Auburn Gear LIMITED SLIP DIFFERENTIALS

MINI-SPOOLS SPOOLS

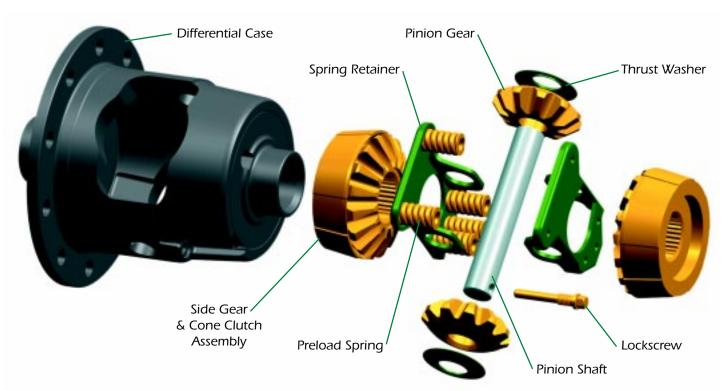
The answer to faster and smoother torque transfer, at any speed, in any driving condition



INNOVATION AT WORK

From over the road daily driving to muddy trails and back roads, Auburn Gear's high bias **Pro Series** and **High Performance Series** limited-slip differentials outperform standard OEM differentials hands down. They deliver more traction and faster engagement for controlled power transfer and lightning-fast reaction to changing conditions. No matter what your application - performance or passenger cars, light duty trucks, vans, sport utility vehicles, off-road or recreational vehicles - the Auburn Gear limited-slip differential is engineered to provide smooth torque-sensing operation with bias ratios to meet your performance needs. This superior performance is achieved through an innovative cone clutch design which transfers more power to the high-traction wheel for quick acceleration and tight cornering.

Auburn Gear has a full range of differentials for GM, Ford, Chrysler, and other vehicles. All are compatible with ABS and electronic controls.



HOW THE AUBURN LIMITED-SLIP DIFFERENTIAL WORKS

The highly efficient torque transfer capability of the Auburn Gear limited-slip differential is achieved through the use of cone clutches coupled to beveled side gears. As torque is transmitted through the differential side gears to the axle shafts, the side gear separating forces and spring preload firmly seat the cones into the differential case. The cone design, along with the applied force, determines the torque transfer capability of the differential. When torque levels decrease, as in a cornering maneuver, the gear separating forces also decrease, allowing the axle shafts to rotate independently. All Auburn Gear limited-slip differentials are designed to provide the maximum amount of torque transfer without compromising the performance requirements of a vehicle in situations where torque transfer is not required.

THE GRIPPING FACTS

1. What is the difference between the Pro Series and the High Performance Series?

The **High Performance Series** is an excellent replacement for the standard original equipment differential for quality traction enhancement. The Auburn cone clutch design offers increased durability and performance in normal street use. The high bias cone clutch design of the **Pro Series** provides higher torque and preload, making it the ultimate limited-slip differential for outstanding performance. It is engineered to provide lightning-quick, torque-sensing traction when you need it. No buttons to push, no levers to pull, it merely goes into action when required. It handles superbly whether on or off the road. If your situation calls for the **High Performance Series** or demands the **Pro Series**, the Auburn differential is a necessity for improved performance in cars, trucks, vans and SUVs.

2. What kind of oil should be used with an Auburn differential?

It is <u>important</u> when installing Auburn differentials that a high quality, **non-synthetic** 80w90 GL-5 oil, treated with GM or Ford limited-slip additive (also known as friction modifier) be used. Three ounces of additive will treat one quart of oil.

3. What is clutch chatter?

Clutch chatter occurs when the clutch cone engages and disengages the case in rapid succession. This creates a noise called clutch chatter. Although noisy, it causes no damage and can be cured by using the correct oil and friction modifier as described above.

4. What bearings should be used with the Auburn Ford 8" and 9" differentials?

This is determined by the bearing bore size. They are as follows:

Small bearing bore, 2.89 bearings are LM102949

LM102910

Bore, 3.062 bearings are LM603049

LM603011

Bore, 3.25 spool only

5. What is a cone clutch?

The cone clutch design consists of two clutching members, one internal and one external. The internal member is a unique single tapered part with lubrication grooves, attached to the side gear, creating a cone clutch assembly (as shown in exploded view). The external member is also tapered, with a matching angle. When the two are forced together, torque is transferred from one member to the other. This cone clutch design allows for more clutch capacity in the same space, and is less prone to chatter due to the reduced number of sliding surfaces. This means higher torque transfer capability in every application, without the noise.

