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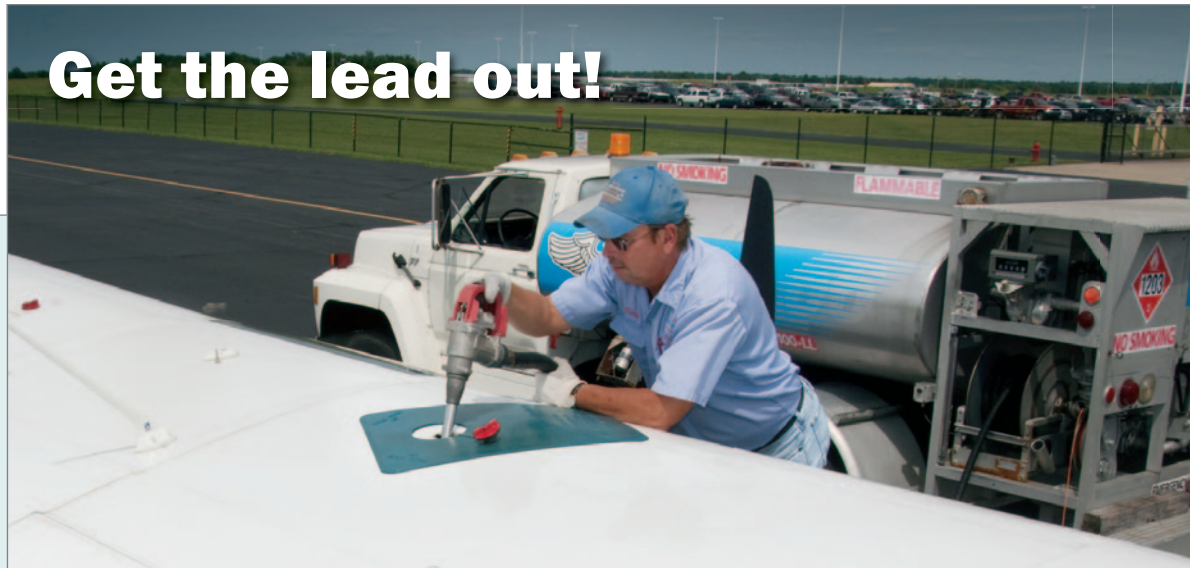
Cessnan

Get the lead out!



When pilots gathered at campsites next to their aircraft during the Experimental Aircraft Association's AirVenture 2010 at the end of July, conversation no doubt turned to leaded avgas.

"This issue is probably the most important issue we've faced as a community in a long time," EAA President and Chairman Tom Poberezny said during a fuel forum at the annual event in Oshkosh, Wis.

Why has avgas suddenly become one of the top trending topics? Because the Environmental Protection Agency has made public statements that it is moving toward the removal of lead from avgas.

"We fully expect a ban on leaded avgas. It won't happen overnight, but the legislative clock is ticking. Lead was banned from automotive fuel decades ago and the science on the effects of lead are well established," said **John Bouma** (373), manager of Propulsion Systems.

That has the owners of piston-powered aircraft around the world wondering what will fuel their aircraft in the future. Research and testing has determined there is no clear drop-in replacement for the 100 low lead avgas currently used.

Among the worries of aircraft owners are: they will have to make costly modifications to their aircraft to accommodate a new fuel type, the replacement fuel will be so pricey they will have to limit flight hours or their aircraft won't perform as well with the new fuel.

For all of those reasons, "Cessna is not only following the development of various fuel alternatives, we're proactively pursuing testing of the fuels," John said. "When a decision is made, we'll be ready."

John provided three examples of products we have tested or are in the process of testing at Cessna:

SwiftFuel

This is a new unleaded biofuel consisting of two pure chemicals intended to be produced from a bio feedstock such as cane sorghum or switchgrass. It is being developed by Swift Enterprises, Ltd. in West Lafayette, Ind.

94UL

This is essentially 100LL but without the lead. Its lower octane rating has resulted in a lukewarm reception within the GA community, however it is being looked at as an interim fuel to reduce lead emissions in the near-term.

