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AUTOFOCUS

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SECTION 9

Auto Sunday

Rust can damage Tahoe's brakes

Q. I have a 2003 Chevy Tahoe with about 90,000 miles on it. I am getting all kinds of grinding and metallic noise



Doug McAllister
Under the hood

from the back of the vehicle. This occurs always when braking but sometimes even when I am not braking. Also at times when coming to a stop I feel a grinding sensation from the front like the ABS is on, but it is not slippery. I had a shop look at it and they said the whole braking system in the back needs to be replaced and a wheel bearing in the front. It is really expensive. Does this sound right?

A. What you are describing can be a fairly involved repair and is common to the Tahoe, Yukon, Suburban and all the pickup trucks.

Let's tackle the problems one at a time. I am going to assume that what is happening to your vehicle is what we usually see on this type of vehicle when it comes in. What is going on in the back of the vehicle can be attributed to good old rust. For some reason everything back there seems to rust away. The brake rotors get all rust pitted and make lots of noise on stopping. The backing plates that are supposed to protect everything rust away and the rusted metal starts rubbing on the inside of the brake rotor. And most of the time the internal emergency brake system needs to be cleaned up or replaced. This is probably what they are talking about replacing in the back of the vehicle: the brake pads, brake rotors, backing plates and e-brake shoes. This is common.

The other problem we refer to as false ABS (anti-lock brake system) activation. GM now has a TSB (technical service bulletin) out for this problem now. This problem is also caused by rust. Here is the description right from the TSB:

"The cause of this condition may be an increased air gap between the wheel speed sensor and the hub reluctor ring due to rust and debris built up on the sensor mounting surface."

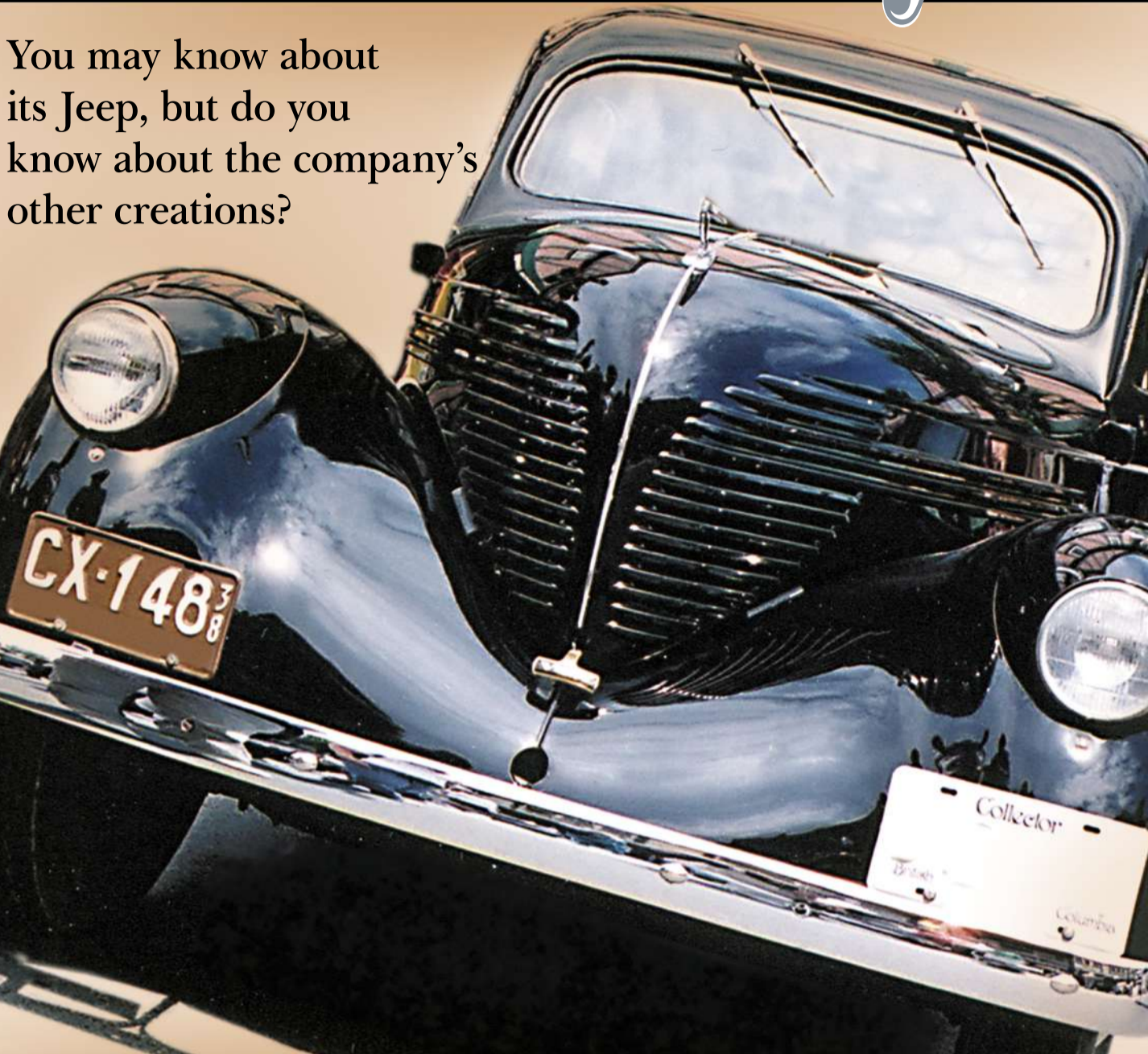
There is a whole procedure for taking this apart and cleaning the parts to get the air gap back to where it should be. If this doesn't work then the wheel bearing will need to be replaced. Every vehicle has its own weak spots and you have run up against a couple of the weak spots on the Tahoe, at least when they are driven around here in the rust belt.

