

2002 DIFFERENTIALS & DRIVE AXLES**Rear Drive Axle****SPECIFICATIONS**

Application	Specification	
	Metric	English
Differential Carrier Nuts	55 N·m	41 lb ft
Differential Side Bearing Cap Bolts	100 N·m	72 lb ft
Load Sensing Spring Bracket Bolts	18–25 N·m	13.5–20.0 lb ft
Lower Shock Absorber Through Bolts and Nuts	85 N·m	63 lb ft
Rear Axle Housing Drain Plug	25 N·m	18 lb ft
Rear Axle Housing Oil Level/Filler Plug	43 N·m	32 lb ft
Rear Axle Shaft Retaining Nuts	23 N·m	17 lb ft
Rear Control Arm Ball Joint Boss Bolts	50 N·m	37 lb ft
Rear Control Arm Through Bolts and Nuts	90 N·m	66 lb ft
Rear Propeller Shaft Bolts and Nuts	50 N·m	37 lb ft
Rear Trailing Rod Through Bolts and Nuts	90 N·m	66 lb ft
Rear Wheel Speed Sensor Bolt	23 N·m	17 lb ft
Rear Wheel Speed Sensor Cover Bolts	15 N·m	11 lb ft
Ring Gear Bolts	90 N·m	65 lb in
Side Bearing Lock Plate Bolts	12 N·m	9 lb in

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Fig. 1: Identifying Torque Specifications
Courtesy of GENERAL MOTORS CORP.

Application	Specification	
	Metric	English
Differential Backlash	0.203 mm–0.381 mm	0.008 in–0.015 in
Differential Side Bearing Preload (Case Spread)	0.0508 mm–0.1524 mm	0.002 in–0.006 in
Differential Side Gear End Play	12 mm–37 mm	0.005 in–0.014 in
Differential Side Gear Preload (Maximum)	2.4 N·m	21 lb in
Pinion Bearing Preload Starting Torque	1.2 N·m	11 lb in
Rear Axle Shaft Length Left Rear Axle Shaft	683.5 mm	26.9 in
Rear Axle Shaft Length Right Rear Axle Shaft	726.5 mm	28.6 in

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Fig. 2: Identifying Rear Axle Specifications
Courtesy of GENERAL MOTORS CORP.

Part Number	Available Shim Thickness	
	Metric	English
96057671	1.12 mm	0.044 in
96057672	1.15 mm	0.045 in
96057673	1.18 mm	0.046 in
96057674	1.21 mm	0.04 in
96057675	1.24 mm	0.048 in
96057676	1.27 mm	0.049 in
96057677	1.30 mm	0.050 in
96057678	0.30 mm	0.012 in

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Fig. 3: Identifying Spacer & Shim Specifications
Courtesy of GENERAL MOTORS CORP.

Application	Specification	
	Metric	English
Rear Axle Housing Oil Capacity (Drain and Refill)	2.2 liters	4.6 pts
Oil Recommended	80W-90 GL5 Lubricant GM P/N 2345977 (Canadian P/N 10953482) or the equivalent	

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Fig. 4: Identifying Rear Axle Housing Lubrication Specifications
Courtesy of GENERAL MOTORS CORP.

DIAGNOSTIC INFORMATION AND PROCEDURES

NOISE DIAGNOSIS - REAR DRIVE AXLE

Many noises thought to be coming from the rear axle may actually be originating from other sources such as the following:

- Tires
- Road surfaces
- Wheel bearings
- Engine
- Transmission
- Body

Because noises is a major factor in determining or diagnosing a rear axle problem, a thorough and careful check should be made to determine the source of the noise before proceeding with rear axle repair.

Road Noise

Some road surfaces, such as brick or rough-surfaced concrete, cause noise which may be mistaken for tire or rear axle noise. Driving the vehicle on varying types of road surfaces such