



CAUSES OF FAULTS IN A CLUTCH SYSTEM



CLUTCH DOES NOT DISENGAGE

SYMPTOM
Pressure plate diaphragm finger tips, prematurely worn

CAUSE

- Incorrectly adjusted clutch release system
- Incorrect driving practice: resting foot on the clutch pedal or prolonged operation of the clutch e.g. at red lights
- Clutch release system stiff / seized
- Clutch release bearing obstructed / faulty

SOLUTION

- Check the clutch release bearing mechanism and adjust / replace if necessary
- Replace the clutch pressure plate

SYMPTOM
Clutch lever or diaphragm finger tips, bent or broken
Note: The height difference of the diaphragm finger tips can only be measured when installed

CAUSE

- Incorrect installation practice: bolts were not tightened sequentially and evenly
- Transport / handling damage
- Clutch release bearing off-centre or damaged
- Clutch release shaft defective

SOLUTION

- Check the clutch release bearing mechanism and replace if necessary
- Replace the clutch pressure plate

SYMPTOM
Pressure plate broken or clutch facings burnt

CAUSE

- Clutch overheated by excessive slipping due to prolonged hill starting, or an overloaded vehicle
- Release system adjusted incorrectly, seized or damaged
- Too much or incorrect grease on the gearbox input shaft, leaking engine oil or gearbox oil, causing prolonged slipping

SOLUTION

- Eliminate the cause of the fault and replace the clutch kit

SYMPTOM
Tangential strap on clutch pressure plate distorted or broken

CAUSE

- Incorrect installation practice: bolts were not tightened sequentially and evenly
- Play in the drive train e.g. worn flexible disc, worn gearbox bearing
- Clutch previously damaged e.g. by being dropped
- Incorrect clutch fitted
- Incorrect driving practice: harsh gear changing

SOLUTION

- Eliminate the cause of the fault and replace the clutch pressure plate

SYMPTOM
Clutch cover housing / pressure plate distorted

CAUSE

- Incorrect installation practice: bolts were not tightened sequentially and evenly
- Transport / handling damage

SOLUTION

- Replace the clutch pressure plate

SYMPTOM
Clutch disc facings stuck, because of grease or oil contamination on the surface

CAUSE

- Too much or incorrect grease on the gearbox input shaft
- Leaking engine oil or gearbox oil

SOLUTION

- Eliminate the cause of the leak
- Replace the clutch disc and clean the remaining parts

SYMPTOM
Excessive lateral run-out of clutch disc

CAUSE

- Transport damage or damaged during installation

SOLUTION

- Replace the clutch disc

SYMPTOM
Stiff clutch disc on the gearbox input shaft

CAUSE

- Corrosion in the hub profile
- Dirty gearbox shaft
- Hub profile damaged due to rough handling / installation
- Input shaft not greased

SOLUTION

- Check the hub profile, then clean and lubricate the profile with the correct grease
- Replace the clutch disc

SYMPTOM
Clutch disc facing segments broken

CAUSE

- Misalignment between engine and gearbox
- Defective pilot bearing / gearbox input shaft bearing
- Defective or missing dowel pins between engine and gearbox
- Defective dowel pins on the flywheel (gearbox input shaft is stuck in the hub profile)

SOLUTION

- Eliminate the cause of the fault and replace the defective clutch parts

SYMPTOM
Marks on the clutch disc e.g. on the clutch disc retainer plate

CAUSE

- Clutch disc fitted incorrectly
- Incorrect clutch parts fitted

SOLUTION

- Check the clutch disc and replace in the case of severe damage

SYMPTOM
Clutch release bearing defective

CAUSE

- Defective release system
- Overheated release bearing due to incorrect adjustment of the release system
- Contact surface with the clutch fork not greased
- Incorrect adjustment of the release system

SOLUTION

- Eliminate the cause of the fault and replace the release bearing

SYMPTOM
Gearbox guide tube worn / scoring marks on the bearing (inner diameter)

CAUSE

- No grease or incorrect grade of grease

SOLUTION

- Replace the defective clutch parts

CLUTCH SLIPS

SYMPTOM
Flywheel depth too big
Heavy scoring marks

CAUSE

- Mating surface of the flywheel badly worn
- Incorrect flywheel, wrong or excessively refaced

SOLUTION

- Replace or reface the flywheel as necessary

SYMPTOM
Pressure plate diaphragm finger tips, prematurely worn

CAUSE

- Incorrectly adjusted clutch release system
- Incorrect driving practice: resting foot on the clutch pedal or prolonged operation of the clutch e.g. at red lights
- Clutch release system stiff / seized
- Clutch release bearing obstructed / faulty

SOLUTION

- Check the clutch release bearing mechanism and adjust / replace if necessary
- Replace the clutch pressure plate

SYMPTOM
Clutch facing worn

CAUSE

- Worn / wear and tear
- Incorrect driving practice: resting foot on the clutch pedal or prolonged operation of the clutch e.g. at red lights
- Incorrect clutch fitted
- Defective release system

