Silo-Matic

MANURE AUGIE

OPERATING INSTRUCTIONS & PARTS MANUAL

Valesco Manufacturing, Inc.
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Loogootee, IN 47553
(812) 636-6001
www.silo-matic.com

REVISION 2-2011

LIMITED WARRANTY

Valesco Mfg., Inc. (Silo-Matic) warrants new equipment of its manufacture to be free of defects in materials and workmanship under normal use and service.

This warranty applies only to the original purchaser of the equipment.

Under no circumstances will Silo-Matic be responsible for labor charges associated with Product warranty.

Silo-Matic will not be liable for any direct, incidental or consequential damages arising in connection with any use, inability to use, misuse or misapplication of this equipment.

Warranty Period

Silo-Matic will repair or replace, at its option, without charge any parts of the equipment found by Silo-Matic to be defective within (1) one year from sale or installation.

Owner's Obligation

To be covered by warranty, all new equipment must be properly registered with Silo-Matic within 30 days of original purchase date of sale. (A warranty registration card is provided in the Owner's Manual for each machine.)

It is the responsibility of the owner, at owner's expense, to transport the equipment to the place of business of an authorized Silo-Matic dealer or to alternately reimburse the dealer for any travel or transportation expense involved in fulfilling this warranty.

Exceptions

Electronic Scales, submersible pumps, tires, electrical components and motors are warranted by the respective manufacturer and not Silo-Matic. Due to uncontrollable conditions, auger knives and liners are not covered under this warranty.

Conditions that Void Warranty

This limited warranty shall not apply to equipment which:

*Has had unauthorized repair or modification, gearboxes that have had the covers removed.

*Has been subject to misuse, negligent handling, improper adjustment, accident, fire damage, or other acts of God.

*Has had repair or replacement parts not manufactured, supplied or authorized by Silo-Matic.

THIS IS THE ONLY WARRANTY MADE BY SILO-MATIC AS TO THE EQUIPMENT. THIS WARRANTY IS IN LIEU OF ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTIES, EXPRESSED OR IMPLIED.

Supercedes previous subject matter
June 1, 1997

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INTRODUCTION

The Silo-Matic MANURE AUGIE, Manufactured by Valesco Manufacturing incorporates many features for fast and efficient removal of semi-solid and liquid animal waste from manure storage systems. The MANURE AUGIE can be used to empty reception pits providing several days of storage or it can be used to replace the elevator of conventional barn cleaners where the manure is too liquid for the chain cleaner to deliver the slurry up the incline.

The instructions in this manual provide procedures for assembly and installation of the auger and include recommendations for concrete detail. It also contains information on safety suggestions, Operation, Trouble Shooting and Repair Parts.

This SAFETY ALERT SYMBOL indicates important safety messages. When you see this symbol, be alert to the possibility of personal injury. In this manual some covers and guards have been removed for illustrative purposes only.

Any reference to Left or Right side of unit is related to as seen from the idler end of the auger and looking forward toward the drive end.

Some common abbreviations which may be used in this manual are as follows:

Assy ---Assembly	Crg ---Carriage	LW ----Lock Washer(s)
Brg ---Bearing	Frt ---Front	RH ----Right Hand
Brkt ---Bracket	LH ----Left Hand	Wld__--Weldment

You are urged to study this manual and follow the instructions carefully. If you don't understand the contents of this manual, contact your dealer or

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Valesco Manufacturing reserves the right to make changes or improvements to its products without incurring any obligation with respect to previously manufactured products.

TABLE OF CONTENTS

EXPLANATION OF SAFETY ALERT, WARNINGS AND DANGERS ASSOCIATED WITH ROTATING AUGERS

Throughout this manual and on the auger there are symbols used to show important safety messages. Please read these and understand their contents. Failure to follow these safety instructions could lead to personal injury, death or severe damage to the manure auger.

This SAFETY ALERT SYMBOL is found throughout this manual and indicates important safety messages. When you see this symbol, be alert to the possibility of PERSONAL INJURY or even DEATH.

DANGER : Indicates an imminently hazardous situation that if not avoided will result in death or serious injury.

WARNING: Indicates a potentially hazardous situation that if not avoided, could result in death or serious injury and alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury and alert against unsafe practices.

SAFETY PRECAUTIONS

CAUTION

This equipment can be hazardous in the hands of an unfamiliar, untrained, or careless operator. For your safety you must not operate, service, inspect or otherwise handle this equipment unless you have read the Owner's Manual and have been properly trained in its intended usage.

Do not allow children to operate machine.

Require all personnel who will operate this machinery or perform service to read and understand the safe operating practices and safety precautions in this manual.

Keep all shields in place. Do not operate until all shields and guards are in place.

Never attempt to clean, adjust, or lubricate machine while it is in motion.

Stop machine and lockout power source before adjusting and servicing.

Keep hands, feet and clothing away from moving parts.

Make certain everyone is clear of equipment before applying power.

Disconnect Power before resetting motor overload.

Liquid manure produces dangerous gases. Become familiar with the hazards and problems of gas produced by liquid manure. Some of these gases are odorless and colorless.

Ventilate all storage pits. Install permanent forced air ventilation and operate it continuously. If agitating, provide maximum possible ventilation by opening windows and doors.

Do not enter a liquid manure pit unless you have a special breathing apparatus or have thoroughly ventilated the pit with fans. In addition, a rope should be tied around the waist and held by a person outside the danger area so that if the operator is overcome by poisonous gases or from lack of oxygen, the operator may be pulled to safety without the rescuer also being overcome. If an operator does feel faint, get the person into fresh air and give artificial respiration, if required.

	WARNING An exposed rotating Auger can crush and dismember, Provide guarding to completely shield Auger.

	DANGER Manure storage areas need proper ventilation. Gases produced can be both EXPLOSIVE and POISONOUS to humans and animals.

This is most critical during the period of agitation. Agitation of contents increases all hazards. Use special caution to avoid inhaling gases during and shortly after agitation. If exposure results in loss of consciousness, remove injured party from area and call physician at once. If breathing has stopped, administer artificial respiration until breathing resumes.

	DANGER Electricity can kill, shock or burn. Disconnect and lock out power source before servicing electrical components. FAILURE TO HEED WILL RESULT IN DEATH OR PERSONAL INJURY!

PLACEMENT OF SAFETY STICKERS

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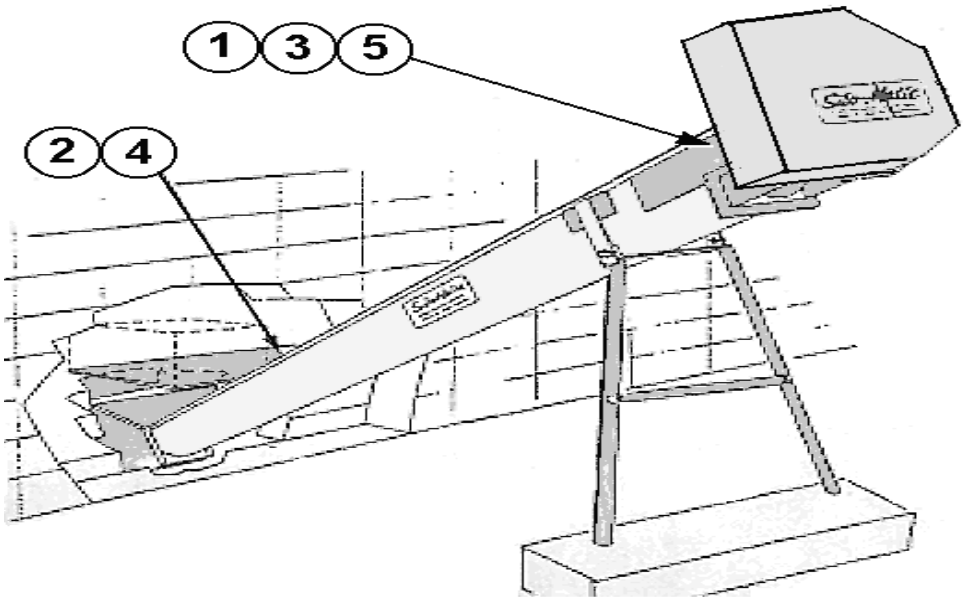
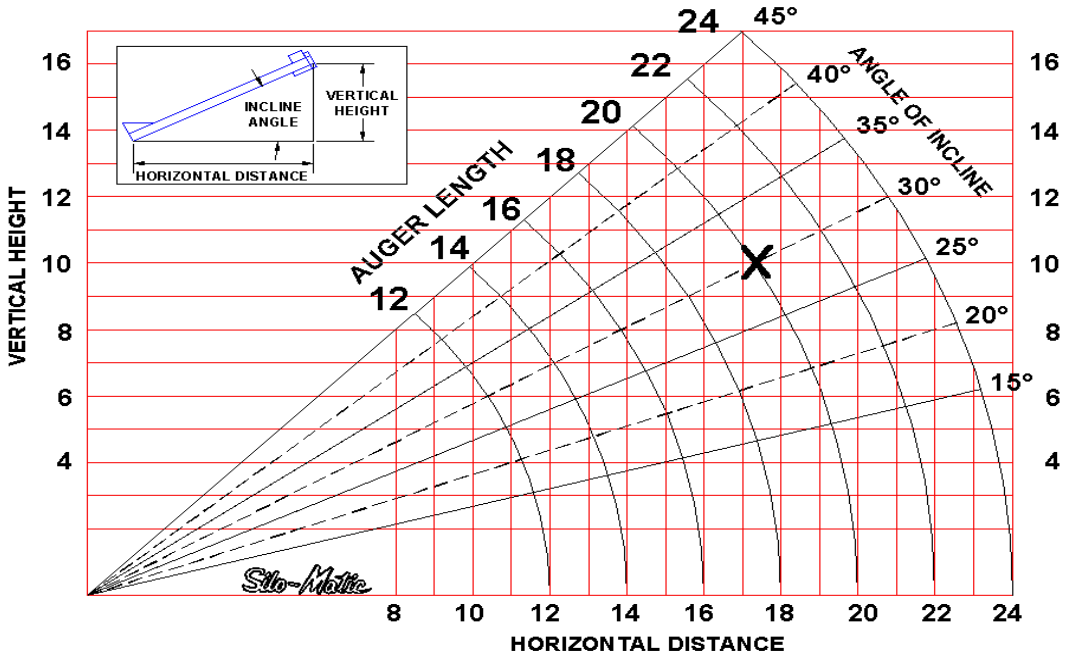


GENERAL INFORMATION

The Manure Auger can be used to remove semi-solid manure directly from a chain barn cleaner or it can be used to remove liquid manure (92% or greater liquid content) from a reception pit.

Manure as produced by a dairy animal is about 87% moisture while that produced by swine is about 91%. Factors that will change this are evaporation in the building by natural and/or forced ventilation, amount of bedding in manure and addition of process water.

For satisfactory performance the incline (angle) of the auger is limited as follows:
Semi-solid manure 87% or less--40 Degrees. Liquid manure 92% and greater--30 Degrees.



