

REAR AXLE

CONTENTS

120002222

GENERAL INFORMATION	2	AXLE ASSEMBLY	13
SERVICE SPECIFICATIONS	4	AXLE SHAFT	
LUBRICANTS	6	<VEHICLES WITH DRUM BRAKE>	17
SEALANTS	6	AXLE SHAFT	
SPECIAL TOOLS	7	<VEHICLES WITH DISC BRAKE>	25
SERVICE ADJUSTMENT PROCEDURES	10	DIFFERENTIAL CARRIER	31
Rear Axle Total Backlash Check	10	LIMITED SLIP DIFFERENTIAL CASE	
Axle Shaft Axial Play Check	10	ASSEMBLY <2WD 4G63>	50
Axle Shaft Axial Play Adjustment		LIMITED SLIP DIFFERENTIAL CASE	
<2WD (without ABS)>	10	ASSEMBLY <EXCEPT 2WD VEHICLES	
Gear Oil Level Check	11	WITH 4G63 ENGINE>	55
Limited Slip Differential Preload			
Measurement	12		
Axle Housing Oil Seal Replacement	12		

GENERAL INFORMATION

- The rear axle is a banjo-type semi-floating type. The axle shaft bearings are: Single-taper bearings for 2WD and 4WD (Panel van and window van). Double-taper bearings for vehicles with ABS and 4WD (Wagon) vehicles. ABS rotor is press-fitted to the axle shaft retainer ring.
- Differential gear has 5 different types. A torque-responsive mechanical-type limited slip differential has a high performance against driving on unstable surfaces such as muddy roads.

REAR AXLE

Item		2WD vehicles with 4G63 engine and standard wheel-base	2WD vehicles (other than those with 4G63 engine and standard wheel-base)	4WD – Panel van and window van	4WD – Wagon
Axle housing type		Banjo type	Banjo type	Banjo type	Banjo type
Axle shaft	Support method	Semi-floating type	Semi-floating type	Semi-floating type	Semi-floating type
	Axle diameter (bearing×centre×total length) mm	38.1 × 33.0 × 747.2 (44.0×33.0×744.5)	40.0 × 34.5 × 744.5	40.0 × 34.5 × 741.5 (44.0×34.5×744.5)	40.0 × 34.5 × 744.5
	Bearing type	Single-taper (double-taper)	Single-taper (double-taper)	Single-taper (double-taper)	Double-taper
	Bearing (outside dia.×inside dia.) mm	60.5 × 38.1 (80.0×40.0)	80.0 × 40.0	80.0 × 40.0	80.0 × 40.0

NOTE

() indicates vehicles with ABS.

DIFFERENTIAL

Item		2WD	2WD	2WD
		4G63 Standard wheelbase	4D56 Standard wheelbase	4G64
Drive gear type		Hypoid gear	Hypoid gear	Hypoid gear
Reduction ratio		4.875	4.222	4.636
Limited slip differential type		Torque-responsive mechanical type	Torque-responsive mechanical type	Torque-responsive mechanical type
Differential gear type (type × No. of teeth)	Side gear	Straight bevel gear × 2	Straight bevel gear × 2	Straight bevel gear × 2
	Pinion gear	Straight bevel gear × 2 (Straight bevel gear × 4)	Straight bevel gear × 2 (Straight bevel gear × 4)	Straight bevel gear × 2 (Straight bevel gear × 4)
Number of teeth	Drive gear	39	38	51
	Drive pinion	8	9	11
	Side gear	14	14	14
	Pinion gear	10	10	10
Bearing (O.D. × I.D.) mm	Side	73.4 × 41.3	80.0 × 45.2	80.0 × 45.2
	Front	64.3 × 30.2	68.3 × 30.2	68.3 × 30.2
	Rear	76.2 × 36.5	76.2 × 36.5	76.2 × 36.5

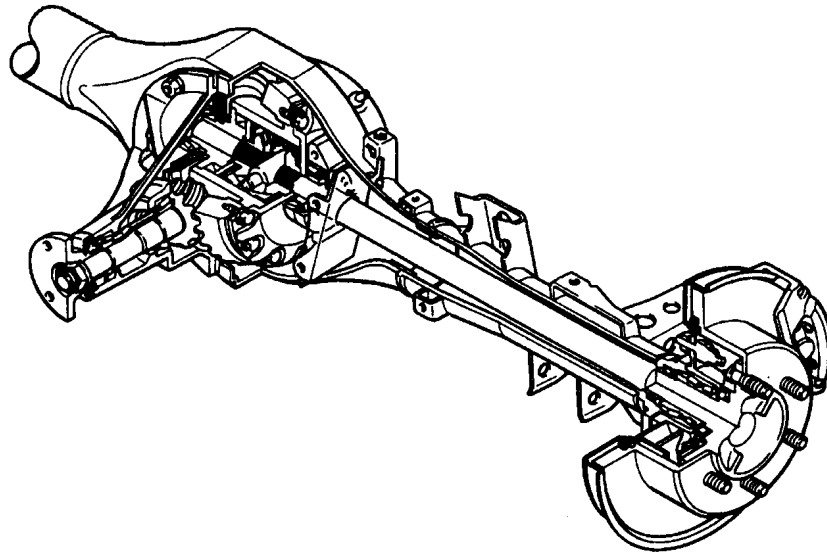
Item		2WD	2WD	4WD
		4D56 Long wheelbase	4G63 Long wheelbase	
Drive gear type		Hypoid gear	Hypoid gear	Hypoid gear
Reduction ratio		4.222	4.875	4.875
Limited slip differential type		Torque-responsive mechanical type	Torque-responsive mechanical type	Torque-responsive mechanical type
Differential gear type (type × No. of teeth)	Side gear	Straight bevel gear × 2	Straight bevel gear × 2	Straight bevel gear × 2
	Pinion gear	Straight bevel gear × 2 (Straight bevel gear × 4)	Straight bevel gear × 2 (Straight bevel gear × 4)	Straight bevel gear × 2 (Straight bevel gear × 4)
Number of teeth	Drive gear	38	39	39
	Drive pinion	9	8	8
	Side gear	19	14	14
	Pinion gear	10	10	10
Bearing (O.D. × I.D.) mm	Side	80.0 × 45.2	80.0 × 45.2	80.0 × 45.2
	Front	68.3 × 30.2	68.3 × 30.2	68.3 × 30.2
	Rear	79.4 × 36.5	76.2 × 36.5	76.2 × 36.5

