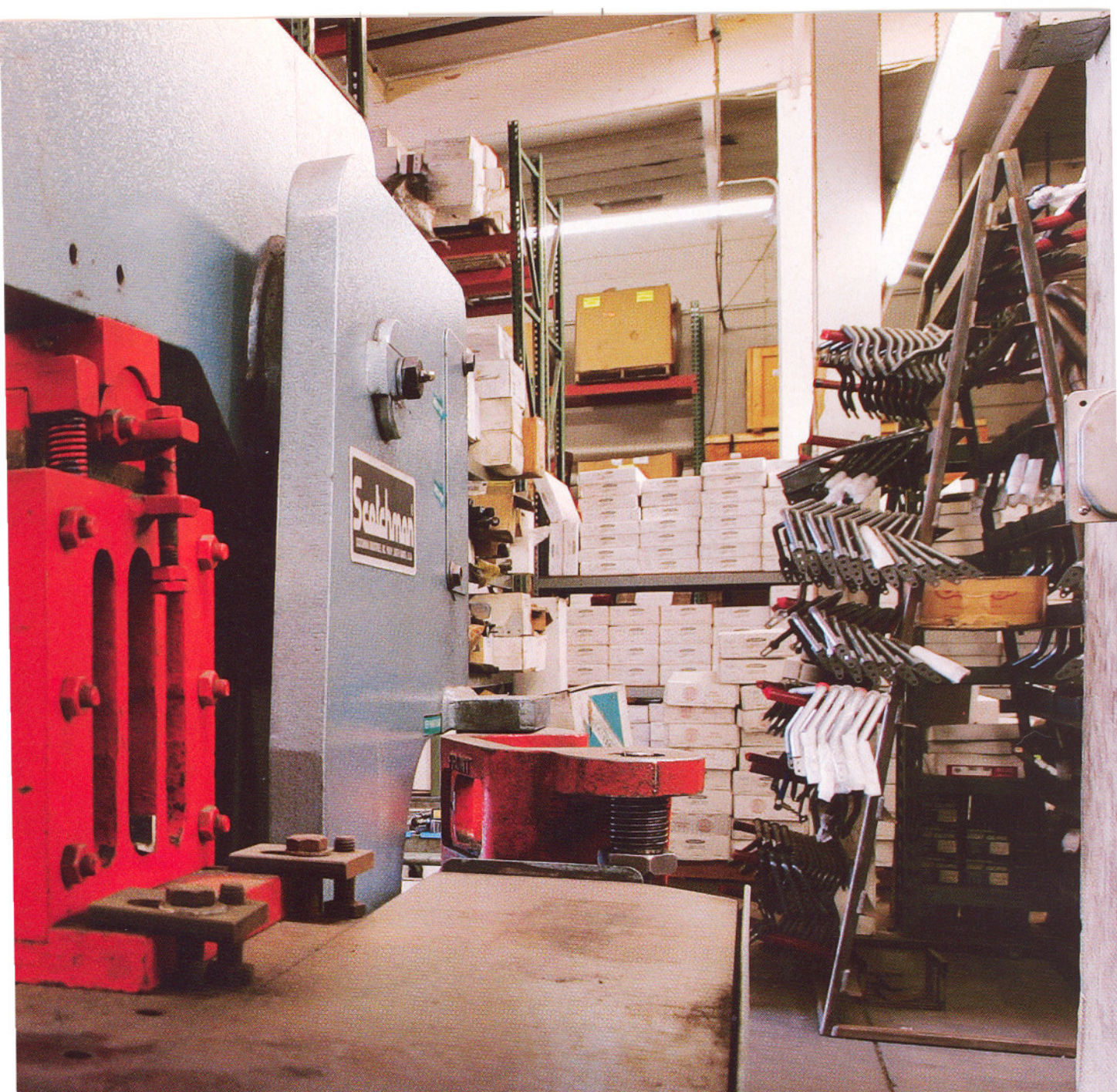




BY DAN MANES • PHOTOGRAPHY BY E. JOHN THAWLEY III

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Hasport's H22-Powered CRX

Whether it's the fuel-sipping HF version or the sporty Si, the Honda CRX has always been light, nimble and easy on the wallet. But one thing it could never do, with its little 1.5-liter engine, was hold its own in any contest of pole-swinging, pedal-mashing acceleration.

Until now.

