



Maintenance

TORQUE DESCRIPTION	METRIC	IMPERIAL
Wheel nuts	140 Nm	(103 lbf.ft)
V8 oil drain plug	33 Nm	(24 lbf.ft)
Td5 oil drain plug	23 Nm	(17 lbf.ft)
Oil filter element, tighten two thirds of a turn by hand or to -	17 Nm	(13 lbf.ft)
Manual gearbox oil drain plug	50 Nm	(37 lbf.ft)
Manual gearbox oil filler/level plug	30 Nm	(22 lbf.ft)
Automatic gearbox oil drain plug	15 Nm	(11 lbf.ft)
Automatic gearbox oil drain plug	30 Nm	(22 lbf.ft)
Transfer gearbox oil drain plug	30 Nm	(22 lbf.ft)
Transfer gearbox oil filler/level plug	25 Nm	(18 lbf.ft)
Axle oil drain plug	64 Nm	(47 lbf.ft)
Axle oil filler/level plug	10 Nm	(7 lbf.ft)

TORQUE WRENCH SETTINGS

Engine Td5

TORQUE DESCRIPTION	METRIC	IMPERIAL
ACE pump bolts	25 Nm	(18 lbf.ft)
A/C compressor bolts	25 Nm	(18 lbf.ft)
Alternator support bracket to cylinder head bolts	25 Nm	(18 lbf.ft)
Alternator/vacuum pump oil feed pipe union	10 Nm	(7 lbf.ft)
Camshaft cover to camshaft carrier bolts	10 Nm	(7 lbf.ft)
Camshaft sprocket to camshaft bolts	37 Nm	(27 lbf.ft)
Centrifuge cover bolts	10 Nm	(7 lbf.ft)
Centrifuge oil drain pipe to sump bolts (or nuts)	10 Nm	(7 lbf.ft)
Centrifuge to oil drain pipe bolts	10 Nm	(7 lbf.ft)
Centrifuge to oil cooler housing bolts	25 Nm	(18 lbf.ft)
CKP sensor bolt	10 Nm	(7 lbf.ft)
Coolant pipe bolt	50 Nm	(37 lbf.ft)
Connecting rod bolts, then a further 80°	20 Nm	(15 lbf.ft)
Crankshaft pulley bolt	460 Nm	(340 lbf.ft)
Crankshaft pulley TV damper bolts	80 Nm	(59 lbf.ft)
Crankshaft rear oil seal housing bolts	10 Nm	(7 lbf.ft)
Cylinder head bolts initial tighten	30 Nm	(22 lbf.ft)
Cylinder head bolts final tighten, then a further 90°, then a further 180° and finally a further 45°	65 Nm	(48 lbf.ft)
Dipstick tube to camshaft carrier bolt	10 Nm	(7 lbf.ft)
Drive plate (automatic transmission) to crankshaft bolts	115 Nm	(85 lbf.ft)
EGR pipe clamp to cylinder head bolt - if fitted	25 Nm	(18 lbf.ft)
EGR pipe Allen screws	10 Nm	(7 lbf.ft)
Engine mounting (front) to cylinder block bolts	48 Nm	(35 lbf.ft)
Engine mounting (front) to chassis nuts	85 Nm	(63 lbf.ft)
Engine mounting bracket (rear, LH & RH) to gearbox bolts	85 Nm	(63 lbf.ft)
Engine mounting bracket (rear, LH & RH) nuts	45 Nm	(33 lbf.ft)
Flywheel to crankshaft (manual transmission) bolts, then a further 90°	40 Nm	(30 lbf.ft)
Front crossmember bolts	26 Nm	(20 lbf.ft)
Fuel connector block bolts	25 Nm	(18 lbf.ft)
Fuel cooler to inlet manifold bolts	25 Nm	(18 lbf.ft)
Gearbox housing to engine bolts	50 Nm	(37 lbf.ft)
Heater pipe to cylinder head bolts	25 Nm	(18 lbf.ft)
Main bearing cap bolts then a further 90°	33 Nm	(24 lbf.ft)
Oil cooler housing to cylinder block bolts	25 Nm	(18 lbf.ft)
Oil cooler pipe clip bolts	10 Nm	(7 lbf.ft)
Oil filter adaptor housing to oil cooler housing bolts	25 Nm	(18 lbf.ft)
Oil pick-up strainer Torx screws +	10 Nm	(7 lbf.ft)
Oil pressure switch	15 Nm	(11 lbf.ft)
Oil pump drive sprocket bolt +	25 Nm	(18 lbf.ft)
Oil pump pressure relief valve plug +	25 Nm	(18 lbf.ft)
Oil pump and stiffener assembly to cylinder block bolts	13 Nm	(10 lbf.ft)
Oil sump to cylinder block bolts	25 Nm	(18 lbf.ft)
Oil sump to gearbox bell housing bolts	13 Nm	(10 lbf.ft)
PAS pump bracket bolts	27 Nm	(20 lbf.ft)
PAS pump pulley bolts	27 Nm	(20 lbf.ft)
Rocker arm adjusting screw locknuts	16 Nm	(12 lbf.ft)

