



ALAMO INDUSTRIAL

PO BOX 549
SEGUIN TX 78156-9967

Please fold (do not tear), tape, and drop in any mailbox.

**PLEASE FILL OUT OWNER WARRANTY REGISTRATION INFORMATION
SIGN, AND DROP LAST COPY IN ANY MAILBOX.**

IMPORTANT!
**TO PLACE THIS WARRANTY IN EFFECT,
THIS WARRANTY REGISTRATION MUST BE
FILLED OUT, SIGNED, AND MAILED WITHIN 30
DAYS OF DELIVERY DATE OF THIS MACHINE.
DEALER AND PURCHASER MUST SIGN.**

**ATTENTION: ANY CLAIM SUBMITTED TO ALAMO INDUSTRIAL®
WILL BE REFUSED UNTIL COMPLETED, SIGNED
WARRANTY REGISTRATION CARD IS ON FILE.**

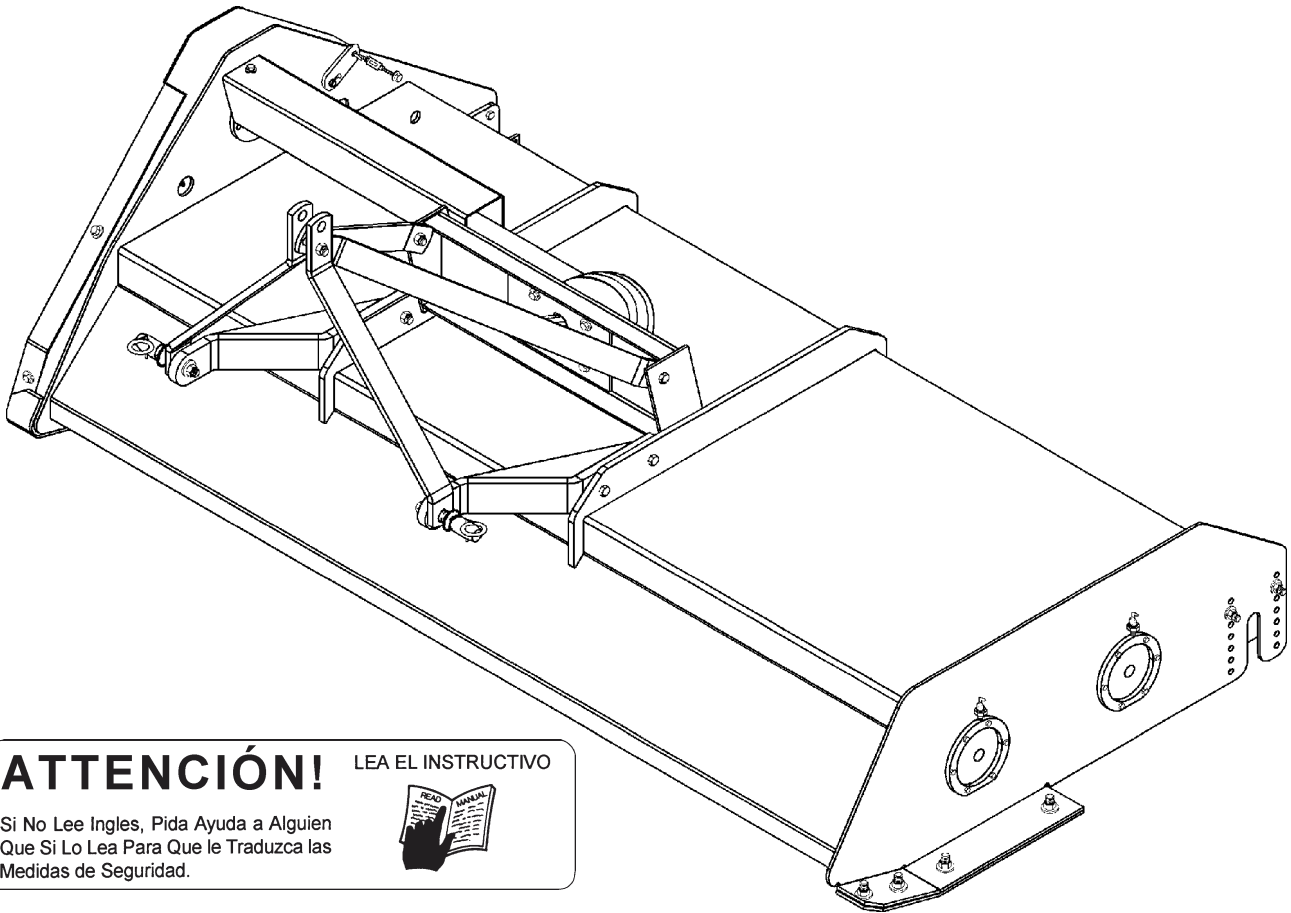


Grass Gator

Twin-Flail Mulching Mower

Rev 03-13

P/N 02970565



ATENCIÓN!

LEA EL INSTRUCTIVO

Si No Lee Ingles, Pida Ayuda a Alguien
Que Si Lo Lea Para Que le Traduzca las
Medidas de Seguridad.



OPERATOR'S MANUAL with PARTS LISTING

ALAMO INDUSTRIAL

1502 E. Walnut
Seguin, Texas 78155
830-372-9595



BUILT SHARPER®

An Alamo Group Company

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TO THE OWNER/OPERATOR/DEALER

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.


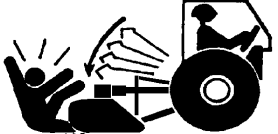
BEFORE YOU START!!

Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!



DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.

| | | | |
|---|--|---|---|
| <p>1. </p> | <p>2. NO RIDERS, NO CHILDREN OPERATORS </p> | <p>3. USE SAFETY SHOES, HARD HAT, SAFETY GLASSES, SEAT BELTS, & ROPS </p> | <p>4. BLOCK UP SECURELY BEFORE WORKING UNDER. </p> |
|---|--|---|---|

1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor & flail mower to prevent misuse, abuse, & accidents. Practice before operating mower in a confined area or near passersby.

- Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children.

2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause serious injury or death from being runover by tractor or mower or contact with Flail Mower Blades.

3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent injury and possible death from falling off or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, and Ear Plugs are recommended.

4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain that area is clear before lowering or folding.

5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding implements. Slow down when turning and on hillsides.

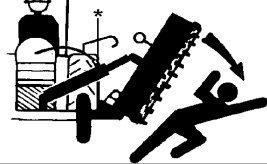
- Install **Restrictor in folding circuit to slow down lowering and unfolding if action is faster than is desirable.

6. Make certain that SMV sign, Warning Lights, and Reflectors are clearly visible. Follow local traffic codes.

7. Never operate with Flail Mower or Folding Section raised if passersby, bystanders or traffic are in the area to reduce possibility of injury or death from objects thrown by Blades under Shields or implement structure.

8. Before dismounting, secure flail mower in transport position or lower to ground.

- Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent entanglement in rotating parts which may cause injury or death.
- Never mount or dismount a moving vehicle. Crushing from runover may cause injury or death.

| | | | |
|--|--|---|--|
| <p>5. TRANSPORT SAFELY, LOCK UP. </p> | <p>6. USE SMV, LIGHTS, & REFLECTORS. </p> | <p>7. DONOT OPERATE WITH MOWER OR WING RAISED. </p> | <p>8. DO NOT MOUNT OR DISMOUNT WHILE MOVING. </p> |
|--|--|---|--|

002369

WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it to within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain.

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SAFETY SECTION

SAFETY

A safe and careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this implement. This equipment should only be operated by those persons who have read the Manual, who are responsible and trained, and who know how to do so safely and responsibly.

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: **“ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!”** The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment..

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.

CAUTION!

The lowest level of Safety Message; warns of possible injury. Decals located on the Equipment with this Signal Word are Black and Yellow.



WARNING!

Serious injury or possible death! Decals are Black and Orange.



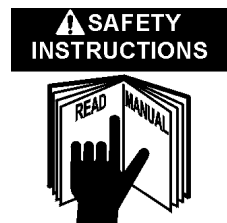
DANGER!

Imminent death/critical injury. Decals are Red and White. (SG-1)



READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards.

(SG-2)

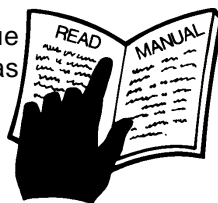


SAFETY

PELIGRO!



Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

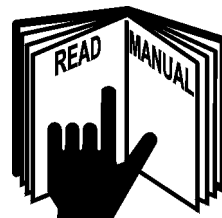


¡LEA EL INSTRUCTIVO!

DANGER!



Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel too operate the Tractor and Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SG-4)



WARNING!

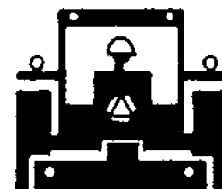


Always maintain the safety decals in good readable condition. If the decals are missing, damaged, or unreadable, obtain and install replacement decals immediately. (SG-5)

WARNING!



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



WARNING!



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)



WARNING!

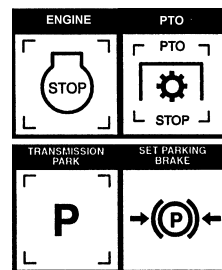


Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)

DANGER!



BEFORE leaving the tractor seat, always engage the brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



DANGER!



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



SAFETY

DANGER!



Never allow children to operate or ride on the Tractor or Implement. (SG-11)



WARNING!



Do not mount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



DANGER!



Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



DANGER!



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



DANGER!



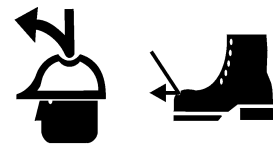
Do not operate this Equipment with hydraulic oil leaking. Oil is expensive and its presence could present a hazard. Do not check for leaks with your hand! Use a piece of heavy paper or cardboard. High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



WARNING!



The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items thrown by the equipment. (SG-16)



SAFETY

CAUTION!



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. *Note:* Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery. (SG-17)



WARNING!

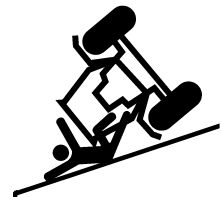


Transport only at safe speeds. Serious accidents and injuries can result from operating this equipment at unsafe speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the safe transport speeds for you and the equipment. Make sure you abide by the following rules:

1. Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum safe transport speed for you and this Equipment.
2. Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum safe turning speed for you and this equipment before operating on roads or uneven ground.
3. Only transport the Tractor and Implement at the speeds that you have determined are safe and which allow you to properly control the equipment.



Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

WARNING!



Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. Make sure the tractor engine is off before working on the Implement.

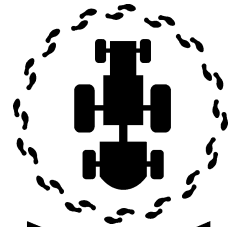
(SG-20)

SAFETY

WARNING!



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



WARNING!



Always read carefully and comply fully with the manufacturers instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)



DANGER!



Never run the tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

DANGER!



KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death. (SG-24)



DANGER!



Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Children can cause the Implement to shift or fall crushing themselves or others. (SG-25)

WARNING!



Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)

DANGER!



NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. **NEVER** knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



SAFETY

DANGER!



Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)

WARNING!

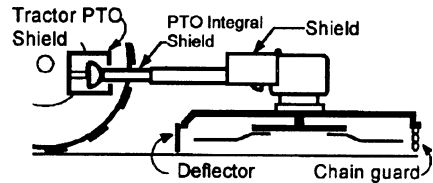


Mow only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never mow in darkness or foggy conditions where you cannot clearly see at least 100 yards in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see this type of items discontinue mowing. (SGM-1)

DANGER!



All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Chain Guards, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SGM-3)



DANGER!



The rotating parts of this machine have been designed and tested for rugged use. However, the blades could fail upon impact with heavy, solid objects such as metal guard rails and concrete structures. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the cutting blades to contact such obstacles. (SGM-4)

WARNING!



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing. (SGM-5)



WARNING!



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items. (SGM-6)

SAFETY

WARNING!



Mow at the speed that you can safely operate and control the tractor and mower. Safe mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 0 to 5 mph. Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-7)

WARNING!



Avoid mowing in reverse direction when possible. Check to make sure there are no persons behind the mower and use extreme care when mowing in reverse. Mow only at a slow ground speed where you can safely operate and control the tractor and mower. Never mow an area that you have not inspected and removed debris or foreign material. (SGM-8)

DANGER!



Replace bent or broken blade with new blades. NEVER ATTEMPT TO STRAIGHTEN OR WELD ON BLADES SINCE THIS WILL LIKELY CRACK OR OTHERWISE DAMAGE THE BLADE WITH SUBSEQUENT FAILURE AND POSSIBLE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)

WARNING!

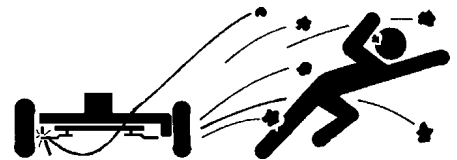


Do not mow with two machines in the same area except with Cab tractors with the windows closed. (SGM-11)

DANGER!



Rotary Mowers are capable under adverse conditions of throwing objects for great distances (100 yards or more) and causing serious injury or death. Follow safety messages carefully



STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS UNLESS:

- Front and Rear Deflectors, Chain Guards, or Bands are installed and in good, workable condition;
- Mower sections or Wings are running close to and parallel to the ground without exposed Blades;
- Passersby are outside the existing thrown-object zone;
- All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.

NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected, closely with any remaining debris being removed, and mowed again at desired final height. (This will also reduce power required to mow, reduce wear and tear on the Mower drivetrain, spread cut material better, eliminate streaking, and make the final cut more uniform.)

(SRM-1)

DANGER!



Always disconnect the main PTO Driveline from the Tractor before performing service on the Mower. Never work on the Mower with the tractor PTO driveline connected and running. Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death.

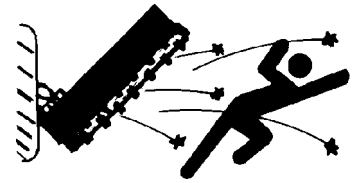
(SRM-3)

SAFETY

WARNING!



Do not let the Blades turn when the Mower Deck is raised for any reason, including clearance or for turning. Raising the Mower deck exposes the Cutting Blades which creates a potentially serious hazard and could cause serious injury or even death from objects thrown from the Blades. (SRM-7)



DANGER!



There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in grass and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care is taken to insure the safety of the operator, bystanders, or passersby in the area. Do not operate this machine with anyone in the immediate area. Stop mowing if anyone is within 100 yards of mower. (SFL-1)

DANGER!



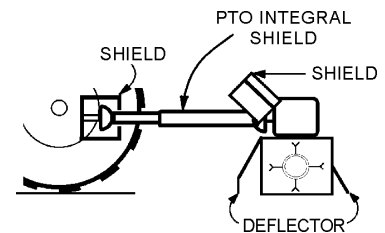
Do not put hands or feet under mower decks. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SFL-2)



DANGER!



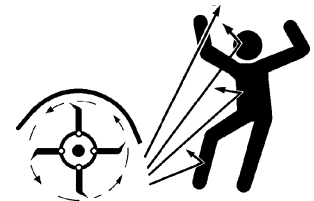
All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SFL-5)



DANGER!



Flail Mowers are capable under adverse conditions of throwing objects for great distances (100 yards or more) and causing serious injury or death. Follow safety messages carefully.



STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS UNLESS:

- Front and Rear Deflectors, Chain Guards, or Bands are installed and in good, workable condition;
- Mower sections or Wings are running close to and parallel to the ground without exposed Blades;
- Passerby are outside the existing thrown-object zone;
- All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.

NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected, closely with any remaining debris being removed, and mowed again at desired final height. (This will also reduce power required to mow, reduce wear and tear on the Mower drivetrain, spread cut material better, eliminate streaking, and make the final cut more uniform.)

