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MAINTENANCE MANUAL



AIR SUSPENSIONS

ARD MODELS

ARD-125/244-6 ARD-234-6 ARD-125/244-8 ARD-238-6

ARD-120-6

THIS MAINTENANCE MANUAL MUST ACCOMPANY THE VEHICLE TO THE END USER

PREFACE

DRIVE AXLE AIR SUSPENSION ARD-125, ARD-244, ARD-234, ARD-238

This manual provides the information necessary for the CARE, MAINTENANCE and SAFE OPERATION of Neway's ARD-125/244, ARD-234 & ARD-238 Series Truck/Tractor Air Suspension.

The Neway Truck/Tractor Air Suspension is designed and engineered to provide many miles of trouble-free service. In the event of a minor breakdown, such as a shock absorber or an air system failure, there are safety features designed into the suspension that will allow the vehicle to be driven CAUTIOUSLY at a reduced speed to the nearest place of service.

The Neway Air Suspension uses air drawn from the conventional truck/ tractor air system to pressurize the air springs. Height control valves are used to control the air pressure required tor varying loads. A feature of this suspension is the ability to provide a cushioned ride throughout the light to loaded range; also an excellent side to side and axle to axle load equalization with controlled braking.

WARRANTY

The Neway Division, Lear Siegler, Inc. warrants its products manufactured and supplied by it for coverage periods of:

Major Components — Up to 36 months or 250,000 miles, whichever occurs first.

Other Components — Up to 12 months or 100,000 miles, whichever occurs first.

Class 1 — Up to 12 months or 36,000 miles, whichever shock Absorbers occurs first.

Class 3 – Up to 12 months or 100,000 miles, whichever occurs first.

Refer to the complete warranty for the country in which the product will be used. A copy of the written warranty is included with the product. It is also enclosed with the suspension catalogs, service manuals or may be ordered directly from the address shown on the back cover. The information contained on this page does not in and of itself constitute a warranty.

"This manual applies to the suspension series or models shown, and for special orders of the same, however, we urge you to determine your specific model number, write that number in the inside back cover, and refer to it when obtaining information or replacement parts"

INDEX

PREFACE & WARRANTY	
INDEX	
PRE-OPERATIONAL CHECK LIST	&
OPERATING INSTRUCTIONS	ţ
ROUTINE MAINTENANCE and INSPECTION	(
MODEL IDENTIFICATION	3 . 8
AIR SPRING IDENTIFICATION	(
EXPLODED PARTS DRAWING AND PARTS LIST FOR ARD-125/244 -6 & -8	14
EXPLODED PARTS DRAWING AND PARTS LIST FOR ARD-234-6	10
EXPLODED PARTS DRAWING AND PARTS LIST FOR ARD-238-6 & ARD-120-6	18
AXLE IDENTIFICATION	1
CONTROL ARM & BEAM HANGER KITS	
EQUALIZING BEAM IDENTIFICATION	2
TRACK BAR/TORQUE ROD	2
RIDE HEIGHT CHART	2
HEIGHT CONTROL VALVE ADJUSTMENT	2
	2!
AIR CONTROLS	2
SERVICE REPAIR KITS (SRK)	3
TROUBLE SHOOTING	38
REPLACEMENT INSTRUCTIONS	42
SMART NUT® TIGHTENING PROCEDURE	.42

PRE-OPERATION VAL CHECK LIST

Prior to placing unit in service the items listed must be checked.

Build tractor air pressure above 65 PSI. With tractor shut off, check system for air leaks.

3/4" Shock absorber nuts.

torque to 150 ft. lbs.

Check shock absorbers for proper installation

Suspension ride height should be within 14" of recommended design height. See Height Control Valve adjustment for proper setting.

> 5/8" frame bracket mounting bolts torqued to 110 ft. lbs.

Air spring mounting nuts torqued to 1/2" -25 ft. lbs. 3/4" -50 ft. lbs.

Minimum clearance around air springs is 1 3/4".

With vehicle on level surface, air supply pressure in excess of 65 PSI, both air springs should be of equal firmness.

> Transverse beam connection must be torqued to 600 ft. lbs.-1 1/8" Nut 700 ft. lbs.-1 1/4" Nut 900 ft. lbs.-1 1/4" Cap screw

Check for proper installation of spacer washers and equalizing beam.

1 1/4" Pivot nut must be torqued to 700 ft. lbs. A standard 1 1/8" Pivot nut must be torqued to 600 ft. lbs. lubricated. 4 1 1/8" Smart Nut® - refer to page 42 for proper installation.

Lower flange of frame bracket must be securely attached to crossmember by bolts.

Axle pivot connection nut torqued to 200 ft. lbs.

Welds connecting adapters to axle must be adequate and sound. Three passes minimum, full length on front and rear side of the adapter.

RIDE HEIGHT

Pinion angle should be within manufacturing specifications (See Trouble Shooting for specific recommendations).

OPERATING INSTRUCTIONS

The NEWAY Drive Axle Air Suspension is controlled by height control valves that are factory pre-set. They will maintain the desired ride height throughout the unloaded to loaded range automatically.

Before putting the vehicle in operation, build air pressure in excess of 65 PSI., to open air pressure protection valve, allowing air flow to the height control valves.

OPTIONAL AIR CONTROLS

To prevent shock absorber damage, an optional air control for your drive axle air suspension is AC-77-M-1 (Page 27). Prevents sudden rise of tractor frame during uncoupling operation by deflating air springs.

DISCONNECTING TRAILER — With landing gear down and glad hands disconnected, turn actuating valve to "ON" position. This will automatically deflate air springs.

BOBTAIL OPERATION/CONNECTING TRAILER — Turn actuating valve to "OFF" position. This will return system to the height control valves and proper Ride Height.

ROUTINE MAINTENANCE and DAILY INSPECTION

DAILY INSPECTION

DAILY INSPECTION—Daily or before each trip, check the suspension to be sure it is fully operational. Service as necessary.

3,000 MILE INSPECTION

- 1. Refer to Smart Nut® Tightening Procedure page 42, inspect 1 1/8" bolts and nuts at the pivot and axle connections to assure they are properly assembled. Physically check all other nuts and bolts for proper torque.
- 2. With vehicle on level surface and air pressure in excess of 65 PSI, all air springs should be of equal firmness. NOTE: On tandem applications, the height control valve on each side controls all air springs on their respective sides. Check all fittings for air leaks.
- 3. Suspension ride height (underside of frame to centerline of axle) MUST be within 1/4" of given dimension to protect the air springs and shock absorbers from over extension. See page 23 for given dimension.

ROUTINE MAINTENANCE

50,000 MILES or 1 year MINIMUM

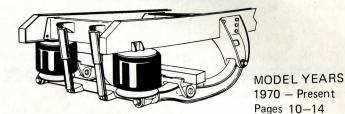
ROUTINE MAINTENANCE—When servicing vehicle brake system, inspect suspension components per 3,000 MILE INSPECTION. Also check all other suspension components for any sign of damage, looseness, wear or cracks. Repair or replace damaged part to prevent failure or equipment breakdown.

TORQUE CHART

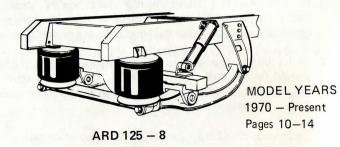
SIZE	1/2"	5/8"	3/4"	3/4"	1 1/8"	1 1/4"	3/4"
TORQUE IN FT. LBS.	25	110	200	AIR SPRING ONLY 50	*600	700	SHOCK ABSORBERS 150

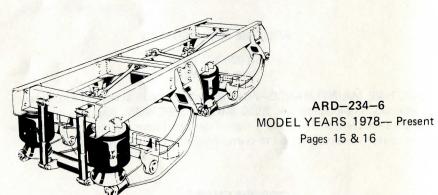
- ABOVE ARE MINIMUM TORQUES WITH CLEAN LUBRICATED THREADS
- * For proper tightening procedure of Smart Nut see page 42.

MODEL IDENTIFICATION

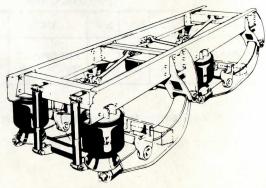


ARD 125 - 6





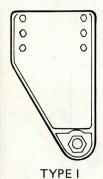
ARD-120-6 ARD-238-6 MODEL YEARS 1984 - Present Pages 17 & 18



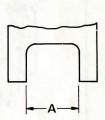
MODEL IDENTIFICATION

The basic difference in the ARD (Air Ride Drive Axle) models are in the Frame Brackets, Equalizing Beam, Shock Absorber and Transverse Beams. To identify models refer to the views below.

