

# HASPORT PERFORMANCE

Installation Instructions For:  
Part Number EFK1  
K-series Mount Kit for the 1988-1991 Civic and CR-X

## HASPORT PERFORMANCE Inc.

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**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-the-art machining facility. Hasport Performance motor mounts control engine movement, transferring more power to the wheels. All mounts have a lifetime warranty against any defects.

**WARNING:** The K-Series engine is much taller than the stock D-series and cannot be used with a stock hood. An SiR style hood or SiR front end conversion will need to be used.

### Recommended Tools

1. Metric Sockets sizes 10mm, 12mm, 14mm, 17mm, 19mm, 32mm
2. 3/8" Short, Medium & Long Extension
3. 10mm, 12mm, 14mm, 17mm, 19mm & 22mm Open-end Wrenches
4. Die Grinder with Cut-off Wheel and/or Reciprocating Saw
5. 2 Open End Adjustable Wrenches
6. Hammer
7. Pry-bar
8. Roll-Pin Punch Set
9. Large Locking Pliers
10. 1/2" Drill Bit
11. Drill
12. Spot Weld Drill Bit
13. Hose-Clamp Pliers
14. Felt Tipped Marker
15. Stud Extractor
16. MIG or TIG Welder for Welding Sheet Metal

### Things that Make Life Easier

1. Automotive Lift
2. Factory Service Manuals for your vehicle and 2002 RSX (Available from [www.helminc.com](http://www.helminc.com))

### Please read all instructions before proceeding with the installation

These instructions pertain **ONLY** to the **ENGINE MOUNTING** of a K-Series Motor into a 1988-1991 Honda Civic and CRX

If you are installing a K24, you will need to purchase an additional engine bracket from Honda. This bracket is needed in-order for the right-mount to properly bolt up to the K24 motor. *Honda Part #: 11910-PPA-000*

A general list of parts needed for the K-Series swap in the chassis listed above is listed below.

Quantity	Description
1	Hasport EFK1 Bolt In Mount Kit (This Kit)
1	K20A Intermediate Shaft
1	Hasport EFKAX Axle Set or other correctly sized axle
1	K20A or K24 Motor and *Compatible Transmission
1	Hasport EFWK Conversion Harness
1	K-Series ECU with Immobilizer removed
1	RSX Shifter Box & Cables
1	Throttle Cable that matches your engine
1	Custom Header
1	External Fuel Pressure Regulator and appropriate fuel lines
1	3/8ths inch Booster Hose
1	An Appropriate Radiator and Hoses
1	Radiator Fan Switch (optional adapter)
1	Water Temperature Sensor (optional adapter)

\*Hasport's transmission side bracket works only with manual transmissions that come in the 2002 up Civic Si and 2002 up RSX or Integra.

**Right Hand****Hardware**

Quant.	Description
1	12mm X 1.25 X 120mm Hex Bolt
1	12mm Flat Washer
3	12mm Flat Washer

**Right Hand Bracket****No Hardware****Rear Mount****Hardware**

Quant.	Description
1	12 X 1.25 X 100 Hex
2	12 X 1.25 X 80 Hex
5	12mm Washer
2	12 X 1.25 Lock Nut

**Rear Bracket****Hardware**

Quant.	Description
1	10mm X 1.25 X 35mm Flange Bolt

**Left Mount****Hardware**

Quant.	Description
2	10 mm X 1.25 X 70mm Hex Head
4	12mm Flat Washer
1	12 X 1.25 Lock Nut

**Left Hand Bracket****Hardware**

Quant.	Description
3	12 mm X 1.50 X 30 Hex Head
1	½" SAE Thick Grade 8 Washer
3	12mm Washer

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

1. Have a professional evacuate your AC system.
2. Place the car on a lift or on jack-stands. (Jack Optional)
3. Disconnect the negative and positive battery cables and remove the battery, with battery tray, and disconnect the engine harness from the chassis. (10mm Socket)
4. Disconnect engine harness from the left and right side shock towers connectors and underhood fuse box.
5. Disconnect positive battery cable from starter and underhood fuse box.
6. Drain the fluids: Oil, Transmission, Radiator & Clutch (17mm Wrench, 3/8" Ratchet, 10mm Line Wrench)
7. Remove shift knob from shifter. (No Tools Required)
8. Remove the lug nuts & front wheels (19mm Socket)
9. Unbolt the left and right shock forks from the front lower control arms. (17mm Socket & 17mm Wrench)
10. Disconnect left & right lower ball joints (17mm Socket, Ball Joint Tool, Hammer)
11. Disconnect the radius rods from the lower control arms and then remove them along with the front crossmember. (17mm wrench & 17mm Socket)
12. Remove 32mm nuts on the ends of the CV-axles and remove the axles (32mm Socket, Impact Wrench, Pry Bar)
13. Remove shift linkage (Roll-pin Punch, Hammer, Extension, 12mm Socket & 12mm Wrench)
14. Remove a-pipe & catalytic converter (14mm socket, 12mm & 14mm Wrench)
15. Remove radiator with fan assembly. (10mm Socket & Hose-clamp pliers)
16. Remove heater hoses. (Hose Clamp Pliers)
17. Disconnect the clutch cable from the transmission.

