

Roadranger®

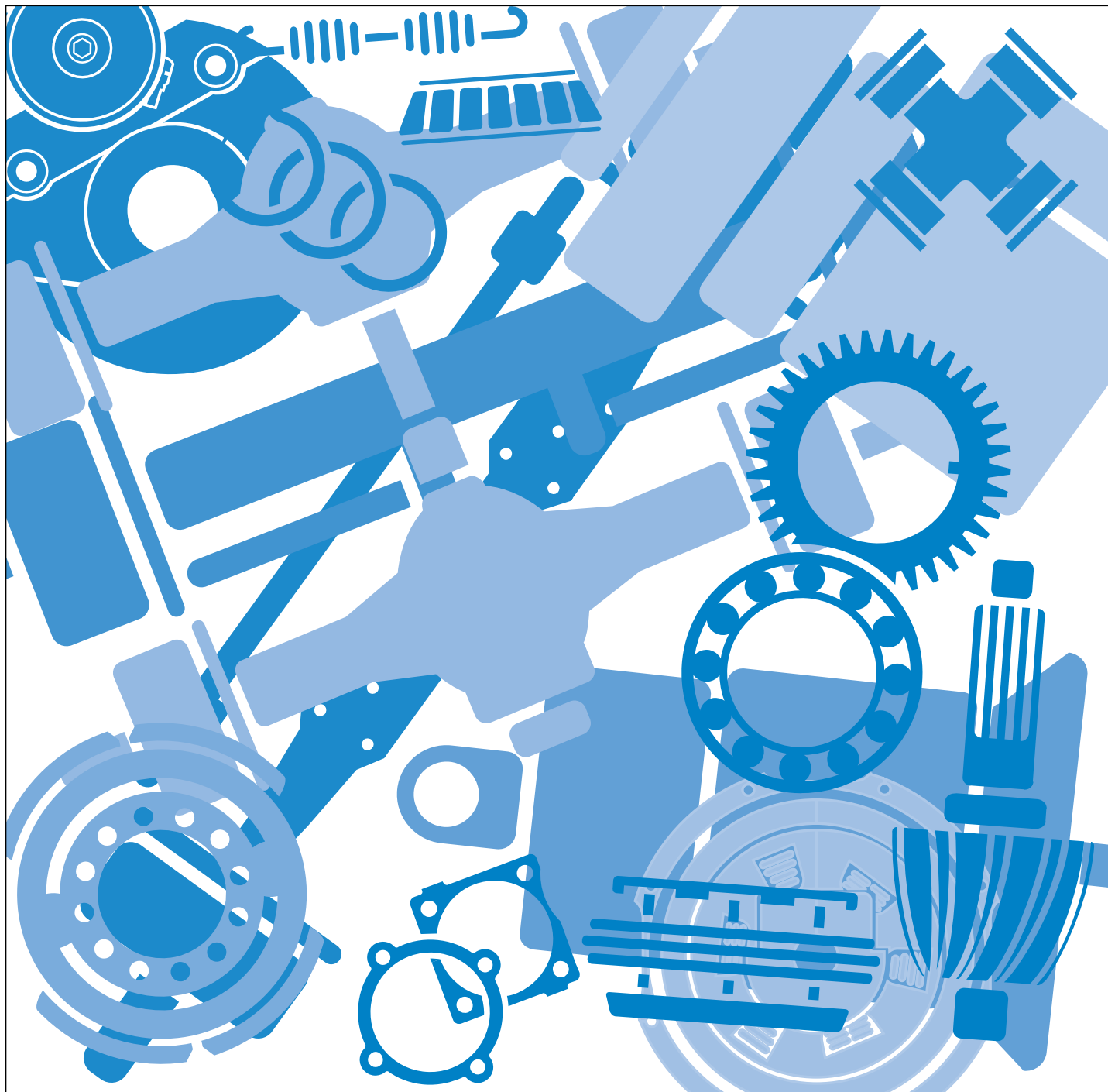
Dana® Spicer® Drive Axles

DSS40, DDS40
RSS40, RDS40



One Great Drivetrain from Two Great Companies

Illustrated Parts List AXIP-0342 July 2004



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

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Introduction

Model Listing

The following models are represented in this publication.

Single Reduction Models

Forward Axle	Rear Axle	Axle Capacity	Gear Size
DSS40(P)	RSS40	40,000 lbs	18" Gear
DDS40(P)	RDS40	40,000 lbs	18" Gear

How to Use Illustrated Parts List

Ordering Parts

- This parts book is organized in sections according to parts servicing requirements. Use the Contents or page headings and colored tabs to find information.
- Use this book to order parts for your Dana® Spicer® Axle.
- For convenience, part numbers have been included for all pieces of the carrier assembly. Some of these parts, such as the carrier and caps, are serviced only in kits or assemblies. Part numbers are for your reference only. Those parts not serviced separately are identified with NSS.

Kits and Assemblies

- Kits and Assemblies contain groups of individual or assembled parts developed for optimal replacement or repair of a service problem.
- Kits and Assemblies are shown with applicable parts groupings in the parts listing.
- See the Appendix for detailed information concerning kits applicable to this model.

Abbreviations

- **A/R-As Required** - Parts that vary in quantity with each axle. Example: shims.
- **NSS-Not Serviced Separately** - Items which can only be purchased in sets, kit form or service assemblies. Example: brake shoes.
- **RH/LH - Right Hand/Left Hand** - Determined as viewed from behind the vehicle looking forward.
- **“RTV” - Gasket Compound** - Formed-in-place gasket sealer. It is recommended for use on all surfaces requiring a gasket.
- **Assy - Assembly**

- **Brg - Bearing**
- **Diff - Differential**
- **Hsg - Housing**
- **Inv - Involute**
- **IASS - In Axle Speed Sensor**
- **ABS - Antilock Brake System**
- **N/A - Not Applicable**
- **Str - Straight**

Illustrations

- Illustrations show parts in assembly groups.
- Item numbers on illustrations correspond with parts listings on pages that accompany the drawings.
- Notes are included on illustrations where needed.

Parts Listings

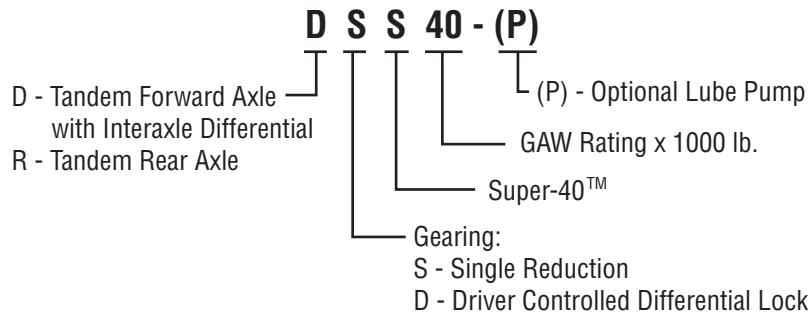
- Parts listings are defined by parts groupings and are broken down by service assemblies.
- Parts listings identify a part for servicing with the following categories:
 - **Item** - corresponds with numbers on illustrations for part identification
 - **Description** - specifies part name or description
 - **Quantity (Qty)** - quantity required for assembly
 - **Current Part** - service part numbers are broken down by model, type or other applicable information
 - **Notes** - define unique characteristics or replacement notes
 - **Kits and Assemblies** - indicated Kits or Assemblies that contain a particular part
- *Other pertinent information is listed in tables or parts listings as required.*

Effectively using a parts listing - Example

- Follow the example below to locate and order exactly what is required for servicing.

