

BRAKE FLUIDS

Date: Wed, 24 Jun 1998 12:02:39 -0400
From: "The Hamiltons" <hamilton#king.igs.net>
Subject: High Temperature Brake Fluid

For those who have access to Canadian Tire Stores, the 550 deg F Dot 3 brake fluid (specially for Ford applications) is sold in 500ml, (approx 16 oz) containers for \$4.99 Cdn. No other size is available unfortunately. I never checked the Ford price but have used this for two years now after I read about the Ford 550 deg fluid in a GMCMI Newsletter.

Al Hamilton
Kingston, Ont

hamilton#king.igs.net

Date: Fri, 05 Feb 1999 11:29:52 -0500
From: Ted Schurman <tedsch@erols.com>
Subject: GMC: Brake Fluids

With my set of SS brake lines, which I have not installed yet, came two quarts of DOT 5 Silicone fluid. I did not order it but did pay for it. When I install the new lines I plan to change out or clean the rest of the brake items. The silicone fluid has some good features, does not absorb water and has a wet (not sure I understand that (g)) boiling point of 500 degrees F. However it does absorb air and in fact the label recommends boiling the air out of the fluid on the stove before use.

Does any one have any experience with DOT 5 or opinions on its use ?

I have seen that many people have recommended a heavy duty Ford brake fluid. I saw at the parts store the other day a synthetic brake fluid by Valvolene for \$5.00 a quart. It has a 513 degree dry boiling point and 333 degree wet. It implied that it was less water absorbent. Also available is a German brake fluid from ATE which has a 536 degree dry boiling point and 333 degree wet. It cost about \$10 a liter plus shipping from Zims (1-800-356-2964). Probably available at many other foreign parts dealers. It is available in either amber or blue color to assist when changing fluid.

Ted Schurman
73 Glacier VA

Date: Fri, 5 Feb 1999 12:11:13 EST
From: EMERYSTORA@aol.com
Subject: Re: GMC: Brake Fluids

Brake fluids are polyglycol based fluids together with corrosion inhibitors. They have the property of absorbing water. This is actually a good thing because if they didn't then water could collect in a line and freeze with the result that you would have no brakes. Water is absorbed

through the hoses, past rubber cups and piston seals. After some time, as more water is absorbed, the boiling point of the fluid decreases. The "Wet" boiling point is measured with water in the brake fluid. So, a fluid with a "500 deg. "dry" b.p. would not be as good as a fluid with a 500 deg. "wet" b.p. The boiling point is important because the high temperatures of disk pads and brake shoes conduct heat to front calipers and brake pistons. This can get high enough to boil the brake fluid where it touches the metal parts. This forms a vapor which compresses and the result is no brakes. By going to a higher boiling point brake fluid you can help prevent the boiling of the fluid. Back in the 60's Ford had a problem with boiling and Dow Chemical developed a 550 deg fluid for them. It is still available. This fluid was packaged for other companies as well, such as Castrol. You should change out the brake fluid by bleeding it through the lines. It takes about two quarts to do the GMC. I recently did this using Performance Friction 500+ degree fluid which I purchased at AutoZone for about \$5 per pint.

Silicone fluid has the advantage of a very high boiling point, but the fact that it doesn't absorb water could cause problems in cold weather if there were to be water contamination. For that reason I have not switched to silicone fluid.

As an Associate Member of the Society of Automotive Engineers in the late 60's and 70's I helped develop specifications relating to DOT-3, 4 and 5 brake fluids. Not much has really changed in the last 20 years.

Emery Stora
77 Kingsley
Santa Fe, NM

Date: Fri, 05 Feb 1999 13:17:58 -0500
From: Ted Schurman <tedsch@erols.com>
Subject: Re: GMC: Brake Fluids

Sorry that my feeble attempt at humor wasn't clear. My comment about not understanding the wet boiling point of a fluid that didn't absorb water was meant to point out the seeming conflict. The comment about possible freezing of unabsorbed water is important and was just the kind of information I was looking for.

