



El Cajon, Calif.-based Arce Enterprises is comprised of Arce Engines, San Diego Engine Balancing and San Diego Engine Parts.

# DIVERSITY & INNOVATION

*Mixing things up ahead of the curve keeps Arce Enterprises running strong.*

**BY PATRICIA KAOWTHUMRONG**



In 2011, Dave Arce was named the winner of MAHLE Clevite's Champion Technician contest, earning a trip to the NASCAR Sprint Cup Series Champion's Week in Las Vegas for him and his wife, Sandy.

**L**IKE THE PERFORMANCE aftermarket as a whole, business is currently booming for Arce Enterprises, but owner Dave Arce is far from satisfied.

Over the last three years, Arce purchased his own building for full-service engine-building; diversified the shop's services to discover a profitable niche; and snagged an award that exposed his business to a whole new world of innovation.

El Cajon, Calif.-based Arce Enterprises ([www.ArceEngines.com](http://www.ArceEngines.com)) is comprised of Arce Engines, San Diego Engine Balancing ([www.SanDiegoEngineBalancing.com](http://www.SanDiegoEngineBalancing.com)) and San Diego Engine Parts ([www.SanDiegoEngineParts.com](http://www.SanDiegoEngineParts.com)). The 5,400-square-foot facility offers complete auto care and repair services, machining, engine balancing, metal fabrication and welding, and gas fuel injector rebuilding.

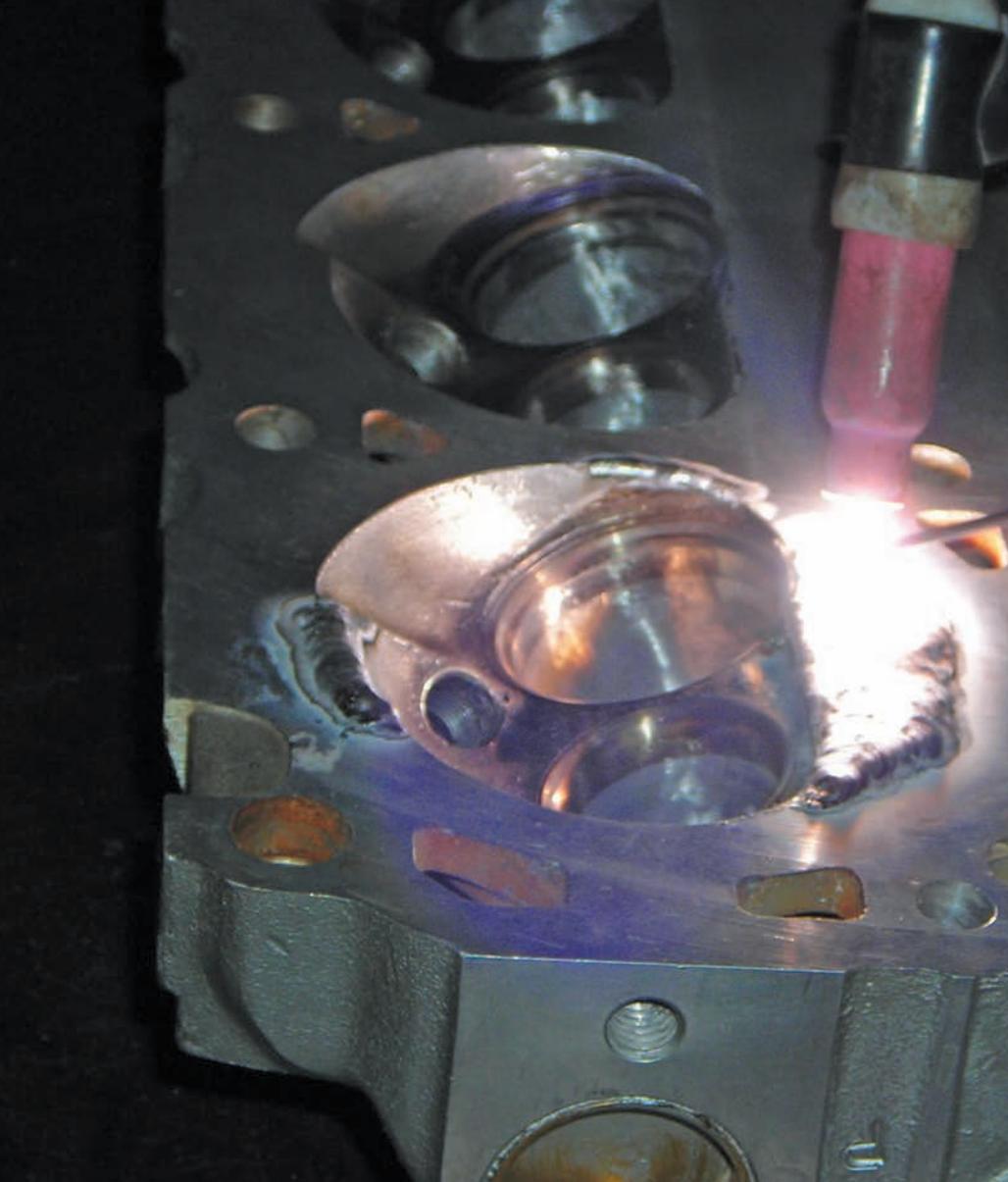
"Coming from where I was at 19 years old to where I am now, I would consider myself a millionaire," Arce says. "I'm not,

but that's the way I feel. I feel very fortunate to walk into this building knowing we purchased it, and there's a place for my daughter, wife and son to come and work."