TORQUE WRENCH SETTINGS



TORQUE DESCRIPTION	METRIC	IMPERIAL
Rocker shaft bolts	32 Nm	(24 lbf. ft)
Timing chain adjustable guide bolt	25 Nm	(18 lbf.ft)
Timing chain cover bolts	27 Nm	(20 lbf.ft)
Timing chain cover to cylinder block stud	7 Nm	(5.2 lbf.ft)
Timing chain fixed guide Allen screw +	25 Nm	(18 lbf.ft)
Timing chain cover to cylinder head nut and bolt	25 Nm	(18 lbf.ft)
Timing chain fixed guide (M6) bolt	10 Nm	(7 lbf.ft)
Timing chain fixed guide (M10) bolt	45 Nm	(33 lbf.ft)
Timing chain lubrication jet bolt	10 Nm	(7 lbf.ft)
Timing chain tensioner	45 Nm	(33 lbf.ft)
Torque converter to drive plate (automatic transmission) bolts	50 Nm	(37 lbf.ft)
Turbocharger heatshield bolts	10 Nm	(7 lbf.ft)
Turbocharger oil feed pipe banjo bolt	25 Nm	(18 lbf.ft)
Turbocharger to exhaust manifold nuts	30 Nm	(22 lbf.ft)
Vacuum pump oil feed pipe to cylinder head union	10 Nm	(7 lbf.ft)
Viscous fan nut	45 Nm	(33 lbf.ft)
Fuel spill return pipe unions - if fitted	20 Nm	(15 lbf.ft)

+ Apply sealant, Part No. STC 50552 to threads

TORQUE WRENCH SETTINGS

Engine V8

TORQUE DESCRIPTION	METRIC	IMPERIAL
Engine mounting bolts (rear, LH & RH) to gearbox bolts	85 Nm	(63 lbf.ft)
Engine mounting (rear, LH & RH) nuts	45 Nm	(33 lbf.ft)
Cylinder head bolts tighten, then 90°, then a further 90° *	20 Nm	(15 lbf.ft)
Rocker shaft bolts	40 Nm	(30 lbf.ft)
Alternator mounting bracket	40 Nm	(30 lbf.ft)
Auxiliary drive belt tensioner	45 Nm	(33 lbf.ft)
Engine earth lead	22 Nm	(16 lbf.ft)
Rocker cover screws/bolts *	8 Nm	(6 lbf.ft)
Torque converter to drive plate	50 Nm	(37 lbf.ft)
A/C compressor	22 Nm	(16 lbf.ft)
ACE pump	22 Nm	(16 lbf.ft)
Flywheel to crankshaft	78 Nm	(58 lbf.ft)
Crankshaft sensor	6 Nm	(5 lbf.ft)
Crankshaft sensor cover	6 Nm	(5 lbf.ft)
Spacer and hub to crankshaft - Early engines	85 Nm	(63 lbf.ft)
Drive plate and clamp ring - Early engines	45 Nm	(33 lbf.ft)
Drive plate to crankshaft Allen bolts - Later engines	85 Nm	63 lbf.ft)
Oil pick up strainer	10 Nm	(7 lbf.ft)
Filter head adaptor	13 Nm	(10 lbf.ft)
Filter head	8 Nm	(6 lbf.ft)
Sump bolts	22 Nm	(16 lbf.ft)
Oil pressure switch	15 Nm	(11 lbf.ft)
Timing gear cover to cylinder block +	22 Nm	(16 lbf.ft)
Oil cooler pipe to timing gear cover	15 Nm	(11 lbf.ft)
Crankshaft pulley bolt	270 Nm	(200 lbf.ft)
Coolant outlet elbow	22 Nm	(16 lbf.ft)
Auxiliary housing	40 Nm	(30 lbf.ft)
Jockey pulley	50 Nm	(37 lbf.ft)
Camshaft gear	50 Nm	(37 lbf.ft)
Rocker shaft bolts	40 Nm	(30 lbf.ft)
Connecting rod bolts	20 Nm	(15 lbf.ft)
Final torque - turn through 80°°	80°	80°
Initial torque - all main bearing cap bolts and side bolts	13.5 Nm	(10 lbf.ft)
Final torque - main bearing cap side bolts 11 to 15	45 Nm	(33 lbf.ft)
Final torque - main bearing cap bolts 1 to 8	72 Nm	(53 lbf.ft)
Final torque - main bearing cap bolts 9 and 10	92 Nm	(68 lbf.ft)
Final torque - main bearing cap side bolts 16 to 20	45 Nm	(33 lbf.ft)
Viscous fan nut	45 Nm	(33 lbf.ft)
Camshaft thrust plate bolts	22 Nm	(16 lbf.ft)
Secondary Air Injection adapters	33 Nm	(24 lbf.ft)