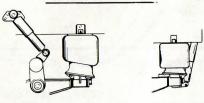
MODEL	FRAME	А	SHOCK	TRANS.	EQUAL.
SUSPENSION	BRKT.		ABSORBER	BEAM.	BEAM
ARD-125-6 ARD-125-8 ARD-244-6 ARD-244-8 ARD-234 ARD-238	Type I Type I Type I Type I Type II	5½ 5½ 5½ 5½ 5½ 5½	Type II Type I Type II Type I Type II Type II	Type I Type I Type I Type I Type I Type II	See Equalizing Beam Identification Chart on Page 21



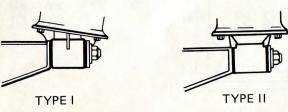
TYPE II



FRAME BRACKETS



TYPE I TYPE II SHOCK ABSORBERS



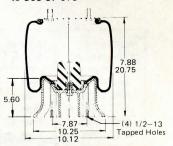
TRANSVERSE BEAMS

AIR SPRING IDENTIFICATION

905 57 006/037 * For Service Replacement Refer to 905 57 075 7.68 21.00 7.87 10.13 Tapped Holes

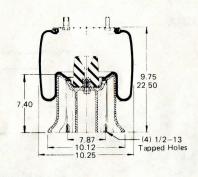
* Air Spring same as 905 57 006 except Piston is rotated 45°

905 57 027/031* For Service Replacement Refer to 905 57 075

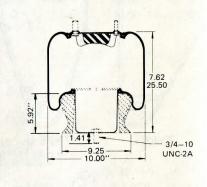


* Air Spring same as 905 57 027 except Piston is rotated 45°

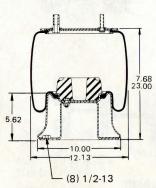
905 57 032



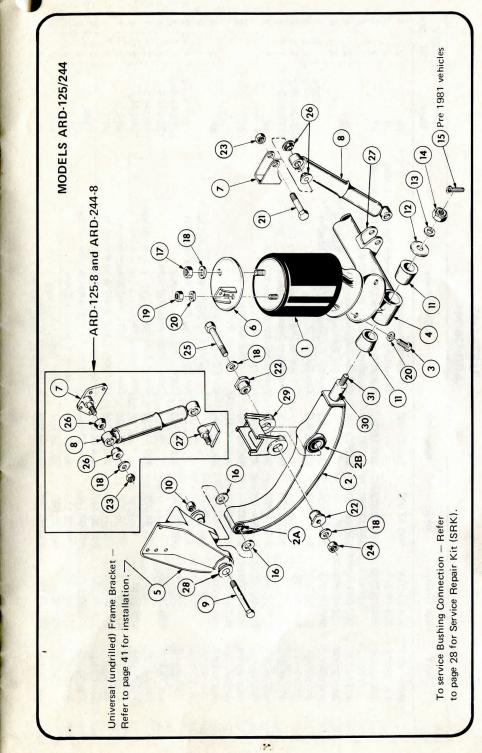
905 57 070



905 57 075



NOTE: 905 57 075 IS ALSO INTERCHANGEABLE WITH 905 57 006 905 57 027 905 57 031 905 57 037



PARTS LIST ARD-125/244

NEWAY	Mack Western	White	Kenworth	Description	Where	125	OTY 5 244
905 57 031	905 57 031	905 57 031	905 57 031	Air Spring Assembly	all	2	4
905 15 277	905 15 277			Equalizing Beam (5 1/4" wide) Pre 1981 vehicles	all	2	4
, 905 15 312	905 15 312	905 15 312	905 15 312	Equalizing Beam (5 3/4" wide) Pre 1981 vehicles	all	2	4
		905 15 583		Equalizing Beam - Pre 1980 White only		2	4
900 08 131	900 08 131	900 08 131	900 08 131	Rubber Bushing (front)	all	2	4
900 80 006	900 80 006			Rubber Bushing (5 1/4" wide hangers)		2	4
800 80 006	800 80 006	800 80 006	800 80 006	Rubber Bushing (5 3/4" wide hangers)		0	4
930 02 893	930 02 893	930 02 893	930 02 893	Cap Screw 1/2"-13 X 1"		4	00
905 44 112	905 44 279			Transverse Beam	125/244-8		2
905 44 079		905 44 079	905 44 079	Transverse Beam	125/244-6	-	2
900 18 389	900 18 389	900 18 389	900 18 389	Frame Bracket LH	all	-	0
W/SRK-120	W/SRK-120	W/SRK-120	W/SRK-120				
900 18 390	900 18 390	900 18 390	900 18 390	Frame Bracket RH	all		2
W/SRK-120	W/SRK-120	W/SRK-120	W/SRK-120				ZV.
905 31 001	905 31 001		905 31 001	Air Spring Mtg. Plate	all	2	4
		905 31 037		Air Spring Mtg. Plate - White only LH		-	2
		905 31 038		Air Spring Mtg. Plate - White only RH		-	2
900 18 116		900 18 330	900 18 116	Upper Shock Mtg. Bracket	125/244-6	2	4
905 18 020	905 18 020			Upper Shock Mount Bracket	125/244-8	2	4
900 44 025		900 44 025	900 44 025	Shock Absorber	125/244-6	7	4
900 44 011	900 44 016			Shock Absorber	125/244-8	2	4
932 00 132		932 01 030	932 01 030	Rod Bolt 1 1/4" Pre 1981 vehicles	all	2	4
932 01 046	932 01 046	932 01 046	932 01 046	Rod Bolt 1 1/8" 1981 & later vehicles	all a	2	4
934 00 524		934 00 524	934 00 524	Lock Nut 1 1/4" Pre 1981 vehicles	lle e	2	4
939 00 165		939 00 165	939 00 165	Smart Nut®11/8" 1981 & later vehicles	all	2	4
900 08 113		900 08 113	900 08 113	Bushing, Transverse Beam	all	4	00
900 36 007	900 36 007	900 36 007	900 36 007	Spacer Washer	all	2	4
936 00 180	936 00 180	936 00 180	936 00 180	1 1/4" Plain Washer	all	2	4

- 11 -

PARTS LIST (Con't.) ARD-125/244

	NEWAY	Mack Western	White	Kenworth	Description	Where	125 2
14	934 00 524	934 00 524	934 00 524	934 00 524	Lock Nut 1 1/4"	110	(
15	938 00 065	938 00 065	038 00 068	030 00 066	Cotton Bin Day 1001 and in the	₹ :	7
10	200 00 000	200 00 000	200 00 000	200 00 000	Cotter Fin Fre 1981 Venicles only	all	7
9	900 36 001	900 36 001	900 36 001	900 36 001	Spacer Washer Pre 1981 vehicles		7
	936 00 495	936 00 495	936 00 495	936 00 495	Spacer Washer 1981 & later vehicles		٠,
17	934 00 417	934 00 417	934 00 417	934 00 417	1 ock Nut 3/4"-16	5 =	4 (
18	936 00 157	936 00 157	936 00 157	936 00 157	Plain Washer	175/244 6	N (
	936 00 157	936 00 157	936 00 157	936 00 157	Plain Washer	125/244-0	0 5
19	934 00 136	934 00 136	934 00 136	934 00 136	Hex Nirt 1/2"-13	9-447/671	2 ,
20	936 00 072	936 00 072	936 00 072	936 00 072	l ock Washer 1/2"		7 (
21	930 03 592		930 03 592	930 03 592	Can Screw 3/4" X 3 1/4"	101/24	٥,
22	900 01 002	900 01 002	900 01 002	900 01 002	Adapter Bushing	0-447/671	4 4
23	934 00 553	934 00 553	934 00 553	934 00 553	l ock Nut 3/4"-10 Thin		4 4
24	934 00 492	934 00 492	934 00 492	934 00 492	l ock Nut 3/4"-10	E =	4 (
25	930 03 693	930 03 693	930 03 693	930 03 693	Can Screw 3/4".10 V 7 1/2"		7 (
26	900 08 003	900 08 003			Shook Absorber Buchis (41) p. p.	all	7
	905 08 004	905 08 004	00 00 000	100 00 100	Shock Absorber bushing (1 Dia. Pin)	125/244-8	00
77	905 19 240	905 10 340	900 00 006	902 08 004	Replacement Bushing (3/4" Dia. Pin)	125/244-6	∞
	900 18 071	000 19 240	2000		Lower Shock Bracket	125/244-8	2
00	300 000	300 18 071	1/0 81 006	900 18 071	Lower Shock Bracket	125/244-6	C
28	900 08 110		900 08 110		Alignment Bushing Pre 1981 - 1 1/4" I.D.	-	4
	900 08 120	900 08 120	900 08 120	900 08 120	Alignment Bushing 1981 & later vehicles 1 1/8" I D all	Ile Ol	4
53		5	Bracket - Refer	Bracket - Refer to page 19 for proper DDK.	per DDK.		+
30	900 44 174		900 44 174	900 44 174	Roll Pin	=	c
31	900 06 242	900 06 242	900 06 242	900 06 242	Stud 1 1/4"	= = =	ч с
						5	7

