OPERATING INSTRUCTIONS AND PARTS LIST FOR

Craftsman 1 H.P. Capacitor-Start Type Motor

115/230 Volts, 60 Cycles, 3450 R.P.M.

Model Number 113.19063

This is the Model Number of Your Craftsman Motor. It will be found on the nameplate attached to the motor. Always mention the Model Number when communicating with us regarding your motor or when ordering parts.

Instructions for Ordering Parts

All parts listed herein must be ordered through a Sears retail or mail order store. Parts are shipped prepaid. When ordering repair parts, always give the following information:

1. The part number in the list.
2. The part name and price in the list.
3. The model number which will be found on the nameplate attached to the motor.

This list is valuable. It will assure your being able to obtain proper parts service. We suggest you keep it with other valuable papers.

SEARS, ROEBUCK AND CO.

PRINTED IN U. S. A.

Instructions for Mounting, Connecting and Servicing Craftsman Motor -- Model No. 113.19063

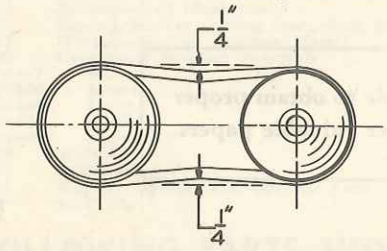
This Motor, As Shipped, Is Connected For 230-Volt Operation

This Craftsman Motor is of the capacitor-start type designed for use on a single-phase, 60-cycle, alternating-current supply of either 115 or 230 volts, and designed to provide a simple means of reversing the direction of rotation. The high-speed, precision ball bearings with which this motor is equipped permit the motor to be mounted in any position.

Mounting Motor

Before shipment from the factory, the motor was given a thorough electrical and mechanical inspection. Before mounting the motor in the application for which it was purchased, however, the following procedure should be followed to insure that the motor has not been damaged in transit:

1. Turn the shaft with the fingers. The shaft should turn freely and smoothly.
2. Remove the two screws which secure the terminal cover to the motor and remove the terminal cover. Inspect the connections to the terminal plate and, if necessary, change the connections as described under CONNECTING MOTOR to match the current supply and to provide the desired direction of rotation. Replace the terminal cover.
3. Remove the two keys from the shaft (or tape them securely to the shaft), connect the motor to the current supply by means of the plug and cord and place the Switch in the "ON" position. The motor should then operate with only a small amount of bearing noise and electrical "hum". Check the direction of rotation to insure that it is correct for the mechanism to be driven by the motor.
4. Return the Switch to the "OFF" position, replace the keys in the shaft (or remove the tape if tape was employed to secure the keys to the shaft) and mount the motor in the application for which it was purchased. If only one of the two shaft extensions is to be used, remove the key from the idle shaft extension. Be sure all pulleys are tightened securely on their shafts and properly aligned. (Proper pulley alignment may be obtained by holding a straightedge across the flat sides of the pulleys and adjusting to it.) The belt tension should be adjusted so that pressure of the fingers on the belt will deflect it readily as shown in the sketch below. Excessive belt tension increases the load on the motor and decreases bearing life. Loose belts reduce tool efficiency and belt life.



Before tightening the motor mounting bolts, be certain that all points of the motor base are in contact with the mounting bracket or motor support. If the motor base does not contact the mounting bracket properly, the base or bracket may be caused to warp or crack when the bolts are tightened. After the motor base has been properly adjusted to the mounting bracket, tighten the motor mounting bolts securely.

The motor should be installed in as cool and dry a place as possible and should be protected against excessive deposits of dust and dirt. The motor must not be confined in a small space which will restrict the flow of cool air over the windings.

In order to provide protection against the possibility of a short circuit between the motor winding and the motor frame, the motor frame or base should be grounded to a water or steam pipe. A metallic connection should be provided between the motor and the mechanism for which it is supplying power. The grounding of the motor will then also provide a ground for the driven mechanism and will prevent the build-up of static electrical charges.

