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# Medium Duty Front-Drive Steer Axles MX-120 & MX-120HR Series



# TABLE OF CONTENTS

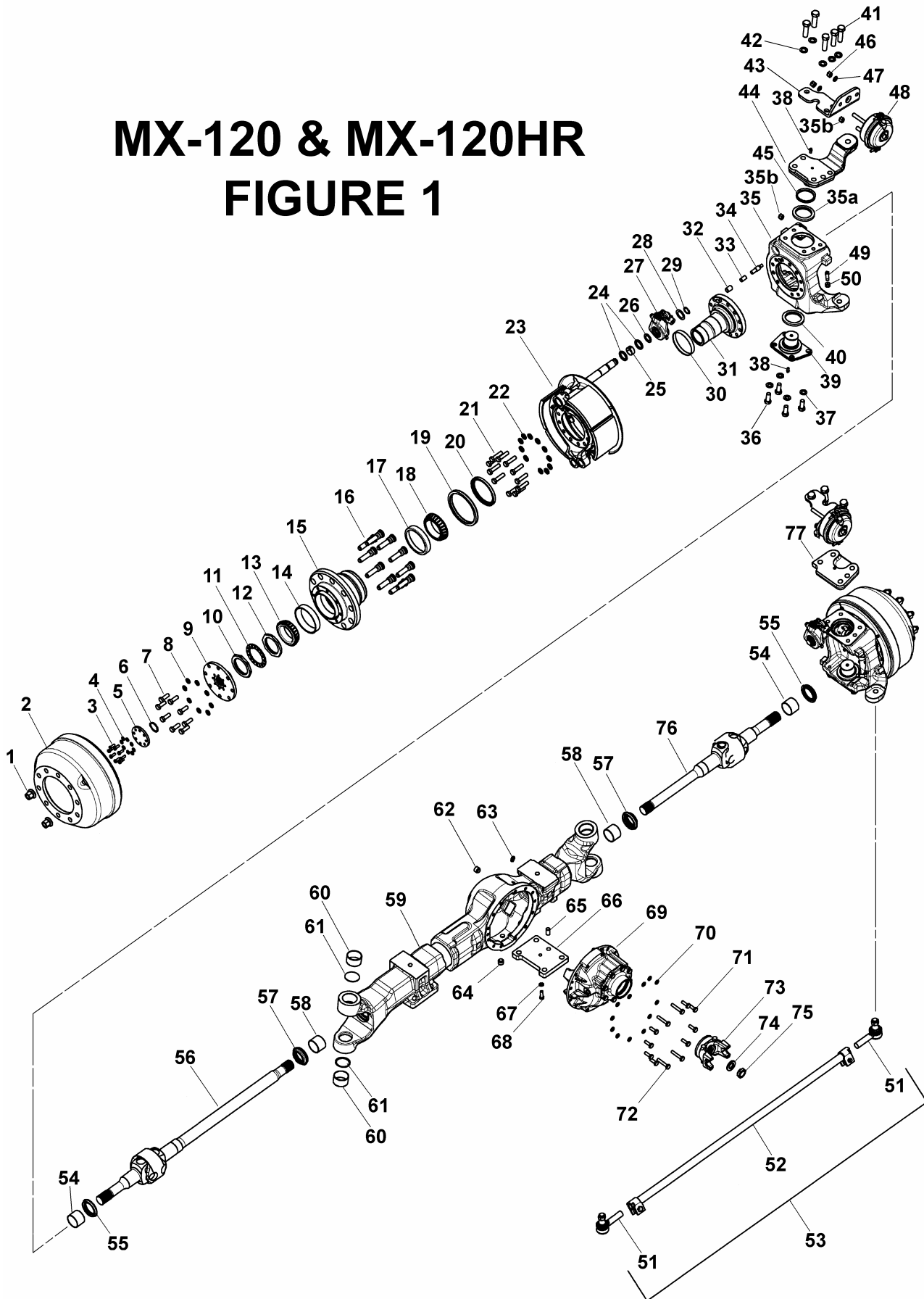
## **MX-120 & MX-120HR**

Illustrations.....	2
Component Part Numbers & Descriptions.....	4
Steering Arms.....	8
Carriers.....	8

