

Causes of Faults in a Clutch System

CLUTCH DOES NOT DISENGAGE

	<p>SYMPTOM Pressure plate diaphragm finger tips, prematurely worn</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch release bearing mechanism and adjust / replace if necessary Replace the clutch pressure plate
	<p>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</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect installation practice: bolts were not tightened sequentially and evenly Transport / handling damage Clutch release bearing off-centre or damaged Clutch release shaft defective <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch release bearing mechanism and replace if necessary Replace the clutch pressure plate
	<p>SYMPTOM Pressure plate broken or clutch facings burnt</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch kit
	<p>SYMPTOM Tangential strap on clutch pressure plate distorted or broken</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch pressure plate
	<p>SYMPTOM Clutch cover housing / pressure plate distorted</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect installation practice: bolts were not tightened sequentially and evenly Transport / handling damage <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the clutch pressure plate
	<p>SYMPTOM Clutch disc facings stuck, because of grease or oil contamination on the surface</p> <p>CAUSE</p> <ul style="list-style-type: none"> Too much or incorrect grease on the gearbox input shaft Leaking engine oil or gearbox oil <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the leak Replace the clutch disc and clean the remaining parts

CLUTCH SLIPS

	<p>SYMPTOM Excessive lateral run-out of clutch disc</p> <p>CAUSE</p> <ul style="list-style-type: none"> Transport damage or damaged during installation <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the clutch disc
	<p>SYMPTOM Stiff clutch disc on the gearbox input shaft</p> <p>CAUSE</p> <ul style="list-style-type: none"> Corrosion in the hub profile Dirty gearbox shaft Hub profile damaged due to rough handling / installation Input shaft not greased <p>SOLUTION</p> <ul style="list-style-type: none"> Check the hub profile, then clean and lubricate the profile with the correct grease Replace the clutch disc
	<p>SYMPTOM Clutch disc facing segments broken</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 Clutch disc damaged during installation (gearbox input shaft is stuck in the hub profile) <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the defective clutch parts
	<p>SYMPTOM Marks on the clutch disc e.g. on the clutch disc retainer plate</p> <p>CAUSE</p> <ul style="list-style-type: none"> Clutch disc fitted incorrectly Oil Contamination on the clutch disc or flywheel facing, due to a leaking engine oil seal or gearbox oil seal (reduced coefficient of friction) <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch disc and replace in the case of severe damage
	<p>SYMPTOM Clutch release bearing defective</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the release bearing
	<p>SYMPTOM Gearbox guide tube worn / scoring marks on the bearing (inner diameter)</p> <p>CAUSE</p> <ul style="list-style-type: none"> No grease or incorrect grade of grease <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the defective clutch parts

	<p>SYMPTOM Flywheel depth too big Heavy scoring marks</p> <p>CAUSE</p> <ul style="list-style-type: none"> Mating surface of the flywheel badly worn Incorrect flywheel, wrong or excessively refaced <p>SOLUTION</p> <ul style="list-style-type: none"> Replace or reface the flywheel as necessary
	<p>SYMPTOM Pressure plate diaphragm finger tips, prematurely worn</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch release bearing mechanism and adjust / replace if necessary Replace the clutch pressure plate
	<p>SYMPTOM Clutch facing worn</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch kit
	<p>SYMPTOM Clutch facings or clutch pressure plate overheated or burnt</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch kit
	<p>SYMPTOM Marks on the clutch disc e.g. on the clutch disc retainer plate</p> <p>CAUSE</p> <ul style="list-style-type: none"> Clutch disc fitted incorrectly Incorrect clutch parts fitted <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch disc and replace in the case of severe damage
	<p>SYMPTOM Gearbox guide tube worn Heavy scoring marks on the bearing (inner diameter)</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect grade or no grease <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the defective clutch parts and lubricate correctly

CLUTCH JUDDER

	<p>SYMPTOM Flywheel depth too big Heavy scoring marks</p> <p>CAUSE</p> <ul style="list-style-type: none"> Mating surface of flywheel not refaced Flywheel not replaced <p>SOLUTION</p> <ul style="list-style-type: none"> Replace or reface the flywheel as necessary
	<p>SYMPTOM Tangential strap on clutch pressure plate bent or broken</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch pressure plate
	<p>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</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect installation practice: bolts were not tightened sequentially and evenly Transport / handling damage Clutch release bearing off-centre Clutch release shaft defective <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch release bearing mechanism and replace if necessary Replace the clutch pressure plate
	<p>SYMPTOM Stiff / sticking clutch disc on the gearbox input shaft</p> <p>CAUSE</p> <ul style="list-style-type: none"> Corrosion in the hub spline profile Dirty / corroded gearbox input shaft splines Hub profile damaged due to rough handling / fitting / alignment <p>SOLUTION</p> <ul style="list-style-type: none"> Check the hub profile, then clean and lubricate the profile with grease Replace the clutch disc
	<p>SYMPTOM Oil or grease on the clutch parts</p> <p>CAUSE</p> <ul style="list-style-type: none"> Too much / wrong type of grease on the gearbox input shaft Leaking engine oil seal or gearbox oil seal <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the lubricant leak Replace the defective clutch parts
	<p>SYMPTOM Gearbox guide tube worn Heavy scoring marks on the bearing (inner diameter)</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect grade or no grease <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the defective clutch parts and lubricate correctly

CLUTCH NOISE

	<p>SYMPTOM Pressure plate diaphragm finger tips, prematurely worn</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch release bearing mechanism and adjust / replace if necessary Replace the clutch pressure plate
	<p>SYMPTOM Marks on the clutch disc e.g. on the riveted joint or on the side plates</p> <p>CAUSE</p> <ul style="list-style-type: none"> Clutch disc fitted incorrectly Incorrect clutch parts fitted <p>SOLUTION</p> <ul style="list-style-type: none"> Check the clutch disc and replace in the case of severe damage
	<p>SYMPTOM Clutch disc, centre retaining rivet worn</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect clutch disc Incorrect driving practice: driving in a too high gear at low revs Motor tuning Judder vibrations <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch disc
	<p>SYMPTOM Torsion spring broken</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the clutch disc
	<p>SYMPTOM Hub profile splines worn / damaged</p> <p>CAUSE</p> <ul style="list-style-type: none"> Problem with alignment Incorrect installation practice: splines damaged during installation Pilot bearing damaged / Dowel pins damaged <p>SOLUTION</p> <ul style="list-style-type: none"> 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
	<p>SYMPTOM Clutch release bearing defective</p> <p>CAUSE</p> <ul style="list-style-type: none"> 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 <p>SOLUTION</p> <ul style="list-style-type: none"> Eliminate the cause of the fault and replace the release bearing
	<p>SYMPTOM Gearbox guide tube worn Heavy scoring marks on the bearing (inner diameter)</p> <p>CAUSE</p> <ul style="list-style-type: none"> Incorrect grade or no grease <p>SOLUTION</p> <ul style="list-style-type: none"> Replace the defective clutch parts and lubricate correctly