

Original Saw Company 465 Third Ave SE Britt, IA 50423 USA

> PH 641-843-3868 800-733-4063

customerservice@originalsaw.com www.originalsaw.com

Parts Breakdown

RADIAL ARM SAW

TYPE 6 - without rip attachments

14" models 3531-01, 3536-01, 3531-03, 3536-03 16" models 3541, 3546

For Serial number 20220704461 forward (September 2022)

Made in USA

	Service Record				
Serial Number	Serial Number Date Purchased				
Date	Service Performed	Ву			

INDEX

General Safety Precautions/Specifications	3-4	Parts Diagram and Listings	15-23
Unpacking and Assembly	4-6	Setting Thermal Overload Relay/Changing Voltage	24-25
Operating Cautions/Alternative Setup	7	Troubleshooting	26-28
Operating Instructions	8-10	Accessories/Preventive Maintenance	29
Adjustments and Alignments	11-14	Warranty Information/Factory Service	30

General Rules for Safe Operation of Power Tools

- 1. KNOW YOUR POWER TOOL— Read the owner's manual carefully. Learn the applications and limitations as well as the specific potential hazards of the tool.
- 2. GROUND ALL TOOLS.
- 3. KEEP GUARDS IN PLACE. Keep guards in working order.
- 4. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- 5. AVOID DANGEROUS ENVIRONMENTS. Don't use power tools in damp or wet locations. Keep work area well lit.
- 6. KEEP CHILDREN AWAY. All visitors should keep a safe distance from the work area.
- 7. DON'T FORCE TOOL. The tool will do a better job if used at its designed rate.
- 8. WEAR PROPER APPAREL. Loose clothing, gloves or jewelry may get caught in moving parts. Rubber footwear is recommended when working outdoors.
- 9. USE PROTECTIVE GLASSES. If operation is dusty also wear a dust mask.
- 10. DON'T OVERREACH. Keep proper balance and footing at all times.
- 11. MAINTAIN TOOLS WITH CARE. Tools kept sharp and clean provide the best and safest performance. Follow instructions for lubricating and changing accessories.
- 12. DISCONNECT TOOLS FROM POWER SOURCE. When not in use, before servicing, when changing accessories, blades, or cutters the tool should be disconnected and locked out.
- 13. REMOVE ADJUSTING KEYS AND WRENCHES. Make it a habit to ensure keys and adjusting wrenches are removed prior to starting tool. 14. USE RECOMMENDED ACCESSORIES. Consult your distributor or the Original Saw
- Company for recommended accessories. Using improper accessories may cause hazards.
- 15. SECURE YOUR WORK. Use clamps or a vise to hold work when practical.
- 16. NEVER LEAVE TOOL RUNNING WHILE UNATTENDED.
- 17. ONE OPERATOR ONLY. The person who pulls the saw should position the work. 18. DO NOT REMOVE SMALL SCRAPS FROM THE TABLE WITH YOUR FINGERS.

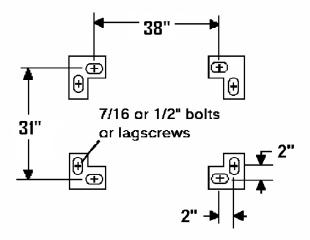
!!! CAUTION !!!

BOTH UPPER AND LOWER GUARDS MUST REMAIN IN PLACE FOR SAFE CUTTING **OPERATION.**

This manual is not totally comprehensive. It does not and cannot cover every possible safety and operational factor which may arise during the life of the machine.