NOTE: The Auburn differential is a fully automatic torque-sensing design. Torque is instantly routed to the wheel with the traction. In some extreme situations, the low traction wheel may begin to spin. It should be understood that spinning the low traction wheel faster does not "**engage**" the differential. In these situations, slight application of the emergency brake will increase the torque transferred to the high traction wheel.

6. What differential should be used for drag racing?

If the vehicle is strictly used for drag racing, a spool would be the answer. Do not use a spool if the vehicle is street driven. It could cause broken axles and other problems, and is not street legal.



PRO SERIES

THE ULTIMATE IN LIMITED-SLIP DIFFERENTIALS

FORD							
AG Part No.	Size	Applications Ratios		Side Gear Spline	Model Years		
542048	7 ¹ / ₂ , 10 Bolt	All Ford products with 7 ¹ / ₂ ring gear (Accepts tone ring for ABS applications)	All ratios	28 Teeth	1978 - Present		
542059	8, 10 Bolt	All Ford products with 7 3/4 & 8 ring gear (Use Ford D802-4216-B ring gear bolts)	All ratios	28 Teeth	1962 - 1979		
542080	8.8, 10 Bolt	All Ford products with 8.8 ring gear including IRS applications (Accepts tone ring for ABS applications)	All ratios	28 Teeth	1979 - Present		
542054	8.8, 10 Bolt	All Ford products with 8.8 ring gear (Accepts tone ring for ABS applications)	All ratios	31 Teeth	1983 - Present		
542036	9, 10 Bolt	All Ford products with 8 ³ / ₄ & 9 ring gear (Use Ford D802-4216-B ring gear bolts)	All ratios	31 Teeth	1957 - 1985		
542043	9, 10 Bolt	All Ford products with 8 3/4 & 9 ring gear (Use Ford D802-4216-B ring gear bolts)	All ratios	28 Teeth	1957 - 1985		
		DOGE - CHRYSLER	- AM	C			
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years		
542051	8 ³ / ₄ , 10 Bolt	All Chrysler products with 8 3/4 ring gear	All ratios	30 Teeth	1957 - 1973		
542081	AMC 20, 12 Bolt	All AMC 20 axles	3.07/up	29 Teeth	1968 - 1986		
		TOYOTA					
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years		
542030	8 ⁷ /8, 12 Bolt	Landcruiser	All ratios	30 Teeth	1968 - 1989		
		(1967 & prior must update to 30 tooth axle shafts)					
		GENERAL MOTO	RS				
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years		
542044	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 $^1/_2$ & 7 $^5/_8$ ring gear	3.23/up	26 Teeth	1976 - 1988		
542045	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 1/2 & 7 5/8 ring gear	3.08/down	26 Teeth	1976 - 1988		
542046	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 $^{1}/_{2}$ & 7 $^{5}/_{8}$ ring gear (Accepts tone ring for ABS applications)	3.23/up	28 Teeth	1988 - Present		
542047	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 $^{1}/_{2}$ & 7 $^{5}/_{8}$ ring gear (Accepts tone ring for ABS applications)	3.08/down	28 Teeth	1988 - Present		
542060	8.2, 10 Bolt	Buick, Oldsmobile, Pontiac with 8.2 ring gear, Non "C" lock axle, 27 tooth pinion spline	3.36/up	28 Teeth	1964 - 1971		
542061	8.2, 10 Bolt	Chevrolet with 8.2 ring gear, "C" lock axle, 25 tooth pinion spline	3.08/up	28 Teeth	1964 - 1972		
542050	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear (Large bearing hub, includes bearings)	2.73/up	28 Teeth	1971 - 1988		
542052	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear (Large bearing hub, includes bearings)	2.73/up	30 Teeth	1989 - Present		
542031	8 ⁷ / ₈ , 12 Bolt	Chevrolet passenger car with 8 ⁷ / ₈ ring gear, "C" axle 4 series case	4.10/up	30 Teeth	1965 - 1972		
542033	8 ⁷ / ₈ , 12 Bolt	Chevrolet passenger car with 8 7/8 ring gear, "C" axle 3 series case	3.07 - 3.73	30 Teeth	1965 - 1972		
542032	8 ⁷ / ₈ , 12 Bolt	Chevrolet truck with 8 ⁷ /s ring gear, 4 series case	3.73/up	30 Teeth	1964 - 19821/2		
542034	8 ⁷ /8, 12 Bolt	Chevrolet truck with 8 $^{7}/_{8}$ ring gear, 3 series case	2.76 - 3.42	30 Teeth	1964 - 19821/2		
542062	10 Bolt	Corvette	2.41 - 3.70	17 Teeth	1963 - 1979		
542063	10 Bolt	Corvette	4.10/up	17 Teeth	1963 - 1979		
DANA							
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years		
542082	Model 44	All Dana 44 models without "C" clips	3.92/up	30 Teeth	1971 - Present		
542083	Model 44	All Dana 44 models without "C" clips	3.73/down	30 Teeth	1971 - Present		
542084	Model 44	All Dana 44 models without "C" clips	3.92/up	19 Teeth	1970 & Prior		
542085	Model 44	All Dana 44 models without "C" clips	3.73/down	19 Teeth	1970 & Prior		



