

# CHEAP TRICKS FOR THE DT400

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**MAKING AN OTHERWISE  
ENJOYABLE MOTOR GET ALONG  
WITH COMPONENTS NEAR BUT  
NOT NECESSARILY SO DEAR**

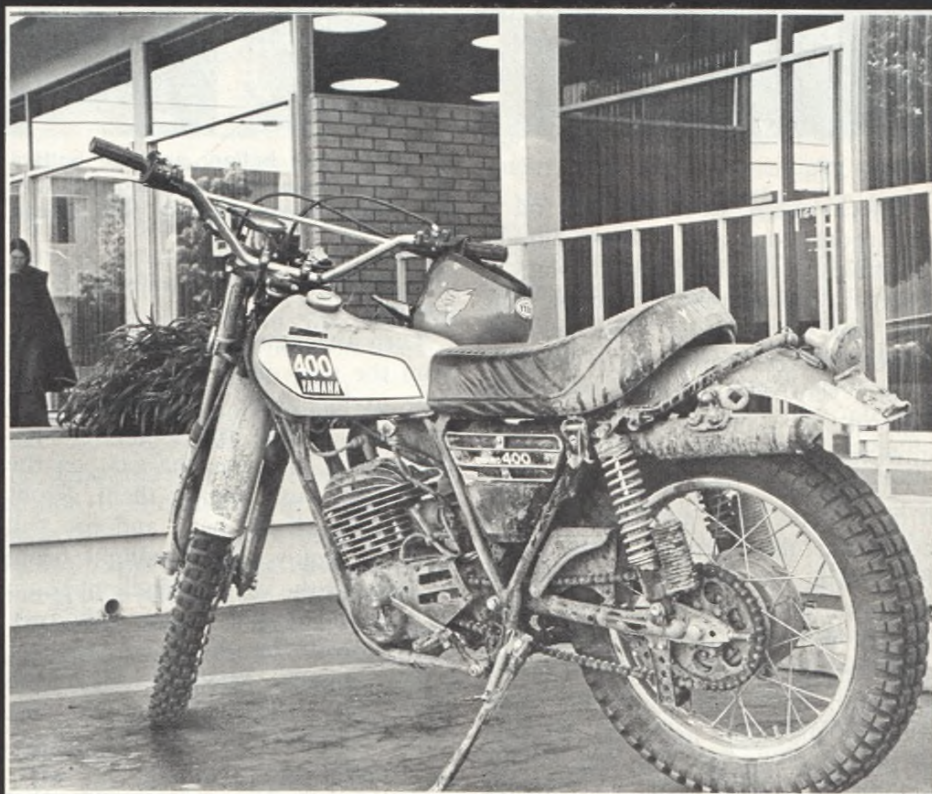
**BY DAVE SCHOONMAKER**

First off, you should understand that the very existence of this article is nothing more than a quirk of fate. If someone had said to me, "You will do a technical article on a motorcycle. What will it be?" my answer would most certainly not have been the DT 400 Yamaha. Why? Because I would have figured it to be too much work to accomplish much of anything on it. I'm lazy and have a fair appreciation for my mental and physical well being. But there was that quirk.

Said quirk was my desire to ride some motorcycle while I waited for my new Frontera to arrive via ox cart, three masted schooner, horseback, pickup truck or any other method that will get a relatively light motorcycle across an ocean and a continent, through pestilence, disease, drought, famine, depression and simple adversity. (Just as a footnote, it got here today.) Since Montesa was clever enough to snatch back their enduro before I could ride it completely into the ground (about 10 days), I had to make do with what was available, none other than the DT 400.

Accordingly, I set to work to make full use of my unrealistic but unbridled optimism about my ability to think better than the people who designed the bike. After all, riding it stock was completely out of the question since I would never have had a chance of keeping up with sundry friends and would have had to tolerate their constant mockery. As it turned out, they laughed most of the time anyway.

DT 400 Enduro Yamaha: a dual purpose motorcycle in all respects, not designed to do what we are about to ask it to do. We are going to try to make it into a competent enduro bike. Here's what we have to start with: fine motor with a few problems in tuning and throttle response; a frame that possesses few good handling characteristics, but equally few bad ones; suspension that ranges from ho-hum to horrible; and a unit that weighs 309 pounds with a gallon of gas.



