HASPORT MOTOR MOUNTS

INSTALLATION INSTRUCTIONS

Installation Instructions For:
Part Number DA1K1 and DA2K1 for K-series engines used with the RSX or Civic Si Transmission into 1990-1993 Acura Integra

Hasport Performance mounts and mount kit accessories are designed in house using the latest in CAD/CAM Engineering software. The designs are the result of many years of pioneering Honda engine swaps and Hasport's extensive racing experience. 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.

Please read all instructions before proceeding with the installation

DA1K1 & DA2K1

WARNING:

The instructions here, deal only with the installation of the engine and transmission using Hasport's DA1K1 or DA2K1 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.

List of Parts included in this kit:

Left-hand Mount

Qty	Description
2	M12 x 1.25 x 30mm Bolts
1	M12 x 1.25 x 45mm Bolt
3	M12 Flat Washers
1	M12 Nyloc Nuts

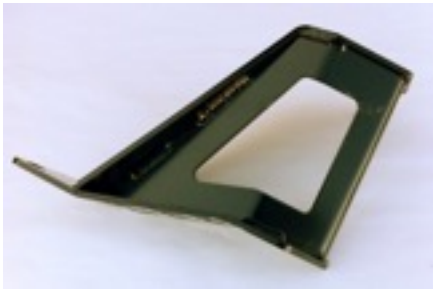
Right-hand Mount

Qty	Description
2	M12 x 1.25 x 35mm Bolts
4	M12 Flat Washers
1	M12 x 1.25 x110mm Bolt
1	M12 Nyloc Nut

Rear Mount

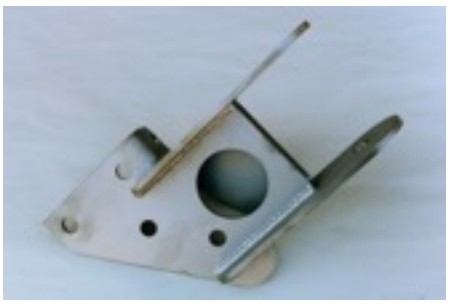
Qty	Description
2	M12 x 1.25 x 70mm Bolts
4	M12 Washers
2	M12 Nyloc Nuts

Left-hand Bracket



Qty	Description
3	M12 Flat Washers
2	M12 x 1.25 x 30mm Bolt
1	M12 x 1.25 x 35mm Bolts

Right-hand Bracket



Rear Transmission Bracket

Qty	Description
2	M12 x 1.25 x 60mm Bolts
2	M12 Washers

Rear Subframe Bracket

Qty	Description
1	M12 x 1.25 x 45mm Bolt
1	M12 x 1.25 x 60mm Bolt
1	M10 x 1.25 x 80mm Bolt
2	M12 Flat Washers
1	M10 Flat Washer

Extra Tools Required for this Swap

Center Punch, Electric Hand Drill, 1/8” Drill Bit,
3/8” Pilot Point Drill Bit, Die Grinder

Please read all instructions before proceeding with the installation

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 K-Series motor and RSX or Civic Si K-series manual transmission into a 90-93 Integra 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 K20A, K20Z, or K24A engines with RSX or Civic Si manual transmissions. Manual transmissions for this swap can be found on the following models. All models of 2002-2006 RSX, 2003-2005 Civic Si, and 2006 up Civic Si. The Transmissions from the JDM versions of these cars will also work.

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 some of the additional parts needed for the K-Series swap with RSX or Civic Si transmission is listed below.

Quantity	Description
1	Hasport DA1K1 or DA2K2 Bolt In Mount Kit (This Kit)
1	K-Series Engine complete (see list of recommended engines below)
1	Hasport Performance DAK-series Swap Axles
1	K-Series Manual Transmission from 03-07 Accord or 04-08 Acura TSX
1	K20 Intermediate Shaft (See list of compatible K-series intermediate shafts below)
1	Compatible Engine harness and ECU
1	Hasport Clutch Master Adapter or EF K-series Hydro Clutch Lever Assembly
1	K-series or custom radiator
1	K-series swap header

List of compatible engines is below. As a general rule all 2.0 liter K-series engines and 2007 and older K24 engines are compatible.

