



# **Roadranger**®

# **Illustrated Parts List**

**Dana Spicer® Drive Axles** 

**AXIP00322** 

August 2011

Two-Speed-Planetary Double Reduction 19055T/P, 21065T/P, 22065T/P Models



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#### **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**

- · ABS Antilock Brake System
- AR As Required Parts that vary in quantity with each axle.
   Example: shims
- Assy Assembly
- · Brg Bearing
- Diff Differential
- · Hsg Housing
- Inv Involute
- N/A Not Applicable
- 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.
- 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
  - · Part Name 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.

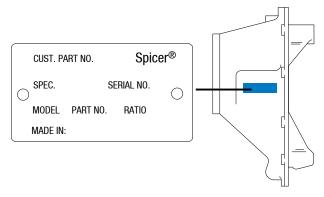
Match to item on illustration Item	Use to identify Part Number Description	Order this quantity for servicing Qty	Order part number by model indicated 19055T/P	Indicates information important to ordering or use Notes	
1	Axle Shaft	2	123456	See Axle Shaft Chart page 10	
2	Flat Washer	4	246810		
Summary of Kits	and Assemblies				
Oil Seal & Shim Kit	į		218888		
Basic Overhaul Kit			510999	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**



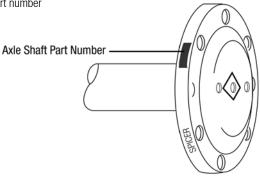
• Model Number, Part Number and Serial Number are located on the data plate on the axle centerline

### **Drive Axle Assembly Tag**

- 1. Country or origin
- 2. Axle model identification
- 3. Specification number assigned to the axle built by Spicer®. Identifies all component parts of the axle including special OEM requirements such as yokes or flanges
- 4. OEM part number assigned to the axle build
- 5. Carrier assembly serial number assigned by the manufacturing plant
- 6. Axle gear ratio
- 7. Carrier assembly production or service part number

**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.

• 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.



### Models

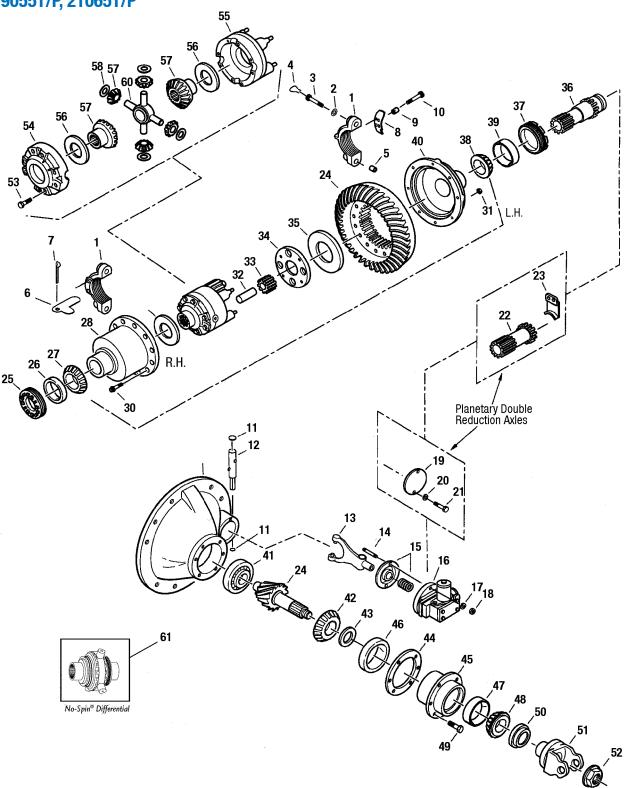
### **Models**

### **Single Reduction Models**

Single Axle*	Axle Capacity	Gear Size	
19055T/P	19,000 lbs	17"	
21065T/P	21,000 lbs	17"	
22065T/P	22,000 lbs	17"	

