



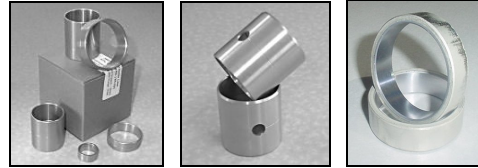
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OMEGA MACHINE & TOOL, INC.

Take A Look At What We Do!

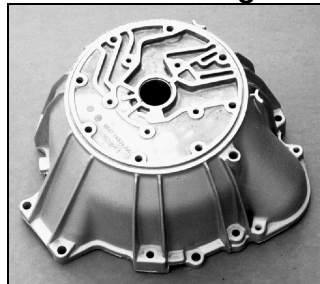
- Source for solid bronze, babbitt, and steel-backed bushings and steel sleeves. Supplier to several major distributors.



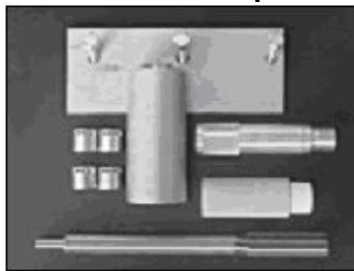
Pumps



Bell Housing



A4LD shift lever repair tool



R&R and Machining Services: Shaft retipping; Case Governor Bore Sleeving, Extension Housings Custom Rebushing, Specialty Machining Work.

We stock many remanufactured hard parts, including but not limited to:

- **A4LD Bellhousings** – Rebushed, Line-bored, bushing, new seal, surfaced.
- **A4LD Cases**, Governor bore and rear servo bore repaired
- **AODE/4R70W pumps**
- **AOD/AODE/4R70W** Governor bore and accumulator bore repair.
- **BW 4405** case repair
- **Clutch Drums**, sleeved and rebushed
- **E40D Pumps**, remachined and updated to 9 lobe Hi-Volume oil pumps
- **E40D Center Supports**, sleeved, rebushed and one-piece case bushing,
- **E40D Overdrive Planets**, sleeved,
- **GM 4L80E Pump** with new gears,
- **GM 700/4L60E Series Pumps**, remachined, new pump kits supplied.



1.



OMEGA

MACHINE & TOOL, INC.

General Motors

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
15439	700-4L60E accumulator piston bushings , reclaim those worn out pistons by installing one of Omega Machine and Tool's bronze bushing, salvage all your early Chevy aluminum accumulator pistons for reuse.
16411 #	B/W 1356 Part-time Transfer Case extension housing bushing - '88-Up Chevrolet; '88-Up GMC ; '88-Up Dodge; '87-Up Jeep; '87-95 Ford F150, F250, F350 & Bronco
17411 #	B/W 4472 Extension housing bushing . All Wheel Drive 91-98 Astro Van, Safari, Bravado, Typhoon, Cyclone Chevrolet S10/S15
25438	4T60E Forward clutch drum bushing , 2 nd Design. '96-Up Buick, Cadillac, Chevrolet, Oldsmobile, Pontiac.
29401	JR403E case bushing : GMC Trucks 88 -Up
33401	4L80E (MT1) "no walk" case bushing , '91-Up- Chevrolet & GMC Trucks & Vans G10, G30, Astro, Safari, Blazer, GMC Yukon, Suburban C & K Pickups. Some 1991's may have larger case bore size. .001 and .002 Oversize OD bushings available.
33423	4L80E Steel-backed babbitt Pump Bushing : '97-Up Second Design (Wider)
33443	Same as above except .0012 larger O.D.
33444	Same as 4L8CB except .0025 larger O.D.
40400 #	208 Transfer case ring gear bushing - '80-Up AMC -Jeep Wagoneer, Cherokee & Truck w/part time 4WD; Chevrolet: Blazer, Suburban K1 K2, K3, Pick-up Trucks w/part time 4WD; Dodge Ramcharger Trailduster & Trucks w/part time 4WD; GMC Trucks, Jimmy, Suburban & K-1500, K-2500, K-3500, Pick-Up trucks w/part-time 4WD.
41411 #	Borg Warner T56 six speed extension housing bushing , 93-Camero
42411 #	GM extension housing bushing - '88-Up 5LM60/HM290/NV3500 5-Speed ½ ton Pickups. Three shift rail uses 42411A (3 rail has slightly larger O.D. bushing)
43401	TH400 case bushing - "hat style" no spin design - '91-Up Buick, Cadillac, Chevrolet, Chevrolet & GMC Trucks w/5.0L, Pontiac, Willys; '64-Up Bentley, Ferrari 400GT, (Some) Holden, Jaguar V12 and Rolls Royce.
46401	TH180,4L30E (MD3,4 3L30) Case bushing – prevents the bushing from walking forward into the planets, "hat style", no walk design. Widely used in '87-up Post Office vehicles LLV.
46411	GEO Tracker extension housing bushing , 89-98 TH180 3sp transmissions. Contrary to most catalogs this bushing is not the same as the 200/350/700R4
49411 #	Chevy/GMC NV1500 extension housing bushing S10/15 96-
50411 #	Chevy, Dodge NV4500 extension housing bushing for NV4500 and NP241DMP.91-UP C,K15/35, 92-UP A,D&W 150/350, RAM Pickup 2500/3500
51411 #	GEO Tracker extension housing bushing , 89-98 5speed transmission
95423	450-43LE transmission pump/converter bushing : W4500/W5500 crew cabs 99-Up

Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
43500	TH400 case bushing kit : "hat style" no-spin design bushing, Output shaft needle bearing, and bonding agent - '91-Up Buick, Cadillac, Chevrolet, Chevrolet & GMC Trucks w/5.0L, Pontiac, Willys; '64-Up Bentley, Ferrari 400GT, (Some) Holden, Jaguar V12 and Rolls Royce.
95500	450-43LE transmission bushing kit : W4500/W5500 crew cabs 99-Up

Denotes a standard transmission or transfer case application

Sleeves

PART NO.	DESCRIPTION AND SPECIFICATIONS
33350	4L80E Direct Drum sleeves for repairing ring cut area.
46341	TH180 Governor bore chrome-moly sleeve: -See 46401 for applications – Fits American Eagle/Southeast Tool

Hard Parts

180

PART NO.	DESCRIPTION AND SPECIFICATIONS
46001	TH180 pump – Remanufactured – re-machined gear cavity and mating surfaces, seals and bushings
46091	TH180 Case - Sleeved governor bore
R&R only	TH180 Bell Housing resurface for no leaks

2004R

54002	2004R Pump - Line-bored converter bushing, new stator shaft & kit parts
54003	2004R Rebuilt Stator Support

400

R&R only	TH400 cases – Repair damaged thrust area and rebush. R & R only
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700R4 All pumps come with complete pump kits, rotors, vanes, slides. etc

15029	700 Stator, R & R only
15005	82-84 Pump, small shaft, line-bored converter bushing, new pump kits are included with all remanufactured pumps.
15006	84-86 Pump, large shaft, line-bored converter bushing, new pump kits are included with all remanufactured pumps.
15007	87_Up (87-1/2) Pump, auxiliary valve body, line-bored converter bushing, new pump kits are included with all remanufactured pumps.

4L60/4L60E/PWM All pumps come with complete pump kits, rotors, vanes, slides. etc

15008	93-94 4L60E, non PWM 30 spline input drum, 1.00 I.D. bushing.
15009	95-96 4L60E, PWM, 10Vane, w/o lip for one piece cases. (15010 maybe substituted here)
15010	96 4L60E, PWM, 10Vane, w / lip for two piece cases.
15011	97-Up 4L60E, PWM, 13Vane, w / lip for two piece cases.
15037	98-Up 4L60E, PWM, 13Vane, w / lip for two piece cases, 310mm TC

4L80E

33017	4L80E Pump remanufactured. 91-96 New oversized gears, re-machined gear cavity and mating surfaces, seals and bushings.
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TH440

25223	TH440 Driven Sprocket Support - Modified for new sealing rings
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* Denotes a standard transmission or transfer case application

Misc.

