THE 400-4 FILES

Volume 2, Issue 1 March 2007

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If anyone knows anything about this little beauty, please get in touch with me at:

rdenoon@mts.net

Editor's Comments

Wow! I stated in the first issue that the continuation of the newsletter would depend on the response that greeted it's introduction. Well little did I know that it would be 2 years before Issue 2 would finally be released. That delay isn't a reflection on the response I received, I currently have over 100 names on my newsletter email list, but rather it's a reflection of my lack of time and energy to commit to the project. To be honest, I had the basic outline of this issue layed out almost as soon as the first issue was completed. At the time I had seen pictures of a 400 being built that simply blew me away with its build quality. A bit of research led me to its owner, Kevin Bidgood.
Right then and there, I knew that this was the bike that I wanted to showcase in the next edition of the newsletter. I'm sure you will agree that Kevin has set a new target for us all to shoot for when putting together our project bikes.

So here is where I apologize for the lack of discipline in regards to getting out the newsletter. At the time I was working on the first Issue, I was doing some work that allowed me great freedom with my time and getting out a newsletter every 3 or 4 months seemed like an easy thing to do. But life is seldom predictable, and while I still have more flexibility than the average person in regards to work hours, I have had to devote much more time to "making a living" than I did a couple of years ago.

So, from here on in I won't be making any predictions for release dates on future newsletters, but I promise to try and make the timing better than one every two years.

There is good news going forward though. I have a couple of more bikes lined up for future issues that are equally as interesting as what has been featured so far, and each one reflects the individual dreams and tastes of their owners.

Anyone who has ideas for articles for future issues is welcomed to contact me at rdenoon@mts.net

Good riding,

Rick Denoon

News

Yahoo Forum under new management

Rick Denoon

In August of 2006 Aaron Heinrich approached a couple of us on the forum member list and asked if we would be interested in taking over the administration of the forum. Nobody was exactly jumping at the chance, but I figured, "what the hey" and agreed to take it over. So far, so good. Other than trying to keep the "biker dating" posts off the board, (pretty much impossible), there isn't really too much work involved.

If anyone isn't already signed up, go to http://autos.groups.yahoo.com/group/cb400f/ and become a member. Good group of guys, lots of good advice, minimal flaming.

New 400F Online Store

Rick Denoon

Most of you are probably familiar with KSM Enterprises and Eaglescall. Well Kevin Mullin has launched a new website, www.400fourstore.com to help you trick out your 400F with a wide range of beautifully constructed parts ranging from CNC machined and anodized tappet covers to those hard to find replacement side covers, and lift handles. Kevin also handles a good range of performance parts for the 400 from Yoshimura, MC-Again, and Keihin.

Check out the store, Kevin goes to a lot of effort and expense to bring these items to market. It's nice to support someone in the 400F community.

One subject that seems to rear it's ugly head from time to time is the question of diagnosing problems with the starter, starter switch, and headlight switch. It is not easy to follow the tortured route that the power takes en route from the battery to the switches and ultimately the headlight and starter. I wrote this and posted it to the forum in 2005, and have updated it for inclusion in the newsletter.

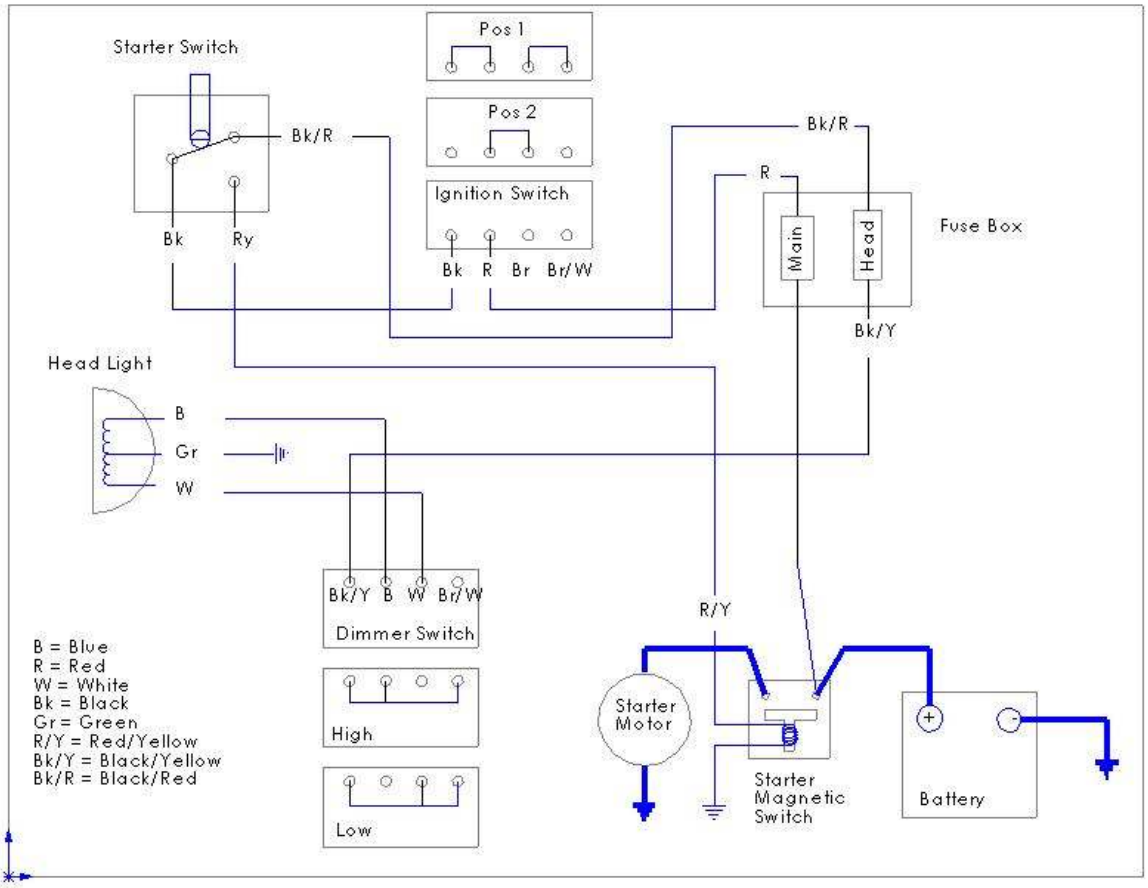
Rick Denoon

Standard Preamble; I am not an Electrical Engineer, the wire colors are taken out of a British Manual, yours may be different, do not drink battery acid, for off-road use only, your mileage may vary.

Ok, presented is a stripped down connection diagram dealing with the starter/headlight circuit, and an explanation of the events that happen when you turn on the key and press the starter button.

