

# Pole Position

**SKF**<sup>®</sup>

Form #457377

October, 2005

## ***Torque Specification Guide***

***Front and Rear Axle Nut Torque***

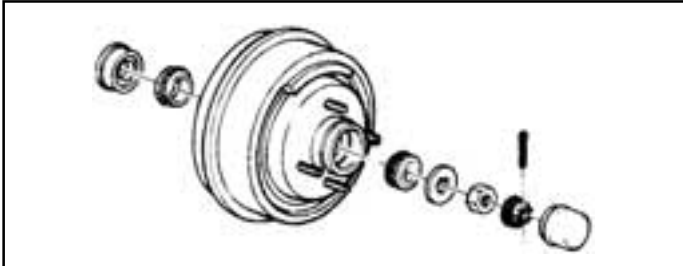
***Specifications for FWD and RWD Vehicles***



# Wheel Bearing Adjustment Procedures and Torques

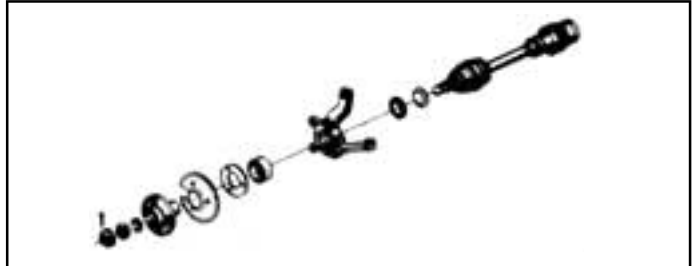
This book provides values to adjust or secure wheel bearings or wheel bearing units. Refer to the following diagrams to determine the type of bearing being serviced and the adjustment procedure or torque.

Note: Wheel Bearing adjustment procedures listed for trucks are for models with a full-floating axle only.



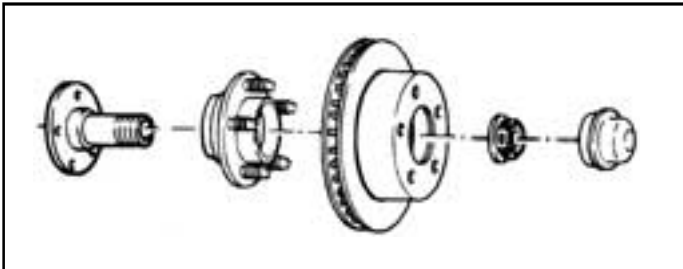
## Type 1

This is a typical adjustable tapered roller bearing. If the vehicle you are working on has this type of unit, find the Make, Model, and Year on the chart. Determine the procedure code and then look it up in the Adjustment Procedures table.



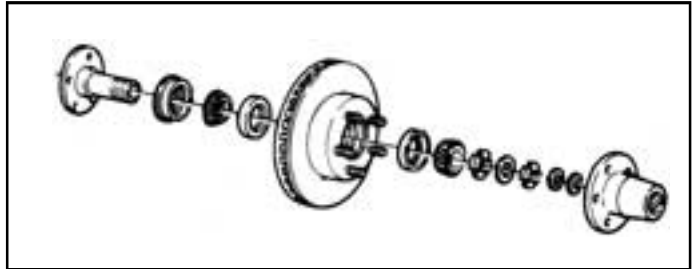
## Type 2

This is the most common type of FWD bearing unit and is becoming the most common 4WD bearing unit. The hub nut securing the driveshaft to the front suspension also locks the bearing unit. Find the Make, Model, and Year on the chart. The torque for the hub nut is listed after the application.



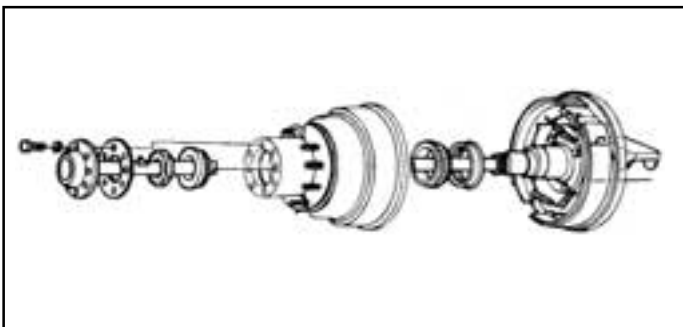
## Type 3

This bearing unit is becoming more common on late model vehicles. The hub nut secures the spindle to the bearing unit. Find the Make, Model, and Year on the chart. The torque for the hub nut is listed after the application.



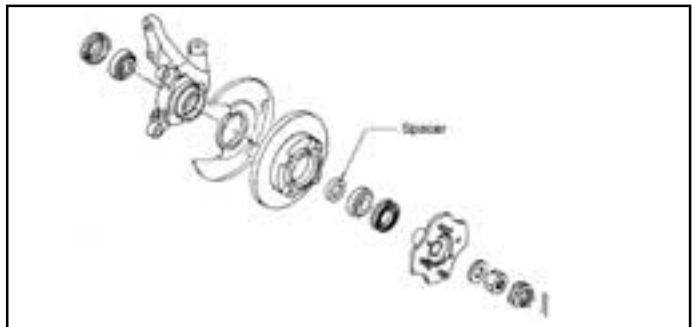
## Type 4

This bearing unit is typical of many early model 4WD trucks. The bearing unit in the front spindle is adjustable. Find the Make, Model, and Year on the chart. Determine the procedure code and then look it up in the Adjustment Procedures table.



## Type 5

This bearing unit represents the type found on optional full-floating rear truck axles. The bearing unit in the hub is adjustable. Find the Make, Model, and Year of truck on the chart. Determine the procedure code and then look it up in the Adjustment Procedures table.



## Type 6

This type of bearing unit is used on some imported cars and is similar to Type 2. However, a spacer is used to provide proper spacing between the inner and outer bearings. Be sure to reuse the spacer if not damaged or replace it using one of the same thickness. Find the Make, Model, and year on the chart and torque the hub nut to the specified value.

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>ACURA</b>			
1997-99	2.2CL, 2.3CL, 3.0CL	181/245	134/181
1995-98	2.5TL	181/245	134/181
2001-03	3.2TL	181/245	134/181
1996-03	3.2TL	181/245	134/181
1996-03	3.5RL	181/245	181/245
1986-01	Integra	134/181	134/181
1991-95	Legend	242/335	206/285
1986-90	Legend	180/244	180/244
2003	MDX	210/285	181/245
2001-02	MDX	181/245	181/245
2002-03	RSX	134/181	134/181
2002-03	RSX Type S	181/245	134/181
1996-99	SLX	IUA	—
1992-94	Vigor	181/245	134/181
<b>AMERICAN MOTORS</b>			
1980	AMX	AMB	—
1980-83	Concord	AMB	—
1980-88	Eagle	—	—
1980	Pacer	AMB	—
1980-83	Spirit	AMB	—
1977-79	All	AMB	—
1975-76	All	AMC	—
1971-74	All	AMD	—
1970	All	AMA	—
<b>AUDI</b>			
1992-94	100	148/200[30]	AIA
1989-91	100, 200	148/200[30]	AIA
1989-91	100 Quattro	148/200[30]	147/200[30]
	200 Quattro	148/200[30]	147/200[30]
1980-87	4000	167/226	AIA
1984-87	4000 Quattro	203/280	203/280
1978-88	5000	202/280	AIA
1984-88	5000 Quattro	202/280	—
1988-91	80	195/265	AIA
	80 Quattro	195/265	236/320
1992-95	90 FWD	148/200[30]	AIA
	90 AWD	81/110[30]	89/120[30]
1988-91	90	195/265	AIA
1992-95	90 Quattro	148/200[30]	177/240
1988-91	90 Quattro	195/265	236/320
2001-03	Allroad	[31]	[31]
1996-03	A4	[31]	AIA
	A4 Quattro	[31]	85/115[32]
1998-03	A6	[31]	—
	A6 Quattro	[31]	[31]
1995-97	A6	148/200[30]	AIA
	A6 Quattro	148/200[30]	148/200[30]
1997-03	A8	140/190[32]	140/190[32]
1994-98	Cabriolet	148/200[30]	AIA

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>AUDI - continued</b>			
1990-91	Coupe	195/265	AIA
1981-87	Coupe	167/226	AIA
1974-79	Fox	167/226	AIA
2000-03	S4	[31]	AIA
	S4 Quattro	[31]	85/115[32]
1992-94	S4 FWD	148/200[30]	AIA
	S4 AWD	148/200[30]	147/200[30]
2002-03	S6	[31]	[31]
1995	S6 FWD	148/200[30]	AIA
	S6 AWD	148/200[30]	148/200[30]
2001-03	S8	140/190[32]	140/190[32]
2000-03	TT FWD	[33]	129/175
	TT AWD	[33]	[33]
1990-94	V8 Quattro	148/200[30]	147/200[30]
<b>BMW</b>			
1996-03	RWD Models (Except 5 Series, 745 & Z8)	210/290	—
1983-95	All	210/290	—
1978-82	All	BWA[2]	—
1970-77	All	BWA	—
<b>BUICK</b>			
1998-03	Century	159/216	—
1997	Century	151/205	—
1996	Century	107/145	—
1995-92	Century	103/140[4]	—
1983-91	Century	185/260	—
1982	Century	225/290	—
1970-81	Century	GMA	—
1985-90	Electra	185/260	—
1980-84	Electra	GMA	—
1980-90	Estate Wagon	GMA	—
1998-03	LeSabre	118/160	—
1992-97	LeSabre	107/145	—
1986-91	LeSabre	185/260	—
1980-85	LeSabre	GMA	—
1998-03	Park Avenue	118/160	—
1992-97	Park Avenue	107/145	—
1991	Park Avenue	185/260	—
1991-88	Reatta	180/244	—
1998-03	Regal	159/215	—
1995-97	Regal	151/205	—
1988-94	Regal	184/250	—
1980-87	Regal	GMA	—
2002-03	Rendezvous	192/260	192/260
1999	Riviera	118/160	—
1995-98	Riviera	107/145	—
1986-93	Riviera	183/248	—
1980-85	Riviera	175/240	—
1991-96	Roadmaster	GMA	—

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>BUICK - continued</b>			
1982-88	Skyhawk .....	185/260	—
1980	Skyhawk .....	GMA	—
1998	Skylark .....	74/100[3]	—
1983-97	Skylark .....	185/260	—
1980-82	Skylark .....	225/290	—
1987-85	Somerset .....	185/260	—
1977-79	All .....	GMA	—
1970-76	All .....	GMB	—

<b>CADILLAC</b>			
1993	Allante .....	110/145	—
1992-87	Allante .....	183/245	—
1992-77	Brougham .....	GMA	—
1976-70	Calais .....	GMC	—
1997-01	Catera .....	236/320	—
1988-82	Cimarron .....	185/260	—
2003	CTS .....	—	118/160
2000-03	Deville .....	[5]	—
1992-99	Deville .....	118/160	—
1992-96	Deville .....	107/145	—
1985-91	Deville .....	180/244	—
1977-84	Deville .....	GMA	—
1970-76	Deville .....	GMC	—
1997-02	Eldorado .....	118/160	—
1993-96	Eldorado .....	107/145	—
1992	Eldorado .....	110/145	—
1991-86	Eldorado .....	180/244	—
1979-85	Eldorado .....	176/238	—
1970-78	Eldorado .....	110/145	—
2002-03	Escalade 2WD .....	—	GMQ[15]
2002-03	Escalade AWD .....	155/210	GMQ[15]
1999-00	Escalade 4WD .....	165/225	GMD[15]
2002-03	Escalade EST 2WD .....	—	GMQ[15]
	Escalade EST 4WD .....	155/210	GMQ[15]
2003	Escalade ESV .....	155/210	GMQ[15]
1993-96	Fleetwood .....	GMA	—
1992	Fleetwood .....	107/145	—
1985-91	Fleetwood .....	180/244	—
1984-77	Fleetwood .....	GMA	—
1976-70	Fleetwood .....	GMC	—
1984-77	Limousine .....	GMA	—
1997-03	Seville .....	118/160	—
1993-96	Seville .....	107/145	—
1992	Seville .....	110/145	—
1986-91	Seville .....	180/244	—
1980-85	Seville .....	176/238	—
1977-79	Seville .....	GMA	—
1976	Seville .....	GMC	—

<b>CHEVROLET</b>			
1980	Bel Air .....	GMA	—
1987-96	Beretta .....	185/260	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHEVROLET - continued</b>			
1993-02	Camaro .....	—	—
1980-92	Camaro .....	GMA	—
1980-96	Caprice .....	GMA	—
2002-03	Cavalier .....	148/200	—
1998-01	Cavalier .....	144/195	—
1982-97	Cavalier .....	185/260	—
1983-90	Celebrity .....	185/260	—
1982	Celebrity .....	225/290	—
1980-87	Chevette .....	GMA	—
1983-85	Citation .....	185/260	—
1980-82	Citation .....	225/290	—
1987-96	Corsica .....	185/260	—
1997-03	Corvette .....	—	118/160
1984-96	Corvette .....	—	164/223
1980-83	Corvette .....	GMA	100/130
1980-87	El Camino .....	GMA	—
2000-03	Impala .....	159/215	—
1980-96	Impala .....	GMA	—
1998-01	Lumina .....	159/216	—
1995-97	Lumina .....	151/205	—
1990-94	Lumina .....	184/250	—
1995-96	Lumina APV .....	104/145	—
1990-94	Lumina APV .....	185/260	—
1997-03	Malibu .....	[34]	—
1980-83	Malibu .....	GMA	—
1998-01	Metro .....	129/175	—
1998-03	Monte Carlo .....	159/215	—
1995-97	Monte Carlo .....	151/205	—
1980-88	Monte Carlo .....	GMA	—
1980	Monza .....	GMA	—
1985-88	Nova .....	137/186	90/123
1998-02	Prizm .....	166/225	—
1985-88	Spectrum .....	137/186	IUC
1989-91	Sprint .....	125/179	125/179
1985-88	Sprint .....	151/210	62/100
2002-03	Venture .....	118/160	192/260
1998-01	Venture .....	118/160	—
1997	Venture .....	151/205	—
1975-79	All .....	GMA	—
1970-74	All .....	GMB	—