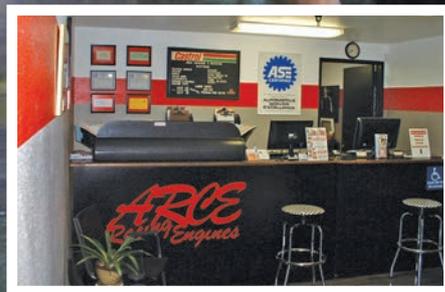
## Speedy Connections

The engine-building shop started as a part-time gig for Arce. He built engines and sold parts out of his garage while he worked full-time in the aerospace industry for 15 years. Although Arce Enterprises was officially established in 1990, Arce says the last three years have been especially significant for the business.

In 2011, Arce was named the winner of MAHLE Clevite's Champion Technician contest, which is designed to honor the skills and expertise of engine technicians and specialists nationwide. Arce and his wife, Sandy, received a trip to the NASCAR Sprint Cup Series Champion's Week in Las Vegas. During the trip, Arce attended a VIP dinner with NASCAR engine builder



The engine-building process often begins with a tired or worn-out engine that arrives in a complete or long-block form. It gets disassembled and the block, crank, cylinder head and rods are typically reclaimed because they are rebuildable components. All the other parts such as the pistons and rings are replaced.



Doug Yates of Roush/Yates Engines, who was recognized as MAHLE Engine Builder of the Year in 2011 for NASCAR.

Arce and Yates hit it off, and Yates invited him to visit the Roush/Yates engine facility in Charlotte, N.C.

“It was a once-in-a-lifetime thing to happen for me,” Arce says. “I totally feel accomplished now because I was given the opportunity to go there, and I don’t have anything to prove or do since that’s happened.”

Arce, who is an asphalt racer, says Yates inspired him to develop a new modified engine for the West Coast Lucas Oil Modified Series. Arce is integrating General Motors’ newest engine in his race car instead of the standard small-block Chevy engine. He approached Lucas Oil officials with the idea, and gained approval for use of the engine.

“Organizations have to OK the Chevy LQ9 engine before it’s allowed in, so I’m

breaking ground on that right now,” Arce says. “And people are really starting to notice because the new engine is much more efficient and trouble-free. The LQ9 also uses pump gas instead of \$10-per-gallon fuel. There’s a handful of features that this thing has that are going to help our environment as well.”

The project is still in the works, but Arce acquired all of the materials he needs and manufactured some of his own parts for the project.

“It’s been a total success in my eyes,” Arce says. “Doug Yates didn’t tell me what to do. He just made me look for an avenue to do something different.”

### When in Doubt, Diversify

In addition to inspiring him to pursue a monumental engine-building project, Arce’s title as MAHLE Clevite Champion Technician brought nationwide recognition to Arce Enterprises.



Arce is an asphalt racer and is in the final development stages of a new, more efficient late-model engine.



The 5,400 square-foot facility offers complete auto care and repair services, machining, engine balancing, metal fabrication and welding, and gas fuel injector rebuilding.



“It’s amazing how much power a corporation like MAHLE Clevite has and can turn your life around like that,” Arce says. “I’m basically the same person, but they’ve spread me across the country. It’s amazing.”

But business was already on the rise before Arce snagged “Champion Technician” status.

Arce decided to purchase 40-year-old San Diego Balancing in 2009 when business began to decrease. At the time, Arce Enterprises was focused on engine builds, machining for other shops and complete auto repair.

“It was all about diversifying,” Arce says. “When business started falling off, we decided we needed to look for new avenues. That’s when we ended up buying out San Diego Engine Balancing.”

Then, since some other shops in the area were closing, Arce was able to purchase a Ram fuel injection machine worth about \$15,000 for just \$1,000, he says.

“They needed to just get it out of there, so we went and got it, put it in place, figured out how to order all the parts and now we do fuel injection service,” Arce says. “And the fuel injection services have actually become more profitable than the balancing, because it takes less time and less effort.”



A dinner with Doug Yates and subsequent trip to the Roush/Yates facility in North Carolina inspired Arce to continue building and expanding his business.



### Piece by Piece

Arce says one of the smartest things he did for his business was establish the machine shop first, and then gradually add equipment for other services. A good relationship with a used-equipment dealer was particularly helpful, he says.

