

Roadranger®

Dana® Spicer® Drive Axles

G155-T, G175-T, M190-T
M210-T, M220-T, M230-T
Two Speed Axles



One Great Drivetrain from Two Great Companies

Illustrated Parts List

AXIP-8810

January 1998



For the most current information, visit the Roadranger web site at www.roadranger.com

TABLE OF CONTENTS

Model Identification Numbering System i
 Axle Identification 1
 Julian Date Code 1
 Components 2
 Parts List 3-4
 End Yoke Assemblies 5
 Housings 6
 Axle Shafts 6
 Bearing Spacers and Pinion Oil Slingers 7
 Kits 8-9
 Ring Gear and Pinion
 Differential Parts
 Differential Cases
 Differential Bearings and Seals
 Planetary Parts

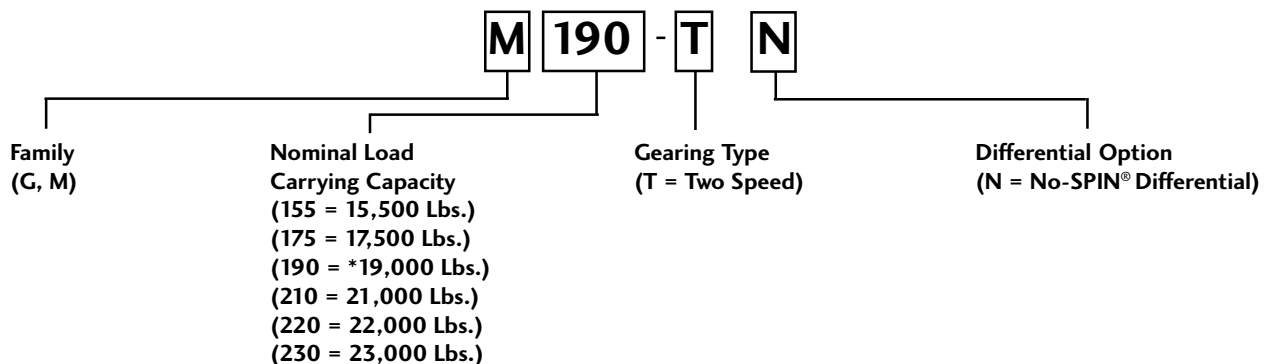


GENUINE SPICER SERVICE PARTS

Should an axle assembly require replacement component parts, it is recommended that Spicer Heavy Axle Service Parts be used. Spicer Heavy Axle Service Parts are manufactured under the same rigid specification as are original equipment axle components. This assures the customer who uses genuine Spicer service parts, maximum reliability for a Spicer Heavy Axle assembly. They may be obtained through your vehicle manufacturer. The use of non-original Spicer service parts may cause premature component failure and may void the warranty.

The items included in this book are currently being offered as service parts at the time of printing. The part numbers and illustrations are provided specifically for reference purposes only. Therefore, Spicer reserves the right to update this manual without notice or liability.

MODEL IDENTIFICATION NUMBERING SYSTEM



* Same as: (185 = 18,500 Lbs.)



AXLE IDENTIFICATION

All axle assemblies are identified with two tags. One located on the differential carrier, and the other located on the right hand side of the axle housing.

ratio. Optional items include customer part number, line set number, and the last six digits of the vehicle serial number.

The differential carrier tag contains the following: Dana part number, julian date code, and ratio. Optional items include customer part number, line set number, and the last six digits of the vehicle serial number.