<b>CHEVROLET/GMC TRUCKS</b>			
2003	Astro, Safari 2WD .....	—	—
1996-03	Astro, Safari AWD .....	147/200	—
1990-02	Astro, Safari 2WD .....	GMA	—
1990-95	Astro, Safari 4WD .....	180/244	—
1985-89	Astro, Safari .....	GMA	—
2002-03	Avalanche 2WD .....	—	GMQ[15]
	Avalanche 4WD .....	155/210	GMQ[15]
1992-94	Blazer, Yukon C/K .....	GMA	—
	Blazer, Yukon C/K .....	165/225	—
	Blazer, Yukon C/K .....	4WD	—

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHEVROLET/GMC TRUCKS - continued</b>			
1988-91	R/V Blazer, Jimmy R/V ..... 2WD	GMA	—
	Blazer, Jimmy R/V ..... 4WD	GMM[12]	—
	.....	GML[13]	—
1980-87	Blazer, Jimmy C/K ..... 4WD	GMM[12]	—
	.....	GML[13]	—
1979-87	Blazer, Jimmy C/K ..... 2WD	GMA	—
1974-79	Blazer, Jimmy 4WD .....	GMN	—
1973-78	Blazer, Jimmy 2WD .....	GMA	—
1973	Blazer, Jimmy 4WD .....	GMP	—
1970-72	Blazer, Jimmy 2WD .....	GMA	—
	Blazer, Jimmy 4WD .....	GMP	—
1997-00	C1500 2WD Pickup .....	GMA	—
1988-96	C1500 2WD Pickup .....	GMA	—
1979-86	C10, C1500 2WD Pickup ....	GMA	—
1973-78	C10, C1500 2WD Pickup ....	GMA	—
1970-72	C10, C1500 2WD Pickup ....	GMA	—
1997-00	C2500 2WD Pickup .....	GMA	GMD
1988-96	C2500 2WD Pickup .....	GMA	GMF
1979-86	C20, C2500 2WD Pickup ....	GMA	GMI[15] GMJ[11]
1973-78	C20, C2500 2WD Pickup ....	GMA	GMJ
1970-72	C20, C2500 2WD Pickup ....	GMA	GMJ[9] GMK[10] GMD[15] GME[14]
1997-00	C3500 2WD Pickup .....	GMA	GMF[15] GME[14]
1994-96	C3500 2WD Pickup .....	GMA	GMF[15] GMG[7]
1991-93	C3500 2WD Pickup .....	GMA	GMF[15] GMG[7]
1988-90	C3500 2WD Pickup .....	GMA	GMF[15] GMG[7]
1979-86	C30, C3500 2WD Pickup ....	GMA	GMI[15] GMJ[11]
1973-78	C30, C3500 2WD Pickup ....	GMA	GMJ
1970-72	C30, C3500 2WD Pickup ....	GMA	GMJ[9] GMK[10] GMQ[15]
2001-03	Denali 2WD .....	—	GMQ[15]
	Denali 4WD ..... 155/210	—	GMQ[15]
1999-00	Denali 2WD .....	GMA	GMD[15]
	Denali 4WD ..... 165/225	—	GMD[15]
1980-87	El Camino, Caballero .....	GMA	—
2002-03	Envoy 2WD .....	—	—
	Envoy 4WD ..... 103/140	—	—
1999-01	Envoy 4WD ..... 103/140	—	—
2003	G1500 Van 2WD .....	—	—
2003	G1500 Van AWD ..... 155/210	—	—
1996-02	G1500 Van .....	GMA	—
1992-96	G10, G1500 Van .....	GMA	—
1988-91	G10, G1500 Van .....	GMA	—
1979-87	G10, G1500 Van .....	GMA	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHEVROLET/GMC TRUCKS - continued</b>			
1973-78	G10, G1500 Van .....	GMA	—
1970-72	G10, G1500 Van .....	GMA	—
2003	G2500 Van .....	—	GMQ[15]
2001-02	G2500 Van .....	GMA	GMQ[15]
1998-00	G2500 Van .....	GMA	GMD
1996-97	G2500 Van .....	GMA	GMF
1992-96	G20, G2500 Van .....	GMA	—
1988-91	G20, G2500 Van .....	GMA	—
1979-87	G20, G2500 Van .....	GMA	—
1973-78	G20, G2500 Van .....	GMA	—
1970-72	G20, G2500 Van .....	GMA	—
2003	G3500 Van .....	—	GMQ[15]
2001-02	G3500 Van .....	GMA	GMQ[15]
1998-00	G3500 Van .....	GMA	GMD
1996-97	G3500 Van .....	GMA	GMF
1992-96	G30, G3500 Van .....	GMA	GMF
1988-91	G30, G3500 Van .....	GMA	GMG[7] GMI[8]
1983-87	G30, G3500 Van .....	GMA	GMI[15] GMG[7] GMJ[11]
1979-82	G30, G3500 Van .....	GMA	GMJ[15] GMH[7] GMJ[11]
1973-78	G30, G3500 Van .....	GMA	GMH[7] GMJ[8]
1970-72	G30, G3500 Van .....	GMA	GMH[7] GMJ[9] GMK[10]
1997-00	K1500 4WD Pickup ..... 165/225	165/225	—
1991-96	K1500 4WD Pickup ..... 165/225	165/225	—
1988-90	K1500 4WD Pickup ..... 175/235	175/235	—
1980-86	K10, K1500 4WD Pickup	GMM[12]	—
	.....	GML[13]	—
1979	K10, K1500 4WD LD Pickup .....	GMN	—
1974-78	K10, K1500 4WD LD Pickup .....	GMN	—
1973	K10, K1500 4WD LD Pickup .....	GMP	—
1970-72	K10, K1500 4WD LD Pickup .....	GMP	—
1997-00	K2500 4WD Pickup ..... 165/225	165/225	GMD
1991-96	K2500 4WD Pickup ..... 165/225	165/225	GMF
1988-90	K2500 4WD Pickup ..... 175/235	175/235	GMF
1980-86	K20, K2500 4WD Pickup	GMM[12]	GMI[15]
	.....	GML[13]	GMJ[11]
1979	K20, K2500 4WD Pickup	GMN	GMI[15]
	.....	—	GMJ[11]
1974-78	K20, K2500 4WD Pickup .....	GMN	GMJ
1973	K20, K2500 4WD Pickup .....	GMP	GMJ

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHEVROLET/GMC TRUCKS - continued</b>			
1970-72	K20, K2500 4WD Pickup .....	GMP	GMJ[9] GMK[10]
1997-00	K3500 4WD Pickup .....	165/225	GMD[15] GME[14]
1994-96	K3500 4WD Pickup .....	165/225	GMF[15] GME[14]
1991-93	K3500 4WD Pickup .....	165/225	GMF[15] GME[14]
1988-90	K3500 4WD Pickup .....	175/235	GMF[15] GME[14]
1983-86	K30, K3500 4WD Pickup .....	GMM[12] GML[13]	GMI[15] GMG[7] GMJ[11]
1980-82	K30, K3500 4WD Pickup .....	GMM[12] GML[13]	GMI[15] GMH[7] GMJ[11]
1979	K30, K3500 4WD Pickup .....	GMO	GMI[15] GMH[7] GMJ[11]
1977-78	K30, K3500 4WD Pickup .....	GMO	GMH[7] GMJ[8]
1973-76	K30, K3500 4WD Pickup .....	—	GMH[7] GMJ[8]
1970-72	K30, K3500 4WD Pickup .....	—	GMH[7] GMJ[9] GMK[10]
1972-82	LUV Pickup 2WD .....	GMA	—
1972-82	LUV Pickup 4WD .....	—	—
1987-91	R10, R1500 2WD Pickup .....	GMA	GMI
1987-91	R20, R2500 2WD Pickup .....	GMA	GMI
1987-91	R30, R3500 2WD Pickup .....	GMA	GMG[7] GMI[8]
1982-03	S Blazer, Jimmy 2WD .....	GMA	—
1997-03	S Blazer, Jimmy 4WD .....	103/140	—
1986-96	S Blazer, Jimmy, Typhoon, Syclone 4WD .....	180/245	—
1982-85	S Blazer, Jimmy 4WD .....	174/235	—
2001-03	Sierra, Silverado 2WD .....	—	GMQ[15]
	Sierra, Silverado 4WD .....	155/210	GMQ[15]
1999-00	Sierra, Silverado 2WD .....	—	GMD[15]
	Sierra, Silverado 4WD .....	155/210	GMD[15]
1982-03	S10, Sonoma, S15 2WD .....	GMA	—
1997-03	S10, Sonoma, S15 4WD .....	103/140	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHEVROLET/GMC TRUCKS - continued</b>			
1986-96	S10, Sonoma, S15 4WD .....	180/244	—
1982-85	S10, Sonoma, S15 4WD .....	174/235	—
2001-03	Suburban 2WD .....	—	GMQ[15]
	Suburban 4WD .....	155/210	GMQ[15]
1997-00	Suburban 2WD .....	GMA	GMD
	Suburban 4WD .....	165/225	GMD
1992-96	Suburban 2WD .....	GMA	GMF
	Suburban 4WD .....	165/225	GMF
1988-91	Suburban 2WD .....	GMA	GMI
	Suburban 4WD .....	GMM[12] GML[13]	GMJ
1980-87	Suburban 4WD .....	GMM[12] GMM[13]	GMI[15] GMJ[11]
1979-87	Suburban 2WD .....	GMA	GMI[15] GMJ[11]
1979	Suburban 4WD .....	GMN	GMI[15] GMJ[11]
1974-78	Suburban 4WD .....	GMN	GMJ
1973-78	Suburban 2WD .....	GMA	GMJ
1973	Suburban 4WD .....	GMP	GMJ
1970-72	Suburban 2WD .....	GMA	GMJ[9] GMK[10]
	Suburban 4WD .....	GMP	GMJ[9] GMK[10]
2001-03	Tahoe, Yukon 2WD .....	—	—
	Tahoe, Yukon 4WD .....	155/210	—
1997-00	Tahoe, Yukon 2WD .....	GMA	—
	Tahoe, Yukon 4WD .....	165/225	—
1995-96	Tahoe, Yukon 2WD .....	GMA	—
	Tahoe, Yukon 4WD .....	165/225	—
1999-03	Tracker .....	159/216	—
1998	Tracker .....	155/210	—
2002-03	Trailblazer 2WD .....	—	—
	Trailblazer 4WD .....	103/140	—
1987-91	V10, V1500 4WD Pickup .....	GMM[12] GML[13]	GMI —
1987-91	V20, V2500 4WD Pickup .....	GMM[12] GML[13]	GMI —
1987-91	V30, V3500 4WD Pickup .....	GMM[12] GMM[13]	GMG[7] GMI[8]
2001-03	Yukon XL 2WD .....	—	GMQ[15]
	Yukon XL 4WD .....	155/210	GMQ[15]
2000	Yukon XL 2WD .....	—	GMD
	Yukon XL 4WD .....	155/210	GMD
<b>CHRYSLER</b>			
2000	Cirrus .....	105/142	185/250
1995-99	Cirrus .....	180/244	185/250

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>CHRYSLER - continued</b>			
2001-04	Concorde .....	105/142	124/168
1995-00	Concorde .....	120/163	124/168
1993-94	Concorde .....	80/108	125/170
1987-89	Conquest .....	CRB	—
1982-83	Cordoba .....	CRA	—
1984-93	Daytona .....	180/244	CRC
1988-93	Dynasty .....	180/244	CRC
1983-84	E Class .....	180/244	CRC
1990-93	Fifth Ave. ....	180/244	CRC
1982-89	Fifth Ave. ....	CRA	—
1990-93	Imperial .....	180/244	CRC
1982-83	Imperial .....	CRA	—
1984-86	Laser .....	180/244	CRC
1982-95	LeBaron .....	180/244	CRC
2001-02	LHS .....	105/142	124/168
1995-00	LHS .....	120/163	124/168
1994	LHS .....	80/108	125/170
1995-96	New Yorker .....	120/163	124/168
1994	New Yorker .....	80/108	125/170
1983-93	New Yorker .....	180/244	CRC
1982	New Yorker .....	CRA	—
1982-87	Newport .....	CRA	—
2004	Pacifica .....	180/244	180/244
2001-03	PT Cruiser .....	180/244	160/217
2001-02	Prowler .....	—	105/141
2003-04	Sebring Convertible .....	150/203	185/250
2001-02	Sebring Convertible .....	110/150	185/250
2000	Sebring Convertible .....	105/142	185/250
1996-99	Sebring Convertible .....	180/244	185/250
1995-03	Sebring Coupe .....	167/226	—
2003-04	Sebring Sedan .....	150/203	185/250
2001-02	Sebring Sedan .....	110/150	185/250
1989-91	TC .....	180/244	—
1999-03	Town & Country .....	180/244	180/244
	AWD		
	Town & Country .....	180/244	—
	FWD		
1990-98	Town & Country .....	180/244	—
	AWD		
	Town & Country .....	180/244	CRC
	FWD		
2001-03	Voyager AWD .....	180/244	180/244
	Voyager FWD .....	180/244	—
2001-04	300M .....	105/142	124/168
1999-00	300M .....	120/163	124/168
1970-81	All .....	CRA	—
<b>DAEWOO</b>			
2000-02	Lanos .....	DAA	DAB
1999	Lanos .....	DAA	DAC
2001-02	Leganza .....	DAE	207/280
1999-00	Leganza .....	DAA	210/285
2001-02	Nubira .....	DAA	DAD

