

MANUAL TRANSMISSION

SECTION MT

MODIFICATION NOTICE:

- The VG30E engine with FS5R30A has been added on 2/4WD models for Australia.
- For TD27 engine models with FS5W71C, the synchronizer of baulk ring has been changed from “double type” to “single type”.
- Information on FS5W71C and FS5R30A has been changed.

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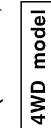
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The lead must be loosened in section C while pulling the lead in direction B.

Plug (Z24S, KA24DE & TD27 engines)

2WD model



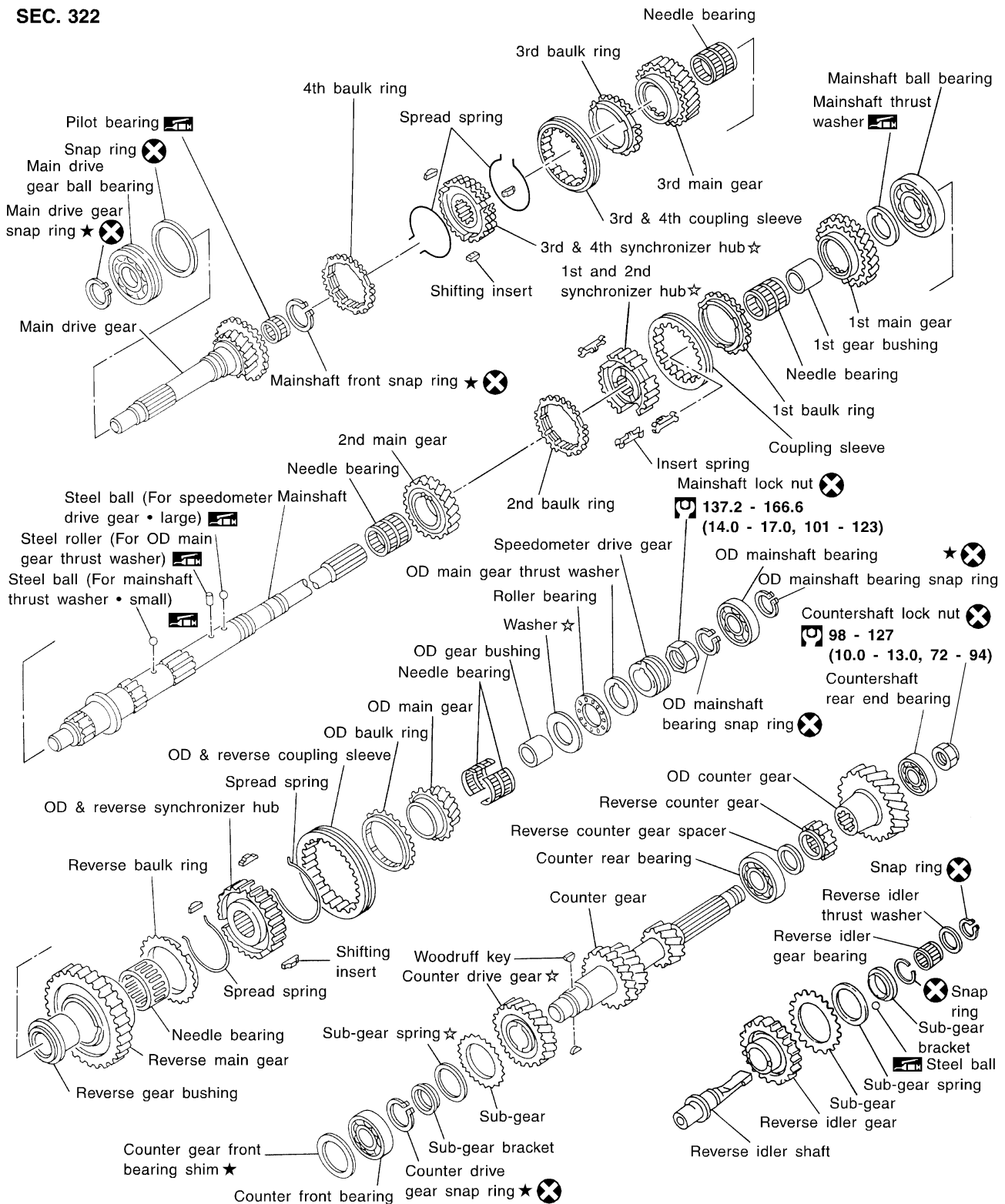
-  : Apply recommended sealant, Nissan genuine part: KP610-00250, Three Bond 1215 or equivalent.
-  : Apply genuine Three Bond TB1324, Loctite 271 or equivalent (locking sealant).

