

● Honda's team transporter had found refuge out in back of the parking lot at Toledo's Holiday Inn West. It was a Chevalier motorhome chassis with a boxy bunk cab on the front and an aluminum truck body behind. The motorcycles had been removed from the truck and were resting in a rather haphazard row, supported by their non-integral stands. Marty Smith's main #1 machine was suspended from an ingenious portable work platform. An inverted U-shaped collar on the platform straddled the bike and suspended it at the handlebars with a chain hook. The engine, tank, exhaust pipe and seat had been removed. Relative humidity and temperature rested at about the 95 mark. One of Honda's two-kilowatt generators was droning away in the background, connected to something inside the truck with a yellow extension cord that was too small and too long for the job. The truck's doors were swung to each side and fastened. An oxy-acetylene welding rig was chained to a support on the left door and a tank of nitrogen for the gas/oil suspensions was fastened to the right door in a similar manner.

Inside, the truck is arranged as a workshop and parts storage room. The box is 16 feet long; eight feet wide and high. Built-in wooden cabinets line the sides at the top and are joined by a tire and wheel rack that runs across the forward wall. A couple of steel closets stand together at the forward end of the left wall, just behind a workbench top that runs across the front under the tire rack. An S-K parts-washing tank butts against the workbench and the right wall and then more workbench continues along the wall for about four feet. The bench top is end-grain maple. Tool boxes and more storage cabinets were stowed under the benches and a small air compressor chuffing away made the extension cord hot. Bare fluorescent fixtures line the right and front walls at about eye level.

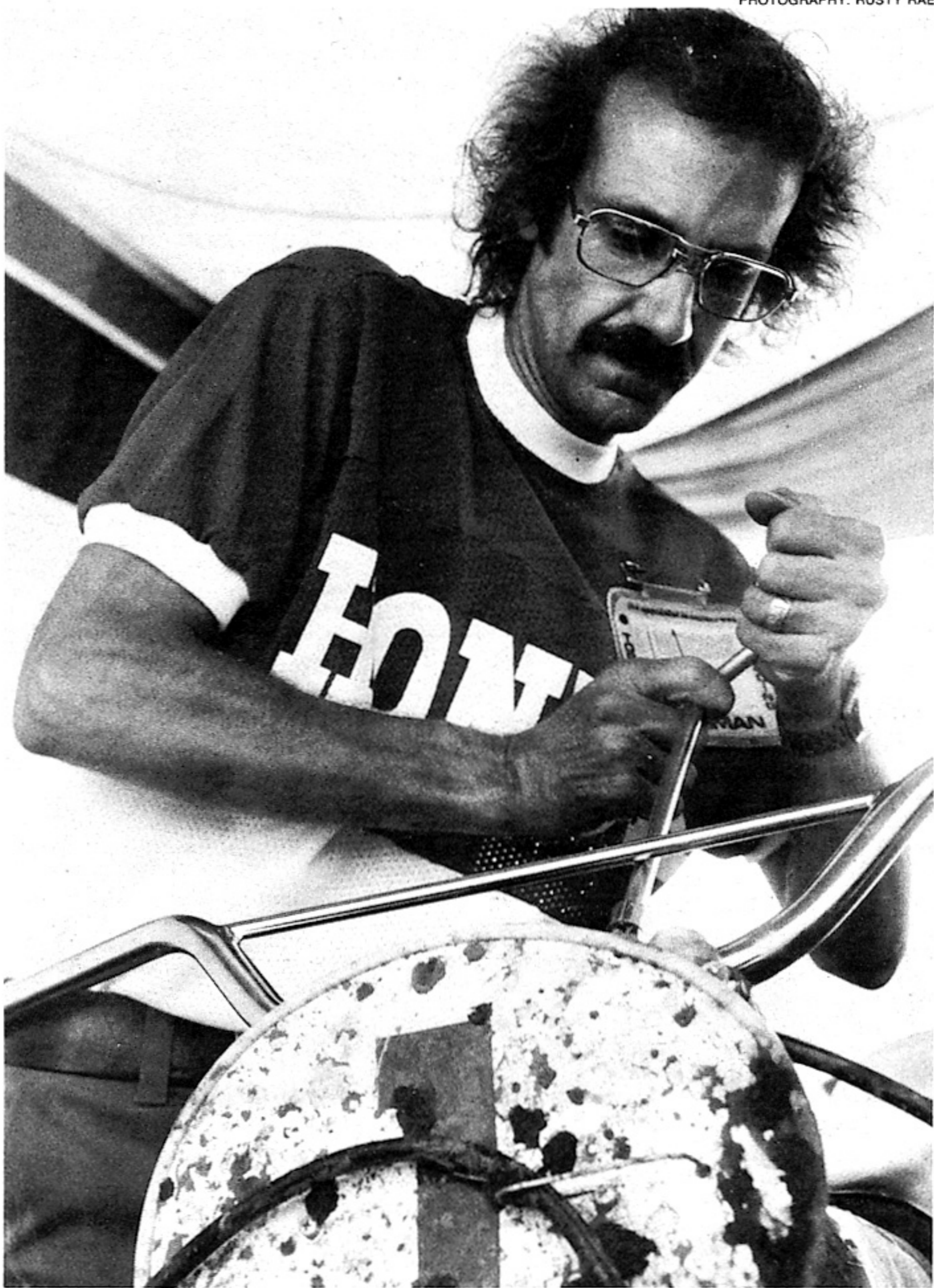
A gaunt, bespectacled Abe Lincoln/Art Garfunkel of a figure sprints from one of the spindly little bikes to a parts closet, to a tool box, and back to the bike. His eyes are wide and intense as they scour a pair of stripped crankcases in the parts washer, cleaning and inspecting. Gaskets are eased off with a stainless steel Snap-on scraper. Abrasive oil stones, constantly washed and trued, are used to perfect the gasket surfaces. It's Jon C. Rosenstiel (sounds like rose 'n steel), the wrench-flinging kingpin of the Honda team. His energy and knowledge inspire the younger and less experienced mechanics.

