

HASPORT PERFORMANCE

Installation Instructions For:
Part Number EFH1
1988-1991 Honda Civic/CRX

Hasport Performance mounts are the result of extensive research and engineering. All mounts are designed with up to date solid modeling software. Each mount is constructed of lightweight 6061-T6-billet aluminum and CNC machined in our state-of-art machining facility. Hasport Performance motor mounts control engine movement, transferring more power to the wheels. All mounts have a limited lifetime warranty against any defects. Warranty information is printed on the back of this instruction booklet.

Please read all instructions before proceeding with the installation

EFH1

INSTALLATION INSTRUCTIONS

WARNING: The H series engines are much taller than the stock D-series. To eliminate ground clearance issues the engine was raised and will not work with a stock hood. An SiR style hood or SiR front end conversion will need to be used. Even with the taller SiR hood you may still need to use spacers or cut away some inner structure on the hood.

List of Parts included in this kit:

Quantity	Description
1	Left Billet Aluminum Mount
1	Left-Hand Aluminum Engine Bracket
1	Right Billet Aluminum Mount
1	Right-Hand Steel Bracket
1	Rear Billet Aluminum Mount
1	Cable to Hydraulic Adapter
1	Alternator Relocation Brackets
1	Left Hardware
1	Right Hardware
1	Rear Hardware
1	Alternator Relocation Bracket Hardware

Tools Required

**Metric Socket set 8mm – 19mm, 32mm Socket, 3/8” Short, Medium & Long Extension, 10mm Line Wrench, 10mm, 12mm, 14mm, 17mm, 19mm & 22mm Open-end Wrenches, Die Grinder with Cut-off Wheel & Sanding Disk
Sawzall, Drill with Spot Removal Bit, 2.0” Hole Saw, Hammer (BFH)
Pry-bar, Roll-Pin Punch Set, Needle-Nose Pliers, Hose-Clamp Pliers
Sharpie® Marker, Stud Extractor, MIG or TIG Welder, 2-Post Automotive Lift**

Additional Recommended Items

Factory Service Manuals for 1988-1991 Civic/CRX and 94-95 Prelude VTEC
(Available from www.helminc.com or Honda/Acura Dealer)
Patience

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This is a very complicated engine swap. If you have never performed an engine swap before, Hasport recommends that you have this swap performed by a competent shop.

These instructions pertain **ONLY** to the **ENGINE MOUNTING** of a H-Series motor into an EF civic chassis.

A general list of additional parts needed for the H-Series swap in the 1988-1991 Civic/CRX is listed below.

Quantity	Description
1	Hasport EFH1 Bolt In Mount Kit (This Kit)
1	H22 Intermediate Shaft
1	Hasport EFHAX Axle Set
1	H22A Motor and Transmission
1	Hasport EFWH OBD0 – OBDI Conversion Harness
1	H-Series ECU
1	94-97 Accord Shifter Cables & Shifter Box or 93-95 Prelude Shifter Cables & Shifter Box
1	98 Prelude Throttle Cable
1	OBD0 – OBDI ECU Adapter (Can be purchased from ECUADAPTERS.COM)
1	Cable-Style Vehicle Speed Sensor (VSS)
1	Hasport EGHRB Rear Prelude Bracket (Rear Engine Mount Bracket from 93-95 Prelude VTEC)
1	Modified Accord or Prelude crank pulley
1	90-93 Accord Lower Radiator Hose
1	94-96 Prelude VTEC Lower Radiator hose
1	Alternator Belt (Gates Part No K030310)

Removing the Engine: (Save all Bolts, You will Need Most of Them!)

1. Discharge R134A or Freon from AC system. (Have a professional evacuate your system.)
2. Place the car on a lift. (2-Post Automotive Lift)
3. Disconnect the negative and positive battery cables and remove the battery, with battery tray. (10mm & 12mm Socket)
4. Disconnect ECU from the cabin harness. (10mm Socket)
5. Disconnect engine harness from driver's side and passenger side shock-tower. (No Tools Needed)
6. Disconnect positive battery cable from starter and remove the starter cable from the under-hood fuse box. (12mm Wrench, Phillips Screwdriver)
7. Drain the fluids: Oil, Transmission, and Coolant (17mm Wrench, 3/8” Ratchet)
8. Remove shift knob from shifter. (No Tools Needed, Unless you have a ricer shift knob)
9. Remove the lug nuts & wheels (19mm Socket & Impact Wrench)
10. Remove the left and right shock forks. (17mm, 14mm Socket & 17mm Wrench)
11. Disconnect left & right lower ball joints (17mm Socket, Ball Joint Tool, Hammer)
12. Remove CV-axles (32mm Socket, Impact Wrench & Pry-Bar)
13. Remove the front engine mount on the lower cross member and transmission. (14mm Socket)
14. Remove the front lower cross-member. (17mm & 19mm Socket)
15. Remove a-pipe & catalytic converter (14mm socket, 12mm & 14mm Wrench)

