

The table of defects

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Конференция "Обменяемся опытом. Нива"
NIVA-FAQ
undefined

This section depicts the defects all the different gearbox parts might present, aided with a graphic description of the many different malfunctions. Only malfunctions directly linked to the gearbox are described here. Similar conditions can be caused, in some cases, by malfunctions or wrong adjustment of other drivetrain components, first of all, the clutch system.

Noise in gearbox, knocks, roar, gnash at movement or as the engine heats up

Deterioration and breakage of bearings

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Axial shaft endplay



Deterioration of synchronizer baulk rings



Easy turning of bearing outer races in the rear cover bores



Broken input shaft lockring



Insufficient oil level

Impact, knocks during start from standstill and at gearshifting

Deterioration of main shaft and/or output flange splines





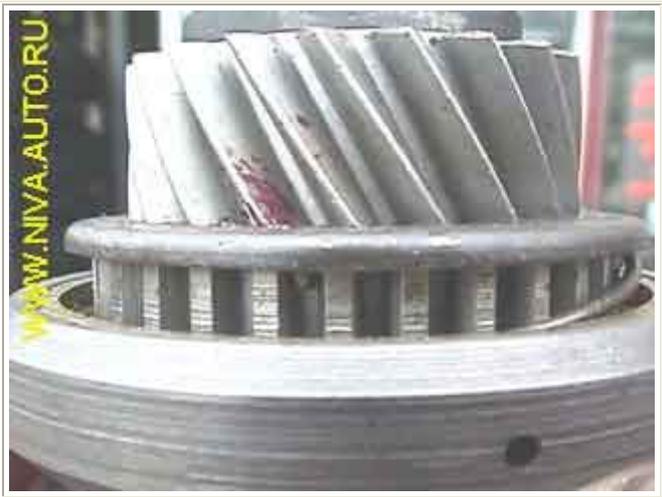
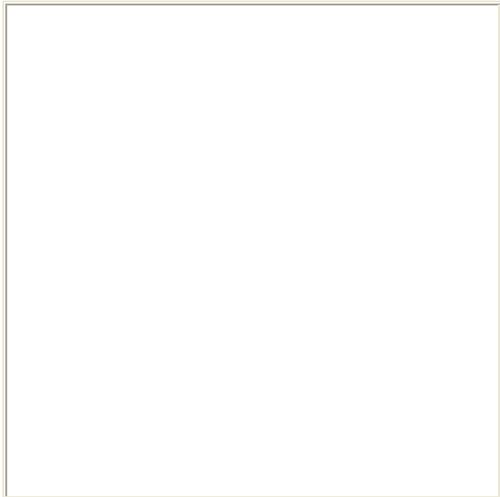
Jamming, gears are not switched off

At attempt to shift one gear off has skipped the gear in the fork of the shift rail of other gear



Synchronizer baulk ring jamming in sleeve





Difficult gearshifting

Deformation of shift lever

The lever has come off the shifting mechanism



Hard movement of shift rails. In the picture: The rail does not get on its place because the fork is bent to the left



Hard movement of sleeves on their hubs



Deformation of shift forks. On the picture it's well visible that the plug is bent to the left and does not land in the sleeve groove



Deterioration of sleeve and gear straight teeth.





Free moving of the release bearing
directing tube in the bellhousing bore



Deterioration of detent balls and/or interlock retainers, breakage or loss of resilience of detent springs



Deterioration of synchronizer baulk rings





Denting of the synchronizer spring persistent ring. This ring is located between the gear's slanting and straight teeth, note in the picture how this ring is dented aside the straight teeth.



Breakage of synchronizer spring



Spontaneous disengagement of 1st, 2nd and 3rd gears

Loose output flange nut



Deterioration of shift forks



Deterioration of synchronizer sleeve grooves



Deterioration of detent balls and/or interlock retainers, breakage or loss of resilience of detent springs



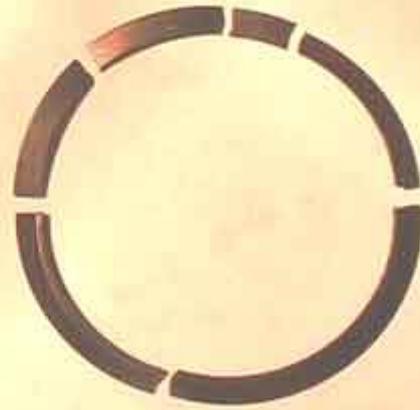
Deterioration of sleeve and gear straight teeth



Spontaneous disengagement of 4th gear

Broken input shaft bearing spring (thrust) washer

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Deterioration of shift forks



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Deterioration of synchronizer sleeve grooves



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Deterioration of sleeve and gear straight teeth



Spontaneous disengagement of 5th gear

Loose output flange nut



Deterioration of the 5th-reverse gear shift fork



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Deterioration of hub splines



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Deterioration of the sleeve straight teeth
(visible from sideways)



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Deterioration of gear straight teeth



Broken gear cluster bolt



Denting of the synchronizer spring persistent ring. This ring is located between the gear's slanting and straight teeth, note in the picture how this ring is dented aside the straight teeth.



Deterioration and/or breakage of main shaft keyway



Damaged main shaft splines

Incorrectly installed detent springs



Difficult shifting into reverse gear

Deterioration of reverse drive and/or idler gear teeth faces



Spontaneous disengagement of reverse gear

Loose output flange nut



Deterioration of the 5th-reverse gear shift fork



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Deterioration of detent balls and/or interlock retainers, breakage or loss of resilience of detent springs



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Deterioration of shift rails. The picture shows a serviceable rail, note the different places that must be checked for malfunctions



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Oil leaks

Deterioration of input and/or main shaft oil seals

Broken oil seals



Volodjushka, 13.03.03.