These figures define the boundary limits. Your dealer may have experience such that he can judge your application within these limits. When lacking this experience, it is recommended that 30 degrees or less be used for a liquid application and 40 degrees or less be used by a semi-solid application. The length of the auger should be selected to provide 10" of clearance to the manure spreader.

Horsepower requirements are dependent on incline, moisture content and auger length. Boundary limits are as follows:

14 ft. Auger--3hp	20 ft. Auger--7.5hp
16 ft. Auger--5hp	22 ft. Auger--7.5hp
18 ft. Auger--5hp	24 ft. Auger--10hp

The above figures are typical for semi-solid manure. On an 18 ft. Auger in liquid manure it may be possible to drop to 3 hp because of reduced material friction and less incline.

IMPORTANT: MANURE STORED IN A RECEPTION PIT MUST BE LIQUID IN ORDER TO AGITATE IT AND SUSPEND THE SOLIDS. IF THERE IS INSUFFICIENT LIQUIDS, IT WILL NOT BE POSSIBLE TO SUSPEND THE SOLIDS AND REMOVE THEM FROM THE PIT.

CALCULATING THE SIZE OF THE RECEPTION PIT

To provide a liquid manure application in a typical dairy stanchion barn it will generally be necessary to use cow mats, no bedding and gutter grates or else add a large volume of water. To store liquid manure, a reception pit must be built which adds the benefit of storage up to several days and eliminates daily hauling. The area of this pit should be limited to 8 feet or less per side and the depth should not exceed 4 feet.

To determine the actual size of pit for your herd use, the following parameters and remember that one day of storage is in the gutter:

1). Divide the average animal weight by 100 to equal gallons of manure produced per day. Multiply by the number of head for total manure production. Add for any additional water being added, such as milkhouse, etc.

2). Convert the daily waste production to cubic feet by dividing gallons by 7.5.

3). (Daily Manure) x (Days of Storage) = (Width) x (Length) x (Depth) where pit dimensions are in feet.

Example: 4 days of storage is desired for a 50 head herd averaging 1200 lbs. in weight. It's desired to keep the pit depth at a minimum.

Remember that one day of storage is in the gutter. Since one day of storage is in the gutter, the pit will be designed to hold 3 days and since the depth is to be minimum, then the maximum area of 8' x 8' will be used.

Total gallons waste = (1200/100) x 50 head plus 30 gallons of water = 630 gallons/day.

Remember that approximately 7.5 gallons=1 cubic foot. The total daily waste in gallons (630 gal.) divided by 7.5 = 84 cubic feet of manure per day.

We want the pit to hold 3 days of waste and we know that each day we will need 84 cubic feet. Since 3 x 84=252, we know we will need to build a pit that will hold a total of 252 cubic Feet.

Total cubic feet =Width x Length x Depth. Since we want the length and width to be 8' x 8', the

depth has to be 252 divided by 64 sq. ft. (8' x 8'.) 252/64=3.94 ft. Approximately a 4' deep pit would be needed. 4' x 8' x 8'= 256' cubic feet. (we end up with 4 extra cu. Ft. in this example)

CAUTION: VENTILATE ALL STORAGE PITS. INSTALL PERMANENT FORCED AIR VENTILATION AND OPERATE IT CONTINUOUSLY. IF AGITATING, PROVIDE MAXIMUM POSSIBLE VENTILATION BY OPENING WINDOWS AND DOORS.

Reception pits must be enclosed in an insulated shelter to keep slurry from freezing.

CAUTION: STORAGE PITS MUST BE GUARDED AGAINST ENTRY BY ENCLOSURE IN A LOCKED ROOM OR BY A BARRIER TO EXCLUDE CHILDREN AND LIVESTOCK AND OTHER PERSONS.

On installations for daily hauling, it is absolutely necessary that the pit under the cleaner be completely safeguarded. This requires a safety plate to be installed over the top of the pit which will shield the barn cleaner paddle wiper and drive sprocket apparatus and will cover the auger such that no moving parts are exposed. Install the Manufacturer's cover as provided over the barn cleaner drive unit. Do not discard it. Every installation will be different so the protection must be constructed on the job site. It is the Owner's responsibility to have this protection installed. Ask your dealer for advice and help in construction.

OPERATION

DAILY HAULING

Park the manure spreader under the Auger discharge. Be sure that all persons are clear of this area.

Turn on the Auger motor switch and then start the barn cleaner. After the gutter is cleaned, turn off the barn cleaner. Allow the Auger to completely empty itself and then turn it off.

WARNING: AN EXPOSED ROTATING AUGER CAN CRUSH AND DISMEMBER. PROVIDE GUARDING TO COMPLETELY SHIELD AUGER.

During cold weather liquids may be held on the upper surfaces of the auger flighting and freeze. Should this cause cold weather starting problems you may have your dealer install a motor reversing switch. This will enable you to start the auger in reverse until the frozen material is broken loose. To change motor direction, allow the motor to come to a complete stop before restarting in the opposite direction. You may also have your dealer install a poly liner in the trough which will aid in preventing auger freeze up.

If long bedding is present in the manure and it wraps on the Auger, install a reversing switch and at the end of each cleaning period reverse the auger to unwind the bedding.

LIQUID MANURE AND RECEPTION PIT

CAUTION: STORAGE PITS MUST BE GUARDED AGAINST ENTRY BY ENCLOSURE IN A LOCKED ROOM OR BY A BARRIER TO EXCLUDE CHILDREN AND LIVESTOCK AND OTHER PERSONS.

Park the manure spreader under the Auger discharge. Be sure that all persons are clear of this area.

A motor reversing switch is recommended so that the auger can be run in reverse to force the

liquid that fills the Auger by gravity back into the pit and thereby mix and agitate the slurry so all solids are suspended. Agitation may not be required on small area pits.

CAUTION: VENTILATE ALL STORAGE PITS. INSTALL PERMANENT FORCED AIR VENTILATION AND OPERATE IT CONTINUOUSLY. IF AGITATING, PROVIDE MAXIMUM POSSIBLE VENTILATION BY OPENING WINDOWS AND DOORS.

To agitate, start the auger in reverse. Slurry will be forced back into the pit and will stir the pit to mix liquid and solids. If the slurry is low on liquid, it may be necessary to periodically stop the Auger to allow it to refill with liquid until the slurry becomes uniform in consistency. If the slurry is too thick it may be necessary to add water. After thorough mixing, reverse the motor and empty the pit.

If the motor is overloaded, adjust the slide gate on the Auger inlet to restrict the rate slurry can enter to reduce the load. See Adjustments Section.

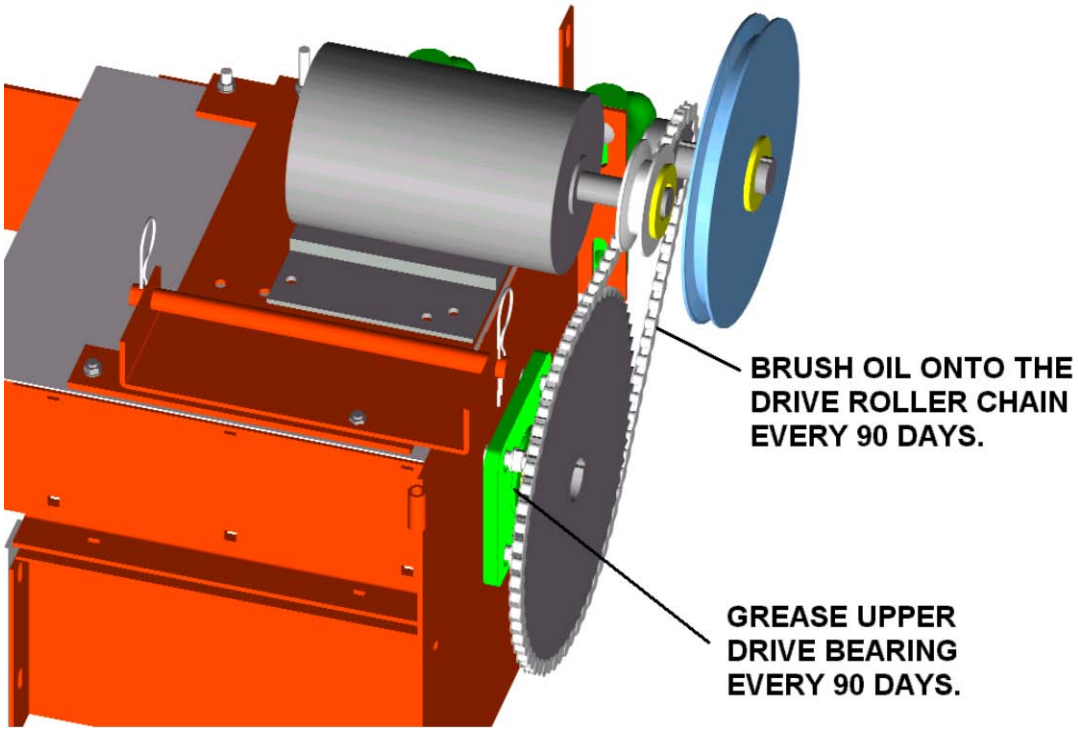
LUBRICATION

CAUTION: NEVER ATTEMPT TO CLEAN, ADJUST OR LUBRICATE MACHINE WHILE IT IS IN MOTION.

Grease the Bearing at the Drive end every 90 days. The idler (lower) end bearing is polyester and does not require lubrication.

Liberally brush oil onto the roller chain every 90 days.

CAUTION: KEEP ALL SHIELDS IN PLACE. DO NOT OPERATE UNTIL ALL SHIELDS AND GUARDS ARE IN PLACE



ADJUSTMENTS

⚠	CAUTION: NEVER ATTEMPT TO CLEAN, ADJUST OR LUBRICATE MACHINE WHILE IT IS IN MOTION.

