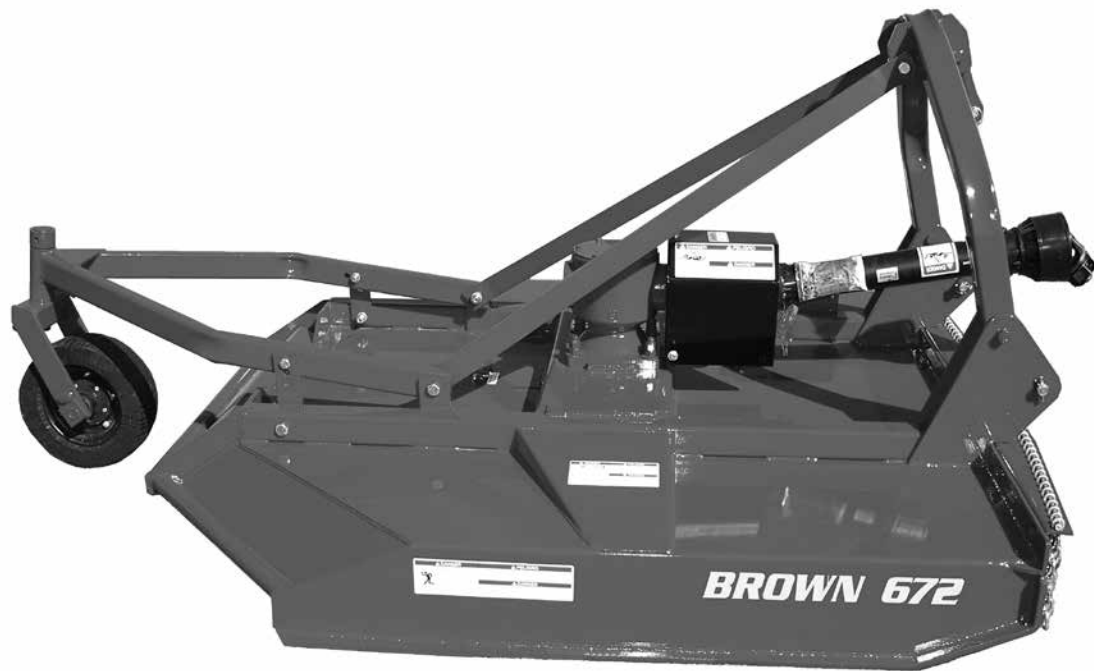


For use with beginning
Serial Numbers:
S605B-XXXX
Example: **S605B-1295**

Brown 672HD Heavy Duty Cutter

ATTENTION:
ALL WARRANTY WORK MUST BE APPROVED
BY BROWN MFG. CORP.
BEFORE WORK BEGINS



Owner / Operator Manual



MANUFACTURING CORPORATION™
6001 E. Hwy 27 • OZARK, ALABAMA 36360
PHONE: (334) 795-6603 • FAX: (334) 795-3029

www.brownmfgcorp.com

⚠ WARNING



Before operating your machine, stop and read this owners manual. Do not attempt to operate the unit until you fully understand the material covered in this manual. Without the knowledge contained in this manual, injury or death can result.

Copyright Information

Copyright ©2000 Brown Manufacturing Corporation, Ozark, Alabama. All photos and illustrations are property of Brown Manufacturing Corporation. “Texaco” and “Mobil” are trademarks of their respective companies. This publication may be freely reproduced, either in whole or in part, provided that the content herein is not altered. We encourage you to make copies of this manual and to distribute it to every operator of the machine. Additional copies are also available from Brown Manufacturing Corporation.

Cover

Illustrated: Model 672HD brush cutter.

Disclaimer

Due to engineering improvements and revision of product specifications, the information contained in this manual is subject to change without notice.

Contents

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Warranty Statement

LIMITED WARRANTY

BROWN MANUFACTURING CORP. hereby warrants that Brown's products will be free from defects in material and workmanship under normal use according to the provisions and limitations herein set forth. All parts, specifically EXCLUDING expendable 'wear' parts, that become unserviceable, due to defective material or workmanship, within three months / 90 days from date of the original retail purchase, shall, at Brown's option, be repaired or replaced.

LIMITATIONS

The obligations of Brown for breach of warranty shall be limited to products manufactured by Brown; (1) that are installed, operated, and maintained according to Brown's instruction furnished and/or available to the purchaser upon request; (2) that are installed according to all other applicable Federal, State, and local codes or regulations; and (3) that the purchaser substantiates were defective in material and workmanship notwithstanding that they were properly installed and correctly maintained as set forth and were not abused or misused. The obligation of Brown shall be limited to replacing or repairing the defective product, at the option of Brown. Brown shall not be responsible for any labor or cost of removal or repairing or reinstallation of its products and shall not be liable for transportation costs to and from its plant in Ozark, Alabama. Use of parts for modification or repair of the product or any component part thereof not authorized or manufactured by Brown specifically for such product shall void this warranty. This warranty shall not apply to any damage to or defect in the Brown's products that is directly or indirectly caused by; (1) FORCE MAJEURE, act of GOD, or other accident not related to an inherent product defect; or (2) abuse, misuse, or neglect of the such product, including any damage caused by improper assembly, installation, adjustment, or faulty instruction of the purchaser. **OTHER THAN AS EXPRESSLY SET FORTH HEREIN ABOVE, BROWN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO ANY OF BROWN'S PRODUCTS, INCLUDED BUT NOT LIMITED TO ANY MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BROWN BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE SUFFERED BY PURCHASER OR ANY OTHER PERSON OR ENTITY CAUSED IN WHOLE OR IN PART BY ANY OF BROWN'S PRODUCTS.** Any person or entity to whom this warranty extends and who claims breach of warranty against Brown must bring suit thereon within one year from the date of occurrence of such breach of warranty or be forever barred from any and all legal or other remedies for such breach of warranty. Brown is not responsible for and hereby disclaims any undertaking, representation, or warranty made by any dealer, distributor, or other person that is inconsistent with or in any way more expensive than the provisions of this limited warranty. This warranty grants specific legal rights and shall be read in conformity with applicable state law. In some jurisdictions, the applicable law mandates warranty provisions that provide greater rights than those provided for herein. In such case, this limited warranty shall be read to include such mandates provisions; and any provision herein that is prohibited or unenforceable in any such jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceable without invalidating the remaining provisions and without affecting the validity or enforceability of such provisions in any other jurisdiction.

STATEMENT OF POLICY

In accordance with our established policy of constant improvement, we reserve the right to amend these specifications at any time without notice.

WARRANTY BY MANUFACTURER

Dealer/distributor understands and agrees that the manufacturer extends only the following warranty to its customers. In the event dealer/distributor extends any additional warranty such as enlarging the scope or period of warranty or undertaking a warranty of fitness for any particular purpose or obligation not encompassed in manufacturer's warranty, dealer/distributor shall be solely responsible therefore and shall have no recourse against manufacturer with respect thereto.

Owner Registration

WARRANTY NOTES

- All parts returned to Brown Manufacturing Corp. for warranty inspection must be received freight prepaid.
- *All Warranty Work MUST be approved by Brown Mfg. Corp. BEFORE work begins.
- If a warranty claim is approved, replacement or repaired parts will be returned to the customer freight prepaid.
- If a dealer makes any type of approved warranty repair, only parts and labor will be credited by Brown Manufacturing Corp. **No service call or transportation charges are warrantable.**
- No returned parts will be inspected for warranty claims if not received with a Return Authorization Number. **Without a RMA#, Brown Manufacturing Corp. cannot and will not be responsible for any returned goods.**
- Drive shaft / slip clutch warranties:** Many factors can cause a slip clutch to fail. Most failures are not caused by the quality of workmanship or of materials used in the component. Therefore, all warranty claims on drive shafts / slip clutches are sent to the manufacturer of the component. All warranties approved by the component manufacturer will be handled and settled by that manufacturer.
- Use of any replacement parts other than original Brown replacement parts will void all warranties.**

⚠️WARNING: The use of after-market replacement parts will change the operational conditions of the machine, shorten the life of other components, lead to failure of the machine, and create safety hazards to all persons near the machine. Brown equipment is designed to use original manufacturer replacement parts meeting the exact specifications of the machine and crafted from high-quality materials. After-market replacement parts are neither engineered to meet the machine’s exact specifications nor manufactured to the same high standards as original Brown replacement parts.

For Your Records

Model: 672HD
 SerialNo.: S605B-_____
 Date Purchased: ___/___/___
 Dealer: _____
 Date Registered: ___/___/___

Owner Registration

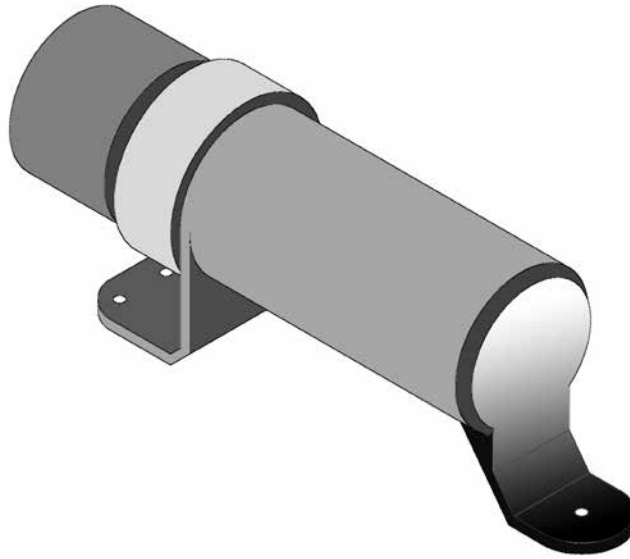


Important: To place the manufacturer’s warranty into effect, this card must be mailed within thirty (30) days after receiving equipment.

