Component Procedures: Automatic Transmission/Transaxle

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Component Procedures: Automatic Transmission/Transaxle

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Transaxle Assembly > From 5/?	FKY019090R00	Transaxle	2285.94	
Transaxle Assembly > From 11?	FSK019090N	Transaxle	0.00	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Diagnose/Test	Transaxle, Diagnosis	A	1.8	0.0
Replace	Complete Assembly With Transfer Of Parts	B	6.2	4.7
Replace	Complete Assembly Without Transfer Of Parts	B	5.6	0.0
Replace	Complete Assembly Without Transfer Of Parts >?	B	0.2	0.0
Replace	Complete Assembly Without Transfer Of Parts >?	B	0.2	0.0
Overhaul/Rebuild	Transaxle, Overhaul	A	18.9	13.7
Overhaul/Rebuild	Transaxle, Overhaul > NOTE > To Flush Cooler ?	A	0.6	0.0
Overhaul/Rebuild	Transaxle, Overhaul > NOTE > To Overhaul Diff?	A	1.5	0.0
Overhaul/Rebuild	Transaxle, Overhaul > NOTE > To Overhaul Valv?	A	1.5	0.0
Overhaul/Rebuild	Transaxle, Overhaul > NOTE > To R&R Torque Co?	A	0.2	0.0

FN4A-EL Automatic Transaxle (Article 1377676)

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- Automatic Transaxle Cross-Sectional View (1377679)
- Outline of Operation (1377680)
- EC-AT Operation Chart (1377681)
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- Oil Pump (1377697)
- Output Gear Outline (1377701)
- Parking Mechanism (1377702)
- Planetary Gears (1377706)
- Power Flow (1377717)
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- Shift Solenoids (1377725)
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- Control Valve Body (1377840)
- Clutches (1377843)
- Brake Bands (1377853)
- Output Gear Outline (1377857)
- Planetary Gears (1377858)
- Parking Mechanism (1377862)
- Shift Solenoids (1377866)
- Pressure Control Solenoids (1377873)
- Oil Pump (1377879)
- Torque Converter (1377883)

Foreword (Article 1377574)

Non Standards

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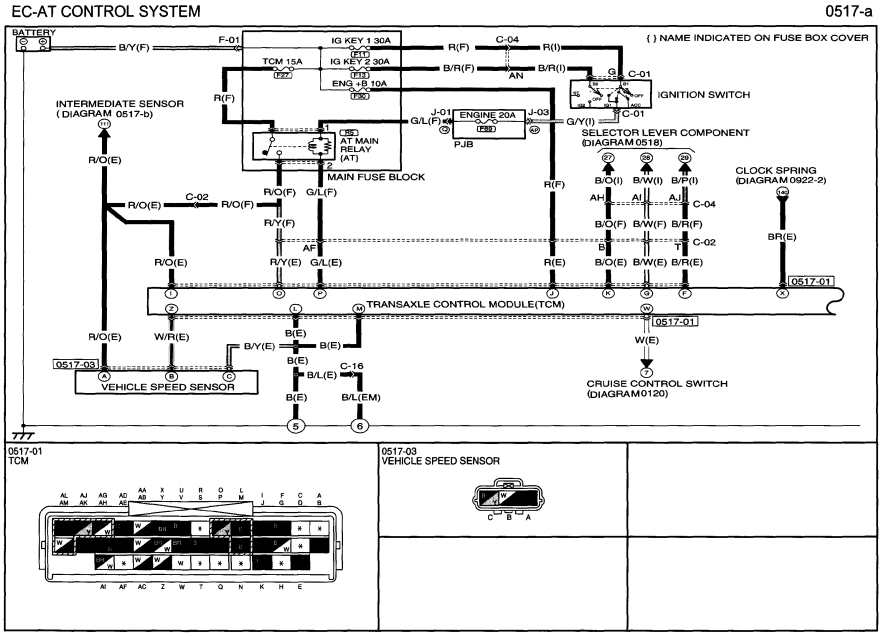
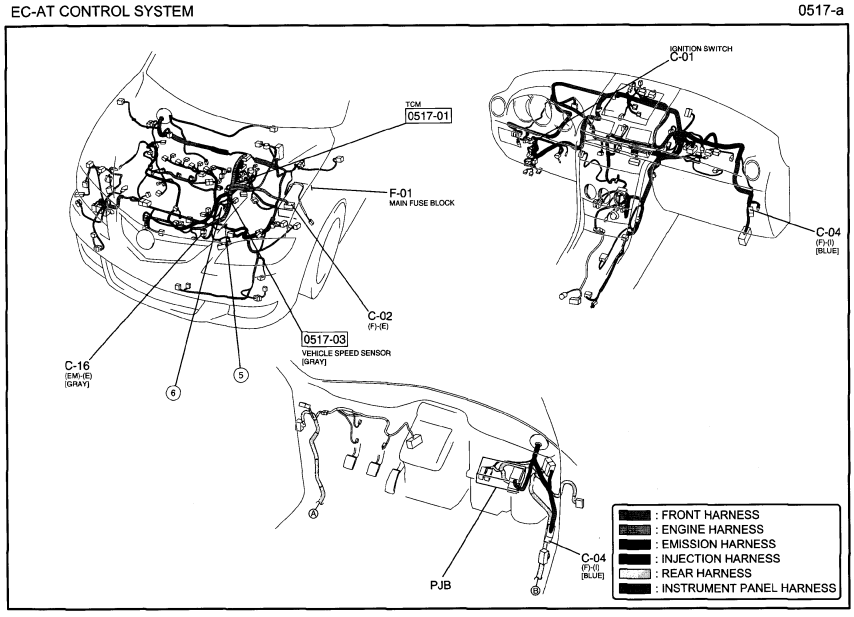
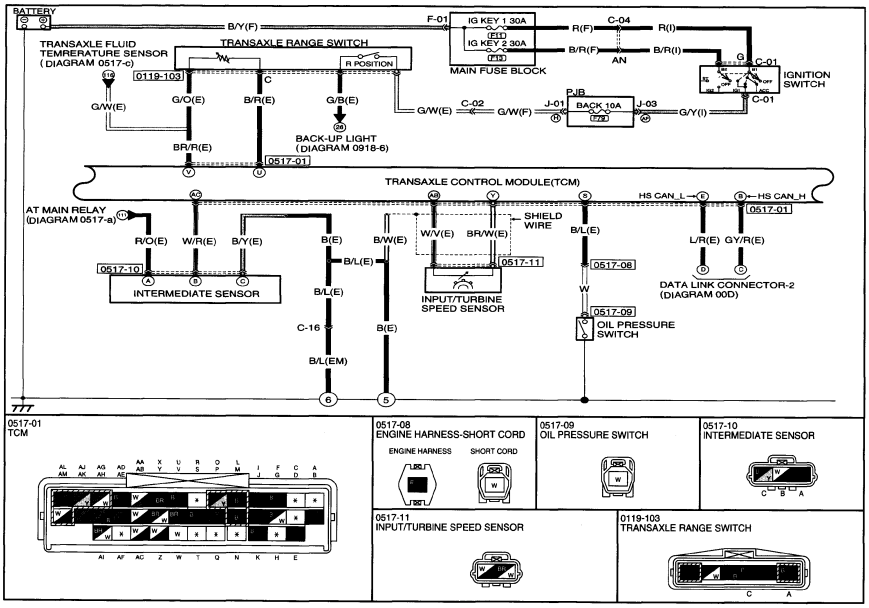
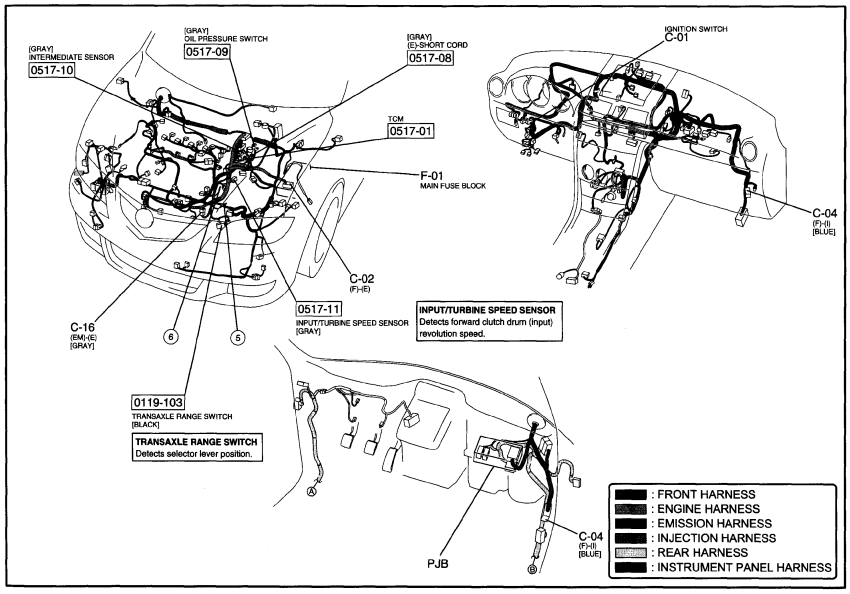


