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Supersedes 457377, Dated 2011

Torque specification guide

Front & rear axle nut torque specifications
for FWD, RWD & 4WD vehicles



Instructions

One of the most common mistakes during installation is improper torque of the Axle nut. To guarantee the (Bearing, Spindle or Hub) is torqued correctly, follow the manufacture's installation procedure. Ignoring these important details will reduce the life of your (Bearing, Spindle or Hub).

Use a qualified, calibrated torque wrench. Do not use an impact gun to install the axle nut. The impact gun will damage the axle nut. It will also leave your spindle nut under or over torque resulting in hub assembly failure.

To ensure that you have the correct torque for the application refer to this guide or contact the vehicle manufactures dealer. It is important that you properly torque the spindle nut to ensure optimum bearing life. Under torque of an axle nut will allow excessive movement causing uneven loading and excessive wear. Over torque of the axle nut will cause excessive load and cause the bearing to overheat, this is one of the most common causes for failures.

All replacement hub units are not created equal

SKF premium quality hubs

- Engineered to meet or exceed OE specifications
- Life expectancy of 100,000+ miles
- OE sensors assure correct ABS functions
- Premium seals, both inboard and outboard, protect the bearing
- Precision bearing preload and correct application of advanced manufacturing techniques such as orbital rolling
- 100% tested to the actual OE specifications per part number for fit, form and function
- High quality steel and surface finishes
- Proper implementation of heat treatment
- Precise assembly tolerances

VS

"Value" grade hubs

- Reverse engineered to generic specifications
- Typically last about 25% to 35% as long as the OE hub (25,000 to 35,000 miles)
- Low quality reproduction sensors can cause ABS system malfunctions
- Reproduction seals selected for price, not performance, quickly subject the bearing to contamination
- Imprecise bearing preload and inconsistent manufacturing techniques may lead to poor performance and shortened bearing life
- Tests not performed on all critical areas – defective return rates run 6 to 12 times higher than premium hubs
- Inferior quality steel and surface finishes will lead to bearing noise and premature failure
- Heat treatment improperly applied and/or poorly controlled can result in safety issues like a wheel off condition
- Inconsistent and imprecise assembly tolerances may lead to wheel pulsation

**Don't compromise your customer's vehicle safety.
Always install SKF premium quality hubs!**

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Acura			
1.6EL.....	1997-2005.....	134/182	—
2.2CL, 2.3CL, 3.0CL	1997-1999	181/245	134/181
2.5TL	1995-1998	181/245	134/181
3.2CL	2001-2003	181/245	134/181
3.2TL	1996-2007	181/245	134/181
3.5RL	1996-2004.....	181/245	181/245
Integra	1986-2001.....	134/181	134/181
IXL 1.5L,2.0L.....	2013	133/181	—
IXL 2.4L.....	2013	181/245	—
Legend	1991-1995.....	242/335	206/285
	1986-1990.....	180/244	180/244
MDX.....	2007-2013.....	242/329	181/245
	2003-2006.....	210/285	181/245
	2001-2002.....	181/245	181/245
NSX.....	1991-2005.....	—	242/329
RDX	2013	242/329	133/181
	2007-2012.....	242/329	181/245
RL	2009-2012.....	242/329	181/245
	2005-2007.....	242/329	181/245
RSX	2002-2006.....	134/181	134/181
RSX Type S	2002-2006.....	181/245	134/181
SLX	1996-1999.....	IUA	—
TL FWD	2009-2013.....	242/329	—
TL AWD	2009-2013.....	242/329	181/245
TL.....	2008.....	181/245	134/181
	2005-2008.....	181/245	134/181
TSX	2009-2013.....	242/329	—
	2004-2008.....	181/245	—
Vigor	1992-1994.....	181/245	134/181
ZDX.....	2010-2013.....	242/329	181/245
AM General			
H2.....	2003-2009.....	173/235	—
H3.....	2006-2010.....	191/260	—
American Motors			
AMX.....	1978-1980.....	AMB	—
Concord.....	1978-1983.....	AMB	—
Eagle.....	1980-1988.....	—	—
Gremlin.....	1977-1978.....	AMB	—
Matador	1977-1978.....	AMB	—
Pacer	1977-1980.....	AMB	—
Spirit.....	1979-1983.....	AMB	—
Audi			
100.....	1992-1994.....	147/200[30]	AIA
100, 200.....	1989-1991.....	147/200[30]	AIA
100 Quattro.....	1989-1991.....	147/200[30]	147/200[30]
200 Quattro.....	1989-1991.....	147/200[30]	147/200[30]
4000	1980-1987.....	167/226	AIA
4000 Quattro	1984-1987.....	203/280	203/280

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Audi - cont.			
5000	1978-1988.....	202/280	AIA
5000 Quattro.....	1984-1988.....	202/280	—
80	1988-1991.....	195/265	AIA
80 Quattro	1988-1991.....	195/265	236/320
90 FWD.....	1992-1995.....	147/200[30]	AIA
90 AWD.....	1992-1995.....	81/110[30]	89/120[30]
90	1988-1991.....	195/265	AIA
90 Quattro	1992-1995.....	147/200[30]	177/240
	1988-1991.....	195/265	236/320
Allroad Quattro.....	2013	[50]	[50]
	2001-2005.....	[31]	[31]
A3, A3 Quattro	2006-2013.....	VWH	VWH
A4, A4 Quattro	2008-2013.....	[50]	[50]
	2006-2007.....	[51]	147/200[45]
A4	1996-2005.....	[31]	AIA
A4 Quattro	1996-2005.....	[31]	85/115[32]
A5	2010-2013.....	[50]	[50]
A5 Quattro	2008-2013.....	[50]	[50]
A6	2005-2013.....	[50]	—
	1998-2004.....	[31]	—
	1995-1997.....	147/200[30]	AIA
A6 Quattro	2005-2013.....	[50]	[50]
	1998-2004.....	[31]	[31]
	1995-1997.....	147/200[30]	147/200[30]
A7 Quattro	2012-2013.....	[50]	[50]
A8	1997-1999.....	140/190[32]	—
A8 Quattro	2006-2013.....	147/200[45]	147/200[45]
A8 Quattro	1997-2005.....	140/190[32]	140/190[32]
Cabriolet.....	1994-1998.....	147/200[30]	AIA
Coupe.....	1990-1991.....	195/265	AIA
	1981-1987.....	167/226	AIA
Fox.....	1976-1979.....	167/226	AIA
Q5.....	2009-2013.....	[50]	[50]
Q7.....	2007-2013.....	[53]	[53]
RS4.....	2007-2008.....	[51]	[50]
RS5.....	2013	[50]	[50]
RS6.....	2003-2004.....	[31]	[31]
R8.....	2008-2013.....	[111]	[50]
S4	2008-2013.....	[50]	[50]
	2006-2007.....	[51]	147/200[45]
	2000-2005.....	[31]	AIA
S4 Quattro	2000-2005.....	[31]	85/115[32]
S4 FWD.....	1992-1994.....	147/200[30]	AIA
S4 AWD.....	1992-1994.....	147/200[30]	147/200[30]
S5	2008-2013.....	[50]	[50]
S6	2007-2013.....	[50]	[50]
S6 Quattro	2002-2013.....	[31]	[31]
S6 FWD.....	1995.....	147/200[30]	AIA
S6 AWD.....	1995-1997.....	147/200[30]	147/200[30]
S7	2013	[50]	[50]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Audi - cont.			
S8	2013	147/200[45]	147/200[45]
	2007-2009	[50]	[50]
	2001-2003	140/190[32]	140/190[32]
S7	2013	[50]	[50]
TT AWD	2007-2013	VWH	VWH
	2000-2005	[33]	[33]
TT FWD	2007-2010	VWH	
	2000-2005	[33]	129/175
V8 Quattro	1990-1994	147/200[30]	147/200[30]

BMW

Active Hybrid 3	2013	—	107/145 [114]
Active Hybrid 5	2013	—	74/100 [84][114]
Active Hybrid 7	2013	—	74/100 [84][114]
M Coupe, Roadster	1998-2002	—	[40]
M3	2008-2013	—	221/300[92]
	1995-2006	—	[40]
	1988-1991	—	147/200
M5	2013	—	[115]
	2006-2010	—	310/420
	2000-2003	—	221/300
	1991-1993	—	214/290
M6	2012-2013	—	[115]
M6 Coupe, Convertible	2006-2010	—	310/420
X1	2013	—	155/210 [44][113]
X3	2011-2013	155/210 [44][113]	74/100 [55][114]
	2004-2010	310/420	221/300
X5	2000-2013	310/420	310/420
X6	2008-2013	310/420	310/420
Z3	1997-2002	—	[40]
Z4	2009-2013	—	184/250
	2003-2008	—	221/300
Z8	2000-2003	—	221/300
1 Series	2012-2013	—	[92][101]
	2008-2011	—	[54][92]
1M Series	2011	—	[92][101]
3 Series AWD (E92,E93)	2012-2013	310/420	[101]
3 Series AWD (F30)	2012-2013	155/210[44]	107/145[27]
3 Series RWD (E92,E93)	2012-2013	—	[101]
3 Series RWD (F30)	2012-2013	—	107/145[27]
3 Series AWD	2008-2011	310/420	[46]
	2006-2007	310/420	[46]
	2000-2005	310/420	[40]
	1985-1992	184/250	[40]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
BMW - cont.			
3 Series RWD	2008-2011	—	[54][92]
	2006-2007	—	[46]
	1985-2005	214/290	[40]
5 Series AWD (F07/F10)	2010-2013	155/210[44]	74/100[84]
5 Series AWD (E60)	2004-2010	221/300	310/420
5 Series AWD (E61)	2006-2010	310/420	310/420
5 Series RWD (F07/F10)	2010-2013	—	[115]
5 Series RWD (E60)	2004-2010	—	310/420
5 Series RWD (E61)	2006-2010	—	310/420
5 Series RWD	1997-2003	—	221/300
	1988-1995	—	214/290
	1985-1987	—	188/260
6 Series AWD	2012-2013	155/210 [44][113]	74/100 [55][114]
6 Series RWD	2012-2013	—	[115]
6 Series	2004-2010	—	310/420
7 Series AWD	2010-2013	155/210 [44][92]	74/100 [55][92]
7 Series RWD	2009-2013	—	[115]
	2002-2008	—	310/420
	1988-1994	—	214/290
	1985-1987	—	188/260
7 Series	2002-2007	—	310/420
	1995-2001	—	221/300
8 Series	1994-1997	—	214/290

Buick

Allure	2005-2009	118/160	—
Century	2001-2005	118/160	—
	1998-2000	159/216	—
	1997	151/205	—
	1996	107/145	—
	1992-1995	103/140[4]	—
	1983-1991	185/260	—
	1982	225/290	—
	1976-1981	GMA	—
Electra	1985-1990	185/260	—
	1980-1984	GMA	—
Enclave	2008-2013	173/235	151/205
Encore	2013	37/50[82]	—
Estate Wagon	1980-1990	GMA	—
LaCrosse AWD	2010-2013	GMS	GMS
LaCrosse FWD	2010-2013	GMS	—
LaCrosse	2005-2009	118/160	—
LeSabre	1998-2005	118/160	—
	1992-1997	107/145	—
	1986-1991	185/260	—
	1980-1985	GMA	—
Lucerne	2006-2011	118/160	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Buick - cont.				Cadillac - cont.			
Park Avenue	1998-2005	118/160	—	Deville	2000-2005	[5]	—
	1992-1997	107/145	—		1997-1999	118/160	—
	1991	185/260	—		1992-1996	107/145	—
Rainer	2004-2007	103/140	—		1985-1991	180/244	—
Reatta	1988-1991	180/244	—		1980-1984	GMA	—
Regal	2011-2013	GMS	—		1977-1984	GMA	—
	2001-2004	118/160	—		1976	GMC	—
	1998-2000	159/215	—	DTS	2008-2011	[56]	[79]
	1995-1997	151/205	—		2006-2007	[5]	[79]
	1988-1994	184/250	—	Eldorado	1997-2002	118/160	—
	1980-1987	GMA	—		1993-1996	107/145	—
Rendezvous	2007	192/260	—		1992	110/145	—
	2002-2006	192/260	192/260		1986-1991	180/244	—
Riviera	1999	118/160	—		1979-1985	176/238	—
	1995-1998	107/145	—		1976-1978	110/145	—
	1986-1993	183/248	—	Escalade 2WD	2007-2013	—	—
	1980-1985	175/240	—		2002-2006	177/240	GMQ[15]
Roadmaster	1991-1996	GMA	—	Escalade AWD	2007-2013	177/240	—
Skyhawk	1982-1988	185/260	—		2002-2006	177/240	GMQ[15]
	1980	GMA	—	Escalade 4WD	1999-2000	165/225	GMD[15]
Skylark	1998	74/100[3]	—	Escalade ESV	2007-2013	177/240	—
	1983-1997	185/260	—		2003-2006	177/240	GMQ[15]
	1980-1982	225/290	—	Escalade EXT 2WD	2007	—	—
Somerset	1985-1987	185/260	—		2002-2006	—	GMQ[15]
Terraza	2005-2007	118/160	—	Escalade EXT 4WD	2007-2013	177/240	—
Verano	2012-2013	GMS	—		2002-2006	177/240	GMQ[15]
Cadillac				Fleetwood	1993-1996	GMA	—
Allante	1993	110/145	—		1992	107/145	—
	1987-1992	183/245	—		1985-1991	180/244	—
ATS	2013	184/250	184/250		1977-1984	GMA	—
Brougham	1977-1992	GMA	—		1976	GMC	—
Calais	1976	GMC	—	Limousine	1977-1984	GMA	—
Catera	1997-2001	236/320	—	Seville	1997-2004	118/160	—
Cimarron	1982-1988	185/260	—		1993-1996	107/145	—
CTS, CTS Sport Wagon					1992	110/145	—
RWD w/o RPOJ56	2010-2013	—	170/230		1986-1991	180/244	—
CTS, CTS Sport Wagon					1980-1985	176/238	—
RWD w/ RPOJ56	2010-2013	—	158/215		1977-1979	GMA	—
CTS, CTS Sport Wagon				SRX	2012-2013	184/250	GMS
AWD	2010-2013	158/215	158/215		2010-2011	184/250	184/250
CTS RWD	2008-2009	—	158/215		2008-2009	159//215	170/230
CTS AWD	2008-2009	158/215	158/215		2004-2007	118/160	118/160
CTS	2003-2007	—	118/160	STS RWD	2005-2011	118/160	118/160
Concours Deville	1997-1999	118/160	—	STS AWD	2005-2011	—	118/160
	1994-1996	107/145	—	XLR	2004-2009	—	151/205
				XTS	2013	GMS	GMS
				Chevrolet			
				Aveo, Aveo 5	2004-2011	221/300	148/190
				Bel Air	1980	GMA	—
				Beretta	1987-1996	185/260	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chevrolet - cont.			
Camaro	2010-2013	—	199/270
	1993-2002	—	—
	1980-1992	GMA	—
Caprice	2012-2013	—	100
	1980-1996	GMA	—
Cavalier	2002-2005	148/200	—
	1998-2001	144/195	—
	1982-1997	185/260	—
Celebrity	1983-1990	185/260	—
	1982	225/290	—
Chevette	1980-1987	GMA	—
Citation	1983-1985	185/260	—
	1980-1982	225/290	—
Classic	2004-2005	[57]	—
Cobalt	2009-2010	[58]	—
	2005-2008	155/210	—
Corsica	1987-2006	185/260	—
Corvette	2006-2013	—	151/205
	1997-2005	—	118/160
	1984-1996	—	164/223
	1980-1983	GMA	100/130
Cruze	2011-2013	[70]	—
HHR	2006-2011	155/210	—
El Camino	1980-1987	GMA	—
Impala	2003-2013	155/210	—
	2001-2002	118/160	—
	2000	159/215	—
	1980-1996	GMA	—
Lumina	1998-2001	159/216	—
	1995-1997	151/205	—
	1990-1994	184/250	—
Lumina APV	1995-1996	104/145	—
	1990-1994	185/260	—
Malibu	2013	GMS	—
	2004-2012	159/215	—
	1997-2003	[34]	—
	1980-1983	GMA	—
Malibu Maxx	2004-2007	159/215	—
Metro	1998-2001	129/175	—
Monte Carlo	2003-2007	118/160	—
	2001-2002	118/160	—
	1998-2000	159/215	—
	1995-1997	151/205	—
	1980-1988	GMA	—
Monza	1980	GMA	—
Nova	1985-1988	137/186	90/123
Orlando	2013	GMS	—
Prizm	1998-2000	166/225	—
Spark	2013	177/240	140/190
Spectrum	1985-1988	137/186	IUC