<sup>\*</sup>carrier options include T=Two Speed, P=Planetary Double Reduction

Two Speed - Planetary Double Reduction 19055T/P, 21065T/P

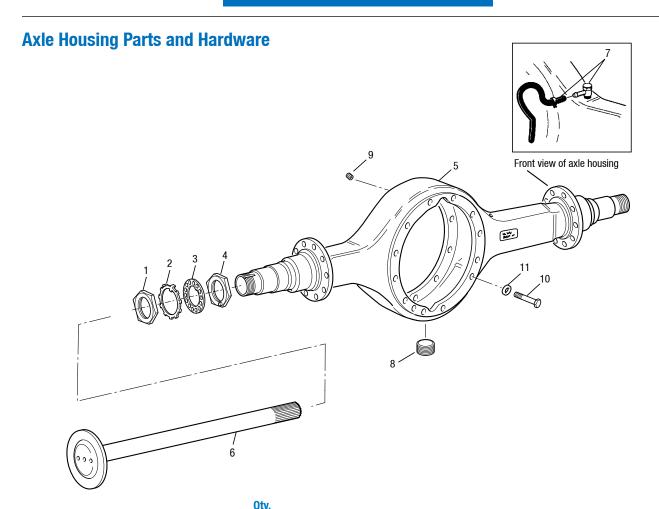


# **Two Speed - Planetary Double Reduction**

Item		Qty. Per	19055T/P 21065T/P	
No.	Description	Axle	210051/P 22065T/P	Notes
	OVERHAUL	1	110635*	Contents identified with *
1	DIFF. CARRIER & BEARING CAPS	1	109365	
	CARRIER CASTING NO. 107493-(NSS)			
2	FLAT WASHER	4	32912	
3	BEARING CAP SCREW	4	32732	
4	LOCKWIRE	4	90538	
5	DOWEL BUSHING	2	32730	
6	BEARING ADJUSTER LOCK - RH	1	13377	
7	COTTER PIN - RH	1	90873	
8	BEARING ADJUSTER LOCK - LH	1	37745	
9	DOWEL BUSHING - LH	2	37746	
10	CAP SCREW - LH	2	210601	
11	EXPANSION PLUG - UPPER	1	30703*	
	EXPANSION PLUG - LOWER	1	9797*	
12	SHIFT FORK SHAFT ASSY.	1	113801	
13	SHIFT FORK AND ROLLER ASSY.	1	32613	
14	SHIFT FORM MOUNTING STUD	2	119863	
15	SHIFT FORK SEAL AND SPRING ASSY.	1	119855*	
16	SHIFT UNIT ASSY - ELECTRIC	1		Refer to page 16
17	LOCKWASHER	2	119857	
18	STUD NUT	2	63028	
19	SHIFT UNIT OPENING COVER	1	45521	PDR Models only
20	LOCK WASHER	2	90415	PDR Models only
21	CAP SCREW	2	20807	PDR Models only
22	SUN GEAR	1	113598	PDR Models only
23	SUN GEAR RETAINER	1	43178	PDR Models only
24	RING GEAR AND DRIVE PINION SET - NSS	1		Refer to matched parts on page 12
25	DIFF. BEARING ADJUSTER - RH	1	110243	
26	DIFF. BEARING CUP - RH	1	9803*	
27	DIFF. BEARING CONE - RH	1	27813*	
28	GEAR SUPPORT CASE - RH	1	110148	
29	GEAR SUPPORT THRUST WASHER - RH	1	27827*	
KIT - RING	GEAR NUT & BOLT	1	087955	Incl. items 30-31
30	BOLT - RING GEAR	8	44358	
31	NUT - RING GEAR	8	60599	
32	IDLER PINION PIN	4	27861	
33	IDLER PINION	4	27835	
KIT - SLIDIN	NG CLUTCH SERVICE KIT	1	060608	Incl. items 34-37
34	HIGH SPEED CLUTCH PLATE	1	56931	
35	GEAR SUPPORT THRUST WASHER - LH	1	43270*	
36	SLIDING CLUTCH	1	113596	Two-Speed models only
37	DIFF. BEARING ADJUSTER - LH	1	56932	