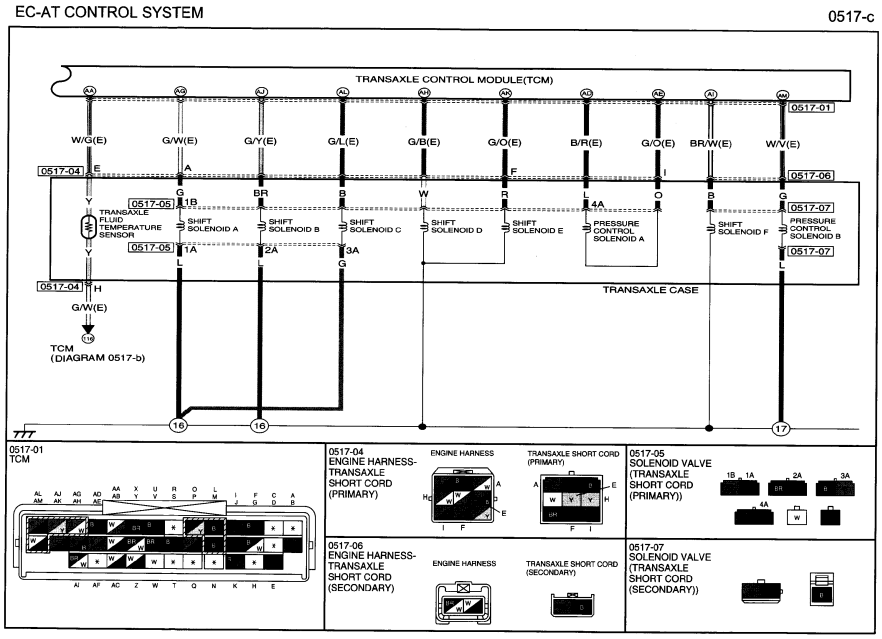


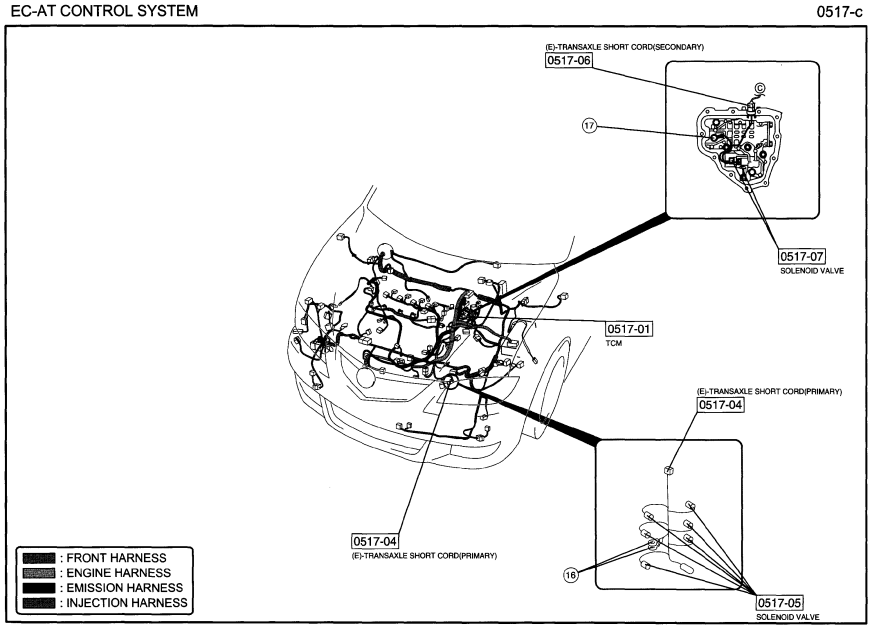
EC-AT CONTROL SYSTEM 0517-b



EC-AT CONTROL SYSTEM 0517-b







System Schematic (Article 1369372)

