

HAWKWORKS

V 6 / Issue 4

School Days

BY ERIKA BENNETT

It was time.

For more than a year, I mulled over the idea of racing my Hawk. I know enough about the sport to understand what an investment it is. So before sinking bucks into the folly, I wanted to attend a track school to see (a) whether I liked the track experience enough to justify the expense and (b) whether I had the potential to race and do well enough to make it worthwhile.

My recent track experiences opened my eyes. Keith Code and Jason Pridmore gently pointed out that for my entire riding career I had been carrying around a lot of baggage — bad habits developed during five years of motorcycling.

My little ego had me convinced that I was a pretty decent rider. Five years and no accidents rated as 'decent' in my book. But when I finished my first track school, the California Superbike School (CSS), I was amazed at how I had managed to get by for so many years with my "skills."

Keith Code helped me get bitten by the track bug. When I heard that Jason Pridmore's new STAR (Skills and Techniques for Advanced Riding) school was going to be nearby, I signed up immediately. After Code's school I really was a decent rider (not terrific, just decent). Once that foundation was set, I was looking forward to the chance to practice my new skills and to continue improving.

Learning the Code My Hawk and I headed to Keith Code's class in August of this year. I had some vague ideas of what I might find at the track, including a proselytizing instructor that students either love or hate. I liked him a lot, by the way, but some students in the class seemed disgruntled by some of his instruction.

I knew that I was going to learn as much as possible and that my riding was going to improve. And it did — by leaps and bounds. I recently chatted with Code about my day with his school, and he said "Boy did YOU improve after a day with us!" I realized that Keith paid me a tremendous compliment, but in the back of my mind I was thinking "Gosh, then I must have REALLY sucked to start with!" I was mentally prepared for the California Superbike School for weeks before I got there. I read all three of Code's books and grilled my racer friends for information

about schools, tracks, racing, Hawks, Keith, and the weather. But I was minimally prepared in terms of personal gear and bike setup. I wore my Aerostitch Roadcrafter and suffered through the hot Texas summer. My Hawk was stock to the core: Springs, shocks, bars, exhaust, centerstand, ugly black plastic license-plate holder thingie ... everything but the tires. Bone stock. So what was so great about Code's class? He took the time to teach not only the hows and whens of riding, but also the whys.

How to best manage the bike through a turn? Roll on the throttle.

When do you do this? All the way through the turn from the time you're looking through the turn 'til the bike is leaned over 'til the bike is upright again.

Why do you do this? All good things come from good throttle control through the turns. Stability. Proper weight distribution. Best environment for optimal suspension.

Of course, now that I understand the fizziks of motorcycles in corners, good throttle control feels totally natural and is one of my new good riding habits. But it took a lot of preaching by Code and a lot of faith (and practice) on the track to convince myself that rolling on the throttle through a turn was in my best interest.

Code reinforced other good cornering skills in his class. Finding the right turn-point was an important one for me. I had never been on a track and was reprimanded by my on-track instructor for "being all over the place out there." Fortunately, after the first track session of the day, the staff put nice big yellow X's on the track, which helped me find the right turn-points and tighten up my lines.

Looking through the turns, flicking the bike into the turns, and relaxing on the bike were other major lessons of the day. For each lesson, Code spent a good half-hour discussing the hows, whens, and whys for each skill that he wanted us to practice on the track. Much to my surprise, proper cornering techniques allowed me to identify problems with the Hawk itself. For two years, I had been hearing Hawk owners gripe "the stock Hawk shock sucks!" At Superbike school, I

was finally cornering well enough that I was able to notice the shock-challenged nature of the Hawk. I also quickly found the limiting factors of lean angle on the Hawk as I made improvements to my cornering skills (left peg, right peg, centerstand, scrape!). Was Code's school worth it? You bet. Would I take his school again? I definitely will.

A Star is Born.

Toward the end of October, I struck out for Oklahoma to spend a day with Jason Pridmore's STAR (Skills and Techniques for Advanced Riding) school. I was much more prepared for my second track school. With some basic skills under my belt and a few months' practice on the fun roads of the Texas hill country, I struck out for STAR. A Fox shock, some Progressive fork springs, and lower clip-ons were the new goodies for the Hawk. Add to the new goodies a set of borrowed leathers and I didn't look so out-of-place on the track.

After taking Code's school, I had a good idea of where my skills were and where they needed to go. At Pridmore's STAR school, I was in the right atmosphere to develop my skills further. I didn't walk away from STAR with the same newbie "wow!" glow that I got from Code's CSS. No one at STAR said "Boy did YOU improve!" But I did get an honest assessment of my skills and my progress.

To my delight, my on-track instructor extended an invitation to join them for another session "because there are still some things we'd like to work on with you." Not the high praise that my ego was hoping for, but in the back of my mind I thought "I must be catching on. They must think I have potential!"

Pridmore's school was set up quite differently from Code's school. There were two groups of riders: those who were primarily interested in improving their street riding, and those who were either currently racing or planning to race. I opted for the race group. I knew I'd be slower than most of the other students, but I

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Torque This

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As I stared at my transmission neatly stacked on the work bench, I wondered how I got there. I actually remember how proud I was when I managed to bleed the brakes on my Radian a scant decade ago. Only spilled half the brake fluid too. The Haz-Mat team wasn't so impressed. Now I'm looking at a Hawk motor that has a similar appearance to a pile of...Hawk parts. In a pile.

