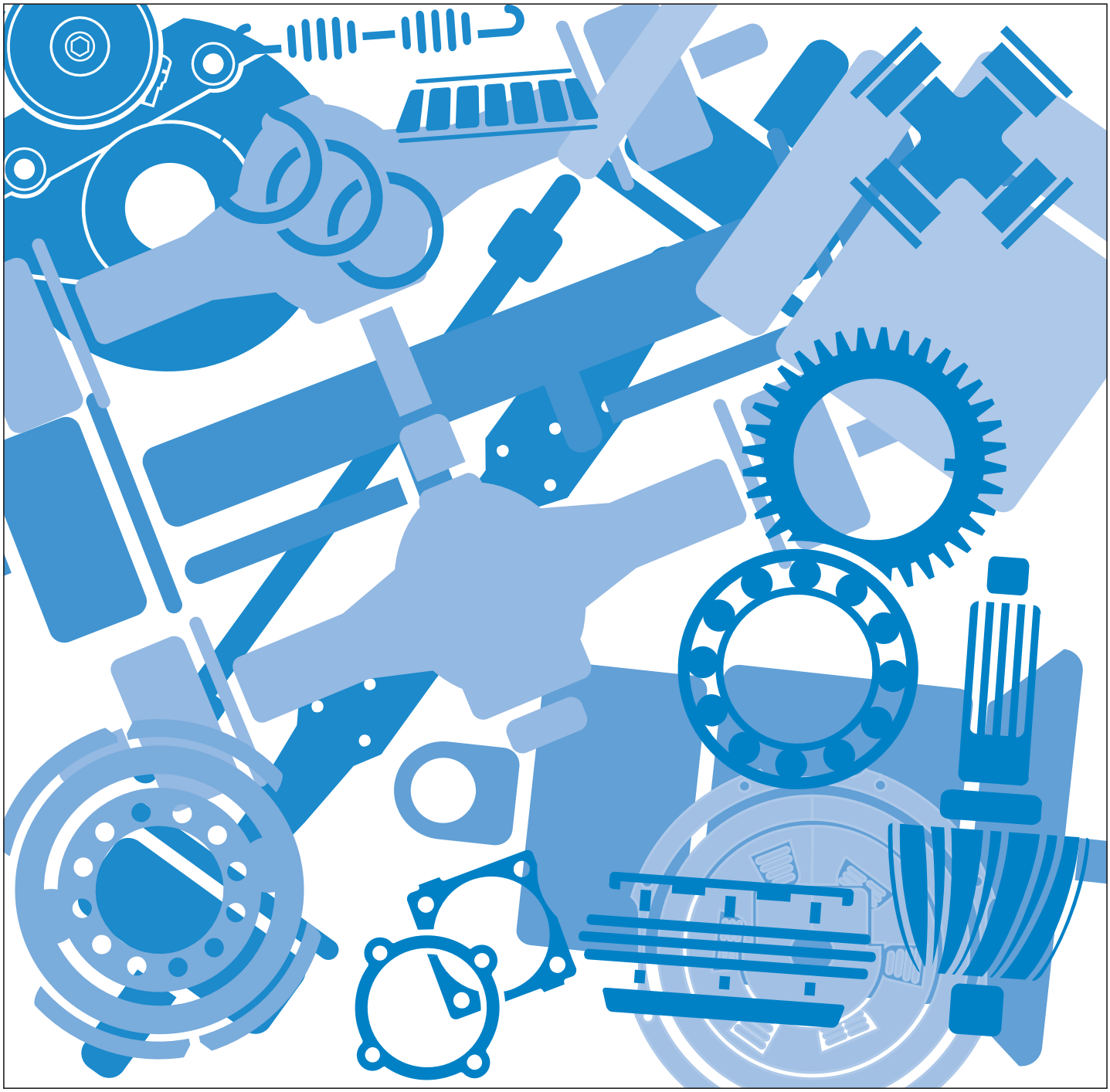
Roadranger®

Dana® Spicer® Tandem Drive Axles

N340-S, N400-S

One Great Drivetrain from Two Great Companies

Illustrated Parts List AXIP-4001 April 1997



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
Power Divider Components 2
Power Divider Parts List 3
Forward Rear Axle Components 4
Forward Rear Parts List 5
Rear Rear Axle Components 6
Rear Rear Parts List 7
End Yoke Assemblies 8
Axle Shafts 9
Housings 10
Spacers/Shims 11
- Input Shaft Bearing Preload Spacers
- Bearing Preload Spacers
- Bearing Cage Adjustment Shim
- Pinion Adjustment Shim

Kits 12-13
- Ring Gear and Pinion
- Differential Case with Bolts
- Bearings and Seals
- Diff-Lock
- Power Divider

SPICER®

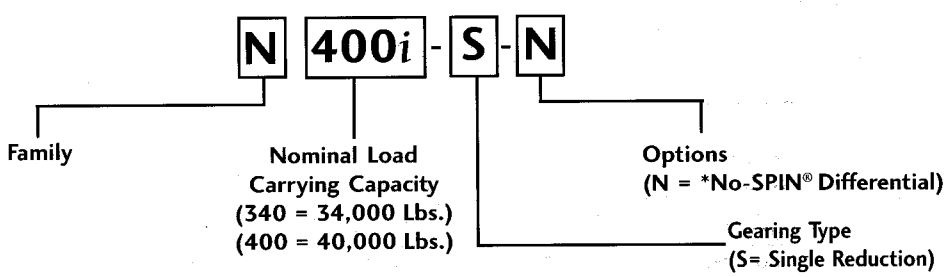
DANA

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 specifications 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