G100UL

This is a new unleaded fuel with an additive to recover the octane level of low lead avgas. It is being developed by General Aviation Modifications, Inc. in Ada, Okla.

"We are not endorsing one particular fuel but as the world's largest manufacturer of GA aircraft, the industry wants to know how the potential solutions will work in Cessna fuel systems," John said. "The biggest challenge is to find one replacement fuel that will be accepted by the entire industry."

GA manufacturers, fuel producers, industry groups and the FAA all support gathering as much data as possible now to help inform decisions for developing, certifying and transitioning to an unleaded fuel.

See page 2 for more on avgas

Cessna
A Textron Company

2010 CALENDAR

AUG 12-14
LABACE
in Sao Paulo, Brazil

AUG 24
Wichita Aero Club luncheon
in Wichita

AUG 31-SEPT 3
Blood Drive
in Wichita

SEPT 11
Food Drive: Customer Service Food Drive Golf Tournament
in Wichita

SEPT 12-15
Cessna Parts Distribution Conference
in Wichita

SEPT 15-17
Jet Expo 2010
in Moscow, Russia

SEPT 15-19
Reno Air Races
in Reno, Nev.

SEPT 25
Race for the Cure
in Wichita

OCT 2
Cessna Fly By

OCT 13-14
Food Drive: Oktoberfest
in Wichita

OCT 19-21
National Business Aviation Association 63rd Annual Meeting and Convention
in Atlanta, Ga.

OCT 21
Textron quarterly earnings announcement

OCT 26
Wichita Aero Club luncheon
in Wichita

NOV 11-13
Aircraft Owners and Pilots Association Convention
in Long Beach, Calif.

Criteria for development of viable avgas

Fuel safety and performance

- Octane, vapor pressure, distillation (hot/cold start), water separation, storage stability, freeze point, energy content, weight, etc.

Aircraft safety and performance

- Rated power (i.e. climb, single engine, high altitude, hot temperature, payload), range, etc.
- Materials compatibility (tanks, bladders, seals, etc.)

Environment and health

- Emissions must be environmentally acceptable (carbon dioxide, nitrogen oxide, volatile organic compounds, carcinogens)
- Human health (toxicity, handling, water solubility)

Fuel production and distribution

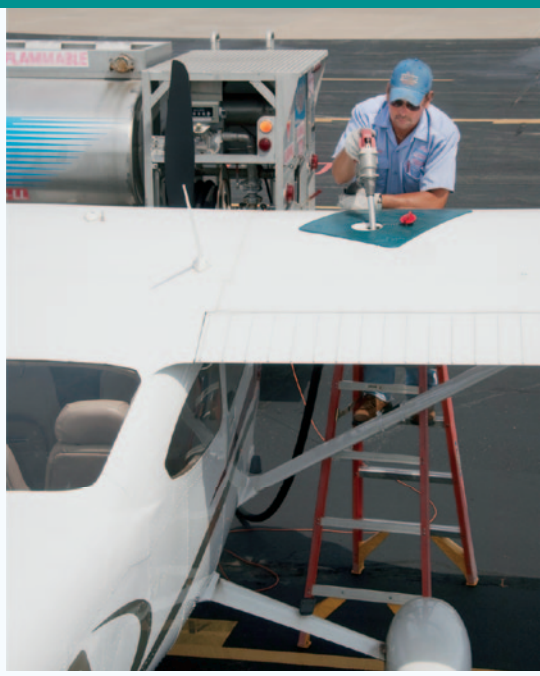
- Impact on existing infrastructure
- Need for new infrastructure
- Can it be made available when and where needed

Cost Impact

- Upfront – aircraft and infrastructure
- Operating – fuel and maintenance

(Source: General Aviation Manufacturers Association)

Jack looks at GAMI's G100UL



In early July Jack Pelton flew to Ada, Okla., with AOPA President Craig Fuller to visit General Aviation Modifications Inc., maker of G100UL. This is a new unleaded avgas GAMI is developing and testing to replace 100 low lead.

