

HawkWorks

The Honda Hawk GT Owners' Network

VOLUME 1, NUMBER 2

USGP ISSUE

July/August 1993

International Hawk Talk

Hong Kong? Germany? London? I knew we had a lot of enthusiastic Hawk owners here in the U.S., but I was really surprised by the number of happy Hawk owners worldwide. In fact, I was surprised by the overwhelming response even here at home. Nearly a dozen Canadian members have come on board over the past few weeks, as well. We are pushing 300 members, as of this writing. Happily, this large, enthusiastic response swamped our spacious office suite (read: closet) and has slightly delayed the production of this newsletter and shirt delivery. But we're catching up and moving forward in leaps and bounds. Here's some now!

Leap number one: This issue and the premier issue were both reproduced on large Xerox-type copy machines, as the small number of copies run did not warrant other methods. But with membership rising, the next issues will be printed on a wet-press, allowing us to produce a much sharper letter, especially in terms of the photos, which now lose a lot of detail in copying. In fact, we have made some photo quality improvements already in this issue!

Bound number one: Buying power. I know of several individuals who would like fairings. The cost can be high, especially street-style fairings with headlights. I have a feeling that if we could order several units, fairings or otherwise, that we may be able to do much better than retail pricing. I'm working on that angle now. I'll keep you informed, but let me know what products you would be interested in.

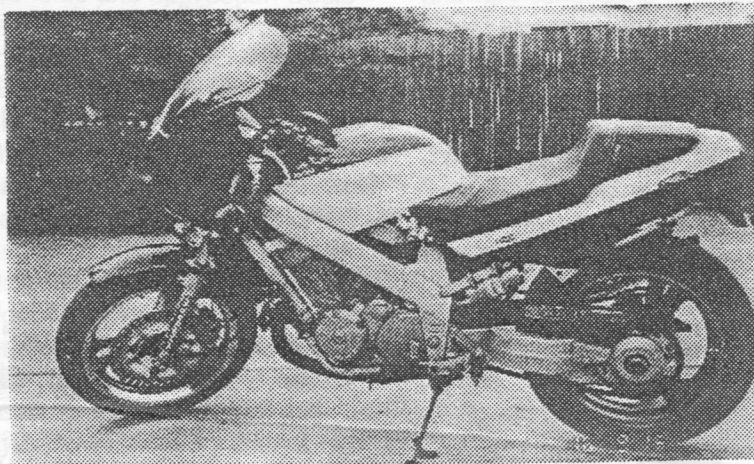
HawkWorks is not affiliated with The American Honda Motor Corp., or any of its subsidiaries. HawkWorks is an independent organization of Honda Hawk NT650 and RC31 owners, riders and racers.

Leap number two: Regional HawkWorks Chapters. Many members have expressed an interest in riding or meeting other Hawk owners in their area. Right now it would be difficult to have one central Hawkfest without each of us going a great distance. But, regional groups may *(continued page2)*

In This Issue

- **International Hawk Talk:** An update of Network news. HawkWorks goes Worldwide! *(Page 1)*
- **Bike of the Month:** Hip Hawk Award for a masterpiece from Modesto. *(Page 1)*
- **Bench Racer's Forum:** Dave's Bogus Adventure-The Continuing saga of the Chicken Hawk Racing Team. *(page 5)*
- **Special Feature:** Batteries Included-A look a very "green" Hawk from the Hollywood Hills. *(Page 2)*
- **SwapShop:** New & Used bikes and parts, for sale or trade. *(page 4)*
- **Performance Plus:** Front end suspension modifications *(insert)*

A well-done Hawk with all the trimmings. This tastfully seasoned RC-31 takes the "Hip-Hawk Award" this time around. Bimonthly winners receive HawkWorks decals and our yearly winner will receive a Hawk photoengraved plaque.



Hip Hopped Hawk

The Hip Hawk Award goes to Tom Tarlow this time around. Tom lives in Modesto, CA and has done some tasty modifications to his 1988 Hawk GT project bike. Of course, the photo does not do justice, but this bike is done in TBR colors, with a nicely integrated Targa fairing. But that's just the surface stuff. The bike has undergone other surgical procedures such as; a TBR 700cc kit, TBR carb kit, changes to gearing, a D&D exhaust, 5 angle valve job and a front wheel widened by Kosman. There are also endless fine style details giving the bike a very slick, factory look. The kind of Hawk Honda would have done well with. Tom plans to be at the USGP in September, so be looking around the Laguna Seca crowd for the guy on this Hot Hawk, wearing the familiar HawkWorks T-shirt and check this bike out in person. Tom will receive a set of HawkWorks decals. Hopefully, they'll become a part of this Hawk GT masterpiece!