* No-SPIN® is a registered trademark of Tractech

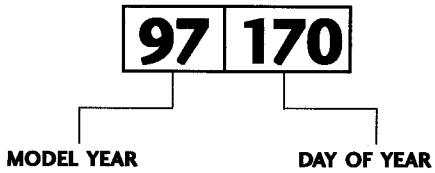
AXLE IDENTIFICATION

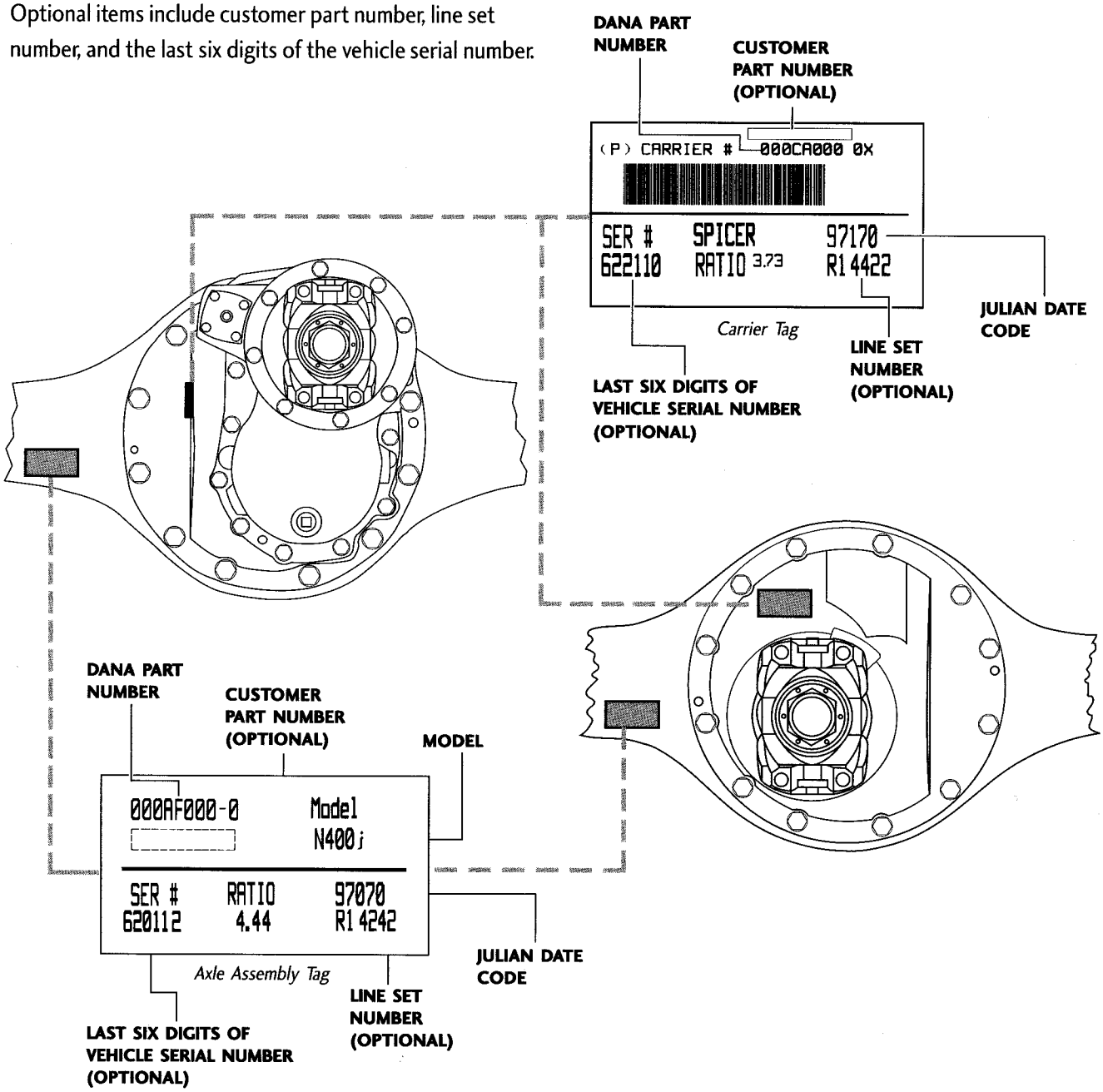
All axle assemblies are identified with two tags; one located on the differential carrier, and the other located on the right hand side of the axle housing.

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.

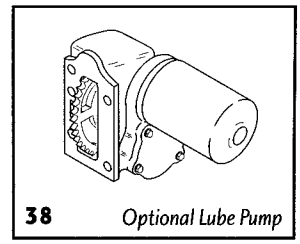
The **axle assembly tag** contains the following items: Dana part number, julian date code, axle model, and ratio. Optional items include customer part number, line set number, and the last six digits of the vehicle serial number.

