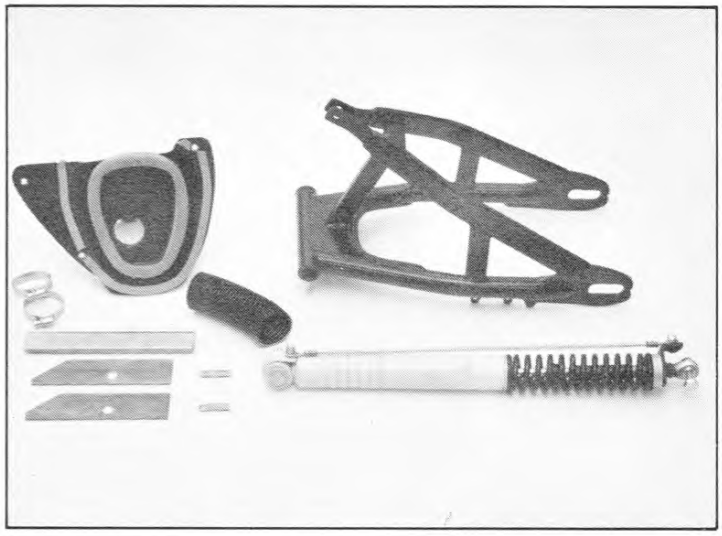
SUZUKI... RAT TO

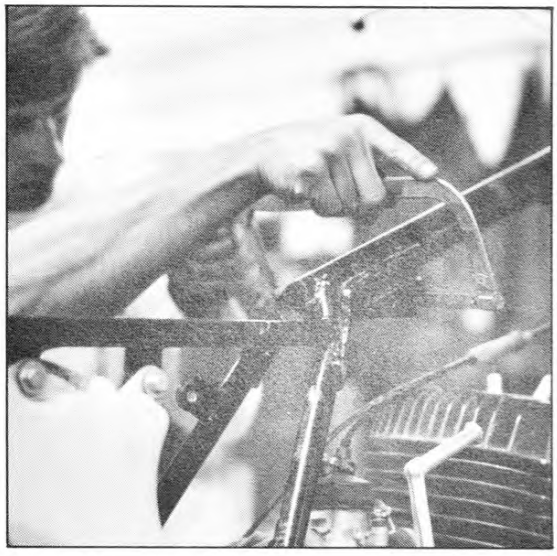
Dirt bike enthusiasts have one thing in common, the desire to always field the latest in equipment. There's nothing worse than to be sitting in doubt on that starting line, wondering if your bike is competitive with all the newer models. If you're really into the sport, the only solution is to buy the new model and hope it stays current for awhile. However, the way things are today, you'd be hinting around for a new scooter every Christmas because that's how fast things are changing now. Horsepower is skyrocketing each year and manufacturers are concentrating on radically new suspension designs. Forward-mounted and slanted shocks are now standard on many of the '75 models, with Yamaha grabbing the lead with their monoshock tail.

So far the monoshock has proven very successful, and there's little doubt that it's the most progressive rear suspension now available. This brings us back around to the tyro who wants to keep with the times but can't pop for a new scoot this year. Instead of buying a new Yamaha, let's suppose you own a Suzuki TM400. You bought it primarily because it made a lot of horsepower and was relatively inexpensive. Later, however, you were perplexed to find you couldn't use all of the power because of the inadequate suspension. Well, all you Suzuki 400 owners can now have your cake and gobble it up too, because Competition Dynamics in Arizona cooked up a monoshock system for the TM400. Their kit enables you to thoroughly update the old chassis and improve the handling of your screaming 400.