MODEL:	3531-01	3531-03	3536-01	3536-03	3541	3546
Arm	Standard	Standard	Medium	Medium	Standard	Medium
Blade Size	14" / 350 mm	16" / 400mm	16" / 400mm			
MOTOR: ALL MOTORS T	OTALLY ENCLOS	ED FAN COOLED				
HP	3	5	3	5	5	5
Phase	1	3	1	3	3	3
Hertz	60	50/60	60	50/60	50/60	50/60
Volts *	230	208/230/460	230	208/230/460	208/230/460	208/230/460
Brake	automatic	automatic	automatic	automatic	automatic	automatic
Arbor	1" x 2 3/16"	1" x 2 3/16"				
CAPACITIES: inches/me	etric					
Maximum Out-Rip	29.875 / 758 mm	29.875 / 758 mm	37 7/8 / 962 mm	37 7/8 / 962 mm	29.875 / 758 mm	37 7/8 / 962 mm
Max Cross Cut 1" Stock	16" / 406 mm	16" / 406 mm	24" / 609 mm	24" / 609 mm	16" / 406 mm	24" / 609 mm
Max Miter 45° 1" Stock	10 7/8" / 276 mm	10 7/8" / 276 mm	15 1/2" / 393 mm	15 1/2" / 393 mm	10 7/8" / 276 mm	15 1/2" / 393 mm
Max Depth of Cut	4 1/8" / 104 mm	4 15/16" / 125 mm	4 15/16" / 125 mm			
Max Depth of Cut 45° Bevel	1 3/4" / 44 mm	2" / 50 mm	2" / 50 mm			

1 1/4" x 5/8" slot Ð



FLOOR MOUNTING DIMENSIONS

Your saw may be mounted to the floor. Use the diagram at right to assist you in placing the saw and fastening it to the floor.

Unpacking and Attaching the Table Legs Your Original Radial Arm Saw has been completely assembled, tested and then partially disassembled. The box included in your shipment contains the following items necessary for assembly of your saw:

Legs	4	Magnetic Starter 1	3/8" Fla	nged Cap Screws	16	3/8" Hex Nut	16
3/8" Lock washer	16	Allen Arbor Wrench	1	Flat Arbor Wrench	1		

The machine can be lifted with a forklift under the steel saw frame. A sling or chain hoist may be used under the arm ONLY if placed at the rear of the arm near the column. Attach the legs using the 3/8" hex head cap screws, lock washers and nuts provided in the hardware bag. Tighten cap screws securely after the machine has been lowered onto its legs.

Important

All cable lengths have been adjusted during manufacture to allow for proper movement of the arm and roller head. However, you should check the cables to ensure full range of movement. If adjustment is necessary, loosen the 2 cable clamps (1 inside of arm, 1 at right rear of arm) and adjust the cables so roller head is free to travel the total length of the arm with the motor pivoted in the roller head so the blade is on the right hand side. Also, check to ensure there is enough slack in the cables between the rear of the arm and the starter enclosure so the arm can be swung to the right a full 90° while the arm is elevated to the right product position. its highest position.

Electrical Connection—





Recommend Copper Wire Sizes (A.W.G.)

To obtain maximum efficiency from your saw motor, the feeder wire from the power source to the machine should comply with the table below.

Note: Always check arbor shaft rotation before installing blade, arbor nuts, or collars.

Wire sizes in this chart are the result of high start up amps.

Recommended Copper Wire Sizes

	1 Phase	3 Phase	3 Phase	3 Phase
Up to 60' from power supply	200-240 V	200-240 V	440-480 V	550-600 V
3 hp	#8 AWG	#8 AWG	#10 AWG	#10 AWG
5 hp	#6 AWG	#8 AWG	#10 AWG	#12 AWG
7.5 hp	N/A	#6 AWG	#8 AWG	#10 AWG

60 - 100' From power supply	200-240 V	200-240 V	440-480 V	550-600 V
3 hp	#6 AWG	#6 AWG	#8 AWG	#10 AWG
5 hp	#2 AWG	#6 AWG	#6 AWG	#8 AWG
7.5 hp	N/A	#4 AWG	#6 AWG	#6 AWG

100 - 160' From power supply	200-240 V	200-240 V	440-480 V	550-600 V
3 hp	#4 AWG	#4 AWG	#8 AWG	#8 AWG
5 hp	#0 AWG	#2 AWG	#6 AWG	#6 AWG
7.5 hp	N/A	#2 AWG	#4 AWG	#8 AWG

Over 160' From power supply	200-240 V	200-240 V	440-480 V	550-600 V
3 hp	#2 AWG	#2 AWG	#4 AWG	#4 AWG
5 hp	#00 AWG	#2 AWG	#2 AWG	#4 AWG
7.5 hp	N/A	#0 AWG	#2 AWG	#2 AWG

<u>Note</u>: Wire too large to insert into the provided magnetic starter will need to be terminated in a fused disconnect and #10 wire ran into the magnetic starter using less than 10 feet of cable.

