



**PARTS MANUAL**  
**FOR**  
**R22N/H REAR AXLE**

**MARMON-HERRINGTON ALL-WHEEL DRIVE**

13001 Magisterial Drive • Louisville, KY 40223  
(502) 253-0277 • (800) 227-0727 • Fax (502) 253-0317  
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## REPLACEMENT PARTS

When ordering replacement parts for **MARMON-HERRINGTON LOW FLOOR** conversions, the following information should be given:

1. **FACTORY ORDER NUMBER** (found on I.D. Plate or small plate affixed to axle housing). This will be a six (6) digit number. (See illustrations this page.)
2. Component for which parts are required, i.e. front drive axle or transfer case/drop box.
3. Model of axle and/or transfer case/drop box, i.e. MT10, MVG 750, MDB500.
4. Give quantity and part number required.  
**NOTE:** Drivelines, shift linkage, etc., can be found on the computer printout of Bill of Material, which is included in the Service Manual.
5. Give complete billing and shipping address.

## WARRANTY CLAIM PROCEDURE

Before proceeding with repairs or ordering parts that you feel may be covered under warranty, you must first contact Marmon-Herrington Customer Service Department and obtain a Repair Authorization Number.


Please be prepared to supply all of the following information:

- **Factory Order Number** – This is located on an ID plate fixed to either the driver’s door panel or the component (axle or transfer case) itself.
- **Model and Serial Number** (required) – Again located on the ID plate fixed to either the driver’s door panel or the component itself.
- **Vehicle Year, Make and Model**
- **Vehicle Identification Number**
- **Mileage**
- **In Service Date**

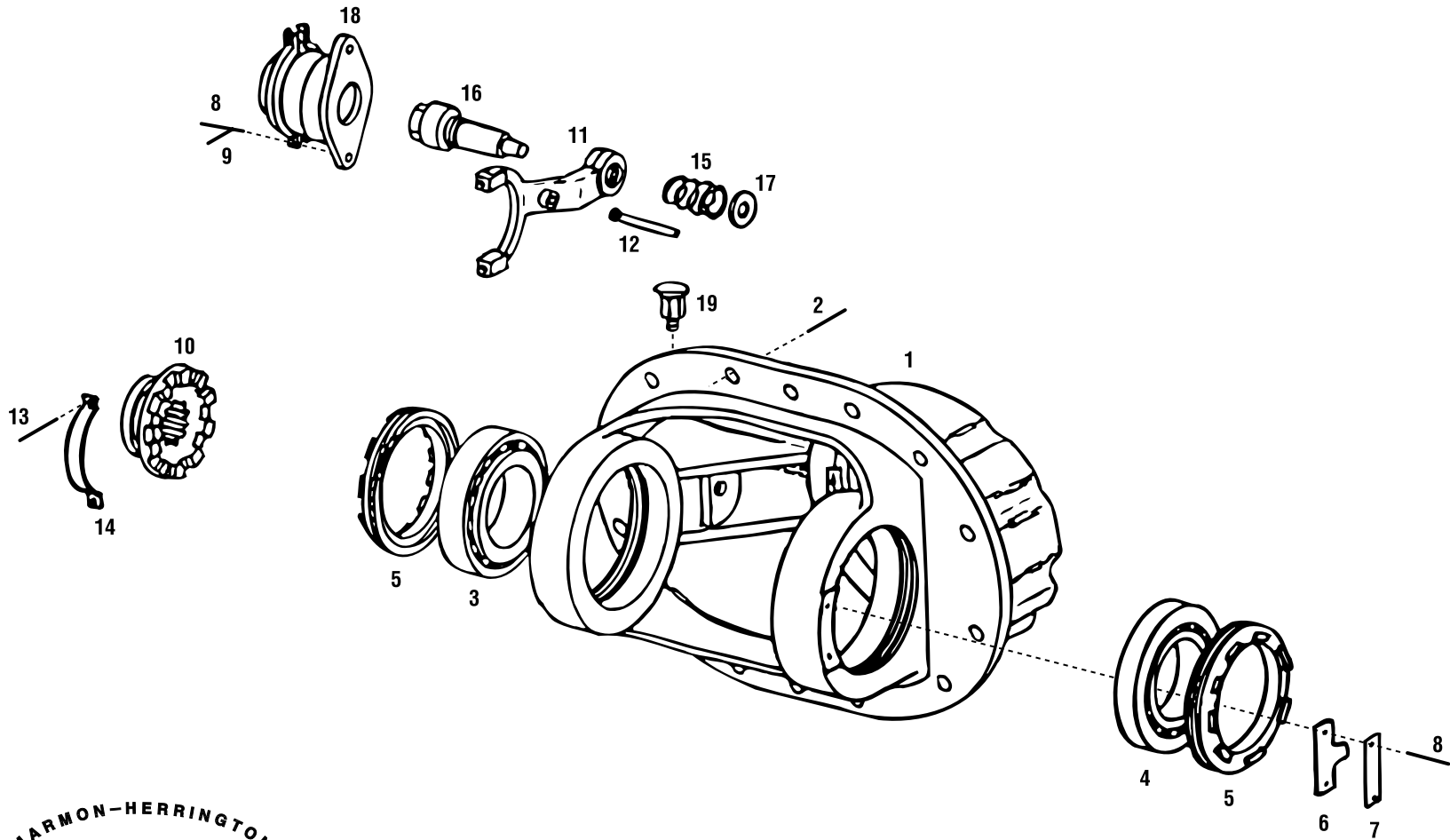
The information necessary for replacement parts and/or warranty claim procedures will be found on either plate design.