Match to items on illustration	Use to identify Part	Order this quantity for servicing	Order Part Number by Model indicated	Indicated information important to ordering or use
Item	Description	Qty	Part No.	Notes
84	Lock washer	10	90417	See Axle Shaft Chart
85	Pipe Plug	1	90325	
Kits and Assemblies				
	Basic Overhaul Kit	1	122437	Contents identified with *
	Oil Seal & Shim Kit	1	118111	Includes 33, 46, 75, 78, & RTV

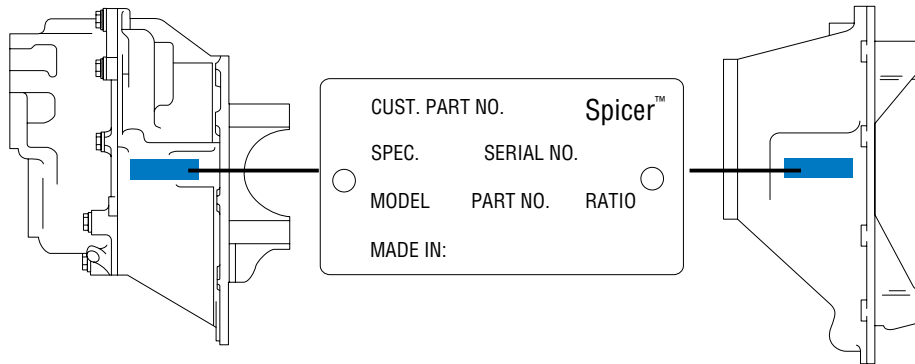
Model Identification



Locating Model Designation Information

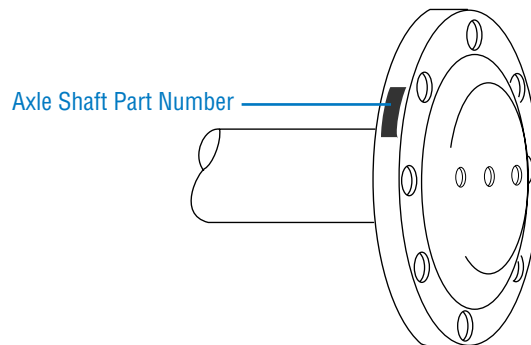
- Axle Model Identification, part Number and Serial Number are located on a tag at the axle centerline. This information will help to locate information in this book and to identify the correct parts for servicing.

Drive Axles



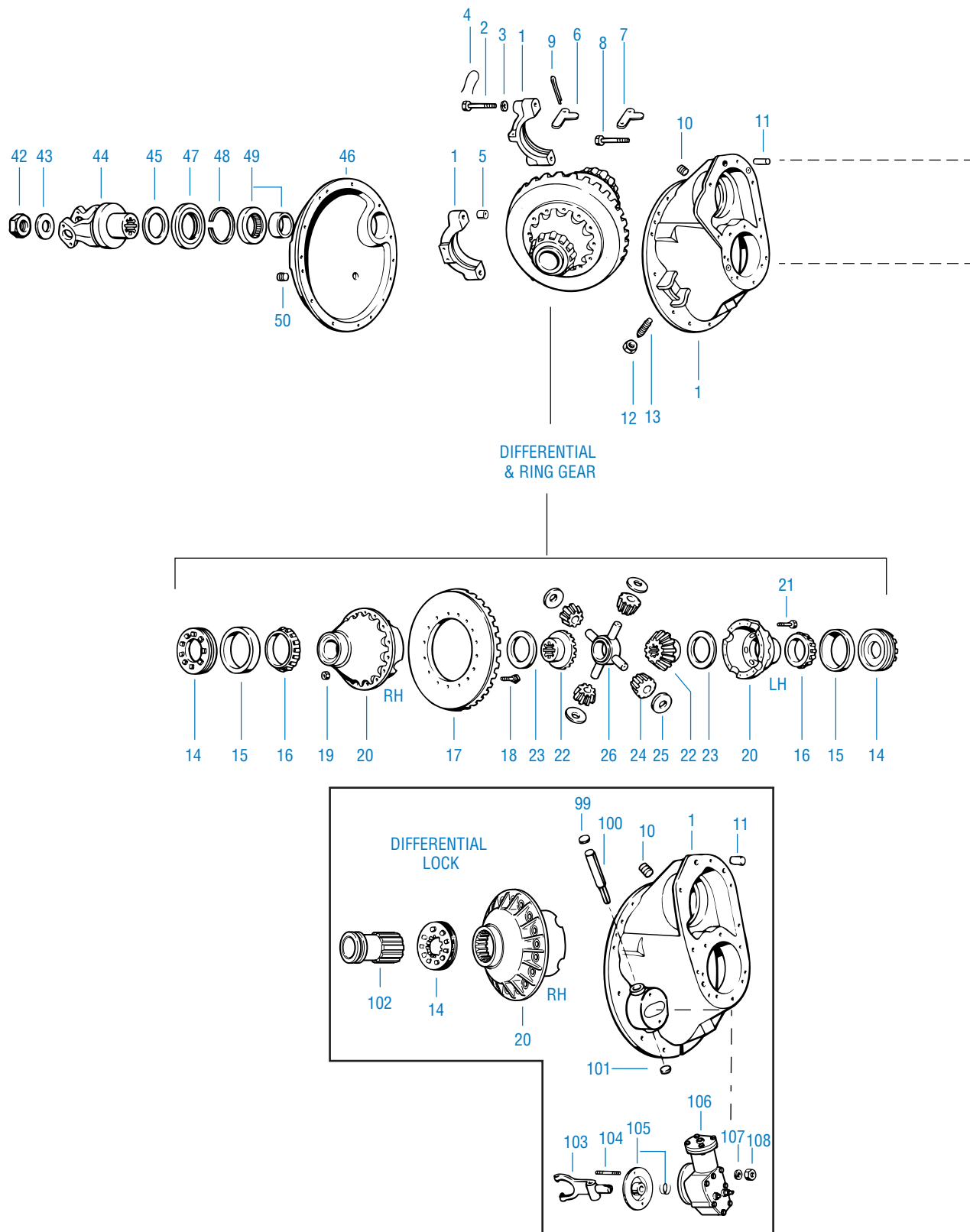
- Model Number, Part Number and Serial Number** are located on the data plate on the axle centerline

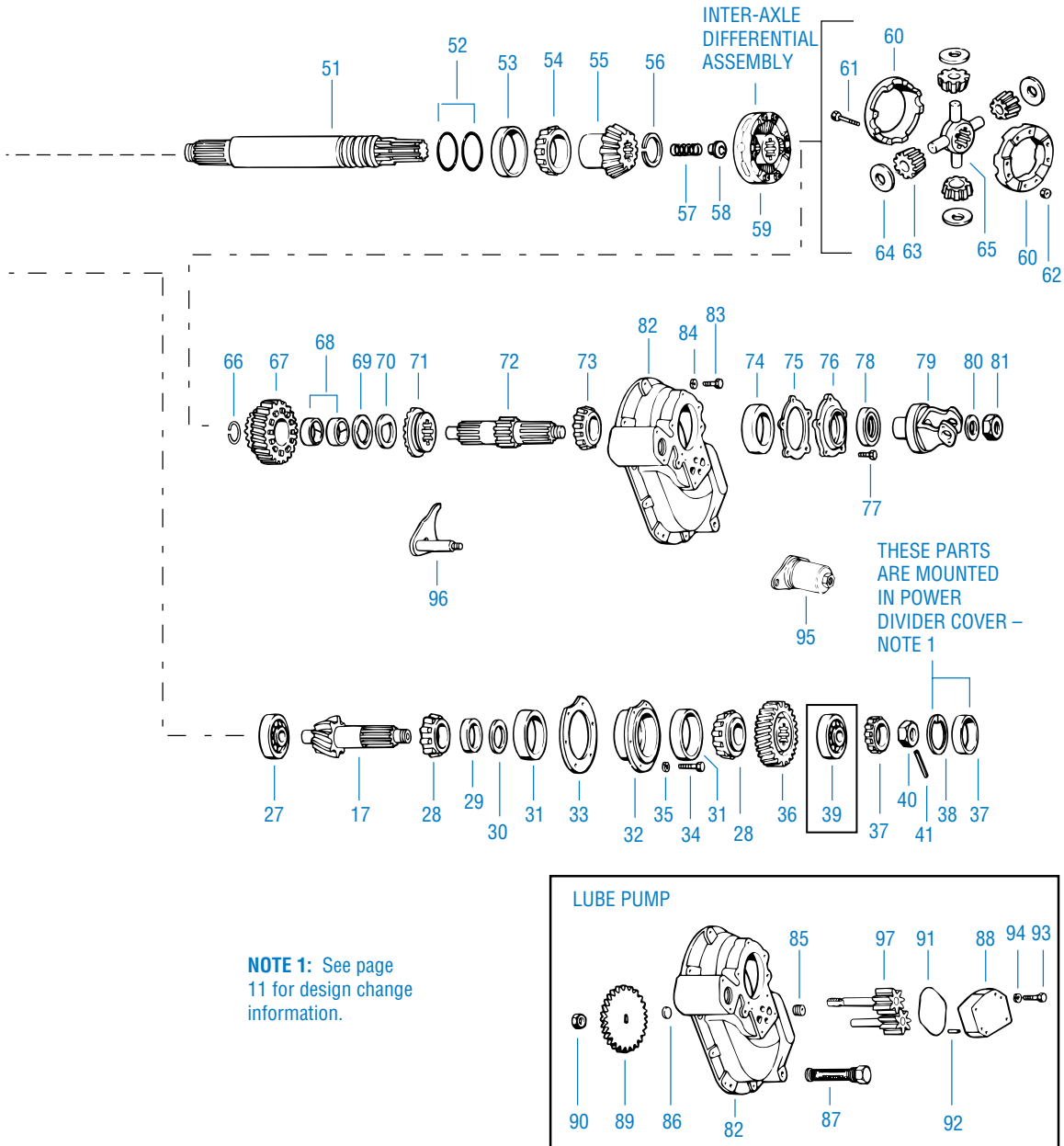
- The axles illustrated in this book are found on a number of different axle shafts, according to OEM specifications.
When ordering replacement axle shafts, note the part number stamped into the flange.