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chevrolet - cont.			
Sprint	1989-1991	125/179	125/179
	1985-1988	151/210	62/100
Sonic	2012-2013	[48]	—
Uplander	2008-2009	118/160	—
	2005-2007	118/160	192/260
Venture	2002-2005	118/160	192/260
	1998-2001	118/160	—
	1997	151/205	—
Volt	2011-2013	[70]	—
Chevrolet / GMC Trucks			
Acadia FWD	2007-2013	173/235	—
Acadia AWD	2007-2013	173/235	118/160
Astro	1985-1989	GMA	—
Astro AWD	1996-2005	147/200	—
Astro 2WD	2003-2005	—	—
	1990-2002	GMA	—
Astro 4WD	1990-1995	180/244	—
Avalanche 2WD	2002-2013	—	—
Avalanche 4WD	2002-2013	177/240	—
Blazer 2WD	1992-1994	GMA	—
	1980-1987	GMA	—
	1976-1978	GMA	—
Blazer R/V 2WD	1988-1991	GMA	—
Blazer 4WD	1992-1994	165/225	—
	1988-1991	GMM[12]	—
		GML[13]	—
	1980-1987	GMM[12]	—
		GML[13]	—
	1979	GMN	—
	1976-1978	GMN	—
Caballero	1980-1987	GMA	—
Canyon 2WD	2004-2012	—	—
Canyon 4WD	2004-2012	191/260	—
Captiva Sport	2012-2013	151/205[75]	151/205[75]
Colorado 2WD	2004-2012	—	—
Colorado 4WD	2004-2012	191/260	—
C10, C1500 2WD			
Pickup	1976-1986	GMA	—
C1500 2WD Pickup	1997-2000	GMA	—
	1988-1996	GMA	—
C20, C2500 2WD			
Pickup	1979-1986	GMA	GM[15]
			GMJ[11]
C2500 2WD Pickup	1997-2000	GMA	GMD
	1988-1996	GMA	GMF

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chevrolet / GMC Trucks - cont.				Chevrolet / GMC Trucks - cont.			
C3500 2WD Pickup	1997-2000	GMA	GMD[15] GME[14]	G3500 Van	2003-2013	—	GMQ[15]
	1994-1996	GMA	GMF[15] GME[14]		2001-2002	GMA	GMQ[15]
	1991-1993	GMA	GMF[15] GMG[7]		1998-2000	GMA	GMD
	1988-1990	GMA	GMF[15] GMG[7]		1996-1997	GMA	GMF
C30, C3500 2WD Pickup	1979-1986	GMA	GMI[15] GMJ[11] GMJ	G4500 Van	2012-2013	—	GMQ[15]
	1976-1978	GMA	—	H1500,H2500 Van AWD	2003-2013	155/210	—
Denali	2007	177/240	—	HHR	2006-2007	155/210	—
	2004-2006	173/235	GMQ[15]	Jimmy 2WD	1988-1991	GMA	—
Denali 2WD	2001-2003	—	GMQ[15] GMD[15]		1979-1987	GMA	—
	1999-2000	GMA	GMQ[15]		1976-1978	GMA	—
Denali 4WD	2001-2003	155/210	GMQ[15] GMD[15]	Jimmy 4WD	1988-1991	GMM[12] GML[13]	—
	1999-2000	165/225	—		1980-1987	GMM[12] GML[13]	—
El Camino	1980-1987	GMA	—		1979	GMN	—
Envoy 2WD	2002-2007	103/140	—		1976-1978	GMN	—
Envoy 4WD	1999-2007	103/140	—	K10, K1500 4WD Pickup	1980-1986	GMM[12] GML[13]	—
Equinox	2007-2013	151/205	151/205 81/110	K1500 4WD Pickup	1991-2000	165/225	—
	2005-2006	151/205	—		1988-1990	175/235	—
G10, G1500 Van	1992-1996	GMA	—	K20, K2500 4WD Pickup	1980-1986	GMM[12] GML[13]	GMI[15] GMJ[11]
	1988-1991	GMA	—	K2500 4WD Pickup	1997-2000	165/225	GMD
	1979-1987	GMA	—		1991-1996	165/225	GMF
G1500 Van	2003-2012	—	—		1988-1990	175/235	GMF
	2001-2002	GMA	—	K3500 4WD Pickup	1997-2000	165/225	GMD[15] GME[14] GMF[15] GME[14] GMF[15] GME[14] GMF[15] GME[14] GMF[15] GME[14]
	1998-2000	GMA	—		1994-1996	165/225	—
	1996-1997	GMA	—		1991-1993	165/225	—
G1500 Van AWD	2007	155/210	—		1988-1990	175/235	—
	2003-2006	173/235	—	K30, K3500 4WD Pickup	1983-1986	GMM[12] GML[13]	GMI[15] GMG[7] GMJ[11]
G20, G2500 Van	1992-1996	GMA	—		1980-1982	GMM[12] GML[13]	GMI[15] GMH[7] GMJ[11]
	1988-1991	GMA	—	LUV Pickup 2WD	1976-1982	GMA	—
	1976-1987	GMA	—	LUV Pickup 4WD	1980-1982	—	—
G2500 Van	2003-2013	—	GMQ[15] GMQ[15] GMD GMF	R10, R1500 2WD Pickup	1987-1991	GMA	GMI
	2001-2002	GMA	—	R20, R2500 2WD Pickup	1987-1991	GMA	GMI
	1998-2000	GMA	—	R30, R3500 2WD Pickup	1987-1991	GMA	GMG[7] GMI[8]
	1996-1997	GMA	—				
G30, G3500 Van	1992-1996	GMA	GMF GMG[7] GMI[8] GMI[15] GMG[7] GMJ[11] GMJ[15] GMH[7] GMJ[11]				
	1988-1991	GMA	—				
	1983-1987	GMA	—				
	1979-1982	GMA	—				

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chevrolet / GMC Trucks - cont.			
S Blazer, Jimmy 2WD	1982-2003	GMA	—
S Blazer, Jimmy 4WD	1997-2005	103/140	—
S Blazer, Jimmy, Typhoon, Syclone 4WD	1986	181/245	—
S Blazer, Jimmy 4WD	1982-1985	174/235	—
S10, Sonoma, S15 2WD	1982-2004	GMA	—
S10, Sonoma, S15 4WD	1997-2004	103/140	—
	1986-1996	180/244	—
	1982-1985	174/235	—
Safari	1985-1989	GMA	—
Safari 2WD	2003-2005	—	—
	1990-2002	GMA	—
Safari AWD	1996-2005	147/200	—
Safari 4WD	1990-1995	180/244	—
Sierra, Silverado 2WD	2010-2013	—	GMQ[15]
	1999-2009	—	GMQ[15]
Sierra, Silverado 4WD	2010-2013	188/255	GMQ[15]
	1999-2009	177/240	GMQ[15]
SSR	2004-2006	—	—
Suburban 2WD	2000-2013	—	GMQ[15]
	1997-1999	GMA	GMD
	1992-1996	GMA	GMF
	1988-1991	GMA	GMI
	1979-1987	GMA	GMI[15]
Suburban 4WD	2000-2013	177/240	GMQ[15]
	1997-1999	165/225	GMD
	1992-1996	165/225	GMF
	1988-1991	GMM[12]	GMI
		GML[13]	
	1980-1987	GMM[12]	GMI[15]
		GMM[13]	GMJ[11]
Tahoe, Yukon 2WD	1998-2013	—	GMQ[15]
	1997	GMA	—
	1995-1996	GMA	—
Tahoe, Yukon 4WD	1998-2013	177/240	GMQ[15]
	1997	165/225	—
	1995-1996	165/225	—
Terrain	2010-2013	151/205	151/205
Tracker	1999-2004	159/216	—
	1998	155/210	—
TrailBlazer 2WD	2002-2009	—	—
TrailBlazer 4WD	2002-2009	103/140	—
Traverse FWD	2009-2013	173/235	—
Traverse AWD	2009-2013	173/235	151/205
V10, V1500 4WD Pickup	1987-1991	GMM[12] GML[13]	GMI
V20, V2500 4WD Pickup	1987-1991	GMM[12] GML[13]	GMI

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chevrolet / GMC Trucks - cont.			
V30, V3500 4WD Pickup	1987-1991	GMM[12] GMM[13]	GMG[7] GMI[8]
Yukon XL 2WD	2001-2013	—	GMQ[15]
	2000	—	GMD
Yukon XL 4WD	2001-2013	177/240	GMQ[15]
	2000	177/240	GMD
Chrysler			
All	1980-1981	CRA	—
200	2011-2013	118/160	—
300 RWD	2005-2013	—	157/213
300 AWD	2005-2013	157/213	157/213
300M	2001-2004	105/142	124/168
	1999-2000	120/163	124/168
Aspen RWD	2007-2009	—	—
Aspen 2WD	2007	—	—
Aspen 4WD	2007-2009	185/251	—
Cirrus	2000	105/142	185/250
	1995-1999	180/244	185/250
Concorde	2001-2004	105/142	124/168
	1995-2000	120/163	124/168
	1993-1994	80/108	125/170
Conquest	1987-1989	CRB	—
Cordoba	1982-1983	CRA	—
Crossfire	2004-2008	—	164/220
Daytona	1984-1993	180/244	CRC
Dynasty	1988-1993	180/244	CRC
E Class	1983-1984	180/244	CRC
Fifth Ave	1990-1993	180/244	CRC
	1982-1989	CRA	—
Imperial	1990-1993	180/244	CRC
	1982-1983	CRA	—
Intrepid	2001-2004	105/142	124/168
	1995-2000	120/163	124/168
	1993-1994	80/108	125/170
Laser	1984-1986	180/244	CRC
LeBaron	1982-1995	180/244	CRC
LHS	2001	105/142	124/168
	1995-2000	120/163	124/168
	1994	80/108	125/170
New Yorker	1995-1996	120/163	124/168
	1994	80/108	125/170
	1983-1993	180/244	CRC
	1982	CRA	—
Newport	1982-1987	CRA	—
Pacifica	2004-2008	180/244	180/244
PT Cruiser	2001-2010	180/244	160/217
Prowler	2001-2002	—	105/141

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Chrysler - cont.				Dodge / Plymouth - cont.			
Sebring Convertible	2008-2010	97/132	181/245	Challenger	2008-2013	184/250	157/213
	2001-2006	110/150	185/250		1978-1983	CRB	—
	2000	105/142	185/250	Champ	1979-1982	167/226	CRB
	1996-1999	180/244	185/250	Charger AWD	2007-2013	157/213	157/213
Sebring Coupe	1995-2005	167/226	—	Charger RWD	2007-2013	152/207	157/213
Sebring Sedan	2007-2010	97/132	—	Charger	2006	184/250	157/213
	2001-2006	110/150	185/250		1982-1987	180/244	CRC
TC	1989-1991	180/244	—		1978-1979	CRA	—
Town & Country	2008-2013	118/244	—	Colt	1993-1994	167/226	130/180
	2005-2007	180/244	—		1989-1992	167/226	127/175
Town & Country AWD	1999-2004	180/244	180/244		1985-1988	167/226	90/125
	1990-1998	180/244	—		1979-1984	167/226	CRB
Town & Country FWD	1999-2004	180/244	—		1976-1980	CRB	—
	1990-1998	180/244	CRC	Conquest	1984-1986	CRB	—
Voyager AWD	2000-2003	180/244	180//244	Dart	2013	148/200[95]	129/175
Voyager FWD	2000-2003	180/244	—	Daytona	1984-1993	180/244	CRC
Daewoo				Diplomat	1977-1989	CRA	—
Lanos	2000-2002	DAA	DAB	Dynasty	1988-1993	180/244	CRC
	1999	DAA	DAC	Grand Caravan	2008-2013	118/160	—
Leganza	2001-2002	DAE	207/280		2005-2007	180/244	—
	1999-2000	DAA	210/285	Grand Caravan, Grand Voyager AWD	1999-2004	180/244	180/244
Nubira	2001-2002	DAA	DAD		1990-1998	180/244	—
	1999-2000	DAA	DAD	Grand Caravan, Grand Voyager FWD	1999-2004	180/244	—
Daihatsu					1990-1998	180/244	CRC
Charade	1988-1992	148/201	144/106	Grand Caravan, Grand Voyager CRC	1988-1989	180/244	—
Rocky	1990-1992	DHA	—	Grand Fury	1977-1989	CRA	—
Dodge / Plymouth				Horizon	1978-1990	180/244	CRC
024, TC3	1980-1982	180/244	CRC	Intrepid	2001-2004	105/142	124/168
400	1982-1983	180/244	CRC		1995-2000	120/163	124/168
600	1982-1988	180/244	CRC		1993-1994	80/108	125/170
Aries	1981-1989	180/244	CRC	Journey AWD	2009-2013	97/132	181/245
Arrow	1976-1980	CRB	—	Journey FWD	2009-2013	97/132	—
Aspen	1978-1980	CRA	—	Lancer	1985-1989	180/244	CRC
Avenger	2009-2013	118/160	—	Laser 4WD	1990-1994	167/226	138/190
	1995-2000	167/226	—	Laser FWD	1990-1994	167/226	166/225
Avenger AWD	2008	118/160	118/160	Magnum AWD	2005-2008	157/213	157/213
Breeze	2000	105/142	185/250	Magnum RWD	2005-2008	184/250	157/213
	1996-1999	180/244	185/250	Magnum	1978-1979	CRA	—
Caliber	2010-2012	180/244	—	Mini Ram Van	1984-1988	180/245	—
Caliber AWD	2007-2009	181/245	181/245	Mirada	1980-1983	CRA	—
Caliber FWD	2007-2009	181/245	—	Monaco	1990-1992	181/245	123/167
Caravan AWD	1999-2004	180/244	180/244	Neon	2000-2005	180/244	160/217
	1990-1998	180/244	—		1996-1998	135/183	160/217
Caravan FWD	1999-2007	180/244	—		1995	150/203	160/217
	1990-1998	180/244	CRC	Neon SRT-4	2003-2005	180/244	160/217
Caravan, Voyager	1984-1989	180/244	CRC	Omni	1980-1990	180/244	CRC
Caravelle	1982-1988	180/244	CRC	Prowler	1997-2000	—	105/141
Cargo Van	2012	118/160	—	Rampage, Scamp	1982-1984	180/244	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Dodge / Plymouth - cont.			
Shadow, Sundance	1987-1994	180/244	CRC
Spirit	1989-1995	180/244	CRC
St. Regis	1980-1981	CRA	—
Stealth AWD	1991-1996	166/225	203/280
Stealth FWD	1991-1996	166/225	166/225
Stratus Coupe	2001-2005	167/226	—
Stratus Sedan	2001-2006	110/150	185/250
	2000	105/142	185/250
	1995-1999	180/244	185/250
TC3	1980-1982	180/244	CRC
Turismo	1982-1987	180/244	CRC
Viper	1997-2006	—	190/258
Vista	1992-1994	167/226	166/225
Vista 4WD	1984-1991	165/224	—
Vista FWD	1984-1991	165/224	CRB
Volare	1978-1980	CRA	—
Voyager AWD	1999-2000	180/244	180/244
	1990-1998	180/244	CRC
Voyager FWD	1999-2000	180/244	—
	1990-1998	180/244	—
Voyager	1984-1989	180/244	CRC