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- [FN4A-EI] Automatic Transmission/Transaxle (1369522)
- [FS5A-EI] Automatic Transmission/Transaxle (1369524)

Bearing and race locations [SJ6A-EI] (Article 1368956)

Non Standards

- FN4A-EL (1368963)
- FS5A-EL (1369015)

Injector Drive Relay/ AT Main Relay (Article 1368988)

RELAY LOCATION

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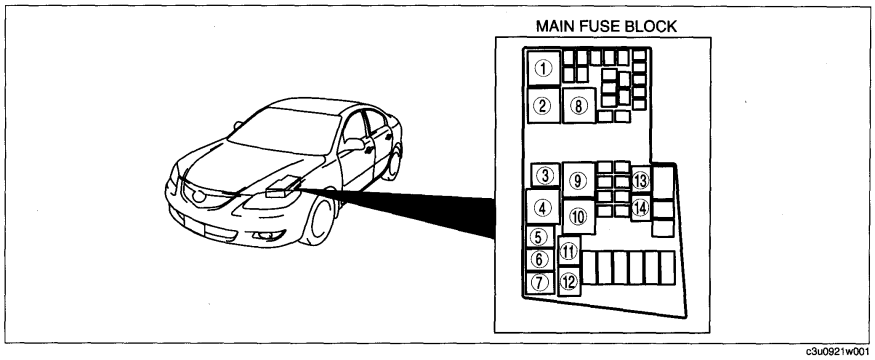

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1	Main relay
2	Starter relay
3	A/C relay
4	Blower relay (L3 with TC)
5	Injector driver relay (L3 with TC)
	AT main relay (FS5A-EL)
6	Drive-by-wire relay
7	Horn relay
8	Rear washer relay (L3 with TC)

9	DRL relay (L3 with TC)
	Blower relay (except L3 with TC)
10	Headlight cleaner relay (L3 with TC)
	Rear washer relay (except L3 with TC)
11	Rear window defroster relay
12	Front fog light relay
13	Fuel pump relay No.2 (L3 with TC)
	DRL relay (except L3 with TC)
	Headlight cleaner relay (except L3 with TC)
14	Fuel pump relay

[FN4A-EI] Automatic Transmission/Transaxle (Article 1368989)

Non Standards
- Automatic Transaxle Location Index (1368990)

[FS5A-EI] Automatic Transaxle/Transaxle (Article 1368991)

Non Standards
- Automatic Transaxle Location Index (1368992)

FN4A-EL Automatic Transaxle Workshop Manual (Article 1374695)

Non Standards
- Automatic Transaxle Assembly (1374696)

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Automatic Transaxle Fluid (ATF) Replacement (Article 1359593)

Non Standards
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- FS5A-EL (1375360)

Capacities (itype_30)

Automatic Transaxle Fluid
Capacities
4 Speed ..... 7.6 Qts. (7.2L)
5 Speed ..... 8.6 Qts. (8.14L)

Primary Control Valve Body (ATF Temperature: -40-150 degrees C {-40-302 degrees F}) (Article 1368850)

Primary control valve body (ATF temperature: –40—150 °C {–40—302 °F})

Terminal	Solenoid valve	Resistance (ohm)
A—GND	Shift solenoid A	1.0—4.2
C—GND	Shift solenoid B	1.0—4.2
G—GND	Shift solenoid C	1.0—4.2
B—GND	Shift solenoid D	10.9—26.2
F—GND	Shift solenoid E	10.9—26.2
D—I	Pressure control solenoid A	2.4—7.3

Secondary Control Valve Body (ATF Temperature: -40-150 degrees C {-40-302 degrees F}) (Article 1368851)

Secondary control valve body (ATF temperature: –40—150 °C {–40—302 °F})

Terminal	Solenoid valve	Resistance (ohm)
A—GND	Pressure control solenoid B	1.0—4.2
B—GND	Shift solenoid F	8.4—21.8

Transaxle Fluid Temperature (TFT) Sensor (Article 1368852)

Transaxle fluid temperature (TFT) sensor

ATF temperature (°C {°F})	Resistance (kilohm)
–20 {–4}	236—324
0 {32}	84.3—110
20 {68}	33.5—42.0
40 {104}	14.7—17.9
60 {140}	7.08—8.17
80 {176}	3.61—4.15
100 {212}	1.96—2.24
120 {248}	1.13—1.28
130 {266}	0.87—0.98

Transaxle Range (TR) Switch (Article 1368853)

Transaxle range (TR) switch

Terminal	Position/Range	Resistance (ohm)
B—C	P	4,085—4,515
	R	1,425—1,575
	N	713—788
	D	371—409

Fluid Types (itype_31)

Automatic Transaxle Fluid
Fluid type .....
ATF
M-V (Type M5)
Updated by TSB 087-008/08

Fluid Types and Capacities (itype_436)

Fluid Types
Capacities

Engine Stall Speed (Article 1368750)

Engine stall speed

Position/range	Engine stall speed (rpm)
D, M (1GR, 2GR)	2,200—2,800
R	

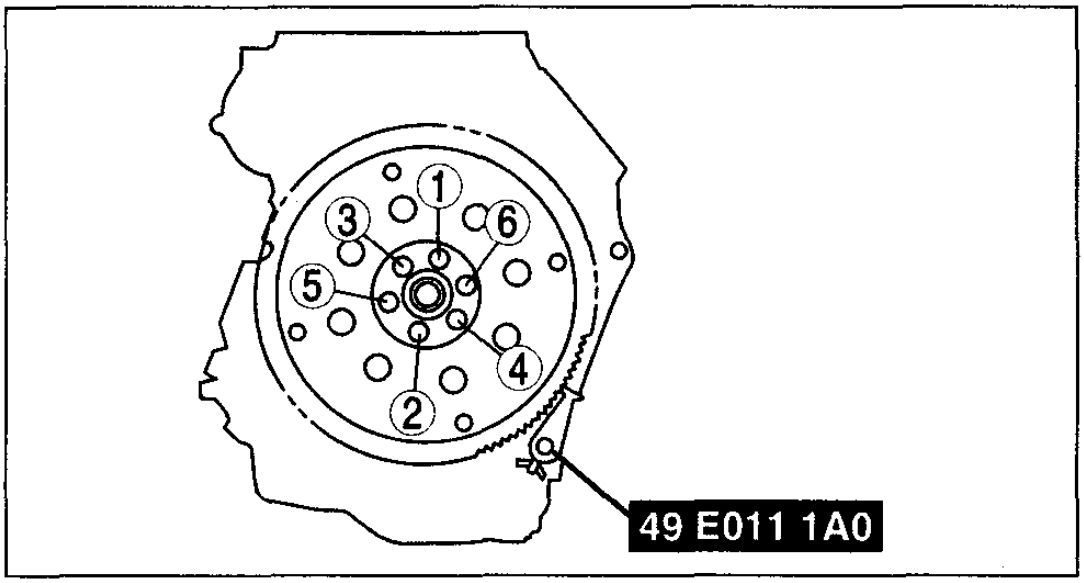
Technical Data (Article 1368694)