The cases are in two different boxes and the crank is away getting re-balanced for the Carillo rods I got. And there in the middle, is this clot of gears. My tranny. You see I've never put a transmission together before, and it has to go together right - with all the right shims and bearings - or my precious motor won't move my bike. And that would suck.

So I find myself in a place I have visited many times before. Newbie wrenchville. "Gotta do this right."

Nothing like THAT nagging voice pestering you as you refer back and forth to the manual. You KNOW that this is the first time you've done this because the manual page is pure white - let me assure you, every time I work on a motor the manual seems to soak up 1/2 a tube of assembly lube and a quart of oil! Maybe that's a good way to check a mechanics qualifications. If the manuals are ragged an well used - that's a good sign. New manual? Find another socket spinner.

Anyway, I carefully stacked the tranny together, having to be very sure of which gear is which as I'm swapping from the stock tranny to a close ratio unit. The tough part is picking up both transmission stacks, AND the shift drum at the same time, making sure the shift forks stay in place, then dropping the whole slimy assembly into one side of the crankcase. No problemo. But I'll manage to do it, and the motor will survive the onslaught of the 1999 CMRA endurance series, fending off those damned SV 650's. It has to. I don't want to do this again too soon.

So what if the thought of swapping spark plugs seems daunting? Go ahead and do it - but here is my advice.

- 1) Buy the best tools you can get. I recommend Craftsman.
- 2) Use the right tool for the job.
- 3) Take your time.
- 4) Use the manual.
- 5) Double check your work.
- 6) Be satisfied.

Dipping your pinkie toe into the pool of wrenching isn't a big deal after you have done it. Soon you'll be pulling the valve covers off and starring at you new feeler gauges contemplating setting you own valve adjustment. It's no big deal. Soon you will be able to slap together a close ratio transmission, toss it into the crankcase and slap the rest of the motor together in an afternoon.

Then you can teach me how to do it.

New Little Hawkster

There is a new addition to the Lillemo riding community.

Joshua Stone

Born February 9, 1999

He is the coolest dude, he doesn't do anything yet but he's still cool. He'll be ripping up the Highways on my vintage Hawk in about 16 years. Everybody's healthy.

I bought a garage mate for the hawk about a month ago, it's a 1998 Kawasaki Concours. The idea is to travel two up with Louellen or the kids. Not Joshua for a while, although he probably fits in the saddle bags just right.

wanted the racing lectures and I wanted faster track speed. The lectures were set up to cover distinct sets of information, but the track sessions didn't necessarily correspond with the classroom information.

Pridmore and Lance Holst covered a variety of topics in the classroom, including: relaxation techniques, visual skills, cornering lines, body positioning, and suspension set-up. Track time was somewhat of a free-for-all. There were no assigned on-track instructors and there were no specific lessons or skills we were supposed to work on during track sessions. The burden was on the student to hook up with an instructor and ask for help or advice, which worked well for some students and left others with little individualized attention. I hooked up with Paul Kuna early in the day. Paul, a veteran instructor of Reg Pridmore's CLASS, talked with me about my current skills and my goals for the day.

My biggest concern was ground clearance: "I'm scraping things left and right." My hope for the day was to learn how to hang off the Hawk and to be able to mentally separate hanging off from falling off. Before getting to STAR, I asked friends how to hang off. Their responses were "Just hang off." That just wasn't enough instruction for me. "Oh, we'll get you hanging off," Paul assured me. He wasn't kidding.

Before giving me any instruction, he followed me around the track to see for himself what issues he would have to deal with. Then he had me follow him around the track for a few laps, observing his body position. Next he had me mimic his body position for the rest of that session. I didn't have to worry about my speed or my lines; Paul controlled those and I followed, concentrating on my body position. Occasionally he'd pull me into the hot pit lane to talk over my progress and give me pointers. He even went so far as to dump a handful of baby powder onto my seat at one point to help me slide easier from side to side.

I learned exactly what I wanted to from STAR. I had a goal, I worked on it all day, and I accomplished what I set out to accomplish. By the end of the day, I was getting comfortable with my body position on the bike, my lines were decent (at CSS I got chastised for having "no lines;" at STAR I got praised for having "tight lines"), and my lap times and confidence were improving. And with a good suspension set up, I was finally able to test the Hawk more. The rear end stayed

where I put it, and the front end was more responsive. The Hawk and I finally felt at home on the track.

Was Pridmore's STAR school worth the 450 mile, 9-hour drive to Oklahoma? Absolutely. You can count on my being there next year. I have plenty of skills needing further refinement.

The XX Factor

What of it? Did my gender influence, interfere with, or otherwise play a part in my two track days? Yes and no. Code thinks that women make the best students because "they're more likely to do the drills and practice the things we teach." He also thinks there aren't many women racers because women aren't "aggressive enough."

Pridmore also thinks women make terrific students. In his experience, he's found that women "check their egos at the door" and are "most open to learning." He also thinks that's why not too many women attend riding/racing schools: because they think they need aggression and ego in order to participate, "although that's not true."