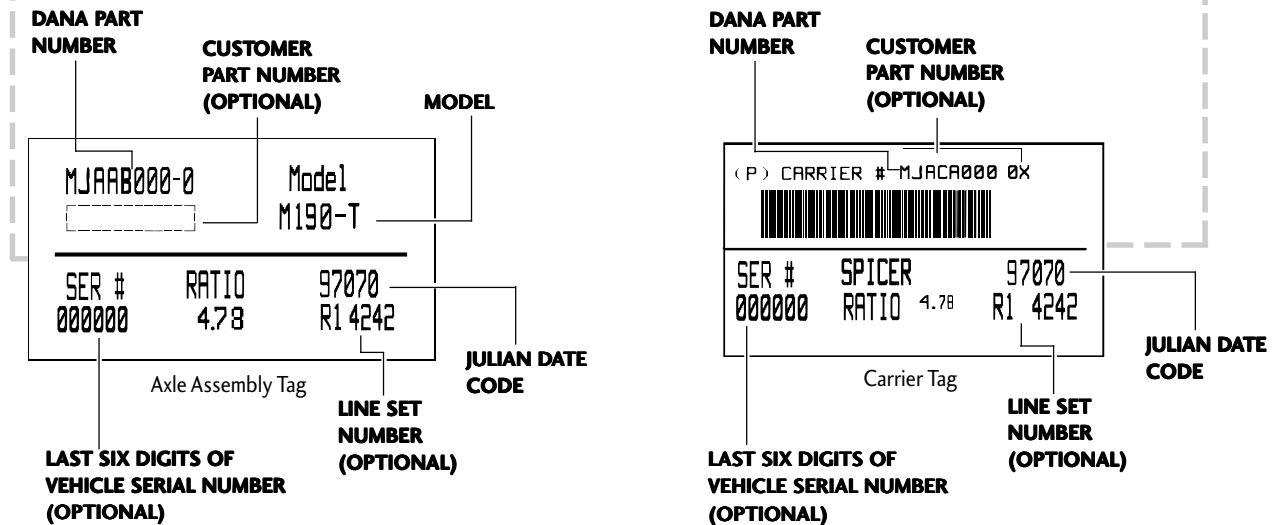
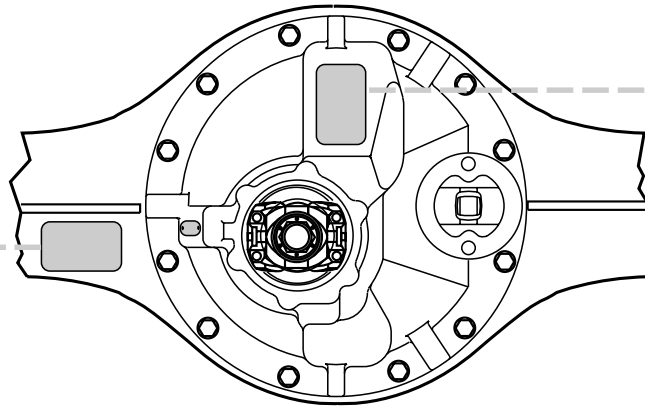
The axle assembly tag contains the following items: Dana part number, julian date code, axle model, and

