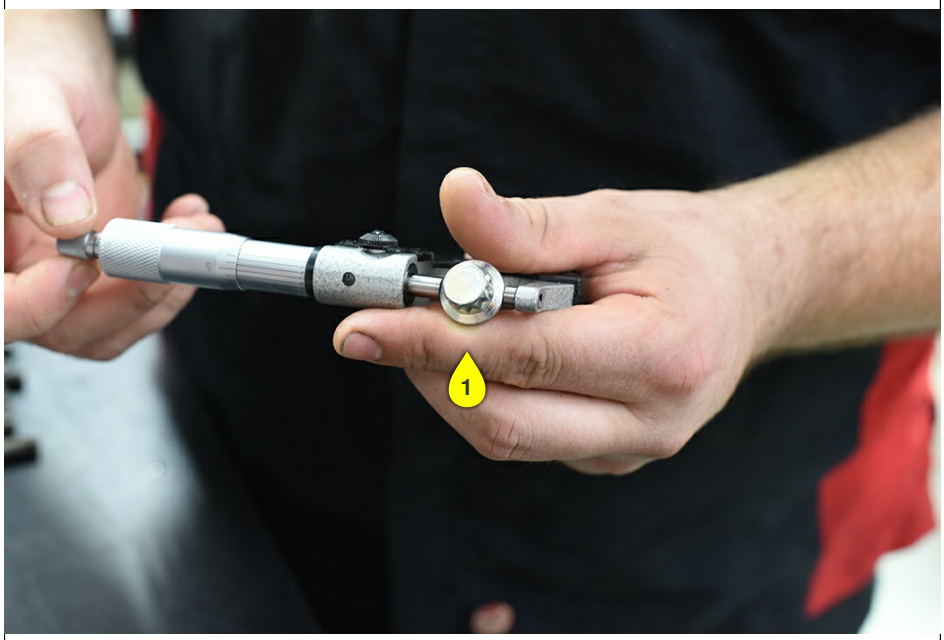
Step 1/17

IAG Performance EJ25 Closed Deck Install Guide

Thank you for choosing IAG Performance. This installation guide is tailored for those with advanced skill levels. Assembly should be performed in a debris-free, climate-controlled clean room using clean and properly lubricated hardware and new gaskets.

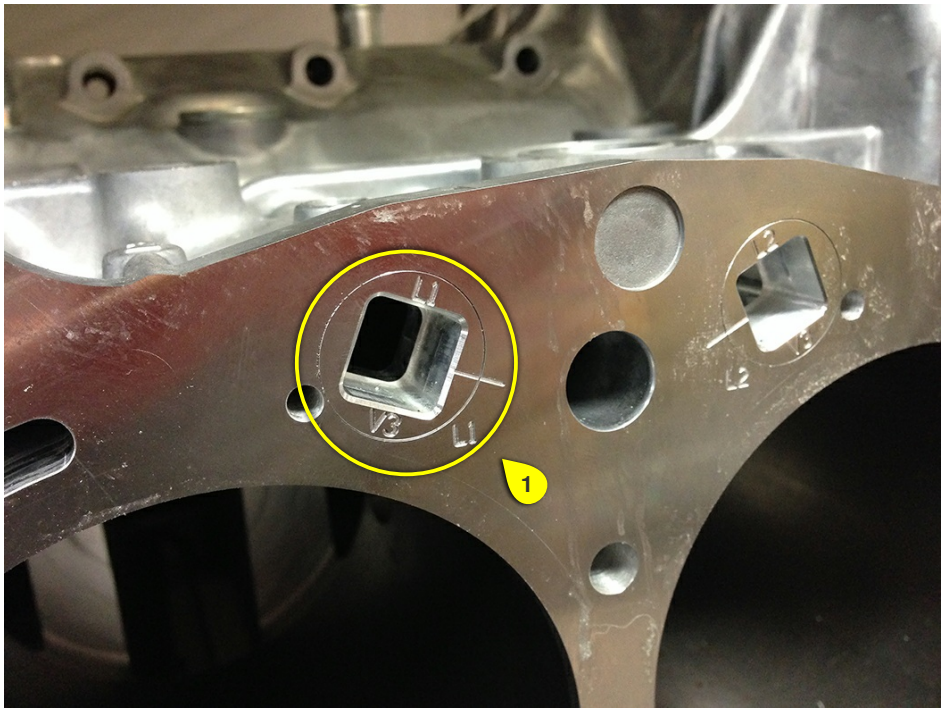


Step 2/17

Numbered annotations (1)

1 *For IAG 1150 Shortblocks Only*

Case Bolts - Verify head of the case bolt fits into the closed deck insert. The case bolt flange may need to be ground down to fit. Be careful not to damage the closed deck plug threads when installing/torquing the case bolts.