PARTS LIST ARD-125/244

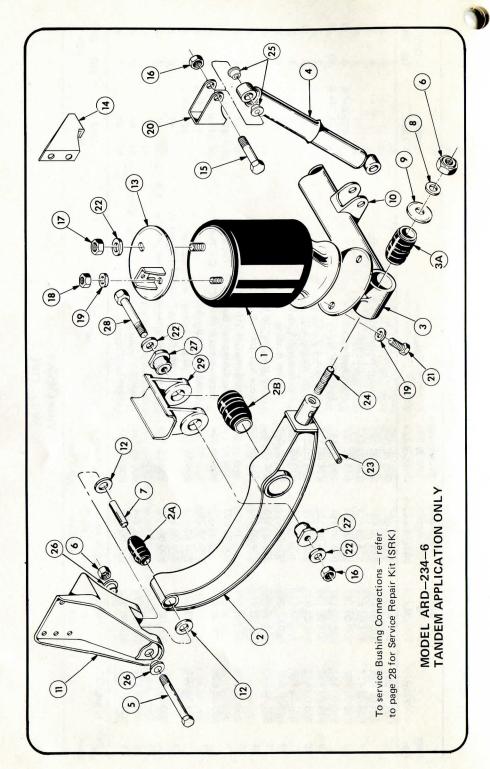
QTY 244	4	4	4	4	4	4	∞	2	2	2		2		4	4	4	4	4	4	4	4	4	00	4	4	4	4
125	2	2	2	2	2	2	4	-	-	-		-		2	2	2	2	2	2	2	2	2	4	2	2	2	2
Where	all	all	all	all				125/244-8	125/244-6	all		all		all	125/244-6	125/244-8	125/244-6	125/244-8	all	all	all	all	all	all	all	all	all
Description	Air Spring Assembly	Equalizing Beam (5 1/4" wide) Pre 1981 vehicles	Equalizing Beam (5 3/4" wide)	Rubber Bushing (front)	Rubber Bushing (5 1/4" wide hangers)	Rubber Bushing (5 3/4" wide hangers)	Cap Screw 1/2"-13 X 1"	Transverse Beam	Transverse Beam	Frame Bracket LH		Frame Bracket RH		Air Spring Mtg. Plate	Upper Shock Mtg. Bracket	Upper Shock Mount Bracket	Shock Absorber	Shock Absorber	Rod Bolt 1 1/4" Pre 1981 vehicles	Rod Bolt 1 1/8" 1981 & later vehicles	Lock Nut 1 1/4" Pre 1981 vehicles	Smart Nut® 1 1/8" 1981 & later vehicles	Bushing, Transverse Beam	Spacer Washer	Plain Washer 1 1/4"	Lock Nut 1 1/4"	Cotter Pin Pre 1981 vehicles only
Mack Eastern & Canada	905 57 037		905 15 312	900 08 131		800 80 006	930 02 893		905 44 079	900 18 389	W/SRK-120	900 18 390	W/SRK-120	905 31 001	900 18 116		900 44 025		932 00 132	932 01 046	934 00 524	939 00 165	900 08 113	900 36 007	936 00 180	934 00 524	938 00 065
Freightliner & White Western	905 57 037	905 15 277	905 15 312	900 08 131	900 80 006	800 80 006	930 02 893	905 44 112		900 18 389	W/SRK-120	900 18 390	W/SRK-120	905 31 001		905 18 020		900 44 011	932 01 030	932 01 046	934 00 524	939 00 165	900 08 113	900 36 007	936 00 180	934 00 524	938 00 065
GM & I.H.C.	905 57 037		905 15 312	900 08 131		800 80 006	930 02 893		905 44 079	900 18 389	W/SRK-120	900 18 390	W/SRK-120	905 31 001	900 18 116		900 44 025		932 00 132	932 01 046	934 00 524	939 00 165	900 08 113	900 36 007	936 00 180	934 00 524	938 00 065
Ford	905 57 032		905 15 787	900 08 131		800 80 006	930 02 893		. 905 44 079	900 18 389	W/SRK-120	900 18 390	W/SRK-120	905 31 001	900 18 116		900 44 025		932 00 132	932 01 046	934 00 525	939 00 165	900 08 113				938 00 065
Item No.	-	2		2A	2B		8	4		* S				9	7		00		6		10		11	12	13	14	15

- 13 -

PARTS LIST (Con't.) ARD-125/244

Vie -		В	Freightliner	Mack Eastern				
Item		∞	&	ø	Description	Where	QTY	>
S.	Ford	I.H.C.	White Western	Canada		Used	125 244	244
16	900 36 001	900 36 001	900 36 001	900 36 001	Spacer Washer Pre 1981 vehicles	all	4	0
	936 00 495	936 00 495	936 00 495	936 00 495	Spacer Washer 1981 & later vehicles	all	4	00
17	934 00 417	934 00 417	934 00 417	934 00 417	Lock Nut 3/4"-16	all	2	4
18	936 00 157	936 00 157	936 00 157	936 00 157	Plain Washer 3/4"	125/244-6	9	12
	936 00 157	936 00 157	936 00 157	936 00 157	Plain Washer 3/4"	125/244-8	10	20
19	934 00 136	934 00 136	934 00 136	934 00 136	Hex Nut 1/2"-13	all a	2	4
20	936 00 072	936 00 072	936 00 072	936 00 072	Lock Washer 1/2"	all	9	12
21	930 03 592	930 03 592		930 03 592	Cap Screw 3/4" X 3 1/4"	125/244-6	4	000
22	900 01 002	900 01 002	900 01 002	900 01 002	Adapter Bushing	all	4	0 00
23	934 00 553	934 00 553	934 00 553	934 00 553	Lock Nut 3/4"-10 Thin	lle	4	000
24		934 00 492	934 00 492	934 00 492	Lock Nut 3/4"-10	lle		4
25		930 03 693			Cap Screw 3/4"-10 X 7 1/2"	=======================================	10	4
26			900 08 003		Shock Absorber Bushing (1" Dia Pin)	125/244-8	ι α	. 4
	905 08 004	905 08 004		905 08 004	Replacement Bushing (3/4" Dia. Pin)	125/244-6	οα	2 4
27			905 19 240		Lower Shock Bracket	125/244-8	0 0	2 <
	900 18 071	900 18 071	900 18 071	900 18 071	Lower Shock Bracket	125/244.6	1 (1 4
28			900 08 110		Alignment Bushing Pre 1981 1 1/4" L.D.	a	1 4	r a
	900 08 120	900 08 120	900 08 120	900 08 120	Alianment Bushing 1981 & later vehicles 1 1/8"1 D	= =	٠,	0 0
29	Beam Hanger Bracket -	Bracket - Refer to	Refer to page 19 for proper DDK.	er DDK.		5	+	0
30	900 44 174	900 44 174	900 44 174	900 44 174	Roll Pin	=	c	,
31	900 06 242	900 06 242	900 06 242	900 06 242	Stud 1 1/4"	= == =================================	, ,	1 4
*	* Befer to page 32							

- 14 -



PARTS LIST ARD-234-6

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	905 57 070	Air Spring Assembly	4
2	905 15 773	Equalizing Beam Assembly	4
2A	900 08 117	Rubber Bushing (Front)	4
2B	900 08 008	Rubber Bushing (Center)	4
3	905 44 491	Transverse Beam	2
3A	900 08 104	Transverse Beam Bushing	4
4	900 44 046	Shock Absorber	4
5	932 01 046	Rod Bolt 1 1/8 -7 X 9 1/4	4
6	939 00 165	Smart Nut ® 1 1/8 –7 gr. C	8
7	900 38 083	Delrin Sleeve	4
8	936 00 493	Washer	4
9	936 00 174	Plain Washer 1 1/8	4
10	900 32 386	Lower Shock Bracket	4
11	905 19 311	Frame Bracket	4
12	936 00 495	Spacer Washer	8
	900 36 108	Spacer Washer (Ford CLT only)	8
13	905 31 045	Air Spring Mounting Plate	4
14	900 23 131	Brace - Air Spring Mounting Plate	4
15	930 03 592	Cap Screw 3/4-10 X 3 1/2 gr. 5	8
16	934 00 492	Lock Nut 3/4-10 gr. B	12
17	934 00 149	Hex Nut 3/4-16 gr. B	4
18	934 00 136	Hex Nut 1/2-13 gr. B	4
19	936 00 072	Lock Washer 1/2	12
20	900 18 367	Upper Shock Bracket	4
21	930 02 893	Cap Screw 1/2-13 X 1 gr. 2	8
22	936 00 156	Plain Washer 3/4	12
23	900 44 309	Roll Pin	4
24	900 06 338	Stud (Equalizing Beam)	4
25	905 08 004	Shock Absorber Bushing	16
26	900 08 120	Alignment Bushing	8
	900 08 092	Alignment Bushing (Ford CLT only)	8
27	900 01 002	Adapter Bushing	8
28	930 03 693	Cap Screw 3/4-10 x 7 1/2"	4
29	*	Beam Hanger Bracket	4

^{*}Beam Hanger Bracket - Refer to page 19 for proper DDK.

