FDM analyst may analyze the flight data to try to find a hard landing. The identity of the crew will be protected except with permission from both front seat occupants.

NOTE: The Director of Safety, NSA General Manager, MSU Aviation Faculty, and NSA Chief Flight Instructor will be notified in writing of any non-sole-source FDM data that is obtained by the Safety Department under the provisions of this section. The data, in a de-identified format will not be delayed from delivery to the SRB, if it is not already in their custody.

FLIGHT DATA USES

- A. The FDM program will use flight data for the following quality and safety assurance purposes:
 - i. Aircraft exceedance monitoring
 - ii. Operational trend monitoring
 - iii. Organizational policy evaluation
 - iv. Benchmarking
 - v. Maintenance quality assurance monitoring
 - vi. Review data related to an event or condition under the provisions of this Policy.
- B. Flight research.
- C. Other research approved by the General Manager and Director of Safety.
- D. North Star Aviation may develop further uses of the flight data in the future which may include:
 - i. Student playback for educational purposes
 - ii. Insurance compliance
 - iii. Warranty compliance

Any new use of flight data, including those listed in D. above, shall only be undertaken when a separate or amended policy governing the specific use is enacted and approved.



RELEASE OF FLIGHT DATA

- A. Unless specifically authorized by this policy, no person or entity shall be allowed access to or to disseminate any raw flight data files.
- B. In the interest of education, the Safety Department and/or SRB may allow students and employees to view de-identified and/or aggregated information generated from flight data.
- C. NSA may release flight data to the National Transportation Safety Board or the Federal Aviation Administration for the express purpose of assisting in any accident or incident investigation.
- D. NSA may allow a specific flight recording device manufacturer to have access to flight data generated by that manufacturer's flight recording device for the express purpose of allowing that manufacturer to troubleshoot flight recording equipment or for the express purpose of engineering design and development so long as the manufacturer agrees to keep all the data confidential and immediately destroy such data after analysis has occurred. In no case shall a flight recording equipment manufacturer be allowed to retain flight data released under this section for a period exceeding 48 hours after analysis of such data is complete.
- E. If an alleged criminal act is being investigated by a law enforcement agency, North Star Aviation may release data and/or recordings to assist law enforcement in their investigation. Any release of information for this purpose will be conducted in accordance with NSA and MSU policies on law enforcement investigations.
- F. In the event of vandalism to the aircraft, including vandalism to any FDM equipment, data and/or recordings may be examined to assist with any investigation.

***North Star Aviation's Safety Management Manual, including the Flight Data Monitoring Policy can be found under the Student Documents page at www.flymankato.com.**

APPENDIX F – ACRONYMS

A/C	Aircraft	EFB	Electronic Flight Bag
AC	Advisory Circular	EFC	Expect Further Clearance
ACS	Airmen Certification Standards	EFIS	Electronic instrument flight system
AD's	Airworthiness Directive's	ELT	Emergency Locator Transmitter
ADC	Air Data Computer	ETA	Estimated Time of Arrival
ADM	Aeronautical Decision Making	ETE	Estimated Time EnRoute
AER	Approach End of Runway	FAA	Federal Aviation Administration
AFD	Airport/Facility Directory	FAASTeam	FAA Safety Team
AGL	Above Ground Level	FAF	Final Approach Fix
AHRS	Attitude Heading Reference System	FAR	Federal Aviation Regulation
AIM	Aeronautical Information Manual	FBO	Fixed Base Operator
AIRMET	Airmen's Meteorological Information	FD	Flight Director
ALS	Approach Lighting System	FOM	Flight Operations Manual
AME	Airmen Medical Examiner	FSDO	Flight Standards District Office
AMEL	Airplane Multi Engine Land	FSS	Flight Service Station
AOA	Angle Of Attack	GNSS	Global Navigation Satellite System
APP	Approach	GPS	Global Positioning System
ARR	Arrival	GS	Glide Slope
ARTCC	Air Route Traffic Control Center	HAT	High Above Touchdown
ASAP	Aviation Safety Action Program	HIRL	High Intensity Runway Lights
ASEL	Airplane Single Engine Land	HSI	Horizontal Situation Indicator
ASI	Airspeed Indicator	HWAS	Hazardous In-Flight Weather Advisory System
ASR	Airport Surveillance Radar	IAF	Initial Approach Fix
ATC	Air Traffic Control	IAP	Instrument Approach Procedure
ATIS	Automated Terminal Information Service	IF	Intermediate Fix
AWOS	Automated Weather Observing System	IFR	Instrument Flight Rules
CAP	Civil Air Patrol	ILS	Instrument Landing System
CDI	Course Deviation Indicator	IMC	Instrument Meteorological Conditions
CDL	Configuration Deviation List	KCAS	Knots Calibrated Airspeed
CFI	Certified Flight Instructor	KIAS	Knots Indicted Airspeed
CFIT	Controlled Flight Into Terrain	LDA	Localizer Directional Aid
CFR	Code of Federal Regulations	LLWAS	Low Level Wind Shear Alert System
CG	Center of Gravity	LNAV	Lateral Navigation
CRM	Crew Resource Management	LOA	Letter Of Authorization
DA/H	Decision Altitude/Height	LOC	Localizer
DEP	Departure	LPV	Localizer Performance w/ Vertical Navigation
DER	Departure End of Runway	MAA	Maximum Authorized Altitude
DG	Directional Gyro	MAP	Missed Approach Point
DME	Distance Measuring Equipment		
DP	Departure Procedure		