* New bolts must be fitted

+ Apply sealant, Part Number STC 50552 to threads



Emission control - Td5

TORQUE DESCRIPTION	METRIC	IMPERIAL
EGR valve pipe Allen screws	10 Nm	(7 lbf.ft)
EGR valve to inlet manifold bolts	10 Nm	(7 lbf.ft)
EGR intake pipe clip to cylinder head bolts - if fitted	25 Nm	(18 lbf.ft)
EGR cooler to cylinder head nut and bolts - if fitted	25 Nm	(18 lbf.ft)
EGR valve to flexible mounting nuts	5 Nm	(3 lbf.ft)
EGR valve flexible mounting to bracket nuts	5 Nm	(3 lbf.ft)

Emission control - V8

TORQUE DESCRIPTION	METRIC	IMPERIAL
HO ₂ S Sensors	45 Nm	(33 lbf.ft)
SAI air manifold union nuts	25 Nm	(18 lbf.ft)
Rubber mountings to SAI pump bracket	10 Nm	(7 lbf.ft)
SAI control valve to manifold bolts	10 Nm	(7 lbf.ft)
SAI pump to bracket nuts	10 Nm	(7 lbf.ft)
SAI pump bracket to body bolt	20 Nm	(15 lbf.ft)
Vacuum reservoir to mounting bracket bolt	10 Nm	(7 lbf.ft)

TORQUE WRENCH SETTINGS

Engine management system - Td5

TORQUE DESCRIPTION	METRIC	IMPERIAL
ECT sensor	15 Nm	(11 lbf.ft)
Fuel tank cradle	45 Nm	(33 lbf.ft)
CKP sensor	10 Nm	(7 lbf.ft)
MAP and IAT sensor	10 Nm	(7 lbf.ft)
Fuel cooler to inlet manifold - upper bolts	25 Nm	(18 lbf.ft)
Turbocharger to exhaust manifold	30 Nm	(22 lbf.ft)
Turbocharger drain pipe	10 Nm	(7 lbf.ft)
Banjo bolt to oil feed pipe	25 Nm	(18 lbf.ft)
Fuel temperature sensor	14 Nm	(10 lbf.ft)
Pressure regulator	25 Nm	(18 lbf.ft)
Glow plugs	16 Nm	(12 lbf.ft)
EUI clamp bolts	32 Nm	(24 lbf.ft)
EGR valve to exhaust manifold	10 Nm	(7 lbf.ft)
EGR valve to inlet manifold	10 Nm	(7 lbf.ft)
EGR clip	25 Nm	(18 lbf.ft)

