

RIDGID[®]

Kollmann

K-1000 Rodder



IMPORTANT

For your own safety, before assembling and operating this unit, read this Operator's Manual carefully and completely. Learn the operation, applications and potential hazards peculiar to this unit.

K-1000 Rodder

Record Serial Number below and retain product serial number which is located on nameplate.

Serial
No.

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General Safety Information

WARNING

Read and understand all Instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SAVE THESE INSTRUCTIONS!

Work Area Safety

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.
4. **Keep the engine at least 1 meter (3 feet) away from buildings and other equipment during operation. Do not place flammable objects close to the engine.** Procedures should be followed to prevent fire hazards and to provide adequate ventilation.

Personal Safety

1. **Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medications.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
3. **Remove adjusting keys or wrenches before turning the tool ON.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
4. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
5. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat,

or hearing protection must be used for appropriate conditions.

Tool Use and Care

1. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate it is designed.
2. **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
3. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
4. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
5. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.
6. **Disconnect the spark plug wire before making any adjustments or repairing tool.** Such preventive measures reduce the risk of starting the tool accidentally.
7. **Keep handles dry and clean; free from oil and grease.** Allows for better control of the tool.

Service

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in injury.
2. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance Section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electrical shock injury.
3. **Follow instructions for lubricating and changing accessories.** Accidents are caused by poorly maintained tools.

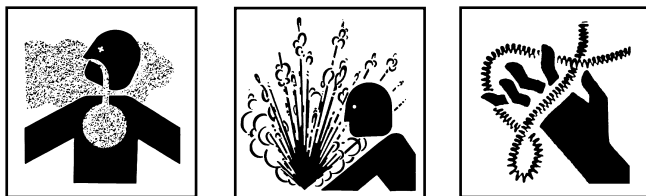
Specific Safety Information

The Operator's Manual contains specific safety information and instructions for your protection against serious injuries including:

- Loss of fingers, hands, arms or other body parts if clothing or gloves get caught in the rods or other moving parts;
- Carbon monoxide poisoning;
- Burns due to fire or explosion;
- Eye injuries, including being blinded by the rods or thrown debris.

Read and follow the safety labels on machine!
 Know the location and functions
 of all controls before using this tool.

! WARNING



Rods may whip or kink. Fingers, hands or other body parts can be crushed or broken. Carbon monoxide poisoning can occur if operated in a confined area.

- Wear mittens with rivets.
- Keep sleeves and jackets buttoned.
- Keep guards in place.
- Wear safety glasses.
- Use caution. Gasoline is extremely flammable and explosive under certain conditions.
- Never run engine in enclosed or confined area.

READ ABOVE WARNING CAREFULLY!

Machine Safety

1. **Wear leather gloves provided with the machine. Never grasp a rotating rod with a rag or loose fitting cloth glove.** Could become wrapped around the rod and cause serious injury.

2. **Never operate machine with belt guards removed.** Fingers can be caught between the belt and pulley.
3. **Do not operate machine in (REV) reverse.** Operating machine in reverse can result in rod damage and is used only to back tool out of an obstruction.
4. **Start engine with Shift Lever in NEUTRAL position.** Shift lever must also be in **NEUTRAL** (straight up) position when adding or removing tools and rod or any other time when machine is not in use.
5. **Disconnect Spark Plug properly.** Spark plug wire should be removed when working on Rodder or engine to prevent accidental starting.
6. **Operate Rodder properly.** Do not operate with more than 20 feet of rod between machine and manhole. This will minimize the possibility of kinking rods. The arcing of rod at manhole should not exceed 3 feet. When striking an obstacle that causes the tool to **hang-up**, do not attempt to **force** the machine by manually pushing on the exposed rods. This will cause kinking and whipping of the rods which could cause serious injury. Do not uncouple rods that are in a stressed condition. Read operating instructions carefully.
7. **Do not overstress rods. Overstressing rods because of obstruction can be dangerous to operators, as rods may twist or kink.** Do not use badly worn or bent rods. Be sure Torque Limiter is adjusted properly to 50 ft. lbs. maximum.
8. **Use caution when handling gasoline. Refuel in well-ventilated area. Do not overfill fuel tank and do not spill fuel. Make sure tank cap is closed properly.** Gasoline is extremely flammable and is explosive under certain conditions.
9. **Never run the engine in an enclosed or confined area.** Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.
10. **Be careful not to touch the muffler while it is hot. To avoid severe burns or fire hazards, let the engine cool before transporting or storing it indoors.** The muffler becomes very hot during operation and remains hot for a while after stopping the engine.

