

HASPORT PERFORMANCE

Installation Instructions For:
Part Number EFJ1 for
J-series V6 engines
into 1988-1991 Honda Civic and CR-X

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 and brackets have a limited lifetime warranty against any defects. Complete warranty information is available at www.hasport.com.

Please read all instructions before proceeding with the installation

EFJ1

INSTALLATION INSTRUCTIONS

WARNING:

The instructions here, deal only with the installation of the engine and transmission using Hasport's EFJ1 mount kit. There are no instructions for hooking up Air Conditioning, Power Steering, Wiring, Emissions Equipment, Exhaust or other peripherals. Please read through the entire instructions before attempting this engine swap. If you have questions regarding other aspects of this swap please call Hasport @ 602.470.0065

<i>List of Parts included in this kit:</i>					
Left-hand Mount		Right-hand Mount		Rear Mount	
					
Qty	Description	Qty	Description	Qty	Description
2	M12 x 1.25 x 45mm Bolts	2	M10 x 1.25 x 40mm Bolts	2	M10 x 1.25 x 30mm Bolts
4	M12 Flat Washers	2	M10 Flat Washers	2	M10 1.25 x 40mm Bolts
2	M12 Nyloc Nuts	2	M12 Flat Washers	4	M10 Flat Washers
		1	M12 x 1.25 x 110mm Bolt	2	M12 Flat Washers
		1	M12 Nyloc Nut	1	M12 x 1.25 x 100mm Bolt
				1	M12 Nyloc Nut
Left-hand Bracket		Right-hand Bracket		Rear Bracket	
					
Qty	Description	Qty	Description	Qty	Description
2	M12 Flat Washers	4	M10 Flat Washers	4	M10 x 1.25 x 30mm Bolts
1	M12 x 1.25 x 60mm Bolt	2	M10 x 1.25 x 150mm Bolts	4	M10 Flat Washers
1	M12 x 1.25 x 30mm Bolt	2	M10 Flat Washers		

Extra Tools Required for this Swap

**Center Punch, Electric Hand Drill, 1/8" Drill Bit, 3/8" Pilot Point Drill Bit,
Die Grinder, T30 Tamper Resistant Torx bit, 4 inch or larger C-Clamp**

Additional Recommended Items

Factory Service Manual for the chassis you are using
(Available from www.helminc.com or Honda/Acura Dealer)

Please read all instructions before proceeding with the installation

This is a complicated engine swap requiring modifications to the chassis. 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 J-Series motor and manual transmission into a 88-91 Honda Civic or CR-X chassis. There are still many other parts including wiring and ECU that will be needed for proper operation of the engine. These parts may be available from Hasport and other companies.

Our kit will allow the mounting of J-Series V6 engines and their manual transmissions. Manual transmissions for this swap can be found on the following models. 2003 and later model Accord with V6 and 2004 -2007 Acura TL Sport. The 2003 Acura CL Sport transmission can also be used with some modification. There were block changes on the 2008 and later J-series engines on most of the Honda and Acura models. They adopted the same bolt pattern found on the Ridgeline V6. These blocks require 2008 and later manual transmissions.

It is important to remember that engine swaps are not legal in all states or countries. It's best to check local laws regarding engine swaps before proceeding.

A general list of additional parts needed for the J-Series swap is listed below.

Quantity	Description
1	Hasport EFJ1 Bolt In Mount Kit (This Kit)
1	Hasport CMA (Clutch Master Adapter)
1	J-Series Engine complete (see list of recommended engines below)
1	Hasport Performance EFJ-series Swap Axles
1	J-Series Manual Transmission from 03-07 Accord, Acura TL or Acura CL
1	Intermediate Shaft (See list of compatible J-series intermediate shafts below)
1	Compatible Engine harness and ECU

List of compatible engines is below. As a general rule the J-series V6 engines with the cable operated throttle bodies are compatible. The newer engines may require modifications to the rear bracket and use a difficult to find intermediate shaft.