Engine management system - V8

TORQUE DESCRIPTION	METRIC	IMPERIAL
Spark plugs	20 Nm	(15 lbf.ft)
Fuel tank cradle	45 Nm	(33 lbf.ft)
ECT sensor +	10 Nm	(7 lbf.ft)
CKP sensor	6 Nm	(4.4 lbf.ft)
CMP sensor	8 Nm	(6 lbf.ft)
KS sensor	22 Nm	(16 lbf.ft)
Throttle body	10 Nm	(7 lbf.ft)
Plenum chamber	22 Nm	(16 lbf.ft)
Breather adaptor	6 Nm	(4.4 lbf.ft)
Throttle cable abutment bracket	10 Nm	(7 lbf.ft)
TP sensor	2.2 Nm	(1.6 lbf.ft)
IACV sensor	8 Nm	(6 lbf.ft)
HO ₂ S sensor	45 Nm	(33 lbf.ft)
Ignition coils	8 Nm	(6 lbf.ft)
Fuel rail	9 Nm	(7 lbf.ft)

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Cooling system

TORQUE DESCRIPTION	METRIC	IMPERIAL
Cylinder block drain plug	30 Nm	(22 lbf.ft)
Coolant pump	24 Nm	(18 lbf.ft)
Coolant pump pulley	22 Nm	(16 lbf.ft)
Coolant pump cover - Td5	10 Nm	(7 lbf.ft)

TORQUE WRENCH SETTINGS

Manifolds and exhaust systems - Td5

TORQUE DESCRIPTION	METRIC	IMPERIAL
Front pipe to turbocharger	27 Nm	(20 lbf.ft)
Inlet manifold	25 Nm	(18 lbf.ft)
Tail pipe	25 Nm	(18 lbf.ft)
Fuel cooler	25 Nm	(18 lbf.ft)
EGR valve	10 Nm	(7 lbf.ft)
Exhaust manifold	25 Nm	(18 lbf.ft)
Exhaust manifold heatshield (M6) bolts	10 Nm	(7 lbf.ft)
Exhaust manifold heatshield (M8) bolts	25 Nm	(18 lbf.ft)
EGR pipe Allen screws	10 Nm	(7 lbf.ft)

Manifolds and exhaust systems - V8

TORQUE DESCRIPTION	METRIC	IMPERIAL
Intermediate pipe/silencer nuts	25 Nm	(18 lbf.ft)
Inlet manifold bolts - initial tighten	10 Nm	(7 lbf.ft)
Inlet manifold gasket clamp bolts	18 Nm	(13 lbf.ft)
Inlet manifold bolts - final tighten	51 Nm	(38 lbf.ft)
Tail pipe	25 Nm	(18 lbf.ft)
Coolant outlet pipe	22 Nm	(16 lbf.ft)
Front pipe flange nuts	30 Nm	(22 lbf.ft)
Exhaust manifold	55 Nm	(40 lbf.ft)



Clutch

TORQUE DESCRIPTION	METRIC	IMPERIAL
Clutch bleed screw	9 Nm	(7 lbf.ft)
Clutch cover nuts Td5	25 Nm	(18 lbf.ft)
Clutch cover bolts V8	40 Nm	(30 lbf.ft)
Clutch master cylinder to pedal box	25 Nm	(18 lbf.ft)
Hydraulic pipe union	18 Nm	(13 lbf.ft)
Clutch release bearing pivot point bolt	8 Nm	(6 lbf.ft)
Slave cylinder	25 Nm	(18 lbf.ft)

TORQUE WRENCH SETTINGS

Manual gearbox - R380

TORQUE DESCRIPTION	METRIC	IMPERIAL
Bias spring adjustment plate bolts +	25 Nm	(18 lbf.ft)
Gearbox to engine bolts	45 Nm	(33 lbf.ft)
Coolant pipe housing bolts	25 Nm	(18 lbf.ft)
Breather pipe banjo bolt	15 Nm	(11 lbf.ft)
Gear lever extension clamp bolt	25 Nm	(18 lbf.ft)
Gearbox mounting bolts	85 Nm	(63 lbf.ft)
Gearbox mounting nuts	48 Nm	(37 lbf.ft)
Seal housing bolts	18 Nm	(13 lbf.ft)
Bearing sleeve bolts	25 Nm	(18 lbf.ft)
Fork bolt	7 Nm	(5.2 lbf.ft)
Reverse light switch	24 Nm	(18 lbf.ft)
Extension housing bolts +	25 Nm	(18 lbf.ft)
Gear selector housing bolts +	25 Nm	(18 lbf.ft)
Oil pump to housing Torx screws	6 Nm	(4.4 lbf.ft)
Gear change lever yoke Allen screw +	25 Nm	(18 lbf.ft)
5th gear stake nut	350 Nm	(258 lbf.ft)
Spool retainer bolts	8 Nm	(6 lbf.ft)
Centre plate detent spring and ball Torx screw	25 Nm	(18 lbf.ft)
Selector lever to housing bolts +	25 Nm	(18 lbf.ft)
Clutch \ Bell housing bolts	73 Nm	(54 lbf.ft)