# **Two Speed - Planetary Double Reduction, Continued**

Item		Qty. Per	19055T/P 21065T/P	
No.	Description	Axle	22065T/P	
38	DIFF. BEARING CONE - LH	1	27817*	
39	DIFF. BEARING CUP - LH	1	27816*	
40	GEAR SUPPORT CASE - LH	1	27838	
41	PINION PILOT BEARING	1	830398*	replaces 015828 & 129175
42	PINION BEARING CONE - INNER	1	45460*	·
43	PINION BRG SPACER (SVC KIT)	AR	504016	Individual pinion bearing spacers listed on pg 11
44	PINION BEARING CAGE SHIMS	AR		
	0.003"	1	107567*	
	0.005"	1	107568*	
	0.010"	1	107569*	
	0.020"	1	107570*	
45	PINION BEARING CAGE & CUP ASSY Standard	1	133875	Cast#107495 Incl. items 46-47
	Parking Brake Models		133876	Cast#130875 Incl. items 46-47
46	PINION BEARING CUP - INNER	1	14217*	
47	PINON BEARING CUP - OUTER	1	12495*	
48	PINION BEARING CONE - OUTER	1	12496*	
49	CAP SCREW	6	113325	
KIT - OIL SEA		1	114104	Incl. items 15, 44, 50A, 62
50	OIL SEAL - Pinion	1	127721	
50A	OIL SEAL - Pinion	1	119427*	optional service seal#
51	PINION YOKE - 39 SPLINE	1		Refer to page 14
52	PINION NUT	1	127589	
KIT - WHEEL	DIFF CASE	1	101878	Incl. items 53-55
53	DIFF. CASE CAP SCREW	8	96283	
54	DIFF CASE - RH - NSS	1	96279	
55	DIFF. CASE - LH 4-LEG W/ PIN - 98182-NSS	1	ORDER 101878 KIT	
KIT - WHEEL	DIFF SIDE GEAR KIT	1		Incl. items 56-60
	19055T 39 inv spline		114469	
	21065T 41 inv spline		114470	
KIT - WHEEL	DIFF KIT - LESS SIDE GEAR	1	118748	Incl. items 56, 58-60
56	SIDE GEAR THRUST WASHER	2	127386	
57	DIFF. SIDE GEAR - 39 INV - 19055T	2	110525	
	DIFF. SIDE GEAR - 41 INV - 21,22065T	2	110527	
58	SIDE PINION THRUST WASHER	4	27810*	
59	SIDE PINION	4	104139	
60	SPIDER	1	128003	
61	No Spin Assembly - 39 INV	1	110829	19055T models only
62	RTV Sealant	1	107276S*	not illustrated



		ųty.			
		Per		21065T/P	
Item N	o. Part Number	Axle	19055T/P	22065T/P	Notes
1	OUTER NUT	1	19186	119881	
2	LOCK WASHER - w/TAB	1	30714	129132	
3	LOCK WASHER - DOWEL TYPE	1	N/A	119883	
4	INNER NUT	1	19186	119882	
5	AXLE HOUSING ASSY.	1			See Page 10
6	AXLE SHAFT	2			See Page 10
KIT - U-	TUBE BREATHER	1	507162	507162	Incls items 7A & 7B
7A	HOSE & CLAMP ASSY	1	129340	129340	
7B	VENT TUBE	1	302706	302706	
8	DRAIN PLUG - MAGNETIC	1	54254	54254	3/4"
9	PLUG - HSG COVER	1	129491	129491	1/2"
10	CAPSCREW CARRIER TO HSG.	8	130836	130836	short
	CAPSCREW CARRIER TO HSG.	4	130187	130187	long
11	LOCKWASHER	12	90422	90422	
12	RTV SEALANT	1	107276S	107276S	not illustrated