MCA	Minimum Crossing Altitude	SIGMET	Significant Meteorological Information
MDA	Minimum Descent Altitude		
MEA	Minimum EnRoute Altitude	SM	Statute Mile
MEL	Minimum Equipment List	SMS	Safety Management System
METAR	Meteorological Information	SOP	Safety Operating Procedure
MFD	Multifunction Flight Display	SPRM	Single Pilot Resource Management
MOA	Military Operations Area		
MOCA	Minimum Obstacle Clearance Altitude	SRB	Safety Review Board
		STAR	Standard Terminal Arrival Route
MRA	Minimum Reception Altitude	SUA	Special Use Airspace
MSA	Minimum Safe Altitude	SVFR	Special Visual Flight Rules
MSL	Mean Sea Level	T/O	Take Off
MVFR	Marginal Visual Flight Rules	TAC	Terminal Area Chart
N/A	Not Applicable	TACAN	Tactical Aircraft Control and Navigation
NAVAID	Navigation Aid		
NDB	Nondirectional Beacon	TAF	Terminal Area Forecast
NEXRAD	Next Generation Weather Radar	TAS	True Airspeed
		TCO	Training Course Outline
NM	Nautical Mile	TFR	Temporary Flight Restriction
NOTAM	Notice to Airmen	TOGA	Take Off/Go Around
NTSB	National Transportation Safety Board	TRACON	Terminal Radar Approach Control
OAT	Outside Air Temperature	TRSA	Terminal Radar Service Area
OBS	Omni Bearing Selector	TSA	Transportation Security Administration
ODP	Obstacle Departure Procedure		
OEI	One Engine Inoperative	TXY	Taxiway
OROCA	Off Route Obstacle Clearance Altitude	UAS	Unmanned Aircraft System
		UTC	Coordinated Universal Time (ZULU)
OTS	Out of Service		
PAPI	Precision Approach Path Indicator	VASI	Visual Approach Slope Indicator
		VDP	Visual Descent Point
PAR	Precision Approach Radar	VFR	Visual Flight Rules
PED	Personal Electronic Device	VHF	very high frequency
PFD	Primary Flight Display	VMC	Visual Meteorological Conditions
PIC	Pilot In Command		
PIREP	Pilot Weather Report	VNAV	Vertical Navigation
POH	Pilot's Operating Handbook	VOR	VHF Omnidirectional Range
PTS	Practical Test Standards	VOR/DME	VOR/Distance Measuring Equipment
RCO	Remote Communications Outlet		
REIL	Runway End Identifier Lights	VORTAC	VOR with TACAN
RNAV	Area Navigation	VOT	VOR Test Facility
RPM	Revolutions Per Minute	VSI	Vertical Speed Indicator
RVR	Runway Visual Range	WAAS	Wide Area Augmentation System
RWY	Runway		
SDF	Simplified Directional Facility	WX	Weather