

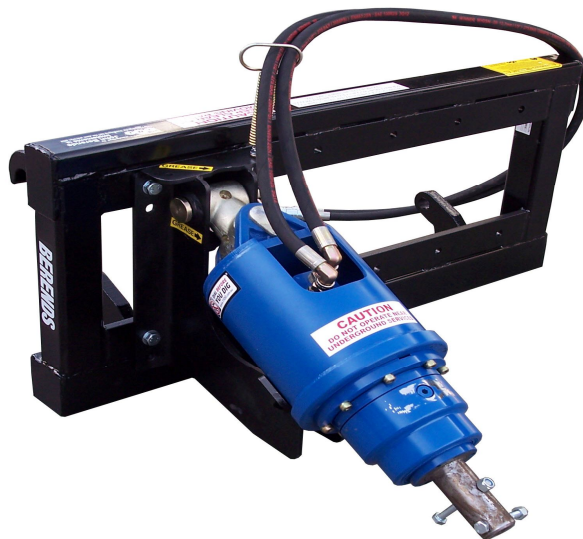


# John Berends Implements Pty Ltd

AGRICULTURAL ENGINEERS

## OPERATOR'S MANUAL PARTS LIST

Front End Loader Post Hole Diggers



**PRODUCT NO.**  
0270

Eurohitch Post Hole Digger less Auger

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# SAFETY





Farm machinery is dangerous if operated incorrectly so please read this manual in its entirety prior to operating the machine.


 No operator, however experienced in farm machinery operation, should attempt to use any machine they have not been competently trained to use. Your local Department of Agriculture can help you with training, as can most Occupational Health and Safety offices, Agricultural schools and colleges and farm equipment dealerships.


 All instructions relating to tractor safety as per the tractor operators manual should be followed. When making any machine adjustments, stop the tractor engine first and wait for all moving parts to stop. Maintain the tractor to ensure it remains safe to use. Do not operate faulty or damaged equipment.


 Extreme caution should be taken when fitting equipment to the tractor's three point linkage. Avoid standing between the implement and the tractor when coupling machinery.


 All machines should be mounted and retained correctly. All guards must be kept in place and correctly maintained. P.T.O. shafts must be correctly attached and secured to both the tractor and the machine. Decals must be visible and legible at all times. Keep well clear of all moving parts.

 Keep all people and animals at a safe distance from all moving parts. Children must not be allowed to operate this equipment and all passengers must have the same level of protection as the operator.


 Wear protective clothing where appropriate.


 Never operate when tired (not alert) or in poorly lit areas and stay alert for humps and other hidden hazards. Remove all timber, rocks and foreign objects prior to operation.


 Avoid operating the machine in wet conditions.


 Exercise extreme caution when changing direction on hills. Avoid sudden movement, sudden breaking, high speeds, rough terrain and steep slopes.


 If machine starts to vibrate, stop tractor, turn off engine and investigate.


 After striking a foreign object or if there are doubts about the performance of the machine, stop the tractor as described and check if machine is making excessive noise.

 Extreme caution must be taken when working in public areas (roadsides etc). It is recommended that flaps and chains are fitted to slashers when operating in public areas. These are available as optional extras. Rear flaps are compulsory in public areas.

 Watch overhead clearance and beware of underground pipes and cables.

 Where fitted, hydraulic hoses and fittings must be maintained so as to prevent damage.

 Do not modify this equipment in anyway, or use it for any other purpose than it was designed to do.

 Never work under unsupported machines or adjust unsupported machines. Do not enter the danger zone where a load being carried by a machine could fall on you, for example a round bale from a bale fork, a log from a carryall or material from a rear end loader.

These instructions should be used in conjunction with any local regulations regarding safety ie OHS.

**Maintenance is essential for safe operation. Ensure maintenance is carried out regularly by people qualified to do so. This is of particular importance on P.T.O. drive machines where driven parts can fly off at high speed if wearing parts are not properly maintained.**

**FAILURE TO FOLLOW THESE INSTRUCTIONS AND PROCEDURES MAY RESULT IN EQUIPMENT MALFUNCTION, OR DAMAGE, SERIOUS INJURY OR EVEN DEATH.**



**INTRODUCTION:**

This manual was developed specifically for the machine you have purchased. The information within is to assist you in preparing, operating and maintaining your machine. Please read and understand the contents of the manual completely before attempting to operate your machine, paying special attention to all safety details. With our policy of continuous improvement, products and specifications may change without notice and without incurring the obligation to install such changes on any unit previously delivered.