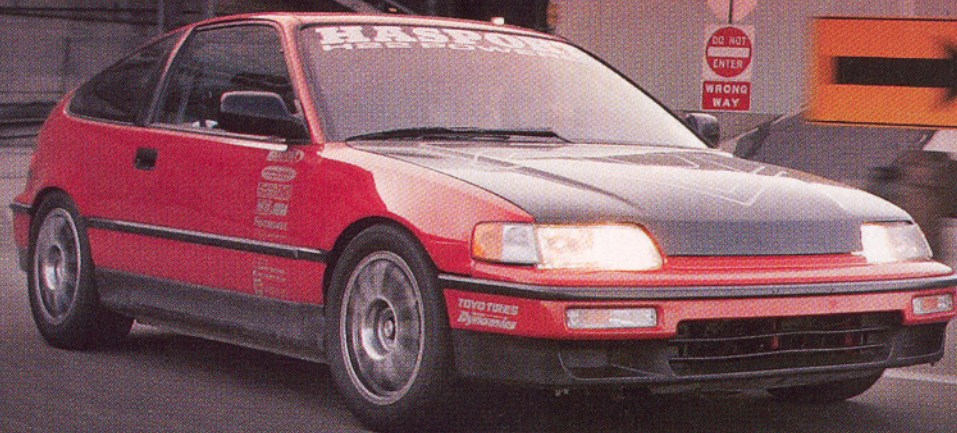
The good folks at Hasport Performance, Inc. have demonstrated it's possible to release your CRX's inner speed demon without shelling out piles of cash.

You probably know about Hasport and its extensive experience building engine mount kits for Hondas. One of the most recent additions to its collection is a kit for the H22A, an engine that

recently entered the realm of affordability.

To test this new kit, the company installed an H22A into the red CRX you see here (For all the gory details, go to page 124). The only problem was that the H22A, used to power the much larger Honda Prelude, displaces 2.2 liters and sports two space-eating camshafts. It would have been easier to ram a 1932 Kelvinator refrigerator into the overhead luggage bin of a Boeing 737.

But Hasport engineers aren't about easy.



DOING THE SWAP: HASPORT CRX

WHAT YOU NEED

1. 1988 Honda CRX
2. H22A DOHC VTEC engine
3. JDM H22A five-speed manual with limited-slip differential
4. Hasport H22A mounting kit for Civic/CRX EF chassis, part number EFH1
5. Nitrous Express Sport Compact system, modified for dry use
6. LoCash Racing ECU adaptor and P28 ECU with Hondata S200 system
7. RC 440cc/min injectors
8. AEM DC Sports header and intake

COST

Car: \$0-\$1,200
 Drivetrain: \$800-\$1,200
 Nitrous system: \$600
 Custom exhaust: \$200-\$500
 Suspension: \$3,000-\$3,500 (as seen here)

WHAT TO DO

Mounting: The engine is huge and requires a mount kit. The Hasport mount kit replaces the passenger-side bracket on the frame rail with a new piece that allows clearance for the shifter mechanism. The driver-side engine bracket is replaced as well with a new Hasport part that allows the engine to be bolted to the stock bracket on the frame rail. The smallish engine bay also needs some strategic dents placed to allow the engine to mount flat so that the stock orientation can be retained. This is necessary to maintain transmission lubrication and engine oil recovery.

Wiring: The easiest thing to do is modify the stock engine harness since it's 80-percent correct. Use bits off the H22 engine harness to modify the EF harness. (See "Hybrid How-To" on page 124 for full details.)

Engine Management: The EF has pre-OBD electronics and the H22 is OBD I/II. The two systems are not compatible. To connect an OBD I ECU to the EF, an ECU adaptor harness is needed. One solution is to modify a '92-'95 Civic Si ECU with the Hondata S200 system. This allows laptop tuneability and dry nitrous control along with other features.

Plumbing: A '90-to-'93 Integra radiator provides a little more cooling capacity and the outlets happen to be the same size as the H22's. Try replacing the lower hose with a B18A's and the upper with a '90 Accord's, trimmed to fit. For the fuel plumbing, use a '90-to-'93 Accord fuel rail and fuel lines. Any aftermarket 2.5-inch exhaust pipe should work well.

Drivetrain: A good solution is a JDM Prelude transmission with a limited-slip differential. For the clutch, try a Clutch Masters stage 4 clutch for launching on nitrous. The Driveshaft Shop is the place to go for axles.