(SFL-6)

SAFETY

WARNING!



Do not operate Mower if excessive vibration exists. Shut down PTO and the Tractor engine. Inspect the Mower to determine the source of the vibration. If Mower blades are missing or damaged replace them immediately. Do not operate the mower until the blades have been replaced and the Mower operates smoothly. Operating the Mower with excessive vibration can result in component failure and broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the Mower to be operated with blades missing. (SFL-4)

WARNING!



Never leave Tractor and Implement unattended while the implement is in the lifted position. Accidental operation of lifting lever or a hydraulic failure may cause sudden drop of unit with injury or death by crushing. To properly park the implement when disconnecting it from the tractor, lower the stand and put the retaining pin securely in place, or put a secure support under the A-Frame. Lower the implement carefully to the ground. Do not put hands or feet under lifted components. (SPT-1)

WARNING!



Be particularly careful when transporting the Implement with the Tractor. Turn curves or go up hills only at a low speed and using a gradual steering angle. Rear mounted implements move the center of gravity to the rear and remove weight from the front wheels. Make certain, by adding front ballast, that at least 20% of the tractor's weight is on the front wheels to prevent rearing up, loss of steering control or Tractor tip-over. Slow down on rough or uneven surfaces to prevent loss of steering control which could result in property damage or possible injury. Do not transport unless 3-Point lift lever is fully raised and in the latched transport position. Dropping implement in transport can cause serious damage to the tractor and/or Implement and possibly cause the operator or others to be injured or killed. (S3PT-2)

DANGER!



Make sure the PTO shield, integral driveline shields, and input shields are installed when using PTO-driven equipment. Always replace any shield if it is damaged or missing. (S3PT-8)



WARNING!



Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Implement on the ground or securely blocked up, disengage the PTO, and turn off the tractor engine. Push and pull the Remote Cylinder lever in and out several times prior to starting any maintenance or repair work. (S3PT-9)



WARNING!



The rotating parts of this machine continue to rotate even after the PTO has been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased. (3PT-10)

“Wait a minute...Save a life!”

SAFETY

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

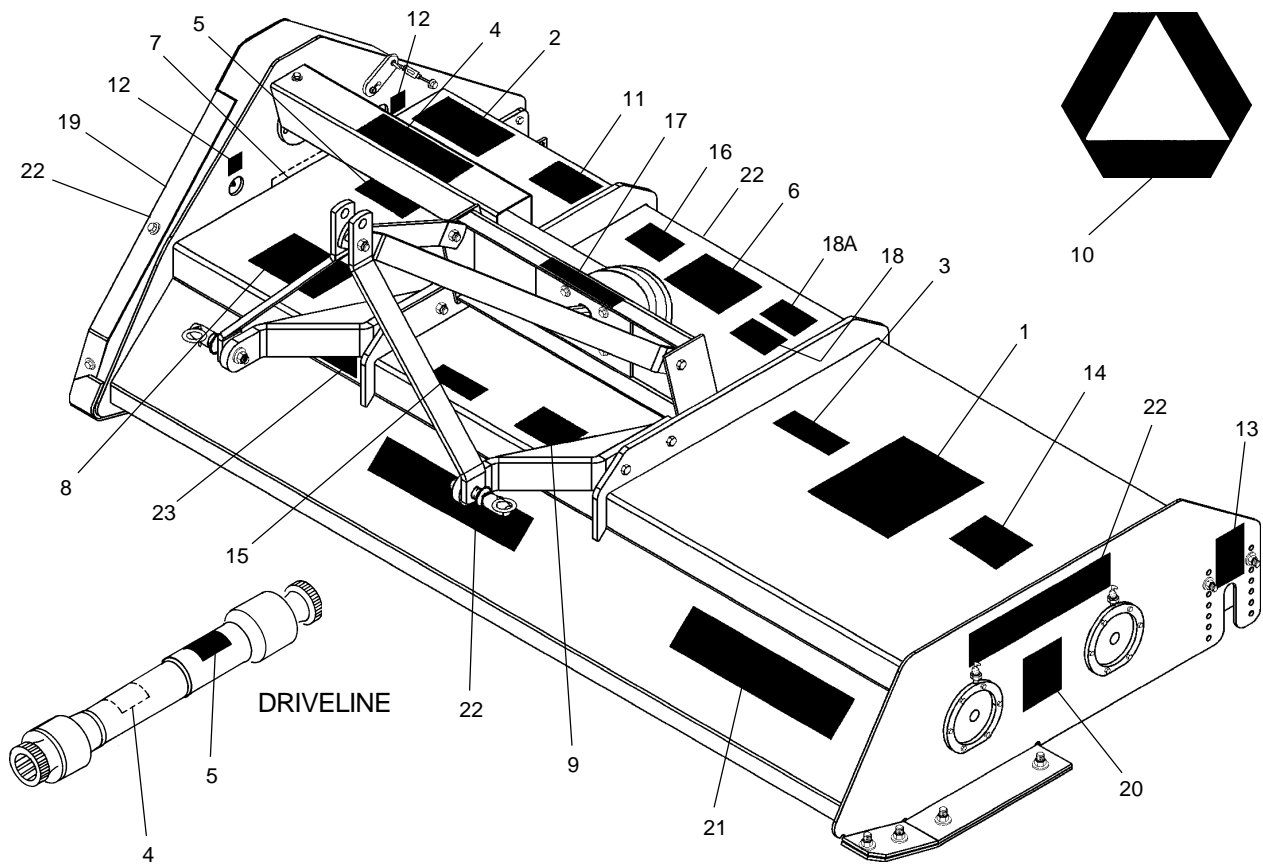
PARTS INFORMATION

Alamo Industrial mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Alamo Industrial specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce mower performance, void mower warranties, and present a safety hazard. Use genuine Alamo Industrial mower parts for economy and safety.

(SPAM-1)

SEE YOUR ALAMO DEALER

SAFETY DECAL LOCATION



| ITEM | PART NO. | QTY | LEVEL | DESCRIPTION |
|------|----------|-------|----------|-----------------------------------|
| 1 | 002369 | 1 | DANGER | Multi-Hazard |
| 2 | 00725739 | 1 | WARNING | Use/Repair Shields & Guards |
| 3 | 00725746 | 1 | DANGER | Translate Safety Material |
| 4 | 00756004 | 1 (1) | DANGER | Driveline Shield Missing |
| 5 | 00756005 | 1 (1) | DANGER | Rotating Driveline |
| 6 | 00756494 | 1 | DANGER | Driveline Multi-Hazard |
| 7 | 00758194 | 1 | WARNING | Pinch Point (V-Belt/Pulley) |
| 8 | 02967668 | 1 | DANGER | Cutting Blades/Thrown Objects |
| 9 | D103 | 1 | WARNING | 540 PTO Required |
| 10 | 03200347 | * | REFLECT | SMV Reflector |
| 11 | 000108 | 1 | Instruc | Flail Operation |
| 12 | 000678 | 2 | Instruc | Grease Fitting Inside |
| 13 | 02969973 | 1 | Instruc | Cutting Height Adjustment |
| 14 | 02969974 | 1 | Insruc | Lubrication Chart |
| 15 | 00763613 | 1 | Instruc | Slip Clutch Adjustment |
| 16 | 00763977 | 1 | Instruc | Notice to Owner |
| 17 | 00769652 | 1 | Instruc | Twist Collar Instructions |
| 18 | 03200432 | 1 | Instruc | Genuine Parts, ALAMO Flail |
| 18A | 00773723 | 1 | PELIGRO! | Rotating Driveline Translation |
| 19 | 001650 | 1 | LOGO | ALAMO (7.26 x 7.5) |
| 20 | 02960766 | 1 | LOGO | ALAMO (4 x 5) |
| 21 | 00757139 | 1 | LOGO | ALAMO (4-1/2 x 16-1/2) |
| 22 | 02969975 | 4 | NAME | Grass Gator Name |
| 23 | nfs | 1 | SER PLT | Serial Plate |
| | | () | | Provided by Manufacturer |
| | | * | | Furnished by Tractor Manufacturer |

GG74/07-96

Safety Section 1-12

SAFETY DECALS

! DANGER



ROTATING DRIVELINE
CONTACT CAN CAUSE DEATH
KEEP AWAY!

DO NOT OPERATE WITHOUT—

- ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVELINES SECURELY ATTACHED AT BOTH ENDS
- DRIVELINE SHIELDS THAT TURN FREELY ON DRIVELINE

00756005

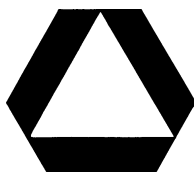
5-00756005

GREASE FITTING INSIDE

12-000678



20-02960766



10-03200347

! DANGER



GUARD MISSING DO NOT OPERATE

00756004

! DANGER



GUARD MISSING DO NOT OPERATE

00756004

! DANGER

4-00756004

OPERATING INSTRUCTIONS

This Mower will give long satisfactory service with a minimum of upkeep cost if the following procedure is followed:

1. KEEP PROPERLY LUBRICATED
 - a. BEARINGS - Use a lithium-based #2 Bearing Grease such as Shell Alvania #2, Sinclair Litholene, Mobil BRB, Texaco Marfak #2, Standard Stanolith #57, etc.
 - b. GEARBOX - Use SAE EP90 oil.
2. KEEP FASTENERS TIGHTENED
 - a. Normally, if Fasteners loosen after being properly tightened, the Mower is vibrating more than is acceptable and permanent damage can occur rapidly.
 - b. See Bolt Chart for proper tightening torque.
3. KEEP THE MOWER RUNNING SMOOTHLY AND QUIETLY.
 - a. After hitting any obstruction and at the first sign of any unusual vibration or noise, STOP THE MOWER, and do not operate again until the problem is found and corrected. VIBRATION CAN DESTROY THE ENTIRE MOWER IN A SHORT TIME.
 - b. Inspect for broken or missing Knives, Knives restricted from swinging freely, worn Bearings, a bent Shaft, or other conditions causing out-of-balance rotation.
 - c. See Bulletin #5 for details on causes and correction of vibration of Flail Mowers.

NOTICE: Warranty does not cover damage resulting from the failure to observe these reasonable procedures. 000108

11-000108





22-02969975


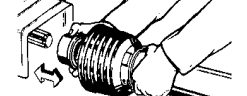
1 - 002369- Not Shown
(See Inside Front Cover of Manual)
19 - 001650 - ALAMO by Mott
23 - nfs Serial Plate

! DANGER

1. MAKE CERTAIN DRIVELINES ARE OF THE CORRECT LENGTH AND SECURELY ATTACHED. DRIVELINE SEPARATION AND/OR PTO STUB SHAFT FAILURE CAN CAUSE INJURY OR DEATH. (See Operator's Manual for procedure.)

| | |
|---|--|
| <p>* SEE MANUAL FOR MINIMUM OVERLAP & MINIMUM/MAXIMUM LENGTHS</p>  | <p>BOTTOMING OUT</p>  |
|---|--|

2. MAKE CERTAIN THAT DRIVELINE SHIELDS ARE INSTALLED CORRECTLY AND TURN FREELY TO PREVENT INJURY OR DEATH FROM ENTANGLEMENT

| | |
|---|---|
|  |  |
|---|---|

3. MAKE CERTAIN THAT DRIVELINE IS INSTALLED CORRECTLY ON TRACTOR PTO SHAFT. MOVE YOKE BACK AND FORTH UNTIL LOCKING COLLAR CLICKS FORWARD AND LOCKS YOKE IN PLACE
4. 540 PTO RPM UNLESS SPECIFICALLY MARKED OTHERWISE. 00756494

6-00756494

SAFETY DECALS

IMPORTANT

ALAMO GENUINE FLAIL PARTS

ALAMO INDUSTRIAL Flail Mowers use dynamically balanced and matched system components for Cutter Shafts, Knives, Knife Hangers, Rollers, Drivetrain components, Bearings, Belts, and Pulleys. ALAMO INDUSTRIAL parts are made and tested to meet close-tolerance specifications of balance, quality, and consistency that assure long, trouble-free service. The use of inferior "will fit" parts will void warranty for your ALAMO INDUSTRIAL implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions concerning the repair parts you are using, contact ALAMO INDUSTRIAL 1502 E. Walnut Seguin, TX 78155 (830) 372-3551.



18-03200432

NOTICE TO OWNER

An OPERATOR'S MANUAL (with Repair Parts Listing) and a WARRANTY REGISTRATION CARD were attached to this implement during final inspection at the factory. If they were not attached at the time of purchase, please contact your selling dealer at once.

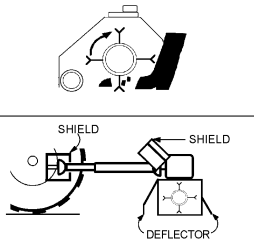
1. Read and understand Manual before operating the implement.
2. Complete, sign, and mail the Warranty Registration Card in today. 00763977

16-00763977

⚠ WARNING

FAILURE TO USE AND MAINTAIN SHIELDS AND DEFLECTORS IN GOOD CONDITION MAY LEAD TO INJURY OR DEATH FROM ENTANGLEMENT WITH ROTATING PARTS, BEING HIT BY OBJECTS THROWN WITH GREAT FORCE BY BLADES, OR BY BLADE CONTACT.

- Always replace Guards which have been removed for maintenance. Never operate with guard missing or broken.
- Chain Guards, Gearbox, Driveline Shields, Rubber-fabric Deflectors, and solid Band enclosures are subject to wear and lost or broken parts and must be repaired or replaced as soon as damage is found.
- Safety Shielding must be installed and in good condition to reduce the possibility of thrown objects any time this machine is operated in any area where thrown objects could cause injury.



2-00725739

⚠ WARNING

**OPERATE THIS MACHINE AT
540 RPM
TRACTOR PTO SPEED ONLY**

Overspeeding PTO may cause component failure with resulting injury.

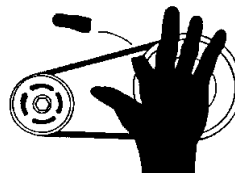
D103

9-D103

⚠ WARNING

DO NOT OPERATE WITH BELT SHIELD REMOVED. FINGER(S) MAY BE PINCHED OFF IF CAUGHT BETWEEN V-BELT AND PULLEY.

00758194



7-00758194

⚠ PELIGRO

Si No Lee Ingles, Pida Ayuda a Alguien Que Si Lo Lea Para Que le Traduzca las Medidas de Seguridad.

LEA EL INSTRUCTIVO




00725746

3-00725746

SAFETY DECALS

⚠ DANGER

CUTTING BLADES THROWN OBJECTS



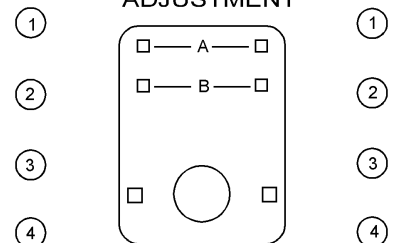
**KEEP AWAY - ROTATING BLADES
BEING HIT BY THROWN**

- Stop mowing if passersby enter the area of thrown objects. (See Operator's Manual)
- Use special care when Flail or Wing is raised off the ground. (See Oper. Manual)
- Operate only if all Guards-Deflectors are in place and in good condition.

02967668

8 - 02967668

**CUTTING HEIGHT
ADJUSTMENT**



| DESIRED CUTTING HEIGHT (INCHES) | HOLE ALIGNMENT |
|---------------------------------|----------------|
| 0 | A1 |
| 1/2 | B3 |
| 1 | A2 |
| 1-1/2 | B4 |
| 2 | A3 |
| 2-1/2 | B5 |
| 3 | A4 |
| 3-1/2 | B6 |
| 4 | A5 |
| 4-1/2 | B7 |
| 5 | A6 |

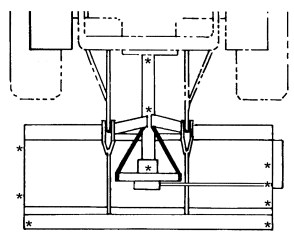
02969973

13 - 02969973



21-00757139

LUBRICATION CHART



* LUBRICATE ALL POINTS EVERY 8 HOURS OF OPERATION

02969974

14 - 02969974


ATTENTION!