We happened to have a 400 available, so we "acquired" a kit from Comp. Dynamics and went about making our own Suzuki monoshocker. Although termed a bolt-on project, their hardware does require some welding up at the steering head. Torque Engineering (makers of the Whisperin'

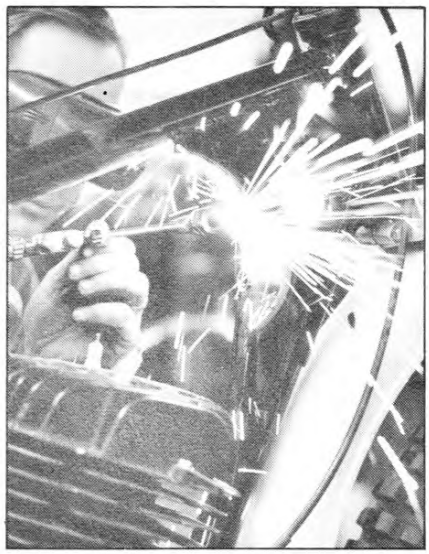


1 *Kit contains swing arm, Bilstein gas shock, steering head gussets, coil mounts, new air cleaner and box, plus new hose and clamps. Sells for $240.*



4 *Several cuts are necessary to cut the back portion of the lower tank tube flush with the rear tank flange.*

5 *The bracket is cut flush with the flange to enable the new head brace to fit tight.*



6 *A radius is cut in the big front frame gusset to allow the shock to pivot once it's in place.*

RACER

Smooth out the race track with Competition Dynamic's monoshock kit for Suzuki's TM400

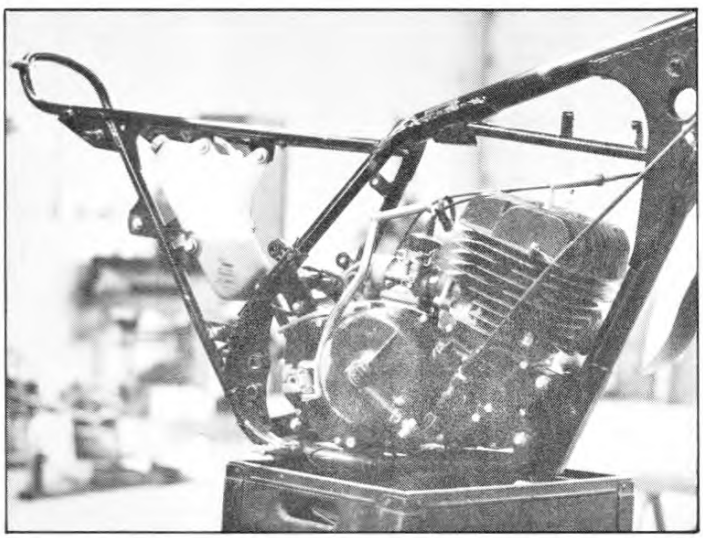
by RICH COX

Smith pipe) was nice enough to give us the run of their entire shop and we quickly stripped Suzy naked and prepared her for the fire wrench.

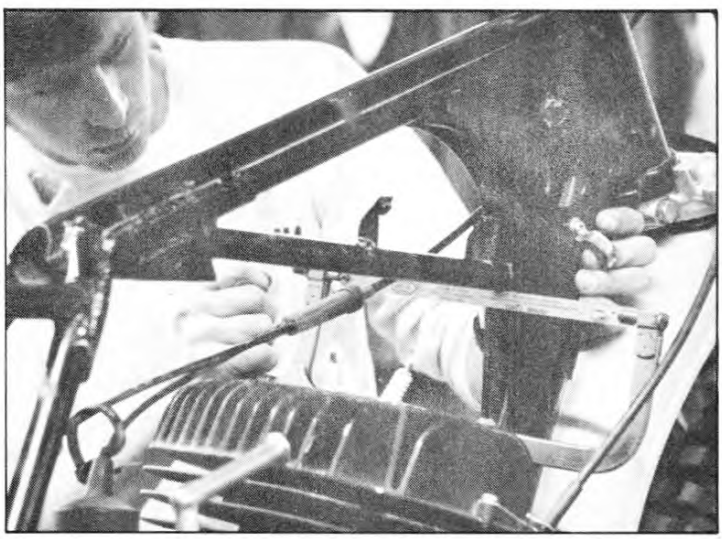
The point at which the shock is attached to the steering head is most important. Although a locating diagram is included in the plans, we found it difficult to comprehend completely. So, in typically American fashion we threw the plans away and guessed our way through it. Welding completed, we returned the bike to our shop to complete the assembly.