<b>Numerical Parts List.....</b>	<b>9</b>
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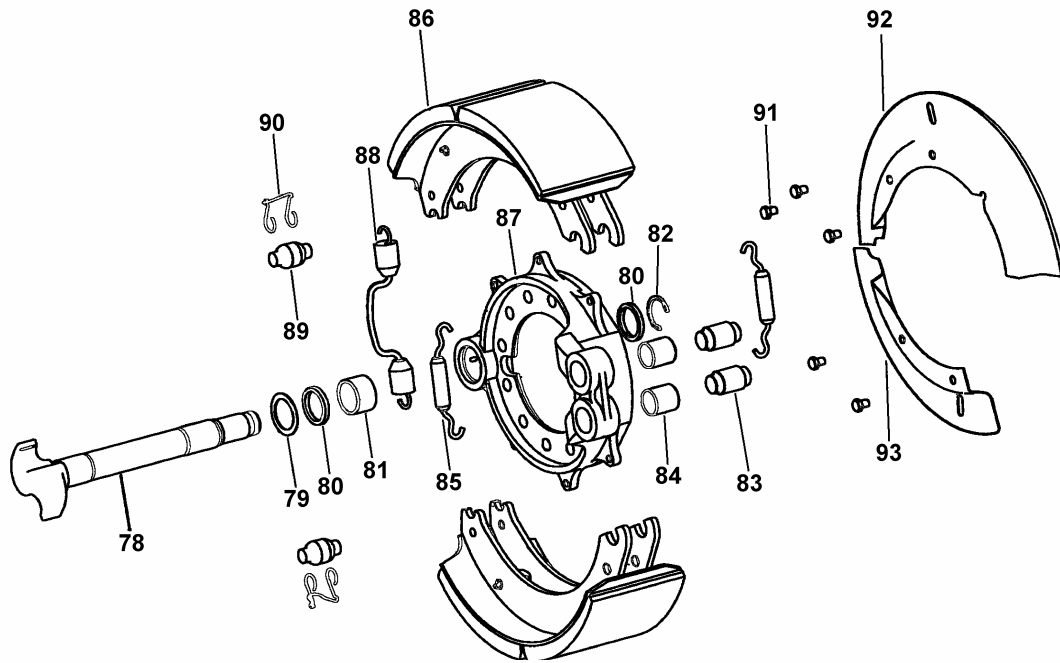
# MX-120 & MX-120HR