Dodge / Plymouth Trucks

Arrow 2WD	1979-1980	CRD	—
Arrow 4WD	1979-1980	DTF	—
B100 Van	1980	DTB	DTE[17] DTD[18]
B150 Van	1985-1993	DTB	DTD
B150 Van	1981-1984	DTB	DTE[17] DTD[18]
B1500 Van	2002-2003	DTK	DTC
	1994-2001	DTB	DTC
B200 Van	1980	DTB	DTE[17] DTD[18]
B250 Van	1985-1993	DTB	DTD
	1981-1984	DTB	DTE[17] DTD[18]
B2500 Van	2002-2003	DTK	DTC
	1994-2001	DTB	DTC
	1994-1998	DTB	DTC
B300 Van	1980	DTB	DTE[17] DTD[18]
B350 Van	1985-1993	DTB	DTD
	1981-1984	DTB	DTE[17] DTD[18]
B3500 Van	2002-2003	DTK	DTC
	1994-2001	DTB	DTC
D100, D150 2WD Pickup	1985-1993	DTB	DTD
	1980-1984	DTB	DTE[17] DTD[18]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Dodge / Plymouth Trucks - cont.			
D200 2WD Pickup	1980	DTB	DTE[17] DTD[18]
D250 2WD Pickup	1985-1993	DTB	DTD[18]
	1981-1984	DTB	DTE[17] DTD[18]
D300 2WD Pickup	1980	DTB	DTE[17] DTD[18]
D350 2WD Pickup	1985-1993	DTB	DTD
	1981-1984	DTB	DTD DTE
Dakota 2WD	2005-2011	—	—
	1997-2004	185/251	—
	1987-1996	DTB	—
Dakota 4WD	2005-2011	185/251	—
	1997-2004	173/235	—
	1987-1996	190/258	—
Durango 2WD	2011-2013	—	—
	1997-2010	—	—
Durango 4WD	2011-2013	229/310	—
	1997-2010	185/251	—
Nitro 2WD	2007-2011	—	—
Nitro 4WD	2007-2011	100/135	—
Raider	1987-1989	DTF	—
Ram 1500 Pickup	2006-2013	—	—
	2WD w/Indep Susp	—	—
	4WD w/Indep Susp	185/251	—
	2003-2007	—	—
	2WD w/Link/Coil Susp	—	—
	4WD w/Link/Coil Susp	263/356	—
	2003-2005	—	—
	2WD w/Indep Susp	—	DTL[9]
	4WD w/Indep Susp	185/251	DTL[9]
	2000-2002	—	—
	2WD	185/251	DTC
	4WD	180/244[16]	DTC
	1996-1999	DTA	DTC
	2WD	—	—
	4WD	175/237[16]	DTC
	1994-1995	DTA	DTC
	2WD	—	—
	4WD	180/244[16]	DTC
Ram 2500 Pickup	2013	—	—
	4WD w/Link/Coil Susp	[38]	DTL[9]
	2010-2012	—	—
	2WD w/Link/Coil Susp	—	DTL[9]
	2WD w/Link/Coil Susp	—	DTM[2]
	4WD w/Link/Coil Susp	[38]	DTL[9]
	4WD w/Link/Coil Susp	[38]	DTM[2]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Dodge / Plymouth Trucks - cont.			
Ram 2500 Pickup - cont.			
	2008-2009.....		
2WD w/Indep Susp.....		—	DTL[9]
2WD w/Indep Susp.....		—	DTM[2]
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Link/Coil Susp.....		—	DTM[2]
4WD w/Indep Susp.....		185/251	DTL[9]
4WD w/Indep Susp.....		185/251	DTM[2]
4WD w/Link/Coil Susp.....		263/356	DTL[9]
4WD w/Link/Coil Susp.....		263/356	DTM[2]
	2006-2007.....		
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Indep Susp.....		—	DTL[9]
4WD w/Link/Coil Susp.....		263/356	DTL[9]
4WD w/Indep Susp.....		185/251	DTL[9]
	2003-2005.....		
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Indep Susp.....		—	DTL[9]
4WD w/Link/Coil Susp.....		[38]	DTL[9]
4WD w/Indep Susp.....		185/251	DTL[9]
	2000-2002.....	280/380	DTC
2WD.....		280/380	DTC
4WD.....		180/244[16]	DTC
	1996-1999.....	DTA	DTC
2WD.....		DTA	DTC
4WD.....		175/237[16]	DTC
	1994-1995.....	DTA	DTC
2WD.....		DTA	DTC
4WD.....		180/244[16]	DTC
Ram 3500 Pickup.....2013.....			
4WD w/Link/Coil Susp.....		[38]	DTL[9]
	2010-2012.....		
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Link/Coil Susp.....		—	DTM[2]
4WD w/Link/Coil Susp.....		[38]	DTL[9]
4WD w/Link/Coil Susp.....		[38]	DTM[2]
	2008-2009.....		
2WD w/Indep Susp.....		—	DTL[9]
2WD w/Indep Susp.....		—	DTM[2]
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Link/Coil Susp.....		—	DTM[2]
4WD w/Indep Susp.....		185/251	DTL[9]
4WD w/Indep Susp.....		185/251	DTM[2]
4WD w/Link/Coil Susp.....		263/356	DTL[9]
4WD w/Link/Coil Susp.....		263/356	DTM[2]
	2006-2007.....		
2WD w/Link/Coil Susp.....		—	DTL[9]
2WD w/Indep Susp.....		—	DTL[9]
4WD w/Link/Coil Susp.....		263/356	DTL[9]
4WD w/Indep Susp.....		185/251	DTL[9]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Dodge / Plymouth Trucks - cont.			
Ram 3500 Pickup - cont.			
	2000-2002.....		
2WD.....		280/380	DTC
4WD.....		180/244[16]	DTC
	1996-1999.....		
2WD.....		DTA	DTC
4WD.....		175/237[16]	DTC
	1994-1995.....		
2WD.....		DTA	DTC
Ram 4500,5500.....2008-2013.....[49]			
	2008-2013.....	—	DTL[9]
	2008-2013.....	—	DTM[2]
Ram 50 Pickup 2WD.....1981-1993.....CRD			
Ram 50 Pickup 4WD.....1981-1993.....DTF			
Ramcharger, Trailduster			
4WD.....	1980-1993.....	DTG	—
Ramcharger, Trailduster			
2WD.....	1979-1993.....	DTB	—
Sprinter, Dual Rear			
Wheels, Inner Hub Nut..	2004-2010.....	—	[41]
Sprinter, Dual Rear			
Wheels, Outer Hub Nut..	2004-2010.....	—	184/250
Sprinter, Single Rear			
Wheels.....	2004-2010.....	—	—
W100, W150			
4WD Pickup.....	1985-1993.....	DTG	DTD
	1980-1984.....	DTG	DTE[17]
W200 HD 4WD Pickup.....1980.....DTI			
			DTE[17]
			DTD[18]
W200 LD 4WD Pickup.....1980.....DTG			
			DTE[17]
			DTD[18]
W250 HD 4WD Pickup.....1985-1993.....DTG			
	1981-1984.....	DTG	DTE[17]
			DTD[18]
W250 LD 4WD Pickup.....1992-1993.....DTH			
	1985-1991.....	DTI	DTD
	1981-1984.....	DTI	DTE[17]
			DTD[18]
W300 4WD Pickup.....1980.....DTI			
			DTE[17]
			DTD[18]
W350 4WD Pickup.....1992-1993.....DTH			
	1985-1991.....	DTI	DTD
	1981-1984.....	DTI	DTE[17]
			DTD[18]
Eagle			
Eagle Wagon.....1988.....—			
Medallion.....1988-1989.....—			
Premier.....1988-1992.....181/245			
Summit.....1993-1996.....167/226			
	1989-1992.....	167/226	127/175

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Eagle - cont.			
Summit Wagon	1992-1996	167/226	166/225
Summit Wagon FWD	1989-1991	165/224	CRB
Summit Wagon 4WD	1989-1991	165/224	CRB
Talon AWD	1995-1998	167/226	167/226
	1990-1994	167/226	138/190
Talon FWD	1995-1998	167/226	—
	1990-1994	167/226	167/226
Vision	1995-1997	120/163	124/168
	1993-1994	80/108	125/170
Fiat			
500	2012-2013	229/310	—
Ford / Mercury			
Aspire	1997	116-174/ 157-235[89]	FDG
	1994-1996	116-174/ 157-235[89]	FDG
C-Max	2013	59/80[44]	—
Capri	1992-1994	145/196	FDC
Contour, Mystique	1998-2000	199/270	210/290
	1995-1997	246/334	210/290
Cougar	1999-2002	214/290	214/290
	1989-1997	221/300	221/300
	1981-1988	FDA	—
Country Squire, Colony Park	1981-1991	FDA	—
Crown Victoria	2003-2011	—	—
	1992-2002	221/300	—
	1983-1991	FDA	—
Edge FWD	2011-2013	FDE	FDE
	2007-2010	FDE	—
Edge 4WD	2011-2013	FDE	—
	2007-2010	FDE	[60]
Escort	2000-2002	205/277	152/206
	1991-1999	205/277	152/206
	1981-1990	188/255	FDA
EXP	1981-1987	188/255	FDA
Fairlane	1976-1980	FDA	—
Fairmont	1981-1983	FDA	—
Festiva	1989-1993	145/196	FDB
Fiesta	2011-2013	—	—
Five Hundred 2WD	2007	259/350[42]	—
Five Hundred 4WD	2007	259/350[42]	148/200
Five Hundred	2005-2006	258/350[42]	148/200
Flex FWD	2009-2013	FDE	—
Flex AWD	2009-2013	FDE	FDE
Focus	2012-2013	59/80[44]	—
	2005-2011	199/270	173/235
	2000-2004	233/316	173/235
Freestar	2004-2007	111/150	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Ford / Mercury - cont.			
Freestyle FWD	2005-2007	259/350[42]	—
Freestyle AWD	2005-2007	259/350[42]	148/200
Fusion AWD	2013	147/200	147/200
	2006-2012	188/255 [59][61]	188/255 [59][61]
Fusion FWD	2013	—	147/200
	2006-2012	188/255 [59][61]	—
Granada	1981-1982	FDA	—
Grand Marquis	2003-2011	—	—
	1992-2002	221/300	—
	1983-1991	FDA	—
LTD	1981-1986	FDA	—
LN7	1982-1983	190/255	FDA
Lynx	1981-1987	190/255	FDA
Marauder	2003-2004	—	—
Milan AWD	2006-2011	188/255 [59][61]	188/255 [59][61]
Milan FWD	2006-2011	188/255	—
Montego FWD	2007	259/350[42]	—
Montego AWD	2007	259/350[42]	148/200
Monterey	2005-2007	111/150	—
Mustang	2006-2013	251/340[59]	—
	2005	221/300	—
Mustang Cobra	1999-2004	258/350	240/325
Mustang	1994-2004	258/350	—
	1981-1993	FDA	—
Mystique	1998-2000	199/270	199/270
	1995-1997	246/334	210/290
Probe	1993-1997	205/277	154/206
	1989-1992	205/277	100/136
Sable, Taurus, Taurus X FWD	2008-2013	FDE	—
Sable, Taurus, Taurus X AWD	2008-2013	FDE	FDE
Sable, Taurus	2000-2007	184/250	221/300
	1986-1999	190/258	221/300
Tempo, Topaz	1984-1994	190/255	FDA
Thunderbird	2002-2005	—	302/410
	1989-1997	221/300	221/300
	1981-1988	FDA	—
Tracer	1991-1999	205/277	152/206
	1987-1989	145/196	—
Villager	1993-2002	203/275	178/240
Windstar	2000-2003	184/250	221/300
	1998-1999	186/252	221/300
	1995-1997	194/263	FDD
XR7	1981-1982	FDA	—
Zephyr	1981-1983	FDA	—
ZX2	1998-2003	205/277	152/206

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Ford / Mercury Trucks				Ford / Mercury Trucks- cont.			
Aerostar 2WD	1995-1997	FTA	—	Expedition 4WD	2010-2013	20/27[59]	184/250[62]
	1986-1994	FTA	—		2009	20/27[59]	184/250[62]
Aerostar 4WD	1995-1997	185/257	—		2007-2008	20/27	254/345
	1986-1994	190/260	—		2003-2006	20/27	250/338
Bronco	1995-1996	FTM[20]	—	Explorer 2WD	1997-2002	221/300	—
		FTQ[21]	—		2011-2013	—	FDE
	1986-1994	FTL[20]	—		2002-2010	—	203/275[59]
		FTO[21]	—		2001	—	—
	1981-1985	FTJ	—		1997-2000	FT2	—
	1977-1980	FTE	—		1995-1996	FTA	—
Bronco II 2WD	1984-1990	FTA	—		1991-1994	FTA	—
Bronco II 4WD	1984-1990	FTU[20]	—	Explorer 4WD	2011-2013	FDE	FDE
		FTV[21]	—		2002-2010	184/250[59]	203/275[59]
Courier	1976-1982	FTD	—		2001	184-250	—
E150 Van	2011-2013	FT6	—		1997-2000	184-250	—
	2007-2010	FTY	—		1995-1996	195/270	—
	2004-2006	[39]	—		1993-1994	FTW[20]	—
	1998-2003	FTY	—			FTX[21]	—
	1977-1997	FTB	—		1991-1992	FTU[20]	—
E250 Van	2011-2013	FT6	—			FTV[21]	—
	2007-2010	FTY	—	Explorer Sport Trac 2WD	2007-2010	—	203/275
	2004-2006	[39]	—	Explorer Sport Trac 4WD	2007-2010	148/200	203/275
	1998-2003	FTY	—	Explorer Sport &			
	1987-1997	FTB	FTT[23]	Sport-Trac 2WD	2001-2003	FT2	—
			FTH	Explorer Sport &			
	1977-1986	FTB	FTZ[24]	Sport-Trac 4WD	2004-2005	162/220	—
E350 Van	2011-2013	FT6	FTZ[24]		2001-2003	184/250	—
	2007-2010	FTY	FTZ[24]	F100 Pickup 2WD	1977-1983	FTB	—
	2004-2006	[39]	—	F100 Pickup 4WD	1981-1983	FTJ	—
	1998-2003	FTY	FTZ[24]		1977-1980	FTE	—
	1987-1997	FTB	FTT[23]	F150 Pickup 2WD	2013	—	—
			FTH		2009-2012	—	—
	1977-1986	FTB	FTZ[24]		2007-2008	296/400	—
E450 Van	2011-2013	FT6	FTZ[24]		2004-2006	FTY	—
	1998-2010	FTY	FTZ[24]		1997-2003	FTY	—
E550 Van	2003	—	FTZ[24]		1977-1996	FTB	—
Escape FWD	2013	59/80[44]	—	F150 Pickup 4WD	2013	30/40[59]	—
	2012	221/300[59]	214/290[59]		2009-2012	20/27[59]	—
	2004-2011	221/300[59]	214/290[59]		2007-2008	20/27	—
	2001-2003	214/290	214/290		2004-2006	20/27	—
Escape 4WD	2013	59/80[44]	98/133		1997-2003	221/300	—
	2012	221/300[59]	214/290[59]		1996	FTM[20]	—
	2004-2011	221/300[59]	221/300[59]			FTR[21]	—
	2001-2003	214/290	214/290		1995	FTM[20]	—
Escape	2001-2003	214/290	214/290			FTQ[21]	—
Excursion	2000-2005	FTY	FT1[23]		1994	FTQ[21]	—
Expedition 2WD	2010-2013	—	184/250[62]			FTL[20]	—
	2009	—	258/350[59]		1986-1993	FTL[20]	—
	2007-2008	—	254/345			FTO[21]	—
	2003-2006	—	250/338		1981-1985	FTJ	—
	1997-2002	FTN	—		1977-1980	FTE	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Ford / Mercury Trucks- cont.			
F250 LD Pickup 2WD	.....1997-1998.....	FTP	—
	1977-1996.....	FTB	—
F250 LD Pickup 4WD	.....1997-1998.....	221/300	—
	1996.....	FTM[20]	—
		FTR[21]	—
	1995.....	FTM[20]	—
		FTQ[21]	—
	1994.....	FTL[20]	—
		FTQ[21]	—
	1986-1993.....	FTL[20]	—
		FTO[21]	—
	1981-1985.....	FTJ[19]	—
		FTK[22]	—
	1977-1980.....	FTE	—
F250 HD Pickup 2WD	.....1987-1997.....	FTB	FTT[23]
			FTS[24]
	1981-1986.....	FTB	FTH
	1977-1980.....	FTB	FTG
F250 HD Pickup 4WD	.....1996-1997.....	FTM[20]	FTT[23]
		FTR[21]	FTS[24]
	1995.....	FTM[20]	FTT[23]
		FTQ[21]	FTS[24]
	1994.....	FTL[20]	FTT[23]
		FTQ[21]	FTS[24]
	1987-1993.....	FTL[20]	FTT[23]
		FTO[21]	FTS[24]
	1986.....	FTL[20]	FTH
		FTO[21]	—
	1981-1985.....	FTJ[19]	FTH
		FTK[22]	—
	1977-1980.....	FTE	FTG
F350 Pickup 2WD	.....1988-1997.....	FTB	FTT[23]
			FTS[24]
	1987.....	FTB	FTT[23]
			FTS[24]
	1981-1986.....	FTB	FTH
	1977-1980.....	FTB	FTG
F350 Pickup 4WD	.....1996-1997.....	FTR	FTT[23]
			FTS[24]
	1994-1995.....	FTQ	FTT[23]
			FTS[24]
	1987-1993.....	FTO	FTT[23]
			FTS[24]
	1986.....	FTO	FTH
	1981-1985.....	FTK	FTH
	1977-1980.....	FTE	FTG
F Super Duty 2WD			
250-350	.....2011-2013.....	FT3	FT7,FT4
	2007-2010.....	FT3	FTZ,FT4

