

## Shopsmith Arbors, Spindles and Chucks

\*Keyed shaft

### Arbors

102-35X	1/2" Arbor	(2 versions, first one without wrench cuts on base)
126-1X	5/8" Arbor	(2 versions, first one without wrench cuts on base)
12 030	1/2" Arbor	(same as 102-35X version 2)
12 031	5/8" Arbor	(same as 126-1X version 2, later threaded only part way down)
22 030	1/2" Arbor*	(came out with the Mark 5, 1954)
22 031	5/8" Arbor*	(came out with the Mark 5, 1954)
22 032	1 1/4" Saw Arbor	(came out with the Mark 5, 1954)
12 431	5/8" Saw Arbor	(for saw blade use only) (originally made for the Mark 2)
27 030	1/2" Universal Arbor*	(62 cat. lists 27030 twice as Arbor & Shaper Adapter)
27 032	1 1/4" Saw Arbor	(For Sawsmith ONLY, two versions, large & small hex)
505505	1/2" Universal Arbor*	(two versions, replaces 27 030 Arbor)
505506	5/8" Universal Arbor*	(version 1-3, now Molder/Dado Arbor – same #)
505506	5/8" Molder/Dado Arbor*	(version 3-4, was 5/8" Universal Arbor – same #)
505511	Mark V 500 1 1/4" Saw Arbor	(2 versions, Rounded or Beveled top - changed 78-79)
505512	Sawsmith 1 1/4" Saw Arbor	(For Sawsmith ONLY) (27032 smaller style)
517118	Sawsmith 1 1/4" Saw Arbor	(For Sawsmith ONLY) (same as 555572)
555118	5/8" Saw Arbor - for Model 510 only	(replaced by 555608 before Model 520 release)
555130	Mark V 510/520 1 1/4" Saw Arbor	
555302	Grinding Wheel Arbor*	
555321	Mark V 500 5/8" Saw Arbor	
555572	Sawsmith 1 1/4" Saw Arbor	(For Sawsmith ONLY, looks like 555608) Discontinued
555608	Mark V 510/520 5/8" Saw Arbor	(originally for Sawsmith use, replaces 555118)
555619	Molder/Dado Arbor Assembly	(Replaced by current 505506)
515462	Biscuit Joiner Blade Arbor	(Part # is for the base part only-has 3 more parts)

### Shaper Spindles

129-10X	1/2" Shaper Adapter	(2 versions, 1 <sup>st</sup> with larger diameter – shorter base)
129-11X	5/16" Shaper Adapter	(same as 12 233)
12 232	1/2" Shaper Adapter - 1/4" and 5/16" set screw versions	(same as 129-10X version 2)
12 233	5/16" Shaper Adapter	(same as 129-11X)
27 030	1/2" Universal Arbor/Shaper Adapter	(pic in 62 cat. looks like 12 232)
555117	1/2" Shaper Arbor* w/ rub collars (collar dia. 25/32", 1", 1 1/4" & 1 1/2")	replaced 505505)
555463	1/2" Shaper Spindle* w/ rub collars	(for Speed Increaser)
555472	Ball Bearing Shaper Spindle	(for Speed Increaser)

### Router Chucks

145-1X	1/4" Router Chuck	(same as 12 190)
145-5X	5/16" Router Arbor	(same as 12 191)
145-9X	1/2" Router Chuck	(same as 12 193)
12 190	1/4" Router Chuck	(same as 145-1X)
12 191	5/16" Router Chuck	(same as 145-5X)
12 193	1/2" Router Chuck	(same as 145-9X, 3rd version straight sleeve)
505597	1/2" Router Chuck	(2 versions - 8/74 cat. shows straight sleeve)
514631	1/2" Router Chuck	
514632	1/4" Router Chuck	
556451	Eliminator Chuck (1/2")	Use 523146 1/4" Collet for 1/4" Shaft Router Bits

### Additional Arbors (non-standard Shopsmith Arbors - May be from other manufactures sold by SS)

AK-1003	1/2" Wheel Arbor	(1/4" Shank for wire wheels, etc. - replaced universal arbor uses)
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## Notes:

Part Numbers for Accessories: 3 digit dash numbers with X (example 126-1X) were the first numbers used starting with Model 10E's (some references left off the "X" and boxes for the parts were first off white then light gray), the 2 digit space 3 digit numbers replaced the original numbers November 19, 1951 starting with 12 (example 12 031) with some of these numbers used into the 1960's. Numbers starting with 22 (example 22 031) were introduced in the Fall of 1953 for the up-coming Mark 5, later the space was left out of these part numbers in some catalogs and 27000 numbers were added. 6 digit numbers (example 505506) were started by Magna American. The Feb. 64 catalog has the new 6 digit numbers with the old numbers in parenthesis. The Black Oxide Protective Coating of parts also started about this time. 555??? numbers were being used by 1984 followed by other 6-digit numbers for accessories. Other part numbers have been used for items sold by Shopsmith Inc. from other suppliers. 4 versions of part number 505506 have been made. 1 through 3 as the 5/8" Universal Arbor then changed to Molder/Dado Arbor for versions 3 & 4 (Winter 1987 catalog shows version 3 and references both names p. 20.) 505506 changes include spacer changed to larger diameter then larger diameter base then longer threaded shaft. The November 13, 1962 Magna American Corporation Accessories Catalog lists part number 27030 twice, first on page 1 as 1/2" *Universal Arbor* (no picture) then on page 3 as 1/2" *Universal Arbor (shaper adapter)* in which the picture shows a Shaper Adapter like 12 232. I have a 27030 in its original Magna American box that is the same as 505505 without the black oxide coating. The Yuba Sawsmith Radial Arm Saw manual of 9/59 shows 27030 the same as 505505 without the black coating. 505505 replaced the 1/2" Shaper Adapter until it was discontinued and replaced by 1/2" Shaper Arbor 555117. Two versions of 505505 were apparently made. The second with a larger diameter base just before it was discontinued. The 2 machined washers and spacer on version 2 were replaced by the 4 shaper collars to become the current 1/2" Shaper Arbor 555117. Owner's Manuals may have different part numbers for the same item and may have numbers for individual pieces of the arbors and spindles as well.

All Shopsmith Arbors and spindle accessories have a 5/8" smooth bore and are made to attach to the 5/8" spindle shaft of any Model 10, Mark series or Sawsmith machine except the 1/2" Wheel Arbor. *Shopsmith legal disclaimer - current arbors and attachments are for use on Mark V and Mark 7 machines and not intended for use on previous models.* That being said the current Lathe Drive Center part number 505715 will work just as well as the original Lathe Drive Center part number 102-34X on a Model 10E or the new Mark 7. The only change made to this part over the years, besides the part numbers changing, was the set screw changed from a 1/8" to a 5/32" Allen wrench size in late 1953 and the black protective coating was added starting in 1964. Arbors with the 5/8" threaded shaft and smaller are right hand fine thread. Most 1 1/4" Arbors are left hand threaded. The 4 Sawsmith only arbors are 1-1/4" or 5/8" threads and the nuts tighten against the spindle rotation. These Sawsmith arbors were first for the Radial Arm Saw and the later 2 were for the Table Saw. Some early Arbors varied slightly in the threaded shaft length. I have found no indication that the Magna Line Model 710 Table Saw used blade arbors.

All direct spindle attachment accessories use a single set screw to attach to the reverse tapered spindle. If the accessory has other than a 5/8" smooth bore for a spindle shaft attachment or more than one set screw than it is not a Shopsmith part with 1 exception, the 2-1/2" jointer head (part numbers 129-12X & 12 230) has two 1/8" or 5/32" Allen wrench size set screws. With the introduction of the Mark 5 by Magna Engineering (sold beginning in 1954) all possible set screws were changed to the 5/32" Allen wrench size although some part numbers remained the same even into the 1960's. Model 10 accessories used 1/8" & 3/16" Allen wrench size set screws. There are a few exceptions, examples - the current 1/4" router chuck (514632) uses 3/32" Allen wrench size set screws to hold the router bit in place and some of the Precision Molders (505553) used 3/16" Allen wrench size set screws for spindle shaft attachment and blade locks. Some parts will have the same number but a different size set screw. As an example, 12 232 the 1/2" Shaper Adapter had two different size bases and both a 1/8" and 5/32" Allen wrench size set screw depending on when it was made. Another change that started with some of the Mark 5 Arbors was the introduction of the keyed lock washer. Model 10E & 10ER Arbors did not have this feature.

