Intake Valve Failure on 2011-2013 Ford 5.0L DOHC Engines

The AERA Technical Committee offers the following information regarding intake valve failures on 2011-2013 Ford 5.0L DOHC engines. These failures have been noted on vehicles with as little as 50,000 miles but all earlier engines may be subject to this condition. First signs of impending failure is usually indicated by an intermittent cylinder miss-fire and error codes.

The engine miss-fires are the result of a bad intake valve-to-seat seal causing a lack of compression. As viewed in Figure 1 below the valve face has eroded away, thus losing its ability to seal against the valve seat angle. It is not uncommon to see all 16 intake valves with severe valve face erosion.

Figure 1. Eroded Intake Valve Face

During the 2013-year Ford modified the intake valve for these engines and is available with Part #BR3Z6507A for use on the earlier engines. After doing so, subsequent failures have not been reported since that change. Aftermarket suppliers of intake valves for these engines are only supplying the improved later part number.