SMG troubleshooting FAQ

Total Produced: 45,000+ - Years Produced: 2001 to 2006.
SMG Serviceable Parts

**hydraulic unit (aka the pump)**
PN: 21532229715  
DIY replacement thread: [http://www.m3forum.net/m3forum/showthread.php?t=227209](http://www.m3forum.net/m3forum/showthread.php?t=227209)  
DIY guide by Mr. Andersen: [http://www.nugadgets.com/customcontent/SmgDiyMain.html](http://www.nugadgets.com/customcontent/SmgDiyMain.html)

**accumulator** (included with the **hydraulic** unit but also available separately)  
PN: 21532229716

**relay** (salmon colored, located in the relay box on top of the drivers side shock tower)  
PN: 12631742690

Source: [http://www.m3forum.net/m3forum/showp...7&postcount=36](http://www.m3forum.net/m3forum/showp...7&postcount=36)

**gear position sensor** (located near the back of the transmission)  
PN: 23412229792

**actuators** (mechanical arms used to physically change the gears)  
PN: 23412229789

**hood sensors** (two switches located under the hood to detect when open/shut)  
PN: 61319119052

**SMG hydraulic fluid** (Pentosine CHF11s)  
PN: 81229407758  
My current thinking is that a full **hydraulic fluid** change would be a tad bit on the expensive size and probably unnecessary. However if you've got a lot of miles you may want to consider using a device to syphon **fluid** out of the reservoir for a partial **fluid** change. This way you don't have to worry about properly resealing the system or getting air in the lines.
Troubleshooting

The Autoenginuity tool is an excellent tool for troubleshooting the SMG system and can take a lot of guess work out of the equation in some cases. Generic code readers are mostly useless since the trouble codes it returns are usually non-specific and the descriptions are typically not accurate. The Autoenginuity also allows for DIY work such as clutch changes and pump changes to be done at home in the proper way.

Specific Issues

Car won't engage 1st gear or reverse after cranking, drops out of 1st, won't start, weak remote key, or other minor nuisance.

Before getting too worried, open and shut the hood once or twice, and make sure all doors/trunk are shut. If still no luck, replace the relay. In general, whenever there is any type of problem with the SMG that seems electrical related, go ahead and replace the relay first. It seems to be a pretty common problem and can cause a wide range of issues. The part is ~$15-$20, takes 5 minutes to replace, and it’s a cheap solution that should be ruled out early when trying to diagnose an issue.

Also check the hydraulic fluid level on top of the intake manifold. I have had the car not want to hold a gear and the transmission light came on simply because it was low on fluid. (note: the SMG system 'shouldn't' be consuming/leaking fluid, mine was low from a Delage install were I swapped fluid reservoirs and forgot to refill the new one).

2->3 shifts became "delayed". *Sometimes* when shifting from 2->3 it would take 4-5 seconds to engage the gear and the gear indicator (3) would flash on the dash during this time. I had zero power during this time, and was basically coasting. Eventually it became so bad it wouldn't even go INTO gear and then start skipping gears (2->5 instead of 2->3). (original post: http://www.m3forum.net/m3forum/showp...5&postcount=25)

Replace the gear position sensor.

No noise from the pump when unlocking the car. Transmission will not engage any gear.

If you've already replaced the relay and there's still no noise from the pump, the hydraulic unit has likely failed.

If the pump makes noise but will not engage a gear, I'm curious as to whether just the accumulator may be the issue, since the hydraulic unit comes w/ the accumulator from the dealer, and the accumulator is also available separately and costs ~$450, it may be the part that wears out. It's an expensive risk to take though, because if the accumulator is not the problem, then it's the cost of labor x2 and you have to rebuy the accumulator when you get the new pump. If it does fix the problem, it would result in about $1k or so in savings. If somewhat had some input on what the accumulator actually does (stores built up pressure?), that would maybe clear this up.

Red SMG light on and or flashing gear numbers.

Check/replace the hood sensors.

3rd to 4th shift delay (broken $2 spring): http://www.m3forum.net/m3forum/showt...44#post3497344

SMG paddle and paddle switch replacement DIY:

http://www.m3forum.net/m3forum/showthread.php?t=157684
http://m3forum.net/m3forum/showthread...ghlight=Paddle

I will update some more later...post or PM me if you want to add something to it

Last edited by hal c; Sat, Feb-14-2009 at 09:26:47 AM.

BxPhillip
Registered User

I think its a great idea, thanks for the info, I've never seen this before.
PSLC
you are along time dead

...thanks to the OP..this has the potential to be a good thread..

Leo
Registered User

Maybe [this](#) can answer some of the questions you have?
If something is missing or incorrect just send the maintainer an email. I'm sure will be happy to for the information.

M3FORM33
Registered User

Great write up Hal, its gonna be a very usefull piece as people start getting more mileage and start having probs with the SMG. I went through hell and back with mine!

hal c
Registered User

Quote:

Originally Posted by M3FORM33
Great write up Hal, its gonna be a very usefull piece as people start getting more mileage and start
having probs with the SMG. I went through hell and back with mine!

Thanks. If you experienced some problems and got them worked out, and I don't have them in the thread already (or if my descriptions are incorrect or incomplete), send me a pm or post them. 😊

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Intriguing symptom

The timing of this couldn't have been better, although I wish I would've found it prior to being charged about $350 in diagnostic fees.

Sadly I found the thread regarding the failed relay the same day that the Service Tech figured it out and thus the education from here was free but the cost of repair was significantly higher than necessary.

My contribution to the thread is that there seemed to have been an increasing weakness in my remote being able to open the doors. I initially equated the weakness to a remote battery problem, but it wasn't until after I had the relay replaced that I noted the significant improvement in the performance of the remote. I should note that the weakness increased for at least a week before the relay starting acting up.

The first time the car failed to start I surmised the problem was battery failure (who hasn't had their BMW OEM battery fail?). I jump started the battery and everything, aside from the door locks, seemed to function fine. The car continued to start multiple times that day, and even the next. Then on Monday morning, wouldn't you know, the car wouldn't start. I put the battery on a newly purchased Sears diagnostic battery charger. The charger indicated the battery was 100%, but I went ahead and put it on rapid charge, 30A, to kick it in the ass. I put the battery back in and the car started. I drove the car directly to the BMW dealer where they did other standard maintenance while diagnosing the (relay) problem.

I don't believe that it was mere coincidence that the remote performance improve dramatically after the relay replacement.

Edit: I noted in other threads about the door lock problems before the relay failure.

I'm definitely going to have a spare relay in each of my M3s.

BTW, my car had about 46k miles on it at the time of failure.

http://www.tailofthedragon.com/dragon.html

Last edited by Pantera; Fri, Oct-17-2008 at 08:04:32 PM.

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Nice post thank you!!
NZ_M3
Registered User
Join Date: Apr 2005
Posts: 170
iTrader: (8)
Reputation: 0

Fri, Oct-17-2008, 10:26:34 PM
1 x vote for sticky - nice post.

brickbreaker
Registered User
Join Date: Nov 2006
Posts: 268
iTrader: (5)
Reputation: 0
Location: Manhattan

Fri, Oct-17-2008, 10:26:37 PM
Great post with a ton of useful resourceful information!!!

2002 BMW ///M3 CAB SMG II Triple Black
Vorsteiner Racing Hood | V-CSL Bumper CF Splitters | MINI CSL Battery | Pioneer Avic-Z1 w/iPod & XM adapter | Valentine 1 hardwire

Quick Reply

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faq, smg, troubleshooting

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