Non Standards
- FS5A-EI (1368742)
- FN4A-EI (1368695)

[FN4A-EI] Automatic Transaxle (Article 1368751)

AUTOMATIC TRANSAXLE [FN4A-EL]

Item				Specification
ATF	Type			ATF M-V
	Capacity (Approx. quantity) (L {US qt, Imp qt})			7.2 {7.6, 6.3}
Line pressure (kPa {kgf/cm^2, psi})		D, M (1GR, 2GR) range	Idle	330—470 {3.4—4.7, 48—68}
			Stall	1,160—1,320 {11.8—13.4, 168—191}
		R position	Idle	490—710 {5.0—7.2, 72—102}
			Stall	1,680—2,020 {17.2—20.5, 244—292}
Engine stall speed (rpm)		D, M (1GR, 2GR) range		2,300—2,900
		R position		
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
Transaxle Fluid temperature (TFT) sensor (kilohm)		ATF temperature: –20 °C {–4 °F}		236—324
		ATF temperature: 0 °C {32 °F}		84.3—110
		ATF temperature: 20 °C {68 °F}		33.5—42.0
		ATF temperature: 40 °C {104 °F}		14.7—17.9
		ATF temperature: 60 °C {140 °F}		7.08—8.17
		ATF temperature: 80 °C {176 °F}		3.61—4.15
		ATF temperature: 100 °C {212 °F}		1.96—2.24
		ATF temperature: 120 °C {248 °F}		1.13—1.28
		ATF temperature: 130 °C {266 °F}		0.87—0.98
Input/turbine speed sensor (ohm)		ATF temperature: –40—160 °C {–40—320 °F}		250—600
Vehicle speed sensor (VSS) (V)				4.5—5.5
Solenoid valves (ohm)		ATF temperature: –40—150 °C {–40—302 °F}	Shift solenoid A	1.0—4.2
			Shift solenoid B	1.0—4.2
			Shift solenoid C	1.0—4.2
			Shift solenoid D	10.9—26.2
			Shift solenoid E	10.9—26.2
			Pressure control	2.4—7.3



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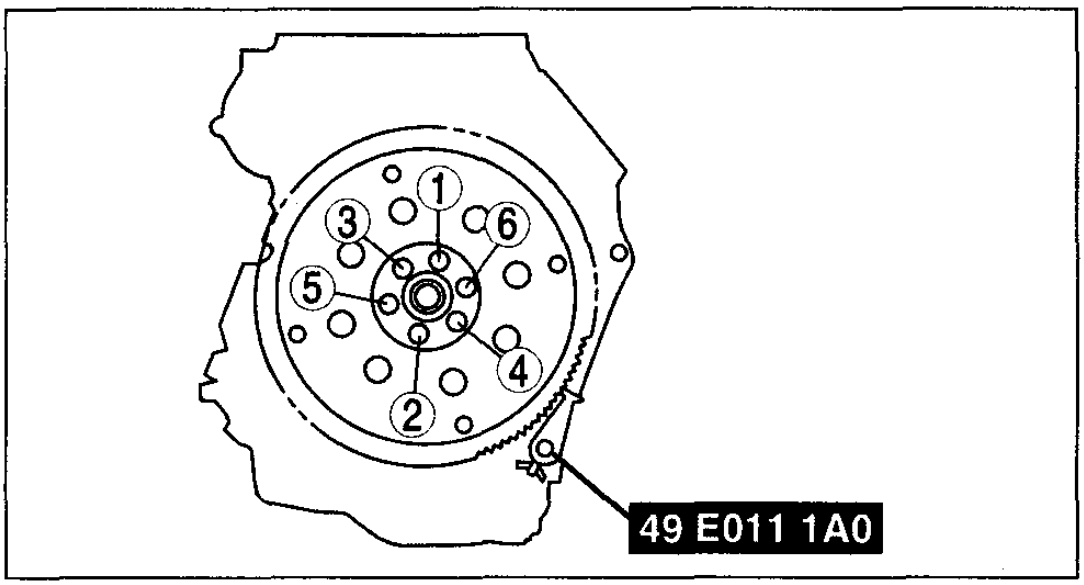
[FS5A-El] Automatic Transaxle (Article 1368752)

AUTOMATIC TRANSAXLE [FS5A-EL]

Item	Specification
Average time lag	N position→D range: 0.4—0.7 sec. N position→R position: 0.4—0.7 sec.
ATF type	ATF M-V
Capacity (approx. quantity)	8.14 L {8.6 US qt, 7.2 Imp qt}
Input/turbine speed sensor resistance	250—600 ohms (ATF temperature: –40—160 °C {–40—320 °F})
Intermediate sensor voltage	4.5—5.5 V
Vehicle speed sensor (VSS) voltage	4.5—5.5 V



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Technical Data FS5A-EL (Article 1368698)

Item			Specification
Engine type			**L3**
Automatic transaxle type			FS5A-EL
Gear ratio		1GR	3.620
		2GR	1.925
		3GR	1.285
		4GR	0.939
		5GR	0.692
		Reverse	3.405
Final gear ratio			3.863
ATF	Type		ATF M-V
	Capacity (Approx. quantity)	(L {US qt, Imp qt})	8.14 {8.60, 7.16}
Torque converter stall torque ratio			1.84
Hydraulic system (Number of drive/driven gear plates)	Forward clutch		4/4
	3-4 clutch		3/3
	Reverse clutch		2/2
	Direct clutch		2/3
	Low and reverse brake		5/5
	Reduction brake		3/5
Band servo	Servo diameter (Piston outer dia.)	(mm {in})	64.6 {2.54}
Front planetary gear (Number of teeth)	Front sun gear		49
	Front pinion gear		20
	Front internal gear		89
Rear planetary gear (Number of teeth)	Rear sun gear		37
	Rear pinion gear		30
	Rear internal gear		98
Primary gear (number of teeth)			86
Secondary gear (number of teeth)			82
Secondary planetary gear (Number of teeth)	Secondary sun gear		31
	Secondary pinion gear		29
	Secondary internal gear		89
Output gear (number of teeth)			22
Ring gear (number of teeth)			85