SAVE THESE INSTRUCTIONS!

Description, Specifications, and Standard Equipment

Description

The RIDGID/Kollmann K-1000 Rodder is a gasoline engine driven machine for cleaning sewer mains, drain tile, process piping, water lines, etc. Recommended for municipal, industrial, commercial, and institutional use. This machine uses RIDGID/Kollmann Sectional Solid Sewer Rod with Speed Coupler.

Specifications

- Rod Capacity24" dia. mains, 500'
- Transmission (2 speed):
 - FWD Gear133 RPM
 - REV. Gear133 RPM
- Throttlevariable speed, returns engine speed to idle when operator releases grip
- Engine4 cycle, gasoline, 6 hp vertical shaft. Model Series 120000. (Operator's Manual included)
- ClutchCentrifugal clutch opens when operator releases throttle
- Length32"
- Width26"
- Height (assembled with handle)40"
- Weight (machine only)160 lbs.

Standard Equipment

- Mitten (L.H.).....No. A-532
- Mitten (R.H.)No. A-2129
- Coupling Pin Key.....No. A-899
- Tool Adapter.....No. A-2704
- Drive Pin.....No. A-3567
- Torque Testing ToolNo. A-4558
- Rod HolderNo. B-3542
- Rod TurnerNo. R-0

Accessories

See RIDGID Catalog for Machine Accessories.

Machine Assembly Instructions

Assembling Rodder

1. Insert Handle Assembly C-3552 into handle openings in base and attach by means of four 3/8" bolts provided.
2. Attach free end of Throttle Cable A-3561 to Throttle Handle A-3560 and secure cable to left side of handle with two Cable Clamps A-3574 provided.

Operating Instructions

WARNING

Operator should be thoroughly familiar with preceding Safety Precautions before attempting to operate this equipment.

Be very careful when cleaning drains where cleaning compounds have been used. Wear gloves, when handling rods, and avoid direct contact of the skin and especially the eyes and facial areas as serious burns can result from some drain cleaning compounds.

Starting Engine

1. Before operating rodder:
 - Check engine crankcase oil level. If low, add oil. (See Briggs & Stratton Owner's Manual enclosed for details.) Engine is shipped with **NO OIL** in it. Fill with oil prior to starting engine.
 - Check engine fuel level. If low, add unleaded gasoline with a pump octane rating of 86 or higher. (See Briggs & Stratton Owner's Manual enclosed for details.)
2. Transmission Shift Lever should be in **NEUTRAL** (straight up) position.
3. Set choke control handle at **CHOKE** and turn engine over a few times with pull starter.
4. When engine *catches* set at **RUN** and pull throttle control to desired speed.

Operating Rodder

(Figures 1 & 2)

WARNING

Make certain that Torque Limiter is properly adjusted to a maximum 50 ft. lbs. Refer to adjustment procedure in manual.

1. When working through a manhole, attach auger or probing tool to tool adapter.

NOTE! When working through manhole, 2 men are required. Machine operator and rod handler at manhole.