Single Reduction

Forward Axle - DSS40(P), DDS40(P)





Item	Description	Qty	DSS40(P)	DDS40(P)	Notes
BASIC OVERHAUL KIT			509302	509305	Contents identified by *
1	Diff. Carrier & Bearing Caps Carrier Casting No. 128282C (NSS)	1	509303	–	Includes items 2-5, 6-14
	Diff. Carrier & Brg. Cap Kit Carrier Casting No. 110500 (NSS)	1	–	508472	
2	Bearing Cap Screw	4	127180	32732	
3	Flat Washer	4	32912	32912	
4	Lockwire	4	12563	12563	
5	Dowel Bushing	2	32730	32730	
6	Bearing Cap Adjuster Lock (LH & RH)	2	14275	–	
	Bearing Cap Adjuster Lock (RH)	1	–	14275	
7	Bearing Cap Adjuster Lock (LH)	1	–	45448	
8	Adjuster Lock Cap Screw	2	210601	210601	
9	Cotter Pin (LH & RH)	2	90876	90876	
10	Filler Plug	1	90325	90325	
11	Carrier Cover Dowel Pin	2	7641	7641	
12	Thrust Screw Jam Nut	1	210184	210184	
13	Ring Gear Thrust Screw	1	126193	126193	
14	Diff. Bearing Adjuster (RH)	1	39448	–	
			–	82451	
	Diff. Bearing Adjuster (LH)	1	21637	21637	
15	Diff. Bearing Cup (RH)	1	19529*	21632*	
	Diff. Bearing Cup (LH)	1	15092*	15092*	
16	Diff. Bearing Cone (RH)	1	27666*	102660*	
	Diff. Bearing Cone (LH)	1	27876*	27876*	
17	Ring Gear & Drive Pinion Set	1	See Chart	See Chart	Page 22
18	Bolt	16	67586	67586	In Kit 70745
19	Nut	16	60600	60600	In Kit 70745
WHEEL DIFF CASE KITS					Includes items 20-21
	3.55-4.11		98610	217619	
	4.33-6.67		121845	217620	
20	Diff. Cases		–	–	
	Plain Half (LH) NSS		86777	86777	
	Flange Half (RH) NSS		–	–	
	3.55-4.11		88501	128980	
	4.33-6.67		126234	128981	
21	Diff. Case Cap Screw	12	88503	88503	
WHEEL DIFF. SIDE GEAR KIT			120739	123292	Includes items 22-26
WHEEL DIFF. KIT w/o SIDE GEAR KIT			118749	118749	Includes items 23-26
22	Diff. Side Gear	2	120052	–	41 Involute
			–	93401	36 Involute
23	Side Gear Thrust Washer	2	27274*	27274*	
24	Side Pinion	4	86780	86780	
25	Side Pinion Thrust Washer	4	86781*	86781*	
26	Spider	1	86778	86778	
27	Pinion Pilot Bearing	1	126187*	126187*	

Note 1: New design parts beginning February 2000. See Page 11 for more detail and reference Dana Bulletin ABIB-0102.

Item	Description	Qty	DSS40(P)	DDS40(P)	Notes
28	Pinion Bearing Cone	2	129562*	129562*	Inner & Outer, Was 14218
29	Pinion Bearing Spacer Washer	1	78904*	78904*	
30	Pinion Bearing Spacer	AR	See Chart	See Chart	Page 22
31	Pinion Bearing Cup	2	129561*	129561*	Was 14217
32	Pinion Bearing Cage & Cup Assy	1	78914	78914	Cage #78932, Includes Item 31
33	Pinion Bearing Cage Shim	AR			
	.003"		45461*	45461*	
	.005"		62829*	62829*	
	.010"		45462*	45462*	
	.020"		62830*	62830*	
	.030"		113131*	113131*	
34	Pinion Bearing Cage Capscrew	6	62158	62158	
35	Lockwasher	6	37207	37207	
36	Pinion Helical Gear	1	119995	119995	
37	Outer Pinion Bearing & Race - Before 2/2000	1	78916*	78916*	Note 1
38	Outer Pinion Bearing Snap Ring - Before 2/2000	1	78937*	78937*	Note 1
39	Pinion Support Bearing - After 2/2000	1	120080	120080	
40	Pinion Shaft End Nut	1	126182	126182	
41	Pinion Nut Spring Pin	1	118807	118807	
42	Output Shaft Nut	1	210508	210508	
43	Output Shaft Washer	1	210509	210509	
44	Output Shaft Yoke	1	See Chart	See Chart	
45	Rear Bearing Retaining Washer	1	78922*	78922*	
46	Axle Housing Cover Assy				Includes Items 47-50
	(Cover 78923R) NSS	1	217647	217647	Replaces 216642, 107863
47	Output Shaft Oil Seal	1	210737*	210737*	
48	Bearing Snap Ring	1	78937*	78937*	
49	Output Shaft Bearing Race – Inner	1	118787*	118787*	Order #78936 Brg Assy
	Output Shaft Bearing Race – Outer	1	118788*	118788*	Order #78936 Brg Assy
50	Magnetic Filler Plug	1	75130	75130	7/8"
	Cover Plug	1	90898	90898	1/2"
51	Output Shaft Kit (Shaft 129016, 41 Splines 2.100" dia) NSS	1	122419	122419	Includes Items 42, 43, 52, 56 Replaces 119991
52	Output Shaft "O" ring	2	78931*	78931*	
53	Output Shaft Bearing Cup (Inner)	1	24328*	24328*	
54	Output Shaft Bearing Cone (Inner)	1	24330*	24330*	
55	Output Shaft Side Gear	1	78911	78911	
56	Side Gear Snap Ring	1	85994*	85994*	
57	Output Shaft Compression Spring	1	127095	127095	
58	Output Shaft Thrust Bearing	1	51228	51228	
INTER-AXLE DIFF. CASE KIT		1	211252	211252	Includes Items 60-62
59	INTER-AXLE DIFF. ASSY - COMPLETE	1	512845	512845	Includes Items 60-65 Replaces 121681
60	Inter-axle Diff. Case Half (NSS)	2	126151	126151	
61	Case Bolt	8	57636	57636	

Note 1: New design parts beginning February 2000. See Page 11 for more detail and reference Dana Bulletin ABIB-0102.

Item	Description	Qty	DSS40(P)	DDS40(P)	Notes
62	Case Nut	8	57637	57637	
63	Side Pinion	4	95218	95218	
64	Side Pinion Thrust Washer	4	126180*	126180*	
65	Spider	1	130904	130904	Replaces 126152
66	Helical Side Gear Snap Ring	1	78909*	78909*	
67	Helical Side Gear & Bushing Assy (Side Gear 113328) NSS	1	113331	113331	Includes Item 68
68	Helical Side Gear Bushing	2	75063	75063	
69	Helical Side Gear Thrust Washer	1	79034*	79034*	
70	Helical Side Gear "D" Washer	1	56360*	56360*	
71	Lockout Sliding Clutch	1	119948	119948	
72	Input Shaft Kit (Shaft 129017, 46 Splines 2.350" dia.) NSS	1	122418	122418	Replaces 119990 Includes Item 81
73	Input Shaft Bearing Cone	1	98387*	98387*	
74	Input Shaft Bearing Cup	1	98388*	98388*	
75	Input Bearing Cover Shim	AR			
	.003"		78918*	78918*	
	.005"		78919*	78919*	
	.010"		78920*	78920*	
	.020"		113130	113130	Not in overhaul kits
	.030"		113131	113131	Not in overhaul kits
76	Input Bearing Cover, Cup & Oil Seal Assy (Cover 111690) NSS	1	509643	509643	Includes Items 74, 78
77	Bearing Cover Cap Screw	5	126243	126243	
78	Input Shaft Oil Seal	1	210736*	210736*	
79	Input Yoke & Slinger	1			See Yokes, Page 20
80	Input Shaft Nut Washer	1	126242*	126242*	
81	Input Shaft Nut	1	126155	126155	
82	PDU Cover Assy Non-Pump Models	1	510792	510792	Note 1
	Diff. Carrier Cover Assy Pump Models	1	510793	510793	Note 1
83	Carrier Cover Cap Screw	8	90069	90069	(short)
		1	9309	9309	(long)
		1	81855	81855	(socket head)
84	Lockwasher	10	90417	90417	
85	Pipe Plug	1	90325	90325	
86	Expansion Plug	1	9797	9797	
87	Magnetic Filter Screen	1	102611*	102611*	
LUBE PUMP REPLACEMENT KIT				121302	Includes items 88-94, 97
88	Lube Pump Cover	1	102607	102607	
89	Pump Drive Gear	1	119946	119946	
90	Drive Gear Locknut	1	111451	111451	
91	Cover "O" Ring	1	102620*	102620*	
92	Cover Dowel Pin	2	102617	102617	
93	Cover Cap Screw	4	102618	102618	
94	Lockwasher	4	90419	90419	

Note 1: New design parts beginning February 2000. See Page 11 for more detail and reference Dana Bulletin ABIB-0102.

