# ///ATOM CHAINSAW DRILL ATTACHMENT OPERATOR/OWNER MANUAL "AUGER-STOP" MODEL 7100 & 7200

The Atom Drill Attachment allows all small, medium and standard, gasoline chainsaw powerheads, to be converted into a handy powerful professional drilling machine. It will drill holes up to a diameter of 32mm (1½") in wood. The Atom Drill Attachment automatically reverses its direction of rotation to anti-clockwise (counter clockwise) when it is pulled back. This model has AUGER-STOP feature which when activated stops the auger rotation if the auger suddenly jams in the timber

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# THIS MANUAL IS IMPORTANT DO NOT THROW AWAY

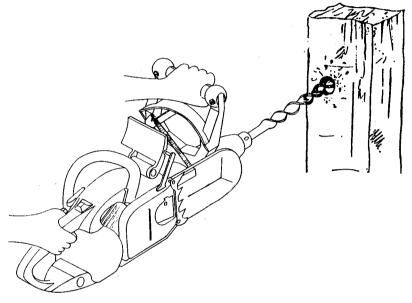
Manual always to be available for reference or instructing new operators

MAKE SURE THIS MANUAL IS READ AND CAREFULLY UNDERSTOOD BEFORE STARTING OR OPERATING THIS EQUIPMENT

#### SERVICE INFORMATION

Service on this power equipment within and after the warranty period can be performed by any authorised service dealer.

NOTE: PROOF OF PURCHASE WILL BE REQUIRED FOR WARRANTY SERVICE. SEE BACK PAGE.



# **SAFETY WARNINGS**

THE PURPOSE OF SAFETY WARNINGS
AND NOTES IS TO ATTRACT YOUR
ATTENTION TO POSSIBLE DANGERS
AND THE EXPLANATIONS WITH THEM
DESERVE YOUR CAREFUL ATTENTION
AND UNDERSTANDING. THE SAFETY
WARNINGS DO NOT BY THEMSELVES
ELIMINATE ANY DANGER.
THE INSTRUCTIONS OR WARNINGS THEY
GIVE ARE NOT SUBSTITUTES FOR
PROPER ACCIDENT PREVENTION MEASURES.

#### SYMBOLS:

WARNING:	Failure to obey a safety warning can result in injury to yourself and others.
NOTE:	Advises you of information or instructions vital to the

equipment.

operation or maintenance of the

#### INTRODUCTION

This manual contains operating, safety, and workshop instructions for the Atom Drill Attachment.

Pay special attention to the safety precautions outlined on pages 3 to 6. Allow only persons who understand this manual to operate your chainsaw drill attachment. To receive maximum performance and satisfaction from your Drill Attachment, it is important that you read and understand the maintenance and safety precautions before using your Drill Attachment. Contact your Atom dealer or the Atom distributor for your area if you do not understand any of the instructions in this manual.

### WARNING

Because the Drill Attachment is a powerful tool, and as with any other power tool to reduce the risk of personal injury, some special safety precautions must be observed. Careless or improper use may cause serious or even fatal injury.

ATOM'S philosophy is to continually improve all of its products. As a result, engineering changes and improvements are made from time-to time. If the operating characteristics or the appearance of your Drill Attachment differs from those described in this manual, please contact your ATOM dealer for information and assistance.

ATOM reserves the right to make changes at any time without notice.

# WARNING

DO NOT USE THIS DRILL ATTACHMENT UNLESS YOU ARE PHYSICALLY FIT AND STRONG.

# **↑** WARNING

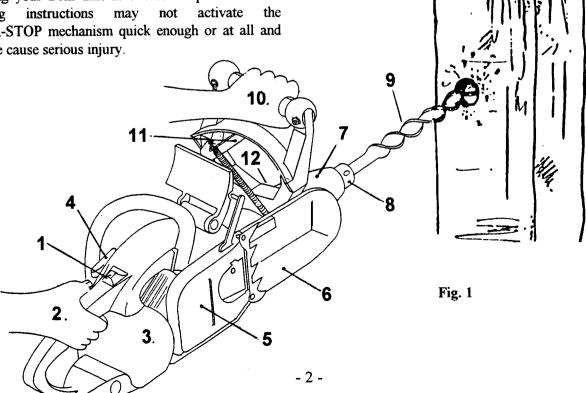
### WHEN DRILLING OPERATE AT LOW ENGINE SPEEDS SUFFICIENT TO DRILL THE HOLE.

Operating your Drill unit at excessive speeds and not following instructions may not activate AUGER-STOP mechanism quick enough or at all and therefore cause serious injury.

### PARTS & CONTROLS

- 1. Run & stop switch position depends on chainsaw model used.
- 2. The throttle control handle of the chainsaw held by the right hand and the throttle trigger which controls speed of engine.
- 3. Fuel filter cap Fuel tank, muffler, spark plug, carburettor adjustment, choke etc. Refer to your chainsaw owner's manual.
- 4. Starter Handle The handle of the pull starter which is the device to start the engine.
- 5. Automatic clutch (under the cover) stops auger rotation when throttle trigger is released.
- 6. Sprocket/chain cover reduces risk of contact with drive chain.
- 7. Gear box with clutch and automatic reverse assembly.
- 8. Locking collar for attaching auger to drill attachment.
- 9. Auger Rotates when engine speed is increased.
- 10. AUGER-STOPstabilising handle held by the left hand which disengages auger rotation when reactive forces, (twisting action) increases.
- 11 AUGER-STOP reset lever. Reset to re-engage auger drive after jamming and reversing out of hole.
- 12. AUGER-STOP adjustment.

ATOM Drill Attachments have been manufactured since 1961 and sold in many countries. AUGER-STOP model requires operators of previous Atom Drill Attachments to read and understand carefully all these instructions to become familiar with its operation.



# **SAFETY PRECAUTIONS**

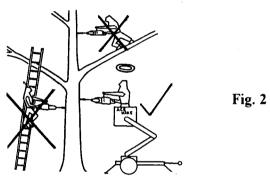
THESE INSTRUCTIONS MUST BE READ AND UNDERSTOOD BEFORE COMMENCING TO USE THE DRILL ATTACHMENT

### ↑ WARNING

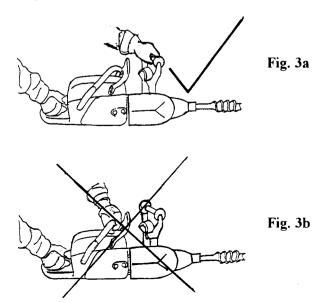
As with any other power tool it is essential that you first make yourself familiar with all the safety precautions that have to be taken. Never take risks which could endanger yourself or others. You should strictly observe these simple rules:

DO NOT USE the Drill Attachment; unless you have proper balance, a firm and safe footing, and a firm and steady grip on the clean and dry chainsaw handle and drill attachment AUGER-STOP handle. Do not over reach. If you do not have a firm grip and/or your feet are not securely placed in a firm position (e.g. on slippery ground; in tree branches; on ladder, chair, makeshift platform, etc), injury can occur.

