



SKID STEER EARTH AUGER HD
Operator's Manual
Maintenance & Parts Information



Read this Manual Before Use

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NOTE: Write your serial number for your attachment in the spaces below. Always refer to this serial number when calling for services parts.

Serial Number

Attachment Dealer

Address

Phone Number

Contact

NOTE: Erskine Attachments LLC reserves the right to make improvements in design or changes in specifications at any time without notice and without incurring any obligations to install them on units previously sold.

SAFETY

DO NOT use or perform maintenance on this machine until this manual has been read and understood. In addition, read the Operation and Maintenance Manual(s) pertaining to the attachment and the attachment carrier (“Loader”).

The user is responsible for inspecting the machine daily, and for having parts repaired or replaced when continued use of the machine would cause damage, excessive wear to other parts or make the machine unsafe for continued operation.

If an operating procedure, tool device, maintenance or work method not specifically recommended is used; you must satisfy yourself that it is safe for you and others. You must also ensure that the attachment will not be damaged or made unsafe by the procedures you choose.

Erskine Attachments LLC cannot anticipate every possible circumstance that might involve potential hazard. The safety messages found in this manual and on the machine are therefore not all inclusive

The signal words **CAUTION**, **WARNING**, or **DANGER** are used to indicate hazards.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ DANGER

Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

The word **IMPORTANT** is used in the text when immediate damage will occur due to improper technique or operation.

The word **NOTE** is used to convey information that is out of context with the manual text; special information such as specifications, techniques, reference information, and other information of a supplementary nature.

Call Before You Dig
1-888-258-0808



SAFETY

Improper operation can cause serious injury or death.

PRE-OPERATION

- **NEVER** use this attachment for purposes other than intended.
- Read the operator's manual for the "Skid Steer Loader". **NEVER** allow untrained people to operate.
- Operating instructions must be given to everyone before operating this machine and at least once a year thereafter in accordance with OSHA regulations.
- **NEVER** exceed the maximum recommended input power or speed specifications for the attachment. Over-powering or over-speeding the attachment may cause personal injury and/or machine damage.
- Keep all shields, guards, and covers in place.
- Do not modify equipment or add attachments that are not approved by Erskine Attachments LLC.
- Use adequate safety warning lights and devices as required by local regulations. Obey all local laws and regulations regarding machine operation on public property. Always call before you dig (1-888-258-0808). When you call, you will be directed to a location in your state/city for information about buried lines (electric, telephone, cable TV, water, sewer, gas, etc.).

OPERATION

- Always wear eye protection that meets z87.1 or use with a loader enclosure that provides similar protection.
- Hydraulic connections may be hot after use. Use gloves if connecting or disconnecting after use.
- Check and be sure all operating controls are in neutral before starting the engine.
- Keep people away from loader and attachment when in use. This attachment has moving parts.

OPERATION (continued)

- To avoid electric shock or electrocution, **NEVER** operate attachment near overhead power lines.
- **NEVER** operate near embankments or terrain that is so steep that rollover could occur.
- Always stay in the operator position when using the attachment.
- Before leaving the operators position, disengage hydraulic drive, lower the attachment to rest flat on the ground, stop engine, set park brake, and wait for all motion to stop.
- **NEVER** place hands near moving parts or clear debris while engine is running.

AVOID HIGH PRESSURE FLUIDS HAZARD

- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving the pressure before disconnecting hydraulic lines.
- Use a piece of paper or cardboard, **NOT BODY PARTS**, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when servicing or performing maintenance on hydraulic systems.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

MAINTENANCE

- **NEVER** make adjustments, lubricate, clean, or perform any service on the machine while it is in operation.
- Make sure the attachment is serviced on a daily basis. Improper maintenance can cause serious injury or death in addition to damage to the attachment and/or your equipment.

DECAL INFORMATION

Serial Number Location:

It is important to refer to the serial number of your attachment when making repairs or ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use different procedures in doing a specific operation.