Do not operate PTO until ALL Slip Clutches are properly adjusted and checked to make certain that **NONE ARE FROZEN** and that **ALL WILL SLIP** under excessive load. See Operator's Manual for complete instructions.

00763613

15 - 00763613

⚠ PELIGRO



Un manual de la seguridad de la línea de conducción n/p 00773776 está disponible en español. Llame el número enumerado para una copia gratis.

LÍNEA DE CONDUCCIÓN GIRATORIA- EL CONTACTO PUEDE CAUSAR LA MUERTE ¡MANTENERSE LEJOS! NO FUNCIONE SIN QUE-

- Todos los protectores de la línea de Conducción, alimentador y blindajes del Equipo estén en su lugar
- Las líneas de conducción estén conectadas con seguridad en ambos extremos
- Los protectores de la línea de conducción den vuelta libremente en la línea de Conducción

00773723

18A - 00773723

**NOTE: LEFT HAND TWIST COLLAR.
Attach to implement input shaft only.**

00769652

17 - 00769652

SAFETY

FEDERAL LAWS AND REGULATIONS

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

DUTIES

Sec. 5 (a) Each employer-

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved."

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop mowing if bystanders or passerbys come within 100 yards.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

INTRODUCTION SECTION

INTRODUCTION

A. OWNER'S RESPONSIBILITIES

1. Read the TRACTOR Owner's Manual as well as the ALAMO TURF FLAIL Manual before attempting to install or operate the ALAMO TURF FLAIL mower.
2. Know all the controls and how to stop quickly. Know how to operate the ALAMO TURF FLAIL before attempting to mow with it.
3. Keep both the tractor and the mower in good operating condition. Keep all fasteners secure to help maintain equipment in safe working condition. Check knives and knife fasteners daily for damage or missing pins.
4. Keep all safety devices in place. Read, understand, and comply with safety decals located on tractor and mowers.
5. Do not allow children to operate the tractor or mower. Do not allow adults to operate the equipment without proper instruction.
6. Do not carry passengers. Keep children and pets a safe distance away.
7. When leaving the operator's position always follow good safety practices:
 - a. Turn off power to the mower.
 - b. Lower the mower to the ground.
 - c. Set the parking brake.
 - d. Stop the engine and remove the key.
8. Clear the work area of objects which might be picked up and thrown.
9. Stay alert for holes in the terrain and other hidden hazards.
10. To reduce fire hazard, keep engine free of grass, leaves, or excessive grease.
11. Thoroughly check the condition of the ALAMO TURF FLAIL before mowing.
12. The cuttershaft must be free to turn before starting the ALAMO TURF FLAIL. Do not start the mower while in the cut. Allow the cuttershaft to develop full speed before mowing.
13. Disengage power to the mower when transporting or not in use. NEVER engage the power to the mower when the cutter unit is in the TRANSPORT position.
14. "In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern and prudence of the operator and requires suitable training of personnel involved in the operation, transport, maintenance and storage of equipment." - SAE J1001

B. WARNINGS

INTRODUCTION

1. Remove all objects from, and stay clear of, the front of the cutter unit. Do not get near the rotating knives.
2. Disengage power to the mower before starting the engine.
3. Never allow anyone near the equipment while in operation, and watch out for traffic when crossing or working near a roadway. Make certain flashers are operating when mowing next to traffic lanes.
4. The tractor and the mower should be stopped and inspected for damage after striking an object. Repair all damage before restarting and operating the equipment.
5. Do not attempt to clear discharge, remove obstacles, adjust belts, or repair equipment before stopping the tractor engine. Never place hands or feet near knives or belts when the tractor engine is running.
6. Do not operate any ALAMO GROUP mower which is vibrating excessively. Vibration is caused by a rotating part which is out of balance. The vibration will cause additional damage to the equipment. Cuttershaft vibration could be caused by the following:
 - a. Wire, rope, rags, etc., wound around the shaft.
 - b. Knives missing or broken.
 - c. Knife hanger lugs which have broken off the shaft.
 - d. Cuttershaft bearings worn.
 - e. Cuttershaft bent from striking an object.
 - f. Cuttershaft not rotating at recommended speed.
7. Decrease travel speed for slopes and sharp turns to reduce the possibility of tipping or loss of control. It is suggested, depending on the amount of slope, to mow up and down rather than across the slope.
8. Do not release the clutch suddenly especially when going up a hill.
9. Never engage power to the mower when the cutter unit is in the TRANSPORT position.

C. PRECAUTIONS

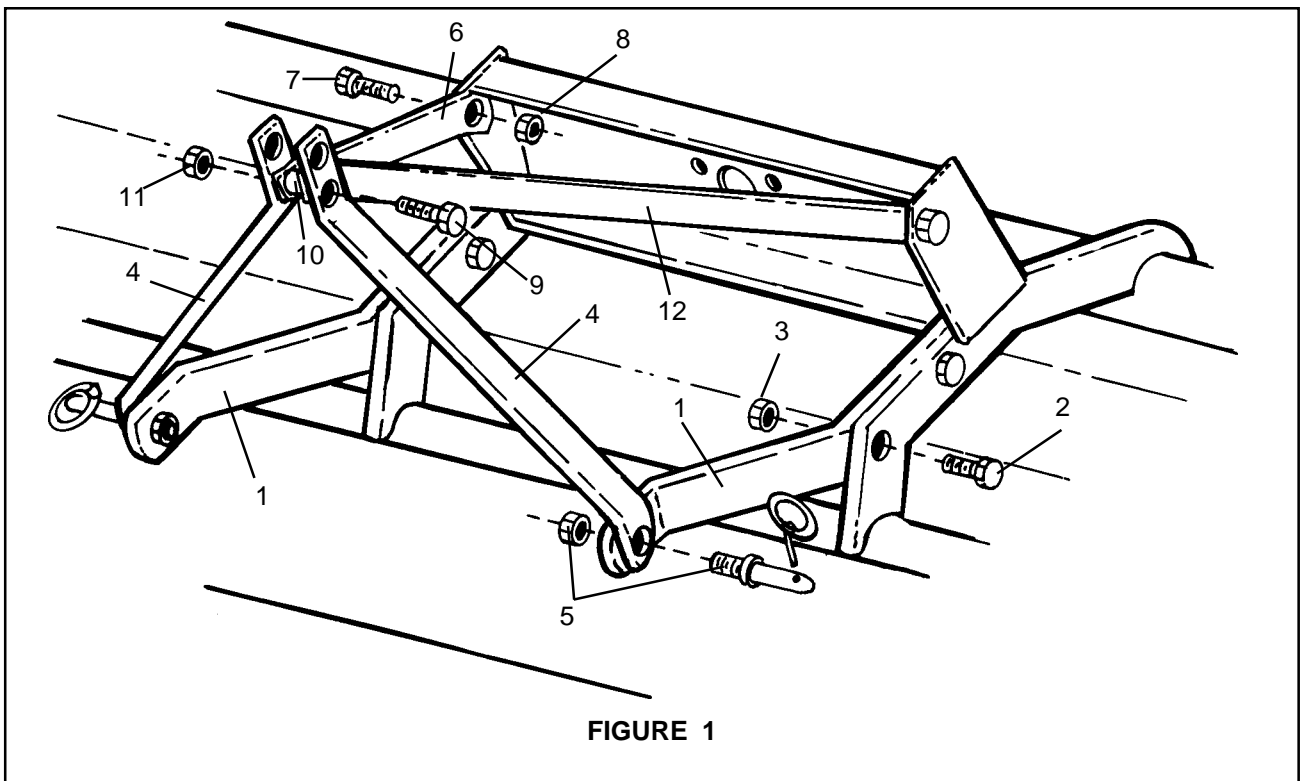
1. Always repair small problems before they become large ones.
2. Never work on the mower or the tractor while the engine is running.
3. Never leave the cutter unit in the raised position without proper support. Do not rely on the mower hydraulics to hold the unit up while working on it. If a hydraulic connection is loosened or a control lever is shifted, the cutter unit will come down. Always block up securely.

ASSEMBLY SECTION

ASSEMBLY INSTRUCTIONS

To Offset Mower

1. Remove the Front Struts (#4) from Hitch Arms (#1) and Upper Struts (#6 & #12). Remove the Upper Struts (#6 & #12) from the Gearbox Mount.
2. Flip Hitch Arms (#1). Secure with 4 - 5/8 x 2-1/4 Bolts (#2) and Locknuts (#3).
3. Attach Front Struts (#4) to Hitch Arms (#1) with 2 - Category I Hitch Pins (#5).
4. Attach the Short Upper Struts (#6) to Left Side of Gearbox Mount and the Long Upper Strut (#12) to the Right Side of Gearbox Mount with 2 - 1/2 x 1-1/4 Bolts (#7) and Locknuts (#8).
5. Attach the Upper Struts (#6 & #12) and Front Struts (#4) together with 1 - 1/2 x 3-1/2 Bolts (#9), Strut Spacer (#10), and Locknut (#11).



A-FRAME ASSEMBLY FOR 74" MOWER (FIGURE 1)

1. Attach Hitch Arms (#1) to Cutterhousing as illustrated. Secure with 4 - 5/8 x 2-1/4 Bolts (#2) and Locknuts (#3).
2. Attach Front Struts (#4) to Hitch Arms (#1) with 2 - Category I Hitch Pins (#5).
3. Attach the Short Upper Struts (#6) to the Right Side of the Gearbox Mount and the Long Upper Strut (#12) to the Left Side of the Gearbox Mount with 2 - 1/2 x 1-1/4 Bolts (#7) and Locknuts (#8).
4. Attach the Upper Struts (#6 & #12) and Front Struts (#4) together with 1 - 1/2 x 3-1/2 Bolts (#9), Strut Spacer (#10), and Locknut (#11).

OPERATION SECTION

OPERATION

INSTALLATION OF MOWER TO TRACTOR

Before attaching mower to tractor, it will be necessary that each tractor lower hitch arm has freedom of movement so that the mover is completely independent of tractor movement. This will allow the mower to pivot sideways as well as move vertically.

Some tractors provide this "float" by means of an optional slot in the lower end of each lift link, others by lift links which can be made telescopic by changing the position of the pins in the links. Failure to provide "float" may result in failure of the cutterhousing and bearings in the roller, thus voiding the mower warranty. Should your tractor not have a built in "float" option, a flexible lift chain assembly will be required.

On all centered mowers, two flexible lift chain assemblies will be necessary to provide "float" to each lift link.

On all offset mowers, one flexible lift chain assembly will be necessary to provide "float" to the lift link on the same side that the mower is offset. The other lift link should be the adjustable stiff link furnished with the tractor.

After the mower is attached to the tractor's 3-point hitch, but before the universal slip joint is installed, and with the mower on the ground, adjust the top link of the hitch to make the mower gearbox input shaft parallel to the tractor P.T.O. shaft. This relationship provides optimum operation of the universal joints in the driveline. A Driveline that is not parallel to PTO will result in vibration due to the characteristic of a universal joint that results in the output end speeding up and slowing down twice each revolution of the universal jointed shaft. Adjust the top link whenever the cutting height is changed.

1. Position the Alamo Flail on a level, firm surface.

2. Position the tractor so that the lower hitch arms are level with and slightly ahead of the mower. Carefully inch the tractor rearward to align the tractor hitch arms outside the mower hitch arms and in line with Hitch Pins. Adjust the Top Link so it will pin to the top set of holes in the A-Frame. Stop the engine and attach tractor lift arms to Hitch Pins. Insert Lock Pins. Figure 1.

3. To install the driveline, separate slip joint halves; then install them onto mower gearbox input shaft and tractor PTO shaft according to illustration on driveline shield. Hold halves side by side, then raise and lower the mower to determine that there is no interference between halves when in the shortest position, and that there is a specified minimum amount of overlap when in the longest position. Once it is determined that the shaft will cause no clearance problems, remove the halves, rejoin them and install the assembled driveline between the tractor and the mower. Figure 2.

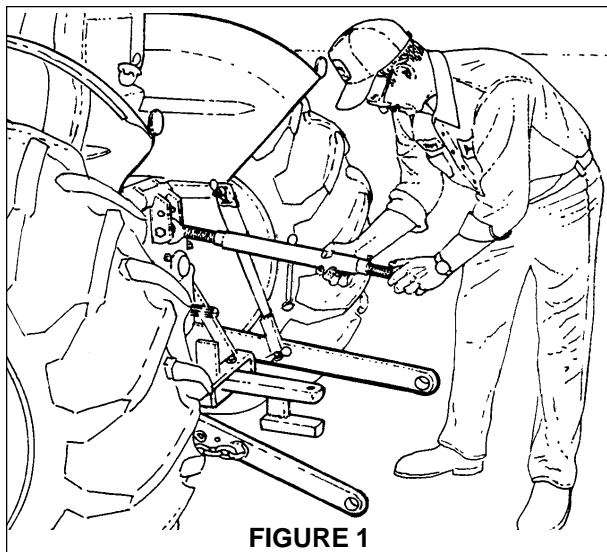


FIGURE 1

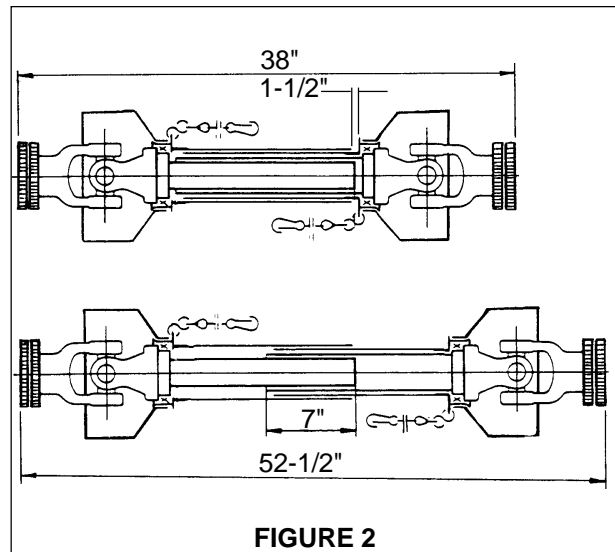


FIGURE 2

OPERATION

CHECK PTO LENGTH

WARNING! A loose driveline could slip off and result in personal injury or damage to mower. When attaching PTO yoke to tractor PTO shaft, it is important that spring activated locking collar is seated in groove on PTO shaft.



WARNING! Before operating mower, check to make sure the driveline will not bottom out or become disengaged.



To adjust length, hold the half-shafts next to each other in the shortest working position. If end of driveline extends beyond shield cone, mark them according to figures below. Always maintain 1-1/2" clearance when operated in shortest working position. Shorten inner and outer guard tubes equally. Shorten inner and outer sliding profiles by the same amount that the shield tubes were shortened. Round off all sharp edges and remove burrs. Grease sliding profiles. Figure 3.

