

## B16A Variants

B16A Motor Guide - Describing the Differences

There are 4 general classifications for B16A motors:

- \* B16A SiR
- \* B16A SiR II
- \* B16A2
- \* B16A3

It is often confused as to which motor is which. In this article, we will help you to pick out the clues as to which motor is which and which one you should get for your swap.

Although I just noted that there are 4 classes of B16A's, we can break that list down into two groups.

Our new grouping of B16A motors:

- \* B16A SiR
- \* B16A SiR II, B16A2, B16A3

Why this breakdown?

It all comes down to OBD. OBD, or on board diagnostics, are broken down into levels, based on the years they are instated. For more info on OBD, please read our article on OBD - Explained.) The B16A SiR, commonly and mistakenly called the B16A1, is an OBD-0 motor. This was the first level of OBD installed on motor ethicals. The other 3 are either OBD-1 or OBD-2 motors.

The SiR was designed for a 4th gen chassis. It works great with an 88-91 CR-X / Civic. However, try putting this motor in a 92+ Civic and the problems will just start to flow. The tranny on the SiR is cable. the 5th gen chassis uses hydraulic actuation.

Why is the SiR cheaper?

It's cheaper for several reasons. First, it's older. Second, the A2/A3/SiR II have a higher demand, as they work in newer cars and have a higher output.

How to tell the difference between an SiR and an A2/A3/SiR II

- \* SiR uses a cable tranny- 5th gens are hydraulic
- \* SiR has a lower compression ratio, 10.2:1 and makes 160ps
- \* A2/A3/SiR II have a higher compression ratio at 10.4:1 and make 160hp (A2/A3) or 170ps (SiR II)
- \* A2/A3/SiR II motors have a better cam profile
- \* A2/A3/SiR II have better oiling functions, keeping things better lubricated
- \* SiR has cast aluminum oil spray bars while the A2/A3/SiR II are made of extruded aluminum.

- \* A2/A3/SiR II have a single- 4-wire O2 sensor instead of 2-single wire O2 sensors
- \* A2/A3/SiR II MAP sensor is an integral part of the throttle body, not an external one with a tube.
- \* A2/A3/SiR II harnesses are grey. SiR has cream colored ones.
- \* SiR is PGM-FI, clearly labeled on the intake manifold, and A2/A3/SiR II are MPFI
- \* SiR valve covers have "DOHC" written in a larger font size than "VTEC"
- \* A2/A3/SiR II valve covers have "VTEC" written in a larger font size than "DOHC"

Chassis Code	Block Stamp	Head Code	Transmission Stamp	Hp / CR
DA6	B16A	PR3	S1 or J1	160
DA8	1xxxxxx"	88-91	Cable type Clutch Y1 or YS1	10.2:1
EF8	"B16A	PR3	Cable	160
EF9	5xxxxxx"	'89-92	Optional 'LSD' stamp on casing	10.2:1
EG2				
EG6	B16A	PR3	Y21	170
EG9		92+	Hydraulic Type	10.4:1
EK4			Clutch	

### Additional Information

88-91 B16A's are known as the SIR 1. It uses OBD0 Ecu's, and cable tranny's. The engine serial number is usually 1xxxxxx or 5xxxxxx.

92+ B16A's are known as the SIR 2. It uses OBD1 or OBD2(2b), and hydraulic trannys. The engine serial number is usually 5xxxxxx

The #'s at the end of the block code tell where the engine originated from. The Americas, Europe, Austrailia, etc.....

ALL Japanese engines, generally do NOT have a number after them. (\*\* see below) SO, if you have a B16A1,2,3,4, or 5. It is usually NOT a true JDM engine. Don't mistake a B16A1 as being a cable unit, because it could be a hydraulic. There are other ways to tell what year it is exactly.

\*\*NOTE: There is ONE exception to this rule. In 90-91, the Civic/CRX SiR came with a B16A1, but they are SUPER rare, and came 160HP with 10.4:1 compression. Their counterpart of the same year was a 158HP, 10.2:1. They are very difficult to tell apart.

### **Which motor is for me?**

If you are swapping into a 4th gen, the SiR is the best choice. If you are swapping into a 5th gen, the SiR II or B16A3 are your best choices. If you are swapping into a 6th gen, the B16A2 is your best bet. Using that method above, wiring will be much easier, and its more of a direct swap than any of the others.

Also, please check local laws before purchasing any motor. California and other states are very strict about swaps. Know what is legal and what is not beforehand and save yourself the hassel.