Recommended Fuse / Breaker Size

(Located in the disconnect enclosure)	1 Phase	3 Phase	3 Phase	3 Phase
	200-240 V	200-240 V	440-480 V	550-600 V
3 hp	60 AMP	20 AMP	20 AMP	20 AMP
5 hp	90 AMP	30 AMP	20 AMP	20 AMP
7.5 hp	N/A	45 AMP	20 AMP	20 AMP

General Safety Precautions

- Be sure the blade rotates clockwise when facing the saw from the left side. Blade must rotate to the front of the saw.
- Be sure all clamp handles are tight before turning on motor. 2.
- 3. Keep the blade sharp and properly set.
- 4. Hold or clamp the material firmly against the guide strip when cutting.
- Be sure the blade and arbor collars are clean and the recessed side of the collars are against blade. 5. Never oil or grease arm tracks or motor.
- 6. 7.
- Do not start machine without proper tool guard. Do not remove the anti-kickback device from the blade guard. Adjust it to just clear the work. 8.
- Keep motor air slots clean.
- 10. Return roller head to full rear after each operation.

General Cautions When Using the Lower Blade Guard:

- Used properly the lower blade guard is designed to provide protection from contact with the side of the blade. It is not 1. designed to prevent contact with the front or rear of the blade. When the lower guard contacts the fence or material being cut it will rise up and expose the blade. Be careful to keep your hands out of the line of the cut.
- 2. Lower blade guards may become caught in prior kerfs in the fence or table. Alleviate this by replacing the guide fence
- frequently. Always stop the saw before attempting to remove a guard that is stuck in a kerf. Short cut-off pieces of wood may become caught between the lower guard and the blade. If this happens shut off the saw and wait until blade stops to remove the piece. 3.
- The lower blade guard's effectiveness is limited in bevel operations. It may have to be raised out of the way when set-ting the bevel angle. Be sure the power is off/locked out and blade is completely stopped before making any 4. adjustment.
- Catching the lower guard in saw kerfs when changing the saw setup can be avoided by elevating the saw until the bot-tom of the guard clears the fence. 5.
- When ripping narrow strips the lower guard may have to be raised to rest on top of the guide fence. Be sure to use a pusher stick to feed the work. 6.
- 7. Do not use the lower guard with any accessory other than the correct size blade.

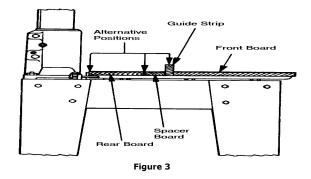
Using the Adjustable Arm Stop

The arm stop should be used whenever roller head travel needs to be limited, such as when repetitive cross cuts are being made. Use of the arm stop will also prevent the blade from throwing small cut off pieces on the return stroke. Do not adjust the arm stop unless the power is off and locked out and the blade stopped. The arm stop must be used on the right side of the arm. Proper adjustment of the arm stop is completed as follows:

- Pull the roller head forward far enough for the blade to sever the material and travel 1/4" past the material. 1.
- Lock the roller head to the arm with the riplock and place the arm stop so it is touching the roller head. 2.
- 3. Loosen the riplock and return the roller head behind the fence.