Hawk Talk (continued)

be the solution. Again, some feedback please!

Bound number two: BBS. I am researching the details of putting together a computer bulletin board system. This would allow for some real networking! Especially with timely information, those things which would be history by the time the next newsletter came out. This one is going to take some doing, but I'll keep you up to speed.

Leap three: HawkWorks affiliated race teams. Need a reason to go to the track? How about cheering for your fellow club members. Need a part quick for you Hawk racer after that highside on Saturday. Call the other Hawk racing teams. And again, some possible buying power of high-perf. parts. If your team (teams of one are OK!) is into this concept, please contact us before Jan 1, so we can get things rolling.

More leaps and bounds to come! But really, our networking potential is unlimited. If you caught the recent mention of HawkWorks in MotorCyclist, you would know that we were berated for not having included a phone number. It is (201) 285-5355 and there is an answering machine there, if we're not home.

So, as we grow, more opportunities will arise which can be productive for us all. Keep in touch! Let's network!
-ed.

Batteries Included

From a distance, a glance would inform the average on-looker that Ely Schless red motorcycle is actually a perfectly stock Honda Hawk GT. To the learned observer, a second look would likely indicate that perhaps something is slightly suspicious about this Honda. "While approaching for a closer look, you'd likely consider that things are a little strange around the motor compartment."

Something is strange indeed! This Hawk is electric!

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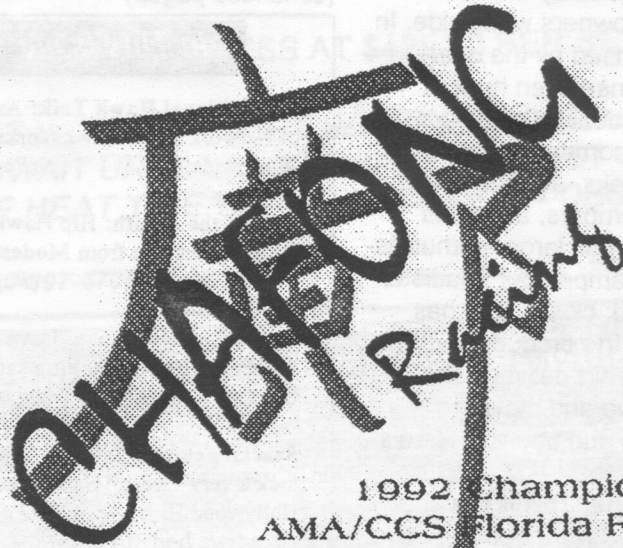
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Ely Schless is the 37 year-old race veteran who has spent the last several years building prototype electrical vehicles. Parked around his North Hollywood design studio are a few completely production-looking cars, except for the fact that their gas engines have been replaced with electrics.

"There have been a lot of people building electric vehicles that end up crazy looking," Schless asserts. "As with the cars we convert, I've kept the Hawk pretty benign. I don't mind acknowledging that Honda's stylists are better than me. I've tried to retain the Hawk's styling points."

This project was built in one week. The bike rolled into his shop on Monday, and on Friday it rolled out as an all-electric vehicle.

(continued on page 3)

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more "SHAWK"

Ely is well qualified for extreme mechanical jobs, especially those that combine mechanical and electrical operations. He's worked within the film and television industry supplying robotics, radio-controlled and computer-controlled gadgetry. "I've motorized everything from the Snuggle Fabric Softener bear to the Parkay tubs. I was also involved with the robotics for the movie "Short Circuit."

