

AXLE SHAFTS - FRONT

1994 Mitsubishi 3000GT

1994 Drive Axles - FWD Axle Shafts

Stealth, 3000GT

DESCRIPTION & OPERATION

Power from transaxle is transferred to driving wheels by 2 axle shafts. Both axle shafts use Constant Velocity (CV) joints at inner and outer ends. CV joints are enclosed in CV boots, and connected by an intermediate shaft. Intermediate shaft is splined on both ends.

Retaining rings retain intermediate shaft in both inner and outer CV joints. A retaining ring retains inner CV joint stub in differential side gear. Outer CV joint stub is splined into wheel hub, and secured by a spindle nut. Left axle, on most FWD applications, has a dynamic damper to reduce vibration. See DYNAMIC DAMPER INSTALLATION SPECIFICATIONS table.

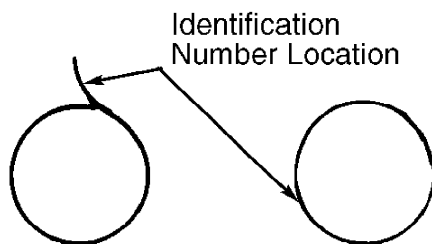
TROUBLE SHOOTING

NOTE: See TROUBLE SHOOTING - BASIC PROCEDURES article in the GENERAL TROUBLE SHOOTING section.

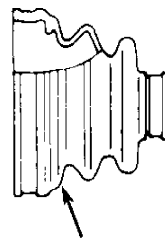
BAND & BOOT IDENTIFICATION

Band identification numbers are stamped on inside edge of band. See Fig. 1. Boot identification numbers are stamped on largest ridge of boot. See BAND & BOOT APPLICATION table.

NOTE: The following are possible types of Constant Velocity (CV) joints used on axle shaft: Birfield Joint (BJ), Double Offset Joint (DOJ), Rzeppa Joint (RJ) and Tripod Joint (TJ). Determine type of CV joint used prior to disassembly. See AXLE SHAFT SPECIFICATIONS table. Note type of boot and location prior to removal. See BAND & BOOT APPLICATION table. Install a NEW retaining ring each time axle shaft is removed from transaxle.



BAND IDENTIFICATION



BOOT IDENTIFICATION

91101904

Fig. 1: Locating Band & Boot Identification Numbers
Courtesy of Mitsubishi Motor Sales of America.

BAND & BOOT APPLICATION TABLE

Application	Large Band		Small Band		Boot
FWD					
SOHC					
BJ	(1)		(1)		(1)
TJ	20-131		20-72		(1)
DOHC					
BJ	(1)		(1)		(1)
TJ	20-131L		20-72		(1)
AWD					
BJ	(1)		(1)		(1)
TJ	20-131		20-72		(1)

(1) - Boots and bands are packaged as a kit. Kits are broken down by type of joint. No specifications or identification numbers given by manufacturer.

REMOVAL, DISASSEMBLY, REASSEMBLY & INSTALLATION

AXLE SHAFT

CAUTION: DO NOT place vehicle weight on hub assembly with axle shaft removed.

Removal

1) Note type and location of CV joint prior to removal. See AXLE SHAFT SPECIFICATIONS table. Remove cotter pin, and loosen axle shaft nut with brakes applied. Raise and support vehicle. Remove front wheels. Remove axle shaft nut and washer. Remove brake caliper assembly, and support with wire. Support control arm.

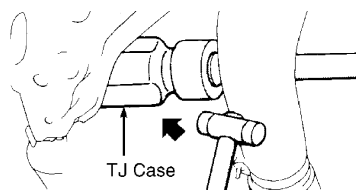
2) Remove speed sensor and/or height sensor (if equipped). Remove ball joint stud nut, and separate ball joint from control arm. Disconnect tie rod end from steering knuckle. Disconnect stabilizer bar and strut bar from control arm (if equipped).

CAUTION: DO NOT pull on axle shafts during removal, or damage to shaft assembly will result.

3) Attach puller to hub and press axle shaft off hub. Swing hub and steering knuckle assembly aside. On left axles without intermediate shaft, pry axle shafts from transaxle using pry bar. DO NOT damage oil seals.

4) On left axles with intermediate shaft, place screwdriver between center bearing and axle shaft. Pry axle shaft from center bearing. Remove center bearing bolts. Place pry bar between transaxle case and intermediate shaft. Pry intermediate shaft from transaxle.