Item	Description	Qty	DSS40(P)	DDS40(P)	Notes
95	AIR OPERATED LOCKOUT ASSY - COMPLETE	1	217794	217794	Reference Page 11
96	Shift Fork & Push Rod Assy	1	103529	103529	
97	Pump Gear & Shaft Assy				
	2.188" Shaft	1	102625	102625	Order Complete Lube Pump
	2.438" Shaft	1	111779	111779	Order Complete Lube Pump
98	Gasket Compound	AR	107276S*	107276S*	Not Illustrated
99	Expansion Plug (Upper)	1	30703	30703	
100	Shift Fork Shaft	1	113801	113801	Includes 113140 O-ring
101	Expansion Plug (Lower)	1	9797*	9797*	
102	Sliding Clutch	1	E935088	E935088	
103	Shift Fork & Roller Assy	1	84508	84508	
104	Shift Unit Mounting Stud	2	119863	119863	
105	Shift Fork Seal & Spring Assy	1	119855	119855	
106	Shift Unit Assy	1			See Piston Air Shift Unit Page 16
107	Flat Washer	2	119857	119857	
108	Stud Nut	2	63028	63028	

Note 1: New design parts beginning February 2000. See Page 11 for more detail and reference Dana Bulletin ABIB-0102.

Kits and Assemblies	DSS40(P)	DDS40(P)	
Basic Overhaul Kit	509302	509305	Contents Identified with *
Oil Seal & Shim Kit	118111	118111	Includes 31, 45, 73, 76 & 97
Lube Pump Replacement Kit	121302	121302	Includes 86-92, 95, 96
Wheel Diff. Case Kit	98610	98610	Ratios 3.55-4.11 Includes Items 18-19
Wheel Diff. Case Kit	121845	121845	Ratios 4.33-6.67 Includes Items 18-19
Wheel Diff. Side Gear Pinion Kit	120739	123292	Includes Items 22-26
Wheel Diff. Kit Less Side Gears	118749	118749	Includes Items 23-26
IAD Diff. Case Kit	211252	211252	Includes 58-60
IAD Complete	512845	512845	Includes 58-63

In February 2000, a product upgrade was made to the power divider section of the DSS/DDS40(P) models. The outer pinion support bearing was upgraded from a three-piece bearing assembly & snap ring design to a one-piece roller bearing design. The new bearing part-no. 120080 has a higher load capacity and the assembly procedure is now simplified.

As part of the change, new production power divider covers 129965 (pump models) and 129969 (non-pump models) were released. The 120080 bearing can only be used with these new covers. The older power divider covers that are machined with a snap ring groove are no longer available and are replaced in service by Power Divider Cover kits. The new kits will also include the new 120080 support bearing. The older design bearing parts (78916 and 78937) will remain available for service as shown on the chart below.

Part Number	Description	New Service Replacement Part-No.	Notes
103526, 103536, 117311	PDU Cover - Pump Models	510792	Includes new 129965 cover & 120080 brg
129459, 508497	PDU Cover - Non - Pump Models	510793	Includes new 129969 cover & 120080 brg
129965	New PDU Cover	order kit above	Pump models
129969	New PDU Cover	order kit above	Non-Pump models
78916	Outer Pinion Brg & Race Assy	still available	Use only with OLD style PDU covers
78937	Outer Pinion Brg Snap Ring	still available	Use only with OLD style PDU covers
120080	New Outer Pinion Brg	current	Use only with NEW style PDU covers

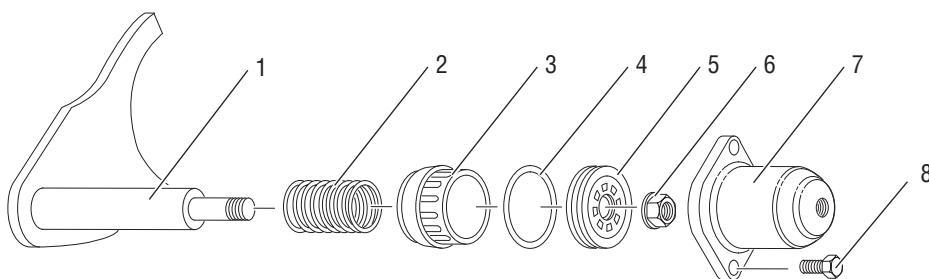
High Entry 4x4, 6x6 and Military applications not affected by this change

Shown below is a quick reference chart for power divider cover castings for both “pump” models and “non-pump” models.

Power Divider Stamped Part Number	Model Type	Reference Casting Number
103526, 103536, 117311, 129965, 510792	pump models	103526C
129459, 508497, 129969, 510793	non pump models	129459C

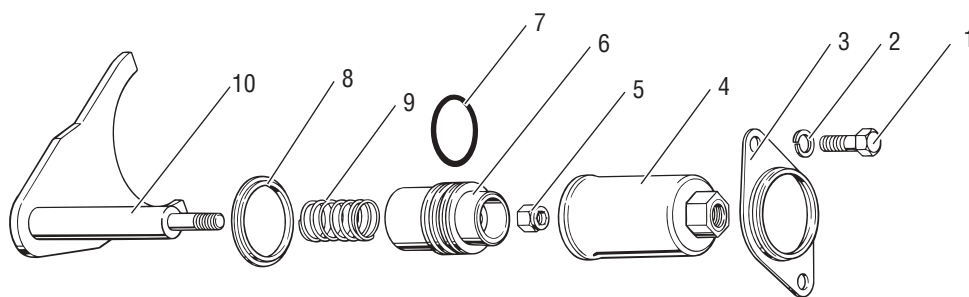
Differential Lockout

Cast Iron Cover Lockout - February 1996 to Present (Single Reduction Models)



Item	Description	Qty	Order Part No.	Notes
COMPLETE LOCKOUT KIT W/SHIFT FORK		1	217794	Includes items 1-8
COMPLETE LOCKOUT KIT W/O SHIFT FORK		1	508457	Includes items 3-8
1	Shift Fork Assembly	1	103529	
2	Compression Spring	1	031038	
3	Piston Stop	1	129153	
4	O-Ring	1	210180	
5	Piston	1	129150	
6	Lock Nut	1	128160	
7	Cast Iron Piston Housing	1	129149	
8	Cap Screw	2	090031	