<b>MARMON-HERRINGTON</b>			
SALES ORDER	0000-00	RATIO	
S/N		TYPE	
CUST P/N			

<b>MARMON-HERRINGTON</b>			
SALES ORDER	0000-00		
S/N		TYPE	
CUST P/N			
<b>COVERED BY ONE OR MORE OF THE FOLLOWING PATENTS: U.S. PATENTS 4,878,691; 4,934,733; 5,016,912; 5,275,430; 5,839,750; AND 6,398,251; AND CA PATENT 1,316,185. OTHER U.S. AND FOREIGN PATENTS PENDING.</b>			

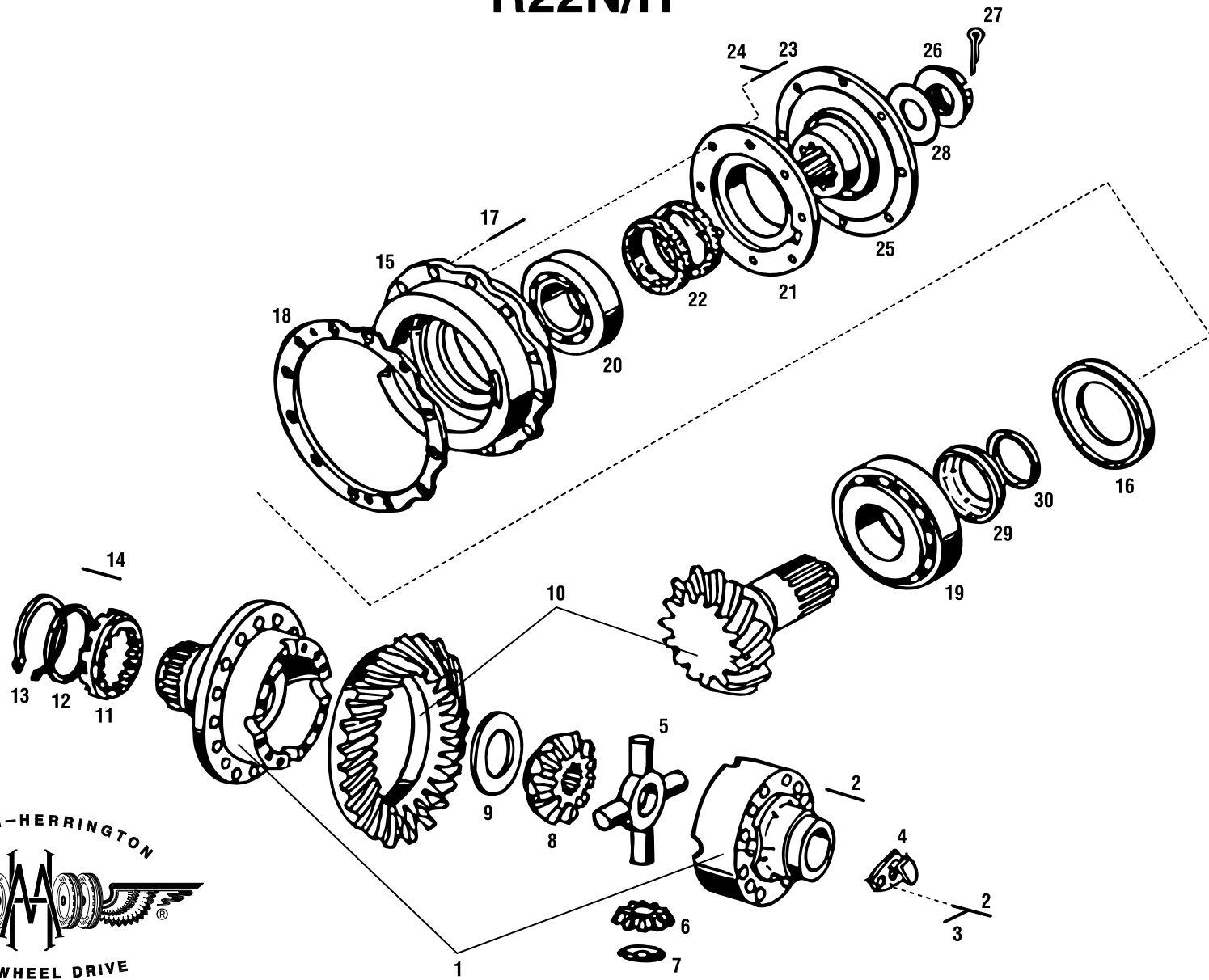
	
ALL-WHEEL DRIVE LOUISVILLE, KENTUCKY U.S.A.	
FACTORY ORDER NO.	0000-00
INSTALLED BY	
FRONT DRIVING AXLE	
MODEL	
CAPACITY	
SERIAL NO.	
RATIO	
TRANSFER CASE	
MODEL	
SERIAL NO.	

