

GB SERIES GRADER BLADES

GB1 & GB4

BY TUFLINE

**ASSEMBLY & OPERATING
INSTRUCTIONS**

MONROE-TUFLINE MANUFACTURING CO., INC.

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INTRODUCTION

We are pleased that you have chosen a TUFLINE product. To assist you in the assembly and safe operation of your unit, we are providing this booklet. We urge you to read this booklet and thoroughly familiarize yourself with all aspects of safety, assembly, and operation. **Note:** All information contained in this booklet is general in nature and to be used for instructional purposes only. Actual appearance, material and specifications may vary somewhat depending on the specific model being assembled or adjusted.

All references made to the left or right in this booklet are determined by standing at the rear of the machine and facing the direction of travel.

** DISCLAIMER **

Any modifications to this product without the specific permission of TUFLINE are not allowed. Unauthorized modifications beyond the original factory specifications could cause damage to the unit and void the warranty.

** LIMITED WARRANTY **

Monroe Tufline Mfg. Co. Inc., the manufacturer, warrants only to the original purchaser of new TUFLINE equipment that they are free of defects in material and workmanship under normal use and service. This warranty is applicable for six months from date of purchase if for personal use; 90 days for commercial or rental purposes. This warranty does not apply to any equipment which has been improperly assembled or which has been subjected to abuse, negligence, normal wear and tear, modifications, tampering or failure to follow operating instructions, or which has been used for a purpose for which the product is not designed. This warranty does not cover any parts not manufactured by Monroe-Tufline Mfg., Inc.

Claims shall be made to the dealer who originally sold the equipment. Warranty coverage is not valid unless the owner registration card below is completed and returned. All claims must be submitted within 30 days of equipment failure and faulted parts or equipment are subject for return to TUFLINE at TUFLINE'S expense and discretion. Monroe-Tufline reserves the right to make improvements and/or changes in specifications of the product at any time without notice or obligation to modify previously manufactured unit.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

**Please fill out the registration card below and mail it to:
Monroe Tufline MFG. Attention: Owner Registration
P.O. Box 7755 Columbus, MS 39705**

OWNER REGISTRATION


Name _____ Address/City _____
State _____
Dealer Name _____ City/State _____
Date of Purchase _____ Model No. _____ Serial # _____
Comments _____


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GENERAL SAFETY INSTRUCTIONS

HITCHING:


 Before hitching always be certain that the proper hitch pins are available for each hitch position. Use of incorrect parts can allow an unexpected and possibly disastrous partial or complete disconnection from the tractor. This can result in serious property damage and/or personal injury.


 It is very important to throttle the engine to idle speed as the tractor is backed up to the implement. Make sure that all helpers are clear.


 Be sure the implement is solidly supported to prevent movement during hitching.


 Never place hands or fingers in possible "pinch points" such as hitch pin holes.


TRANSPORTING:


 Never allow anyone other than the operator to be on or around the tractor or implement when it is being operated or moved. No riders anywhere!

 Use all of the required safety equipment such as slow moving vehicle signs, etc.


 Obey all area traffic regulations. If the implement is over width, be courteous and pull off the road and stop to allow long lines of traffic to pass safely.


 Never transport at night without proper front and rear caution lights.


 Never transport at speeds in excess of 20 MPH on paved roads or highways.

 On bumpy roads, be aware that implements cannot withstand severe bouncing. Bouncing can also cause the tractor to swerve and this can result in an accident.


OPERATION:

 STOP the tractor engine and apply the the parking brake before leaving the tractor seat.


 Always operate at reasonable field speeds. Absolute maximum for earth-moving implements is 7 MPH. Lower speeds are recommended if the terrain is uneven or obstructions such as rocks are present.


 Use extra caution and slow speeds on steep slopes, near power lines, gullies, and tree limbs.