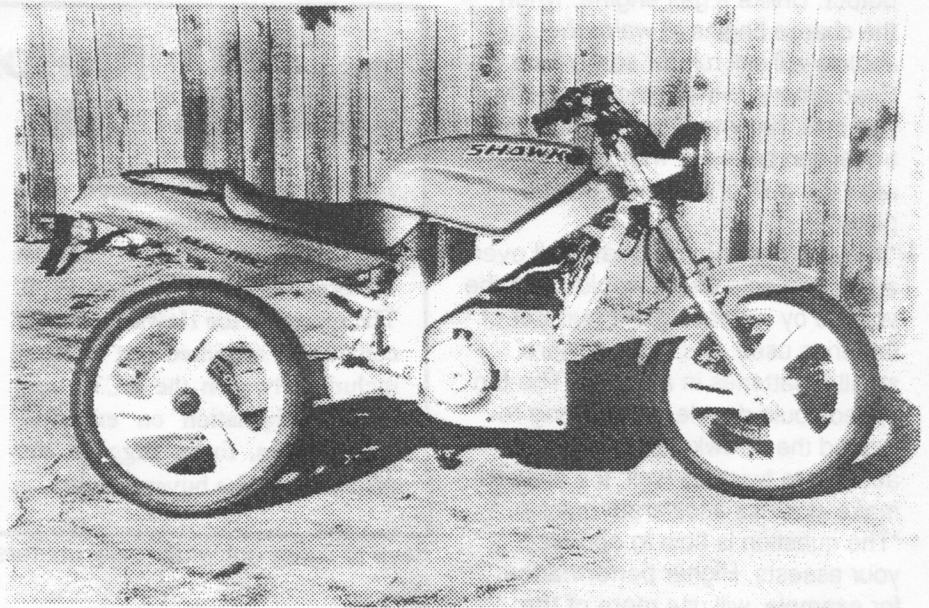
Since the age of 15, Ely has been working with motorcycles. He started road racing in Florida, winning the Florida Open Superbike Championship for two years on a Triumph in 1976 and '77. In 1984 he even managed to qualify and finish the Daytona 200 on that same old British machine. (He qualified 40th and finished 26th.)

After that came his involvement in the infamous "Battle of the Twins". He ran Ducatis and a unique Ducati/Honda hybrid: A Cagiva bottom end with Honda XR600 heads. The pre-electrical Hawk was one of Ely's race bikes.

The Hawk was fully built, reportedly festooned with titanium components, embellished with some hand-built one-offs and seasoned with a little RC-30 bodywork. As Ducatis became faster, Ely's Hawk wasn't able to withstand the stresses associated with competitive power output. After great frustration, he gave up on his Hawk's Duck hunting career.

"But why would anyone essentially emasculate, as it were, a bike that could have been torn down, rebuilt and returned to street use as a respectable exotic ex-racer?" To some, it may seem as some sort of dark insult to the machine that "gave it's life" in the pursuit of victory for it's rider.

Ely is an engineer and machinist. He owns another Hawk GT that is used as a daily commuter. Restoring an old bike to street duty can be a troublesome task, and when your specialty is prototypical electric vehicles, complete innovation is a little more fun. Ely had converted a



What's wrong with this picture? Yes, "Hawk" is spelled wrong. Besides that, it doesn't make that wonderful little V-Twin "Blat-Blat-Blat" sound. Here it is, the Hawk of the future!

Honda Elite scooter to electric power for Honda as a promotional affair years ago, and had since wanted to try it with a full-size motorcycle.

THE MOTOR

The Hawk is built using what Ely deems as "Conventional golfcart technology." Still, there's nothing conventional about the Hawk's concept and mode of execution. Gearing was computed and a motor was chosen.

Though the technology is simple, the components and application would prove foreign to most riders or even to most machinists. Essentially, the Hawk is propelled by a large electric motor. The output characteristics of this motor are determined by the "controller". This component serves as the electrically equivalent to a carburetor. It accumulates throttle-position information from a standard twist grip that is attached to the "throttle potentiometer". Based upon throttle-position information, the controller chops and reconfigures the voltage and provides for the proportional speed control.

Four large batteries provide the stored charge necessary to produce the bike's 20 horsepower. These are 12 volt DC calcium-positive plate or gas recombinant batteries. Ely says. "They're a little beyond the maintenance-free technology. You can position them inverted if you want. They don't have to breathe. You just keep recharging them. They're completely maintenance free. The electric motor and the batteries combined weigh about as much as the stock 650cc V-Twin power plant."

The Hawk is used for local errands and light commuting chores. "It's slow!" assures Ely, "But you can get around without creating any pollution".

