

## Four-Cycle Valve Recession Additives and Outboard Gasolines – Update

### Use Of Four-cycle Valve Recession Additives In Two-cycle Outboard Gasolines

As earlier reported, certain four-cycle valve recession additives may have triggered a reaction with premium outboard motor oils. This reaction may have caused certain two-cycle additives to precipitate. The precipitation resembles mucous and may clog the in-line fuel filters located between the fuel pump and carburetor(s). If it passes through the in-line fuel filter, it can clog the smaller passages in the carburetor(s). This problem could occur on two-cycle outboards that use pre-mixed gasoline with oil AND on outboards equipped with AutoBlend and/or equipped with integral oil injection. When gasoline containing these four-cycle valve recession additives mixes with premium outboard motor oil, this precipitation may occur.

WE HAVE BEEN INFORMED BY ALL LEADING ADDITIVE PRODUCERS THAT ADDITIVES WHICH MAY HAVE CONTRIBUTED TO THIS PROBLEM HAVE BEEN REMOVED FROM THE MARKET. AT THIS TIME, CURRENTLY AVAILABLE FOUR-CYCLE ADDITIVES APPEAR TO BE SAFE IN THAT THERE IS NO EVIDENCE OF CLOGGING TRACED BACK TO THE USE OF SUCH ADDITIVES IN TWO-CYCLE ENGINES.

Many marinas are blending four-cycle valve recession additives in the gasoline they sell because they want the owners of older four-cycle marine engines to have some added protection against premature valve seat wear. We do not object to this practice. However, as stated in the preceding paragraph, it has recently been determined that certain additives available prior to the 1989 season may be detrimental when blended with two-cycle outboard gasolines and oils.

The purpose of this service bulletin is to alert marine operators and dealers of potential problems.

**IMPORTANT: Premium outboard motor oils that have been subjected to temperature cycles (changes) including below freezing temperatures may experience precipitation with gasolines that DO NOT contain four-cycle valve recession additives. However, this happens very infrequently – and extensive testing is being conducted to determine the cause.**

You will be further advised on both of these issues as soon as more information becomes available.