



# WORKHORSE PRODUCTS

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This Manual Covers both the Mach Series Original  
and Series II (all heads down) Machines.



MACH IV

MACH VI

MACH VIII

## Introduction

Congratulations on your purchase of the MACH Printing Press from WORKHORSE PRODUCTS.

Check the Crate for damage, DO NOT accept the crate if damaged due to improper handling during shipping. Report any damage to the Carrier at once as well as WORKHORSE at 800-778-8779.

Inspect the Crate IMMEDIATELY while the carrier is still there. Our packaging has been carefully designed to handle normal shipping conditions. However, we cannot be responsible for shipping by the carrier. Upon discovery of freight damage, notify driver AND note damage on all paper work! File a claim with the carrier, then notify WORKHORSE at 800-778-8779.

## Read Instructions first

First read the instructions completely before you attempt to assemble the Press, this will familiarize you with the parts and the sequence of assembly and will make the easy assembly go even faster.

## Features

- Printer is equipped with an OFF CONTACT adjustment. This feature allows the Screen frame and Back Clamp to be raised and lowered while staying Level with the Shirt Board.
- The Micro - Adjust Screen Angle feature allows you to raise or lower the FRONT end of the Screen
- The Micro - Registration feature allows for quick and easy "X" and "Y" axis adjustments for precise registration. Each Print Head Micro's are centered at the factory for you.
- The Micro - Registration Side to Side feature allows for quick and easy side to side adjustments for precise registration. Each Print Head Micro's are centered at the factory for you

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# Replacement Parts

See page 12 for a visual description for most of these parts

Description	Part No.	
Complete arm assembly. Includes everything on pg. 12	20001R	
Nylon Registration bolt kit. Includes Lock nut Package of 12	73007R	
Spring and Hog Ring kit. Package of 12 NOTE: these should be replaced annually !! <b>(not sold separate)</b>	71010R	
Y-axis Adjusting assy. Knob and nylon eye bolts Package of 2	20005R	Pg 12, B
Thrust bng, under micro cinch knob Package of 2	75004R	Pg 12, C
Knob, micro cinch Package of 2	74006R	Pg 12, C
Screen TILT Adjusting assembly Package of 1	20006R	Pg 12, H
X-axis Adjusting assembly Package of 1	20017R	Pg 12, D
Screen Clamp Knob Package of 2	74011R	Pg 12, F
Back clamp steel insert Package of 6	60079R	Pg 12, F
Off contact PAD & stem Package of 1	60006R	Pg 12, I
Off contact locking knob Package of 1	74012R	Pg 12, A
Off contact Knob Package of 2	74004R	Pg 12, A
<b>Old Style hog ring Pre 1996 (4 digit ser #) must be drilled!!!!</b>	<b>71006R</b>	<b>Package of 6 pcs</b>

Please take a moment and fill out the following information:

Find the Serial Number on your Machine located on a sticker attached to the printers base and write it in the space provided below. Having this number handy will help when calling the factory for service.

Serial Number: \_\_\_\_\_ Date of Purchase \_\_\_\_\_ Product Name \_\_\_\_\_

Company Purchased from \_\_\_\_\_ Assembled by \_\_\_\_\_

Please keep this information in a safe place for future reference



The WORKHORSE Mach Series Screen Press (4/4, 6/4, 6/6, 8/6, 8/8) Ships in one wooden Crate (Photo 1). Uncrate using a power Screwdriver (Photo 2). The 2x4 inner supports are nailed so you can just bend them to remove them. (Photo 3). The Finished Uncrating (Photo 4).



To remove the Print Arms from the pallet, use a 1/2" socket wrench and unbolt them. (Photo 5). Mach Series Press with Print Arms, Shirt Boards and Small Parts Box removed. (Photo 6)

Once the Print Arms and all other parts are removed from the pallet, unscrew the Press Leg supports. (Photo 5)

Then slide the Press off the pallet, use two people to make the final lift to get the Press on the floor.