ADJUSTMENTS:

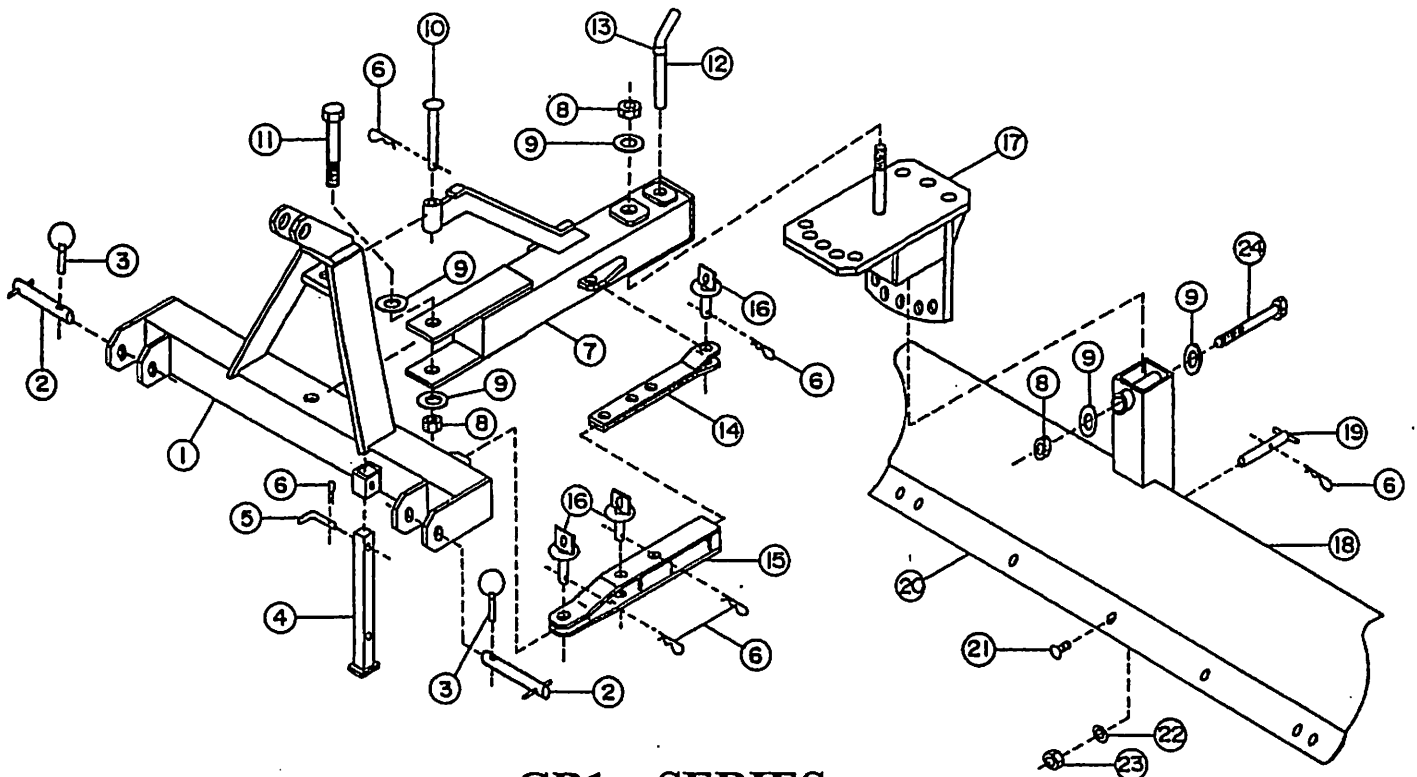
 Lower the implement to the ground when performing adjustments or maintenance.

GRADER SAFETY:

 Operation of the grader in an offset position can put side loads on the tractor and cause it to pull sideways.

 Operator vision is limited during back-filling. Take extra precautions and remember that often tractors operate faster in reverse.

