

2018

GENUINE BRUNSWICK

# PARTS

HARD WORKING PRODUCTS

SINCE 1890

**Brunswick®**

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# NOBODY KNOWS PINSETTERS LIKE BRUNSWICK KNOWS PINSETTERS

Brunswick introduced its first automatic pinsetter in 1956 and has been on the leading edge of pinsetter innovation ever since. Nobody knows pinsetters like Brunswick knows pinsetters. So when it comes to OEM parts to support the maintenance and repair of your pinsetters, Genuine Brunswick Parts are the obvious choice.

Brunswick engineers and mechanics work with suppliers to ensure the parts to support both the A2 and GS® series of pinsetters are exactly what is required in form, fit and function. Brunswick designed the pinsetters, so who better to provide the parts needed to ensure the pinsetters meet your expectations.

For some of the most critical parts necessary to achieve great pinsetter performance, Brunswick has stepped it up a notch with Advanced Performance Genuine Brunswick parts. Advanced Performance Genuine Brunswick parts are the cream of the crop and are all backed by at least a 1-year warranty. Like all Genuine Brunswick parts, they are the originals – precision engineered for your equipment, refined with knowledge that can only be drawn from over 50 years of experience in the parts business.

To further enhance our knowledge of pinsetter operations we make a point of listening to and working with the mechanics who spend their working days with the machines. Over the years they have taught us a lot about the practical aspects of pinsetter operations. And in many instances mechanics have given Brunswick ideas for new or improved products that we have adopted. As you look through this catalog you will see many parts that were the brainchild of mechanics.

Buy Genuine Brunswick Parts and rest assured you are getting the highest-quality parts, designed to keep your center running smoothly.



**GS PINSETTER PARTS**







**Advanced Performance**

**ADVANCED PERFORMANCE PIN GUIDE/STOP**

See page 20 for additional information.

**47-097417-000**



**Advanced Performance**

**ADVANCED PERFORMANCE NEX GEN REAR DISPLAY PACKAGE**

See pages 6 and 28 for additional information.

**47-861048-403**



**Advanced Performance**

**ADVANCED PERFORMANCE CHAIN GEAR**

See page 18 for additional information.

**47-075474-009**

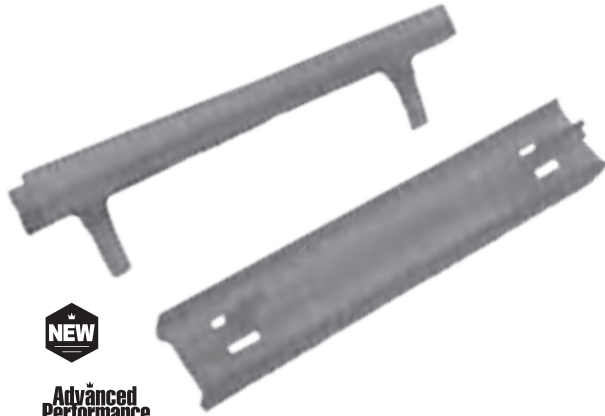
**Advanced Performance**

**ADVANCED PERFORMANCE OEM TRANSPORT BAND**

See page 8 for additional information.

**11-635201-000** – Short Pit

**11-053581-000** – Long Pit



**Advanced Performance**

**ADVANCED PERFORMANCE DOUBLE DAMPERS - GS AND GS-X SPOTTING TONGS**

See page 10 for additional information.

**47-051770-600** - Standard (Pkg of 10)

**47-051771-600** - Oversized (Pkg of 10)

**Advanced Performance**

**ADVANCED PERFORMANCE IMPACT STRIP (PAIR)**

See page 14 for additional information.

**47-026102-009**



**BELT WELD KITS, IRONS, AND ACCESSORIES**

See page 30 for additional information.



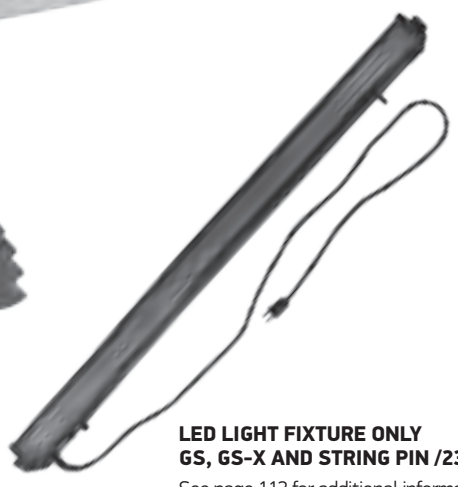
**UNIVERSAL PIN STATION**  
 See page 20 for additional information.  
**47-094792-009** – 2, 3, 4, 8, 9 pin location (shown large)  
**47-094793-009** – 1, 5, 6 pin location (not shown)  
**47-094794-009** – 7, 10 pin location (not shown)



**BALL STOP**  
 See page 99 for additional information.  
**47-277455-009**



**TWO PIECE SPUR GEAR**  
 See page 20 for additional information.  
**47-274669-004**



**LED LIGHT FIXTURE ONLY**  
**GS, GS-X AND STRING PIN /230/380V**  
 See page 113 for additional information.  
**47-863001-000**



**SETTING TABLE CABLE ASSEMBLY (NEX GEN)**  
 See page 10 for additional information.  
**47-245420-004**



**PIN FEED EXTENDER KIT**  
 See page 6 for additional information.  
**47-862507-000**



### ADVANCED PERFORMANCE NEX GEN REAR DISPLAY PACKAGE

Reduce down time and improve safety with GS Rear Displays.

- View errors or error codes from the back of the machine
- Nex Gen package includes updated firmware  
**47-861048-403** – Nex Gen  
**47-861046-000** – Consolidated  
(See page 28 for additional information)



### NEX GEN FIRMWARE UPGRADE

Easy to replace firmware provides new features and options:

- Fine tune table position after a non-strike first ball to improve pin collection and loading efficiency, while noticeably reducing pinsetter noise in the center
- Choose to drop the rake when the lane is turned off, reducing ball jams and protecting staff working in the pit area
- The ball accelerator can immediately shut down upon detection of an associated error, providing additional protection for motors and equipment
- A new timing option will return a ball even after the lane has been turned off

**47-862877-403**

**47-862509-403** – PKG - Nex Gen Firmware with two 24 volt LED bulbs



### STATUS LIGHT BULBS

Extend the life of a trouble light - up to 50,000 hours (24 volt assemblies only).

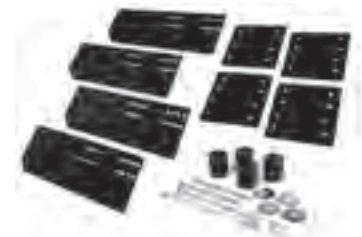
**47-013817-004** – 12 volt assy series 42 and below

**47-014687-004** – 12 volt assy series 43-465

**47-015646-004** – 24 volt assy series 466 and above

**47-223170-000** – 12 volt LED bulb only (2 pack)

**47-861047-000** – Advanced Performance 24 volt LED bulb only (2 pack)



### PIN FEED EXTENDER KIT

Improves elevator pin loading efficiency which decreases pin distributor time outs by up to 90%.

- Kits are packaged for lane pairs
- Comes with instructions
- Requires purchase of one drill fixture per center (47-862508-000). Sold separately and includes instructions

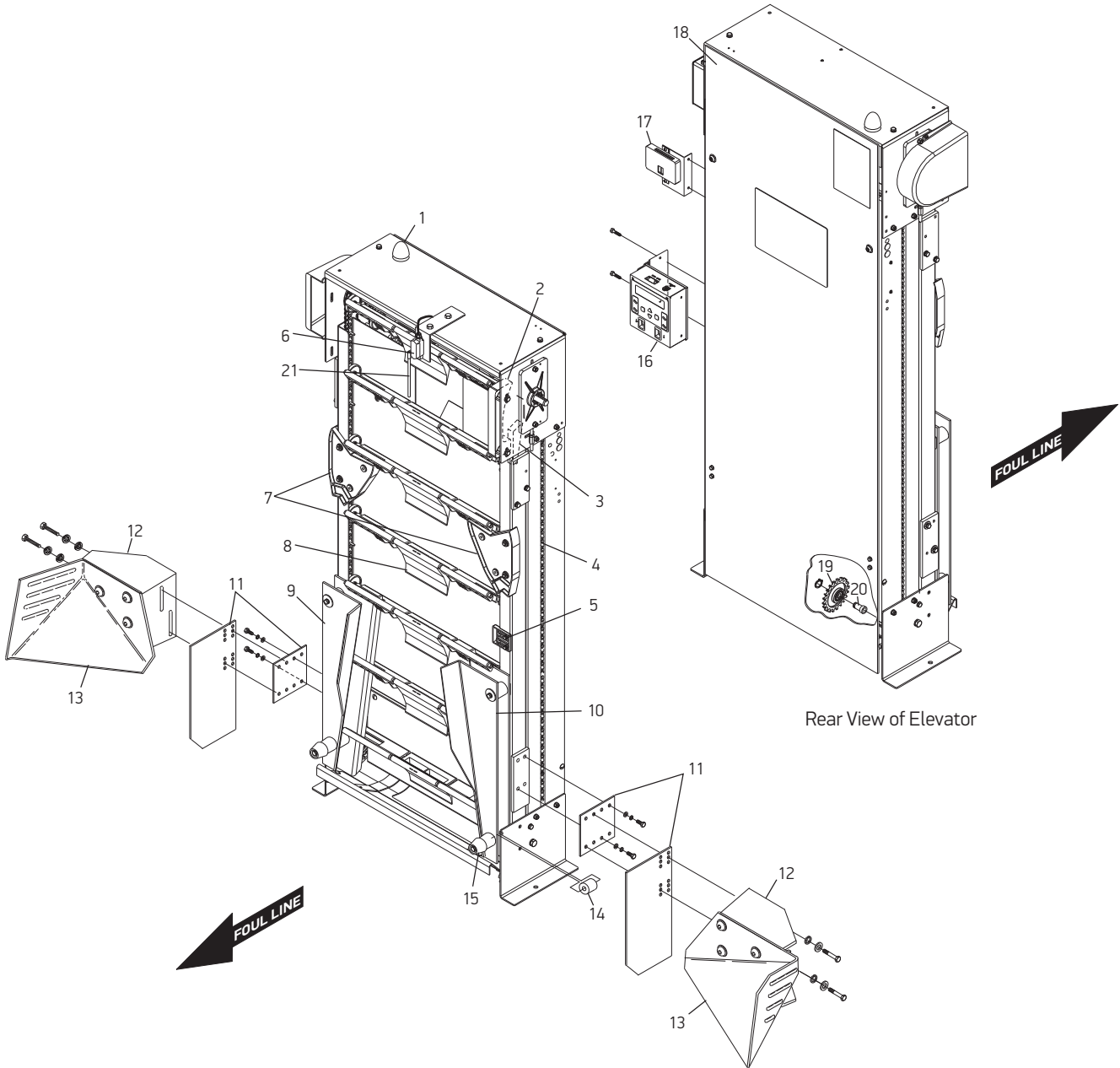
**47-862507-000**



### NO STEP DECAL

"No Step" label for Pin Deflector Support Bracket.

**11-682569-000**



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

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<b>1</b>	47-015646-004	24 Volt Trouble Light Assembly – Nex Gen	<b>6</b>	47-014917-009	Pin Count Switch – GS 96 and prior	<b>13</b>	47-023987-001	LH Pin Deflector
<b>1</b>	47-014687-004	12 Volt Trouble Light Assembly – Consolidated	<b>6</b>	47-014918-003	GS 98/GS-X	<b>14</b>	47-014009-004	Spacer
<b>1</b>	47-861047-000	AP - 24 Volt LED Bulb (Pkg of 2)	<b>7</b>	47-014761-003	Centering Guides	<b>15</b>	47-023660-004	Cushion Cap
<b>1</b>	47-223170-000	12 Volt Bulb	<b>8</b>	47-013532-009	Pin Shovel Assembly	<b>16</b>	47-861048-403	AP - Nex Gen Rear Display Pkg
<b>2</b>	47-014017-003	Shovel Guide	<b>9</b>	47-013992-001	LH Front Pin Deflector	<b>17</b>	47-861046-000	AP - Consolidated Rear Display Pkg
<b>3</b>	47-013951-003	Wedge Guide	<b>10</b>	47-013991-001	RH Front Pin Deflector	<b>18</b>	47-013990-002	Elevator Guard
<b>4</b>	47-014008-003	5/8" Chain w/ Shovel Pins	<b>11</b>	47-862507-000	Pin Feed Extender Kit	<b>19</b>	47-011053-004	Deflection Chain Gear
<b>5</b>	47-014060-003	Ejector	<b>11</b>	47-862508-000	Drill Fixture, Pin Feed Extender	<b>20</b>	47-011130-004	Bearing Bolt
			<b>12</b>	47-024036-002	Pin Deflector Support Bracket	<b>21</b>	47-860016-000	Pkg-Arm, Pin Count Switch (6)
			<b>13</b>	47-023986-001	RH Pin Deflector			



**Advanced  
Performance**

#### **ADVANCED PERFORMANCE OEM TRANSPORT BAND**

Brunswick's best transport band! Improve performance with this "top of the line" transport band. Made to stringent specifications to assure it will run straight and will not stretch, assuring long life.

- Consider adding Pin Feed Extender Kit (pg. 6) to minimize time outs

**11-635201-000** – Short Pit (1440 mm x 2020 mm)

**11-053581-000** – Long Pit (1440 mm x 2450 mm)



#### **V-BELT PULLEY**

OEM V-belt pulley, for transport band drive.

**47-024004-003**



#### **SIDE FRAME REPAIR KIT**

This kit repairs stripped or missing insert nuts on the transport band side frames.

- Nut plate has peel and stick tape for easy installation
- Kit comes with one plate and one M10 x 60mm socket flat head screw

**47-276153-009**



#### **CERTIFIED TRANSPORT BAND**

Utilize this lower cost belt that still maintains the performance of GS® pinsetters.

- Double-finger splice construction with wider joint provides more surface contact, relieving impact stress more effectively
- Thicker material gives the belt higher ultimate tensile strength and higher bearing load
- Consider adding Pin Feed Extender Kit (pg. 6) to minimize time outs

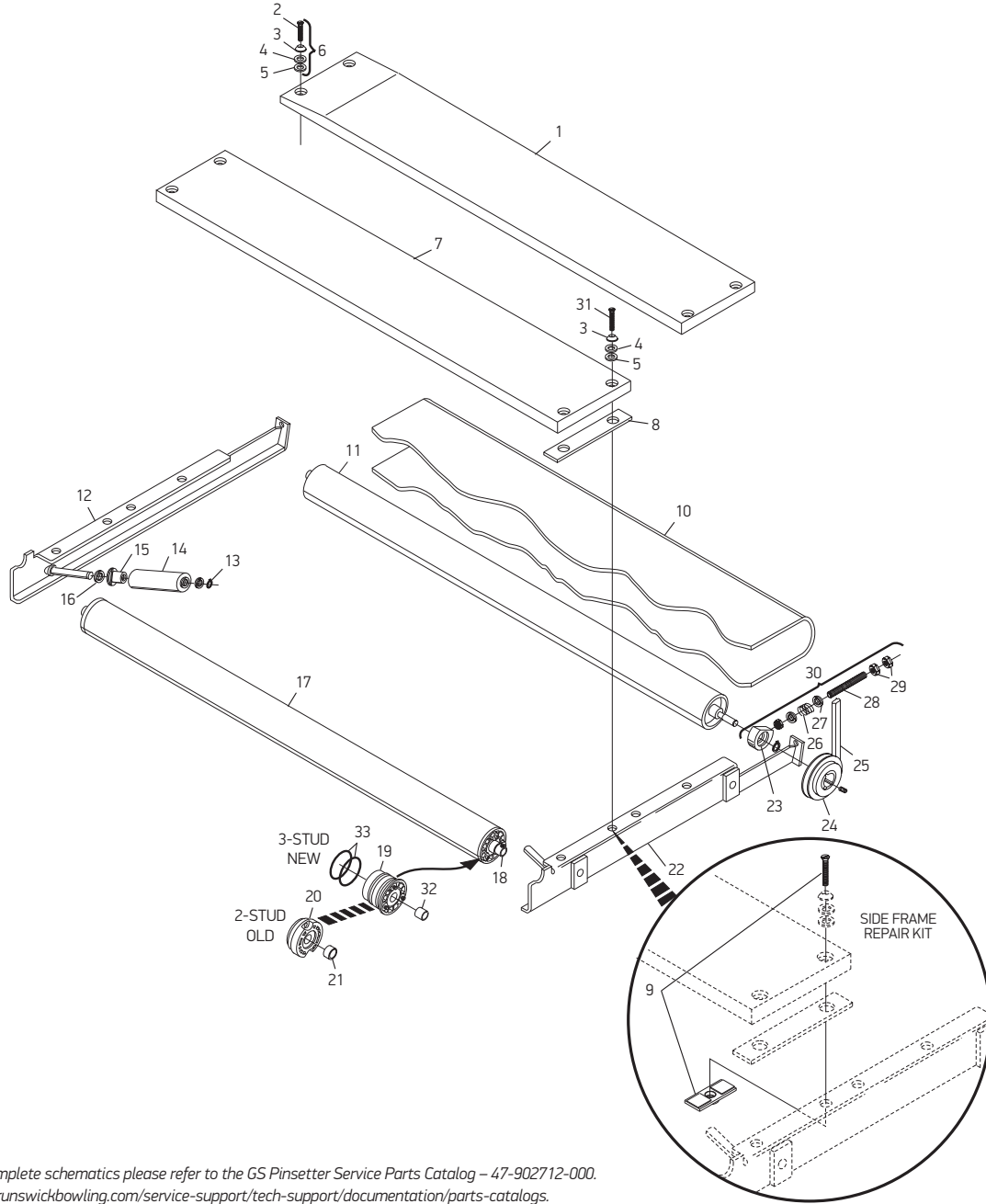
**11-635201-100** – Short Pit (1440 mm x 2020 mm)



#### **THREADED ROD**

OEM threaded rod for transport band bearing housing.

**47-024093-004**



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

## PART INDEX

1	47-025175-003	LH Rear Board Assy, odd lane	9	47-276153-009	Side Frame Repair Kit	23	11-430055-000	Deep Groove Ball Bearing
1	47-025176-003	RH Rear Board Assy, even lane	10	11-635201-000	AP - OEM Transport Band Belt	23	11-051902-001	Retaining Ring 52mm
2	11-052401-001	Slotted, Pan Head. Screw 8mm x 50mm (GS-92)	10	11-635201-100	Certified Transport Band Belt	24	47-024330-004	V-Belt Pulley 100mm
2	11-052929-000	Slotted, Pan Head. Screw 10mm x 50mm (GS-96 and above)	11	47-025051-001	RH Short Roller Assy (Rear) Even Lane	25	11-053909-000	V-Belt (use 100mm Pulley)
3	11-052150-001	Finishing Washer 8mm (GS-92)	11	47-024905-001	LH Short Roller Assy (Rear) Odd Lane	25	11-053910-000	V-Belt (use 125mm Pulley)
3	47-024740-004	Finishing Washer 5.3mm x 28mm x 10.2mm (GS-96 and above)	11	47-023669-002	Rear Roller Assy (Long Pit)	25	47-025049-004	V-Belt Pulley 125mm
4	47-023663-004	Rubber Washer (GS-92)	12	47-024736-009	LH Transport Band Side Frame	26	47-024309-004	Spring
4	47-861042-001	Rubber Washer (GS-96 and above)	13	11-051858-001	Retaining Ring 15mm	27	11-052050-001	Flat Washer 10.5mm
5	11-052019-001	Flat Washer (GS-92)	14	47-020942-003	Roller	28	47-024093-004	Threaded Rod 10mm x 140mm
5	47-024741-004	Flat Washer (GS-96 and above)	15	47-020943-004	Roller Bushing	29	11-051703-001	Hex Nut 10mm
6	47-024744-009	Board Screw Kit 10mm	16	47-861011-001	LH Washer 17mm (Pkg of 10)	30	47-274332-002	Bearing Block Repair Kit
7	47-023959-003	Front Board Assembly	17	47-023981-002	Roller Assy, 3-stud (Front)	31	47-861018-001	Slotted, Pan Head. Screw 8mm x 60mm (GS-92)
8	47-023915-004	Rubber Spacer	18	47-023933-004	Shaft - Front	31	11-052930-000	Hex Head. Cap Screw 10mm x 60mm (GS-96 and above)
9	11-135400-000	Rubber Well Nut, Series 43-76	19	47-025178-003	Bearing (3-Stud) with bushing	32	47-026370-009	Spacer Bushing - 21 mm (Pkg of 2)
			20	47-020908-003	End Cap w/Bearing (2-Stud)	32	47-026370-009	Spacer Bushing - 21 mm (Pkg of 2)
			21	47-026371-009	Spacer Bushing - 13.5 mm (Pkg of 2)	33	47-860013-000	O-Ring (4/pkg)
			22	47-024735-009	RH Transport Band Side Frame			
			23	47-024094-003	Housing			





#### SETTING TABLE REPAIR KIT GS SERIES 13 THROUGH 574

Used to prevent the back portion of the GS-Series pinsetters setting table from bending upward due to pin impact. If excessive, this bending can obstruct movement and improper operation of the spotting tong.

- Uses 7 existing holes and 2 new holes drilled through the table frame. The repair plate attaches to the bottom of the setting table across the entire width of the frame (from 7 pin to 10 pin) using 9 - hex socket, flathead screws

**47-275850-009**



#### SETTING TABLE REPAIR KIT GS-X/CPO SERIES 424 AND ABOVE

Used between the rear swing shaft mounting support brackets for extra support.

- Bent or broken supports will not allow the swing shafts of the table to operate correctly during pinsetter operation, leading to wobbling pins when a new rack is set
- Hardware included

**47-275620-009**



#### SETTING TABLE LEVER

Improved design with extra material and radius to the tab area of this part.

- Secures pin holders in the horizontal position during pinsetter operation
- Tab connects to the setting table latch assembly

**47-054989-001**



#### TABLE LATCH

Does your table try and set pins on the first ball cycle? If so your table latch may be broken. From mechanics requests we have increased the radius on this part to make it stronger and less prone to breakage.

**47-051674-004**

#### CABLE GUIDE CLIPS

- Use to fasten cables to cable guide  
**47-055167-003**
- For pinsetter series 424 and above  
**47-861052-000** – (Pkg of 10)



#### OEM SETTING TABLE CABLE ASSEMBLY (NEX GEN)

Based on field feedback, this assembly has been improved to provide added flexibility and protection. Additionally, to reduce movement and wear, the cable attachment has been modified for an optimized fit.

- Standard on production pinsetters series 686 and above

**47-245420-004**



#### LINK ASSEMBLY

Keep one of these links in your GS-X spare parts inventory at all times.

- Allows for stable connection from one swing shaft to the other
- Provides adjustment to pin spotting from front to back on the pin deck when new pins are spotted on the pin deck

**47-055002-002**



#### ADVANCED PERFORMANCE DOUBLE DAMPERS - GS AND GS-X SPOTTING TONGS

- Holds pins more securely by gripping in two places
- Pins are held higher and at the same level
- Works well with new pins, which can slip more easily
- Oversized dampers work well on worn spotting tongs and should be installed on 10-pin side of spotting tong
- Use standard and oversized the same way as original single dampers. Installation instructions included

**47-051770-600** - Standard (Pkg of 10)

**47-051771-600** - Oversized (Pkg of 10)



#### ADVANCED PERFORMANCE GS OVERSIZE SPOTTING TONG DAMPER

Extends life and eliminates pinsetter downtime with these oversize tongs.

- Install on 10 pin side of spotting tong
- Used on all series GS machines, including GS-X
- Ships in packages of ten

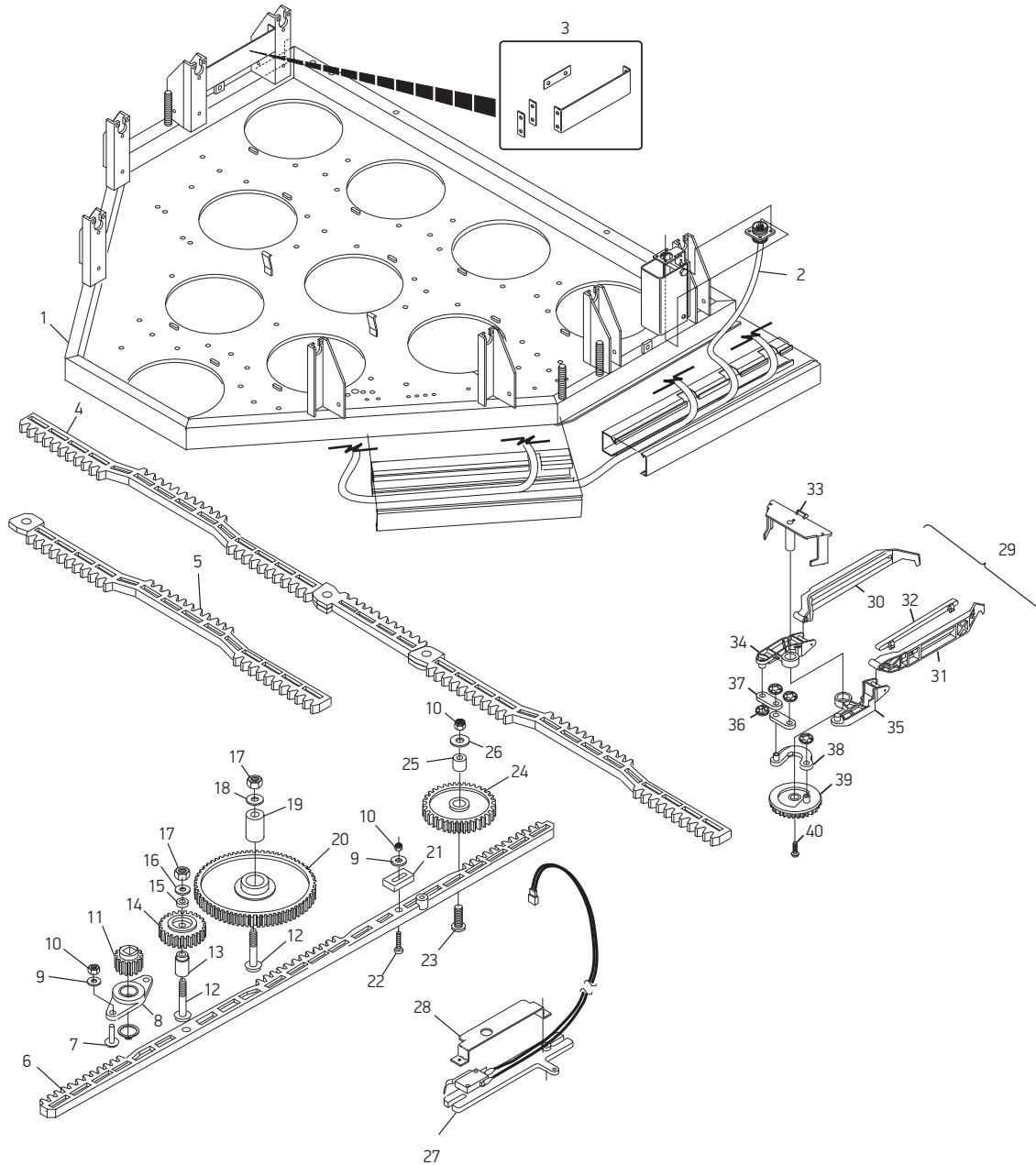
**47-051758-500** - Vinyl Black

**47-051758-600** - Urethane Clear

#### OEM DAMPER STANDARD SINGLE

**47-051758-003**





For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

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1	47-05177-001	Setting Table Assembly Frame	17	11-051744-001	Locknut 8mm	32	47-051770-600	Double Damper - Standard
1	47-05166-009	Setting Table Complete	18	11-052019-001	Flat Washer 8.4mm	32	47-051771-600	Double Damper - Oversized
2	47-245164-001	Setting Table Harness	19	47-051617-004	Spacer Bushing	32	47-051758-003	Damper - Standard Single
3	47-275620-009	Setting Table Repair Kit	20	47-051616-004	Gear	32	47-051758-600	AP - Oversized Urethane Damper
4	47-053513-009	Toothed Rack (center)	21	47-051682-004	Stop	32	47-051758-500	AP - Oversized PVC Damper
5	47-051565-002	Toothed Rack (front)	22	11-051877-001	Truss Hd. Screw 6mm x 25mm	33	47-054902-002	Deck Plate
6	47-051635-001	Geared Rack	23	11-051877-001	Truss Hd. Screw 6mm x 25mm	34	47-054897-003	L.H. Spotting Tong Pivot
7	47-861008-001	Truss Hd. Screw 6mm x 16mm	24	47-051632-004	Gear	35	47-054898-003	R.H. Spotting Tong Pivot
8	47-051625-004	Shaft Support	25	47-051633-004	Spacer Bushing	36	47-861050-000	Speed Nut 8 mm (10/pkg)
10	11-051743-001	Locknut 6mm	26	11-052037-001	Flat Washer 6.4mm	37	47-051762-004	Connecting Link
11	47-071615-004	Square Shaft Gear	27	47-243027-004	Switch - Complete	38	47-054900-003	LH Lever (1, 4, 5, 6)
12	11-051878-001	Truss Hd. Screw 8mm x 45mm	28	47-053812-004	Switch Protector	38	47-054901-003	RH Lever (2, 3, 7, 8, 9, 10)
13	47-052021-004	Spacer Bushing	29	47-055117-009	Spotting Tong (1,4,5,6)	39	47-054899-003	Gear
14	47-052020-004	Gear	29	47-055118-009	Spotting Tong (2,3,7,8,9,10)	40	11-054459-000	Self Tapping,
15	47-052022-004	Spacer Ring	30	47-054896-002	R.H. Tong			Torx Screw K60 x 16mm
16	11-052017-001	Flat Washer 8.4mm	31	47-055148-002	L.H. Tong			

**PINHOLDER ASSEMBLY COMPLETE**

**47-053850-009** - GS-10 and GS-92  
(universal electrical system)

**47-054699-009** - GS-96 - GS-98

**47-055314-009** - GS-X/CPO

**MICRO SWITCH**

OEM pin holder micro switches. Single, for GS 92 and earlier, Double for GS 96 and 98, and GS-X for all GS-X machines.

**47-054700-004** - Double (Shown large)

**47-053635-004** - Single, cherry

**47-055323-004** - GS-X

**GS-X SWITCH FINGER**

Prevent broken or worn switch finger leading to pin loading errors with this improved design.

- Allows for extended wear
- Check pinholders for worn components regularly for ultimate performance

**47-054982-002**

**GS-X TABLE SAFETY SUPPORT**

This support prevents the setting table from falling while the pinsetter is in the home position for maintenance needs. It improves maintenance safety, and prevents pinsetter damage.

- Easily installs on pinsetter
- Only for use with the GS-X Tower-down Pinsetters
- Includes installation instructions

**47-860011-000**

**TECH TIP**

If you receive a "Multiple Spotting Tong Switch Error" Code /76, you may want to add a garden hose washer to the top of the large gear at the left side of the setting table. By adding the garden hose washer under the nut and washer, you will prevent the gear rack from bouncing off the stop blocks – acting like a second clutch for the gear racks.

**PINHOLDER SOLENOID**

Prevent setting table jams with these solenoids.

- Solenoid comes with the plunger
- Powerful solenoid made from high grade iron
- Designed to activate pin holder pin grippers properly long term

**99-060242-004**

For tables with round swing shafts

**99-060351-004**

For tables with square swing shafts

**TUBE GUIDE**

Provides long-lasting consistent support for table setting and resetting of pins.

**47-085349-003**

**PIN HOLDER WITH DAMPERS**

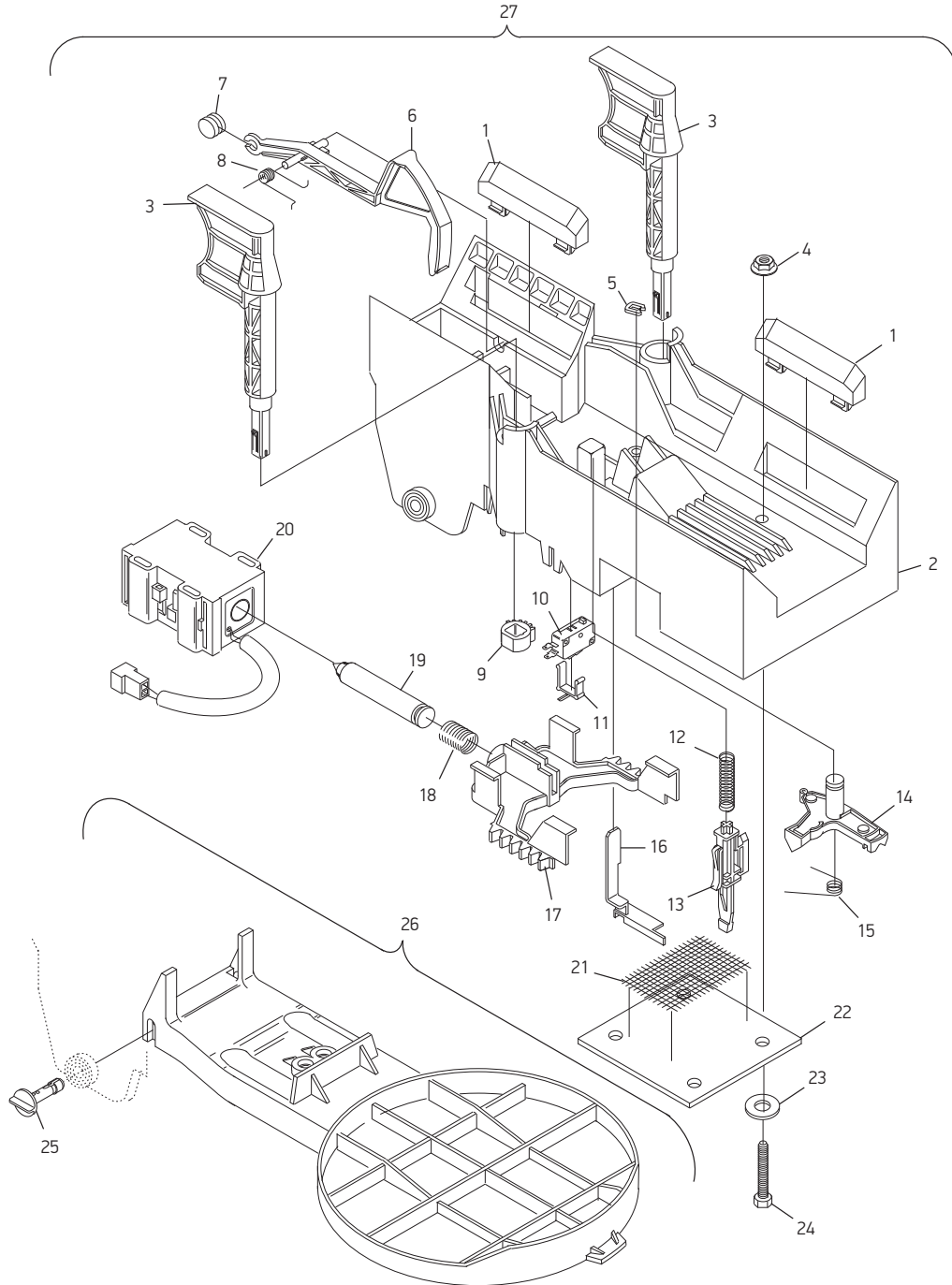
**47-054689-009** - GS-10, GS-92,  
GS-96 - GS-98

**47-054980-201** - GS-X/CPO

**SWITCH ACTUATOR**

Improved pin holder switch actuation reliability. Flatter contact surface of the switch actuator reduces double loading of the setting table pinholders.

**47-054985-001**



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

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1	47-050308-004	Damper	11	47-055001-004	Clip (Micro Switch)	20	99-060351-004	Solenoid - Only
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3	47-054981-002	Pin Gripper	13	47-054988-003	Switch Button	22	47-055003-004	Mount Plate
4	11-055500-001	Hex Nut 6 mm	14	47-054985-001	Switch Actuator	23	47-861040-001	Washer 6.1 mm (Pkg of 10)
5	47-054986-004	Grip Ring	15	47-055006-004	Torsion Spring	24	11-051014-001	Hx Hd. Cap Screw 6mm x 45mm
6	47-054982-002	Switch Finger	16	47-055328-003	Connector Clip	25	47-860005-000	Pivot Pin (Pkg of 10)
7	47-052124-004	Counter Weight	17	47-054983-002	Drive	26	47-054298-001	Pin Detector Plate w/Pin
8	47-055005-004	Tension Spring	18	47-054987-004	Solenoid Spring	27	47-055314-009	Pinholder Assembly - GS-X/CPO
9	47-054984-004	Gear	19	47-055004-004	Solenoid Plunger			
10	47-055323-004	Micro Switch	19	99-090349-004	O-Ring for Plunger			



**Advanced Performance**

**ADVANCED PERFORMANCE IMPACT STRIP (2/PKG)**

- Lasts 3-5 times longer than the original impact strips
  - Made from ultra-high molecular weight polyethylene
  - Save time checking and replacing worn parts
  - Avoid costly damage from broken strips
- 47-026102-009**



**BALL CUSHION BOARD WITH FACING**

Minimize ball energy with this special cushion facing.

- Cushion molded to board to prevent delaminating
  - Includes 47-274888-009 ball door flap kit
- 47-025044-009 – LH**  
**47-025045-009 – RH**



**Advanced Performance**

**ADVANCED PERFORMANCE BALL CUSHION FRAME**

Eliminate risk of failed Ball Cushion Frame with a design that conforms to stringent specifications.

- This frame has increased material thickness where necessary
  - Made from high grade steel
  - Improved welding and shock mounting system
- 47-025639-009**



**IMPACT STRIP**

Inspect and replace damaged impact strips at all times as part of normal maintenance to the ball cushion assembly.

- Damaged impact strips can lead to possible ball and pin damage
  - Made to withstand repeated ball impacts to the pit cushion
- 47-021010-003**



**BALL CUSHION HYDRAULIC SHOCK ASSEMBLY-COMplete**

Preserve pit cushions with properly maintained shocks. For all GS pinsetter models.

- 47-861049-009 – Replacement O-Ring (5/pkg)
- 99-026121-000**



**CUSHION ADJUSTMENT HARDWARE KIT**

Reduce wear on the Cushion Rubber Bumper – 11-053578-000. Worn cushion bumpers can create ball return issues.

**47-862108-000**



**PIT CURTAIN**

Smooth surface is easy to clean, non-marking, and oil resistant.

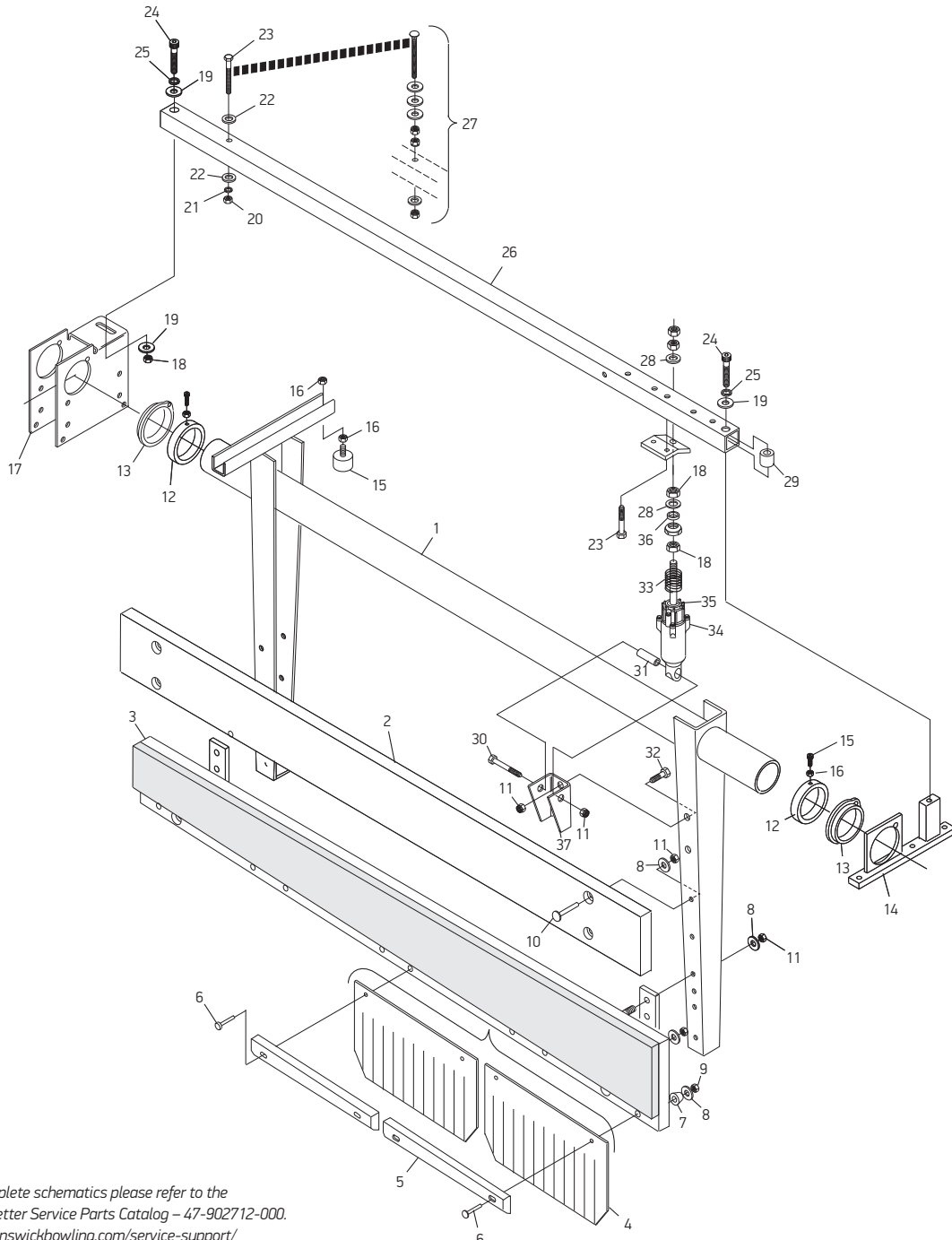
**47-021084-004**



**BALL DOOR FLAP KIT**

Minimize "pins in the ball door."

**47-274888-009**



For complete schematics please refer to the  
 GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

1	47-025639-009	AP-Ball Cushion Frame w/ Bracket	11	11-051745-001	Locknut 10mm	25	11-051772-001	Lockwasher 12mm
2	47-021872-003	Top Ball Cushion Board	12	47-020953-004	Stop Collar	26	47-020948-003	Transverse Bar
3	47-025045-009	RH Ball Cushion Board with Facing, even lane	13	99-010108-004	Bearing	26	47-024077-003	Transverse Bar, Short Pit
3	47-025044-009	LH Ball Cushion Board with Facing, odd lane	14	47-020947-003	Bearing Block	27	47-862108-000	Cushion Adjustment Hardware Kit
4	47-274888-009	Ball Door Flap Kit	15	11-053578-000	Rubber Bumper	28	11-052015-001	Flat Washer 13mm
5	47-026102-009	AP Impact Strips (2/pkg)	16	11-051704-001	Hex Nut 8mm	29	47-021110-004	Spacer
5	47-021010-003	Impact Strip (Black) 1 ea	17	47-021466-001	Bearing Block	30	11-051071-000	Hex Hd. Cap Screw M10 x 60mm
6	11-051055-001	Hx Hd. Cap Screw 8 mm x 60 mm	18	11-051706-001	Hex Nut 12mm	31	47-025638-004	Spacer
7	47-023660-004	Cap	19	47-861010-001	Flat Washer 13mm (Pkg of 20)	32	11-051058-001	Hex Hd. Cap Screw 10mm x 55mm
8	11-052018-001	Flat Washer 10.5mm	20	11-051703-001	Hex Nut 10mm	33	47-071602-004	Compression Spring
9	11-051744-001	Locknut 8mm	21	11-051771-001	Lockwasher 10mm	34	99-026121-000	Ball Cushion Hydraulic Assy
10	11-052618-001	Carriage Bolt 10mm x 50mm	22	11-052050-001	Flat Washer 10.5mm	35	11-055351-000	Sealing Ring, all GS Shocks
			23	11-051012-001	Hx Hd. Cap Screw 10mm x 70mm	36	47-021108-004	Spacer
			24	11-051564-009	Sckt Hd. Cap Screw 12mm x 60mm	37	47-025637-003	Bracket

**TECH TIP**

Occasionally the sweep on the GS pinsetter will stay down at the end of a cycle causing the pin light to stay on and the pinsetter not to generate an error code on the pinsetter electronics. The problem can be solved by reducing the excessive swing of the sweep release assembly, adjusting the sweep release tipper position in relationship to the tipper roller, and adjusting the forward position of the sweep.

**GUTTER ADAPTER**

OEM gutter adapter for sweep board. Now made of stronger material to last even longer.

**47-041721-002**

**SWEEP RELEASE ASSEMBLY**

Complete assembly, including all linkages and solenoid.

- Easy to change and repair if necessary

**47-041794-009** – Tower Up

**47-045566-009** – Tower Down

**RETAINING CLIP (15MM)**

A must have for the spare parts inventory, keeps the linkage in place for smooth sweep operation.

**11-051869-000**

**SWEEP WAGON FRAME**

Built to provide years of service and smooth operation of the sweep assembly. Broken or bent frames may cause excess wear to the plastic rollers or put stress on the sweep drive motor to operate effectively.

**47-045010-002**

**GS SWEEP FOOT CAP UPGRADE KIT**

- Do you have rake foot caps that fall out and are missing? You can now upgrade your rake foot caps with this handy kit
- Kit includes special size drill bit, 25 fasteners and instructions

**47-862011-000**

**47-044978-004** – Foot Caps  
(sold separately)

**SWEEP ROLLER**

Keeps the sweep wagon operating smoothly.

**99-040249-004**

**SWEEP SHOCK ABSORBER**

Strong plunger shaft manufactured from high grade steel.

- Keeps GS sweep performing at maximum performance level

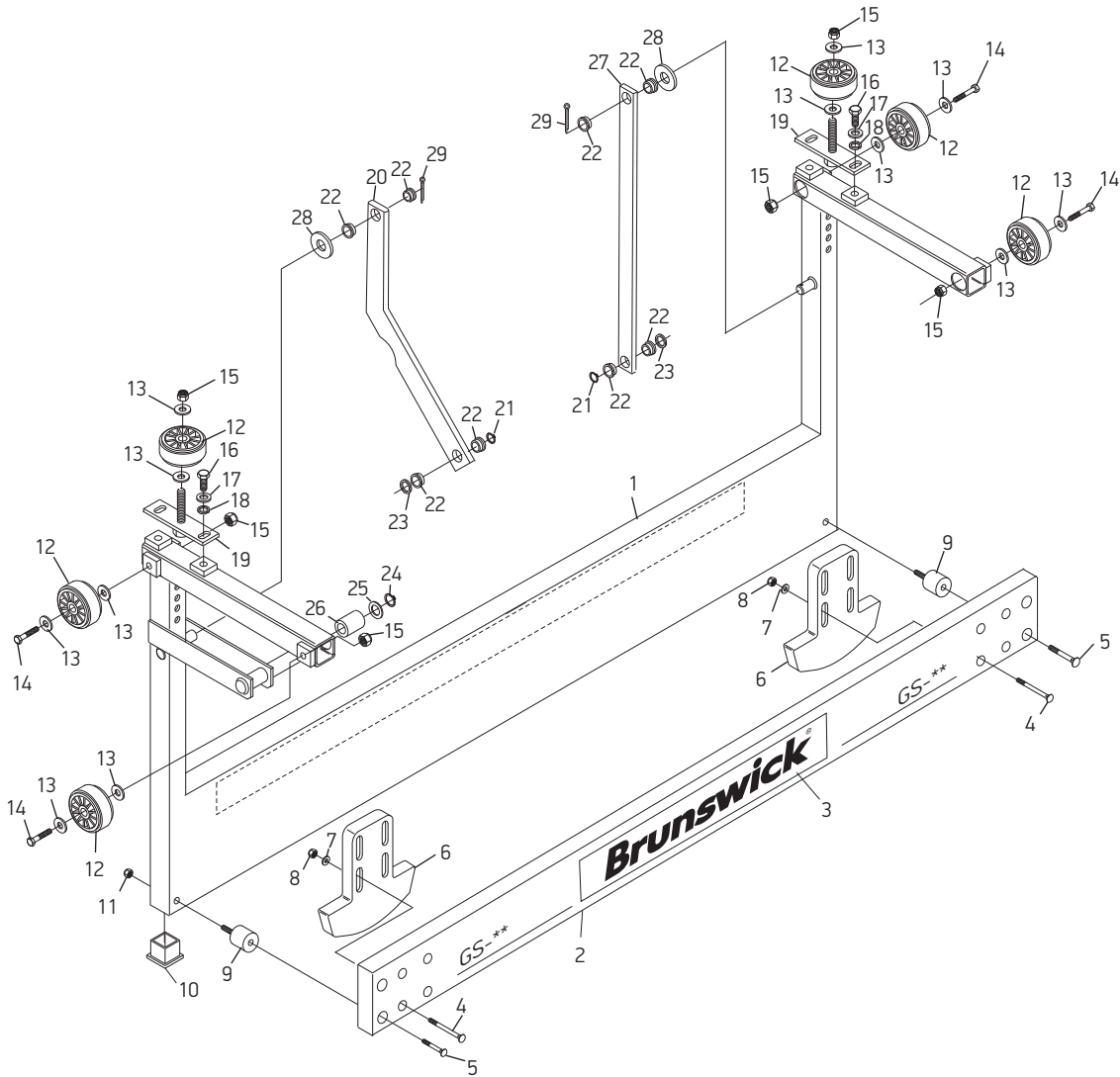
**99-046122-000**

**47-861049-009**

Replacement O-Ring (5/pkg)



# GS | SWEEP WAGON



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

## PART INDEX

1	47-045010-002	Sweep Wagon (Frame only)	9	47-044979-004	Rubber Bumper	20	47-042056-003	L.H. Pusher Rod
2	47-044927-003	Sweep Board Only (Grey) for GS-98, GS-X	10	47-044978-004	Foot Cap	21	11-051869-000	Retaining Ring 15 mm
2	47-044802-009	Sweep Board w/Felt (Brown)	11	11-051744-001	Locknut 8mm	22	99-010103-004	Plastic Bearing
3	47-045082-004	Sweep Board Decal (GS-98)	12	99-040249-004	Plastic Roller Assembly	23	47-861029-001	Flat Washer 16mm (Pkg of 10)
3	47-045373-004	Sweep Board Decal (GS-X)	13	47-861010-001	Flat Washer 13mm (Pkg of 20)	24	11-051852-001	Retaining Ring 17mm
4	11-052614-001	Carriage Bolt 6 mm x 40 mm	14	11-051070-001	Hx Hd. Cap Screw 12mm x 60mm	25	47-861011-001	Flat Washer 17mm (Pkg of 10)
5	11-052601-001	Carriage Bolt 8 mm x 30 mm	15	11-051747-001	Locknut 12 mm	26	46-040170-004	Roller
6	47-041721-002	Gutter Adapter	16	11-051010-001	Hx Hd. Cap Screw 8mm x 20mm	27	47-041526-004	R.H. Pusher Rod
7	11-052035-001	Flat Washer 10mm	17	11-052019-001	Flat Washer 8.4mm	28	11-052034-001	Flat Washer
8	11-051745-001	Locknut 10mm	18	11-051770-001	Lockwasher 8mm	29	11-051786-001	Cotter Pin
			19	47-041774-004	Bracket			





### V-BELTS

Provide the important power necessary to run the GS machines. Offers increased flexibility and reduces heat build-up that extends the life of the belt.

- 11-053901-000** – 10mm x 6mm x 875mm Distributor Sweep/Motor Drive
- 11-053902-000** – 10mm x 6mm x 1160mm Setting Table Drive
- 11-053903-000** – 13mm x 8mm x 1375mm Distributor Shaft Drive
- 11-053904-000** – 10mm x 6mm x 950mm Ball Accelerator – 50 Cycle
- 11-053905-000** – 10mm x 6mm x 1900mm Elevator Drive
- 11-053907-000** – 10mm x 6mm x 925mm Ball Accelerator – 60 Cycle
- 11-053909-000** – 10mm x 6mm x 2560mm Transport Band Drive (110mm Pulley)
- 11-053910-000** – 10mm x 6mm x 2650mm Transport Band Drive (125mm Pulley)



### DRIVE MOTORS

Designed and tested to meet the most rigorous requirements.

- Available in two different voltages to meet multiple needs
- Setting table and sweep motors include heavy duty brake for improved reliability and durability
- OEM design

### SWEEP MOTOR

- 99-076366-000** – 1/4 H.P. 208 VAC
- 99-076367-000** – 1/4 H.P. 230/380 VAC (Shown)

### DISTRIBUTOR MOTOR

- 99-076362-000** – 1/2 H.P. 208 VAC
- 99-076363-000** – 1/2 H.P. 230/380 VAC (Shown)

### TABLE MOTOR

- 99-076364-000** – 1/2 H.P. 208 VAC (Shown)
- 99-076365-000** – 1/2 H.P. 230/380 VAC



### GS MOTOR STRAIN RELIEF

Used on both ABT and Siemens Motors and on all GS Series pinsetters.

**11-055080-000**



### STROKE LIMITER SHOCK ABSORBER

Stroke limiter shock will ensure the setting table functions correctly all the time.

- Designed with no reservoir
  - Strong plunger shaft manufactured from high grade steel
- 47-861049-009** – Replacement O-Ring (5/pkg)  
**99-076123-000** – For series 442 and below  
**99-076120-000** – For series 443 and above



### GEAR ASSEMBLY WITH HUB

Used in conjunction with the pinion shaft – 47-071705-004 in the pulley drive assembly to allow for correct operation of the setting table and sweep.

- Supplied with hub for ease of replacement
- 47-071702-003**



**Advanced  
Performance**

### ADVANCED PERFORMANCE CHAIN GEAR

Based on field feedback, this newly re-designed assembly includes two set screws to reduce stress on the gear, key, and shaft.

- Compatible with all GS-Series Tower Down Pinsetter models
  - Now standard on production pinsetters series 687 and above
  - Metric Key – 11-053503-000 for gear
- 47-075474-009**



### PINION SHAFT

Used in the pulley drive assembly to allow for correct operation of the up and down movement of the setting table and correct lifting of the sweep assembly at the end of the pinsetter cycle.

**47-071705-004**



**Advanced  
Performance**

### ADVANCED PERFORMANCE GS METAL PINION GEAR

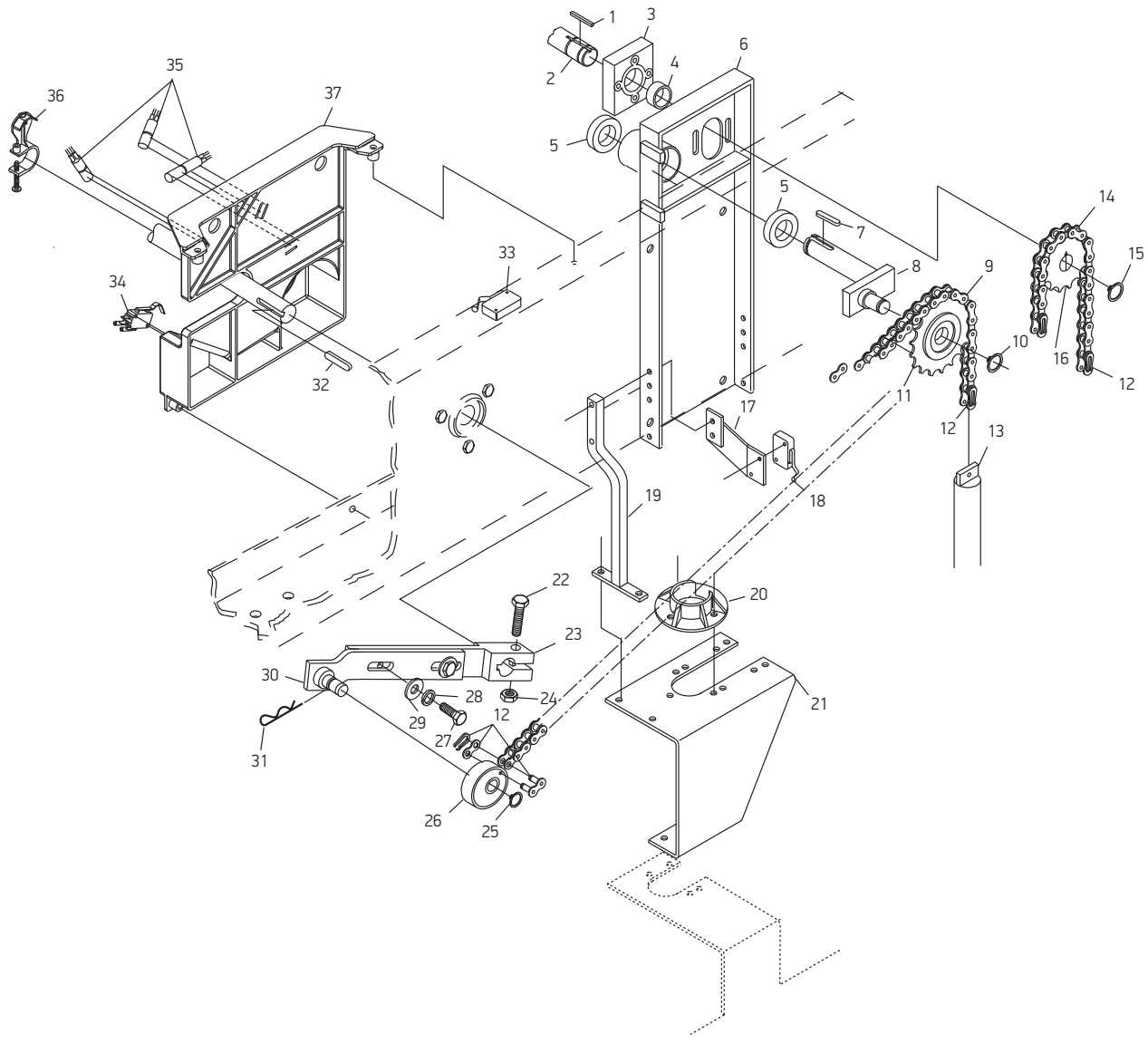
Used on all Tower Up pinsetters.