Safety Decals Locations:

This unit comes equipped with all safety decals in place. They are designed to help you safely operate your unit. Read and follow all safety decals.

- Keep all safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible.
- If these decals are missing, damaged, or painted over they must be replaced. Call Erskine Attachments LLC for replacement decals.



MOUNTING INSTRUCTIONS

After the initial set-up assembly is completed use the following procedure to mount the attachment to the loader for user operation.

⚠ WARNING

Coupler wedges or pins must extend through holes in attachment. Levers must be fully down and locked. Failure to secure wedges or pins can allow the attachment to come off and cause injury or death.

1. Use the step, safety treads, and grab handles to get on and off the loader and attachment.
2. Sitting in the operator's seat, lower seat bar (if so equipped) and fasten the seat belt.
3. Drive the loader to the rear of the attachment. Put the loader quick attach coupler into the attachment mounting bracket.
4. Tilt the loader coupler backward a small amount until it is fully engaged in the attachment mounting bracket.
5. Stop the engine and engage the park brake.
6. Secure the coupler locking mechanism that attaches the attachment to the loader.
7. Connect the hydraulic quick couplers from the attachment to the loader.
8. Make sure the hoses are properly routed to fit your specific loader. If the hoses are not routed correctly, hoses may get pinched or rub on tires. Be sure to check the hose routing through the full range of intended motion of the attachment before operating it.

IMPORTANT: Wipe the ends of the hydraulic quick couplers (both lead and loader) with a rag to remove any possible contamination. Contamination can cause hydraulic components to fail and is not covered under warranty.

IMPORTANT: Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and brand. Do not force the quick couplers together.

NOTE: See the loader's operator's manual for auxiliary hydraulic specifications and connection instructions.

NOTE: Attachment is shipped with 8FJX (1/2" Female JIC Swivel) fittings on the ends of the lead hoses.

NOTE: More than one routing may be acceptable depending on the loader. Pick the routing that best suits your loader.

IMPORTANT: Proper hose routing is the responsibility of the owner and/or operator. Pinched or stretched hoses are not covered under warranty.

NOTE: Mounting is now complete and the attachment is ready for operation. Use reverse order of above instructions to dismount the attachment from the loader.

OPERATING INSTRUCTIONS

⚠ WARNING

To prevent injury or death from falling equipment, before operating, always ensure that the Earth Auger is properly connected to the parent machine.

Drilling Operations

1. To begin drilling, position the auger on the ground in the desired location. Engage the auxiliary hydraulics to rotate the auger in a clockwise direction.
 2. Lower the loader arms to engage the auger into the ground. Use only enough down pressure to assure positive penetration of the auger. Reduce the down pressure if the auger rotation slows down drastically or stalls. Excessive down pressure will cause the auger to stall frequently.
- IMPORTANT:** Do not continually stall the auger drive. Continued stalling may cause excessive heating of the hydraulic system and possible damage to the auger drive.
3. As the auger digs into the ground, the loader arms may travel through an arc. This means the operator may need to continually reposition the machine to ensure vertical application of the auger.
 4. When the auger has penetrated the ground about 24" (610mm), raise the auger from the hole to clean out the loose material.
 5. Once the required hole depth is reached, allow the auger to turn a few seconds at this depth to clean the hole.
 6. Stop rotation of the auger and raise the auger out of the hole. Swing the auger away from the newly drilled hole. Spin the loose material off of the auger by rotating the auger in the reverse direction.

NOTE: Do not reverse the auger rotation while the auger is still in the hole. The loose material will back fill the hole.

