
Short Shifting

“Short Shifting” is shifting up at too low an engine RPM, this is also called “Lugging”. How to tell if you are Short Shifting?

In second gear or higher gear, hold the throttle in the same position and down shift. The engine will speed up and one of the following things will happen:

- The bike speed will decrease
- The bike speed will stay the same
- The bike speed will increase

Interpreting the above:

Speed Decrease: This is what should happen when you down shift, it means you are in the proper gear for road conditions. You have not Short Shifted.

Speed Stays the Same: This means you are almost okay, but you have Short Shifted, the engine wants to be in this lower gear.

Speed Increase: This is Lugging, and it is bad. If you drive this way all the time you will damage your engine. This also hurts gas mileage as you are using more throttle than necessary.

Comment

When you increase the front pulley size you are doing this to lower engine rpm for high speed driving. However, the pulley reduces engine rpm at all mph and in all gears. This means that you will need to get used to your new pulley, you will need to learn how to drive your bike, again. You will need to drive faster before up shifting.

Example

You have a 2009/883. This has a front pulley with 28 teeth. You change to 32 teeth. The increase is 14.3% in mph compared with where you used to shift. If you used to shift into 5th at 50 mph, you now need to wait until (50 mph + 14.3% = 57 mph).

Following are the changes each pulley or pulley combination makes to your bike, as a percentage.

Front Pulley	Setting, 883 1991-2003 (27)	Setting, 883 2004-2010 (28)	Setting, 883 2011-2016 (29)	Setting, 1200 1991-2016 (29)
28	3.7	Standard	-3.4	-3.4
29	7.4	3.6	Standard	Standard
30	11.1	7.1	3.4	3.4
31	N/A	10.7	6.9	6.9
32	18.5	14.3	10.3	10.3

Front & Rear Pulley	Setting, 883 2004-2010	Setting, 883 2011-2016	Setting, 1200 2004-2016
29/66	6.5	2.9	2.9
30/66	10.1	6.4	6.4
31/66	13.7	9.8	9.8
32/66	17.2	13.3	13.3