Step 3/17

Numbered annotations (1)

1 Plug Install – These plugs come preinstalled on new short blocks. Each plug has a location identifier machined into it that corresponds to the deck surface. Please make sure to install the plug into the correct deck hole. Example (L1 plug installs in L1 deck location). Each plug is pre-lubed with a moly lubricant. This should be adequate to reinstall unless the plug holes or plugs were cleaned and lube has been removed. The plugs will start and install by hand, requiring no effort until seating in the block. *IF ANY RESISTANCE IS FELT - ** STOP **

If you experience resistance, back out the insert and inspect the threads on both parts; clean the threads as needed. Reapply the moly lube and try installing it again.

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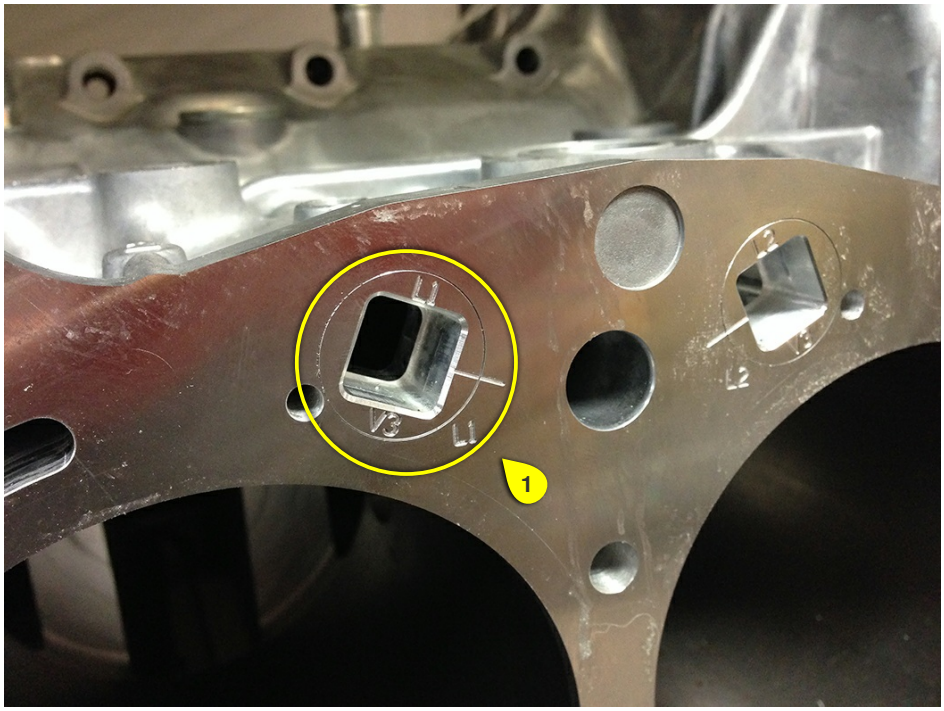


Step 4/17

Numbered annotations (1)

1. The Plug should sit nearly flush with the deck surface. Using a 1/2" drive wrench tighten the plugs until the indicator line is collinear (lines up) to the line on the block deck surface. The plug should be even with the decked surface.

   Acceptable Lubricants:
   ARP Moly Lube
   Loctite LB8012 Moly Paste
   Jet-Lube MP-50 Moly Paste

Step 5/17

If you have purchased the IAG 1/2" head stud option proceed to step 6.

If you have purchased the IAG 14mm head stud option proceed to step 11.