If drilling higher than your shoulder height above ground level, then you must stand only in a hydraulic bucket ("cherry -picker"). Anything else, such as standing on ladders, tree branches, etc, is forbidden due to risk of injury. Fig. 2. Over-reaching is dangerous.



When using the chainsaw Drill Attachment the AUGER-STOP handle as illustrated in Fig. 3a must be used and held firmly with your left hand, and your right hand must have a firm grip on the chainsaw powerhead rear handle. The AUGER-STOP handle is interconnected with AUGER-STOP system which is designed to reduce the risk of reactive force injury if activated in certain situations by instantly stopping the rotation of the auger the moment it suddenly jams or drill unit twists when drilling. In order for the AUGER-STOP to reduce the risk of injury it must be properly maintained, in good working order and adjusted correctly to operate in the conditions of drilling work being undertaken.



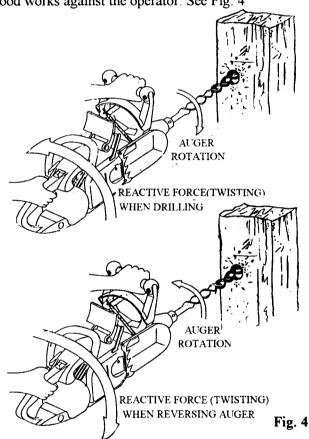
### **⚠** WARNING

An improperly maintained AUGER-STOP may increase the time needed to stop the auger rotation, or it may not activate at all. The auger stop can only function if the AUGER-STOP handle is held very firmly and is kept in good working condition. The spring tension adjustment must also be set correctly to suit type of timber, size of auger operator etc (see OPERATING INSTRUCTIONS Page 9).

### **⚠** WARNING

#### REACTIVE FORCES, TWISTING ACTION

Reactive (twisting) forces with the powerhead and drill attachment may occur at any time the auger is rotating. Reactive forces can be dangerous! In any drilling machine, the powerful rotational torque used to drill wood works against the operator. See Fig. 4



If the rotating auger is suddenly stopped by contact with any solid object like a wood knot, split, nail or cross hole, the reactive forces twisting the chainsaw/drill attachment may occur instantly. These reactive twisting forces could result in loss of control of the chainsaw/drill attachment. An understanding of the causes of these reactive (twisting) forces will help you avoid loss of control.

The greater the force of the kickback reaction, the more difficult it becomes for the operator to control the drill unit. By stopping the auger rotation the AUGER-STOP reduces this risk.

If the engine stops or the auger bit jams tight in the drill hole, do not restart the engine until you have taken all safety precautions. See OPERATING INSTRUCTIONS Page 10.

# **SAFETY PRECAUTIONS (Continued)**

Proper clothing and equipment is necessary for operation of the drill attachment. Clothing must be snug-fitting, but allow complete freedom of movement. Fig. 5.

Check chainsaw powerhead carefully for broken or worn parts e.g. handles, casing, anti-vibration fittings, worn rubbers or broken or stretched springs. Replace missing parts. See maintenance chart Page 12.

Engine noise may damage your hearing. Wear sound barriers (ear plugs or ear mufflers) to protect your hearing. Continual and regular users should have their hearing checked regularly. Repair or replace damaged mufflers.

### **⚠** WARNING

At correct idle speed the auger should not rotate. For directions to adjust idle speed, see the appropriate section of the chain saw owner's manual. DO NOT USE CHAINSAW POWERHEAD IF IDLE IS NOT SET CORRECTLY, OR ENGINE CUTS OUT OR RUNS <u>ERRATICALLY</u>, OR THROTTLE TRIGGER JAMS OR STICKS AND DOES NOT ALLOW ENGINE TO IDLE WHEN RELEASED.

Before installing spare parts, make sure that only original parts are used. The chain guard of the drill attachment **must always** be fitted in position when you use the drill attachment.

You may endanger yourself and others if you use non-approved accessories and attachments.

Keep children and animals clear of the machine. Fig.6.

### **STARTING**

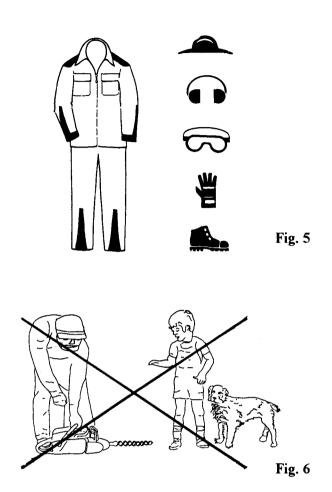
# **⚠** WARNING

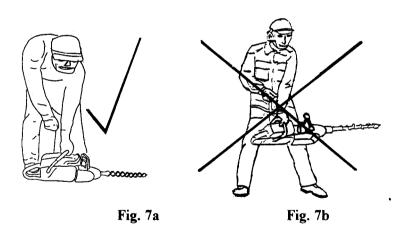
Your drill unit is a one-person unit. Do not allow other persons to be near the drill unit (Fig. 6). Start and operate your drill unit without assistance. Use correct starting technique (Fig. 7a). Do not "drop start" the unit (Fig. 7b).

Bystanders, especially children and animals should not be allowed in the area where a drill unit is in use. Never let the engine run unattended. Store it in a locked place away from children and empty the fuel tank before storing for longer than a few days. Do not store where naked flames or electric appliances are used.

Do not lend, rent, sell or dispose of your drill attachment without this operators manual. Be sure that anyone using your drill attachment understands the information contained in this Manual.

Bystanders must be kept at least 3 metres (10ft) away from the work area. Minors or non fit persons should never be allowed to use a drill unit.





The drill attachment may only be used for the purpose described in this manual.

Carefully check the area around the planned hole and clear away everything that could catch on the auger bit.

# **⚠** WARNING

Gasoline is an extremely flammable fuel. Use extreme caution when handling gasoline or fuel mix. Do not smoke or bring any fire or flame near the fuel. (Fig. 8).

# **SAFETY PRECAUTIONS (Continued)**



Fig. 8

### **Fuelling Instructions**

Fuel your chain saw powerhead in well-ventilated areas or outdoors only.

Always shut off the engine and allow it to cool before refuelling. Relieve fuel tank pressure by loosening fuel cap slowly.

Select bare ground for fuelling and move at least 10 feet (3m) from fuelling spot before starting the engine.

Check for fuel leakage while refuelling and during operation. If fuel or oil leakage is found, do not start or run the engine until leak is fixed and spilled fuel has been wiped away.