N/P 208 Front Output Yoke - Sleeved with chrome-moly, R & R only #

T5 Case - Front counter shaft bearing bore repaired, new bearing installed. R&R only #

Sleeve Bearing Retainer Bell Housing (Transaxle)

Tools

DESCRIPTION AND SPECIFICATIONS



700 E-Z clutch drum loading tool, for forward and 3-4 clutch piston seal installation. Allows installation of pistons without cutting seals.

Part # 15312



Specially designed to support both inner and outer metal rings, for a trouble free installation. When seals are this expensive, you only want to buy one per job.

Part # 99321

Denotes a standard transmission or transfer case application

OMEGA **MACHINE & TOOL, INC.**

Presents

A new aftermarket
PWM pump body

Works in either
removable or non
removable case
applications

Diamond finished rotor
and slide area, one
piece design

Install your pump kit
and go!



For more information, inquire at your nearest transmission parts
supplier.

Part # 15021

Omega Machine & Tool, Inc.

"Omega Better – No Longer a Secret"

6.

Chrysler/Jeep

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
16411 #	B/W 1356 Part-time Transfer Case extension housing bushing: '88-Up Chevrolet; '88-Up GMC ; '88-Up Dodge; '87-Up Jeep; '87-95 Ford F150, F250, F350 & Bronco
21441	A-500, 518 Output shaft pilot bushing: '90-Up Chrysler A518 (46RH), 4-Spd. O.D.; '88-Up Dodge vans & trucks; A500 (40RH, 42RH) Vans: 3.9 L & 5.2 liter; 2/4WD conventional trucks w/3.9L & 5.2 L; 2/4WD SUV w/3.9L & 5.2L; mid-size pickups w/3.9 L; '91-'92 Mitsubishi Pickups 2.4 & 3.0L.
27411J	A340H Jeep extension housing bushing: 87-Up Cherokee Jeep 4.0L, 87-90 Comanche Wagoneer
40400 #	208 Transfer case annulus ring gear bushing: - '80-Up AMC -Jeep Wagoneer, Cherokee & Truck w/part time 4WD; Chevrolet: Blazer, Suburban K1 K2, K3, Pick-up Trucks w/part time 4WD; Dodge Ramcharger Trailduster & Trucks w/part time 4WD; GMC Trucks, Jimmy, Suburban & K-1500, K-2500, K-3500, Pick-Up trucks w/part-time 4WD; Plymouth Trailduster w/part time 4WD.
50411 #	CHEVY, DODGE NV4500 extension housing bushing: NV4500 and NP241DMP.91-UP C,K15/35, 92-UP A,D&W 150/350, RAM Pickup 2500/3500
80411 #	Extension housing bushing: '93-Up 5-speed Dodge Dakota Pickup (Not for Jeep)

Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
28500	Toyota A340H (4X4) Transfer case bushing kit: 1984-Up 4 Runner (Pickup). 1986-Up Jeep. (5-Piece Kit: Front Support, Ring Gear Flange, Center Support, Pilot Direct Clutch Drum.
67500	ZF4HP18 Input & stator shaft bushing kit: '86-Up Alfa Romeo 164 w/Transverse, Citroen XM w/Transverse; '89-Up Dodge Monaco V6, In-Line, Porsche 944, Eagle Premier - In-Line; (2-pc. Kit) <i>Note: for 1986-Up Saab 9000 w/Transverse, use the direct shaft bushing only. Stator requires a custom bushing.</i>
68500	ZF4HP14 Input & stator shaft bushing kit: '89-'91 Rover 214, Peugeot 405; '86-Up Citroen BX. (2-piece kit)
70500	KM 175-5, 176-5, 177/177-8, F4A33-1: Sun gear bushing kit: 91-up Stealth, Eclipse, Talon & 3000GT w/Turbo; 92-95 Diamante w/v eng; 94 Galant 2.4L DOHC, 94 Sonata 3.0L; '88-'91 Chrysler Galant w/V eng.; '90-'91 Sonata w/V eng.; '92 Colt Vista - 35 w/T eng.; '89-'91 Mitsubishi Sigma; '91-'92 Eagle Talon, Mirage, Eclipse, Lazer w/o Turbo; '89-'90 Summit-24, 41LC, Eclipse, Talon, Excel, K-eng; '91 Hyundai, Scoupe, Elantra; '90-'94 Hyundai, Excel; '91-'92 Summit Sedan-C41, Summit 24-41 LC w/Q Eng.; (5-piece kit: (2 ea.) Large & Small Sun Gear, (1 ea.) Ring Gear

Hard Parts

DESCRIPTION AND SPECIFICATIONS
A44D forward clutch drum repair ring cut. R&R only , '87-Up A44D, Ram 50 - 4 spd., AW372 (2WD); '87-Up Van - KM148 (4WD); '83-'84 Raider, Montero (4WD)
404-413-470-670 Rear Planetary Gear Repair: Machine washer surface to fit supplied needle bearing.
413-470-670 Differential Carriers, with bearings & races - no spider gears
Repair throw-out bearing stub area on transaxles
ZF18 Case sleeve governor bore
96753 45RFE 99 & Up accumulator cover plate. (see page 8)

Denotes a standard transmission or transfer case application

45RFE Accumulator plate

The accumulator screws loosen or break, and the O.D. accumulator piston exits the bore. The plate is damaged beyond repair. In the past the only fix was buying a complete valve body.



Grand Cherokee 4.7L V8 99 - Up
Durango 00 - Up

Part #96753

For more information, inquire at your nearest transmission parts supplier.

Omega Machine & Tool, Inc.

“Omega Better – No Longer a Secret”

Ford

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
14411 #	Ford Aerostar Dana 28, transfer case extension housing bushing: 1990-Up All Wheel Drive
16411 #	B/W 1356 Part-time Transfer Case extension housing bushing: - '88-Up Chevrolet; '88-Up GMC ; '88-Up Dodge; '87-Up Jeep: '87-95 Ford F150, F250, F350 & Bronco
30411 #	Ford M50D extension housing bushing: '88-Up M5R1, 5-SPD, 2 WD; M5R2. 2nd exec. Cougar, T-Bird, Ranger, Aerostar, F-Series Trucks
32411 #	TOYO/KOGYO extension housing bushing: '83-86 Bronco II, Ranger 4-SPEED 2WD
35421	AXOD pump shaft bushing: - '86-Up Taurus w/183 & 232; Tempo w/3.0L; '91-Up Topaz w/3.0L; '86-Up Sable w/183 & 232; '88-Up Lincoln Continental. (Replaces needle bearing in pump assembly.)
36411 #	TOYO/KOGYO extension housing bushing: '83-Up Ranger 5-SPEED, 2WD (No Aerostar)
37407	G4 brake drum bushing: - Non-Turbo Ford G4EAT, '89-Up Probe, Probe GT ; '91-Up Capri ; Non-turbo '86-Up Mazda G4A-EL 626; '87-Up MX6, 323.
37407T	G4 Posi-Track sun shell turbo brake drum bushing (See 37407 above for applications.)
62408	C4 Reverse and High clutch drum bushing: '64-'69 Ford: Bobcat, Capri, Comet, Cougar, XR7, Cortina, Consul, Fairmont, Falcon, Ford, Ford Lt. Trucks, Granada, LTD, Marquis, Mercury, Montego, Monarch, Mustang, Pinto, T-Bird, Versailles, Zephyr, Zodiac, Falcon 6 & Australian Transit Van.
66414	A4LD lever bore bushing: Fits Omega Lever Bore Repair Tool. This bushing is used to restore the lever bore hole in the side of the A4LD case to original dimensions, stopping those annoying leaks.
66428	A4LD late front stator bushing: '91-Up Aerostar Van 2/4WD, Wagon 2/4WD, Bronco 2/4WD, Ranger, Ranger II 4WD, Starlight van, European Granada & Sierra, Mustang & T-Bird, Explorer 2/4WD, Mazda Navajo 4WD w/4.0L.
66428A	A4LD late front stator bushing: '91-Up Aerostar Van 2/4WD, Wagon 2/4WD, Bronco 2/4WD, Ranger, Ranger II 4WD, Starlight van, European Granada & Sierra, Mustang & T-Bird, Explorer 2/4WD, Mazda Navajo 4WD w/4.0L. 1 inch long
73401	E40D one piece case bushing: '89 - Up Ford Light trucks and vans. All E & F series 2/4WD. Trucks in the 8,500 - 16,000 GVW Range, 5.0L, 5.8L & 7.8L engines. Electronically controlled 4-Speed OD. C6: '66-'80 Ford Passenger & Mercury; '66-'79 Lincoln & Mark III-IV-V, '94-Up Econoline Chateau; '66-'74 AC 428. (Oversize .020 and .050 available for case spin out)
73401R	E40D rolled case bushing: This is the same bushing as above except it is a rolled bushing and not a solid bronze bushing See 73401 for application
73423OS	E40D pump bushing oversize, bronze.

Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
37500	G4A-EL/G4-EAT 7-piece bushing kit: '86-Up Mazda 626, '87-Up MX6, 323, '90-Up Protégé 4WD; '88-Up Probe, Probe GT; '91-Up Capri. (2-4 Brake Drum, Stator, Small & Large pump bushings, Rotor, Sun Gear with holes, and Sun Gear without holes). Mazda may take G4PSSB Sun Shell bushing.
48500	F4A-EL/F4-EAT 6-piece bushing kit: '91-Up Ford Escort, Mercury Tracer; '90-Up Mazda 323 & Protégé. (2-4 Brake Drum, Rotor, Stator, Sun Gear with holes, Sun Gear without holes, Pump.)
92500	4F27E Ford Focus 00-Up 8 piece bushing kit, includes one piece rear stator bushing

#Denotes a standard transmission or transfer case application

Sleeves

PART NO.	DESCRIPTION AND SPECIFICATIONS
35349BR	AXOD channel plate bronze sleeve: (American Eagle A-133 Tool)
35349	Chrome-moly sleeve for AXOD channel plate: '88-Up Lincoln Continental, '86-Up Sable (various), Taurus (various); '91-Up Taurus SHO – 5 piece minimum order
74341	Ford AOD case, governor bore sleeve: Chrome-moly: '80-'93 Ford: T-Bird, T-Bird Super, Mercury, Cougar, XR7; '83-'86 LTD; '84-'93 Mustang; '84-'86 Capri; '80-'85 Marquis; '80-'81 Lincoln, '82-'93 Continental; '80-'93 Mark VI, VIII; '82-'93 Town Car; '91-Up Vans, Trucks E & F, Bronco.
74341E	Ford AODE/4R70W case governor bore sleeve: Available in various oversizes Chrome-moly: '92-'95 T-Bird, T-Bird Super, LTD, Mercury, Cougar, XR7; Mustang; Capri; Marquis; Lincoln, Continental; Mark VI, VIII; Town Car; Vans, Trucks E & F, Bronco
74348	Ford stator support sleeve: See "AODE Sleeve" above for application
66341	A4LD governor bore sleeve: – Chrome-moly – Fits American Eagle/Southeast Tool

Hard Parts

DESCRIPTION AND SPECIFICATIONS

AOD, AODE, 4R70W

PART NO.	DESCRIPTION AND SPECIFICATIONS
R&R only	4R70W case repair 1-2 accumulator bore
74092 - 74093	AOD/AODE case- Governor bore sleeved with chrome-moly, 2 bolt or 3 bolt starter and check valve body pin sizes, .172 or .238
74033	AOD/AODE stator repaired with our AODESS Chrome moly sleeve

AXOD, AXODE

35181 - 35186	AXOD/AXODE chain cover repaired with chrome-moly sleeve. . Please supply cover identification code when ordering, E8, F1, F3, etc
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A4LD, 4R44E, 4R55E, 5R55E

66138 - 66149	A4LD -- Bell housing Install line-bored converter bushing, resurface, replace oil seal.
66315	A4LD -- Bushing stabilizer tool
66224	A4LD -- Center support sleeved
66098 - 66100	A4LD -- Governor bore sleeved with chrome-moly. 4.0 liter cases have new thrust washer installed.
Coming soon	A4LD -- Overdrive direct drum
Coming soon	A4LD -- Overdrive planet
Coming soon	A4LD -- Pump

E40D, 4R100, 4 Speed Overdrive

73221, 73222	E40D Center support kit including rear case bushing, piloted and non-piloted shaft
73012 - 73016	E40D Pump – Remanufactured – early & late, 9 lobe high volume.
73251, 73252	E40D Sleeved overdrive planet – early and late – Sleeved to prevent stress cracks
R&R only	E40D Repair case for spun case bushing or damaged thrust area.

M50D, (M5R1), (M5R2)

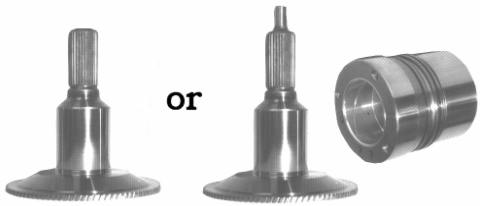
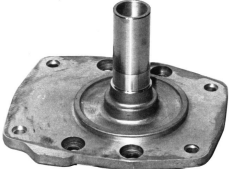




30107, 30108	M5R1, M5R2 – 1998 – on Ford & Ranger Standard (Aerostar, Bronco, E/F 150, 350) Mazda M50D (1979-93) Steel sleeve front main or counter shaft bore. R & R only #
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DANA 28

91-Up Ford Aerostar transfer case extension housing repair R&R only

MISC

Repair throw-out bearing snout area on transaxles

 <p style="text-align: center;">or</p> <p style="text-align: center;">73222 73221</p>	<p>Our support kit includes a line-bored bushing for greater concentricity, and one of our famous one-piece case bushings. The shaft has a burnished surface for superior wear resistance. We also make this as a direct replacement for the bearing type support, without the pilot tip on the shaft.</p>
	<p>This is an example of a throw-out bearing damaged area we repair. This repair is also done on transaxle cases. Part # 32281</p>
	<p>E40D Planet with Chrome Moly reinforcing sleeve Part # 73251 3 pin 73252 4 pin</p>
	<p>Borg Warner 4405 front and rear case halves. The rear mainshaft bearing bore and front and rear shift rail bores wear out and cause the transfer case to jump out of gear. The shift rail bores are bushed and the groove made in the case by the oil pump stabilizer arm is pinned. Part #55109 rear #55109A front</p>
	<p>Borg Warner 1356 Transfer case input planetary remanufactured. The input gear eats into the thrust surface of the carrier and produces undesirable end-play. We machine the carrier and install thrust washer to bring part back to factory specifications. Part # 16254</p>
	<p>AXODE/AX4N Pump covers, these stronger pump cover plates are thicker and have ribbed center to reduce flexing. They are made from 7075-T6 aircraft aluminum alloy. Part # 35034</p>

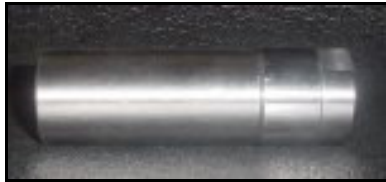
Tools

DESCRIPTION AND SPECIFICATIONS



A4LD lever bore repair tool kit - # **66311**
Fixture Plate, 7/8" Reamer, Bushing driver, 5
Solid Bronze Bushings, Cutting Solution
Concentrate, application bottle.

Part # 66311

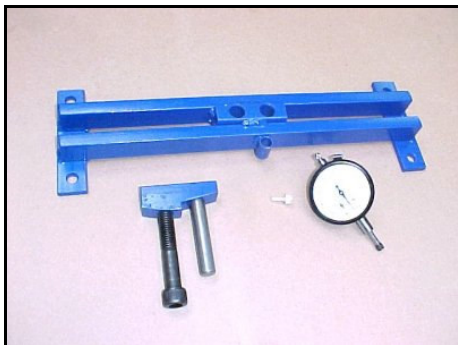


A4LD bushing stabilizer tool. Since our
bushings are line-bored to a closer tolerance
than the factory, many times the factory
alignment tool will not work in our bell
 housings.

Part # 66315



4R55E/5R55E
Front stator Teflon ring sizer
Part # 85320



E40D / 4R100 Case Repair Tool
The valve body area of the cases can become
distorted from over tightening the center
support bolts. Our tool pulls up on the inside of
the case. A conveniently mounted dial indicator
tells you when things are back on the level.

