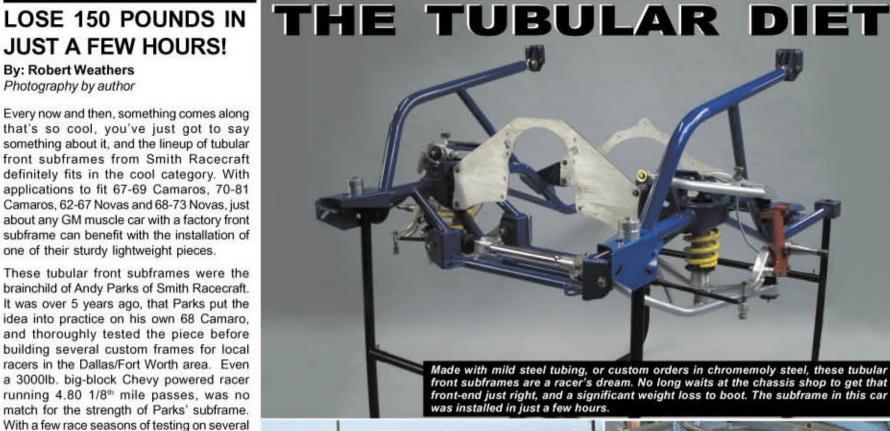
JUST A FEW HOURS!

By: Robert Weathers Photography by author

Every now and then, something comes along that's so cool, you've just got to say something about it, and the lineup of tubular front subframes from Smith Racecraft definitely fits in the cool category. With applications to fit 67-69 Camaros, 70-81 Camaros, 62-67 Novas and 68-73 Novas, just about any GM muscle car with a factory front subframe can benefit with the installation of one of their sturdy lightweight pieces.

These tubular front subframes were the brainchild of Andy Parks of Smith Racecraft. It was over 5 years ago, that Parks put the idea into practice on his own 68 Camaro, and thoroughly tested the piece before building several custom frames for local racers in the Dallas/Fort Worth area. Even a 3000lb. big-block Chevy powered racer running 4.80 1/8th mile passes, was no match for the strength of Parks' subframe. With a few race seasons of testing on several different cars under his belt, he was confident that the design was solid and ready for production. He then teamed up with Kim Smith, owner of Smith Racecraft, and they began a series of modifications to add those details and workmanship that Smith is famous for.

The concept of making the tubular front subframe was easy, but accomplishing it was a major challenge. They keep everything located just where the factory did. Even the engine is kept in the same spot, which is another reason racing organizations love this frame. Factory components such as control arms and springs can be used on their subframes, but most customers opt for the









Smith Racecraft's tubular front subframes are accepted for competition by several racing organizations. The Nova pictured has seen improved 60 ft. times and lowered ET's due to the weight loss and improved front suspension, which gets the weight over the rear end quicker.

Factory mounting locations for all components make the tubular front subframe from Smith Racecraft a unique piece. Even the factory springs and control arms can be used.

We removed the front clip of this Nova for illustration purposes. Installation is much easier if the front clip is left in tact. Notice the difference between the two frames. GM made their front subframe beefy enough to handle a snow plow attachment.

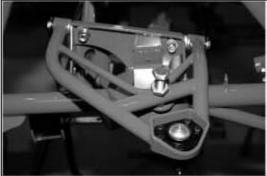




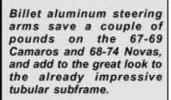


Most of the components for the tubular front subframes are manufactured in-house on CNC machines to make everything fit like it should. If it isn't CNC'd, it's laser cut, and the precision is very apparent. The spring bucket and A-arm mounting location (shown) requires several individual pieces which are meticulously fitted and welded





Smith Racecraft's tubular control arms are made from chromemoly steel and are available for the standard spring and shock configuration, or coil-over shocks. According to Smith, the standard spring set-up actually works better than the coil-over shocks on a small tire car, because of the stored energy in a large custom front racing spring.



tubular control arms instead. The frames take away most of the advantage that later model strut cars currently have, when equipped with tubular K-members. The field has now been leveled, so the strut cars should be aware that their days of privilege are nearing an end.

With years of building pro-stock cars, pro-stock truck and a myriad of other exotic race cars, Smith had a few tricks up his sleeve on just how to improve the Park's designed front-end, and that's just what he did. The front end is often ignored, but it's at least half of the equation, or more, when it comes to traction and safety.

Some of the features in all their frames include round tube construction designed for maximum rigidity, front and mid-engine plates, rack-and-pinion steering, and bolt-in installation. The tubular construction also provides clearance for large oil pans and headers. Speaking of headers, Smith Racecraft has custom headers available, which are less restrictive than factory frame designs because some of the bends are eliminated. They can also be ordered with ceramic coating inside and out, so they're ready to install.

Smith and Parks designed the frames to improve safety over the factory pieces, and make it easy for even the novice racer to install, which they did, seeing that we were able to install one of them ourselves in just a few hours, with simple hand-tools. The rack-and-pinion location virtually eliminates bump steer, and is a big part of the over-all weight savings over the factory steering.

Installation time for the mechanically inclined can range from 3 to 5 hours. Some of the things that increase installation time are rusted bolts, welded-in subframe connectors, front down bars, or anything outside of the original GM setup. Prior to removal of the factory frame, be sure to take reference measurements so the tubular frame is installed properly. Just as with the factory piece, the tubular frame has some room for adjustment side-to-side and front-to-back. Starting with a car that already has the engine and transmission removed,

"The Tubular Diet", continued on page 14...



