

MCMILLEN®



MODEL X8000

HYDRAULIC EARTH AUGER ATTACHMENT OPERATOR'S MANUAL

SERIAL NUMBER _____

CAUTION!

Maximum Pressure 3,000 PSI



WARNING!

AVOID INJURY OR DEATH

READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE
INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.

Part No. 22689
REV. 12/04

M-229
12-6-04-2

TO THE OWNER

GENERAL COMMENTS

Congratulations on the purchase of your new McMillen Earth Auger Attachment. Your earth auger was carefully designed and manufactured to give you many years of dependable service. Your earth auger will require some minor maintenance (such as cleaning and lubricating) to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual, on the safety decals located on the attachment, and on any equipment on which the earth auger is mounted.

ABOUT THIS MANUAL

This manual has been designed to help you to do a better, safer job. Read this manual carefully, and become familiar with the operating procedures before attempting to operate your earth auger. Remember, never let anyone operate this earth auger without them having read and completely understand the "Safety Precaution" and "Operating Instructions" sections of this manual, or having them be fully trained by an experienced, qualified person who has read and completely understands the "Safety Precautions" and Operating Instructions".

After reading this manual, if you have any questions about your attachment please contact us immediately as follows:

NORTH AMERICAN TOLL FREE: (800) 922-2981
Outside North America: (563) 922-2981
Fax: (563) 922-2700

SERVICE

When servicing this product, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, record the model and serial number of your unit in the space provided on this page. This information may be obtained from the identification plate located on the product.

MODEL: _____ **SERIAL NO.** _____

Your parts department needs this information to insure that you receive the correct parts or attachments for your specific earth auger.

McMILLEN®

P.O. Box 266 • Delhi, Iowa 52223 • Phone (563) 922-2981 • Fax (563) 922-2700
North American Toll Free (800) 922-2981

M-102
4-18-05-4

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SAFETY INFORMATION

TO THE OPERATOR

Your personal safety is a concern of ours. It should also be of concern to you. It is the responsibility of all operators to read and understand this entire manual before installing, operating or servicing this equipment. Pay particular attention to cautions, warnings and safe operating procedures. Be a safe and qualified operator. Operate your equipment with care and good judgement and see to it that it is properly maintained.

SAFETY ALERT SYMBOL



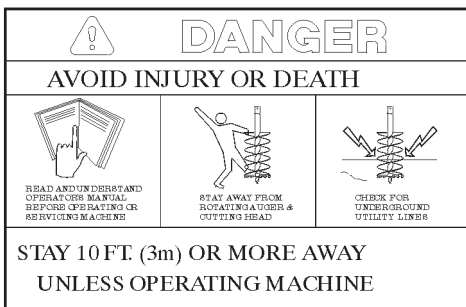
This Safety Alert Symbol Means:
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

When you see it pay attention and follow the instructions in the safety message.

The safety alert symbol is generally used in conjunction with a key signal word to emphasize special information. The signal words listed below carry a specific meaning and should be carefully read and understood:

- DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

REPLACEMENT SAFETY DECALS
















WORN, DAMAGED OR ILLEGIBLE SAFETY DECALS MUST BE REPLACED.

New safety decals can be ordered from McMillen. Two (2) #22680 (89-P2-237A) Safety Decals must be displayed on each McMillen Hydraulic Earth Auger Drive Unit. Decals should be located on opposite sides of the drive unit from each other.



SAFETY INFORMATION

THE USE OF THIS EQUIPMENT IS SUBJECT TO CERTAIN HAZARDS WHICH CANNOT BE PROTECTED AGAINST MECHANICAL MEANS OR PRODUCT DESIGN. ALL OPERATORS OF THIS EQUIPMENT MUST READ AND UNDERSTAND THIS ENTIRE MANUAL, PAYING PARTICULAR ATTENTION TO SAFETY AND OPERATING INSTRUCTIONS, PRIOR TO USING THE MCMILLEN HYDRAULIC EARTH AUGER. IF THERE IS SOMETHING IN THIS MANUAL YOU DO NOT UNDERSTAND, ASK YOUR SUPERVISOR TO EXPLAIN IT TO YOU. FAILURE TO OBSERVE THESE SAFETY PRECAUTIONS CAN RESULT IN DEATH OR SERIOUS INJURY OR SERIOUS EQUIPMENT DAMAGE.

