



# Spindle Nut Torque Specifications



N1206-3-T-348

# Spindle Nut Torque Specifications



It is important to use the correct torque when installing the spindle nut.

## Follow the Manufacture's Instructions

To assure the hub assembly is installed correctly, follow the manufacture's installation procedure. One of the most common mistakes during installation of a new hub assembly is improper torque of the spindle nut. Ignoring these important details will reduce the life of your bearing. Many manufactures have multiple steps to ensure the proper load is on the bearing.

## Use a Torque Wrench for the Spindle Nut

It is important to use a certified, calibrated torque wrench. Never use an impact gun to install the spindle nut. The impact gun will damage the axle nut, threads and components. It will also leave your spindle nut under or over torque resulting in hub assembly failure. To ensure proper torque, never use an impact wrench.

## Torque Specifications are Important

To ensure that you have the correct torque for the specific vehicle always refer to the National catalog 510-2, the National torque specification brochure or contact the manufactures dealer. It is important that you properly torque the spindle nut to ensure optimum bearing life from your hub assembly. Under torque of a spindle nut will allow excessive bearing movement causing uneven loading and excessive wear. Over torque of the spindle nut will cause the bearing to overheat, one of the most common causes for bearing failure.

### ***National Hub Assemblies meet OE configuration for all applications and feature:***

- High-quality oil seals that eliminate leaking and contamination.
- Integral raceways that ensure proper clearance between ball and bearing riding surfaces.
- OEM-specification ABS Sensor and Plug (where applicable) that offer better ABS signals due to high-strength polymer and copper wiring for better connection and conductivity.



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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>ACURA</b>				
CL	1999 - 1997	Front	513098	181/245
CL	1999 - 1997	Rear	512172	134/181
Integra	1989 - 1986	Rear	513050	134/181
Integra	1993 - 1990	Rear	513033	134/181
Integra	2001 - 1990	Rear	513105	134/181
Integra	2001 - 1994	Rear	512034	134/181
Legend	1995 - 1991	Rear	512008	206/285
RL	2004 - 1996	Rear	512123	181/245
RSX	2006 - 2002	Rear	512259	134/181
TL	1998 - 1995	Rear	512120	134/181
TL	1998 - 1996	Rear	512121	134/181
TL	2003 - 1999	Rear	512179	134/181
Vigor	1994 - 1992	Front	513093	181/245
Vigor	1994 - 1992	Rear	512031	134/181
<b>AUDI</b>				
A4	2004 - 2002	Rear	512305	(AS)
A4	2006 - 2002	Rear	512231	(AS)
A4 Quattro	2003 - 2002	Rear	512305	85/115 (AD)
A6 Quattro	2004 - 2000	Rear	512305	(AE)
S4	2002	Rear	512305	(AS)
S6	2003 - 2002	Rear	512305	(AE)
S8	2003 - 2001	Rear	512305	140/190 (AD)
TT FWD	2005 - 2000	Rear	512012	129/175
<b>BUICK</b>				
Century	1982	Front	513011K	225/290
Century	1989 - 1983	Front	513011K	185/260
Century	1991 - 1983	Front	513016K	185/260
Century	1993 - 1992	Front	513016K	103/140 (AP)
Century	1995 - 1994	Front	513087	103/140 (AP)
Century	1996	Front	513087	107/145
Century	2000 - 1997	Front	513121	159/215
Century	2001	Front	513121	118/160
Century	2005 - 2001	Front	513179	159/216
Electra	1990 - 1985	Front	513016K	185/260
LeSabre	1991 - 1986	Front	513016K	185/260
LeSabre	1992	Front	513088	107/145
LeSabre	1999 - 1992	Front	513087	118/160

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>BUICK - continued</b>				
LeSabre	2001 - 2000	Front	513121	118/160
LeSabre	2005 - 2001	Front	513179	118/160
Park Avenue	1991	Front	513016K	185/260
Park Avenue	1996 - 1992	Front	513087	107/145
Park Avenue	2001 - 1997	Front	513121	118/160
Park Avenue	2005 - 2001	Front	513179	118/160
Reatta	1988	Front	513016K	180/244
Reatta	1991 - 1989	Front	513059	180/244
Regal	1994 - 1988	Front	513044	184/250
Regal	1996 - 1995	Front	513044	151/205
Regal	2000 - 1997	Front	513121	159/215
Regal	2001	Front	513121	118/160
Regal	2005 - 2001	Front	513179	159/215
Rendezvous	2002	Front	513179	192/260
Rendezvous	2006 - 2002	Front	513187	192/260
Rendezvous	2006 - 2002	Rear	513121	192/260
Riviera	1985 - 1980	Front	513013	175/240
Riviera	1988 - 1986	Front	513016K	183/248
Riviera	1991 - 1989	Front	513059	183/248
Riviera	1993 - 1992	Front	513087	183/248
Riviera	1996 - 1995	Front	513087	107/145
Riviera	1999 - 1997	Front	513121	118/160
Skyhawk	1988 - 1984	Front	513017K	185/260
Skylark	1982 - 1980	Front	513011K	225/290
Skylark	1985 - 1983	Front	513011K	185/260
Skylark	1997 - 1986	Front	513017K	185/260
Skylark	1998	Front	513017K	74/100 (AR)
Somerset	1987 - 1985	Front	513017K	185/260
<b>CADILLAC</b>				
Allante	1990 - 1987	Front	513016K	183/245
Allante	1992 - 1991	Front	513059	183/245
Allante	1993	Front	513087	110/145
Catera	2001 - 1997	Front	513164	236/320
Cimarron	1988 - 1984	Front	513017K	185/260
CTS	2003	Rear	512223	118/160
Deville	1991 - 1985	Front	513016K	180/244
Deville	1993 - 1992	Front	513088	118/160
Deville	1996 - 1992	Front	513087	118/160