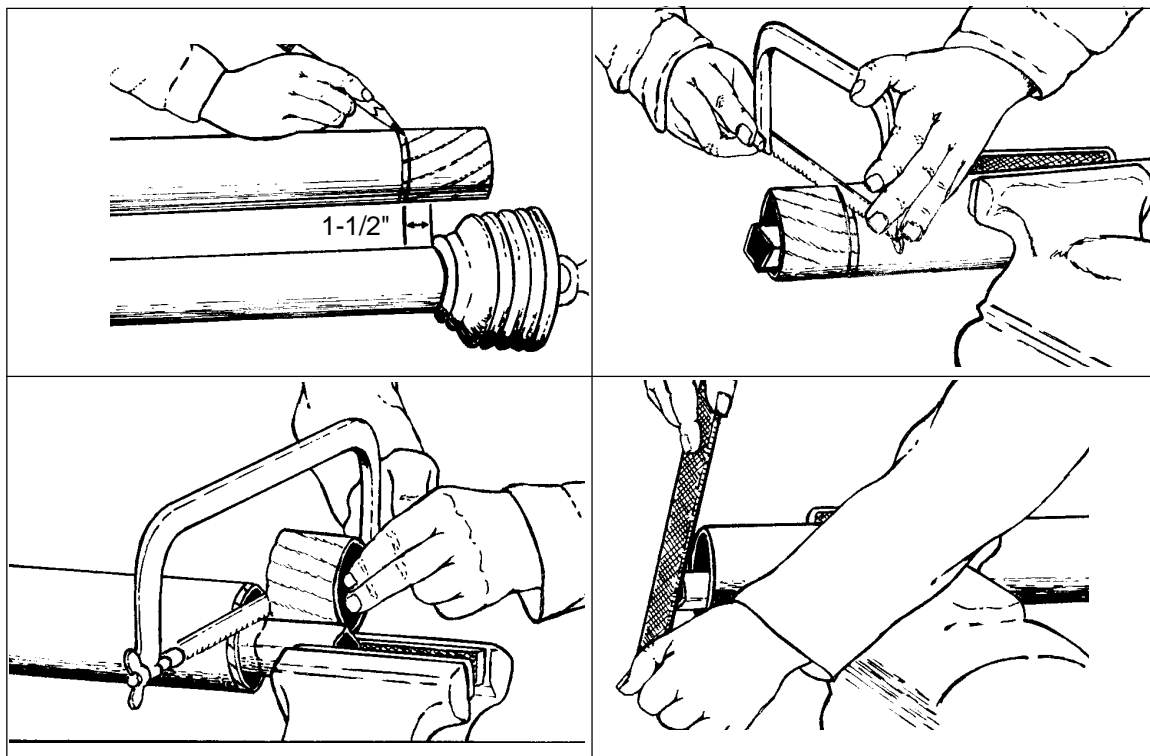


FIGURE 3

WARNING! Driveline profile engagement must always exceed 7" at any operating position.



OPERATION

OPERATING INSTRUCTIONS

The GRASS GATOR is designed to mulch leaves and grass clippings, while providing a well-groomed cut. This mower is primarily intended for use on level maintained grounds such as parks, lawns, playing fields and golf courses.

The GRASS GATOR is equipped with two flail cutter shafts mounted in tandem and fitted with fine cut flail blades. The front cutter shaft turns in the direction of travel to aide in cutting the grass flattened by the tractor tires. The rear cutter shaft turns the opposite direction to mulch the material an leave a fine finished cut. The cutter shafts are staggered in height and both cut the grass at the stem to leave a fine finish. For the mower to operate properly and provide good mulching of the grass, it is very important for the mower to be properly leveled front to back and side to side.

LEVELING THE GRASS GATOR

The GRASS GATOR must be properly leveled to the ground to achieve the best mulching effects. If the mower is not properly leveled the quality of grass finishing and mulching of grass may be poor, and damage to the turf and mower can result. After the mower is attached to the tractors 3-point hitch, move the tractor and mower onto a flat and level surface. Next adjust the top link of the tractor 3-point hitch by screwing it in or out until the side skid shoes of the mower are parallel with ground within 1/8" measured from the front and the back of the skid shoes. The skid shoe to ground measurements from each side of the mower should be the same. You can adjust on the tractor 3-point lift arms to level the mower from side to side.

When the mower skid shoes are level with the ground the front cutter shaft will be 1" higher than the second cutter shaft. This will allow the rear cutter shaft to complete the cutting and double cut or mulch the material cut by the front cutter shaft.

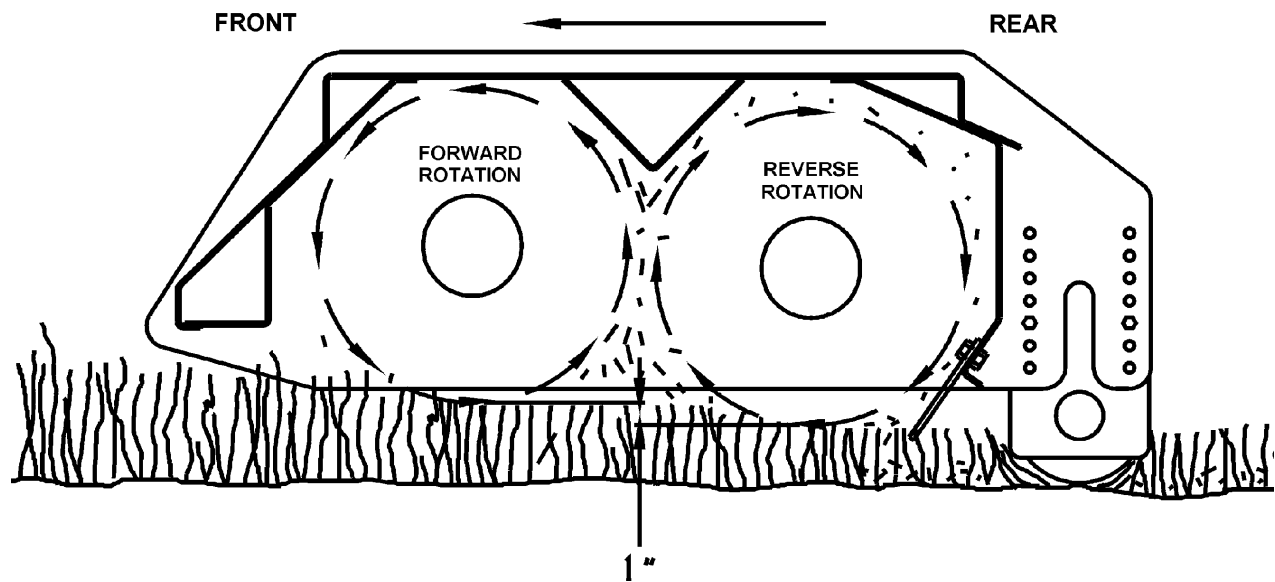


FIGURE 4

OPERATION

CUTTING HEIGHT

Set the cutting height of the mower based off the rear cutter shaft only. In special cutting situation where the total amount of material to be cut is less than 1" the mower may be tilted forward to allow the front cutter shaft to contact the grass and provide for better grass mulching.

ADJUSTING CUTTING HEIGHT - Figure 6

1. Lower cutter unit to ground and place tractor selector lever in "FLOAT" position.
2. Place lifting device (scissors jack, hydraulic jack) under center of cutter housing.
3. Remove hex nuts, washers, and carriage bolts from bracket at each end of roller. Make certain that roller bracket is free to move once the fasteners are removed. A wedged roller could drop suddenly and cause injury.
4. Use lifting device to reposition cutter housing to desired cutting height. Align bracket holes with cutter housing holes then reinstall fasteners. Refer to cutting height decal on mower or refer to copy below. Figure 5
5. Lower cutter unit to ground; then remove lifting device.

Decal #02969973

FIGURE 5

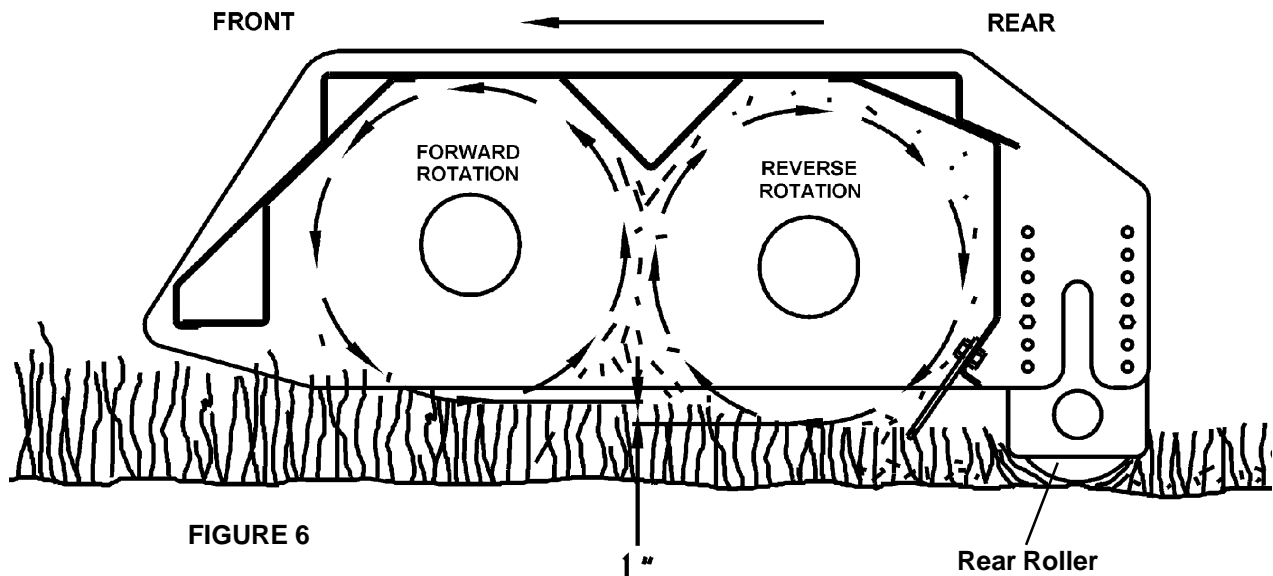
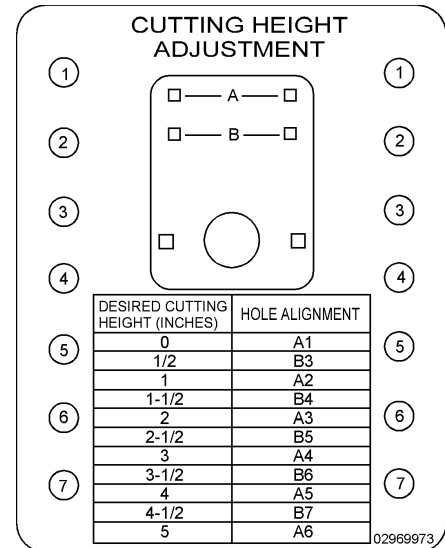


FIGURE 6

OPERATION

ADJUSTING THE MULCHING REAR RAKE - Figure 7

The GRASS GATOR is equipped with a rear rake to facilitate mulching. The rake is set 1/8" to 1/4" below the cutting height to capture the grass clippings and hold them inside the mower deck for recycling until the clippings are small enough to filter through the standing stems.

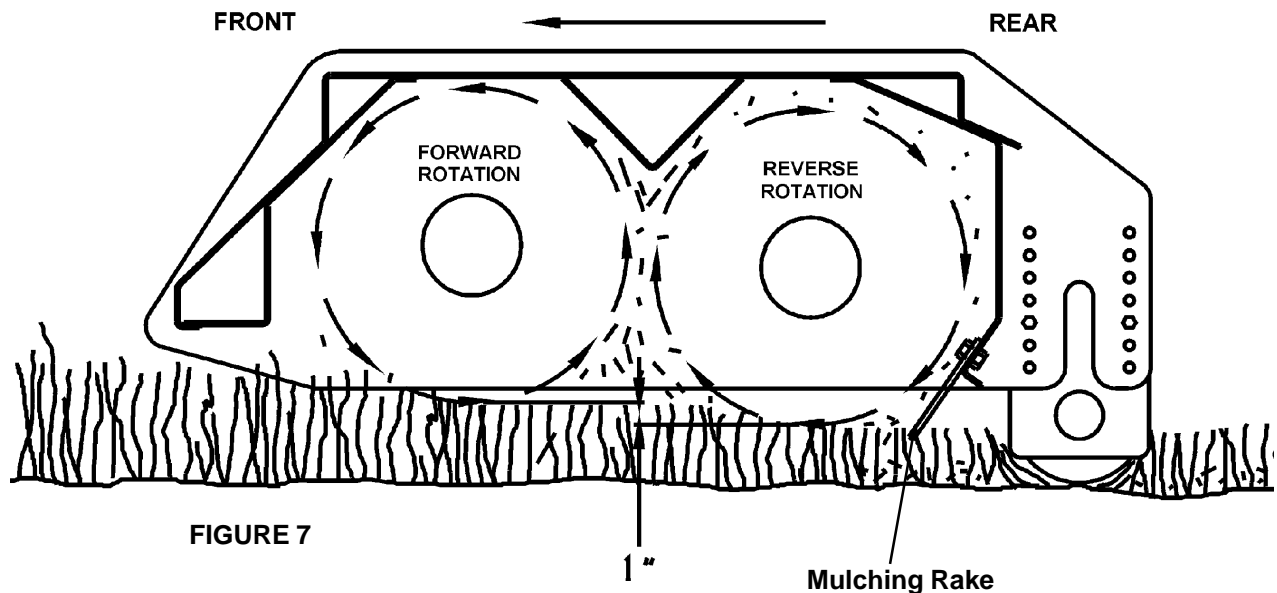
CAUTION!



The rake should be set in the lower position only when mowing on even terrain where no objects can strike the rake causing damage to the mower deck. Bolt rake in raised position or remove when in rough conditions.

The rake attachment offers fine mulching in dry conditions. In moist conditions the rake may cause clumping of the discharged grass and result in poorly distributed clippings. In damp conditions the rake should be bolted in the raised position to allow material discharge.

The mulching results will vary with grass type and moisture content. The cut height which can be successfully mulched is dependent on grass type. In general good mulching practices should be followed. The two thirds rule is a guideline in which only one third of the stem is cut at one time. This leaves sufficient growth to hide the clippings which work their way down to the root system. While the mower capacity is sufficient to mulch larger quantities the clippings may sit on top of the grass or cause clumping of the discharge. The direction of mowing should be alternated between cuttings to better distribute the clippings.



LEAF MULCHING

The optimum results can be achieved with the rake in the lowered position and the cut height set close to the ground. Several passes may be necessary to finely mulch the leaves depending on volume.

The GRASS GATOR mower deck is designed to recycle material with an enclosed discharge. This reduces the risk of thrown objects from the rear of the machine. However safety guidelines outlined in the front of the manual should be followed.

OPERATION

OPERATING TECHNIQUES

With the tractor engine at low idle, engage PTO, increase the engine speed until the PTO is at 540 RPM. Always start the cutter unit in the clear and allow the unit to develop full speed before starting to cut.

The models included in this manual are designed to operate with a cuttershaft speed of 2100 RPM while using a tractor power take-off speed of 540 RPM. If the mower is operated at a lower speed, trouble can develop throughout the driveline. The universal slip joint, as well as the final drive belt, can be overloaded and fail. As cuttershaft speed decreases, cutting ability also decreases and winding of the grass may occur. Tractors are designed to operate at full PTO speeds. If cutting conditions require a slower ground speed, shift the tractor into a lower gear. Maintain the proper PTO speed. Exceeding PTO speed will over-speed the cuttershaft and may cause vibration.

Always start mower with tractor engine at low idle and cutter unit in the clear. Increase engine speed until PTO is at 540 RPM. The cuttershaft must be at full speed before starting to cut. If cuttershaft slows down, due to heavy cutting, tractor ground speed must be reduced. If not, grass may wind around cuttershaft rather than being discharged properly. Grass wound against housing sidesheets acts as a brake, causing power loss and possibly overheating cuttershaft bearings. The drive belt also may be overloaded and fail. Give the unit time to cut. In tough mowing situations where full power can not be developed, taking a narrower cut or raising mower height is recommended.