-  All bystanders should be kept a minimum of 10 feet (3 meters) away from working area of the earth auger.
-  Always wear an OSHA approved hard hat and safety eye protection when operating or servicing this equipment. Do not wear loose fitting clothing, flopping cuffs, dangling neckties and scarves, or rings and wrist watches that can catch moving parts.
-  An operator must not use drugs or alcohol which can change his alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advise on whether or not he can safely operate equipment.
-  Always locate underground electrical wires, telephone cables, gas, water and sewer lines before digging. Maintain safe clearance and avoid contact with any underground or overhead utility lines or electrically charged conductors.
-  Never alter or remove any safety decals or shields. Replace all missing or damaged safety decals or safety shields. Check this manual for location of these items and replace immediately if damaged or illegible.
-  Never adjust a relief valve for pressure higher than recommended by vehicle manufacturer.
-  Whenever changing or installing this or other attachments, make sure all connections are securely fastened.
-  Travel only with the earth auger in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes. Tether earth auger with a chain, if necessary, to prevent uncontrolled swinging of earth auger when moving from hole to hole. Remove earth auger from vehicle when transporting to and from job site.
-  Before exiting vehicle, lower earth auger to ground, turn off vehicle engine and lock vehicle brakes.
-  Never check a pressurized system for leaks with your bare hand. Oil escaping from pinhole leaks under pressure can penetrate skin and could cause serious infection. Hold a piece of cardboard up next to suspected leaks and wear a face shield or safety eye protection. If any fluid is injected into the skin, it must be removed immediately by a doctor familiar with this type of injury.
-  Before disconnecting hydraulic lines or fittings be sure to relieve all pressure by cycling all hydraulic controls after shutdown. Remember hydraulic systems are under pressure whenever the engine is running and may hold pressure after shutdown. Before applying pressure to the system make sure all connection are tight and that there is no damage to lines, fittings and hoses.
-  Flow and pressure gauges, fittings and hoses must have a continuous operating pressure rating of at least 25% higher than highest pressures of the system.
-  Avoid steep hillside operation which could cause the vehicle to overturn. Consult your vehicle operator's and safety manuals for maximum incline allowable.
-  Never perform any work on an earth auger unless you are authorized and qualified to do so. Always read the operator service manual(s) before any repair is made. After completing maintenance or repair, check for correct functioning of the earth auger. If not functioning properly always tag "DO NOT OPERATE" until all problems are corrected.
-  This manual covers the safe use, installation, operation and service instructions for the earth auger only. Always read the operating and safety manuals prepared for your vehicle and any other attachments before using them.

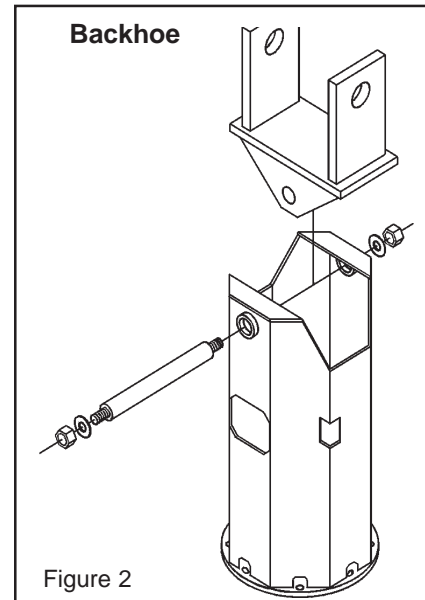
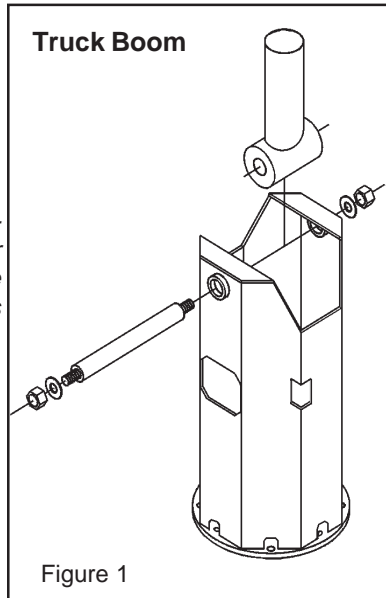


