



# NATA Safety 1st eToolkit

Welcome to the 22nd issue of the NATA Safety 1st eToolkit, our monthly online safety newsletter, supporting the NATA Safety 1st Management System (SMS) for Ground.

This monthly newsletter will highlight known and emerging trends, environmental and geographical matters, as well as advances in operational efficiency and safety. Flight and ground safety have been enhanced and many accidents prevented because of shared experiences.



The NATA Safety 1st Management System for Ground is underway and many of the tools discussed in this and other eToolkits will be provided as a part of the program.

## Protection of Aircraft – Static Wicks, Trailing Edges, Prop Tips and Employee’s Heads

**Lou Sorrentino - SH&E VP and Managing Director – Safety, Security & Operations**

NATA Safety 1st Management System Webcasts present more than training sessions in the development of attendees’ SMS manuals. They also provide a forum for an interactive exchange among participants, SH&E and NATA. During many Webcast sessions, we discuss “what works for us” and ideas are exchanged such as the following on aircraft protection.

One of SH&E’s longstanding recommendations has been to place highly visible markers and streamers on fixed wing and rotor wing aircraft stored in hangars. The reasoning is multifold. First, by drawing attention, through contrasting color, we identify hazards that employees or customers working / walking through your hangar should notice and stay away from.

Secondly, placing protective coverings over these sharp edges; such as static wicks, prop tips, belly fins, antennae and trailing edges, protect the aircraft and, should someone come in contact with the surface, prevent a nasty injury, like skin punctures. Finally, most folks who have worked around aircraft for a long time know of the phenomenon of the disappearing wing. This phenomenon occurs in both low-light and bright days and, in all cases, when the aircraft is in the hangar and the employee/customer approaches the aircraft from back to front. The trailing edge of the wing surface blends into the ambient background lighting, usually of similar color (white or off white) and because of the structure of the wing (laminar flow), the separation of the two objects, wing and background – is blurred; hence, the wing (trailing edge) is not contrasted against the ambient background and “Boink”, the employee walks into the trailing edge. This normally is not a serious injury, but a lesson none the less. Okay, for all those who have experienced this phenomenon, raise your hands. Thanks, now you can put them down.



So what are the easy fixes you ask? Well, we have plenty and all are easy to do but most importantly,, are very, and I mean VERY, INEXPENSIVE.

To protect most wing trailing edges and belly fins, we recommend the “Noodle.” Yes, the noodle is that thing most of us may have encountered in our neighbor’s



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pool. Noodles cost about \$2.00 to \$3.00 each and are made from closed cell foam. They are approximately 60" long, nearly 3" thick, have a 1/2" center hole and come in a variety of colors.

The noodle can be easily cut into appropriate lengths, like 12", and then slit down one side so it can be slipped over the trailing edge or belly fin. Smaller noodle sizes can be cut to slip over prop tips.



To further enhance the noodles' contrast, we add a fluorescent streamer; high-visibility green is preferred, hot glued to the noodle.

Similarly, the noodles with the pre-manufactured hole down the center can be cut into 5" lengths and slipped over the static wicks for additional aircraft protection.

Now, for each aircraft placed into the hangar, a small kit made up of prop tip covers, static wick covers, wing trailing edge and horizontal stabilizer trailing edge noodles can be designated for each aircraft. This can become a checklist item for placement of aircraft in your hangar or maintenance hangar.

- ▶ Aircraft visual inspection (record what you find)
- ▶ Rubber chocks
- ▶ Ground cable ( for aircraft in maintenance)
- ▶ Aircraft protection kit (as described above)



Your customers will appreciate the extra care you provide their investment. Most employees will like it too because it spares them head injuries.

Now, let's talk about FOD, or Foreign Object Damage. Noodles will not damage an aircraft or cause any significant damage if ingested into an engine.

This is good. Some folks have used clothes pins (you know those small wooden clips with the METAL spring!). **SH&E and NATA DO NOT RECOMMEND the use of clothes pins. These will cause damage and should be prohibited from use.**

**All you need is for one of these wooden-type devices to be forgotten on an engine run or worse, lost on a taxiway or runway. Don't use them!**

Other ways to protect static wicks include the use of clear plastic tubing, sized correctly that easily slip over the static wick and cover the length with a 2" overlap. We again hot glue a fluorescent streamer and you're done.

Alternatively, the best form of protection for static wicks is to remove them during maintenance. Consideration must be given to ease of removal and the need to safely store them.