## Parts for the Mach Series Printing Press

You will need 2 - 1/2" and  
2 - 3/4" open/close end wrenches

12 - Print Head Springs

6 - Print Head UpStop Bolts

6 - 1 1/2" Bolts for Print Heads

36 - 1/2" Flat Washers

24 - 1/2" Lock Washers

4 - 3" Leveling Bolts and Nuts

12 - Hog Rings

12 - Spring Pins

**Parts shown for 6 color model  
Quantity will vary by the unit you  
purchased. (Parts in small box)**



You will receive either 4, 6, or 8 print  
arms depending on the unit you  
purchased.

All have Shirt Board Registration  
Gate and Plastic Print Head  
Centering Bolts installed



You will receive either 4, 6, or 8 shirt  
boards depending on the unit you  
purchased.

All Shirt Boards come with Print  
Arm Bracket and Lock Screws  
installed



### Step 1 Install Leveling leg

First screw the Leveling Nut till it is 1" from the Bolt Head. (Insert) Use a ruler to make sure all four Leg Bolts are the same height

Then while someone holds up the Printing Press Base screw in Bolt up to the Nut



### Step 2 Install Leveling leg

Then use a 3/4" wrench on Head of the Bolt and a 3/4" wrench on the Nut. While holding the Bolt Head tighten the Nut up against the Press Base

Repeat for each leg on the Press Base

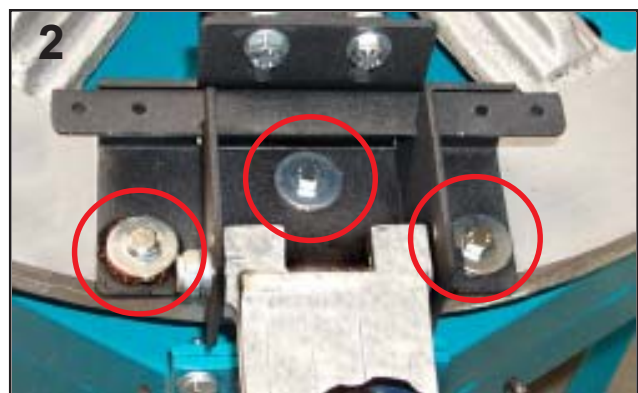
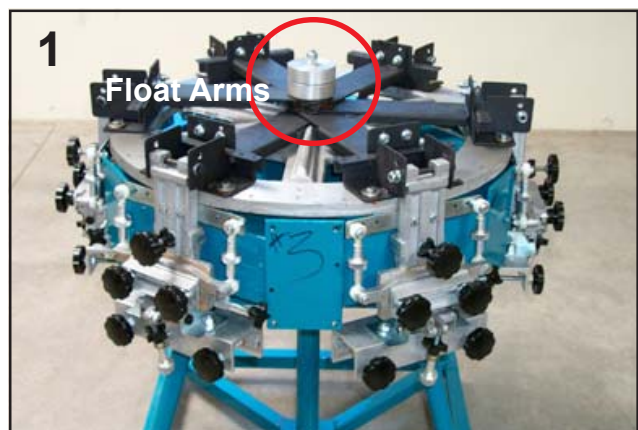


### Mach ALL HEADS Carousel Ph 1 & 2

All Heads Down (Photo 1) means that the individual heads FLOAT. This lets the Heads self adjust so when their is more than one head down they will engage the register gates without interfering with each other.

The FLOAT ARMS (Black Arms) are attached to the center shaft which goes all the way to the cross bar at the very bottom of the Press for stability.

The FLOAT ARMS (Black Arms) float (Photo 2) because of the three Bolts and Washers that are factory set to allow for the self adjusting. **DO NOT ATTEMPT TO TIGHTEN or ADJUST**, this could render the All Heads down feature useless.