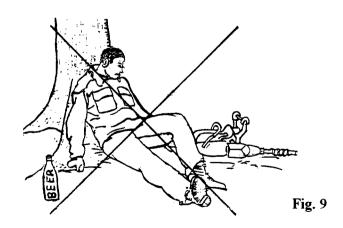
Tighten the fuel cap after filling to avoid spillage and risk of fire.

Start and run the engine so that you do not breathe in exhaust gases. The drill attachment must not be operated in confined spaces (risk of inhaling poisonous fumes!).

### 

Do not operate a Drill unit when you are fatigued. Be alert - If you get tired while operating your Drill unit take a break, as tiredness can result in loss of control. Working with any Drill unit may be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a drill unit.

Only operate the drill unit when you have rested, in good physical condition and mentally alert. Do not consume alcohol when working. Fig. 9.



# **△** WARNING

DO NOT USE THIS DRILL ATTACHMENT UNLESS YOU ARE PHYSICALLY FIT AND STRONG.

### **⚠** WARNING

Prolonged use of Drill units (or other machines) exposing the operator to vibrations may produce

Whitefinger disease (Raynaud's phenomenon) or carpal tunnel syndrome. These conditions reduce the hand's ability to feel and regulate temperature, produce numbness and burning sensations and may cause nerve and circulation damage and tissue necrosis. Many power head models are available with an anti-vibration system designed to reduce engine vibration. An anti-vibration system is recommended for those using this equipment on a regular or sustained basis.

Anti-vibration systems do not guarantee that you will not sustain Whitefinger disease. Therefore continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

In hot and exposed sunny conditions always wear a hat for protection against skin cancer and use a good brand of sunscreen for further protection.

### **↑** WARNING

Avoid stumbling on obstacles such as stumps, roots or rocks and watch out for holes or ditches. Be extremely cautious when working on slopes or uneven ground. There is increased danger of slipping on freshly debarked logs.

# **⚠** WARNING

Always hold the drill attachment firmly and correctly with both hands as illustrated when the engine is running. Place your left hand on AUGER-STOP handle and your right hand on chainsaw powerhead rear handle and throttle trigger. Left-handers should follow this instruction too. See Fig 3.

Wrap your fingers tightly around the handles, keeping the handles cradled between your thumb and forefinger. With your hands in this position, you can best oppose and absorb the push, pull and twisting forces without losing control (see section on reactive forces, Page 3). Make sure your handles and grip are in good condition and free of moisture, pitch, oil or grease.

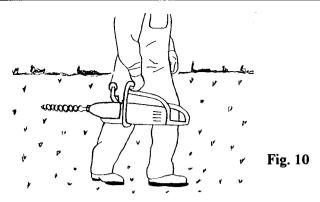
# **⚠** WARNING

Never use the Drill Attachment with one hand. You cannot control the reactive forces and you will lose control of the unit.

# **⚠** WARNING

Switch chainsaw ignition to OFF before fitting auger to drill attachment. Keep the attachment in a properly maintained condition and only use sharp auger bits.

# **SAFETY PRECAUTIONS (Continued)**



# TRANSPORTING THE DRILL ATTACHMENT A WARNING

Always stop the engine before putting a Drill unit down or carrying it. Carrying a drill unit by hand with the engine running is extremely dangerous. Accidental acceleration of the engine can cause the auger to rotate. Grip the front handle of the saw and place the muffler at the side away from the body (Fig 10). When carrying your saw the auger should be behind you. During operation, the powerhead muffler and the material around it reach extremely high temperatures. Avoid touching the hot muffler, you could receive serious burns. A worn, holed or damaged muffler could cause excessive heat to be blown on the rear of the Drill attachment and cause damage (or a fire).

By vehicle: When transporting in a vehicle, keep chain and auger covered. Properly secure your Drill unit to prevent turning over, fuel spillage and damage to the Drill unit. Keep drill unit clean at all times.

## **⚠** WARNING

DO NOT OPERATE YOUR DRILL UNIT WITH THE STARTING HALF THROTTLE LOCK ENGAGED. ALWAYS ALLOW ENGINE TO IDLE BEFORE DRILLING.

IF THE ENGINE STOPS WHILE DRILLING DO NOT RESTART AS SERIOUS INJURY COULD OCCUR. SEE OPERATING INSTRUCTIONS PAGE 10.

## **⚠** WARNING

Never touch an auger with your hand or any part of your body when the engine is running, even when the auger is not rotating. The auger continues to rotate for a short period after the throttle trigger is released until the automatic clutch disengages.

## 

Do not drill any material other than wood or wooden objects.

Use your drill for drilling only. It is not designed for prying or shovelling away limbs, roots or other objects.

When drilling, make sure that the auger does not touch any foreign materials such as rocks, wire, nails and the like. Such objects may damage the auger or cause the drill unit to twist suddenly (Reactive force). Before commencing work adjust AUGER-STOP reaction time to suit job. See Operating Instructions Page 9.

In order to keep control of your drill always maintain a proper balance and a firm foothold. Never work on a ladder, in a tree or on any other insecure support. Never use the drill unit above shoulder height. Never over reach. See Fig. 2.

ALWAYS HOLD THE DRILL UNIT WITH THE LEFT HAND ON THE AUGER-STOP STABILISER HANDLE AND THE RIGHT HAND ON THE THROTTLE CONTROL HANDLE. See Fig. 3a Page 3. OPERATE AT LOW SPEEDS SUFFICIENT TO DRILL THE HOLE.

### ASSEMBLING & FITTING THE DRILL ATTACHMENT

#### FITTING TO VARIOUS CHAINSAWS

Check that this drill attachment has the same chain pitch as your chainsaw. A chain pitch measuring gauge is on the side of the drill carton. The drill attachment is available to suit the following chain pitch sizes:-

To Suit Chain Saws with:

404 Pitch Chain

3/8LP (Low Profile)

3/8" Pitch Chain

Picco

325 Pitch Chain

Each ATOM drill attachment comes packed with the following parts: 1 Drill Attachment unit, 1 Sprocket & spacer washers, 1 Drive chain (with joining links), 1 Guide bar to suit chain saw, 4 Hex head screws, 1 Allen key ¼", 1 Chain guard, 2 Sets of nylon bar spacers for 2 & 1 bar stud chainsaws, replaceable overload shear pin, 1 operator manual. [Low gear reduction professional models additionally have a nose cone and 3 screws].

Remove saw chain and guide bar from the chainsaw. by unscrewing bar stud nuts.

#### A. On chainsaws-(2 or 1 bar studs)-

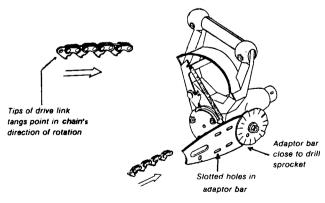
On some chainsaw models it may be necessary to unscrew the bumper spike. Select the correct fitting nylon bar spacer rings or rectangular spacer supplied (11) and fit over the guide bar mounting studs (10) - Fig. 11 Page 7.