What do I think? The gender-defining moment at Code's school came with my first session on the track. Before entering the track, a fellow working course control would ask riders a general question before he'd let them enter the track. The first time he stopped me he patted me on the shoulder and said "Okay, guy, what are you going to work on this session?" After hearing my response (an obvious female voice) he said "Oh. You're not a guy. Well, have fun out there, uh, (pause), girl." Did this really matter during the course of the day? Nope. But I was amused that he was caught so far off guard.

The gender-defining moment at Pridmore's school came the night before class. Hanging out in the parking lot of the hotel I met a couple of BMW guys who gave me a bit of a hard time, saying things like "Oooh, we heard there was a fast girl on a Hawk out here ... you must be her." And "Hey, speed girl, are you going to set the new track record? I bet you're really fast." I laughed them off and turned in for the evening.

The next day, as we were self-selecting into groups of street riders versus racers, the look of surprise on the Beemer Brothers' faces was quite enjoyable. They headed off for the street group as I headed off for the race group. You know what? I didn't hear a peep out of those guys for the rest of the day, and I gave them plenty of opportunity. Again, did this make a difference in the day?

Other than giving me a little smug satisfaction, it didn't factor into the day.

How did my gender make a difference, then? I've always been a believer in getting as much as possible out of the classes I take. I like to get the most bang for my education buck. As a college student I did anything I could that would make me stand out (i.e., sitting in the front-row-center seat, asking a lot of questions, showing up early, visiting teachers during office hours). Why? I discovered the secret formula: If the teacher gets to know who you are, you'll get more individual attention. I've taught college courses as well and have experienced this phenomenon from both sides of the desk. What made me stand out most at both CSS and STAR was my gender.

I was one of four women at CSS and the only female at STAR. I used that fact to my advantage (and no, you cynics, I didn't bat my eyelashes at Keith or Jason to get attention). I looked different from most of the other riders, and I sounded different. It's as hard to not notice a woman in a room full of men.

When I cornered my assigned on-track instructor at CSS before the day started to talk about my expectations and skills, he took a bit more time to listen to me than he did with most of his other students. At STAR, I had an instructor virtually to myself for about 80 percent of the time I was on the track. There were five on-track instructors and about 17 students. That left four students for every other instructor. Did I get more individualized attention than most riders on the track? Yep. Was it because I was female? I don't know what odds Jimmy the Greek would give to that bet, but I sure wouldn't bet against them.

Erica "Kneepuck" Bennett's racing future.

My Hawk and I have come a long way, and we have quite a trip ahead of us. It's amazing what some choice bits of hardware will do for a Hawk's performance and what some choice bits of information will do for a rider's performance. Code may believe that women don't make good racers, but watch out, Texas. There's a new girl in town. She's got a Hawk, and she's learning how to use it.

Of Hoses and Valves

Len Smith wrote an interesting note to the Hawk list:

I am looking at race-prepping my hawk and I want to get rid of the CA emissions stuff. I've ordered some smog port plugs from 2Bros, but I am not sure what to do with all the other tubes.

Can I follow the tubes from the Purge Control Valve and Air Vent Control Valve and simply cap them off where they run into the Carbs? Same with the hoses from the air pump, that run to the carb?

Also can I cap the two tubes that run from the carbs to the sub-air cleaner and the crank case breather, or do I need mini-filters for them? I would really like to minimize the hoses, etc. I will be putting in uni-pods to replace the stock air box.

Recluse Hawkster James Montebello responded:
To do this painlessly, you need to understand what each hose does. This isn't rocket science.

Each hose will serve one of three functions:

- a vacuum tap, to power a valve or pump.
- an air passage, either into the engine or into the smog pump
- an atmospheric pressure "reference" (i.e., a vent)

The first type can be plugged in all cases with no ill effects. The third type should never be plugged, or the engine will run poorly or not at all. The second type is an "it depends".

The ASV (air suction valve) is, in fact, the smog pump, and is that big ugly thing on the side of the

engine. It is powered by intake vacuum, and sucks air out of the airbox and into the exhaust ports. The exhaust ports, the airbox port, and the vacuum port all need to be plugged.

The other half of the smog system is the evaporative canister. This device is supposed to trap vapors from hot fuel in the tank and the float bowls in a charcoal filter while the engine is off. When the engine is running, air is sucked in through the filter, along with the trapped vapors, and into the engine. There are two vacuum powered valves that determine when the engine is "on".

When the ACV (air control valve, or air vent control valve) is in the engine off position, the float bowls are vented into the canister. When the ACV is in the engine on position, the float bowls are vented to the atmosphere. When you remove the ACV, you need to plug the vacuum line, and leave the float bowl vent open. If the float bowl vent is plugged, the engine will die quickly after starting, if it starts at all, since there will be no atmospheric pressure "pushing" the fuel out of the bowl.

The other valve is the PCV (purge control valve). It vents the canister to the intake manifolds to burn the trapped vapors when the engine is on, and simply plugs these when the engine is off. All of the lines here need to be plugged. If the intake manifold ports are not plugged, there will be a vacuum leak, and the mixture will be very lean.