### Step 3 Attach Springs / Ph 1/2

Raise the Print Head and put one of the Hog Rings bottom up into the left side hole located on the Print Head Attachment Arm Bracket at either side of the Print Head (Photo 1)

Put one of the Springs from bottom up into the left side hole located on the bracket at either side of the Carousel Print Head Slot (Photo 2)



### Step 4 Attach Springs / Ph 3/4

Once you have a set of Hog Ring and Springs in place attach a Hog Ring and Spring on the other side of the Print Head Attachment Arm Bracket. (Photo 3)

Then raise the Print Head all the way so you can hook the Hog Ring and Spring together (Photo 4)

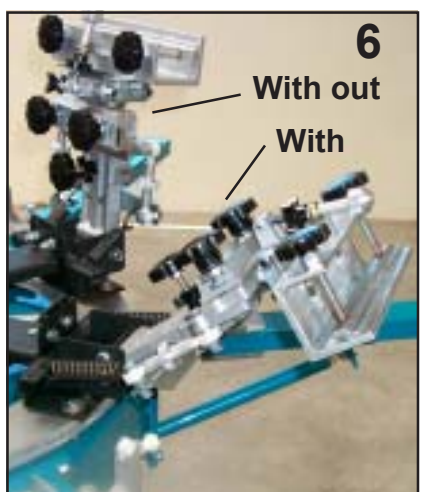


### Step 5 Attach Springs / Ph 5/6

Once you have both sets of Springs and Hog Rings in place pull down the Print Head all the way so you can see through both UpStop Bolt holes, install stop bolt, then the nut and tighten by HAND not with a wrench (Photo 5)

In (Photo 6) see the difference With and With out the UpStop Bolt in place.

Repeat Step 2 for the rest of the Print Heads.

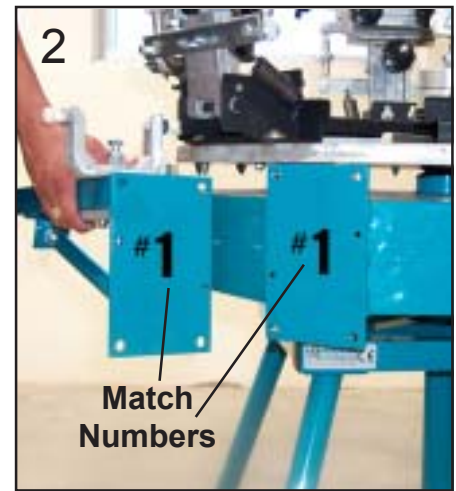


### Step 6 Attach Arms / Ph 1/2

It's very IMPORTANT that you **MATCH the NUMBERS** on the Print Arm with the numbers on the Print Arm Base. These are factory set for the proper leveling and alignment (Photo 2)

Use 4 - 1 1/2" Bolts, 2 Flat Washers, 2 Lock Washers and two Spring Pins per leg. (Photo 1)

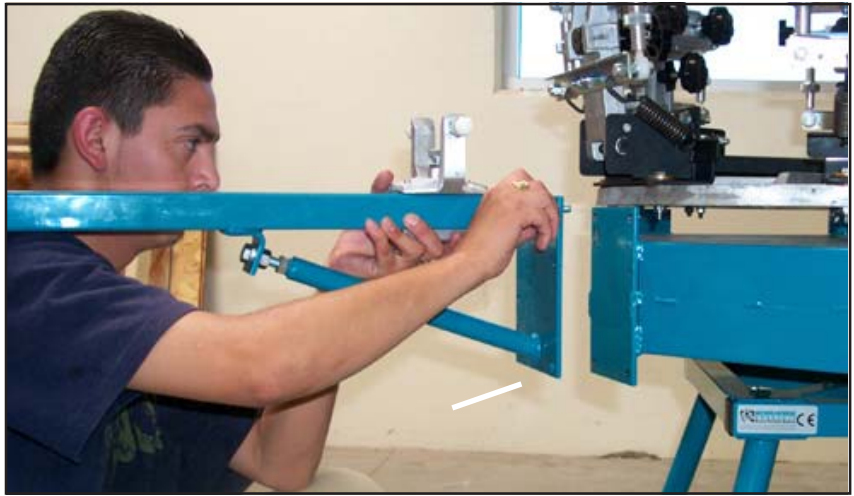
Put the Flat Washer on Bolt first and then the Lock washer.