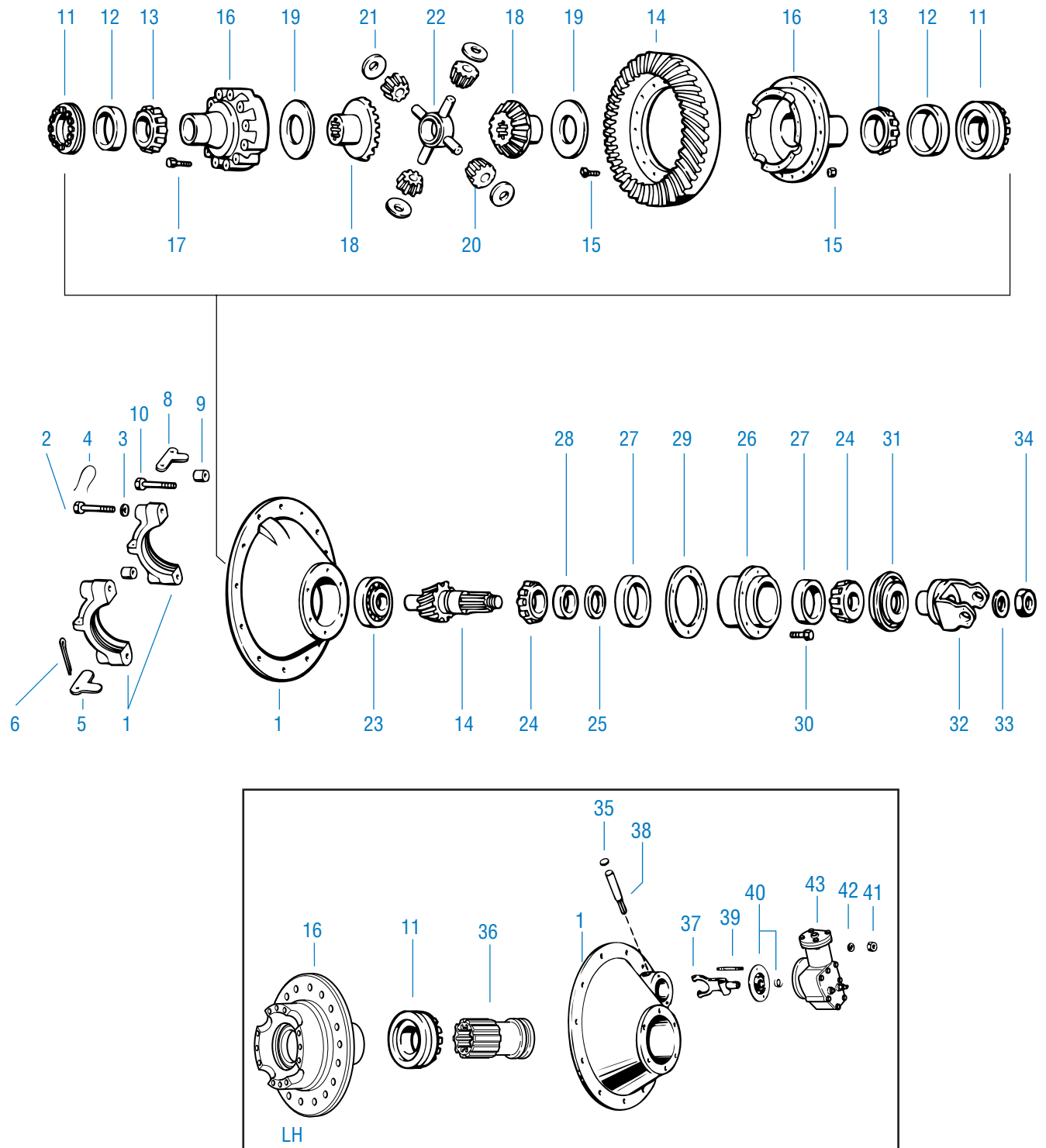
Early Models: Cylindrical Design Lockout



Item	Description	Qty	Order Part No.	Notes
1	Cap Screw	2	210381	
2	Lock Washer	2	90415	
3	Mounting Bracket	1	NLA	
4	Piston Housing	1	NLA	
5	Lock Nut	1	128160	
6	Piston	1	NLA	
7	Piston O-Ring	1	210180	
8	Shoulder Washer	1	NLA	
9	Compression Spring	1	31038	
10	Shift Fork & Push Rod Assy	1	103529	

*NLA - No Longer Available

Rear Axle - RSS40, RDS40



Item	Description	Qty	RSS40	RDS40	Notes
BASIC OVERHAUL KIT			122434	217622	Contents identified by *
DIFF. CARRIER & BEARING CAP KIT					
1	Carrier Casting No 127220-C	1	98593	—	Includes items 2-4, 7
	Carrier Casting No 127218R	1	—	98590	Includes items 2-4, 40-44
2	Bearing Cap Screw	4	127180	—	
		2	—	127180	
		2	—	32732	
3	Flat Washer	4	32912	—	
		2	—	32912	
4	Lockwire	4	12563	12563	
5	Bearing Cap Adjuster Lock	2	14275	—	
	Bearing Cap Adjuster Lock (RH)	1	—	14275	
6	Cotter Pin	2	90876	90876	
7	Dowel Bushing	2	32730	32730	
8	Bearing Cap Adjuster Lock (LH)	1	—	45448	
9	Dowel Bushing Adjuster Lock	2	37746	37746	
10	Capscrew	2	210601	210601	
11	Diff. Bearing Adjuster (RH)	1	21637	21637	
	Diff. Bearing Adjuster (LH)	1	39448	82451	
12	Diff. Bearing Cup (RH)	1	15092*	15092*	
	Diff. Bearing Cup (LH)	1	19529*	21632*	
13	Diff. Bearing Cone (RH)	1	27876*	27876*	
	Diff. Bearing Cone (LH)	1	27666*	102660*	
14	Ring Gear & Drive Pinion Set	1			See Appendix: Gear & Pinion Information
15	Bolt	16	67586	67586	In Kit 70745
	Nut	16	60600	60600	In Kit 70745
WHEEL DIFF. CASE KITS					
	3.55-4.11		98610	217619	
	4.33-6.67		121845	217620	
WHEEL DIFF. SIDE GEAR KIT			120739	114472	Includes items 21-25
WHEEL DIFF. KIT w/o SIDE GEAR KIT			118749	118749	Includes items 22-25
16	Diff. Case (Flanged Half) NSS				
	3.55-4.11	1	88501	128980	
	4.33-6.67	1	126234	128981	
	Diff. Case (Plain Half) NSS	1	86777	86777	
17	Diff. Case Cap Screw	12	88503	88503	
18	Diff. Side Gear	2	120052	—	41 Involute
		2	—	93401	36 Involute
19	Side Gear Thrust Washer	2	27274*	27274*	
20	Side Pinion	4	86780	86780	
21	Side Pinion Thrust Washer	4	86781*	86781*	
22	Spider	1	86778	86778	
23	Pinion Pilot Bearing	1	126187*	126187*	
24	Pinion Bearing Cone (Inner)	1	27239*	27239*	
	Pinion Bearing Cone (Outer)	1	14218*	14218*	
25	Pinion Bearing Spacer*	AR			See Appendix: Gear & Pinion Information

* Note: Pinion Bearing Spacer information is included in the Appendix: Gear & Pinion Information

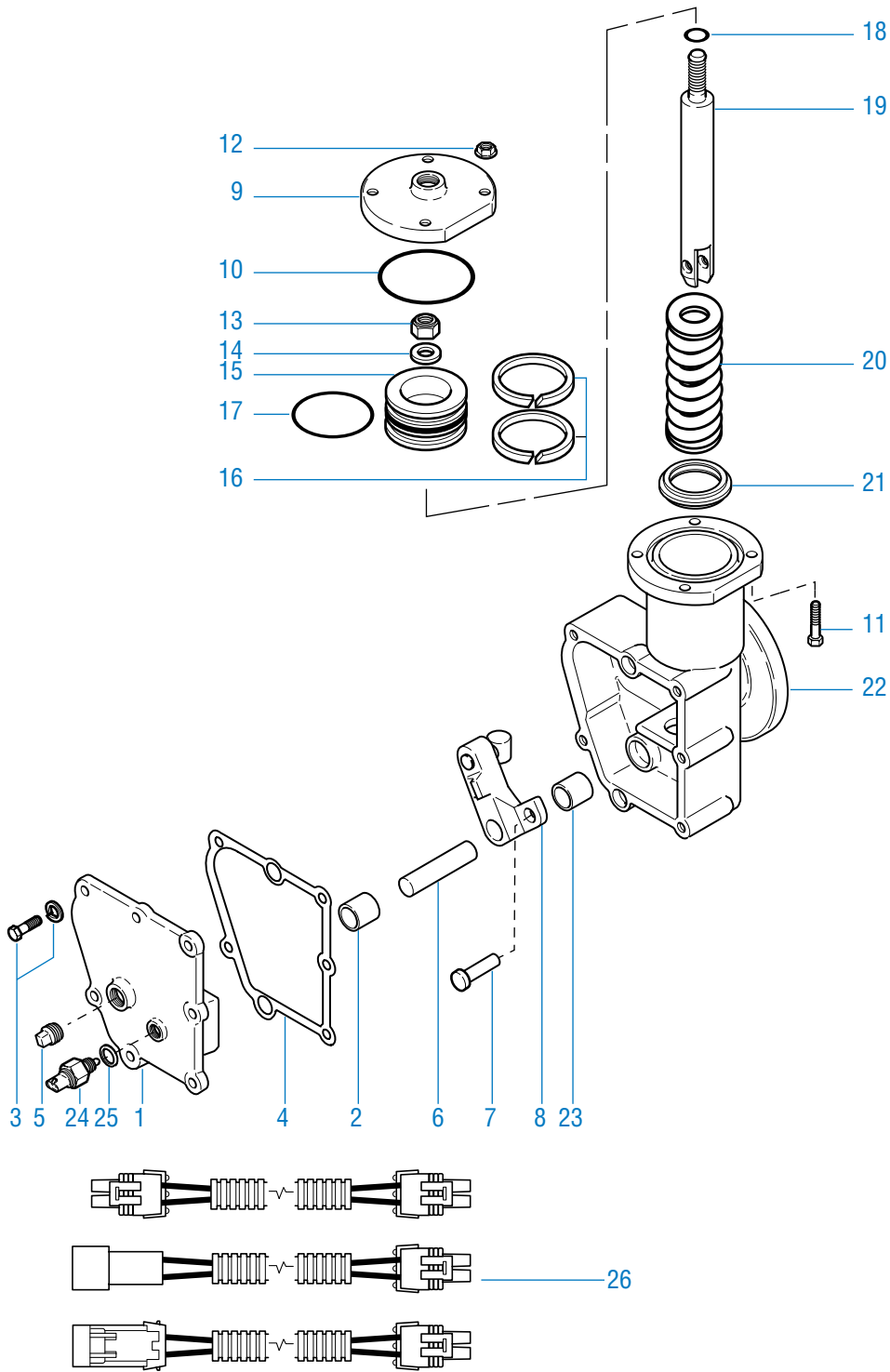
Item	Description	Qty	RSS40	RDS40	Notes
26	Pinion Bearing Cage & Cup Assy (Production # 128976)	1	210592	210592	Cage # 079245 Includes Item 27
27	Pinion Bearing Cup (Inner)	1	27238*	27238*	
	Pinion Bearing Cup (Outer)	1	14217*	14217*	
28	Pinion Bearing Spacer Washer	1	078904	31366	
29	Pinion Bearing Cage Shim	AR			
	0.003		67920*	67920*	
	0.005		67921*	67921*	
	0.010		67922*	67922*	
	0.020		67923*	67923*	
	0.030		67924*	67924*	
30	Bearing Cage Cap Screw	6	130187	130187	Replaces: 113327 & 128532
31	Oil Seal	1	210724*	210724*	
32	Input Yoke	1			See Yokes, Page 20
33	Flat Washer	1	210509	210509	
34	Pinion Nut	1	210508	210508	
Differential Lock					
35	Expansion Plug (Lower)	1	9797	9797	
	Expansion Plug (Upper)	1	30703*	30703*	
36	Sliding Clutch	1	E935088	E935088	
37	Shift Fork & Pin Assy	1	84508	84508	
38	Shift Fork Shaft Assy Shaft #41103 NSS	1	113801	113801	Includes 113140 O-ring
39	Shift Fork Mounting Stud	2	119863	119863	
40	Shift Fork Seal & Spring Assy	1	119855*	119855*	
41	Stud Nut	2	63028	63028	
42	Flat Washer	2	119857	119857	
43	Shift Unit Assy	1			See Piston Air Shift Unit, Page 16
44	Gasket Compound	AR	107276S*	107276S*	Not Illustrated