Ted Schurman
73 Glacier VA

Date: Fri, 05 Feb 1999 13:29:53 -0500
From: Patrick Flowers <patri63@ibm.net>
Subject: Re: GMC: Brake Fluids

IIRC, the Ford "High Performance" fluid was about \$1 a pint less expensive than the Performance Friction fluid at AutoZone and is reportedly the same stuff.

In addition to the non-absorption of water and possible incompatibility with some brake system components, I understand that silicon fluid also tends to become "aerated" making it hard to bleed and sometimes resulting in a spongy pedal feel.

I'll stick with the Ford fluid, but I'm sure there's some silicon fluid devotees out there that'll disagree.

Patrick

Date: Fri, 5 Feb 1999 21:50:46 EST

From: Gcbr@aol.com

Subject: Re: GMC: Brake Fluids

Patrick

I wont disagree to hard. I put Sillycone brake fluid in my GMC. You can all watch another experiment. I stick with what works for me. When it fails me I will change. I have an old farm truck that lost brakes because of the problems with regular brake fluid. Six years ago I converted it to sillycone brake fluid. It may sit for 6 months with no use. I have needed it winter and summer-----never a problem. I put the LeSharo on it when I rebuilt it 4 years ago-----no problems. My mechanic friend who has helped me with the GMC has a contract with the US Post Offices here in So, IL to do all of their maintenance work. The post office trucks ALL run sillycone brake fluid. These include vechiles that run everyday, ones that run only on weekends, and some that only run when the mail is very heavy. When we started on the LeSharo I ask him how much of a problem the sillycone was-----none he said. I ask him to call whenever he had a brake system open so I could look at it. No problem-----I have looked at -----I honestly dont know how many open systems. My thoughts were that if water can collect and freeze on the slave pistons I would see corrosion there. I know I have looked at at least 40 to 50 open systems-----it aint there. These systems all looked better than I thought they should. If there was a big problem I think the post office would have seen it. I am not trying to persuade any of you to use sillycone fluid. I am just telling you what I am doing. I will add a few things here. I would not have gone to sillycone fluid in my two motorhomes had I not replaced everything in the brake system. With the sludge from old brake fluid and sillycone fluid you do get a very freezable jelly. Nasty stuff that will drive the equalizer valve nuts. I do not know if it is because of the jelly or if there is a real freeze problem but you cant use sillycone with ABS either. I will listen to all of you but most often go my own way. Yeah I should add that I did take sillycone brake fluid out of my van. I did not change out the lines ect. Just flushed with sillycone fluid. My van has an equalizer valve for the rear brakes. After putting sillycone in old lines and cylinders the rear brakes locked up all the time. We removed the equalizer valve and blew it out with air. What can I say the stuff that came out looked like brown snot. Flushed the system with alcohol and put in DOT 3 stuff. No further problems. Yeah I lost one. Thats where I am at and what I am doing.

Take Care

Arch 76 GB IL

Date: Sat, 6 Feb 1999 01:54:24 -0800
From: "David Sandford" <dsand@inreach.com>
Subject: Re: GMC: Brake Fluids

I doubt if this is applicable, but I routinely see Silicone based fluids used as a Dielectric insulating medium in large electrical transformers. The acceptance limits (IEEE) for moisture content are approximately twice those of mineral oil based fluids. In addition, Silicone resists decomposition to a higher degree than Mineral oil. Like I said I don't know how much this helps, but take it FWIW.

Dave

Date: Sat, 6 Feb 1999 20:11:58 EST
From: Gcbr@aol.com
Subject: GMC: Brake Fluid

GMCers

From where I sit I think that this is another place where you do the research and find what works for you. You make your choice and take your chances. I read a whole lot more than I sent to all of you but between the three I think most of the info is there.

There is one thing I chased because I wanted to know why there is much agreement on no silicone for ABS cars. It turns out that the ABS pump and rapid valve action causes the silicone fluid to foam. I did not see this any where but I will draw a conclusion from that if you are running a Power Master system that you too should stay away from silicone brake fluid. That's what I found out.

