

Roadranger®

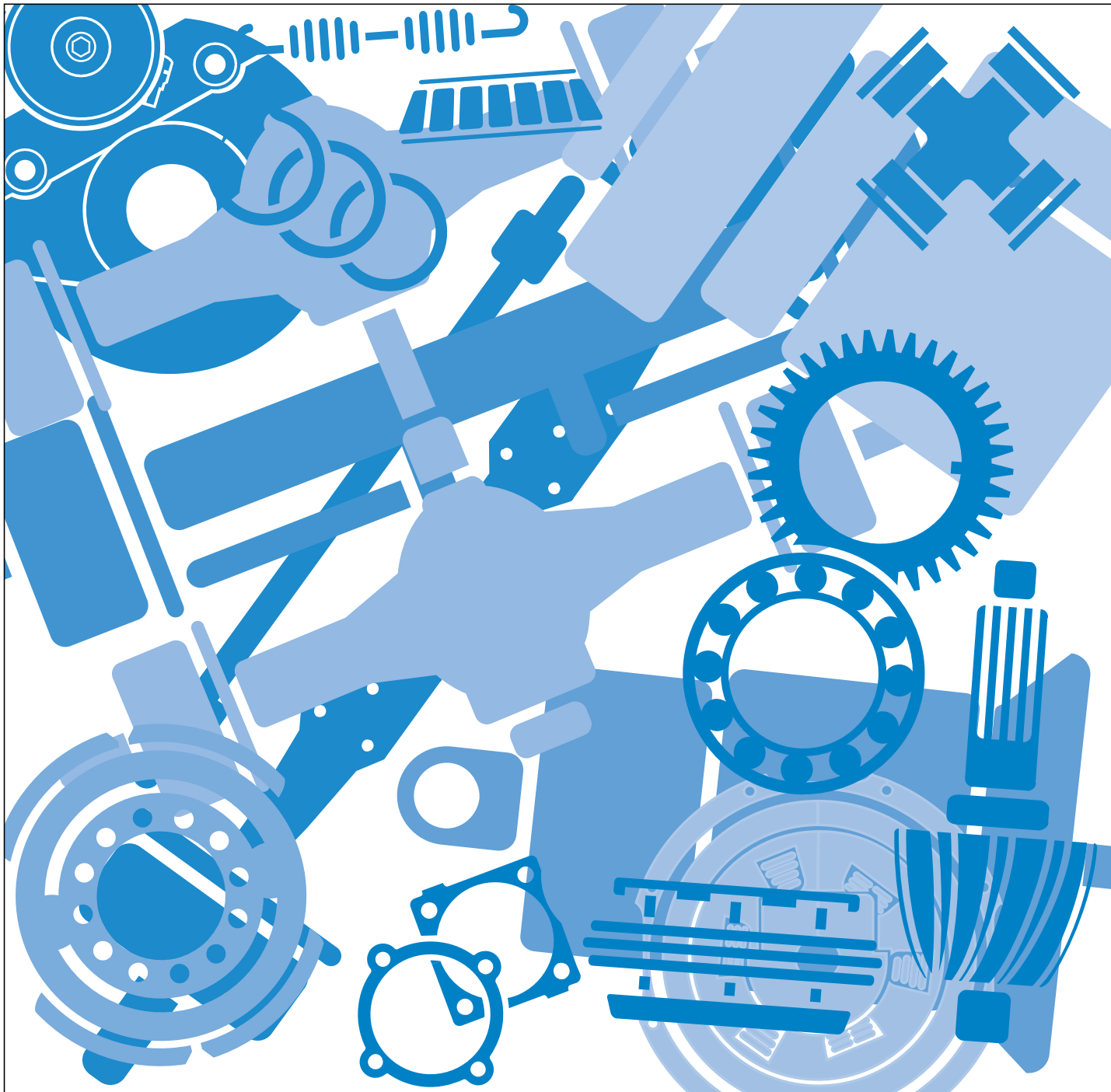
Dana® Spicer® Tandem Drive Axles

344, 404, 405, 454



One Great Drivetrain from Two Great Companies

Illustrated Parts List □ AXIP-0200 □ January 2005



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

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Models

The following models are represented in this publication.

Single Reduction Models

Forward Axle	Rear Axle	Axle Capacity	Gear Size
DS344	RS344	34,000 Lbs	15" Hypoid Gear
DS404-(P)	RS404	40,000 Lbs	15" Hypoid Gear
DS405-(P)	RS405	40,000 Lbs	15" Hypoid Gear
DS454-(P)	RS454	45,000 Lbs	15" Hypoid Gear

Single Reduction Models W/IASS (In-Axle Speed Sensors)

Forward Axle	Rear Axle	Axle Capacity	Gear Size
DA344	RA344	34,000 Lbs	15" Hypoid Gear
DA404-(P)	RA404	40,000 Lbs	15" Hypoid Gear
DA405-(P)	RA405	40,000 Lbs	15" Hypoid Gear
DA454-(P)	RA454	45,000 Lbs	15" Hypoid Gear

Single Reduction Models W/Wheel Differential Lock

Forward Axle	Rear Axle	Axle Capacity	Gear Size
DD404-(P)	RD404	40,000 Lbs	15" Hypoid Gear
DD405-(P)	RD405	40,000 Lbs	15" Hypoid Gear
DD454-(P)	RD454	45,000 Lbs	15" Hypoid Gear

Note: The D/R454 models no longer produced after 2001.

General Information

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

- **AR - 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 / Assy's Where Used** - indicates 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		Indicates information important to ordering or use
Item	Description	Qty	DS404	DD404	Notes
1	Axle Shaft	2	123456	789101	See Axle Shaft Chart
2	Flat Washer	4	246810	121416	

Summary of Kits and Assemblies

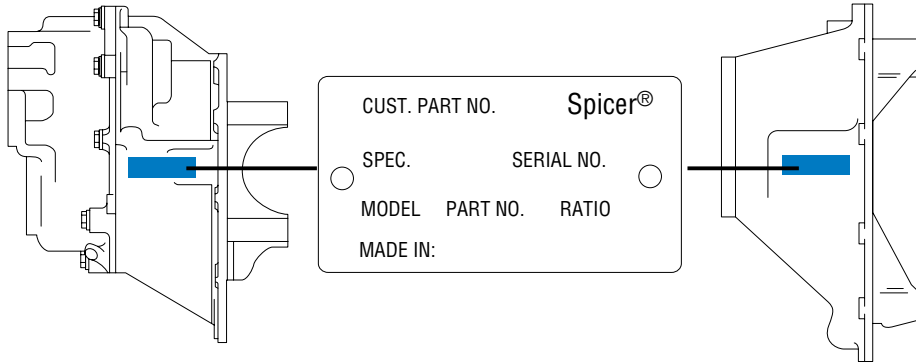
Oil Seal & Shim Kit	216225	Includes 29-30, 36
Basic Overhaul Kit	216221	Contents Identified with •

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

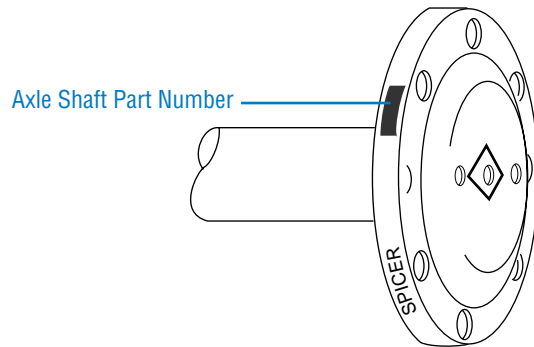
Drive Axle Assembly Tag

1. The OEM part number assigned to the axle build.
2. The specification number assigned to the axle build by Spicer. The spec number will identify all the component parts of the axle as built by Spicer, including special OEM requirements such as yokes or flanges.
3. The axle model identification.
4. The production or service part number of the carrier assembly.
5. The gear ratio of the axle.
6. The serial number of the carrier assembly assigned by the manufacturing plant.

Note: When inquiring about specific information on your axle, write down all of the above information from your tag and call your local OEM dealer or your Roadranger representative.

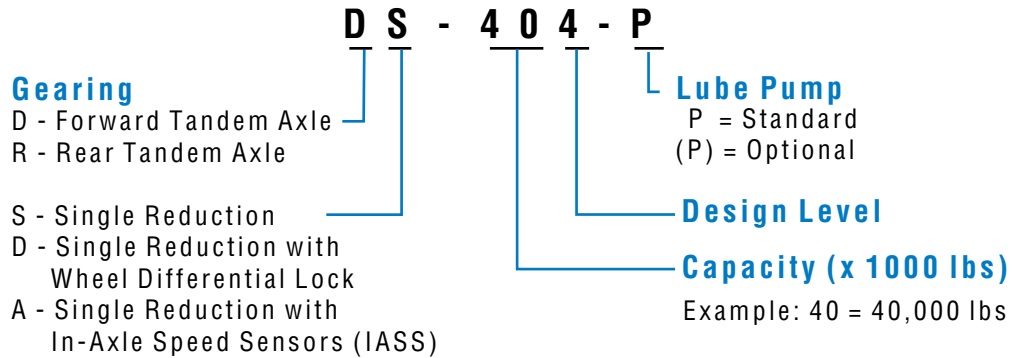
7. Country of Origin

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



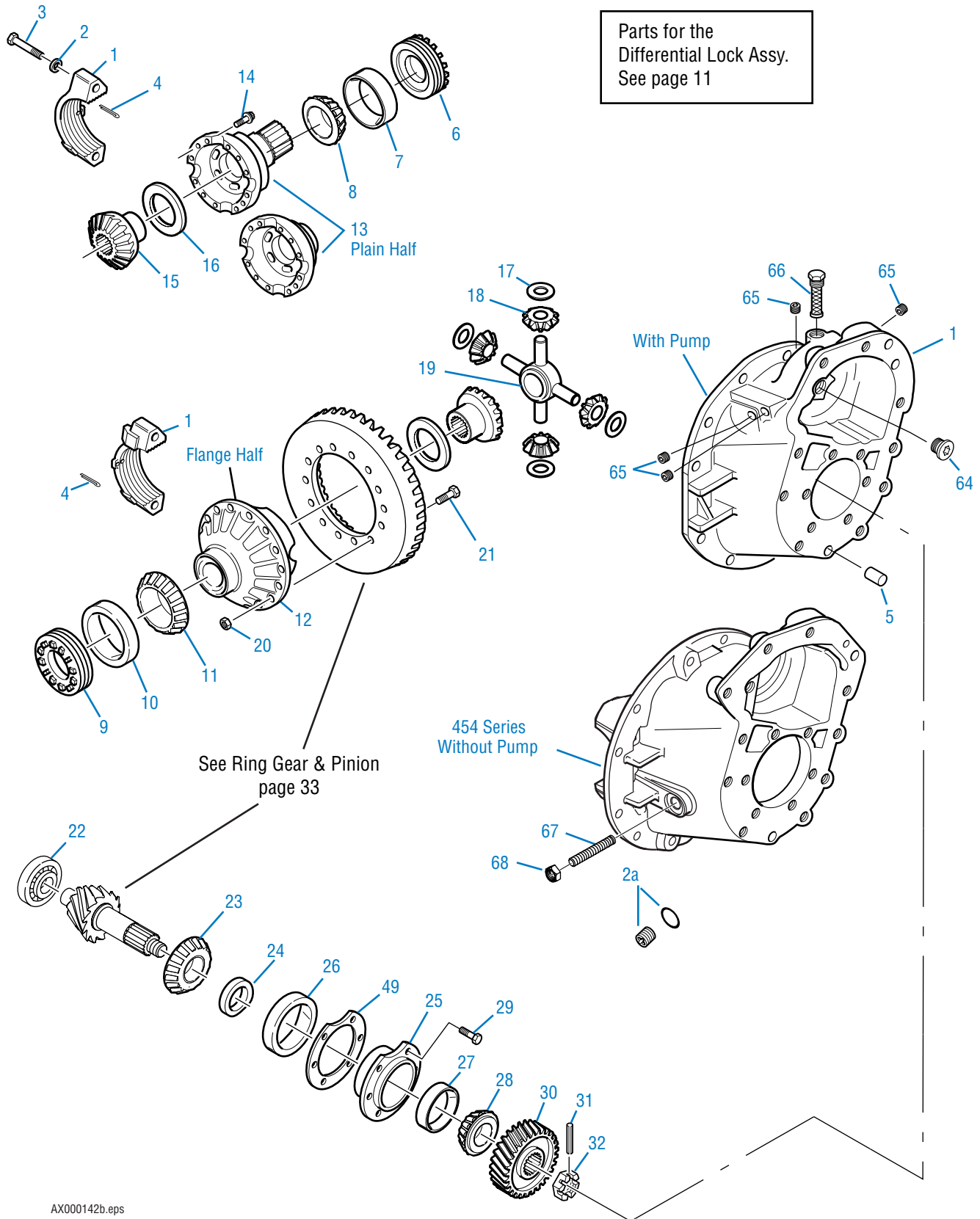
Using Model Designation to Identify Axle Components

- The Axle Model Identification number contains information that is important to understand when purchasing service parts or new components. The Model Identification number provides important vehicle, capacity and application information and model features. Use this guideline to understand your Axle Model Identification. If you need assistance, contact your Roadranger representative.

