

# Component Procedures: Manual Transmission/Transaxle

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# Component Procedures: Manual Transmission/Transaxle

## Parts and Labor (itype\_189)

### Parts

Qualifier	Part #	Name	Price	Note
Transaxle Assembly	NOT LISTED	Transaxle	0.00	

### Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Complete Assembly With Transfer Of Parts	B	4.3	3.1
Replace	Complete Assembly Without Transfer Of Parts	B	4.0	0.0
Overhaul/Rebuild	Transaxle, Overhaul	A	12.5	9.1
Overhaul/Rebuild	Transaxle, Overhaul > NOTE > To Overhaul Diff?	A	1.5	0.0

### [G35M-R] Manual Transmission/Transaxle (Article 1368339)

#### Non Standards

- Manual Transaxle Location Index [G35M-R] (1368340)
- Transmission Drain and Refill Locations (1368341)

### [A26M-R] Manual Transmission/Transaxle (Article 1368342)

#### Non Standards

- Manual Transaxle Location Index (1368343)
- Transmission Drain and Refill Locations (1368344)

### Manual Transaxle G35M-R (Article 1372616)

#### Non Standards

- Overhaul Procedures G35M-R (1372617)
- Technical Data - MCI (1372741)
- Service Tools (1372742)

### [G35M-R] Manual Transmission/Transaxle (Article 1373673)

#### Non Standards

- Transaxle Oil Inspection (1373674)

### [A26M-R] Manual Transmission/Transaxle (Article 1373675)

#### Non Standards

- Transaxle Oil Inspection (1373676)

### How to Use This Information G35M-R (Article 1373628)

#### Non Standards

- Range of Topics (1373629)
- Service Procedure (1373630)
- Symbols (1373633)
- Advisory Messages (1373634)
- Abbreviations (1373641)

### [G35M-R] Manual Transmission/Transaxle (Article 1373305)

#### Non Standards

- Manual Transaxle Removal/Installation (1373306)
- Transaxle Oil Replacement (1373308)

### [A26M-R] Manual Transmission/Transaxle (Article 1373309)

#### Non Standards

- Transaxle Oil Replacement (1373310)
- Manual Transaxle Removal/Installation (1373311)

**[G35M-R] Manual Transaxle (Article 1368204)****Manual Transaxle [G35M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90 Above 10 °C {50 °F}: SAE 80W-90
Manual transaxle oil capacity (approx. quantity)	2.87 L {3.03 US qt, 2.53 Imp qt}

**[A26M-R] Manual Transaxle (Article 1368205)****Manual Transaxle [A26M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90
Manual transaxle oil Capacity (approx. quantity)	2.5 L {2.6 US qt, 2.2 Imp qt}

**[G35M-R] Manual Transaxle (Article 1368430)****Manual Transaxle [G35M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90 Above 10 °C {50 °F}: SAE 80W-90
Manual transaxle oil capacity (approx. quantity)	2.87 L {3.03 US qt, 2.53 Imp qt}

**[A26M-R] Manual Transaxle (Article 1368431)****Manual Transaxle [A26M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90
Manual transaxle oil Capacity (approx. quantity)	2.5 L {2.6 US qt, 2.2 Imp qt}

**[G35M-R] Manual Transaxle (Article 1368430)****Manual Transaxle [G35M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90 Above 10 °C {50 °F}: SAE 80W-90
Manual transaxle oil capacity (approx. quantity)	2.87 L {3.03 US qt, 2.53 Imp qt}

**[A26M-R] Manual Transaxle (Article 1368431)****Manual Transaxle [A26M-R]**

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90
Manual transaxle oil Capacity (approx. quantity)	2.5 L {2.6 US qt, 2.2 Imp qt}

## [G35M-R] Manual Transaxle (Article 1368204)

### Manual Transaxle [G35M-R]

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90 Above 10 °C {50 °F}: SAE 80W-90
Manual transaxle oil capacity (approx. quantity)	2.87 L {3.03 US qt, 2.53 Imp qt}