If mower starts making an unusual noise, foreign material may have wound around the cuttershaft, or an end knife has bent and is hitting the housing. Remove material from the shaft. Use Knife Straightener Set No. 700413 to reshape bent knives. Replace any broken or missing knives immediately. To avoid excessive vibration, a pair of knives must be mounted to each set of lugs. To do the best job of mowing, knives should be sharp. Sharp knives require less power to cut and will operate better in tougher conditions.

OPERATING INSTRUCTIONS

This Mower will give long satisfactory service with a minimum of upkeep cost if the following procedure is followed:

KEEP PROPERLY LUBRICATED

- a. BEARINGS - Use a lithium-based #2 Bearing Grease such as Shell Alvania #2, Sinclair Litholene, Mobil BRB, Texaco Marfak #2, Standard Stanolith #57, etc.
- b. GEARBOX - Use SAE EP90 oil.

KEEP FASTENERS TIGHTENED

- a. Normally, if Fasteners loosen after being properly tightened, the Mower is vibrating more than is acceptable and permanent damage can occur rapidly.
- b. See Bolt Chart for proper tightening torque.

KEEP THE MOWER RUNNING SMOOTHLY AND QUIETLY.

- a. After hitting any obstruction and at the first sign of any unusual vibration or noise, STOP THE MOWER, and do not operate again until the problem is found and corrected. VIBRATION CAN DESTROY THE ENTIRE MOWER IN A SHORT TIME.
- b. Inspect for broken or missing Knives, Knives restricted from swinging freely, worn Bearings, a bent Shaft, or other conditions causing out-of-balance rotation.
- c. See Bulletin #5 for details on causes and correction of vibration of Flail Mowers.

NOTICE: Warranty does not cover damage resulting from the failure to observe these reasonable procedures. 000108

OPERATION

TRANSPORTING

Pay particularly close attention to the Safety Messages regarding Mower transport. Avoid unnecessary injuries and equipment damage by exercising cautious, conscientious travel procedures.

Attaching the Mower to Tractor increases the overall length of the working unit. Allow additional clearance for the Mower to swing when turning.

Raise the Mower as high as possible for transporting while maintaining clearance between the Driveline and Deck of the 3-Point Lift Mower.

When using Check Chains, adjust as described earlier for safe transport.

WARNING!



When transporting the Mower on a road or highway, use the tractor warning lights, SMV Sign, Reflectors, and other devices for adequate warning to the operators of other vehicles. Check the traffic regulations governing the locale where mowing is to be done, and work safely within those guidelines.

CAUTION!



Be sure that the tractor Lift Lever is locked into the "transport" detent before attempting to transport the Mower.

BEFORE OPERATING OR TRANSPORTING THIS MOWER:

Always display this emblem in the rear of the tractor transporting this mower where it is clearly visible to oncoming traffic. Prominent display of this symbol will help the operator avoid accidents which could cause injury or possibly death.



SMV SYMBOL

OPERATION

TROUBLE SHOOTING

| SYMPTOM | POSSIBLE PROBLEM | CORRECTION |
|----------------------------------|--|--|
| DISCHARGING BUNCHES OR CLOGGING | Belt installed improperly. Blades dull. Grass too wet. Grass too long. Travel speed too fast. PTO RPM too low. Rear Rake in low position. Cutting too much grass. | Check belt for correct set up. Check blades for sharpness. Wait for grass to dry. Mow at 3-1/2" and recut lower. Use a lower tractor gear. Mow at engine RPM to match 540 PTO RPM. Raise to higher position. Raise Mower, leave 2/3 of grass uncut. |
| BLADES SCALPING HIGH PLACES | Mowing too low. Rough, uneven ground. Turning Tractor too fast. | Raise height of cut. Use a Slower Speed. Lower Gauge Wheels or Rollers. Slow down when turning. |
| UNEVEN CUT | Travel speed too fast. Mower deck not level. Blades dull or unbalanced. Deck underside plugged. Grass too high | Use a slower speed. Level the mowing deck. Sharpen or balance blades Clean underside of deck. Mow 3-1/2" and recut lower. |
| GRASS CLIPPINGS WINDROW OR CLUMP | Grass too wet. Grass too high. Housing plugged. | Wait for grass to dry. Mow at 3-1/2" and recut lower. Clean underside of deck. |
| GRASS NOT BEING CUT EVENLY | Belt worn or slipping. Spring & Idler. Housing jplugged. Debris around pulleys Grass too high. | Mow at full engine RPM. Use a slower speed Clean underside of Housing. Remove deck belt shield and clean out debris. Mow at 3-1/2" and recut lower. |
| NOISE | Damaged Belt Shield (Rubbing on pulleys or belt) Worn Bearing or Gear | Straighten or replace Shields. Replace Bearing or Gear |
| VIBRATION | Blade missing or broken. Unmatched blades Bent Shaft | Replace Blade Install only Alamo Blades Replace shaft |

MAINTENANCE SECTION

MAINTENANCE

LUBRICATION

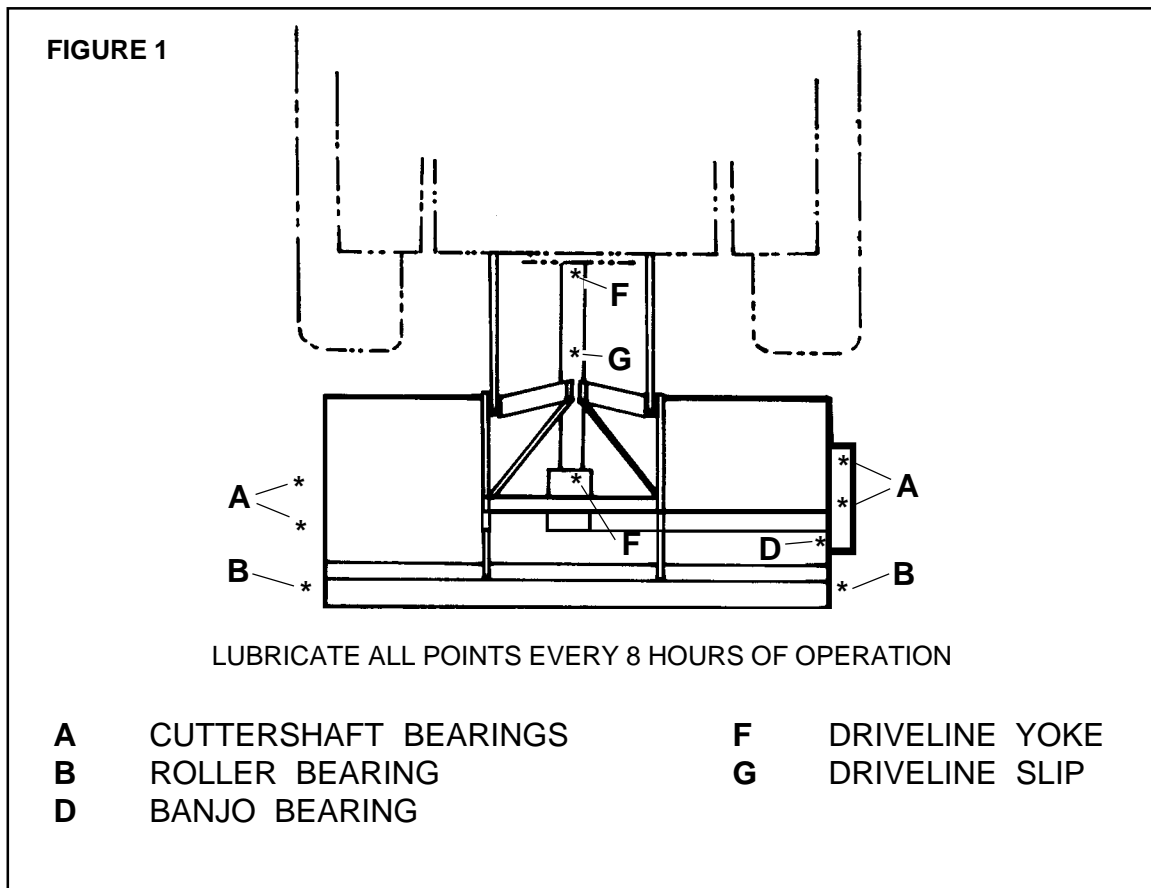
1. Lubricate at the specified intervals as outlined in the lubrication diagram below. All mower grease fittings are equipped with lubricaps which snap over the grease fittings to prevent dirt from entering the fittings. Remove the cap and wipe the fitting before greasing. Wipe the outlet of the grease gun then grease the bearing. When finished, place the cap over the fitting and wipe any excess grease from around the cap. In extremely dusty conditions, it is desirable to lubricate more often than every 8 hours. Grease PTO shaft as outlined on the diagram located on PTO shaft shield. The idler pulleys are equipped with a sealed ball bearing and require no further lubrication. Caster wheel bearings should be repacked at the end of each mowing season and checked before the start of the next season. The gearbox is shipped with the proper amount of SAE No. 90 extreme pressure lubricant. Check level before operating and maintain the level of this oil at the LOWER 1/8" pipe plug on the gearbox cover. LUBRICATE MOWER BEFORE INITIAL USE. **FIGURE 1.**

* NOTE: Lubricate roller bearing until lubricant can be seen coming out between roller and bearing housing.

2. Before each day's use, follow this procedure:

- a. Visually check the unit, and make certain all items are properly tightened.
- b. Check the cuttershaft to make certain it is fully knifed. Replace any missing knives or cotter pins, then run the unit at full speed to check for vibrations. Do not operate the unit in an out-of-balance condition.

DANGER! Before doing maintenance, turn off power and securely block up mower.

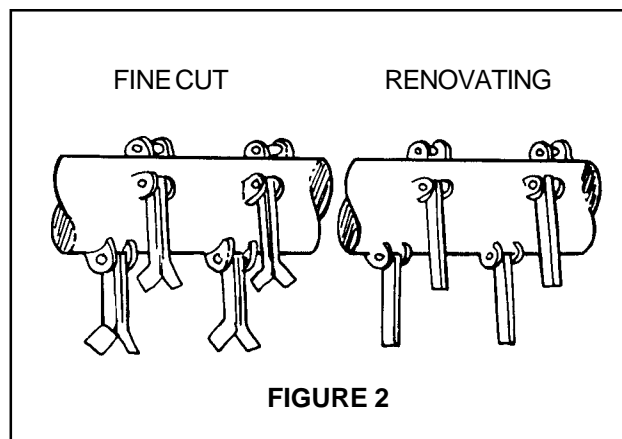


MAINTENANCE

KNIVES (FIGURE 2)

Replacing

Remove Flail Mower from tractor. Turn Housing over with a hoist. Raise and support securely at a convenient height. With one hand, hold two knives back to back so the tips are apart and the holes are in line. Insert the two knives between a pair of ears on the shaft, and with the other hand, insert a headed pin. All knife pins are installed with their heads facing away from the drive side of the Housing. This will locate cotter pins where Knives cannot reach them when flexing backward. Proceed along the shaft in like manner. Then, take a few of the special cotters in one hand, insert in the pin, hold the cotter head edgewise to the ear, and bend out about 45 degrees. Repeat on the other rows of ears.



Sharpening

These Alloy Knives can be sharpened by filing or grinding. If by grinding, keep cool to maintain hardness and avoid early dulling. When sharpening, remove metal mostly at the end of the tip and not much next to the shank. This will make the cutting portion taper rather than long and weak after several sharpening. If the Alamo Electric Grinder is used, the knives can be sharpened without removing from the machine. Sharp knives require less power than dull knives. Sharp knives do a better job than dull knives. Replace broken or missing knives promptly!

Straightening

These Alloy Spring Steel Knives are tough and will bend quite far before they break, and can be straightened several times if bent slightly from hitting obstructions. Use two pairs of pliers or ViseGrips™ or Special tools. Replace any broken or cracked blade at once to prevent the knife's flying off causing imbalance and vibration or possible serious bodily injury.

When replacing a knife set on one lug always replace the corresponding knife set at 180° around shaft. Unbalance may result if this procedure is not followed.

MAINTENANCE

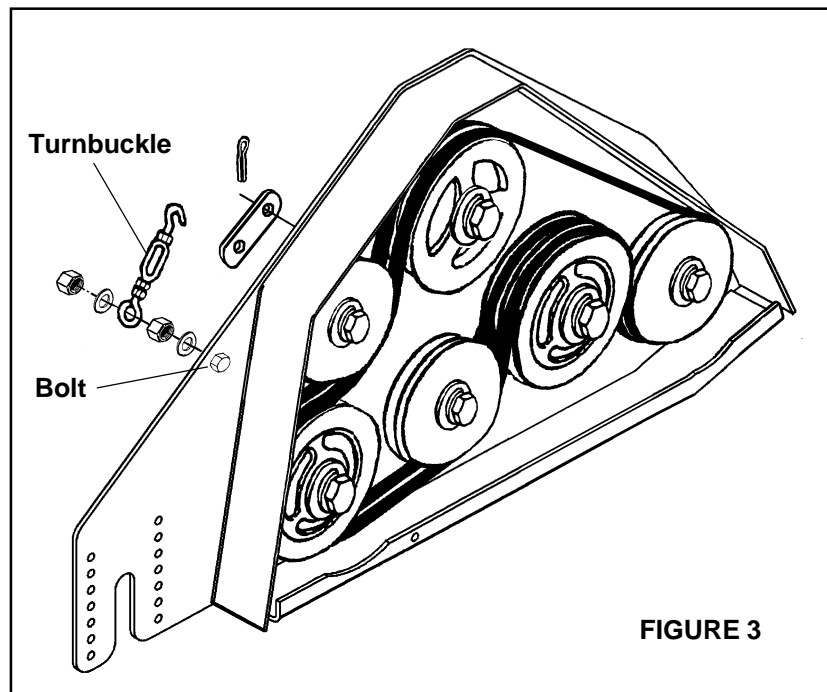
BELTS

Replacement (Figure 3)

1. Place Flail Mower on ground or support securely.
2. Remove Belt Guard.
3. Loosen Idler Arm Turnbuckle until the tension is removed. Remove Bolt on Turnbuckle.
4. Remove old Belt and install new one.
5. Reinstall Turnbuckle and Bolt. Adjust Turnbuckle to the proper tension. See Adjustment.
6. Reinstall Belt Guard.

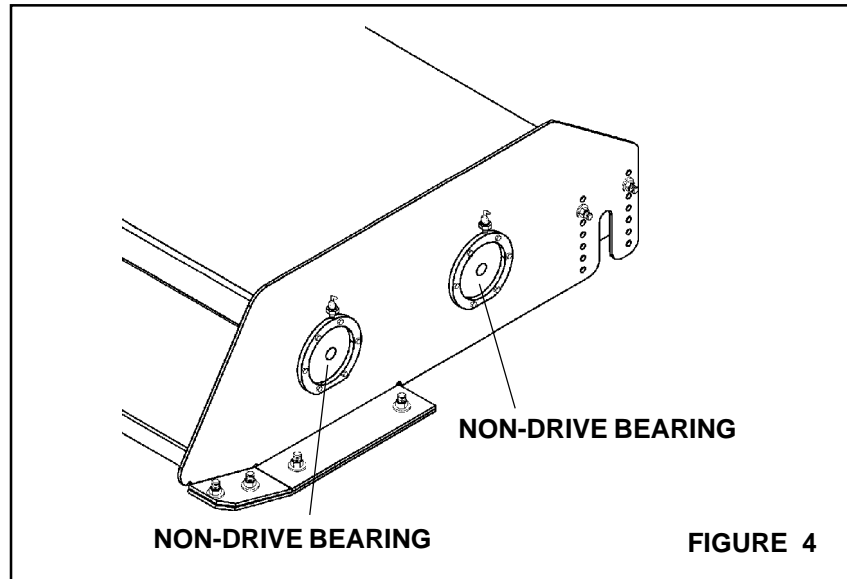
Adjustment

1. Remove Belt Guard.
2. Turn Idler Arm Turnbuckle clockwise to tighten belt and counterclockwise to loosen belt. Tighten until a 10 lb. force will cause approximately 1" deflection.