12.

OMEGA **MACHINE & TOOL, INC.**

AODE/4R70W 1-2 Accumulator bore repair

Before



AODE/4R70W
Erratic/Prolonged 1-2 Shift
(See TSB 97-11-11)

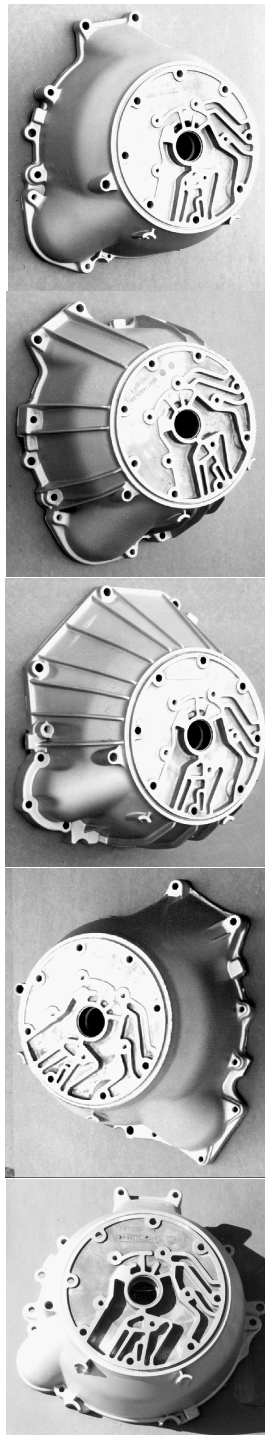
As a result of the spring breaking or just plain wear in the 1-2 accumulator bore, the 1-2 shift will not be crisp or the transmission may neutral out on up and or down shifts.

After



We repair the bore by boring the hole oversize in one of our precision jig fixtures and then installing a chrome-moly sleeve. The result is a standard size bore, that takes standard parts.

Ford Bell Housing identification guide



Omega part #

(dependant on pump bolt size)

66138 - 6 mm bolts

66140 - 8 mm bolts

2-bolt starter on driver's side.
Smooth exterior on bell housing

Omega part # 66142

2-bolt starter on driver's side in vehicle
with 4-liter engine.
Notice ribs on exterior of bell housing.

Omega part #

(dependant on pump bolt size)

66144 - 6 mm bolts

66145 - 8 mm bolts

3 bolt starter on driver's side.
Found in Aerostars

Omega part #

(dependant on pump bolt size)

66147 - 6 mm bolts

66148 - 8 mm bolts

3 bolt starter on passenger's side.
Commonly found in 4 cylinder
Mustangs. Height approx. 6.9"

Omega part # 66150 or 66151

(dependant on pump bolt size)

Merkur

66150 - 6 mm bolts

66151 - 8 mm bolts

2-bolt starter on driver's side.
Smooth exterior on bell housing.
Note bell housing height of 6.4"

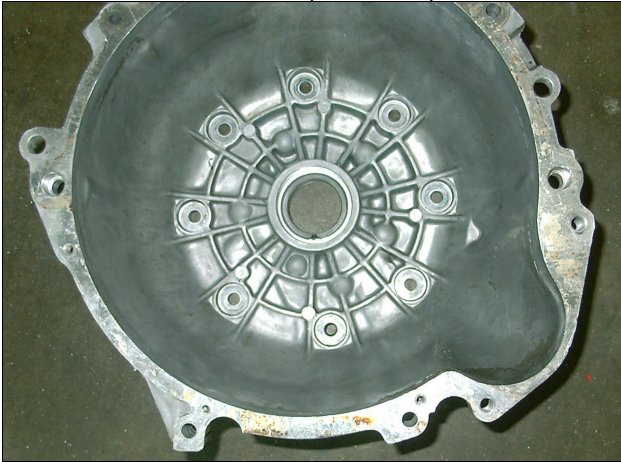
A4LD-4R55E Bell Housing and case differences



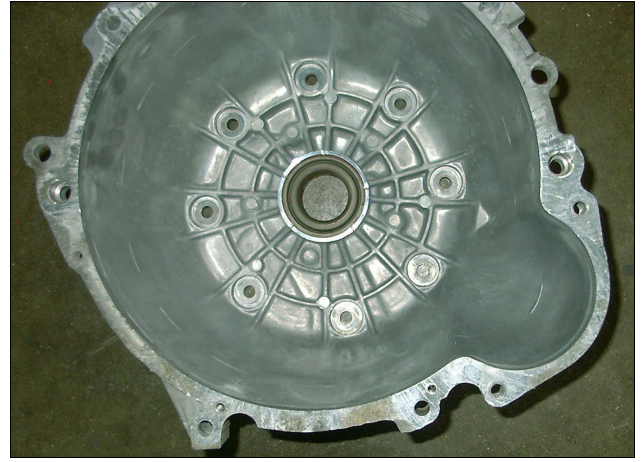
Notice there are six pump bolt holes instead of five in this bell housing. If your bell housing has six it is an electronic version. It could still be an A4LD or 4R55E

There is also a difference in the starter pocket. The housing on the left is the newer 4R55E. The housing on the right is our number 66142, the A4LD electronic version. Notice that the starter pocket on the bell housing on the left is smaller and not centered between the mounting holes as is the pocket on the right

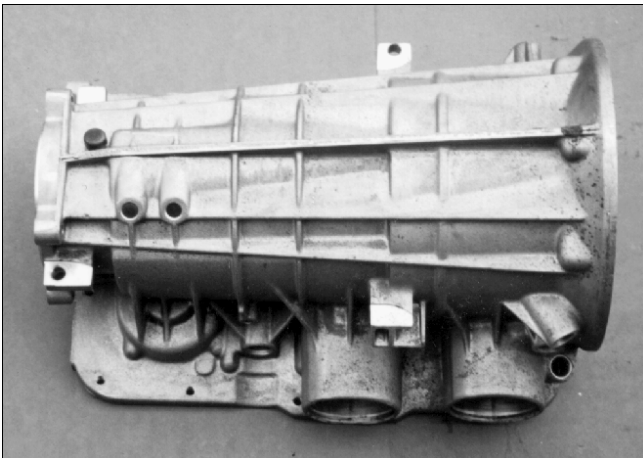
66131 (4R55E)



66142 (A4LD)



A4LD Case



The cooler line fitting orifices on the passenger's side of the case are two different sizes. The large is .585 and the small is .448. The 4 liter case has the large size fittings and a thrust washer behind the sprag race at the rear of the case.

Part #

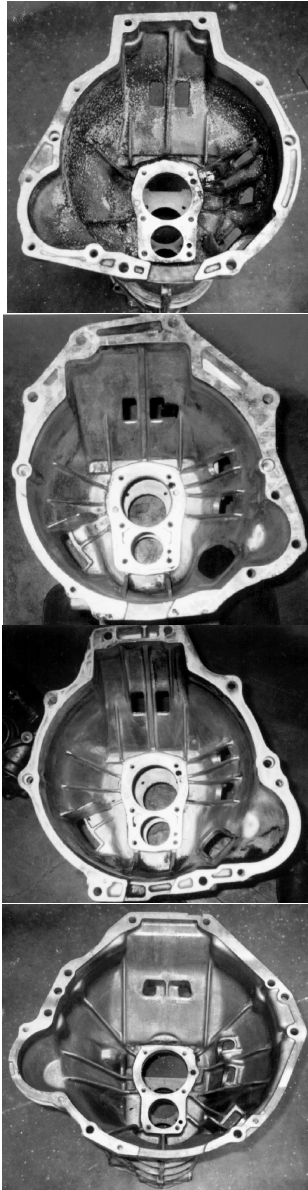
66098 -- .448

66099 -- .585

66100 -- 4.0L

15.

