

BUMPER CAR PARTS MANUAL

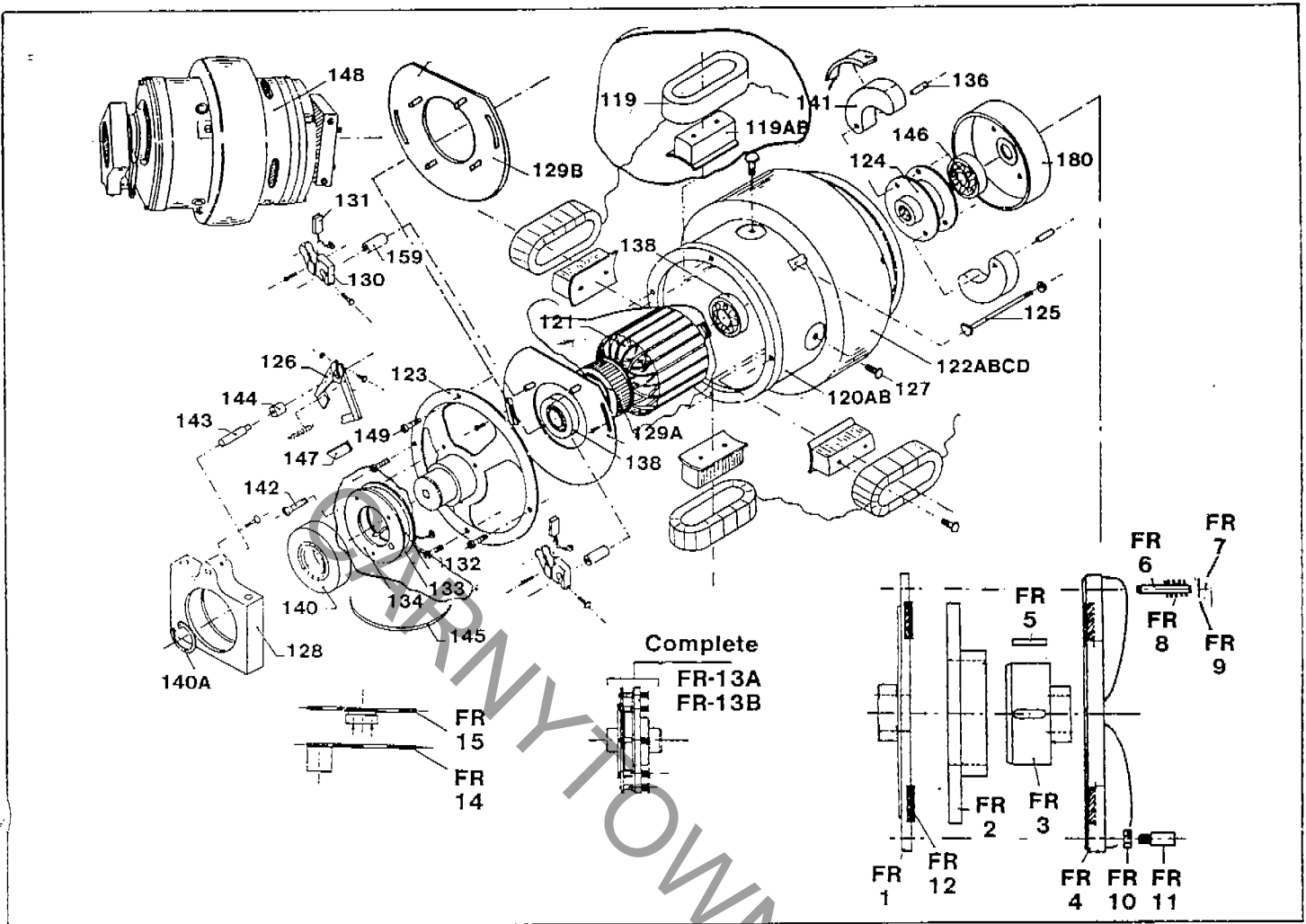
*Part: MAJESTIC
Part: Bumper Cars*

Majestic



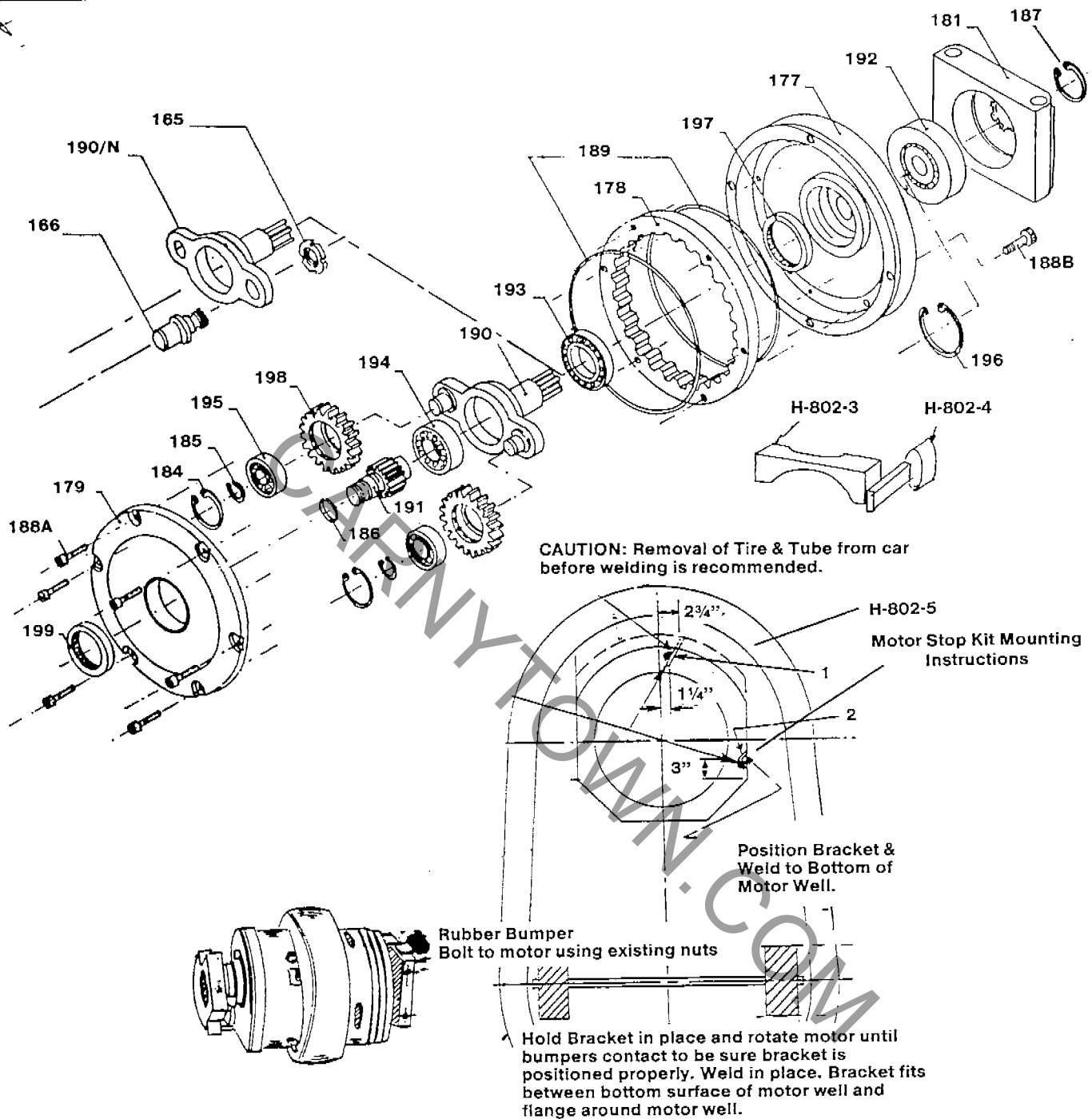
Majestic Manufacturing, Inc.