7. If necessary, repeat steps 2 through 3 to obtain a cleaner hole.

Operations to Avoid

1. In some soil conditions or when excessive down pressure is applied, the auger may screw itself into the ground. This can cause the auger to become stuck, causing the auger drive to stall. If this situation occurs, reverse the auger rotation and slowly raise the auger from the hole.
2. If the auger becomes lodged under rocks, tree roots, or other large obstructions, do not attempt to raise the auger out of the ground. See step 1 of this section to relieve the auger.
3. Avoid excessive side loading. This can cause damage to the auger drive and the auger.
4. Keep all auger teeth and pilot bits in good condition. Avoid using damaged teeth and holders.
 - Following operation, or when unhooking, stop, set brakes, disengage power drives, shut off engine, and remove ignition key.
 - Store the unit in and away from human activity.
 - Before long term storage, wash the unit with mild detergent and water to remove any debris and grime.
 - Do not permit children to play on or around the storage area.
 - Protect the shafts and ports with grease or rust inhibitor.
 - Grease bearing seals.
 - Check and tighten all bolts, nuts, and screws. Paint is available from your authorized service dealer.
 - When storing the unit for any length of time, be sure the unit is stored with clean gear oil.

ROUTINE MAINTENANCE

⚠ WARNING

Lower the attachment to rest flat on the ground, shut down the engine, relieve the hydraulic pressure to the attachment, set the park brake, and wait for all motion to stop before leaving the operator's seat to perform service of any kind.

It is the operator's responsibility to make daily inspections of the loader and attachment for damage, loose bolts, fluid leaks, or anything else that could cause a potential service or safety problem. Preventive maintenance is the easiest and least expensive type of maintenance.

IMPORTANT: Bolts can loosen after initial usage. After the first hour of operation check all bolts.

- Always use proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- Inspect hydraulic oil daily for contamination. If contamination is present, determine the source and correct the problem.
- Paint all scratched or bare metal surfaces.
- Repair or replace any cutting head components that are damaged or worn.
- Check the gearbox for sufficient amount of oil.
- Check the auger drive output shaft for bends, cracks, breaks, or wear. Replace if any of these conditions appear.

Lubrication and Maintenance

The oil should be changed after the first 50 hours of use and at 500 hour intervals thereafter. Gear drives in auger drives require GL-5 grade EP 80/90 gear oil for lubrication. It is recommended to partially disassemble the unit to inspect gears and bearings at 1,000 hours intervals.

Checking the Gear Oil

1. Make sure the auger drive unit is in an upright position when checking the oil.
2. Slowly loosen the oil fill-drain plug located on the side of the gearbox. As you reach the end of the threads on the plug, oil should start to come out.
3. If you see oil starting to pour out of the port, quickly re-tighten the plug. This is an indication that the oil level is adequate, but in order to correctly measure the amount of oil, the gearbox should be drained and the correct amount of oil replenished. See "Changing the Gear Oil" section for oil capacity.

Changing the Gear Oil

1. Position the auger drive unit in a position in which the oil can flow freely from the gearbox once the plug is removed.
2. Place a drain pan under the drain port that will hold at least one gallon of oil.
3. Remove the drain plug and allow the oil to completely drain out.
4. Position the gearbox for filling by orienting the unit so that the same port used for draining can now be used to fill.
5. Fill the gearbox with 0.20 gallons (0.757 liters) of gear oil. See oil recommendation.

Lubrication Recommendations:

Mobil Delvac Synthetic Gear Oil 75W-90

Density @15°C: 0.859

Viscosity @40°C: 120

Viscosity @100°C: 15.9

Viscosity Index: 140

Flash Point °C: 205

Pour Point °C: -48

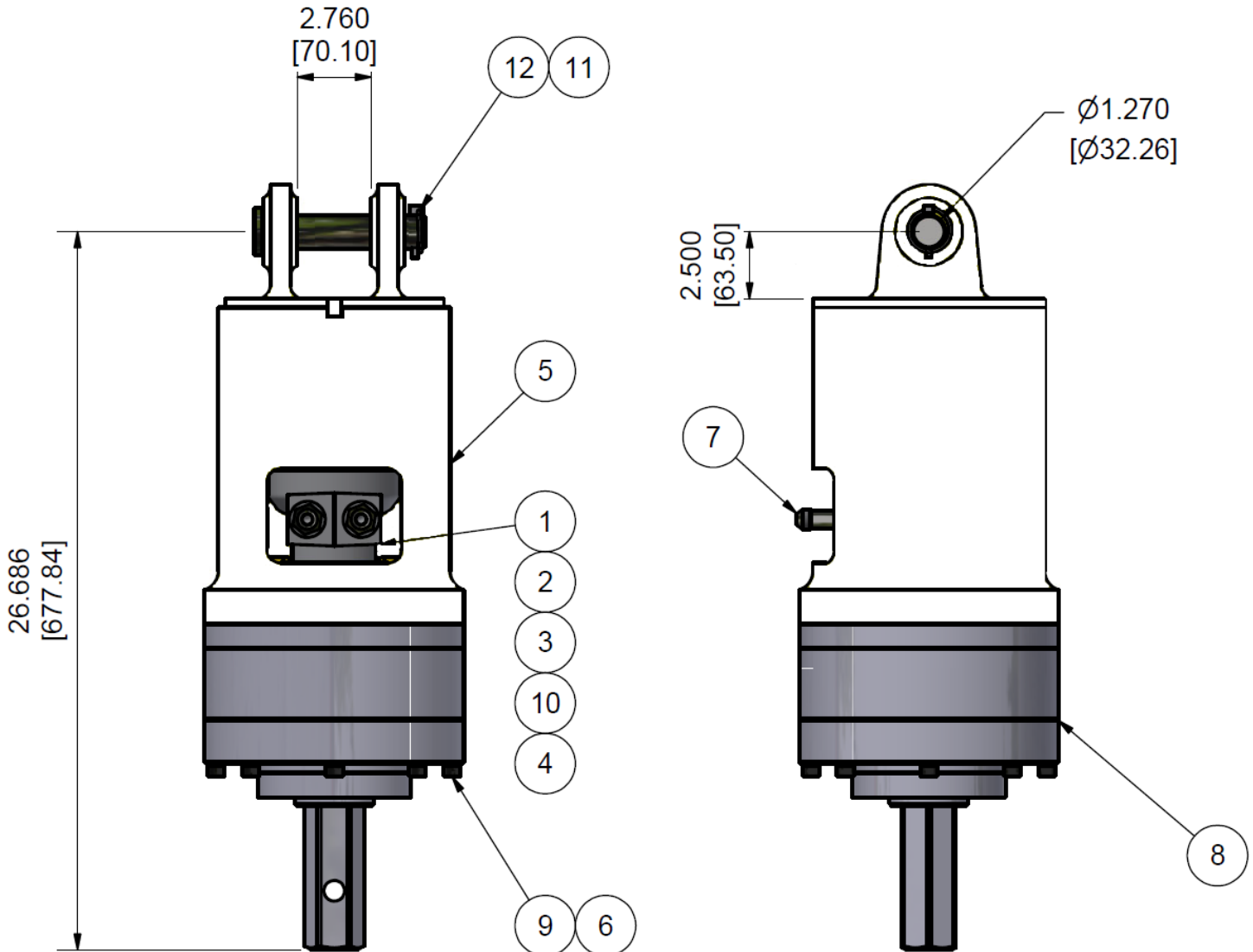
TROUBLESHOOTING

In the event your auger drive unit malfunctions or does not appear to have enough speed or power, refer to the section below to identify the cause of the problem and possible remedy. If the problem persists, contact your authorized service dealer for assistance.