When asked to write an article about cams, I naively assented without consideration for the voluntary yet time-consuming nature of the task. Writing an article about cams and nothing else turned out to be a difficult thing to do simply because they are part of a larger, more complicated system of air/fuel proportioning, delivery, and exhaust. Air/fuel delivery is a key factor in motorcycle performance because the amount of power a piston can deliver to the crank is largely determined by the weight of the air/fuel charge that pushed it, assuming the engine is properly designed and in an adequate state of tune. Because I'm inherently lazy, I thought I'd review how cylinders come to be packed with an air/fuel charge because that will greatly simplify the bit about the cams.

In order for air/fuel mix to get into the cylinders, air has to be sucked or pushed through the carburetors. It can be pushed with a supercharger or turbocharger or, at high speeds, with a ram-air intake box. These devices all have the effect of pushing more air through the carburetors in a given unit of time, which can result in a heavier air/fuel charge to the cylinders if the carburetors are tuned properly. Whenever you make modifications that bring significantly more air through the carburetors, you can bet that you will need to adjust the carburetors to allow a faster fuel metering rate. Otherwise, the ratio of air to fuel will be high, what is called a "lean" condition, and the engine will run poorly and at higher temperatures. There don't appear to be many companies attempting any of the push-methods of increasing air/fuel charge weight on Hawks and so our attention can turn to the suction methods.

The most easily understood source of vacuum drawing air through the carburetors is the downstroke of the piston during the intake cycle. In stock shape, the low pressure in the cylinder left by the descending piston sucks air through the Hawk's (naturally restrictive) air box, through the carburetors, and delivers a meager air/fuel charge to the cylinder. Generally speaking, stock airboxes and filters are more restrictive than they need to be. On the Hawk, removing the airbox top (with an appropriate modification to hold the filter in place) or switching to UNI or K&N pods will significantly increase the amount of air (and grit) that the piston will draw through the carburetor on the intake stroke.

The other main source of vacuum is provided by exhaust escaping through the exhaust valve. There is a point between the end of the exhaust stroke and the beginning of the intake stroke where both the intake

Non-Coastal Rally

Attention midwestern Hawksters! The first annual Non-Coastal Hawk Rally will be held the weekend of April 30-May 1 just outside of Milwaukee WI. The agenda includes a private tour of the Buell Motor Company, plenty of riding time through the scenic Kettle Moraine area, and a stop at the Slimy Crud rally on Sunday. For information, email kpmarie@binc.net or windingroads@hotmail.com, or phone (414) 369-3293.

Cam Slam

BY HOWARD BERKSON

and exhaust valves are open. The rush of the exhaust gasses down the header pipe is another source of vacuum. Vacuum from exhaust and intake valve overlap is enhanced by "scavenging" vacuum

power from the most recent exhaust pulse of the other cylinder. As the other cylinder's previous exhaust pulse is reaching the end of the exhaust pipe, the residual vacuum left behind it aids the next exhaust charge clear the other cylinder.

Another feature effecting how air/fuel charge moves about is the width of the tubes through which it moves. For a given volume of gas to flow in a given unit of time, the smaller the space it must flow through, the faster it must flow. The problem is that you cannot maximize the volume that can be flowed while also maximizing the speed at which it flows. Smaller apertures imply higher speeds but larger apertures imply higher potential volume. If, for instance, intake valves are too small, then they will have a high intake velocity but they won't flow enough air/fuel mixture for good power as RPMs increase because the time available to charge the cylinders decreases. If the intake valves are too large, they could theoretically flow enough air/fuel mixture for good high end power but that will not happen before the valve has to close because the intake velocity will be too low causing poor mid-range performance.

This brings us to an important finding by the R&D folks at the Army of Darkness, as advertised on their web page, <http://www.13x.com/aod/homepage/1995-6.htm>. They dug up an ancient formula that gives you an estimate of the mean intake velocity for a given displacement, valve arrangement, and RPM level. Upon shoving the relevant numbers for several sportbikes through this formula, they discovered that all the Japanese manufacturers arrived at about the same maximum mean intake velocity shortly before redline for their sportbikes. They discovered that 12.5 meters per second was about as high a mean air/fuel charge velocity that one might expect and, consequently, that speed corresponds with the RPM level at which power begins to flatten out. This level is achieved quite quickly with the Hawk's smallish intake valves and mild cam which explains why it has such a long, flat torque curve in stock shape.

High horsepower Hawks all have +1mm to +3mm intake valves. By the time valve seats are hogged out much above +2mm, the spark plugs have to be indexed so electrodes do not interfere with valve travel. 1mm over intake valves can use the the stock seats, but larger valves will need new seats. Even with lumpy cams,

maximum intake velocity arrives quite early in the game for the Hawk. According to the results obtained by the AoD with respect to max mean intake velocity, Hawk performance should level out early and stay there throughout the rev range. With the Megacycle 153 cam, max mean intake velocity is reached at about 6750 RPMs with stock intake valves, add 250 RPMs per 1mm increased intake valve size. With the X8 cam, the baseline figure is 7250 RPMs with similar effect for intake valve diameter increases. The Webcam 470 runs like the 153 except 250 RPMs later: .010" lift increase is about the same as a +1mm intake valve change in this case (the comparison is not as good at other possible lift magnitudes).