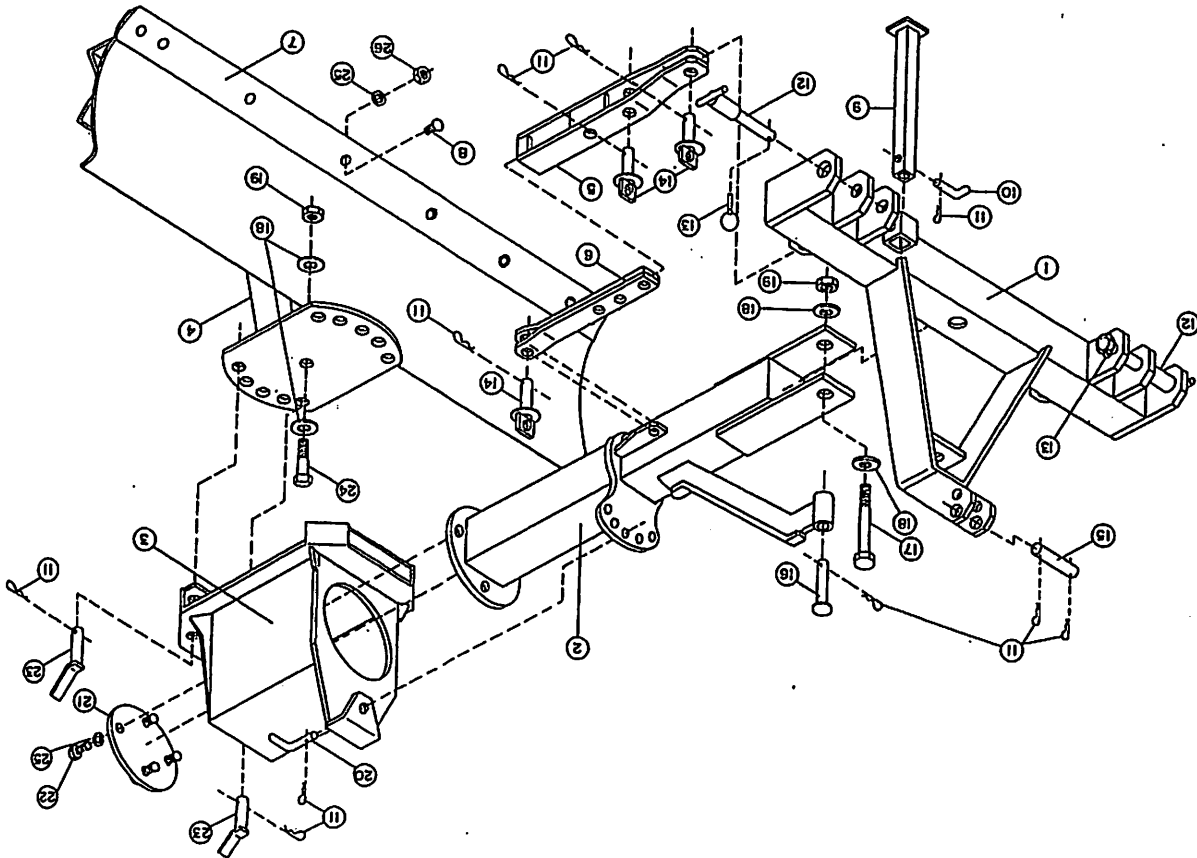
 Graders are primarily recommended for dirt moving not debris or work site clearing.



GB1 - SERIES

REF. NO.	PART #	DESCRIPTION
1	13331	HITCH WELDMENT
2	10684	HITCH PIN, CAT. 1, 7 3/8"
3	VP252	LYNCH PIN
4	13309	PARK STAND, 24 1/2"
5	9690	PARK STAND PIN
6	9979	HAIR PIN CLIP
7	13335	MAIN BAR WELDMENT
8	10332	HEX LOCK NUT, 1"
9	T-606	FLAT WASHER, 1"
10	13310	STRUT PIN, 1" X 5"
11	T-2662	HEX BOLT, 1" X 6 1/2", GR. 5
12	13348	PIVOT PIN, 3/4" X 10"
13	13349	PIVOT PIN STOP
14	13326	LATERAL ADJUST BAR
15	13328	ADJUST BAR RECEIVER
16	13260	ADJUST BAR PIN, 1" X 3"
17	13339	PIVOT & TILT HOUSING
18	13344	MOLDBOARD, 60"
	13345	MOLDBOARD, 72"
	13346	MOLDBOARD, 84"
19	13347	TILT PIN, 7/8" X 6"
20	10702	CUTTING EDGE, 60"
	10704	CUTTING EDGE, 72"
	10705	CUTTING EDGE, 84"
21	10699	PLOW BOLT 5/8" X 1 1/2"
22	T-24	5/8" LOCK WASHER
23	T-22	5/8" HEX NUT
24	13254	HEX BOLT, 1" X 7" GR. 5

