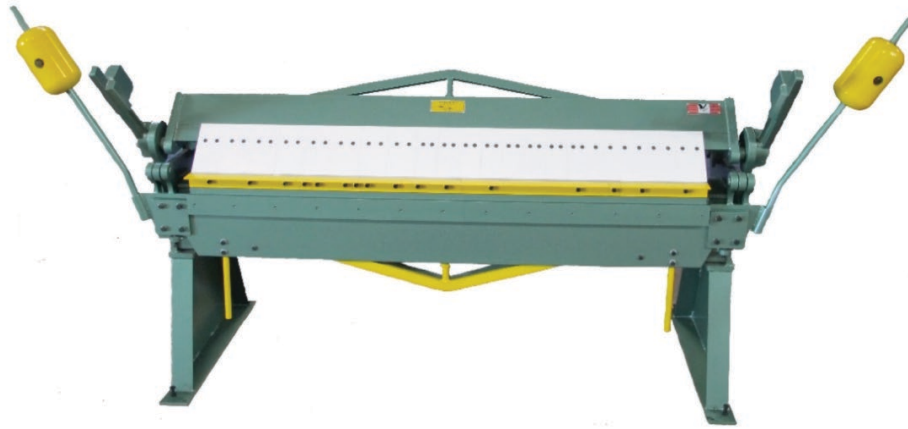


TIN KNOCKER

TK 616 Universal Brake

INSTRUCTIONS & PARTS DIAGRAM



TAAG INDUSTRIES CORP.

“The Tin Knocker People”

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**TIN KNOCKER
SAFETY RULES
TK 616 Universal BRAKE**

1. Never use a machine or tool for anything other than its intended purpose. Use the proper tool and equipment for the task.

2. Do not operate the machine in excess of its rated capacity.

WARRANTY

All new machines are sold with a one-year limited warranty, on factory defective parts. The warranty is limited to the original user. TAAG Machinery Co. at its option, will repair, replace or refund the purchase price of any part, tool or machine that fails during the warranty period. TAAG Machinery Co. will pay normal shipping charges for replacement parts. After 90 days from date of purchase, all express or overnight delivery charges are the responsibility of the customer. Purchaser must deliver to TAAG Machinery Co., at the address below, any written claim, with proof of original purchase. Replacement parts will be invoiced to purchaser and credit issued when the failed part is delivered to TAAG Machinery Co. Removal, reinstallation or replacement parts shall be at purchasers' / user's expense. Failure due to improper use of the machine voids the warranty.

NOTE: 1. this machine has been tested and adjusted prior to shipment, but can and often does require readjustment due to vibration and bouncing during transport. Following the procedures described within can easily do readjustment. These are procedures with which you, as a user, should be familiar, as you will use them repeatedly over the life use of the machine. If you have difficulty in performing these procedures, we are here to support you. Call us at: (800) 640-0746.

2. Opening rolls (for Philipsburg Lock) are consumable items and not subject to warranty.

TK 616 Universal Brake

RECEIVING THE MACHINE

Inspect before signing Bill of Lading.

Upon receipt closely examine the Leaf Brake for damage during shipment. Any loss or damage should be noted in detail on the delivery receipt and reported to your distributor immediately. Free replacement from TK International is dependant upon the notation and the Bill of Lading on delivery slip.

INSTALLING THE MACHINE

Locate the Leaf Brake in a well-lighted area on a solid, level floor. The Leaf Brake must be securely bolted to the floor. Be sure you have adequate room to swing both handles and Bending Leaf.

PRECAUTIONS

DO NOT use the Leaf Brake to bend rods, nails or wires. This will cause damage to the edge of the top blade. DO NOT exceed the capacity of the Leaf Brake.

OPERATING & ADJUSTMENT OF THE TK 616

Adjusting for Metal Thickness

Clearance for bends is obtained by moving Top Leaf back at bending edge. If material is to be bent is within four gauges of capacity, move the Top Leaf back twice the thickness of the material. With lighter material, move Top Leaf proportionately forward if sharper bends are desired.

1. Unclamp Handles (H) slightly.
3. Loosen Top Adjustment Plate Bolt (N). Adjust Top Leaf with Top Adjustment Bolts (L). Tighten Locking Nuts and Top Adjustment Plate Bolt (N). Clamping pressure of the Links (K) is changed by adjusting the Nuts. (M)

Duplicate Bends

Adjustable Stop Gauge (O) may be positioned at any point on Rod (P) by means of Lock Bolt (Q) to limit the degree of bend.

Counterbalance

Counterweight (J) can be raised or lowered on Rod to properly counterbalance the Bending Leaf.

Over bending Adjustment

If sheet bends over further on one side than the other/ set the Top Leaf back on the end where sheet is over bending.