Take Care
Arch

Date: Sat, 6 Feb 1999 20:50:34 EST
From: EMERYSTORA@aol.com
Subject: Re: GMC: Brake Fluids

One thing in favor of the Silicone brake fluids, in addition to the high boiling point, is that it is not as hygroscopic (water absorbing) as regular brake fluids. This means that it is not as spongelike in sucking water through hoses and seals. Like everything else in life there are pros and cons to everything. We all have to make up our own minds based upon various input. The contributors to this list help to provide a wide range of useful input to us. Thanks to all.

Emery Stora
77 Kingsley
Santa Fe, NM

Date: Sat, 6 Feb 1999 21:50:31 -0800 (PST)
From: herm beeck <hbeeck@yahoo.com>
Subject: Re: GMC: Brake Fluids

BRAKE FLUID 101

Brake fluid is blended into 2 types which are glycol-based, DOT3 and DOT4 and one which is silicone based, DOT5. DOT 3&4 are hygroscopic, that is they readily absorb moisture. Moisture in brake fluid reduces the boiling point. For example, DOT3 must have a dry (no moisture absorbed) boiling point of no less than 401 degrees F, and a wet (moisture absorbed) boiling point of no less than 284 degrees F. Most new DOT3 brake fluids have a boiling point ranging from 460 to 500 degrees F. As the concentration of moisture increases, it causes a sharp drop in the fluid's boiling temperature. A moisture content of 1% can reduce the boiling point to 369 degrees F, 2% to 320 degrees and 3% to 293 degrees. Depending on humidity, most new brake fluid will absorb up to 2% in one year and after several years it's not unusual to see as much as 8%. DOT4 has a minimum required dry boiling point of 466 degrees F and a wet boiling point of 311 degrees F. Reduced boiling point can cause the brake fluid to vaporize in high temperature conditions, such as extended downhill braking or emergency stops. Vaporization creates pockets of air in the system, which compress when the brakes are applied. This results in what is known as "brake fade" and in its extreme, can result in complete loss of braking power. If brake fluid is left in an open container for more than just a few hours, it could absorb enough moisture to render it unsafe for use. DOT5, the silicone based brake fluid, does not absorb water. It has a required dry boiling point of 500 degrees F. Because DOT5 does not provide the lubrication to ABS components like glycol-based brake fluid, it is not normally used in over the road cars and trucks. Also, because water is not absorbed in DOT5 brake fluid, water that enters the hydraulic system will settle at low points where it causes corrosion. DOT5 is used normally in motorcycles because of the higher temperatures required of the brake fluid.

You can see where frost can produce an ice plug in your system when using silicone fluids. This should generate some comments?

Herm

Date: Sat, 6 Feb 1999 19:06:05 EST
From: Gcbr@aol.com
Subject: GMC: brake fluid

GMCers

Oh boy thus may start some problems.

BRAKE-FLUID SPECIFICATION

Dot-3 and dot-4 fluid are glycol based while Dot-5 is silicone based. DOT fluid must meet 2 specifications. A dry boiling point and a wet boiling point. The dry

boiling point is for fresh fluid from a new container while wet boiling point is the same fluid that have absorb moisture.

DOT 3 DOT 4 DOT 5

Dry boiling point (deg F) 401 446 500

Wet boiling point (deg F) 284 311 356

Note that fluid boiling point drops after it is exposed to water. DOT 4 fluid meet DOT 3 requirement. You may buy in store 500F DOT 3 fluid and 450F DOT 4. The temperature shown on the containers are always dry boiling point. The 500F DOT 3 meet the dry boiling point requirement of DOT 4 but is not DOT 4 because it does not meet the DOT-4 wet boiling point.

For a racer which bleed is brakes before his race, a 500F DOT 3 is better than a 450F DOT 4. But for a long term use, the DOT 4 while be better after a few month.

SILICONE BASED DOT 5 FLUID

If you want the highest wet boiling point and a different combination of properties, you might considerer changing to silicone-based brake fluid. This fluid does not absorb moisture like a glycol-based fluid. Therefore, its wet boiling point is much higher. Also, silicone-based brake fluid do not damage the pain on your car if spilled.