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Ford / Mercury Trucks- cont.			
F Super Duty 4WD			
250-350	.....2011-2013.....	—	FT7,FT4
	2007-2010.....	—	FTZ,FT4
F Super Duty 2WD			
450-550	.....2011-2013.....	—	FTZ,FT4
	2007-2010.....	—	FTZ,FT4
F Super Duty 4WD			
450-550	.....2011-2013.....	—	FTZ,FT4
	2007-2010.....	—	FTZ,FT4
F Super Duty			
250-550	.....1999-2006.....	FTY	FT1[23]
			FTZ[24]
Mariner FWD	.....2005-2011.....	221/300[59]	214/290[59]
Mariner 4WD	.....2005-2011.....	221/300[59]	221/300[59]
Mountaineer 2WD	.....2002-2010.....	—	203/275[59]
	2001.....	—	—
	1997-2000.....	FT2	—
Mountaineer 4WD	.....2002-2010.....	184/250[59]	203/275[59]
	2001.....	184-250	—
	1997-2000.....	184-250	—
Ranger 2WD	.....2006-2011.....	FT2	—
	2001-2005.....	FT2	—
	1998-2000.....	FTA	—
	1995-1997.....	FTA	—
	1983-1994.....	FTA	—
Ranger 4WD	.....2006-2011.....	184/250[59]	—
	2001-2005.....	162/220	—
	1998-2000.....	[25]	—
	1993-1997.....	FTW[20]	—
		FTX[21]	—
	1983-1992.....	FTU[20]	—
		FTV[21]	—
Transit Connect	.....2010-2013.....	207/280[59]	251/340[59]
Geo			
Metro	.....1989-1997.....	129/175	129/175
Prizm	.....1993-1997.....	159/216	—
	1989-1992.....	137/186	90/123
Spectrum	.....1989.....	137/186	IUC
Storm	.....1990-1993.....	137/186	—
Tracker	.....1989-1997.....	155/210	—
GMC Trucks - See Chevrolet / GMC Trucks			
Honda			
Accord	.....2008-2013.....	242/328	—
	1990-2002.....	181/245	134/181
	1986-1989.....	134/181	134/181
	1983-1985.....	137/190	HAA
	1976-1982.....	108/150	HAA

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Honda - cont.				Hyundai - cont.			
Accord 2.4L A/T	2003-2007	134/181	134/181	Genesis Coupe	2010-2013	—	188/255
Accord 2.4L M/T	2003-2007	181/245	134/181	Santa Fe	2013	199/270	199/270
Accord 3.0L	2003-2007	181/245	134/181		2008-2012	188/255	188/255
Accord Crosstour FWD	2010-2013	242/329	—		2001-2007	170/230	170/230
Accord Crosstour AWD	2010-2013	242/329	181/245	Scoupe	1991-1995	170/230	127/175
Civic	1984-2006	134/181	134/181	Sonata	2011-2013	188/255	—
	1976-1983	108/150	HAA		2008-2010	207/280	—
Civic SI	2007-2013	181/245	—		2002-2007	177/240	177/240
Civic Exc. SI	2007-2013	134/181	—		1995-2001	170/230	167/226
CR-V	2012-2013	242/328	[109]		1992-1994	170/230	196/270
	20007-2011	242/328	181/245		1989-1991	170/230	HIA
	1997-2006	181/245	134/181	Tiburon	1997-2001	170/230	158/215
CRX	1984-1991	134/181	134/181	Tiburon 2.0L	2008	192/260	192/260[93]
CRZ	2011-2013	134/181	134/181		2008	207/280	192/260[93]
Del Sol	1993-1997	134/181	134/181		2003-2007	170/230	170/230
Element	2003-2011	181/245	134/181			177/240	170/230
Fit	2007-2013	134/181	134/181	Tucson	2010-2013	203/275	203/275
Insight	2010-2013	134/181	134/181		2005-2006	HIB	170/230
	2000-2006	134/181	119/162	Tucson 2WD	2007-2009	HIB	170/230
Odyssey	2005-2013	242/328	—	Tucson 4WD	2007-2009	HIB	190/258
	1995-2004	181/245	181/245	Veloster	2012-2013	202/274	—
Passport 2WD & 4WD	1994-2002	IUA	—	Veracruz AWD	2007-2012	202/274	202/274
Pilot	2009-2013	242/328	181/245	Veracruz FWD	2007-2012	202/274	—
	2005-2008	210/285	181/245	XG300	2001	192/260	170/230
	2003-2004	181/245	181/245	XG350	2002-2005	192/260	170/230
Prelude	1992-2001	181/245	134/181	Infiniti			
	1990-1991	181/245	181/245	EX35 AWD	2011-2012	92/125	77/105
	1983-1989	134/181	HAA		2008-2010	92/125	135/183
	1979-1982	108/150	HAA	EX35 RWD	2011-2012	—	77/105
Ridgeline	2006-2013	242/328	181/245		2008-2010	—	135/183
S2000	2000-2009	242/329	181/245		2013	—	77/105
Hyundai				EX37 AWD	2013	92/125	77/105
Accent	2012-2013	202/274	—	FX35, FX45 AWD	2003-2008	203/275	177/240
	2007-2011	188/260	—	FX35, FX45 RWD	2003-2008	—	177/240
	2006	175/237	—	FX35, FX50 RWD	2011-2012	—	77/105
	2001-2005	175/237	147/200		2011-2012	92/125	77/105
	1995-2000	170/230	147/200		2009-2010	—	136/185
Azera	2012-2013	199/270	—		2009-2010	92/125	136/185
	2007-2011	207/280	—	FX37 AWD	2013	92/125	77/105
	2006	170/230	—	FX37 RWD	2013	—	77/105
Elantra	2007-2013	202/274	—	G20	2002	217/294	163/221
	2001-2006	192/260	192/260		1999-2001	203/275	156/210
	1996-2000	192/260	162/220		1991-1996	203/275	163/221
	1995-92	192/260	148/200	G25 AWD	2011-2012	92/125	77/105
Elantra GT	2013	199/270	—	G25 RWD	2011-2012	—	77/105
Entourage	2007-2008	199/275	188/260	G35	2003-2006	177/240	177/240
Equus	2011-2013	—	203/280	G35 Coupe	2007	—	177/240
Excel	1990-1994	170/230	129/175	G35 Sedan AWD	2008	92/125	133/180
	1986-1989	170/230	HIA		2007	92/125	129/175
Genesis	2009-2013	—	188/255				