- Heavy-duty Setting Table pinion gear replaces the OEM plastic gear for extended life and better performance
- 47-071449-609**





# GS | DRIVE FRAME ASSEMBLY



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	11-053503-000	Key 8mm x 7mm x 28mm	16	47-075474-009	AP - Chain Gear (with set screws)	30	47-075357-003	Crank Arm
2	47-075476-004	Shaft	17	47-075473-003	Switch Support	31	11-054300-001	Cotter Pin 2mm
3	47-085348-003	Bearing Housing	18	47-243028-004	OOR Switch Tower Down	32	11-053493-000	Key 8mm x 7mm x 45mm
4	11-430051-000	Bearing	19	47-085449-003	Support Rod	33	47-243028-004	TS-2 Switch
5	11-430052-000	Bearing	20	47-085349-003	Tube Guide	34	47-243028-004	Cherry Switch (Silver, Consolidated, Nex Gen)
6	47-075482-002	Guide Beam	21	47-085436-003	R.H. Guide Support Bracket	34	47-073534-004	"A" Switch (Red Box)
7	11-053507-000	Key 8mm x 7mm x 30mm	21	47-085430-003	L.H. Guide Support Bracket	35	47-243029-004	Magnetic "B", "C", "D" Switch (Silver, Consolidated, Nex Gen)
8	47-071591-004	Sprocket Shaft	22	11-051070-001	Hx Hd Cap Screw 12mm x 60mm	35	47-072307-004	Reed Switch (Red Box)
9	47-075488-004	5/8" Chain	23	47-075356-003	Crank	36	47-071879-003	Cam
10	11-051852-001	Retaining Ring 17mm	24	11-051747-001	Locknut 12mm	37	47-075188-001	Frame (Fixed B-Switch)
11	47-011053-004	Sprocket	25	47-861031-001	Flat Washer 18mm (Pkg of 10)	37	47-071876-001	Frame (Adjustable B-Switch)
12	11-600500-000	Master Link (3-Piece)	26	47-075352-004	Pivot Bearing			
13	47-070386-004	Counter Weight	27	11-051062-001	Hx Hd Cap Screw 12mm x 25mm			
14	47-075486-004	Chain	28	11-051772-001	Lockwasher 12mm			
15	11-051856-001	Retaining Ring 25mm	29	47-861010-001	Flat Washer 13mm (Pkg of 20)			



### UNIVERSAL PIN STATION

Redesigned with an improved steel pin release lever attachment pivot.

- Universal Housing Only – 47-094778-001
- Steel Shaft – 47-861045-000 (Pkg of 10)
- Retaining Pins – 47-094789-003 (Improved longer area for pin engagement)
- Retaining Ring – 47-861044-000 (Pkg of 20)
- Plastic Retaining Bow Bushing – 47-861043-000 (Pkg of 10)

**47-094792-009** – 2, 3, 4, 8, 9 pin location (shown large)

**47-094793-009** – 1, 5, 6 pin location (not shown)

**47-094794-009** – 7, 10 pin location (not shown)



### UNIVERSAL RELEASE LEVER

Wider button improves performance by minimizing release levers slipping off pin grippers. Used on all universal pin stations.

**47-095154-009** – Complete

**47-094782-003** – Button only



### REAR DISTRIBUTOR DRIVE PULLEY

OEM pulley 162 mm for 15 mm polycord belt.

**47-024839-002**



### TWO-PIECE SPUR GEARS AND PULLEY

Prevent pinsetter down situations by keeping a couple of easy to install two-piece gears and pulley on hand. These are great temporary replacements that do not require removal of the front or rear distributor shaft for installation. Hardware included.

**47-275746-009** – Front Distributor Shaft Gear

**47-274669-004** – Rear Distributor Shaft Gear

**47-275748-009** – Distributor Round Belt Pulley

To order permanent one-piece replacement gear:

**47-090547-004** – Front Distributor Gear

**47-093900-003** – Rear Distributor Gear

**47-093863-003** – Round Belt Pulley



### SQUARE SPINDLE

Prevent pin station housing and retaining pin wear with this square spindle complete with a bushing on each end.

**47-094790-009**



### RETAINING BOW EXTENDER SLEEVE

Minimizes pin station jams.

- No more diving pins in the 4,7,10 positions
- Packaged 6 per pack

**47-862931-000**



**Advanced Performance**

### ADVANCED PERFORMANCE PIN GUIDE/STOP

- Helps minimize pin jams
- Improves accuracy of pin loading from pin station into pin holder

**47-097417-000** – Sold Separately



### SLIDER ASSEMBLY

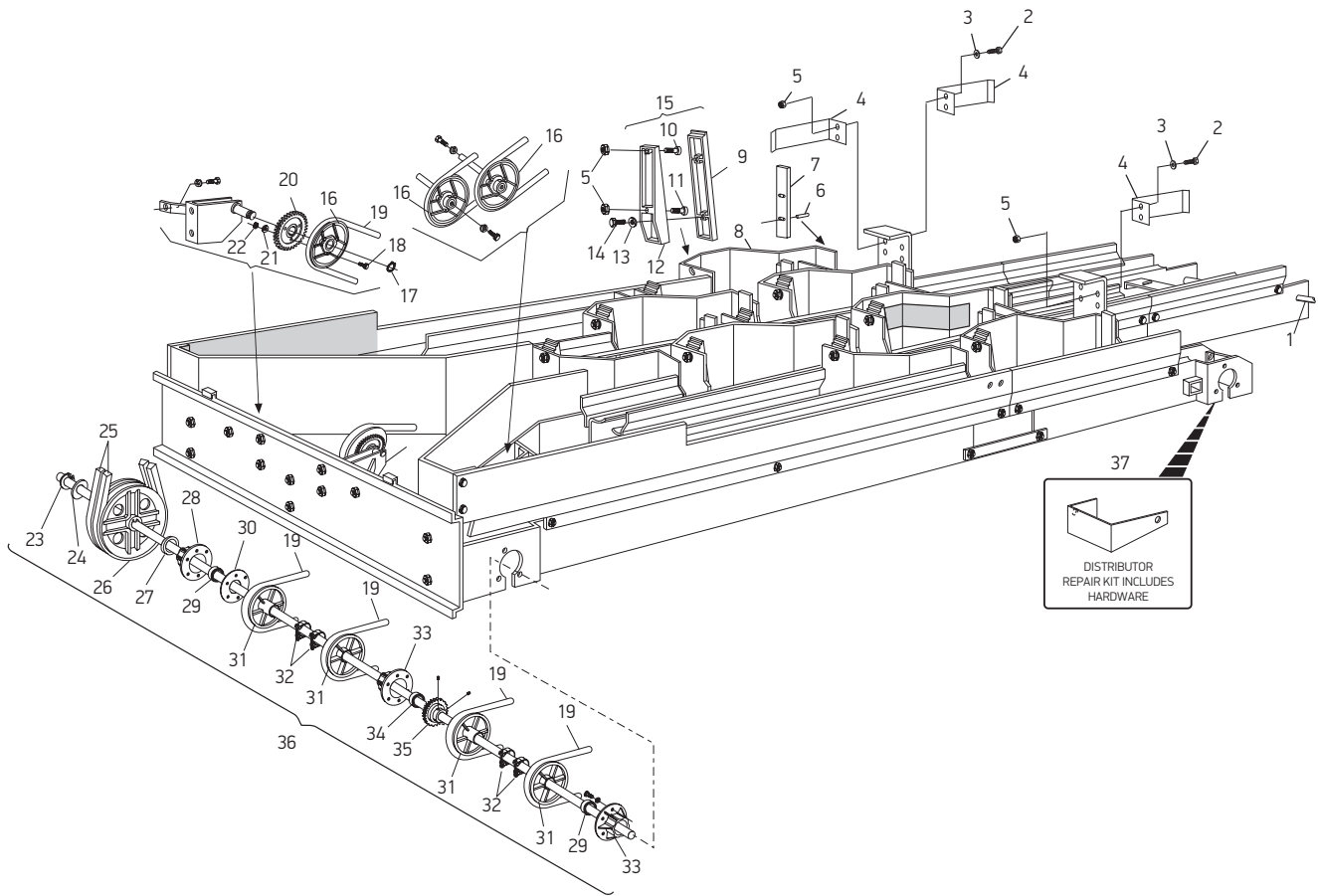
Long design improves reliability by centering pin movement to the pin holder.

- Minimizes distributor jams and table switch problems
- Manufactured from impact resistant polyethylene
- Easy to install

**47-091284-002** – Complete

**47-091277-002** – Mount only

**47-095609-002** – Slider only



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	47-092206-004	Shaft	13	11-052019-001	Flat Washer 8.4mm	26	47-090989-002	Double Pulley
2	11-051018-001	Hex Head Screw 6mm x 20mm	14	11-054449-000	Hx Hd. Self-Tapping Screw K70x18mm	27	47-094353-004	PVC Spacer
3	11-052037-001	Flat Washer 6.4mm	15	47-091284-002	Slider Assembly Complete	28	47-094346-003	Bearing Shell w/ Shoulder
4	47-094712-003	Bracket	16	47-092415-003	Pulley with Bearing	29	11-430013-000	Bearing
5	11-051743-001	Locknut 6mm	17	11-051852-001	Retaining Ring 17mm	30	47-094351-003	Washer
6	47-093587-004	Dowel Pin 3mm x 15mm	18	11-051546-001	Hex Head Screw 5mm x 40mm	31	47-093863-003	Round Belt Pulley
7	47-090969-003	Pin Stop	19	47-092300-004	Polycord 12mm x 44 meters Lg	31	47-275748-009	2-Piece Pulley Repair Kit
8	47-093760-002	Pin Shield (7)	19	47-092300-005	Polycord 13mm x 20 meters Lg	32	47-093874-004	Clamp
8	47-091890-002	Pin Shield (2, 3, 8, 9, 10)	20	47-093547-004	Gear	33	47-094347-003	Bearing Shell
8	47-092211-002	Pin Shield (1, 6)	21	11-052039-001	Flat Washer 5.3mm	34	47-095050-003	Plastic Bearing
9	47-095609-002	Slider Only	22	11-051742-001	Locknut 5mm	35	47-090547-004	Spur Gear w/ 25mm Collar
10	11-051515-001	Socket Head Screw 6mm x 18mm	23	11-051856-001	Retaining Ring 25mm	35	47-275746-009	Two Piece Gear Kit
11	11-051520-001	Socket Head Screw 6mm x 20mm	24	47-861028-001	Shim Washer 25mm x 36mm x 1 mm	36	47-094349-001	Front Shaft Assembly
12	47-091277-002	Slider Mount	25	11-053903-000	V-Belt 13mm x 8mm x 1375mm	37	47-275730-009	Distributor Repair Kit

**POLYCORD 12MM**

The original OEM distributor belt.

- Minimal stretching for increased life and performance
- See page 31 for belt weld kits and components

**47-275804-009** – 20 meter length

**47-092300-004** – 44 meter length

**POLYCORD ROUND BELT TRIM TOOL**

Makes the trimming process painless. Simply wrap the tool around the weld bead, rotate the tool and cut the excess bead away.

**47-860009-000**

**47-860009-001** – Replacement Blades - Pkg of 2

**GS-X SHARK FIN**

Made of impact resistant material making the Shark Fin more durable..

**47-095106-001**

**POLYCORD 13MM**

Improve distributor performance with a larger diameter polycord.

- Improve pin transfer throughout the distributor
- See page 31 for belt weld kits and components

**47-092300-005** – 20 meter length

**RUBBER MOUNT**

Absorbs vibration between the elevator and shark assembly while helping to prevent wear of the assemblies.

**11-053579-000**

**SMART SHARK GUIDES**

Complete with a radius at the bed to prevent cracking.

**47-095103-001** – LH

**47-095104-001** – RH

**POLYCORD 15MM**

Minimize pins in the ball door with more power.

- Made from non-stretch high grade polyurethane
- See page 31 for belt weld kits and components

**47-024838-005** – 7 meter length

**ROUND BELT GEARED PULLEY**

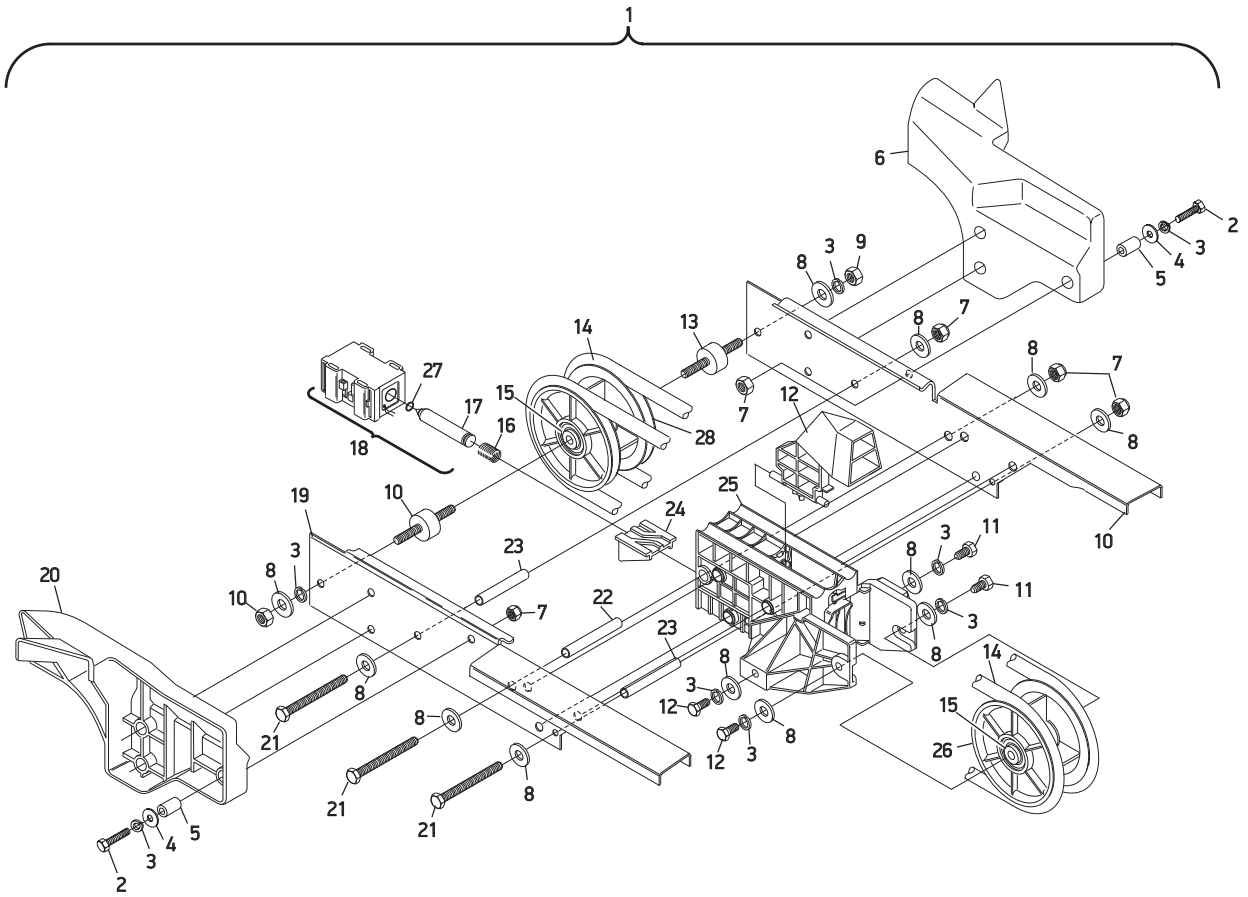
GS-X original equipment shark switch rear geared pulley assembly.

**47-095744-004**

**SOLENOID**

GS-X original equipment shark switch solenoid.

**99-060387-004**



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

1	47-095108-001	Shark Switch Assembly	11	11-051010-001	Hex Hd. Cap Screw 8mm x 20mm	21	11-051081-001	Hex Head. Screw 8mm x 100 mm
2	11-051026-001	Hex Head. Screw 8mm x 40mm	12	47-095106-001	Fin Switch	22	47-095112-004	Spacer - short
3	11-051770-001	Lock Washer 8mm	13	11-053579-000	Rubber Mount	23	47-095109-004	Spacer - long
4	11-052019-001	Flat Washer 8.4mm	14	47-092300-004	Polycord 12mm x 44 Meters Lg	24	47-095105-003	Slide
5	47-093925-004	Spacer	15	11-430007-000	Bearing	25	47-095107-003	Housing
6	47-093906-001	R.H. Pin Guide Wedge	16	99-090348-004	Spring	26	47-095744-004	Round Belt Geared Pulley
7	11-051744-001	Lock Nut 8mm	17	47-095111-004	Solenoid Plunger	27	99-090349-004	O-Ring
8	11-052006-001	Washer 8.4mm	18	99-060387-004	Solenoid Consolidated/Nex Gen	28	47-095745-004	Round Belt Pulley - Non Geared
9	11-051704-001	Hex Nut 8mm	19	47-095103-001	L.H. Guide			
10	47-095104-001	R.H. Guide	20	47-093929-001	L.H. Pin Guide Wedge			



#### OEM OVERFLOW SOCK

Improved OEM sock has a locking strap to keep socks from swinging excessively as pins exit.

- Help prevent pin and transport band wear
- Offers a reinforced bottom, slowing pin entrance onto the transport band

**47-097509-000**



#### OVERFLOW CHUTE ASSEMBLY WITHOUT SOCK

Prevent disruption in distributor overflow.

- Polyethylene design eliminates noise
- Shock mounted for durability

**47-095739-009** – LH

**47-095740-009** – RH

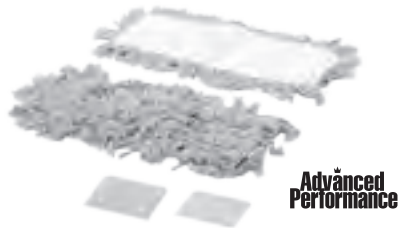


#### ADVANCED PERFORMANCE OVERFLOW CHUTE PIN WIPE FOR PLASTIC CHUTE

Improve cleanliness and performance of pins with this easy to install, long lasting and washable advanced pin wipe.

- Used on GS machines, series 406 and above, including GS-X
- Cloth fits the plastic overflow chute used on GS-X pinsetters
- Packaged 2 cloths per bag

**47-860003-000**



#### ADVANCED PERFORMANCE OVERFLOW SOCK PIN CLEANER KIT

Improve pin appearance with this easy to install and maintain pin cleaner.

- Mounting plates eliminate need for Velcro®
- Pockets on both sides of mounting plates allowing cover to be flipped when one side is dirty

**47-275812-009**

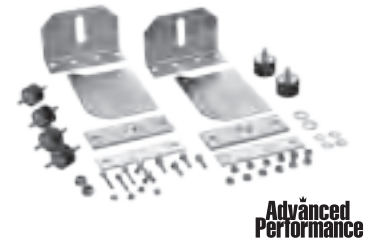


#### OVERFLOW CHUTE PIN WIPE FOR METAL CHUTE

Improve pin performance by keeping them clean with this easy to install, long lasting, and washable Pin Wipe.

- Cloth fits the metal overflow chute used on GS-X pinsetters
- Packaged one per bag

**47-092527-000**



#### ADVANCED PERFORMANCE OVERFLOW CHUTE UPGRADE KIT

Reduces stress by using cushioned mounts to secure the front and rear of the overflow chutes to the mounting locations of the pinsetter. Must be used with: L.H. Overflow Chute – 47-095738-001 and R.H. Overflow Chutes 47-095737-001. Includes all mounting hardware and instructions to upgrade older style chutes. Note: Overflow Chutes 47-095739-009 and 47-095740-009 must be replaced with the overflow chute numbers above when using this upgrade kit.

**47-275731-009**

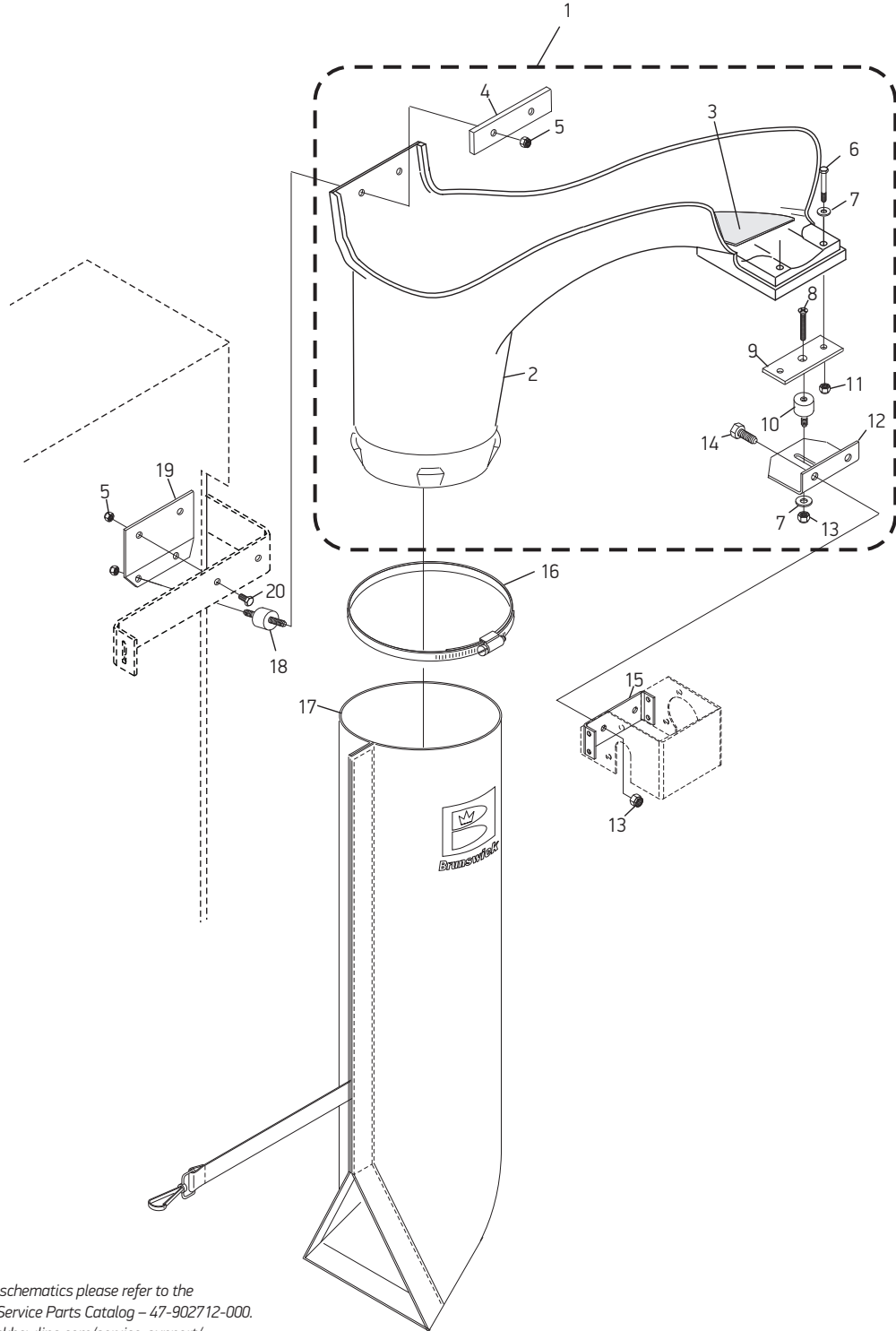


#### GS-X PIN CLEANER KIT MOP COVERS

Improve pin appearance while removing dirt from your system.

- Contains two mop covers and instructions
- Replacement mop covers for Overflow Sock Pin Cleaner Kit - 47-275812-009

**47-860012-000** – Pkg of 2



For complete schematics please refer to the  
 GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

1	47-095740-009	R.H. Chute Assembly w/out Sock	7	11-052039-001	Flat Washer 5.3 mm	15	47-093749-004	Bracket
1	47-095739-009	L.H. Chute Assembly w/out Sock	8	11-052938-001	Flat Hd. Screw 8 mm x 12 mm	16	11-603301-000	Overflow Chute Clamp
2	47-095738-001	L.H. Plastic Chute - Only	9	47-095726-004	Mounting Plate	17	47-097509-000	Socket (Black) with Brunswick logo
2	47-095737-001	R.H. Plastic Chute - Only	10	11-053588-000	Rubber Bumper 30 mm x 20 mm	17	47-092529-600	Socket - Heavy Duty (White)
3	47-860003-000	AP - Pin Wipe	11	11-051742-001	Locknut 5 mm	18	11-053587-000	Rubber Bumper 25 mm x 15mm
4	47-095727-004	Pressure Plate	12	47-095728-004	Angle Bracket	19	47-095729-004	Mounting Bracket
5	11-051743-001	Locknut 6 mm	13	11-051744-001	Locknut 8 mm	20	11-051035-001	Hex Hd. Cap Screw 6 mm x 16 mm
6	47-861001-001	R.O. Hex Hd. Cap Screw 5 mm x 25 mm (Pkg of 10)	14	11-051038-001	Hex Hd. Cap Screw 8 mm x 16 mm			



**ACCELERATOR MOTOR-208/230/380**

GS-X original equipment accelerator motor.

- Rigorously tested to assure long life
- For series 420 and below, order motor 99-076362-000

**99-030363-004**

**ACCELERATOR FLAT BELT**

Minimizes stretching to ensure long life.

**10-635127-000**

**EJOT-PLASTIC NUTS 3.5**

Keep your ball door protector plate tight with these nut plates.

- Replace loose, stripped or broken nut plates with new nuts to keep your Ball Door Protect Plate from failing prematurely

**11-055800-000**

**PROTECTOR WEDGE**

Upper Ball Door Protector Wedges.

- Missing or broken protector wedges can cause ball, pin and ball door assembly damage
- Check and replace when worn

**47-021620-002** – 7 pin side (L.H.)

**47-021619-002** – 10 pin side (R.H.)

**BALL DOOR SOLENOID**

Original equipment Ball Door Solenoid.

- Powerful solenoid made from high grade iron
- Designed to activate ball door mechanism under the highest load
- Designed housing minimizes malfunction due to dirty/oily environmental conditions
- Also used in GS Drive Frame Assembly and Sweep Release Assembly

**99-070356-004**

**TENSION SPRING (BALL DOOR)**

Stretched or weak tension springs can cause ball calls at the ball door. Replace this spring with new for optimal operation.

**47-034767-004**

**PROTECTOR PLATES**

Protects the ball doors from direct impact from pins and bowling balls.

**47-035240-001** – L.H. 10 Pin Side (Shown)

**47-035241-001** – R.H. 7 Pin Side

**ACCELERATOR NON-SLIP PLATE**

Provides a secure surface for walking and climbing on top of accelerator. Can be installed on any GS pinsetter.

**47-862932-000**

**PROTECTIVE COVER**

Used to protect the ball rods of the accelerator.

- Defective or broken protective covers can lead to scratching bowling balls
- Allows for smooth transition from the ball accelerator to the return track

- Pack of 4

**47-862787-000**

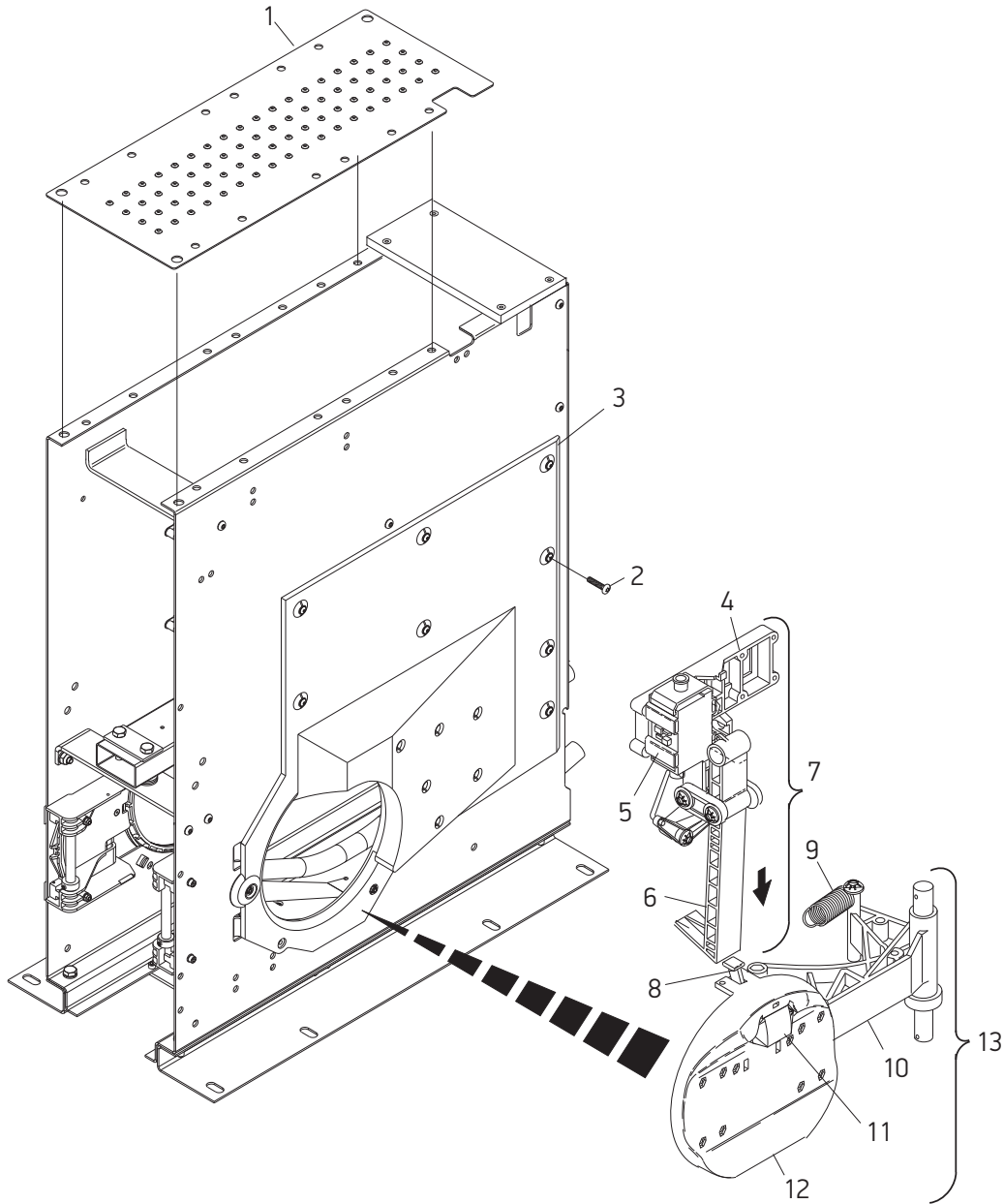
**MOUNT BUSHING FOR ACCELERATOR MOTOR**

Accelerator Motor Mount Bushing for GS series 419 and below

- Keep your accelerator belt adjusted properly and motor moving freely by replacing these bushings

**99-010123-004**





For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	47-862932-000	Accelerator Non-Slip Plate	6	47-031797-002	Locking Bolt	11	47-031056-003	LH Ball Door Key
2	11-054466-000	Plastic Fastener Screw	7	47-033558-009	RH Locking Mechanism Complete	11	47-031055-003	RH Ball Door Key
3	47-035240-001	Protector Plate, 10 pin side	7	47-033557-009	LH Locking Mechanism Complete	12	47-031054-002	Ball Door (use for RH and LH)
3	47-035241-001	Protector Plate, 7 pin side	8	47-031822-004	Lever	13	47-033556-009	RH Ball Door with Arm
4	47-031796-002	Holder	9	47-030276-004	Ball Door Arm Tension Spring	13	47-033555-009	LH Ball Door with Arm
5	99-060219-004	Solenoid Assembly	10	47-031058-001	Arm (use for RH and LH)			

### TECH TIP

If you are unable to scroll through the different modes on the keypad of the Nex Gen box, check the reset button on the Framework ball rack. The reset button may be stuck in the "pushed in" position and needs to reset to the normal position.



Advanced Performance

### ADVANCED PERFORMANCE REAR DISPLAY PACKAGE FOR GS CONSOLIDATED ELECTRONICS PINSETTERS GS-98

This was designed to allow the functions of the consolidated box to be located at the rear of the pinsetter. Comes complete with all mounting hardware and rear display for easy mounting to the elevator.

**47-861046-000**



### LCD NEX GEN PACKAGE

Direct replacement for the LCD display of the Nex Gen box. Includes wiring harness.

**47-862100-000**

### LED LIGHT FIXTURE

Fixture ONLY. Brackets or hardware not included.

**47-863001-000**



Advanced Performance

### ADVANCED PERFORMANCE NEX GEN REAR DISPLAY PACKAGE FOR GS-X

Very useful upgrade for customers to allow all functions of the Nex Gen box to be performed from the rear of the pinsetter. Mounts to the elevator of the pinsetter, mounting hardware included. Perfect for centers where the soffit wall interferes with direct access to the Nex Gen Box mounted at the front of the pinsetter.

**47-861048-403**

**11-616034-000** – Replacement Toggle Switch

**47-862877-403** – Nex Gen Firmware (v4.97.02)

**NOTE:** 2002-2003 CPU board upgrade needed when purchasing new Nex Gen Rear Display. Order 47-142736-820.



### TRANSFORMER ASSEMBLY - DOUBLE

Direct replacement for GS-X Nex Gen boxes equipped with two transformers.

**47-142692-000**



### TRANSFORMER ASSEMBLY - SINGLE

Insure you have the correct power for critical electronic functions of the GS-X pinsetter.

- Direct replacement for GS-X Nex Gen Boxes equipped with a single transformer

**47-142659-000**



### GS-X FUSES

Make sure you have the correct amp fuses at all times. This is a must have for your spare parts inventory.

- Using the incorrect fuse may lead to CPU or High voltage PCB failures
- All fuses come 5 per package

#### 3.15 Amp Fuse – 47-862854-000

Used to protect the output functions of the CPU PCB.

#### 8 Amp – Ceramic Fuse – 47-862855-000

Used on the High Voltage PCB, these fuses protect the clockwise and counter clockwise directional phases of the table motor for a pair of pinsetters.

#### .5 AMP – Slow Blow Fuse – 47-862856-000

Used on the High Voltage PCB to protect the pin light circuitry.



### EMERGENCY STOP UPGRADE KIT

Safety is the number one priority while working on or around pinsetters. This kit will add emergency stop switches and motor contactor functions to older GS-X pinsetters.

- Includes complete instructions and all parts needed to upgrade one pair of pinsetters

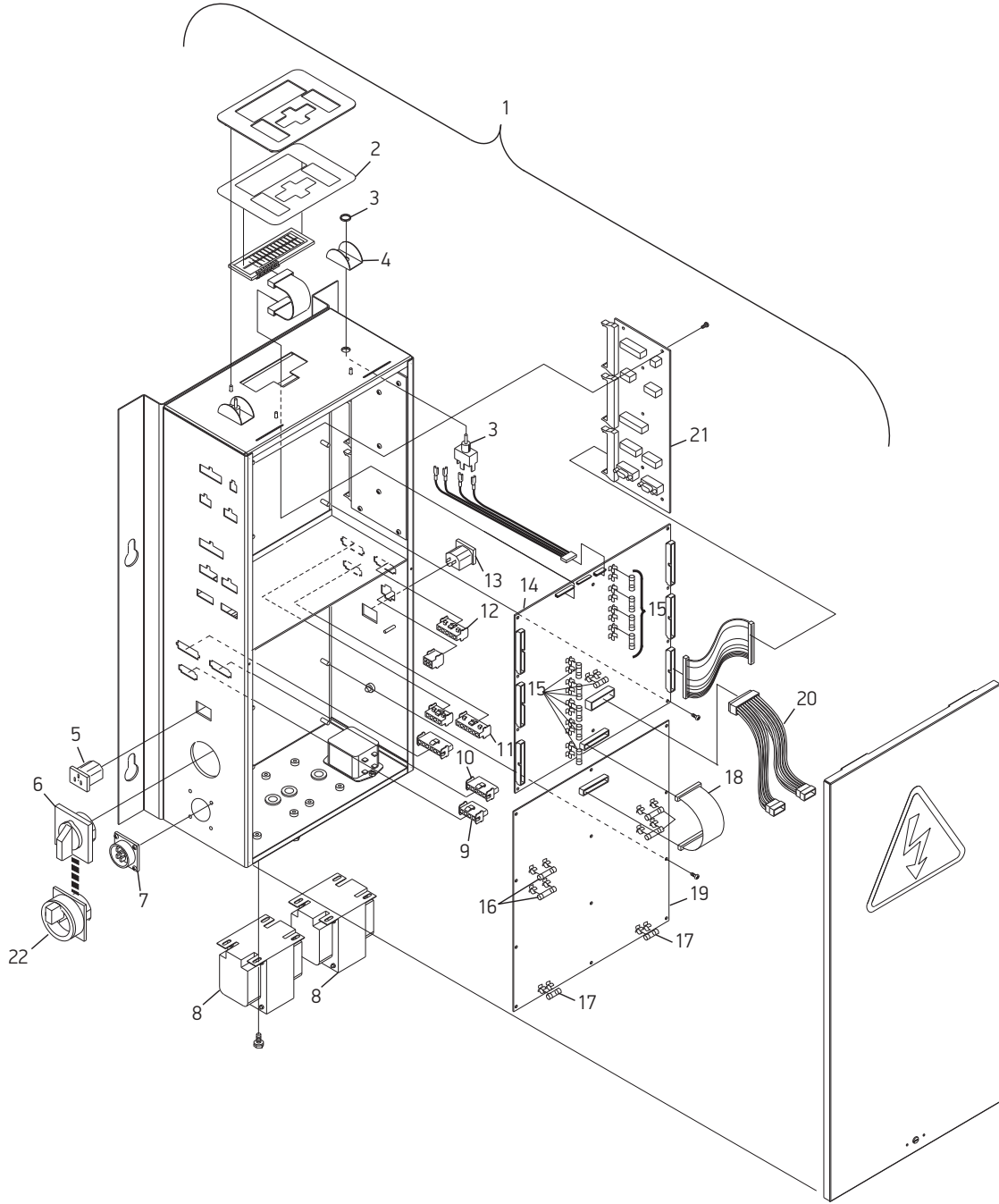
**47-862867-000**



### EMERGENCY STOP CONTACTOR

Used in conjunction with the emergency stop switches on the pinsetter, this will kill power to both pinsetters. This is a must have for your spare parts inventory for the GS-X pinsetter.

**47-142712-000**



For complete schematics please refer to the GS Pinsetter Service Parts Catalog – 47-902712-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

<b>1</b>	47-862866-404	Nex Gen Controller Assembly	<b>9</b>	47-142657-000	LH Harness Deck Power Motor Assmby	<b>16</b>	47-862855-000	Fuse 8A 250V, Fast Blow (Pkg of 5)
<b>2</b>	47-862857-000	Keyboard Membrane	<b>10</b>	47-142661-000	LH Harness Sweep Motor Power Assembly	<b>17</b>	47-862856-000	Fuse .5A, 250V, Slow Blow (Pkg of 5)
<b>3</b>	11-615511-000	ON/OFF Toggle Switch w/Nut	<b>11</b>	47-142657-010	RH Harness Deck Power Motor Assmby	<b>18</b>	47-142700-000	CPU to High Voltage Logic Cable Assembly 14'
<b>4</b>	47-142594-000	Switch Guard	<b>12</b>	47-142661-010	RH Harness Sweep Motor Power Assembly	<b>19</b>	47-862859-000	High Voltage PCB Nex Gen Controller
<b>5</b>	47-142664-000	LH Pin Light Power Cable	<b>13</b>	47-142664-010	RH Pin Light Power Cable	<b>20</b>	47-142693-000	Transformer to CPU Cable
<b>6</b>	47-142660-000	Black Power Switch/Cable (single transformer Nex Gen)	<b>14</b>	47-142736-404	CPU PCB Nex Gen Controller	<b>21</b>	47-862863-000	I/O PCB Assembly
<b>7</b>	47-142663-000	AC Power In Cable Assembly	<b>15</b>	47-862854-000	Fuse 3.15A, 250V (Pkg of 5)	<b>22</b>	11-615048-000	Lockout Power Switch - Red
<b>8</b>	47-142659-000	Harness Transformer Assembly						
<b>8</b>	47-142692-000	Transformer/Harness - Double (Dual Transformer Nex Gen)						

**POLYCORD ROUND BELT TRIM TOOL**

Makes the trimming process painless. Simply wrap the tool around the weld bead, rotate the tool and cut the excess bead away leaving a smooth surface.

**47-860009-000**

**47-860009-001** – Replacement Blades - Pkg of 2

**URETHANE (NO-BOUNCE) Mallet**

No-bounce urethane head drastically reduces rebound that can damage parts or cause personal injury. Contoured handle provides a firm, nonslip grip.

**90-750069-000**

**ELEVATOR CHAIN REPAIR KIT**

Repairs stretched chains which cause elevator jams. Kit contains tool and master link with pin.

- 47-013871-004 Master link with pin only
- 47-013872-004 Elevator chain break tool only

**47-013873-004**

**BELT WELD KITS , IRONS AND ACCESSORIES**

This kit contains all the items needed to repair poly cord belts.

- Adjustable thermostat to keep iron calibrated at optimal temperature
- Kits contain belt welding iron, belt welding clamp, and belt cutter. Also available separately:

**47-862770-000** Belt Welding Clamp

**47-277134-009** Belt Welding Kit 115V 50/60Hz

**47-277135-009** Belt Welding Kit 230V 50/60Hz

**47-097132-000** Belt Welding Iron - 115V 50/60Hz

**47-097133-000** Belt Welding Iron - 230V 50/60Hz

**47-097136-000** Teflon Heat Plt, PQ-18 Belt Welder

**47-093876-004** Belt Cutter

**BELT WELDING INSTALLATION TOOL**

Makes it easy to properly tension belts while in place on the pinsetter. Instructions included.

**47-860001-000**

**GAUGE BLOCK**

Perform GS adjustments with this easy to use all-in-one tool. Use for pin detector, setting table lowest position, setting table highest position, transport band tension spring, pin count switch, shovel guide, distributor guide wedge to elevator adjustments and more.

**47-900012-000**

**SPUD WRENCH**

This tool combines 13mm and 17mm twelve point sockets in one tool. Use one tool for GS pinsetter maintenance.

**47-900011-000**

**METRIC TOOL KIT**

All the metric tools needed to maintain the GS pinsetter.

**47-273865-009**



**NEW**

**GS PINSETTER TOUCH-UP PAINT**

Lacquer based paint which comes with a "fan" type nozzle for better coverage.

**47-860021-000** – 12 oz. (Grey)



**GS ELECTRICAL TOOL KIT**

This kit contains all the special tools required to remove and replace all the cable terminals associated with the GS-X pinsetter. Includes: Molex® extractor, Molex Crimper, Miller Cutter/Stripper, Round Extractor, Digital Multi-meter, Molex Terminals, Female Mini Fit Terminals, Pin Terminals, and other extraction tools.

**47-862804-000**



**CABLE TERMINAL TOOLS**

Required tools for repairing GS pinsetter cable connectors.

**57-900102-000** – Molex round extractor

**57-900103-000** – Molex Crimper

**57-900108-000** – Miller Cutter/Stripper



**GS PREVENTATIVE MAINTENANCE WALL CHART**

Reusable 24" x 36" chart shows Brunswick's recommended preventative maintenance schedule for daily, weekly, monthly, quarterly, bi-yearly, and yearly items.

- Allows for recording of progress using water-soluble markers.
- Marks wipe off easily using a damp cloth.

**47-902401-000**



**TERMINAL-37 PIN ON SETTING TABLE**

**11-615101-000** – Male



**BALLAST**

For 230 volt Pinlight.

**47-226294-004** – OEM Replacement



**NON-LITHIUM GREASE - 14.5 OZ.**

Recommended grease for GS pinsetters.

- Lubricate parts appropriately
- For use on non-metal parts

**11-676361-000**



**NYOGEL 788 LUBRICANT**

Prevent damage to plastic parts by using the correct type of lubricants.

- Used to lubricate pin station pivot points in the distributor area or anywhere plastic part pivot points need lubrication
- Also used in old style pin ball wizard motors with plastic internal gearing

**11-676308-000**



**CHAIN LUBE**

Keep chains lubricated and rust free

**G34-205116-000**



**A•2 PINSETTER PARTS**





**OEM PLUS™ DECK CHUTES**  
See page 64 for complete line.  
12-200900-500 (shown)



**SCISSOR DECK CABLE ADJUSTMENT TOOL**  
See pages 62 and 97 for additional information.  
12-860010-000



**BALL DETECT ASSEMBLY - SINGLE**  
See page 112 for additional information.  
57-863670-000



**BALL STOP**  
See page 99 for additional information.  
47-277455-009



**FRAMEWORX CONSOLE FLASH DRIVE KIT**  
See page 112 for additional information.  
57-863397-400



**BALL WHEEL WIPER KIT WITH CLOTHS**  
See page 78 for additional information.  
Cloths only (2/pkg) – 12-862054-000.  
12-862055-000



**CLUTCH FACING RIVET SET**  
See page 99 for additional information.  
12-700111-091

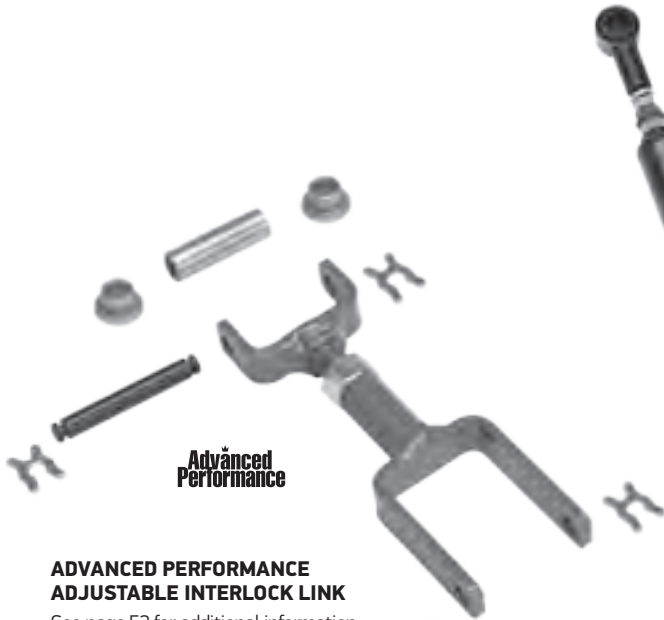


**A•2 SCISSOR DECK STUD WRENCH**  
See page 97 for additional information.  
12-860009-000



**UNIVERSAL BALL WHEEL GUARD**  
See page 78 for additional information.  
90-400840-600





**Advanced Performance**

**ADVANCED PERFORMANCE ADJUSTABLE INTERLOCK LINK**  
See page 52 for additional information.  
12-862034-000



**Advanced Performance**

**ADVANCED PERFORMANCE SMOOTH DROP RAKE SHOCK**  
See page 72 for additional information.  
12-252343-000



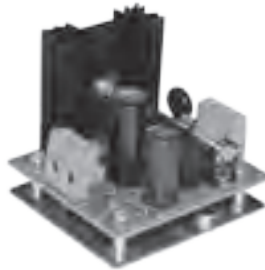
**Advanced Performance**

**ADVANCED PERFORMANCE PIT CUSHION LINKAGE AND ALIGNMENT KIT**  
See page 66 for additional information.  
12-862026-000



**Advanced Performance**

**ADVANCED PERFORMANCE ADJUSTABLE "Y" SWITCH**  
See page 88 for additional information.  
12-862033-000



**Advanced Performance**

**ADVANCED PERFORMANCE MAGNETIC CLUTCH VOLTAGE REGULATOR**  
See page 90 for additional information.  
Replacement Fuses (2/pkg) – 12-862124-000  
12-862030-000



**Advanced Performance**

**ADVANCED PERFORMANCE 3A RESETTABLE CIRCUIT BREAKER**  
See page 90 for additional information.  
12-862022-000



**Advanced Performance**

**ADVANCED PERFORMANCE 1A RESETTABLE CIRCUIT BREAKER**  
See page 90 for additional information.  
12-862947-000

## RECENT PARTS DESIGNED BY MECHANICS FOR MECHANICS

Through the years many Brunswick parts have been designed or influenced by mechanics. The influences of mechanics can still be found in many of our parts today. The following is just a sampling of some recent parts designed by mechanics.



BRUCE MCMARTIN DESIGN

### ELECTRONIC FIVE PIN INDEXING KIT

See page 50 for additional information.

12-862028-000



BRUCE MCMARTIN DESIGN

### ADJUSTABLE INTERLOCK LINK

See page 52 for additional information.

12-862034-000



BRUCE MCMARTIN DESIGN

### ADVANCED PERFORMANCE TURRET FRAME REINFORCEMENT

See page 56 for additional information.

12-862009-000



BRUCE MCMARTIN DESIGN

### ADVANCED PERFORMANCE ANTI-INVERSION BLOCK

See page 72 for additional information.

12-862012-000



KEVIN HIZAR DESIGN

### ADVANCED PERFORMANCE SPINNING BALL ELIMINATOR II (SBE II)

See page 78 for additional information.

12-862250-000 – Roller Assembly Only



KEVIN HIZAR DESIGN

### ADVANCED PERFORMANCE SBE II WITH ARM

See page 78 for additional information.

12-862262-000 – SBE II with Arm



BRUCE MCMARTIN DESIGN

**ADVANCED PERFORMANCE CLUTCH  
LEVER REINFORCEMENT SUPPORT**

See page 38 for additional information.  
12-862008-000



BRUCE MCMARTIN DESIGN

**SCISSOR DECK CABLE ADJUSTMENT TOOL**

See page 97 for additional information.  
12-860010-000



BRUCE MCMARTIN DESIGN

**ADVANCED PERFORMANCE  
CAM FOLLOWER LIVE ROLLER**

See page 58 for additional information.  
12-862252-000



BRUCE MCMARTIN DESIGN

**ADVANCED PERFORMANCE MOVING  
DECK CAM FOLLOWER SUPPORT**

See page 58 for additional information.  
12-862010-000



JOHN COLE DESIGN

**ADVANCED PERFORMANCE PIT CUSHION  
LINKAGE AND ALIGNMENT KIT**

See page 66 for additional information.  
12-862026-000



KEVIN HIZAR DESIGN

**ADVANCED PERFORMANCE  
HIZAR GATE**

See page 86 for additional information.  
12-862251-000



KENNEY ADAMS DESIGN

**CABLE SHAFT BEARING REMOVAL TOOL**

See page 98 for additional information.  
12-700135-000



BRUCE MCMARTIN DESIGN

**BALL WHEEL WIPER KIT WITH CLOTHS**

See page 78 for additional information.  
12-862055-000



### CLUTCH YOKE AND BEARING ASSEMBLY

Ensure positive 360° cycling. Comes complete with oilite bushings and special grooved steel pins that will not come out and destroy clutch shoes.

**12-100370-000**



### GEAR BOX OIL PAN

3" wider and 4" longer than the original.

- Includes removable collection jar
- Helps keep oil streaks off of the pit curtain

**12-100316-000**



### ADVANCED PERFORMANCE CLUTCH LEVER REINFORCEMENT SUPPORT

Prevent or repair clutch lever failure with this easy-to-install support kit.

- Includes heavy duty bearing with a full 1/4-20 hex socket head cap screw for maximum durability
- Installs on Clutch Lever Assembly 12-100486-000
- Designed by Mechanic Bruce McMartin

**12-862008-000**



### ADVANCED PERFORMANCE CLUTCH LEVER SUPPORT KIT

Do away with unnecessary recycles caused by a clutch that does not disengage properly.

- Eliminates excessive clutch face wear and vibration that causes wear on other parts
- Drastically reduces clutch adjustments and extends the life of clutch shoes
- Eliminates the need for oversized clutch shoes

**12-862138-000**



### CLUTCH LEVER ASSEMBLY

Avoid unnecessary recycles caused by assemblies with oilite bearings.

- Precision machined lever provides the press fit necessary to prevent shaft movement

- To order individual parts:  
Bearing – 11-435501-000  
Pin – 12-100487-000  
Lock Nut – 11-170004-001

**12-100486-000**



### CLUTCH SHOE

Extend the working life of worn clutch drive discs with correctly sized shoes.

- Be sure to replace in pairs
- Fine grain steel precisely ground to exact dimensions

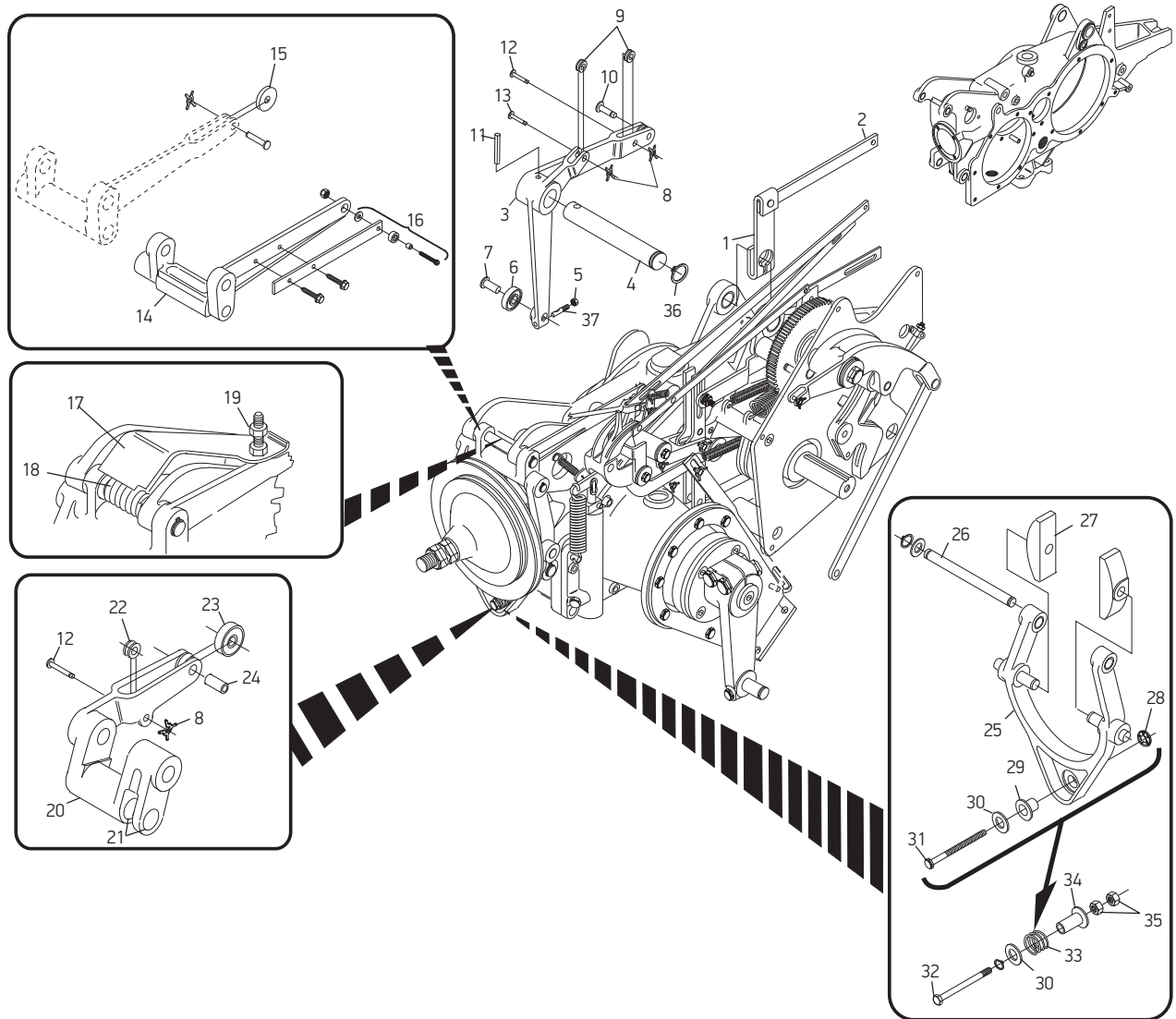
**12-100146-000**



### YOKE REPAIR KIT

Restore clutch adjustability and extend yoke life with this money-saving repair kit. Kit comes complete with fasteners and is quick and easy to install.

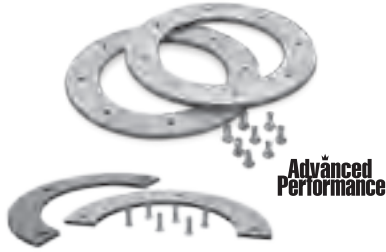
**12-860672-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-100392-000	Lever	14	12-100486-000	Clutch Lever Assembly	28	11-532022-000	Grip Ring
2	12-100064-000	Bar	15	11-433000-000	Ball Bearing	29	12-102179-000	Bushing
3	12-100242-091	Deck Hook Cam Lever Assembly	16	12-862008-000	AP - Clutch Lever Support	30	12-100170-012	Washer 1"
3	12-100178-091	Deck Hook Cam Lever	17	12-862138-000	AP - Clutch Lever Support Kit	30	11-190018-001	Flat Washer 1/2"
4	12-100072-000	Shaft	18	12-102178-000	Spring	31	12-102180-000	Special Hx Hd Sckt Cap Screw 1/4-28 x 3"
5	11-176000-001	Keps Nut	19	11-010139-001	Hx Hd Slotted Screw 1/4-20 x 1-1/4"	32	12-100257-000	Hx Hd Sckt Cap Screw 4"
6	11-435001-000	Ball Bearing	20	12-100250-000	Clutch Cam Lever Assembly	33	12-100091-000	Compression Spring
7	12-100069-000	Stud	21	11-420019-000	Sleeve Oilite Bearing	34	12-100092-000	Spring Guide
8	11-230000-001	X-Washer 3/32	22	10-376010-000	Spring Roller	35	11-125201-001	Hex Jam Nut 1/4-28
9	10-376010-000	Spring Roller	23	11-435001-000	Ball Bearing	36	11-530027-000	External Retaining Ring
10	12-100166-027	Pin .2495 x .820	24	12-100074-000	Bearing Shaft	37	12-100069-001	Pin Clamp
11	11-360568-000	Spirol Pin 1/4 x 1-1/2"	25	12-100370-000	Yoke and Bearing Assembly			
12	12-100166-022	X-Washer Pin	26	12-100168-003	Pin			
13	12-100166-024	X-Washer Pin	27	12-100146-000	Clutch Shoe			



### ADVANCED PERFORMANCE HEAVY DUTY CLUTCH FACING

Offering 3 to 5 times the life of conventional facings, this 3-layer facing increases the life of Gear Box clutch parts.

- Highly durable Kevlar® top layer
- Under layers are designed to indicate if replacement is needed before an expensive clutch drive disk is ruined

**12-862864-603** – Full circle for Clutch Pulley

**12-862864-605** – Semi-circle for Clutch Drive Disc



### CLUTCH FACING REPLACEMENT KITS

Brunswick's specially designed clutch facings are custom formulated.

- Highest grade, non-asbestos friction material designed to resist wear and provide the longest life in the industry
- 11-301001-001: Rivet, 3/16" - 3/8", for series number 7,598 and below
- 11-301002-001: Rivet, 3/16" - 1/2", for series number 7,599 and up
- Use the exclusive clutch facing rivet set tool (12-700111-091) for convenience and perfect installation every time (pg. 99)

**12-862864-004** – Series 7,598 and below

**12-862864-005** – Series 7,599 and up

**12-862864-003** – Series 24,001 and up



### CLUTCH PULLEY ASSEMBLY

**12-860630-000**



### COMPLETE CLUTCH PULLEY AND BEARING ASSEMBLY

Interchangeable with the original equipment clutch pulley.