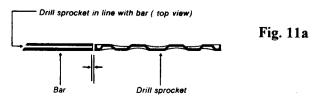
### B. Fitting to powerhead. See Figs. 11a, 11b, 12 & 13

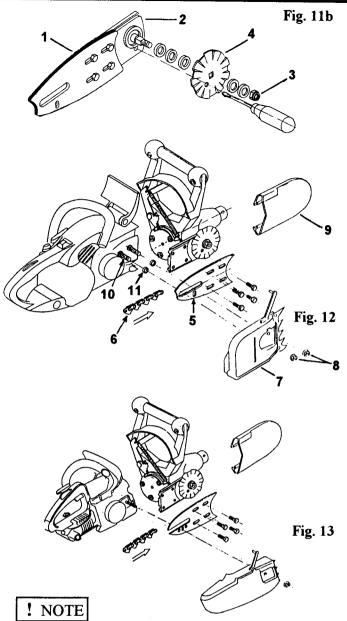
- 1. Fit the chain bar (1) on the drilling head (2).
- 2. Fit sprocket by removing nut (3) and 2 washers leaving 3 washers on shaft.
- 3. Fit sprocket (4) and rotate so that hole in sprocket lines up with hole in drill body. See Fig. 11b Page 7.
- 4. Fit 2 washers and nut.
- 5. Insert allen key or screwdriver in sprocket hole and tighten nut tight.

# ASSEMBLING & FITTING THE DRILL ATTACHMENT (Continued)

- 6. Slide bar up as close as possible to sprocket without touching. This will allow for forward movement of the drill body for adjustment later. Tighten 4 bar hex screws.
- 7. Check that drill sprocket is in line with bar. See Fig. 11a below. Use extra spacer washer or reverse sprocket if necessary to align.
- 8. Back off the powerhead chain tensioning screw as far as possible by turning it counterclockwise (to the left). The bar must not touch the powerhead sprocket (4). The peg of the chain tensioning screw to engage in the bar's locating hole (5). If the bar's locating hole does not line up then file or drill a new hole. Or temporarily remove the tension adjusting screw from the saw and obtain tension by pulling or levering the drill attachment away from the powerhead whilst tightening the bar stud nuts. See Page 8 Fig. 15.
- Check chain for length. If necessary shorten by one drive link and rejoin. If chain is not joined see Page 8 Fig. 14.
- 10.On some models you may have to file or re-work end of guide bar to fit.
- 11. Place cutterless drive chain over the sprockets and in the bar groove. Make sure the drive tangs (6) are in the bar groove - See Fig. 11a & 12.
- 12. Fit the powerhead sprocket cover (7) on the bar mounting stud(s) and finger tighten the nut(s) (8). (Figs. 12 & 13).
- 13. Turn powerhead chain bar tensioning screw clockwise (on some saws it is on the chainguard) or if adjusting screw removed pull drill attachment forward and up away from powerhead body. Fig. 15 Page 8 until chain is tight against underside of bar. Make sure that drive link tangs (6) are in the bar groove (Fig. 11a).
- 14. Tighten the chainsaw bar stud nut(s) (8). The chain should be able to be pulled around with 2 hands (slightly tight to allow for stretch). Page 8 Fig. 15. Slide chain cover (9) on drill body.







THE FIRST 10 MINUTES ARE DECISIVE FOR THE LIFE OF YOUR CHAIN. NEVER START DRILLING WITH A NEW CHAIN. FIRST LET THE CHAIN RUN IN FOR A FEW MINUTES AT JUST ABOVE IDLE SPEED, THEN STOP ENGINE AND RE-TENSION CHAIN. CHECK CHAIN TENSION FREQUENTLY PARTICULARLY FIRST FEW MINUTES OF DRILLING AND FIRST HALF HOUR OF **OPERATION** AND **RE-TENSION** REQUIRED. THE **CHAIN** WILL STRETCH IMMEDIATELY AND THEN A LITTLE MORE BEFORE IT IS "BROKEN IN". CHAIN TENSION IS CORRECT WHEN IT FITS SNUGLY AGAINST THE UNDERSIDE OF THE BAR BUT CAN STILL BE PULLED ALONG THE BAR BY HAND. SLIGHT CHAIN ADJUSTMENT CAN ALSO BE MADE BY SLACKENING HEX SCREWS (4) AND INCREASING GAP BETWEEN SPROCKET AND BAR. FIG. 13. (RETIGHTEN SCREWS) FAILURE TO RE-TENSION CHAIN WILL RESULT IN THE CHAIN GROOVE JUMPING OUT OF THE BAR RESULTANT DAMAGE TO THE DRIVE LINKS (SEE 7 **PAGE 11).** 

The chain must always be adequately lubricated. See chain lubrication Page 12.

# ASSEMBLING & FITTING THE DRILL ATTACHMENT (Continued)

SHORTEN CHAIN BY GRINDING RIVET HEAD AND PUNCHING THRU



NOTE CORRECT POSITION OF JOINING LINKS

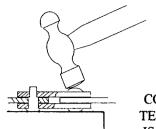


Fig. 14

JOINING CHAIN

BY RIVETING

CORRECT CHAIN TENSION WHEN CHAIN IS UP AGAINST BAR Lift Drill body up and pull out before tightening bar nuts

Fig. 15

Further chain adjustment can be made by loosening 4 hex screws and pulling drill forward.

### **FUEL MIX & FUELLING**

#### **FUEL MIX**

Follow instructions supplied with chainsaw powerhead. Only mix sufficient fuel for a few days' work - store in approved safety-type canisters.

GASOLINE IS EXPLOSIVE - HANDLE CAREFULLY. DO NOT INHALE VAPOUR.

# **⚠** WARNING

Screw the fuel can cap on tightly and thoroughly shake the mixture for 30 seconds before fuelling your machine. Pressure may build up in the fuel canister. Remove fuel cap slowly to avoid injury from fuel spray.

Clean the fuel tank and canister from time to time.

Take care when handling gasoline. Avoid direct contact with the skin and avoid inhaling fuel vapor.

Before fuelling, clean the filler cap and the area around it to ensure that no dirt falls into the tank.

# **△** WARNING

Do not spill gasoline over a hot engine otherwise fire or explosion may occur. Do not smoke or light matches

# **⚠** WARNING

Fill or add fuel to the tank only when the chainsaw powerhead has cooled and has been placed in a firm position. Clean your hands after handling gasoline.

### STARTING & STOPPING INSTRUCTIONS

Follow instructions supplied with chainsaw powerhead. Follow instructions in your chainsaw operator manual. Check the powerhead before operation according to the maintenance and instructions in the chainsaw powerhead manual. DO NOT operate the powerhead until these instructions have been followed.