WHAT TO DO NEXT

Suspension: The Progress Group offers complete suspension packages that work well.

For a race-worthy setup, install these parts:

Front coil-overs: Progress Group coil-over system 600# (75.1002.TA) or 450# (75.1002.HC)

Rear coil-overs: Progress Group coil-over system 800# (75.1002.TA) or 650# (75.1002.HC)

Rear anti-roll bar: Progress Group rear anti-roll bar (62.1001)

Bearings, bushings, adjusters: Progress Group front camber adjusters (18.1024), front pivot bearing kit (18.1000), front strut rod kit (18.1001), rear race bearings kits (18.1002), and rear tow link kit (18.1025)

Brakes: For the front brakes, check out the Fastbrakes 11-inch OEM upgrade discs and Axis Ultimate pads. You can leave the rear brakes stock, but go with better pads such as Axis Ultimates.

HORSEPOWER

Nitrous is the key to more power on the cheap.

1. More nitrous
2. Rebuild the engine stronger after you blow it up
3. Even more nitrous or maybe a turbo

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They're about putting powerful engines into little Hondas and doing it right. In fact, others have tried to put an H22A into the Civic/CRX chassis before, but these efforts typically have come up short in ground clearance.

So, the Hasport boys were determined to go the extra mile to ensure the CRX would be a legitimate, practical, fast and cheap daily driver. At the same time, they sought to keep the hood low enough to retain the two-seater's signature low cowl and superb sightlines.

Their solution involved "denting," a technique that isn't considered ideal to anyone not in the know. We're not talking about accidental denting. Rather, this is strategic denting, necessary to allow better placement of critical components. Specifically, one dent was placed in the firewall so the engineers could move the engine back and align the axles, and another in the frame rail to make room for the transmission.

In addition to all the denting, Hasport's gurus did extensive engineering on two critical engine mounts. They replaced the mount on the frame rail where the transmission attaches with an entirely new design, improving crank pulley clearance. And they reworked the mount supporting the front of the engine, reinstating proper alignment with the stock frame rail bracket.

Hasport also remounted the alternator closer to the ground so it wouldn't encroach on the headlamp bucket and modified the crank pulley to clear the frame rail. Despite all this clever engineering, the stock hood was too low to clear everything

comfortably. Fiber Images had an ideal solution: a replica of a JDM SiR hood, except for its length, which was curtailed to fit the slightly stubbier front end of USDM models.

Modifications to the engine itself were less extensive. In fact, in an effort to keep things as cheap as possible, Hasport left the engine's internals alone. When you consider that this 2.2-liter DOHC VTEC packs 91 hp per liter bone stock and that a CRX only weighs about 2,200 pounds, they could have left the externals alone, too.

But how much fun would that have been?

So, in went a header and cold-air intake, both courtesy of AEM. The intake was originally conceived for the B16A, a powerplant that first came stateside under the hood of a '94 Civic del Sol VTEC and promptly generated headlines for its 100-hp-per-liter output. While AEM could have delivered an H22A version, Hasport went with the B16A because it offered the tidiest fit under the CRX's cramped hood.

Hasport still had one more trick up its sleeve. It elected to use a dry nitrous system, which mandated several other

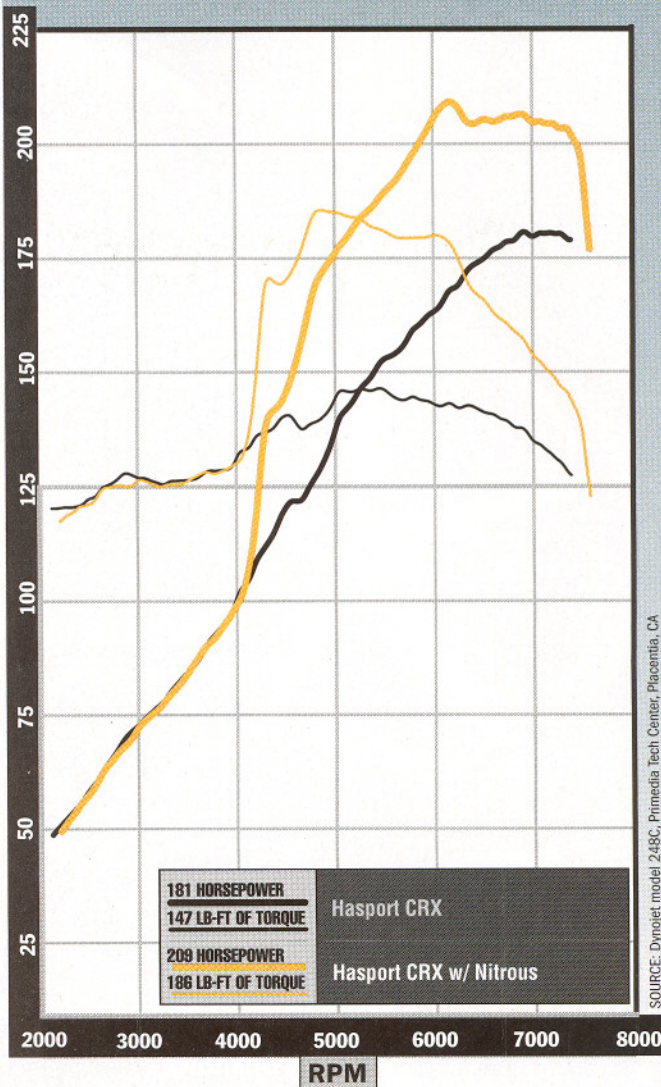
hardware changes.

