

**To: Parts Managers
 Service Managers**

Subject: Hino Genuine Long Life Coolant Specifications

Date: December 1, 2008

The following technical specification notice is intended to help dealers and customers understand the value of using Hino Genuine Long Life Coolant for all heavy duty vehicles. Hino Genuine Long Life Coolant meets the following specifications set by the American Society for Testing and Materials (ASTM): **ASTM D3306 and ASTM D6210 (Heavy Duty specs).**

Chemical Properties

Property	ASTM D-6210 (50%) Specification
Specific Gravity (60/60°F)	1.0650 Min.
Freezing Point, 50 Vol. %, °F	-34 Max.
Boiling Point, 50 Vol. %, °F	226 Min.
Effect On Automotive Finish	No Effect
PH, 50 Vol. %	7.5-11.0
Chloride, PPM	25 Max.
Reserve Alkalinity	Report
Ash (Wt. %)	2.5 Max.
Color	Pink

One critical element to this specification is the benefit of using a premixed coolant. A premix coolant minimizes chances of engine problems resulting from impurities in the water used to formulate your coolant. Using water of poor quality can introduce metal ions and anions into your engine cooling system. These ions can react with corrosion inhibitors and create precipitation or accelerate metal corrosion. This can cause radiator plugging which may lead to overheating, coolant leakage or other more disruptive system problems. Hino Genuine Long Life Coolant is premixed using high-quality water, such as de-ionized water, thus minimizing concern for these problems.

Understanding the Specifications:

- Automotive antifreeze (for cars, not intended to be maintained with SCAs). These are characterized by ASTM specification **D-3306**.

- Low-silicate heavy-duty antifreeze to which SCAs must be added before use. These are characterized by ASTM specification **D-4985** (Standard Specification for Low-Silicate Heavy Duty Antifreeze Requiring an Initial Charge of Supplemental Coolant Additive).
- Fully formulated heavy-duty antifreeze that **already contains the SCA** components. These are characterized by ASTM specification **D-6210**.

At first there existed just the top two of the ASTM specifications listed above: 1) ASTM D-3306, and 2) ASTM D-4985. ASTM D-6210 was added more recently. It established the new standard for heavy-duty antifreeze that includes the cavitation protection provided by SCAs.

ASTM **D-3306** calls out the physical and performance requirements that a new (non-recycled) automotive antifreeze should meet. Don't buy or use any product that fails to at least claim it meets this specification. Generally automotive antifreeze usually includes a silicate to protect aluminum for two or three years.

Because operators of Heavy-Duty diesel engines experienced problems when using the car antifreeze, a "low silicate" specification was developed. These antifreezes contain less silicate and are designed to be maintained (tested and, if necessary fortified) on a periodic basis. Importantly, as indicated in the title of **D-4985's** specification, this antifreeze isn't "ready-to-use;" SCA's must be added!

Hino Genuine Long Life Coolant is a fully formulated antifreeze (ASTM **D-6210** specification) and is strongly recommended for use in all Hino Trucks. It can also be used in all other diesel powered vehicles and is comparable in formulation to most fully formulated antifreezes. SCA's should still be checked and maintained as recommended by the specific engine manufacturer.

If you have any further questions, please contact Hino Customer Service at 1-866-372-HINO (4466). Thank you for your continued support and business.

Sincerely,

Your Hino Parts Team