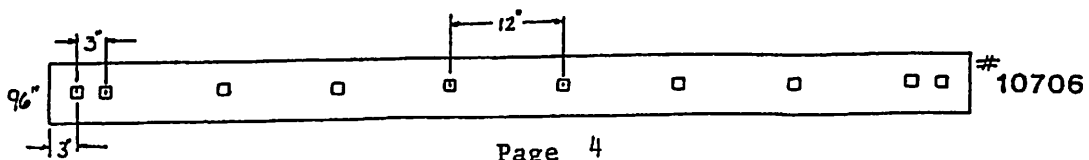
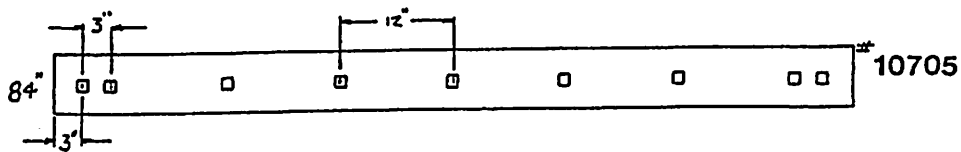
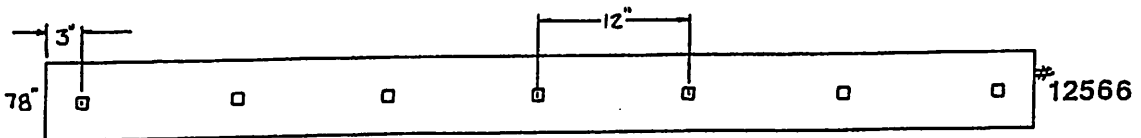
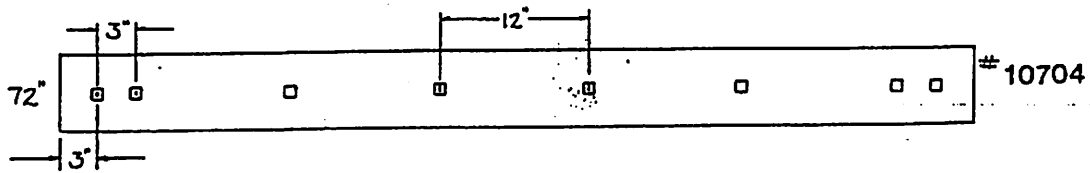
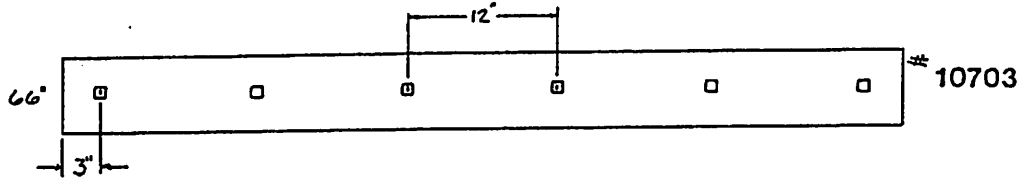
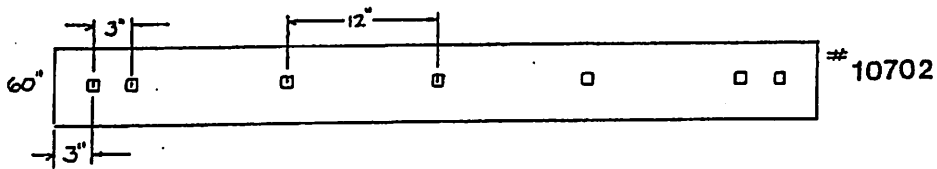
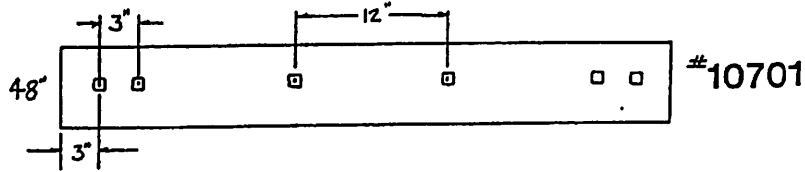
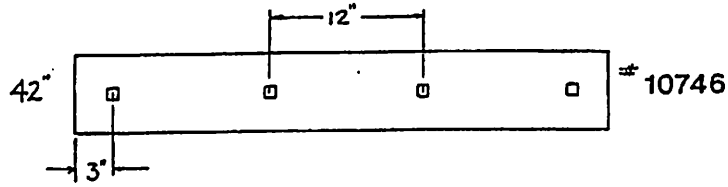
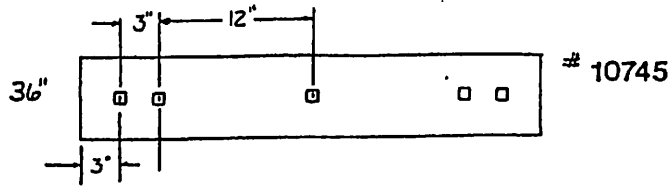
GB4 - SERIES