HYDRAULIC DRIVE UNITS

Hook-Up Procedures

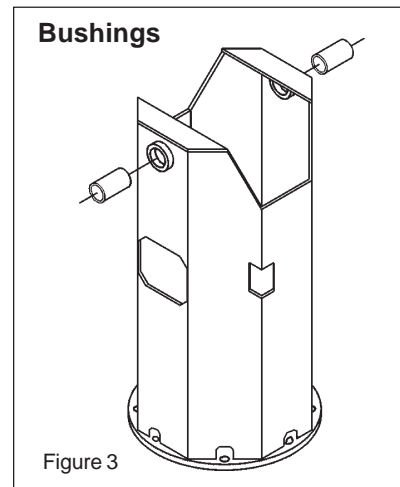
1. Pin the Hydraulic Drive Unit to your vehicle (Figures 1 & 2).

NOTE: A variety of Backhoe Adaptors are available through McMillen. For details, contact your Equipment Dealer or McMillen's Sales department at the numbers listed on the first page of this manual.

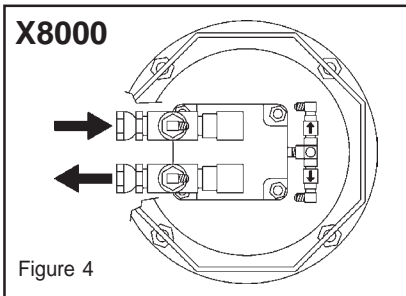


Both 1.50" diameter and 1.25" dia. pins are supplied with the drive unit. When the 1.25" diameter pin is used, insert one of the supplied bronze bushings into each of the pivot holes on the Hydraulic Drive Unit (Figure 3).

Note: No bushing is necessary when the 1.50" diameter pins are used.



2. Attach the Hydraulic Hoses to the Drive Unit (Figure 4). The X8000 Drive Unit is supplied with 3/4" female pipe couplers. Attach the adaptors to fit your hoses. Hook-up the digging pressure hose as shown.