Connecting Motor

The motor must be connected to a single-phase, alternating-current supply of 60 cycles and either 115 or 230 volts. It will be damaged if connected to a direct-current supply or alternating-current supply of a frequency of other than 60 cycles. If the motor is not required to start under load and is not overloaded after starting, the normal fifteen-ampere fuses recommended for household lighting circuits will be satisfactory for 115-volt operation and eight-ampere fuses will be satisfactory for 230-volt operation. If, however, the motor must start under load or is to be subjected to occasional overloads, a special circuit from the source of current supply should be provided and fused with a twenty-ampere fuse for 115-volt operation or a ten-ampere fuse for 230-volt operation. The following wire sizes are recommended for this special circuit from the source of current supply:

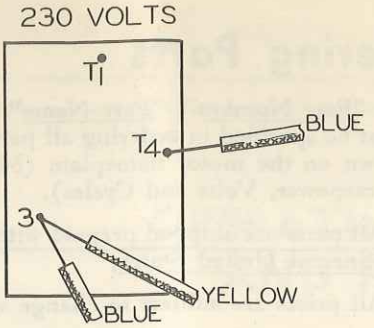
Length of Two-Conductor Extension	Wire Size Required (American Wire Gauge No.)
115 Volt Lines	
100 feet or less	No. 10
100 feet to 150 feet	No. 8
150 feet to 200 feet	No. 6
200 feet to 400 feet	No. 4
230 Volt Lines	
100 feet or less	No. 12
100 feet to 150 feet	No. 10
150 feet to 200 feet	No. 8
200 feet to 400 feet	No. 6

For circuits of greater length the wire size must be increased proportionally.

Fuses of the delayed-action type, such as the "Fustat" or "Fusetron", which are designed to meet the demands of motor protection in addition to the demands of lighting circuit protection, are recommended.

This motor is equipped with a manual reset, thermal overload protector, designed to open the line circuit when the motor temperature exceeds a safe value. If this protector opens the line, it can be closed again after the motor has cooled by firmly pushing the red button on the end of the motor until the protector snaps into the running position. Do not tap or strike the reset button. This protector is not intended to make the use of a fuse unnecessary as the protector will not provide protection against overloads or short circuits in the lines leading to the motor. The motor should not be operated on a load which causes the protector to open the line frequently.

For operation on 230 volts the yellow lead and either one of the two blue leads should be connected to terminal post 3, the remaining blue lead should be



BLACK LEAD OPEN AND INSULATED
Fig. No. 1

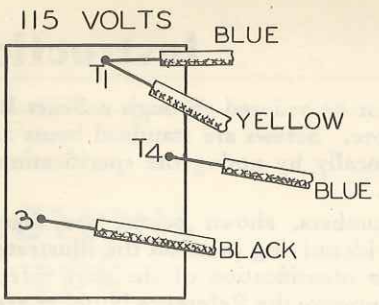


Fig. No. 2

TO CHANGE DIRECTION OF ROTATION INTERCHANGE POSITION OF TWO BLUE LEADS

connected to terminal post T4, and the black lead should be left open and insulated, as illustrated in Fig. No. 1. To change the direction of rotation interchange the positions of the two blue leads.

For operation on 115 volts the yellow lead and either one of the two blue leads should be connected to terminal post T1, the black lead should be connected to terminal post 3, and the remaining blue lead should be connected to terminal post T4 as illustrated in Fig. No. 2. To change the direction of rotation interchange the positions of the two blue leads.

Lubrication and Maintenance

The ball bearings, which are installed in both end shields of this motor, have been packed at the factory with the proper lubricant and require no additional lubrication. No other part of the motor requires lubrication.

Every effort should be made to prevent foreign materials from entering the motor. If the motor is operating under conditions making likely the accumulation of deposits of dust, dirt or waste within the motor, visual inspections of the motor should be made at frequent intervals. Accumulations of dry dust can usually be blown out successfully. Motors used on wood working tools are particularly susceptible to the accumulation of sawdust and wood chips and should be vacuumed or blown out frequently to prevent interference with proper ventilation of the motor and interference with proper operation of the centrifugally actuated starting switch. If disassembly of the motor is necessary, the motor should be returned to your nearest Sears retail or mail order store to avoid voiding the guarantee.

If the leads from the Stator Assembly or from the Plug and Cord are for any reason removed from their connection to the Switch, they must be reconnected so as to have the two leads from the Plug and Cord connected to the two adjacent terminal screws at one end of the Switch and the two leads from the Stator Assembly connected to the two adjacent terminal screws at the opposite end of the Switch. Do not under any circumstances connect the two leads from the Plug and Cord to the Switch in such a manner as to have one Plug and Cord lead at each end of the Switch.

The speed of this motor cannot be regulated or changed.

The majority of all motor troubles may be traced to loose or incorrect connections, to overloading or to reduced input voltage which results when small size wires are used in the supply circuit or when the supply circuit is very long. Always check the connections, load and supply circuit when the motor fails to perform satisfactorily. Although the motor is designed for operation on the voltage and frequency specified on the motor nameplate, normal loads will be handled safely on voltages not more than 10% above or below the nameplate voltage. Heavy loads, however, require that the voltage at the motor terminals be not less than the voltage specified on the nameplate.