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COMPLETE MOTOR/AUTOMOTIVE CLUTCH

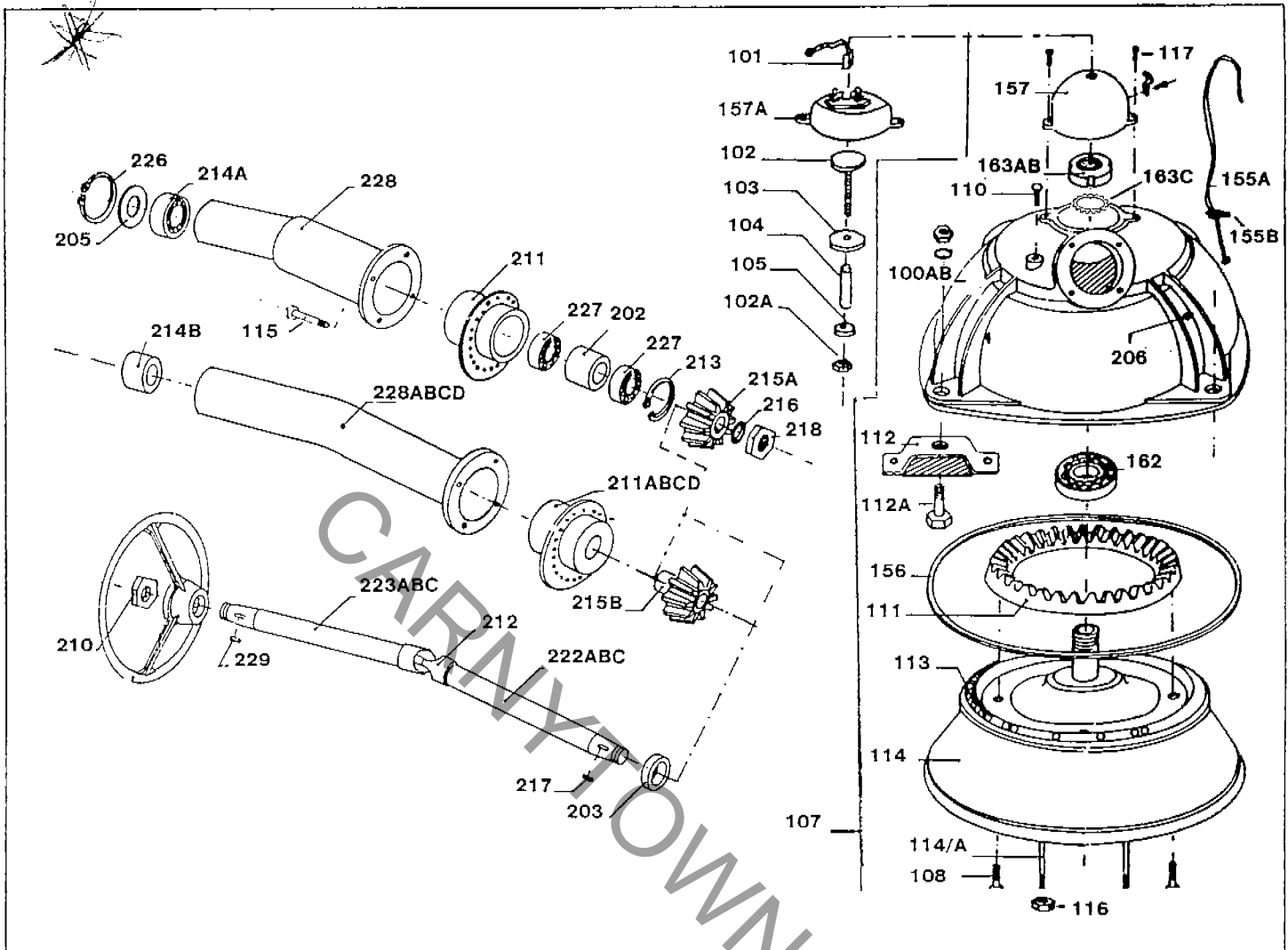
Part No.	Description	Part No.	Description	Part No.	Description
119A	Field Coils 90 Volt	135	Labor To Rebuild Motors		
119B	Field Coils 48 Volt	136	Clutch Shoe Pin	149	Allen Bolt
120A	Motor Housing 90 Volt	137		159	Insulator
120B	Motor Housing 48 Volt	138	Bearing (6204 2RS)	180A	Clutch Flywheel
121A	Armature 90 Volt	139		180B	Floor Pickup Clutch Flywheel (Finned)
121B	Armature 48 Volt	140	Bearing (6208 2RS)	FR-13	A. Complete Clutch Ceiling/Pick-up
122	Front Wheel	140A	Snap Ring		B. Complete Clutch Floor/Pick-up
	A. Black Rubber	141	Clutch Shoe	FR-1	Gear Box Side Plate
	B. New Poly Wheel	142	Screw	FR-2	Clutch Disk
	C. 3/4" Resurfaced Poly with Customer Rim	143	Brush Holder Pin	FR-3	Coupling
	D. 3/4" Resurfaced Poly without Customer Rim	144	Insulator Tube	FR-4	Disk Holder
123	Bell Housing	145	Insulator	FR-5	Key
124	Clutch Shoe Holder	146	Bearing	FR-6	Spring Pin
125	Fixing Bolt	147	Brush without Wire	FR-7	Snap Ring
126	Double Brush Holder	148	Complete Motor sold without Drive Wheel	FR-8	Spring Ring
127	Hex Bolt		A. 90 Volt Motor	FR-9	Washer
128	Motor Mounting Block		B. 48 Volt Motor	FR-10	Hex Nut
129A	Plate Mounting Brush (2)		1. Clutch Shoe Type Motor New	FR-11	Connection Pin
129B	Plate Mounting Brush (4)		2. Clutch Shoe Type Motor Reman	FR-12	Clutch Shoe Band
130	Single Brush Holder		3. Clutch Automotive Type Motor New	FR-14	Clutch Tool
131	Brush with Wire		4. Clutch Automotive Type Motor Reman	FR-15	Clutch Tool
132	Commutator Ring				
133	Insulator Plate				
134	Insulator Plate				



PLANETARY TRANSMISSION

Part No.	Description	Part No.	Description	Part No.	Description
177	Transmission - Case	187	Snap Ring	197	Grease Retainer 55.70.8
178	Ring Gear	188A	Allen Bolt	198	Drive Gear
179	Transmission Cover	188B	Hex Bolt	199	Grease Retainer 30.47.6
180A	Clutch Flywheel	189	Large O Ring	H-802-3	External Motor Stop
180B	Floor Pickup Clutch Flywheel (Finned)	190	Mounting Gear	201	Shock Absorber
181	End Block	191	Spur Gear	H-802-4	Rubber Stop
182		192	Bearing (6208 2RS)	190N	Mounting Gear
183		193	Bearing (16006)	165	Lock Nut
184	Large Ring	194	Bearing (6204)	166	Pin
185	Small Ring	195	Bearing (6202)	H-802-5	External Motor Stop Kit
186	Small O Ring	196	Large Ring	I095RC	Transmission Grease (Qt)

NOTE: Order bumper brackets and bumpers as a complete assembly. Part No. H-802-5.



