

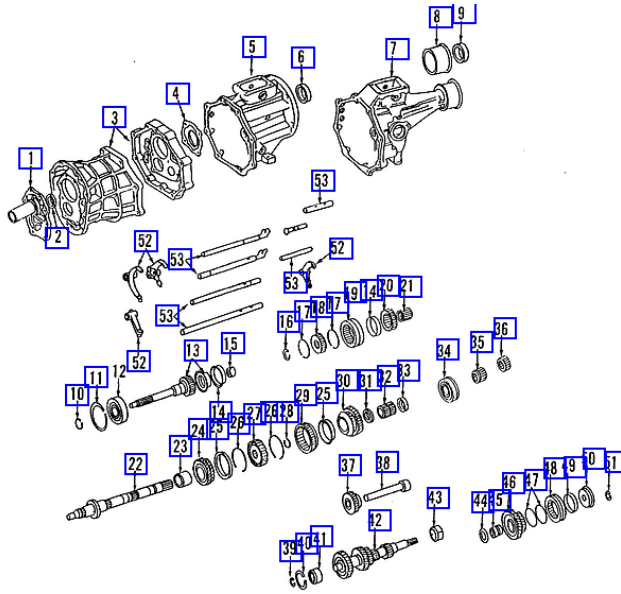
Component Procedures: Manual Transmission/Transaxle

Table of Contents

1. Aisin AX15 (Article 293202)
2. Aisin AX5 (Article 293210)
3. Parts and Labor (itype_189)
4. Components (itype_389)
5. General Information (Article 2031658)
6. Components (itype_32)
7. Cleaning and Inspection (Article 2031019)
8. Disassembly and Assembly (Article 2031020)
9. Removal and Installation (Article 2031026)
10. Capacities (itype_30)
11. Fluid Types (itype_31)
12. Fluid Types and Capacities (itype_436)
13. Low Lubricant Level (Article 2031693)
14. Hard Shifting (Article 2031694)
15. Transmission Noise (Article 2031695)
16. Electrical / Mechanical Repair (itype_413)

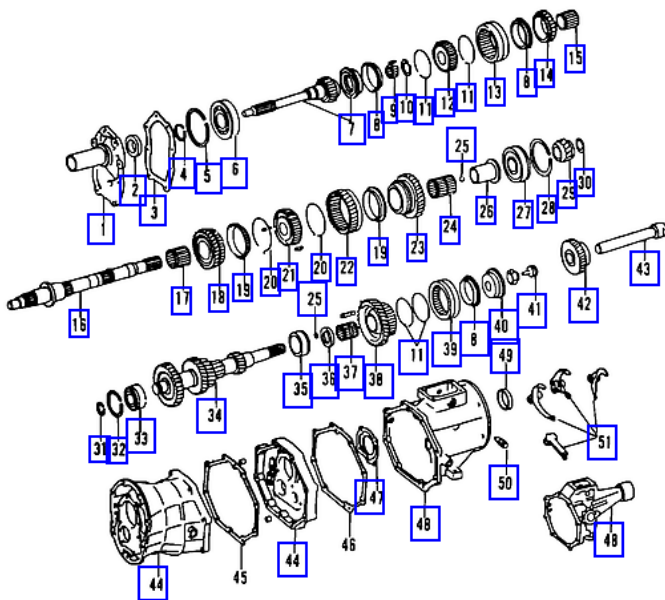
Component Procedures: Manual Transmission/Transaxle

Aisin AX15 (Article 293202)



MANUAL TRANSMISSION-5 SPEED, AISIN AX15

Aisin AX5 (Article 293210)



MANUAL TRANSMISSION-5 SPEED, AISIN AX5

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Aisin AX5 > Transmission	52104548	Transmission Assembly	0.00	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Aisin AX5 > Complete Assembly With Transfer O?	B	3.0	1.9
Replace	Aisin AX5 > Complete Assembly Without Transfe?	B	2.7	1.8
Replace	Aisin AX15 > Complete Assembly With Transfer ?	B	3.0	1.9