Engine Code	Year and Model
J30A1	00-02 Honda Accord, 97-99 Acura CL
J30A4	03-04 Accord
J32A1	01-03 Acura TL, 01-03 Acura CL
J32A2	01-03 Acura CL Type S, 02-03 Acura TL Type S
J35A1	99-01 Honda Odyssey
J35A3	01-02 Acura MDX
J35A4	03-04 Honda Pilot, 02-04 Honda Odyssey

List of compatible intermediate shafts below. The following intermediate shafts are found on automatic transmission engines. Unlike B, H and K-series engines these automatic transmission intermediate shafts will work with the 6 speed manual transmissions.

Engine Code	Description
J30A1	98-02 Honda Accord, 97-99 Acura CL
J30A4	03-04 Accord
J32A1	01-03 Acura TL, 01-03 Acura CL
J32A2	01-03 Acura CL Type S, 02-03 Acura TL Type S

Things you should know about this swap

The following is a list of information you should know before performing this swap. Please visit www.hasport.com for the latest information on this swap.

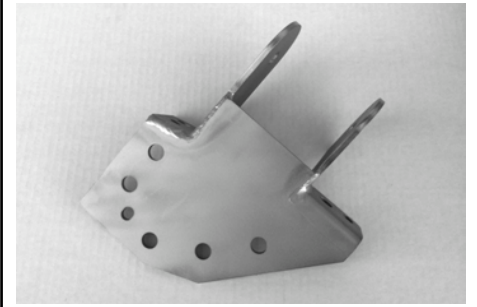
1. Ground and hood clearance – The J-series engine is a tall engine. It is much taller than the H22 and K-series engines. The J-series engine if mounted with normal clearance would stick up several inches above the hood line. This kit is designed to mount a J32A2 engine as low as is practical for a street driven car. The oil pan hangs significantly below the subframe of the car and may hit the ground or other objects during normal driving. Hasport makes no claims as to the drivability of your car with this engine.
2. At this time, Hasport does not make a conversion engine harness for the swap.
3. Power Steering – The Civic/CR-X power steering hose will not work with the J-series power steering pump. If you wish to have power steering, a new power steering hose needs to be made.
4. AC – To retain AC, you will need an AC compressor from a J-series engine and have custom AC lines made to fit the car.
5. Shift mechanism – The 03-07 manual transmission shift mechanism and cables from the V6 equipped Accord can be used to operate the TL and Accord J-series manual transmissions. The 2003 Acura CL Sport 6 speed transmission can also be used with some modification to the transmission. A boss on the transmission will have to be drilled and tapped.
6. Cooling and radiator – The engine has been moved forward for axle-subframe clearance. The stock radiator mount location no longer works. Fabrication and possibly a custom radiator may be required.
7. Clutch Actuation – You will need to purchase a hydraulic clutch adapter like the Hasport Clutch Master Adapter to convert the cable clutch actuation of the 88-91 Civic or CRX for use with the V⁶'s hydraulic clutch.
8. Fuel line and regulator – Some of the J-series engines have a fuel pressure regulator located in the fuel tank and some are located on the fuel rail. If your engine came from a vehicle with the pressure regulator in the tank, one will need to be added to the fuel system the same way you would for a K-series swap.
9. Alternator - The J-series alternator sits up high on the front of the engine and will interfere with the headlamp of the Civic/CR-X. Either a new set of alternator mounts will need to be fabricated or the headlamp and headlamp housing will need to be modified.

Removing the Engine: (Save all Bolts, You May Need One!)

1. Follow the appropriate Honda/Acura Service Manual's instructions for removing the engine from your car. Although the Service Manual shows a hoist being used and lifting the engine out of the top, this process can be simplified if you have access to a chassis lift. With the lift, you can use a flat surface about 10 inches tall to support the engine from underneath while unbolting it from the vehicle. After it is unbolted use the lift to raise the chassis off the engine. You should remove the front suspension subframe, radiator and fans for extra working room before you try removing the engine.

Preparing the Engine Bay:

- 1 The major change to the engine bay is the installation of the new passenger side engine bracket from Hasport. It will replace the current right-hand transmission bracket in the car.