However, for racing, use only a glycol-based racing brake fluid. Silicone fluid has been tried in racing, but it has a tendancy to give a spongy pedal after exposure to high temperatures. This is due to the slight compressibility of silicone brake fluid at high temperature. For ordinary street driving, this is not critical, but a racer needs all the brake-system stiffness he can get.

SWITCHING TO SILICONE

If you change to silicone brake fluid, you must first clean all of the old fluid from the brake system to get the maximum benefit of the silicone-based fluid.

If you merely bleed out and install new fluid, you will have a mixture of the two fluids. This will work, but it won't be as good as it could be.

ABOUT DAMAGING YOUR SYSTEM

This occurs commonly when U.S.-manufactured brake fluid is used in an older foreign car with natural-rubber seals. The seals swell and have to be replaced eventually.

A good application for silicone brake fluid is in antique and collector cars. Brakes in these types of cars are never subjected to high-temperatures. Protection of the internal parts from corrosion is most important. Silicone brake fluid serves this purpose beautifully, because the absence of moisture in the system pratically eliminates the chance of dreaded internal corrosion.

This book is available from Classics Motorbooks: www.motorbooks.com

Take Care
Arch

Date: Sat, 6 Feb 1999 19:11:55 EST
From: Gcbr@aol.com
Subject: GMC: Brake Fluid

GMCers

More for you.

DOT 5 Brake Fluid

Mike Burdick (on the SOL list) says:

A while back when this topic came up, I posted excerpts from a Skinned Knuckles article on silicone brake fluid. They made the best attempt I've seen so far to actually address this issue with hard data instead of anecdotes. The data they used came from military tests in jungle conditions and tests from the original producer of DOT5 fluid (DuPont? I can't remember...). Even so, they were not able to come up with many conclusions about DOT5 fluid. In a nutshell, the conclusions were:

DOT5 does not absorb water and may be useful where water absorption is a problem.

DOT5 does NOT mix with DOT3 or DOT4. They also maintain that all reported problems with DOT5 are probably due to some degree of mixing with other fluid types. They said the proper way to convert to DOT5 is to totally rebuild the hydraulic system.

Reports of DOT5 causing premature failure of rubber brake parts were more common with early DOT5 formulations. This is thought to be due to improper addition of swelling agents and has been fixed in recent formulations.

DOT5 is compatible with all rubber formulations.

DOT5 doesn't eat paint.

They also made some general recommendations based on this data and personal experiences. These, along with recommendataions of list members included:

If it works for you, use it. You won't hurt anything if you do the conversion correctly. (See, #2 above)

Careful bleeding is required to get all of the air out of the system. Small bubbles can form in the fluid that will form large bubbles over time. It may be necessary to do a series of bleeds.

DOT5 is probably not the thing to use in your race car although it is rated to stand up to the heat

generated during racing conditions. The reason for this recommendation is the difficult bleeding mentioned above.

DOT5 is a good choice for the weekend driver/show car. It doesn't absorb water and it doesn't eat paint. One caveat is that because it doesn't absorb water, water that gets in the system will tend to collect at low points. In this scenario, it would actually be promoting corrosion! Annual flushing might be a good idea.

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Take Care
Arch

Date: Sun, 07 Feb 1999 09:12:53 -0500
From: Ted Schurman <tedsch@erols.com>
Subject: Re: GMC: Brake Fluids

Arch, here is the exact quote from the instructions.
Wish I had a scanner <g>.

"Since Silicone Brake Fluid tends to retain air, which will not escape until the fluid has been heated (as under heavy use), we recommend the following additional procedure be followed, prior to installation:

- a. Pour fluid into a pot and heat on a stove until bubbling stops, indicating that most of the entrained air has been driven-off (fluid will not be damaged since boiling point is 500 degree F).
- b. Let fluid cool slowly; do not agitate prior to use or more air will be entrained.