M5R1-M5R2



M5R1

Aerostar and occasionally in Ranger
3.0, 3 bolt starter on passenger's side

M5R1

Ranger & Aerostar
3.0 liter, 3 bolt starter on drivers side

M5R1 V-6

2.9 & 4.0, 2 bolt starter on drivers side

M5R2

T-Bird, Cougar or Full size truck

6 cylinder or small V-8
4.9, 5.0, 5.8 liter

HONDA

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
19405	3-4 clutch feed pipe bushing. Fits 98-2002 Accord 4cyl & V6; 99-2002 Odyssey
20415	Main shaft bushings 83-85 Accord; 83-87 Prelude (AS,F4, AK, K4, AS) 86-89 Accord; 85-87 Prelude SI with fuel injection (F4)
24415	Main shaft bushings 86-87 Legend (G4) 88-90 Legend (L5)
26415	Main shaft bushings 88-91 Civic (L4, P1, CQ)

Bushing Kits

PART NO	DESCRIPTION AND SPECIFICATION
19500	One kit covering all of the models below
19500A	Fits A4RA, MP7A, S4XA, SP7A, MPRA, MY8A, PY8A, R0
19500B	Fits A24A, M24A, M4TA, P24, S24A, CRV (SDMA)
19500C	Fits A6VA, AOYA, APX4, APXA, BOYA, MP1A, MPXA, MPOA, PX4B
19500D	Fits MPYA
19500E	Fits MPWA (VIGOR), MPZA, B6VA, BAXA, M6HA, M7ZA, B7XA, MAXA

Hard Parts

DESCRIPTION AND SPECIFICATIONS
Repair throw-out bearing stub area on transaxles For example see picture on page # 22

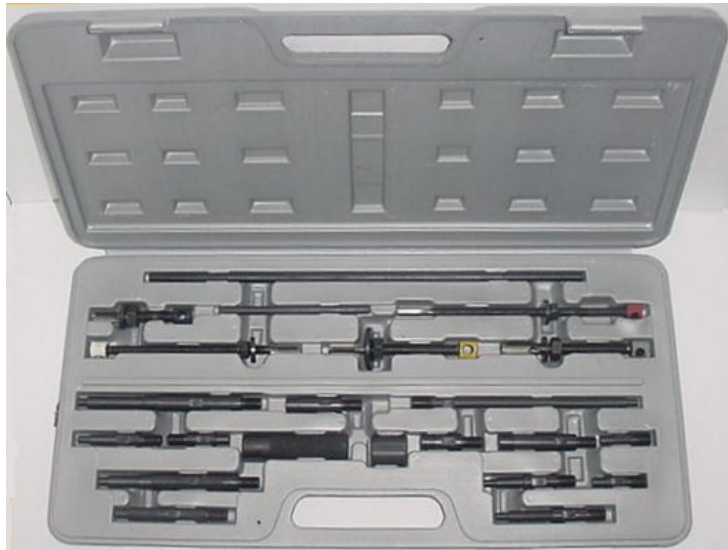
Tools

DESCRIPTION AND SPECIFICATIONS	
	<p>This tool is for extracting and replacing the clutch feed pipe bushings. It works on all two and three shaft Hondas</p> <p>Part # 24313</p>

OMEGA **MACHINE & TOOL, INC.**

Presents our newest tool

This tool is for
extracting and replacing
the clutch feed pipe
bushing on any two or
three shaft Honda.



See page 17 for the 3-4 clutch feed pipe bushings this tool services.

Part # 24313

For more information, inquire at your nearest transmission parts
supplier.

Omega Machine & Tool, Inc.

"Omega Better – No Longer a Secret"

18.

ISUZU

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
29401	JR403E trans one piece case bushing: 88-Up Isuzu trucks.
64411 #	Isuzu extension housing bushing: '81 UP. RWD - 4Cyl., 5-Speed, No turbo.
75411	'85-'91 Isuzu Impulse extension housing bushing: A44DL Impulse and Pickups; '83-Up Toyota 4Spd, OD with L/U.
89411	Isuzu AW-372 extension housing bushing: '88-Up Pickups and Sports Utility Vehicles. Yoke 1.50"
95423	450-43LE transmission pump/converter bushing: Isuzu NPR, NQR 99-Up

Bushing Kit

PART NO	DESCRIPTION AND SPECIFICATION
95500	450-43LE transmission bushing kit: Isuzu NPR, NQR 99-Up

Hard Parts

DESCRIPTION AND SPECIFICATIONS
A40/A42D/A43D/A44DL forward clutch drum repair ring cut. R&R only

MAZDA

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
66428	A4LD late front stator bushing: '91-Up Aerostar Van 2/4WD, Wagon 2/4WD, Bronco 2/4WD, Ranger, Ranger II 4WD, Starlight van, European Granada & Sierra, Mustang & T-Bird, Explorer 2/4WD, Mazda Navajo 4WD w/4.0L.
37407	G4 brake drum bushing: Non-Turbo Ford G4EAT, '89-Up Probe, Probe GT ; '91-Up Capri ; Non-turbo '86-Up Mazda G4A-EL 626; '87-Up MX6, 323.
37407T	G4 posi-track sun shell turbo brake drum bushing: (See G4BD above for applications.)
69411	Mazda extension housing bushing: 85-90 B2200, 85-90 RX7
30411#	Ford M50D extension housing bushing: '88-Up M5R1, 5-SPD, 2 WD; M5R2. 2nd exec. Cougar, T-Bird, Ranger, Aerostar, F-Series Trucks

Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
37500	G4A-EL/G4-EAT 7-piece bushing kit: '86-Up Mazda 626, '87-Up MX6, 323, '90-Up Protégé 4WD; '88-Up Probe, Probe GT; '91-Up Capri. (2-4 Brake Drum, Stator, Small & Large pump bushings, Rotor, Sun Gear with holes, and Sun Gear without holes). Mazda may take G4PSSB Sun Shell bushing
48500	F4A-EL/F4-EAT 6-piece bushing kit: '91-Up Ford Escort, Mercury Tracer; '90-Up Mazda 323 & Protégé. (2-4 Brake Drum, Rotor, Stator, Sun Gear with holes, Sun Gear without holes, Pump.)
92500	J39A Mazda Protégé 00-Up 8 piece bushing kit, includes one piece rear stator bushing

Denotes a standard transmission or transfer case application

Sleeves

PART NO.	DESCRIPTION AND SPECIFICATIONS
66341	A4LD governor bore sleeve- CHROME-MOLY - Fits American Eagle/Southeast Tool

Hard Parts

DESCRIPTION AND SPECIFICATIONS
A44DE forward clutch drum repair ring cut. R&R only Miata 98-99



R4A-EL governor bore repair.

Mercedes

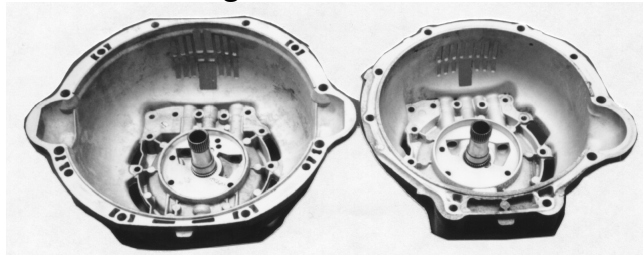
Bushings

PART NO	DESCRIPTION AND SPECIFICATION
77423	Mercedes 722.3, 5, & 6 front pump body bushing (HUB OF 1.692) 1981-Up. Steel-backed Babbitt (6-bolt pan, 4-speed)
77440	722.6 transmission sun gear bushing
77413	722.6 input drum bushing 96-99 Mercedes
77413A	722.6 input drum bushing 96-99 Mercedes converts bearing style to bushing

Hard Parts

DESCRIPTION AND SPECIFICATIONS
Mercedes Bell Housing - Replaced stator
RE-bush and seal ZF pump body
Repair Mercedes case governor bore

Omega number MERBH



Mercedes Benz Bell Housings – Fitted with new hardened stator shaft

20.