Bearing bushing design ensures a minimum 1,000 lbs. of axial pulling force eliminating slippage

**12-860717-000**



### CLUTCH PULLEY BEARING ASSEMBLY

Complete assembly fits Brunswick's Clutch Pulleys (12-860630-000 and 12-860717-000).

**12-860716-000**



### CLUTCH DRIVE DISC ASSEMBLY

Eliminate vibration and extend worm shaft spline life with this precision balanced clutch drive disc.

- Universal spline fits Model A/A•2, and Japanese pinsetters
- Maximum thickness at friction surfaces for long life

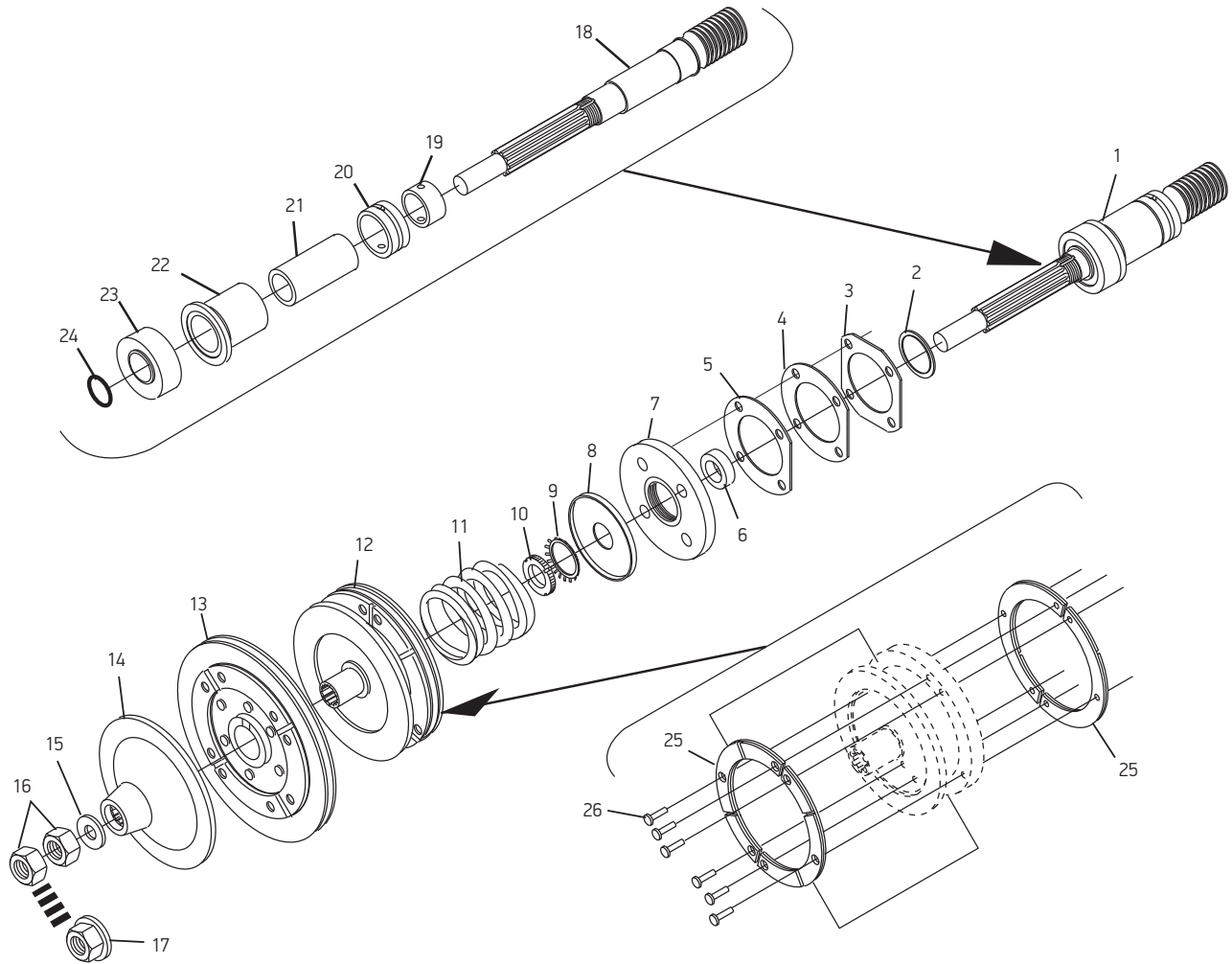
**12-860613-000**



### WORM SHAFT OIL LEAK REPAIR KIT

Solve oil-leaks with replacement seals and gaskets to fit every machine. Includes worm shaft assembly 12-860172-000 and complete instructions.

**12-860603-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-860172-000	60:1 Worm Shaft Assembly	11	12-100090-000	Compression Spring	19	11-450200-000	Ball Bearing
2	11-625501-000	O-Ring	12	12-860613-000	Clutch Drive Disc Assembly	20	11-450100-000	Ball Ring and Roller Bearing
3	12-100391-000	Gear Box Housing Gasket	13	12-860717-000	Clutch Pulley Assembly	21	12-100185-002	Spacer
4	12-100381-002	Shim .005"	13	12-860716-000	Clutch Bearing Assembly	22	12-100066-000	Spacer
5	12-100381-003	Shim 0.010"	13	12-860630-000	Clutch Pulley Assembly	23	11-432002-000	Ball Bearing
6	12-100185-003	Spacer	14	12-860626-000	Clutch Drive Disc	24	11-625501-000	O-Ring
7	12-100477-000	Bearing Retainer	14	11-350456-001	Drive Pin 1/4 x 7/8"	25	12-862864-605	AP - Clutch Face Disc
8	12-100058-000	Spring Disc	15	10-191562-000	Washer 25/32	25	12-862864-005	Clutch Face Kit
9	11-231005-001	AFBMA Standard Lockwasher	16	11-125115-001	Hex Nut 3/4-16	25	12-862864-004	Clutch Face Kit
10	11-160005-001	AFBMA Standard Locknut	17	11-131516-000	Flange Nut 3/4-16	26	11-301002-001	Rivet 3/16-1/2"
			18	12-860171-000	60:1 Worm Shaft	26	11-301001-001	Rivet 3/16-3/8"



**RAKE CRANK HOUSING KIT**

Eliminates oil leaks and improper rake crank housing action caused by a faulty rake crank housing.

- Precision high-strength die cast aluminum
- Kit reduces oil requirements from 1-1/5 quarts in the original-style sandcast housings to just 24 ounces
- Includes support plate, bearing, retainers, spacers and shimming gaskets to properly align the housing with the worm gear
- Pin for Rake Crank Housing Kit  
12-100169-008

**12-860633-000**

**1:1 GEAR BOX COVER ASSEMBLY**

Protect your gear box and detector with this industry standard cover assembly.

- Includes 1:1 cover, 1:1 gear, 1:1 shaft, detector mounting plate, moving deck and scissor cam, extended cycle cams, detector drive gear and a complete set of hardware

**12-860065-000**

**RAKE LIFT CAM CONVERSION KIT**

Eliminate 90° over-travel on the Model A pinsetter. Upgrade to the A•2 style rake lift cam and improve automatic scoring while speeding up bowling.

- Cam surfaces are precision machined to ensure proper lifting of the rake
- Surfaces are hardened to ensure compatibility with cam follower and long part life
- To order separate parts:  
Link only – 12-102033-000  
Pin only – 12-100166-005

**12-860578-000**

**1:1 REBUILD KIT**

Eliminates oil leaks and worn bearings in a 1:1 that can lead to erratic deck and rake movement.

- Includes all hardware for rebuilding, repairing and installing the 1:1 assembly on any model A or A•2 pinsetter

**12-862859-000**

**60:1 WORM SHAFT ASSEMBLY**

Contains all parts required for a full worm shaft replacement job including the oil seal kit 12-860603-000, for all serial number machines series 62,100 and up. Factory-assembled unit saves installation time. Thread size is 3/2inch.

**12-860172-000**

**WORM WHEEL 60:1**

Designed for maximum output torque.

- Constructed of tough chill-casted Bronze alloy for exceptional durability and high-tensile strength
- Worm wheel teeth, keyway and shaft are precision machined to extremely close tolerances and checked for perfect fit
- For machines equipped with the 27:1 Worm Gears, order 12-100902-002

**12-100174-002**

**27:1 WORM SHAFT ASSEMBLY (NO LONGER AVAILABLE)**

To convert a 27:1 Worm Shaft to a 60:1, refer to Service Bulletin SB17-1 on [brunswickbowling.com](http://brunswickbowling.com)

**CABLE AND TUBE ASSEMBLY**

Don't endanger your pinsetter because of a worn-out control cable and tube assembly.

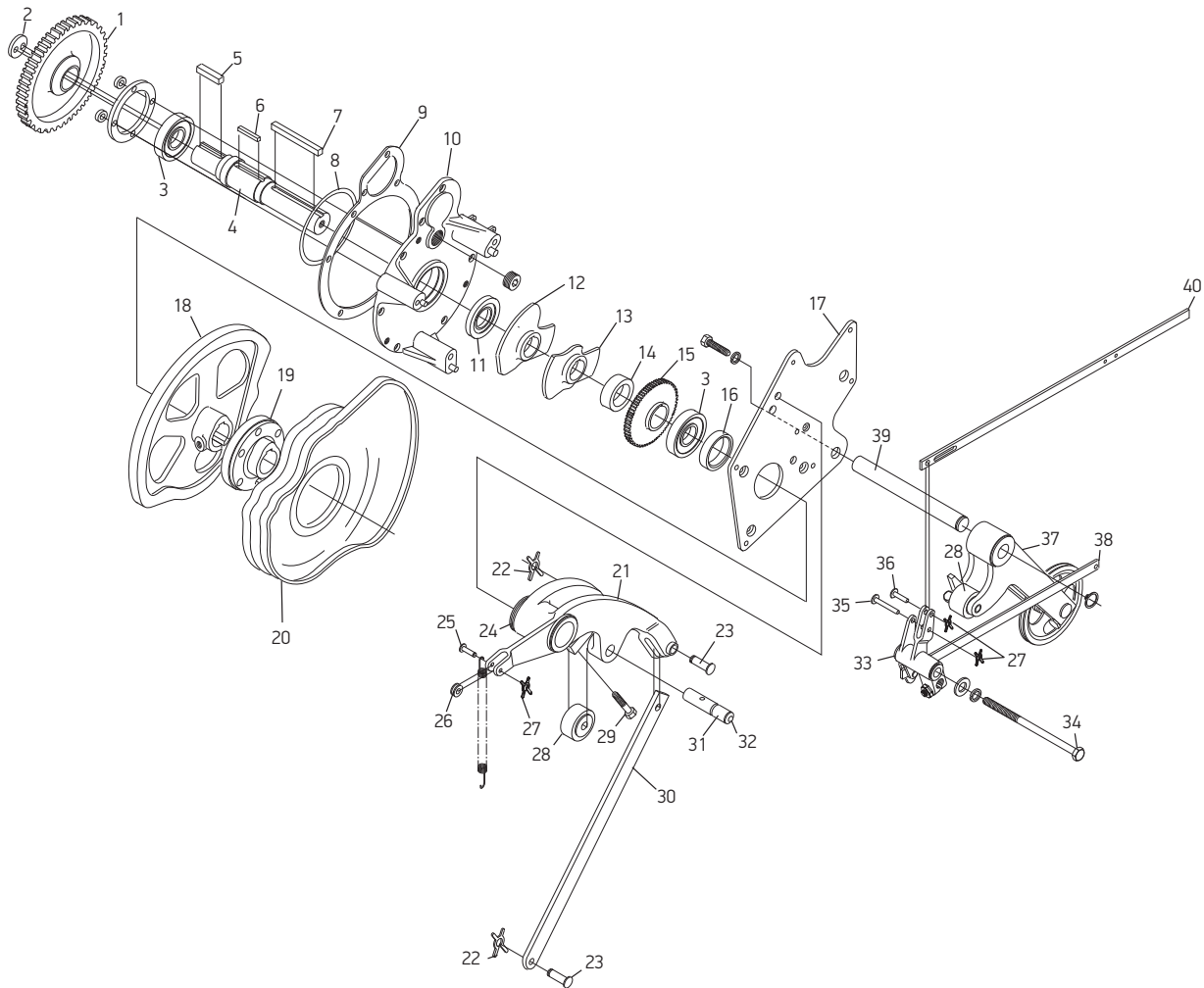
**12-100281-000**

**PIN ASSEMBLY**

Keep your moving deck cam follower in top shape with this OEM cam follower pin. Includes push in ball to allow for proper lubrication to the moving deck cam follower bearing.

**12-100306-000**

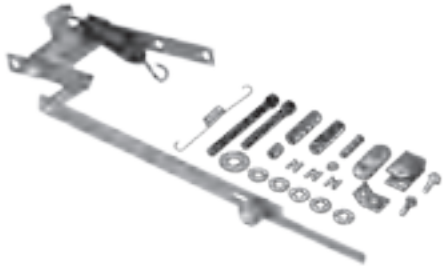




For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

<b>1</b>	12-100140-000	Spur Gear	<b>18</b>	12-102794-000	Scissor/Moving Deck Cam (equip. with Scotch Yoke)	<b>31</b>	12-100305-000	Pin Assembly
<b>2</b>	12-100223-000	Washer	<b>18</b>	12-100828-002	Scissor/Moving Deck Cam (equip. with Lowering Link)	<b>32</b>	11-280002-000	Grease Fitting Drive
<b>3</b>	11-430011-000	Ball Bearing	<b>19</b>	12-100045-000	Rake Cam Hub	<b>33</b>	12-100236-000	Starter Bellcrank Assembly
<b>4</b>	12-100130-000	Shaft	<b>20</b>	12-860578-000	Rake Cam Conversion Kit	<b>33</b>	12-102236-000	Starter Bellcrank Assembly
<b>5</b>	12-100187-007	Square Key	<b>21</b>	12-100365-000	Scissor	<b>33</b>	11-421011-000	Bearing .502 ID x .627 OD
<b>6</b>	12-100164-000	Rectangular Key	<b>21</b>	11-420038-000	Bearing .3135 ID x .4395 OD	<b>33</b>	11-421092-000	Flanged Bronze Bearing
<b>7</b>	12-100187-008	Square Key	<b>22</b>	12-100166-021	X-Washer Pin	<b>34</b>	12-100441-000	Special Hex Head Bolt
<b>8</b>	11-625530-000	O-Ring	<b>24</b>	11-421109-000	Flanged Oilite Bearing	<b>35</b>	12-100166-019	X-Washer Pin
<b>9</b>	12-100339-000	L.H. Gear Box Cover Gasket	<b>25</b>	12-100166-006	X-Washer Pin 7/8 x .187	<b>35</b>	12-150158-012	X-Washer Pin
<b>10</b>	12-860628-002	Gear Box Cover Assembly	<b>26</b>	10-376010-000	Spring Roller	<b>36</b>	12-100166-005	X-Washer Pin
<b>11</b>	12-100088-000	Oil Seal	<b>27</b>	11-230000-001	X-Washer 3/32	<b>37</b>	12-100313-000	Moving Deck Cam Lever
<b>12</b>	12-100122-000	Extended Cycle Cam	<b>28</b>	11-450301-000	Ball Bearing	<b>37</b>	11-421109-000	Flanged Oilite Bearing
<b>13</b>	12-100123-000	Cam	<b>29</b>	11-001068-001	Hx Hd Cap Screw 10-24 x 1-1/2	<b>37</b>	12-100363-000	Link
<b>14</b>	12-102123-000	Spacer	<b>30</b>	12-100219-000	Cam Lever Link	<b>38</b>	12-102363-000	Link
<b>15</b>	12-100068-000	Drive Gear				<b>39</b>	12-100104-000	Shaft
<b>16</b>	12-100185-004	Spacer				<b>40</b>	12-100040-004	Link
<b>17</b>	12-100207-000	Mounting Plate						



### TURRET AND DECK JAM KIT

Avoid breaking expensive pinsetter parts by installing this machine-saving safety kit.

- When a deck jam occurs, the machine shuts off instantaneously with no coasting of the gear box
- Immediate disengagement of the clutch prevents pressure build-up and unnecessary wear
- Reduces expensive downtime and maintenance by eliminating breakage of a 1:1 cover plate, shaft and spotting fingers

**12-862122-000**



### OUT-OF-RANGE STOP LINK

Prevent a bent link from interfering with proper out-of-range detection.

- Link is flat and straight to prevent binding and interference with nearby parts
- Spring hook is securely riveted to prevent it from coming off

**12-100337-000**



### STARTER BELLCRANK ASSEMBLY

Replace worn starter bellcranks with OEM cast part to eliminate triggering problems.

**12-102236-000** – for Model A•2 pinsetter

**12-100236-000** – for Model A pinsetter



**Advanced Performance**

### ADVANCED PERFORMANCE CLUTCH RESET LEVER ASSEMBLY MODEL A•2

Avoid pinsetter recycling without full yoke design.

- High-strength assembly will not twist which can cause improper clutch actuation
- Designed for Model A•2 pinsetters
- To order individual parts:  
 Bearing – 11-434000-000  
 Stud – 12-102443-000  
 Washer – 11-191532-000  
 Pin – 12-100166-019  
 X - Washer – 11-230000-001  
 Roller – 12-100030-002  
 Keps Nut – 11-176000-001  
 Rivet Pin – 12-100493-002

**12-102176-000**



### LINK

Replace worn cycle solenoid links for better triggering. Package of 5.

**12-102363-000** – for Model A•2 pinsetter

**12-100363-000** – for Model A pinsetter



**Advanced Performance**

### ADVANCED PERFORMANCE CLUTCH RESET LEVER ASSEMBLY MODEL A

Prevent unnecessary pinsetter recycling with this high strength assembly.

- Designed for Model A pinsetters
- To order individual parts:  
 Stud Bearing – 11-436001-000  
 Stud Bearing Radial – 11-437000-000  
 Washer – 12-100170-019  
 Lockwasher – 11-195010-001  
 Hex Nut – 11-125005-001  
 Spacer – 12-100170-021  
 Spring Pin – 12-100115-003  
 X - Washer Pin – 12-100166-019  
 X - Washer – 11-230000-001  
 Roller – 12-100030-002

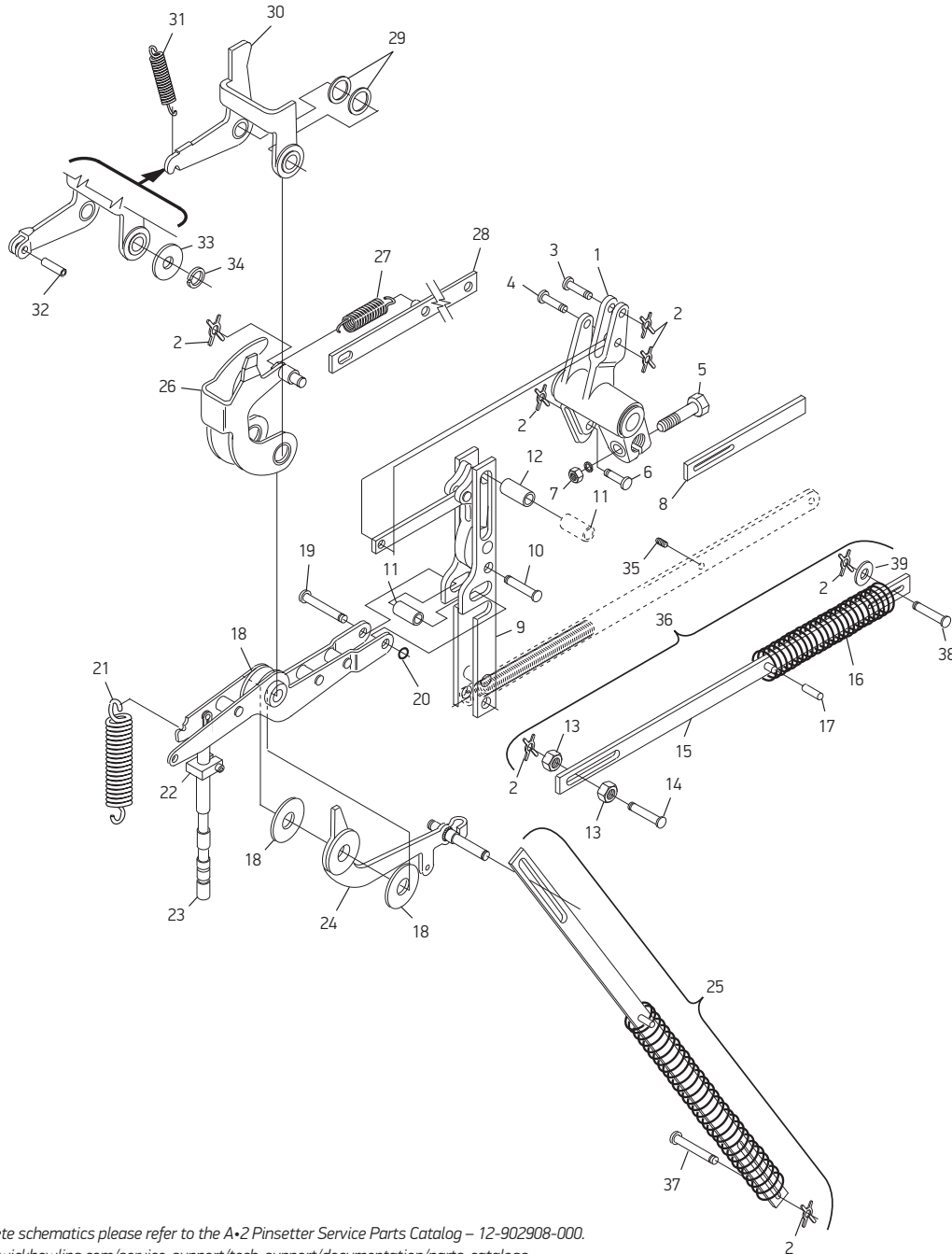
**12-100176-002**



### LEVER ASSEMBLY

Having cycling problems? Check for loose rivets or wear and replace today.

**12-100465-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-100236-000	Starter Bellcrank Assembly, A	13	11-125200-001	Hex Jam Nut 1/4-20	26	11-420059-000	Bearing .5025 ID x .629 OD
1	12-102236-000	Starter Bellcrank Assembly, A•2	14	12-100166-025	X-Washer Pin	27	12-100105-000	Tension Spring (Pkg. Of 2)
2	11-230000-001	X-Washer 3/32	15	12-100903-000	Pin Detector Link	28	12-100337-000	Out-of-Range Link Assembly
3	11-345312-000	Roll Pin 3/16 x 1"	16	11-345310-001	Roll Pin 3/16 x 7/8"	29	12-100338-002	Spacer
3	12-100166-005	X-Washer Pin	17	12-100905-000	Spring	29	12-100338-003	Spacer
4	12-150158-012	X-Washer Pin	18	12-100298-000	Spacer	30	12-100495-000	Clutch Actuator Lever
4	12-100166-019	X-Washer Pin	19	10-229453-000	O-Ring Pin	31	12-100296-000	Tension Spring
5	11-001265-001	Hx Hd Cap Screw 5/16-18 x 1-1/8"	20	11-625538-000	O-Ring	32	11-345302-001	Roll Pin 3/16 x 3/8"
6	12-100166-004	X-Washer Pin	21	12-100043-000	Tension Spring	33	12-100170-012	Washer
7	11-125009-001	Hex Nut 5/16-18	21	12-102043-000	Spring	34	11-195014-001	Lockwasher 1/4
8	12-100363-000	Link – Model A pinsetter	22	12-100050-000	Stop Collar	35	11-345304-000	Roll Pin 3/16 x 1/2"
8	12-102363-000	Link – Model A•2 pinsetter	23	12-100093-000	Plunger (N.A.)	36	12-862868-000	Pin Detector Link Assy.
9	12-100025-000	Clutch Actuator Link	24	12-100708-000	Clutch Release Lever Assembly	37	12-100166-007	Pin
10	12-100166-013	Pin	24	11-421011-000	Bearing .502 ID x .627 OD	38	12-100166-008	Pin
11	12-100030-002	Roller	25	12-862867-000	Clutch Release Lever Link Assy.	39	11-190006-001	Plain Washer
12	12-100030-005	Roller	26	12-100437-000	Out-of-Range Lever Assembly			

**SCOTCH YOKE PLATE**

Accurately machined to ensure smooth harmonic movement with the T-track (12-102815-000).

- High-strength steel plate won't break or bend, guaranteeing sure and steady deck lifting and lowering
- Upgrade kit for Scotch Yoke Bearing Stud 12-862073-000 includes one each of:
  - Spacer – 12-102753-000
  - Bearing Stud – 12-102754-000
  - Hex Head Bolt – 11-001384-001
  - Flathead Hex Soc. Screw – 11-007384-001
  - Lockwasher – 11-195016-001
  - Bearing-Cam Follower – 11-450101-000
  - Countersunk Washer – 10-193013-000
  - Spacer – 10-385529-000

**12-102816-000**

**GASKET**

When removing any gear assemblies be sure to install new bolt gaskets on your mounting hardware to eliminate leaks.

**12-100344-002**

**OIL SEAL**

2:1 Clutch cam seal.

- When replacing a 2:1 assembly, always replace this seal for the clutch cam spacer
- Check clutch cam spacer part 12-100185-007 for groove worn in it by old seal. Replace if worn

**11-625005-000**

**DECK LIFT HOOK**

The deck lift hook controls the lowering and raising of your deck assembly.

- A worn deck lift hook can cause expensive damage to pinsetters if the hook slips off the lift pin, allowing the deck to come crashing down
- Make sure you replace worn hooks before this happens
- Order 11-360619-000 Spiral Pin when ordering your Deck Lift Hook

**12-100832-000**

**ROLLER BEARING**

Don't let a bearing freeze up and scar a bearing stud. Keep properly maintained bearings on your pinsetter.

**11-450101-000** – Scotch Yoke Bearing

**11-481030-000** – Lowering Link Bearing

**OIL SEAL – IMPROVED 1/2" WIDTH**

2:1 Cover seal.

- Replace this seal when rebuilding your 2:1 assembly
- Reseal the 2:1 assembly and use these for complete sealing:
  - Oil Seal – 11-625005-000
  - R.H. Gear Box Cover Gasket – 12-100340-000
  - Copper Gasket – 12-100344-002

**11-625003-000**

**DECK LOWERING LINK ASSEMBLY**

Replaces old-style, forged deck lowering link.

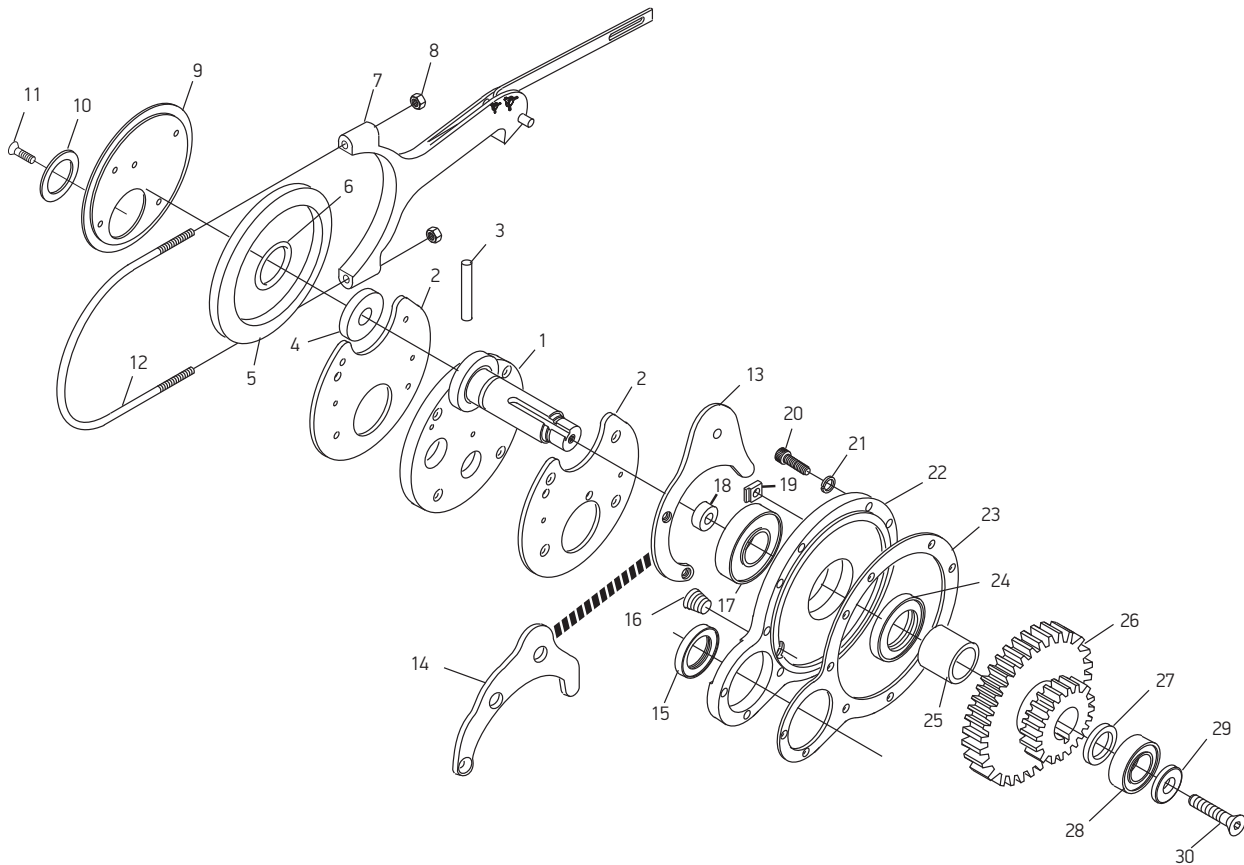
- Used with Crank Pin – 12-100220-000
- Available replacement parts:
  - Bearing – 11-481030-000
  - U-Bolt – 12-100506-000
  - Ring – 12-100504-000

**12-100503-000**

**R.H. GEAR BOX COVER GASKET**

When rebuilding a 2:1 do not forget to install a new cover gasket to eliminate leaks.

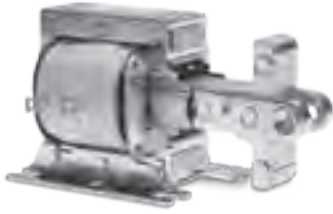
**12-100340-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

<b>1</b>	12-862185-000	Deck Lift Crank	<b>12</b>	12-100282-000	Deck Hook U-Bolt	<b>20</b>	11-005263-001	Hx Hd Sckt Cap Screw 5/16-18 x 7/8"
<b>2</b>	12-100898-000	Cover	<b>13</b>	12-100387-000	Deck Lift Hook Cam (machines < 90,000)	<b>21</b>	12-100344-002	Gasket
<b>3</b>	12-100457-000	Felt Wick	<b>14</b>	12-100831-000	Deck Lift Hook Cam (machines > 90,000)	<b>22</b>	12-100177-000	Gear Box Cover
<b>4</b>	12-100458-000	Felt Pad	<b>15</b>	11-625001-000	Oil Seal	<b>23</b>	12-100340-000	R.H. Gear Box Cover Gasket
<b>5</b>	12-100283-000	Eccentric	<b>16</b>	11-625005-000	Oil Seal	<b>24</b>	11-625003-000	Oil Seal
<b>6</b>	12-100290-000	O-Ring	<b>17</b>	11-030004-001	Pipe Plug 1/2-14 x .582 max	<b>25</b>	12-100185-006	Spacer
<b>7</b>	12-100832-000	Deck Lift Hook	<b>18</b>	11-430017-000	Ball Bearing	<b>26</b>	12-100150-000	Gear
<b>8</b>	11-125203-001	Hex Jam Nut 5/16-24"	<b>19</b>	12-100896-000	Spacer	<b>27</b>	12-100185-005	Spacer
<b>9</b>	12-100830-000	Clamp Ring				<b>28</b>	11-430003-000	Ball Bearing
<b>10</b>	12-100185-009	Spacer				<b>29</b>	12-100065-002	Washer
<b>11</b>	11-007182-001	Fl Hd Sckt Cap Screw 1/4-20 x 3/4"				<b>30</b>	11-007344-001	Fl Hd Sckt Cap Screw 3/8-16 x 1"



#### **SOLENOID - 230V, 60 HZ. INTERMITTENT DUTY**

Keep your Model A pinsetters cycling properly. Weak or defective solenoids can lead to improper pinsetter triggering.

**12-100291-000**



#### **HOOK SELECTOR**

Heavy-duty hook selector.

- Easy-to-replace linkage pins
- Durable, long-lasting cam follower bearing
- Includes replaceable Bearing 11-436000-000

**12-100410-000**



#### **DECK HOOK ASSEMBLY**

Prevents the deck from dropping on the standing pins. Includes:

- AP - Hook - 12-350803-000
- Deck Hook Hub with bearings - 12-350804-000
- Hex Head Bolt - 11-001344-001
- Washer - 11-190014-001
- Nut - 11-170110-001

**12-350802-000**



#### **MOUNTING PLATE**

Precision flatness is critical to optimum performance of this part.

- This is the original Brunswick 1:1 mounting plate
- This piece is machined by toolmakers to exact dimensions for perfect mating with the 1:1 cover and detector assembly shafts

**12-100207-000**



#### **DETECTOR ROD ASSEMBLY**

Eliminate problems detecting strikes, standing pins, or out-of-range pins with a new Complete Detector Rod Assembly. A defective rod can cause binding and throw the rod out of time.

- To order components separately:  
Replacement Rod - 12-100017-000  
Spiral Pin - 11-360257-000 (Pkg of 20)  
Stop Bracket Pins - 11-360258-001 (Pkg of 20)  
Spring - 12-100167-000

Tip: Remember to check for worn deck pads before starting to adjust the detector.

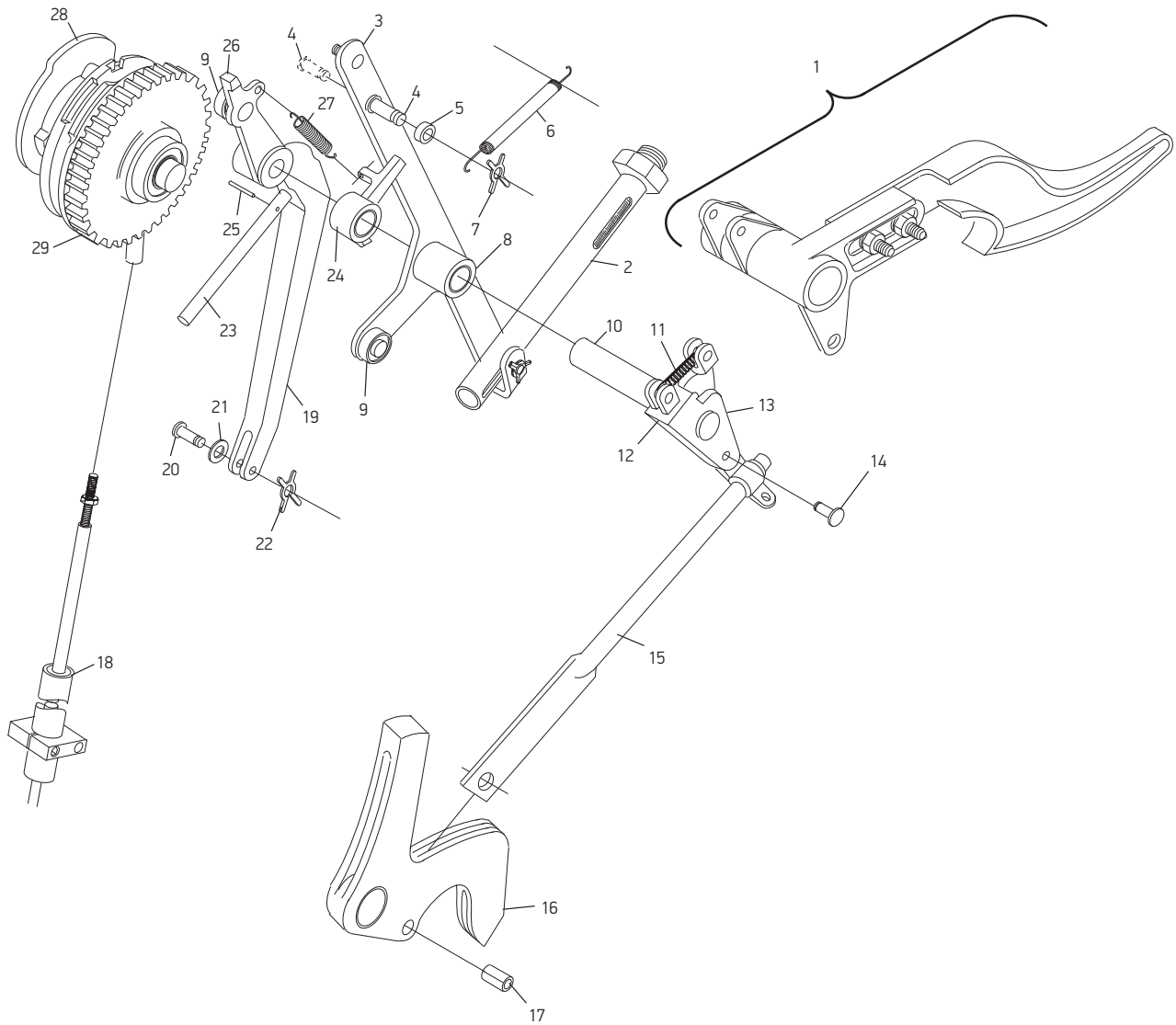
**12-100261-000**



#### **OUT-OF-RANGE RESET LINK**

Keep the detector in time with the rake and other matching parts during an out-of-range. Ensures precision machine timing for smooth pinsetter operation and reduced part wear.

**12-100040-004**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-350802-000	Deck Hook Assembly	10	12-100188-000	Shaft	20	12-100166-008	X-Washer Pin
2	12-100057-000	Deck Hook Link	11	12-100086-000	Tension Spring	21	11-190006-001	Flat Washer - SAE (#10)
3	12-100410-000	Hook Selector	12	12-100097-000	Deck and Scissor Latch	22	11-230000-001	X-Washer 3/32
4	12-100166-004	X-Washer Pin	13	12-100175-000	Latch	23	12-100077-000	Spring Guide
4	12-100166-013	Pin	14	12-100166-011	X-Washer Pin	24	11-420041-000	Bearing .504 ID x .628 OD
5	12-100185-019	Spacer	15	12-100353-000	Link	24	12-100183-000	Deck Hook Latch Assembly
6	12-100156-000	Tension Spring	16	12-100238-051	Latch and Bearing Assembly	25	11-360364-000	Spiral Pin 1/8 x 1"
7	11-230001-001	X-Washer 1/8	17	11-345404-000	Roll Pin 1/4 x 1/2"	26	12-100189-000	"D" Shaft Assembly
8	11-420065-000	Bearing .5025 ID x .753 OD	18	12-100261-000	Detector Rod Assembly	27	12-100083-000	Tension Spring
9	11-436000-000	Ball Bearing	19	12-100129-000	Scissor Cam Lever	28	12-100037-000	Cam
9	12-100170-018	Washer	20	12-100166-006	X-Washer Pin 7/8 x .187	29	12-100198-000	Detector Gear



## A•2 | ELECTRONIC FIVE PIN INDEXING

A large number of pinsetter stops are turret and turret clutch related. Eliminate a lot of the variables for failure by updating your pinsetter with this revolutionary kit. The Electronic Five Pin Indexing Kit eliminates nine of the turret clutch high maintenance components. Maintenance of this kit simply consists of an annual inspection and applying oil to linkage and pins.



*Hardware not pictured*





#### ELECTRONIC FIVE PIN INDEXING KIT

- Reduce down time and annual maintenance costs
- No more rebuilding clutch assembly or replacing facings
- Less tension on belts promoting longer belt life
- Complete with all necessary hardware and installation instructions
- For use on cast aluminum turret frames
- Not for use on steel turret frames
- Designed by Mechanic Bruce McMartin  
12-862028-000

#### COMPONENT REPLACEMENT PARTS

- 10-229455-000 - O-Ring Pin
- 12-150336-000 - Solenoid
- 12-752023-000 - Cable - Solenoid
- 12-150320-000 - Link
- 12-150339-000 - Magnet
- 12-150338-000 - Reed Switch Assy
- 12-752021-000 - Cable - Reed Switch
- 12-150343-000 - PCB and Enclosure
- 12-752022-000 - Cable - PCB Power Supply

#### KIT ELIMINATES THESE PARTS:

- Time Delay Gear and Cam - 12-150138-000
- Torsion Latch Assembly - 12-150011-000
- Friction Disc Assembly - 12-860804-000
- Post - 12-150253-000
- Spring Guide - 12-150004-000
- Compression Spring - 12-150222-000
- Trip Lever - 12-150079-000
- Torsion Spring - 12-150012-000
- Stud - 12-150254-000

## A•2 | TURRET ASSEMBLY



**Advanced  
Performance**

#### ADVANCED PERFORMANCE ADJUSTABLE INTERLOCK LINK

Makes relationship between the pin release lever and interlock probe fully adjustable.

- Great when working on older A/A•2 with worn or bent release lever.

**12-862034-000**



#### CENTER CHUTE ASSEMBLY

Designed for durability and long-life, Center Chute Assembly is constructed of high-strength carbon steel with a continuous weld.

- Surface is free of imperfections that could damage or wear bowling pins
- Contoured so pins slide without resistance
- Thickest mounting plate on the market is continuously welded to eliminate breakage

**12-150108-000**



#### CENTER CHUTE REPAIR PLATE

Eliminate 180° stops from broken or loose mounting plates with this 11-gauge, high-strength steel repair plate.

- Used for complete replacement or tacked onto the broken plate for reinforcement

**12-150109-000**



#### TURRET RING AND BEARING ASSEMBLY

Fixes turret ring problems efficiently and economically.

- All parts are precision machined for perfect mating and smooth turret indexing
- Factory assembled and lubricated

Note: The newer Turret Rings have a larger 1/4-20 threaded hole for the 5 pin chute. The older rings had a 10-24 thread

**12-862874-000**



#### TURRET RING

Eliminate jerky turret indexing caused by wear from improper lubrication.

- High-strength turned steel for durability
- Ball bearing contact surface is machined to tight tolerances for a precision fit
- Case hardened surface for wear resistance
- Holes positioned and drilled to ensure precise alignment with the turret basket
- Inside surface buffed to prevent wear on pins.
- Concentric surfaces provide smooth turret indexing.

**12-150040-000**



#### TURRET RING BALL BEARINGS

Replace worn bearings to prevent excessive and costly turret ring damage.

- Carbonized steel bearings are precisely dimensioned and file hard to resist wear
- Package includes 10 bearings (149 are needed for a complete turret)

**11-575093-000**



#### INTERLOCK PROBE ASSEMBLY

Prevent deck jams and 180° stops with this high quality interlock probe.

- Bearings are press-fit and sized so the pivot shaft moves without binding
- Top Bearing (2 required) – 11-421026-000  
Lower Bearing – 11-420046-000

**12-150086-000**



#### INTERLOCK PROBE BRACKET REPAIR KIT

Eliminate rewelding broken interlock probe brackets with this quick and easy repair kit.

- Simply remove the broken bracket(s), install replacement bracket on probe, then connect to the seam of center chute
- Can be used in an emergency until proper repairs are made. Make sure interlock probe moves freely after installation

Note: Face the 5 pin chute to the machine front for easiest installation

**12-860119-000**

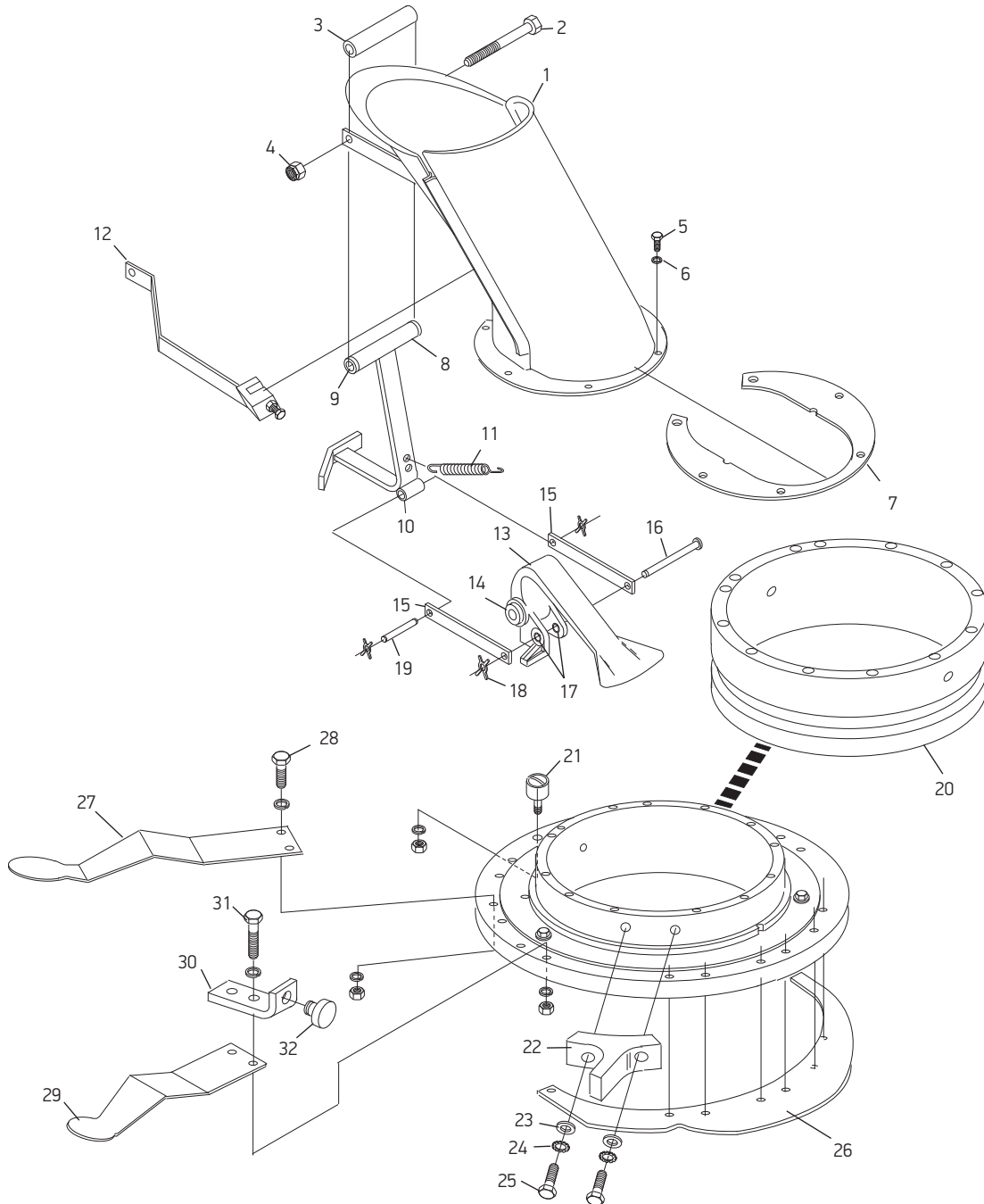


#### TURRET RING AND BEARING JIG

Assists in the disassembly and reassembly of the turret ring and bearing assemblies by collecting the bearings and properly positioning the rings.

- Rugged aluminum casting won't deform

**12-150326-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-150108-000	Center Chute Assembly	23	11-190014-001	Flat Washer 3/8"
2	12-150268-000	Hx Hd Cap Screw 5/16 x 4-3/4	24	11-198007-001	Ext. Tooth Lockwasher 3/8"
3	12-150267-000	Spacer	25	11-001343-001	Cap Screw Hex Head
4	11-170006-001	Locknut 10-32	26	12-150066-000	Release Cam
5	12-150304-003	Hex Hd Cap Screw	27	12-150283-000	Long Turret Spoon
6	11-195010-001	Lockwasher (#10)	28	11-002004-001	Hx Hd Cap Screw 1/4-20 x 1
7	12-150109-000	Center Chute Repair Plate	29	12-150284-000	Short Turret Spoon
8	12-150086-000	Interlock Probe Assembly	30	12-150266-000	Bracket
9	11-421026-000	Flanged Oilite Bearing	31	12-150304-002	Special H Hd Cap Screw
10	11-420046-000	Sleeve Oilite Bearing	32	12-150265-000	Turret Stop Bumper 15/16"
11	12-150096-000	Tension Spring	32	12-150325-000	Turret Stop Bumper 3/4"
12	12-860117-000	L.H. Bracket			
			13	12-150049-000	Pin Release Lever Assy
			14	11-421004-000	Flanged Oilite Bearing
			15	12-150237-000	Interlock Link
			16	12-150158-015	X-Washer Pin
			17	11-421045-000	Flanged Oilite Bearing
			18	11-230001-001	X Washer 1/8"
			19	12-150023-008	X Washer Pin
			20	12-150040-000	Turret Ring
			21	11-480001-000	Cam Follow Needle Bearing
			22	12-150264-000	Stop

**PIN GUIDE WIRES**

Improves pin transfer into the buckets and protects bowling pins from weak, imperfect guide wires.

**12-150294-000** – Inside wires for #2, 3, 4, 6, 8, 9

**12-150295-000** – Inside wires for #1, 7, 10

**12-150296-000** – Outside wires for #1, 7, 10

**12-150297-000** – Outside wires for #2, 3, 4, 6, 8, 9

**PIN GUIDE WIRE PAD AND CUSHION**

Prevent scuffed and cut pin heads from turret wires, avoiding pin damage.

- Provides a cushion for pin heads to hit and rest against
- Compatible with all turret wire positions

**90-150182-000**

**INSIDE WIRE ASSEMBLY REPAIR RODS**

Economical fix for a broken inside pin guide wire.

**12-150324-000** – For #2, 3, 4, 6, 8, 9

**12-150309-000** – For #1, 7, 10

**PIN GUIDE WIRE CUSHION**

Original factory cushion only.

**12-150182-000**

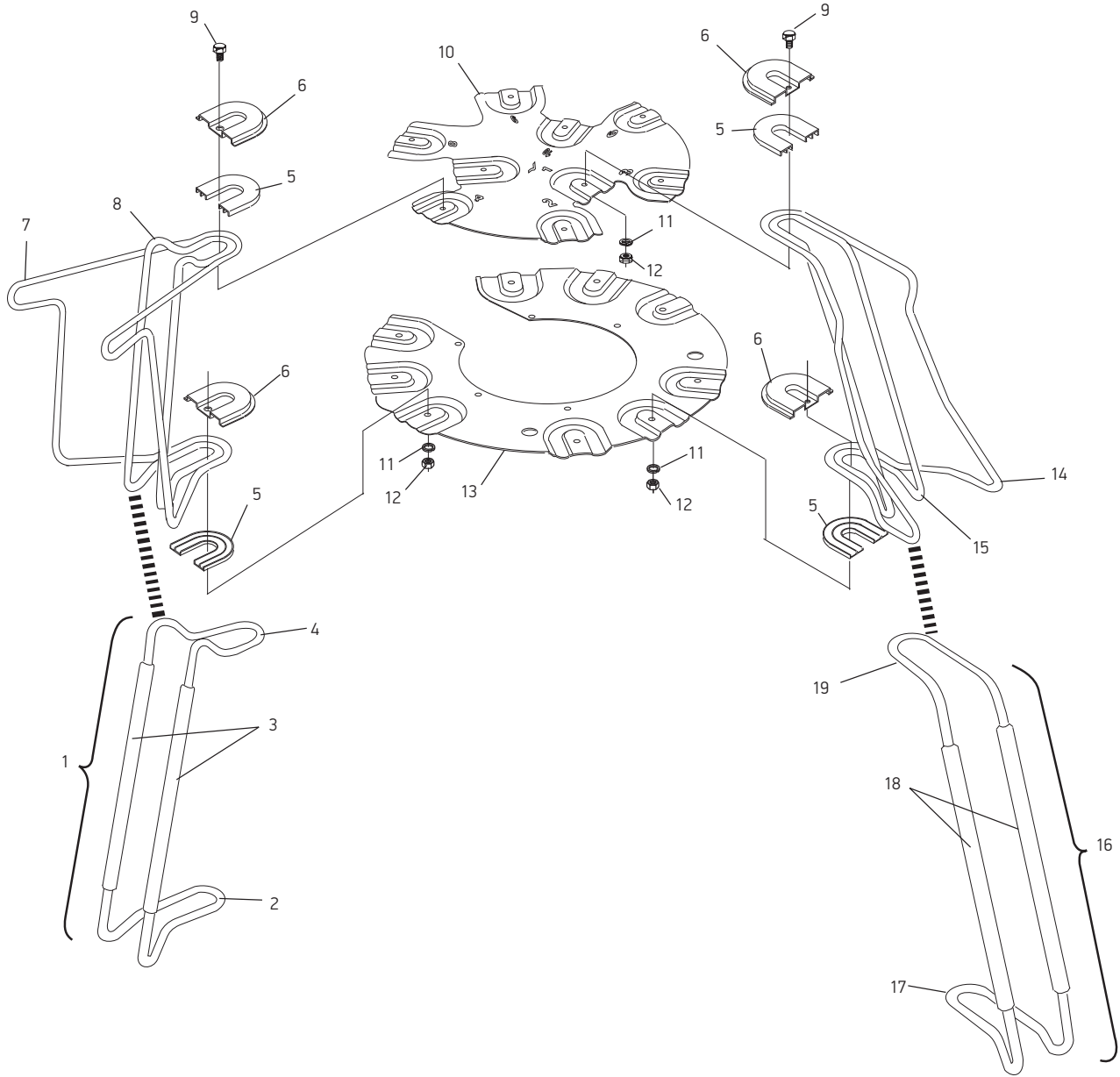
**TURRET CLAMP PLATES**

Eliminates the need to hold the bottom nut with a tool when changing turret wires with the Turret Clamp Plates.

- Instead of a through hole, the plates include a stationary cinch nut so the bottom nut is not necessary

**12-150106-000** – Lower

**12-150107-000** – Upper



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

<b>1</b>	12-862116-000	N/A	<b>7</b>	12-150297-000	Outside Guide Wire (2, 3, 4, 6, 8, 9)	<b>15</b>	12-150295-000	Inside Guide Wire (1, 7, 10)
<b>2</b>	12-150314-000	Bottom Wire Form	<b>8</b>	12-150294-000	Inside Guide Wire (2, 3, 4, 6, 8, 9)	<b>16</b>	12-862113-000	N/A
<b>3</b>	12-150324-000	Inside Wire Assy Repair Rod (2, 3, 4, 6, 8, 9)	<b>9</b>	11-001182-001	Hx Hd Cap Screw 1/4-20 x 3/4"	<b>17</b>	12-150311-000	Bottom Wire Form
<b>4</b>	12-150313-000	Wire Form (n.a.)	<b>10</b>	12-150107-000	Upper Clamp Plate	<b>18</b>	12-150309-000	Inside Wire Assy Repair Rod (1, 7, 10)
<b>5</b>	12-150182-000	Guide Wire Cushion	<b>11</b>	11-195014-001	Lockwasher 1/4"	<b>19</b>	12-150310-000	Top Wire Form
<b>5</b>	90-150182-000	Guide Wire Pad and Cushion	<b>12</b>	11-125100-001	Hex Nut 1/4-20			
<b>6</b>	12-150181-000	Pin Guide Clamp	<b>13</b>	12-150106-000	Lower Clamp Plate			
			<b>14</b>	12-150296-000	Outside Guide Wire (1, 7, 10)			

**TECH TIP**

To extend the life of your belts and improve operation, make sure your lower turret belt clutch pulley and short turret belt are matched to the proper indexing cam. The split pulley – 12-150306-000 (2 qty) works with the stamped turret cam and requires a special flat washer – 12-150307-000. The offset pulley – 12-150219-000 is used with the belt UP for cast turret cam. Always verify that the short belt is not rubbing on the frame or the short indexing linkage.

**BLOCKING FINGER TENSION SPRING**

Make sure your pins drop smoothly and avoid deck jams.

**12-150213-000**

**FRICTION DISK ASSEMBLY**

Helps eliminate multiple indexing and failure to index problems.

- Premium, high-density polyethylene clutch facings are specially formulated to maximize drive and minimize wear
- For individual parts:  
Turret Clutch Facing Kit – 12-860805-000 (includes three facings and six rivets), Rivets – 11-301001-001 (Pkg of 10)  
**12-860804-000**

**STOP ROLLER AND BUSHING ASSEMBLY**

Tests have proven that this Delrin® roller will last longer than nylon or plastic rollers.

- Durable, Teflon®-impregnated roller smoothly follows the contours of the turret index cam without wearing cam surface
- One-piece design rolls freely

**90-150303-000**

**Advanced Performance****ADVANCED PERFORMANCE TURRET FRAME REINFORCEMENT**

Eliminate costly down time from cracking and breaking Turret frames.

- Installs in 30 minutes and reduces further wear
- Recommend replacing Moving Deck Cam Follower Live Roller - 12-862252-000
- Designed by Mechanic Bruce McMartin  
**12-862009-000**

**TURRET CLUTCH DRIVE PULLEYS**

Pulley model 12-150306-000 is a split pulley. Order two 12-150306-000 and spacer (12-150307-000).

**TIP:** When installing solid offset model, place the offset in the down position so the belt is raised and level with the turret indexing cam and it will drive properly.

**12-150219-000** – Pulley  
Offset style for cast turret indexing cam

**12-150306-000** – Disk  
Split style for stamped turret indexing cam

**BLOCKING FINGER ASSEMBLY**

Ensure pins drop smoothly when the deck is empty and up with this precisely dimensioned assembly.