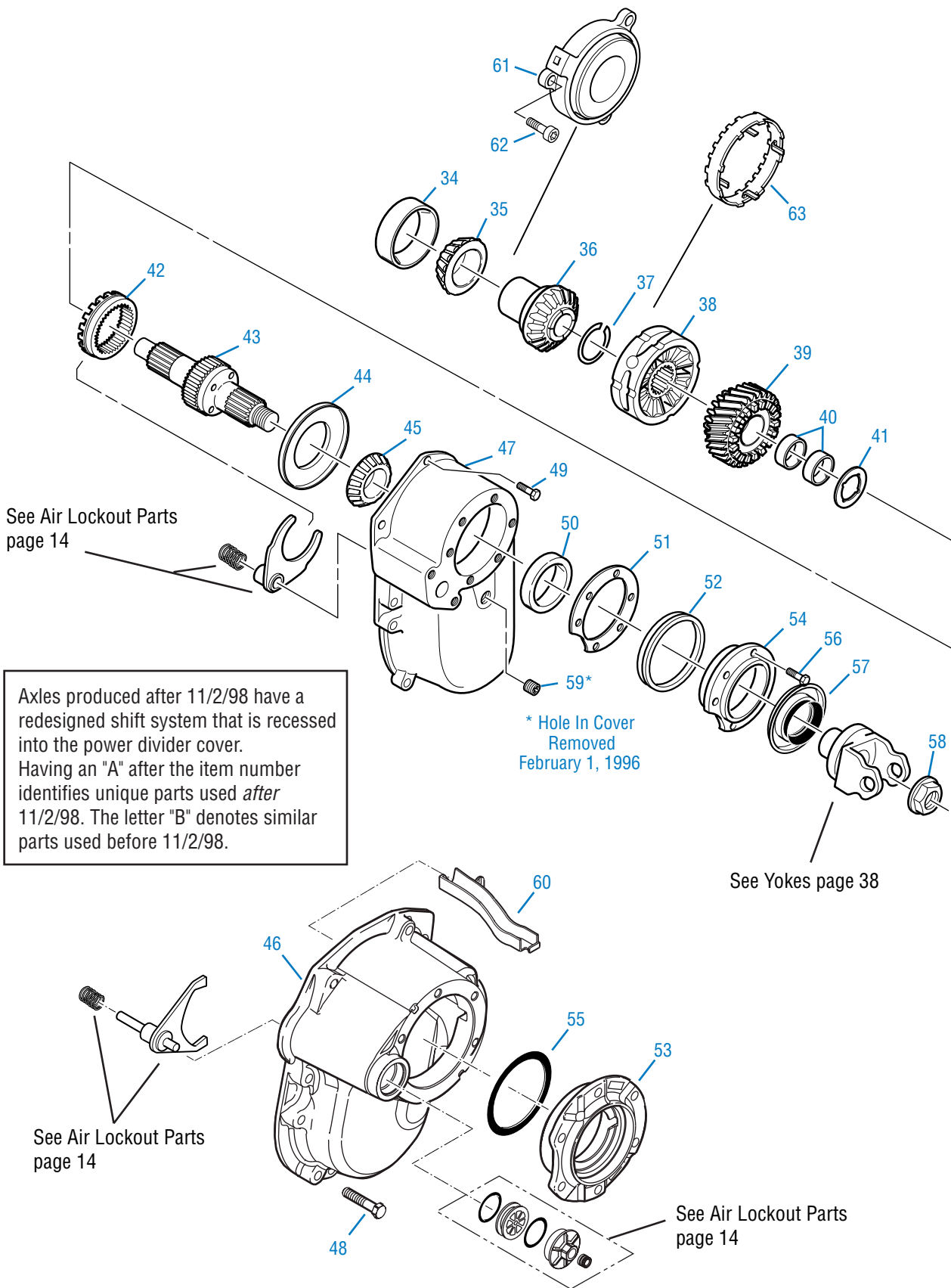


Example:
 DS = Forward Tandem/Single Reduction
 or
 RS = Rear Tandem/Single Reduction

Single Reduction-Forward Axles



AX000142b.eps



Axles produced after 11/2/98 have a redesigned shift system that is recessed into the power divider cover. Having an "A" after the item number identifies unique parts used *after* 11/2/98. The letter "B" denotes similar parts used before 11/2/98.

Single Reduction-Forward Axles

Item	Description	Qty	DA344 DS344 DA404(P) DS404(P) DA405(P) DS405(P)				Notes																												
			DA454(P) DS454(P)	DD404(P) DD405(P)	DD454(P)																														
BASIC OVERHAUL KIT			216220	216220	217463	217463	Contents Identified with •																												
BEARING KIT			216234	216234	512800	512800																													
1	Diff Carr & Brg Caps Kit Includes 1-3, 5 D454(P) Models also include items 67-68	See Chart Below	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Model Type</th> <th>Part No.</th> <th>Casting No.</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>DS344/404/405/454</td> <td>510023</td> <td>130809</td> <td>Replaces 129539, 129540</td> </tr> <tr> <td>DS404P/405P/454P</td> <td>510024</td> <td>130819</td> <td>Replaces 129551</td> </tr> <tr> <td>DD404/405/454</td> <td>510027</td> <td>130814</td> <td>Replaces 129550</td> </tr> <tr> <td>DD404P/405P/454P</td> <td>510028</td> <td>130814</td> <td>Replaces 129550</td> </tr> <tr> <td>DA344/404/405/454</td> <td>510031</td> <td>130809</td> <td>Replaces 129539, 129540</td> </tr> <tr> <td>DA404P/405P/454P</td> <td>510032</td> <td>130819</td> <td>Replaces 129551</td> </tr> </tbody> </table>				Model Type	Part No.	Casting No.	Notes	DS344/404/405/454	510023	130809	Replaces 129539, 129540	DS404P/405P/454P	510024	130819	Replaces 129551	DD404/405/454	510027	130814	Replaces 129550	DD404P/405P/454P	510028	130814	Replaces 129550	DA344/404/405/454	510031	130809	Replaces 129539, 129540	DA404P/405P/454P	510032	130819	Replaces 129551	
Model Type	Part No.	Casting No.	Notes																																
DS344/404/405/454	510023	130809	Replaces 129539, 129540																																
DS404P/405P/454P	510024	130819	Replaces 129551																																
DD404/405/454	510027	130814	Replaces 129550																																
DD404P/405P/454P	510028	130814	Replaces 129550																																
DA344/404/405/454	510031	130809	Replaces 129539, 129540																																
DA404P/405P/454P	510032	130819	Replaces 129551																																
2	Flat Washer	4	210288	210288	210288	210288																													
2A	Plug, O-Ring	1	131809	131809	131809	131809	Not Illustrated																												
3	Capscrew	4	210095	210095	210095	210095																													
4	Cotter Pin	2	90873	90873	90873	90873	Replaces 126156																												
5	Dowel Pin	2	7641	7641	7641	7641																													
6	Diff Brg Adjuster - Plain Half	1	129130	129130	128616	128616																													
	DA models see page 22	1	—	—	—	—																													
7	Brg Cup - Plain Half	1	129566	129566	15092•	15092•	129566 Replaces 9803																												
8	Brg Cone - Plain Half	1	129565	129565	128604•	128604•	129565 Replaces 27813																												
9	Diff Brg Adjuster - Flange Half	1	129128	129128	129128	129128																													
	DA models see page 22		—	—	—	—																													
10	Brg Cup - Flange Half	1	129564•	129564•	129564•	129564•	129564 Replaces 90943																												
11	Brg Cone - Flange Half	1	129563•	129563•	129563•	129563•	129563 Replaces 6082																												
WHEEL DIFF. CASE KITS							Includes items 12-14																												
12	Diff Case-RH (Flg Half)- NSS129464	1	508653	508653	508724	508724	Ratios 2.64 to 3.25																												
	NSS129465		508654	508654	508725	508725	Ratios 3.36 to 3.90																												
	NSS129466		508655	508655	508726	508726	Ratios 4.11 to 4.88																												
	NSS129467		508656	508656	508727	508727	Ratios 5.29 to 7.17																												
13	Diff Case-LH (Plain Half)-NSS	1	127498	127498	128607	128607	Order kits listed above																												
14	Capscrew	12	127465	127465	128619	128619																													
WHEEL DIFF SIDE GEAR KIT							Includes items 15-19																												
	All 344 models—39 Inv		217461	—	—	—																													
	All other models—41 Inv		216229	216229	216229	216229																													
WHEEL DIFF KIT w/o SIDE GEARS			216228	216228	216228	216228	Includes items 16-19																												
15	Side Gear																																		
	39 Inv spline	2	127367	—	—	—																													
	41 Inv spline		127368	127368	127368	127368																													
16	Side Gear Thrust Washer	2	127386•	127386•	127386•	127386•																													
17	Side Pinion Thrust Washer	4	129305•	129305•	129305•	129305•																													
18	Side Pinion	4	127364	127364	127364	127364																													
19	Diff Spider	1	127359	127359	127359	127359																													
RING GEAR NUT & BOLT KIT			508652	508652	508652	508652	Includes items 20-21																												

Single Reduction-Forward Axles

Item	Description	Qty	DA344 DS344 DA404(P) DS404(P) DA405(P) DS405(P)				Notes
			DA454(P) DS454(P)	DD404(P) DD405(P)	DD454(P)		
20	Nut	16	126216	126216	126216	126216	
21	Bolt	16	129686	129686	129686	129686	Replaces 128806 See bulletin ABIB-9701
22	Pinion Pilot Brg	1	127484•	127484•	127484•	127484•	
23	Pinion Brg Cone - Inner	1	129560•	129560•	129560•	129560•	129560 Replaces 85439
24	Pinion Brg Spacer	AR					Pinion Bearing Spacer page 21
25	Pinion Brg Cage & Cup Assy Cage #127488C NSS	1	129767	129767	129767	129767	Includes item 25-27 129767 Replaces 127601
26	Pinion Brg Cup - Inner	1	129561•	129561•	129561•	129561•	129561 Replaces 14217
27	Pinion Brg Cup - Outer	1	12495•	12495•	12495•	12495•	
28	Pinion Brg Cone - Outer	1	127535•	127535•	127535•	127535•	
29	Capscrew	6	210115	210115	210115	210115	
30	Pinion Helical Gear	1	127523	127523	127523	127523	
31	Roll Pin	1	118807	118807	118807	118807	
32	Slotted Pinion Nut	1	126182	126182	126182	126182	
34	Output Shaft Brg Cup	1	127536•	127536•	127536•	127536•	
35	Output Shaft Brg Cone	1	110812•	110812•	110812•	110812•	
36	Output Shaft Side Gear	1	127645	127645	127645	127645	
37	Snap Ring	1	85997•	85997•	85997•	85997•	
38	Inter-Axle Diff Assy	1	129771	129771	129771	129771	Was 128634
39	Helical Side Gear & Bushing Assy Gear #130906 NSS (Includes item 40)	1	130907	130907	130907	130907	Was 127495 and 127494
40	Helical Gear Bushing	2	129371	129371	129371	129371	Replaces 127543
41	Helical Gear Thrust Washer	1	128702•	128702•	128702•	128702•	
42	Lockout Sliding Clutch	1	127510	127510	127510	127510	
43	Input Shaft Kit / Shaft#129770 NSS (was 128704)	1	510593	510593	510593	510593	Includes Items 41, 43, 58 Was 216226 - See Note 2
44	Oil Retainer	1	128700	128700	128700	128700	Oil Retainer
45	Input Shaft Bearing Cone	1	129558•	129558•	129558•	129558•	129558 Replaces 820643
For Items 46 through 49, See page 14							
50	Bearing Cup	1	1008912•	1008912•	1008912•	1008912•	
OIL SEAL & SHIM KIT		1	216224	216224	216224	216224	Includes items 51, 57 & 127592 Oil Seal

NOTE 1: Helical Gear part numbers 127495 & 130907 are totally interchangeable. The 130907 is an enhanced design and 127495 is no longer being produced. No other associated parts are affected by this change. These parts are used in ALL D404 family axles.

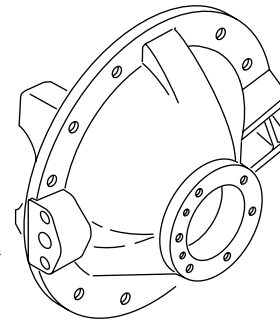
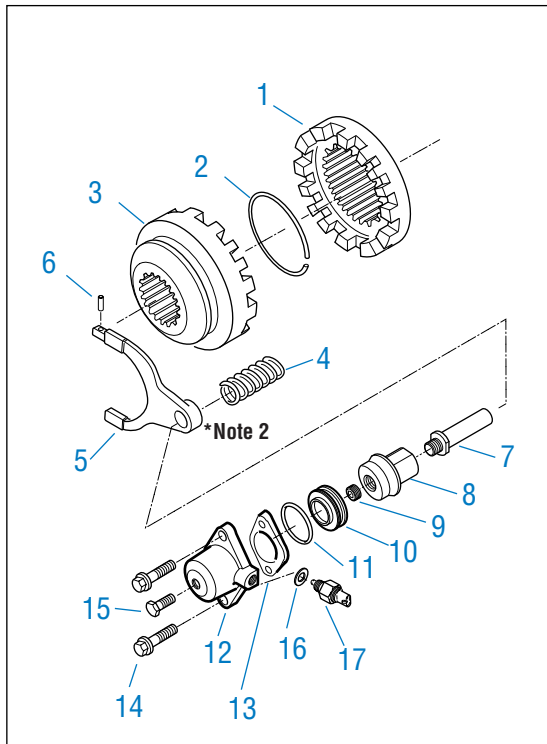
NOTE 2: Kit 510593 replaces kit 216226 in all situations. But kit 216226 cannot replace kit 510593 in the following specific models DSH40(P), DDH40(P), DSH44(P), and DDH44(P) unless it contains shaft number 129770. Kit 510593 contains input shaft p/n 129770, which is **Induction Hardened** for those model applications. Input shaft p/n 128704, which is NOT Induction Hardened, was originally included in kit 216226 up to April 22, 2003. Beginning April 22, 2003 Dana began using induction hardened input shaft 129770 in place of 128704.

