

# Clutches

## TROUBLE SHOOTING & DIAGNOSIS

CONDITION	POSSIBLE CAUSE	CORRECTION
<b>CHATTERING OR GRABBING</b>	<ol style="list-style-type: none"> <li>1) Incorrect Lever Adjustment</li> <li>2) Oil or Grease on Facings</li> <li>3) Loose "U" Joint Flange</li> <li>4) Worn Input Shaft Spline</li> <li>5) Binding Pressure Plate</li> <li>6) Binding Release Lever</li> <li>7) Binding Disc Hub</li> <li>8) Glazed Facings</li> <li>9) Unequal Pressure Plate Contact</li> <li>10) Bent Clutch Disc</li> <li>11) Uneven Spring Pressure</li> <li>12) Incorrect Transmission Alignment.</li> <li>13) Loose Facings</li> <li>14) Scored Pressure Plate</li> <li>15) Worn Pressure Plate, Disc or Flywheel</li> <li>16) Clutch Disc Hub Sticking on Shaft</li> <li>17) Worn or Binding Release Levers</li> <li>18) Broken or Weak Pressure Springs</li> <li>19) Sticking Clutch Pedal</li> <li>20) Incorrect Disc Facing</li> <li>21) Engine Loose in Chassis</li> </ol>	<ol style="list-style-type: none"> <li>1) Adjust Clutch</li> <li>2) Check for Oil Leaks</li> <li>3) Check "U" Joint Flange and Tighten</li> <li>4) Replace Shaft</li> <li>5) Check for Binding, Replace as Necessary</li> <li>6) Free Binding Levers or Replace</li> <li>7) Replace Disc and Adjust Clutch</li> <li>8) Replace Disc After Checking Pressure Plate and Flywheel for Scoring. Replace as Necessary</li> <li>9) Check Release Lever Clearance, Disc Thickness, and Pressure Plate for Paralleism with Flywheel</li> <li>10) Replace Clutch Disc</li> <li>11) Adjust Spring Tension</li> <li>12) Check Clutch Housing Alignment</li> <li>13) Replace Clutch Disc</li> <li>14) Replace Pressure Plate if Warped More Than .015"</li> <li>15) Replace When There are Signs of Excessive Wear, Heat Checking or Scoring</li> <li>16) Check Shaft for Excessive Wear or Burrs, Check Shaft for Distortion and Replace as Necessary</li> <li>17) Replace Levers and Release Bearing</li> <li>18) Replace Springs</li> <li>19) Check for Worn or Misaligned Components</li> <li>20) Replace Clutch Disc</li> <li>21) Check Motor Mounts and Replace or Tighten</li> </ol>
<b>SPINNING</b>	<ol style="list-style-type: none"> <li>1) Dry or Worn Bushings</li> <li>2) Misaligned Clutch Housing</li> <li>3) Bent or Distorted Clutch Disc.</li> <li>4) Warped Pressure Plate</li> <li>5) Excessive Pedal Free Play</li> </ol>	<ol style="list-style-type: none"> <li>1) Replace Bushings</li> <li>2) Check Clutch Housing Alignment</li> <li>3) Replace Clutch Disc</li> <li>4) Replace Pressure Plate</li> <li>5) Readjust Pedal Free Play</li> </ol>