JULIAN DATE CODE

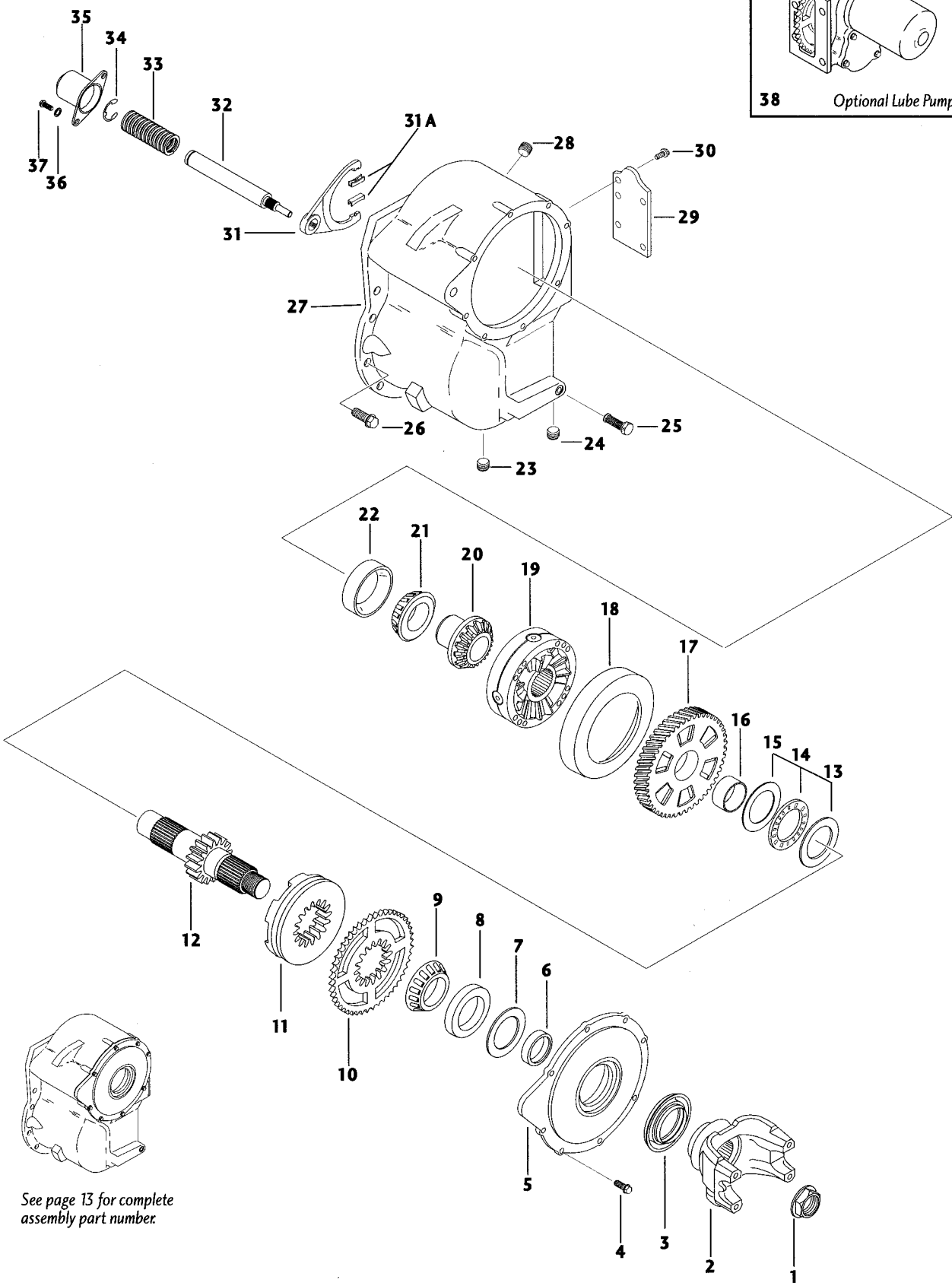




POWER DIVIDER COMPONENTS



38 *Optional Lube Pump*



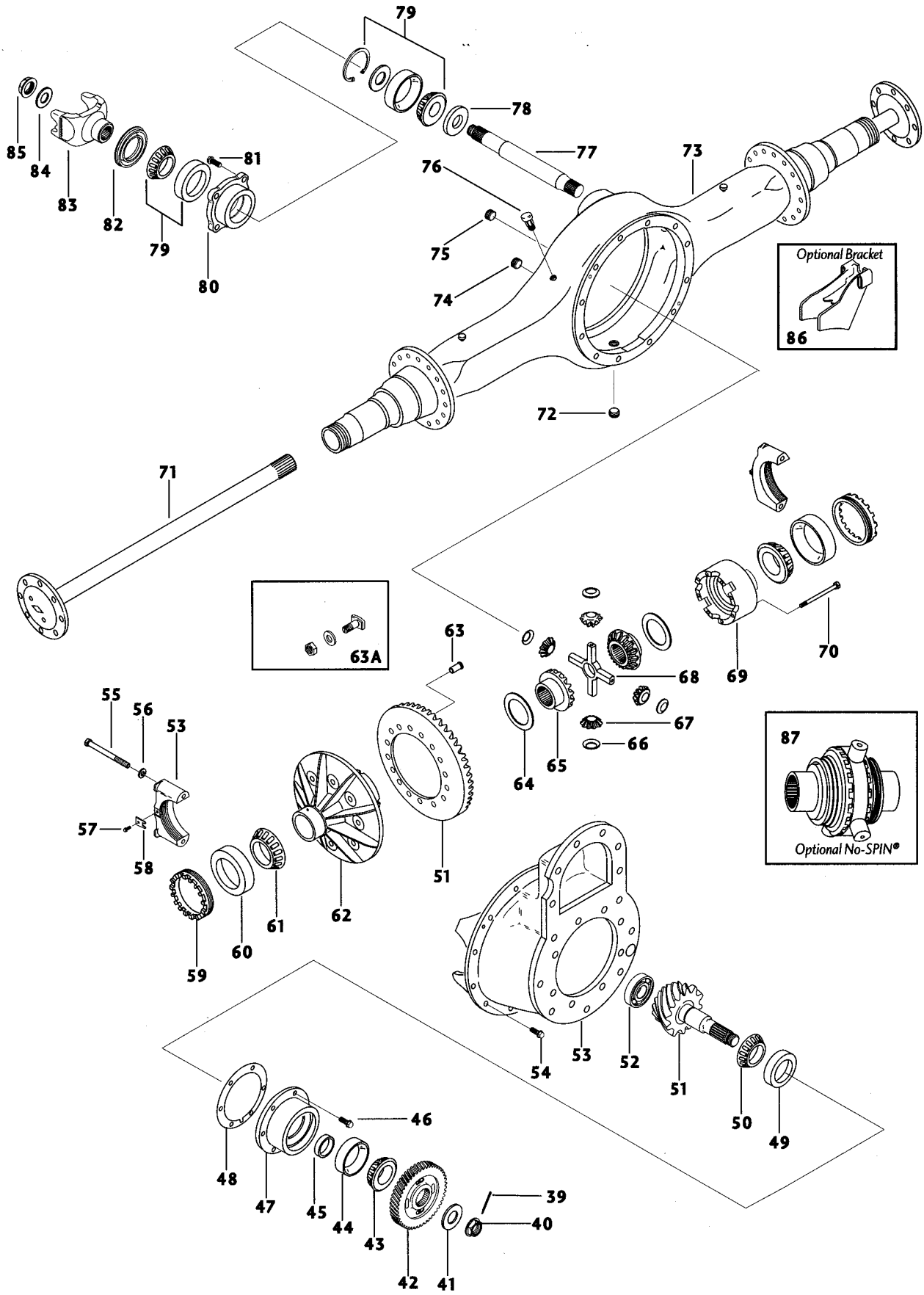
See page 13 for complete assembly part number.

