

## CUSTOMER SUCCESS STORY



**At BASF, we  
don't make the  
golf course.  
We help keep it  
green.**

**Customer:** Doral<sup>®</sup> Golf Resort and Spa, a Marriott<sup>®</sup> resort in Miami, Fla.

**End-Use:** Hydraulic fluid used to operate maintenance equipment

**Product:** Plurasafe<sup>®</sup> EnBio TC<sup>®</sup>S Hydraulic Fluid

**PROBLEM:** Current hydraulic fluid product offerings made from mineral and vegetable oils can cause substantial damage to grass turf. Under high pressure, the flexible hoses used in the equipment sometimes leak, and conventional hydraulic fluids containing either of these oils kill grass. In April 2007, John Patterson, Fleet Service Manager at Doral, discovered that a turf mower had spilled two gallons of hydraulic fluid onto eight greens of the club's White Course. "This was a 'worst case scenario.' Due to extraordinary circumstances, the fluid leak was not discovered until three hours after it began, and washout could not begin until another hour after that. Cleanup was also hampered by the amount of play, with 165 rounds played on the White Course that Friday," said Patterson.

**SOLUTION:** Doral had recently switched to BASF's Plurasafe EnBio TCS hydraulic fluid, the first water-free lubricant that provides excellent lubricity and is formulated to eliminate turf loss when leaked. It is designed to replace hydraulic fluids based on mineral and vegetable oils. Plurasafe EnBio TCS is biodegradable and environmentally friendly. It will not harm or kill grass if leaked onto the turf when the recommended wash procedure is followed. However, instead of washing the spill with water within 20 minutes, the leak was not discovered for three hours, and it took a total of four hours before cleanup began.

"The results were amazing. Initially, the affected grass had yellowed, but it maintained its density so ball roll was not affected. Within 120 hours, there were no visible marks from the spill," said Patterson. "The leak occurred on a Friday morning. The weather was sunny, warm and windy that day and for the rest of the weekend. More than 280 golfers played the course that weekend, and most did not notice that anything had happened."

**BENEFITS:** With another hydraulic fluid, a leak such as the one at Doral could have taken 24 hours of labor to replace the damaged turf with sod from the nursery green, and could have shut down parts of the course for three days so repairs could be made. Plurasafe EnBio TCS hydraulic fluid:

- Does not harm grass when leaks occur when washed properly with water.
- Offers excellent lubricity and wear properties.
- Is biodegradable and has low toxicity in its virgin state.
- Can help save money by avoiding the damage caused by leaks of conventional mineral or vegetable oils that require digging up and re-sodding turf.
- Offers the potential to extend change out intervals, to lower lubricant cost, reduce the need for disposal of used lubricant, and lower equipment down time associated with changing lubricant.
- Demonstrates outstanding anti-wear and corrosion performance.
- Has a high viscosity index and a low pour point that eliminates the need for seasonal fluid changes.
- Has a higher flash and fire point than typical petroleum based fluids.

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