Alternate Guide Strip Positions

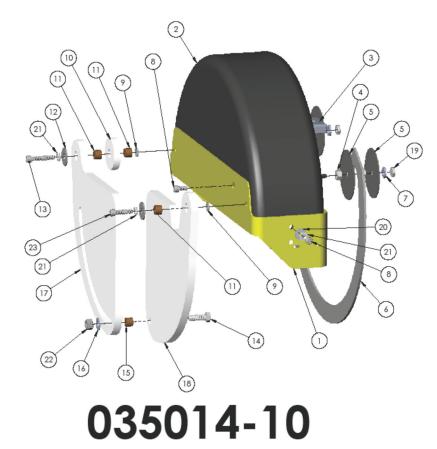
Your saw was assembled with the guide strip in the most frequently used position on the work table (see figure 3). The guide strip may be moved to alternate positions to accommodate varying uses. Moving the guide strip behind the spacer board will allow for maximum cross cutting capabilities. Moving the guide strip back to the rear board will provide for maximum ripping capability.



Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- Quantity, part number and description of parts required
- Complete shipping and billing instructions



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	096614-04	SKIRT, BLADE GUARD 14"	1
2	096614-02	GUARD BODY, 14"	1
3	096694	Guard Mount Bracket	1
4	099370-04	5/16"-18 HEX NUT	4
5	400720	BLADE GUARD RETAINER 12"	4
6	096798-00	RING, 14" GUARD	1
7	099384-07	5/16" LOCK WASHER	2
8	099154-08	1/4-20X1/2 SHCS	3
9	096803-22	POLY WASHER, 1/4	2
10	096614-07	GUARD BLADE SPACER 12"	1
11	096803-04	BUSHING, .25ID X .50OD	3
12	099361-18	Flat Washer 1/4 x 1" zinc	2
13	0996154-22	1/4-20X13/8 SHCS	1
14	082104-02	5/16"-18 x 1 1/4" HEX BOLT	1
15	096803-02	5/16" BRASS BUSHING	1
16	099361-16	5/16" FLAT WASHER	1
17	096614-10	GUARD, BLADE, REAR 12"	1
18	096614-11	GUARD, BLADE, FRT 12"	1
19	099364-04	5/16"-18 HEX NUT	2
20	046084-00	1/4" FLAT WASHER	2
21	91102A750	Wshr. 1/4 Lock ZP	4
22	082024-02	Nut, 5/16-18 Elastic Stop ZP	1
23	082190	Scr 1/4-20 x 1 SHCS Black	1

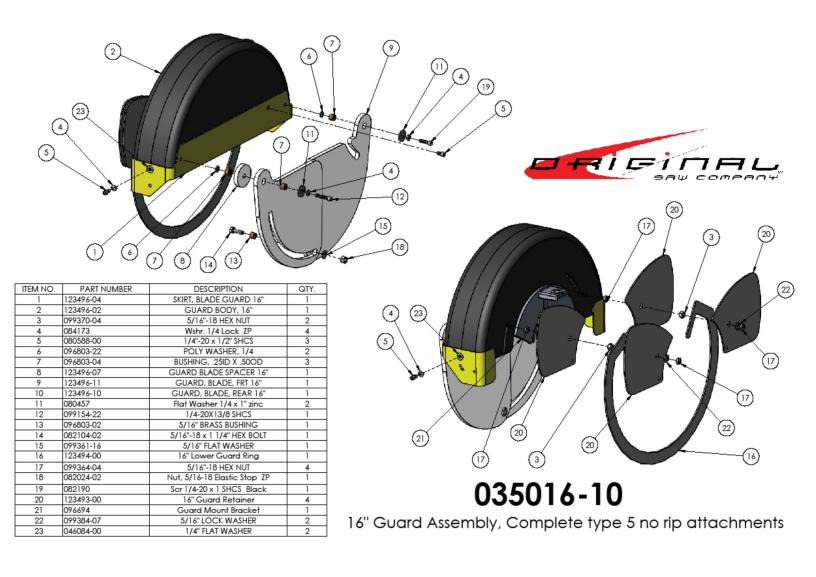


14" Guard Assembly, Complete type 5 no rip attachments

Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- Quantity, part number and description of parts required
- Complete shipping and billing instructions