By your answer, it is clear that you do not follow this procedure.
Ted Schurman
73 Glacier VA

Date: Sun, 7 Feb 1999 09:38:36 -0500 (EST)
From: "Thomas G. Warner" <warner@borg.com>
Subject: Re: GMC: Brake Fluids

Since silicon brake fluid is not hygroscopic, and cannot absorb water, how would the water get into the lines in the first place so it could settle in a low spot? Is someone going to purposely put some into the system? Sounds like another myth to destroy!

Date: Sun, 7 Feb 1999 09:42:00 EST
From: Gcbr@aol.com
Subject: Re: GMC: Brake Fluids

Ted

You are right----I did not do that. After my waltz around the net last night and your efforts to inform us, I will next time. Thanks for the info. The container that mine came in said nothing about such a procedure. Thanks again for your effort.

Take Care
Arch

Date: Sun, 7 Feb 1999 09:52:21 EST
From: Gcbr@aol.com
Subject: Re: GMC: Brake Fluids

Thomas

After spending a couple of hour running the net last night. I am convinced that there is a lot of myth around this subject. I found stuff saying that it will absorb some water but far less than regular brake fluid. Another report that said that condensation on the master cylinder cap was the source of water in the system. The main thing I got out of all of the reading was-----change the fluid every two years if you are using regular brake fluid, every 5 for silicone. Thats what I learned.

Take Care
Arch

PS please dont say I said to do that. The only places I could find info on the subject was on extreme pages. BMW club Saab club ect.

Date: Sun, 7 Feb 1999 11:25:19 -0500
From: "Mark Grady" <mgrady@bnin.net>
Subject: GMC: One real world experience (was: Brake Fluids and other "gremlins in the forest")

I do know this from personal experience. We got our coach about 7 years ago. It had sat for 4 years in a garage unused. I made a panic stop in Indy when some yahoo ran a red light. Blew a hole in the line to the rear brakes. Half way patched it in the parking lot of an auto parts place, and half-#! Bled out the air that I could, since I didn't think I'd get the bleeders open.

When we got home, put on all new brake lines and hoses, all new wheel cylinders shoes and pads. (This was before the list, so those wonderful stainless lines weren't around.) At the advice of my brother-in-law, (GM shop foreman) changed all the fluid, put in DOT 4 Ford fluid. I thought all was right with the world.

Flash forward. We went to Gatlinburg this fall. Like fools, we drove up Öber Gatlinburg to see some friends. In the GMC. (If you've been there, you'll know why this isn't such a good idea.) No problems going up. Coming down, I was in 1st gear and on the brakes, since this is a 10%+ grade, maybe more. Brakes are fine, good pedal pressure. We get to the bottom, I get out and

check them, sure, they're warm, but not "overheated". I go to stop at the light ahead, the brake pedal is like a stepping on a plum. We do get stopped through some miracle, and the possible abuse of a TH-425.

We park, I change my underwear and start looking for the problem. No brake fluid seems to be leaking anywhere, and the master cylinder is full. We have good engine vacuum, and the booster seems to be working. I'm stumped. I walk around in a daze, and try to figure out how we're going to be back through the twisting, winding road to our campground, or more seriously, how we're going to get parts to be back home. I'm hoping that someone will be open on Saturday, and I'll have to fix this problem instead of driving home. While I'm agonizing over this problem, we are informed that we have to move by the local police, who really don't care about our problems, just get going. My wife remembers a church parking lot we think we can get to. I start up the coach and try pumping the brake pedal. Again, a miracle, I've got a soft pedal, but some brakes! We slowly ease on down the road in 1st gear, timing our distance to the lights to avoid needing to make a complete stop. I have no confidence in the 'emergency' brake at all. We get to the church, and I step on the brakes, ready to pump them to get stopped. The pedal is firm, and we have good brakes!

Now at this point, I'm totally flustered, how can we not have brakes one second and have good brakes the next?

Now when I say we didn't have brakes, I'm not talking about drum brake fade.

In a mis-spent youth, I'd pushed many cars to the limit of heat induced brake fade. Just minutes ago, I had an effortless, spongy pedal that was the trademark of serious problems, not what I'd call hot brakes.