Here are Jack's comments:

We participated in a thorough brief along with a test cell demonstration running three types of fuels, 100LL, min spec 100LL and G100UL. At the conditions we observed, it was very interesting to see the data on the engine characteristics for the three fuels. I would characterize the conditions as worst-case sea-level tests. In general terms, G100UL out-performed min spec 100LL and seemed to be about the same as straight-from-the-FBO 100LL.

G100UL looks to be a fuel that can be refined and distributed within the existing infrastructure we have here in the states. I would guess it could be produced in many other international locations also.

I know the devil is in the details. But this project is very interesting and very exciting. George Braly, GAMI's chief engineer, heard what the EPA said about 100LL and is trying to do something about it for our industry.

Marketing shifts ad messages to **'hard-hitting'** product promotion

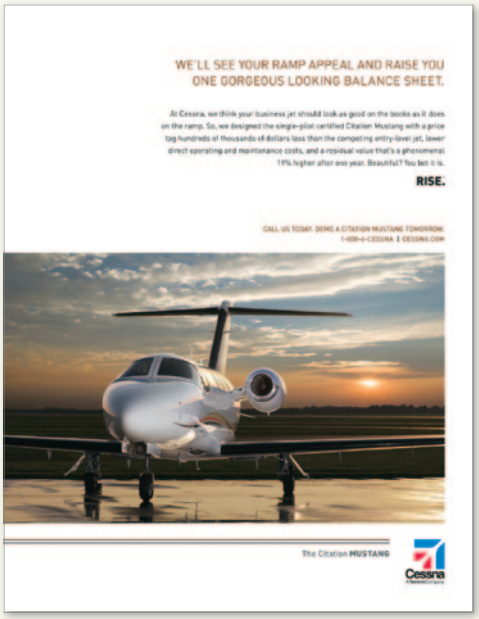
Last year, Cessna took the right stance at the right time with the RISE advertising campaign. We provided a strong leadership voice for the general aviation industry. But times have changed and so have the ads.

Now, Cessna is debuting ads with straight-to-the-point headlines and hard-hitting supporting copy to clearly show why a Citation is the right choice. The ads focus on our competitive advantages, candidly explaining the features and benefits of buying Cessna over the competition.

"With the competitive advantage ads, we're not going to stand back and let our competition claim to have a superior product. We have it, and we're going to prove it," said **Amanda Martin** (594), manager Marketing Communications.

Citation models will be featured in about three ads each. The Citation Mustang ads will debut in August, the Citation XLS+ and Citation Sovereign ads will come next and all other models will follow.

The ads target each aircraft's main demographic – whether it be the new owner/operator and charter companies for the Mustang, or large companies and fleet operators for the larger models. The various ads will run anywhere from 30-50 times a month in U.S. and international aviation magazines and business publications such as Bloomberg and Forbes, Inc.



Cessna uses ODA to certify CJ4

Another milestone has been reached for Cessna and the Citation CJ4 program: using Cessna's Organization Designation Authorization (ODA) to evaluate and designate the CJ4 ready to be produced and sold.

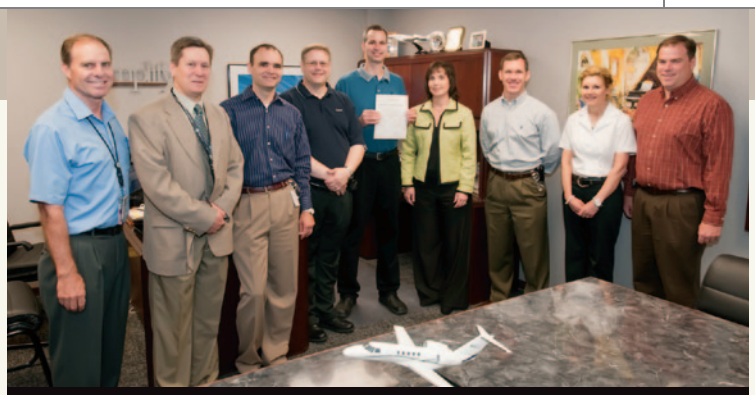
"Basically, with ODA, Cessna has the authority, granted to us by the FAA, to evaluate an aircraft, approve the design and say it is ready to produce, issue airworthiness certificates, license and deliver," said **Mike Cain** (095), Quality engineer specialist.