## [A26M-R] Manual Transaxle (Article 1368205)

### Manual Transaxle [A26M-R]

Item	Specification
Manual transaxle oil Grade	API Service GL-4 or GL-5
Manual transaxle oil Viscosity	All-season: SAE 75W-90
Manual transaxle oil Capacity (approx. quantity)	2.5 L {2.6 US qt, 2.2 Imp qt}

## Technical Data - MCI, G35M-R (Article 1368582)

### TECHNICAL DATA - MCI

Item		Specification		
G35M-R				
Thrust clearance	1st gear	Clearance (mm (in))	0.05—0.28 (0.002—0.011)	
		Maximum (mm (in))	0.33 (0.013)	
	2nd gear	Clearance (mm (in))	0.18—0.46 (0.007—0.018)	
		Maximum (mm (in))	0.51 (0.020)	
	3rd gear	Clearance (mm (in))	0.05—0.20 (0.002—0.007)	
		Maximum (mm (in))	0.25 (0.010)	
4th gear	Clearance (mm (in))	0.17—0.37 (0.007—0.014)		
	Maximum (mm (in))	0.42 (0.017)		
5th gear	Clearance (mm (in))	0.100—0.220 (0.0040—0.0086)		
	Maximum (mm (in))	0.270 (0.0106)		
Oil clearance	1st gear	1st gear inner diameter (mm (in))	39.500—39.525 (1.555—1.556)	
		Secondary shaft outer diameter (mm (in))	39.445—39.470 (1.553—1.554)	
		Clearance (mm (in))	0.030—0.080 (0.002—0.003)	
	2nd gear	2nd gear inner diameter (mm (in))	35.000—35.025 (1.378—1.379)	
		Secondary shaft outer diameter (mm (in))	34.945—34.965 (1.376—1.377)	
		Clearance (mm (in))	0.05—0.09 (0.002—0.003)	
	3rd gear	3rd gear inner diameter (mm (in))	36.000—36.025 (1.417—1.418)	
		Primary shaft outer diameter (mm (in))	35.945—35.970 (1.415—1.416)	
	4th gear	Clearance (mm (in))	0.030—0.080 (0.001—0.003)	
		4th gear inner diameter (mm (in))	31.000—31.025 (1.220—1.221)	
	5th gear	Primary shaft outer diameter (mm (in))	30.945—30.970 (1.218—1.219)	
		Clearance (mm (in))	0.030—0.080 (0.001—0.003)	
		5th gear inner diameter (mm (in))	34.000—34.025 (1.3386—1.3395)	
	Shift fork and hub sleeve	Clearance between 1st/2nd shift fork and hub sleeve	Standard (mm (in))	0.10—0.45 (0.004—0.017)
			Maximum (mm (in))	0.95 (0.037)
Clearance between 3rd/4th shift fork and hub sleeve		Standard (mm (in))	0.10—0.40 (0.004—0.015)	
	Maximum (mm (in))	0.90 (0.035)		
Clearance between 5th shift fork and hub sleeve	Standard (mm (in))	0.10—0.36 (0.004—0.014)		
	Maximum (mm (in))	0.86 (0.034)		
Synchronizer ring	Clearance between synchronizer ring and flank surface of gear	Standard (mm (in))	1.50 (0.059)	
		Maximum (mm (in))	0.80 (0.031)	

