

TOP PARTS

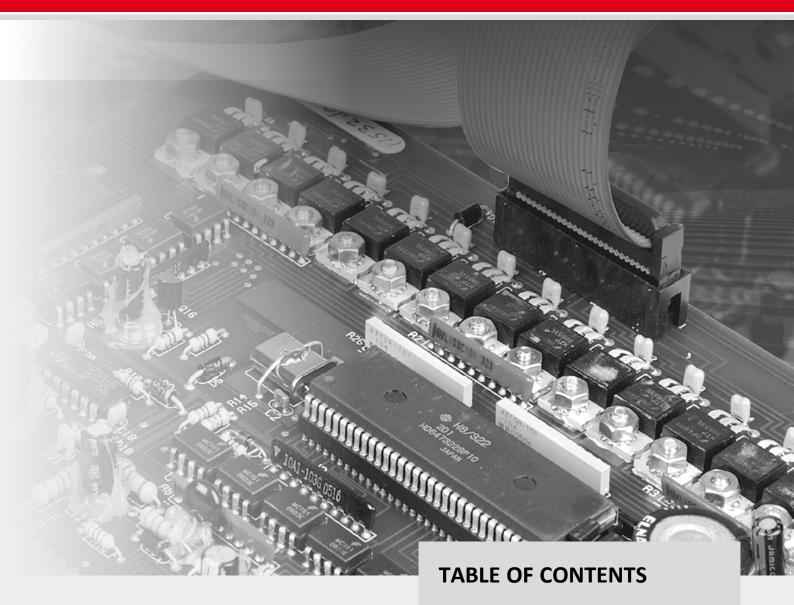


CHOOSING THE O.E.M. BRAND... ...HAS ITS ADVANTAGES

You will find that several of the Top Parts in this catalog are completely new, and many more have recently been improved in design, material, and construction. QubicaAMF has a reputation for "firsts" in bowling equipment innovation, and we honor our vast legacy by continuing to improve and expand in every way we can. We're proud of our past, we're committed to serving your needs today, and we're always working toward improving our shared business in the future.

As the Original Equipment Manufacturer, we're flattered by the many companies that make imitation parts for QubicaAMF pinspotters. But, before you consider QubicaAMF as "just another parts source," consider the following:

- QubicaAMF continues to combine highly skilled engineers, veteran mechanics, and the latest design and manufacturing technology to develop new part ideas and improve on existing parts for the bowling industry.
- The Genuine AMF Parts business consistently out delivers all other brands in unit volume and dollar volume, order turnaround time and order fill rate, warranty claims and customer support.
- QubicaAMF stocks more parts for more generations of pinspotters than all other manufacturers combined. And that's not counting any of the parts and supplies available for scoring systems, lanes, bumpers, ball returns, furniture, fouls, masks, lane chemicals, cleaners, shoes, socks, house balls, etc.
- We are the only company that builds new QubicaAMF Pinspotters that means all of our products are the quality you'd expect to find in a brand-new machine.
- QubicaAMF is the largest American employer in the bowling equipment industry. Our main production facility in Richmond, Virginia, USA employs hundreds of Americans who take pride in their work and in their company's past, present, and future.



DOES THIS CATALOG SHOW EVERY PART AVAILABLE FROM QUBICAAMF?

Not even close! These pages are filled only with our most popular items, as well as those things that you just won't find anywhere else. From small hardware pieces to complete upgrade kits, all of our most requested parts are here. Use the photos and descriptions to find exactly what you're looking for, without any confusion. QubicaAMF appreciates you and we value your business, whether you maintain AMF equipment that's one year old or fifty. We hope you find your Top Parts catalog useful, as well as interesting, and we thank you for choosing Genuine AMF Parts!

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SPRING - CAM LEVER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 657 Ea



Everywhere a finger lever operates a microswitch, this spring keeps it tensioned properly. If faulty switch operation is causing machine problems, this spring might be missing or deformed.

C-1 PLUG BLOCKS

000 025 068 (Chassis Side) 000 025 144 (Machine Side)

82/70



Makes the high voltage connections between the machine chassis and the pinspotter.

SWITCH - MICRO 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 026 042 (Small Button) 000 026 043 (Big Button)



signal in many locations on all generations of pinspotters. Knockoffs of this switch can be flaky. Stick with the original for reliable performance.

C-2A PLUG BLOCKS 82/70

000 028 410 (Chassis Side) 000 028 409 (Machine Side)



Makes the low voltage/signal connections between the machine chassis and the pinspotter.

- Cracks, loose/missing hardware, and other damage to C-1 and C-2A blocks is dangerous and causes electrical problems.
- Replace all questionable blocks and missing clips and keep all hardware tight for good electrical performance.
- Always use correct block for proper terminal identification.

LOCKING SPRING CLIP & CATCH 82/70

000 029 013BG (Clip) 000 029 014BG (Catch) • These Clips and Catches mate together to secure the C-1 and C-2A plug connections between the machine and chassis.

• Keep these tight to prevent them from falling into the wireway below and causing short circuits.

• Secure with the proper Guide Pin 000 028 442 BG and Socket 000 028 443 BG with nuts 843 140 002.

SWEEP & TABLE CONTACTOR 82/30, 82/70

610 704 141 (70 Kit) 070 011 755 (70 Relay Only) 610 003 037 (30 Kit) 030 006 526 (30 Relay Only)



Enclosed relay that replaces the original sweep and table contactors. Don't be fooled by modern replacement parts for original contactors. Stick with the safe, dependable, OEM choice.

SUPERSTAR AC CHASSIS

070 003 902 070 003 902-R - Repair/Exchange

The latest, most advanced version of the computer that controls each pinspotter.

- All of the features of a original MP chassis, plus diagnostic LED's and programmable functions.
- Now improved with a cooling fan, more robust electronic components, and resettable breakers that protect all highvoltage circuits.
- To replace an older SS chassis, choose the MP pgrade Kit 610 070 300.



CHASSIS & ELECTRICAL CHASSIS & ELECTRICAL

CHASSIS RELAY - 24V COIL



The common "ice cube" relay in most chassis. In the SS chassis, SP relay 070 005 883 looks very similar, but it has a 10 VCC coil and is not interchangeable.

BACK END RELAY 82/70

000 025 863 Ea

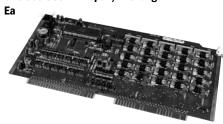


Mounted to the wall of the chassis, this relay controls voltage to the Back End Motor.

- SS and early MP chassis use this relay.
- The terminal numbers are no longer the same as the original. Use terminal location and internal connection for wire location when installing.
- This was replaced in later MP's with sealed type 755 504 048.

MP LOGIC BOARD WITH LED'S 82/70

070 009 860 070 009 860-R - Repair/Exchange



This board puts the microprocessor in the MicroProcessor Chassis. Processes the inputs and determines the outputs to control a 82/70. A direct replacement for all MP boards. Has diagnostic LED's and programmable options.

- A direct replacement for all MP boards.
- Has diagnostic LED's and programmable options.

BALL DETECTOR CYCLE TRIGGER 82/30, 82/70, Brunswick A, Jetback, A-2



Replaces all five boards in a Solid State chassis.

· Installs in minutes.

XOP BOARD

610 709 870

Ea

610 709 870-R

• For short-cycle function with QubicaAMF scoring, add relay kit 070 009 872.





This system mounts just ahead of the machine and starts a machine cycle when a ball passes through it's infrared beam.

- Sturdy, dependable, easy to install and andjust as it has been for years.
- For best results, mount these to the underlane floor, independent of lane structure or machine vibration.

82/90XL PINSPOTTER CONTROL CHASSIS

090 005 700-R (115 Volt) - Repair/Exchange

Chassis type most common on 82/90XL. Four round C-23 type plugs connect machine signals and power on this chassis.

Replaceable items inside this chassis include:

- Breaker 743 513 028
- Spot/Lamp relay 755 520 074
- S & T Motor Relay 755 520 062
- Face Keypad Overlay 090 006 810
- Motor Capacitor 090 003 748 for 110V or 743 000 307 for 220V

Be sure there is no existing warranty on a chassis before breaking its seal.



90XL PINSPOTTER CONTROL CHASSIS 82/90XL

090 008 965CR-R - Repair/Exchange Ea

Universal voltage and cycle "black chassis" for use with later model XL pinspotters.

All machine connections on this chassis are made with rectangular, white plugs.

Replaceable items inside this chassis include:

- Breaker 090 008 939
- Spot/Lamp relay 090 002 775
- S & T Motor Relay 755 520 062
- Motor Capacitor 743 000 307

Be sure there is no existing warranty on a chassis before breaking its seal.



MANAGER'S CONTROL UNIT 82/90XLi

610880057 Ea

This unit acts as a connection point and signal converter between pinspotters' chassis and most scoring control systems.

Each new unit comes packaged with a ball deflector reflector assembly, as they are both single items required with a new installation.



CHASSIS & ELECTRICAL FRONT END

AMP WIRE TERMINALS 82/70, 82/90, 82/90XL

760 019 201BG (Socket) 760 011 197BG (Pin) 20/Bag



Though used in all AMP plugs, these wire terminals are mainly associated with the chassis connections on 82/70's.

- Always unplug the main power first before disconnecting any AMP plugs. Check pins and sockets for corrosion, burns, and proper seating every time you handle a plug.
- If a socket is suspect, insert a loose pin to test. Sockets may look OK, but be too loose tomake a good connection.
- Use Extractor Tool 030 004 031 to remove terminals from plug blocks.

J-STRIP TERMINALS

760 002 061 (Brass) 760 002 063 (Silver)





These terminals seat into the J-strip and connect to the terminals on the machine chassis. Match the color for proper fit and operation. Silver terminals have locking tabs on both sides.

STRAIGHT TERMINALS 82/30, 82/70, 82/90, 82/90XL, 90XLi

760 017 044 (Small Gauge Wire) 760 017 036 (Large Gauge Wire)



These "faston" or "spade" terminals are used at most switch and other connections where quick disconnect is preferred.

- Strip about 1/8" insulation and crimp these and all terminals on the bare wire with the smaller set of tabs and on the insulation with the large set of
- Crimping tool 792 512 019 is made specifically for this purpose.

CHAIR TERMINAL 82/30, 82/70, 82/90, 82/90XL, 90XLi

760 001 070



Where two wires connect on the same terminal, this is typically used to accommodate them.

In tight locations such as the A&MC Box, bend terminals slightly if necessary so that there is room between neighboring terminals to prevent shorting.

SOLENOID - 5/32" HOLE 82/30, 82/70

000 026 027 (110V) 000 027 873 (220V) Ea

82/30 and early 82/70's use this solenoid to operate parts that determine if the table will pick up standing pins or spot new pins. 30's also use it for pinfeed toggles on their pin elevators.

Our solenoids have recently been improved to be more efficient and improve fit and clearance

LOWER LINK - SPRING 82/70, 82/90, 82/90XL, 90XLi

070 006 282 Ea



The middle link under the Spotting Solenoid, held by two 070 006 277 Spring Caps and an 070 006 276 Spring. Be sure that the 070 006 280 Spring Clip at the bottom is adjusted to adequately stretch 070 006 283 Spring and disengage the spotting mechanism.

LOWER SPRING - SPOTTING SOLENOID

070 006 283



Located at the very bottom of the spot solenoid linkage, this spring stretches between Lower Link 070 006 282 and Spring Tab 070 006 280.

SOLENOID - 1/4" HOLE 82/70,82/90

070 006 726 (110V)



Late 70's and early 82/90's without a white solenoid plug use this to engage pin spotting mechanisms.

UPPER LINK - SPRING 1/4" HOLE 82/70, 82/90, 82/90XL, 90XLi

070 006 724 Ea



If you have early 82/70's, use the 5/32" hole version, 070 006 281 and Shoulder Screw 000 028 391. Two of these are used in the spotting solenoid plunger linkage.

SPRING CAP WASHER 82/70, 82/90, 82/90XL, 90XLi

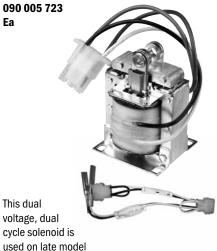


Two of these contain the spring in the spotting solenoid linkage.

UNIVERSAL SOLENOID 82/90XL, 90XLi

090 005 723

This dual



machines, and can be fitted to earlier machines with Adapter Cable 090 003 739.

- QubicaAMF recommends the use of 2, 090 003 459 Dampener Bases with this solenoid to cushion the shock of solenoid operation.
- Replace crushed washers with 000 021 442BG on 82/70's, or 948 041 100 on 82/90 and later pinspotters.
- Universal Solenoid replaces 070 006 723, 220V Solenoid.



FRONT END FRONT END

TABLE DRIVE ASSEMBLY 82/70,82/90

070 001 840

Mounted at the end of the table driveshaft, this controls whether the table lowers to respotting height or to spotting height.

- Keep a spare assembly for quick replacement and convenient repairs.
- For machines with steel tables, use 090 005 550 instead.



DRIVE SHAFT - TABLE 82/70, 82/90

070 001 700



BEARING - CLEVIS ROD END 82/70, 82/90, 82/90XL, 90XLi

000 021 881



Two of these bearings go in the rod end between the Clevis and the Table Drive Eccentric. Often forgotten, these should be inspected regularly.



- Also inspect cam followers 610 704 002.
- For 82/90XL machines with steel table, use 090 005 589.

SPRING - SPOT & RESPOT ARMS 82/70, 82/90, 82/90XL, 90XLi



CAM FOLLOWER ASSY 82/70, 82/90, 82/90XL, 90XLi



These roller follow the cam surfaces and determine how the spot and respot arms pivot and operate the table mechanisms. Assemble to arm with a new Nut 844 070 002BG.

HANGER - SPRING



Attaches Spot & Respot "crableg" arms to the 070 001 707 Springs. 090 005 576 Hanger is a direct replacement and makes it unnecessary to remove Pin 070 001 587 when servicing.

PIN - SPRING HANGER 82/70, 82/90, 82/90XL, 90XLi



CLAMP STUD - CAM 82/70, 82/90, 82/90XL, 90XLi

070 001 664



Secures the Sweep and Table cams onto their driveshafts. Use jam nut 835 549 002BG and snug, but don't overtighten.

ROLLER - COUNTERBALANCE SPRING 82/70, 82/90, 82/90XL, 90XLi

070 001 668



The two 000 022 782 Counterbalance Springs hook around this roller at the top - front end. If the pin for this roller needs to be replaced, order repair kit 610 704 103.

END FITTING - ADJ. TIE ROD 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 025 004 (RH Thread) 000 025 005 (LH Thread)



Used in tie rod assemblies on the Sweep and Table so adjustments can be made by turning the tube. Includes grease zerk for easy maintenance. Secure with Jam Nut RH 835 570 002BG or LH 835 670 002BG.

GREASE ZERK



a grease zerk is used all over all models of pinspotters.

Common hardware items like this can be kept in quantity without being expensive or taking up too much space.

SPRING - SWEEP BRAKE 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 022 168



82/30 Sweep Brakes, 82/70 & later Bin Switch Levers. Springs make a big difference in pinspotter performance. Only your O.E.M. knows the right specifications.

SHOCK MOUNT - SWEEP

Absorbs impact when a ball is

 New. improved design locks studs in place with square holes, while enhanced rubber adhesion to plates makes it more resistant

• Use with cast aluminum Sweep

• Steel channel sweep links use

Shock Mount 090 006 136

delivered during a machine cycle.

070 003 195

to tearing.

instead.

Link 070 003 184.

Ea

X-WASHER - SWEEP & TABLE

030 001 358

Ea



This special washer is used in respot cells and on the sweep carriage assembly.

Just one example of the many 30-exclusive parts you can still expect from your O.E.M. More than any other manufacturer!

undining.

URETHANE BUMPER - SWEEP LINK 82/70, 82/90

000 023 279



Goes through

Sweep Stabilizer (top) Link 070 003 238. During regular inspection, or if your sweep "pops" when it starts down, make sure these are the correct thickness and not sticky. It is a direct replacement for obsolete rubber bumper 000 023 216.

BUMPER - LINK ASSY 82/70, 82/90, 82/90XL, 90XLi



In the middle of the sweep telescoping links, this ring is essential to proper adjustment and operation of the sweep. Keep a supply of these on hand and inspect regularly.

SLIDE BAR - SWEEP 82/30, 82/70, 82/90



Allows the sweep bar to raise safely if it comes down on a fallen pin. Use with sweep brackets 000 023 170 (10-side) and 000 023 171 (7-side).

PILLOW BLOCK 82/30, 82/70

000 022 811 Ea

030 003 938.



82/30, 82/70, 82/90, 82/90XL, 90XLi

710 501 009

Ea



A direct replacement for most locations where

CRANK ARM 82/70, 82/90, 82/90XL, 90XLi

000 023 139 (82/70)



SWEEP SWEEP

THREADED LINK - SWEEP 82/70, 82/90

070 003 223 Ea PIN BEARING - SWEEP LINK 82/70, 82/90

070 003 103 Ea



Cast sweep arm assemblies use these pins in the two "knuckles" where three links meet.

- Lubricate per your service manual.
- During maintenance, don't forget Retaining Rings 919 010 700BG.

SWEEP STABILIZER LINK ASSY 82/70.82/90

The "corn cob pipe" used to adjust

sweep height at guard position.

Always keep these links horizontal.

070 003 238

Ea

The top link in the sweep arm assembly, complete with bushings and bumper.

• A direct replacement for 090 003 903.

• Machines with steel links use 090 006 139 instead.

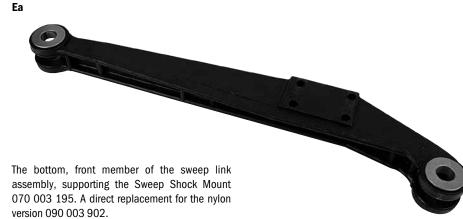
DRIVE LINK - SWEEP 82/70, 82/90, 82/90XL, 90XLi

070 003 158 Ea



SUPPORT LINK ASSEMBLY 82/70, 82/90

070 003 184



LINK ASSEMBLY 82/70, 82/90

070 003 242



SWEEP BAR & CAP ASSY

300 000 182



SWEEP BRACKETS, SLIDE-FREE 82/70, 82/90

090 001 170 (10-side) 090 001 171 (7-side)

Ea



These brackets connect the sweep bar to the sweep shock mounts and don't use sliders like older versions did.

- Replaces sweep slide bars and all related LH-RH parts.
- Reduces pin-in-channel calls.
- Makes sweep height & timing adjustments easier.
- Only for machines with aluminum sweep arms and plastic sweep bars. 90XL and later machines with steel channel sweep links use 090 006 129 (7-side) and 090 006 130 (10-side).