### Step 7 Attach Arms

One of the advantages to the Mach Series Presses is when constructed each Press is fully assembled, leveled and checked, then it is disassembled and crated, this saves you time and makes set up quick and easy

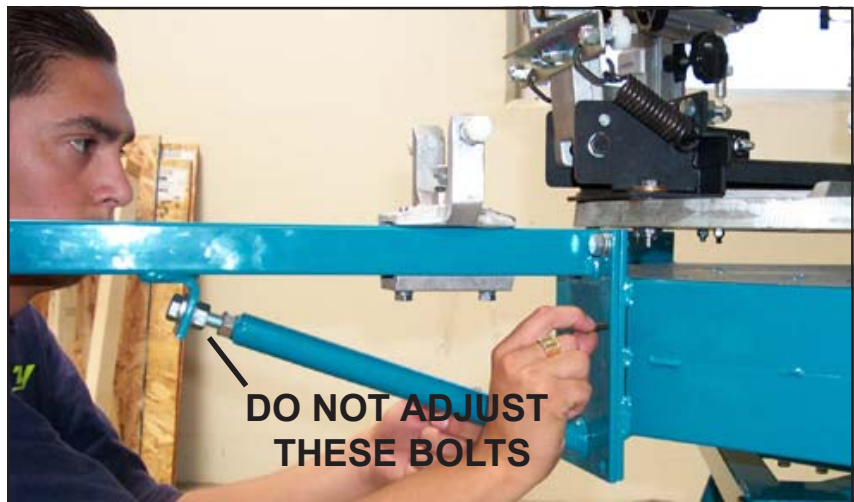
To attach Print Arm support on shoulder and put the top right Bolt through the hole and line up with the top right hole on Press Base.



### Step 8 Attach Arms

After you have started the first Bolt by hand, use one of the Spring Pins and press it into the right hand hole located approximately half way down under the first Bolt so it engages the hole on the Press Base.

**DO NOT attempt to adjust the Bolts on the print Arm Support these are factory set and do not need adjusting.**





### Step 9 Attach Arms

Put the second Spring Pin in and press it into the left hand hole located approximately half way down under the second Bolt hole, so it engages the hole on the Press Base.

Then put in the other three Bolt and Washers, then tighten all the Bolts with a 1/2" socket wrench.



### Step 10 Attach Arms

After you have tighten all four Bolts, use a hammer and carefully tap in the Spring Pins, leaving about 1/4" left out. (so they can be removed later if necessary).

Repeat steps for all the other arms.



### Step 11 Attach Arms

Notice Support Arm attached under the each Print Arm.

**DO NOT TRY TO ADJUST OR MOVE THE SUPPORT ARM**

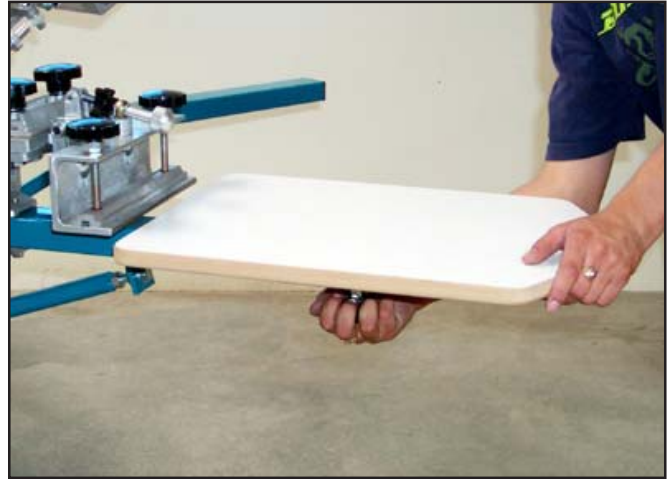
These Support Arms are set at the factory to level the Print arm, that's why it is important to match the numbers when attaching Arms.



## Step 12 Install Shirt Board

To put on the Shirt Boards lower the Print Heads. Then use a 1/2" spacer so all the Boards are the same distance from the Heads.