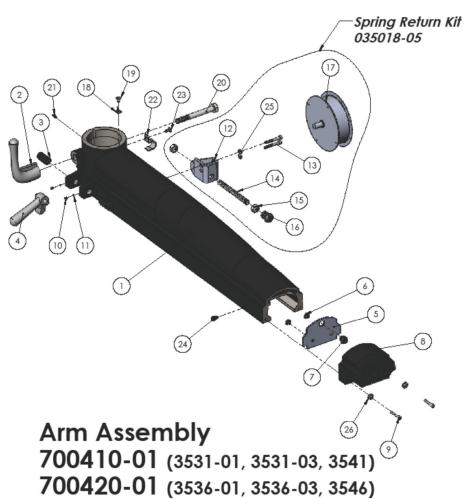
Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- Quantity, part number and description of parts required
- Complete shipping and billing instructions

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	123518-00	32" HD Arm (Std)	1
	123518-01	40" HD Arm (Med)	
2	083294	HD Arm Clamp Handle	1
3	083122	Miter Latch Screw	2
4	096767	HD Miter Latch	1
5	088183-01	HD Dust Cover w/ bumper holes	1
6	070869	Bumper	2
7	048822	Strain Relief	1
8	096728-02	HD End Cap w/ single hole	1
9	082190	1/4-20 x 1" Soc Hd Cap Scr	2
10	082387	Scr 1/4-20 x 1/4 SSCPPT Black	2
11	083412	1/4" Set Screw Slug	2
12	084962-01	HD Bracket, Reel Mounting Type 2	1
13	099154-28	1/4-20 x 1 5/8 Soc Hd Cap Scr	2
14	088186	HD Bumper Stud Cut to Length	1
15	099366-10	HEX JAM NUT, 1/2-13	2
16	068653-01	1/2" Rod Bumper	1
17	066212-00	Spring Return	1
18	203597-01	Pointer	1
19	080489	PHPS, 1/4-20 X 3/8	1
20	096771-01	Arm Clamp Bolt	1
21	080648	1/4-20 x 1/2 Cup Pt Set Screw	1
22	81778	Cable Clamp	1
23	080634	Scr 1/4-20 x 1/2 Rd.Hd.Sltd.Mach.ZP	1
24	082200	Scr 5/16 x 3/8 SHCS Black	1
25	084173	Wshr. 1/4 Lock ZP	2
26	099384-07	5/16" LOCK WASHER	2



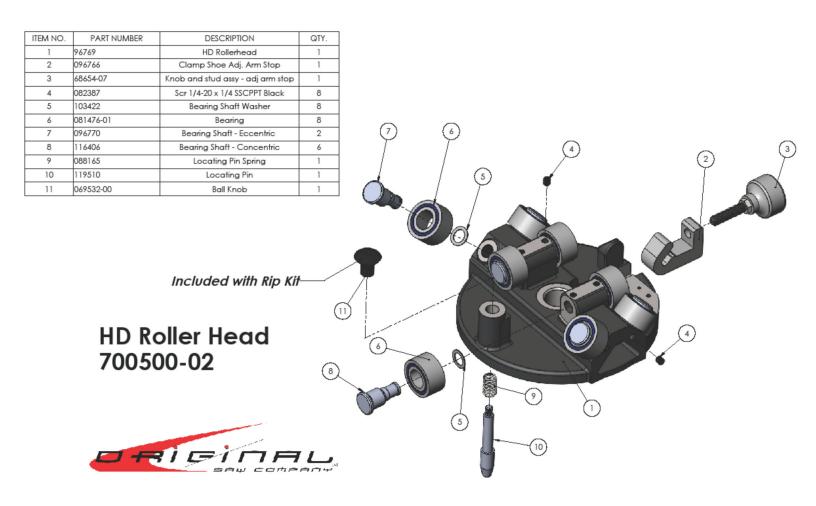


•

Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- · Quantity, part number and description of parts required
- Complete shipping and billing instructions



Order only genuine replacement parts from your Original Saw Company Dealer.

