



## Installation Instructions for KPMI® Part No: 20-21045 HARLEY DAVIDSON • MILWAUKEE-EIGHT • 2017-'19 Black Diamond™ Rocker Arm Tower Stud Kit

- 1) **Disassembly:** Make sure the cylinder is at TDC on the compression stroke before beginning the removal/installation process. Remove old rocker stand bolts from head.
- 2) **Preparation:** Properly clean rocker stand threaded holes using a 5/16-18 UNC G3 bottoming roll tap. Be careful if the engine is assembled, not to allow any debris to contaminate the engine. KPMI® suggests using Tapmatic® cutting fluid, ATF, or WD40® when cleaning up threads in the rocker stand. After the threads have been chased clean the threads in the head with lacquer thinner or Loctite Klean'N Prime and then with compressed air make sure the threads are clean and dry.
- 3) **Determine Stud Ends:** Each end of the cylinder stud has a different thread type; one to be inserted in the rocker stand and one for the nut. The Black Diamond™ nuts included will not screw completely onto the rocker stand end.
- 4) **Stud Installation:** First clean the stud thread with lacquer thinner or Loctite Klean'N Prime and compressed air, being sure the thread is left clean and dry. Then apply blue Loctite™ on the course thread before installing it into the cylinder head.  
Install studs by locking two 5/16-24 nuts on the finely threaded end, paying careful attention that the correct end is threaded into the rocker stand. Using the locked double nuts, torque the studs into the rocker stand to 3-5 lb-ft. Break the double nuts loose, and remove.  
Important Note: If threads in the rocker stand are too loose or worn, proper rocker stand repair must be made before installation of KPMI Black Diamond studs.
- 5) **Rocker Installation:** Before rocker installation, it is recommended that the rocker arm is filled with oil through the pushrod seat. Install the rocker arm onto the studs and apply a small amount of Loctite to the threads of the stud and nut. Then thread the Black Diamond™ Nut onto the stud thread and torque according to the following procedure:
  - a) Torque each nut to 5 lb-ft
  - b) Torque each nut to 10 lb-ft
  - c) Loosen both nuts to ensure the rocker shaft is seated
  - d) Using several increments, torque nut to a final 24 lb-ft

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