



IAG Performance EJ25 Closed Deck Install Guide [v.14]

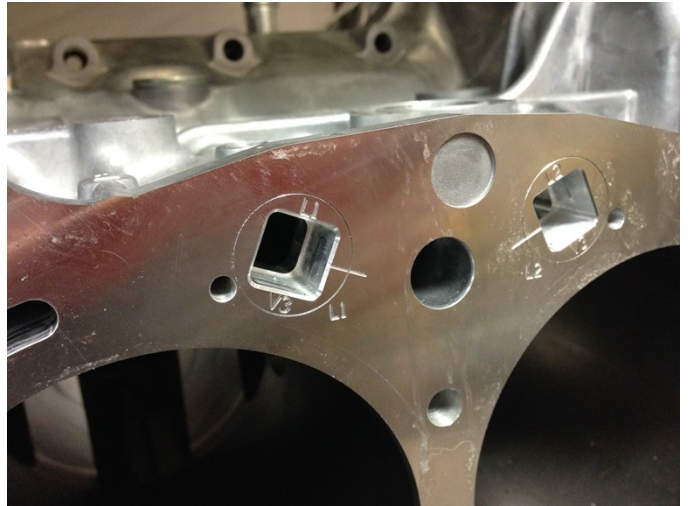
Please Note* This document is intended for IAG Short Blocks that shipped after 4-19-2018. If your block shipped before 4-19-2018 different torque specs are required and there are supporting documents available with those specs.

- Shipped Prior to 4-11-2018 use Closed Deck Document [v.13](#)
- Shipped between 4-11-2018 to 4-19-2018 use Closed Deck Document [v.13.1](#)
- Shipped after 4-19-2018 use Closed Deck Document [v.14](#)

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 – 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 1/2" 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 ****

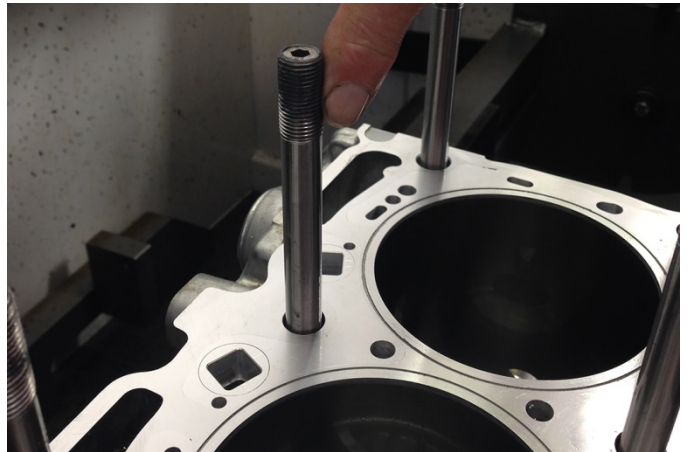
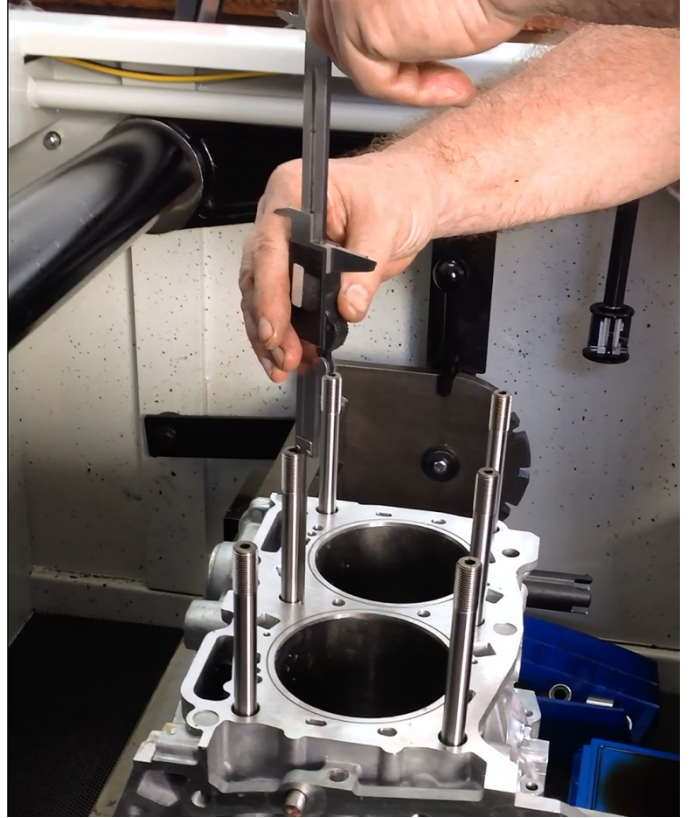
If you experience resistance, back out the stud and inspect the threads on both parts; clean the threads as needed. Try threading it again.



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. Apply ARP lube to the studs top five or more head side threads (completely around the circumference, not just a dab one side) as well as both sides of the flat washer and the flange of the nut. Install the cylinder head, washers and nuts.



1/2" 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 1/2" head studs

The larger 1/2" 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.

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. 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)



3. 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.



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

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





5. Verify stud height relative to each other stud. The exposed stud to head gasket surface height should be 4.035"-4.055" (All studs should be within +/- .008" of each other).



6. Apply ARP lube to the studs top five or more head side threads (completely around the circumference, not just a dab one side) as well as both sides of the flat washer and the flange of the nut. Install the cylinder head, washers and nuts.

14mm Head Stud Torque Specs For Blocks Shipped After 4/19/2018

**If your block shipped prior to 4/19/2018 please refer to Support Page for Obsolete Parts Instructions for different torque specs.
<http://www.iagperformance.com/support-a/265.htm>*

| | 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 | 130 lb·ft | 130 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.

Preparing head gaskets for 14mm head studs

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.