Single Reduction-Forward Axles

Item	Description	Qty	DA344	DA454(P)	DD404(P)	DD454(P)	Notes
			DS344	DS454(P)	DD405(P)		
			DA404(P)				
			DS404(P)				
			DA405(P)				
			DS405(P)				
51	Shim.003	AR	127595•	127595•	127595•	127595•	
	Shim.005		127596•	127596•	127596•	127596•	
	Shim.010		127597•	127597•	127597•	127597•	
	Shim.020		127598•	127598•	127598•	127598•	
	Shim.030		127599•	127599•	127599•	127599•	
52	Oil Seal-V-Ring	1	128703•	128703•	128703•	128703•	
53	Input Brg Cover Assy - #129574C		129575	129575	129575	129575	After 11/2/98 Includes Item 50
54	Input Brg Cover Assy - #127490C	1	127602	127602	127602	127602	Before 11/2/98 Includes Item 50
55	O-Ring		129576	129576	129576	129576	After 11/2/98
56	Bearing Cover Cap Screw	6	210115	210115	210115	210115	
57	Oil Seal	1	127591•	127591•	127591•	127591•	
58	Locknut	1	128049	128049	128049	128049	In 216226 Kit (M42-1.5)
59	Plug	1	90325	90325	90325	90325	See Bulletin AXIB-9510
60	Lube Trough	1	129577	129577	129577	129577	
61	Lube Pump Assembly	1	127534	127534	127534	127534	Pump Models Only
62	Capscrew	3	127551	127551	127551	127551	Pump Models Only
63	Drive Coupling - Service	1	128628	128628	128628	128628	Pump Models Only
64	Poppet Valve Plug	1	19411	19411	19411	19411	Pump Models Only Hole size changed 2/97 Same as 90897
65	Pipe Plug	4	90897	90897	90897	90897	Pump Models Only
66	Filter Screen Assy	1	127649	127649	127649	127649	Pump Models Only
67	Thrust Screw	1	—	126193	—	126193	
68	Jam Nut	1	—	210184	—	210184	
69	RTV - Sealant	1	107276S	107276S	107276S	107276S	Not Illustrated

NSS - Not Sold Separately

Wheel Differential Lock Assembly



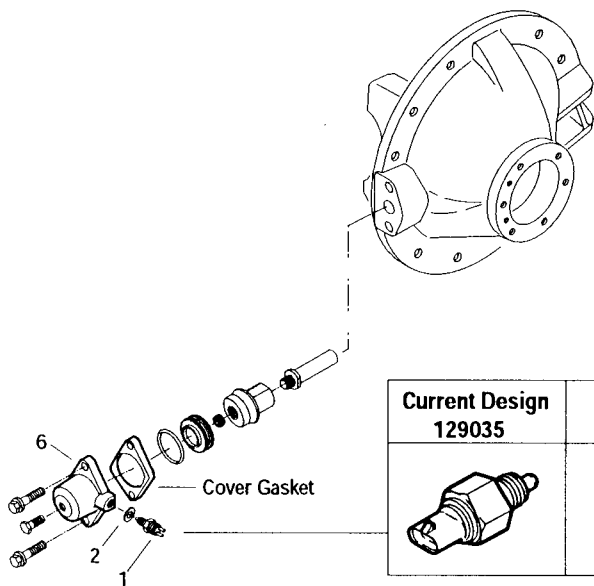
Rear carrier illustrated above.
Parts for forward carrier are identical to the rear carrier.

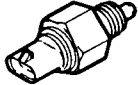
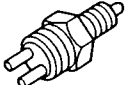
WHEEL DIFFERENTIAL LOCK ASS'Y.

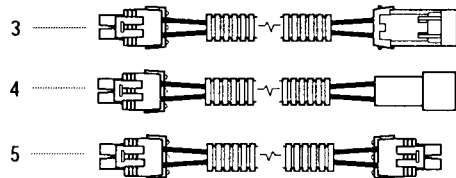
Item	Description	Qty	DD/RD404-(P) DD/RD405-(P) DD/RD454-(P)	Notes
1	Fixed Curvic Clutch Gear	1	128627	
2	Snap Ring	1	129433	Replaces 210299
3	SL Curvic Clutch Gear - 41 Inv spline	1	126840	
4	Compression Spring	1	128614	
SHIFT FORK ASSY			217465	Includes items 5-6
5	Shift Fork - 128611C NSS	1	—	128609 Fork – NSS
6	Spring Pin	1	210020	
7	Push Rod	1	128617	
8	Piston Driver	1	128640	
9	Set Screw	1	128618	
10	Piston	1	128624	
11	O-Ring	1	210180	
12	Piston Cover	1	—	See page 12 & 13
13	Gasket	1	128643	
14	Cap screw - Flg Head	2	128744	
15	Cap screw	1	128274	M12 x 1.5
16	Washer	1	129034	See page 12 & 13
17	Switch	1	129035	See page 12 & 13
18	Fitting Assy.	1	128178	Note 1 - Not Illustrated
19	Wiring Harness	1	—	See page 12 & 13 - Not Illustrated
20	Washer	1	210288	Note 2 - Not Illustrated

Note 1: Used in clearance sensitive applications, fitting also converts Metric threads to English threads.

***Note 2:** Washer used in diff. lock assembly in 3.90 ratios only.



Current Design 129035	Old Design 210280
	



After July 1, 1996, (Bulletin ABIB-9609) the diff lock selector switch is located on a piston cover that has a 14 mm threaded hole to accommodate the 129035 switch. The original piston covers are replaced by PISTON COVER UPGRADE KITS and the 129035 selector switch is now included with any Carrier Unit built after July 1, 1996 (date code H96183). When ordering a piston cover upgrade kit, it is important to select a kit that includes the proper wiring harness for the vehicle being repaired, reference charts below.

Item	Parts Used Before 7/1/96	Parts Used After 7/1/96	Part Description	Notes	Order Upgrade Kit
1	210280 Note 1	129035	Selector Switch	Note 2	—
2	126618	129034	Nylon Washer - Black		—
3	128146 Note 1	129044	Wiring Harness	Metri-Pack 150 Series	508396
4	128445 Note 1	129046	Wiring Harness	Metri-Pack 280 Series	508291
5	128481 Note 1	129047	Wiring Harness	Weather Pack	508289
6	128641	129425	Piston Cover	Inch Thread Airline Hole	See Below
6	128612*	129424*	Piston Cover	Metric Thread Airline Hole	508290

Note 1: Part is no longer available, you must order upgrade kits.

Note 2: Service carrier units built after 7/1/96 are built with 129425 Piston Covers and include a new selector switch.

Piston Cover Upgrade Kits

Description	Kit Contents			
	508289	508290	508291	508396
Selector Switch - 14 MM	129035	129035	129035	129035
Nylon Washer	129034	129034	129034	129034
Piston Cover*	129425	129424*	129425	129425
Wiring Harness	129047	129047	129046	129044
Cover Gasket	128643	128643	128643	128643

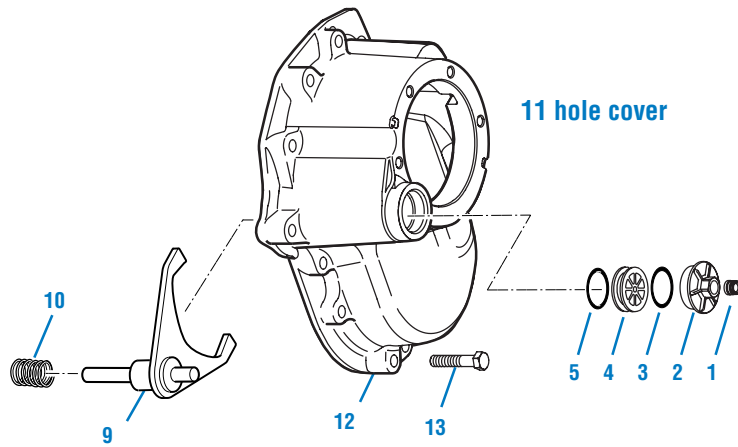
*Cover 129424 and 128612 have metric threaded airline hole for GMC applications.

Wiring Harness Usage by OEM

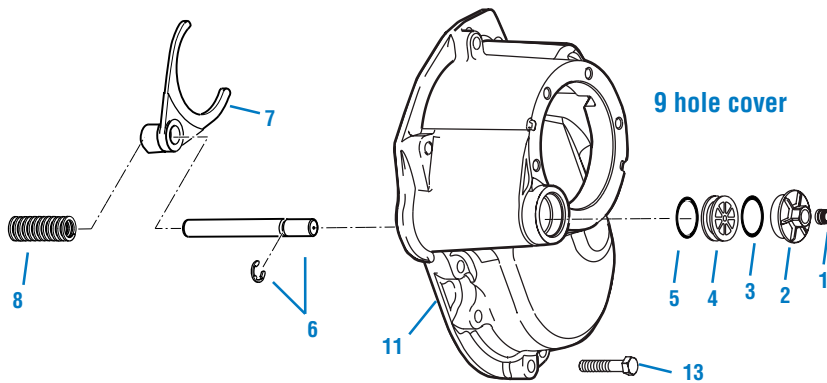
OEM	Wiring Harness Part Numbers	
	Before 7/1/96	After 7/1/96
Volvo, GMC, IHC Kenworth, Peterbilt	128481	129047
Western Star, Freightliner Ford	128146	129044
Mack	128445	129046

Air Lockout Parts - After 11/2/98

Lockout design after 2/2/00



Lockout design after 11/2/98



Item	Description	Qty	Integral Shift Cylinder Models	Notes
1	Plastic Shipping Plug	1	599792	
2	Piston Cover Assy	1	129573	Cover 129578, Includes 3
3	O-Ring	1	129579	
4	Piston	1	129580	
5	O-Ring	1	210180	
6	Push Rod Assy	1	N/A	Order Kit 510870
7	Shift Fork Assy	1	129584	Order Kit 510870
8	Compression Spring	1	129859	
9	Shift Fork Assy - Welded	1	129856	Order Kit 510870
10	Compression Spring	1	129859	
11	PDU Cover - 9 hole	1	129572	Note 1
12	PDU Cover - 11 hole	1	130823	Note 1
13	Capscrew			
	After 11/2/98	9	210091	Note 1
	After 2/2/00	11	210091	Note 1

NSS - Not Sold Separately

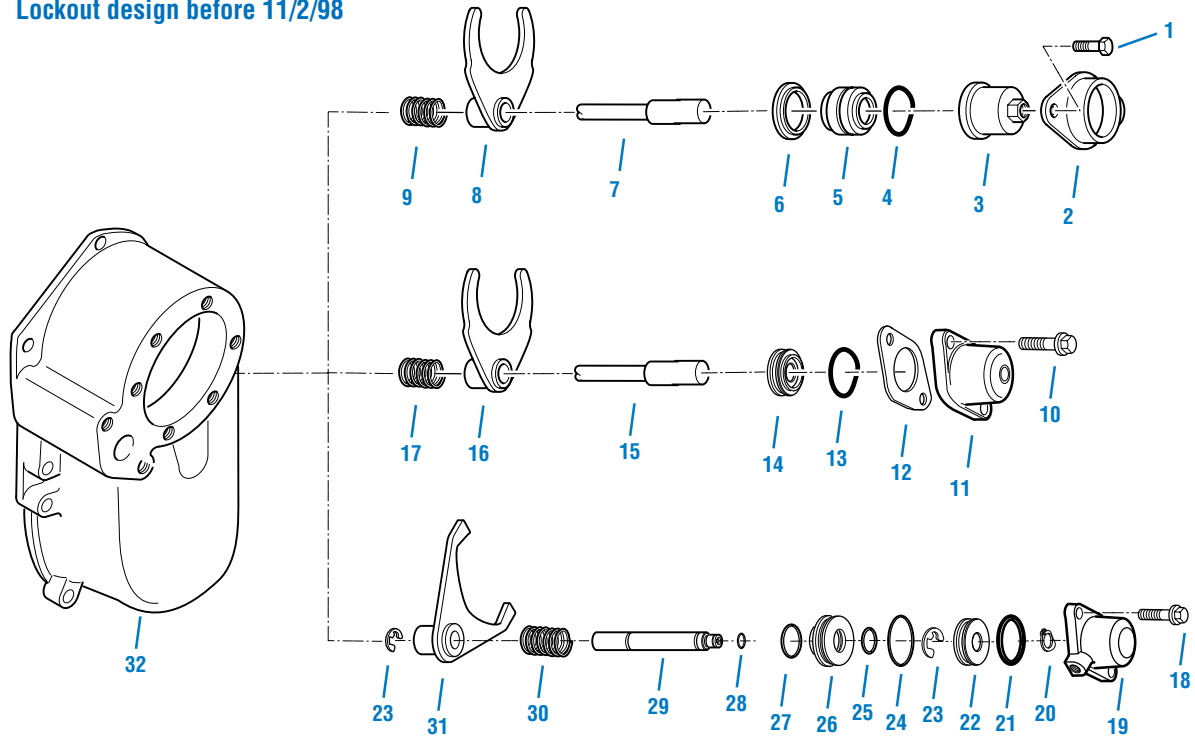
NOTE 1: On June 3, 2002, the design of the power divider cover changed. The original PDU cover (P/N: 129572) had 9 holes and required 9 fasteners. The current design PDU cover (P/N: 130823) has 11 holes and requires the use of 11 long fasteners. The new 130823 PDU covers now replace the 129572 covers in service.