MITSUBISHI Bushings

PART NO	DESCRIPTION AND SPECIFICATION
21441	A-500, 518 Output shaft pilot bushing: '90-Up Chrysler A518 (46RH), 4-Spd. O.D.; '88-Up Dodge vans & trucks; A500 (40RH, 42RH) Vans: 3.9 L & 5.2 litre; 2/4WD conventional trucks w/3.9L & 5.2 L; 2/4WD SUV w/3.9L & 5.2L; mid-size pickups w/3.9 L; '91-'92 Mitsubishi Pickups 2.4 & 3.0L.
65411 #	Mitsubishi extension housing bushing: '80-'91 5-Speed KM 2WD, Mitsubishi/Dodge imports.
86411	Mitsubishi 03-71 series (D50; 03-72) extension housing bushing: '87-Up A44D, Ram 50 - 4 sp., AW372 (2WD); '87-Up Van - KM148 (4WD); '83-'84 Raider, Montero (4WD)
29401	JR403E trans one piece case bushing: 88-Up Mitsubishi trucks with
95423	450-43LE transmission pump/converter bushing: Fuso trucks 99-Up

Bushing Kit

PART NO	DESCRIPTION AND SPECIFICATION
70500	KM 175-5, 176-5, 177/177-8, FA33-1: Sun gear bushing kit: 91-up Stealth, Eclipse, Talon & 3000GT w/Turbo; 92-95 Diamante w/v eng.; 94 Galant 2.4L DOHC, 94 Sonata 3.0L; '88-'91 Chrysler Galant w/V eng.; '90-'91 Sonata w/V eng.; '92 Colt Vista - 35 w/T eng.; '89-'91 Mitsubishi Sigma; '91-'92 Eagle Talon, Mirage, Eclipse, Lazer w/o Turbo; '89-'90 Summit-24, 41LC, Eclipse, Talon, Excel, K-eng; '91 Hyundai, Scoupe, Elantra; '90-'94 Hyundai, Excel; '91-'92 Summit Sedan-C41, Summit 24-41 LC w/Q Eng.; (5-piece kit: (2 ea.) Large & Small Sun Gear, (1 ea.) Ring Gear
95500	450-43LE transmission bushing kit: Fuso 99 and Up

Hard Parts

PART NO	DESCRIPTION AND SPECIFICATION
76106	Cases: A44D, Ram 50, AW372, AW3072L, A44DL 2WD 87-Up; A44D – Raider, Montero – 4WD 83-84. Governor bore repair.
86069	Forward clutch drum: A44D/AW372/A44DL forward clutch drum repair ring cut. R&R only , '87-Up A44D, Ram 50 - 4 sp., AW372 (2WD); '87-Up Van - KM148 (4WD); '83-'84 Raider, Montero (4WD)
R&R only	Repair throw-out bearing stub area on transaxles

NISSAN Bushings

PART NO	DESCRIPTION AND SPECIFICATION
81442 #	Nissan striker shaft bushing: '81-'86 Stanza 2.0L; '81-'94 Sentra 1.6l; '83-'90 Pulsar 1.6L
71411 #	Nissan extension housing bushing: 4-5 Speed FS4W71. FS5W71 A, B & C
91411	RE4R03A Nissan extension housing bushing: '90-Up QX45 V-8 INFINITY.
58401	RE4R01A, R4A-EL, RE4R03A One-Piece case bushing: '87-Up Nissan P/U & Pathfinder w/4WD; '89-up Pickup & Pathfinder w/2WD
57423	Nissan RE/RL4F02A converter/pump steel-backed babbit bushing: '89-Up Axxess 2/4WD; 7/84-Up Maxima; 3/84-Up Stanza, 2/4WD Stanza Station Wagon.
78423	Nissan converter/pump bronze bushing: 7/91-Up Maxima; '92-Up Altima; '93-Up Villager/Quest Hub: 1.73"
58441	RE4R01A Output shaft pilot bushing: 1987 AND UP (See RE4CB for application)
29401	RE4R03A /JR403E One-Piece case bushing: '90-Up 300ZX - V6 Turbo; '90-Up Infinity Q45, V8. Nissan Diesel truck 88-Up
95423	450-43LE transmission pump/converter bushing: Nissan UD truck 99 and Up
82411 #	Nissan T-5 extension housing bushing

Denotes a standard transmission or transfer case application

Bushing Kit

PART NO.	DESCRIPTION AND SPECIFICATIONS
95500	450-43LE transmission bushing kit: Nissan UD truck 99 and Up

Hard Parts

Part NO.	DESCRIPTION AND SPECIFICATIONS
R&R only	RL-4/RE-4FO2A - Nissan, Maxima, Stanza, Pulsar, Posi-Track. Re-machine pump surface
55061	RL-3 Direct clutch drum with chrome-moly sleeve (Nissan RL4F01A Trans. with Lockup)
57061	RL-4 Direct (High) clutch drum with chrome-moly sleeve (Nissan RL4F02A Trans.)
55071	RN-3 Direct (High and Reverse) clutch drum with chrome-moly sleeve (Nissan RN3F01A Trans., w/o lockup)
R&R only	RL4FO4A (Nissan) FO4A (Mercury) Pump. Reface stator support.



RL4/RE4FO2A - Nissan, Maxima, Stanza, or Pulsar, Posi-Track. Re-machined pump surface.

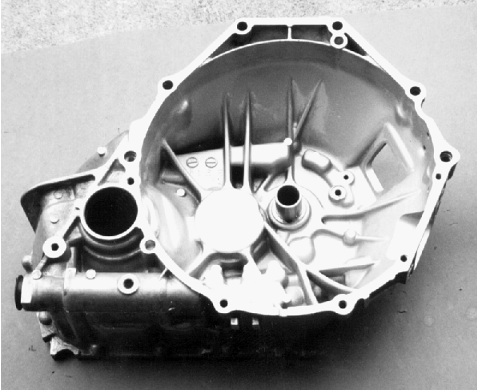


RE4RO1A-L4N71B
Governor bore. Install new one piece solid bronze case bushing.



Nissan RL4 Direct Clutch Drum
We restore the ring cut area with a
chrome moly sleeve

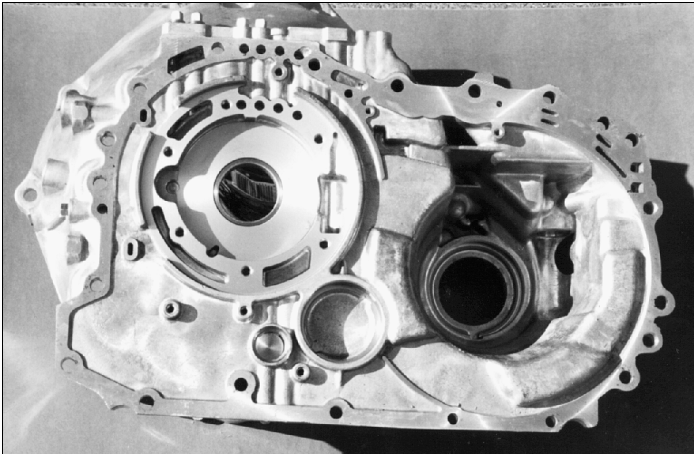
Part # 57061



We repair the throw-out bearing area
with a chrome moly sleeve

23.

Nissan bell housing identification guide



**Early Maxima
Non-electronic**

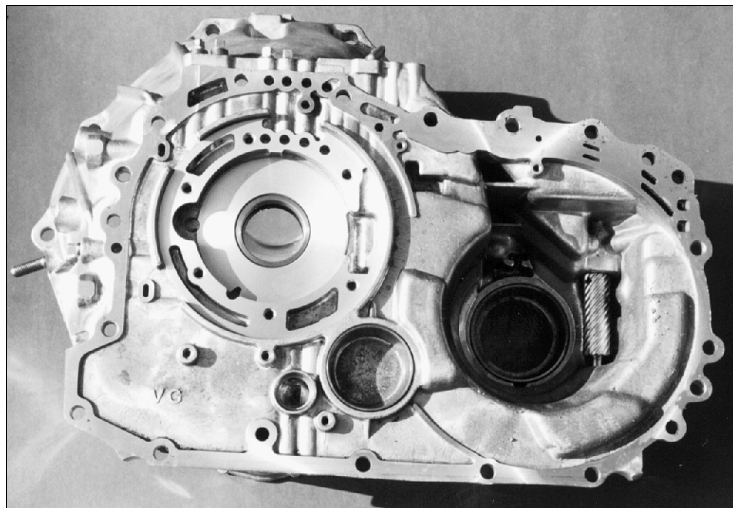
Part # 57132

Non electronic (early) Maxima's have two different size bolt holes along the bottom edge of the case. The two holes on the right side, under the differential area are approximately .350" in diameter. The two holes to their left, in line, are .425" in diameter. On the late, Maxima all four holes are the same size.