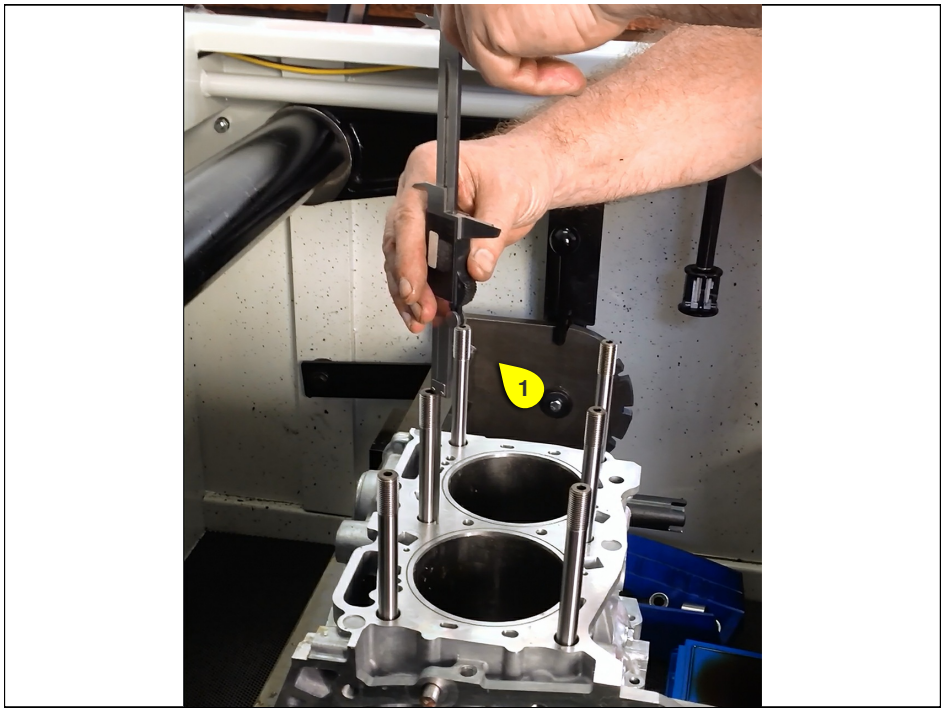
Step 6/17

Numbered annotations (1)

1. ½” Head Studs - Using 30w engine oil, lubricate the studs block end threads, and let it sit to drain excess. Do not drop the stud in the hole as it will damage the leading thread in the block. The stud will easily start when engaged in the correct starting thread. It may require rotating the stud counter-clockwise to feel. The incorrect starting thread may allow up to one turn of engagement and get tight. *IF ANY RESISTANCE IS FELT - ** STOP **

   If you experience resistance, back out the stud and inspect the threads on both parts; clean the threads as needed. Try threading it again. Block threads are tested during manufacturing to confirm proper thread engagement.

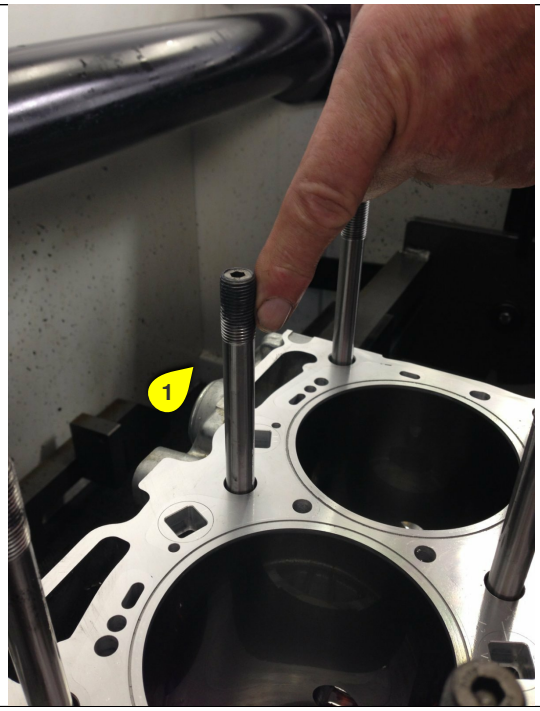
   Studs must be installed with hand tools due to the amount of thread engagement, friction, and lubrication. Hand snug studs in the block. DO



Step 7/17

Numbered annotations (1)

1. Verify stud height relative to each other stud. All studs should be within +/- .015” of each other.



Step 8/17

Numbered annotations (1)

1. Install the head gasket then apply ARP lube to the studs head side threads (completely around the circumference, not just a dab one side).

½" Head Stud Torque Specs	
Step 1	30 lb/ft
Step 2	70 lb/ft
Step 3	110 lb/ft
Step 4	125 lb/ft
Repeat Step 4	

1

Step 9/17

Numbered annotations (1)

1. Apply ARP lube to the flange of the head stud nut and install. Follow the torque procedure outlined. Follow the OEM service manual for the torque sequence. OEM torque sequence can be seen in step 15.

Preparing Cylinder Heads for 1/2" Head Studs

The larger ½” head studs (threads measure .496”) require drilling out the cylinder heads for clearance. Use a 33/64 or .515” bit to drill out the head stud locations on the cylinder head. Make sure the heads are sorted and free of debris before installing onto the short block.