Item		Specification	
Reverse idle gear and reverse lever	Clearance between reverse idle gear bushing and reverse lever	Standard	(mm {in}) 0.10—0.35 {0.004—0.013}
		maximum	(mm {in}) 0.85 {0.033}
Primary shaft gear	Runout	(mm {in})	0.050 {0.0020}max.
	Bearing preload	(N·m {kgf·cm, in·lbf})	0.12—0.39 {1.2—4.0, 1.05—3.47}
	Preload adjust shims	(mm {in})	0.20 {0.008}, 0.25 {0.010}, 0.30 {0.012}, 0.35 {0.014}, 0.40 {0.016}, 0.45 {0.018}, 0.50 {0.020}, 0.55 {0.022}, 0.60 {0.024}, 0.65 {0.026}, 0.70 {0.028}
Secondary shaft gear	Runout	(mm {in})	0.015 {0.0006}max.
	Bearing preload	(N·m {kgf·cm, in·lbf})	0.2—0.3 {2.0—4.0, 1.8—3.4}
	Preload adjust shims	(mm {in})	0.20 {0.008}, 0.25 {0.010}, 0.30 {0.012}, 0.35 {0.014}, 0.40 {0.016}, 0.45 {0.018}, 0.50 {0.020}, 0.55 {0.022}, 0.60 {0.024}, 0.65 {0.026}, 0.70 {0.028}
Differential	Differential bearing preload	(N·m {kgf·cm, in·lbf})	1.4—1.9 {14—20, 13—17}
	Preload adjust shims	(mm {in})	0.1 {0.004}, 0.20 {0.008}, 0.25 {0.010}, 0.30 {0.012}, 0.35 {0.014}, 0.40 {0.016}, 0.45 {0.018}, 0.50 {0.020}, 0.55 {0.022}, 0.60 {0.024}, 0.65 {0.026}, 0.70 {0.028}, 0.75 {0.030}, 0.80 {0.031}, 0.85 {0.033}, 0.90 {0.035}, 0.95 {0.037}, 1.0 {0.039}, 1.05 {0.041}, 1.10 {0.043}, 1.15 {0.045}, 1.20 {0.047}
	Backlash of side gear and pinion gear	Standard	(mm {in}) 0.050—0.150 {0.0020—0.059}

Item		Specification	
		LF (2.0 L)	L3 (2.3 L)
<b>CLUTCH</b>			
Clutch pedal	Disengagement point	Disengagement stroke	(mm {in}) 90—110 {3.55—4.33} (Reference value)
		Pedal stroke	(mm {in}) 135 {5.31} (Reference value)
Clutch cover	Diaphragm spring fingers	Depth	(mm {in}) 0.6 {0.024}
		Maximum height difference	(mm {in}) 1.0 {0.039}
		Maximum clearance of flatness of the pressure plate	(mm {in}) 0.5 {0.020}
Clutch disc	Minimum depth	(mm {in})	0.3 {0.012}
	Maximum runout	(mm {in})	0.7 {0.028}
Flywheel	Maximum runout	(mm {in})	0.1 {0.004}
Clutch fluid	Type	SAE J1703, FMVSS 116 DOT-3	
<b>MANUAL TRANSAXLE</b>			
Manual transaxle type		G35M-R	
Transaxle oil	Grade	API Service GL-4 or GL-5	
	Viscosity	All-season	SAE 75W-90
		Above 10 °C {50 °F}	SAE 80W-90
Capacity (Approx. quantity)	(L {US qt, Imp qt})	2.87 {3.03, 2.53}	
<b>AUTOMATIC TRANSAXLE</b>			
Automatic transaxle type		FN4A-EL	
ATF	Type	ATF M-V	
	Capacity (Approx. quantity)	(L {US qt, Imp qt})	7.2 {7.6, 6.3}
Line pressure (kPa {kgf/cm <sup>2</sup> , psi})	D, M (1GR, 2GR) range	Idle	330—470 {3.4—4.7, 48—68}
		Stall	1,160—1,320 {11.8—13.5, 168—191}
	R position	Idle	490—710 {5.0—7.2, 72—102}
		Stall	1,750—1,970 {17.8—20.1, 254—285}   1,600—1,820 {16.3—18.6, 232—264}
Engine stall speed (rpm)	D, M range	2,200—2,800	
Time lag (s)	N position → D range	0.4—0.7	
	N position → R position	0.4—0.7	
Transaxle range (TR) switch (ohm)	P position	4,085—4,515	
	R position	1,425—1,575	
	N position	713—788	
	D range	371—409	

