

# 200, 300, & 400 Series Slip Ring Service Manual

**AERO-MOTIVE COMPANY**

A Woodhead Industries, Inc. Subsidiary



## **IMPORTANT SAFETY INSTRUCTIONS**

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

The following safety precautions call attention to potentially dangerous conditions.



**DANGER:** Immediate hazards which **WILL** result in severe personal injury or death.



**WARNING:** Hazards or unsafe practices which **COULD** result in severe personal injury or death.



**CAUTION:** Hazards or unsafe practices which **MAY** result in *minor* personal injury or product or property damage.

**NOTE:** Instruct operators in the safe, proper use and maintenance. Keep this manual for future reference.

## **INSTALLATION**



**WARNING:** Failure to read, understand or follow these instructions could lead to hazards or unsafe practices **COULD** result in severe personal injury or death.



**WARNING:** Disconnect power before servicing.



**CAUTION:** Instruct operators in the safe, proper use and maintenance of this product.

Mount slip ring by sliding the mounting hub over mounting shaft and securing it tightly with set screws. See chart below. The drive stud (customer supplied or mounted on the reel) must protrude through the hole on drive plate, allowing for a 1/2" minimum clearance to the first brush in line. This will allow slip ring to rotate properly. Drive stud should not exceed 3/8" diameter.

SERIES	MOUNTING HOLE DIAMETER
SR200, AG200	.875 Mounting Hub
SR300, AG300, SR400	1.500 Mounting Hub

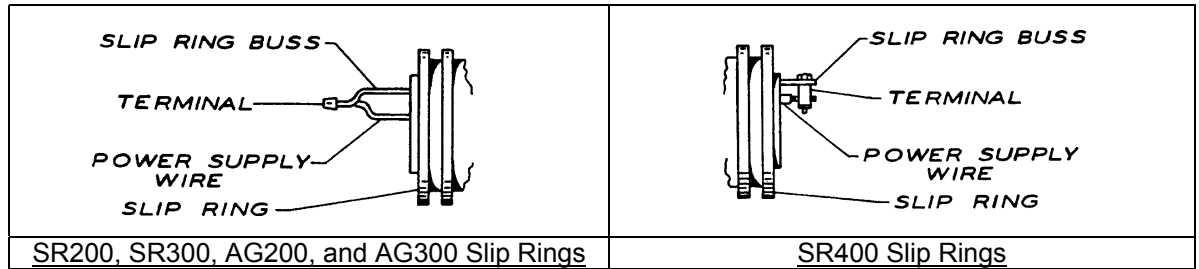
## **OPERATION**

### **WIRING**

To complete wiring, connect one set of wires to brushes and other corresponding set of wires through main shaft to slip ring buss--as illustrated. Always insure that each lead is connected to the corresponding brush and buss wire. Always provide slip ring with fuse protection. Chart below shows maximum lead wire size supplied or allowed with ring.

Models	Lead Wire	Models	Lead Wire	Models	Lead Wire
SR202-SR2012	#12 AWG	SR302-SR316	#10 AWG	SR402-SR404	Max #4 AWG
SR2014-SR2016	#14 AWG	SR318-SR324	#12 AWG	SR405-SR406	Max #6 AWG
SR2018-SR2028	#16 AWG	SR326-SR336	#14 AWG		

To complete wiring, connect one set of wires to brushes and other corresponding set of wires through main shaft to the slip ring buss--as illustrated.