SWEEP TABLE

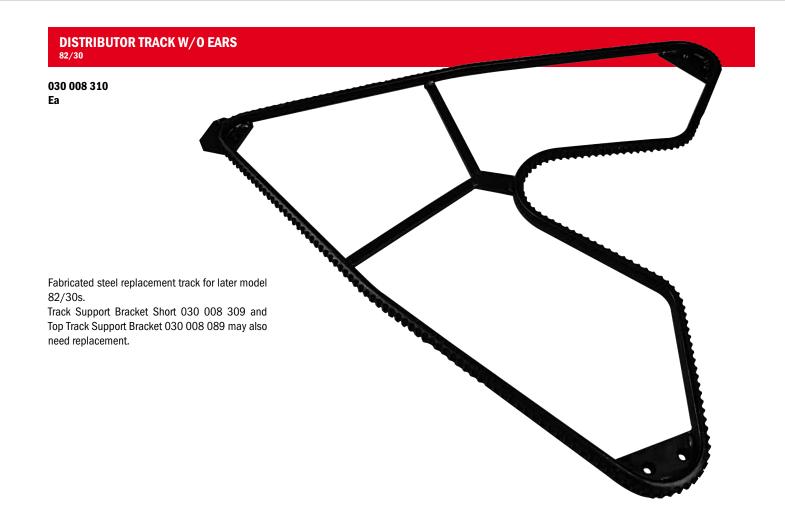








TABLE TABLE



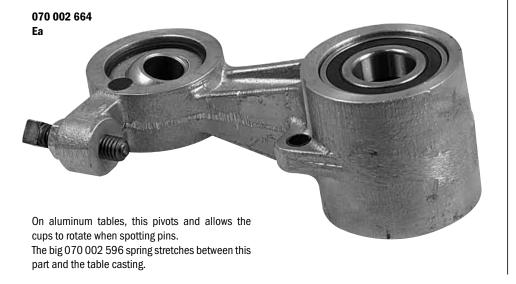
SPOTTING CUP LINERS 82/30

Provides a smooth surface for better pin transfer and reduced wear. Attach to cup

LEG ASSY FRONT LH (7 SIDE) 82/70, 82/90, 82/90XL

halves with Long Clip 030 007 849 and Short

Clip 030 008 235.



SPHERICAL BEARING 82/70, 82/90, 82/90XL



On aluminum tables, this replaces the bearing in the bottom of all 4 yoke legs Steel tables use different legs, 090 005 545 in front and 090 005 548 in back.

TABLE TABLE

YOKE & BEARING ASSY 82/70, 82/90, 82/90XL, 90XLi

070 002 623 (Assembly) 070 002 683 (Yoke only)

Sometimes called the "X-Frame," the Yoke holds the spotting mechanisms on the Table assembly.

- Order just the Yoke casting or the Yoke assembly with bearings factory aligned and staked in • For quick repair of most broken Yoke castings,
- order Repair Kit 610 704 011.



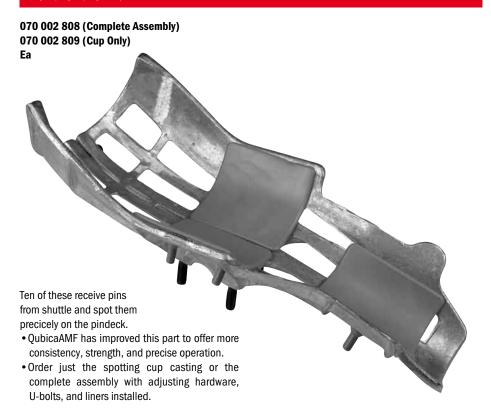
AMF 82-70 / 90 DAILY PREVENTIVE MAINTENANCE

CENTER:			MONTH:																				YE/	٩R:							
Day of the month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Check the call sheets for the previous day, transfer calls to stop summary																															
Cycle / check machines, pinspotting, sweeps, foul lights, related equipment.																															
Investigate / correct machines that have developed a malfunction pattern.																															
Clean Balllift belts, Pin elevator, Pin guide, Orienter pan																															
Keep work area, workbench, service aisle clean and orderly																															
Empty trash cans																															
Assign and record completed PM on the PM charts																															

SPRING - LATERAL DRIVE 82/70, 82/90, 82/90XL, 90XLi

000 026 032 Steel tables use two of these springs to pull the yoke forward. If the spring stud has pulled through the table casting on an aluminum table, it can be replaced by two of these springs and related parts as shown in any steel table parts manual.

SPOTTING CUP 82/70, 82/90, 82/90XL, 90XLi



LINER - SPOTTING CUP 82/70, 82/90, 82/90XL, 90XLi

070 002 784

Three liners mount in each spotting

cup to improve pin shuttling and spotting.

- Different from the PBL Lift Arm Liner, this material has been specialized to eliminate pin sticking and gumming.
- If it's difficult to install, try warming up the pull tabs first.

CAP - SPOTTING CUP 82/70, 82/90, 82/90XL, 90XLi



and U-Bolts 070 002 787BG to position spotting cups. Unsurpassed QubicaAMF engineering and manufacturing control make this the best cap on the market.

TABLE TABLE

FRAME - RESPOT WELDMENT 82/70, 82/90, 82/90XL



- · Includes threaded weldnuts for mounting.
- If the center stud is the only problem, try a Replacement Stud 070 002 650 and Nut 840 049 002BG.

YOKE ASSY - RESPOT CELL 82/70, 82/90, 82/90XL, 90XLi

070 002 629 (Aluminum Table) 090 004 118 (Steel Table)



The main body of respot cell mechanisms. New advances in casting technology make this part more precise than ever.

ARM - RESPOT YOKE ASSEMBLY 82/90XL, 90XLi



TOP PLATE ASSY - RS YOKE 82/70, 82/90, 82/90XL, 90XLi

070 002 644



The best item to top off a great respot cell. A direct replacement for 070 002 695.

SCREW ADJUST - RESPOT CELL 82/70, 82/90

070 002 632BG Bag 10



BUMPER - RESPOT CELL 82/70, 82/90, 82/90XL



- For respot cells on aluminum tables.
- · Packaged in pairs.

ARM - RESPOT YOKE ASSEMBLY

O70 002 646 Ea Aluminum Table Respot Cells

depend on this assembly
for adjustment and proper fit.
Often imitated, only the Genuine AMF Parts Yoke
Assembly can be trusted for years of trouble-free

SHAFT - RESPOT LEVER 82/70, 82/90, 82/90XL, 90XLi

070 002 645 Ea

service.



LEVER RESPOT ASSY 82/70, 82/90, 82/90XL

070 002 633 (1/4" hole) 070 007 618 (5/16" hole)



This lever is what is driven by the "carb link" to open the respot cell on cast aluminum tables.

- 070 002 633 is the respot cell lever for use with $1/4\ensuremath{^{\prime\prime}}$ pivot studs 070 002 654BG.
- Select 070 007 618 for use with common 5/16" Pivot Studs 070 007 617BG.

RESPOT PIVOT 82/90XL, 90XLi

090 005 504 Ea



Each respot cell lever pivots about this stud on stamped steel tables.

Secure with carriage bolt 801 149 100.

RESPOT FINGER 82/70, 82/90, 82/90XL, 90XLi

090 004 123



- With square holes at the end, this is a direct replacement for the old version, 070 007 261.
- Kit 610 903 709 is for rebuilding and updating old respot cells.

82/70, 82/90

COMPLETE RESPOT CELL ASSY



The complete assembly that picks up each standing pin while fallen pins are swept away. Used for pins #1-6 and 8-10. The #7 cell is different from the rest, and there are two different versions of the #7 cell. Early 82/70's with long carb link use #7 Cell 070 007 199. Most have a bolt

connection at the #7 cell and use the 070 006 674.

FINGER GLIDE INSERT 82/70, 82/90, 82/90XL, 90XLi

792 506 033 (Aluminum Table) 090 005 617 (Steel Table)



This allows the tips of the fingers to slide smoothly at the edge of the cell opening. Our original 82/70 roll pin type glides are still available, order 070 007 197BG.

TABLE BIN & SHUTTLE

RESPOT LEVER 82/70, 82/90, 82/90XL, 90XLi

070 007 623 (1/4 pivot hole) 070 002 678 (5/16 pivot hole)



This lever operates each

row of respot cells via each wireway/link.

- Early model 82/70's use 1/4" Pivot Pins 070 002 681BG.
- Later aluminum tables use 5/16" Pivot Pins 070 007 616BG.
- All steel tables use Pivot Pin 090 005 503.

SCREW - CAM LINK 82/70, 82/90, 82/90XLi

070 002 733

This is a special screw that goes through the 070 002 583 Actuating Link "Bellcrank." Spring 070 002 732BG hooks into this screw and stretches to Bracket 070 002 734.

LINK ASSY - RESPOT CELL 82/70, 82/90, 82/90XL, 90XLi



These links operate

the respot cells and are used to make maximum open adjustments. Older 82/70's have a long carb link 070 002 813 between the wireway and the #7 respot cell.

RESPOT FINGER SPRING 82/70, 82/90, 82/90XL, 90XLi



CLIP - BALL JOINT 82/70, 82/90, 82/90XL, 90XLi

730 036 025 (Silver) 730 035 025 (Brass)



Yes, end clips are available separately! Match color with rod assembly for the proper fit. These clips snap onto ball studs in carburetor linktype connections including respot cells, Spotting Latch Link 070 006 493, and Distributor Trip Cable 070 011 170.

BUMPER - BIN ASSY 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 021 992BG Bag of 10



Most commonly used for protecting pins in the Bin assembly, this bumper is also for the start switch lever, and for closed pinwheels on early 82/30's. Made of 100% neoprene rubber for best performance. File off any sharp metal edges around mounting holes prior to installing. Twist them as you press them into place. Some mechanics use a drop of liquid dishsoap on the round surface to help ease installation.

PIN EAR GUIDE 82/70, 82/90, 82/90XL, 90XLi

070 006 380 (7 Side) 070 006 381 (10 Side)

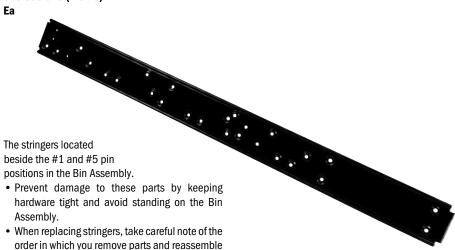


As the name suggests, this part helps pins find their places in the Bin Assembly.

Double-stacked pins might sometimes end up laying across the top of the stringers. A popular trick to prevent this problem is to mount these guides with their points pointing upward, between the stringer and the Pin Guide 070 006 353.

STRINGER - CENTER RH & LH 82/70, 82/90, 82/90XL, 90XLi

070 006 372 (10 Side) 070 006 373 (7 Side)



PIN BUTT GUIDE & PIN HEAD GUIDE 82/70, 82/90, 82/90XL, 90XLi

070 006 364 (Butt Guide) 070 006 366 (Head Guide)

in reverse order.



These are located throughout the Bin Assembly and locate each pin as it falls in from the Distributor. When replacing, hold the mounting face of Shock Mount 070 006 354BG tight against the butt guide as you tighten the screws.

This helps prevent twisting during installation and premature failure.

PIN GUIDE 82/70, 82/90, 82/90XL, 90XLi

070 006 353



Two of these in each pin location help keep the pins centered in their bins. In the #9 position, this part is supposed to get bent as it is installed, to accommodate Spacer 070 006 390.

STRAP - SHUTTLE ASSEMBLY 82/70, 82/90, 82/90XL, 90XLi

070 006 268 Ea



location in the Shuttle. They help strengthen the assembly.

• Straps help prevent shuttle tube bending.

• Easy to install in any pin location.

BIN & SHUTTLE DISTRIBUTOR

SUPER PIN HOLDER 82/70, 82/90, 82/90XL, 90XLi

088 001 211



A direct replacement for the original Pin Holder 070 006 265, this new pin holder helps prevent doubleshuttles, wears like iron, and will never change shape or get gummy.

SHUTTLE OPERATOR ROD ASSY 82/70, 82/90, 82/90XL, 90XLi



AMF 82-70 / 90 WEEKLY PREVENTIVE MAINTENANCE

CENTER:			_MONTH:	YE <i>i</i>	AR:
Day of the month	1	2	3	4	5
Clean shuttle and bin					
Check ball door exit, door rings, segments, fillers, paddle, LBS operation, repair as needed					
Clean pit carpet belt, clean under the machine					
Clean, pin curtain, pit cushion and tube weldment					
Tighten plows, check for cracks, replace as needed					
Change ball wipes, do not turn them inside out					
Inspect distributor, observe for proper operation, correct as needed					

DISTRIBUTOR ASSEMBLY 82/70, 82/90, 82/90XL, 90XLi

610 704 032



POLY-V DISTRIBUTOR BELT 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 909 (82/70-Later) 030 006 789 (82/30) Ea

This constantly-moving belt carries pins from the Orientor Pan at the back of the Distributor to the Trip Arms at the front.

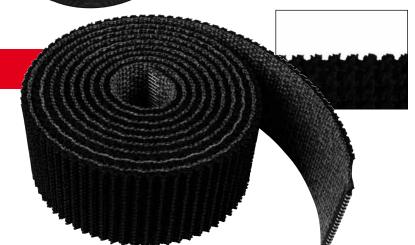
- The most successful distributor belt in history, now available for 82/30's too!
- Manages dirt and oil automatically.
- New, improved Unibar® lacing included.
- Belt is extra long so you can find just the right ength for your distributor.

ROUGH TOP DISTRIBUTOR BELT 82/70, 82/90, 82/90XL, 90XLi

070 006 757 (Individual) 610 709 811 (3-Pack w/Laces)

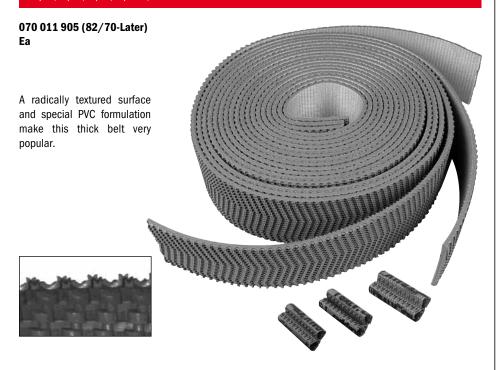
070 006 036BG Lacing & Pins for Distributor Belt (Bag 10) 070 006 037BG Pin for Lacing (Bag 10)





DISTRIBUTOR DISTRIBUTOR

GREY GRIPPER DISTRIBUTOR BELT 82/30, 82/70, 82/90, 82/90XL, 90XLi



TRACKING BRACKET - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLi

070 006 106



At the bottom of the Distributor Belt's "S" curve, this bracket tensions the belt and helps it track properly. Keep your brackets aligned and seated properly around Tube Assembly 070 006 105.

LINK - ROLLER ASSEMBLY - DIST 82/70, 82/90, 82/90XL, 90XLi

070 006 109 Ea On both sides of the Tracking Bracket, these links pivot to ensure proper belt operation.

- Loose belt lacings can wear these links down to be paper-thin and eventually break. Trim off loose hooks at the edges of the belt and ensure it tracks on center.
- When replacing a distributor belt, don't bother removing the spring - just slide the Carl Klauck Distributor Tool 000 200 000 between this link and the casting.

SPRING - DISTRIBUTOR BELT TENSION 82/70, 82/90, 82/90XL, 90XLi

000 026 031 Ea Stretched between the tracking bracket and carriage support, this spring

keeps the distributor belt tight and helps it track properly. Many mechanics have a large flat blade screwdriver with a notch carved in the side to help install this spring.

BEARING - 13/8 0.D. X 5/8 l.D. 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 679 Ea

Very common bearing used in the Distributor, Kicker Shaft, and PBL Ratchet Drive Crank. A good item to have several of on hand.

SPRING - LATERAL DRIVE 82/70, 82/90, 82/90XL, 90XLi

000 026 032



SPRING - SAFETY LINK - DIST 82/70, 82/90, 82/90XL, 90XLi

hook shape and coil tension.

070 006 030

Ea

Parallel to the Safety Link, this heavy spring helps balance and control the distributor as it indexes around the bin.

- Check the Spring Tab 070 006 068. If it is bent, the spring can't do it's job.
- Springs get weaker over time and may need to be replaced even when they look acceptable.



ROD - SAFETY LINK - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLi

070 006 067



- the Distributor. • Erratic indexing can be caused by bent or sloppy rod ends.
- Inspect regularly and keep this area greased per your service manual.

LINEAR SPRING - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLi

070 006 034 Underneath the Distributor Assembly, this spring keeps the Cam Follower against the Indexing Cam while the Carriage extends to 1, 5, and 6. If this spring needs to be overstretched or doubledup to extend the Carriage, try shortening the belt or cleaning and repacking bearings in the 070 006 011 belt rollers.

STUD CLAMP - CARRIAGE 82/70, 82/90, 82/90XL, 90XLi



This 1/4-20 Stud Clamp is used extensively in the Carriage Assembly and in the Spotting Linkage Assembly on the front end. Like all Stud Clamps, the nut on this should be snug but never overtightened.

BUMPER 82/70, 82/90, 82/90XL, 90XLi



Used to cushion moving parts all over the Distributor, this small bumper can also be found in the PBL Ratchet Crank, behind the Bin Switch Lever, and under the Spotting Solenoid on 82/70's. Washer 948 767 132BG can be sandwiched under the bumper head to adjust the stopping position of moving parts if necessary.

CARRIAGE TUBE - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLi

070 006 004 Ea

Two of these tubes support and guide the front carriage of the distributor assembly. • It's essential to keep these tubes clean, straight,

- and free of grooves and divots.
- If they are divoted but not bent, you can swap them side-forside to double their service life.

TRIP ARM ASSY 82/70, 82/90, 82/90XL, 90XLi

070 006 015 (7 Side) 070 006 016 (10 Side)



As pins fall off the end

of the distributor, they push down these arms and advance the distributor to its next position. Bearings that are missing or that don't spin freely should be replaced with Bearing 000 026 251BG, Screw 813 540 082BG, and Lockwasher 957 100 002BG.

ECCENTRIC AND CONCENTRIC ROLLERS - CARRIAGE TUBE 82/70, 82/90, 82/90XL, 90XLi

070 006 117 (Concentric) 070 006 118 (Eccentric)



These are used to make Distributor parallel adjustments and let the Carriage move smoothly forward and back.

- O.E.M. bearings are the best available, sealed to prevent contamination and eliminate slop.
- Check regularly for smooth operation, looseness around internal balls, and excessive Carriage side-toside play.