Return to:
 Brown Manufacturing Corp.
 6001 East Hwy 27
 Ozark, AL 36360

Name: _____
 Address: _____
 City: _____ State: _____
 Model: 672HD
 Serial No.: S605B _____
 Date Purchased: ___/___/___
 Dealer: _____

IMPORTANT NOTICE: OWNER'S MANUAL STORAGE CONTAINER




- * Brown Manufacturing provides an Owner's Manual storage container on all equipment.
- *This holder is mounted in a convenient location and provides the owner with the proper safety and operation information.
- *Two (2) copies are provided with each unit.
- *One copy is for the **owner** to have at office for review when not operating the equipment.
- *Second copy is to stay with the unit at all times. This will provide the **operator** the information needed for safe and proper operation of the unit.
- *If the Owner's Manual becomes lost or damaged, contact Brown Mfg. or your local dealer for replacement.

Please use envelope.

Equipment Safety

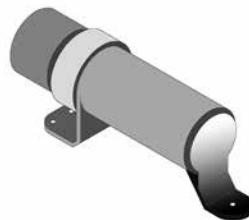
Warning: Read this manual before operation.

Operators of the equipment must read and understand this manual. Failure to read this manual and follow these safety and operating instructions could result in serious bodily injury or even death.

! WARNING	
	<p>Before operating your machine, stop and read this owners manual. Do not attempt to operate the unit until you fully understand the material covered in this manual. Without the knowledge contained in this manual, injury or death can result.</p>

Each operator of the equipment should review this manual every six (6) months. You are encouraged to duplicate this manual and to distribute it to each operator of the equipment for their training and reference. Additional copies are available from Brown Manufacturing Corporation.

IMPORTANT NOTICE: OWNER'S MANUAL STORAGE CONTAINER



- * Brown Manufacturing provides an Owner's Manual storage container on all equipment.
- * This holder is mounted in a convenient location and provides the owner with the proper safety and operation information.
- * Two (2) copies are provided with each unit.
- * One copy is for the **owner** to have at office for review when not operating the equipment.
- * Second copy is to stay with the unit at all times. This will provide the **operator** the information needed for safe and proper operation of the unit.
- * If the Owner's Manual becomes lost or damaged, contact Brown Mfg. or local dealer for replacement, or go to our website at: <http://www.brownmfgcorp.com/manuals/index.html>. All of our manuals are available for download and printing.

Equipment Safety

Recognize safety information

This is the safety alert symbol. When you see this symbol on your equipment or in this manual, be alert to the potential for personal injury or injury to others.



Understand signal words

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury



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



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



NOTICE indicates information considered important but not directly hazard related. (e.g. security, hygiene, equipment or property damage).



Follow safety instructions

- Read owner/operator manual.
- Replace missing or damaged safety decals.
- Safety decals and this manual must be considered a permanent part of your equipment.
- Should ownership of the equipment be transferred, this manual must also be transferred.
- Unauthorized modifications to the equipment are not recommended. This could impair the function, safety, and life of the machine.
- For any part of this manual that you do not understand, contact your dealer or Brown Manufacturing Corporation at (800) 633-8909.
- All implements with moving parts are potentially dangerous. Due to this fact, there is no substitute for a safe, knowledgeable operator. It is important that all persons operating this equipment read, understand, and follow the instructions provided in this manual.





DO NOT OPERATE THIS UNIT IF YOU ARE UNDER THE INFLUENCE OF ALCOHOL, ILLEGAL DRUGS, OR ANY PRESCRIPTION OR OVER THE COUNTER MEDICATIONS THAT COULD CAUSE DROWSINESS, DIZZINESS, DISORIENTATION AND/OR IMPAIR YOUR ABILITY IN ANY WAY TO SAFELY OPERATE THE UNIT.

DO NOT OPERATE THIS UNIT IF YOU SUFFER FROM ANY PHYSICAL CONDITION OR DISABILITY THAT WOULD IMPAIR YOUR ABILITY TO OPERATE IT SAFELY.



Equipment Safety

Safety Decals


The following safety decals should be attached to the equipment at all times. Should any decals become damaged or lost, it is the responsibility of the owner to replace it. Additional decals may be obtained from the dealer or Brown Manufacturing Corporation.

 WARNING	 ADVERTENCIA
	<p>Antes de probar la unidad por primera vez deben remitirse a las instrucciones contenidas en el manual.</p>
<p>Read and understand owner's manual before operating unit.</p>	 ADVERTISSEMENT <p>S'assurer de bien comprendre toutes les consignes du manuel de propriétaire avant d'utiliser la unité.</p>

Part No.: SD-010.

 DANGER	
	<p>THROWN OBJECT HAZARD</p> <p>To prevent serious injury or death from thrown objects:</p> <ul style="list-style-type: none"> • Stay clear when blade is turning. • Operate only with all guards installed and in good condition. • Stop operation if bystanders come within several hundred feet.

Part No.: SD-001A.

 WARNING
<p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> • Operate only at 540 RPM PTO. • Keep guards and shields in place.

SD-007A, Standard models*.

*All Brown 672 Model rotary cutters are equipped for 540 RPM PTO as standard. Equipping for 1000 RPM PTO is an option, however; in such a case, use safety decal SD-008A.

Equipment Safety

Safety Decals (continued)

! DANGER




ROTATING DRIVELINE - CONTACT CAN CAUSE DEATH
KEEP AWAY!

DO NOT OPERATE WITHOUT -

- All driveline guards, tractor and equipment shields in place.
- Drivelines securely attached at both ends.
- Driveline guards that turn freely on driveline.

Part No.: SD-006A.

! DANGER



ROTATING BLADES

To prevent serious injury or death from rotating blades:

- Stay clear when blades are turning or engine is running.
- Do not place hands or feet under deck when the engine is running.



Part No.: SD-005A.

! DANGER




SHIELD MISSING
DO NOT OPERATE

Part No.: DC-3-5-018.

<p>! WARNING</p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> •Read and understand Operator's Manual before using. •Do not permit riders on the tractor or cutter. Never carry child on tractor seat. •Operate with guards installed and in good condition. •Operate only with tractor equipped with ROPS and seatbelts. •Keep away from moving parts. •Stop engine, set brake and wait for all moving parts to stop before dismounting. •Be sure lights and reflectors required by law are clean and in good working order before transporting. •Do not allow children to operate cutter. •Travel with SMV and lights that follow local codes. •Clear debris from cutting area. •Do not operate in the raised position. •Support securely before working beneath unit. •Review safety instructions annually. 		<p>! ADVERTENCIA</p> <p>Para prevenir lesiones graves o de accidentes mortales:</p> <ul style="list-style-type: none"> •Léan y asimilen el Manual del Usuario antes de probar la máquina. •No permitan pasajeros ni en el cortador ni en el tractor. Nunca lleven consigo a un niño en el asiento del tractor. •Debe manejarse con los resguardos puestos y en buen estado. •No se enganchen al no se a un tractor equipado de su blindaje de protección y del cinturón de seguridad. •No se acerquen a las piezas en movimiento. •Paren el motor, echen el freno y esperen a que todos los órganos que estén en movimiento se paren antes de bajarse del tractor. •Asegúrense que las luces y los reflectores estén limpios y en buen estado antes de iniciar la tarea. •No permitan a los menores poner el cortador en marcha. •Observen los reglamentos locales en lo tocante a la iluminación y velocidad de los vehículos lentos. •Limpien de desperdicios el área que vayan a cortar. •No utilicen el cortador en la posición elevada. •Sostengan, bloqueando con seguridad, el equipo antes de ponerse a trabajar por debajo de él. •Reléan las instrucciones sobre la seguridad anualmente. 		<p>! AVERTISSEMENT</p> <p>Prévenir les blessures graves et la mort:</p> <ul style="list-style-type: none"> •Lire et comprendre le manuel du propriétaire avant de faire fonctionner la machine. •Il est interdit de prendre des passagers sur le coupeur ou le tracteur. Il est interdit de prendre un enfant avec soi sur le tracteur. •Tous les gardes doivent être posés et en bon état. •N'atteler que sur un tracteur équipé d'une cage de protection et de ceinture de sécurité. •Rester éloigné des pièces en mouvement. •Arrêter le moteur, serrer les freins et attendre que toutes les pièces en mouvement se soient immobilisées avant de descendre du tracteur. •S'assurer que les feux de circulation et les réflecteurs sont propres et en bon état avant de prendre la route. •Interdire aux enfants de faire fonctionner le coupeur. •Respecter les lois locales réglant les véhicules lents et leur signalisation. •Débarasser la section à couper de tous les débris. •Interdit de faire fonctionner en position relevée. •Bloquer de façon sécuritaire avant de travailler sous la machine. •Retire les consignes de sécurité annuellement. 			
<p>! CAUTION</p>  <p>To Avoid Injury Or Machine Damage:</p> <ul style="list-style-type: none"> • When servicing machine use proper tools and equipment. • Refer to operations manual for instructions. 		<p>! PRECAUCIÓN</p> <p>En evitación de lesiones y de averías de todo tipo:</p> <ul style="list-style-type: none"> • Utilicen siempre los útiles y herramientas apropiados para el mantenimiento de la máquina. • Léan las instrucciones del manual del usuario. <p>! ATENCIÓN</p> <p>Dans le but d'éviter les blessures et les dommages à la machine:</p> <ul style="list-style-type: none"> • Toujours utiliser les outils et équipements appropriés à l'entretien la machine. • Consulter les marches à suivre au manuel du propriétaire. 		<p>! WARNING</p>  <p>Read and understand owner's manual before operating cutter.</p>		<p>! ADVERTENCIA</p> <p>Antes de probar la cortadora por primera vez deben remitirse a las instrucciones contenidas en el manual.</p> <p>! AVERTISSEMENT</p> <p>S'assurer de bien comprendre toutes les consignes du manuel du propriétaire avant d'utiliser la coupeur.</p>	
<p>! DANGER</p> <p>Tighten blade bolts as prescribed in owner/operator's manual.</p> <p>Do not operate this unit if you suffer from any physical condition or disability that would impair your ability to operate it safely.</p> <p>Do not operate this machine if you are under the influence of alcohol or any drug that could impair your ability to operate the unit in a safe manner.</p>		<p>! PELIGRO</p> <p>Los pernos que sujetan la cuchilla deben apretarse como se indica en el manual.</p> <p>No opere esta unidad si tiene algún tipo de discapacidad o afección física que afecte su capacidad para operarla de forma segura.</p> <p>No opere esta máquina bajo los efectos del alcohol o cualquier droga que puede afectar su capacidad para operar la unidad de forma segura.</p>		<p>! DANGER</p> <p>Serrer les boulons des lames selon les consignes du manuel du propriétaire/opérateur.</p> <p>Ne pas utiliser cette unité si vous souffrez d'une affection ou d'une incapacité physique susceptible de nuire à la capacité d'utiliser le produit en toute sécurité.</p> <p>Ne pas utiliser cet appareil sous l'influence de l'alcool ou de drogues susceptibles de nuire à la capacité d'utiliser le produit en toute sécurité.</p>			

