

# Installation Manual

Product

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**14mm  
Head Stud Kit**



Fitment

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EJ25

EJ20

FA20

## BEFORE YOU START

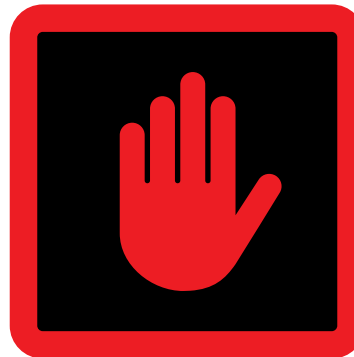
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### Suggested Tools

- 3/16 Allen Socket
- 11/16 12-Point Socket
- High Accuracy Torque Wrench

### What's Included

- 12x M14x2 Head Studs
- 4x Locator Dowels
- 12x 11/16" drive 12-Point Nut
- 12x Washers
- ARP Fastener Assembly Lubricant



## CAUTION: NOTES BEFORE STARTING

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Contracting a specialty engine builder to perform this work is highly recommended.

Make sure you have all necessary tools before beginning installation.

Please reference your **Factory Service Manual** for specific part removal instructions on your specific vehicle.

**Factory Service Manuals can be purchased at:**

<https://techinfo.subaru.com/>

## SAFETY CHECK

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Always make sure the vehicle is adequately supported on ramps, jack stands, or a lift.

Make sure engine is securely mounted to the engine stand. Be sure not to apply force in a direction that will cause the engine to tip during this installation process.

**Warning:** Never work under a vehicle supported only by a floor jack!

## PART 01

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### Machining

1. Follow machining instructions per separately provided engineering diagram.

## PART 02

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### Stud Installation

1. Using 30w engine oil, lubricate the end of the studs that will be inserted into the block.  
Let sit to drain excess oil.
2. Gently set the studs into the holes. Any impact to the threads may result in damage.  
The stud should easily start threading by hand.  
**Note:** STOP IMMEDIATELY if you experience resistance, back the stud out and inspect the threads on both parts, clean/chase the threads as needed and begin again.
3. Using hand tools, thread studs into block then torque to 10 lb/ft.
4. Confirm stud height noting any drastic variation – studs should be within +/- .010” of one another
5. Install head gasket.
6. Apply supplied ARP lube to the top five threads around the entire circumference of each stud.

## PART 03

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### Cylinder Head Installation

1. Carefully install cylinder head.
2. Use a clean dry rag to remove oil and contaminants from head stud washers  
– failure to do this may impact torque values.
3. Install a washer onto each head stud.
4. Apply ARP lube to the flange side of the stud nut and thread onto stud.

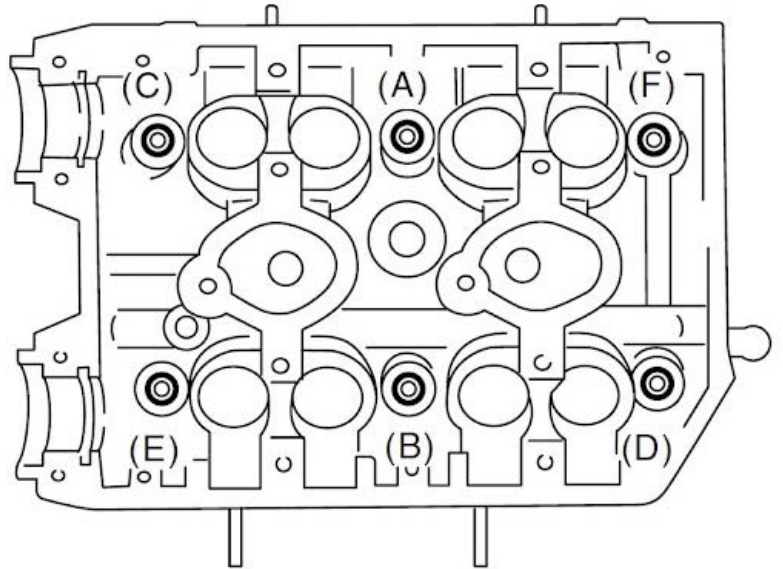
*Continue to the next page for the more steps in the process.*

## Cylinder Head Installation

5. Follow torque procedure below. Torque to each value indicated in the diagram below (A, B, C, D, E, F) before moving to the next higher value. Repeat until final torque is achieved.

**Note:** Only use higher torque specs at your engine builder's discretion. VSC studs and hardware are capable of much higher torque values; however, significant damage may occur to your engine such as cracking heads or pulling threads from the block.

1)	30 lb/ft
2)	75 lb/ft
3)	110 lb/ft
4)	125 lb/ft



## Finished

If you have questions or need help with your install or parts questions, please reach out to us:

**Email:** [support@vtcar.com](mailto:support@vtcar.com) | **Phone:** 802.655.3533

**Prior to the installation and/or use of any of products contained herein, whether purchased from or provided by Lance Smith Inc., d/b/a Vermont SportsCar (“VSC”), please read and understand both the installation instructions and these Warning and Safety Rules.**

**Failure to read, and strictly adhere to both the installation instructions and this Warning and Safety Rules may result in damage to personal property, serious personal injury, and/or death.**

Keep all products out of the reach of children, and if children are around the products, always have an adult present.

Follow all instructions regarding the installation and use of all products.

Do not disassemble, modify, or attempt to repair any products for any reason. If damaged or in need of service, please contact VSC at the phone number or email address below.

Do not use products in any manner which has not been approved by VSC, or in connection with any third-party products, unless each has been approved by VSC prior to such use.

Do not install or use products on vehicles which have not been approved by VSC, as stated at [www.vtcar.com](http://www.vtcar.com) (the “Website”).

Prior to installation, always store products in a dry and clean location.

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In the event you become injured during installation or use of products seek immediate medical attention.

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**Your installation or use of the products will constitute your acknowledgement that you have read the above. Keep this Warning and Safety Rules for your records so that you may return to them as needed.**



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