**Post Hole Diggers**

The Front End Loader Post Hole Digger is designed to fit the common Eurohitch (Global) system. Other frames can be made to suit different brand loader on request. Our augers are all clockwise (right hand) rotation and are available in 6", 8", 10", 12", 15", 18" and 24". All are fitted with "Pengo" toothed heads which have separate replaceable teeth. There are a variety of teeth and pilots available depending on your ground condition.

**MACHINE SPECIFICATIONS**

<b>Model</b>	<b>0270</b>
Max Torque	2,847NM
Oil Flow Range	27 to 65 l/min
Max Pressure	240 Bar
Nett weight less auger	132kg

NB : Gearbox H.P. rating is not critical as the phd is run at low speed, lowering horsepower (though at high torque) and the actual power required by the auger can be as low as 5-10 H.P.

**WARRANTY**

John Berends Implements P/L warrants each new product sold to be free from defects in material and workmanship, under normal use and service, as outlined in the operators manual, for a period of 12 months.

This warranty is void if any damage to the machine has been caused by misuse or non genuine parts have been used or any repairs have been made by any persons other than authorised dealer service personnel.

The manufacturer/dealer is not obligated to any transportation charges incurred in the repair or replacement of parts.

This warranty does not exclude any condition or warranty implied by the Trade Practices Act 1974 or any other legislation which implies any condition which cannot be excluded.

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# Safety Features

1. SERIAL NUMBER (Decal)



2. WARNING DECAL



3. CAUTION DECAL FOR P.T.O. SHAFT

**CAUTION  
KEEP CLEAR OF  
MOVING PARTS**

4. BERENDS DECAL



## ASSEMBLY








### Installing the Auger drive

The drive unit requires a 'flow' and 'return' of hydraulic oil from the parent machine's auxiliary hydraulic power supply to operate. All gearboxes are reversible, but require the host machine to be fitted with a two-way flow auxiliary circuit. Ensure that the drilling rotation of the Auger drive unit is clockwise. The unit is supplied with hydraulic hoses and a mal/female quick release coupler. Check that these are compatible with the parent machine.

#### **CAUTION:**

It is critical that the supply of oil is within the stated flow and pressure limits for the drive unit.

## **MAINTENANCE & LUBRICATION**

	<b>Safety at all times</b>
	<b>Ensure environmentally safe disposal of waste oil:</b> Do not pour down drain!
	<b>Avoid Fire or Explosion:</b> Do not smoke near, or expose lubricants to, any possible sources of ignition (e.g. fire, electrical sparks or heat sources.)
	<b>All lubricants are toxic and potentially carcinogenic (cancer causing).</b>
	<ul style="list-style-type: none"><li>• <b>Avoid contact with skin and eyes:</b> Wear suitable protective clothing and gloves. Always use a suitable barrier cream in case of skin contact.</li></ul>
	<ul style="list-style-type: none"><li>• <b>Always wear eye protection:</b> In the event of skin contact wash with soap and water. In the event of eye contact wash with water and seek medical advice.</li></ul>
	<ul style="list-style-type: none"><li>• <b>Do not ingest:</b> If swallowed seek medical advice immediately.</li></ul>

Auger Torque Auger Drive Unit features a sealed gear housing filled with gear oil to lubricate the planetary gerset components and bearings within the housing.

Auger Torque Auger Drive Units are low maintenance, however regular checks for oil leaks and following the service schedules are recommended to ensure a trouble free product.

#### **Weekly:**

Grease hitch and drive unit pivot pins.

#### **After first 500 hours of use or six (6) months:**

To maximise life and maintain warranty the Auger Drive Unit gear oil requires draining and replacing with Castrol SP320 (or equivalent) after the first 500 hours of use or six (6) months from date of purchase – which ever occurs first. (Note this first service is LABOUR FREE provided your Auger Torque dealer carries it out).