SYMPTOM	POSSIBLE CAUSE	POSSIBLE REMEDY
Slow speed (RPM) or insufficient digging power	Low oil flow	Check parent machine specifications
	Auger drive is too large for machine	Contact your authorized service dealer
	Check auger and teeth for excessive wear	Replace worn auger components
No output rotation	Quick release couplers not engaged	Check connections
	Quick release coupler is faulty	Replace faulty coupler
	Hydraulic fluid level is low	Fill hydraulic fluid tank
	Planetary gear failure	Contact your authorized service dealer
Bail housing leaking oil	Machine or hydraulic pump failure	Refer to parent machine manual
	Hose(s) or fitting(s) leaking	Tighten or replace
Output shaft leaking oil	Motor O-ring failure	Replace damaged O-ring
	Oil seal failure	Contact your authorized service dealer
Auger bit will not engage or dig	Hydraulic motor failure	Contact your authorized service dealer
	Auger bit is worn or damaged	Replace cutting head or entire auger bit
No torque	Oil pressure is too low	Contact your authorized service dealer
	Drive unit is too small for parent machine	Contact your authorized service dealer
	Hydraulic system is overheating	See "Hydraulic oil overheating" section below
Hydraulic oil overheating	Oil pressure is too low	Set relief valve to machine specifications
	Hydraulic line is restricted	Inspect and repair
	Auger continually stalling	Limit down pressure
	Hydraulic fluid level is low	Fill hydraulic fluid tank
	Insufficient oil capacity	Check oil cooler
	Parent machine is too small	Couple auger drive to larger machine