Engine Code	Year and Model
K20A	JDM Integra (DC5), Civic Type R and Accord Euro R
K20A2	02-04 RSX Type S
K20A3	03-05 Civic Si, 02-06 RSX
K20Z1	05-07 RSX Type S
K20Z3	06 -10 Civic Si
K24A1	02-06 CR-V
K24A2	04-08 TSX
K24A4	03-07 Accord

List of compatible **transmissions** and **intermediate shafts** below.

Engine Code	Description
K20A	JDM Integra (DC5) or Civic Type R
K20A2/Z1	02-07 RSX Type S
K20A3	03-05 Civic Si, 02-06 RSX with manual trans.
K20Z3	06-10 Civic Si (custom shift mechanism or fabrication needed)

Things you should know about this swap
The following is a list of information you should know before performing this swap.

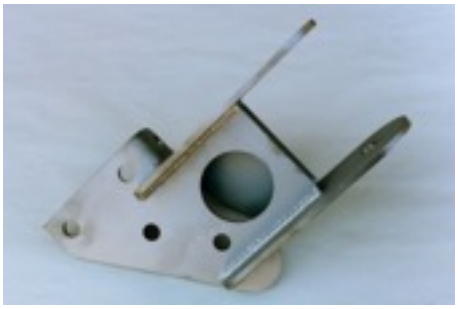
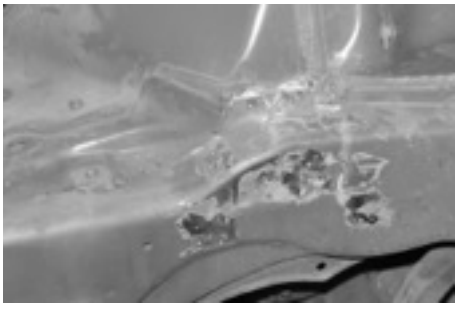
1. Ground and hood clearance – The K-series engine is a tall engine. The K-series engine if mounted with stock ground clearance would stick up above the hood line. This kit is designed to mount a K20 engine low enough to clear the hood. This means the oil pan hangs below the subframe of the car and may hit the ground or other objects during normal driving. Hasport makes no claims as to the drivability of your car with this engine. Please drive with caution.
2. If you are using this kit with the taller K24 engine, some of the hood's substructure will need to be removed to clear the valve cover and throttle body.
3. Power Steering – The power steering pump pulley may interfere with the hood. There are some pulleys available from aftermarket suppliers the may help clear the hood. There are two styles of power steering pumps and the TSX and Accord pumps have a taller profile because of one of the fittings. The RSX may be easiest to modify to fit. Custom power steering hoses need to be made.
4. AC – To retain AC, you will need an AC compressor from a K-series engine and have custom AC lines made to fit the car. The stock K-series AC compressor mounts low on the front of the block and interferes with the front suspension crossmember. You will probably need an aftermarket crossmember.
5. Vehicle Speed Sensor – The 05 up RSX Type S and 06 up Civic Si Vehicle Speed Sensor (VSS) pulse many times faster than the 02-04 RSX or EP3 VSS. To get the correct speed signal to the speedometer, the signal will need to be altered. Hasport recommends these two choices, using the built in adjustment in the Hondata K-Pro ECU or a device like the Dakota Digital Universal Speedometer Interface.
6. Shift mechanism – The RSX shift mechanism and cables from the manual transmission equipped RSX can be used to operate the RSX and EP3 transmissions. If you want to use the 06 up Civic Si transmission

7. Cooling and radiator – The stock radiator mount location no longer works. The radiator inlet will interfere with the intake manifold of the K-series engine. Relocation of the stock radiator or possibly a custom radiator may be needed.
8. Clutch Actuation – The stock cable clutch mechanism won't operate the K-series slave cylinder. Hasport sells a hydraulic clutch master cylinder actuator or cable clutch conversion for clutch operation.
9. The K-series engine interferes with the proportioning valve on the models of Integra without Anti-lock Brakes. On cars with Anti-lock Brakes the Modulator, Accumulator, and ALB Pump will need to be relocated. See the section on Preparing the Engine Bay for more details.
10. Fuel line and regulator – The K-series powered cars use a fuel pressure regulator located in the fuel tank of the car. The EG and DC2 do not, a fuel pressure regulator will need to be added to your system.