POWER DIVIDER PARTS LIST

Item	Part Name	Qty.	N340	N400i
1+	Flanged Hex Nut	1	HN162	HN162
2	End Yoke Assembly (Input)	1	See Page 8 for correct part numbers	
3+	Pinion Oil Seal (Input)	1	401HH104	401HH104
4	Input Shaft Bearing Retainer Bolt	8	HM100	HM100
5+	Input Shaft Bearing Retainer	1	401CP115	401CP115
6	Yoke Spacer	1	401HS115	401HS115
7	Input Shaft Bearing Preload Shim	A/R	See Page 11 for correct part numbers	
8	Input Bearing Cup	1	401HA100	401HA100
9+	Input Bearing Cone	1	GGAHB105	GGAHB105
10	Lube Pump Gear	1	401GS106	401GS106
11	Clutch Collar	1	401SH101	401SH101
12+	Input Shaft Kit (Includes Items 1)	1	401KK103-X	401KK103-X
13+*	Bearing Thrust Washer	1	*Kit* 390KS106-X	390HS106-X
14+*	Needle Bearing Thrust Washer	1		
15+*	Bearing Thrust Washer	1		
16+	Needle Bearing	1	401GS109-X	401GS109-X
17	Helical Drive Gear	1		
18+	Lube Retainer	1	401HR100	401HR100
19+	Inter-axle Differential Assembly	1	401DS102-X	401DS102-X
20+	Inter-axle Differential Side Gear	1	400GD105	400GD105
21+	Inter-axle Differential Bearing Cone	1	390HB101	390HB101
22+	Inter-axle Differential Bearing Cup	1	390HA100	390HA100
23+	Magnetic Drain Plug	1	MJAHM121	MJAHM121
24+	Drain Plug (Use In 401CB107 Case)	1	MJAHM120	MJAHM120
25+	Magnetic Screen Plug (Use In 401CB107 Case)	1	MJAHN140	MJAHN140
26+	Inter-axle Differential Case Bolt (Use In 401CB105 Case)	13	HM100	HM100
27+	Inter-axle Differential Case			
	(With Lube Pump)	1	401CB107	401CB107
	(Without Lube Pump)	1	401CB105	401CB105
28+	Fill Plug	1	MJAHM120	MJAHM120
29+	Dust Cover	1	401CV102	401CV102
30+	Dust Cover Retainer Bolt	5	500397-10	500397-10
31+	Shift Fork Kit (Includes 31A)	1	401KT101-X	401KT101-X
31A+	Shift Fork Shaft Insert	2	504131C1	504131C1
32+	Shift Fork Shaft	1	401SS103	401SS103
33+	Air Shift Compression Spring	1	584278C1	584278C1
34+	Air Shift Snap Ring	1	378066R1	378066R1
35+	Air Shift Cylinder	1	472SU101	472SU101
36+	Air Shift Retainer Washer	2	HN138	HN138
37+	Air Shift Retainer Bolt	2	HM198	HM198

+Item Included in Kit
A/R - As Required
**As of March 17, 1997 390KS106-X replaces 401HS101*

