



B-SERIES CUMMINS, 12 VALVE HD  
L-19, CUMMINS ENGINES 1989-98  
PN: HMR 105-4007HD



## INSTALLATION INSTRUCTIONS

WITH HEAD OFF:

1. Take a 12mm x 1.75 bottoming tap and clean holes in the block.
2. Install by hand a stud in each hole of the block, verifying that the chamfered shoulder on the stud bottoms out in the block. If it does not, remove stud, tap hole deeper with the bottoming tap, re-check for proper fit.
3. Remove studs
4. Install head on block, not forgetting head gasket
5. Coat threads of studs with motor oil (Use a conservative amount of oil. A small paint brush is best for applying the oil) before installing in block. Install studs in block - SNUG. **DO NOT TORQUE STUDS IN BLOCK**
6. Place flat washers on studs, lube washer and upper (fine) threads with ARP Ultra Torque Assembly Lube. Torque to: 50 Ft Lb, 75 Ft Lb, 100 Ft Lb, 120 Ft Lb and 130 Ft Lb
7. Recheck all studs at 130 Ft Lb final torque.
8. **RETORQUE PROCEDURE:**
  - a. Leave valve cover off, start truck and let run until it reaches operating temperature.
  - b. Remove fuel lines and return line.
  - c. Retorque studs to 120 - 125# FT LB, ENGINE HOT. **DO NOT OVER-TORQUE** This is the **ONLY** hot retorque. Cold engine for all afterwards
  - d. Check valves, re-adjust if necessary. INTAKE - .008 and EXHAUST - .018 on hot engine
9. **FOR BEST RESULTS:** WE ARE RECOMMENDING THAT YOU DRIVE THE TRUCK EASY FOR A WEEK AND RETORQUE AGAIN. REPEAT THE WEEKLY PROCEDURE UNTIL THE HEAD GASKET IS PROPERLY SEATED. CHECK PERIODICALLY.

### POSSIBLE VALVE COVER MODIFICATIONS:

Step 1 Place valve cover without gasket on cylinder head, if valve cover does not set flat on head, continue to step 2.

Step 2 With a die grinder: on inside of valve cover, remove excess aluminum from casting runners. Some valve covers ok, some hit the runners.

