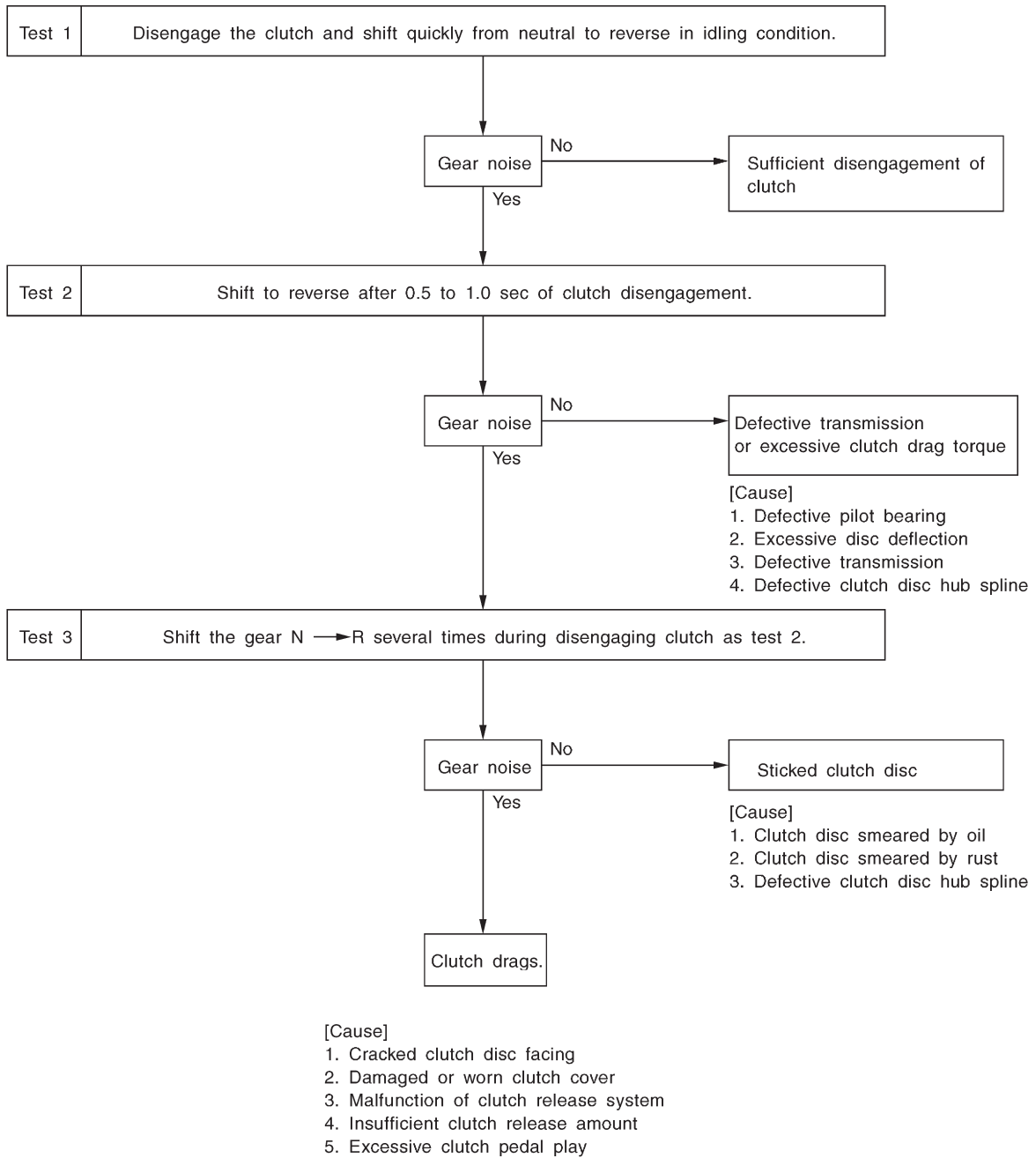


# 1. Clutch System

| Symptom  | Possible cause                                    | Corrective   |
|--|---|--|
| <p>1. Clutch slippage.<br/>It is hard to perceive clutch slippage in the early stage, but pay attention to the following symptoms</p> <ul style="list-style-type: none"> <li>● Engine revs up when shifting.</li> <li>● High speed driving is impossible; especially rapid acceleration impossible and vehicle speed does not increase in proportion to an increase in engine speed.</li> <li>● Power falls, particularly when ascending a slope, and there is a smell of burning of the clutch facing.</li> <li>● Method of testing: Put the vehicle in stationary condition with parking brake fully applied. Disengage the clutch and shift the transmission gear into the first. Gradually allow the clutch to engage while gradually increasing the engine speed. The clutch function is satisfactory if the engine stalls. However, the clutch is slipping if the vehicle does not start off and the engine does not stall.</li> </ul> | (a) No clutch pedal play                          | Readjust.  |
|  | (b) No release lever end play                     | Readjust.  |
|  | (c) Clutch facing smeared by oil                  | Replace.   |
|  | (d) Worn clutch facing                            | Replace.   |
|  | (e) Deteriorated diaphragm spring                 | Replace.   |
|  | (f) Distorted pressure plate or flywheel          | Correct or replace.  |
|  | (g) Defective release bearing holder              | Correct or replace.  |
|  | (h) Defective pedal and cable system              | Correct or replace.  |
| <p>2. Clutch drags.<br/>As a symptom of this trouble, a harsh scratching noise develops and control becomes quite difficult when shifting gears. The symptom becomes more apparent when shifting into the first gear. However, because much trouble of the this sort is due to defective synchronization mechanism, carry out the test as described after.<br/>&lt;Ref. to 2-10 [K1A0].&gt;<br/>It may be judged as insufficient disengagement of clutch if any noise occurs during this test.</p>   | (a) Excessive clutch pedal play                   | Readjust.  |
|  | (b) Excessive clutch release lever play           | Readjust.  |
|  | (c) Worn or rusty clutch disc hub spline          | Replace clutch disc.   |
|  | (d) Excessive deflection of clutch disc facing    | Correct or replace.  |