TRIP CABLE 82/70, 82/90, 82/90XL, 90XLi

070 011 170



As pins push down the trip arms when they're leaving the distributor, this cable trips the rocker arm and begins the index to the next location. A direct replacement for the old trip rod 070 007 305.

SLEEVE - PIVOT TRIP ASSY 82/70, 82/90, 82/90XL, 90XLi

070 006 685

Ea



Where the trip casting pivots to index the distributor to its next position, this sleeve belongs between the screw and bushing.

- Binds during indexing can happen in this area if it is not lubricated properly or if the Bushing is not seated firmly in the casting 090 006 665.
- · Very early 82/70's used a longer sleeve, 070 006 087.

STOP BLADES 82/70, 82/90, 82/90XI, 90XLi

070 006 691



Bolted to the Trip Casting, this part engages the clutch to index the distributor when tripped. If these are binding, the contact surfaces may need to be greased, or may have changed shape from wear.

TRIP ROD & CASTING ASSEMBLY 82/70, 82/90, 82/90XL, 90XLi

090 006 668

Rocker arm rollers push the rod in this assembly up and down, which operates the stop blades and starts an index.

- together.
- Solid, heavy design makes cable length and
- Comes with bushing installed.
- The key components in this assembly are

Key and bolt system locks the rod and casting

- clutch pressure adjustment easier.
- 090 006 663 Rod and 090 006 665 Casting.

SPRING - DISTRIBUTOR CARRIAGE 82/70, 82/90, 82/90XL, 90XLi



On the 7-pin side of the distributor, this spring is essential to proper indexing as pins fall off the end of the distributor and the trip mechanism operates. Keep the spring, collar, and shaft in place with 919 006 800BG Internal Tooth Washer.

BUSHING - TRIP CASTING 82/70, 82/90, 82/90XL, 90XLi

701 710 098 (Nylon) 701 712 097 (Brass)

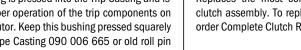


This bushing is pressed into the Trip Casting and is key to proper operation of the trip components on the Distributor. Keep this bushing pressed squarely into bolt-type Casting 090 006 665 or old roll pin type Casting 070 006 667.

PINION & SLEEVE ASSEMBLY 82/70, 82/90, 82/90XL, 90XLi



Replaces the most common wear items in the clutch assembly. To replace all clutch wear items, order Complete Clutch Rebuild Kit 612 700 001.



DISTRIBUTOR DISTRIBUTOR

SUPPORT GUIDE LH & RH 82/70, 82/90, 82/90XL, 90XLi

070 006 103 (7-Side) 070 006 104 (10-Side)





ORIENTOR PAN 82/70, 82/90, 82/90XL, 90XLi

090 003 077 Ea

Often referred to as the "O-Pan" or "Turn Pan," this adjustable pan accepts pins from the elevator and positions them butt-first onto the distributor belt.

- A direct replacement for 070 006 144.
- The back edge of the pan should be as close as possible to the elevator wheel, but not touch it unless pushed outside of the 7 or 10 positions.
- The front flanges will spread apart over time. These need to be parallel with and flush against the support guides.

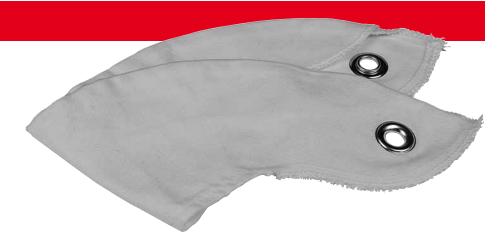


ORIENTOR PAN WIPE 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 910 Ea

An add-on to the Orientor Pan devised to remove lane oil from pins.

- · Removes dirt and oil from pins as they pass onto distributor.
- Slows pin transfer to prevent pins falling off side.
- Machine washable, change in seconds.



SLEEVE & BUSHING - PINION 82/70, 82/90, 82/90XL, 90XLi

070 006 676 (Sleeve) 070 006 679 (Bushing)



These items fit between the Pinion Gear and the Drive Shaft, allowing the clutch to stay stationary while the drive shaft rotates.

- Replace only these critical wear items when other distributor drive components are OK.
- Unmatched precision in part consistency and proper dimensions.
- For best results, coat bushing, sleeve, shaft, and mating washer with a light film of Pinion Lubricant 715 010 205.

FRICTION DISC 82/70, 82/90, 82/90XL, 90XLi

070 006 126 Ea



At the center of the Clutch assembly, the Friction Disc transfers rotation to the pinion gear to index between pin positions.

New forming process guarantees consistent, smooth friction faces, free of mold marks and flashings.

KIT - CLUTCH PLATE ASSY. 82/70, 82/90, 82/90XL, 90XLi

610 704 006

Ea



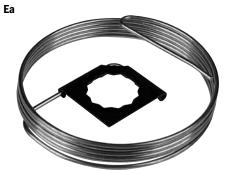
When stop blade wear or clutch plate - pinion slop is causing pin pileups, eliminate the problem with this kit.

Clutch plate includes the pin separator ring, essential to preventing pins from leaving the distributor between bin positions.

If the stop blades are dragging on this ring, your carriage tubes may be bent.

SPRING ASSY - DIST. DRIVE 82/70, 82/90, 82/90XL, 90XLi

070 006 128



The spring hooks into the Clutch Plate, locks onto the nut, and provides proper tension to the Clutch assembly.

Nut 835 582 002 should only be tightened using this spring as a hand tool. Overtightening the nut can cause clutch deformation and poor performance.

CLUTCH PLATE 82/70, 82/90, 82/90XL, 90XLi

070 006 130 Ea



This is the constantly rotating part of the Clutch. Adjusting spring rotation determines it's pressure against the friction disc. To ensure proper operation, the friction surface on this plate must be completely flat, and the opening must screw neatly onto the worm. You can check these by looking for air gaps when you set the plate on a flat surface and when you stack it with another plate.

DISTRIBUTOR DISTRIBUTOR

INDEXING CAM - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLI

070 006 149 Rollers follow the cams on this wheel. moving the Distributor around the Bin to each pin location. With most Distributor problems, the first item to check is timing mark alignment between the Indexing Cam and Pinion

DRIVE SHAFT - DISTRIBUTOR 82/70, 82/90, 82/90XL, 90XLi

070 006 077

Gear at the #1 position.

Ea

- A bent/wobbling shaft translates to poor Distributor operation.
- pliers and diagonal cutters to insert and remove roll pins.

UNIVERSAL JOINT - PLASTIC 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 008 004



- The original low-cost universal joint.
- High-grade materials for longer life than all

UNIVERSAL JOINT - STEEL 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 007 586

Ea



Transfers power between distributor driveshafts through all ten positions of the distributor.

- New higher standards for materials and dimensions.
- Smooth-running lightweight design is optimal for distributor performance and long life.

SIMPLIFIED CLUTCH ASSEMBLY 82/70, 82/90, 82/90XL, 90XLi

070 009 890



A different approach to the clutch, this system uses a compression coil spring for pressure and a nyloc nut for adjustment. Unlike competitors, this clutch plate has a pin separator ring to prevent misfeeds.

WORM - DISTRIBUTOR CLUTCH 82/70, 82/90, 82/90XL, 90XLi

070 006 125



The worm properly spaces clutch components and supports the Clutch Plate.

It is easy to assemble a clutch with missing or incorrectly positioned parts. Use the illustrations in your service manual to ensure proper assembly.

BALL - DISTRIBUTOR SHAFT 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 026 461BG (82/30-82/70) 090 002 019 (82/90-Later) Bag of 2



Helps keep distributor operation smooth as it indexes to each position. Worn balls will cause other parts to wear and cause pin pileups.

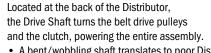
- Replace in pairs.
- Use with Pin 000 022 717 on 82/30 and 82/70, or with Pin 908 048 480 on 82/90 and later pinspotters.

DISTRIBUTOR DRIVE HOUSING 82/30, 82/70, 82/90



Part of the system that allows the distributor driveshaft to reach the distributor in all ten of it's

- Distributor indexing problems can be caused by twisting, spreading, or grooves worn in this part.
- Keep it lubricated with plenty of clean grease.
- For the wide version on 82/90 and later machines, choose 090 001 130.



- Never use a hammer on this shaft, instead use Chan-nel-lock

DISTRIBUTOR GEARBOX & MOTOR

BALL BEARING RETAINER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 892 (82/30 & 82/70) 090 002 034 (82/90-Later) Ea

This clip holds the balls on the distributor drive shaft and is critical for proper operation. Clean, inspect and grease balls and drive housing as a part of regular maintenance.

CENTER:

SPRING - DISTRIBUTOR INDEXING

000 026 880 Fa



On the head of the distributor, this spring holds up the indexing lever. QubicaAMF continues to offer as many Genuine AMF Parts as possible for your 82/30 machines.

AMF 82-70 / 90 MONTHLY PREVENTIVE MAINTENANCE

																						•															-							_
Lane #	1	2	3	4	5	. (3	7	8	9	10	11	12	13	1	4 1	5	16	17	18	19	20) 2	1 2	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	3	7 3	8 3	9 4	۰0
Check, clean, correct, sdjust, spotting cups, respot cells, table assembly in general																																												
Check, clean, correct, adjust, sweep assembly																																												
Check, correct, adjust starter pad, kicker rollers PBL assembly, balltracks, downsweeps																																												
Check, correct, adjust carpet belt tracking, front and rear rollers																																												
Check, correct, adjust bounceboard, dampers, supports, ground strap																																												
Check, correct, adjust cushion assembly, shock, start switch																																												
Check all machine belts, replace as needed																																												
Clean Distributor assembly in general																																												

MONTH:

YFAR:

GENUINE QAMF GEARBOX OIL 82/30, 82/70, 82/90, 82/90XL, 90XLi

715 021 716 (1 Qt) 715 021 706 (12 Qt Case)

Quart bottle / Case of 12 Quart bottles



Lubricates, cleans, cools, and seals gearboxes on AMF pinspotters.

- Use no substitutes! Other oils can slowly deteriorate expensive internal gearbox parts you won't know until it's too late. This is the oil that our gearboxes are intended to run with.
- Depending on machine type, use about 1 bottle for every 2 gearboxes.
- Change oil every 5 years or less, depending on lineage.
- For IPTS gearboxes, try our synthetic gearbox oil, part 715 021 717.

COMBO MOTOR CAPACITOR 82/30, 82/70



Used in the circuit to start and stop the sweep and table circuit.

- Original dimensions and screw terminals.
- New construction method makes it the strongest combo capacitor yet.
- Always install capacitors with the vent hole as high as possible.

5-POSITION RUSSELL-STOLL PLUG 82/70

000 027 655 (Motor Side-Male) 000 027 660 (Cable Side-Female)



Makes the electrical connection between the sweep and table motors and the pinspotter.

- Check the wire connections in these plugs if you have motor heating, coasting, or starting trouble.
- Complete cable assemblies are available too: 070 005 542 for Sweep or 070 007 751 for Table.

CARBON BRUSH - NATIONAL COMBO

785 502 020 Ea



Four of these drag on a disc in National combination motors to add resistance for braking.

- Make sure the disk is smooth and clean for peak performance.
- If a motor needs a little extra braking, try replacing the outer two brush springs with Spring 070 001 845.

KLIXON THERMAL PROTECTOR 82/30, 82/70, 82/90, 82/90XL, 90XLi

Motor Type Klixon 30 GE Combo 785 501 392 30 GE BE 60Hz 785 501 389 30 GE BE 50Hz 785 501 388 70 GE Combo 60Hz 785 501 392 **70 GE BE 60Hz** 785 501 389 785 501 540 70 GE Combo 50Hz **70 GE BE 50Hz** 785 501 508 70 WH Combo 785 501 393 **70 WH BE 60Hz** 785 501 394 70 WH BE 50Hz 785 501 564 **70 National Combo** 785 502 005 **70 National BE** 785 502 080 90 Franklin Combo 090 003 630 90 Franklin BE 60Hz 090 003 630 90 Franklin BE 50Hz 090 003 665 Ea



This 'red button' in motors protects the motor from damage if it isn't able to run properly. Order Guard part number 785 501 591 and 2, 785 501 592 pins to repair missing or smashed protector plates.



GEARBOX & MOTOR GEARBOX & MOTOR

COMBO MOTOR & GEARBOX ASSY - WESTINGHOUSE $^{82/70}$

610 704 052 (60Hz) 610 704 052-R (60Hz Repair/Exchange) 070 006 219 (50Hz)

Both the Sweep and the Table are driven by these interchangeable assemblies, mounted on the front end of the machine.

- The only OEM replacement for 82/70 motors & gearboxes.
- Built and tested at the QubicaAMF plant from all new parts.
- Complete and ready to use.



BE MOTOR & GEARBOX ASSY - WESTINGHOUSE

610 704 042 (Even Ln - 60Hz) 610 704 043 (Odd Ln - 60Hz) 610 704 042-R (Repair/Exchange Even Ln - 60Hz) 610 704 043-R (Repair/Exchange Odd Ln - 60Hz) 070 007 901 (Odd Ln - 50Hz) 070 007 900 (Even Ln - 50Hz)

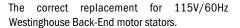
Positioned in the back corner of the machine, this assembly drives the Distributor, Carpet, Pin Elevator, and Ball Lift.

- \bullet The only OEM replacement for 82/70 motors & gearboxes.
- Built and tested at the QubicaAMF plant from all new parts.
- Complete and ready to use.



STATOR - WH BE 115V

785 501 663 (show with 785 501 666L & R below)

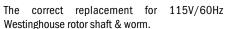


- Comes complete with end bell, switch, klixon, capacitor, and through bolts.
- Works with motor model 325P201.
- Make sure motor has a Belleville Washer 785 501 402 in place.



ROTOR - WH BE 115V

785 501 666R 785 501 666L Ea



Check the Westinghouse motor label for compatibility - motor code 314P079 is the old style, 325P201 is current.

Choose L for even lane gearbox, R for odd lane.

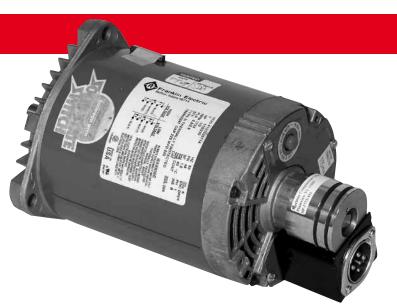


NATIONAL COMBO MOTOR REPLACEMENT 82/70

785 502 261 (110 Volt) 785 502 260 (220 Volt)

Runs National (Matsushita) combination gearboxes on the front end of the pinspotter.

- Direct replacement for all National sweep & table motors.
- All internal parts are available.







GEARBOX & MOTOR GEARBOX & MOTOR

NATIONAL BACK END MOTOR REPLACEMENT



Ea

back - end gearboxes on both odd and even lanes.

- Direct replacement for all National BE motors.
- Same motor as used on our newest 90XLi machines, adapted for your National BE gearbox.
- All internal parts are available.
- · Reversible rotation.

STARTING SWITCH & CENTRIFUGAL MECHANISM - WH BE MOTOR

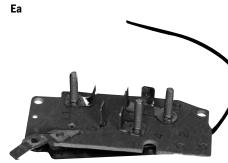
785 502 300 (Centrifugal Mechanism) 785 501 384 (60Hz Switch)



The "wide disk" mechanism and switch for starting late model Westinghouse and A.O. Smith BE motors. This type of centrifugal mechanism is held in place on the rotor shaft with clips on top and bottom. Match your rotor shaft to the appropriate mechanism type before ordering.

TERMINAL BOARD SWITCHES -WESTINGHOUSE COMBO 82/70

785 501 386 (Main) 785 501 372 (Aux)

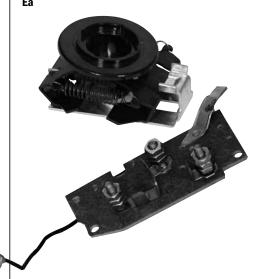


These two switches inside the top of Westinghouse Sweep & Table motors work together to engage the start windings of the motor.

The 50Hz Centrifugal Mechanism is still available as part number 785 501 531. The 60Hz mechanism is no longer available, we recommend our Solid State Start Switch 610 309 044 as the best replacement.

STARTING SWITCH & CENTRIFUGAL MECHANISM - WH BE MOTOR

785 501 664 (Switch)



The "small disk" mechanism and switch for starting early model Westinghouse BE motors. If the rotor shaft has worn and no longer supports the mechanism, we recommend replacing it with the 610 309 046 Solid State Switch.

SOLID STATE SWITCH - BE MOTOR 82/30, 82/70

610 309 046

Ea

If the original centrifugal switch or mechanism can't be replaced, this unit eliminates them both and adds extra protection to the circuit.

- Current-sensing technology always switches start winding circuit at just the right moment.
- Replaces all switches and centrifugal mechanisms on all BE and ball return motors.
- · Internal fuse for added circuit protection.

SOLID STATE SWITCH - COMBO MOTOR 82/30, 82/70

610 309 044



- Integral braking circuit for improved stopping
- Current-sensing technology always switches start winding circuit at just the right moment.
- Replaces all switches and centrifugal mechanisms on all sweep & table motors.

ADJUSTABLE SOLID STATE SWITCH 82/30, 82/70

610 309 042 (110 Volt)



The length of time that the start winding is engaged can be adjusted with this type of solid state start switch. Often known as the "Lewus" switch, this is not recommended for combination motors.

BE GEARBOX SEALS 82/70

716 501 009 (Worm Input) 716 503 023 (Pin Elev & Pit Drive) 716 503 022 (Dist Output)



prevent leakage around the four gearbox

shafts. When installing, prevent seal damage by wrapping sharp edges on shafs with teflon tape and coating shafts with gearbox oil.

RING GEAR - WESTINGHOUSE COMBO

785 501 179 Ea



The three planet gears stop in the same location every time. Extend the lifespan of these parts by cranking the motor to a new stopping position every time the gearbox is off of the machine.

This one-piece ring gear & flange is the part of the gearbox that is mounted to the machine frame.



PLANET GEAR - WESTINGHOUSE COMBO



Alternately called "helical gear," it is part of the system that reduces output shaft speed and increases operating torque.

When there is breakage or excessive wear, it is best to replace these in sets of three, along with the Ring Gear 785 501 179 and Wheel Shaft 785 501 291.