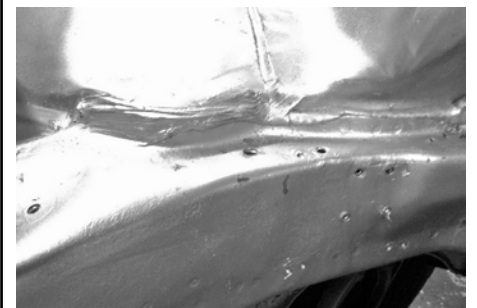
- 2 To make removing the existing transmission bracket easier, you will need these tools:
Center punch
1/8 inch drill bit
3/8 or 1/2 inch pilot point drill bit



- 3 Begin by center punching all the spot-welds on the mount. This is so the drill bit won't drift when drilling. You won't be able to get the spot welds on the tab nearest the shock tower. Next use the 1/8 inch drill to drill a hole approximately 3/16 inches deep. This will prevent the pilot point drill from drifting. Don't worry if you drill completely through the sheet metal. Now use the pilot point drill to drill a hole as deep as the bracket sheet metal is thick. This is to remove the spot welds.

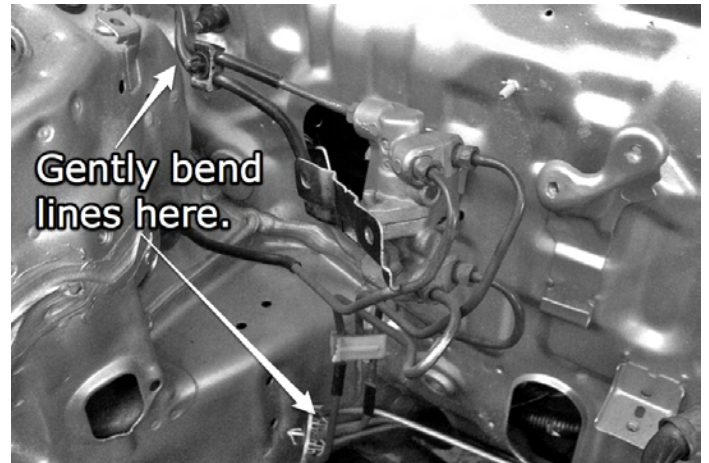
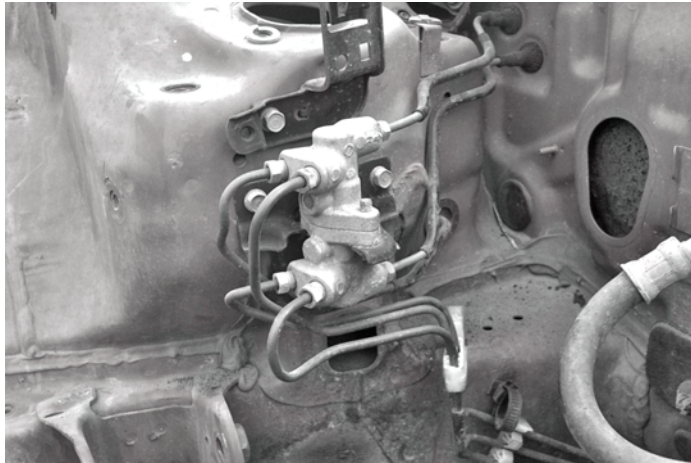


- 4 A chisel and hammer can now be used to finish removing the bracket. Once it is off use the die grinder with a sanding wheel to remove any left over material.

