DRILL PRESS MOTOR (about 1975)

OPERATING INSTRUCTIONS AND PARTS LIST FOR CRAFTSMAN 1/3 H.P. CAPACITOR START TYPE MOTOR 115/230 Volts, 60 Cycles, 1725 R.P.M.

MODEL NUMBER 113.19706

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.

SAFETY PRECAUTION

Carefully read these instructions and observe all of the safety precautions included to obtain longest trouble-free service from your new Craftsman motor.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER.
2. The PART NAME.
3. The MODEL NUMBER 113.19706.
4. The NAME of item—⅓ H. P. Motor.

COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR YOUR CRAFTSMAN MOTOR

PROTECTIVE Sears Care MAINTENANCE

SEARS, ROEBUCK AND CO. backs up your investment with quick, expert mechanical service and genuine CRAFTSMAN replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

SEARS, ROEBUCK AND CO.—U. S. A.

IN CANADA, SIMPSONS-SEARS LIMITED

Printed in U. S. A.

CRAFTSMAN 1/3 H. P. CAPACITOR START TYPE ELECTRIC MOTOR—MODEL NUMBER 113.19706

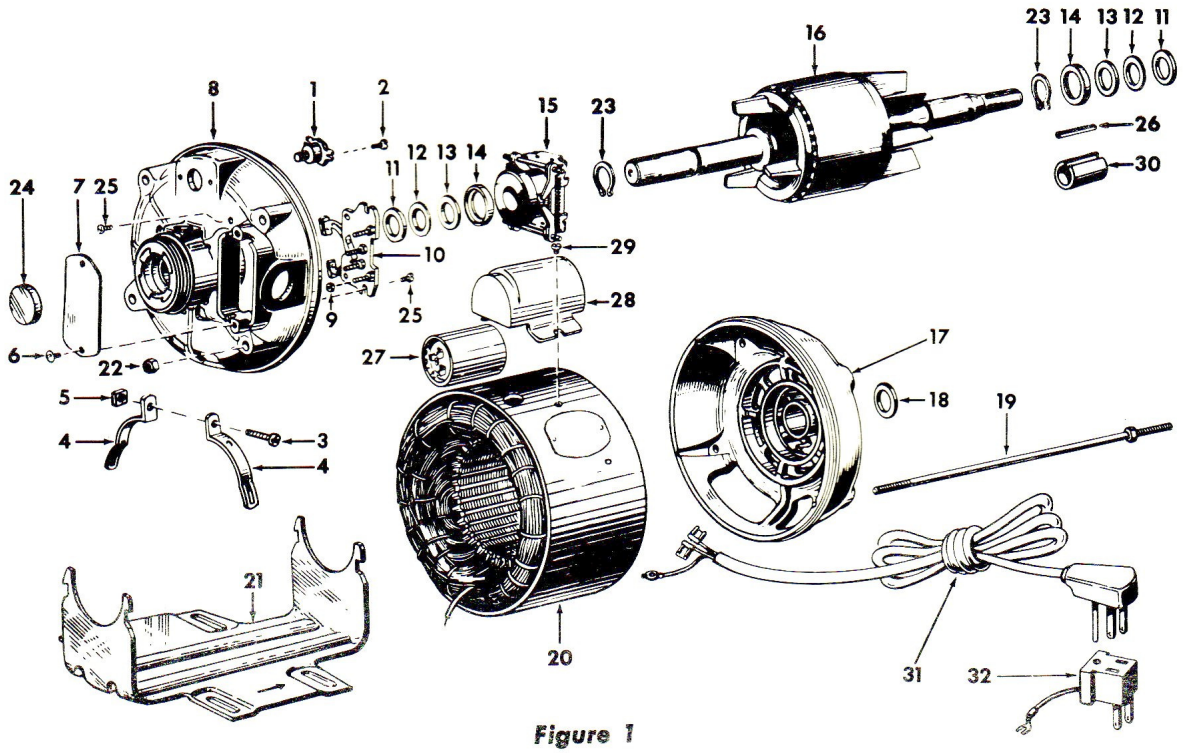


Figure 1

All parts illustrated in Figure No. 1 and listed below under part numbers may be ordered through any Sears retail or mail order store. Order parts by mail from the mail order store which serves the territory in which you live. In several instances part numbers are listed for COMPLETE ASSEMBLIES. All parts are shipped prepaid within the limits of the continental United States.

WHEN ORDERING REPAIR PARTS ALWAYS GIVE THE FOLLOWING INFORMATION:

1. The PART NUMBER.
2. The PART NAME.
3. The MODEL NUMBER 113.19706.
4. The NAME OF ITEM—⅓ H. P. MOTOR.

Do not use Reference Numbers when ordering Repair Parts, always use Part Numbers.

PARTS LIST

Ref. No.	Part No.	Description
1	37050	Protector
2	S-1409	*Screw, #6-32 x 1/2 Ty. 23 Pan Hd. Cd. Pl.
3	S-1396	*Screw, #10-32 x 1 Fil. Hd. Mach. Cd. Pl.
4	30762	Base Clamp
5	S-1397	*Nut, #10-32 x 3/8 x 1/8 Sq. Cd. Pl.
6	S-1369	*Screw, #6-32 x 5/16 Ty. 23 Pan Hd. Cd. Pl.
7	37096	Terminal Cover
8	37114	End Shield Assembly (Terminal Plate End)
9	S-1229	*Nut, #8-32 x 11/32 x 1/8 Hex. Cd. Pl.
10	37115	Starting Switch Assembly
11	30766	End Play Washer (Plastic)
12	30767	End Play Washer (Steel)
13	30768	Thrust Washer (Rubber)
14	37021	Thrust Washer Retainer
15	30770	Centrifugal Actuator Assembly
16	37052	Rotor Assembly
17	37116	End Shield Assembly, (Shaft Extension End)
18	30779	Oil Sling Washer (Rubber)
19	64030	Stator Screw
20	37129	Stator Assembly
21	37112	Base
22	S-1274	*Nut, #10-32 x 3/8 x 1/8 Hex. Cd. Pl.
23	30783	Retaining Ring
24	30784	Bearing Cap, Cd. Pl.
25	S-1330	*Screw, #8-32 x 3/8 Ty. 23 Pan Hd. Cd. Pl.
26	30789	Shaft Key
27	37049	Capacitor
28	37118	Capacitor Cover
29	S-1412	*Screw, #10-32 x 3/16 Ty. C Pan Hd. Cd. Pl.
30	30790	Bushing (To Adapt Shaft from 1/2" to 5/8" Diameter—with Shaft Key)
31	37177	Cord and Plug
32	30469	Adapter Plug
Not Shown	37130	Operating Instructions and Parts List for Craftsman 1/3 H.P. Motor Model Number 113.19706

* Standard hardware items — may be purchased locally.

INSTRUCTIONS FOR MOUNTING, CONNECTING AND SERVICING CRAFTSMAN MOTOR—MODEL No. 113.19706

This Motor, As Shipped, Is Connected For 115-Volt Operation

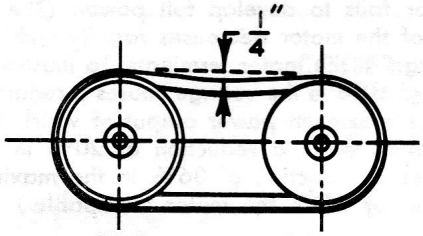
EXTRA SAFETY PRECAUTIONS: Connect to proper voltage, using correct fuse size. Ground motor frame. Do not remove terminal cover without first disconnecting power supply. This motor is equipped with a manual protector; if it trips keep hands and clothing away from belts and pulleys when resetting. Disconnect power supply before removing capacitor cover.

This Craftsman Motor is of the capacitor start type designed for use on a single-phase, 60-cycle, alternating-current supply of 115 or 230 volts, and designed to provide a simple means of reversing the direction of rotation. This motor is designed to operate 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. Connect the motor temporarily to the proper voltage supply with the cord and plug. When the motor is energized it should 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. If the direction or rotation is not correct, change in accordance with the instructions under "Connecting Motor".
3. Turn the motor off and mount the motor in the application for which it was purchased. 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 efficiency and belt life.

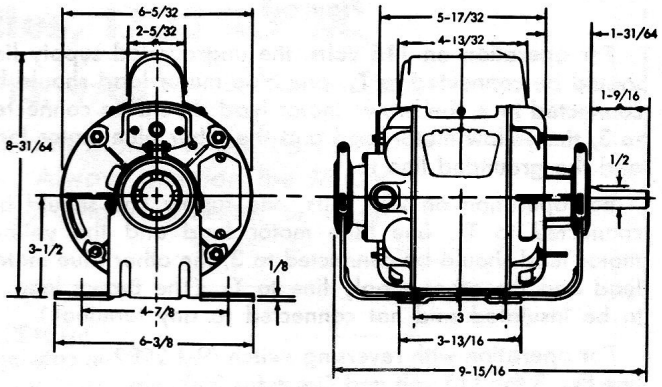


Before tightening the motor mounting bolts, be certain that all points of the motor base are in contact with the mounting bracket or motor support. If the motor base does not contact the mounting bracket properly, the base or bracket may be caused to warp or crack when the bolts are tightened. After 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 prevent accumulation of static electric charges due to belt friction, the motor frame or base should be grounded to a water or steam pipe. A metallic connection should also be provided between the motor and the device it is driving.

DIMENSIONS OF MOTOR



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. The motor should be connected through a switch and fuse block from the source of voltage supply and should be fused with a 10 ampere fuse for 115 volts or a 5 ampere fuse for 230 volts. The power leads into the motor should go through the hole in the end shield (after removing the conduit plug) at the terminal board end. A strain relief clamp should be installed in this 7/8" diameter hole. 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. 12
100 feet to 150 feet	No. 10
150 feet to 200 feet	No. 8
200 feet to 400 feet	No. 6
230 Volt Lines	
100 feet or less	No. 14
100 feet to 150 feet	No. 12
150 feet to 200 feet	No. 10
200 feet to 400 feet	No. 8

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.

TO REVERSE DIRECTION OF ROTATION INTERCHANGE TWO BLUE LEADS.

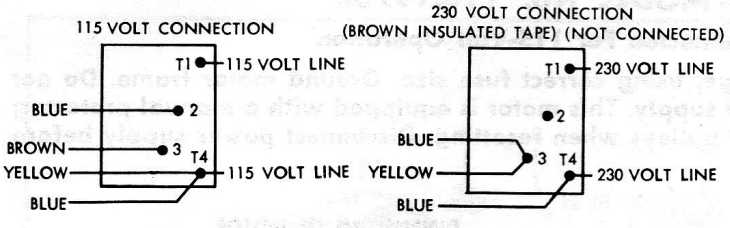


Figure 2

For operation on 115 volts, the ungrounded supply line should be connected to T_1, one blue motor lead should be connected to 2, the brown motor lead should be connected to 3, the yellow motor lead and the other blue motor lead and the grounded line to T_4.

For operation on 230 volts, one supply line should be connected to T_1, one blue motor lead and the yellow motor lead should be connected to 3, the other blue motor lead and the other supply line to T_4. (The Brown lead is to be insulated and not connected to any terminal.)

For operation with reversing switch (9M 2982 in catalog). See Fig. 3 for 115 volt and Fig. 4 for 230 volt.

IF MOTOR ROTATION DOES NOT CORRESPOND TO SWITCH NOTATION, INTERCHANGE SWITCH LEADS 2 AND 4

CAUTION: Be sure motor is connected for proper voltage (Fig. 2) before using Reversing Switch.

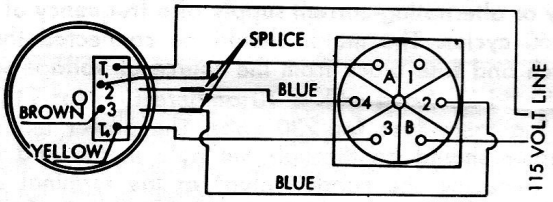


Figure 3

IF MOTOR ROTATION DOES NOT CORRESPOND TO SWITCH NOTATION, INTERCHANGE SWITCH LEADS 2 AND 4

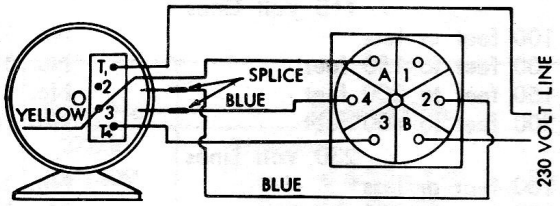


Figure 4

LUBRICATION AND MAINTENANCE

The sleeve bearings, which are installed in both end shields of this motor, have been lubricated at the factory with the proper lubricant. No other part of the motor requires lubrication.

In order to relubricate your motor, it is necessary to puncture the top of the rubber oil plug. The plug is designed to reclose after oiling. Relubricate with a good grade of medium weight mineral oil such as automobile engine oil S.A.E. viscosity rating 20.

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.

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.
4. Motor burns out when operated for long periods of time when overloaded.
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

During the first year we will replace the motor free of charge if defective in material or workmanship. This guarantee service is available by simply returning the motor to any Sears store throughout the United States.