MOTOR HOUSING AND STEERING UNIT

Part No.	Description	Part No.	Description	Part No.	Description
100A	Cover Outer Housing	116	Motor Stud Nut	215A	Bevel Pinion Gear (taper)
	Center Column	117	Cover Screws	215B	Bevel Pinion Gear (straight)
100B	Cover Outer Housing	155A	Power Wire	216	Lock Washer
	Offset Column	155B	Wire Holder (3 Required)	217	Short Key
101	Carbon Brush with Wire	156	Dust Ring	218	Hex Nut
102	Brass Contact Disk Bolt	157	Cover	219	
102A	Brass Contact Disk Hex Nut	157A	Cover with Brush Holder	222	Lower Steering Shaft
103	Large Insulator Washer	162	Bearing (32207)	A. CX	
104	Insulator Tube	163A	Nylon Lock Nut	B. Turbo	
105	Small Insulator Washer	163B	Lock Nut used w/Tab Washer	C. Azzurra	
106		163C	Tab Washer	D. Futura	
107	Complete Steering Housing	202	Large Spacer Sleeve	223	Upper Steering Shaft
108	Bolt	203	Small Spacer Sleeve	A. CX	
109		205	Dust Ring	B. Turbo	
110	Grease Fitting	206	Housing Grease Fitting	C. Azzurra	
111	Ring Gear	207		D. Futura	
112	Damper/Shock Absorber	210	Hex Nut	225	
112A	Bolt and Nut	211A	Gear Adjuster Aluminum	226	Snap Ring
113	Ball Bearing (71 Per Housing)	211B	Gear Adjuster Gray Nylon	227	Bearing
113	Ball Bearing (71 Per Housing)	211C	Gear Adjuster Black Nylon	228	Steering Column Case
114	Inner Housing	211D	Gear Adjuster Black Nylon	A. CX	
114A	Stud	212	Joint Coupling	B. Turbo	
114B	Metric Tape for 114A	213	Snap Ring	C. Azzurra	
	Replacement M12 x 1.75	214A	Bearing	D. Futura	
115A	Column Bolt Short	214B	Nylon Bushing	229	Large Key
115B	Column Bolt Long				

CAR PEDAL

Part No.	Description
230A	Pedal Assembly
230B	Pedal Repair Kit
230C	Dual Pedal Contact Kit
231	Large Bracket
232	Small Bracket
233A	Pedal
233B	Nut
233C	Nut
M234	Spring Pedal
235	Switch Hinge
236	Round Head Bolt
237	Pedal Hinge
238	Bolt and Nut
M239	Large Copper Block
M240	Small Copper Block
241A	Flat Insul. Cut Corners
241B	Flat Insul. with Holes
242	Insulator Washer
243	Screw
244	Square Insulator (2 required)
245	A. Complete Micro Pedal Assembly B. D.C. Solenoid/Contact Points C. Micro Switch D. Foot/Hinge Pedal Assembly E. Solenoid Repair Contact Kit
M246	Spring Tool for Pedal
246	Lock Washer
247	Bumper Rubber
248	Insulator Washer
249	Iron Flat Washer
401	Pedal Support Plate
402	Rubber Bumper
403	Plate Fixing Nut
404	Plate Fixing Screw
405	Micro Fixing Screw
406	Washer
407	Nut
408	Micro
409	Nut
410	Cableclip
411	Screw
412	Plastic Pedal
413	Washer
414	Spring
415	Lower Nut
416	Upper Nut
417	Washer
418	Relay Cable
420	Micro-Relay

Driver

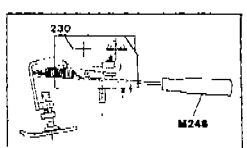
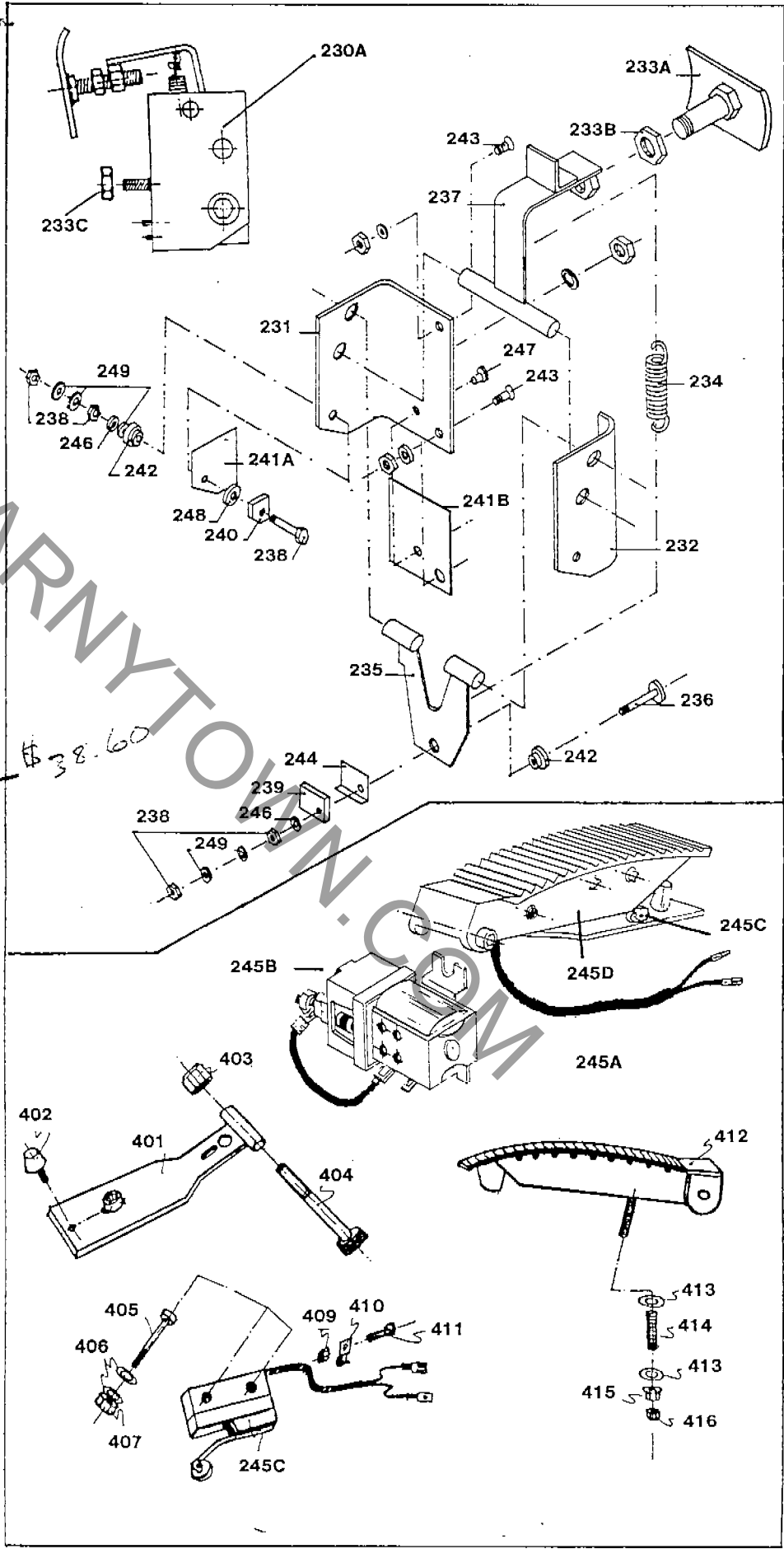
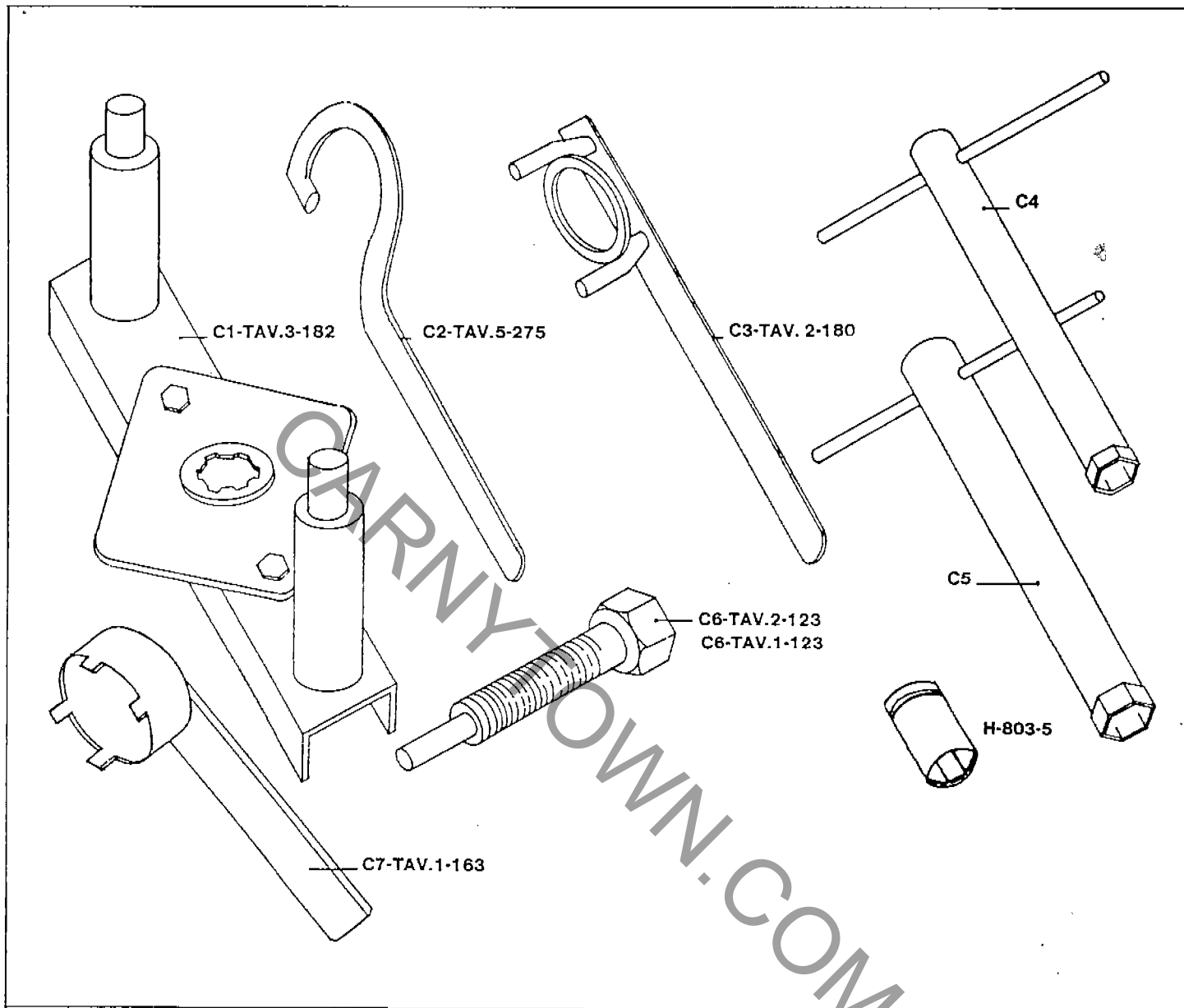