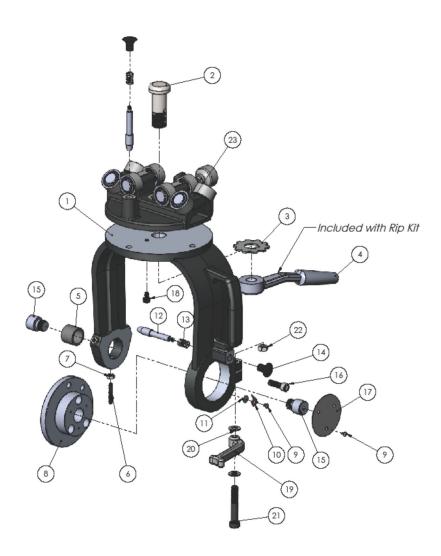
When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- Quantity, part number and description of parts required
- Complete shipping and billing instructions

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	96737	HD Yoke	1
2	067927	KING BOLT	1
3	068655	Adjuster Washer	1
4	096774	YOKE CLAMP HANDLE	1
5	101122	TRUNION BUSHING	1
6	082403-00	1/4"-20 CP SET SCREW	3
7	099364-04	Nut 5/16-18 Hex Jam	3
8	83356-01	DIAL PLATE	1
9	099262-04	PHPS, 8-32 X 1/4	4
10	203588-01	Pointer	1
11	030251	#10 flat washer	1
12	119510	Locating Pin	1
13	088165	Locating Pin Spring	1
14	069532-00	Ball Knob	1
15	101121	Trunion Stud	2
16	082173-00	3/8"-16 x 1 1/4" SHCS	3
17	101118	HD Dial Logo Plate	1
18	082200	Scr 5/16 x 3/8 SHCS Black	1
19	201361	Bevel clamp handle	1
20	080674	3/8" Flat Washer	2
21	082182	SHCS, 3/8-16 X 2 3/4	1
22	99370-07	HEX NUT, 5/16-18	1
23	HD Roller Head Assembly	SEE PAGE 10	1

HD Yoke Assembly 700300-03





Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

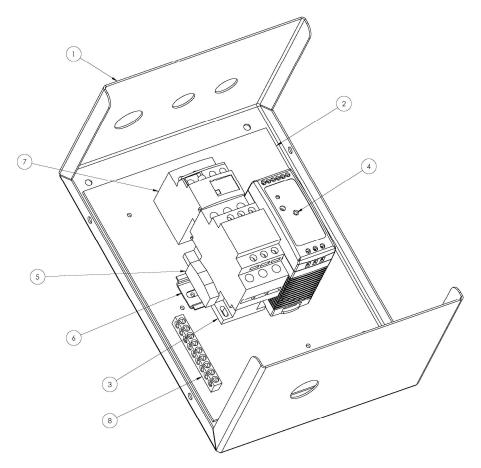
- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame

(12) (15)

- Complete motor identification from motor name plate
- Quantity, part number and description of parts required
- Complete shipping and billing instructions

ITEM NO.	PART NUMBER	DESCRIPTION	Inculdo	
1	122332-01	HD Base	1	
2	099174-01	5/8"-11 X 1 1/4" HEX HEAD BOLT	4	
3	080682-00	5/8 Lock Washer	4	
4	088166	HD Column	1	
7	096742	Elavating Assembly	1	
8	082205	SHCS 5/16-18 X 5/8	6	
9	121616-00	HD & CD Gib	1	
10	096897-00	1/4"-20 x 1 3/4" CPSS	2	
11	099374-05	1/4"-20 HEX JAM NUT	2	
12	080501-00	Thrust Bearing	1	
13	046084	1/4" WASHER	1	
14	121267-01	HD THRUST CAP	1	
15	070964-03	CRANK HANDLE ASM	1	
16	121451	Special Washer	2	
17	082173-00	3/8"-16 x 1 1/4" SHCS	2	
18	096714	1/4-20 x 5/16 SET SCREW	2	
19	096722-01	5/8"-11 X 2 1/2" HEX HEAD BOLT	1	
20	081988-00	5/8"-11 HEX JAM NUT	2	
21	096722-02	5/8"-11 X 3 1/2" HEX HEAD BOLT	1	
22	103206	HANDLE	1	() where the second sec
23	082023-02	1/4"-20 x 2 1/4" HEX BOLT	1	
24	082024-00	1/4"-20 LOCK NUT	1	
HI	D Base and	d Column Assem	bly	