However, the formula does not take into account any aspect of several other important factors. The exhaust valve performance with respect to exhaust velocity, the quality of the exhaust system and its impact on exhaust velocity and efficiency of scavenging are not included. The duration of valve openings, their overlap in being open, the flow characteristics of their shapes, the angle of the port turn, and the quality of the port job are not included. The efficiency of the air box or pods and velocity stacks and carburetor throat diameter are not considered either. Moreover, we should be skeptical not just about the importance of these figures but also the value of the max mean intake velocity discovered by AoD. The max mean intake velocity figure that they found was for comparatively short stroking, high revving, four cylinder motorcycles.

The comparison of the Hawk's three valve, long stroke, two cylinder engine to those of several four valve, short-stroke, four cylinder purpose built sportbikes is dubious. 12.5 meters per second may be a pipe dream for the Hawk without serious consideration of these other areas, perhaps most notably the restricted breathing space (even without the airbox, there is not much space for air flow), older and non sport-oriented exhaust system, and rough hewn intake ports. However, piston speed in the twin is much higher for a given level of RPM because the pistons have farther to travel in comparison to the 600cc fours. This may imply that a higher maximum mean intake is possible because the vacuum from piston descent may be greater and also developed faster.

What has all this got to do with cams? Cams control how far the valves push into your cylinders, and how long they stay there. The lobes on the cams can force valves open wider, affect their "lift", by their height (distance from the shaft center). They also hold the valves open longer, affect their "duration", by the width of the lobe (from front to back around the shaft). The two best known companies manufacturing cams for the Hawk are

Megacycle and Webcam, the former being much better known and more popularly used. Megacycle cams are available through Jim Davis' Hawk Connection (<http://www.hawkconnection.com>) and Webcams are available through the manufacturer (<http://www.webcaminc.com>). Both modify stock cams by welding on new material and then grinding them down to shape and both have a variety of grinds available.

The Megacycle 153X1 grind cams are probably the most popular, they can be used with stock pistons, and have been used in racing engines exceeding 70hp. Webcam's similar grind is numbered 470, also usable with stock pistons, it has a longer intake lift for a similar duration but is otherwise the same. Consistent with the equation give by the Army of Darkness, it is likely that the higher lift for the same duration exhibited by the Webcam product will cause the Hawk to spin to a higher RPM level before theoretical maximum mean gas flow is achieved. In general, any other cam made by either company will require aftermarket pistons with relief cutouts for the valves. When pistons and valves contact, that's bad.

The relationship between lift and duration to power development and RPM level explains why you can't really maximize bottom end and top end power at the same time without rocket assistance or magic tricks. Yamaha's exhaust gate on their sportbikes (now apparently outmoded as it is not present on their R1) or their carburetor trick on the V-Max provide ways to give improved velocity at all levels of the RPM range. Without such magic tricks, maximizing velocity of the air/fuel mix at low RPMs will restrict the engine's ability to pack the cylinders with a fat charge at high RPMs because the intake valve lift and duration will not provide sufficient volume even at maximum flow rate. Maximizing volumetric potential of the air/fuel mix at high RPMs will prevent the engine from packing the cylinders with a fat charge at low RPMs because the flow rate will be too low through the long lift and duration of the valves. With a Hawk engine, a cam change is the single greatest power boost you can buy but it's part of a larger system of engine performance. Without attending to the entire system, no single change will do much for your machine.

(Editors note - those of you looking for drop in horsepower should buy the milder 153X1 type cams and install them with NEW OEM cam followers in your Hawk. You'll have more power everywhere, but as noted above, the cam will be more effective if you have 1mm over intake valves installed and have the porting cleaned up. Be careful - Power corrupts and you may soon find yourself with a Hawk crank on you kitchen table and a set of high compression pistons on the way - hey it happened to me! Besides it will take a couple weeks to get the cams done, might as well get the heads ported, shave off 25 thousandths and slip in those bigger valves. See how easy that is?)

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2UR or not 2B

BY ROBERT "TOENAIL" PANDYA

There are plenty of bikes out there that elicit a singular response. That is to say you either love it or hate it. Bikes like the BMW R1200C (Das Cruisermobile) and the Bimota Mantra come to mind. Did you know that there are a few motorcycle accessories that confound the senses as well? Let me introduce you to the 2uR fairing. That's pronounced "tour" by the way. Bet you either love it or hate it already.

The 2uR fairing is unique in many ways. Most obvious is that there is no windshield; there is no clear "screen" to look through. It's solid aluminum. It has all of three parts to it, and I'm including the little "2uR" sticker on the front. The fairing is CNC cut from a sheet of aluminum. The mounting tabs are pressed out of the center of the hole that the headlight fills. The entire sheet is formed into a subtle compound curve that has a single large rivet popped through tabs in the bottom of the fairing, keeping the aluminum under tension and in its final shape. The only other part of the windscreen is the rubber molding that lines the headlight opening, preventing scratches on the headlight itself.

The 2uR fairing mounts via the forked tabs that extend back and split around the stock headlight mounting bolts. Loosen the mounting bolts very slowly until there is just enough clearance to slip the screen tabs between the headlight bucket and the stock mounting triangles. If you get enthusiastic with that allen wrench, the nut inside the headlight bucket will fall off, and you'll have to take the headlight lens out of the bucket to get the nut back onto the bolt. You've been warned.

