

# VANTAGE

REPLACEMENT

PARTS

FOR

“GS”

“A-2”

“JETBACK”

“A”

THAT

MAKE

YOUR

JOB

EASIER.

**2006 / 2007**

**NEW FOR 2006/2007**  
**GS PARTS**  
19-PAGE HARDWARE  
SECTION

# We Listen. You Profit.



*Great designs provide performance and durability to keep your pinsetters running and your bowlers bowling.*

## **GREAT PARTS START WITH GREAT DESIGN...**

Vantage engineers take pride in supplying products that are not just copies, but offer improvements in design, installation, and function. Many original equipment designs are re-engineered to incorporate improved metals, elastomers, and technologies.

## **QUALITY MANUFACTURING...**

Vantage's expanded line of Brunswick pinsetter parts last longer and cost less. Since we manufacture what we sell and not just purchase them from other sources, our ability to control quality is exceptional. In all cases our products meet or exceed the expectations of the O.E.M. When it comes to quality - **perfect is good enough!**



*Quality manufacturing, **right here in the USA**, allows us to directly monitor the quality of our parts to keep your center running.*



*Inventory management allows us to have the right part on hand when the mechanic needs it.*

## INVENTORY SYSTEM...

Vantage's Inventory Management System is one of the most sophisticated in the industry. This combined with forecasting it allows Vantage to react faster to industry trends. Making it easier for the mechanic to get the right part at the right time.

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**VANTAGE**  
 GENUINE. PARTS.

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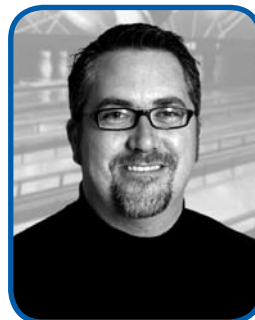
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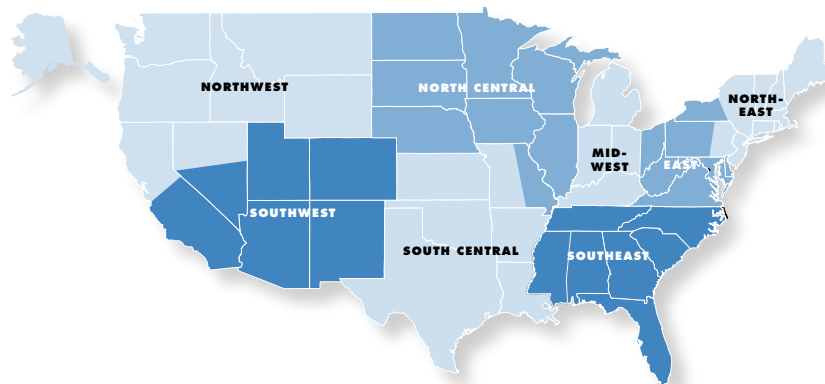
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## Vantage Policies and Procedures

### Warranty Returns:

Vantage Bowling Corporation offers a 1-year Factory Direct Warranty Exchange on any defective product except where noted in this catalog. Our Factory Direct Warranty Exchange procedure is as follows:

1. Call Vantage's toll-free number 1-800-255-7401 ask for Customer Service.
2. Customer Service will assign an RGA (Return Goods Authorization) Number.
3. Customer Service will determine if a replacement part will be shipped prior to receiving the defective part.
4. If replacement parts are shipped prior to receiving the defective parts the customer will be invoiced for the replacement parts.
5. Customer Service will issue a call tag for the defective part.
6. Vantage will issue a Credit (against item four above) once the defective product has been returned, received, and inspected in accordance with the Warranty Policy on page 68.

### Returns Goods Policy:

All returns for credit must have prior authorization. The products must be listed in the current catalog, and be in saleable condition. Return Goods Policy is as follows:

1. You must first contact Vantage for an RGA (Returns Goods Authorization) number, and prepay all shipping costs.
2. Acceptance of the return is subject to the amount of Abuse and Misuse of the product, and these returns are separate to products returned under warranty.
3. There will be a minimum 15% restocking charge on all returns, and additional charges if the products require rework as a result of Misuse and Abuse.
4. Special Orders do not qualify under the Return Goods Policy. (see: SPECIAL ORDERS POLICY)

### Special Orders Policy:

Orders for custom, or customized products, and/or packaging, cannot be altered, adjusted, or cancelled. Special Orders do not qualify under the Return Goods Policy.

### Short Shipment Policy:

If any products have been inadvertently short shipped, Vantage's Customer Service Department must be notified within 7-Days of receiving the order.

Providing the above mentioned 7-Day qualification has been met, Vantage will either ship the missing products or issue a credit.

(Note: It is not acceptable to simply deduct the value of the missing products from the invoice.)

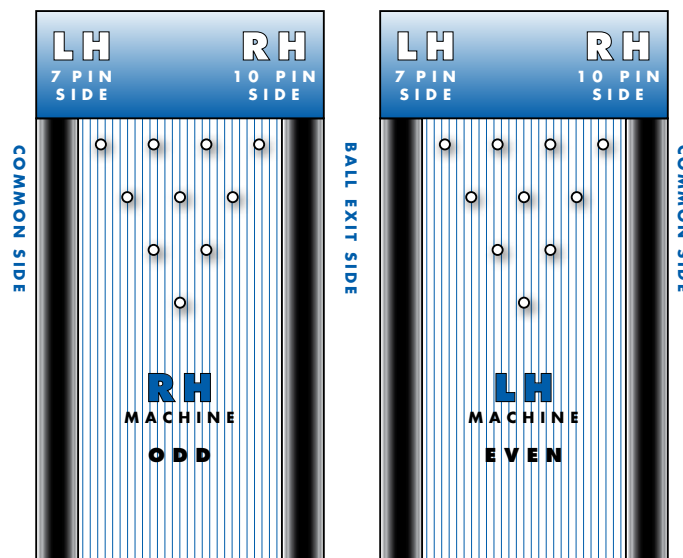
### Breakage, Damage, Loss of Goods:

All Shipments leave Vantage's warehouse in good condition. In the event of breakage and/or damage, you should contact Vantage's Customer Service Department. The carrier will want to inspect the package; so it is important to retain all interior and exterior packing materials until the claimed is resolved. You should also contact Vantage's Customer Service Department if a shipment does not arrive.

## Vantage is taking steps to define a good working catalog.

The Vantage Catalog has gone through numerous changes this year with the inclusion of parts for new machine styles and true to size hardware. Also this year are new illustrations through out the Catalog. Each Catalog has been separated into Sections based upon machine style and then broken down into subassemblies following the pins through the machines. Starting at the pits and working up and around the machine finishing of with the electrical systems.

## Vantage is taking the mystery out of right hand and left hand.



It has always been confusing when talking about pinsetter, which machine is a right hand machine and which machine is a left hand machine. And, then there is a right hand side and a left hand side of a right hand machine and vice versa. Then how do you look at the machine from the mechanics end or the bowlers end which reverses the right and left. Vantage has added labeling to its part numbers to make this a little easier. By labeling the parts ODD and EVEN as well as 7 Pin and 10 Pin this should cut down on some of the confusion on which part is correct for which machine.



### DECK CHUTES

#### Vantage "Smooth Shoot™" Big Mouth™ Deck Chutes.

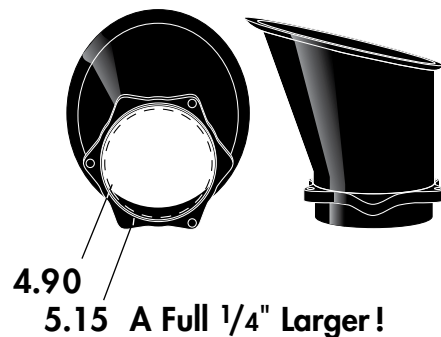
Few areas receive more attention on Brunswick pinsetters than deck chutes. Stuck surlyn pins, excessive wear, breakage and low service life can drive mechanics crazy. Few materials solve these problems better than urethane! That's why we have chemically engineered a urethane formulation specifically for our deck chutes. It gets even better — WE MAKE THEM AT OUR FACTORY IN DENVER, COLORADO, USA! No other manufacturer in bowling does.

Compare our urethane formulation to the rubber and plastic types available and we're sure you'll experience better wear and abrasion resistance, no pin jams and no premature breakage.

Our new "Big Mouth™" design, with its expanded inside diameter and "mirror" finish interior lets pins fly through.

- V 12 200808 002
- V 12 200808 003
- V 12 200809
- V 12 200810
- V 12 200837

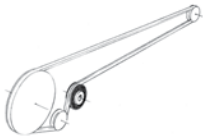
- Smooth Shoot #1 Pin
- Smooth Shoot #7 & 10 Pin
- Smooth Shoot #2, 6, 8 Pin
- Smooth Shoot #3, 4, 9 Pin
- Smooth Shoot #5 Pin







V 12 300075 N



V 12 400297 N



V 12 400219 N



V 12 400209 N



V 12 450034 N



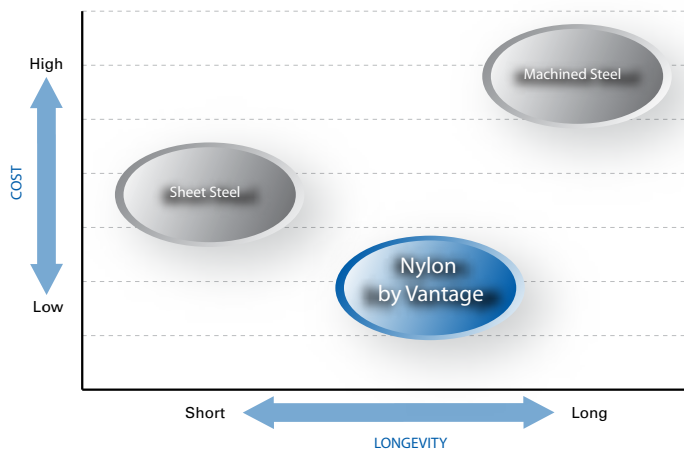
V 12 400221 N

## Finally, a Pulley That Performs and Doesn't Cost an Arm and a Leg!

Our molded premium quality pulleys have high strength glass-reinforced nylon that is abrasion and corrosion resistant. Offered at a lower cost than the unreliable sheet metal pulleys.

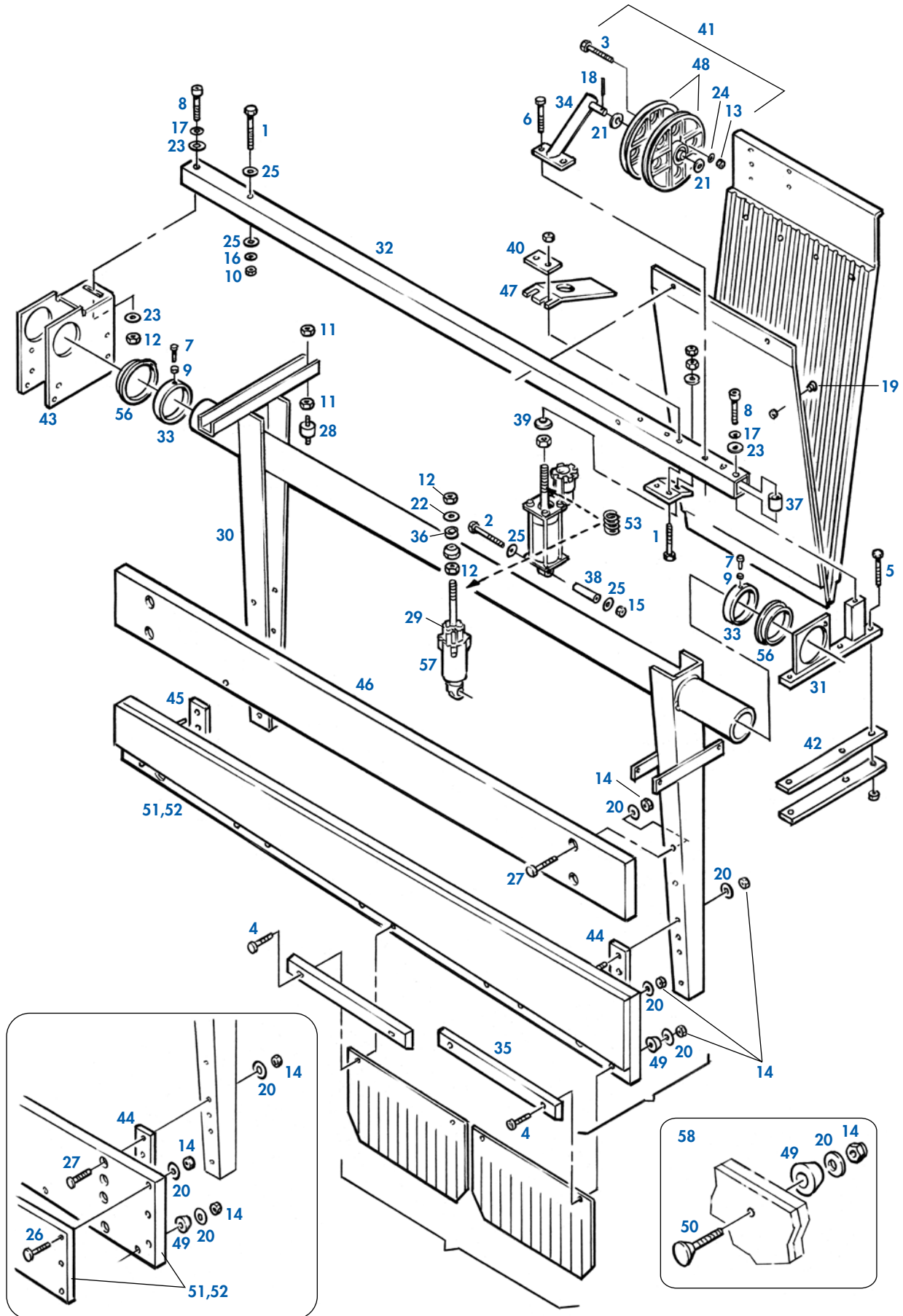
### 3-YEAR WARRANTY

Vantage offers a 3-year Factory Direct Warranty Exchange on any defective Vantage Composite Nylon Pulley. We not only say our new pulleys will do the job we put our money where our mouth is. We stand behind the quality and strength of the NEW Vantage Composite Nylon Pulley.





# Ball Cushion Assembly



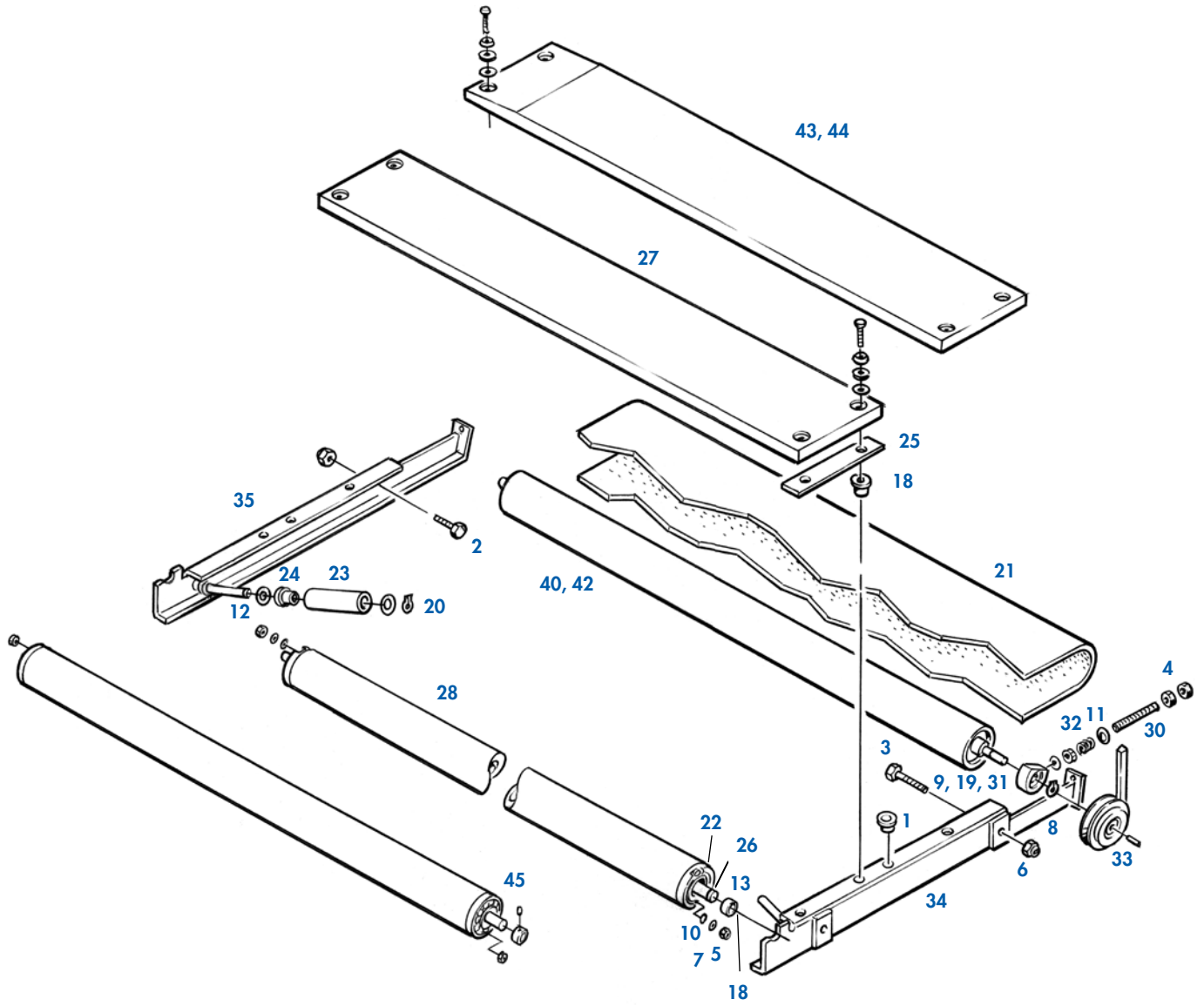
\* Available Starting Fall 2006



Part #	Description	Part #	Description
1 V 11 051012 001	Hex Hd. Cap Screw (10 mm x 70 mm)	30 V 47 020945 002	Ball Cushion Frame (for both right-hand and left-hand machines)
2 V 11 051013 001	Hex Hd. Cap Screw (10 mm x 90 mm)	31 V 47 020947 003	Bearing Block
3 V 11 051014 001	Hex Hd. Cap Screw (6 mm x 45 mm)	32 V 47 020948 003	Transverse Bar
4 V 11 051055 001	Hex Hd. Cap Screw (8 mm x 60 mm)	33 V 47 020953 004	Stop Collar
5 V 11 051057 001	Hex Hd. Cap Screw (10 mm x 60 mm)	34 V 47 021009 002	Pulley Holder
6 V 11 051058 001	Hex Hd. Cap Screw (10 mm x 55 mm)	*35 V 47 021010 003	Impact Strip (black)
7 V 11 051515 001	Socket Hd. Cap Screw (6 mm x 18 mm)	*36 V 47 021108 004	Spacer (used in new and old Shock)
8 V 11 051553 001	Socket Hd. Cap Screw (12 mm x 60 mm)	*37 V 47 021110 004	Spacer
9 V 11 051702 001	Hex Nut (6 mm)	*38 V 47 021112 004	Bushing
10 V 11 051703 001	Hex Nut (10 mm)	39 V 47 021119 004	Special Round Top Nut (12 mm)
11 V 11 051704 001	Hex Nut (8 mm)	40 V 47 021120 004	Mounting Plate
12 V 11 051706 001	Hex Nut (12 mm)	41 V 47 021195 002	Pulley Holder Complete
13 V 11 051743 001	Locknut (6 mm)	42 V 47 021318 003	Wood Shim (10 mm)
14 V 11 051744 001	Locknut (8 mm)	*43 V 47 021466 001	Bearing Block
15 V 11 051745 001	Locknut (10 mm)	*44 V 47 021488 004	Spacer (long)
16 V 11 051771 001	Lockwasher (10 mm)	*45 V 47 021489 004	Spacer (short)
17 V 11 051772 001	Lockwasher (12 mm)	*46 V 47 021872 003	Top Ball Cushion Board
18 V 11 051786 001	Split Pin (2.5 mm x 25 mm)	47 V 47 022098 004	Hydraulic Protector Plate
19 V 11 051879 001	Truss Hd. Machine Screw (6 mm x 20 mm)	48 V 47 022410 003	Drive Pulley with Bearing
20 V 11 052003 001	Flat Washer (8.4 mm x 17 mm x 1.6 mm)	49 V 47 023660 004	Cap
21 V 11 052012 001	Flat Washer (18 mm x 24 mm 2 mm)	*50 V 47 024276 004	Rubber Head Screws
22 V 11 052015 001	Flat Washer (13 mm x 24 mm x 3 mm)	*51 V 47 025044 009	Ball Cushion Board with Facing odd lane (left-hand)
23 V 11 052024 001	Flat Washer (13 mm x 30 mm x 1.6 mm)	*52 V 47 025045 009	Ball Cushion Board with Facing even lane (right-hand)
24 V 11 052048 001	Flat Washer (6.4 mm x 16 mm x 1.6 mm)	*53 V 47 071602 004	Cushion Shock Spring
25 V 11 052050 001	Flat Washer (10.5 mm x 30 mm x 2.5mm)	*54 V 47 274281 009	Ball Cushion Repair Kit
26 V 11 052603 001	Carriage Bolt (8 mm x 45 mm)	55 V 47 274888 009	Cushion Flap Kit Complete
27 V 11 052620 001	Carriage Bolt (8 mm x 75 mm)	56 V 99 010108 004	Bearing
28 V 11 053578 000	Rubber Bumper - male (8 mm)	*57 V 99 020402 002	Ball Cushion Hydraulic-Complete (all GS Pinsetters)
*29 V 11 055351 000	Sealing Ring (all GS Shocks)		



# Transport Band Assembly

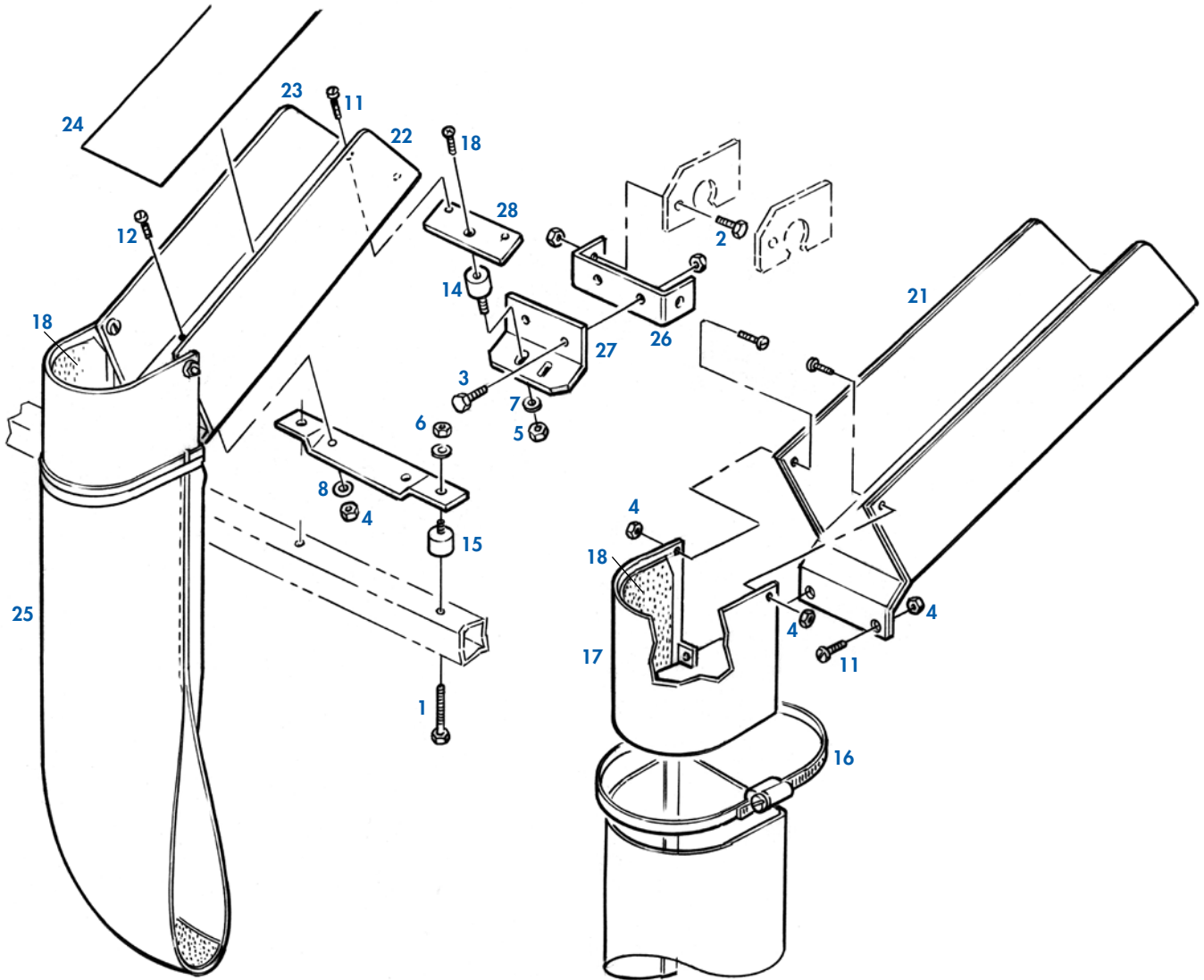




Part #	Description	Part #	Description
1 V 11 050326 001	Rivot Nut	24 V 47 020943 004	Bearing
2 V 11 051045 001	Hex Hd. Machine Screw (10 mm x 30 mm)	25 V 47 023915 004	Rubber Spacer
3 V 11 051059 001	Hex Hd. Machine Screw (10 mm x 110 mm)	26 V 47 023933 004	Shaft - Front
4 V 11 051703 001	Hex Nut (10 mm)	*27 V 47 023959 003	Front Board Assembly Complete
5 V 11 051744 001	Locknut (8 mm)	28 V 47 023981 002	Roller Assembly Complete, (front) 3 Stud End Cap - Replaces 2 Stud End Cap Roller Assembly
6 V 11 051745 001	Lock Nut (10 mm)	29 V 47 023982 002	Spacer Bushing
7 V 11 051770 001	Washer (8 MM)	30 V 47 024093 004	Threaded Rod (10 mm x 140 mm)
8 V 11 051858 001	Retaining Ring (20 mm)	31 V 47 024094 003	Bearing
9 V 11 051902 001	Retaining Ring (52 mm)	32 V 47 024309 004	Spring
10 V 11 052003 001	Flat Washer (8.4 mm x 17 mm x 1.6 mm)	33 V 47 024330 004	V-Belt Pulley (110 mm )
11 V 11 052050 001	Flat Washer (10.5 mm x 30 mm x 2.5 mm)	*34 V 47 024735 002	Transport Band Side Frame Complete (right-hand)
12 V 11 052064 001	Flat Washer (15 mm x 24 mm x 2 mm)	*35 V 47 024736 002	Transport Band Side Frame Complete (left-hand)
13 V 11 052676 001	Rolled Pin (3 mm x 30 mm)	36 V 47 024739 004	Rubber Washer (3 mm x 28 mm x 10 mm, GS-96 and above) (Not Shown)
14 V 11 052929 000	Slted. Pan Hd. Machine Screw (10 mm x 50 mm, GS-96 and above) (Not Shown)	37 V 47 024740 004	Finishing Washer (5.3 mm x 28 mm x 10.2 mm, GS-96 and above) (Not Shown)
15 V 11 052930 000	Slted. Pan Hd. Machine Screw (10 mm x 60 mm, GS-96 and above) (Not Shown)	38 V 47 024741 004	Flat Washer (10.5 mm x 28 mm x 2 mm, GS-96 and above) (Not Shown)
16 V 11 053909 000	V-Belt (2560 mm) - use with 110 mm pulley	40 V 47 024905 001	Short Roller Assembly Complete (rear, right-hand)
17 V 11 053910 000	V-Belt (10 mm x 6 mm x 2650 mm) use with 125 mm pulley	41 V 47 025049 004	V-Belt Pulley (125 mm) (Not Shown)
18 V 11 135400 000	Rubber Well Nut (8 mm, machine series 43 to 76)	42 V 47 025051 001	Short Roller Assembly Complete (rear, left-hand)
19 V 11 430016 000	Deep Groove Ball Bearing	*43 V 47 025175 003	Rear Board Assembly-Complete (left-hand)
20 V 11 051858 001	Retaining Ring (15 mm)	*44 V 47 025176 003	Rear Board Assembly-Complete (right-hand)
21 V 11 635201 000	Transport Band Carpet (2020 mm x 1440 mm)	45 V 47 025178 003	Bearing (3-stud)
22 V 47 020908 003	End Cap with Bearing (2 Stud Front rollers Only)		
23 V 47 020942 003	Roller		