ODA was granted to Cessna two years ago, but has not been used to certify a brand new product from start to finish until the CJ4.

Cessna was also granted the authority to use our Production Certificate (PC) ODA to perform a facility evaluation to make sure a quality system exists capable of producing certifiable aircraft. Previously, this evaluation was done by the FAA.

"This marks the first time the Wichita FAA Manufacturing Inspection District Office has delegated the use of PC ODA to evaluate the quality control system for a new model," said Neal Rice, FAA's Manufacturing Inspection District Office acting manager.

The last step in the process was getting Cessna's Production Limitation Record, which is a complete list of aircraft Cessna is able to produce and sell, amended by the FAA to include the CJ4 – this happened in early June.



(L to R) Earl Schwebach, FAA Aviation Safety Inspector; Neal Rice, FAA's Manufacturing Inspection District Office acting manager; **Brian Steele** (347), program manager; **Larry Hager** (164), Quality manager; **Don Welch II** (089), inspection supervisor; **Teresa Kirkendoll** (164), Quality vice president; **Cub Marion** (007), vice president Citation/Caravan operations; **Kim Caliendo** (164), Quality manager; **Ken Mull** (095), Quality engineer specialist

"This is a significant achievement in Cessna's history," said **Teresa Kirkendoll** (164), Quality vice president. "This will be a true competitive advantage for Cessna as new products come online in the future. We will be able to get these products to market quicker while maintaining our high quality."

Ergonomics: What is a cumulative trauma disorder?

Many of the injuries occurring at Cessna are ergonomic-type injuries known as cumulative trauma disorders. CTDs are injuries that occur over time – the silent injury. It is sometimes hard to recognize that these types of injuries may be occurring because it does not happen immediately like an acute injury.

Here is an example of an acute injury: an employee was drilling holes in a sheet metal part and used his right hand to hold the drill and his left hand to hold the part. The drill bit went through the sheet metal and punctured the left hand. This is an acute injury because it occurred instantly.

Here is an example of a CTD: an employee was drilling holes in a sheet metal part that was outside her comfort zone. This caused her arms to be outstretched for an extended period of time every time she performed this task. Over time she developed pain in her right shoulder. In this example, the employee did not have an instant sign that her right shoulder would be injured.

What can you do to help reduce the risk of a CTD? Start by looking carefully at your job. If you continuously perform a repetitive motion that is uncomfortable or causes you discomfort, call the Ergonomics hotline at (316) 517-1800. Simple changes to your work station, the use of a different tool or different postures may make a tremendous difference in your comfort level on the job.

ERGONOMICS AND LEAN

How does focusing on ergonomics help us improve business results? "One of the basic premises behind a lean operating system is that if you focus on safety, quality and delivery, cost improvement will be a result," said **Jim Franchville** (193), director, Textron Production System.

Focusing on ergonomics often leads to improvements in efficiency and productivity. Using the lean principle of reducing wasted motions can be directly linked to ergonomics. Reducing how far we reach for parts or tools and ensuring we work within our comfort zone are two examples of reducing wasted motions and ergonomic risk. By doing these actions we improve safety and productivity.

Seem like a stretch? Consider this: a safe workplace means fewer accidents, a more physically robust workforce and increased productivity. As we develop and refine our standard work, safety should be incorporated as a key element.

A strong focus on safety is something every Cessnan can work to develop. Accept responsibility for your actions, practice situational awareness, know your limitations and help identify solutions to correct unsafe practices.

WING hosts Textron VP Lynn Kelley

Join the Women's Informal Networking Group (WING) as it hosts Lynn Kelley, Textron vice president, Operations Strategy. Lynn will present a lively discussion on women and the workplace: how women interact with and support one another and the behaviors that will help women be more successful in their interactions.

Aug. 19, 2:30–3:30 p.m.
Cessna Auditorium

At this meeting, WING will also be collecting these items to donate to the Women's Crisis Center: bus passes, gas cards, mascara and washcloths.

To register, click on the "Enroll in a Course" (Textron University) link on ERIC. Search using the keyword "WING."