Note: Inner sleeve must be removed from axle pivot bushing (if necessary) prior to assembly of adapter bushings 900 01 002.

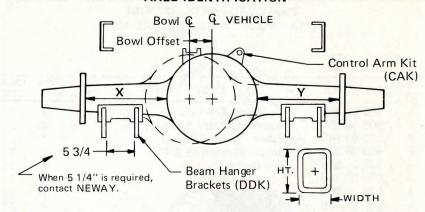
(2) MODEL ARD-238-6 TANDEM APPLICATION ONLY (=)

EXPLODED PARTS LIST FOR NEWAY MODEL ARD-238-6, ARD-120-6

			and the second	
ITEM NO.	PART NO.	DESCRIPTION	238-6 QTY.	120-6 QTY.
1	905 57 031	Air Spring Assembly	4	2
2	905 16 151	Equalizing Beam Assembly	4	2
3	900 08 145	Rubber Bushing (front)	4	2
4	900 08 008	Rubber Bushing (5 3/4")	4	2
5	932 01 046	Rod Bolt 1 1/8"	4	2
6	939 00 165	Smart Nut 1 1/8"	4	2
7	934 00 509	Lock Nut 1 1/4"	4	2 2 2 2 2 2 2 2
8	936 00 180	Plain Washer 1 1/4"	4	2
9	900 36 007	Spacer Washer	4	2
10	900 33 044	Lower Shock Bracket Plates	8	4
11	905 19 733	Frame Bracket Fixed - R.H.	2	1
	900 18 431	Frame Bracket Adj L.H.	2	1
12	900 08 113	Bushing - Transverse Beam	8	4
13	905 31 001	Air Spring Mounting Plate	4	
14	900 18 036	Air Spring Mounting Plate Bracket	4	2 2 4
15	930 03 597	Cap Screw 3/4" -10 x 3 1/2"	8	4
16	934 00 492	Lock Nut 3/4" -10	12	6
17	934 00 417	Lock Nut 3/4" -16	4	6 2 2 6
18	934 00 136	Hex Nut 1/2" -13	4	2
19	936 00 072	Lock Washer 1/2"	12	6
20	900 18 367	Upper Shock Bracket	4	2
21	930 02 893	Cap Screw 1/2" -13 x 1"	8	4
22	900 23 131	Brace	4	2
23	900 44 174	Roll Pin	4	2 2 2
24	900 06 380	Stud	4	2
25	905 08 004	Replacement Bushing (3/4" Dia. Pin)	16	8
26	900 08 150	Alignment Bushing	8	4
27	*	Beam Hanger Bracket	4	2
28	900 01 002	Adapter Bushing	8	4
29	930 03 693	Cap Screw 3/4" -10 x 7 1/2"	4	2
30	936 00 157	Plain Washer 3/4"	8	4
31	905 44 755	Transverse Beam Assembly	2	1
32	900 44 025	Shock Absorber	4	2

^{*}Beam Hanger Bracket - Refer to page 19 for proper DDK.

AXLE IDENTIFICATION



When ordering replacement torque rod/track bar brackets or axle brackets, the bowl offset, if any, must be determined. To determine offset, measure from brake flange to reference line shown on drawing. Subtract the smaller dimension and divide by "2".

	AXLE M	FG.		
	ROCKWELL	AXLES	DDK	CAK
R-170	4 5/8 X 5 1/4	1" Bowl Offset	1026	1250
L-155	4 1/4 X 5	O" Offset	1005	1215
	4 5/8 X 5 1/4		1022	1256
	4 1/4 X 5		1006	2214
SQHD	4 1/4 X 5	O" Offset		
	4 5/8 X 5 1/4		1040	2263
SSHD	4 5/8 X 5 1/4	2 9/16" Offset	1032	2233
11	TERNATIONAL	HARVESTER	di wat	ET BUB
	RA-73, RA-74,		1026	1250
	4 5/8 X 5 1/4	1" Offset		
RA-57	4 5/8 X 5 1/4		1007	1238
RA-328,	RA-333, RA-334	, RA-388	10	M SEE TO
	4 1/4 X 5	O" Offset	1006	2214
	WHITE TRUCK C	ORP. AXLES	CK E CEN	Maria Maria Maria
134-C	4 5/8 X 5 1/4	1" Offset	1026	1250
	EATON A			
17 & 22	Series Single Driv		1047	1271
		1 57/64" Offset		
23 & 26	Series Single Driv	e	1042	1265
	4 7/8 X 5 5/8	1 57/64" Offset		
340, 380,	400 Series Tand	dem	1044	2233
	4 5/8 X 5 1/4	3" Offset		
440, 480	Series		1054	2267
		2 19/32 Offset		

NOTE: See page 20 for Track Bar, Torque Rod, and Beam Hanger Brackets.

CONTROL ARM KITS (CAK) BEAM HANGER KITS (DDK)

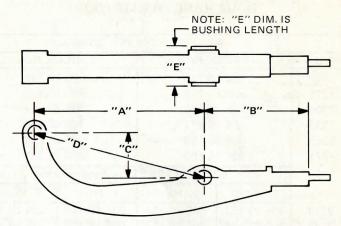
7	А	XLE BRACKE	TS - Single A	xle
CAK	TRAC	K BAR	TORQU	JE ROD
1250	905 1	8 155	905 1	8 364
1215	905 1	8 152	905 1	8 149
1256	905 1	8 155	905 1	8 151
1238	905 1	8 271	905 1	8 270
1265	905 1	8 155	905 1	8 351
1271	905 1	8 155	905 1	8 351
	A	KLE BRACKE	TS — Tandem A	Axle
	L. Hand	R. Hand	L. Hand	R. Hand
2214	905 18 152	905 18 153	905 18 149	905 18 149
2233	905 18 155	905 18 155	905 18 150	905 18 151
2263	905 18 155	905 18 155	905 18 150	905 18 151
2267	905 18 155	905 18 155	905 18 347	905 18 352

BEAM	HANGER BRACK	KETS 5 3/4"
DDK	Straight Side	Offset Side
1005	* 905 18 378	
1006	* 905 18 378	
1007	* 905 19 273	
1022	905 19 372	905 19 606
1026	905 18 268	905 18 269
1032	905 19 372	905 19 606
1040	905 19 372	905 18 358
1042	905 18 964	905 18 965
1044	905 19 337	905 19 375
1047	905 19 337	905 19 338
1054	905 18 964	905 19 381

NOTE: Left Side - Road Side, Right Side - Curb Side.

^{*2} Required Per Axle.

EQUALIZING BEAM IDENTIFICATION

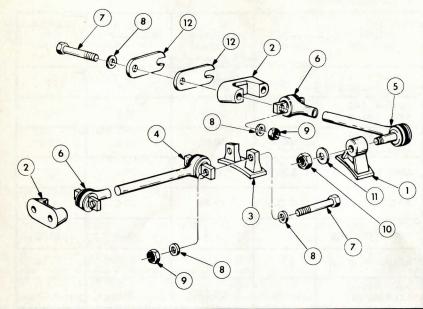


ARD-125/244, ARD-234 AND ARD-238

					and the second second
PART NO.	Α	В	С	D	Е
905 15 277	24 3/4	15	7	25 23/32	5 1/4
905 15 312	24 3/4	15	7	25 23/32	5 3/4
905 15 320	24 19/32	15	5 1/4	25 5/32	5 1/4
905 15 362	24 19/32	15	5 1/4	25 5/32	5 3/4
905 15 323	24 1/16	15	3 1/2	24 5/16	5 1/4
905 15 583	25 9/16	15	7	26 1/2	5 3/4
905 15 773	24 3/4	15 7/16	7	25 23/32	5 3/4
905 16 151	24 3/4	15 9/16	7	25 23/32	5 3/4

^{*}ARD-234

TRACK BAR/TORQUE ROD SYSTEM



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	*	Track Bar Axle Bracket	1
2	900 18 042	Frame Bracket	2
3	*	Torque Rod Axle Bracket	1
4	** 900 44 636	Rod End (Male)	1
5	** 900 44 637	Rod End - 1 1/8" Thread (Male)	1
	** 900 44 638	Rod End - 1 1/4" Thread (Male)	1
6	** 900 44 635	Rod End (Female)	2
7	930 03 429	Cap Screw, 5/8" x 5 1/2"	6
8	936 00 279	Plain Washer, 5/8"	12
9	934 00 488	Lock Nut, 5/8"	6
10	934 00 505	Lock Nut, 1 1/8"-12	1
	934 00 509	Lock Nut, 1 1/4"-12	1
11	936 00 174	Plain Washer, 1 1/8"	1
	936 00 180	Plain Washer, 1 1/4"	1
12	900 36 019	Spacer	6

^{*} See Chart for track bar/torque rod axle brackets — Page 20.

