



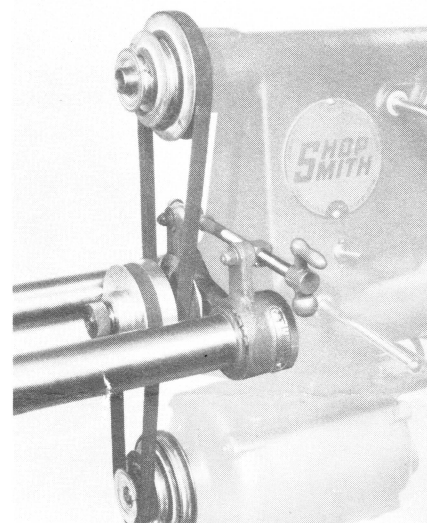
MAGNA ENGINEERING CORPORATION

417 Montgomery Street
San Francisco 4, Calif.

INSTRUCTIONS FOR INSTALLATION AND OPERATION OF VARIABLE SPEED CHANGER

TO INSTALL THE SPEED CHANGER:

1. Remove motor bracket set screw on left side of headstock. Insert in its place the longer motor bracket set screw included with the Speed Changer.
2. Remove tie bar (101-3) from tubular ways.
3. Place Speed Changer on the ways, handle and scale toward the front, and slide along the ways to a position against the headstock.
4. Place jam nut over motor bracket set screw inserted in Step 1 and finger tighten to secure Speed Changer to headstock.
5. Replace tie bar.
6. Remove knob from Speed Changer spindle.
7. Remove Speed Changer pulley assembly.
8. Place one belt over each Speed Changer pulley.
9. Replace pulley assembly on spindle with longest belt nearest headstock.
10. Place longest belt over largest headstock pulley.
11. Replace and tighten knob removed in Step 6.
12. Remove motor pulley and reverse with large step near motor.
13. If necessary, align headstock and motor pulleys with Speed Changer pulleys.
14. Adjust tension on upper belt by turning Speed Changer crank.
15. Place the other belt over smallest motor pulley.
16. Adjust tension on lower belt by adjusting motor height in usual manner described in Shopsmith Owner's Guide and Instruction Book.
17. SHOPSMITH Speed Changer is now ready to operate in **Low Speed** Range.



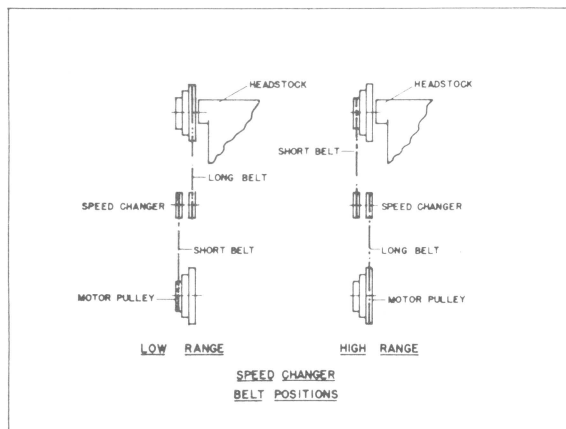
Low Speed Range

NOTE: Do not operate saw blades, grinding wheels, sanding discs, face plates, etc. at greater than recommended speeds.

CAUTION: At maximum and minimum speed settings do not force the crank—it will cause excessive belt tension and damage to the machine.

TO CHANGE FROM SPEED RANGES: Slip belt off headstock pulley and off motor pulley.