Common Causes of Low Voltage Are:

1. Overloading of house or shop circuits with lights, electrical appliances or other motors.
2. Under-sized wires in supply circuits or extension cords.
3. General overloading of the power company's facilities. (In many sections of the country the demands for electrical power exceed the capacity of the generating and distribution systems. If you suspect that the voltage being supplied is low, ask your power company to check it for you.)

Some Effects of Low Voltage Are:

1. Motor fails to develop full power. (The power output of the motor decreases rapidly with decrease in voltage at the motor terminals. To illustrate: a reduction of 10% in the voltage causes a reduction of 19% in the maximum power output of which the motor is capable, while a reduction of 20% in the voltage causes a reduction of 36% in the maximum power output of which the motor is capable.)
2. Motor starts slowly or fails to come up to full speed.
3. Motor overheats and causes the overload protector to open the circuit frequently.
4. Motor burns out when operated for long periods of time or when slightly overloaded. (This applies to motors without thermal overload protectors.)
5. Frequent opening of fuses or circuit breakers. (This may also result if the motor is overloaded or if the motor circuit is fused with a fuse other than those recommended. Do not use a fuse of greater capacity without consulting your power company.)

Guarantee

This Craftsman Motor was thoroughly inspected and tested before shipment. Should it fail due to faulty material or workmanship, we will repair it free of charge if returned to your Sears retail or mail order store within one year from date of purchase. This guarantee is void if the motor has been tampered with, misused or abused or if either end shield has been removed in the process of servicing by anyone other than an authorized service station. External parts such as the cord, toggle switch, terminal cover and base may be removed or replaced without voiding the guarantee.

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Instructions for Ordering Parts

All parts must be ordered through a Sears Retail or Mail Order Store. Screws are standard items and may be purchased locally by noting the specifications listed for these parts.

Reference numbers, shown below, are merely for convenience in identifying parts on the illustrated parts drawing. After identification of the part refer to the "Parts List". Opposite the Reference Number are shown the "Part Number", "Part Name" and "Price" which must be specified in ordering all parts. Also, give data shown on the motor nameplate (Model, Frame, Style, Horsepower, Volts and Cycles).

All parts are shipped prepaid within the limits of the continental United States.

All prices are subject to change without notice.

