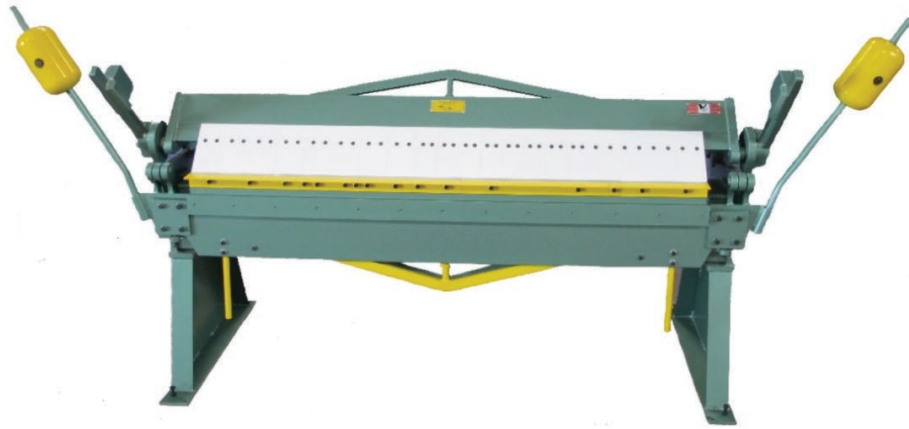


TIN KNOCKER

TK 616 Universal Brake

INSTRUCTIONS & PARTS DIAGRAM



RED RIVER MACHINERY
1-800-729-0759
www.redrivermachinery.com

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.

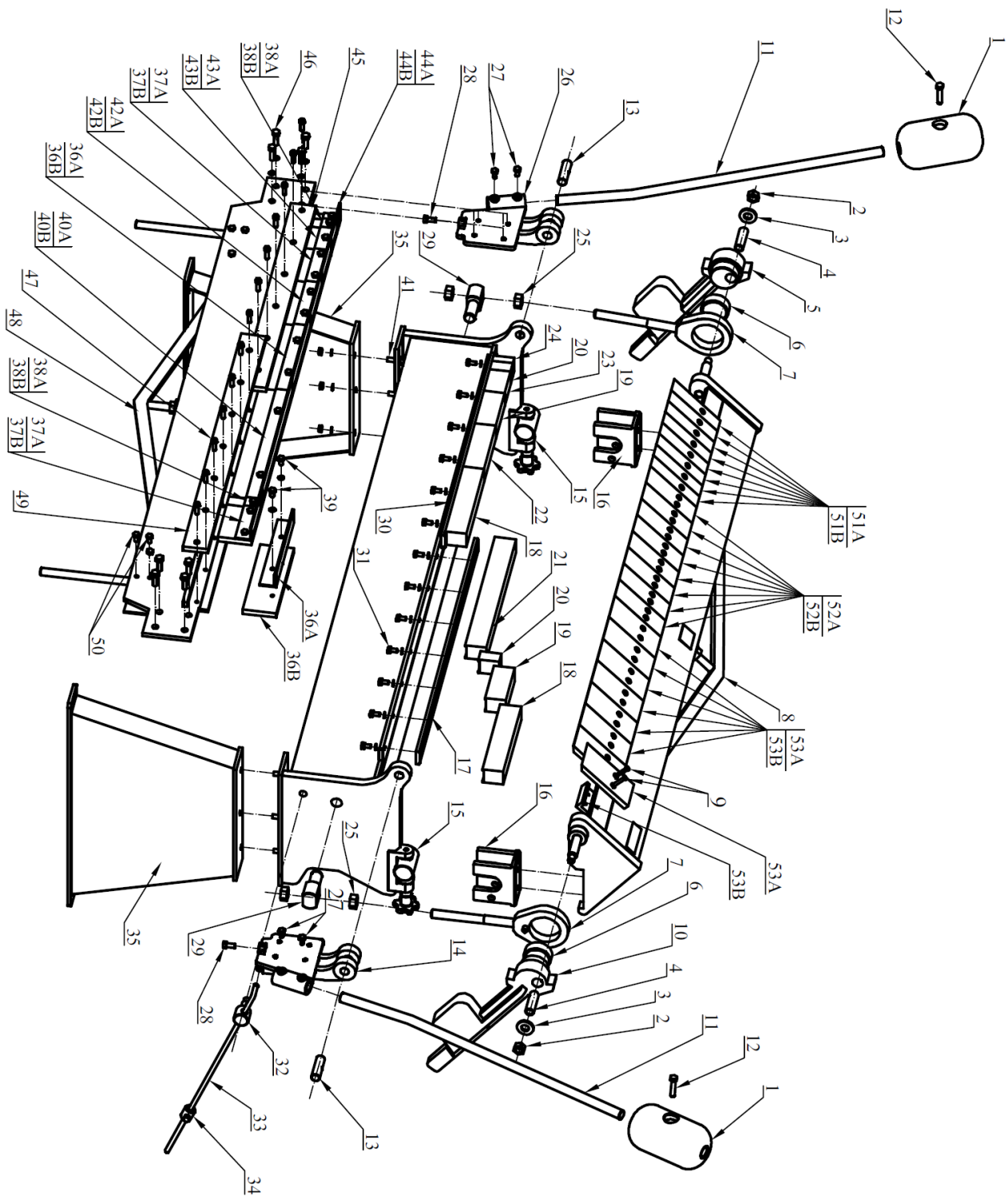
Sheets are not always perfectly flat and a buckle left in one end while the other is straightened by clamping in the brake will throw the first bend out of line when it, in turn, is straightened.