MAINTENANCE

CUTTERSHAFT BEARING REPLACEMENT



NON-DRIVE BEARING. (FIGURE 4)

1. Lift cutter unit to maximum horizontal height; then, securely support ends of cutterhousing.
2. Remove enough knives to place a floor jack under center of cuttershaft.
3. Securely support cuttershaft.

NOTE: The cuttershaft must remain supported while changing bearings.

5. Remove fasteners securing bearing and housing assembly to cutterhousing; then remove bearing and housing assembly.

NOTE: There are two tapped holes in the housing which can be used to pull bearing and housing assembly out by using special tool No. 701627.

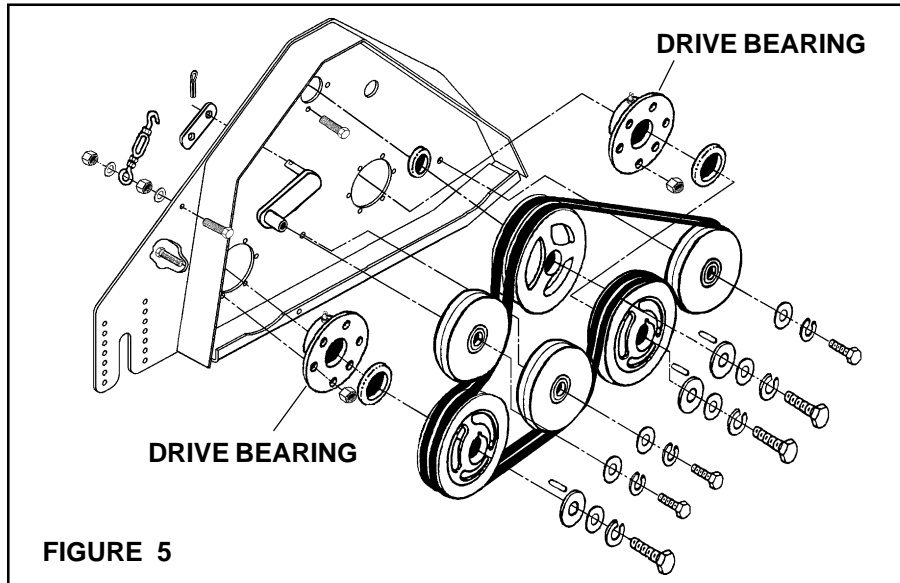
6. Using a jack to align parts, install bearing and housing assembly to cutter unit and make certain that bearing setscrew is located in keyway on cuttershaft. Grease bearing and install cap over fitting.

If only the Non-Drive bearing and housing assembly is to be replaced, proceed as follows: Remove jack and check shaft rotation. Reinstall knives which were removed. Reinstall outboard fender. Remove supports. Lower unit to ground and test unit.

If the drive bearing is to be replaced, proceed to step 7.

MAINTENANCE

CUTTERSHAFT BEARING REPLACEMENT (cont'd)



DRIVE BEARING. (FIGURE 5)

7. Remove belt shield.
8. Remove turnbuckle from idler arm.
9. Remove extension shaft housing mounting bracket fasteners at the cutterhousing. Pivot mounting bracket assembly and remove drive belts.
10. Remove fasteners that secure pulley to cuttershaft. Remove pulley and key.
11. Remove fasteners securing drive bearing and housing assembly to cutterhousing; then, remove bearing and housing assembly.

NOTE: There are two tapped holes in the housing which can be used to pull bearing and housing assembly out by using special tool No. 701627.

12. Using a jack to align parts, install drive bearing and housing assembly to cutter unit. Grease bearing and install cap over fitting.
13. Reinstall key and pulley. Secure with cuttershaft fasteners.
14. Remove jack and check shaft rotation. Reinstall knives which were removed.
15. Reinstall drive belts then secure motor mounting bracket to cutterhousing.
16. Reinstall idler arm turnbuckle.
17. Reinstall belt shield.
18. Remove supports, lower unit to ground and test unit.

F. CUTTERSHAFT REPLACEMENT

NOTE: It is recommended that cuttershaft bearing and housing assemblies be replaced when replacing cuttershaft.

1. Place unit on the ground or securely support at a convenient height.
2. Remove cuttershaft bearing and housing assemblies as outlined above. After removing both assemblies, the cuttershaft can be removed and a new one installed. It may be necessary to remove two sets of knives nearest the drive end of cuttershaft.
3. Install new bearing and housing assemblies.

MAINTENANCE

CUTTERSHAFT (FIGURE 6)

Disassembly

Note: Retain fasteners, they will be reused.

1. Detach mower from tractor.
2. Remove Belt Guard and Idler Turnbuckle.
3. Tip Mower up to facilitate removal of cuttershaft and housing assemblies.

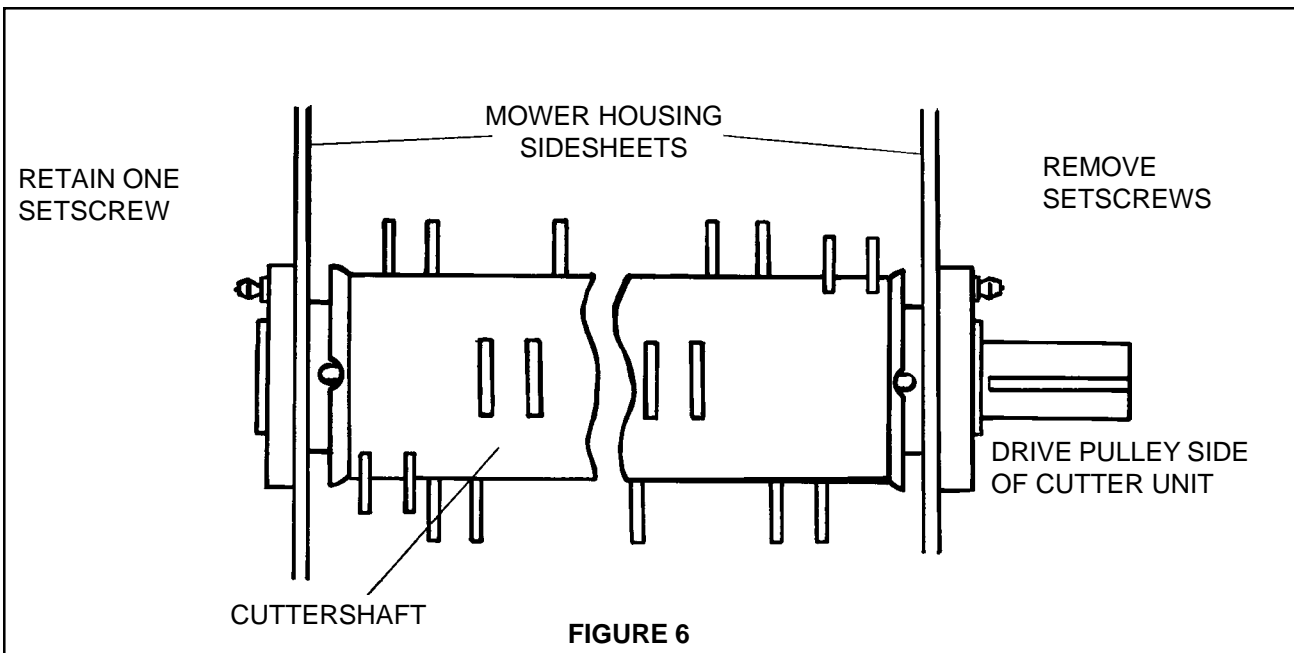
CAUTION! Safely support Mower once it is tipped up.



4. Remove Drive Belt, Cuttershaft Pulley, and Key. Position Idler Pulley so it is out of the way.
5. Align cutout in cuttershaft anti-wrap shield with slot in non-drive side bearing and housing assembly, then loosen bearing setscrew. Remove bearing and housing assemblies from both ends of the cuttershaft. If only the bearing housing assemblies are to be replaced, proceed to Assembly step 2.
6. Remove Cuttershaft.

Assembly

1. Install new cuttershaft.
2. Install new Bearing and Housing Assemblies. Remove setscrews from bearing to be installed on drive pulley side. Each housing has a slot through the stepped down surface. This slot should point toward bottom of mower.
Note: To facilitate assembly, align setscrew in bearing with slot in housing, then align these with cutout in cuttershaft anti-wrap shield. Do not tighten setscrew at this time.
3. Reinstall key, cuttershaft pulley, and drive belt.
4. Rotate cuttershaft, if necessary, to align setscrew in non-drive side bearing and cutout in anti-wrap shield with slot in housing. Tighten setscrew to lock cuttershaft to bearing. Grease both bearings and check shaft rotation.
5. Install new knives in new cuttershaft, or transfer knives from old cuttershaft to new one.
6. Lower Mower to ground then reinstall Idler Turnbuckle and Belt Guard.
7. Reattach Mower to tractor. Start tractor the engage Mower and check for vibration.



MAINTENANCE

GEARBOX SERVICE INSTRUCTIONS

GEARBOX DISASSEMBLY

1. Remove the 4 capscrews (#1) from the input shaft bearing cap (#2). Tap around circumference of the input shaft bearing cap (#2) to loosen and remove.

Note: Wrap plastic tape around irregular shaft surfaces such as splines to protect seal during disassembly and assembly.

2. Remove the 4 capscrews (#3) from the seal housing (#4). Tap around circumference of seal housing (#4) to loosen and remove.

3. Remove the 8 capscrews (#5) and remove input shaft housing cover (#6).

4. Grab hold of the Gear and input shaft assembly (#7) and pull out of main housing (#8).

5. Remove the 4 capscrews (#9), break gasket loose, and then remove the seal Housing (#10).

6. Output shaft assembly must be removed from main housing by pulling shaft out. Note: The simplest method of removing the output shaft assembly (#11) is to attach a slide hammer puller to the shaft and use that to pull the shaft out.

7. The gearbox is now disassembled.

8. Replace all defective parts.

GEARBOX ASSEMBLY

Clean and scrape all gasket surfaces.

1. Insert output shaft assembly (#11) into main housing and press into place. NOTE: Use pipe or tube with approximately same O.D. as bearing and press into place by striking or pressing on tube.

2. Place lower shims (#12) in place and then carefully slide Seal Housing (#10) assembly down shaft.

3. Install bolts and lockwashers (#9) and torque to 40-50 ft. lbs.

5. Insert input shaft assembly (#7) into main housing (#8). It may be necessary to rotate shaft to align gear teeth so that housing will install completely.

6. Attach Housing Cover (#6) to Gear Housing (#8). Install bolts and lockwashers (#5) and torque to 40-50 ft. lbs.

7. Place shims (#14) in place and carefully slide Seal Housing (#4) assembly down shaft.

8. Install bolts and lockwashers (#3) and torque to 40-50 ft. lbs.

9. Place shims (#13) in place and attach the Bearing Cap (#2) in place. Install bolts and lockwashers (#1) and torque to 40-50 ft. lbs.

10. Fill gearbox with the proper amount of SAE No. 90 extreme pressure lubricant. Maintain the level of this oil at the LOWER 1/8" pipe plug on the gearbox cover.

MAINTENANCE

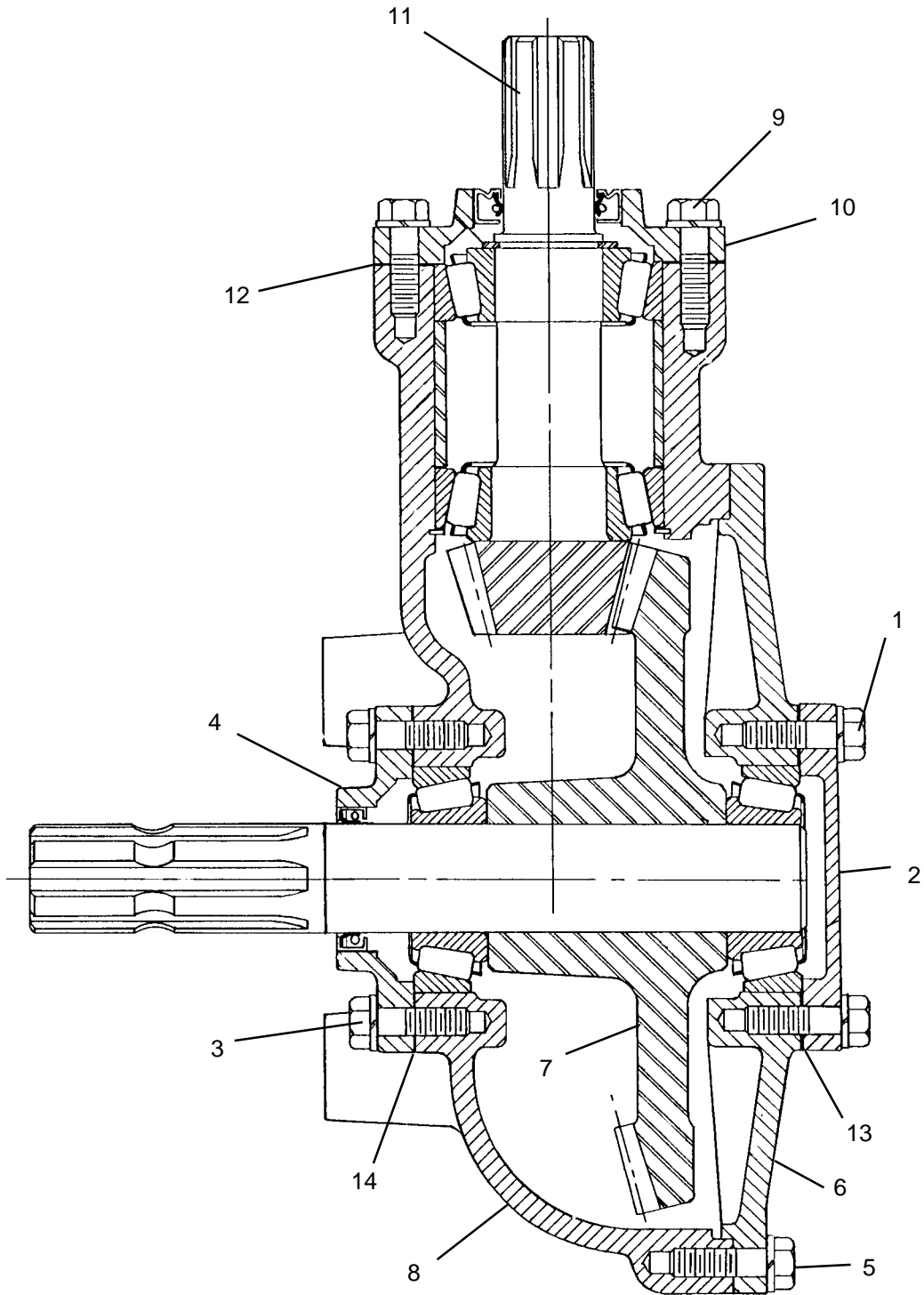
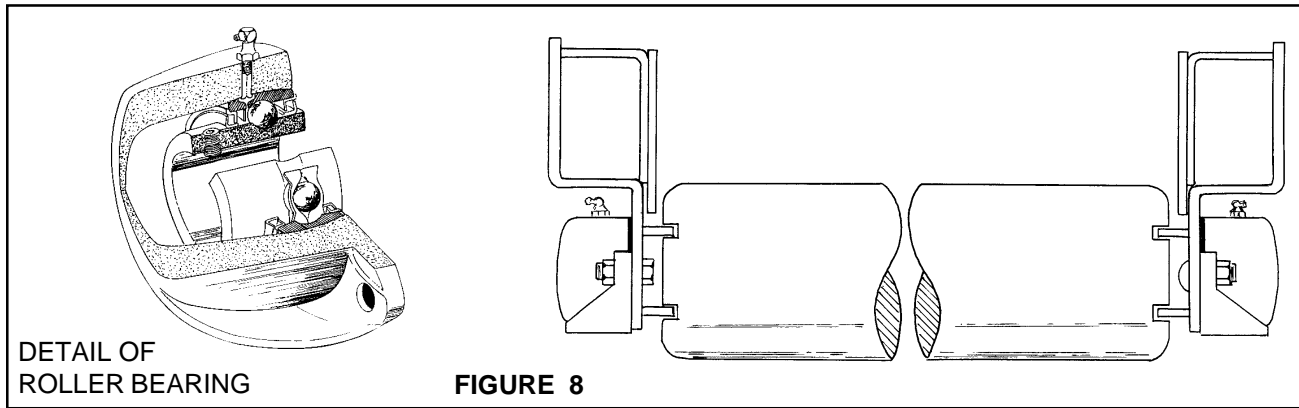


FIGURE 7

MAINTENANCE

ROLLER BEARING REPLACEMENT FIGURE 8



1. Remove roller and both bearing and bracket assemblies from mower. Lift the mower only high enough to remove the roller assembly.