REF. NO.	PART #	DESCRIPTION
1	13264	HITCH WELDMENT
2	13279	MAIN BAR WELDMENT
3	13294	PIVOT HOUSING
4	13295	MOLDBOARD, 72"
	13316	MOLDBOARD, 84"
	13317	MOLDBOARD, 96"
5	13259	ADJUSTING BAR RECEIVER
6	13258	LATERAL ADJUSTING BAR
7	10704	CUTTING EDGE, 72"
	10705	CUTTING EDGE, 84"
	10706	CUTTING EDGE, 96"
8	10699	FLOW BOLT 5/8" X 1 1/2"
9	13309	PARK STAND, 24 1/2"
10	9690	PARK STAND PIN
11	9979	HAIR PIN CLIP
12	13257	HITCH PIN, CAT. 1 & 2
13	VP252	LYNCH PIN
14	13260	ADJUST BAR PIN, 1" X 3"
15	13311	TOP LINK PIN, 1" X 3 1/2"
16	13310	STRUT PIN, 1" X 5"
17	13254	HEX BOLT, 1" X 7" GR. 8
18	T-606	FLAT WASHER, 1"
19	10332	HEX LOCK NUT, 1"
20	13308	TILT PIN, 3/4" X 5" BENT
21	13303	ROUND CONNECTOR PLATE
22	13255	HEX BOLT, 5/8" X 1 1/2" GR. 8 NF
23	13304	MOLDBOARD ANGLE ADJUSTING PIN, 1" X 3"
24	13253	HEX BOLT, 1" X 3" GR. 8
25	T-24	5/8" LOCK WASHER
26	T-22	5/8" HEX NUT

MONROE - TUFLINE
CUTTING EDGES

8-91



GB1 ADJUSTMENTS

ANGLE

To adjust the angle, remove the pivot pin, Ref. 1, Fig. 1, and rotate the moldboard until the desired angle is reached. Replace the pivot pin to lock the angle setting.

TILT

There are two tilt positions of 15° and 30° to both the left and right. Remove the tilt pin, Ref. 1, Fig. 1A. Pull or push on the edge of the moldboard in order to rotate it up or down. Replace the pin when tilt angle is reached and secure it with the hair pin cotter, Ref. 2.

OFFSET

The GB1 series grader has 2 manual offset positions on both the left and right side. To get maximum offset, remove the adjusting bar pin, Ref. 3, Fig. 1A, and slide the lateral adjusting bar, Ref. 4, out of the receiver, Ref. 5, until the adjusting pin can be replaced in the last hole position. This should allow approximately 17 1/2" of offset.