Summary of Kits and Assemblies

Air L/O Kit - Complete	510052	Includes: 1-8
Repair Kit	510053	Includes: 2-5
Shift Fork & Compression Spring Kit	510870	Includes: 9-10

Air Lockout Parts - Before 11/2/98

Lockout design before 11/2/98

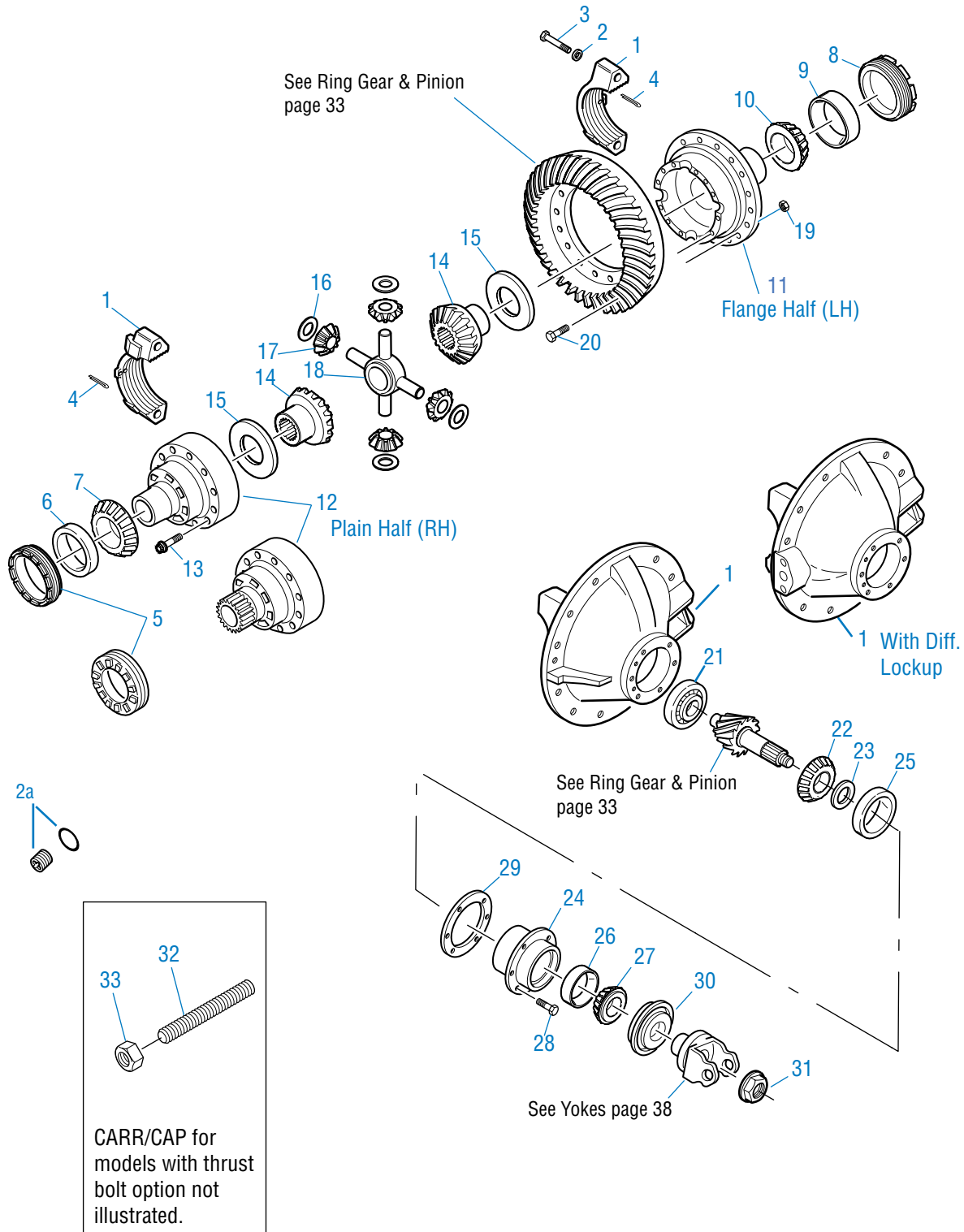


Item	Description	Qty	Straight Air Before 11/2/96 (Cylindrical)	Straight Air 11/2/96 to 11/2/98 (Cast Iron)	Navistar Rev Air	Notes
1	Capscrew	2	210381			
2	Mounting Bracket	1	NLA			Order: 507494
3	Piston Housing	1	NLA			Order: 507494
4	O-Ring	1	210180			
5	Piston	1	NLA			Order: 507494
6	Shoulder Washer	1	NLA			Order: 507494
7	Push Rod	1	127477			
8	Shift Fork Assy	1	129783			Replaces 127506
9	Compression Spring	1	127474			
10	Capscrew	2		128744		
11	Piston Housing	1		129005		
12	Gasket	1		128643		
13	O-Ring	1		210180		
14	Piston	1		129290		
15	Push Rod	1		129583		
16	Shift Fork Assy	1		129783		Replaces 127506
17	Compression Spring	1		129584		
18	Capscrew	1			128744	
19	Piston Housing	1			128733	
20	Snap Ring	1			128734	
21	O-Ring	1			210180	
22	Piston	1			128724	
23	Snap Ring	2			128725	
24	O-Ring	1			128728	
25	O-Ring	1			128729	
26	Pilot Plate	1			128726	
27	O-Ring	1			128727	
28	O-Ring	1			128331	
29	Push Rod	1			128730	
30	Compression Spring	1			128731	
31	Shift Fork Assy	1			129783	Replaces 127506
32	PDU Cover - Original Design	1	127605	129572	127605	

Summary of Kits and Assemblies

Air L/O Kit w/o Shift Fork	507494	Includes: 10-14
Air L/O Kit - Complete	508121	Includes: 10-17
Repair Kit	507709	Includes: 12-14
Air L/O Kit - w/o Shift Fork	216048	Includes: 18-30
Air L/O Kit - Complete	128735	Includes: 18-31

Single Reduction - Rear Axles



Single Reduction - Rear Axles

Item	Description	Qty	RA344	RS344	RA404	RS404	RA405	RA454	RD404	RD454	Notes
			RS405	RS454	RD405	RD454					
	BASIC OVERHAUL KIT		216221	216221	217464	217464					Contents Identified with •
	BEARING KIT		216248	216248	512805	512805					
1	Diff Carr & Brg Caps Kit includes items 1-3, 32 & 33		See Chart Below								
			Model Type	Part No.	Casting No.	Notes					
			RS344/404/405/454	510018	129541C	replaces 216223					
			RA344/404/405/454	510020	129541C	replaces 510019					
			RD404/405/454	510017	128600C	replaces 217362					
2	Flat Washer	4	210288	210288	210288	210288					
2a	Plug & O-Ring Assembly	1	131809	131809	131809	131809					
3	Capscrew	4	210095	210095	210095	210095					
4	Cotter Pin	2	90873	90873	90873	90873					Replaces 126156
5	Diff Brg Adjuster - Plain Half	1	129130	129130	128616	128616					
	RA models see page 22		—	—	—	—					
6	Bearing Cup - Plain Half	1	129566•	129566•	129566•	129566•					Replaces 9803
7	Bearing Cone - Plain Half	1	129565•	129565•	129565•	129565•					Replaces 27813
8	Diff Brg Adjuster - Flange Half	1	129128	129128	129128	129128					Replaces 127410
	RA models see page 22		—	—	—	—					
9	Bearing Cup - Flange Half	1	129564•	129564•	129564•	129564•					Replaces 90943
10	Bearing Cone - Flange Half	1	129563•	129563•	129563•	129563•					Replaces 6802
WHEEL DIFF. CASE KITS											Includes items 11-13
11	Diff Case-LH (Flg Half)-NSS129464	1	508653	508653	508724	508724					Ratios 2.64 to 3.25
	Diff Case-LH (Flg Half)-NSS129465		508654	508654	508725	508725					Ratios 3.36 to 3.90
	Diff Case-LH (Flg Half)-NSS129466		508655	508655	508726	508726					Ratios 4.11 to 4.88
	Diff Case-LH (Flg Half)-NSS129467		508656	508656	508727	508727					Ratios 5.29 to 7.17
12	Diff Case-RH(Plain Half)-NSS	1	127498	127498	128607	128607					Order kits listed above
13	Capscrew	12	127465	127465	128619	128619					
WHEEL DIFF SIDE GEAR KIT											Includes items 14-18
	All 344 models - 39 Inv		217461	—	—	—					
	All other models - 41 Inv		216229	216229	216229	216229					
WHEEL DIFF KIT w/o SIDE GEARS			216228	216228	216228	216228	Includes items 15-18				
14	Side Gear										
	39 Inv spline	2	127367	—	—	—					
	41 Inv spline		127368	127368	127368	127368					
15	Side Gear Thrust Washer	2	127386•	127386•	127386•	127386•					
16	Side Pinion Thrust Washer	4	129305•	129305•	129305•	129305•					Replaces 127369
17	Side Pinion	4	127364	127364	127364	127364					
18	Diff Spider	1	127359	127359	127359	127359					
RING GEAR NUT & BOLT KIT			508652	508652	508652	508652	Includes items 19-20				
19	Nut	16	126216	126216	126216	126216					
20	Bolt	16	129686	129686	129686	129686					Replaces 128806 See bulletin ABIB-9701
21	Pinion Pilot Brg	1	127485•	127485•	127485•	127485•					

Single Reduction - Rear Axles

Item	Description	Qty	RA344	RA454	RD404	RD454	Notes
			RS344	RS454	RD405		
			RA404				
			RS404				
			RA405				
			RS405				
22	Pinion Brg Cone - Inner	1	129562•	129562•	129562•	129562•	Replaces 14218
23	Pinion Brg Spacer	AR					Pinion Bearing Spacer page 21
24	Pinion Brg Cage & Cup Assy Cage #127481C NSS	1	127600	127600	127600	127600	Includes items 24-26
25	Pinion Brg Cup - Inner	1	129561•	129561•	129561•	129561•	Replaces 14217
26	Pinion Brg Cup - Outer	1	12495•	12495•	12495•	12495•	
27	Pinion Brg Cone - Outer	1	12496•	12496•	12496•	12496•	
28	Capscrew	6	210115	210115	210115	210115	
OIL SEAL & SHIM KIT			216225	216225	216225	216225	Includes items 29-30, 34
29	Shim.003	AR	127595•	127595•	127595•	127595•	
	Shim.005		127596•	127596•	127596•	127596•	
	Shim.010		127597•	127597•	127597•	127597•	
	Shim.020		127598•	127598•	127598•	127598•	
	Shim.030		127599•	127599•	127599•	127599•	
30	Oil Seal	1	127591•	127591•	127591•	127591•	
31	Pinion Nut	1	127589	127589	127589	127589	M36 x 1.5
32	Thrust Screw	1	—	126193	—	126193	
33	Jam Nut	1	—	210184	—	210184	
34	RTV - Sealant	1	107276S•	107276S•	107276S•	107276S•	Not Illustrated

NSS - Not Sold Separately

Bearing Spacers

Effective March 1 1995, Dana Spicer D344/404/405/454 series axles were built with a thicker variable pinion spacer different from the original design, axles built before this date used a "two" washer setup. This "two" washer setup is comprised of a spacer washer (127565) and a variable pinion bearing spacer (part number by thickness).

When servicing the above models, select a variable pinion bearing spacer from the list below to attain the correct pinion bearing preload. All procedures on "Pinion Bearing Preload" remain the same and the proper steps should be followed according to your Dana Spicer Service Manual. **If you have an existing 127565 spacer washer, do not use it with the new variable pinion bearing spacers listed below.**

Spacer washer 127565 is no longer available and has been removed from basic overhaul kits 216220 & 217463. The new variable pinion bearing spacers listed below are sold separately.

D344/404(P)/405(P)/454(P)

New Spacers	Spacer Thickness
129079	0.797
129080	0.798
129081	0.800
129082	0.801
129083	0.802
129084	0.803
129085	0.804
129086	0.806
129087	0.807
129088	0.808
129089	0.809H
129090	0.810H
129091	0.811H
129093	0.812H
129097	0.814H
129099	0.815H
129101	0.816H
129103	0.817H
129105	0.818H
129107	0.819H
129109	0.820H
129111	0.821
129113	0.822
129115	0.823
129117	0.824
129119	0.825
129120	0.826
129121	0.828
129122	0.829
129123	0.830
129124	0.831
129125	0.832
129126	0.833

H Most popular

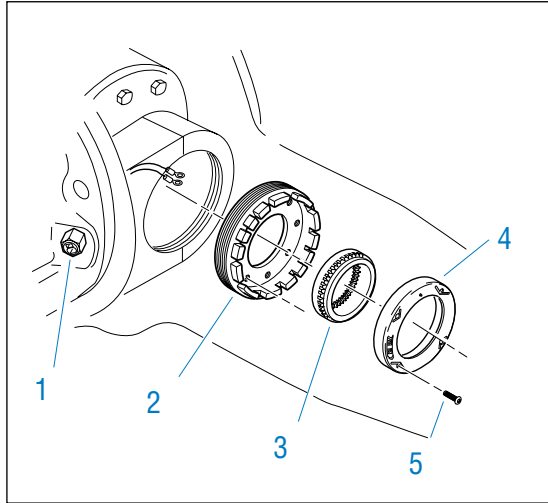
R344/404/405/454

Bearing Spacers Part Number	Spacer Thickness
91553	.624
91554	.625
91555	.626
91556	.627
91557	.628
91558	.629
91559	.630
91560	.631
91561	.632
91562	.633
91564	.634H
91566	.635H
91568	.636H
91572	.637H
91576	.638H
91580	.639H
91584	.640H
91588	.641H
91592	.642H
91596	.643H
91600	.644H
91602	.645
91604	.646
91606	.647
91608	.648
91610	.649
91611	.650
91612	.651
91613	.652
91614	.653
91615	.654