**Important:** To maintain product warranty your Auger Torque dealer must record proof of this first oil change.

#### **Yearly or after every 2000 hours of use (whichever is sooner):**

The Auger Drive Unit gear oil requires draining and replacing with Castrol SP320 (or equivalent) every twelve (12) months or 2000 hours – which ever occurs first. See Parts Manual for volumes.



# FITTING THE AUGER DRIVE UNIT



**ALWAYS** work in pairs (2 skilled operatives) whenever Auger Drive Unit components are being assembled or disassembled from the parent machine.

**ALWAYS** check parent machine:

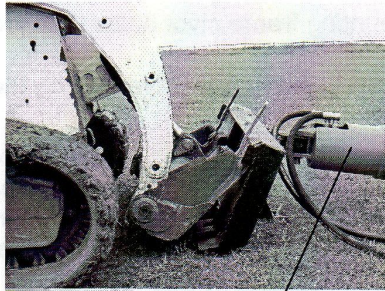
- **Is in correct working order**
- **Is parked correctly on flat ground**
- **The hydraulic circuit is locked out and the engine switched OFF.**

**Check** that the Auger Drive is of the correct model and type to fit the parent machine.

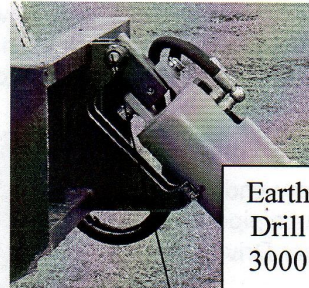
**Ensure** that the Auger Drive Unit, and its connections are clean before fitting.

**Use** suitably rated lifting equipment if required (**see data plate for weight**).

**1**



Refer to the parent machine operator's manual for attaching accessories

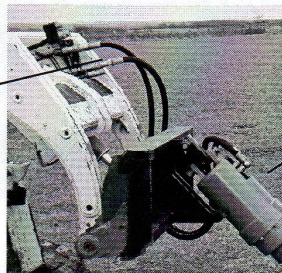


Earth Drill 3000

Align the Auger Drive Unit and mounting frame pivot holes then locate and secure the pivot pin with its lynch pin

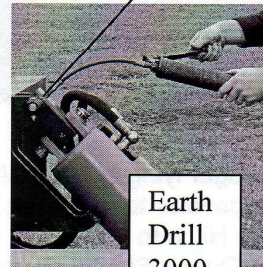
**2**

Connect quick release couplers. Ensure drilling rotation is clockwise!



Locate the flow and return hydraulic pipes onto the Auger Drive Unit

Grease location pin(s).



Earth Drill 3000

Check that hydraulic pipes are of sufficient length to allow the drive unit to articulate during work



# FITTING THE AUGER



**ALWAYS** work in pairs (2 skilled operatives) whenever Auger Drive Unit components are being assembled or disassembled from the parent machine.

**ALWAYS** check parent machine:

- **Is in correct working order**
- **Is parked correctly on flat ground**
- **The hydraulic circuit locked out and the engine switched OFF.**

**Check** that the Auger is the correct model and type to fit the Auger Drive Unit.

**Ensure** that the Auger connections are clean before fitting.

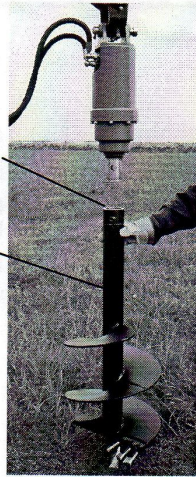
**Use** suitably rated lifting equipment if required (**see data plate for weight**).