GEARBOX & MOTOR GEARBOX & MOTOR

OB ROTOR / ENDBELL BEARINGS 82/30, 82/70, 82/90, 82/90XL, 90XLi

Motor Type Klixon 30 GE Combo 701 021 010 **30 GE BE** 701 021 010 701 021 010 70 GE Combo 70 GE BE 701 019 007 701 021 010 70 WH Combo 70 WH BE 701 020 091 701 021 010 **70 National Combo** 70 National BE 785 502 088 90 Franklin Combo 785 502 087 90 Franklin BE 785 502 087 Ea



The rotor shaft inside every motor is supported at the end by one of these bearings.

Don't let a questionable bearing ruin good endbells and rotor shafts. Bearings that don't feel smooth or turn with even resistance should be replaced.

BE GEARBOX 82/90, 82/90XL, 90XLi

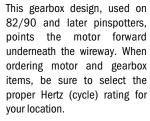
088 004 501 (60Hz Odd) 088 004 502 (60Hz Even)

088 004 504 (Repair/Exchange - 60Hz Odd) 090 004 502-R (Repair/Exchange - 60Hz Even)

088 004 506 (50Hz Odd)

088 004 507 (50Hz Even)

E





BE MOTOR 82/90, 82/90XL, 90XLi

090 003 766 (60Hz) 090 007 310 (50Hz) Ea

This motor adapts to the BE gearbox and drives the back end components of the pinspotter.

Coat the shaft with anti-seize compound use a new Shaft Key 907 202 500. The Switch in this motor is 090 004 560 (60Hz) or 090 004 558 (50Hz).



BE MOTOR & GEARBOX ASSEMBLY 82/90, 82/90XL, 90XLi

090 003 514 (60Hz 0dd) 090 003 515 (60Hz Even) 090 003 512 (50Hz 0dd) 090 003 513 (50Hz Even) Ea THE TAXABLE PARTY OF THE PARTY

A complete, ready to install back end drive unit assembly. Early 82/90's used a round plug - this cable assembly is available, order 250 001 115.

COMBINATION GEARBOX - 3-BOLT FLANGE 82/90, 82/90XL

088 004 504 (60Hz) 088 004 509 (50Hz) Ea 088000173 Complete FE 60Hz

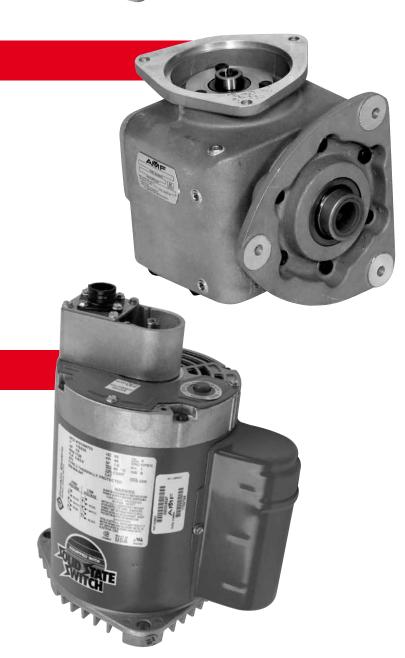
Two of these gearboxes mount to the front end of the machine to run the sweep and the table. Clean output splines while gearbox is off of pinspotter and apply grease prior to installation. The splines will wear longer and it will be easier to remove the gearbox in the future.

COMBINATION MOTOR - SMALL PLUG 82/90XL

090 004 547 (60Hz) 090 004 548 (50Hz) Fa

This motor has a 7/8" dia. receptacle, a 3-bolt interface to the gearbox, and accepts a drop-in drag brake.

- Combine with 60Hz Gearbox 088 004 504 or 50Hz Gearbox 088 004 509, using Key 907 202 500
- Coat shaft interface surfaces with Anti-Sieze Compound 715 011 803.



GEARBOX & MOTOR GEARBOX & MOTOR

COMBINATION MOTOR - LARGE PLUG 82/90, 82/90XL

090 003 532

This motor has a 1.5" dia. receptacle, a 3-bolt interface to the gearbox, and uses a drop-in brake. Common internal replacement items include Capacitor 090 003 634, Klixon 090 003 630, and Switch 090 004 560 (60Hz) or 090 004 550 (50Hz).

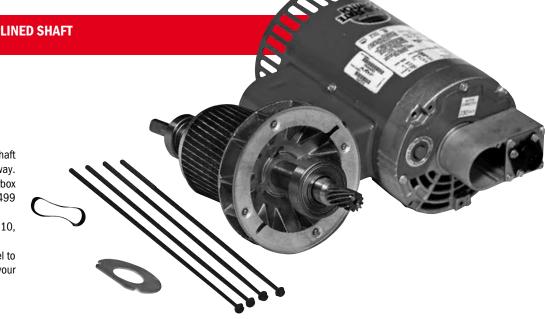


COMBINATION MOTOR - SPLINED SHAFT 82/90XL

090 004 062 (60Hz) 090 004 060 (50Hz)

The output end of this motor's rotor shaft has a helical spline rather than a keyway. It is made to interface only with Gearbox 090 004 500 (60Hz) or 090 004 499 (50Hz).

- The 60Hz motor now operates at 110, 208, or 230 Volts.
- Use the diagram on the motor label to determine the proper wiring for your voltage service.



DRAG BRAKE - DROP IN 82/90, 82/90XL

090 004 516 Ea



Fits between the Franklin combo motor endbell and rotor shaft to help stop the motor.

A direct replacement for the brake on most Franklin combo motors.

VITON OIL SEAL - WORM INPUT 82/90.82/90XL

785 503 104 Ea

- Made of a new material, this seal helps prevent oil leakage around the worm shaft.
- A direct replacement for 785 503 074.
- Correct for both Combination (Front End) and Back- End gearboxes.

DRAG BRAKE W/ HEAT SHIELD

090 003 550



Seats against the plug housing on early Franklin motors to help stop rotor shaft rotation.

This brake is also used on our 82/70 National Combo Motor replacements, 785 502 261 (60Hz) and 785 502 260 (50Hz). Order part number 090 003 554 for a replacement spring, and 919 007 500 for the retaining ring.

OIL SEAL - BE DIST DRIVE & PIT DRIVE OUTPUT 82/90, 82/90XL

785 503 072 Ea



When mating seals with shafts, wrap shafts in teflon tape and lubricate with gear oil before installing.

OIL SEAL - BE PIN ELEVATOR OUTPUT 82/90, 82/90XL, 90XLi

785 503 071



Shaft seals are pressed into gearbox and cap openings to prevent leakage.

Prevent future leaks during gearbox rebuilding by dressing off burrs and sharp edges on and around mating surfaces.

OIL SEAL - COMBINATION OUTPUT SHAFT

785 503 073

Ea



If a groove is worn in an output shaft from the old seal, a new seal can usually be seated slightly further in than the old one to contact a new area on the shaft and prevent leakage.

COMBO GEARBOX REBUILD KIT 82/90, 82/90XL

610 900 064 (60Hz) 610 900 063 (50Hz) Ea









GEARBOX & MOTOR BALL LIFT

BACK END GEARBOX PACKAGING KIT 82/90, 82/90XL

610 900 051

All seals, shims, gaskets, oil and hardware required to completely renew a back end gearbox.

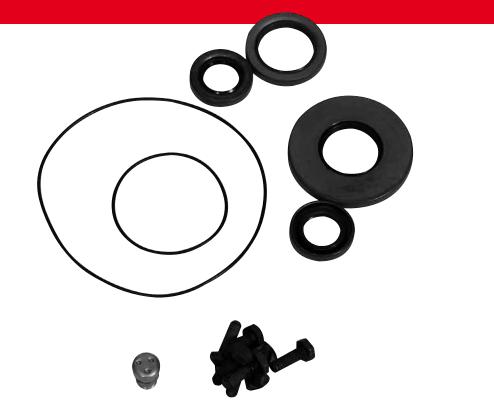
When rebuilding a gearbox, always have plenty of room, a good cleaning solution, and the proper tools including safety glasses, gloves, and face mask.



BACK END SEAL KIT 82/90, 82/90XL

610 900 116R

The necessary items to repair a leaky back end gearbox. Comes with instructions. The correct oil is essential to proper seal service life and function.





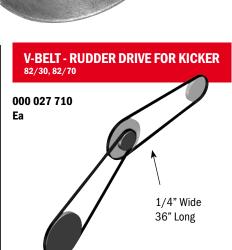


This is the belt that turns the kicker rollers. The 82/30 belt is slightly longer than the 82/70 version.

RUDDER DRIVE LINK 82/30, 82/70

halfway ball spin.



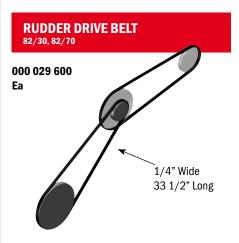


In Kicker ball exits and PBL Plus "mini PBL" exits, this belt runs between the ball lift and the belt tensioner "mousetrap" pulley. Works with our adjustable speed rudder drive sheave, 000 024 599.

KICKER SPRING 82/30, 82/70



Provides tension for kicker roller drive belts. Rather than trying to double-up or reshape old springs, it's best to replace with new.



This belt runs between the belt tensioner "mousetrap" pulley and the rudder drive sheave. Measures approximately 33.5" outside.

ADJUSTABLE RUDDER DRIVE LINK 82/30, 82/70



• All internal components are available separately.

BALL LIFT BALL LIFT

BEARING - 1 3/8 0.D. X 5/8 I.D. 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 679 Ea



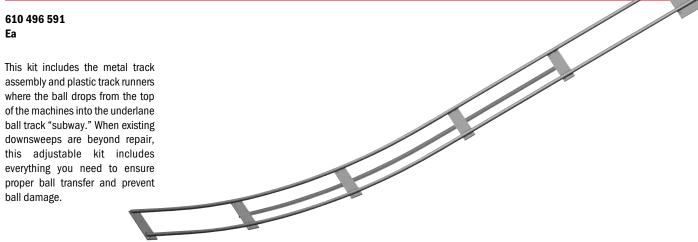
Very common bearing used in the Distributor, Kicker Shaft, and PBL Ratchet Drive Crank. A good item to have several of on hand.

BALL WIPER CLOTH 82/30, 82/70, 82/90, 82/90XL, 90XLi



DOWNSWEEP REPLACEMENT KIT 82/30, 82/70, 82/90, 82/90XL, 90XLi

This kit includes the metal track assembly and plastic track runners where the ball drops from the top of the machines into the underlane ball track "subway." When existing downsweeps are beyond repair, this adjustable kit includes everything you need to ensure proper ball transfer and prevent ball damage.



BELT - PIT DRIVE 000 022 099 Ea The correct belt to run 82/70 carpets and ball lifts. 82/30's with kickers or PBL's use 030 008 671.

CLUTCH PULLEY ASSEMBLY 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 811 (closest to even machine) **000 024 812 (closest to odd machine)**



CLUTCH BEARING - BALL LIFT 82/30, 82/70, 82/90, 82/90XL, 90XLi, C-80, C-90, Options, Profile

070 007 291



The key to either machine on a pair being able to run the shared ball lift, this clutch bearing locks when turned one direction, and freewheels in the other. This is the same bearing used on the lower shaft of AMF-type front ball returns including C-90, Options and Profile.

SPRING - DISTRIBUTOR 82/30, 82/70, 82/90, 82/90XL, 90XLi

This 5" pulley assembly allows one lane to run the ball lift while the other

lane is off. To replace the Clutch

Bearing only, order 070 007 291.

Faster 4 1/4" pulleys are available

too - order 000 028 772 (even) or

000 024 673

000 028 773 (odd).

Ea

Originally used on the 82/30 distributor, this spring is more often associated with ball lift parts. When using this spring to tension the ratchet drive belt, one hook needs to be opened up a little wider than the original size.

LINK ASSY - BALL LIFT - UPPER & LOWER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 651 (Lower) 000 024 720 (Upper)

Ea





CLAMP STUD - BALL LIFT 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 610



This secures the Ball lift shafts in the "U" brackets on the kickbacks. Install with Nut 835 565 002 on back side of bracket for easiest access next time maintenance is required.

HANGER ARM ASSEMBLY 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 029 659

2 of these go into

the belt tensioner

on kicker and PBL

Complete with bushings 900 110

systems.

081BG.

"mousetrap" assembly

Ea

BUMPER - BALL LIFT ADJUST 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 641

At the top of the kickbacks, this adjusts ball lift height. Also used in our Signature and Curvature series masking units. Lock adjustment with Jam Nut 835 558 002BG.

CUSHION RUBBER - SHOCK ABSORBER 82/30, 82/70

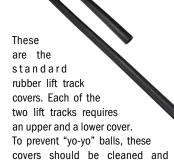
000 027 996 Ea



Two of these are sandwiched between retainers above and below the shock absorber bracket on PBL and Kicker ball lifts. An essential part to proper ball lift operation, these should be resilient and compressed neatly on the shock absorber stud.

TRACK COVER - LOWER 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 440 (Lower)



000 024 663 (Upper)

rotated on a regular basis.

BALL LIFT BELT - WIDE/DEEP GROOVE 82/30,82/70

070 011 280 Ea

- The belt for pulleys with a wide/deep groove.
- Similar construction to our famous "Gripper" belt.



BALL LIFT BELT-GRIPPER 82/30, 82/70, 82/90, 82/90XL, 90XLi



This belt is stretched around the two ball lift pulleys and raises balls from the pit level up to the top of the machines.

- Highest quality ball lift belt available.
- Trusted Gates® construction.
- Easy to adjust and keep adjusted.

LOWER D-BORE SHAFT KIT



SPACER - BALL LIFT SHAFT 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 006 748



Essential to proper alignment and fit of ball lift shafts, these "tophat" spacers are available individually. Replace these at the first sign of wear to extend the life of related parts that are more expensive.

CLUTCH RACE - BALL LIFT 82/30, 82/70, 82/90, 82/90XL, 90XLi

090 003 401



lower ball lift shafts to the clutch pulleys on Kicker and PBL lifts. Two are required per shaft. A direct replacement for 070 006 749.

This race mates all

STRAIGHT BORE BEARING & SPACER KIT 82/30, 82/70, 82/90, 82/90XL, 90XLi

610 905 704





- The correct bearing and steel spacer for use with all straight bore shafts.
- Two required per shaft / 4 per ball lift. Include the spacer in your assembly to ensure tight fit and proper alignment.

D-BORE BALL LIFT SHAFTS & BEARING 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 795 (Upper Shaft) 070 011 796 (Lower Shaft) 070 011 797 (Bearing)



A different spin on the original round style, this system locks the shaft and inner bearing race together.

- D-Bore system prevents shaft from spinning free of bearing.
- New tighter tolerances for longer wear.
- Lower shaft not recommended for 82/30's or extremely narrow exits.



BALL LIFT BALL LIFT

PULLEY - BALL LIFT BELT 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 661

The "Narrow/Shallow" pulley for use with most common ball lift belts.

Use with ball lift belt 088 001 233 and make sure the two pulleys are aligned before installing lift in machine.



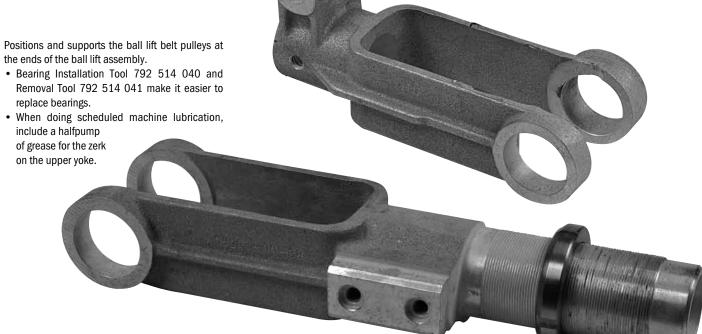
BALL LIFT YOKE - UPPER & LOWER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 659 (Lower) 070 001 995 (Upper-Includes Spring Nut) Ea

the ends of the ball lift assembly.

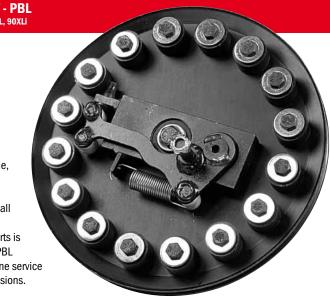
Removal Tool 792 514 041 make it easier to replace bearings.

include a halfpump of grease for the zerk



RATCHET ASSEMBLY - PBL 82/30, 82/70, 82/90, 82/90XL, 90XLi 070 011 039

Mounted to the metal kickback on the even machine, this assembly includes a rotating pulley and an inner crank that rotates to lift the ball into contact with the belt. Proper alignment of these parts is critical. Use the chart in the PBL installation manual or machine service manual for the correct dimensions.



RATCHET ARM WELDMENT 82/30, 82/70, 82/90, 82/90XL, 90XLi



FLANGE BUSHING 82/30, 82/70, 82/90, 82/90XL, 90XLi

900 208 091BG Bag of 5



The heart of the LBS, this bushing is used extensively in the mechanism to ensure reliable operation. The Light Ball Sensor is intended to run perfectly clean and dry. No lubrication should be added to any parts in this assembly.

V-BELT 82/30, 82/70, 82/90, 82/90XL, 90XLi



SPRING - RATCHET DRIVE 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 032

Ea



This spring hooks between the ratchet arm and the crank block to unlock the lift arm once the ball has left the exit area. Changes through the years have made this critical spring the best version available.

CAM SENSOR ASSEMBLY 82/30/82/70/82/90,82/90XL,90XLi



This is the base about which the parts of the Light Ball Sensor (LBS) operate in a full PBL system. Assembly includes the Cam Sensor Weldment 070 011 100 and Bushings 900 208 091BG.

LINERS - CRADLE 82/30, 82/70, 82/90, 82/90XL, 90XLi

090 002 024 (Black-PBL Lift Arm)



mount in the lift arm to protect

the ball and help it transfer to the track rails.

- Though originally the same part as the Spotting Cup Liner, materials have been specialized for these two applications.
- If it's necessary to install these with the lift arm in the machine, some mechanics prefer to hit the flat side with a ball peen hammer to knock the pull tabs into their holes.

PADDLE - PBL 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 146

Bolted to the rudder arm, this urethane part moves back and forth to clear pins from the ball exit.

- Unique shape accommodates both wide and narrow exits.
- Strong enough to push pins out of exit, while gentle on bowling balls.
- Resists bending and cracking.

BALL DOOR WELDMENT - PBL 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 005 (Even Lane) 070 011 006 (Odd Lane)

This is the ramp that PBL exits use to deliver balls from the pit area to the lift arm. Often imitated, never duplicated. Expect only the best quality from your O.E.M.

URETHANE BALL DOOR RING 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 641 (Even Lane) 070 011 642 (Odd Lane)

An alternative to the steel version, this urethane part guides balls from the ball exit to the lift arm in PBL systems.