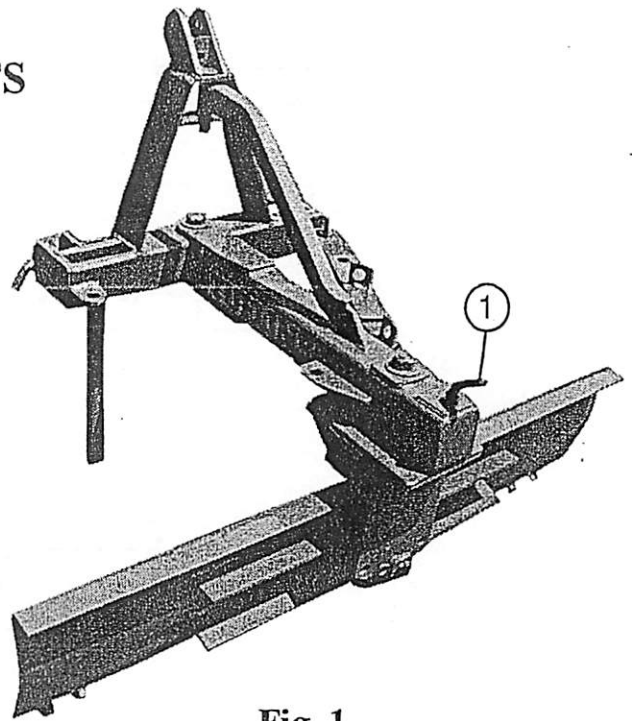


Fig. 1

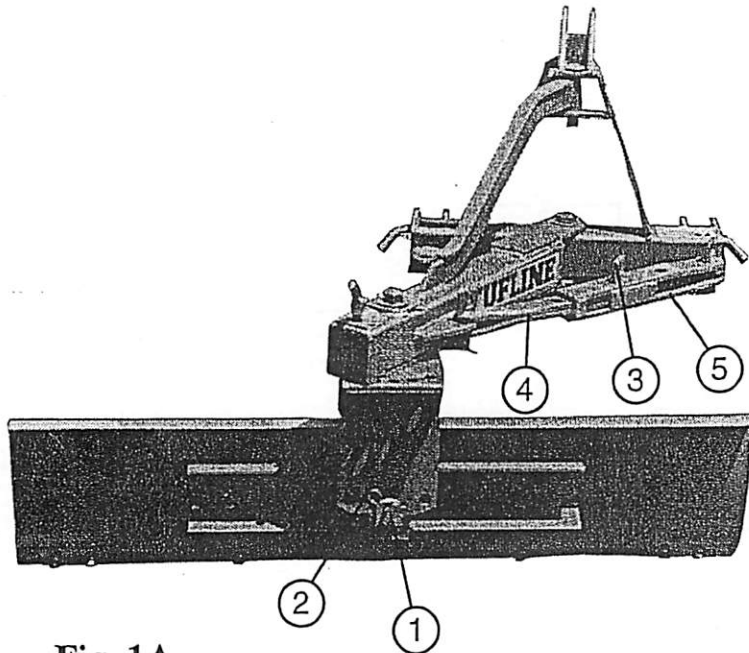


Fig. 1A

GB4 ADJUSTMENT

ANGLE

Angle adjustment is achieved by first removing the rear angle adjusting pins, Ref. 1, Fig. 7 & 8, and swinging the moldboard until the desired angle is reached. Replace the pin and secure with the hair pin clip, Ref. 3. ⚠ Never use fingers to align the holes and keep clear when swinging the moldboard.

TILT

There are two tilt positions of 15° and 30° on each side. Remove the tilt pin, Ref. 2, Fig. 7, while pushing or pulling on the edge of the moldboard to rotate it in the desired direction. When proper tilt is reached, replace the tilt pin and secure it with the hair pin clip, Ref. 3.

OFFSET

The GB4 series grader has 2 manual offset positions on both the left and right side. To get maximum offset, remove the adjusting bar pin, Ref. 4, Fig. 7, and slide the lateral adjusting bar, Ref. 5, out of the receiver, Ref. 6, until the adjusting pin can be placed back in the last hole position. This should give approximately 17 1/2" of offset. The rear angle adjusting pin, Ref. 1, should be in the center back hole in order for the moldboard to be perpendicular to the direction of travel.