FORWARD REAR COMPONENTS

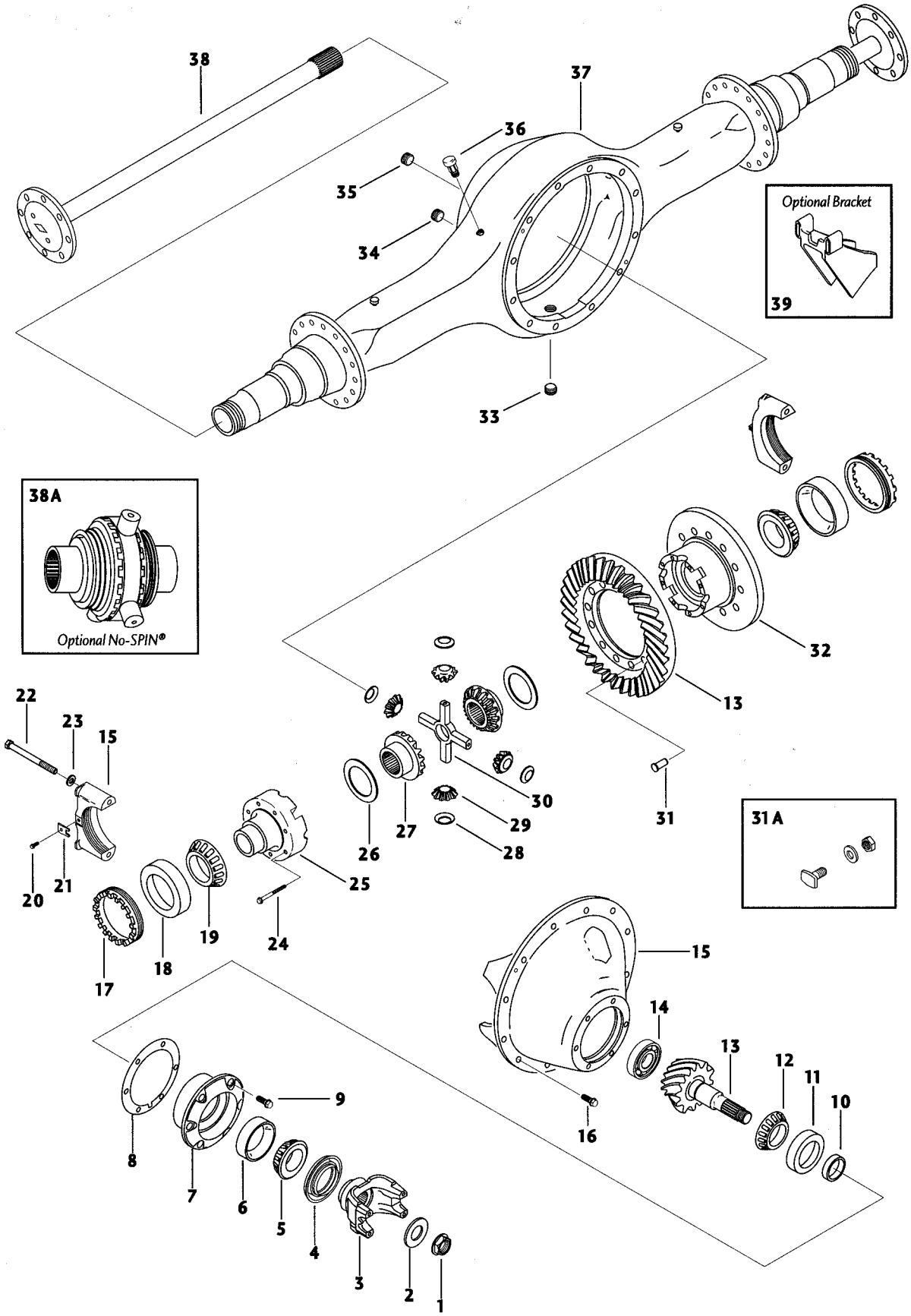


FORWARD REAR PARTS LIST

Item	Part Name	Qty.	N340	N400i
39+	Roll Pin	1	HP112	HP112
40+	Flanged Hex Nut	1	HN137	HN137
41	Pinion Spacer	1	401HS115	401HS115
42	Helical Drive Gear	1	401GS102	401GS102
43+	Outer Pinion Bearing Cone	1	360HB100	360HB100
44+	Outer Pinion Bearing Cup	1	360HA100	360HA100
45	Bearing Preload Spacer	A/R	See Page 11 for correct part numbers	
46	Bearing Cage Bolt	12	HM117	HM117
47+	Pinion Bearing Cage (Includes Items 44 & 49)	12	401CP104-X	401CP104-X
48	Pinion Bearing Cage Shim	1	See Page 11 for correct part numbers	
49+	Inner Pinion Bearing Cup	1	360HA100	360HA100
50+	Inner Pinion Bearing Cone	1	360HB100	360HB100
51+	Ring Gear & Pinion Set	1	See Page 12 for correct part numbers	
52+	Pinion Pilot Bearing	1	401HD100	401HD100
53	Carrier Sub-Assembly (Includes Items 55 & 56)	1	401CS104-X	401CS104-X
54	Carrier Mounting Bolt	12	HM117	HM117
55	Differential Bearing Cap Bolt	4	HM200	HM200
56	Differential Bearing Cap Washer	4	HN125	HN125
57	Adjusting Ring Lock Hex Bolt	2	HM201	HM201
58	Adjusting Ring Lock	2	401HR104	401HR104
59	Adjusting Ring	2	401HR103	401HR103
60+	Differential Bearing Cup	2	GGAHA101	GGAHA101
61+	Differential Bearing Cone	2	GGAHB101	GGAHB101
62+	Differential Case Flange Half			
	4.44 Ratio & Down	1	401DU101	401DU101
	4.56 Thru 6.14 Ratio	1	401DU103	401DU103
	6.50 Thru 7.83 Ratio	1	401DU105	401DU105
63	Ring Gear Rivets	12	157490R1	157490R1
63A	Ring Gear Bolt Kit	1	401KY101-X	401KY101-X
64+	Differential Gear Thrust Washer	2	— Kit Only —	
65+	Differential Side Gear	2		
66+	Differential Pinion Mate Thrust Washer	4	472KS108-X	472KS109-X
67+	Differential Pinion Mate	4		
68+	Differential Cross Shaft	1		
69+	Differential Case Cap Half (Ratios 3.06 Thru 6.14)	1	401DT107	401DT107
70+	Differential Case Bolt	8	HM116	HM116
71	Axle Shaft	2	See Page 9 for correct part numbers	
72	Magnetic Drain Plug	1	MJAHM121	MJAHM121
73	Axle Housing (Includes Item 78)	1	See Page 10 for correct part numbers	
74	Temperature Sensor Plug	1	MJAHM115	MJAHM115
75	Fill Plug	1	MJAHM120	MJAHM120
76	Vent	1	MJAHN110	MJAHN110
77	Output Shaft Kit (Includes Item 84 & 85)	1	401KK101-X	401KK101-X
78	Output Shaft Bearing Spacer	1	401HS109	401HS109
79	Output Shaft Bearing Assembly	1	401HC101	401HC101
80	Bearing Cage Assembly (Includes Items 79 & 81)	1	401CP104-X	401CP104-X
81	Bearing Cage Assembly Bolts	4	HM117	HM117
82+	Output Oil Seal	1	401HH103	401HH103
83	End Yoke Assembly (Output)	1	See Page 8 for correct part numbers	
84	Washer	1	MJAH104-1	MJAH104-1
85	Flanged Hex Nut	1	HN162	HN162
86	Torque Rod Bracket (See Page 10)	1	175TF100	175TF100
87	No-SPIN® Differential	1	579365C91	579365C91