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>CADILLAC - continued</b>				
Deville	1999 - 1997	Front	513121	118/160
Deville	2001 - 2000	Front	513121	(AO)
Deville	2005 - 2001	Front	513179	(AO)
Eldorado	1985 - 1979	Front	513013	176/238
Eldorado	1988 - 1986	Front	513016K	180/244
Eldorado	1991 - 1989	Front	513059	180/244
Eldorado	1996 - 1992	Front	513087	107/145
Eldorado	2001 - 1997	Front	513121	118/160
Eldorado	2002 - 2001	Front	513179	118/160
Escalade 4WD	2000 - 1999	Front	515024	165/225
Escalade 4WD	2005 - 2002	Front	515036	155/210
Fleetwood	1991 - 1985	Front	513016K	180/244
Fleetwood	1992	Front	513087	107/145
Fleetwood	1992	Front	513088	107/145
Seville	1985 - 1980	Front	513013	176/238
Seville	1988 - 1986	Front	513016K	180/244
Seville	1991 - 1989	Front	513059	180/244
Seville	1996 - 1992	Front	513087	107/145
Seville	2001 - 1997	Front	513121	118/160
Seville	2005 - 2001	Front	513179	118/160
<b>CHEVROLET</b>				
Astro	1994 - 1990	Front	515005	180/244
Astro	1995	Front	515019	180/244
Astro	2002 - 1996	Front	515019	147/200
Beretta	1996 - 1987	Front	513017K	185/260
Blazer 4WD	1994 - 1992	Front	515001	173/234
Blazer 4WD	1997 - 1995	Front	513061	180/245
Blazer 4WD	2003 - 1997	Front	513124	103/140
Cavalier	1997 - 1984	Front	513017K	185/260
Cavalier	2001 - 1998	Front	513017K	144/195
Cavalier	2003 - 2002	Front	513017K	148/200
Celebrity	1982	Front	513011K	225/290
Celebrity	1989 - 1983	Front	513011K	185/260
Celebrity	1990 - 1983	Front	513016K	185/260
Citation	1982 - 1980	Front	513011K	225/290
Citation	1985 - 1983	Front	513011K	185/260
Corsica	1996 - 1987	Front	513017K	185/260
Corvette	1996 - 1984	Rear	513020	164/223

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>CHEVROLET - continued</b>				
Corvette	2003 - 1997	Rear	512153	118/160
Impala	2001 - 2000	Front	513121	151/205
Impala	2003 - 2001	Front	513179	159/215
Lumina	1994 - 1990	Front	513044	184/250
Lumina	1997 - 1995	Front	513044	151/205
Lumina	2001 - 1998	Front	513044	159/216
Lumina APV	1991 - 1990	Front	513016K	185/260
Lumina APV	1994 - 1992	Front	513087	185/260
Lumina APV	1996 - 1995	Front	513087	104/145
Malibu	2003 - 1997	Front	513137	173/235
Monte Carlo	1999 - 1995	Front	513044	159/215
Monte Carlo	2001 - 2000	Front	513121	159/215
Monte Carlo	2003 - 2001	Front	513179	159/215
S10 Pickup	1994 - 1983	Front	513013	180/244
S10 Pickup	1997 - 1990	Front	513061	180/244
S10 Pickup 4WD	2005 - 1997	Front	513124	103/140
Silverado 4WD	2005 - 2000	Front	515036	155/210
Silverado 4WD	2006 - 2001	Front	515058	155/210
Tahoe	2000 - 1995	Front	515024	165/225
Tahoe	2005 - 2000	Front	515036	155/210
Tracker	2004 - 2001	Front	513193	159/216
Trailblazer 4WD	2006 - 2002	Front	513188	103/140
Venture	2001 - 1997	Rear	513121	118/160
Venture	2003 - 2001	Front	513179	118/160
Venture	2005 - 2002	Front	513187	118/160
Venture AWD	2005 - 2002	Rear	513121	192/260
<b>CHRYSLER</b>				
300M	2000 - 1999	Front	513089	120/163
300M	2004 - 1999	Rear	512029	124/168
300M	2004 - 2001	Front	513089	105/142
Cirrus	1997 - 1995	Rear	512133	185/250
Cirrus	2000 - 1995	Front	513138	180/244
Cirrus	2000 - 1995	Rear	512154	185/250
Cirrus	2000 - 1998	Rear	512220	185/250
Concorde	1994 - 1993	Front	513089	80/108
Concorde	1994 - 1993	Rear	512029	125/170
Concorde	2000 - 1995	Front	513089	120/163
Concorde	2004 - 1995	Rear	512029	124/168