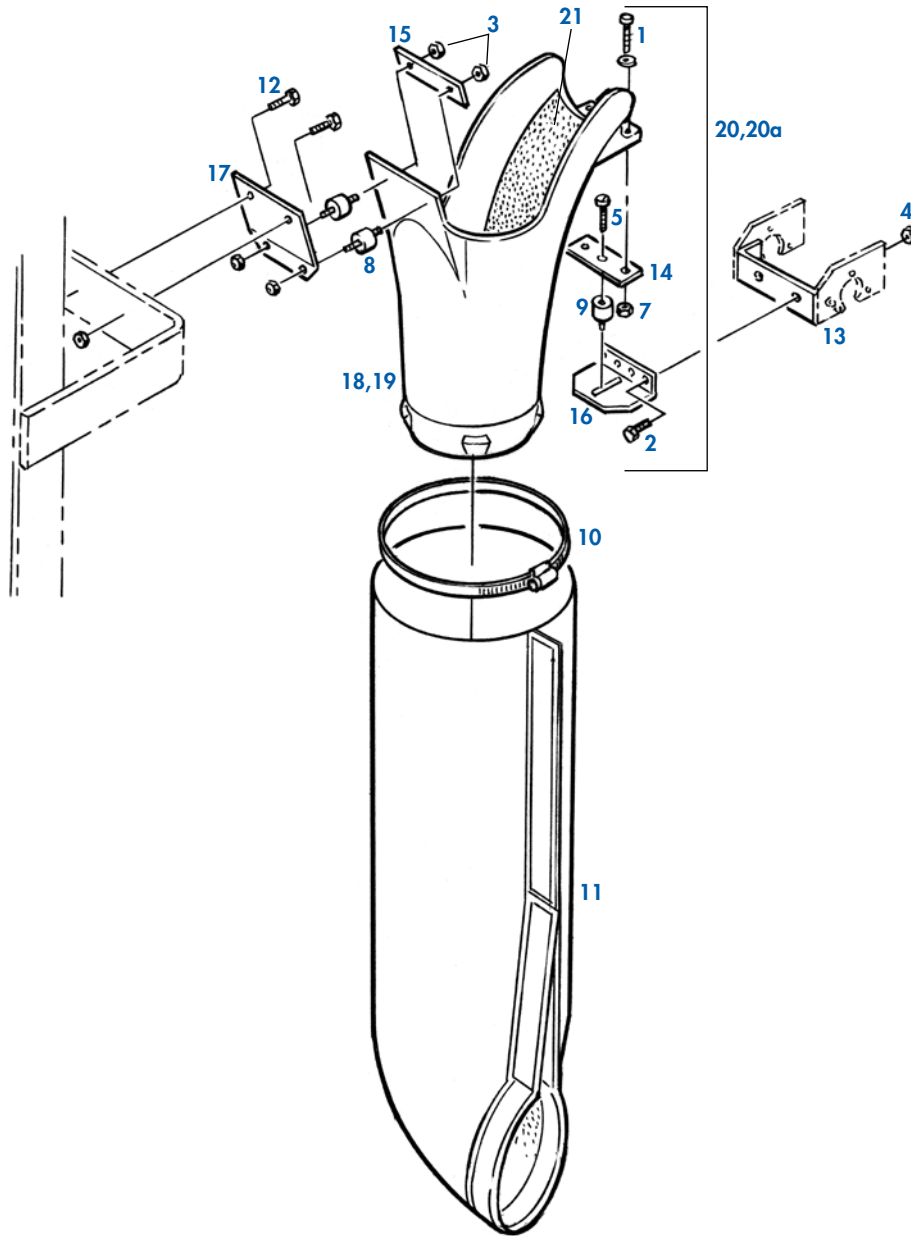
# Dual Feed Overflow Chute



Part #	Description
1 V 11 051011 001	Hex Hd. Cap Screw (8 mm x 50 mm)
2 V 11 051038 001	Hex Hd. Cap Screw (8 mm x 16 mm)
3 V 11 051043 001	Hex Hd. Cap Screw (8 mm x 12 mm)
4 V 11 051742 001	Locknut (5 mm)
5 V 11 051743 001	Locknut (6 mm)
6 V 11 051744 001	Locknut (8 mm)
7 V 11 052 048 001	Flat Washer (6.4 mm x 16 mm x 1.6 mm)
8 V 11 052006 001	Flat Washer (8.4 mm x 20 mm x 2 mm)
9 V 11 052019 001	Flat Washer (8.4 mm x 25 mm x 2 mm) (Not Shown)

Part #	Description
10 V 11 052039 001	Fender Washer (5.3 mm x 15 mm x 1.2 mm) (Not Shown)
11 V 11 052361 001	Pan Hd. Machine Screw (5 mm x 12 mm)
12 V 11 052369 001	Pan Hd. Machine Screw (5 mm x 16 mm)
13 V 11 052928 001	Countersunk Screw (6 mm x 10 mm)
14 V 11 053575 000	Rubber Mount
15 V 11 053585 000	Rubber Mount
16 V 11 603301 000	Overflow Chute Clamp
*17 V 47 092298 003	Sock Brace Only
*18 V 47 092310 004	Felt (for Sock Brace)
19 V 47 092332 003	Not Available

Part #	Description
20 V 47 092333 003	Not Available
*21 V 47 092448 004	Felt (for inside wall, long pit version)
*22 V 47 092449 004	Felt (for bottom, long pit version)
*23 V 47 092450 004	Felt (for outside wall, long pit version)
*24 V 47 092527 000	Pin Wipe
25 V 47 092529 000	Sock (white)
*26 V 47 093749 004	Bracket
*27 V 47 094355 004	Bracket
*28 V 47 094356 004	Plate
*29 V 47 094357 004	Plate



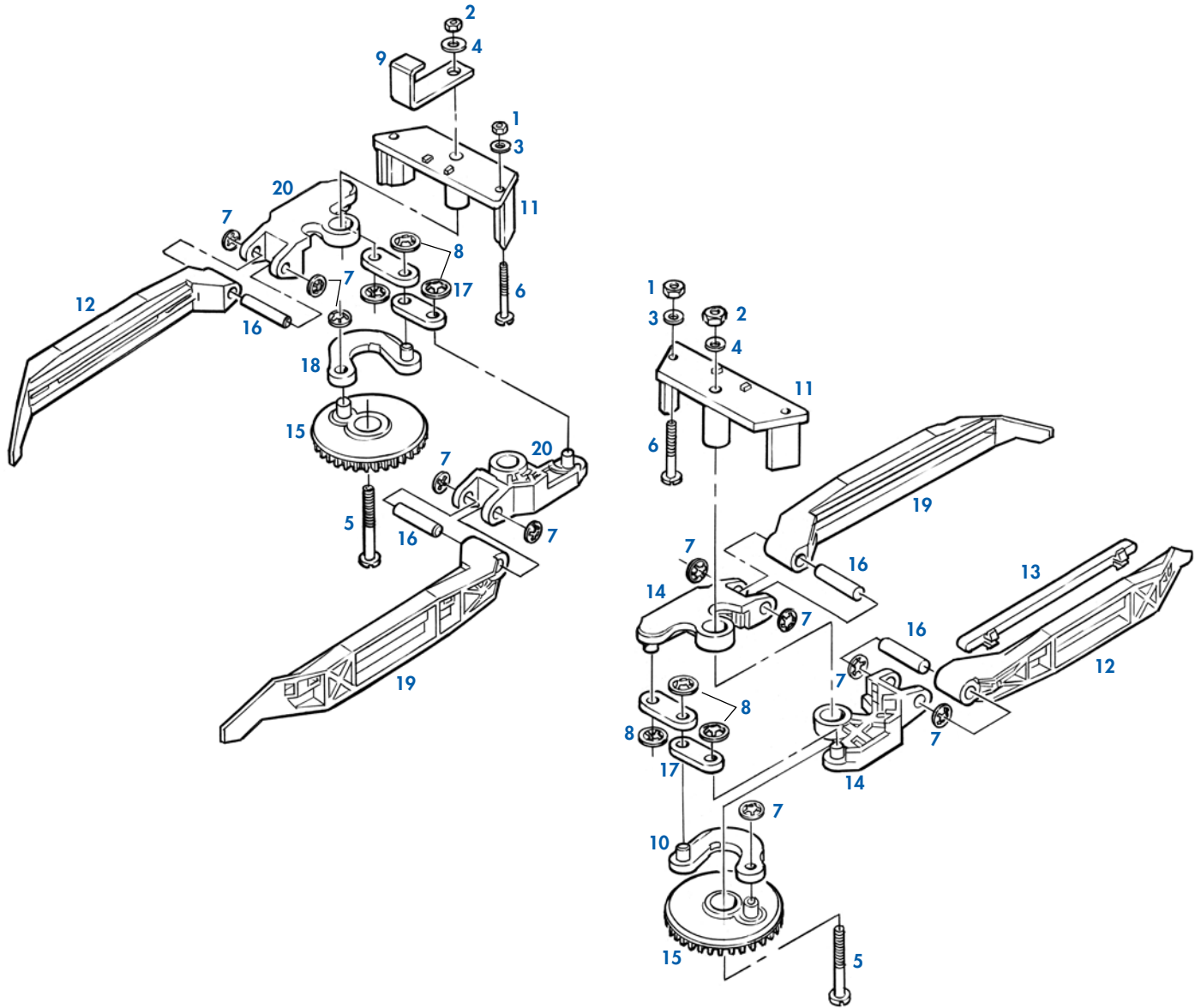
Part #	Description
1 V 11 051004 001	Hex Hd. Cap Screw (5 mm x 22 mm)
2 V 11 051038 001	Hex Hd. Cap Screw (6 mm x 16 mm)
3 V 11 051743 001	Locknut (6 mm)
4 V 11 051744 001	Locknut (8 mm)
5 V 11 052038 001	Flat Hd. Screw
6 V 11 052039 001	Flat Washer (5.3 mm x 15 mm x 1.2 mm) (Not Shown)
7 V 11 052742 001	Locknut (5 mm)

Part #	Description
8 V 11 053587 000	Rubber Bumper (25 mm x 15 mm)
9 V 11 053588 000	Rubber Bumper (30 mm x 20 mm)
10 V 11 603301 000	Overflow Chute Clamp
11 V 47 022530 000	Sock (White)
12 V 47 051035 001	Hex Hd. Cap Screw
*13 V 47 093749 004	Chute Bracket
*14 V 47 095726 004	Mounting Plate
*15 V 47 095727 004	Plate

Part #	Description
*16 V 47 095728 004	Support Bracket
*17 V 47 095729 004	Bracket
*18 V 47 095737 001	Plastic Chute - only (right-hand)
*19 V 47 095738 001	Plastic Chute - only (left-hand)
*20 V 47 095739 009	Chute Assembly Left-Hand w/out Sock
*20a V 47 095740 009	Chute Assembly Right-Hand w/out Sock
*21 V 47 860003 000	Pin Wipe



# GS10 GS98 Spotting Tong Assembly

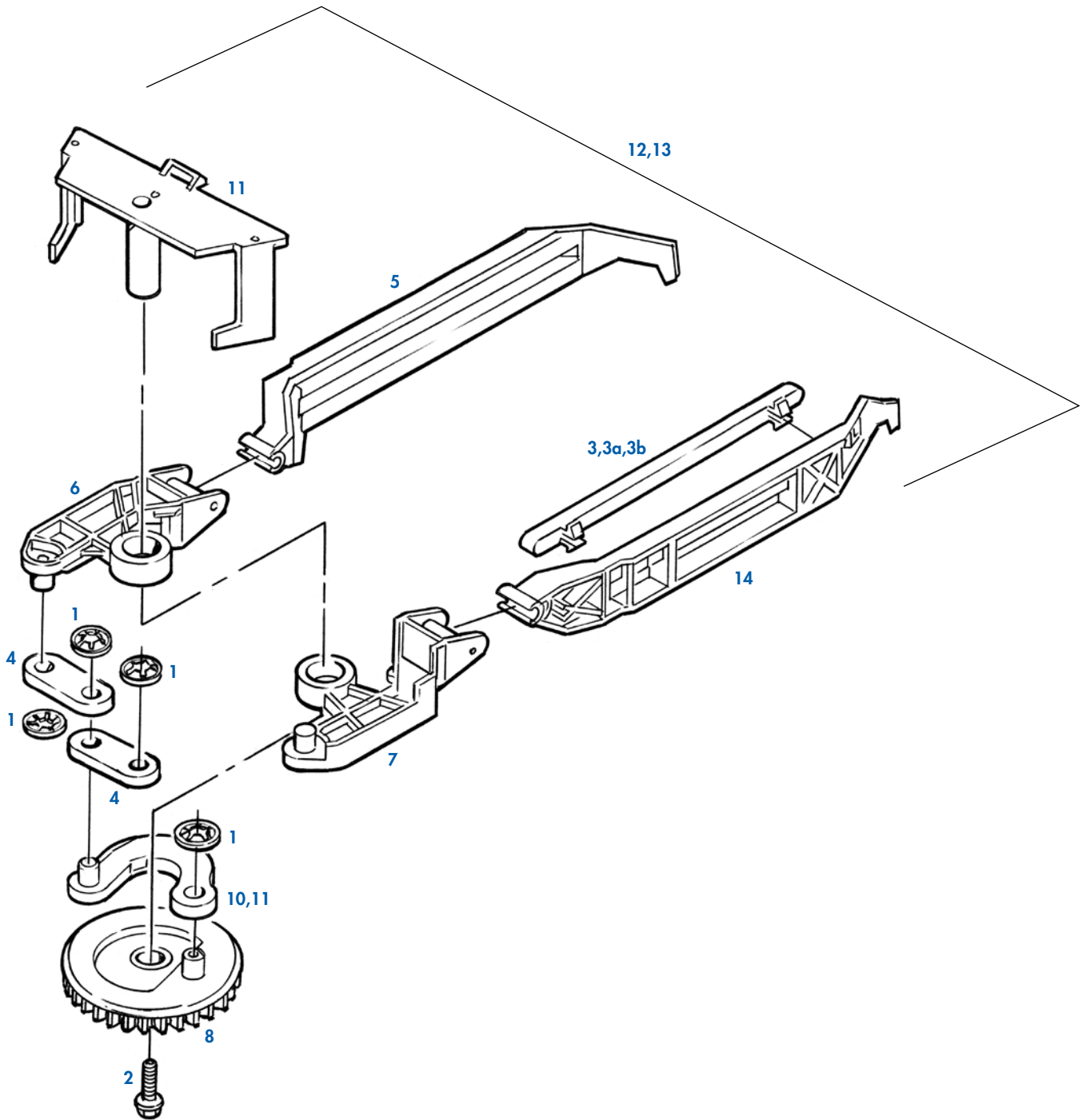


Part #	Description
1	V 11 051742 001 Locknut (5 mm)
2	V 11 051743 001 Locknut (6 mm)
3	V 11 052005 001 Flat Washer (5.3 mm x 10 mm x 1 mm)
4	V 11 052048 001 Flat Washer (6.4 mm x 16 mm x 1.6 mm)
5	V 11 052351 001 Sld. Pan Hd. Machine Screw (6 mm x 55 mm)
6	V 11 052355 001 Sld. Pan Hd. Machine Screw (5 mm x 55 mm)

Part #	Description
7	V 11 053478 001 Starlock (8 mm)
8	V 11 053479 001 Starlock (9 mm)
9	V 47 051575 004 Pin Stop - GS 98
10	V 47 051755 003 Connector
11	V 47 051756 004 Deck Plate
12	V 47 051757 003 Tong
13	V 47 051758 003 Damper
14	V 47 051759 004 Pivot Wing

Part #	Description
15	V 47 051760 003 Gear
16	V 47 051761 004 Shaft
17	V 47 051762 004 Connecting Link
18	V 47 053767 003 Connector
19	V 47 053782 003 Tong
20	V 47 053783 004 Pivot Wing

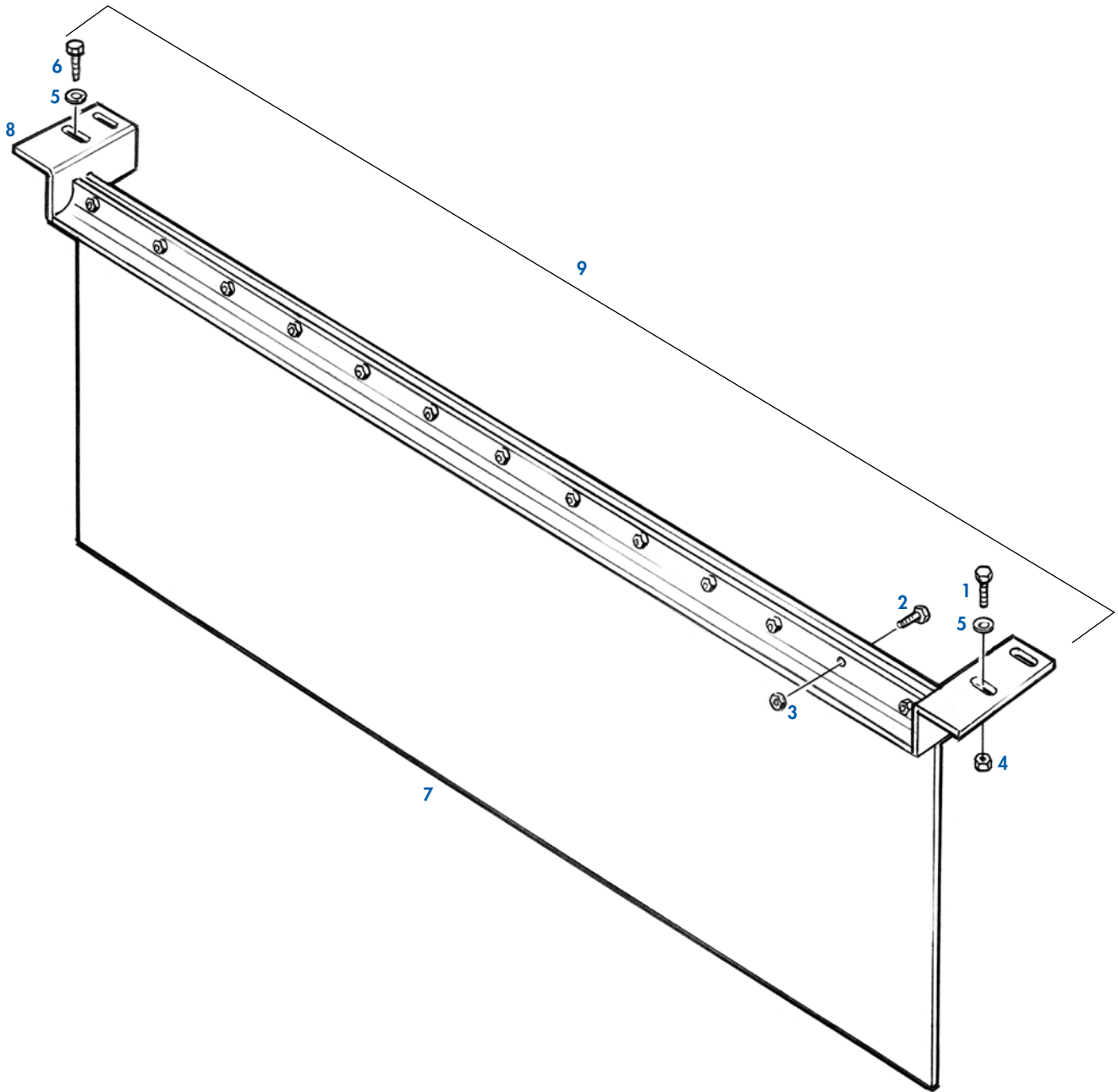




Part #	Description
*1 V 11 053478 001	Starlock (8 mm)
*2 V 11 054459 000	Self Tapping, Torx Screw (K60 x 20 mm)
*3 V 47 051758 003	Damper
*3a V 47 051758 500	PCV Damper - Oversized (10 Pack)
*3b V 47 051758 600	Urethane Damper - Oversized (10 Pack)

Part #	Description
*4 V 47 051762 004	Link
*5 V 47 054896 001	Tong (right-hand)
*6 V 47 054897 003	Spotting Tong Pivot - Left-Hand
*7 V 47 054898 003	Spotting Tong Pivot - Right-Hand
*8 V 47 054899 003	Gear
*9 V 47 054900 003	Lever - right-hand

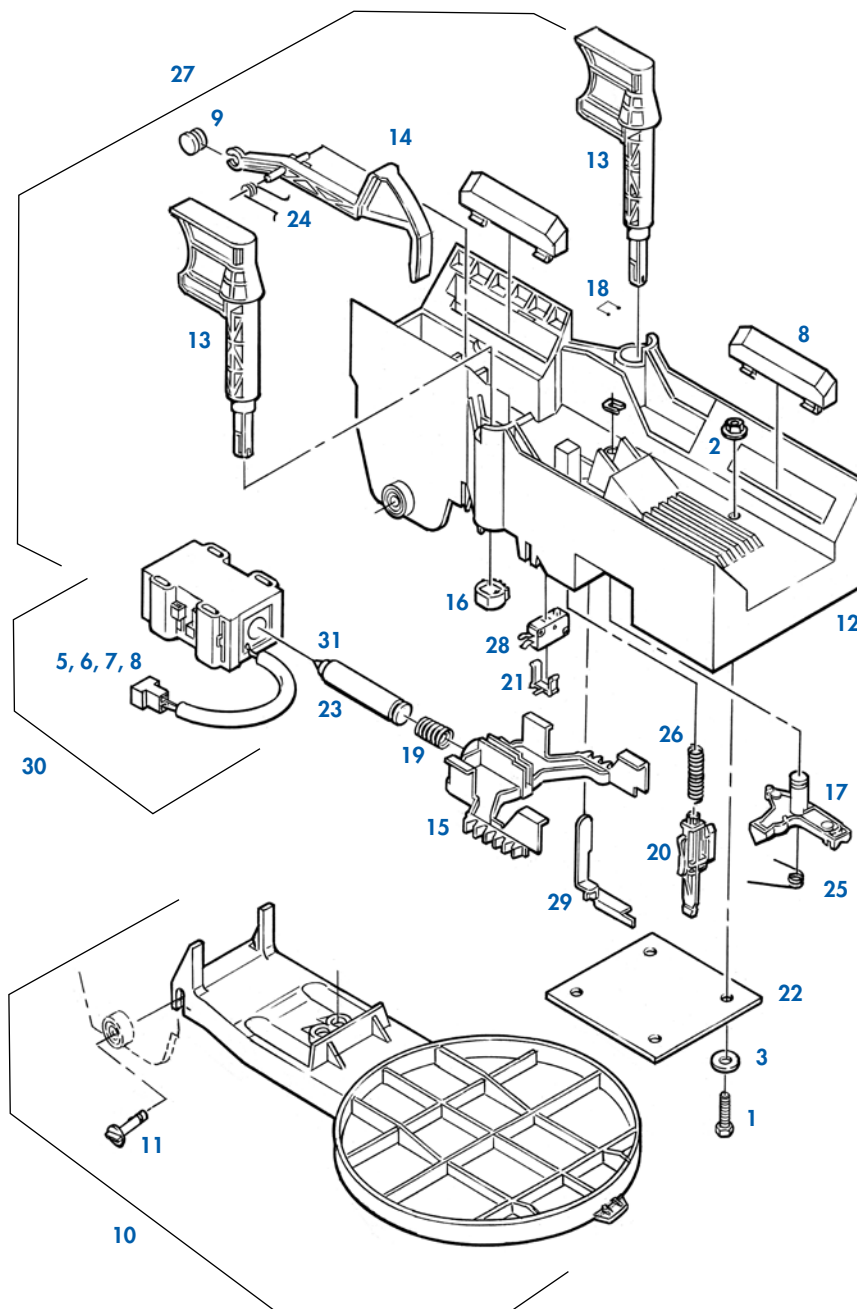
Part #	Description
*10 V 47 054901 003	Lever - left-hand
*11 V 47 054902 002	Deck Plate
*12 V 47 055117 009	Spotting Tong - Complete Assembly (Pin Stations 1, 4, 5, and 6)
*13 V 47 055118 009	Spotting Tong - Complete Assembly (Pin Stations 2, 3, 7, 8, 9, and 10)
*14 V 47 055148 002	Tong (left-hand)



Part #	Description
1 V 11 051005 001	Hex Hd. Cap Screw (10 mm x 20 mm)
2 V 11 051533 001	Socket Hd. Cap Screw (8 mm x 25 mm)
3 V 11 051744 001	Locknut ( 8 mm)

Part #	Description
4 V 11 051745 001	Locknut (10 mm)
5 V 11 052006 001	Flat Washer (8.4 mm x 20 mm x 2 mm)
6 V 11 053302 001	Wood Lag Screw (10 mm x 40 mm)

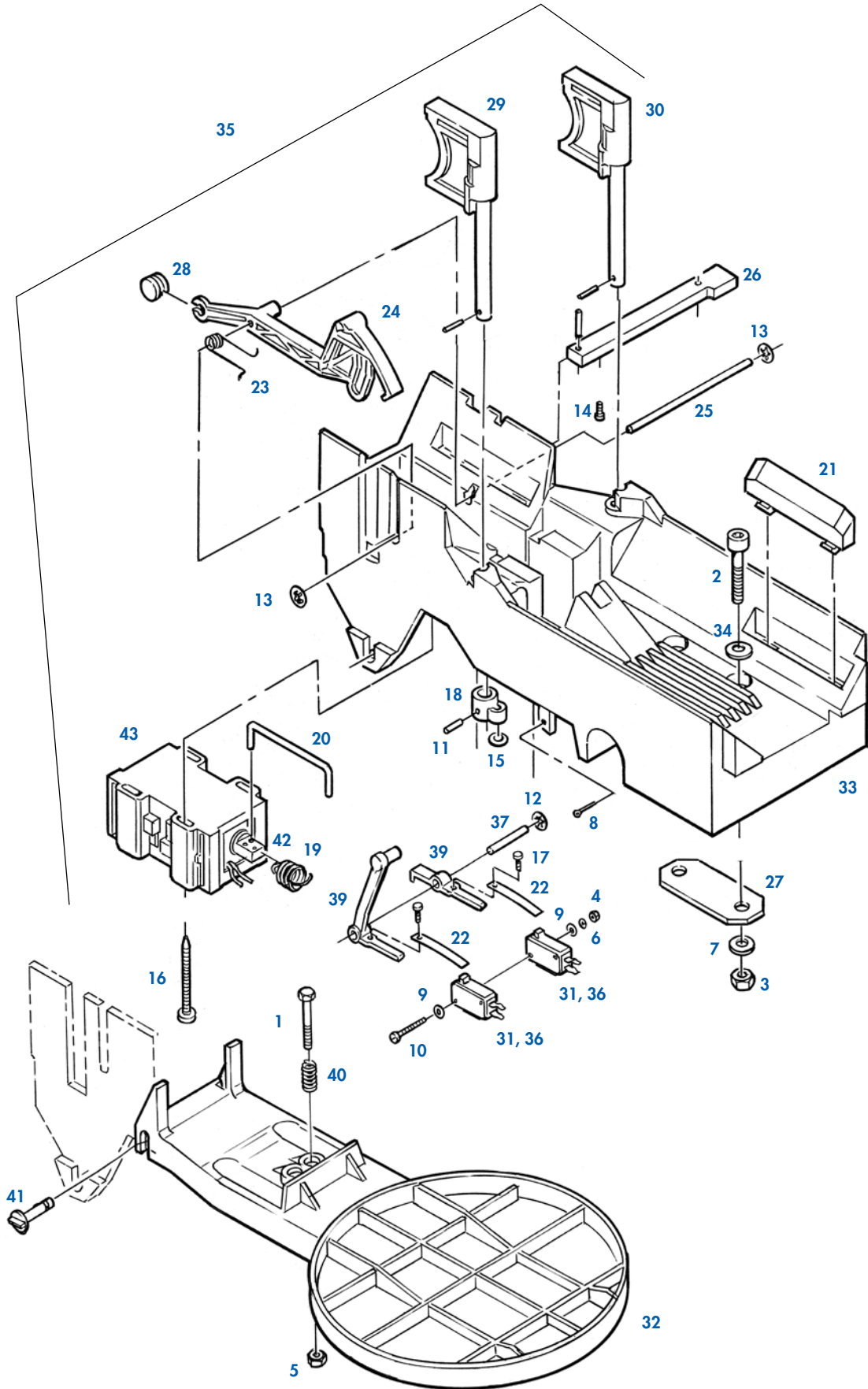
Part #	Description
7 V 47 021084 004	Curtain
*8 V 47 021088 002	Pit Curtain Holder
*9 V 47 021196 002	Pit Curtain Assembly Complete