+ Apply sealant, Part No. STC 50552 to threads



Transfer box - LT230SE

TORQUE DESCRIPTION	METRIC	IMPERIAL
High/low selector cable	30 Nm	(22 lbf.ft)
Bottom cover plate bolts +	25 Nm	(18 lbf.ft)
Transfer box to gearbox bolts - Petrol and diesel +	45 Nm	(33 lbf.ft)
Rear cover plate stud nut/bolts +	25 Nm	(18 lbf.ft)
Differential lock warning lamp switch locknut - Up to 03 MY	11 Nm	(8 lbf.ft)
Differential lock warning lamp switches - 03 MY onwards +	25 Nm	(18 lbf.ft)
Drive flange nut	148 Nm	(109 lbf.ft)
Output shaft housing bolts +	45 Nm	(33 lbf.ft)
Oil temperature sensor - If fitted +	25 Nm	(18 lbf.ft)
Inhibitor switch to transfer box	26 Nm	(19 lbf.ft)
Intermediate shaft nut †	88 Nm	(65 lbf.ft)
Intermediate shaft retaining plate bolt +	25 Nm	(18 lbf.ft)
Differential bearing retaining nut *	72 Nm	(53 lbf.ft)
Output flange nut	162 Nm	(119 lbf.ft)
High/Low selector housing bolts +	25 Nm	(18 lbf.ft)
Bearing housing/cover bolts +	25 Nm	(18 lbf.ft)
Blanking plug +	25 Nm	(18 lbf.ft)
High/Low selector warning lamp switch	25 Nm	(18 lbf.ft)
Differential lock selector housing bolts +	25 Nm	(18 lbf.ft)
Neutral sensor	25 Nm	(18 lbf.ft)
Interlock solenoid bolts - Up to 03 Model Year	10 Nm	(7 lbf.ft)

† New nut must be fitted

* New Patchlok nut must be fitted

+ Apply sealant, Part No. STC 50552 to threads

TORQUE WRENCH SETTINGS

Automatic gearbox - ZF4HP22

TORQUE DESCRIPTION	METRIC	IMPERIAL
Selector lever to selector shaft nut	26 Nm	(19 lbf.ft)
Starter inhibitor switch bolts	10 Nm	(7 lbf.ft)
Engine to torque converter bolts - Td5 & V8 +	50 Nm	(37 lbf.ft)
Closing plate to gearbox housing bolt - V8	7 Nm	(5.2 lbf.ft)
Fluid pump to intermediate plate bolts	10 Nm	(7 lbf.ft)
Intermediate plate Allen plugs (M14)	40 Nm	(30 lbf.ft)
Intermediate plate Allen plugs (M20)	50 Nm	(37 lbf.ft)
Oil cooler adaptors	42 Nm	(31 lbf.ft)
Extension housing bolts	25 Nm	(18 lbf.ft)
Oil sump to gearbox housing bolts	8 Nm	(6 lbf.ft)
Oil filter Torx screws	8 Nm	(6 lbf.ft)
Oil pick-up tube Torx screw	8 Nm	(6 lbf.ft)
Parking pawl guide Torx screw	10 Nm	(7 lbf.ft)
Pressure regulator to valve body assembly	8 Nm	(6 lbf.ft)
Lock-up solenoid valve, retaining fork Torx screw	8 Nm	(6 lbf.ft)
Lock-up solenoid valve assembly to valve body Torx screws	8 Nm	(6 lbf.ft)
Gearbox bell housing (intermediate plate and converter housing to gearbox casing) bolts	46 Nm	(34 lbf.ft)
Speed sensor bracket screws	8 Nm	(6 lbf.ft)

+ Apply sealant, Part No. STC 50553 to threads



Propeller shafts

TORQUE DESCRIPTION	METRIC	IMPERIAL
Propeller shaft to transfer gearbox	47 Nm	(35 lbf.ft)
Propeller shaft to differential	47 Nm	(35 lbf.ft)
Propeller shaft to flexible coupling	76 Nm	(56 lbf.ft)
Flexible coupling to differential	76 Nm	(56 lbf.ft)