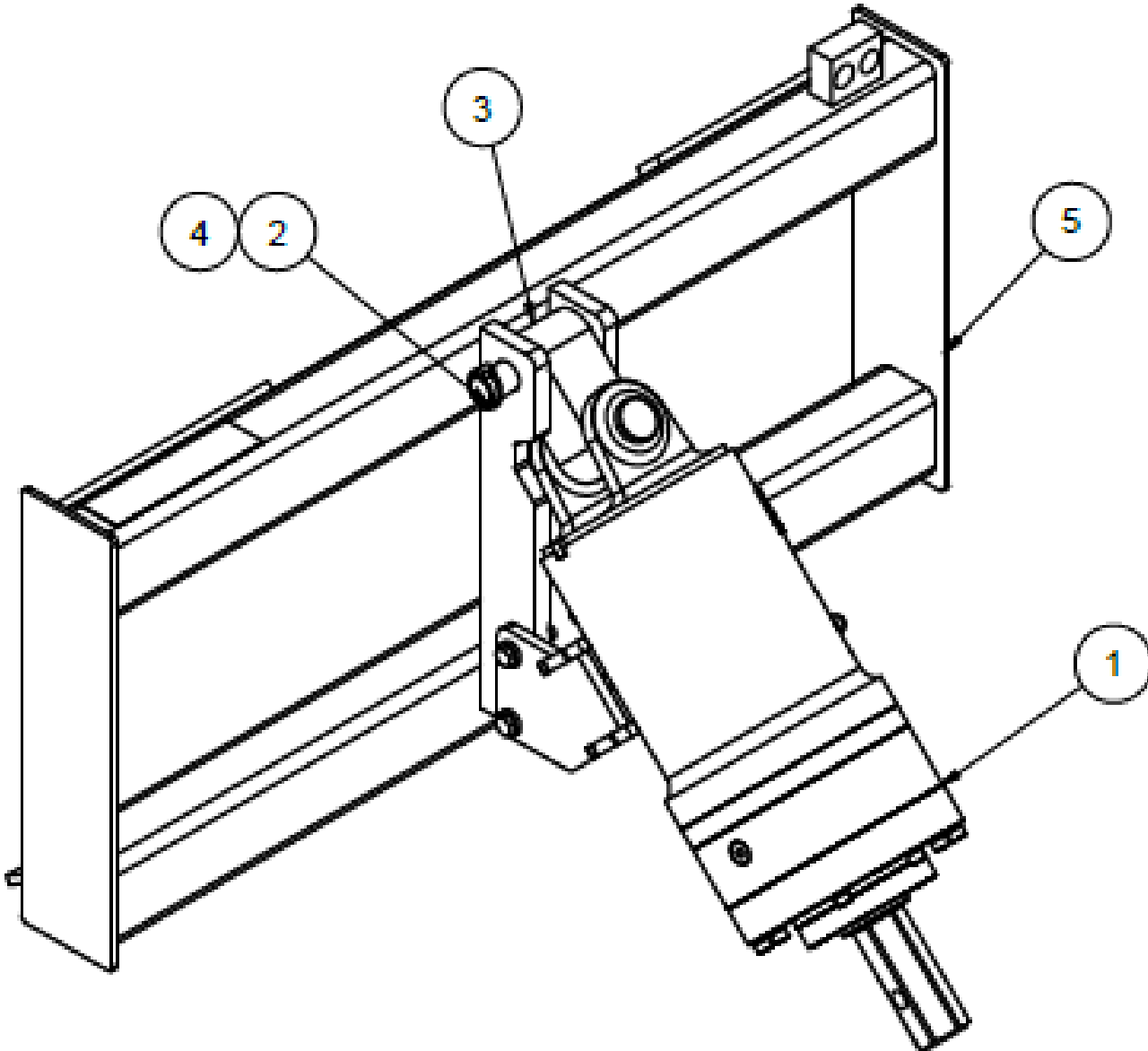
PARTS INFORMATION

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	2-300-012	PARKER MOTOR 310 CC	
2	2	4-200-015	W, 1/2IN, HI-COLLAR, YZ	
3	2	4-200-006	FW, 1/2IN X 1.062IN, GR8, YZ	
4	2	4-100-024	HHCS, 1/2-13 UNC X 1 1/2" LG, GR-8, YZ	
5	1	BH-20186	BH, X3K3, ERSKINE, 2-3/4IN I/I, 1-1/4IN PIN DIA	
6	8	5-200-083	LW, HI-COLLAR, M10, B.O.	
7	2	3-500-286	HA, 6400-L, -8MJ -10ORB	
8	1	1-300-006	X3K/4K Gearbox, 2" Hex Shaft, V2.0	
9	8	5-100-174	SHCS, M10x1.5 X 150mm LG, GR-12.9, B.O.	
10	1	3-200-015	O Ring for Parker Motor - 2 - 042	
11	1	BP-40149	BP, 1-1/4IN, X3K3	
12	1	4-400-063	LYNCH PIN, 1/4IN X 1-1/4IN	



PARTS INFORMATION

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	DH-10226	DH, X3K3 ERSKINE, WITH BAIL, 2IN HEX SHAFT	
2	1	BP-40149	BP, 1-1/4IN, X3K3	
3	1	LA-40220	LINK ARM, X3K3	
4	1	4-400-063	LYNCH PIN, 1/4IN X 1-1/4IN	
5	1	AT-10397	AT, SKIDSTEER, X3K3, 1-1/4IN PIN, 4IN EAR I/I, 45 DEG	
NP	1	10-000-204	HYDRAULIC HOSE KIT	108" LEADS



HARDWARE FOR SECURING BIT (NOT PICTURED)		
PART NUMBER	QTY	DESCRIPTION
4-100-378	1	HHCS, 5/8-11 X 4-1/2 IN, GR5, ZINC
4-300-052	1	LN, 5/8-11, GR5, ZINC