## Arce Enterprises' most popular services are engine builds and machining.

"I didn't come in and spend \$300,000," Arce says. "I did it one piece at a time. I don't know how I did it, but I did. It was a big investment when I was younger, but I bought everything used on a budget, and we cleaned it, repaired it and kept the equipment that way."

The shop is now a seven-employee operation, but Arce Enterprises is ultimately a family business. Arce's wife Sandy, who owns a dance studio next door, handles accounting and other business operations. Arce's daughter, Hollee, works at the shop part-time, and his son, David, is responsible for managing the business' Web presence.

Dave Arce has had success working with his family, but he says he's had problems finding other good employees. He's had the most luck with individuals who have families to support.

"If a person has a family to take care of, they're going to be more dedicated and put

a better foot forward because they have to support a family and not be a come-and-goer," he says.

Arce attributes difficulty finding enthusiastic employees to dwindling support of vocational education.

"If it wasn't for my school and the three-hour block of electronics I was able to take for four years there, I would have never made it," Arce says. "That's where I got my training. My training came from my teachers, my peers and being able to put my hands on stuff and doing it in the lab."

Arce also mingled in auto shop in school as well, which allowed him and his friends to fix up a vehicle his sister gave him—a beat-up 1963 Chevrolet truck with a traditional Chevy V-8 engine.

"Buddies in my class helped me out a little bit, so that's kind of where it all started," Arce says. "I needed transportation, so I fixed the truck."

Arce went on to junior college and

worked in the electronics and aerospace industry for 15 years. When his company was forced to downsize, Arce was offered another position, but decided to take on his passion for engine building full-time instead.

### Heavy Machining

It's difficult for Arce to decide whether he enjoys racing or machining more.

"The racing is truly fun, but I don't want to put it ahead of the work, because the machining is what makes everything really tick," he says.

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The engine-building process often begins with a tired or worn-out engine that arrives in a complete or long-block form. It gets disassembled and the block, crank, cylinder head and rods are typically reclaimed because they are re-buildable components. All the other parts such as

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Diversity and innovation drive Arce Enterprises.



the pistons, rings, all bearings, camshaft, etc., are replaced.

“We disassemble everything, clean everything and dispose of the parts that are non-machinable,” Arce says. “Those four items go to machining after they are cleaned and checked for cracks.”

Then an engine kit and/or parts are ordered for the engine. Arce’s top suppliers include MAHLE Clevite, Melling, Enginotech and Engine Pro. Arce Engines also orders automobile parts online from CarQuest Auto Parts.

“Over the years we’ve collected stock, so we have a pretty good inventory of parts, so we can pull a lot of stuff right off the shelves,” Arce says. “It speeds up turnaround time.”

The business’ in-house machine capabilities facilitate two- to three-day turnaround times if necessary.

“If somebody came in on Monday and needed an engine on Wednesday, we could do it,” Arce says.

Once the engine is assembled, it endures a detailed inspection to make sure all of the clearances are correct. Arce says the shop offers a 12-month or 12,000-mile warranty on all of its engine work.

### On the Forefront

Maxwell Technologies, a manufacturer of energy storage and power delivery solutions, recently took notice of Arce’s engine-building capabilities. The company asked him to help integrate its ultracapacitor, a device that stores and discharges energy, into a vehicle to assist with the battery, stereo and power steering.

Ultracapacitors complement a primary energy source such as internal combustion engines, fuel cells or batteries to provide quick power. Arce Enterprises performed the heavy wiring to fit the ultracapacitor on the top of the car battery electronically.

“If for any reason the car battery becomes dysfunctional, you can push a button, and the ultracapacitor will temporarily take the place of a battery and start the car,” says Arce, who considers the project one of his most memorable accomplishments.





Although Arce Enterprises has had many victories over the past three years, it has had its challenges as well. Sandy Arce was diagnosed with breast cancer three years ago. She was able to battle the disease and is now cancer-free, but it is a victory that Arce and his family celebrate on a daily basis.

“Keeping that in the back of my mind with everything that we’ve done with purchasing this building, and doing the ultracapacitor and the Gen III LQ9 race car engine program, while keeping business going—it’s been quite a challenge,” Arce says.

Another challenge the business faces is the uncertainty of the automotive industry as a whole. Because cars and their engines are lasting longer and longer, shops need to constantly diversify their offerings and keep up with the trends, Arce says.

“We’re always looking at industry changes and avenues that will help us in the future,” he says. “We try and stay up on all of our electronics for automobiles, because they’re going to do nothing but get more electronically controlled.”

### Racing Forward

The evolution of price-checking for auto services on smartphones has made pricing more competitive, but Arce says the shop fights back with its established reputation and quality work.

“This type of business can really knock you down easily,” Arce says. “You have to be very, very persistent, and very, very strong, because customers will eat you alive.”

Arce Enterprises may not be short on business, but the shop is currently working on boosting its Internet sales. Arce says the company might also get into manufacturing parts in the near future, especially if his modified LQ9 race engine project really takes off.

The future of the industry may be uncertain, but it certainly won’t stop Arce Enterprises from moving forward.

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