**Finished product looks like this and will still take you to work and to the bank with comfort, safety and legality.**





## STRIP IT

Check out a stock DT 400 on a showroom floor and it most closely resembles a jewelry rack at Macy's. There is an impressive pile of stuff that can be removed from the DT without adversely affecting its function in any way. List of things you can start off by removing and any tricks unwittingly discovered:

**Tachometer:** two cotter pins hold it in. Pop them off and pull the light bulbs out the bottom of the tach. Disconnect the cable at the tach and down on the engine case by the carb. To get the cable out, you'll have to pull the gas tank which is held on by a 17mm head nut under the seat. Remove the cable and seal the hole in the case you just left. Tape it or buy the part that Yamaha supplies for the MX series. Remember, "buy" is a dirty word. Pull the bulbs and stash them somewhere, then tape up

**Yanky off the turn indicators, but leave the rear brackets. Flasher can be stripped too, much to its greater longevity.**

**Out comes the battery and the battery box. Tape these two wires together and seal airbox/flange opening with silicon seal.**

the outlets. Amount removed: 3 pounds.

**Turn indicators:** Leave the brackets from the rear ones, since you would have to buy (ugh) a shorter bolt to hold the fender on without them. Wires plug in under the seat on the right side. Just unplug them. Front ones come off the bars, and you will have to remove the headlight beam to unfasten the wires. Headlight beam is held in by one screw (Phillips). Don't torque on the beam adjuster which is smaller. Might as well get the flasher too while you're at it. It's rubber mounted near the coil on the top frame tube. Unplug the wires and remove it. Amount removed: 6 pounds.

**Battery and tool tray:** unplug the positive and negative wires to the battery and connect them together. Put the battery in your spares box. Might as well remove the tool tray and kit

too since it's more weight high on the motorcycle. All your electrical goodies will work fine without the battery, since it's only there to pacify legislators. Trick: be sure to put the 6mm bolt that holds the front of the tool tray back in since it also holds the pipe in place. Keep the intake rubber flange in there since it offers a nice high air intake. Amount removed: 5 pounds.

**Taillight:** for now we'll just take it off and will offer a conversion solution a little later on. Don't bark your knuckles on the sharp edges of the brackets that hold the wiring loom in place. Amount removed: 4 pounds.

## OPTIONALS

**Oil pump:** I took it off since I have little use for the things and was disgusted by all that steel in the person of the tank. A plate to cover the hole is available from your Yamaha

**Tachometer comes off after two clips are removed and the cable is undone. Tape the opening, remove the bulbs and tape their sockets.**





Oil pump sits here, but would be just as happy to rest quietly in a cardboard box. Plate of simple stock covers hole. dealer or can be fashioned from a small piece of aluminum. Plug the holes to outside air with some silicon seal. Be sure to carefully plug the spigot on the carburetor to avoid air leaks. Open the junction box for the cables, remove the carb slide to get some slack and pull the pump cable out.

In order to get the oil tank out, you'll have to pull the pipe and grunt and pry. If you slip the front portion of the tank in, then the back part will pull out. Two 6mm bolts hold it, along with the wiring harness which gets tangled up and the filler cap which has to be removed. It will come eventually. If you fail to plug the oil line it will leak all over. Amount removed: 8 pounds.

But the best part is that without the injection system you get an easier

**Oil tank is a bitch to get out, but can be pried and coaxed to do so without removing the airbox.**

throttle pull, more control and better throttle response and power at low rpm. Once we fix the rear brake there is almost no stalling problem. I've been running 32:1 Golden Spectro with a 160 Main jet and the needle in the middle position. Just a little detonation under heavy load.

Ignition switch and wiring: You can take the switch off and pull out all the unnecessary wiring loom. I elected not to since it's a big hassle, only saves about 4 pounds and besides, I have to put this thing back together and give it back pretty soon. Amount removable: about 4 pounds. Incidentally, if you pull off any of the electrical boxes your lights will no longer be rectified or regulated and they will burn out.

Headlight: If you don't need one, by all means remove it. While you're at it, you can pull the switches on the left bar and a lot of the wiring lying around up there. I need a headlight and have so far been too lazy to convert the kill switch into a light

switch, so all remains. Besides, I lost the key a long time ago and need the kill switch to make it go and stop. Most any Japanese bike with a magneto will run if you just unplug the ignition switch (great theft protection).

#### CUBIC DOLLAR ITEMS

Gas tank: it weighs a lot and doesn't hold enough for more than 50 miles. Plastic ones cost money so I don't have one. You can save about 10 pounds here in a big, expensive hurry.

Rear fender: save 6 pounds by installing a Preston Petty Integral Taillight rear fender and gain much prestige. Lose \$19.95. I used the stock fender and made a taillight which I will describe shortly. (It looks terrible.)