**Late Maxima
Electronic**

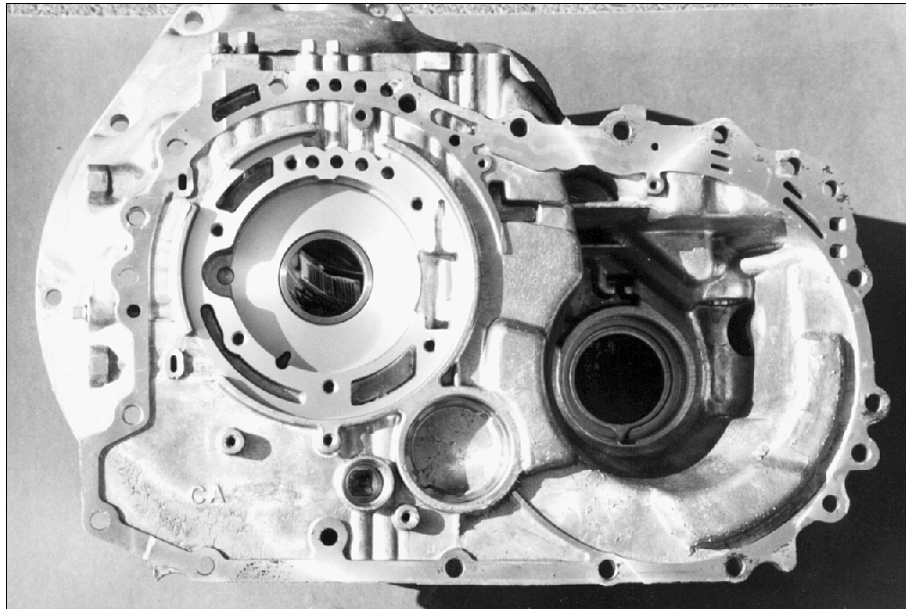
Part # 57133

**These bell housings are
also found in Sentras**



The starter mount for the early and Late Maxima is on the driver's side at eight o'clock.

Stanza – Early or Late?



As with the Maxima, early models have two different size bolt holes along the straight edge of the bottom of the bell housing. Late models have only one size.

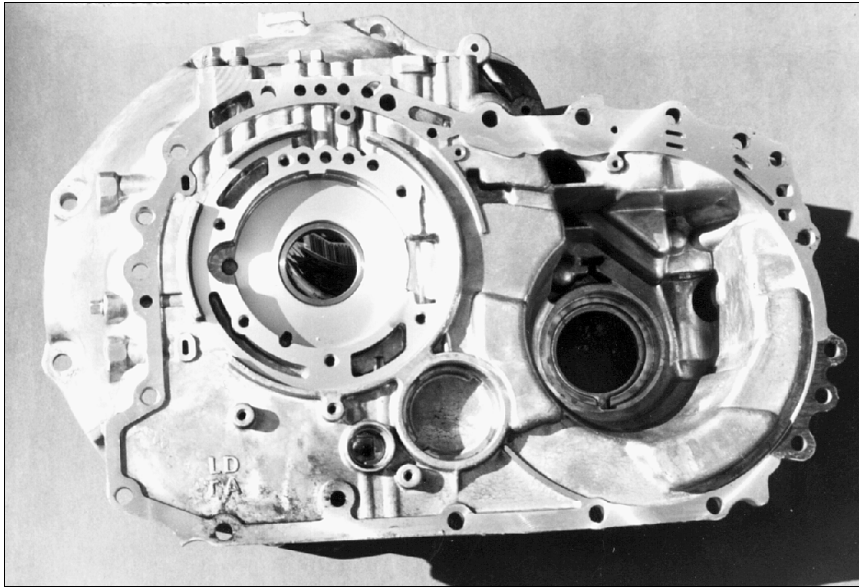


Starter mounting position

Part #
Early 57136
Late 57137

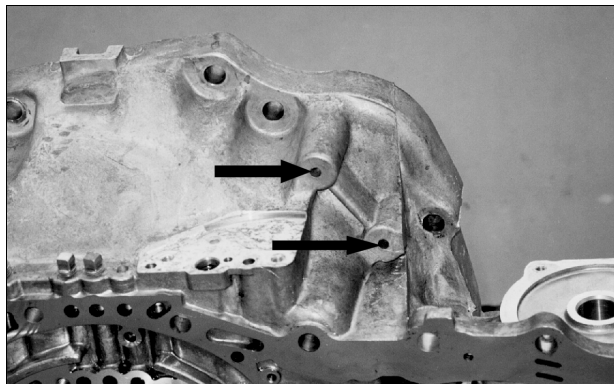
25.

2.4L Stanza, Pulsar & Posi-Track

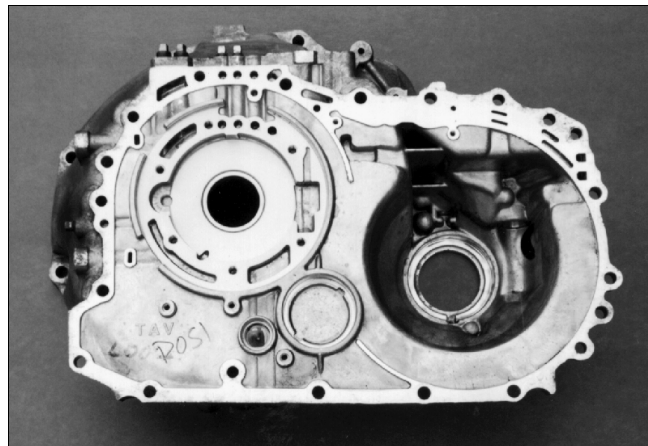


**Part #
57134**

Note raised areas on final drive surface. The 57135 posi-track bell housing is smooth in these areas. (See below)