⚠	CAUTION: STOP MACHINE AND LOCK-OUT POWER SOURCE BEFORE ADJUSTING AND SERVICING

AUGER CLEARANCE

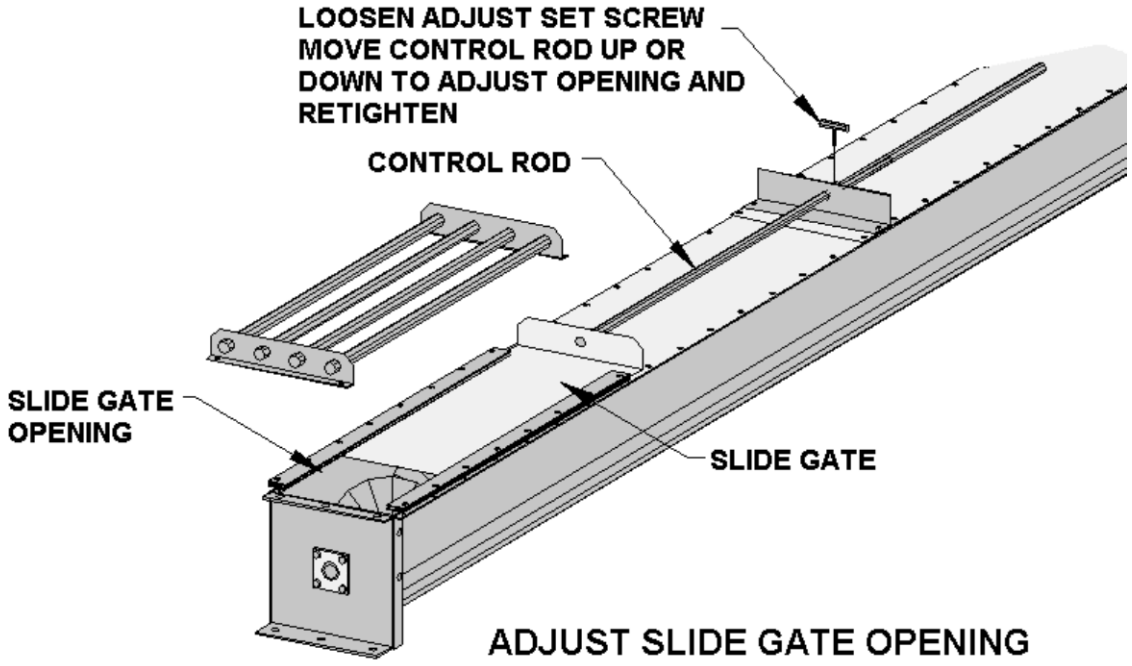
Auger Clearance is critical for satisfactory performance on liquid slurries. Maximum allowable clearance of flighting to trough is 1/8" and high liquid or steep incline applications may have to be within 1/16".

The bearings at both ends of the trough are mounted in vertical slotted holes for adjustment. Adjust the lower Auger end by loosening the (4) 1/2" hex nuts inside the trough end. Move the bearing up or down for proper Auger clearance and retighten nuts.

SLIDE GATE OPENING (OPTIONAL)

The Slide Gate is provided to regulate liquid material flow into the Auger. Adjust the Slide Gate so the motor is not overloaded. To adjust, loosen the set bolt in the Bracket and move Control Rod as required to move the Gate. Retighten the set bolt.

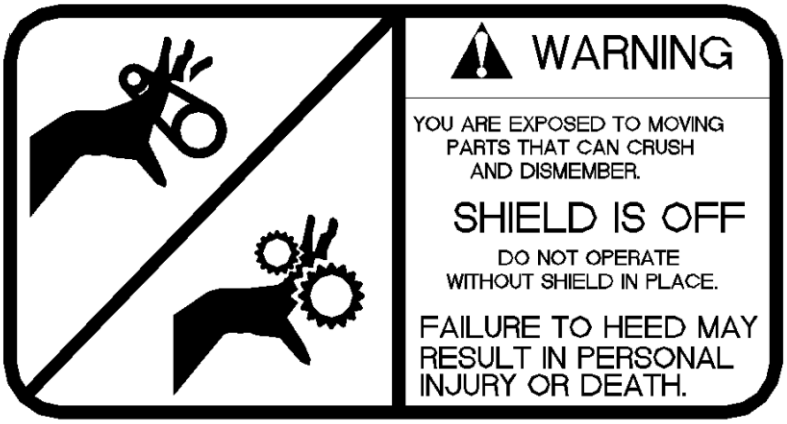
ROLLER CHAIN DRIVE
The Roller Chain slack is adjusted by tilting the Motor up or down with the Motor Plate Adjuster Bolt.



ADJUST SLIDE GATE OPENING

TROUBLESHOOTING

⚠	CAUTION: NEVER ATTEMPT TO CLEAN, ADJUST OR LUBRICATE MACHINE WHILE IT IS IN MOTION.



TROUBLE:	REMEDY:
Motor hums or does not start.	Check fuses. Check & reset motor overload.
Fuses burn out or circuit breakers kick off repeatedly.	Motor overloaded; reduce inlet opening with Slide Gate adjustment. Low voltage or incorrectly wired motor.
Low capacity in liquid manure.	Adjust flight to trough clearance.
Solids stay in reception pit.	Agitate pit before emptying. Low liquid content, add water and agitate.

The listed TROUBLE/REMEDY occurrences is not necessarily all inclusive. If further help is required contact your dealer.

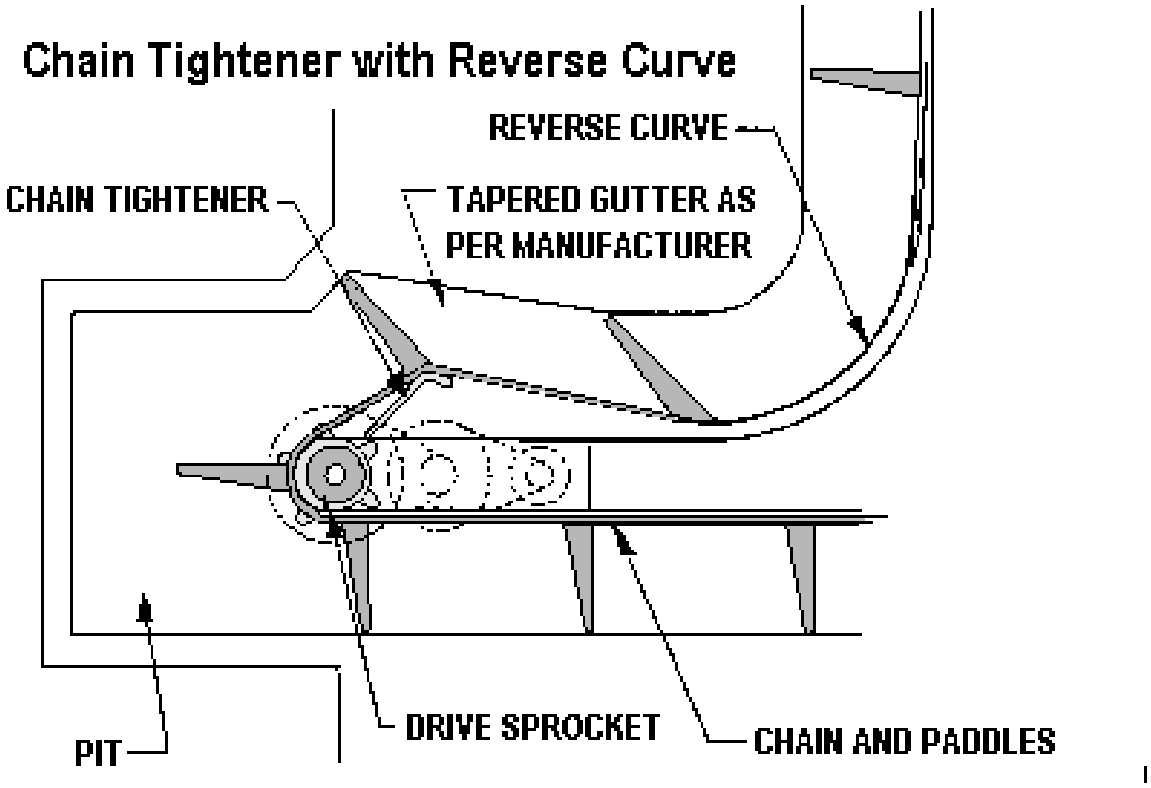
	DANGER: ELECTRICITY CAN KILL, SHOCK OR BURN. DISCONNECT AND LOCK-OUT POWER SOURCE BEFORE SERVICING ELECTRICAL COMPONENTS.

INSTALLATION

BARN CLEANER DRIVE INSTALLATION

Representative dimensioning is provided for concrete details in the following instructions. These dimensions are not intended for construction purposes. Use details as required by the Manufacturer of the drive unit. Consideration should be given to a split chute type gutter on endless chain cleaners so that a reverse curve is not required. Hook link chain cleaners may require a spring-loaded tightener to keep the chain tensioned, which is on the return side of the drive. In these cases a standard return gutter with reverse curb will be required.

Paddle wipers are generally not required on liquid manure applications. They are required on semi-solid and bedded manure. When used with daily haul installations, wipers which clean the paddle on the return side of the drive will have to be modified to eliminate interference with the pit walls under the cleaner. See Barn Cleaner Wiper Modification.

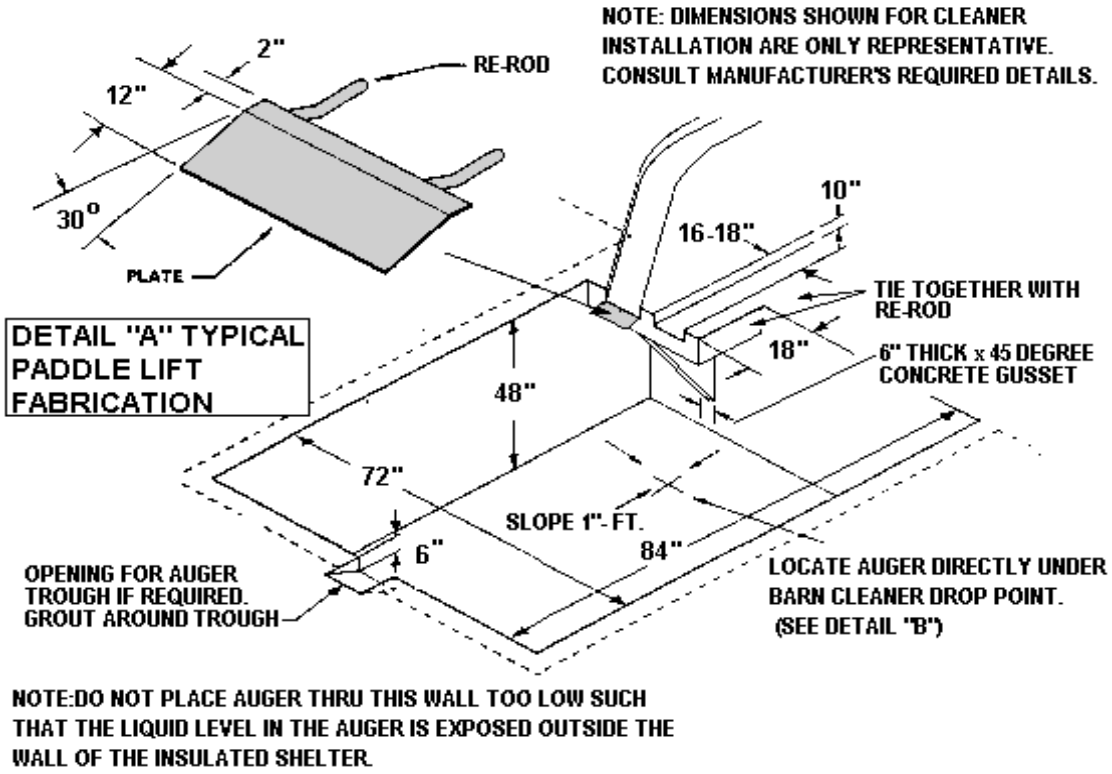


TYPICAL RECEPTION PIT CONSTRUCTION

Limit the area of reception pits to about 8' x 8' so they can be agitated and emptied properly. The depth of the pit will generally be limited by the Auger incline. The Auger inlet is to be located directly under the barn cleaner drop point so the solids are deposited near the inlet.