### **OPERATING INSTRUCTIONS**

Inspect the power head and drill attachment to ensure that they are complete: Chain guard in place, no loose screws etc., chain tension must be correct and adequate fuel and oil in the tank.

Select auger bit size to suit diameter of hole to be drilled. Insert auger bit into shaft with the flat on its shank pointing towards the grub screw. Tighten down the grub screw with the allen key provided. See Fig. 16.

Check that auger-stop re-set lever is in the "ON" position.

Reduce AUGER-STOP handle tension by unscrewing anticlockwise (counter clockwise) adjusting bolt until loose. See Fig. 17.

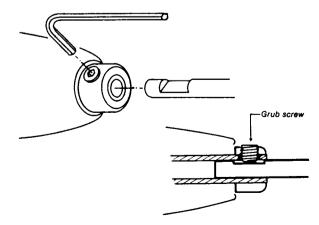


Fig. 16

# **OPERATING INSTRUCTIONS (Continued)**

# COMBINATION STABILISER HANDLE/AUGER STOP

As the operator is holding the AUGER-STOP handle when drilling, any reactive force (twisting) occurs in the drill body, forcing the drill body to twist against a spring (AUGER-STOP adjustment spring). As the increased twisting forces compress the spring the AUGER-STOP handle releases a pawl ratchet which disengages a spring tensioned lever, operates a cam and clutch system and puts the drill unit into neutral gear thus stopping the auger from rotating. Keep hands and fingers away from AUGER-STOP mechanism at all times unless setting AUGER-STOP.

# **△** WARNING

The auger stops rotating only in clockwise rotation. The Drill will still work in the reverse rotation which DOES NOT have AUGER-STOP feature. Only operate engine speed to turn auger at a steady feed rate. DO NOT operate engine speed at high revolutions.

# ! NOTE

#### ADJUSTING AUGER-STOP REACTION TIME

- 1. Engage AUGER-STOP lever by pulling left to reset.
- 2. Turn spring adjusting screw anticlockwise (counterclockwise) until loose (minimum pressure). Fig. 17.
- 3. Drill hole. If AUGER-STOP activates when not jamming increase pressure on spring via adjusting screw half a turn at a time until operator is satisfied at reaction time.
- 4. Adjust to suit conditions and drilling being done.
- 5. Re-adjust if timber, auger size or other conditions change.

# **⚠** WARNING

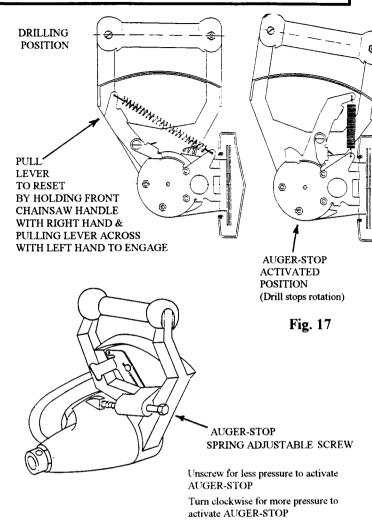
Different operators, timber types and auger sizes require different settings.

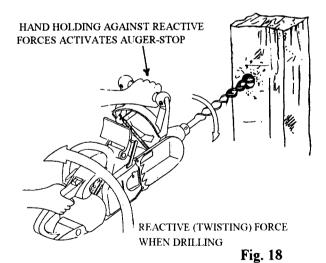
# **⚠** WARNING

Spring setting is correct when each individual operator feels increased pressure on stabiliser handle activating AUGER-STOP. AUGER-STOP will NOT operate if spring tension too high, that is screwed in too far. Different operators, auger size and type, different timbers all activate auger stop at different spring tension. Adjust to suit each operator and every condition.

# **⚠** WARNING

When you observe or know you are working in difficult situation or timbers, very hard, split, etc, spring adjustment pressure on AUGER-STOP handle should be lessened by turning adjustment screw anticlockwise (counterclockwise) so that AUGER-STOP reaction time occurs earlier and more sensitive in use. Always drill at a speed to do the job. Over-revving of powerhead can be dangerous.





# **↑** WARNING

Drilling vertically downwards in some situations, the additional weight of the power head and extra pressure created by the operator pushing down vertically may be greater than the spring pressure to activate AUGER-STOP. Always drill carefully when drilling vertically downwards. Drill slowly allowing auger to pull into timber. DO NOT put pressure on drill.

# **OPERATING INSTRUCTIONS (Continued)**

### **⚠** WARNING

AUGER-STOP FEATURE ONLY WORKS IN FORWARD (DRILLING) ROTATION. IT WILL NOT OPERATE IN REVERSE.

Start engine and allow to idle while locating the auger in position for drilling the hole. If engine's idling speed is correctly adjusted, the auger does not rotate.

Push powerhead/attachment towards the wood and increase the power to drill the hole. For deep holes drill only 50 to 75mm (2-3") at a time and clear the auger frequently by pulling the attachment into reverse gear, thus preventing overloading and auger binding in the hole with wood chips.

# ! NOTE

Auger-Stop/Stabiliser handle if set correctly will automatically stop rotation of auger if overloading or jamming is starting to occur. Only drill at speeds sufficient to turn auger.

# **⚠** WARNING

Do not re-set AUGER-STOP until after reversing auger out of timber.

To clear the hole or withdraw the auger, allow engine to slow down and pull attachment back towards you to engage reverse gear. This will unscrew the auger in an anticlockwise direction. Increase engine power until auger runs freely. The drill automatically changes back to clockwise direction, or to AUGER-STOP (non rotation of auger) if it was activated. Re-set AUGER-STOP (if activated) after removal from hole.

# **⚠** WARNING

AUGER-STOP is activated only if operator holds stabiliser handle. It will not operate if operator holds both handles of chainsaw powerhead.

# ! NOTE

If AUGER-STOP is set correctly the operator will get the feel of the twisting force increasing while drilling and then should reverse and clear out hole and recommence drilling. AUGER-STOP will not operate until such time as reactive forces are allowed to increase substantially (and adjustment spring set correctly). Once drilling technique is mastered AUGER-STOP should only be activated when jamming or sudden twisting force occurs. Reset AUGER-STOP CAM LEVER after reversing out of hole. Then recommence drilling.

### JAMMED AUGERS

! NOTE

Use the following procedure if auger becomes jammed very tight:

Run engine a little faster than idle speed without engaging chain saw clutch. If AUGER-STOP not activated pull drill back about 5mm (¼")-this puts it into neutral gear.

Keep a firm grip on the machine, accelerate engine to 3/4 maximum revs and pull back attachment very quickly. This enables clutch to engage fully and the sudden additional torque should reverse the auger out of the hole.