+Item Included in Kit
A/R - As Required

REAR REAR COMPONENTS



Item	Part Name	Qty.	N340	N400*i*
1+	Flanged Hex Nut	1	HN162	HN162
2	Pinion Nut Washer	1	HN163	HN163
3	End Yoke Assembly	1	See Page 8 for correct part numbers	
4+	Pinion Oil Seal (Input)	1	401HH102	401HH102
5+	Outer Pinion Bearing Cone	1	360HB100	360HB100
6+	Outer Pinion Bearing Cup	1	360HA100	360HA100
7	Bearing Cage Assembly (Includes Items 6 & 11)	1	454719C91	454719C91
8	Pinion Bearing Cage Shim	A/R	See Page 9 for correct part numbers	
9	Bearing Cage Retainer Bolt	6	HM117	HM117
10	Bearing Preload Spacer	A/R	See Page 11 for correct part numbers	
11+	Inner Pinion Bearing Cup	1	360HA100	360HA100
12+	Inner Pinion Bearing Cone	1	360HB100	360HB100
13	Ring Gear & Pinion Set	1	See Page 12 for correct part numbers	
14+	Pinion Pilot Bearing	1	401HD100	401HD100
15+	Carrier Sub-Assembly (Includes Items 22 & 23) Ratios 3.06 Thru 6.14	1	401CS101-X	401CS101-X
16+	Carrier Mounting Bolt	12	HM117	HM117
17	Adjusting Ring	2	401HR103	401HR103
18+	Differential Bearing Cup	2	GGAHA101	GGAHA101
19+	Differential Bearing Cone	2	GGAHB101	GGAHB101
20	Adjusting Ring Lock Hex Bolt	2	HM201	HM201
21	Adjusting Ring Lock	2	401HR104	401HR104
22	Differential Bearing Cap Bolt	4	HM200	HM200
23	Differential Bearing Cap Washer	4	HN125	HN125
24+	Differential Case Bolt	8	HM116	HM116
25+	Differential Case Cap Half	1	401DT107	401DT107
26+	Differential Gear Thrust Washer	2	Kit Only	
27+	Differential Side Gear	2		
28+	Differential Cross Shaft	1	472KS108-X	472KS109-X
29+	Differential Pinion Mate	4		
30+	Differential Pinion Mate Thrust Washer	4		
31	Ring Gear Rivets	12	157490R1	157490R1
31A	Ring Gear Bolt Kit	1	401KY101-X	401KY101-X
32+	Differential Case Flange Half			
	4.44 Ratio & Down	1	401DU101	401DU101
	4.56 Thru 6.14	1	401DU103	401DU103
	6.50 Thru 7.83	1	401DU105	401DU105
33	Magnetic Drain Plug	1	MJAHM121	MJAHM121
34	Temperature Sensor Plug	1	MJAHM115	MJAHM115
35+	Fill Plug	1	MJAHM120	MJAHM120
36+	Vent	1	MJAHN110	MJAHN110
37+	Axle Housing	1	See Page 10 for correct part numbers	
38+	Axle Shaft	2	See Page 9 for correct part numbers	
38A+	No-SPIN® Differential	1	579365C91	390GN100
39	Torque Rod Bracket (See Page 10)	1	175TF100	175TF100

+Item Included in Kit
A/R - As Required

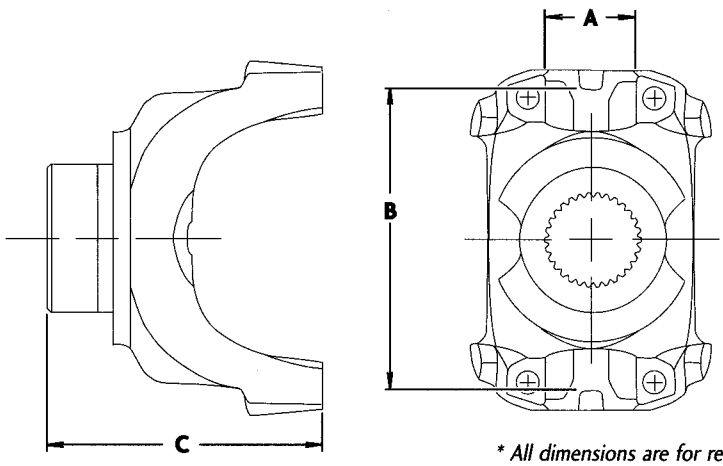
END YOKE ASSEMBLIES

FORWARD REAR (INPUT)

Series	- A-	-B-	-C-	Joint Angle	Spline Major Dia. - Number of Splines	Spicer Part Number
1610	1.88"	5.31"	5.38"	33.5°	2.114-32	5-4-8611-1X
1710	1.94"	6.09"	4.56"	24°	2.114-32	6-4-8681-1X
1760	1.94"	7.00"	5.00"	30.5°	2.114-32	6.3-4-1521-1X
1810	1.94"	7.55"	5.00"	30°	2.114-32	6.5-4-4661-1X

FORWARD REAR (OUTPUT)