Part #	Description	Part #	Description	Part #	Description
*1	V 11 051014 001 Hex Hd. Cap Screw (6 mm x 45 mm)	*11	V 47 054916 004 Pin	*22	V 47 055003 004 Mount Plate
*2	V 11 055500 001 Hex Nut (6 mm)	*12	V 47 054980 001 Pin Holder Housing - Only	*23	V 47 055004 004 Solenoid Plunger
*3	V 11 055961 001 Washer	*13	V 47 054981 002 Pin Gripper	*24	V 47 055005 004 Tension Spring
*4	V 11 680116 000 Connector - Male	*14	V 47 054982 004 Switch Finger	*25	V 47 055006 004 Torsion Spring
*5	V 11 680216 000 Connector - Female	*15	V 47 054983 002 Drive	*26	V 47 055008 004 Tension Spring
*6	V 11 680301 000 Terminal - Female	*16	V 47 054984 004 Gear	*27	V 47 055314 009 Pin Holder Assembly Complete
*7	V 11 680302 000 Terminal - Male	*17	V 47 054985 001 Switch Lever	*28	V 47 055323 004 Micro Switch
*8	V 47 050308 004 Damper	*18	V 47 054986 004 Clip	*29	V 47 055328 003 Connector Clip
*9	V 47 052124 004 Weight	*19	V 47 054987 004 Solenoid Spring	*30	V 99 060351 004 Solenoid - Only
*10	V 47 054298 001 Pin Detector Plate with Pin	*20	V 47 054988 003 Switch Button	*31	V 99 090349 004 O-Ring for Plunger
		*21	V 47 055001 004 Clip (Micro Switch)		



# GS96 GS98 Pin Holder Assembly

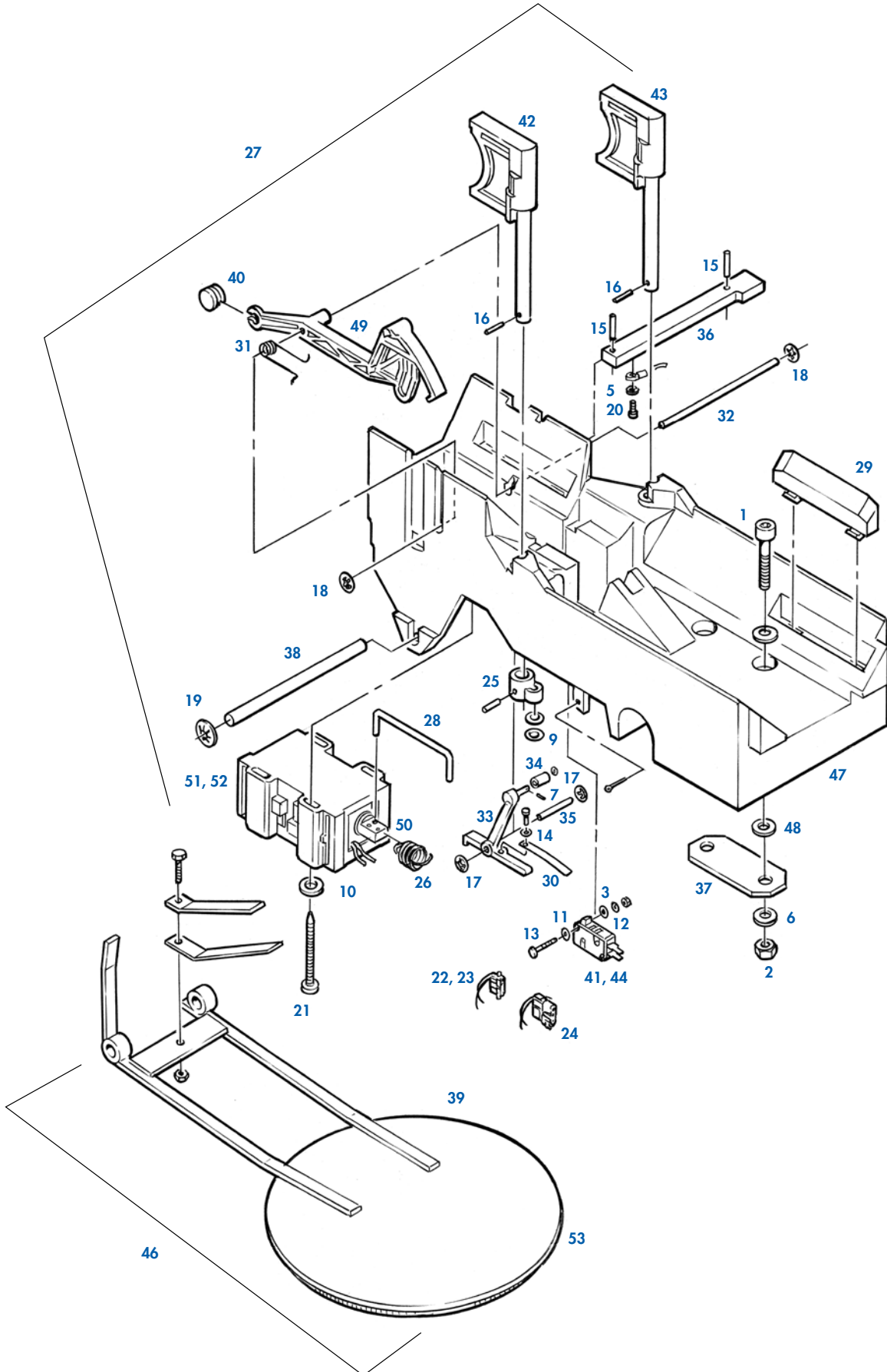




Part #	Description	Part #	Description
1	V 11 051088 001 Hex Hd. Cap Screw (6 mm x 35 mm)	23	V 47 050640 004 Tension Spring
2	V 11 051535 001 Socket Hd. Cap Screw (8 mm x 40 mm)	24	V 47 050665 003 Switch Finger
3	V 11 051704 001 Hex Nut (8 mm)	25	V 47 050668 004 Switch Finger Shaft
4	V 11 051708 001 Hex Nut (2.5 mm)	26	V 47 050675 004 Ground Shaft *Ground Shaft is reversed for left-hand or right-hand Pin Holder Assembly
5	V 11 051743 001 Lock Nut	27	V 47 050676 004 Bracket
6	V 11 051766 001 Lockwasher (2.5 mm)	28	V 47 052124 004 Counter Weight
7	V 11 051770 001 Lockwasher (8 mm)	29	V 47 052439 004 Pin Gripper (left-hand)
8	V 11 051808 001 Straight Pin	30	V 47 052440 004 Pin Gripper (right-hand)
9	V 11 052041 001 Flat Washer (2.7 mm x 8 mm x .8 mm)	31	V 47 053635 004 Micro Switch (single, cherry)
10	V 11 052220 001 Sld. Machine Screw (2.5 mm x 30 mm)	32	V 47 054298 001 Pin Detector Plate with Pin
11	V 11 052681 001 Rolled Pin (3 mm x 16 mm)	33	V 47 054689 009 Pin Holder with Dampers
12	V 11 053475 001 Starlock (3 mm)	34	V 47 054691 004 Flat Washer (8.4 mm x 17 mm x 1.6 mm)
13	V 11 053476 001 Starlock (4 mm)	35	V 47 054699 009 Pin Holder Complete
14	V 11 053776 001 C.R. Pan Hd. Screw (4 mm x 8 mm) (red box only)	36	V 47 054700 009 Micro Switch (double)
15	V 11 054500 001 Grip Ring	37	V 47 054701 004 Shaft
16	V 11 054776 001 C.R. Pan Hd. Screw (5 mm x 60 mm)	38	V 47 054702 004 Switch Finger
17	V 11 055150 000 Slotted Machine Self Tap Screw Plastic (2.5 mm x 5 mm)	39	V 47 054703 004 Switch Finger
18	V 46 050300 004 Catch	40	V 47 054708 004 Spring
19	V 46 050302 004 Spring	41	V 47 054916 004 Pivot Pin
20	V 47 050266 004 Connector Link	42	V 99 060208 004 Plunger
21	V 47 050308 004 Damper	43	V 99 060242 004 Solenoid
22	V 47 050639 004 Switch Spring		



# GS10 GS92 Pin Holder Assembly

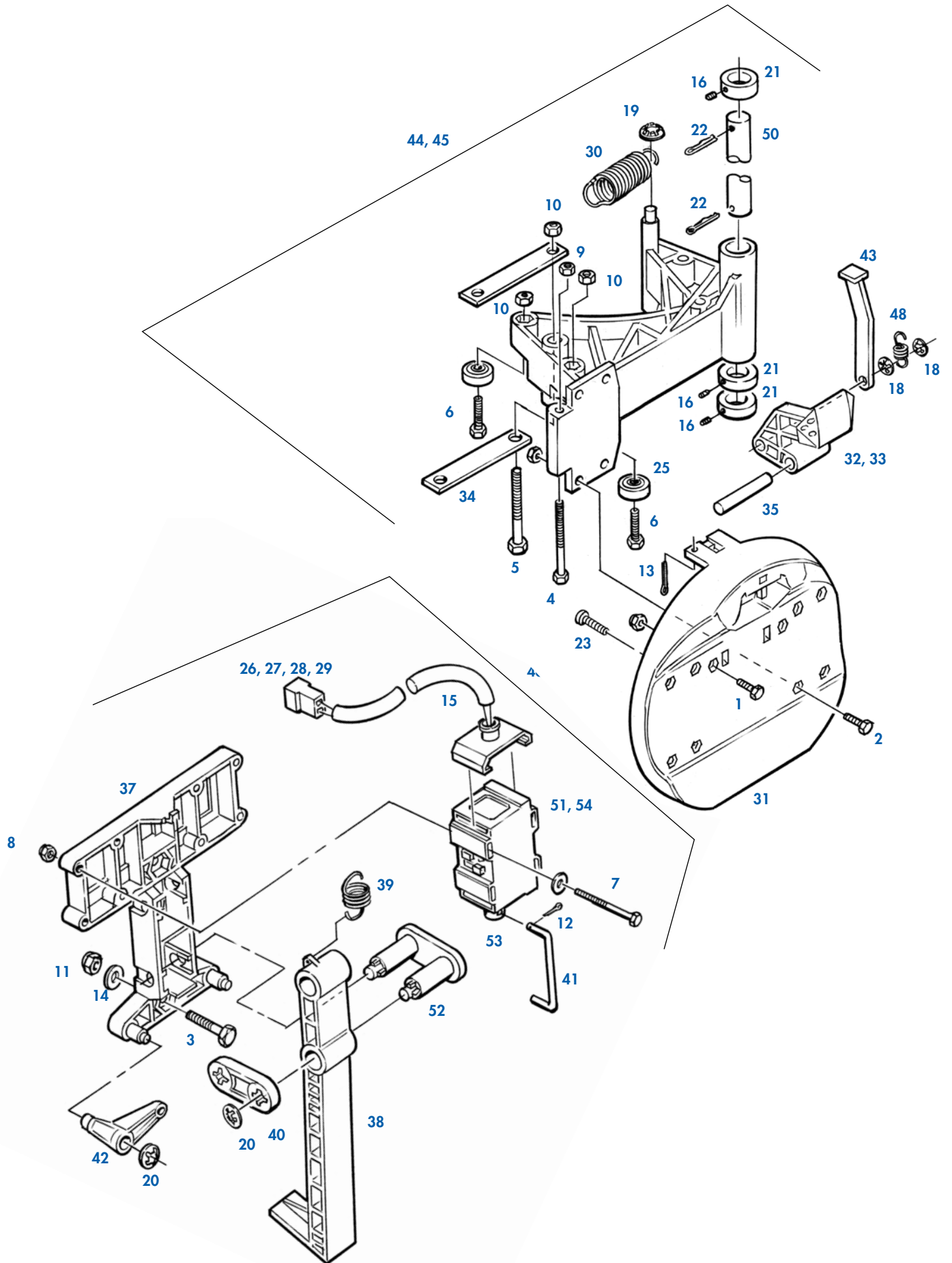




Part #	Description	Part #	Description		
1	V 11 051535 001	Socket Hd. Cap Screw (8 mm x 40 mm)	27	V 47 050036 001	Pin Holder Complete (red box electrical system)
2	V 11 051704 001	Hex Nut (8 mm)	28	V 47 050266 004	Connector Link
3	V 11 051708 001	Hex Nut (2.5 mm) (Not Shown)	29	V 47 050308 004	Damper
4	V 11 051766 001	Lockwasher (2.5 mm)	30	V 47 050639 004	Switch Spring
5	V 11 051767 001	Lockwasher (4 mm) (red box only)	31	V 47 050640 004	Tension Spring
6	V 11 051770 001	Lockwasher (8 mm)	32	V 47 050668 004	Switch Finger Shaft
7	V 11 051802 001	Split Pin (1 mm x 10 mm)	33	V 47 050670 004	Switch Finger
8	V 11 051809 001	Straight Pin (2 mm)	34	V 47 050671 004	Roller Bushing
9	V 11 052025 001	Flat Washer (4.3 mm x 9 mm x .8 mm)	35	V 47 050674 004	Shaft
10	V 11 052039 001	Flat Washer (5.3 mm x 15 mm x 1.6 mm)	36	V 47 050675 004	Ground Shaft *Ground Shaft is reversed for left-hand or right-hand Pin Holder Assembly.
11	V 11 052041 001	Flat Washer (2.7 mm x 8 mm x .8 mm)	37	V 47 050676 004	Bracket
12	V 11 052051 001	Flat Washer (2.5 mm x 7 mm x .8 mm)	38	V 47 050677 004	Shaft
13	V 11 052203 001	Sltd. Machine Screw (2.5 mm x 20 mm)	39	V 47 051753 004	Pin Detector Plate with Rubber
14	V 11 052205 001	Slotted Machine Screw (2.5 mm x 8 mm)	40	V 47 052124 004	Counter Weight
15	V 11 052677 001	Rolled Pin (2 mm x 16 mm)	41	V 47 052418 004	Cherry Switch (red box only)
16	V 11 052681 001	Rolled Pin (3 mm x 16 mm)	42	V 47 052439 004	Pin Gripper (left-hand)
17	V 11 053475 001	Starlock (3 mm)	43	V 47 052440 004	Pin Gripper (right-hand)
18	V 11 053476 001	Starlock (4 mm)	44	V 47 053635 004	Cherry Switch (silver box)
19	V 11 053478 001	Starlock (8 mm)	45	V 47 053850 009	Pin Holder Complete (universal electrical system) (Not Shown)
20	V 11 053776 001	C.R. Pan Hd. Screw (4 mm x 8 mm) (red box only)	46	V 47 054298 001	Pin Detector Plate Complete *Interchangeable new style
21	V 11 054776 001	C.R. Pan Hd. Screw (5 mm x 60 mm)	47	V 47 054689 009	Pin Holder with Dampers
22	V 11 680105 000	Connector - 4 Pin (silver box & universal)	48	V 47 054691 004	Flat Washer (8.4 mm x 17 mm x 1.6 mm)
23	V 11 680302 000	Terminal (silver box & universal)	49	V 47 050665 003	Switch Finger
24	V 11 697187 000	Terminal (red box)	50	V 99 060208 004	Plunger
25	V 46 050300 004	Catch	51	V 99 060218 004	Solenoid Complete (red box)
26	V 46 050302 004	Spring	52	V 99 060242 004	Solenoid Complete (silver box)
			53	V47 051754 004	Rubber Material Only



# Ball Door Lock Assembly



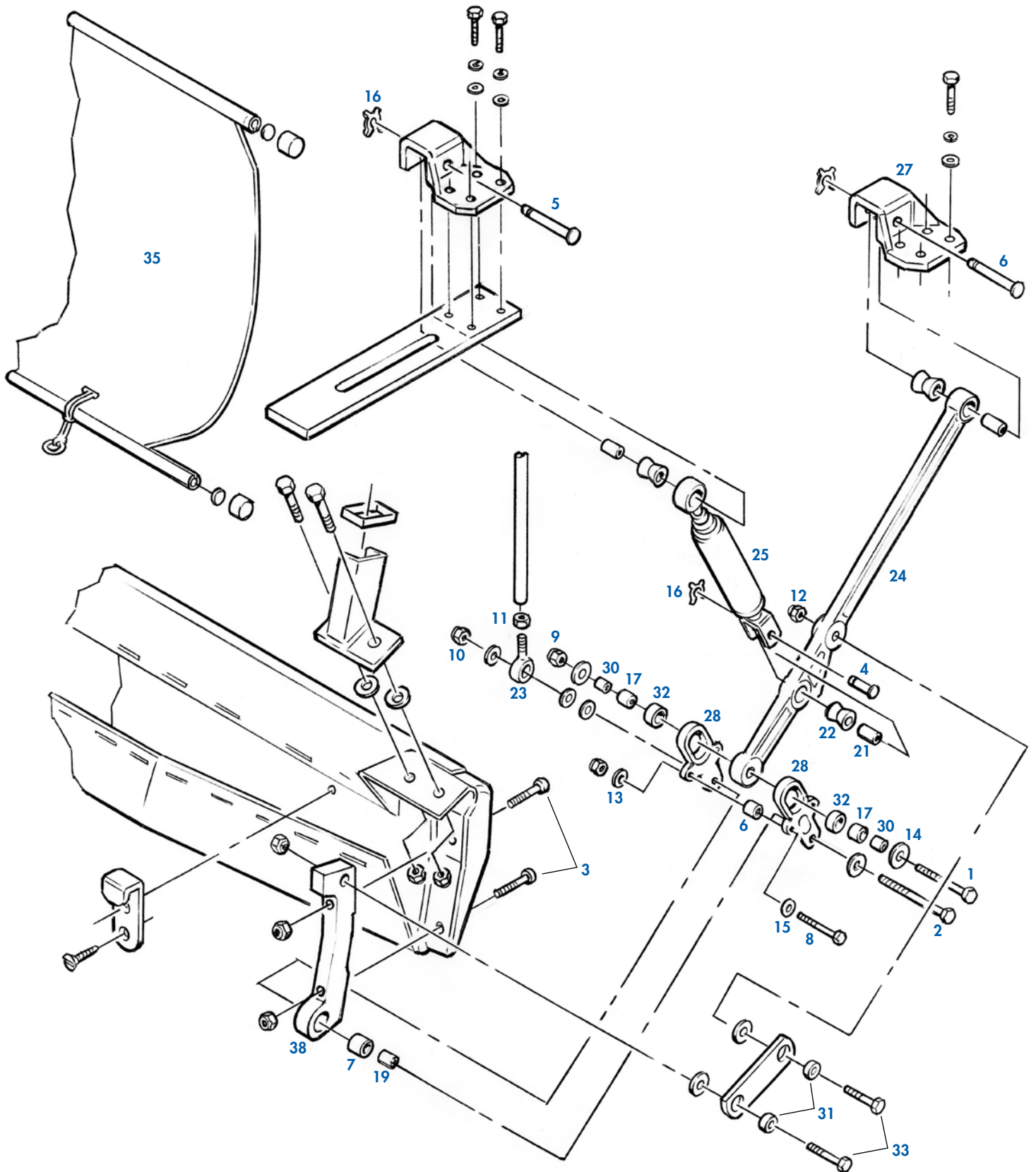


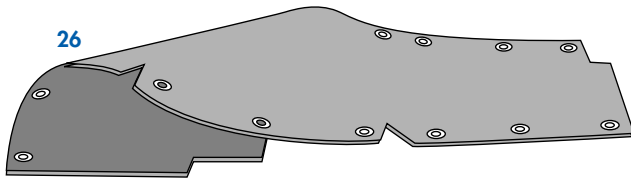


Part #	Description	Part #	Description
*1 V 11 051008 001	Hex Hd. Cap Screw (6 mm x 10 mm)	*29 V 11 680302 000	Terminal - Male
*2 V 11 051018 001	Hex Hd. Cap Screw (6 mm x 16 mm)	*30 V 47 030276 004	Ball Door Arm Tension Spring
*3 V 11 051021 001	Hex Hd. Cap Screw (10 mm x 35 mm)	*31 V 47 031054 002	Ball Door
*4 V 11 051060 001	Hex Hd. Cap Screw (6 mm x 70 mm)	*32 V 47 031055 003	Button (for right-hand machine Ball Door)
*5 V 11 051061 001	Hex Hd. Cap Screw (8 mm x 75 mm)	*33 V 47 031056 003	Button (for left-hand machine Ball Door)
*6 V 11 051067 001	Hex Hd. Cap Screw (8 mm x 35 mm)	*34 V 47 031090 004	Support Brace
*7 V 11 051068 001	Hex Hd. Cap Screw (5 mm x 65 mm)	*35 V 47 031091 004	Shaft
*8 V 11 051742 001	Locknut (5 mm)	*36 V 47 031302 004	Ball Door Shaft (Pre GS-X Pinsetters) (Not Shown)
*9 V 11 051743 001	Locknut (6 mm)	*37 V 47 031796 002	Holder
*10 V 11 051744 001	Locknut (8 mm)	*38 V 47 031797 002	Locking Bolt
*11 V 11 051745 001	Locknut (10 mm)	*39 V 47 031799 004	Spring
*12 V 11 051791 001	Split Pin (1.6 mm x 10 mm)	*40 V 47 031800 004	Pivot Link
*13 V 11 051793 001	Split Pin (2.5 mm x 20 mm)	*41 V 47 031801 004	Connecting Link
*14 V 11 052028 001	Flat Washer ( 10.5 mm x 25 mm x 2 mm)	*42 V 47 031802 004	Lever
*15 V 11 052039 001	Flat Washer (5.3 mm x 15 mm x 1.6 mm)	*43 V 47 031822 004	Lever
*16 V 11 052807 001	Set Screw (6 mm x 8 mm)	*44 V 47 033555 009	Ball Door with Arm Complete (left-hand)
*17 V 11 053157 001	Jam Nut (14 mm) (Not Shown)	*45 V 47 033556 009	Ball Door with Arm Complete (right-hand)
*18 V 11 053477 001	Starlock (7 mm)	*46 V 47 033557 009	Locking Mechanism (left-hand)
*19 V 11 053478 001	Starlock (8 mm)	*47 V 47 033558 009	Locking Mechanism Complete (right-hand)
*20 V 11 053480 001	Starlock ( 10 mm)	*48 V 47 034767 004	Spring
*21 V 11 053616 001	Stop Collar (15 mm x 25 mm x 12 mm)	*49 V 47 034843 004	Shaft - Threaded End (Not Shown)
*22 V 11 054301 001	Hitch Pin (3 mm x 62 mm)	*50 V 47 035238 004	Ball Door Shaft (GS-X Pinsetters)
*23 V 11 054463 000	EJOT Self Tapping Screw (KB30 x 7 mm)	*51 V 47 243030 004	Solenoid Assembly Complete (silver box) *Does not include Plunger, V 99 060133 004
*24 V 11 055253 001	Special Lockwasher (6 mm) (Not Shown)	*52 V 47 931798 994	Connecting Stud
*25 V 11 430046 000	Bearing	*53 V 99 060133 004	Plunger Only
*26 V 11 680116 000	Connector - Male	*54 V 99 060219 004	Solenoid Assembly (red box) Complete *Does not include Plunger, V 99 060133 004
*27 V 11 680216 000	Connector - Female		
*28 V 11 680301 000	Terminal - Female		



# Pit Cushion Components





### V 12 252310 "Strap On" Cushion Facing

Made from polyester/nylon reinforced sheet, this facing offers excellent service life and will not mark pins or reactive resin bowling balls. Mounting holes are reinforced with grommets and each comes complete with tie wraps ready to install.



### V 12 862167 Pit Curtain

Reinforced, double wall rubber sheet. Textured surface will not reflect light, so automatic scoring is unaffected.



### V 12 200527 Nut Plate Kit

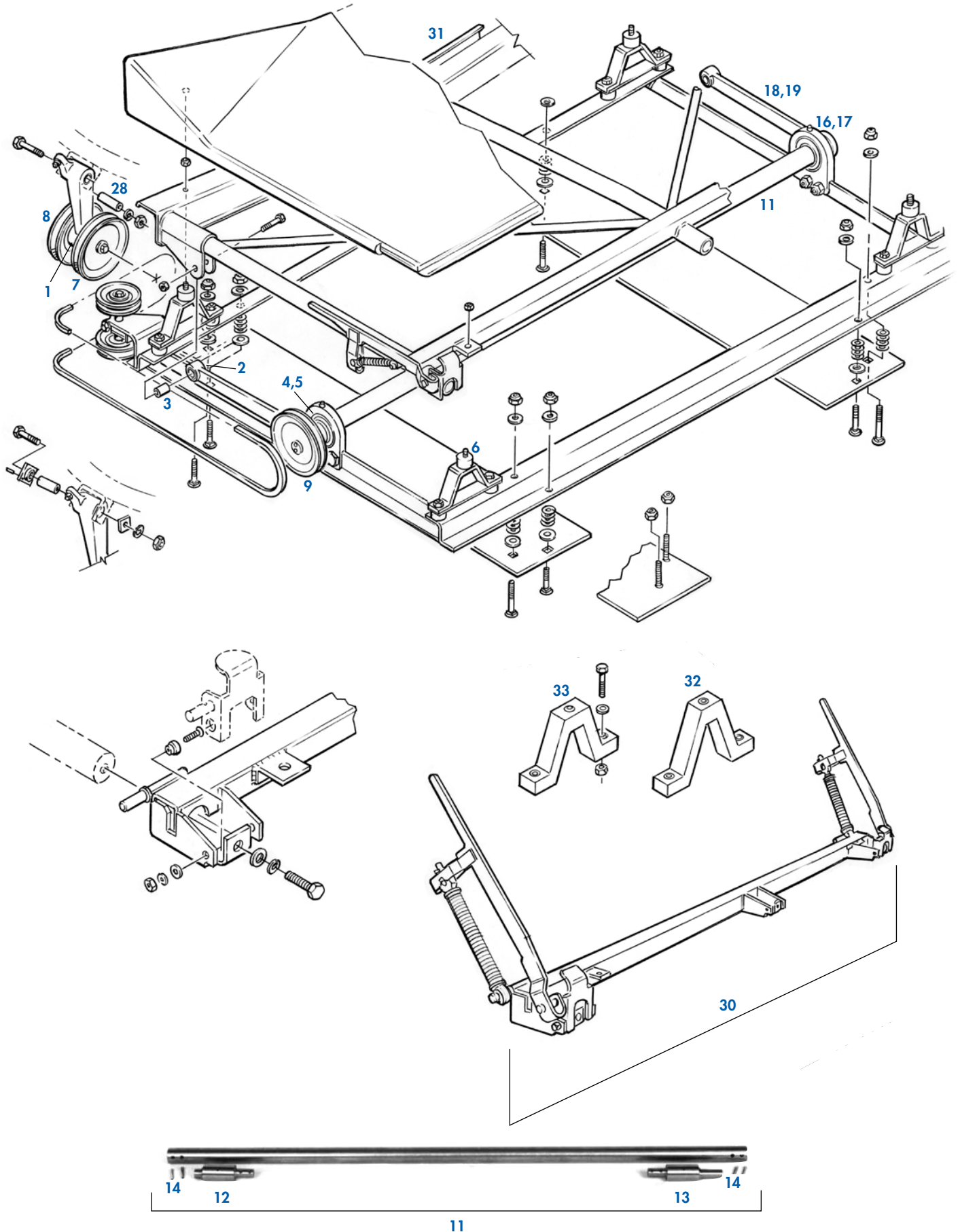
Steel nut plate kit eliminates problems caused by hex nuts when installing curtain rod brackets and is adjustable.