SCL-020

! WARNING



MISSING DEFLECTOR HAZARD

To prevent serious injury or death from thrown objects:

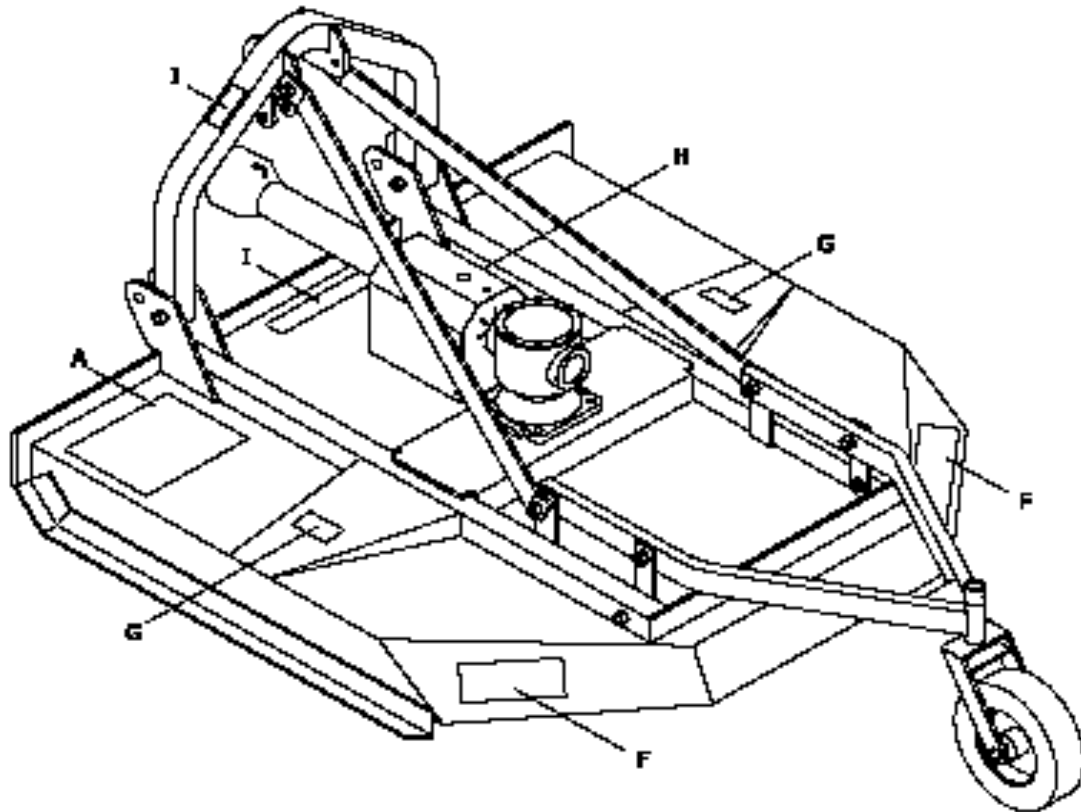
- Install deflector around operator enclosure, as described in manual, before starting.
- Deflector protects operator from thrown objects.

Part No.: SD-011A.

Equipment Safety

Safety Decals (*continued*)

Safety decals must be positioned as illustrated below. Use this diagram to correctly identify missing, damaged, or illegible decals for replacement.



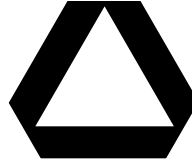
Ref. No.	Part No.	Description
A	SD-009A	Safety Decal: (General safety issues.)
B	SD-002	Safety Decal: Tighten blade bolts.
C	SD-SW2	Safety Decal: When servicing, use proper tools and equipment.
D	SD-010	Safety Decal: Read and understand owners manual.
F	SD-001A	Safety Decal: Thrown object hazard. (2 req.)
G	SD-005A	Safety Decal: Rotating blades. (2 req.)
H	SD-006A	Safety Decal: Rotating driveline.
I	SD-011A	Safety Decal: Missing deflector hazard.
J	SD-007A	Safety Decal: Operate only at 540 RPM.
	SD-008A	Safety Decal: Operate only at 1000 RPM.
Not pictured	SD-672	Brown 672 Decal

Equipment Safety

Warning

Transport with care.

Before transporting to a new location, make certain that the slow-moving vehicle (SMV) emblem is installed and is clearly visible. Use flashing lights and follow local traffic regulations.



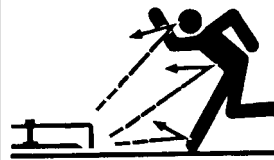
WARNING

Transport with care. Use slow-moving vehicle emblem and flashing light. Follow local traffic regulations.

Danger

Protect bystanders, clear work area of debris.

Do not operate the cutter near people. Debris can be thrown hundreds of feet. Clear work area of foreign objects such as wire, glass, and other debris. Debris thrown by the cutter can cause serious injury or death.



DANGER

Do not operate cutter near bystanders. Clear work area of debris before operating.

Warning

Parking and dismounting.

The rotating parts of this cutter continue to rotate even after power has been disengaged. The operator should remain seated until rotation has stopped. He should then set the brake, turn off the engine, and remove the key. See skid loader manual for proper parking procedure.



WARNING

Wait for all rotation to stop before dismounting tractor.

Caution

Avoid fires.

Keep the machine clean of debris, trash, and any other flammable material.



CAUTION

Keep machine clean of debris. Flammable debris on machine poses fire hazard.

Warning!

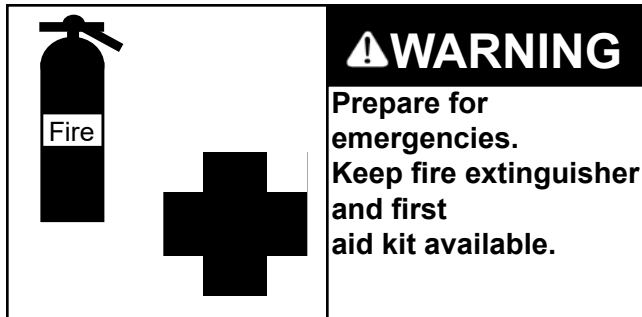
Fasten Seatbelt!

Before Starting Tractor.

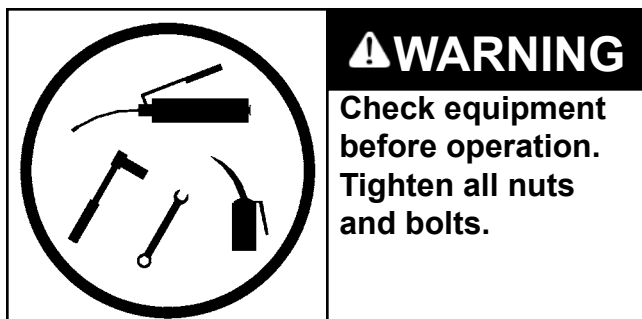
Always Wear Your Seatbelt.



Equipment Safety



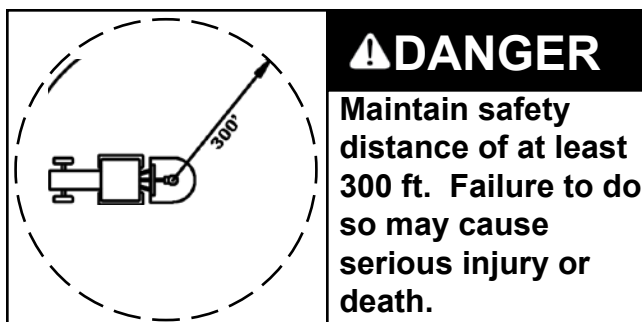
! Warning
Prepare for emergencies. Keep fire extinguisher and first aid kit available. Inspect fire extinguisher and check for charge daily. Check first aid kit for expired contents and keep stocked.



! Warning
Check equipment before operating. Tighten all nuts and bolts before operating. Make certain that equipment is lowered to ground before attempting to make adjustments or perform maintenance. Replace or repair any safety device, bolts, etc., if damaged or worn.