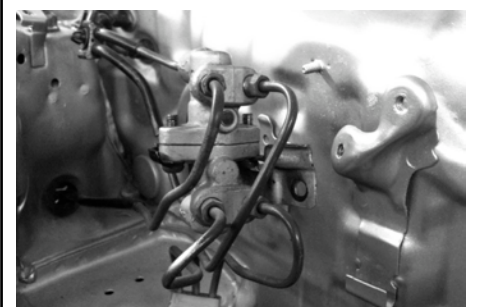
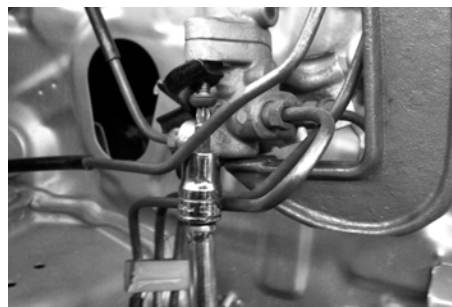
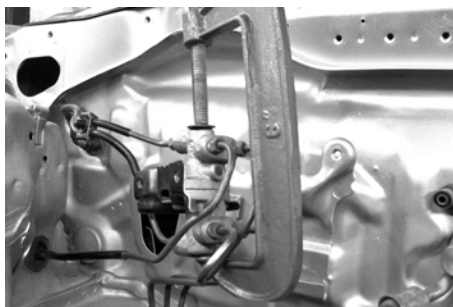
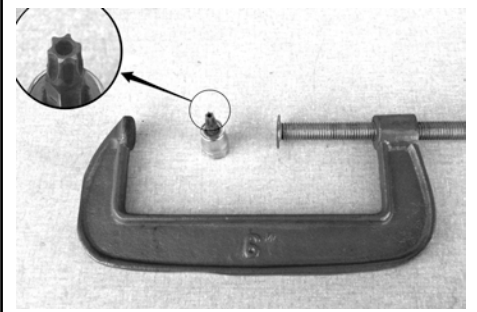


Preparing the Engine Bay:

- 5 The brake proportioning valve in its stock location will interfere with K-series engine. You need to move it from its current location on the shock tower to the firewall. Unbolt the proportioning valve and gently bend the brake lines so the valve is moved from the shock tower to the firewall.

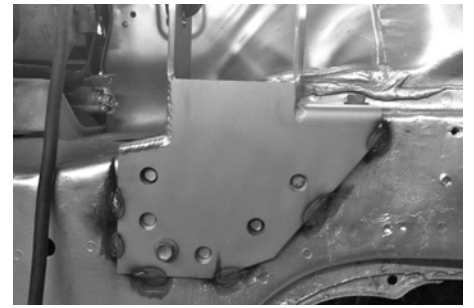
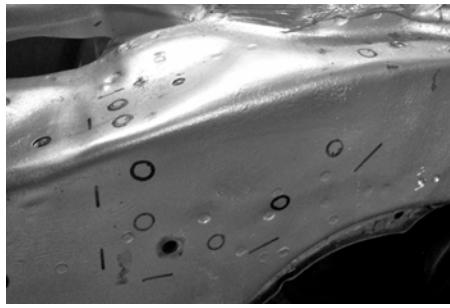
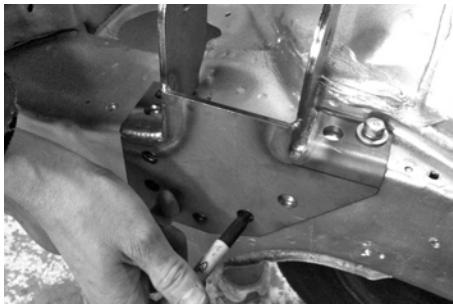


- 6 Next flip the bracket on the prop valve so it can be used to mount it to the firewall. You'll need these tools; C-clamp with a 4" opening and T-30 Torx Security Bit. Use the C-clamp to hold the prop valve together and unscrew the two T-30 Torx screws holding the bracket on. Flip the bracket towards the firewall as shown in the picture and retighten the screws.

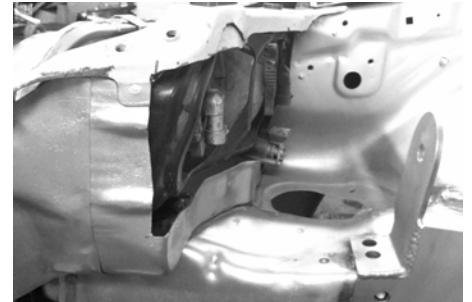


- 7
1. Place the new right-hand bracket on the framerrail so that it can be bolted on using two of the existing threaded holes originally used for the battery tray. These bolts are not strong enough to hold the engine during operation but are used to position the bracket properly for welding. Use the 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. If you anticipate not permanently leaving the engine in, you may want to weld the edges of the bracket instead so it can be more easily removed at a later date.