Item	Specification
Clearance between the end of the oil pump housing and the outer rotor and inner rotor	Standard: 0.04—0.05 mm {0.0016—0.0019 in} Maximum: 0.05 mm {0.002 in}
Clearance between the outer rotor and the inner rotor	Standard: 0.02—0.11 mm {0.0008—0.0043 in} Maximum: 0.12 mm {0.0047 in}
Forward clutch drive plate thickness	Standard: 1.60 mm {0.063 in} Minimum: 1.45 mm {0.057 in}
Forward clutch springs and retainer component free length	Standard: 17.2 mm {0.677 in} Minimum: 15.2 mm {0.598 in}
Forward clutch clearance	Standard: 1.50—1.80 mm {0.059—0.070 in}
Reverse clutch drive plate thickness	Standard: 1.60 mm {0.063 in} Minimum: 1.45 mm {0.057 in}
3-4 clutch drive plate thickness	Standard: 2.55 mm {0.100 in} Minimum: 2.40 mm {0.094 in}
3-4 clutch driven plate thickness	Standard: 2.55 mm {0.100 in} Minimum: 2.40 mm {0.094 in}
3-4 clutch springs and retainer component free length	Standard: 17.2 mm {0.677 in} Minimum: 15.2 mm {0.598 in}
Rear sun gear bushing inner diameter	Standard: 29.900—29.921 mm {1.17717—1.17799 in} Maximum: 29.941 mm {1.17878 in}
Reverse clutch clearance	Standard: 1.00—1.30 mm {0.039—0.051 in}
3-4 clutch clearance	Standard: 1.10—1.40 mm {0.043—0.055 in}
Low and reverse brake drive plate thickness	Standard: 1.60 mm {0.063 in} Minimum: 1.45 mm {0.057 in}
Low and reverse brake clearance	2.20—2.50 mm {0.087—0.098 in}
Direct clutch drive plate thickness	Standard: 1.80 mm {0.071 in} Minimum: 1.65 mm {0.065 in}
Direct clutch springs and retainer component free length	Standard: 17.2 mm {0.677 in} Minimum: 15.2 mm {0.598 in}
Direct clutch clearance	Standard: 1.10—1.40 mm {0.043—0.055 in}
Reduction brake drive plate thickness	Standard: 1.80 mm {0.071 in} Minimum: 1.65 mm {0.065 in}
Reduction brake springs and retainer component free length	Standard: 18.2 mm {0.717 in} Minimum: 16.2 mm {0.638 in}
Reduction brake clearance	1.50—1.80 mm {0.059—0.070 in}
Differential backlash	Standard: 0.05—0.15 mm {0.002—0.005 in} Maximum: 0.5 mm {0.020 in}
Differential bearing Preload	Preload: 1.4—2.3 N·m {14—24 kgf·cm, 12—20 in·lbf} Reading on pull scale: 14—23 N {1.4—2.4 kgf, 3.1—5.3 lbf}
Front sun gear bushing inner diameter	Standard: 18.000—18.018 mm {0.70866—0.70936 in} Maximum: 18.038 mm {0.71016 in}
End cover bushing inner diameter	Standard: 23.600—23.621 mm {0.92913—0.92995 in} Maximum: 23.641 mm {0.93075 in}
Secondary sun gear bushing inner diameter	Standard: 26.000—26.021 mm {1.02362—1.02445 in} Maximum: 26.041 mm {1.02524 in}
Primary gear preload	0.50—0.90 N·m {5.10—9.17 kgf·cm, 4.42—7.96 in·lbf}
Between the end of the torque converter and the end of the converter housing	21.4 mm {0.84 in}
Oil Pump bushing inner diameter torque converter side	Standard: 40.015—40.040 mm {1.57539—1.57637 in} Maximum: 40.060 mm {1.57716 in}
Oil Pump bushing inner diameter forward clutch side	Standard: 19.000—19.021 mm {0.74803—0.74885 in} Maximum: 19.041 mm {0.74964 in}
3-4 clutch hub bushing inner diameter	Standard: 18.000—18.018 mm {0.70866—0.70936 in} Maximum: 18.038 mm {0.71016 in}
2-4 brake drum bushing inner diameter	Standard: 55.005—55.030 mm {2.16555—2.16653 in} Maximum: 55.050 mm {2.16732 in}

Accumulator spring (standard)

Spring	Outer diameter mm {in}	Free length mm {in}	No. of coils	Wire diameter mm {in}
Servo apply accumulator large spring	21.0 {0.827}	67.8 {2.669}	10.3	3.5 {0.138}
Servo apply accumulator small spring	13.0 {0.512}	67.8 {2.669}	17.1	2.2 {0.087}
Forward accumulator large spring	21.0 {0.827}	75.0 {2.953}	10.7	2.3 {0.091}
Forward accumulator small spring	15.6 {0.614}	49.0 {1.929}	7.7	2.4 {0.094}

Snap ring size for forward clutch clearance

Range mm {in}	Snap ring sizes mm {in}
2.810—3.010 {0.111—0.118}	1.2 {0.047}
3.010—3.210 {0.119—0.126}	1.4 {0.055}
3.210—3.410 {0.127—0.134}	1.6 {0.063}
3.410—3.610 {0.135—0.142}	1.8 {0.071}
3.610—3.810 {0.143—0.150}	2.0 {0.079}
3.810—4.010 {0.150—0.157}	2.2 {0.087}

Snap ring size for reverse clutch clearance

Range mm {in}	Snap ring sizes mm {in}
2.370—2.570 {0.094—0.101}	1.2 {0.047}
2.570—2.770 {0.102—0.109}	1.4 {0.055}
2.770—2.970 {0.110—0.116}	1.6 {0.063}
2.970—3.170 {0.117—0.124}	1.8 {0.071}
3.170—3.370 {0.125—0.132}	2.0 {0.079}
3.370—3.570 {0.133—0.140}	2.2 {0.087}