! Danger
Stay clear of rotating blades. The cutter is designed to cut woody material up to 4" in diameter. **Keep hands and feet from under cutter deck!**



! Danger Maintain safe distance. The cutter creates a serious discharge hazard. Always maintain a safety distance of at least 300 ft. **Never operate cutter with bystanders present!**

Note: Not to scale.

Equipment Safety

Warning

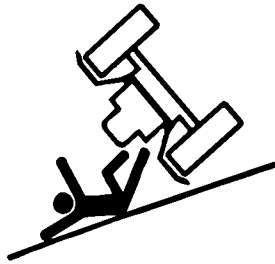
Wear protective clothing.

Wear close-fitting clothing and other protective devices appropriate for the job.



WARNING

Wear protective clothing.



WARNING

Use only with tractors equipped with a certified roll-over protective structure.

Warning

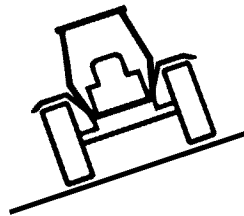
Roll-over protection.

Do not operate the cutter on any tractor not equipped with a certified roll-over protective structure (ROPS).

Warning

Slopes and rough terrain.

When operating on slopes or rough terrain, decrease travel speed. Do not operate in an area where the tractor could roll over. **Be sure to fasten safety belt when operating tractor!**



WARNING

Slow travel speed when operating on slopes or rough terrain.

Danger

Tighten blade bolts.

Blade bolts will stretch with use and must be tightened. Follow maintenance instructions in this manual (see page 23). **If the cutter is operated with loose blade bolts, blades and blade carrier will be damaged. Operation with damaged blades and blade carrier will lead to blade ejection and will cause serious injury or death.**



WARNING

Tighten blade bolts as prescribed in owners manual. Ejection of blade will cause serious injury or death.



DANGER

Riders can be injured or killed. Keep riders off machine.

Danger

Keep riders off machine.

Riders can be seriously injured or killed by entanglement or by falling.

Equipment Safety



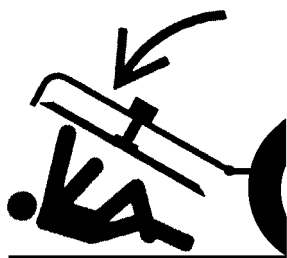
⚠ DANGER

Stay clear of rotating drivelines. Keep driveline shields in place.

⚠ Danger

Stay clear of rotating drivelines.

Entanglement in driveline can cause serious injury or death. Keep driveline shields in place at all times during operation. Driveline must turn freely inside shields. Driveline shields must be chained to prevent rotation.



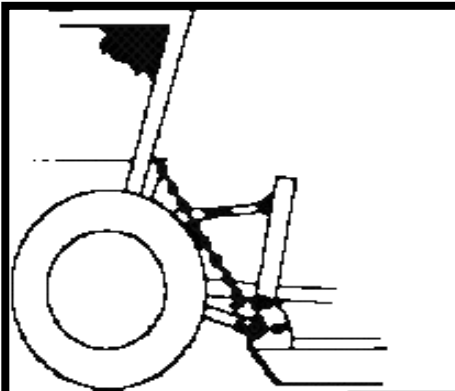
⚠ WARNING

Exercise caution while working under cutter deck. Failure to heed warnings may lead to serious injury or death.

⚠ Warning

Hazardous service conditions.

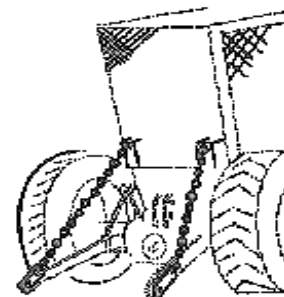
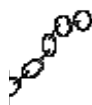
While working under the cutter deck, be aware of safety hazards. Follow safety precautions specified in this manual (see page 20). Failure to exercise caution may lead to serious injury or death.



Using Choke Chains (Optional) - Not a factory supplied option.

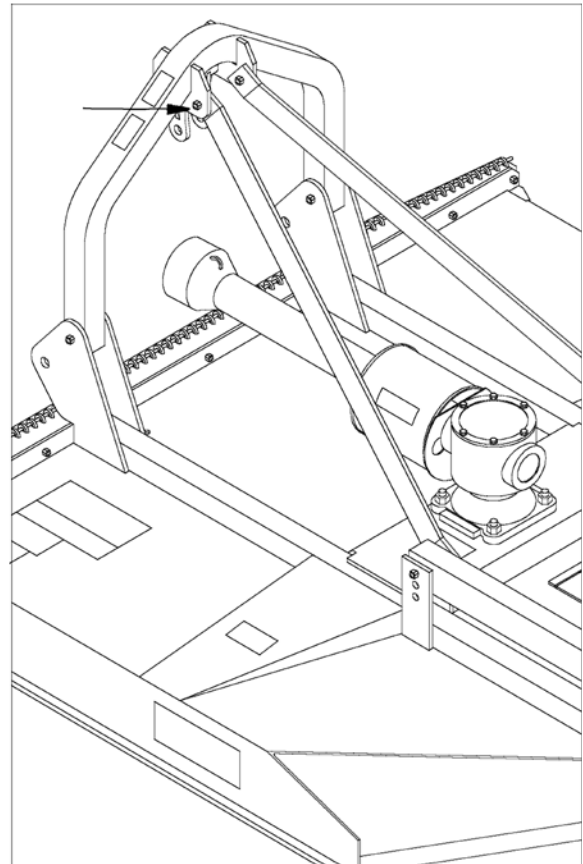
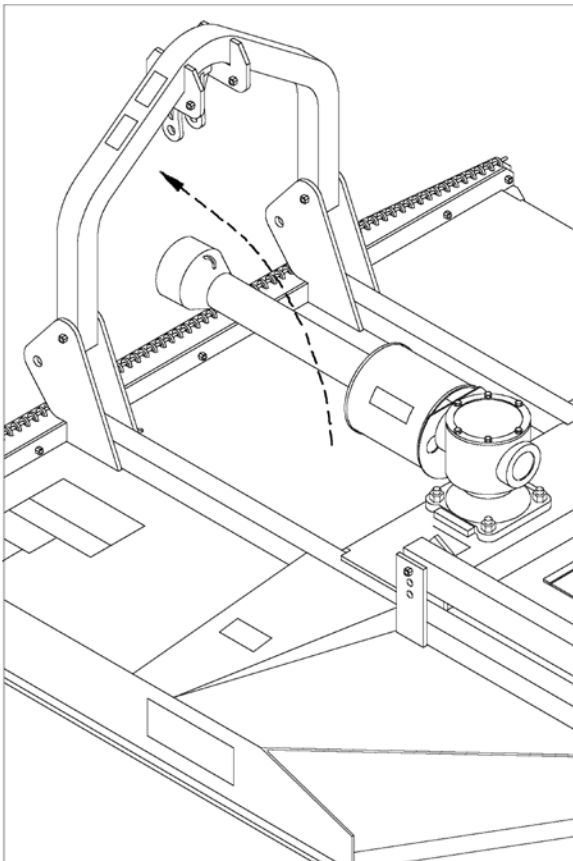
Choke chains are lengths of chain that attach from the tractor ROPS to the lift pins of the cutter unit. The chains are intended to hold the weight of the unit, insuring that the front of the cutter remains at a fixed altitude above the ground and removing the weight of the unit from the tractor's lift arms. Choke chains attach to the outside of the cutter unit's lift pins, after the tractor's lift arms have been properly attached to the unit. The chains' hitch plates are then secured in place by the existing spring-clip pins in the unit's lift pins.

The chain system consists of two lengths of suitable chain, each with one end terminating in a hitch plate. A bracket attached to each side of the tractor's ROPS holds the other ends of the choke chains taut in slots milled to the width of a chain link. Choke chain length is adjustable by choosing which chain link is inserted into the retention slots of the ROPS brackets; fine-tuning of the chain lengths may be performed by twisting the chains before securing the chains into their retention slots on the ROPS brackets.



Assembly

1. Install tailwheel stem into fork holder tube, placing collar over stem and inserting roll key through collar and stem.
2. Raise A-frame from its shipping position to its operational position (almost perpendicular to the cutter deck). Remove bolt holding Flex-link toggle to the A-frame. Install A-frame braces to outside surface of A-frame and replace bolt. **Note: keep top toggle in position when reinstalling A-frame bolt.**
3. Bolt the rear end of the A-frame brace to the mounting bracket near the rear of the machine deck.
4. Tighten all bolts securely.



Assembly

5. Check the drive shaft for proper length:
 - a. Attach the cutter to the tractor.
 - b. Lift the cutter to the point where the distance from the tractor pto is at the closest distance to the input shaft of the gearbox.
 - c. Measure the distance from PTO of the tractor to the input shaft of the cutter's gearbox.
 - d. Push both halves of the drive shaft together fully. Measure the overall length.
 - e. If the length of the compressed drive shaft is greater than the length between the PTO and input shaft, then the drive shaft must be shortened.

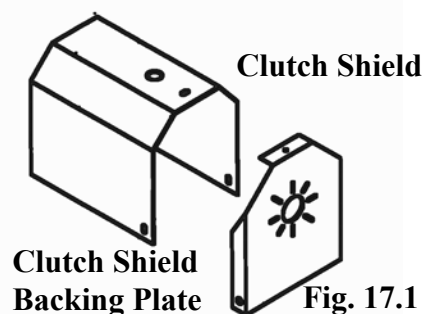
Please note that equal amounts must be removed from each section of the drive shaft.