• Douglas Automotive is in Barrington and Crystal Lake.

NASCAR team helps Haiti relief effort

CONCORD, N.C. — Hendrick Motorsports has added a second airplane to the Haitian earthquake relief effort, with both planes making daily flights into the devastated nation. The NASCAR team initially loaned one 45-passenger plane and an eight-person crew to Missionary Flights International. Team owner Rick Hendrick said on Wednesday that one of the planes transported 26 orphans to Fort Pierce, Fla., on Tuesday to meet American families that had adopted the children before the earthquake struck.

You may know about its Jeep, but do you know about the company's other creations?



WILLYS



A late 1930s Willys Overland sedan

BY MALCOLM GUNN
Wheelbase Communications

To most people, the mere mention of the name Willys conjures memories of the original Jeep.

But though this sturdy mainstay of World War II continues in one form or another, much of the company's history, and the man credited with making it, has been all but forgotten.

The workers at the Overland Automobile Co. had John North Willys to thank for keeping them on the payroll after 1907. The fledgling operation, which had begun making automobiles back in 1903, had run into severe financial difficulties, the first of a number of such near catastrophes the company was forced to endure.

To the rescue came John Willys (pronounced Willis), a flamboyant 34-year-old entrepreneur who purchased 500 Overland cars for resale, and had already shelled out \$10,000 in deposit funds. To protect his investment, the customer soon became the principal owner, and in 1912 Overland was reorganized as the Willys-Overland Motor Co., with manufacturing facilities in Toledo, Ohio.

Under the direction of Willys, the company not only survived, but thrived. From 1910-'19, its automobile production was second only to Ford's Model T.

Along with selling a line of affordable Overland models, Willys also produced the more expensive Knight-powered cars. Willys met Charles Knight in 1913 and was immediately impressed with his revolutionary sleeve-valve engine. Knight's patented design had been proven to be far more durable than anything else on the market and was quieter and more fuel efficient to boot. The only drawback to the Knight design was its relatively high production costs. As a result, the engine had only been used in low-volume, premium-priced North-American and European marques.

After securing a license from its inventor, Willys began manufacturing

Fine Lines

The automobiles of John North Willys

a line of higher-priced Willys-Knight-branded cars, eventually churning out more than a half million examples between 1914 and 1933.

But the road to success was hardy a smooth one for Willys. Disaster loomed in 1918 when a protracted six-month strike at his Toledo plant nearly killed the company. To stave off disaster, Willys' financial backers — namely the banks — hired none other than Walter P. Chrysler to oversee their investment. Chrysler had recently retired as head of Buick and had yet to start his own car company.

From 1920-'22, Chrysler restored Willys-Overland to financial health before moving on to earn his own spot in the pantheon of automotive magnates. Willys was saved, but it would never again enjoy a prominent position as one of North America's top-selling brands.

Throughout the Roaring '20s, both Overland and Willys-Knight vehicles proved not only popular, but profitable. Leading the way was the high-volume Overland Whippet that became the company's prime income earner. From 1927-'31, more than 100,000 of the popular-priced Whippets were sold.

By 1933, however, the Great Depression had taken root and Willys, to prevent liquidation, was forced to shut down its highly touted Willys-Knight line after 19 years of production. Bruised and battered from the state of the economy, the company emerged from bankruptcy in 1936, but without the stewardship of John Willys, who had died of a heart attack the previous year.

