

SECTION 205-02A: Rear Drive Axle/Differential — Ford 8.8-Inch Ring Gear SPECIFICATIONS

2014 F-150 Workshop Manual
Procedure revision date: 10/25/2013

Material

Item	Specification	Fill Capacity
Additive Friction Modifier XL-3 (US); CXL-3 (Canada)	EST-M2C118-A	—
Motorcraft® High Contrast Hypoid Gear Marking Compound XG-14	—	—
Motorcraft® SAE 75W-140 Synthetic Rear Axle Lubricant XY-75W140-QL (US); CXY-75W140-1L (Canada)	WSL-M2C192-A and GL-5	2.84L (6.0 pt) (to the bottom of the filler hole)
Premium Long-Life Grease XG-1-C or XG-1-K (US); CXG-1-C (Canada)	ESA-M1C75-B	—
Silicone Gasket and Sealant TA-30	WSE-M4G323-A4	—
Threadlock and Sealer TA-25	WSK-M2G351-A5	—

General Specifications

Item	Specification
Available drive pinion bearing adjustment shim in steps of 0.25 mm (0.010 in)	0.254-0.965 mm (0.010-0.038 in)
Backlash between ring gear teeth and pinion teeth	0.203-0.304 mm (0.008-0.012 in)
Differential case maximum runout	0.076 mm (0.003 in)
Pinion bearing rotational preload	1.5-3.0 Nm (13-26 lb-in)
Ring gear maximum variation between teeth backlash	0.102 mm (0.004 in)
Maximum axle shaft flange runout	0.279 mm (0.011 in)

Rear Axle Backlash Shim Adjustment Table

Backlash Change Required		Thickness Change Required	
mm	in	mm	in

0.025	0.001	0.050	0.002
0.050	0.002	0.050	0.002
0.076	0.003	0.101	0.004
0.101	0.004	0.152	0.006
0.127	0.005	0.152	0.006
0.152	0.006	0.203	0.008
0.177	0.007	0.254	0.010
0.203	0.008	0.254	0.010
0.228	0.009	0.304	0.012
0.254	0.010	0.355	0.014
0.279	0.011	0.355	0.014
0.304	0.012	0.406	0.016
0.330	0.013	0.457	0.018
0.335	0.014	0.457	0.018
0.381	0.015	0.508	0.020

Torque Specifications

Description	Nm	lb-ft	lb-in
Axle vent	18	—	159
Brake hose bracket bolts	30	22	—
Brake tube/parking brake cable bracket bolt	25	18	—
RH parking brake cable bracket bolt	30	22	—
Differential bearing cap bolt	112	83	—
Differential housing cover bolts	45	33	—
Differential pinion shaft lock bolt	30	22	—
Differential ring gear bolts ^a	—	—	—
Filler plug	52	38	—
Handle Adapter	2.2	—	20
Lower shock absorber nuts	90	66	—
Tool 205-135 nut	7	—	62
U-bolt nut ^a	—	—	—
Wheel speed sensor bolts	15	—	133

^a Refer to the procedure in this section.

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