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CONDITION	POSSIBLE CAUSE	CORRECTION
<b>DRAGGING</b>	<ol style="list-style-type: none"> <li>1) Oil or Grease on Facings</li> <li>2) Incorrect Lever Adjustment</li> <li>3) Incorrect Pedal Adjustment</li> <li>4) Dust or Dirt on Clutch</li> <li>5) Worn or Broken Facings</li> <li>6) Bent Clutch Disc</li> <li>7) Clutch Disc Hub Binding on Shaft</li> <li>8) Binding Pilot Bushing</li> <li>9) Sticking Release Bearing Sleeve</li> <li>10) Warped Pressure Plate</li> </ol>	<ol style="list-style-type: none"> <li>1) Free Release Levers</li> <li>2) Check for Damage and Readjust Lever</li> <li>3) Adjust Pedal</li> <li>4) Disassemble Clutch and Clean Thoroughly</li> <li>5) Replace Clutch Disc</li> <li>6) Replace Clutch Disc, Check for Cause</li> <li>7) Check Shaft for Burrs or Gummed Splines</li> <li>8) Replace Pilot Bushing</li> <li>9) Free Sleeve, Check for Scoring or Rough Spots</li> <li>10) Replace Pressure Plate if Worn More Than .015"</li> </ol>
<b>RATTLING</b>	<ol style="list-style-type: none"> <li>1) Weak or Broken Release Lever Spring</li> <li>2) Damaged Pressure Plate</li> <li>3) Broken Clutch Return Spring</li> <li>4) Worn Splines in Clutch Disc Hub or Transmission Input Shaft</li> <li>5) Worn Clutch Release Bearings</li> <li>6) Dry or Worn Pilot Bushing</li> <li>7) Unequal Release Lever Contact</li> <li>8) Incorrect Pedal Freeplay</li> <li>9) Warped Clutch Disc</li> </ol>	<ol style="list-style-type: none"> <li>1) Replace Spring</li> <li>2) Replace Pressure Plate and Adjust Clutch</li> <li>3) Replace Return Spring</li> <li>4) Replace Clutch Disc or Transmission Input Shaft</li> <li>5) Replace Release Bearing, Check Tips of Release Levers for Wear, Replace as Necessary</li> <li>6) Lubricate or Replace Pilot Bushing</li> <li>7) Readjust Release Levers</li> <li>8) Adjust Pedal Free Play</li> <li>9) Replace Clutch Disc, Check Pressure Plate for Wear and Replace as Necessary</li> </ol>
<b>SLIPPING</b>	<ol style="list-style-type: none"> <li>1) Pressure Springs Worn or Broken</li> <li>2) Worn Facing</li> <li>3) Incorrect Clutch Alignment</li> <li>4) Oil or Grease on Facings</li> <li>5) Warped Clutch Disc</li> <li>6) Warped or Scored Pressure Plate</li> <li>7) Binding Release Levers</li> <li>8) Binding Clutch Pedal</li> </ol>	<ol style="list-style-type: none"> <li>1) Replace Springs</li> <li>2) Replace Clutch Disc</li> <li>3) Adjust Clutch</li> <li>4) Replace Clutch Disc, Fix Oil Leaks</li> <li>5) Replace Clutch Disc</li> <li>6) Replace Pressure Plate if Scored, Heat Checked, or Warped More Than .015", Test Spring Tension and Replace Clutch Disc</li> <li>7) Free Release Lever</li> <li>8) Check for Worn or Misaligned Parts</li> </ol>

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CONDITION	POSSIBLE CAUSE	CORRECTION
<b>SQUEAKING</b>	<ol style="list-style-type: none"> <li>1) No Lubrication in Release Bearing</li> <li>2) Worn Release Bearing</li> <li>3) Dry or Worn Pilot Bushing</li> <li>4) Pilot Bearing Turning in Crankshaft</li> <li>5) Worn Input Shaft Bearing</li> <li>6) Incorrect Transmission Alignment</li> <li>7) No Lubrication Between Clutch Fork and Pivot</li> <li>8) No Lubrication in Torque Shaft</li> </ol>	<ol style="list-style-type: none"> <li>1) Lubricate</li> <li>2) Replace Release Bearing</li> <li>3) Lubricate or Replace Pilot Bushing</li> <li>4) Replace Pilot Bearing</li> <li>5) Replace Input Shaft Bearing</li> <li>6) Check Clutch Housing Alignment</li> <li>7) Lubricate</li> <li>8) Lubricate</li> </ol>
<b>HEAVY, STIFF PEDAL</b>	<ol style="list-style-type: none"> <li>1) Dry or Binding Linkage Components</li> <li>2) Sticking Release Bearing Sleeve</li> <li>3) Dry or Binding Pedal Hub</li> <li>4) Pedal Interference With Floorboard or Mat</li> <li>5) Rough, Dry or Binding Pivot Ball, or Fork Pivots</li> </ol>	<ol style="list-style-type: none"> <li>1) Lubricate Linkage Components</li> <li>2) Check Release Bearing Sleeve for Wear, Burrs or Roughness on Mating Surface</li> <li>3) Replace Bushing or Bearings in Pedal Hub and Lubricate</li> <li>4) Check for Pedal Interference</li> <li>5) Lubricate All Moving Points</li> </ol>
<b>GRINDING</b>	<ol style="list-style-type: none"> <li>1) Dry Release Bearing</li> <li>2) Worn or Dry Pilot Bearing</li> <li>3) Worn Input Shaft Bearing</li> </ol>	<ol style="list-style-type: none"> <li>1) Replace Release Bearing</li> <li>2) Lubricate or Replace Release Bearing</li> <li>3) Replace Input Shaft Bearing</li> </ol>
<b>WHIRRING</b>	<ol style="list-style-type: none"> <li>1) Incorrect Pedal Free Play</li> <li>2) Incorrect Transmission Alignment</li> </ol>	<ol style="list-style-type: none"> <li>1) Adjust Pedal Free Play</li> <li>2) Check Clutch Housing Alignment</li> </ol>