CAUTION: Securely support mower while removing and installing roller assembly.



If installing a roller with pre-assembled bearing and bracket assemblies, remove the old roller, proceed to step 11.

2. Slide bearing and bracket assemblies off each end of roller.

If replacing with new bearing and bracket assemblies, proceed to step 9.

3. Remove roller bearing and housing assembly attaching hardware. Remove assembly from bracket. Inspect seal between assembly and bracket for brittleness, cracks, wear and tear. Replace if necessary.

If replacing with new roller bearing and housing assemblies, proceed to step 8.

4. Remove grease fitting from the top of bearing housing.

5. Remove bearing from housing. By rotating Bearing 90° sideways and line up with notches in Bearing Housing; then pull out.

6. Install new bearing into housing. Bearing must be installed with grease hole in bearing aligned with grease fitting hole in housing.

7. Reinstall grease fitting to housing. Grease fitting must be tight and seated in grease hole in bearing to prevent bearing from rotating in housing.

8. Attach roller bearing and housing assembly to bracket with seal between housing and bracket.

9. Slide bearing and bracket assemblies on each end of roller.

10. Check bearing for proper installation in housing by gently rocking bearing and bracket assembly in end of roller. Play should be slight to none at all.

11. Install roller and bearing and bracket assemblies on mower.

PARTS SECTION

PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this section.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must include the name and address of the person or organization ordering the parts, who should be charged, and if possible, the serial number of the machine for which the parts are ordered.
3. The Purchase Order must clearly list the quantity of each part, the complete and correct part number, and the basic name of the part.
4. The Manufacturer reserves the right to substitute parts where applicable.
5. Some parts are unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a Purchase Order.
6. The Manufacturer reserves the right to change prices without prior notice.

NOTE: Please refer to The Safety Section in the front of this Manual for the proper Part Number when ordering Replacement Safety Decals.



For maximum safety and to guarantee optimum product reliability, always use genuine Alamo Group Parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death. Direct any questions regarding parts to:



ALAMO
1502 E. Walnut
Seguin, Texas 78155
830-372-3551

PARTS TABLE OF CONTENTS

| | |
|---------------------------|------|
| Mower Assembly | 6-4 |
| Driveshaft Assembly | 6-6 |
| Gearbox Assembly | 6-8 |
| Pulley Assembly | 6-10 |

IMPORTANT

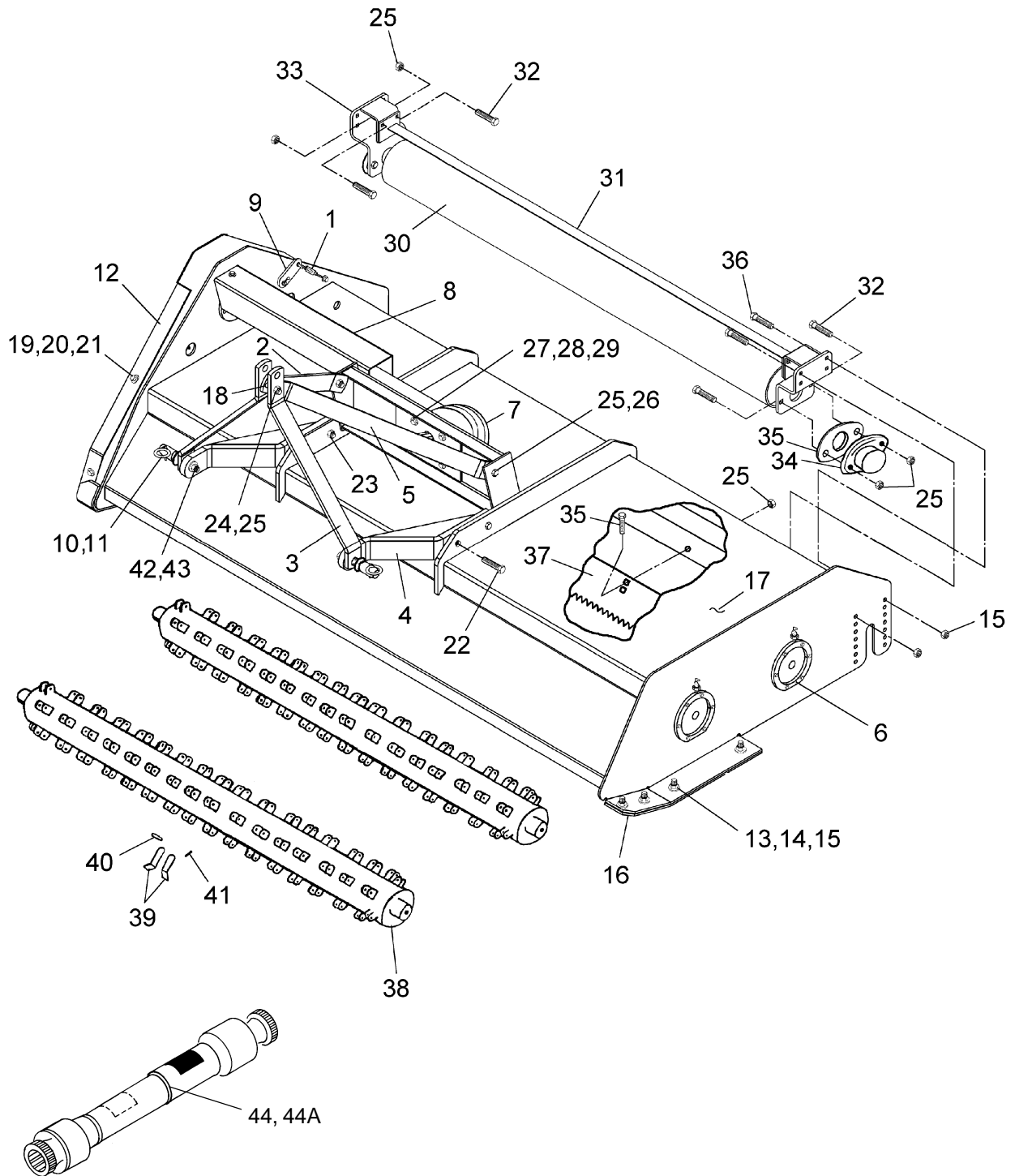
ALAMO GENUINE FLAIL PARTS

ALAMO INDUSTRIAL Flail Mowers use dynamically balanced and matched system components for Cutter Shafts, Knives, Knife Hangers, Rollers, Drivetrain components, Bearings, Belts, and Pulleys. ALAMO INDUSTRIAL parts are made and tested to meet close-tolerance specifications of balance, quality, and consistency that assure long, trouble-free service.

The use of inferior "will fit" parts will void warranty for your ALAMO INDUSTRIAL implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions concerning the repair parts you are using, contact ALAMO INDUSTRIAL 1502 E. Walnut Seguin, TX 78155 (830) 372-3551.



MOWER ASSEMBLY

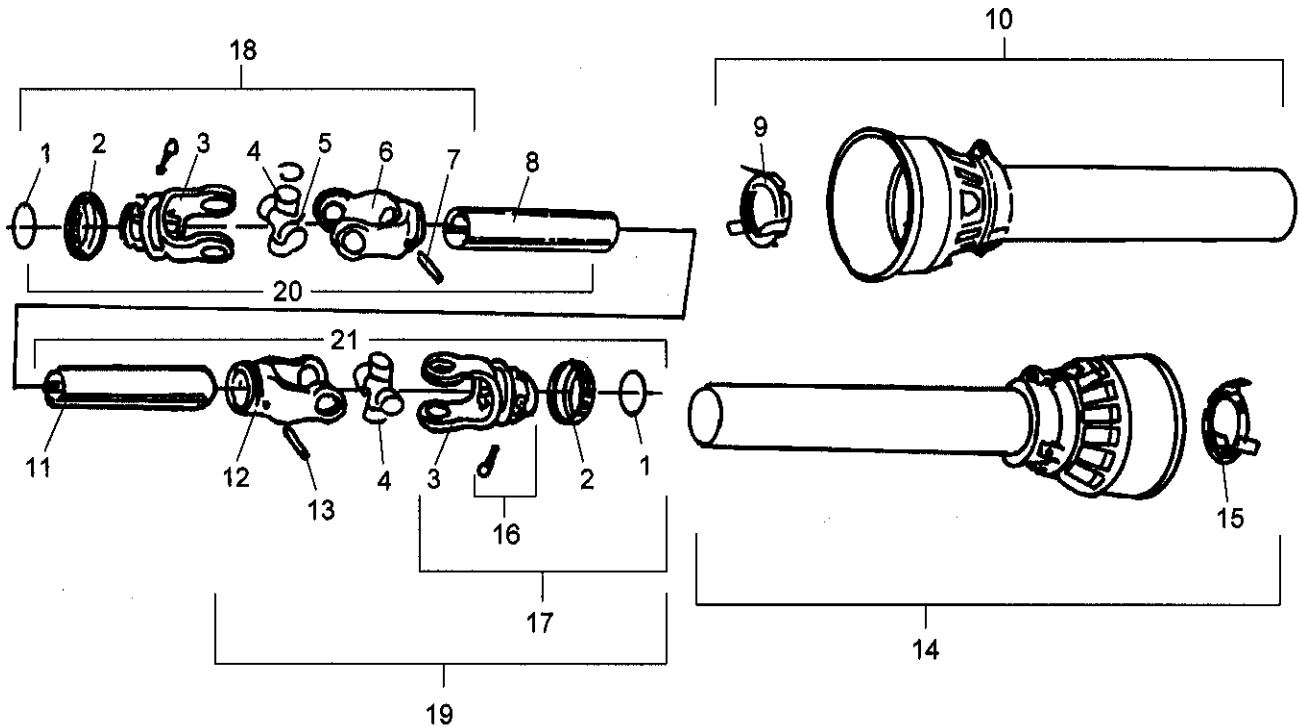


MOWER ASSEMBLY

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------|
| 1 | 02961194 | 1 | Turnbuckle |
| 2 | 02967233 | 1 | Narrow Brace |
| 3 | 02967245 | 2 | Front Strut |
| 4 | 107412 | 2 | Hitch Arm Weldment |
| 5 | 02967234 | 1 | Wide Brace |
| 6 | 703271 | 2 | Bearing (Non-Drive Side) |
| | 02967326 | 2 | Bearing (Drive Side) |
| 7 | 702673 | 1 | Gearbox |
| | 000552 | AR | Shim |
| 8 | 02967983 | 1 | Shield - Output Shaft |
| 9 | 106786 | 1 | Arm Spring |
| 10 | 00603500 | 2 | Hitch Pin |
| 11 | 2196 | 2 | Clip Pin |
| 12 | 02967216 | 1 | Belt Shield |
| 13 | 00748555 | 8 | Bolt |
| 14 | 00011100 | 8 | Flatwasher |
| 15 | 00015800 | 8 | Locknut |
| 16 | 02967416 | 1 | Skid Shoe - L.H. |
| | 02967415 | 1 | Skid Shoe - R.H. |
| 17 | 02967176 | 1 | Weldment - Main Deck |
| 18 | 102803 | 1 | Front Strut Spacer |
| 19 | 02970351 | 4 | Insert |
| 20 | 10119000 | 4 | Bolt |
| 21 | 00011700 | 4 | Lockwasher |
| 22 | 02845500 | 4 | Bolt |
| 23 | 00695100 | 4 | NUT, TOPLOCK 5/8 NC PLC |
| 24 | 00999418 | 4 | Bolt |
| 25 | 00001800 | 3 | LOCKNUT TLM 1/2 NC PLC |
| 26 | 02030700 | 2 | Bolt |
| 27 | 02675800 | 4 | Bolt |
| 28 | 00010300 | 4 | Lockwasher |
| 29 | 00001400 | 4 | Flatwasher |
| 30 | 107785 | 1 | Roller Assembly |
| 31 | 02967437 | 1 | Roller Scraper |
| 32 | 000516 | 8 | Bolt |
| 33 | 02967188 | 2 | Roller Mount Bracket |
| 34 | 703976 | 2 | Roller Bearing Assembly |
| | 002486 | 2 | Bearing |
| | 300849 | 1 | Housing |
| 35 | 002037 | 2 | Seal |
| 36 | 000644 | 4 | Bolt |
| 37 | 02967144 | 1 | Rake |
| 38 | 702615 | 2 | Cuttershaft Assembly |
| 39 | 102086 | 184 | Fine Cut Knife |
| 40 | 101034 | 92 | Pin |
| 41 | 000026 | 92 | Cotter Pin |
| 42 | 00012200 | 2 | Lockwasher |
| 43 | 00603600 | 2 | Nut |
| 44 | 001867 | 1 | Driveline (Prior) |
| 44A | 00775472 | 1 | Driveline (Current) |

DRIVE SHAFT ASSEMBLY (PN001867)

