



GB1000 GRINDER BACKBONE

PATENT PENDING

 **WARNING**

You must thoroughly read and understand all manuals before operating the equipment, paying particular attention to the Warning & Safety instructions.

**ORIGINAL INSTRUCTIONS
OPERATORS MANUAL**



IMPORTANT SAFETY MESSAGE



This manual will cover the use of the Grinder Backbone. As manufacturers we want to confirm to you, our customers, our concern for safety. We also want to remind you about the simple, basic, and common sense rules of safety when using equipment. Failure to follow these rules can result in severe injury or death to operators or bystanders.

It is essential that everyone involved in the assembly, operation, transport, maintenance, and storage of this equipment be aware, concerned, prudent, and properly trained in safety. Always use proper shielding and person protective equipment as specified by the manufacturer.

Read and fully understand all the safety practices discussed in this manual. All safety rules must be understood and followed by anyone who works with reel grinders.

This piece of equipment is designed to be used with a reel grinder. Refer to the operating equipment manual for all warnings with regard to the operation of the reel grinder. An operator using this equipment must read and understand all of the information in this manual and understand all the safety signs attached to the product. A person who has not read or understood this manual and safety signs is not qualified to use this equipment. Accidents occur often on with equipment when used by someone who has not read the manual and is not familiar with the equipment. If you do not have an manual or current production safety signs, contact the manufacturer or your dealer immediately.

Following these simple, basic safety rules, as well as others:

Find and understand all safety signs in the operators manual and on the equipment. This will help minimize the possibility of accidents and increase your productivity in using this product. Be careful and make sure that everyone who operates the grinder knows and understands that it is a very powerful piece of machinery, and if used improperly, serious injury or death may result. The final responsibility for safety rests with the operator of this machine.

Throughout this manual, the following safety symbols will be used to indicate the degree of certain hazards.



This symbol is used throughout this manual to call attention to the safety procedures.

 **DANGER**

The word **DANGER** indicates an immediate hazardous situation, which if not avoided, will result in death or serious injury.

 **WARNING**

The word **WARNING** indicates a potential hazardous situation, which if not avoided, could result in death or serious injury.

 **CAUTION**

The word **CAUTION** preceded with a safety alert symbol indicates a potential hazardous situation which, if not avoided, may result in minor or moderate injury.

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Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustments and operating procedures before attempting to operate the equipment. Replacement manuals can be obtained from your selling dealer or the manufacturer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate and clean the unit as specified. Please observe all safety information in this manual and safety decals on the equipment.

This equipment is designed to attach to TORO GREENSMaster 1000 SERIES REELS so that they can be sharpened in a Reel Mower Grinder. Any use other than this may cause personal injury and void the warranty.



To assure the quality and safety of your equipment and to maintain the warranty, you MUST use original equipment manufacturer's replacement parts and have any repair work done by a qualified professional.



ALL operators of this equipment must be thoroughly trained BEFORE using the equipment.

Do not use compressed air to clean grinding dust from the this equipment. This dust can cause personal injury as well as damage to the equipment.

PREPARATION/INSTALLATION CHECK LIST

Before using this equipment refer to the list below. Verify that all of the listed items are completed before powering up the equipment:

- 1. Equipment is completely assembled
- 2. All fasteners are tight and in good condition.
- 3. All decals are in place and readable.
- 4. Overall condition good (i.e. paint, welds, electrical)
- 5. Read and understand all areas of the Operator's manual, and review the Service Manual, and any additional training material if available.

DAILY INSPECTION

1. Perform a visual inspection of the entire unit. Look for signs of wear, loose hardware, and missing or damaged components. Ensure connections are tight and hoses and tubes are in good condition.
2. Clean the equipment by wiping it off.
3. Remove all grinding grit from the mounting surfaces and clamps.
4. Lubricate the clamps if needed monthly.



DO NOT USE COMPRESSED AIR TO CLEAN GRINDING DUST FROM GRINDER.



SPECIFICATIONS

OPERATING CONDITIONS: THIS EQUIPEMENT IS INTENDED FOR INDOOR USE ONLY.

AMBIENT TEMPERATURE:+5°C/ 40°F to +40°C/ 100°F

RELATIVE HUMIDITY: 50% Relative Humidity, +40°C / 100°F. Higher Relative Humidity may be allowed at lower temperatures. (There must not be condensation present).

ALTITUDE:..... Up to 1000m/ 3280 ft. above mean sea level.

TRANSPORTATION AND STORAGE:...-25°C/-15°F to +55°C / 130°F

Means must be provided to prevent damage from humidity, vibration and shock.



