

Aluminum Cylinder Head Straightening

Meets NATEF Task: M1 Machinist task not specified by NATEF

Name _____ Date _____ Time on Task _____

Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

Check service information and determine the following information.

_____ 1. Specifications for out-of-flatness: _____

_____ 2. Measured actual out-of-flatness: _____

_____ 3. Before machining the surface of the cylinder head, place the head onto a flat 2" thick steel plate.



_____ 4. Place shims equal to one-half of the warpage (out-of-flatness) of the head under both ends of the cylinder head.

thickness of shims used: _____

_____ 5. Bolt the center of the head to the plate using head bolts.

_____ 6. Place the cylinder head into a 500° F oven and heat for at least 8 hours.

NOTE: The heat from the oven not only straightens the cylinder head, but it also stress relieves the head.

_____ 7. Turn off the oven, and allow the cylinder head to cool gradually (at least 8 hours).

_____ 8. After allowing the cylinder head to cool, measure the out-of-flatness: _____

_____ 9. Machine the cylinder head as necessary.