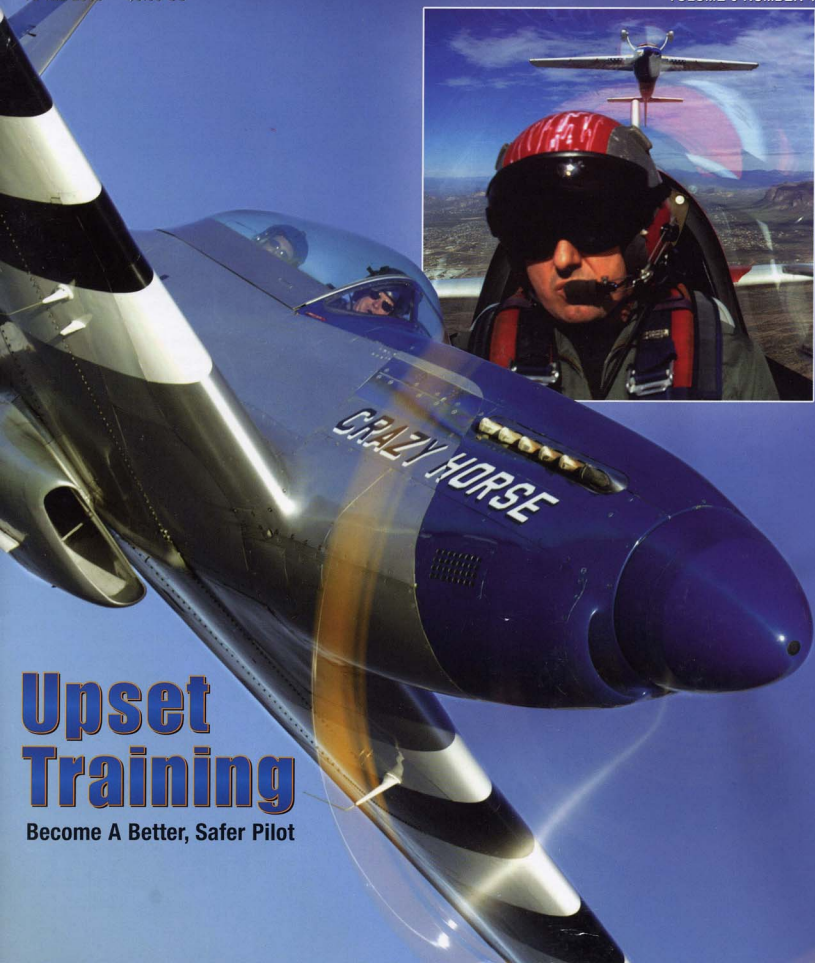


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Upset Training

Become A Better, Safer Pilot

Training in the P-51 Mustang

Stallion 51 Corporation Offers Unusual Attitude Training in Classic Fighter

Photo by Paul Bowen

by William T. Smith

The NTSB recommends that air carriers and commercial operators “providing their flight crews with training in the recognition of the recovery from unusual attitudes and aircraft upsets.” Since private owners and operators of business jet aircraft come with varying amounts of experience, I’ve always believed the NTSB recommendation should apply to Part 91 operators as well as the 135 and 121 drivers.

Thus, when Guardian Jet decided to send several of its pilots out to experience unusual attitude training courses in different types of aircraft, I thought it was an excellent idea.

When my training assignment turned out to be the P-51 Mustang, I felt an even greater sense of need for this type of training! We have always urged our customers transitioning from single-engine and twin reciprocating aircraft into turbine

aircraft to get altitude chamber training. We also believe in the need for pilots to recognize and recover from unusual attitudes. We have not, however, experienced UAT (unusual attitude training) in an aircraft as opposed to a simulator. Therefore, my goal is to describe my experience in the P-51 school of UAT.

Stallion 51's Approach

My training was conducted at Stallion 51 Corporation in Kissimmee, Fla. As I arrived at the offices and hangars of Stallion 51, I thought that this is the place I would want my P-51 or any other airplane I owned to be hangared. Their facilities include two spotless hangars with a third under construction, an office complex with all the facilities of your favorite FBO and more. Angela, the office manager, who had made all the arrangements for my training met me and introduced me to Lee Lauderback, the owner and chief pilot of Stallion 51.