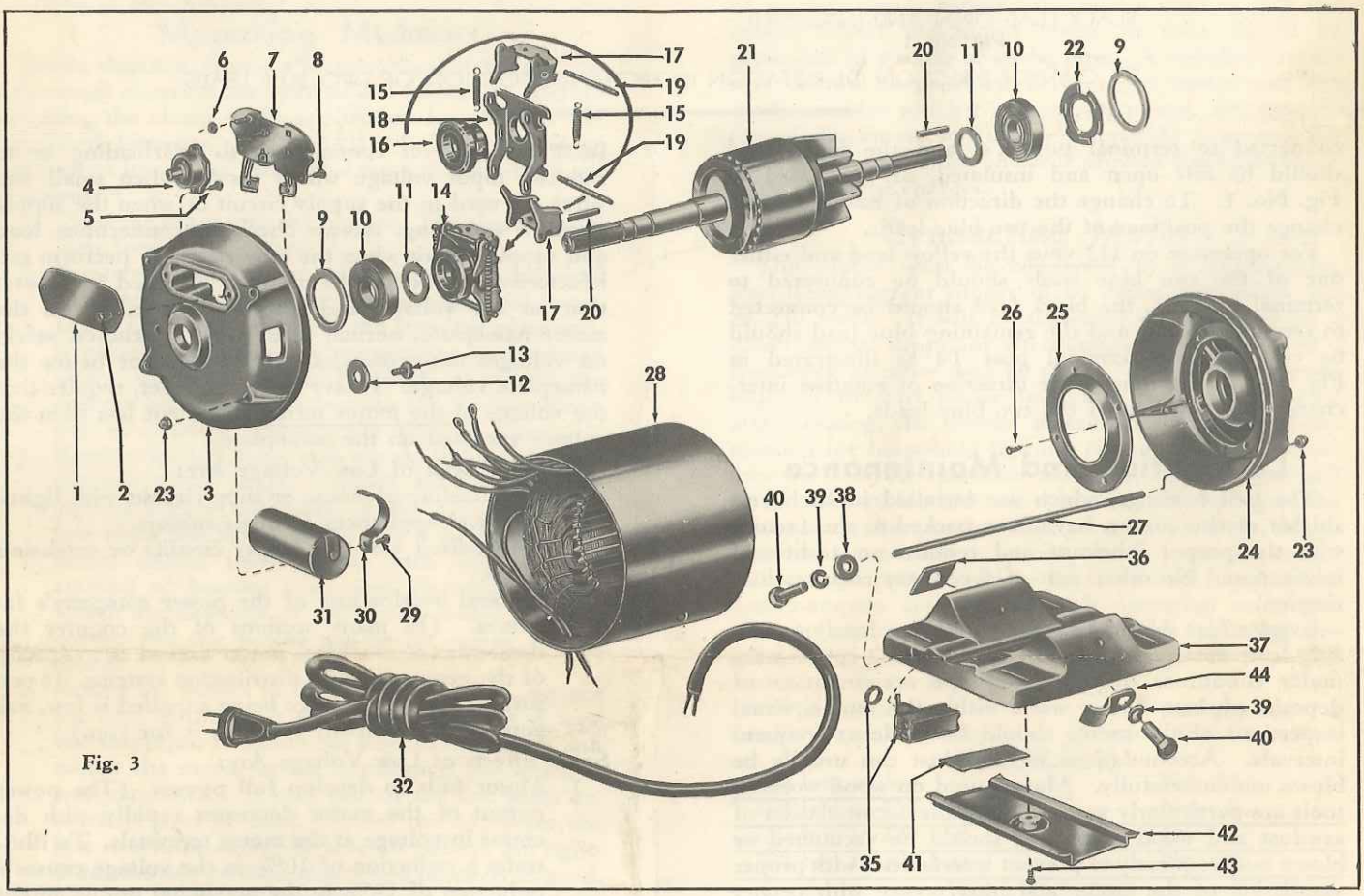

Fig. 3

PARTS LIST

Reference Number	Part Number	Name of Part	Prepaid Price Each
1	24421	Cover for Terminal	$ 0.20
3	24422	End Shield (Terminal Plate End)	3.50
4	24451	Thermal Protector (Klixon D-705)	1.50
6	20160	Nut for Terminal Stud	.10
7	24452	Starting Switch Assembly	1.50
9	24444	Washer—End Play—Steel (Both Ends)	.10
10	24313	Bearing—Ball (Both Ends)	2.50
11	24457	Bearing Washer (Spring Steel, Both Ends)	.10
12	24445	Washer—Bearing Retainer (Steel)	.10
14	24446	Centrifugal Actuator Assembly	1.50
15	24447	Spring	.20
16	24206	Sleeve	.45
17	24448	Lever	.35
18	24450	Bracket	.40
19	24449	Spring pin	.15
20	23428	Shaft Key	.20
21	24453	Rotor Assembly	8.00
22	24458	Washer—Spring (End Opposite Term. Plate)	.10
23	24257	Stud Nut	.10

Reference Number	Part Number	Name of Part	Prepaid Price Each
24	24426	End Shield (Opposite Term. Plate End)	3.50
25	24427	Baffle Plate	.40
27	24454	Stator Stud	.45
28	25193	Stator Assembly	22.00
30	24239	Capacitor Clamp	.10
31	24443	Capacitor	3.75
32	24250	Cord and Plug	3.40
35	24255	Toggle Switch	1.00
36	24248	Indicating Plate for Switch	.50
37	24441	Base	2.75
38	23964	Washer for Base	.10
39	23965	Lockwasher for Base	.10
40	23966	Screw for Base	.10
41	24249	Insulation for Switch	.10
42	24442	Cover for Switch	.60
44	25241	Cord Clamp	.10

THE FOLLOWING PARTS SHOWN IN ABOVE PARTS DIAGRAM ARE STANDARD AND CAN BE PURCHASED LOCALLY:

Reference Number	Part Number	Name of Part
2	S-1281	8—32 x 3/8" Park. Kal. Type "F" Pan Hd. Self-Tap. Screw for Terminal Cover
5	S-1282	8—32 x 7/16" Park. Kal. Type "F" Pan Hd. Self-Tap. Screw for Thermal Protector
8	S-1281	8—32 x 3/8" Park. Kal. Type "F" Pan Hd. Self-Tap. Screw for Starting Switch
13	S-1281	8—32 x 3/8" Park. Kal. Type "F" Pan Hd. Self-Tap Screw for Bearing Retainer Washer

Reference Number	Part Number	Name of Part
26	S-1209	#4 x 3/16" Type "U" Park. Kal. Drive Screw for Baffle Plate
29	S-1281	8—32 x 3/8" Park. Kal. Type "F" Pan. Hd. Self-Tap. Screw for Capacitor Clamp
43	S-1279	8—32 x 1/4" Type "F" Pan. Hd. Park. Kal. Self-Tapping Screw for Switch Cover

Form 7856-1