

THE FIRST MOTORCYCLE JACKET

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Inside a Factory Race Hauler

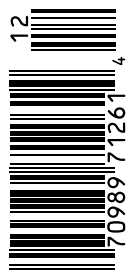
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Motorcyclist



NOV
DEC
2017

NOVEMBER/DECEMBER 2017
\$6.99 US/\$8.99 CAN
DISPLAY UNTIL 11/28/17



Gasoline versus

THUNDER AND LIGHTNING

electricity at

AND

the pinnacle of

performance

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PHOTOGRAPHY BY SPENSER ROBERT

THIS STORY ISN'T
ABOUT THE FUTURE OR
WHAT IT MAY HOLD.

IT'S ABOUT TODAY.

It's about the pinnacle of performance in two-wheel propulsion as it stands in the year 2017. Right now. This story is about the best evolution of each technology and a city in which both bikes come alive. World-beating power and a quarter-mile of asphalt.

Take a moment to consider the small miracle of these two machines—posing side by side, a Christmas tree in the middle and a straight stretch of pavement shimmering under the lights ahead—rising to the top of the motorcycling world. A supercharged literbike, Kawasaki's H2, and the electric Lightning LS-218, named after its record-breaking land-speed run. Similar enough that it's impossible to know which will win and so different it's hard to know where to start.

We could go back a century and a half, to when there were more electric vehicles than gas-powered ones, but there's no sense in dwelling on the past. Better to go to a place that represents the cutting edge of technology in society: San Francisco, a city hot with welders burning and new buildings reaching into the sky, while beneath on the urban jungle floor the digital information of a new generation of technology flows in torrents. It's the perfect place for an all-digital superbike to face off against the best internal combustion has to offer.

Stage lights illuminate in sequence. Edging the LS-218 forward means twisting the grip ever so slightly, waiting for an ominous click from the motor and the top run of the chain to stretch tight. It stares down the strip through squinty LED eyes. Silent and stoic. The H2 burps baritone revs out the pipe. Four cylinders in line but with a special tone—the chirp the engine makes when the throttle closes is a friendly reminder of the forced induction along for the ride. The H2 hints at something special every time you look at or listen to it.

Depending on your perspective of motorcycles and motorcycling, Kawasaki might feel like a regular-size company that aligns with other brands around the world. It's not. Kawasaki Heavy Industries is a colossal business, more than 100 years old with tens of thousands of employees working on trains, ships, aerospace, gas turbines, and industrial robots. The H2 isn't just a supercharged, \$28,000 motorcycle. It's the best ideas the brain trust of a global superpower in aero and fluid dynamics, metallurgy, and engineering can assemble, all in one place.

Which is why the paint glistens just so. It's applied by hand and actually isn't paint at all. H2 body panels are primed, wet sanded, and then a chemical combination is sprayed on, which cures by reacting and creating a layer of pure silver. Layers of clear coat are added until it looks like the whole bike was carved from a bubble of mercury. It's menacing. It reflects the light of the dragstrip and soaks it up at the same time.

G R E E N L I G H T .



Next to the Kawasaki's screaming pistons you can't hear the Lightning's rear tire struggle for grip as the front floats just above the road. It's a 230-hp rocket that makes almost no noise. It whirs and whines and pulls like a possessed elevator to hyperspace. The H2 is gently lofting the front wheel too—and not even on the boil. Sixty feet down the track and not even two seconds have elapsed. Both bikes are just starting to stretch their legs.

But the truth is, it takes a herculean effort to get to the strip at all, especially if you're a young electric motorcycle company. Lightning comprises 15 employees nestled into a warehouse on an unassuming street in Silicon Valley. The CEO himself unloaded the bike from the company truck for us to ride it. There is no aerospace or bullet-train division. It's just a small industrial space and a bunch of people bursting with ideas for how to make electric bikes viable. And in the context of motorcycling history, they haven't been at it very long.



KAWASAKI HAS TO OFFER

IS A MONUMENTAL STEP FORWARD FOR ELECTRIC BIKES.