HIGH PERFORMANCE SERIES

HIGH PERFORMANCE REPLACEMENTS FOR STANDARD EQUIPMENT ON MOST POPULAR CARS AND TRUCKS

		FORD				
AG Part No.	Size	Size Applications		Side Gear Spline	Model Years	
542023	7 ¹ /2, 10 Bolt	All Ford products with 7 ½ ring gear (Accepts tone ring for ABS applications)	All ratios	28 Teeth	1978 - Present	
542079	8.8, 10 Bolt	All Ford products with 8.8 ring gear including IRS applications (Accepts tone ring for ABS applications)	All ratios	28 Teeth	1979 - Present	
542025	8.8, 10 Bolt	All Ford products with 8.8 ring gear (Accepts tone ring for ABS applications)	All ratios	31 Teeth	1983 - Present	
542090	9 ³ / ₄ , 12 Bolt	All Ford products with 9 $^3/_4$ ring gear (Accepts tone ring for ABS applications)	All ratios	34 Teeth	1997 - Present	
542089	10 ¹ / ₄ & 10 ¹ / ₂ , 12 Bolt	All Ford products with 10½ & 10½ ring gear (Accepts tone ring for ABS applications)	All ratios	35 Teeth	1984 - Present	
		GENERAL MOTO	RS			
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years	
542057	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 1/2 & 7 5/8 ring gear	3.23/up	26 Teeth	1976 - 1988	
542058	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 1/2 & 75/8 ring gear	3.08/down	26 Teeth	1976 - 1988	
542040	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 ½ & 7 5/8 ring gear (Accepts tone ring for ABS applications)	3.23/up	28 Teeth	1988 - Present	
542041	7 ¹ / ₂ & 7 ⁵ / ₈ , 10 Bolt	All GM products with 7 ½ & 7 ½ ring gear (Accepts tone ring for ABS applications)	3.08/down	28 Teeth	1988 - Present	
542018	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear	2.73/up	28 Teeth	1971 - 1988	
542022	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear	2.73/up	30 Teeth	1989 - 1998	
542029	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear	2.56/down	30 Teeth	1989 - 1998	
542097	8.5 & 8.6, 10 Bolt	All GM products with 8.5 & 8.6 ring gear Uses LM60349 & LM60312 diff. bearings	2.73/up	30 Teeth	1999 - Present	
542087	91/2 ,14 Bolt	All GM products with 9 ½ ring gear	All	33 Teeth	1984 - Present	
		DGE - CHRYSLER	- AM	C		
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years	
542072	8 ¹ / ₄ , 10 Bolt	All Chrysler products with 8 $^{1}/_{4}$ & 8 $^{3}/_{8}$ ring gear (Accepts tone ring for ABS applications)	2.71/up	27 Teeth	1968 - 1996	
542074	8 ¹ / ₄ , 10 Bolt	All Chrysler products with 8 $^1\!/_4$ & 8 $^3\!/_8$ ring gear (Accepts tone ring for ABS applications)	2.71/up	29 Teeth	1997 - Present	
542070	9 ¹ / ₄ , 12 Bolt	All Chrysler products with 9 1/4 ring gear (Accepts tone ring for ABS applications)	2.71/up	31 Teeth	1984 - Present	
542071	9 ¹ / ₄ , 12 Bolt	All Chrysler products with 9 1/4 ring gear	2.71/up	31 Teeth	1968 - 1983	
		DANA				
AG Part No.	Size	Applications	Ratios	Side Gear Spline	Model Years	
★ 542091	Model 60	All Dana 60 models	4.10/down	30 Teeth	1963 - Present	
★ 542092	Model 60	All Dana 60 models	4.56/up	30 Teeth	1963 - Present	
★ 542093	Model 60	All Dana 60 models	4.10/down	35 Teeth	1963 - Present	
★ 542094	Model 60	All Dana 60 models	4.56/up	35 Teeth	1963 - Present	
★ 542095	Model 35	All Dana 35 models	3.31/down	27 Teeth	1984 - Present	
★ 542096	Model 35	All Dana 35 models	3.55/up	27 Teeth	1984 - Present	



