



PRODUCT BULLETIN

JOHNSEN'S BRAKE FLUIDS

PRODUCT DESCRIPTION

Johnsen's Synthetic DOT 3 and Synthetic DOT 4 brake fluids meet or exceed FMVSS 116 and SAE J1703/J1704 specifications. The formulas for Johnsen's DOT 3 and DOT 4 brake fluids have not changed. The brake fluid in the bottles with the new labeling is exactly the same brake fluid as supplied previously.

APPLICATION

All OEM DOT 3 and DOT 4 brake fluids are synthetic. Therefore, Johnsen's brake fluids are highly recommended for aftermarket applications (both full fill and top off) because of their complete compatibility with OEM systems and fluids. Johnsen's brake fluids are also compatible with other brands of brake fluid.

	Boiling Point (ERBP)
DOT 3	
US Government Specification	401 F
Johnsen's Test Results (typical)	475 F
DOT 4	
US Government Specification	446 F
Johnsen's Test Results (typical)	500 F



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SUBJECT: MINI MASTER CYLINDER SILICON ASSEMBLY FLUID

During manufacture of the Mini Master Cylinder, Bosch lubricates the piston bore with a silicone fluid to facilitate component installation and testing. This silicone material has the consistency of a light grease. It is inert and is compatible with brake fluid. This silicone material often migrates to the master cylinder reservoir. Since the silicone is lighter than the brake fluid, it floats on the surface of the brake fluid and is often mistaken as "foreign matter" or contamination. The silicone fluid appears as either a relatively thin film on top of the brake fluid or globules floating in the brake fluid. While the possibility of contamination should not be discounted, material floating in the reservoir is most likely the silicone assembly fluid used during manufacture.

When the brake fluid and silicone mixture in the reservoir is penetrated with the tip of a clean screwdriver, the silicone will tend to gather and adhere to the screwdriver tip. When the screwdriver is slowly removed the silicone will "string" away, similar to heavy oil.

True oil contamination in the brake fluid is most easily identified by examining the rubber components in the reservoir caps. When brought into contact with oil, rubber components intended for use in brake fluid will exhibit substantial swelling (often exceeding 125% of their original size).



A NAVISTAR COMPANY

Workhorse

P.O. Box 110, 922 South State Route 32
Union City, IN 47390 USA

P : 765-964-4000

W : navistar.com

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Since its inception, the Workhorse W20/22 motor home chassis has been a favored choice in the class A gas RV market. Although we have always used trusted component suppliers in our chassis, you may have been notified of an upcoming campaign involving Bosch brake calipers on your W series RV chassis. Rest assured, we have been diligently working with Bosch, the brake caliper manufacturer, on engineering, validation and production plans leading to the launch of this campaign. We are committed to you, our valued customers, and are taking immediate corrective steps to regain your confidence in our product.

Workhorse has allocated additional personnel to field brake campaign questions and has streamlined operations with our authorized service centers. We have also made significant additions to our website to keep our customers updated and informed. We are confident, as a result of these actions, that Workhorse will emerge as a more trusted and even more customer responsive manufacturer than ever before.

Workhorse prides itself on the quality and reliability of our products as well as the after sale service and support we provide. I want to apologize for the disruption and concerns this issue may have caused to our customers and our partners. Your confidence in Workhorse is extremely important to us, and we are committed to restoring that confidence fully and as quickly as possible.

Sincerely,

Jim Gavaghan