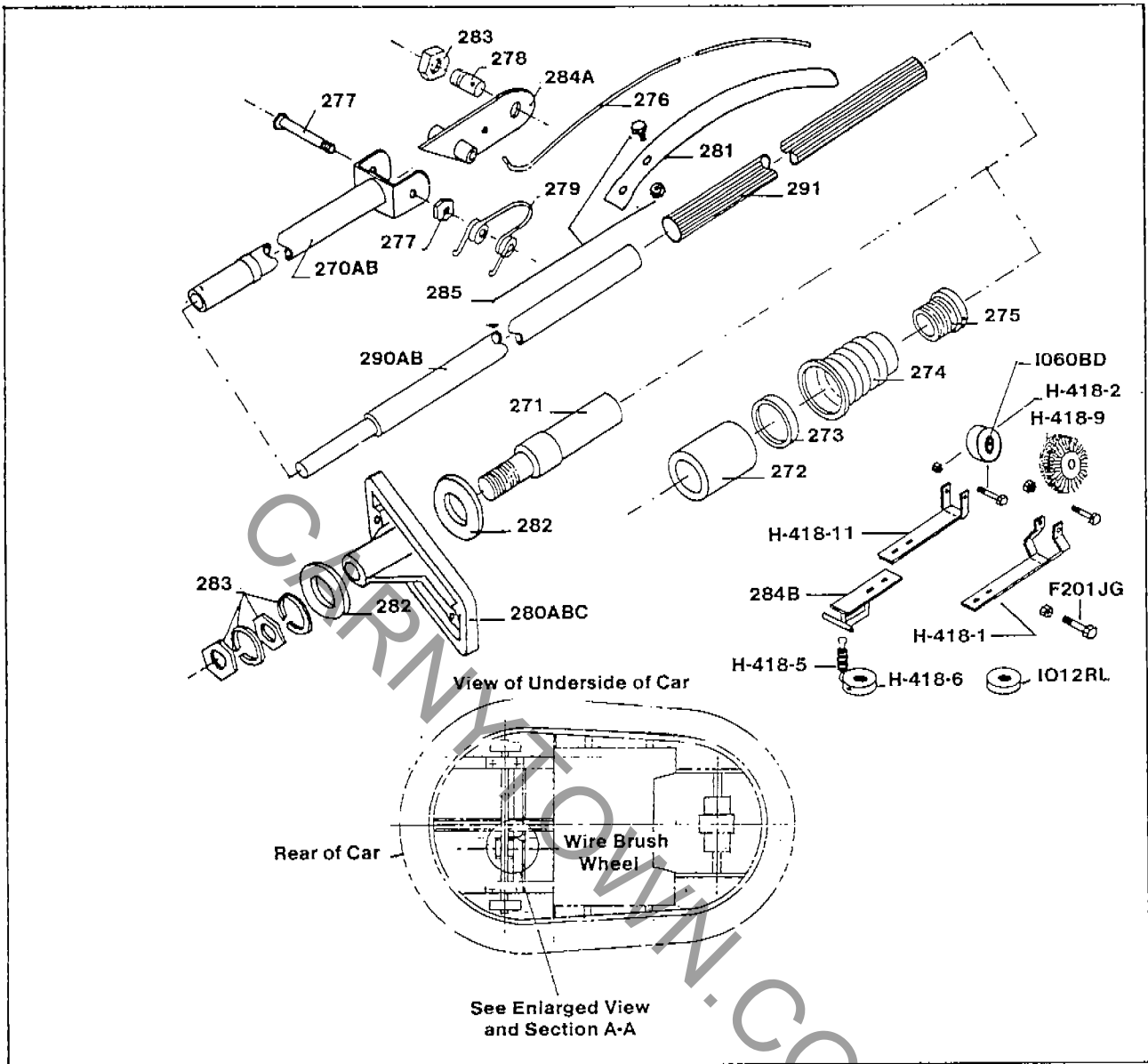
Illustration showing the proper method of using the spring installation tool, Part No. M246.