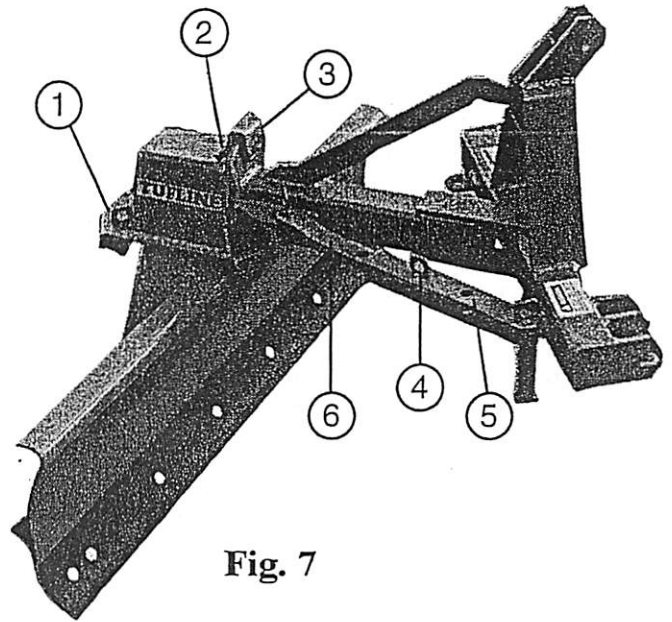


Fig. 7

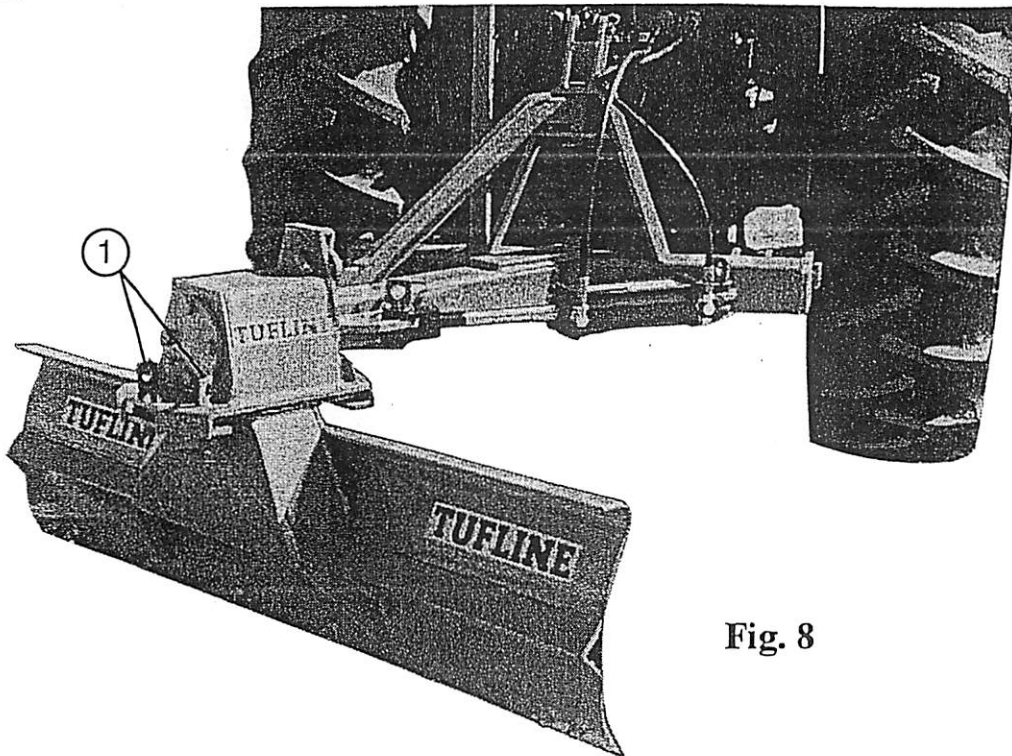


Fig. 8

OPERATION OF GB SERIES

Front tractor weights may be needed if the tractor is not absolutely stable when the blade is lifted. Hitch arms should be leveled if level grading is required, Ref. 1, Fig. 9. Position the moldboard crossways to check.

Pitch the unit backward with the top link until it won't readily penetrate medium ground, then shorten the top link about 1 1/2 rounds. Best operation is obtained when the pitch downward is just enough to penetrate and "shave" without jumping or chattering.

Operate the tractor at half throttle and approximately 3 MPH ground speed. Operation of the blade is easier at slower speeds thus resulting in faster operation. When this method is followed, a step higher gear is usually used and this prevents the tractor from surging so violently if an obstruction is encountered. If the tractor is small enough to be fully loaded by the work being done, these instructions would not completely apply except for speed.