The remainder of working time was spent carving and hacking the plastic fenders and side covers to clear the monoshock. A different air box and air filter are included in the kit, but it seemed to be a last-minute substitution because it wouldn't fit for us. We had to enlarge the mounting holes and move the box around to keep the monoshock swing arm from hitting the air box inlet. The left-side cover serves a dual purpose, holding the air cleaner in and also sealing off the air box. It does neither well, and needs additional screws placed around the box to ensure a good seal. The rest of the installation was completed with little problem; to top it off we threw on a set of knobby Carlisle tires from the Flanders Co. in Pasadena, California, 3.00x21 front and 4.35x18 rear. The 4.35 was a tight go and whether or not a 4.50 would fit would depend upon the particular brand of tire.

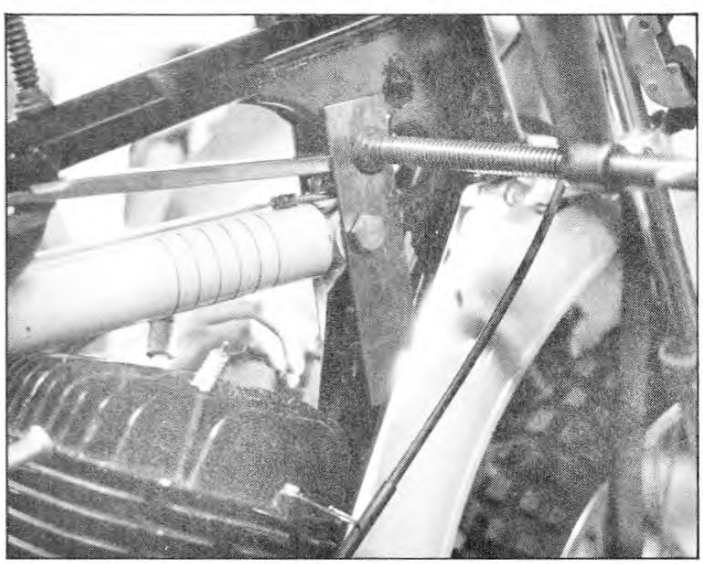
But what about the weight factor? Tested in the March '74 issue of Motorcyclist at 251 pounds wet, the 400 Suzy had fattened up 14 pounds from Competition Dynamics' icing on the cake; she now tipped the beam at 265 with her big Bilstein shock, modified arm and larger tire. And how much travel is there at the rear wheel? Yamaha gets close to seven inches out of their monoshock which gives seven inches at the rear wheel. The Bilstein shock in the C.D. kit has a built-in stop



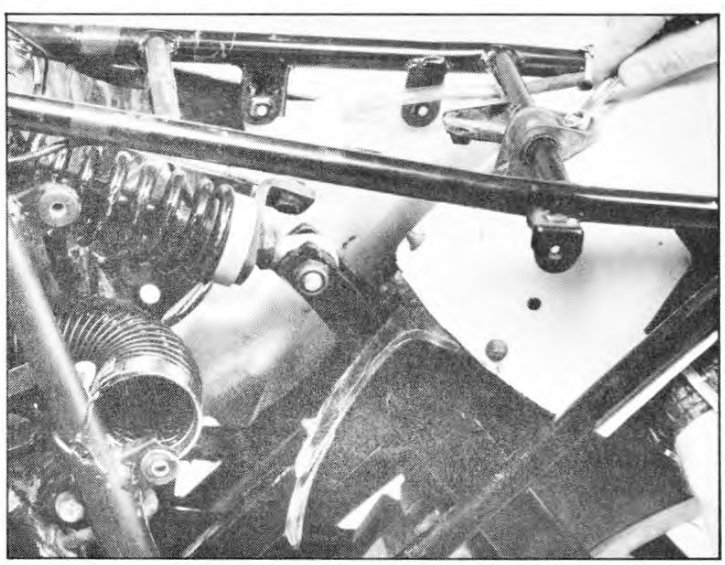
2 *The Suzy is stripped almost naked, removing the gas tank, seat, coil, ignition box, air box, rear swing arm assembly, rear fender and exhaust pipe.*