Snap ring size for 3-4 clutch clearance

Range mm {in}	Snap ring sizes mm {in}
2.400—2.600 {0.095—0.102}	1.2 {0.047}
2.600—2.800 {0.103—0.110}	1.4 {0.055}
2.800—3.000 {0.111—0.118}	1.6 {0.063}
3.000—3.200 {0.119—0.125}	1.8 {0.071}
3.200—3.400 {0.126—0.133}	2.0 {0.079}
3.400—3.600 {0.134—0.141}	2.2 {0.087}

Servo return spring (Standard)

Outer diameter mm {in}	Free length mm {in}	No. of coils	Wire diameter mm {in}
34.0 {1.340}	36.4 {1.430}	2.5	4.0 {0.160}

Snap ring size for low and reverse brake clearance

Range mm {in}	Snap ring sizes mm {in}
4.050—4.250 {0.159—0.167}	1.8 {0.071}
4.250—4.450 {0.167—0.175}	2.0 {0.079}
4.450—4.650 {0.175—0.183}	2.2 {0.087}
4.650—4.850 {0.183—0.190}	2.4 {0.094}
4.850—5.050 {0.190—0.199}	2.6 {0.102}
5.050—5.250 {0.199—0.207}	2.8 {0.110}
5.250—5.450 {0.207—0.215}	3.0 {0.118}

Snap ring size for direct clutch clearance

Range mm {in}	Snap ring sizes mm {in}
2.424—2.624 {0.096—0.103}	1.2 {0.047}
2.624—2.824 {0.104—0.111}	1.4 {0.055}
2.824—3.024 {0.112—0.119}	1.6 {0.063}
3.024—3.224 {0.120—0.126}	1.8 {0.071}
3.224—3.424 {0.127—0.134}	2.0 {0.079}
3.424—3.624 {0.135—0.142}	2.2 {0.087}

Snap ring size for reduction brake clearance

Range mm {in}	Snap ring sizes mm {in}
2.920—3.120 {0.115—0.122}	1.2 {0.047}
3.120—3.320 {0.123—0.130}	1.4 {0.055}
3.320—3.520 {0.131—0.138}	1.6 {0.063}
3.520—3.720 {0.139—0.146}	1.8 {0.071}
3.720—3.920 {0.147—0.154}	2.0 {0.079}
3.920—4.120 {0.155—0.162}	2.2 {0.087}

Primary control valve body spring (standard)

Item	Outer diameter mm {in}	Free length mm {in}	No. of coils	Wire diameter mm {in}
Low and reverse shift valve spring	8.7 {0.343}	31.3 {1.232}	9.0	0.8 {0.031}
Solenoid reducing valve spring	8.7 {0.343}	44.2 {1.740}	16.0	1.1 {0.043}
Pressure regulator valve spring	7.9 {0.311}	36.3 {1.429}	13.2	0.9 {0.035}
Solenoid shift valve spring	8.3 {0.327}	35.1 {1.382}	12.0	0.6 {0.024}
Converter relief valve spring	9.0 {0.354}	42.5 {1.673}	14.2	1.3 {0.051}
Torque converter clutch control valve spring	8.7 {0.343}	31.3 {1.232}	9.0	0.8 {0.031}
Bypass valve spring	8.7 {0.343}	31.3 {1.232}	9.0	0.8 {0.031}
3–4 shift valve spring	8.7 {0.343}	31.3 {1.232}	9.0	0.8 {0.031}
Pressure modifier accumulator spring	11.0 {0.433}	23.0 {0.906}	6.6	1.5 {0.059}

Secondary control valve body spring (standard)

Item	Outer diameter mm {in}	Free length mm {in}	No. of coils	Wire diameter mm {in}
4–5 shift valve spring	8.7 {0.343}	27.0 {1.063}	10.7	0.8 {0.031}
4/5 accumulator large spring	21.2 {0.835}	72.2 {2.843}	14.0	2.6 {0.102}
4/5 accumulator small spring	15.2 {0.598}	53.7 {2.114}	11.9	3.2 {0.126}

Differential preload adjust shims (mm {in})

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}	1.00 {0.039}	1.05 {0.041}
1.10 {0.043}	1.15 {0.045}	1.20 {0.047}
1.25 {0.049}	1.30 {0.051}	1.35 {0.053}
1.40 {0.055}	1.45 {0.057}	1.50 {0.059}
1.55 {0.061}	–	–

Band strut length for 2-4 brake band servo stroke (mm {in})

36.0 {1.417}	36.5 {1.437}	37.0 {1.457}
37.25 {1.467}	37.5 {1.476}	37.75 {1.486}
38.0 {1.496}	38.25 {1.506}	38.5 {1.516}
39.0 {1.535}	–	–

Adjust shim size for output gear component total end play

total end play {in}	Adjust shims sizes mm {in}
1.431—1.481 {0.057—0.058}	1.20 {0.047}
1.381—1.431 {0.055—0.056}	1.15 {0.045}
1.331—1.381 {0.053—0.054}	1.10 {0.043}
1.281—1.331 {0.051—0.052}	1.05 {0.041}
1.231—1.281 {0.049—0.050}	1.00 {0.039}
1.181—1.231 {0.047—0.048}	0.95 {0.037}
1.131—1.181 {0.045—0.046}	0.90 {0.035}
1.081—1.131 {0.043—0.044}	0.85 {0.033}
1.031—1.081 {0.041—0.042}	0.80 {0.031}
0.981—1.031 {0.039—0.040}	0.75 {0.029}
0.931—0.981 {0.037—0.038}	0.70 {0.028}
0.881—0.931 {0.035—0.036}	0.65 {0.026}
0.831—0.881 {0.033—0.034}	0.60 {0.024}
0.781—0.831 {0.031—0.032}	0.55 {0.022}
0.731—0.781 {0.029—0.030}	0.50 {0.020}

Line Pressure Specification (Article 1368939)

Line pressure specification

Position/range	Line pressure (kPa {kgf/cm^2, psi})	
	Idle	Stall
D, M (1GR, 2GR)	330—470 {3.4—4.8, 48—68}	1,200—1,320 {12.2—13.5, 174—191}
R	490—710 {5.0—7.2, 71—102}	1,640—1,860 {16.8—18.9, 238—269}

All Technical Service Bulletins (itype_100)