The Auger Trough should clear the top of the pit where it extends to the outside. Incline the Auger to clear the manure spreader by about 10". If necessary an opening can be provided in the pit wall for the trough to fit through and the trough can then be grouted in. When this is done the insulated wall of the enclosure must be set beyond the pit wall so that the liquid level in the Auger is still inside the enclosure.

NOTE: THE SLURRY LEVEL IN THE AUGER TROUGH MUST BE INSIDE THE INSULATED ENCLOSURE TO PREVENT FREEZING.



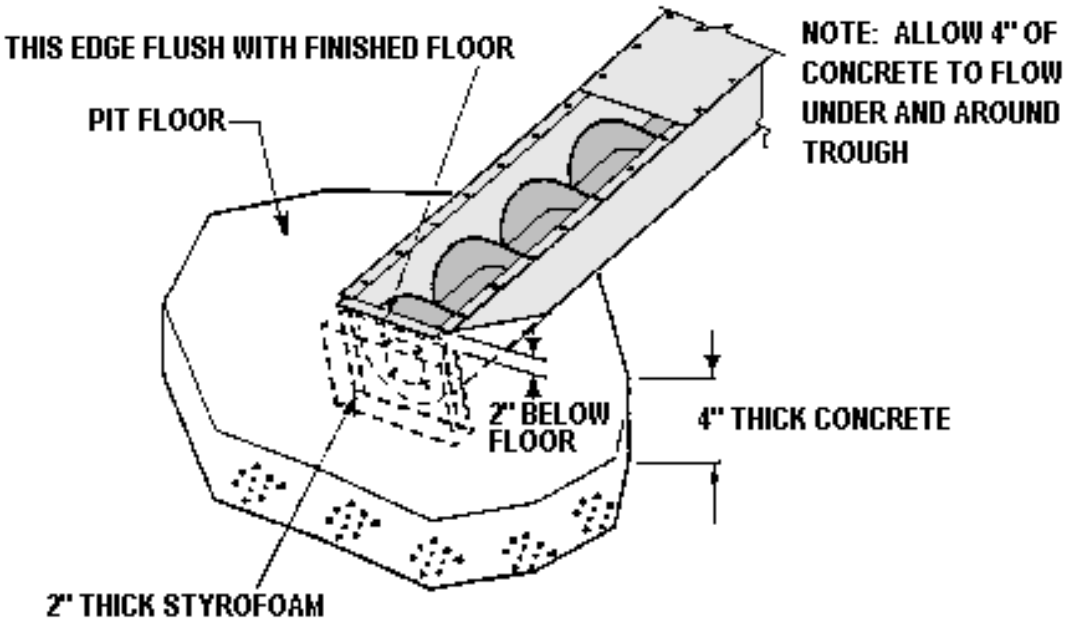
TYPICAL RECEPTION PIT CONSTRUCTION

Extend the gutters into the pit about 18" by building a concrete platform over the pit for mounting the barn cleaner drive. Pour the gutters and platform to conform to the required details of the cleaner Manufacturer.

A barn cleaner paddle lift must also be installed to lift and guide the empty paddles into the return gutter. A typical fabrication is shown in Detail "A".

Pour the walls and the cleaner platform. Then install the Manure Auger by locating the bottom end and supporting the outer end with a suitable stand as indicated in ANCHORING THE AUGER.

Dig the bottom end of the auger down so that the top edge of the trough end will be flush with the finished floor level. Allow 4" of concrete to flow around and under the trough end. See Detail "B". It is also recommended to embed a 2" thick piece of Styrofoam against the idler end of the trough and about 2" below finished floor level. If service is ever required at this location, the concrete can be chipped away and the Styrofoam removed. Pour the floor allowing about 1" per foot of slope from all sides toward the inlet of the auger.



DETAIL "B" AUGER BOTTOM END INSTALLATION

ANCHORING THE AUGER

High torque is encountered and the outer end of the auger must be securely anchored. Bolt the Stand Bracket to (4) of the bolts securing the cover to the trough flanges. Mount the stand as close to the drive as possible and still allow ample room to maneuver a manure spreader under the discharge. Use 1-5/8" minimum OD tubing or pipe for stands 60" or less in length. Use heavier tubing for stands longer. Pour a concrete block of at least 1/3 cubic yard in volume across the base of these stands. It is recommended to pour the top surface of this block 6" above the barn yard level so manure does not accumulate around the stands and create a rusting problem. Also recommended is welding a piece of flat stock to the stands at the base to firmly anchor them in concrete.

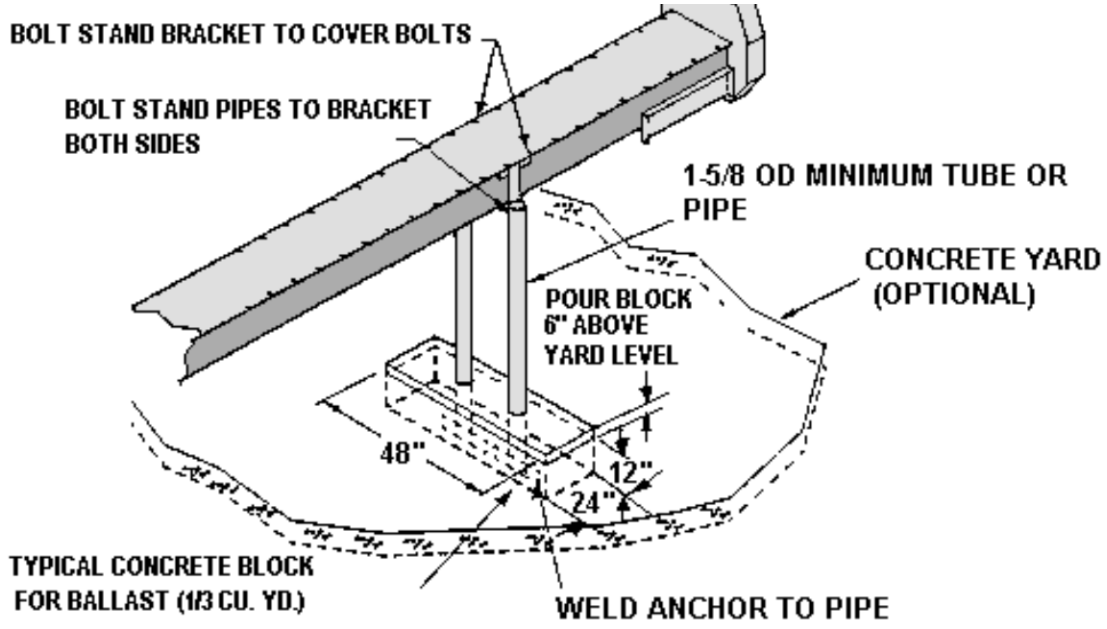
TYPICAL DAILY HAUL PIT CONSTRUCTION

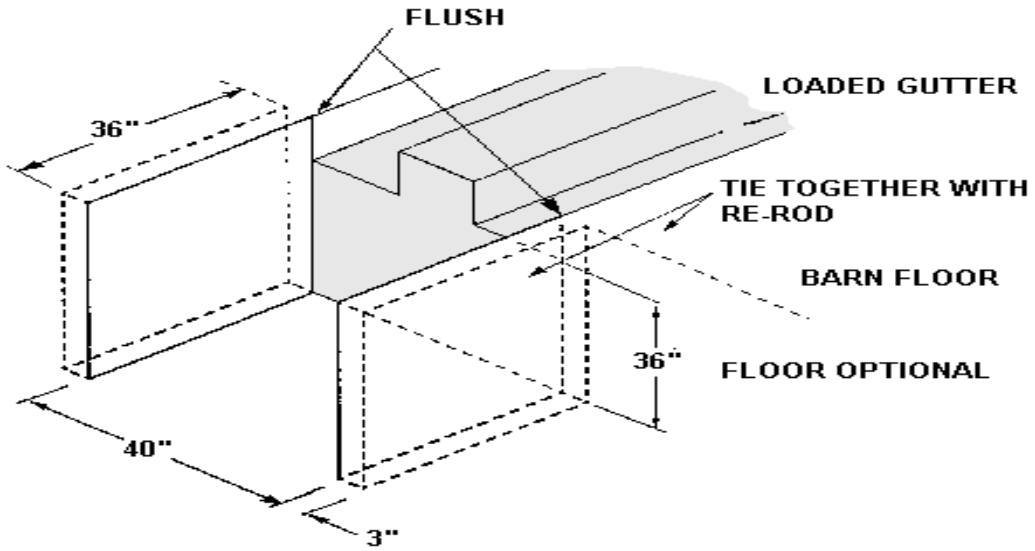
Excavate for a pit below the barn cleaner drop point. Pour the concrete walls of the pit flush with the outer walls of the loaded and return gutters. The depth of this pit should be about 36" from the gutter bottom. The length of the pit should be about 36", but can vary to accommodate the incline of the Auger.

Plan the Auger incline and length for the particular installation.

It is required to install a Safety Plate over the pit opening as described in INSTALLATION OF SAFETY PLATE OVER DAILY HAUL PIT. Generally, the finished level of the pit walls and of the barn floor can be flush so all edges of this plate can be supported on these surfaces. If for any reason all these elevations are not flush or if it is required for the plate to be elevated above this level, pour a concrete curb as required to support this plate.

NOTE: IF A CURB IS REQUIRED TO SUPPORT THE SAFETY PLATE, IT CAN BE POURED WITH WALLS OR ADDED LATER. IF POURED LATER, PLACE RE-ROD IN THE WALLS WITH THE ENDS EXPOSED FOR ATTACHING THE CURB TO WHEN IT IS POURED.