We parked, and I called my brother-in-law for a quick consultation. We concluded that there must be water in the brake fluid, and that it had tried to boil off, leaving air in the lines. He suggested changing as much of the fluid as possible. We left the church and went to the closest Wal-mart and got a turkey baster and a couple of quarts of brake fluid.

Working under the harsh light of the parking lot, we got an old milk jug and the turkey baster busy. The brake fluid was as dark as tar, even though it was only about 5 years old. We replaced all of it that we could in both circuits, front and rear. The brakes were fine all the way home, and when we got home, I got quarts of the Ford fluid and re-bleed the whole she-bang. There was no trapped air that I could see during that process, but the fluid was very dark.

Now I've told y'all this story for several reasons.

- 1). If you don't believe that you can get water in your brake fluid, think again. You can. I don't know how, but it can happen.
- 2). I think Arch's suggestion of changing your brake fluid every few years is a good idea.

- 3). To whoever said people won't admit to the stupid things that happen, they do.
- 4). Don't drive up and down steep mountains in your GMC.
- 5). If you do, have plenty of clean underwear.

Mark Grady
'77K
North Webster, IN
mailto:mgrady@bnin.net

Date: Sun, 7 Feb 1999 12:26:44 EST
From: EMERYSTORA@aol.com
Subject: Re: GMC: Brake Fluids

<< Since silicon brake fluid is not hygroscopic, and cannot absorb water, how would the water get into the lines in the first place >>

1. From condensation in the master cylinder.
2. From water splashing on the pistons that move in and out of the seals.
3. From absorption from the hoses. Even if the silicon doesn't absorb water, the rubber parts do and they are in physical contact with the fluid.

Emery Stora
77 Kingsley
Santa Fe, NM

Date: Sun, 7 Feb 1999 12:42:01 -0500 (EST)
From: "Thomas G. Warner" <warner@borg.com>
Subject: Re: GMC: Brake Fluids

Some interesting reading for those that do not think there are civil penalties involved in violating govt standards. I have not had the time to really read it and understand it. There is also information on the site about brake fluid standards and which ones passed.

<http://www.nhtsa.dot.gov/cars/testing/procedures/Civpentb.o97.html>

Tom & Marg Warner
Vernon Center NY
1976 palmbeach

Date: Sun, 07 Feb 1999 11:59:17 -0800
From: Chuck Will <willa@impulse.net>
Subject: GMC: Brakes'

If you will take the time to clean all the lines from the Master to each wheel cylinder independly with ALCOHOL you will be a few steps ahead. Then re introduce your DOT 4 or 5 to the system. Bleeding as directed in the book. You will be a much happier camper in the long run, you may find a leak at the wheel cylindeers. I put in new ones rather than a rebuild job. At this point check the STARS for self adjusting the brakes. Be sure to back out the brakes to the drum and then back in so you have a free wheeling of each of the rear wheels. You may want to pull the drums and check the brake shoes and drums at this time too. I use High Temp Engine paint on my drums (outside) usually BLACK and it seems to work well. There are several weights on each of the drums so you want to ensure they are there and did not get mysteriously knocked off. Wire brush and air blow clean. Wear a respriator or dust mask and goggles. Don't get any of the residues into you eyes or breath the stuff. At our ages we do not need to hurry the GRIM REAPER! I also clean each wheel inside and out very carefully and check the boggies at this point too. The fron is different and of course takes a little care there also. Take Care Chuck

Date: Sun, 7 Feb 1999 21:03:20 EST
From: Gcbr@aol.com
Subject: Re: GMC: Brake Fluid

Ted

The Power-Master system is a 12v pump that pumps pressure instead of the master cylinder doing it. Very high pressure----be sure to put on new lines if you are going to do this.

Take Care
Arch

In a message dated 2/7/99 7:28:25 PM Central Standard Time, tedsch@erols.com writes:

- > Arch, guess I'm not familiar enough with the Power-Master system. Could you explain the reason.
- > Thanks
- > Ted Schurman
- > 73 Glacier VA

Date: Mon, 8 Feb 1999 18:39:20 -0800
From: "David Sandford" <dsand@inreach.com>
Subject: Re: GMC: Brake Fluids

Speaking of Myths

Silicone based fluids are LESS hygroscopic than Parrifinic based fluids, as apposed to the Mythical Non-Hygroscopic.