Besides the twin nitrous tanks under the hatch and switches on the dashboard to power the system on and off, a Nitrous Express Sport Compact system installed downstream from the intake delivers the gas. RC injectors provide the requisite petrol, and the brain behind the operation—a Hondata S200 system—sits in a P28 ECU modified by LoCash Racing.

With some tuning assistance from Joe Sawyer of LoCash Racing and Doug MacMillan of Hondata, the

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DOING IT RIGHT.**

Hasport CRX



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nitrous system was on line and ready to go.

With all this thrust waiting to be unleashed, Hasport sent out a search party for a JDM H22A transmission with a limited-slip differential. Password JDM delivered, ensuring, along with a Clutch Masters Stage 4 clutch, that all the power would get to the ground via the wheel that would use it best. Hasport fitted Team Dynamics Pro Race 15x7-inch 12-spokers wearing sticky Toyo Proxes RA-1 meats.

Hasport fitted wider tires in the front

than the rear (225/45ZR-15 vs. 205/50ZR-15) to help balance the chassis at the limit. It also upgraded the front brakes with 11-inch Fastbrakes discs and calipers from a '94 Acura Integra and Axxis Ultimate pads.

To keep the tires firmly planted and to quell body roll, Hasport turned to The Progress Group for a complete suspension upgrade package, including coil-overs, anti-roll bars, camber adjusters, a strut rod kit, a toe link kit and an upper arm kit.

Changes to the interior include removal of a few superfluous components like the air conditioner, heater and stereo, the addition of a Honda S2000 shift knob and, of

course, those two big nitrous bottles where there used to be space for luggage.

Exterior mods were similarly minimal. Except for a few exterior decals, a Hasport banner across the upper part of the windshield and the slightly suspicious-looking black hood, you'd never know this CRX is packing heat.

Get behind the wheel of this thing, though, and you won't have any doubts about the performance. Even with the nitrous system off, acceleration is abundant. Turn it on and acceleration is like being in a refrigerator dropped off a cliff. This car doesn't encourage you to drive fast for any length of time—the noise level is just this side of ludicrous and a mechanical bull would be gentler on your backside—but you will find yourself slowing down just to experience the rush of speeding up again.

If you find yourself hurtling toward a sharp curve at an inadvisable speed, you won't have to question the power of the brakes, the grip of the tires, or the honest feel of the manual steering. And, thanks to equal-length halfshafts, what would have been a torque-steering monster is surprisingly free of any wheel-yanking antics.

**GET BEHIND THE WHEEL OF THIS
THING AND YOU WON'T HAVE ANY
DOUBTS ABOUT THE PERFORMANCE.**



The Secret of Japan's Best Racers

"Before using Swift, I didn't know how much springs could be a secret weapon."

- Nobuteru Taniguchi

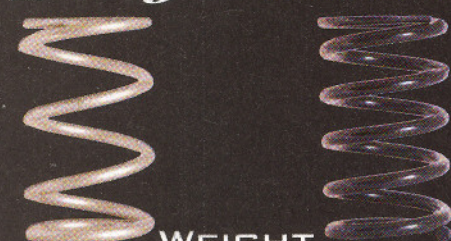
D1, JGTC
Super Taikyu
LeMans 24hr



Why The Pros Choose Swift

- ☒ Increased Handling & Control
- ☒ Smooth Consistent Weight Transfer
- ☒ Better Sprung-to-Unsprung Weight Ratio
- ☒ Great Ride quality
- ☒ Faster Times

Swift BRAND X



WEIGHT

5LBS 11OZ 8LBS 7OZ

STROKE

5.2" 4.3"

WIRE DIA.