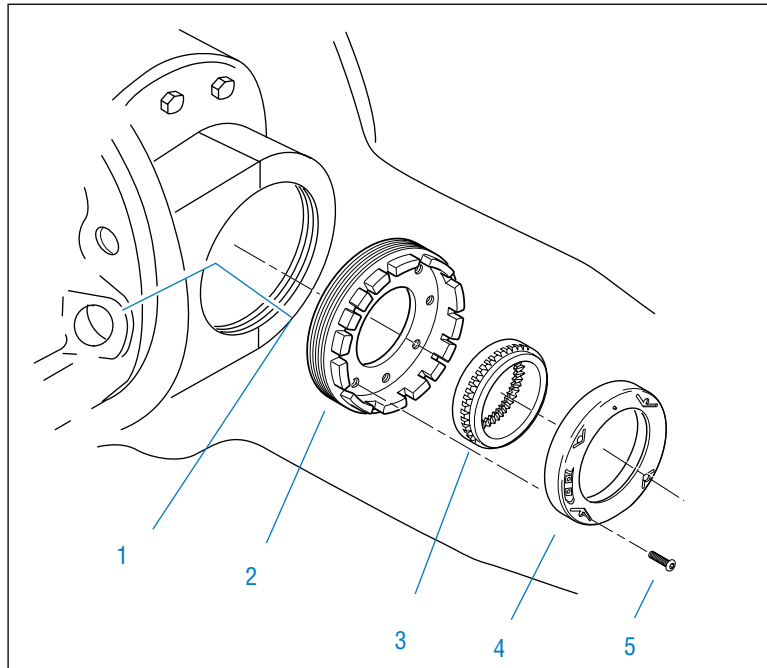
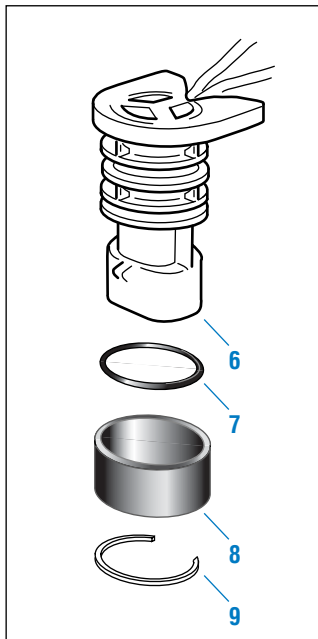
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In Axle Speed Sensor

In Axle Speed Sensor Before 11/2/98



In Axle Speed Sensor After 11/2/98

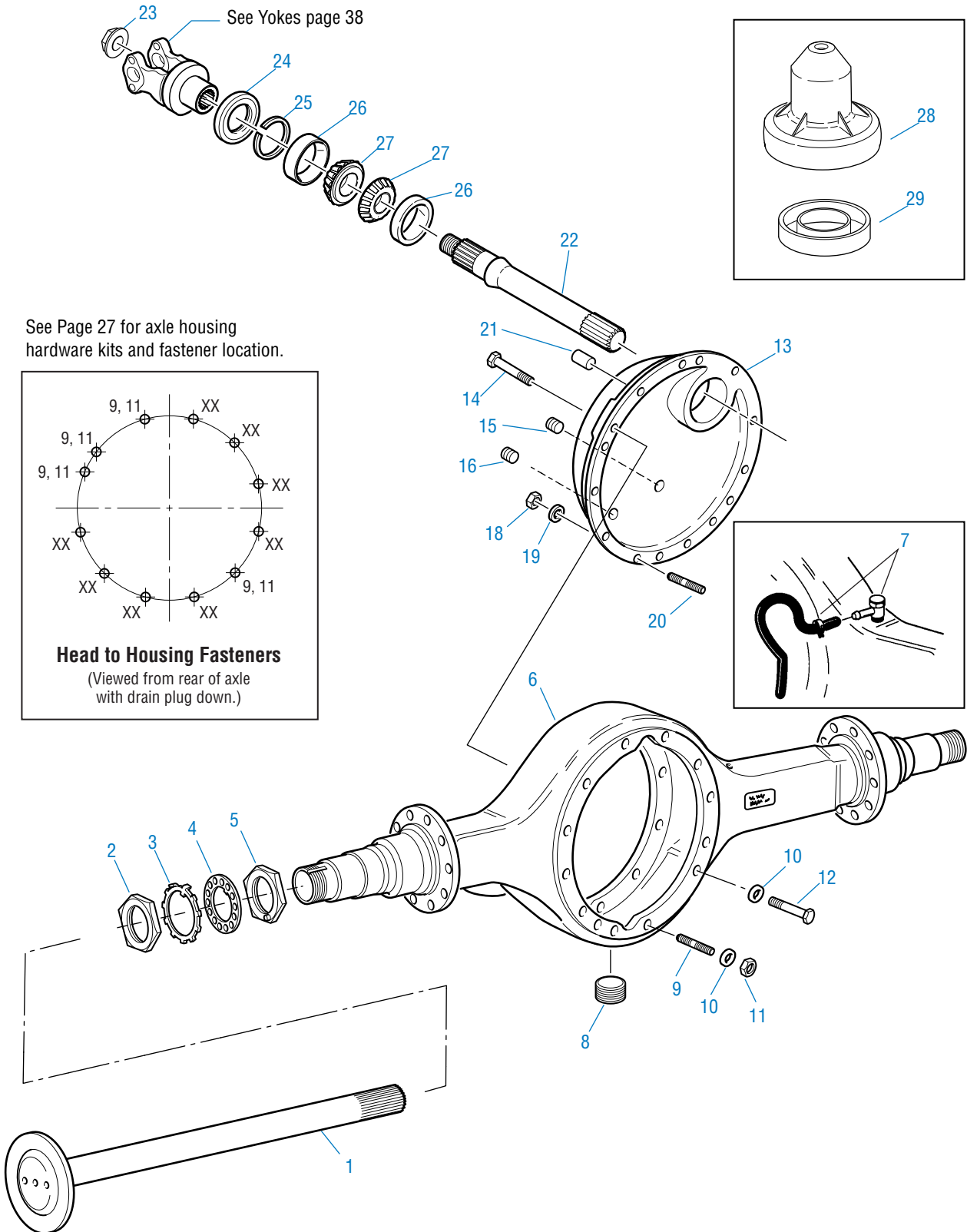


Note: Sensor connector installed up through carrier hole, reference bulletin ABIB-9901.

In Axle Speed Sensor

Item	Description	Qty	DA344	RA344	DA344	RA344	Notes
			DA404-(P)	RA404	DA404-(P)	RA404	
			DA405-(P)	RA405	DA405-(P)	RA405	
			DA454	RA454	DA454-(P)	RA454	
			(Before 11-2-98)	(Before 11-2-98)	(After 11-2-98)	(After 11-2-98)	
1	Sensor Connector	2	128713	128713	—	—	
2	Diff Bearing Adjusters						
	Plain Half - 344 series	1	129056	129056	129056	129056	
	Flange Half - 344 series	1	129055	129055	129055	129055	
	Plain Half - 404/405/454	1	128429	128429	128429	128429	
	Flange Half - 404/405/454	1	128428	128428	128428	128428	
3	Rotor Assembly						
	41 spline	2	128081	128081	128081	128081	All models except D/R344
	39 spline	2	128993	128993	128993	128993	D/R344 models only
4	Sensor Assembly	2	128082	128082	128082	128082	
5	Fasteners	4	128074	128074	128074	128074	
6	Sensor Connector Assy	2	—	—	129061	129061	Includes Item 7
7	O-ring	2	—	—	14033	14033	
8	Bushing Sleeve	2	—	—	129059	129059	
9	Snap Ring	2	—	—	129057	129057	

Output Shaft and Axle Housings



Item	Description	Qty	Part No.	Notes
1	Axle Shaft	2		Axle Shaft Chart page 29
2	Outer Bearing Adjuster Nut	2	119881	See Note 1
3	Lockwasher - w/Tab	2	129132	
4	Dowel-Type Lockwasher	2	119883	
5	Inner Bearing Adjuster Nut	2	119882	
6	Axle Housing Assy	1	Note: See page 31	See your OEM Catalog
7	U-Tube Breather Kit	1	507162	
8	Magnetic Drain Plug - 3/4"	1	54254	All D/R models
9	Stud - Carrier to Hsg	4	127641	All D/R models M16 X 1.5
10	Washer - Carrier to Hsg	12	29804	All D models
10A	Washer - Carrier to Hsg	4	29804	All R models
11	Nut - Carrier to Hsg	4	127567	All R models
12	Capscrew - Carrier to Hsg	10	130836	All D/R models (was 210173 and 130158) M16 X 2.0
13	Axle Hsg Cover Kit Cover casting #127486C NSS Note: See page 31	1	217519	Includes 13, 15-16, 23-29 Replaces 129490/127487/129489/129037 Ref: Bulletin ABIB-9709
14	Capscrew - Hsg Cover to Hsg	8	210135	M12 x 1.75
15	Magnetic Plug - 1"	1	75130	See Bulletin ABIB-9709
15	Non-Magnetic Plug 3/4"	1	129492	See Bulletin ABIB-9709
15	Magnetic Plug - 3/4"	1	129491	See Bulletin ABIB-9709
16	Temperature Sensor Plug 1/2"	1	90898	
17	Lube Tag (for 3/4" Plug)	1	129486	See Bulletin ABIB-9709, Part - Not Illustrated
17	Lube Tag (for 1" Plug)	1	128288	See Bulletin ABIB-9709, Part - Not Illustrated
18	Nut - Hsg Cover to Hsg	4	127569	All Forward Axles
19	Lockwasher - Hsg Cover to Hsg	4	210140	All Forward Axles
20	Stud - Hsg Cover	4	127568	All Forward Axles
21	Dowel Pin - Hsg Cover	1	7641	All Forward Axles
OUTPUT SHAFT KIT		1	216227	Includes Items 22-23
22	Output Shaft - #127646 NSS			
23	Locknut - Hex	1	127588	M39 x 1.5
24	Oil Seal	1	127592•	
25	Snap Ring .103	1	129594•	Replaces 127538, 127537
26	Bearing Cup	2	127539•	
27	Bearing Cone	2	127540•	
28	Seal Driver	1	126917	In Kit 217414
29	Adapter	1	128706	In Kit 217414
30	Loctite Adhesive	1	129293	Not Illustrated, .5 ml Tube
31	RTV - Sealant	1	107276S	Not Illustrated, 3 oz. Tube

NSS - Not Sold Separately

Note 1: All 404/405/454 models except 344. Use p/n 19186, 30714 for D/R344 series.

Carrier Mounting Flange Design Change

Beginning June 3rd, 2002, the nominal thickness of the carrier to housing flange was increased in the D/R404 family models. This change required the use of new fastener parts. A new (45mm) cap-screw (P/N 130836) was released as it replaced both 210173 and 130158 old design capscrews. Additionally, a much thicker boss was added to the flange at the 12:00 & 6:00 o'clock positions. These new thicker flange bosses require an even longer (70mm) capscrew (P/N 130837). A thicker and larger diameter flat washer (P/N 130877) was also released as part of this upgrade. The new washer replaces existing washer 29804. The existing stud (P/N 127641) and nut (P/N 127567) are not affected by these changes and will continue to be used.

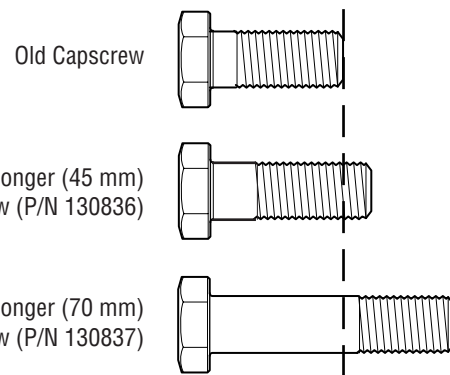
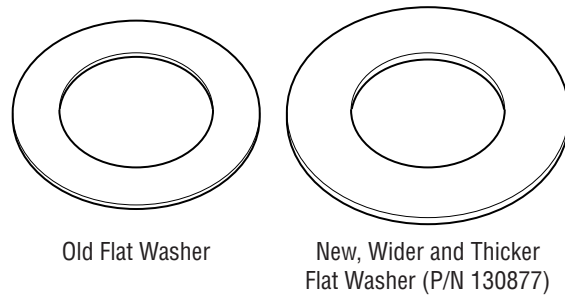
Note: Dana models with Wheel Differential Lock and Lube Pump options do not have "Thick Flange" carriers as of this publication. The upgrade for these particular models will take place 1st quarter 2003.

EXCHANGE CARRIER NOTE:

Due to the popularity of the Dana Carrier Exchange program, stock levels of both early design carriers and new "Thick Flange" design carriers exist. If you have a vehicle that was originally equipped with a Dana axle built with the "Thick Flange" carrier design, it can be universally serviced with an early style (Thin Flange) Carrier Exchange Assembly. The repairing dealer must simply make sure to use the correct axle housing hardware parts when installation is done. New exchange carriers built with the thick flange design, will include the necessary thick flange hardware kit to minimize any down time to the customer.

- Differentials with "THICK FLANGE" carriers use axle housing hardware kit (P/N 512087).
- Early design differentials with "THIN FLANGE" carriers use axle housing hardware kit (P/N 511600).
- GM Vehicles requires the use of double-ended capscrews at the housing fastener location. Double-ended capscrews for thick flange design carriers are not available at this time. GM vehicles must be serviced with early design carriers.