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>CHRYSLER - continued</b>				
Concorde	2004 - 2001	Front	513089	105/142
Daytona	1993 - 1989	Front	513075	180/244
Dynasty	1993 - 1989	Front	513075	180/244
Imperial	1993 - 1990	Front	513075	180/244
LeBaron	1995 - 1989	Front	513075	180/244
LHS	2001 - 1994	Front	513089	120/163
LHS	2001 - 1994	Rear	512029	124/168
New Yorker	1993 - 1989	Front	513075	180/244
New Yorker	1996 - 1994	Front	513089	120/163
New Yorker	1996 - 1994	Rear	512029	124/168
Pacifica	2006 - 2004	Front	513201	180/244
Pacifica	2006 - 2004	Rear	512288	180/244
PT Cruiser	2002 - 2001	Rear	512168	160/217
PT Cruiser	2006 - 2001	Rear	512167	160/217
Sebring Convertible	1997 - 1996	Rear	512133	185/250
Sebring Convertible	2000 - 1996	Front	513138	180/244
Sebring Convertible	2000 - 1996	Rear	512154	185/250
Sebring Convertible	2002 - 2001	Front	513138	110/150
Sebring Convertible	2004 - 1998	Rear	512220	185/250
Sebring Convertible	2006 - 2003	Front	513138	150/203
Sebring Coupe	2003 - 1995	Front	513157	167/226
Sebring Sedan	2002 - 2001	Front	513138	110/150
Sebring Sedan	2004 - 2001	Rear	512220	185/250
Sebring Sedan	2006 - 2003	Front	513138	150/203
Town & Country	1995 - 1990	Front	513074	180/244
Town & Country	1995 - 1991	Front	513075	180/244
Town & Country	2000 - 1996	Front	513122	180/244
Town & Country	2006 - 1996	Front	513123	180/244
Town & Country AWD	2003 - 1999	Rear	512157	180/244
Voyager	2003 - 2001	Front	513123	180/244
<b>DAEWOO</b>				
Leganza	2002 - 1999	Rear	512159	210/285
<b>DODGE</b>				
Avenger	2000 - 1995	Front	513157	167/226
Caravan	1988	Front	513231	180/244
Caravan	1994 - 1991	Rear	512125	(AT)
Caravan	1995 - 1989	Front	513074	180/244

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>DODGE - continued</b>				
Caravan	1995 - 1991	Front	513075	180/244
Caravan	1998 - 1996	Rear	512157	(AT)
Caravan	1999	Rear	512157	180/244
Caravan	2000 - 1996	Front	513122	180/244
Caravan	2006 - 1996	Front	513123	180/244
Colt	1994 - 1992	Rear	512040	130/180
Colt	1994 - 1993	Rear	512033	130/180
Colt	1994 - 1993	Rear	512148	130/180
Dakota 2WD	2003 - 1997	Front	515032	185/251
Dakota 2WD	2003 - 1997	Front	515033	185/251
Dakota 4WD	1990 - 1987	Front	513082	190/258
Dakota 4WD	1996 - 1990	Front	513109	190/258
Dakota 4WD	2003 - 1997	Front	515009	180/244
Dakota 4WD	2004 - 1997	Front	515007	180/244
Dakota 4WD	2004 - 1997	Front	515008	180/244
Daytona	1993 - 1989	Front	513075	180/244
Durango 2WD	2004 - 1998	Front	515032	185/251
Durango 2WD	2004 - 1998	Front	515033	185/251
Durango 4WD	2004 - 1998	Front	515007	180/244
Durango 4WD	2004 - 1998	Front	515008	180/244
Durango 4WD	2004 - 1998	Front	515009	180/244
Dynasty	1993 - 1989	Front	513075	180/244
Intrepid	1997 - 1993	Rear	512030	124/168
Intrepid	2000 - 1993	Front	513089	120/163
Intrepid	2004 - 1993	Rear	512029	124/168
Intrepid	2004 - 2001	Front	513089	105/142
Neon	1995	Rear	512021	160/217
Neon	1997 - 1995	Rear	512023	160/217
Neon	1999 - 1998	Rear	512013	160/217
Neon	2005 - 2000	Rear	512167	160/217
Ram 1500 Pickup 4WD	1999 - 1994	Front	515006	175/237 (AN)
Ram 1500 Pickup 4WD	1999 - 1997	Front	515023	175/237 (AN)
Ram 1500 Pickup 4WD	1999 - 1997	Front	515049	175/237 (AN)
Ram 1500 Pickup 4WD	2001 - 2000	Front	515038	180/244 (AN)
Ram 1500 Pickup 4WD	2001 - 2000	Front	515039	180/244 (AN)
Ram 1500 Pickup 4WD	2006 - 2002	Front	515072	185/251
Ram 1500 Pickup 4WD	2006 - 2002	Front	515073	185/251
Ram 2500 Pickup 4WD	1998 - 1994	Front	515011	175/237 (AN)



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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>DODGE - continued</b>				
Ram 2500 Pickup 4WD	1999 - 1994	Front	515012	175/237 (AN)
Ram 2500 Pickup 4WD	1999 - 1998	Front	515034	175/237 (AN)
Ram 2500 Pickup 4WD	1999 - 1998	Front	515035	175/237 (AN)
Ram 2500 Pickup 4WD	2002	Front	515063	180/244 (AN)
Ram 2500 Pickup 4WD	2005 - 2003	Front	515061	(AA)
Ram 3500 Pickup 4WD	2002 - 2000	Front	515063	180/244 (AN)
Ram 3500 Pickup 4WD	2005 - 2003	Front	515061	(AA)
Shadow	1994 - 1991	Front	513075	180/244
Spirit	1995 - 1991	Front	513075	180/244
Stealth 4WD	1996 - 1991	Front	513133	166/225
Stealth FWD	1996 - 1991	Front	513133	166/225
Stealth FWD	1996 - 1991	Rear	512039	166/225
Stratus Coupe	2005 - 2001	Front	513157	167/226
Stratus Sedan	1997 - 1995	Rear	512133	185/250
Stratus Sedan	1999 - 1995	Front	513138	180/244
Stratus Sedan	2000	Front	513138	105/142
Stratus Sedan	2002 - 2001	Front	513138	110/145
Stratus Sedan	2004 - 1995	Rear	512154	185/250
Stratus Sedan	2004 - 1998	Rear	512220	185/250
Stratus Sedan	2004 - 2003	Front	513138	150/203
<b>EAGLE</b>				
Summit	1992 - 1991	Rear	512037	127/175
Summit	1996 - 1992	Rear	512040	130/180
Summit	1996 - 1993	Rear	512033	130/180
Summit	1996 - 1993	Rear	512148	130/180
Summit Wagon	1993 - 1992	Rear	512037	166/225
Summit Wagon	1996 - 1992	Rear	512040	166/225
Summit Wagon	1996 - 1993	Rear	512033	166/225
Summit Wagon	1996 - 1993	Rear	512148	166/225
Talon	1998 - 1995	Front	513157	167/226
Talon 4WD	1998 - 1995	Rear	512181	167/226
Talon FWD	1994 - 1990	Rear	512010	167/226
Talon FWD	1994 - 1990	Rear	512011	167/226
Vision	1997 - 1993	Front	513089	120/163
Vision	1997 - 1993	Rear	512029	124/168
Vision	1997 - 1993	Rear	512030	124/168