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>DAEWOO - continued</b>			
1999-00	Nubira .....	DAA	DAD
<b>DAIHATSU</b>			
1988-92	Charade .....	148/201	144/106
1990-92	Rocky .....	DHA	—
<b>DODGE/PLYMOUTH</b>			
1978-82	024, TC3 .....	180/244	CRC
1982-83	400 .....	180/244	CRC
1982-88	600, Caravelle FWD .....	180/244	CRC
1981-89	Aries, Reliant .....	180/244	CRC
1978-80	Aspen, Volare .....	CRA	—
1995-00	Avenger .....	167/226	—
2000	Breeze .....	105/142	185/250
1996-99	Breeze .....	180/244	185/250
1999-03	Caravan, Voyager .....	180/244	180/244
	AWD		
	Caravan, Voyager .....	180/244	—
	FWD		
1990-98	Caravan, Voyager .....	180/244	—
	AWD		
	Caravan, Voyager .....	180/244	CRC
	FWD		
1984-89	Caravan, Voyager .....	180/244	CRC
1978-83	Challenger, Saporro .....	CRB	—
1982-87	Charger, Turismo .....	180/244	CRC
1978-79	Charger .....	CRA	—
1993-94	Colt .....	167/226	130/180
1989-92	Colt .....	167/226	127/175
1985-88	Colt .....	167/226	90/125
1979-84	Colt, Champ FWD .....	167/226	CRB
1971-80	Colt RWD, Arrow .....	CRB	—
1984-86	Conquest .....	CRB	—
1984-93	Daytona .....	180/244	CRC
1977-89	Diplomat, Grand Fury .....	CRA	—
1988-93	Dynasty .....	180/244	CRC
2001-04	Intrepid .....	105/142	124/168
1995-00	Intrepid .....	120/163	124/168
1993-94	Intrepid .....	80/108	125/170
1985-89	Lancer .....	180/244	CRC
1978-79	Magnum .....	CRA	—
1980-83	Mirada .....	CRA	—
1990-92	Monaco .....	181/245	123/167
1978	Monaco, Fury .....	CRA	—
2000-03	Neon .....	180/244	160/217
1996-98	Neon .....	135/183	160/217
1995	Neon .....	150/203	160/217
2003	Neon SRT-4 .....	180/244	160/217
1978-90	Omni, Horizon .....	180/244	CRC
1997-00	Prowler .....	—	105/141
1982-84	Rampage, Scamp .....	180/244	—
1987-94	Shadow, Sundance .....	180/244	CRC

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>DODGE/PLYMOUTH - continued</b>			
1989-95	Spirit, Acclaim .....	180/244	CRC
1979-81	St. Regis .....	CRA	—
1991-96	Stealth 4WD .....	166/225	203/280
	Stealth FWD .....	166/225	166/225
2001-03	Stratus Coupe .....	167/226	—
2003-04	Stratus Sedan .....	150/203	185/250
2001-02	Stratus Sedan .....	110/145	185/250
2000	Stratus Sedan .....	105/142	185/250
1995-99	Stratus Sedan .....	180/244	185/250
1990-94	Laser 4WD .....	167/226	138/190
	Laser FWD .....	167/226	166/225
1997-03	Viper .....	—	190/258
1992-94	Vista .....	167/226	166/225
1984-91	Vista 4WD .....	165/224	—
	Vista FWD .....	165/224	CRB
1970-77	All .....	CRA	—

<b>DODGE/PLYMOUTH TRUCKS</b>			
1980	B100 Van .....	DTB	DTE[17] DTD[18]
1970-79	B100 Van .....	DTB	DTE
1985-93	B150 Van .....	DTB	DTD
1981-84	B150 Van .....	DTB	DTE[17] DTD[18]
	.....	.....	.....
2002-03	B1500 Van .....	DTK	DTC
1994-01	B1500 Van .....	DTB	DTC
1980	B200 Van .....	DTB	DTE[17] DTD[18]
1970-79	B200 Van .....	DTB	DTE
1985-93	B250 Van .....	DTB	DTD
1981-84	B250 Van .....	DTB	DTE[17] DTD[18]
	.....	.....	.....
2002-03	B2500 Van .....	DTK	DTC
1994-01	B2500 Van .....	DTB	DTC
1994-98	B2500 Van .....	DTB	DTC
1980	B300 Van .....	DTB	DTE[17] DTD[18]
1970-79	B300 Van .....	DTB	DTE
1985-93	B350 Van .....	DTB	DTD
1981-84	B350 Van .....	DTB	DTE[17] DTD[18]
	.....	.....	.....
2002-03	B3500 Van .....	DTK	DTC
1994-01	B3500 Van .....	DTB	DTC
1994-97	B3500 Van .....	DTB	DTC
1985-93	D100, D150 2WD Pickup .....	DTB	DTD
1980-84	D100, D150 2WD Pickup .....	DTB	DTE[17] DTD[18]
	.....	.....	.....
1970-79	D100 2WD Pickup .....	DTB	DTE
1980	D200 2WD Pickup .....	DTB	DTE[17] DTD[18]
1970-79	D200 2WD Pickup .....	DTB	DTE

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>DODGE/PLYMOUTH TRUCKS - continued</b>			
1985-93	D250 2WD Pickup .....	DTB	DTD[18]
1981-84	D250 2WD Pickup .....	DTB	DTE[17] DTD[18]
	.....	.....	.....
1980	D300 2WD Pickup .....	DTB	DTE[17] DTD[18]
1970-79	D300 2WD Pickup .....	DTB	DTE
1985-93	D350 2WD Pickup .....	DTB	DTD
1981-84	D350 2WD Pickup .....	DTB	DTD DTE
	.....	.....	.....
1979-81	Arrow, D50 Pickup 2WD .....	CRD	—
	Arrow, D50 Pickup 4WD .....	DTF	—
1997-03	Dakota 2WD .....	185/251	—
	Dakota 4WD .....	180/244	—
1987-96	Dakota 2WD .....	DTB	—
	Dakota 4WD .....	190/258	—
1997-03	Durango 2WD .....	185/251	—
	Durango 4WD .....	180/244	—
1987-89	Raider .....	DTF	—
	.....	.....	.....
2002-03	Ram 1500 Pickup 2WD .....	—	—
	Ram 1500 Pickup 4WD .....	185/251	—
2000-01	Ram 1500 Pickup 2WD .....	185/251	DTC
	Ram 1500 Pickup 4WD .....	180/244[16]	DTC
1996-99	Ram 1500 Pickup 2WD .....	DTA	DTC
	Ram 1500 Pickup 4WD .....	175/237[16]	DTC
1994-95	Ram 1500 Pickup 2WD .....	DTA	DTC
	Ram 1500 Pickup 4WD .....	180/244[16]	DTC
2003	Ram 2500 Pickup 2WD .....	—	DTL
	Ram 2500 Pickup 4WD .....	[38]	DTL
2000-02	Ram 2500 Pickup 2WD .....	280/380	DTC
	Ram 2500 Pickup 4WD .....	180/244[16]	DTC
1996-99	Ram 2500 Pickup 2WD .....	DTA	DTC
	Ram 2500 Pickup 4WD .....	175/237[16]	DTC
1994-95	Ram 2500 Pickup 2WD .....	DTA	DTC
	Ram 2500 Pickup 4WD .....	180/244[16]	DTC



## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>DODGE/PLYMOUTH TRUCKS - continued</b>			
2003	Ram 3500 Pickup ..... — 2WD		DTL
	Ram 3500 Pickup ..... [38] 4WD		DTL
2000-02	Ram 3500 Pickup ..... 280/380 2WD		DTC
	Ram 3500 Pickup ..... 180/244[16] 4WD		DTC
1996-99	Ram 3500 Pickup ..... DTA 2WD		DTC
	Ram 3500 Pickup ..... 175/237[16] 4WD		DTC
1994-95	Ram 3500 Pickup ..... DTA 2WD		DTC
	Ram 3500 Pickup ..... 180/244[16] 4WD		DTC
1981-93	Ram 50 Pickup 2WD ..... CRD		—
	Ram 50 Pickup 4WD ..... DTF		—
1993-80	Ramcharger, Trail Duster 4WD ..... DTG		—
1980-93	Ramcharger, Trail Duster 4WD ..... DTG		—
1974-93	Ramcharger, Trail Duster 4WD ..... DTB		—
1974-79	Ramcharger, Trail ..... 100/136 Duster 4WD		—
1985-93	W100, W150 4WD ..... DTG Pickup		DTD
1980-84	W100, W150 4WD ..... DTG Pickup		DTE[17] DTD[18]
1977-79	W100 4WD Pickup ..... 100/136		DTE
1973-76	W100 4WD Pickup ..... DTG		DTE
1980	W200 HD 4WD Pickup ..... DTI		DTE[17] DTD[18]
1977-79	W200 HD 4WD Pickup ..... DTI		DTE
1970-76	W200 HD 4WD Pickup ..... —		DTE
1980	W200 LD 4WD Pickup ..... DTG		DTE[17] DTD[18]
1977-79	W200 LD 4WD Pickup .... 100/136		DTE
1970-76	W200 LD 4WD Pickup ..... —		DTE
1985-93	W250 HD 4WD Pickup ..... DTG		DTD
1981-84	W250 HD 4WD Pickup ..... DTG		DTE[17] DTD[18]
1992-93	W250 LD 4WD Pickup ..... DTH		DTD
1985-91	W250 LD 4WD Pickup ..... DTI		DTD
1981-84	W250 LD 4WD Pickup ..... DTI		DTE[17] DTD[18]
1980	W300 4WD Pickup ..... DTI		DTE[17] DTD[18]
1977-79	W300 4WD Pickup ..... DTI		DTE
1970-76	W300 4WD Pickup ..... —		DTE
1992-93	W350 4WD Pickup ..... DTH		DTD
1985-91	W350 4WD Pickup ..... DTI		DTD

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>DODGE/PLYMOUTH TRUCKS - continued</b>			
1981-84	W350 4WD Pickup ..... DTI		DTE[17] DTD[18]
<b>EAGLE</b>			
1988	Eagle Wagon ..... —		—
1988-89	Medallion ..... —		—
1988-92	Premier ..... 181/245		123/167
1993-96	Summit ..... 167/226		130/180
1989-92	Summit ..... 167/226		127/175
1992-96	Summit Wagon ..... 167/226		166/225
1989-91	Summit Wagon 4WD ..... 165/224		CRB
	Summit Wagon FWD ..... 165/224		CRB
1995-98	Talon 4WD ..... 167/226		167/226
	Talon FWD ..... 167/226		—
1990-94	Talon 4WD ..... 167/226		138/190
	Talon FWD ..... 167/226		167/226
1995-97	Vision ..... 120/163		124/168
1993-94	Vision ..... 80/108		125/170
<b>FORD/MERCURY</b>			
1994-97	Aspire ..... 145/196		75/105
1992-94	Capri ..... 145/196		FDC
1998-00	Contour, Mystique ..... 199/270		210/290
1995-97	Contour, Mystique ..... 246/334		210/290
1999-02	Cougar ..... 214/290		214/290
1981-91	Country Squire, ..... FDA Colony Park		—
2003	Crown Victoria, Grand ..... — Marquis, Marauder		—
1992-02	Crown Victoria, ..... 221/300 Grand Marquis		—
1983-91	Crown Victoria, Grand ..... FDA Marquis		—
2000-02	Escort ..... 205/277		152/206
1991-99	Escort, Tracer ..... 205/277		152/206
1981-90	Escort, Lynx, EXP, LN7 ... 190/255		FDA
1970-80	Fairlane ..... FDA		—
1981-83	Fairmont, Zephyr ..... FDA		—
1989-93	Festiva ..... 145/196		FDB
2000-03	Focus ..... 233/316		173/235
1981-82	Granada, Cougar ..... FDA		—
1981-86	LTD, Marquis ..... FDA		—
1996-98	Mountaineer ..... 195/270		—
1999-03	Mustang Cobra ..... 258/350		240/325
1994-03	Mustang ..... 258/350		—
1981-93	Mustang, Capri ..... FDA		—
1993-97	Probe ..... 205/277		154/206
1989-92	Probe ..... 205/277		100/136
2000-03	Taurus, Sable ..... 184/250		221/300
1986-99	Taurus, Sable ..... 190/258		221/300
1984-94	Tempo, Topaz ..... 190/255		FDA
2002-03	Thunderbird ..... —		302/410

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>FORD/MERCURY - continued</b>			
1989-97	Thunderbird, Cougar .....	221/300	221/300
1981-88	Thunderbird, Cougar ..... XR7	FDA	—
1987-89	Tracer .....	145/196	—
1993-02	Villager .....	203/275	178/240
2000-03	Windstar .....	184/250	221/300
1998-99	Windstar .....	186/252	221/300
1995-97	Windstar .....	194/263	FDD
1998-03	ZX2 .....	205/277	152/206

<b>FORD/MERCURY TRUCKS</b>			
1995-97	Aerostar 2WD .....	FTA	—
	Aerostar 4WD .....	185/257	—
1986-94	Aerostar 2WD .....	FTA	—
	Aerostar 4WD .....	190/260	—
1995-96	Bronco .....	FTM[20]	—
	Bronco .....	FTQ[21]	—
1986-94	Bronco .....	FTL[20]	—
	Bronco .....	FTO[21]	—
1981-85	Bronco .....	FTJ	—
1977-80	Bronco .....	FTE	—
1973-76	Bronco .....	FTI	—
1970-72	Bronco .....	FTF	—
1983-90	Bronco II 2WD .....	FTA	—
	Bronco II 4WD .....	FTU[20]	—
	.....	FTV[21]	—
1972-82	Courier .....	FTD	—
1970-76	E100 Van .....	FTC	—
1998-03	E150 Van .....	FTY	—
1977-97	E150 Van .....	FTB	—
1976	E150 Van .....	FTC	—
1975	E200 Van .....	FTC	FTH
1971-74	E200 Van .....	FTC	FTG
1998-03	E250 Van .....	FTY	—
1987-97	E250 Van .....	FTB	FTT[23]
	.....	.....	FTS[24]
1977-86	E250 Van .....	FTB	FTH
1975-76	E250 Van .....	FTC	FTH
1970-74	E250 Van .....	FTC	FTG
1970-71	E300 Van .....	FTC	FTG
1998-03	E350 Van .....	FTY	FTZ[24]
1987-97	E350 Van .....	FTB	FTT[23]
	.....	.....	FTS[24]
1977-86	E350 Van .....	FTB	FTH
1975-76	E350 Van .....	FTC	FTH
1972-74	E350 Van .....	FTC	FTG
1998-03	E450 Van .....	FTY	FTZ[24]
2003	E550 Van .....	—	FTZ[24]
2001-03	Escape .....	214/290	214/290
2000-03	Excursion .....	FTY	FT1[23]
	.....	.....	FTZ[24]
2003	Expedition 2WD .....	—	250/338
	Expedition 4WD .....	20/27	250/338