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Infiniti - cont.				Isuzu - cont.			
G35 Sedan RWD	2008	—	133/180	Pickup 2WD	1988-1995	IUB	—
	2007	—	129/175		1981-1987	IUE	—
G37 AWD	2010-2013	92/125	77/105	Pickup 4WD	1988-1995	IUA	—
	2009	92/125	[63]		1981-1987	IUF	—
	2008	92/125	[63]	Rodeo	1991-2002	IUA	—
G37 RWD	2010-2013	—	77/105	Rodeo 2WD	2003-2004	—	—
	2009	—	[63]	Rodeo 4WD	2003-2004	181/245	—
	2008	—	133/180	Rodeo Sport	2001-2003	IUA	—
I30	2000-2001	217/294	163/221	Stylus	1991-1993	137/186	—
	1996-1999	203/275	163/221	Trooper	1992-2002	IUA	—
I35	2002-2004	203/275	163/221		1984-1991	IUF	—
J30	1993-1997	217/294	178/241	Vehicross	2000-2001	IUA	—
JX35 AWD	2013	135/182	92/125	Jaguar			
JX35 FWD	2013	135/182	—	All	1980-1987	JGB	—
M30	1990-1992	—	117/152	S-Type	2000-2008	—	221/300
M35H	2012-2013	—	77/105	X-Type	2002-2008	200/270	200/270
M35,M45	2010	92/125	136/185	XF AWD	2013	221/300	221/300
	2009	92/125	[63]	XF RWD	2009-2013	—	221/300
	2008	92/125	135/183	XFR	2010-2013	—	221/300
	2006-2007	92/125	130/175	XJ AWD	2013	221/300	221/300
M37,M56	2011-2013	92/125	77/105	XJ RWD	2004-2013	—	221/300
M45	2003-2004	181/245	177/240	XJ Series	2004-2007	—	221/300
Q45	1990-2006	181/245	177/240	XJ6, XJ12 & XJS	1988-1997	JGA	—
QX4	1997-2003	NDG	181/245	XJ8	1998-2003	—	236/320
QX56	2011-2013	90/123	164/223	XK, XKR Series	2004-2013	—	221/300
	2004-2010	101/137	170/230	XK8	1997-2003	—	236/320
Isuzu				Jeep			
Amigo	1998-2000	IUA	—	Cherokee	1996-2001	175/237	—
Amigo 2WD	1989-1994	IUB	—		1976-1983	JPB	—
Amigo 4WD	1989-1994	IUA	—	Cherokee 2WD	1984-1995	JPA	—
Ascender 2WD	2003-2008	—	—	Cherokee 4WD	1984-1995	175/237	—
Ascender 4WD	2003-2008	103/140	—	CJ-5	1977-1983	JPB	—
Axiom 2WD	2002-2004	181/245	—	CJ-7	1977-1986	JPB	—
Axiom 4WD	2002-2004	—	—	Comanche 2WD	1986-1992	JPA	—
Hombre 2WD	1997-2000	GMA	—	Comanche 4WD	1986-1992	175/237	—
	1996	GMA	—	Commander	2006-2010	100/135	—
Hombre 4WD	1997-2000	103/140	—	Compass, Patriot AWD	2007-2013	180/244	181/245
	1996	181/245	—	Compass, Patriot FWD	2007-2013	180/244	—
I-Mark	1986-1989	137/186	IUC	Grand Cherokee	2005-2010	100/135	—
	1981-1984	IUC	—		1993-2004	175/237	—
I-Mark FWD	1985	137/186	IUC	Grand Cherokee AWD	2011-2013	229/310	229/310
I-Mark RWD	1985	IUC	—	Grand Cherokee RWD	2011-2013	—	229/310
Impulse	1990-1993	137/186	—	Grand Wagoneer	1993	175/237	—
	1983-1989	IUD	—		1984-1991	JPB	—
i-280, i-290, i-350, i-370 2WD	2006-2008	—	—	J10 Pickup	1976-1987	JPB	—
i-280, i-290, i-350, i-370 4WD	2006-2008	191/260	—	J20 Pickup	1976-1987	JPB	—
Oasis	1996-1999	181/245	134/185	Liberty RWD	2002-2012	—	—
				Liberty 4WD	2002-2012	100/135	—
				Scrambler	1982-1985	JPB	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Jeep - cont.				Lexus			
Wagoneer	1976-1983.....	JPB	—	CT200H.....	2011-2013.....	159/216	—
Wagoneer 2WD	1984-1990.....	JPA	—	ES250	1990-1991.....	137/186	90/123
Wagoneer 4WD	1984-1990.....	175/237	—	ES300	1992-2003.....	217/294	—
Wrangler	2007-2013.....	100/136	—	ES300H.....	2013	217/294	—
	1987-2006.....	175/237	—	ES330	2004-2006.....	217/294	—
Kia				ES350	2007-2013.....	217/294	—
Amanti	2004-2009.....	207/280	—	GS300.....	1993-1997.....	147/199	213/289
Borrego RWD.....	2009-2010.....	199/270	199/270	GS300 AWD	2006	217/294	214/290
Borrego 4WD.....	2009-2010.....	199/270	199/270	GS300 FWD	2001-2006.....	217/294	213/289
Forte.....	2010-2013.....	203/275[93]	—	GS300, GS400.....	1998-2000.....	147/199	213/289
Optima [81].....	2011-2013.....	188/255	—	GS350 AWD	2007-2013.....	217/294[96]	214/290[96]
Optima [67].....	2006-2010.....	203/280	—	GS350 RWD.....	2007-2013.....	—	214/290[96]
Optima [66].....	2001-2006.....	192/260	192/260	GS430.....	2001-2007.....	—	214/290
Rio.....	2012-2013.....	202/275	—	GS450H.....	2007-2013.....	—	214/290[96]
Rio [65].....	2005-2011.....	188/255	—	GS460 2WD.....	2008-2011.....	—	214/290[96]
Rio [64].....	2001-2005.....	145/200[93]	KIB	GS460 4WD.....	2008-2011.....	217/294[96]	214/290[96]
Rio5.....	2011-2013.....	202/275	—	GX460.....	2010-2013.....	173/235	—
	2006-2011.....	188/255	—	GX470.....	2003-2009.....	173/235	—
Rondo.....	2007-2010.....	203/275	—	HS250H.....	2010-2012.....	159/216[97]	—
Sedona.....	2006-2012.....	199/270[93]	188/255	IS250 AWD.....	2006-2013.....	217/294[96]	214/290[96]
	2002-2005.....	199/270[93]	25/33	IS250 RWD.....	2006-2013.....	—	214/290[96]
Sephia.....	1997-2001.....	180/244	180/244	IS300	2000-2005.....	108/147	213/289
	1994-1996.....	177/240	[35]	IS350 AWD.....	2006-2013.....	217/294[96]	214/290[96]
Sorento.....	2011-2013.....	159/215	159/215	IS350 RWD.....	2011-2013.....	—	214/290[96]
	2003-2009.....	198/275	—	IS-F.....	2008-2013.....	—	214/290[96]
Soul	2011-2013.....	199/270	—	LS400.....	2000	—	213/289
Spectra, Spectra5.....	2008-2009.....	188/255	188/255		1995-1999.....	147/199	213/289
	2001-2007.....	180/244	180/244		1990-1994.....	147/199	253/343
Sportage.....	1995-2002.....	KIA	—	LS430.....	2001-2006.....	—	214/290
Sportage FWD	2011-2013.....	202/274	—	LS460 AWD.....	2009-2013.....	217/294[97]	214/290[97]
	2005-2010.....	207/280[86]	207/280[86]	LS460 RWD	2007-2013.....	—	214/290[96]
Sportage 4WD.....	2011-2013.....	202/274	202/274	LS600HL.....	2008-2013.....	217/294[97]	214/290[97]
	2005-2010.....	207/280[86]	207/280[86]	LX450.....	1996-1997.....	TAA	—
Land Rover				LX470.....	1998-2007.....	TAH	—
Defender	1997	LRC	—	LX570.....	2008-2013.....	[52]	—
	1993-1995.....	LRB	—	RX300 2WD.....	1999-2003.....	217/294	—
Discovery	1995-1997.....	LRA	—	RX300 4WD.....	1999-2003.....	217/294	159/216
Discovery II	1998-2004.....	360/490[6]	—	RX330 2WD.....	2004-2006.....	217/294	—
Evoque.....	2012-2013.....	89/120[26]	73/100[44]	RX330 4WD.....	2004-2006.....	217/294	217/294
Freelander	2002-2005.....	295/400	295/400	RX350 2WD.....	2007-2013.....	217/294	—
LR2.....	2008-2013.....	[71]	LRD	RX350 4WD.....	2007-2013.....	217/294	217/294
LR3	2005-2009.....	258/350	258/350	RX400H 2WD.....	2006-2008.....	217/294	—
LR4.....	2010-2013.....	170/230[95]	311/420[95]	RX400H 4WD.....	2006-2008.....	217/294	217/294
Range Rover	2013.....	89/120[26]	89/120[26]	RX450H 2WD.....	2010-2013.....	217/294	—
	2003-2012.....	311/420	311/420	RX450H 4WD.....	2010-2013.....	217/294	217/294
	2000-2002.....	192/260[6]	—	SC300, SC400.....	1992-2000.....	147/199	213/289
	1995-1997.....	LRA	—	SC430.....	2002-2010.....	147/199	213/289
Range Rover Sport	2010-2013.....	169/230[95]	311/420[95]	Lincoln			
	2008-2009.....	169/230[95]	258/350[95]	Aviator.....	2003-2005.....	184/250	203/275
				Blackwood.....	2002.....	FTY	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Lincoln - cont.				Mazda - cont.			
Continental.....	1999-2002.....	184/250	221/300	B2300 Pickup 2WD	2001-2009.....	FT2	—
	1988-1998.....	190/258	221/300		1994-1997.....	FTA	—
LS.....	2000-2006.....	—	221/300	B2300 Pickup 4WD	2001-2009.....	162/220	—
Mark VII.....	1988-1992.....	FDA	—		1994-1997.....	FTW[20]	—
Mark VIII.....	1993-1998.....	221/300	—			FTX[21]	—
Mark LT Pickup 2WD	2006-2008.....	296/400	—	B2500 Pickup 2WD	2001.....	FTP	—
Mark LT Pickup 4WD	2006-2008.....	20/27	—		1998-2000.....	FTA	—
MKS AWD.....	2009-2013.....	FDE	FDE			[25]	—
MKS FWD.....	2009-2013.....	FDE	—	B2500 Pickup 4WD	2001.....	162/220	—
MKT AWD.....	2010-2013.....	FDE	FDE	B2600 Pickup 2WD	1987-1993.....	MAC	—
MKT FWD.....	2010-2013.....	FDE	—	B2600 Pickup 4WD	1987-1993.....	MAD	—
MKX AWD.....	2011-2013.....	FDE	FDE	B3000 Pickup 2WD	2001-2007.....	FT2	—
	2007-2010.....	FDE	[60]		1998-2000.....	FTA	—
MKX FWD.....	2011-2013.....	FDE	—		1994-1997.....	FTA	—
	2007-2010.....	FDE	—	B3000 Pickup 4WD	2001-2007.....	162/220	—
MKZ AWD.....	2013.....	147/200	147/200		1998-2000.....	[25]	—
	2007-2012.....	189/255[61]	189/255[61]		1994-1997.....	FTW[20]	—
MKZ FWD.....	2013.....	147/200	—			FTX[21]	—
	2007-2012.....	189/255[61]	189/255[61]	B4000 Pickup 2WD	2001-2009.....	FT2	—
Navigator 2WD	2003-2006.....	—	221/300		1998-2000.....	FTA	—
	1998-2002.....	FTN	—		1994-1997.....	FTA	—
Navigator 4WD	2003-2006.....	20/27	221/300	B4000 Pickup 4WD	2001-2009.....	162/220	—
	1998-2002.....	221/300	—		1998-2000.....	[25]	—
Navigator, Navigator L					1994-1997.....	FTW[20]	—
2WD.....	2010-2013.....	—	184/250[62]			FTX[21]	—
	2009.....	—	258/350	CX-5 AWD.....	2013.....	FT8	FT8
	2007-2008.....	—	254/345	CX-5 FWD.....	2013.....	FT8	—
Navigator, Navigator L				CX7 AWD.....	2007-2012.....	202/274[98]	202/274
4WD.....	2010-2013.....	20/27	184/250[62]	CX7 FWD.....	2007-2012.....	202/274[98]	—
	2009.....	20/27	258/350	CX9 AWD.....	2007-2013.....	202/274[98]	202/274
	2007-2008.....	20/27	254/345	CX9 FWD.....	2007-2013.....	202/274[98]	—
Town Car.....	2003-2011.....	—	—	GLC	1977-1980.....	MAB	—
	1991-2002.....	221/300	—	GLC Wagon	1981-1983.....	MAB	—
	1988-1990.....	FDA	—	GLC Exc. Wagon	1981-1985.....	145/200	MAB
Zephyr.....	2006.....	185/255	185/255	Mazda 2.....	2011-2013.....	202/274	—
				Mazda 3	2007-2013.....	202/274	—
					2004-2006.....	MA3	—
Mazda				Mazda 5	2007-2013.....	202/274	—
All	1976-1987.....	FDA	—		2006.....	188/255	—
323.....	1990-1994.....	205/277	152/206	Mazda 6 AWD	2003-2013.....	202/274	235/319
	1986-1989.....	144/196	MAA	Mazda 6 FWD	2006-2007.....	202/274	—
626.....	1983-1987.....	145/200	MAA	Miata (MX-5).....	2004-2013.....	—	202/275[10]
	1979-1982.....	MAB	—	Miata	1999-2003.....	159/216[87]	235/319[68]
626, MX-6	1993-2002.....	205/277	152/206		1990-1997.....	159/216	217/293[88]
	1988-1992.....	205/277	102/138	Millenia	1995-2002.....	205/277	152/206
808.....	1976-1977.....	MAB	—	MPV	2000-2006.....	205/277	152/206
929.....	1988-1991.....	100/138	203/275	MPV 2WD	1989-1998.....	152/206	—
929, Serenia	1992-1995.....	152/206	203/275	MPV 4WD	1989-1998.....	203/275	—
B1800 Pickup	1976-1978.....	MAC	—	MX-3, Precidia	1992-1996.....	205/277	152/206
B2000 Pickup	1979-1987.....	MAC	—	MX-5	2006.....	—	188/255
B2200 Pickup	1982-1993.....	MAC	—				

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Mazda - cont.			
MX-6.....	1993-1997.....	205/277	152/206
	1988-1992.....	205/277	102/138
Navajo 2WD	1991-1994.....	FTA	—
Navajo 4WD	1993-1994.....	FTW[20]	—
		FTX[21]	—
	1991-1992.....	FTU[20]	—
		FTV[21]	—
Protégé, Protégé 5	1990-2003.....	205/277	152/206
RX-7	1993-1995.....	152/206	203/275
	1986-1992.....	MAB	203/275
	1979-1985.....	MAB	—
RX-8	2004-2011.....	—	202/275
Serenia.....	1992-1995.....	152/206	203/275
Tribute.....	2008-2011.....	222/300	222/300
	2001-2006.....	214/290	214/290
Mercedes-Benz			
C Series.....	2008-2013.....	—	[103]
	1997-2007.....	—	162/220
C Series 4 Matic.....	2008-2013.....	[102]	[103]
	2003-2007.....	81/110[82]	162/220
CL Series.....	2010-2013.....	—	[103]
	2006-2009.....	—	[104]
	2000-2005.....	236/320	236/320
CL 63AMG.....	2008-2013.....	—	[103]
CL 65AMG.....	2008-2013.....	—	[105]
CL Series 4 Matic.....	2009-2013.....	[102]	[103]
CLK Series.....	1998-2012.....	—	162/220
CLK AMG Series.....	2001-2009.....	—	162/220
CLK AMG Cabriolet, Black Series	2004-2009.....	—	[104]
CLS Series.....	2012-2013.....	—	258/350
	2006-2011.....	—	[103]
CLS Series 4 Matic.....	2012-2013.....	[102]	258/350
E Series	2004-2012.....	—	[103]
	1999-2003.....	[83]	236/320
	1997-1998.....	[83]	162/220
E Series 4 Matic.....	2010-2013.....	[102]	[103]
	2004-2009.....	51/70[44]	[103]
	1999-2003.....	[30]	236/320
	1997-1998.....	[30]	162/220
G Series	2002-2013.....	133/180	—
GL Series.....	2013.....	[106]	[108]
	2007-2012.....	192/260[84]	—
GLK Series	2010-2013.....	[102]	[103]
GLK Series 4 Matic.....	2010-2013.....	192/260[84]	—
ML Series	2013.....	—	[108]
	2006-2011.....	192/260[84]	[107]
	1998-2005.....	361/490	361/490
ML Series 4 Matic	2012-2013.....	[106]	[108]
R Series	2006-2012.....	192/260[84]	[107]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Mercedes-Benz - cont.			
S Series	2006-2013.....	—	[103][78]
	1997-2005.....	—	236/320
S55 AMG.....	2001-2006.....	—	[104]
S63,S65 AMG	2006-2012.....	—	[105]
S Series 4 Matic.....	2006-2013.....	[102]	[103][78]
	2003-2005.....	51/70[44]	236/320
SL Series.....	2006-2013.....	—	[103]
	2003-2005.....	—	236/320
	1997-2002.....	—	162/220
SL 65 AMG.....	2005-2011.....	—	[77]
SLK Series.....	2012-2013.....	—	258/350
	2000-2011.....	—	162/220
SLK 55 AMG Series.....	2002-2013.....	—	258/350
Sprinter Dual Rear Wheels.....	2011-2013.....	—	—
Inner Hub Nut.....	—	—	[41]
Outer Hub Nut.....	—	—	184/250
Sprinter Single Rear Wheel.....	2011-2013.....	—	—
Mercury - See Ford / Mercury			
Mini			
Cooper AWD	2002-2013.....	134/182	134/182
			[117]
Cooper FWD		134/182	—
Mitsubishi			
3000GT AWD	1991-1999.....	166/225	203/280
3000GT FWD	1991-1999.....	166/225	166/225
Cordia, Tredia	1983-1988.....	167/226	MIA
Diamante	1997-2004.....	167/226	—
	1992-1996.....	167/226	166/225
Eclipse.....	2006-2012.....	167/226	—
	2000-2005.....	167/226	—
Eclipse AWD	1995-1999.....	167/226	166/225
	1990-1994.....	167/226	138/190
Eclipse FWD	1995-1999.....	167/226	—
	1990-1994.....	167/226	166/225
Endeavor FWD.....	2004-2011.....	188/225	—
Endeavor 4WD.....	2004-2011.....	188/225	188/225
Expo	1992-1996.....	167/226	166/225
Galant	2010-2012.....	188/255	—
	1994-2009.....	167/226	—
	1985-1988.....	167/226	MIA
Galant AWD.....	1989-1993.....	167/226	MIA
Galant FWD	1989-1993.....	167/226	MIA
I-MIEV.....	2012.....	—	129/176
Lancer	2002-2007.....	181/245	130/175
Lancer AWD.....	2011.....	129/176[110]	129/176
	2008-2010.....	129/176	129/176

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Mitsubishi - cont.			
Lancer AWD Evolution.....	2012-2013.....	129/176[110]	129/176
Lancer AWD Ex. Evolution	2012-2013.....	184/250	129/176
Lancer FWD.....	2012-2013.....	184/250	—
	2011.....	129/176[110]	—
	2008-2010.....	129/176	—
Mirage	1993-2002.....	167/226	130/180
	1989-1992.....	167/226	127/175
	1985-1988.....	167/226	90/125
Montero.....	2004-2006.....	148/200	188/255
	2001-2003.....	188/255	188/255
	1983-2000.....	DTF	—
Montero Sport 2WD.....	1997-2004.....	DTJ	—
Montero Sport 4WD.....	1997-2004.....	DTJ	—
Outlander AWD.....	2003-2006.....	181/245	181/245
Outlander 2WD.....	2007-2013.....	129/176	—
	2003-2006.....	181/245	130/175
Outlander 4WD.....	2007-2013.....	129/176	129/176
Outlander Sport 2WD.....	2011-2013.....	129/176	—
Outlander Sport 4WD.....	2011-2013.....	129/176	129/176
Pickup 2WD.....	1983-1996.....	CRD	—
Pickup 4WD.....	1983-1996.....	DTF	—
Precis.....	1993-1994.....	170/230	127/175
	1990-1992.....	167/226	127/175
	1987-1989.....	167/226	HIA
Raider.....	2006-2009.....	185/251	—
Sigma.....	1988-1990.....	167/226	MIA
Starion.....	1984-1989.....	CRB	—
Van.....	1987-1990.....	CRD	—
Nissan			
200SX.....	1995-1998.....	174/236	163/221
	1977-1988.....	NDB	—
210.....	1979-1982.....	NDE	—
240SX.....	1995-1998.....	181/245	178/241
	1989-1994.....	134/182	203/275
280ZX.....	1979-1983.....	NDB	—
300ZX.....	1990-1996.....	181/245	178/241
	1984-1989.....	NDB	—
310.....	1979-1982.....	—	NDC
350Z.....	2003-2009.....	—	177/240
370Z.....	2012-2013.....	—	77/105
	2011.....	—	133/180
	2009-2010.....	—	[63]
510.....	1978-1981.....	NDE	—
810.....	1978-1983.....	NDB	—
Altima.....	2013.....	135/182	—
	2008-2012.....	129/175	—
	2007.....	92/125	—
	2002-2006.....	202/275	—
	1993-2001.....	203/275	163/221