Magnetic Starter Assembly Magnetic starter with DC control circuit For Heavy Duty Series models



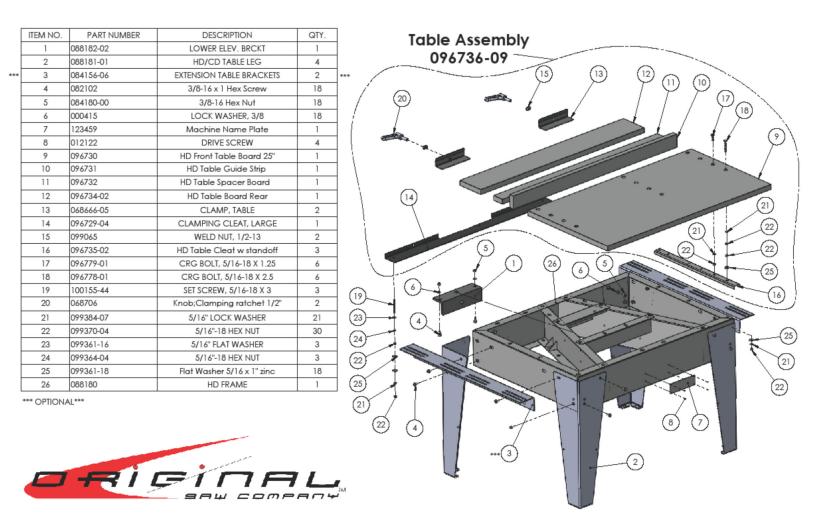
Ind	ex Description	Qty	5hp 3 phase	5hp 3 phase
No.			230 v	460 v
Ent	ire assembly part numbers		700740-12-230	700740-07-460
1	Enclosure (2 pcs back and door)	1	201474-28	201474-28
2	Sublate	1	201474-28s	201474-28s
3	Contactor	1	122108-82-24vdc	122108-82-24vdc
4	DC power supply	1	122105-70-100/260	122105-70-200/550
5	End stop (din rail)	2	068720-16	068720-16
6	Din Rail	1	hardware item	hardware item
7	Thermal overload	1	122110-85	122110-82
8	Ground lug	2	081769-06	081769-06

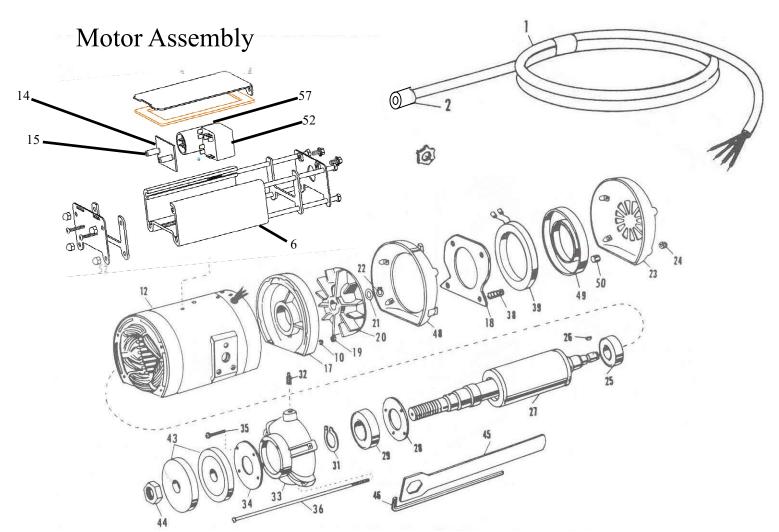
3hp 1 phase					
220 v					
700740-16-230					
201474-28					
201474-28s					
122108-82-24vdc					
122105-70-100/260					
068720-16					
hardware item					
122110-86					
081769-06					

Order only genuine replacement parts from your Original Saw Company Dealer.