- Protects balls from coming in contact with metal ball exit parts.
- New improved urethane formula and molding process to improve strength and fit consistency.
- · Molded-in nuts for easy installation.
- New and improved tooling and new formula. Better fitting and stronger than ever. You won't be disappointed.



V-BELT - PBL 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 148 In complete PBL systems, this belt runs between the ball lift and the belt tensioner "mousetrap" pulley. This wider belt is made to work with the 070 011 131 Pulley.

PBL MINI KIT 82/30, 82/70

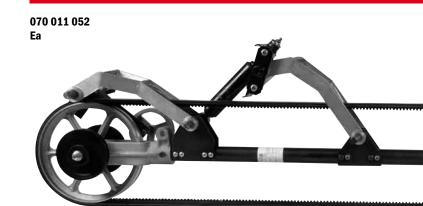
610 088 086

A kit that includes only the vital parts required to update a pair of machines from the old "kicker" ball exit system.

- Includes all the parts of our Gripper PBL Kit.
- Features our adjustable rudder drive link, adjustable speed sheave, and new urethane ball door rings.
- Don't forget a reusable Template & Drill Bits Kit 610 704 098.



BALL LIFT ASSEMBLY - PBL 82/30, 82/70, 82/90, 82/90XL, 90XLi



This is the complete assembly that carries balls up the lift rods from the pit to the top of the machines.

- Complete assembly, ready to install in any PBL system.
- Have a spare ball lift for convenient replacement and service.



BALL LIFT BALL LIFT



GRIPPER PBL KIT 82/30, 82/70, 82/90, 82/90XL, 90XLi

610 049 510

• Put all lane oil, lightweight ball,



• Specially engineered ball lift belt, rod covers, "thimbles," and adjustable support bracket team up to provide superior ball lift performance.

• Everything you need to quickly & easily convert any PBL to the Gripper

To convert a Kicker Ball Lift to the Gripper PBL, order 610 088 086.

THIMBLE 82/30, 82/70, 82/90, 82/90XL, 90XLi

088 001 230 Ea



PBL systems make great use of this part as a direct replacement for 070 011 018 Ball Guide.

- Helps center balls and transition them from lift arm to rails.
- Protects balls from metal-related damage.
- Must use these if installing Clear Rail Covers 088 001 231.

RAIL COVER - LOWER CLEAR 82/30, 82/70, 82/90, 82/90XL, 90XLi

088 001 231 Though this is a part of the Gripper ball lift kit, it can be used separately to cure problems with PBL ball lift traction.

- The best rail cover available for eliminating "yo-yo" ball slip.
- Exclusive urethane formula specifically formulated for this product.
- Do not install without Thimbles 088 001 230.

AMF 82-70 / 90 QUARTERLY PREVENTIVE MAINTENANCE

CENTER:																			M	10	NTI	H: .												_)	YΕ	AR	:_							_
Lane #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1 1	5 1	.6	17	18	19	20	21	22	2 :	23	24	25	26	27	28	3 29	9 3	0 3	1	32	33	34	35	36	37	38	39	9 40	0
Clean the machine framework, drip pans																																												
Complete Quarterly lube chart items																																												
Tighten front and rear jackscrews, balltrack bolts																																												
Tighten pit cushion and hanger box bolts																																												
Remove the distributor clutch assy. Clean the pinion and sleeve, friction disks metal and plastic, use a fine emory cloth to smooth all surfaces, reassemble and lubricate pinion sleeve.																																												
Check: bin bumpers, shock mounts, 1 pin track, butt plates, stringers, pin holders brackets, shuttle straps, shuttle operator rod. Repair as needed Tighten: Bib and shuttle bolts																																												

AMF 82-70 / 90 ANNUAL PREVENTIVE MAINTENANCE

CENTER:																	M	10	ΝTΙ	H:												YE	AF	}:_							_			
Lane #	1	2	3	4	1	5	6	7	8	9	10	11	12	2 13	3 1	.4 :	15	16	17	18	19	20	21	1 22	2 2	23 2	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	3 3	9 4	10
Check the following for worn orbroken parts, repair or replace as:																																												
Table and sweep arms, shaft bushings, keyways and pillow blocks																																										T	1	_
Complete Annual lube chart items																																												
Check / correct gerabox oil leaks																																												
Rebuild table drive assembly																																												
Rebuild carpet roller and pit assembly																																												
Rebuild distributor assembly																																												
Rebuild ball lift assembly, light ball sensor																																												
Clean underground return tracks, tighten dropsweep track																																												

ROLLER ASSEMBLY - FRONT 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 576



ROLLER BODY HALF 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 578

Ea



ROLLER - HINGE 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 579

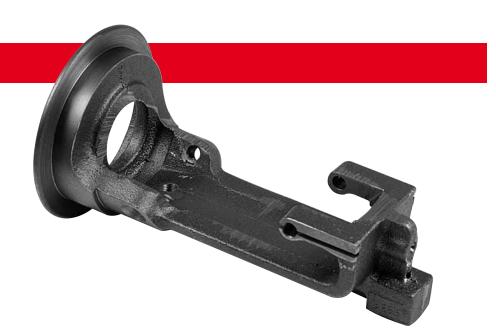
Ea

in pit.

The "flange" portion of the Front Roller assembly. Two required per lane.

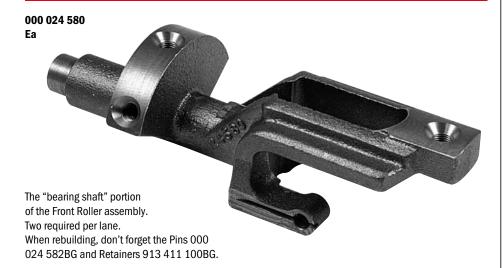
screw head edges flush before installing inside

Assemble both of these to the same half of the roller body for proper carpet belt operation.



PIT AREA
PIT AREA

SHAFT - HINGE 82/30, 82/70, 82/90, 82/90XL, 90XLi



HINGE ASSEMBLY - FRONT ROLLER 82/30, 82/70, 82/90, 82/90XL, 90XLi



LINK - FRONT ROLLER - BRONZE 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 597

Ea



This is what pivots between the two halves of the Front Roller assembly. When assembling, make sure grease zerk points toward the hole in roller body. Interested in trying the lube-free plastic version? If so, order 000 024 760. Always replace these in pairs.

BEARING - F & R ROLLER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 590



There are four of these per machine, one at each end of each carpet roller assembly. These can be cleaned and repacked as a part of regular pit maintenance.

ROLLER ASSY - REAR 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 002 034 (82/70-Later) 030 005 648 (82/30) Fa

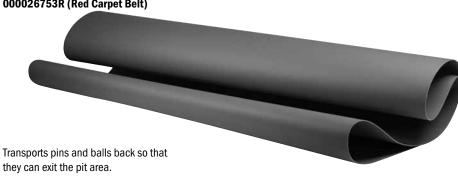


At the back of the pit, this roller drives the carpet belt.

If the pulley is frozen on the shaft, loosen setscrews and start/stop BE Motor until pulley spins free.

CARPET BELTS 82/30, 82/70, 82/90, 82/90XL, 90XLi

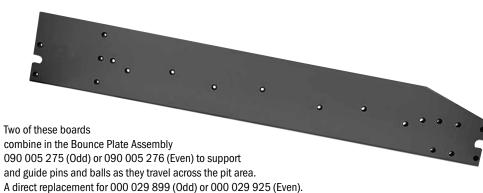
090 006 124 (Pumpkin) 088 500 505BX (Black Carpet Belt) 000026753R (Red Carpet Belt)



PHENOLIC BOUNCE BOARD - FRONT 82/30, 82/70, 82/90, 82/90XL, 90XLi

090 005 270 (Odd) 090 005 271 (Even)

Ea



PHENOLIC BOUNCE BOARD - REAR 82/30, 82/70, 82/90, 82/90XL, 90XLi

090 005 272 (Odd) 090 005 273 (Even)

Ea



088 500 505BX (Black)

The standard carpet belt on all our new pinspotters.

Maintains flexible contact over the pit carpet rollers, eliminating ball idling issues.

The Black Belt stays soft and flexible without stretching.

Field tested for four years, it's easy to install, starts up easier, and resists lane oils.

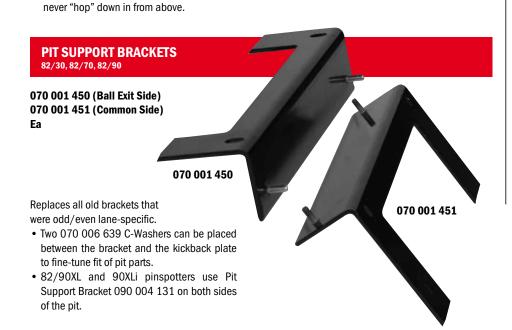
090 006 124 (Pumpkin):

- Industry Standard.
- New improved structure to improve ball movement into exit.
- Two year warranty.

CHANNEL - BOUNCE BOARD 82/30, 82/70, 82/90, 82/90XL, 90XLi







BONDING STRAP 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 025 622



static electricity that

would otherwise build up in the bounce plate assembly. If your scoring system freezes or locks up, inspect to make sure this strap is present, intact, and connected properly.

FE-BE BRACKET REPAIR KIT 82/70, 82/90, 82/90XL, 90XLi



If the back end of a machine migrates away from the front end, it can crack the brackets where the two machine halves meet. Use this kit to repair the damage, and make sure that Floor Bracket 000 026 464 is mounted firmly at both rear corners of the machine.

000 027 368 (Even) 000 027 372 (Odd)

Transitions the pins from the carpet belt to the pin elevator.

LARGE PLOW & MAT ASSEMBLY

82/30, 82/70, 82/90, 82/90XL, 90XLi

- If you are seeing damage on your pins or carpet belt, check this area for cracks and loose hardware.
- Not for use on early 82/30's.



PLOW & MAT ASSY - SMALL RH & LH 82/70, 82/90, 82/90XL, 90XLi

070 001 412 (Odd) 070 002 169 (Even) Ea

This is the plow that goes on the ball exit side of the pit. For late model 82/30's, the equivalent is RH plow 030 008 397 (Odd) or LH plow 030 008 398 (Even).

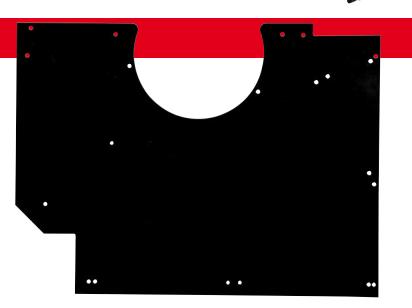


KICKBACK PANEL - BALL DOOR SIDE 82/30, 82/70, 82/90, 82/90XL, 90XLi

030 008 660 Ea

This is the fibre panel for the steel kickback plate on the ball exit side. It is secured with Rivets 937 000 000BG. To install, hold the new rivets in place with duct tape.

- A direct replacement for panel 000 029 640.
- For the common (opposite) side, order 030 006 495 for 82/30's or 070 002 027 for all other models.





PIT AREA

PIT AREA PIN ELEVATOR

RETAINER SUPPORT 82/30, 82/70, 82/90, 82/90XL, 90XLi



Direct replacement if the Rear Roller Bearing Support breaks on the ball door side. Remove old part, drill holes if necessary and secure with 810 258 100BG screws and 844 058 002BG nuts.

PIVOT STUD 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 029 015



If a front roller pivot stud is worn out, break it out of the kickback plate with a large wrench and replace it with this. File/grind/chisel old weld as necessary to position new stud perpendicular to plate, then secure tightly with 844 074 002BG Nut and 941072200BG washer.

THRUST BEARING 82/30, 82/70, 82/90, 82/90XL, 90XLi



The necessary part between the kickback and the front roller bearing support brackets. During pit service, clean all parts in this area and apply a light film of grease to both sides of this part.

Machines made before 1970 use this solenoid to actuate various mechanisms including pinfeed. This solenoid has been revised to make it more compact and eliminate dimensional issues it had with certain 82/70's.

CAM FOLLOWER 82/30

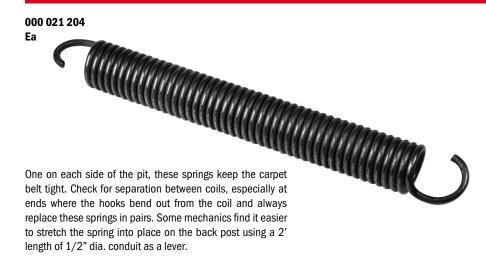
030 006 662

Ea



Goes in the Toggle Assembly on open-pinwheel 82/30's. Expect our bearings to operate smoothly, wear well, and be the right size.

SPRING - BEARING SUPPORT 82/30, 82/70, 82/90, 82/90XL, 90XLi



GREASE ZERK 82/30, 82/70, 82/90, 82/90XL, 90XLi

710 501 009 Ea



A direct replacement for most grease fittings on various parts of all pinspotters. Self-locking and aligning drivable zerk for 3/16" dia. holes.

TOGGLE TIP ASSEMBLY

SOLENOID - 5/32" HOLE

82/30 & 82/70

000 026 027 (110 Volt)

000 027 873 (220 Volt)

030 007 152 (Original Round Rubber) Ea



Open pinwheel 82/30's use this to cushion finger operation. Keep these parts in good order to ensure proper operation and prevent wear on related parts.

Seven required per pinspotter to hold pins in the

pin elevator. If pins are sticking in the wheel and

going past the distributor, clean the wheel surface

BRACKET - PIN HOLDER

82/30, 82/70

000 025 330 (Even)

000 025 331 (Odd)

and check these for wear.

Ea

030 007 879

Ea



FLANGE BUSHING - TOGGLE HOUSING

On an open pinwheel 82/30, two of these are pressed into each toggle housing 030 006 631. Another QubicaAMF exclusive part.

RUBBER MOUNT - PIN ELEVATOR 82/70, 82/90, 82/90XL, 90XLi



Two of these support the pin rail "kidney", and one

 Hold the edge of the rubber with pliers while tightening nut to prevent twisting and extend

PIVOT PIN - TOGGLE FINGER

030 008 308

Ea



The toggle finger pivots about this pin on open pinwheel 82/30's. Servicing this area also requires X-Washer 963 200 002BG.



is used on the pin seating rod.

- Recently improved to improve strength and
- service life.

WICK PIN 82/70

000 029 203

Ea



The "cigarette butt" that lubricates the ring tube weldment.

- · Screw through Spring 000 029 202 to adjust
- For best performance, split the top end to form a "Y" and fit it around the ring tube.

BEARING SUPPORT BRACKETS - FRONT ROLLER 82/30,82/70,82/90,82/90XL,90XLi

000 022 249 (7-side Even) 000 029 672 (10-side Odd) 000 027 645 (7-side Odd) 000 027 646 (10-side Even)

Pivots to keep carpet belt tight and tracking properly. These are sometimes referred to as "hatchets," "Pork Chops," "flanges," or "hinges." Comes complete with rubber "half moon" 000 022 924BG, Bushing 900 112 203BG, and grease zerk 710 501 009.





PIN ELEVATOR PIN ELEVATOR

RING TUBE WELDMENT

The pin elevator wheel is supported by the Ring Tube Weldment. • Trust your O.E.M. to provide the strength, precision, and quality required. • Lubricate with Way 0II 715 021 006. • Secure with 801 149 897 Bolts and 844 049 002BG Nuts.

RING TUBE GUIDE ROLLER

000 021 211



Four of these support and guide the Ring Tube Weldment.

- Worn rollers can result in pin pileups and expensive repairs.
- Quickly check by rocking elevator wheel forward & back 1/2" slop or more indicates trouble.
- For the 82/30 ring tube roller, order 030 006 663.

PIN ELEVATOR DRIVE BELT 82/70

070 002 005



The correct pin elevator drive belt for all 82/70 pinspotters.

- If using a smaller drive pulley, try the Adjustable Belt 000 025 731, Fastener 702 600 002, and Nails 716 003 000.
- 82/90 and later machines use belt 090 002 065 instead.

PIN ELEVATOR ROLLER 82/90, 82/90XL, 90XLi



Three of these support and guide the pin elevator wheel on late model pinspotters.

It is easy to install these without all the required parts or with the parts assembled in the wrong order. Use your service manual as a guide to ensure proper assembly.

PIN ELEVATOR GUARD ASSEMBLY 82/70

000 022 219

Ła

The "Half Moon" guard fits into the red pin elevator guard on the back of 82/70's and prevents pins from bouncing out of the elevator opening.

Replacement bracket pins are available separately.

Order 000 022 222.

PIN WHEEL STRIP REPLACEMENT KIT 82/90, 82/90XL, 90XLi

090 004 043

Ea

Late model machines use this plastic strip on the inner lip of the pin elevator wheel.

- Contains Pin Wheel Strip 090 005 108 and Rivets 938 523 050
- Install so there is a 1/16" gap between the ends of the strip.
- Be sure Static Brush 090 005 144 is in place to prevent scoring system damage.



AMF 82-70 / 90 MONTHLY LUBRIFICATION

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Grease fittings for respot and spot cam follower bearings																																															
Respot / spot cams, shuttle cam surfaces																																															
Oilite bearings and roller arm in the table drive latch mechanism																																															-
Oilite bearings in respot and spot levers, tension spring plates																																															
Oilite bearings in spot solenoid linkage																																														T	-
Distributor pinion and stop blade																																															
Check ring tube oiler, refill as needed with AMF way oil																																															
Sweep pantograph link bushings																																											1				

AMF 82-70 / 90 ANNUAL QUARTERLY LUBRICATION

CENTER:																			_ N	10	NT	Ή:	_											YE	Αl	₹:_							-
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Table and sweep cam lever rollers, and cam lever pivots																																											
Table torque tube pillow blocks, connecting tie rod ends, bushings, table spring roller bearings																																											
Respot cells and distribution link pivot points, yoke leg bushings and sperical bearings																																											
Spot, respot arm grease fittings																																											
Sweep torque tube pillow blocks, telescoping links, connecting rod ends																																											-
Respot shifter mechanism, finger link																																											
Distributor assembly, reference service manual																																											
Ball elevator, rudder drive, start switch pivots, pin ejector, track rail assembly																																									I		
Belt tensioner assembly																																											

SPRING - START SWITCH 82/30, 82/70

000 021 431



In machines that don't use electronic triggering, this spring holds the lever against the start switch at the top of the cushion shock. Our new improved design prevents end hooks from breaking. Early 82/30's use longer spring 000 021 334.

EAR - CUSHION HANGER 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 534 Ea



bolts to the cushion
hanger weldment and attaches it to
the bottom ring of the shock absorber.
Keep these bolts tight and make sure the hole for
Pin 000 022 821 is round and keeps a snug fit.