6. Separate the male and female halves of the drive shaft. Apply heavy grease to the telescoping portion of the male drive shaft; recouple the drive shaft.
7. Locate the slip clutch shield, and mounting plate attached to the machine. Remove the mounting bolts, flat washers, and lock washers from the gearbox face plate. Position the clutch shield mounting plate (flat side up) over the input shaft and align it with the threaded holes in the gearbox face plate. Secure with bolts, flat washers, and lock washers previously removed.
8. Remove the clamp cone from the clutch hub assembly, see Fig. 37.1, page 37. Slide the hub onto the input shaft of the gearbox. Align the groove on the input shaft with the bolt hole in the hub. Reinstall the clamp cone and tighten securely. **Check torque of clamp cone after one hour of operation. Failure to do so will result in decreased life of the clutch hub and gearbox shaft splines. Further instructions are on page 37.**

9. Install the clutch shield with the three bolts provided, onto the backing plate.

Warning!

The driveline shield and clutch shield must be kept in good operating condition. Failure to maintain safety shields can result in injury or death.



10. Locate vent plug in owners manual storage tube. Remove shipping plug from top center of gearbox. Install vent plug into top port. Failure to install vent plug can and will cause seal failure.

Operation

Before hitching cutter to your tractor, make sure all safety devices are installed on both the cutter and the tractor.

Please follow all safety instructions and procedures.



Attach equipment to tractor.

Be sure the tractor is equipped with the correct category hitch pins, top link, etc.

Be extremely careful when positioning tractor to hitch to the equipment.



Caution Never allow anyone between the tractor and the equipment during the hitching process.

Be certain that the cutter has been lubricated properly and check oil level in gear box prior to connecting driveline to tractor. Also, do not tighten the top link such that the flex-link toggle is fully extended toward the tractor. The flex-link should be in a **relaxed** position when on level ground. See Illustration 19-1.

Attach the driveline to the tractor. **When attaching driveline to PTO shaft, be certain that the quick-disconnect pin is properly seated.**



Warning A loose driveline can disconnect and cause personal injury or property damage.

Adjust cutting height.

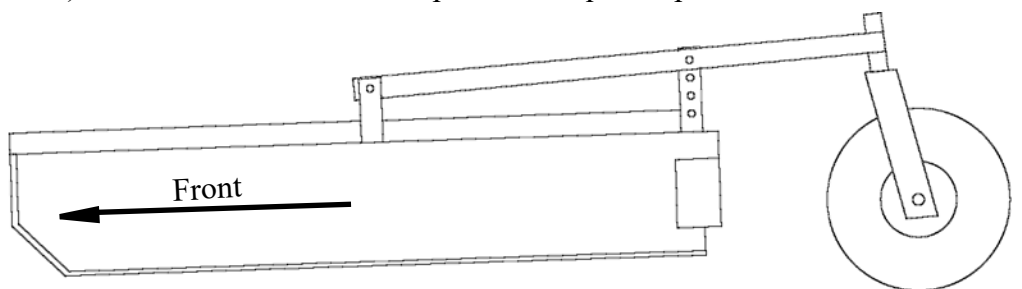


Warning Be certain that tractor engine is stopped, key is removed, and all rotation of the cutter has ceased before making adjustments.



Caution Avoid very low cutting heights. Striking the ground with blades causes a damaging shock that can damage both the cutter and the tractor.

Using the tailwheel adjustment and the tractor's lift arms, set the cutter to the desired height; the cutter is designed to operate with a cutting height range between 2" and 12". Note that, on level ground, the front of the cutter should be 1" below the rear (see illustration). Set the tractor's lift stop at the required position to maintain a uniform cut.



Operation

Starting Cutter

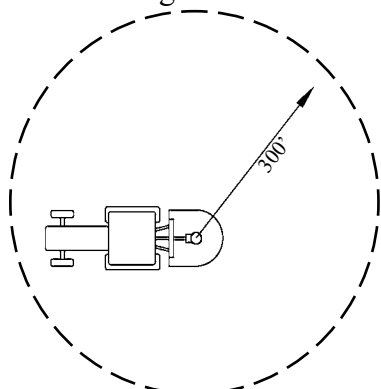
Power for operating the cutter is supplied from the tractor PTO. Refer to your tractor manual for instructions on engaging and disengaging the PTO.

Warning Do not operate this cutter unless the tractor has a live, or independent, PTO. The momentum created by the blade carrier can push the tractor forward unexpectedly.

Warning Operate cutter only with the specified PTO RPM. Brown 672 Model cutters are designed to operate at 540 RPM; however, a 1000 RPM design is an option.

Operating speed

Proper operating speed for equipment will depend upon the height, density, and type of the material to be cut. Regardless of chosen ground speed, always operate the PTO at the recommended RPM when cutting.



Note: Not to scale.

General Operation

Warning The cutter creates a very serious discharge hazard. Maintain a safe distance from nearby persons and property. **Do not operate when bystanders are present.**

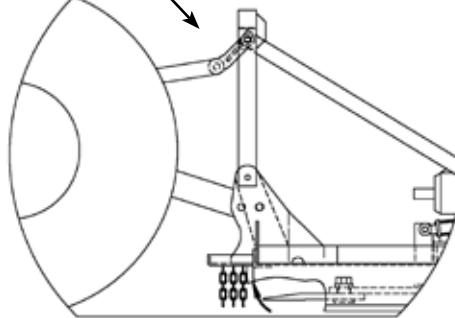
Warning Avoid personal injury. Remove all rocks and other debris from work area before cutting.

Observe the following guidelines when operating the cutter:

- Never lower the cutter onto material.
- Avoid tight turns near trees or stationary objects. The deck may be damaged by side impact.

Remember: The safe operation of this equipment is the responsibility of the operator. The operator should be familiar with both the tractor and the equipment. He must read and understand all applicable operator manuals and follow all safety practices.

19-1: Relaxed Top Link Position



OPERATING INSTRUCTIONS

COMMON SENSE ON THE COMPONENTS
PLEASE READ AND UNDERSTAND
IF YOU DO NOT UNDERSTAND ANY POINT STATED BELOW
YOU MUST CALL THE FACTORY FOR ASSISTANCE
1-800-633-8909

USE ONLY GENUINE BROWN REPLACEMENT PARTS.

USE OF AFTERMARKET PARTS OR COMPONENTS WILL VOID ANY WARRANTY
CONSIDERATION

BLADES This machine was designed to operate **ONLY** with sharp blades. Dull blades will cause multiple types of problems that are **NOT** covered under warranty:

- a. Slip clutch failure
- b. Extreme wear on blade bolts
- c. Blade bar fatigue and cracking or total failure
- d. Blade fatigue and cracking or total failure
- e. Deck fatigue and cracking
- f. Increased amount of discharge or debris
- g. Poor cut – increased amount of uncut material
- h. Blades must be freely pivoting during operation

BLADE BOLTS Blade bolts **MUST** be kept tight and checked twice daily during operation. Every hour for the first 8 hours of use.

- a. Brown's blade bolts are designed for the extreme conditions and should not be substituted for any reason
- b. 600 Series blade bolts are **RIGHT** hand thread
- c. Bolts and lock nuts are matched as pairs or sets – do not mix
- d. See maintenance section for proper torque specifications

BLADE BAR Proper maintenance of blade bar will insure long life.

- a. Loose blade bolts will impact the bottom of the blade bar, causing the blades to lock into a fixed position.
- b. Loose bolts will cause the elongation of bolt holes
- c. Dull blades will cause the blade bar to crack and fail
- d. Blade bar nut must be checked and kept tight at all time
- e. Loose blade bar can cause output shaft failure, blades striking the bottom of the deck, blade breakage and blade bar cracking
- f. Bar **MUST** be inspected daily for cracking or fatigue

Continued-Next Page

OPERATING INSTRUCTIONS con't

CLUTCH

CLUTCH WEAR OR FAILURE is not covered under warranty.

Improper operation of the unit will cause the clutch to slip:

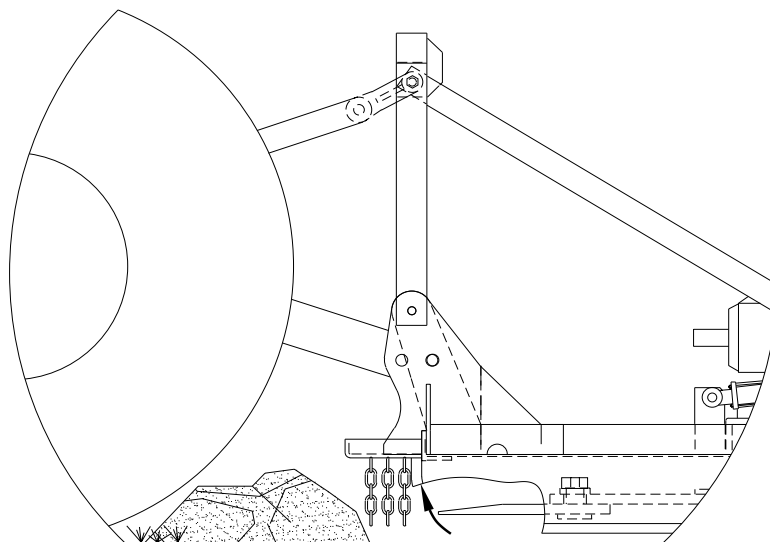
- a. When the clutch slips the operator must lift the cutter off the obstruction immediately.
- b. Clutch must be allowed to cool after slippage.
- c. Excessive ground speed or dull blades will overload the clutch capacity.
- d. Proper clutch setting for horse power of tractor.
- e. Timely replacement of worn clutch discs.
- f. Proper reassembly of slip clutch.