Tsbs
- A/T - Speed Sensor Replacement (MTIP-08-12-2, 2008/12/01)
- 05-001/18 - CORRECT APPLICATION FOR ATF M-V (TYPE M5), MERCON®V, MERCON®LV, AND JWS3309 (T-IV) AUTOMATIC TRANSMISSION FLUIDS (05-001/18, 2018/04/02)
- A/T - Cooler Line Flushing Procedures (0500811, 2011/09/21)
- A/T - Range Switch Removal/Installation Caution (0501107, 2007/12/07)
- A/T - Intermittent Engine No Start In PARK (0500212, 2012/02/29)
- A/T - Diagnostic Procedures (0500411, 2011/06/21)
- Automatic Transmission/Transaxle Cooler and Lines Flushing Procedure (05-002/21, 2021/12/08)
- A/T - 3-4 Shift Shock Under Load (0501010, 2010/08/06)

Customer Interest Bulletins (itype_109)

Tsbs
- A/T - Intermittent Engine No Start In PARK (0500212, 2012/02/29)
- A/T - 3-4 Shift Shock Under Load (0501010, 2010/08/06)

Repair Tips (itype_110)

Tsbs
- A/T - Speed Sensor Replacement (MTIP-08-12-2, 2008/12/01)
- A/T - Cooler Line Flushing Procedures (0500811, 2011/09/21)
- A/T - Range Switch Removal/Installation Caution (0501107, 2007/12/07)
- A/T - Diagnostic Procedures (0500411, 2011/06/21)

[FN4A-EI] Automatic Transmission/Transaxle (Article 1378241)

Non Standards
- Automatic Transaxle Fluid (ATF) Inspection (1359650)
- Input/Turbine Speed Sensor Inspection (1378242)
- Line Pressure Test (1378243)

- Mechanical System Test (1359647)
- PCM Inspection (1378244)
- Solenoid Valve Inspection (1378245)
- Stall Test (1378246)
- Time Lag Test (1378247)
- Transaxle Fluid Temperature (TFT) Sensor Inspection (1378248)

[FS5A-EL] Automatic Transmission/Transaxle (Article 1378249)

Non Standards
- Mechanical System Test (1359644)
- Line Pressure Test (1378250)
- Stall Test (1378251)
- Time Lag Test (1378252)
- Automatic Transaxle Fluid (ATF) Inspection (1375424)

[FS5A-El] Automatic Transmission/Transaxle (Article 1378253)

Non Standards
- Transaxle Fluid Temperature (TFT) Sensor Inspection (1378254)
- Input/Turbine Speed Sensor Inspection (1378255)
- Intermediate Sensor Inspection (1378256)
- TCM Inspection (1377101)
- Solenoid Valve Inspection (Secondary Control Valve Body) (1378257)
- Solenoid Valve Inspection (Primary Control Valve Body) (1378258)

[FN4A-El] Automatic Transmission/Transaxle (Article 1377452)

Non Standards
- Foreword (1377453)
- After Repair Procedure (1377455)
- Basic Inspection (1377456)
- Road Test (1375423)

[FS5A-El] Automatic Transmission/Transaxle (Article 1377095)

Non Standards
- Foreword (1377096)
- After Repair Procedure (1376613)
- Basic Inspection (1377098)
- Road Test (1359645)

[FS5A-El] Automatic Transmission/Transaxle (Article 1376609)

Non Standards
- Reading Diagnostic Trouble Codes (1376610)

[FN4A-El] Automatic Transmission/Transaxle (Article 1378876)

Non Standards
- PID/Data Monitor Inspection (1378877)

[FS5A-El] Automatic Transmission/Transaxle (Article 1378804)

Non Standards
- PID/Data Monitor Inspection [FS5A-El] (1378879)

[FN4A-El] Automatic Transmission/Transaxle (Article 1382625)

Non Standards
- Symptom Troubleshooting Item Table [FN4A-El] (1377454)
- Quick Diagnosis Chart (1382656)
- No.1 Vehicle Does Not Move In D Range, or In R Position (1382626)
- No.2 Vehicle Moves In N Position (1382627)
- No.3 Vehicle Moves In P Position, or Parking Gear Does Not Disengage When P Is Disengaged (1382628)
- No.4 Excessive Creep (1382629)

- No.5 No Creep at All (1382630)
- No.6 Low Maximum Speed and Poor Acceleration (1382631)
- No.7 No Shifting (1382632)
- No.8 Does Not Shift to 4GR (1382633)
- No.9 Abnormal Shifting (1382634)
- No.10 Frequent Shifting (1382635)
- No.11 Shift Point Is High or Low (1382636)
- No.12 Torque Converter Clutch (TCC) Non-Operation (1382637)
- No.13 No Kickdown (1382638)
- No.14 Engine Flares Up or Slips When Upshifting or Downshifting (1382639)
- No.15 Engine Flares Up or Slips When Accelerating Vehicle (1382640)
- No.16 Judder Upon Torque Converter Clutch (TCC) Operation (1382641)
- No.17 Excessive Shift Shock From N to D or N to R Position/Range (1382647)
- No.18 Excessive Shift Shock Is Felt When Upshifting and Downshifting (1382648)
- No.19 Excessive Shift Shock on Torque Converter Clutch (TCC) (1382649)
- No.20 Noise Occurs at Idle When Vehicle Is Stopped In All Positions/Ranges (1382650)
- No.21 Noise Occurs at Idle When Vehicle Is Stopped In D Range, or In R Position (1382642)
- No.22 No Engine Braking In 1GR Position of M Range (1382643)
- No.23 Transaxle Overheats (1382644)
- No.24 Engine Stalls When Shifted to D Range, or In R Position (1382645)
- No.25 Engine Stalls When Driving at Slow Speeds or Stopping (1382646)
- No.26 Starter Does Not Work (1382651)
- No.27 Gear Position Indicator Light Does Not Illuminate In D or M Range (1382652)
- No.28 Gear Position Indicator Light Illuminate In P, R and N Position (1382653)
- No.29 Does Not Upshift In M Range (1382654)
- No.30 Does Not Downshift In M Range (1382655)

[FS5A-EI] Automatic Transmission/Transaxle (Article 1382164)