A twin to the first truck lumbers up and disgorges the other two mechanics assigned to this tour, Roy Turner and Merle Anderson. Turner is muscular and regular featured with straight, shoulder-length hair; Anderson is a great, ambling, red-faced bear. Both men obviously are still punchy from the road as they stumble and stretch and yawn, unable to focus.

"Hi, Jon R. What's happenin'?" Boy, am I bushed. Been at the wheel all night while

# HONDA: THE GIANT ROARS

PHOTOGRAPHY: RUSTY RAE



## RIGHT HAND OF THE GIANT

**Officially he's Marty Smith's mechanic, and guardian of the red racers. The name is Jon Rosenstiel, but everyone calls him Jon R.**



By Jess Thomas



## HONDA: THE GIANT ROARS



"The best tire to use is the lightest one that will give acceptable traction for one moto."

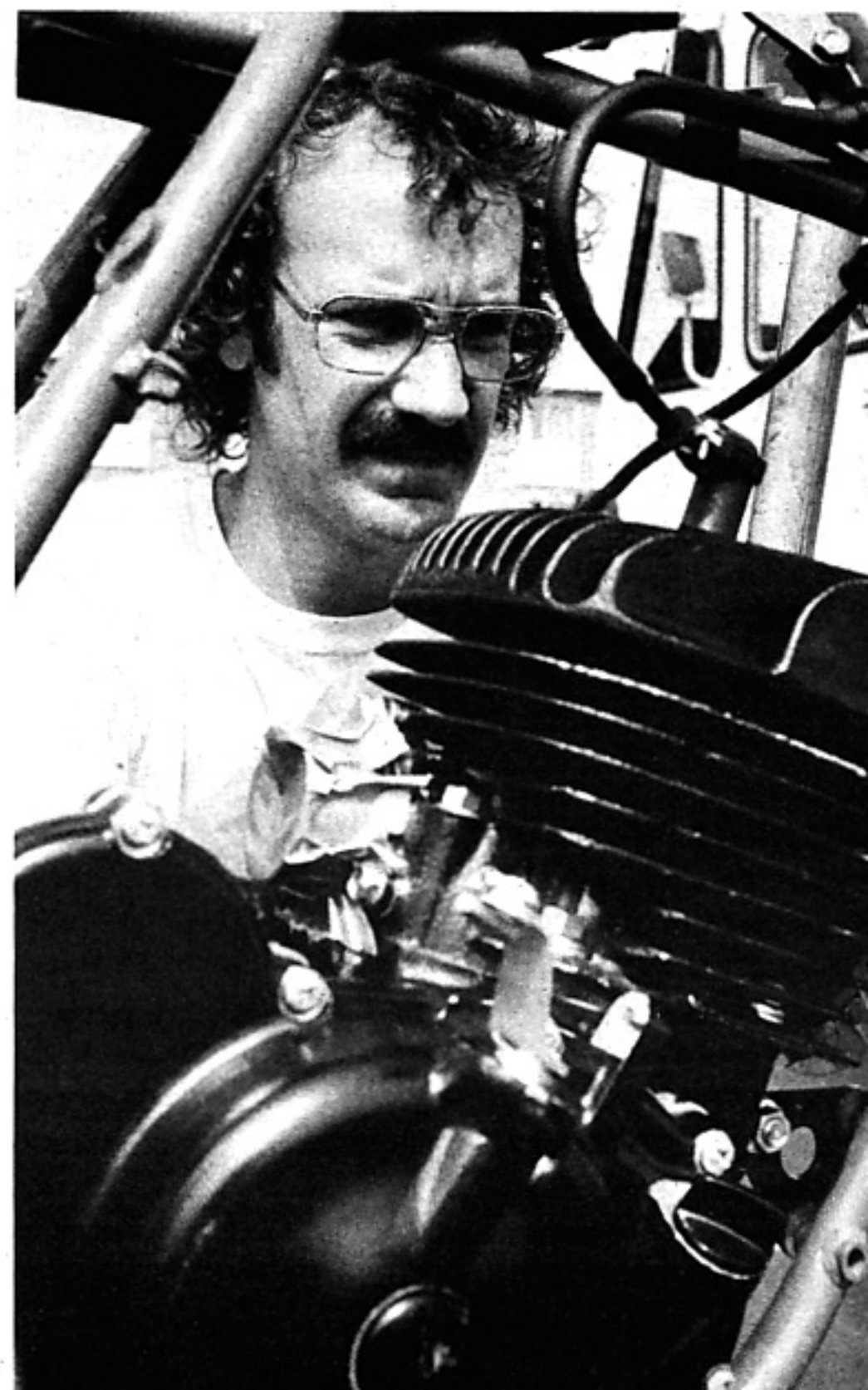
32

that turkey was sacked out," shouts Turner.

"Yeah, sure, you Romeo," counters Anderson. "He just woke up when I pulled off the pike and says, 'Guess I can drive a while now'."

The two continue to hassle and jab each other back to life until Rosenstiel finally asks if they had any more tire trouble with their truck. The voice is a flat monotone, soft and somehow deprived of force by energy spent elsewhere. Feeling rewarded at having captured his attention, the two trot over to the tennis court and sluggishly start a game that shortly warms into being merely awful. The ritual soon brings about the desired change of season in their faces, though, and they go off to check into their rooms.

When Roy and Merle return, they unload the second truck, set up shop, and begin their work. Each man is responsible for one rider's machines: one main and one backup bike for each class entered. For this race, Jon R. has Marty Smith's 125cc bikes for the National Championship feature race, Merle has identical machines for Tommy Croft, and Roy is in charge of Pierre Karsmakers' 250cc