Replace	Aisin AX15 > Complete Assembly Without Transf?	B	2.7	1.8
Overhaul/Rebuild	Aisin AX5	A	8.6	5.9
Overhaul/Rebuild	Aisin AX15	A	8.6	5.9

Components (itype_389)

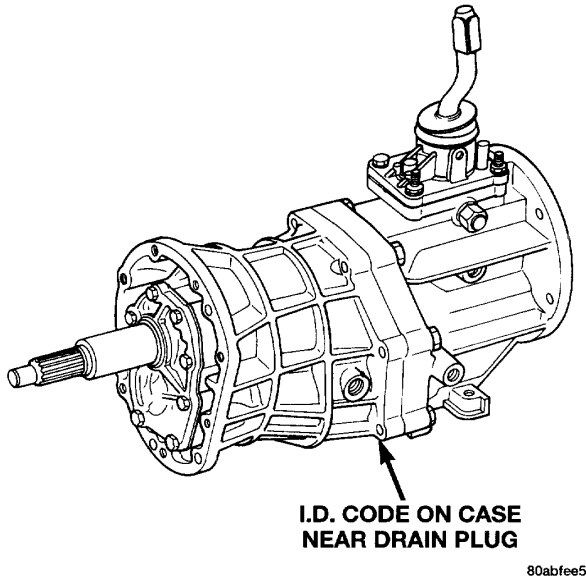


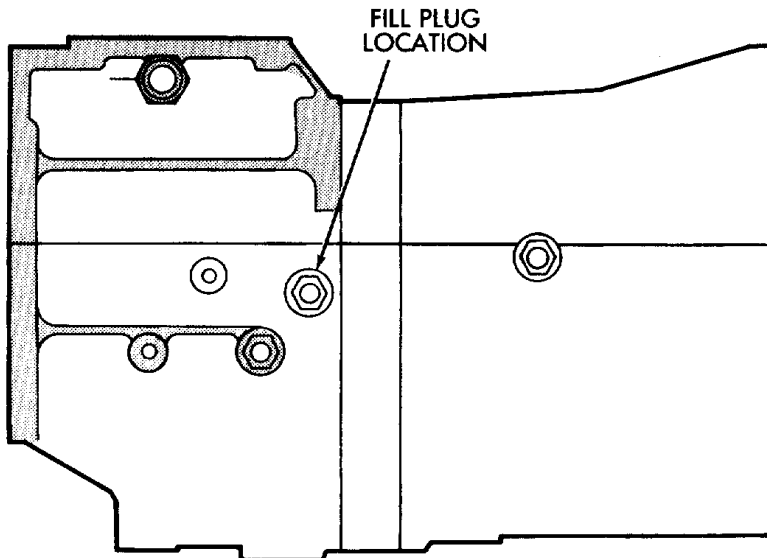
Fig. 2 Transmission Identification

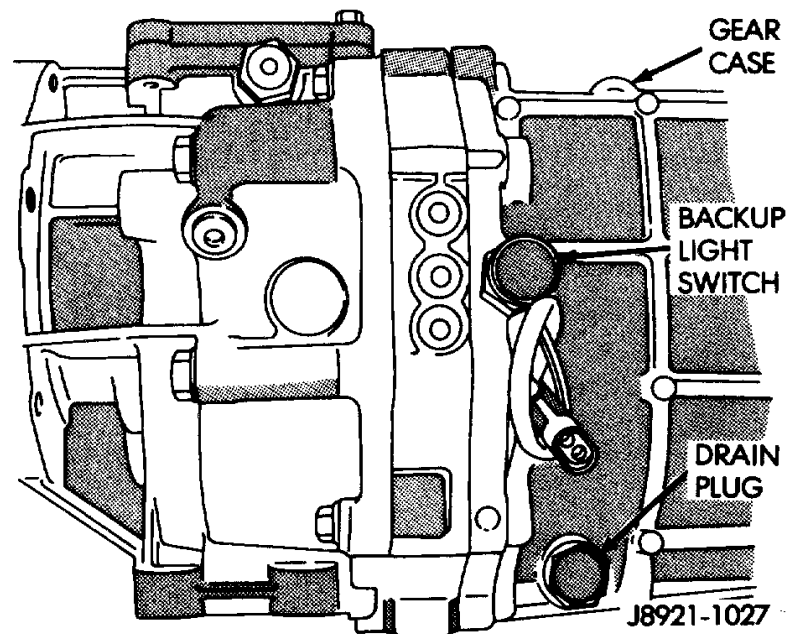
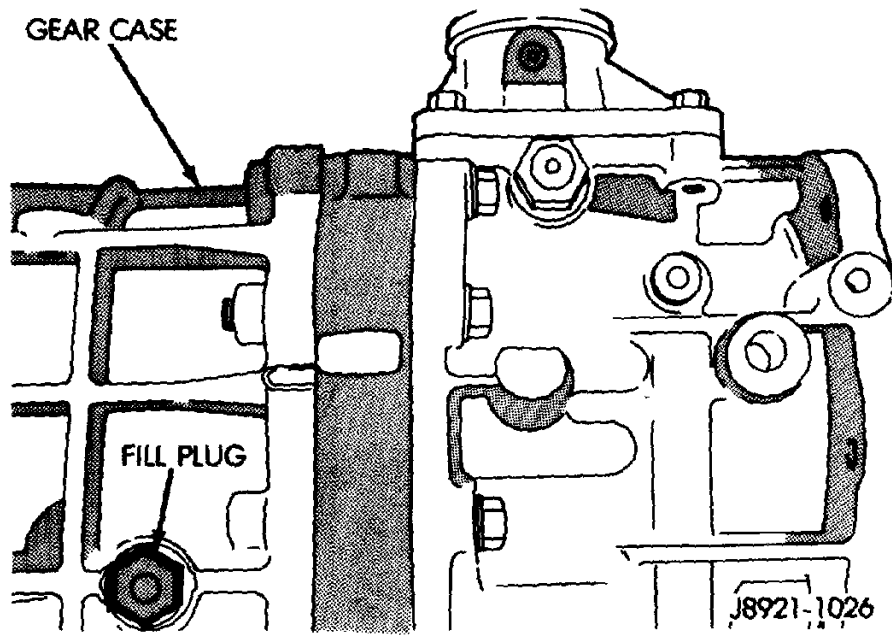
General Information (Article 2031658)

Non Standards

- Description (2031663)
- Gear Ratios (2031667)
- Recommended Lubricant (2031670)
- Transmission Assembly Information (2031671)

Components (itype_32)





Cleaning and Inspection (Article 2031019)

Non Standards

- Countershaft (2031455)
- Gear and Synchronizer (2031456)
- Gear Case, Adapter/Extension Housing, Intermediate Plate (2031457)
- General Information (2031458)
- Output Shaft (2031459)

Disassembly and Assembly (Article 2031020)

Non Standards

- Countershaft (2031021)
- Adapter/Extension Housing and Front Bearing Retainer (2031022)
- Input Shaft (2031023)
- Output Shaft (2031024)
- Semi-Synchronized Reverse Idler Gear (2031373)
- Shift Mechanism and Gear-Train (2031025)

Removal and Installation (Article 2031026)

Non Standards

- Transmission Assembly (2031027)

Capacities (itype_30)

TRANSMISSION FLUID

CAPACITY

Correct fill level is to the bottom edge of the fill plug

hole.

AX5

Four wheel drive 3.3 L (3.49 qts.)

Two wheel drive 3.5 L (3.7 qts.)

AX15

Four wheel drive 3.1 L (3.27 qts.)

Two wheel drive 3.15 L (3.32 qts.)

Fluid Types (itype_31)

TRANSMISSION FLUID

TYPE

MOPAR 75W-90, API GL-3

gear

lubricant, or equivalent.