CAR REPAIR TOOLS

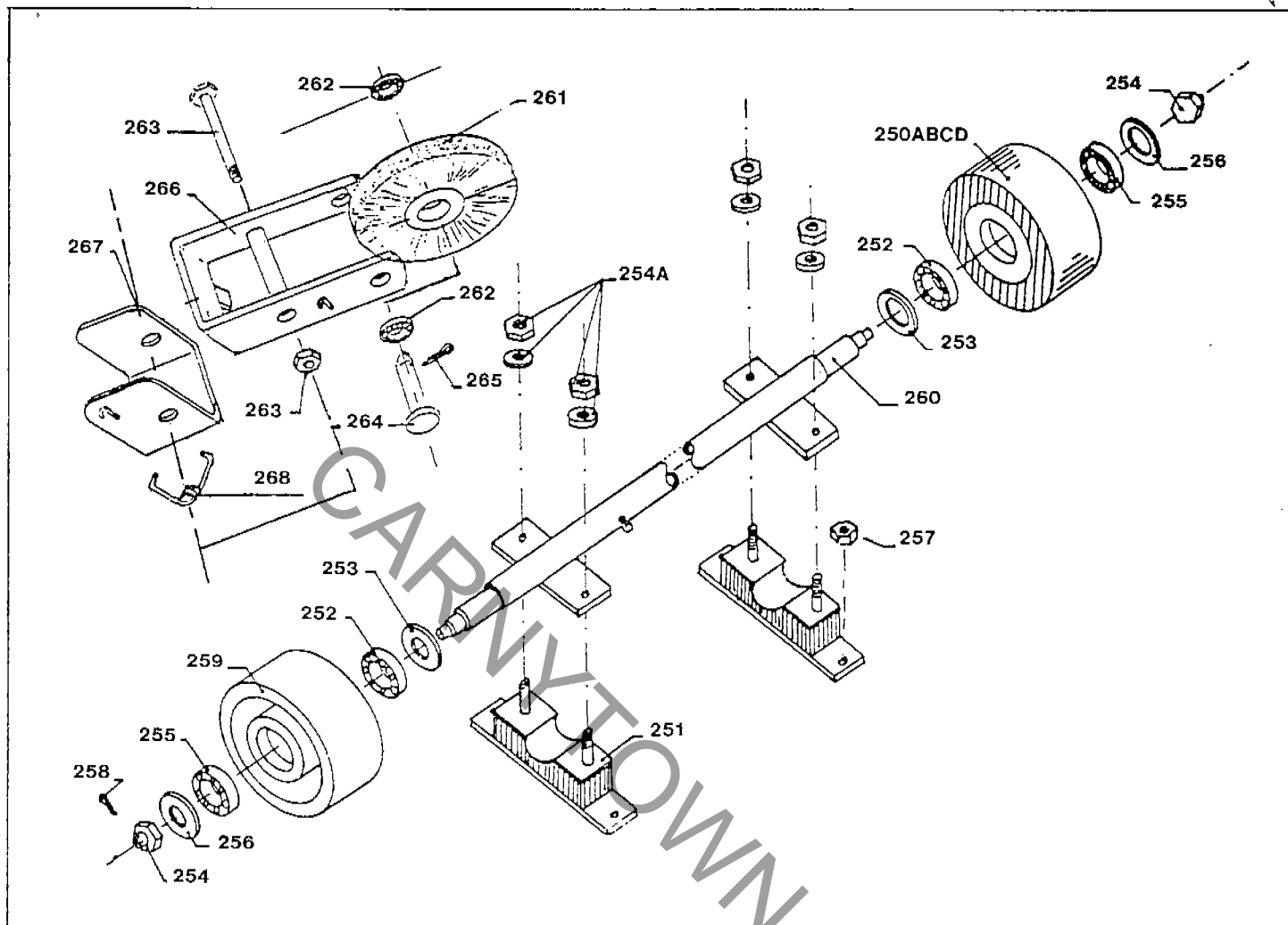
Part No.	Description
C1-TAV.3-182	Transmission Holder
C2-TAV.5-275	Spanner Wrench
C3-TAV.2-180	Clutch Wrench
C4	Socket Tool
C5	Socket Tool
C6-TAV.1-123	Small Puller Bolt to remove #123
C6-TAV.2-123	Large Puller Bolt to remove #123
C7-TAV.1-163	Socket Wrench to remove #163
H-803-5	Steering Wheel Socket

inside
motor
↳ BRUSHES
check for
CONTACT



TROLLEY ASSEMBLY

Part No.	Description	Part No.	Description
270A	Trolley Rod Standard	284B	Trolley Holder
270B	Trolley Rod Extended	285	Nut and Bolt
271	Trolley Pole Holder	H-418-6	Coil Trolley Spring Collar
272	Rubber Sleeve	I012RL	Height Adjusting Collar
273	Compression Ring	H-418-5	Coil Trolley Spring
274	Rubber Cover	H-418-11	Roller Holder
275	Rail Fitting	H-418-1	Brush Holder
276	Wire Wiper	290	A. STD. Trolley Pole B. Extended Trolley Pole
277	Hex Bolt and Nut	291	Trolley Pole Plastic Insulator
278	Headless Bolt	H-418-2	Aluminum Trolley Wheel with Nut and Bolt
279	Trolley Spring	H-418-9	3" Stainless Steel Wire Brush with Nut and Bolt
280	Trolley Holder Support Insulator A. Nylon for Azzurra Car B. Wood for Azzurra Car C. Wood for CX Car	F201JG	Socket Shoulder Screw
281	Flat Wiper Blade	I060BD	Roller Oil Light Bushing
281A	Stainless Steel Wiper Blade	292	Complete Stinger Head with Roller
282	Washer	293	Complete Stinger Head with SS Wire Brush
283	Nut and Lock Washer	294	Complete Stinger with Stainless Wiper Blade
284A	Wire Holder		



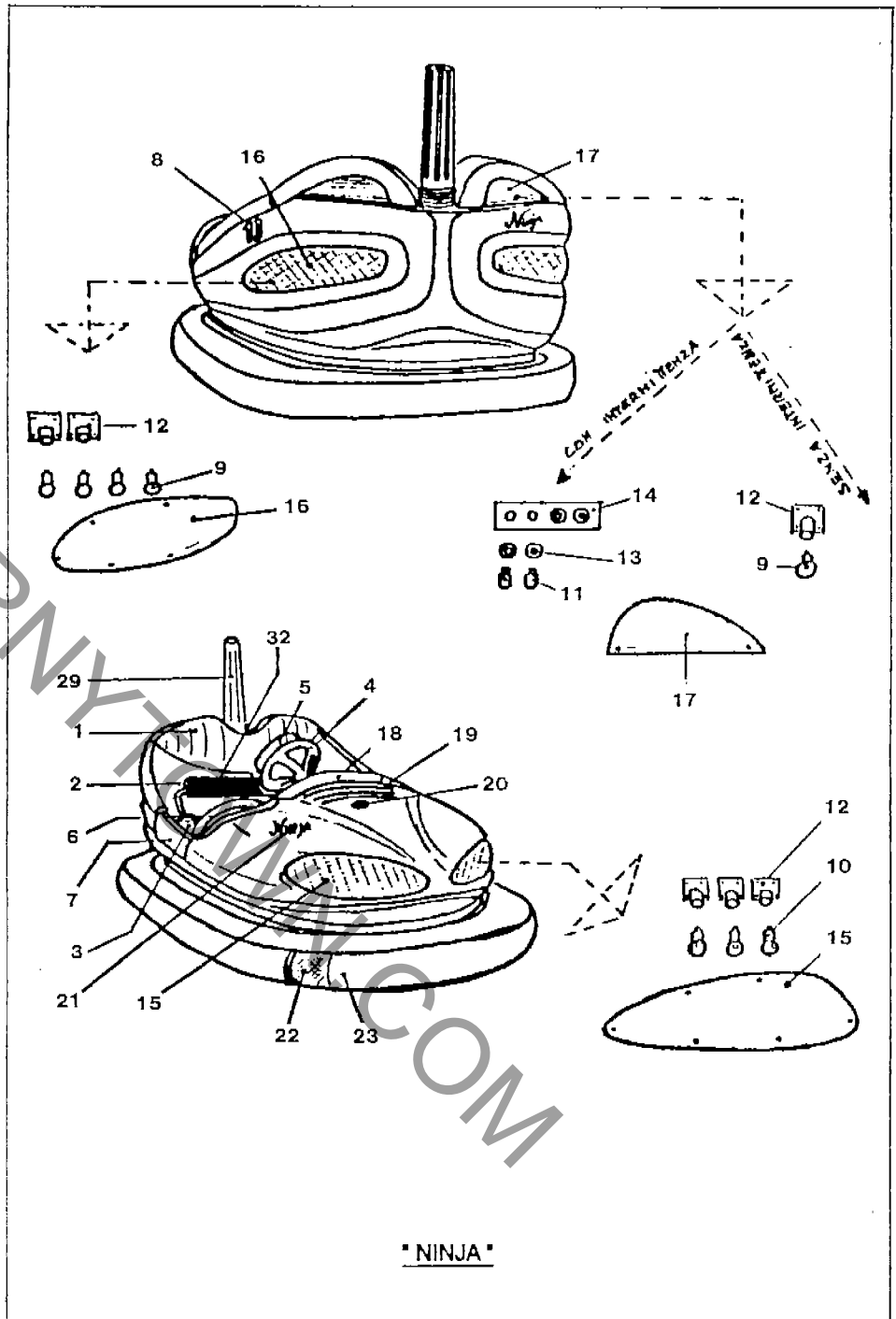
REAR AXLE ASSEMBLY

Part No.	Description	Part No.	Description
250	A. Black Rubber	259	Iron Rear Wheel
	B. New Polyurethane	260	Rear Axle
	C. Resurfaced Poly with Customer Rim	261	Steel Brush
	D. Resurfaced Poly without Customer Rim	261A	Spacer for Brush Assembly
251	Shock Absorber	262	Bearing
252	Bearing	263	Hex Bolt and Nut
253	Washer	264	Pin
254	Castle Nut	265	Cotter Pin
254A	Nut and Washer	266	Brush Holder
255	Bearing	267	Brush Support
256	Washer	268	Spring (2 per unit)
257	Nut	269	Complete Wire Brush Assembly
258	Cotter Pin		



NINJA BODY STYLE

Part No.	Description
NJ1	Head Rest (A) (B)
NJ2	Seat Back Right or Left
NJ3	Seat
NJ4	Steering Wheel
NJ5	Steering Wheel Pad
NJ6	Handle Right or Left
NJ7	Inox Footboard
NJ8	Number
NJ9	Bulb 24V 5W
NJ10	Bulb 30V 21W
NJ11	Bulb 24V 3W
NJ12	Socket
NJ13	Socket
NJ14	Socket Holder Plate
NJ15	Front Lens R or L
NJ16	Tail Red Lens R or L
NJ17	Tail Orange Lens R/L
NJ18	Center Dashboard Frame
NJ19	Side Dashboard Strip
NJ20	Barbieri Logo
NJ21	Ninja Sticker
NJ22	Inner Tube
NJ23	Tire
NJ24	Inside Plastic Protection A. Right B. Left
NJ25	Template Coin Box
NJ26	Coin Box Frame
NJ27	Lock
NJ28	Flasher
NJ29	Pole Cover
NJ30	Front Lens Strip R/L
NJ31	Tail Lens Strip R/L
NJ32	Lap Bar Complete
NJ33	Lap Bar Pad
NJ34	Gas Shock
NJ35	Lap Bar Cap Nut
NJ36	Lap Bar Shoulder Bolt
NJ37	Lap Bar Plastic Washer
NJ38	Steel Bracket Right Hand
NJ39	Steel Bracket Left Hand
I096CB	Bumper Tire Talc