Lee is a pilots' pilot who has a very impressive bio. He has amassed more than 17,000 flight hours in all types of aircraft and helicopters, including some 6,000 hours in Mustangs. He also conducts all of the unusual attitude and upset training for Stallion 51. Lee is also a certified flight and ground instructor for airplanes (single and multi-engines), instruments, helicopters and gliders, as well as being a FAA Pilot proficiency examiner.

Lauderback gave me the cook's tour of his facility, which included a look at several Mustangs, a T-6 Texan, L-39 and a Spitfire, all looking as if they had just rolled out of the factory. The Mustang that we were going to fly was a TF-51 called Crazy Horse. It's a 1944 P-51 D converted to North American/Cavalier dual cockpit standards and wears the authentic paint scheme of the 48th fighter Squadron at Asche, Belgium 1945.

Prior to beginning our pre-flight brief, Lee and I had an informal chat during which I'm sure he

tried to ascertain if this old man of 72 was going to live through the flight, and if he did, just what his (or the TF-51's rear cockpit) condition would be after landing. Here I might mention that each applicant for this training must send in a bio stating age, weight and height as well as class of medical certificate held. Also required are ratings held and type of aircraft flown with total time in each. The basic recommended requirement for training, however, is only that you be a pilot with an up-to-date medical certificate.

The formal briefing began with the objectives of the program, the training schedule, and the airspace we would utilize. Aircraft limitations came next and emergency procedures were covered here and later in detail in the aircraft. Transfer of aircraft control was covered so that the bane of every pilot flying with dual controls is avoided – that of two pilots trying to fly at once or neither pilot operating the controls and the aircraft controlling itself. I would be flying the aircraft from the rear cockpit where I would find all the required aircraft and engine controls except for the landing gear handle. Lee was responsible for the gear-down flight or a gear-up landing!

Using P-51 models, Lee explained the maneuvers I would be doing prior to executing recoveries from unusual attitudes. These consisted of wing-overs, loops, and Cuban eights. When in an unusual attitude, the recovery is executed from a position you will most likely find yourself in during one of these maneuvers. We discussed options and optimal recovery procedures, power control during recovery and "G" factors relating to different methods of return to straight and level flight.

A normal preflight briefing is 1.2 hours, ours was a bit longer because we were telling each other war stories and waiting for the weather to break, since all the flight training is conducted VFR. I now, however, was chomping at the bit. I had not flown in excess of 20 degrees pitch or 30 degrees of bank since 1966, when I last flew the F-104 in the U.S. Air Force.

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Lee Lauderback, the owner and chief pilot of Stallion 51.



Photo by Paul Bowen



Photo by Paul Bowen

The preflight was next. An exterior inspection of the plane had been completed by Stallion 51's crew chief, Chuck "Buddha" Weiss. He also fitted me with a helmet and flight suit. Lee helped me strap into the rear cockpit and went over the emergency egress procedures. As Yogi would say, "It was de ja vu all over again," as I strapped on my parachute. I did, however, miss my spurs and ejection seat. After a thorough rear cockpit briefing, Lee was ready to wake up the monstrous Merlin Rolls Royce.

The Flight

After starting the engines and going through a checklist, which Lee completed over the interphone, we were ready to taxi. I was given the task of taxiing and flying the TF-51 about 95 percent of the time. As those of you who have flown a tail dragger know, the taxi part of the mission is not to be taken lightly. We did arrive at the runway without mishap and I

As we climbed out to 8,000 feet and proceeded to the maneuvering area Lee encouraged me to get the feel of the aircraft. I made a series of turns, pull-ups and aileron rolls and found out why pilots love the P-51.

completed the engine checks with Lee calling out the checklist items. Because I had never flown the TF-51 (especially from the rear seat) Lee made the takeoff until the gear was retracted, at which time I took over.

Now the fun began. As we climbed out to 8,000 feet and proceeded to the maneuvering area Lee encouraged me to get the feel

of the aircraft. I made a series of turns, pull-ups and aileron rolls and found out why pilots love the P-51. It handles not unlike the F-86's and F-104's I had flown in the Air Force. Unlike the jet fighters, the Mustang requires some rudder input if one is to stay perfectly coordinated, but actually not as much as I had thought.

Once in the maneuvering area, I continued some warm-up exercises pulling 2 to 3 "G's" as Lee kept an eye on me through his mirror and conversed with me to make sure the old man was okay. I was feeling great, so Lee proceeded to talk me through the first of the basic maneuvers used to teach recovery from unusual attitudes.