Looking at the connection diagram;

1. With the ignition switch in the off position, current is free to flow from the battery to the positive side of the starter magnetic switch, and on thru the main fuse to the red terminal of the ignition switch. Since neither of these circuits are closed, there is nowhere for the power to go. End of story.
2. Turning the key to the ON position, or Position 1, the Red ignition wire now connects to the Black, and the Brown connects to the Brown/White wires. (We won't worry about the Brown and Brown/White wire) The Black wire feeds the black terminal of the starter switch, and the normally closed portion of the switch passes power thru and out the Black/Red wire to the main headlight fuse. The power exits the headlight fuse (assuming it is good) thru the Black/Yellow wire, which then feeds the Dimmer switch. Depending on if the dimmer is in the High or Low position, the power continues out of the switch thru the Blue or White wire, to the headlight. Assuming the bulb is good, the power lights the headlight, and passes to ground.
3. When the starter switch is pressed, the normally closed part of the switch that allows power to flow to the fusebox/dimmer switch/headlight, is opened, and the switch reroutes the power thru the Red/Yellow wire to a small coil in the magnetic starter switch. The coil then completes a circuit in the switch that routes high



amperage power to the starter motor.
So, pushing the starter button shuts off power to the headlight, and routes the power to fire the starter coil which in turn sends power to the starter motor. Once the starter button is released, the power to the starter magnetic switch is interrupted, the coil releases, power to the starter motor is gone, and power to the headlight circuit is restored.

TESTING

OK, so your headlight doesn't work, how do you go about finding the problem. Some basic tools are needed, and a systematic approach to isolating the problem section of the circuit is required. These same principals apply to diagnosing any electrical problem.

A test light looks like a pointy screwdriver with a wire coming out of one end, and has a light in the handle. Get one!
An OHM meter measures resistance in a circuit. Really nice little digital ones go on sale for about $10 here in Canada. Get one! Most OHM meters will also double as a test light because they can be configured to read voltage also. But a test light is handier, and if you mistakenly route voltage thru the meter in the OHM setting, you can fry a fuse in the meter.

Use the OHM meter to check the fuse, and the headlight bulb. Turn the OHM meter on and touch the two leads together. You get a reading, or a beep on some.
Remove the fuse from its holder. Touch one lead to one side of the fuse, the other lead to the other side. If the fuse is good, you get a reading. If it is bad, you get no reading. Disconnect the headlight leads. Touch one lead to a terminal on the headlight, and one to the ground lead terminal. If the bulb is good, you get a reading. Check the other terminal. One is for High beam, one is for Low.

Take your test light. Clip the wire to a ground point on the engine, or to the negative battery terminal. Touch the pointy end to the positive battery terminal. The light should go on.

Now turn on the ignition switch and start testing the circuits in the following order. Every time you touch the tester to the wire/terminal/connector, the light should go on. If it doesn't, you know that there is a problem somewhere between the point you last got power, and the spot you aren't getting power

1. Positive side of magnetic starter switch
2. Power side of main fuse
3. Other side of main fuse (if there is power at one side and not the other, bad fuse)
4. Red wire on ignition switch
5. Turn the ignition switch on, and touch the black terminal/wire
6. Black terminal/wire at starter switch
7. Black/Red wire at starter switch
8. Black/Red wire at headlight fuse
9. Black/Yellow wire at headlight fuse
10. Black/Yellow wire at dimmer switch
11. Blue wire at dimmer switch for High beam
12. White wire at dimmer switch for Low beam
13. Blue wire at headlight for High beam
14. White wire at headlight for Low beam

If you find a problem, you can try bypassing the bad section with a jumper wire. If this works, then you don't have much choice but to tear apart the harness/switch where the problem is and fix it. The good news is that you will have isolated the problem to one part of the system, and you don't need to tear apart the whole bike to fix it.

South African Stunner!

Reading down the list of engine mods that Kevin Bidgood provided would probably be enough to induce the average person into a catatonic haze. To a rabid CB400F enthusiast, it's enough to induce an extreme case of jealous envy. To an oddball like myself, it fires up my creative juices and starts me wondering; "Just what kind of guy has access to this kind of technology?"

Kevin got his start in motorcycling around 1974/5, his father used to ride trials bikes when he was in the British army.
Some of the bikes owned along the way include a KTM 50cc that was his first bike, various Yamaha RD's 125, and 350cc. He purchased his first CB400F in 75, and still owns the same one today. Kawasaki KDX250, Z750 and a 73 CB750 with a Yoshimura motor, this was his first foray into performance bike building. An RVF400 NC35 and now a VFR750R RC30 along with his various 400's reside in the shop. Kevin's involvement in the bike industry began around 1980 and evolved into the present, where

ENGINE MODS

Yoshimura 56mm (492cc) 10.5-1 balanced 2 ring slipper pistons
Spun cast iron liners (meanite), modified block to fit
Enlarged crankcase to accept new liner size
Ported cylinder head, std. size valves,
Carb inlets ported to match Keihin CR carbs
Copper head gasket
Yoshimura Ontario race camshaft, modified rocker cover to fit
Machined cam sprocket, to degree cam
Rocker springs removed and machined spacers used to line rocker to valve tip
S&W race valve springs with TTR titanium retainers
RSC Honda race balanced con rods with 15mm small ends
Balanced crankshaft
Yoshimura heavy duty cam chain
TTR lower tensioner arm, (cam chain)
Under cut standard 6 speed gearbox
Bushed selector forks
Barnett clutch plates and springs,(a dry clutch unit is under development)
Keihin CR26mm smooth bore carbs
Pingel fuel tap and fuel line
Yoshimura 4-1 exhaust system
Titanium fasteners on crankcases and side covers
Modified sprocket cover
Up rated oil pump, with take off for 7 row curved Plot oil cooler
TLML anti friction coating is used on the complete gearbox, main and big end bearings and the piston skirts
Piston crowns are ceramic coated
Crankcases, block and cylinder head have been glass bead blasted
Rocker, clutch, sump and sprocket covers are painted a matt bronze colour

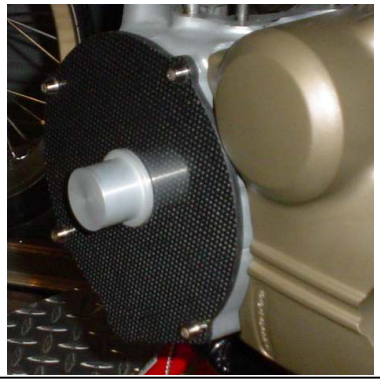
besides building a range of performance parts for the 400F and RC30, he spends the better part of the day designing and manufacturing billet sport bike parts, mostly for Ducati's. Although, "I am ever expanding the classic range of parts mostly 350/400 four based, I am also starting to get a lot of requests for the larger Honda fours, so that will get bigger I am sure. CR750 parts are on my list to do."