## FIGURE 1



# MX-120 & MX-120HR

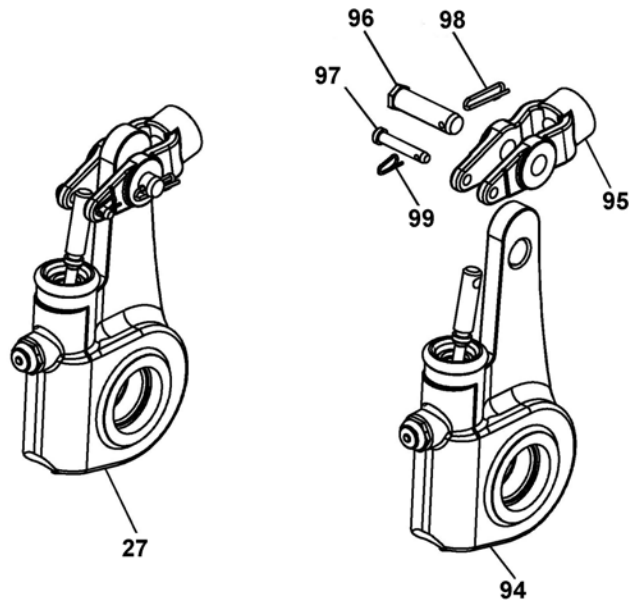
## FIGURE 2



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# MX-120 & MX-120HR

## FIGURE 3



**FIGURE 1**  
**MX-120 and MX-120HR**

Item	Description	Qty.	Part Number	Comments
1	Wheel Nut	20	1227-Z-1378	
2	Brake Drum	2	3219-N-5942	
3	Capscrews – Cover Plate	16	S-268P-2	
4	Washers – Cover Plate	16	1229-K-1597P	
5	Cover Plate	2	3266-Z-1456	
6	Snap Ring – Axle Shaft	2	1229-W-4807	
7	Capscrews – Drive Flange	16	10-X-1594	
8	Washers – Drive Flange	16	1229-U-1503	
9	Drive Flange	2	3270-R-1084	
10	Outer Adjusting Nut	2	1227-K-1025	
11	Lock Washer	2	R002560	
12	Inner Adjusting Nut	2	1227-D-1018	
13	Outer Bearing Cone	2	594A	
14	Outer Bearing Cup	2	592A	
15	Hub Assembly	2	A-333-R-4230	Available as Assembly Only. Contains Items 14, 17.
16	Wheel Studs	20	20-X-2392	Steel Wheels
		20	20-X-2390	Aluminum Wheels
17	Inner Bearing Cup	2	52618	
18	Inner Bearing Cone	2	52400	
19	ABS Tone Ring	2	3237-V-1062	
20	Grease Seal	2	A-1205-P-2434	
21	Capscrews – Brake Assembly	22	S-21020A-2	
22	Washers – Brake Assembly	22	1229-W-1557	
23	Brake Assembly	1 (LH)	QP6-1655-451	MX-10/12-120 axles with MA212 lining material. See Figure 2 for individual components.
		1 (RH)	QP6-1655-452	
		1 (LH)	QP6-1655-449	MX-14-120 axles with R301 lining material. See Figure 2 for individual components.
		1 (RH)	QP6-1655-450	
		1 (LH)	QP6-1655-729	MX-10/12/14-120 axles with SOR610 lining material. See Figure 2 for individual components.
		1 (RH)	QP6-1655-730	
		1 (LH)	QP6-1656-781	MX-16-120 axles with R403 lining material. See Figure 2 for individual components.
		1 (RH)	QP6-1656-782	
1 (LH)	QP6-1656-1113	MX-16-120 axles with R301 lining material. See Figure 2 for individual components.		
1 (RH)	QP6-1656-1114			
24	Camshaft Seal	4	A-1205-V-1556	
25	Camshaft Bushing	2	1225-R-1344	
26	Spacing Washer (Outer)	6	1229-B-1848	
27	Automatic Slack Adjuster	2	See Figure 3	
28	Spacing Washer (Inner)	2	1229-S-2697	
29	Camshaft Snap Ring	2	1229-X-1116	
30	Wear Sleeve	2	1199-T-3166	
31	Spindle Assembly	2	A-3213-M-1937	Available as Assembly only. Contains Items 30, 32, 54
32	ABS Bushing	2	S1225-S-1189	