New Axle Housing Fasteners



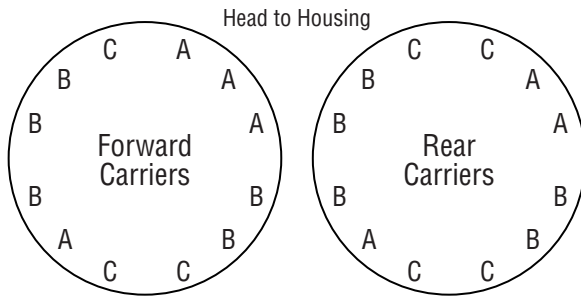
IMPORTANT!

Dana does not recommend the mixing of various designs carrier-to-housing capscrews on the same assembly. Whether mixing or not, torques must be measured using a calibrated torque wrench. Failure to re-torque bolts and nuts to proper specifications may lead to carrier to housing leaks and possible component damage.

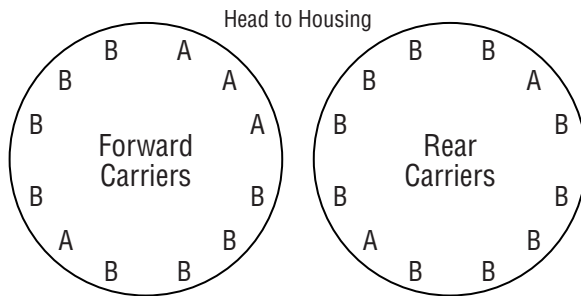
Axle Housing Fasteners

On June 3, 2002 the D/R404 family models were upgraded to the new "Thick Flange" carrier design as fully detailed in Dana bulletin AXIP-0210r1. Shown below are the axle housing hardware kits and fastener locations for both variations. View fastener locations as if installing differential into the axle housing.

Thick Flange – After 6/3/02



Original Design Flange – Before 6/3/02*



- A – 127641 Studs & 127567 Nuts
- B – 130836 Capscrews – Short (45 mm)
- C – 130837 Capscrews – Long (70 mm)
- D – 130877 Flat Washers – All Locations

Note: GM models require a special double-ended capscrews. They continue to use carriers with the original design thin flange. At this time Dana does not have a double-ended capscrew for "Thick Flange" models.

512087 Hardware Kit (Thick Flange)

Part No.	Qty.	Description
107276S	1	RTV Sealant 3 oz. Tube
127567	4	Nut
127641	4	Stud
129293	1	Loctite 271 0.5 ml. Tube
130836	8	Capscrew (45 mm) - Short
130837	4	Capscrew (70 mm) - Long
130877	12	Washer
shais 136	1	Instruction Sheet - Thick Flange

511600 Hardware Kit

Part No.	Qty.	Description
107276S	1	RTV Sealant 3 oz. Tube
127567	4	Nut
127641	4	Stud
129293	1	Loctite 271 0.5 ml. Tube
130836	10	Capscrew (was 130158)
130877	12	Washer (was 29804)
shais 131	1	Instruction Sheet

Casting & Service Parts Cross-Reference Listing

Below are two helpful cross-reference charts. Chart-A shows "casting" numbers that can quickly identify the old design parts versus the new design parts. Chart-B is a "service parts" cross-reference listing. The part numbers in this chart are sorted by part type; refer to the "New Part Description" column.

Chart A: Part Number Cross-Reference - Casting Numbers

New Casting Part No.	Old Casting Part No.	Description	Model
130809	129539, 129540	Diff. Carrier Casting	DA344, 404, 405, 454, DS344, 404, 405, 454
130814	129550	Diff. Carrier Casting	DD404, DD404P, DD454, DD454P
130819	129551	Diff. Carrier Casting	DA404P, 405P, 454P, DS404P, 405P, 454P
130822	129571	PDU Cover Casting	All "D" Forward Carriers - 11 hole
130824	129351C, 129541	Diff. Carrier Casting	RA344, 404, 405, 454, RS344, 404, 405, 454
130827	128600	Diff. Carrier Casting	RD404, RD454

Chart B: Part Number Cross-Reference - Service Parts

Current Service Part No.	Replaces Old Service Part No.	New Part Description	Notes
511600	None	Axle Hsg hardware Kit - Thin Flange Models	Use only in Models with Thin Flange Carrier Design
512087	None	Axle Hsg hardware Kit - Thick Flange Models	Use only in Models with Thick Flange Carrier Design
130836	130158, 210173	Capscrew - 45 mm	Use in All Models (New & Old Design)
130837	None	Capscrew - 70 mm	Use only in Models with Thick Flange Carrier Design
130158	NLA	Capscrew - 40 mm	Replaced by 130836 Capscrew
210173	NLA	Capscrew - 40 mm	Replaced by 130836 Capscrew
130877	29804*	Flat Washer	Use in All Models (New & Old Design) - *Old Part Not Obsolete
29804*	None	Flat Washer	Used only in Brake Assemblies - *Part Not Obsolete
130823	129572	PDU Cover - 11 hole	All "D" Forward Carriers (new cover uses 11 capscrews)
129572	NLA	PDU Cover - 9 hole	Replaced by 130823 PDU Cover
510023	Refer to Note 1	Carrier & Cap Kit	DS344, 404, 405, 454
510024		Carrier & Cap Kit	DS404P, 405P, 454P
510027		Carrier & Cap Kit	DD404, 405, 454
510028		Carrier & Cap Kit	DD404P, 405P, 454P
510017		Carrier & Cap Kit	RD404, 405, 454
510018		Carrier & Cap Kit	RS344, 404, 405, 454

Note 1: The Carrier & Cap kits have been optimized for service. New design carriers and hardware will be provided in kits when various model options are released through production.

Axle Shafts

Dana 404 series axle shafts are used in “sets”, have unequal shaft lengths and may be “location specific” or “Wheel Equipment specific”. When replacing 404 axle shafts, locate the axle shaft part number (see Model Identification page 4) or select the correct axle shaft from the chart below, before placing your order.

DO NOT MISPLACE AXLE SHAFTS FROM THEIR INTENDED LOCATION.

Note: STR - Straight, TPR - Tapered

Axle Shafts - Single Reduction Models

Model	Part No.	Qty	Spline	Body O.D.	Shaft Length	Spline Length	Flange O.D.	Flange Holes	OEM
RS344	129010	1	39	1.81	38.500	4"	6.125	12(.748) TPR	2
	129011	1	39	1.81	42.750	4"	6.125	12(.748) TPR	2
DS404	127437	1	41	1.87	38.976	4"	8.500	8(.635) STR	6,5,3
	127438	1	41	1.87	43.307	4"	8.500	8(.635) STR	6,5,3
RS404	128514	1	41	1.87	38.130	4"	8.500	8(.773) STR	7,10
DS454	128515	1	41	1.87	42.460	4"	8.500	8(.773) STR	7,10
RS454	128516	1	41	1.87	38.976	4"	8.500	8(.948) TPR	2,4,7,9
	128517	1	41	1.87	43.307	4"	8.500	8(.948) TPR	2,4,7,9
	128521	1	41	1.87	38.130	4"	8.500	8(.948) TPR	1
	128522	1	41	1.87	42.460	4"	8.500	8(.948) TPR	1
RD344	128893	1	39	1.81	40.906	11"	5.500	8(.645) STR	10

- | | |
|------------------|------------------|
| 1 = Ford | 6 = Kenworth |
| 2 = GMC | 7 = Volvo White |
| 3 = Freightliner | 8 = Marmon |
| 4 = Mack | 9 = Western Star |
| 5 = Peterbilt | 10 = Navistar |

Axle Shafts - Diff Lock Models

Model	Part No.	Qty	Spline	Body O.D.	Shaft Length	Spline Length	Flange O.D.	Flange Holes	OEM
DD404	127437	1	41	1.87	38.976	4"	8.500	8(.635) STR	3,5,6
	128435	1	41	1.87	43.307	11"	8.500	8(.635) STR	3,5,6
	128514	1	41	1.87	38.130	4"	8.500	8(.773) STR	7,10
RD404	128559	1	41	1.87	42.460	11"	8.500	8(.773) STR	7,10
DD454	128516	1	41	1.87	38.976	4"	8.500	8(.948) TPR	2,4,7,9
RD454	128561	1	41	1.87	43.307	11"	8.500	8(.948) TPR	2,4,7,9
	128521	1	41	1.87	38.130	4"	8.500	8(.948) TPR	1
	128563	1	41	1.87	42.460	11"	8.500	8(.948) TPR	1
	129432	1	41	1.87	43.380	11"	8.500	8(.773) STR	7
	129434	1	41	1.87	38.976	4"	8.500	8(.773) STR	7

- | | |
|------------------|------------------|
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| 3 = Freightliner | 8 = Marmon |
| 4 = Mack | 9 = Western Star |
| 5 = Peterbilt | 10 = Navistar |

Axle Shafts - Models having IASS (In Axle Speed Sensors) for ABS

Model	Part No.	Qty	Spline	Body O.D.	Shaft Length	Spline Length	Flange O.D.	Flange Holes	OEM
RA344	129052	1	39	1.81	38.500	11"	6.125	12(.748) TPR	2
	129053	1	39	1.81	42.750	11"	6.125	12(.748) TPR	2
DA404	128434	1	41	1.87	38.976	11"	8.500	8(.635) STR	6,5,3
	128435	1	41	1.87	43.307	11"	8.500	8(.635) STR	6,5,3
RA404	128558	1	41	1.87	38.130	11"	8.500	8(.773) STR	7,10
DA454	128559	1	41	1.87	42.460	11"	8.500	8(.773) STR	7,10
RA454	128560	1	41	1.87	38.976	11"	8.500	8(.948) TPR	2,4,7,9
	128561	1	41	1.87	43.307	11"	8.500	8(.948) TPR	2,4,7,9
	128562	1	41	1.87	38.130	11"	8.500	8(.948) TPR	1
	128563	1	41	1.87	42.460	11"	8.500	8(.948) TPR	1

- | | |
|------------------|------------------|
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| 3 = Freightliner | 8 = Marmon |
| 4 = Mack | 9 = Western Star |
| 5 = Peterbilt | 10 = Navistar |

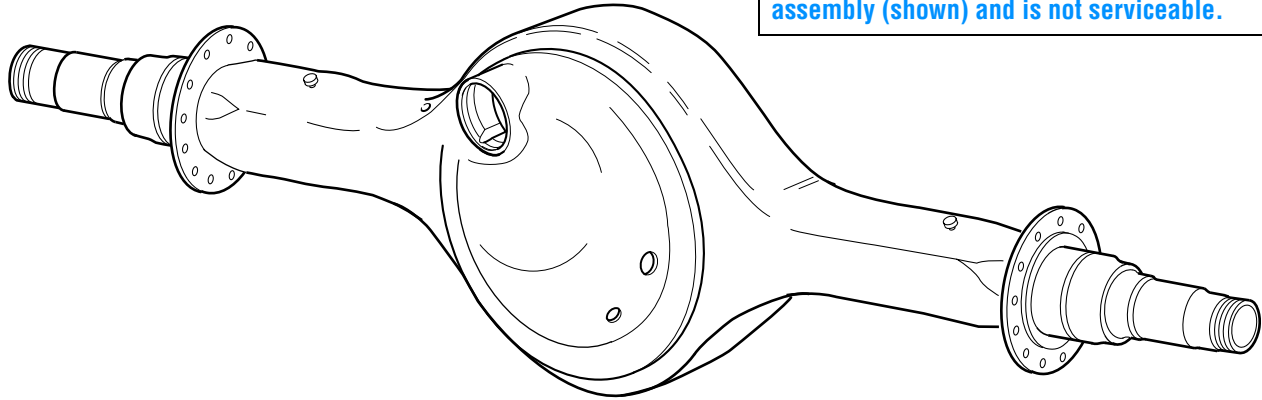
Axle Shafts - Wide Track Models

Model	Part No.	Qty	Spline	Body O.D.	Shaft Length	Spline Length	Flange O.D.	Flange Holes	OEM
DS404	129388	1	41	1.87	43.887	4"	8.500	8(.773) STR	7
	129434	1	41	1.87	38.976	4"	8.500	8(.773) STR	7
RS404	129306	1	41	1.87	45.500	4"	8.500	8(.635) STR	9
DS454	128243	1	41	1.87	40.630	4"	8.500	8(.635) STR	9
RS454	128914	1	41	1.87	45.500	4"	8.500	8(.773) STR	7
	128912	1	41	1.87	41.313	4"	8.500	8(.773) STR	7
	128910	1	41	1.87	42.460	4"	8.500	8(.635) STR	5
	126684	1	41	1.87	46.156	4"	8.500	8(.635) STR	5
DD454	128910	1	41	1.87	42.460	4"	8.500	8(.635) STR	6
RD454	128504	1	41	1.87	46.156	11"	8.500	8(.635) STR	6

- | | |
|------------------|------------------|
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| 3 = Freightliner | 8 = Marmon |
| 4 = Mack | 9 = Western Star |
| 5 = Peterbilt | 10 = Navistar |

Axle Housing

In the 4th quarter of 1998 a design change was made to the "FORWARD" axle housings in the 404 family axles. The axle housing rear cover is no longer a bolt on cover but is a welded assembly (shown) and is not serviceable.



Shown below is an axle housing part number cross reference listing for some common D/R housings used in production. If the part number on your tag is not listed below, consult your OEM, local OEM dealer or your Roadranger representative (1-800-826-HELP).

