



BY KEVIN BLUMER  
PHOTOGRAPHY: KEVIN BLUMER

**A** long time ago in a galaxy far, far away, the late Randall Jachmann wrote an introductory story about a bolt-on four-link rear-suspension system offered by Plank Motorsports. *Method to the Madness* was the chosen title. Among other things, Randall wrote, "Forget what you know and hang on for the future in bolt-on suspension technology — the off-road four-link." Randall also implored readers to "stay tuned for a complete installation of the kit down the road." We've been down the road, and some of you have stayed tuned. Here's the follow-up.

Larry Plank, the namesake of Plank Motorsports, tragically died in an aircraft accident in 2000. Using the experience and expertise gained while working for Larry, former Plank employee Tom McKenzie founded his own fabrication business, Suspension Innovation Motorsports, aka S.I. Motorsports. Tom has designed four-link suspensions for many applications, from a custom-wheel-base F-150 to an early '70s Chevy, but has continued to produce and offer the four-link that Plank Motorsports developed for the Ford Ranger.

"I don't consider the Ranger kit 'my kit,'" Tom states flatly. "I consider this kit Larry's kit."

It is built using the original jigs that we used at Plank Motorsports at the time."

Only two shops, S. I. Motorsports and Newline Products, are authorized builders of the Plank Motorsports Ranger four-link.

This time we'll cover the individual kit components and show them in place on a real, live Ranger. Next month we'll show that same truck in the dirt strutting its newfound capability. At presstime, the Ranger was awaiting some last-minute details prior to our off-road photo session. We'll have the photo session in the bag by the time you read this. There's clearly more method than madness in this top-drawer four-link kit. **OR**

# FOUR-LINK FOLLOW-UP

## NO MORE MADNESS



▲ The Plank four-link kit from S.I. Motorsports includes upper and lower links, all hardware shown, bolt-on link-mounting brackets, Delrin pivot bushings for the forward end of the lower links, and weld-on tabs for the rear axle. This system is designed to be used with a Ford 9-inch rear axle. S.I. can truss and tab your axlehousing as an extra-cost option. The links and mounting brackets are all made from 4130 chrome-moly tubing and plate. The system's geometry has been optimized for correct instant center and antisquat and cycles through 28 inches of clean suspension travel. A sway bar is not mandatory with the Plank four-link. The kit bolts to '86-'97 2WD and 4WD SuperCab Ford Ranger pickups using factory frame holes as mounting points.



▲ A close look at the shock mounts on the lower link reveals flawless TIG-welding and a simple, effective design.

► The frame-end mounting brackets for the lower links bolt to the frame using factory holes. The brackets sandwich between the frame and the C-pillar body mounts for extra strength.



► This tab anchors to the frame and reinforces the outside edge of the lower link's frame-end pivot.



◀ Check out the inside of the lower link's forward pivot. Weld penetration is uniform without having blistered completely through to the inside. Highly developed skill was used to weld these links.



◀ Tubing and plate come together at the aft end of the lower link, joined by textbook-quality welds. The threaded bung accepts industry-standard 1-1/4-inch rod ends although rod ends are not included with the kit. "My customers often have their own sources for

the rod ends, so offering the kit without the rod ends saves me time and saves the customers money," Tom says.



▲ Custom-machined hardware indexes into industry-standard rod ends. The frame-end lower link pivots are crafted from Delrin and are also included.



## Four-Link Follow-Up

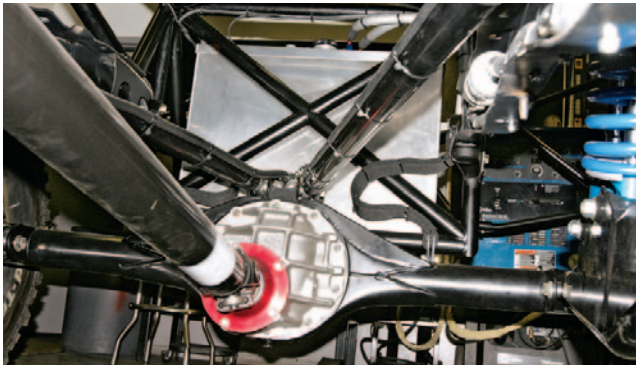


◀ Here's how the lower link pivot bracket mounts to the frame. By using bolt-on construction, the four-link system can be transferred from truck to truck or can be temporarily removed during race prep. In addition, the mounting bolts allow a minute amount of

movement between the framerail and the mounting bracket. Allowing this movement helps disperse stress and avoid the resulting stress cracks. During its stay at the S.I. shop, this Ranger also received a full rollcage.



◀ The bolt-on philosophy is carried to the frame end of the upper links.



▲ The rest of S.I.'s fabrication is as meticulous as the four-link kit. Here, the rear section of this Ranger's frame has been kicked upward to allow for generous bumptravel at a low ride height. The rear section of the 'cage' has no shortage of X-bracing. Fuel cell plumbing and wiring is routed inside the framerails where it's protected from abrasion. Brake lines and breather lines have been securely lashed to the upper links.

► King coilover and bypass shocks work in tandem to smooth the terrain. A 2.5-inch coilover sits astride a 3-inch bodied bypass shock featuring custom bypass tube placement to complement the Plank kit's geometry and the S.I. 'cage's configuration. Paul Alusha, the truck's owner, wanted a low-profile 'cage that would not protrude above the Autofab fiberglass bedsides. Tom's expertise made it happen.



▲ A custom-configured Fuel Safe fuel cell mounts low in the chassis behind the rear axle. This placement helps the truck's front-to-rear balance, especially with a spare 35-inch BFG Mud-Terrain tire mounted above. S.I. also built the custom cargo box seen directly behind the cab. The bottom of the cargo box slopes upward to clear the upper links when the rear suspension is at full bump.



▲ Paul's Ranger got the S.I. treatment up front: long-travel Dana 35 Twin-Traction Beams. Four inches wider per side, the S.I. long-travel 'beams' received generous plating and trussing for extra strength. The factory rubber pivot bushings were replaced with desert-tough spherical bearings. As with the rest of the 'cage, the engine cage and the bumpstop mounting brackets bolt to the frame using Grade 8 hardware.



▲ The radius arms and their attendant pivot brackets are simple, elegant, and strong. The pivot brackets are integrated with the tranny crossmember.

## Source

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