### V 12 862580 S Mini-Cushion Arm Rebuild Kit

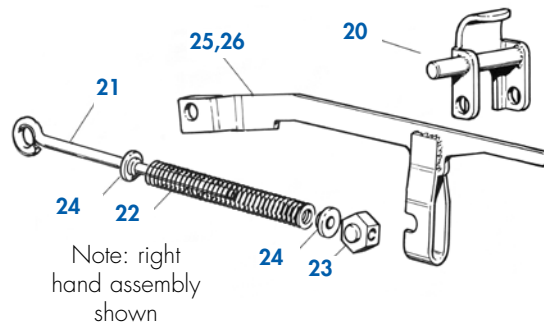
Proper cushion arm maintenance is a must for smooth cushion operation. Choose our mini-cushion arm rebuilding kit or cushion arm rebuilding kit to do the job right!

Part #	Description	Part #	Description	Part #	Description
1	V 10 002001 Hex Head Cap Screw	16	V 11 230005 X-Washer	30	V 12 252349 Follower Spacer
2	V 10 002006 Hex Head Cap Screw	17	V 11 420094 Bronze Bushing	31	V 12 252350 Bushing
3	V 10 009001 Socket Head Cap Screw	18	V 11 603 114 Cable Tie (Not Shown)	32	V 12 252351 Urethane Follower Link Bushing
4	V 10 229601 X-Washer Pin	19	V 12 100185 036 Spacer	33	V 12 252352 Cushion Arm Bolt
5	V 10 229602 X-Washer Pin	20	V 12 200527 Nut Plate Kit	34	V 12 252365 Rod End (Not Shown)
6	V 10 386092 Spacer	21	V 12 250011 002 Spacer	35	V 12 862167 Pit Curtain
7	V 10 424001 Grooved Bearing	22	V 12 250189 Rubber Bushing	36	V 12 862580 Cushion Arm Rebuilding Kit (not shown)
8	V 11 001394 Hex Head Cap Screw	23	V 12 252060 Rod End	37	V 12 862580 S Mini Cushion Arm Rebuilding Kit (not shown)
9	V 11 121519 Nylon Cap Lock Nut	24	V 12 252069 Cushion Link	38	V 12 862839 Cushion Mount
10	V 11 121523 Nylon Cap Lock Nut	25	V 12 252173 No Longer Available		
11	V 11 125259 Hex Jam Nut L.H.	26	V 12 252310 "Strap On" Cushion Facing		
12	V 11 170016 Lock Nut	27	V 12 252344 Single Cushion Bracket		
13	V 11 190511 Washer 13/16	28	V 12 252346 Follower Link		
14	V 11 190512 Fender Washer	29	V 12 252346 U Urethane Follower Link (Not Shown)		
15	V 11 190520 Washer				

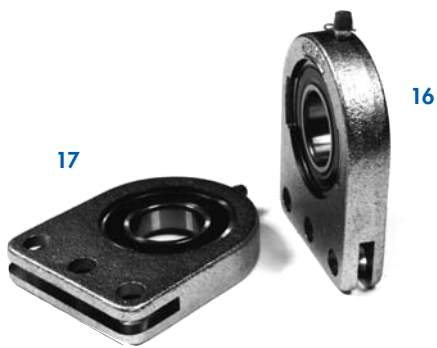




**PIT BOARDS**



**PIT FRAME SERVICE PARTS**



**VIBRATOR SHAFT BEARING ASSEMBLY**

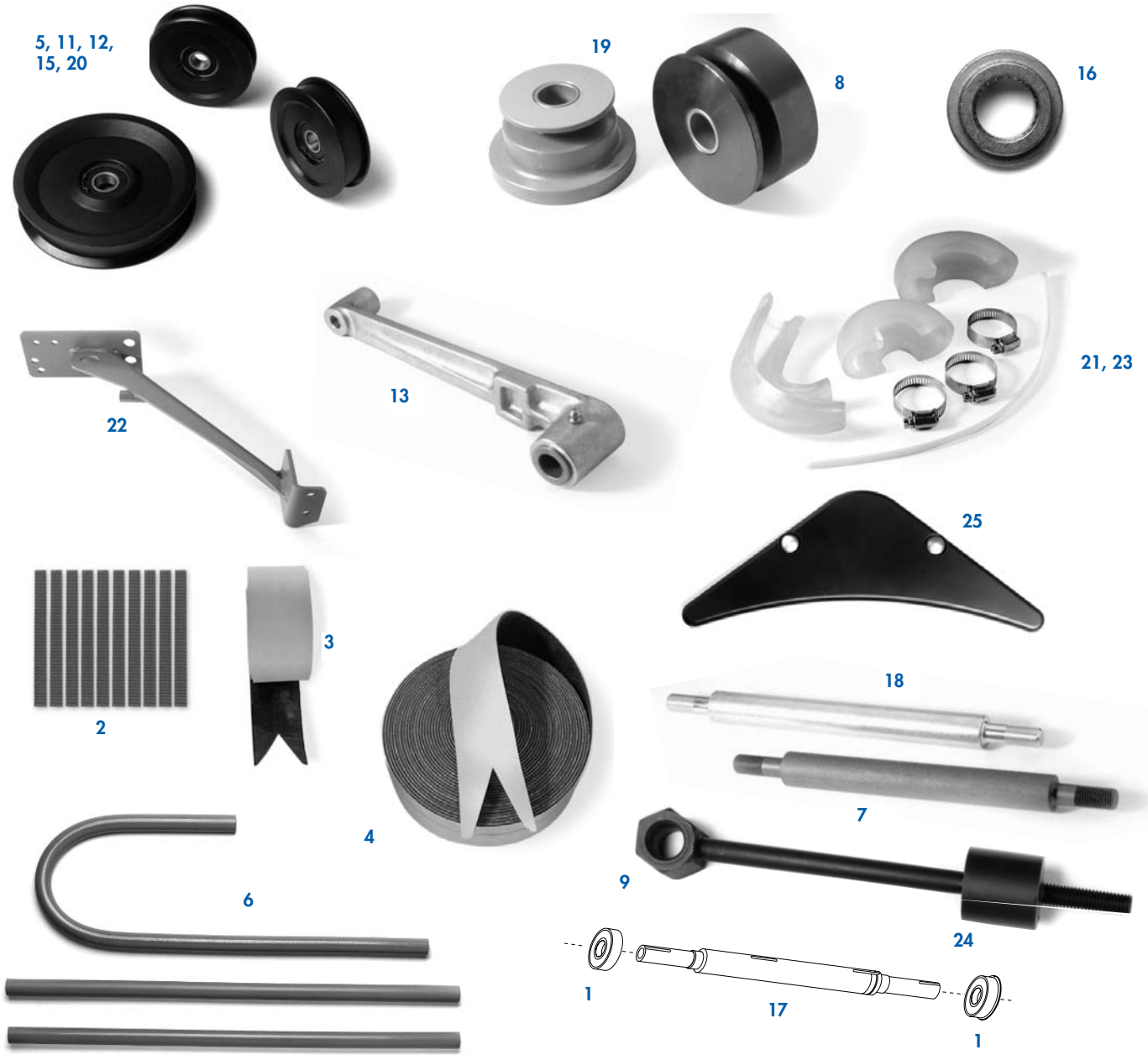
Special self-aligning pit shaft bearing has housing with grease fitting.



**JOGGER ARM**

Solid steel construction lasts longer.

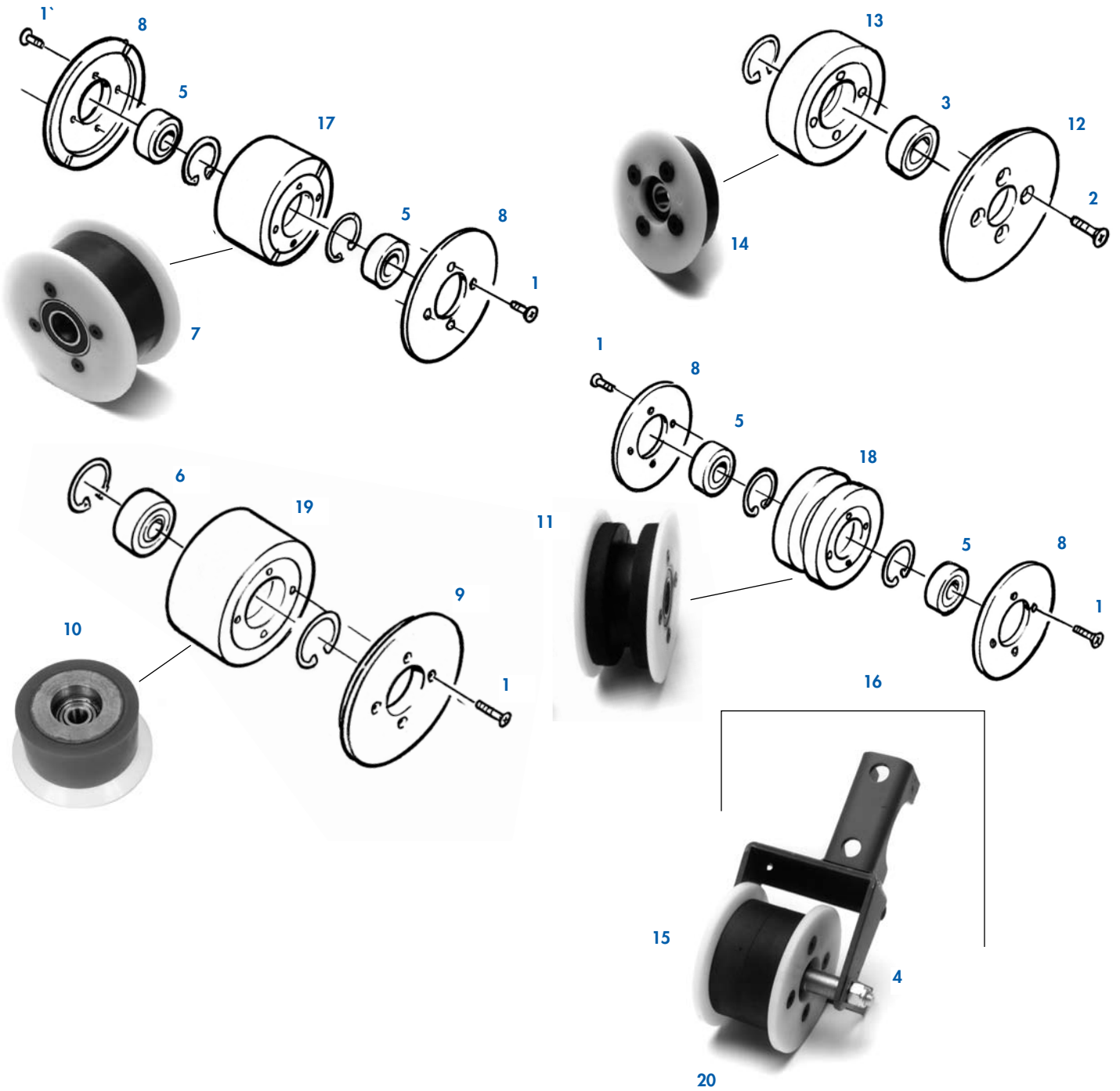
Part #	Description	Part #	Description	Part #	Description
1	V 11 430007	Ball Bearing	13	V 12 300141 2	Pivot End R.H.
2	V 11 450001	Roller Bearing	14	V 12 300141 3	Roll Pins, 10 Pack
3	V 11 450201	Inner Ring	15	V 12 300149	Pit Drive Shaft
4	V 11 491000	Bearing	16	V 12 300160	Vibrator Shaft Bearing Assembly, Complete
5	V 11 536026	Retaining Ring	17	V 12 300160 3	Insert Bearing
6	V 11 675000	Rubber Pit Mount	18	V 12 300163	Jogger Arm
7	V 12 300071	Small Pulley	19	V 12 300163 001	Jogger Arm Assembly
8	V 12 300073	Large Pulley	20	V 12 300168	Clamp & Pin Assembly R.H.
9	V 12 300088	Pit Shaft Drive Pulley	21	V 12 300170	Spring Rod
10	V 12 300103	Pit Carpet	22	V 12 300172	Compression Spring
11	V 12 300141	Vibrator Shaft	23	V 12 300178	Pivot
12	V 12 300141 1	Pivot End L.H.	24	V 12 300189	Step Washer
			25	V 12 300192	Clamp Lever R.H.
			26	V 12 300193	Clamp Lever L.H.
			27	V 12 300206	Plywood Pit Board Only
			28	V 12 400241	Pulley Arm Spacer
			29	V 12 860620 3	Complete Pit Board Assembly
			30	V 12 860624	Quick Change Conversion Kit
			31	V 12 860659	Top Pit Frame Assembly
			32	V 90 300076	Front Pit Mount
			33	V 90 300077	Rear Pit Mount



Part #	Description
1 V 10 430001	Universal Jack Shaft Bearing
2 V 100	Ball Wheel Liner
3 V 100 SS	Ball Wheel Liner, Adhesive Backed
4 V 100 SS 24	Twenty Four Foot Roll, Ball Wheel Liner, Adhesive Backed
5 V 12 300075	Idler Pulley Assembly Pit Conveyor
6 V 12 400048 005	Urethane Lift Rod Cover

Part #	Description
9 V 12 400193	Spring Rod
10 V 12 400209	Cross Conveyor Drive Idler Pulley
11 V 12 400219	Long Turret Drive Idler Pulley-Flat Belt
12 V 12 400221	Long Turret Drive Idler Pulley-V Belt
13 V 12 400254	Pivot Idler Arm
14 V 12 400256	Guide Roller Replacement Shaft
15 V 12 400297	Flat Belt Idler Motor/Elevator

Part #	Description
16 V 12 400803	Spring Rod Wear Bushing
17 V 12 400810	Universal Jack Shaft
18 V 12 402051	Stud
19 V 12 402126	Pin Wheel Drive Pulley
20 V 12 450034	Cross Conveyor Pulley
21 V 12 860614	A Pinsetters Lift Rod Cap Kits
22 V 12 862180	Track Support
23 V 12 862860	A2 Pinsetters Lift Rod Cap Kits
24 V 90 400123	Urethane Spring Rod Bumper
25 V 90 400840	Ball Wheel Guard (Urethane Universal)



Part #	Description
1 V 11 008148 001	Nyloc Screw
2 V 11 008301 001	Nyloc Screw
3 V 11 430004	Bearing
4 V 11 430007	Bearing
5 V 11 430013	Bearing
6 V 11 432000	Bearing
7 V 12 400240	Urethane Ball Wheel Roller
8 V 12 400257	Nylon Flange

Part #	Description
9 V 12 400265	Nylon Flange
10 V 12 400266	Upper Pin Wheel Guide Roller
11 V 12 400268	Urethane Ball Wheel Roller
12 V 12 400269	Nylon Flange
13 V 12 400271	Hub & Tire
14 V 12 400272	Urethane Ball Wheel Guide Roller Assembly
15 V 12 402107	Nylon Flange

Part #	Description
16 V 12 862823	H.D. Urethane Ball Wheel Guide Roller
17 V 90 400258	Urethane Coated Hub
18 V 90 400260	Urethane Coated Hub
19 V 90 400264	Urethane Coated Hub
20 V 90 402108	Urethane Coated Hub



**TORSION LATCH**

Assembly includes oilite bushings.



**PIN GUIDES**

Tough high grade alloy, nickel plated, gives exceptional wear resistance.



**TURRET DELAY GEAR**

Heavy duty casting, built for long life. Precision machining.

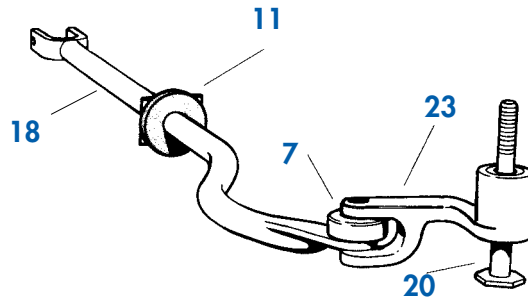


**SHORT LINK**

Durable, yet easy to adjust.



**INTERLOCK PROBE**



**LONG LINK ASSEMBLY**

5, 6, 7, 8



**PIN GATE STRAP**

This low friction plastic provides no-lock, smooth operation, long life and reduced roll pin wear.





**NEW!**

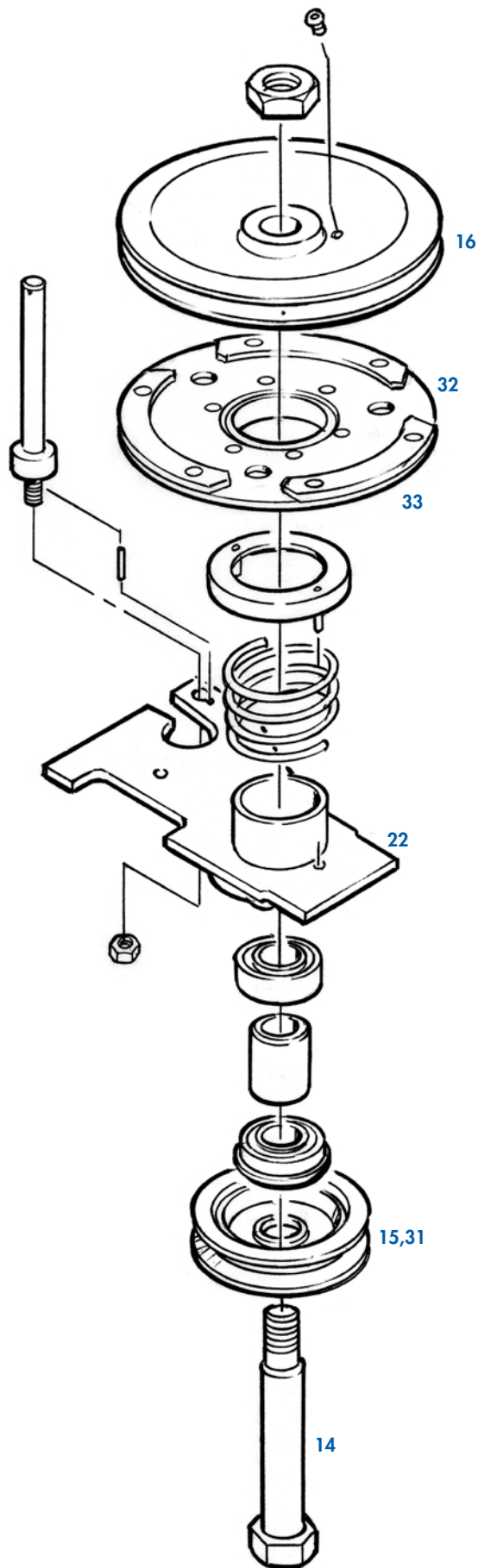
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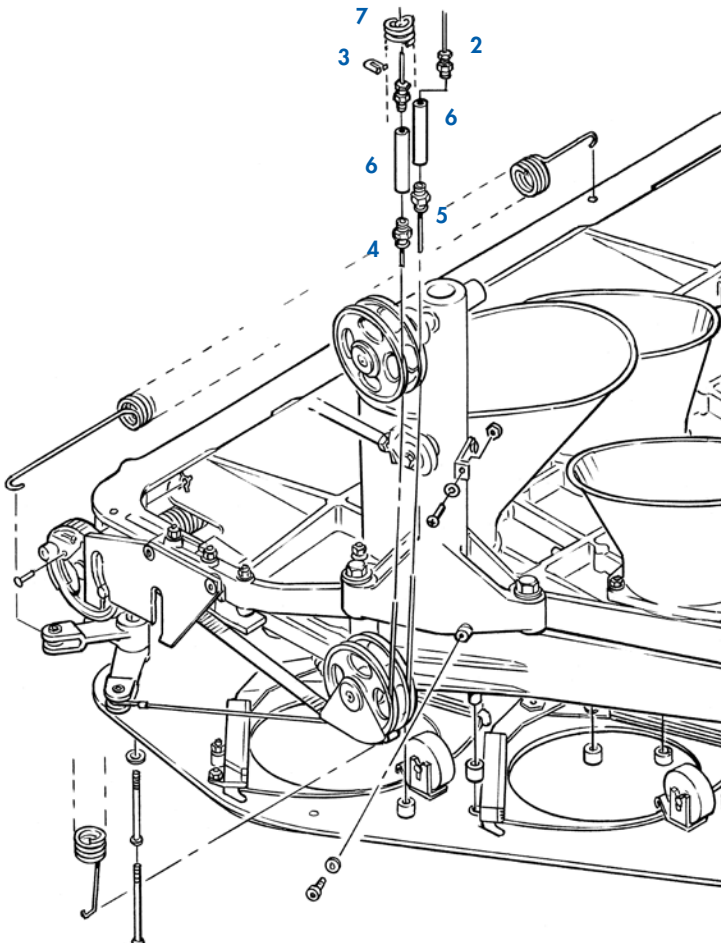


## TURRET RINGS

Available with standard size and oversize holes.

Part #	Description
1	V 12 150011 Torsion Latch
2	V 12 150040 Turret Ring Original Holes
3	V 12 150040 1 Turret Ring (Large Holes)
4	V 12 150051 Bellcrank (Not Shown)
5	V 12 150057 003P Pin Gate Strap, Plastic
6	V 12 150057 003S Pin Gate Strap, Steel
7	V 12 150057 004P Pin Gate Strap Kit, Plastic
8	V 12 150057 004S Pin Gate Strap Kit, Steel
9	V 12 150086 Interlock Probe
10	V 12 150138 Turret Delay Gear
11	V 12 150142 3 Bumper (package of 5)
12	V 12 150176 Full Deck Blocking Finger (Not Shown)
13	V 12 150200 Restricted Drop Link Blocking Finger (Not Shown)
14	V 12 150216 Turret Clutch Drive Shaft
15	V 12 150219 Turret Clutch Drive Pulley
16	V 12 150220 Turret Clutch Top Pulley
17	V 12 150226 Roller and Bearing Assembly
18	V 12 150234 Long Link
19	V 12 150235 Latch (Not Shown)
20	V 12 150247 Shoulder Stud
21	V 12 150254 Turret Delay Gear Shaft (comes with oil fitting for lubrication)
22	V 12 150258 Slide Plate
23	V 12 150279 Lever Assembly
24	V 12 150287 Long Link Assembly
25	V 12 150289 Short Link
26	V 12 150294 Inner 2,3,4,6,8,9
27	V 12 150295 Inner 1,7,10
28	V 12 150296 Outer 1,7,10
29	V 12 150297 Outer 2,3,4,6,8,9,
30	V 12 150303 Indexing Roller (Not Shown)
31	V 12 150306 Turret Clutch Drive Pulley
32	V 12 860617 Friction Disc Assembly
33	V 12 860805 Turret Disc Facing





**FOR  
DECK CHUTES  
ALSO SEE  
PAGE 6**



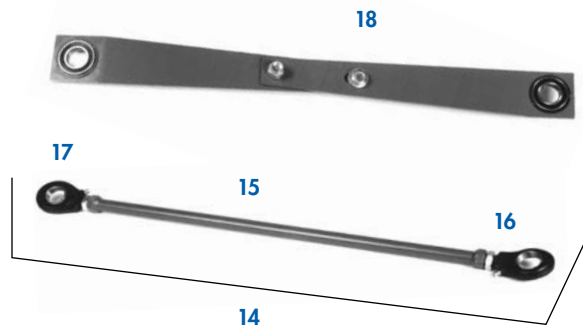
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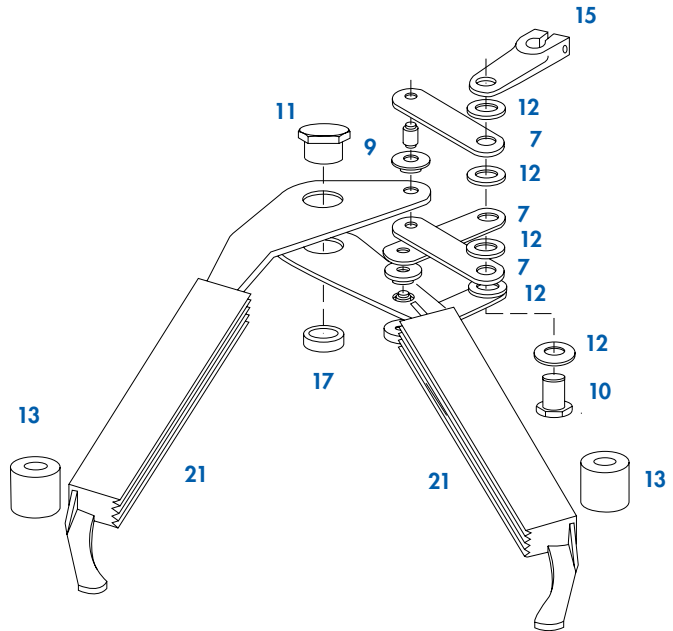
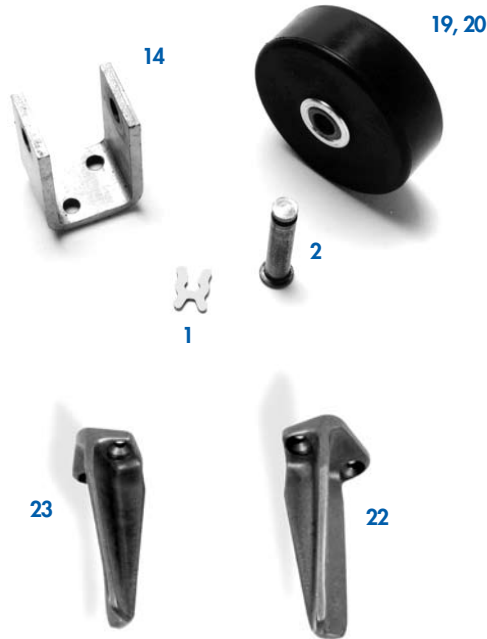
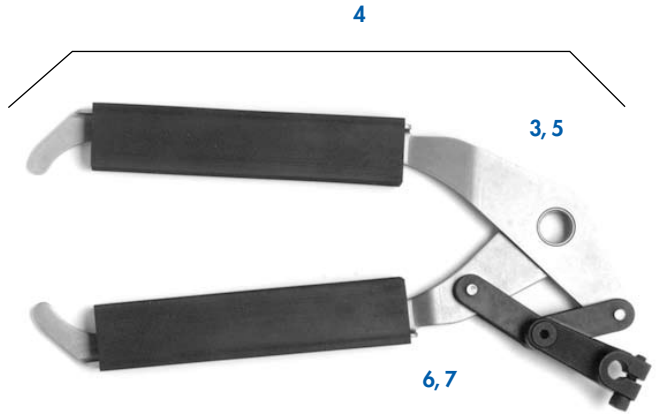
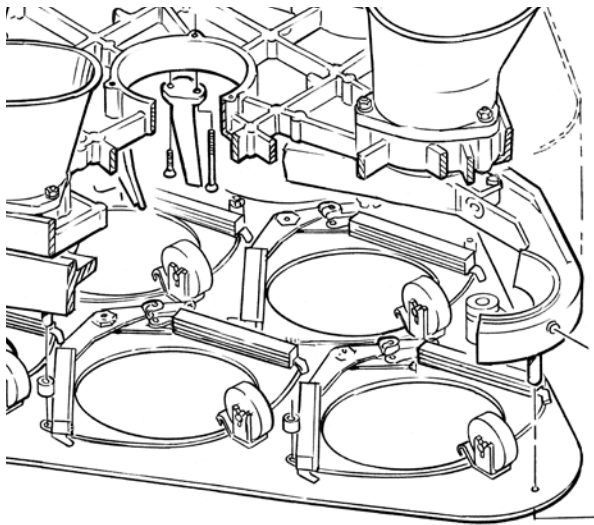
16

14

Part #	Description
1	V 12 100 280 Moving Deck Cable (Not Show)
2	V 12 200 066 2 Upper Scissor Cable
3	V 12 200 066 3 Upper Moving Deck Cable
4	V 12 200 066 4 Lower Moving Deck Cable
5	V 12 200 067 Lower Scissor Cable
6	V 12 200 069 Turnbuckle
7	V 12 200 125 Keeper Spring
8	V 12 200 126 Moving Deck Wheel