machine for the supporting event.

After each race, the main bikes are completely stripped and every component is thoroughly inspected before reassembly. Any parts suspected of being defective are carefully labeled and stored for return to the factory. Many parts are strictly one-race items: pistons, rear sprockets and chains are replaced, cheap insurance against failure. Scrupulously maintained notebooks on each engine establish any patterns of failure as early as possible.

These team bikes are genuine factory racers. They are hand-built in the race shop of Honda Research and Development, Ltd., a separate company that is relatively autonomous from the parent Honda Motor Co., Ltd. and its U.S. subsidiary, American Honda Motor Co., Inc. Any machine produced in the Honda R&D shop carries the distinctive RC-prefix model and serial number and an equally unmistakable tool-room look to its manufactured parts. As a result of the time required to make such special parts, and the huge number of projects filling R&D's daily schedule, spare parts must be ordered far in advance.

But for all the effort and expense the bikes represent, no special magnetic-particle or dye-penetrant fracture testing is used to check the components on a weekly basis. Apparently none is needed, for the team has amazingly few mechanical failures. Conventional preparation and the proverbial 90/10 ratio of sweat-to-genius combine to keep the team in top shape on the mechanical end.

After cleaning and inspection, all the painted parts on the bikes are touched-up with spray cans, so the machines look almost new as they roll out for technical inspection at the races each week.