"When people realize that a vehicle is electric, immediately they want to compare it with gas vehicles. When building an electric vehicle, there are many accommodations that must be made. For around-town, low mileage applications, this bike is wonderful. It's safe, and ghostly quiet. It's really a different type of solution".

The Hawk will run just under 50 mph for 15 to 20 minutes of rigorous

more "SHAWK"

output. Unlike a gas engine, when the charge begins to wain, the vehicle will still run for some time. Even among the electric autos Ely has built, he notes that surface street travel can be made with ease long after the bulk of the charge is depleted.

"If I were building the Hawk all over again," reflects Ely, "I would raise the voltage by increasing the number of batteries used. I would run more smaller batteries in a series. The top speed sould double. After being re-gearred the Hawk would also accelerate twice as well. It's easy to make electrics accelerate quickly. "The question is how to optimize your assests. Higher performance, for example, will use more of the charge, shortening your range. The better you are at optimizing aspects at the design level, the better electric vehicle you'll have. It's really sobering stuff."

THE CHASSIS

The Hawk GT comes stock with a respectable 4.5-inch rim in back. This part comfortably fits a 160 or 170-size tire. Up front, the stock situation isn't quite as perfect. The wheel is simply too narrow to run truly choice rubber.

For the track, Ely had fitted his Hawk with a three-spoked Italian front wheel that faciilitated top-notch rubber fitment.

"You learn about efficiency when you're dealing with electrics," states Ely. With the power output reduced, there was no longer any call for top-end radial technology for this bike. With the maximum speeds reduced, the stock front rim became overkill. The obvious solution was to narrow the rims, allowing for skinnier, more appropriately sized tire usage. When discussing the motor fitting, Ely noted, "Whenever you undertake a project like this, or any sort, there are usually two or three really important dimensions and a whole lot of marginally significant dimensions. Once you take care of the essentials, the rest is basically instinctive. You



Motorcycle Reports On Your Hawk !!

Ian Smith Information has compiled full motorcycle reports on hundreds of different Motorcycles dating back to 1970. The report on the Hawk currently contains 9 reprinted test articles, including two on the RC31, and useful information on exhausts, tires, shocks, forks, luggage etc. **Plus a used bike buyers guide**

including Hawk prices. The price for the Hawk report is \$17. For further reports, the price is: 2 bikes - \$26, 3 bikes - \$32, 4 bikes - \$36. Please add \$2 for 'Priority' delivery. Send to:- **Ian Smith Information, Dept Hawk, PO Box 5893, Sherman Oaks, CA 91413-5893, or call 818 905 1820.**

have to figure out what really matters first."

Ely illuminates that the electric motor's output shaft is positioned in exactly the same position the gas motor's countershaft had once occupied. All the other critical dimensions were copied from the stock engine case.

The large aluminum members that position the electric motor and cradle the batteries also serve as structural frame members. Remember, the stock Hawk GT uses the engine as a stressed member.

Since this was a racebike, there are still many nice one-off performance chassis parts found throughout the Hawk. A Fox shock replaces the stock part, while a set of one-off magnesium foot-peg brackets position rear-set aluminum footpegs. Equally trick is the custom rear brake-caliper mount and smaller Brembo caliper.

The stock gauges are replaced by a single digital speedometer. This part was originally intended for use on bicycles. It is driven magnetically by a no-friction sensor located on the left side of the front wheel. This part is extremely cost effective compared with the stock gauges. Ely also claims that it's more accurate than the stock speedo.

The under-portion of the fuel tank was removed. Now the tank is nothing more than an aesthetically

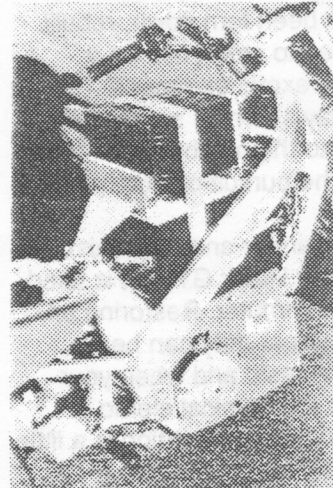
correct battery cover. The Shawks graphics were produced by Ely as well.

RIDING THE SHAWK

The Hawk produced no noise or discernable vibration while either sitting dormant or while under power. The only indication that the bike is armed and ready to go is the ignition key position.