IMPORTANT: Make contact with both side & bottom Knobs first. Then turn **Side Knob** 1/4 turn and **then** Bottom Knob 1/4 turn. Do not over tighten. . . this can damage the Print Station.



If you tighten the BOTTOM knob first the Shirt Board may not be centered. Repeat for all Heads to complete the assembly of the Press.

## Completed Mach VI



## MAINTENANCE and TROUBLE SHOOTING

The MACH line of printing presses do not require much maintainance. But periodic lubrication and cleaning will insure smooth operation and extended life of the components. Wipe the press daily to remove spray adhesive and lint. DON'T let the spray adhesive and lint accumulate.

To lubricate use heavy duty wheel bearing grease. Unscrew the (C) Micro Lock Down Knobs and both of the Nuts that attach the Micro Adjusters to the Micro Plate, lift up a little and put grease under the Micro Plate to provide easy movement of the micros.

To lubricate the Micros back off the Adjusters so most of the thread shows apply a small dab of grease and work into threads, then screw down to reveal the other side and do the same thing on the other side. Then re-center the micros.

Don't forget to grease the Off Contact Bolt Head on the inside of the Screen Clamp Holder by loosing the Off Contact Bolt and pulling the Large Bolt head out a little and put grease on the threads also put grease on the Print Head Pivot Bolt.

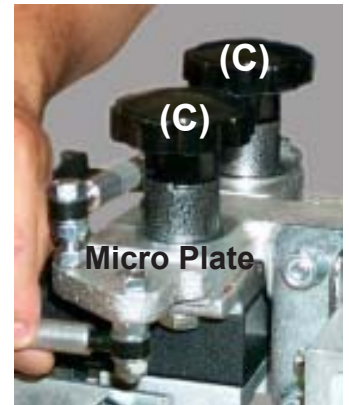
Do NOT grease the white Plastic Print Head Centering Bolts

To lubricate the Carousel center Float Arms just apply grease under the Arms DO NOT ATTEMPT TO LOOSEN OR ADJUST THE CENTER CAP.

### TROUBLE SHOOTING

If you have any trouble turning any of the Knobs or Micro Adjusters check to see that they are not gummed up with spray adhesive or Ink. If they are clean with a oil based solvent and lubricate. If the Carousel becomes stiff or to easy to rotate check to see that the Resistant Nut is not to tight or loose of if the Tapered Bearings need grease. First take off the Jam Nut to get to the Resistant nut.

The Plastic Print Head Bolts (White Plastic) wear out over time. Order part # 73007R from WORKHORSE 800 -778-8779. Keep these on hand in case one breaks or becomes worn out.



Please take a moment and fill out the following information:

Serial Number: \_\_\_\_\_ Date of Purchase \_\_\_\_\_ Product Name \_\_\_\_\_  
 Company Purchased from \_\_\_\_\_ Assembled by \_\_\_\_\_

Please keep this information in a safe place for future referance



# Using the Off Contact and Micros Adjustments

## Locking Down Screen: (C)

To place a Screen in the Print Head, loosen the two (F) Screen Lock Down Knobs and raise the (G) Screen Lock Down Clamp Bar, so you can fit the screen in, push the screen all the way to the back of the Screen Clamp and then tighten the two (F) Screen Lock Down Knobs. Don't over tighten.

**Tip:** When using a BACK CLAMP Printing Press always measure the Design Height from the BACK of the Screen that way even if you are using different size Screens the Design will register

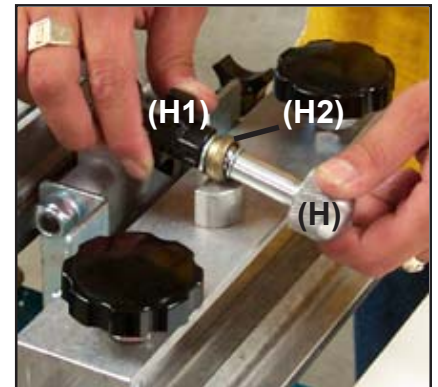
## Adjusting the Off Contact: ( A, E & I )

Your Mach Press comes from the factory leveled and the standard Off Contact set. But when you need to adjust the Off Contact, loosen the Off Contact Adjustment JAM Knob (E) then unscrew or screw down the Off Contact Knob (A) to adjust the Foot Pad (I), to the desired Off Contact. Then tighten the JAM Knob (E) to prevent the Off Contact Knob (A) from moving . Don't over tighten.