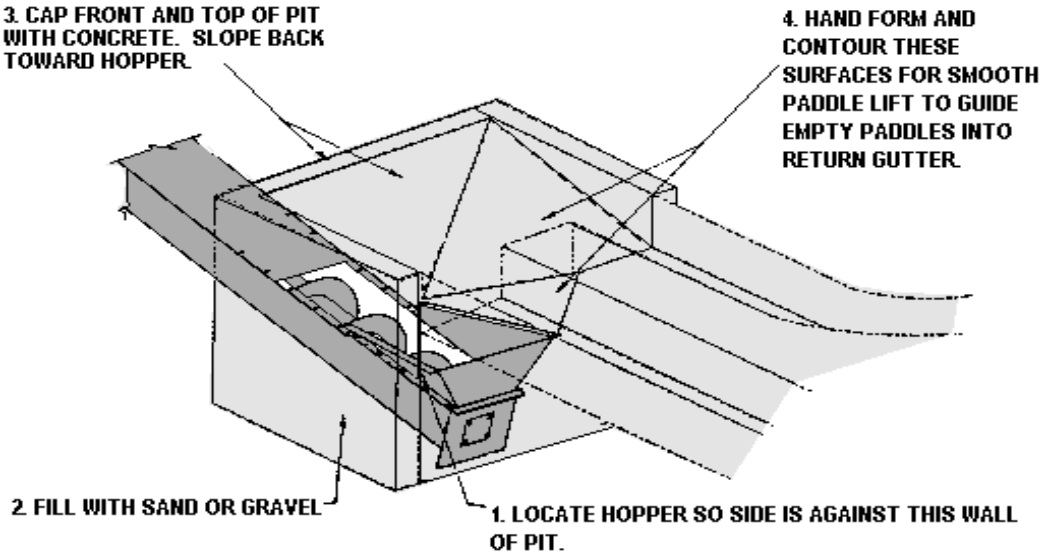




TYPICAL DAILY HAUL PIT CONSTRUCTION

After pouring the walls, place the assembled Auger with Hopper in the pit with the Hopper End tight against the back wall of the pit and with the Hopper Side tight against the pit wall on the loaded gutter side. Support the outer end of the Auger with a suitable stand as indicated in ANCHORING THE AUGER.

DAILY HAUL PIT FINISH DETAILS

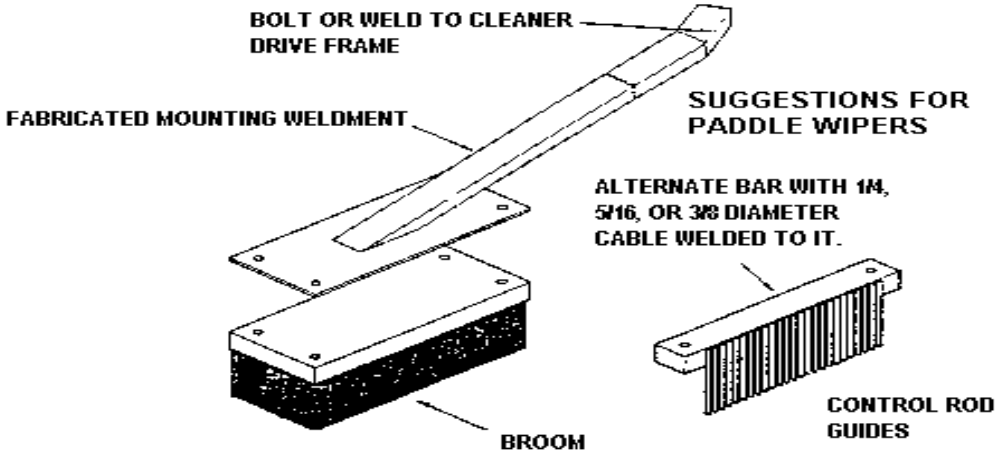


Fill the pit with sand or gravel allowing a 4" concrete cap to be poured over the top and on the front of the pit. Hand form concrete for a smooth and uniform contour from the return gutter to the Hopper Side. This concrete contour serves as the paddle lift to guide the empty paddles into the return gutter. Grout the Hopper flanges to the pit walls and grout the Auger Trough as required.

BARN CLEANER WIPER MODIFICATION

Two types of cleaner paddle wipers will be encountered in the field. One type will clean the paddle on the loaded gutter side and moves on a radius in the same direction as the chain travel. The second type cleans the paddle on the return side of the drive and travels on a radius opposite to chain travel. This type of wiper will interfere with the wall of the small daily haul pit. Two options have been used successfully to solve this problem and are presented for consideration:

BARN CLEANER WIPER MODIFICATION FOR DAILY HAUL PIT



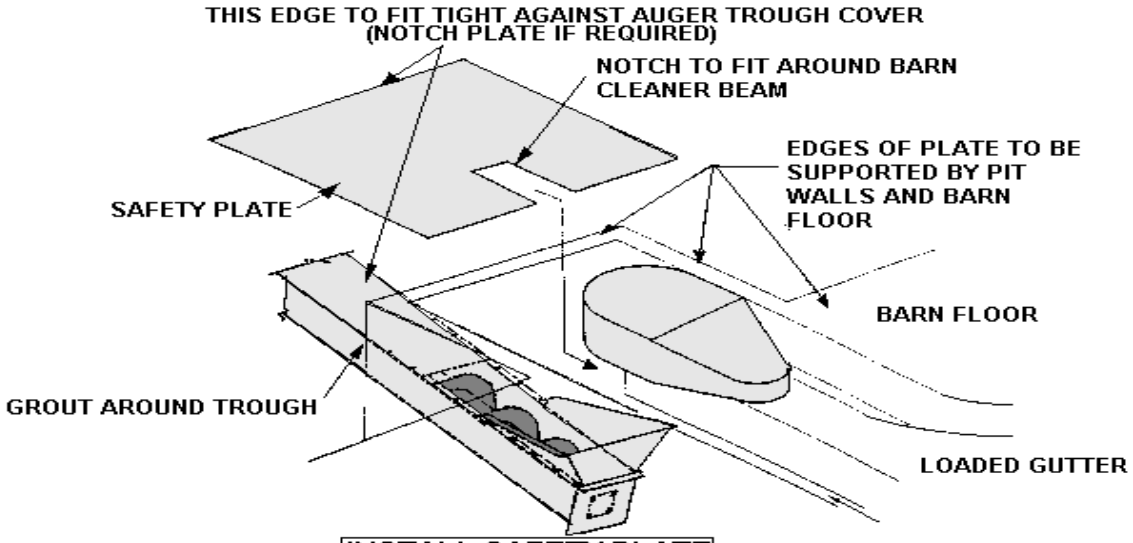
1). Modify the wiper to clean on the loaded side. To do this, weld the mounting to the frame for the wiper on the opposite side of the drive and about 10" further ahead than its original position. Then extend the wiper arm and bend the arm into a radius as required.

2). Discard the Manufacturer's paddle wiper and mount a barn broom on a fabricated bracket which can be welded or bolted to the barn cleaner drive frame. An alternative to the barn broom is a cleaner fabricated from cable as shown in the figure. This cleaner will have longer life and is not as susceptible to clogging up with manure.

SAFETY PLATE INSTALLATION OVER HAUL PIT

⚠	WARNING: AN EXPOSED ROTATING AUGER CAN CRUSH AND DISMEMBER. PROVIDE GUARDING TO COMPLETELY SHIELD AUGER.

A Safety Plate is provided for field installation over the pit opening. Every installation will be different so the protection over the pit must be constructed on the job site. It is the Owner's responsibility to have this protection installed. Ask your dealer for advice and help in constructing.



INSTALL SAFETY PLATE

The notch in the Safety Plate is intended to fit around the barn cleaner drive beam and the opposite edge of the plate must fit tight against the Auger Trough Cover. If the plate is too long, either trim the edge of notch the edge to fit around the trough. The edges of the Safety Plate are to be supported on the walls of the pit and on the barn floor. If the plate must be raised for clearance to the cleaner chain or sprocket or if the finished height of the barn floor and pit walls are not flush, then a concrete curb must be poured around the pit opening for the plate to rest on.

When completed the Safety Plate must completely span the pit opening. It must fit tight against the Auger Trough Cover at one edge and must extend a minimum of 10" past the gutter ends at the opposite edge. Provide some means of holding the Plate in position. It is suggested to use cement anchor bolts or weld angles to the bottom side of the plate that fit inside the pit walls to keep the plate from shifting.

IMPORTANT: IF THE PLATE IS NOT WIDE ENOUGH OR LONG ENOUGH, WELD EXTENSIONS TO THE PLATE OR FABRICATE A NEW PLATE. IF NECESSARY, TORCH OPENINGS AND NOTCHES TO FIT AROUND OBSTACLES AS REQUIRED.

Install all barn cleaner covers and guards as provided by the Manufacturer.

OUTSIDE RAILING GUARD

It is advised but not required to construct a pipe rail guard or fence guard around the Auger to keep cattle from crowding against and over the Auger in the barnyard if cattle are allowed in this area.

VENTILATION

All liquid manure pits must be ventilated by forced air. Install fans to draw gases out of the pit area and replace with fresh air. Operate fans continuously.

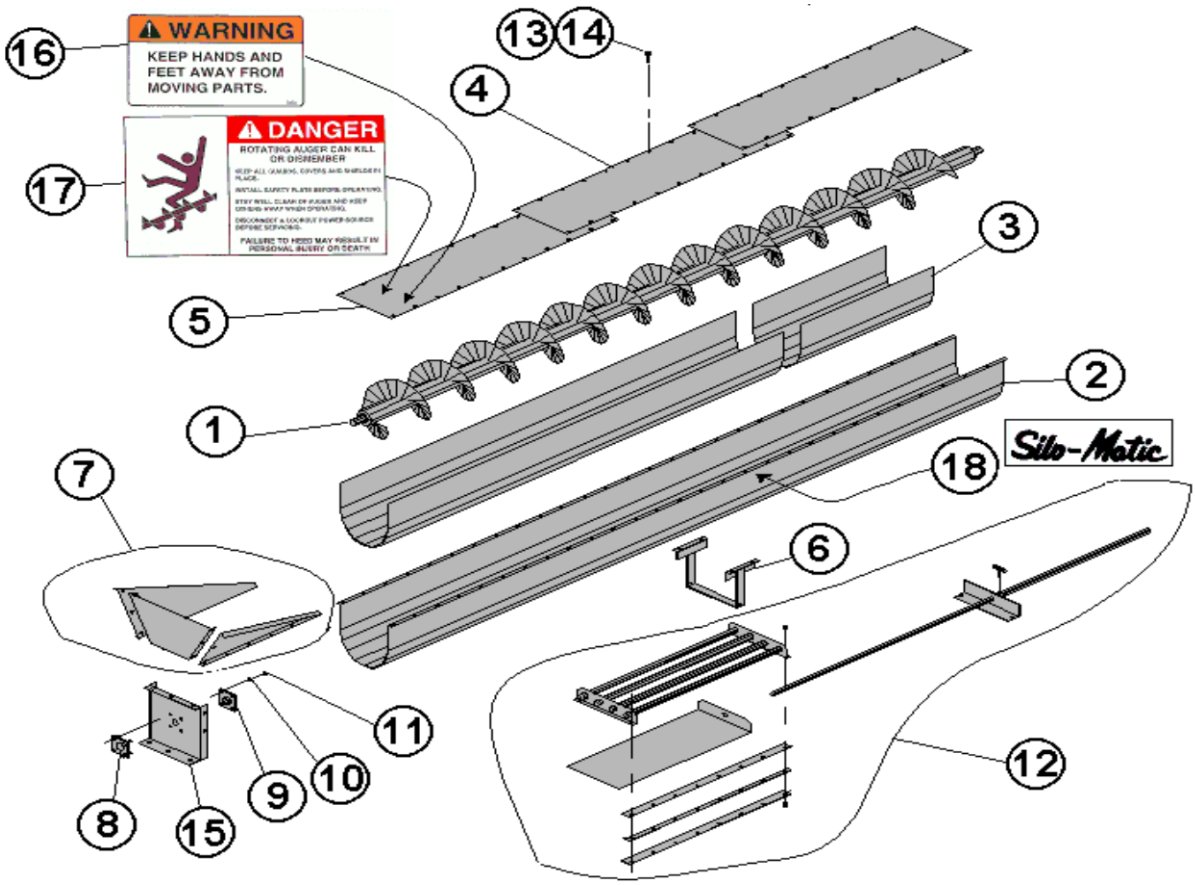
OTHER SAFETY

⚠ CAUTION: STORAGE PITS MUST BE GUARDED AGAINST ENTRY BY ENCLOSURE IN A LOCKED ROOM OR BY A BARRIER TO EXCLUDE CHILDREN AND LIVESTOCK OR OTHER PERSONS.