Seat: save about 5 pounds by installing an MX seat and gain in comfort (the stocker is brutal). Lose another \$40 and mouse up brackets to get it on. Mine is stock giving me the advantage of much exercise by standing up on anything but asphalt.

Headlight: replace it with a Preston Petty Headlight Number Plate and save another 5 pounds. Lose \$20 by the time you get all the doo-dads. Mine is stock. I'm very cheap.

Oil tank: get an MX oil tank which will be about 3 pounds lighter than the steel one. But remember, the 400 gobbles oil and will consume the smaller MX tank's supply in about 60 miles. I still think you should remove the pump.

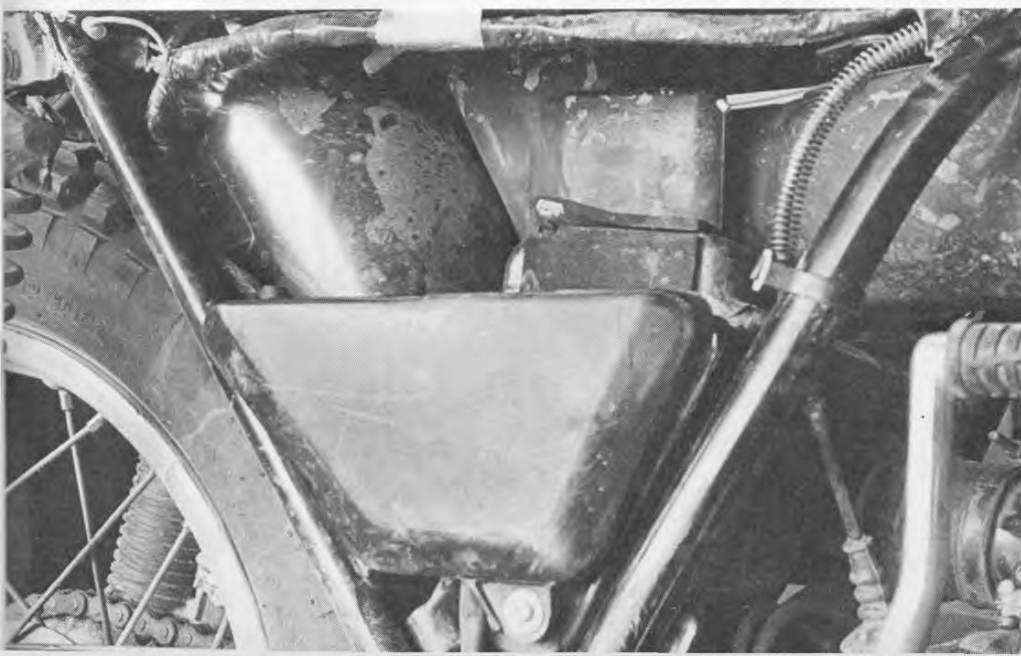
Air box: the stock one is steel, thereby weighing in at about pounds five. Purchase a plastic one and you save four of those and gain waterproofing. Mine is stock and carefully sealed with silicon and duct tape. Cheap.

Pipe: you can no doubt gain power and save a few pounds by installing an accessory pipe. I stayed stock because it's free, doesn't weigh that much, the engine has more power than the frame has handling and the pipe is reasonably quiet.

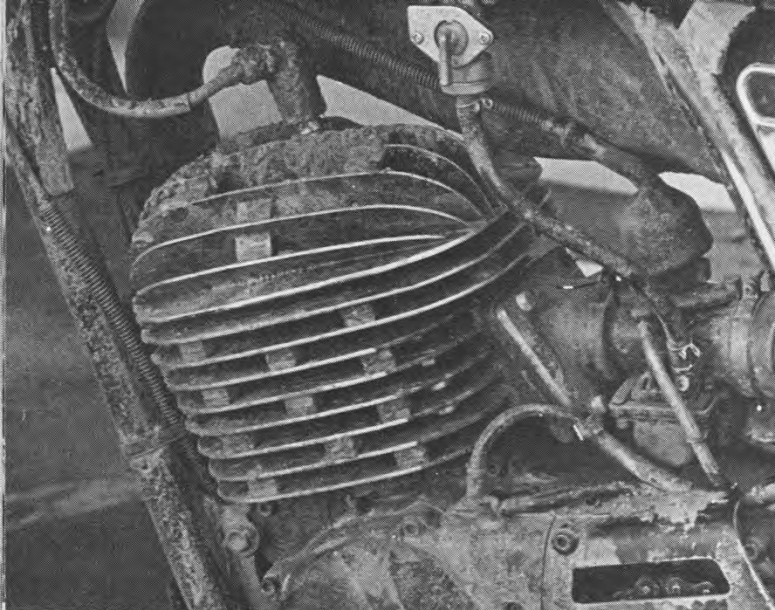
How are we doing now? Take a look.