1. Unclamp Handles (H) slightly on side that is over bending.
2. Adjust Top Leaf with Top Adjustment Bolts (L).
3. Re-clamp Handle (H).

Creeping Top Leaf Adjustments

Should Top Leaf creep forward when clamping material.

1. Check that brake sets level on floor.
2. Check Top Adjustment Plate (M) and Top Adjustment Bolts and Lock Nuts (L) to eliminate any movement of step bracket (15).
3. If still creeping, wedge under rear of Leg (A) at end that creeps until stopped. Replace wedge with permanent block of correct height.

Capacity:

The bending capacity of the brake is determined by the bending edge thickness provided by the Bending Leaf Bars (U/V) when mounted on Leaf.

1. Insert Bar (U) with Angle Bar (V) allow the full rated 1" minimum flange on capacity material.
2. Insert Bar alone without Angle Bar reduces capacity of brake four gauges.
3. Removing both Insert Bar and Angle Bar reduces capacity of brake seven gauges. These Bars are removed only to make narrow offset bends.

Narrow Offset Bends

Remove Angle Bar (V) and Insert Bar (U) - use Bending Leaf only.

Cautions

Bend short pieces of material in center of brake to equalize the strain. Never bend against seams unless Links (K) are adjusted to clamp the full multiple thickness of seam; and Top Leaf is set back for clearance of the same full multiple thickness. Always have both Angle Bar (V) and Insert Bar (U) mounted to Leaf when making capacity bends. When forming sections of wide girth such as cornices, to equalize the buckles in the sheet:

1. Start bend near the center of sheet, or,
2. Make a kink in the opposite end of sheet from the bend first made.

Sheets are not always perfectly flat and a buckle left in one end while the other is straightened by clamping in the brake will throw the first bend out of line when it, in turn, is straightened.

Always use material with square-sheared edges - rolled-edges will cause material to bow.

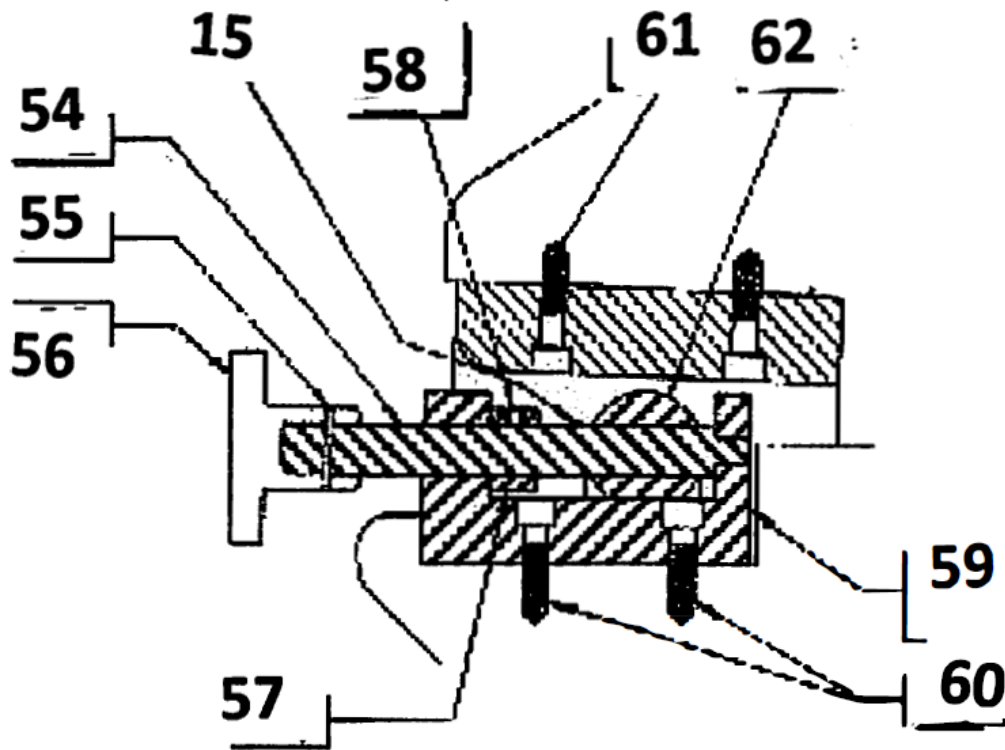
Never use brake to bend rods - these will nick Nose Bar. Always adjust for differences in the metal gauges. **Never** force-clamp the material.

Lubrication

Lubricate occasionally with SAE-30 oil.