18. Remove parts of the AC system: AC lines, compressor, condenser and fan. (10mm Socket, Open End Adjustable Wrenches)
19. To aid installing the new engine wiring harnesses and relocating the brake proportioning valve remove the AC evaporator box and AC subharness from under the dash. (10mm socket, 12mm & 10mm Wrench)
20. Disconnect fuel line & fuel return line from firewall. (22mm or 17mm Socket & Needle-Nose pliers)
21. Remove throttle cable. (12mm Wrench)
22. Remove brake booster hose from motor. (Needle-Nose Pliers)
23. Remove any additional connections that attach the motor to the chassis.
24. Secure the motor on a stand or engine hoist. (Roller Cart, Engine Hoist)
25. Remove the rear engine bracket. (17mm Socket)
26. Remove left mount. (17mm Socket)
27. Remove right mount. (17mm Socket)
28. Remove motor from car. If you have a lift, raise the vehicle off the engine. If you have an Engine Hoist pull the motor out of the engine bay.
29. Remove the remaining rear engine mount. (14mm Socket & Lift or Hoist)

### **Preparing The Engine Bay**

1. The stock right-hand transmission bracket on the frame rail will need to be removed to make room for the new bracket supplied by Hasport. This can be done in two ways. The bracket can simply be cut from the framerail using a reciprocating saw or die grinder and any remaining sheet metal that interferes with the new bracket can be removed by grinding it away with a die grinder. Another solution would be to drill out the spot welds holding bracket to the framerail and removing the bracket. (Reciprocating Saw, Die Grinder, Center punch, Spot Weld Bit and Drill)
2. Place the new bracket on the framerail so that it can be bolted on using two of the existing threaded holes originally for the battery tray. These bolts are not strong enough to hold the engine during operation but are used to position the bracket properly for welding. Use the felt tipped marker to mark the open holes on the Hasport bracket on the underlying frame rail. Remove the bracket and clean the areas marked down to the bare metal. These marks will be for rosette welds to attach the bracket.
3. Re install the bracket and rosette weld the open holes. For most applications you will not need to fill all the holes with rosette welds. A minimum of 4 should be made with one top front, one top rear and two on the side front and rear. (MIG or TIG welder)
4. Since the stock radiator outlets will not work with the K-series engine, remove your lower radiator supports with a spot drill. Relocate the mounting tabs for the radiator you will be using.
5. Remove the purge canister and fuel filter, these will need to be relocated later.
6. Unbolt the brake proportioning valve from the frame rail along with the wire harness brackets. Use a pair of large locking pliers to clamp the proportioning valve together while you remove the mounting bracket. Flip the bracket over and mount it to the other side of the proportioning valve.
7. Gently bend the brake lines so that the proportioning valve can be swung towards the firewall to be mounted there. Take special care not to kink any of the brake lines. If you have removed the AC evaporator from under your dash, you can drill two new holes through the bracket and firewall to mount the proportioning valve securely.
8. The Hasport kit mounts the transmission differential very close to the rear crossmember. To prevent contact a dent will be place in the crossmember for clearance. Measure approximately 2.5 inches from where the lower control arm mounting brace connects to the crossmember and put a ¼ inch deep dent in the crossmember. Directly above this point is a lip that will need to be bent up too. It is best to test fit the engine in the car to make sure that the crossmember has adequate clearance as it would be very difficult to do if you decided more clearance was needed after the engine was installed.
9. Install the new rear engine bracket on the rear crossmember using the three stock rear mount bolts. In the hardware provided by Hasport there will be a forth bolt to be used also. Do not tighten all the bolts yet. Place the rear mount in the rear bracket. Using the 12mm X 120mm bolt, 12mm locknut & 2-12mm flat washers, supplied in the rear-mount hardware bag, attach the mount to the bracket; do not tighten the lock nut yet.