Now under the chairmanship (and largest shareholder) Ward Canaday, the newly reformed Willys-Overland

Motors Inc. struggled on, updating both the looks and mechanical components of Willys-badged cars, but retaining the same basic four-cylinder engine design created for the Whippet.

As it turned out, World War II kept Willys-Overland afloat. The company was the successful bidder to produce the military-specified Jeep, a design originally created by the smaller American Bantam Car Co. The four-wheel drive jack-of-all-trades Jeep was the salvation for Willys. By 1945, the company had made 360,000 (out of a total production of 647,000) of these tough little beasts of burden, all featuring a modified version of the original Whippet engine.

After the war, Willys continued to produce a variety of civilian-grade Jeeps, including the Jeep station wagon and attractive Jeepster convertible.

After seven years of making nothing but four-wheel drive vehicles, Willys returned to making passenger cars in 1952 with the launch of the six-cylinder Aero-Willys lineup of coupes, sedans and hardtops. These compact cars proved to be both durable and economical, but were priced higher than their Ford, Chevy and Plymouth competitors and sales suffered as a result.

In 1953, Canaday sold the Willys operation to industrialist (and automaker) Henry J. Kaiser, who kept the brand alive until 1955 when he closed down his North American passenger-car operations (but maintained Jeep production in the United States) and relocated to Brazil. From 1960 until its eventual demise in 1972, The Aero-Willys continued as one of the cornerstones of the Brazilian automobile industry.

In good times and bad, and through depressions, wars and peace, the Willys company had soldiered on, leaving its mark with some of the most memorable vehicles to ever turn a wheel.

• E-mail feature writer Malcolm Gunn at www.wheelbase.us/mailbag.html.

Powerful Armada has robust roominess

BY ANN M. JOB
For The Associated Press

Large sport utility vehicles aren't as fashionable as they once were. So today's buyers of big SUVs are apt to be the people who really need them — for towing horse trailers, boats and motor homes or for carrying large groups of people.

The 2010 Nissan Armada handles all these tasks capably yet drives like a smaller vehicle than it is. Body motions for this 17.3-foot-long SUV are well-managed, and despite the Armada's two-ton-plus weight, the ride is comfortable and controlled.

The Armada's 317-horsepower, 5.6-liter V-8 is powerful, allowing for a towing capacity of 9,100 pounds with optional towing package.

Plus, there's generous room inside the eight-passenger Armada, enough for people in the first and second rows to stretch their legs and for smaller adults to be accommodated in the third row. Maximum cargo space is a healthy 97.1 cubic feet.

Pricing is competitive for the segment. Manufacturer's suggested retail price, including destination charge, for a base two-wheel drive 2010 Armada is the same as for 2009: \$38,010.

This compares with \$39,480 for a 2010 Toyota Sequoia with 310-horsepower V-8 and \$42,440 for a 2010 GMC Yukon XL 1500 with 320-horsepower V-8.

The lowest starting MSRP for a 2010 Armada with four-wheel drive is \$43,610 — which compares with \$42,705 for the four-wheel-drive Sequoia, and \$45,280 for the similar Yukon XL.

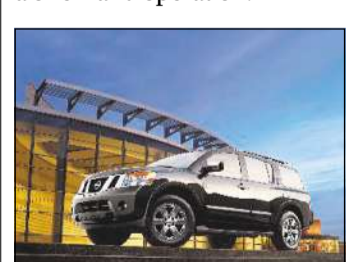
Based on the sturdy, fully boxed platform of the Nissan Titan full-size pickup truck, the Armada has attractive styling and an immense presence on the road.

The robust V-8 is named Endurance by Nissan officials, and it has dual overhead cams and produces 385 foot-pounds of torque at 3,400 rpm.

Right at startup, passengers hear the deep, strong engine sounds. Some people may prefer a quieter engine, but I liked hearing the confident sounds of power from this engine.

The V-8 never stressed in its duties and merged the Armada into city and highway traffic without fuss. There was just a bit of coasting when I'd let up on the accelerator pedal.

This V-8 uses regular unleaded gasoline, not pricey premium. Fit and finish on the test Armada was excellent, and manually flipping the second-row seats out of the way for access to the third row was a one-hand operation.



There's generous room inside the eight-passenger 2010 Nissan Armada SUV.

At a glance

Price as tested: \$45,960

Engine: 5.6-liter, double overhead cam V-8

City/highway fuel economy: 12/18 miles per gallon

Length: 207.7 inches

Wheelbase: 123.2 inches

Curb weight: 5,841 pounds

Built: Canton, Miss.

Destination charge: \$800