You can view more of Kevin's offerings at www.ttr400.com. You can order the full range of parts from Kevin Mullen at Eaglescall.

Kevin lives in South Africa, and riding motorcycles there has its advantages and disadvantages. They have great weather, decent roads and some great places to go riding, and not too much aggravation from the traffic police. "On the down side the drivers here are some of the worst I have come across, but even worse are the mini bus taxi's. They have there own set of traffic rules..!!" Kevin didn't expand on this, and frankly I was afraid to ask!

There is a lively street bike scene dominated by the sport bike crowd, so the classic scene is a fairly small bunch of enthusiasts. "I am mostly involved in the racing scene. I have just recently joined the historic motorcycle group, who have regular track type parade/race events. Jim

If a picture tells a thousand words, then I'll shut my trap and let these pictures do the talking.



Keihin CR Smoothbores look right at home

Details, details, details

Obviously Kevin didn't follow my # 1 Rule of Bike Building "Start with the best bike you can"

We all have the skill and patients to turn the basket case on the left into this,,, don't we?

(Sounds of me sobbing in the background)

Redman is the honorary president of the club and is a regular rider at the events. We have many international class race tracks all over the country, Kyalami and Phakisa are the most well known as these are GP type tracks."

When queried about his affinity for the 400F, Kevin replied, "Well the little Honda four has always been there and at the moment they seem to re-produce in my shop. I have a few 400 projects on the go, a full rebuild of my JPS 466cc café (this is my original CB400F bought in 75 and shipped to SA) this one I plan to use on the road. I am also busy with a back to OE restoration of a 1975 varnish blue model, a restoration of my VFR750R RC30 and a Jim Redman RC173 350 four replica. I have to finish my buddy's CB1100R 82 model for classic racing and he has also asked me to build him a CR750 replica, the whole deal, no expense spared."

The idea to build the Yoshimura racer came when Kevin decided that with all the parts that had collected over the years, he thought it was time to put them to good use. Plus, having raced an RVF400 in regional racing, and being a bit older now and no longer able to give the youngsters a good go, he thought he still had to have a race bike to do his thing. "If you have ever been to a track day you will know what I mean. I spend a lot of time at the tracks, as I am a technical consultant for the regional and national motorcycle racing countrywide."

The whole project took about 5 years time to complete, and devoured many hours of work in the shop. "Along the way I developed and manufactured all the parts, as I couldn't find any to buy, so this is how the range of 350/400 products came about."

Now that the bike is complete Kevin plans to use the bike to do some track days and the odd classic race meet. "Plus with the historic club I hope to do the track parade/race events, what is nice is that I can get it on the track against a lot bigger and more powerful machines to really see how it performs."

Riding impressions so far? "I still have to dyno the bike and set the jetting, as the CR's are set a bit rich for my altitude. I have a practice event on the 20th January so I can get it dialed in, and hopefully get to ride in an international classic event in the beginning of February. First impressions so far are it feels very strong and revs very clean."

All in all, a simply stunning display of talent, dedication, and attention to detail. We can look forward to seeing more from Kevin in the future, as he currently has many more projects on the go. It surely won't be the last we hear from him.

Check out Kevin's website at WWW.TTR400.COM and Kevin Mullin's WWW.400FOURSTORE.COM to purchase goods in North America.

Other CNC machined parts:

-Front motor mounts

-Set of 8 tappet covers

-Set of 4 rocker shaft bolts

-Race oil filler cap

-Race oil drain plug

-Blanking plug to replace kick-starter shaft

-Blanking plug to replace rev-counter cable

-Ignition cover

-Generator cover, carbon and alloy

-Top triple tree nut

-Top triple tree bearing retainer cap

-Oil filter housing with feed from oil cooler

-Oil cooler frame mount bracket

-4 exhaust clamps

-Stainless steel exhaust studs

-Special steering damper bracket

-Spring pre-load adjuster caps

-Rev counter mount bracket

-Special rear lower motor mount bolt (EN19 steel)

-Rear brake torque arm

-Rear sprocket drive pins

-Rear wheel axle, spacers and chain adjusters

-Special 20mm front wheel axle

-Fuel tank mount brackets

-All Allen cap screws are machined to a taper or waisted head style

Last issue we looked at the theoretic beginnings of building a frame. Doing some basic research, and some basic design. This month we'll look at equipping the shop, and getting started on a frame jig.

Certainly the most expensive piece of equipment you will need to own, or have access to is a lathe. It turns some of the harder aspects of construction into child's' play. You will use it to turn out an endless supply of spacers, short sections of tubes, threaded inserts, bearing races, shouldered nuts and bolts, etc. etc.. It doesn't need to be a big one, as most of the parts will be quite small, but the bigger you can afford, and /or have room for, the more work, and the better quality work you can do.

I chose a 3 in 1 lathe/mill/drill from www.Shoptask.com . The quality as delivered leaves a bit to be desired, but after some set up, tightening of bolts, and getting used to it's inherent limitations, it is quite amazing what you can do on it. There are similar machines from other companies, but what sold me on this one was that it came ready to be converted to CNC.
I bought mine in 2000, and since that time there have been some substantial changes to the unit that addresses some of the limitations of my machine. The new models offers vertical movement of the mill head that really increases its work capacity, and cuts down on set up time. Of course the price has gone up accordingly. Knowing what I know now, if I was doing it over again I would look real hard at a separate lathe, and separate milling machine. Performing both operations on one machine means that you are constantly switching back and forth between having the lathe tool post, lathe chuck, and tail stock installed on the machine, and then removing all three and installing the milling vise to secure parts for milling. Then it seems like Murphy's law always applies, and however you leave the machine set up is always wrong for the next operation to be done later in the day. But, in it's favor, my 3 in 1 fits into my 10' x 13' shop and takes up little room in the process. Plus, if you want CNC capability, you only need 3 sets of controllers and motors instead of 5 sets with separate machines. A savings of around $500-$800.

The latest Model from Shoptask, the Eldorado Bridgemill. This one is fully set up with 3 axis CNC drives, and a Digital Readout. Say good-bye to about $8000 to have this sitting in the shop. You can save money by assembling and building the CNC system yourself, and the DRO is not required. Still, plan on $4k - $5K with tooling.

You are going to require a way of notching tubing. You can purchase a tube notcher for use with a hand drill, or drill press, from www.Protools.com or www.trick-tools.com, but I built one starting with the rotating base from a vice. I can install this onto my lathe/mill, and notch tubing very accurately in two different planes depending on if I put the cutter into the lathe chuck, or into the mill head. This makes cutting mirror image tubes much easier, and helps to ensure that the frame tubes I cut match my design model as close as possible.

Welding

You are also going to need a way to weld everything together, and there are really three choices; Brazing, TIG, and MIG.