-  : N•m (kg-m, in-lb)
-  : N•m (kg-m, ft-lb)
-  : Apply recommended
-  : Apply genuine Th...

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Gear Components — 2WD Model with TD27 Engine

SEC. 322



Apply gear oil to gears, shafts, synchronizers and bearings when assembling.

★ : Select with proper thickness.

☆ : Pay attention to its direction.

: N·m (kg-m, ft-lb)

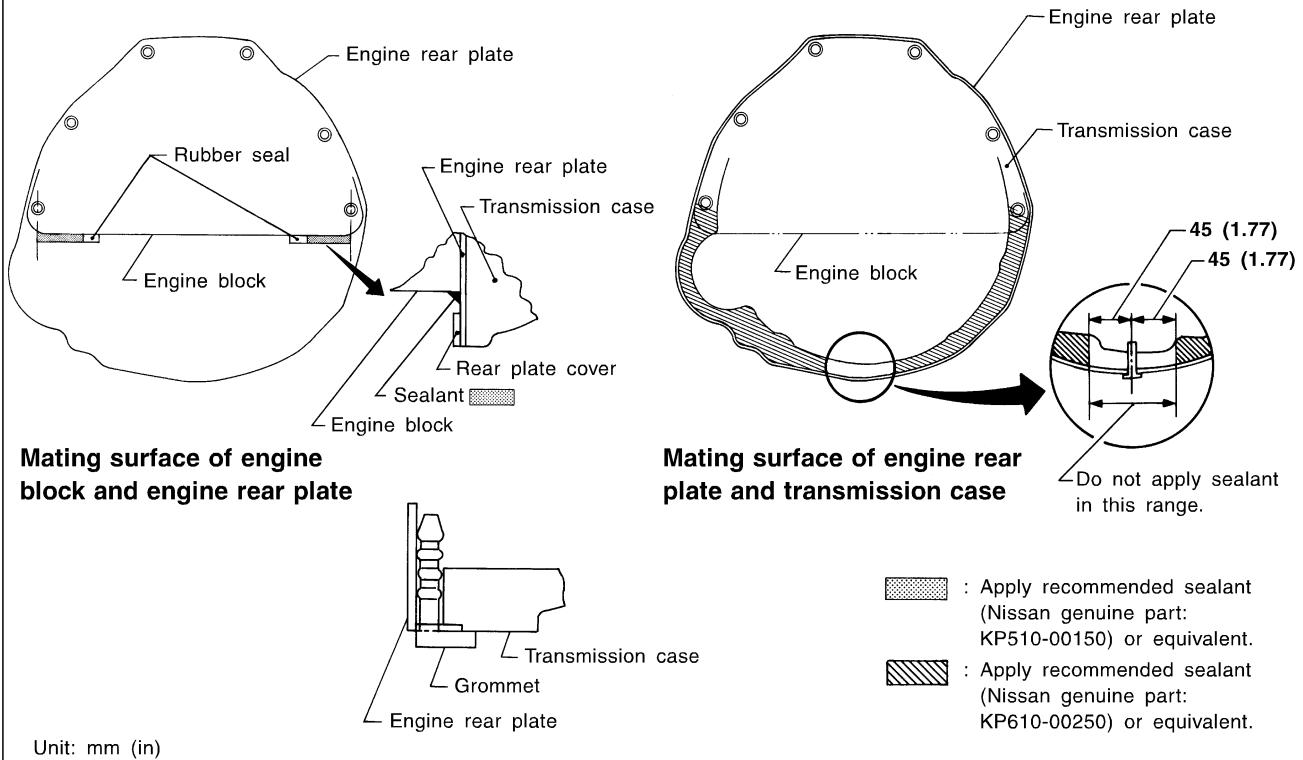
: Should be lubricated with grease.