The use of Mark 5 and Mark V in this text comes from the way the machines themselves are marked. Early Mark 5's like the "Greenies" used the number 5 whereas the current Mark V's use the Roman Numeral V. This change was made on the machine's markings early in 1980 by Shopsmith Inc. although advertising used Mark V prior to 1980. The Mark 2 made in the 1950's at Montgomery Wards' request had the number 2. The Mark VII made in the 1960's had both the Roman Numeral VII and Number 7 in different places on the machine and is very different than the Mark 7 made today.

The above information was gathered from Catalogs, Packaging, Manuals, Advertising and Hands On, Shavings & Shop Notes Magazines. Additional information came from the parts themselves. I have at least one of each arbor, spindle and chuck version listed above with the exception of the straight sleeve version (from 8/74 catalog) of Router Chuck 505597. According to Shopsmith (on 05/06/16) the last only for Sawsmith Arbor 555572 was discontinued about 20 years ago. The Saw Blade Arbor shown in the Original Model 10E Manual on page 1 figure 1 shows an Arbor different from the early Model 10E 1/2" Arbor (102-35X.) If shipped with the first Model 10E's and not a pre-production arbor it should be included in this list but has no known part number. I have an original Model 10E (S/N 1077) but it did not have the Arbor shown in Fig. 1 when I purchased it. Early Model 10E's came with a 1/2" Arbor, not a 5/8" Arbor.

This is a work in progress as there may be additional arbors, spindles or chucks I have not found yet. I have limited parts information from the early 1960's until the late 1970's (Yuba and Magna American eras and beginning Shopsmith Inc. years.) As an example, I have not found any reference to a 1/4" Router Chuck with a 505??? part number. This Chuck appears to have been discontinued like the 5/16" Router Chuck both in the 1950's then added back by 1990 under the current part number 514632.

### **Set Screw Information**

3/8"-16 x length Set Screw uses 3/16" Allen Wrench

5/16"-18 x length Set Screw uses 5/32" Allen Wrench

1/4"-20 x length Set Screw uses 1/8" Allen Wrench

1/4"-28 x length Set Screw uses 1/8" Allen Wrench

The normal Allen Wrench size is half the diameter of the set screw.

There are exceptions: some early 5/16" Set Screws use a 1/8" Allen Wrench and the 3/8" Set Screws in early Mark 5 Drill Chucks use a 5/32" Allen Wrench size.

### **Who Made It?**

- 1947 Magna Engineering Corporation formed to make the Shopsmith Model 10E. The first 250 were ready and shipped to Montgomery Wards on November 15, 1947. As revisions in the design of the Model 10 continued they became the Model 10ER first on the East Coast than on the West Coast (as per the Serial Numbers.) In 1954 the Mark 5 "Greenies" were introduced and for sale starting March 1954. Special Purpose Tools to use on the Shopsmith like the 4" Jointer, Jig Saw, 6" Belt Sander, Band Saw and Air Compressor carried the Magna name.
- 1955 During 1955 Magna divided into two divisions. Magna Engineering became the design and manufacturing division and Magna Power Tool Corporation became the sales and marketing division. This name was chosen to better reflect what the company made.
- 1958 Magna Power Tool Corporation was merged with Weber Engineering Products, Inc. to form Yuba Power Products a new division of Yuba Consolidated Industries.
- 1962 Yuba sells Shopsmith/Magna line to a group of employees. November 13, 1962 Magna American Corporation is formed. As demand fell off in the mid to later 1960's Magna American discontinued different Shopsmith/Magna Tool lines until all were out of production.
- 1972 Shopsmith Inc. formed, Shopsmith brand tools are back for sale in 1973. Some Special Purpose Tools still had Magna markings as late as 1990 but are now Shopsmith tools. Later Shopsmith started using the ShopMate name on some accessories.
- 2009 Shopsmith Inc. in bankruptcy protection and reorganized as RLF Shop LLC.
- 2010 June 10 became RLF Brands LLC but all tools continue to carry the Shopsmith name.