- Oilite bearings are sized to properly fit on mounting shaft, providing the latch with full up and down motion
- Rubber bumper absorbs shock effectively as latch pivots - oil resistant for long life
- Right-hand latch includes an assembled spring wheel – 12-150130-006 and a rubber bumper – 12-150142-002

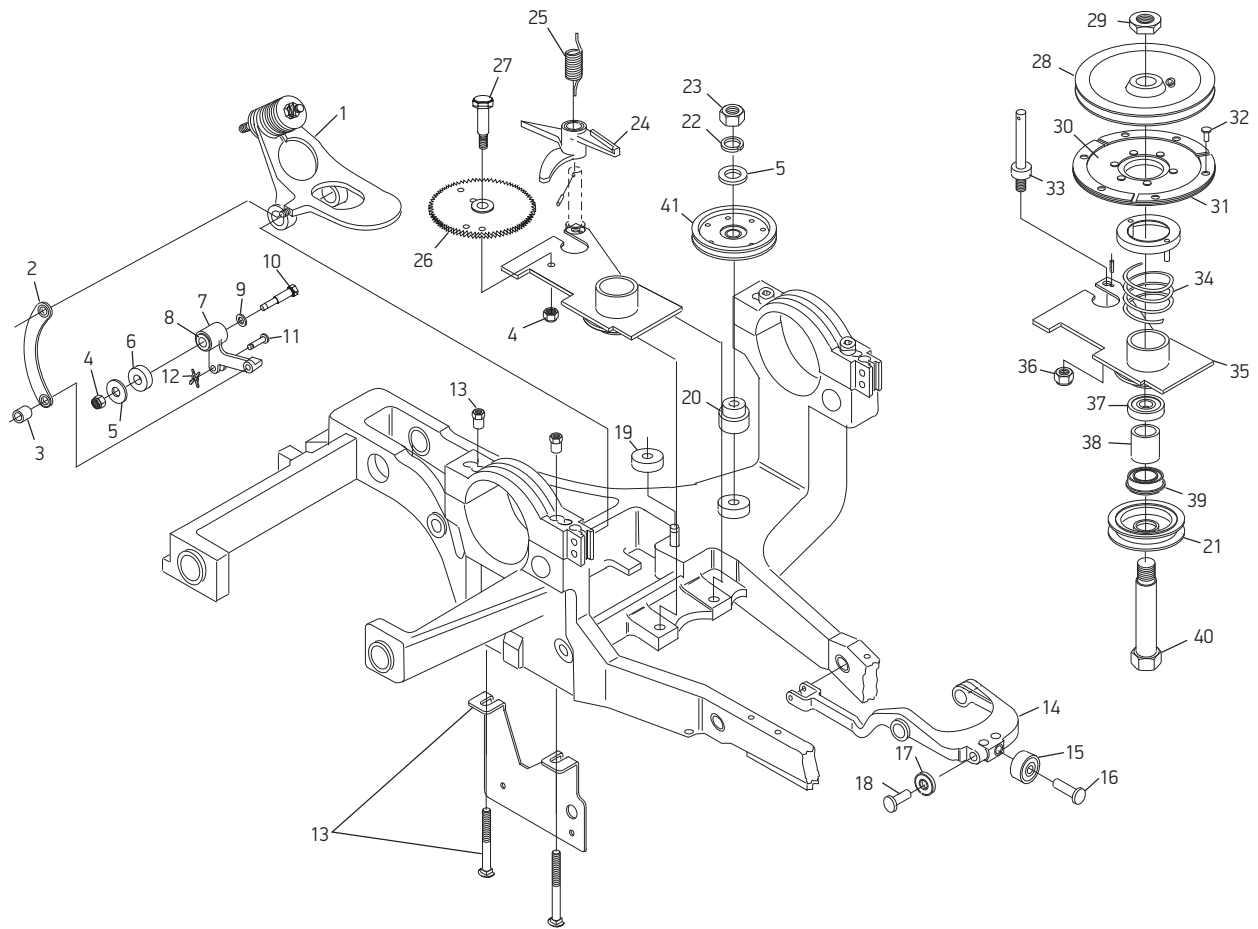
**12-150200-000** – RH

**12-150176-000** – LH

**TURRET CLUTCH ASSEMBLY**

A good replacement part to keep as a spare.

- Assembled and ready to install
- Use on serial number 12,644 and below  
**12-150198-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-150064-000	Trip Lever Assembly	16	12-150056-002	Roller Stud	27	12-150254-000	Stud
2	12-150065-000	Link	17	11-500001-000	Ball Bearing	28	12-150220-000	Turret Clutch Drive Pulley
3	12-150190-000	Sleeve Oilite Bearing	18	12-150056-003	Roller Stud	29	11-125265-001	Hex Jam Nut 3/4-16 Lh
4	11-170010-001	Locknut 5/16-24 Nyl Insr	19	12-150246-000	Bumper 11/16"	30	12-860804-000	Friction Disc Assembly
5	11-190012-001	Flat Washer 5/16"	19	12-150246-002	Bumper 1-1/4"	31	12-860805-000	Turret Clutch Facing Kit
6	12-150245-000	Spacer	20	12-150186-000	Spacer	32	11-300001-001	Tubular Flat Head Rivet
7	12-150051-000	Bell Crank Assembly	21	12-150306-000	Two-piece Disc Pulley	33	12-150253-000	Post
8	11-421048-000	Flanged Oilite Bearing	21	12-150219-000	Pulley	34	12-150222-000	Spring
9	11-190014-001	Flat Washer 3/8"	22	11-195014-001	Lockwasher 1/4"	35	12-150258-000	Sleeve and Plate Assembly
10	12-150252-000	Shoulder Screw	23	11-125100-001	Hex Nut 1/4-20	36	11-170109-001	Hex Nut Flexloc 5/16-24
11	12-150158-013	X-Washer Pin	24	12-150011-000	Torsion Latch Assembly	37	11-431006-000	Ball Bearing
12	11-230000-001	X Washer 3/32"	24	11-421065-000	Flanged Oilite Bearing	38	12-150217-000	Spacer
13	12-862009-000	AP - Turret Frame Reinforcement	25	12-150012-000	Torsion Spring	39	11-431010-000	Ball Bearing
14	12-150231-000	Turret Stop Lever	26	12-150138-000	Turret Delay Gear and Cam	40	12-150216-000	Turret Drive Clutch Shaft
15	90-150303-000	Stop Roller and Bushing Assembly	26	11-421035-000	Flanged Oilite Bearing	41	12-400219-000	Idler Pulley Assembly



**Advanced  
Performance**

#### **ADVANCED PERFORMANCE MOVING DECK CAM FOLLOWER SUPPORT**

This kit provides a permanent fix to mounting bolt failure that can lead to costly damage to your 1:1 assembly.

- Collar replaces mounting bolt, eliminating original weak point
- Heavy-duty bracket provides support to the shaft on the opposite side
- Does not require new shafts to work properly
- Designed by Mechanic Bruce McMartin  
**12-862010-000**



#### **TRIP LEVER SHAFT**

Helps eliminate "failure to index" problems caused by sloppy trip levers.

- Extend the life of a worn turret frame
- Longer shaft extends into unworn area of turret frame casting  
**12-150069-000**



**Advanced  
Performance**

#### **ADVANCED PERFORMANCE CAM FOLLOWER LIVE ROLLER**

Prevent lever wear which can cause pin loading issues from the turret to deck, bent interlock shafts, and potentially crack turret frames.

- Provides rolling surface for lever to virtually eliminate wear
- Includes a new lever 12-150144-000
- Designed by Mechanic Bruce McMartin  
**12-862252-000**



#### **SHORT TURRET LINK**

Eliminate turret alignment errors with this properly fitted short link.

- Ends are coiled to guarantee proper alignment and assembly
- For optimum performance use X-washers and X-washer pins for stable connection  
**12-150289-000**



#### **TURRET INDEX LATCH ASSEMBLY**

Stop multiple indexing caused by worn indexing faces on the latch.

- Latch is contoured to match the bearing (11-500001-000) surface for a smooth index
- High-strength ductile iron casting for wear resistance
- Fully-assembled bearing is fit and sized so the latch will pivot freely  
**12-150235-000**

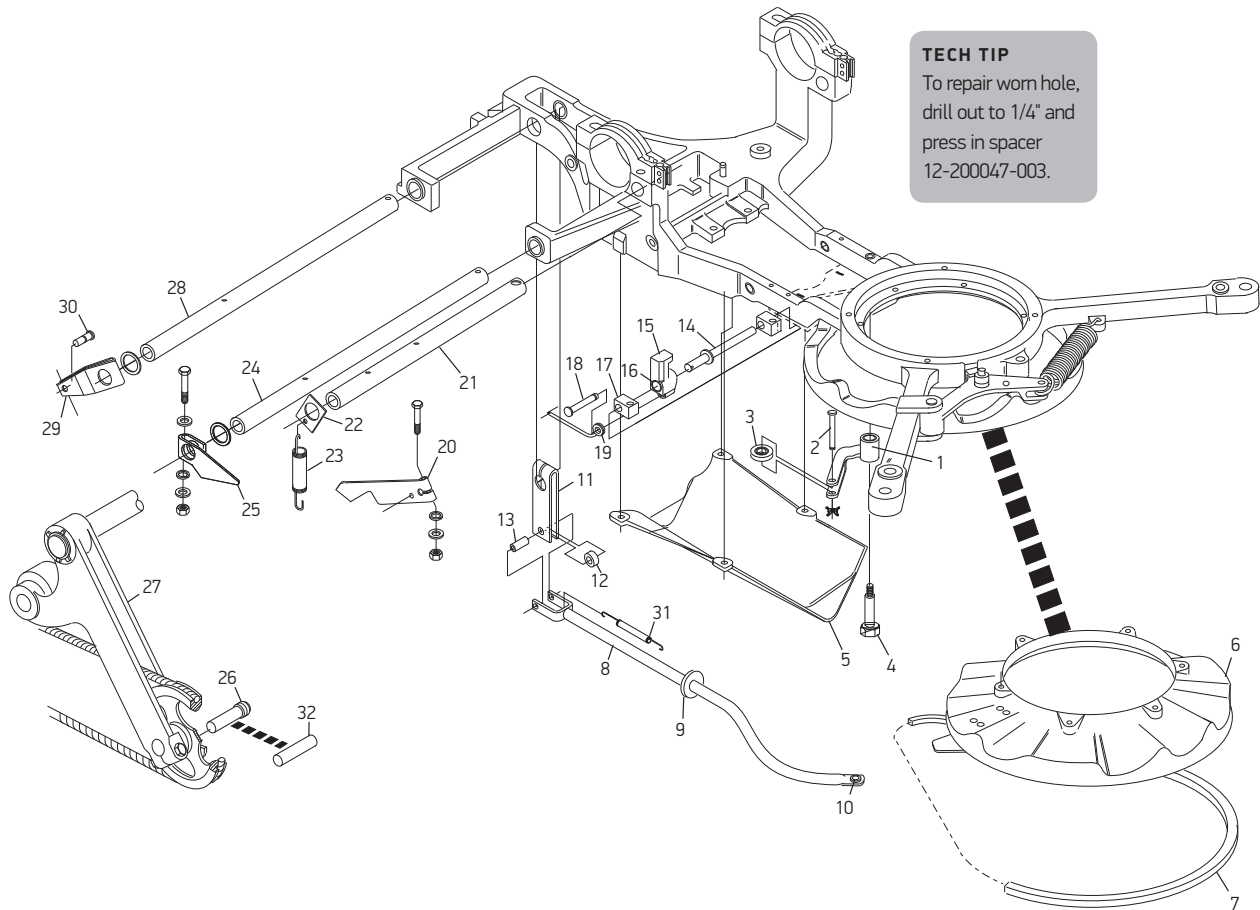


#### **INTERLOCK LINK ASSEMBLY**

Makes sure that the clutch properly engages at 180°.

- Oil-resistant rubber bumper will not deteriorate
- Factory-assembled with bearings in place
- To order replacement parts:  
Bearing – 11-421061-000  
Bumper – 12-150142-003  
**12-150234-000**



**TECH TIP**

To repair worn hole,  
drill out to 1/4" and  
press in spacer  
12-200047-003.

For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

1	12-150279-000	Lever Assembly	11	12-150147-000	Lever Assembly	23	12-150090-000	Tension Spring
1	11-420043-000	Sleeve Oilite Bearing	12	12-150125-000	Roller	24	12-150143-003	Interlock Shaft - 19-5/8" solid
2	12-150158-006	X-Washer Pin	13	11-420000-000	Sleeve Oilite Bearing	25	12-150144-000	Lever
3	12-150226-000	Roller and Bearing Assembly	14	12-150259-000	Shaft	26	12-862252-000	AP - Moving Deck Cam
4	12-150247-000	Stud	15	12-150235-000	Turret Index Latch Assembly			Follower Live Roller
5	12-150187-000	Bottom Protector	16	12-150256-000	Bronze Bearing	27	12-100313-000	Moving Deck Cam Lever
6	12-150290-000	Turret Index Pulley Assy	17	12-150293-000	Shaft Clamp	28	12-150143-002	Shaft - 17-3/4" hollow
7	12-150113-000	Short Turret Drive Belt, Short	18	12-150158-007	X-Washer Pin 1 - 3/32 x .186	29	12-150145-000	Lever
7	12-150113-600	Short Turret Drive Belt, Long	19	12-150289-000	Short Turret Link	30	12-150071-000	Pin
8	12-150234-000	Interlock Link Assembly	20	12-150111-000	Latch	31	12-150132-000	Tension Spring
9	12-150142-003	Bumper	21	12-150069-000	Trip Lever Shaft	32	12-100226-000	Original Pin
10	11-421061-000	Flanged Oilite Bearing	22	12-150144-000	Lever			

**SCISSOR GRIPPER PAD**

Ensure respotting in the exact position. Oil-resistant neoprene rubber pad slips onto scissor arm and stays securely in place.

**12-200120-004**

**CROSS BIASED GRIPPER PAD**

For those who prefer a urethane construction. Slotted to slide on the scissor arm assembly for a secure fit. No adhesive needed.

**90-200120-000**

**SCISSOR ARMS**

Brunswick continues to offer many alternatives.

- Stainless steel arms have controlled flatness to prevent dragging or binding when operating
- Factory-assembled unit includes long and short arms, pads, and all hardware. These parts are assembled to controlled tolerances for accurate respotting of pins.

**TIP:** Don't forget to use an External Tooth Lockwasher 1/4 – 11-198005-001 when reassembling the scissor assembly. It keeps your hardware from becoming loose.

**12-200018-000** – Short with Gripper pad

**12-200016-000** – Long with Gripper pad

**12-200019-092** – Short w/o Gripper pad

**12-200017-092** – Long w/o Gripper pad

**12-200016-091** – Complete Assembly with Gripper pads



**Advanced  
Performance**

**ADVANCED PERFORMANCE TOP-NOTCH DECK BUMPER**

Minimize deck jams with this great alternative to deck rollers.

- No moving parts to wear out or cause performance issues
- Durable urethane material
- "Notch" ensures that the scissors and other moving parts do not interfere with performance or action

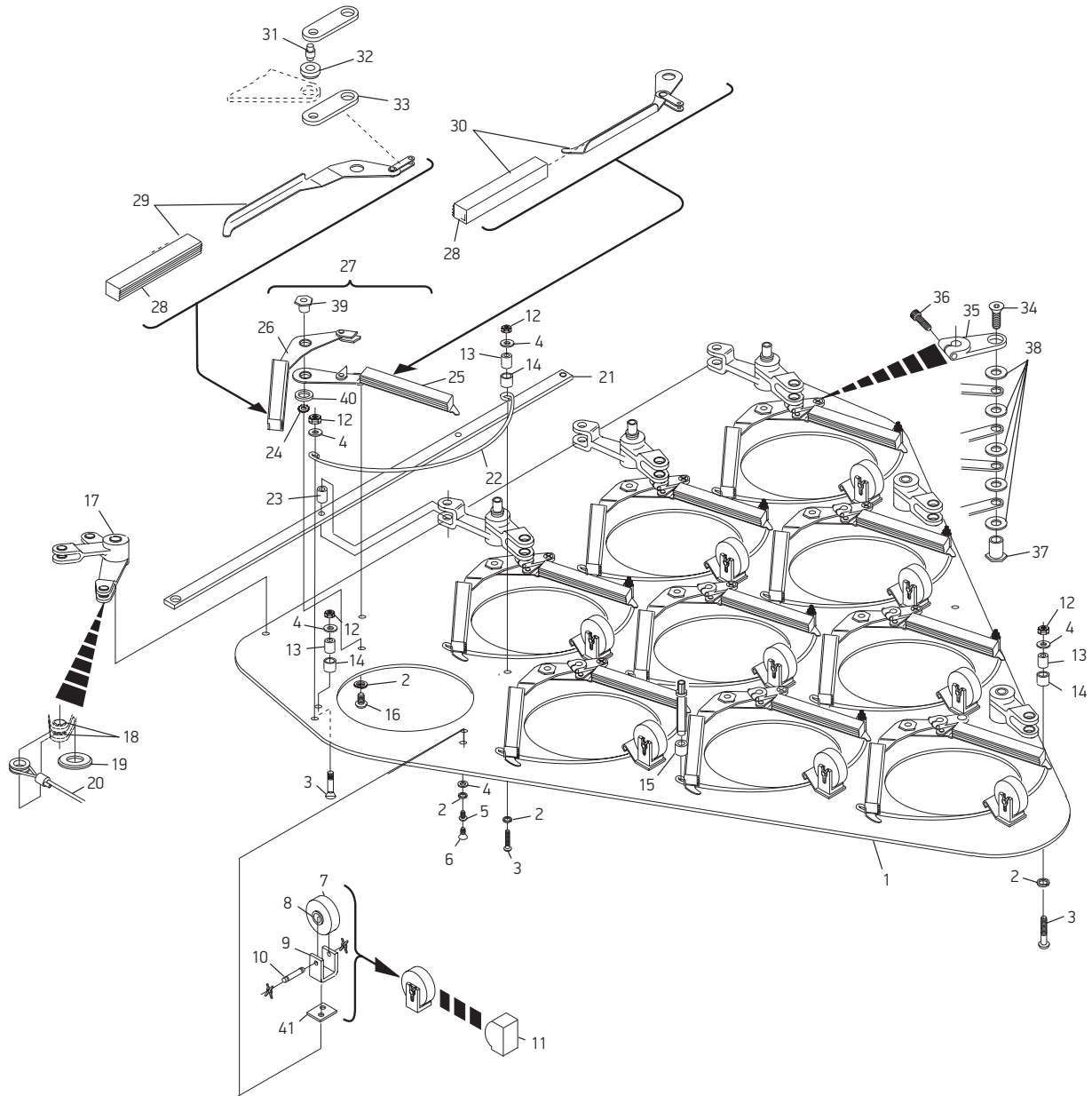
**90-200114-600**

**DECK SHIELD**

Time to replace a missing or damaged deck shield? Use this improved Brunswick replacement.

**12-862037-002** – Gray w/o Decal

**12-862037-010** – Brown w/ Decal



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-200003-000	Scissor Deck	14	12-200032-000	Neoprene Stop	29	12-200017-092	Scissor Arm Assembly
2	11-199005-001	Int. Tooth Lockwasher 1/4	15	12-200103-000	Bearing (N.A.)	30	12-200019-092	Scissor Arm Assembly
3	11-007186-001	Flat Sckt Cap Screw 1/4-20x1-1/4	16	11-006180-001	Button Hd Sckt Cap 1/4-20x5/8	31	12-200027-000	Shoulder Pin
3	11-007188-001	Flat Sckt Cap Screw 1/4-20x1-1/2	16	11-007180-001	Fl Hd Sckt Cap 1/4-20x5/8	32	12-200105-000	Flanged Oilite Bearing
4	11-190010-001	Flat Washer 1/4	17	12-200023-000	Toggle Lever Assembly	33	12-200026-000	Link (Scissor Arm)
5	11-006218-000	Button Sckt Cap Screw 1/4-28x1/2	18	11-420070-000	Oilite Bearing	34	11-007182-001	Fl Hd Socket Cap Screw
6	11-007216-001	Flat Sckt Cap Screw 1/4-28x3/8	19	11-422002-000	Bearing .510 ID x 1.000 OD	35	12-200039-000	Drag Link
7	12-200114-000	Rubber Deck Roller Assembly	20	12-200067-000	Scissor Cable Assembly	36	11-005182-001	Hx Hd Socket Cap Screw
7	12-200115-000	Rubber Deck Roller Only	21	12-200139-000	Connecting Rod Assembly	37	12-200028-000	Shoulder Pin
7	90-200114-000	AP - Urethane Deck Roller	22	12-200094-000	Wire	38	12-200031-003	Nylon Washer
8	11-423000-000	Sleeve Oilite Bearing	23	12-200140-002	Spacer	38	12-200031-004	Nylon Washer
9	12-200038-000	Roller Bracket	24	11-198005-001	External Tooth Lockwasher 1/4	39	12-200029-000	Stud
10	12-100166-031	Pin	25	12-200018-000	Scissor Arm Assembly	40	12-200059-002	Washer
11	90-200114-600	AP - Top-Notch Deck Bumper	26	12-200016-000	Scissor Arm Assembly	41	12-200865-000	Plate (use with steel deck)
12	11-125100-001	Hex Nut 1/4-20	27	12-200016-091	Scissor Arm Assembly			
13	12-200041-000	Spacer	28	12-200120-004	Scissor Gripper Pad			



#### NYLON SPOTTING FINGERS

Spots pins accurately every time.

- Molded hex socket head holds the screw in place
- Easy-to-install
- Kit Includes both right-hand and left-hand fingers and the proper hex head hardware:  
Hex Head Bolt – 11-001186-001 (2 qty)  
Hex Head Cap Screw – 11-001198-001 (2 qty)

**90-200892-000** – RH

**90-200893-000** – LH

**12-860771-000** – Kit



#### ALUMINUM SPOTTING FINGERS

These tried-and-true aluminum spotting fingers are anodized to provide the best in strength and durability.

**12-200892-000** – RH

**12-200893-000** – LH



#### ADVANCED PERFORMANCE DECK RIGHT KIT

Corrects sticking or sluggish shifting caused by a warped moving deck.

- Straightens out deck for a smooth operation
- Turnbuckle style tensioner straightens deck for a smooth operation

**12-862858-000**



#### SCISSOR DECK CABLE ADJUSTMENT TOOL

This uniquely designed wrench will hold both cable nuts at the same time, and no hands are needed due to the spring loaded feature. Simply adjust your cables to the correct lengths. Accommodates both size nuts commonly found in pinsetters.

**12-860010-000**



#### CABLE ASSEMBLIES

This 7x19 (133-strand) aircraft cable is more flexible than the 49-strand cable to prevent kinking and fraying as the cable moves around pulleys.

- Factory-assembled end fittings are designed to withstand 2,000 pounds of force
- 12-200067-000** – Lower scissor cable 31"  
**12-200066-004** – Lower deck cable 36-1/8"  
**12-200066-003** – Upper deck cable 45-11/16"  
**12-200066-002** – Upper scissor cable 43-11/16"  
**12-100280-000** – Moving Deck Control Cable 41-1/2"



#### DECK LIFT SHAFT ASSEMBLY

Manufactured on a controlled and exact welding fixture to ensure precision positioning of all components.

- Fully-assembled shaft guarantees proper positioning to all mating parts
- Easy to install
- Comes complete with the following:  
Retaining Ring – 11-533512-000  
Washer – 12-100170-017  
Shaft for serial #71489 and up – 12-350166-000
- To order individual parts:  
Main Pivot Bearing – 11-490001-000  
Needle Roller Bearing – 11-461000-000

**12-862581-000**

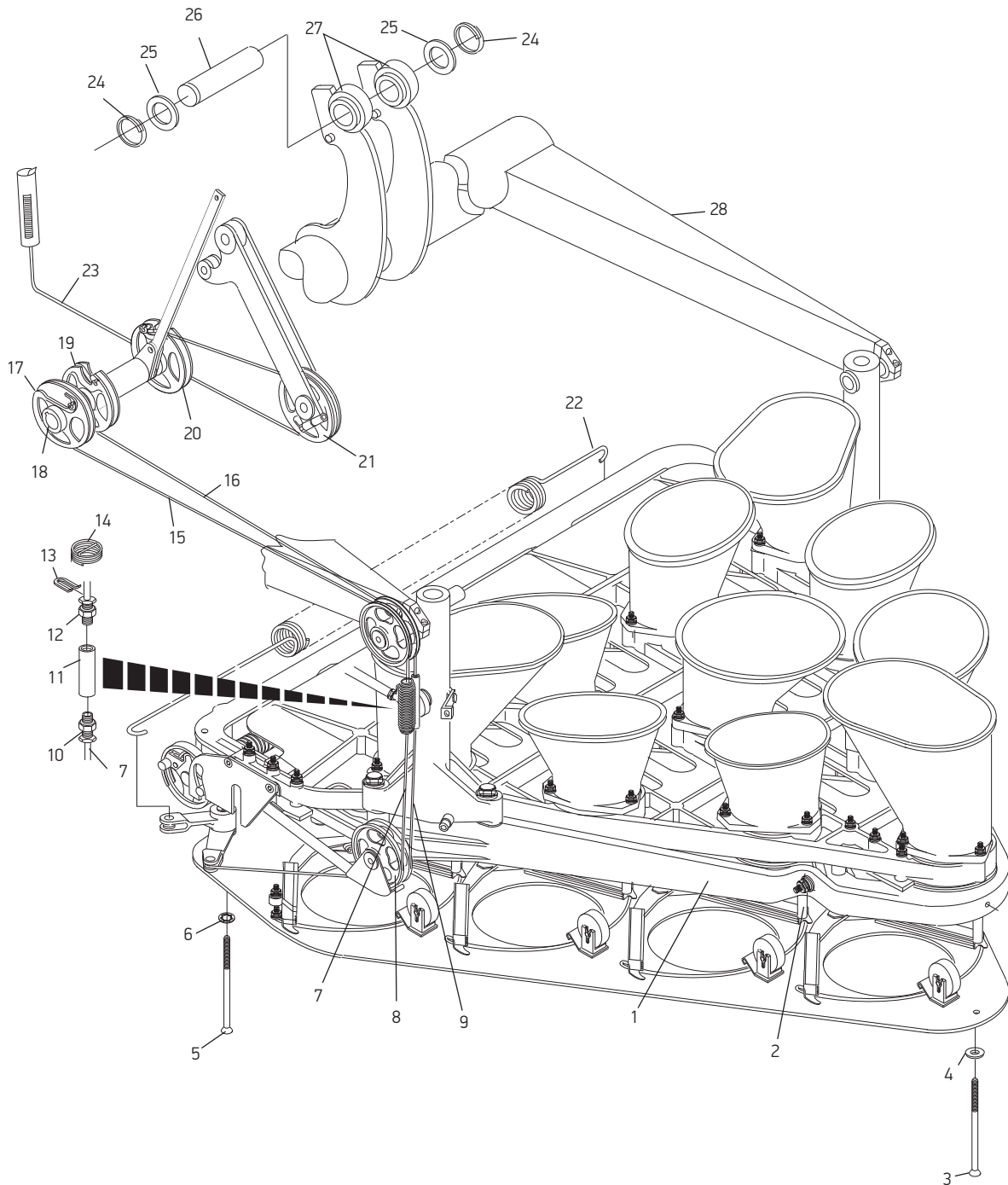


#### CABLE GUIDE ASSEMBLY

Ensures that your deck cables stay in-line with the lower deck pulleys

- Broken or damaged cable guides can cause deck binding or shifting problems
- Allows proper mounting position for the keeper spring 12-200125-000 to keep cables in constant contact with the pulleys

**12-200097-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-862117-000	Moving Deck Assembly	12	11-125209-001	Hex Jam Nut 1/2-20	23	12-100280-000	Moving Deck Control Cable
2	12-200110-000	Stud	13	12-200099-000	Spring Retainer (n.a.)	24	11-533512-000	Ext. Spirol Retaining Ring
3	11-007200-001	Fl Hd Sckt Cap Screw 1/4-20 x 4"	14	12-200125-000	Keeper Spring	25	12-100170-017	Washer
4	12-200896-000	Finishing Washer	15	12-200066-003	Upper Deck Cable 45-11/16"	26	12-350166-000	Shaft 4-13/16" (machines 71,489 and up)
5	11-007198-001	Fl Hd Sckt Cap Screw 1/4-20 x 3-1/2"	16	12-200066-002	Upper Scissor Cable 43-11/16"	27	12-350035-000	Shaft 4-9/16" (machines prior to 71,489)
6	11-199005-001	Int. Tooth Lockwasher 1/4	17	12-350029-000	Moving Deck Pulley	28	11-461000-000	Needle Roller Bearing
7	12-200066-004	Lower Deck Cable 36-1/8"	18	12-350032-000	Pulley Shaft		12-862581-000	Deck Lift Shaft Assembly
8	12-200055-000	Pulley Assembly	19	12-350033-000	Scissor Pulley Assy (N.A.)			
9	12-200067-000	Lower Scissor Cable 31"	20	12-350030-000	Moving Deck Pulley			
10	11-125259-001	Hex Jam Nut 1/2-20	21	12-100081-000	Pulley Assembly			
11	12-200069-000	Barrel	22	12-200022-000	Scissor Spring			



#1

**OEM PLUS™ BLUE DECK CHUTE**

Arguably the most functional urethane deck chute in today's marketplace. Developed through a focused effort by Brunswick engineers, material scientists and bowling center mechanics. Designed to provide perfect balance between durability, slipperiness, and functionality.

- Injection molded using premium Bayer® urethane. Resulting in no cracks even after years of use
  - A very low coefficient of friction allows the pins to easily pass through the chute with no pin jams.
  - Backed by a 2-year warranty
- 12-200808-502** – #1  
**12-200837-500** – #5  
**12-200808-503** – #7, #10  
**12-200900-500** – Multi



#5

**POLYPROPYLENE DECK CHUTES**

The best value in deck chutes, these economical deck chutes were designed for tight budgets.

- Strong, durable and impact resistant polypropylene provides the best low-cost alternative to other chutes
  - Features a good coefficient of friction without requiring the use of lubricants
- 12-200864-002** – #1  
**12-200895-000** – #5  
**12-200864-003** – #7, #10  
**12-200894-000** – Multi



#7/10



MULTI

**ADVANCED PERFORMANCE URETHANE DECK CHUTES**

Wear testing has shown that this deck chute has 50% less wear than other manufacturer's chutes which means it'll outlast all the rest.

- Injection molded urethane chute ensures less porosity – the most common cause of cracking in other manufacturer, poured urethane chutes
  - This chute also exhibits the lowest coefficient of friction of any chute on the market
  - Backed by a 2-year warranty
- 12-200808-602** – #1  
**12-200837-600** – #5  
**12-200808-603** – #7, #10  
**12-200900-600** – Multi

**Advanced Performance****TECH TIP**

Pins sticking in the deck chute? Consider these possible causes: improper pin maintenance, bad deck rollers, deck pad interference as well as dirty or damaged chutes. We do not recommend trimming the skirt of the deck chute. Trimming jeopardizes the strength and support of the chute. It puts more stress on the mounting flange leading to cracks and tears in the flange. Trimmed chutes can also cause damage to the base rings of pins by exposing them to the metal edge of the moving deck.



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#### ADVANCED PERFORMANCE DECK ROLLER AND BEARING ASSEMBLY

Are split rollers setting wobbly pins or causing deck jams? Buy this top-of-the-line deck roller. Durable urethane roller exhibits excellent rebound characteristics, so pins don't bounce off and cause deck or turret jams.

**90-200114-000**



#### RUBBER DECK ROLLER ASSEMBLY

You asked for it...the original is here.

12-200115-000 – Roller Only

11-423000-000 – Oilite Bearing

**12-200114-000**



**Advanced  
Performance**

#### ADVANCED PERFORMANCE URETHANE DECK PADS

Cushion pins with this soft, open-cell foam urethane pad. Replace all 10 pads at the same time to ensure proper strike/standing pin detection.

**12-860571-000** – Bolt-on

**12-860570-000** – Glue-on



#### DRILLING TEMPLATE

Allows for accurate drilling when installing bolt-on deck pads.

**12-200178-000**



**Advanced  
Performance**

#### ADVANCED PERFORMANCE DECK LIFT STABILIZER ASSEMBLY

Improved design offers unsurpassed strength and deck control.

- Controlled-position bearings provide maximum stability by eliminating the potential for deck swaying which could happen with the original self-aligning bearings
- The replacement parts for the original style stabilizers are also available:  
Deck Stabilizer Rod – 12-350122-002  
Jam Nut – 12-350122-002  
L.H. Thread – 12-350122-004  
R.H. Thread – 12-350122-003  
63/64 x 31/64 Bearing – 10-427001-000  
**12-350217-000**





### PIT CUSHION COVERS

A lower cost option made from PVC and Polyester materials. Quick installation with cable ties (included).

12-862970-000 – A•2 and Jetback

12-860971-000 – Model A



### STRAP-ON PIT CUSHION FACINGS

Protect pit cushion, pins, and bowling balls.

- Durable nylon fabric with built in straps including "D" rings for easy installation
- Includes foam pad to absorb bowling ball shock

12-252310-000 – A•2 and Jetback

12-250286-000 – Model A



### PIT CUSHION

Heavy, durable cushion is engineered to handle bowling balls and pin impacts.

- Includes a premium urethane cushion facing to protect the rubber from damage
- A•2 and Jetback models

12-862578-000



### URETHANE PIT CUSHION FACING

Easy-to-install, pre-formed urethane facing leaves none of the cushion rubber exposed and guards it from impact damage.

- Non-marking to pins and bowling balls
- Tie-wraps secure facing in place to prevent rotation during ball impact (not included)
- A•2 and Jetback models only

12-252308-000 – Black

12-252308-600 – Clear

11-603114-000 – Cable ties (pkg of 12)



### ADVANCED PERFORMANCE PIT CUSHION LINKAGE AND ALIGNMENT KIT

Aligns and levels pit cushion linkage which improves pinsetter triggering.

- Greatly improves pit cushion sensitivity which is great for lighter balls
- Extends the life of follower links or similar add-on kits
- Designed by Mechanic John Cole
- Watch installation video at [www.brunswickbowling.com/pit-cushion](http://www.brunswickbowling.com/pit-cushion)

12-862026-000



### RUBBER PIT CURTAIN

- Smooth on back side for easy cleaning
- Textured front for consistent scoring

12-862167-000



### ADVANCED PERFORMANCE TRIANGULAR PLATE

Keep your linkage in top working order for years with this seven gauge solid steel link plate

- Worn Link Plates can lead to improper triggering of the rake to the guard position upon ball impact
- Replace your Link Plates with new hardware, busings and spacers:  
Hex HD Cap Screw 3/8-16 x 2-1/2" – 11-001354-001  
Hex Nut Nyloc 3/8-16 – 11-170011-001  
Sleeve Oilite Bearing – 12-250248-000  
Spacer – 12-250011-003  
Fiber Washer – 12-250076-002

12-252359-000

Advanced Performance



### ADVANCED PERFORMANCE CUSHION ARM REBUILD KIT

Kit includes parts necessary to rebuild one pit cushion arm.

12-862580-000



### ADVANCED PERFORMANCE PIT CURTAIN BRACKET KIT

Easy to install, will not come loose or put unnecessary stress on pit cushion assembly.

- Mounts to cushion support arm, not the pit cushion
- Replacement nut – 11-170115-001

12-860227-600



### ADVANCED PERFORMANCE FOLLOWER LINK

Critically-dimensioned link assures proper pinsetter cycling.

- Special die casting method and tough, lightweight alloy create a smooth surface so all parts pivot easily

12-252346-000 – Cast



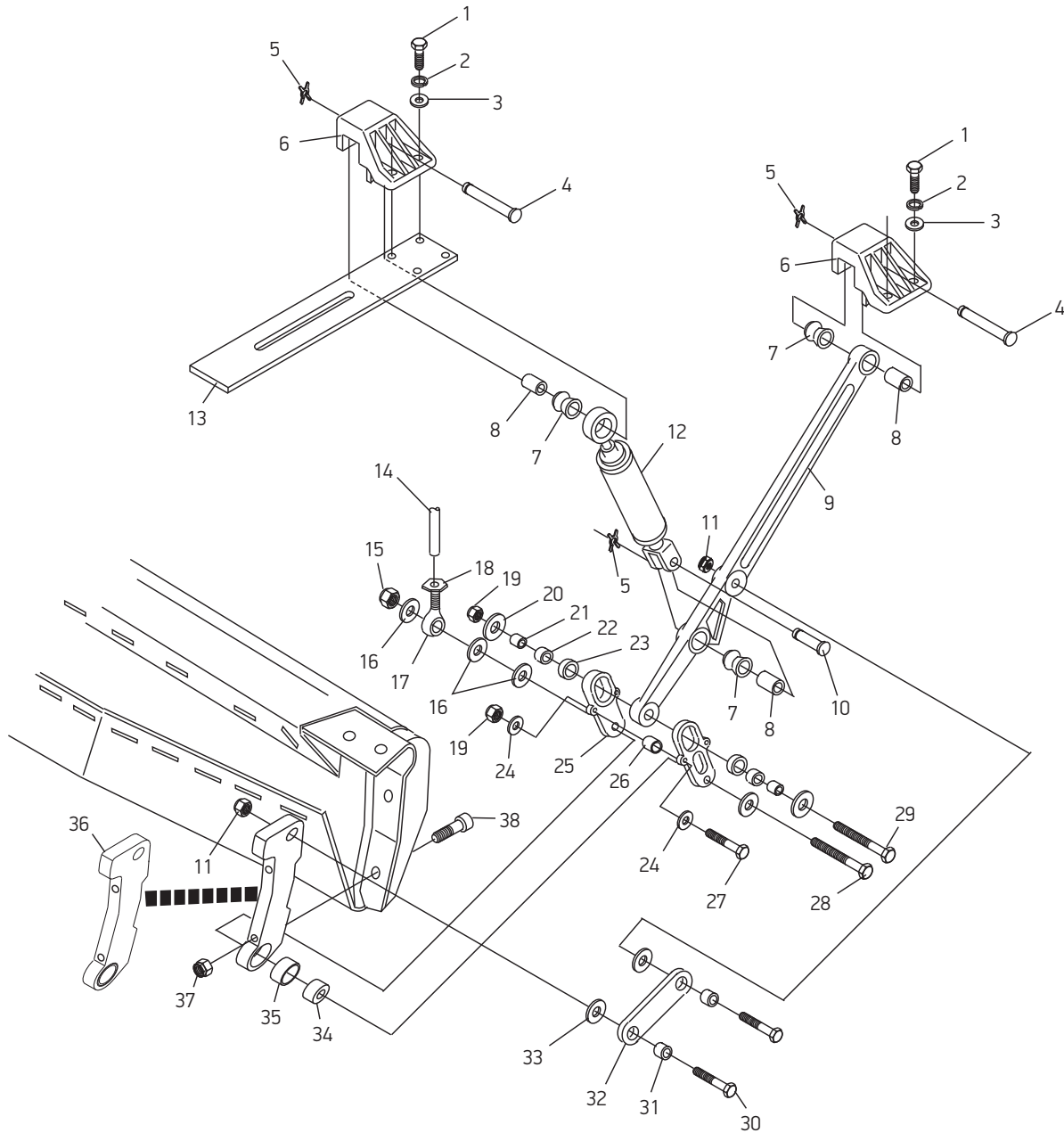
### ROD END CONVERSION KIT

Eliminates binding that causes recycling problems.

- Convert old "fixed-position" rod ends to "uniball" rod ends using this kit
- Uniball rod ends are self-aligning to increase flexibility and reduce the chance of recycling and cushion binding

12-862015-000





For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	11-001344-001	Hx Hd Screw 3/8-16 x 1"	15	11-170016-001	Hex Nut Nylock 1/2-20	30	12-252352-000	Cushion Arm Bolt
2	11-195016-001	Lockwasher 3/8	16	11-190520-001	Plain Washer	31	12-252350-000	Bushing
3	11-190014-001	Flat Washer 3/8	17	12-252060-000	Uniball Rod End	32	12-252069-000	Link
4	10-229602-000	X-Washer Pin	18	11-125259-001	Hex Jam Nut 1/2-20	33	12-252360-000	D-Washer
5	11-230005-001	"X" Washer 1/4	19	11-170012-001	Hex Nut Nylock 3/8-24	34	12-100185-036	Spacer
6	12-252344-000	Cushion Bracket	20	11-190512-001	Flat Washer	35	10-424001-000	Sleeve Oilite Bearing
7	12-250189-000	Rubber Bushing	21	12-252349-000	Follower Spacer	36	12-862839-000	Cushion Mount and Bearing
8	12-250011-002	Spacer	22	11-420094-000	Sleeve Oilite Bearing	37	11-170012-001	Hex Nut Nylock 3/8-24
9	12-252073-000	Support Arm	23	12-252351-000	Roller	38	10-009001-001	Hx Sckt Hd Screw 3/8-24 x 2-1/16"
10	10-229601-000	X-Washer Pin	24	11-190511-001	Flat Washer			
11	11-170016-001	Hex Nut Nylock 1/2-20	25	12-252346-000	Follower Link			
12	12-252173-000	"A•2" Shock Absorber	26	10-386092-000	Spacer			
12a	12-250173-000	"A" Shock Absorber	27	11-001394-001	Hx Hd Screw 3/8-24 x 2-1/2"			
13	12-252348-000	Elevator Plate	28	10-002006-000	Hx Hd Screw 1/2-20 x 3-1/2"			
14	12-252364-002	Tube	29	10-002001-000	Hx Hd Screw 3/8-24 x 2-3/4"			



### ADVANCED PERFORMANCE VIBRATOR SHAFT BEARING SHIMS

Bottom pit conveyor frames vary in thickness over the years.

- Use these shims when assembling the vibrator shaft bearing assembly to the frame to help fill in the gap
- Package contains 4 shims

12-862027-000



### IDLER PULLEY ASSEMBLY

Split, steel pulley with bolt-together design for easy bearing replacement.

- Comes fully assembled with hardware
- Replaceable steel bearing – 11-434001-000 allows for replacement of the high-wear part
- For screw only – 11-005088-001

12-300075-000



### V-BELT IDLER PULLEY

Solid steel, precision machined pulley with replaceable bearing.

- Replaceable steel bearing only - 11-434001-000

12-400819-000



### PIT BOARD BUMPER

Prevent the pit conveyor board from knocking against the pit frame

- Sturdy urethane mold
- Hose clamps available for mounting part number 11-603201-000 (2 required)

12-302212-000



### ADVANCED PERFORMANCE JOGGER LINK ASSEMBLY COMPLETE

Made out of ductile iron for long service life. Includes: Jogger Link, Grease Fitting, Bearing, Inner Ring, Spirol Retaining Pin, and Ball Bearing and Race 11-450201-000.

12-300194-091



### DRIVE PULLEYS

One-piece steel pulleys are welded and riveted for strength and durability. Pulley groove angle is controlled for optimum belt drive.

12-300071-000 – Front

12-300073-000 – Rear



### NATURAL RUBBER PIT MOUNT

Keeps pins and balls moving correctly through the pit conveyor.

- Natural rubber compound offers better dampening capabilities compared to neoprene
- Our grade 5 metals and strict rubber curing process ensure durability and performance
- Broken mounts can lead to ball calls and poor pin transfer to the elevator

**TIP:** Using locknuts to secure the mounts can be difficult to install and can damage the pit mount. For proper installation and replacement of the mounts use Keps Nut – 11-176001-001.

90-675000-000



### PIT FRAME ASSEMBLY

Quick-release design allows for secure board positioning and easy pit board removal.

- L.H. Lever and Bracket – 12-300193-000
- L.H. Clamp and Pin Assembly – 12-300169-000
- R.H. Lever and Bracket – 12-300192-000
- R.H. Clamp and Pin Assembly – 12-300168-000

12-860659-000



### QUICK RELEASE PIT CONVEYOR CONVERSION KIT

Quick release design requires no tools to release the pit board. Positive spring loading holds board in place better than old style.

12-860624-000

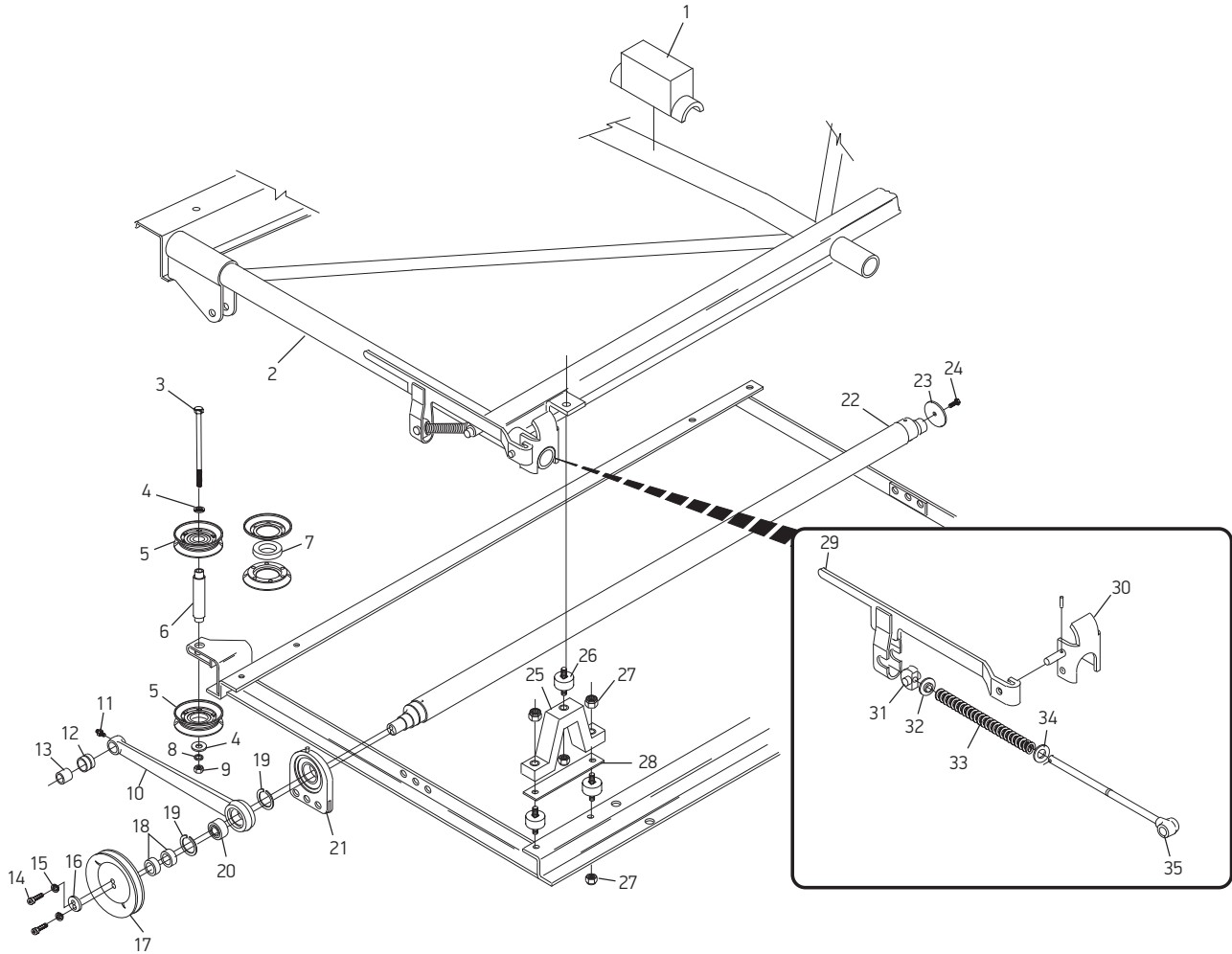


### VIBRATOR SHAFT BEARINGS

Original equipment bearing and housing assembly. Keeps the vibrator shaft in place and quiet.

12-300160-000 – Complete Bearing and Housing Assembly

12-300160-003 – Bearing only



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

<b>1</b>	12-302212-000	Pit Board Bumper	<b>15</b>	11-196012-001	High Collar Lockwasher 1/4"	<b>26</b>	90-675000-000	Black Rubber Pit Mount
<b>2</b>	12-860659-000	Pit Frame Assembly	<b>16</b>	12-300016-002	Washer	<b>27</b>	11-176001-001	Keys Nut 5/16-18
<b>3</b>	11-001286-001	Hx Hd Cap Screw 5/16-18 x 5-1/2"	<b>17</b>	12-300088-000	Pulley Assembly	<b>28</b>	12-300024-003	Front Tie Plate
<b>4</b>	11-190012-001	Flat Washer - SAE 5/16	<b>18</b>	12-300013-002	Spacer	<b>28</b>	12-300024-002	Rear Tie Plate
<b>5</b>	12-300075-000	Idler Pulley Assembly	<b>19</b>	11-536026-000	Spirol Retaining Ring	<b>29</b>	12-300192-000	R.H. Lever and Bracket
<b>6</b>	12-300109-000	Shaft	<b>20</b>	11-491000-000	Ball Bearing	<b>29</b>	12-300193-000	L.H. Lever and Bracket
<b>7</b>	11-434001-000	Bearing .500 ID x 1.1250 OD	<b>21</b>	12-300160-000	Bearing and Housing Assembly	<b>30</b>	12-300168-000	R.H. Clamp and Pin Assembly
<b>8</b>	11-195015-001	Lockwasher 5/16	<b>22</b>	12-300014-000	Vibrator Shaft	<b>30</b>	12-300169-000	L.H. Clamp and Pin Assembly
<b>9</b>	11-125102-001	Hex Nut 5/16-18	<b>22</b>	12-300126-000	Vibrator Shaft – Oscillating	<b>31</b>	12-300178-000	Pivot
<b>10</b>	12-300163-000	AP - Jogger Link only	<b>23</b>	12-300081-004	Flat Washer	<b>32</b>	12-300189-000	Step Washer
<b>10</b>	12-300194-091	AP - Jogger Link Assy-Complete	<b>24</b>	11-110130-001	Hx Hd Cap Screw 1/4-20 x 3/4"	<b>33</b>	12-300172-000	Compression Spring
<b>11</b>	11-280001-000	Grease Fitting 11/32	<b>25</b>	90-300076-000	Front Pit Mount - Urethane	<b>34</b>	11-190016-001	Flat Washer 7/16
<b>12</b>	11-450001-000	Bearing	<b>25</b>	90-300077-000	Rear Pit Mount - Urethane	<b>35</b>	12-300170-000	Spring Guide
<b>13</b>	11-450201-000	Inner Ring	<b>25</b>	12-300076-000	Steel Front Pier			
<b>14</b>	11-005184-011	Hx Sckt Hd Cap Screw	<b>25</b>	12-300077-000	Steel Rear Pier			



### ADVANCED PERFORMANCE FIBERGLASS PIT BOARD ASSEMBLY

Ready-to-install board comes fully assembled with carpet, rubber blocks and strips.

- High-tech process ensures consistently strong parts without the material variations and weak spots inherent in wood grain
- Increased density in high-impact areas boosts the life of the board
- 5-year warranty
- Fiberglass Pit Board Only – 12-860620-002  
**12-860620-003**



### WOOD PIT BOARD ASSEMBLY

Ready-to-install pit board comes with deflectors, pit carpet, rubber blocks and strips.

- Wood pit board only – 12-860620-005  
**12-860620-004**

### PIT RUG

Tightly woven, continuous loop pile resists wear from bowling pins and balls.

- Industrial-grade carpet made from three-ply 100% virgin nylon
- Fits all models of A/A•2, and Jetback pinsetters
- Suitable for wood or fiberglass boards  
**12-300103-000**



### PIT CARPET COVER

Cover removes dirt and oil from balls and pins.

**12-860725-000**



### HEAVY DUTY PIT CARPET COVER

Reinforced stitching prevents unraveling. Heavy-duty material lasts longer and cleans pins better.

- Wider loop area on laundry tabs for better holding power  
**12-862919-000**



### CONTACT ADHESIVE

Adhesive for pit carpets, pit boards, pit cushions, power lift parts and numerous other applications. Fast-drying and strong.

**11-676047-000** – (Gallon)



### PIT BOARD RUBBER BLOCK INDIVIDUAL REPLACEMENT PARTS

Eliminates pit board from bouncing on metal frame and making noise.

- Secures pit board from floating side to side

**11-014090-009** - Screws (Pkg of 10)

**11-170005-001** - Nut (Pkg of 25)

**12-300146-002** - Rubber Strip 48"

**12-300146-004** - Rubber Strip 17"

**12-300180-000** - Rubber Strip 6"

**12-300212-000** - Rubber Block

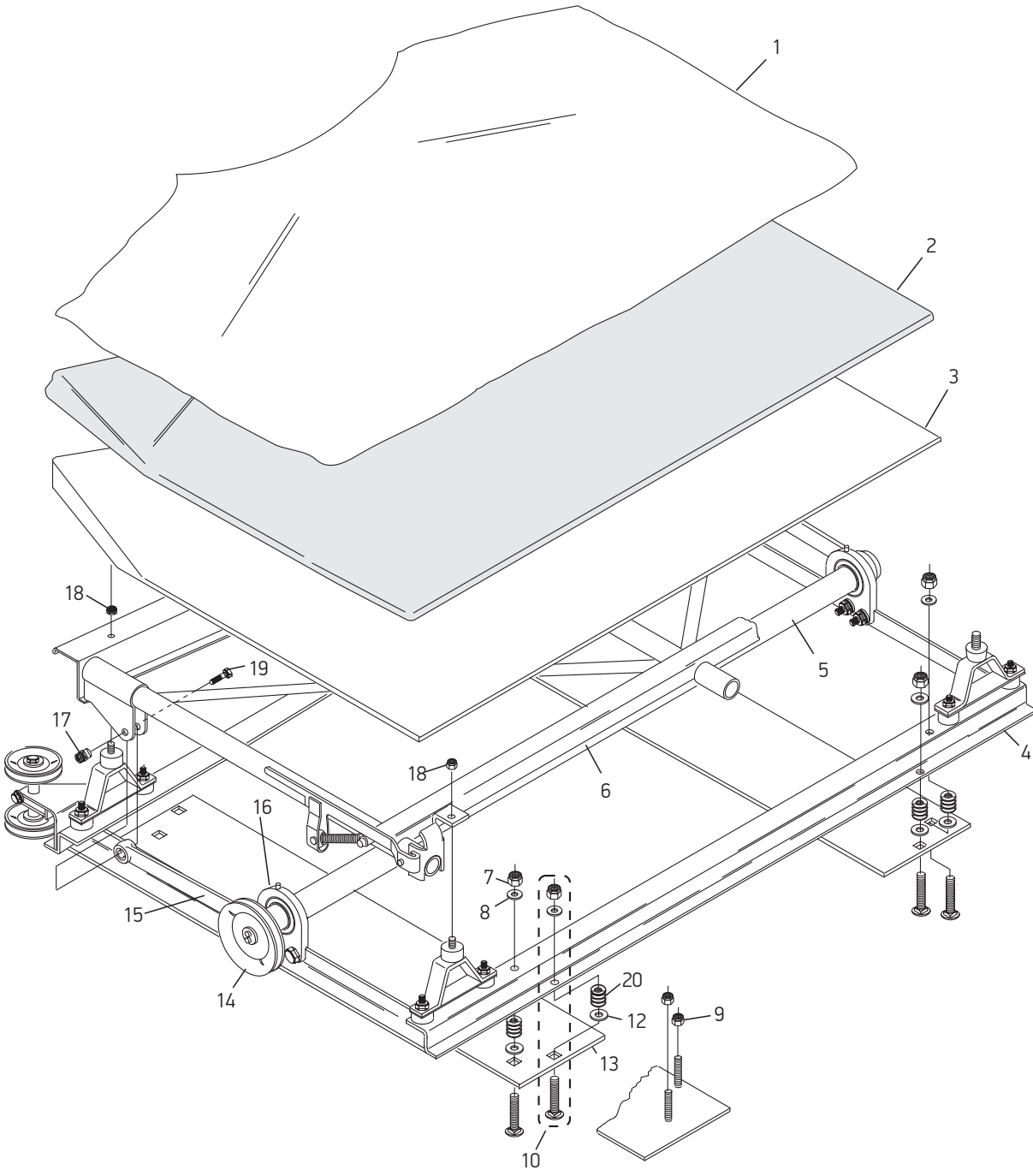


### VIBRATOR SHAFT

Strong, hard steel shaft prevents wear at bearing journals.

- Solid, one-piece design
- Bearing journals and shaft ends are machined for a tight fit, extending the life of shaft and mating parts

**12-300141-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

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1	12-860725-000	Pit Carpet Cover (1 Ea.)	8	N/A	See Index Number 10	16	12-300160-000	Bearing and House Assembly
2	12-300103-000	Pit Rug	9	11-170013-001	Self-Locking Nut 7/16-14	16	12-300160-003	Bearing
3	12-860620-002	AP - Fiberglass Pit Board Only	10	12-860552-000	Pkg Carriage Bolt-Pit Frame-Qty 2	17	11-155401-002	Spline Nut 3/8-24
3	12-860620-003	AP - Fiberglass Pit Board Assy.	11	N/A	See Index Number 10	18	11-176001-001	Keys Nut 5/16-18"
4	12-300131-000	Frame Assembly	12	11-191024-001	Flat Washer 3/4	19	11-001390-001	Hx Hd Cap Screw 3/8-24x1-3/4
5	12-300141-000	Vibrator Shaft	13	12-300110-000	Pit Sub Mounting Plate	20	11-191018-001	Flat Washer 1/2"
6	12-860659-000	Pit Frame Assembly	14	12-300088-000	Pulley Assembly			
7	N/A	See Index Number 10	15	12-300194-091	AP Jogger Link Assy-Complete			

## A • 2 | RAKE ASSEMBLY



**Advanced Performance**

### ADVANCED PERFORMANCE SMOOTH DROP RAKE SHOCK

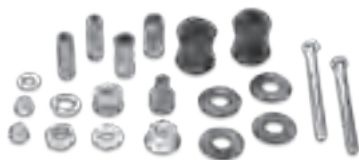
**Exclusive design, available only from Brunswick. Quieter – eliminates initial noise during start-ups**

- Prevents automatic scoring errors caused by rake interference from a slow shock
- Fully assembled with rubber bushings in mounting holes, nylon spacer, and adjusting hardware. Easy-to-install
- Rubber bushings installed in the mounting ends extend the connecting pin's life
- Rubber Bushing – 12-250189-000
- Polyurethane Spacer – 12-252342-000  
**12-252343-000**



### RAKE SHOCK ASSEMBLY

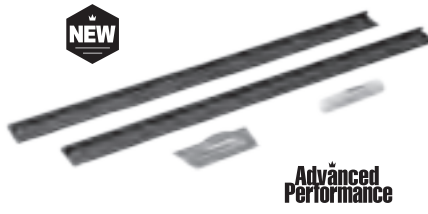
- Prevents automatic scoring errors caused by rake interference from a slow shock
- Fully assembled with rubber bushings in mounting holes, nylon spacer, and adjusting hardware. Easy-to-install
- Rubber bushings installed in the mounting ends extend the connecting pin's life
- Rubber Bushing – 12-250189-000
- Polyurethane Spacer – 12-252342-000  
**12-252338-000**



### RAKE SHOCK KIT

Everything needed to ensure that the rake shock absorber is in top operating condition. Packaged in a kit for convenience.

**12-252382-000**



**Advanced Performance**

### ADVANCED PERFORMANCE RAKE BOARD CUSHION KITS

- Kit consists of 2 each rake cushions, one tube of special adhesive, trowel for application along with instructions for proper installation.
- Non marking cushion that lays flatter
- Rake board adhesive also sold separately – 11-676388-000  
**12-860388-000** - Gray  
**12-860388-010** - Brown



### RAKE SHAFT REPAIR KITS

Tube is precision machined for easy installation yet provides snug fit for long life.

- Steel tube is easy to drill
- Comes complete with sleeve, all engineering approved hardware, and easy-to-use instructions
- TIP:** Use the rake shaft repair driver (12-700115-003) to prevent flaring damage to the repair shaft.  
**12-860607-000** – US Machines  
**12-860665-000** – Japanese Machines



**Advanced Performance**

### ADVANCED PERFORMANCE SWEEP ARM

The strongest, most economical sweep arm on the market.