**FIGURE 1 (Cont.)**  
**MX-120 and MX-120HR**

<b>Item</b>	<b>Description</b>	<b>Qty.</b>	<b>Part Number</b>	<b>Comments</b>
33	ABS Clip	2	R955459	For use with Bendix WS-24 style ABS equipped axles only.
		2	2237-Q-1005	For use with WABCO ABS equipped axles or Bendix WS-20 style ABS equipped axles.
34	ABS Sensor Assembly	2	A-3237-Z-1248	Bendix WS-24 style ABS equipped axles only. Replaces Bendix WS-20 style ABS sensor A-3237-Z-1196.
		2	A-2237-B-1328	WABCO ABS equipped axles only
35	Steering Knuckle Assembly	1 (LH)	A-3111-Z-3874	Wheelbase < 190 in. Contains Items 24, 25. A-3111-Z-3874 replaces A-3111-R-3684. A-3111-A-3875 replaces
		1 (RH)	A-3111-A-3875	A-3111-T-3686. If replacing the "old style" knuckle, both the LH and RH sides must be replaced.
		1 (LH)	A-3111-B-3876	Wheelbase >= 190 in. Contains Items 24, 25. A-3111-B-3876 replaces A-3111-V-3688. A-3111-C-3877 replaces
		1 (RH)	A-3111-C-3877	A-3111-W-3689. If replacing the "old style" knuckle, both the LH and RH sides must be replaced.
35a	Shim - .005"	As reqd.	2803-L-3444	Knuckle end-play. Available in KIT 4760.
	Shim - .015"		2803-M-3445	
	Shim - .025"		2803-N-3446	
35b	ABS Cable Grommet	2	2237-A-1223	
36	Capscrews – Lower Knuckle Cap	8	S-21214A-2	
37	Washers – Lower Knuckle Cap	8	1229-V-1556	
38	Grease Fitting	6	1199-B-3226	
39	Lower Knuckle Cap	2	3262-G-1255	
40	Thrust Bearing	2	A-1228-X-1220	
41	Capscrews – Upper Knuckle Cap/ Steering Arm	10	S-21424A-2	
42	Washers – Upper Knuckle Cap/ Steering Arm	10	1229-M-1625	
43	Chamber Bracket	1	3299-X-7148	LH
		1	3299-Y-7149	RH
		1	3299-Q-7349	RH. For use with offset clevis only
44	Steering Arm	1	See Page 8	
45	Grease Seal – Upper Cap/Steering Arm	2	1205-A-1743	
46	Nut – Air Brake Chamber	4	NL-210-1	
47	Washers – Air Brake Chamber	4	1229-U-1503	
48	Air Brake Chamber	2	A67-3276-T-20	MX-10/12/14-120 axles
		2	A88-3276-X-24	MX-16-120 axles
49	Steering Stop Adjusting Screw	2	26-X-227	
50	Steering Stop Adjusting Nut	2	N-39-1	
51	Tie Rod End	1 (LH)	R230068	
		1 (RH)	R230069	

**FIGURE 1 (Cont.)**  
**MX-120 and MX-120HR**

Item	Description	Qty.	Part Number	Comments
52	Cross Tube w/ clamps	1	A-3102-Y-3457	For Std. Track (1752mm KPI) Standard Duty (38.1mm OD)
		1	A-3102-Z-3458	For Wide Track (1790mm KPI) Standard Duty (38.1mm OD)
		1	A-3102-N-3472	For Std. Track (1752mm KPI) Heavy Duty (44.5mm OD)
		1	A-3102-G-3465	For Wide Track (1790mm KPI) Heavy Duty (44.5mm OD)
53	Tie Rod Assembly	1	A2-3102-Y-3457	For Std. Track (1752mm KPI) Standard Duty (38.1mm OD)
		1	A2-3102-Z-3458	For Wide Track (1790mm KPI) Standard Duty (38.1mm OD)
		1	A2-3102-N-3472	For Std. Track (1752mm KPI) Heavy Duty (44.5mm OD)
		1	A2-3102-G-3465	For Wide Track (1790mm KPI) Heavy Duty (44.5mm OD)
54	Outer Axle Shaft Bushing	1	1225-L-1442	Replaces 1225-G-1333
55	Grease Seal – Axle Shaft	2	A-1205-V-2648	
56	Axle Shaft Assembly LH	1	A-3205-W-1115	For KPI 69" (1752mm)
			A-3205-J-1128	For KPI 70.5" (1790mm)
57	Oil Seal – Axle Shaft	2	A-1205-U-2647	SEAL MUST BE INSTALLED WITH NOTCH ON TOP
58	Inner Axle Shaft Bushing	1	1225-L-1442	Replaces 1225-G-1333
59	Axle Housing Assembly	1	See Bill of Materials	Contains Items 58, 60, 61. Three piece housing (before 11/03) also contains items 65, 66, 67, 68
60	King Pin Bushing	4	1225-U-1191	
61	Socket Plug	4	1250-V-1218	
62	Lube Fill Plug	1	1250-E-473	
63	Breather Assembly	1	A-1199-W-4053	
64	Lube Drain Plug	1	1250-E-473	
65	Dowel – Spring Plate	1	1246-Z-390	
66	Spring Plate	1	3305-S-1449	Not required with one-piece housing (after 11/03).
67	Washer – Spring Plate	1	1229-C-1511	
68	Capscrew – Spring Plate	1	S-2812A-2	
69	Carrier Assembly	1	See Bill of Materials	
70	Washer – Carrier Housing	12	1229-C-1511	
71	Capscrew (Short) – Carrier Housing	8	10-X-1602	
72	Capscrew (Long) – Carrier Housing	4	10-X-1603	
73	Yoke	1	See Bill of Materials	
74	Washer – Yoke	1	1229-A-2653	
75	Nut – Yoke	1	40-X-1236	
76	Axle Shaft Assembly RH	1	A-3205-X-1116	
77	Upper Knuckle Cap	1	3266-A-1457	