The 2uR fairing is currently available in crinkle-finish black. 2uR owner and designer Phil Wilson plans on a brushed aluminum finish, either unadorned or with a black or red stripe through the middle. Phil might also be talked into selling a plain, uncoated screen for you custom painter types. But that's just between you and me.

The cost of the standard black version is \$149 (plus 6 percent tax for Michigan residents). That's fine, but how does it work?

Very well indeed. It's no Gold Wing fairing up there (thank God), but it does manage to push the air into a very clean envelope around the rider's chest. Those of you with stock handlebars will notice slightly less turbulence around your lower chest. Riders with F2 bars or aftermarket clip-ons will find that the air envelope climbs up your chest a bit. At 5'8" on a bike with low-rise clip-ons, the wind at legal

speeds was just below my helmet opening. It didn't raise the turbulence or the noise associated with it (I wear ear plugs on long rides anyway), but it did clean up airflow around the instrument cluster. Perfect.

The black powder coating appears tough too. I spent some time chasing down bigger bikes in the twisties (the sound you hear is me tooting my own horn) with nary a stone chip from the fat tires of those turd 916s. Toot toot. Bug splatter can be a bit of a problem, but it's still easier to clean the 2uR screen than digging into the nooks of the instrument pods to squeegee out a moth's sun-dried intestinal system.

The final issue goes back to aesthetics. Do you like the way it looks? A loaded question. I heard everything from enthusiastic compliments to "Hey Robert, somebody stuck a toilet seat on your bike". And that's the crux of this accessory. You will either love it or hate it. It does its job with a simple elegance. It's constructed in a unique manner and is built to last as long as your Hawk. But it can fundamentally change the way your Hawk -or any bike with a 7" headlight- looks. And knowing that motorcyclists are quick with an opinion, you'd better be prepared for both sides of the coin. Love it or hate it, the answer's right in front of you.

You can contact 2uR online at www.2ur.com, by phone at (616) 752-7694, or by writing 2ur Motorcycle, P.O. Box 6097, Grand Rapids, MI 49516-6097. Phil offers a two-week, money-back guarantee. Send the unit back (unused) if you don't like it for a full refund - minus shipping costs. You've gotta love that.

2UR, A SECOND OPINION

When I saw the 2UR windscreen pictured on Phil's website, it's new black powdercoat wrinkle finish grabbed me in a way that the older, polished version didn't. I ordered one, knowing I had two weeks to decide yea or nay. I had a weekend at Loudon, NH planned, at which I was looking forward to fielding questions and comments about the screen, but unfortunately my trip got rained out. Too bad, too as the thumbs up vs. thumbs down reactions would have been interesting. On the home front, my wife doesn't care for it, while my 10 year old son thinks it's cool. A friend who rides a jewel-like Duc 750 SS offered that he guessed he could be seen riding with me. High praise, indeed.

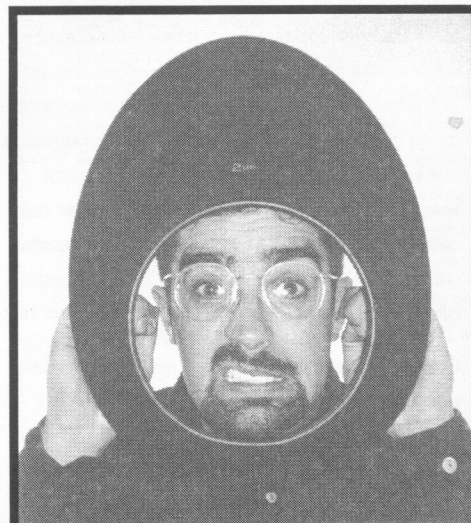
To my eye, the 2UR works with the Hawk because like the bike, it's an expression of minimalism, and neither dominates nor alters the Hawks' basic character. From the side the it almost disappears and ones' attention is still drawn

first to the bright red tank and aluminum frame. From any other angle, it's egg-shaped outline echoes the many rounded design elements found on the Hawk. Like most other fairings of it's type, probably it is visually weakest from head on, where the headlight presents a Cyclops effect - it's not easy for any fairing to disguise a 7" orb. Maybe Phil could incorporate some cat-eye projector lamps...but not for 150 bucks.

Though I'd be interested to see how a color-matched version might look, I like the textured black paint; it's as if it is supposed to be black - in the same way that the radiator, instruments, controls, and seat are by God supposed to be black. But that's me. More quantifiably I can say that the 2UR is a super compliment to the stock bars. It's just big enough to delay by 20 MPH that "blowin' in the wind" feeling which sets in at 70 or so by providing a blast relief area, which on my 69" frame falls between the collarbones and knees. At WOT, I found my Hawk to be as stable as ever.

Build quality is impeccable, the finish (on both sides!) is perfect and it literally takes a minute to install. It's one of those all too rare aftermarket accessories whose standard of quality equals that of the bike. And Phil's service is nearly as good as his windscreen. Though he doesn't accept credit cards, I had my order exactly one week from the date I dropped my check in the box. If you ask me, and Robert did, the 2UR Windscreen is a Good Thing.