SOLUTION

- Eliminate the cause of the fault and replace the clutch kit

SYMPTOM
Clutch facings or clutch pressure plate overheated or burnt

CAUSE

- Clutch overheated by slipping too long
- Oil Contamination on the clutch disc or flywheel facing, due to a leaking engine oil seal or gearbox oil seal (reduced coefficient of friction)
- Incorrect clutch fitted
- Defective release system (cable or hydraulics)
- Too much or incorrect grease on the gearbox input shaft

SOLUTION

- Eliminate the cause of the fault and replace the clutch kit

SYMPTOM
Marks on the clutch disc e.g. on the clutch disc retainer plate

CAUSE

- Clutch disc fitted incorrectly
- Incorrect clutch parts fitted

SOLUTION

- Check the clutch disc and replace in the case of severe damage

SYMPTOM
Gearbox guide tube worn
Heavy scoring marks on the bearing (inner diameter)

CAUSE

- Incorrect grade or no grease

SOLUTION

- Replace the defective clutch parts and lubricate correctly

CLUTCH JUDDER

SYMPTOM
Flywheel depth too big
Heavy scoring marks

CAUSE

- Mating surface of flywheel not refaced
- Flywheel not replaced

SOLUTION

- Replace or reface the flywheel as necessary

SYMPTOM
Tangential strap on clutch pressure plate bent or broken

CAUSE

- Incorrect installation practice: bolts were not tightened sequentially and evenly
- Play in the drive train e.g. worn out flexible disc, worn out gearbox bearing
- Clutch previously damaged e.g. by being dropped
- Incorrect clutch fitted
- Incorrect driving practice: harsh gear changing

SOLUTION

- Eliminate the cause of the fault and replace the clutch pressure plate

SYMPTOM
Clutch lever or diaphragm finger tips, bent or broken
Note: The height difference of the diaphragm spring fingers can only be measured when installed

CAUSE

- Incorrect installation practice: bolts were not tightened sequentially and evenly
- Transport / handling damage
- Clutch release bearing off-centre
- Clutch release shaft defective

SOLUTION

- Check the clutch release bearing mechanism and replace if necessary
- Replace the clutch pressure plate

SYMPTOM
Stiff / sticking clutch disc on the gearbox input shaft

CAUSE

- Corrosion in the hub spline profile
- Dirty / corroded gearbox input shaft splines
- Hub profile damaged due to rough handling / fitting / alignment

SOLUTION

- Check the hub profile, then clean and lubricate the profile with grease
- Replace the clutch disc

SYMPTOM
Oil or grease on the clutch parts

CAUSE

- Too much / wrong type of grease on the gearbox input shaft
- Leaking engine oil seal or gearbox oil seal

SOLUTION

- Eliminate the cause of the lubricant leak
- Replace the defective clutch parts

SYMPTOM
Gearbox guide tube worn
Heavy scoring marks on the bearing (inner diameter)

CAUSE

- Incorrect grade or no grease

SOLUTION

- Replace the defective clutch parts and lubricate correctly

CLUTCH NOISE

SYMPTOM
Pressure plate diaphragm finger tips, prematurely worn

CAUSE

- Incorrectly adjusted clutch release system
- Incorrect driving practice: resting foot on the clutch pedal or prolonged operation of the clutch e.g. at red lights
- Clutch release system stiff / seized
- Clutch release bearing obstructed / faulty

SOLUTION

- Check the clutch release bearing mechanism and adjust / replace if necessary
- Replace the clutch pressure plate

SYMPTOM
Marks on the clutch disc e.g. on the riveted joint or on the side plates

CAUSE

- Clutch disc fitted incorrectly
- Incorrect clutch parts fitted

SOLUTION

- Check the clutch disc and replace in the case of severe damage

SYMPTOM
Clutch disc, centre retaining rivet worn

CAUSE

- Incorrect clutch disc
- Incorrect driving practice: driving in a too high gear at low revs
- Motor tuning
- Judder vibrations

SOLUTION

- Eliminate the cause of the fault and replace the clutch disc

SYMPTOM
Torsion spring broken

CAUSE

- Incorrect clutch disc fitted
- Engine tuning
- Incorrect driving practice: driving in a too high gear at low revs
- Oil or grease on the clutch facing
- Judder vibrations

SOLUTION

- Eliminate the cause of the fault and replace the clutch disc

SYMPTOM
Hub profile splines worn / damaged

CAUSE

- Problem with alignment
- Incorrect installation practice: splines damaged during installation
- Pilot bearing damaged / Dowel pins damaged

SOLUTION

- Check the pilot or gearbox input shaft bearing and replace if necessary
- Check the dowel pins between engine and gearbox, and the flywheel dowel pins and replace if necessary

SYMPTOM
Clutch release bearing defective

CAUSE

- Defective release system (cable or hydraulics)
- Overheated release bearing due to incorrect adjustment of the release system
- Contact surface with the clutch fork not greased
- Incorrect adjustment of the release system

SOLUTION

- Eliminate the cause of the fault and replace the release bearing

SYMPTOM
Gearbox guide tube worn
Heavy scoring marks on the bearing (inner diameter)

CAUSE

- Incorrect grade or no grease

SOLUTION

- Replace the defective clutch parts and lubricate correctly