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>FORD/MERCURY TRUCKS - continued</b>			
1997-02	Expedition 2WD .....	FTN	—
	Expedition 4WD .....	221/300	—
2002-03	Explorer, Mountaineer .....	—	203/275
	2WD		
	Explorer, Mountaineer .....	184/250	203/275
	4WD		
2001	Explorer, Mountaineer .....	—	—
	2WD		
	Explorer, Mountaineer .....	184/250	—
	4WD		
1997-00	Explorer, Mountaineer .....	FT2	—
	2WD		
	Explorer, Mountaineer .....	184/250	—
	4WD		
1995-96	Explorer 2WD .....	FTA	—
	Explorer 4WD .....	195/270	—
1993-94	Explorer 4WD .....	FTW[20]	—
	.....	FTX[21]	—
1991-94	Explorer 2WD .....	FTA	—
1991-92	Explorer 4WD .....	FTU[20]	—
	.....	FTV[21]	—
2001-03	Explorer Sport & .....	FT2	—
	Sport-Trac 2WD		
	Explorer Sport & .....	184/250	—
	Sport-Trac 4WD		
1981-83	F100 Pickup 4WD .....	FTJ	—
1977-83	F100 Pickup 2WD .....	FTB	—
1977-80	F100 Pickup 4WD .....	FTE	—
1973-76	F100 Pickup 4WD .....	FTI	—
1970-76	F100 Pickup 2WD .....	FTC	—
1970-72	F100 Pickup 4WD .....	FTF	—
1997-03	F150 Pickup 2WD .....	FTY	—
1977-96	F150 Pickup 2WD .....	FTB	—
1970-76	F150 Pickup 2WD .....	FTC	—
1997-03	F150 Pickup 4WD .....	221/300	—
1996	F150 Pickup 4WD .....	FTM[20]	—
	.....	FTR[21]	—
1995	F150 Pickup 4WD .....	FTM[20]	—
	.....	FTQ[21]	—
1994	F150 Pickup 4WD .....	FTQ[21]	—
	.....	FTL[20]	—
1986-93	F150 Pickup 4WD .....	FTL[20]	—
	.....	FTO[21]	—
1981-85	F150 Pickup 4WD .....	FTJ	—
1977-80	F150 Pickup 4WD .....	FTE	—
1973-76	F150 Pickup 4WD .....	FTI	—
1970-72	F150 Pickup 4WD .....	FTF	—
1997-98	F250 LD Pickup 4WD .....	221/300	—
1996	F250 LD Pickup 4WD .....	FTM[20]	—
	.....	FTR[21]	—
1995	F250 LD Pickup 4WD .....	FTM[20]	—
	.....	FTQ[21]	—
1994	F250 LD Pickup 4WD .....	FTL[20]	—
	.....	FTQ[21]	—

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>FORD/MERCURY TRUCKS - continued</b>			
1986-93	F250 LD Pickup 4WD .....	FTL[20]	—
	.....	FTO[21]	—
1981-85	F250 LD Pickup 4WD .....	FTJ[19]	—
	.....	FTK[22]	—
1977-80	F250 LD Pickup 4WD .....	FTE	—
1973-76	F250 LD Pickup 4WD .....	FTI	—
1970-72	F250 LD Pickup 4WD .....	FTF	—
1997-98	F250 LD Pickup 2WD .....	FTP	—
1977-96	F250 LD Pickup 2WD .....	FTB	—
1970-76	F250 LD Pickup 2WD .....	FTC	—
1987-97	F250 HD Pickup 2WD .....	FTB	FTT[23]
	.....		FTS[24]
1981-86	F250 HD Pickup 2WD .....	FTB	FTH
1977-80	F250 HD Pickup 2WD .....	FTB	FTG
1970-76	F250 HD Pickup 2WD .....	FTC	FTG
1996-97	F250 HD Pickup 4WD .....	FTM[20]	FTT[23]
	.....	FTR[21]	FTS[24]
1995	F250 HD Pickup 4WD .....	FTM[20]	FTT[23]
	.....	FTQ[21]	FTS[24]
1994	F250 HD Pickup 4WD .....	FTL[20]	FTT[23]
	.....	FTQ[21]	FTS[24]
1987-93	F250 HD Pickup 4WD .....	FTL[20]	FTT[23]
	.....	FTO[21]	FTS[24]
1986	F250 HD Pickup 4WD .....	FTL[20]	FTH
	.....	FTO[21]	
1981-85	F250 HD Pickup 4WD .....	FTJ[19]	FTH
	.....	FTK[22]	
1977-80	F250 HD Pickup 4WD .....	FTE	FTG
1973-76	F250 HD Pickup 4WD .....	FTI	FTG
1970-72	F250 HD Pickup 4WD .....	FTF	FTG
1988-97	F350 Pickup 2WD .....	FTB	FTT[23]
	.....		FTS[24]
1987	F350 Pickup 2WD .....	FTB	FTT[23]
	.....		FTS[24]
1981-86	F350 Pickup 2WD .....	FTB	FTH
1977-80	F350 Pickup 2WD .....	FTB	FTG
1970-76	F350 Pickup 2WD .....	FTC	FTG
1996-97	F350 Pickup 4WD .....	FTR	FTT[23]
	.....		FTS[24]
1994-95	F350 Pickup 4WD .....	FTQ	FTT[23]
	.....		FTS[24]
1987-93	F350 Pickup 4WD .....	FTO	FTT[23]
	.....		FTS[24]
1986	F350 Pickup 4WD .....	FTO	FTH
1981-85	F350 Pickup 4WD .....	FTK	FTH
1977-80	F350 Pickup 4WD .....	FTE	FTG
1973-76	F350 Pickup 4WD .....	FTI	FTG
1970-72	F350 Pickup 4WD .....	FTF	FTG
1999-03	F Super Duty 250-550 .....	FTY	FT1[23]
	.....		FTZ[24]
2001-03	Ranger 2WD .....	FT2	—
	Ranger 4WD .....	162/220	—
1998-00	Ranger 2WD .....	FTA	—
	Ranger 4WD .....	[25]	

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>FORD/MERCURY TRUCKS - continued</b>			
1995-97	Ranger 2WD .....	FTA	—
1983-94	Ranger 2WD .....	FTA	—
1993-97	Ranger 4WD .....	FTW[20]	—
	.....	FTX[21]	—
1983-92	Ranger 4WD .....	FTU[20]	—
	.....	FTV[21]	—
<b>GEO</b>			
1989-97	Metro .....	129/175	129/175
1993-97	Prizm .....	159/216	—
1989-92	Prizm .....	137/186	90/123
1989	Spectrum .....	137/186	IUC
1990-93	Storm .....	137/186	—
1989-97	Tracker .....	155/210	—
<b>GMC TRUCKS-See CHEVROLET/GMC TRUCKS</b>			
<b>HONDA</b>			
2003	Accord 2.4L A/T .....	134/181	134/181
	Accord 2.4L M/T .....	181/245	134/181
	Accord 3.0L .....	181/245	134/181
1990-02	Accord .....	181/245	134/181
1986-89	Accord .....	134/181	134/181
1983-85	Accord .....	137/190	HAA
1976-82	Accord .....	108/150	HAA
1984-03	Civic .....	134/181	134/181
1973-83	Civic .....	108/150	HAA
1997-03	CR-V .....	181/245	134/181
1984-91	CRX .....	134/181	134/181
1993-97	Del Sol .....	134/181	134/181
2003	Element .....	181/245	134/181
2000-03	Insight .....	134/181	119/162
1995-03	Odyssey .....	181/245	181/245
1994-02	Passport 2WD & 4WD .....	IUA	—
2003	Pilot .....	181/245	181/245
1992-01	Prelude .....	181/245	134/181
1990-91	Prelude .....	181/245	181/245
1983-89	Prelude .....	134/181	HAA
1982-79	Prelude .....	108/150	HAA
2000-03	S2000 .....	242/329	181/245
<b>HYUNDAI</b>			
2001-03	Accent .....	175/237	167/226
1995-00	Accent .....	170/230	147/200
2001-03	Elantra .....	170/230	170/230
1998-00	Elantra .....	170/230	158/215
1996-97	Elantra .....	170/230	148/200
1992-95	Elantra .....	170/230	129/175
1990-94	Excel .....	170/230	129/175
1986-89	Excel .....	170/230	HIA

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>HYUNDAI - continued</b>			
2001-03	Santa Fe .....	170/230	170/230
1991-95	Scoupe .....	170/230	127/175
2002-03	Sonata .....	177/240	177/240
1995-01	Sonata .....	170/230	167/226
1992-94	Sonata .....	170/230	196/270
1989-91	Sonata .....	170/230	HIA
2003	Tiburon 2.0L .....	170/230	170/230
	Tiburon 2.7L .....	177/240	170/230
1997-01	Tiburon .....	170/230	158/215
2001	XG300 .....	192/260	170/230
2002-03	XG350 .....	192/260	170/230
<b>INFINITI</b>			
2002	G20 .....	217/294	163/221
1999-01	G20 .....	203/275	156/210
1991-96	G20 .....	203/275	163/221
2003	G35 .....	—	177/240
2000-01	I30 .....	217/294	163/221
1996-99	I30 .....	203/275	163/221
2002-03	I35 .....	203/275	163/221
1993-97	J30 .....	217/294	178/241
1990-92	M30 .....	—	117/152
2003	M45 .....	181/245	177/240
1990-03	Q45 .....	181/245	177/240
1997-03	QX4 .....	NDG	—
<b>ISUZU</b>			
1998-00	Amigo .....	IUA	—
1989-94	Amigo 2WD .....	IUB	—
	Amigo 4WD .....	IUA	—
2003	Ascender 2WD .....	—	—
	Ascender 4WD .....	103/140	—
1997-00	Hombre 2WD .....	GMA	—
	Hombre 4WD .....	103/140	—
1996	Hombre 2WD .....	GMA	—
	Hombre 4WD .....	181/245	—
1986-89	I-Mark .....	137/186	IUC
1985	I-Mark FWD .....	137/186	IUC
	I-Mark RWD .....	IUC	—
1981-84	I-Mark .....	IUC	—
1990-93	Impulse .....	137/186	—
1983-89	Impulse .....	IUD	—
1996-99	Oasis .....	181/245	134/185
1988-95	Pickup 2WD .....	IUB	—
	Pickup 4WD .....	IUA	—
1981-87	Pickup 2WD .....	IUE	—
	Pickup 4WD .....	IUF	—
1991-02	Rodeo .....	IUA	—
2001-02	Rodeo Sport .....	IUA	—
1991-93	Stylus .....	137/186	—
1992-02	Trooper .....	IUA	—
1984-91	Trooper .....	IUF	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>JAGUAR</b>			
1980-87	All .....	JGB	—
1988-97	XJ6, XJ12 & XJS .....	JGA	—
2000-03	S-Type .....	—	221/300
2002-03	X-Type .....	244/330	244/330
1998-03	XJ8 .....	—	236/320
1997-03	XK8 .....	—	236/320
<b>JEEP TRUCKS</b>			
1996-01	Cherokee .....	175/237	—
1984-95	Cherokee 2WD .....	JPA	—
	Cherokee 4WD .....	175/237	—
1974-83	Cherokee .....	JPB	—
1970-73	Cherokee .....	JPC	—
1977-83	CJ-5 .....	JPB	—
1970-76	CJ-5 .....	JPC	—
	CJ-6 .....	JPC	—
1977-86	CJ-7 .....	JPB	—
1970-76	CJ-7 .....	JPC	—
1986-92	Comanche 2WD .....	JPA	—
	Comanche 4WD .....	175/237	—
1993-04	Grand Cherokee .....	175/237	—
1993	Grand Wagoneer .....	175/237	—
1984-91	Grand Wagoneer .....	JPB	—
1974-87	J10 Pickup .....	JPB	—
1970-73	J10 Pickup .....	JPC	—
1974-87	J20 Pickup .....	JPB	—
1970-73	J20 Pickup .....	JPC	—
2002-03	Liberty 4WD .....	100/136	—
1982-85	Scrambler .....	JPB	—
1984-90	Wagoneer 2WD .....	JPA	—
	Wagoneer 4WD .....	175/237	—
1974-83	Wagoneer .....	JPB	—
1973-70	Wagoneer .....	JPC	—
1987-03	Wrangler .....	175/237	—
<b>KIA</b>			
2003	Optima .....	177/240	170/230
2001-02	Optima .....	170/230	170/230
2001-03	Rio .....	145/196	KIB
2002-03	Sedona .....	188/255	188/255
1997-01	Sephia .....	180/244	180/244
1994-96	Sephia .....	177/240	[35]
2001-03	Spectra .....	180/244	180/244
2003	Sorento .....	192/260	—
1995-02	Sportage .....	KIA	—
<b>LAND ROVER</b>			
1993-95	Defender .....	LRB	—
1997	Defender .....	LRC	—
1995-97	Discovery .....	LRA	—

