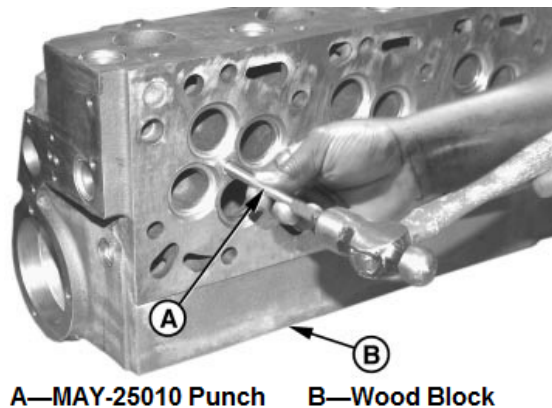




## Injector Sleeve Removal & Installation for John Deere 13.5L Diesel Engines

The AERA Technical Committee offers information on the removal & installation of injector sleeves for John Deere 13.5L diesel engines. This repair is done after the cylinder head has been removed from the engine block. It should also be noted that anytime the EUI (electronic unit injector) is replaced the injector sleeve must also be replaced at that time.

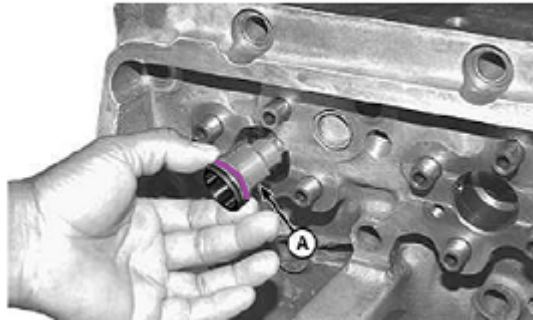
**NOTE:** Carefully inspect threads on 8 mm cap screws prior to use to avoid damaging injector hold-down clamp threads in cylinder head. Replace cap screw as needed.



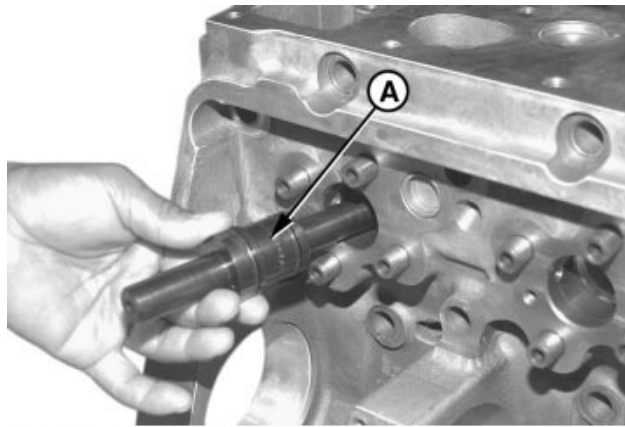
1. Using a 2X4 block of wood (B) at least 36" long, lay cylinder head on its side with air intake manifold mounting surface resting on block of wood.
2. Carefully drive injector sleeve from combustion face side of cylinder head using the punch MAY-25010 Punch (A) from JDG981 Unit Injector Sleeve Installation set and a hammer.
3. DO NOT use engine oil or any petroleum based product as a lubricant for the injector sleeve O-rings. A chemical reaction will occur, leading to O-ring failure. Instead use AR54749 soap lubricant (or similar) to lubricate the packing, B= Black, C= purple colored O-rings.
4. Install replacement injector sleeve (A) and push with minimal pressure until tightly seated in sleeve bore.