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

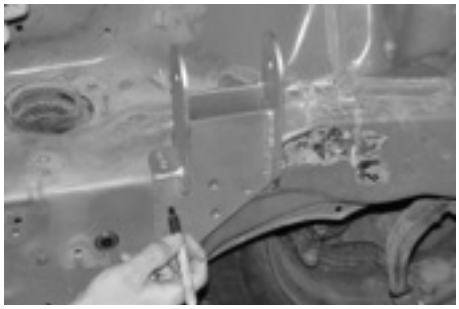
1. Discharge R134A from AC system. Disconnect the hoses from the compressor. You will be removing the compressor with the engine. (Have a professional evacuate your system.)
2. Follow the appropriate Honda/Acura Service Manual's instructions for removing the engine from your car. Although the Service 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 radiator and fans for extra working room before you try removing the engine.

Preparing the Engine and Engine Bay:

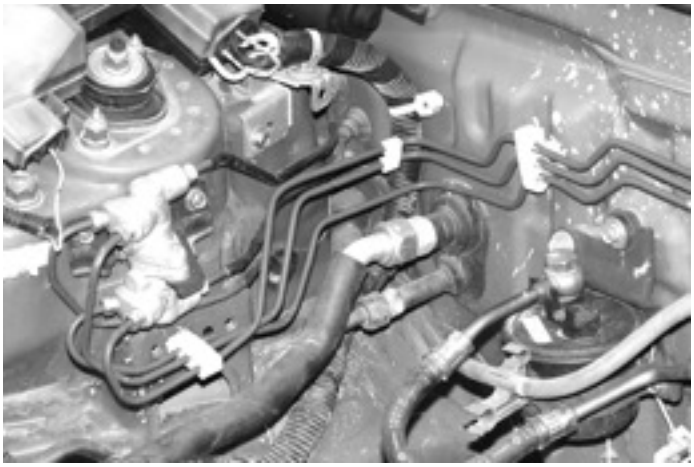
1	The major change to the engine bay is the installation of the new passenger side engine bracket from Hasport. It will replace the current right-hand transmission bracket in the car.	
2	To make removing the existing transmission bracket easier, you will need these tools: Center punch 1/8 inch drill 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. 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.	
		 
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 and Engine Bay:

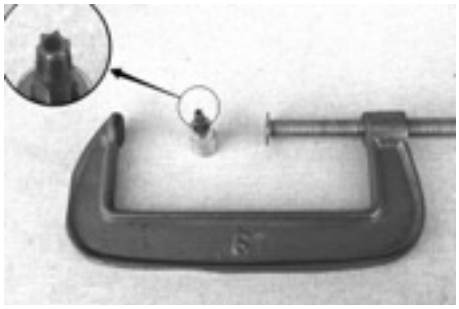
5 Place the new right-hand bracket on the frame rail so that it can be bolted on using two of the existing threaded holes originally used to attache the battery tray. These bolts are not string enough to hold the bracket with the engine installed, but are sued to position properly for welding. Use the 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.



6 If your Integra is equipped with an Anti-Lock Brake System Some of the components will need to be relocated or they will interfere with the K-series engine. It will require custom fabrication. For those without Anti-Lock Brakes 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.

