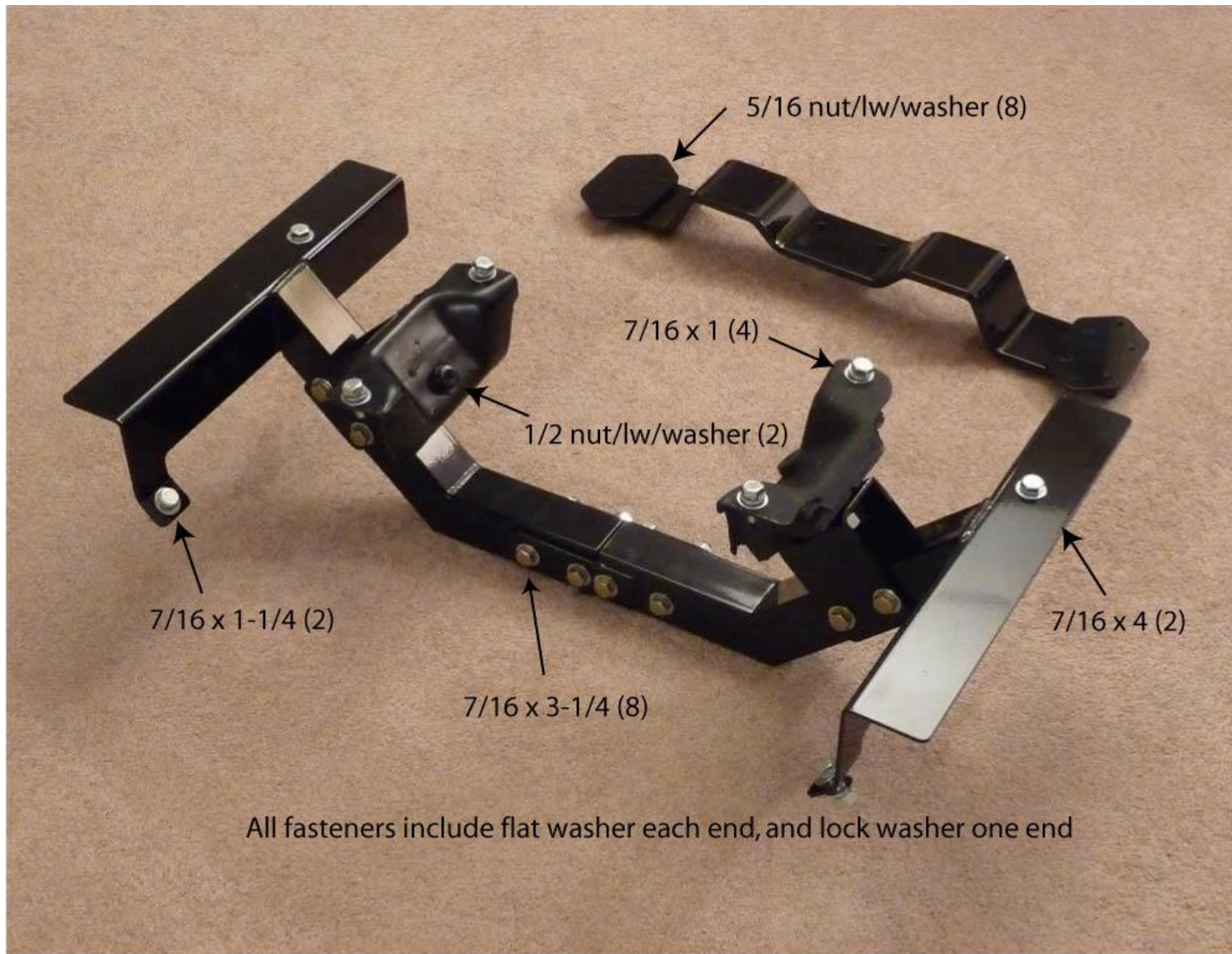


## Installation Instructions - Z-Car Mounting Kit for Small-Block Ford

Here's how the parts fit together, showing where the hardware is used:



**Note:** You may find the on-line copy of these instructions easier to read since it is in color, and you can zoom in on the photos.

## Unpacking

You should receive the following parts in your shipment:

SBF-Z-Match Parts List	
Qty	Description
2	Engine cradle halves, one left, one right
2	U-mounts for connecting rubber motor mounts to cradle
2	Rubber motor mounts
1	Transmission mounting bar
2	Transmission mounting top plates
2	7/16-14 x 1 1/4" bolts, washers (each end), nuts and lock-washers; used to attach the front of the motor cradle to the Datsun cross-member.
2	7/16-14 x 4" bolts, washers (each end), nuts and lock-washers; used to attach the rear of the motor cradle to the Datsun side-frame member.
4	7/16-14 x 1" bolts, washers and lock-washers; used to attach the rubber motor mount to the engine block.
8	7/16-14 x 3 1/4" bolts, washers (each end), nuts and lock-washers; used to attach the two cradle halves together, and the U-mounts to the cradle.
8	5/16-18 nuts, washers and lock-washers; used to attach the upper transmission mount to the transmission mount top plates.
2	1/2-13 nuts, washers and lock-washers; used to attach the rubber motor mounts to the U-mounts.

When you unpack, several parts are bolted together. Save the fasteners, including the washers and lock washers, since they will be used as part of the installation. The only unused fasteners are two 7/16-14 x 6" bolts. Toss those into your bolt-bin for a future project.