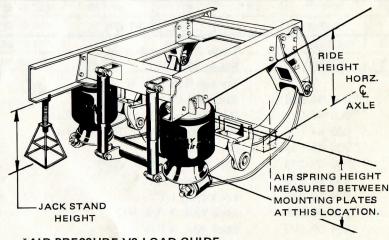
^{**}ARD-238

^{**} See page 35 for welding instructions.

RIDE HEIGHT CHART

* TAPERED FRAME

	MODEL NUMBER	RIDE HEIGHT	JACK STAND HEIGHT	TIRE SIZE 10:20/11:22.5 UNLADEN RADIUS	APPROX. AIR SPRING HEIGHT	
	ARD-125-6 & 8 ARD-244-6 & 8	10"	30.5	20.5	13"	
	ARD-125-6 ARD-244-6	8.75"	29.25	20.5	12"	
	ARD-234-6 ARD-238-6 ARD-120-6	10	30.5	20.5	12.5"	
	ARD-125-6-01	8.25	28.75	20.5	12"	
	ARD-125-6-02	7.25	27.75	20.5	11"	
*	ARD-125-6-03	10	30.5	20.5	12.88	
*	ARD-125-6-04	8.75	29.25	20.5	11.75	
	ARD-125-6 LOW MOUNT	5.25	25.75	20.5	9.18	



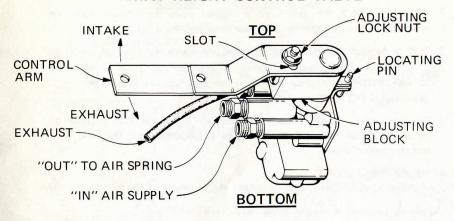
*AIR PRESSURE VS LOAD GUIDE

ARD 12	5, 244 & 238	Α	RD 234
PSI	LOAD	PSI	LOAD
10	5,000	9	5,000
35	10,000	27	10,000
75	18,000	55	17,000
95	22,000		

* Assuming 3000 lb. unsprung weight.

(CAUTION: Do Not overload axle.)

NOTE: RIDE HEIGHT ADJUSTMENT PROCEDURE page 24



ADJUSTMENT PROCEDURE

- 1. Prior to adjustment, the vehicle must be in an unladen condition. CAUTION: Jack stands must be of sufficient strength to support vehicle.
- 2. Disconnect linkages at lower brackets, push control arms to "up" position, and raise vehicle. Then position jack stands (one each side) at proper ride height between the truck frame and ground. With jack stands in position, push control arms to "down" position lowering vehicle and deflating all air from air springs and vehicle system. Recheck for proper ride height. NOTE: It may be necessary to shim jack stands to achieve proper ride height.
- 3. Move valve control arms to a 45° "down" position for duration of 10-15 seconds. Return the control arms slowly to the center position and insert wood locating pins into the adjusting block and bracket on the height control valves. Repeat this procedure on opposite valve. Then loosen the 1/4" adjusting lock nuts located on the adjusting blocks. This will allow the control arms to oscillate approximately \pm 1". Reconnect the linkage to the lower brackets.
- 4. Retighten the 1/4" adjusting lock nuts at the adjusting blocks 2-4 ft. lbs. Complete this operation on both valves.
- 5. Remove the wood locating pins that were inserted in Step 3 and raise vehicle to remove the jack stands. The height control valves may be used as an improvised jack, whereas the linkage must be disconnected at the lower bracket. Then push control arms to an "up" position to raise vehicle and remove jack stands. Push control arms to "down" position completely exhausting system, then reconnect lower linkage. The suspension system will return to and maintain the proper ride height.

NOTE: If additional information is required on OEM installation and/or adjustment, contact the Neway Application Engineering Department.

Jack stand height is predicated on $10:00 \times 20/11:22.5$ tires with unladen radius of 20.5". If a different size tire is used the difference in the radius for that particular tire must be added or subtracted from the jack stand height. Refer to Page 23.

CARE AND MAINTENANCE

- 1. Visually inspect the valves on a regular basis for proper clearance around or damage to valve control arm or adjusting block.
- Dirt or foreign particles in the air line may harm the internal workings of the valve. Even though it contains a protective filter to eliminate foreign matter, normal air brake system maintenance should be practiced — DO NOT grease valve.
- Drain moisture from air tank periodically. In severe cold weather an air dryer and/or an alcohol evaporator is recommended to avoid valve freezing and damage.

VALVE REPLACEMENT

Proper checking can eliminate unnecessary replacement of height control valve.

1. Apply air pressure in excess of 65 PSI.*

2. Disconnect the link.

3. Move control arm up (45°) for ten (10) seconds - air should flow to air spring(s)

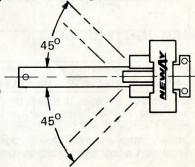
4. Move control arm to neutral position - valve should shut off air flow.

5. Move control arm down (45°) for ten (10) seconds - air should exhaust.

6. Move control arm to neutral position - valve should shut off air flow.

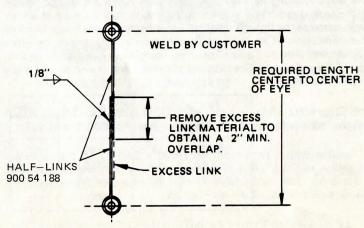
7. Valve is good if performance is as noted.

Refer to adjustment procedure — Pg. 24
 *If 65 PSI cannot be achieved, check
 Air Pressure Protection Valve.

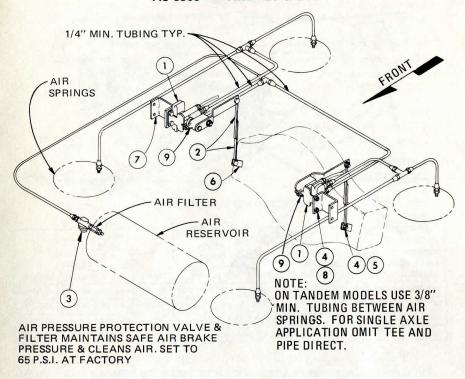


HEIGHT CONTROL VALVE LINKAGE Two-Piece Linkage Instructions.

- 1. To determine length of link to be replaced, measure center of eye to center of eye.
- 2. Position the two half links together at length required to determine if cutting off excess is necessary. A 2" min. overlap required as shown.
- Clamp the two half links in position at length required, then properly weld as shown.

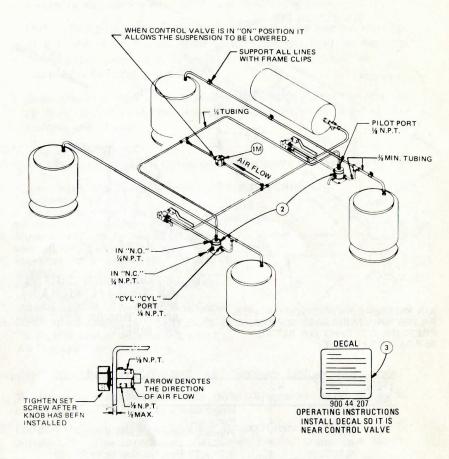


AIR CONTROL PIPING & PARTS LIST AC-3800 ARD-125 & 244



ITEM NO.	PART NO.	NO. REQ'D.	PARTNAME
ne 1 one	90054007	2	Height Control Valve
2	90054188	4	Half-Link
2 3	90054001	1	Pressure Protection Valve & Filter
4	93400060	8	14-20 Hex. Lock Nut (Gr. B)
5	93002361	4	14-20 x 11/4 Hex. Hd. Cap Screw (Gr. B)
6	90031425	2	Axle Bracket
7	90018090	2	Mounting Bracket
8	93002349	4	14-20 x 34 Hex. Hd. Cap Screw (Gr. 5)
9	90054122	2	Locating Pin
10	93800014	4	Insert (For ¼" Plastic Tubing)
11	93800140	4	Brass Nut
12	93800142	4	Brass Sleeve (for copper tubing)
13	93800062	4	Delrin Liner (for plastic tubing)
14	90554059	4	Filter
15	93800139	2	Exhaust Fitting
16	90054276	2	Exhaust Hose, 6" Long.

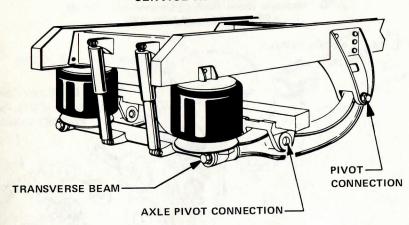
AIR CONTROL PIPING AND PARTS LIST AC-77-M-1



ITEM	PART NO.	QTY.	DESCRIPTION
1-M	900 54 088	1	VALVE MANUALLY OPERATED
2	900 54 079	2	PILOT VALVE
3	900 44 207	1	DECAL

THIS KIT IS RECOMMENDED AND UTILIZED TO PREVENT SUSPENSION RISE DURING UNCOUPLING OPERATION.