# DIFFERENTIAL CARRIER HOUSING R22N/H



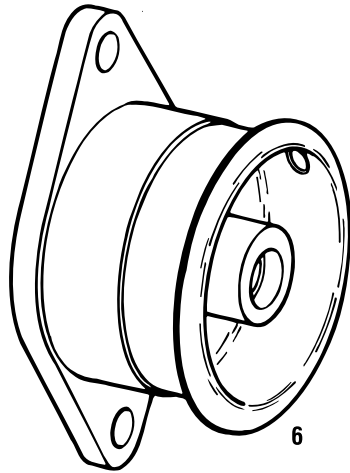
ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	R22-1039	Differential Carrier Housing	1				
2	MT22-1077	Flanged Bolt, Special	14				
3	MT22-1212	Taper Roller Bearing	1				
4	MT22-1078	Taper Roller Bearing	1				
5	MT22-1079	Bearing Adjuster, M133x2	2				
6	MT22-1080	Adjuster Lock Plate	2				
7	MT22-1081	Lock Plate	2				
8	11500773	Hex Bolt, M8x16	6				
9	11500191	Flat Lock Washer	2				
10	R22-1011	Toothed Hub	1				
11	R22-1012	Shift Fork	1				
12	R22-1013	Guide Pin	1				
13	R22-1014	Clevis	1				
14	11504971	Hex Bolt, M5x12	2				
15	R22-1015	Spring	1				
16	R22-1016	Push Rod	1				
17	R22-1017	Washer	AR				
18	R22-1021	Differential Lock Actuating Air Chamber Assy.	2				
19	MT14-1068	Vent Valve	1				
		AR = As Required					