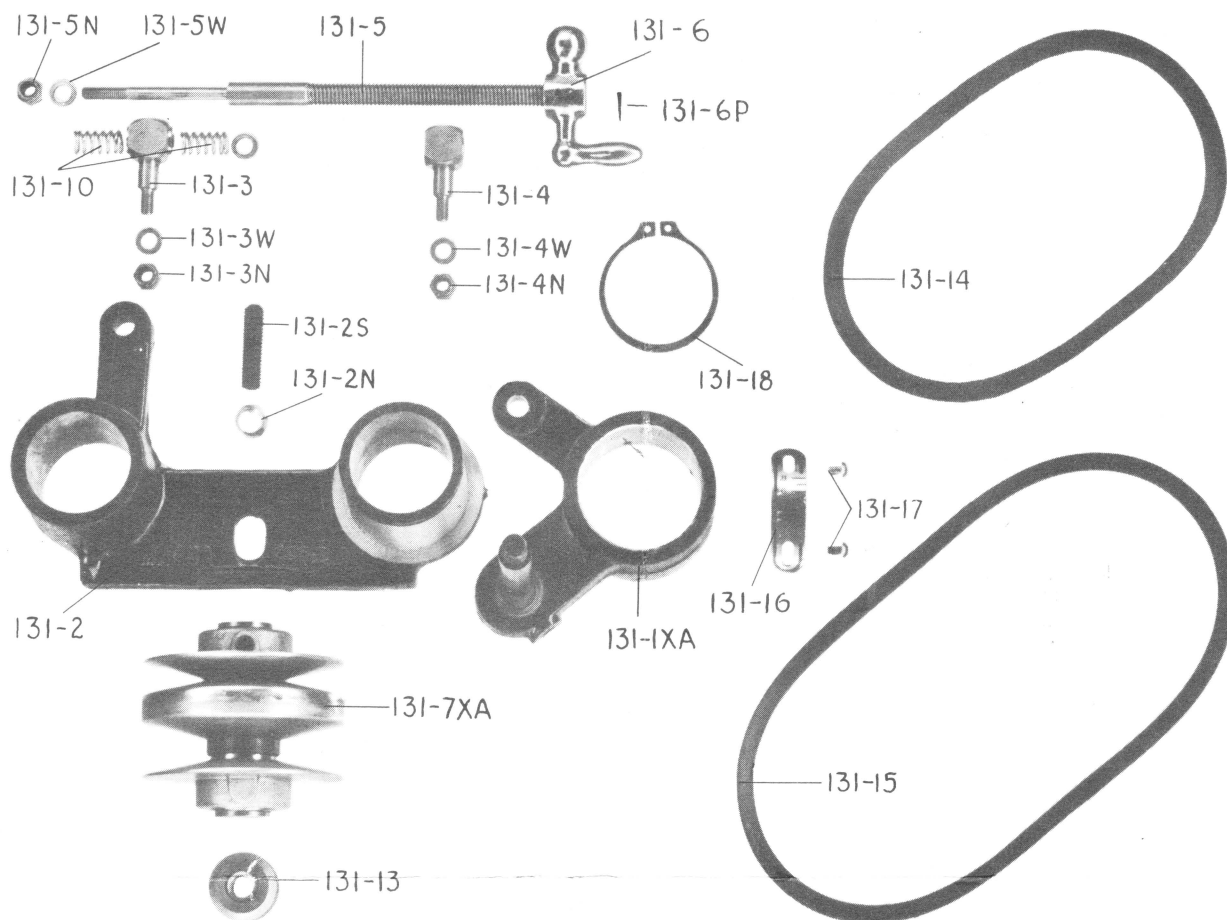
- (a) **For Low Speed Ranges:** Replace belts with long belt on headstock pulley and short belt on motor pulley. (See sketch below.)
- (b) **For High Speed Range:** Replace belts with short belt on headstock pulley and long belt on motor pulley.



SHOPSMITH VARIABLE SPEED CHANGER CHART

Indicator Reading	Low Range R.P.M.	High Range R.P.M.
0	425	1850
1	555	2500
2	745	3300
3	960	4200
4	1225	5500
5	1600	6800

All above speeds are only approximate and may vary according to belt tension, or wear, or current voltage.



SPEED CHANGER PARTS LIST

Part Number	Description	List Price	Ship. Wt.		Part Number	Description	List Price	Ship. Wt.	
			Lbs.	Oz.				Lbs.	Oz.
131-1XA	Axle Support Assembly	\$3.95	1	3	131-5W	1/4 SAE Standard Washer	\$.05		3
131-2	Screw Anchor	2.25	1	3	131-6	Ball Crank	.95		4
131-2S	3/8 - 16 x 1 1/2 Cup Point Allen Set Screw	.20		3	131-6P	Ball Crank Roll Pin	.05		2
131-2N	3/8 - 16 SAE Hex Jam Nut	.05		3	131-7XA	Floating Pulley Assembly	5.50	1	13
131-3	Screw Anchor Lug	.60		5	131-10	Speed Changer Spring	.05		3
131-3N	1/4 - 28 NF 3 Elastic Stop Nut	.05		3	131-13	Axle Knob	.50		5
131-3W	1/4 SAE Standard Washer	.05		3	131-14	Fractional Horsepower, V type A Gates Truflex Belt No. RW 2225 - Short	.95		5
131-4	Screw Lug	.60		5	131-15	Fractional Horsepower type A Gates Truflex Belt No. RW 2255 - Long	.95		5
131-4N	1/4 - 28 NF 3 Elastic Stop Nut	.05		3	131-16	Speed Changer Scale	.25		4
131-4W	1/4 SAE Standard Washer	.05		3	131-17	8-32 x 1/4 Rd. Head Machine Screw	.05		3
131-5	Adjusting Screw	.95		5	131-18	Truarc Retaining Ring 5100-212 External	.50		3
131-5N	1/4 - 28 NF 3 Elastic Stop Nut	.05		3					