SERVICE REPAIR KITS

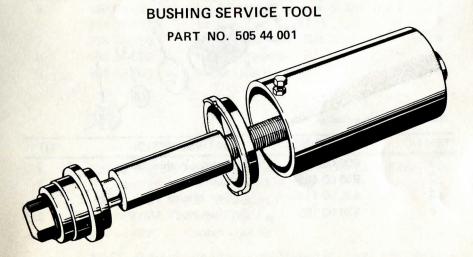


A STATE OF		PIVOT CONN.		AXLE PIVOT		TRANSVERSE BEAM		* * TRACK BAR		** TORQUE
	FIXED	AI	oJ.	СО	NN.		*CAP	СО	NN.	ROD
MODEL	*1 1/4"	****1/8"	*1 1/4"	5 1/4"	5 3/4"	STUD	SCREW	1 1/8"	1 1/4"	CONN.
ARD-125	SRK-76	SRK-139-A	SRK-105	SRK-79	SRK-80	SRK-77-1	SRK-78	SRK-122	SRK-123	SRK-121
ARD-244	SRK-76	SRK-139-A	SRK-105	SRK-79	SRK-80	SRK-77-1	SRK-78	SRK-122	SRK-123	SRK-121
ARD-234		SRK-124			SRK-80	SRK-95		SRK-122	SRK-123	SRK-121
ARD-238		SRK-148			SRK-80	SRK-77-1		SRK-122	SRK-123	SRK-121

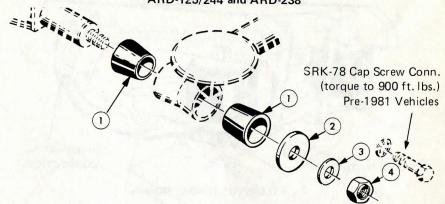
WHEN SERVICING YOUR NEWAY AIR RIDE DRIVE AXLE SUSPENSION USE THE CONVENIENT SERVICE REPAIR KITS NOTED ABOVE. DESCRIPTIONS ARE FOUND ON THE FOLLOWING PAGES.

NOTE: FOR MODELS PRIOR TO 1970 CONTACT NEWAY SERVICE DEPT. FOR ASSISTANCE

*PRE-1981 VEHICLES **REFER TO PAGE 35. *** REFER TO PAGE 32.

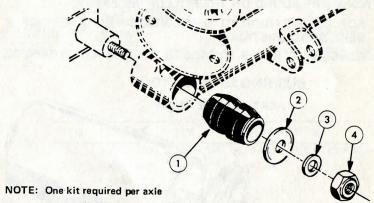


SRK-77-1 ARD-Transverse Beam Bushing Connection - (Stud) ARD-125/244 and ARD-238



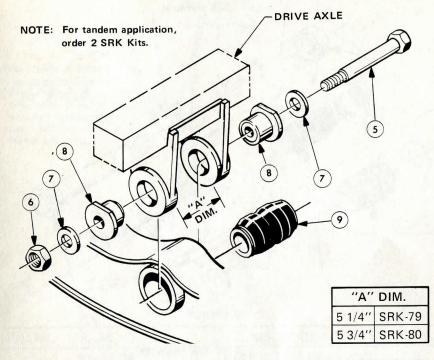
ITEM		Also The Area of	Maria Caralla Maria
NO.	PART NO.	DESCRIPTION	QTY.
1	900 08 113	Rubber Bushing	4
2	900 36 007	Spacer Washer	2
3	936 00 180	Plain Washer 1 1/4	2
4	934 00 509	Lock Nut 1 1/4	2

SRK-95 Transverse Beam Bushing Replacement ARD-234



The second secon		A STATE OF THE PARTY OF THE PAR	
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	900 08 104	Rubber Bushing	2
2	936 00 493	Washer	2
3	936 00 174	Plain Washer 1 1/8	2
4	939 00 165	Smart Nut®1 1/8-7	2

SERVICE REPAIR KITS For ARD Axle Beam Hanger Brackets



SRK-79 Axle Connection - 5 1/4 Bushing

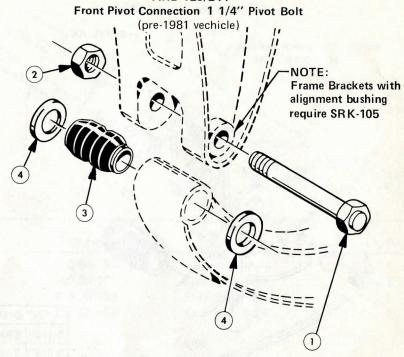
NO.	PART NO.	DESCRIPTION	QTY.
5	930 03 681	Hex Hd. Cap Screw, gr. 5, 3/4-10 x 7	2
6	934 00 492	Lock Nut, gr. B 3/4-10	2
7	936 00 156	Plain Washer, H.T. 3/4	4
8	900 01 002	Adapter Bushing	4
9	900 08 006	Rubber Bushing	2

SRK-80 Axle Connection - 5 3/4 Bushing

			ALCOHOLD STREET
5	930 03 693	Hex Hd. Cap Screw, gr. 5, 3/4-10 X 7 1/2	2
6	934 00 492	Lock Nut, gr. B 3/4-10	2
7	936 00 156	Plain Washer, H.T. 3/4	4
8	900 01 002	Adapter Bushing	4
9	900 08 008	Rubber Bushing	2

NOTE: Refer to page 19 for identification of Beam Hanger Bracket. "A" Dim. IMPORTANT.

SRK-76 and SRK-105 ARD-125/244



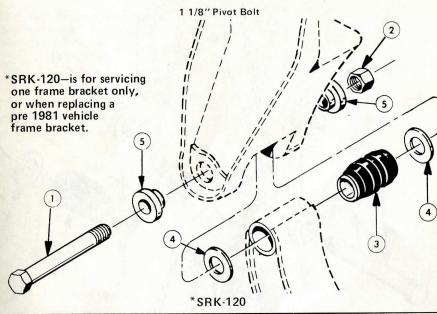
SRK-105 (see note)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	932 01 030	Rod Bolt 1 1/4-12 X 10 9/16	2
2	934 00 509	Lock Nut 1 1/4-12 gr. B	2
3 .	900 08 002	Rubber Bushing	2
4	900 36 001	Washer 3 1/2 X 1 1/4 X 1/4	4

SRK-76

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	932 00 132	Rod Bolt Assembly 1 1/4-12 X 9 11/16	2
2	934 00 509	Lock Nut 1 1/4-12 gr. B	2
3	900 08 002	Rubber Bushing	2
4	900 36 001	Spacer Washer 3 1/2 X 1 1/4 X 1/4	4

SRK-120, SRK-139 and SRK-139-A Front Pivot Connection Kit ARD-125/244



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	932 01 046	Rod Bolt 1 1/8 -7 x 9 1/4"	1
2	939 00 165	Smart Nut® 1 1/8 -7	1
3	900 08 131	Rubber Bushing	1
4	936 00 495	Spacer Washer	2
5	900 08 120	Alignment Bushing	2

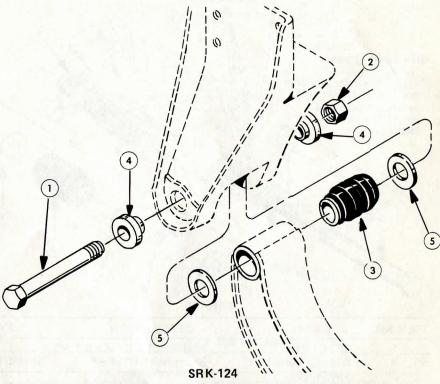
SRK-139 W/Alignment Bushing

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	932 01 046	Rod Bolt 1 1/8 -7 x 9 1/4"	2
2	939 00 165	Smart Nut® 1 1/8 -7	2
3	900 08 131	Rubber Bushing	2
4	936 00 495	Spacer Washer	4
5	900 08 120	Alignment Bushing	4

SRK-139-A W/O Alignment Bushing

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	932 01 046	Rod Bolt 1 1/8 -7 x 9 1/4"	2
2	939 00 165	Smart Nut® 1 1/8 -7	2
3	900 08 131	Rubber Bushing	2
4	936 00 495	Spacer Washer	4

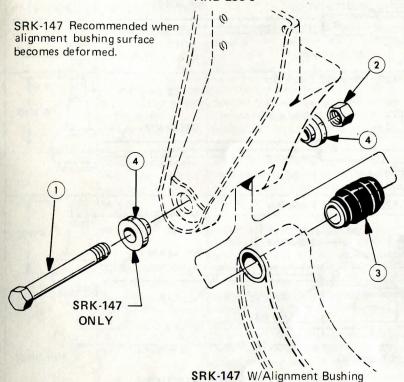
SRK-124 Front Pivot Connection Kit ARD-234-6



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	932 01 046	Rod Bolt 1 1/8 -7 x 9 1/4"	1
2	939 00 165	Smart Nut® 1 1/8 -7 gr. C	- 1
3	900 08 145	Rubber Bushing	1
4	900 08 120	Alignment Bushing	2
5	936 00 495	Spacer Bushing	2

NOTE: Two kits required per axle.