JULIAN DATE CODE

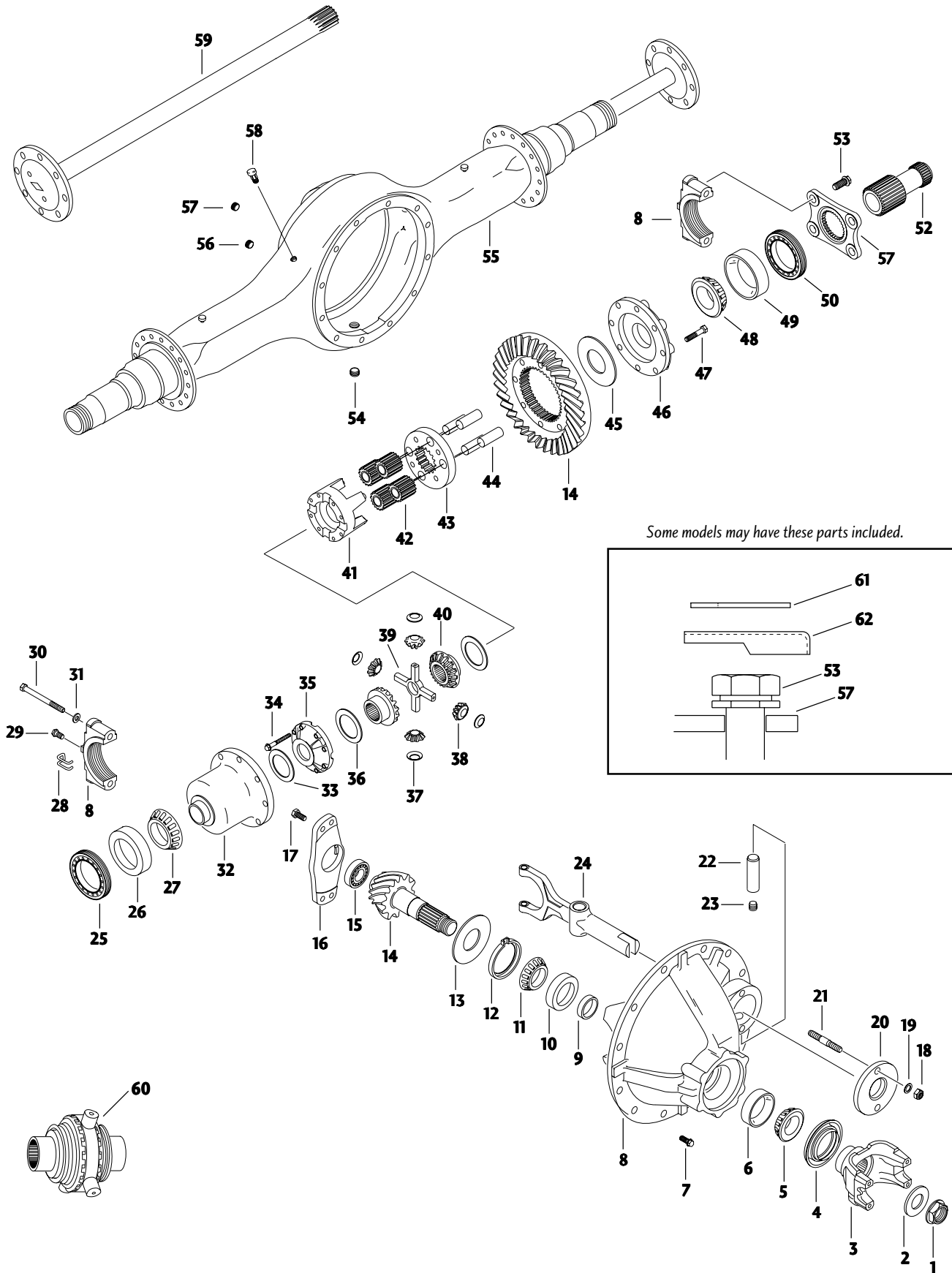
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MODEL YEAR