0.61" 0.65"

DURABILITY

+999,999 173,582

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springs

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909.923.9788

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This is a racecar that could pass as a daily driver. Our in-house Dynojet reports that the engine, with nitrous coursing through its veins, is good for 209 hp at 6200 rpm and 186 lb-ft of torque at 4800 rpm at the wheels. Even if you manage to deplete both tanks of N₂O, you'll still have 181 hp and 147 lb-ft of torque to work with.

If these figures don't knock your Gold

GIVEN THE PALTRY \$8,000 HASPORT INVESTED IN THIS PROJECT, THIS CAR IS A STELLAR EXAMPLE OF THE BUDGET TUNER CONCEPT.

Toes off, note we're talking about 2,240 pounds of pocket rocket. So it's no surprise the CRX does well on the track, finishing the quarter mile in 13.7 seconds with nitrous and 14.1 without.

Slap on some slicks and the improved launch will get you through the traps in 13.5 seconds—faster than the last 2005 WRX STi we tested. Not that the Z-rated Toyos, which pulled an otherworldly 1.03 g on the skidpad, are anything to sneeze at.

Given the paltry \$8,000 Hasport invested in this project, not counting the \$500 it cost to buy a 1988 CRX with a nonoperational engine, this car is a stellar example of the budget tuner concept. It goes to show that, with some clever packaging, even a CRX can leave some serious sheet metal in its wake. ■

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HASPORT CRX

WHAT IT'S GOT

Hp @ the Wheels: 209 hp @ 6200 rpm
Hp w/o Nitrous: 181 hp @ 6900 rpm
Torque @ the Wheels: 186 lb-ft @ 4800 rpm
Torque w/o Nitrous: 147 lb-ft @ 5150 rpm
Test Weight: 2,240 lbs
Power-to-Weight Ratio: 10.7 lb/hp

ENGINE

Engine Code: H22A
Type: Inline four, aluminum block, aluminum head, DOHC VTEC, dry nitrous system
Internal Modifications: Stock
External Mods: AEM header, AEM intake for B16A, Nitrous Express Sport Compact system modified for dry use
Engine Management Mods: Hondata S200 installed in a P28 ECU by LoCash Racing, RC 440cc/min injectors

DRIVETRAIN

Layout: Transverse front engine, front-wheel drive
Drivetrain Modifications: JDM Honda H22A five-speed manual with limited-slip differential

SUSPENSION

Front: Progress Group coil-overs, anti-roll bar, bearings, bushings and adjusters
Rear: Progress Group coil-overs, anti-roll bar, bearings, bushings and adjusters

BRAKES

Front: Fastbrakes OEM upgrade 11-in. discs, '94 Acura Integra calipers, Axis Ultimate pads
Rear: Axis Ultimate pads

WHEELS AND TIRES

Wheels: 15x7-in. Team Dynamics Pro Race w/40mm offset (F) and 35mm offset (R)
Tires: P225/45ZR-15 (F) and P205/50ZR-15 (R) Toyo Proxes RA-1

INTERIOR

Accord shifter, S2000 shift knob, nitrous system toggles, removed A/C and stereo

WHAT IT CAN DO

Acceleration
No Nitrous / With Nitrous / Nitrous + Slicks
Quarter-Mile Time: 14.1 / 13.7 / 13.5 sec.
Quarter-Mile Speed: 100 / 104 / 107 mph
0-30 mph: 2.7 / 2.8 / 2.6 sec.
0-60 mph: 6.0 / 5.8 / 5.4 sec.
0-100 mph: 14.2 / 12.3 / 11.9 sec.
Handling
Slalom Speed (700-ft. slalom): 72.7 mph
Lateral Grip (200-ft. skidpad): 1.03g
Braking
60-0 stopping distance: 113 ft
70-0 stopping distance: 154 ft
80-0 stopping distance: 202 ft

WHAT IT CAN BEAT

Quarter Mile: On the bottle, it's faster than the last 2005 WRX STi we tested
Slalom: Acura NSX
Skidpad: Just about everything—Project Silvia, Dodge Viper SRT-10