TO AVOID INJURY, READ AND UNDERSTAND THE SAFETY ITEMS LISTED BELOW. IF YOU DO NOT UNDERSTAND ANY PART OF THIS MANUAL AND NEED ASSISTANCE, CONTACT YOUR LOCAL DEALER OR THE MANUFACTURER.

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE WRENCHES AND OTHER TOOLS.**
3. **KEEP WORK AREA CLEAN.**
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use in damp or wet locations. Equipment is for indoor use only. Keep the work area well lit.
7. **DON'T FORCE THE EQUIPMENT.** It will do the job better and safer if used as specified in this manual.
8. **USE THE RIGHT TOOL.** Don't force the Grinder or an attachment to do a job for which it was not designed.
9. **WEAR PROPER APPAREL.** Wear no loose clothing, gloves, neckties, or jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair. Wear respirator or filter mask where appropriate. Wear protective gloves.
10. **ALWAYS USE SAFETY GLASSES.**
11. **SECURE YOUR WORK.** Make certain that the cutting unit is securely fastened with the clamps provided before operating.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN EQUIPEMENT WITH CARE.** Follow instructions in this Manual for lubrication and preventive maintenance.
14. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that all switches are OFF and the E-stop is pressed in before plugging in the Grinder.
15. **CHECK FOR DAMAGED PARTS.** A clamp or other part that is damaged or will not perform its intended function should be properly repaired or replaced.
16. **KNOW YOUR EQUIPMENT.** Read this manual carefully. Learn its application and limitations as well as the specific potential hazards.
17. **KEEP ALL SAFETY DECALS CLEAN AND LEGIBLE.** If safety decals become damaged or illegible for any reason, replace immediately. Refer to replacement parts illustrations in Service Manual for the proper location and part numbers of safety decals.
18. **DO NOT USE THE EQUIPEMENT WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.**
19. **REFER TO THE MACHINE EQUIPEMENT MANUAL FOR INFORMATION ON HOW TO USE AND OPERATE THE GRINDER and ADDITIONAL SAFETY INFORMATION.**

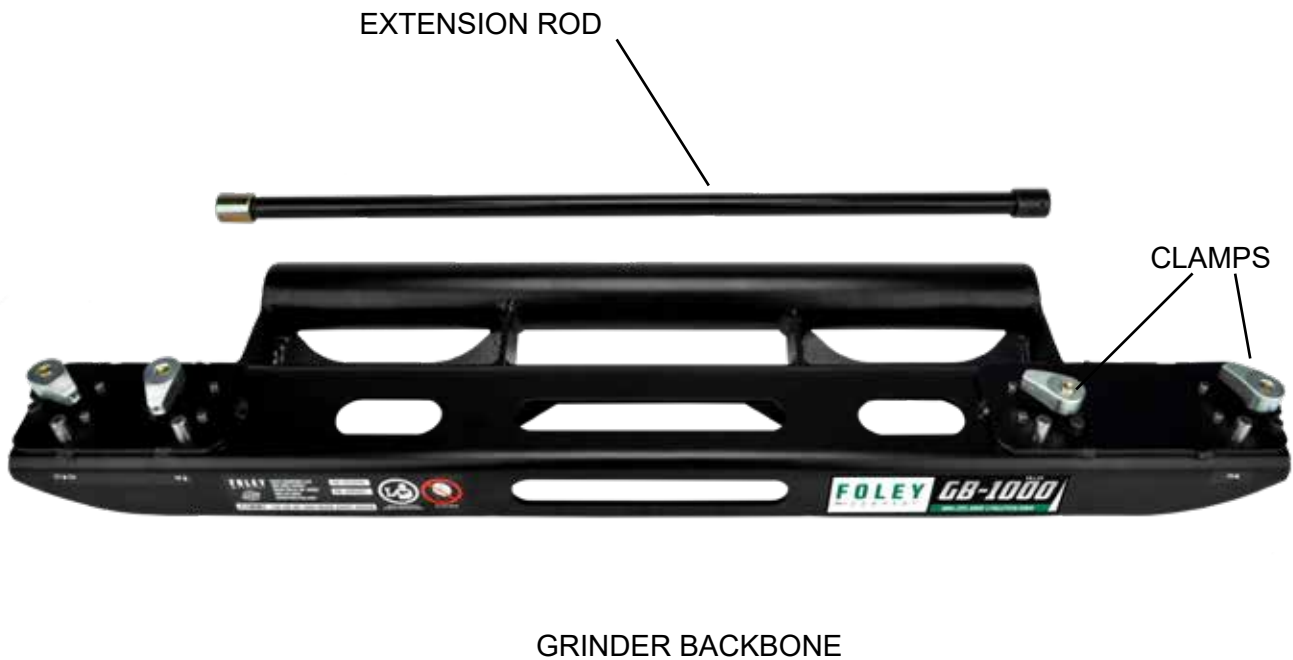


SAFETY DECALS - LOCATION.

