

Correct Bond Line Temperature Made Easy

One of the most important parts of getting a good bond on your TC pistons or covers is having the correct bond line temperature. Most experts agree that a bond line temperature of 400° F to 425° F is needed for a good bond. While the gauges on your bonder tell you what heat is available to the heating elements, the difference in mass of the individual clutches and covers makes them heat up at different rates. Thus, it's impossible to really know what the bond line temperature of each clutch or cover is without monitoring each and every piece.

Jack Wolf at Myles Martin in Valley Stream, N.Y., has found an easy way to monitor his bond line temperature. In addition to keeping an eye on his gauges, he also puts a small dab of non-reversible temperature liquid as close to the bond line as possible. When the temperature liquid reaches its rated temperature, it melts. It's an easy way to check that your bond line temperature is correct for a specific clutch or cover.

The temperature liquid is available in 40 different varieties that range from 175° F to 2000° F. Jack uses the 400° F liquid. The temperature accuracy of the liquid is within +/- 1% at 400°. The temperature liquid is available in the McMaster-Carr catalog (p/n 3261K93) and the MSC catalog (p/n 82822115). A 2-ounce bottle costs \$11 to \$12.

If you really want to be creative, you can add two additional dabs of temperature liquid (225° F and 275° F) and monitor the beginning and end of the flow cycle for your adhesive. (The length of the flow cycle is important.)

There are also temperature crayons available that will yield the same result, allowing you to track bond line temperature from piece to piece.

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