A grill cover is provided for installation over the auger opening when used in a liquid manure pit. Be sure to install this cover as illustrated.

REPAIR PARTS

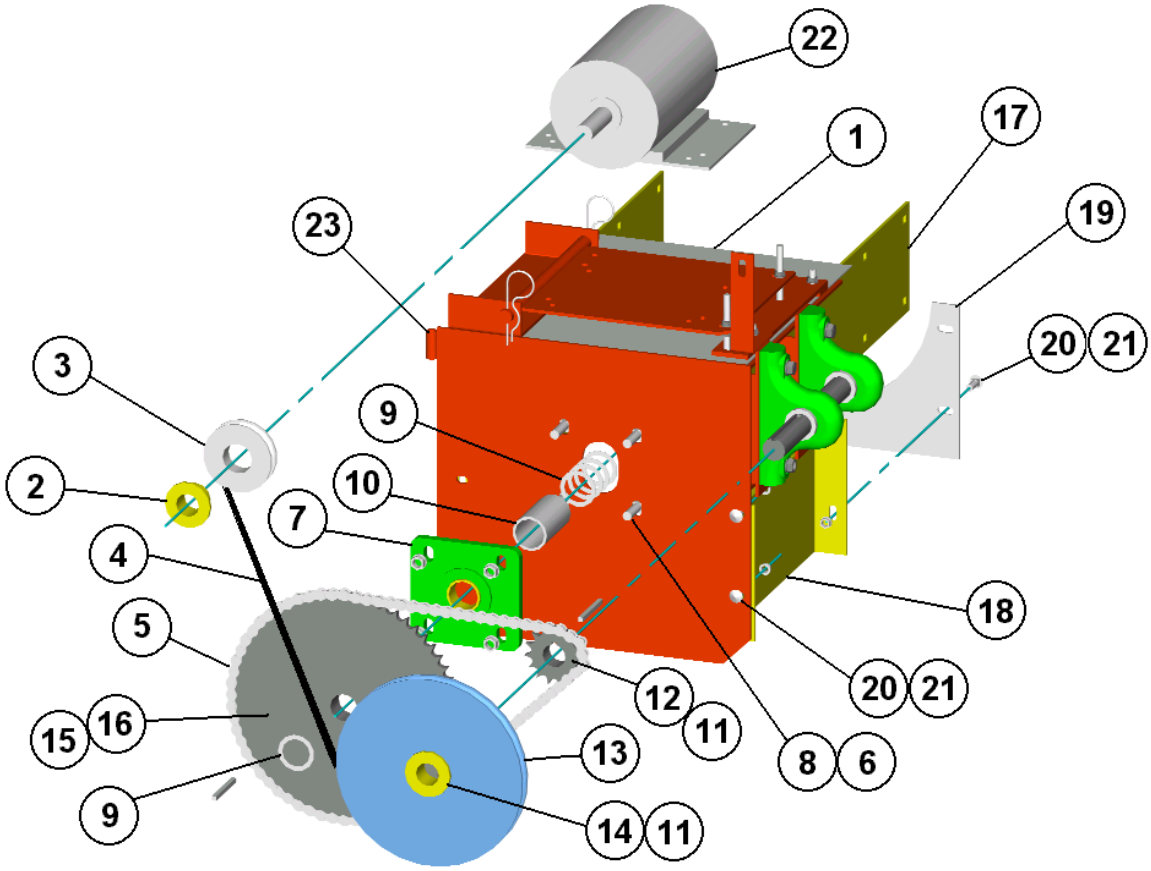
SILO-MATIC MANURE AUGER TROUGH & AUGER ASSEMBLY



PC	PART #	DESCRIPTION	QT
1	W0855	Auger, 14' 165.00"	1
	W0856	Auger, 16' 189.00"	
	W0857	Auger, 18' 213.00"	
	W0858	Auger, 20' 237.00"	
	W0923	Auger, 22' 261.00"	
	W0924	Auger, 24' 285.00"	
2	W0859-G	Trough Weldment, 14' Galv.	1
	W0859-S	Trough Weldment, 14' SS	
	W0860-G	Trough Weldment, 16' Galv.	
	W0860-S	Trough Weldment, 16' SS	
	W0861-G	Trough Weldment, 18' Galv.	
	W0861-S	Trough Weldment, 18' SS	
	W0862-G	Trough Weldment, 20' Galv.	
	W0862-S	Trough Weldment, 20' SS	
	W0950-G	Trough Weldment, 22' Galv.	
	W0950-S	Trough Weldment, 22' SS	
	W0951-G	Trough Weldment, 24' Galv.	
	W0951-S	Trough Weldment, 24' SS	
3	M4525-xx	Poly Liner for Trough (xx size	1
4	M4487	Standard Cover - 5' Galv. (14-18' uses 2, 20-22' uses 3, 24' uses 4)	

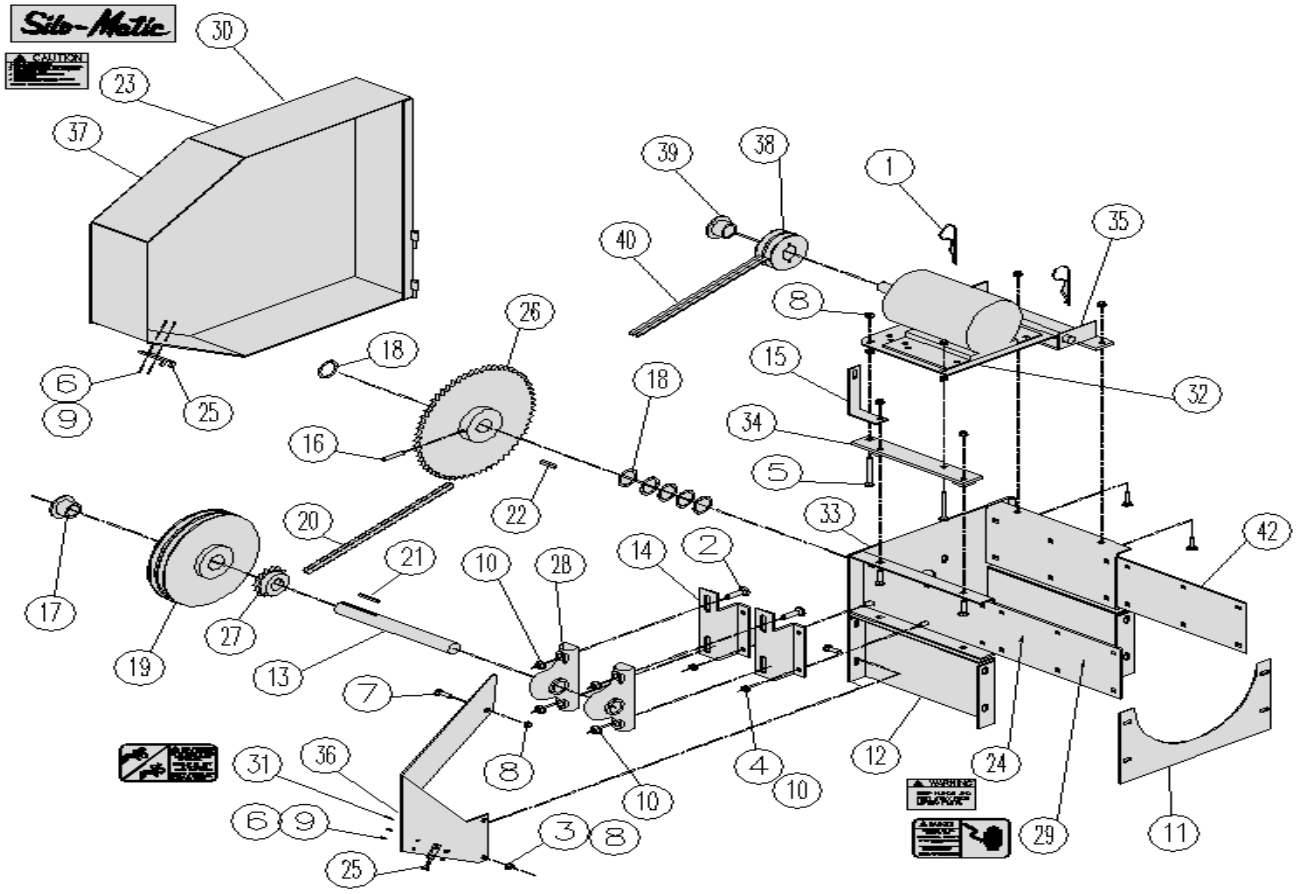
PC	PART #	DESCRIPTION	QT
5	M4488	Trough Cover - 14' Galv. 8"	1
	M4489	Trough Cover - 16' Galv. 32"	
	M4490	Trough Cover - 18' Galv. 56"	
	M4491	Trough Cover - 20' Galv. 20"	
	M4786	Trough Cover - 22' Galv. 44"	
	M4488	Trough Cover - 24' Galv. 8"	1
6	W0868	Support Stand	1
7	5237X	Hopper Assembly	1
8	W0867	Bearing Plate	1
9	M4508	Bearing, Idler End	1
10	G103323	Washer, 1/2" Lock	4
11	G120378	Nut, 1/2" Hex	4
12	5326X	Slide Gate Assembly	1
13	G126227	Carriage Bolt, 3/8NC x 3/4"	AR
14	G9411507	Nut, 3/8NC Serrated Flange	AR
15	W0866	Lower Trough End	1
16	S0935	DECAL: Warning Keep Hands	1
17	S1182	DECAL: Rotating Auger	1
18	S1195	Decal, Silo-Matic	