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Nissan - cont.			
Armada 2WD.....	2012-2013.....	—	135/182
	2005-2011.....	—	170/230
Armada 4WD.....	2012-2013.....	101/137	135/182
	2005-2011.....	101/137	170/230
Axxess FWD.....	1990.....	203/275	163/221
Axxess 4WD.....	1990.....	203/275	203/275
B210.....	1976-1978.....	NDB	—
Cube.....	2009-2013.....	92/125	—
Frontier 2WD.....	2005-2013.....	—	—
	2004.....	NDA	206/280
	1998-2003.....	NDA	—
Frontier 4WD.....	2005-2013.....	101/137	—
	2004.....	NDG	206/280
	1998-2003.....	NDG	—
GT-R.....	2009-2013.....	166/225	166/225
Juke 2WD.....	2011-2013.....	136/185	—
Juke 4WD.....	2011-2013.....	136/185	92/125
Leaf.....	2011-2013.....	136/185	—
Maxima.....	2009-2013.....	203/275	—
	2007-2008.....	203/275	—
	2004-2006.....	217/294	—
	2000-2003.....	217/294	163/221
	1989-1999.....	203/275	163/221
	1985-1988.....	203/275	—
	1983-1984.....	NDB	—
Murano AWD.....	2013.....	177/240	92/125
	2011-2012.....	177/240	129/175
	2009-2010.....	129/175	129/175
	2003-2007.....	92/125	92/125
Murano FWD.....	2013.....	177/240	—
	2011-2012.....	177/240	—
	2009-2010.....	129/175	—
	2003-2007.....	92/125	—
NX.....	1991-1993.....	174/236	163/221
Pathfinder 2WD.....	2013.....	—	92/125
	2005-2012.....	—	177/240
Pathfinder 4WD.....	2013.....	135/182	92/125
	2005-2012.....	101/137	177/240
Pathfinder.....	1996-2004.....	NDG	—
Pathfinder 2WD.....	1987-1995.....	NDD	—
Pathfinder 4WD.....	1987-1995.....	NDG	—
Pathfinder Armada 2WD ..	2004.....	—	170/230
Pathfinder Armada 4WD ..	2004.....	101/137	170/230
Pickup 2WD.....	1981-1997.....	NDD	—
Pickup 4WD.....	1987-1997.....	NDG	—
	1984-1985.....	NDH	—
	1981-1982.....	126/175	—
Pickup 4WD, Early.....	1983.....	126/175	—
Pickup 4WD, Late.....	1983.....	NDH	—
Pickup 4WD, 720.....	1986.....	NDH	—
Pickup 4WD, D21.....	1986.....	NDG	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Nissan - cont.			
Pickup	1976-1980.....	NDE	—
Pulsar.....	1987-1990.....	174/236	163/221
	1983-1986.....	—	NDC
Quest.....	2011-2013.....	155/211	—
	2004-2009.....	92/125	—
	1993-2002.....	203/275	178/240
Rogue AWD.....	2011-2013.....	136/185	92/125
	2008-2010.....	92/125	—
Rogue FWD	2011-2013.....	136/185	—
	2008-2010.....	92/125	92/125
Sentra	2013	96/130	—
	2012	140/190	—
	2007-2011.....	92/125	—
	2006	145/197	163/221
	1987-2001.....	174/236	163/221
	1982-1986.....	—	NDC
Sentra 1.8L.....	2002-2005.....	174/236	163/221
Sentra 2.5L.....	2002-2005.....	217/294	163/221
SE-R 2.5L.....	2002-2003.....	217/294	163/221
Stanza.....	1987-1992.....	203/275	—
	1982-1986.....	174/236	NDC
Titan	2004-2013.....	101/137	—
Versa Hatchback.....	2012	140/190	—
Versa Sedan.....	2012-2013.....	183/247	177/240
Versa	2007-2011.....	83/113	—
Xterra.....	2005-2013.....	101/137	—
Xterra 2WD.....	2000-2004.....	NDA	—
Xterra 4WD.....	2000-2004.....	NDG	—
Oldsmobile			
88	1998-1999.....	118/160	—
	1992-1997.....	107/145	—
	1986-1991.....	185/260	—
	1980-1985.....	GMA	—
98	1992-1996.....	107/145	—
	1985-1991.....	185/260	—
	1980-1984.....	GMA	—
Achieva	1998.....	74/100[3]	—
	1992-1997.....	185/260	—
Alero	1999-2004.....	[34]	—
Aurora	2001-2003.....	118/160	—
	1998-1999.....	118/160	—
	1995-1997.....	107/145	—
Bravada	1997-2004.....	103/140	—
	1991-1996.....	181/245	—
Calais	1985-1991.....	185/260	—
Ciera, Cruiser	1996	107/145	—
	1992-1995.....	103/140[4]	—
	1983-1991.....	185/260	—
	1982.....	225/290	—
Custom Cruiser	1980-1992.....	GMA	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Oldsmobile - cont.			
Cutlass FWD	1997-1999.....	284/385	—
Cutlass Supreme	1996-1997.....	151/205	—
	1988-1995.....	184/250	—
Cutlass Supreme RWD	1988	GMA	—
Cutlass RWD	1980-1987.....	GMA	—
Firenza	1982-1988.....	185/260	—
Intrigue	2001-2002.....	159/215	—
	1998-2000.....	118/160	—
LSS	1998-1999.....	118/160	—
	1992-1997.....	107/145	—
Omega	1983-1984.....	185/260	—
	1980-1982.....	225/290	—
Regency	1998	118/160	—
	1997	107/145	—
Silhouette	2002-2004.....	118/160	192/260
	1998-2001.....	118/160	—
	1997	151/205	—
	1995-1996.....	104/145	—
	1990-1994.....	185/260	—
Starfire	1980	GMA	—
Toronado	1986-1992.....	183/248	—
	1979-1985.....	175/240	—
Trofeo	1988-1992.....	183/248	—
Plymouth - See Dodge / Plymouth			
Plymouth Trucks - See Dodge / Plymouth Trucks			
Pontiac			
1000	1983-1987.....	GMA	—
2000	1983	185/260	—
6000	1983-1991.....	185/260	—
	1982	225/290	—
Acadian	1980-1987.....	GMA	—
Aztec.....	2001-2005.....	192/260	192/260
Bonneville.....	1998-2005.....	118/160	—
	1992-1997.....	107/145	—
	1987-1991.....	185/260	—
Bonneville, Catalina.....	1980-1986.....	GMA	—
Fiero	1988	220/280	200/270
	1984-1987.....	195/267	200/270
Firebird.....	1993-2002.....	—	—
	1980-1992.....	GMA	—
Firefly.....	1989-1997.....	129/175	129/175
	1985-1988.....	151/210	62/100
Grand Am	1999-2005.....	[34]	—
	1998	74/100[3]	—
	1985-1997.....	185/260	—
	1980-1981.....	GMA	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Pontiac - cont.			
Grand Prix	1998-2008	118/160	—
	1995-1997	151/205	—
	1988-1994	184/250	—
	1980-1987	GMA	—
GTO	2004-2006	—	221/300
G3	2009	221/300	—
G5	2009	[58]	—
	2007-2008	155/210	—
G6	2005-2010	159/215	—
G8	2008-2009	—	[69]
J2000	1982	185/260	—
Laurentian	1980-1981	GMA	—
LeMans	1988-1993	GMR	—
	1980-1981	GMA	—
Montana	1999-2001	118/160	—
Montana SV6	2007-2009	118/160	—
Montana, Montana SV6	2002-2006	118/160	192/260
Parisienne	1980-1986	GMA	—
Phoenix	1983-1984	185/260	—
	1980-1982	225/290	—
Pursuit	2005-2006	155/210	—
Safari Wagon	1980-1989	GMA	—
Solstice	2006-2009	—	159/215
Sunbird	1984-1994	185/260	—
	1980	GMA	—
Sunburst	1985-1987	137/186	IUC
Sunfire	2002-2005	148/200	—
	1998-2001	144/195	—
	1995-1997	185/260	—
Sunrunner	1994-1997	155/210	—
T1000	1981-1982	GMA	—
Tempest	1987-1991	185/260	—
Torrent	2007-2009	151/205	151/205
	2006	151/205	81/110
Trans Sport	1997-1999	118/160	—
	1995-1996	104/145	—
	1990-1994	185/260	—
Vibe	2003-2008	159/216	—
Vibe AWD	2009-2010	159/215	159/215
Vibe FWD	2009-2010	159/215	—
Wave	2005-2007	221/300	140/190
Porsche			
All	1980-1994	POA	—
Except 911	1995	POA	—
911 Turbo	2001-2006	340/460	340/460
911 AWD	1995-2012	340/460	340/460
911 RWD	1995-2012	[29]	340/460[1]
Boxster	1995-2013	[29]	340/460
Cayman	2006-2013	[29]	340/460
Cayenne	2003-2013	340/460	340/460

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Porsche - cont.			
Panamera AWD	2010-2013	340/460	340/460
Panamera RWD	2010-2013	—	340/460
Saab			
9-2X	2005-2006	162/220	140/190
9-3	2003-2007	170/230	—
	1999-2002	[36]	—
9-3XAWD	2008-2011	170/230	170/230
9-3 FWD	2008-2011	170/230	—
9-5	2011	SBA	SBA
	2007-2010	170/230	—
	2002-2006	148/200[37]	—
	2000-2001	125/170[27]	—
	1999	[36]	—
9-7X	2005-2009	103/140	—
900	1994-1998	214/290	—
	1979-1993	222/300	222/300
9000	1986-1998	214/290	—
Saturn			
Astra	2008-2009	[70]	—
Aura	2007-2009	159/215	—
ION	2004-2007	155/210	—
	2003	81/110	—
L Series	2000-2005	SNA	—
Outlook AWD	2007-2010	173/235	150/205
Outlook FWD	2007-2010	172/235	—
Relay AWD	2005-2006	118/160	192/260
Relay FWD	2005-2007	118/160	—
S Series	1991-2002	148/200	—
SKY	2007-2010	—	159/215
Vue AWD	2008-2009	151/205	151/205
	2007	151/205	63/85[43]
	2002-2006	151/205	81/110
Vue FWD	2002-2009	151/205	—
Scion			
FR-S	2013	—	104/190[93]
iQ	2012-2013	159/216[93]	—
tC w/MT	2011-2013	215/292[93]	—
tC	2005-2013	159/216	—
xA	2004-2006	159/216	—
xB	2004-2013	159/216	—
xD	2008-2013	159/216[59]	—
Smart			
Fortwo	2008-2013	—	33/45[44]
Sterling			
All	1987-1991	215/290	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Subaru				Toyota			
Baja	2003-2006	162/220	177/240	4-Runner 2WD	2003-2013	203/275	—
BRZ	2013	—	140/190[98]		1996-2002	—	—
B9 Tribeca	2006-2007	177/240	177/240		1986-1995	TAD	—
Forester	2004-2006	162/220	—		1984-1985	TAD	—
Forester AWD	2007-2013	162/220	140/190	4-Runner 4WD	2003-2013	173/235	—
	2003-2006	140/190	140/190		1996-2002	174/235	—
	1998-2002	137/186	137/186		1986-1995	TAB	—
Impreza	2004-2013	162/220	140/190		1984-1985	TAC	—
	2003	140/190	140/190	Avalon	2011-2013	217/294	—
Impreza AWD	1993-2002	137/186	137/186	Avalon w/ABS	1995-2010	217/294	—
Impreza FWD	1993-1995	137/186	SUA	Avalon w/o ABS	1995-2010	217/294	90/123
Justy	1987-1994	130/177	SUA	Camary	2011-2013	217/294	—
Legacy, Outback	2004-2013	162/220	177/240		1983-1986	137/186	90/123
	2002-2003	159/216	174/235	Camry w/ABS	1992-2010	217/294	—
	2000	137/186	174/235	Camry w/o ABS	1992-2010	217/294	90/123
Legacy, Outback, 2.5L	2001	137/186	174/235	Camry 4WD	1987-1991	137/186	137/187
Legacy, Outback, 3.0L	2001	159/216	174/235	Camry FWD	1987-1991	137/186	90/123
Legacy AWD	1990-1999	137/186	137/186	Camry Solara	1999-2008	217/294	—
Legacy FWD	1990-1996	137/186	SUA	Celica	1994-2005	159/216	—
SVX	1992-1997	137/186	138/187		1986-1987	137/186	90/123
Tribeca	2008-2013	177/240[98]	177/240[98]		1976-1985	TAE	—
XV Crosstrek	2013	162/220	140/190	Celica FWD	1992-1993	166/226	90/123
All Others 4WD	1976-1994	148/200	145/196		1988-1991	137/186	90/123
All Others FWD	1976-1994	148/200	SUA	Celica 4WD	1992-1993	166/226	166/226
					1988-1991	137/186	137/186
Suzuki				Corolla	2003-2013	159/216	—
Aerio, Aerio SX	2002-2007	127/175	127/175		1998-2012	166/225	—
Esteem	1995-2002	127/175	127/175		1993-1997	159/216	—
Equator	2009-2012	101/137	—		1991-1992	152/206	90/123
Forenza	2004-2008	221/300	—		1988-1990	137/186	90/123
Grand Vitara	1999-2005	156/216	—		1976-1983	TAE	—
Grand Vitara AWD	2006-2013	160/220	160/220	Corolla FWD	1984-1987	137/186	90/123
Grand Vitara FWD	2006-2013	160/220	—	Corolla RWD	1984-1987	TAE	—
Kizashi AWD	2010-2013	185/250	185/250	Corona	1976-1982	TAE	—
Kizashi FWD	2010-2013	185/250	—	Cressida	1989-1992	108/147	203/275
Reno	2006-2008	221/300	—		1978-1988	TAE	—
Samari	1989-1995	SZA	—	Echo	2000-2005	159/216	—
Sidekick	1991-1998	152/210	—	FJ Cruiser 2WD	2007-2013	203/275	—
	1989-1990	119/160	—	FJ Cruiser 4WD	2007-2013	174/235	—
Swift	1989-2001	127/175	[28]	Highlander FWD	2001-2013	217/294	—
SX4 FWD	2007-2013	147/200	—	Highlander 4WD	2001-2013	217/294	217/294
SX4 4WD	2007-2013	147/200	129/175	Land Cruiser	2011-2013	[80]	—
Verona	2004-2006	236/320	—		2008-2010	[52]	—
Vitara	1999-2004	156/216	—		1998-2007	TAH	—
XL-7 AWD	2008-2009	151/205	151/205		1981-1997	TAA	—
	2007	151/205	81/110		1976-1980	—	—
XL-7 FWD	2008-2009	151/205	—	Matrix FWD	2003-2013	159/216	—
	2007	151/205	—	Matrix 4WD	2003-2013	159/216	159/216
XL-7	2004-2006	157/216	—	MR2	2000-2005	—	159/216
X-90	1996-1998	152/210	—		1985-1989	90/123	137/186