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>FORD</b>				
Aerostar 4WD	1997 - 1990	Front	515000	185/257
Contour	2000 - 1995	Rear	512024	210/290
Crown Victoria	1997 - 1992	Front	513104	221/300
Crown Victoria	2002 - 1997	Front	513202	221/300
Escort	2002 - 1991	Rear	513030	152/206
Escort	2002 - 1994	Rear	512161	152/206
Expedition 4WD	2000 - 1997	Front	515004	221/300
Expedition 4WD	2002 - 2000	Front	515031	221/300
Expedition 4WD	2003	Rear	541001	250/338
Explorer 2WD	2005 - 2002	Front	515050	184/250
Explorer 4WD	2002 - 1997	Front	515003	221/300
Explorer 4WD	2005 - 2003	Front	515052	184/250
F-150 Pickup 4WD	2000 - 1997	Front	515010	221/300
F-150 Pickup 4WD	2000 - 1997	Front	515017	221/300
F-150 Pickup 4WD	2003 - 2000	Front	515022	221/300
F-150 Pickup 4WD	2003 - 2000	Front	515028	221/300
F-150 Pickup 4WD	2003 - 2000	Front	515029	221/300
F-150 Pickup 4WD	2003 - 2000	Front	515030	221/300
F-250 Pickup 2WD HD	1997	Front	515022	(AY) (AK)
F-250 Pickup 2WD HD	1997	Front	515030	(AY) (AK)
F-250 Pickup 2WD LD	1998 - 1997	Front	515022	(AZ)
F-250 Pickup 2WD LD	1998 - 1997	Front	515030	(AZ)
F-250 Pickup 4WD HD	1997	Front	515022	(BA) (AL)
F-250 Pickup 4WD HD	1997	Front	515022	(BB) (AM)
F-250 Pickup 4WD HD	1997	Front	515030	(BA) (AL)
F-250 Pickup 4WD HD	1997	Front	515030	(BB) (AM)
F-250 Pickup 4WD HD	1998 - 1997	Front	515022	221/300
F-250 Pickup 4WD HD	1998 - 1997	Front	515030	221/300
Mustang	2003 - 1994	Front	513115	258/350
Probe	1997 - 1993	Rear	512118	154/206
Probe	1997 - 1993	Rear	512119	154/206
Ranger 4WD	2000	Front	515013	(AJ)
Ranger 4WD	2000	Front	515014	(AJ)
Ranger 4WD	2000 - 1998	Front	515026	(AJ)
Ranger 4WD	2000 - 1998	Front	515027	(AJ)
Ranger 4WD	2002 - 2001	Front	515013	162/220
Ranger 4WD	2003	Front	515051	162/220
Ranger 4WD	2003 - 2001	Front	515014	162/220

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>FORD - continued</b>				
Taurus	2000	Rear	512162	221/300
Taurus	2000 - 1990	Rear	512106	221/300
Taurus	2003 - 1993	Rear	512107	221/300
Taurus	2003 - 2001	Rear	512163	221/300
Taurus	2006 - 1996	Front	513100	184/250
Taurus	2006 - 2001	Rear	512164	221/300
Taurus	2006 - 2001	Rear	512164	221/300
Thunderbird	1990 - 1989	Front	513076	221/300
Thunderbird	1990 - 1989	Front	513077	221/300
Thunderbird	1997 - 1991	Front	513092	221/300
Windstar	2003 - 1998	Rear	512149	221/300
Windstar	2003 - 1999	Rear	513156	221/300
ZX2	2003 - 1998	Rear	512161	152/206
ZX2	2003 - 1998	Rear	513030	152/206
<b>GMC</b>				
Envoy 4WD	2003 - 2002	Front	513188	103/140
Jimmy	1997 - 1995	Front	513061	180/245
Jimmy 4WD	2001 - 1997	Front	513124	103/140
S15 Pickup 4WD	1985 - 1983	Front	513013	174/235
S15 Pickup 4WD	1990	Front	513061	180/244
S15 Pickup 4WD	1990 - 1986	Front	513013	180/244
Safari 4WD	1994 - 1990	Front	515005	180/244
Safari 4WD	1995	Front	515019	180/244
Safari 4WD	2002 - 1996	Front	515019	147/200
Sonoma	1994 - 1991	Front	513013	180/244
Sonoma	1997 - 1991	Front	513061	180/244
Sonoma 4WD	2003 - 1997	Front	513124	103/140
Syclone 4WD	1991	Front	513013	180/245
Syclone 4WD	1991	Front	513061	180/245
Typhoon	1993 - 1992	Front	513013	180/245
Typhoon	1993 - 1992	Front	513061	180/245
Yukon 4WD	1994 - 1992	Front	515001	165/225
Yukon 4WD	1999 - 1995	Front	515024	165/225
Yukon 4WD	2003 - 2000	Front	515036	155/210
Yukon 4WD	2003 - 2001	Front	515058	155/210