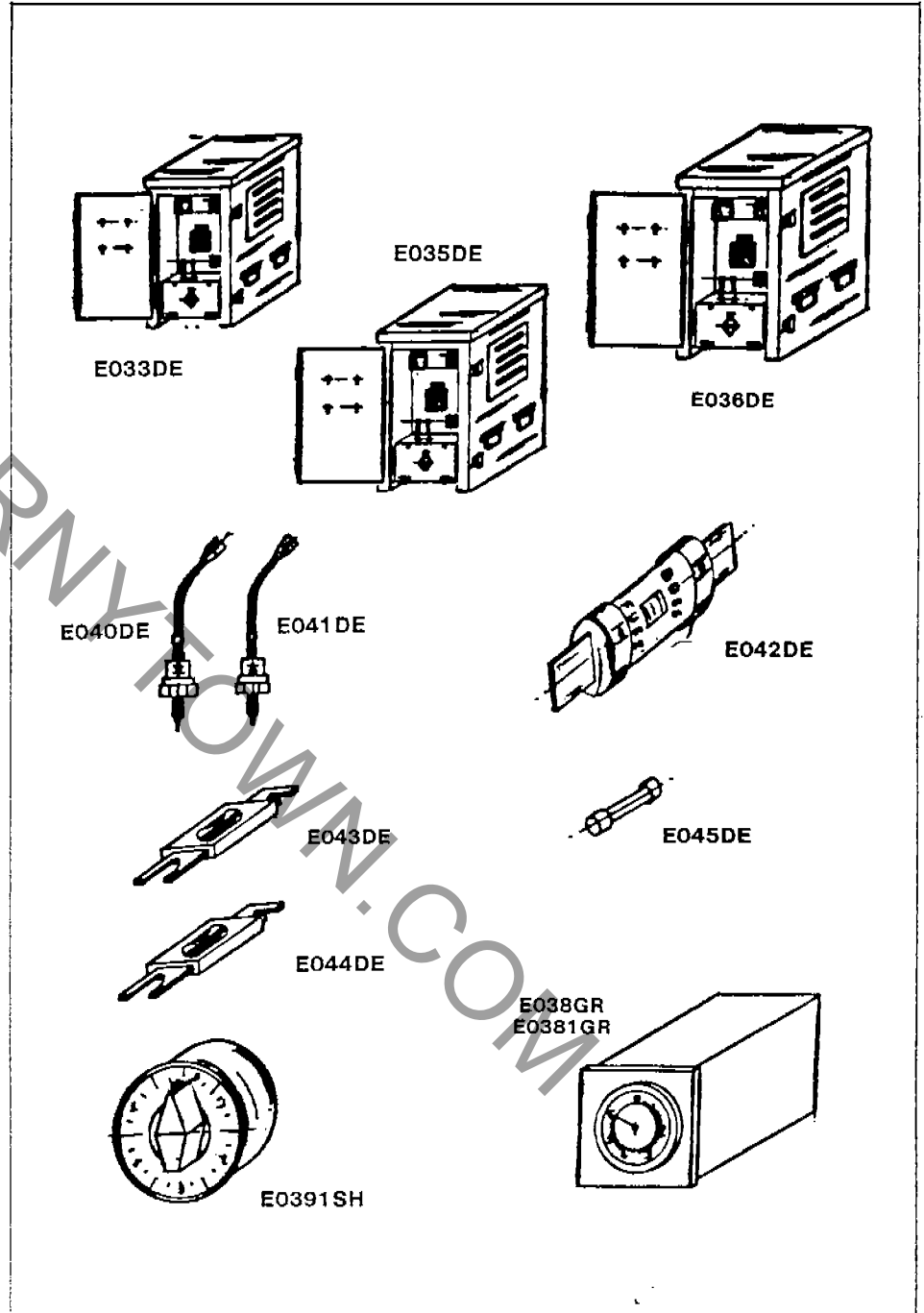


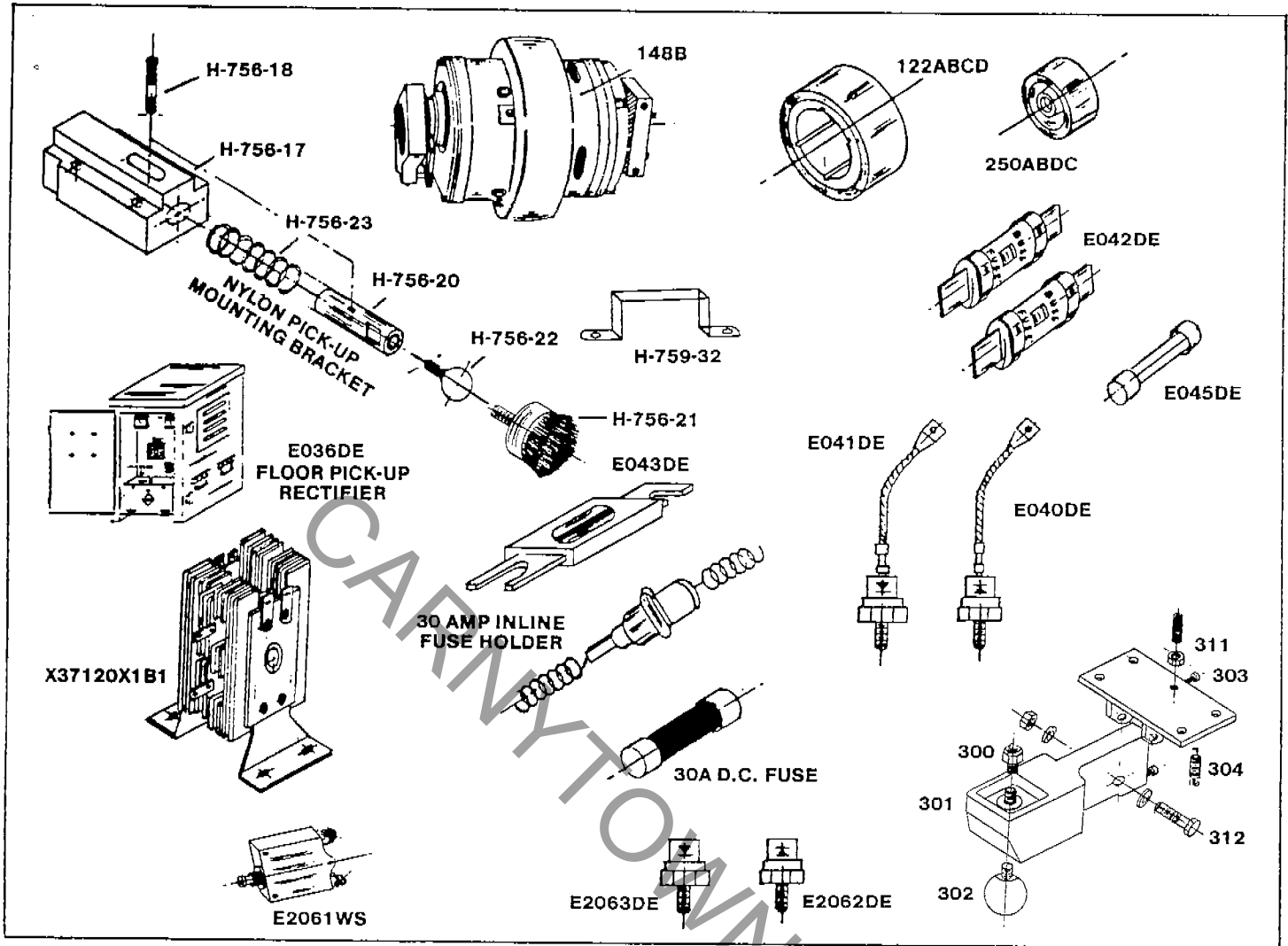
Light Bulbs
Lens covers



MAJESTIC RECTIFIERS & REPLACEMENT PARTS

Part No.	Description
E033DE	Single Phase Rectifier 24 Cars, 300 Amp.
E034DE	Single Phase Rectifier 40 Cars, 400 Amp.
E035DE	Three Phase Rectifier 40 Cars, 400 Amp.
E036DE	Single Phase 400A 48V DC Rectifier
E040DE	Diodes Forward
E041DE	Diodes Reverse
E043DE	ANL 400 Amp DC Fuse
E044DE	ANL 500 Amp DC Fuse
E042DE	80 Amp AC Fuse
E045DE	6 Amp AC Fuse
E038GR	Crouzet Electromechanical Timer
E0391SH	Mechanical Timer
E0421DE	ANL 200 DC Amp. Fuse
E0422DE	ANL 150 DC Amp. Fuse
E0420DE	ANL 80 DC Amp. Fuse
E0381GR	Omron Electromechanical Timer





FLOOR PICK-UP COMPONENTS

Part No.	Description	Part No.	Description
H-756-24	Electric Pick-Up Complete Assembly	301	IT Plastic Swing Contact Arm
H-756-17	Nylon Case	302	IT Steel Pick-Up
H-756-23	Spring	303	IT Bracket
H-756-18	Stud Electrical Connector	304	IT Spring
H-756-22	Bronze Contact Ball	311	IT Machine Screw
122	Drive Wheel	312	IT Contact Arm Bolt and Nut
	A. Black Rubber	X37120X1B1	Polarity Selector Unit
	B. New Poly Wheel	-----	30 Amp. Inline Fuse Holder
	C. 3/4" Resurfaced Poly with Customer Rim	148B	48 Volt Complete Motor Less Wheel
	D. 3/4" Resurfaced Poly without Customer Rim	E036DE	Single Phase 300 Amp. 48 Volt Floor Pick-Up Rectifier
250	Rear Wheel	H-759-32	Metal Pick-Up Mounting Bracket
	A. Black Rubber	E041DE	Reverse Diode for Rectifier
	B. New Poly Wheel	E040DE	Forward Diode for Rectifier
	C. 3/4" Resurfaced Poly with Customer Rim	E188BA	25 Amp. Fuses for Lighting Box
	D. 3/4" Resurfaced Poly without Customer Rim	E2062DE	2D Reverse Polarity Diodes
H-756-21	Stainless Steel Contact Brush Under Car	E2063DE	D2 Forward Polarity Diodes
300	Nut and Washer	E2061WS	30 Amp. Circuit Breaker for Cars
		E2062WS	40 Amp. DC Circuit Breaker
		E043DE	ANL 400 Amp. DC Fuse

BUMPER CARS

MAIN FEATURES

- | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CHASSIS | • Manufactured from cold, rolled steel in various sections formed and welded. |
| BODY | • Fiberglass construction with colors molded into fiberglass. |
| SEAT/DASH PAD | • Fiberglass structure covered with high density polyurethane foam. |
| TRIMS | • Stainless steel. |
| LENS | • High impact and plastic light lenses. |
| TIRE | • Pneumatic bumper tire. Operative pressure max. 13 psi. |
| MOTOR | • DC electric motor operating from 40 to 90 volt. Internal clutch and transmission.
Operating power 0.78 kw.
Length - 1,940 mm (6'4")
Width - 1,220 mm (4'0")
Height - 780 mm (2'7") Headrest
Height - 2,850 mm (9'4") Recommended Ceiling Height |
| WEIGHT | • 215 kb (474 lbs.) |

MAINTENANCE

This bumper car has been built for heavy operation with all parts and components being selected and manufactured to keep maintenance at the minimum level.