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm	Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Toyota - cont.				Toyota - cont.			
MR2 Turbo	1993-1995	90/123	217/294	Tercel	1994-1999	159/216	TAF
	1991-1992	90/123	217/294		1992-1993	166/226	TAF
MR2 Exc. Turbo	1993-1995	90/123	159/216		1989-1991	137/186	TAF
	1991-1992	90/123	137/186		1983-1988	137/186	TAF
Paseo	1994-1997	159/216	TAF		1980-1982	90/127	TAF
	1992-1993	166/226	TAF	Tundra 2WD	2007-2013	282/382	—
Pickup 2WD	1986-1995	TAD	—		2000-2006	203/274	—
	1979-1985	TAD	—	Tundra 4WD	2007-2013	249/338	—
Pickup 4WD	1986-1995	TAB	—		2000-2006	173/235	—
	1979-1985	TAC	—	Van 2WD	1984-1989	TAE	—
Previa	1991-1997	147/199	—	Van 4WD	1984-1989	TAG	—
Prius	2001-2013	159/216	—	Venza AWD	2009-2013	217/294	217/294
Prius C, Prius V	2012-2013	159/216	—	Venza FWD	2009-2013	217/294	—
RAV4	1996	159/216	152/206	Yaris	2006-2013	160/216	—
RAV4 4-cyl. 2WD	2007-2012	159/216	—	Volkswagen			
RAV4 4-cyl. 4WD	2007-2012	159/216	159/216	Cabrio	1995-2002	195/265	VWB
RAV4 V6 2WD	2007-2012	215/292	—	Cabriolet	1985-1992	174/240	VWB
RAV4 V6 4WD	2007-2012	215/292	159/216	CC AWD	2009-2013	VWH	VWH
RAV4 2WD	1998-2006	159/216	—	CC FWD	2009-2013	VWH	[74]
RAV4 4WD	1998-2006	159/216	159/216	Corrado	1990-1994	195/265	VWB
RAV4 4WD, 2WD w/ABS	1997	159/216	159/216	EuroVan FWD	1997-2003	111/150[30]	—
Sequoia 2WD	2008-2013	282/382	251/340	EuroVan AWD	1997-2003	111/150[30]	111/150[30]
	2001-2007	203/274	—	EuroVan	1993-1996	148/200	VWB
Sequoia 4WD	2008-2013	249/338	251/340	Eos	2013	VWH	[74]
	2001-2007	173/235	—		2012	VWI	[77]
Sienna AWD	2011-2013	217/294	217/294		2007-2011	VWE	148/200[45]
	2007-2010	217/294	159/216	Fox	1987-1993	170/230	VWB
	2004-2006	217/294	217/294	GLI	2009	[85]	—
Sienna FWD	1998-2012	217/294	—		2008	147/200[47]	—
Starlet	1981-1984	TAE	—	Golf	1999-2006	VWC	129/175
Supra	1993-1998	147/199	213/289	Golf AWD	2012-2013	VWH	VWH
	1987-1992	147/199	203/275	Golf FWD	2010-2013	VWH	[99]
	1982-1985	100/137	100/137	Golf w/Base Suspension	1985-1998	195/265	VWB
	1979-1981	TAE	—	Golf w/Plus Suspension	1985-1998	VWD	VWB
Supra 2.8L	1986	100/137	100/137	GTI	2010-2013	VWH	[99]
Supra 3.0L	1986	147/199	203/275		2006-2009	VWE	VWF
T100 Pickup 2WD	1993-1998	TAD	—		1983-1984	174/240	VWB
T100 Pickup 4WD	1993-1998	TAB	—	GTI w/Base Suspension	1985-1998	195/265	VWB
Tacoma 2WD	2011-2013	147/199	—	GTI w/Plus Suspension	1985-1998	VWD	VWB
	2005-2010	147/199	—	Jetta	2011-2013	VWH	[99]
	1997-2004	TAD	—		2007-2010	VWE	VWF
	1995-1998	TAD	—		1999-2006	VWC	129/175
Tacoma 4WD	2011-2013	173/235	—		1980-1984	174/240	VWB
	2005-2010	173/235	—	Jetta w/Base Suspension	1985-1998	195/265	VWB
	1997-2004	174/235	—	Jetta w/Plus Suspension	1985-1998	VWD	VWB
	1995-1998	TAB	—	New Beetle	2012-2013	VWJ	133/180[44]
Tacoma Prerunner	2005-2010	203/275	—		1998-2010	VWC	129/175
				Passat	2013	VWL	133/180[44]
					2012	VWH	133/180[45]
					2009-2010	VWE[75]	[74]

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Volkswagen - cont.			
Passat AWD	2007-2008	VWE[75]	[73]
	1998-2006	[31]	85/116
Passat FWD	2007-2008	VWE[75]	[74]
	1998-2006	[31]	AIA
Passat w/Base			
Suspension FWD	1995-1997	195/265	VWB
Passat w/Plus			
Suspension FWD	1995-1997	66/90[27]	66/90[27]
Passat w/Base			
Suspension 4WD	1995-1997	195/265	66/90[27]
Passat w/Plus			
Suspension 4WD	1995-1997	66/90[27]	VWB
Passat Synchro	1990-1994	195/265	170/230
Passat Exc. Synchro	1990-1994	195/265	VWB
Phaeton	2004-2006	—	148/200[45]
Pickup	1980-1984	174/240	VWB
Quantum Synchro	1982-1988	170/230	170/230
Quantum Exc. Synchro	1982-1988	170/230	VWB
R32	2008	VWE[75]	VWG
Rabbit	2006-2010	VWE[75]	VWF
	1976-1984	174/240	VWB
Routan	2009-2011	118/160	—
Scirocco	1985-1989	195/265	VWB
	1976-1984	174/240	VWB
Tiguan AWD	2009-2013	VWH	VWH
Tiguan FWD	2009-2013	VWH	—
Touareg	2011-2013	VWK	VWK
Touareg w/17, 18, 18			
Plus Wheels	2003-2010	369/500	369/500[75]
Touareg w/16 Wheels	2003-2010	148/200	148/200[75]
Vanagon	1980-1983	VWB	253/350
Vanagon Synchro	1984-1991	258/350	253/350
Vanagon Exc. Synchro	1984-1991	VWB	253/350
Volvo			
240, 260 Series	1976-1993	VOA	—
740[72]	1985-1990	VOA	—
760	1988-1990	VOA	102/140[26]
760[72]	1983-1987	VOA	-
780[72]	1987-1990	VOA	102/140[26]
850	1993-1997	89/120[26]	—
940	1991-1995	VOA	102/140[26]
960	1992-1997	VOA	102/140[26]
C30	2008-2013	26/35[44]	—
C70	2007-2013	26/35 [44]	—
	1998-2006	89/120[26]	—
Coupe	1991	VOA	102/140[26]
DL, GL, GLE, GLT	1980-1984	VOA	—
S40	2011	26/35[44]	37/50
S40 AWD	2007-2010	26/35 [44]	37/50
S40 FWD, V40	2007-2010	26/35[44]	—

Make/ Model	Year	Front proc. or torque ft-lbs/Nm	Rear proc. or torque ft-lbs/Nm
Volvo - cont.			
S40, V40	2004-2006	26/35 [44]	37/50
	2003	89/120[26]	89/120[26]
S60 AWD	2011-2013	26/35[44]	26/35
	2001-2009	26/35[44]	37/50
S60 FWD		26/35[44]	—
		37/50	—
S70, V70	1998-2000	89/120[26]	—
S80	2001-2006	26/35[30]	—
	1999-2000	37/50	—
S80 AWD	2007-2013	26/35[44]	26/35
S80 FWD		26/35[44]	—
S90, V90	1998-1999	VOA	102/140[26]
V50	2011	26/35[44]	81/110
V50 AWD	2005-2010	26/35[44]	37/50
V50 FWD		26/35[44]	—
V70	2008-2010	26/35 [44]	—
V70 FWD	2001-2007	26/35 [44]	—
V70, V70R AWD		26/35 [44]	37/50
XC60	2010-2013	26/35[44]	26/35
XC70	2008-2013	26/35[44]	26/35
	2006-2007	26/35[44]	36/50
XC90 AWD	2003-2013	26/35[44]	37/50
XC90 FWD		26/35[44]	—
Yugo			
All	1985-1991	160/215	—

Footnote codes

- [1] Additional lock nut on 911 Carrera RS, 147 ft-lbs/200 Nm.
- [2] With 302RBI rear axle.
- [3] After tightening to this value, turn an additional 40 degrees.
- [4] After tightening to this value, turn an additional 20 degrees.
- [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] With 10.5 or 11.5 rear axle.
- [10] Maximum value shown. Torque value varies from 174-202 ft-lbs/236- 275 Nm.
- [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 degrees.
- [27] After tightening to specification, turn an additional 45 degrees.
- [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 degrees.
- [31] M14 bolt, tighten to 85 ft-lbs/115 Nm, then turn an additional 180 degrees. M16 bolt, tighten to 140 ft-lbs/190 Nm, then turn an additional 180 degrees.
- [32] After tightening to this value, turn an additional 180 degrees.
- [33] Use new bolt or nut. Bolt: Tighten bolt to 177 ft-lbs/240 Nm, loosen 90 degrees, loosen 90 degrees, tighten bolt to 177 ft-lbs/240 Nm, then advance bolt an additional 90 degrees. 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 degrees.
- [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 degrees.
- [37] After tightening to this value, turn an additional 30 degrees.
- [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.
- [39] With Dana 70 axles, tighten bolts to 105 ft-lbs/143 Nm, loosen 90 degrees, tighten to 70 ft-lbs/95 Nm, loosen 90 degrees, tighten 18 ft-lbs/24 Nm. With Dana 135 axles, tighten bolts to 99 ft-lbs/133 Nm, loosen 90 degrees, tighten to 70 ft-lbs/95 Nm, loosen 90 degrees, tighten 18 ft-lbs/24 Nm.
- [40] M22 nut, tighten to 147 ft-lbs/200 Nm; M24 nut, tighten to 184 ft-lbs/ 250 Nm; M27 nut, 221 ft-lbs/300 Nm.
- [41] Tighten inner hub nut 221 ft-lbs/300 Nm while spinning wheel hub constantly. Turn back inner nut and then tighten until it touches thrust washer without play. Then tighten 1/8 turn.
- [42] Install and tighten new front axle wheel end nut to specification in a continuous rotation. Stopping the rotation during installation will cause the nylon lock to seat incorrectly.

Footnote codes

- [43] Then turn additional 36 degrees.
- [44] Then turn additional 90 degrees.
- [45] Then turn additional 180 degrees.
- [46] M27 nut, tighten to 310 ft-lbs/420 Nm; M24 nut, tighten to 184 ft-lbs/ 250 Nm.
- [47] Then turn additional 80 degrees.
- [48] There are two styles of axle nuts. Style 1 has a thin collar measuring 1.5mm thick; Style 2 has a thick collar measuring 2.7mm thick. For the Style 1 axle nut, torque to 244 ft-lbs/330 Nm. For style 2 axle nut, tighten to 37 ft-lbs/50 Nm, plus 60 degrees. Do not reuse old nut.
- [49] With 9 1/4 axle, 179 Nm/132 ft-lbs, then rotate 5 to 10 times, final torque 356 Nm/263 ft-lbs. With 275 FBI axle, 330 Nm/243 ft-lbs.
- [50] With vehicle on the ground, loosen 90 degrees. With vehicle off the ground and brakes applied, tighten new bolt to 147 ft-lbs/200 Nm. Install wheels and lower the vehicle onto its wheels. Tighten the axle shaft bolt an additional 180 degrees. Always replace bolt after removal.
- [51] With M14 bolt, tighten to 85 ft-lbs/115 Nm; with M16 bolt, tighten to 147 ft-lbs/200 Nm, if vehicle is raised. Only turn an additional 180 degrees when vehicle is on floor. Always replace nut after removal.
- [52] Using a 39mm socket, tighten axle shaft nut to 148 ft-lbs/200 Nm. Loosen the axle shaft nut. Tighten the axle shaft nut to 251 ft-lbs/340 Nm.
- [53] With vehicle on the ground, loosen 90 degrees. With vehicle off the ground and brakes applied, tighten new nut to 110 ft-lbs/150 Nm. Install wheels and lower the vehicle onto its wheels. Tighten the axle shaft nut to 368 ft-lbs/500 Nm. Always replace nut after removal.
- [54] With M27, thread tighten to 310 ft-lbs/420 Nm; with M24, thread tighten to 106 ft-lbs/145 Nm, then turn additional 90 degrees.
- [55] Then turn additional 45 degrees.
- [56] With RPO Codes FE1 or FE3, 118 ft-lbs/160 Nm; with RPO Code FE7, 170 ft-lbs/230 Nm.
- [57] First design, 284 ft-lbs/385 Nm; second design, 173 ft-lbs/235 Nm.
- [58] With RPO Code LNF, MU3, 159 ft-lbs/215 Nm; without RPO Code LNF, MU3, 155 ft-lbs/210 Nm.
- [59] Use new original equipment nut.
- [60] Using new nut, tighten inner nut to 203 ft-lbs/275 Nm; outer hub nut to 129 ft-lbs/175 Nm.
- [61] Remove and discard the old wheel hub nut. With the vehicle raised up, apply the brake so the halfshaft will not rotate and install a new wheel hub nut. Do not attempt to tighten the nut with the vehicle on the ground or the wheel bearing will be damaged. Stake the new nut in the keyway to .039 in (1mm) minimum depth.
- [62] Use new original equipment nut. Have assistant apply the brakes to keep the halfshaft from rotating.
- [63] Rear CV axle without adjusting cap and spring washer, torque to 136 ft-lbs/185 Nm; with adjusting cap and spring washer, torque to 77 ft- lbs/105 Nm.
- [64] Kia Rio model code 'BC'.
- [65] Kia Rio model code 'JB'.
- [66] Kia Optima model code 'MS'.
- [67] Kia Optima model code 'MG'.
- [68] Maximum value shown. Torque value varies from 174-235 ft-lbs/236- 319 Nm.
- [69] Tighten in three steps: First, 110 ft-lbs/150 Nm; second, loosen 180 degrees; last, tighten 313 ft-lbs/425 Nm.
- [70] Tighten in three steps: First, 111 ft-lbs/150 Nm; second, loosen 45 degrees; last, tighten 185 ft-lbs/250 Nm.
- [71] Torque bolt to 33 ft-lbs plus an additional 80 degrees.
- [72] The 700 Series has 2 different types of wheel bearings available. The 1982 to 1987 700 Series had an integral front wheel hub and brake disc. The hub was fitted with a conical bearing and castle nut held with a cotter pin. For 1988 and onward the hub and brake disc are separate. Volvo states for 1982-1987 vehicles, once the earlier integral hub/disc units are no longer available, service kits must be used. The service kit included a separate brake disc, a new hub, bearing and seals. There are different torques depending on the type of hub. The tightening torques for 1982-1987 vehicles with the integral hub/disc design are: Torque to 42 ft-lbs (57 Nm). Turn the wheel while tightening. Loosen the nut half a turn and re-tighten to 1.1 ft-lbs (1.5 Nm) (finger tight). Insert the cotter pin. If the holes don't line up, tighten nut until they do. The tightening torques for 1982-1992 with the separate hub and rotor are: Torque to 74 ft-lbs (100 Nm) plus an additional 45 degrees.
- [73] Tighten bolt to 52 ft-lbs/70 Nm plus an additional 90 degrees. Always replace bolt after removal.
- [74] Tighten bolt to 148 ft-lbs/200 Nm plus an additional 180 degrees. Always replace bolt after removal.
- [75] Use new original equipment bolt.
- [76] Vehicles with aluminum wheel bearing housing, 148 ft-lbs/200 Nm plus additional 180 degrees; with steel wheel bearing housing, 133 ft-lbs 180 Nm plus additional 180 degrees.
- [77] Tighten with code P99 to 380 Nm/280 ft-lbs; without code P99, 150 Nm/110 ft-lbs plus an additional 45 degrees.
- [78] Model 221 with code Z07 or Z19, tighten 390 Nm/273 ft-lbs.
- [79] Models with FE7 suspension 147 ft-lbs/200 Nm.
- [80] Tighten in two steps; 1st step, 148 ft-lbs/200Nm Then, 250 ft-lbs/ 340Nm.
- [81] Kia Optima model code 'TF'.