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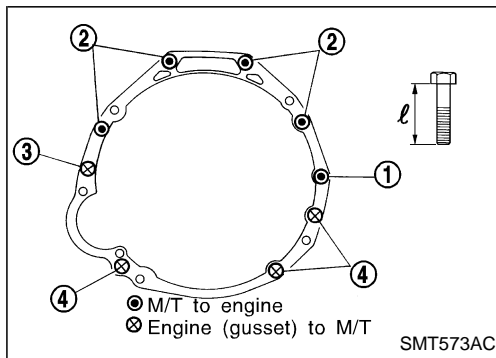
Installation

- Apply sealant as below:

4WD models only (VG30E engine with FS5R30A)



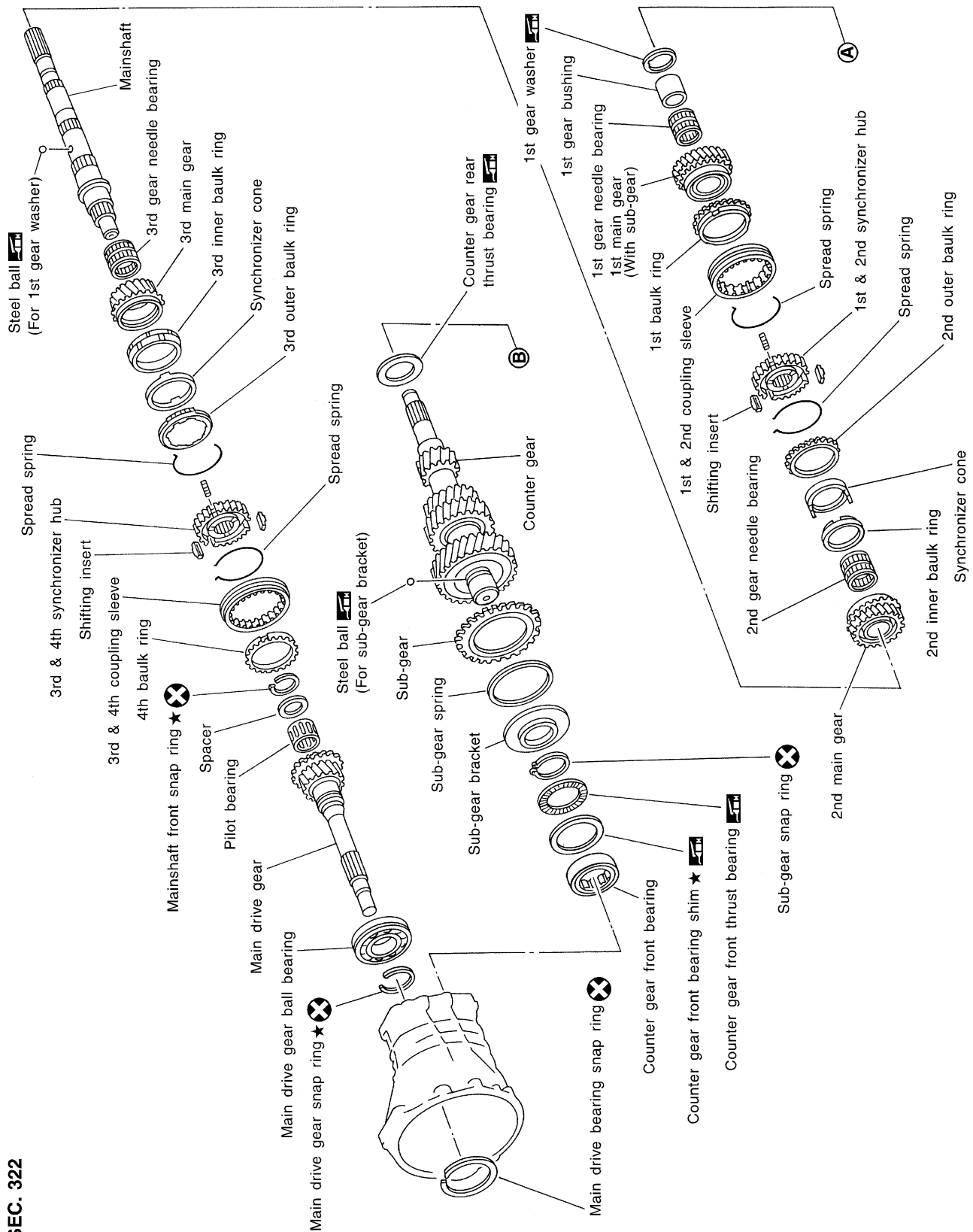
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- Tighten bolts securing transmission.
VG30E engine model