## MAINTENANCE



### CAUTION:

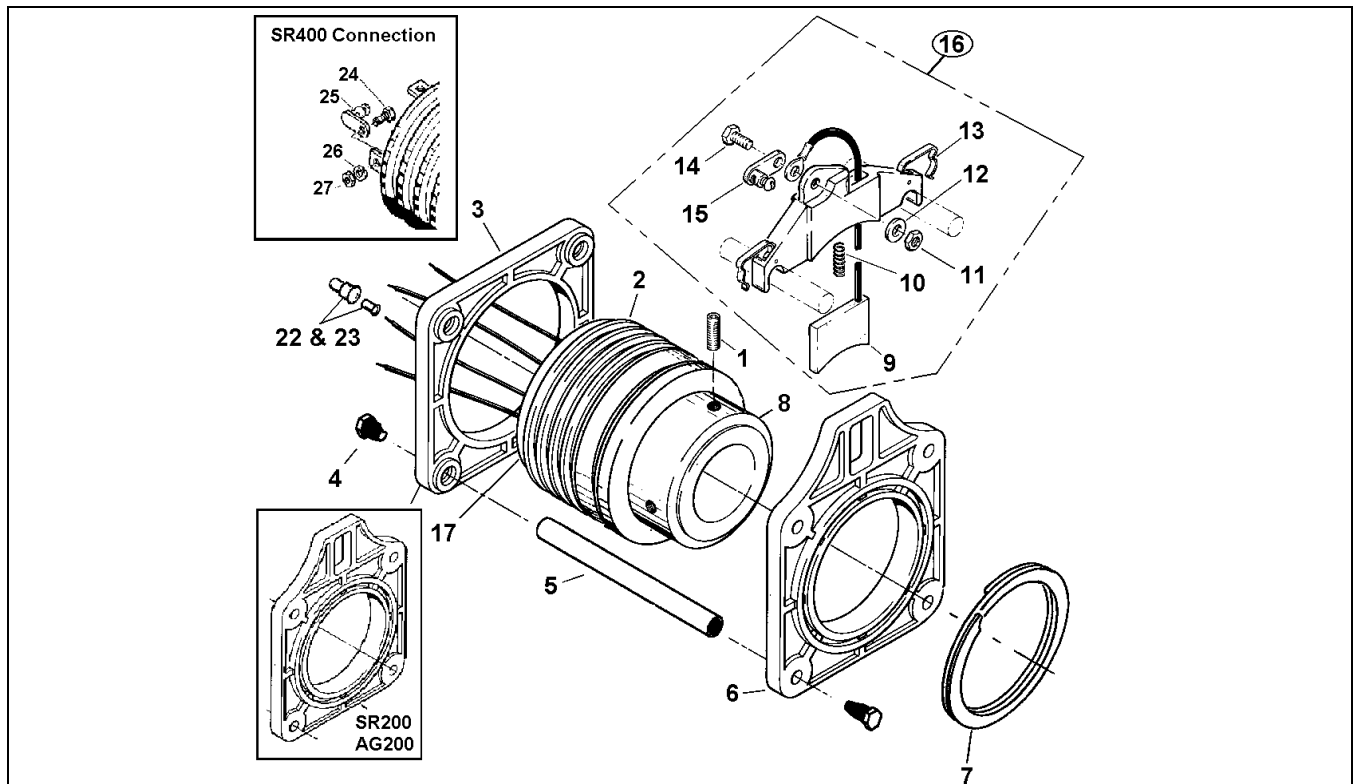
Wipe off any excess grease. Never treat ring surface with any type of lubricant cleaner. Hazards or unsafe practices **MAY** result in *minor* personal injury or product or property damage.

Grease may be required depending on the use and atmosphere. If required, place a light coat of nonconductive grease on riding surface of drive plate and end plate. Inspect brushes and slip rings periodically for wear and corrosion.

## SERVICE

All parts illustrated are available as repair parts. During disassembly and assembly of slip rings, always be careful to install parts in their proper places as illustrated. The brush and brush holder should always be centered between the insulators on the slip ring. The last brush should be mounted 90° from drive stud, to allow for needed clearance between drive stud and brush. Be sure that brush surface makes complete contact with ring. Clamp brush holder in place securely.5

## REPLACEMENT PARTS



**SR200 & AG200 SERIES**

Reference Number	Part Number	Qty.	Description
1	00053P0408	2	Screw; 5/16-18 X 5/16, Set
8	5980600XX	1	Sub-Assembly; SR202 (XX)=01, 204=02, 206=03, 208=04, 2010=05,2012=06, 2014=07, 2016=08, 2018=09, 2020=10, 2022=11, 2024=12, 2026=13, 2028=14
	H965100XX	1	Sub-Assembly Silver; AG202 (XX)=02, 204=03, 206=04, 208=05, 2010=06, 2012=07, 2014=08, 2016=09, 2018=10, 2020=11, 2022=12, 2024=13, 2026=14, 2028=15.
3	5980300000	1	End Plate
4	C03430405	8	Screw; Self-Tapping, 1/4 – 20 x 3/4
5	H05050xxx	1	Stud & Plate Kit (includes 4 studs and items 3, 4 & 6 ) XXX= SRXXX Example: SR212 is H05050212
6	5980300000	1	Drive Plate
7	C01960151	8	Ring; Retaining
8	M37730025	1	Hub
9	5851400000	1/ring	Brush Only, Copper-Graphite (Models: SR2xx)
	6154800000		Brush Only, Silver Tipped (Models: AG2xx)
10	00600P0002	1/ring	Spring Model SR2xx
	Included w/ #9		Spring, Model AG2xx
11	00160P0050	1/ring	Nut #10-24
12	5773300000	1/ring	Washer #10
13	Not Available		
14	00030P0217	1/ring	Screw #10-24x5/8
15	C70280310	1/ring	Lug terminal
16	6053700000	1	Brush assembly complete for SR2xx I (Items 9-15)
	6155000000	1	Brush assembly complete for AG2xx I (Items 9-15)
17	5980400000	1	End Bearing
22	00904P0001	1/ring	Splice Cap
23	00903P0001	1/ring	Insulator Cap