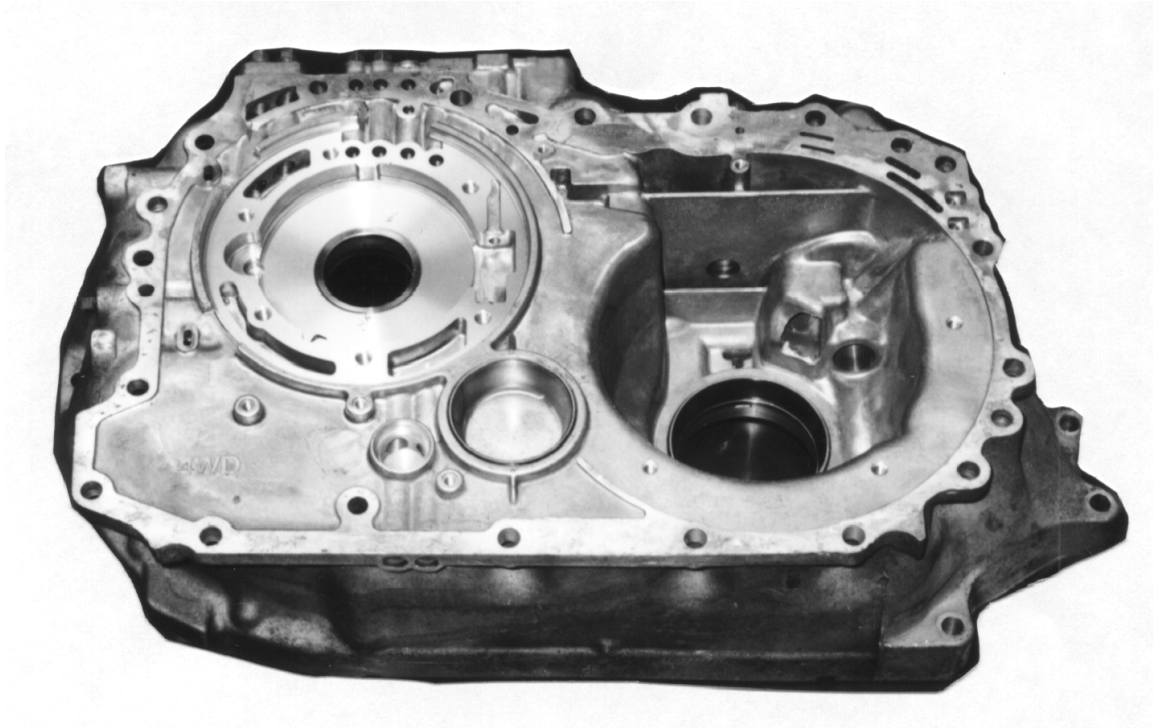


Notice the two drilled bosses behind starter mounting area



**Part #
57135
posi-track**
Note smooth area around differential area

3/85 – 7/89 Stanza Station Wagon 4WD



Omega Part # 57136A

SAAB

Bushings

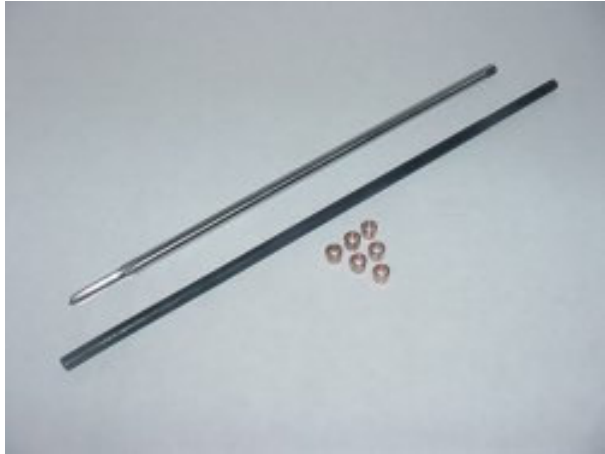
PART NO	DESCRIPTION AND SPECIFICATION
13423	ZF18 Saab 9000 Converter/pump bushing: Hub: 1.77"

Saturn

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
93405	MP6, MP7, TAAT Saturn clutch feed pipe bushings (See ATRA Tech bulletin #733)

Tools

DESCRIPTION AND SPECIFICATIONS	
	<p>Part # 93314</p> <p>This simple tool makes removing and installing the clutch feed pipe bushings a snap in the MP6, MP7, and TAAT Saturn transmissions.</p>

SUBARU

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
47423	R4AX-EL Subaru Legacy converter/pump bushing: '87-Up XT6Coups/2700CC, XTGL Coupe w/1800CC; Sta. wgn. W1800CC, 3&4 Dr. w/180CC, '90-Up Loyale Sedan & S/W; '90-Up Legacy, '92-Up SVX w/3.3L (6-Cyl); '93-Up Impreza.

Bushing Kit

PART NO	DESCRIPTION AND SPECIFICATION
47500	Subaru 4EAT (R4AX-EL) bushing kit. Includes converter bushing, extension housing bushing, front and rear converter sleeve, front stator support bushing, and rear stator support bushing (both sizes) '87-Up XT6Coups/2700CC, XTGL Coupe w/1800CC; Sta. wgn. W1800CC, 3&4 Dr. w/180CC, '90-Up Loyale Sedan & S/W; '90-Up Legacy, '92-Up SVX w/3.3L (6-Cyl); '93-Up Impreza.

SUZUKI

Bushings

PART NO	DESCRIPTION AND SPECIFICATION
46401	TH180,4L30E (MD3,4 3L30) Case bushing – prevents the bushing from walking forward into the planets, “hat style”, no walk design. Widely used in '87-up Post Office vehicles LLV. Suzuki Sidekick; SOME '77-'82 Fiat.
12423	A440F/A442F 1985-Up Toyota Landcruiser and Suzuki Samurai pump bushing - 4 sp. Rear wheel drive, w/OD. Transmission TAG-HJ60. For a wider pump bushing see our new 95423
53411 #	Suzuki Samurai (USA) extension housing bushing: '85-1995 Samurai 5-Speeds.
79411 #	Suzuki Samurai (Hawaiian) extension housing bushing: 1985 5-Speed

TOYOTA

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
28409	340 transfer case direct clutch drum bushing: 1985 -Up 4-Runner, 4WD, Pickup, 4WD,
12423	A440F/A442F 1985-Up Toyota Landcruiser and Suzuki Samurai pump bushing - 4 spd. Rear wheel drive, w/OD. Transmission TAG-HJ60. For a wider pump bushing see our new 95423
75411	Isuzu Impulse extension housing bushing: '85-'91 A44DL Impulse and Pickups; '83-Up Toyota 4Spd, OD with L/U.
61411 #	Toyota extension housing bushing: '86 R150 5-Speed V6; '87-'91 Supra Turbo.
72411 #	SR5SXB Toyota Corolla SR5 extension housing bushing: 1970-87 T50 5-Speed
97442 #	W56 5 speed shift shaft bushing. Center support and front housing.

Denotes a standard transmission or transfer case application

Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
28500	Toyota 340 transfer case direct clutch drum bushing kit: 1984-Up 4 Runner (Pickup). 1986-Up Jeep. (5-Piece Kit: Front Support, Ring Gear Flange, Center Support, Pilot, Direct Clutch Drum.

Sleeves

PART NO.	DESCRIPTION AND SPECIFICATIONS
76341	Toyota A40 series governor bore sleeve: Chrome-moly - Fits American Eagle/Southeast Tool

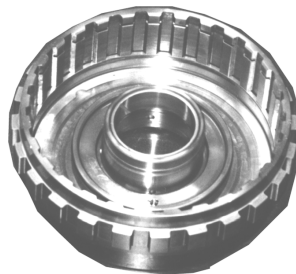
Hard Parts

Part NO.	DESCRIPTION AND SPECIFICATIONS
18063	130/140 Direct clutch drum with chrome-moly sleeve & new bushing (Toyota)
28063	340 Direct clutch drum, reman or new
76069	A40 series forward clutch drum repair ring cut. R&R only

Toyota Clutch Drums



130/140



28063
340 transfer case drum,

If you have a ring cut drum or the bushing is not serviceable, we can repair your drum or sell you one of our new or rebuilt drums.

Volvo

Hard Parts

DESCRIPTION AND SPECIFICATIONS
Cases – AW55 (Japan built), BW55 (England built), 3 Spd; AW70, AW71 4Spd Overdrive; AW70L, AW72L Overdrive W/Lock Up Governor bore repair.

VW

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
83423	ZF5HP19 Converter/pump bushing: 98- Audi A4, A6, A8; VW Passat; Porsche Boxster
90408	VW 096 K2 reverse clutch drum bushing: '90-Up Corrado; '95-'96 Cabrio; '93-'94 Golf; '93-'94 Jetta/GLX, 2.8; '90-'94 Passat
90423	Pump bushing, same applications as above.

ZF

Bushings

PART NO.	DESCRIPTION AND SPECIFICATIONS
13423	ZF18 Saab 9000 Converter/pump bushing: Hub: 1.77"
83423	ZF5HP19 Converter/pump bushing: 98- Audi A4, A6, A8; VW Passat; Porsche Boxster

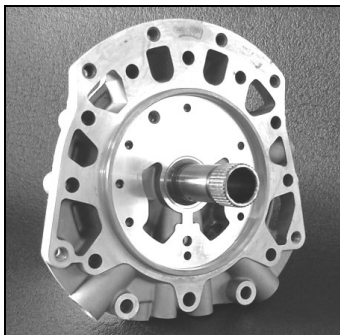
Bushing Kits

PART NO.	DESCRIPTION AND SPECIFICATIONS
67500	ZF4HP18 input and stator shaft bushing kit: '86-Up Alfa Romeo 164 w/Transverse, Citroen XM w/Transverse; '89-Up Dodge Monaco V6, In-Line, Porsche 944, Eagle Premier - In-Line; (2-pc. Kit) <i>Note: for 1986-Up Saab 9000 w/Transverse, use the direct shaft bushing only. Stator requires a custom bushing.</i>
68500	ZF4HP14 input and stator shaft bushing kit: '89-'91 Rover 214, Peugeot 405; '86-Up Citroen BX. (2-piece kit)

Hard Parts

DESCRIPTION AND SPECIFICATIONS

ZFHP22 Stator



Machined and new hardened stator shaft installed to prevent converter failure. With or without check valve.

Part # 87031

Please visit us on-line at: www.omegamachine.com

31.