5) On Stealth and 3000GT AWD models, remove center bearing bolts from left axle with intermediate shaft. Using soft-faced hammer, tap lightly on Tripod Joint (TJ) case, and remove axle shaft from transaxle. See Fig. 2.

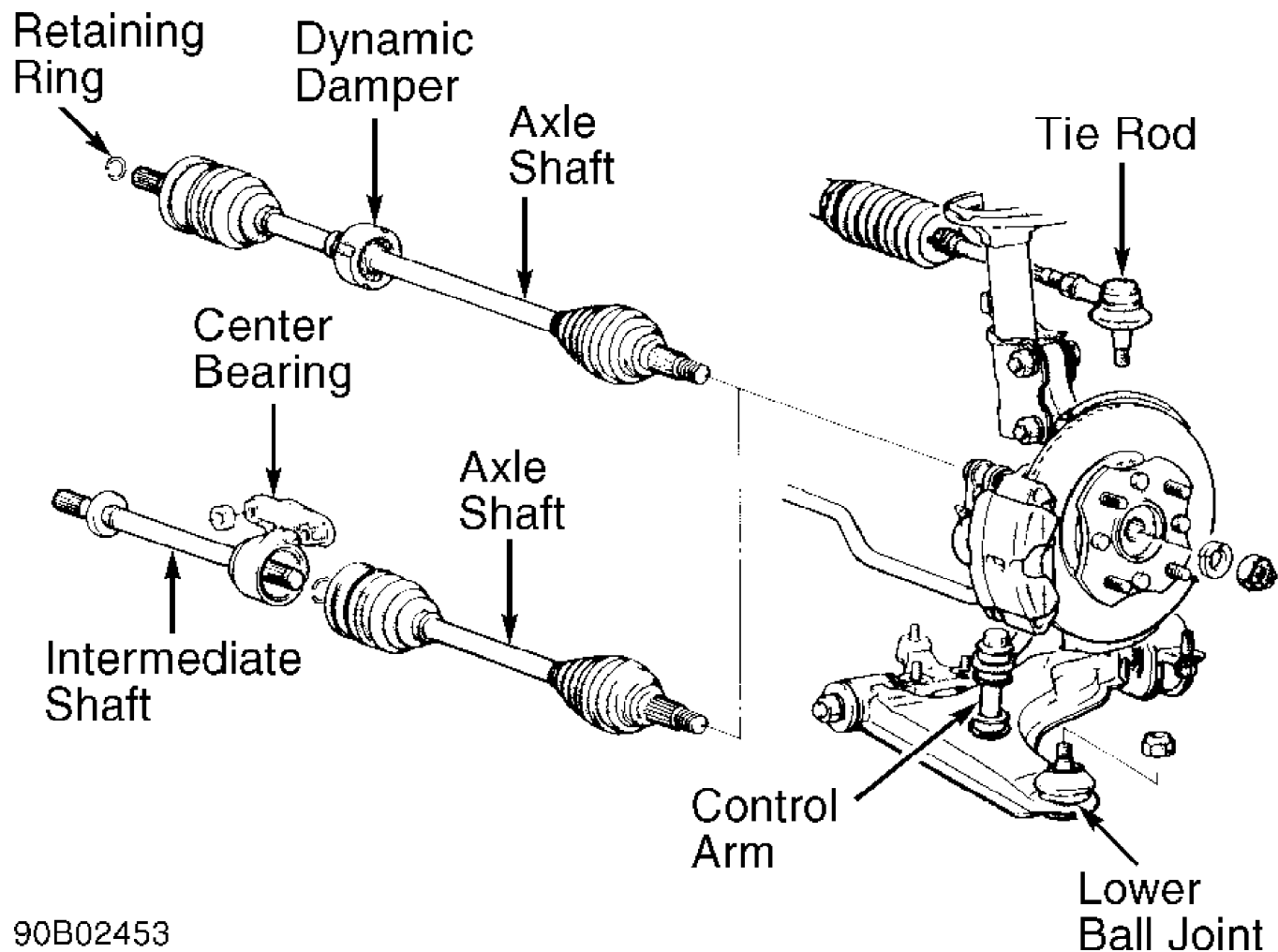


90G02455

Fig. 2: Removing Left Axle Shaft (AWD Models)
Courtesy of Mitsubishi Motor Sales of America.