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-clip the material.

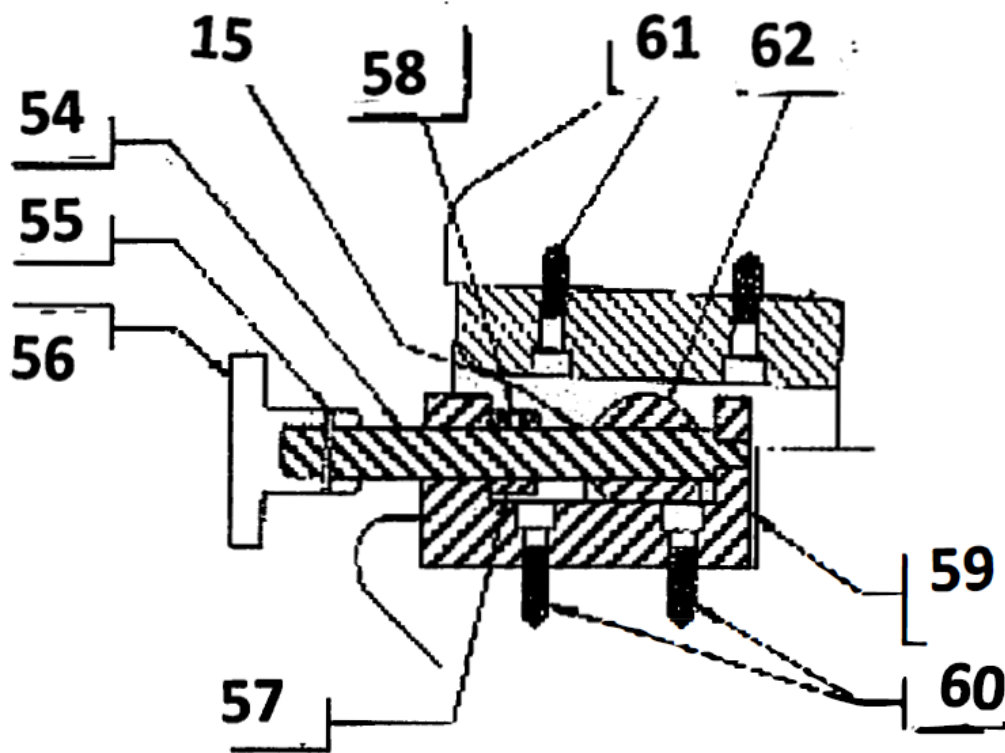
Lubrication

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