## Adjusting the Screen Tilt: (H, H1, & H2)

Loosen the Screen Tilt JAM Knob (H1) so that you have room to adjust the Screen Tilt. Then loosen the Screen Tilt Knob (H). Take a hold of the SCREEN and tilt it up or down to adjust the angle so the screen is parallel with the Shirt Board. DON'T TRY TO ADJUST WITH the Screen Tilt Knob (H)

Then tighten the Screen Tilt JAM Knob (H1) until it comes up against the Screen Tilt RING (H2). Holding the Screen Tilt JAM Knob (H1), tighten the Screen Tilt Knob (H) so that tightens the Screen Tilt JAM Knob (H1) up against the Screen Tilt RING (H2).



**Tip:** To set the Off Contact consistently front and back, get yourself two 16" by 1"10mm thick strips of plastic (Screen Door Window Plastic) for each of your standard Off Contact distance. Then when you set the Off Contact Adjustment and the Screen Tilt, place one strip on the SHIRT BOARD at the front of the Screen, and one at the back of the screen.

Adjust the Screen tilt (H) so it makes contact with the plastic strips front and back. By doing this you will be able to tell if the FRONT end of the screen is parallel with the back.

## Using the X and Y Micro Adjusters: (C)

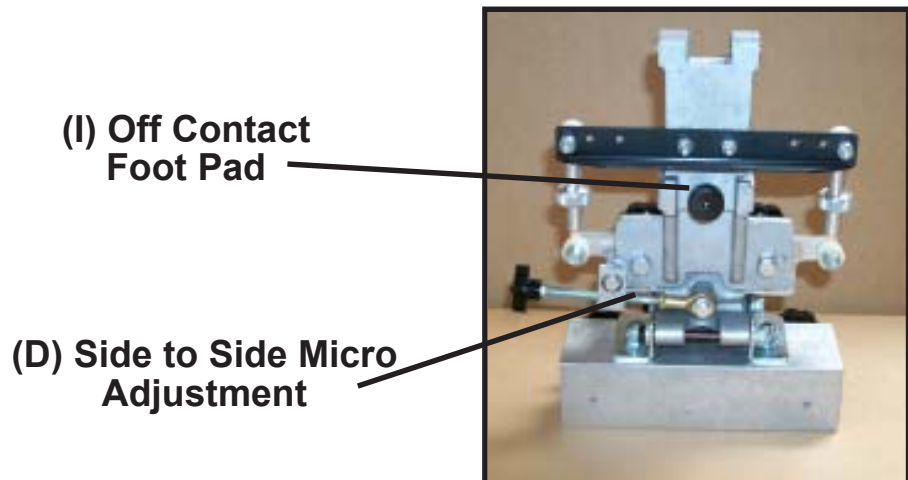