3 *Using a hacksaw, remove original coil mounting bracket along with the front left mount for the rear fender.*



7 *The new unit is positioned and held in place with C-clamps and then tack-welded. The shock is then removed and the entire assembly completely welded.*

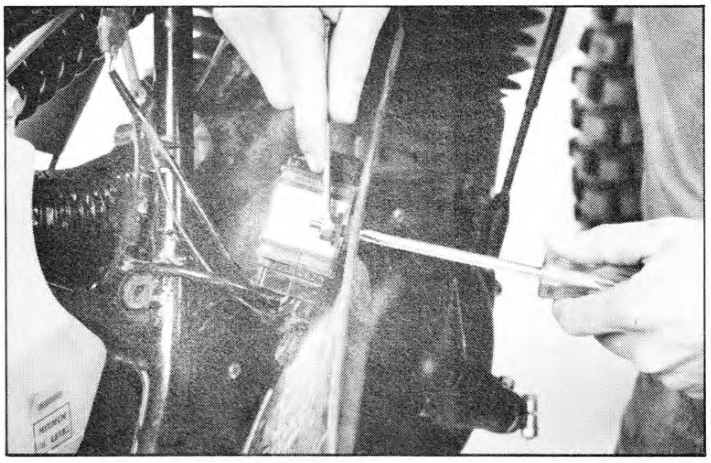


8 *2½ inches have been cut off the fender, the mud flap has been remounted and slotted, and an additional rubber fender bracket secures the fender.*

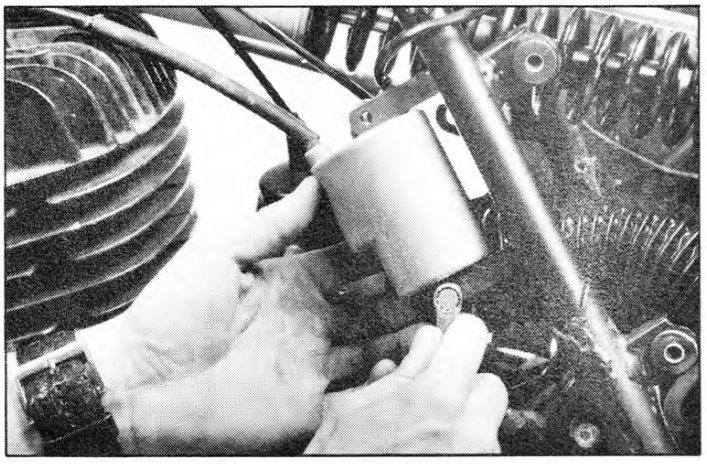
PHOTOGRAPHY: PPC PHOTOGRAPHIC

that allows the rear axle 5 6/8 inches of movement. The ratio between shock travel and rear wheel travel is determined by the length of the swing arm and the distance between the swing arm pivot and rear shock mounting. Yamaha's ratio is almost one to one whereas the C.D. unit is close to two to one; why C.D. made theirs different and what affect it has remains unknown to us.