Step 10/17

Elements (1)

⚠ IAG offers a machine service to drill the heads to the proper spec. Please contact our sales department for more information.

Step 11/17

Numbered annotations (1)

1 14mm Head Studs - Using 30w engine oil, lubricate the studs block end threads and let it sit to drain excess. Do not drop the stud in the hole as it will damage the leading thread in the block.

Step 12/17

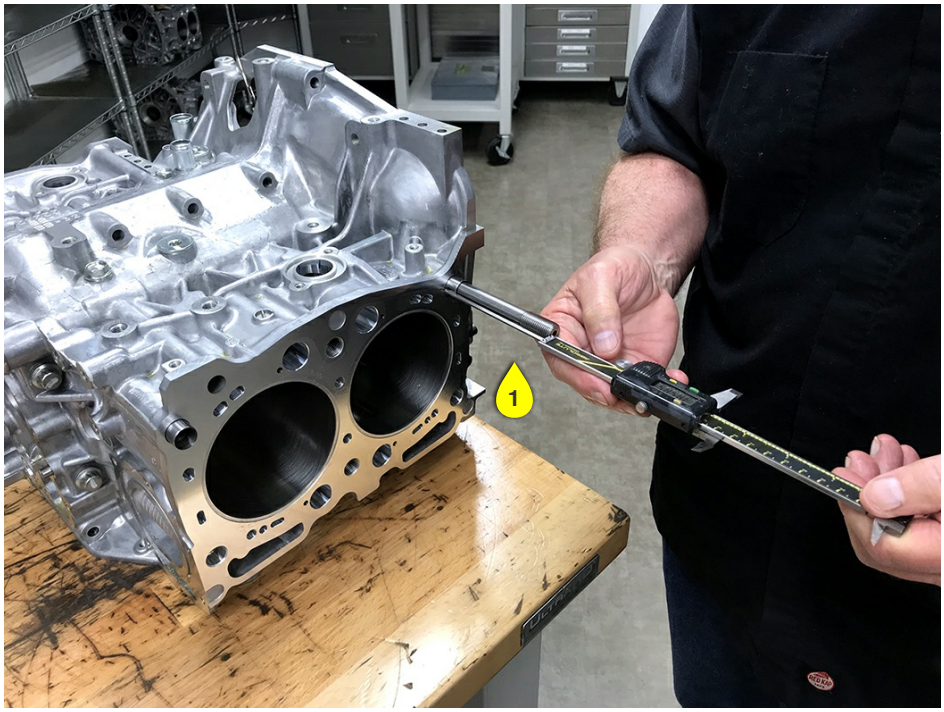
Numbered annotations (1)

1. Place a 3/16” allen wrench into the open end of the IAG ARP head stud and then hand thread the stud into the block.

   *IF ANY RESISTANCE IS FELT - ** STOP **

   If you experience resistance, back out the stud and inspect the threads on both parts; clean the threads as needed. Try threading it again.

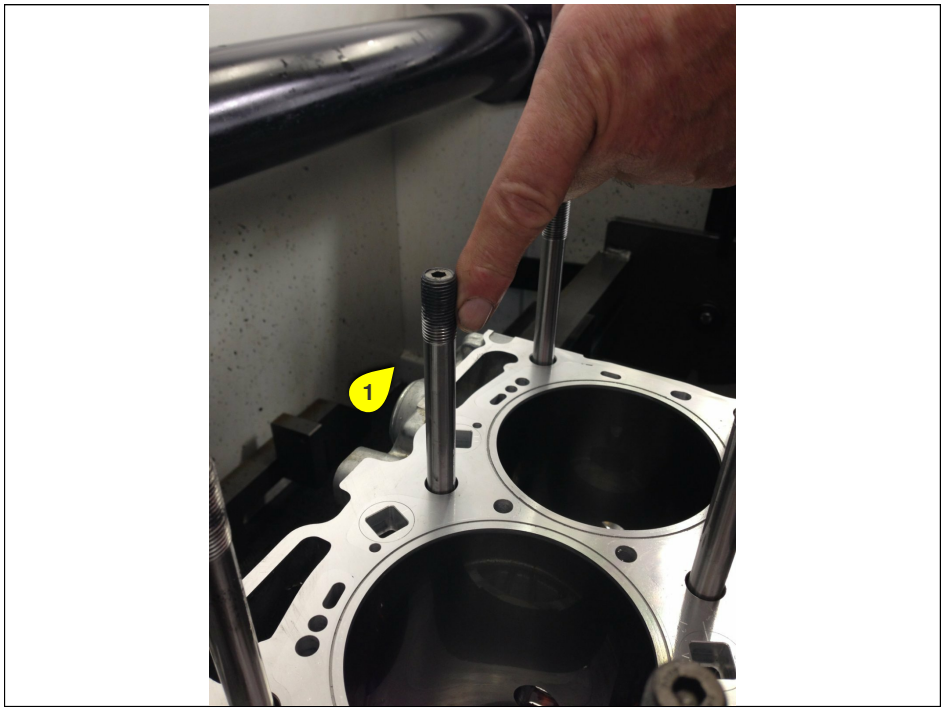
   Studs must be installed with hand tools due to the amount of thread engagement, friction, and lubrication. Hand snug studs in the block. DO NOT apply torque to stud.



