

THE KEMPNER POWER WAGON MUSEUM

TECHNICAL SUPPORT

GASOLINE

QUESTION: The mechanic at a local garage told me that my problems with my flathead 6 were caused by the use of "unleaded" gasoline? Will it hurt my Power Wagon?

I drove MOPAR flathead in-line 6 and 8 cylinder engines in the 1950's on "white" gasoline routinely sold as motor fuel by several major oil companies. Now it's called "unleaded" and you young guys think it is something new. The use of "white" gasoline was common and it was perfectly okay to use it in cars and trucks built back then.

"White" gasoline was also used in gasoline campstoves. Leaded gasoline fouled the generator (the part where the liquid fuel is vaporized by heat) so stove fuel came into being. The Coleman company has resumed making campstoves and "gasoline" lanterns that use unleaded gasoline.

When the "muscle cars" came along with their high compression V-8's, their engines needed high-octane gas to prevent pre-detonation and a fuel additive to "lubricate" the valves and valve seats. Lead additive was already out there so leaded high test became the gasoline of choice.

The EPA said "no" to lead and the auto industry changed the metallurgy of valves and valve seats and oil companies changed the additives that "lubricate" the valves and valve seats.

The guys and gals with the high-compression muscle cars produced before the ban on lead had problems. I continued to drive the low-compression flat head engines on the "new" unleaded and had no problems. Through the years, Dodge "souped up" the flat head by increasing its compression ratio from 6.7:1 in the WDX all the way up to 7.5:1 in the 1968 WM300 251 cu. in. engine. In 1955, they added valve inserts, so the C-3-PW and later has them. White gas in flathead engines was okay when the first Power Wagons were sold and unleaded in flathead engines is still okay.

If you have supercharged your flat head 6, the increased compression demands not only a very high-octane fuel, but also a very high tech additive to keep those valves happy.

If yours is not supercharged and you want your Power Wagon truck to work for another 40-50K miles without a breakdown caused by unleaded gas, you will have to find a shop that does not blame unleaded gas for problems in engines they have worked on.

Note that the 383 cu.in. V-8 optional in the 1968 W100's and W200's had 9.2:1 compression ratio and only required regular grade gasoline. Because some of the V-8's may have been "souped up" or replaced with later engines, the above comments may not apply. Certain ones may require attention

to valves and valve seats, as well as possible use of gasoline additives. If you do not know the compression ratio or details about the valves and valve seats, it would be advisable to consult with a mechanic who is knowledgeable of performance engines.

One more thing... Please don't make me have to remember all this stuff about when I was young and gasoline was 19 cents a gallon.