Axles

TORQUE DESCRIPTION	METRIC	IMPERIAL
Front and rear differential to axle bolts +	55 Nm	(40 lbf.ft)
Hub to axle bolts	100 Nm	(74 lbf.ft)
Pinion flange bolt	100 Nm	(74 lbf.ft)
Drive shaft nut	490 Nm	(360 lbf.ft)

+ Apply sealant, Part No. STC 50552 to bolt threads

TORQUE WRENCH SETTINGS

Steering

TORQUE DESCRIPTION	METRIC	IMPERIAL
Drag link to drop arm	80 Nm	(59 lbf.ft)
Track rod to steering knuckle	125 Nm	(92 lbf.ft)
Tension collet to steering knuckle	5 Nm	(3.7 lbf.ft)
Steering damper	125 Nm	(92 lbf.ft)
Steering knuckle to axle yoke upper ball joint	110 Nm	(81 lbf.ft)
High pressure pipe union	20 Nm	(15 lbf.ft)
Drag link/track rod M8 bolts	22 Nm	(16 lbf.ft)
Drag link/track rod M10 bolts	33 Nm	(24 lbf.ft)
Steering box	90 Nm	(66 lbf.ft)
Universal joint to intermediate shaft	25 Nm	(18 lbf.ft)
Panhard rod	230 Nm	(170 lbf.ft)
Steering box output shaft	88 Nm	(65 lbf.ft)
Drop arm	240 Nm	(177 lbf.ft)
Auxiliary housing bolts	40 Nm	(30 lbf.ft)
Auxiliary housing nut	10 Nm	(7 lbf.ft)
PAS pump - V8	22 Nm	(16 lbf.ft)
PAS pump pipe bracket bolt	22 Nm	(16 lbf.ft)
Jockey pulley bolt	50 Nm	(37 lbf.ft)
PAS pump adaptor pipe	10 Nm	(7 lbf.ft)
PAS pump to coolant pump bolts - Td5	25 Nm	(18 lbf.ft)
Steering column to fascia	25 Nm	(18 lbf.ft)
Universal joint to steering box	25 Nm	(18 lbf.ft)
Ball joint to swivel hub	77 Nm	(57 lbf.ft)
PAS pump pulley	22 Nm	(16 lbf.ft)
Steering wheel nut	43 Nm	(32 lbf.ft)



Front suspension

TORQUE DESCRIPTION	METRIC	IMPERIAL
Wheel nuts	140 Nm	(103 lbf.ft)
Panhard rod	230 Nm	(170 lbf.ft)
Lower ball joint nut	135 Nm	(100 lbf.ft)
Track rod and drag link	80 Nm	(59 lbf.ft)
Damper to front axle	55 Nm	(40 lbf.ft)
Anti-roll bar link - upper	100 Nm	(74 lbf.ft)
Anti-roll bar link - lower	100 Nm	(74 lbf.ft)
Turret to chassis	23 Nm	(17 lbf.ft)
Radius arm	230 Nm	(170 lbf.ft)
ACE pump pulley	25 Nm	(18 lbf.ft)
ACE pump banjo bolt	28 Nm	(21 lbf.ft)
Valve block to chassis	18 Nm	(13 lbf.ft)
Valve block clamping plate	21 Nm	(15 lbf.ft)
ACE valve block pipe clip	6 Nm	(4.4 lbf.ft)
ACE valve block filter cap	35 Nm	(26 lbf.ft)
Pressure transducer	20 Nm	(15 lbf.ft)
Fluid pipes to actuator cap	29 Nm	(21 lbf.ft)
Banjo to pump bolt	28 Nm	(21 lbf.ft)
Actuator to long arm	48 Nm	(35 lbf.ft)
Actuator to short arm	180 Nm	(133 lbf.ft)
Torsion bar clamp plate bolts	45 Nm	(33 lbf.ft)
Long arm to torsion bar bolt	185 Nm	(136 lbf.ft)