## MANUAL TRANSAXLE

Item	Specification
Manual transaxle oil [G35M-R]	Specified oil grade: API Service GL-4 or GL-5 Specified oil viscosity (All-season): SAE 75W-90 Specified oil viscosity (Above 10 °C {50 °F}): SAE 80W-90 Capacity (approximate quantity): 2.87 L {3.03 US qt, 2.53 Imp qt}
Manual transaxle oil [A65M-R]	Specified oil grade: API Service GL-4 or GL-5 Specified oil viscosity: SAE 75W-90 Capacity (approximate quantity): 2.3 L {2.4 US qt, 2.0 Imp qt}
Manual transaxle oil [A26MX-R]	Specified oil grade: API Service GL-4 or GL-5 Specified oil viscosity: SAE 75W-90 Capacity (approximate quantity): 2.55 L {2.69 US qt, 2.24 Imp qt}

## All Technical Service Bulletins (itype\_100)

Tsbs

- M/T - Grinding Noise In 3rd Gear/Pops Out Of Gear (0501209, 2009/07/10)
- M/T - 4th Gear Service Precautions (MTIP-08-05-1, 2008/05/01)

## Customer Interest Bulletins (itype\_109)

Tsbs

- M/T - Grinding Noise In 3rd Gear/Pops Out Of Gear (0501209, 2009/07/10)

## Repair Tips (itype\_110)

Tsbs

- M/T - 4th Gear Service Precautions (MTIP-08-05-1, 2008/05/01)

## [G35M-R] Manual Transmission/Transaxle (Article 1374008)

Non Standards






















- Inspection After Transaxle Installation (1373307)
- Transaxle Oil Inspection (1374009)

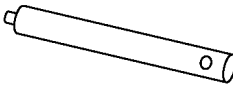
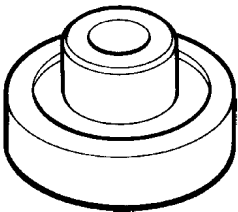
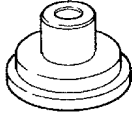
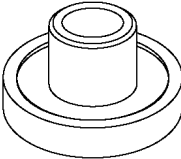
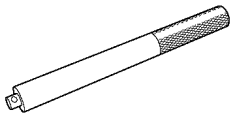
## [A26M-R] Manual Transmission/Transaxle (Article 1374010)

Non Standards

- Inspection After Transaxle Installation (1373312)
- Transaxle Oil Inspection (1374011)

## Service Tools G35M-R (Article 1373358)

SERVICE TOOLS			
49 0107 580A Engine stand 	49 G019 0A0 Transaxle hanger set 	49 0839 425C Bearing puller set 	49 FT01 361 Bearing remover 
46 0636 145 Fan pulley boss puller 	488 G030 370 Removing plate 	49 F401 368A Plate 	49 G030 795 Oil seal installer 
49 G030 440 Primary shaft holder 	49 B017 207 Attachment G 	49 B017 208 Attachment H 	49 B017 209 Attachment J 
49 F401 331 Body 	49 F401 335A Attachment A 	49 F401 336B Attachment B 	49 G030 338 Attachment E 
49 G030 380D Shim selector set 	49 G017 202 Preload adapter 	49 B017 102 Preload adapter 	49 G030 455 Differential side gear holder 
49 G033 105 Attachment 			

49 G033 102 Handle 	49 H033 101 Attachment 	49 L025 002 Bearing Installer 
49 H025 001 Attachment 	49 F027 003 Handle 	

**Noise (itype\_156)**

Tsbs

- M/T - Grinding Noise In 3rd Gear/Pops Out Of Gear (0501209, 2009/07/10)

**Pops out of gear (itype\_164)**

Tsbs

- M/T - Grinding Noise In 3rd Gear/Pops Out Of Gear (0501209, 2009/07/10)