DAY OF YEAR



AXLE COMPONENTS



PARTS LIST

Item	Part Name	Qty.	G Model	M Model	M230-T Export
1+	Flanged Hex Nut	1	HN130	HN130	HN130
2+	Washer	1	MJAHN104-1	MJAHN104-1	MJAHN104-1
3	End Yoke Assembly	1	See Page 5 for correct part numbers		
4+	Pinion Oil Seal	1	GGAHH109	GGAHH109	GGAHH109
5+	Outer Pinion Bearing Cone	1	MJAHB101	MJAHB101	MJAHB101
6+	Outer Pinion Bearing Cup	1	MJAHA101	MJAHA101	MJAHA101
7	Carrier Mounting Bolt	12	HM101	HM109	HM109
8	Carrier Housing (Includes Items 30 & 31)	1	GGACS106-X	MJACS102-X	MJACS102-X
	Carrier Housing Pinion-Up (Includes Items 30 & 31)	1	---	MJACS103-X	MJACS103-X
9+	Pinion Bearing Spacer (Selective)	A/R	See Page 7 for correct part numbers		
10+	Inner Pinion Bearing Cup	1	MJAHA101	360HA100	360HA100
11+	Inner Pinion Bearing Cone	1	MJAHB101	360HB100	360HB100
12+	Oil Slinger Seal	1	MJAHH102	MJAHH102	MJAHH102
13	Pinion Oil Slinger (Selective)	1	See Page 7 for correct part numbers		
14+	Ring Gear & Pinion Set	1	See Page 8 for correct part numbers		
15+	Pinion Pilot Bearing	1	GGAHD100	MJAHD100	MJAHD100
16+	Pinion Pilot Bearing Cap	1	GGACP104	MJACP104	MJACP104
17+	Pinion Pilot Bearing Cap Bolt	4	GGAHM102-1	MJAHM113-1	MJAHM113-1
18	Shift Motor Nut	2	HN192	HN192	HN192
19	Shift Motor Washer	2	070HN167	070HN167	070HN167
20	Shift Housing Seal Assembly	1	MJAHH104-X	MJAHH104-X	MJAHH104-X
21	Stud-Dowel	2	MJAHM100	MJAHM100	MJAHM100
22	Shift Fork Shaft	1	MJASS102	MJASS102	MJASS102
23	Shift Fork Shaft Set Screw	1	MJAHM119	MJAHM119	MJAHM119
24	Shift Fork Assembly	1	GGASV102-X	MJASV102-X	MJASV102-X
25	Adjusting Ring (Right Side)	1	GGAHR100	MJAHR105	MJAHR105
26	Differential Bearing Cup (Right Side)	1	GGAHA101	MJAHA103	MJAHA103
27	Differential Bearing Cone (Right Side)	1	GGAHB101	MJAHB103	MJAHB103
28	Adjusting Ring Retainer	2	MJAHR102	MJAHR102	MJAHR102
29	Flanged Hex Bolt	2	HM177	HM177	HM177
30	Differential Bearing Cap Bolt	4	MJAHM110-2	MJAHM108-2	MJAHM108-2
31	Differential Bearing Cap Washer	4	GGAHN102	25712R1	25712R1
32	Differential Support Case (Right Side)	1	GGADY104	MJADY100	MJADY100
33+	Differential Gear Thrustwasher	1	GGAHS101	MJAHS101	MJAHS101
34+	Differential Case Bolt	8	GGAHM101-1	MJAHM112-1	----
	Grade 8, 1/2"- 13 UNC x 3"	8	----	----	HM233
	Grade 8, 1/2"- 13 UNC x 2-1/2"	4	----	----	HM228
35+	Differential Case Cap Half	1	GGADT100	MJADT100	MJADT108
36+	Differential Side Gear Thrustwasher	2	<div style="border: 1px solid black; padding: 10px; text-align: center;"> Service as Kit Only See Page 9 for correct part numbers </div>		
37+	Differential Pinion Mate Thrustwasher	4			
38+	Differential Pinion Mate	4			
39+	Differential Cross Shaft	1			
40+	Differential Side Gear	2			
41+	Differential Case (Planetary) Half	1	GGADV104	MJADV100	MJADV103
42+	Planet Gear	4	GGAGU101	MJAGU100	MJAGU100
43	Planet Gear Mounting Plate	1	GGAGH100	MJAGH100	MJAGH100
44+	Planet Gear Shaft	4	GGASS100	MJASS100	MJASS100
45+	Differential Thrust Plate	1	GGAHS102	MJAHS102	MJAHS102
46	Differential Support Case (Left Side)	1	GGADZ100	MJADZ100	MJADZ100
47+	Ring Gear Bolt	8	GGAHM133	MJAHM124	MJAHM124
48	Differential Bearing Cone (Left Side)	1	GGAHB100	MJAHB100	MJAHB100
49	Differential Bearing Cup (Left Side)	1	GGAHA100	MJAHA100	MJAHA100
50	Adjusting Ring (Left Side)	1	GGAHR101	MJAHR104	MJAHR104