Todd Burpee - NT650@aol.com



Hawk Bits

You need a 17 tooth countershaft sprocket for your modded Hawk? Afam sells 'em for a Transalp.

Two time AHRMA national Battle of the Twins Formula Three champion JD Hord likes to keep things simple. He eliminated the stock fuel pump with a high flow Pingel 18mm-1/4" adapter bolted to a Pingel 1/4" single outlet race petcock. Put it all together, ride. Tested at all the big tracks. It works. Hord-san suggests using teflon tape to seal the threads. You can get your Pingel petcock through Orient Express <http://www.orientexpress.com> or 1-800-645-6521. Ask for Rich.

While the above set-up will work for sprint racers, the Hawkworks racing Hawk needed a fuel pump of some sort to insure the bike can suck every drop of fire-water it needs to get through out the long races (4-8 hours) and minimize fuel stops. I decided to mount up a Mikuni dual outlet vacuum pump normally used on Jet Skis. (reliable, no electrical draw, can mount in any position) I blocked off one of the outlets and routed the other to the carbs. The pump uses intake pulses to operate a diaphragm and simple flap valves to move fuel through the system. You can use a carb synchronizer adapter screw (Honda part # 166221-MA6-000 according to subscriber Gary Beale) or get ahold of a generic one for Part Unlimited or Motion Pro. I got desperate one night and drilled and tapped a big ass hole into the head. Why? So I could fit a modified brake bleed screw in there. Told you I was desperate. Do yourself a favor and get the right part in the first place...

Hawkworks told you about Todd Reiswig awhile ago. He's modding VFR rims to bolt on to your Hawk. "It's time to do another set of rims. I lost my best wheel price source. If you have a used rim or can find a better price on wheels, I will machine them for the below listed machining prices.

New rim price	Size	Machining cost
'90-'93 \$398	8 spoke 5.5"	\$150
'94-'97 \$462	5 spoke 5"	\$180
'98-'99 \$279	5 spoke 5.5"	<\$180

The rims are modified to fit by first creating the center bore and bevel like the stock Hawk rim. Next, the four lug nut holes are drilled, plugged and the face machined to give a uniform finished surface. After that, a counter bore on the four bolt holes on the back is drilled to clear the base of the Hawk's locator pins and a sleeve inserted to fit the locator pins. If you have any questions feel free to call me at (509)522-8246. Todd will also provide you with references if you wish to

talk with some of his past customers. Powder coating is \$70 for almost any color. All of the above prices do not include shipping. Mondo rubber anyone?

The new Suzuki SV 650 might be a match for a decade old Hawk in the lightweight twins class across the country. It's sure to be a developmental battle for the new 90 degree twin at first, but the worm might turn as aftermarket manufacturers jump on the bike and create shock, pipes, and other hardware to soup up little Suzy. So imagine a Hawk with the following: An F3 front end, VFR rear suspension, a Transalp 750 motor, some 39mm CV carbs, a high leftside exhaust like the RC 30 and a VFR fuel tank. Keep it naked. Keep it cheap and sell it in America. Sounds nice - huh? It'll never happen.

Those of you who insist on a megaphone racing exhaust system, and can live with the dirty look a 108 db system will bring on, can call Ace racing exhausts in Houston, Tx. The phone number is (281)578-5992. The guy's name is Andy.

He has almost 20 years experience building pipes and has been building winning exhaust systems for nearly to decades now. Our endurance partner Bruce Moore had a custom system made up for his MZ Skorpion racer while he waited. That's service folks.

Wanna take a race school? Jason Pridmore has started a new advanced riding school. You can get more info at <http://www.starmotorcycle.com/>. For those of you in the Texas area, I highly recommend Texas Sportbike School. Owned by two Hawkworks Racing sponsors, Mototek Imports and Advanced Motor Sports, the school is dedicated to teaching street riders how to better their skills in the perfect laboratory - the racetrack. Contact Jay Bernard at Mototek for information on the next school. (512)451-3960. You'll get a ton of track time, and will be taught one-on-one by some of the best racers in the Central Texas Motorcycle Roadracing Association. Everybody has left smiling - and pooped.

Michelin has quit making slicks for 125 and 250 GP bikes. So what? Well those of you with the stock 4.5" rim will either have to upgrade to a VFR, Dymag, or Techno rim to get at least a 5" rim to fit the French slicks designed for F3's and newer 600 cc sportbikes. This is assuming you have already upgraded to a 3.5" front rim. For more information on Michelin Racing slicks and DOT legal racing tires check www.bibmen.com.

Thinking about investigating the stunning twists and turns of the Blue Ridge Parkway, or the infamous Deals Gap some time in 1999? Contact fellow Hawksters Chuck and Vera Pofhal for some uncommon local knowledge. (828)926-9075 or write them at 125 Forest Park Dr. Waynesville, NC 28786. Not too often you get an open

invitation like that!