## Axle Shafts & Axle Housings

### **Axle Shafts**

				<b>BODY</b>	SHAFT	SPLINE	FLANGE	FLANGE	
MODEL	PART NO.	QTY	SPLINE	<b>0.D</b>	LENGTH	LENGTH	0.D.	HOLES	
19055T	110882	2	39	1.81	40.906	4.00	6.125	12(.781) TPR	
	119594	2	39	1.81	40.906	4.00	6.625	8(.635) STR	
21065T	129330	2	41	1.87	41.500	4.00	8.500	8(.948) TPR	
&	127668*nla	2	41	1.87	40.276	4.00	8.500	8(.948) TPR	
22065T	110888	2	41	1.87	41.313	4.00	8.500	8(.635) STR	
	126877	2	41	1.87	40.630	4.00	8.500	8(.948) TPR	
	129332	2	41	1.87	40.630	4.00	8.500	8(.733) STR	

NOTE: 127668 is replaced by 126877

## **Axle Housings**

Tag ID Number	Service P/N	OEM	Features/Notes	
322308	322308	Nav	Bare Housing	
322310	322311	Nav	Torque Rod Bracket	
321762	321762	Nav	are hsg, ABS Blocks	
321762	321762	Nav	Bare hsg, ABS Blocks	
321996	319031	FtInr	Bare Housing	
323696	502079	Nav	Bare hsg, ABS Blocks	
409187	409187	Blue Diamond / Nav	Torque Rod Bracket, ABS Blocks	
409832	409832	Blue Diamond / Nav	Bare hsg, ABS Blocks	
	322308 322310 321762 321762 321996 323696 409187	322308     322308       322310     322311       321762     321762       321762     321762       321996     319031       323696     502079       409187     409187	322308         322308         Nav           322310         322311         Nav           321762         321762         Nav           321762         321762         Nav           321996         319031         FtInr           323696         502079         Nav           409187         409187         Blue Diamond / Nav	322308         322308         Nav         Bare Housing           322310         322311         Nav         Torque Rod Bracket           321762         321762         Nav         are hsg, ABS Blocks           321762         321762         Nav         Bare hsg, ABS Blocks           321996         319031         Ftlnr         Bare Housing           323696         502079         Nav         Bare hsg, ABS Blocks           409187         409187         Blue Diamond / Nav         Torque Rod Bracket, ABS Blocks

### **Pinion Bearing Spacers**

### **Pinion Bearing Spacers**

The pinion bearing spacers shown below come in a variety of different thickness's for use in re-assembly. All are available individually OR customers can order the PINION BRG SPACER SERVICE KIT, which has a selected range of popular bearing spacers.

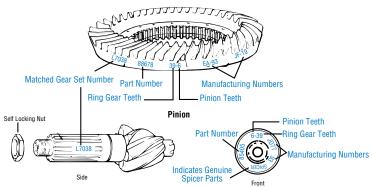
# Models: 19055T/P, 21065T/P, 22065T/P PINION BEARING SPACER KIT: 504116 (includes items w/\*)

Diameter (inches)	Part No.
.623	91552*
.627	91556*
.630	91559*
.631	91560
.632	91561
.633	91562
.634	91564
.635	91566
.636	91568
.637	91572*
.638	91576
.639	91580*
.640	91584
.641	91588
.642	91592
.643	91596*
.644	91600
.645	91602*
.646	91604
.653	91614*

### **Ring Gear & Pinion Identification**

Ring Gear and Drive Pinion are matched parts and must be replaced in sets. Complete identification is stamped on both parts as shown in the adjacent drawing. Order the Dana kit by the ratio required from the chart below.