HYDRAULIC DRIVE UNIT

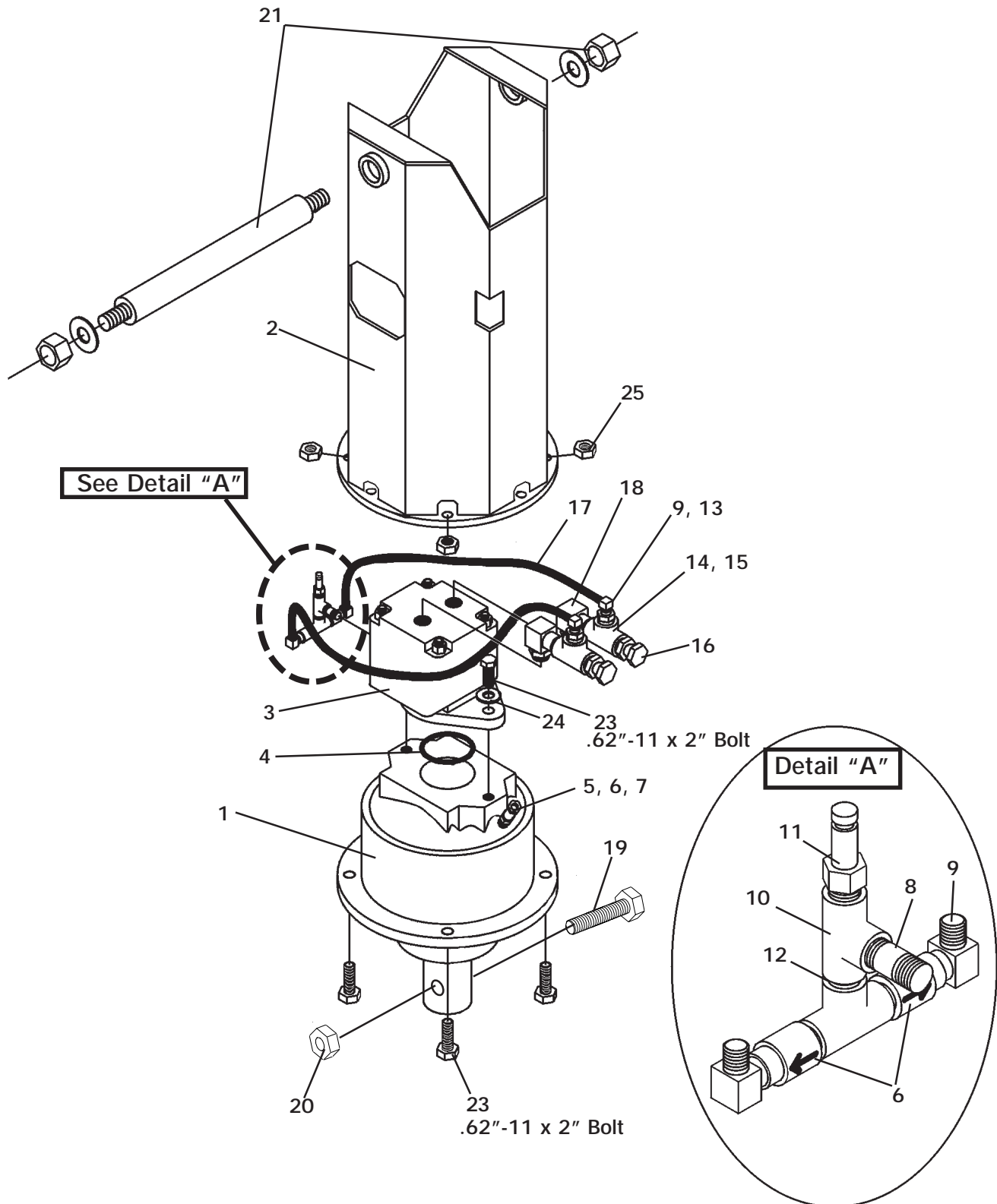
Specifications

MODEL X8000			
Maximum Auger Diameter:	48" (1219 mm)		
Minimum Hydraulic Flow:	30 gpm (114 lpm)		
Maximum Hydraulic Flow:	60 gpm (227 lpm)		
Maximum System PSI:	3000 psi (211 kg/cm ²)		
Output Shaft Options:	2-1/2" (64mm) Hexagon 2-5/8" (67mm) Hexagon		
Maximum Back Pressure	500 psi (35 kg/cm ²)		
OUTPUT SPEED		OUTPUT TORQUE	
FLOW	SPEED	PRESSURE	TORQUE
GPM (LPM)	≡ RPM	PSI (kg/cm ²)	≡ Lb•Ft (N•m)
30 (114)	= 28	2400 (169)	= 7027 (9525)
40 (151)	= 38	2750 (193)	= 8137 (11,030)
60 (227)	= 59	3000 (211)	= 8433 (11,431)



X8000 SINGLE SPEED HYDRAULIC DRIVE UNIT

Exploded View





X8000

SINGLE SPEED HYDRAULIC DRIVE UNIT*Parts List*

<u>REF.#</u>	<u>QTY.</u> <u>REQ'D</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1*	1	22499	2.50" Hex Planetary Gear Reduction
1*	1	22500	2.62" Hex Planetary Gear Reduction
2	1	21686	Utility Housing Weldment
3	1	21954	Single Speed 8000 Utility Motor
4	1	22609	"O" Ring
5	1	22610	Reducer Fitting, .50" NPT - .25" NPT
6	3	22589	Check Valve
7	1	22588	Breather, .25" NPT
8	1	22562	.25" NPT Nipple, 1.50" long
9	4	22557	.25" NPT Male / #4 JIC 90° Fitting
10	2	3191	.25" NPT Tee Fitting
11	1	22561	.25" NPT Male / PD342 Quick Disconnect
12	2	22559	.25" NPT Close Nipple
13	2	3140	.75" NPT to .25" NPT Reducer
14	2	3062	.75" Close Nipple
15	2	3213	.75" Tee
16	2	22582	.75" NPT Male / #12 JIC Female Straight
17	2	22565	Hose, 17" long, #4 JIC Female Ends
18	2	22601	#12 SAE / .75" FPT 90° Elbow
19	1	1151	.75"-10 x 6" Gr. 5 Bolt
20	1	1231	.75" - 10 Hex Nut
21	1	21219	1.50" Drive Unit Pin Kit
22	1	21220	1.25" Drive Unit Pin Kit
23	10	1895	.62" x 2.00" NCX Hex Capscrew GR 8
24	2	21220	.62" Lock Washer
25	8	1839	.62" Lock Nut GR 5
Not Shown	2	22680	Safety Decal (Danger Avoid Injury)
Not Shown	1	22684	Extreme™ 8000 Decal