When ordering parts be sure to include:

- Name of manufacturer—Original Saw Company
- Complete machine identification data found on name plate on front of frame
- Complete motor identification from motor name plate
- · Quantity, part number and description of parts required
- Complete shipping and billing instructions





Ind No.	ex Part No.	Description	Qty	Ind No.	ex Part No.	Description	Qty
1	064540	#14-4 motor cable	1	31 32	541351 123497-02	Retaining Ring Sud Kit	1
2	081724-01 068820-02	Strain Relief—Liquid tight fitting Nut—for strain relief	1	32 33 34	088146 070786-01	Arbor End Bell Cover Plate	1
4	123466-02	motor data label 3 phase	1	35	099263-20	#10-24 x 1 1/4 pan hd mach screw	4
	123466-08	motor data label 1 phase	ī	36	123419	Tie Rod	4
5				37			
6	088175-11	Motor conduit Box Assembly	1	38	123418	Spring (brake)	4
7 10	000418 000417	#8 lock washer #10 lock washer	2 6	39	123406-01	Brake Coil Assembly	1
11	096994	10-24 x 3/4 pan hd mach screw	2	43	101820-01	Arbor Collar (ground)	2
12	123412-95	Stator 230/460 Volts 3 ph	1	44	081433	Arbor Nut	1
12	123412-96	Stator 575 Volts 3ph	ī	45	301020-02	Arbor Wrench Flat	ī
	123411-56	Stator 230 Volts 1 ph	1	46	203511	Arbor Wrench Allen	1
13				47	121319-71	Connection Diagram 208/230/460 v	1
14	072222	Brake module	1		121318-71	Connection Diagram 575 v	
15	123420	spacer (brake module)	2	10	123460-71	Connection Diagram 220 v 1 phase	
16 17	099248-28 541003	#8-32 x 1 3/4 pan hd mach screw Fan End Bell	2	48 49	123403 123404	Fan Baffle Coil Housing	1
18	123402	Brake Disk	1	49 50	121341	Bumper (peel & stick)	1 3
19	081953	#10-24 hex nut	4	50	121341	bumper (peer & stick)	5
20	123417	fan assembly	i	Sina	le nhase only	below line (motor # 123424-00)	
21	539160	shim washer (.002)	AR	Sing	ie pliase only		
	539161	shim washer (.005)	AR				
~~	539162	shim washer (.010)	AR	52	068595-03	Relay	1
22 23	037846 541007	retaining ring	1	53 54	099249-05 099361-10	#10-24 x 3/8 pan hd mach screw #10 flat washer	1
23 24	081932	Fan housing #10-24 hex cap nut	1	54	000417	#10 lock washer	1
25	123414	Ball Bearing	1	57	083382-05	Capacitor	1
26	026587	Woodruff Key	ī			s wire connector for motor leads	-
27	123408	Rotor and Shaft	ī			(081733 & 081730)	
28	083419	Bearing Cap	1				
29	123413	Ball Bering	1				

Industrial Use Warranty Information

Your new Original Radial Arm Saw is precision manufactured under strict quality standards. In the unlikely event there is trouble with your machine, the Original Saw Company warrants the machine for the period of one year from the date of purchase. The warranty covers defects in materials and workmanship. We will cover the cost of the defective part and ground shipping. If a replacement part is sent under warranty the defective part must be returned to Original Saw Company or you will be charged for the replacement. The part must also be accompanied by a return goods authorization number. This number can be obtained by calling customer service at 1-800-733-4063. When the part is returned it may be repaired or replaced at our discretion. The part must be shipped prepaid to: The Original Saw Company, Attn. Warranty Replacement Counter, 465 Third Avenue SE, Britt, Iowa 50423.

IMPORTANT	IMPORTANT	IMPORTANT		
To assure product reliability, repairs, maintenance and adjustments should be performed by Authorized Service Centers, always using genuine replacement parts.				

For parts or service please contact Original Saw for the dealer nearest you.



465 Third Ave SE P.O. Box 331 Britt, IA 50423 PH 800/733-4063 641-843-3868 FX 641 / 843-3869 E-mail customerservice@originalsaw.com www.originalsaw.com

Printed in the USA © The Original Saw Company 1/2020 (Updated 12/7/2022)