First came the wingover. This entails a nose-high attitude and rolling into a 90 degree bank, letting the aircraft slice through the horizon and rolling wing's level as airspeed builds. This increases situational awareness and provides

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pitch and bank conditions unfamiliar to the typical pilot. It also demonstrates proper techniques to recover from a nose-high or nose-low unusual attitude.

Next is the loop, this is a maneuver that every pilot is familiar with but in many cases has not performed except possibly at Six Flag's. If you have experienced a loop at the amusement park and enjoyed it, you'll find flying a

Mustang through a perfect loop 8,000 feet in the air is the ultimate blast.

The purpose of this fun maneuver is to provide you with inverted flight experience and controlling the aircraft under abnormal conditions. It also provides you with some light in the seat of your pants (less than 1G) experience. The amount of altitude loss when using proper and improper recovery is

also demonstrated. If you do it right, Lee will demonstrate how it can done wrong.

The Cuban eight rounds out the three maneuvers and demonstrates how to correctly recover from a nose low inverted flight, once again comparing altitude loss between proper and improper recoveries.

Now comes the task of the recognizing an unusual attitude, and determining the aircraft's attitude and performing the proper recovery to straight-and level-flight with minimum loss of altitude. I closed my eyes and ducked my head; Lee put the Mustang in an unusual attitude and turned the aircraft over to me for recovery. As we repeated this procedure several times it was evident that this training was invaluable should you ever find yourself in an unusual attitude in your twin jet. We went through recoveries from several nose-high and nose-low attitudes with wings level to varying degrees of bank to inverted flight. Each recovery instilled my confidence in being able to recover from any situation I might encounter in the future.

Now it was time to simulate final approach behind that Boeing 757. I'm sure most of you have experienced some type of wingtip vortices while crossing the path of a heavy jet. Lee puts the Mustang in an upset position from level flight and I practiced recovery while maintaining as close to one "G" as possible.

Once the unusual attitude and upset training was over, I then got to fly back to Kissimmee Airport and fly the Mustang through the 360-degree overhead traffic pattern to landing. This will bring back fond memories for you ex-fighter guys and a fun experience for the Citation drivers that usually couple the autopilot to the ILS until reaching minimums. The landing from the rear seat was uneventful and after my third touchdown I taxied back to the ramp where I woefully saw the Stallion 51 photographer who had



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all three landings on film.

Speaking of film, the TF-51 incorporates three cameras that records the flight and provides invaluable aid in the debriefing. One camera on the tail and one on the left wingtip records all the flight maneuvers and a cockpit camera provides a picture of the student pilot. During the debriefing the videotape of each recovery was reviewed and the tape was presented to me for future reference.

Instructive and Fun

This entire course at Stallion 51 provided me with some invaluable training that I feel could possibly save me from a disaster in the future. It also provides a fun time for any pilot, whether he's ever flown upside down or not.

This training at Stallion 51 comes at a cost of \$3,050 per Hobbs time hour (engine start to engine stop). There is no charge for ground school. The usual Hobbs time is 1.3 hours. Other programs available at Stallion 51 are P-51 orientation flights, P-51 checkout training and dual training in the T-6G Texan. You can visit the Stallion 51 Web site at www.stallion51.com.

Most of the pilots who take advantage of the unusual attitude and upset training are operators of business jets who are corporate pilots or owner-operators of light twin or turbine aircraft. I hesitate to designate any jet operator as professional as opposed to pilots who are non-compensated owner-operators. Any pilot flying a light twin or turbine aircraft should be considered a "pro" after the required training and obtaining the real stamp of approval that of the owner's insurance company.

I can assure you that your underwriter will look quite favorably upon completion of unusual attitude and upset training at Stallion 51 Corporation. Happy flying and keep the blue side up!



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With more than 20,000 hours of jet time in his logbook, William Smith is the senior Standards Captain in Guardian Jet's Guardian program. Prior to flying the F-104 as a squadron test pilot and NATO instructor, Bill trained jet technicians. After his career in the U.S. Air Force, Bill was a Pan Am Clipper Captain before getting his Citation 500 and 560XL type ratings. Bill has an unmatched combination of technical understanding, military, airline and corporate experience. He is an encyclopedia of flying stories. bill.smith@guardianjet.com



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