ABOVE The mean streets of San Francisco. Meaner with the Kawasaki and Lightning strutting their stuff. No passenger pegs and no nonsense. Street legal, yes, but it's debatable if they should be.

Lightning started a little more than 10 years ago, with a lithium battery shoved into a Yamaha R1 frame and just enough horsepower (about 65) to make everyone believe that electric propulsion could be the future. Over the past decade, the company has won the Pikes Peak International Hill Climb, FIM world championship events, and reached 218 mph at Bonneville. Acceptance grew with the accolades. Now anyone with \$38,000 and change can purchase a bike with the Lightning power and pedigree. Nothing happens in an instant, but the LS-218's evolution has been rapid.

The machine is rapid too. After an eighth of a mile, the LS-218 is still wheelying, pushing more than 200 hp to the tarmac. The only sound is chain spinning and wind hissing around the carbon bodywork. Six and a half seconds down the strip and still not wide open. Aboard the H2, revs climb into five digits. The supercharger impeller spins at 10 times crank speed, smashing air through 16 valves slamming open and shut hundreds of times every second. It's a blur of alloy and fire, dipped in black chrome. It's behind the Lightning but catching up.

Ironically, everywhere other than a dragstrip, catching up is what the Lightning still has to do. Riding across San Francisco Bay and into the city showed the LS-218 for what it is: a race-bike with lights, and an unapologetic one. Even tall riders are stretched out toward the low clip-ons. Necks are craned and wrists are cramped. A big and bright LCD dash shows rpm and speed, along with a gaggle of other data points that you have to learn to read before you take off. The blinker switch is tricky to reach, the seat is thin, and there's not much steering lock.

The H2 is docile, in large part, and not uncomfortable. The riding position is aggressive but also compact. The handlebars feel close to the seat, and if you scoot up you can trundle along pretty happily at city or freeway speeds. At 525 pounds it's about 30 ticks heavier than the Lightning but doesn't feel overweight. The little stuff has a well-executed feel



to it: Everything from the hybrid analog/digital dash to the switchgear to the way the seat meets the tank feels like it's evolved over generations of streetbikes.

And it has. Kawasaki has already solved hundreds of problems that Lightning hasn't run into yet. Suspension tuning, traction control—all of the nuances and complexities of becoming a mature, refined motorcycle—are yet to come for Lightning. Almost all of the nuances, anyway: The H2's throttle response is atrocious. It doesn't matter wide open.

Most of the way down the strip, the two beasts are at full sprint, both pulling maniacally toward 150 mph. The Lightning starts to run out of gearing with its 66-tooth rear sprocket, while the Kawasaki catches fifth gear, supercharger spinning at 120,000 rpm and singing its song. Nine-point-nine-four

seconds after the start, the H2 has covered a quarter-mile and is traveling 148 mph. The Lightning is less than a hundredth of a second and 4 mph behind.

Play the game of "if the Kawasaki just had a pipe on it" or "all the Lightning needed was different gearing" all you want. It's all totally true and totally irrelevant. Both bikes could go faster, and that's exactly what makes the parity so beautiful and so refreshing. Covering a quarter-mile in 10 seconds is a benchmark of speed that serves as its own achievement.

Keeping up with the best Kawasaki has to offer is a monumental step forward for electric motorcycles. To be complaining about little stuff like hard-to-reach switches and too-bright screens is so encouraging it could almost bring tears to your eyes. That stuff will evolve quickly. What the electric motorcycle industry needs is more emotion. It needs

things that leave you at a loss for words.

It's not just about rolling up next to a superbike and pushing your chest out. Motorcycling is about a connection with the machine. Whether it's freedom or exhilaration, there has to be a sense of togetherness. Pure thrust can be that conduit. Performance is a pillar of motorcycling imagination. When there's enough power on tap that it's in your hands to control it, there becomes a sense of cohesion between the person and the vehicle. It demands respect and rewards understanding.

What it means is that the end of this drag race is actually just the beginning of a new era of competition. The Lightning LS-218 isn't perfect, but the fact that there's even a conversation—that an electric bike actually creates feelings that are hard to describe—holds more potential than just horsepower. **M**