2. Couple enough rod together to reach down into main and extend out no more than 20 feet.
3. Holding onto both ends of a piece of rope, lower auger or probing tool into manhole, guiding tool towards lateral opening.
4. Use a hand operated rod turner and feed rod a short distance into lateral opening.
5. Release one end of rope and remove from manhole.
6. Couple rod to machine using rod holder if using RIDGID/Kollmann sectional rods with K-10 Speed Coupler. (Figure 1)

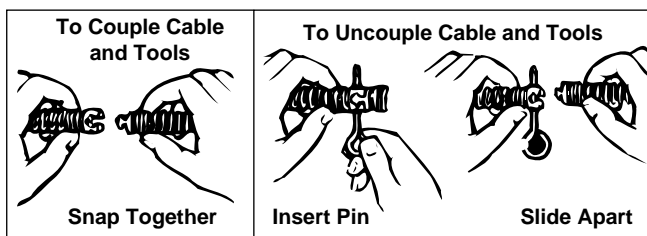


Figure 1 – Coupling and Uncoupling Rods and Tools

NOTE! The K-10 Speed Coupler is the fastest, easiest method of changing tools and rods. Simply snap male and female together and they are locked. To disconnect, insert coupling pin key and slip apart. Speed couplers can be added to all existing tools and rods.

WARNING

Make certain that rod handler is wearing standard equipment leather mittens with riveted palms. Use no substitute.

7. Place Transmission Shift Lever in **FWD** gear.
8. Squeeze Throttle Handle for desired rod (R.P.M.) rotation and push machine forward.
9. As machine is pushed forward the rod handler should push downward on rod with rod guided between thumbs and palms of hands with fingers extended. (Figure 2)

WARNING

The arcing of Rod at manhole should not exceed 3 feet.

10. When machine is approximately 8 feet from manhole, release throttle handle and place transmission shift lever in **NEUTRAL** (straight up) position.
11. Uncouple rod from rod holder, move machine back approximately 10 feet and connect additional rods.
12. Continue feeding rod by following steps 7 through 13 until through obstruction.

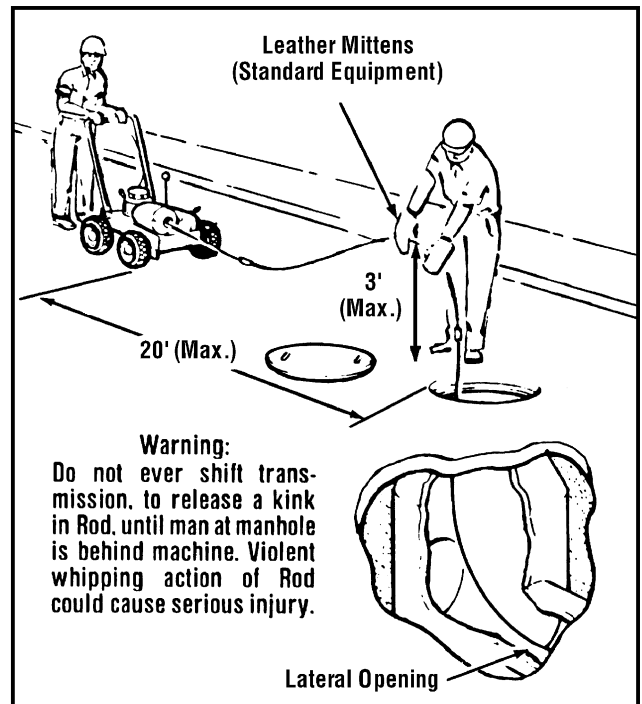


Figure 2 – Operating Rodder

13. If tool gets *hung up* in obstruction, release throttle handle. Put machine in reverse gear, squeeze throttle control and pull machine back to release tool.

WARNING

If kinking of Rod occurs, move all people to rear of machine before shifting transmission. Violent whipping action of Rod could cause serious injury.