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>LAND ROVER - continued</b>			
1998-03	Discovery II .....	360/490[6]	—
2002-03	Freelander .....	295/400	295/400
1995-97	Range Rover .....	LRA	—
2000-02	Range Rover .....	192/260[6]	—
2003	Range Rover .....	311/420	311/420
<b>LEXUS</b>			
1990-91	ES250 .....	137/186	90/123
1992-03	ES300 .....	217/294	—
2001-03	GS300, GS430 .....	147/199	213/289
1998-00	GS300, GS400 .....	147/199	213/289
1993-97	GS300 .....	147/199	213/289
2003	GX470 .....	173/235	—
2000-03	IS300 .....	108/147	213/289
2000	LS400 .....	—	213/289
1995-99	LS400 .....	147/199	213/289
1990-94	LS400 .....	147/199	253/343
2001-03	LS430 .....	—	214/290
1996-97	LX450 .....	TAA	—
1998-03	LX470 .....	TAH	—
1999-03	RX300 2WD .....	217/294	—
1999-03	RX300 4WD .....	217/294	159/216
2001-03	SC430 .....	147/199	213/289
1992-00	SC300, SC400 .....	147/199	213/289
<b>LINCOLN</b>			
2003	Aviator .....	184/250	203/275
2002	Blackwood .....	FTY	—
1999-02	Continental .....	184/250	221/300
1988-89	Continental .....	190/258	221/300
2002-03	LS .....	—	302/410
2000-01	LS .....	—	221-300
1988-92	Mark VII .....	FDA	—
1993-98	Mark VIII .....	221/300	—
2003	Navigator 2WD .....	—	250/338
	Navigator 4WD .....	20/27	250/338
1998-02	Navigator 2WD .....	FTN	—
	Navigator 4WD .....	221/300	—
2003	Town Car .....	—	—
1991-02	Town Car .....	221/300	—
1988-90	Town Car .....	FDA	—
<b>MAZDA</b>			
1970-87	All .....	FDA	—
1990-94	323 .....	205/277	152/206
1986-89	323 .....	144/196	MAA
1993-02	626, MX-6 .....	205/277	152/206
1988-92	626, MX-6 .....	205/277	102/138
1983-87	626 .....	145/200	MAA
1979-82	626 .....	MAB	—
1972-77	808 .....	MAB	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>MAZDA - continued</b>			
1992-95	929, Serenia .....	152/206	203/275
1988-91	929 .....	100/138	203/275
1972-76	B1600 Pickup .....	MAC	—
1976-78	B1800 Pickup .....	MAC	—
1979-87	B2000 Pickup .....	MAC	—
1982-93	B2200 Pickup .....	MAC	—
2001-03	B2300 Pickup 2WD .....	FT2	—
	B2300 Pickup 2WD .....	162/220	—
1994-97	B2300 Pickup 2WD .....	FTA	—
	B2300 Pickup 4WD .....	FTW[20]	—
	.....	FTX[21]	—
2001	B2500 Pickup 2WD .....	FTP	—
	B2500 Pickup 4WD .....	162/220	—
1998-00	B2500 Pickup 2WD .....	FTA	—
	B2500 Pickup 2WD .....	[25]	—
1987-93	B2600 Pickup 2WD .....	MAC	—
	B2600 Pickup 4WD .....	MAD	—
2001-03	B3000 Pickup 2WD .....	FT2	—
	B3000 Pickup 2WD .....	162/220	—
1998-00	B3000 Pickup 2WD .....	FTA	—
	B3000 Pickup 4WD .....	[25]	—
1994-97	B3000 Pickup 2WD .....	FTA	—
	B3000 Pickup 4WD .....	FTW[20]	—
	.....	FTx[21]	—
2001-03	B4000 Pickup 2WD .....	FT2	—
	B4000 Pickup 4WD .....	162/220	—
1998-00	B4000 Pickup 2WD .....	FTA	—
	B4000 Pickup 4WD .....	[25]	—
1994-97	B4000 Pickup 2WD .....	FTA	—
	B4000 Pickup 4WD .....	FTW[20]	—
	.....	FTX[21]	—
1981-85	GLC Exc. Wagon .....	145/200	MAB
1981-83	GLC Wagon .....	MAB	—
1977-80	GLC .....	MAB	—
2003	Mazda6 .....	188/255	152/206
1999-02	Miata .....	141/191	205/277
1990-97	Miata .....	141/191	—
1995-03	Millenia .....	205/277	152/206
2000-03	MPV .....	205/277	152/206
1989-98	MPV 2WD .....	152/206	—
	MPV 4WD .....	203/275	—
1992-95	MX-3, Precidia .....	205/277	152/206
1991-94	Navajo 2WD .....	FTA	—
1993-94	Navajo 4WD .....	FTW[20]	—
	.....	FTX[21]	—
1991-92	Navajo 4WD .....	FTU <sup>1</sup>	—
	.....	FTV <sup>2</sup>	—
1990-03	Protege .....	205/277	152/206
1973-74	RX-2 .....	MAB	—
1972-78	RX-3 .....	MAB	—
1993-95	RX-7 .....	152/206	203/275
1986-92	RX-7 .....	MAB	203/275
1979-85	RX-7 .....	MAB	—
2001-03	Tribute .....	214/290	214/290

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>MERCURY-See FORD/MERCURY</b>			
<b>MINI</b>			
2002-03	Cooper	134/182	—
<b>MITSUBISHI</b>			
1991-99	3000GT 4WD	166/225	203/280
	3000GT FWD	166/225	166/225
1983-88	Cordia, Tredia	167/226	MIA
1997-03	Diamante	167/226	—
1992-96	Diamante	167/226	166/225
2000-02	Eclipse	167/226	—
1995-99	Eclipse 4WD	167/226	166/225
	Eclipse FWD	167/226	—
1990-94	Eclipse 4WD	167/226	138/190
	Eclipse FWD	167/226	166/225
1992-96	Expo	167/226	166/225
1994-03	Galant	167/226	—
1989-93	Galant 4WD	167/226	MIA
1989-93	Galant FWD	167/226	MIA
1985-88	Galant	167/226	MIA
2002-03	Lancer	181/245	130/175
1993-01	Mirage	167/226	130/180
1989-92	Mirage	167/226	127/175
1985-88	Mirage	167/226	90/125
2001-03	Montero	188/255	188/255
1983-00	Montero	DTF	—
1997-03	Montero Sport: 2WD	DTJ	—
	Montero Sport: 4WD	DTJ	—
2003	Outlander 2WD	181/245	130/175
	Outlander AWD	181/245	181/245
1983-96	Pickup 2WD	CRD	—
	Pickup 4WD	DTF	—
1993-94	Precis	170/230	127/175
1990-92	Precis	167/226	127/175
1987-89	Precis	167/226	HIA
1988-90	Sigma	167/226	MIA
1984-89	Starion	CRB	—
1987-90	Van	CRD	—
<b>NISSAN/DATSUN</b>			
1995-98	200SX	174/236	163/221
1977-88	200SX	NDB	—
1979-82	210	NDE	—
1995-98	240SX	181/245	178/241
1989-94	240SX	134/182	203/275
1970-73	240Z	NDE	—
1974	260Z	NDB	—
1975-78	280Z	NDB	—
1979-83	280ZX	NDB	—
1990-96	300ZX	181/245	178/241
1984-89	300ZX	NDB	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>NISSAN/DATSUN - continued</b>			
1979-82	310	—	NDC
2003	350Z	—	177/140
1978-81	510	NDE	—
1970-73	510	NDE	—
1973-78	610	NDB	—
1973-78	710	NDB	—
1978-83	810	NDB	—
2002-03	Altima	202/275	—
1993-01	Altima	203/275	163/221
1990	Axxess 4WD	203/275	203/275
1990	Axxess FWD	203/275	163/221
1974-78	B210	NDB	—
1976-78	F10	—	NDB
1998-03	Frontier 2WD	NDA	—
1998-03	Frontier 4WD	NDG	—
2000-03	Maxima	217/294	163/221
1989-99	Maxima	203/275	163/221
1985-88	Maxima	203/275	—
1983-84	Maxima	NDB	—
2003	Murano FWD	92/125	—
2003	Murano AWD	92/125	92/125
1991-93	NX	174/236	163/221
1996-03	Pathfinder	NDG	—
1987-95	Pathfinder 2WD	NDD	—
	Pathfinder 4WD	NDG	—
1981-97	Pickup 2WD	NDD	—
1987-97	Pickup 4WD	NDG	—
1986	Pickup 4WD, 720	NDH	—
	Pickup 4WD, D21	NDG	—
1985-84	Pickup 4WD	NDH	—
1983	Pickup 4WD, early	126/175	—
	Pickup 4WD, late	NDH	—
1981-82	Pickup 4WD	126/175	—
1973-80	Pickup	NDE	—
1970-72	Pickup	NDF	—
1987-90	Pulsar	174/236	163/221
1983-86	Pulsar	—	NDC
1993-02	Quest	203/275	178/240
2002-03	Sentra 1.8L	174/236	163/221
2002-03	Sentra 2.5L	217/294	163/221
1987-01	Sentra	174/236	163/221
1982-86	Sentra	—	NDC
2002-03	SE-R 2.5L	217/294	163/221
1987-92	Stanza	203/275	—
1982-86	Stanza	174/236	NDC
2000-03	Xterra 2WD	NDA	—
2000-03	Xterra 4WD	NDG	—
<b>OLDSMOBILE</b>			
1998-99	88	118/160	—
1992-97	88	107/145	—
1986-91	88	185/260	—
1980-85	88	GMA	—

## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>OLDSMOBILE - continued</b>			
1992-96	98	107/145	—
1985-91	98	185/260	—
1980-84	98	GMA	—
1998	Achieva	74/100 <sup>1</sup>	—
1992-97	Achieva	185/260	—
1999-03	Alero	[34]	—
2001-03	Aurora	118/160	—
1998-99	Aurora	118/160	—
1995-97	Aurora	107/145	—
1997-03	Bravada	103/140	—
1991-96	Bravada	181/245	—
1985-91	Calais	185/260	—
1996	Ciera, Cruiser	107/145	—
1992-95	Ciera, Cruiser	103/140[4]	—
1983-91	Ciera, Cruiser	185/260	—
1982	Ciera, Cruiser	225/290	—
1980-92	Custom Cruiser	GMA	—
1997-99	Cutlass FWD	284/385	—
1996-97	Cutlass Supreme	151/205	—
1988-95	Cutlass Supreme	184/250	—
1988	Cutlass Supreme	GMA	—
	Classic RWD		
1980-87	Cutlass RWD	GMA	—
1982-88	Firenza	185/260	—
2001-02	Intrigue	159/215	—
1998-00	Intrigue	118/160	—
1998-99	LSS	118/160	—
1992-97	LSS	107/145	—
1983-84	Omega	185/260	—
1980-82	Omega	225/290	—
1997	Regency	107/145	—
2002-03	Silhouette	118/160	192/260
1998-01	Silhouette	118/160	—
1997	Silhouette	151/205	—
1995-96	Silhouette	104/145	—
1990-94	Silhouette	185/260	—
1980	Starfire	GMA	—
1986-92	Toronado	183/248	—
1979-85	Toronado	175/240	—
1970-78	Toronado	—	—
1988-92	Trofeo	180/248	—
1970-79	All Exc. Toronado	GMA	—
<b>PLYMOUTH-See DODGE/PLYMOUTH</b>			
<b>PLYMOUTH TRUCKS-See DODGE/PLYMOUTH TRUCKS</b>			
<b>PONTIAC</b>			
1983-87	1000	GMA	—
1983	2000	185/260	—
1983-91	6000	185/260	—
1982	6000	225/290	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>PONTIAC - continued</b>			
1980-87	Acadian	GMA	—
2001-03	Aztec	192/260	192/260
1998-03	Bonneville	118/160	—
1992-97	Bonneville	107/145	—
1987-91	Bonneville	185/260	—
1980-86	Bonneville, Catalina	GMA	—
1988	Fiero	220/280	200/270
1984-87	Fiero	195/267	200/270
1993-02	Firebird	—	—
1980-92	Firebird	GMA	—
1989-97	Firefly	129/175	129/175
1985-88	Firefly	151/210	62/100
1999-03	Grand Am	[34]	—
1998	Grand Am	74/100 <sup>1</sup>	—
1985-97	Grand Am	185/260	—
1980-81	Grand Am	GMA	—
2001-04	Grand Prix	159/215	—
1998-00	Grand Prix	118/160	—
1995-97	Grand Prix	151/205	—
1988-94	Grand Prix	184/250	—
1980-87	Grand Prix	GMA	—
1982	J2000	185/260	—
1980-81	Laurentian	GMA	—
1988-93	LeMans	GMR	—
1980-81	LeMans	GMA	—
2002-03	Montana	118/160	192/260
1999-01	Montana	118/160	—
1980-86	Parisienne	GMA	—
1983-84	Phoenix	185/260	—
1980-82	Phoenix	225/290	—
1980-89	Safari Wagon	GMA	—
1984-94	Sunbird	185/260	—
1980	Sunbird	GMA	—
1985-87	Sunburst	137/186	IUC
2002-03	Sunfire	148/200	—
1998-01	Sunfire	144/195	—
1995-97	Sunfire	185/260	—
1994-97	Sunrunner	155/210	—
1981-82	T1000	GMA	—
1987-91	Tempest	185/260	—
1997-99	Trans Sport	118/160	—
1995-96	Trans Sport	104/145	—
1990-94	Trans Sport	185/260	—
1970-79	All	GMA	—
<b>PORSCHE</b>			
1980-94	All	POA	—
1995	Except 911	POA	—
2001-03	911 Turbo	340/460	340/460
1999-03	911	[29]	340/460
1995-98	911	[29]	340/460[1]
1995-03	Boxster	[29]	340/460

# FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>SAAB</b>			
2003	9--3	190-230	—
1999-02	9--3	[36]	—
2002-03	9--5	148/200[37]	—
2000-01	9--5	125/170[27]	—
1999	9--5	[36]	—
1994-98	900	214/290	—
1979-93	900	222/300	222/300
1986-98	9000	214/290	—
<b>SATURN</b>			
2003	ION	81/110	—
2000-03	L Series	SNA	—
1991-02	S Series	148/200	—
2002-03	Vue FWD	151/205	—
2002-03	Vue AWD	151/205	81/110
<b>STERLING</b>			
1987-91	All	215/290	—
<b>SUBARU</b>			
2003	Forester AWD	140/190	140/190
1998-02	Forester AWD	137/186	137/186
2003	Impreza	140/190	140/190
1993-02	Impreza AWD	137/186	137/186
1993-95	Impreza FWD	137/186	SUA
1987-94	Justy	130/177	SUA
2002-03	Legacy, Outback	159/216	174/235
2001	Legacy, Outback 2.5L	137/186	174/235
	Legacy, Outback 3.0L	159/216	174/235
2000	Legacy, Outback	137/186	174/235
1990-99	Legacy AWD	137/186	137/186
1990-96	Legacy FWD	137/186	SUA
1992-97	SVX	137/186	138/187
1970-94	All Others 4WD	148/200	145/196
	All Others FWD	148/200	SUA
<b>SUZUKI</b>			
2002	Aerio	127/175	127/175
1995-02	Esteem	127/175	127/175
1999-02	Grand Vitara	156/216	—
1989-95	Samari	SZA	—
1991-98	Sidekick	152/210	—
1989-90	Sidekick	119/160	—
1989-01	Swift	127/175	[28]
1999-02	Vitara	156/216	—
1996-98	X-90	152/210	—