# TANDEM DIFFERENTIAL R22N/H

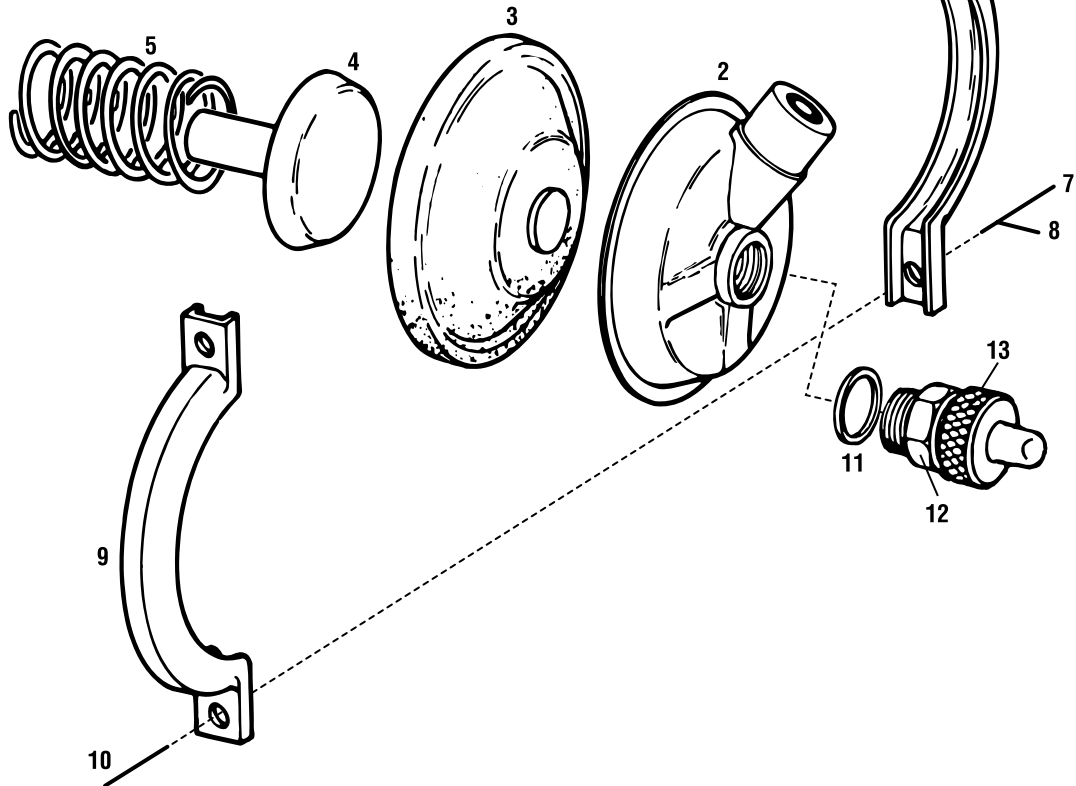


COMPLETE CARRIER ASSEMBLY				ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
CARRIER P/N	PINION & RING GEAR RATIO	FINAL RATIO	DIFFERENTIAL CASE	13	R22-1027	Snap Ring	1
R22-1001	1.227	4.25	R22-1018	14	RF22-1250	Self-Lock Flange Bolt	16
R22-1002	1.318	4.56	R22-1018	15	MT22-1068	Bearing Cage Assy. <b>(Includes Item #16)</b>	1
R22-1003	1.422	4.92	R22-1033	16	MT14-1078	Oil Baffle Plate	1
R22-1004	1.526	5.29	R22-1033	17	MT22-1077	Flanged Bolt, Special	12
R22-1005	1.632	5.65	R22-1033	18	MT22-1067A	Shim, 1.0 MM	AR
R22-1006	1.812	6.27	R22-1033		MT22-1067B	Shim, .50 MM	AR
R22-1007	1.929	6.68	R22-1033		MT22-1067C	Shim, .30 MM	AR
					MT22-1067D	Shim, .25 MM	AR
					MT22-1067E	Shim, .20 MM	AR
ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	19	MT14-1075	Pinion Bearing, Inner	1
1	R22-1018	Differential Case Halves, Assy. (4.25-4.56) <b>(Includes Item #'s 2, 3, 4)</b>	1	20	MT14-1079	Pinion Bearing, Outer	1
	R22-1033	Differential Case Halves, Assy. (4.92-6.68) <b>(Includes Item #'s 2, 3, 4)</b>	1	21	MT22-1070	Cover	1
2	MT22-1066	Hex Bolt, M10x75	12	22	MT22-1069	Oil Seal Kit, Pinion	1
3	MT22-1065	Washer, Special	2	23	11500713	Hex Bolt, M8x20	8
4	RF22-1064	Oil Baffle Plate	2	24	11500191	Flat Lock Washer, M8	8
5	MT22-1061	Differential Cross	1	25	MT17-1050	Companion Flange, 1610 Series	1
6	MT22-1062	Differential Pinion Gear	4	26	MT14-1082	Pinion Castle Nut	1
7	MT22-1063	Washer, Differential Pinion Gear	4	27	103422	Cotter Pin	1
8	RF22-1093	Differential Side Gear	2	28	MT22-1074	Washer, Special	1
9	MT22-1059	Washer, Differential Side Gear	2	29	MT14-1076	Distance Sleeve	1
10	MT23-1054	Ring Gear and Pinion (1.227) 4.25	1	30	MT14-1077A	Bearing Distance Ring, 6.90 MM	AR*
	MT23-1053	Ring Gear and Pinion (1.318) 4.56	1		MT14-1077B	Bearing Distance Ring, 7.00 MM	AR
	MT23-1056	Ring Gear and Pinion (1.422) 4.92	1		MT14-1077C	Bearing Distance Ring, 7.02 MM	AR
	MT23-1057	Ring Gear and Pinion (1.526) 5.29	1		MT14-1077D	Bearing Distance Ring, 7.04 MM	AR
	MT23-1043	Ring Gear and Pinion (1.553) 5.38	1		MT14-1077E	Bearing Distance Ring, 7.06 MM	AR
	MT23-1055	Ring Gear and Pinion (1.632) 5.65	1		MT14-1077F	Bearing Distance Ring, 7.08 MM	AR
	MT23-1047	Ring Gear and Pinion (1.684) 5.83	1		MT14-1077G	Bearing Distance Ring, 7.10 MM	AR
	MT23-1046	Ring Gear and Pinion (1.765) 6.11	1		MT14-1077H	Bearing Distance Ring, 7.20 MM	AR
	MT23-1058	Ring Gear and Pinion (1.812) 6.27	1		MT14-1077I	Bearing Distance Ring, 7.32 MM	AR
	MT23-1040	Ring Gear and Pinion (1.929) 6.68	1		MT14-1077J	Bearing Distance Ring, 7.44 MM	AR
	MT23-1041	Ring Gear and Pinion (2.077) 7.14	1		MT14-1077K	Bearing Distance Ring, 7.56 MM	AR
MT23-1042	Ring Gear and Pinion (2.231) 7.72	1	MT14-1077L	Bearing Distance Ring, 7.68 MM	AR		
MT23-1044	Ring Gear and Pinion (2.415) 8.36	1	MT14-1077M	Bearing Distance Ring, 7.80 MM	AR		
MT23-1045	Ring Gear and Pinion (2.462) 8.52	1	MT14-1077N	Bearing Distance Ring, 7.92 MM	AR		
11	R22-1019	Clutch Ring	1			AR = As Required	
12	R22-1020	Spacer Ring	1			<b>*Note:</b> Choose 2 to produce proper bearing preload.	