**KIT 4760**

**SHIM KIT**

Item	Part Number	Qty.	Description	Comments
1	2803-L-3444	4	Shim - .005"	Knuckle end-play.
2	2803-M-3445	4	Shim - .015"	
3	2803-N-3446	4	Shim - .025"	
4	TP-0690	1	Instruction Sheet	



## FIGURE 2 MX-120 and MX-120HR Brakes

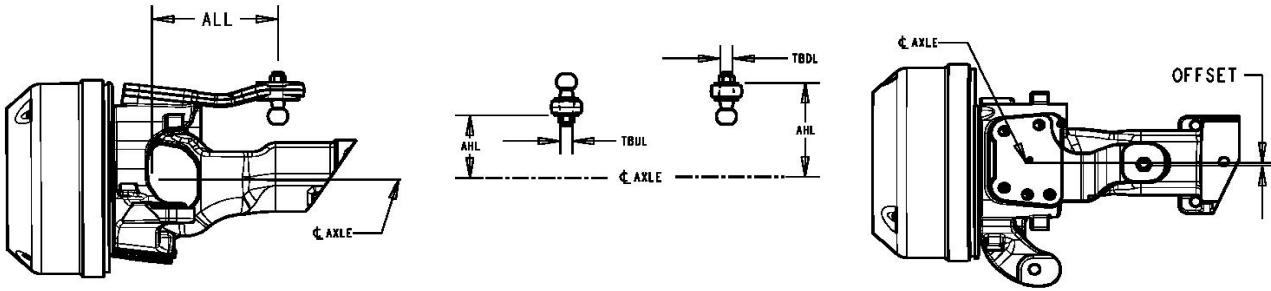
Item	Description	Qty.	Part Number	Comments
78	Camshaft	1	2210-E-8585	LH
		1	2210-D-8584	RH
79	Washer	1	1229-X-3118	
80	Camshaft Seal	2	1205-Q-2123	
81	Camshaft Bushing	1	1225-B-834	
82	Snap Ring	1	1229-T-4102	
83	Brake Shoe Anchor Pin	2	1259-N-274	
84	Anchor Pin Bushing	2	1225-B-496	
85	Brake Shoe Retaining Spring	2	2258-H-1230	
86	Brake Shoe and Lining Assembly	2	A22-3222-Z-2288	MX-10/12-120 axles with MA212 lining material. Contains Items 89, 90
		2	A4-3222-Z-2288	MX-14-120 axles with R301 lining material. Contains Items 89, 90
		2	A29-3222-Z-2288	MX-10/12/14-120 axles with SOR610 lining material. Contains Items 89, 90
		2	A8-3222-P-2200	MX-16-120 axles with R403 lining material. Contains Items 89, 90
		2	SR301-4715QP	MX-16-120 axles with R301 lining material. Contains Items 89, 90
87	Brake Spider Assembly	1	A-3211-M-5733	Contains Items 80, 81, 84
88	Brake Shoe Return Spring	1	2258-Y-1273	
89	Brake Shoe Roller	2	2297-T-7222	
90	Brake Shoe Roller Retainer	2	3105-B-210	
91	Dust Shield Capscrew	5	S-264B	
92	Dust Shield	1	3264-P-1290	LH
		1	3264-Q-1291	RH
93	Dust Shield	1	3264-T-1450	LH
		1	3264-S-1449	RH