# 1

Position the Auger in the vertical work position



Ensure the Auger is in a stable condition and cannot fall over



# 2

Lower the Auger Drive Unit onto the Auger

Align the Auger Drive pin holes

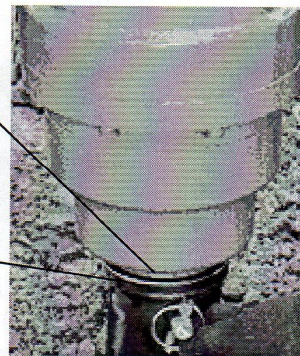


# 3

Locate Auger drive pin



Secure Auger drive pin with lynch pin

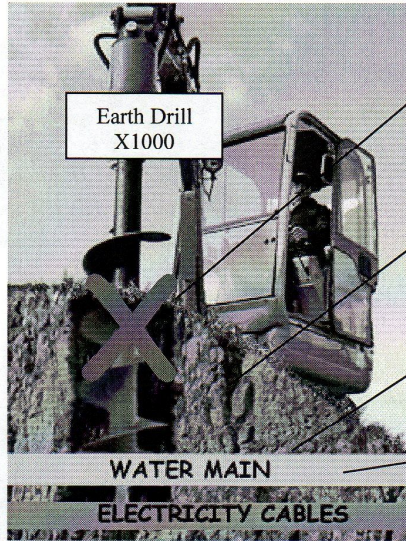




# WORKING PROCEDURE



1



**CONSIDER** the topography (e.g. risk of subsidence, slope angle, position to embankments and any previous excavation)

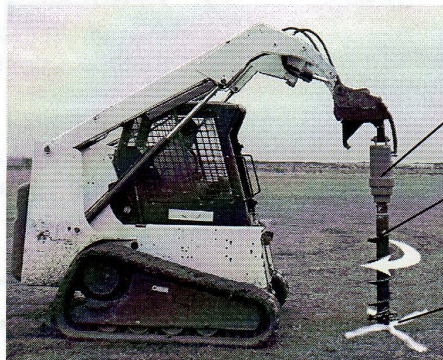
**NOTE** the type of soil and its condition to enable selection of suitable teeth and pilot

**ALWAYS** carry out a site survey and risk assessment **BEFORE** starting work

**AVOID** underground hazards, such as Water / Gas / Electricity / Communication Lines etc.

If in doubt detection equipment and professional advice should always be considered before carrying out any work.

2

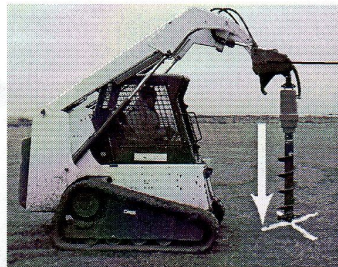


**SET** Auger in a vertical drilling position

**ENSURE** the direction of rotation of the Auger for drilling is **CLOCKWISE**.

**ONLY** start drilling after a site survey on a pre - marked safe spot.

3



**GRADUALLY** lower the parent machine arm(s) to apply down force to the Auger.

The harder the ground the more down force required.

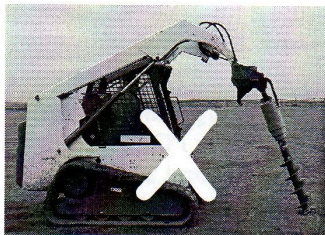
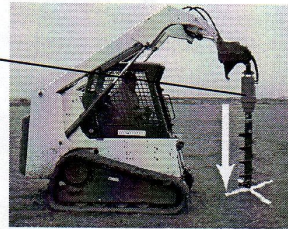
Maintain drilling speed. **DO NOT CONTINUALLY STALL** the Auger Drive Unit with excessive down force, as this will overheat the hydraulic oil and could damage the machine.



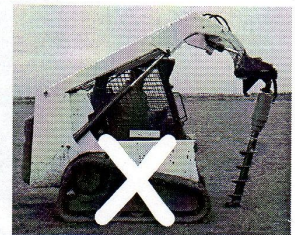
## WORKING PROCEDURE (Cont.)

# 4

**MAXIMISE** efficiency and avoid damaging the Auger assembly by keeping the Auger vertical.



As many parent machine arm(s) travel through an arc, it may be necessary to reposition the parent machine as the Auger lowers into the ground to maintain vertical drilling.



**REGULARLY** raise the Auger out of the ground to clear material from the Auger.

This will help maintain drilling effectiveness and ensure your machine does not become unstable.

