

100 Causes of Bad Shifting

1. Crack or split in cable housing – possibly under the ferrule where it can't be seen.
2. Crack in the ferrule.
3. Crack in the cable stop on the frame.
4. Crack in the shifter where the cable housing inserts.
5. Barrel adjuster turned out too far.
6. Brake housing used instead of shift housing.
7. Cable not routed properly through the under bottom bracket cable guide.
8. Thick chainstay protector between the cable and the frame that interferes with the cable.
9. Interference from accessories mounted to the frame.
10. A ferrule is used that is too large and allows the housing to move inside the ferrule.
11. No ferrule used where one is required.
12. Shift housing that is too short and pulled tight in order to be used.
13. Plastic sheath around the cable housing pushed back from the ends.
14. Housing enters the cable stop/shifter/derailleur at a bad angle.
15. Ferrule with tongue used at the shifter or derailleur end.
16. Special ferrule required by frame at a cable stop but not used.
17. Cable fraying or splitting.
18. Housing forced around some obstruction – like a shock.
19. Housing gets pulled tight as the suspension compresses.
20. Housing gets pulled tight as the bars are turned.
21. Cable clamped between a kickstand and the frame.
22. Kink in the cable.
23. Kink in the housing.
24. Something lodged under the head of the cable inside the shifter.
25. Crack in the barrel adjuster.
26. Interference from the front brake as the bars are turned.
27. Cable wrapped around the fixing bolt the wrong way.
28. Fixing bolt plate oriented incorrectly.
29. Play in derailleur pivots.
30. Derailleur bent at the cable fixing bolt.
31. Some sort of contaminant causing friction between the cable and housing.
32. Tight bend in the housing as it goes through internal routing.
33. Ferrule hole pinched shut.
34. Housing end pinched shut.
35. Sealed ferrule seal lodged between the cable and the ferrule hole.
36. Dirt inside the shifter.
37. Dirt around the derailleur pivots.
38. Sticky drink spilled on the front derailleur.
39. Derailleur hanger bolt loose.
40. Derailleur mounting bolt loose.
41. Quick release skewer loose.
42. Freehub body mounting bolt loose.
43. Play in hub axle.
44. Worn freehub body bearings.
45. Missing cassette spacer allowing play in the cogs.
46. Cassette lock ring loose.
47. Worn bottom bracket bearings.
48. Bottom bracket cup loose.
49. Crank fixing bolt loose allowing the arm to wobble on the bottom bracket.
50. Loose chainring bolts.

100 Causes of Bad Shifting (cont.)

51. Bent crank arms.
52. Bent chainring.
53. Bent cog
54. Play in B axle.
55. Play in P axle.
56. Broken hub axle.
57. Flex in frame while riding.
58. Crack in cassette carrier.
59. Crack in cog.
60. Crack in chainring.
61. Crack in bottom bracket cup.
62. Crack in crank arm.
63. 11 tooth lockring used on 12 tooth cog.
64. E-type front derailleur mounting bolt loose.
65. Bent derailleur hanger.
66. Bent hub axle.
67. Bent B axle.
68. Bent P axle.
69. Bent pulley cage.
70. Bent parallelogram.
71. Bent front derailleur cage.
72. Misaligned frame.
73. Spacing of frame does not match over locknut dimension of hub.
74. Front derailleur mounted too high or low.
75. Front derailleur mounted crooked.
76. E-Type front derailleur rotated too far forward or back.
77. Wheel not mounted all the way into the dropouts.
78. Wheel not mounted straight in semi-horizontal dropouts.
79. Chainstay angle exceed specifications of front derailleur.
80. Incompatibility between shifter and derailleur.
81. Number of gears on cassette does not match the number of gears in the shifter.
82. Chainring spacing is incorrect – like if a 10 speed crankset were used on a 9 speed drivetrain.
83. Wrong width chain used.
84. Chainring installed backwards.
85. Chainring oriented incorrectly.
86. Front derailleur clamp bolt loose.
87. Cable mounted incorrectly through the multi-pull pulley.
88. Mixing cogs from different model cassettes.
89. Mixing cogs from the same model cassette with a different gear ratio.
90. Mixing chainrings from different cranksets.
91. Incorrect spacer used between cogs.
92. Incorrect chainring bolts used - if they are to long they can allow play.
93. Bent crankarm spider.
94. Non-Shimano front derailleur dust boot interfering with derailleur movement.
95. Rear derailleur dust boot lodged between derailleur and cable.
96. Quick connection link used.
97. Play in suspension pivots.
98. Chainstay length below minimum.
99. Crank loose on bottom bracket spindle because of damaged splines.
100. Bent chainring spider.