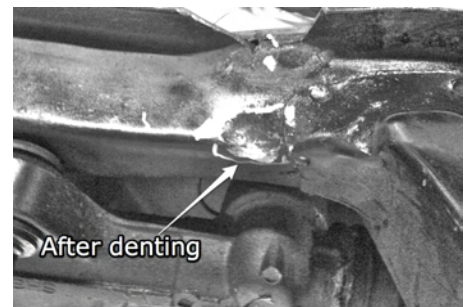
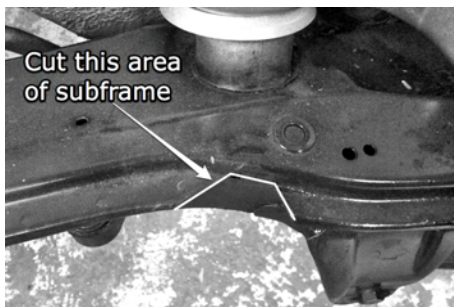
Preparing the Engine Bay:



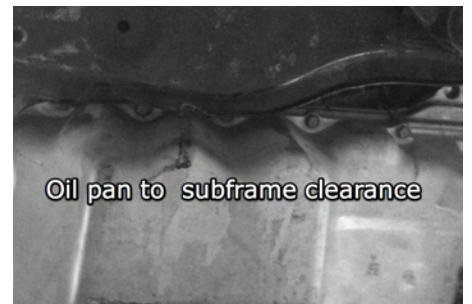
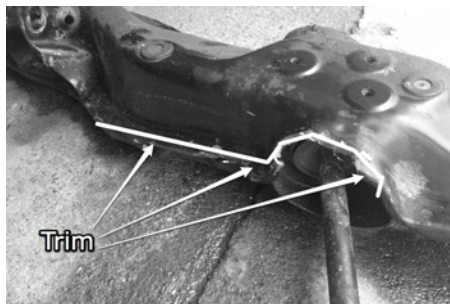
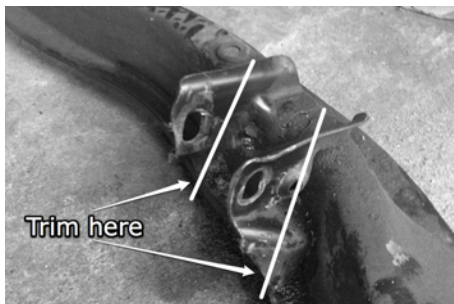
- 8 Next trim the right-hand headlamp sheet metal to clear the front cylinder head valve cover. About an inch of sheet metal needs to be trimmed from the car so the valve cover won't interfere once the engine is bolted in place. You may want to trim a small amount and try the engine in for clearance. More can be trimmed if needed. If you plan to mount the stock alternator in the stock location more will need to be trimmed.




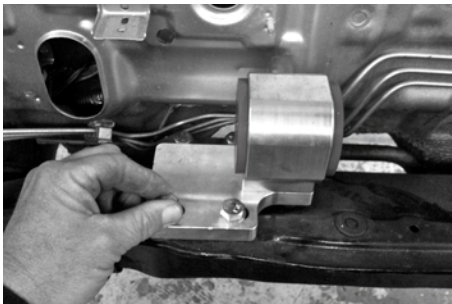
- 9 The front suspension has both a front and rear subframe component. Both pieces need to be modified to fit the V6 engine. The rear subframe interferes with the differential housing of the transmission. Trim the rear subframe at the pinch weld flange as shown in the photo to the below. Below the are that is trimmed a dent will need to be made as well.



- 10 On the front subframe, trim the original D-series engine front mount tabs off. Next trim the rear edge of the subframe where it interferes with the oil pan. You may need to wait until the engine is in the car to determine exactly where to trim. As you can see by the close oil pan to subframe clearance, an easier choice might be to use an aftermarket front crossmember.