Part #	Description
9	V 12 200 808 002 Smooth Shoot #1 Pin(See Page 6)
10	V 12 200 808 003 Smooth Shoot #7 & 10 Pin (See Page 6)
11	V 12 200 809 Smooth Shoot #2, 6, 8 Pin (See Page 6)
12	V 12 200 810 Smooth Shoot #3, 4, 9 Pin (See Page 6)
13	V 12 200 837 Smooth Shoot #5 Pin (See Page 6)
14	V 12 350 122 Deck Lift Stabilizing Assembly (Original Style)

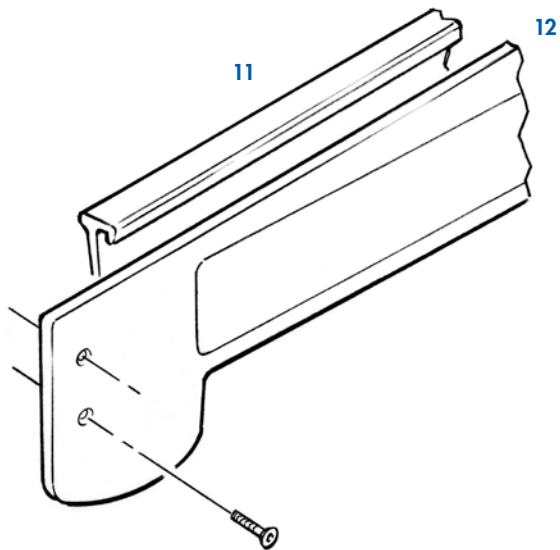
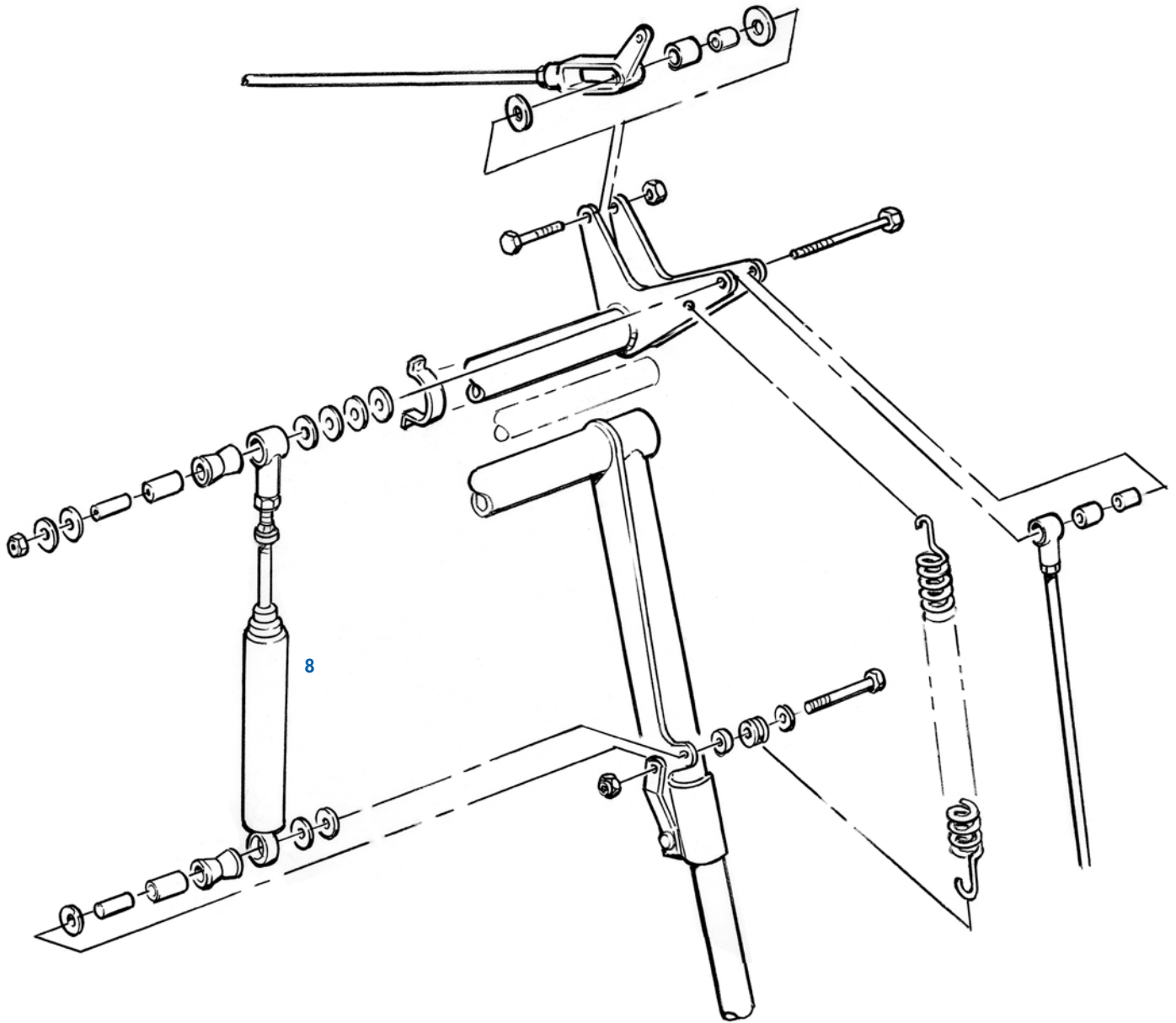
Part #	Description
15	V 12 350 122 2 Threaded Tube
16	V 12 350 122 3 Rod End R.H. Thread
17	V 12 350 122 4 Rod End L.H. Thread
18	V 12 350 217 Deck Lift Stabilizing Assembly (New Style)
19	V 12 350 802 Deck Hook Complete Assembly
20	V 12 350 803 Deck Hook
21	V 12 350 804 Deck Hook Hub



Part #	Description
1 V 11 230002	X Washer
2 V 12 100166 31	Pin For Machines After #26001
3 V 12 200016	Long Scissor Arm (w/slip on pad)
4 V 12 200016 091	Scissor Arm Assembly
5 V 12 200017 092	Long Scissor Arm (w/o pad)
6 V 12 200018	Short Scissor Arm (w/slip on pad)
7 V 12 200019 092	Short Scissor Arm (w/o pad)

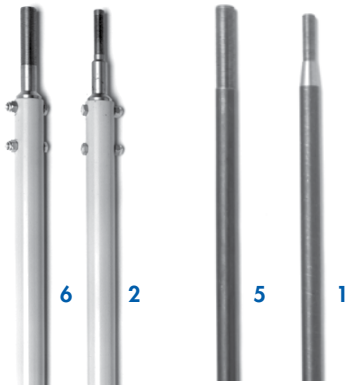
Part #	Description
8 V 12 200026	Link
9 V 12 200027	Shoulder Pin
10 V 12 200028	Shoulder Pin
11 V 12 200029	Stud
12 V 12 200031 004	Nylon Washer .020 Thick
13 V 12 200032	Rubber Stop
14 V 12 200038	Roller Bracket
15 V 12 200039	Drag Link
16 V 12 200059 002	Washer

Part #	Description
17 V 12 200104	Scissor Arm Bushing
18 V 12 200105	Iron Oilite Bearing
19 V 12 200114	Deck Roller w/Bearing Assy, Neoprene
20 V 12 200114 0	Rubber Deck Roller only
21 V 12 200120 004	Scissor Pad
22 V 12 200892	Spotting Fingers Right Hand
23 V 12 200893	Spotting Fingers Left Hand



**SWEEP ARM**

This sweep arm is manufactured of lightweight aluminum and is equipped with oilite bushings for pinsetter attachment and steel helicoil inserts for mounting to the rake board assembly.



## RAKE CRANK RODS

Non-collapsible version offers traditional construction and service. Collapsible version eliminates bent and broken rake crank rods.



## RAKE BOARD ASSEMBLY

Manufactured from a phenolic graphite composite that is stronger than fiberglass it offers high strength and impact resistance mechanics request.

**NEW!**



## RAKE SHAFT ASSEMBLY

Quickly installed, easy to repair, lasts longer with an unprecedented 3 YEAR WARRANTY.



## TRIP ARM ASSEMBLY

Heavy duty cast aluminum product with oilite bushings installed.



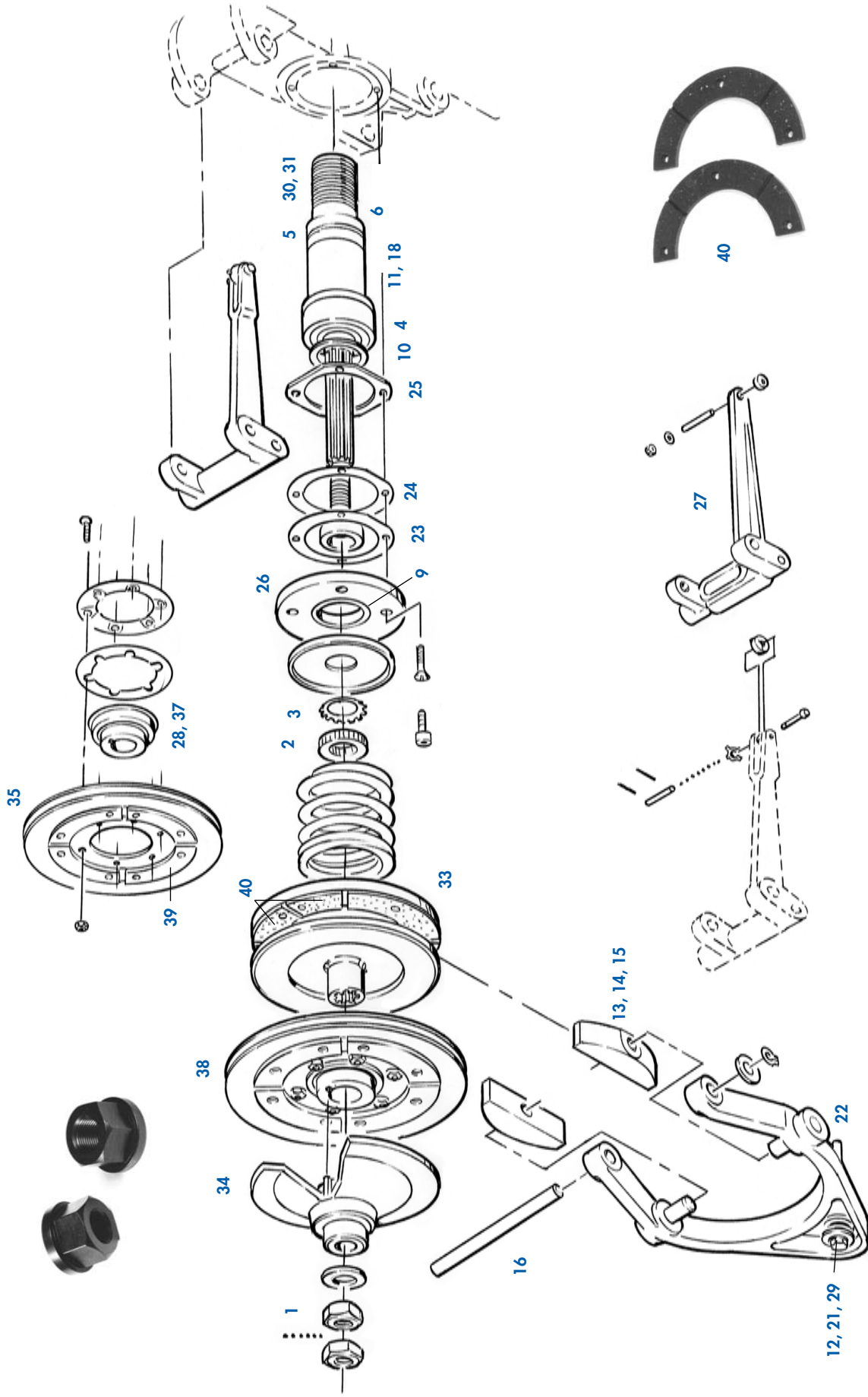
## RAKE REPAIR KIT

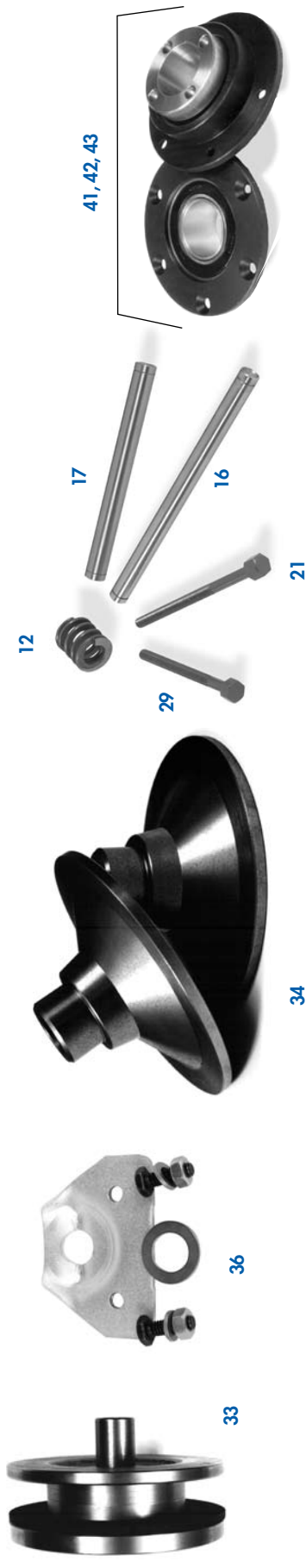
Features a solid aluminum bar machined to fit a rake shaft tube very tightly. The strong aluminum tube can be drilled with ease.

Part #	Description	Part #	Description	Part #	Description
1	V 12 250022 002 Rake Crank Rod, Tapered End	6	V 12 250278 002C Rake Crank Rod, Straight End, Collapsible	11	V 12 252372 Rake Cushion
2	V 12 250022 002C Rake Crank Rod, Tapered End, Collapsible	7	V 12 252037 Sweep Arm	12	V 12 252373 Rake Board Only
3	V 12 250273 Pivot Assy w/Bearings	8	V 12 252338 Rake Shock Assembly	13	V 12 252374 Rake Board Assembly
4	V 12 250275 Pivot Assy w/Bearings	9	V 12 252354 Trip Arm Assembly	14	V 12 860607 Rake Repair Kit
5	V 12 250278 002 Rake Crank Rod, Straight End	10	V 12 252355 91 Pivot Link	15	V 12 862186 Rake Shaft Assembly
				16	V 12 862186 006 Spare Arm, fits either side



**Gearbox Components**





41, 42, 43



27



32

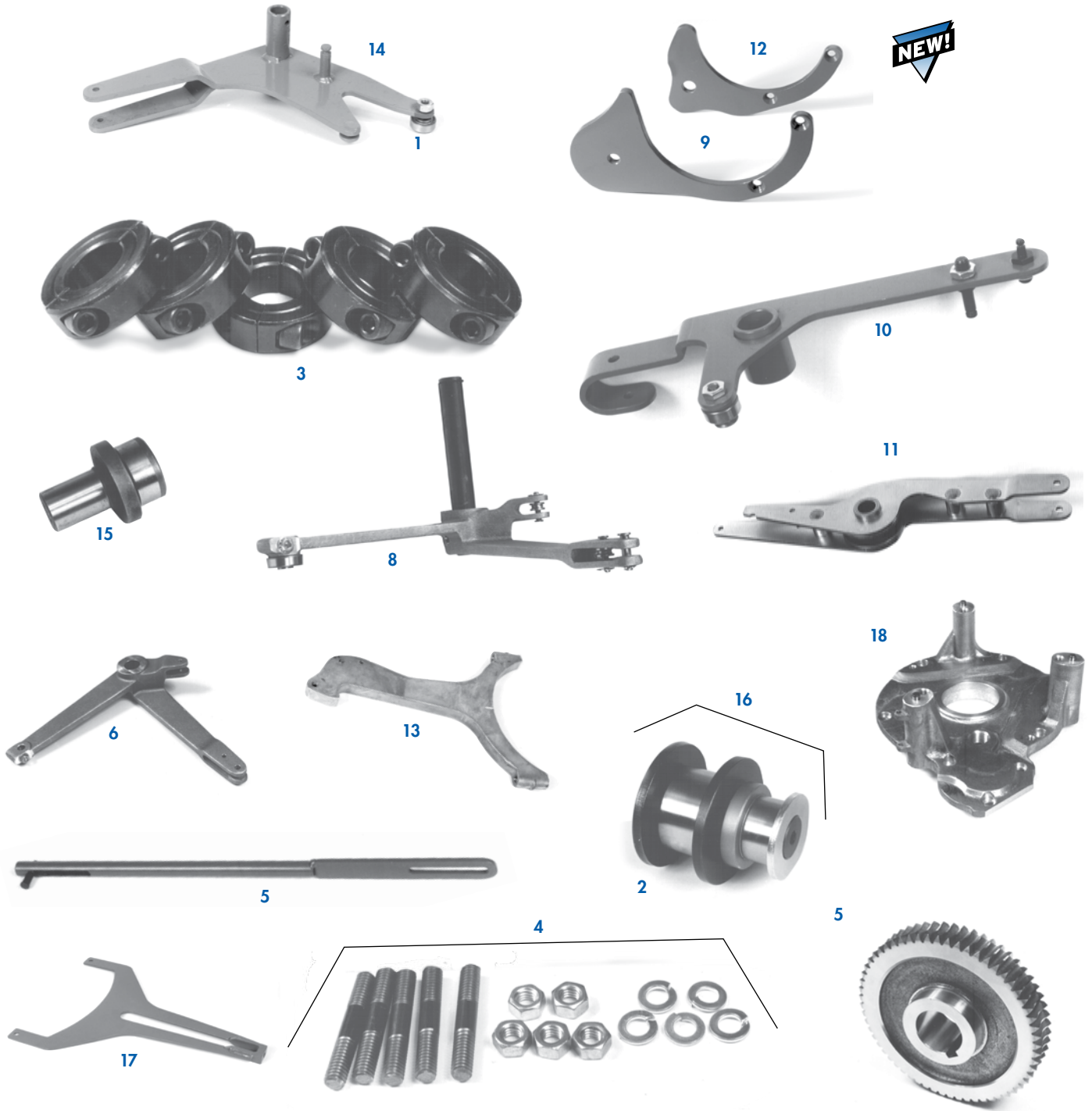


30, 31



13, 14, 15

Part #	Description	Part #	Description	Part #	Description
1	V 11 131 516 Heavy Duty Worm Nut	11	V 12 100 066 Spacer-outer	22	V 12 100 370 Yoke & Bearing Assembly
2	V 11 160 005 Special Nut	12	V 12 100 091 Compression Spring	23	V 12 100 381 2 Shim Gasket .005
3	V 11 231 005 Special Lock Washer	13	V 12 100 146 Standard Size	24	V 12 100 381 3 Shim Gasket .010
4	V 11 432 002 Bearing	14	V 12 100 146 30 .030 Thicker	25	V 12 100 391 Rubber Gasket
5	V 11 450 100 Bearing-outer race	15	V 12 100 146 60 .060 Thicker	26	V 12 100 477 Bearing Retainer
6	V 11 450 200 Bearing-inner race	16	V 12 100 168 2 Clutch Lever Pin	27	V 12 100 486 Clutch Lever Assembly
7	V 11 530 015 External Retaining Ring (not shown)	17	V 12 100 168 3 Clutch Yoke Pin	28	V 12 100 892 Replacement Bearing
8	V 11 530 017 External Retaining Ring (not shown)	18	V 12 100 185 2 Spacer-inner	29	V 12 102 180 2-1/2" Adjusting Screw
9	V 11 625 000 Oil Seal	19	V 12 100 185 3 Hardened Spacer	30	V 12 860 171 Worm Shaft
10	V 11 625 501 Rubber O-Ring	21	V 12 100 257 4" Adjusting Screw	31	V 12 860 172 Complete Worm Shaft Assembly
				32	V 12 860 303 Worm Shaft Kit
				33	V 12 860 613 Clutch Drive Disc
				34	V 12 860 626 Clutch Disc
				35	V 12 860 630 Clutch Pulley
				36	V 12 860 672 Yoke Repair Kit
				37	V 12 860 716 Clutch Pulley Bearing
				38	V 12 860 717 Clutch Pulley Assembly
				39	V 12 862 864 3 Pulley Facing
				40	V 12 862 864 5 Non-astatos Clutch Facing...made with long wear in mind.
				41	V 12 8629 A Pulley Housing
				42	V 12 8629 B Replacement Bronze Bushing
				43	V 12 8629 D Snap Ring

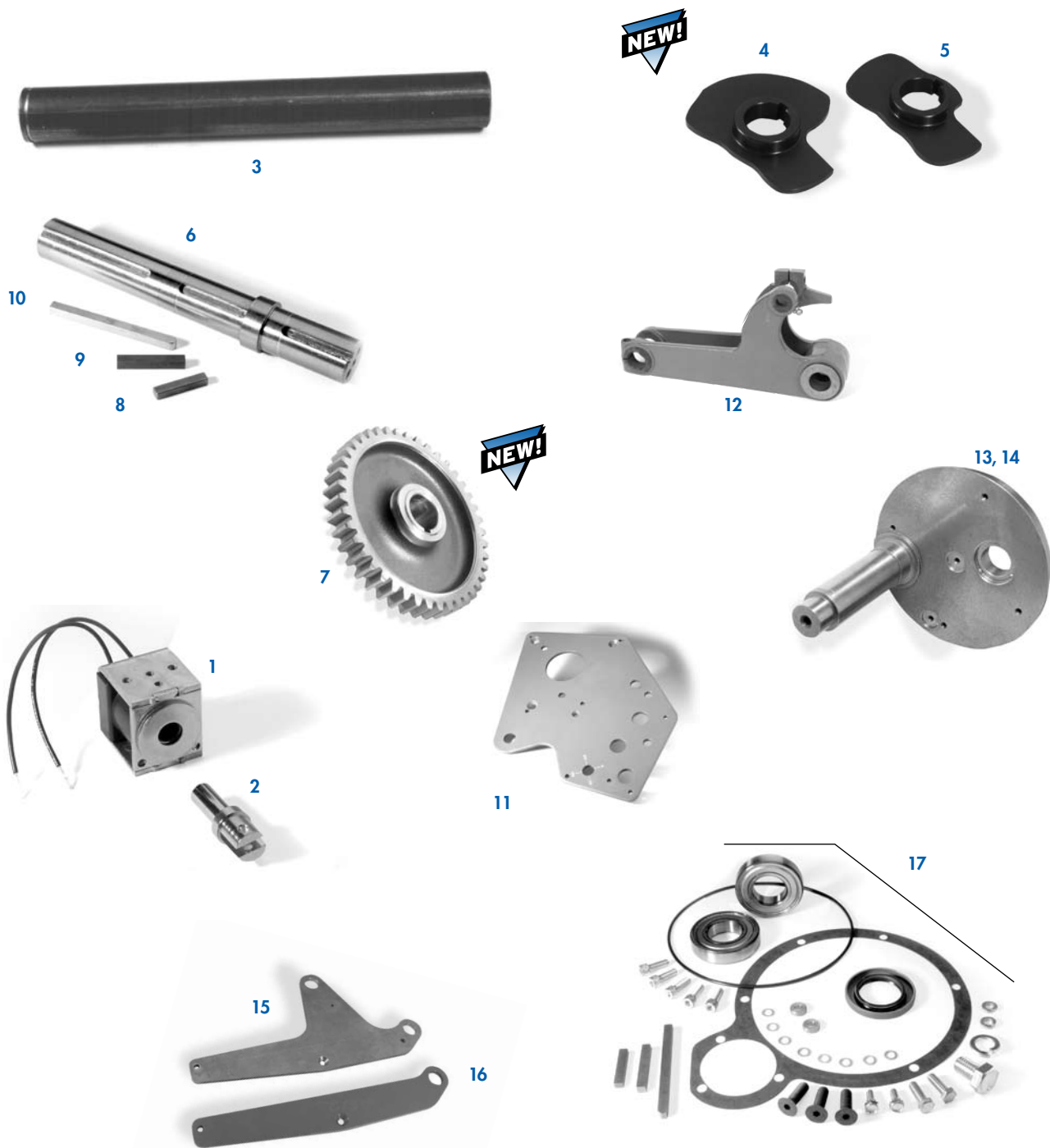


Part #	Description
1	V 10 376 010 Spring Roller
2	V 11 450 101 Roller Bearing
3	V 12 100 104 5 Special Locking Collar, 5 collars per package
4	V 12 100 107 Grade 8 Studs, 5 studs and hardware per package
5	V 12 100 174 4 to 1 Worm Wheel
6	V 12 100 178 Deck Hook Cam Lever Only

Part #	Description
7	V 12 100 229 Clutch Release Link Also replaces part #12 862 867
8	V 12 100 242 Deck Hook Cam Lever Assembly
9	V 12 100 387 Deck Hook Lift Cam
10	V 12 100 410 Hook Selector
11	V 12 100 465 Plunger Lever Assembly
12	V 12 100 831 Deck Hook Lift Cam

Part #	Description
13	V 12 100 832 Deck Lift Hook
14	V 12 102 176 Clutch Reset Lever Assembly
15	V 12 102 754 2 to 1 Stud
16	V 12 102 755 Stud Replacement Kit (Kit includes stud, bearings, washers and cap screws)
17	V 12 102 816 Scotch Yoke Plate
18	V 12 860 628 Gearbox Cover and Pin Assembly

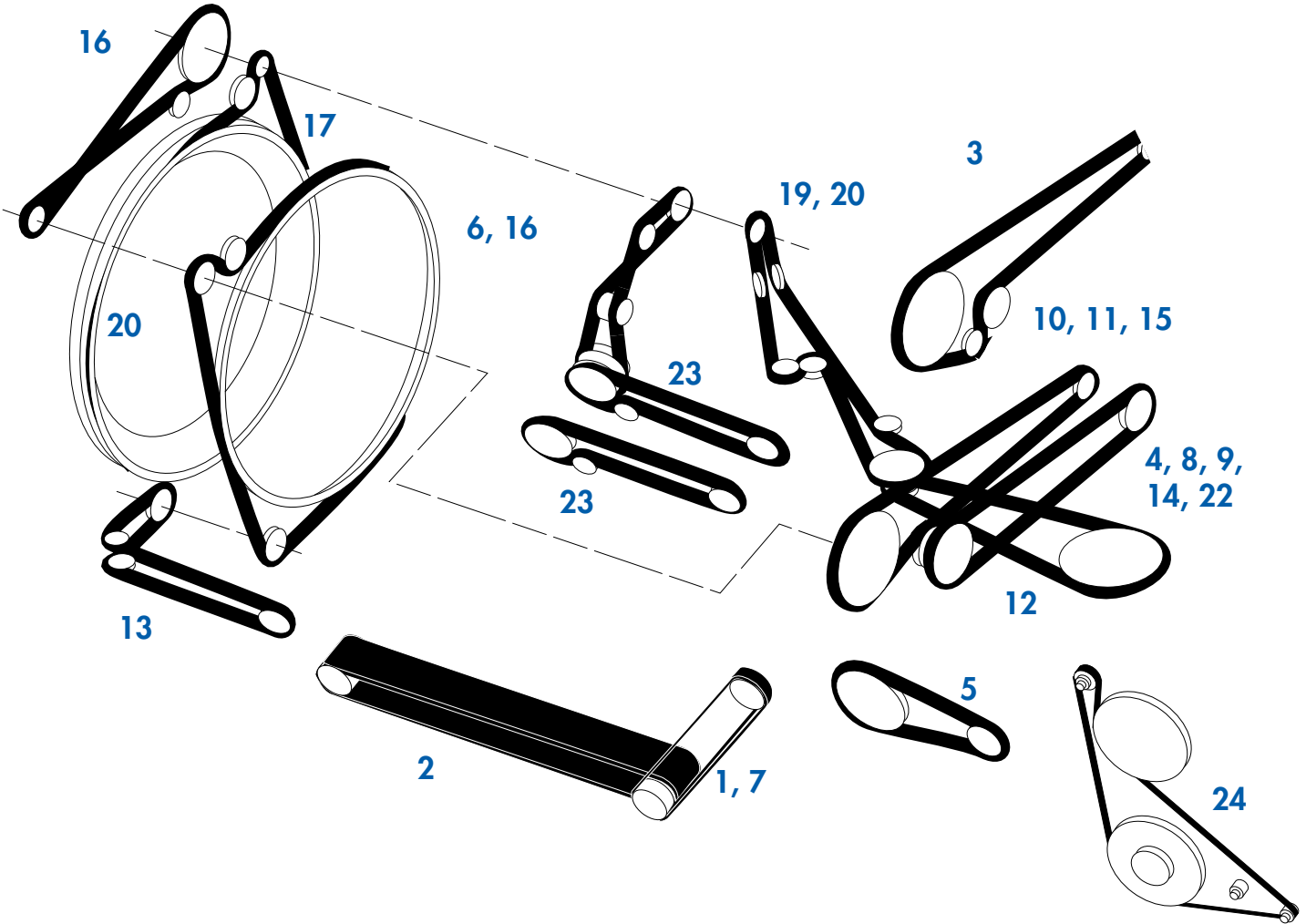




Part #	Description	Part #	Description	Part #	Description
1	V 10 688 003 Solenoid, 230V 60 hz	7	V 12 100 140 Spur Gear	13	V 12 100 829 2 to 1 Main Shaft
2	V 10 688 003 003 Plunger	8	V 12 100 164 Key, Rectangle	14	V 12 100 900 092 2 to 1 Main Shaft
3	V 12 100 104 Cam Follower Shaft Kit	9	V 12 100 187 7 Key, Square, 2"	15	V 12 250 234 Cam Follower Arm
4	V 12 100 122 Cycle Cam	10	V 12 100 187 8 Key, Square, 4 1/8"	16	V 12 252 234 Cam Follower Arm
5	V 12 100 123 Cycle Cam	11	V 12 100 207 1 to 1 Mount Plate	17	V 12 862 859 1 to 1 Rebuild Kit
6	V 12 100 130 1 to 1 Main Shaft	12	V 12 100 313 Moving Deck Cam Follower		