As the throttle is rolled back, the bike mysteriously accelerates, as if propelled by the wind or some other unseen force. If you listen really carefully, you may be able to hear

It's all very interesting, but can you ride it when it's wet? Think about it! The Ever Ready Rabbit has nothing on this 48 volt Hawk GT.



Honda NT650 Hawk GT Front End Modifications

These suggested front fork modifications will change the damping, feel, and handling characteristics of the stock Honda front forks. As delivered from the factory, the stock suspension is generally too soft. These modifications will firm the suspension and improve handling. If you do not understand or are unfamiliar with the internal workings of the front forks, have a qualified mechanic perform the work for you.

(1) If your front forks are from a '88 model year Hawk, two of the four damping orifices should be plugged to slow front end damping. Hawks manufactured between '89 and '91 have only two damping orifices and do not have to be changed.

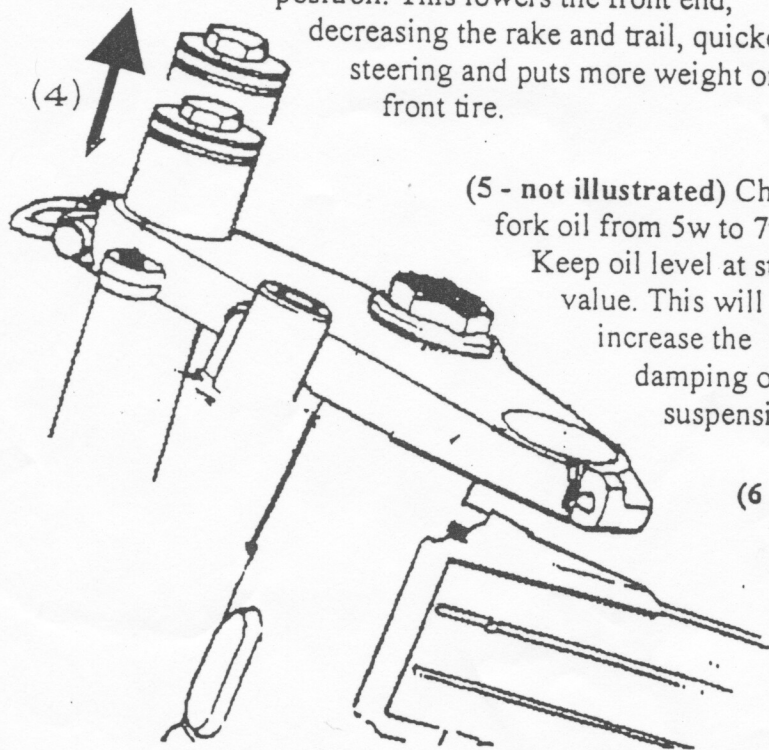
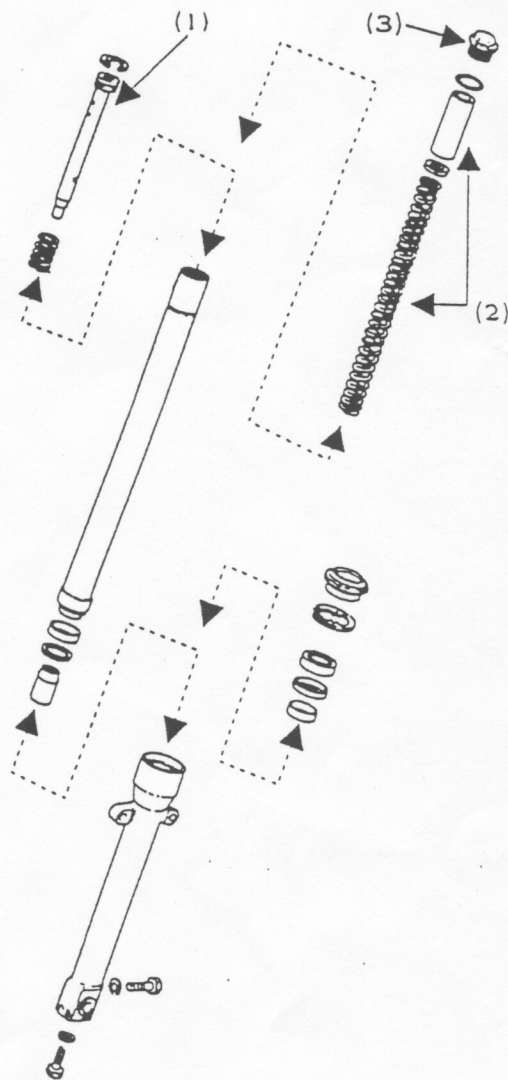
(2) Replace stock fork springs with Progressive fork springs (model 1126) to reduce the amount of front end dive during hard braking. The internal preload spacer must be cut to 3" as recommended by the Progressive fork spring installation instructions.