# 5



**NEVER** leave the Auger assembly suspended.

**ALWAYS** park with Auger on ground





# TRANSPORTATION

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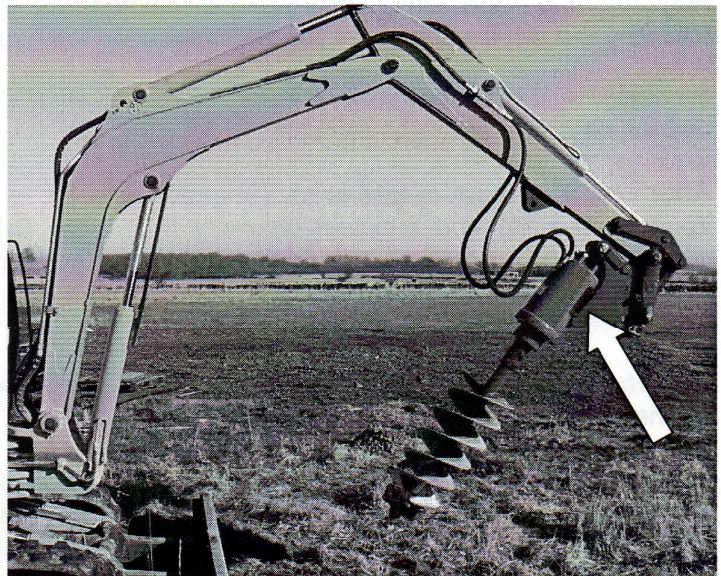
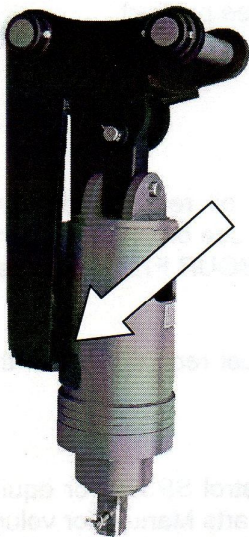
When attached to the parent machine the standard Auger Unit is free to swing and can be extremely dangerous during transport.

## TRANSPORTATION ON PUBLIC HIGHWAYS:

- **ALWAYS** remove the Auger and Drive Unit before driving or transporting the parent machine on public highways.
- **ALWAYS** store the Auger and Drive Unit securely and safely when removed from the parent machine taking special care of the hydraulic hoses and connections.

## TRANSPORTATION WITHIN THE JOB SITE:

- **ALWAYS** operate the parent machine slowly when on site taking great care to avoid the Auger swinging.
- **RECOMMENDED:** where fitted use the hitch cradle (identified below) to support the Auger Drive Unit when manoeuvring or slewing when on site.





# TROUBLESHOOTING - FAULT FINDING

**IF IN DOUBT ASK!** - Seek Auger Torque/ parent machine dealer for advice & repair.  
**BE SAFE** - only use genuine Auger Torque / parent machine spare parts.

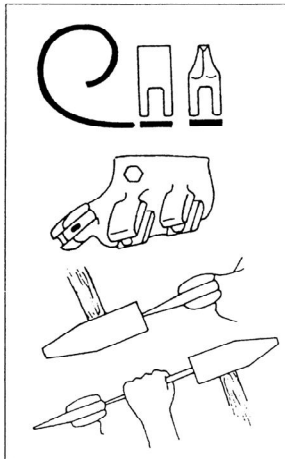
<b>MOUNTING FRAME – ASSEMBLY</b>		
<b>FAULT</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
<b>Mounting frame does not fit parent machine</b>	Incorrect or non- genuine mounting frame being used	Refer to both this manual <u>and</u> parent machine's operating assembly instructions
	Damaged / worn parts	Repair or replace with genuine mounting frame
<b>MOUNTING FRAME - OPERATION</b>		
<b>FAULT</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
<b>Excessive movement in locating pins</b>	Incorrect or worn locating pins	Replace with correct new genuine parts
	Parent machine pin location / linkage frame pin location worn	Seek advice from parent machine dealer
	Damaged parts	Seek advice from Auger Torque Australia Pty Ltd / parent machine dealer. Only use genuine spare parts
<b>AUGER DRIVE UNIT - ASSEMBLY</b>		
<b>FAULT</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
<b>Auger Drive Unit will not fit mounting frame</b>	Incorrect / incompatible or non-genuine mounting frame / Auger Drive Unit	Obtain & fit correct and compatible genuine parts
	Damaged parts	Seek advice from Auger Torque Australia Pty Ltd dealer. Only use genuine spare parts
<b>Excessive movement in locating pins</b>	Incorrect or worn pins	Replace with correct new genuine parts
<b>AUGER DRIVE UNIT - OPERATION</b>		
<b>FAULT</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
<b>Auger drive output shaft does not rotate</b>	No oil flow	Check that quick release coupler(s) are correctly engaged to parent machine  Check that parent machine hydraulic system is operating correctly and has sufficient oil of the correct grade (refer to parent machine operating instructions)