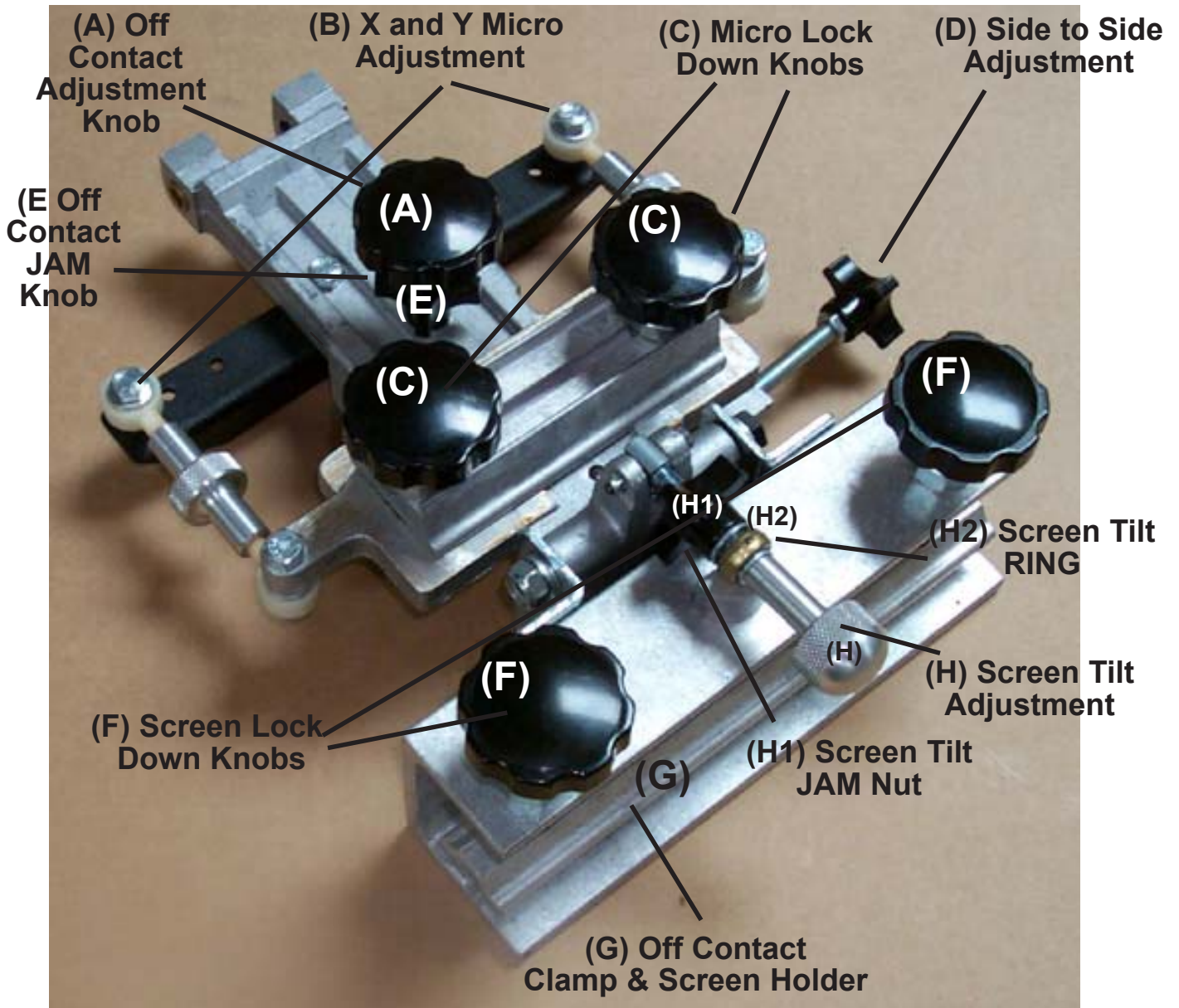
**ALWAYS LOOSEN the MICRO LOCK DOWN KNOBS (C)** before you attempt to adjust the Micros. Adjust the registration by turning the (B) X and Y Micro Adjusters. Use the left or right Micro adjuster (B) to move the screen left or right, up or down. If you turn both Micro Adjusters together you can move the Screen up and down without the left or right movement . When done tighten the MICRO LOCK DOWN KNOBS (C), but don't over tighten.

## Using the Side to Side Micro Adjuster: (D)

**ALWAYS LOOSEN the MICRO LOCK DOWN KNOBS (C).** Turning the Side to Side Micro Adjuster (D) you can move the Screen straight side to side, use in conjugation with the X and Y Micro Adjusters (B) Using both sets of adjusters will give you a full range of movement. Always try to Center the Micros when done with the Job or before setting up the next Job, this saves a lot of movement.

### The Register Gate and Bolt: (H)

The Print Head has a Register Locator attached under the MICRO LOCK DOWN KNOBS (C) this fits into the Register Gate to center the Screen. The two plastic bolts are used to adjust the Centering" of the Screen. As they wear down adjust the Bolts to keep the Screen centered.