WARNING

NEVER ALLOW BLADES TO COME INTO CONTACT WITH ROCKS OR STUMPS.

The blades will be forced to glance over the top of the obstruction, causing a tremendous amount of upwards pressure on the blades, blade bar and output shaft. This pressure can and will cause fatigue, cracking and possible breakage of the components. NEVER lower blades down onto material, the same pressures will be applied to the components causing failure.



WARNING! NEVER DO THIS!

Maintenance

Safety When Working Under Cutter Deck

Never work under the cutter deck until:

- The cutter is sufficiently braced and supported
- The tractor engine is off, brake is set, and key is removed
- PTO has been disengaged
- Driveline is disconnected
- Rear tractor tires have been secured with tire chocks
- The cutter is cooled



Warning! Failure to follow these safety guidelines can result in serious injury or death.

Initial Maintenance



Warning! These maintenance practices must be followed every hour for the first eight hours of operation; the practices must also be performed every hour for the first eight hours following the removal/replacement of any of the components named in this section. Check daily thereafter.

1. Tighten the bolts and tapered shank keeper bolt holding the slip clutch to the input shaft of the gear box.

Caution! Failure to tighten the keeper bolts will shorten the life of the slip clutch hub.

2. Check for debris deposited between the blade bar and the blades. Debris found jamming or locking the blades must be removed to insure that the blade may pivot freely on the blade bolt.



Warning! Failure to maintain freely pivoting blades will cause severe vibration or blade breakage which can result in injury or death.

3. Tighten blade bolts and blade bar nut.



Warning! Failure to tighten blade bolts and blade bar nut can cause blade bolts, blades, or output shafts to break, which can result in injury or death.

4. Check for debris deposited around the output shaft or tail wheel axle.
5. Tighten gearbox mounting bolts.

Caution! Failure to keep the gearbox bolts tightened can cause the blades to strike the bottom of the cutter deck or break the output shaft of the gearbox.

Daily Maintenance

1. Repeat all steps listed under the “Initial Maintenance” section on a daily basis after the initial maintenance has been performed.
2. Lubricate the driveshaft tubes and U-joint.
3. Lubricate the tail wheel hub.
4. Check and maintain the proper amount of lubricant in the gearbox. **The recommended lubricant for the gear box is SAE 85-140 weight gear oil or equivalent.**
5. Check the blades; sharpen or replace as necessary. **When sharpening blades, only sharpen the beveled edge. Also, be certain that paired blades weigh within 1oz. of each other. When replacing blades, replace both blades of the pair.**

(continued on next page)

Maintenance

Warning! Use only blades and blade bolts supplied by Brown Manufacturing Corporation.

Warning! If the blades must be sharpened, follow the proper safety procedures listed on page 22 of this manual for working under the cutter deck.

Tightening Blade Bolts and Blade Bar

Tighten blade bolts each hour for the first eight hours of use; tighten daily thereafter. **Repeat hourly inspections each time the blades are removed/replaced.**

Warning! Blade bolts will stretch with use and must be tightened.

1. Disengage PTO; be certain that all rotation has stopped.
2. Lift cutter high enough to place suitable supports under the cutter deck.
3. Turn tractor engine off; remove key; lock transmission and brakes; chock rear wheels.
4. Disconnect driveline.
5. **Tighten blade bolts:** Use an air impact wrench with a 2 3/4" socket with an output of at least 1600 ft/lbs of torque in a right hand direction, all air impacts have two torque measurements, do not use the maximum torque value, this is in left hand rotation, (counterclockwise), use the normal torque value (clockwise). Use the blade bolt access door in the top of the deck. It can be accomplished by hand however it requires at least a 10 foot cheater bar with a minimum force of 160 pounds on the end to develop 1600 ft/lbs. If the bolt turns you will have to hold the head of the bolt with a wrench having a 4" opening. Our bolt wrench part number: TC-165B Wrench.
6. **Tightening Blade Bar:** Remove blade bar cotter pin and tighten nut with a 2-9/16" socket. Torque nut to 2200 ft./lbs.; continue to torque until cotter pin hole aligns with nut. Install a new cotter pin. **Never loosen nut to align cotter pin hole.** Use the disconnected driveline to "foul" the blade bar, by moving the free end of the driveline to the side of the cutter at 90 degrees to rotation. Use an air wrench or torque multiplier to torque the blade bar to the correct value. As you approach 2200 ft/lbs make sure that you align the cotter pin hole up with the castle nut, do not back off on the nut to align the hole. Note: Foot Pounds (ft/lbs) of torque is a means of measuring tightness. 1 pound of force 1 foot from the turn element is 1 foot/lb of torque, any extension use multiplies the force, a 10 foot arm multiplies 10 times the force exerted. $Arm * Force = Ft/Lbs.$

Arm (In Feet)	Force (In Pounds)	Torque (In Ft/Lbs.)
1	1	1
8	200	1600
10	220	2200



(continued on next page)

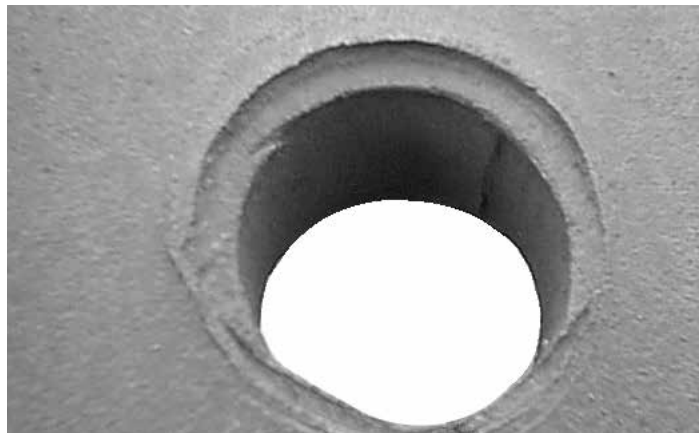
Maintenance

⚠ Warning! Failure to keep blade bolts tight will cause damage to the blade carrier. If this occurs, refurbish the blade carrier; otherwise, tightening the blade bolt after the blade carrier is damaged will jam the blade, causing the blade to break. This occurrence can cause serious injury or death.

⚠ If blade bolts are allowed to run loose, the obvious danger is for the bolt to come completely loose, allowing the blade, bolt, and nut to be ejected from the cutter.

Tightening Blade Bolts (*continued*)

⚠ The second danger is that when the bolt is not sufficiently tight, the blade is allowed excess vertical movement when it strikes an object, be it something it will cut or something into which it should not come in contact. In this situation, the blade is being hammered against the blade carrier and flexed, or bent, up around the edge of the blade carrier at least twelve (12) times per second, generally fifteen (15) times per second. This situation will cause the blade to break from fatigue and to be ejected from the cutter.



⚠ The third danger is that, while the second situation is occurring, the blade bolt is also hammering the underside of the blade carrier; the shoulder of the blade bolt beats an indentation around the blade bolt hole into which the bolt shoulder will fit. When this damage occurs, the blade bolt will pull up into the indentation when the bolt is tightened, causing the blade to jam so that it can no longer pivot on the blade bolt. A jammed blade will break either from fatigue or from catastrophic occurrence and will allow the blade to be ejected. A blade carrier damaged in this manner must be taken out of service immediately. Repair the blade carrier (contact Brown Mfg. Corp. for instructions) and replace the blades and blade bolts before returning the machine to service.

⚠ All three of the described occurrences will cause the blades to break and be ejected. An ejected blade can and will cause serious injury or death.

REMEMBER: Blades must pivot freely and blade bolts must be tight!

Maintenance

Sharpening Blades

Blade sharpening procedure:

Cutter blades are manufactured from Ultra-Kor™ Steel. When sharpening this blade using a side grinder keep the grinder moving at all times. DO NOT allow the grinder to stop or rest in one spot, because this will over heat the material and cause it to turn “blue”. Blades should be sharpened in opposing pairs. For example; Sharpen the bevel up blades, which are directly across from each other, then the bevel down blades (tree cutter).

Take care to remove equal amounts of material from each blade, failure to do so will cause destructive vibration to the cutter and tractor. Opposing pair blades must be kept within 1/10th of a pound of each other to prevent vibration damage.

Tip: The first 1” to 1 ½” of the blade tip is where all of the cutting action takes place. P
SEP

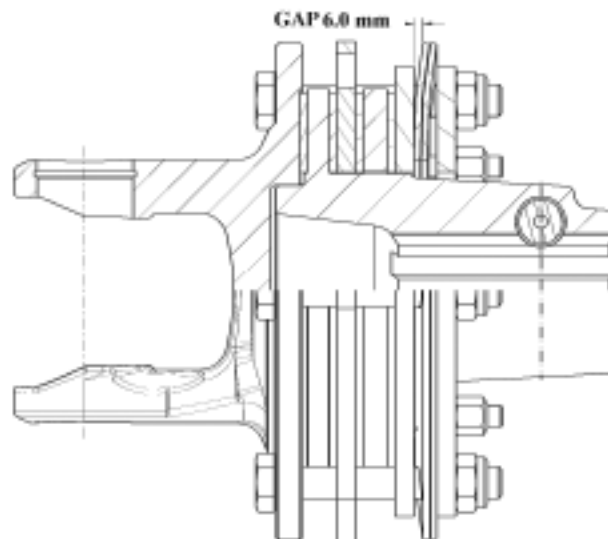
NOTE: Failure to keep the blades sharp will cause multiple problems, including:

1. Slip clutch failure.
2. Extreme blade bolt wear
3. Blade bar fatigue, cracking and total failure
4. Blade fatigue, cracking and total failure
5. Deck fatigue and cracking
6. Increased amount of discharge or debris
7. Poor cut – increased amount of uncut material

Food for Thought: If your blade was an axe head, would you try to cut a tree with it?