TORQUE WRENCH SETTINGS

Rear suspension

TORQUE DESCRIPTION	METRIC	IMPERIAL
Wheel nuts	140 Nm	(103 lbf.ft)
Wheel hub to axle	100 Nm	(74 lbf.ft)
Damper to axle	125 Nm	(92 lbf.ft)
SLS height sensor link to radius arm	25 Nm	(18 lbf.ft)
Radius arm	230 Nm	(170 lbf.ft)
Transverse links to pivot housing	155 Nm	(114 lbf.ft)
Pivot housing to axle bolts	230 Nm	(170 lbf.ft)
Transverse link to chassis	140 Nm	(103 lbf.ft)
SLS height sensor	6 Nm	(4.4 lbf.ft)
SLS compressor	25 Nm	(18 lbf.ft)
ACE actuator to short arm	185 Nm	(136 lbf.ft)
ACE actuator to long arm	48 Nm	(35 lbf.ft)
ACE actuator pipe cap nuts	29 Nm	(21 lbf.ft)
Anti-roll bar link - upper	50 Nm	(37 lbf.ft)
Anti-roll bar link - lower	100 Nm	(74 lbf.ft)
ACE long arm to torsion bar	180 Nm	(133 lbf.ft)



Brakes

TORQUE DESCRIPTION	METRIC	IMPERIAL
Brake caliper bleed screw	10 Nm	(7 lbf.ft)
Brake disc to drive flange	13 Nm	(10 lbf.ft)
Caliper bolts - Front	175 Nm	(129 lbf.ft)
Caliper bolts - Rear	95 Nm	(70 lbf.ft)
Master cylinder to servo	25 Nm	(18 lbf.ft)
Master cylinder brake pipe, unions	25 Nm	(18 lbf.ft)
Brake caliper pivot bolt	30 Nm	(22 lbf.ft)
Vacuum pump	8 Nm	(6 lbf.ft)
Vacuum pump lubrication pipe union	10 Nm	(7 lbf.ft)
Brake caliper guide pin bolts	30 Nm	(22 lbf.ft)
Brake caliper banjo bolt	32 Nm	(24 lbf.ft)
ABS modulator to mounting bracket nuts	9 Nm	(7 lbf.ft)
ABS modulator - 13 mm unions	22 Nm	(16 lbf.ft)
ABS modulator - 11 mm union	14 Nm	(10 lbf.ft)
Handbrake lever to floor bolts	22 Nm	(16 lbf.ft)

TORQUE WRENCH SETTINGS

Restraint systems

TORQUE DESCRIPTION	METRIC	IMPERIAL
Front seat belt upper anchorage	32 Nm	(24 lbf.ft)
Front seat belt reel	50 Nm	(37 lbf.ft)
Front seat belt lower anchorage to seat	32 Nm	(24 lbf.ft)
Second row upper anchorage	50 Nm	(37 lbf.ft)
Second row seat belt reel	32 Nm	(24 lbf.ft)
Second row lower anchorage	32 Nm	(24 lbf.ft)
Third row upper anchorage	50 Nm	(37 lbf.ft)
Third row seat belt reel	50 Nm	(37 lbf.ft)
Third row lower anchorage	32 Nm	(24 lbf.ft)
'B' post adjustable seat belt mounting	22 Nm	(16 lbf.ft)
Seat belt pre-tensioners	32 Nm	(24 lbf.ft)
Driver's side air bag	9 Nm	(7 lbf.ft)
Passenger side air bag	8 Nm	(6 lbf.ft)
SRS DCU	10 Nm	(7 lbf.ft)