Axle Series	Tag I.D. Number	Old Service P/N	Current Service P/N	OEM	Notes
DS404	305828	216123	319421	Peterbilt	Bare Hsg.
DS405	306296	216604	319421	Peterbilt	Bare Hsg.
RS404	305830	216124	216605	Peterbilt	Bare Hsg.
RS405	306298	—	216605	Peterbilt	Bare Hsg.
DS404	305828	319157	319903	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Leaf Suspension
DS404	305828	319161	319905	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Trac Suspension
DS404	305828	—	320175	Peterbilt	Has Torque Rod Bkt & Spring Seats For Low Air Suspension
DS405	306296	319157	319903	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Leaf Suspension
DS405	306296	319161	319905	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Trac Suspension
DS405	306296	—	320175	Peterbilt	Has Torque Rod Bkt & Spring Seats For Low Air Suspension
DS405	306296	219144	319447	Peterbilt	Has Brackets For Hendrickson Suspension
RS404	305830	—	319159	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Leaf Suspension
RS404	305830	—	319163	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Trac Suspension
RS404	305830	—	320177	Peterbilt	Has Torque Rod Bkt & Spring Seats For Low Air Suspension
RS405	306298	—	319159	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Leaf Suspension
RS405	306298	—	319163	Peterbilt	Has Torque Rod Bkt & Spring Seats For Air Trac Suspension
RS405	306298	—	320177	Peterbilt	Has Torque Rod Bkt & Spring Seats For Low Air Suspension
RS405	306298	—	219145	Peterbilt	Has Brackets For Hendrickson Suspension
RS405	319382	—	319383		Has Brackets For Hendrickson Suspension
RS405	319934	—	319935		Has Brackets For Hendrickson Suspension
DS404	305466	214015	319603	Peterbilt/KW	Bare Hsg.
DS344	305480	213957	319609	GMC	Bare Hsg.
DS404	305694	214986	319613	Peterbilt	Bare Hsg.
DS454	305832	218436	319405	Peterbilt/KW	Bare Hsg.
DS404	305886	214966	319407	Volvo Mack	Has Torque Rod Brackets & Hanger Brackets
RS404	305888	—	214967	Volvo/Mack	Has Torque Rod Brackets & Hanger Brackets
DS404	305890	216086	319409	Western Star	Bare Hsg.
DS404	305894	216127	319617	Marmon	Bare Hsg.

Axle Housing

Axle Series	Tag I.D. Number	Old Service P/N	Current Service P/N	OEM	Notes
DS404	305916	217657	319411	Navistar	Has Torque Rod Brackets & Hanger Brackets
DS404	305920	217641	319623	Navistar	Has Torque Rod Brackets & Hanger Brackets
DS404	305924	216019	319413	Navistar	Has Torque Rod Bracket
DS404	305930	216172	319415	Mack	Has Torque Rod Bracket
DS404	305934	216254	319417	Mack	Bare Hsg.
DS404	305942	218042	319625	Mack	Has Torque Rod Brackets & Hanger Brackets
DS404	305952	216307	319629	Ford Mtr	Has Torque Rod Bracket
DS404	305974	219354	319639	Ford Mtr	Bare Hsg.
DS404	306358	507322	319659	Peterbilt/KW	Bare Hsg.
DS404	306378	216250	319661	Volvo	Has Torque Rod Bracket
DD404	306436	319423	321501	Peterbilt/KW/Volvo	Bare Hsg.
DD454	306440	319425	321549	Peterbilt/KW	Bare Hsg.
DD405	306460	319427	321501	Peterbilt/KW	Bare Hsg.
DS404	307082	219504	319723	Crane	Has Torque Rod Brackets & Hanger Brackets
RS404	306084	216126	---	Volvo	Has Torque Rod Brackets & Hanger Brackets
RS404	305896	216128	---		

Gear & Pinion Kits

D - Forward Axles

D344/404/405/454

15.4" Hypoid

Ratios	Current Kit	Current Gear(NSS)	Current Pinion(NSS)	Original Kit	Original Gear(NSS)	Original Pinion(NSS)
2.64	211462	127387 (37)	127439 (14)	NA	NA	NA
2.85	211463	127388 (37)	127440 (13)	NA	NA	NA
3.08	513373	127381 (37)	129737 (12)	211464	127388 (37)	127441 (12)
3.25	513385	127389 (39)	130120 (12)	211465	127389 (39)	127442 (12)
3.36	513384	127388 (37)	130121 (11)	211466	127388 (37)	127443 (11)
3.55	513383	127389 (39)	130122 (11)	211467	127389 (39)	127444 (11)
3.70	513382	127388 (37)	130123 (10)	211468	127388 (37)	127445 (10)
3.90	513381	127389 (39)	130124 (10)	211469	127389 (39)	127446 (10)
4.11	513380	127388 (37)	130125 (9)	211470	127388 (37)	127447 (9)
4.33	513379	130201 (39)	130126 (9)	211471	127389 (39)	127448 (9)
4.63	513378	130196 (37)	129733 (8)	211472	127390 (37)	127449 (8)
4.88	513377	130197 (39)	129735 (8)	211473	127391 (39)	127450 (8)
5.29	513376	130196 (37)	129816 (7)	211474	127390 (37)	127451 (7)
5.57	513375	130197 (39)	129820 (7)	211475	127391 (39)	127452 (7)
6.17	513374	127390 (37)	129843 (6)	211476	127390 (37)	127453 (6)
6.50	211477	127391 (39)	127454 (6)	NA	NA	NA

NSS – Not Sold Separately

Note: In mid-2004, the original design kits were replaced by new kits that contain current production parts. Both current and original kits are backwards compatible.

R - Rear Axle

R344/404/405/454

15.4" Hypoid

39-1.95" Inv Spline

Ratios	Current Kit	Current Gear(NSS)	Current Pinion(NSS)	Original Kit	Original Gear(NSS)	Original Pinion(NSS)
2.64	211478	127380 (37)	127420 (14)	NA	NA	NA
2.85	211479	127381 (37)	127421 (10)	NA	NA	NA
2.93	509424	129534 (41)	129533 (14)	NA	NA	NA
3.08	513373	127381 (37)	139737 (12)	211480	127381 (37)	127422 (12)
3.25	513372	127382 (39)	130127 (12)	211481	127382 (39)	127423 (12)
3.36	513371	127381 (37)	130128 (11)	211482	127381 (37)	127424 (11)
3.55	513370	127382 (39)	130129 (11)	211483	127382 (39)	127425 (11)
3.70	513369	127381 (37)	130130 (10)	211484	127381 (37)	127426 (10)
3.90	513368	127382 (39)	130131 (10)	211485	127382 (39)	127427 (10)
4.11	513367	127381 (37)	130132 (9)	211486	127381 (37)	127428 (9)
4.33	513366	130200 (39)	130133 (9)	211487	127382 (39)	127429 (9)
4.63	513365	130194 (37)	129748 (8)	211488	127383 (37)	127430 (8)
4.88	513364	130195 (39)	129750 (8)	211489	127384 (39)	127431 (8)
5.29	513363	130194 (37)	129818 (7)	211490	127383 (37)	127432 (7)
5.57	513362	130195 (39)	129822 (7)	211491	127384 (39)	127433 (7)
6.17	513361	127383 (37)	129844 (6)	211492	127383 (37)	127434 (6)
6.50	211493	127384 (39)	127435 (6)	NA	NA	NA
7.17	211494	127385 (43)	127436 (6)	NA	NA	NA

NSS – Not Sold Separately

Note: In mid-2004, the original design kits were replaced by new kits that contain current production parts. Both current and original kits are backwards compatible.

Service Carrier Assemblies

DS404-(P)

Single Reduction
41 Inv Spline

Ratio	(non-pump) Carrier Exchange	(pump) Carrier Exchange	(non-pump) Reverse Air Carrier Exchange	(pump) Reverse Air Carrier Exchange
2.64	674861	675200	674962	—
2.85	674862	675201	674963	—
3.08	674863	675202	674964	675525
3.25	674864	675203	674961	—
3.36	674865	675204	674921	—
3.55	674866	675205	674922	675527
3.70	674867	675206	674923	675528
3.90	674868	675207	674924	675529
4.11	674869	675208	674925	675530
4.33	674870	675209	674926	675523
4.63	674871	675210	674965	675531
4.88	674872	675211	674966	675532
5.29	674873	675212	674967	675533
5.57	674874	675213	674968	675534
6.17	674875	675214	674969	675544
6.50	674876	N/A	674970	675535

DD404-(P)

Single Reduction w/Differential Lock
41 Inv Spline

Ratio	(non-pump) Carrier Exchange	(pump) Carrier Exchange
2.64	675510	675303
2.85	675251	675304
3.08	675252	675305
3.25	675253	675306
3.36	675254	675307
3.55	675255	675308
3.70	675256	675309
3.90	675257	675310
4.11	675258	675311
4.33	675259	675312
4.63	675260	675313
4.88	675261	675314
5.29	675262	675315
5.57	675263	675316
6.17	675264	675317
6.50	675265	675318

RS404

Single Reduction
41 Inv Spline

Ratio	Carrier Exchange
2.64	674877
2.85	674878
3.08	674879
3.25	674880
3.36	674881
3.55	674882
3.70	674883
3.90	674884
4.11	674885
4.33	674886
4.63	674887
4.88	674888
5.29	674889
5.57	674890
6.17	674891
6.50	674892
7.17	674893

RD404

Single Reduction w/Differential Lock
41 Inv Spline

Ratio	Carrier Exchange
2.64	675280
2.85	675281
3.08	675282
3.25	675283
3.36	675284
3.55	675285
3.70	675286
3.90	675287
4.11	675288
4.33	675289
4.63	675290
4.88	675291
5.29	675292
5.57	675293
6.17	675294
6.50	675295
7.17	675296

Supersession of D/R454 Models to New Generation Models

Ratio	DS454 NLA	Replaced By	P/N
2.64	675657	NLA	NLA
2.85	675658	NLA	NLA
3.08	675659	DSH40	675740
3.25	675660	DSH40	675741
3.36	675661	DSH40	675742
3.55	675662	DSH40	675743
3.70	675663	DSH40	675744
3.90	675664	DSH40	675745
4.11	675665	DSH40	675746
4.33	675666	DSH40	675747
4.63	675667	DSH40	675748
4.88	675668	DSH40	675749
5.29	675669	DSH44	675835
5.57	675670	DSH44	675836
6.17	675671	DSH44	Call Dana
6.50	675672	DSH44	Call Dana
7.17	—	DSH44	Call Dana

Ratio	RS454 NLA	Replaced By	P/N
2.64	675673	NLA	NLA
2.85	675674	NLA	NLA
3.08	675675	RSH40	675780
3.25	675676	RSH40	675781
3.36	675677	RSH40	675782
3.55	675678	RSH40	675783
3.70	675679	RSH40	675784
3.90	675680	RSH40	675785
4.11	675681	RSH40	675786
4.33	675682	RSH40	675787
4.63	675683	RSH40	675788
4.88	675684	RSH40	675789
5.29	675685	RSH44	675871
5.57	675686	RSH44	675871
6.17	675687	RSH44	Call Dana
6.50	675688	RSH44	Call Dana
7.17	—	RSH44	Call Dana

Ratio	DS454P NLA	Replaced By	P/N
2.64	675641	NLA	NLA
2.85	675642	NLA	NLA
3.08	675643	DSH40P	675750
3.25	675644	DSH40P	675751
3.36	675645	DSH40P	675752
3.55	675646	DSH40P	675753
3.70	675647	DSH40P	675754
3.90	675648	DSH40P	675755
4.11	675649	DSH40P	675756
4.33	675650	DSH40P	675757
4.63	675651	DSH40P	675758
4.88	675652	DSH40P	675759
5.29	675653	DSH44P	675847
5.57	675654	DSH44P	675848
6.17	675655	DSH44P	Call Dana
6.50	675656	DSH44P	Call Dana
7.17	—	DSH44P	Call Dana

Ratio	DD454 NLA	Replaced By	P/N
2.64	675705	NLA	NLA
2.85	675706	NLA	NLA
3.08	675707	DDH40	675760
3.25	675708	DDH40	675761
3.36	675709	DDH40	675762
3.55	675710	DDH40	675763
3.70	675711	DDH40	675764
3.90	675712	DDH40	675765
4.11	675713	DDH40	675766
4.33	675714	DDH40	675767
4.63	675715	DDH40	675768
4.88	675716	DDH40	675769
5.29	675717	DDH44	675811
5.57	675718	DDH44	675812
6.17	675719	DDH44	Call Dana
6.50	675720	DDH44	Call Dana
7.17	—	DDH44	Call Dana

Ratio	DD454P NLA	Replaced By	P/N
2.64	675689	NLA	NLA
2.85	675690	NLA	NLA
3.08	675691	DDH40P	675770
3.25	675692	DDH40P	675771
3.36	675693	DDH40P	675772
3.55	675694	DDH40P	675773
3.70	675695	DDH40P	675774
3.90	675696	DDH40P	675775
4.11	675697	DDH40P	675776
4.33	675698	DDH40P	675777
4.63	675699	DDH40P	675778
4.88	675700	DDH40P	675779
5.29	675701	DDH44P	675823
5.57	675702	DDH44P	675824
6.17	675703	DDH44P	Call Dana
6.50	675704	DDH44P	Call Dana
7.17	—	DDH44P	Call Dana

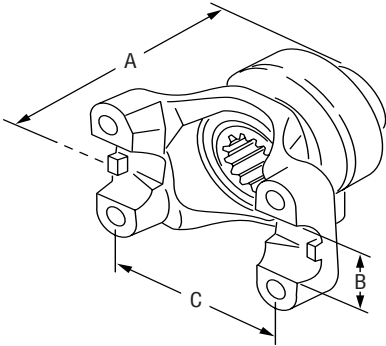
Ratio	RD454 NLA	Replaced By	P/N
2.64	675721	NLA	NLA
2.85	675722	NLA	NLA
3.08	675723	RDH40	675790
3.25	675724	RDH40	675791
3.36	675725	RDH40	675792
3.55	675726	RDH40	675793
3.70	675727	RDH40	675794
3.90	675728	RDH40	675795
4.11	675729	RDH40	675796
4.33	675730	RDH40	675797
4.63	675731	RDH40	675798
4.88	675732	RDH40	675799
5.29	675733	RDH44	675859
5.57	675734	RDH44	675860
6.17	675735	RDH44	Call Dana
6.50	675736	RDH44	Call Dana
7.17	—	RDH44	Call Dana

Carrier Service part-numbers for models with IASS have not been released. Contact your Roadranger representative at 1-800-826-HELP for additional help. IASS MODELS: (DA/RA344/404/405/454).