- Tip: Make sure to use two sweep arms on each pinsetter.  
**90-252037-000**



**Advanced Performance**

### ADVANCED PERFORMANCE ANTI-INVERSION KIT

Stop trip rod lever and pivot link inversions. Installs quickly.

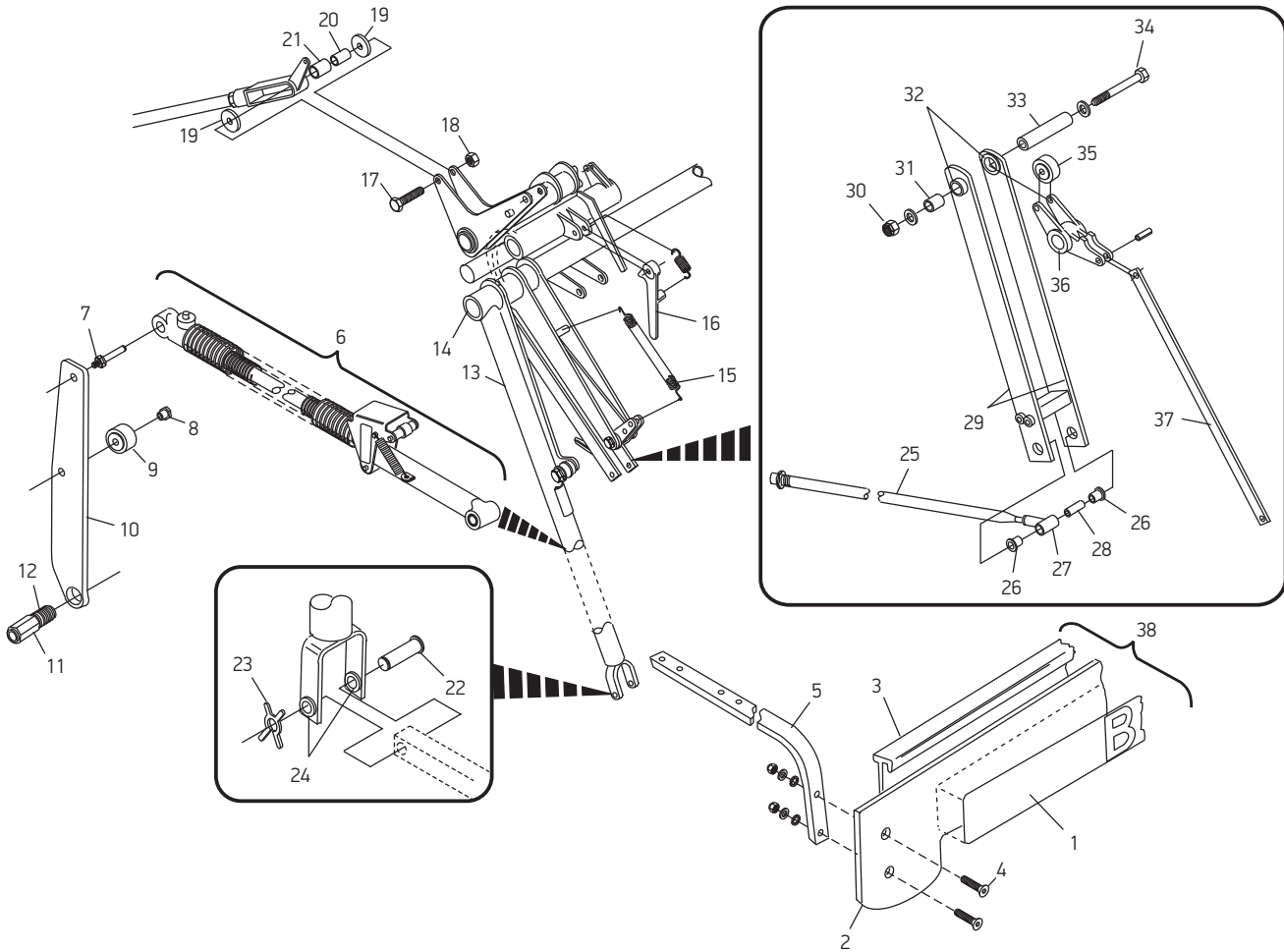
- Designed by Mechanic Bruce McMartin  
**12-862012-000**



### SPRING LOADED RAKE CRANK ROD

Eliminate bending rake crank rods from catching on the tail plank.

- Spring-loaded, steel rod compresses and returns if rake board jams behind the tail plank during machine operation
- Absorbs shock of accidental bowling ball impact on the rake board  
**12-252309-000** – Straight ends  
**12-250289-000** – Tapered ends



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

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1	12-252290-000	Brunswick Astrogray Decal	14	11-421030-000	Flanged Oilite Bearing	27	12-250014-000	Pivot Assembly
1	12-252290-010	Brunswick Brown Decal	15	12-250050-000	Spring	27	12-250273-000	Pivot Assembly
2	12-252373-000	Gray Rake Board Only	16	12-250044-000	Latch (N.A.)	28	12-250011-014	Spacer
2	12-252373-010	Brown Rake Board Only	17	11-002008-001	Hx Hd Sckt Cap Screw 1/4-20x2"	29	12-250225-000	Link and Bearing Assembly
3	12-860388-000*	Gray Rake Board Cushion Kit	18	11-170007-001	Hex Nut Nylock 1/4-20	30	11-170009-001	Hex Nut Nylock 5/16-18
3	12-860388-010*	Brown Rake Board Cushion Kit	19	12-250076-003	Washer	31	12-250011-012	Spacer
4	11-007386-001	Fl Hd Sckt Cap Screw 3/8-24x1-1/4"	20	12-250091-000	Sleeve Oilite Bearing	32	11-421017-000	Flanged Oilite Bearing
5	90-252037-000	AP - Molded Sweep Arm Assembly	21	12-252090-000	Bumper	33	12-250011-011	Spacer
6	12-252301-000	Rake Latch Assembly (pg. 75)	22	12-250010-007	X-Washer Pin	33	12-250053-004	Washer
7	12-250229-000	Pivot Stud	23	11-230005-001	"X" Washer 1/4	34	11-002072-001	Hx Hd Sckt Cap Screw 5/16-18 x 3"
8	12-250244-000	Bearing Stud	24	11-420063-000	Sleeve Oilite Bearing	35	11-450302-000	Ball Bearing
9	11-460000-000	Needle Roller Bearing	24	11-421147-000	Bearing .5145 ID x .6905 OD	36	12-250029-000	Bell Crank
10	12-252234-000	Cam Follower Arm, Model A•2	25	12-250022-002	Rod, Rake Crank, Tapered	37	12-250040-000	Link
11	11-421019-000	Flanged Oilite Bearing	25	12-250278-002	Rod, Rake Crank, Straight	38	12-252374-010	Brown Rake Board w/ Decal and Cushion
12	12-250230-000	Hub and Bearing Assembly	25	12-252309-000	Collapsible Rake Crank Rod, Straight	38	12-252374-000	Astrogray Rake Brd w/ Decal and Cushion
13	12-862186-000	Rake Shaft Assembly	26	11-421027-000	Flanged Oilite Bearing			

\*See previous page for more information.





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Performance**

#### **ADVANCED PERFORMANCE RAKE LIFT ARM REPAIR KITS**

Avoid costly repairs later from worn or slotted "rabbit ears."

- Damaged V levers or C levers can cause trigger failure, improper rake dropping, and automatic scoring errors
- Cover elongated holes with new steel reinforcement plates. Precisely positioned mounting holes match original mounting hole pattern
- For use on all pinsetter models
- Instructions and hardware included

**12-862582-000** – V Lever

**12-862377-000** – C Lever



#### **TRIP ARM ASSEMBLY**

Die cast trip arm. Oilite bearings – 11-421103-000 are factory installed.

**12-252354-002**



#### **PIVOT LINK**

Fully assembled with flanged oilite bearings – 11-421104-000.

**12-252355-091**



#### **RAKE LIFT ARM ASSEMBLY**

*Get the best lift for the dollar.*

- All-steel rake lift arm is produced on a precision welding fixture to ensure exact positioning of V and C levers
- Lever positioning is critical for smooth rake dropping without binding
- Continuous welds around pipe for strong, durable joints
- Rake Lift Arm Repair Kit – 12-862582-000  
**12-252048-000** – A•2 and Jetback  
New and Converted



#### **ROD END KIT**

Replacement rod end kit for A•2 turnbuckle assembly.

- Replace worn rod ends for optimal triggering
- Instructions included  
**12-860576-000** – RH  
**12-860577-000** – LH



#### **RAKE LIFT ARM BUMPER AND BEARING ASSEMBLY**

One package now works on Model A and A•2. Install oilite bearings – 12-250091-000 to eliminate vibration and ensure smooth lifting and dropping of rake.

**12-252092-000**



#### **RAKE SHAFT ASSEMBLY**

- Three-piece shaft cuts down on shipping, stores easier, and virtually eliminates repairs
- Available Replacement Parts:  
Hex Hd. Cap Screw, 1/2-13 x 3" – 11-002252-000  
Lockwasher (1/2") – 11-195018-001  
Key – 12-252670-000  
Bronze Flanged Bearing – 11-421147-000  
Center Shaft Weldment – 12-252668-000  
**12-862186-000**



#### **TRIP ROD LEVER**

Avoid excessive use of the reset button because the rake won't trigger.

- Trip end is hardened to minimize wear and extend life
- Two replacement oilite bearings required – 11-421102-000

**12-252356-000**



#### TRIP CYLINDER COMPLETE WITH ALL BEARINGS

Why continue to press in difficult bearings when you can purchase the trip cylinder with the bearings already installed. Saves time and makes rebuilding faster and easier.

**12-252335-091**

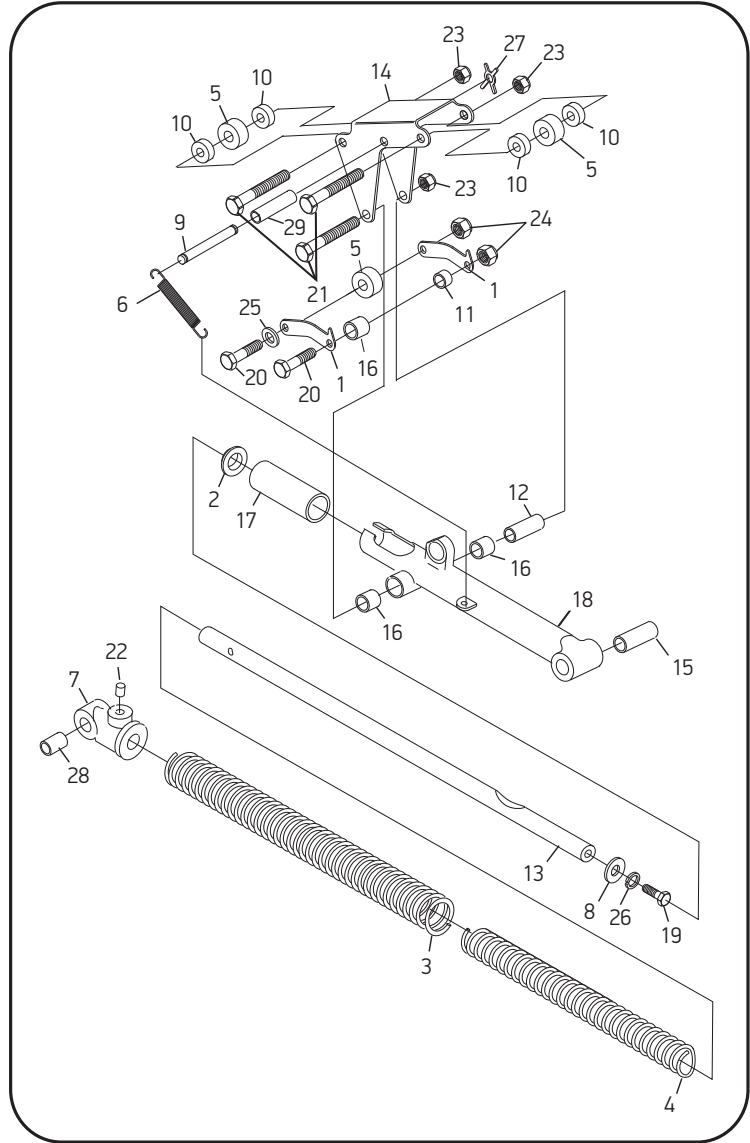
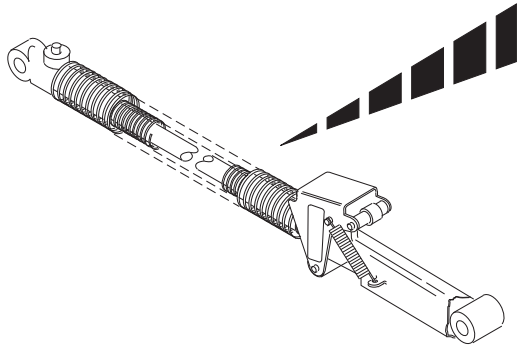


#### RAKE LATCH ASSEMBLY

Always keep a couple of "shotguns" in stock to avoid pinsetter recycling problems, which can be an extremely awkward mechanic repair.

- Ready-to-install unit saves time by avoiding unnecessary downtime

**12-252301-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

<b>1</b>	12-252326-000	Roller Bracket (2)	<b>11</b>	12-100185-021	Spacer	<b>21</b>	11-001193-001	Hex Head Cap Screw (3)
<b>2</b>	12-252327-000	Spring Seat	<b>12</b>	12-100185-022	Spacer	<b>22</b>	11-101208-001	Hex Socket Set Screw
<b>3</b>	12-252328-000	Compression Spring - R.H.	<b>13</b>	12-252333-000	Shaft	<b>23</b>	11-170007-001	Hex Nut Nylock 1/4-20 (3)
<b>4</b>	12-252329-000	Compression Spring - L.H.	<b>14</b>	12-252334-000	Trip Bracket	<b>24</b>	11-170106-001	Flexloc Hex Nut (2)
<b>5</b>	11-450303-000	Roller Spring (3)	<b>15</b>	11-420096-000	Sleeve Oilite Bearing	<b>25</b>	11-190509-001	Flat Washer - Non-Standard
<b>6</b>	12-252330-000	Tension Spring	<b>16</b>	11-420097-000	Sleeve Oilite Bearing (3)	<b>26</b>	11-195014-001	Lock Washer 1/4
<b>7</b>	12-252331-000	Shaft End	<b>17</b>	11-420098-000	Sleeve Oilite Bearing	<b>27</b>	11-230001-001	X-Washer 1/8
<b>8</b>	11-190508-001	Plain Washer	<b>18</b>	12-252335-000	Trip Cylinder w/o Bearings	<b>28</b>	11-420035-000	Bearing
<b>9</b>	12-252332-000	X-Washer Pin	<b>19</b>	11-001178-001	Hex Head Cap Screw	<b>29</b>	10-386062-000	Spacer
<b>10</b>	12-100185-020	Spacer (4)	<b>20</b>	11-001185-001	Hex Head Cap Screw (2)			



### LIFT ROD COVERS ADVANCED TECHNOLOGY

The cover's ability to grip balls optimizes ball lift and return.

- Cut the length you need for the spinning ball eliminator, ball lift rods, and ball lift guide rods
- Product design requires all three lift rod caps to be installed upon installation. See enclosed instructions.

**12-400048-091** – 50' roll

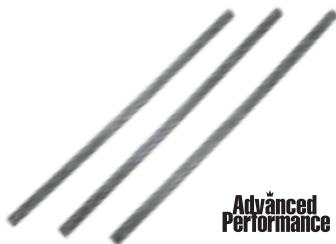
**12-400048-005** – 90" cover



### HEAVY-DUTY LIFT ROD COVER ADVANCED TECHNOLOGY

Resists twisting on rods for more effective ball lift and return. Product design requires all three lift rod caps to be installed upon installation. See enclosed instructions.

**90-400048-000** – 50' roll



**Advanced Performance**

### ADVANCED PERFORMANCE BALL LIFT ROD COVER

Extremely durable! Specially formulated urethane foam material wears 60% less than any other rod cover on the market.

- Incredibly flexible and comes in 3 pieces  
**90-400048-600**



### LIFT ROD CAP KITS

Extra durable urethane lift rod caps.

- Comes complete with tie wrap and hose clamps
- To order individual parts:  
Bottom Front – 12-402432-000  
Top Rear – 12-402043-000  
Top Front – 12-402042-000  
Clamp – 11-603201-000

Note: Individual caps are for the A•2, not the A

**12-860614-000** – Model A

**12-862860-000** – Model A•2



### BALL JAM ELIMINATOR

An innovative product that mounts to the front ball lift rod eliminating ball jams between the pit cushion and the ball lift rods.

- Kit is easy to install, includes all hardware and instructions

**12-860548-000**



### 18-INCH BALL ROD COVER

Allows for a quick fix, easy to install (tie wraps not included).

- Made from heavy-duty, long-lasting urethane
- Cut out 18 inches of the damaged rod cover

**90-400048-005**



### BALL LIFT ROD ASSEMBLY ADVANCED TECHNOLOGY

Put an end to ball lift return problems. Install a new ball lift rod assembly.

- The Model A and Model A•2 versions both have the original cast clapper box. Durable weld on box will not crack
- Fully assembled with non-marking lift rod covers and bottom urethane lift rod cap for greater protection
- Also includes lift pin, adjusting screw, mounting hardware, and top urethane rod caps (unassembled)

**12-860579-000** – For Model A

**12-862579-000** – For Model A•2/Jetback

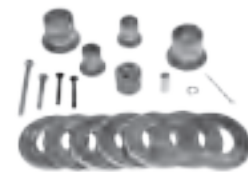


### BALL LIFT ARM REBUILD KIT

Kit includes oversized ball lift arms, oversized bore on spacers, ball bearing, ball lift pin (12-862588-000), and e-clips for cast clapper box.

- All parts are made from high-strength steel and cast iron
- Slide-on sleeve provides a long-lasting surface for ball lift arms to pivot on
- No welding required

**12-862866-000**

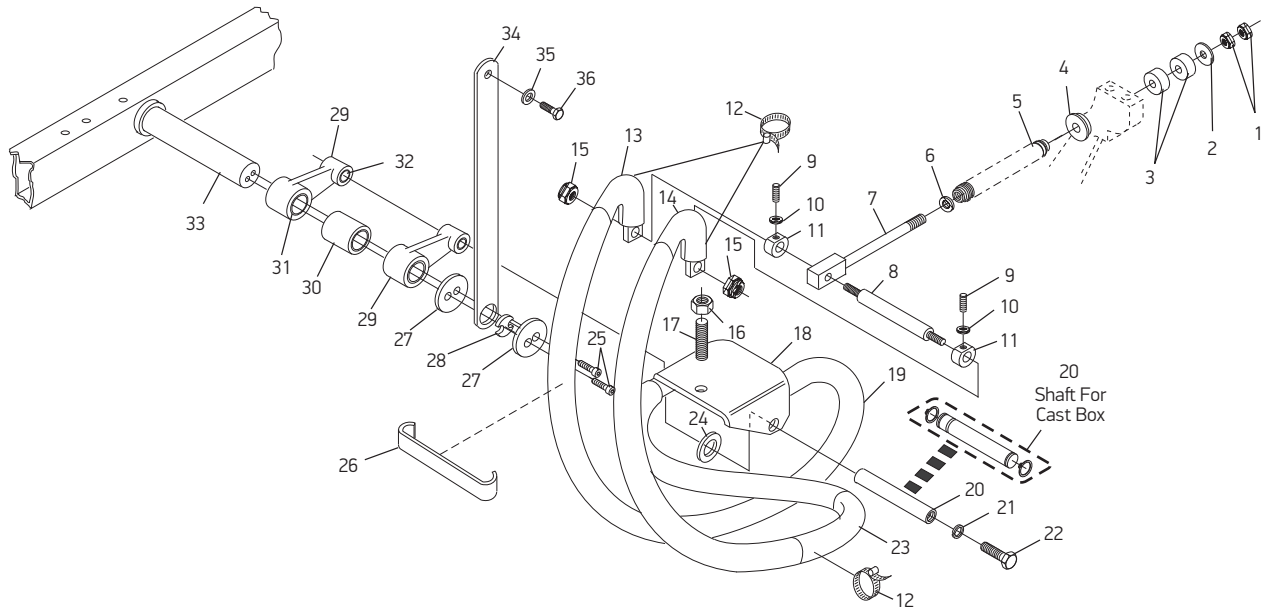


### ANTI YO-YO KIT

Helps to eliminate yo-yo problems.

- Kit revives lift rod assembly by centering ball lift rods with ball wheel

**12-862014-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	11-125208-001	Hex Jam Nut 1/2-13	13	12-402043-000	Top Rear Rod Cover	24	11-191024-001	Flat Washer 3/4"
2	12-400139-004	Washer	14	12-402042-000	Top Front Rod Cover	25	11-005183-001	Cap Screw 1/4 x 20 x 7/8"
3	12-400123-000	Rubber Bumper (see pg 84)	15	11-170014-001	Hex Nut Nylock 7/16-20	26	12-402096-000	Clamp A•2
3	90-400123-000	Spring Rod Bushing (see pg 84)	16	11-125204-001	Hex Jam Nut 3/8-16	26	12-400096-000	Clamp A
4	12-400803-000	Spring Rod Bushing	17	11-102262-001	Set Screw 3/8-16 x 2-3/4"	27	12-402053-000	Retaining Washer
4	90-400803-000	AP - Delrin Spring Bushing	18	12-862579-000	A•2 Ball Lift Rod Assembly Adv Tech	28	12-402054-000	Spacer
5	12-402121-000	Compression Spring	18	12-860579-000	B/L Rod Assembly, Model A	29	12-400288-000	Ball Lift Arm Assembly
6	11-190018-001	Flat Washer 1/2	19	90-400048-000	Hvy Duty Lift Rod Cover Adv Tech	30	12-400289-000	Spacer
7	12-400193-000	AP - Spring Rod (see pg 84)	19	12-400048-091	Ball Lift Rod Cover	31	12-400199-000	Flanged Oilite Bearing
8	12-400051-000	Ball Lift Stud, Model A	19	90-400048-600	AP - Ball Lift Rod Cover	32	11-421041-000	Flanged Oilite Bearing
8	12-402051-000	Ball Lift Stud, Model A•2	20	12-400848-000	Ball Lift Pin for Steel Clapper Box	33	12-400149-000	Shaft
9	11-105208-001	Set Screw	20	12-862588-000	Ball Lift Pin for Cast Clapper Box	34	12-402425-000	Support Brace
10	11-170108-001	Flexlock Hex Nut 5/16-18	21	11-195016-001	Lockwasher 3/8	35	11-195015-001	Lockwasher 5/16"
11	12-400300-000	Collar	22	11-002124-001	Hex Head Cap Screw	36	11-001263-001	Hx Hd Cap Screw 5/16x18x7/8"
12	11-603201-000	Hose Clamp	23	12-402432-000	Bottom Front Rod Cover			



#### ADVANCED PERFORMANCE BALL LIFT ROD (TRACK) SUPPORT

One piece design eliminates the problems found with the original design.

- Fits all A•2 and converted models
- Includes instructions and mounting hardware

**12-862180-000**

#### REPLACEMENT BALL WHEEL

Manufactured to original OEM specifications which allow proper transition of ball through lift rods.

**12-860662-000**



#### BALL WHEEL WIPER KIT WITH CLOTHS

The ball wheel wiper continually removes dirt and oil from the ball wheel. This means less dirt and oil in the ball return system all the way back to the bowler. Pads are washable and additional replacement pads can also be purchased in a two-pack.

**12-862055-000**

**12-862054-000** – Replacement Cloths (2/pkg)



#### ADVANCED PERFORMANCE SPINNING BALL ELIMINATOR II (SBE II)

Prevents pins from jamming under the SBE shaft and eliminates foam and rubber covers.

- Rollers guide light weight balls in for faster return
- Installs easily
- Designed by Mechanic Kevin Hizar

**12-862250-000** – Roller Assembly Only

**12-862262-000** – SBE II with Arm

**12-862253-000** – Japanese Roller Only

#### ADVANCED PERFORMANCE SBE AND BALL JAM ELIMINATOR KIT

Includes: 12-860583-000 and 12-860548-000

**12-860229-600**

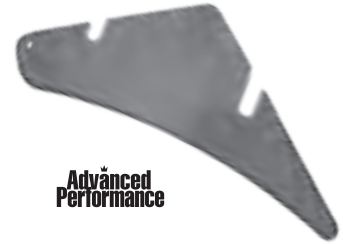


#### SPINNING BALL ELIMINATOR (SBE)

Ensure balls get back to bowlers without assistance.

- Eliminates ball calls caused by spinning balls
- Requires no driving mechanism
- Comes with Rod Cover

**12-860583-000**



#### ADVANCED PERFORMANCE UNIVERSAL BALL WHEEL GUARD

- Improved inserts made with Toughened Nylon 6/6 to resist breakage
- Prevents expensive damage to balls and pins that could be damaged by elevator wheels
- Non-marking to ball and pins
- Universal design fits both right hand and left hand side of elevator
- Slotted mounting holes for easy installation
- Replacement Hardware: Button Head Socket Cap Screw - 11-006506-001 or Carriage Bolt - 11-071085-001

**90-400840-600**



#### MAGNETIC CLUTCH ASSEMBLY

Stops and starts pin wheel to eliminate turn pan, cross conveyor, and turret jams.

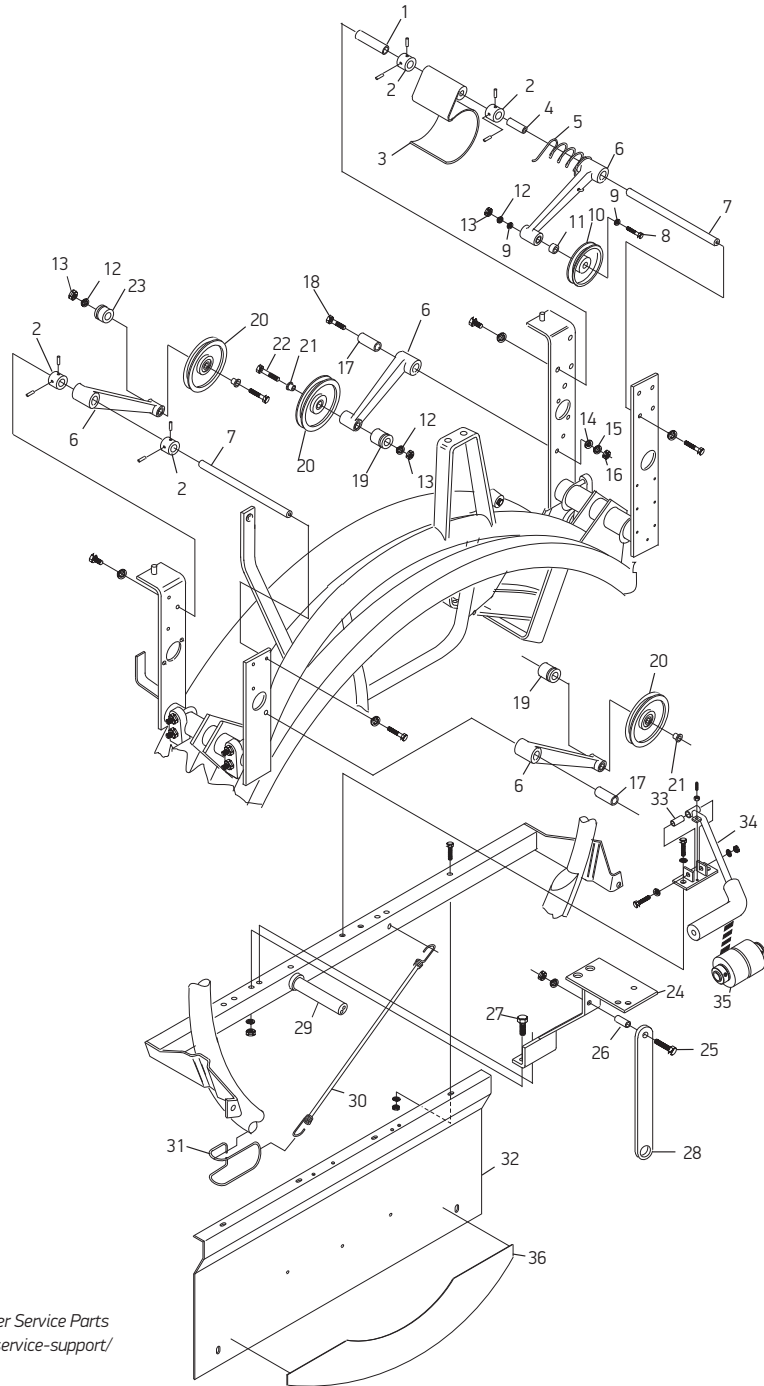
- 100 inch-pound torque requirement ensures that the pin wheel will start without slipping
- Special non-asbestos clutch facing is tightly bonded and provides long, quiet operation
- Comes with replaceable bearing – 11-430045-000, heavy-duty cord and restraint, and twist-lock plug that ensures proper mating with the wire channel

**TIP:** Suggest replacing Selenium Rectifier and Capacitor with Magnetic Clutch Voltage Regulator - 12-862030-000 (see pg. 90)

**12-862163-000**

### TECH TIP

Failing jack shafts and bearings? Failing jack shafts and bearings can be the result of the bearing being press fit onto the shaft. The bearing should be locked against the shoulder of the shaft by the clamping action of a bolt, lock washer, heavy duty washer, pulley, and a spacer. When assembled, the end of the jack shaft should be slightly recessed inside the hub of the pulley allowing for the clamping action of the bolt to lock the inner race of the bearing against the shoulder of the shaft. If you don't have a recessed condition, it is usually because the spacers have worn down and need to be replaced.



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000. Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	12-400018-016	Spacer	13	11-125102-001	Hex Nut 5/16-18	26	11-387264-002	Rollled Spacer 5/16 x 1"
2	12-400281-000	Collar	13	11-125104-001	Hex Nut 3/8-16	27	11-001275-001	Hx Hd Cap Screw 5/16-18x2-3/4"
2	11-105200-001	Set Screw 5/16-18x1/4"	14	11-190016-001	Flat Washer 7/16	28	12-402425-000	Support Brace
3	12-402422-000	Pin Wheel Brake	15	11-195017-001	Lockwasher 7/16	29	12-400149-000	Shaft
4	12-400018-017	Spacer	16	11-125106-001	Hex Nut 7/16-14	30	11-606200-000	Pin Deflector Cord
5	12-400252-000	Torsion Spring	17	12-400018-023	Spacer	31	12-402429-000	Hook
6	12-400254-000	Arm and Bearing Assembly	18	11-001359-001	Hx Hd Cap Screw 3/8-16x3-3/4"	32	12-400237-000	Rear Plate
7	12-400027-000	Idler Arm Stud	19	12-400031-003	Spring Post	33	12-860583-002	Pivot Spacer
8	11-001354-001	Hx Hd Cap Screw 3/8-16x2-1/2"	20	12-400297-000	Idler Pulley Assembly - Flat Belt	34	12-860583-000*	Spinning Ball Eliminator
9	11-190014-001	Flat Washer 3/8"	21	12-400030-000	Bearing Bushing	35	12-862250-000*	AP - SBE II
10	12-400209-000	Idler Pulley	22	11-001357-001	Hx Hd Cap Screw 3/8-16x3-1/4"	35	12-862262-000*	AP - SBE II with Arm
10	12-400221-000	Idler Pulley	23	12-400031-002	Spring Post	36	12-400807-000	Rear Plate Pad
11	12-400036-000	Bushing	24	12-862180-000*	AP - Support Arm Assembly			
12	11-195016-001	Lockwasher 3/8	25	11-001272-001	Hx Hd Cap Screw 5/16-18x2"			

\*See previous page for more information.





**Advanced Performance**

**ADVANCED PERFORMANCE HEAVY-DUTY UPPER LEFT HAND BALL WHEEL GUIDE ROLLER ASSEMBLY**

Heavy-duty roller replaces two standard ball wheel guide rollers on the upper left-hand (lift rod) side.

- Roller – 90-402108-000
  - Flange – 12-402107-000
  - Bearing – 11-430007-000. May also replace with Bearing – 11-430028-000
- Hardware sold separately:
- Order Screw – 11-022385-001 and Washer – 11-190010-001 separately
- 12-862823-000**



**ONE-PIECE UPPER BALL WHEEL GUIDE ROLLER**

One-piece roller is injection molded from an abrasion-resistant urethane. Fully assembled with a replaceable bearing – 11-430004-000.

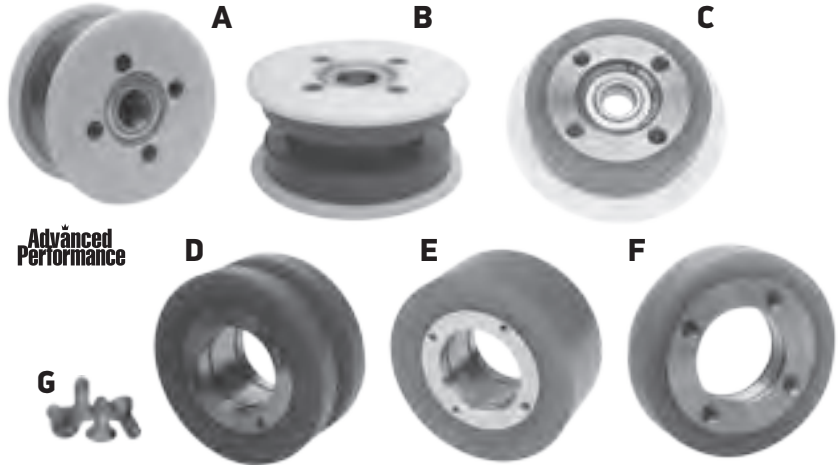
**90-400272-000**



**BALL WHEEL GUIDE ROLLER FLANGES**

These improved flanges will not break or deform.

- 12-400257-000** – For lower ball wheel guides
  - 12-400269-000** – For upper ball wheel guide
  - 12-402107-000** – For heavy-duty ball wheel guide
  - 11-008301-001** – OEM Screws with Nylon Patch
- TIP:** Tighten to 5-6 Ft. Lbs.



**Advanced Performance**

**ADVANCED PERFORMANCE URETHANE BALL WHEEL GUIDE ROLLERS**

Keeps ball wheel rotating smoothly and quietly. Factory assembled with bearings, retaining rings, and hardware.

- (A)-12-400240-000** – Lower LH ball wheel guide roller Repl. Bearing – 11-430013-000
- (B)-12-400268-000** – Lower RH ball wheel guide roller Repl. Bearing – 11-430013-000
- (C)-12-400272-000** – Upper ball wheel guide roller Repl. Bearing – 11-430004-000
- (D)-90-400260-000** – Lower RH ball wheel - roller only
- (E)-90-400258-000** – Lower LH ball wheel - roller only
- (F)-12-400271-000** – Upper ball wheel - roller only
- (G)-11-008301-001** – OEM Screws with Nylon Patch **TIP:** Tighten to 5-6 Ft. Lbs.



**CORK/RUBBER BALL WHEEL TRACTION MATERIAL**

A special blend of cork and rubber for increased durability improving ball wheel traction and reducing ball calls.

- Premium 3M adhesive backing. No waiting. No more messy contact cement, tape, or cutting down sheets of adhesive material
- Packaged in 23.5' rolls (1.5" wide x .062" thick). Instructions included

**12-860336-000**



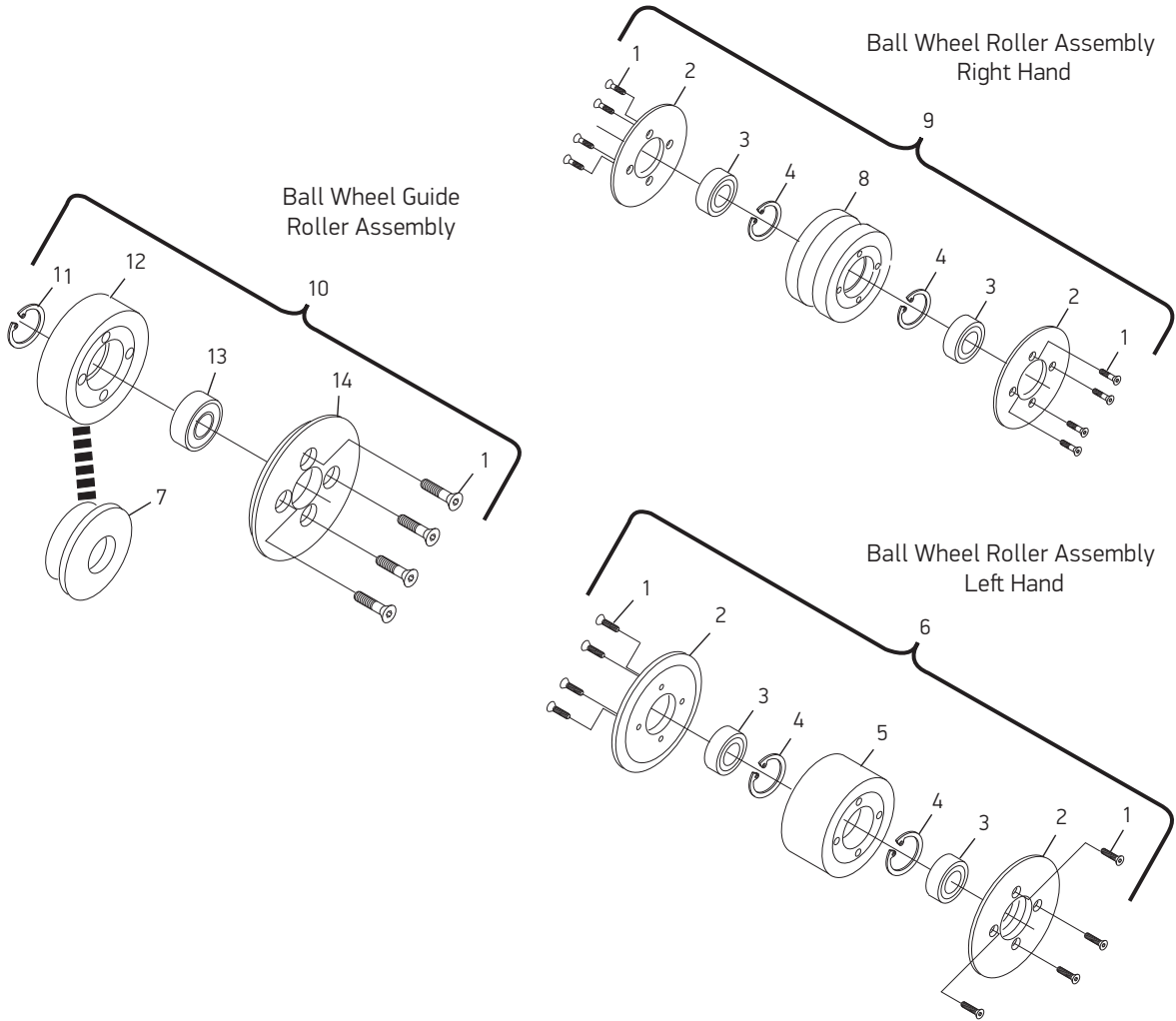
**BALL WHEEL TRACTION MATERIAL**

Give oily balls the extra traction they need to get up the ball wheel.

- Made from tough synthetic thermoplastic to withstand oil and dirt
- Self-adhesive back provides quick and easy installation without contact cement
- Packaged in 10' rolls

**12-860330-000**





For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	11-008301-001	Screw C'sunk Hex Soc w/Nylon Patch	6	12-400240-000	L.H. Ball Wheel Roller Assy.	11	11-530522-000	Internal Retaining Ring
2	12-400257-000	Flange	7	90-400272-000	Ball Wheel Guide Roller - One Piece	12	12-400271-000	Upper Ball Wheel Guide Roller
3	11-430013-000	Ball Bearing	8	90-400260-000	R.H. Ball Wheel Roller	13	11-430004-000	Ball Bearing
4	11-531020-000	Inverted Internal Retaining Ring	9	12-400268-000	Ball Wheel Roller Assembly	14	12-400269-000	Flange
5	90-400258-000	L.H. Ball Wheel Roller	10	12-400272-000	Ball Wheel Guide Roller Assembly			



### PIN WHEEL GUIDE ROLLER FLANGES

New and improved flanges eliminate problems of hardware coming loose.

- Will not break or deform
  - Nylon flanges made from a special blend of DuPont Zytel®
  - 12-400262-000** – For lower pin wheel guide
  - 12-400265-000** – For upper pin wheel guide
  - 11-008301-001** – OEM Screws w/ Nylon Patch
- TIP:** Tighten to 5-6 Ft. Lbs.



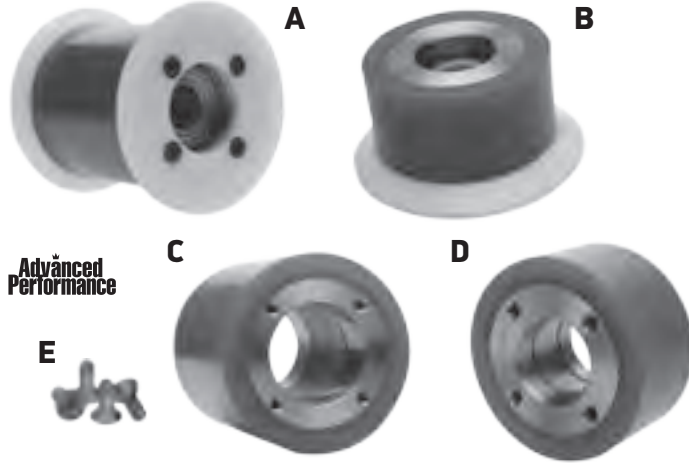
### ADVANCED PERFORMANCE MODULAR PIN WHEEL

Quiet. Lightweight. Impact resistant. Low cost. The best-selling pin wheel in the industry.

- Polymer pin wheel won't rust, or be noisy like steel wheels
- Patented design with individual pin pockets
- Seven identical pockets create one wheel with unbeatable strength and durability
- For individual segment hardware order:
  - Spacer – 12-400335-000
  - Hex Head Cap Screw – 11-001267-001
  - Lock Nut – 11-170009-001
  - Washer – 11-190012-001
  - Modular Pin Wheel Hardware Package – 12-860035-000

**NOTE:** If installing on a Japanese Pinsetter, you must order Belt - 12-400034-005

- 12-860071-000** – Assembly
- 12-400104-000** – Single pocket



### ADVANCED PERFORMANCE URETHANE PIN WHEEL GUIDE ROLLERS

Keeps your pin wheel rotating smoothly and quietly.

- Tough, wear-resistant Dyalon® "B" urethane tire is securely bonded to a steel hub specifically designed for this application
- Nylon flanges have been improved to eliminate fracturing and deforming problems
- Factory assembled with bearings, retaining rings, and hardware
- (A)-12-400263-000** – Lower pin wheel guide roller Repl. Bearing – 11-430013-000
- (B)-12-400266-000** – Upper pin wheel guide roller Repl. Bearing – 11-432000-000
- (C)-90-400261-000** – Lower pin wheel - roller only
- (D)-90-400264-000** – Upper pin wheel - roller only
- (E)-11-008301-001** – OEM Screws with Nylon Patch **TIP:** Tighten to 5-6 Ft. Lbs.



### PIN WHEEL GUIDE ROLLER KIT

Reduce pin wheel vibration with this handy kit.

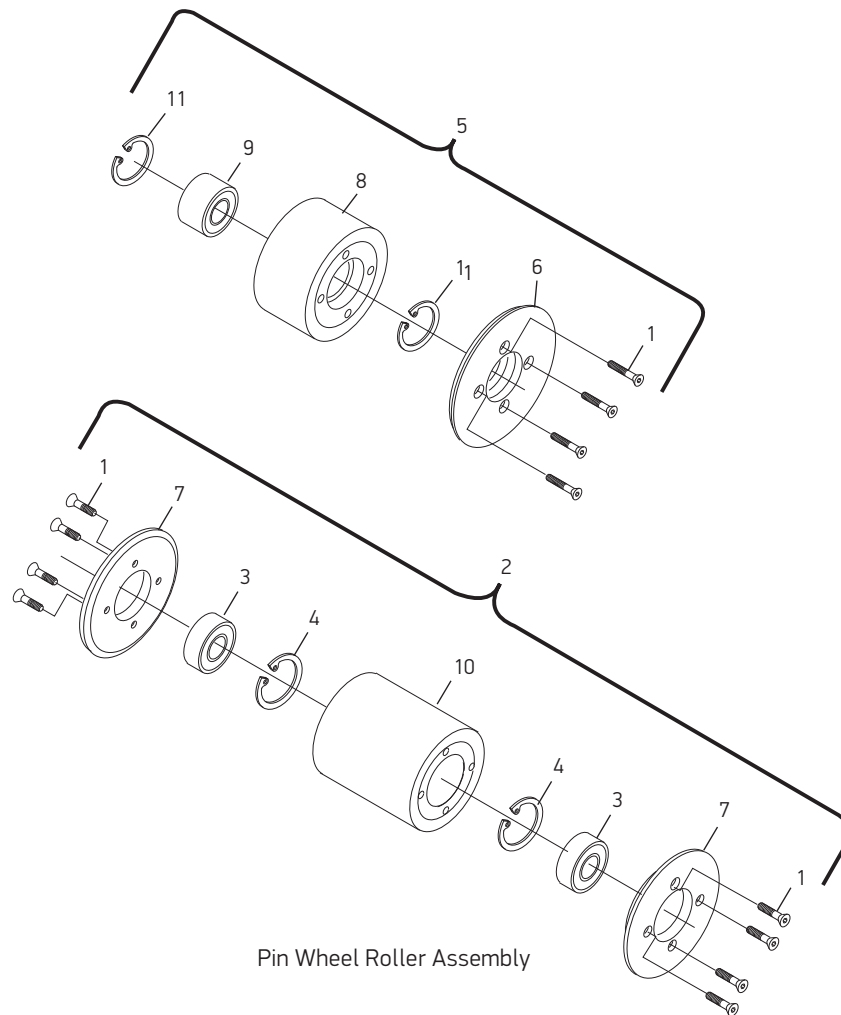
- 12-860807-000** – Kit
- 12-400674-000** – Roller only



### PIN WHEEL DRIVE PULLEY ASSEMBLIES

To run a pin wheel faster, use the large pulley – 12-402126-000, to run it slower, use the small pulley – 12-400126-000.

- Solid, one-piece pulleys are machined from steel bar stock
- Bearing – 11-420045-000 is installed and sized for proper press fit onto shaft
- 12-400126-000** – Small, Model A
- 12-402126-000** – Large, Model A•2 and converted



Pin Wheel Roller Assembly

For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

<b>1</b>	11-008301-001	Hex Socket w/Nylon Patch Screw	<b>5</b>	12-400266-000	Guide Roller Assy-(Upper Pinwheel)	<b>9</b>	11-432000-000	Ball Bearing
<b>2</b>	12-400263-000	Pin Wheel Roller Assembly	<b>6</b>	12-400265-000	Flange	<b>10</b>	90-400261-000	Hub and Tire - Lower Pin Wheel
<b>3</b>	11-430013-000	Ball Bearing	<b>7</b>	12-400262-000	Flange	<b>11</b>	11-530522-000	Internal Retaining Ring
<b>4</b>	11-531020-000	Inverted Internal Retaining Ring	<b>8</b>	90-400264-000	Pin Wheel Guide Roller			



### ADVANCED PERFORMANCE SPRING ROD BUSHING

Help the ball get back to the bowler every time.

- Delrin® material is precisely formed through injection molding process that keeps the spring rod from binding
- Delrin bushing is twice as thick as steel, creating more pressure on lift rods for better ball return
- Teflon®-impregnated Delrin bushing allows the ball lift spring to slide through smoothly without abrasion

**90-400803-000** – Premium Delrin bushing



### SPRING ROD BUMPER

Know that lift rods will pick up the ball. Keep these bumpers in good shape so the spring stays in adjustment.

- Tough, abrasion-resistant urethane bumper is twice as thick as the original rubber bumper. One urethane bumper does the job of two rubber bumpers
- Brunswick continues to offer oil-proof rubber bumpers for those mechanics who prefer them
- Two required

**90-400123-000** – Urethane

**12-400123-000** – Rubber



### ADVANCED PERFORMANCE SPRING ROD

Look no further, it's the strongest spring rod on the market.

**12-400193-000**



### PIN RETAINER ASSEMBLY

The pin retainer assembly helps the pins stay in the pin wheel as they transition onto the turn pan. Complete with instructions.

**12-860066-000** – Pin Retainer Assembly

**12-400055-000** – Wiper and Spring Assembly

Keep your pin guides in good working order to eliminate jams at your turn pan with these replacement parts.

- Avoid turn pan jams, turret jams and 180° stops.
- An improperly tensioned or positioned pin wiper assembly can create nuisance problems.

**12-400055-003** – Flat Spring

**12-400071-000** – Leaf Spring

**12-402064-000** – Retainer Spring

**12-400225-000** – Pin Wiper Shim



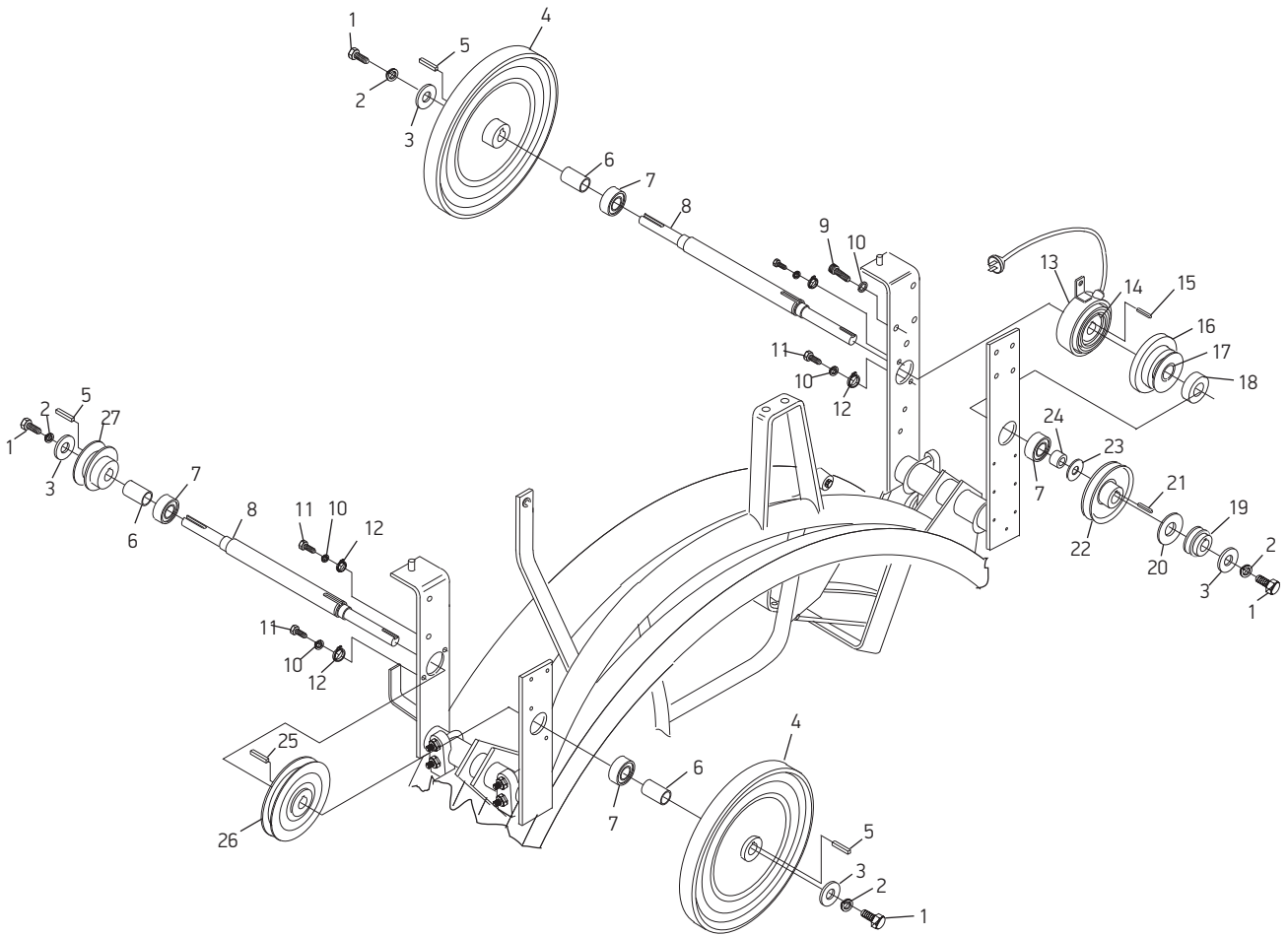
### MAGNETIC CLUTCH ASSEMBLY

Stops and starts pin wheel to eliminate turn pan, cross conveyor, and turret jams.

- 100 inch-pound torque requirement ensures that the pin wheel will start without slipping
- Special non-asbestos clutch facing is tightly bonded and provides long, quiet operation
- Comes with replaceable bearing – 11-430045-000, heavy-duty cord and restraint, and twist-lock plug that ensures proper mating with the wire channel

**TIP:** Suggest replacing Selenium Rectifier and Capacitor with Magnetic Clutch Voltage Regulator - 12-862030-000 (see pg. 90)

**12-862163-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	11-001342-001	Hx Hd Cap Screw 3/8-16 x 3/4"	10	11-195014-001	Lockwasher 1/4	19	12-400035-009	Sheave
2	11-195016-001	Lockwasher 3/8	11	11-002004-001	Hx Hd Cap Screw 1/4-20 x 1"	20	11-190024-000	Plain Washer 7/8
3	12-400139-003	Washer	12	12-400033-000	Bearing Retainer	21	12-400138-004	Key
4	12-400035-004	Sheave	13	12-862163-000	Magnetic Clutch Assembly	22	12-400035-008	Sheave
5	12-400138-002	Square Key	14	11-430045-000	Ball Bearing	23	12-400139-005	Special Washer
6	12-400018-002	Spacer	15	12-400138-006	Key	24	12-400018-007	Spacer
7	10-430001-000	Ball Bearing, w/ Snap Ring	16	12-402126-000	Pin Wheel Drive Pulley	25	12-400138-003	Key
7	11-430015-000	Ball Bearing	16	12-400126-000	Pinwheel Drive Wheel Assembly	26	12-400035-003	Sheave
8	12-400810-000	Drive Shaft	17	11-420045-000	Sleeve Oilite Bearing	26	12-400035-005	Sheave
9	11-005183-001	Hx Hd Sckt Cap Screw 1/4-20 x 7/8"	18	12-400804-000	Collar	27	12-400035-006	Sheave

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Performance**



#### ADVANCED PERFORMANCE HIZAR GATE

Replaces the high wear pin gate strap and roll pin which improves cross conveyor performance by making it easier to push down.

- Comes with hardened steel link and hardware
- Link only 12-862021-000 (Pkg of 2)
- Replacement Hardware 12-860008-000
- Designed by Mechanic Kevin Hizar

Tip: Lubricate pins during normal maintenance.

**12-862251-000**



#### STANDARD PIN GATE STRAP

The original and still the mechanics choice. Inspect your Pin Gate straps once a year for wear.

**12-150057-003**

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Performance**



#### ADVANCED PERFORMANCE DELUXE PIN GATE STRAP

Our best Pin Gate Strap. Long lasting and durable.

- Keep pins locked at the Pin Gate with this HD pin gate strap
- Hardware Replacement package 12-252016-000

**12-860808-000**



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Performance**

#### ADVANCED PERFORMANCE CROSS CONVEYOR IDLER PULLEY

Split, steel pulley with bolt-together design for easy bearing replacement.

- Pulley groove angle is controlled for correct belt fit
- Comes fully assembled with hardware
- Replaceable steel bearing – 11-434003-000 allows replacing of only the high wear part

**12-450090-000**



#### SNUBBER ASSEMBLY

Precision contour to guide pins smoothly into the turret without excessive pin bouncing.

- Protective finish ensures that pins will slide into turret without being marked
- Pin guide is fillet welded and stress relieved to prevent breakage

**12-450075-000**



#### PINSETTER MOTOR PULLEYS

Models supply the optimum elevator speed. Eliminates need for a special Jetback pulley to slow the elevator.

- Speed of gear box is controlled by diameter of pulley. Slow speed pulley has a 5-1/4" O.D., medium speed pulley has a 6-1/4" O.D., and the fast pulley has a 7-3/4" O.D.
- Any pulley can be used on any style machine

**12-400081-000** – Slow, Model A

**12-502410-000** – Medium, Jetback

**12-402081-000** – Fast, Model A•2



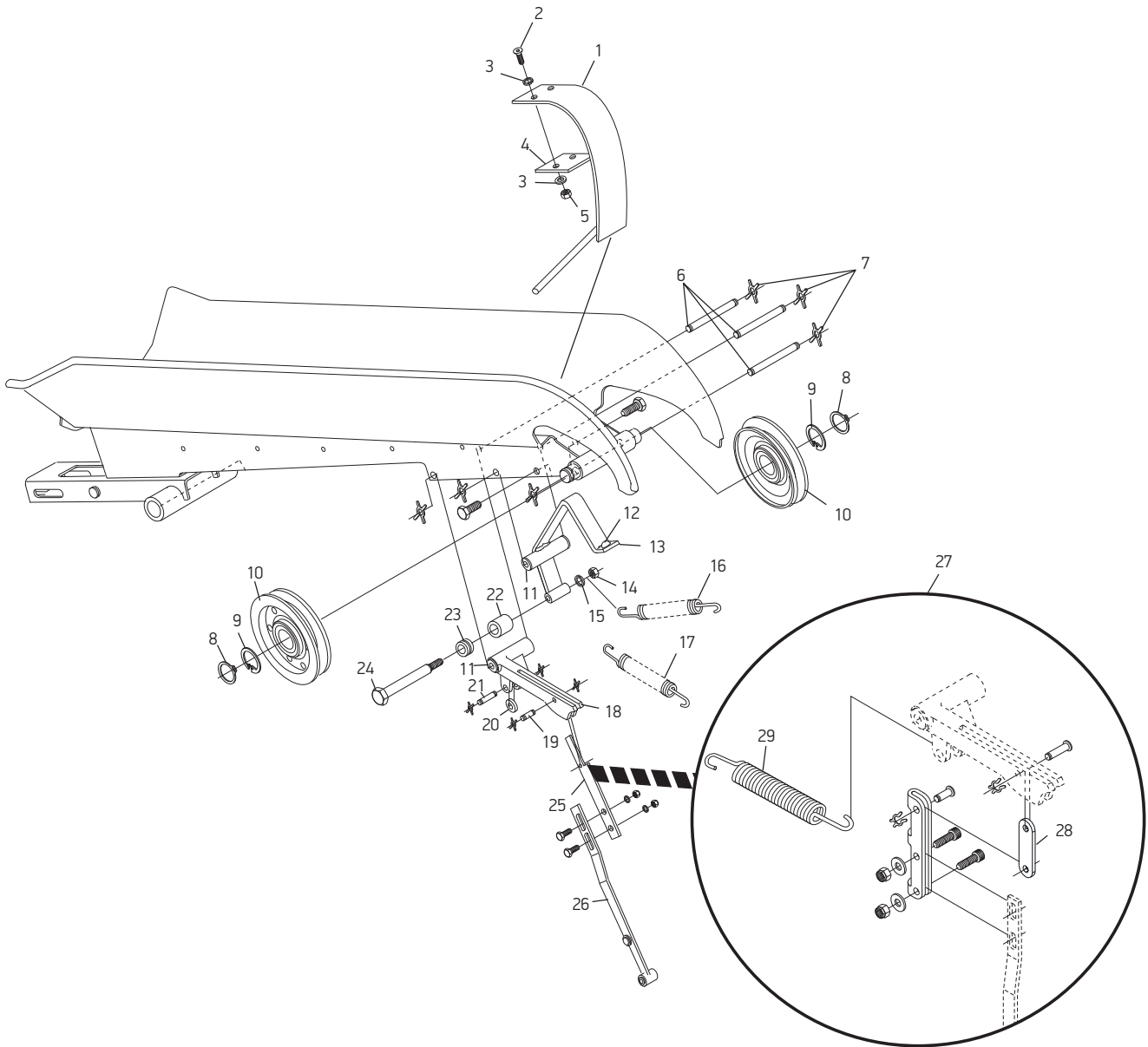
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Performance**

#### ADVANCED PERFORMANCE CROSS CONVEYOR PIN WIPER CLOTH

Improves pin transfer in cross conveyor.