Preparing the Engine Bay:

11	To install the rear mount you will need the two M10 x 40mm bolts and two M10 x 30mm bolts.	
12	Using the longer bolts at the rear and the shorter bolts at the front, bolt the mount on the rear subframe in the same location as the stock rear mount. Just finger tighten the bolts at this time.	



Installing the Engine:

Installing from the bottom

Place the engine and transmission on an engine stand or cart positioned under the vehicle. Make the engine as level as possible on the cart, this will aid installation.

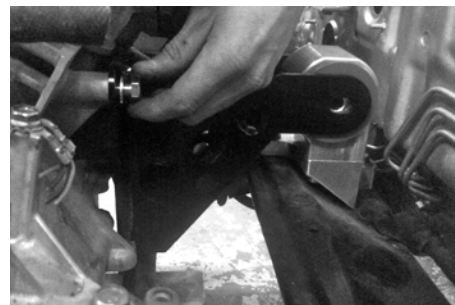
Installing from the top

Attach the engine to an engine hoist using the hangers on the engine. Be careful with the hoist chain and don't let it do damage to the throttlebody components.

1	Lower the car or the engine slowly taking care not to hit the engine on the way down. Keep a close eye on the subframe to make sure it doesn't come into contact with any parts of the engine or wiring harness. This is a two-person job.	
2	To install the rear bracket you will need the four 10mm x 30mm bolts and washers.	

Installing the Engine:

- 3 Once the engine is in the engine bay shift it forward as far as it will go and install the rear bracket on the rear mount. Use the 10mm x 30mm hex to attach the bracket to the block. Finger-tighten at this time. Slide the engine back so the bracket goes over the mount. Don't put a bolt through the rear mount just yet.



- 4 Using the two 10mm x 40mm bolts with washers and the 12mm x 110mm bolt with washers and nylok nut. Bolt the right-hand mount in the bracket using the 12mm bolt, don't tighten. Now carefully align the mount with the engine and hand thread the 10mm bolts all the way down. Care should be taken because the 10mm bolts are threaded into a cast aluminum bracket and the threads can be damaged easily.



- 5 You will need the 12mm x 60mm and 12mm x 30mm bolts to install the left-hand bracket

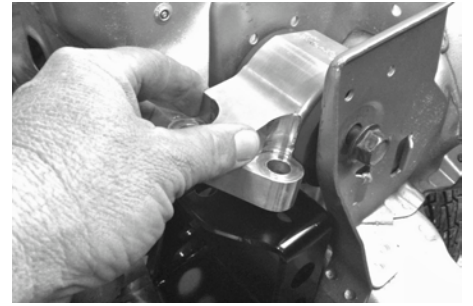
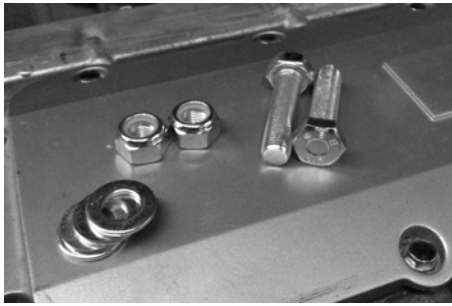


- 6 Install the left-hand bracket on the transmission leaving the bolts finger tight.



Installing the Engine:

- 7 Install the left-hand mount on the transmission bracket using the two 12mm x 40mm bolts washers and nyloc nuts. Use the stock 12mm bolt to attach the mount to the bracket. Now tighten all left-hand and right-hand mount bolts including the left-hand transmission bracket to the proper specification. Torque 10mm bolts to 33 ft/lbs and 12mm bolts to 43 ft/lbs.



- 8 Now that the engine is supported by the left and right-hand mounts we can connect the rear bracket to the rear mount. Use the 12mm x 100mm bolt, washers and nyloc nut. You may need to left the rear of the engine slightly to get the mount hole to line up line up with the bracket. Once this is done tighten all the mount and bracket bolts. Use the same torque specs as above.