# CARRIER AIR CHAMBER R22N/H



1





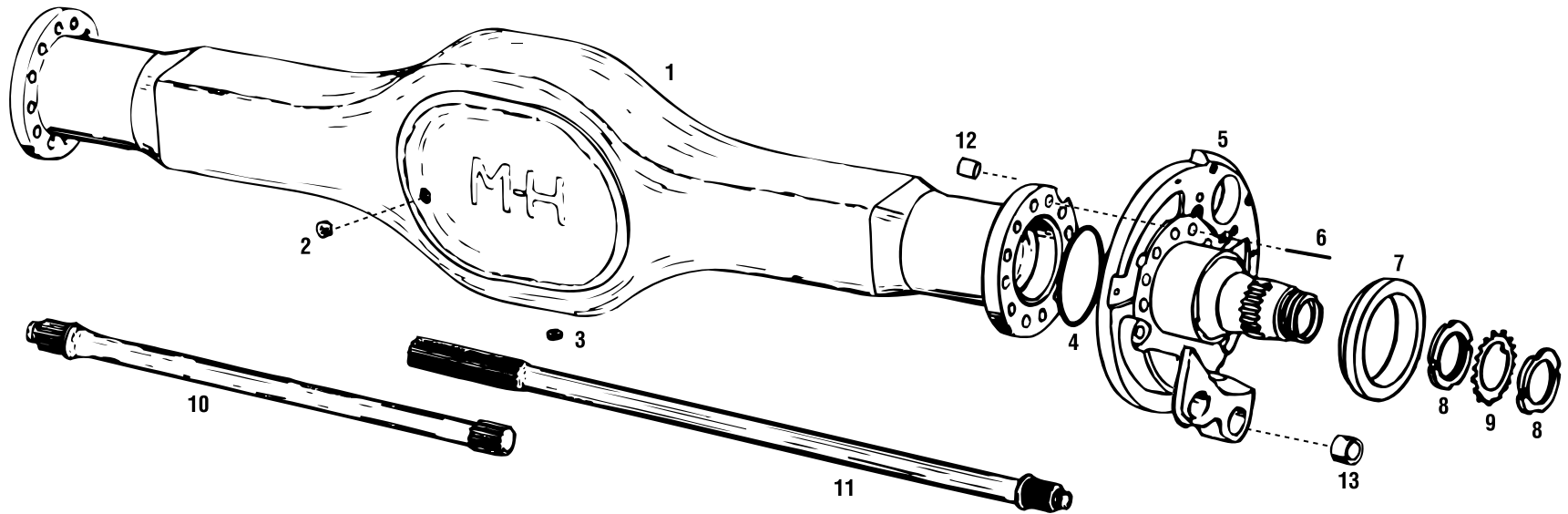
ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	R22-1021	Differential Lock Actuating Air Chamber Assy.	1				
2	R22-1022	Cap	1				
3	R22-1023	Diaphragm	1				
4	R22-1024	Spring Cup	1				
5	R22-1025	Spring	1				
6	R22-1026	Housing	1				
7	103024	Hex Nut NF	2				
8	103319	Lock Washer	2				
9	R22-1029	Clamp Half	2				
10	454826	Hex Bolt 1/4x1 NF	2				
11	MVG12-1040	Washer	1				
12	MVG12-1041	Switch	1				
13	MT75-7750	Connecting	1				

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**CARRIER AIR CHAMBER  
 R22N/H**