- Reduces frequency of pin cleaning. Cloths are machine washable
- For refill pin wiper cloth, order 12-860803-000 (Pkg of 6)

**12-862941-000**



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

#### PART INDEX

1	12-450075-000	Snubber Assembly	12	11-650001-000	Bumper	21	12-450006-003	X-Washer Pin
2	11-006184-001	Button Hd Sckt Cap Screw 1/4-20x1"	13	12-450017-000	Pin Gate Assembly	22	12-450064-000	Roller
3	11-190010-001	Flat Washer 1/4	14	11-125006-001	Hex Nut 12-24	23	12-450045-003	Spring Wheel
4	12-450080-000	Rubber Spacer	15	11-195012-001	Lockwasher #12	24	12-450063-000	Shoulder Bolt
5	11-170007-001	Locknut 1/4-20	16	12-450061-000	Tension Spring	25	12-150057-003	Strap
6	12-450006-002	X-Washer Pin	17	12-450051-000	Tension Spring	25	12-860808-000	AP - Deluxe Pin Gate Strap
7	11-230002-001	"X" Washer 5/32	18	12-450079-000	Tension Spring	26	12-150227-000	Linkage Assembly
8	11-530025-001	External Retaining Ring	18	12-450032-000	Latch Assembly	26	11-420048-000	Bearing .1885 ID x .3145 OD
9	11-531512-000	Beveled Retaining Ring 1.761 OD	19	11-345306-000	Roll Pin 3/16 x 5/8"	27	12-862251-000	AP - Hizar Gate - Complete
10	12-450034-000	Cross Conveyor Pulley	19	12-252016-000	Pin Gate Latch Bolt Assembly	28	12-862021-000	AP - Hizar Gate Links (pkg of 2)
11	11-421053-000	Oilite Bearing (Pkg of 5)	20	12-450045-002	Spring Roll	29	12-150054-000	Spring



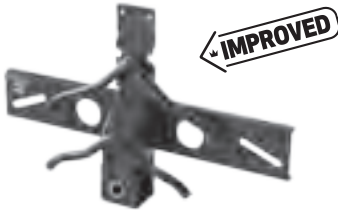


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Performance

#### ADVANCED PERFORMANCE ADJUSTABLE "Y" SWITCH

- Reduce ball jams going into the down sweep
- Easy to adjust from back of pinsetter
- Complete with hardware and instructions

12-862033-000



IMPROVED

#### SWITCH TRACK ASSEMBLY WITH BEARINGS

- Reinforced heavy duty construction
- Includes bearings reamed to proper size
- Pre-drilled to accept AP Adjustable Y-Switch 12-862033-000

12-502100-091



#### BALL ACCELERATOR PAN

Pan provides a solution to the stray pin by including a "trap door" to drop the pin before the subway ball return. Simple in design, saves time and minimizes hassles.

12-502320-600



#### BALL ACCELERATOR/BOOSTER MOTOR

Reduce wear and tear on ball lift components by slowing the accelerator.

- This 1/4-horsepower motor increases the life of ball lift components, and reduces energy costs
- Universal voltage and cycle 115/208/230 volts, 50/60 cycle
- 1725/1425 rpm
- Heavy-duty 1/2" shaft

12-802059-003



#### HEAVY-DUTY BALL ACCELERATOR MOTOR

For accelerators with more power, choose this heavy-duty motor.

- 1/2-horsepower motor
- Universal voltage and cycle 115/208/230 volts, 50/60 cycle
- 3450/2850 rpm
- Heavy-duty 5/8" shaft

12-802059-004



#### BALL BOOSTER KIT

Speeds up the ball on original Model A machines.

- Limits wear on ball lift components better than accelerators do
- Comes equipped with motor, pulleys, ball booster wheel, and hardware for Jetback machine

**TIP:** Try the urethane ball wheel – 90-520060-000 in this application.

12-862602-008

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Performance



#### ADVANCED PERFORMANCE CONTROL BOX

Replacement control box for accelerators or boosters. Now equipped with solderless relays.

- Control Box Connectors Male/Female – 12-862032-000
- 24 Volt Relay – 11-697103-000

12-502335-000



#### DROP SWEEP BALL WIPER

Cleans the ball as it goes down the drop sweep.

- Velcro® on both sides to get longer use before washing
- Easy to change

61-860246-000



#### BALL ACCELERATOR WIPER

Cleans the ball as it goes into the accelerator.

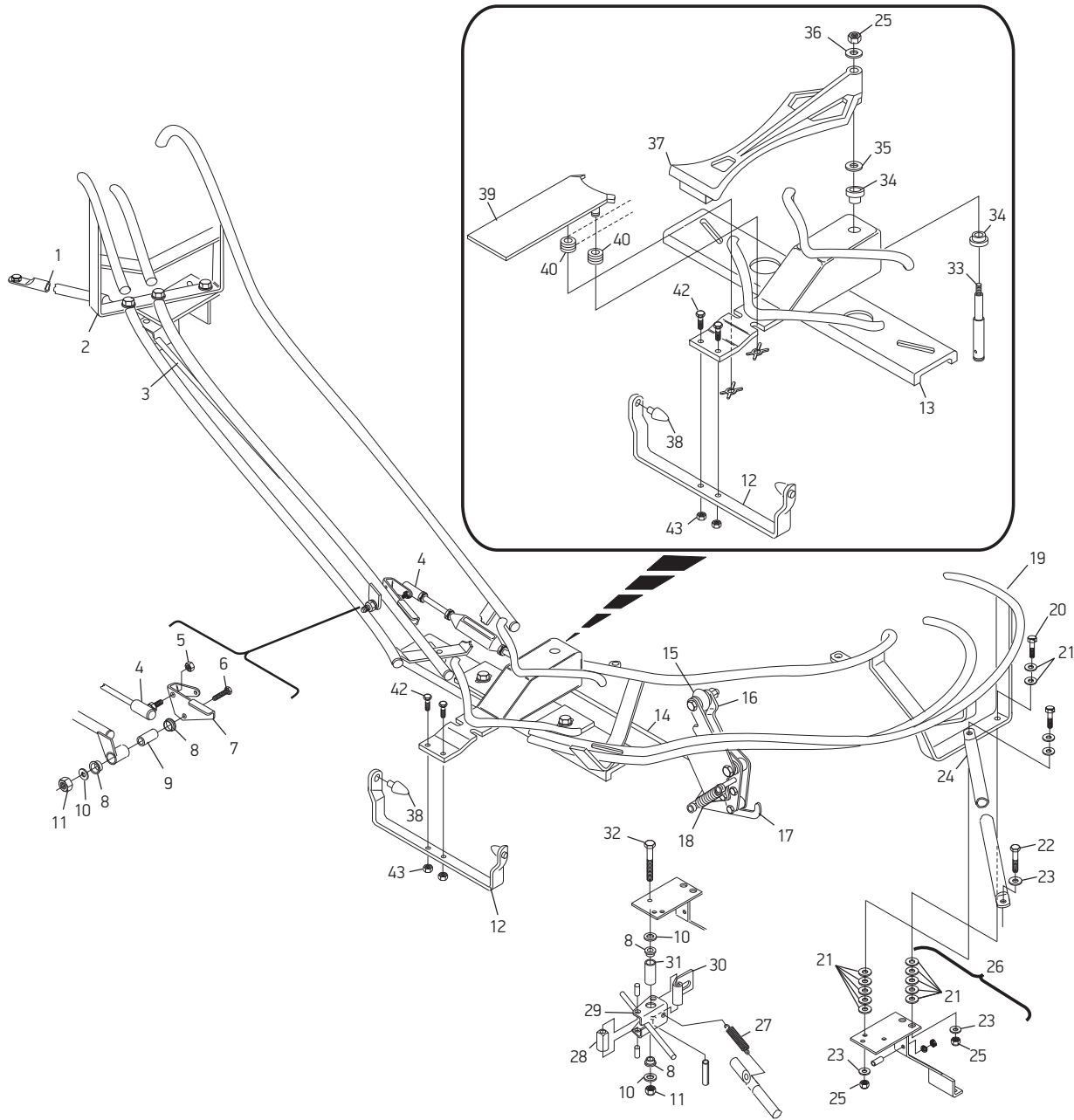
- Outer sleeve made from special filter cloth that absorbs oil from balls and resists wear
- Pre-shrunk sleeve is machine washable and dryer safe

12-252377-000

#### A • 2 BALL WIPER

Wipes bowling ball before entering ball lift. Machine washable.

53-520405-000



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	12-502139-000	L.H. Track Brace	15	34-082132-000	Rubber Roller Assembly	30	12-502152-000	Bracket
2	12-502115-000	Ball Track Assembly	16	12-502138-000	Ball Stop Bracket	31	10-386091-000	Spacer
3	12-502142-000	Trip Rod	17	12-502136-000	Hook	32	11-001276-001	Hx Hd Cap Screw 5/16-18 x 3"
4	10-690001-000	Ball Joint Assembly	18	12-502167-000	Tension Spring	33	12-502134-000	Y-Switch Shaft
5	11-170010-001	Hex Nut Nylock 5/16-24	19	12-502105-000	Ball Track Assembly (Curved)	34	10-421901-000	Flanged Oilite Bearing
6	11-001272-001	Hx Hd Cap Screw 5/16-18 x 2"	20	11-001355-001	Hex Head Cap Screw	35	11-190018-001	Flat Washer 1/2
7	12-502133-000	Ball Trip	21	11-190522-001	Plain Washer	36	11-190014-001	Flat Washer 3/8
8	11-421110-000	Ball Joint Assembly	22	11-001342-001	Hx Hd Cap Screw 3/8-16 x 3/4"	37	90-502153-000	Nylon Y-Switch
8	11-421111-000	Flanged Oilite Bearing	23	11-191014-001	Flat Washer 3/8	38	12-502154-000	Y-Switch Bumper pull through
9	10-386077-000	Spacer 5/16 x 1-9/32	24	12-502140-000	R.H. Track Brace	39	12-502328-000	Y-Switch Plate
10	11-190012-001	Flat Washer - SAE 5/16	25	11-170011-001	3/8-16 Locknut	40	12-502155-000	Spacers
11	11-170009-001	Hex Nut Nylock 5/16-18 (25)	26	12-862180-000	AP - Support Arm Assembly	41	11-170011-001	3/8" Locknut
12	12-502131-000	AP - Y Switch Stop Bar	27	12-502114-000	Tension Spring	42	11-001264-001	Hex Head Cap Screw
13	12-502100-091	Switch Track Assy w/ Bearings	28	12-502151-000	Block	43	11-170009-000	Lock Nut
14	12-502132-000	Rod	29	12-502150-000	Pivot Bracket			



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#### ADVANCED PERFORMANCE MAGNETIC CLUTCH VOLTAGE REGULATOR

- Regulates and supplies 90 VDC to the Magnetic Clutch
- Provides over voltage and over current protection which increases the lifetime of the Magnetic Clutch
- This is the replacement for the Selenium Rectifier and the Capacitor on A•2 pinsetter
- Comes with instructions
- Easy installation, no drilling

**12-862030-000**

**12-862124-000** – Replacement Fuses (2/pkg)



#### ELECTRICAL BOX COVER - U.S.

New electrical cover ensures pinsetters are safe, and includes an easy access panel to get inside the box. Offers punch outs for breakers and motor overload relays to fit any Model A and A•2 electrical box except for Japanese.

- Helps improve pinsetter electrical box safety
- Cover opens quickly with quick release latches
- Cover doubles as a tool tray when open
- Complete with hardware, "DANGER HIGH VOLTAGE" decal and instructions
- Warning Label - 47-162540-000

**12-862263-000** – Factory A/A•2 - U.S.



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#### ADVANCED PERFORMANCE 3A RESETTABLE CIRCUIT BREAKER

Stop replacing fuses. Resettable circuit breaker, replaces the A/A•2 3.2 A fuse and fuse holder. Fuse installed on mounting plate for easy installation into original 3.2 A position. No soldering required for installation. For US manufactured electrical boxes only.

**12-862022-000**



#### ELECTRICAL BOX COVER - JAPANESE

- Fits original Japanese electrical box configuration
- Includes reset button for original motor thermal overload
- Helps improve pinsetter electrical box safety
- Cover opens quickly with quick release latches
- Cover doubles as a tool tray when open
- Complete with hardware, "DANGER HIGH VOLTAGE" decal and instructions
- Warning Label - 47-162540-000

**12-862948-000** – A•2 Japanese



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Performance**

#### ADVANCED PERFORMANCE 1A RESETTABLE CIRCUIT BREAKER

Resettable fuse replaces the Model A and A•2 1 amp fuse holder.

- Easy to install, requires no soldering
- Fits into existing fuse holder opening
- For US manufactured electrical boxes only

**12-862947-000**



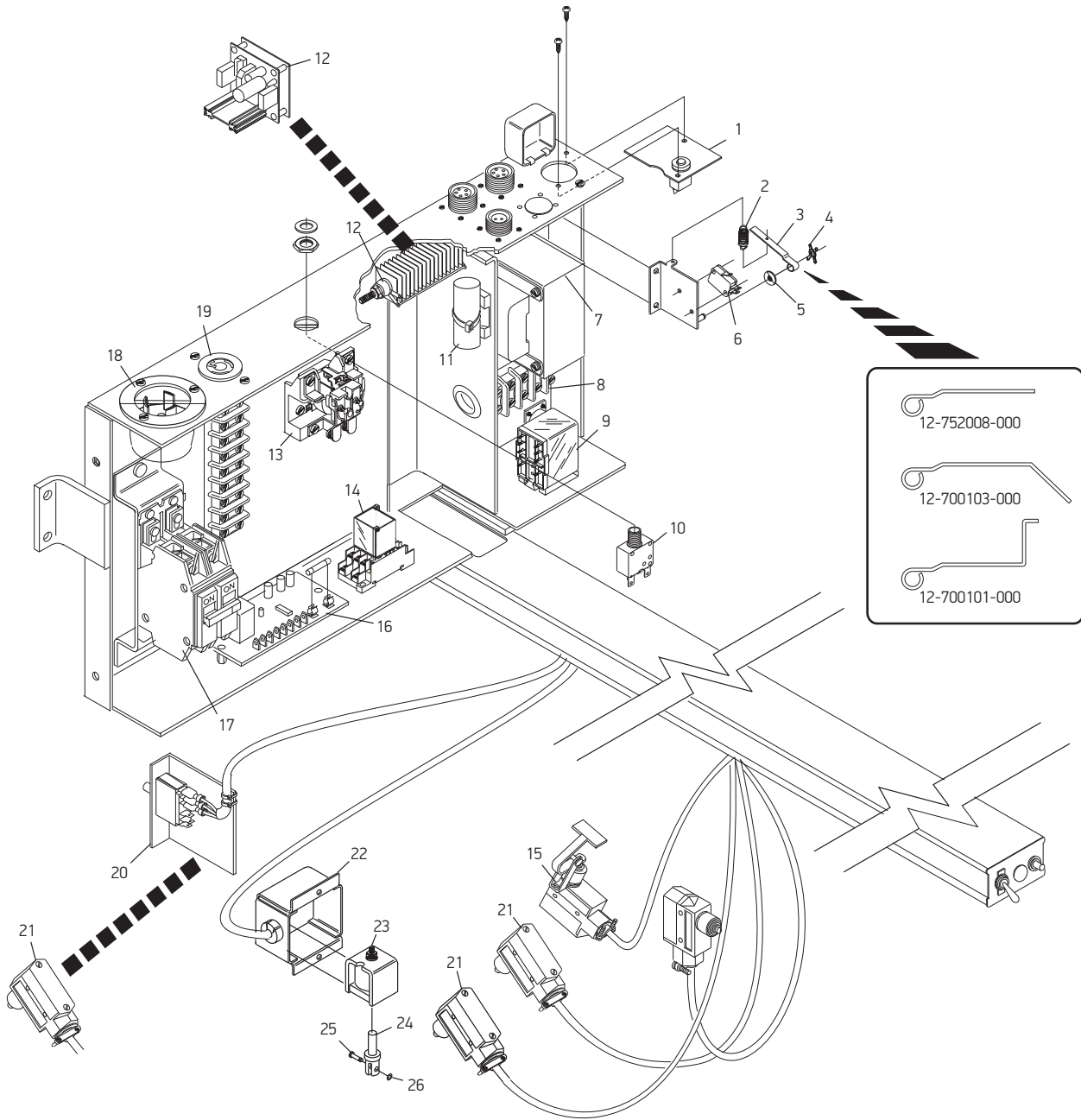
#### HEAVY DUTY CYCLE SOLENOID

Over 10% stronger than the OEM solenoid to help minimize failure to trigger.

- Intermittent duty solenoid helps save energy

**10-688006-000** – 208/230V

**10-688006-003** – Plunger only



For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	12-862022-000	AP - 3A Resettable Circuit Breaker	10	12-862947-000	AP - 1A Resettable Circuit Breaker	19	11-679303-000	Plug Twist Receptacle
2	12-752005-000	Spring	11	11-696107-000	Capacitor (.50 UF)	20	11-674995-000	Push Button Switch
3	12-752008-000	Lever	12	12-862030-000	Magnetic Clutch Voltage Regulator	21	12-860563-000	Turret/Deck Jam Micro Switch Assy
3	12-700103-000	Lever	12	12-750079-000	Selenium Rectifier	21	11-615052-000	Micro Switch
3	12-700101-000	Lever	13	12-862111-000	Motor Contactor	22	12-102020-000	Solenoid Cover
4	11-230001-001	X-Washer 1/8	14	12-862203-000	AP - Plug-In Motor Start Relay Pkg	23	10-688003-000	Solenoid, 208-230V, 60Hz
5	11-190010-001	Flat Washer 1/4	15	12-860205-000	Switch Assy	23	10-688009-000	Solenoid, 115V
6	11-616013-000	Switch (#V3-101-D8)	15	11-615053-000	Micro Switch only	24	10-688003-003	Plunger Only
7	12-862164-000	Transformer	16	12-862890-000	Time Delay Module, Solid State	25	10-229451-000	O-Ring Pin
8	10-700202-000	Terminal Strip	17	12-860627-000	Circuit Breaker	26	11-625538-000	O-Ring
9	11-672518-000	Relay	18	11-679306-000	Plug Twist Receptacle	27	12-860205-000	Switch Assy



#### **ADVANCED PERFORMANCE PLUG-IN MOTOR START RELAY**

Offers better durability and performance. The solderless design is easily installed in Model A and A•2 machines.

- For easy change out of bad relays
- Relay only – 12-862025-000
- Not for use with Japanese wired electrical box  
**12-862203-000** – Complete



#### **RECYCLE RELAY**

Ensure that the Model A pinsetter gearbox recycles.

- Pinsetter vibration will not cause contacts to close
- Single pole relay used on Model A machines
- Single throw
- Continuous duty  
**12-862828-000**



#### **MOTOR START RELAYS**

Powers the contactor and provides safety shut off.

- Single throw
- Continuous duty  
**12-862827-000** – Model A, Three pole  
**12-862829-000** – Model A•2, Two pole



#### UNIVERSAL PINSETTER MOTOR

Energy-efficient design provides enough torque to operate gear box and elevator.

- Universal voltage and cycle – 115/208/230 volts, 50/60 cycle
- Universal motor will drive any Brunswick pinsetter, domestic or export
- One-horsepower motor
- 1725/1450 rpm
- Thermal overload protection, manual reset

**12-752056-000**



#### SOLENOID KITS

Upgrade a Model A solenoid to a Model A•2 and get more reliable triggering and longer lasting links, or use when converting a machine from 115V to 230 volts.

- Comes with:  
115V solenoid – 10-688009-000, or  
230V solenoid – 10-688003-000, plunger,  
bellcrank assembly, and spacers

**12-862905-115** – 115V

**12-862905-230** – 208/230V



#### MOTOR CONTACTOR

- Motors with built-in overload protection only need Contactor – 12-862111-000
- Motors without built-in overload protection also require Motor Overload Relay – 12-860334-000
- Relays require a heater to operate, see chart below
- For the motor overload relay and contactor order 12-860335-000

**NOTE:** Motor Overload Relays require heater to operate. Heater must be selected based on Motor Overload Relay and motor output in Amps. Motor output is stamped on the motor I.D. plate.

**12-862111-000**

#### HEATERS FOR MOTOR OVERLOAD RELAY

##### For New Relay – 12-860334-000

10-679125-001	Heater 4.3-4.7 Amps
10-679125-002	Heater 4.7-5.1 Amps
10-679125-003	Heater 5.1-5.6 Amps
10-679125-004	Heater 5.7-6.2 Amps
10-679125-005	Heater 6.3-6.8 Amps
10-679125-006	Heater 6.9-7.5 Amps
10-679125-007	Heater 7.6-8.2 Amps
10-679125-008	Heater 8.2-9.0 Amps
10-679125-009	Heater 9.1-9.9 Amps
10-679125-010	Heater 10-10.8 Amps
10-679125-011	Heater 10.9-11.9 Amps
10-679125-012	Heater 12-13.1 Amps
10-679125-013	Heater 13.2-14.3 Amps
10-679125-014	Heater 14.4-15.7 Amps
10-679125-015	Heater 15.8-17.2 Amps

##### For OLD Relay – 10-679151-000

10-679157-000	Heater 4.65 Amps
10-679159-000	Heater 5.69 Amps
10-679160-000	Heater 6.32 Amps
10-679161-000	Heater 6.99 Amps
10-679163-000	Heater 8.37 Amps
10-679164-000	Heater 9.13 Amps
10-679165-000	Heater 9.96 Amps
10-679167-000	Heater 11.7 Amps
10-679168-000	Heater 12.9 Amps
10-679169-000	Heater 14.7 Amps
10-679170-000	Heater 15.4 Amps
10-679171-000	Heater 16.9 Amps

**NOTE:** 10-679151-000 replaced by 12-860334-000



### BALL ACCELERATOR FLAT BELTS

Flat, concentric belts with straight, smooth splice move freely around pulleys and will not jump off the pulley edge.

- Smaller pulley size slows accelerator speed, reducing wear and tear on the accelerator as well as the retarder and power lift
- Reference the chart in the right hand column for pulley, bore, and belt combinations
  - 10-635124-000** – For 1-1/2" pulley
  - 10-635113-000** – For 1-11/16" pulley
  - 10-635118-000** – For 2-1/32" pulley
  - 10-635112-000** – For 2-23/32" pulley
  - 10-635114-000** – For 3-17/64" pulley



### LONG ACCELERATOR BELTS

- Blue fabric-based belts have a slippery surface ideal for reactive-resin balls.
- Light colored belt leaves no marks on balls and provides excellent acceleration for oily balls
- Both types of belt will track straight and true when used in conjunction with the high crown pulley – 12-502349-600
  - 10-635129-000** – Blue
  - 10-635126-000** – Light colored

### TECH TIP #1

**Choosing the Proper Belt Tension is Critical for Smooth Operation of the Pinsetter**

- If too little tension is applied, the belts may slip.
- Too much tension can reduce belt and bearing life
  - The correct tension is the lowest tension at which belts will not slip when the drive is under full load

### TECH TIP #2

Do not use automotive belts for turrets or in other areas. Some belts are required to slip.

Pulley Diameter	Accelerator Speed	Pulley Part # 1/2" Bore	Pulley Part # 5/8" Bore	Flat Belt Part #
1-1/2"	Slowest	12-502474-000	12-502554-000	10-635124-000
1-11/16"	Slow	12-502351-000	12-502553-000	10-635113-000
2-1/32"	Medium	12-502355-000	12-502551-000	10-635118-000
2-23/32"	Fast	12-502332-000	12-502550-000	10-635112-000
3-17/64"	Fastest			10-635114-000

### SEAL FOR IDLER PULLEYS

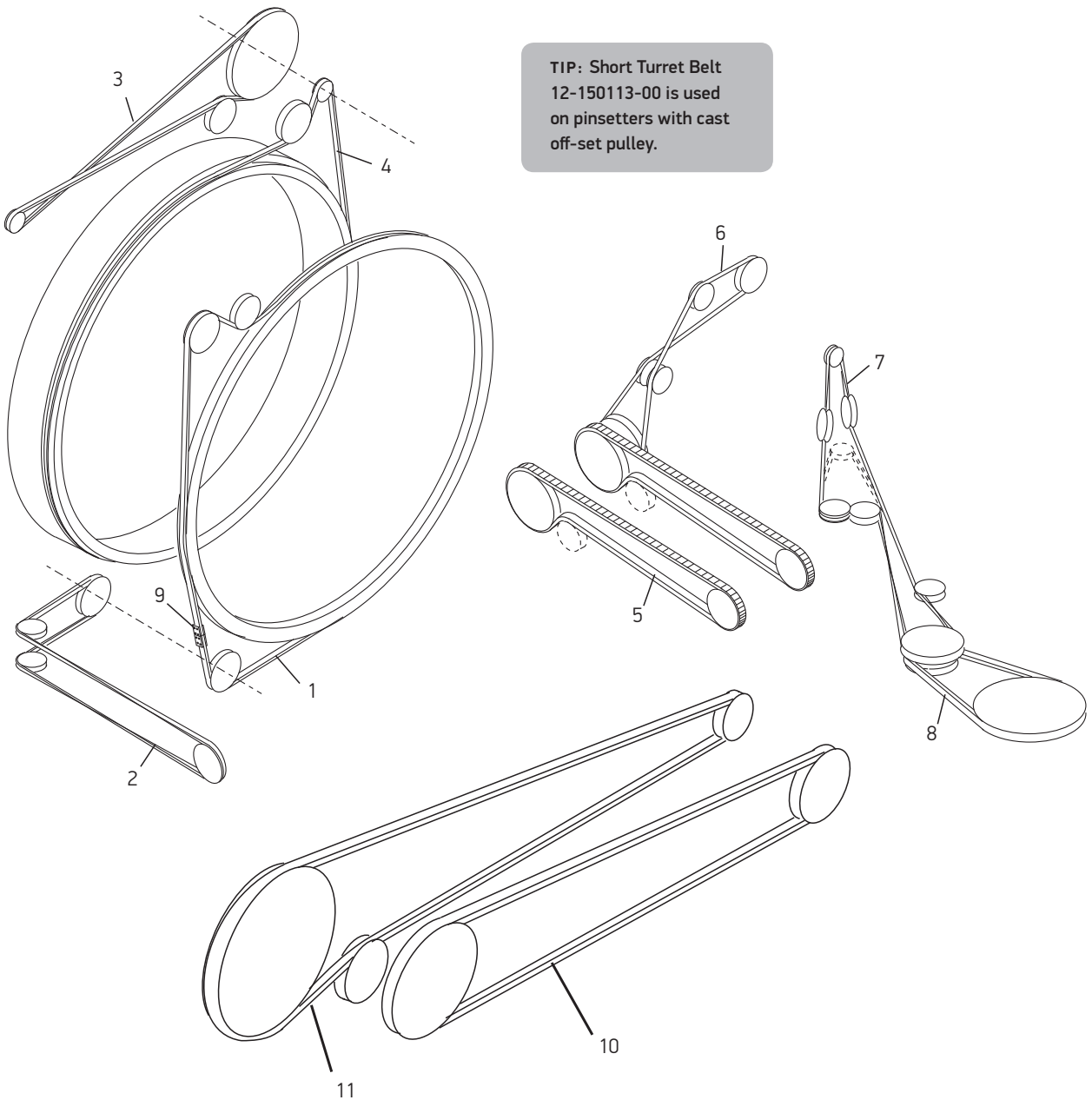
Repack your idler pulley bearings for longer life and a smoother, quieter running machine. Works on Idler Pulleys – 12-400209-000 and 12-400221-000.

**12-400301-000**

### HOW TO CHOOSE A MOTOR PULLEY

- One of the most important considerations to make is determining the optimum speed for the gear box.
- The motor pulley determines how fast the gear box cycles. The bigger the diameter of the pulley, the higher the gear box speed
  - If the pinsetter cycles faster than the ball gets back to the bowler, the pinsetter is being pushed harder than necessary
  - Top mechanics are choosing the Jetback pulley – 12-502410-000 to provide ideal performance
  - The Jetback pulley provides a faster cycle time than a Model A – 12-502410-000, improving league start and finish time and increasing open bowling time
  - The Jetback pulley also slows the cycle time compared to the Model A+2 pulley – 12-502410-000, reducing wear and tear on the pinsetter
  - All three elevator pulleys have a standard diameter to provide the optimum elevator speed





For complete schematics please refer to the A•2 Pinsetter Service Parts Catalog – 12-902908-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

### PART INDEX

1	12-400227-000	Ball Wheel Belt - Endless	8	12-150113-000	Short Turret Drive Belt, Short	10	10-635320-000	27:1 Gear Box, A•2 60"
1	12-400279-000	Ball Wheel Belt - Spliced	8	12-150113-600	Short Turret Drive Belt, Long	11	10-635321-000	27:1, A and Jetback 75"
2	12-300082-003	Pit Conveyor Drive Belt	9	12-400279-003	Double V-Belt Fastener	11	10-635328-000	A and Jetback, 1.5" longer 108.6"
3	12-400034-004	Jack Shaft Belt - Cross Drive	10	10-635309-000	Jetback, 2.5" longer 81.5"	11	12-400034-003	Standard for A and Jetback 107.1"
4	12-400034-005	Pin Wheel Belt	10	12-400329-000	Standard for Jetback 79"	11	10-635327-000	A and Jetback, 1.5" shorter 105.6"
5	12-450037-000	Cross Conveyor Belt	10	10-635323-000	A and Jetback 77.5"	11	10-635315-000	A•2 with 12-862162-000 kit 98"
6	10-635309-000	Cross Conveyor Drive Belt "V"	10	12-400034-002	Standard for Model A 77.1"	11	10-635330-000	A•2, 1.5" longer 93.8"
6	12-400034-007	Cross Conveyor Drive Round Belt	10	10-635326-000	A•2, 2.5" longer 69.5"	11	10-635306-000	A•2, 50 cycle 93.3"
7	12-400223-000	Long Turret Belt, Non-Bevel Gear	10	10-635304-000	Standard for A•2 67"	11	10-635303-000	Standard for A•2 92.3"
7	12-400314-000	Long Turret Belt, Bevel Gear	10	10-635325-000	A•2, 1.5" shorter 65.5"	11	10-635329-000	A•2, 1.5" shorter 90.8"



### 3 OZ. GREASE GUN KIT

Compact grease gun allows lubrication of areas where a big gun will not fit. Kit includes: grease gun, standard grease fitting coupler, and a lithium grease cartridge.

- Avoids the mess of bulk filling by using a 3 oz. lithium grease cartridge. Cartridge – 12-700129-000 is available in handy two packs (two 3 oz. cartridges)
- Following convenient adapters make repacking bearings simple:  
Needle Adapter – 12-700121-000  
5.5" Grease Pipe – 12-700130-000  
12 Grease Needles – 12-700126-000 for repacking bearings
- Brunswick sells convenient 14.5 oz. grease cartridges:  
Lithium grease – 11-676305-000 for use on metal parts  
Non-Lithium grease – 11-676361-000 for use on non-metal parts

**12-700120-000**



### PISTOL OILER

Decrease malfunction rate, prevent major breakdowns, and extend the life of a pinsetter.

- Hand-held oiler features a 6 oz. capacity body with a 6" flexible spout
- Wide base allows oiler to stand upright
- Flow is controlled by pressure applied to trigger

**12-700105-000**



### A•2 PINSETTER GEAR BOX OIL

Scheduled oiling is imperative for trouble-free pinsetter operation.

- High-grade oil comes in a one-gallon, easy-to-pour plastic container
- Use Brunswick Stop Leak oil – 32 oz. 12-700127-000 (90/140 weight) if needed
- Gear box oil pan – 12-100316-000 (pg. 38)

**NOTE:** If you have a Model A pinsetter with a dashpot, use a high-quality, name brand 10w30 oil.

Tip: Gear box oil leaks. By adding one ounce of a transmission sealer to the gear box, oil leaks through gaskets or seals of gear box components can be minimized. This of course is only a temporary fix until the gasket or seals can be replaced.

**12-752024-000**



### AUTOMATIC PINSETTER GREY PAINT

Fix nicks, scratches, and scrapes quick and easily.

- This is the original grey paint used on the automatic pinsetter. It is guaranteed to match
- Lacquer spray paint dries quickly to a durable finish
- 12 oz. can

**62-860062-000**



### DECK CHUTE CONDITIONER

Improve durability and performance of deck chutes; minimize deck jams allowing pins to slide easily through chutes.

Tip: Some mechanics use this conditioner to lengthen the life of deck pads.

**62-860029-000**



### AUTOMATIC PINSETTER CLEANER

Strong, solvent-based cleaner cuts through tough pinsetter grease and grime.

Tip: Do not use on non-metal parts.

**62-860083-005**



NEW

**SCISSOR DECK CABLE ADJUSTMENT TOOL**

This uniquely designed wrench will hold both cable nuts at the same time, and no hands are needed due to the spring loaded feature. Simply adjust your cables to the correct lengths. Accommodates both size nuts commonly found in pinsetters.

**12-860010-000****PIN GATE ROLL PIN INSTALLATION TOOL**

Removes worn pin and installs new one in a single operation.

- Easy screw operation eliminates need for hammer and pin punch
- Use this tool without removing pin gate latch from pinsetter

**12-900181-000**

NEW

**A•2 SCISSOR DECK STUD WRENCH**

Just the right tool to easily access and remove stud 12-200029-000 that holds the scissor arms. Customized tool just for Brunswick mechanics. A tool every mechanic can't be without.

**12-860009-000****BELT FASTENER TOOLS**

Quickly repair spliced ball wheel belts using these tools.

- Holders clamp belts firmly so fasteners can be easily and securely attached
- Metal fasteners temporarily splice broken belts until a replacement is obtained
- Rocker pin tool ensures that belt is held together securely by locking the rocker pin in place

**12-800502-000** – Double V-Belt Holder**12-400279-003** – Double V-Belt Fasteners (box of 10)**12-400180-000** – Single V-Belt Fasteners (box of 10)**12-800503-000** – Rocker Pin Tool**X-WASHER PLIERS**

Special grooved jaws that hold an X-washer and prevent it from slipping out.

- Ability to install and remove X-washers with one hand using the pliers
- Jaws tips are designed to eliminate interference with X-washer pin, allowing for closure of an X-washer completely
- Simple procedure reduces maintenance time substantially

**12-800517-001** – 1/16" slot**12-800517-002** – 3/32" slot**TURRET RING AND BEARING JIG**

Assists in the disassembly and reassembly of the turret ring and bearing assemblies by collecting the bearings and properly positioning the rings.

- Rugged aluminum casting won't deform

**12-150326-000****INSTALLATION AIR FITTING**

Used to "blow on" ball lift rod covers when attached to air compressor.

- Decreases installation time
- Standard compressor fitting

**12-700268-000****THREAD RESTORER**

Use this specialty tool to clean and repair threads on the spot. Do not force the locknut on, because cross-threading jeopardizes this critical seal point.

- Eight different sizes: 9, 10, 12, 16, 20, 27, 28, and 32

**NOTE:** Use size 32 on Worm Shaft**12-860660-000**



#### CABLE SHAFT BEARING REMOVAL TOOL

Remove and install the cable shaft bearings easily with this kit.

- Requires only two 9/16" wrenches
  - Kit includes all inserts and instructions
  - Designed by Mechanic Kenney Adams
- 12-700135-000**



#### SCISSOR SPRING INSTALLER

This tool takes the work out of removing and installing the scissor spring – 12-200022-000.

- Easy and safe to use
  - A must have tool in every center
- 12-700271-000**



#### JACK SHAFT INSTALLATION TOOL

Installs the jack shaft and bearings easily. Extends life of bearings.

**12-700270-000**



#### ADVANCED PERFORMANCE DECK RIGHT KIT

Corrects sticking or sluggish shifting caused by a warped moving deck.

- Straightens out deck for a smooth operation
- Turnbuckle style tensioner straightens deck for a smooth operation

**12-862858-000**



#### CLUTCH FACING RIVET SET

Use this tool to replace clutch facings without causing damage.

- One piece steel construction – no welds means longer life
- Press action of the tough steel screw allows for control of rivet pressure, preventing damage to facing material
- Precision end flare properly sets rivets against facing material

- Use on all pinsetter facings, including clutch drive, hub drive pulley, and turret clutch

Tip: Use with Brunswick's Gear Box Clutch Repair Kit DVD – 61-860200-100.

**12-700111-091**



#### SPECIAL BEARING WRENCH

Use this tool to remove deck lift shaft bearing.

- Ultra-thin wrench is proper thickness to deck lift shaft bearing
- 1- 3/4" head is case-hardened for added strength
- Handle is 12" long for increased leverage

**12-800506-000**



#### DECK JAM CABLE SPRING TUBE SERVICING FIXTURE

Replace a deck jam cable quick and safe with this specialty tool.

- Easy to use by mounting on a table or in a vise
- Reversible head allows easy servicing of both Model A and A•2 tube types
- Safety mechanisms within the ram head secure the pressurized springs in the fixture

**12-700110-000**



#### BALL STOP

Protect and keep mechanics safe when working on the pinsetter and lanes. The "Ball Stop" blocks the entire lane and gutters, keeping balls from injuring the mechanic. The bright yellow look also alerts bowlers that the lane is being worked on. Unique system will adhere quickly to the lane, even if it has lane oil on it. A must for all centers.

**47-277455-009**



#### DECK JAM SWITCH CHECKER

Ensure proper deck jam switch operation.

- Eliminates expensive repairs
- Guarantees safe running condition of deck jam switch

**12-700207-000**



#### TRI-PLATE BUSHING PULLER

Eliminates stress cracks in bracket and bushing distortion commonly caused by the hammer driving method. Remove and install the tri-plate bushing easily in one simple step.

**12-700112-000**



#### WORM SHAFT HOLDING WRENCH

Prevent damage to the worm shaft spline during a repair job.

- Use with the worm nut alignment socket to tighten the worm nut properly
- Eliminates the use of improper holding devices, such as pliers, which tend to damage splines and result in gear box clutch malfunctions

**12-700114-000**



#### WORM NUT ALIGNMENT SOCKET

Ensures proper removal and installation of the worm nut.

- Self-centering on worm shaft for accurate alignment and starting of the worm nut
- Standard 1-1/8" hex head to tighten worm nut

**12-700113-000**



#### DECK PIN GAUGE

Use this tool to check pin spotting before a tournament or when making deck adjustments, such as changing a moving deck cable or stabilizer arm.

- Base is cut away to easily see pin spot
- USBC/WIBC use this to check pin spotting during inspections

**12-700003-000**



### MULTIMETER

This multimeter measures voltage, current and resistance.

- Tests diodes and continuity
- Rotary switch ensures that only one test is run at a time
- Meter automatically sets ranges for the most accurate reading
- Shows readings on a digital display and an analog bar graph
- Comes complete with a holster that attaches to a belt or converts into a table top stand
- Backed up with a three-year manufacturer's warranty

**57-860295-000**



### PINSETTER TOOL KIT

Save time and prevent damaging parts by using these tools.

- Each tool was specifically designed to work with pinsetter needs
- Kit includes the following tools, which can also be ordered individually:
  - (1) Deck Cable Spring Tube Fixture – 12-700110-000
  - (1) Clutch Face Rivet Set – 12-700111-091
  - (1) Triangular Plate Bushing Puller – 12-700112-000
  - (1) Worm Nut Alignment Socket – 12-700113-000
  - (1) Worm Shaft Holding Wrench – 12-700114-000
  - (1) Worm Shaft Bearing Driver – 12-700115-001
  - (1) Shaker Shaft Bearing Driver – 12-700115-002
  - (1) Rake Shaft Repair Driver – 12-700115-003
  - (1) Long Jogger Link Bearing Driver – 12-700115-004
  - (1) Small Jogger Link Bearing Driver – 12-700115-005
  - (1) Guide Roller Bearing Driver – 12-700115-006
  - (1) Elevator Drive Shaft Adapter Plate – 12-700116-001
  - (1) Clutch Bearing Sleeve Adapter Plate – 12-700116-002
  - (1) Magnetic Clutch Adapter Plate – 12-700116-003
  - (1) 2:1 and 1:1 Adapter Plate – 12-700116-004
  - (1) 4:1 and Worm Adapter Plate – 12-700116-005
  - (1) Trunnion Roller Bearings Adapter Plate – 12-700116-006

**12-860670-000**



### RETAINING RING PLIERS SET

Set comes complete with one pair of internal pliers, one pair of external pliers, and an assortment of tips.

- 6-3/8" long pliers with vinyl covered handles for comfortable grip
- Tips come in various sizes and angles for a majority of the pinsetter retaining ring applications

**12-900172-000**

**12-900172-002** – Replacement Tips



### URETHANE (NO-BOUNCE) MALLET

No-bounce urethane head drastically reduces rebound that can damage parts or cause personal injury. Contoured handle provides a firm, nonslip grip.

**90-750069-000**



### HEX BIT SOCKET SET

Set of seven sockets includes the following sizes: 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8".

- Sockets fit 3/8" square drives
- Chrome-plated sockets resist corrosion

**12-900180-000**



### A•2 PREVENTATIVE MAINTENANCE WALL CHART

Reusable wall chart, 24" x 36", shows Brunswick's recommended preventative maintenance schedule for daily, weekly, monthly, quarterly, bi-yearly, and yearly items.

- Allows recording of most up-to-date maintenance using water-soluble markers that wipe off easy with a damp cloth

**12-700108-000**

**SUPPORT MATERIALS (MANUALS, CATALOGS, DVDS)**

PART NUMBER	DESCRIPTION	PRINT	ONLINE	DVD
<b>A AND A•2 PINSETTERS</b>				
10-095400-018	Genuine Brunswick Part Catalog (this document)	X	X	
12-752828-000	A•2 Automatic Pinsetter Service Manual	X	X	
12-900250-000	Hardware Catalog for A and A•2 Pinsetters	X		
12-900259-000	Service Parts Inventory Control Record for A and A•2 Pinsetters	X		
12-900260-000	Brunswick Parts Preventative Maintenance Manual	X	X	
12-900261-000	Supp Instructions for Electronic Pinsetter Trigger/Control System - Model A		X	
12-900900-000	Model A Pinsetter Service Manual	X	X	
12-900903-000	Gear Box Disassembly Manual	X	X	
12-900907-000	Detector Manual	X		
12-902262-000	Electronic Pinsetter Trigger/Control System Installation and Operations Manual	X	X	
12-902908-000	A and A•2 Pinsetter Service Parts Catalog - Green Book	X	X	
12-902920-000	A•2 Pinsetter Service Manual (Spanish)	X		
12-902921-000	Motor Repair Manual	X		
61-860200-100	Gear Box Clutch Repair and Maintenance			X
61-860201-100	Electrical System Overview			X
61-860202-100	Motor Contact Replacement			X
61-860227-100	Basic Pinsetter Operation			X
<b>GS SERIES PINSETTERS</b>				
47-902712-000	GS Series Pinsetter Service Parts Catalog	X	X	
47-902727-000	GS Series Pinsetter Service Parts Inventory	X		
47-902735-000	GS Series Pinsetter Operations and Service Training Program	X	X	
47-902741-000	Hardware Catalog for GS-92 Pinsetters	X		
<b>BOWLING EQUIPMENT</b>				
28-201739-000	Bowling Service Parts Catalog	X	X	
61-900020-000	Computer Lane Monitor Operator's Manual for Windows	X	X	
<b>AUTOMATIC SCORERS</b>				
57-900300-000	Scoring System Service Manual	X		
57-900306-000	Automatic Scorer Service Parts Catalog	X	X	
57-900351-000	Frameworkx Scorer Service Manual		X	
57-900360-000	Frameworkx Scorer Service Parts Catalog	X	X	
57-900384-000	Frameworkx Scoring Solutions 3, 4, and 5 User's Guide	X		
57-900608-000	Classic Service Parts Catalog	X		
57-900620-000	Vector Scorer Service Parts Catalog	X	X	





**NON PINSETTER PARTS**

**NON PINSETTER PARTS**

# BALL LIFT ASSEMBLY



## URETHANE FOAM BALL LIFT TIRE

Durability! After more than 1.5 million ball impacts, there is virtually no wear. This tire is made of a specially formulated foam material manufactured to the proper density to optimize ball lift performance.

- Tire is now designed with a smaller diameter for better performance
- Made with same technology used to manufacture Reactive resin bowling balls  
Tip: For the best lifting results with highly reactive balls, install a urethane lift wheel in the bottom position and a rubber hub and tire ball lift wheel – 53-520060-000 in the top position.

**90-520060-600** – Tire only



## URETHANE BALL LIFT V-TIRE

Prevent balls from getting stuck in the lift, by keeping urethane ball lift wheels in top condition.

- Red/orange V-shaped urethane wheels are a continuous one piece urethane part, eliminating separation problems
- Long lasting
- For Frameworkx metric ball lifts, also order 8mm x 30mm Hex Head Bolt – 11-051044-001

**90-520060-000**



## BALL LIFT WHEEL ASSEMBLY

Original power lift wheel can be counted on for years of positive ball lifting.

- For Frameworkx metric ball lifts, order hardware – 11-051038-001 (Pkg of 10)
- Hex Head Cap Screw – 11-001258-001 (Pkg of 25)

**53-520060-000**

**Advanced  
Performance**



## ADVANCED PERFORMANCE HIGH FRICTION POLY V-POWER LIFT BELT

This power lift belt provides more power transmission to lift all types of bowling balls

- The high friction “backside” works efficiently with idler pulleys to provide consistent and reliable performance

**53-520235-600**



## POLY V-BELT

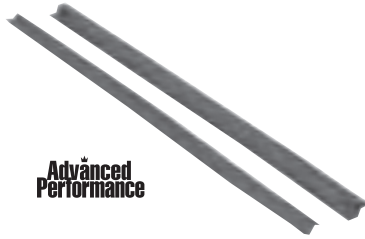
Poly V-belts offer increased flexibility and reduced heat build up, extending belt life.

- They are ideal for operating at higher speeds on small pulleys
- They provide enough drive power to lift two or three balls at a time
- Recommended to use with Power Ball Lifts
- To convert from a flat belt or V-belt to a Poly V-Belt, order Brunswick’s handy conversion kit – 53-860431-000

**53-520235-000**

### TECH TIP

Power lift tires and tracks should be inspected yearly for worn/flat spots on the lower C tracks, swelling from oil soaking of the C tracks, and cracking of the hub and tire assembly. This is a good time to also verify the alignment of the drive belt and remove, clean, inspect, and lubricate the lift motor.



**Advanced  
Performance**

#### **ADVANCED PERFORMANCE URETHANE FOAM BALL LIFT TRACK**

Urethane grommets strengthen the mounting holes to prevent tearing.

- Outlasts the standard OEM rubber and leather lift tracks
- Will not absorb lane oils and swell like conventional lift tracks
- Package of 2 each (For B2000)

**90-520171-600**



#### **RUBBER AND LEATHER POWER LIFT TRACK**

Flexible rubber lift track fits the steel contours better than some molded urethane tracks do, providing excellent ball lift.

- High-grade, bolt-on leather strips protect rubber without tearing or marking balls
- Make these tracks last a lifetime by periodically replacing the leather and retouching the glue that adheres the rubber to the steel

**53-520171-000** – Rubber for B2000

**53-520172-000** – Leather for B2000 or FX

**53-520686-000** – Rubber for FX

**53-520040-000** – Rubber for concealed power lift assembly



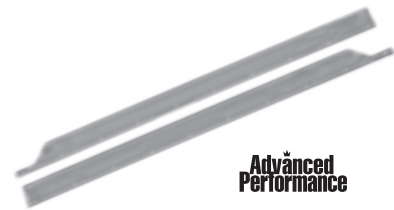
#### **SANTOPRENE BALL LIFT TRACK**

One-piece santoprene track is injection molded to ensure proper fit with the steel track.

- Red/orange material will not mark balls
- Resists oil and wear. (For B2000)

Tip: Extend life of a santoprene track by bolting a leather track (53-520172-000) on top of it. Short of replacement, it is possible to swap the right and left santoprene lift tracks to move the worn area from the critical transition spot to the less critical top exit area.

**90-520171-000**



**Advanced  
Performance**

#### **ADVANCED PERFORMANCE FRAMEWORX BALL LIFT TRACK**

Used on Frameworkox Ball Lifts, this one piece, urethane ball lift track provides durability, ball protection, and maximum oil resistance.

- Independent lab tests show little wear after one million balls
- Sold in pairs (1 Right Hand and 1 Left Hand)

**90-520172-600**

#### **BALL LIFT TRACK ASSEMBLY - FRAMEWORX**

Completely assembled and ready to install.

Assembly consists of metal track, rubber track, leather track, washers, and screws. Installation hardware sold separately.

**53-520678-000** – R.H.

**53-520679-000** – L.H.

# BALL LIFT ASSEMBLY



## 1/4 HP, 1425/1725 RPM POWER LIFT MOTOR

Motor for Frameworx lifts only.

- 1425/1725 RPM
- 110/220/115/230 Volt – 50/60 cycles
- 1/4 horsepower
- 5/8" shaft
- Continuous duty
- Push button thermal overload reset
- Made for 48Z frame

**53-860328-000**



## B/L MOTOR-1/4HP 1150/960RPM-5/8 SHAFT

Choose a motor that has enough power to lift balls up the track and uses less energy.

- For B2000 ball lifts only
- 1150/960 RPM
- 110/220/115/230 – 60/50 cycles
- 1/4 horsepower
- 5/8" shaft
- Made for 56 frame
- Usable at 208
- Push button thermal overload reset

**53-860322-010**



## 1/3 HP, 1150/950 RPM POWER LIFT MOTOR

For higher voltage centers, this universal voltage motor will hold strong.

- For B-2000 and before
- 1150/950 RPM
- 110/220/115/230 Volt – 60/50 cycles
- 1/3 horsepower
- 5/8" shaft
- Continuous Duty
- Push button thermal overload reset
- Made for 56YZ frame

**53-529999-000**



## POWER LIFT DRIVE SHAFT

Prevent worn shafts that cause ball to stick in the power lift.

- Made from a solid piece of stress-proof steel

**53-520066-000**



## POWER LIFT CLUTCH

Fully assembled with a special, heat-treated hex head cap screw that will not shear under repeated ball impact.

- Extend the life of the power lift wheels by keeping this clutch in shape
- Based on a replaceable, high-performance Torrington clutch - bearing assembly – 11-500552-000

**53-860555-000**



**Advanced  
Performance**

#### ADVANCED PERFORMANCE URETHANE TRANSITION TRACKS

Prevent bowling balls from failing to roll out of ball lift onto rack by replacing rubber transition tracks.

- Designed to be wear resistant to today's abrasive balls and will last 2 to 1 over OEM rubber track

**90-520075-600**



#### BALL TRANSITION ASSEMBLY

Transitions ball from power lift to ball rack smoothly.

- Worn transition tracks can cause balls to hang up in the exit of the power lift and cause rough transitions to the ball rack

- Made for Power Lift

**53-520073-000**



#### POWER LIFT IDLER PULLEY ASSEMBLY

Eliminate belt tensioning problems by replacing worn and broken pulleys.

- Solid steel pulleys come fully assembled with a replaceable bearing – 11-430028-000 and a retaining ring

**53-520244-000** – For poly V-belt

**53-520026-000** – For V-belt



#### BALL LIFT WELDMENT ASSEMBLY (METRIC)

Replacement frame for Frameworx ball lift. Includes metric hardware.

- Having a spare on hand helps avoid unnecessary down time

**53-520696-001**



#### LOWER PULLEY ASSEMBLY

When replacing a power lift clutch, also replace the race assembly for longer service.

**53-520663-001**



#### INTELLISHIELD BALL RETURN GUARDING SYSTEM

- Automatically shuts off ball lift if a foreign object enters opening or if the ball rack is full
- Prevents injury to hands and fingers
- Automatically timed restart once obstruction is cleared
- Compatible with the Frameworx® ball lift hood
- For use with 8.5" balls
- Easy installation
- Integrates with SYNC™ Scoring and Management System
- Works independently of other scoring systems

**53-861674-000**

# BALL RETURN AND RACK



### FRAMEWORX BALL HOOD THROAT

Complete with hardware  
**53-861126-000** – Dark gray  
**53-861126-003** – Graphite  
**53-861126-205** – Black



### RESET SWITCH AND BRACKET ASSEMBLY FOR FRAMEWORX BALL RACK

- Replacement for damaged or worn out switches
- Includes switch and bracket  
**53-861127-000** – Dark Gray  
**53-861127-100** – Silver  
**53-861127-205** – Black



### RESET BUTTON

Gold Crown and AstroLine Ball Rack Reset Button.  
**11-615014-000**

### BALL RETURN SAFETY DECALS

- 53-400067-000** – Ball Rack Hand Warning
- 53-400487-000** – No Hands in Ball Return
- 53-400494-000** – Max 12 - Number of Balls in Rack

### HAND DRYERS - BALL RETURN

Replace worn or damaged motors. Keep bowlers grip tight on the ball.  
**53-861077-000** - Conversion Pkg - 24V to 115V  
**53-861059-115** - Pkg 115V Hand Dryer Fan  
**53-861059-230** - Pkg 230V Hand Dryer Fan



### FRAMEWORX BALL RETURN STORAGE RACK

Rack is made from rugged, all steel construction that will not damage balls.

- Racks are available in 6-ball or 8-ball additions
- This product is perfectly integrated to the best-selling Framework® ball return, and other Framework ball rack look-alikes
- Easy to install
- Includes hardware and instructions  
**53-861147-606** – 6 ball, dark gray  
**53-861147-608** – 8 ball, dark gray  
**53-861133-606** – 6 ball, silver  
**53-861133-608** – 8 ball, silver  
**11-651103-000** – Rubber replacement for ball rack tips (Pkg of 4)



### WEAR STRIP

Sold individually  
**53-400057-227** – Black  
**53-400057-229** – Graphite



### BALL RAIL EXTRUSIONS

Includes two Ball Rail Extrusions and screws.  
**53-861026-227** – Black  
**53-861026-229** – Graphite  
**53-400079-XXX\*** – one each  
 \* = See color chart on this page.



### FRAMEWORX BALL RACK SAFETY SWITCH

Turns off ball lift when lever is pushed.

- Help prevent injuries to anyone who may put their hands in the lift
- For Framework and B2000 lifts. Must use in the upper wheel position Ball Lift Wheel – 53-520060-000 or Urethane Foam Tire – 90-520060-600 Not compatible with V-style wheel or U-style wheel in upper position  
**53-861149-000** – Complete Assembly  
**53-860458-000** – Replacement Switch



### BALL RETURN COLOR KITS

- Includes:
- (1) package - Ball Rail Extrusion Package – 53-861026-XXX\*
  - (1) - Vent Decal – 53-400043-XXX\*
  - (2) - Wear Strip – 53-400057-XXX\*
  - (1) - Throat insert – 53-400009-XXX\*
- 53-861122-002\*\*** – Graphite/Silver  
**53-861122-205\*\*** – Black  
**53-861090-XXX\*** – Package w/ Hood Logos
- \* = See color chart below  
 \*\* = Does not include hood logo

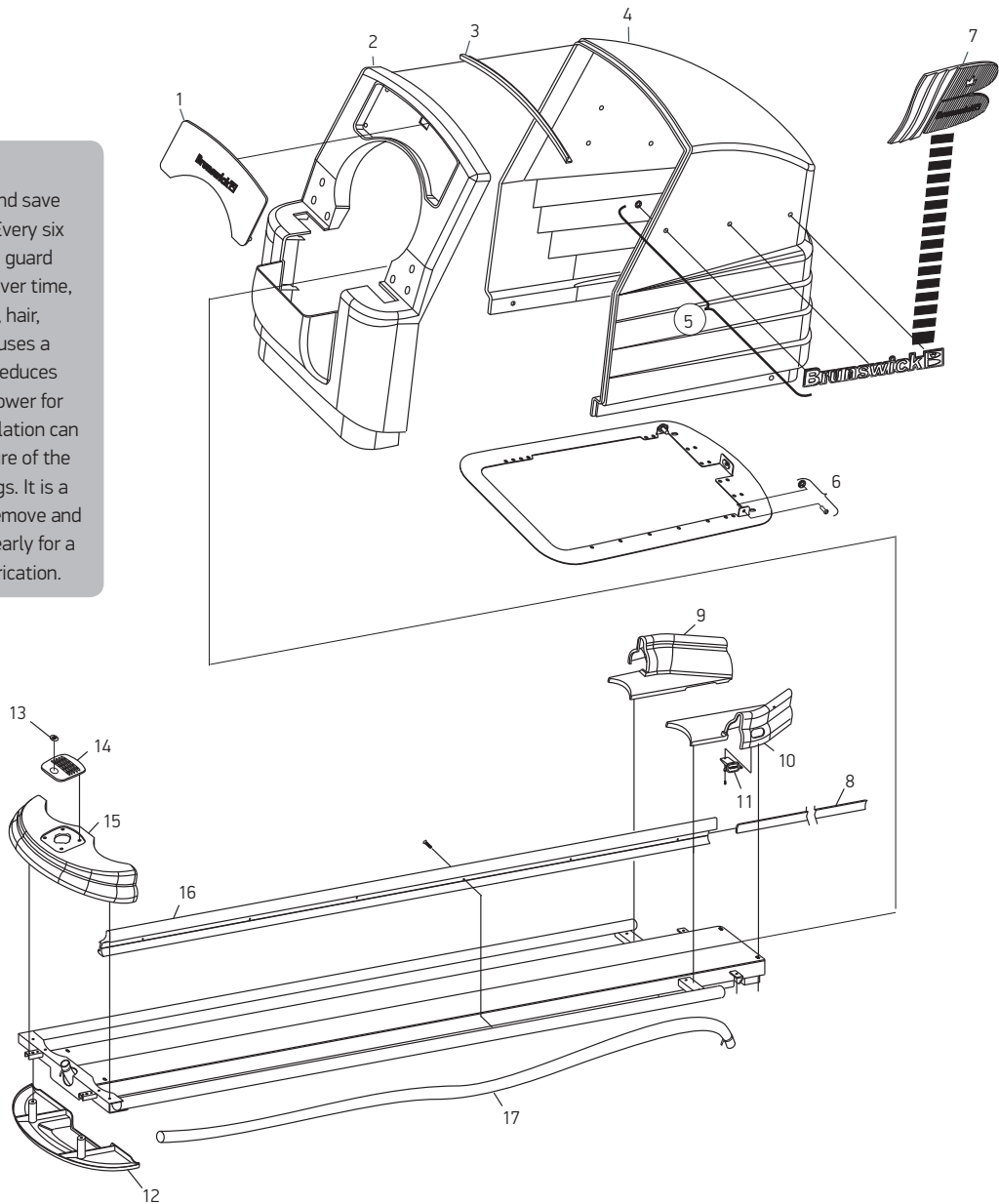
#### \* Color Kit Chart

Part No. Suffix	Color
-227	Black
-229	Graphite
-260	Violet
-261	Daffodil
-262	Blaze Orange
-263	Malachite
-265	Jade
-266	Navy
-267	Eggplant
-268	Silver



**TECH TIP**

Blow off your customers and save money at the same time! Every six months vacuum the intake guard on the hand dryer motor. Over time, the guard will collect dust, hair, and dirt. This collection causes a decrease in airflow which reduces the effectiveness of the blower for the customer. The accumulation can also cause premature failure of the motor or the motor bearings. It is a good idea to completely remove and disassemble the blower yearly for a thorough cleaning and lubrication.