* **Note:** Pinion Bearing Spacer information is included in the Appendix: Gear & Pinion Information

Kits and Assemblies	RSS40	RDS40	
Basic Overhaul Kit	122434	217622	Contents identified with *
Wheel Diff. Case Kit	98610	217619	Ratios 3.55-4.11 / Includes Items 16-17
Wheel Diff. Case Kit	121845	217620	Ratios 4.33-6.67 / Includes Items 16-17
Wheel Diff Side Gear & Pinion Kit	120739	114472	Includes Items 18-22
Wheel Diff Kit Less Side Gears	118749	118749	Includes Items 19-22
Oil Seal & Shim Kit	122436	122436	Includes Items 29, 31, & RTV

Piston Air Shift Unit

Piston Air Shift Unit



61804-6-94

Item	Description	Qty	Part No.	Notes
1	COVER ASSY	1		
	DD Models - cover# 73484 -NSS		129032	Includes Item 2
	RD Models - cover# 73485 -NSS		129033	
2	Cover Bearing	1	73481	
3	Screw & Washer Assy	7	88053	Self-Tapping
4	Cover Gasket	1	73488	
5	Cover Plug	1	28325	
6	Actuating Lever Pin	1	73456	
7	Clevis Pin	1	73498	
8	ACTUATING LEVER, PIN & BLOCK ASSY	1		
	DD Models		129025	
	RD Models		129029	
9	Shift Hsg Cover	1	73490	
10	Seal Ring	1	73492	
11	Cover Bolt	4	73491	
12	Lock Nut	4	47641	
13	Lock Nut	1	73496	
14	Washer	1	111406	
15	Piston	1	73493	
16	Felt Piston Oiler (strip)	2	96916	
17	Piston O-Ring	1	32832	
18	Grommet	1	32826	
19	Push Rod	1	73497	
20	Compression Spring	1	73494	
21	Piston Stop	1	73495	
22	HOUSING ASSY	1		Includes Items 3 & 23 and 84805 Bushing (part not shown)
	DD Models		82428	
	RD Models		82429	
23	Housing Bearing	1	73481	
24	Switch	1	129035	
25	Nylon Washer	1	129034	
26	Wiring Harness	1	129044	Metri-pack 150 series
			129046	Metri-pack 280 series (Mack Only)
			129047	Weather Pack

Kits and Assemblies

DD Models

Air Shift Unit	129006	
Piston Air Shift Unit & Wiring Harness	129068	Incls Items 1-25 & Wiring Harness 129044
Piston Air Shift Unit & Wiring Harness	129069	Incls Items 1-25 & Wiring Harness 129046
Piston Air Shift Unit & Wiring Harness	129070	Incls Items 1-25 & Wiring Harness 129047

RD Models

Air Shift Unit	129038	
Piston Air Shift Unit & Wiring Harness	129065	Incls Items 1-25 & Wiring Harness 129044
Piston Air Shift Unit & Wiring Harness	129066	Incls Items 1-25 & Wiring Harness 129046
Piston Air Shift Unit & Wiring Harness	129067	Incls Items 1-25 & Wiring Harness 129047

Axle Housings & Shafts

Axle Shaft Configurations

Axles are built with a number of different axle shafts, on the basis of OEM specification. When ordering replacement axle shafts, note the part number stamped into the flange.

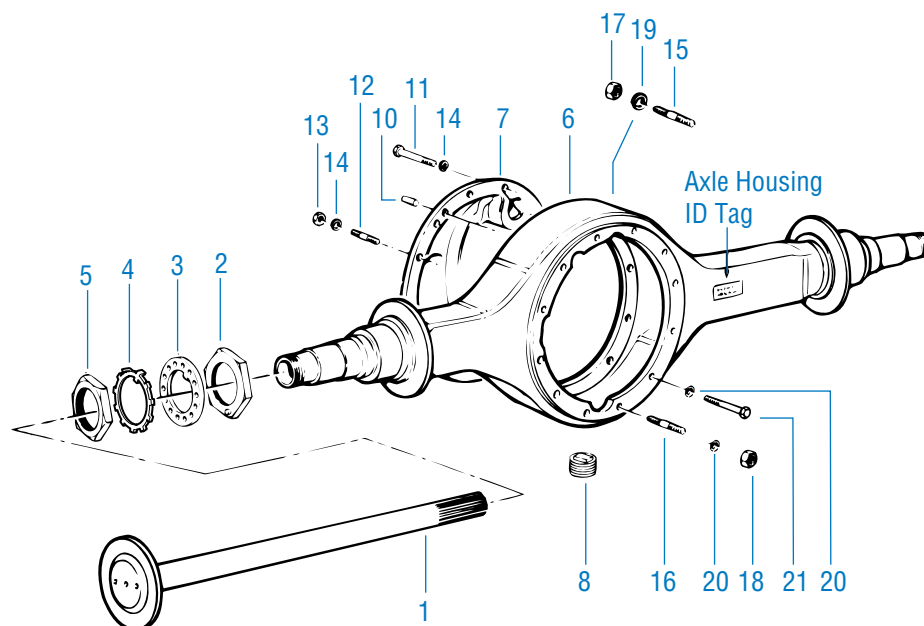
Axle Shafts

Model	Part No.	Qty	Spline	Body O.D.	Shaft Length	Spline Length	Flange O.D.	Flange Holes	OEM
DDS40 RDS40	110888	2	41	1.87	41.313		8.50	.635 STR	1, 2, 3, 4
	129330	2	41	1.87	41.500		8.50	.948 TPR	5, 6
	129332	2	41	1.87	40.690		8.50	.773 STR	4
DDS40 RDS40	129141*	1	36	2.06	40.600	11"	8.50	.948 TPR	1
	126880	1	36	2.06	40.600	4"	8.50	.948 TPR	1
	129140*	1	36	2.06	40.600	11"	8.50	.773 STR	4
	128055	1	36	2.06	40.600	4"	8.50	.773 STR	4
	129139*	1	36	2.06	41.375	11"	8.50	.635 STR	1, 2, 3, 4
	129508	1	36	2.06	41.375	4"	8.50	.635 STR	1, 2, 3, 4

* = Diff Lock Shaft w/11" Splines, and are used in sets.