### Vantage Replacement Belts



Part #	Description	Part #	Description	Part #	Description
1	V 10 635112 Motor Pulley Flat Drive Belt 2-23/32"	9	V 10 635326 Motor to Gearbox Belt A66	18	V12 400034 007 Round Belt Drive Cross Conveyor
2	V 10 635126 Long Accelerator Flat Belt A2/66-67"	10	V 10 635329 Motor to Elevator Belt A90	19	V12 400223 Long Non-Bevel GearDrive Turret Belt
3	V 10 635303 V-Belt Motor to Elevator A2/91-92"	11	V 10 635330 Motor to Elevator Belt A94	20	V12 400227 V-Belt Ball Wheel Endless
4	V10 635304 V-Belt Motor to Gearbox Driver & 8" driven	12	V 12 150113 Turret Short Drive	21	V12 400314 Long Bevel Gear Drive Turret Belt
5	V 10 635308 V-Belt Ball Booster 2.7"	13	V 12 300082 003 V-Belt Pit Conveyor	22	V12 400329 V-Belt Motor to Gearbox A&JB/78-79"
6	V 10 635309 V-Belt Drive Cross Conveyor	14	V12 400034 002 V-Belt Motor to Gearbox A/76-77"	23	V12 450037 Cogged V-Belt Cross Conveyor
7	V 10 635314 V-Belt Ball Booster 2.3" Driver & 9" driven	15	V12 400034 003 V-Belt Motor to Elevator A&JB/106107"	24	V53-520230 002 Poly V Subway Belt Drive
8	V 10 635325 Motor to Gearbox Belt A62	16	V12 400034 004 V-Belt Jack Shaft Cross Drive		
		17	V12 400034 005 V-Belt Pin Wheel		

Elevator and Ball Return



8



5

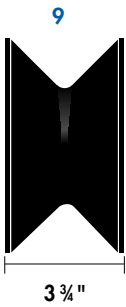


1



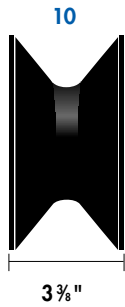
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7



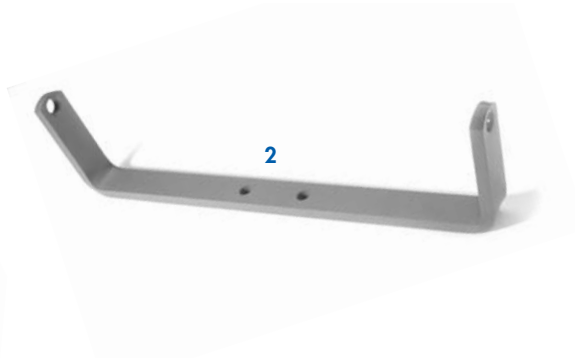
9

3 3/4"



10

3 3/8"



2



11



6

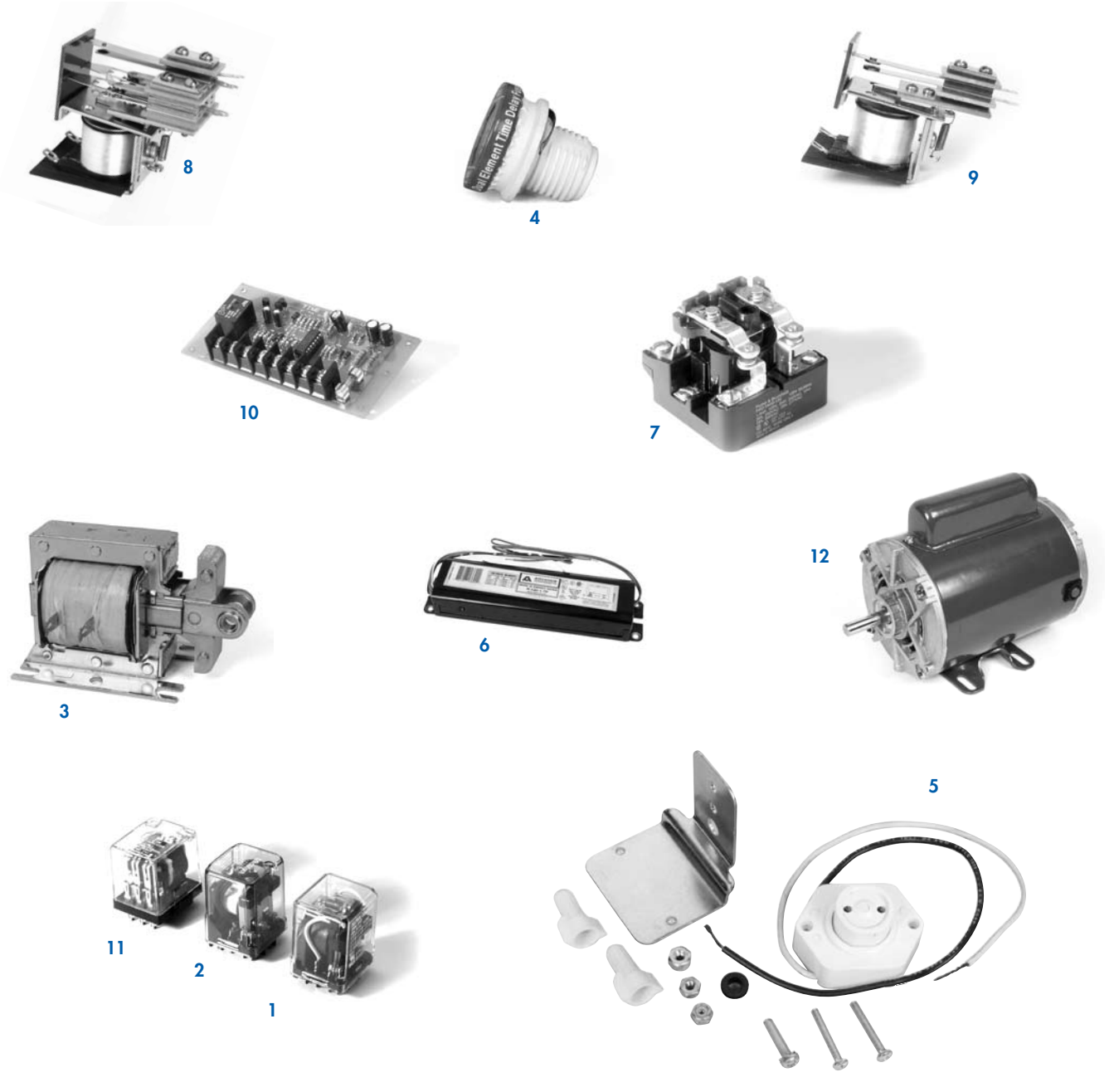


4

Part #	Description
1 V 12 502100	Y Track Assembly
2 V 12 502131	Y Switch Stop Bar
3 V 12 502134	Y Switch Shaft
4 V 12 502154	Y Switch Bumper, Urethane

Part #	Description
5 V 12 502155	Y Switch Spacer, Urethane
6 V 53 520066	Power Lift Drive Shaft
7 V 53 860555	Standard Duty Clutch
8 V 90 502153	Y Switch, Urethane

Part #	Description
9 V 90 520060	Ball Lift Wheel "V" Shape
10 V 90 520060 U	Ball Lift Wheel "U" Shape
11 V 90 520171	Power Lift Track



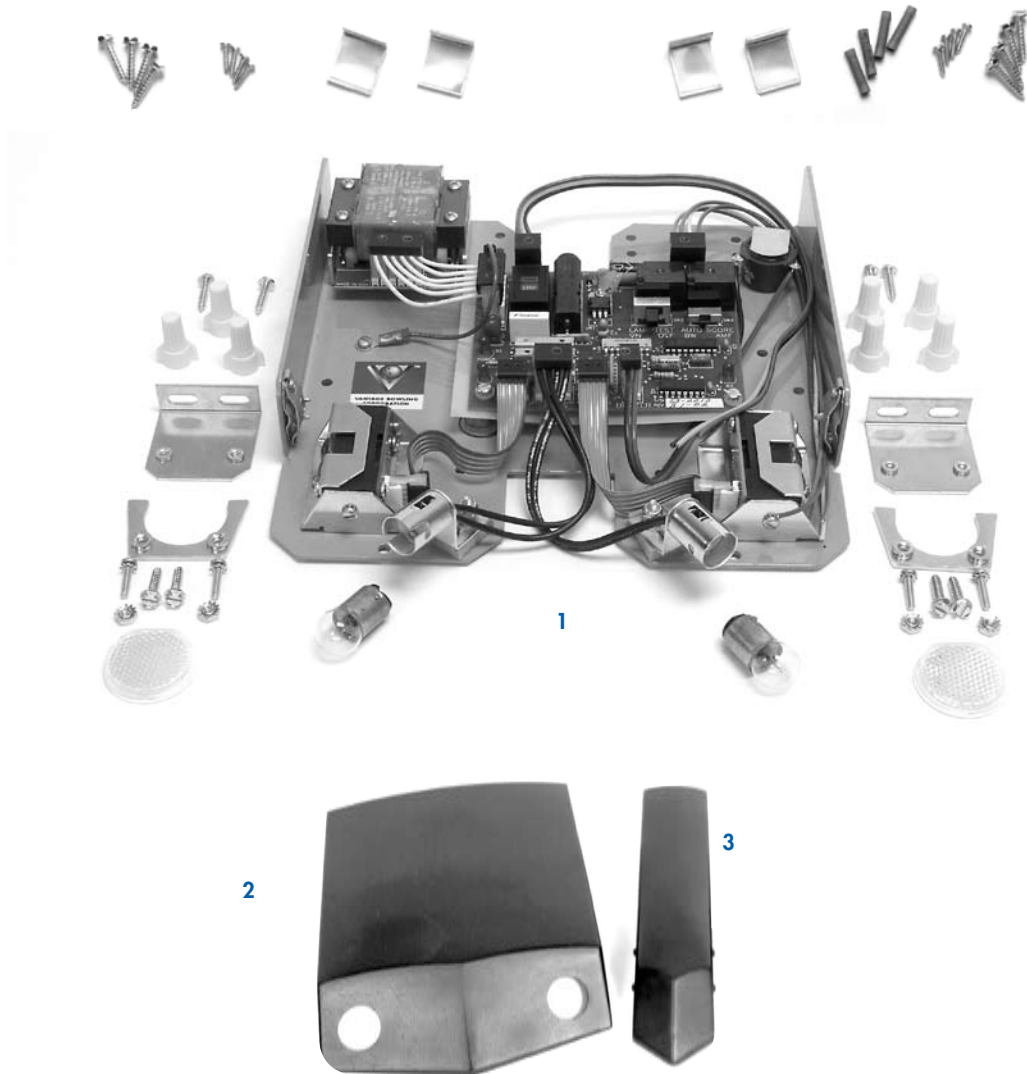
Part #	Description
1 V 11 672600	Power Lift Relay
2 V 11 697103	Power Lift Relay
3 V 12 100291	Recycle Solenoid
4 V 12 750180	3.2 AMP Fuse

Part #	Description
5 V 12 750993	Lamp Socket Kit
6 V 12 750994	Pin Light Ballast
7 V 12 862111	Motor Contactor
8 V 12 862827	Motor Start & Cycle Relay

Part #	Description
9 V 12 862828	Recycle Relay
10 V 12 862890	Time Delay Module
11 V 17 860324	Power Lift Relay
12 V 53 520322 010	Power Lift Motor



## NEW FOUL LIGHTS FOR BRUNSWICK INSTALLATIONS



### THE VANTAGE FOUL LIGHT SYSTEM OFFERS A FULLY INTEGRATED CIRCUIT BOARD AND COMPLETE COMPATIBILITY WITH ALL CENTERS AND BOWLING MACHINERY.

Its many benefits include:

- Compatibility with all major scoring systems
- A low profile for easy installation under any type of ball return cover, that is designed for subway ball returns
- Modular construction for easy service and troubleshooting
- Operation at 120V or 240V
- Vantage service and support worldwide!
- Easy adjustment of photo optics

Attractively priced, contact your Vantage distributor.

- 1. VFL-001**
- 2. VFL-004**
- 3. VFL-003**

**For Brunswick Installations  
Brunswick Wide Division Cover  
Narrow Division Cover  
with Reflector**



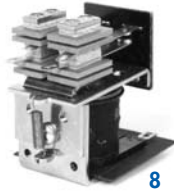
7



3



5



8



1, 2



4



9



12



10



13



11

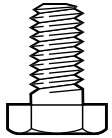
Part #	Description
1 V 12 502349	Accelerator Pulley Assembly (Standard Crown)
2 V 12 502349 600	Accelerator Pulley Assembly (High Crown)
3 V 12 502410S	Pinsetter Motor Pulley
4 V 12 615501	Pinsetter Toggle Switch

Part #	Description
5 V 12 705040	Accelerator Motor
6 V 12 750054	Mechanics Cycle Button (Not Shown)
7 V 12 752056	Pinsetter Motor 50/60 HZ
8 V 12 862830	Accelerator Relay
9 V 124 17 870	Bowler's Reset Button
10 V 14 400022	Ball Polisher Bumper

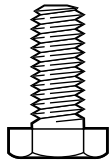
Part #	Description
11 V 14 400036	Ball Polisher Roller
12 V 14 400147	Ball Polisher Filter
13 V 14 860021	Ball Polisher Buffing Wheel

# Hex Head Cap Screws

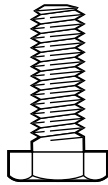
## 1/4-20 Grade 2 Hex Head Cap Screws



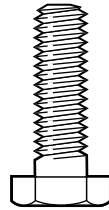
V 11 001078  
1/4-20 x 1/2



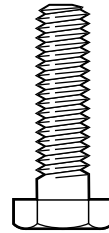
V 11 001180  
1/4-20 x 5/8



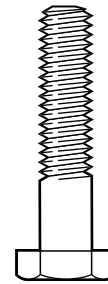
V 11 001182  
1/4-20 x 3/4



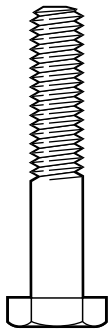
V 11 001183  
1/4-20 x 7/8



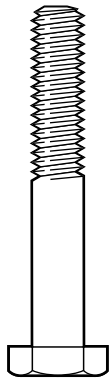
V 11 001184  
1/4-20 x 1



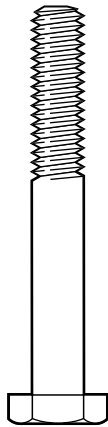
V 11 001186  
1/4-20 x 1-1/4



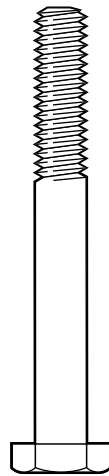
V 11 001188  
1/4-20 x 1-1/2



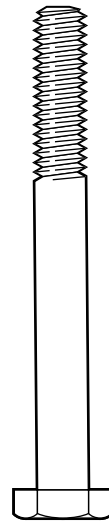
V 11 001190  
1/4-20 x 1-3/4



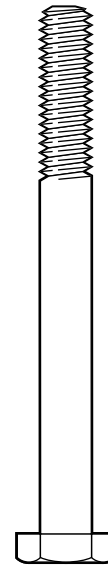
V 11 001192  
1/4-20 x 2



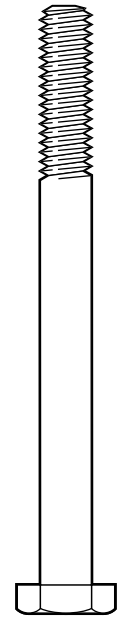
V 11 001193  
1/4-20 x 2-1/4



V 11 001194  
1/4-20 x 2-1/2



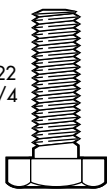
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1/4-20 x 2-3/4



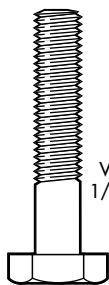
V 11 001196  
1/4-20 x 3

### 1/4-28 Grade 5

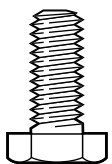
V 11 001222  
1/4-28 x 3/4



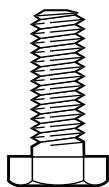
V 11 002035  
1/4-28 x 1-1/4



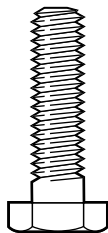
### 1/4-20 Grade 5



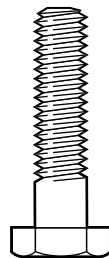
V 11 002001  
1/4-20 x 5/8



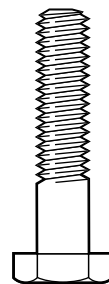
V 11 002002  
1/4-20 x 3/4



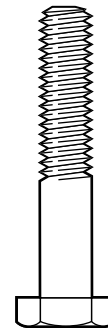
V 11 002004  
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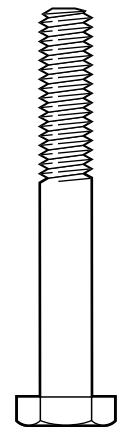
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1/4-20 x 1-1/8



V 11 002005  
1/4-20 x 1-1/4



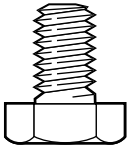
V 11 002006  
1/4-20 x 1-1/2



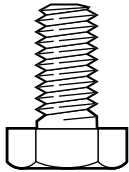
V 11 002008  
1/4-20 x 2



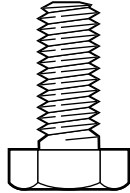
5/16-18 Grade 2 Hex Head Cap Screws



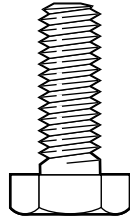
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5/16-18 x 1/2



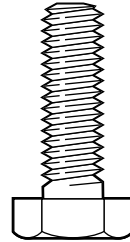
V 11 001260  
5/16-18 x 5/8



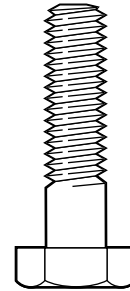
V 11 001262  
5/16-18 x 3/4



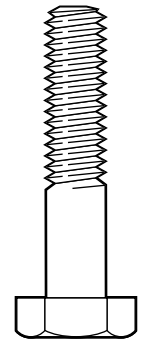
V 11 001263  
5/16-18 x 7/8



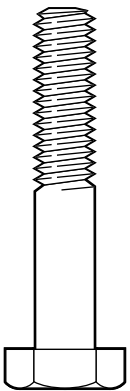
V 11 001264  
5/16-18 x 1



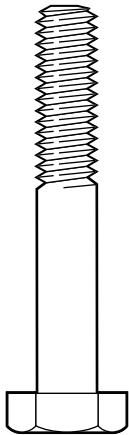
V 11 001266  
5/16-18 x 1-1/4



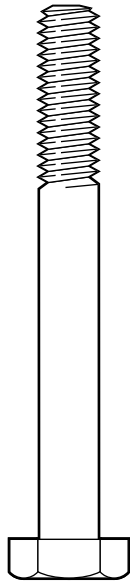
V 11 001268  
5/16-18 x 1-1/2



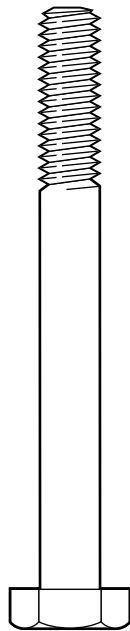
V 11 001270  
5/16-18 x 1-3/4



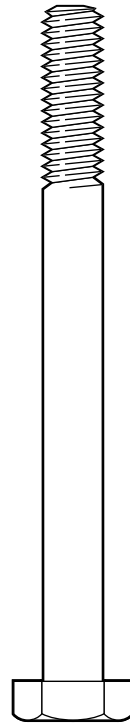
V 11 001272  
5/16-18 x 2



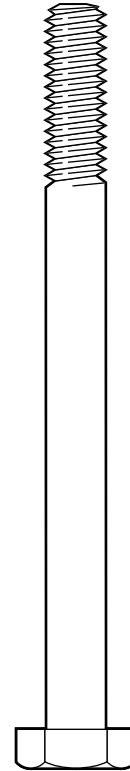
V 11 001275  
5/16-18 x 2-3/4



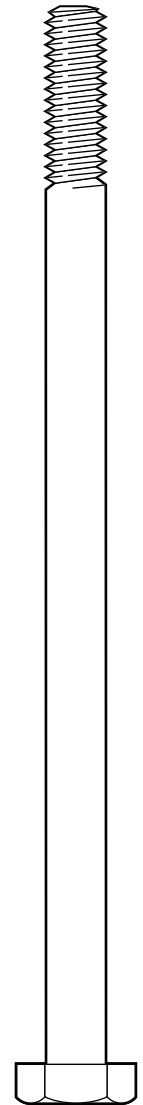
V 11 001276  
5/16-18 x 3



V 11 001278  
5/16-18 x 3-1/2



V 11 002075  
5/16-18 x 3-3/4

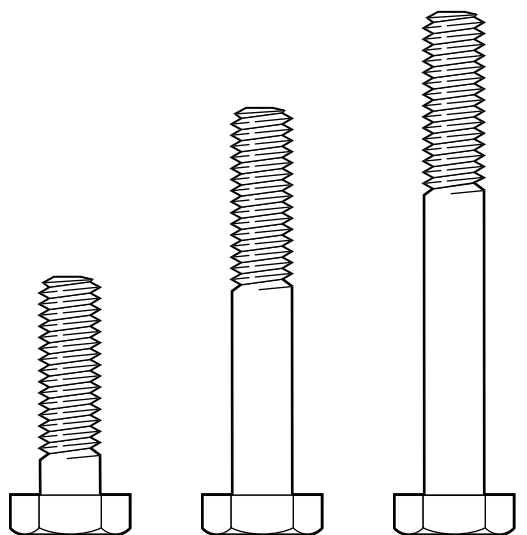


V 11 001286  
5/16-18 x 5-1/2

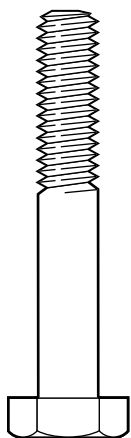


**5/16-18 Grade 5**

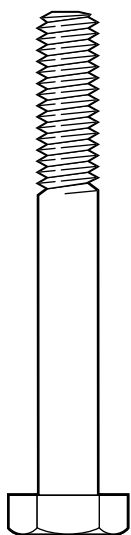
**3/8-24 Grade 2**



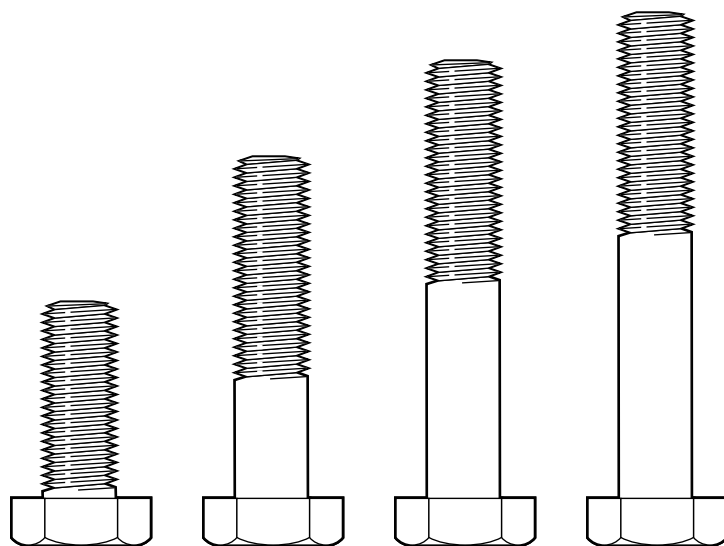
V 11 001265  
5/16-18x1-1/8



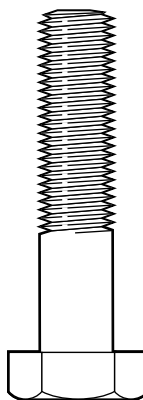
V 11 002068  
5/16-18 x 2



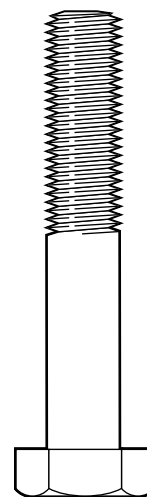
V 11 002070  
5/16-18 x 2-1/2



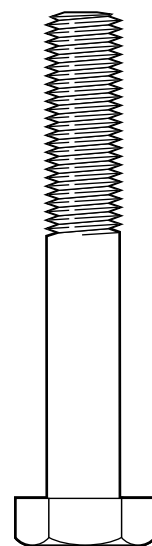
V 11 001384  
3/8-24 x 1



V 11 001390  
3/8-24 x 1-3/4



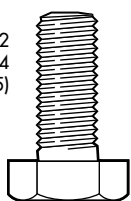
V 11 001393  
3/8-24 x 2-1/4



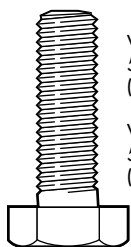
V 11 001394  
3/8-24 x 2-1/2

**5/16-24 Grades 2 & 5**

V 11 002092  
5/16-24 x 3/4  
(Grade 5)



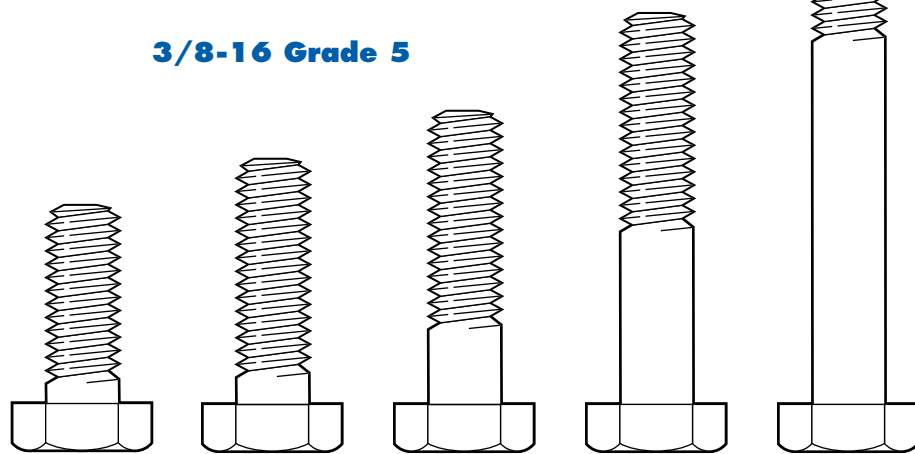
V 11 002094  
5/16-24 x 1  
(Grade 5)



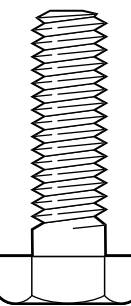
V 11 001304  
5/16-24 x 1  
(Grade 2)

