



CHAPTER "99" NEWSLETTER  
ASC-CA-NORTH



## *ASCCA Annual Holiday Dinner*

*Saturday, December 4th, 2010*

*Riverview Restaurant*

*4422 Gover Road, Anderson, California*

*Dinner includes appetizers, entree, dessert, and unlimited iced tea, hot chocolate, or coffee from the gourmet coffee bar.*

*Entrees include soup or salad, baked potato or rice pilaf, and bread.*

*Entree choices are:*

*Prime Rib*

*Grilled Halibut*

*Sauteed Halibut*

*Chicken Marsala*

*Please RSVP with entree choices to Steve (365-1265),*

*Linda or Lisa (365-3326)*

*Membership provides 2 dinners per shop.*

*Extra dinners are \$35 + tax & 20% gratuity.*

*No host bar begins at 6:30. Dinner at 7:00.*

*As always, we will have our gift exchange.*

*If you would like to participate, please bring a gift in the \$20 range and join in the fun! Hope to see you there!*

We have heard about the Compressed Air Cars for some time now, but this is an interesting argument. Just thought it was worth reading. I have always heard that there is no free lunch!

## The Myth of the Clean Compressed-Air Car Continues

**Manufacturing vehicles that run on compressed air is clean, cheap and easy—or so the thinking goes, for a handful of niche manufacturers. Can compressed air save bad air quality and choked streets?**

By Dan Grushkin

**It's an elegant idea—you ride your motorcycle to the filling station, pull up to the compressor where other people are filling their tires and top off your fuel tank with air. What could be cheaper and less harmful to the environment? You ride off into the inexpensive, eco-friendly sunset on a fuel tank powered by air. And there's your happy ending, right? Not so fast.**

Over the last decade, companies have continually claimed to be a few years away from releasing air-powered cars to market. At the head of the pack has been the French company Motor Development International (M.D.I.), which partnered with Indian giant Tata Motors in 2008. Its director, Guy Nègre, however, has a blighted reputation, having claimed to design an F1 engine for a racer that never actually raced.

Recently, the design for a seemingly more credible air engine has surfaced from a duo of mechanical engineering professors in India. The two plan to refit India's scooters with an air-compression motor that is about three-quarters of a foot in diameter. In the engine's schematics, a tank of compressed air fires into the chambers of a turbine whose axis is set off-center from its housing. The vanes of the turbine extend as they rotate, allowing the chambers to accommodate the volume of air as it expands and contributes to the drive.

The engine can run off the pressure it takes to fill a tire at the gas station (about 60 pounds per square inch). In comparison, the prototype air car at M.D.I. requires 4350 psi in its tanks, which would require stations to outfit new high-tech air pumps—an unlikely transition in a developing country like India.

Bharat Raj Singh and Onkar Singh have spent the last four years developing their prototype. For inspiration, they looked outside their lab windows and found that more than half of the vehicles that crowd India's interminably grid-locked streets are two-wheelers. Singh says he's at the foot of an Indian transportation revolution. "This is going to cut down about 50 to 60 percent of the CO<sub>2</sub> released from tailpipes," he says, if his plan to sell the engine to two-wheelers across the developing world takes off. But, of course, there are issues.

**The design first needs to overcome a number of hurdles.** For starters, although the engine can run at the same speed as a gasoline-powered scooter, its twin tanks, welded to the sides of a motorcycle's frame, only provide for reaching about 18 miles before they need more air. Another hitch: the engine puts out 7 lb-ft of torque. "Think of all those Mickey Mouse movies where the tire goes *psssh* and Donald Duck gets shoved across the room," says Lee Schipper, a project scientist at the Global Metropolitan Studies program at University of California–Berkeley. "This is like a guy blowing up a balloon—it certainly won't get me up the hills in Berkeley."

By way of comparison, the \$10,000 California-made Zero S Electric Motorcycle puts out 60 lb-ft of torque and is already on sale.



(continued page 3)

### The Myth of the Clean Compressed-Air Car Continues

Beyond these engineering challenges is the fallacy that the air vehicles actually run on air. Companies manufacturing air vehicles usually fail to consider that the energy needed to compress the air into their tanks comes from the electrical grid, Schipper says. "Everyone considering compressed-air storage for motors overlooks the cost of the compressor and the power plant needed to run the compressor," Schipper says. "A compressed-air vehicle is an electric vehicle using compressed air as storage."

Last year, Schipper co-authored a study showing compressed air's inefficiency: per volume, it contains only 12 percent of the energy in lithium-ion batteries and 1 percent in that of gasoline. Worse: as clean as it sounds environmentally, the air vehicle isn't all that clean—but the emissions come from the power plant instead of the tail-pipes.

Because of its poor mileage, air vehicles must constantly return to the air compressor to siphon more energy from the grid. In a country such as India, which runs on coal, that means more coal emissions. Though his study focused on the M.D.I. car, Schipper found that an air vehicle of an equivalent size ultimately releases more than double the CO<sub>2</sub> of a gasoline vehicle.

"He [Singh] is about 50 years too late," Schipper says. "Batteries have him beat."

### Programs—2010

- January**.....Open Meeting, Bird Seed (B.S.)  
—Steve Lustig
- February**... Smog Updates, Diesel, etc... B.A.R.  
—Tim Corcoran
- March**.....Shasta Co. Environmental Health  
—Jim Whittle
- April**.....Zenergy Works...Web Site Design  
—Eric Van Cleave
- May**..... Service Writing (2—nights)  
—Tim Morelock
- June**..... Armstrong & Associates Ins. Service  
—Glen Dailey
- July**.....Hazardous Materials Compliance  
—Dean Lowe
- August**.....Legal Issues  
—David Gregory,  
ASCCA Attorney
- September**...Educational Seminars  
—Mylan Newton  
(2—nights)

**October & November**...Dark

**December Annual Holiday Party**  
Saturday, December 4, 2010)

2010 been a good year...next may be even better,  
thanks president Steve!

### WELCOME

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**We trust that your joining us will be rewarding!  
At ASSCA - Chapter 99...we are here to each  
other.**

### Quotes

The race is not always to the swift, but to those who keep on running. -*Anonymous*

What is beautiful is not always good, but what is good is always beautiful.-*Unknown*

Why not go out on a limb? That's where the fruit is. -*Will Roger*

The only way to pass any test is to take the test. -*Anonymous*

When you are reluctant to change, think of the beauty of autumn.-*submitted by vbbrown*

The only place success comes before work is in the dictionary. -*Unknown*

Pray for a good harvest, but keep on plowing. -*Nancy Otto*

## CODE of ETHICS

1. To promote good will between the motorist and the industry.
2. To have a sense of personal obligation to each individual customer.
3. To perform high quality repair service at a fair and just price.
4. To employ the best skilled personnel obtainable.
5. To use only proven merchandise of high quality distributed by reputable firms.
6. To itemize all parts and adjustments in the price charged for service rendered.
7. To retain all parts replaced for customer inspection, if so requested.
8. To uphold the high standards of our profession and always seek to correct any and all abuses within the automotive industry.
9. To uphold the integrity of all members.
10. To refrain from advertisement which is false or misleading or likely to confuse or deceive the customer.

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