B = Upper. C = Lower

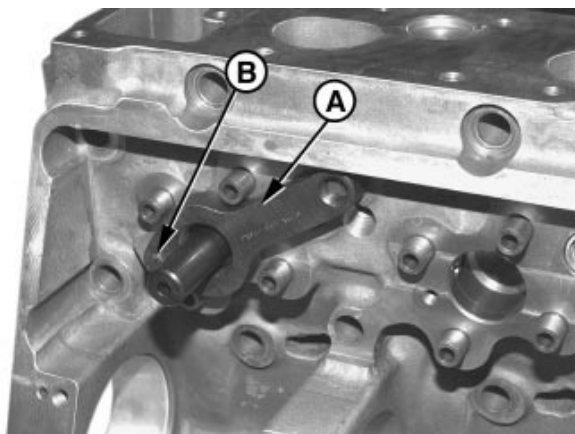


A = Injector Sleeve



**Installing Injector Sleeve Guide (A) JDG981-1**

5. Grease polished tip of JDG981-1 Guide Sleeve (A) and install inside injector sleeve.



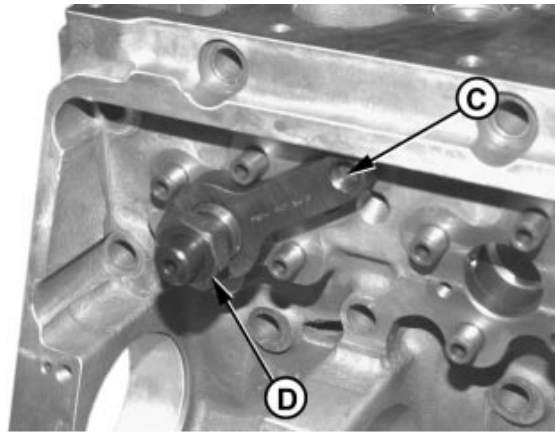
**Installing Guide Support Bar (A) Cap Screw (B)**

6. Install JDG981-3 Guide Sleeve Holding Bar (A) as shown. Install 220213 (8 mm) cap screw (B) finger tight.



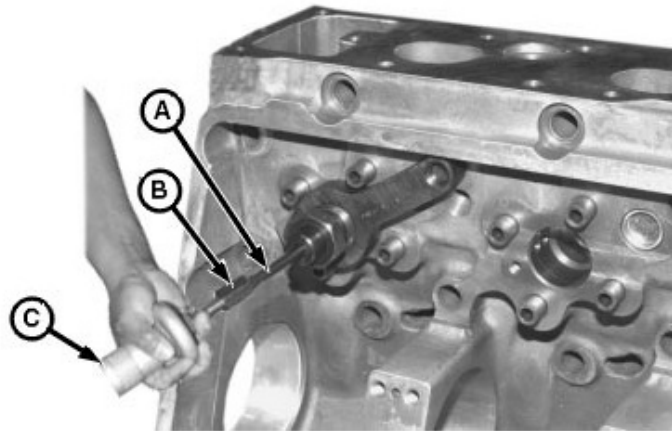
**Guide Support Bar Cap Screw (C)**

7. Install 220089 (16 mm) cap screw (C) from combustion face side of head using a phosphate washer from cylinder head mounting cap screw finger tight.



**Guide Sleeve Arbor Nut (D), 16MM Cap Screw**

8. Install JDE131-2 Driver Nut (D) finger tight.
9. Tighten cap screws and nut in following order to:
  - 16 mm Cap Screw (C) to 85 FT/LBS (115 Nm)
  - 8 mm Cap Screw (B) to 35 FT/LBS (47 Nm)
  - Guide Sleeve Nut (D) to 110 FT/LBS (150 Nm)



**Using Expansion Arbor (A), Adapter (B), Slide Hammer (C)**

10. Clean and inspect JDG1184-2-1 Swedge Arbor (A) for raised or foreign material.
11. Assemble small end of 8132 Adapter (B) onto swedge arbor (A), assemble large end of adapter onto D01300AA 5-pound Slide Hammer (C).
12. Position tip of swedge into guide sleeve and drive swedge through sleeve tip. Withdraw swedge with slide hammer. Remove tooling and inspect for proper installation. Repeat all steps on additional locations.



**Properly Installed Injector Sleeve**