## FIGURE 3 MX-120 and MX-120HR Slack Adjusters

Item	Description	Qty.	Part Number	Comments
27	Slack Adjuster Assembly	2 *	A2-3275-A-1249S	Contains Items 94, 95, 97, 98, 99, 100
94	Slack Adjuster	1	A1-3275-A-1249	
95	Clevis	1	1245-Z-1066	Standard clevis. For use on ALL LH and on RH in combination with 3299-Y-7149.
96	Clevis - Offset	1	1245-H-1074	Offset Clevis. For use on RH in combination with 3299-Q-7349 ONLY.
97	Clevis Pin - Large	1	19-X-1116	
98	Clevis Pin - Small	1	19-X-127	
99	Clip - Large	1	2257-D-1174	
100	Clip - Small	1	2257-C-1173	

\* **NOTE:** All LH slack adjusters can be ordered as assembly A2-3275-A-1249S. The RH slack adjusters can also be ordered as assembly A2-3275-A-1249S if they have standard clevises. RH slack adjusters with OFFSET clevises must be ordered as separate components (Items 94, 96, 97, 98, 99, 100).

## STEERING ARMS



Steering Arm (44)	ALL/ALR (mm)	AHL/ALR (mm)	TBDL/TBDR (mm)	TBUL/TBUR (mm)	OFFSET (mm)	COMMENTS
3133-E-8325	279.4	230.1	26.49	-	12.7	LH ONLY
3133-L-8514	279.4	230.1	26.49	-	0.0	LH ONLY
3133-U-8627	297.0	230.1	26.49	-	12.7	LH ONLY
3133-E-8767	279.4	191.7	-	26.49	0.0	LH ONLY
3133-L-8826	297.0	193.0	-	26.60	12.7	LH ONLY
3133-X-9020	297.0	230.1	26.49	-	12.7	LH ONLY. Same as 3133-U-8627 with clearance cut for steering linkage.
3133-X-9046	254.0	230.1	26.49	-	0.0	RH ONLY

## CARRIERS

Axle Model	Differential Style	Carrier Assembly (Less Yoke)	Available Axle Ratios
MX-10-120	Standard less Thrust Screw	<b>A69-3200-C-1745</b>	3.31, 3.58, 3.73, 3.91, 4.10, 4.30, 4.56, 4.88, 5.13, 5.29, 5.57, 5.86, 6.14, 6.83, 7.17
MX-12-120	Standard with Thrust Screw	<b>A19-3200-G-1749</b>	
MX-14-120			
MX-16-120			
MX-10-120HR	Standard with Thrust Screw - HR	<b>C7-3200-G-1749</b>	4.88, 5.57, 6.14, 6.83
MX-12-120HR			
MX-14-120HR			
MX-16-120HR			