Footnote codes

- [82] Then turn additional 60 degrees.
- [83] Bolt, 199 ft-lbs/270 Nm; Nut, 206 ft-lbs/280 Nm.
- [84] Then turn additional 45 degrees.
- [85] M16 Bolt Hex head, 148 ft-lbs/200 Nm, then an additional 180 degrees. M16 Bolt, 12 point 52 ft-lbs/70 Nm, then an additional 90 degrees.
- [86] Maximum value shown. Torque value varies from 148-206 ft-lbs/200- 279 Nm.
- [87] Maximum value shown. Torque value varies from 123-159 ft-lbs/167- 216 Nm.
- [88] Maximum value shown. Torque value varies from 159-217 ft-lbs/216- 293 Nm.
- [89] If bearings are replaced, proceed as follows to select the proper bearing preload spacer. Drive inner and outer bearing races into steering knuckle. Lubricate races and new bearings with engine oil, then install bearing into steering knuckle. Install spacer selection tool kit T87C-1104-B, original spacer and hardware to steering knuckle in a soft jaw vise. Tighten center bolt in increments to 36 ft-lbs, 72 ft-lbs, 108 ft-lbs and 145 ft-lbs. After bolt is tightened to each specification, remove from vise and rotate knuckle to seat bearings. Measure the torque required to start rotation of center bolt using an inch pound torque wrench. If torque reading is 2.2-10.4 in-lbs, the spacer thickness is correct. If less than 2.2 in-lbs, a thinner spacer is required. If greater than 10.4 in-lbs, a thicker spacer is required. See service manual for details.
- [90] Use new nut. After installing nut, stake nut shoulder against spindle. The nut must be replaced if it splits or cracks during staking.
- [91] Use new nut. Before installing nut, apply a small amount of engine oil to seating surface of nut. After tightening nut, stake nut shoulder against spindle. The nut must be replaced if it splits or cracks during staking.
- [92] Use new nut. Before installing nut, apply a small amount of engine oil to retaining nut to wheel bearing contact surface. After tightening nut, stake nut shoulder in two locations against spindle. The nut must be replaced if it splits or cracks during staking.
- [93] Use new nut. After tightening, stake nut into shaft groove. The nut must be replaced if it splits or cracks during staking.
- [94] Use new nut. After installing nut, stake nut shoulder against spindle in two places. The nut must be replaced if it splits or cracks during staking.
- [95] Use new retaining nut. After tightening, stake nut.
- [96] After tightening, stake lock nut.
- [97] Stake shaft nut after axle hub bearing looseness & axle hub runout inspections.
- [98] Use new nut. After tightening, stake nut (.02 inch minimum) into shaft groove. The nut must be replaced if it splits or cracks during staking.
- [99] Tighten bolt to 133 ft-lbs/180 Nm plus an additional 90 degrees. Always replace bolt after removal.
- [100] Without police package, tighten to 258 ft-lbs/350 Nm. Loosen 180 degrees, then tighten to 258 ft-lbs/350 Nm. Always replace nut after removal. With police package, tighten to 111 ft-lbs/150 Nm. Loosen 180 degrees, then tighten to 313 ft-lbs/425 Nm. Always replace nut after removal.
- [101] With M27 thread, tighten to 310 ft-lbs/420 Nm; with M24 thread, tighten to 106 ft-lbs/145 Nm, then turn additional 45 degrees. Always replace nut after removal.
- [102] Tighten 160 Nm/ 118 ft-lbs, back off nut, tighten 120 Nm/ 88 ft-lbs, final torque additional 90 degrees.
- [103] Tighten self locking, 350 Nm/258 ft-lbs; non self locking, 170 Nm/125 ft-lbs, tighten additional 45 degrees.
- [104] Tighten self locking, 350 Nm/258 ft-lbs; without self locking, 320 Nm/ 236 ft-lbs.
- [105] Tighten 150 Nm/110 ft-lbs plus additional 45 degrees.
- [106] Tighten 250 Nm/184 ft-lbs, loosen 180 degrees, 200 Nm/147 ft-lbs, tighten additional 30 degrees.
- [107] Tighten 250 Nm/184 ft-lbs, tighten additional 45 degrees.
- [108] Tighten 350 Nm/258 ft-lbs, loosen 180 degrees, tighten 250 Nm/184 ft-lbs, torque an additional 30 degrees.
- [109] Rear spindle nut with 4WD, 245 Nm/181 ft-lbs. With real time AWD system, 181 Nm/133 ft-lbs.
- [110] Front axle torque with castle nut, 129 ft-lbs/176 Nm. Torque with flange nut, 184 ft-lbs/250 Nm.
- [111] Collar bolt: With vehicle on the ground, loosen 90 degrees. With vehicle off the ground and brakes applied, tighten new bolt to 147 ft-lbs/200 Nm. Install wheels and lower the vehicle onto its wheels. Tighten the axle shaft bolt an additional 180 degrees. Always replace bolt after removal. 12 point nut: With vehicle on the ground, loosen 90 degrees. With vehicle off the ground and brakes applied, tighten new nut to 110 ft-lbs/150 Nm. Install wheels and lower the vehicle onto its wheels. Tighten the axle shaft nut to 368 ft-lbs/500 Nm. Always replace nut after removal.
- [112] Tighten an additional 57 degrees-63 degrees.
- [113] Replace collar bolt and compression spring.
- [114] Use new nut. After tightening nut, stake nut on flat areas of output shaft.
- [115] With M27 thread, tighten to 74 ft-lbs/100 Nm; then turn an additional 45 degrees. Replace collar nut after removal. With M16 thread, tighten to 37 ft-lbs/50 Nm; then turn an additional 155 degrees. Replace collar bolt and spring after removal.
- [116] Tighten M5 nut 4 ft-lbs/5 Nm.
- [117] Replace collar nut and oil contact surface.

Adjustment procedures

AIA	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.		
AMA	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.		
AMB	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.		
AMC	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.		
AMD	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.		
BWA	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.		
CRA	Tighten hub nut to 20-25 ft-lbs/25-29 Nm while rotating wheel. Back off 90 degrees and finger tighten. Install cotter pin.		
CRB	Tighten hub nut to 14 ft-lbs/20 Nm. Back off and retighten to 4 ft-lbs/6 Nm. Install cotter pin.		
CRC	Tighten hub nut to 20-27 ft-lbs/27-34 Nm while rotating wheel. Back off and finger tighten. Install cotter pin.		
CRD	Tighten hub nut to 22 ft-lbs/29 Nm. Back off and retighten to 4 ft-lbs/6 Nm. Install cotter pin.		
DAA	Tighten nut to 133 ft-lbs/181 Nm, loosen, tighten to 37 ft-lbs then turn nut an additional 60 degrees.		
DAB	While spinning wheel, tighten nut to 18 ft-lbs/ 25 Nm, loosen 180 degrees, tighten to 18 in-lbs/2 Nm.		
DAC	While spinning wheel, tighten nut to 15 ft-lbs/ 20 Nm, loosen 180 degrees, tighten to 9 in-lbs/1 Nm.		
DAD	While spinning wheel, tighten nut to 18 ft-lbs/ 25 Nm, loosen 180 degrees, tighten to 9 in-lbs/1 Nm.		
DAE	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.		
DHA	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.		
DTA	Tighten hub nut 30-40 ft-lbs/37-50 Nm while rotating wheel. Back off and finger tighten. Install cotter pin. Freeplay is measured at wheel .001-.002".		
DTB	Tighten hub nut to 30-40 ft-lbs/37-50 Nm while rotating wheel. Back off and finger tighten. Install cotter pin.		
DTC	Tighten hub bearing adjustment nut to 120-140 ft-lbs/ 163-190 Nm while turning hub. Loosen 1/8 to 1/3 turn		to provide .001-.009" endplay. Tap locking wedge into spindle keyway and adjusting nut.
DTD	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.		
DTE	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.		
DTF	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 degrees 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.		
DTG	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 degrees. Install lock washer by aligning hole on washer with pin on nut. Install outer locknut and torque to 50 ft-lbs/68Nm.		
DTH	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 degrees. 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.		
DTI	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 degrees. 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.		
DTJ	Tighten locknut to 120 ft-lbs/165 Nm. Back off to 0/0 then retighten to 18 ft-lbs/25 Nm. Back off 30 degrees 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.		
DTK	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".		
DTL	Tighten hub bearing adjustment nut to 22 ft-lbs/30 Nm while turning hub. Loosen nut approximately 30 degrees and align hub nut with axle tube key slot. Install locking key. Endplay should be .001-.010".		
DTM	Tighten hub nut to 95 Nm (70 ft-lbs) while rotating the hub. Then back off nut 90 degrees and retighten nut to 41 Nm (30 Ft-lbs). NOTE: This will set hub to zero end-play.		
FDA	Tighten hub nut to 17-25 ft-lbs/22-29 Nm while rotating wheel. Back off 1/2 turn and re- tighten to 10-15 lbs/ 1-2 kg. Install FDA cotter pin.		
FDB	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.		

Adjustment procedures

- FDC** 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.
- FDD** While rotating hub, tighten to 18-23 ft-lbs/ 24-31 Nm, back-off 2-3 turn, tighten to 18 in-lbs/2 Nm.
- FTA** 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.
- FTB** 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.
- FTC** 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.
- FTD** Tighten hub nut to 17-25 ft-lbs/22-29 Nm while rotating hub. Back off 1/4 turn and install cotter pin.
- FTE** Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 90 degrees. 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".
- FTF** 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".
- FTG** 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.
- FTH** 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.
- FTI** Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 90 degrees. 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".
- FTJ** Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating hub. Back off 45 degrees. Align lock washer hole with pin on adjusting nut. Tighten locknut to 150 ft-lbs/203 Nm. Endplay should be .001-.006".
- FTK** 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 degrees while rotating hub. Insert washer and tighten locknut to 65 ft-lbs/88 Nm. Bend washer tab over adjusting nut and locknut.
- FTL** 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 degrees. Tighten adjusting nut to 15 ft-lbs/20 Nm and remove Spanner. Endplay should be 0-.006".
- FTM** 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 degrees. Tighten adjusting nut to 15 ft-lbs/20 Nm and remove Spanner. Endplay should be 0.
- FTN** Tighten hub nut to 30 ft-lbs/40 Nm while turning wheel. Back off 2 turns and tighten to 17-24 ft-lbs/23-24 Nm. Loosen nut 180 degrees. Tighten nut to 17 in-lbs/2 Nm.
- FTO** 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 degrees. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/247 Nm. Endplay should be 0-.006".
- FTP** Tighten hub nut to 17-24 ft-lbs/22-34 Nm while turning wheel. Loosen nut 180 degrees and tighten to 17 in-lbs/ 2 Nm.
- FTQ** Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off 90 degrees. Align lock washer with keyway and pin on adjusting nut. Tighten locknut to 182 ft-lbs/ 247 Nm.
- FTR** Tighten adjusting nut to 50 ft-lbs/68 Nm while turning hub. Back off 90 degrees. 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.
- FTS** 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 degrees and retighten to 15-20 ft-lbs/18-25 Nm.
- FTT** 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).
- FTU** Tighten the adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90 degrees. 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.
- FTV** Tighten adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90 degrees. 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.

Adjustment procedures

- FTW** Tighten the adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90 degrees. 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.
- FTX** Tighten adjusting nut to 35 ft-lbs/47 Nm while turning hub. Back off 90 degrees. 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 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.
- FTY** 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 degrees. Tighten nut to 17 in-lbs/2 Nm.
- FTZ** 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 degrees. 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 20in-lbs/2.3 Nm.
- FT1** 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).
- FT2** Tighten hub nut to 17-24 ft-lbs/22-34 Nm while turning wheel. Loosen nut 175 degrees and tighten to 17 in-lbs/2 Nm.
- FT3** Tighten hub nut to 21 ft-lbs/28 Nm while turning wheel clockwise. Back off 180 degrees. While rotating brake disc, tighten to 17 in-lbs/2 Nm.
- GMA** Tighten hub nut to 12 ft-lbs/16 Nm while rotating wheel. Back off and finger tighten. Back off slightly to install cotter pin.
- GMB** Snug hub nut while rotating wheel. Back off 1/4-1/2 turn and finger tighten. Install cotter pin.
- GMC** Tighten hub nut to 15 ft-lbs/18 Nm while rotating wheel. Back off and finger tighten. Back off slightly to install cotter pin.
- GMD** 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-.010".
- GME** 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 degrees. Insert lock washer and bend one tab over adjusting nut. Install locknut and tighten to 65 ft-lbs/88 Nm. Bend tab of washer over locknut. Endplay should be .001-.010".
- GMF** 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.
- GMG** 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."
- GMH** 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."
- GMI** 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.
- GMJ** 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".
- GMK** 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.
- GML** 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".
- GMM** 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 press through slot on spindle. Hole in pin must align with locknut, turn adjusting nut to align. Endplay should be .001-.010".
- GMN** 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".
- GMO** 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".
- GMP** 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".

Adjustment procedures

- GMQ** 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.
- GMR** Tighten to 74 ft-lbs/100 Nm, loosen, tighten to 15 ft-lbs/20 Nm, turn an additional 90 degrees.
- HAA** Tighten hub nut to 22 ft-lbs/30 Nm. Back off and retighten to 4 ft-lbs/6 Nm.
- KIB** 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 Nm. Turn adjusting nut slowly until specified preload is obtained. After preload adjustment, stake nut in position.
- LRA** Tighten the hub nut to 50 ft-lbs/61 Nm, then back off 90 degrees. Tighten the hub nut 3 ft-lbs/4 Nm. Endplay should be .004. Install lock nut and tighten to 50 ft-lbs/61 Nm.
- LRB** While slowly rotating hub, tighten the hub nut until all endplay is removed, then back off 180 degrees. 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.
- LRC** Tighten the hub nut to 37 ft-lbs/50 Nm, then back off 90 degrees. Tighten the hub nut 7 ft-lbs/10 Nm. Endplay should be .0004". Install lock nut and tighten to 37 ft-lbs/50 Nm.
- MAA** 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.
- MAB** 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 .77-1.92 lbs/.35-.87 kg.
- MAC** 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.
- MAD** 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/.60-1.2 kg. Install bearing set plate and bolts; spacer, then snap ring.
- MA3** Tighten locknut to 23-29 ft-lbs/32-39 Nm. Mark lockbolt at one point and tighten it further until marking has moved 85-95 degrees.
- MIA** 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.
- NDA** Tighten hub nut to 25-29 ft-lbs/30-34 Nm. Turn hub several times in each direction to seat bearings, then tighten again to 25-29 ft-lbs/30-34 Nm. Back off 45 degrees and install cotter pin.
- NDB** Tighten hub nut to 18-22 ft-lbs/22-26 Nm. Back off and tighten again. Back off up to 60 degrees and install cotter pin.
- NDC** Tighten hub nut to 29-33 ft-lbs/34-40 Nm. Back off and tighten again. Back off up to 90 degrees and install cotter pin.
- NDD** Tighten hub nut to 25-29 ft-lbs/30-34 Nm. Back off and tighten again. Back off up to 45 degrees and install cotter pin.
- NDE** Tighten hub nut to 22-25 ft-lbs/25-29 Nm. Back off and tighten again. Back off up to 90 degrees and install cotter pin.
- NDF** Tighten hub nut to 16-17 ft-lbs/19-21 Nm. Back off and tighten again. Back off up to 40-70 degrees and install cotter pin.
- NDG** 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.
- NDH** 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.
- POA** 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.
- SNA** Tighten nut to 74-118 ft-lbs/100-160 Nm, loosen, tighten to 15 ft-lbs/20 Nm, turn an additional 90 degrees.
- SUA** Tighten adjusting nut while turning wheel. Back off 1/8 turn and finger tighten.
- SZA** Tighten adjusting nut while turning wheel to 58 ft-lbs/80 Nm. Loosen nut. Tighten nut to 9 ft-lbs/12.5 Nm.
- TAA** 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 ft-lbs/6 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. Insert lock washer. Tighten locknut to 47 ft-lbs/64 Nm. Recheck turning torque with the spring scale.
- TAB** 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.
- TAC** 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.
- TAD** 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.
- TAE** 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".

Adjustment procedures

- TAF** 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.
- TAG** 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.
- TAH** 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.
- VOA** Tighten adjusting nut to 50 ft-lbs/68 Nm while rotating wheel. Back off 1/3 turn. Loosen slightly and install cotter pin.
- VOB** Tighten adjusting nut to 15 ft-lbs/20, then 33 ft-lbs/45 Nm. Tighten an additional 60 degrees.
- VWA** Tighten adjusting nut to 7 ft-lbs/10 Nm. Back off and finger tighten. Install cotter pin.
- VWB** 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.
- VWC** Tighten to 148 ft-lbs/200 Nm. Loosen. Tighten to 37 ft-lbs/50 Nm, then turn nut an additional 60 degrees.
- VWD** Tighten to 148 ft-lbs/200 Nm. Loosen. Tighten to 37 ft-lbs/50 Nm, then turn nut an additional 30 degrees.
- VWE** With hex head bolt, 148 ft-lbs/200 Nm. Then turn nut an additional 180 degrees. With 12 point bolt, 52 ft-lbs/70 Nm. Then turn nut an additional 90 degrees.

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