# Double Reduction - 2 Speed Ring Gear



### 19055T/P, 21065T/P, 22065T/P

Drive Pinion Spline-39 Inv 2.00" Diameter 17" Gearing

	For Service			
Ratio	Order Kit No.	Ring Gear	Pinion	Teeth
		(NSS)	(NSS)	No.
3.70/5.05	504063	133997	133998	37/10
3.90/5.32	121956	107507	126080	39/10
4.11/5.61	121957	107508	126081	37/9
4.33/5.91	121810	107509	126082	39/9
4.63/6.31	122146	107510	126083	37/8
4.88/6.65	121811HX	107511	126084	39/8
5.29/7.21	121812	107512	126085	37/7
5.57/7.60	121813	107513	126086	39/7
6.17/8.41	121814HX	107514	126087	37/6
6.50/8.86	121815	107515	126088	39/6
7.17/9.77	121816	107516	126089	43/6

### **Service Carriers**

# 19055T STANDARD CARRIER & PARKING BRAKE OPTION

### 17" Gearing

#### Side Gear # 110525

Ratio	Side Gear Spline	Standard Carrier	Parking Brake Carrier
3.90/5.32	39 Inv	N/A	681555
4.11/5.61	39 Inv	N/A	681556
4.33/5.91	39 Inv	681567	N/A
4.88/6.65	39 Inv	N/A	681557
5.29/7.21	39 Inv	681568	681558
6.17/8.41	39 Inv	681569	681559
6.50/8.86	39 Inv	681570	N/A
7.17/9.77	39 Inv	N/A	681570

### 19055T NS - NO SPIN CARRIER & PARKING BRAKE OPTION

#### 17" Gearing

### No Spin # 110829

Ratio	Side Gear Spline	Standard Carrier	Parking Brake Carrier
3.90/5.32	39 Inv	N/A	681561
4.33/5.91	39 Inv	N/A	681566
5.57/7.75	39 Inv	681554	N/A
6.17/8.41	39 Inv	681553	N/A
7.17/9.77	39 Inv	681552	N/A

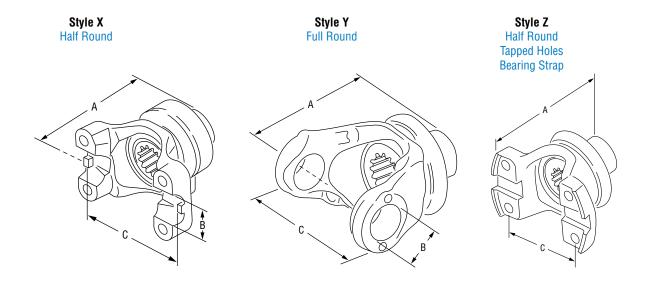
#### 21065T, 22065T STANDARD CARRIER

#### 17" Gearing

#### Side Gear # 110527

Ratio	Side Gear Spline	Standard Carrier	
3.70/5.05	41 Inv	681541	
3.90/5.32	41 Inv	681542	
4.11/5.61	41 Inv	681543	
4.33/5.91	41 Inv	681544	
4.63/6.31	41 Inv	681545	
4.88/6.65	41 Inv	681546	
5.29/7.21	41 Inv	681547	
5.57/7.60	41 Inv	681548	
6.17/8.41	41 Inv	681549	
6.50/8.86	41 Inv	681550	
7.17/9.77	41 Inv	681551	