For complete schematics please refer to the Bowling Service Parts Catalog – 28-201739-000.  
Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

1	53-400009-227	Throat Decorative Insert (Dark Gray w/Silver Logo)	4	53-861034-205	Ball Return Hood Assembly (w/ No. 3, 5 and adhesive)-Black	11	53-861127-100	Reset Switch (Silver)
1	53-400009-229	Throat Decorative Insert (Graphite w/Silver Logo)	5	53-860648-000	Brunswick Side Plate Logo	12	53-400271-000	End Cap - Lower (Light Gray)
1	53-400027-002	Throat Decorative Insert (Black w/Black Logo)	6	53-520723-000	Ball Lift Hood Retainer Clips	12	53-400271-003	End Cap - Lower (Graphite)
2	53-861126-000	Pkg. Throat (Dark Gray)	7	53-400048-XXX*	Side Logo Assembly	12	53-400271-205	End Cap - Lower (Black)
2	53-861126-003	Pkg. Throat (Graphite)	7	53-400048-229	Logo Assy-Graphite-Non Glow	13	53-400043-XXX*	Decal Vent
2	53-861126-205	Pkg. Throat (Black)	8	53-400057-XXX*	Wear Strip	14	53-400278-000	Vent - Ball Rack (Dark Gray)
3	53-400044-000	Hood Lip Trim	9	53-400097-000	L.H. Exit Track Only (Lt Gray)	14	53-400278-003	Vent - Ball Rack (Graphite)
4	53-860937-000	Ball Return Hood Assembly (w/ No. 3) - Light Gray	9	53-400097-003	L.H. Exit Track Only (Graphite)	14	53-400278-205	Vent - Ball Rack (Black)
4	53-861034-002	Ball Return Hood Assembly (w/ No. 3, 5 and adhesive)-Silver	9	53-400097-205	L.H. Exit Track Only (Black)	15	53-400270-000	Ball Return End Cap - Top (Lt Grey)
			10	53-400099-000	R.H. Exit Track Only (Lt Gray)	15	53-400270-003	Ball Return End Cap - Top (Graphite)
			10	53-400099-003	R.H. Exit Track Only (Graphite)	15	53-400270-205	Ball Return End Cap - Top (Black)
			10	53-400099-205	R.H. Exit Track Only (Black)	16	53-861026-XXX*	Ball Rail Extrusion
			11	53-861127-000	Reset Switch (Dark Gray)	17	53-400041-000	Hand Dryer Hose - Framework
						17	53-100415-010	Hand Dryer Hose - 2000 Twin Line

\* See Bowling Service Parts Catalog (P/N 28-201739-000) for color options.



### STRIKING LINE WOOD SEAT BOTTOMS

Refreshes Striking Line seating to look like new.

- Easily installs with existing chair hardware

#### STYLE "A"

*Florence, Contessa, Catalina, Voltair*

**54-860511-001** – Dark Cherry (Pkg of 4)

**54-860511-002** – Natural (Pkg of 4)

#### STYLE "B"

*Easton, Montgomery, Broderick, Alden*

**54-860512-001** – Dark Cherry (Pkg of 2)

**54-860512-002** – Natural (Pkg of 2)

#### STYLE "C"

*Wayland*

**54-860513-001** – Dark Cherry (Pkg of 2)

**54-860513-002** – Natural (Pkg of 2)



### FRAMEWORX SEATS

Give your Frameworkx seating new molded seats or new color kits. New Graphite color kits now available.

- Light Gray Seat Only – 53-860959-000
- Graphite II Seat Only – 53-860959-004
- 53-860960-XXX\*** – Seat color kit only (\* = See color chart to the right)
- 53-860395-000** – 45° Swivel

### STRIKING LINE SEAT BUCKET COMPLETE WITH MOUNTING HARDWARE

Seat Bucket Style	Part Number	Dark Cherry	Natural	Black (custom only)	Quantity Per Package
		-001	-002	-003	
Easton	54-861106-XXX	X	X	X	2
Montgomery	54-861107-XXX	X	X		2
Broderick	54-861108-XXX	X	X		2
Wayland	54-861109-XXX	X	X		2
Alden	54-861110-XXX	X	X		2

### STRIKING LINE CHAIR GLIDES

For Striking Line wood stools.

**54-861080-000** – (Pkg of 4)

### ACCENT DECALS - OVERHEADS

**57-860935-227** – Black

**57-860935-229** – Silver

### DRINK HOLDERS

**54-100260-000**

\* Framework Color Kit Chart

Part No. Suffix	Primary Color
-205	Black
-232	Light Grey
-260	Violet
-261	Daffodil
-262	Blaze Orange
-263	Malachite
-265	Jade
-266	Navy
-267	Eggplant
-268	Silver - non metallic



### FRAMEWORX TOUCH-UP PAINT

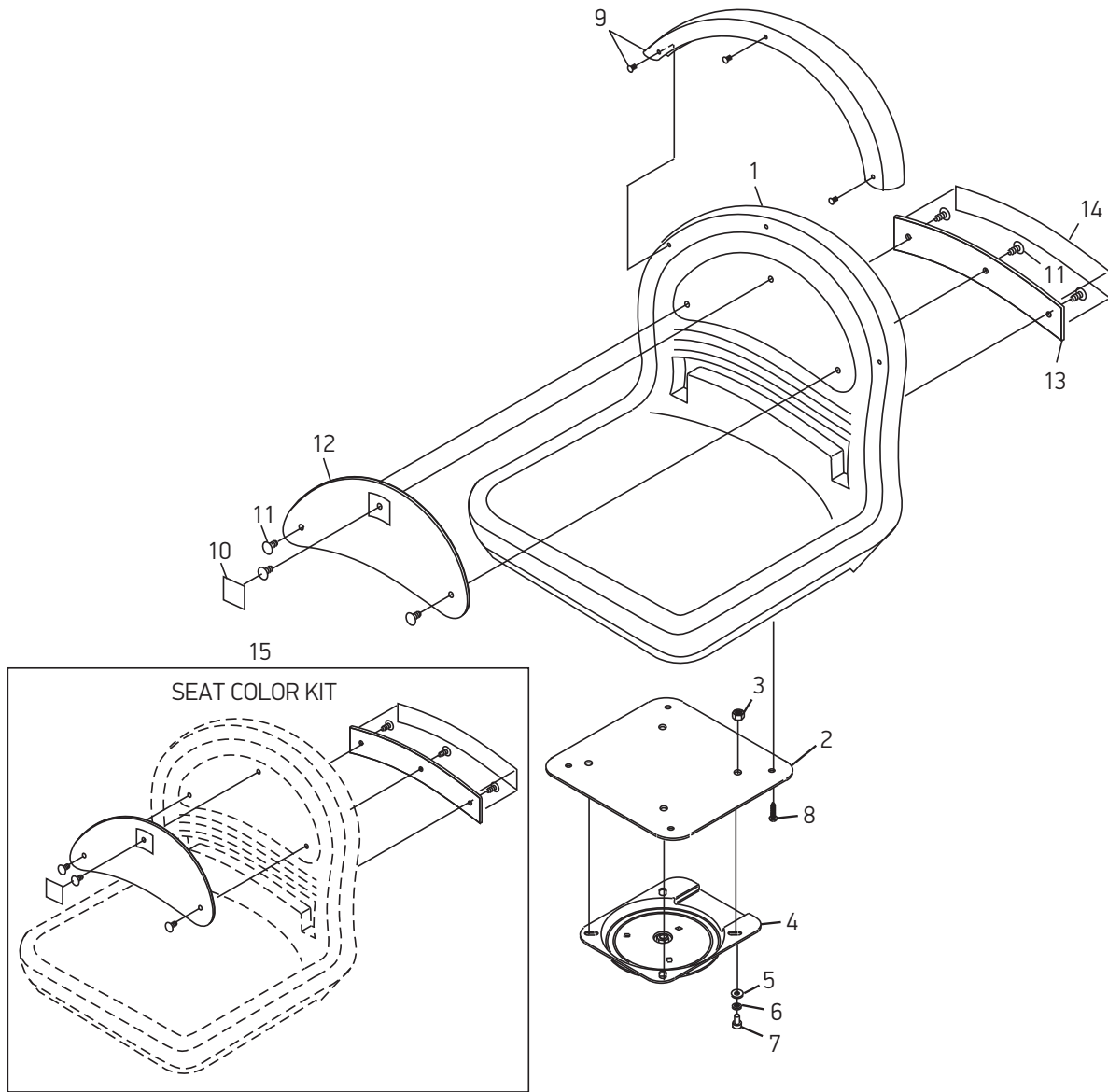
Keep furniture weldments looking new. Dark grey paint.

**53-861005-101**

### FRAMEWORX PANEL FASTENERS

**53-861010-XXX\*** (Pkg of 10)

(\* = See color chart to the left)



For complete schematics please refer to the Bowling Service Parts Catalog – 28-201739-000.  
 Visit [brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs](http://brunswickbowling.com/service-support/tech-support/documentation/parts-catalogs).

**PART INDEX**

- |  |   |   |
|--|---|---|
| <p><b>1</b> 53-860959-000 Contour Seat Pkg. (Lt Gray)<br/> <b>1</b> 53-860959-004 Contour Seat Pkg. (Graphite)<br/> <b>2</b> 53-400165-000 Adapter Plate (Dark Gray)<br/> <b>2</b> 53-400165-100 Adapter Plate (Silver)<br/> <b>3</b> 11-051702-001 Hex Nut (6 mm)<br/> <b>4</b> 53-860395-000 45° Seat Swivel<br/> <b>5</b> 11-052037-001 Flat Washer</p> | <p><b>6</b> 11-051769-001 Lock washer<br/> <b>7</b> 11-054803-001 Socket Hd. Cap Screw<br/> <b>8</b> 11-082862-001 Self Tapping Screw (#14-10x 1")<br/> <b>9</b> 53-861066-000 Seat Back Cap (Dark Gray)<br/> <b>10</b> 53-400103-XXX* Front Decal<br/> <b>11</b> 53-861010-XXX* Plastic Fastener (Pkg. of 10)<br/> <b>12</b> Use index No. 15 Front Insert – Not sold sep.</p> | <p><b>13</b> Use index No. 15 Rear Insert – Not sold sep.<br/> <b>14</b> 53-400111-XXX* Rear Decal<br/> <b>15</b> 53-860960-XXX* Color Seat Kit<br/>                 (This package contains one each of item no.:<br/>                 10, 12, 13 and 14 and six plastic fasteners)</p> |
|--|---|---|

\* See Bowling Service Parts Catalog (P/N 28-201739-000) for color options.

**TEL-E-FOUL COVERS**

Tel-E-Foul lenses are secured to cover with hardware. Eliminates lenses popping out and getting damaged from lane machines and bowlers. Lens set – 84-860770-000 includes a template to fasten lens to older style Frameworkor Tel-E-Foul Covers.

**84-860602-000** – Division Cover

**84-860769-000** – Return Cover with lenses

**84-860770-000** – Lens Set RH and LH

**DUAL OUTPUT BALL DETECTOR REPLACEMENT PARTS**

Dual output used for scoring and electronic triggering. Larger reflector gives more surface area for infrared beam than the older small ones.

**57-860507-000** – Reflector with bracket

**53-600176-000** – Reflector only

**MANAGERS CONTROL PANEL ROCKER SWITCH**

Used at the front desk.

**12-750410-000**

**SENSOR ASSEMBLY**

Sensor for infrared Tel-E-Foul.

**53-600181-003**

**TEL-E-FOUL SYSTEM**

Infrared technology.

- Operates on 110/220 VAC at 50/60 Hz
- Requires additional transformer for installation:  
115 volt – 53-860628-115  
230 volt – 53-860629-230
- Self diagnostics for easy adjustment and no interruptions in league play
- All modular design makes it easy to troubleshoot and change parts
- Board is spring mounted to limit vibration which can damage electronics
- Compatible with all scoring systems
- Tel-E-Foul PCB - 53-600181-005

**53-861076-000**

**TACTILE SWITCH KEYBOARDS**

Replacement for automatic scorer membrane keyboards.

- Provides a click-free contact when touched
- Easier activation and increased durability means longer product life

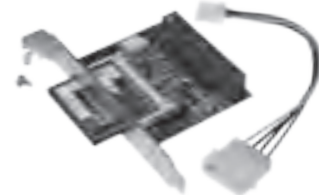
**57-860607-002** – Black Keys

**57-860608-002** – White Keys

**RESET BUTTON KIT**

Locks out reset button when machine starts to cycle until zero degree switch is made and will score immediately if the reset button (up front, after a ball detect) is pushed.

**57-860109-000**

**FRAMEWORX CONSOLE FLASH DRIVE KIT**

Replace your Frameworkor hard drives with this solid state replacement kit.

- No moving parts
- Eliminates hard drive down time
- Pre-programmed with Frameworkor software 6.3
- Comes with cable, mounting hardware, and complete instructions

**57-863397-400**

**DUAL PEDESTAL NON-PIVOT FOR VECTOR**

**57-866867-000** – Dark Gray

**57-866867-100** – Silver

**BALL DETECT - SINGLE**

Package is complete with sensor, nuts, bezel, screwdriver and instructions.

**57-863670-000**

**LIGHT BULBS**

	GOLD CROWN	ASTROLINE	ASTRO II	SYSTEM 2000	FRAMEWORK
<b>MASKING UNIT</b>					
Starlights	N/A	11-675513-002 #90	11-675517-002 #94	N/A	N/A
Strikelight	11-675501-000 28V #308	11-675517-002 #94 Clear	11-675513-002 #90 Clear	11-675521-002 #1692 11-675523-000 (AMF) #68	N/A N/A
1st and 2nd Ball Light	11-675501-000 28V #308	11-675521-002 #1692	11-675521-002 #1692	11-675582-000 #624 11-675523-000 (AMF) #68	11-675582-000 #624 11-675523-000 (AMF) #68
<b>TEL-E-SCORE</b>					
Projection	17-213927-000 - 150 Watt	17-213927-000 - 150 WATT	17-213927-000 - 150 WATT	17-213927-000 - 150 WATT	N/A
Table Light	N/A	N/A	N/A	N/A	N/A
<b>TEL-E-FOUL®</b>					
Foul Indicator	N/A	11-675513-002 #90 Clear	11-675513-002 #90 Clear	11-675513-002 #90 Clear	11-675513-002 #90 Clear
Light Source	15-609567-000 - 6 Volt	11-675514-002 #1876	11-675514-002 #1876	11-675514-002 #1876	11-675514-002 #1876
<b>PINFINDER</b>					
Display	11-675503-000 #1252	N/A	N/A	N/A	N/A
<b>AUTOMATIC SCORER</b>					
Service Light	N/A	N/A	N/A	11-675503-000 - #1252	N/A
Scanner	N/A	N/A	N/A	N/A	N/A
Ball Detector	11-675514-002 #1876	11-675514-002 #1876	N/A	N/A	N/A



**DUAL PIN LAMP COMPONENTS**  
 11-615519-000 - Toggle Switch  
 12-860109-000 - A•2 Ballast Only: (115 Volt)



**LED LIGHT FIXTURE GS, GS-X AND STRING PIN 208/230/380V**

- Does not include brackets or hardware
- Not for use with A•2's, or for systems that use cameras for scoring

**47-863001-000**



**PIN LIGHT FIXTURE - STANDARD**  
 Light Fixture without bulb (GS 230/380V)  
**47-225723-004**



**“DO NOT CROSS FOUL LINE” SAFETY DECAL**  
 Designed with large text and red background to catch bowlers' attention.

- Installs on return Tel-E-Foul unit for easy visibility
- Self adhesive, water resistant material
- Package of five

**84-860902-000**

**LED PINDECK LIGHT SPARE PARTS KIT**

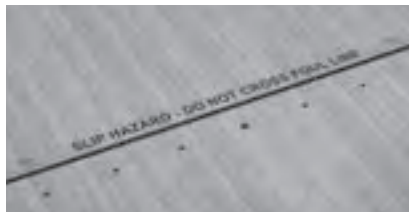

Keep your LED Pindeck Lights looking good with this LED spare parts kit. Have everything you need at your fingertips, and save money too. Kit consists of one each of the following:

- 47-863013-000 - Pkg-Led Pindeck Repl Panels (3)
  - 47-863014-000 - Pkg-Power Supply-OS-8080
  - 47-863015-000 - Pkg-Main Control PCB Brd - OS-8080
- Component parts also sold separately.  
**47-863016-000**

**DUAL PIN LIGHT FIXTURE**  
 Light Fixture without bulb (GS 208V)  
**47-225722-004**



**PIN LAMP HOLDER**  
 This kit offers easy installation in the existing opening on both U.S. and Japanese pinsetter versions.  
**12-860770-000**



**FOUL LINE DECAL (PKG OF 6)**  
 This USBC approved decal is easy and quick to install. Made with Guardian, the decal provides great glow under black lights.

**84-860266-000** – English  
**84-860269-000** – Spanish



**HARDWARE**





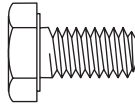
## HEX HEAD CAP SCREWS

## 1/4-20 GRADE 2

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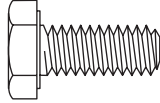
1/4-20 x 1/2

Pkg. Qty. 25

**11-001180-001**

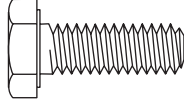
1/4-20 x 5/8

Pkg. Qty. 25

**11-001182-001**

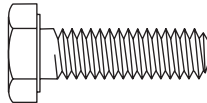
1/4-20 x 3/4

Pkg. Qty. 25

**11-001183-001**

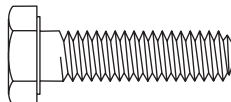
1/4-20 x 7/8

Pkg. Qty. 25

**11-001184-001**

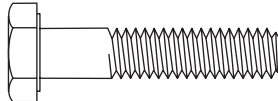
1/4-20 x 1

Pkg. Qty. 25

**11-001186-001**

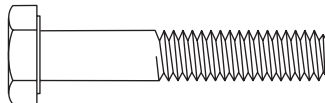
1/4-20 x 1-1/4

Pkg. Qty. 25

**11-001188-001**

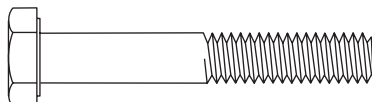
1/4-20 x 1-1/2

Pkg. Qty. 25

**11-001190-001**

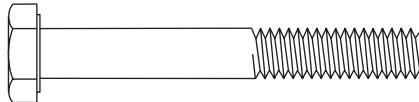
1/4-20 x 1-3/4

Pkg. Qty. 25

**11-001192-001**

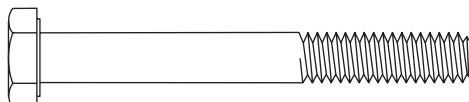
1/4-20 x 2

Pkg. Qty. 25

**11-001193-001**

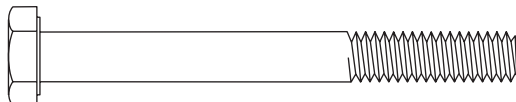
1/4-20 x 2-1/4

Pkg. Qty. 15

**11-001194-001**

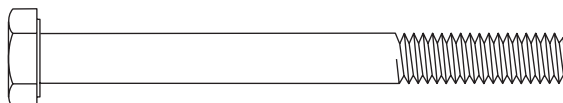
1/4-20 x 2-1/2

Pkg. Qty. 25

**11-001195-001**

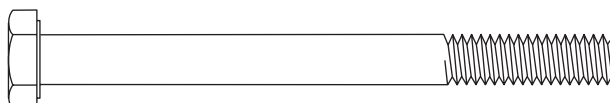
1/4-20 x 2-3/4

Pkg. Qty. 10

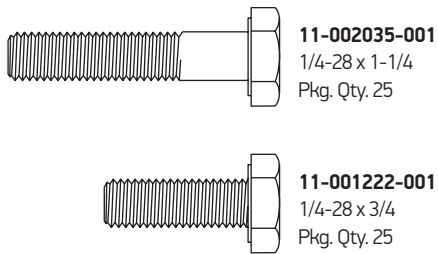
**11-001196-001**

1/4-20 x 3

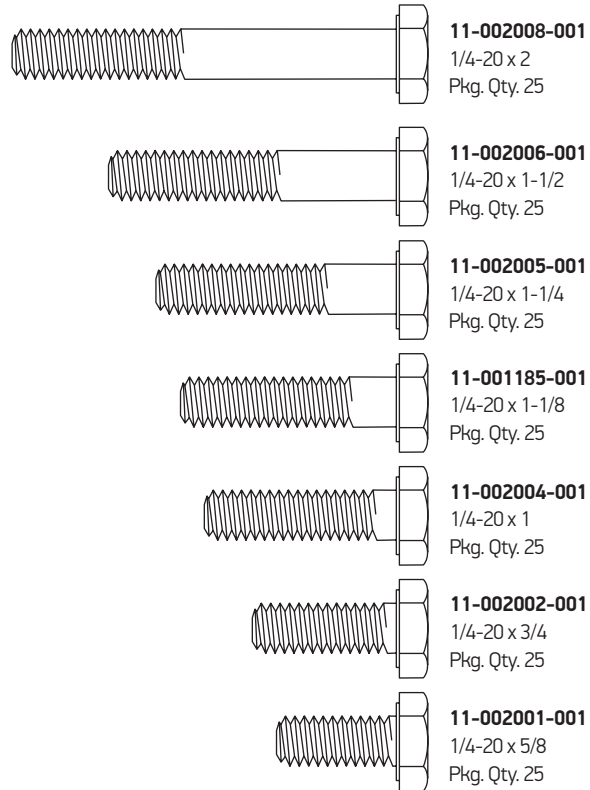
Pkg. Qty. 25



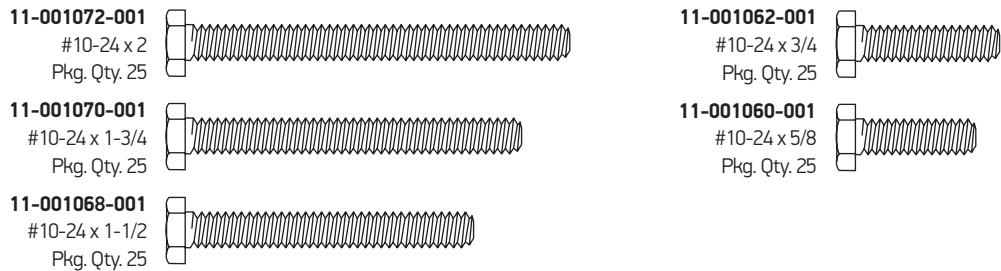
**1/4-28 GRADE 5**



**1/4-20 GRADE 5**

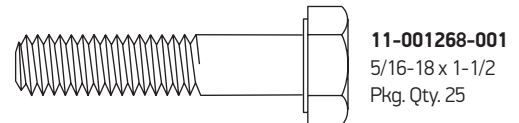
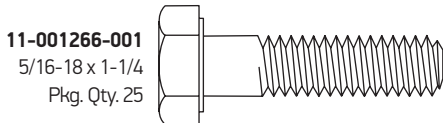
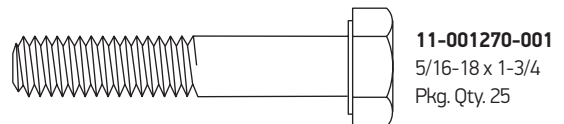
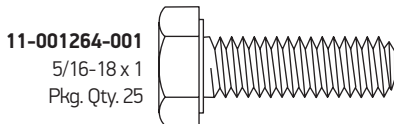
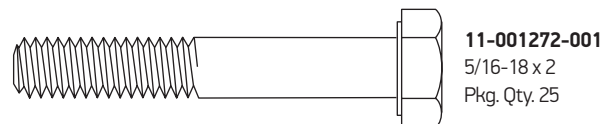
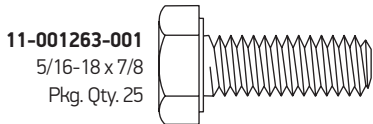
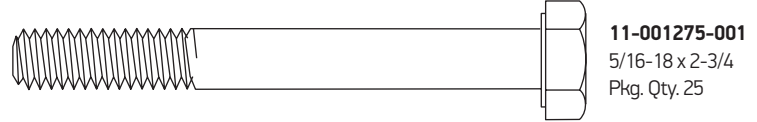
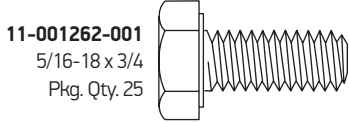
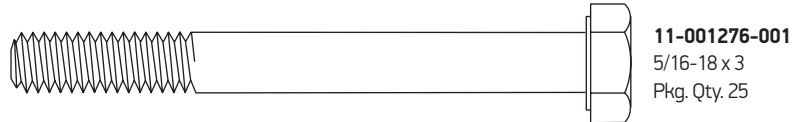
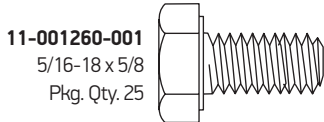
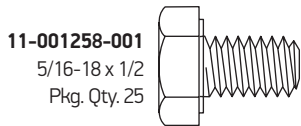
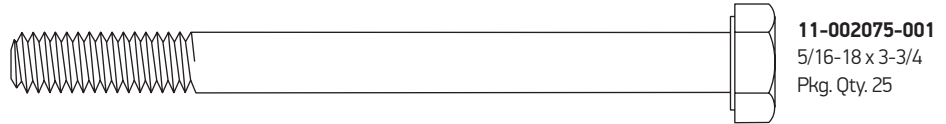
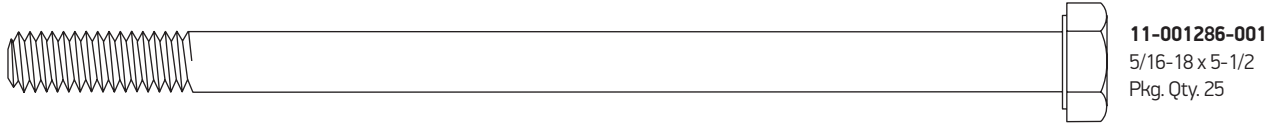


**MACHINE SCREWS**



## HEX HEAD CAP SCREWS

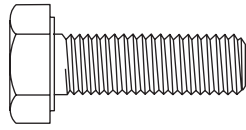
5/16-18 GRADE 2



Hardware illustrations are actual size.

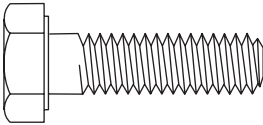
**5/16-24 GRADE 2**

**11-001304-001**  
5/16-24 x 1  
Pkg. Qty. 25

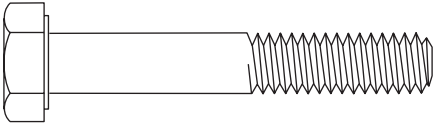


**5/16-18 GRADE 5**

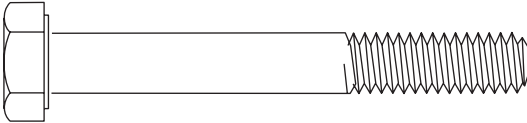
**11-001265-001**  
5/16-18 x 1-1/8  
Pkg. Qty. 25



**11-002068-001**  
5/16-18 x 2  
Pkg. Qty. 25

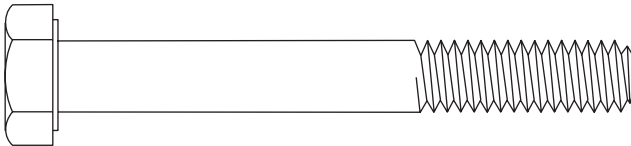


**11-002070-001**  
5/16-18 x 2-1/2  
Pkg. Qty. 25

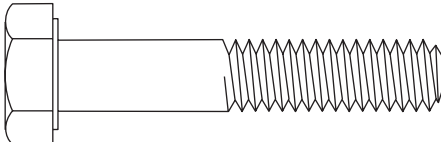


**3/8-16 GRADE 5**

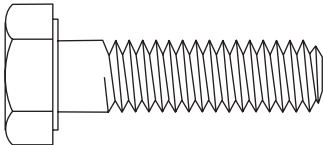
**11-002132-001**  
3/8-16 x 3  
Pkg. Qty. 10



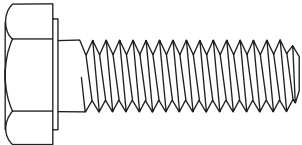
**11-002128-001**  
3/8-16 x 2  
Pkg. Qty. 10



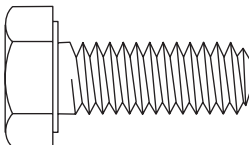
**11-001347-001**  
3/8-16 x 1-3/8  
Pkg. Qty. 10



**11-002125-001**  
3/8-16 x 1-1/4  
Pkg. Qty. 10

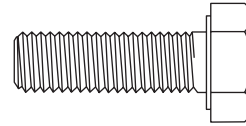


**11-002124-001**  
3/8-16 x 1  
Pkg. Qty. 10

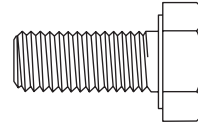


**5/16-24 GRADE 5**

**11-002094-001**  
5/16-24 x 1  
Pkg. Qty. 25

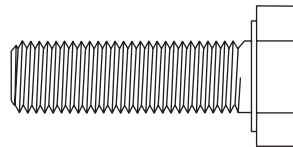


**11-002092-001**  
5/16-24 x 3/4  
Pkg. Qty. 25

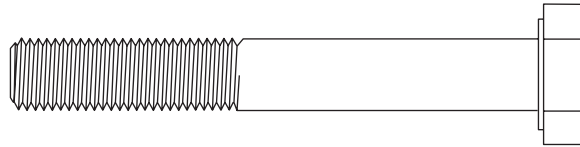


**3/8-24 GRADE 5**

**11-002155-000**  
3/8-24 x 1-1/4  
Pkg. Qty. 10

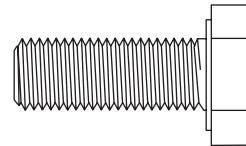


**10-002001-000**  
3/8-24 x 2-3/4  
Pkg. Qty. 10

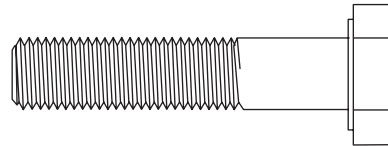


**3/8-24 GRADE 2**

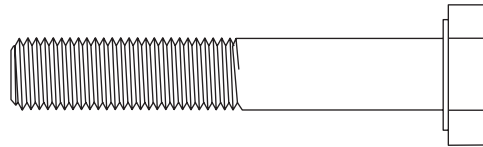
**11-001384-001**  
3/8-24 x 1  
Pkg. Qty. 10



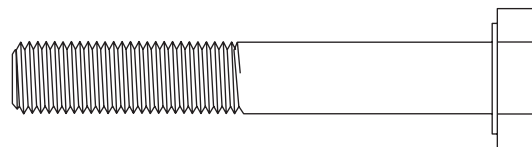
**11-001390-001**  
3/8-24 x 1-3/4  
Pkg. Qty. 10



**11-001393-001**  
3/8-24 x 2-1/4  
Pkg. Qty. 10



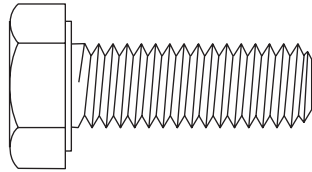
**11-001394-001**  
3/8-24 x 2-1/2  
Pkg. Qty. 10



## HEX HEAD CAP SCREWS

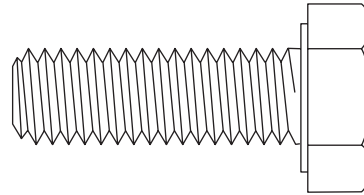
**7/16-14 GRADE 5**

**11-001423-001**  
7/16-14 x 7/8  
Pkg. Qty. 10

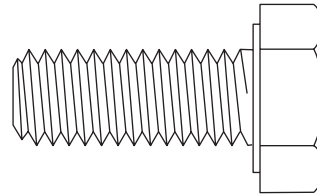


**1/2-13 GRADE 2**

**11-001508-001**  
1/2-13 x 1-1/2  
Pkg. Qty. 10

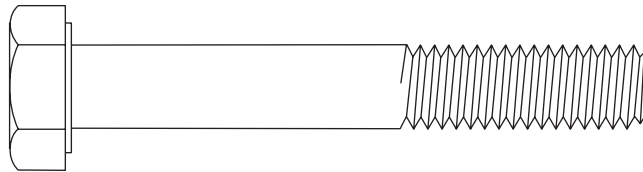


**11-001506-001**  
1/2-13 x 1-1/4  
Pkg. Qty. 10



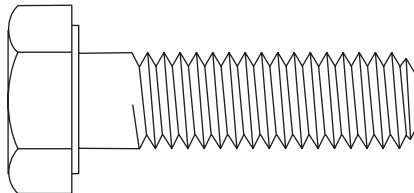
**7/16-14 GRADE 2**

**11-001436-001**  
7/16-14 x 3  
Pkg. Qty. 10



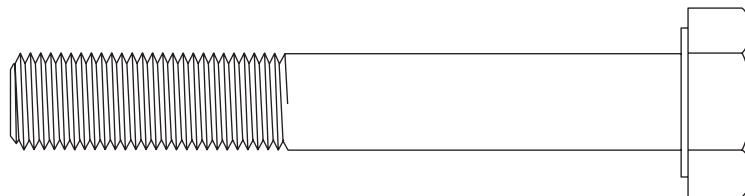
**1/2-13 GRADE 5**

**11-002247-000**  
1/2-13 x 1-3/4  
Pkg. Qty. 10



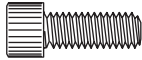
**1/2-20 GRADE 5**

**10-002006-000**  
1/2-20 x 3-1/2  
Pkg. Qty. 10

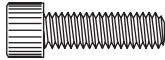


**#10-32**

**11-005118-001**  
#10-32 x 1/2  
Pkg. Qty. 10



**11-005120-001**  
#10-32 x 5/8  
Pkg. Qty. 10

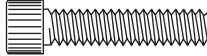


**#10-24**

**11-005092-001**  
#10-24 x 3/4  
Pkg. Qty. 10



**11-005093-001**  
#10-24 x 7/8  
Pkg. Qty. 10

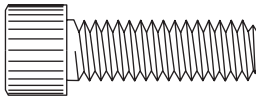


**5/16-18**

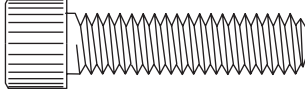
**11-005263-001**  
5/16-18 x 7/8  
Pkg. Qty. 10



**11-005264-001**  
5/16-18 x 1  
Pkg. Qty. 10



**11-005266-001**  
5/16-18 x 1-1/4  
Pkg. Qty. 10

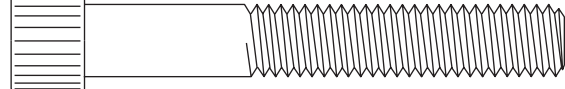


**3/8-16**

**11-005343-001**  
3/8-16 x 7/8  
Pkg. Qty. 10

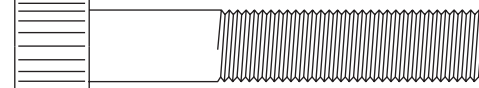


**11-005354-001**  
3/8-16 x 2-1/2  
Pkg. Qty. 10



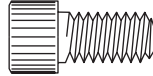
**3/8-24**

**10-009001-001**  
3/8-24 x 2-1/8  
Pkg. Qty. 10



**1/4-20**

**11-005178-001**  
1/4-20 x 1/2  
Pkg. Qty. 10



**11-005180-001**  
1/4-20 x 5/8  
Pkg. Qty. 10



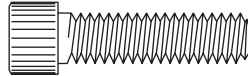
**11-005182-001**  
1/4-20 x 3/4  
Pkg. Qty. 10




**11-005183-001**  
1/4-20 x 7/8  
Pkg. Qty. 10



**11-005184-001**  
1/4-20 x 1  
Pkg. Qty. 10



**11-005194-001**  
1/4-20 x 2-1/2  
Pkg. Qty. 10



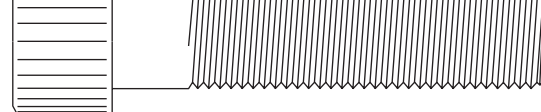
**7/16-20**

**11-005474-001**  
7/16-20 x 2-1/2  
Pkg. Qty. 10



**1/2-20**

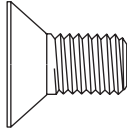
**11-005553-001**  
1/2-20 x 2-1/4  
Pkg. Qty. 10



# FLAT HEAD SOCKET CAP SCREWS

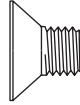
**5/16-24**

**11-007300-001**  
5/16-24 x 5/8  
Pkg. Qty. 10



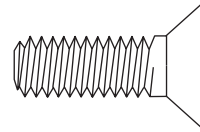
**1/4-28**

**11-007216-001**  
1/4-28 x 3/8  
Pkg. Qty. 10



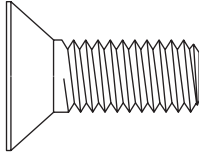
**5/16-18**

**11-007264-001**  
5/16-18 x 1  
Pkg. Qty. 10

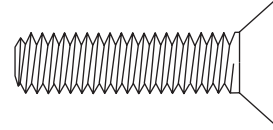


**3/8-16**

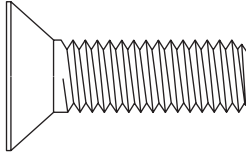
**11-007344-001**  
3/8-16 x 1  
Pkg. Qty. 10



**11-007267-001**  
5/16-18 x 1-3/8  
Pkg. Qty. 10

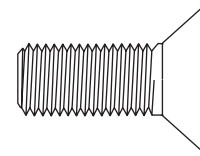


**11-007346-001**  
3/8-16 x 1-1/4  
Pkg. Qty. 10

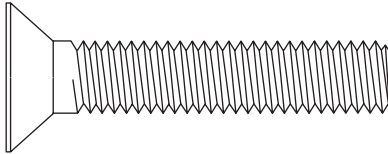


**3/8-24**

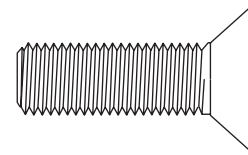
**11-007384-001**  
3/8-24 x 1  
Pkg. Qty. 10



**11-007352-001**  
3/8-16 x 2  
Pkg. Qty. 10

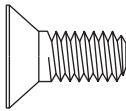


**11-007386-001**  
3/8-24 x 1-1/4  
Pkg. Qty. 10

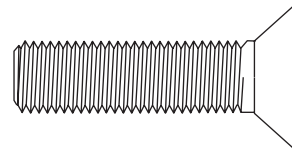


**1/4-20**

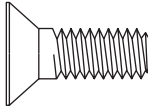
**11-007180-001**  
1/4-20 x 5/8  
Pkg. Qty. 10



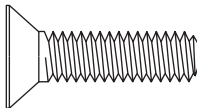
**11-007388-001**  
3/8-24 x 1-1/2  
Pkg. Qty. 10



**11-007182-001**  
1/4-20 x 3/4  
Pkg. Qty. 10



**11-007184-001**  
1/4-20 x 1  
Pkg. Qty. 10

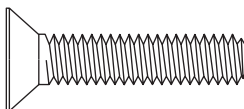


**#10-24**

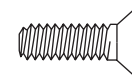
**11-007086-001**  
#10-24 x 3/8  
Pkg. Qty. 10



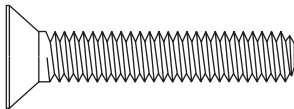
**11-007186-001**  
1/4-20 x 1-1/4  
Pkg. Qty. 10



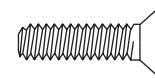
**11-007090-001**  
#10-24 x 5/8  
Pkg. Qty. 10



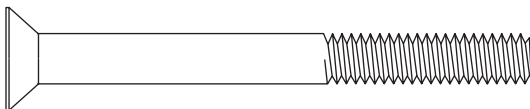
**11-007188-001**  
1/4-20 x 1-1/2  
Pkg. Qty. 10



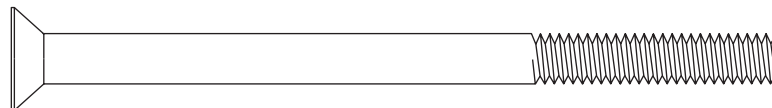
**11-007092-001**  
#10-24 x 3/4  
Pkg. Qty. 10



**11-007195-001**  
1/4-20 x 2-3/4  
Pkg. Qty. 10



**11-007200-001**  
1/4-20 x 4  
Pkg. Qty. 10

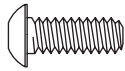


Hardware illustrations are actual size.



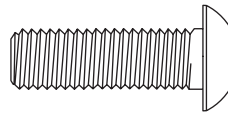
#10-24

**11-006088-001**  
#10-24 x 1/2  
Pkg. Qty. 10



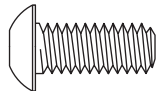
5/16-24

**11-006304-001**  
5/16-24 x 1  
Pkg. Qty. 10



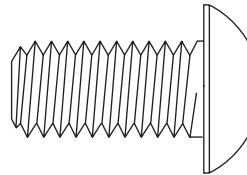
1/4-20

**11-006180-001**  
1/4-20 x 5/8  
Pkg. Qty. 10

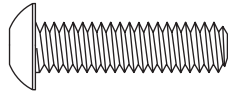


1/2-13

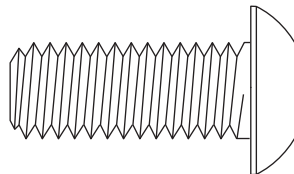
**11-006504-001**  
1/2-13 x 1  
Pkg. Qty. 10








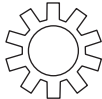

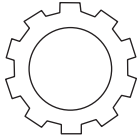

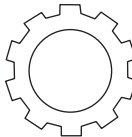

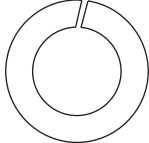



**11-006184-001**  
1/4-20 x 1  
Pkg. Qty. 10



**11-006506-001**  
1/2-13 x 1-1/4  
Pkg. Qty. 1



# LOCKWASHERS

	SPLIT	HI-COLLAR SPLIT	EXTERNAL TOOTH	
<b>11-195006-001</b> #6 Pkg. Qty. 1		<b>11-196006-001</b> #8 Pkg. Qty. 1		<b>11-198002-001</b> #8 Pkg. Qty. 1
<b>11-195008-001</b> #8 Pkg. Qty. 1		<b>11-196008-001</b> #10 Pkg. Qty. 25		<b>11-198003-001</b> #10 Pkg. Qty. 1
<b>11-195010-001</b> #10 Pkg. Qty. 1		<b>11-196012-001</b> 1/4 Pkg. Qty. 25		<b>11-198005-001</b> 1/4 Pkg. Qty. 1
<b>11-195014-001</b> 1/4 Pkg. Qty. 1		<b>11-196020-001</b> 1/2 Pkg. Qty. 10		<b>11-198007-001</b> 3/8 Pkg. Qty. 25
<b>11-195015-001</b> 5/16 Pkg. Qty. 1				<b>11-198009-001</b> 1/2 Pkg. Qty. 25
<b>11-195016-001</b> 3/8 Pkg. Qty. 25				
<b>11-195017-001</b> 7/16 Pkg. Qty. 25				
<b>11-195018-001</b> 1/2 Pkg. Qty. 25				
<b>11-195020-001</b> 5/8 Pkg. Qty. 25				

Hardware illustrations are actual size.

**FLEXLOC NUTS**

<b>COARSE</b>		<b>FINE</b>	<b>COARSE</b>	<b>FINE</b>
<b>11-170104-001</b> #10-24 Pkg. Qty. 10				<b>11-170109-001</b> 5/16-24 Pkg. Qty. 10
<b>11-170106-001</b> 1/4-20 Pkg. Qty. 10			<b>11-170110-001</b> 3/8-16 Pkg. Qty. 10	
<b>11-170108-001</b> 5/16-18 Pkg. Qty. 10				

**MACHINE SCREW NUTS**

<b>COARSE</b>	<b>FINE</b>
	<b>11-125000-001</b> #4-40 Pkg. Qty. 25
	<b>11-125001-001</b> #6-32 Pkg. Qty. 25
	<b>11-125003-001</b> #8-32 Pkg. Qty. 25
<b>11-125004-001</b> #10-24 Pkg. Qty. 25	<b>11-125005-001</b> #10-32 Pkg. Qty. 25
<b>11-125006-001</b> #12-24 Pkg. Qty. 25	
<b>11-125007-001</b> 1/4-20 Pkg. Qty. 25	
<b>11-125009-001</b> 5/16-18 Pkg. Qty. 25	
<b>11-125011-001</b> 3/8-16 Pkg. Qty. 25	

**STANDARD HEX NUTS**

<b>COARSE</b>	<b>FINE</b>
<b>11-125100-001</b> 1/4-20 Pkg. Qty. 25	<b>11-125101-001</b> 1/4-28 Pkg. Qty. 25
<b>11-125102-001</b> 5/16-18 Pkg. Qty. 25	<b>11-125103-001</b> 5/16-24 Pkg. Qty. 25
<b>11-125104-001</b> 3/8-16 Pkg. Qty. 25	
<b>11-125106-001</b> 7/16-14 Pkg. Qty. 25	<b>11-125107-001</b> 7/16-20 Pkg. Qty. 25
<b>11-125108-001</b> 1/2-13 Pkg. Qty. 25	<b>11-125109-001</b> 1/2-20 Pkg. Qty. 25
	<b>11-125115-001</b> 3/4-16 Pkg. Qty. 25

Hardware illustrations are actual size.

# HEX NUTS

## NYLOCK NUTS

### COARSE

**11-170005-001**  
#10-24  
Pkg. Qty. 25

**11-170007-001**  
1/4-20  
Pkg. Qty. 25

**11-170009-001**  
5/16-18  
Pkg. Qty. 1

**11-170011-001**  
3/8-16  
Pkg. Qty. 25

**11-170015-001**  
1/2-13  
Pkg. Qty. 25

### FINE

**11-170002-001**  
#6-32  
Pkg. Qty. 25

**11-170004-001**  
#8-32  
Pkg. Qty. 25

**11-170006-001**  
#10-32  
Pkg. Qty. 25

**11-170008-001**  
1/4-28  
Pkg. Qty. 25

**11-170010-001**  
5/16-24  
Pkg. Qty. 25

**11-170012-001**  
3/8-24  
Pkg. Qty. 25

**11-170014-001**  
7/16-20  
Pkg. Qty. 25

**11-170016-001**  
1/2-20  
Pkg. Qty. 25

## JAM NUTS

### COARSE

**11-125200-001**  
1/4-20 R.H.  
Pkg. Qty. 25

**11-125202-001**  
5/16-18 R.H.  
Pkg. Qty. 20

**11-125204-001**  
3/8-16 R.H.  
Pkg. Qty. 25

**11-125206-001**  
7/16-14 R.H.  
Pkg. Qty. 25

**11-125208-001**  
1/2-13 R.H.  
Pkg. Qty. 25

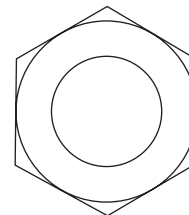
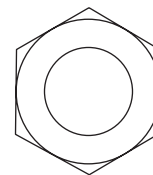
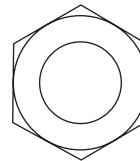
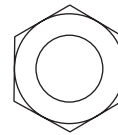
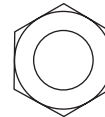
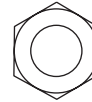
### FINE

**11-125201-001**  
1/4-28 R.H.  
Pkg. Qty. 25

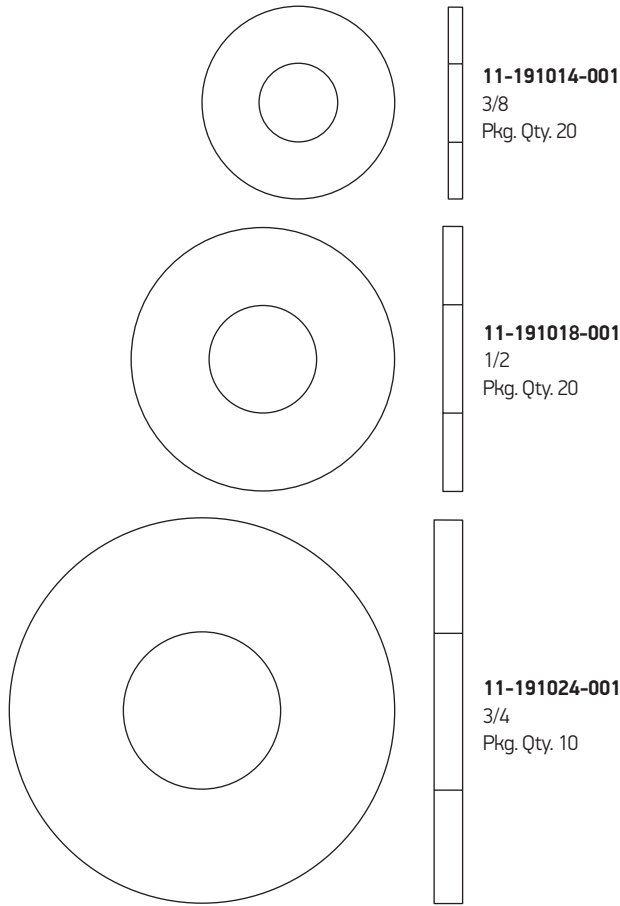
**11-125207-001**  
7/16-20 R.H.  
Pkg. Qty. 25

**11-125209-001**  
1/2-20 R.H.  
Pkg. Qty. 25

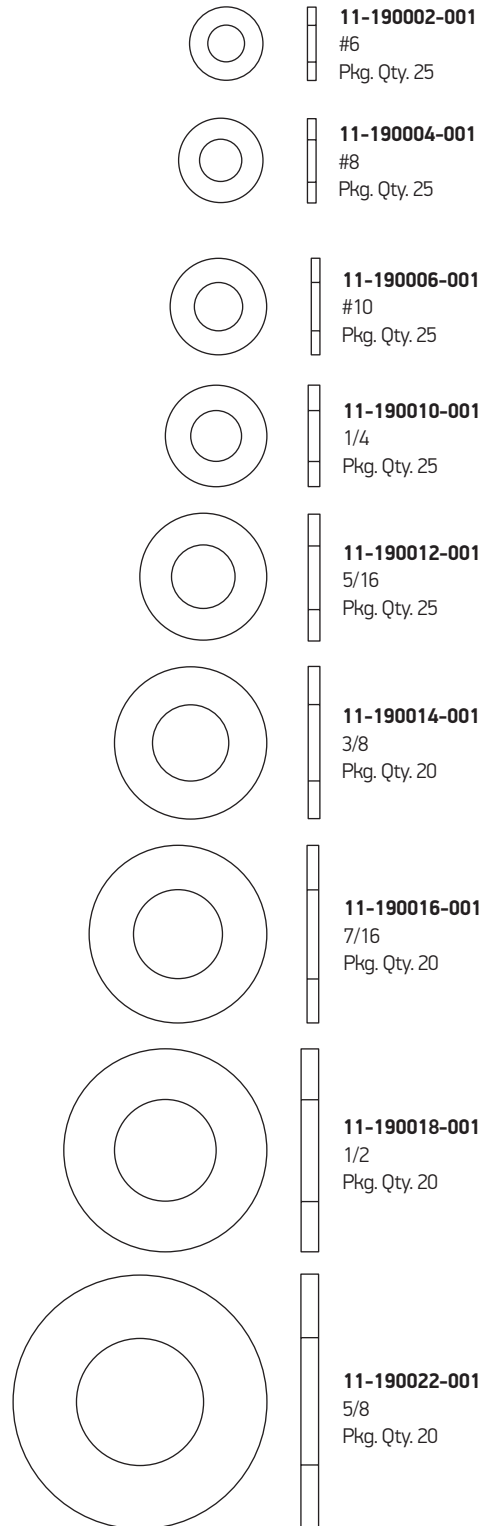
**11-125213-001**  
5/8-18 R.H.  
Pkg. Qty. 25



## USS

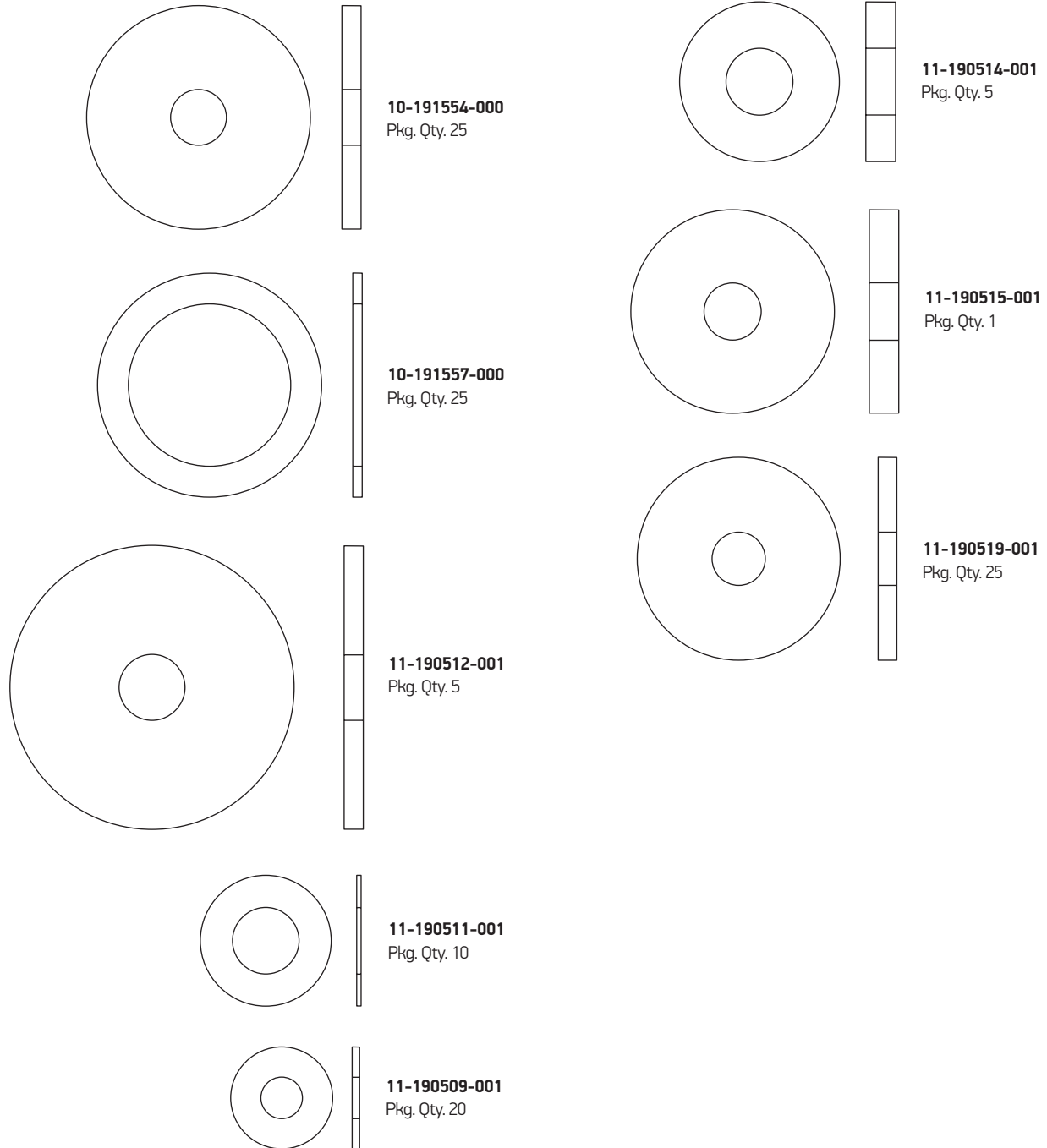


## SAE



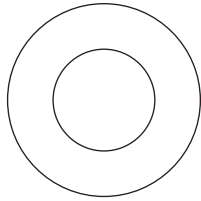
## FLAT WASHERS

### NON-STANDARD

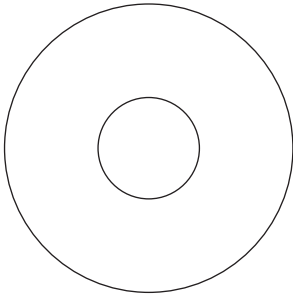


Hardware illustrations are actual size.

