

# Crack Detection and Cylinder Head Warpage

Meets ASE Task: A1 – B-3 – P-1

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time on Task: \_\_\_\_\_

Make/Model/Year: \_\_\_\_\_ VIN: \_\_\_\_\_

Evaluation (Enter number from 4, 3, 2, 1) : \_\_\_\_\_

1. Clean the cylinder head(s) and visually inspect for damage.
2. Check the cylinder head(s) for cracks. Which method(s) was used?
- \_\_\_\_\_ magnetic (Magnafluxing®)
  - \_\_\_\_\_ dye penetrant (red dye and white powder)
  - \_\_\_\_\_ fluorescent penetrant (Zyglo®)
  - \_\_\_\_\_ pressure testing
3. If cracks were detected, what was the solution?
- \_\_\_\_\_ replace the head/block
  - \_\_\_\_\_ stop drilling
  - \_\_\_\_\_ welding
  - \_\_\_\_\_ crack plugging
  - \_\_\_\_\_ other (describe) \_\_\_\_\_
4. Use a precision straight edge and a feeler (thickness) gauge to check for warpage, distortion, bend, and twist by checking in five places.
5. Maximum thickness of feeler gauge that could be placed between the straight edge and the head is \_\_\_\_\_ inches. **OK** \_\_\_\_\_  **NOT OK** \_\_\_\_\_
6. What is the necessary action? \_\_\_\_\_
- \_\_\_\_\_