Additional Breakdown for Adjusting Mechanism

FN 54-62



**CROSS SECTION THRU
ADJUSTING MECHANISM**

Parts for TK 616 Universal Brake

| Find No. | Part No. | Description | No. Req. |
|-----------------|-----------------|--|-----------------|
| 1 | 616001 | Counterweight | 2 |
| 2 | 616002 | Clamp Nut | 2 |
| 3 | 616003 | Clamp Washer | 2 |
| 4 | 616004 | Clamp Handle Bushing | 2 |
| 5 | 616005 | Left Clamp Handle | 1 |
| 6 | 616006 | Yoke Bushing | 2 |
| 7 | 616007 | Yoke R/L | 2 |
| 8 | 616008 | Hold-down Assembly | 1 |
| 9 | 616009 | Screw Finger Clamp | 40 |
| 10 | 616010 | Right Clamp Handle | 1 |
| 11 | 616011 | Bar Counterweight | 2 |
| 12 | 616012 | Screw, Counterweight | 2 |
| 13 | 616013 | Pin, Hinge | 2 |
| 14 | 616014 | Right Hand Hinge | 1 |
| 15 | 616015 | Adjusting Mechanism (Addition Breakdown) | 2 |
| 16 | 616016 | Adjusting Bracket Hold-down | 2 |
| 17 | 616017 | Bed Tooling Guide Bar Right | 1 |
| 18 | 616018 | 12" Bed Tooling | 2 |
| 19 | 616019 | 6" Bed Tooling | 2 |
| 20 | 616020 | 1 ½" Bed Tooling | 2 |
| 21 | 616021 | 20" Bed Tooling | 1 |
| 22 | 616022 | 8" Bed Tooling | 1 |
| 23 | 616023 | 4" Bed Tooling | 1 |
| 24 | 616024 | 1" Bed Tooling | 1 |
| 25 | 616025 | Yoke Nut | 4 |
| 26 | 616026 | Left Hand Hinge | 1 |
| 27 | 616027 | Screw, Counterweight Bar | 4 |
| 28 | 616028 | Screw, Apron Adjust | 2 |
| 29 | 616029 | Clamp Swivel | 2 |
| 30 | 616030 | Bed Tooling Guide Bar Left | 1 |
| 31 | 616031 | Bolts, Tooling Guide Bar | 13 |
| 32 | 616032 | Swivel, Stop Rod | 1 |
| 33 | 616033 | Stop Rod | 1 |
| 34 | 616034 | Stop | 1 |
| 35 | 616035 | Leg | 2 |
| 36A | 616036A | 12" Tooling support Bar | 2 |
| 36B | 616036B | 12" Tooling, Apron | 2 |
| 37A | 616037A | 6" Tooling Support Bar | 2 |
| 37B | 616037B | 6" Tooling, Apron | 2 |
| 38A | 616038A | 1 ½" Tooling Support Bar | 2 |
| 38B | 616038B | 1 ½" Tooling, Apron | 2 |

| | | | |
|-----|---------|------------------------------|----|
| 39 | 616039 | Bolts, Tooling Support | 16 |
| 40A | 616040A | 20" Tooling Support | 1 |
| 40B | 616040B | 20" Tooling, Apron | 1 |
| 41 | 616041 | Leg bolts | 6 |
| 42A | 616042A | 8" Tooling Support | 1 |
| 42B | 616042B | 8" Tooling, Apron | 1 |
| 43A | 616043A | 4" Tooling Support | 1 |
| 43B | 616043B | 4" Tooling, Apron | 1 |
| 44A | 616044A | 1" Tooling Support | 1 |
| 44B | 616044B | 1" Tooling, Apron | 1 |
| 45 | 616045 | Lower Tooling Clamp Bar Left | 1 |
| 46 | 616046 | Bolts, Hinge Mounting | 8 |
| 47 | 616047 | Bolts, Lower Tooling Clamp | 13 |
| 48 | 616048 | Bending Apron | 1 |
| 49 | 616049 | Lower Tooling Clamp Right | 1 |
| 50 | 616050 | Bolts, Apron Handles | 4 |
| 51A | 616051A | 2" Finger | 8 |
| 51B | 616051B | 2" Clamp, Finger | 8 |
| 52A | 616052A | 3" Finger | 8 |
| 52B | 616052B | 3" Clamp, Finger | 8 |
| 53A | 616053A | 4" Finger | 8 |
| 53B | 616053B | 4" Clamp, Finger | 8 |

Additional Breakdown for FN 15, (616015 Adjusting Mechanism)

| | | | |
|----|--------|--------------------------|---|
| 54 | 616054 | Top Adjusting Screw | 2 |
| 55 | 616055 | Pin, Handle | 2 |
| 56 | 616056 | Handle | 2 |
| 57 | 616057 | Collar | 2 |
| 58 | 616058 | Set Screw | 2 |
| 59 | 616059 | Adjusting Saddle | 2 |
| 60 | 616060 | Bolts, Saddle | 4 |
| 61 | 616061 | Bolts, Adjusting Bracket | 4 |
| 62 | 616062 | Top Adjusting Screw | 2 |