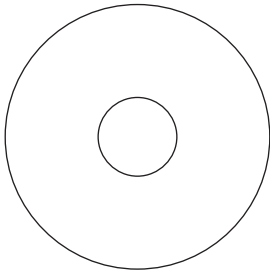
**NON-STANDARD**



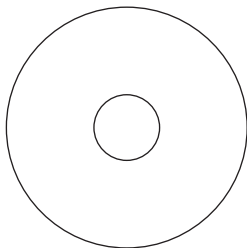
**11-190520-001**  
Pkg. Qty. 20



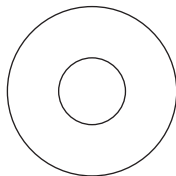
**11-190521-001**  
Pkg. Qty. 25



**11-190522-001**  
Pkg. Qty. 10

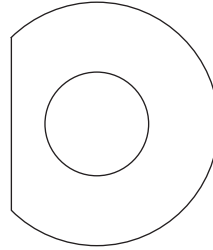


**11-190527-001**  
Pkg. Qty. 10

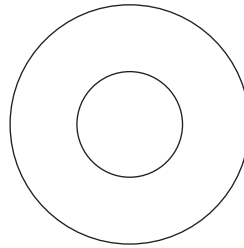


**11-190529-001**  
Pkg. Qty. 5

**SPECIAL**



**12-252360-000**  
D-Washer  
Pkg. Qty. 5



**12-250076-002**  
Fiber Washer  
Pkg. Qty. 10

# RETAINING RINGS

## EXTERNAL



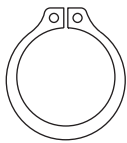
**11-530012-001**  
Pkg. Qty. 20



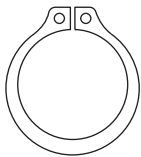
**11-530015-000**  
Pkg. Qty. 20



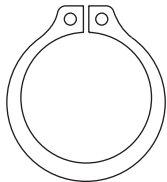
**11-530017-001**  
Pkg. Qty. 20



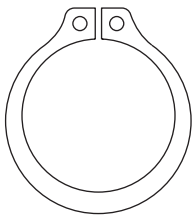
**11-530019-000**  
Pkg. Qty. 20



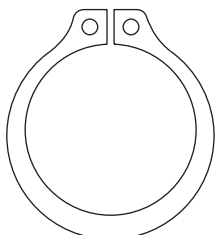
**11-530021-001**  
Pkg. Qty. 20



**11-530025-001**  
Pkg. Qty. 20

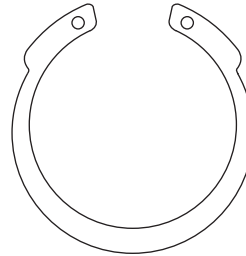


**11-530028-000**  
Pkg. Qty. 20

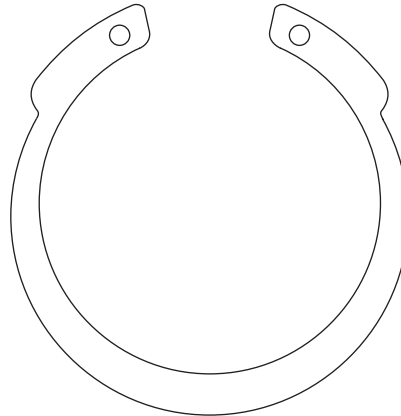


**11-530030-001**  
Pkg. Qty. 20

## INVERTED INTERNAL

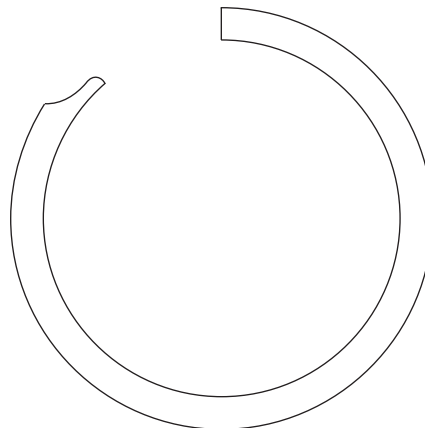


**11-531008-000**  
Pkg. Qty. 20



**11-531020-000**  
Pkg. Qty. 20

## INTERNAL SPIROL


























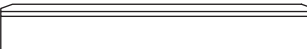
**11-536026-000**  
Pkg. Qty. 20

Hardware illustrations are actual size.



- 11-345154-000**  
 1/8 x 1/2  
 Pkg. Qty. 25
- 11-345160-001**  
 1/8 x 7/8  
 Pkg. Qty. 25
- 11-345161-000**  
 1/8 x 15/16  
 Pkg. Qty. 25
- 11-345258-001**  
 5/32 x 3/4  
 Pkg. Qty. 20
- 11-345264-000**  
 5/32 x 1-1/4  
 Pkg. Qty. 10
- 11-345302-001**  
 3/16 x 3/8  
 Pkg. Qty. 25
- 11-345304-000**  
 3/16 x 1/2  
 Pkg. Qty. 25
- 11-345306-000**  
 3/16 x 5/8  
 Pkg. Qty. 25
- 11-345310-001**  
 3/16 x 3/4  
 Pkg. Qty. 20
- 11-345312-000**  
 3/16 x 1  
 Pkg. Qty. 25
- 11-345316-000**  
 3/16 x 1-1/2  
 Pkg. Qty. 25
- 11-345318-000**  
 3/16 x 1-3/4  
 Pkg. Qty. 25

- 11-345404-000**  
 1/4 x 1/2  
 Pkg. Qty. 1
- 11-345406-000**  
 1/4 x 5/8  
 Pkg. Qty. 25
- 11-345408-001**  
 1/4 x 3/4  
 Pkg. Qty. 10
- 11-345412-000**  
 1/4 x 1  
 Pkg. Qty. 25
- 11-345414-000**  
 1/4 x 1-1/4  
 Pkg. Qty. 25
- 11-345418-001**  
 1/4 x 1-3/4  
 Pkg. Qty. 25
- 11-345420-001**  
 1/4 x 2  
 Pkg. Qty. 25
- 11-345516-000**  
 3/8 x 1-1/2  
 Pkg. Qty. 20
- 11-345520-001**  
 3/8 x 2  
 Pkg. Qty. 20
- 11-345573-000**  
 1/2 x 2-3/4  
 Pkg. Qty. 10

<b>11-360258-001</b> 3/32 x 5/8 Pkg. Qty. 20		
<b>11-360260-000</b> 3/32 x 3/4 Pkg. Qty. 20		
<b>11-360264-000</b> 3/32 x 1 Pkg. Qty. 20		
<b>11-360364-000</b> 1/8 x 1 Pkg. Qty. 20		
<b>11-360365-001</b> 1/8 x 1-1/8 Pkg. Qty. 20		
<b>11-360415-001</b> 5/32 x 1-1/8 Pkg. Qty. 20		
<b>11-360460-000</b> 3/16 x 3/4 Pkg. Qty. 20		
<b>11-360465-000</b> 3/16 x 1-1/8 Pkg. Qty. 20		
<b>11-360466-000</b> 3/16 x 1-1/4 Pkg. Qty. 20		
<b>11-361315-000</b> 3/16 x 1-3/8 Pkg. Qty. 20		
<b>11-360568-000</b> 1/4 x 1-1/2 Pkg. Qty. 10		
<b>11-360619-000</b> 5/16 x 1-5/8 Pkg. Qty. 25		

**SQUARE KEYS**

- 12-100187-009**  
Pkg. Qty. 5

Moving deck-scissor control cable pulley/shaft assembly, Jetback ball booster shaft
- 12-400138-007**  
Pkg. Qty. 5

Pin wheel jack shaft - single small sheave, Turret drive bevel gear shaft/belt sheave
- 12-400138-002**  
Pkg. Qty. 5

Elevator jack shafts - 12" sheaves
- 12-400138-006**  
Pkg. Qty. 5

Pin wheel jack shaft - magnetic clutch keyway
- 12-400138-004**  
Pkg. Qty. 5

Elevator jack shafts - small sheaves
- 12-100187-011**  
Pkg. Qty. 5

Detector main shaft. Pinsetter motor shaft (shorten as required)
- 12-400138-003**  
Pkg. Qty. 5

Ball wheel jack shaft - ball wheel pulley keyway
- 12-100187-007**  
Pkg. Qty. 5

1 to 1 shaft - spur gear
- 12-100187-008**  
Pkg. Qty. 5

1 to 1 shaft - moving deck, scissor and rake cams
- 12-100187-002**  
Pkg. Qty. 5

4 to 1 shaft - bronze gear

**RECTANGULAR KEYS**

- 12-100164-000**  
Pkg. Qty. 5

1 to 1 shaft - extended cycle cams
- 12-400138-008**  
Pkg. Qty. 5

Pin wheel jack shaft - nylon bevel gear drive

## X-WASHER PINS


**12-100318-002**  
Pkg. Qty. 5



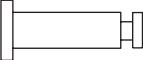
**12-100318-003**  
Pkg. Qty. 1



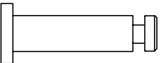
**12-100166-002**  
Pkg. Qty. 5




**12-100166-004**  
Pkg. Qty. 5




**12-100166-005**  
Pkg. Qty. 5



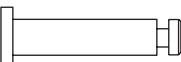
**12-150158-013**  
Pkg. Qty. 5



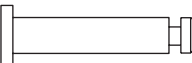
**12-100166-006**  
Pkg. Qty. 5



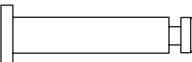
**12-100166-024**  
Pkg. Qty. 5




**12-100166-022**  
Pkg. Qty. 5



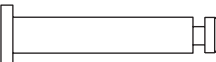
**12-100166-008**  
Pkg. Qty. 5




**12-100166-026**  
Pkg. Qty. 5




**12-100166-025**  
Pkg. Qty. 5



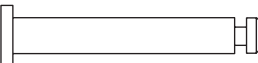
**12-150158-007**  
Pkg. Qty. 5



**12-150158-006**  
Pkg. Qty. 5



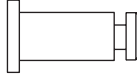
**12-150158-012**  
Pkg. Qty. 5



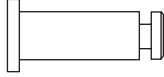
**12-100166-019**  
Pkg. Qty. 5




**12-100166-009**  
Pkg. Qty. 5




**12-100166-011**  
Pkg. Qty. 5



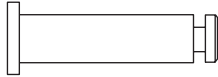
**12-250010-011**  
Pkg. Qty. 5



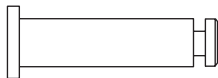
**12-100166-027**  
Pkg. Qty. 5



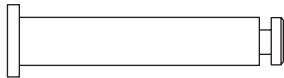
**12-100166-007**  
Pkg. Qty. 5




**12-100166-013**  
Pkg. Qty. 5




**12-100166-014**  
Pkg. Qty. 5



**12-100166-015**  
Pkg. Qty. 5



**12-150158-015**  
Pkg. Qty. 5



**12-100166-016**  
Pkg. Qty. 5



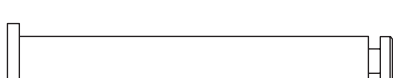
**12-100166-017**  
Pkg. Qty. 5



**12-100166-032**  
Pkg. Qty. 5



**12-150158-017**  
Pkg. Qty. 5



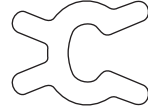
**11-230000-001**  
Pkg. Qty. 25



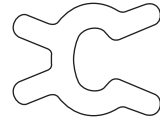
**11-230001-001**  
Pkg. Qty. 25



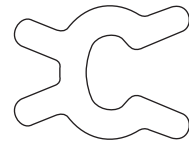
**11-230002-001**  
Pkg. Qty. 25



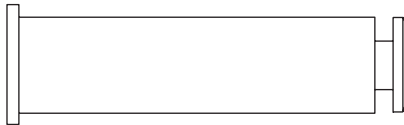
**11-230003-001**  
Pkg. Qty. 25



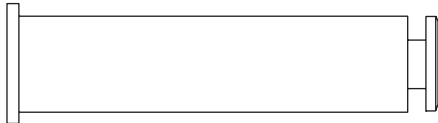
**11-230005-001**  
Pkg. Qty. 25



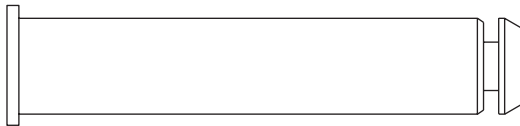
**10-229601-000**  
Pkg. Qty. 1



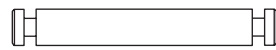
**12-250010-007**  
Pkg. Qty. 2



**10-229602-000**  
Pkg. Qty. 1



**12-150023-007**  
Pkg. Qty. 2



**12-150023-008**  
Pkg. Qty. 2



**12-450006-002**  
Pkg. Qty. 1



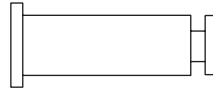
**12-150023-002**  
Pkg. Qty. 2



**12-100166-021**  
Pkg. Qty. 2



**12-200081-002**  
Pkg. Qty. 2



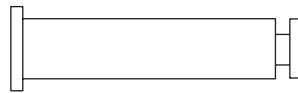
**12-100166-029**  
Pkg. Qty. 2



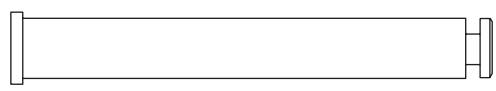
**12-100166-031**  
Pkg. Qty. 2



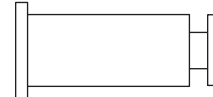
**12-150158-009**  
Pkg. Qty. 2



**12-150158-004**  
Pkg. Qty. 2



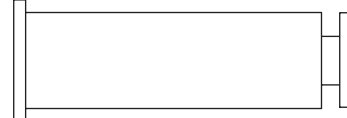
**12-150158-014**  
Pkg. Qty. 2



**12-150158-016**  
Pkg. Qty. 2



**12-350023-002**  
Pkg. Qty. 2

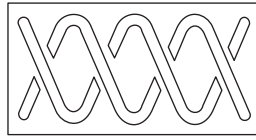
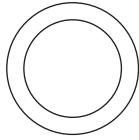


## SLEEVE OILITE BEARINGS

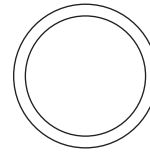
<p><b>11-420000-000</b> Pkg. Qty. 5 Rear Long Link</p>			<p><b>11-420009-000</b> Pkg. Qty. 5 Spring Guide Tube</p>		
<p><b>12-150190-000</b> Pkg. Qty. 5 "C" Link to Indexing Bell Crank</p>			<p><b>11-420066-000</b> Pkg. Qty. 1 Rake Sweep Shaft Left Hand</p>		
<p><b>11-420046-000</b> Pkg. Qty. 1 Interlock Probe</p>			<p><b>11-420015-000</b> Pkg. Qty. 1 Gear Box Clutch Support "A" Triggering Kit</p>		
<p><b>11-420043-000</b> Pkg. Qty. 1 Long Link Bell Crank</p>			<p><b>11-420011-000</b> Pkg. Qty. 5 Gear Box Clutch Lever Support</p>		
<p><b>11-423000-000</b> Pkg. Qty. 5 OOR Controller - Bottom</p>			<p><b>11-420095-000</b> Pkg. Qty. 5 Rake Support Arm</p>		
<p><b>11-420070-000</b> Pkg. Qty. 1 Scissors Distribution Rod Lever</p>			<p><b>11-420097-000</b> Pkg. Qty. 10 Scissors Connecting Rod Ends</p>		
<p><b>11-420097-000</b> Pkg. Qty. 10 Scissors Connecting Rod Ends</p>			<p><b>12-250075-100</b> Pkg. Qty. 2 Rake Lift Shaft / Shock Mount / Pit Cushion Arm "A" Style</p>		
<p><b>12-250091-000</b> Pkg. Qty. 5 Standing Pins Selector Pivot</p>			<p><b>11-420096-000</b> Pkg. Qty. 1 Rake Trip Shaft Shotgun</p>		
<p><b>11-420008-000</b> Pkg. Qty. 5 Pit Cushion Lift Rod and Ball Stop Hook</p>			<p><b>11-420035-000</b> Pkg. Qty. 1 Rake Trip Shaft Shotgun Rake Crank Rod</p>		

Hardware illustrations are actual size.

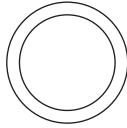
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Pkg. Qty. 2  
Pit Cushion  
Lift Rod Ends



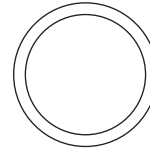
**11-420094-000**  
Pkg. Qty. 1  
Pit Cushion



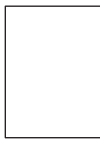
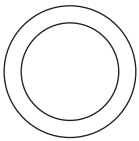
**11-420102-000**  
Pkg. Qty. 1  
Rake Lift Rod



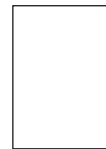
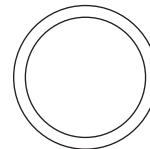
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Pkg. Qty. 5  
Clutch Cam Follower  
Spring Guide Tube



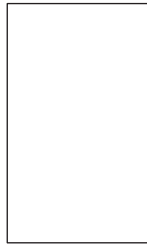
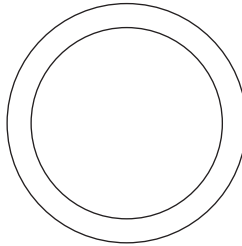
**11-420063-000**  
Pkg. Qty. 5  
Rake Lift Rod



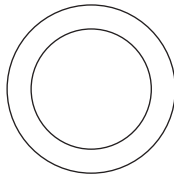
**11-420018-000**  
Pkg. Qty. 5  
Moving Deck  
Scissors Latch "Flag"



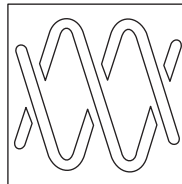
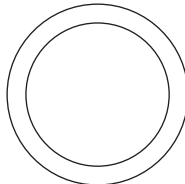
**11-420045-000**  
Pkg. Qty. 5  
Elevator  
Jack Shaft



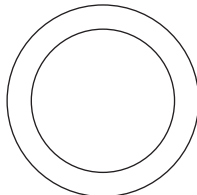
**11-420054-000**  
Pkg. Qty. 1  
Pit Conveyor  
Pulley Arm



**10-424001-000**  
Pkg. Qty. 1  
Ball Cushion  
Mount



**11-420098-000**  
Pkg. Qty. 1  
Rake Trip Shaft  
Shotgun

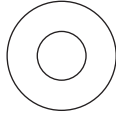


## FLANGED OILITE BEARINGS

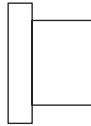
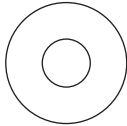
**11-421061-000**  
Pkg. Qty. 5  
Long Link



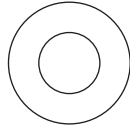
**11-421045-000**  
Pkg. Qty. 10  
Pin Release  
Lever



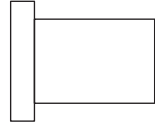
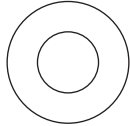
**11-421102-000**  
Pkg. Qty. 5  
Rake Trip Arm



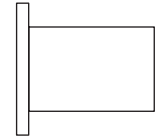
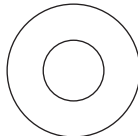
**12-200105-000**  
Pkg. Qty. 5  
Scissors



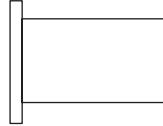
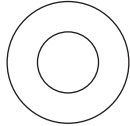
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Pkg. Qty. 5  
Pin Release  
Lever



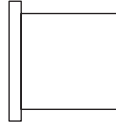
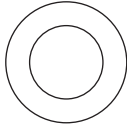
**11-421053-000**  
Pkg. Qty. 5  
Cross Conveyor  
Pin Gate



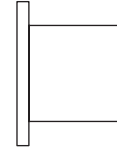
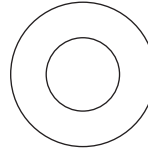
**11-421026-000**  
Pkg. Qty. 5  
Turret Interlock  
Probe



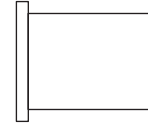
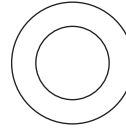
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Pkg. Qty. 5  
Rake Lift Shaft



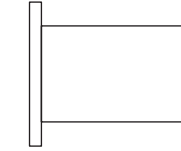
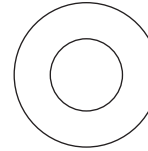
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Pkg. Qty. 1  
Indexing Bell  
Crank Lever



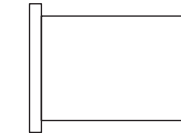
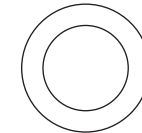
**11-421008-000**  
Pkg. Qty. 1  
Spider Release  
Lever



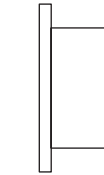
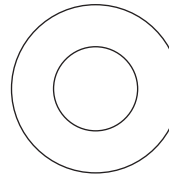
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Pkg. Qty. 5  
Turret Frame



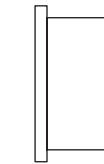
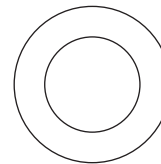
**11-421065-000**  
Pkg. Qty. 5  
Torsion Latch



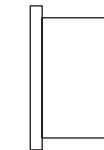
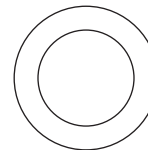
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Pkg. Qty. 5  
Time Delay Gear



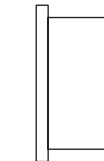
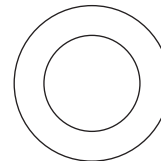
**11-421015-000**  
Pkg. Qty. 5  
Detector, Detector  
Mounting Plate,  
Gear Box



**11-421110-000**  
Pkg. Qty. 5  
Motor-Elevator  
Belt Tensioner  
all Preference System



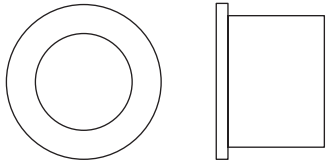
**11-421017-000**  
Pkg. Qty. 5  
Rake Sweep Shaft



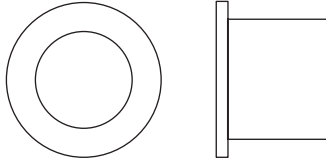
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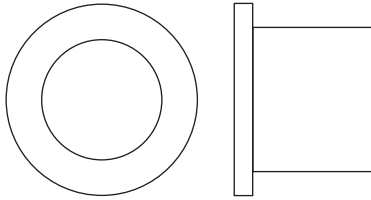
**11-421027-000**  
Pkg. Qty. 1  
Rake Crank Rod



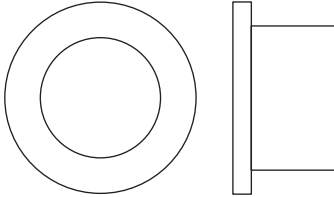
**11-421093-000**  
Pkg. Qty. 5  
2 Piece Clutch  
Reset Lever



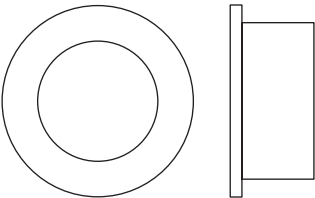
**11-421019-000**  
Pkg. Qty. 1  
Deck Jam Kit,  
Rake Lift  
Cam Follower,  
Elevator Idler Arm



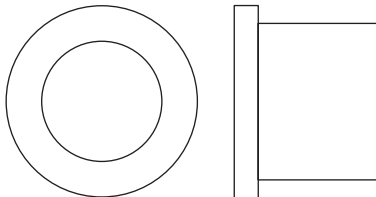
**11-421103-000**  
Pkg. Qty. 5  
Rake Lift Shaft



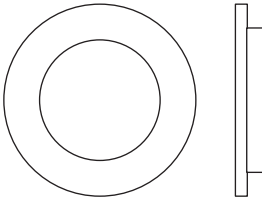
**11-421111-000**  
Pkg. Qty. 5  
Ball Stop



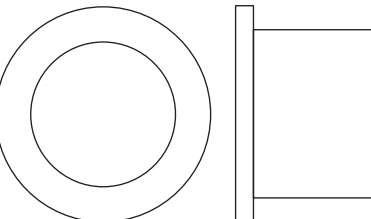
**11-421058-000**  
Pkg. Qty. 5  
Pit Conveyor  
Pulley Arm



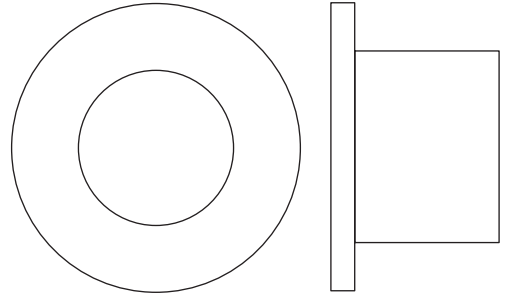
**12-200104-000**  
Pkg. Qty. 5  
Scissor Arm



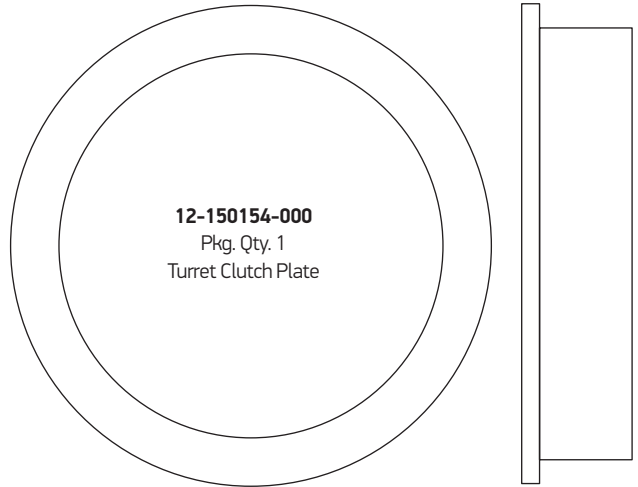
**10-421901-000**  
Pkg. Qty. 2  
"Y" Switch



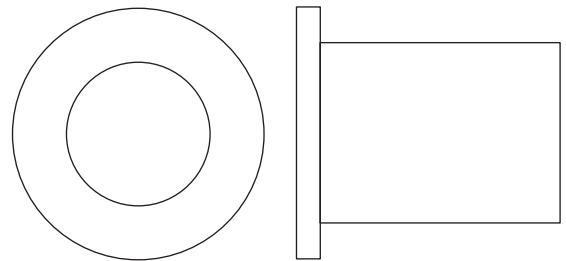
**11-421109-000**  
Pkg. Qty. 2  
Moving Deck  
Cam Follower  
Scissors Cam Follower



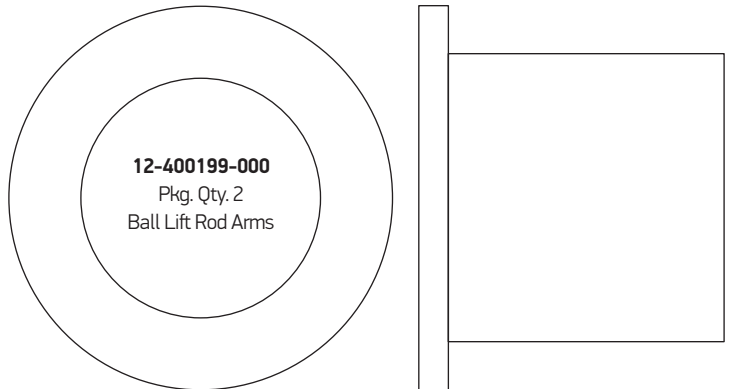
**12-150154-000**  
Pkg. Qty. 1  
Turret Clutch Plate

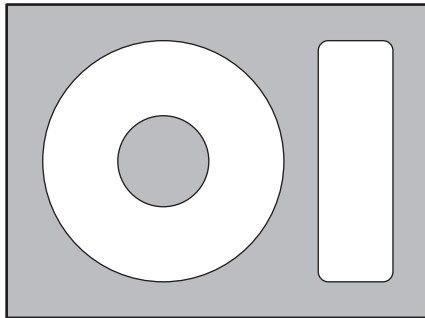


**11-421041-000**  
Pkg. Qty. 2  
Ball Lift  
Rod Arms

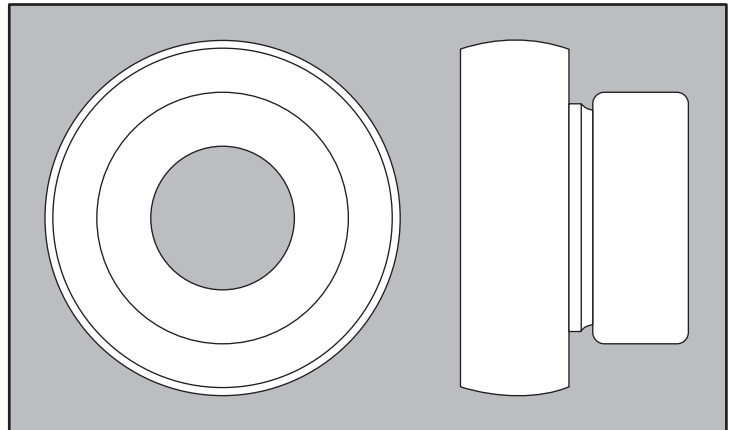


**12-400199-000**  
Pkg. Qty. 2  
Ball Lift Rod Arms

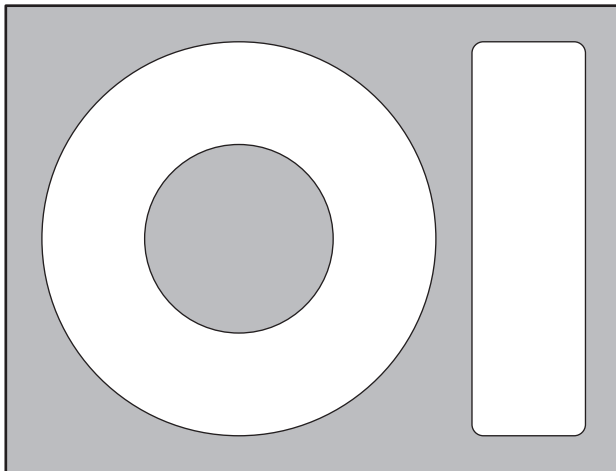




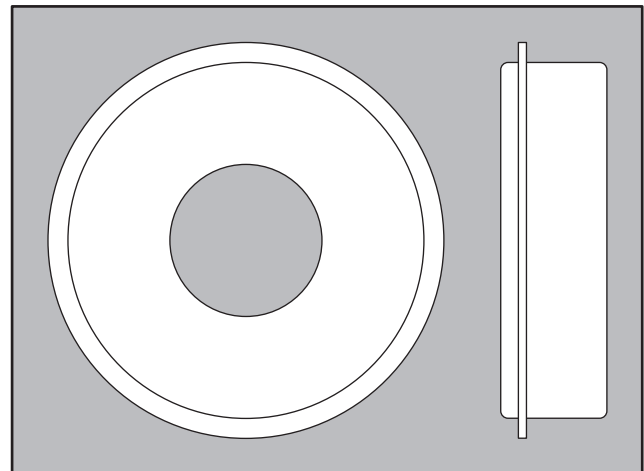
**11-430004-000**  
Ball Wheel Guide Roller



**11-413001-000**  
Ball Booster Shaft



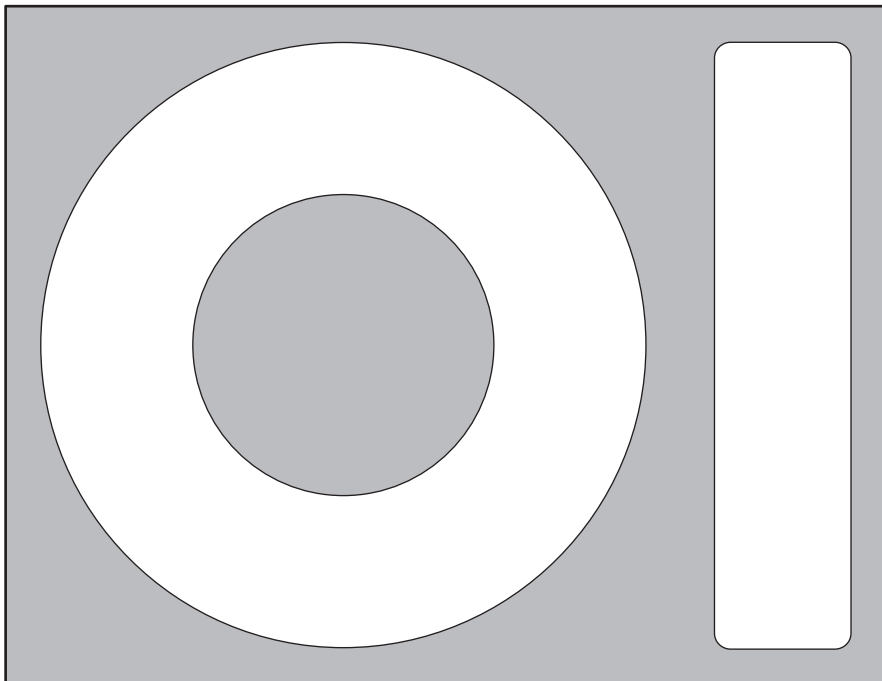
**11-430008-000**  
Deck Lowering Link Connector  
Pin Wheel Guide Roller



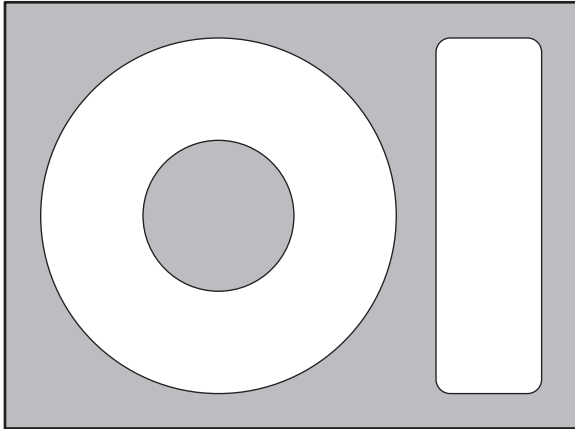
**10-430001-000**  
Pin Wheel Jack Shaft



**11-430003-000**  
2:1 Shaft



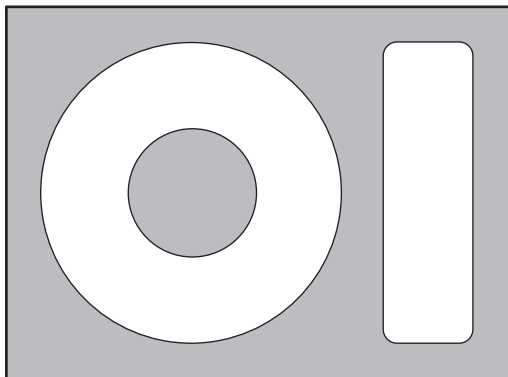
**11-430002-000**  
4:1 Shaft



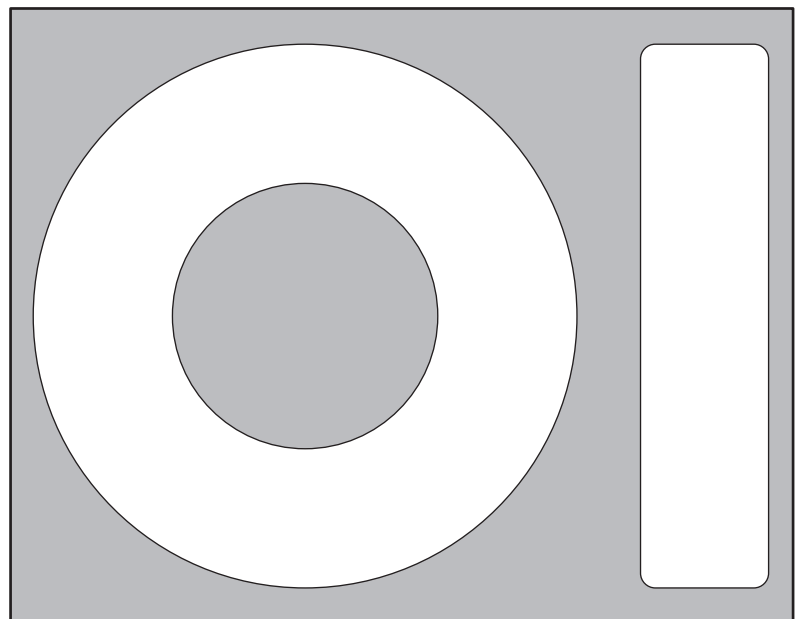
**11-430015-000**  
Pinsetter Motor - Front



**11-430013-000**  
Ball Wheel Roller  
Pin Wheel Roller  
Ball Accelerator Pulleys

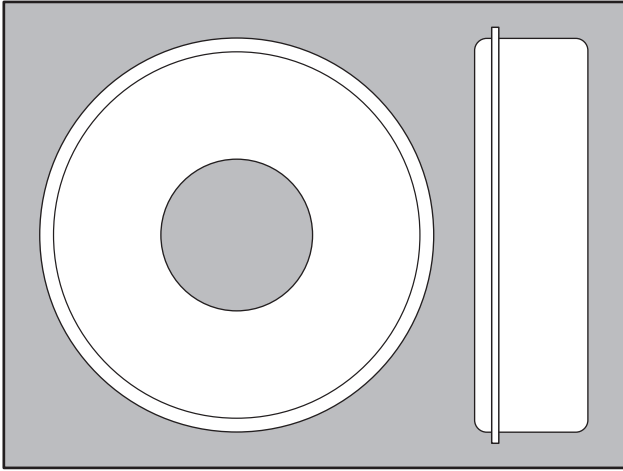


**11-430028-000**  
Elevator Drive Belt Tensioner

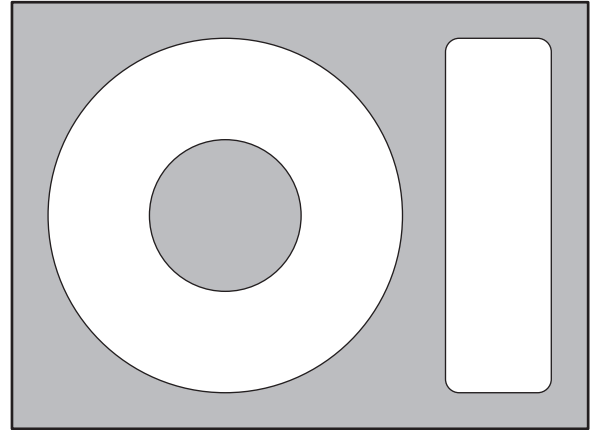


**11-430011-000**  
1:1 Shaft

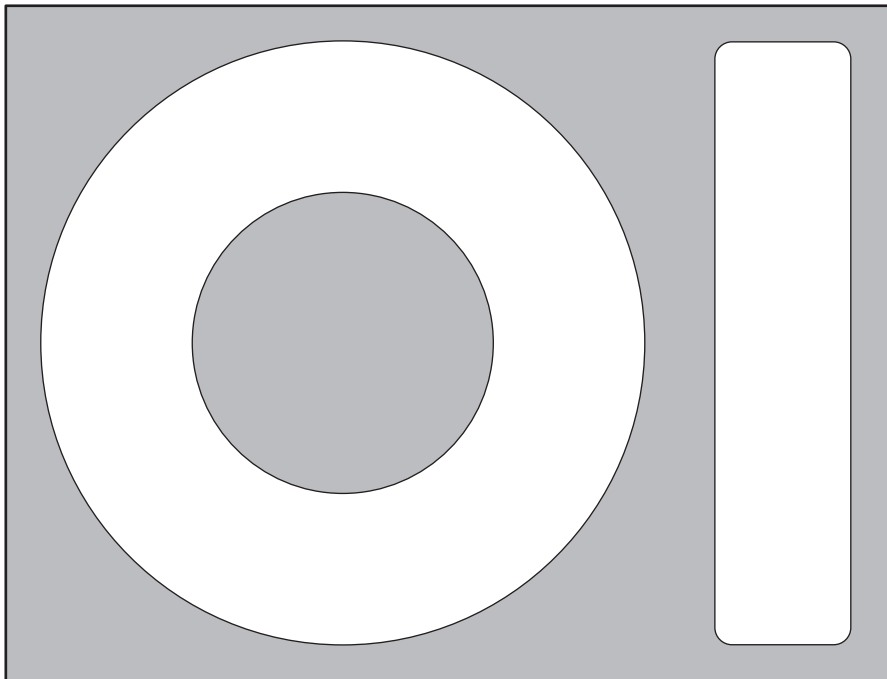
*Hardware illustrations are actual size.*



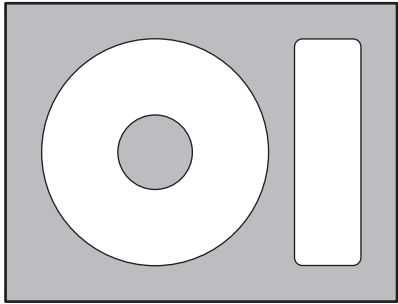
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Jogger Arm



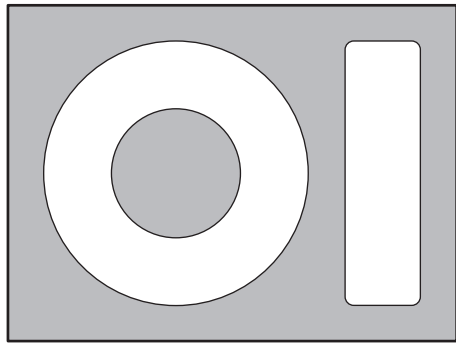
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Cross Conveyor Drive Shaft



**11-430017-000**  
2:1 Shaft



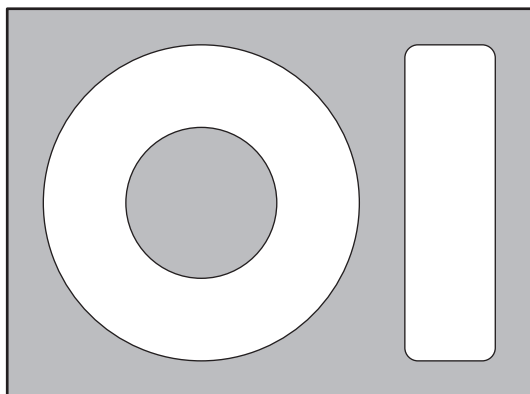
**11-430037-000**  
Ball Stop Hook



**11-431002-000**  
Detector 1:1 Shaft



**11-431000-000**  
Deck Support Arm Deck Lift Shaft

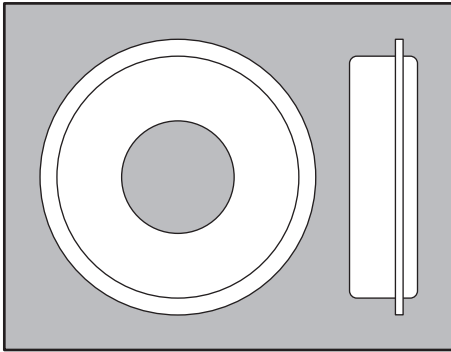


**11-431006-000**  
Turret Clutch

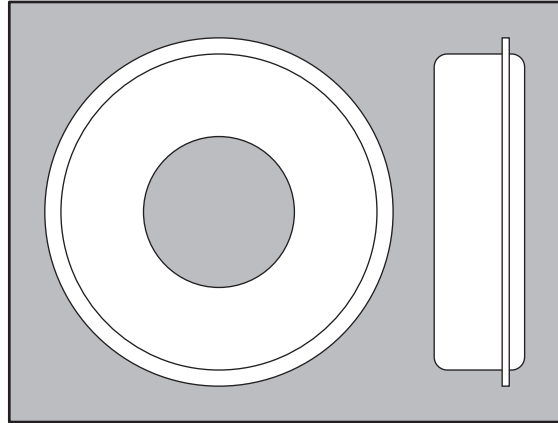


**11-430045-000**  
Magnetic Clutch - 4:1 Shaft

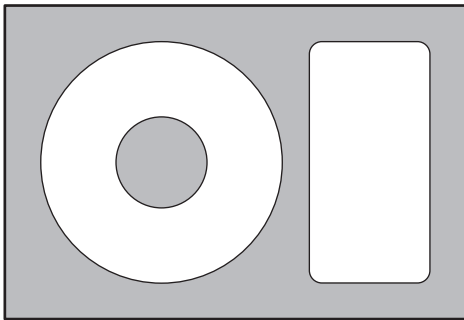
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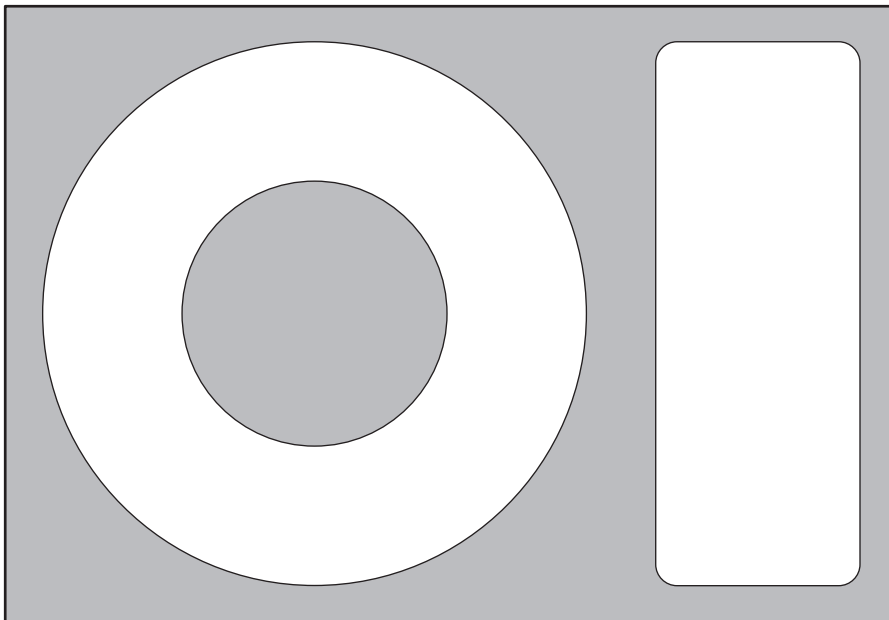
**11-431003-000**  
Detector 1:1 Shaft



**11-431010-000**  
Turret Clutch

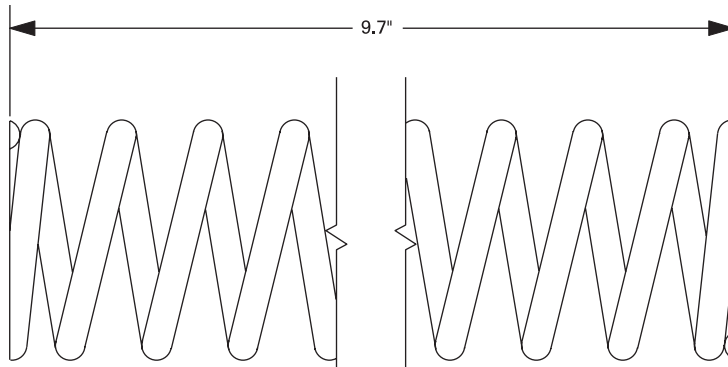


**11-432000-000**  
Pin Wheel Guide Roller

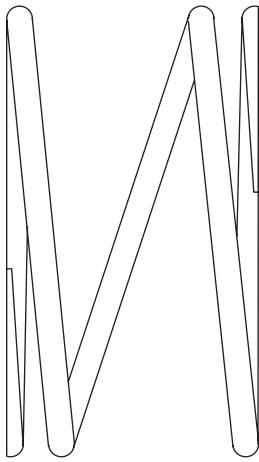


**11-432001-000**  
4:1 Shaft

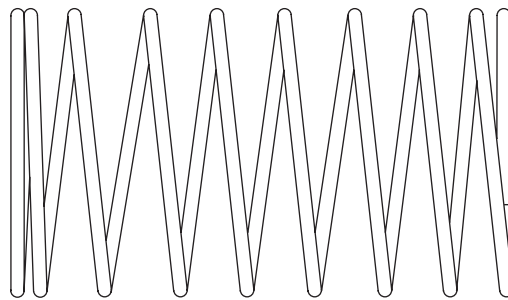
## COMPRESSION SPRINGS



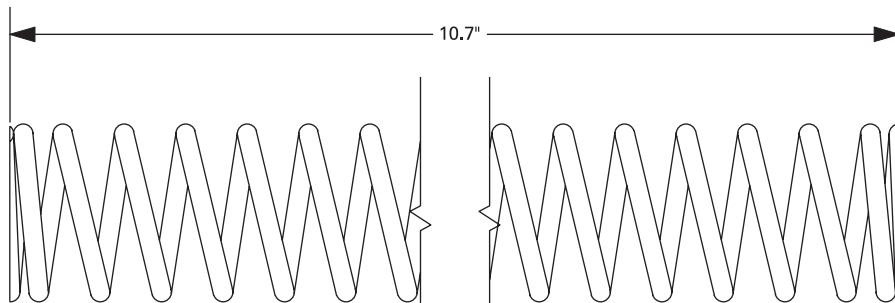
**12-100482-000**  
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**12-150222-000**  
Clutch and Pulley Assembly



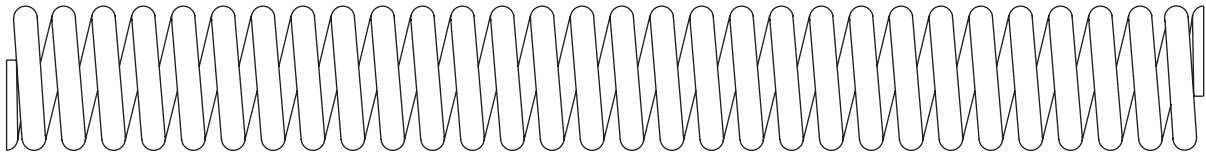
**12-150087-000**  
Trip Lever and Spring Assembly



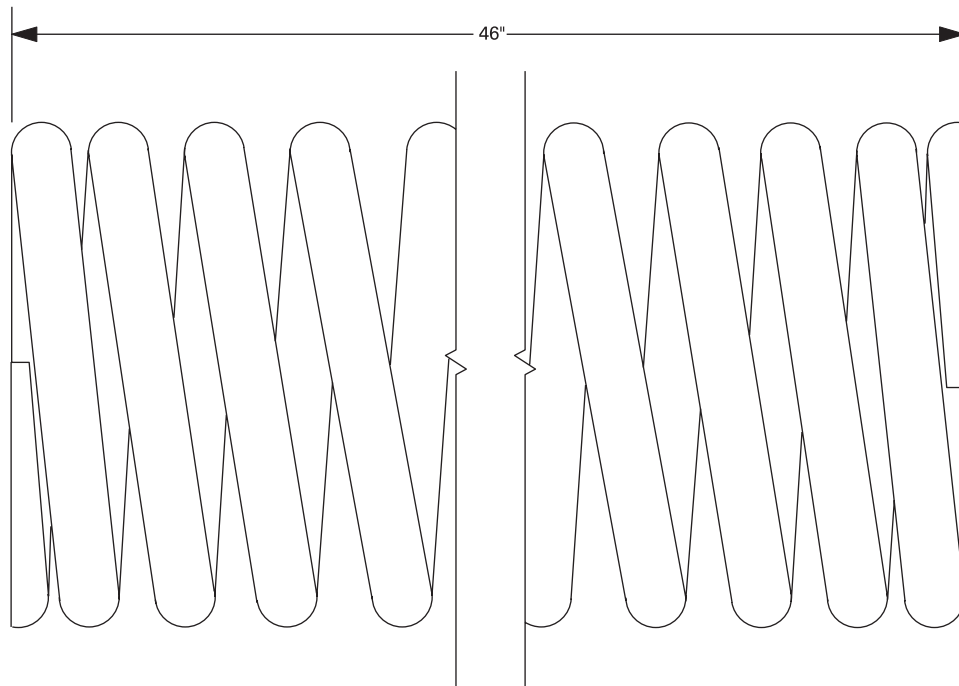
**12-100481-000**  
Cable and Tube Assembly

Hardware illustrations are actual size.

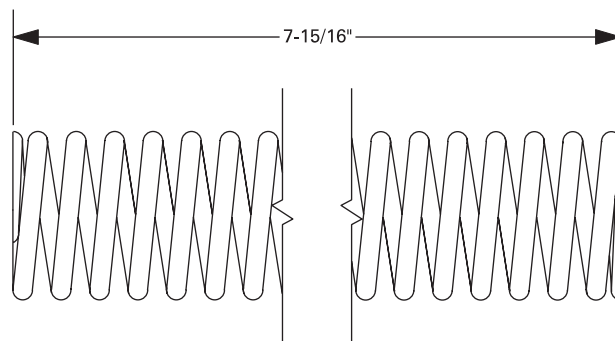




**12-300172-000**  
Pit Conveyor Assembly

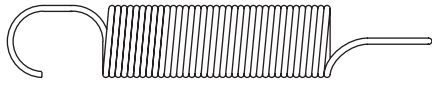


**12-350126-000**  
Frame Assembly

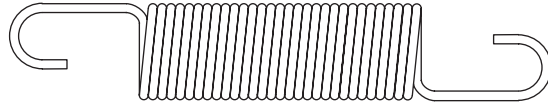


**12-400122-000**  
Ball Lift Rod Assembly

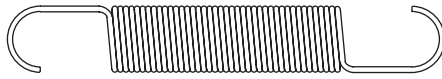
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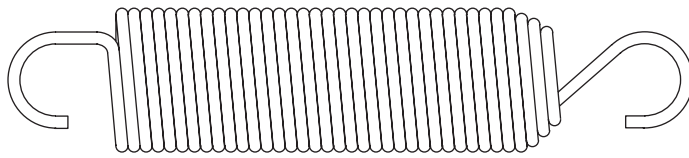
**12-100296-000**  
Gear Box Assembly



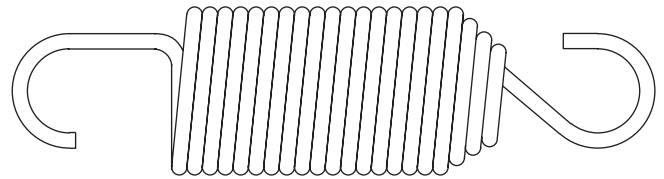
**12-100105-000**  
Gear Box Assembly



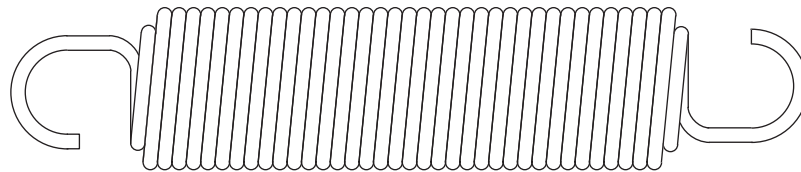
**12-102105-000**  
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Complete Triggering Kit



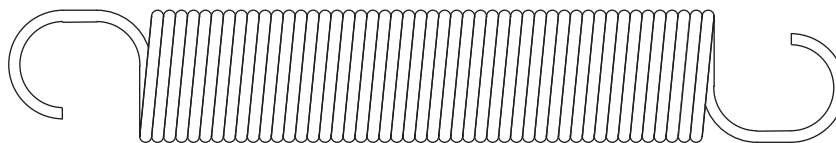
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**12-100158-000**  
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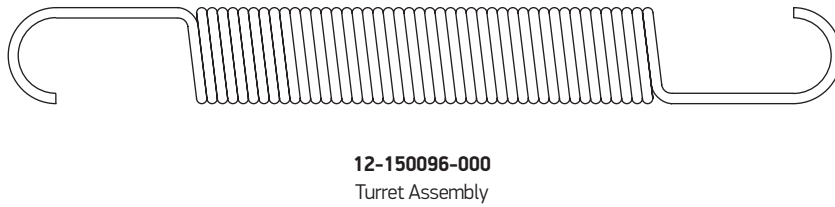
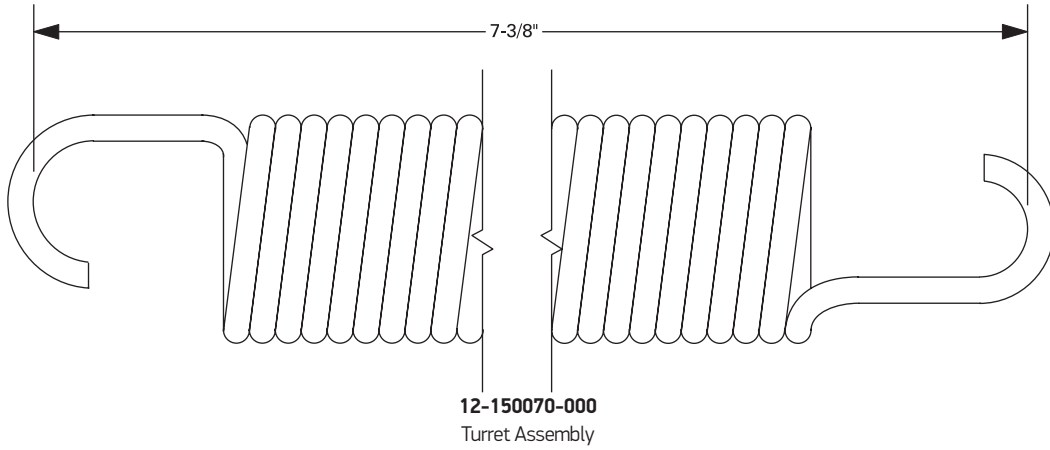


**12-502114-000**  
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**12-502167-000**  
Model A•2 Pinsetter Center Ball Return System

Hardware illustrations are actual size.



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# SAFETY | PROCEDURES

## SAFETY TIPS AND GENERAL SAFETY REGULATIONS

Following basic safety procedures can help avoid injury. As with all machinery, there is an element of risk working on the pinsetter if the rules of safety are disregarded. Common sense, a knowledge of pinsetters and a knowledge of basic safety procedures will prevent injury to personnel working on the machines.



Wear the proper clothing when working on the pinsetter. Don't wear neckties or loose clothing that may get caught in the machine. Wear pants without cuffs to prevent tripping. Wear shoes with safety, non-slip soles.



Use the right tool for each job to prevent injury to yourself and to the machine. Remove all tools from the pinsetter before turning it on.



Avoid the use of cleaners that are toxic.



To prevent slipping, immediately wipe up any oil or liquids that have spilled.



Store oily rags and any other combustibles in a fireproof container.



When the safety guards are removed from the pinsetter, be extra cautious while the pinsetter is turned on. Replace the guards immediately when the work is complete.

## PINSETTER SAFETY REGULATIONS

- The head mechanic must teach all personnel who will work on the pinsetter enough about the machine to prevent accidents through ignorance.
- Always open the pinsetter circuit breaker or disconnect the pinsetter power plug from the electrical box before working on the machine.
- When the pinsetter shuts itself off electrically, be sure to open the circuit breaker and disconnect the pinsetter power plug from the electrical box before looking for, and clearing, the cause of the jam.
- Always reach over or around the machine assemblies, never through or between the shafts, arms and levers.
- Use the appropriate rods to securely lock the rake compression spring guide tube before maintaining the rake or deck.
- The desk person must never turn on a machine from the manager's control desk without first making sure that no one is working on the machine.
- Position the rake in its down position when working on the front of the machine to prevent being hit by a bowling ball.
- When more than one person is working on the machines, never turn on a machine without checking to see if everyone is clear of the machine.
- Under no circumstances allow an unqualified person to work on the pinsetter.

Partial schematics are listed in each section.

For full pinsetter and bowling schematics, visit our website at [www.brunswickbowling.com/service-support/tech-support](http://www.brunswickbowling.com/service-support/tech-support)





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