Installation

Position dynamic damper properly on axle shaft (if equipped). See DYNAMIC DAMPER. To complete installation, reverse removal procedure. See Fig. 3. On all models, when installing axle shaft nut, washer must be installed with chamfered edge (raised side) toward axle shaft nut. Tighten the axle shaft nut to proper specification. See TORQUE SPECIFICATIONS TABLE at the end of this article.



90B02453

Fig. 3: Installing Axle Shafts (Typical)
Courtesy of Mitsubishi Motor Sales of America.

AXLE SHAFT SPECIFICATIONS TABLE

Application (1)	Inner Joint (2)		Outer Joint (2)		Length
FWD					
SOHC (A/T)					
Left	TJ	.....	BJ	....	16.5 (419)
Right	TJ	.....	BJ	....	15.5 (394)
SOHC (M/T)					
Left	TJ	.....	BJ	....	16.5 (419)
Right	TJ	.....	BJ	....	16.0 (406)
DOHC (A/T)					
Left	TJ	.....	BJ	....	16.4 (417)

Right	.....	TJ	.....	BJ	....	15.5 (394)
DOHC (M/T)						
Left	.....	TJ	.....	BJ	....	16.4 (417)
Right	.....	TJ	.....	BJ	....	15.9 (404)
AWD						
Left	.....	TJ	.....	BJ	....	16.5 (419)
Right	.....	TJ	.....	BJ	....	15.4 (391)

- (1) - Right indicates passenger's side, and left indicates driver's side.
- (2) - Type of CV joint used are identified by letters as follows: BJ - Birfield Joint, DOJ - Double Offset Joint, RJ - Rzeppa Joint, and TJ - Tripod Joint.

INTERMEDIATE SHAFT

Disassembly

On Stealth and 3000GT AWD models, press intermediate shaft and bearing assembly from TJ case with Intermediate Shaft Remover (MB991248 or MD998801). On all models, press out intermediate shaft from center bearing assembly with Bearing Puller (MB990810-01). Remove center bearing from bracket with appropriate bearing remover. See Fig. 4.

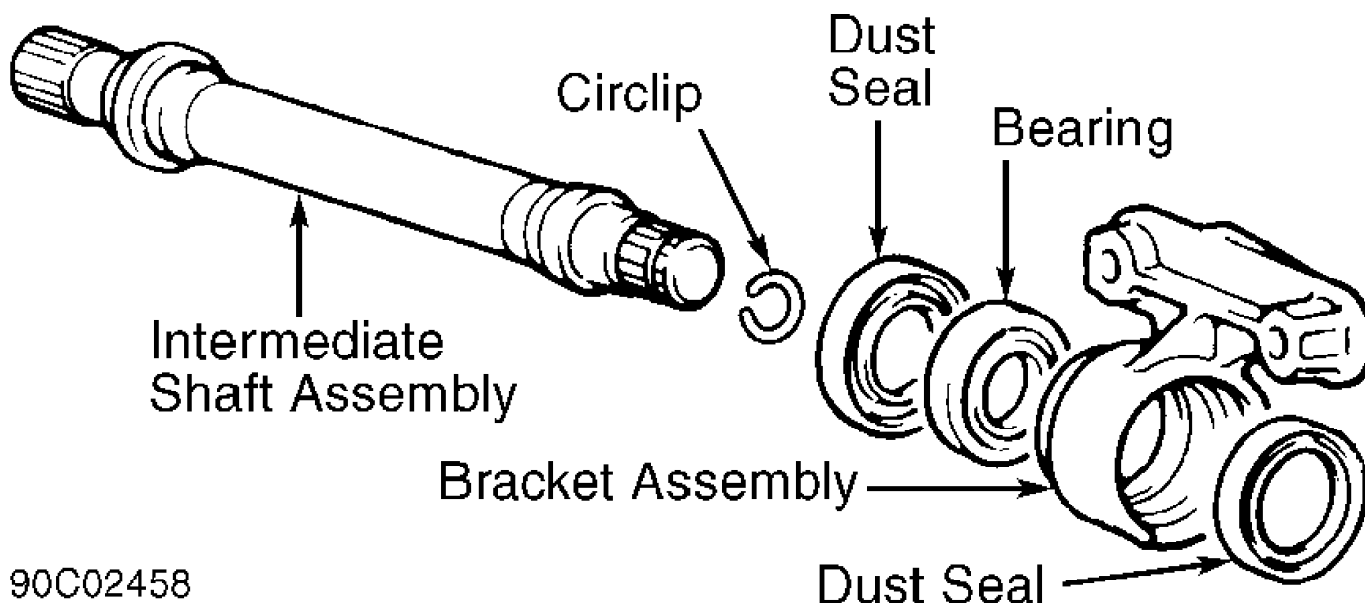


Fig. 4: Assembling Intermediate Shaft (Typical)
Courtesy of Mitsubishi Motor Sales of America.