There is a world of difference between "LESS" and "NON"
Without Completely sealing your brake system. (A highly dangerous venture I might add) there will always be a tendency for moisture to be introduced to some degree or another. Brake systems are thermal cycled routinely, as a part of their operation. This provided a mechanism for the introduction of moist air, which in turn can be introduced into the fluid. The advantage of Si based fluids is that they resist this tendency to a greater extent than other types of fluids.

Hopefully this helps quell some of the misinformation circulating here.
Dave

Date: Tue, 9 Feb 1999 00:33:22 EST
From: Gcbr@aol.com
Subject: GMC: Brake Fluids

GMCers

OK here is a page that compares some brake fluids. Notice the Ford stuff has a real high dry boiling point. Also note that it falls down to a real low number. I thought the Ford fluid was a DOT4 fluid---this says it is a 3 fluid-----with a boiling point that low I bet it is. I have seen other sites that say the Ford stuff dies early-----I honestly dont know-----never used the stuff. When I did my search for brake fluid-----I did not like what I found. When I chose silicone I thought it was the lesser of the evils. Please believe me when I say I am not trying to persuade anybody to use anything. I told you what I did---thats all!! I would like to see any hard info that anybody has. I know this site is not hard info but it was the only one I have been able to find---I know there are others.

You evaluate you decide-----just dont shoot the messenger.

Take Care
Arch Been at this too long----nite

Date: Tue, 9 Feb 1999 00:35:19 EST
From: Gcbr@aol.com
Subject: GMC: brake fluid

Like I said been at this too long. Here is the site

[Http://www.yourkovich.com/brkfluid.htm](http://www.yourkovich.com/brkfluid.htm)

Take Care
Arch

Date: Sat, 20 Feb 1999 16:34:32 PST
From: "Frank Folkmann" <fmfolkmann@hotmail.com>
Subject: Re: GMC: Brake Fluid

Arch.

I purchased Valvoline that I plan to use . The reason that I chose this brand is that the wet boiling point is higher than any other available to me. At this time do not want to go to silicone fluid. The price is also reasonable. The Ford fluid has a higher dry boiling temp but drops to 284° when wet. This is why I decided on Valvoline.....Frank

>From: Gcbr@aol.com
>Date: Sat, 20 Feb 1999 18:36:51 EST
>Subject: GMC: Brake Fluid

>GMCers
>Don't mean to start a fight.....BUT.....I was in Auto Zone today.
>They have a new brake fluid Valvoline (OK I can't spell and my spell checker does not know)
>synthetic brake fluid.
Dry boil point 513
3 F wet 335 F. Says it is compatible with DOT 3 and 4. Anybody know anything about this stuff?
>
>Take Care
>Arch 76 GB IL

From: EMERYSTORA@aol.com
Subject: Re: GMC: Brake Fluid

Arch is this a DOT 3 or DOT 4 fluid? I am using Performance Friction 550 deg dry boil point, DOT 3. This is the same fluid as the Ford 550 Dot 3. I wonder if the word "synthetic" is being overused by Valvoline? I would say that all brake fluids are essentially synthetic as there is no petroleum oil in them. They are composed of glycols, polyglycols, inhibitors and rubber swell agents.

Emery Stora
77 Kingsley
Santa Fe, NM

Date: Sat, 20 Feb 1999 21:39:29 -0500
From: Patrick Flowers <patri63@ibm.net>
Subject: Re: GMC: Brake Fluid

I think Arch is the victim of marketing<g> - I saw this stuff also and made the same mistake the first time. It's Valvoline "Syntec" brake fluid. I don't think it's really a "synthetic". "Syntec" is a marketing gimmick for a line of Valvoline products. FWIW, I'm planning to use this to bleed

out my disk brake conversion the first time. It's half the price of the Ford fluid. I'll probably run it a year and then change to the Ford HP fluid. The wet BP is not a concern as I plan to bleed my brakes annually. Cheap insurance IMO.

Patrick