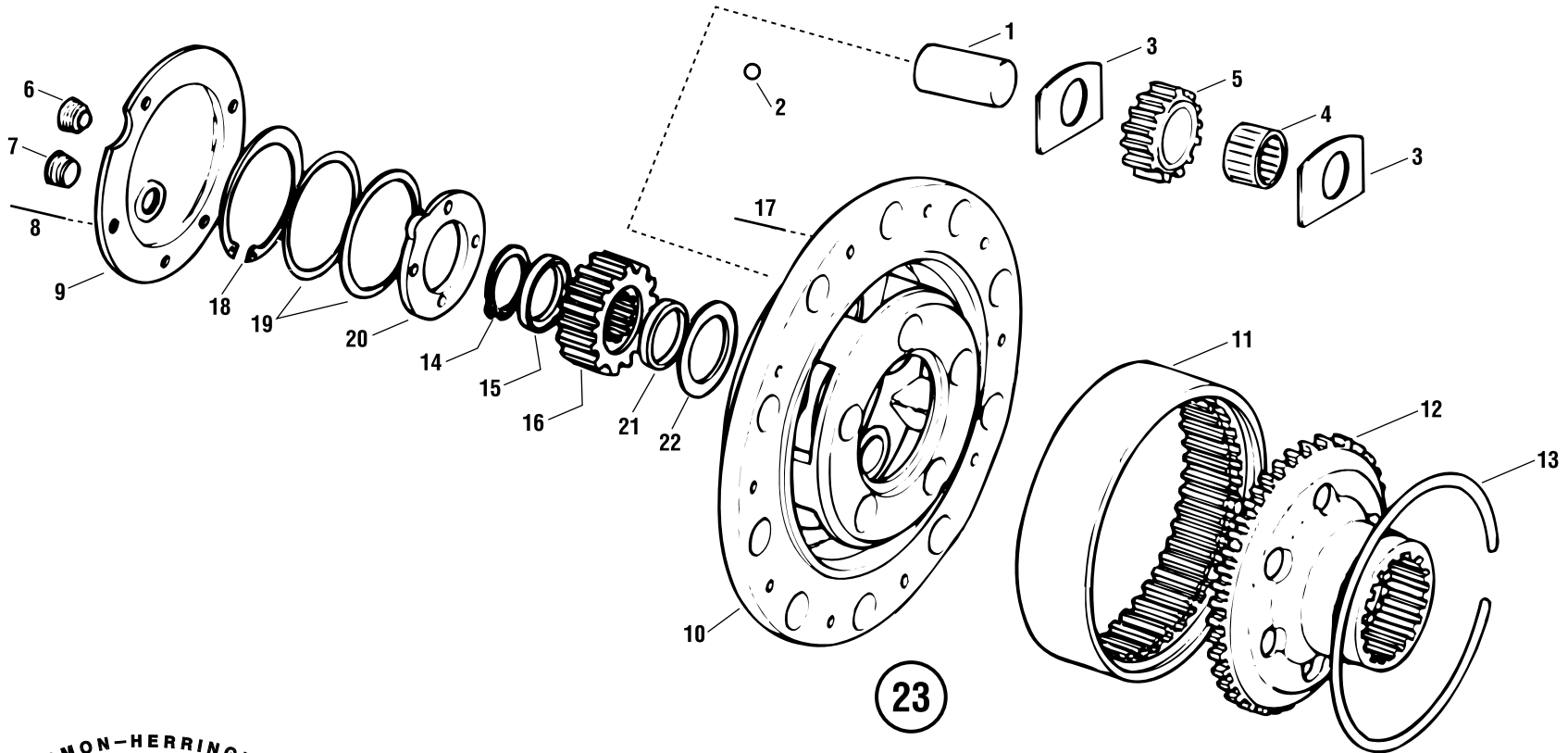


# AXLE HOUSING & AXLE SHAFT R22N/H



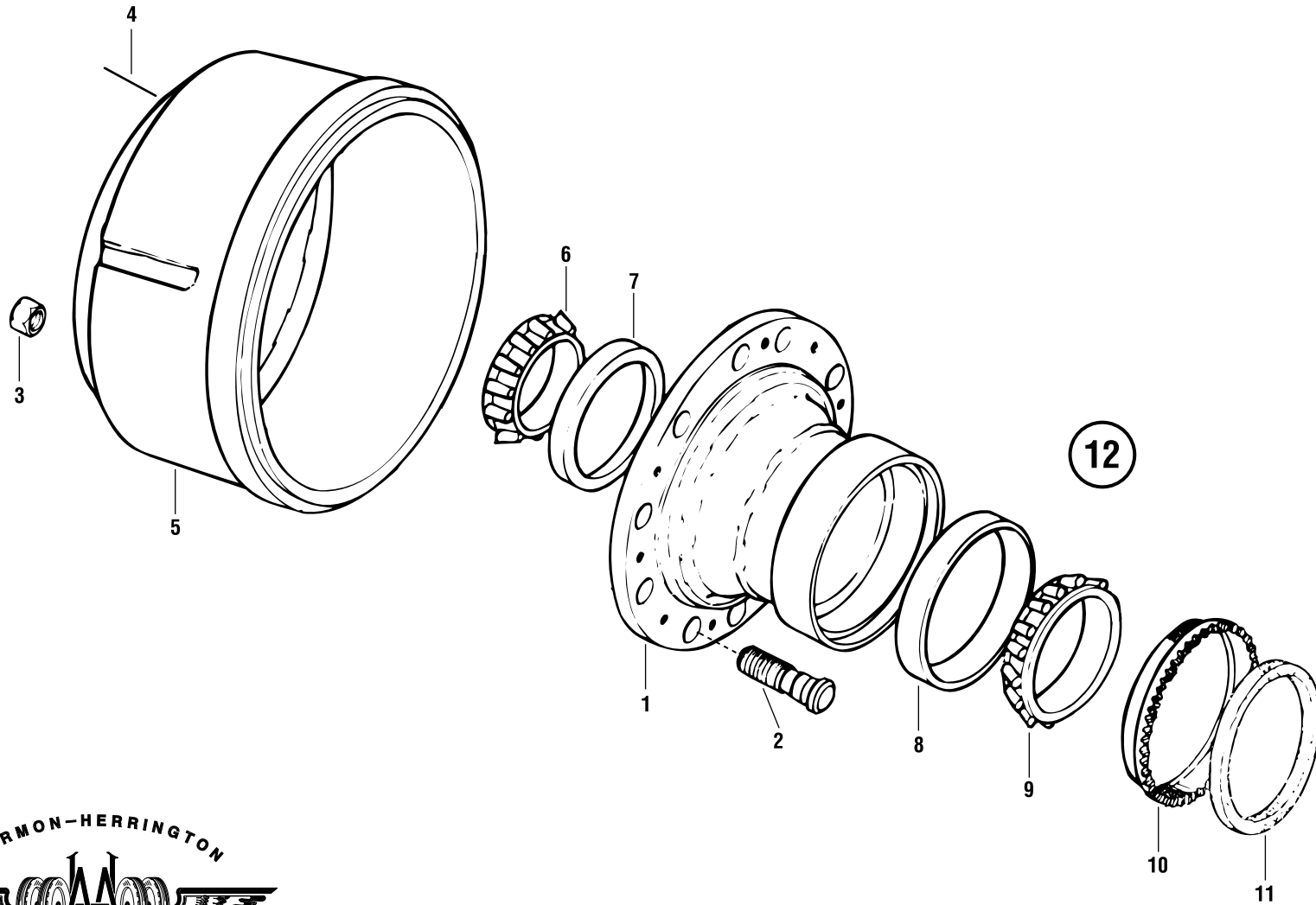
ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	R22-1034	Axle Housing	1				
2	MT14-1070	Fill Plug, Carrier	1				
3	MT14-1071	Drain Plug, Carrier	1				
4	MT14-1088	O-Ring, Housing to Yoke, 119x5	2				
5	R22-1207	Spindle Assy., L.H. <b>(Incl. Item #'s 12,13)</b>	1				
	R22-1208	Spindle Assy., R.H. <b>(Incl. Item #'s 12,13)</b>	1				
6	R22-1209	Hex Bolt	22				
7	R22-1037	Shoulder Ring ABS	2				
8	MT22-1132	Spindle Nut, M70x2	4				
9	MT22-1133	Locking Plate	2				
10	RF22-1102	Axle Shaft	1				
11	RF22-1103	Axle Shaft, Differential Lock Side	1				
12	MT17-1112	Bushing	2				
13	MT22-1241	Bushing	4				
		AR = As Required					