TORQUE INFORMATION

Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal Thread Size	SAE J429 Grade 2			SAE J429 Grade 5			SAE J429 Grade 8		
	Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque	
		K = .15	K = .20		K = .15	K = .20		K = .15	K = .20
Unified Coarse Thread Series									
1/4-20	1,300	49 in-lbs	65 in-lbs	2,000	75 in-lbs	100 in-lbs	2,850	107 in-lbs	143 in-lbs
5/16-18	2,150	101	134	3,350	157	210	4700	220	305
3/8-16	3,200	15 ft-lbs	20 ft-lbs	4,950	23 ft-lbs	31 ft-lbs	6,950	32.5 ft-lbs	44 ft-lbs
7/16-14	4,400	24	30	6,800	37	50	9,600	53	70
1/2-13	5,850	36.5	49	9,050	57	75	12,800	80	107
9/16-12	7,500	53	70	11,600	82	109	16,400	115	154
5/8-11	9,300	73	97	14,500	113	151	20,300	159	211
3/4-10	13,800	129	173	21,300	200	266	30,100	282	376
7/8-9	11,425	125	166	29,435	321	430	41,550	454	606
1-8	15,000	187.5	250	38,600	482.5	640	54,540	680	900
Unified Fine Thread Series									
1/4-28	1,500	55 in-lbs	75 in-lbs	2,300	85 in-lbs	115 in-lbs	3,250	120 in-lbs	163 in-lbs
5/16-24	2,400	112	150	3,700	173	230	5,200	245	325
3/8-24	3,600	17 ft-lbs	22.5 ft-lbs	5,600	26 ft-lbs	35 ft-lbs	7,900	37 ft-lbs	50 ft-lbs
7/16-20	4,900	27	36	7,550	42	55	10,700	59	78
1/2-20	6,600	41	55	10,200	64	85	14,400	90	120
9/16-18	8,400	59	79	13,000	92	122	18,300	129	172
5/8-18	10,600	83	110	16,300	128	170	23,000	180	240
3/4-16	15,400	144	193	23,800	223	298	33,600	315	420
7/8-14	12,610	138	184	32,480	355	473	45,855	500	668
1-12	16,410	205	273	42,270	528	704	59,670	745	995

Clamp load estimated as 75% of proof load for specified bolts.

Torque values for 1/4 and 5/16 inch series are in inch-pounds. All other torque values are in foot-pounds.

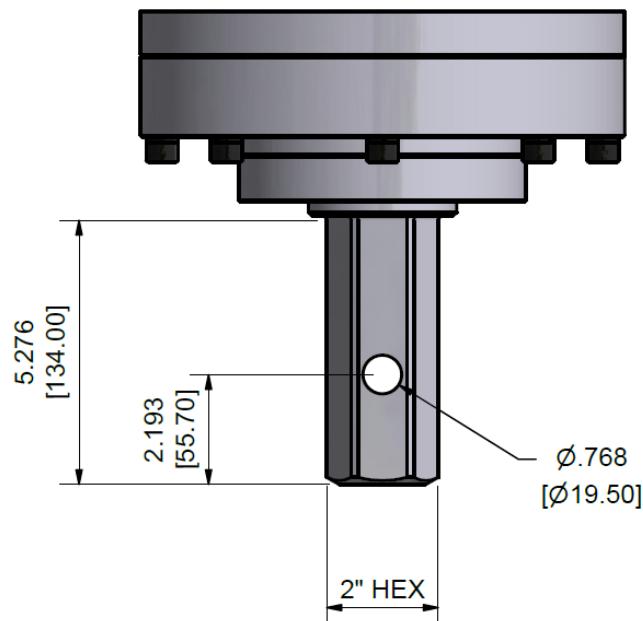
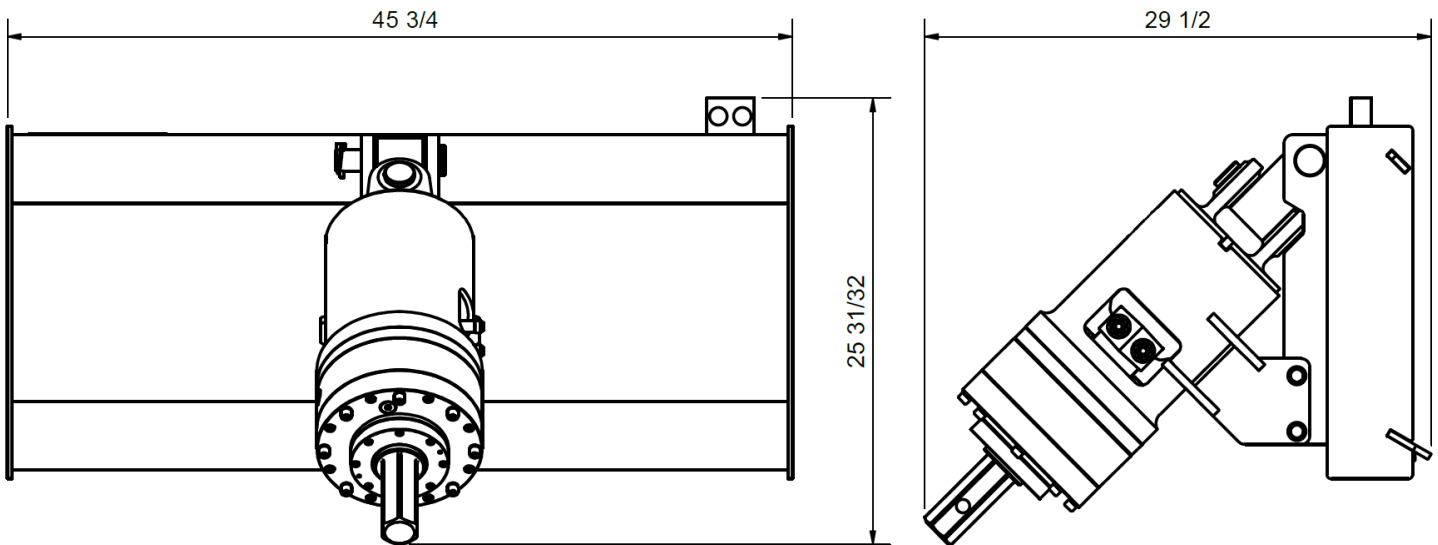
Torque values calculated from formula $T = KDF$