Body

TORQUE DESCRIPTION	METRIC	IMPERIAL
Front and rear door hinges	30 Nm	(22 lbf.ft)
Tail door hinge bolts	34 Nm	(25 lbf.ft)
Door frames	10 Nm	(7 lbf.ft)
Regulator to glass	6 Nm	(4.4 lbf.ft)
Chassis cross member	25 Nm	(18 lbf.ft)
Bulkhead to chassis bolts	45 Nm	(33 lbf.ft)
Body to chassis bolts	45 Nm	(33 lbf.ft)
Quarter light glass to frame	10 Nm	(7 lbf.ft)
Glass lift motor to regulator	5 Nm	(3.7 lbf.ft)
Tail door hand rail	10 Nm	(7 lbf.ft)
Latch and motor assembly	7 Nm	(5.2 lbf.ft)
Door handle	7 Nm	(5.2 lbf.ft)
Damper to step	17 Nm	(13 lbf.ft)
Throttle pedal assembly	13 Nm	(10 lbf.ft)
Step assembly to chassis	45 Nm	(33 lbf.ft)
Wing to sill finisher bracket	17 Nm	(13 lbf.ft)
Front wing to body	17 Nm	(13 lbf.ft)
Door mirror	4 Nm	(3 lbf.ft)
Roof bars	32 Nm	(24 lbf.ft)
Bonnet release lever	10 Nm	(7 lbf.ft)
Front bumper to crash cans	13 Nm	(10 lbf.ft)
Front bumper to side mountings	13 Nm	(10 lbf.ft)
Mudshield	10 Nm	(7 lbf.ft)
Rear bumper	45 Nm	(33 lbf.ft)
Grab handle to body	3 Nm	(2.2 lbf.ft)
Fascia	26 Nm	(19 lbf.ft)
Fascia to steering column bracket	11 Nm	(8 lbf.ft)
Front seat to floor	45 Nm	(33 lbf.ft)
Second row seats to floor	45 Nm	(33 lbf.ft)
Third row seats to lower rear quarter	22 Nm	(16 lbf.ft)
Sunroof tray to frame	2 Nm	(1.5 lbf.ft)
Solenoid securing cap	11 Nm	(8 lbf.ft)
Support stay to alternator	25 Nm	(18 lbf.ft)
Sunroof glass	3 Nm	(2.2 lbf.ft)
Motor to sunroof tray	2 Nm	(1.5 lbf.ft)
Drive cable assembly to frame	2.5 Nm	(1.8 lbf.ft)
Front and rear door striker bolts	26 Nm	(19 lbf.ft)
Tail door striker bolts	26 Nm	(19 lbf.ft)

TORQUE WRENCH SETTINGS

Heating and air conditioning

TORQUE DESCRIPTION	METRIC	IMPERIAL
Heater assembly	16 Nm	(12 lbf.ft)
Compressor bolts	22 Nm	(16 lbf.ft)
Blower motor	19 Nm	(14 lbf.ft)
Compressor to mounting bracket bolts	25 Nm	(18 lbf.ft)
A/C pipes to compressor bolts	10 Nm	(7 lbf.ft)
Condenser pipe bolt	5 Nm	(3.7 lbf.ft)
Receiver drier to bracket bolts	5 Nm	(3.7 lbf.ft)
Adaptor block to receiver drier bolt	5 Nm	(3.7 lbf.ft)
Evaporator pipe bolts	5 Nm	(3.7 lbf.ft)
Dual pressure switch to receiver drier	10 Nm	(7 lbf.ft)
Air conditioning pipes to receiver drier bolts	5 Nm	(3.7 lbf.ft)
TX valve pressure pipe union	22 Nm	(16 lbf.ft)
Evaporator pipe to TXV valve	32 Nm	(24 lbf.ft)
Evaporator assembly to body bolts	16 Nm	(12 lbf.ft)
High and low pressure pipe, bolts	10 Nm	(7 lbf.ft)
Fuel burning heater Torx bolts	25 Nm	(18 lbf.ft)

Wipers and washers

TORQUE DESCRIPTION	METRIC	IMPERIAL
Link to motor spindle	7 Nm	(5.2 lbf.ft)
Front motor assembly	2.5 Nm	(1.8 lbf.ft)
Spindle nut	3 Nm	(2.2 lbf.ft)
Wiper arm nut	13 Nm	(10 lbf.ft)



Electrical

TORQUE DESCRIPTION	METRIC	IMPERIAL
Alternator support stay	25 Nm	(18 lbf.ft)
Alternator lead - Td5	6 Nm	(4.4 lbf.ft)
Auxiliary drive belt tensioner bolt	50 Nm	(37 lbf.ft)
Alternator pulley	80 Nm	(59 lbf.ft)
Alternator B+ nut - V8	18 Nm	(13 lbf.ft)
Alternator B+ nut - V8	5 Nm	(3.7 lbf.ft)
Starter motor - Td5	27 Nm	(20 lbf.ft)
Starter motor solenoid	10 Nm	(7 lbf.ft)
Starter motor - V8	44 Nm	(32 lbf.ft)
Alternator	45 Nm	(33 lbf.ft)
Starter motor heat shield - V8	10 Nm	(7 lbf.ft)
Horn	13 Nm	(10 lbf.ft)
Battery carrier bolts	28 Nm	(21 lbf.ft)