Hawk List member Richard Herrington picked up a price list, dated 10/98, at the Daytona Biketoberfest from Composites Unlimited on their Sharkskin products. Below are the prices from that price list on Hawk compatible bodywork:

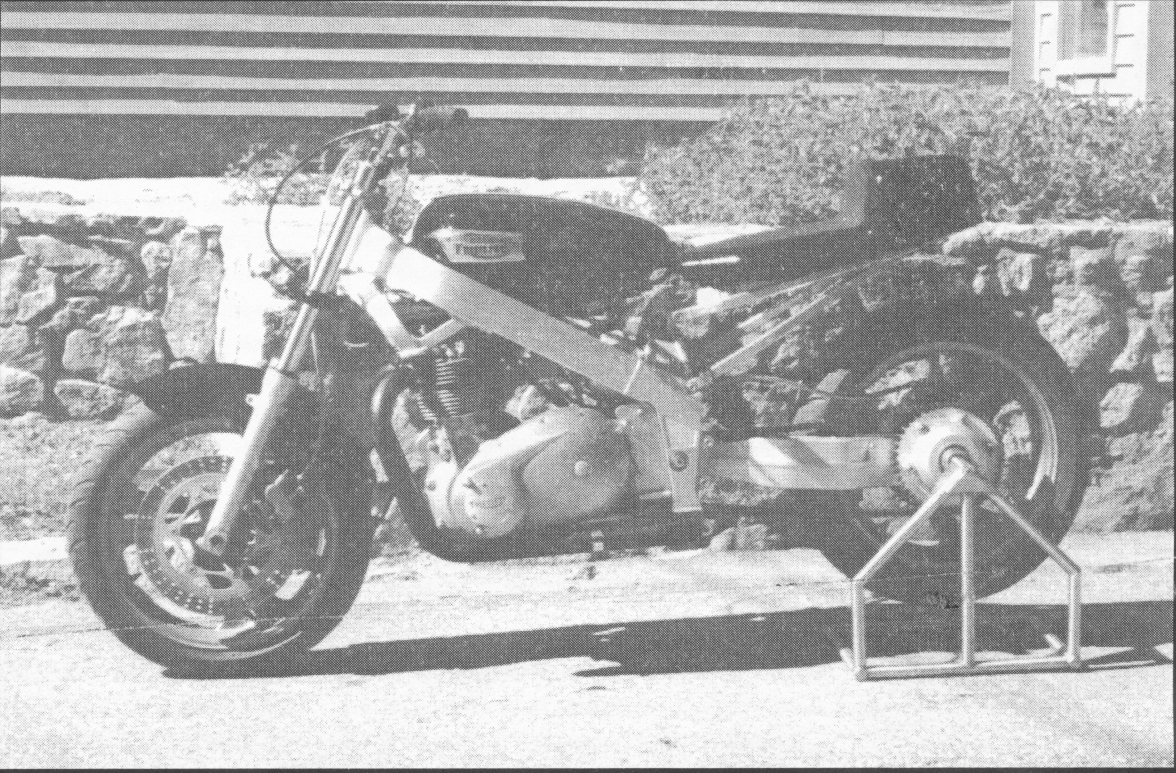
Part#	Description	Listed price
1036	RS250 style upper	310.00
1037	RS250 style lower	210.00
1053	RS250 style brkt.&fast.	105.00
1038	Solo tail	200.00
1054	Tail brkt. & fast.	50.00
1025	R1 style upper	330.00
1028	R1 style lower	225.00
1029	R1 style brkt. & fast.	105.00

That's right - Sharkskin features a new two piece (3/4 upper and AMA legal bellypan) R1 style fairing to fit the Hawk. You'll have to fabricate a bit I'm sure, but it's a nice way to update the Hawk's look. Sharkskin bodywork is regarded as some of the best available on the market. Coming in a beige primer ready to paint, it's light and way flexible to resist fatigue cracks and shattering when things go horizontal. www.sharkskin.com or (800)519-7229.

Those of you who don't race might not be aware of the premiere roadracing news magazine, Roadracing World & Motorcycle Technology. Owned and operated by John and Trudy Ulrich, it's packed with regional, national and international roadracing reports. RRRW is one of the top publishers of technical information, with recent stories by suspension, exhaust, tuning, and aerodynamic experts. The large format packs more info onto a page than many glossy mags can over three months. A short lead time keeps the news current, and the reading exciting. Lastly the ad section is HUGE, selling everything from race YSR 50's, to vintage bikes to... hey - race Hawks. It's a great place to find used parts and to keep pace with the latest products offered by the performance aftermarket whether you hit the track or not. A 1 year (12 issue) subscription is \$17.95 payable to: Roadracing World PO Box 1428 Lake Elsinore, CA 92531-9974. Canadian subscriptions cost \$39.95.

Speaking of Canadian...one of our north of the border subscribers Alfred Jaeger (67 Donegal Bay, Winnipeg, Manitoba R2K 2B5 Canada) is looking for a Vision 550 full fairing in good condition. Now I know that a Vision isn't even a Honda let alone a Hawk - but Alfred has a Hawk, and the winter months are long up there. I can't find one here in Texas, so if you have a used parts supplier that can help our friend, please send Alfred a note, or forward his address to your local breaker for a quick sale. Thanks - eh?

Hawkworks



Some time ago Bob Daly sent me this shot of his Hawk-framed, Triumph-powered flat tracker thing. He's looking for another rolling chassis. Probably has an extra KZ1000 motor or sumphn'. Call Bob in Hingham, MA at 617.749.5911 or 617.740.1879 if you have one for sale at a fair price.

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P.O. Box 8052
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