**SR300 & AG300 SERIES**

Reference Number	Part Number	Qty.	Description
1	00011P0019	2	Screw; Set
2	H965101XX	1	Sub-Assembly; Collector Ring SR302 (XX) =00, 304=01, 306=02, 308=03, 310=04, 312=05, 314=06, 316=07, 318=08, 320=09, 322=10, 324=11, 326=12, 328=13, 330=14, 332=15, 334=16, 336=17.
	H965200XX	1	Sub-Assembly; Collector Ring AG302 (XX)=22, 303=23, 304=24, 305=25, 306=26, 308=27, 310=28, 312=29, 314=30, 316=31, 318=32, 320=33, 322=34, 324=35, 326=36, 328=37, 330=38, 336=41.
3	M87810012	1	Plate; End
4	C03430405	8	Screw; Self-Tapping, 1/4 - 20 x 3/4
5	H05050XXX	1	Stud & Plate Kit (includes 4 studs and items 3, 4 & 6 ) XXX= SRXXX Example: SR312 is H05050312
6	M87810011	1	Plate; drive
7	00582P0016	1	Ring; Retaining
8	M37730026	1	Hub
9	5850200000	1/ring	Brush Only, Copper-Graphite (Models: SR3xx)
	6154900000	1/ring	Brush Only, Silver Tipped (Models: AG3xx)
10	00600P0002	1/ring	Spring Model SR3xx
	00600P0016	1/ring	Spring, Model AG3xx
11	00160P0050	1/ring	Nut #10-24
12	5773300000	1/ring	Washer #10

13	6050600000	1/ring	Brush holder complete
14	00030P0217	1/ring	Screw #10-24x5/8
15	C70280310	1/ring	Lug terminal
16	H97620007	1/ring	Brush assembly complete for SR3xx I (Items 9-15)
	H97620010	1/ring	Brush assembly complete for AG3xx I (Items 9-15)
17	5854900000	1	End Bearing
22	00904P0001	1/ring	Splice Cap
23	00903P0001	1/ring	Insulator Cap

## SR400 SERIES

Reference Number	Part Number	Qty.	Description
1	00011P0019	2	Screw; Set
2	H965103XX	1	Sub Assy. Collector Ring; SR402 (xx)=00, 403=01, 404=02, 405=06, 406=07.
3	M87810012	1	Plate; End
4	C03430405	8	Screw; Self-Tapping, 1/4 - 20 x 3/4
5	H05050XXX	1	Stud & Plate Kit (includes 4 studs and items 3, 4 & 6 ) XXX= SRXXX Example: SR404 is H05050404
6	M87810011	1	Plate; drive
7	00582P0016	1	Ring; Retaining
8	M37730026	1	Hub
9	5850500000	1/ring	Brush Only, Copper-Graphite (Models: SR4xx)
10	00600P0002	1/ring	Spring Model SR3xx
11	C22430113	1/ring	Nut 1/4-20
12	00126P0050	1/ring	Washer 1/4
13	6134500000	1/ring	Brush holder
14	00030P0110	1/ring	1/4-20 X 3/4 HHCS
15	C70280311	1/ring	Lug terminal
16	H97620004	1/ring	Brush assembly complete for SR4xx I (Items 9-15)
17	5854900000	1	End Bearing
24	00030P0120	1/ring	1/4-20 X 3/8 HHCS brass
25	C70280311	1/ring	Lug
26	00101P0030	1/ring	1/4 Lockwasher
27	00152P0005	1/ring	1/4-20 Hex Nut brass

### Aero-Motive Company

**W** A Woodhead Industries Inc. Subsidiary  
PO Box 2678  
Kalamazoo, MI 49003-2678  
(616) 337 7700  
(800) 999 8559  
FAX: (800) 333 6119  
www.aeromotive.com

### AKAPP Electro Industrie

**W** A Woodhead Industries Inc. Subsidiary  
Nijverheidsweg 14 Box 54  
NL-3771 ME Barneveld  
NL-3771 AB Barneveld  
Holland  
(31) 34 241 4022  
FAX: (31) 34 249 2384  
www.akapp.com

### Woodhead Connectivity LTD.

**W** A Woodhead Industries Inc. Subsidiary  
Factory No. 9  
Rassau Industrial Estate  
Ebbw Vale Gwent NP3 5SD  
United Kingdom  
(0495) 35 0436  
FAX: (0495) 35 0877  
sales@wdhd.co.uk

### Woodhead Asia PTE LTD.

**W** A Woodhead Industries Inc. Subsidiary  
401 Commonwealth Drive #04-04  
Haw Par Technocentre  
Singapore 0314  
(65) 261 6533  
FAX: (65) 479 3588  
sales@wasia.com.sg

### Woodhead Canada LTD.

**W** A Woodhead Industries Inc. Subsidiary  
1090 Brevik Place  
Mississauga Ontario  
L4W 3Y5 Canada  
(905) 624-6518  
FAX: (905) 624-9151  
www.woodhead.ca