Fluid Types and Capacities (itype_436)

Fluid Types

Capacities

Low Lubricant Level (Article 2031693)

A low transmission lubricant level is generally the result of a leak, inadequate lubricant fill, or an incorrect lubricant level check.

Leaks can occur at the mating surfaces of the

gear

case

, intermediate plate and adapter or

extension housing

, or from the front/rear seals. A suspected leak could also be the result of an overfill condition.

Leaks at the rear of the extension or

adapter housing

will be from the housing oil seals. Leaks at component mating surfaces will probably be the result of inadequate sealer, gaps in the sealer, incorrect bolt tightening, or use of a non-recommended sealer.

A leak at the front of the transmission will be from either the front bearing retainer or retainer seal.

Lubricant may be seen dripping from the

clutch housing

after extended operation. If the leak is severe, it may also contaminate the

clutch disc

causing the disc to slip, grab, and/or chatter.

A correct lubricant level check can only be made when the vehicle is level. Also allow the lubricant to settle

for a minute or so before checking. These recommendations will ensure an accurate check and avoid an underfill

or overfill condition. Always check the lubricant level after any addition of fluid to avoid an incorrect

lubricant level condition.

Hard Shifting (Article 2031694)

Hard shifting is usually caused by a low lubricant level, improper, or contaminated lubricants. The

consequence of using non-recommended lubricants is noise, excessive wear, internal bind, and hard shifting.

Substantial lubricant leaks can result in

gear

,

shift rail

, synchro, and bearing damage. If a leak goes undetected for an extended period, the first indications of component damage are usually hard shifting and noise.

Component damage, incorrect

clutch

adjustment, or a damaged clutch

pressure plate

or disc are additional probable causes of increased shift effort. Incorrect adjustment or a worn/damaged

pressure plate or disc can cause incorrect release. If the clutch problem is advanced, gear clash during

shifts can result. Worn or damaged

synchro ring

s can cause gear clash when shifting into any forward gear. In some new or rebuilt transmissions, new synchro

rings may tend to stick slightly causing hard or noisy shifts. In most cases, this condition will decline as

the rings wear-in.

Transmission Noise (Article 2031695)

Most

manual transmission

s make some noise during normal operation. Rotating gears generate a mild whine that is audible, but generally

only at extreme speeds.

Severe, highly audible transmission noise is generally the initial indicator of a lubricant problem.

Insufficient, improper, or contaminated lubricant will promote rapid wear of gears, synchros,

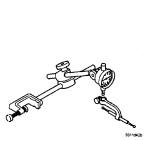
shift rail

s, forks and bearings. The overheating caused by a lubricant problem, can also lead to

gear

breakage.

Electrical / Mechanical Repair (itype_413)



C-3339 Dial Indicator Set



8212 Installer, Seal



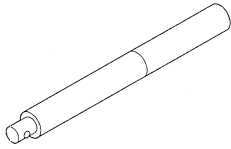
8208 Installer, Seal



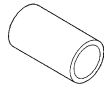
C-3995-A Installer, Extension Housing Seal



P-334 Splitter, Bearing



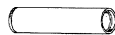
C-4171 Handle, Universal Tool



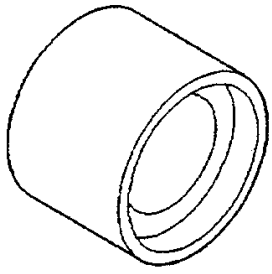
8109 Cup, Installer



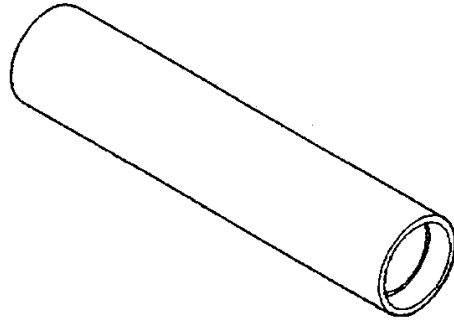
8211 Installer, Seal



L-4507 Tube, Driver



6747-1A Adapter, Fixture



MD-998805 Installer, Seal