|  | (e) Seized crankshaft pilot needle bearing        | Replace.   |
|  | (f) Malfunction of pedal and cable system         | Correct or replace.  |
|  | (g) Cracked clutch disc facing                    | Replace.   |
|  | (h) Sticked clutch disc (smeared by oil or water) | Replace.   |
| <p>3. Clutch chatters.<br/>Clutch chattering is an unpleasant vibration to the whole body when the vehicle is just started with clutch partially engaged.</p>  | (a) Improper clutch cable routing                 | Correct.   |
|  | (b) Adhesion of oil on the facing                 | Replace clutch disc.   |
|  | (c) Weak or broken torsion spring                 | Replace clutch disc.   |
|  | (d) Defective facing contact or excessive disc    | Replace clutch disc defec-tion.  |
|  | (e) Warped pressure plate or flywheel             | Correct or replace.  |
|  | (f) Loose disc rivets                             | Replace clutch disc.   |
|  | (g) Loose engine mounting                         | Retighten or replace mounting.   |
|  | (h) Improper adjustment of pitching stopper       | Adjustment.  |
| <p>4. Noisy clutch<br/>Examine whether the noise is generated when the clutch is disengaged, engaged, or partially engaged.</p>  | (a) Broken, worn or unlubricated release bearing  | Replace release bearing.   |
|  | (b) Insufficient lubrication of pilot bearing     | Apply grease.  |
|  | (c) Loose clutch disc hub                         | Replace clutch disc.   |
|  | (d) Loose torsion spring retainer                 | Replace clutch disc.   |
|  | (e) Deteriorated or broken torsion spring         | Replace clutch disc.   |
| <p>5. Clutch grabs.<br/>When starting the vehicle with the clutch partially engaged, the clutch engages suddenly and the vehicle jumps instead of making a smooth start.</p>   | (a) Grease or oil on facing                       | Replace clutch disc.   |
|  | (b) Deteriorated cushioning spring                | Replace clutch disc.   |
|  | (c) Worn or rusted spline of clutch disc or main  | Take off rust, apply grease or replace clutch shaft disc or mainshaft. |
|  | (d) Deteriorated or broken torsion spring         | Replace clutch disc.   |
|  | (e) Loose engine mounting                         | Retighten or replace mounting.   |
|  | (f) Deteriorated diaphragm spring                 | Replace.   |

**A: DIAGNOSTIC DIAGRAM OF CLUTCH DRAG**



MEMO:

MEMO: