

**CENTRAL MACHINERY**

®

# 13" INDUSTRIAL PLANER

**Model 39860**

## ASSEMBLY AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

Manual Revised 10h

THANK YOU for choosing a **HARBOR FREIGHT TOOLS** product. For future reference, please complete the owner's record below:

**Model** \_\_\_\_\_ **Serial No.** \_\_\_\_\_ **Purchase Date** \_\_\_\_\_

SAVE THE RECEIPT, WARRANTY AND THESE INSTRUCTIONS. It is important that you read the entire manual to become familiar with the unit BEFORE you begin assembly.

### Technical Specifications

<b>Tool Name:</b>	<b>13" Industrial Planer</b>
<b>Item Number:</b>	39860
Motor:	3 HP, 220 V~, 60 Hz, Single Phase, 3450 RPM
Cutter Head:	5200 RPM
Maximum Depth of Cut:	3/16"
Stock Capacity:	6-1/4" H x 13" W
Cutter Head:	2.289" Diameter
Feed Rate:	13 FPM
Blade Dimensions:	13-1/16" x .795" x .015"
Table Dimensions:	19" L x 12-1/8" W
Accessories:	8 mm - 10 mm Combination Wrench, 3 mm Hex Wrench, 5 mm Hex Wrench, 6 mm Hex Wrench



## **IMPORTANT SAFETY INSTRUCTIONS!**



### ***READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT!***

**Warning:** The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that **COMMON SENSE AND CAUTION ARE FACTORS WHICH CANNOT BE BUILT INTO THIS PRODUCT, BUT MUST BE SUPPLIED BY THE OPERATOR.**

#### **The Operator**

**PLEASE REMEMBER:**

Do not operate the product if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment/reflexes might be impaired.

Do not wear loose clothing or jewelry as they can be caught in moving parts.

Protective gloves and non-skid footwear are recommended.

Wear restrictive hair covering to contain long hair.

Use eye and ear protection. Always wear ANSI-approved impact safety goggles and dust mask or respirator when working around metal, wood and chemical dusts and mists. Wear a full face shield if your are producing wood filings.

Always stand off to one side of the machine.

Do not reach over or across running machines.

Maintain proper footing and balance at all times.

Do not abuse the power cord. Do not yank on cord to disconnect it from outlet. Keep the cord away from heat, oil and sharp edges.

REV 03d; 06b

## **Work Area**

TO AVOID RISK OF PERSONAL INJURY, EQUIPMENT DAMAGE, FIRE AND SHOCK, MAKE SURE YOUR **WORK AREA IS:**

Free of damp, wet or rainy conditions.

Free of children (never let them handle tools or machinery).

Well-lit, clean and uncluttered.

## **Before Operating**

Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function.

Before operating your Planer check for damaged parts. You should also check the feed rollers to be sure chips and sawdust are not caught in them. If the Rollers are not seated firmly, the Feed Rolls will not hold the stock firmly against the bed. This may result in kickback during operation.

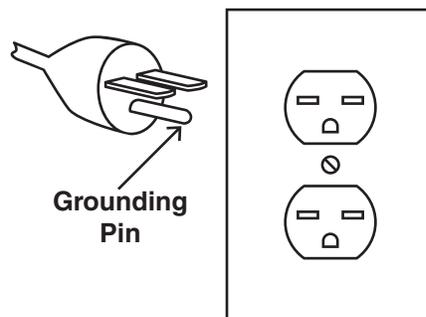
Give the Planer a test run. If it makes an unfamiliar noise or vibrates irregularly, turn it off, unplug it and have the problem corrected by a qualified technician.

Make certain to turn off and unplug the Planer when doing any maintenance. The tool should always be turned off, unplugged when not in use and Guards kept in place and in working order.

Feed the work into the blade or cutter against the direction and rotation of the blade or cutter.

## **Grounding/Voltage Warning 220-240 V~ Tools**

This 13" Industrial Planer is pre-wired for 220 Volts.



**250 V~ 3-Prong Plug and Outlet**  
(for up to 250 V~ and up to 15 A)

1. This tool is intended for use on a circuit that has an outlet that looks like the one illustrated above. The tool has a grounding plug that looks like the plug illustrated above in **250 V~ 3-Prong Plug and Outlet**. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.
2. The 250 V~ plug does not come pre-installed and will need to be installed by a certified electrician.
3. The plug above is for use on a 15 A circuit. A different 250 V~ plug and outlet combination may be used, provided it is rated to handle the electrical requirements of the tool and is installed by a certified electrician.
4. Do NOT MODIFY YOUR PLUG IN ANY WAY. IF YOU HAVE ANY DOUBT, CALL A QUALIFIED ELECTRICIAN.

## Assembly

Your Planer requires only limited assembly as indicated below; otherwise it is fully assembled. To assist you with assembly and operation please refer to the Assembly Diagram and Parts List located on pages 8,9,10 and 11. Lay out all parts onto a clear section of your workbench prior to assembly.

1. The Planer has four (4) legs so that it can be mounted to a table or a work bench. Each of these legs/angles (4) should be attached at one side (bottom corners) to the Planer and then 2 of the 5/16" bolts should be bolted onto the workbench with a washer between the Bolt and the workbench or table.
2. To put the Handle (part #150) onto the Planer, insert it into the hole on the right front side of the Planer and press it into place. **WARNING! Check blade setting and tightness before initial use.**

## Operation

When operating your Planer, refer to the Parts List and Assembly Diagram on the last pages of this manual.

Never force the tool or attachment to do the work of a larger industrial tool. It is designed to do the job better and more safely at the rate for which it was intended. Plane only wood boards.

After planing approximately 50 feet of material, stop machine and check Cutterhead Jib screws and blades for tightness.

Do not force feed your work through the machine. Allow the Planer to feed at the designated rate of feed.

Step 1) Use the Height Adjusting Handle (part #150) to set the blade height. Set the height according to the indicating scale on the Planer beneath the Handle.

**Note:** This Planer is specifically designed for the planing of lumber. Before planing any lumber, check for any foreign materials such as nails, screws, or hard impurities in the wood. Also check for loose knots in the wood. If not cleaned off these may cause damage to the blade or machine. Never make a Planer cut deeper than 1/8".

When feeding your lumber, use a Push Block to feed the lumber, rather than using your hands. The Push Block must be thinner than 3 inches.

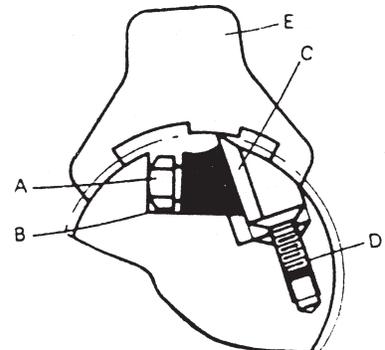
Step 2) The ON and OFF switch is located on the front of the Planer. Press the GREEN button to START the Planer, and RED button to turn the Planer OFF.

Step 3) The planing depth of the planer is controlled by turning the Handle and setting the depth of the Planer by the Ruler. The settings on the Ruler run from 0" to 6".

Step 4) Feed lumber through Planer. After each planing, you can use the Roller Bars on top of the planer to roll the workpiece back to the Feed position, rather than carrying it back and forth.

### Checking the Knife Gauge for Proper Height

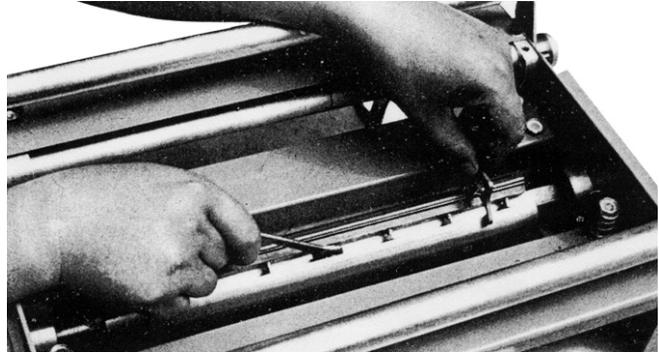
Step 1) Loosen all screws. Place the knife gauge as shown in Figure 1 and Figure 2. Use the wrench key and the turn screw (D) until the blade (C) touches the knife gauge.



**Figure 1**

REV 06a; 10h

- Step 2) Repeat the same steps for the other end of the blade.
- Step 3) Once the knife gauge is at the proper height, tighten all screws that were loosened in step 1.



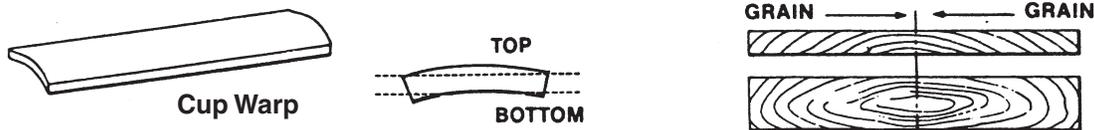
**Figure 2**

Adjusting Warp

Warp is a variation from a plane or true surface. Warping of wood is caused by uneven shrinkage during the drying process.

The ideal is to have a straight board with no warp. Merely run the board through on both sides and plane to the desired thickness.

Cup Warpage: With a board that is cupped (as in the figure below) you would first plane the top flat and then turn the board over and plane the bottom flat. If possible, rip the board down the middle of the cup. This will eliminate a large amount of waste in the planing.



**Figure 3**

Grain Direction

Feeding with the grain is feeding so that the knives travel in the same direction as the slant of the grain.

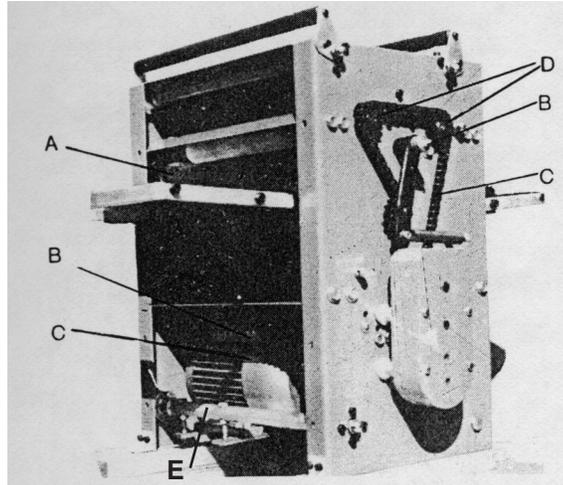
Grain patterns often have a "V" shape. The point of the "V" should point away from the cutterhead while feeding.

Grain direction can also be determined by running your fingertips over the stock. The stock will be smoother when your fingertips are moving with the grain.

Occasionally the grain direction reverses in the same piece of wood. For best planing results, it would be better to cut the board in half so that each section can be planed with the grain. For an example, please refer to the illustration above in Figure 3.

Lubrication of the Planer is important for accuracy and durability of the machine.

- Step 1) Apply grease to the Guide Rod (A) to ensure that the table block moves up and down the planer smoothly.
- Step 2) There are eight (8) sets of bevel sprockets (B) located inside the Planer.
- Step 3) Use a brush to apply oil to the chain (C). Oil should also be applied to the Bracket (D) of the Feed Roll Rod.



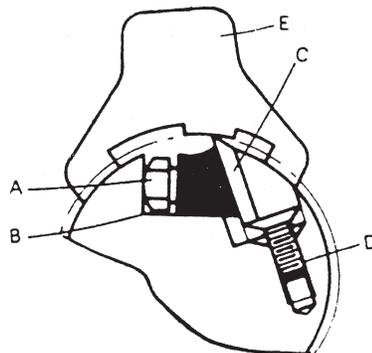
**Figure 4**

#### Adjusting Belt Tension

Located under the motor are two (2) brackets (see E in Figure 4). Each bracket has one (1) set screw and two (2) Lock Nuts. Loosen all Lock Nuts. At the middle of the pulleys, apply light pressure to the Belt. At the same time adjust the Set Screw until the Belt is just firm but not overly tight. Do not over tighten Belt tension. Once the correct tension is reached, tighten the lock nuts.

#### Blade Maintenance

- Step 1) Use the Allen Wrench to loosen the screws. Loosen the Hex screw and then take out the Knife Lock Bar (B) and blade (C).
- Step 2) Use the same method to remove the blade at either end.



**Figure 5**

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IF THERE IS ANY QUESTION ABOUT A CONDITION BEING SAFE OR UNSAFE, DO NOT OPERATE THE TOOL.

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## Unpacking

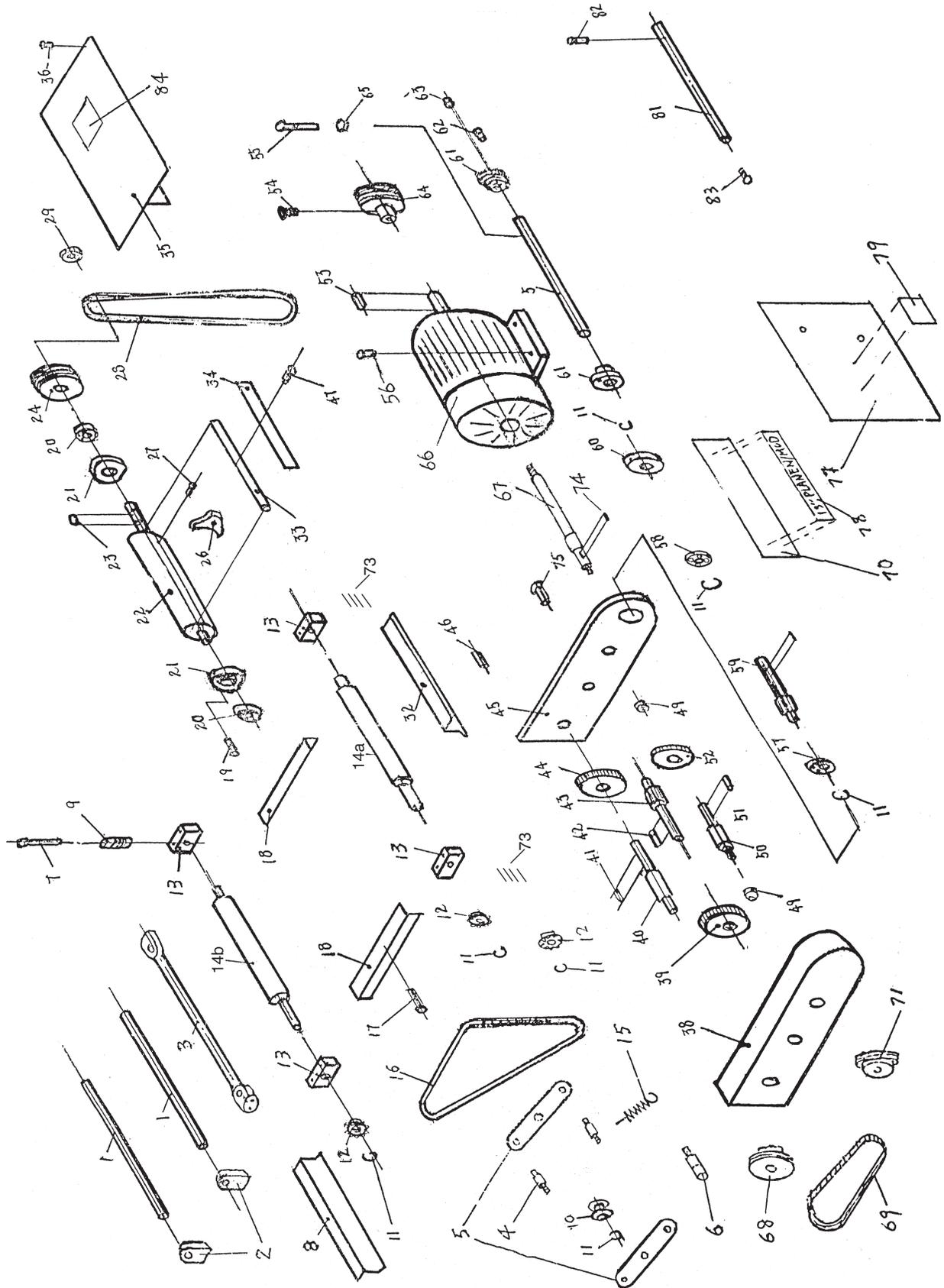
When unpacking your 13" Planer, check to make sure the following parts are included. If any parts are missing or broken, please call Harbor Freight tools at telephone number 1-800-444-3353.

### Parts List- #1-#84

Part	Description	Size	Q'ty
1	Roller		2
2	Frame		4
3	Frame Support		2
4	Screw		12
5	Stay Grinder		2
6	Screw		1
7	Cap Screw	M8 x 80	8
8	Splash Apron		1
9	Spring		8
10	Roller Chain		1
11	Retaining Ring		6
12	Sprocket		4
13	Bushing Block		4
14a	Steel Roller		1
14b	Rubber Roller		1
15	Tension Spring		1
16	Chain		1
17	Screw Cap	M6 x 22	6
18	Angle Flange		2
19	Screw Cap	M6 x 22	6
20	Bearing	60203zz	2
21	Flange		2
22	Cutter Head		1
23	Key	5 x 5 x 20	1
24	Drive Pulley		1
25	Shaft		1
26	Knife Gauge		1
27	Adjustment Bolt		4
28	V-belt		1
29	Nut	M16 x 1.5	2
30	Shaft Bolt		1
31	Bar		1
32	Splash Apron		1
33	Knife Lock Plate		3
34	Knife		3
35	Top Cover		1
36	Screw	M6 x 10	4
37	Screw	M6 x 80	4
38	Box Gear		1
39	Gear		1
40	Shaft		1
41	Key	5 x 5 x 20	1

Part	Description	Size	Q'ty
42	Key	4 x 4 x 10	1
43	Pinion		1
44	Gear		1
45	Cover Gear		1
46	Collar		1
47	Knife Lock Bolt		21
48	Cover		1
49	Collar		2
50	Pinion		1
51	Key	3 x 3 x 10	1
52	Gear		1
53	Key	6 x 6 x 25	1
54	Bolt Lock	M8 x 16	1
55	Cap Screw	M8 x 55	2
56	Screw	M8 x 25	4
57	Bearing	F609zz	1
58	Bearing	60202zz	1
59	Pinion Gear		1
60	Plate		1
61	Angle Flange		2
62	Screw	M6 x 20	8
63	Nut	M10	2
64	Motor Pulley		1
65	Nut	M8	4
66	Motor		1
67	Universal Axle Joint		1
68	Idler Pulley		1
69	Belt		1
70	Face Cover		1
71	Feed Pulley		1
72	Motor Bracket		2
74	Key	5 x 5 x 10	1
75	Screw	M6 x 12	8
76	Purlin		2
77	Cover		2
78	Label		1
79	Label		1
81	Stay Grinder		1
82	Cap Screw	M8 x 25	2
83	Screw		2
84	Label		1