⁺Item Included in Kit
A/R - As Required

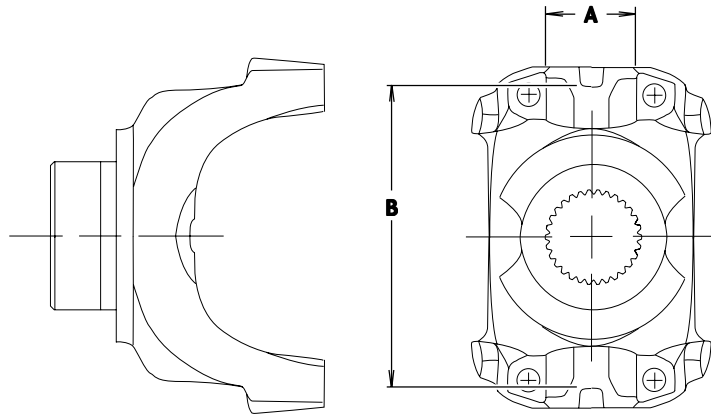


PARTS LIST

Item	Part Name	Qty.	G Model	M Model	M230-T Export
51	Sun Gear Retainer Plate	1	GGAGH102	MJAGH102	MJAGH102
52 ⁺	Sun Gear	1	GGAGS100	MJAGS100	MJAGS100
53	Hex Bolt	4	HM131	HM131	HM131
54	Magnetic Drain Plug	1	MJAHM106	MJAHM106	MJAHM106
55	Axle Housing	1	See Page 6 for correct part numbers		
56	Temperature Sensor Plug	1	MJAHM115	MJAHM115	MJAHM115
57	Fill Plug	1	MJAHM120	MJAHM120	MJAHM120
58	Vent Plug	1	MJAHN110	MJAHN110	MJAHN110
59	Axle Shaft	2	See Page 6 for correct part numbers		
60	No-SPIN [®] Differential (Optional)	1	GGAGN100	MJAGN100	MJAGN100
61	E-Clip	4	MJAHR113	MJAHR113	MJAHR113
62	Bolt Retainer	4	MJAHR112	MJAHR112	MJAHR112



END YOKE ASSEMBLIES



** All dimensions are for reference purposes only*

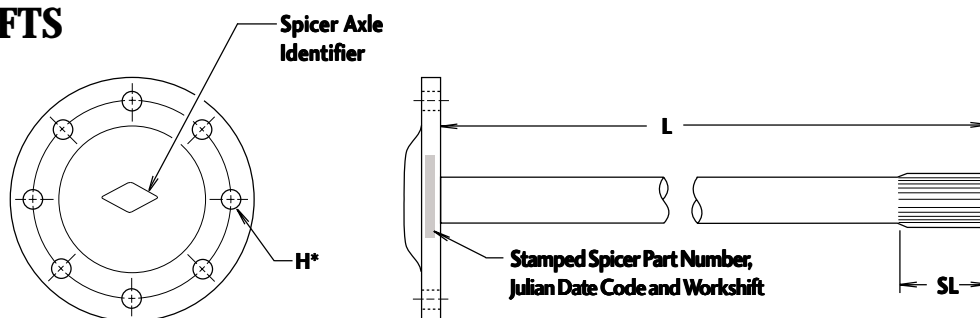
Series	- A-	-B-	Spline	Joint Angle	Spicer Part Number
1480	1.38"	4.19"	1.998-38	25°	3-4-12121-1X
1550	1.38"	4.97"	1.998-38	35°	4-4-6981-1X
1610	1.88"	5.31"	1.998-38	30°	5-4-8591-1X
1710	1.94"	6.09"	1.998-38	30°	6-4-8661-1X
1760	1.94"	7.09"	1.998-38	30°	6.3-4-1501-1X
SPL90	1.62"	4.95"	1.998-38	15°	90-4-571-1X
SPL170	55mm	164mm	1.998-38	25°	170-4-881-1X