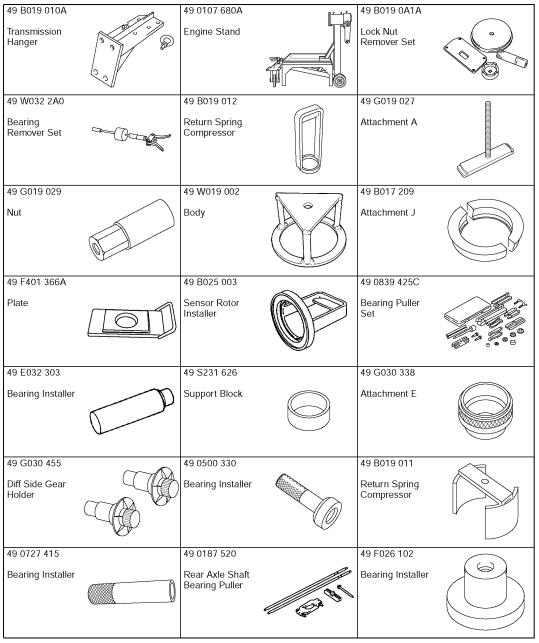
Non Standards
- Symptom Troubleshooting Item Table (1377097)
- Quick Diagnosis Chart (1382196)
- No.1 Vehicle Does Not Move In D, M Ranges, or In R Position (1382165)
- No.2 Vehicle Moves In N Position (1382166)
- No.3 Vehicle Moves In P Position, or Parking Gear Does Not Disengage When P Is Disengaged (1382167)
- No.4 Excessive Creep (1382168)
- No.5 No Creep at All (1382169)
- No.6 Low Maximum Speed and Poor Acceleration (1382170)
- No.7 No Shifting (1382171)
- No.8 Does Not Shift to 5GR (1382172)
- No.9 Abnormal Shifting (1382173)
- No.10 Frequent Shifting (1382174)
- No.11 Shift Point Is High or Low (1382175)
- No.12 Torque Converter Clutch (TCC) Non-Operation (1382176)
- No.13 No Kickdown (1382177)
- No.14 Engine Flares Up or Slips When Upshifting or Downshifting (1382178)
- No.15 Engine Flares Up or Slips When Accelerating Vehicle (1382179)
- No.16 Judder Upon Torque Converter Clutch (TCC) Operation (1382180)
- No.17 Excessive Shift Shock From N to D or N to R Position/Range (1382181)
- No.18 Excessive Shift Shock Is Felt When Upshifting and Downshifting (1382182)
- No.19 Excessive Shift Shock on Torque Converter Clutch (TCC) (1382183)
- No.20 Noise Occurs at Idle When Vehicle Is Stopped In All Positions/Ranges (1382184)
- No.21 Noise Occurs at Idle When Vehicle Is Stopped In D, M Ranges, or In R Position (1382185)
- No.22 No Engine Braking In 1GR Position of M Range (1382186)
- No. 23 Transaxle Overheats (1382658)
- No.24 Engine Stalls When Shifted to D, M Ranges, or In R Position (1382188)
- No.25 Engine Stalls When Driving at Slow Speeds or Stopping (1382189)
- No.26 Starter Does Not Work (1382190)
- No.27 Gear Position Indicator Light Does Not Illuminate In D or M Range (1382659)
- No.28 Gear Position Indicator Light Illuminate In P, R and N Position (1382660)
- No.29 Does Not Upshift In M Range (1382193)

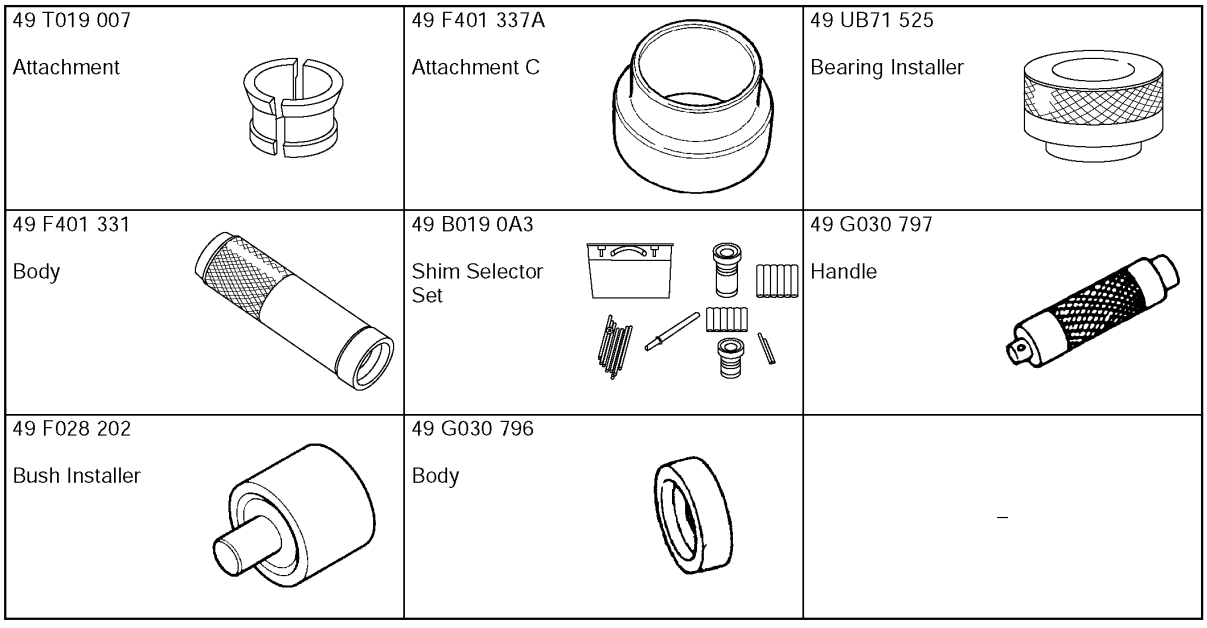
- No.30 Does Not Downshift In M Range (1382194)

Service Tools (Article 1375626)

Non Standards
- FS5A-El (1375671)
- FN4A-El (1375628)

Transmission/Transaxle SST FS5A-EL (Article 1375660)





Hard Shifting (itype_140)

Tsbs
- A/T - 3-4 Shift Shock Under Load (0501010, 2010/08/06)

Starting problems (itype_171)

Tsbs
- A/T - Intermittent Engine No Start In PARK (0500212, 2012/02/29)

Fluids, Chemicals and Additives (itype_112)

Tsbs

- 05-001/18 - CORRECT APPLICATION FOR ATF M-V (TYPE M5), MERCON®V, MERCON®LV, AND JWS3309 (T-IV) AUTOMATIC TRANSMISSION FLUIDS (05-001/18, 2018/04/02)

New / Updated Parts (itype_117)

Tsbs

- A/T - Intermittent Engine No Start In PARK (0500212, 2012/02/29)

OEM Policies and Procedures (itype_120)

Tsbs

- Automatic Transmission/Transaxle Cooler and Lines Flushing Procedure (05-002/21, 2021/12/08)