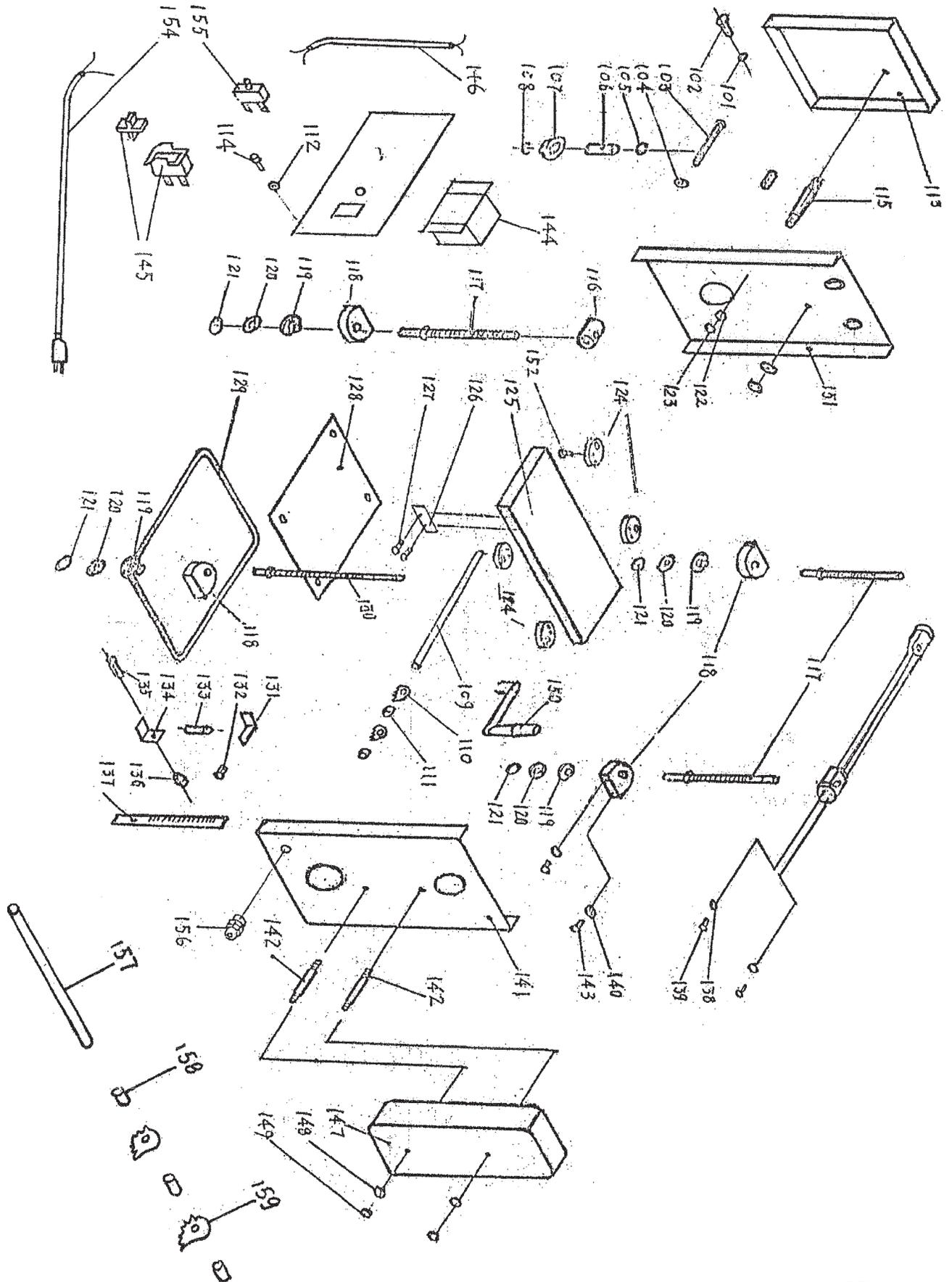
**Assembly Diagram 1**  
**Parts #1-#84**



**Parts List- Parts #101-164**

No.	Name	Size or Remark	Q'ty	No.	Name	Size or Remark	Q'ty
101	Washer	φ 6	2	143	Screw	M8x16	8
102	Screw Cap	M6x12	2	144	Cover Switch		1
103	Screw	M6x50	1	145	Switch		1
104	Washer	φ 6	1	146	Cord Power		1
105	Retaining Ring	φ 15	1	147	Cover Bolt		1
106	Shaft		1	148	Washer	φ 6	2
107	Sprocket		1	149	Nut	M6	2
108	Retaining Ring	φ 15	1	150	Lifting Handle		1
109	Shaft		1	151	Cover Left		1
110	Pawl		30	152	Screw Cap	M8x20	8
111	Bushing		31	153	Screw Cap	M8x16	4
112	Washer	φ 6	4	154	Motor Cord		1
113	Sprocket cover		1	155	Circuit Breaker	230V 10A	1
114	Screw Cap	M6x16	4	156	Strain Relief Bushing	M16x1.5	1
115	Screw Bolt		1	157	Axle		1
116	Frame		2	158	Collar		30
117	Sprocket	M16	3	159	Pawl		30
118	Sprocket Frame		4				
119	Sprocket		4				
120	Washer	φ 10	4				
121	Nut	M10	4				
122	Washer	φ 8	2				
123	Nut	M8	2				
124	Sprocket Frame		4				
125	Table		1				
126	Side Guide		4				
127	Screw	M5x10	8				
128	Backing Board		1				
129	Chain		1				
130	Control Screw	M16	1				
131	Pointer		1				
132	Screw	M6x10	1				
133	Screw Wood		4				
134	Bracket Base		4				
135	Screw Cap	M6x16	8				
136	Nut	M6	8				
137	Scale		1				
138	Washer	φ 6	8				
139	Screw	M6x16	8				
140	Washer	φ 8	8				
141	Cover Right		1				
142	Screw Bolt	M8x50	2				

# ASSEMBLY DRAWING



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## LIMITED 1 YEAR / 90 DAY WARRANTY

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Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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**PLEASE READ THE FOLLOWING CAREFULLY**

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