- 1 = Freightliner
- 2 = Kenworth
- 3 = Peterbilt
- 4 = Volvo White
- 5 = Mack
- 6 = Western Star

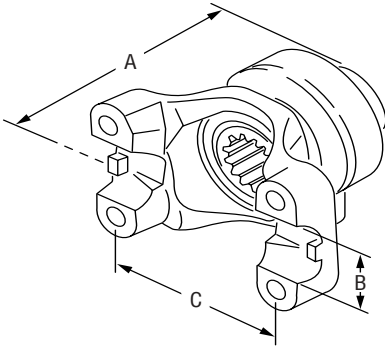
DSS40(P) / RSS40



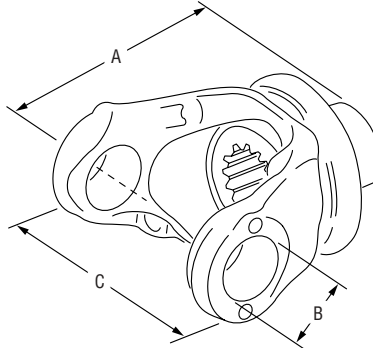
Item	Description	Qty	Part No.	Notes
1	Axle Shaft	2	See Chart	Page 18
2	Adjuster Nut - Inner	2	119881	
3	Bearing Adjuster Lockwasher	2	119883	
4	Tanged Lockwasher	2	129132	
5	Adjuster Nut - Outer	2	119882	
6	Axle Housing	1	N/A	See OEM - Housings Vary
7	Axle Housing Cover Assy	1	216642	Casting # 78923
8	Magnetic Drain Plug	1	54254	
9	Magnetic Filler Plug	1	75130	
10	Cover Locating Dowel	1	7641	Forward Axle Only
11	Cover Cap Screw	1	79558	Forward Axle Only
		7	128533	Forward Axle Only
12	Cover Stud	4	49982	Forward Axle Only
13	Nut	4	42364	Forward Axle Only
14	Lockwasher	4	90415	Forward Axle Only
15	Stud	4	36435	Forward Axle Only
16	Stud	8	36435	(short) Rear Axle Only
		4	51212	(long) Rear Axle Only
17	Nut	4	90208	Forward Axle Only
18	Nut	12	90208	Rear Axle Only
19	Lockwasher	4	90422	Forward Axle Only
20	Lockwasher	12	90422	Rear Axle Only
21	Cap Screw	2	99708	(12 pt.) Forward Axle Only
		6	128532	Forward Axle Only
22	U-Tube Breather Kit		507162	Not Illustrated

Yokes

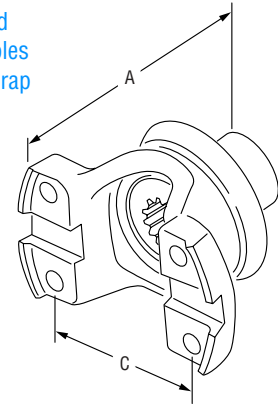
STYLE X
Half Round



STYLE Y
Full Round



STYLE Z
Half Round
Tapped Holes
Bearing Strap



All DSS40, DDS40

Forward Axle - Input / 46 - 2.350 Involute Spline, Hub Dia. 3.19"

Yoke & Seal Kit	Series	Joint Angle	Style	Dimensions (in inches):			Replaces Old Straight Spline Yokes		
				A	B	C	Dana/Eaton	Spicer	Rockwell
210843*	SPL 170	25°	X	6.53	2.16	5.51			
210845*	SPL 250	25°	X	6.76	2.36	5.31			
216471	1710	30°	Y	6.01	1.94	6.09	82468	6-4-4581	17NYS39-3
216473	1760	30°	Y	6.20	1.94	7.00	109639	6-3-4-131	
216476	1810	22.5°	X	6.01	1.94	7.55	84886	6.5-4-1991	18NYS39-3
216477	82N/8C	30°	X	4.75	N/A	6.88	119420		

* Yoke and slinger only. Purchase oil seal separately.

Forward Axle - Output / 41 - 2.100 Involute Spline, Hub Dia. 3.00"

Yoke & Seal Kit	Series	Joint Angle	Style	Dimensions (in inches):			Replaces Old Straight Spline Yokes		
				A	B	C	Dana/Eaton	Spicer	Rockwell
216479	1610	45°	Y	6.50	1.88	5.31	99714	5-4-5031	16NYS34-7
216480	1710	38°	Y	6.62	1.94	6.09	83800	6-4-4591	7NYS34-8
216481	1760	38°	Y	5.81	1.94	7.55			
216482	1810	30°	Y	5.81	1.94	7.55	87512	6.5-4-2291	8NYS34-1

* Yoke and slinger only. Purchase oil seal separately.

All RDS40, RDD40

Rear Axle - 41 - 2.100 Involute Spline, Hub Dia. 2.50"

Yoke & Slinger Assy**	Series	Joint Angle	Style	Dimensions (in inches):			Replaces Old Straight Spline Yokes		
				A	B	C	Dana/ Eaton	Spicer	Rockwell
128882	1610	26°	Y	5.19	1.88	5.31	99715	5-4-5031	16NYS34-7
128883	1610	37°	Y	6.00	1.88	5.31			
128884	1710	28°	Y	5.19	1.94	6.09			
128885	1710	42°	Y	6.12	1.94	6.09	83801	6-4-4591	7NYS34-8
128886	1760	30.5°	Y	5.25	1.94	7.00			
128887	1810	30°	Y	5.25	1.94	7.55	87513	6.5-4-2291	8NYS34-1
128888	72N/7C	N/A	Z	4.25	N/A	4.62	106459*		
210853	SPL 170	25°	X	5.32	2.16	5.51			
210855	SPL 170	45°	X	6.68	2.16	5.51			

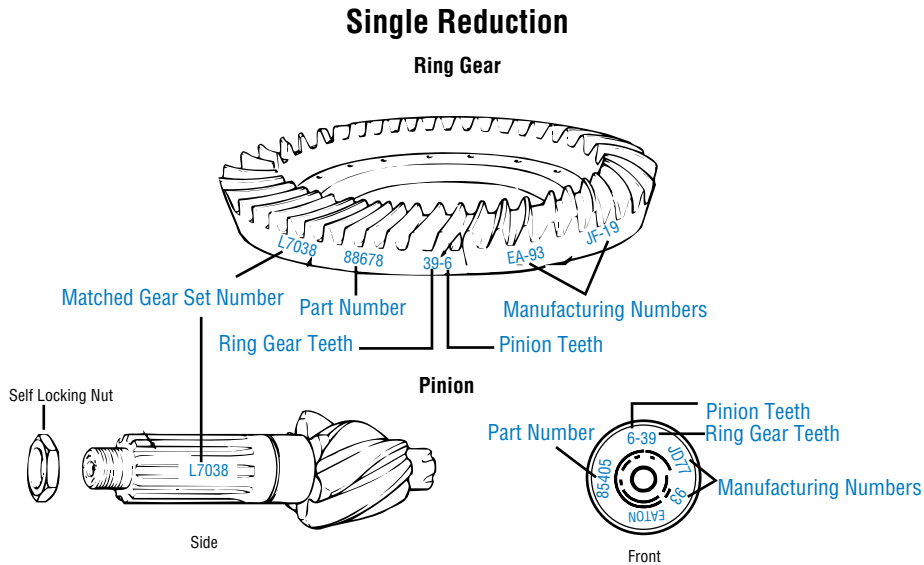
* Mechanics part number 272715.

** Yoke and slinger only. Purchase oil seal separately.

Appendix

Ring Gear and Pinion Identification

- Ring Gear and Drive Pinion are matched parts and must be replaced in sets.
- Complete identification is stamped on both parts shown in the adjacent drawing.
- Order by Dana "Set No." which includes drive pinion nut.



Pinion Bearing Spacers - DSS40(P), RSS40, DDS40(P), RDS40

Pinion Bearing Spacer size is equal to thickness in inches. The most commonly used spacers are indicated with an asterisk*.