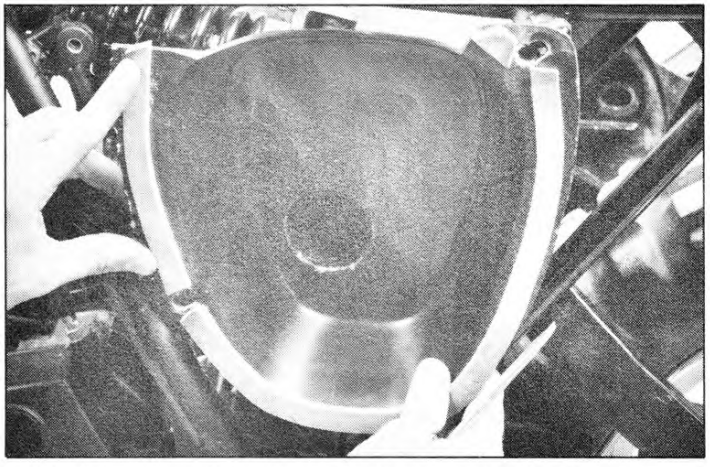
Now that everybody has eye-balled this trick Suzuki, the next question is, does it work? If big wide smiles are any indication of success, then the Suzy would be right up there in front because everybody who rode it came back grinning ear to ear. Remember the hard ride for which the TM has always been famous? It's a different story now. Just point it up a rutty hill and feel the rear soak up the bumps while always keeping the wheel on the ground. The TM is now a completely new animal, fun to ride, easy to handle and a conversation piece wherever you take it. •



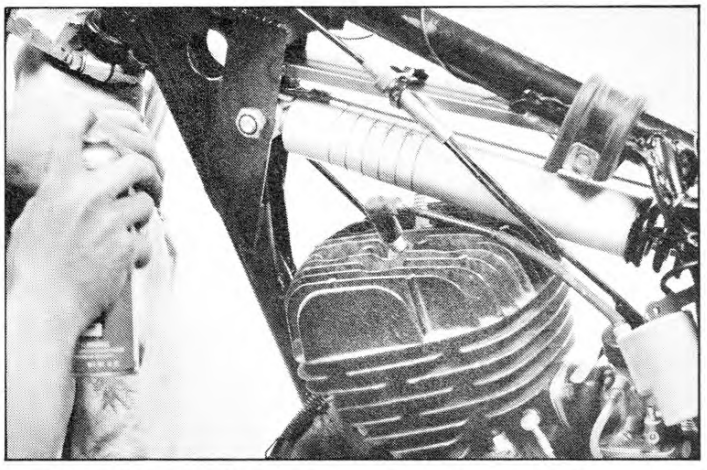
9 *Here the ignition box is being mounted to the inside of the right side cover. Use aircraft nuts on all assemblies and tape all wires away from the shock.*



10 *When remounting the coil make sure the coil wire will still reach the plug. Cut away the forward top section of both side covers to clear the shock.*

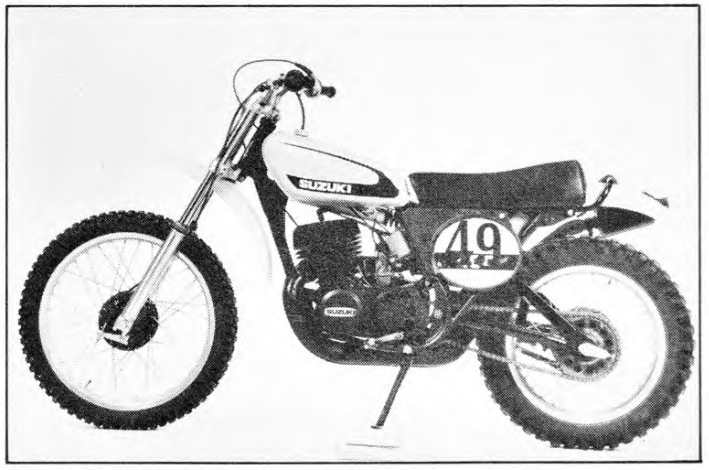


11 *We had to enlarge the bolt holes and reposition the air box because the inlet was too close to the swing arm arc. The side cover seals off the air box.*



12 *Before completing the assembly we coated all the bare surfaces with flat black paint. Notice how the shock makes head removal rather difficult.*

13 *Here's a good picture of our Suzy before final assembly. Tire clearance is a problem as we later installed a 4.35x18 Carlisle which barely cleared.*



14 *Trick-looking isn't it? Could even be mistaken for a Yamaha if you glanced at it quickly. TM owners unite, for the Suzy is still alive.*