Adjusting the Torque Setting of the Slip Clutch

To re-set the clutch to 1800 Nm, the gap between the Belleville springs (p/n’s 236-0642) and the drive plate should be approximately 6.0-mm. If a higher torque setting is needed, then tighten each bolt a 1/6 of a turn. One revolution of the nut will compress the spring 1.75 mm. Do not set the gap smaller than 5.0-mm. Measurements are approximate since variations in spring force and friction materials may cause some differences in torque values. The clutch can be adjusted with two 19-mm wrenches.



REASONS SLIP CLUTCHES FAIL

* DULL BLADES*

When the blades become dull, the cutting or chipping effect is lost; (dull blades become hammers and will not cut). The dull blades require more torque to hammer into and through the material. The Tree Cutter is not designed to hammer through material. This hammering action will destroy the machine and slip clutch from increased shock load and increased torque required from dull blades. **NEVER** operate the unit with dull or damaged blades.

* GROUND SPEED*

Excessive ground speed increases the torque load to the slip clutch. As more material is fed into the cutting chamber; more torque is required to pass through the slip clutch. NOTE: A good measure for proper ground speed is to watch the tractor tachometer, if the tractor engine loses speed (RPM drop) reduce your ground speed to regain your engine speed. **NEVER** reduce your ground speed by the engine throttle; (select a lower gear to reduce ground speed).

* DECK ADJUSTMENT*

Improper deck adjustment or deck attitude will increase the torque load to the clutch. *See proper deck adjustment in this manual.* The front of the cutter deck should be adjusted 1 inch lower than the rear of the deck, this allows the material to be cut on the front side of the blade arc. If the deck were adjusted with the front higher than the rear, all the material will be cut twice. **NEVER** lower cutter deck down onto material. Keep cutter deck down on the ground at cutting height.

* ENGINE SPEED*

Your tractor engine is designed to operate at a continuous speed to produce a given PTO speed (540 or 1000 RPM). Failure to keep the tractor engine at the proper speed will cause the Tree Cutter to be under powered; thus increasing the torque load to the slip clutch. Refer to tractor owners manual for proper tachometer setting to deliver the proper PTO speed to the cutter. **NEVER** operate your cutter at less than manufactures recommended engine speed for proper PTO output speed. The Tree Cutter is designed to operate at a certain PTO speed (NOT BOTH). Refer to model number or call Brown Mfg. Corp. if you have questions about your Tree Cutter design speed.

SLIP CLUTCH FAILURE IS NOT COVERED UNDER WARRANTY

THE TEN COMMANDMENTS OF OPERATION

1. **ALWAYS** - Read and understanding the owners manual before operating this or any other equipment.
2. **ALWAYS** – Attach this equipment to a tractor that has suitable safety equipment properly installed.
3. **ALWAYS** – Operate this equipment with all safety devices properly installed on this equipment.
4. **ALWAYS** – Inspect, walk, flag or remove all foreign material from job site before starting the cutting process.
5. **NEVER** – Allow riders or bystanders within 300 feet of this unit during operation.
6. **ALWAYS** – Check all bolts, fasteners, fittings and oil levels before beginning operations each day.
7. **NEVER** – Allow blades to make contact with rocks or stumps – unit was not designed for this type of operation.
8. **NEVER** – Allow an untrained operator to operate this equipment.
9. **ALWAYS** – Install only genuine Brown replacement parts.
10. **ALWAYS** – Remain on tractor seat until blades have stopped turning and all tractor shut down procedures have been completed.

THESE ARE ONLY A FEW OF THE SAFETY PROCEDURES THAT MUST BE FOLLOWED TO INSURE THE SAFE OPERATION OF THIS EQUIPMENT – MANY OTHER SAFETY RELATED POINTS ARE STATED THROUGHOUT THIS MANUAL



WARNING: FAILURE TO FOLLOW THE TEN COMMANDMENTS CAN AND WILL CAUSE SERIOUS INJURY OR DEATH

IF YOU HAVE ANY SAFETY, MAINTENANCE OR OPERATIONAL QUESTIONS – PLEASE CALL THE FACTORY BEFORE USING THIS EQUIPMENT – 1-800-633-8909

Troubleshooting

Problem	Possible Cause(s)	Possible Solution(s)
Excessive vibration	<ol style="list-style-type: none"> 1. Loose gearbox bolts 2. Loose blade bar and/or blade bolts 3. Blades are not freely swinging 4. Broken, bent, or warped blades 5. Blade bar not seated properly on shaft 	<ol style="list-style-type: none"> 1. Tighten bolts 2. Tighten blade bar nut or blade bolt nuts 3. Clear blade of obstruction 4. Replace blades, install T5-165S shim(s) between blade bar and bolt if needed. 5. Remove blade bar; clean hub and shaft; reseal
Excessive clutch slippage	<ol style="list-style-type: none"> 1. Worn clutch linings or plates 2. Oil on lining 3. Glazed friction lining 4. Excessive torque on clutch 5. Dull blades 	<ol style="list-style-type: none"> 1. Repair clutch 2. Replace linings 3. Clean with emory cloth 4. Reduce ground speed, material intake, or tractor size 5. Sharpen or replace blades
Overheating gearbox	<ol style="list-style-type: none"> 1. Insufficient lubricant level 2. Improper lubricant 3. Debris build-up around gearbox 4. Bearing or gears set improperly 	<ol style="list-style-type: none"> 1. Fill to full level 2. Replace with correct lubricant 3. Remove debris 4. Consult dealer
Noisy gearbox	<ol style="list-style-type: none"> 1. Rough gears 2. Worn bearing 	<ol style="list-style-type: none"> 1. Run for a short break-in period or replace gears 2. Replace bearing
Leaking gearbox	<ol style="list-style-type: none"> 1. Damaged oil seal 2. Bent shaft 3. Oil seal installed incorrectly 4. Oil level too high 5. Shaft rough or pitted in oil seal area 6. Seal bore worn in casting 7. Damaged gasket 8. Loose bolts 	<ol style="list-style-type: none"> 1. Replace seal 2. Replace seal and shaft 3. Replace seal 4. Drain oil to proper level 5. Replace shaft 6. Replace casting or gearbox 7. Replace gasket 8. Tighten bolts.
Short blade life	<ol style="list-style-type: none"> 1. Cutting too low 2. Cutting in sandy or rocky conditions 3. Inadequate blades 	<ol style="list-style-type: none"> 1. Increase cutting height 2. Increase cutting height 3. Replace with Brown blades
Not cutting clean	<ol style="list-style-type: none"> 1. Dull blades 2. Insufficient PTO speed 3. Cutter not level 4. Ground speed too fast 5. Blades are not freely swinging 	<ol style="list-style-type: none"> 1. Sharpen or replace blades 2. Use correct PTO speed 3. Adjust cutter 4. Reduce ground speed 5. Clear blade of obstruction or shim

Specifications

True Cutting Width	72" (6')
Overall Deck Width	81" (6' 9")
Cutting Elevation	2" to 12"
Deck Construction	1/4" steel plate
A-frame Construction	3 x 3 x 1/4" tubing with Flex Link Category II hitch
Weight	1720 lbs.
Blades	Qty. 2, 5/8" x 6" Ultra-KOR alloy
Blade Bar	1-1/4" solid steel plate, 26-1/2" diameter
Drive Shaft	Heavy-duty, fully shielded
Tail Wheel	500 x 8 laminated solid tire
Gearbox	145 HP
Slip Clutch	Heavy-duty, 4 disc slip clutch
Horsepower Requirement	60 to 120 HP PTO
Maximum Material Size	4" Diameter