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>HONDA</b>				
Accord	1989 - 1986	Rear	513033	134/181
Accord	1991 - 1990	Rear	513079	134/181
Accord	1993 - 1990	Rear	513081	134/181
Accord	1993 - 1991	Rear	512032	134/181
Accord	1997 - 1990	Front	513098	181/245
Accord	1997 - 1990	Rear	513080	134/181
Accord	1997 - 1991	Rear	512122	134/181
Accord	1997 - 1994	Rear	512172	134/181
Accord	2002 - 1998	Rear	512176	134/181
Accord	2002 - 1998	Rear	512177	134/181
Accord	2002 - 1998	Rear	512178	134/181
Accord	2002 - 1998	Rear	512179	134/181
Accord	2006 - 2003	Rear	512188	134/181
Civic	1984	Rear	513034	134/181
Civic	1991 - 1988	Rear	513033	134/181
Civic	2000 - 1985	Rear	513035	134/181
Civic	2000 - 1992	Rear	512034	134/181
Civic	2000 - 1992	Rear	513105	134/181
Civic	2003 - 2002	Rear	512258	134/181
Civic	2005 - 2001	Rear	512174	134/181
Civic	2005 - 2001	Rear	512175	134/181
CR-V	2001 - 1997	Rear	512166	134/181
CR-V	2001 - 1997	Rear	512240	134/181
CRX	1984	Rear	513034	134/181
CRX	1991 - 1985	Rear	513035	134/181
Element	2003	Rear	512262	134/181
Element	2006 - 2003	Rear	512260	134/181
Odyssey	1997 - 1995	Rear	512124	181/245
Odyssey	1998	Rear	512123	181/245
Odyssey	2004 - 1999	Rear	512180	181/245
Prelude	1996 - 1992	Rear	512242	134/181
Prelude	1996 - 1992	Rear	512022	134/181
Prelude	2001 - 1997	Rear	512144	134/181
<b>HYUNDAI</b>				
Accent	1996 - 1995	Rear	512027	147/200
Accent	1999 - 1997	Rear	512165	147/200
Accent	2000	Rear	512192	147/200
Accent	2000	Rear	512193	147/200

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Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>HYUNDAI - continued</b>				
Accent	2003 - 2001	Rear	512193	167/226
Accent	2006 - 2001	Rear	512192	167/226
Elantra	1997 - 1996	Rear	512160	148/200
Elantra	2000 - 1998	Rear	512160	158/215
Elantra	2003 - 2001	Rear	512194	170/230
Elantra	2003 - 2001	Rear	512195	170/230
Santa Fe	2003 - 2001	Rear	512196	170/230
Santa Fe	2003 - 2001	Rear	512197	170/230
Sonata	1994 - 1992	Rear	512026	196/270
Sonata	1998 - 1995	Rear	512026	167/226
Tiburon	2001 - 1997	Rear	512160	158/215
Tiburon	2006 - 2001	Rear	512199	170/230
Tiburon	2006 - 2003	Rear	512198	170/230
<b>INFINITI</b>				
I30	2001 - 2000	Rear	512203	163/221
I35	2003 - 2002	Rear	512203	163/221
<b>ISUZU</b>				
Ascender 4WD	2006 - 2003	Front	513188	103/140
Hombre 4WD	2000 - 1998	Front	513124	103/140
Oasis	1997 - 1996	Rear	512124	134/185
Oasis	1998	Rear	512123	134/185
Oasis	1999	Rear	512180	134/185
<b>JEEP</b>				
Cherokee	1999 - 1996	Front	513084	175/237
Cherokee	2001 - 1999	Front	513158	175/237
Cherokee 2WD	1989 - 1984	Front	513107	(BE)
Cherokee 2WD	1995 - 1994	Front	513084	(BE)
Cherokee 4WD	1995 - 1990	Front	513084	175/237
Comanche 2WD	1989 - 1986	Front	513107	(BE)
Comanche 4WD	1992 - 1990	Front	513084	175/237
Grand Cherokee	1998 - 1993	Front	513084	175/237
Grand Cherokee	2004 - 1999	Front	513159	175/237
Liberty 4WD	2005 - 2002	Front	513176	100/136
Liberty 4WD	2005 - 2002	Front	513177	100/136
Liberty 4WD	2005 - 2002	Front	513178	100/136
Wagoneer 2WD	1989 - 1984	Front	513107	(BE)
Wagoneer 4WD	1990	Front	513084	175/237

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>JEEP - continued</b>				
Wrangler	1989 - 1987	Front	513107	175/237
Wrangler	1999 - 1990	Front	513084	175/237
Wrangler	2003 - 2000	Front	513158	175/237
<b>KIA</b>				
Sephia	1996 - 1994	Rear	512200	(AC)
Sephia	1996 - 1994	Rear	512251	(AC)
Sephia	2001 - 1997	Rear	512200	180/244
Sephia	2001 - 1997	Rear	512251	180/244
Spectra	2001	Rear	512251	180/244
Spectra	2003 - 2001	Rear	512200	180/244
<b>LEXUS</b>				
LS430	2003 - 2001	Rear	512205	214/290
RX300 4WD	2003 - 1999	Rear	512009	159/216
<b>LINCOLN</b>				
Aviator	2005 - 2003	Front	515050	184/250
Continental	2002 - 1999	Front	513100	184/250
Continental	2002 - 1999	Rear	512107	221/300
Mark VII	1992	Front	513092	(BF)
Mark VIII	1998 - 1993	Front	513092	221/300
Navigator	2006 - 2003	Rear	541001	250/338
Navigator 4WD	2000 - 1998	Front	515004	221/300
Navigator 4WD	2002 - 2000	Front	515031	221/300
Town Car	1997 - 1992	Front	513104	221/300
Town Car	2002 - 1997	Front	513202	221/300
<b>MAZDA</b>				
323	1994 - 1990	Rear	513030	152/206
626	1997 - 1993	Rear	512118	152/206
626	2002 - 1993	Rear	512119	152/206
626	2002 - 1998	Rear	512186	152/206
929	1995 - 1992	Front	513131	152/206
B3000 4WD	2000	Front	515013	(AJ)
B3000 4WD	2000	Front	515014	(AJ)
B3000 4WD	2000 - 1998	Front	515026	(AJ)
B3000 4WD	2000 - 1998	Front	515027	(AJ)
B4000 4WD	2000	Front	515013	(AJ)
B4000 4WD	2000	Front	515014	(AJ)
B4000 4WD	2000 - 1998	Front	515026	(AJ)