IF ANY DECALS ARE DAMAGED, REPLACE THEM IMMEDIATELY!



Refer to manual— after installation, read the user's guide carefully before operating. Follow all operating and other instructions carefully.



ORIGINAL INSTRUCTIONS -

OPERATING INSTRUCTIONS:

The Grinder backbone comes fully assembled in a box. Use this box to store the unit when not being used.

IMPORTANT!!

Do not drop the unit, dropping the unit could cause the unit to deform and affect the fit to the reel and the quality of grind.

The Grinder Backbone was designed to support the reel section of the Toro Greensmower 1000 cutting unit for grinding. Follow the instructions include with your reel mower for removing the reel from the drive system.

With the reel free of the drive unit, place it on a flat surface. Elevate the back of the reel slightly to allow for easier installation of the Grinder Backbone.

The Grinder Backbone will fit 3 lengths of reels. There are markings on the top of the Grinder Backbone indicating which set of pins and clamps to use when mounting it to a reel.

With the back of the reel raised slightly use the larger pins to help align the Grinder Backbone to the reel. The large pins will fit in the bolt holes in the brackets on the reel.

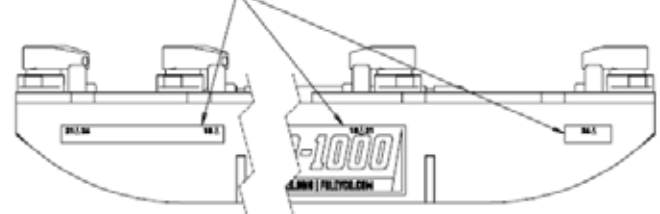
Now align the 4 smaller pins on the Grinder Backbone with the locating holes in the reel. The Grinder Backbone should mate tight to the mating pad on the reel. This is a snug fit, so a light tap may be necessary to fully seat the Grinder Backbone to the Reel.

CAUTION

DO NOT FORCE THE GRINDER BACKBONE ONTO THE REEL, THIS MAY DAMAGE THE LOCATING PIN HOLES.



REEL SIZE INDICATION
DECALS



Once the Grinder Backbone is flush against the reel use the clamps to secure the unit to the Reel. Use a wrench to rotate the hex head clockwise to tighten the clamp to the reel. The clamp should rotate into position and then Tighten up as you rotate the wrench. If the clamp down not rotate into position you may need to rotate the clamp head by hand to get it into the correct position.

⚠ CAUTION

TORQUE THE CLAMPS TO 5 FT-LBS. DO NOT OVERTIGHTEN THE CLAMPS AS THIS COULD DAMAGE THE CLAMPS OR THE REEL. DO NOT USE AN IMPACT WRENCH TO TIGHTEN THE BOLTS!

Once the Grinder Backbone is secured to the reel it can be now be ground in a Reel Grinder. Refer to the manual that came with your reel grinder for how to grind a reel.

You may need to use the extension bar to drive the reel. Connect the Spline end of the extension bar to the spline on the reel. Connect the opposite end to the spin motor on the reel grinder using a 1/2" square drive.

After Grinding the reel place the reel on a flat surface and elevate back of the reel to allow for easier removal of the Backbone. Rotate the hex heads counter clockwise to loosen the clamps. Once the clamps are loose the should rotate out of the way so that the Grinder Backbone can be easily removed. Pull the Grinder Backbone away straight away from the reel. If the unit is stuck on you may need to lightly tap the Grinder Backbone to remove it from the Reel.