### **⚠** WARNING

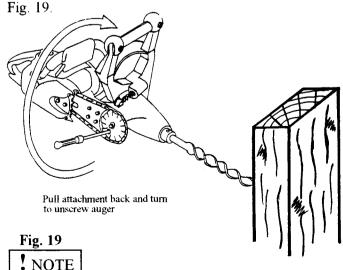
WHEN OPERATING IN REVERSE KEEP A VERY FIRM HOLD OF DRILL UNIT AS AUGER-STOP DOES NOT ACTIVATE IN REVERSE.

### ⚠ WARNING

If auger jams very hard and the procedure above does not free the auger, or if the POWERHEAD ENGINE STOPS while drilling wood, e.g. no gasoline, refer to the following: NEVER ATTEMPT TO START THE ENGINE WHEN THE AUGER IS IN THE WOOD. STARTING THE ENGINE WILL CAUSE THE POWERHEAD TO ROTATE SUDDENLY AND RESULT IN SERIOUS INJURY.

#### Follow these instructions:

With the auger attached to the drill and the engine stopped; if powerhead fitted with chain brake, engage chain brake then go to (b); if no chain brake (a) remove sprocket chain cover, insert screwdriver or rod through sprocket hole and align with hole provided in body of drill attachment; (b) pull back the entire powerhead and turn drill attachment counterclockwise (in reverse gear) until auger is completely withdrawn from the wood. See



WHEN DRILL ATTACHMENT IS NOT IN USE, RELIEVE PRESSURE OF AUGER-STOP CAM ARM SPRING BY ACTIVATING AUGER-STOP.

### TROUBLE SHOOTING

#### PREVENT DAMAGE AND PREMATURE WEAR

### 1. Drill sprocket, chain or bar wear:

Incorrect alignment of bar chain and sprocket.

Wrong pitch chain or sprocket fitted

Drive link thickness too thin should be .063 not .050.

Chain too loose or overtensioned.

Total lack of lubrication. Chain requires same amount of oil as a bicycle chain.

Worn powerhead sprocket which causes new chain to stretch excessively and results in drill sprocket wearing rapidly.

### 2. Auger will not drill

Re-set AUGER-STOP.

Auger sharpened incorrectly.

Auger filed on outside edges instead of inside edges. Auger is blunt. Sharpen auger - see Page 12, Fig. 20. Worn dog clutch.

Shear pin has broken, replace. If it breaks again, attachment is being misused or overloaded and AUGER-STOP support handle not being used correctly.

### 3. Attachment will not drive the auger

AUGER-STOP not set in drill position. Re-set. Auger is blunt. Sharpen auger - see Page 12, Fig. 20. No internal lubrication, gears seized or broken. Dog clutch cannot engage - Shear pin #40907 broken.



Constant breaking of shear pin indicates wrong type of pin fitted, auger stop handle disconnected or not used. Overloading.

#### 4. Attachment will not reverse

If auger is small and especially in soft or mushy woods it is easily withdrawn without reverse gear engaging. No lubrication, gears seized. Disassemble the attachment, clean, lubricate and reassemble with about 1/4 cup of free flowing or self levelling grease.

Shear pin in dog clutch broken, replace. If it breaks repeatedly, attachment is being misused or overloaded and AUGER-STOP handle is not being used correctly.

#### 5. Wrong main shaft spring fitted

Will make AUGER-STOP inoperative.

Will cause premature wear of clutch dogs.

#### 6. Worn clutch dog teeth

Auger is blunt

Auger is too large (greater than 1½" (32mm) diameter). Saw overpowered for attachment (saws with 90cc or larger displacement)

Abusive operation.

Continuous overloading of attachment due to very hard wood or large augers.

### 7. Chain jumps off sprocket

Chain too slack. Retension frequently, especially when new. See Page 7.

Damaged chain drive links. Once drive links are damaged they have to be filed to fit bar groove, or damaged drive links replaced.

Wrong pitch of chain, drill sprocket or powerhead sprocket. Fit correct parts.

Chain not in line with bar. Use shims or spacer rings to align sprocket with bar - See Fig. 13, Page 7.

Powerhead sprocket badly worn.

Replace drill sprocket if bent or twisted.

### 8. AUGER-STOP does not work:

Handle does not pivot.

Spring tension adjusted too high. Reduce spring tension. If handle still does not pivot, remove handle from end cap, clean and grease the outside of end cap and back plate assembly, reassemble (See Page 13).

If spring adjusting screw is fully screwed in and auger stop is always activated change spring.

Spring not activating pawl.

Spring on AUGER-STOP cam lever arm not strong enough, or overstretched. Relieve pressure of AUGER-STOP cam arm spring when not in use by activating AUGER-STOP.

Pawl back plate engagement worn. Replace.

Wrong assembly or missing parts e.g. push rods inside end cap.

Check length of all springs. Replace if stretched or shortened. See Fig. 29.

Loose nuts holding back plate - re-tighten.

### 9. Anti vibration hand grip:

Replace rubbers if perished or damaged. Do not overtighten screws. Allow sufficient movement for rubbers to work.

#### 10. Handle and end cap worn:

Usually due to drill operating in very dirty gritty conditions or exposing drill unit on back of truck in dusty driving conditions. Keep unit clean, remove back plate and AUGER-STOP handle. Clean and re-grease surfaces.

#### **CHAINSAW POWERHEAD**

Refer to owner's manual supplied with chainsaw powerhead.

### MAINTENANCE & REPAIR

SHARPENING AUGER BIT

Use a small three-cornered 100mm (4") extra slim taper file. Snap the non-toothed end of the file with a pair of pliers or in a vice. Secure the auger in a vice as close to the end as possible.

Only file the inside edge (shown in Fig. 20). Only use the end of the file with short 13mm (½") strokes. When the file end becomes dull, break enough off to get a fresh filing edge.

If the correct sharpening procedure is followed the cutting edges will be as sharp as your saw chain teeth. Once they become dull they should be resharpened as described.

CHAIN LUBRICATION

The chain must always be adequately lubricated. Since the chain is used for transmission only it needs less oil than a cutting chain. You may drill a hole in the chain bar if you wish to increase oil supply, but usually it is not necessary as the oil finds its way from the powerhead down the side of the bar and onto the chain. Use a heavy oil to reduce oil usage if necessary.

SPROCKET REMOVAL

To remove see Fig. 21, rotate sprocket by hand until round hole in sprocket exposes a similar hole in the attachment housing. Insert screwdriver or allen key supplied into these two holes to lock the sprocket. Then unscrew the sprocket nut. Nut has normal righthand thread. Examine the sprocket for straightness or wear on flats in center hole. If worn, fit a new sprocket of correct pitch and part number. Reverse procedure to assemble and tighten down securely.