Reassembly

Grease center bearing and inside center bearing bracket. Press bearing into bearing bracket assembly with appropriate bearing installer. Press dust seals into bearing with handle and installer. Lubricate assembly with grease. Press intermediate shaft into center bearing assembly.

BIRFIELD JOINT (BJ) & RZEPPA JOINT (RJ) ASSEMBLY

Disassembly

Note type of boot and location prior to removal. See BAND & BOOT IDENTIFICATION. DO NOT disassemble BJ or RJ type assemblies. Only CV boot may be replaced. To remove boot, wrap splined area of axle

shaft with tape. Remove band and boot.

Reassembly

Ensure proper boot is installed. See BAND & BOOT APPLICATION table. Apply proper amount of grease to joint and inside of boot. See AXLE SHAFT LUBRICATION SPECIFICATIONS table. Tighten bands on boots with axle shaft in straight position.

AXLE SHAFT LUBRICATION SPECIFICATIONS TABLE

Application	Ozs. (g)
Outer Boot	(1)
Inner Boot	
SOHC	5.3 (151)
DOHC & AWD	5.6 (160)

(1) - Apply same amount of grease as removed. No specification available from manufacturer.

DOUBLE OFFSET JOINT (DOJ) ASSEMBLY

Disassembly

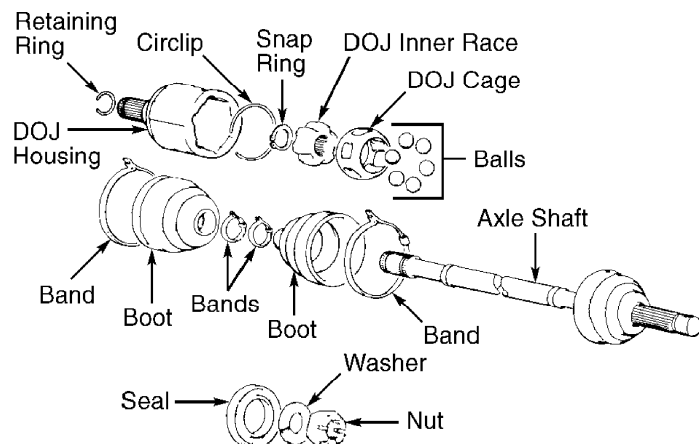
1) Note type of boot and location prior to removal. See BAND & BOOT IDENTIFICATION. Remove bands and boot from DOJ housing. See Fig. 5. Remove circlip and remove DOJ housing.

2) Place reference marks on axle shaft, DOJ inner race and DOJ outer race for reassembly reference. Remove snap ring. Remove DOJ cage, balls and DOJ inner race. Wrap splined area of axle shaft with tape, and remove boot.

Reassembly

1) To reassemble, reverse disassembly procedure. Ensure reference marks are aligned on DOJ inner race and axle shaft. Apply one half of proper lubricant amount in balls and inner race, and other half in DOJ boot. See AXLE SHAFT LUBRICATION SPECIFICATIONS table.

2) Install boot and bands. Tighten bands with axle shaft in straight position. Position boots so bands are positioned at specified distance and secure.