**3/8-24 Grade 5**

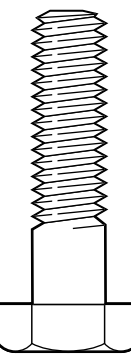
**3/8-16 Grade 5**



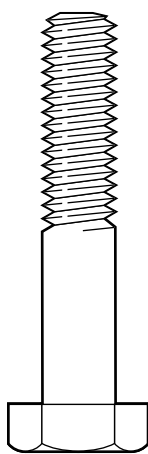
V 11 002124  
3/8-16 x 1



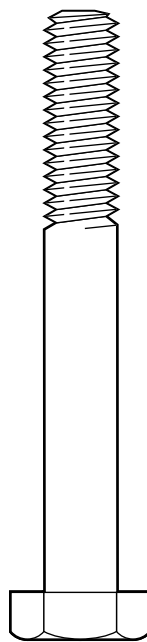
V 11 002125  
3/8-16 x 1-1/4



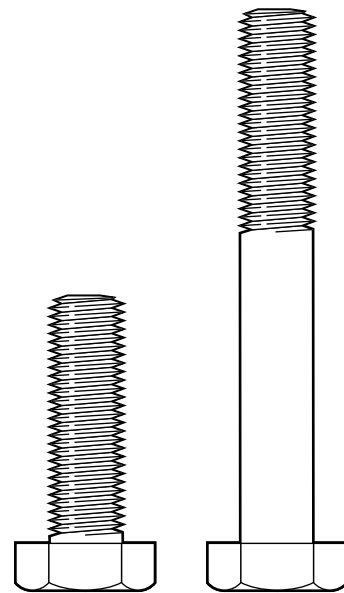
V 11 001347  
3/8-16 x 1-3/8



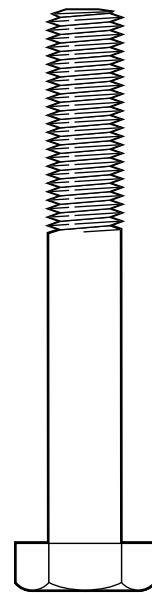
V 11 002128  
3/8-16 x 2



V 11 002132  
3/8-16 x 3



V 11 002155  
3/8-24 x 1-1/4



V 11 002001  
3/8-24 x 2-3/4



**7/16-14 Hex Head**

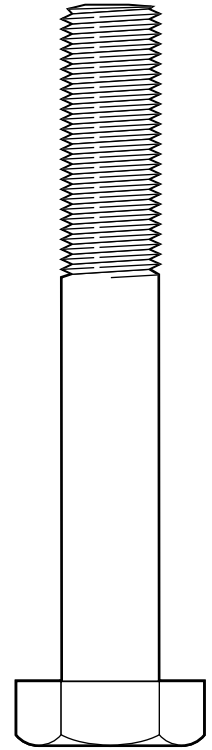
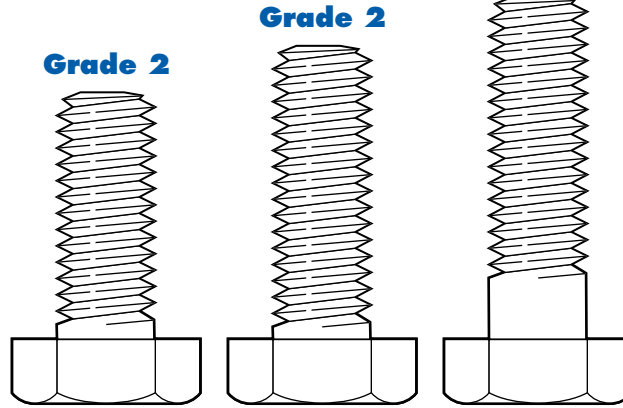
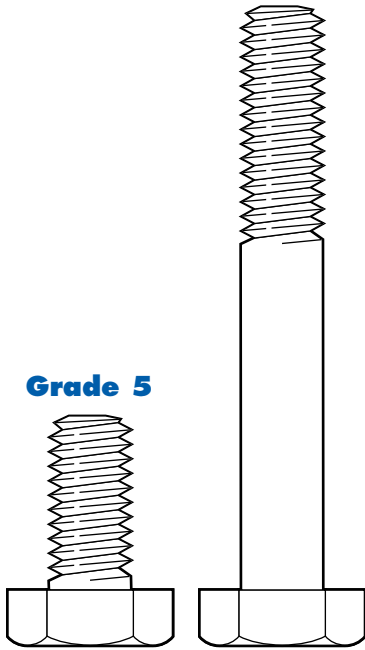
**1/2-20 Grade 5**

**Grade 2**

**1/2-13 Hex Head Cap Screws**

**Grade 5**

**Grade 5**



V 11 001423  
7/16-14 x 7/8

V 11 002436  
7/16-14 x 3

V 11 001506  
1/2-13 x 1-1/4

V 11 001508  
1/2-13 x 1-1/2

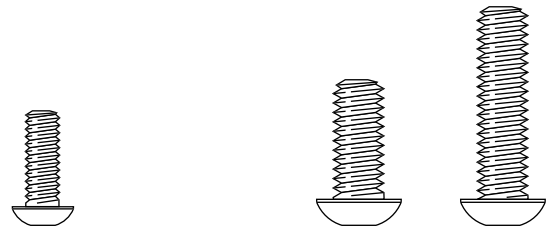
V 11 002247  
1/2-13 x 1-3/4

V 10 002006  
1/2-20 x 3-1/2

**#10-24 Button Head**

**1/4-20 Button Head**

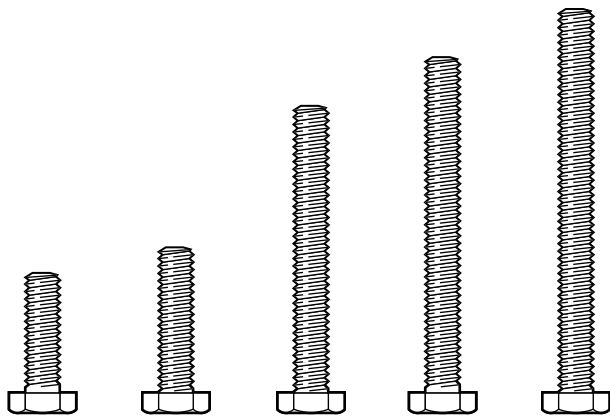
**Machine Screws**



V 11 006088  
#10-24 x 1/2

V 11 006180  
1/4-20 x 5/8

V 11 006184  
1/4-20 x 1



V 11 001060  
#10-24 x 5/8

V 11 001062  
#10-24 x 3/4

V 11 001068  
#10-24 x 1-1/2

V 11 001070  
#10-24 x 1-3/4

V 11 001072  
#10-24 x 2

**5/16-24 Button Head**

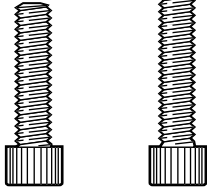
**1/2-13 Button Head**



V 11 006304  
5/16-24 x 1

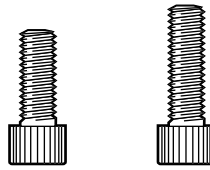
V 11 006504  
1/2-13 x 1

**#10-24 Socket Head**



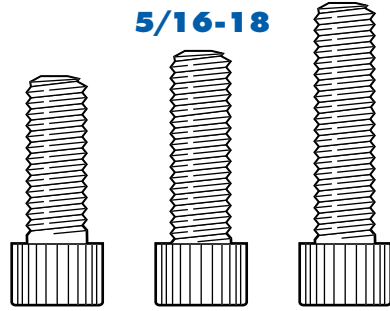
V 11 005092 #10-24 x 3/4  
V 11 005093 #10-24 x 7/8

**#10-32 Socket Head**



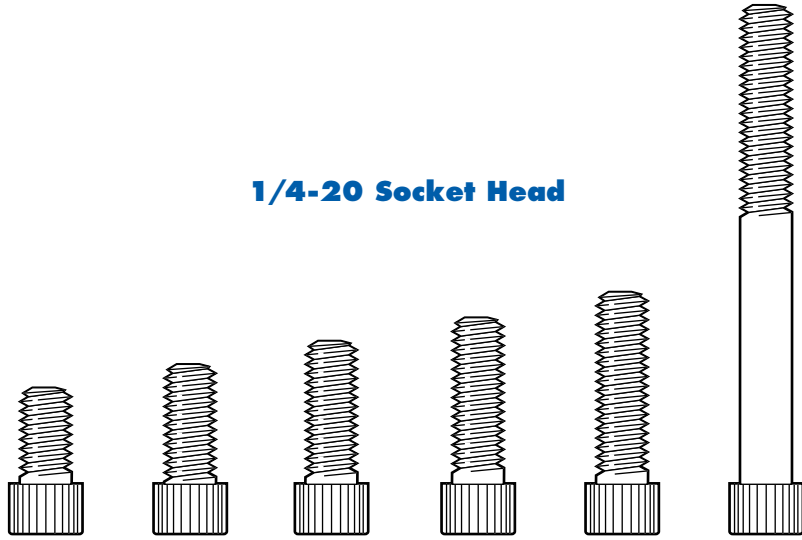
V 11 005118 #10-32 x 1/2  
V 11 005120 #10-32 x 5/8

**5/16-18**



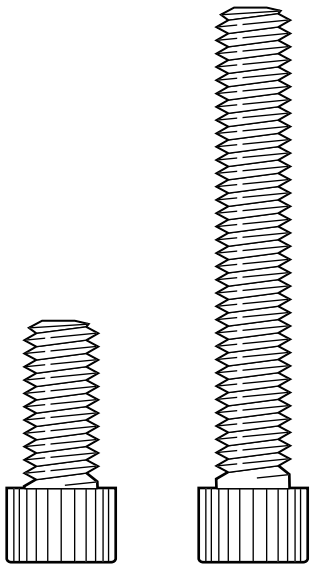
V 11 005263 5/16-18 x 7/8  
V 11 005264 5/16-18 x 1  
V 11 005266 5/16-18 x 1-1/4

**1/4-20 Socket Head**



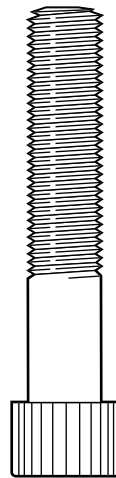
V 11 005178 1/4-20 x 1/2  
V 11 005180 1/4-20 x 5/8  
V 11 005182 1/4-20 x 3/4  
V 11 005183 1/4-20 x 7/8  
V 11 005184 1/4-20 x 1  
V 11 005194 1/4-20 x 2-1/2

**3/8-16 Socket Head**



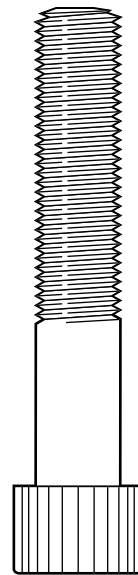
V 11 005343 3/8-16 x 7/8  
V 11 005354 3/8-16 x 2-1/2

**3/8-24**



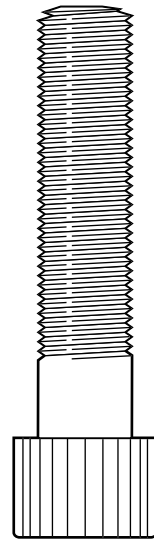
V 10 009001 3/8-24 x 2-1/16

**7/16-28**



V 11 005474 7/16-20 x 2-1/2

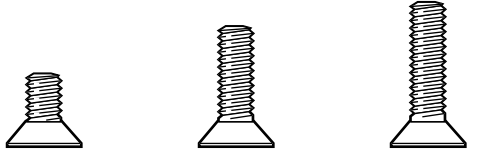
**1/2-20**



V 11 005553 1/2-20 x 2-1/4



#10-24 Flat Head

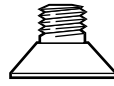


V 11 007086  
#10-24 x 3/8

V 11 007090  
#10-24 x 5/8

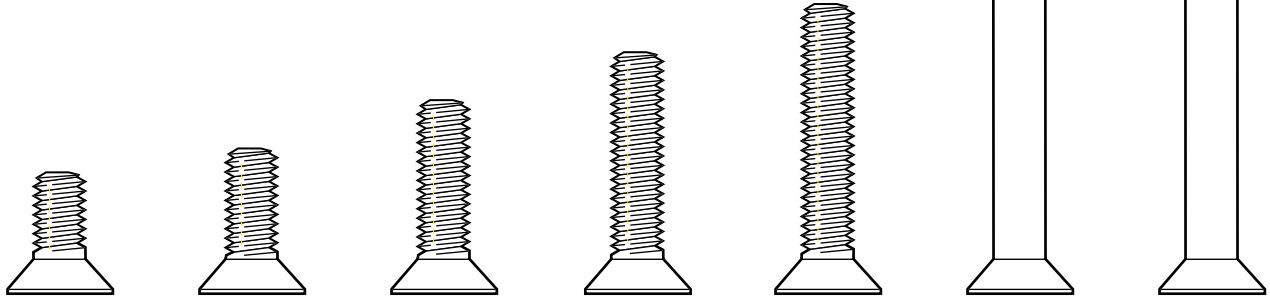
V 11 007092  
#10-24 x 3/4

1/4-28 Flat Head



V 11 007216  
1/4-28 x 3/8

1/4-20 Flat Head Socket Cap Screws



V 11 007180  
1/4-20 x 5/8

V 11 007182  
1/4-20 x 3/4

V11007184  
1/4-20 x 1

V 11 007186  
1/4-20 x 1-1/4

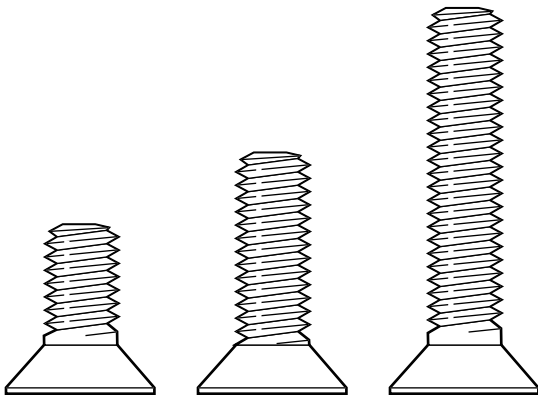
V 11 007188  
1/4-20 x 1-1/2

V 11 007195  
1/4-20 x 2-3/4

V 11 007200  
1/4-20 x 4

5/16-18 Flat Head Socket

3/8-16 Flat Head Socket

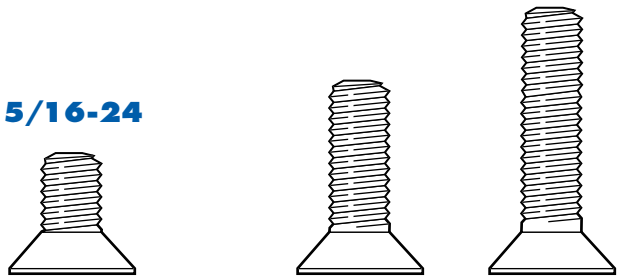


V 11 007344  
3/8-16 x 1

V 11 007346  
3/8-16 x 1-1/4

V 11 007352  
3/8-16 x 2

5/16-24

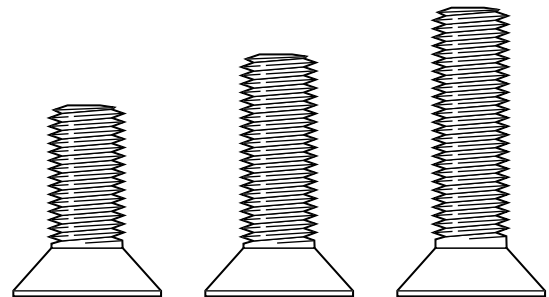


V 11 007300  
5/16-24 x 5/8

V 11 007264  
5/16-18 x 1

V 11 007267  
5/16-18 x 1-3/8

3/8-24 Flat Head Socket



V 11 007384  
3/8-24 x 1

V 11 007386  
3/8-24 x 1-1/4

V 11 007388  
3/8-24 x 1-1/2

**Split Lockwashers**



V 11 195006  
#6



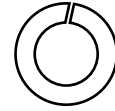
V 11 195008  
#8



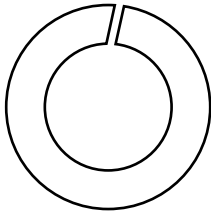
V 11 195010  
#10



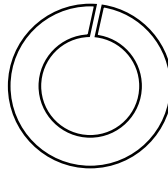
V 11 195014  
1/4



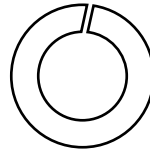
V 11 195015  
5/16



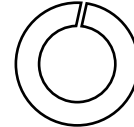
V 11 195020  
5/8



V 11 195018  
1/2



V 11 195017  
7/16



V 11 195016  
3/8

**Hi-Collar Split Lockwashers**



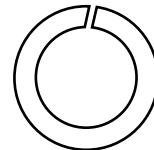
V 11 196006  
#8



V 11 196008  
#10



V 11 196012  
1/4



V 11 196020  
1/2

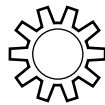
**External Tooth Lockwashers**



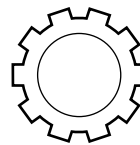
V 11 198002  
#8



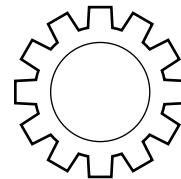
V 11 198003  
#10



V 11 198005  
1/4



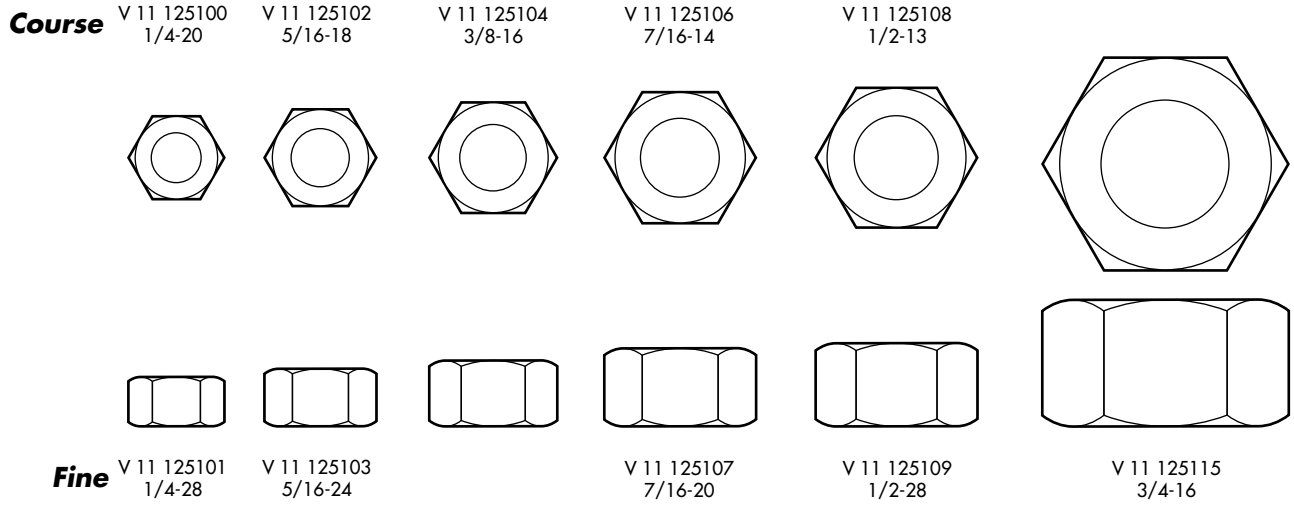
V 11 198007  
3/8



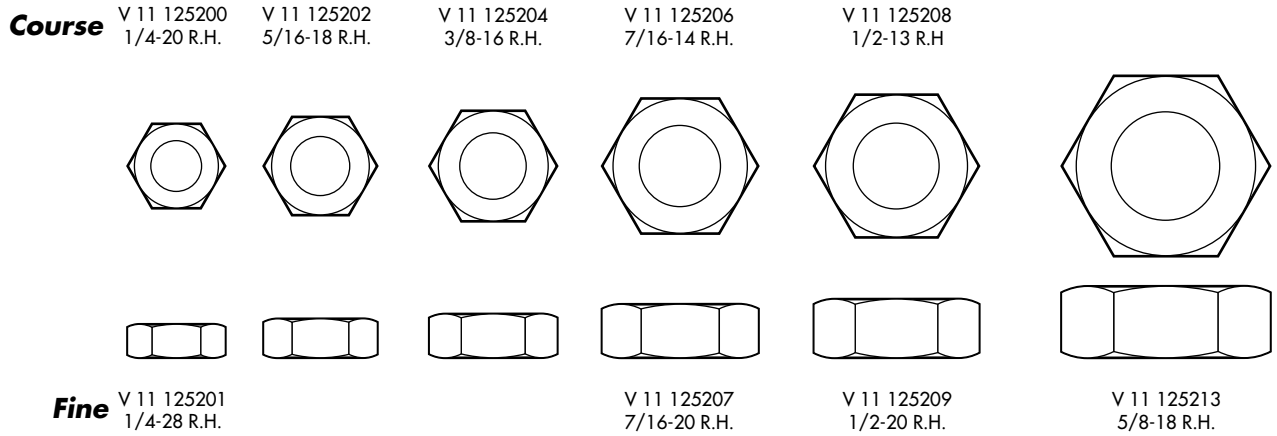
V 11 198009  
3/8



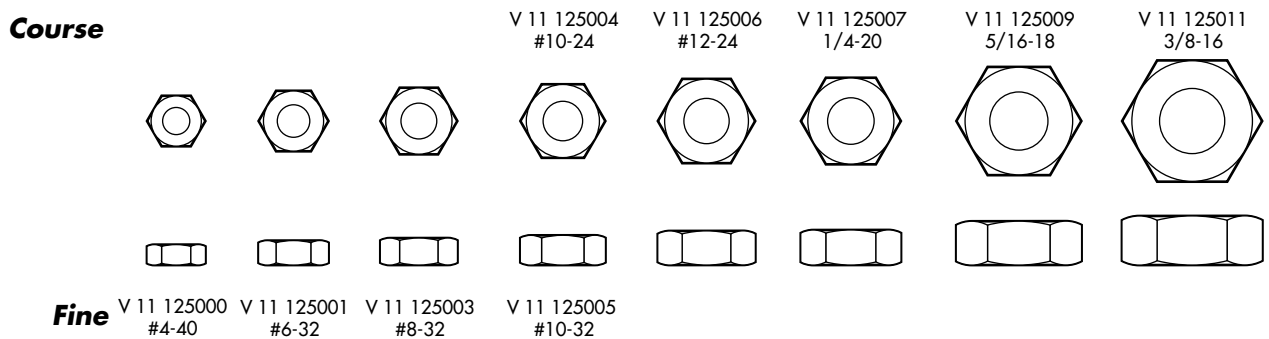
Standard Hex Nuts



Jam Nuts



Machine Screw Nuts



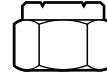


### Nylock Nuts

**Course**

V 11 170005  
#10-24

V 11 170007  
1/4-20



**Fine**

V 11 170002  
#6-32

V 11 170004  
#8-32

V 11 170006  
#10-32

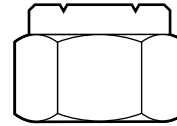
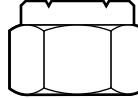
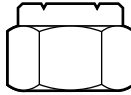
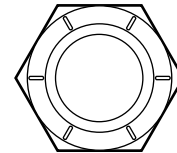
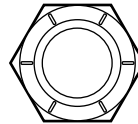
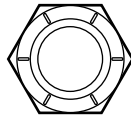
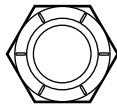
V 11 170008  
1/4-28

**Course**

V 11 170009  
5/16-18

V 11 170011  
3/8-16

V 11 170015  
1/2-13



**Fine**

V 11 170010  
5/16-24

V 11 170012  
3/8-24

V 11 170014  
7/16-20

V 11 170016  
1/2-20

### Flexloc Nuts

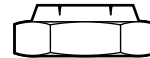
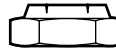
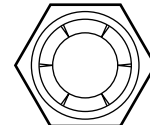
**Course**

V 11 170104  
#10-24

V 11 170106  
1/4-20

V 11 170108  
5/16-18

V 11 170110  
3/8-16



**Fine**

V 11 170109  
5/16-24



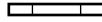
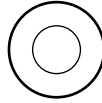
**Flat Washers (SAE)**



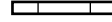
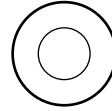
V 11 190002  
#6



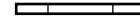
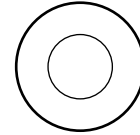
V 11 190004  
#8



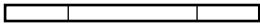
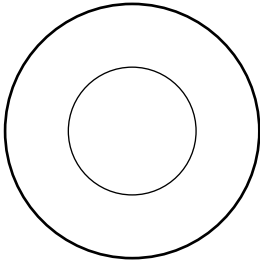
V 11 190006  
#10



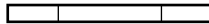
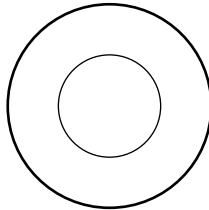
V 11 190010  
1/4



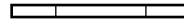
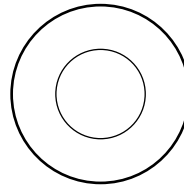
V 11 190012  
5/16



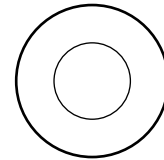
V 11 190022  
5/8



V 11 190018  
1/2

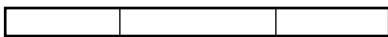
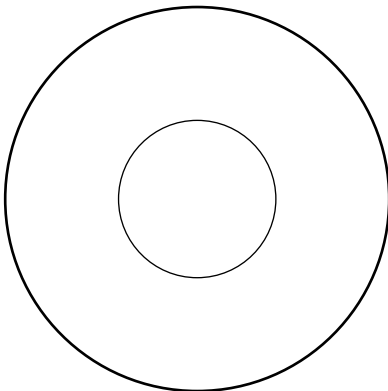


V 11 190016  
7/16

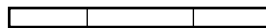
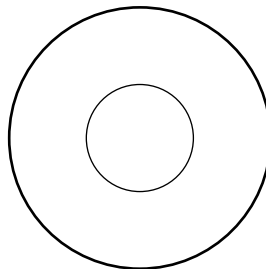


V 11 190014  
3/8

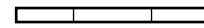
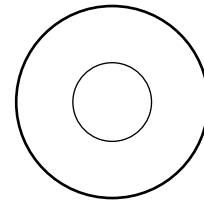
**Flat Washers (USS)**