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>MAZDA - continued</b>				
B4000 4WD	2000 - 1998	Front	515027	(AJ)
B4000 4WD	2002 - 2001	Front	515013	162/220
B4000 4WD	2003 - 2001	Front	515014	162/220
B4000 4WD	2006 - 2003	Front	515051	162/220
Miata	2002 - 1990	Front	513152	141/191
Miata	2002 - 1991	Front	513155	141/191
Millenia	2000 - 1995	Rear	512118	152/206
Millenia	2002 - 2001	Rear	512269	152/206
MPV	2006 - 2000	Rear	512269	152/206
MPV	2006 - 2000	Rear	512270	152/206
MPV 2WD	1998 - 1996	Front	513131	152/206
MX-3	1995 - 1992	Rear	512161	152/206
MX-3	1995 - 1992	Rear	513030	152/206
MX-6	1997 - 1993	Rear	512118	152/206
MX-6	1997 - 1993	Rear	512119	152/206
Protege	2002 - 1990	Rear	513030	152/206
Protege	2002 - 1995	Rear	512161	152/206
Protege	2002 - 2000	Rear	512269	152/206
RX-7	1995 - 1993	Rear	512118	203/275
<b>MERCURY</b>				
Cougar	1990 - 1989	Front	513076	221/300
Cougar	1990 - 1989	Front	513077	221/300
Cougar	1997 - 1991	Front	513092	221/300
Cougar	2002 - 1999	Rear	512024	214/290
Grand Marquis	1997 - 1992	Front	513104	221/300
Grand Marquis	2002 - 1997	Front	513202	221/300
Mountaineer	2001 - 1997	Front	515003	195/270
Mountaineer 4WD	2005 - 2002	Front	515050	184/250
Mystique	2000 - 1995	Rear	512024	210/290
Sable	2000	Rear	512162	221/300
Sable	2000 - 1990	Rear	512106	221/300
Sable	2003 - 1993	Rear	512107	221/300
Sable	2003 - 1996	Front	513100	190/258
Sable	2003 - 2001	Rear	512163	221/300
Sable	2003 - 2001	Rear	512164	221/300
Sable	2003 - 2001	Rear	512164	221/300
Tracer	1999 - 1991	Rear	513030	152/206
Tracer	1999 - 1994	Rear	512161	152/206
Villager	2002 - 1997	Rear	512219	178/240

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>MINI</b>				
Cooper	2006 - 2002	Front	513226	134/182
<b>MITSUBISHI</b>				
3000GT	1999 - 1991	Front	513133	166/225
3000GT FWD	1999 - 1991	Rear	512039	166/225
Diamante	1996 - 1992	Rear	512010	166/225
Diamante	1996 - 1992	Rear	512011	166/225
Eclipse	2002 - 1995	Front	513157	167/226
Eclipse 4WD	1999 - 1995	Rear	512181	166/225
Eclipse FWD	1994 - 1990	Rear	512010	166/225
Eclipse FWD	1994 - 1990	Rear	512011	166/225
Expo	1995 - 1992	Rear	512040	166/225
Galant	1998 - 1996	Front	513135	167/226
Galant	2003 - 1999	Front	513157	167/226
Galant FWD	1993 - 1989	Rear	512158	(BG)
Lancer	2006 - 2002	Rear	512276	130/175
Lancer	2006 - 2002	Rear	512277	130/175
Lancer	2006 - 2003	Front	513133	181/245
Lancer	2006 - 2003	Rear	512181	130/175
Mirage	1992 - 1991	Rear	512037	127/175
Mirage	1996 - 1993	Rear	512033	130/180
Mirage	2001 - 1993	Rear	512148	130/180
Mirage	2001 - 1997	Rear	512185	130/180
<b>NISSAN</b>				
200SX	1998 - 1995	Rear	512025	163/221
Altima	2001 - 1993	Rear	512016	163/221
Axxess	1995 - 1990	Rear	512016	174/231
Maxima	2006 - 2000	Rear	512203	163/221
Quest	2002 - 1997	Rear	512219	178/240
Sentra	1999 - 1991	Rear	512025	163/221
Sentra	2003 - 2000	Rear	512303	163/221
<b>OLDSMOBILE</b>				
98	1991 - 1985	Front	513016K	185/260
98	1996 - 1992	Front	513087	107/145
Achieva	1998 - 1992	Front	513017K	185/251
Alero	2004 - 1999	Front	513137	173/235
Aurora	1996 - 1995	Front	513087	107/145
Aurora	1999 - 1997	Front	513121	118/160



# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>OLDSMOBILE - continued</b>				
Aurora	2003 - 2001	Front	513179	118/160
Bravada	1997 - 1991	Front	513061	181/245
Bravada	2004 - 2002	Front	513188	103/140
Bravada 4WD	2001 - 1997	Front	513124	103/140
Calais	1987 - 1985	Front	513017K	185/260
Ciera	1995	Front	513087	103/140 (AP)
Ciera	1996	Front	513087	107/145
Cutlass FWD	1999 - 1997	Front	513137	173/235
Cutlass Supreme	1995 - 1988	Front	513044	184/250
Cutlass Supreme	1997 - 1996	Front	513044	151/205
Firenza	1988 - 1984	Front	513017K	185/260
Intrigue	2001 - 1998	Front	513121	118/160
Intrigue	2002 - 2001	Front	513179	159/215
LSS	1999 - 1996	Front	513087	118/160
Omega	1982 - 1980	Front	513011K	225/290
Omega	1984 - 1983	Front	513011K	185/260
Regency	1997	Front	513087	107/145
Silhouette	1991 - 1990	Front	513016K	185/260
Silhouette	1994 - 1992	Front	513087	185/260
Silhouette	1996 - 1995	Front	513087	104/145
Silhouette	1997	Rear	513121	151/205
Silhouette	2001 - 1998	Rear	513121	118/160
Silhouette	2004 - 2001	Front	513179	118/160
Silhouette	2004 - 2002	Front	513187	118/160
Silhouette AWD	2004 - 2002	Rear	513121	192/260
Toronado	1985 - 1979	Front	513013	175/240
Toronado	1988 - 1986	Front	513016K	183/248
Toronado	1991 - 1989	Front	513059	183/248
Toronado	1992	Front	513087	183/248
<b>PLYMOUTH</b>				
Acclaim	1995 - 1991	Front	513075	180/244
Breeze	1997 - 1996	Rear	512133	185/250
Breeze	2000 - 1996	Front	513138	180/244
Breeze	2000 - 1996	Rear	512154	185/250
Breeze	2000 - 1998	Rear	512220	185/250
Colt	1994 - 1992	Rear	512040	130/180
Colt	1994 - 1993	Rear	512033	130/180
Colt	1994 - 1993	Rear	512148	130/180

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>PLYMOUTH - continued</b>				
Laser FWD	1994 - 1990	Rear	512010	166/225
Laser FWD	1994 - 1990	Rear	512011	166/225
Neon	1995	Rear	512021	160/217
Neon	1997 - 1995	Rear	512023	160/217
Neon	1999 - 1998	Rear	512013	160/217
Neon	2001 - 2000	Rear	512167	160/217
Sundance	1994 - 1991	Front	513075	180/244
Voyager	1988	Front	513231	180/244
Voyager	1995 - 1989	Front	513074	180/244
Voyager	1995 - 1991	Front	513075	180/244
Voyager	2000 - 1996	Front	513122	180/244
Voyager	2000 - 1996	Front	513123	180/244
Voyager FWD	1994 - 1991	Rear	512125	(AT)
<b>PONTIAC</b>				
6000	1989 - 1982	Front	513011K	185/260
6000	1991 - 1983	Front	513016K	185/260
Aztec	2001 - 1997	Rear	513121	118/160
Aztec AWD	2005 - 2001	Rear	513121	192/260
Bonneville	1991 - 1987	Front	513016K	185/260
Bonneville	1992	Front	513088	107/145
Bonneville	1997 - 1992	Front	513087	107/145
Bonneville	1999 - 1998	Front	513087	118/160
Bonneville	2001 - 2000	Front	513121	118/160
Bonneville	2005 - 2001	Front	513179	118/160
Fiero	1987 - 1984	Front	513011K	195/267
Fiero	1988	Front	513011K	220/280
Firefly	1994	Rear	512182	129/175
Grand Am	1997 - 1985	Front	513017K	185/260
Grand Am	1998	Front	513017K	74/100 (AR)
Grand Am	2003 - 1999	Front	513137	173/235
Grand Prix	1994 - 1988	Front	513044	184/250
Grand Prix	1996 - 1995	Front	513044	151/205
Grand Prix	1997	Front	513121	151/205
Grand Prix	2001 - 1998	Front	513121	118/160
Grand Prix	2003 - 2001	Front	513179	159/215
Grand Prix	2005 - 2004	Front	513199	159/215
Grand Prix	2005 - 2004	Front	513203	159/215
Montana	1997	Rear	513121	151/205

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>PONTIAC - continued</b>				
Montana	2001 - 1998	Rear	513121	118/160
Montana	2003 - 2002	Front	513187	118/160
Montana	2005 - 2001	Front	513179	118/160
Montana AWD	2005 - 2001	Rear	513121	192/260
Phoenix	1982 - 1980	Front	513011K	225/290
Phoenix	1984 - 1983	Front	513011K	185/260
Sunbird	1994 - 1985	Front	513017K	185/260
Sunfire	1997 - 1995	Front	513017K	185/260
Sunfire	2005 - 1998	Front	513017K	148/200
Tempest	1991 - 1987	Front	513017K	185/260
Trans Sport	1991 - 1990	Front	513016K	185/260
Trans Sport	1994 - 1992	Front	513087	185/260
Trans Sport	1996 - 1995	Front	513087	104/145
Trans Sport	1997	Front	513121	151/205
Trans Sport	1998	Front	513121	118/160
<b>SAAB</b>				
9-3	2003	Front	513191	190-230
9-5	2003 - 2002	Front	513192	148/200 (AB)
900	1987 - 1982	Rear	512147	222/300
9000	1989 - 1986	Front	513127	214/290
9000	1998 - 1990	Front	513126	214/290
<b>SATURN</b>				
ION	2003	Front	513204	81/110
ION	2003	Front	513205	81/110
Vue	2003 - 2002	Front	513189	151/205
Vue	2003 - 2002	Front	513190	151/205
Vue AWD	2003 - 2002	Rear	512229	81/110
Vue AWD	2003 - 2002	Rear	512230	81/110
<b>SUBARU</b>				
Impreza FWD	1995 - 1993	Rear	512036	(BJ)
Legacy	2004 - 2000	Rear	512183	174/235
Legacy FWD	1996 - 1990	Rear	512036	(BJ)
Outback	2003 - 2000	Rear	512183	174/235