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>TOYOTA</b>			
1996-02	4-Runner 2WD	—	—
	4-Runner 4WD	174/235	—
1986-95	4-Runner 2WD	TAD	—
	4-Runner 4WD	TAB	—
1984-85	4-Runner 2WD	TAD	—
	4-Runner 4WD	TAC	—
1995-03	Avalon w/ABS	217/294	—
	Avalon Exc. ABS	217/294	90/123
1992-03	Camry w/ABS	217/294	—
	Camry Exc. ABS	217/294	90/123
1987-91	Camry 4WD	137/186	137/187
	Camry FWD	137/186	90/123
1983-86	Camry	137/186	90/123
1999-03	Camry Solara	217/294	—
1971-75	Carina	TAE	—
1994-03	Celica	159/216	—
1992-93	Celica 4WD	166/226	166/226
	Celica FWD	166/226	90/123
1988-91	Celica 4WD	137/186	137/186
	Celica FWD	137/186	90/123
1986-87	Celica	137/186	90/123
1972-85	Celica	TAE	—
2003	Corolla	159/216	—
1998-02	Corolla	166/225	—
1993-97	Corolla	159/216	—
1991-92	Corolla	152/206	90/123
1988-90	Corolla	137/186	90/123
1984-87	Corolla FWD	137/186	90/123
	Corolla RWD	TAE	—
1970-83	Corolla	TAE	—
1970-82	Corona	TAE	—
1989-92	Cressida	108/147	203/275
1978-88	Cressida	TAE	—
2000-03	Echo	159/216	—
2001-02	Highlander FWD	217/294	—
	Highlander 4WD	217/294	159/216
1998-03	Land Cruiser	TAH	—
1981-97	Land Cruiser	TAA	—
1970-80	Land Cruiser	—	—
2003	Matrix FWD	159/216	—
2003	Matrix 4WD	159/216	159/216
2000-03	MR2	—	159/216
1993-95	MR2 Turbo	90/123	217/294
	MR2 Exc. Turbo	90/123	159/216
1991-92	MR2 Turbo	90/123	217/294
	MR2 Exc. Turbo	90/123	137/186
1985-89	MR2	90/123	137/186
1994-97	Paseo	159/216	TAF
1992-93	Paseo	166/226	TAF
1986-95	Pickup 2WD	TAD	—
	Pickup 4WD	TAB	—
1979-85	Pickup 2WD	TAD	—
	Pickup 4WD	TAC	—
1970-78	Pickup	TAD	—



## FWD FRONT AXLE NUT TORQUE SPECIFICATIONS

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>TOYOTA - continued</b>			
1991-97	Previa .....	147/199	—
2001-02	Prius .....	159/216	—
1998-03	RAV4 2WD .....	159/216	—
1998-03	RAV4 4WD .....	159/216	159/216
1997	RAV4 4WD, 2WD w/ABS .....	159/216	159/216
1996	RAV4 .....	159/216	152/206
2001-03	Sequoia .....	173/235	—
1998-03	Sienna .....	217/294	—
1981-84	Starlet .....	TAE	—
1993-98	Supra .....	147/199	213/289
1987-92	Supra .....	147/199	203/275
1986	Supra 2.8L .....	100/137	100/137
1986	Supra 3.0L .....	147/199	203/275
1982-85	Supra .....	100/137	100/137
1979-81	Supra .....	TAE	—
1993-98	T100 Pickup 2WD .....	TAD	—
	T100 Pickup 4WD .....	TAB	—
1997-03	Tacoma 2WD .....	TAD	—
	Tacoma 4WD .....	174/235	—
1995-98	Tacoma 2WD .....	TAD	—
	Tacoma 4WD .....	TAB	—
1994-99	Tercel .....	159/216	TAF
1992-93	Tercel .....	166/226	TAF
1989-91	Tercel .....	137/186	TAF
1983-88	Tercel .....	137/186	TAF
1980-82	Tercel .....	90/127	TAF
2000-03	Tundra 2WD .....	—	—
	Tundra 4WD .....	173/235	—
1984-89	Van 2WD .....	TAE	—
1984-89	Van 4WD .....	TAG	—
<b>VOLKSWAGEN</b>			
1995-98	Cabrio .....	195/265	VWB
1985-92	Cabriolet .....	174/240	VWB
1990-94	Corrado .....	195/265	VWB
1997-03	EuroVan FWD .....	111/150[30]	VWB
	EuroVan AWD .....	111/150[30]	111/150[30]
1993-96	EuroVan .....	148/200	VWB
1987-93	Fox .....	170/230	VWB
1999-03	Golf .....	VWC	129/175
1985-98	Golf w/Base Suspension .....	195/265	VWB
	Golf w/Plus Suspension .....	VWD	VWB
1985-98	GTI w/Base Suspension .....	195/265	VWB
	GTI w/Plus Suspension .....	VWD	VWD
1983-84	GTI .....	174/240	VWB
1999-03	Jetta .....	VWC	129/175
1985-98	Jetta w/Base Suspension .....	195/265	VWB
	Jetta w/Plus Suspension .....	VWD	VWB
1980-84	Jetta .....	174/240	VWB
1998-03	New Beetle .....	VWC	129/175
1998-03	Passat FWD .....	[31]	AIA
	Passat AWD .....	[31]	85/115

Make Year	Model	Front Proc. or Torque Ft-lbs/Nm	Rear Proc. or Torque Ft-lbs/Nm
<b>VOLKSWAGEN - continued</b>			
1995-97	Passat w/Base .....	195/265	VWB
	Suspension FWD .....		
	Passat w/Plus .....	66/90[27]	66/90[27]
	Suspension FWD .....		
	Passat w/Base .....	195/265	66/90[27]
	Suspension 4WD .....		
	Passat w/Plus .....	66/90[27]	VWB
	Suspension 4WD .....		
1990-94	Passat Synchro .....	195/265	170/230
	Passat Exc. Synchro .....	195/265	VWB
1980-84	Pickup .....	174/240	VWB
1982-88	Quantum Synchro .....	170/230	170/230
	Quantum Exc. Synchro .....	170/230	VWB
1975-84	Rabbit .....	174/240	VWB
1985-89	Scirocco .....	195/265	VWB
1975-84	Scirocco .....	174/240	VWB
1970-79	Type 1 .....	VWA	—
1970-79	Type 2 .....	VWA	—
1984-91	Vanagon Synchro .....	258/350	253/350
	Vanagon Exc. Synchro .....	VWB	253/350
1980-83	Vanagon .....	VWB	253/350
<b>VOLVO</b>			
1970-74	142, 144, 145, 164 .....	VOA	—
1975-93	240, 260 Series .....	VOA	—
1985-90	740 .....	VOA	—
1988-90	760 .....	VOA	102/140 <sup>1</sup>
1983-87	760 .....	VOA	—
1987-90	780 .....	VOA	102/140 <sup>1</sup>
1993-97	850 .....	89/120	—
1991-95	940 .....	VOA	102/140 <sup>1</sup>
1992-97	960 .....	VOA	102/140 <sup>1</sup>
2000-03	S40, V40 .....	89/120[26]	89/120[26]
2001-03	S60 .....	37/50	—
1998-00	C70, S70, V70 .....	89/120[26]	—
2001-03	V70 .....	26/35[30]	—
1999-00	S80 .....	37/50	—
2001-03	S80 .....	26/35[30]	—
1991	Coupe .....	VOA	102/140 <sup>1</sup>
1980-84	DL, GL, GLE, GLT .....	VOA	—
1998-99	S90, V90 .....	VOA	102/140 <sup>1</sup>
2003	XC90 .....	26/35[30]	—
<b>YUGO</b>			
1985-91	All .....	160-215	—

## Footnote Codes

- [1] Additional lock nut on 911 Carrera RS, 147 ft-lbs/200 Nm.
- [2] Models with stake nut, tighten to 210 ft-lbs/290 Nm.
- [3] After tightening to this value, turn an additional 40°.
- [4] After tightening to this value, turn an additional 20°.
- [5] Soft ride & sport suspension, 118 ft-lbs/160 Nm; heavy duty suspension, 170 ft-lbs/230 Nm.
- [6] Driveshaft nut.
- [7] With Rockwell 12 or 12 1/4 ring gear.
- [8] With 9 3/4 or 10 1/2 ring gear.
- [9] 9 3/4 or 10 1/2 ring gear; 5500 lb. GVW.
- [10] With 9 3/4 or 10 1/2 ring gear; 5200 lb. or 7200 lb. GVW.
- [11] With 9 3/4 ring gear.
- [12] With manual locking hubs.
- [13] With automatic locking hubs.
- [14] With 11 ring gear (Dana 80 with rear disc brakes).
- [15] With 10 1/2 or 12 1/2 ring gear.
- [16] Tighten nut to specified value and tighten further to align cotter pin with hole.
- [17] With double nut type bearing unit.
- [18] With wedge nut type bearing unit.
- [19] With Dana 44 axle.
- [20] With manual locking hubs.
- [21] With automatic locking hubs.
- [22] With Dana 50 axle.
- [23] With Ford axle.
- [24] With Dana axle.
- [25] The wheel hub and bearing are not serviceable or adjustable. If the bearing retaining nut is removed, the hub and bearing must be replaced.
- [26] After tightening to specification, turn an additional 60°.
- [27] After tightening to specification, turn an additional 45°.
- [28] Less wheel hub, 73 ft-lbs/100 Nm. With wheel hub, 127 ft-lbs/175 Nm.
- [29] Wheel hub to wheel carrier, 340 ft-lbs/460 Nm.
- [30] After tightening to this value, turn an additional 90°.
- [31] M14 bolt, tighten to 85 ft-lbs/115 Nm, then turn an additional 180°. M16 bolt, tighten to 140 ft-lbs/190 Nm, then turn an additional 180°.
- [32] After tightening to this value, turn an additional 180°.
- [33] Use new bolt or nut. Bolt: Tighten bolt to 177 ft-lbs/240 Nm, loosen 90°, tighten bolt to 177 ft-lbs/240 Nm, then advance bolt an additional 90°. Nut: Older adhered type hub stamped 8N0 615, apply Audi locking fluid D185 400 A2, or equivalent, tighten nut to 195 ft-lbs/235 Nm. Newer greased type hub stamped 8N0 615A or B, apply grease G052 142 A2, or equivalent, tighten nut to 140 ft-lbs/190 Nm, then turn an additional 90°.
- [34] First design nut (Pac-style nut painted black) 284 ft-lbs/385 Nm; second design nut (solid gray nut), 173 ft-lbs/235 Nm.
- [35] Rear disc brake, 131-173 ft-lbs/177-235 Nm; rear drum brake 154-200 ft-lbs/209-279 Nm.
- [36] Nut less top groove, 214 ft-lbs/290 Nm; nut with top groove, 125 ft-lbs/170 Nm, then turn an additional 45°.
- [37] After tightening to this value, turn an additional 30°.
- [38] Tighten axle nut to 132 ft-lbs/179 Nm, rotate axle 5 to 10 times to seat hub bearings, tighten axle nut to 263 ft-lbs/356 Nm. Align axle nut to next forward cotter pin hole and install cotter pin.

