

## Open diff vs. LSD transmission

Posted by mug23 - 17 Apr 2012 06:44

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I have a decision to make. Here's the situation I have now. I'm building a cup car and I have 2 trans with me. One trans is out of a 924S I believe and I bought it from someone in Cali and it's like in excellent shape. It looks brand new. It drives very nice too and it's has a short 5th but the only problem is, it is a open diff.

Now, I have another trans and this one is from a 1985.5 944 with regular long 5th but it has a LSD in it. The trans came with the car I just bought and not 100% sure of it condition. From the outside, it looks rough as it seems like it's wet outside and perhaps leaking???

So to do the swap of diff from the lsd one to the open diff trans will cost 8 hours from a local Porsche shop I just talked to and they want \$800 for the job. That's a bit too expensive I want to do now and I'm not even 100% sure the actual condition of the LSD.

Can anyone here recommend me on what to do? Just install the short 5th trans and call it good or continue to use the long 5th LSD trans? Does the 5th ratio make that much of a difference in lap time on most tracks? I would really like to use the short 5th gear trans as it's in excellent condition but it has a open diff.

Thank you for looking...

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## Re: Open diff vs. LSD transmission

Posted by 944Racer72 - 17 Apr 2012 14:32

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In my opinion, the LSD will make a bigger difference on most tracks if it is functional. That's a big IF and of course depends on the track. If this is an original LSD with 80K + miles, it probably isn't doing much. That said, why not swap the 5th gear into the LSD trans? There is a procedure for doing it on this site and it is very easy and cheap to do if you are decent with tools. A Porsche shop shouldn't charge more than maybe 2-3 hours to do that if you aren't up for it.

Ideal scenario would be to remove the LSD and send it to Guard to rebuild for ~ \$450. I had them do my LSD last year and it is night and day for trail braking stability. Install it in your good short 5th trans and you've got a top notch setup for \$1300 if you pay the shop.

I don't consider swapping a diff difficult but it does require some careful measurements that might be better left to a competent shop if you aren't sure.

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## Re: Open diff vs. LSD transmission

Posted by joepaluch - 18 Apr 2012 06:22

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It depends mostly on the tracks you run. If you run on a track that requires 5th gear then you need the short 5th. Every car with a short 5th will drive away from you and there is nothing you can do to recover that. No level of driving will fix it.

However some tracks don't use 5th gear at all.

LSD vs open. This is something you can learn to drive around and you can be competitive. It is more work on set-up, but you can still compete.

In your case however simply take the short 5th from the one box and swap it into LSD box and call it good. It is not that hard of a swap and gets you the best of both worlds. I took some photos to well document this procedure and here it is.

[944spec.org/944SPEC/technical-articles/187-944-5th-gear-swap](http://944spec.org/944SPEC/technical-articles/187-944-5th-gear-swap)

If the box is leaking you can replace the front seal. This is not that hard. Leaking gearboxes are not really very common, but that can get dirty from years of small leaks.

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