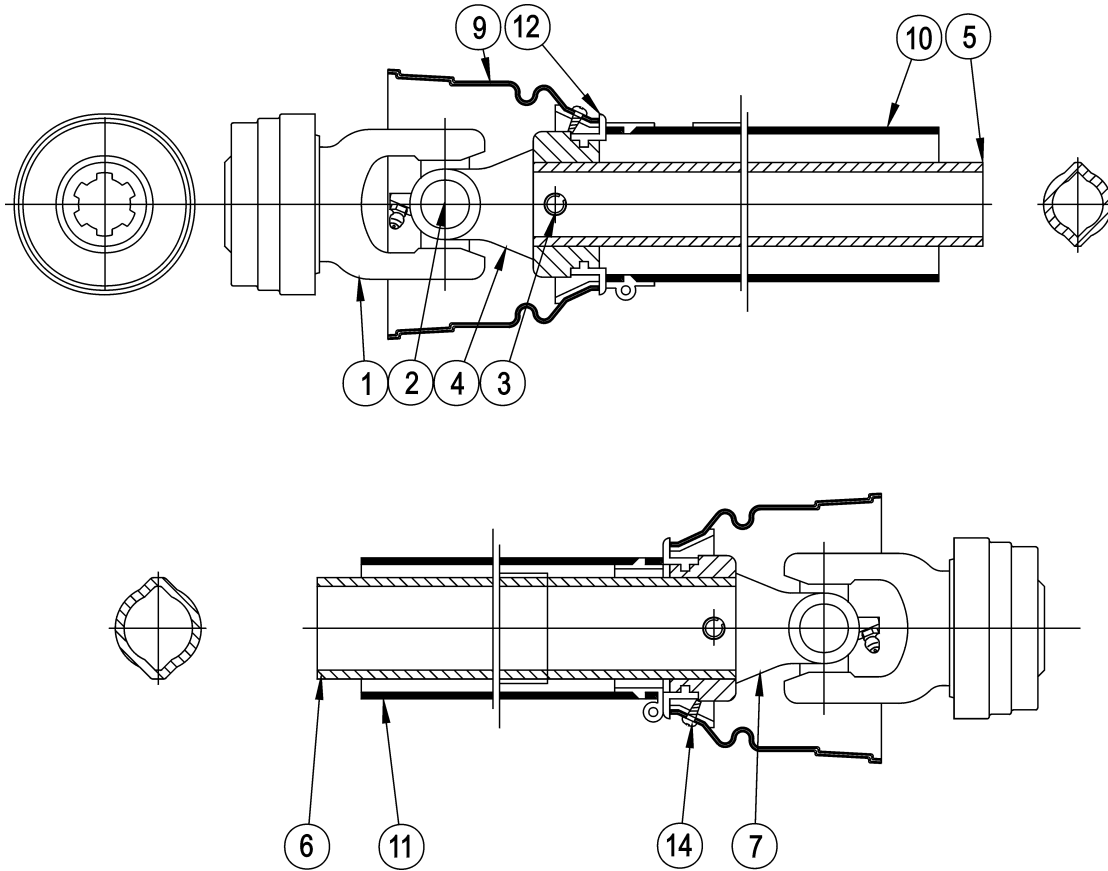
Driveline 001867
To Prior



| ITEM | PART NO. | QTY | DESCRIPTION |
|------|-----------|-----|--------------------------|
| 1 | 00759515 | 1 | Clip |
| 2 | 00759516 | 1 | Collar Lock |
| 3 | 00759170 | 1 | Outer Yoke |
| 4 | 00759163 | 2 | Cross Assembly |
| 5 | 00759517 | 2 | Grease Fitting |
| 6 | 00759164 | 1 | Inner Yoke |
| 7 | 00759165 | 1 | Roll Pin |
| 8 | 00759518 | 1 | Inner Tube |
| 9 | 00762574 | 1 | Tube Bearing |
| 10 | 00759528A | 1 | Half Shield |
| 11 | 00759519 | 1 | Outer Tube |
| 12 | 00759168 | 1 | Outer Yoke |
| 13 | 00759169 | 1 | Roll Pin |
| 14 | 00759529A | 1 | Half Shield |
| 15 | 00762577 | 1 | Bearing |
| 16 | 00754474 | 3 | Push Pin Set |
| 17 | 00759171 | 1 | Collar Kit |
| 18 | 00759520 | 1 | U-Joint (Inner) |
| 19 | 00759521 | 1 | U-Joint (Outer) |
| 20 | 00759522 | 1 | Inner Shaft w/ Protector |
| 21 | 00759523 | 1 | Outer Shaft w/ Protector |
| 23 | 00759530A | 1 | Complete Shield |

DRIVE SHAFT ASSEMBLY (PN001867)

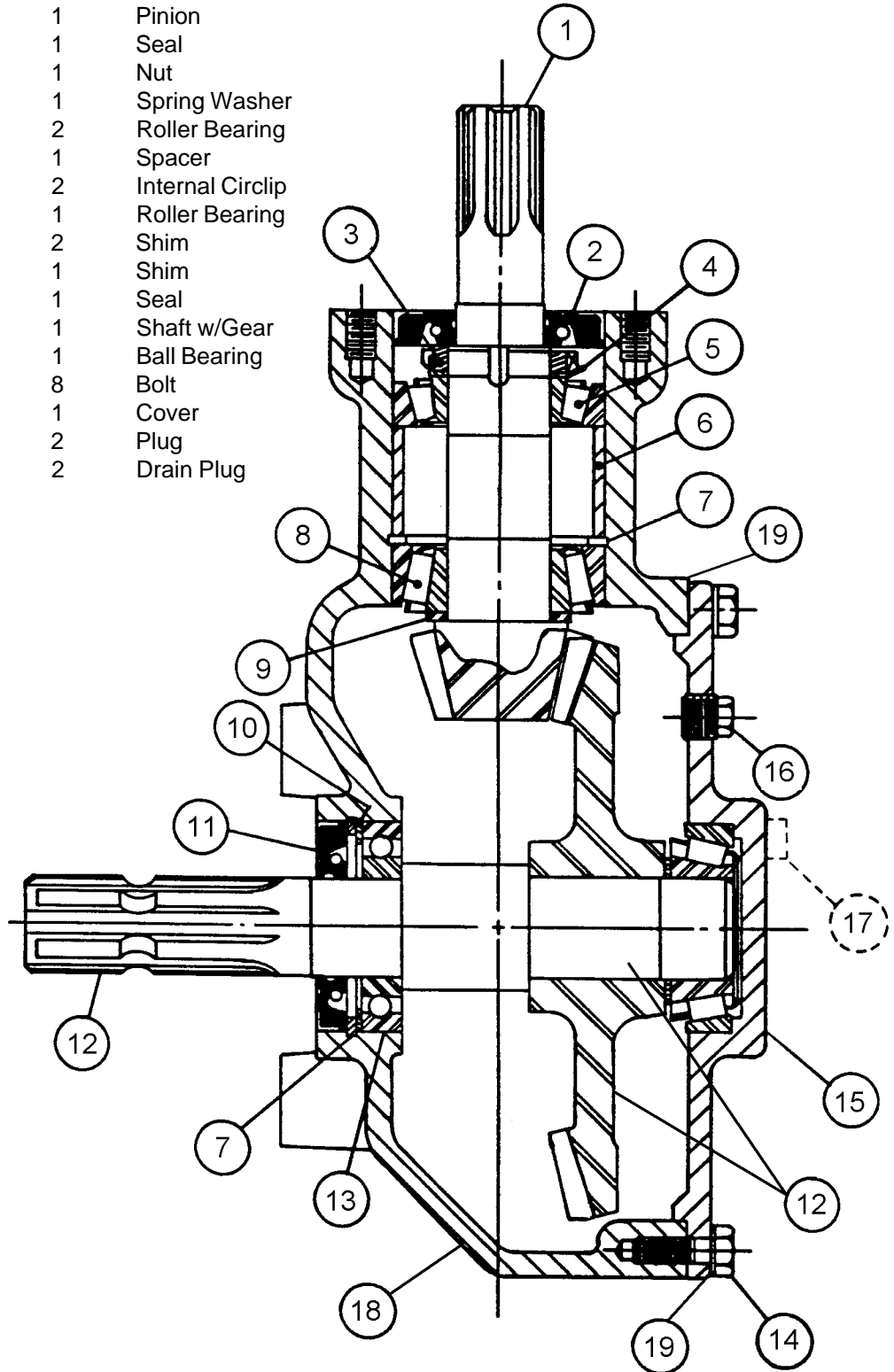
Driveline 00775472
To Current



| ITEM | PART NO. | QTY | DESCRIPTION |
|------|-----------------|-----|--------------------------|
| | 00775472 | - | Drive Shaft |
| 1 | 00775475 | 2 | Yoke, 1 3/8" - 6 SPL |
| 2 | 00775476 | 2 | Cross & Bearing Kit |
| 3 | 703623W | 2 | Spring Pin |
| 4 | 00775477 | 1 | Inboard Yoke |
| 5 | 3216401 | 1 | Inner Profile |
| 6 | 3216402 | 1 | Outer Profile |
| 7 | 00775480 | 1 | Inboard Yoke |
| 9 | ----- | 2 | Shield Cone |
| 10 | ----- | 1 | Outer Shield Tube, Oval |
| 11 | ----- | 1 | Inner Shield Tube, Round |
| 12 | 3216406 | 2 | Bearing Ring |
| 14 | 00759217 | 2 | Screw in Items 9 |

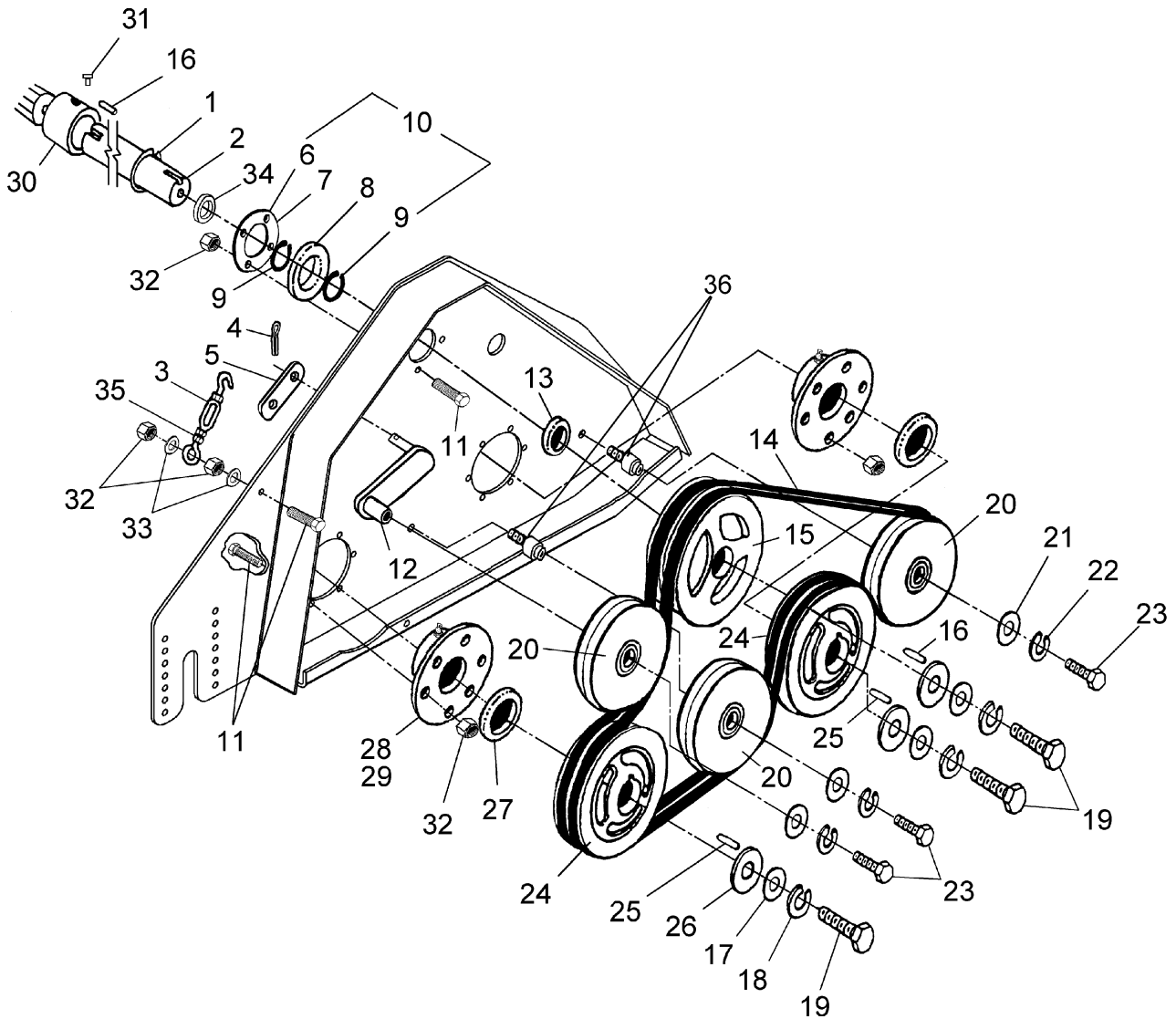
GEARBOX

| ITEM | PART NO. | QTY | DESCRIPTION |
|------|----------|-----|------------------|
| 1 | 001718 | 1 | Pinion |
| 2 | 001719 | 1 | Seal |
| 3 | 001717 | 1 | Nut |
| 4 | 001720 | 1 | Spring Washer |
| 5 | 00754757 | 2 | Roller Bearing |
| 6 | 001716 | 1 | Spacer |
| 7 | 00754752 | 2 | Internal Circlip |
| 8 | 001722 | 1 | Roller Bearing |
| 9 | 00753222 | 2 | Shim |
| 10 | 00754761 | 1 | Shim |
| 11 | 001724 | 1 | Seal |
| 12 | 001725 | 1 | Shaft w/Gear |
| 13 | 00754459 | 1 | Ball Bearing |
| 14 | 001708 | 8 | Bolt |
| 15 | 001710 | 1 | Cover |
| 16 | 00755633 | 2 | Plug |
| 17 | 000055 | 2 | Drain Plug |



NOTES

PULLEY ASSEMBLY



PULLEY ASSEMBLY

| ITEM | PART NO. | QTY | DESCRIPTION |
|------|----------|-----|---|
| 1 | 00758900 | 1 | Retaining Ring |
| 2 | 02970337 | 1 | Shaft |
| 3 | 02961194 | 1 | Turnbuckle |
| 4 | 00755153 | 1 | Clip Pin |
| 5 | 106786 | 1 | Arm |
| 6 | 100702 | 1 | Housing Bearing |
| 7 | 000053 | 1 | Grease Fitting |
| 8 | 000398 | 1 | Bearing |
| 9 | 000402 | 2 | Retaining Ring |
| 10 | 700491 | 1 | Bearing Assy. (Includes Items 6-9) |
| 11 | 00753642 | 29 | Bolt |
| 12 | 02969983 | 1 | Idler Arm |
| 13 | 02970339 | 1 | Pulley Spacer |
| 14 | 02967207 | 2 | V-Belt |
| 15 | 02969817 | 1 | Pulley |
| 16 | 02669600 | 1 | Key |
| 17 | 101780 | 3 | Washer |
| 18 | 00019600 | 3 | Lockwasher |
| 19 | 00019300 | 3 | Bolt |
| 20 | 02969874 | 3 | Idler Pulley |
| 21 | 00011100 | 3 | Washer |
| 22 | 00012101 | 3 | Lockwasher |
| 23 | 00002000 | 3 | Bolt |
| 24 | 02969818 | 2 | Pulley |
| 25 | 02959282 | 2 | Key |
| 26 | 100720 | 3 | Washer |
| 27 | 02969978 | 2 | Spacer |
| 28 | 02967326 | 2 | Cuttershaft Bearing Assy. (Drive Belt Side) |
| | 002315 | 1 | Bearing |
| | 107469 | 1 | Housing |
| | 002348 | 1 | Coupling |
| | 00752176 | 1 | Grease Fitting |
| | 02967190 | 1 | Nipple |
| 29 | 703271 | 2 | Cuttershaft Bearing Assy. (Non-Drive Side) |
| | 0002315 | 1 | Bearing |
| | 001477 | 1 | Setscrew |
| | 107469 | 1 | Housing |
| | 00752176 | 1 | Grease Fitting |
| 30 | 106970 | 1 | Coupling |
| 31 | 02957080 | 1 | Setscrew |
| 32 | 00015800 | 13 | Locknut |
| 33 | 00011100 | 2 | Washer |
| 34 | 100010 | 1 | Bevel Ring |
| 35 | 00021800 | 1 | Nut |
| 36 | 02967247 | 2 | Bolt, Idler Pulley |

ALAMO INDUSTRIAL

LIMITED WARRANTY

1. LIMITED WARRANTIES

- 1.01. Alamo Industrial warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser ("Purchaser") that the goods purchased are free from defects in material or workmanship.
- 1.02. Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.
- 1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This limited warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found in your Operator's Manual.
- 1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

- 2.01. This limited warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.
- 2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.
- 2.03. Purchaser is responsible for returning the goods in question to the Dealer.
- 2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:
 - (a) Repair or replace the defective goods or part(s) or
 - (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

- 2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

- 3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOT WITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

- 4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Guadalupe County, Texas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Alamo Industrial Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION:
READ YOUR OPERATOR'S MANUAL

ALAMO INDUSTRIAL

An Alamo Group Company
Post Office Drawer 549
Seguin, Texas 78156
830-379-1480





TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seatbelts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

REQUIRED OF THE OPERATOR

1. Securely fasten seatbelt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going - especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.



Keep children away from danger all day, every day...



Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...



Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.