# Adjustment Procedures

<b>AIA</b>	Tighten the hub nut gradually while turning the thrust washer with a screwdriver tip. Do not bend or pry with the screwdriver. Tighten the hub nut to the point where the washer cannot be turned and back off slightly. Install the locknut and cotter pin.	<b>DTB</b>	Tighten hub nut to 30-40 ft-lbs/37-50 Nm while rotating wheel. Back off and finger tighten. Install cotter pin.
<b>AMA</b>	Tighten hub nut to 20 ft-lbs/27 Nm then back off 1/3 turn. Tighten to 12 in-lbs/1.5 Nm while turning wheel. Install the cage nut and cotter pin.	<b>DTC</b>	Tighten hub bearing adjustment nut to 120-140 ft-lbs/163-190 Nm while turning hub. Loosen 1/8 turn to provide .001-.010" endplay. Tap locking wedge into spindle keyway and adjusting nut.
<b>AMB</b>	Tighten hub nut to 25 ft-lbs/33 Nm then back off 1/3 turn. Tighten to 6 in-lbs/1 Nm while turning wheel. Install the cage nut and cotter pin.	<b>DTD</b>	Tighten adjusting nut to 120-140 ft-lbs/163-190 Nm while turning hub. Loosen 1/3 turn to provide .001-.008" endplay. Tap locking wedge into spindle keyway and adjusting nut.
<b>AMC</b>	Tighten hub nut to 22 ft-lbs/30 Nm then back off 1/3 turn. Tighten to 6 in-lbs/1 Nm while turning wheel. Install the cage nut and cotter pin.	<b>DTE</b>	Rotate wheel and tighten locknut until drag is felt at wheel. Back off 1/6 turn to zero or just perceptible endplay. Install lock washer and jambnut. Without turning locknut, tighten jambnut to 35-65 ft-lbs/41-88 Nm. Bend tabs of lock washer over both locknut and jambnut.
<b>AMD</b>	Tighten hub nut to 20-25 ft-lbs/27-33 Nm then back off 1/3 turn. Tighten to 2-10 in-lbs/1 Nm while turning wheel. Install the cage nut and cotter pin.	<b>DTF</b>	Tighten locknut to 120 ft-lbs/165 Nm. Back off to 0/0 then retighten to 18 ft-lbs/25 Nm. Back off 30-40° so that the hub turning resistance is 2.6-11.3 lbs/0.3-1.3 kg on a spring scale. Install lock washer and loosen locknut slightly to align holes.
<b>BWA</b>	Tighten hub nut to 22-24 ft-lbs/29-32 Nm while rotating wheel. Back off and retighten to 2 ft-lbs/3 Nm. Back off slightly and install cotter pin.	<b>DTG</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm and then loosen. Retorque to 30-40 ft-lbs/41-54 Nm while rotating hub and rotor. Back off 135-150°. Install lock washer by aligning hole on washer with pin on nut. Install outer locknut and torque to 50 ft-lbs/68Nm.
<b>CRA</b>	Tighten hub nut to 20-25 ft-lbs/25-29 Nm while rotating wheel. Back off 90° and finger tighten. Install cotter pin.	<b>DTH</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm and then loosen. Retorque to 30-40 ft-lbs/41-54 Nm while rotating hub and rotor. Back off 135-150°. Install lock washer by aligning hole on washer with pin on nut. Install outer locknut and torque to 160-205 ft-lbs/217-278 Nm.
<b>CRB</b>	Tighten hub nut to 14 ft-lbs/20 Nm. Back off and retighten to 4 ft-lbs/6 Nm. Install cotter pin.	<b>DTI</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm and then loosen. Retorque to 30-40 ft-lbs/41-54 Nm while rotating hub and rotor. Back off 135-150°. Install tabbed washer and locknut. Without turning adjusting nut, tighten locknut to 65 ft-lbs/88 Nm. Then bend tabs on washer over inner and outer nuts.
<b>CRC</b>	Tighten hub nut to 20-27 ft-lbs/27-34 Nm while rotating wheel. Back off and finger tighten. Install cotter pin.	<b>DTJ</b>	Tighten locknut to 120 ft-lbs/165 Nm. Back off to 0/0 then retighten to 18 ft-lbs/25 Nm. Back off 30° so that the hub turning resistance is .9-4.3 lbs/4-9 N on a spring scale. Install lock washer and loosen locknut slightly to align holes.
<b>CRD</b>	Tighten hub nut to 22 ft-lbs/29 Nm. Back off and retighten to 4 ft-lbs/6 Nm. Install cotter pin.	<b>DTK</b>	Tighten hub nut to 35 ft-lbs/48 Nm while rotating wheel. Back off nut. Tighten nut to 25 in-lbs/3 Nm. Install cotter pin. Endplay should be .001-.003".
<b>DAA</b>	Tighten nut to 133 ft-lbs/181 Nm, loosen, tighten to 37 ft-lbs then turn nut an additional 60°.	<b>DTL</b>	Tighten hub bearing adjustment nut to 22 ft-lbs/30 Nm while turning hub. Loosen nut approximately 30° and align hub nut with axle tube key slot. Install locking key. Endplay should be .001-.010".
<b>DAB</b>	While spinning wheel, tighten nut to 18 ft-lbs/25 Nm, loosen 180°, tighten to 18 in-lbs/2 Nm.	<b>FDA</b>	Tighten hub nut to 17-25 ft-lbs/22-29 Nm while rotating wheel. Back off 1/2 turn and retighten to 10-15 lbs/1-2 kg. Install FDA cotter pin.
<b>DAC</b>	While spinning wheel, tighten nut to 15 ft-lbs/20 Nm, loosen 180°, tighten to 9 in-lbs/1 Nm.		
<b>DAD</b>	While spinning wheel, tighten nut to 18 ft-lbs/25 Nm, loosen 180°, tighten to 9 in-lbs/1 Nm.		
<b>DAE</b>	Using a new caulking nut, tighten to 133 ft-lbs/181 Nm, then loosen nut. Tighten the nut 50 degrees, then advance nut an additional 60 degrees.		
<b>DHA</b>	Tighten hub nut to 72-109 ft-lbs/98-147 Nm. Back off nut 1/6 turn. Turn hub 2 to 3 turns. Adjust lock nut so that starting torque is 3.1-7.9 lbs/1.4-3.6 kg when measured with a spring scale attached to the hub wheel stud. Models w/manual hubs, install lock washer and lock nut and tighten to 72-109 ft-lbs/98-147 Nm. Install cotter pin. Recheck starting torque with spring scale.		
<b>DTA</b>	Tighten hub nut while rotating wheel. Back off and tighten again while rotating wheel. Back off until .001-.002" of freeplay is measured at wheel.		

# Adjustment Procedures

<b>FDB</b>	Tighten hub nut to 18-22 ft-lbs/22-27 Nm while rotating wheel. Back off and retighten until 6-22 in-lbs/0.5-2 Nm of drag is measured at drum with a pull scale.		
<b>FDC</b>	Tighten to 18-21 ft-lbs/25-29 Nm, loosen. Using in-lbs torque wrench on wheel stud, measure seal drag. Add amount of seal drag to 1.3-4.3 in-lbs to determine bearing preload. Tighten nut slightly until specified preload is reached.		
<b>FDD</b>	While rotating hub, tighten to 18-23 ft-lbs/24-31 Nm, back-off 2-3 turn, tighten to 18 in-lbs/2 Nm.		
<b>FTA</b>	Tighten hub nut to 17-25 ft-lbs/22-29 Nm while turning wheel. Back off 1/2 turn and tighten to 18-20 in-lbs/2-3 Nm.		
<b>FTB</b>	Tighten hub nut to 22-25 ft-lbs/25-29 Nm while rotating hub in opposite direction. Back off 1/8 turn and install locknut and cotter pin.		
<b>FTC</b>	Tighten hub nut to 17-25 ft-lbs/22-29 Nm while rotating hub. Install locknut and back off two slots of the nut. Install cotter pin.		
<b>FTD</b>	Tighten hub nut to 17-25 ft-lbs/22-29 Nm while rotating hub. Back off 1/4 turn and install cotter pin.		
<b>FTE</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 90°. Install lock ring and align nearest hole with pin on adjusting nut. Tighten locknut to 65 ft-lbs/88 Nm. Endplay should be .001-.010".		
<b>FTF</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off and retighten to 35 ft-lbs/47 Nm while rotating hub. Back off 1/2 turn. Assemble lock washer hole to pin on adjusting nut. Tighten locknut to 50 ft-lbs/68 Nm. Endplay should be .001-.010".		
<b>FTG</b>	Tighten adjusting nut to 65 ft-lbs/88 Nm while rotating hub. Back off 3/8 turn. Install lock washer with smooth side out. Tighten locknut to 100 ft-lbs/139 Nm. Bend two tabs of lock washer over adjusting nut and locknut.		
<b>FTH</b>	Tighten adjusting nut to 130 ft-lbs/180 Nm while rotating hub. Back off enough to get .001-.010" endplay, usually 1/8-1/4 turn. Insert locking wedge in keyway slot. Tap in easily. Do not bottom out against shoulder of adjusting nut. Wedge must cut a new groove in nut or both must be replaced.		
<b>FTI</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 90°. Install lock ring and align nearest hole with pin on adjusting nut. Tighten locknut to 90 ft-lbs/127 Nm. Endplay should be .001-.010".		
<b>FTJ</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 45°. Align lock washer hole with pin on adjusting nut. Tighten locknut to 150 ft-lbs/203 Nm. Endplay should be .001-.006".		
<b>FTK</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off to 0. Retighten adjusting nut to 48 ft-lbs/66 Nm and then back off 135-150° while rotating hub. Insert washer and tighten		
			locknut to 65 ft-lbs/88 Nm. Bend washer tab over adjusting nut and locknut.
		<b>FTL</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 70 ft-lbs/95 Nm. After 70 ft-lbs/95 Nm, nut will ratchet. Apply inward pressure on Spanner to disengage adjusting locknut splines and back off 180°. Tighten adjusting nut to 15 ft-lbs/20 Nm and remove Spanner. Endplay should be 0-.006".
		<b>FTM</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 70 ft-lbs/95 Nm. After 70 ft-lbs/95 Nm, nut will ratchet. Apply inward pressure on Spanner to disengage adjusting locknut splines and back off 90°. Tighten adjusting nut to 15 ft-lbs/20 Nm and remove Spanner. Endplay should be 0.
		<b>FTN</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off 90°. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/247 Nm.
		<b>FTO</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off to 0. Tighten adjusting nut to 35 ft-lbs/48 Nm and back off 135-150°. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/247 Nm. Endplay should be 0-.006".
		<b>FTP</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off to 0. Tighten adjusting nut to 35 ft-lbs/48 Nm and back off 90°. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/247 Nm. Endplay should be 0-.004".
		<b>FTQ</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off 90°. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/247 Nm.
		<b>FTR</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off 90°. Tighten wheel retaining nut to 16 in-lbs/1.8 Nm. Install key into spindle keyway by inserting the short leg into the aligned slot in nut. Press in until curved portion of retaining key is seated into counterbore of nut. Install cam assembly. Install: metal washer, plastic washer, then splined washer. Install C clip or lock ring.
		<b>FTS</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 70 ft-lbs/95 Nm. Hub will ratchet as torque is applied. Ratchet back 90° and retighten to 15-20 ft-lbs/18-25 Nm.
		<b>FTT</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 60 ft-lbs/82 Nm. Hub will ratchet as torque is applied. Ratchet nut back 5 clicks (used bearing) or 8 clicks (new bearing).
		<b>FTU</b>	Tighten the adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90°. Retighten the adjusting nut to 16 in-lbs/1.8 Nm. Install lock washer so that the pin on the adjusting nut aligns with a hole on the washer. Torque locknut to 150 ft-lbs/203 Nm. Install bearing thrust spacer, needle thrust bearing, and axle shaft spacer. Clip snap ring to spindle.

# Adjustment Procedures

<b>FTV</b>	Tighten adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90°. Retighten the adjusting nut to 16 in-lbs/1.8 Nm. Align the closest lug in the wheel bearing adjusting nut with the center of the spindle keyway slot. Advance nut to next lug as needed. Install the separate lock key in the spindle keyway under the adjusting nut. Install locknut needle bearing and thrust washer. Push cam assembly onto the locknut by lining up the key in the cam with the spindle keyway. Caution! Do not damage the separate lock key when aligning the spindle nut adjustment lug with the center of the spindle keyway slot. Also, do not damage the fixed cam when aligning the cam key with the spindle keyway.	<b>GMB</b>	Snug hub nut while rotating wheel. Back off 1/4-1/2 turn and finger tighten. Install cotter pin.
<b>FTW</b>	Tighten the adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90°. Retighten the adjusting nut to 16 in-lbs/1.8 Nm. Install lock washer and tighten locknut to 150 ft-lbs/203 Nm. Endplay should be 0-.003". Install axle shaft spacer and clip the snap ring to the end of the shaft.	<b>GMC</b>	Tighten hub nut to 15 ft-lbs/18 Nm while rotating wheel. Back off and finger tighten. Back off slightly to install cotter pin.
<b>FTX</b>	Tighten adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90°. Retighten the adjusting nut to 16 in-lbs/1.8 Nm. Align the closest lug in the wheel bearing adjusting nut with the center of the spindle keyway slot. Advance nut to next lug as needed. Install the separate lock key in the spindle keyway under the adjusting nut. Install the two-thrust spacer and push or press the cam assembly onto the locknut by lining up the key in the cam with the center keyway. Caution! Do not damage the separate lock key when aligning the spindle nut adjustment lug with the center of the spindle keyway slot. Also, do not damage the fixed cam when aligning the cam key with the spindle keyway.	<b>GMD</b>	Tighten adjustment nut to 50 ft-lbs/68 Nm while rotating hub and drum. Back off 1/4 turn and tighten to 13 ft-lbs/17 Nm. Align nut slot with closest keyway. Insert key, retaining ring, and axle. Endplay should be .001-.910".
<b>FTY</b>	Tighten hub nut to 30 ft-lbs/40 Nm while turning wheel. Back off 2 turns. While rotating brake disc, tighten to 17-24 ft-lbs/22-34 Nm. Loosen nut 175°. tighten nut to 17 in-lbs/2 Nm.	<b>GME</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub and disc. Back off and retighten to 35 ft-lbs/47 Nm. Back off 135-150°. Insert lock washer and bend one tab over adjusting nut. Bend tab of washer over locknut. Endplay should be .001-.010"
<b>FTZ</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 70 ft-lbs/95 Nm. After 70 ft-lbs/95 Nm, nut will ratchet. Apply inward pressure on Spanner to disengage adjusting locknut splines and back off 90°. Tighten adjusting nut to 18 ft-lbs/24 Nm and remove Spanner. Final bearing adjustment has zero end play. maximum torque to rotate bearing is 20 in-lbs/2.3 Nm.	<b>GMF</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub and drum. Back off nut to "just loose" (not more than one slot of lock or axle spindle) to align with keyway. Install key, retaining ring, and axle.
<b>FT1</b>	Using Spanner Locknut Wrench special tool, tighten adjusting nut to 60 ft-lbs/82 Nm. Hub will ratchet as torque is applied. Ratchet nut back 5 clicks (used bearing) or 7 clicks (new bearing).	<b>GMG</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 1/8 turn while rotating hub. Insert lock washer and bend one tab over adjusting nut. Install locknut and tighten to 250 ft-lbs/339 Nm. Bend tab of washer over locknut. Endplay should be "just loose."
<b>FT2</b>	Tighten hub nut to 17-24 ft-lbs/22-34 Nm while turning wheel. Loosen nut 175° and tighten to 17 in-lbs/2 Nm.	<b>GMH</b>	Tighten adjusting nut to 90 ft-lbs/120 Nm while rotating hub. Back off 1/8 turn while rotating hub. Insert lock washer and bend one tab over adjusting nut. Install locknut and tighten to 250 ft-lbs/339 Nm. Bend tab of washer over locknut. Endplay should be "just loose."
<b>GMA</b>	Tighten hub nut to 12 ft-lbs/16 Nm while rotating wheel. Back off and finger tighten. Back off slightly to install cotter pin.	<b>GMI</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off to "just loose." Torque on nut when contacting bearing must be 0 or finger tight. Insert key into nut through slot or back off slightly. Install snap ring and axle shaft.
		<b>GMJ</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off and retighten to 35 ft-lbs/47 Nm. Back off 1/4 turn and insert washer. Install locknut and tighten to 65 ft-lbs/88 Nm. Endplay should be .025-.250".
		<b>GMK</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 1/8 turn and insert washer. Install locknut and tighten to 175 ft-lbs/235 Nm.
		<b>GML</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off and retighten to 35 ft-lbs/47 Nm. Back off 3/8 turn. Install ring and torque locknut to 160 ft-lbs/217 Nm minimum. Tang on ring must press through slot on spindle. Hole in pin must align with locknut, turn adjusting nut to align. Endplay should be .001-.010".
		<b>GMM</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off and retighten to 50 ft-lbs/68 Nm. Back off to 0. Install ring and torque locknut to 160 ft-lbs/217 Nm minimum. Tang on ring must pres through slot on spindle. Hole in pin must align with locknut, turn adjusting nut to align. Endplay should be .001-.010".