# PLANETARY R22N/H



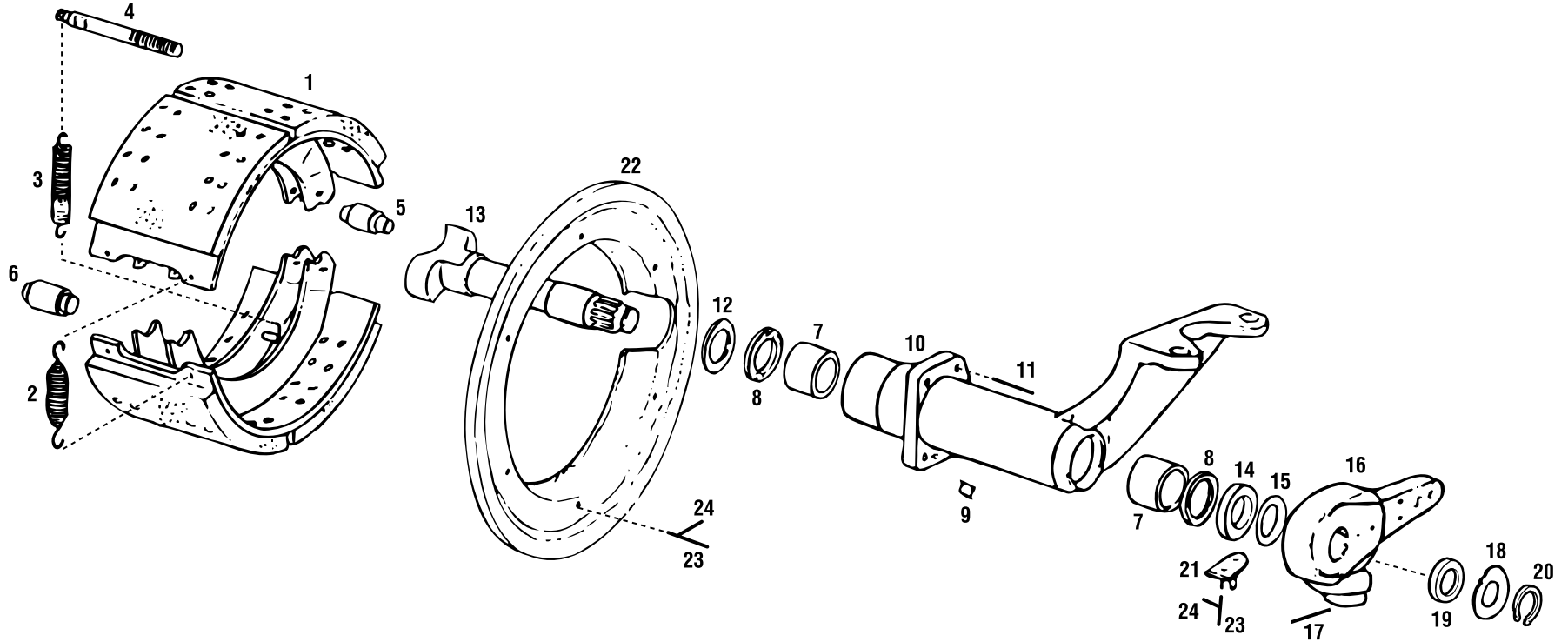
ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	MT14-1217	Planet Gear Pin	10				
2	MT14-1218	Steel Ball	10				
3	MT14-1219	Distance Plate	20				
4	MT14-1220	Roller Bearing Assy.	10				
5	MT14-1028	Planet Gear	10				
6	MT14-1071	Magnetic Drain Plug	2				
7	MT14-1070	Fill Plug	2				
8	11500723	Hex Bolt, M10 X 20	10				
9	MT22-1156	End Cover	2				
10	MT22-1161	Planet Gear Carrier	2				
	MT22H-1161	Planet Gear Carrier Hub Pilot (R22H Only)	2				
11	MT22-1162	Planetary Ring Gear	2				
12	MT22-1163	Ring Gear Support Hub	2				
13	MT14-1207	Retaining Ring	2				
14	MT22-1154	Snap Ring	2				
15	MT22-1153	Spacer	2				
16	MT22-1152	Sun Gear	2				
17	11500724	Hex Bolt, M10 X 30	12				
18	MT14-1084	Snap Ring	2				
19	MT22-1158A	Shim, 0.25 MM	AR				
	MT22-1158B	Shim, 0.50 MM	AR				
	MT22-1158C	Shim, 2.00 MM	AR				
20	MT22-1159	Friction Disk	2				
21	MT22-1151	Distance Ring	2				
22	MT22-1150	Friction Disk	2				
23	MT22-1200	Planet Gear Carrier Assy. (R22/R/N Only) <b>(Includes Items #1, 2, 3, 4, 5 and 10)</b>	2				
	MT22H-1200	Planet Gear Carrier Assy. (R22H Only) <b>(Includes Items #1, 2, 3, 4, 5 and 10)</b>	2				
		AR = As Required					

