



*The First in Synthetics*®

## Synthetic TBI ISO 32/46 Biodegradable Hydraulic Oil

- Denison HF-0, HF-1, HF-2
- Vickers M-2950-S, I-286-S
- Cincinnati Milacron P-68, P-70



### PRODUCT DESCRIPTION

AMSOIL Synthetic Anti-Wear Biodegradable Hydraulic Oil (TBI) is a premium lubricant designed to biodegrade to its natural state when subjected to sunlight, water and microbial activity. Because it is formulated with ashless additives that do not contain heavy metals, AMSOIL Biodegradable Hydraulic Oil has a very low toxicity level.

AMSOIL Biodegradable Hydraulic Oil incorporates very high-quality synthetic base oils that provide thermal stability, even though they are biodegradable. It also contains anti-wear additives that have been thoroughly tested and qualified against stringent hydraulic oil standards, including Denison HF-0, HF-1 and HF-2; Vickers M-2950-S and I-286-S and Cincinnati Milacron P-68 and P-70. AMSOIL Biodegradable Hydraulic Oil provides optimum protection for hydraulics, helping to prevent pump wear and rusting of critical components. It also contains antioxidants that increase oil life and foam inhibitors that quickly release air from the oil.

Based on high-quality, synthetic oil chemistry that better withstands heat and lasts longer, AMSOIL Biodegradable Hydraulic Oil outperforms vegetable oil-type, biodegradable hydraulic oils, promoting problem-free operation.

### APPLICATION RECOMMENDATION

AMSOIL Synthetic Biodegradable Hydraulic Oil is recommended for gear, vane and piston stationary and mobile hydraulic systems. It is a multi-viscosity, SAE 5W-20 oil and is recommended for use in place of either ISO-32 or ISO-46 hydraulic oils.

AMSOIL Biodegradable Hydraulic Oil is essentially compatible with typical hydraulic oils, and small amounts of contamination (lines, residue) are acceptable. However, it is recommended systems be drained prior to installing TBI. Excessive system contamination will minimize its biodegradability effectiveness.

AMSOIL TBI is especially well-suited for applications where environmental contamination due to leaking or blown hydraulic lines presents an environmental hazard.

AMSOIL Biodegradable Hydraulic Oil has been tested and found compatible with Nitrile (Buna-N), Poly Acrylate, Fluorocarbon (Viton) and Silicone seals which are commonly found in hydraulic systems.

The ability of AMSOIL TBI to extend drain intervals and excel in performance is subject to operating conditions and maintenance practices. Monitoring by oil analysis is recommended.

### PERFORMANCE FEATURES

- **80% Biodegradable Within 21 days (CEC L-33-A-94)**
- **Thermally Stable**
- **Resists Oxidation**
- **Anti-Rust and Anti-Foam**
- **-69°F Pour Point For Cold-Temperature Performance**
- **Outperforms Vegetable-Type Bio-Hydraulic Oils**



## **TYPICAL TECHNICAL PROPERTIES**

### **Synthetic TBI Hydraulic Oil**

ISO VG — ASTM D-2422	32/46
SAE Grade	5W-20
Viscometrics 100°C, cSt — ASTM D-445	7.3
Viscometrics 40°C, cSt — ASTM D-445	40.1
Viscosity Index (VI) — ASTM D-2270	149
Specific Gravity — ASTM D-1298	0.9646
Density — ASTM D-1298	8.033
Four-Ball Wear Test — ASTM D-4172 (40 kg, 1200 rpm, 75°C, 60 min.), Scar, mm	0.40
Flash Point °C (°F) — ASTM D-92	256°C (493°F)
Fire Point °C (°F) — ASTM D-92	282°C (540°F)
Pour Point °C (°F) — ASTM D-97	-56°C (-69°F)
Copper Strip Corrosion Test — ASTM D-130	1A
Foam ASTM D-892	
Sequence I	0/0
Sequence II	0/0
Sequence III	0/0
Demulsibility ASTM D-1401	
Oil/Water/Cuff (minutes)	40/40/0 (15)
Dielectric Strength, KV — ASTM D-887	39KV
Biodegradability % — CEC L-32-A-94	80

### **AMSOIL PRODUCT WARRANTY**

AMSOIL Industrial Lubricants are formulated to exceed accepted industry specifications. AMSOIL warrants that the use of its lubricants will not cause mechanical damage to any mechanically-sound equipment when AMSOIL products are used in full compliance with the company's recommendations. However, the purchaser is responsible for determining if these specifications are adequate and proper for the intended application. The AMSOIL warranty is limited to lubricant performance consistent with indicated specifications. No additional warranty, expressed or implied, can be made. For additional warranty information visit [www.amsoil.com](http://www.amsoil.com).

### **AMSOIL PRODUCT AVAILABILITY**

AMSOIL products are available in 5-gallon pails, 55-gallon drums, 275-gallon totes and bulk quantities.

AMSOIL Industrial Lubricants are stocked in Superior, Wisconsin and in select regional distribution centers throughout the United States and Canada. AMSOIL will stock additional quantities of lubricants or special-order products based on customer requests and regional demands. For applications and recommendations, contact your local AMSOIL Dealer or the AMSOIL Technical Services Department.

*AMSOIL products and Dealership information are available from your local AMSOIL Dealer.*

