Suzuki service bulletin - clutch rattle

Courtesy H2Rick

SERVICE BULLETIN

Bulletin No. 75-39
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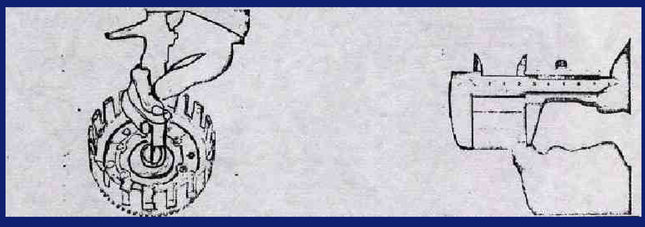
SUBJECT: CLUTCH RATTLE ON TWIN CYLINDER MODELS
Affected Models: ALL TWIN CYLINDER MODELS
Effective Engine No.:
Reference: Page 44, T20 Service Manual

Read & Initial
Manager
Parts
Service

PROBLEM: Distinct rattle in the right primary case when the engine is idling, clutch lever released transmission in neutral. Noise worsens as the engine warms up. Noise disappears when the clutch lever is pulled.

CAUSE: The usual cause of this problem is the clutch housing "walking" on the transmission countershaft. The housing has too much axial play because of normal wear on the thrust side of the clutch hub.

CORRECTION: Disassemble the clutch and measure the difference in length of the spacer and the thickness of the clutch housing. This difference is the amount of clearance that the clutch housing can slide back and forth on the shaft.

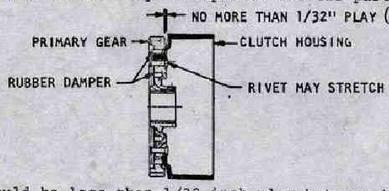


MODEL	AXIAL PLAY	
	MAXIMUM	MINIMUM
X6, TC250, T200, TC200, T250, T350, T305, TC305	.007 inch	.003 inch
S32	.008 inch	.004 inch
T10	.006 inch	.004 inch
T500	.007 inch	.002 inch

If the measurement is more than the maximum, rub one end of the clutch spacer on a honing stone until the difference is near the minimum above. Don't overdo it, or the clutch will not release.

OTHER CHECKPOINTS:

A. The clutch housing/primary gear is a riveted assembly. There are rubber dampers which cushion the drive shock between these two parts. If the rivets stretch or the dampers soften, the clutch housing will wobble and make the same noise. Try to separate the two parts with your hands.



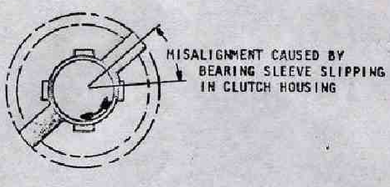
There should be less than 1/32 inch play between the two parts. Don't try to tighten the rivets. Instead, replace the assembly.

B. Check the clutch hub nut and the primary pinion nut for tightness. Use a torque wrench when tightening these critical nuts.

C. The X6, TC250, T200, TC200, T250, T305, TC305, T350, clutch housing is fitted with the kickstart drive gear on its backside. Be sure that the oil grooves in the gear are matched with the slots in the clutch bearing sleeve. Otherwise, the thrust face of the housing will prematurely wear due to lack of oil.

RIGHT
Slots Lined Up

WRONG
Gear Installed 90° off on Splines



WRONG

Bearing has seized on shaft, causing sleeve to slip in housing.

D. If the transmission oil level is too low, or if extreme heat is present in the clutch assembly, the clutch housing bearing will seize on the transmission driveshaft. The engine will stop suddenly, and the inertia of the rolling motorcycle will cause the clutch bearing sleeve, which is pressed into the housing, to spin in the housing. After it frees up, the clutch will work well. However, the thrust surface of the clutch housing will starve for oil and wear too quickly, again causing this "rattling" noise.

E. Another possible cause is transmission oil level too low. Or the transmission oil viscosity is incorrect. The correct type is a 20W-40 multigrade detergent.