

MANUAL TRANSMISSION (R150, R150F)

SS05E-04

SERVICE DATA

Output shaft 1st gear journal diameter	Min.	38.979 mm (1.53446 in.)
Output shaft 2nd gear journal diameter	Min.	46.984 mm (1.8498 in.)
Output shaft 3rd gear journal diameter	Min.	37.984 mm (1.4954 in.)
Output shaft flange thickness	Min.	4.80 mm (0.1890 in.)
Output shaft runout	Max.	0.03 mm (0.0012 in.)
Gear thrust clearance 1st	STD	0.20–0.45 mm (0.0079–0.0177 in.)
	Max.	0.45 mm (0.0177 in.)
Gear thrust clearance 2nd and 3rd	STD	0.10–0.25 mm (0.0039–0.0098 in.)
	Max.	0.25 mm (0.0098 in.)
Gear radial clearance 1st	STD	0.020–0.073 mm (0.0008–0.0029 in.)
	Max.	0.073 mm (0.0029 in.)
Gear radial clearance 2nd and 3rd	STD	0.015–0.068 mm (0.0006–0.0027 in.)
	Max.	0.068 mm (0.0027 in.)
Shift fork to hub sleeve clearance		
Reverse gear	Max.	0.41 mm (0.016 in.)
Hub sleeve No. 2	Max.	0.35 mm (0.014 in.)
Synchronizer ring to 3rd gear clearance	Min.	0.75 mm (0.030 in.)
Synchronizer ring to 1st and 2nd gear clearance	Min.	0.65 mm (0.026 in.)
Input shaft snap ring thickness	Mark A	2.10–2.15 mm (0.0827–0.0846 in.)
	Mark B	2.15–2.20 mm (0.0846–0.0866 in.)
	Mark C	2.20–2.25 mm (0.0866–0.0886 in.)
	Mark D	2.25–2.30 mm (0.0886–0.0906 in.)
	Mark E	2.30–2.35 mm (0.0906–0.0925 in.)
	Mark F	2.35–2.40 mm (0.0925–0.0945 in.)
	Mark G	2.40–2.45 mm (0.0945–0.0965 in.)
Output shaft snap ring thickness Clutch hub No.1	Mark A	2.30–2.35 mm (0.0906–0.0925 in.)
	Mark B	2.35–2.40 mm (0.0925–0.0945 in.)
	Mark C	2.40–2.45 mm (0.0945–0.0965 in.)
	Mark D	2.45–2.50 mm (0.0965–0.0984 in.)
	Mark E	2.50–2.55 mm (0.0984–0.1004 in.)
	Mark F	2.55–2.60 mm (0.1004–0.1024 in.)
	Mark G	2.60–2.65 mm (0.1024–0.1043 in.)
Output shaft snap ring thickness Clutch hub No.2	Mark A	1.80–1.85 mm (0.0709–0.0728 in.)
	Mark B	1.85–1.90 mm (0.0728–0.0748 in.)
	Mark C	1.90–1.95 mm (0.0748–0.0768 in.)
	Mark D	1.95–2.00 mm (0.0768–0.0787 in.)
	Mark E	2.00–2.05 mm (0.0787–0.0807 in.)
	Mark F	2.05–2.10 mm (0.0807–0.0827 in.)
	Mark G	2.10–2.15 mm (0.0827–0.0846 in.)

SERVICE SPECIFICATIONS – MANUAL TRANSMISSION (R150, R150F)

Output shaft snap ring thickness Rear	Mark A Mark B Mark C Mark D Mark E Mark F Mark G Mark H Mark J Mark K Mark L Mark M Mark N Mark P Mark Q Mark R Mark S	2.65–2.70 mm (0.1043–0.1063 in.) 2.70–2.75 mm (0.1063–0.1083 in.) 2.75–2.80 mm (0.1083–0.1102 in.) 2.80–2.85 mm (0.1102–0.1122 in.) 2.85–2.90 mm (0.1122–0.1142 in.) 2.90–2.95 mm (0.1142–0.1161 in.) 2.95–3.00 mm (0.1161–0.1181 in.) 3.00–3.05 mm (0.1181–0.1201 in.) 3.05–3.10 mm (0.1201–0.1220 in.) 3.10–3.15 mm (0.1220–0.1240 in.) 3.15–3.20 mm (0.1240–0.1260 in.) 3.20–3.25 mm (0.1260–0.1280 in.) 3.25–3.30 mm (0.1280–0.1299 in.) 3.30–3.35 mm (0.1299–0.1319 in.) 3.35–3.40 mm (0.1319–0.1339 in.) 3.40–3.45 mm (0.1339–0.1358 in.) 3.45–3.50 mm (0.1358–0.1378 in.)
Counter gear roller bearing journal diameter	Min.	27.860 mm (1.0968 in.)
Counter 5th gear thrust clearance	STD	0.10–0.35 mm (0.0039–0.0138 in.)
	Max.	0.40 mm (0.0157 in.)
Counter 5th radial clearance	STD	0.015–0.068 mm (0.0006–0.0027 in.)
	Max.	0.160 mm (0.0063 in.)
Reverse idler gear radial clearance	STD	0.040–0.082 mm (0.0016–0.0032 in.)
	Max.	0.130 mm (0.0051 in.)
Reverse idler gear to shift arm clearance	STD	0.05–0.35 mm (0.0020–0.0138 in.)
	Max.	0.50 mm (0.0197 in.)
Counter gear snap ring thickness Front	Mark A Mark B Mark C Mark D Mark E Mark F	2.00–2.05 mm (0.0787–0.0807 in.) 2.05–2.10 mm (0.0807–0.0827 in.) 2.10–2.15 mm (0.0827–0.0846 in.) 2.15–2.20 mm (0.0846–0.0866 in.) 2.20–2.25 mm (0.0866–0.0886 in.) 2.25–2.30 mm (0.0886–0.0906 in.)
Counter gear snap ring thickness Rear	Mark A Mark B Mark C Mark D Mark E Mark F Mark G	2.80–2.85 mm (0.1102–0.1122 in.) 2.85–2.90 mm (0.1122–0.1142 in.) 2.90–2.95 mm (0.1142–0.1161 in.) 2.95–3.00 mm (0.1161–0.1181 in.) 3.00–3.05 mm (0.1181–0.1201 in.) 3.05–3.10 mm (0.1201–0.1220 in.) 3.10–3.15 mm (0.1220–0.1240 in.)
Oil seal drive in depth		
Front bearing retainer (from retainer end)		11.7 ± 0.5 mm (0.461 ± 0.020 in.)
Extension housing		0 ± 0.5 mm (0 ± 0.020 in.)
Transfer adaptor		45.6 ± 0.5 mm (1.795 ± 0.020 in.)