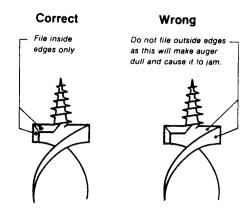
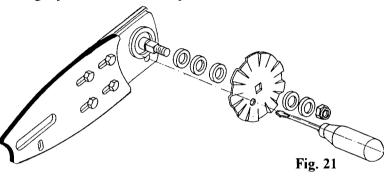


Fig. 20

### **GEAR LUBRICATION**

Gear case is pre-lubricated. Only requires lurication if being repaired. See Workshop Information.



Note: Different chainsaw powerheads may have different		<del> </del>	AFTER FINISHING WORK		REPLACE IF FAULTY OR DAMAGED
Complete machine	Visual inspection (condition, leaks)	X		X	
	clean		X		
Throttle trigger, safety throttle lock if fitted, stop switch	Check operation	X		Х	Х
Drive Chain & Guide Bar	Check tension	X	X	X	X
	Replace				X
Carburettor	Check idle adjustment - Auger must not rotate	х		X	
All accessible screws and nuts (not adjusting screws)	Retighten	X			Х
Rubber vibration buffers	Inspect	X	X		Х
	To be replaced				X
Auger	Check if in good condition	Х	Х		X
	Resharpen	Х	X		Х
AUGER-STOP adjustment spring	Inspect	X			X
Ratchet spring	Check if in good condition	X			X
Cam arm spring	Check if in good condition	X	$\mathbf{x}\mathbf{x}^{1}$		X
Back plate assembly	Check if in good condition and not loose	x	х		х

xx And relieve pressure by activating AUGER-STOP when not in use

### WORKSHOP INFORMATION

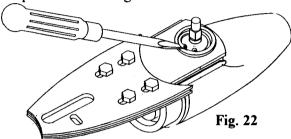
### DISASSEMBLY OF ATTACHMENT

Identify parts with the aid of parts list and disassemble the attachment as follows:

Remove drill attachment with bar from saw. With guide bar attached to drill head hold guide bar in jaws of vice or similar clamp.

### **REMOVING SPROCKET & PINION**

Remove drill sprocket and spacer rings - See Fig. 21 P12. Use circlip pliers or other suitable tool to remove circlip #40910 - see Fig. 22.



To remove pinion shaft:- refit the sprocket and nut on the shaft after removing the circlip. Now use two screwdrivers to lever out the pinion shaft-see Fig. 23 - or grip shaft on two flats in vice jaws (without sprocket) and lever or tap gently body sideways - see Fig. 24.

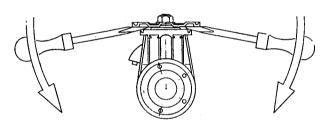


Fig. 23

### REMOVING AUGER-STOP HANDLE

Release AUGER-STOP by lifting pawl or pushing handle against spring pressure to release cam. Remove 4 nyloc nuts on back plate assembly and remove after slightly rotating handle against spring pressure - See Fig. 25.

Fig. 24

Rotate handle backwards and away from spring and remove spring. Slide handle off.

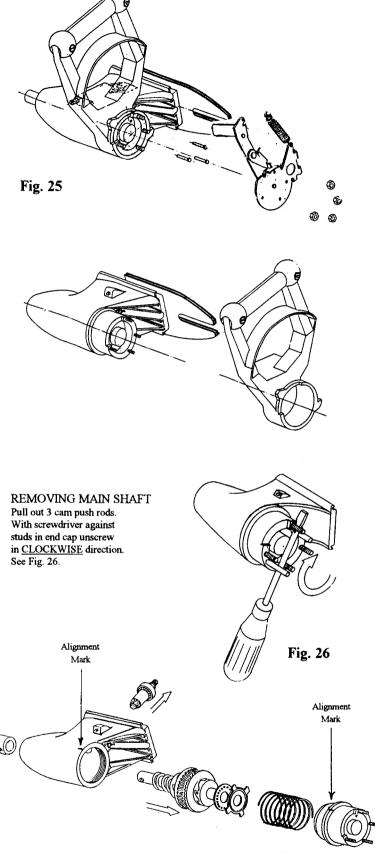


Fig. 27

Spring pressure should eject the mainshaft assembly. Fig. 27. Wash parts in kerosene for inspection.

# **WORKSHOP INFORMATION (Continued)**

### INSPECTION OF PARTS

#### Pinion shaft:

After the sprocket has been removed, the bearing #40835 can be pushed off the pinion shaft. Save any spacers or rings provided for reassembly. Inspect pinion gear for damage or worn teeth and other surfaces. The driving flats must not be damaged or worn. The bearing should slide onto the shaft without binding, but not too loose. Inspect circlip groove in casing for damage. Inspect pinion bush, and if worn, refit in reverse or replace.

#### Mainshaft:

There is a shear pin #40907 in each driving dog #40920. To remove gears and dogs from shaft, punch one or both pins into the centre of the hollow mainshaft #40921. Pin can be shaken or pushed out of shaft. If dogs are tight, tap lightly from shaft with a hammer or large tube to allow gears to be removed. Inspect gears and dogs for damage or excessive wear. Note: Some shine on the gear teeth indicates normal wear, but damaged gears must be replaced. Bearings inside gears should slide easily on shaft without binding. Check that grub screw hole in shaft is not badly worn. There is an oil sealing plug inside the mainshaft. It must not leak. Check bearings for worn or missing rollers. Note installed position of roll pins-Fig. 31. Do not use old pins or solid pins.

### Mainshaft Bearings and Oil Seals:

Thrust Bearings: Two large diameter thrust bearings transmit thrust to the housing of the attachment. The back of each main gear is grooved to form part of the thrust bearing. A matching thrust washer #40928 and ball cage #40929 are provided. Examine each groove for scoring and other damage. Balls should not fall out of the ball cage. Fig. 28.

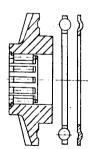


Fig. 28

Radial Bearings: A roller bearing #40806 at each end of the attachment ensures a long life. These bearings should run freely. The shaft should not be scored by the bearings.

Housing, End Cap and O-Ring: Inspect housing and end cap for damage. Ensure that O-ring #40906 provides a good seal. Check that bearings are held tight; the housing screw thread must be in good condition and there should be no cracks or oil leaks.

### Chain guide bar:

Check bar for straightness, wear in groove and other damage. If bent, the bar may be carefully straightened with a hammer, or replaced. Clean up edges with a file.

### Chain and sprocket:

Examine chain for excessive wear. This is indicated by slackness. Damaged drive links should be replaced or, where possible, deburred with a file.

Auger Stop Adjusting Screw, Nut & Washer Replace if worn or damaged.

# **⚠** WARNING

The correct ATOM supplied springs should only be used otherwise AUGER-STOP will not work correctly. Fig. 29.