The rebuilding routine consumes an average of 30 hours per week. Unless too much time is spent driving to the next race location, improvements to the transporter/shops are made and the hours may be found to do some experimentation with the bikes. If there is no crash damage to make right, the guys get to knock off work between five and six in the evening. With a schedule that keeps them away from their Los Angeles-area homes some 25 weeks during the year, the evening relaxation is necessary to restore enthusiasm for a largely-repetitious workday.

For extra responsibility, and for being on the road so much, the Honda mechanics get a 50-percent bonus above the base salary for an equivalent job at the home office. An additional living allowance pays for dinner at a good steakhouse when they feel like it. Roy and Merle are bachelors and they will sometimes "check out the local dive," though Merle took a lot of kidding for being so straight-arrow lately due to the influence of a pretty brunette who worked for the Honda dealer in Elkhart, Indiana.

But mostly the guys go to a movie or watch TV or bench race and harass each other in the evenings. While there is a fair amount of friendly interchange with the mechanics of the other teams over

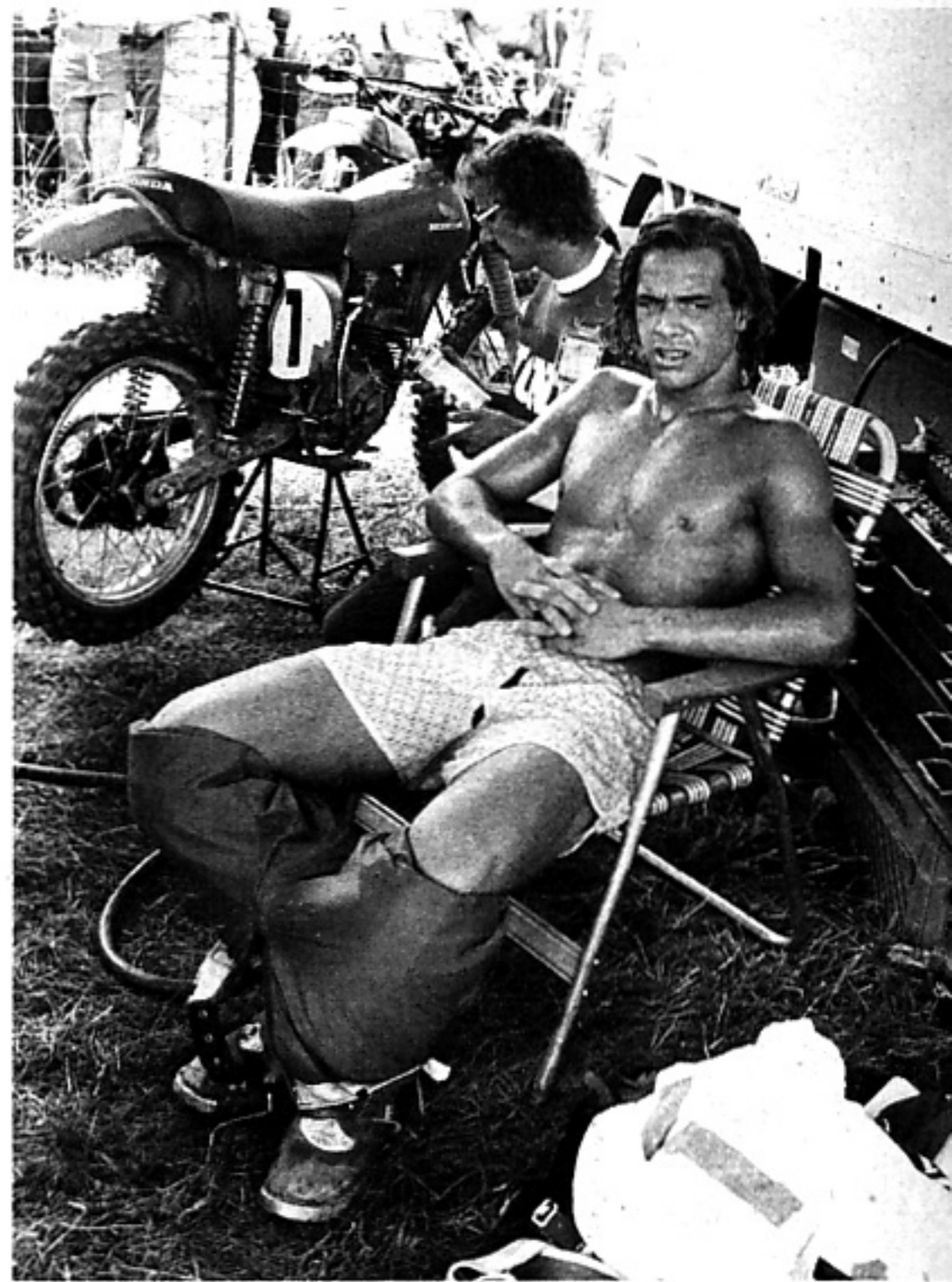
supper and a beer, there is never any talk that is technically specific. They are ever aware of the competitive nature of their business.