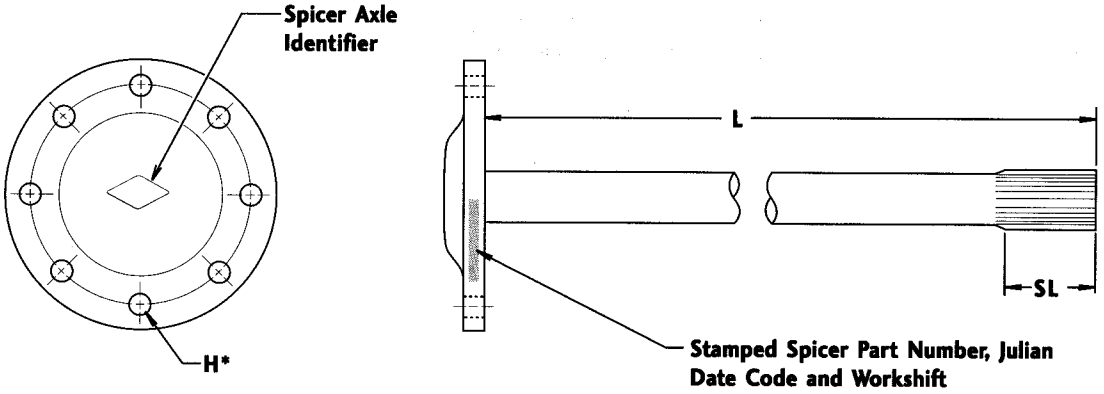
Series	- A-	-B-	-C-	Joint Angle	Spline Major Dia. - Number of Splines	Spicer Part Number
1610	1.88"	5.31"	5.38"	33.5°	2.114-32	5-4-8611-1X
1710	1.94"	6.09"	4.88"	28°	1.790-34	6-4-9021-1X



** All dimensions are for reference purposes only*

REAR REAR

Series	- A-	-B-	-C-	Joint Angle	Spline Major Dia. - Number of Splines	Spicer Part Number
1610	1.88"	5.31"	6.00"	45°	2.114-32	5-4-8691-1X
1610	1.88"	5.38"	5.54"	33.5°	2.114-32	5-4-8611-1X
1710	1.94"	6.09"	4.56"	24°	2.114-32	6-4-8681-1X
1710	1.94"	6.09"	6.06"	43°	2.114-32	6-4-8761-1X

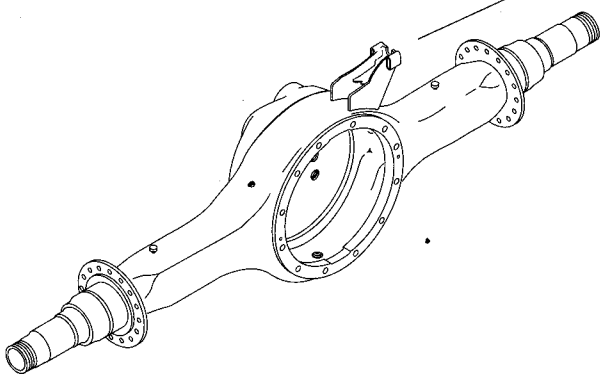


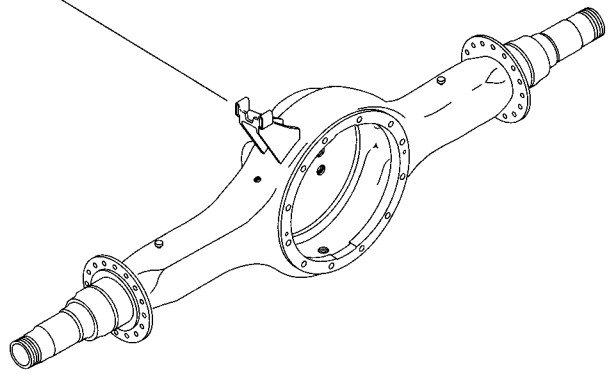
-SL- Spline Length	-L- Length	-H- Hole Dia.	Hole Type	Spicer Part Number
2.49"	40.25"	.65"	Straight	571349C2
3.50"	40.72"	.65"	Straight	401SR102
3.50"	40.72"	.73"	Tapered	MJASR124
3.84"	40.00"	.78"	Straight	571350C2

** Tapered holes are measured at the bottom of the taper*

HOUSINGS

See note at bottom of page





FORWARD REAR / N340

Suspension	ABS Blocks	Locator Pin Centers	OEM	Spicer Part Number
Spring	Yes	40.20	Navistar	340CG110
Spring	No	40.20	Navistar	340CG109
Spring	Yes	40.20	Navistar	340CG108
Air (Low Profile)	No	----	Navistar	340CG104
Hendrickson	No	----	Navistar	340CG103
Hendrickson	No	----	Navistar	340CG102
* Air	No	40.20	Navistar	340CG101

REAR REAR / N340

Suspension	ABS Blocks	Locator Pin Centers	OEM	Spicer Part Number
Spring	Yes	40.20	Navistar	340CH110
Hendrickson	Yes	----	Navistar	340CH112
Spring	No	40.20	Navistar	340CH109
* Air	Yes	40.20	Navistar	340CH108
Spring	No	40.75	Navistar	340CH107
Air	No	----	Navistar	340CH104
Hendrickson	Yes	----	Navistar	340CH102

FORWARD REAR / N400*i*

Suspension	ABS Blocks	Locator Pin Centers	OEM	Spicer Part Number
Spring	No	40.27	Navistar	401CG112
* Air	Yes	40.20	Navistar	401CG109
Spring	Yes	40.20	Navistar	401CG107
Spring	Yes	40.20	Navistar	401CG105
Spring	No	40.75	Navistar	401CG104
Air (Low Profile)	No	40.20	Navistar	401CG102

**Optional bracket for air suspension systems*

IMPORTANT: *Please consult your OEM for proper bracket mounting locations and procedures.*
NOTICE: *Spicer Heavy Axle and Brake will not be responsible for housing claims related to the welding of brackets.*

REAR REAR / N400*i*

Suspension	ABS Blocks	Locator Pin Centers	OEM	Spicer Part Number
Spring	No	40.27	Navistar	401CH112
Spring	Yes	40.20	Navistar	401CH111
Spring	Yes	40.20	Navistar	401CH107
* Air	Yes	40.20	Navistar	401CH105
Spring	No	40.75	Navistar	401CH104
Air (Low Profile)	No	40.20	Navistar	401CH102