SRK-147 and SRK-148 Front Pivot Connection Kit ARD-238-6



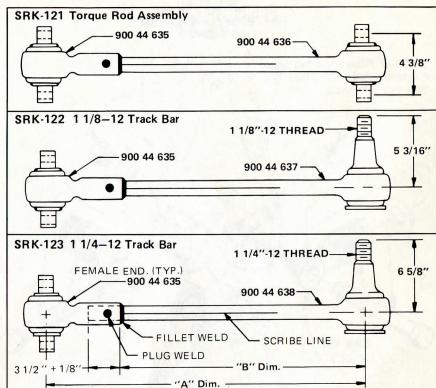
ITEM NO.	PART NO.	DESCRIPTION	QTY.			
1	932 01 046	Rod Bolt 1 1/8-7 x 9 1/4"	2			
2	939 00 165	Smart Nut® 1 1/8 -7	2			
3	900 08 145	Rubber Bushing	2			
4	900 08 150	Alignment Bushing	4			

NOTE: One kit required per axle

SRK-148 W/O Alignment Bushing

1 932 01 046 Rod Bolt 1 1/8–7 x 9 1/4" 2 2 939 00 165 Smart Nut® 1 1/8-7 2	ITEM-NO.	PART NO.	DESCRIPTION	QTY.
2 939 00 165 Smart Nut® 1 1/8 -7 2	1			2
	2			2
	3	900 08 145	Rubber Bushing	2

UNIVERSAL TRACK BAR & TORQUE ROD



WELDING INSTRUCTIONS

& BUSHING

1. Measure center to center of bushings on assembly to be replaced, "A" Dim. Determine "B" Dim. plus 3 1/2" ± 1/8" to obtain "A" Dim. If necessary cut excess off male end. CAUTION: DO NOT FLAME OR ARC CUT.

& BUSHING

- 2. Insert ends and install on vehicle. With proper pinion angle and scribe line located in center of plug weld hole, tack weld to proper length.
- 3. Remove from vehicle, then complete welding using E-7018 or equivalent. Plug weld both sides securely and apply continuous fillet weld around rod.

NO.	PART NO.	DESCRIPTION	SRK -121	SRK-122	SRK-123
1	900 44 635	Control Arm End (Female)	1	1	1
2	900 44 636	Control Arm	1		
	900 44 637	Control Arm		1	m m m k
	900 44 638	Control Arm	The same of the same		1
3	930 03 417	Cap Screw 5/8-11 x 5	2	2	2
4	934 00 488	Lock Nut 5/8-11	4	2	2
5	939 00 025	Washer 5/8	8	4	4
6	930 03 395	Cap Screw 5/8-11 x 4	2		
7	934 00 505	Lock Nut 1 1/8-12		1	
Company Company	934 00 509	Lock Nut 1 1/4-12			1
8	936 00 174	Washer 1 1/8		1	
	936 00 180	Washer 1 1/4			1

TROUBLE SHOOTING AIR CONTROL SYSTEM

PROBLEMS	POSSIBLE CAUSE	CORRECTIONS
All air springs flat.	Insufficient air pressure in the vehicle air system.	Check the air pressure gauge on the instrument panel. If air pressure is low, run the engine until a minimum pressure of 65 psi is indicated on the gauge.
(No air)	Air leakage from the suspension air system or the air brake system.	Listen for leakage due to loose fittings or damaged air lines, air springs, brake actuators or control valves. Tighten loose fittings to stop leakage and/or replace worn or damaged parts with new ones.
Application of the property of	Air leakage between the height control valve and the air spring(s).	Listen for leakage due to loose fittings or damaged air lines. Tighten loose fittings to stop leakage and/or replace damaged air lines with new ones.
	Air spring(s) leaking air.	Visually inspect the air spring(s) for leaks resulting from damage, wear or deterioration. If any air spring is leaking, replace with proper part.
Air spring(s) flat on one side of the vehicle only.	Bent, broken or disconnected height control valve linkage.	Visually inspect the linkage for damaged or loose parts. Reconnect loose linkage parts and/or replace defective parts with new ones.
	Height control valve out of adjustment.	Disconnect the height control valve actuating lever from the height control valve linkage. Move the lever upward. If the air spring then inflates, adjust the height control valves.
	Inoperative height control valve.	If movement of the actuating lever in the above step fails to inflate the air spring or continually leaks air through the exhaust port in the neutral position, the height control valve must be replaced.
The search against	Damaged height control valve or valve linkage.	Visually inspect for damage to the height control valve linkages and actuating levers. Repair or replace damaged linkage parts.
Tractor leans slightly due to unequal infla- tion of air springs.	Loose or missing height control valve bolts or adjustment locknut.	Visually inspect for loose or missing height control valve mounting bolts and/or adjustment locknut. Replace any missing bolts and/or nuts, then adjust the height control valves. Tighten all connections to the values listed on page 6.
Albania da seria de la composición del composición de la composici	Height control valve out of adjustment.	Adjust the height control valves as outlined in prior "HEIGHT CONTROL VALVE ADJUSTMENT" instructions.

PROBLEMS	POSSIBLE CAUSE	CORRECTIONS
Air springs deflate rapidly when vehicle is parked.	Air leakage from the suspension air system.	Listen for air leakage due to loose fittings between air tank and air suspension or damaged air lines, air springs or height control valves. Tighten loose fittings to stop leakage and/or replace worn or damaged parts with new ones.
Tractor ride height too high or too low.	Height control valve valve(s) out of adjustment.	Readjust the height control valve(s) as outlined in "HEIGHT CONTROL VALVE ADJUSTMENT" instructions.
Air springs ruptured.	Air spring cut or punctured.	Locate large leaks by listening for escaping air; and locate smaller leaks by applying soap and water solution to the suspected air spring and watching for bubbles. Temporary repair can be made to punctures and cuts of less than 1/8" by applying hot patches on both sides of the hole. If the cut is more than 1/8" long, install a new air spring.
	Tires, rims or chains rubbing the air spring.	Check the clearance between the air spring and the tire, If the tire, rim or chains contact the inflated air spring, change to narrower tires and rims to provide clearance for tires with chains.
	Air brake chamber rubbing against the air spring.	Relocate the brake chambers with factory approved parts to provide adequate clearance
Air spring failed	Continual or repeated over-extension of the air spring.	Visually inspect for broken or loose shock absorber or shock absorber mounting bracket. Reconnect loose parts and replace any defective parts. Check the adjustment of the height control valves as outlined in prior "HEIGHT CONTROL VALVE ADJUSTMENT" instructions.
	Air spring(s) worn out.	Replace
Air spring(s) fail to fully deflate when all weight is removed from the suspension.	Restricted air line(s) between the height control valve(s) and the air spring(s).	Disconnect the height control valve linkage(s) and rotate the actuating lever(s) to the 45° down position. If the air spring(s) remain inflated check for pinched or blocked line(s). Clean or replace plugged line(s) and/or replace defective valves.
Front pivot con- nection worn and loose.	Loose pivot connection, under torqued.	Replace bushing - be sure suspension is set at proper ride height before torquing pivot connection to specified ft. lb. See page 6.
	7	Pivot connection rod bolt improperly torqued. Inspect bushing sleeve for wear. Replace delrin liner and rod bolt and torque to specified ft. lb.
	Worn out due to length of service.	Replace pivot connection with proper SRK. See Page 28.

PROBLEMS	POSSIBLE CAUSE	CORRECTIONS
Pivot Conn. (Con't.)	Axle alignment block not welded properly.	Replace worn parts and torque and weld to specifications, see Page 41.
		Improper ride height. See readjustment procedures.
Shock Absorber	Over-extension	Mislocated shock brackets.
Failures		Improper shocks installed.
	Legalian Said	Rear mounted crossmember mislocated
	Worn out from length of service.	Replace
	Axles Misaligned	Realign axles. Some suspensions have alignment blocks located in the front frame bracket at pivot connection.
Excessive Tire Wear	Improper Equalizing Beam	Improper equalizing beam installed. Refer to Beam Identification Chart Dimension "A"., Page 21.
	Service life of bushing exceeded.	Worn pivot connection. Rebush, refer to SRK's.
Vehicle unstable or	Loose transverse beam connection	Replace worn bushings and/or nuts or bolts to be torqued to specifications. See Page 6.
handles poorly	Loose frame bolts or attachments.	Tighten frame bolts and attaching part to proper specifications.
	Cracked or loose frame crossmembers.	Repair or replace damaged frame members and torque all nuts and bolts to proper torque specifications. See Page 6.
to the second se	Loose or worn pivot connection.	Retorque to specifications and/or rebush if necessary with proper SRK. Refer to Page 28.