Even in the evening, Jon R. (never addressed by any other name) is ill at ease when he's not working at filling out his personal notebook or keeping the parts inventory up to date. Maybe it's partly a basic shyness, but he's constantly fiddling with his watch, moustache, a pencil or paper clip or anything. Conversations eased away from nervous formality after a couple of days when he saw he wasn't going to be subjected to some kind of Mike Wallace-type big-deal interrogation.

Jon R.'s father was a farmer in Illinois when the son came along 32 years ago. Then there was a farm implement business. The boy grew up with a day-to-day confrontation and understanding of machines and tools. Taking apart radios and reading electronics handbooks led to his getting a ham license for a while as a teenager. Then the senior Rosenstiel opened a truck and heavy equipment repair garage about the time of the big motorcycle boom of the mid-Sixties. Jon bought a Honda to ride to work at the garage. Soon the family had a partnership in the local Honda agency and Jon divided his time between repairing diesel engines and Hondas. Just before joining the Navy, he became fairly adept in the local scrambles races.

After returning to Illinois for a while to work in the Honda shop, Jon R. decided to move to Southern California for a change of pace. In 1970 he wrote to American Honda's service department to ask if they knew of a position open in an L.A. area dealership. The answer was a call from one of Honda's employment counselors to take a series of tests in St. Louis. A couple of months later, a manager from American Honda's Product

"Marty's just a baby now. If he can sustain his drive, he'll be a World Champion within two years."



**The Giant  
pays him  
to be right,  
and Jon R.  
knows it.**

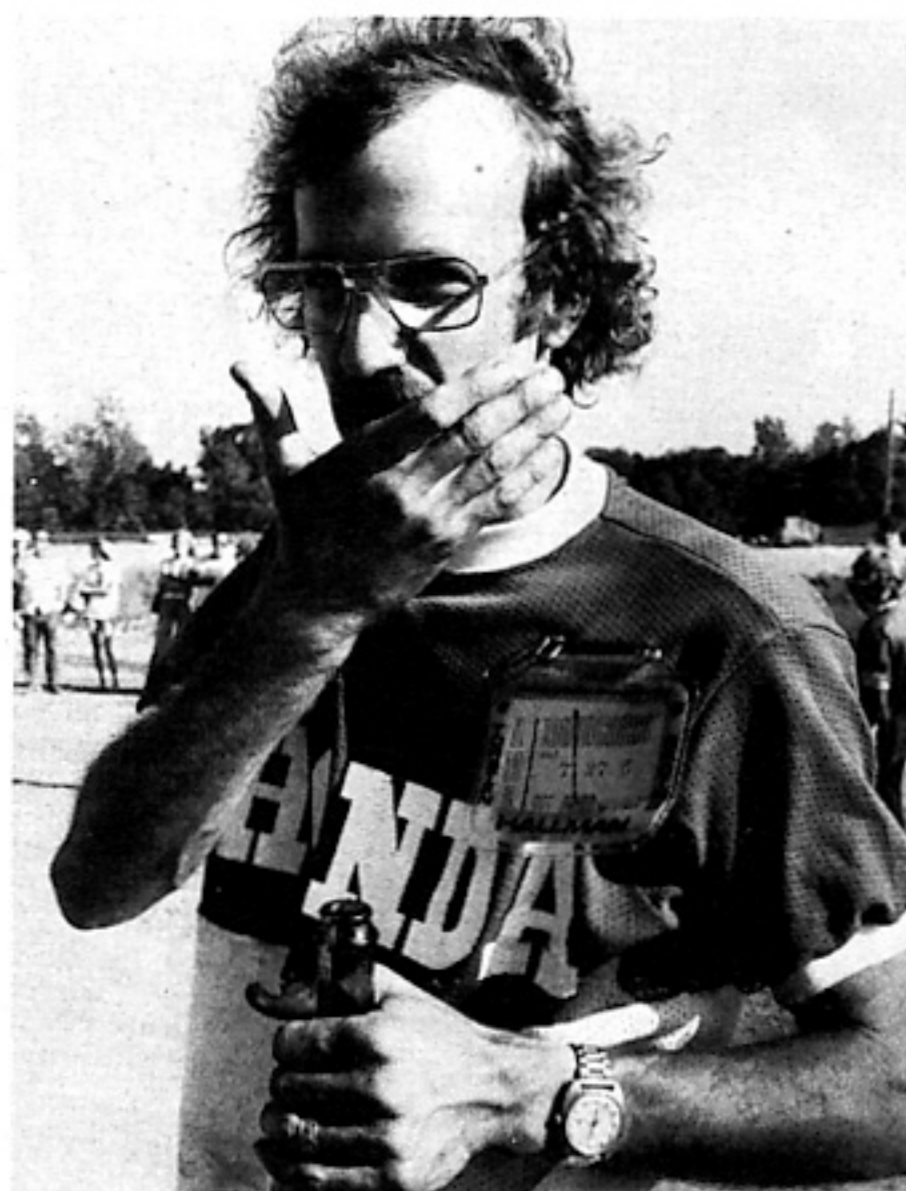
Testing Department called and hired him over the phone. At Honda, he was a development mechanic for 2½ years before going to the racing department.