## TROUBLESHOOTING - FAULT FINDING (Cont.)

<b>AUGER DRIVE UNIT – OPERATION (Cont.)</b>		
<b>FAULT</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
<b>Auger Drive output shaft does not rotate</b>	Parent machine pressure relief valve faulty or set too low	Test, reset or replace to parent machine's specification
	Auger Drive Unit seized	Seek advice from Auger Torque Australia Pty Ltd dealer
	Auger jammed in ground	Remove Auger from ground before starting machine
<b>Slow digging speed / slow rotation of Auger Drive output shaft</b>	Insufficient oil flow from parent machine	Check that parent machine hydraulic system is operating correctly and has sufficient oil of the correct grade
	Incompatible Auger Drive to parent machine combination	Check specification. Seek advice from Auger Torque Australia Pty Ltd dealer
	Incorrect Auger, boring teeth or pilot fitted or worn boring teeth / pilot	Ensure Auger size is compatible with Auger Drive Unit (not too large) and that boring teeth / pilot are suitable for the ground conditions and not worn
	Worn Auger Drive hydraulic motor possibly due incorrect or dirty oil supply	Seek advice from Auger Torque Australia Pty Ltd dealer. Only use genuine spare parts. Change parent machine hydraulic oil and filter <u>before</u> fitting replacement drive unit
<b>Auger stalls during work</b>	Parent machine pressure relief valve faulty or set too low	Reset / replace pressure release valve to parent machine's specification
	Restricted oil flow	Check for damaged or incorrect hydraulic hoses and connections.
	Blocked hydraulic filter	Change parent machine filter and oil.
	Excessive parent machine down force on Auger	Reduce down force
	Insufficient parent machine hydraulic pressure	Check that parent machine oil pressure meets with Auger Drive Unit requirements
	Incompatible Auger Drive / Auger size / parent machine combination	Check specification. Seek advice from Ltd Auger Torque Australia Pty dealer

## Auger

Ensure the bolt on pilot and all teeth are intact and not overly worn. Teeth can be turned over for longer life.



### Installation instructions:

1. Cut Ribd Rubr-Lok® as long as the tooth is wide at the tangs.
2. Insert evenly in holder.

Note: water may be used as a lubricant to install Ribd Rubr-Lok® but NEVER use grease or oil.

3. Drive tooth fully in until seated in holder, using Pengo's SH-85 soft steel hammer. Compression of Ribd Rubr-Lok® holds tooth firmly in pocket.

For tungsten carbide teeth cushion carbides with softwood board before driving fully in.

4. Remove worn teeth with drift punch. Replace Ribd Rubr-Lok® only if damaged.

CAUTION: Always wear eye protection when installing and removing teeth.

### Auger components (All teeth are supplied with rubber lock)

Part Number	Quantity	Description
1781	ar	Earth tooth
1782	ar	Tungsten tipped tooth
1692	ar	Tungsten hard-faced tooth
1783	ar	Serrated tungsten tipped tooth
1780	ar	Chisel tooth (used as standard on 8" augers)
1789	ar	Tungsten tipped chisel tooth
1796	ar	Carbide insert tooth
1785	ar	R/H earth pilot c/w bolt/nut
1786	ar	R/H tungsten pilot c/w bolt/nut
1791	ar	L/H earth pilot
1792	ar	L/H tungsten pilot
1790	ar	Weld on drive lug suit RH Pilot
1798	ar	Weld on drive lug suit LH Pilot
1795	ar	Weld on single tooth pocket suit augers pre 2000
3845	ar	Weld on single tooth pocket suit 6" augers
3846	ar	Weld on double tooth pocket suit 8" augers
3847	ar	Weld on double tooth pocket suit 10" and 12" RH augers
3848	ar	Auger shearbolt/nut



1781



1782



1692



1783



1780



1789



1796



1785/1791



1790/1798



3845-3847