HOUSINGS

Suspension	G155-T	G175-T	M190-T	M210-T	M220-T	M230-T
Spring	GGACH164	GGACH102	MJACH102	MJACH120	MJACH106	MJACH124
	GGACH177	GGACH110	MJACH109	MJACH146	MJACH108	MJACH129
	----	GGACH114	MJACH111	----	MJACH112	MJACH145
	----	GGACH125	MJACH133	----	MJACH131	MJACH147
	----	GGACH127	MJACH149	----	----	MJACH150
	----	GGACH167	----	----	----	MJACH154
	----	GGACH178	----	----	----	MJACH156
	----	GGACH179	----	----	----	MJACH157
	----	----	----	----	----	MJACH158
Spring w/ ABS	----	GGACH175	MJACH136	MJACH138	MJACH139	MJACH141
	----	GGACH181	MJACH152	----	----	MJACH148
	----	GGACH186	----	----	----	MJACH153
Air Standard	GGACH169	GGACH168	MJACH117	MJACH122	MJACH119	MJACH151
	----	GGACH184	----	----	----	----
Air w/ ABS	----	GGACH174	MJACH135	MJACH137	MJACH140	MJACH155
	----	GGACH185	----	----	----	----
Low Profile Air	GGACH165	GGACH182	----	----	----	----
	----	GGACH166	----	----	----	----
Low Profile Air (ABS)	----	GGACH176	----	----	----	----
	----	GGACH183	----	----	----	----
Hendrickson w/ Neway Brackets	----	----	----	----	----	MJACH160

AXLE SHAFTS



-SL- Length & Spline #	-L- Length	-H*- Hole Dia.	Hole Type	G155-T	G175-T	M190-T	M210-T	M220-T	M230-T
3.228"-36	39.70"	.59"	Straight	----	571348C2	----	----	----	----
3.228"-36	40.60"	.53"	Tapered	----	GGASR103-1	----	----	----	----
3.500"-39	40.90"	.58"	Tapered	----	----	MJASR102-1	----	----	----
3.842"-39	40.90"	.65"	Straight	----	----	578778C2	578778C2	----	----
3.500"-41	40.72"	.69"	Tapered	----	----	----	----	MJASR103-1	MJASR103-1
3.843"-41	40.72"	.78"	Straight	----	----	----	----	577506C1	577506C1
3.228"-36	38.62"	.59"	Straight	360SR104-1	----	----	----	----	----
3.228"-36	40.60"	.58"	Tapered	----	GGASR103-4	----	----	----	----
3.228"-36	40.25"	.65"	Straight	----	175SR102	----	----	----	----
3.250"-39	40.50"	.53"	Tapered	----	----	MJASR130	----	----	----
3.843"-41	36.90"	.78"	Straight	----	----	----	----	MJASR126-1	----
3.843"-41	41.60"	.78"	Straight	----	----	----	----	MJASR126-2	----
3.843"-41	41.60"	.73"	Tapered	----	----	----	----	----	MJASR128

* Tapered holes are measured at the bottom of the taper



SHIMS AND BEARING SPACERS

PINION BEARING SPACER

Inches	MM	Spicer Part Number	Spacer Kit
.727	18.466	MJAHS104-727	
.726	18.440	MJAHS104-726	
.725	18.415	MJAHS104-725	
.724	18.390	MJAHS104-724	
.723	18.364	MJAHS104-723	MJAKV101-X
.722	18.339	MJAHS104-722	
.721	18.313	MJAHS104-721	
.720	18.288	MJAHS104-720	
.719	18.263	MJAHS104-719	
.718	18.237	MJAHS104-718	
.717	18.212	MJAHS104-717	
.716	18.186	MJAHS104-716	
.715	18.161	MJAHS104-715	
.714	18.136	MJAHS104-714	
.713	18.110	MJAHS104-713	
.712	18.085	MJAHS104-712	
.711	18.059	MJAHS104-711	
.710	18.034	MJAHS104-710	
.709	18.009	MJAHS104-709	
.708	17.983	MJAHS104-708	
.707	17.958	MJAHS104-707	
.706	17.932	MJAHS104-706	
.705	17.907	MJAHS104-705	
.704	17.882	MJAHS104-704	
.703	17.856	MJAHS104-703	
.702	17.831	MJAHS104-702	
.701	17.805	MJAHS104-701	
.700	17.780	MJAHS104-700	

G MODEL - PINION OIL SLINGER

Inches	MM	Spicer Part Number	Spacer Kit	
.052	1.321	GGAHS104-052		
.055	1.397	GGAHS104-055	GGAKV100-X	
.058	1.473	GGAHS104-058		
.061	1.549	GGAHS104-061		
.064	1.626	GGAHS104-064		
.067	1.702	GGAHS104-067		
.070	1.778	GGAHS104-070		
.073	1.854	GGAHS104-073		
.076	1.930	GGAHS104-076		
.079	2.007	GGAHS104-079		
.082	2.063	GGAHS104-082		

M MODEL - PINION OIL SLINGER

Inches	MM	Spicer Part Number	Spacer Kit	
.052	1.321	MJAHS103-052		
.055	1.397	MJAHS103-055	MJAKV100-X	
.058	1.473	MJAHS103-058		
.061	1.549	MJAHS103-061		
.064	1.626	MJAHS103-064		
.067	1.702	MJAHS103-067		
.070	1.778	MJAHS103-070		
.073	1.854	MJAHS103-073		
.076	1.930	MJAHS103-076		
.079	2.007	MJAHS103-079		
.082	2.063	MJAHS103-082		



KITS

RING GEAR AND PINION			
Ratio	G Model	M Model	Included Items
3.70	----	MJAKG137-X	1, 14
3.90	----	MJAKG146-X	
4.11	----	MJAKG132-X	
4.56	GGAKG127-X	MJAKG133-X	
4.89	GGAKG126-X	MJAKG119-X	
5.29	----	MJAKG134-X	
5.57	GGAKG122-X	MJAKG120-X	
6.14	----	MJAKG121-X	
6.17	GGAKG123-X	----	
6.50	GGAKG124-X	MJAKG122-X	
7.17	GGAKG125-X	MJAKG123-X	

DIFFERENTIAL PARTS

Customer	G155-T, G175-T	M190-T, M210-T	M220-T, M230-T	Included Items
All OEM [®] s	GGAKD101-X	MJAKD101-X	MJAKD103-X	36-40

DIFFERENTIAL CASES

Description	G155-T, G175-T	M190-T, M210-T	M220-T, M230-T	Included Items
Replacement Differential Case Parts	GGAKF102-X	MJAKF100-X	MJAKF100-X	33, 34, 35, 41, 45