**If you have a great idea to share, please email [Safety1st@nata.aero](mailto:Safety1st@nata.aero). If you can send a picture with your idea, it will make it even better.**

## Fuel and Hazardous Materials Safety Workshop

June 19-20, 2006, in Dallas, Texas



AAAE, NATA and Air BP Aviation Services are pleased to present a new seminar that specifically addresses 14 CFR Part 139.321 certification requirements and hazardous materials. This two-day workshop is designed for airport operations personnel, ARFF, FBO and airline personnel who are responsible for the safe fueling of aircraft and handling of hazardous materials.

The first day of this course is designed to define and explain the criteria for quarterly inspections. The second day will



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provide attendees with the skills and information needed to safely handle hazardous materials incidents.

Tentative topics (subject to change) include:

- ▶ FAR Part 139 Fire Training Safety
- ▶ Handling Fuel Spills
- ▶ Overview of Fuel Truck and Fuel Farm
- ▶ NFPA 407 – Standard for Aircraft Fuel Servicing
- ▶ Proper Labeling of Hazardous Materials
- ▶ Material Safety Data Sheets
- ▶ Proper Hazmat Storage
- ▶ Protecting Yourself When Handling Hazmat

Register today for the Fuel and Hazardous Materials Safety Workshop at the Hilton Garden Inn DFW Airport South. Hotel rates are \$119 for single/double occupancy. Reservations must be made by June 2, 2006, in order to guarantee this rate. The phone numbers is (972) 313-2800 and identify yourself as part of the AAAE group.

**Register online today at <http://www.aaae.org/meetings>.**

**For further program information**, call Jennifer Klass, C.M., AAAE, at (703) 824-0504 ext 225 or e-mail: [jennifer.klass@aaae.org](mailto:jennifer.klass@aaae.org). **For further registration information**, call Catherine Pawlowicz, AAAE, at (703) 824-0500 ext 132 or e-mail: [catherine.pawlowicz@aaae.org](mailto:catherine.pawlowicz@aaae.org).

## NATA Safety 1st eToolkit Reader Questions

From time to time, we receive questions from our readers that may be of interest to everyone. We thought we would share this question with our readers so that all may benefit. If you have a question, please send it to [Safety1st@nata.aero](mailto:Safety1st@nata.aero).

**Q. Do you have any information on the practice of draining fuel out of aircraft into PVC buckets?**

A. Industry experts recommend the use of metal containers, not PVC or plastic. Metal containers should be bonded to whatever the fuel is coming from. This assures that the static charge remains at the same level everywhere because when fuel moves, it generates static electricity. Fires have been started when folks have “just drained or dripped” fuel from their aircraft into metal containers that were not bonded to the aircraft.

The exception to plastic would be the special application plastic buckets containing permanent metal bonding rods on the sides of the bucket that go all the way down to the bottom to allow a path for static electricity to get to ground. The bonding rod has a cable that connects to the aircraft or the source you are draining fuel from.

Here is a section in the NATA Safety 1st Professional Line Service Training Program (PLST) that references plastic and galvanized metal containers:

### 9.9.2 Plastic and Galvanized Metal Containers

Plastic funnels and buckets should not be used for handling fuel. They are an excellent generator of static electricity and create a significant fire hazard.

If fuel needs to be funneled into any type of container or tank, always use a large, high-quality, non-galvanized metal funnel to reduce the risk. When performing fuel quality assurance activities, special application plastic buckets with aluminum electrostatic bonding devices are acceptable for handling sump fuel.

When using a funnel, it must always remain in contact with the filler opening during fuel handling operations. This procedure will reduce or eliminate the potential for static discharge (between the two surfaces) which has been precipitated by the movement of the fuel.

Please send questions to [Safety1st@nata.aero](mailto:Safety1st@nata.aero).

## 2006 NATA Safety 1st Professional Line Service (PLST) Update

NATA Safety 1st PLST participants have received the updated materials on CD ROM for the 2006 fiscal year.

If you have not renewed your participation, letters have gone out alerting you that you need to pay the renewal fee as well as train, test and certify all of your line personnel in the New Year. Each year we add exciting training to our program and this year is no exception.

What’s new and exciting on the 2006 PLST CD-ROM?

- ▶ Recurrent training options to **re-certify** your employees are in the “Line Service Exams” CD ROM folder.
- ▶ **NEW:** Past issues of all our monthly online newsletters, the NATA Safety 1st *eToolkit*. Widely read and enthusiastically received, each issue provides pertinent safety tools that can easily be put into place on every ramp.