# WHEEL HUB, BRAKE DRUM R22N/H



ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	MT22R-1168	Hub Assy., R.H. (R22N Only) <b>(Includes Items #2, 6, 7, 8, 9, 11, 12)</b>	2				
	MT22H-1168	Hub Assy. (R22H Only) <b>(Includes Items #2, 6, 7, 8, 9, 11, 12)</b>	2				
	MT22N-1168	Hub Assy., L.H. (R22N Only) <b>(Includes Items #2, 6, 7, 8, 9, 11, 12)</b>	1				
2	MT93-2931	Wheel Stud, L.H., Long (R22N Only)	10				
	MT93-2932	Wheel Stud, R.H., Long (4.625)	20				
	MT22-1134	Wheel Stud Hub Pilot (R22H Only)	20				
3	67011	Wheel Nut, R.H.	20				
	67012	Wheel Nut, L.H. (R22N Only)	10				
	MT93-1197	Flange Wheel Nut (R22H Only)	20				
4	11500779	Hex Bolt, M10 X 40	4				
5	MT22-1165W	Brake Drum	2				
6	MT22-1166	Wheel Bearing, Cone, Outer	2				
7	MT22-1167	Wheel Bearing, Cup, Outer	2				
8	MT22-1170	Wheel Bearing, Cup, Inner	2				
9	MT22-1171	Wheel Bearing, Cone, Inner	2				
10	MT22R-1164	Exciter Ring (R22R/N/H Only)	2				
11	MT22R-1172	Hub Seal (R22R/N/H Only)	2				
12	MT22-1216	Bearing Kit Hub <b>(Includes Items #6, 7, 8, 9)</b>	1				
		AR = As Required					

# BRAKE R22N/H





ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.	ITEM NO.	MH PART NO.	DESCRIPTION	QTY. REQ.
1	MT22-1164	Brake Shoe Assembly	4				
	MT22-1244	Brake Lining Kit	1				
2	MT22-1177	Brake Shoe Spring, Long	4				
3	MT14-1157	Brake Shoe Return Spring, Short	4				
4	MT14-1158	Spring Support Pin	4				
5	R22-1178	Brake Shoe Roller	4				
6	MT22-1243	Brake Shoe Pin	4				
7	MT22-1180	Bushing	4				
8	MT22-1179	Oil Seal	4				
9	MT14-1119	Ball Grease Fitting	2				
10	R22-1140	Brake Chamber Bracket Assy, L.H. <b>(Includes Item #'s 7,8,9)</b>	1				
	R22-1141	Brake Chamber Bracket Assy., R.H. <b>(Includes Item #'s 7,8,9)</b>	1				
11	MT22-1183	Hex Flanged Bolt	8				
12	MT14-1145	Spacer	2				
13	R22-1146	Brake Spanner, L.H.	1				
	R22-1147	Brake Spanner, R.H. (Not Shown)	1				
14	MT22-1201	Spacer	2				
15	MT11-1105	Shim, 0.5 MM	AR				
16	R22-1205	Automatic Slack Adjuster, L.H.	1				
	R22-1206	Automatic Slack Adj., R.H. (Not Shown)	1				
17	MT22-1246	Adjusting Cap, L.H.	1				
	MT22-1247	Adjusting Cap, R.H.	1				
18	MT22-1187	Wear Indicating Washer	2				
19	MT17-1142	Washer	2				
20	MT22-1186	Snap Ring	2				
21	MT22-1239	Stop, L.H.	1				
	MT22-1240	Stop, R.H.	1				
22	MT22-1176	Brake Cover Plate	2				
23	11500773	Hex Bolt, M8x16	16				
24	11500191	Flat Lock Washer	16				
		AR = As Required					



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