### Reverse Shaft Spring 5000 Series: #40842



WIRE DIAMETER 2.5MM 4½ TURNS 37MM LONG 26MM OD

### Auger Stop Handle Return Spring: #40662



WIRE DIAMETER 2.8MM 18 TURNS 80MM LONG 17MM OD

Fig. 29

### Cam Return Spring: #40658



WIRE DIAMETER 2.24MM 20 TURNS 46MM LONG COIL 21MM OD 73MM OVERALL LENGTH 11-14KG TENSION AT 140MM

### Pawl Return Spring: #40664

WIRE DIAMETER 1MM 76MM OVERALL LENGTH



### Star Thrust Bearing Return Spring: #40668



WIRE DIAMETER 1.6MM 7 TURNS 60MM OD 75MM OVERALL LENGTH

# NOTE. Spring drawings above not to size or scale Push Rod:

Three push rods, check for wear. Length is 32.0mm.

## **WORKSHOP INFORMATION (Continued)**

#### Mainshaft assembly:

- Fit one driving dog #40920 and drive new roll pin #40907 in 5mm (3/16") below surface to secure dog to shaft. See Figs. 30 & 31.

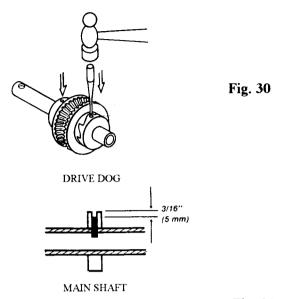


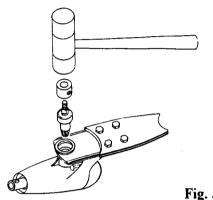
Fig. 31

- Fit bearing #40806 into gear #40805, and slide gear and bearing onto shaft and to engage dog.
- Fit thrust bearing #40803 onto shaft.
- Fit second bearing to second gear and slide onto shaft.
- Fit second driving dog to shaft and drive new pin 5mm (3/16") below surface Fig. 30 & Fig. 31 to complete assembly to mainshaft.

#### General assembly of attachment:

- Pre-grease gears and dog clutches heavily with 60cc self levelling flowable grease(half of bottle #40933)
- Hold long end of mainshaft assembly vertically and place ball cage #40929 on driving gear and thrust washer #40928 on top of ball cage.
- Fit spring #40842, fit (smaller hole) grooved thrust washer #40804 groove away from spring fit ball thrust bearing #40803 (check all balls are fitted), fit (larger hole) grooved thrust washer #40809 groove facing balls.
- Fit long end of shaft into roller bearing #40806 (with roller bearing cage shoulder fitting into hole of thrust washer #40809); and if not in body, fit bearing shell #40830 over roller bearing #40806, then fit seal #40831 on shaft and against bearing shell #40830.
- While vertical, fit housing #40872 over the shaft and push shaft upwards .

- Turn housing over so that short end of shaft is up and fit second thrust ball cage #40929 and thrust washer #40928. Fit thrust bearing #40803 and star thrust washer #40670 (groove facing bearing).
- Fit O-ring #40906 onto end cap #40640. Fill end cap with 60cc (half of bottle #40933) soft self levelling grease. Fit large diameter spring #40668 into end cap (See Fig. 27 Page 13). Push end cap over end of shaft and screw end cap counterclockwise (lefthand thread) until nearly tight and end cap and main body #40823 marks A line up. See Fig. 27.



- Fig. 32
- Fit pinion assembly. Apply liquid locking medium (e.g. Loctite) to outside diameter of bearing #40835 and carefully tap (and turn) pinion so it slides between bevel gears and is fully in, exposing the circlip groove Fig. 32. Then fit circlip.
- Fit 3 inner washers, sprocket, 2 outer washers, and nylon locknut. See Fig. 21. Lock sprocket with rod or screwdriver in hole of sprocket and hole in housing and tighten nylon locknut securely. Ensure that drill sprocket lines up with bar. Turn sprocket to ensure gears are in mesh and turn freely but with a little tension.

#### Fitting AUGER-STOP Handle

Fit 3 push rods. Lightly grease inner ring of handle #40632, fit washer #40643 & return spring #40662 and slide over end cap. Pre-grease back plate assembly #40636 and fit over 4 studs and screw up. (Reverse of Page 13 instructions). Also see Fig. 25. You may have to adjust the end cap slightly so that back plate assembly lines up with the body of the Drill Attachment (See Fig. 27 for small line up marks "A" on end cap and on main body).

Fit to powerhead and test AUGER-STOP. Adjust tension as required to suit auger size and timber to be drilled. RELIEVE PRESSURE OF AUGER-STOP CAM ARM SPRING WHEN NOT IN USE BY ACTIVATING AUGER-STOP.

# **↑** WARNING

Always replace missing or hard to read warning labels available as a spare part - see parts list.

#### LIMITED ONE YEAR WARRANTY ATOM DRILL ATTACHMENT

Atom Industries (ATOM) warrants each new ATOM Drill Attachment for ONE (1) year according to the following terms.

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of the ATOM Drill Attachment manufactured or supplied by ATOM and found in the reasonable judgement of ATOM to be defective in material or workmanship will be repaired or replaced by an authorised ATOM service dealer without charge for parts and labour.

The ATOM Drill Attachment including any defective part must be returned to an authorised service dealer within the warranty period. The expense of delivering the ATOM Drill Attachment to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. ATOM's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any ATOM Drill Attachment. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an authorised ATOM service dealer or by Atom Industries.

This warranty is limited to thirty (30) days from the date of original retail purchase for any ATOM Drill Attachment that is used for rental or commercial purposes, or any other income producing purpose.

This warranty does not cover any ATOM Drill Attachment that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the ATOM Operator's manual. This warranty does not apply to any damage to the ATOM Drill Attachment that is the result of improper maintenance or to any ATOM Drill Attachment that has been altered or modified so as to adversely affect the products operation, performance or durability or that has been altered or modified so as to change its intended use. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the ATOM Drill Attachment or adversely affect its operation, performance or durability.

ATOM reserves the right to change or improve the design of any ATOM Drill Attachment without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE (1) YEAR WARRANTY PERIOD OR THIRTY (30) DAYS FOR PRODUCTS USED FOR ANY COMMERCIAL ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE ONE YEAR OR THIRTY DAY WARRANTY PERIOD. ATOM'S OBLIGATION UNDER THIS WARRANTY, IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS, AND ATOM DOES NOT ASSUME OR AUTHORISE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty applies to all ATOM Drill Attachments manufactured by ATOM.

#### DISCLAIMER

AUGER-STOP feature is an effective safety feature if used according to instructions. Due to the infinite variations of conditions and uses that AUGER-STOP can be used, Atom cannot guarantee the effectiveness and safety of operation of AUGER-STOP feature. These situations and uses vary according to the type of timber, auger size and type, strength and operating ability of operator, operating conditions, incorrect setting of AUGER-STOP, missing broken or worn parts and other situations and conditions which may apply.

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This is your Drill Attachment model number. When purchasing parts always quote these numbers.