REPLACEMENT INSTRUCTIONS

SUSPENSION AIR SPRINGS

- 1. CAUTION: Be sure proper replacement is installed, refer to AIR SPRING IDENTIFICATION, page 9.
- 2. NOTE: It is recommended that the vehicle be unloaded. Support vehicle frame with adequate jacks or stands at approximate ride height.
- 3. Exhaust air from suspension system. NOTE: If air spring has a leak and is deflated, the EXHAUSTING PROCEDURE MUST still be performed.

Exhaust air by:

- A. Automatic control height control valve disconnect link at lower connection, then rotate control arm to exhaust (approx. 45° down) position.
- B. Disconnect air supply line from air spring.
- 4. Disconnect and remove old air spring assembly.
- 5. Install new air spring assembly and properly torque fasteners. See Torque Chart, page 6.
- 6. Reconnect air supply line and link connections.
- 7. Build suspension air system in excess of 65 PSI, and check for leaks. CAUTION: 100 PSI IS THE MAXIMUM ALLOWABLE OPERATING AIR PRESSURE.

SHOCK ABSORBERS

- Vehicle must be at approximate ride height to assure that tension is relieved on shocks.
- 2. Remove upper and lower mounting bolts and shock absorber.
- 3. Replace with correct shock absorber.
- 4. Torque nuts to 150 ft. lbs. lubricated.

EQUALIZING BEAM BUSHINGS

NOTE: If replacing the pivot bushing only, you can use a NEWAY Bushing Service Tool, P/N 505 44 001. See separate instructions. If used, it will not be necessary to disassemble axle connection. When replacing the pivot bushings or equalizing beams, it is recommended to replace the hardware items. Service Repair Kits (SRK's) are available, refer to page 28.

- 1. It is recommended the vehicle be unloaded. Block vehicle to prevent rolling. Raise vehicle frame 2" and support with adequate jacks or stands.
- 2. Exhaust air by:
 - A. Automatic control height control valve disconnect link at lower connection, then rotate control arm to exhaust (approx. 45° down) position.
 - B. Disconnect air supply line from air spring.
- 3. Disconnect shock absorbers and air springs at lower end.
- 4. Disconnect transverse beam, axle connection and pivot connection. NOTE: Before removing front pivot connection bolt(s) note position of spacer washers (if used) for reassembly.
- 5. Inspect all parts for wear, cracks or failed welds repair or replace. CAUTION: DO NOT REPAIR A CRACKED EQUALIZING BEAM REPLACE IT.
- 6. Press out old bushing with hydraulic press of 5-ton capacity minimum or the Bushing Service Tool, P/N 505 44 001, and clean out receptacle of all foreign

REPLACEMENT INSTRUCTIONS - cont.

material. Lubricate new bushings with approved lubricant or a soap and water solution may be used. DO NOT use an oil-based lubricant. Press new bushing in bushing receptacle past center, turn beam over, and center the bushing in beam.

- 7. Reassemble new or rebushed equalizing beam to frame bracket with spacer washers, as noted in step 4. Refer to page 42 for SMART NUT®TIGHTENING PROCEDURE.
- 8. Reassemble axle connection and the transverse beam.
- 9. Reconnect air springs, shock absorbers and height control valve links.
- 10. Reinstall, if necessary, wheels and camshafts. Reinstall tires. Remove jacks and stands, and apply air pressure in excess of 65 PSI. CAUTION: 100 PSI IS MAXIMUM ALLOWABLE OPERATING PRESSURE.

TRANSVERSE BEAM BUSHING

- 1. Block vehicle to prevent rolling. Raise vehicle frame 2" and support with adequate jacks or stands.
- 2. Exhaust air from air springs by disconnecting height control valve links at lower end. Rotate height control valve arm to exhaust (approx. 45° down) position. Disconnect air supply line from air springs.
- 3. Disconnect air springs and shock absorbers at the lower end. Note: On ARD-125/244-8 models, it is not necessary to disconnect the shock absorbers.
- 4. Remove transverse beam. If it does not come off easily, place a portapower between the axle and transverse beam. Note: Steel sleeve bushings are split for ease of removal.
- Remove old bushings. Clean bushing receptacle of rubber debris, etc.
 On single bushing connections, the Neway Bushing Service Tool, P/N
 505 44 001, or an adequate hydraulic press may be used to remove and
 install the bushings.
- 6. Lubricate new bushings with an approved rubber lubricant or a soap and water solution.
 - A. On single bushing connections insert new bushings in transverse beam (push past center, turn beam over then center bushing in beam). Reposition transverse beam on equalizing beam. Proceed to Step 7.
 - B. On two bushing connections install inner bushing onto equalizing beam with taper toward transverse beam. Reposition transverse beam on equalizing beams. Insert outer bushing into the transverse beam with the tapered end into it.
- 7. Properly install washers and nuts, torque 1 1/4" nuts to 700 ft. lbs. torque lub., 1 1/8" nuts to 600 ft. lbs. torque, lub. Note: If a Smart Nut® is used, refer to page 42 for proper tightening procedure.
- 8. Reconnect air springs and shock absorbers, refer to page 6 for proper torque. Connect height control valve links, 2 4 ft. lbs. lubricated.
- 9. Reconnect air lines. Remove jacks or stands. Build air pressure in excess of 65 P.S.I. (100 P.S.I. max.) and check for leaks.

REFER TO SRK's ON PAGE 29 FOR VIEW OF PARTS ON TRANSVERSE BEAM CONNECTIONS.

REPLACEMENT INSTRUCTIONS - cont. FRAME BRACKETS, ARD-125/244

A universal (undrilled) Left Hand (900 18 389) or Right Hand (900 18 390) Frame Bracket provides the flexability required to service the variety of frame brackets. These frame brackets require one Service Repair Kit (SRK-120) per frame bracket. See page 32.

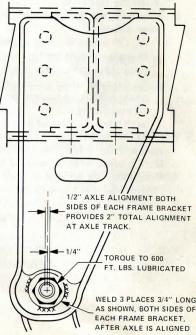
These universal frame brackets are less pre-drilled mounting holes and will require back drilling at installation. The new brackets must be installed in proper position then use the existing frame bolt holes as a drill pattern. The alignment feature provided by the SRK-120 will allow approximately 1" axle alignment.

FRAME BRACKET INSTALLATION

- 1. Support frame, then exhaust air from air springs.
- 2. Disconnect frame bracket and remove. Note position of spacer washers.
- 3. Replace pivot rubber bushing if necessary.
- 4. Clamp new frame brackets in proper position. Back drill mounting holes, use existing frame mounting holes as pattern. NOTE: 5/8" min. mounting bolts required, if holes are worn, drill to next larger size necessary. Bolt frame bracket to frame and torque to specifications.

5. Reassemble pivot connection. Position spacer washers as previously noted in step 2.

- 6. Align axle to proper position by shifting alignment blocks.
- 7. With suspension at proper Ride Height and axle aligned, torque the pivot connection nut to 600 ft. lbs. lubricated.
- 8. Recheck alignment, then weld alignment blocks on both sides of each frame bracket as shown below. Make three 3/4" welds using welding rod E-7018 or equivalent.



REPLACEMENT INSTRUCTIONS - cont.

CONTROL ARM KITS . . . TRACK BAR/TORQUE RODS

NOTE: Before disconnecting the control arms, check and record the pinion angle (s) for future reference.

- 1. Support differential in its present position.
- 2. Disconnect and remove control arm(s).
- 3. Inspect axle bracket boss for any excessive wear.
- 4. If the universal replacement control arms were ordered, assemble the rod ends to obtain proper length and weld. See Page 35 for instructions.
- 5. Connect both ends to their respective brackets and torque securely.
- 6. Recheck the pinion angle. Make any adjustments necessary.

NOTE:

Specific replacement instructions are included in all Service Repair Kits (SRK's).

SMART NUT® TIGHTENING PROCEDURE

- 1. Temperature of the nut assembly and associated parts must be at 32° F. (0° C.) or greater during assembly.
- 2. A 1 11/16" (43mm) socket and air impact wrench or hand wrench may be used to tighten nut.
- 3. Inspect bolt threads and nut mating surfaces to insure that they are free from damage, rust or dirt. Do not lubricate.
- 4. Tighten "Smart Nut®" until snug.
- 5. Continue to tighten "Smart Nut "" assembly until plastic squeezes out from under nut face (approximately 3/4 of a turn) and can be removed with the effort required to turn a page in a book. See Steps 1, 2, and 3.
- 6. Use on applications other than those approved by Neway's Application Engineering Dept. may not provide bolt tension and may damage connection.

NOTE: If Smart Nut® has been torqued to where the retaining ring has sheared and been removed, but not replaced with a new Smart Nut®, it may be reused by following standard lock nut tightening procedure and torqued to 600 ft. lbs.







STEP 1

STEP 2

STEP 3