Size "	Part #	Size "	Part #	Size "	Part #	Size "	Part #
0.167	91679	0.176	91688	0.185	91702*	0.194	91719
0.168	91680	0.177	91689*	0.186	91704*	0.195	91720*
0.169	91681	0.178	91690*	0.187	91706*	0.196	91721
0.170	91682	0.179	91691*	0.188	91708*	0.197	91722
0.171	91683	0.180	91692*	0.189	91710*	0.198	91723*
0.172	91684	0.181	91694*	0.190	91712	0.199	91724
0.173	91685	0.182	91696*	0.191	91714	0.200	91725
0.174	91686	0.183	91698*	0.192	91716	0.201	91726
0.175	91687	0.184	91700*	0.193	91718*	0.202	91727

Drive Pinion and Gear Set

Single Reduction - 18" Gearing

Forward Axle Models: DSS40(P), DDS40(P)

Ratios	Kit #	Gear (NSS)	Pinion (NSS) 41, 2.100" Dia.
3.55	122667	126678 (39)	126679 (11)
3.70	122334	98160 (37)	126161 (10)
3.90	123333	99900 (39)	127047 (10)
4.11	122335	94381 (37)	126162 (9)
4.33	122336	78856 (39)	126163 (9)
4.56	122337	78858 (41)	126164 (9)
4.88	122338	78860 (39)	126165 (8)
5.29	211333	127339 (37)	127327 (7)
5.43	122339	78862 (38)	126166 (7)
6.17	122340	78864 (37)	126167 (6)
6.50	212890	128028 (39)	128029 (6)
6.67	213287	107888 (40)	128052 (6)

Single Reduction - 18" Gearing

Rear Axle Models: RSS40, RDS40

Ratios	Kit #	Gear (NSS)	Pinion (NSS) 41, 2.100" Dia.
3.55	122668	111349 (39)	126677 (11)
3.70	121887	88500 (37)	126120 (10)
3.90	123334	99896 (39)	127048 (10)
4.11	121888	88502 (37)	126121 (9)
4.33	121889	52999 (39)	126118 (9)
4.56	121890	73312 (41)	126125 (9)
4.88	121891	53001 (39)	126119 (8)
5.29	211335	127338 (37)	127328 (7)
5.43	121892	53003 (38)	126122 (7)
6.17	121893	53005 (37)	126123 (6)
6.50	212891	128030 (39)	128031 (6)
6.67	213288	53007 (40)	128054 (6)

New Carrier Assemblies

These assemblies are complete, less input yoke and diff. lock shift units.

P = Pump

Single Reduction Models

41 Involute Splines

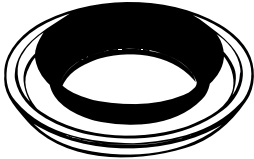
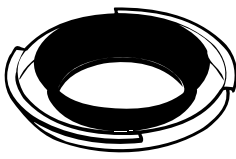
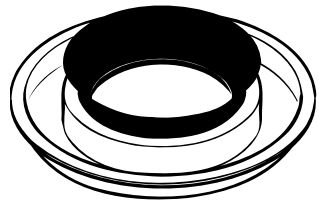
Gear Ratio	Forward Assy		Rear Assy
	DSS40	DSS40-P	RSS40
3.55	675638	675583	675575
3.70	675571	675600	675576
3.90	675572	675584	675577
4.11	675876	675585	675578
4.33	675573	675586	675579
4.56	675574	675587	675580
4.88	N/A	N/A	N/A
5.29	676113	675632	675633

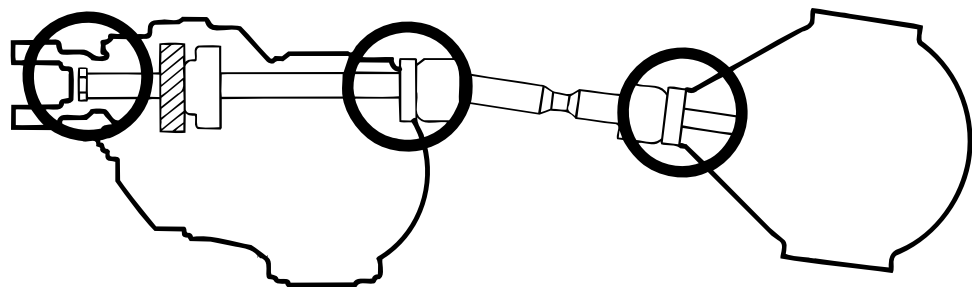
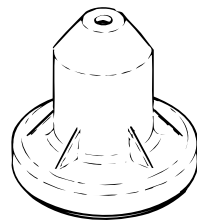
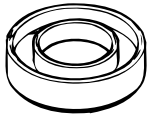
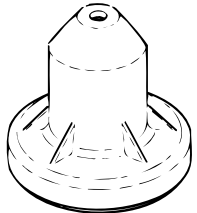
Single Reduction w/Diff Lock

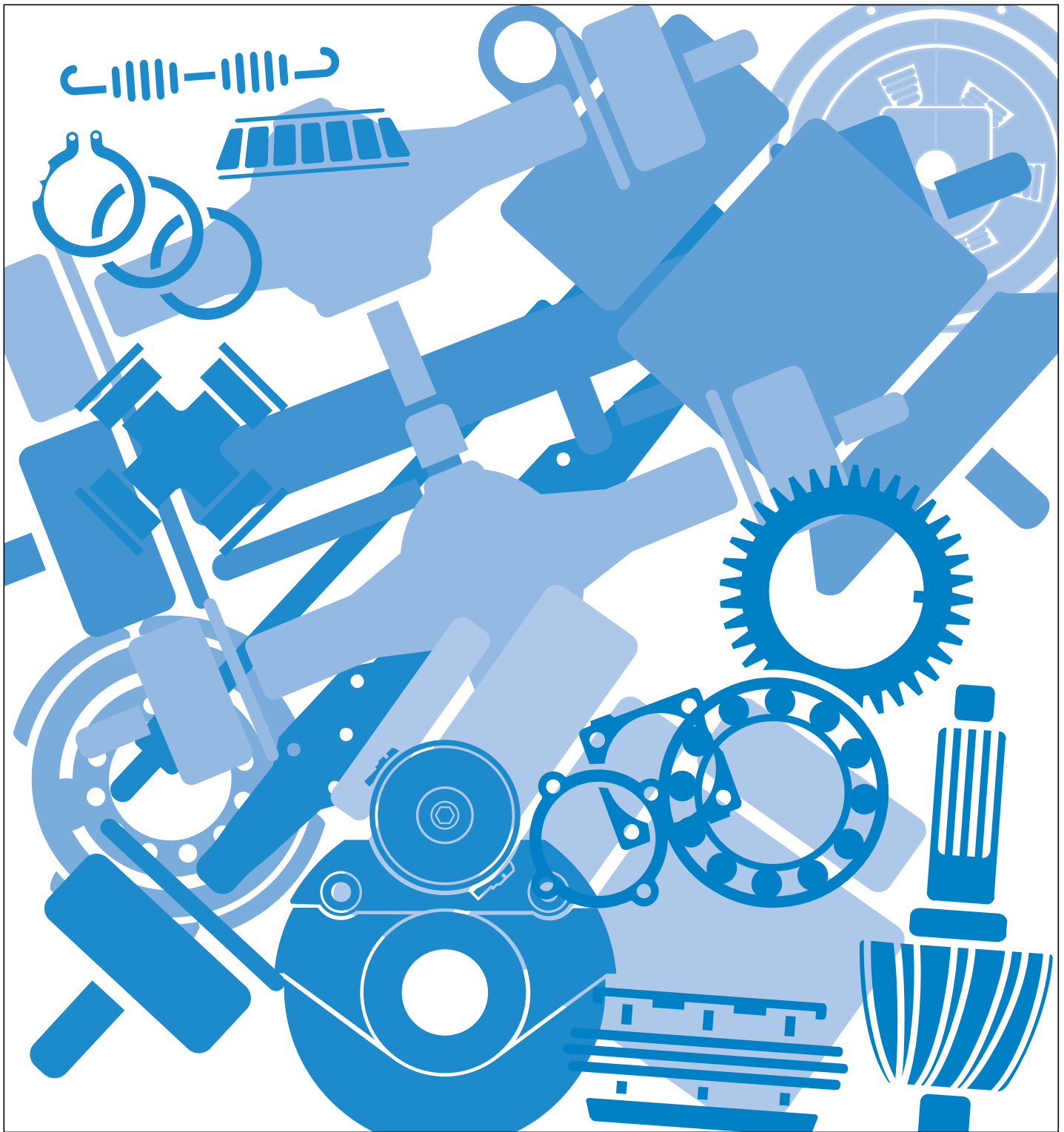
36 Involute Splines

Gear Ratio	Forward Assy		Rear Assy
	DDS40	DDS40-P	RDS40
3.55	675602	675588	675928
3.70	675603	675589	675594
3.90	675604	675590	675595
4.11	675605	675601	675596
4.33	675606	675591	675597
4.56	675607	675592	675598
4.88	N/A	N/A	N/A
5.29	675608	675593	675599

Service Kit: 217590

	D-Input	D-Output	R-Pinion
Seal Part Number	 210736	 210737	 210724

	D-Input	D-Output	R-Pinion
Location			
Tool Number Used	 +  210750		 210749



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