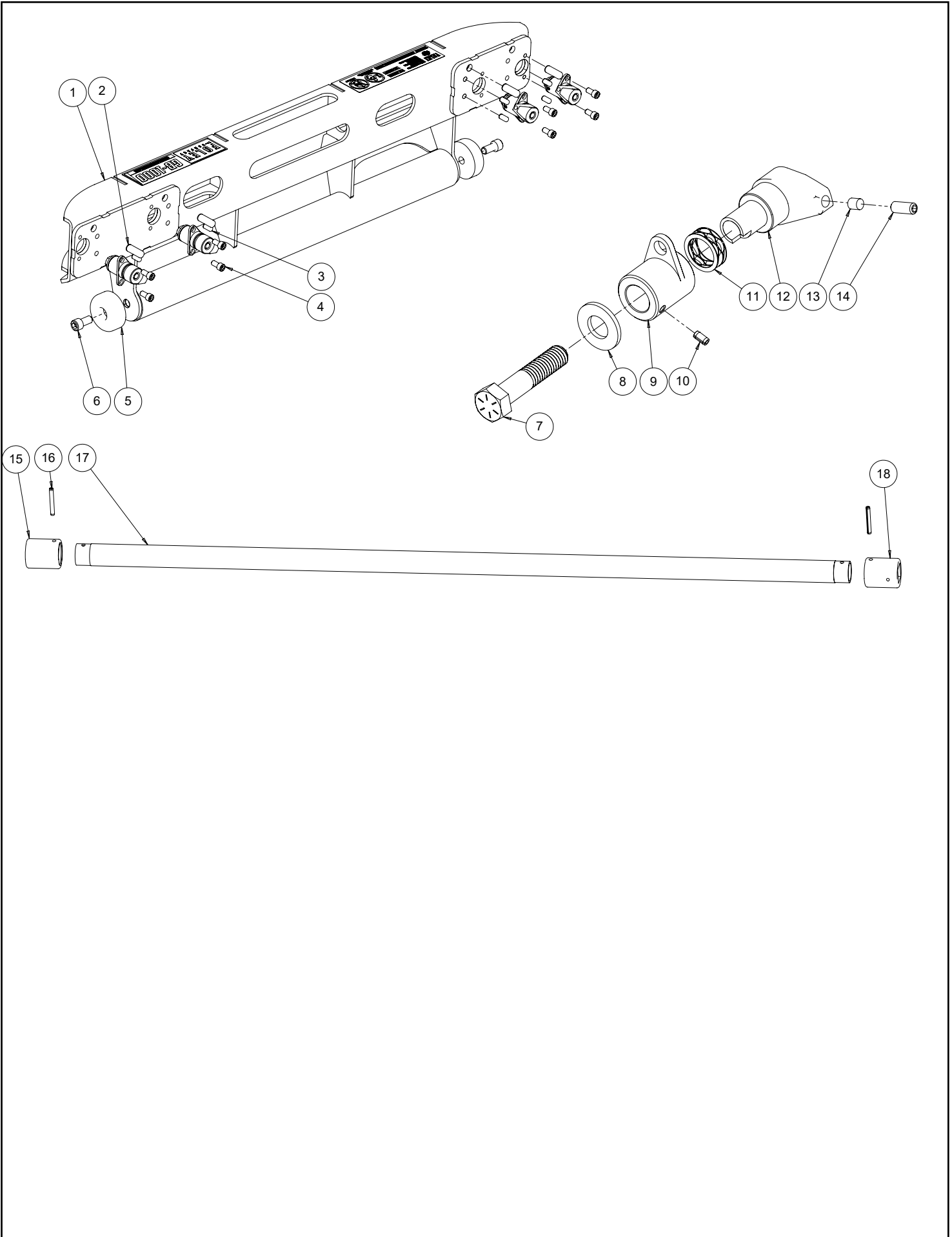
⚠ CAUTION

DO NOT USE EXCESSIVE FORCE TO REMOVE THE BACKBONE AS YOU MAY DAMAGE THE ALIGNMENT PIN HOLES OR THE MOUNTING SURFACES.

Once the unit is removed place it back in the box along with the extension rod and store in a dry safe place.



- ORIGINAL INSTRUCTIONS -



- ORIGINAL INSTRUCTIONS -

DIAGRAM NO.	PART NO.....	DESCRIPTION		
1.....	6359501.....	TORO BRKT FRAME WELDMENT	1	ea.
2.....	H371601	PIN - DOWEL .375Dx1.000LG	4	ea.
3.....	H250813	PIN - DOWEL .250Dx.500LG	8	ea.
4.....	B250811.....	1/4-20x1/2 SHCS	8	ea.
5.....	3706324.....	RUBBER BUMPER, 1.88" OD	1	ea.
7.....	3706329.....	HHCS, 7/16-14 X 1-3/4, GR 5	4	ea.
8.....	3706328.....	WASHER, .438 ID X .875 OD	4	ea.
9.....	6359504.....	CLAMP HOUSING - WELDMENT	4	ea.
11.....	3706314.....	WAVE SPRING, 17/32 ID, 3/4 OD	4	ea.
12.....	6359008.....	ROTARY CLAMP	4	ea.
13.....	3579109.....	NYLON PLUG 3/16 DIA.	4	ea.
14.....	C250820.....	1/4-20x1/2 SSS CPPT	4	ea.
15.....	6359015.....	8 TOOTH FEMALE SPLINE	1	ea.
16.....	H121602	PIN - ROLL .125Dx1.00LG	2	ea.
17.....	6359011.....	DRIVE EXTENSION	1	ea.
18.....	3706129.....	1/2" SQUARE ADAPTER	1	ea.
DECALS:				
.....	6359013.....	DECAL - LOGO "GB1000"	1	ea.
.....	6359014.....	DECAL - TORO INFO	1	ea.
.....	6359016.....	DECAL - INDICATOR	1	ea.