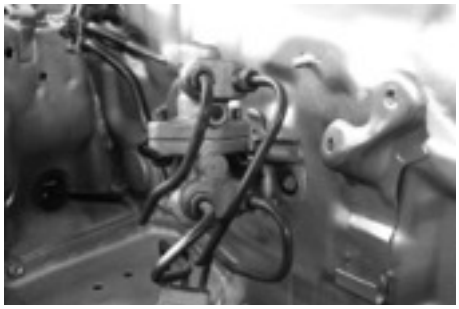


7 Next flip the bracket on the prop valve so it can be used to mount it to the firewall. You'll need these tools; C-clamp with a 4" opening and T-30 Torx Security Bit. Use the C-clamp to hold the prop valve together and unscrew the two T-30 Torx screws holding the bracket on. Flip the bracket towards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



Preparing the Engine and Engine Bay:



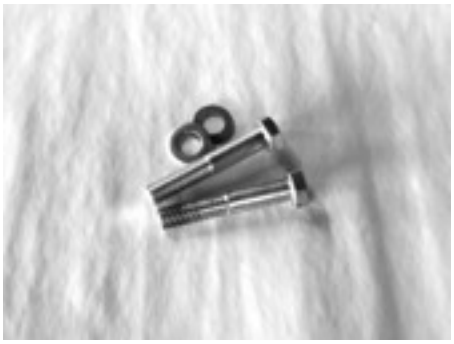


8	The fuel filter can now be relocated. After modifying the mount bracket, we moved it up and and towards to the center of the car then bolted it to the firewall using existing threaded holes.	
9	Using the hardware provided by Hasport bolt the new rear chassis bracket to the rear engine crossmember. The bracket bolts in using two holes near the center of the subframe and the front bolt that held the PS rack. Reuse the washer from the PS rack bolt on the new bracket. Torque the 12mm bolts to 43 ft/lbs and the 10mm bolt to 33 ft/lbs	



Preparing the Engine and Engine Bay:

10	Finally, using the two M12 x 60mm bolts provided by Hasport install the new rear engine bracket. Use the stock bolt for the forward most bolt hole that passes through the bracket, the block, and threads into the transmission. Insert all three bolts and finger tighten. Once all three are in, tighten the bolts to 43 ft/lbs of torque.



Installing the Engine:

Installing from the bottom
Installing from the bottom is the preferred way to install an engine into a Honda car. These instruction will deal with installing the engine 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
If you don't have access to a lift, the engine can be installed from the top. Honda engines come with special hangers to help with attaching it to a hoist. Be careful with the hoist chain and don't let it do damage to the throttlebody components or other sensors on the engine. Removing the hood will make removal and installation easier.

1	If you removed the original engine from the bottom the front engine subframe should already be removed. Lower the car or the engine slowly taking care not to hit the engine on the way down. Keep a close eye on the rear engine 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	Once the engine is in the bay, move the engine towards the righthand bracket. Use the two 12mm x 35mm bolts with washers, the 12mm x 120mm bolt, 12mm nut and two more washers and attach the right-hand mount to the bracket and the engine using the hardware from the right-hand mount hardware bag. Leave all the bolts finger tight at this time.	
	 	
3	Bolt the left-hand mount to the left-hand bracket using the M12 x 30mm and M12 x 45mm with corresponding washers and nut. Torque the bolts to 43 ft/lbs. Take the assembled left-hand mount and bracket and install in the left-hand framerail bracket and use the stock bolt to secure it.	

Installing the Engine:



4	Using the M12 x 35mm bolt and two M12 x 30mm bolts with washers, bolt the Hasport mount and bracket to the transmission. Leave the bolts finger tight at this time.


5	Now that the engine is supported by the left and right-hand mounts we can connect the rear mount to the chassis bracket and transmission bracket. Using the two M12 x 60mm bolts with washers and nuts bolt the rear mount int both the rear chassis bracket and rear engine bracket.



5	Once all the mounts are installed tighten **ALL** the mount and bracket bolts. 10mm bolts should be torqued to 33 ft/lbs and 12mm bolts to 43 ft/lbs.

Installing the Engine: