

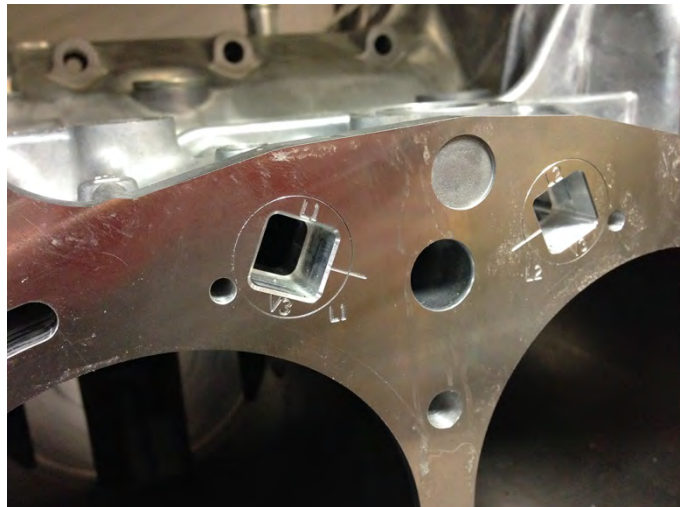


IAG Performance EJ25 Closed Deck Install Guide [v.15.3]

1. Case Bolts - The case bolt flange diameter should be .745". If the case bolt flange diameter is larger, the flange will need to be ground down to spec. Be careful not to damage the closed deck plug threads when installing/torquing the case bolts.



2. 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.

The Plug should sit nearly flush with the deck surface. Using a torque wrench tighten the plugs until the indicator line is collinear (lines up) to the line on the block deck surface. This should require approximately 8-10 lb-ft of torque (no greater than 11) and the plug should be even with the decked surface.

Acceptable Lubricants:

- ARP Moly Lube
- Loctite LB8012 Moly Paste
- Jet-Lube MP-50 Moly Paste

If you have purchased the IAG ½" head stud option proceed to Page 2.



If you have purchase the IAG 14mm head stud option proceed to Page 4.

1/2" Head Studs Install

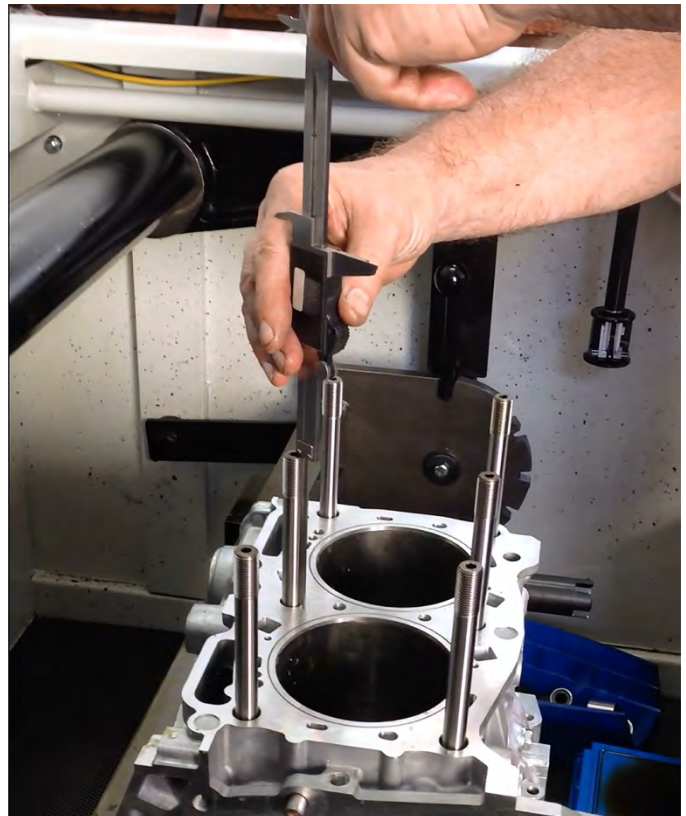
1. **1/2" Head Studs** - Using 30w engine oil, lubricate the studs block end threads and let it sit to drain excess. Do not drop the stud in the hole as it will damage the leading thread in the block. The stud will easily start when engaged in the correct starting thread. It may require rotating the 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.



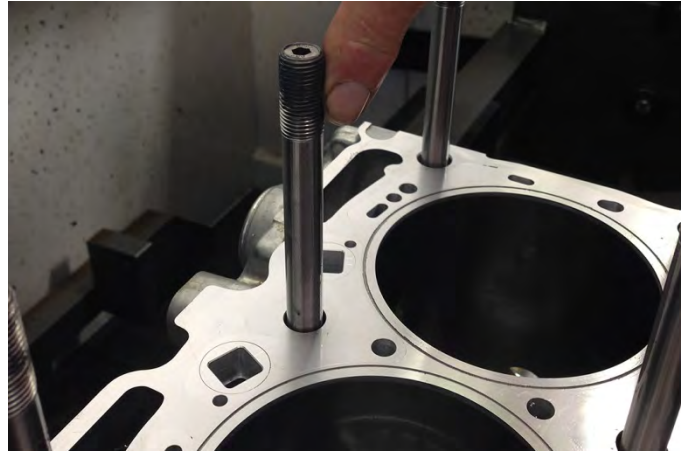
Studs must be installed with hand tools due to the amount of thread engagement, friction and lubrication. Do not attempt to fully install and seat each stud in one sequence. Move stud-to-stud until fully seated.

2. Verify stud height relative to each other stud. The exposed stud to deck height should be 3.760"-3.800" (All studs should be within +/- .008" of each other).





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



4. 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).

5. Apply ARP lube to the flange of the head stud nut and install.

6. Follow the torque procedure below.

½" Head Stud Torque Specs		
	Center Two	Outer Four
Step 1	30 lb·ft	30 lb·ft
Step 2	70 lb·ft	70 lb·ft
Step 3	110 lb·ft	110 lb·ft
Step 4	125 lb·ft	125 lb·ft
Repeat Step 4		

Preparing cylinder heads for ½" 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.



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

14mm Head Studs Install

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.



2. 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.





If your head studs are black and were purchased prior to 2018: in order to tighten the studs to the block it will require using hand tools and two head stud nuts. Thread the two nuts to the cylinder head side as shown in the picture. (Nut flanges against one another)

Slide a 18mm 12pt open end wrench down the stud and then hand thread the stud into the block.

*Note: the wrench is used to tighten the two nuts against one another and to break the nuts free once the stud is torqued in place.

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.

Do not attempt to fully install and seat each stud in one sequence. Move stud-to-stud until fully seated.



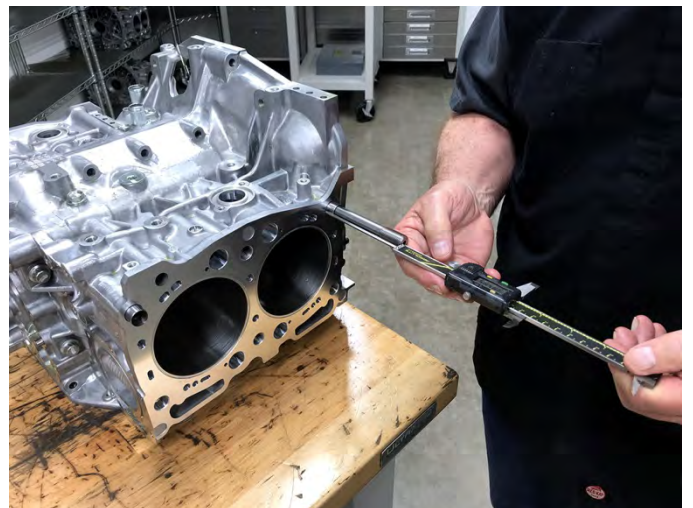


3. Torque the stud to 10lb/ft. Once torqued, loosen the nuts and proceed to the next stud location repeating this step.



4. Verify stud height relative to each other stud.

- **If your head studs are silver and purchased in 2018 to current** the exposed stud to head gasket surface height should be 3.815" - 3.860" (All studs should be within +/- .010" of each other).
- **If your head studs are black and purchased prior to 2018** the exposed stud to head gasket surface height should be 4.035" - 4.055" (All studs should be within +/- .008" of each other).





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

6. 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).

7. Apply ARP lube to the flange of the head stud nut and install.

8. Follow the torque procedure on the next page



Different torque specs are required based on when your block shipped from our manufacturing facility!

Please use one of the three charts listed below based on your blocks shipping date!

14mm Head Stud Torque Specs for IAG Blocks shipped prior to 4/11/2018

	Center Two	Outer Four
Step 1	40 lb-ft	30 lb-ft
Step 2	87 lb-ft	70 lb-ft
Step 3	115 lb-ft	110 lb-ft
Step 4	130 lb-ft	125 lb-ft
Repeat Step 4		

14mm Head Stud Torque Specs for IAG Blocks that shipped between 4-11-2018 to 4-19-2018

	Center Two	Outer Four
Step 1	40 lb-ft	30 lb-ft
Step 2	87 lb-ft	70 lb-ft
Step 3	115 lb-ft	110 lb-ft
Step 4	130 lb-ft	120 lb-ft
Step 5	130 lb-ft	130 lb-ft
Repeat Step 5		

14mm Head Stud Torque Specs For IAG Blocks that shipped after 4-19-2018

	Center Two	Outer Four
Step 1	35 lb-ft	25 lb-ft
Step 2	70 lb-ft	60 lb-ft
Step 3	105 lb-ft	95 lb-ft
Step 4	130 lb-ft	120 lb-ft
Step 5	155 lb-ft	155 lb-ft



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.

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

Preparing head gaskets for 14mm head studs

***Since late 2018 IAG offers head gaskets that are manufactured with the appropriate sized holes for 14mm heads. The new gaskets do not require modifications. We recommend using the appropriate manufactured gaskets rather than the instructional steps listed below to modify off the shelf gaskets.**

1. The center two head stud locations on the head gaskets require drilling out to clear the larger 14mm hardware. The best way to accomplish this is to utilize a piece of aluminum or nice flat piece of wood. Create a pilot hole in the substrate using a drill and step bit maxing out the hole to 9/16".

2. Place the head gasket on the clean flat substrate lining up each of the (x2) center head stud holes to the pilot hole you created. *Make sure not to dent or bend the head gasket to avoid damage and improper sealing. Using the step bit, drill out the (x2) center head stud locations on the gasket to 9/16". ***We have found the best way to drill the gasket is to start drilling one side, then flip the gasket over and drill the other side and continue alternating to avoid burrs and snags.**

3. Once completed make sure to clean the gasket so it is free of debris.