

# R155 MANUAL TRANSMISSION

## SERVICE DATA

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| Synchronizer ring outer No. 3 to gear spline piece No. 5 clearance | STD   | 0.68 to 1.32 mm (0.0267 to 0.0610 in.)   |
| Hub sleeve No. 3 to shift fork No. 3 clearance                     | STD   | 0.62 to 0.84 mm (0.0102 to 0.0331 in.)   |
| Counter 5th gear inner diameter                                    | STD<br>Max.   | 38.015 to 38.040 mm (1.4967 to 1.4976 in.)<br>38.040 mm (1.4976 in.)   |
| Reverse idler gear inner diameter                                  | STD<br>Max.   | 24.040 to 24.061 mm (0.9465 to 0.9473 in.)<br>24.061 mm (0.9473 in.)   |
| Reverse idler gear shaft outer diameter                            | STD<br>Min.   | 23.979 to 24.000 mm (0.9441 to 0.9449 in.)<br>23.979 mm (0.9441 in.)   |
| Reverse idler gear to reverse idler gear shaft clearance           | STD   | 0.040 to 0.082 mm (0.0016 to 0.0032 in.)   |
| Reverse idler gear to reverse shift arm                            | STD   | 0.05 to 0.35 mm (0.0020 to 0.0138 in.)   |
| Counter gear snap ring thickness<br>Rear                           | STD<br>Mark A<br>Mark B<br>Mark C<br>Mark D<br>Mark E<br>Mark F<br>Mark G   | 0.1 mm (0.0039 in.) or less<br>2.80 to 2.85 mm (0.1102 to 0.1122 in.)<br>2.85 to 2.90 mm (0.1122 to 0.1142 in.)<br>2.90 to 2.95 mm (0.1142 to 0.1161 in.)<br>2.95 to 3.00 mm (0.1161 to 0.1181 in.)<br>3.00 to 3.05 mm (0.1181 to 0.1201 in.)<br>3.05 to 3.10 mm (0.1201 to 0.1220 in.)<br>3.10 to 3.15 mm (0.1220 to 0.1240 in.)  |
| Counter 5th gear thrust clearance                                  | STD   | 0.10 to 0.35 mm (0.0039 to 0.0138 in.)   |
| Counter 5th gear radial clearance                                  | STD   | 0.015 to 0.068 mm (0.0006 to 0.0027 in.)   |
| Output shaft snap ring thickness<br>Snap ring                      | STD<br>Mark A<br>Mark B<br>Mark C<br>Mark D<br>Mark E<br>Mark F<br>Mark G<br>Mark H<br>Mark J<br>Mark K<br>Mark L<br>Mark M<br>Mark N<br>Mark P<br>Mark Q<br>Mark R<br>Mark S | 0.10 mm (0.0039 in.) or less<br>2.65 to 2.70 mm (0.1043 to 0.1063 in.)<br>2.70 to 2.75 mm (0.1063 to 0.1083 in.)<br>2.75 to 2.80 mm (0.1083 to 0.1102 in.)<br>2.80 to 2.85 mm (0.1102 to 0.1122 in.)<br>2.85 to 2.90 mm (0.1122 to 0.1142 in.)<br>2.90 to 2.95 mm (0.1142 to 0.1161 in.)<br>2.95 to 3.00 mm (0.1161 to 0.1181 in.)<br>3.00 to 3.05 mm (0.1181 to 0.1201 in.)<br>3.05 to 3.10 mm (0.1201 to 0.1220 in.)<br>3.10 to 3.15 mm (0.1220 to 0.1240 in.)<br>3.15 to 3.20 mm (0.1240 to 0.1260 in.)<br>3.20 to 3.25 mm (0.1260 to 0.1280 in.)<br>3.25 to 3.30 mm (0.1280 to 0.1299 in.)<br>3.30 to 3.35 mm (0.1299 to 0.1319 in.)<br>3.35 to 3.40 mm (0.1319 to 0.1339 in.)<br>3.40 to 3.45 mm (0.1339 to 0.1358 in.)<br>3.45 to 3.50 mm (0.1358 to 0.1378 in.) |
| Front bearing retainer oil seal drive in depth                     | -   | 11.2 to 12.2 mm (0.4409 to 0.4803 in.)   |
| Extension housing oil seal drive in depth                          | -   | - 0.5 to 0.5 mm (- 0.020 to 0.020 in.)   |
| Transfer adapter oil sea drive in depth                            | -   | 45.4 to 46.4 mm (1.7874 to 1.8268 in.)   |
| Synchronizer ring No. 2 to input shaft clearance                   | STD   | 0.70 to 1.70 mm (0.0276 to 0.0669 in.)   |
| Input shaft snap ring thickness<br>Snap ring                       | STD<br>Mark A<br>Mark B<br>Mark C<br>Mark D<br>Mark E<br>Mark F<br>Mark G   | 0.1 mm (0.0039 in.) or less<br>2.10 to 2.15 mm (0.0827 to 0.0846 in.)<br>2.15 to 2.20 mm (0.0846 to 0.0866 in.)<br>2.20 to 2.25 mm (0.0866 to 0.0886 in.)<br>2.25 to 2.30 mm (0.0886 to 0.0906 in.)<br>2.30 to 2.35 mm (0.0906 to 0.0925 in.)<br>2.35 to 2.40 mm (0.0925 to 0.0945 in.)<br>2.40 to 2.45 mm (0.0945 to 0.0965 in.)  |
| 1st gear thrust clearance  | STD   | 0.20 to 0.45 mm (0.0079 to 0.0177 in.)   |
| 2nd gear thrust clearance  | STD   | 0.10 to 0.25 mm (0.0039 to 0.0098 in.)   |
| 3rd gear thrust clearance  | STD   | 0.10 to 0.25 mm (0.0039 to 0.0098 in.)   |
| 1st gear radial clearance  | STD   | 0.020 to 0.073 mm (0.0008 to 0.0029 in.)   |
| 2rd gear radial clearance  | STD   | 0.015 to 0.068 mm (0.0006 to 0.0027 in.)   |