AFTERMARKET SPOOLS

Full spools for complete differential replacement



Part Number	Ring Gear Diameter	Axle Spline	Bearing Cup	Bearing Cone	Special Notes
544813	FORD 9"	31T (45 deg.)	LM 102949 LM 603049	LM 102910 LM 603011	All Ratios, 2.891" Case All Ratios, 3.062" Case
544814	FORD 9"	33T (45 deg.)	LM 102949 LM 603049	LM 102910 LM 603011	All Ratios, 2.891" Case All Ratios, 3.062" Case
544815	FORD 9"	35T (30 deg.)	LM 104949	LM 104911	All Ratios, 3.250" Case Aftermarket Housing
544816	FORD 8.8	31T (45 deg.)	LM 603049	LM 603012	All Ratios
544817	GM 8 ⁷ /8	30T (45 deg.)	LM 603049	LM 603012	4-Series Car, 4.10:1 Ratios
544818	GM 8 ⁷ /8	33T (45 deg.)	LM 603049	LM 603012	4-Series Car, 4.10:1 Ratios
544819	GM 8 ¹ / ₂	30T (45 deg.)	LM 102949	LM 102911	2.73:1 and up (bearings included)
544820	GM 8 ¹ / ₂	33T (45 deg.)	LM 102949	LM 102911	2.73:1 and up (bearings included)
544821	DANA 60	35T (30 deg.)	387A	3825	4.56:1 and up
544822	CHRY 8 ³ / ₄	33T (45 deg.)	LM 104949	LM 104912	2.76:1 and up

AFTERMARKET MINI-SPOOLS

Designed for a perfect fit. No other modifications required.

Our Mini-Spools fit OEM Open type (non limited-slip) differentials ONLY!!!

'C'-Lock Eliminators are required.

* This application may require a spacer between the two (2) drive blocks to hold them apart depending upon axle shaft length.



Part Number	Axle Spline	Application
544801	30T	GM 8 ⁷ / ₈ Car & Truck
544802	30T	GM 8 1/2
544803	28T	GM 8 ¹ / ₂
544804	28T	CHEVY 8.2
544805	28T	BOP 8.2*
544806	28T	FORD 8.8
544807	31T	FORD 8.8
544808	30T	CHRY 83/4
544809	28T	FORD 8" & 9"
544810	31T	FORD 8" & 9"



DIFFERENTIAL SERVICE KITS

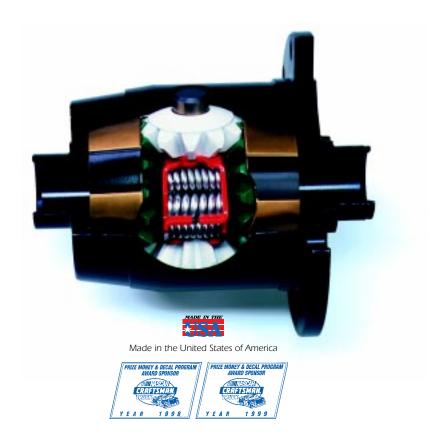






Pinion	Gear
Service	e Kit

Application	AG Diff. Part Number	Spring Retainer Service Kit	Pinion Gear Service Kit	Pinion Shaft Service Kit
GM 7.5 & 7 ⁵ /8	542040, 41, 57, 58 542044, 45, 46, 47	541016 541017	541011 541011	541005 541005
GM 8.5 & 8.6	542018, 22, 29, 97 542050, 52	541018 541019	541012 541012	541007 541007
GM 8.2	542060, 61	541035	541036	541037
1963 -'79 Corvette	542062, 63	541035	541036	541037
GM 8 ⁷ /s 12 Bolt, Car & Truck	542031, 32, 33, 34	541022	541014	541009
GM 9.5 & 9.6	542087	541043	541044	541042
Ford 7.5	542023 542048	541016 541017	541011 541011	541006 541006
Ford 8.8, 28 Tooth	542024, 79 542053, 80	541018 541019	541012 541012	541007 541007
Ford 8.8, 31 Tooth	542025 542054	541020 541021	541013 541013	541008 541008
Ford 8" & 9"	542036, 43, 59	541023	541015	541010
Ford 9.75	542090	541043	541044	541042
Ford 10 1/4	542089	541045	541046	541047
Chrysler 9 1/4	542070, 71	541038	541039	541040
Chrysler 8 ¹ / ₄	542072, 74	541041	541012	541007
Chrysler 8 ³ / ₄	542051	541022	541014	541024
AMC Model 20	542081	541019	541012	541007
Toyota Landcruiser	542030	541022	541014	541009
Dana Model 35	542095, 96	*	*	*
Dana Model 44	542081, 82, 83, 84	541019	541012	541007
Dana Model 60	542091, 92, 93, 94	*	*	*





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