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- ▶ **NEW:** NATA Safety 1st Lesson Plans for interactive training or to spice up your safety meetings.
- ▶ **NEW:** A training presentation for special events at your FBO is in the “Special Events Training” folder. This powerful training tool will quickly bring up to speed line techs who are on loan from other FBOs to assist with your large event. You know they’ve been NATA Safety 1st trained, but you want to assure they know about the specifics of your location and expectations. After they view your presentation, show them you are serious with the ramp safety quiz.
- ▶ **NEW:** 2006 PLST Certification checklist – assure your paperwork is right the first time!
- ▶ **UPDATED:** Aircraft Ground Service Guide (AGSG)
- ▶ **UPDATED:** Aircraft Towing Guide (ATG)
- ▶ **UPDATED:** Employee Career Reference Guide (ECRG)
- ▶ **UPDATED:** Trainer’s Guidebook
- ▶ **UPDATED:** NATA Safety 1st supplies – Participants only
- ▶ **UPDATED:** 2006 NATA Safety 1st product brochure and order form
- ▶ **NEW:** NATA Safety 1st logos – Your marketing logos for brochures and promotional literature
- ▶ **UPDATED:** 2006 LSST seminar schedule, the NATA Safety 1st Trainer seminar schedule and other valuable training opportunities
- ▶ **UPDATED:** NATA membership applications and benefits

If you don’t have a new 2006 CD ROM, please call us at (703) 575-2045 or email [Safety1st@nata.aero](mailto:Safety1st@nata.aero) to assure you have signed up for another great year of training benefits!

## How to Save Your Back: Easy Steps To Preventing a Back Injury

### Have Good Posture!

Good posture, strong muscles and proper lifting and carrying techniques PREVENT pain or injury.

### What is Good Posture?

Posture is the position you hold your body while standing, sitting or laying down. Good posture is training your body to stand, walk, sit and lie in positions where your muscles are not strained.

### Tips to Start Your Day

- ▶ Stand up and gently stretch your arms above your head.
- ▶ Exercise regularly to keep the abdominal muscles strong and flexible to help support your spine.
- ▶ Choose shoes that offer good foot support and comfort. Flat shoes are better for your back.
- ▶ Look at yourself in the mirror. Is your posture correct? Think about your posture and how to maintain it throughout the day’s activities. Practice makes perfect.

### Tips When Holding, Lifting or Carrying Items

- ▶ Test the weight of the object you want to carry first and get help if it is heavy or bulky. Get close to the object.
- ▶ Move your feet shoulder width apart with toes pointed slightly outward.
- ▶ Perform a proper squat, sticking the buttocks out behind you as you bend your knees, while keeping your chest and head up. Don’t bend at the waist!
- ▶ Pick up the load and bring it in close to you.
- ▶ Stand by using your legs and buttocks to push up your body using good posture.
- ▶ If turning, don’t twist. Turn your feet by taking small steps.
- ▶ If carrying is necessary, keep the stomach muscles tight and keep good posture.
- ▶ To lower the load, be sure to squat properly.

### Final Tips

- ▶ When deciding to push or pull, don’t pull! **PUSH** using your body weight!
- ▶ It is easiest to pick up and put down things at waist height.



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## NATA Safety 1st Management System Develops Safety Investigation Response Kit with USAIG

NATA will soon release a new offering designed specifically for FBOs. The concept was developed with USAIG to assist NATA's membership with a readymade Safety Investigation Response Kit. USAIG sponsored the initial kits for the 2006 Convention attendees of the Accident Update and NATA Safety 1st Management System Review Session. Participants that remained until the end of the session gave business cards or signed an attendance sheet to receive a complimentary kit. Attendees can anticipate their kits by mid-June. Additional kits will be available for purchase by NATA members. Notices will go out in the NATA eNews, NATA Safety 1st eToolkit and eFlightbag newsletters.

The Safety Investigation Response Kit comes in a preformed plastic case molded specially for NATA Safety 1st. The kits include paperwork for accident investigations, incident responses, utility location information, emergency contact information and weather recording forms. Also included are a flashlight, compass, tape measure, pen, marking chalk, note pad and disposable camera. The kits were designed to grab and go to the investigation scene. More details will follow in a future eToolkit.