### **Preparing The Motor**

1. Remove the relay(s) from the Hasport conversion harness.
2. Connect the K-series engine harness and Hasport conversion harness to all of the proper connections on the motor. Determine where you will be placing the radiator fan switch and water temperature gauge sensor and make any make sure the adapter harness connectors have sufficient length to reach them. Leave the ECU Plugs and other interior plugs on top of valve cover at this time. (No Tools Needed)
3. Remove the studs on the transmission. (Stud extractor)

### **Installing The Motor**

1. Bolt the left-hand mount to the left-hand bracket using the 12mm X bolts, washers and lock nuts provided in the LH hardware bag. Finger-tighten the bolts at this time.
2. If you have an engine hoist, lower the engine and transmission assembly into engine bay. If you are performing the swap on a lift, place engine and transmission assembly onto the engine stand and lower the car onto the motor as depicted below. (Engine Hoist or Lift & Engine Stand)
3. Place the left-hand bracket with mount attached on the top of the transmission. A thick washer will be placed between the bracket and transmission under the outside hole on the rear of the bracket as a spacer. Insert the 12mm X 35mm bolts and washers, supplied in the left-mount hardware bag. Snug the 12mm bolts down to the transmission but do not fully tighten yet. (19mm Socket)
4. Install the new left-hand mount in the bracket on the framerail and put the stock mount bolt through to hold it in place. Do not tighten it yet.
5. Place the right-mount in the bracket over the studs on the motor's right-hand engine bracket. Install the stock 12mm flange nut onto the tall stud and the supplied 12mm locknut and washer onto the short stud. Snug the 12mm locknut and flange nut down to the bracket but do not fully tighten until the other mounts are in place. (17mm & 19mm Socket)
6. Raise the motor or lower the car so the right mount's bolthole lines up with the right-bracket's through hole. Using the 12mm X 120mm bolt, 12mm locknut & 2-12mm flat washers, supplied in the right-mount hardware bag, attach the mount to the bracket. Snug the 12mm locknut down to the 12mm through-bolt but do not tighten until the other mounts are in place. (19mm Socket & 19mm Wrench)
7. Next put the 12mm X 80mm bolt through the top bolthole and finger tighten a 12mm locking nut to it. (No Tools Required)

8. At this point go ahead and torque the hardware on the left and right mounts and brackets. See the torque spec chart below for correct torque specs. (14mm, 17mm, and 19mm sockets and torque wrench, 19mm open end wrench)
9. You no longer need to support the engine with a hoist or stand. In order to get the bottom rear mount bolt in lift the rear of the engine up while threading the 12mm X 80mm bolt and washer into the transmission. (17mm, 19mm Socket)
10. Torque all rear mount and bracket bolts according to specifications below. (14mm, 19mm Socket & 17mm, 19mm Wrench)

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

11. Run engine harness through the firewall to the ECU. You may use either the existing wiring harness opening or the AC evaporator line opening.
12. Install RSX shifter cables on the transmission. Route the shifter cables into the Civics' cabin by cutting a small hole in the floor in front of the old shifter location or low on the firewall. Check clearances with items like sway bars and catalytic converters to choose the best path. (Needle-Nose Pliers & Die Grinder with Cutoff Wheel)



13. Install the left and right Hasport EFKAX axles. (32mm Socket & Impact Wrench)
14. Clearances will need to be made to the crossmember so the oil pan will not make contact. Test fit the front crossmember to the car to determine what needs to be done. After the adjustments are made reinstall the crossmember, the other suspension components and the wheels on the car. (14mm, 17mm, 19mm, Socket & 17mm Wrench)
15. Install the clutch cable onto the Hasport Hydraulic/Cable conversion mechanism and adjust it as you would the stock clutch.
16. To hook up the wiring harness and ECU, please see the Hasport conversion harness instructions for the EFKWH.
17. The heater hose fittings on the engine are of two different sizes. Using 3/4 inch diameter hose connect the larger of the two fittings to the heater bypass valve. A hose clamp will be needed to secure the hose to the valve instead of the normal spring clamp. Use a 5/8ths diameter hose to connect remaining hose fitting to the heater core outlet.
18. Relocate the fuel filter away from the brake proportioning valve but so that the stock fuel hose can still reach the filter. Placement of the fuel regulator and fuel lines is dependent on how you choose to do the system.
19. Use a section of 3/8ths inch hose to connect the brake booster check valve above the CRX's booster to the brake booster line on the engine. On the purge canister there is a larger hose and smaller that connected to the throttlebody and purge solenoid valve respectively. To make the system operate correctly you will need to connect a vacuum line from both of these fitting to the purge valve on the throttlebody of the K-series motor.
20. To finish the project you will need to use a suitable header and have it connected to exhaust system.