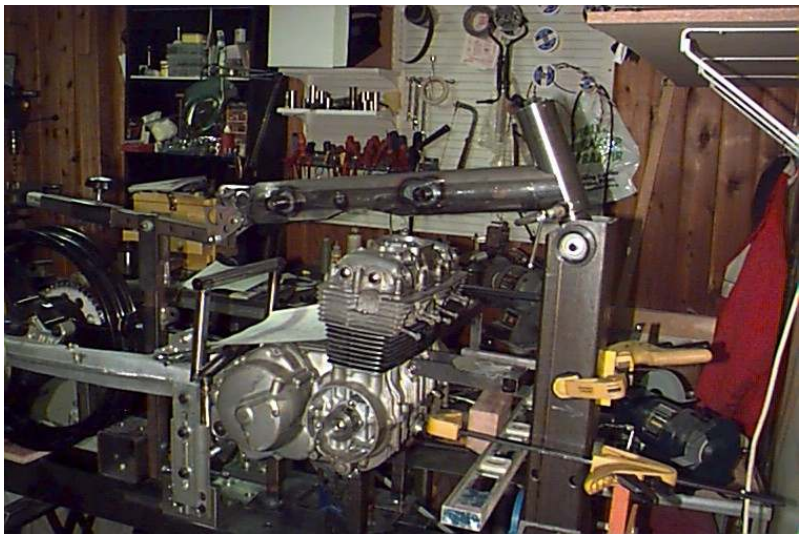
Brazing is by far the cheapest method, both is term of equipment costs and consumables. This is an excerpt from the Eurospares website on brazing;
"Braze welding is much easier on the tubing since you don't get over a dull cherry red temperature. The drawback is the bronze contracts more as it cools, so you have to work out your welding sequence. When I can control my impatience to weld the whole thing up NOW, I try to do a bunch of little tacks, moving symmetrically around the frame, and then go back and do .5 to 1.0 " sections of bead in a similar pattern. Let the frame cool a bit between beads and things will hold their shape really well. Another nice thing about the brazing is you can do a reliable visual inspection of the joint. If too cold, the bronze won't "tin" the metal ahead of the fillet, and if too hot it flows out like water."
The oxy-acetylene torch has been around since the dawn of time, and we now tend to think of it as a low-tech method of joining metal. But the fact is that it is an extremely versatile and reliable technique for joining metal, and there are many airplanes still flying today that were constructed back in the 40's and 50's with this method.
If you are only going to own one piece of weld equipment and you want to tackle materials other than mild steel, then TIG welding is the way to go. With an AC/DC Tig welder you can weld Mild steel, Stainless steel, Aluminum, Titanium, Copper, Brass, and the list goes on. Sounds great doesn't it? But Tig welding is not without it's downsides. IT IS

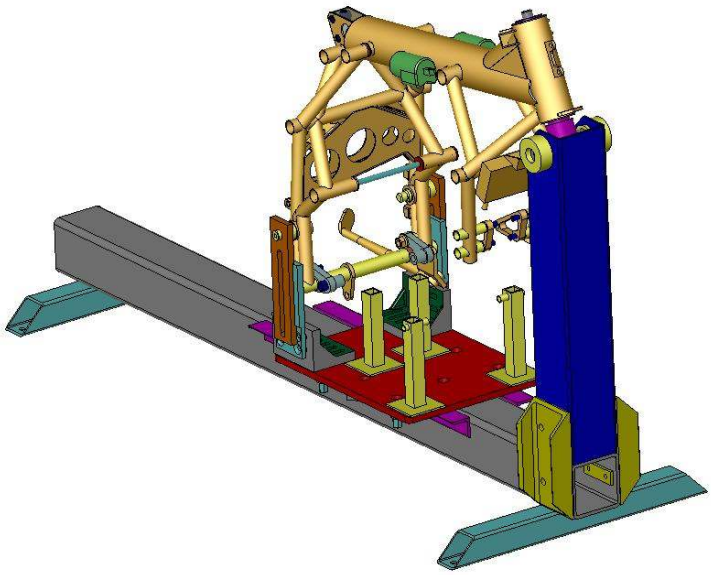
Almost impossible on a manual machine, cutting a large radius arc into the main backbone for carb clearance is a snap with the CNC control.

EXPENSIVE. If you only want to weld Mild steel, then some of the new DC only machines can be bought for under $1000.00 US or less. These are very compact (about the size of a lunch box) and light, but again you are limited to Mild steel.
When I was choosing a Tig welder I ended up buying a Lincoln PRO 175. This is a Square Wave welder with an 8 – 175 Amp range, that is good for materials ranging from 0.030" – ¼" thick. Although the PRO 175 is still available, there is a newer version called the Precision 185 that offers more adjustment and control over both the Wave pulse, and the gas flow.
The process itself is slow and expensive. The weld speed is typically in the 2 – 5 inch per minute range, and you are using argon gas not only during the weld process, but even after you stop! Tig welders use a "postflow" that keeps the argon gas flowing after the arc stops to shield the still molten material until it cools down.
Just to give you an idea, I have had a MIG welder for about 10 years that I have used to build a trailer, portable sign, shelving, gusset a bike frame, etc, and in that time I have gone thru about 4 small tanks of BlueShield weld gas. That same size tank of argon lasts about 3 or 4 days of working on a project like a bike frame. At around $45US a fill, I spent almost $350US learning, practicing, and building my first frame. But if you have spent much time arc or mig welding, your first time on a tig welder will seem like a

revelation. The control over the weld puddle is amazing, you can hold the puddle in one spot indefinitely, and there is no smoke or splatter if the parts are properly cleaned.

The Eurospares web site recommends avoiding MIG welding for anything but building trailers, and this is true to a point. It is easy to be fooled into buying a cheap mig welder, but if you want to weld material down to 0.030" range you need one that is microprocessor controlled. This will set you back somewhere in the $1800 - $2500 US mark, the same or even a bit more than the TIG welder. The long-term advantage is they are much easier to learn on, cheaper to operate, and faster to weld with. Weld rates up to 24 inches per minute would be typical.
Ideally your shop would be equipped with all 3 sets of equipment. It is much easier to tack parts together with the mig welder, you can hold the part in one hand, point the gun and pull the trigger with the other. Once the parts are tacked, you can wire brush them clean, and then finish them with the tig welder. The tig process often requires some filler, even on a tack weld, and that dictates both hands are already busy holding the torch and filler rod, meaning that the part must be held in position by some other means. The gas welder is nice to have, as it is very versatile, and can be used to braze, cut, and heat parts to be bent. Sometimes a part that has warped or moved from the weld process can be heated and straightened with the gas torch, saving a lot of time and headache.