Jon Rosenstiel feels good about what he's doing and figures that he is adequately paid. He wouldn't change his situation just to be changing, and hasn't considered what he would do if Honda suddenly quit racing. "I'll worry about that

# HONDA: THE GIANT ROARS



**If he makes  
a mistake,  
omnipotent  
Honda can lose.**



"Ain't nothin' Pierre  
ain't hard on,  
least of all himself."

when the time comes." The six- and sometimes seven-day working week suits him. "If I weren't on the road working, I'd spend the weekends and nights working on Warren's bike." Warren Reid is his 16-year-old stepson—who is accompanying the team on this trip, helping out whenever possible, and campaigning a 125 Elsinore of his own. Warren's mom, Jon's wife of two years, is described as "vital and self-assured" by Jon's friends. He says that she does not object to the long absences because "she works as hard as I do and has many interests. And it sure is nice when I come home."

Jon R. is an exacting taskmaster. No matter how relaxing and prolonged an evening's fun may have been, he is up and rousing the others at 7:30 on work mornings. Though the mechanics are officially equal in status, he clearly is the first among these equals. There is never even a grudging glance in negative reaction to what he says. Roy Turner is in his second year on the team and he works

almost entirely independently. But both Merle Anderson and his rider, Tommy Croft, are new to the team this year and Anderson checks his decisions with Jon R. frequently. How tight should a bearing be or how much play should there be in a shift linkage? Experience knows.

On the final day of preparation, your Man On The Spot slept a little late and got out to the trucks about nine, to be greeted with a barrage of static about how soft a life it must be to work for a magazine, etc., etc. from Turner and Anderson. Jon R., already in high gear and moving like a cat, barely looked up from his work. The crankcases for Marty Smith's spare engine were smoking-hot on a Calrod hotplate. He lifted the right half from the plate and his hands flew to assemble the crankshaft and gear clusters in it before it cooled enough to tighten the bearing fits. Screwdrivers stabbed home from about two feet out. The tools moved like extensions of his hands. The left case half was eased onto the assembled right one and mated with a deft swat from a heavy plastic mallet. The eyes were never anywhere but where the tool was going to impact; there was no wasted motion or energy. The same artist's-brush precision was displayed with a vise, and a pneumatic impact wrench.

Only after the last engine is carefully stowed away, ports taped and quirks recorded, will Jon R. stop to talk and explain. Despite the complete tool-room origins of the 125s, they are remarkably similar to the production bikes. To be sure, there is titanium and magnesium and chromium-molybdenum alloy where you'd find steel and aluminum pieces on the production counterpart, but the frames, engines, and wheels appear very similar. Appearances aside, the RCs turned out to be so light that some ballast was required to meet the minimum weight requirement imposed by the AMA and FIM. The solution was one typical of Honda R&D: they cast heavier cylinder heads in solid copper.

There are pairs of fork bridges stored away that have varying amounts of steering offset to comply with the style and strength differences of riders, and the

*(Continued on page 103)*



demands of different circuits. And high and low handlebars to go with the thick and thin seats.