# Adjustment Procedures

<b>GMN</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off and retighten to 35 ft-lbs/47 Nm. Back off 3/8 max. Align nearest hole in adjusting nut lock with adjusting nut pin. Tighten locknut to 80 ft-lbs/108 Nm. Endplay should be .001-.010.	<b>JGB</b>	Tighten hub nut to eliminate endplay. Back off nut slightly to provide endplay of .002-.005".
<b>GMO</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off and retighten to 35 ft-lbs/47 Nm. Back off 3/8 max. Insert lock washer and tighten locknut to 65 ft-lbs/88 Nm. Bend one tab over adjusting nut and one over locknut. Endplay is .001-.010.	<b>JPA</b>	Tighten the hub nut to 21 ft-lbs/28 Nm while rotating the wheel. Back off 1/2 turn and tighten to 19 in-lbs/1.5 Nm.
<b>GMP</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off and retighten to 35 ft-lbs/47 Nm. Back off 1/4 max. Holes in washer must align with tang in slot in spindle. Tighten locknut to 50 ft-lbs/68 Nm. Endplay should be .001-.010".	<b>JPB</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Repeat several times. Loosen the adjusting nut 1/6 turn while rotating hub. Install lock washer. Align one of the holes with the peg on the adjusting nut. Install the locknut and tighten to 50 ft-lbs/68 Nm. Endplay should be 0.
<b>GMQ</b>	Tighten adjustment nut to 52 ft-lbs/70 Nm while rotating hub and drum. Loosen nut. Tighten nut until it contacts bearing cone. Torque on nut must be zero to finger tight. Back off nut, if necessary, to align nut slot with closest keyway. Do not back off more than one slot to align keyway. Insert key, retaining ring, and axle shaft.	<b>JPC</b>	Tighten adjusting nut while rotating hub. Repeat several times. After tightening nut, back off 1/6-1/4 turn. Install washer and locknut. Bend one tab of the washer over the locknut.
<b>GMR</b>	Tighten to 74 ft-lbs/100 Nm, loosen, tighten to 15 ft-lbs/20 Nm, turn an additional 90°.	<b>KIA</b>	Tighten lock nut against hub to set bearing preload. Use spring scale on hub wheel stud to measure bearing preload which should be 10 in-lbs/1-3 Nm.
<b>HAA</b>	Tighten hub nut to 22 ft-lbs/30 Nm. Back off and retighten to 4/6.	<b>KIB</b>	Tighten lock nut to 20 ft-lbs/27 Nm. Loosen nut slightly until it can be turned by hand. Use spring scale on hub wheel stud to measure bearing grease seal drag. Add grease seal drag reading to value of .6-1.9 lbs/2.6-8.5 N. Turn adjusting nut slowly until specified preload is obtained. After preload adjustment, stake nut in position.
<b>HIA</b>	Tighten hub nut to 15 ft-lbs/20 Nm. Back off and retighten to 4/6.	<b>LRA</b>	Tighten the hub nut to 50 ft-lbs/61 Nm, then back off 90°. Tighten the hub nut 3 ft-lbs/4 Nm. Endplay should be .004:. Install lock nut and tighten to 50 ft-lbs/61 Nm.
<b>IUA</b>	Tighten the hub nut to 22 ft-lbs/29 Nm then fully loosen. Install a spring scale to one of the wheel nut studs. Tighten the hub nut until the scale reads: 4.5-5.5 lbs/2-2.5 kg for new bearing and seal; or 2.5-4.0 lbs/1.2-1.8 kg for a used bearing and seal.	<b>LRB</b>	While slowly rotating hub, tighten the hub nut until all endplay is removed, then back off 180°. Tighten the hub nut 13-15 in-lbs. Endplay should be .0005-.004". Install lock nut and tighten to 70-80 ft-lbs/95-108 Nm.
<b>IUB</b>	Tighten the hub nut to 22 ft-lbs/29 Nm then fully loosen. Install a spring scale to one of the wheel nut studs. Tighten the hub nut until the scale reads: 1.8-2.2 lbs/20-25 kg.	<b>LRC</b>	Tighten the hub nut to 37 ft-lbs/50 Nm, then back off 90°. Tighten the hub nut 7 ft-lbs/10 Nm. Endplay should be .0004". Install lock nut and tighten to 37 ft-lbs/50 Nm.
<b>IUC</b>	Tighten the hub nut to 22 ft-lbs/30 Nm then fully loosen. Tighten nut finger tight and install cotter pin.	<b>MAA</b>	Tighten locknut to 18-22 ft-lbs/25-29 Nm. Turn the hub 2-3 times. Loosen the locknut and finger tighten. Turn the locknut until torque to turn hub with a spring scale attached to a lug stud is 1.3-4.3 in-lbs/.15-.50 kg. Stake locknut.
<b>IUD</b>	Tighten the hub nut until 1.1-3.3 lbs/0.5-1.5 kg of force is required to turn the hub with a spring scale attached to a lug nut stud.	<b>MAB</b>	Tighten locknut to 14-18 ft-lbs/20-25 Nm. Turn the hub 2-3 times. Loosen the locknut and finger tighten. Turn the locknut until force to turn hub with a spring scale attached to a lug stud is .77-1.092 lbs/.35-.87 kg.
<b>IUE</b>	Tighten the hub nut to 22 ft-lbs/29 Nm. Turn the hub 2-3 times and loosen the nut. Finger tighten the nut. Tighten the nut further until 2.2 lbs/1.0 kg of force is required to turn the hub with a spring scale attached to a lug stud.	<b>MAC</b>	Tighten locknut to 14-22 ft-lbs/20-29 Nm. Turn the hub 2-3 times. Loosen the locknut and finger tighten. Turn the locknut until force to turn hub with a spring scale attached to a lug stud is 1.3-2.4 lbs/.60-1.1 kg.
<b>IUF</b>	Tighten the hub nut to 22 ft-lbs/29 Nm. Turn the hub 2-3 times and loosen the nut. Finger tighten the nut. Tighten the nut further until 3.3 lbs/1.5 kg of force is required to turn the hub with a spring scale attached to a lug stud. Align the holes in the lock washer with the nut. Turn the nut slightly if needed.	<b>MAD</b>	Tighten locknut. Turn the hub 2-3 times. Loosen the locknut and finger tighten. Turn the locknut until force to turn hub with a spring scale attached to a lug stud is 1.3-2.6 lbs/.6-1.2 kg. Install bearing set plate and bolts; spacer, then snap ring.
<b>JGA</b>	Tighten hub nut to eliminate endplay. Back off nut slightly to provide endplay of .001-.003".		

# Adjustment Procedures

<b>MIA</b>	Tighten hub nut to 14 ft-lbs/20 Nm, rotate wheel 2-3 turns and back off nut. Tighten hub nut to 7 ft-lbs/10 Nm, rotate wheel, retorque to 7 ft-lbs/10 Nm.	<b>TAC</b>	Tighten adjusting nut to 43 ft-lbs/60 Nm. Turn the hub right and left several times and loosen the adjusting nut. Retighten to 35-60 in-lbs/4-6 Nm. Force to turn hub with a spring scale attached to a lug stud should be 2.2-8.6 lbs/1.0-3.9 kg. Install washer and locknut. Tighten to 65 ft-lbs/90 Nm.
<b>NDA</b>	Tighten locknut to 58-72 ft-lbs/78-98 while turning hub. Back off to 0. Tighten locknut to 4-13 in-lbs/0.5-1.5 Nm. Turn hub and tighten again to 4-13 in-lbs/0.5-1.5 Nm. Axial play should be 0. Install lock washer by tightening the locknut within 15-30°. Starting force, measured with a spring scale pulling the lug bolt, should be 1.5-4.7 lbs/0.7-2.1 kg.	<b>TAD</b>	Tighten adjusting nut to 25 ft-lbs/34 Nm while rotating hub. Back off to 0. Tighten adjusting nut until 1.3-4 lbs/0.6-1.8 kg of force is required to turn hub with a spring scale attached to a lug stud.
<b>NDB</b>	Tighten hub nut to 18-22 ft-lbs/22-26 Nm. Back off and tighten again. Back off up to 60° and install cotter pin.	<b>TAE</b>	Tighten adjusting nut to 21 ft-lbs/28 Nm while rotating wheel. Back off and finger tighten. Tighten slightly to install cotter pin. Axial endplay should be .002".
<b>NDC</b>	Tighten hub nut to 29-33 ft-lbs/34-40 Nm. Back off and tighten again. Back off up to 90° and install cotter pin.	<b>TAF</b>	Tighten adjusting nut to 22 ft-lbs/29 Nm while rotating wheel. Back off to 0. Tighten adjusting nut until 0-2.6 lbs/0-1.2 kg of force is required to turn hub with a spring scale attached to a lug stud.
<b>NDD</b>	Tighten hub nut to 25-29 ft-lbs/30-34 Nm. Back off and tighten again. Back off up to 45° and install cotter pin.	<b>TAG</b>	Tighten adjusting nut to 43 ft-lbs/59 Nm while turning wheel. Back off to 0. Tighten adjusting nut to 11 ft-lbs/15 Nm. Force to turn hub with a spring scale attached to a lug stud should be 4.6-7.9 lbs/2.1-3.6 kg. Install washer and torque locknut to 35 ft-lbs/47 Nm.
<b>NDE</b>	Tighten hub nut to 22-25 ft-lbs/25-29 Nm. Back off and tighten again. Back off up to 90° and install cotter pin.	<b>TAH</b>	Tighten adjusting nut to 43 ft-lbs./59 Nm while turning wheel. Back off to 0. Tighten adjusting nut to 38-57 in-lbs/4.3-6.5 Nm. Force to turn hub with a spring scale attached to a lug stud should be 9.5-15 lbs/42-67 N. Install washer and tighten locknut to 47 ft-lbs/64 Nm.
<b>NDF</b>	Tighten hub nut to 16-17 ft-lbs/19-21 Nm. Back off and tighten again. Back off up to 40-70° and install cotter pin.	<b>VOA</b>	Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating wheel. Back off 1/3 turn. Loosen slightly and install cotter pin.
<b>NDG</b>	Tighten adjusting nut to 58-72 ft-lbs/78-98 Nm while turning hub. Back off to 0. Tighten adjusting nut to 4.3-13 in-lbs/0.5-1.5 Nm.	<b>VOB</b>	Tighten adjusting nut to 15 ft-lbs/20, then 33 ft-lbs/45 Nm. Tighten an additional 60°.
<b>NDH</b>	Tighten adjusting nut to 58-72 ft-lbs/78-98 Nm while turning hub. Back off to 0. Tighten adjusting nut until force to turn hub with a spring scale attached to a lug stud is 1.6-4.7 lbs/0.7-2.1 kg.	<b>VWA</b>	Tighten adjusting nut to 7 ft-lbs/10 Nm. Back off and finger tighten. Install cotter pin.
<b>POA</b>	While turning wheel tighten adjusting nut slightly. Back off adjusting nut until brake disc can just be moved using finger pressure on a screwdriver. Tighten adjusting nut retaining screw to 11 ft-lbs.	<b>VWB</b>	Tighten the hub nut gradually while turning the thrust washer with a screwdriver tip. Do not bend or pry with the screwdriver. Tighten the hub nut to the point where the washer cannot be turned and back off slightly. Install the locknut and cotter pin.
<b>SNA</b>	Tighten nut to 74-118 ft-lbs/100-160 Nm, loosen, tighten to 15 ft-lbs/20 Nm, turn an additional 90°.	<b>VWC</b>	Tighten to 148 ft-lbs/200 Nm. Loosen. Tighten to 37 ft-lbs/50 Nm, then turn nut an additional 60°.
<b>SUA</b>	Tighten adjusting nut while turning wheel. Back off 1/8 turn and finger tighten.	<b>VWD</b>	Tighten to 148 ft-lbs/200 Nm. Loosen. Tighten to 37 ft-lbs/50 Nm, then turn nut an additional 30°.
<b>SZA</b>	Tighten adjusting nut while turning wheel to 58 ft-lbs/80 Nm. Loosen nut. Tighten nut to 9 ft-lbs/12.5 Nm.		
<b>TAA</b>	Tighten adjusting nut to 43 ft-lbs/60 Nm. Turn the hub right and left several times and retighten to 43 ft-lbs/60 Nm. Loosen the nut and finger tighten. Tighten adjusting nut to 4/6. Force to turn hub with a spring scale attached to a lug stud should be 6.4-12.6 lbs/2.9-5.7 kg. Insert lock washer. Tighten locknut to 47 ft-lbs/64 Nm. Recheck turning torque with the spring scale.		
<b>TAB</b>	Tighten adjusting nut to 43 ft-lbs/60 Nm. Turn the hub right and left several times and loosen the adjusting nut. Retighten to 18 ft-lbs/25 Nm. Force to turn hub with a spring scale attached to a lug stud should be 6.4-12.6 lbs/2.9-5.7 kg. Install washer and locknut. Tighten to 35 ft-lbs/47 Nm. Axial play should be 0.		



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