When road grading, use enough angle to make the material move along the moldboard freely. Ditching the road will usually require at least on tilt position but shaping can be done best if tractor linkage tilt only is used.

Offsetting should not be done unless the tractor can't be shifted enough to reach the position required since offsetting is simple and quick. Special caution should always be observed when operating the unit in offset position.

Backward operation is an excellent feature but due to limited vision in reverse, objects can protrude suddenly toward the operator. Also terrain changes can be reached quicker than anticipated. Severe damage can also be inflicted on the blade and the tractor due to the blade "digging in" suddenly. Tractors that have three point hitches sometimes let the equipment "ride up" when in reverse. Downward pitch of the blade should always be as flat as possible. Shorten the top link as much as possible to still operate satisfactorily.

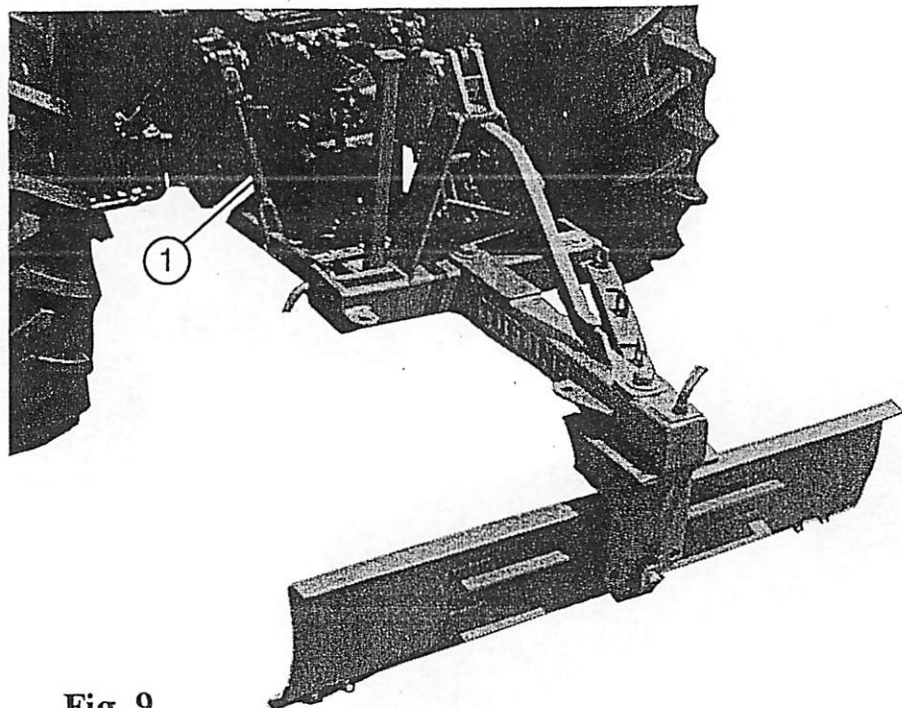


Fig. 9

MAINTENANCE

Periodically check all pins and bolts on your unit to be sure that all are in place and in good working condition. Missing pins or loose bolts could result in damage to the unit or hazardous operation.

Should the unit be stored outdoors, remember adverse weather conditions can cause parts such as adjusting pins to rust making adjustments difficult. If this is the case, lightly lubricate all moving parts and joints with motor oil.

Cutting edges can be reversed and/or ends swapped when they are worn on one side.

TROUBLE SHOOTING

PROBLEM

Grader is hard to control. Digs in and jumps out.

Grader doesn't cut satisfactorily.

Grader moldboard hits tractor arms when in reverse.

SOLUTION

Pitch or cutting angle too steep. Flatten pitch by lengthening top link if going forward or shortening if going backward. Also ground speed may be too great.

Increase pitch or angle slightly.

Lift too high or pitch too flat to reverse. Lower unit nearly to the ground and shorten the top link until reversed.

SAFETY DECAL PLACEMENT

**** NOTE:** If safety decals have been damaged, removed, or become illegible, new decals must be applied. New decals are available from your distributor or dealer parts department or the factory.