We aren't at liberty to describe the induction system differences, but Jon R. says that the crankcase control reeds were much more influential on the bike's original flattish torque curve than to the present road racer-type power. The machines as received from the factory had engines very well suited to rough, slippery tracks. As Marty Smith developed last year, it became evident that he needed more sheer speed to cope with our relatively smooth, fast courses. R&D was swamped at the time and it was up to the mechanics to make the necessary changes. Ironically, it was a little book written by *Cycle's* own Gordon Jennings (*Two-Stroke Tuner's Handbook*) that provided Jon R. with the key to the changes he wanted. All the engines' time-area values fitted the classic formulas for a flexible and high-revving engine but the RC's inlet size. Removing the 29mm RC carburetors and installing 34mm Mikunis initiated a line of development that was completed with a corresponding exhaust system made by Don Emler at Flying Machine Factory in Harbor City, California.

With the engine working the way they thought it should, attention was directed to a chronic rear suspension hammering that Smith complained about. The Girling gas shocks they still use were chosen during a week of testing last fall.

As Jon R. talks, he only hesitates when asked non-technical questions. Opinions and personal matters are the things that require reflection. In the same vein, the only things he seemed concerned about all week were the supply of ice water he consumes all day, a source of clean shop towels, and the location of a properly-equipped 25¢ car wash to clean the bikes after the race on Sunday.

Saturday morning: time to have the bikes inspected and sealed at the mall of a nearby shopping center. Then the riders begin arriving and check in to reassure themselves that the machines were in the expected perfect order. The tempo picked up as the almost-electric nervous energy of the riders infected all those around. The riders' eyes scoured the machines at a glance and Marty Smith remarked on the only different thing he sees from a hundred such times: there is paint flaking from the spoke flange of the rear hub. There is some more trivial and slightly nervous conversation between rider and tuner. There is obvious mutual respect, but absolutely no expression of warmth. It is business-time.

Later, Jon R. talks in quickening bursts of the racers and the probable course of tomorrow's events.

"Those kids make me nuts (Smith and Croft). The first thing they do is climb up in the truck cab and put on Turner's rock tapes and turn the volume wide open. Everything they do is wide open. I don't see how they can think. Maybe they don't.

"Marty rides harder and faster than

Karsmakers. He rides the corners much faster. He goes in harder and brakes harder. For Marty, tomorrow is only a possibility. For Pierre, motocross is a business and he treats it with a businessman's rules. That includes not sticking his neck out when it's not likely to give him an equivalent return on his investment.

"But Pierre is the strongest man I've ever met. He relies on sheer strength and stamina. Marty can beat him on the smaller bikes for a while, but Pierre is the only one strong enough for long enough to do the job on one of the 500s so far. And he's the best development rider in the business. His recommendations bring about improvements. He can break anything."

Roy Turner tosses in a condensed evaluation: "Ain't nothin' Pierre ain't hard on, least of all himself. But he does get things done."

Jon R. continues to reflect.

"Marty's just a baby yet. If he can sustain his drive, he'll be a World Champion in a couple of years. He's already incredible. These GP bikes are so highly tuned and uncompromised that a lesser rider couldn't cope with them. The power band is extremely narrow; it's horrible on a muddy track. And the suspension is very sensitive to change. Once I mistakenly put a four-ply tire on the rear and Marty could hardly get around. He thought something was broken. And the weight difference is only three pounds. The best tire to use is the lightest one that will give acceptable traction for a full 45-minute moto. A heavy tire will make a good shock go bad," Jon R. intones in a put-on broken-heart parody of a truck-stop ballad.

On Sunday morning, the pre-honed and oiled and programmed combination is at the track when the gate opens at 8:30. Nothing goes wrong with the team, but fumbles on the part of the promoting club delay the start of practice until 11:20. Smith waits until practice is about half over and the mud holes are drying before he even starts the bike. He goes out and rides hard for ten minutes, then comes in and asks Jon R. to put the low seat and bars back on. He tries that combination for a few more laps and then parks the bike until the first of the two 45-minute motos he will have to endure.

All Jon R. will say at the race is: "I get very nervous. Sometimes I wake up Sunday morning and wish I was a librarian or something."

Things go like clockwork. Marty Smith completely dominates both motos from start to finish and Jon R. orchestrates the whole thing with his signal board. Then Marty has to drag Jon R. to the base of the presentation stand, but he absolutely cannot coax him up to share the glory. Jon R. grins sheepishly a lot and then loads up the now-filthy work of art for a re-enactment of the ritual again next week. ©