## CONTINUING EDUCATION

### General Education Offerings

**Fuel and Hazardous Materials Safety Workshop  
(Sponsored by AAAE, NATA and Air BP Aviation Services)**

**June 19 & 20 in Dallas, Texas**

Additional Details and Registration Online:

<http://www.aaae.org/meetings>

[Line Service Supervisor Training](#)

[Seminar](#) ---

### 2006 Schedule at a Glance

**June 12 & 13**

Hotel & Seminar: Sanibel Harbour Resort –

**September 13 & 14**

Seminar: Air Services Museum / Hotel: Academy Hotel

**November 29 & 30**

**More people are killed annually by donkeys than by air crashes.**

Hotel & Seminar: Marriott Riverwalk

**Additional Details & Registration Online:**

<http://www.nata.aero/events/index.jsp>

### 2006 Schedules: Aviation Safety and Security Offerings

**Embry-Riddle Aeronautical University's Center for Aerospace Safety/Security Education (CASE)**

Website: [http://www.avsaf.org/case/programs\\_events.html](http://www.avsaf.org/case/programs_events.html)

**Southern California Safety Institute**

Website: <http://www.scsi-inc.com/>

**The GW Aviation Institute  
Aviation Safety and Security Certificate Program**

Website: [http://www2.gwu.edu/~aviation/safetyandsecurity/ss\\_courses.html](http://www2.gwu.edu/~aviation/safetyandsecurity/ss_courses.html)

**Transportation Safety Institute**

Website:

<http://www.tsi.dot.gov/divisions/Aviation/aviation.htm>

**University of Southern California**

**Aviation Safety and Security Program**

Website: <http://viterbi.usc.edu/aviation/>

## SH&E

The NATA **Safety 1st eToolkit** is brought to you by NATA **Safety 1st** SMS and SH&E. SH&E is the leading expert in safety and operational integrity evaluations and safety management consulting. SH&E has developed a proprietary evaluation methodology, called Safety Architecture, which is unique within the industry as it focuses on systemic surveillance and process evaluation. This is a systems and controls look at how an operator manages those technical functions that support aviation operations.

**Subscribe To NATA Safety 1st eToolkit.** If you are not currently a subscriber to NATA **Safety 1st eToolkit** and would like to receive it on a regular basis, please send an email to [Safety1st@nata.aero](mailto:Safety1st@nata.aero) with the word "Subscribe" in the header. Please include your name, title, company and e-mail address. **Safety 1st eToolkit** is distributed free of charge to NATA member companies and NATA **Safety 1st** participants.

## Order Form

# NATA Safety 1st® Management System (SMS) for Ground



4226 King Street  
Alexandria, VA 22302  
(703) 845-9000  
Fax: (703) 845-0396

Yes, we want to sign up for the NATA SMS for Ground! We understand the following will be included in the price of our participation in the SMS:

- ▶ SMS Guide
- ▶ SMS Webcast Tutorials
- ▶ SMS Consultation by Telephone or email
- ▶ SMS Secure, Online Event Reporting Form
- ▶ SMS Monthly Online Newsletter
- ▶ SMS Root Cause Analysis

### Contact Information (please print legibly)

CEO/Owner \_\_\_\_\_ Email \_\_\_\_\_

Safety Coordinator \_\_\_\_\_ Email \_\_\_\_\_

Company \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

### Pricing

The prices below reflect the total number of employees at your facility. This number should include all you FBO locations. Please note that we will correspond with one Safety Coordinator per company and will require additional company information once established in the program. Please check appropriate box below.

- \$600 for NATA Safety 1st participants / NATA Members with 0-50 employees
- \$1,200 for NATA Safety 1st participants / NATA Members with 51-150 employees
- \$1,800 for NATA Safety 1st participants / NATA Members with more than 150 employees

### Payment

Check enclosed (Please make payable to Aviation Training Institute, LLC.)

Please charge my  MasterCard  Visa  American Express

Credit card number \_\_\_\_\_ Expiration \_\_\_\_\_

Signature \_\_\_\_\_ Name on card \_\_\_\_\_

Fax to (703) 845-8176 or mail to NATA Safety 1st® SMS, 4226 King Street, Alexandria, VA 22302

### Agreement

I understand as CEO/Manager of this facility, Safety is our #1 priority. As such, the authority and responsibility to implement this program is placed with me. I will provide the resources necessary to ensure the safety of our customers, their equipment, our employees and the environment in our daily operations

Signed this date \_\_\_\_\_ CEO/Owner Signature \_\_\_\_\_