# Spindle Nut Torque Specifications



Application Model	Year Range	Location	Part Number	Torque (ft.lbs/Nm)
<b>SUZUKI</b>				
Aerio	2002	Rear	512241	127/175
Esteem	2001 - 1995	Rear	512241	127/175
Grand Vitara	2002 - 2001	Front	513193	156/216
Swift	1994 - 1989	Rear	512182	(AG)
Vitara	2002 - 2001	Front	513193	156/216
<b>TOYOTA</b>				
Avalon Exc. ABS	1999 - 1995	Rear	512009	90/123
Camry Exc. ABS	2001 - 1987	Rear	512009	90/123
RAV4	2000 - 1996	Rear	512038	159/216
<b>VOLKSWAGEN</b>				
Golf	2005 - 1999	Rear	512012	129/175
Jetta	2005 - 1999	Rear	512012	129/175
<b>VOLVO</b>				
740	1988	Front	513213	(BK)
740	1990 - 1988	Front	513128	(BK)
740	1990 - 1989	Front	513170	(BK)
760	1990 - 1988	Front	513128	(BK)
780	1990 - 1988	Front	513128	(BK)
850	1997 - 1994	Front	513174	89/120
940	1995 - 1991	Front	513170	(BK)
960	1994 - 1992	Front	513170	(BK)
960	1997 - 1995	Rear	512234	102/140
C70	1998	Front	513174	89/120 (AH)
C70	2000 - 1999	Front	513175	89/120 (AH)
S40	2004 - 2000	Rear	512252	89/120 (AH)
S60	2006 - 2001	Front	513194	37/50
S70	1998	Front	513174	89/120 (AH)
S70	2000 - 1999	Front	513175	89/120 (AH)
S80	2000 - 1999	Front	513194	37/50
S80	2003 - 2001	Front	513194	26/35 (AF)
S90	1998	Rear	512234	102/140
V40	2003 - 2000	Rear	512252	89/120 (AH)

# Spindle Nut Torque Specifications



## Torque Specification Footnotes

(AA)	Tighten spindle nut to 132 ft-lbs/179 Nm, rotate axle 5 to 10 times to seat hub bearings, tighten spindle nut to 263 ft-lbs/356 Nm. Install new cotter pin.
(AB)	Tightening spindle nut to this value then turn an additional 30 degrees.
(AC)	With rear disc brake torque to 154ft-lbs/206Nm; With rear drum brakes, torque to 184ft-lbs/250Nm.
(AD)	Tightening spindle nut to this value then turn an additional 180 degrees.
(AE)	Hubs with M14 bolts; tighten to 85ft-lbs/115Nm, then turn an additional 180 degrees. Hubs with M16 bolt, tighten to 140ft-lbs/190Nm, then turn an additional 180 degrees.
(AF)	Tightening spindle nut to this value then turn an additional 90 degrees.
(AG)	With out wheel hub, torque to 73ft-lbs/100Nm. With wheel hub, torque to 127ft-lbs/175Nm.
(AH)	Tightening spindle nut to this value then turn an additional 60 degrees.
(AJ)	If the bearing retaining nut is removed, the hub and bearing must be replaced.
(AK)	Applications with Dana axle.
(AL)	Applications with automatic locking hubs.
(AM)	Applications with manual locking hubs.
(AN)	Tighten spindle nut to specified value, then tighten further to align new cotter pin with hole.
(AO)	Soft ride & sport suspension, 118 ft-lbs/160 Nm; heavy duty suspension, 170 ft-lbs/230 Nm.
(AP)	Tightening spindle nut to this value then turn an additional 20 degrees.
(AR)	Tightening spindle nut to this value then turn an additional 40 degrees.
(AS)	Tighten the hub nut slowly, while turning the thrust washer with a screwdriver tip. Tighten the hub nut to the point where the washer cannot be turned and back off slightly. Install the locknut and cotter pin.
(AT)	Tighten hub nut to 24ft-lbs/30 Nm while rotating wheel. Back off nut and finger tighten. Install new cotter pin.
(AY)	Using Spanner Locknut Wrench special tool, tighten spindle nut to 70 ft-lbs/95 Nm. Hub ratchet as torque is applied. Ratchet back and retighten to 18ft-lbs/22Nm. See manufactures intructions for more details.
(AZ)	Tighten axle nut to 50 ft-lbs/68 Nm while turning hub then back off. Next, tighten axle nut to 35ft-lbs/48Nm and back off 90 degrees. Align lock washer with keyway and pin on spindle nut. Tighten locknut to 182ft-lbs/247Nm.
(BA)	Tighten 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.
(BB)	Using spanner locknut wrench tool, tighten nut to 70 ft-lbs/95 Nm. Apply inward pressure on spanner to disengage adjusting locknut splines and back off 90 degrees. Tighten spindle nut to 15 ft-lbs/20 Nm and remove Spanner.
(BE)	Tighten the spindle nut to 21 ft-lbs/28 Nm while rotating the wheel. Back off 1/2 turn and tighten to 19 in-lbs/1.5 Nm.
(BF)	Tighten spindle nut to 17-25 ft-lbs/22-29 Nm while rotating wheel. Back off 1/2 turn and retighten to 10-15 lbs/1-2 kg. Install FDA cotter pin.
(BG)	Tighten spindle nut to 14 ft-lbs/20 Nm, rotate wheel 2-3 turns and back off nut. Tighten spindle nut to 7 ftlbs/ 10 Nm, rotate wheel, retorque to 7 ft-lbs/10 Nm.
(BJ)	Tighten spindle nut while turning wheel. Back off 1/8 turn and finger tighten.
(BK)	Tighten spindle nut to 50 ft-lbs/68 Nm while rotating wheel. Back off 1/3 turn. Losen slightly to align hole and install new cotter pin.