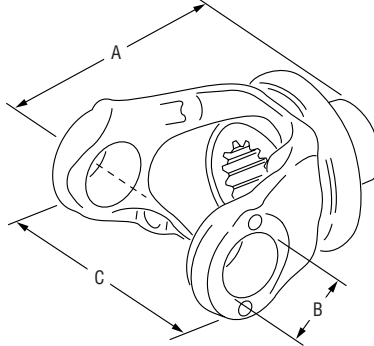
Yokes and Flanges

The following provides information necessary for ordering yoke assemblies for new carrier exchange models and is called out by model series.

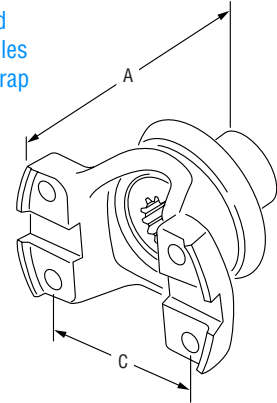
STYLE X
Half Round



STYLE Y
Full Round



STYLE Z
Half Round
Tapped Holes
Bearing Strap



Forward Axle - Input / 44 - 2.250 Involute Spline

Yoke & Slinger Assy	Series	Joint Angle	Style	Dimensions (in inches):		
				A	B	C
127550	1710	23°	Y	5.19	1.94	6.09
127617	1710	30°	X	5.19	1.94	6.19
127618	1760	30°	Y	5.25	1.94	7.00
127619	1810	30°	Y	5.25	1.94	7.55
127620	1610	35°	X	5.00	1.88	5.31
127621	1810	30°	X	5.25	1.94	7.64
127622	1760	30°	X	5.25	1.94	7.09
210831	SPL 170	25°	X	5.27	2.16	5.51
210833	SPL 250	25°	X	5.49	2.36	5.31

Forward Axle - Output / 39 - 1.950 Involute Spline

Yoke & Slinger Assy	Series	Joint Angle	Style	Dimensions (in inches):		
				A	B	C
127558	1710	30°	Y	5.25	1.94	6.09
127624	1710	45°	Y	6.12	1.94	6.09
127638	1610	45°	Y	6.00	1.88	5.31
128722	1710	39.5°	X	6.12	1.94	6.19
128737	1710	30°	X	5.25	1.94	6.19
210835	SPL 170	25°	X	5.27	2.16	5.51
210837	SPL 170	45°	X	6.50	2.16	5.51

Note: 404 Family yoke assemblies DO NOT contain seals. Purchase seals separately.

Rear Axle - Input / 39 - 1.95 Involute Spline

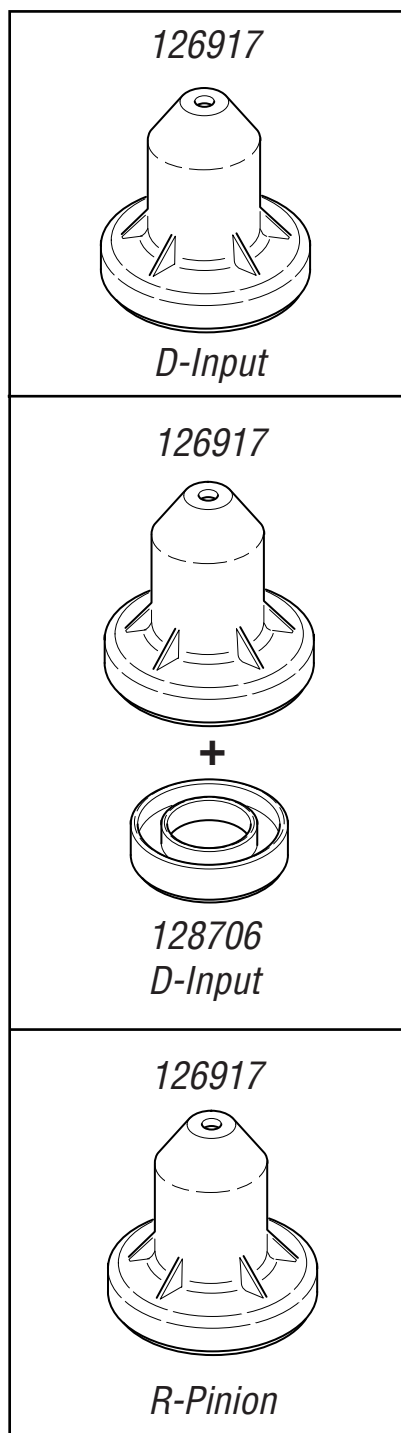
Yoke & Slinger Assy	Series	Joint Angle	Style	Dimensions (in inches):		
				A	B	C
127415	1710	30°	Y	5.25	1.94	6.09
127637	1710	45°	Y	6.12	1.94	6.09
128720	1610	45°	Y	6.00	1.88	5.31
128721	1610	22°	Y	4.72	1.88	5.31
128745	1710	30°	X	5.25	1.94	6.19
128746	1710	39.5°	X	6.12	1.94	6.19
129019	1610	45°	X	6.00	1.88	5.31
129043	1610	23°	X	4.88	1.88	5.31
129164	1480	19°	X	4.34	1.38	3.69
129166	1550	24.5°	X	4.30	1.38	4.47
210839	SPL 170	25°	X	5.16	2.16	5.51
210841	SPL 170	45°	X	6.24	2.16	5.51
210875	RPL 20	30°	X	4.85	N/A	5.30
210877	RPL 20	42°	X	5.69	N/A	5.30
210923	SPL 90	15°	X	4.75	1.61	4.53

Kits and Assemblies

Oil Seal Installation Tools

This kit contains installation tools used for installing driveline oil seals. Using these tools ensures proper installation of the seal. Failure to use these tools may result in an improperly installed or damaged seal.

Oil Seal Driver Installation Kit: 217414



Service Kits and Assemblies

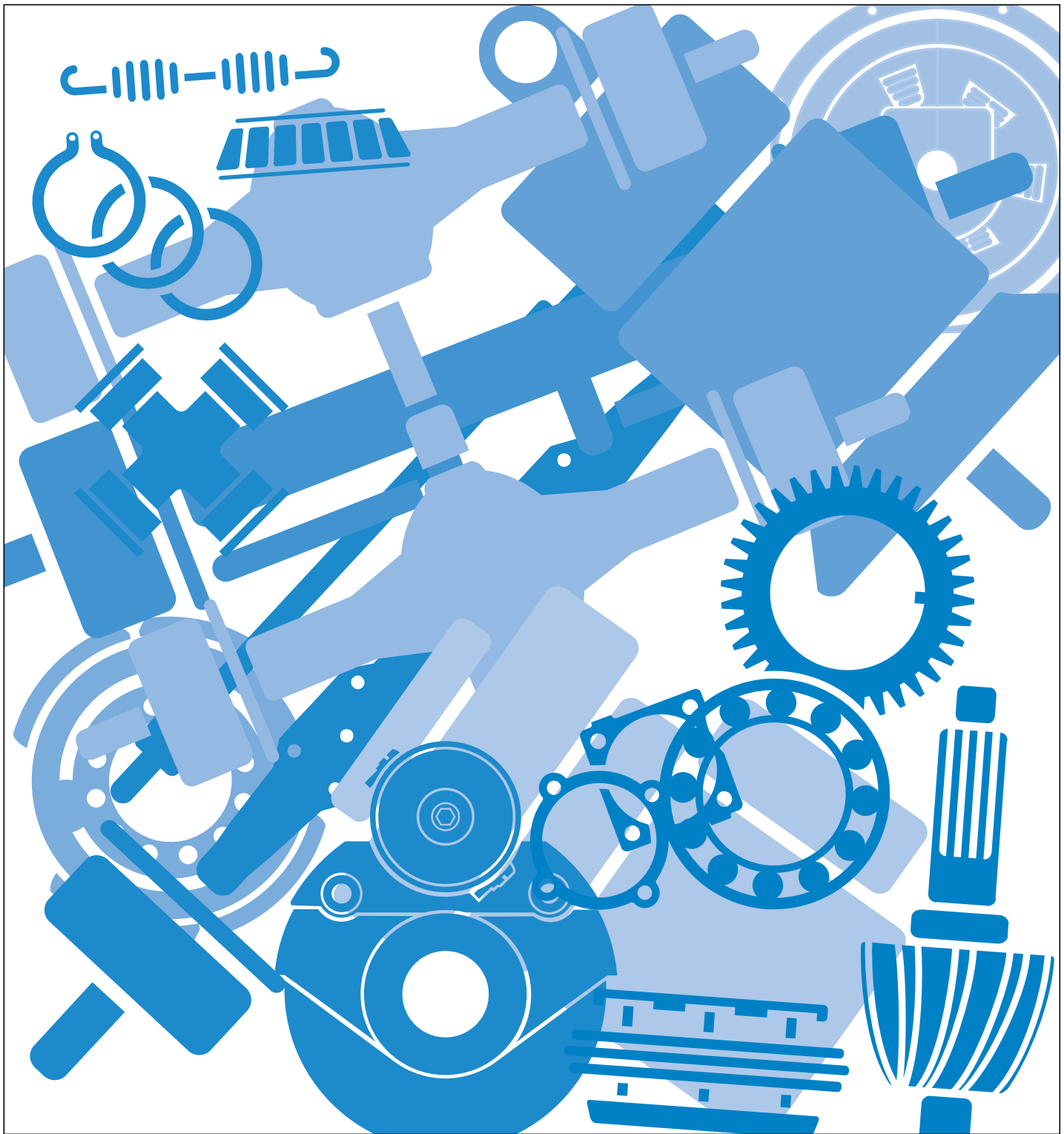
Basic Overhaul Kit - DD Models	217463
Basic Overhaul Kit - RD Models	217464
Basic Overhaul Kit - DS/DA Models	216220
Basic Overhaul Kit - RS/RA Models	216221
Bearing Kit	216234
Bearing Kit	216248
Bearing Kit	512800
Bearing Kit	512805
Cage & Cup Assy - "D" series	129767
Cage & Cup Assy - "R" series	127600
Input Brg Cover Assy - After 11/2/98	129575
Input Brg Cover Assy - Before 11/2/98	127602
Input Shaft Kit - All "D" Models	510593
Inter-Axle Diff Assy (All "D" Models)	129771
Lube Pump Assembly	127534
Oil Seal Driver Installation Kit - All Models	217414
Oil Seal & Shim Kit - All "D" series	216224
Oil Seal & Shim Kit - All "R" series	216225
Output Shaft Kit - All "D" Models	216227
Ring Gear Nut & Bolt Kit	508652
Wheel Diff Case Kit - 2.64 to 3.25 DS/RS344/404/454	508653
Wheel Diff Case Kit - 3.36 to 3.90 DS/RS344/404/454	508654
Wheel Diff Case Kit - 4.11 to 4.88 DS/RS344/404/454	508655
Wheel Diff Case Kit - 5.29 to 7.17 DS/RS344/404/454	508656
Wheel Diff Case Kit - 2.64 to 3.25 DD/RD404/405/454	508724
Wheel Diff Case Kit - 3.36 to 3.90 DD/RD404/454	508725
Wheel Diff Case Kit - 4.11 to 4.88 DD/RD404/454	508726
Wheel Diff Case Kit - 5.29 to 7.17 DD/RD404/405/454	508727
Wheel Diff Side Gear Kit - 41 Inv	216229
Wheel Diff Side Gear Kit - 39 Inv 344 models	217461
Wheel Diff Kit - w/o side gears (all models)	216228

Quick Part Number Replacement Listing

Listed Below is a Quick Part Number Replacement Listing

Old Part Number	Current Replacement Part Number	Notes
6082	129563	
9803	129566	
14217	129561	
27813	129565	
85439	129560	
90943	129564	
121753	508652	See bulletin ABIB-9701
126156	90873	
126841	—	See bulletin ABIB-9609 for replacement kits
127369	129305	
127410	129128	
127412	129130	
127487	217519	See bulletin ABIB-9709
127494	130907	
127495	130907	
127506	129783	127506 cannot be used in axle designs built after 11-2-99
127601	129767	
127648	127628	
128146	129044	See bulletin ABIB-9609
128445	129046	See bulletin ABIB-9609
128481	129047	See bulletin ABIB-9609
128612	508290	See bulletin ABIB-9609
128806	508652	See bulletin ABIB-9701
128926	126840	
129037	217519	See bulletin ABIB-9709
129056	NONE	Never released
129489	217519	See bulletin ABIB-9709
129490	217519	See bulletin ABIB-9709
129859	129584	
210280	—	See bulletin ABIB-9609 for replacement kits
210299	129433	
216222	510021	DS344/404/405
216230	508653	See bulletin ABIB-9701
216231	508654	See bulletin ABIB-9701
216232	508655	See bulletin ABIB-9701
216233	508656	See bulletin ABIB-9701
217166	508724	See bulletin ABIB-9701
217168	508726	See bulletin ABIB-9701
217169	508727	See bulletin ABIB-9701
217360	510022	DS404P/405P
217361	510025	404/405
217536	510029	DA344/404/405
217537	510026	404P/405P

Old Part Number	Current Replacement Part Number	Notes
218167	508725	See bulletin ABIB-9701
219704	508652	See bulletin ABIB-9701
820643	129558	
216223	510018	
217362	510017	
510019	510020	



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