Off my bike without	
spending anything:	26 pounds
Additional for use of	
cubic dollars:	42
My total:	283 pounds
What can be yours:	241 pounds

Now the DT 400 is at least 25 pounds lighter than it used to be, not







**Plug up the carburetor oil inlet carefully or airleak will make for mysterious inaccurate carburetion.**

much but at least most of it came off the top. You'll be surprised how much difference it makes. Now we're to the part where a little money has to be spent. We'll keep it just as little as possible.

The grips must go and the best buy still is Good Old Dohertys at about a buck ninety-five. Since I planned to be in the mud some and I can swipe them back when I'm finished, I sprung for some American Pros for \$3.95. Grips will change your whole attitude about the motorcycle.

In order to avoid committing almost certain suicide at anything over a casual trail pace you must change the front tire. It is a matter of personal safety. Since it's my neck and I like it a lot, I put a 3.00x21 Metzler up there; it's my personal choice for a wide variety of conditions. A 3.50

**Afer changing the oil and springs on the Thermal-Flos, be sure to mount them backwards for better weight distribution.**

wouldn't hurt. I had an old dead Maico front wheel and swiped it off that, but to buy it will cost \$35-40. Shop around and haggle.

Now that you have a front tire that holds and a bike light enough to turn, you'll find yourself going a bit faster. The suspension will be flaccid. Clear out what's in the front forks and replace with 165cc of Bel-Ray 30, Molly Blue Heavy or Fortner Heavy. If you feel expansive, buy a Number One Products Trickit. They're well worth the money if you have any. Mine went without, and the forks worked okay until the seals went. Lancione seals are superb but Honda seals are cheap and work acceptably. Don't put Yamaha ones in.

And the shocks bottom a lot too. Take them off the bike, remove the springs and nylon pieces and stow them in the corner. Remove the cap on the shaft with a spanner or (shudder!) a drift and hammer. Drain out the oil and clean the shock out with solvent. Put in 150cc of Bel-Ray LT 300 and let it bleed off and drool all

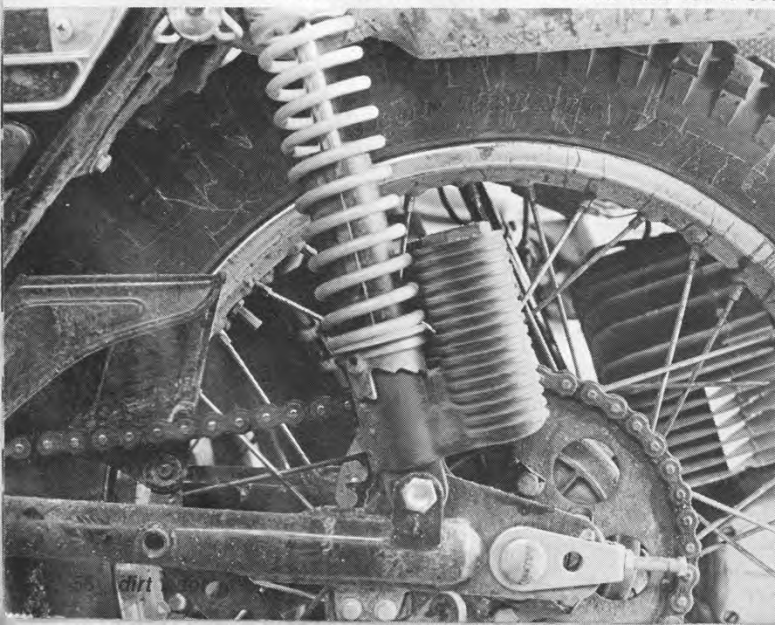


**Turning your feet-type controls upwards wards off the worst of the toe-nibbling rocks. Bash plate would be good, too.**

over as you reassemble. Install either 90- or 100-pound springs depending on your weight. I weigh 155, ride brutally though not necessarily fast, and found 90s to be great for trailing but too soft for high speed bouncing. If you are under 145 you should probably use LT200 in the shocks. But if you're under 145, you're going to have a hard time handling this behemoth. At least your Thermal-Flos will work about 75 percent as well as a Boge, Telesco or Koni.

As mentioned in the recent test of the DT, ground clearance is a serious problem. A bash plate is a good idea just to protect the frame rails. Since mine were all torqued before I thought about a bash plate, I've just left it. Really, I was too cheap; you should get one. Again a Petty product works well. But the frame isn't

**All the accessories that make up a tail-light/turn indicator conversion set. You're putting taillight innards into the indicator.**



the only clearance problem. The pegs are so low that they and your feet will take a horrid beating. I rotated mine up about 45 degrees and the shifter a corresponding amount. Now my feet don't hit too often and the weight distribution (slightly rearward) helps keep the front end lighter. Still, I've cleaned the right peg right off the frame on rocks and mangled the other one seriously. A bash plate would help the very vulnerable welds on the frame.

Bending the rear brake rod effectively reduces the rear brake's incessant locking except when you get it wet. If you ride in dampness, cut three grooves diagonally across the shoes about a half-inch wide and an eighth-inch deep. Much better. In order to get along with the front brake, which also tends towards lockiness, learn to adjust it so that it is just locking up when it pulls against your fingers around the throttle grip. Two fingers on the lever will be more than enough. Oh, and remove that chrome knick-knack which locates the brake cable. It will just get mangled.

I can't decide about the gearing. There's no reason to change it, but there's no reason to leave it the same. Since the oil pump went away, the engine will chug over anything in first gear and about 80% of my trail riding can be done in third gear (about 10-45 mph). But in the dirt you'll just about never use fifth since it will go 65 mph in fourth. The fact that it will pull fifth is nothing more than frightening considering the handling. If you lower the gearing, you'll get to use more gears more often which isn't necessarily an advantage considering the torque the 400 engine has. I've left it stock 'cause that's cheaper. I like to think I'm mature enough not to use fifth in the dirt.

## MAKING A TAILLIGHT

One Saturday afternoon when I was forced to admit that it was the DT or nothing the next day, I went out in the garage to check it out. After lubing the chain, naturally there was nothing else left to do so I set about making a taillight out of a turn indicator (a pet idea for some time). It works, isn't too difficult to construct, costs the price of a 12-volt bulb, is Mickey Mouse and looks ugly. As far as I know it's street legal.

Take one each front turn indicator and your old taillight, both of which should already be lying in the corner anyway. The only thing keeping the turn indicator from being a taillight is that it is setup for a single filament bulb. So, pull the guts out of the taillight and put them into the turn indicator. In order to get the contacts from the taillight into the turn indicator you will have to file two locating tabs slightly. When you try it you will understand. Keep it a snug fit, and the contact plate will stay in place. The wires (blue and yellow) from the taillight will all slip in where there had only been one before, but very tightly.

Mickey Mouse part: I couldn't find any 6-volt, dual filament, with locating prongs at the same height bulbs. The one in the taillight won't fit. So, I got a 12-volt bulb with one filament and slipped it in. It touches both contacts so that when the lights are on it glows somewhat weakly and then gets brighter when you add the brake current. Putting a 12-volt bulb in a 6-volt system is an old six-days trick for longevity.

I mounted mine where the wires used to come through the fender, using the existing grommet, two big washers from the rear turn indicators, a ground wire from one of the in-

dicators, a lock nut I found under the work bench and a bunch of gorilla snot. The wires now come through where the top mount for the old taillight was. It looks kind of like a lighthouse, all my friends laugh, but it cost 39 cents, weighs 3½ pounds less, and doesn't hook my leg every time I try to get on the bike. Oh, and put one of the red lenses from a rear taillight on to be legal.

The speedo clapped out at 454 back in January out on the California City Qualifier course, and it's been a bunch more miles since then. Of course, the motor just keeps plugging, in fact seems to get better. It actually wheelies now in third gear. The 400 motor is definitely the undisputed champion of Japanese grunt enduro bikes.

What's been done to the bike didn't make it an enduro champion by any means. I set out to make the thing predictable enough so that I wouldn't hurt myself riding it. Since I got the Metzler on the front, I've only bailed off once, and I would have to credit that one at least 50 percent to over-indulgence. There are certain things I've learned that I just shouldn't try to do on the bike and now that those are found out, I find it an efficient and safe mount. The way I attempt to explain it to doubtful friends is that you always know what it will do next, though it may not be good.

Gripe, gripe, gripe all the time. Straightforward now: stock, a DT 400 just isn't too much fun to ride in the dirt, but with a little work it can be an amazingly reliable, impressively powerful, adequate handling enduro scooter. Better than I'd like to admit I guess. ●