In order to obtain the best performance and lengthen the life of the various components, we suggest the following maintenance program.

AFTER INITIAL FEW DAYS OF OPERATION, CHECK FOR TIGHTNESS OF ALL ELECTRICAL CONNECTIONS AND MOUNTING BOLTS AND NUTS.

DAILY MAINTENANCE

A. Check all bulbs. Lights are wired in series so that rugged 30 volt or 24 volt bulbs can be used. If one bulb burns out, the remaining bulbs in the circuit will fail. In order to check the position of the burnt bulb, we have equipped each headlight set with a warning bulb (the bulb should be changed when the warning light is on).

B. Clean and apply to the external side of the pneumatic tire a white mixture, prepared in advance, composed of 1 kg talc powder dissolved into 10 liters water. Application of this material will provide protection and avoid damage due to friction of tires against another or against the steel bumper rail around the floor. Normal life of a tire can be extended to as much as 10 years if this mixture is applied daily.

C. Clean and apply to the bumper rail of the building the same white mixture as per point B.

WEEKLY MAINTENANCE

A. Remove the dust accumulated in the electric motor by blowing with compressed air. This will prevent overheating and sparks between the armature and brushes.

B. Grease the pedal hinge (237) and switch hinge (235).

C. In the pedal unit, check if the bolts (236, 238, 243) are properly tightened. A loose connection could produce sparks causing a failure of the pedal unit.

D. Check and maintain pneumatic tire (13) pressure at 13 psi.

E. Grease the connection between top of trolley (290) and trolley rod (270) with vaseline or similar product.

MONTHLY MAINTENANCE

A. Check the diameter of the iron rear wheel (259) and clean it with a steel brush. Never utilize grinders, file, or similar tools which will damage the roundness of the wheel.

B. Check the thickness of rubber on the rubber rear wheel (250).

C. Check the thickness of rubber on the rubber front driving wheel.

D. In the pedal unit, check the copper blocks (239-240). If these blocks are pitted, smooth with a file. It is recommended that the copper blocks be removed from the pedal assembly before being filed as filing can get between insulation causing a short circuit.

E. Check the thickness of brushes (147) in the double brush holder (126) and smooth the slip ring (132) surface with a soft cloth.

F. Check the thickness of brush (131) in the single brush holder inside of the motor (130), four in the new model and two in the old one.

SIX MONTHS MAINTENANCE

These operations can be delayed or advanced according to the total number of rides per car occurring during this period. The maintenance should be carried out between 20,000 and 25,000 rides.

A. Check and grease the ball bearing (252, 255) in the iron (259) and rubber (250) rear wheel. Utilize any type of good grade bearing grease.

B. Check the ball bearings (113) between the inner housing (114) and outer housing (100) and grease with grease gun (110) if necessary. Recommended lubricants are:

Vanguard - Likoz

Shell - Alvania 2

B P - Energrease LS 2

Exxon - Multipurpose Grease 42

C. Check and grease the gear (111, 215).

D. Check and replace (if necessary) the clutch shoes (141, 141A). The new model car with disc clutch needs replacement after 50,000 rides.

ONE YEAR MAINTENANCE

A. Check transmission unit that is assembled coaxially to the electric motor and replace the grease inside according to the following procedure:

1. Disassemble the motor from the car.
2. Remove the square block (181) with special key (C1/C6).
3. Unscrew bolts (188A) and remove the reduction unit inside the transmission case (177).
4. Detach the transmission unit from the clutch (180).
5. Unscrew the bolts (188) and remove the transmission cover (179).

Now the reduction unit is open. Remove carefully the grease and replace with 150 gr of new grease. Recommended greases are:

- Shell - Simnia O
- Vanguard - ML OO EP
- B P - Energrease HT EP OO
- Exxon - Pen O LED EP 350

6. The unit can be reassembled by reversing the order of the above procedure, carefully checking the O ring (189) and washers.
7. Check and grease the support (228).

TROUBLESHOOTING CHART

✕ A. Slight nicks in fiberglass or trim on nose of car:

_____ Check the pressure of the tires

CAUTION - over inflation may cause severe bouncing between cars and possible injuries to passengers.

✕ B. The bumper tire is too close to the floor or drags on the floor:

_____ Check the diameter of iron rear wheel (259)

_____ Check the diameter of rubber rear wheel (250)

_____ Check the diameter of rubber front wheel (122)

_____ Check the rear shock absorber (251)

Letting the wheels wear to the point that lets the bumper tire brush the floor will cost more in the long run as the bumper tires are very expensive. (Temporary fixing while waiting the arrival of a new wheel is to place 4 or 5 washers between the part 114/128/181 on each stud (114A). The effect is to raise the car higher from the floor.

✕ C. Sparks in the pedal unit:

_____ Check the insulator (244) and copper block (239-240). If trouble persists, we recommend utilizing two insulators (244) instead of one.

D. The trolley rod is not rotating in trolley pole easily:

_____ Check the connection between trolley (290) and trolley rod (270). Grease with vaseline or similar product.

E. Sparks in the trolley rod:

_____ Check the spring (279)

_____ Check the wear of the blade or wire contact (276)

_____ Check if the net ceiling is tight

F. Trolley rod blade (or wire) break:

_____ Check the gap between the ceiling plates or between plate and support. Blades or wires can creak when forced backwards into the joint between ceiling gap.

✕ G. Hard steering:

_____ Check and grease the bearing between inner housing (114) and outer housing (100)

✕ H. Noise from inner housing:

_____ Check the grease in the spheres (113)

_____ Check the grease in the gear (111-215)

_____ Check the shock absorber (112)

✕ I. Steering wheel is vibrating:

_____ Check the shock absorber (112)

_____ Check to see that the nut (210) is tight

_____ Check the bearing (214)

_____ Check the nylon ring (214N)

J. All cars are not working:

_____ Check the fuse in the transformer

_____ Check the connection floor to transformer

_____ Check the wire connection between net ceiling with transformer

K. One car is not working:

✓ Check the brushes (131-147)

✓ Check the wire to insulator block

_____ Check the armature (121)

_____ Check the slip ring (133)

_____ Check the poles (119-119A)

L. Noise from motor:

_____ Check the clutch shoes (141)

N. Leakage of grease under motor:

_____ Check the transmission unit washers and replace seals (proceed as mentioned in the Maintenance for One Year section)

CAUTION - overfilling will destroy seals. This unit requires only 150 gr. grease when filled completely.