14. If rod kinking occurs, release throttle to return engine to idle speed. Be sure all personnel are to the rear of the machine. Back the machine to remove all *slack* from the rods. Shift transmission to neutral to insure all torque is released.
15. Proceed through obstruction with Transmission Shift Lever in **FWD** gear.
16. After clearing obstruction continue through line to make sure that it is clear.
17. When completed, leave Transmission Shift Lever in **FWD** gear and back machine away from sewer opening.

Stopping Engine

Move choke control handle to **STOP** position.

CAUTION

After using, thoroughly flush and drain rods and couplings with water due to damaging effects of some drain cleaning compounds.

Machine Maintenance

1. Use sharp cutting tools.
2. Inspect rods. Replace worn or kinked rods.
3. Follow instructions for lubricating and changing accessories.
4. Keep handles dry and clean. Keep free from oil and grease.
5. When not being used, store machine in a secured, locked area, out of reach of children and people unfamiliar with the machine.
6. Keep torque limiter in working order.

Torque Limiter Adjustment

(Figures 3 & 4)

The purpose of the Torque Limiter A-3570 is to minimize kinking of rods and excessive torque through the transmission system. Kinking is caused by heavy blockage within pipe, and must be adjusted to no more than 50 ft.-lbs. (600 inch-lbs.).

The Torque Limiter consists of two fiber discs with one assembled on either side of the driven sprocket A-3569. When clamped against sprocket the Torque Limiter produces the only connection between Drive Shaft B-3548 and Driven Sprocket A-3569.

Torque Limiter Adjustment Using Torque Wrench

(Figures 3 & 4)

1. Disconnect spark plug wire.
2. Remove 3 screws and Guard D-3544 to expose Torque Limiter A-3570.
3. Back off three cap screws so they do not contact backup plate. They are now free to be turned by hand.
4. Back off torque limiter threaded ring until it turns freely. Hand tighten torque limiter threaded ring against backup plate.
5. Hand tighten three cap screws to make contact with backup plate.