SILO-MATIC MANURE AUGER DRIVE ASSEMBLY



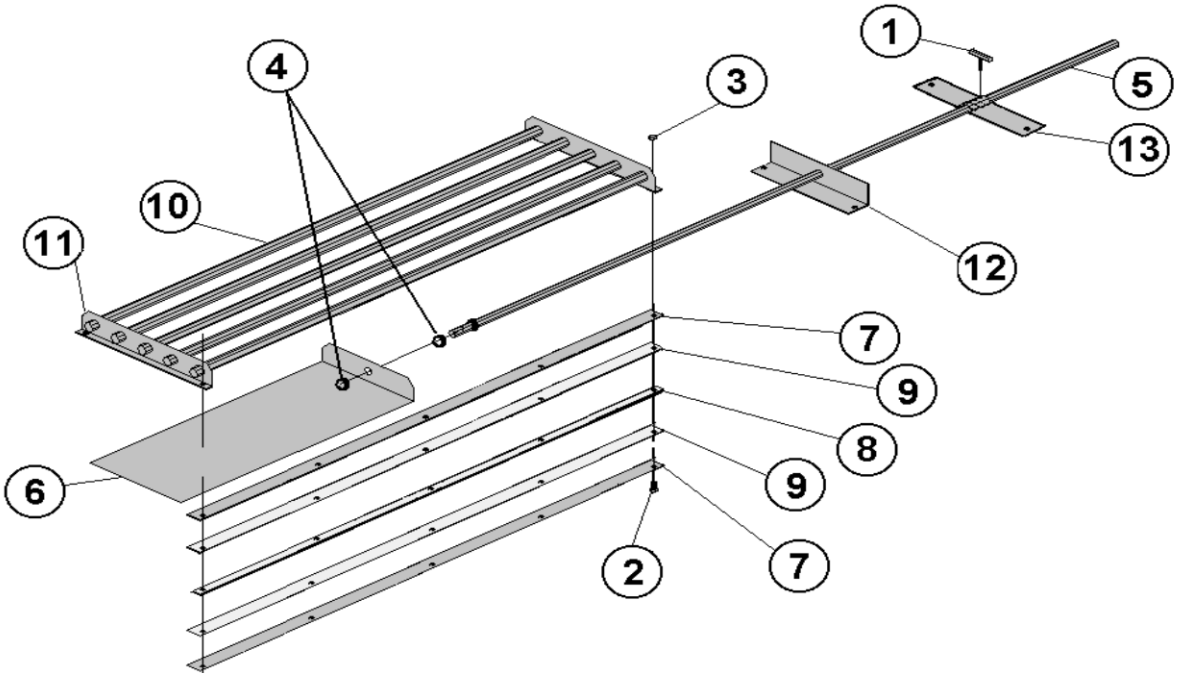
PC	Part #	Description	Qt		PC	Part #	Description	Qt
1	M4916	14 " x 16" Galvanized Top Plate	1		11	S0690	Key, 1/4" Square x 1-1/2"	2
2	S0263-3	Taper Hub H x 1-1/8	1		12	S1071	Sprocket, 50B15 x 1.25"(2)	1
	S0263-5	Taper Hub H x 1-3/8			13	S0407	Sheave, 2BK100H 9.75"OD	1
3	S0981	Sheave, 2BK36H	1		14	S0263-4	Taper Hub H x 1-1/4	1
4	S0788	Belt B-46, MA	2		15	S1067	50B60 x 1.5" Bore Sprocket	1
5	S0012	#50 Roller Connect Link	1		16	S0780	Key, Square 3/8 X 3/8 X 1 1/2"	1
	S0013	#50 Roller Offset Link			17	M4511	Connector Plate	2
	S0559-03	Chain, #50 Roller 47.00"			18	M4505	Outlet Side	2
6	G9415187	Nut, 1/2NC Serrated Flange	12		19	M4504	Outlet End	1
7	S0715	Bearing, 4 Bolt Flange	1		20	G9411507	Nut, 3/8NC Serrated Flange	AR
8	G120917	Carriage Bolt, 1/2nc x 1-1/2" G5	4		21	G126227	Carriage Bolt, 3/8NC x 3/4"	AR
9	S0269-01	Mach. Bushing 1-1/2" x 18 ga.	10		22	N/A	Motor 5hp -10hp	1
10	M4915	Bushing, 1.90 x 1.61 x 3 5/8"	1		23	N/A	5411X Drive (See Next Page)	

SILO-MATIC MANURE AUGER DRIVE MOUNT

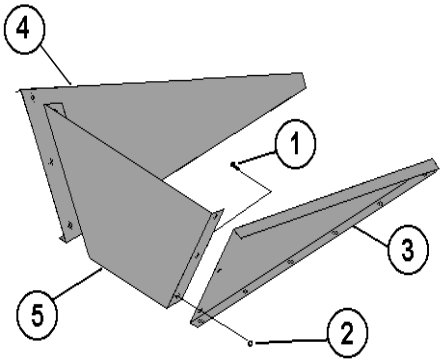


PC	PART #	DESCRIPTION	QT	PC	PART #	DESCRIPTION	QT
1	G103409	Cotter Pin, 3/16 x 1 1/2"	2	22	S0780	Key, Square 3/8" x 1 1/2"	1
2	G109136	CrgBolt, 1/2-13NC x 1 1/2" SS	4	23	S0934	Decal, Caution-Failure To	1
3	G120915	Carriage Bolt, 3/8NC x 1" ZP	1	24	S0935	Decal, Warning-Keep Hands	1
4	G126402	Carriage Bolt, 3/8NC x 1-1/4" G5	3	25	S1066	Rubber Latch Clamp	1
5	G126422	CrgBolt, 3/8NC x 3 Full Thread	2	26	S1067	Sprocket, 50B60 x 1.5"(2) Setscrew	1
6	G132830	MachScrew, #10-24 x 3/8" RH	4	27	S1071	Sprocket, 50B15 x 1-1/4" Bore	1
7	G180122	HHCS 3/8NC x 1" G5 ZP	1	28	S1143	Bearing, Pillow Block 1 1/4"	2
8	G9411507	Nut, 3/8NC Serrated Flange	11	29	S1181	Decal, Electrical Hazard	1
9	G9411807	Nut, #10-24 Serrated Flange	4	30	S1195	Decal, Silo-Matic (3.25 x 11.5)	1
10	G9415187	Nut, 1/2NC Serrated Flange	4	31	S1201	Decal, Shield, Protection 3 x 4	1
11	M4504	Outlet End	1	32	W0864	Motor Mount Weldment	1
12	M4505	Outlet Side	2	33	W0964	Trough End, Upper	1
13	M4954	Jack Shaft	1	34	W0965	Motor Mount Adj. Weldment	1
14	M4955	Bearing Mount	2	35	W0966	Motor Mount Pivot Weldment	1
15	M4964	Shield Support Bracket	1	36	W0967	Shield Filler Weldment	1
16	S0224	Roll Pin, 3/8 x 2"	1	37	W0968	Drive Shield Weldment	1
17	S0263-4	Taper Hub H x 1-1/4	1	38	S0981	Sheave 2BK36H	1
18	S0269-01	Bushing, Machine 1-1/2 x 18Ga	6	39	S0263-3	Taper Hub H x 1-1/8	1
19	S0407	Sheave, 2BK100H 9.75" OD	1	40	S0788	Belt B-46	2
20	S0559-03	Chain, #50 Roller	1	41	G126227	Carriage Bolt, 3/8NC x 3 /4	8
21	S0690	Key, 1/4" Square x 1-1/2"	1	42	M4511	Connector Plate	2

SILO-MATIC 5326X SLIDE GATE ASSEMBLY

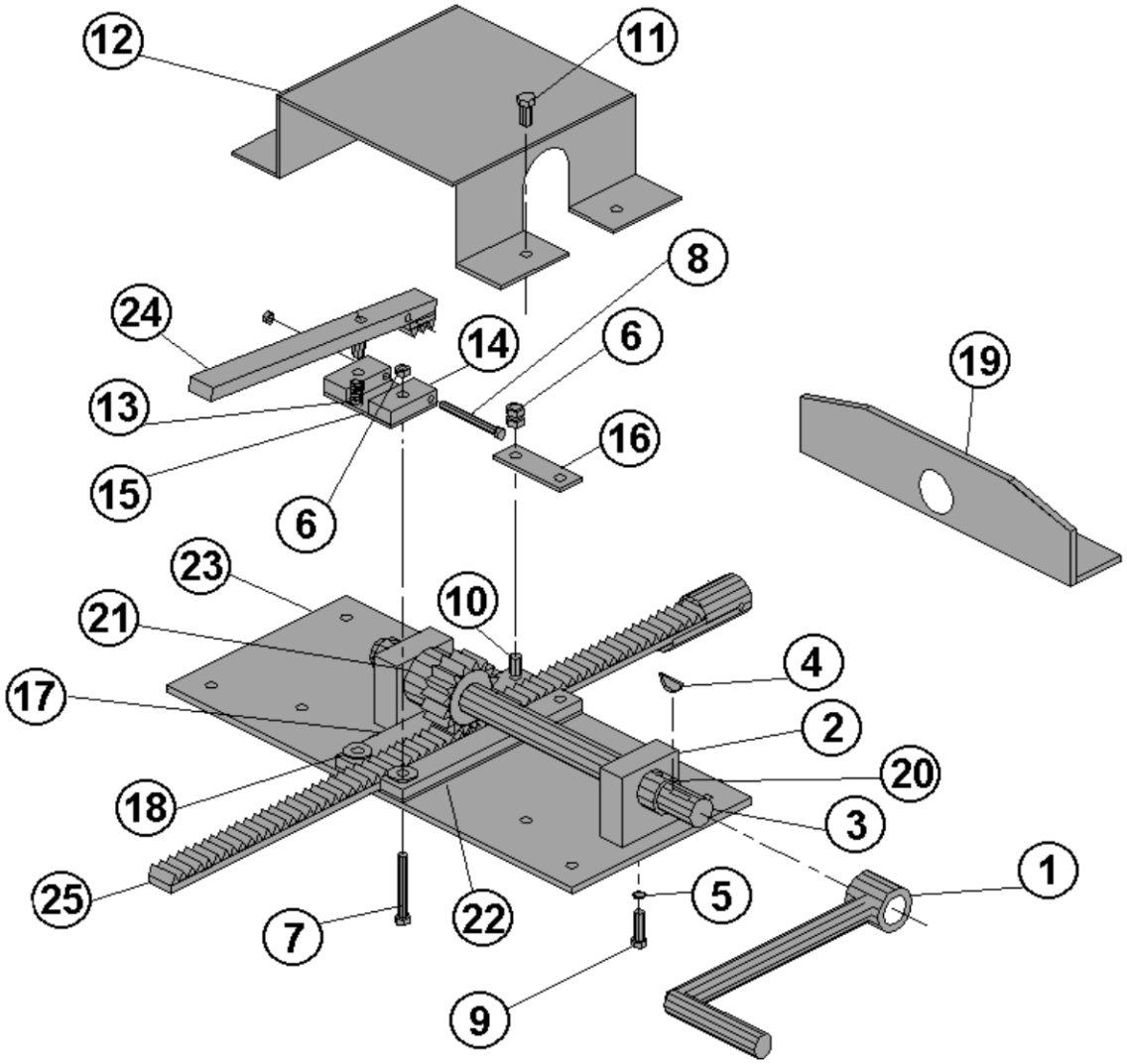


PC#	PART #	DESCRIPTION	QTY
1	40043	Set Screw Handle Assembly	1
2	G126402	CrgBolt, 3/8NC x 1-1/4" G5 ZP	20
3	G9411507	Nut, 3/8NC Serrated Flange	10
4	G9416452	Nut, 3/4NC Hex Centerlock	2
5	M4518-xx	Slide Rod Specify Size	1
6	M4519	Slide, Metal	1
7	M4520	Slide Guard, Galvanized	8
8	M4521	Spacer, Slide, Poly 3/8”	2
9	M4521-01	Spacer, Slide, Poly 1/8”	4
10	M4522	Grill Rod	5
11	M4523	Grill Support	2
12	M4774	Rod Guide	1
13	W0869	Slide Lock Weldment	1