**NOTE:** Reference PB-9396 for individual carrier components.

## NUMERICAL PARTS LIST

PART NUMBER	PAGE NUMBER
10-X-1594	4
10-X-1602	6
10-X-1603	6
10-X-1669	6
19-X-127	7
19-X-1116	7
20-X-2390	4
20-X-2392	4
26-X-227	5
40-X-1236	6
A-333-R-4230	4
1199-T-3166	4
1199-B-3226	5
A-1199-W-4053	6
A-1205-V-1556	4
1205-A-1743	5
1205-Q-2123	7
A-1205-P-2434	4
A-1205-U-2647	6
A-1205-V-2648	6
1225-B-496	7
1225-B-834	7
S-1225-S-1189	4
1225-U-1191	6
1225-R-1344	4
1225-L-1442	6
1227-D-1018	4
1227-K-1025	4
1227-Z-1378	4
A-1228-X-1220	5
1229-X-1116	4
1229-U-1503	4, 5
1229-C-1511	6
1229-V-1556	5
1229-W-1557	4
1229-K-1597P	4
1229-M-1625	5
1229-B-1848	4
1229-A-2653	6
1229-S-2697	4
1229-X-3118	7
1229-T-4102	6
1229-T-4102	7
1229-W-4807	4
1245-Z-1066	7
1245-H-1074	7
1246-Z-390	6
1250-E-473	6
1250-V-1218	6
1259-N-274	7
2210-D-8584	7

PART NUMBER	PAGE NUMBER
2210-E-8585	7
2237-Q-1005	5
2237-A-1223	5
A-2237-B-1328	5
2257-C-1173	7
2257-D-1174	7
2258-H-1230	7
2258-Y-1273	7
2297-T-7222	7
2803-L-3444	5
2803-M-3445	5
2803-N-3446	5
A-3102-Y-3457	6
A2-3102-Y-3457	6
A-3102-Z-3458	6
A2-3102-Z-3458	6
A-3105-G-3465	6
A2-3205-G-3465	6
A-3102-N-3472	6
A2-3102-N-3472	6
3105-B-210	7
A-3111-Z-3874	5
A-3111-A-3875	5
A-3111-B-3876	5
A-3111-C-3877	5
3133-E-8325	8
3133-L-8514	8
3133-U-8627	8
3133-E-8767	8
3133-L-8826	8
3133-X-9020	8
3133-X-9046	8
A-3144-D-524	5
A-3144-E-525	5
A69-3200-C-1745	8
A19-3200-G-1749	8
C7-3200-G-1749	8
A-3205-W-1115	6
A-3205-X-1116	6
A-3205-J-1128	6
A-3211-M-5733	7
A-3213-M-1937	4
3219-N-5942	4
A8-3222-P-2200	7
A4-3222-Z-2288	7
A22-3222-Z-2288	7
A29-3222-Z-2288	7
3237-V-1062	4
A-3237-Z-1248	5
3262-G-1255	5
3264-P-1290	7

PART NUMBER	PAGE NUMBER
3264-Q-1291	7
3264-S-1449	7
3264-T-1450	7
3266-Z-1456	4
3266-A-1457	6
3270-R-1084	4
A1-3275-A-1249	7
A2-3275-A-1249S	7
A67-3276-T-20	5
A88-3276-X-24	5
3299-X-7148	5
3299-Y-7149	5
3299-Q-7349	5
3305-S-1449	6
592A	4
594A	4
52400	4
52618	4
KIT 4760	6
N-39-1	5
NL-210-1	5
QP6-1655-449	4
QP6-1655-450	4
QP6-1655-451	4
QP6-1655-452	4
QP6-1656-729	4
QP6-1656-730	4
QP6-1656-781	4
QP6-1656-782	4
QP6-1656-1113	4
QP6-1656-1114	4
R002560	4
R230068	5
R230069	5
R955459	5
S-264B	7
S-268P-2	4
S-21020A-2	4
S-21214A-2	5
S-21424A-2	5
SR301-4715QP	7

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As the exclusive remedy under this warranty, we will, at our option, repair or replace such parts free of charge, or take back the nonconforming parts and refund the monies paid by buyer for such parts, if found on examination by us to be nonconforming and if any necessary return charges are prepaid.

If it is necessary to return any parts under this warranty, buyer agrees not to make any deduction on account thereof from remittances on current accounts while claims are in the process of disposition. Any expense incurred without our consent for repairs or replacement will not be allowed.

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