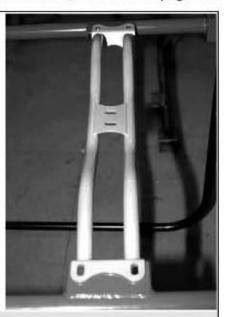


Header and oil pan clearance is abundant, and turbocharged applications will really like the additional space made available with the tubular front subframe.

Engine front and mid-plates are CNC machined from ¼" thick T-6 6061 aluminum sheet, and add structural integrity to the frame. Watching a car equipped with one of these frames launch with the wheels up, demonstrates just how rigid it is. A properly installed and tuned front suspension will help a car carry the front end evenly.



Chromemoly drop spindles for 67-69 Camaros and 68-74 Novas lower the cars height 2" for a low stance that makes a car look fast, even when it's sitting still. Lightweight standard spindles for 70-81 Camaros will be available soon.

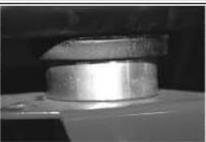


A tubular transmission crossmember is available for TH350 or Powerglide applications. Since the frame accepts stock crossmembers, those who run a TH400 will need to use the factory piece.

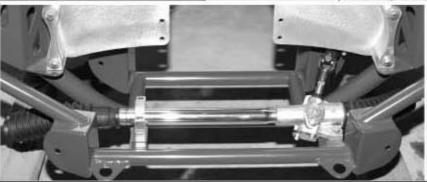


The bolt on the right is a 38 year old factory piece. It's safe to say that replacing it with a new grade 8 bolt is a good idea. Be sure to clean and lube all four nuts in the body's mounting pads to help avoid cross-threading.

On 68-73 Nova applications, don't forget to keep the ¼" factory spacers and reuse them with the aluminum bushing kit. Core support bushings and bumper brackets fit like a glove on the frames laser cut mounting locations.







Pinto style rack-and-pinion units are available in standard radius and extended radius to get it closer to the factory turning radius. Rack mounts are machined from billet aluminum, and add a nice touch.



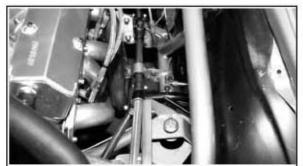
it's just a matter of removing or disconnecting the front bumper, front brake lines, steering shaft and six body bolts. A floor jack, jack stands, a little elbow grease, and the factory frame is history. Once the old frame is out, it's apparent where the weight savings comes from. The factory subframe looks like it belongs on a one-ton truck.

Some people may be inclined to remove the front clip, but this is not necessary, or advised. A little cleaning on the firewall or underneath the car, along with the application of some touch-up paint can all be done with everything in place. Leaving the front clip on the car makes it much easier to align the new tubular frame.

In addition to their line of front subframes, Smith Racecraft also manufactures chromemoly tubular control arms for the same applications as their frames. They even have chromemoly drop spindles for the 67-69 Camaros and 68-74 Novas. The parts and model applications are constantly growing, and there's been some talk about a few products for the Blue Oval boys. All the front subframes are available in stage one, two, or three, three being the most complete. They also have rack-and-pinion steering units, brake-line kits, front coil springs, tubular transmission cross-members, billet aluminum steering arms, rack mounts, and body bushings. Every piece that's bolted to the subframe comes with mounting hardware for easy installation.

So it looks cool, saves weight, vanquishes bump steer, and makes a car safer to race, but what's the best reason to install one of Smith Racecraft's tubular front subframes? It's the best performance enhancing product that can be bolted on to a car without blowing up the engine! Up to 150 lbs. is gone instantly, and that equals a massive reduction in ET. When equipped with adjustable shocks, high-energy coil springs, and tubular control arms, cars are able to launch more aggressively and achieve weight transfer much quicker than stock suspended cars. Weight reduction and a race-car quality front suspension has helped several cars reduce ET's by 2 tenths with no changes to the drive-train. That's impressive in anyone's book, and it's no wonder they're selling them as fast as they can make them, so it might be a good idea to get an order in before winter is over and the racing action starts again.





The steering kit is easy to install and comes with everything needed to connect from rack to steering shaft. Just remember, before drilling a hole through the steering shaft, reinstall the engineltrans so ride height can be established, and the steering wheel can be held straight. Measuring tow-in and getting everything as close to aligned as possible will insure there's plenty of adjustment available after it goes to the alignment shop. After drilling and bolting the steering shaft to the steering tube, Smith recommends a sizable tack weld for added insurance.

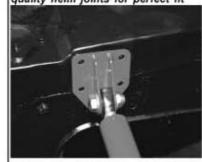




Smith Racecraft engineered these long coil springs to store more energy than any other spring available, in order to help get weight transfer to the rear as quick as possible. Cars that don't need this extra help can opt for standard racing springs, or go with coil-overs.

A-arms are available with spherical rod ends for race-only applications. This eliminates the resistance of bushings and allows the front suspension to work more efficiently.

Firewall mount plates secure the down tubes and are equipped with highquality heim joints for perfect fit



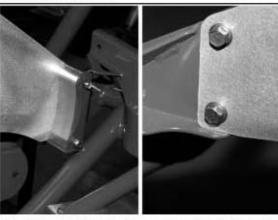


With a standard coil spring and shock configuration, Competition Engineering's 3-way adjustable drag shocks get the job done. Non back-halved cars have worked best with Smith Racecraft High-Energy springs and CE's drag shocks.

Smith Racecraft Dallas, Texas 214-330-0660

Sources:

smithracecraft.com



A built-in shelf for the front motor plate helps make engine installation a one-man job. This is a feature found on high-end chassis cars that Smith has incorporated into these front subframes.



This is a frame being prepared to ship to an anxious customer. All frames are shipped by truck, so don't expect UPS or FedEx to be ringing your doorbell.