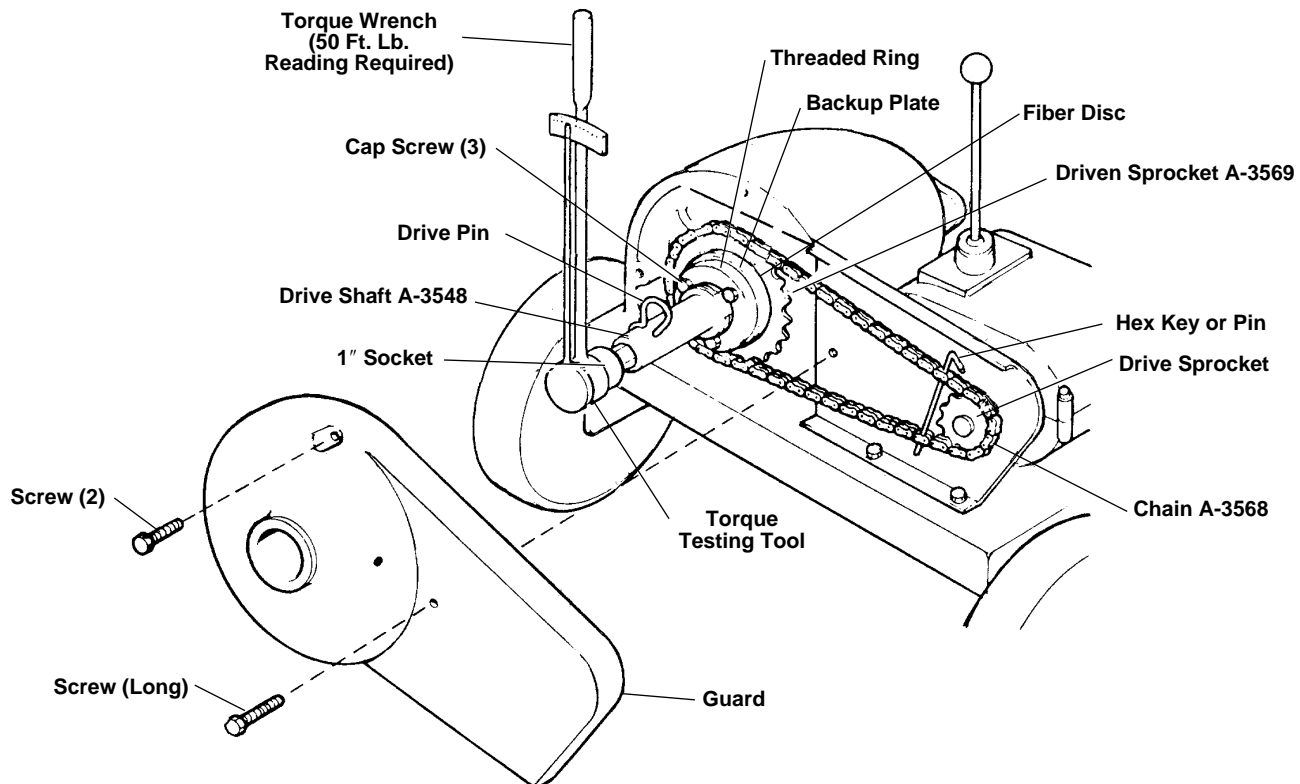


Figure 3 – Adjusting Torque Limiter

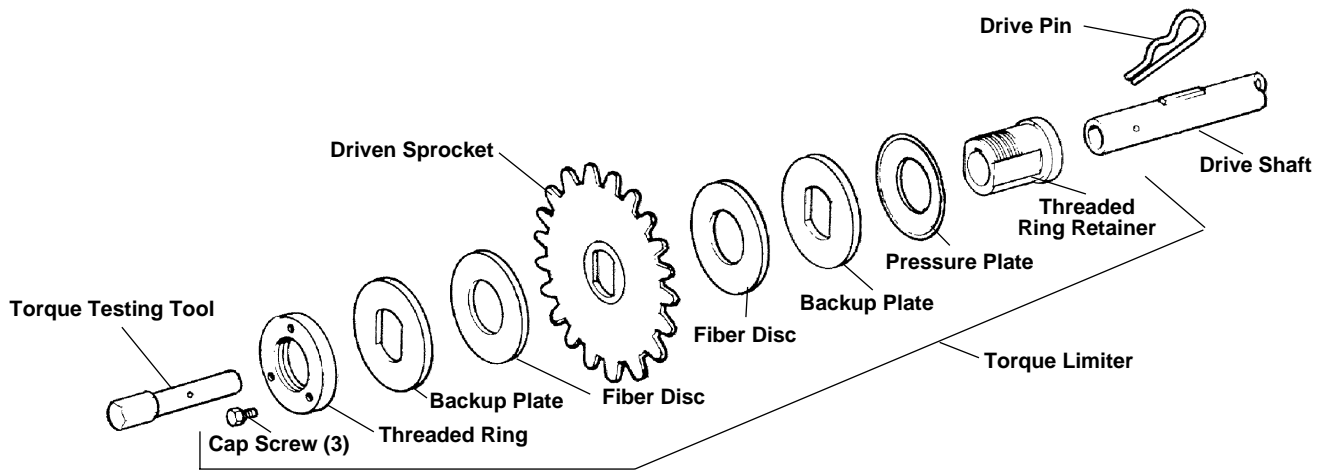


Figure 4 – Torque Limiter, Torque Testing Tool, Driven Sprocket and Drive Shaft

NOTE! This insures that all three Screws provide even pressure against Backup Plate at beginning of torque adjustment.