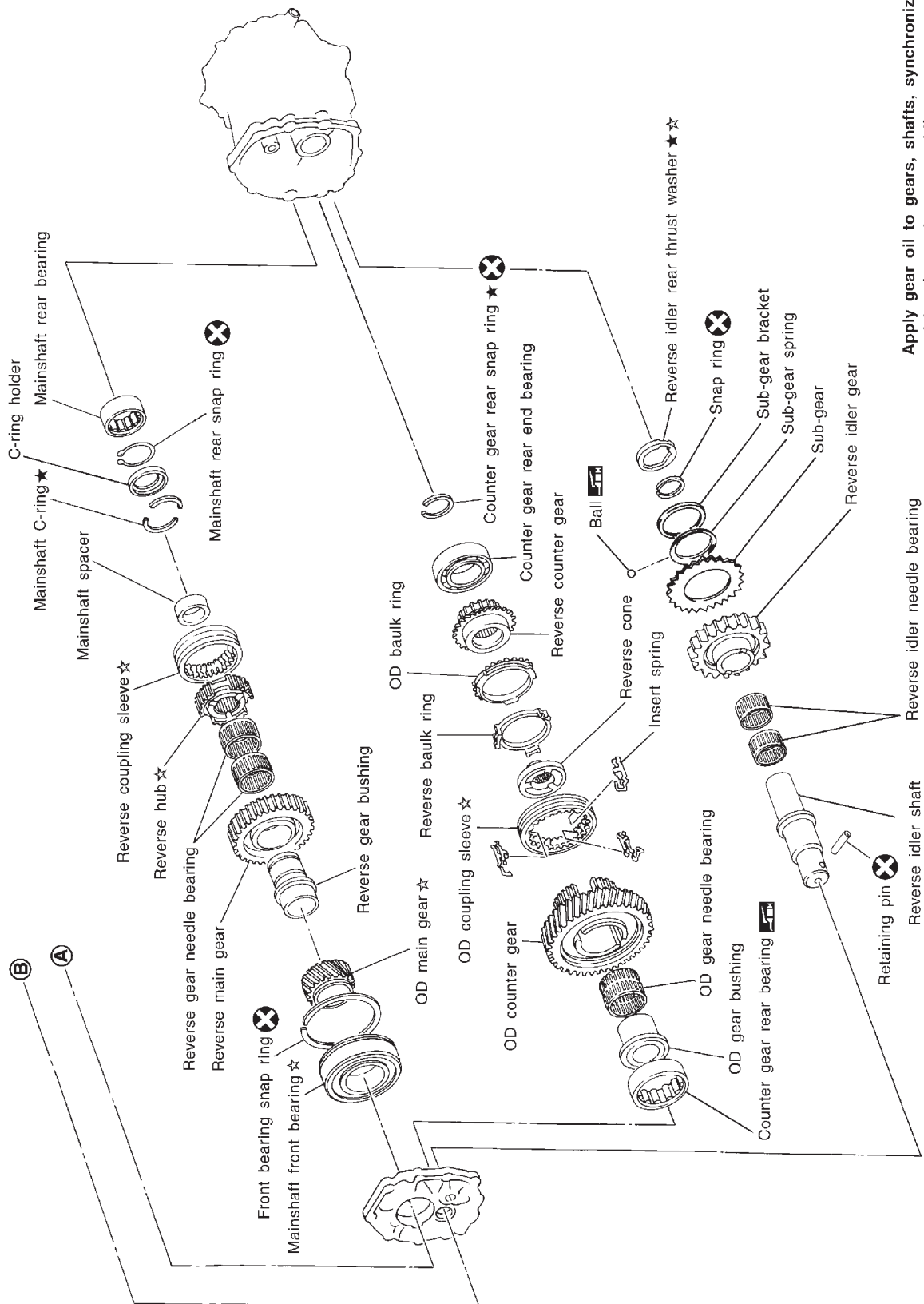
Bolt No.	Tightening torque N·m (kg-m, ft-lb)	ℓ mm (in)
①	39 - 49 (4.0 - 5.0, 29 - 36)	65 (2.56)
②	29 - 39 (2.9 - 4.0, 21 - 28)	58 (2.28)
③	39 - 49 (3.9 - 5.0, 29 - 36)	58 (2.28)
④	30 - 39 (3.0 - 4.0, 22 - 28)	25 (0.98)
Gusset to engine	29 - 39 (3.0 - 4.0, 22 - 29)	20 (0.79)

Gear Components — VG30E Engine Model



SEC. 322

Gear Components — 4WD Model with QD32 Engine



Apply gear oil to gears, shafts, synchronizers and bearings when assembling.