V 11 190024  
3/4



V 11 190018  
1/2



V 11 190014  
3/8



**External Retaining Rings**



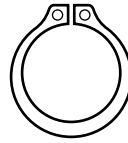
V 11 530012



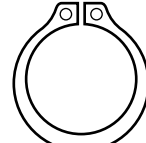
V 11 530015



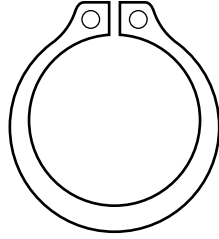
V 11 530017



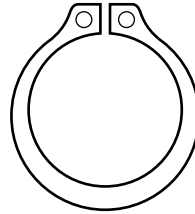
V 11 530019



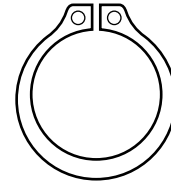
V 11 530021



V 11 530027

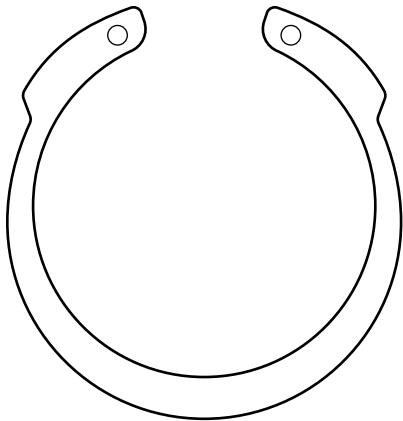


V 11 530025

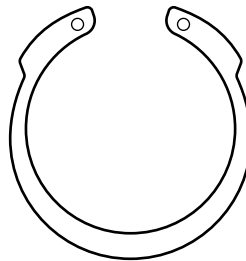


V 11 530024

**Inverted Internal Retaining Rings**

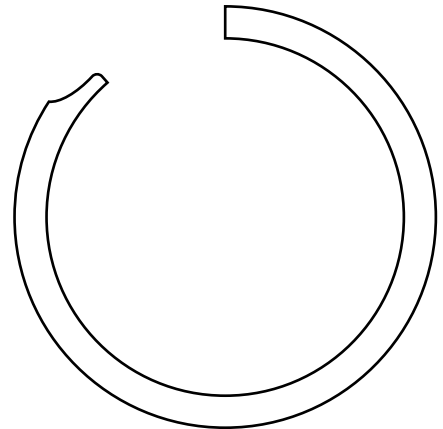


V 11 531020



V 11 531008

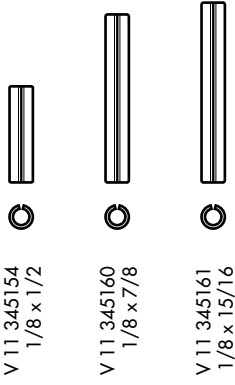
**Internal Spirol**



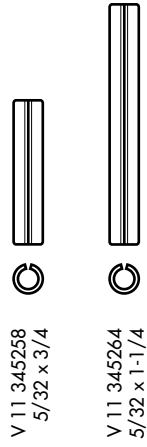
V 11 536026



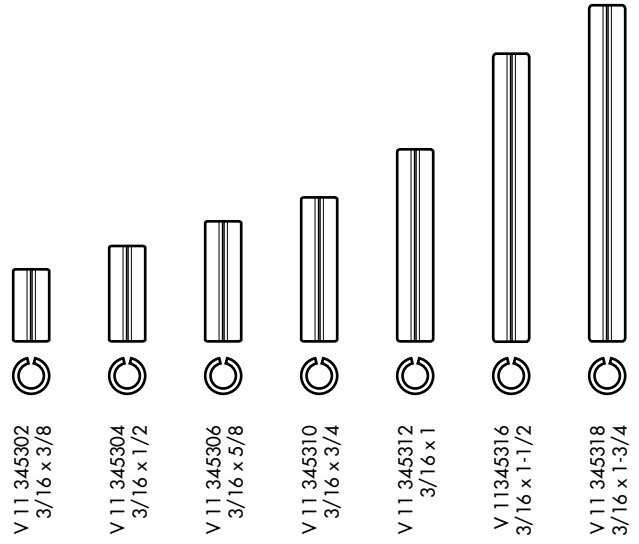
**1/8 Roll Pins**



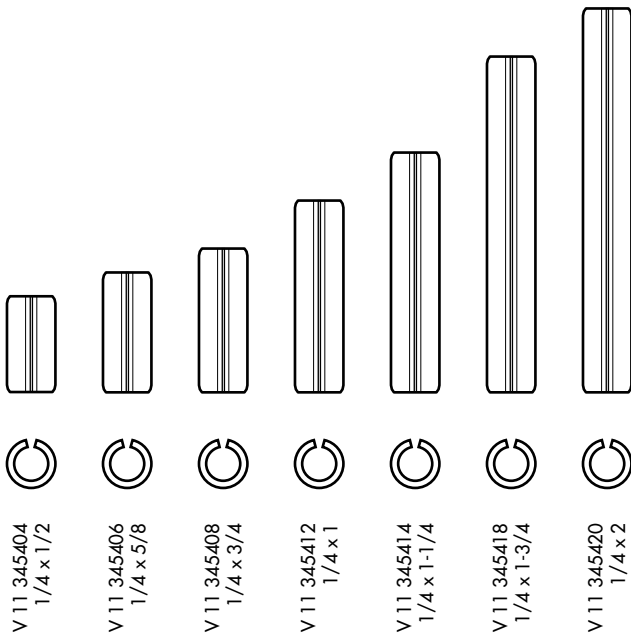
**5/32 Roll Pins**



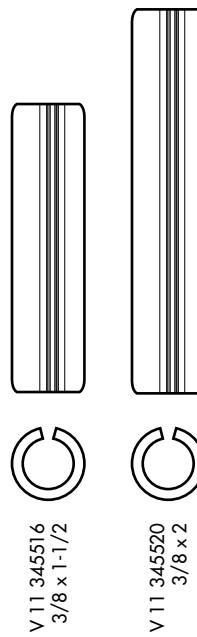
**3/16 Roll Pins**



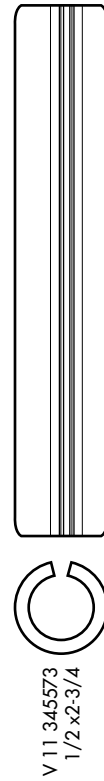
**1/4 Roll Pins**



**3/8 Roll Pins**

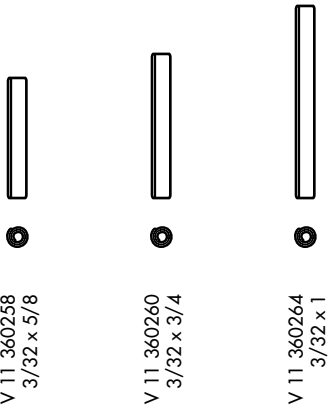


**1/2 Roll Pins**





**3/32 Spirol Pins**

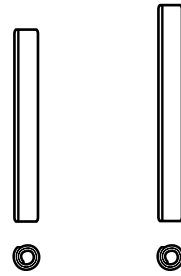


V 11 360258  
3/32 x 5/8

V 11 360260  
3/32 x 3/4

V 11 360264  
3/32 x 1

**1/8 Spirol Pins**



V 11 360364  
1/8 x 1

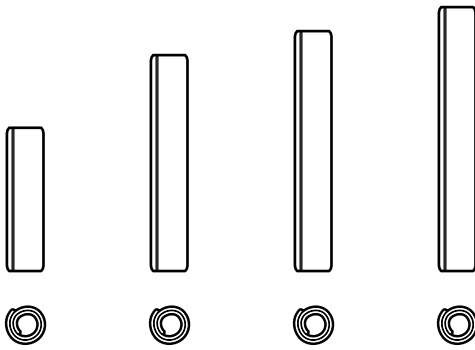
V 11 360365  
1/8 x 1-1/8

**5/32 Spirol Pins**



V 11 360415  
5/32 x 1-1/8

**3/16 Spirol Pins**



V 11 360460  
3/16 x 3/4

V 11 360462  
3/16 x 1/8

V 11 360466  
3/16 x 1-1/4

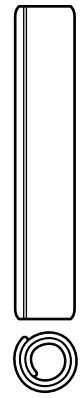
V 11 361315  
3/16 x 1-3/8

**1/4 Spirol Pins**



V 11 360568  
1/4 x 1-1/2

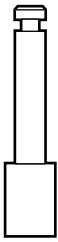
**5/16 Spirol Pins**



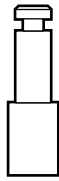
V 11 360619  
5/16 x 1-5/8



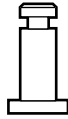
X-Washer Pins



V 12 100318 002



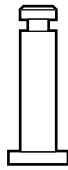
V 12 100318 003



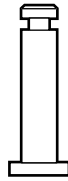
V 12 100166 002



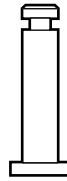
V 12 100166 004



V 12 100166 005



V 12 150158 013



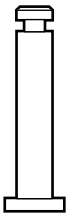
V 12 100166 006



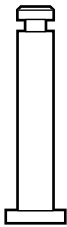
V 12 100166 024



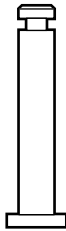
V 12 100166 022



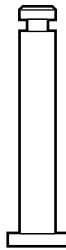
V 12 100166 008



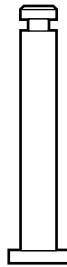
V 12 100166 026



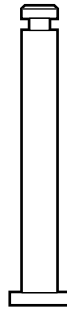
V 12 100166 025



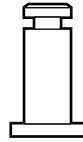
V 12 100166 007



V 12 150158 006



V 12 100166 019



V 12 100166 009



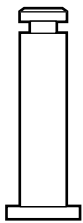
V 12 100166 011



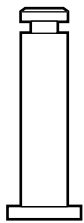
V 12 250010 011



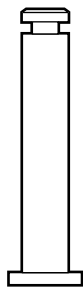
V 12 100166 027



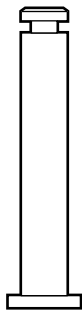
V 12 100166 007



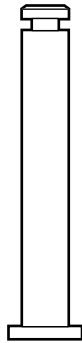
V 12 100166 013



V 10 229509



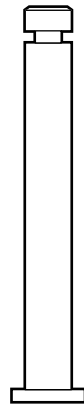
V 12 100166 014



V 12 100166 015



V 12 100166 016

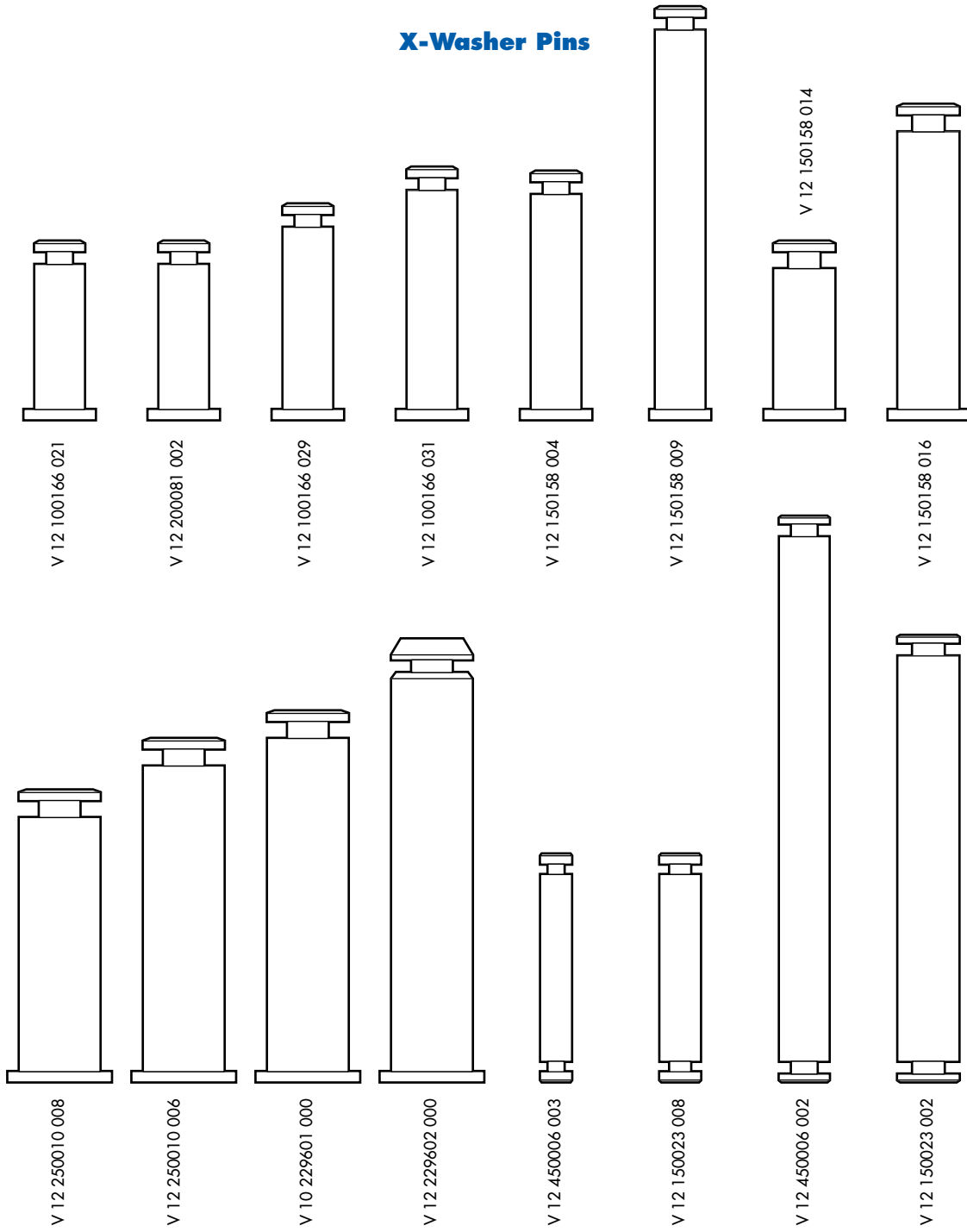


V 12 100166 032

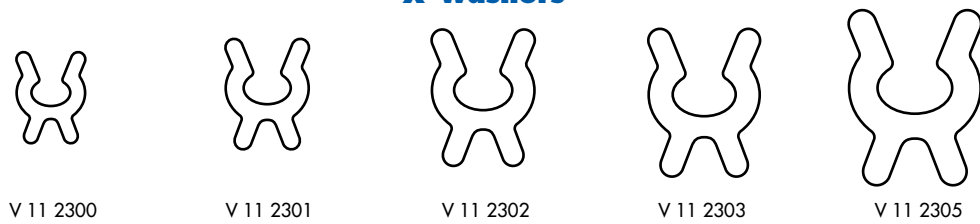


V 12 150158 017

**X-Washer Pins**

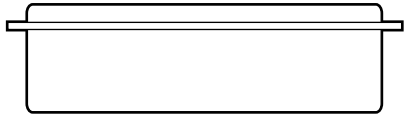
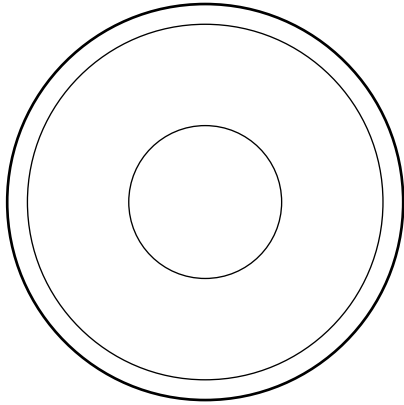


**X-Washers**

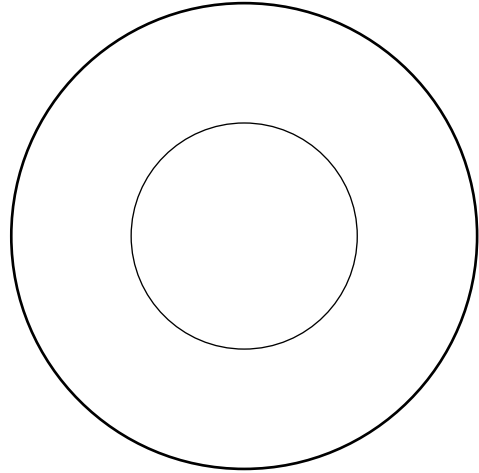




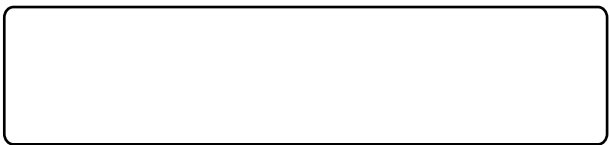
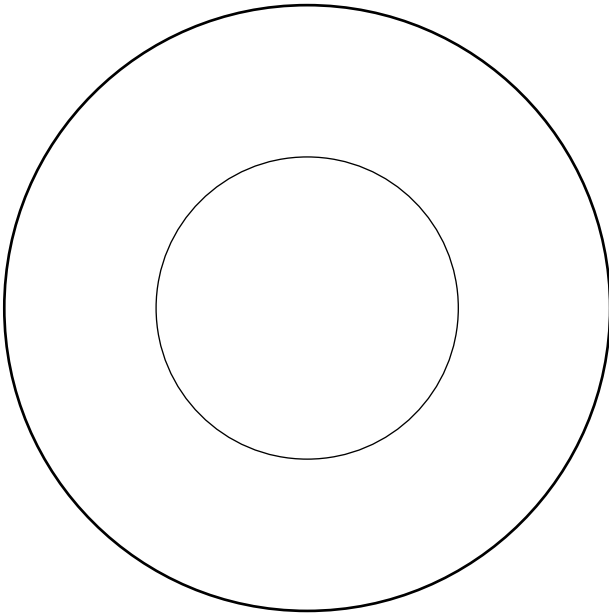
Ball Bearings



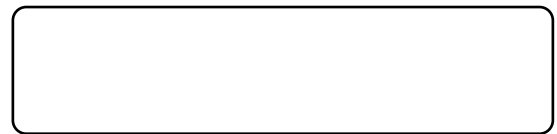
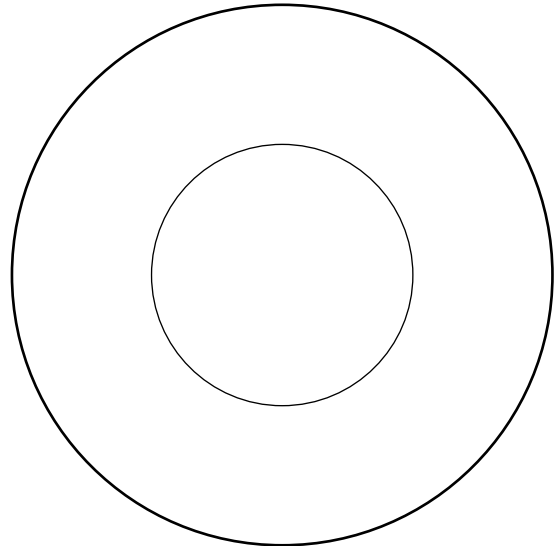
V 10 430001  
Pin Wheel Jack Shaft



V 11 430017  
2:1 Shaft



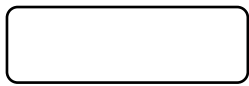
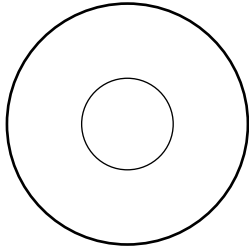
V 11 430002  
4:1 Shaft



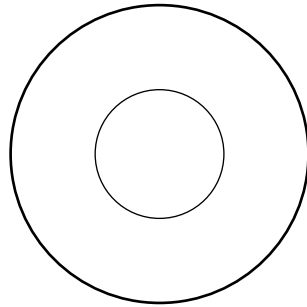
V 11 430011  
1:1 Shaft



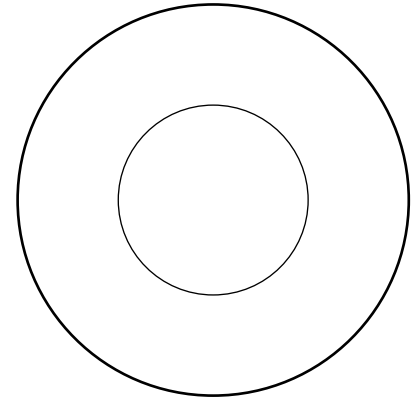
### Ball Bearings



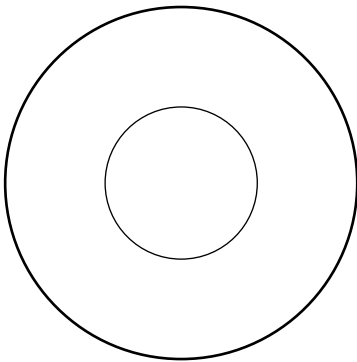
V 11 430004  
Ball Wheel Guide Roller



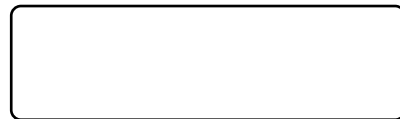
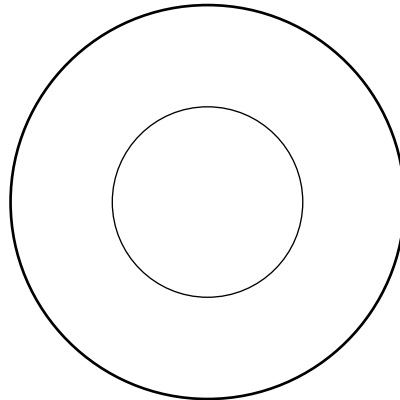
V 11 430028  
Elevator Drive Belt Tensioner



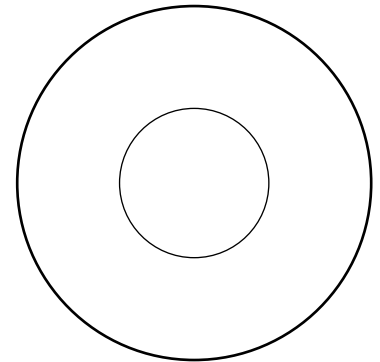
V 11 430008  
Deck Lowering Link Connector  
Pin Wheel Guide Roller



V 11 430018  
Cross Conveyor Drive Shaft



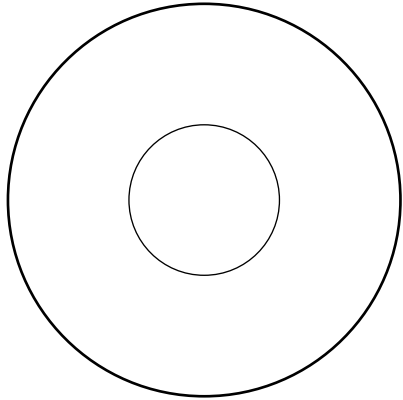
V 11 430013  
Belt Wheel Roller  
Pin Wheel Roller  
Ball Accelerator Pulleys



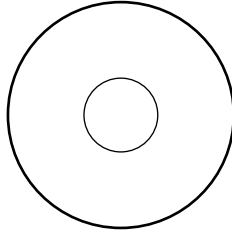
V 11 430015  
Pinsetter Motor – Front



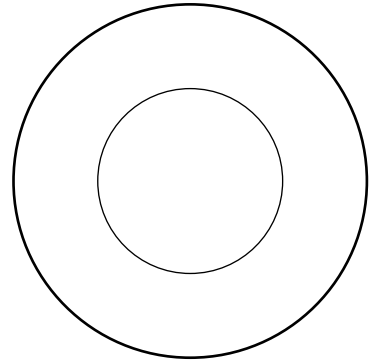
Ball Bearings



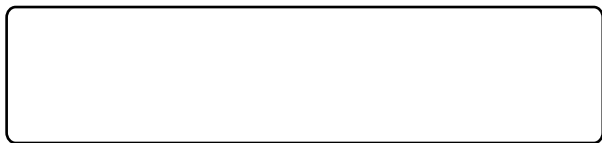
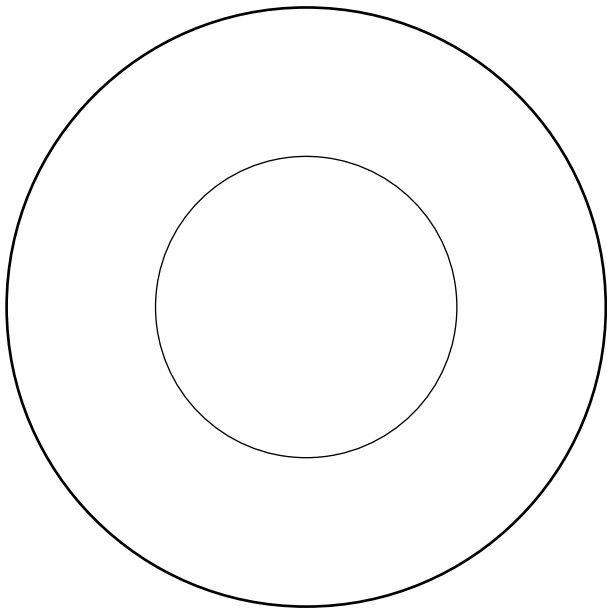
V 11 430016  
Jogger Arm



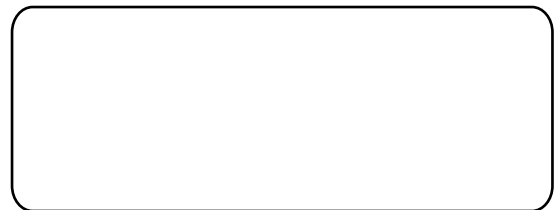
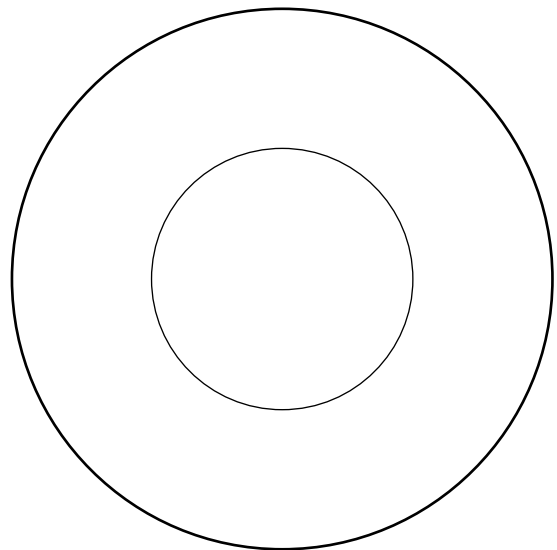
V 11 430037  
Ball Stop Hook



V 11 431000  
Deck Support Arm  
Deck Lift Shaft



V 11 430017  
2:1 Shaft

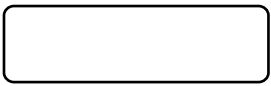
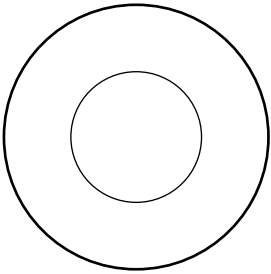


V 11 432001  
4:1 Shaft

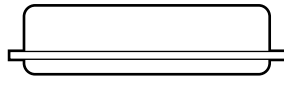
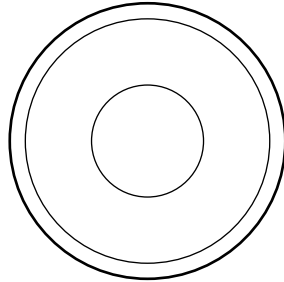




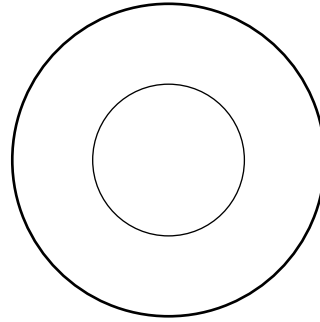
## Ball Bearings



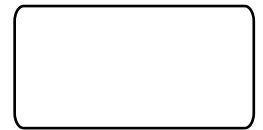
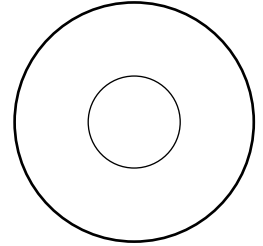
V 11 431002  
Detector 1:1 Shaft



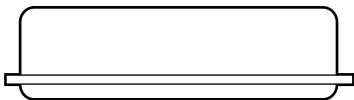
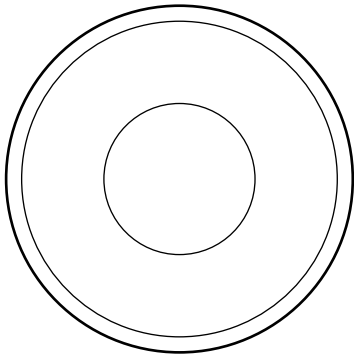
V 11 431003  
Detector 1:1 Shaft



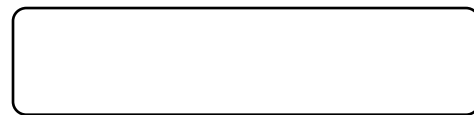
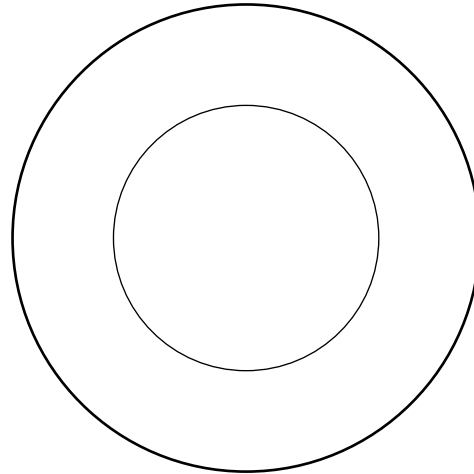
V 11 431010  
Turret Clutch



V 11 432000  
Pin Wheel Guide Roller



V 11 431010  
Turret Clutch



V 11 430045  
Magnetic Clutch  
4:1 Shaft



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9

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10.5 11.0 11.5 12.0 13.0 14.0 15.0

7

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8.5 9.0 9.5 10.0 11.0 12.0

2

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