where: $K=0.15$ for "lubricated" conditions

$K=0.20$ for "dry" conditions

GENERAL SPECS

MODEL	EARTH AUGER HD
MOTOR MOUNT	SAE A 2-BOLT
MOTOR	306CC
MIN. HYDRAULIC FLOW	5 GPM
MAX. HYDRAULIC FLOW	25 GPM
MAX. CONT. PRESSURE	3500 PSI
OUTPUT SHAFT	2" HEX
OUTPUT SPEED	12 - 72 RPM
OUTPUT TORQUE	377 - 3,297 FT-LBS.





LIMITED WARRANTY

Erskine Attachments, LLC warrants each new machine manufactured by us to be free from defects in material and workmanship for a period of twenty-four (24) months from date of delivery to the original purchaser. The drive gearbox of the Earth Auger is warranted for sixty (60) months from date of delivery to the original purchaser.

Our obligation under this warranty is to replace free of charge, at our factory or Authorized Dealership, any part proven defective within the stated warranty time limit.

All parts must be returned freight prepaid and adequately packaged to prevent damage in transit.

This warranty does not cover:

1. New products which have been operated in excess of rated capacities or negligence
2. Misuse, abuse, accidents or damage due to improperly routed hoses
3. Machines which have been altered, modified or repaired in any manner not authorized by our company
4. Previously owned equipment
5. Any ground engaging tools in which natural wear is involved, i.e. tooth tips, cutting teeth, etc.
6. Normal maintenance
7. Fork tines
8. Hydraulic motors that have been disassembled in any manner
9. Drive gearbox output shaft breakage as a result of misuse or abuse

In no event will the Sales Representative, Dealership, Erskine Attachments, LLC, or any other company affiliated with it or them be liable for incidental or consequential damages or injuries, including but not limited to the loss of profit, rental or substitute equipment or other commercial loss. Purchaser's sole and exclusive remedy being as provided here in above.

Erskine Attachments, LLC must receive immediate notification of defect and no allowance will be made for repairs without our consent or approval.

This warranty is in lieu of all other warranties, express or implied by law or otherwise, and there is no warranty of merchantability or fitness purpose.

No agent, employee, or representative of Erskine Attachments, LLC has any authority to bind Erskine Attachments, LLC to any warranty except as specifically set forth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms apply.

This warranty may not be enlarged or modified in any manner except in writing signed by an executive officer of Erskine Attachments, LLC to improve its products whenever it is possible and practical to do so. Erskine Attachments, LLC reserves the right to make changes and or add improvements at any time without incurring any obligation to make such changes or add such improvements to products previously sold.

Erskine Attachments, LLC
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