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| 3rd gear radial clearance  | STD   | 0.015 to 0.068 mm (0.0006 to 0.0027 in.)  |
| Output shaft circle runout                                       | Max.  | 0.03 mm (0.0012 in.)  |
| Output shaft outer diameter                                      | (A) STD<br>(B) STD<br>(C) STD<br>(A) Min.<br>(B) Min.<br>(C) Min.         | 38.979 to 38.995 mm (1.5334 to 1.5352 in.)<br>46.984 to 47.000 mm (1.8498 to 1.8504 in.)<br>37.984 to 38.000 mm (1.4954 to 1.4961 in.)<br>38.979 mm (1.5334 in.)<br>46.984 mm (1.8498 in.)<br>37.984 mm (1.4954 in.)  |
| Output shaft flange  | STD   | 4.8 to 5.2 mm (0.1890 to 0.2047 in.)  |
| 3rd gear inner diameter  | STD<br>Max.   | 44.015 to 44.040 mm (1.7329 to 1.7339 in.)<br>44.040 mm (1.7339 in.)  |
| 2nd gear inner diameter  | STD<br>Max.   | 53.015 to 53.040 mm (2.0872 to 2.0881 in.)<br>53.040 mm (2.0881 in.)  |
| 1st gear inner diameter  | STD<br>Max.   | 46.015 to 46.046 mm (1.812 to 1.8126 in.)<br>46.040 mm (1.8126 in.)   |
| 1st gear thrust washer thickness                                 | STD   | 5.95 to 6.05 mm (0.2346 to 0.2382 in.)  |
| Synchronizer ring set No. 1 to 1st gear clearance                | STD   | 0.75 to 1.65 mm (0.0295 to 0.0649 in.)  |
| Synchronizer ring set No. 1 to 2nd gear clearance                | STD   | 0.65 to 1.75 mm (0.0256 to 0.0689 in.)  |
| Synchronizer ring No. 2 to 3rd gear clearance                    | STD   | 0.75 to 1.65 mm (0.0295 to 0.0649 in.)  |
| Reverse gear to shift fork No. 1                                 | STD   | 0.15 to 0.41 mm (0.0060 to 0.0161 in.)  |
| Hub sleeve No. 2 to shift fork No. 2 clearance                   | STD   | 0.15 to 0.35 mm (0.0059 to 0.0138 in.)  |
| Output shaft snap ring thickness (clutch hub No. 2)<br>Snap ring | STD<br>Mark A<br>Mark B<br>Mark C<br>Mark D<br>Mark E<br>Mark F<br>Mark G | 0.1 mm (0.0039 in.) or less<br>1.80 to 1.85 mm (0.0709 to 0.0728 in.)<br>1.85 to 1.90 mm (0.0728 to 0.0748 in.)<br>1.90 to 1.95 mm (0.0748 to 0.0768 in.)<br>1.95 to 2.00 mm (0.0768 to 0.0787 in.)<br>2.00 to 2.05 mm (0.0787 to 0.0807 in.)<br>2.05 to 2.10 mm (0.0807 to 0.0827 in.)<br>2.10 to 2.15 mm (0.0827 to 0.0846 in.) |
| Output shaft snap ring thickness<br>Clutch hub No. 1             | STD<br>Mark A<br>Mark B<br>Mark C<br>Mark D<br>Mark E<br>Mark F<br>Mark G | 0.1 mm (0.0039 in.) or less<br>2.30 to 2.35 mm (0.0906 to 0.0925 in.)<br>2.35 to 2.40 mm (0.0925 to 0.0945 in.)<br>2.40 to 2.45 mm (0.0945 to 0.0965 in.)<br>2.45 to 2.50 mm (0.0965 to 0.0984 in.)<br>2.50 to 2.55 mm (0.0984 to 0.1004 in.)<br>2.55 to 2.60 mm (0.1004 to 0.1024 in.)<br>2.60 to 2.65 mm (0.1024 to 0.1043 in.) |

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