CUSHION SHOCK ASSEMBLY 82/30, 82/70, 82/90, 82/90XL, 90XLi



HANGER WELDMENT RH & LH 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 002 050 (Odd) 070 002 252 (Even)



This weldment mounts between the cushion blocks and supports the Cushion Assembly.

- \bullet The strongest, most precicely-built cushion weldments on the market.
- \bullet For 82/30's, order 030 002 792 RH (odd) and 030 002 793 LH (even).
- For 8800's, order 070 002 050 RH (odd) and 070 002 252 LH (even).

CUSHION CUSHION

CUSHION PLANK RH & LH 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 024 795 (even) 000 024 796 (odd)

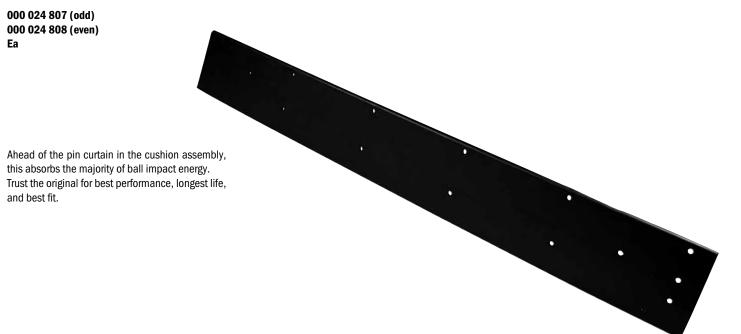
part more dependable.



CUSHION RUBBER 82/30, 82/70, 82/90, 82/90XL, 90XLi

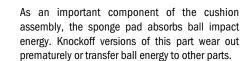
000 024 807 (odd) 000 024 808 (even)

and best fit.



SPONGE RUBBER PAD - CUSHION ASSY 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 022 770





PIN CURTAIN - REVERSIBLE 82/30, 82/70, 82/90, 82/90XL, 90XLi

000 026 450



CUSHION FACING 82/30, 82/70, 82/90, 82/90XL, 90XLi

090 005 230



As the front layer of a standard cushion assembly, this durable material protects balls and pins from scuffs and scrapes.

A direct replacement for 070 006 761 and all other cushion facings.

CUSHION

AMF 82-70 / 90 SEMI ANNUAL LUBRIFICATION

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Table support leg sperical bearings																																											
Table drive cam ball																																											
Apply a light film of grease to the inside of the clevis																																											
Bin switch lever pivots																																											
Off spot overtravel lever																																											
Shuttle support rod ends																																											
Front roller links, bearings and front roller supports																																											

AMF 82-70 / 90 ANNUAL LUBRICATION

CENTER:																		_ M	10	۱T۲	l: _											_YE	EAF	₹:_						
Lane #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	2 23	3 24	1 25	5 26	3 27	28	29	30	31	32	33	34	35	36	37	38	39	40
Sweep motor / gearbox service, grease motor bearings, drain and refill gearbox oil, pull gearbox clean splines apply anti seize compound to the shaft splines, crank gearbox 10 times prior to installing																																								
Table motor / gearbox service, grease motor bearings, drain and refill gearbox oil, pull gearbox clean compound to the shaft splines, crank gearbox 10 times prior to installing																																								
Brackend motor service, grease motor bearing, drain and refill gearbox oil																																								
Table drive assembly																																								
Shuttle operating rod																																								
Ring tube oiler, remove spring and wick, clean out reservoir, install new wick and AMF way oil																																								

VELCRO CUSHION COVER 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 011 840 (Cover) 070 011 841 (Odd Backing) 070 011 842 (Even Backing) Ea

An add-on item to cover the surface that takes the impact every time a ball is thrown.

- Easy way to protect rivet heads and cushion facing from wear.
- Can be added to any cushion in minutes, no disassembly necessary.
- Covers and backs are reusable.



CUSHION RIVETS - RUBBER & URETHANE "PLUS" 82/30, 82/70, 82/90, 82/90ZL, 90XLi

000 028 519 (Black Rubber) 000 028 529 (Blue Urethane)

16 of these hold the cushion assembly together. Some mechanics install heavy-duty blue rivets in the high-wear positions and standard black in the others.

CURTAIN PROTECTION PAD 82/30, 82/70, 82/90, 82/90XL, 90XLi

070 001 432 (Pad) 070 001 422 (U-Bolt) 070 001 421 (Strap) 844 057 002BG (Nuts) Ea

Aptly named, this pad keeps flying balls and pins from hitting the cushion hanger weldment and tearing the pin curtain on the ball exit side.

The bottom edge of this pad seats tightly on top of the cushion plank between the curtain and the metal hanger arm.



<u>CUSHION</u> FRONT BALL LIFTS

BOX - CUSHION SUPPORT 82/30,82/70,82/90,82/90XL,90XLI 000 022 788 Ea This box is bolted to the metal kickbacks and contains the blocks that hold the cushion. Only remove the commonside box when absolutely necessary to avoid the possibility of breaking off hard-to-reach weldnuts.

BLOCK - CUSHION SUPPORT 82/30, 82/70, 82/90, 82/90XL, 90XLi





CURTAIN LINK 82/70, 82/90, 82/90XL, 90XLi

070 005 610



Often referred to as the "Figure 8," this part holds up the curtain rod on the common side of the machine (opposite from ball exit).

- A 945 091 242 washer on both sides of this part is critical to proper performance and service life.
- At the other end of the curtain rod, use bushing 070 011 286.

BUSHING - CURTAIN ROD 82/70, 82/90, 82/90XL, 90XLi

070 011 286 Ea



On the ball exit side of the curtain rod, this bushing prevents damage to the kickplate and curtain rod.

- Often overlooked, this part prevents a lot of machine stops and premature wear.
- A direct replacement for Grommet 070 002 171.
- New XLi pinspotter use bushing part number 088 500 190 with a flat-head screw.

UNDERLANE RETURN BALL STOP KIT All AMF underlane ball track systems

611 353 105

Ball stop flips up to allow balls to return to bowlers, but stops any balls that travel backwards.
Urethane Stop 135 001 002 and Tube 135 001 004 are the most common replacement items in this kit.



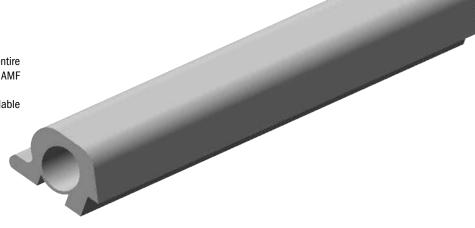
PLASTIC RUNNER - UNDERGROUND TRACK

Older AMF underlane systems

167 003 122 Ea

This 67' nylon track protects balls on the entire length of most older sheet metal-type AMF underlane tracks. 2 are required per track.

Don't forget the Clips 167 002 014, available individually.

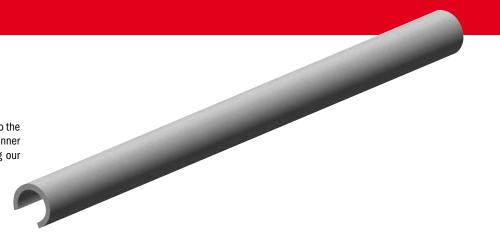


PLASTIC RUNNER - RAIL TRACK

049 006 360

Ea

This 150' C-shaped nylon extrusion snaps onto the rails on current "railroad" underlane tracks. Runner can be cut to length for any patch, including our rail-type downsweeps.



FRONT BALL LIFTS FRONT BALL LIFTS

BALL LIFT BELTS FOR OLDER AMF BALL RETURNS Sure-Pik & Spectrum

190 001 305 (Sure-Pik) 234 001 147 (Spectrum)

These belts carry the balls from the underlane track to the ball return tray on older front ball returns. Time-tested replacement belts from Gates Rubber.



MOTOR 110V/60HZ - SURE-PIK & SPECTRUM

000 022 068

Ea



Replaces the original GE drive motors on older AMF front ball returns. When replacing a Spectrum motor, also order a 234 001 243 adaptor bracket.

POWERLIFT TIRES

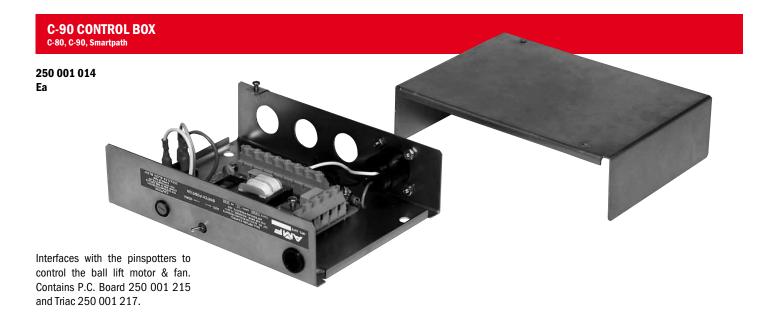
C-80, C-90, Smartpath, Profile, Brunswick Powerlift

B53520060000 ("Go-Kart" Tire) 250001163 (Blue V Wheel) **B90520060600 (Blue Urethane Foam)** Ea

Powered wheels that lift bowling balls from the underlane to the storage tray in common "S" type front-end lifts.

- With three choices, QubicaAMF has the right wheel to suit any location.
- Our taller "Options" lift uses 250 001 236 wheels instead.





C-TRACKS UPPER & LOWER C-80, C-90, Smartpath, Profile

250 001 012 (Upper) 250 001 013 (Lower)Ea

The ball rides these rails as it travels from the underlane track to the ball rack on the approach. We've made sure our ball lift tracks are the correct shape, size, and material for premium performance.



BALL LIFT DRIVE BELT C-80, C-90, Smartpath, Options, Profile

250 001 037 Ea

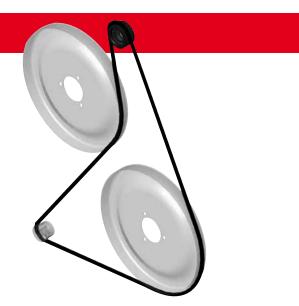
This AA-90 type belt drives all AMF "S" path ball lifts made before 2007. Make sure all pulleys, including the drive pulley on the motor shaft, are in perfect alignment for quiet operation and long life.

Parts to convert AA90 belt to flat belt:

250 001 130 Motor Pulley 250 001 131 Flat Belt

250 001 133 Pulley Wheel (2 required)

250 001 134 Idler Pulley





FRONT BALL LIFTS LANES & BUMPERS

HAND DRYER FAN - BOMAX TYPE Smartpath ball rack

612 820 016 (Retrofit Kit) 250 001 122 (Fan Only)



A universal replacement for the "muffin fan" type hand dryer in Smartpath front ball return ball racks.

Fan cage wire has been improved to resist breaking.

HAND DRYER FAN - SQUIRREL CAGE TYPE

252 001 066 (Fan Assembly) 252 001 068 (Cage Only)

Plug-in replacement for fans in currentgeneration ball racks. The hub on the "squirrel cage" is now thicker and stronger than ever.

SWITCH KIT - BALL RETURN Options and Profile ball racks

612 520 086



A direct replacement for Mylar Switch 252 001 034, this is everything you need to convert the 10th Frame Switches to a mechanical type.

- Eliminate switch failure with simple, reliable
- · Kit includes wiring and instructions.
- Includes differently-colored mechanic call



BALL RETURN HOOD REPAIR KIT All Fiberglass Ball Return Hood

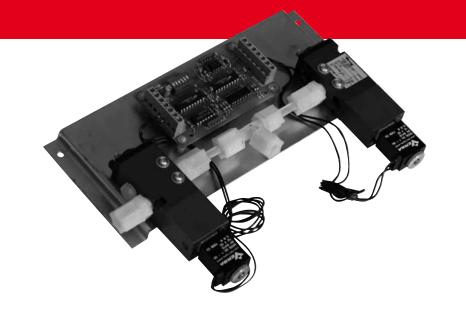
250 003 100



- Use this kit to repair most brands and vintages of ball return hoods and settee area equipment.
- Includes all the materials you need to safely and easily fix cracks, cuts, and breaks in molded housings, covers, and furniture.
- For a fraction of the price of new, you can return your existing equipment to like-new condition.
- Comes with an adjustable texture spray to match most original surfaces.
- AMF-original color spraypaint cans for C-80, C-90, Options and Profile are sold separately, order Silver Mink 250 003 101, or Cool Gray 250 003 102.

BUMPER VALVE CONTROL ASSEMBLY Durabowl Automatic Bumpers

049 007 175QA



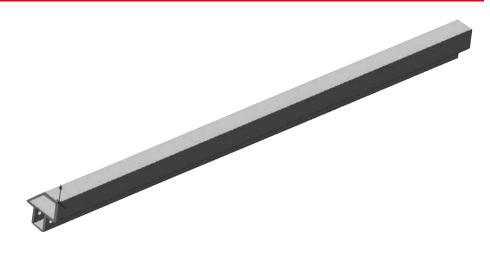
Mounted on the curtain wall, this controls the bumpers on a pair of lanes. For use with scoring system control or front desk switch box. Contains P.C. Board 049 007 125 and Valves 049 007 123.

8' 3" RAIL RH & LH

049 007 091-X (10-side) 049 007 092-X (7-side)

The first section of bumper rail on automatic and manual Durabowl systems.

When ordering, indicate your color selection by replacing the 'X' in the part numbers shown with one of the following color codes: C = Clear, B = Blue, G = Gray, N = Brown



ACTIVATOR ARM Durabowl Automatic Bumpers

049 007 262 049 007 260 Upright Bracket 049 007 133 Activator Arm Assembly Ea

Pivots between the air cylinder and the upright bracket to raise the bumper.

If these arms are breaking, check entire length of bumper rail for damage or hardware catching the lane or gutter edges.



LANES & BUMPERS LANES & BUMPERS

10' BUMPER RAIL PREDRILLED LH/RH Durabowl Bumpers

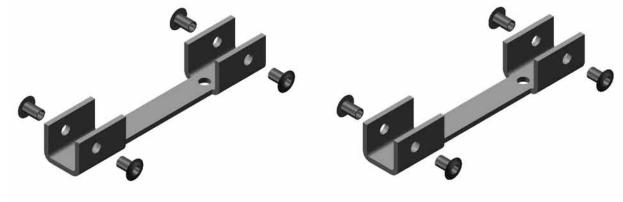
049 007 075-X

The common section of gutter rail for both sides of lane. Select your color by adding a letter (X) to the end of the part number: C = Clear, B = Blue, G = Gray, N = Brown

H-BRACKET UPGRADE KIT Durabowl Bumpers

049 007 093

Ea



This set of two brackets add strength and durability to your manually operated Durabowl bumper. Installs easily above the front two uprights on the bumper rail.'

GUTTER COUPLING KIT

Durabowl Gutters

610 494 640-x 1.5" Kit for gutters w/o bumpers 610 494 639-x 1.5" Kit for gutter with bumpers 610 494 329-x 1" Kit for gutters w/o bumpers 614 286 072-x 1" Kit for gutters with bumpers Ea



All kits include parts for one complete run of gutter.

All couplings use screw 820 726 122BG-X.

Replace 'x' in above part numbers for color choice:

G = Grey, R = Red, B = Blue, N = Brown

1/2" x 1/8" HPL Plugs Bag of 100

049 045 031



1/8" thick plugs used to cover screw heads and ensure a consistent lane surface. These plugs are for glow lane surface. For HPL Pindeck plugs, order 049 006 772.

REPLACEMENT KICKBACK PLATES

All wooden kickbacks under AMF Pinspotters.

049 001 721 Fibre Kickback Plate
049 001 723 Durabowl AMF Kickback Plate
049 001 720 Durabowl Brunswick Kickback
Plate

Ea



This plate supports good pin action while protecting valuable kickbacks from damage.

- Dimension: AMF 15" x 33"; Brunswick 15" x 50"
- \bullet Each plate requires about 1/4 lb. of nails to install. Order part 716 014 011BG for a 1 pound bag.

RADARAY+ FOUL UNIT KIT

Most centers that do not have overlane ball return systems.

612 460 036 612 460 036-R (Repair/Exchange)

Ea







- This kit includes a new foul unit, cover, reflector unit, instructions, and all necessary hardware to replace older AMF foul units.
- Order an extra reflector unit 612 460 007 for each bank of lanes (columns, walkways, lane splits, etc.). Components are available separately:
- 612 460 039 Foul unit chassis assembly
- 246 001 005 Reflector Disc
- 246 001 017 Lens
- 246 001 015 Cover with LED openings
- 246 001 020 LED Assembly.





LANES & BUMPERS

LANE MACHINES

FACILITIES MONTHLY PREVENTIVE MAINTENANCE

CENTER: ______ MONTH: ______ YEAR: _____

Maintenance item	Date	Ву	Maintenance item	Date	Ву	Maintenance item	Date	Ву
HVAC - Replace filters in all units, write the date on the filter when installed			EXTERIOR LIGHTING - Parking Lot, Building, signs, all working, time clocks adjusted for current timing			ALL DOORS - inspect / correct panic hardware, door closers, hinges, door pulls		
HVAC - Check fan motor belts for wear, grease moto bearings			PARKING LOT - Inspect for potholes, striping and fire zone curb paint, arrange for repair			INTERIOR LIGHTING - all interior and EMERGENCY EXIT lights are operational		
HVAC - Check / clean condensation drains, clean return air grills			KITCHEN VENT HOOD SYSTEM - check vent hood fire system, arrange for service, exhaust vents cleaned quarterly			FURNITURE - inspect / correct, bent chair legs, loose tables, etc.		
ROOF MAINTENANCE - clean / clear drains, gutters, down spouts are securely fastned, notify RFM of any roof leaks			REFRIGERATION EQUIPMENT - clean the condenser coils, coolers, coke machine, freezers, etc			CARPETING - Inspect correct carpet for trip hazards, llose moldings, step off into bowlers area, etc.		
DUMPSTER AREA - clean, check / correct dumpster fence, or arrange for repairs			SPRINKLER SYSTEM - certification must be current, clean dust off of the sprinkler heads			RESTROOMS - Inspect / correct stall doors, toilet paper, soap and hand towel dispensers		
EXTERIOR BUILDING WALLS - check for graffiti, arrange for repairs			FIRE EXTINGUISHERS - inspect all service tag must be current			RESTROOMS - Inspect all toilet flush valves, toilet seas fastenings, arrange for repairs		
CANOPY OR AWNING - inspect / correct problems, or arrange for repairs			WARNING DECALS - ensure that all applicable decals are in place and readable, replace as needed			ADA - check alla ADA compliance issues, building access, signs, etc.		