INPUT SHAFT BEARING PRELOAD SHIM

Thickness		
Inches	MM	Spicer Part Number
.003	.076	401HS102-1
.005	.127	401HS102-2
.010	.254	401HS102-3
.030	.762	401HS102-4

BEARING PRELOAD SPACERS

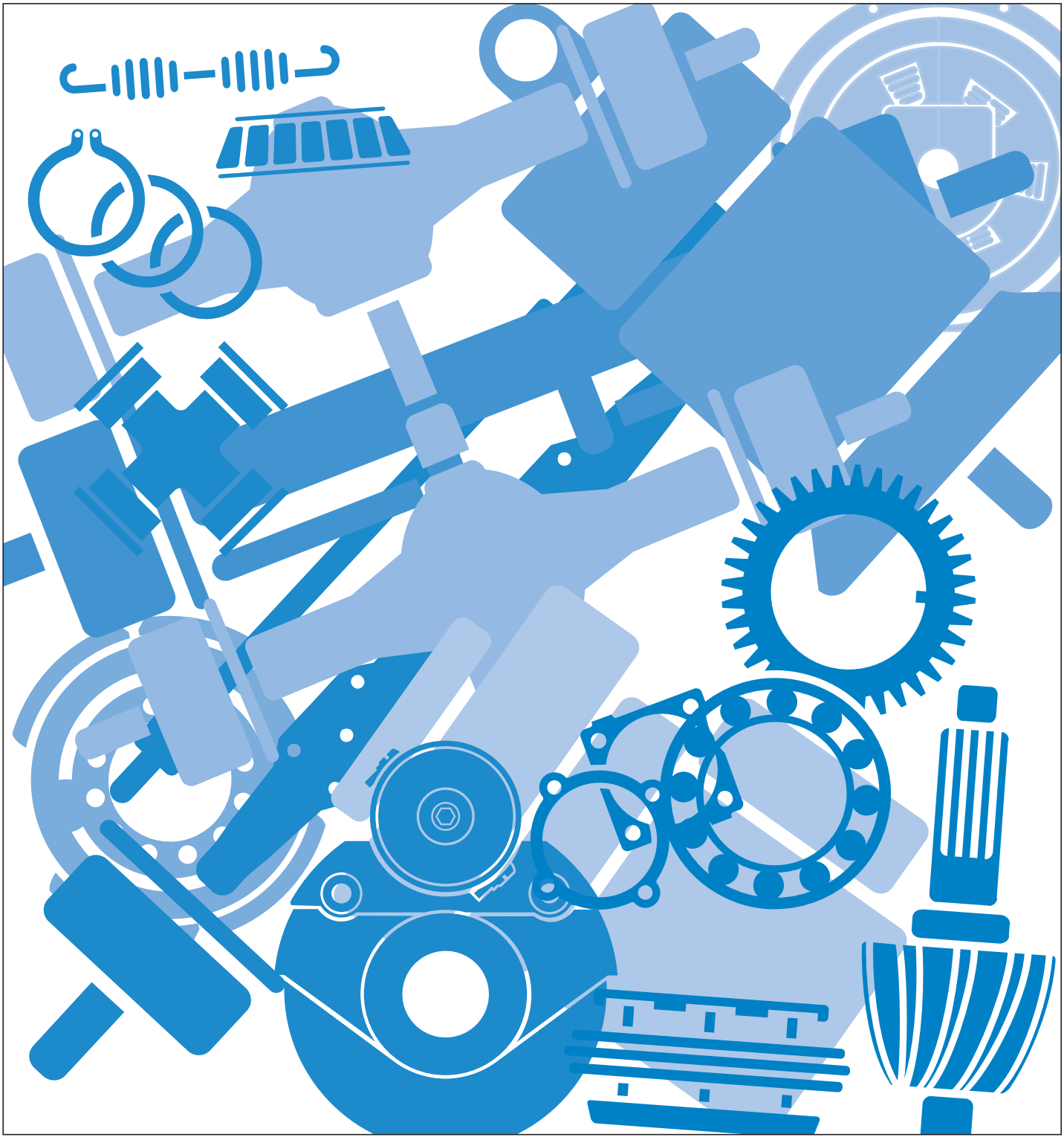
Thickness			
Inches	MM	Spicer Part Number	Spacer Kit
.718	18.237	042HS101-1	
.719	18.263	042HS101-2	
.720	18.288	042HS101-3	
.721	18.313	042HS101-4	
.722	18.339	042HS101-5	
.723	18.364	042HS101-6	
.724	18.390	042HS101-7	

BEARINGS AND SEALS

Description	Forward Rear	Rear Rear	Included Items
Power Divider and Forward Rear Axle	401KS100-X	----	3, 8, 9, 16, 21, 22, 43, 44,49, 50, 52, 60, 61
Rear Rear Axle	----	401KS101-X	4, 5, 6, 14, 18, 19

POWER DIVIDER

Description	Forward Rear	Included Items
Inter-axle Differential Components (complete assembly)	401KZ100-X	All except 2, 25, 35, 36, 37
Inter-axle Differential Gears	401KD100-X	16, 17, 18, 19, 20
Shifter Assembly	472SU100-X	33, 34, 35, 36, 37
Input Shaft & Gear Kit	401KK102-X	1, 12, 20



Copyright Eaton and Dana Corporation, 2002. EATON AND DANA CORPORATION hereby grants its customers, vendors, or distributors permission to freely copy, reproduce and/or distribute this document in printed format. THIS INFORMATION IS NOT INTENDED FOR SALE OR RE-SALE, AND THIS NOTICE MUST REMAIN ON ALL COPIES.

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.

DANA | EATON

One Great Drivetrain from Two Great Companies

AXIP-4001
05/04 PDF
Printed in USA