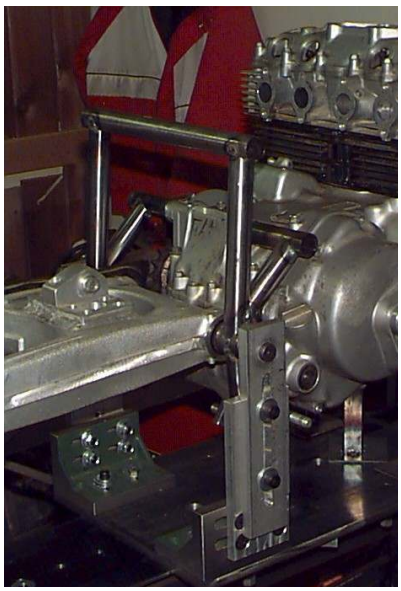


Frame Jig

I designed and built my own frame jig before starting the construction of the frame.
The steering head angle is adjustable, as is the swingarm pivot location in both the vertical and horizontal directions. The section of the jig that positions the swingarm pivot slides back and forth on the lower beam on a set of 4 adjustable bearings. Once the horizontal position is determined, it can be secured in place with a set of locks. The vertical positioning is handled with a set of machined aluminum plates attached to the sliding section with a set of machinists' angle plates.

These are cast steel plates that are precision ground to be flat and at 90 degree angles within +-0.0005 inch. The upper plates were squared and had the pivot holes bored while being clamped together in a vice, so once the jig is leveled during setup, the pivot location can be measured, a straight edge laid on top of the plates, and a machinist level used to ensure the swingarm pivot is located accurately and evenly.

Next Issue – The easy part, building the frame

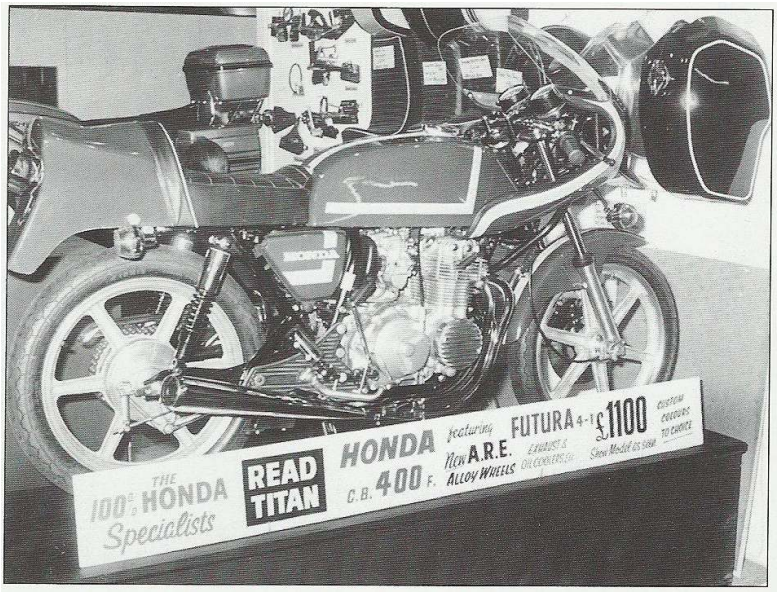


CB400F Specials of the day

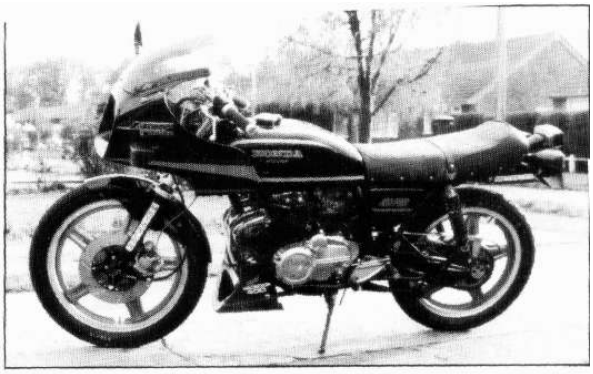
Undoubtedly the most famous 400F special of its day was the Ontario Moto Tech race bike, piloted to numerous class and championship wins. "Yoshima's Rocket" weighed in under 300 lbs. and was good for 135 mph top speeds.

As famous as that bike was, it can certainly be argued that the British won the specials race hands down if you count the shear volume of companies that tried their hand at modifying and racing our favorite Honda four.

What follows is a collection of specials from the 70's and 80's that I have collected over the years. Maybe they'll bring back some memories, or provide some inspiration to a budding builder.



Read Titan were better known for their work on British bikes, but by the mid 70's were applying their touch to Hondas of all sizes, including our beloved 400-4.



I know my place

Thanks for a great mag and especially for the 'Not' Readers Specials feature in the Feb' ish. Now I know where my 400/4 belongs. Anyway here's a pic to show that mine is better looking than that belonging to Ian Jackson's father. It's fitted with rear sets, JMC swing arm, GPz1100 fairing, GPz550 belly pan, RD250LC master cylinder, Super Dream wheels, brakes & forks, Tomaselli clip-ons, Alfa exhaust, home-made chainguard, CX500 rear indicators, GS750 Marzocchi shocks, fork brace, fibre front mudguard, plastic rear guard. Goodridge hose and lots of shiney stuff.

In 60,000 miles, it's used up one camchain tensioner, one camchain, one primary chain and a set of piston rings. what more do you want?