SQUEEGEE BLADES All Century stripping and combination machines



Two of these are used to collect cleaner residue, emulsified lane oil, and dirt from the lane, leaving a squeaky-clean surface ready for conditioner to be applied. Blades can often be swapped front-to-back to extend their service life.

• Use the orange SV21 blades for Summit, Magnum, Silver Bullet and Gemini. Use blue SV72 blades for Express, VLS+, and AVLS.

110V SOLENOIDS - LANE MACHINES All Century lane machines

294 002 031 (0il) 294 002 032 (RH) 294 002 033 (LH) Ea



These solenoids engage various assemblies in the machine to clean, apply oil, and transfer oil as specified in the machine's programming.

These solenoids have been redesigned to increase service life over previous versions.

- Direct replacements for 02-002, 02-074, and SA-3039
- Identify RH and LH solenoids by which side the terminals are on when the solenoid is horizontal, facing the plunger.

BUFFER BRUSH

All Century lane conditioning & combination machines that do not use mohair buffer tub

SA1182

Ea



Specially designed green fibres collect oil from the transfer roller inside the machine and deposit it smoothly on the lane surface.

- Bristles wear down over time. Depending on lineage and surface, the brush should be replaced about once a year for proper oil application.
- The metal drive coupling is available separately, order A0420.

TANK HEATER KIT Summit, Magnum, Silver Bullet, Gemini

294 300 001 (Summit) 294 300 002 (Magnum and older)







An add-on device to increase oil flow and improve consistency from lane to lane.

This kit also allows wick machines to use super-high viscosity lane conditioners such as Utopia 294 006 091

DRIVE WHEEL

All self-propelled Century lane machines

294 115 404

Ea



Two of these wheels protrude from the bottom of the lane machine to move it up and down the lane with mimimal effect on the lane conditioning pattern. Replacing old A0994 and A0995 wheels, these are bidirectional and handle heavy oil conditions better than older versions.

FOAM WICKS

All Century conditioning and combination machines

294 115 654 (Replacement foam SLO) 294 115 484 (Replacement foam MO)

294 115 486 (Replacement foam MHO) 294 115 488 (Replacement foam HO)

294 115 490 (Replacement foam SHO) Ea

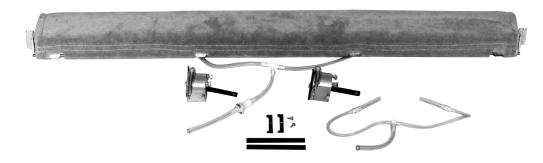


Advanced foam technology wicks oil out of the tanks and transfers it to the roller more consistently than ever. Comes in 47" length and can be cut to any tank configuration. If you have a multiple-tank machine, make wick cutting easier with the Wick Template 294 080 200.

CLEANER PAD UPGRADE KIT

Summit, Magnum, Silver Bullet

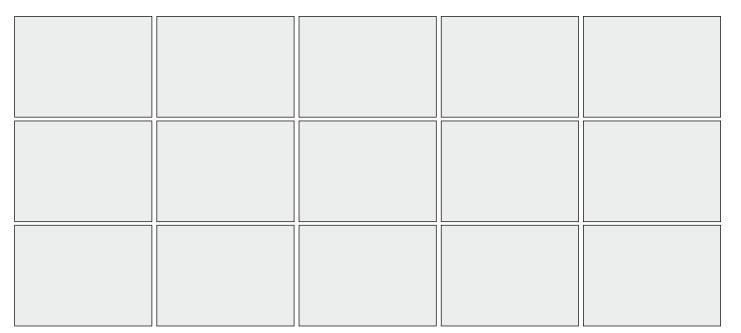
294 005 100 Ea



Easy-install kit that improves the performance of the cleaner system.

- Sends cleaner directly to the sponge and lane surface, eliminating the drip system.
- Allows more adjustment of cleaner pad height.
- For optimal performance, use Formula ACC Cleaner 294 006 081.
- Not for use in Summit "S".

NOTES



15" TOUCH SCREEN MONITOR All PC-based back office and POS terminals 288 601 051 A direct replacement for any modern desktop computer monitor. Free up valuable counter space while improving the



BALL TRIGGER KIT W/SPEED CABLE BOSS with 82/30, 82/70, or Brunswick A

612 460 038 612 460 038-R (Repair/Exchange)



Informs scoring system of ball delivery to cycle the machine and mark score.

For best results, isolate ball detector units from vibration. Mount on a solid surface, directly to the subfloor if possible.

PINSENSING KIT



Use for interfacing AccuScore+ scoring with 90XL pinspotter chassis. One kit required per pair.

LCD MONITOR REPLACEMENT PROGRAM

appearance of your customer

service areas.

Let your QubicaAMF representative customize a package for you!

Replace aging CRT technology with the latest flat-screen LCD monitors without the cost of a complete scoring system!

- LCD technology specifically engineered for the bowling
- Adapts to any scoring system from the oldest to the newest.
- No more difficult, dangerous monitor and monitor board service or replacement.
- Every monitor is always bright, sharp, and easy to read. • Optional ability to show different TV channels on each
- Upgradable at any time to QubicaAMF scoring.





SCORING SCORING

CURTAIN WALL CHASSIS - ACCUSCORE AccuScore II, 500, Plus

232 007 500R-R Model 7500 CWC Red, sn 50000-99999 232 007 500B-R Model 7500 CWC Black, sn 00000-49999

232 007 150-R Model 7150 CWC 232 007 350-R Model 7350 CWC

Ea *Repair/Exchange Only

The primary computing unit of the scoring system, mounted on the curtain wall above each pair of lanes.

- 7500R and 7500B Will not work properly unless at Eprom version 4.18 or higher.
- CWC's can be intermixed in front to back order: 7500R 7500B 7150 7350.



SCORING CAMERA AccuScore and Boss systems

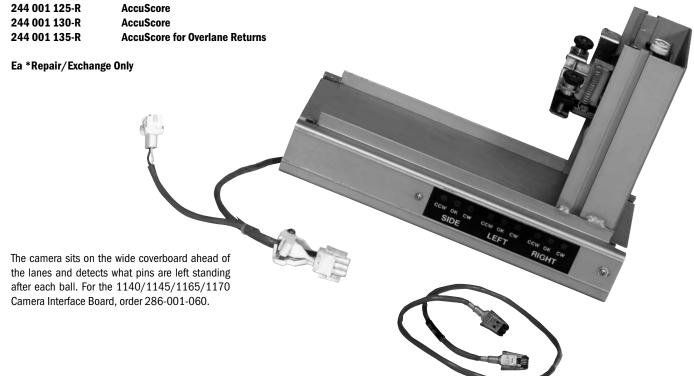
232 009 510-02-R BOSS Digital

244 001 165-R BOSS with Automatic Bumper

244 001 170-R BOSS with Auto Bumpers and Overlane Return

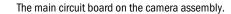
244 001 140-R BOSS Camera

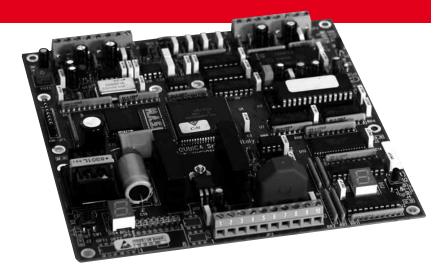
244 001 145-R BOSS Camera for Overlane Returns



CAMERA PC BOARD Qubica Scoring

INTBOATVISION98
INTBOATVISION98 - R (Repair/Exchange)
Fa





Q-VISION CAMERA Qubica Scoring

288 350 001 Q-Vision Camera Assembly 288 300 001 Q-Vision Camera 288 300 002 Q-Vision Camera Board Ea

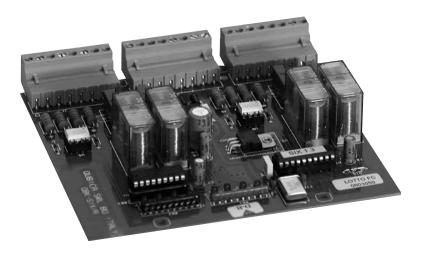
Direct replacement camera for most Qubica scoring systems.



6-BOX CIRCUIT BOARD Outlies Scoring

INTBOASIXB
INTBOASIXB - R (Repair/Exchange)

For M- and T-Vision cameras order for a new camera or 288 300 006 for a replacement OKKIO2 camera.



SCORING INDEX

SENSORS W/SUPPORT Qubica Scoring



A photocell device that detects when a ball has been delivered.

BUMPER INTERFACE Qubica Scoring and automatic bumper systems

BUMBOXBCU



This box enables Qubica scoring systems to raise and lower automatic bumper systems automatically.



BUMPER INTERFACE BOX Qubica Scoring and automatic bumper systems

BUMBOXBCU2



AMF LOGIC INTERFACE BOARD

Qubica scoring systems and "smart" AMF Pinspotters

INTKITXLMPSIX (Six Box)



This board produces command signal for AMF pinspotters, which speeds up bowling and reduces wear on machine parts. Not for use with machines that do not have MP Chassis or MP-emulating function and necessary wiring and hardware.

Page Number	Part Number	Description	Page Number	Part Number	Description
66	000020855	Ring Tube Weldment 70	47	000024621	Filler Front
64	000021204	Spring - Bearing Support	47	000024628	Rubber Pad - Front Filler
66	000021211	Roller - Pin Elevator Ring Tube 70	50	000024641	Bumper - Ball Lift Adjust
62	000021224	Vibration Dampener	49	000024651	Link Assy Lower
69	000021334	Spring - Start Switch - Early 30	5	000024657	Spring - Cam Lever
69	000021431	Spring - Start Switch - Common	52	000024659	Ball Lift Yoke - Lower
9	000021442BG	Rubber Washer - Solenoid 70	52	000024661	Pulley - Ball Lift Belt
17	000021784	Washer - Slotted	50	000024663	Track Cover - Upper
11	000021881	Bearing - Clevis Rod End	49	000024673	Spring - Distributor 30 - Ball Lift
62	000021914	Channel - Bounce Board	47	000024678	Front Filler Assy - Kicker Exit
25	000021992BG	Bin Bumpers	28, 48	000024679	Bearing - Common 5/8 ID
76	000022068	Sure-Pik / Spectrum Motor 110V	49	000024720	Link Assy Upper
48	000022099	Belt - Pit Drive - 70	60	000024760	Link - Front Roller - Plastic
13	000022168	Spring - Sweep Brake	70	000024795	Cushion Plank - LH-Even
67	000022219	Pin Elev. Guard Assy	70	000024796	Cushion Plank - RH-Odd
67	000022222	Pin Brackets - Pin Elev. Guard Assy	70	000024807	Cushion Rubber RH-Odd
64	000022249	Bearing Support Assy - LH-LH	70	000024808	Cushion Rubber LH-Even
74	000022300	Shield - Cushion Block	49	000024811	Clutch Pulley Assy 5" RH-Even Side
35	000022717	Pin - Dist Shaft Balls - 30-70	49	000024812	Clutch Pulley Assy 5" LH-Odd Side
71	000022770	Sponge Rubber Pad - Cushion	36	000024892	Ball Brg Retainer - 30-70
12, 17	000022782	Spring - Counter Balance	12	000025004	End Fitting RH - Adj. Tie Rod
74	000022788	Box - Cushion Support	12	000025005	End Fitting LH - Adj. Tie Rod
74	000022794	Block - Cushion Support - RH-10 Side	5	000025068	C-1 Plug Block - Chassis Side
74	000022795	Block - Cushion Support - LH-7 Side	5	000025144	C-1 Plug Block - Machine Side
74	000022796	Urethane Cushion Block RH-10 Side	65	000025330	Bracket - Pin Holder LH-Even
74	000022797	Urethane Cushion Block LH-7 Side	65	000025331	Bracket - Pin Holder RH-Odd
12	000022811	Pillow Block	62	000025622	Bonding Strap
69	000022821	Pin - Cushion-Shock Absorber	59	000025662BG	Nyloc Screws - Front Roller Assy
69	000022822	Sleeve	67	000025731	Adjustable Pin Elev. Belt
69	000022823	Shock Absorber Only	6	000025863	Back End Relay - Open Type
69	000022824	Cushion Shock Assembly	9, 65	000026027	Solenoid 110V - 5/32" Hole
64	000022924BG	Bearing Support Rubber	28	000026031	Spring - Dist Belt Tension
64	000022926	Retainer Support	21, 29	000026032	Spring - Lateral Drive
13	000023139	Crank Arm - Sweep	5	000026042	Microswitch - Small Button
13	000023170	Sweep Bracket - 10 Side	5	000026043	Microswitch - Big Button
13	000023171	Sweep Bracket - 7 Side	30	000026251BG	Bearing - Trip Arm - Dist
13	000023182	Slide Bar - Sweep	71	000026450	Pin Curtain - Reversable
13	000023279	Urethane Bumper - Sweep Link	35	000026461BG	Balls - Dist Shaft - 30-70
69	000024534	Ear - Cushion Hanger	62	000026464	Bracket Kickback Pit
59	000024576	Front Roller Assy - Front	61	000026753R	Red Carpet Belt
59	000024578	Roller Body Half	36	000026880	Spring - Dist. Indexing
59	000024579	Roller Hinge	63	000027368	Large Plow & Mat Assy LH-Even
60	000024580	Shaft Hinge	63	000027372	Large Plow & Mat Assy RH-Odd
60	000024590	Bearing - F & R Roller	35	000027390	Housing - Dist Drive - 30-70
60	000024592	Hinge Assy - Front Roller	64	000027641	Thrust Bearing
60	000024597	Link - Front Roller - Bronze	64	000027645	Bearing Support Assy - LH-RH
47	000024599	Adjustable Speed Rudder	64	000027646	Bearing Support Assy - RH-LH
50	000024610	Clamp Stud - Ball Lift	37	000027655	Five-Position Russell-Stoll Plug Male