**Note:** *It is easy to miss the size difference between the 1" and 1-1/4" long bolts. Make sure that you use the shorter ones when bolting the rubber motor mounts to your block - the longer ones might bottom-out prior to fully tightening.*

## Installing the Cradle

To install the engine cradle, it is first necessary to remove clips and fasteners from the top of the frame rails. You can carefully grind these off, or use a spot weld removal tool with your drill, available from places like Eastwood.



It is also necessary to remove the original Z-car motor mounts from the front frame cross-member on the Z. While this might sound drastic, if someone down the road wants to reinstall an original motor, a replacement cross-member can be bolted back in place.

Once the frame rails and cross-member are prepared, you can fit your new engine cradle in place. The tabs on the front should be approximately in the center of the frame cross-member. Don't drill the mounting holes in the car yet, wait until you have done a trial fit with the motor.

Note that the bolt holes on the engine side of the U-brackets go toward the top, as shown in the picture above.

## Prepare the Engine

Use an engine with a Fox-body Mustang oil pan, and oil pickup. These are available at suppliers such as Summit Racing, or you can source one at your local junkyard. If converting from a front-sump pan, you will also need to install a rear dipstick that works with the fox-body pan. The Ford Motorsport part number M-6675-A50 contains all these parts. Summit sells this as their part number FMS-M-6675-A50. It is about \$165 at the time of writing. Make sure to check the details that it will fit your motor prior to ordering.

Patriot H8427 hugger headers can be used in a Z-car conversion. The Summit part number is PTE- H8427, for about \$165 at time of writing. Do a trial fit prior to final engine installation, as the left-hand motor mount probably needs to be ground down at one point to allow clearance for the header. After the motor is installed, you will need to make another trial fit and make an indentation in the left front tube to provide clearance for the steering shaft on the Z-car. In some installations, the U-bracket for the motor mount on the driver's side may need to be notched to clear the steering shaft.

On the right side of the engine, you will need a small starter. These are available as a Fort Motorsport part (M-11000-B51), or, according to the Summit site, a standard 1990 or later Mustang 5.0 starter will fit. Summit sells the Ford Motorsport part as their part number FMS-M-11000-B51, at about \$280, but offers less expensive options for small-block-Ford mini-starters.

Install the transmission mount that you want to use, and ensure that it bolts to the transmission mounting bar that comes with this kit. The holes will normally be towards the rear of the car, and the humps will always be facing up, since they provide clearance for the exhaust pipes that will be running underneath them.

Bolt the engine, bell-housing and transmission together as a unit for a trial fit. Connect your engine hoist so it allows the rear to be significantly lower than the front for installation. Also, connect the rear of the hoist to be clear of the extreme rear of the motor, since that will be very close to the firewall.

## Trial Fit

To install the motor, slide the engine cradle forward. Then lower the engine and transmission in place, then slide the cradle rearward until the front tabs are approximately centered over the cross-member. Temporarily jack up the transmission to be at the correct height, and then bolt the motor to the cradle. The cradle should be adjusted in width so that it is lightly pressing on the outside frame members prior to tightening the middle four bolts in the cradle. It may be necessary to make small indents in the firewall to provide clearance for the top bell-housing bolts.

When you are satisfied with the fore-aft adjustment, mark for the 7/16" holes in the Z-car frame and cross-member, but don't drill yet. When you finally install the motor, don't over-tighten the rear 4" bolts in the frame. Even though this is a strengthened part of the frame, it can be crushed with enough pressure.

Install the transmission mounting bar to the rear mount of the transmission, and then jack it into final position so that the bar is touching the floor pan of the car. When it is perfectly straight across the car, mark for the four holes on each side. Make a trial small hole through one hole on each side to ensure that the holes will come up evenly, and on a good location on each side. When you do final drilling, you will probably want to use a 3/8" drill to allow clearance for the 5/16" studs. The upper support plates for the transmission mount install under the carpet. There is a 1/4" hole in each end of the upper plates. You may choose to install a bolt and nut (or sheet metal screw) in these holes so that the plate is secured to the floor. That can make installation of the transmission mounting bar easier if you don't have a helper to hold down the top as you install the nuts and bolts from the bottom.

Once the transmission is fitted, double check the front cradle hole marking that you made to ensure that it didn't shift while working on the transmission.

You are now ready to drill all the holes and do final installation of your power plant.

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## MotorMatch Limited Warranty and Return Policy...

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### Limited Warranty

The buyer acknowledges that use of a MotorMatch involves installing a high-powered motor into an older car designed for significantly less horsepower, and many of the parts used, including MotorMatch, are not professionally engineered. You will also be providing the possibility for workmanship errors. As a result, very bad things can happen if anything goes wrong. Consequently, these mounting parts are provided without warranty with regard to fitment, application for a particular purpose, and quality. The purchaser assumes all liability and consequences, direct and indirect; resulting from the use of these parts and any related information provided by the supplier or associated web sites.

TechnoVersions LLC limits warranty to return of undamaged product as stated in the return policy above.

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### Return Policy

If a MotorMatch unit does not work properly in your application, and is not marred or damaged, TechnoVersions LLC will allow return for refund of purchase cost, less 10% restocking charge and exclusive of any shipping charges. Claim for such must occur within 30 days of product shipment from TechnoVersions LLC. eMail TechnoVersions for an RMA number, then ship the MotorMatch unit back to TechnoVersions LLC, with prepaid shipping. TechnoVersions LLC will remit the refund via US Mail or PayPal within 10 working days of product receipt.