(3) Replace fork tube cap with adjustable preload caps (part number CFR-010). This allows a fine tuning 16mm adjustment range of spring preload.

(4) Pull the fork tube up 10mm from stock position. This lowers the front end, decreasing the rake and trail, quickens steering and puts more weight on the front tire.

(5 - not illustrated) Change fork oil from 5w to 7w. Keep oil level at stock value. This will increase the damping of the suspension.

(6 - not illustrated) A wider front wheel - 3.50". This allows for a larger contact patch for more traction and a more varied tire selection.



THE HONDA HAWK GT
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Dave's Bogus

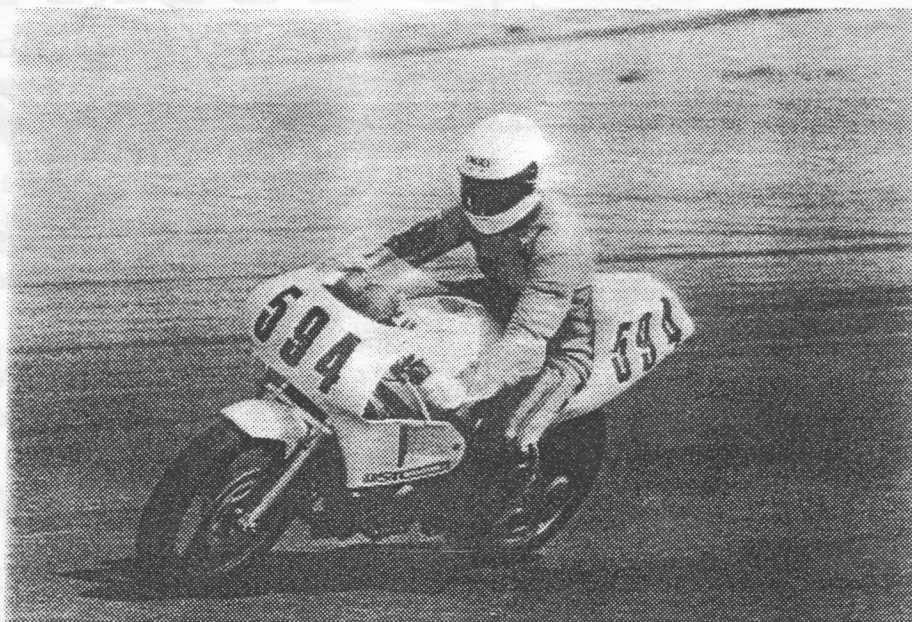
Adventure

One of the most frustrating things that happen (short of impotency) is mechanical failure. This has been the case with Chicken Hawk Racing's Dave Poldolsky (mechanical failure, that is). Dave has been experiencing a bizarre problem with his Supertwins Hawk. The problem first appeared after a horrific crash at New Hampshire International Speedway on the weekend before the AMA National. While coming over the hill another rider got into a tank-slapper and knocked Dave down at speed. Although the subframe and body work were a shambles, the bike seemed fine. The next day in practice the bike would cut out and sometimes die completely. We felt sure it was an electrical problem and we swapped the black box. The bike fired right up and ran great, however, as soon as you took it on the track, it would stall and die. This proved to be a problem that would plague Dave for the next three weekends. It couldn't have been worse timing because we were planning to race in the National the next week. In order to be sure that the problem would be solved for the National, we swapped everything!

We swapped the pickups, the coils, the carbs, replaced the battery, rewired the whole wiring harness, and disconnected the tach. No Good!

Meanwhile I had been having a great weekend preparing for the National. I was riding faster than I had before and was looking forward to doing well in the First Annual "Jimmy Adamo" Pro Twins race. The local CCS club will be sponsoring the class at the Loudon Camel Classic each year now.

Dave and I gridded up and joined the rest of the field in a moment of silence for Jimmy, the the rumble of



HawkWorks member Tony Albright, of Spring Valley, California, seen here waking up the neighbors at Willow Springs and looking very poised at the same time. Go get 'em, Tony.

36 wonderfully loud twins filled the air. It was a truly beautiful sound. I was ready, the bike was ready and I wanted to do well. Well, maybe I was a bit too ready, because I ended up sitting on my ear in turn six. In a first lap dash I began flying by other riders. I had passed three riders before turn three. While setting up to make my favorite pass in the bowl (turn 6), I lost the front (cold tires) and tumbled all the way to the wall. Oh well, at least it was a good place to watch as Ron Magill took his 1050cc Moto Guzzi to the checkered flag in front of Jerry Wood on his 888 spo, and Guzman Andrada on an 851. Dave finished back in the pack, once again the bike was cutting out, but at least it wasn't dying.

It took a couple of hours to put my bike back in order. My partner for the GTU was Galen Miller. Unfortunately, Galen hadn't had a lot of time on my bike, and he didn't have any on it, as it sat, minus fairings. He quickly adapted and we managed to put on a good showing, although there wasn't much chance of keeping up with the TZ 250's and superbike spec CBR600F2's. We had entered

the endurance for fun and experience and that's exactly what we had. That still doesn't answer the big question, "what's wrong with Dave's bike?". It had to be fuel, but after swapping carburetors, we didn't dream that something could be wrong with both sets. Not unless it is something that's wrong with Hawk carbs. This turned out to be the case. Thanks to a few hundred suggestions from other Hawk racers, we found the problem. The more you modify your bike, the more fuel you burn. Dave was literally burning all the gas in his card bowls and the needles wouldn't allow it to refill fast enough to keep up. Solution: raise the floats by 1 to 2mm, depending on how much fuel your Hawk can burn. We still have no idea why this problem showed up after a crash and I guess we never will. Gary Orr, Chicken Hawk Racing-

In The Next Issue

- Rear Suspension Modifications
 - More Member Mail
 - Hawk Parts Suppliers
 - Hawk GT Tire Options
- and all the regular features

even more "SHAWK"

the drive belt as the bike accelerates. It's rather strange to just glide around with no sound other than wind noise echoing through the helmet. Accelerating from a stop on a motorcycle that doesn't even sound or feel as though it is running is, to be sure, something unusual.

There is, of course, no compression breaking. The rear wheel is equipped with a free-wheel mechanism that replaces the stock "cush drive."

The bike accelerates surprisingly quickly, more quickly than expected, though it's top speed is only about 50 mph. The engine's performance (up to maximum speed) is comparable to that of an average 250cc motorcycle. It is, however, much more pleasant to ride as it's much smoother than any 250. Come to think of it, it probably offers the smoothest power delivery of any gas powered motorcycle in the world!

Though Ely has no plans to change the Hawk any time soon, I would love to ride it again should he ever decide to boost the voltage, as mentioned earlier. Acceleration is already a relative Hawk strong point. Double both that and the top speed, and you'd have a really, really fun machine. Of course, you'd have to widen the wheels and mount some sticky tires again...

MotoJoe Caswell

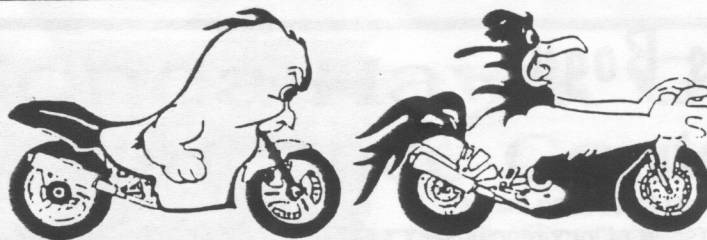
HawkWorks would like to thank Margaret Fowler of Free 2 Wheel Magazine for her permission to reprint this article which ran last month in that publication, and also thank her for her continued support and enthusiasm for the HawkWorks Network!

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Hawk Parts - engine, polished swing arm, front wheel and fender. All B/O. Call Steve (507)252-1361. MN

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Spec II Teleflex Upper Fairing kit. Red, barely used. \$185.00. CBR Climp-ons. \$80.00. Call Chris (805) 239-8615. CA

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