## Manual Printing Accessories

Expand your profit potential....

### Pallets:

Description:	Top w/ bracket	Standard Top	Aluminum Top
10 x 14 youth	12010	12110	12180
15 x 18 adult	12015	12120	12181
18 x 20 oversize	12020	12130	12182
4 x 18 sleeve - leg	12070	12170	12183
Pallet bkt. only	12200		

### Vacupallet Graphics Printing Pallet:

Vacuum Pallet with bracket, pump and footswitch 18 x 24

Order no. 12513

### EZ-CAP Cap Printing Pallet:

E-Z Cap Pallet 3 x 4.75 w/110 Cap Screen and Squeege

Order no. 12011

E-Z Cap Screen #110 Mesh

Order no. 12012

E-Z Cap Screen #124 Mesh

Order no. 12013

E-Z Cap Screen #155 Mesh

Order no. 12014

### Gripper Jacket Printing Pallet:

Gripper Jacket hold down with bracket, 16 x 16

Order no. 12512

### EZ-Pocket Pocket Printing Attachment:

E-Z Pocket Pallet E-ZP 4 x 4

Order no. 12005

**Please see our extensive line of Cap Printers, attachments and screens in our full color catalog, or visit:**

**WWW.WORKHORSEPRODUCTS.COM**



# LIMITED WARRANTY AND WARRANTY REGISTRATION

*Although every effort has been made to provide accurate specifications, Workhorse Products/Odyssey does not assume any liability for damages, whether consequential or incidental, that may result from the use or misuse of the indicated specifications. Workhorse Products/Odyssey requires the use of a licensed industrial electrician for the installation of electrical service to equipment requiring electrical power.*

Workhorse Products/Odyssey reserves the right to alter specifications in the manufacture of its products.

It is understood and agreed that Seller's liability for any equipment whether liability in contract, in tort, under any warranty, in negligence, in strict liability or otherwise shall not exceed the return of the amount of the purchase price paid by Buyer. Notwithstanding the foregoing provision, under no circumstances shall Seller be liable for special, indirect or consequential damages. The price stated for the equipment is a consideration in limiting Seller's liability. No action regardless of form, arising out of the transactions under this Agreement may be brought by Buyer more than one (1) year after the cause of action has occurred. Our warranty is specified is exclusive and no other warranty, whether written or oral, is expressed or implied. Workhorse Products specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

Equipment manufactured or sold by Workhorse Products/Odyssey is warranted against defects in workmanship and materials for a period of one year from receipt by customer. All warranties initiate from date of shipment to original customer.

Replacement parts are covered for the term of the equipment warranty period. Parts not under warranty are covered for thirty (30) days from receipt by customer. Any part found by Workhorse/Odyssey to be defective in material or workmanship within the stated warranty period will be replaced or repaired at Workhorse's option without charge. **AFTER OBTAINING AN RMA# SEND RETURNED FREIGHT PREPAID TO 3730 E. Southern Avenue, PHOENIX, AZ 85040 USA.** Written authorization must be obtained from Workhorse/Odyssey before any part will be accepted. Replacement parts are sent out freight collect. **Parts sent out prior to receiving defective part will be sent C.O.D., cost plus freight. Upon return of defective part, if it is deemed that the part was not damaged by customer but failed, the cost of the replacement part will be refunded.**

*This warranty does not extend to expendable parts such as filters, fuses, elements and brushes. Workhorse does not warrant failure of parts or components resulting from misuse or lack of proper maintenance. Installation, inspection, and maintenance costs are the sole responsibility of the purchaser.*

## Registration Form

Company Name: _____	Contact Name: _____
Address: _____	Phone Number: _____
_____	Fax Number: _____
City: _____	Email : _____
State: _____	Cell Number: _____
Country: _____	
Zip Code: _____	Serial Number: _____
	Date Recivied: _____
Model Number: _____	
Date Purchased _____	

**Please Fax Registration Form for warranty to take place**