6. Insert a $\frac{3}{16}$ " hex key or pin through both sides of Chain A-3568 near drive sprocket to lock chain.
7. Insert Torque Testing Tool into Shaft B-3548 and lock in place with Drive Pin A-3567.
8. Install a 1 inch socket on torque wrench and apply torque to Torque Testing Tool. Record torque reading at which Torque Limiter slips.
9. If torque reading is less than 50 ft.-lbs. tighten the 3 cap screws uniformly and recheck torque reading. If torque reading is greater than 50 ft. lbs. loosen the 3 cap screws uniformly and recheck torque reading.

NOTE! Turn cap screws $\frac{1}{4}$ turn for initial adjustment. Reduce to $\frac{1}{8}$ turn or less for final adjustment to obtain 50 ft.-lbs. reading.

10. Remove hex key or pin that was installed to secure chain.
11. Remove torque wrench, drive pin and torque testing tool.
12. Install Guard D-3544 and secure with three screws. One screw is longer than others and is used in lower right hand side.
13. Connect spark plug wire.

Torque Limiter Adjustment Using Spring Scale

1. Follow steps 1 through 7 of Torque Limiter adjustment using Torque Wrench.
2. Snap socket drive handle into a 1 inch socket and install on Torque Testing Tool.

3. Measure 12 inches from center of socket along socket drive handle and attach spring scale.
4. Pull on spring scale until Torque Limiter slips. Scale should read 50 lbs.
5. Repeat step 9 above until 50 lbs. reading is obtained.

Engine

Always check engine oil level. For complete directions on engine maintenance, consult the Briggs & Stratton manual enclosed. Parts and service can be obtained at any Briggs dealer or RIDGID Warranty Repair Center.

Transmission

The transmission needs no re-lubrication, however, a leak in a seal could allow grease to be depleted after several hours. Such a leak will be obvious and should be corrected.

Centrifugal Clutch

Centrifugal Clutch A-3563 will automatically engage when the throttle is opened. No maintenance should be necessary. However, if slippage should occur from dirt or grease entering clutch, the foreign material should be removed.

Wheel Assemblies

All four Wheel Assemblies C-3611 should be greased once a year. The grease fitting is located on the inside face of the hub.

Checking Engine Idle (RPM) Speed

After engine has started, squeeze throttle handle to **REV** engine at high speed and immediately release so that engine returns to idle. At idle speed the drive shaft should not be turning. If drive shaft does turn, make sure that Throttle Control Spring is connected or adjust idle speed at carburetor. See Briggs and Stratton Engine Manual.

Throttle Adjustment

Throttle control is factory set and should not require adjustment. If idle speed seems too high or engine does not speed up when throttle is pulled check throttle linkage.

1. Check speed adjustment by adjusting cable position; loosen clamp at Bracket A-3554 and move slightly.
2. For idle adjustment and mixture control, refer to Briggs & Stratton manual enclosed.

"V" Belt Tension Adjustment

"V" Belt A-2139 should be checked at least once a month. Belt tension should be just enough to drive maximum load at high speed with throttle open. Excess belt tension will cause the centrifugal clutch to *creep* at idle speed. "V" Belt is tightened by loosening engine mounting bolts and sliding engine to rear.

Main Bearings

The Main Bearings A-3562 should be greased after using machine on 12 jobs or once every three months, whichever comes first. Guard D-3544 must be removed to grease front main bearing. Chain A-3568 should be checked and greased while guard is removed.

Storing of Rods

Rods should be thoroughly flushed with water to prevent damaging effect of some drain cleaning compounds. Periodically, lubricate rods and couplings with oil. When storing, uncouple rods. Do not store in a coil since this could cause bending and damage.

Service and Repair

If any maintenance is required, the tool should be sent to a RIDGID Independent Authorized Service Center or returned to the factory. All repairs made by Ridge service facilities are warranted against defects in material and workmanship.

If you have any questions regarding the operation or function of this tool, call or write to:

Ridge Tool Company
Technical Service Department
400 Clark Street
Elyria, Ohio 44036-2023
Telephone: 800-519-3456

If any correspondence, please give all information shown on the nameplate of your tool including model number, voltage and serial number.