NOTE

(): Vehicles with limited slip differential

CONSTRUCTION DIAGRAM

120000407



11W0052

SERVICE SPECIFICATIONS

120002224

Item		Standard value	Limit	
Axle shaft axial play mm	2WD (vehicles without ABS)	0.05–0.20	–	
	2WD (vehicles with ABS) and 4WD	0–0.25	–	
Rear axle total backlash mm		–	5	
Limited slip differential preload Nm	2WD 4G63	Using special tool	17 or more	
		Without using special tool	34 or more	
	Except 2WD 4G63	Using special tool	13 or more	
		Without using special tool	25 or more	
Axle shaft retainer press-fitting force N	2WD 4G63 standard wheelbase (without ABS)		Initial press-fitting force 39,000 or more	–
			Final press-fitting force 59,000	–
	Except 2WD 4G63 standard wheelbase (without ABS)		Initial press-fitting force 49,000 or more	–
			Final press-fitting force 78,000	–
	4WD or 2WD (with ABS)		Initial press-fitting force 49,000 or more	–
			Final press-fitting force 98,000–108,000	–

Item		Standard value	Limit	
Clearance between axle shaft retainer and snap ring mm		0–0.166	–	
Drive gear runout mm		–	0.05	
Drive gear backlash mm	4G63 Standard wheelbase	0.11–0.16	–	
	4G63 Long wheelbase 4D56 Standard wheelbase 4G64	0.08–0.13	–	
	4D56 Long wheelbase	0.13–0.18	–	
Differential gear backlash mm	2WD 4G63 Standard wheelbase (without ABS)	0.01–0.076	0.2	
	2WD 4G63 Standard wheelbase (with ABS) 4D56 Long wheelbase	0–0.076	0.2	
	2WD 4G63 Long wheelbase 4D56 Standard wheelbase 4G64 4WD	0.01–0.25	0.2	
Drive pinion turning torque Nm	Without oil seal	When replacing (with anti-rust agent)	0.6–0.9	–
		When replacing or reusing (with gear oil applied)	0.4–0.5	–
	With oil seal	When replacing (with anti-rust agent)	0.8–1.1	–
		When replacing or reusing (with gear oil applied)	0.6–0.7	–

Item		Standard value	Limit	
Limited slip differential starting torque Nm	2WD 4G63	When a new clutch plate is used	49–78	–
		When re-installing current clutch plate	34–78	–
	Except 2WD vehicles with 4G63 engine	When a new clutch plate is used	39–74	–
		When re-installing current clutch plate	25–74	–
Friction plate and friction disc warping (flatness) mm		–	0.08	
Friction plate and friction disc wear (difference in the thickness of the friction surface and the projections) mm		–	0.1	
Horizontal difference between friction plate and friction disc thickness mm		0–0.05	–	
Clearance between friction plate and friction disc mm	2WD 4G63	0.05–0.20	–	
	Except 2WD vehicles with 4G63 engine	0.06–0.20	–	
Difference between left and right dimensions from back thrust face of pressure ring to end of thrust washer mm	Except 2WD vehicles with 4G63 engine	0–0.05	–	
Clearance in side gear axial direction mm	Except 2WD vehicles with 4G63 engine	0.05–0.20	–	

LUBRICANTS

120002208

Item	Specified lubricants	Quantity		
Rear differential gear oil	<ul style="list-style-type: none"> Conventional differential: Hypoid gear oil API classification GL-5 or higher SAE viscosity No. 90, 80 W Limited slip differential: Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No. 8149630 EX CASTROL HYPOY LS (GL-5, SAE 90), SHELL-LSD (GL-5, SAE 80W-90) or equivalent 	2WD	4G63 Standard wheelbase	1.2 dm ³
			4D56 Standard wheelbase	1.6 dm ³
			4G63 Long wheelbase	
			4G64	
		4WD	4D56 Long wheelbase	2.6 dm ³
			4G64	1.8 dm ³
4D56 (Standard wheelbase)				

SEALANTS

120000410

Items	Specified sealants	Remarks
Bearing case	3M ATD Part No. 8663 or equivalent	Semi-drying sealant
Dust cover		
Axle housing (differential carrier mounting part)		
Drive gear and differential case mounting part	3M Stud Locking 4170 or equivalent	Anaerobic sealant