

MANUAL TRANSMISSION (R150, R150F)

SS07V-02

SERVICE DATA

Shaft 1st gear journal diameter	Min.	38.860 mm (1.5299 in.)
Shaft 2nd gear journal diameter	Min.	46.860 mm (1.8449 in.)
Shaft 3rd gear journal diameter	Min.	37.860 mm (1.4905 in.)
Shaft flange thickness	Min.	4.70 mm (0.1850 in.)
Shaft runout	Max.	0.06 mm (0.0024 in.)
Belt clearance 1st	STD	0.20 – 0.45 mm (0.008 – 0.0177 in.)
	Max.	0.50 mm (0.0197 in.)
Belt clearance 2nd	STD	0.10 – 0.25 mm (0.0039 – 0.0098 in.)
	Max.	0.30 mm (0.0118 in.)
Belt clearance 3rd	STD	0.10 – 0.25 mm (0.0039 – 0.0098 in.)
	Max.	0.30 mm (0.0118 in.)
Belt clearance 1st	STD	0.020 – 0.073 mm (0.0008 – 0.0029 in.)
	Max.	0.160 mm (0.0063 in.)
Belt clearance 2nd	STD	0.015 – 0.068 mm (0.0006 – 0.0027 in.)
	Max.	0.160 mm (0.0063 in.)
Belt clearance 3rd	STD	0.015 – 0.068 mm (0.0006 – 0.0027 in.)
	Max.	0.160 mm (0.0063 in.)
to hub sleeve clearance	Max.	1.0 mm (0.039 in.)
to gear ring to gear clearance	Min.	0.8 mm (0.031 in.)
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.)
Shaft snap ring thickness Sub 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.)
Shaft snap ring thickness Sub 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.)

Output shaft snap ring thickness Rear	Mark A	2.65 – 2.70 mm (0.1043 – 0.1063 in.)
	Mark B	2.70 – 2.75 mm (0.1063 – 0.1083 in.)
	Mark C	2.75 – 2.80 mm (0.1083 – 0.1102 in.)
	Mark D	2.80 – 2.85 mm (0.1102 – 0.1122 in.)
	Mark E	2.85 – 2.90 mm (0.1122 – 0.1142 in.)
	Mark F	2.90 – 2.95 mm (0.1142 – 0.1161 in.)
	Mark G	2.95 – 3.00 mm (0.1161 – 0.1181 in.)
	Mark H	3.00 – 3.05 mm (0.1181 – 0.1201 in.)
	Mark J	3.05 – 3.10 mm (0.1201 – 0.1220 in.)
	Mark K	3.10 – 3.15 mm (0.1220 – 0.1240 in.)
	Mark L	3.15 – 3.20 mm (0.1240 – 0.1260 in.)
	Mark M	3.20 – 3.25 mm (0.1260 – 0.1280 in.)
	Mark N	3.25 – 3.30 mm (0.1280 – 0.1299 in.)
	Mark P	3.30 – 3.35 mm (0.1299 – 0.1319 in.)
	Mark Q	3.35 – 3.40 mm (0.1319 – 0.1339 in.)
	Mark R	3.40 – 3.45 mm (0.1339 – 0.1358 in.)
	Mark S	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	2.00 – 2.05 mm (0.0787 – 0.0807 in.)
	Mark B	2.05 – 2.10 mm (0.0807 – 0.0827 in.)
	Mark C	2.10 – 2.15 mm (0.0827 – 0.0846 in.)
	Mark D	2.15 – 2.20 mm (0.0846 – 0.0866 in.)
	Mark E	2.20 – 2.25 mm (0.0866 – 0.0886 in.)
	Mark F	2.25 – 2.30 mm (0.0886 – 0.0906 in.)
	Mark G	2.30 – 2.35 mm (0.0906 – 0.0926 in.)
Counter gear snap ring thickness Rear	Mark A	2.80 – 2.85 mm (0.1102 – 0.1122 in.)
	Mark B	2.85 – 2.90 mm (0.1122 – 0.1142 in.)
	Mark C	2.90 – 2.95 mm (0.1142 – 0.1161 in.)
	Mark D	2.95 – 3.00 mm (0.1161 – 0.1181 in.)
	Mark E	3.00 – 3.05 mm (0.1181 – 0.1201 in.)
	Mark F	3.05 – 3.10 mm (0.1201 – 0.1220 in.)
	Mark G	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.)