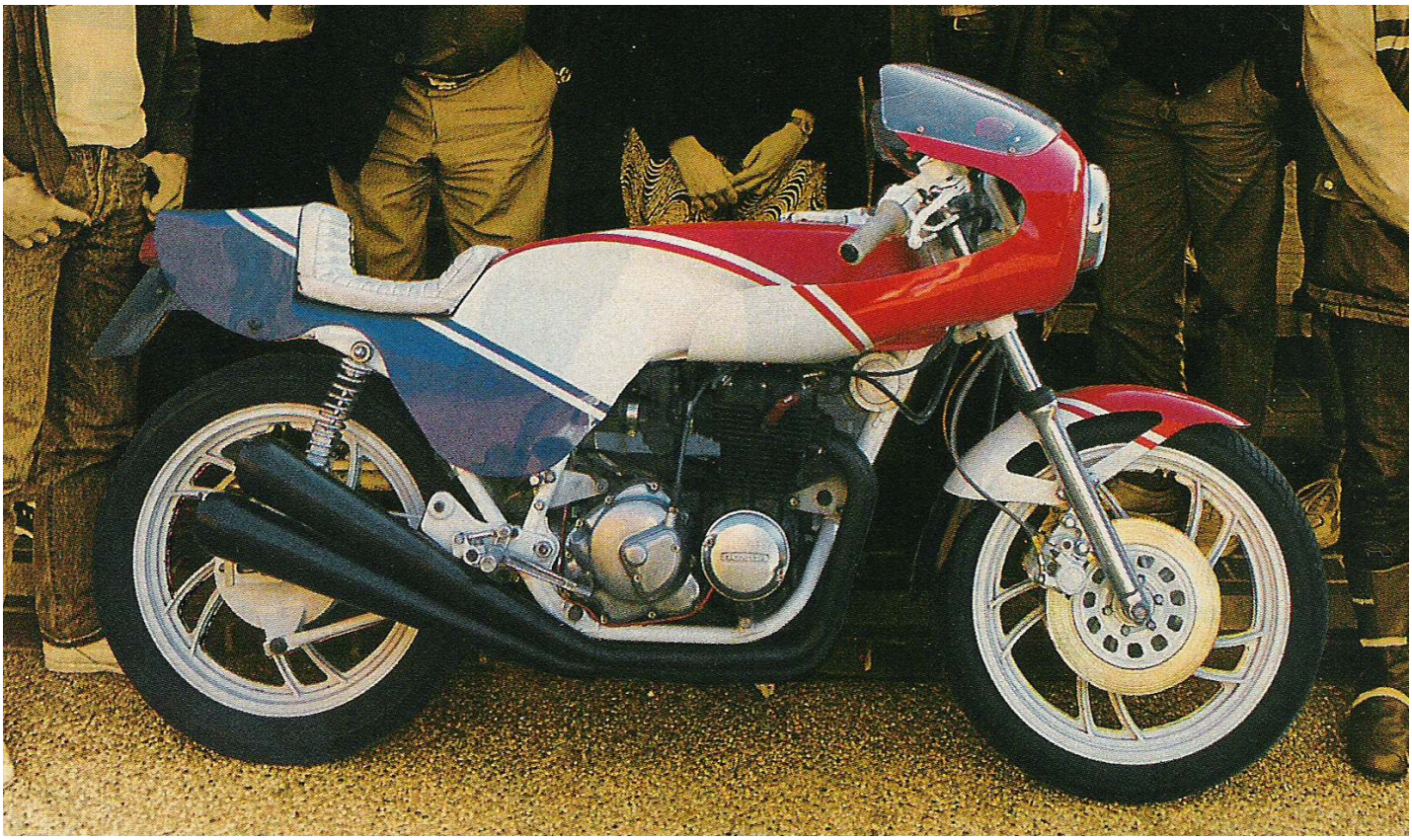
David Broks, Sprowston.

● **Nothing, well, maybe another 20bhp — Ed**

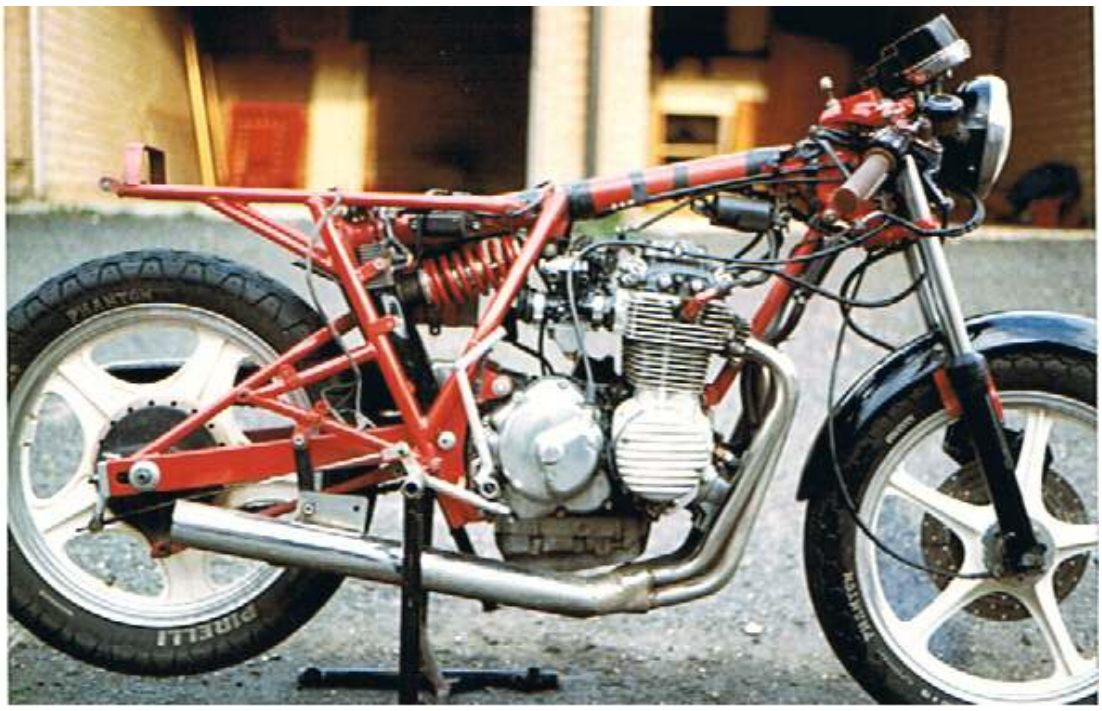
From Performance Bikes Magazine

Chuck Hess has taken Honda's CB400F to the edge of high performance.

Chuck Hess had his 400F included in a "Power of the Pocanos" in the January 92 issue of Motorcyclist. This was a full on race bike with 1mm OB pistons, RSC rods, Falicon Crank, OMT exhaust and oil pump, RSC sand cast 29mm Keihin carbs and ported head. Porting and trick parts courtesy of Eugene Klymenko of Klymenko Flow.



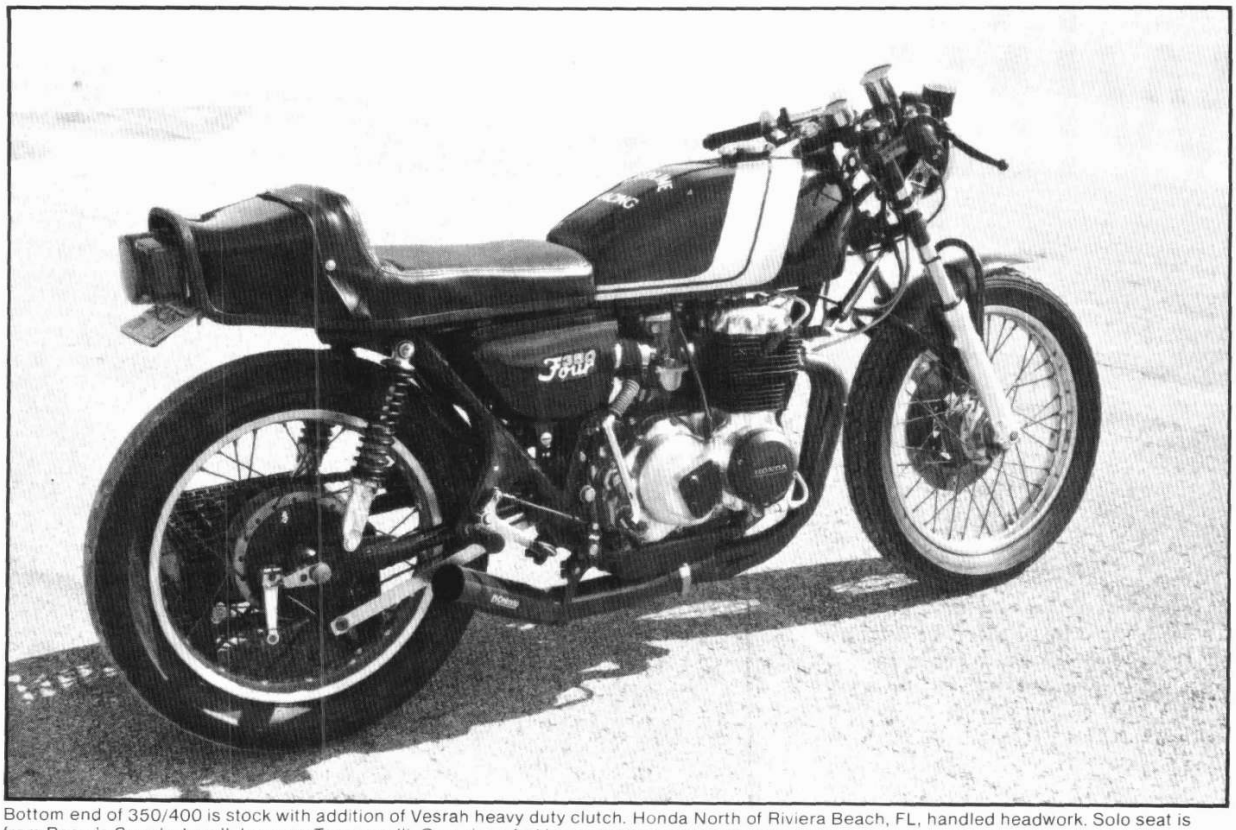
Performance Bike Magazine – December 1986 - This was an ongoing project labeled "Dole Racer". It was supposed to be a quick and dirty (cheap) project that turned into a bit of nightmare for them. Blown tranny, cracked Yosh 460 piston, leaking valves, the bike never ran as well as hoped. RD350LC running gear, CB250RS tank, "custom" tail section, and a trash bin fairing. Originally the whole bike was white, it was horrid. For the last installment they pulled the engine to fix the mechanical problems and painted it black at the same time, along with the red and blue colors. Taste is subjective, but I never liked this one.



Tony Foale had his turn with the 400F also.
This is an actual bike that was owned by a fellow that I have been in touch with on the internet from England. Sadly he no longer owns the bike, or knows of its whereabouts.

Mocheck Harrier 400 had the usual engine upgrades; 458 pistons, cam, electronic ignition, Piper exhaust and open carbs. Chassis mods included Koni shocks, CMA cast wheels, and ART slotted disk. Styling was enhanced with a solo seat, fiberglass front fender, and café fairing. I could be wrong, but I think this was the fairing that Honda offered as an option for the 400F. Somebody please correct me if I am wrong. Torque peak was listed at 32lb/ft @8500rpm and HP hit 40 @9500 rpm and stayed there till 11,000rpm.

STREET SCENE



Bottom end of 350/400 is stock with addition of Vesrah heavy duty clutch. Honda North of Riviera Beach, FL, handled headwork. Solo seat is from Racer's Supply; handlebars are Tommaselli. One piece forkbrace is Ultimate Source product.

Honda 350/400

Kirk Schiner's Street Legal Roadracer

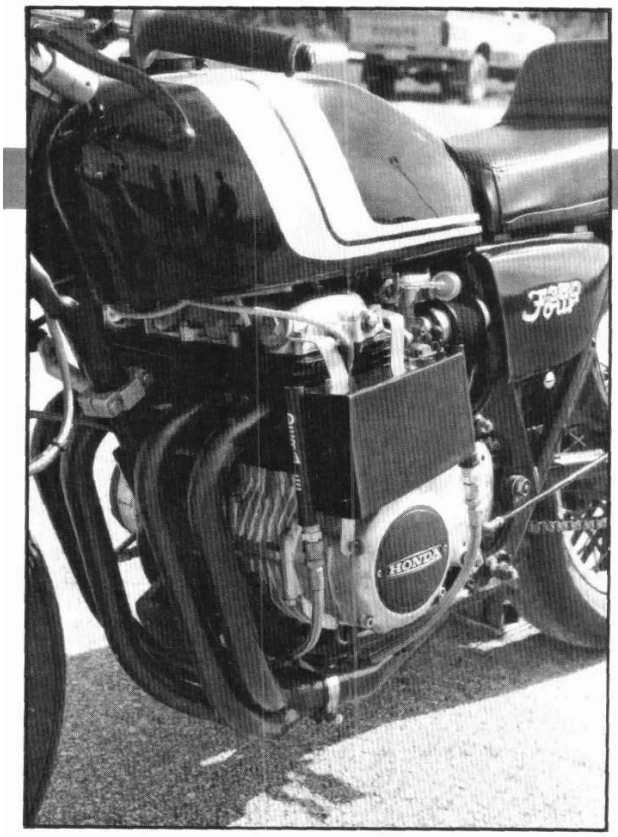
Not one to pass up a good cliche, we'll start this article with, good things come in small packages. Paychecks, Pit Bulls and, in this case, a 400cc Honda cafe bike fabricated and raced by Kirk Schiner of W. Palm Beach, Florida.

Kirk and his buddies had brought one of their shop bikes to the Moroso Motor Sport Race Park for some "informal" drag racing, an event this editor happened to attend while on a working Florida vacation. The bike stood out amongst all the monster Kawi and Suzuki drag race bikes, and being one to gravitate to the unusual, out of place, or just plain weird, the little Honda ended up in the crosshairs of my camera.

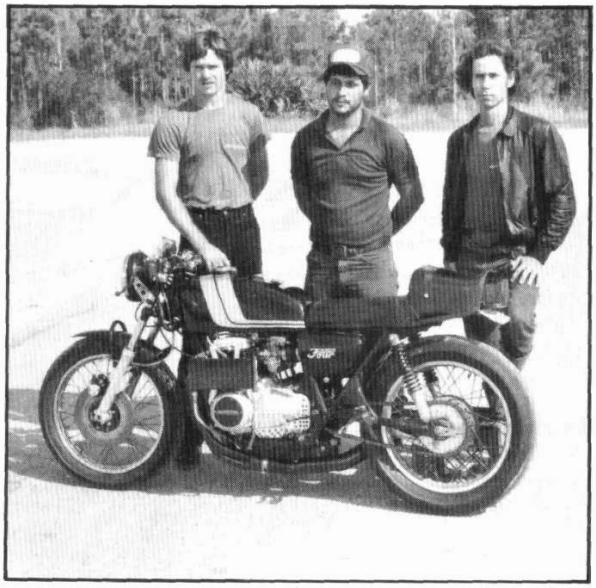
The logo on the side panel identifies the bike as a Honda 350-Four, a 5-speed multi- that preceded the very popular CB400F. In fact, so popular was the 400F "Super Sport" that it was sadly mourned when it passed from production in the late 70s. It's classic four-into-one chromed header system, six gears, sporty but clean styling and high performance potential made it a real winner, so much so that for 1984 Honda has re- introduced the 400F in even sportier garb and hi-tech tricks such as "in-board" ventilated front disc brake. But that's another story.

Kirk's 350 received a 400 engine transplant, and then some cc booster in the form of a Yoshimura 458 cc big bore kit and cam. Tack on a ported and polished head, Ontario hi-perf pipe, 23mm carbs, and Koni shocks for handling improvements, and you have a fast "mini-bike" that is scheduled to run the AAMRR and AMA circuit. Big plans for the Schiner 350/400 include an appearance at the next Daytona Speed Week.

PHOTOS: PAUL GARSON



Kirk Schiner's Honda 350-four took on an engine transplant in the form of 458 cc Yoshed-up 400F powerplant. Note trick arrangement of Derale oil cooler. Cafe racer runs AAMRR and AMA road race circuit.



Redline Cycle Parts sponsors bike anc crew (left to right) Henry Picard, Kirk Schiner (roadracing), and Tim Jones (dragracing/mechanic.) They say special thanks to Manny Vinho of Redline Cycle.

Honda smokes it at W. Palm Beach, FL, Moroso Race Park. Other hi perf components include Superbike Mike ignition, D.I.D. alloy wheels, Michelin tires and Koni shocks.

THE BAD NEWS

Full and detailed accounts of the Dole Racer project are currently under scrutiny by the Fraud Squad and so aren't yet available. Further entries have been suspended pending full exoneration of the Dole Racer Construction Committee. When and if this takes place our accountants will be instructed to provide readers with a full examination of the goings-on.

OUTGOINGS

LC front end	*£80.00*
Yosh 460cc kit	*25.00*
TZ250 replica seat	*5.00*
Dresda swing arm	*15.00*
Brazing	*12.00*
Paint (to date)	*17.90*
Paint stripper	*1.25*
Wet 'n' Dry	*0.80*
Extra wheel spacers	*1.00*
Bolts (for above)	*0.40*
CB72 piston ring set	*9.78*
Camchain	*4.00*
Paper gaskets/oil seal/ damper rubbers	*12.42*
Front mudguard	*8.50*
Copper sheet (head gasket)	*2.00*
CB250RS tank	*8.00*
Sheet steel	*6.00*
Isopon filler	*6.72*
	£215.77

GOOD NEWS

The success of the Dole Racer Committee in selling off redundant bits of the original Honda 400/4 can, at best, be described as . . . unsuccessful.

We managed to get rid of the petrol tank but only because someone wanted the fuel tap, and an owner of a seized 400/4 relieved us of our old barrel and camshaft but only after knocking us down to eight quid. The Cibié headlamp went in a flash for a tenner (wince) and we're now looking for a mug to take the rest of the bits off our hands although we're not optimistic.

INCOME

Petrol tap (and tank)	*1.00*
Camshaft & barrel	*8.00*
Cibié headlamp	*10.00*
Sidepanels	*2.00*
	£21.00

AND NOW OVER TO YOU . . .

Since the start of the Dole Racer last October we're continually being reminded through your letters what an ingenious lot you are.

There we are worrying if readers will be able to do this, or do that, but compared with the activities of you lot, our pathetic ideas pale into insignificance.

Paul Taylor of Wells in Somerset is a prime example. He's built himself a cheap 400/4 racer and monoshocked it using a bog standard LC swing arm and shocker. He used a couple of 100x100mm plates (3mm thick) for the top damper bracket welded to the frame. He suggests keeping the rear frame rail to swing arm distance the same as on the Honda when the bike's at rest.

To fit the swing arm he made up a couple of shouldered phosphor bronze bushes which accommodated the Honda swing arm spindle. If the Honda tank is retained, it's necessary to cut a small portion of the underside to make room for the top of the damper.

Simon Diffy of Haynes, Bedford, who came up with a way of fitting an LC tank to the Honda claims that the LC seat and tail piece also fit straight on with just a little welding.

After fitting a Yoshi kit, a Pat O'Niel gas flow job and a Laser 4-into-1, he managed to blow it up running it in (we know guys who run 'em in like that too — Ed). Since then he's fitted a YPVS belly pan, a cockpit fairing and rearsets.

Merseyside's Fred Derby's mods are more subtle. Making an already light bike even lighter he's fitted plastic or alloy components wherever he can. He's fitted a 250N rear mudguard and chainguard, and alloy front mudguard, front engine plate and wheel rims. Passengers also get a better deal thanks to some alloy brackets welded to the frame.

Fred reckons the bike weighs about 360lb.

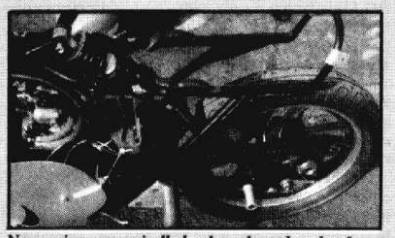
Tony Borg's problems are slightly more interesting than the rest. You see he lives in Malta and since 1974 no bikes over 250cc are allowed to be imported.

Quite how, therefore, he has become the proud owner of a 400/4 we're not sure, but he does say that he gets all his parts mail order from the UK.

He's fitted the almost mandatory Yosh' 460 kit, full race camshaft, 4-into-1 exhaust, and heavy duty clutch springs, timing chain and valve springs. The head is fully ported too. He managed to get a belly pan from M & P and has fitted a 250LC headlamp and a smart half fairing.

Best of all, though, he's done himself a superb red and white spray job. He now yearns after a pair of Dymags and twin front discs. I hope he's got enough stamps.

Not quite a Dole Racer but a cheap racer all the same. Paul Taylor's Honda 400/4 benefits from having a monoshocked rear end plus LC wheels, full fairing . . . oh, doesn't it make you sick.



New swing arm spindle bushes plus a bracket for the top damper mount were all that was required to fit the LC rear end.

Now here's a nice Honda 400/4. The owner, Tony Borg, lives in Malta and has all his parts sent from the UK. The bike's a rarity in Malta — over-250cc bikes have been banned since 1974.

Another Performance Bikes Article