### **Yokes & Flanges**



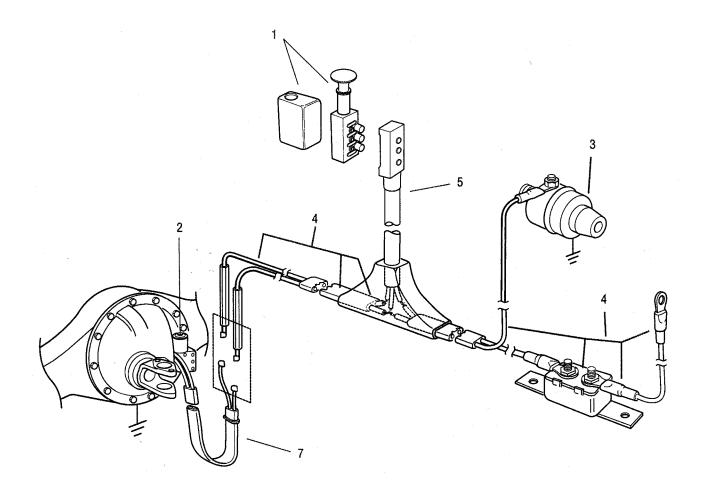
The following yoke reference information can be used for ordering replacement yoke assemblies for new service carriers. Shown below are original production part numbers and shown next to them are how those Yoke & Slinger Assy's are serviced thru the Dana's aftermarket. Always double check part supersession and options before ordering product.

#### 19055T/P, 21065T/P, 22065T/P

#### Rear Axle - 39 - 1.75 Involute Spline

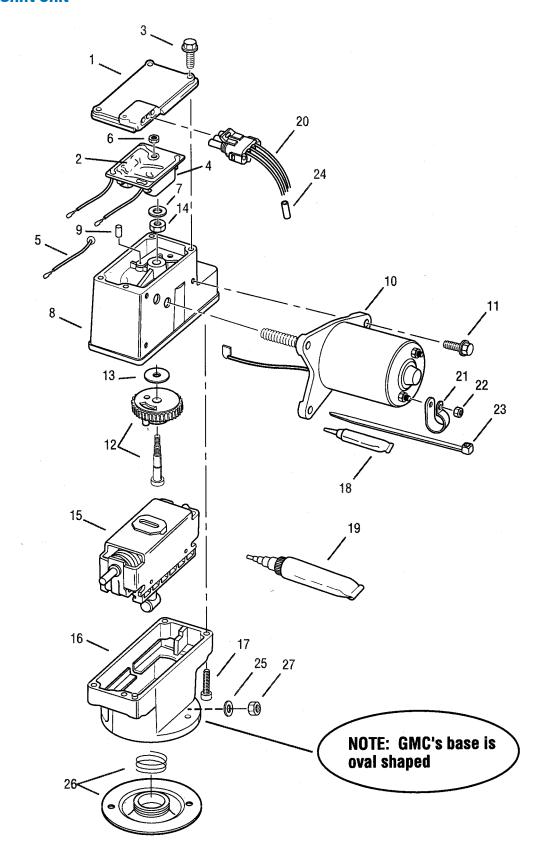
	Production Yoke & Slinger Slinger Assy	Service Part Number	Series	Style	
٠	129162	3-4-13061-1X	1480	X	
	126555	4-4-5691-1X	1550	Х	
	126561	5-4-8131-1X	1610	Χ	

# **Electric Shift System**



Item No.	Part Name	Qty. Per Axle	Part Number	Notes
1	Electric Shift Switch-Original Design	1	32861 - NLA	See OEM Catalog
2	Electric Shift Unit Assy - Current Design	1	120750	12 Volt - Standard
			113752	12 Volt - GM Design
			127773	Waterous
3	Speedometer Adapter	1		See OEM Catalog
4	Forward Wiring Harness-Original Design	1		See OEM Catalog
5	Plug and Cable (3-wire to shift Switch)-Original Design	1	42401 - NLA	11" long
		1	49810 - NLA	20" long
6	Circuit Breaker	1		See OEM Catalog
7	Rear Wiring Harness-Original Design	1		See OEM Catalog