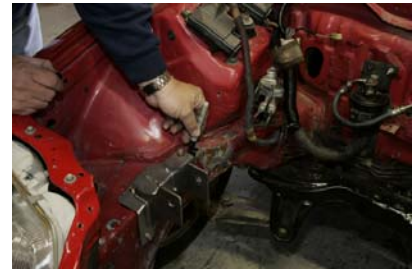
16. Remove shift linkage. (Roll-pin Punch, Hammer, Extension, 12mm Socket & 12mm Wrench)
17. Remove radiator with fan assembly. (10mm Socket & Hose-clamp pliers)
18. Remove heater hoses. (Hose Clamp Pliers)
19. Remove the clutch cable. (No Tools Needed)
20. Remove AC system: AC lines, compressor, condenser and fan. (10mm Socket)
21. Remove fuel line & fuel return line. (22mm or 17mm Socket & Needle-Nose pliers)
22. Remove throttle cable. (12mm Wrench)
23. Remove brake booster hose from motor. (Needle-Nose Pliers)
24. Remove cruise control unit & cable (optional). (10mm Socket & 12mm Wrench)
25. Remove power steering belt and pump. (optional) (12mm Socket)
26. Remove any additional connections that attach the motor to the chassis.
27. Secure the motor on a stand or engine hoist. (Roller Cart, Engine Hoist)
28. Remove the rear engine bracket. (17mm Socket)
29. Remove left mount. (14mm & 17mm Socket)
30. Remove right mount. (14mm & 17mm Socket)
31. Remove motor from car and remaining rear engine mount. (14mm Socket & Lift or Hoist)

Preparing the Engine Bay:

1. Remove the stock OEM right-hand engine bracket from the frame rail. Use a spot drill to remove the spot-welds from the bracket.



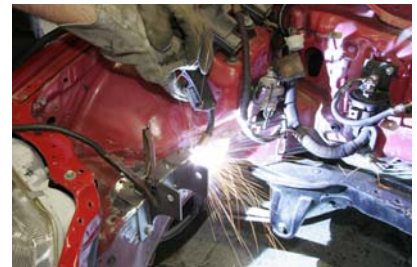
2. Bolt the right bracket to the passenger side frame-rail using the 12mm battery tray bolts. Using a marker trace the outline of the bracket onto the frame-rail.



3. Unbolt the bracket from the frame-rail and set aside. Remove the paint around the outline you traced on the frame-rail and prepare it for welding.



4. Bolt the bracket back onto the frame-rail. Stitch-weld the right-hand engine bracket to the passenger side frame rail.



5. Clearance the chassis frame rail to make room for the transmission case. Use the sawzall and die grinder to cut a notch as wide as the right hand engine bracket under the frame rail bracket. Lower the car over the engine to get an idea where to cut the frame rail. Make sure you reinforce the frame rail after you have removed the material from the frame rail!

6. Create a dent in the fire wall using an impact hammer or a sledge hammer. The dent will insure that the intake manifold will fit into the engine bay and that the rear mount and bracket will fit. Lower the car over the engine to get an idea where to place the dents in the firewall.



7. Bolt in the rear mount to the rear cross-member using the rear mount hardware supplied with the mount kit.
8. Use a hole saw to create a hole in the firewall. The hole will be used to route the shifter cables to the shifter box.



Preparing the Motor:

1. Remove the valve and timing covers along with the OEM left hand engine bracket. Install the Hasport aluminum engine bracket. Trim the timing belt case so that it can be reinstalled over the Hasport aluminum engine bracket.



2. Remove the electronic vehicle speed sensor (VSS) from the Prelude transmission. Install the cable driven vehicle speed sensor from your stock motor onto the Prelude transmission.
3. Install the cable to hydraulic adapter assembly on the transmission.



4. Because of the size of the Prelude engine, the crank pulley will need to be modified. The outer pulley, used for powersteering, will need to be removed. You can also use an under drive pulley like this one from Unorthodox Racing.



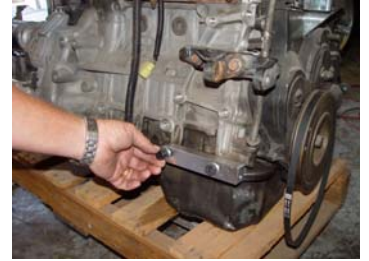
5. Bolt the alternator bracket adapter to the block as shown in the picture. Use the supplied 10mm x 35 mm and one of the 10mm x 30 mm bolts to attach.