Step 13/17

Numbered annotations (1)

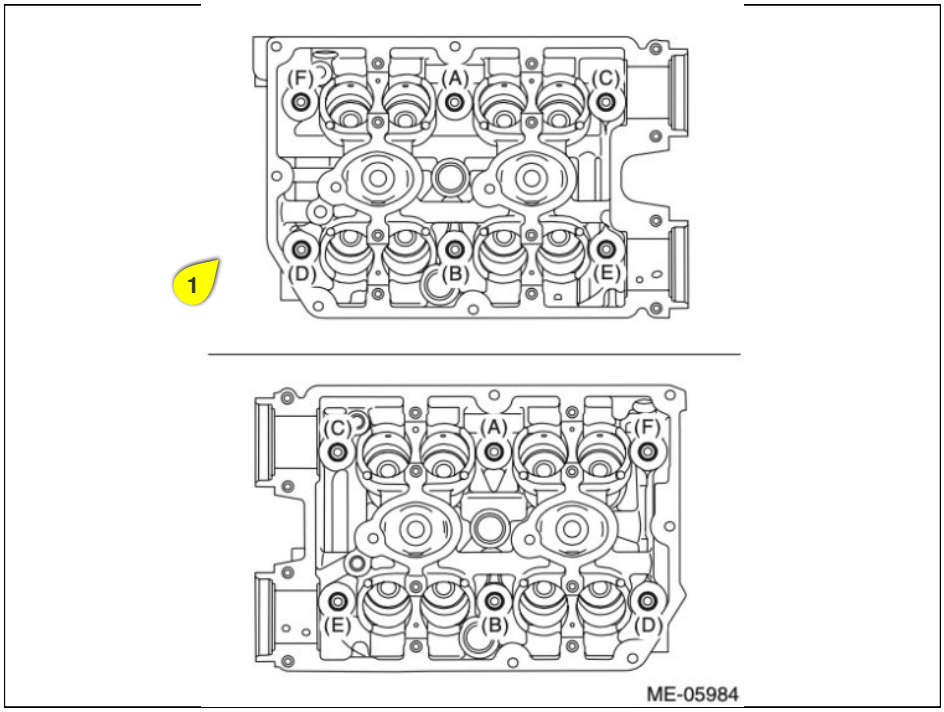
1. Verify stud height relative to each other stud. All studs should be within +/- .015” of each other.



Step 14/17

Numbered annotations (1)

1. Install the head gasket then apply ARP lube to the studs top head side threads (completely around the circumference, not just a dab on one side).



Step 15/17

Numbered annotations (1)

1. Install the cylinder head. Then, using a clean, dry rag remove all oil from both sides of each head stud washer. The cylinder head and washer mating surfaces must be free of oil/grease/lubricant. Failure to keep these surfaces dry may result in inconsistent preloads during the torque procedure. Install the washer(s).

14mm Head Stud Torque Specs	
Step 1	40 lb/ft
Step 2	80 lb/ft
Step 3	120 lb/ft
Step 4	155 lb/ft
Repeat Step 4	

1

Step 16/17

Numbered annotations (1)

1 Apply ARP lube to the flange of the head stud nut and install. Follow the torque procedure outlined. Follow the OEM service manual for the torque sequence. OEM torque sequence can be seen in step 16.

Preparing Cylinder Heads for 14mm Head Studs

The larger 14mm head studs (threads measure .563”) require drilling out the cylinder heads for clearance. Use a 37/64 or .578” bit to drill out the head stud locations on the cylinder head. Make sure the heads are sorted and free of debris before installing onto the short block.

Step 17/17

Elements (1)

⚠ IAG offers a machine service to drill the heads to the proper spec. Please contact our sales department for more information.