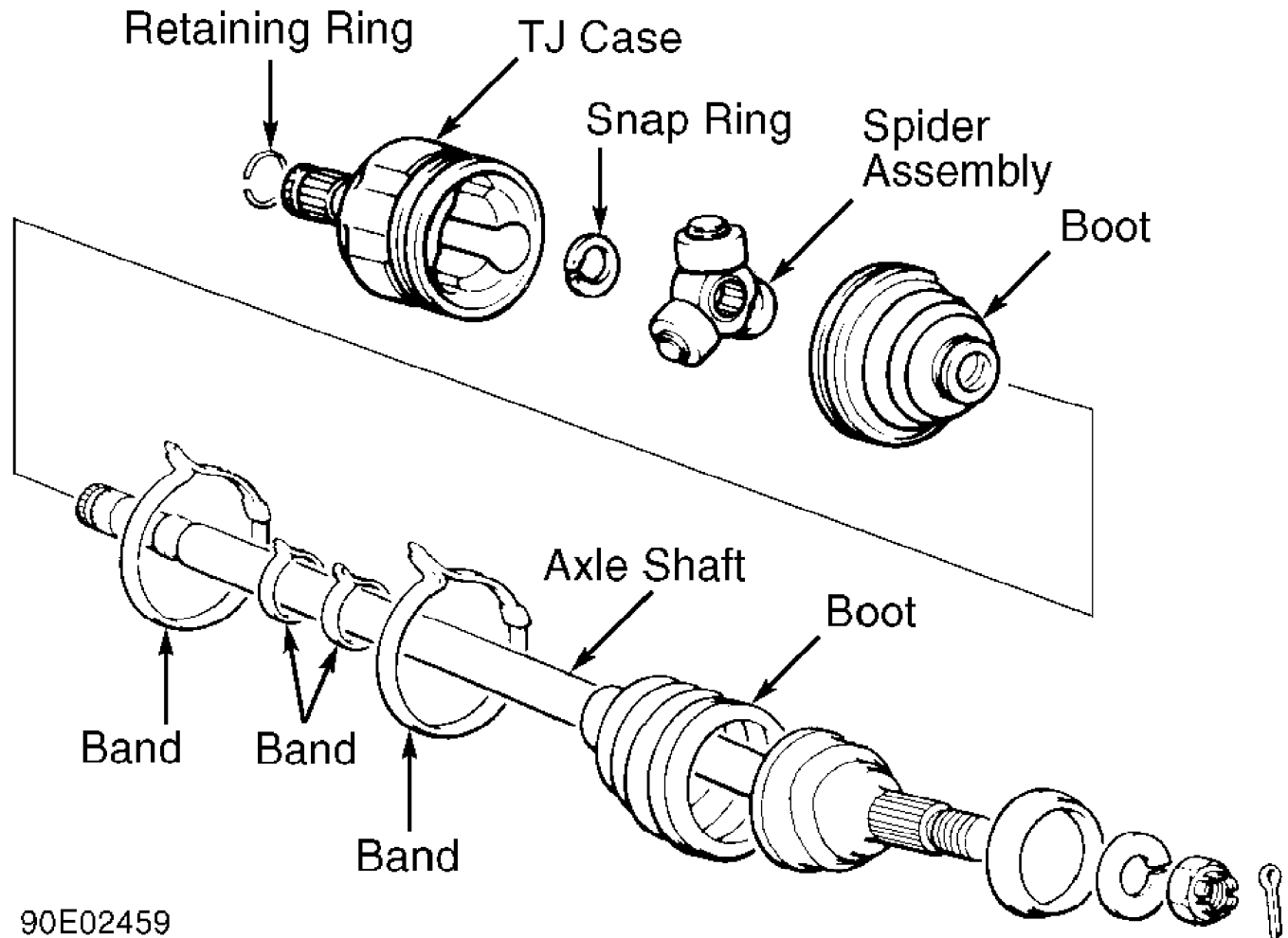
90102456

Fig. 5: Exploded View Of DOJ Assembly
Courtesy of Mitsubishi Motor Sales of America.

TRIPOD JOINT (TJ) ASSEMBLY

Disassembly

1) Note the type of boot and location prior to removal. See BAND & BOOT APPLICATION table. Remove bands and boot from TJ case. See Fig. 6. Place reference mark on TJ case and spider assembly. Pull axle shaft and spider assembly from TJ case.



90E02459

Fig. 6: Exploded View Of TJ Assembly
Courtesy of Mitsubishi Motor Sales of America.

2) Remove snap ring and pull spider assembly from axle shaft. Clean, but DO NOT disassemble spider assembly. Wrap splined area of axle shaft with tape, and remove boot. Dynamic damper (if equipped) and outer boots can be serviced at this time.

Reassembly

1) To reassemble, reverse disassembly procedure. Use new snap ring to retain spider assembly. Ensure reference marks are aligned on spider assembly and TJ case. Using proper lubricant, apply half amount in TJ case and other half TJ boot. See AXLE SHAFT LUBRICATION SPECIFICATIONS table.

2) Install boot and bands. Tighten bands on boots with axle shaft in straight position. Position boots so bands are positioned at specified distance and secure.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Axle Shaft Nut	145-188 (197-255)
Center Bearing Bracket Bolt	26-33 (35-45)
Control Arm Ball Joint Nut	43-53 (58-72)
Tie Rod Nut	17-25 (23-34)
Wheel Lug Nut	87-101 (118-137)