6. Bolt the EF alternator bracket to the adapter using the stock hardware. The oil dipstick tube will need to be bent slightly so it does not interfere with the alternator bracket.



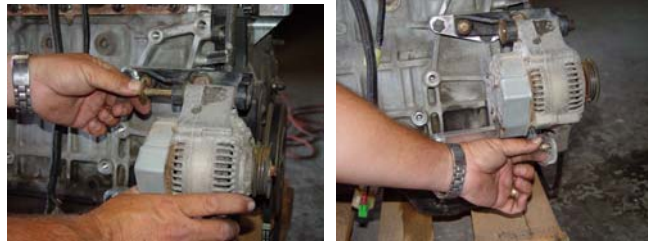
7. Bolt the alternator adjusting plate bracket to the block using the two 10mm x 45mm bolts.



8. Bolt the EF alternator adjusting plate onto the bracket using the 10mm x 25mm bolt provided.



9. At this point you can install the EF alternator using the stock hardware. It will mount upside down as compared to how it mounted on the EF engine. You can also wait until the engine is in the vehicle.



10. Using the alternator belt referred to in the list of additional parts at the beginning you can tension belt and tighten the alternator. Tension the belt as you would with the EF engine. For proper belt alignment the alternator belt should ride on the two outer grooves of the crank pulley if an Accord pulley is used. If a Prelude pulley is used, there will be one open groove on the outer most edge of the pulley.



11. Connect the Hasport wiring conversion harness to all of the proper connections on the motor. Leave the ECU Plugs on top of valve cover at this time.



Installing the Motor:

1. Place engine and transmission assembly onto the engine stand and lower the car onto the motor as depicted below.



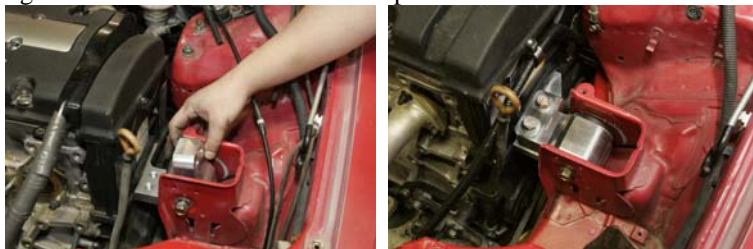
2. Pull the engine towards the front of the car and insert the rear Prelude engine bracket, just like KDM James, Male Import Model™, in the pictures below.



3. Place the right-mount on the top of the transmission and insert the 12mm washers, nuts and bolts supplied in the left-mount hardware bag. Snug the 12mm bolts and nuts down to the transmission but do not fully tighten them until all three mounts are in place. Insert the 12mm X 120mm Bolt, supplied in the hardware bag through the engine mount bracket and the engine mount.



4. Align the left mount's bolt hole up with the left OEM bracket's through hole. Using the stock hardware and the mount kit hardware, attach the mount to the engine bracket and. Snug the 12mm locknut down to the 12mm through-bolt but do not tighten until the other mounts are in place.



5. Torque all mount and bracket bolts according to specifications below. (14mm, 17mm, 19mm Socket & 17mm, 19mm Wrench)

Mount / Bracket	Torque Specification (lbf*ft)
Hasport Mounts to Brackets	47
Left Mount to Transmission	40
Left Bracket to Frame Rail	33
Right Mount to Engine Bracket	40
Right Bracket to Frame Rail	43

6. Plug the engine harness into the plugs on the drivers and passenger side shock tower. Run the sub-harness through the firewall to the ECU.
7. Relocate the battery to the trunk.
8. Install the radiator and radiator hoses.

9. Install the OEM clutch cable onto the cable to hydraulic adapter assembly.



10. Install the Prelude shifter cables on the transmission. Route the shifter cables into the Civic/CRX's cabin through the small hole in the floor, in front of the old shifter location.

11. Use the template, attached to these instructions, to cut a hole in the floor for the Prelude or Accord shifter box to be installed.



12. Fabricate the shifter box mounting location.



13. Install the header and exhaust

14. Raise the car in the air and notch out the OEM lower front cross member to clear the Prelude header and the oil pan. Use a sawzall or a die grinder to clearance the lower cross member. If you do not want to cut the lower cross member, there are a few aftermarket applications that can be substituted.

15. Install the left and right Hasport EFHAX axles, put the suspension back together and the wheels on the car. (14mm, 17mm, 19mm, 32mm Socket & 17mm Wrench)

16. Congratulations! Hopefully, you have just successfully completed the H-Series engine installation into your 1988-1991 Honda Civic/CRX. Additional information & tips pertaining to installing the accessory systems for the H-Series swap in an EF Civic/CRX can be obtained online at www.hasport.com