### **Electric Shift Unit**



### **Electric Shift Unit**

### **Electric Shift Unit**

Item No.	Part Name	Qty. Per Axle	Part Number	Notes
KIT - ELECTF		1	127772	12-Volt - Standard
MI LLLOII	(Includes Items 1-19, 25-28)		127770	12-Volt - GM
	(110100003 110113 1 13, 23 20)		127773*	Special - Waterous
KIT - ELECTE	RIC SHIFT RETROFIT-COMPLETE (incls items 1-28)	1	113743	12-Volt Standard - w/Wiring Harness
	RIC SHIFT RETROFIT (incls items 1-19, 25-28)	1	120750	12-Volt Standard - w/o Wiring Harness
1	Cover Assembly	1	113786	NSS (Use 211319)
2	Cover Gasket	<u>'</u> 1	113764	1100 (000 211010)
3	Cover Hex Screw	3	113726	
Ü	GOTOL FIGAL GOLOW	1	113788	Long
4	KIT - CIRCUIT BOARD & COVER	1	211319	Includes 1-3, 5-7, 18-19
5	Ground Wire	1	113775	NSS
6	Circuit Board Locknut	<u>.</u> 1	113772	NSS
7	Circuit Board Washer	<u>'</u> 1	113773	NSS
8	Motor Housing Assembly	<u>·</u> 1	113742	noc .
9	Cam Pin	<u>·</u> 1	113721	
10	KIT - SHIFT MOTOR & LUBE	1	124650	Includes 18
			130115**	
11	Head Hex Screw	4	113725	
12	Drive Gear & Camp Pin Kit	<u>·</u> 1	113746	Includes 5, 9, 13-14, 18
13	Gear Washer	1	113774	NSS
14	Gear Locknut	1	113729	NSS
15	Slide Block & Lube Kit	1	113759	Includes 18
			113781***	
16	Base Housing	1	113750	12-Volt - GM
	· ·		113701	12-Volt - Standard
17	Hex Head Screw	4	113725	
18	Lubricant - Shift Unit 1/4oz	AR	113741	
19	Gasket Compound - shift unit	AR	113771	
KIT - WIRING	HARNESS & CONNECTOR	1	113753	Includes 20-26
20	Connector & Harness Asembly	1	113738	NSS
21	Cable Clip	1	113747	NSS
22	Nut	1	113748	NSS
23	Tie Wrap	2	113749	NSS
24	Wire Connector	3	113739	NSS
25	Flat Washer	2	119857	
26	Seal & Spring Assembly	1	119855	
27	Stud Nut	2	63028	
28	Fit Up Card	1	128039	not illustrated

<sup>\*</sup> Special shift unit for Waterous (Firetrucks) - Sold as is.

<sup>\*\*</sup> Special motor for 127773 shift units - Sold in kit 124650 only.

<sup>\*\*\*</sup> Special slider block for 127773 shift units.

### **Kits and Assemblies**

Description	Part Number
Basic Overhaul Kit	110635
Cage & Cup Assy - Standard Models	130875
Cage & Cup Assy - Parking Brake Models	130876
Diff Carrier & Bearing Cap Kit	109365
No Spin Diff Assy - 39 Inv Spline	110829
Oil Seal & Shim Kit	114104
Pinion Oil Seal - Microlip design	127721
Pinion Oil Seal - triple lip design - service only	119427
Pinion Bearing Spacer Kit	504016
Ring Gear Nut & Bolt Kit	087955
Sliding Clutch Parts Kit	060608
Wheel Diff Case Kit	101878
Wheel Diff Side Gear Kit - 39 Inv Spline	114469
Wheel Diff Side Gear Kit - 41 Inv Spline	114470
Wheel Diff Kit w/o Side Gears	118748
U-Tube Breather Kit	507162
RTV Sealant	107276S



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# **Roadranger®**





For spec'ing or service assistance, call 1-800-826-HELP (4357) 24 hours a day, 7 days a week (Mexico: 001-800-826-4357), for more time on the road. Or visit our web site at www.roadranger.com.

Roadranger: Eaton, Dana and other trusted partners providing the best products and services in the industry, ensuring more time on the road.