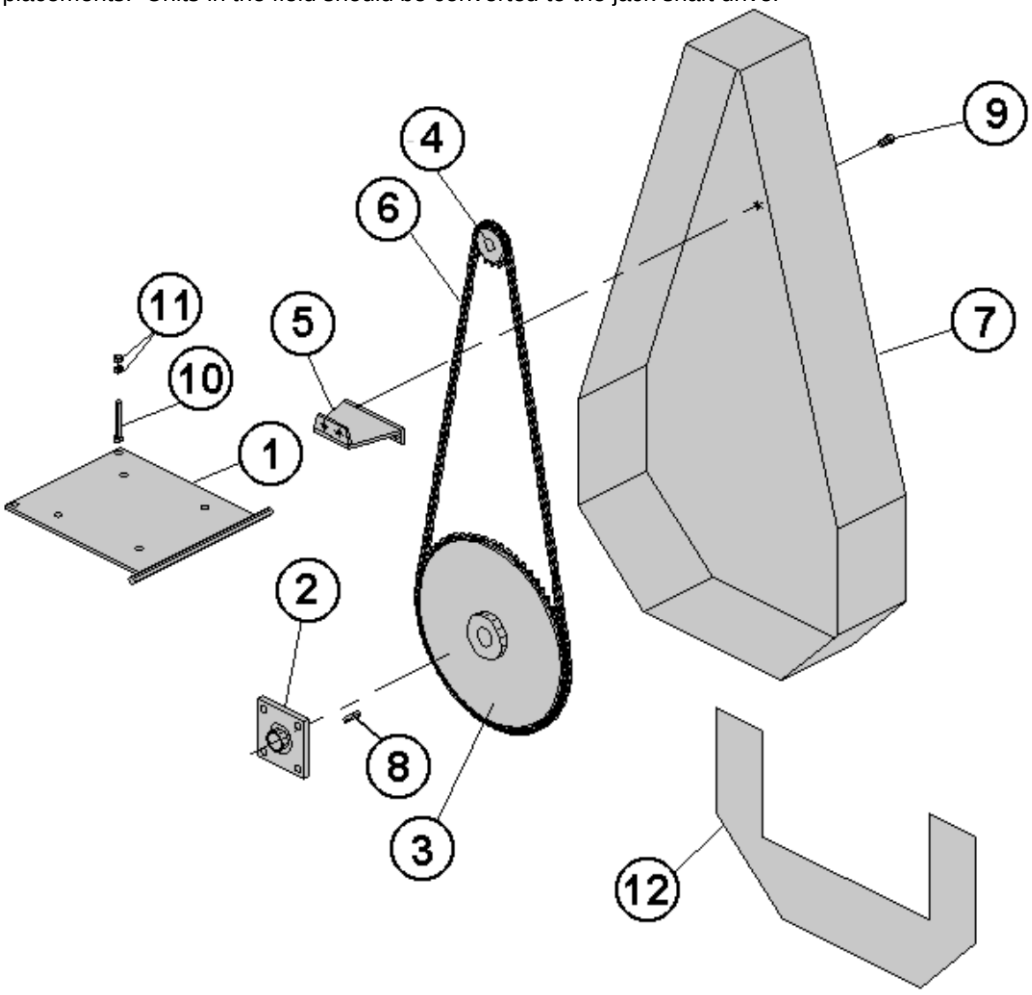
SILO-MATIC 5237X HOPPER ASSEMBLY			
PC #	PART #	DESCRIPTION	QTY.
1	G126227	Carriage Bolt, 3/8NC x 3/4"	6
2	G9411507	Nut, 3/8NC Serrated Flange	6
3	M4493	Hopper Side R.H.	1
4	M4494	Hopper Side L.H.	1
5	M4495	Hopper End	1

SILO-MATIC 5325X MANUAL POWER SLIDE



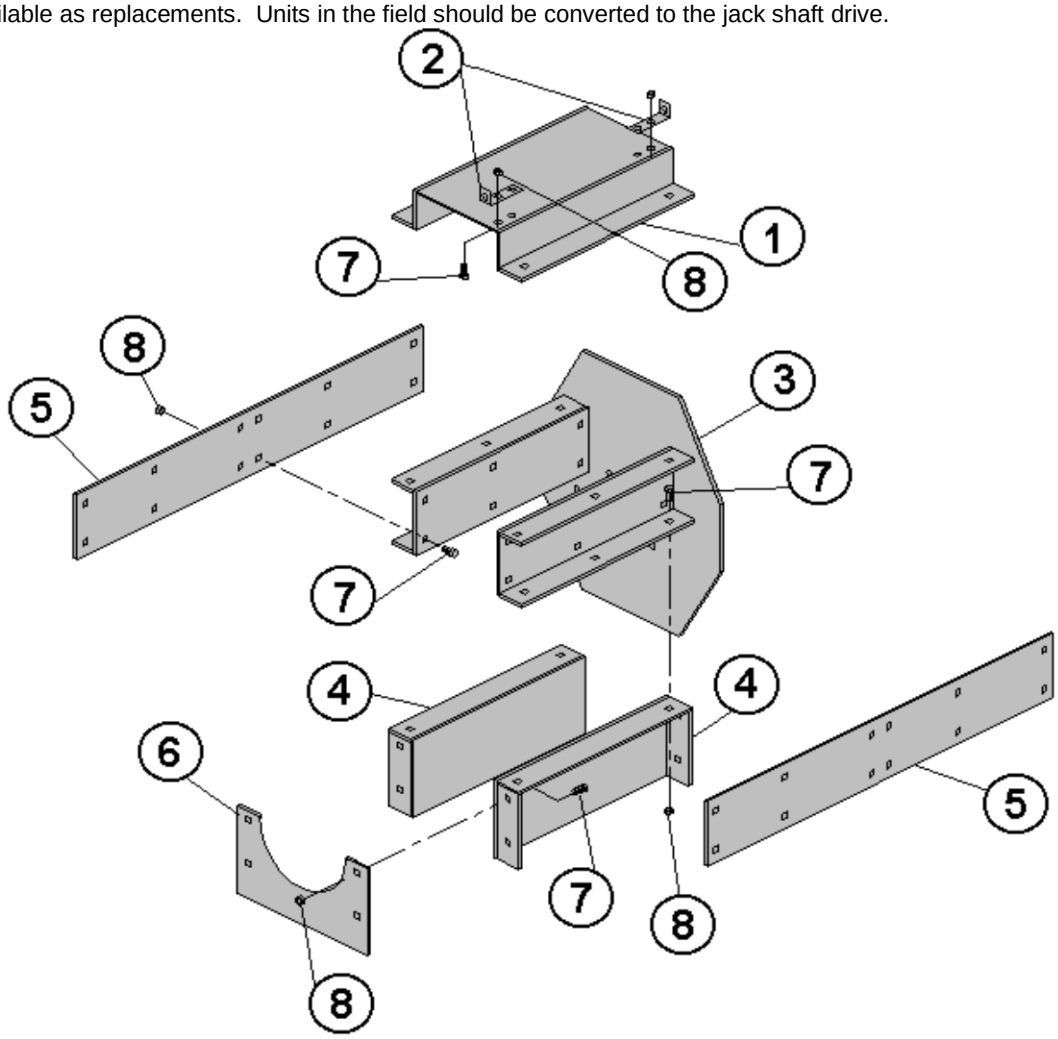
PC	PART #	DESCRIPTION	QT		PC	PART #	DESCRIPTION	QT
1	A0051	Crank	1		14	M4760	Pivot Block	2
2	A0626	Shaft Block	2		15	M4761	Slide Keeper, Large	1
3	A0627	Pinion Gear Shaft	1		16	M4762	Slide Keeper, Small	1
4	G106751	Woodruff Key, #9	1		17	M4765	Spacer Bar	2
5	G120214	Washer, Lock 5/16" ZP	4		18	M4767	Special Washer,5/16" Flat	2
6	G120376	Nut, 5/16NC Hex ZP	4		19	M4774	Rod Guide	1
7	G120696	HHCS 5/16NC x 2 1/4"	2		20	S0793	Set Collar, 3/4"	2
8	G121966	HHCS 1/4NC x 2 1/2"	1		21	S0798	Spur Gear 12 Pitch, 21 Tooth	1
9	G122017	HHCS 5/16NC x 1" G5	4		22	S0855	UHMW Strip	1
10	G122040	HHCS 5/16NC x 1 1/2"	2		23	W0917	Mounting Plate w/Spacers	1
11	G180120	HHCS 3/8NC x 3/4" G5	4		24	W0918	Stop Lever	1
12	M4756	Cover, Power Slide	1		25	W0919	Connecting Gear Rod	1
13	M4757	Stop Lever Spring,3/4"	1					

Silo-Matic DRIVE ASSEMBLY PRIOR TO 1991 (for reference only.) Not all parts are available as replacements. Units in the field should be converted to the jack shaft drive.



PC #	PART #	DESCRIPTION	QTY
1	W0864	Motor Mount Weld	1
2	S0715	Upper Bearing	1
3	S0752	Sprocket 50B96	1
4	S0751	Sprocket, 50B15	1
5	M4506	Bracket, Chain Guard	1
6	S0559	Chain, #50 Roller	AR
7	W0863	Chain Guard	1
8	S0780	Key, 3/8" x 3/8" x 1-1/2"	1
9	G9415187	3/8NC x 3/4" Bolt	2
10	G122119	Full Thread Hex Bolt 3/8NC x 2-1/2"	1
11	G120377	3/8NC Hex Nut	2
12	M4818	Filler Plate	1

Silo-Matic DRIVE MOUNT ASSEMBLY PRIOR TO 1991 (for reference only.) Not all parts are available as replacements. Units in the field should be converted to the jack shaft drive.



PC #	PART #	DESCRIPTION	QTY
1	M4510	Motor Mount Base	1
2	M4509	Motor Mount Pivot	2
3	W0865	Upper Trough End (obsolete)	1
4	M4505	Outlet Side	2
5	M4511	Connector Plate	1
6	M4504	Outlet End	1
7	G126227	3/8NC x 3/4" Carriage Bolt	36
8	G9411507	3/8NC Serrated Flange Nut	36