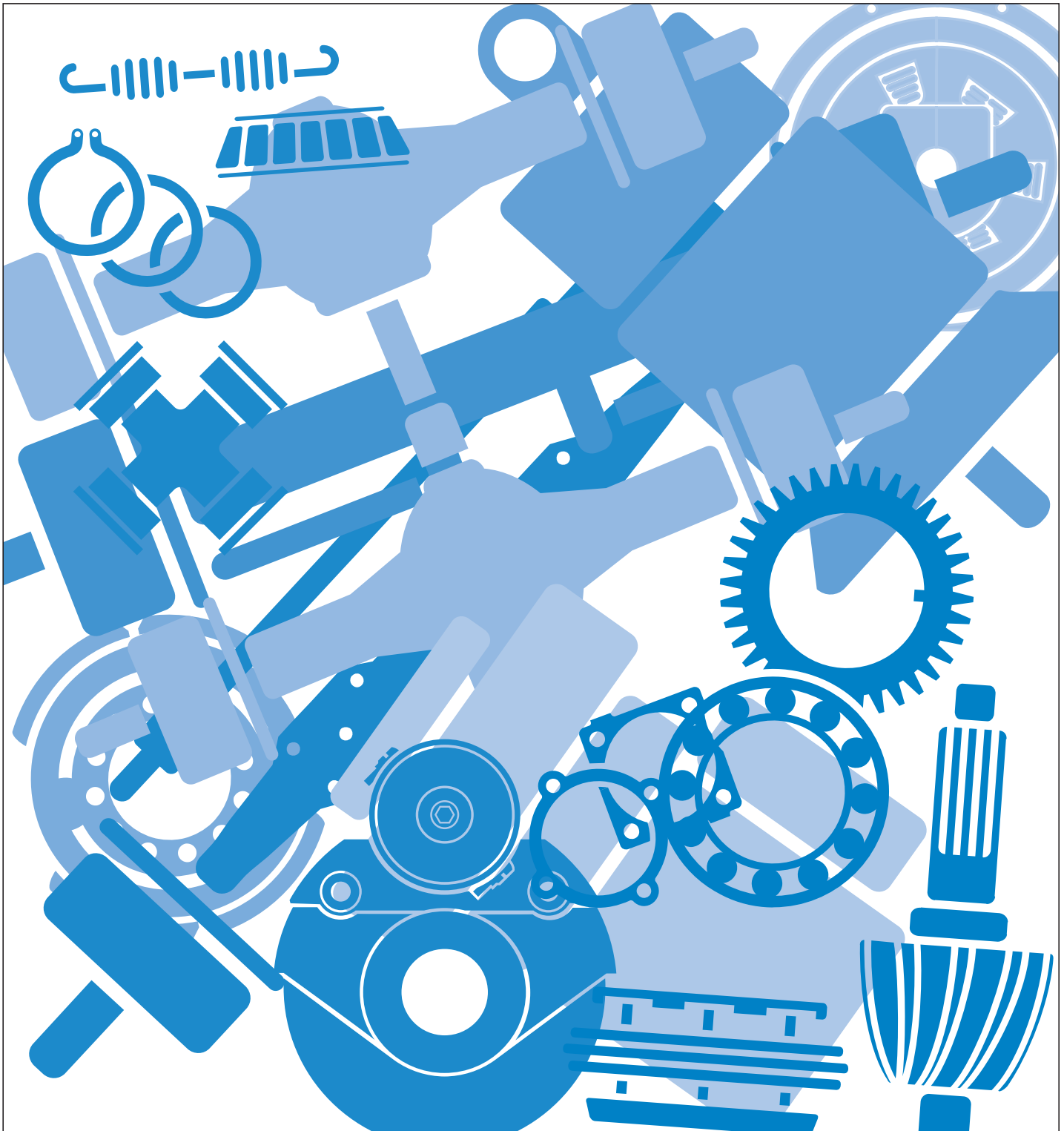
DIFFERENTIAL BEARINGS AND SEALS

Description	G155-T, G175-T	M190-T, M210-T	M220-T, M230-T	Included Items
Carrier Assembly Overhaul	GGAKA101-X	MJAKA101-X	MJAKA101-X	1,2,4,5,6,10,11,12,15

PLANETARY PARTS

Description	G155-T, G175-T	M190-T, M210-T	M220-T, M230-T	Included Items
Replacement Planetary Parts	GGAKP101-X	MJAKP100-X	MJAKP100-X	42, 44, 47, 52





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National Institute for
**AUTOMOTIVE
SERVICE
EXCELLENCE**

Roadranger®

MORE TIME ON THE ROAD

The Roadranger® System is an unbeatable combination of the best products from Eaton and Dana -- partnering to provide you the most advanced, most trouble-free drivetrain in the industry. And it's backed by the Roadrangers -- the most experienced, most expert, most accessible drivetrain consultants in the business. Visit our web site at www.roadranger.com. For spec'ing or service assistance, call 1-800-826-HELP (4357) 24 hours a day, 7 days a week, (Mexico: 001-800-826-HELP (4357)) for more time on the road.



One Great Drivetrain from Two Great Companies

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