Page Number	Part Number	Description	Page Number	Part Number	Description	Page Number	Part Number	Description	Page Number	Part Number	Description
37	000027660	Five-Position Russell-	5	030006526	82/30 CR-1 & CR-2 Relay Only	10	070001840	Table Drive Asm	15	070003242	Link Assembly - Sweep - Cast
47	000027710	V-Belt - Rudder Drive for Kickers	65	030006631	Toggle Housing	37	070001845	SPRING	5	070003902	Superstar AC Chassis
9, 65	000027873	Solenoid 220V - 5/32" Hole	65	030006662	Cam Follower - Toggle Assy 30	11	070001910	Spot Respot Cam	5	070003902-R	Super Star MP Chassis 60Hz RB
50	000027996	Cushion Rubber - Shock Absorber	66	030006663	Roller - Pin Elevator Ring Tube 30	52	070001995	Yoke Asm w/Bearing Nut	48	070004669	Ball Wiper Cloth
9	000028391	Shoulder Screw - 5/32" Dia	65	030007152	Toggle Tip Assy	67	070002005	Belt Drive Pin Elev	48	070004670	Dust Trap Cloth
5	000028409	C-2A Plug Block - Machine Side	19	030007634	Spotting Cup Liner RH - 10 Side 30	63	070002027	Panel Kickback	6	070005515	Chassis Relay - 24V Coil
5	000028410	C-2A Plug Block - Chassis Side	19	030007635	Spotting Cup Liner LH-7 Side 30	60	070002034	Roller Asm Rear	37	070005542	Sweep Motor Cable Assy 70
5	000028442BG	Guide Pin - C-1 & C-2A Plugs	19	030007849	Long Clip - Spotting Cup Liner 30	69	070002050	Tube Weld RH	74	070005610	Curtain Link
5	000028443BG	Socket	65	030007879	Flange Bushing - Toggle Housing	63	070002169	Plow & Mat Asm Sm LH	6	070005883	Chassis Relay - 10VDC Coil
73	000028519	Rivet - Cushion - Rubber	18	030008089	Bracket Top	74	070002171	Grommet (obsolete - use 070 011 286)	30	070006004	Carriage Tube - Dist
73	000028529	Rivet - Cushion - Urethane	19	030008235	Short Clip - Spotting Cup Liner 30	69	070002252	Tube Weld Cushion LH	30	070006011	Belt Roller - Dist
47	000028540	Adjustable Rudder Drive Link	65	030008308	Pivot Pin - Toggle Finger	22	070002570BG	Insert Yoke Arm Bag/5	30	070006015	Trip Arm Assy LH-7 Side
49	000028772	Clutch Pulley Assy 4 1/2" RH-Even	18	030008309	Bracket Short Track Support	24	070002583	Link Asm Actuating	30	070006016	Trip Arm Assy RH-10 Side
49	000028773	Clutch Pulley Assy 4 1/2" LH-Odd	18	030008310	Distributor Track w/o Ears	19	070002596	Spring Yoke Asm	29	070006030	Spring - Safety Link - Dist
47	000028864	Kicker Drive Belt 30	63	030008397	Sm Plow & Mat Assy - RH-Odd 30	20	070002623	Yoke & Bearing Asm	30	070006034	Linear Spring - Dist
47	000028865	Kicker Drive Belt 70	63	030008398	Sm Plow & Mat Assy - LH-Even 30	22	070002629	YOKE RESPOT ASM	31	070006035	Spring - Distributor Carriage
5	000029013BG	Locking Clip - C-1 & C-2A Plugs	17	030008542	Gripper Pad	22	070002632BG	Scr Adj Respot Cell Bag/10	27	070006036BG	Lacing & Pins for Distributor Belt (Bag 10)
		(obsolete-use 000 029 013BG)	63	030008660	Kickback Panel - Ball Exit Side	23	070002633	Lever Respot Asm	27	070 006037BG	Pin for Lacing (Bag 10)
5	000029014BG	Locking Catch - C-1 & C-2A Plugs	48	030008671	Belt - Pit Drive - 30	22	070002644	Plate Yoke Asm	27	070006045	Post - Dist Mount 70-90-XL-XLi
		(obsolete-use 000 029 014BG)	81	049001721	Kickback Plate - Fibre	22	070002645	Shaft Lever Asm Respot Asm	29	070006067	Rod - Safety Link
64	000029015	Pivot Stud	81	049001723	Kickback Plate - Durabowl	22	070002646	Arm Respot Yoke Asm	29	070006068	Tab - Safety Link Spring
65	000029068	Rubber Mount - Pin Elevator	75	049006360	Plastic Runner - Rail track	22	070002650	Stud	34	070006077	Drive Shaft - Dist
65	000029202	Spring - Wick Pin	81	049006772	HPL Pindeck Plugs	23	070002654BG	Pivot Shaft Bag/10	31	070006087	Long Sleeve - Pivot Trip Assy
65	000029203	Wick Pin	80	049007075-X	10' Bumper Rail Predrilled LH/RH	19	070002664	LEG ASY-FRONT LH	32	070006103	Support Guide LH-7 Side
47	000029600	Rudder Drive Belt	80	049007076	H-Bracket - Durabowl Bumpers	24	070002678	Lever Respot Asm	32	070006104	Support Guide RH-10 Side
47	000029601	Kicker Spring	79	049007091-X	8'3" Rail RH-10 Side (X = Color)	24	070002681BG	Pivot Pins 1/4"	28	070006105	Tube Assy - Belt Pulley - Dist
63	000029640	Kickback Panel - Ball Exit Side	79	049007092-X	8'3" Rail LH-7 Side (X = Color)	20	070002683	Yoke Only	28	070006106	Tracking Bracket - Dist
50	000029659	Hanger Arm Assembly	80	049007093	H-Bracket Upgrade Kit -	22	070002695	Top Plate (obsolete - use 070 002 644)	28	070006109	Link - Roller Assy - Dist
47	000029671	Rudder Drive Link - Shock Type	79	049007123	Solenoid with Connector	19	070002698	Spherical Bearing - Table Legs	30	070006116	Stud Clamp - Carriage
64	000029672	Bearing Support Assy - RH-RH	79	049007125	PC Board Bumper Control	24	070002732BG	Spring Bag/2	30	070006117	Concentric Roller - Grooved - Dist
61	000029899	Bnce Bd F-RH	79	049007133	Activator Arm Assembly	24	070002733	Screw - Cam Link	30	070006118	Eccentric Roller - Grooved - Dist
		(obsolete-use090 005 270)	79	049007175QA	Valve Control Asm	24	070002734	Bracket - Actuating Spring	35	070006125	Worm - Dist. Clutch
61	000029924	Bnce Bd R-RH	79	049007260	Upright Bracket	22	070002752BG	Bumper - Respot Cell Frame	33	070006126	Friction Disc
		(obsolete-use 090 005 272)	79	049007262	Activator Arm	21	070002784	Liner - Spotting Cup	33	070006128	Spring Assy - Dist Drive
61	000029925	Bnce Bd F-LH	81	049045031	1/2 x1/8 HPL Reg Plug Bag/100	21	070002787BG	U-Bolts - Spotting Cup	33	070006130	Clutch Plate
		(obsolete-use090 005 271)	63	070001412	Plow & Mat Asm SM RH	21	070002788	Cap - Spotting Cup	30	070006142BG	Bumper Bag/10
61	000029926	Bnce Bd R-LH	73	070001421	Strap	22	070002792	Frame - Respot Cell	32	070006144	Orientor Pan
		(obsolete-use 090 005 273)	73	070001422	Bolt-U	21	070002808	Spotting Cup Assembly Complete			(obsolete - use 090 003 077)
28	000200000	Carl Klauck Distributor Tool	73	070001432	Pad Cushion Asm	21	070002809	Spotting Cup - Aluminum	34	070006149	Indexing Cam
83	02002	Solenoid (obsolete - use 294 002 033)	62	070001450	Pit Support Bracket BDS	24	070002813	Link Assy Long - #7 Cell	38	070007901	WH BE Motor-GB 50Hz RH-Odd Ln
83	02074	Solenoid (obsolete - use 294 002 032)	62	070001451	Pit Support Bracket OBDS	24	070002814	Link Assy - Respot Cell	38	070007900	WH BE Motor-GB 50Hz LH-Even Ln
13	030001358	X-Washer - Sweep & Table 30	11	070001587	Pin Spring Hanger	14	070003103	Pin Bearing - Sweep Link	38	070006219	WH Combo Motor & GB Assy 50Hz
69	030002792	Hanger Weldment - RH-Odd 30	12	070001664	Clamp Stud Cam	14	070003158	Drive Link - Sweep	26	070006265	Pin Holder - Original
69	030002793	Hanger Weldment - LH-Even 30	12	070001668	Roller Spring FE Asm	13	070003162	Sweep Connecting Rod 70			(obsolete-use 088 001 211)
12	030003938	Strap Only - Pillow Block	10	070001700	Table Shaft	13, 15	070003184	Sweep Link - Cast Aluminum	25	070006268	Strap - Shuttle
8	030004031	Tool Extracting 50Pt Connection	11	070001707	Spring	13, 15	070003195	Shock Mount - Sweep - Cast Links	9	070006276	Spring
60	030005648	Rear Roller Assembly 30	11	070001751	Hanger Spring	14	070003221	Special Screw - Sweep Link	9	070006277	Spring Cap
63	030006495	Kickback Panel - Common Side 30	24	070001804	Pivot Weld Respot	14	070003223	Threaded Link - Sweep	9	070006280	Spring Clip
					******	13, 14	070003238	Sweep Stabilizer Link Assy Alum	9	070006281	Upper Link - Spring 5/32" Hole

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9	070006283	Spring - Solenoid Disengage	35	070009890	Simplified Clutch Assy	15	090001171	Sweep Bracket Solid LH-7 Side	26	090005263	Shuttle Operator Rod Assy
26	070006293	Shuttle Rod Assy	54	070011005	Ball Door Weldment LH-Even	35	090002019	Balls - Dist Shaft - 90-Later	61	090005270	Phenolic Bounce Board Front RH-Odd
		(obsuse 090 005 263)	54	070011006	Ball Door Weldment RH-Odd	53	090002024	Cradle Liner - PBL Lift Arm	61	090005271	Phenolic Bounce Board Front LH-Evn
26	070006299	Tube - Shuttle Operator	57	070011018	Ball Guide	36	090002034	Ball Brg Retainer - 90-Later	61	090005272	Phenolic Bounce Plate Rear RH-Odd
26	070006304	Rod - Shuttle Operator	53	070011032	Spring - Ratchet Drive	67	090002065	Pin Elev Belt 90-XL-XLi-8800	61	090005273	Phenolic Bounce Plate Rear LH-Even
25	070006353	Pin Guide	53	070011039	Ratchet Assembly - PBL	7	090002775	Fuse Spare PCB for Pinsp.Chass	61	090005275	Bounce Plate Assembly RH-Odd
25	070006354BG	Bin Shock Mounts	55	070011052	Ball Lift Assembly - PBL	32	090003077	Orientor Pan	61	090005276	Bounce Plate Assembly LH-Even
25	070006364	Butt Guide	53	070011064	V-Belt - Ratchet Drive	27	090003112	Mount - Dist - 90XL-XLi	24	090005503	Link Connector
25	070006366	Head Guide	53	070011100	Cam Sensor Weldment	51	090003401	Clutch Race - Ball Lift	23	090005504	Respot Pivot
25	070006372	Stringer - Center RH-10 Side	53	070011110	Cam Sensor Assembly	43	090003514	BE Motor-GB Assy 90-XL	19	090005545	Table Leg Assy - Front - Steel Table
25	070006373	Stringer - Center LH-7 Side	55	070011131	Pulley - PBL	43	090003515	BE Motor-GB Assy 90-XL 60Hz LH-Evn	19	090005548	Table Leg Assy - Back - Steel Table
25	070006380	Pin Ear Guide LH-7 Side	54	070011146	Paddle - PBL	43	090003512	50HZ BE RH MOTOR	10	090005550	Table Drive Assy - Steel Table
25	070006381	Pin Ear Guide RH-10 Side	55	070011148	V-Belt - PBL	43	090003513	50HZ LH BE MOTOR	10	090005565	Drive Shaft - Table - 90-Later
25	070006390	Spacer - 9 Pin Bin	24, 31	070011170	Trip Cable - Distributor	44	090003532	Combo Motor - Lg Plug 90-XL	11	090005576	Spring Hanger
24	070006493	Spotting Latch Link	53	070011217	Ratchet Arm Weldment	45	090003550	Drag Brake w/Heat Shield	11	090005589	Spot/Respot Cam 90XL
62	070006639	C-Washer	50	070011280	Ball Lift Belt - Wide/Deep Groove	45	090003554	Spring FE Drag Brake	23	090005617	Glide Insert - RS Finger - Steel Table
31	070006667	Trip Casting - Roll Pin Type	74	070011286	Bushing - Curtain Rod	37, 44	090003630	Klixon Thermal Protector 90 Combo	24	090005631	Pivot Weldment - Steel Table
23	070006674	RS Cell #7 - Bolt Connection	50	070011440	Track Cover - Lower	44	090003634	Capacitor - 90 Combo stator-mount	7	090005700-R	82/90 XL Chassis 115v RB
33	070006676	Bushing - Dist Pinion	54	070011641	Urethane Ball Door LH-Even	37	090003665	Klixon Thermal Protector 90 BE 50hz	9	090005723	Solenoid Universal
33	070006679	Sleeve - Dist Pinion	54	070011642	Urethane Ball Door RH-Odd	9	090003739	Adapter Cable - Universal Solenoid	85	090005734	9-Pin Cable
31	070006685	Sleeve - Pivot Trip Assy	5	070011755	82/70 S & T Relay Only	7	090003748	CHASSIS BREAKING CAPACITORS	85	090005743	15-Pin Cable
31	070006691	Stop Blades	51	070011795	Upper Shaft - D-Bore	42	090003766	BE Motor 60Hz 90-XL-XLi	61	090006124	Pumpkin Tan Carpet Belt - 2 Yr Wty.
9	070006726	Solenoid 110V - 1/4" Hole	51	070011796	Lower Shaft - D-Bore	15	090003901	Link Assembly - Sweep - Nylon	15	090006129	Sweep Bracket Late LH-7 Side
51	070006748	Spacer - Ball Lift Shaft	51	070011797	D-Bore Bearing	15	090003902	Support Link Assy - Nylon	15	090006130	Sweep Bracket Late RH-10 Side
51	070006749	Clutch Race	73	070011840	Velcro Cushion Cover	14	090003903	Sweep Stabilizer Link Assy Nylon	13	090006136	Shock Mount - Sweep - Steel
		(obsolete-use 090 003 401)	73	070011841	Backing - Velcro Cush. Cover Odd-RH			(obsolete-use 070 003 238)	14	090006139	Sweep Stabilizer Link 90
27	070006757	Rough Top Distributor Belt - Complete	73	070011842	Backing - Velcro Cush. Cover Even-LH	67	090004043	Pin Wheel Strip Replacement Kit	14	090006140	Drive Link w/Pin Bearing Assy
71	070006761	Cush. Facing	28	070011905	Gripper Distributor Belt - 70-90-XL-XLi	44	090004062	Combo Motor - Splined Shaft 60Hz	16	090006166	Decal - Sweep - Blk Bkgrd Glow
		(obsolete-use 090 005 230)	27	070011909	Poly-V Distributor Belt 70-90	22	090004113	Arm Assy - RS Cell 90	31	090006663	Trip Rod
23	070007197BG	Glide Insert - RS Finger - Orig Roll Pin	32	070011910	Orientor Pan Wipe	22	090004118	Yoke Assy - RS Cell - Steel Table	31	090006665	Trip Casting
23	070007199	Respot Cell #7 - Long Carb Link		088000173	Complete FE 60Hz	23	090004123	Respot Finger	31	090006668	Trip Rod & Casting Assy
23	070007200	Respot Cell Assembly - Complete				62	090004131	Pit Support Bracket 90XL-90XLi-8800	7	090006810	Overlay Keyboard 90 XL 8800
23	070007261	Respot Finger	16	088001089	Decal - Sweep - QubicaAMF	44	090004499	Combo Gearbox-Lightwt 50Hz XL-XLi	42	090007310	BE Motor 50Hz 90-XL-XLi
		(obsolete-use 090 004 123)	26	088001211	Super Pin Holder			(obsolete-use 088 004 509)	15	090007319	Link Assembly - Sweep - Forged
13	070007283	Bumper - Telescoping Link Assy	57	088001230	Thimble	44	090004500	Combo Gearbox-Lightwt 60Hz XL-XLi			(obsolete-use 070 003 242)
49	070007291	Clutch Bearing - Ball Lifts	57	088001231	Rail Cover - Lower Clear			(obsolete-use 088 004 504)	67	090007327	Pin Elevator Roller
31	070007305	Trip Rod (obsolete-use 070 011 170)	51, 52	088001233	Gripper Ball Lift Belt	42	090004501-R	Gearbox BE RH 60Hz RB	7	090008939	XL Chassis Circuit Breaker
34	070007586	Universal Joint - Steel	26	088001631	Shuttle Rod Asm Lg Spr	42	090004502-R	Gearbox BE LH 60Hz RB	7	090008965CR-R	XL Pinspotter Controller RB
24	070007616BG	Pivot Pins 5/16"	42	088004501	Gearbox BE RH 60 Hz Odd	45	090004516	Drag Brake - Drop In - XL	75	135001002	Urethane Stop - Underlane
23	070007617BG	Pivot Stud 5/16"	42	088004502-01	HC Gearbox BE LH 60Hz Even	48	090004520	Belt - Pit Drive - 90	75	135001004	Tube - Underlane Ball Stop
23	070007618	Lever Respot Assy 5/16"	42	088004504	Gearbox FE 60Hz	43	090004547	Combo Motor - Sm Plug 3-Bolt 60Hz	75	167002014	Clips - Underlane Track Runner
24	070007623	Respot Lever 1/4"	42	088004506-01	HC Gearbox BE RH 50Hz Odd	43	090004548	Combo Motor - Sm Plug 3-Bolt 50Hz	75	167003122	Plastic Runner - Underlane Track
37	070007751	Table Motor Cable Assy 70	42	088004507-01	HC Gearbox BE LH 50Hz Even	44	090004550	START SWITCH 50 HZ	76	190001305	Sure-Pik Ball Lift Belt
11	070007761	Spring Bracket Repair Kit	43	088004509	Gearbox FE 50 HZ	42	090004558	Switch - 50Hz - BE Motor 90-XL-XLi	86	232007150-R	CWC A/S+ 115v 50/60Hz RB
34	070008004	Universal Joint - Plastic	74	088500190	Bushing with flat-head screw	42, 44	090004560	Switch - 60Hz - BE Motor 90-XL-XLi	86	232007350-R	CWC A/S+ 115v / 230v RB
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6	070009860-R	MP Logic Board - Repair/Exchange	35	090001130	Housing - Dist Drive - 90 Wide	67	090005144	Static Brush	86	232007500R-R	CWC Model 7500 Red A/S PI RB
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76	234001243	Adaptor Bracket for 22068 Motor	83	294115486	Replacement Foam Strip MHO	6	612362068	Strike/Foul Mask Board	41	785501291	Wheel Shaft - Westinghouse Combo
6	244001058	Ball Detector Cycle Trigger	83	294115488	Replacement Foam Strip HO	85	612440061	Pinsensing Kit - AccuScore-90XL	40	785501372	WH Combo Switch - Aux. Board
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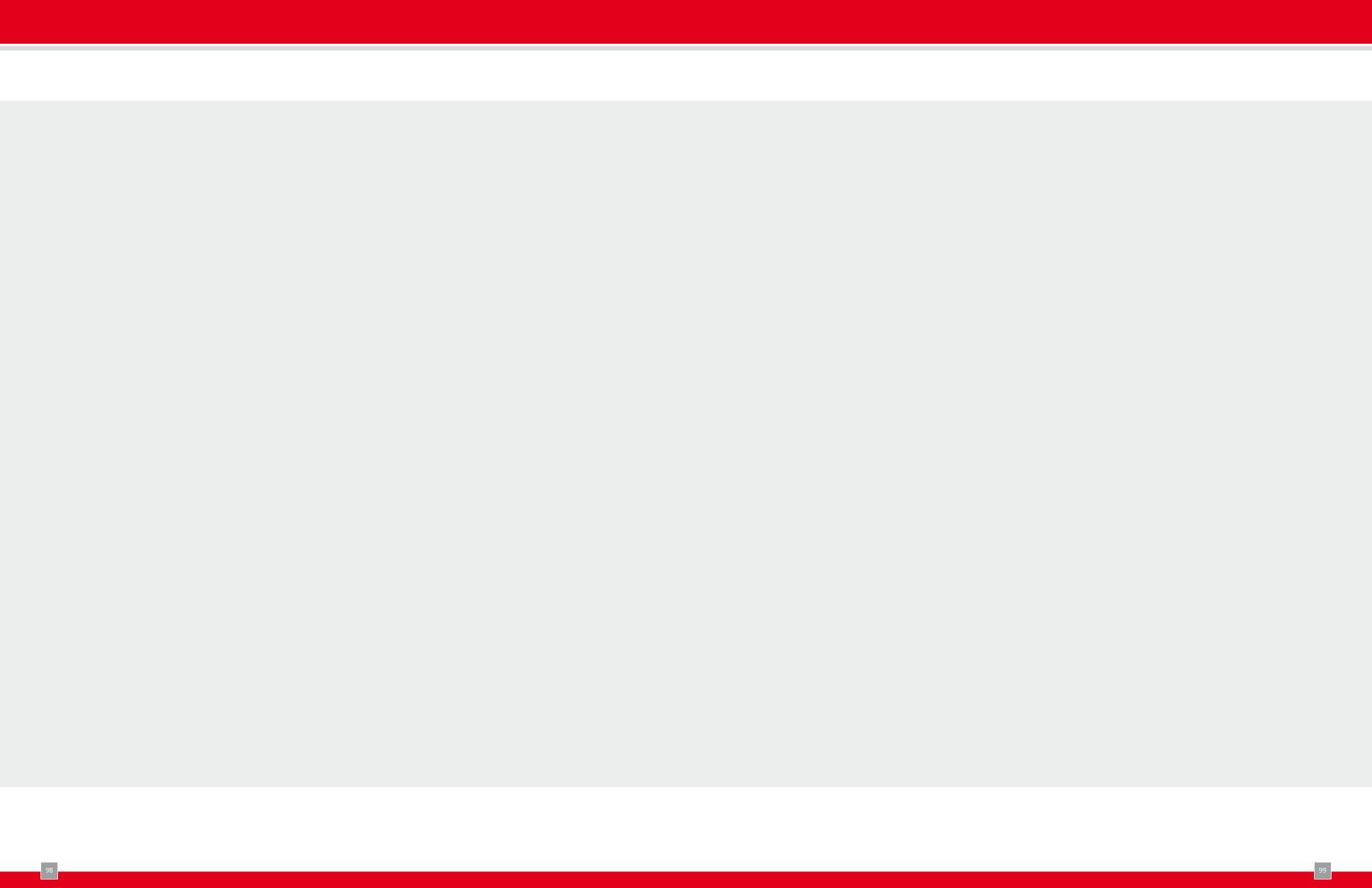
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