★ : Select with proper thickness.

☆ : Pay attention to its direction.

General Specifications

Applied model			2WD				4WD		
			KA24DE	Z24S	TD27	VG30E	KA24DE	QD32	VG30E
Transmission			FS5W71C			FS5R30A	FS5W71C	FS5R30A	
Number of speed			5						
Shift pattern			<div><div>135</div><div>24R</div><div>N</div></div>						
Synchromesh type			Warner						
Gear ratio									
1st			3.592	3.985		3.580	3.592	3.580	4.061
2nd			2.246	2.246		2.077	2.246	2.077	2.357
3rd			1.415	1.415		1.360	1.415	1.360	1.490
4th			1.000	1.000		1.000	1.000	1.000	1.000
OD			0.821	0.821		0.811	0.821	0.811	0.862
Reverse			3.657	3.657		3.636	3.657	3.636	4.125
Number of teeth									
Mainshaft									
Drive			21	21		22	21	22	20
1st			33	34		32	33	32	32
2nd			28	28		30	28	30	30
3rd			26	26		29	26	29	28
OD			21	21		24	21	24	23
Reverse			36	36		30	36	30	30
Countershaft									
Drive			32	32		32	32	32	33
1st			14	13		13	14	13	13
2nd			19	19		21	19	21	21
3rd			28	28		31	28	31	31
OD			39	39		43	39	43	44
Reverse			15	15		12	15	12	12
Reverse idler gear			21			22	21	22	
Oil capacity ℓ (Imp pt)			2.0 (3-1/2)			2.8 (4-7/8)	4.9 (8-5/8)	5.1 (9)	
Remarks	Sub-gear	Counter drive gear	Installed						
		Reverse idler gear	Installed	Not installed		Installed			
	Double baulk ring type synchronizer		2nd and 3rd gears		Not installed	2nd and 3rd gears			
	Reverse synchronizer		Installed			Not installed	Installed	Not installed	

Inspection and Adjustment

CLEARANCE BETWEEN BAULK RING AND GEAR

KA24DE & Z24S engine

Unit: mm (in)

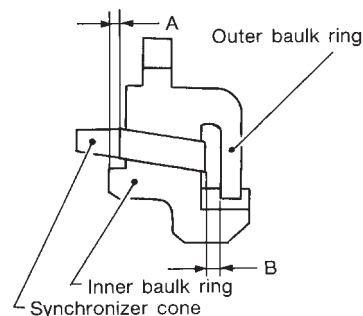
Standard	
1st	1.20 - 1.60 (0.0472 - 0.0630)
Main drive	1.20 - 1.60 (0.0472 - 0.0630)
OD	1.20 - 1.60 (0.0472 - 0.0630)
Reverse	1.10 - 1.55 (0.0433 - 0.0610)
Wear limit	
1st	0.80 (0.0315)
Main drive	0.80 (0.0315)
OD	0.80 (0.0315)
Reverse	0.70 (0.0276)

TD27 engine

Unit: mm (in)

Standard	
1st & 2nd	1.20 - 1.60 (0.0472 - 0.0630)
3rd & main drive	1.20 - 1.60 (0.0472 - 0.0630)
Overdrive	1.20 - 1.60 (0.0472 - 0.0630)
Reverse	1.10 - 1.55 (0.0433 - 0.0610)
Wear limit	
1st & 2nd	0.80 (0.0315)
3rd & main drive	0.80 (0.0315)
Overdrive	0.80 (0.0315)
Reverse	0.70 (0.0276)

2nd and 3rd baulk ring (KA24DE & Z24S engines)



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Unit: mm (in)

Dimension	Standard	Wear limit
A	0.7 - 0.9 (0.028 - 0.035)	0.2 (0.008)
B	0.6 - 1.1 (0.024 - 0.043)	

Inspection and Adjustment

GEAR END PLAY

Gear	End play mm (in)
1st main gear	0.23 - 0.33 (0.0091 - 0.0130)
2nd main gear	0.23 - 0.33 (0.0091 - 0.0130)
3rd main gear	0.06 - 0.16 (0.0024 - 0.0063)
OD counter gear	0.23 - 0.33 (0.0091 - 0.0130)
Reverse main gear	0.33 - 0.43 (0.0130 - 0.0169)
Counter gear	0.10 - 0.25 (0.0039 - 0.0098)
Reverse idler gear	0.30 - 0.53 (0.0118 - 0.0209)