Standard Features

1/4" steel plate deck

1 1/4" solid steel blade carrier, 26-1/2" diameter

Qty. 2, 5/8" x 6" high-tensile blades

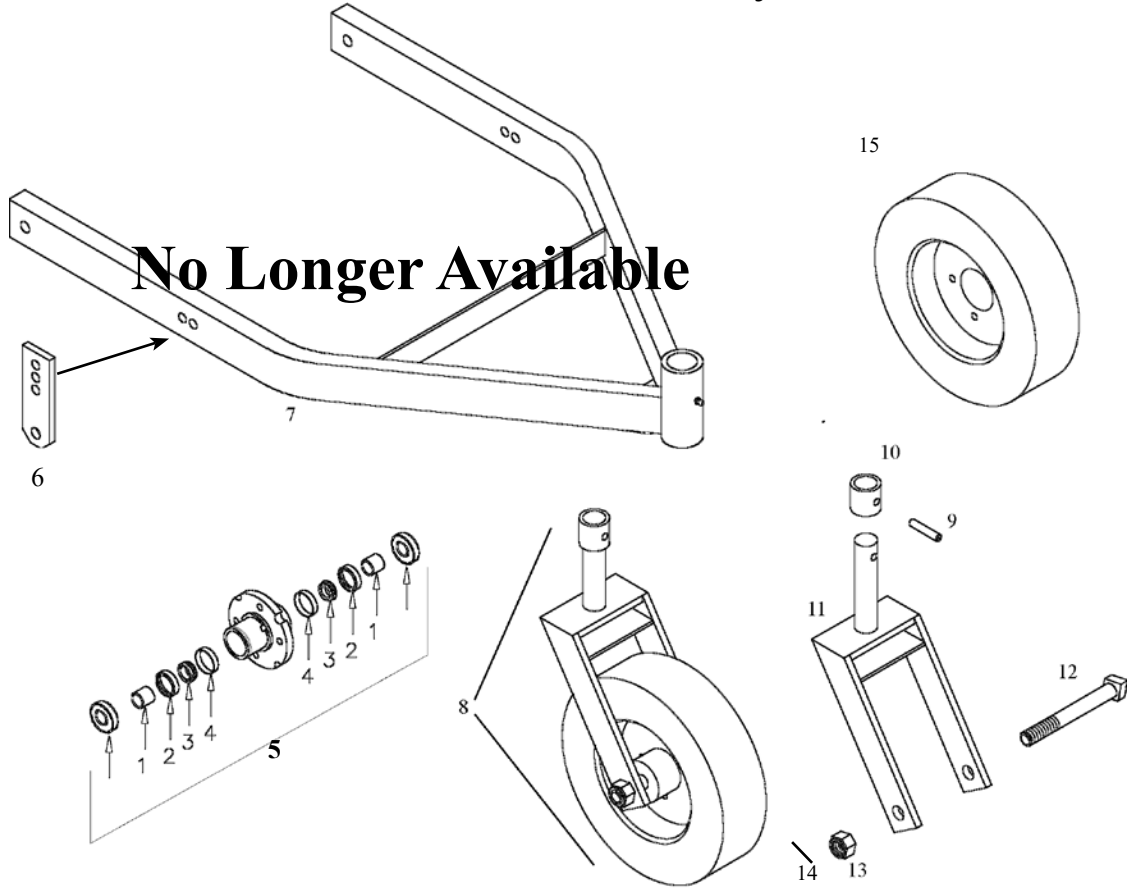
4" diameter maximum material capacity

2" to 12" cutting height

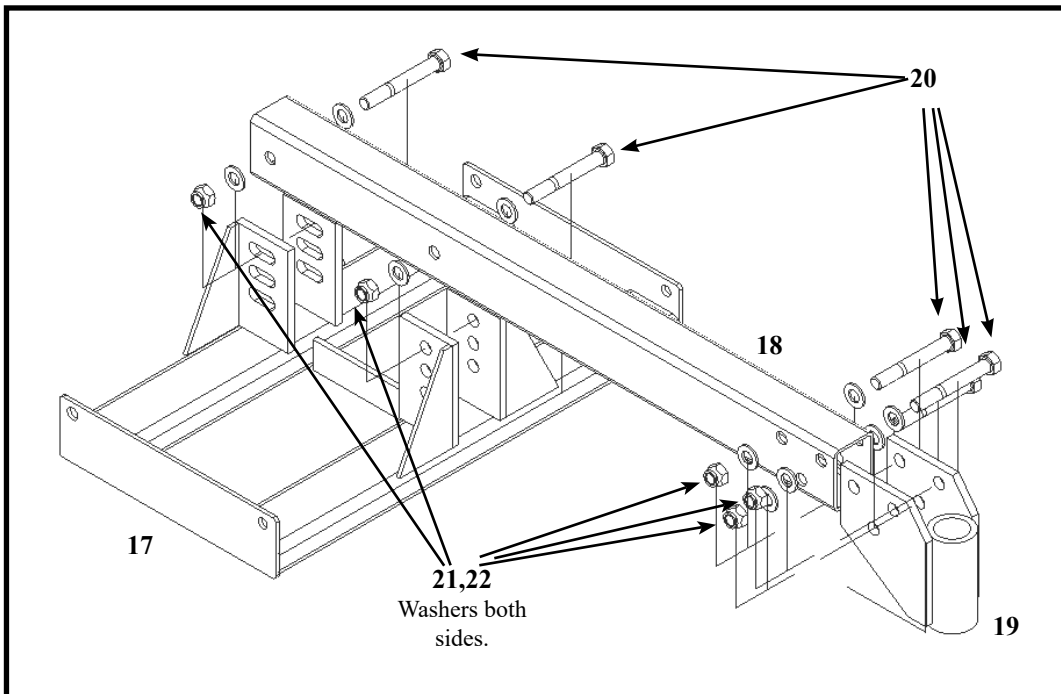
5/16" chain curtain front deflector

Replacement Parts

Standard: Tailwheel Assembly w/ Tail Wheel



Heavy Duty Tailwheel Assembly



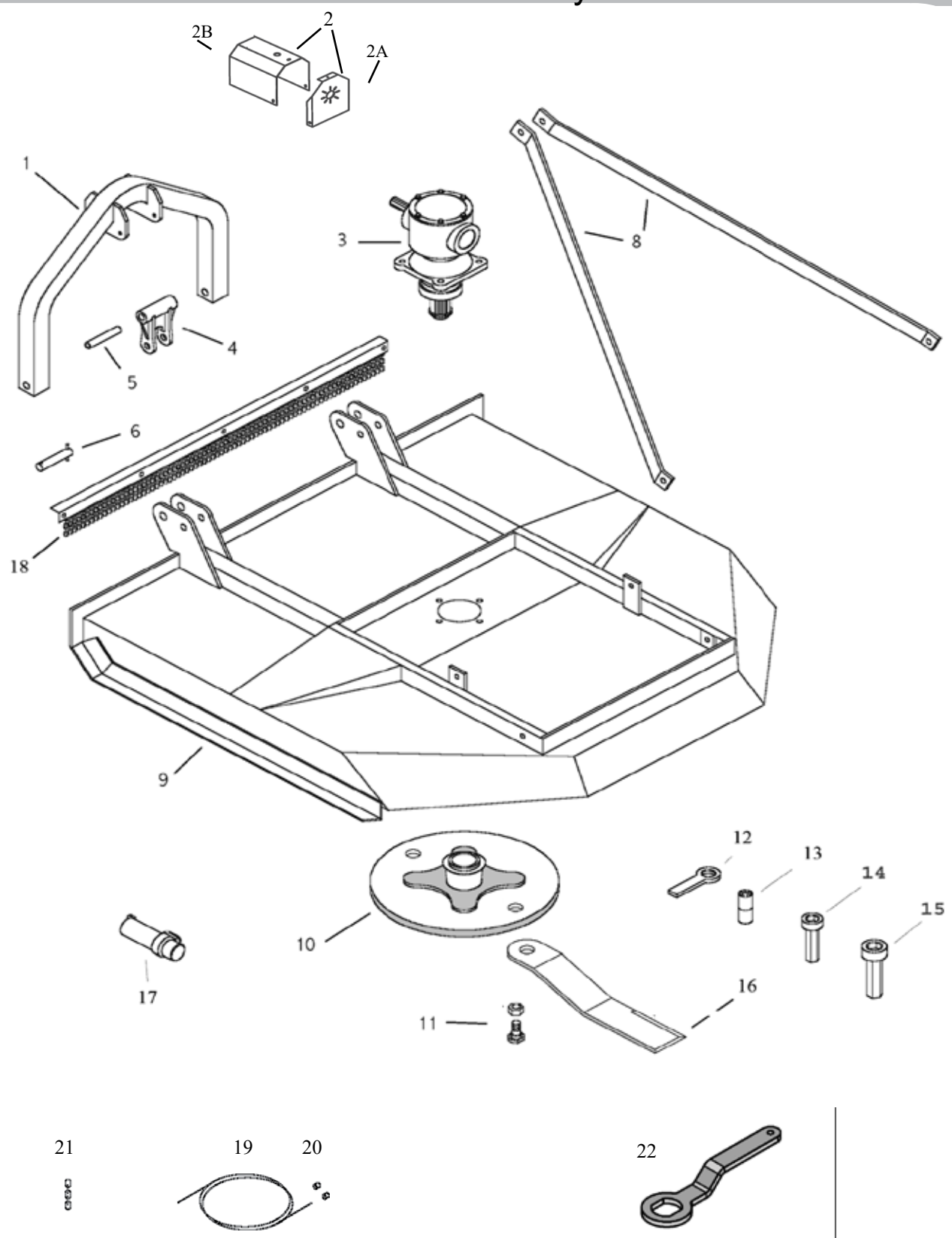
16

Replacement Parts

Ref. No.	Part No.	Qty	Description
1	232-6020	2	Spacer
2	TC-108	2	Seal (2 req.)
3	TC-109	2	Bearing (2 req.)
4	TC-110	2	Cup (2 req.)
NS	232-6040	2	O-ring - Axle Seal (Inside 232-6020)
NS	HC58F16Z	5	Lug Bolts 1/2-20 x 1" HCS Grade 5 Zinc
5	232-6000	1	Complete tailwheel hub assembly
6	6-009	2	Tailwheel arm adjustment bracket
7	6-005	1	Tailwheel arm with fork holder NO LONGER AVAILABLE, See Item 16
8	6-010	1	Complete tailwheel assembly
9	TC-012	1	Roll pin (1/2" x 2")
10	TC-011	1	Collar
11	6-004	1	Fork
12	TC-106	1	Axle
13	TC-114	1	Axle nut
14	TC-115	1	Cotter Pin for Axle Nut
15	TC-113XA	1	Tire and wheel assembly
16	232-5000	1	Heavy Duty Tail Wheel Assembly
17	232-5010	1	Tail Wheel Arm Base
18	232-5050	1	672HD Tail Wheel Arm
19	232-0119	1	Tail Wheel Fork Holder
20	HC512C88Z	5	3/4 - 10 x 5 1/2" Grade 5 Bolts
21	NNE34CZ	5	Nylon Lock Nut 3/4 - 10 Zinc NC
22	WSA834Z	10	3/4" Flat Washers Grade 8

Replacement Parts

Deck Assembly



Replacement Parts

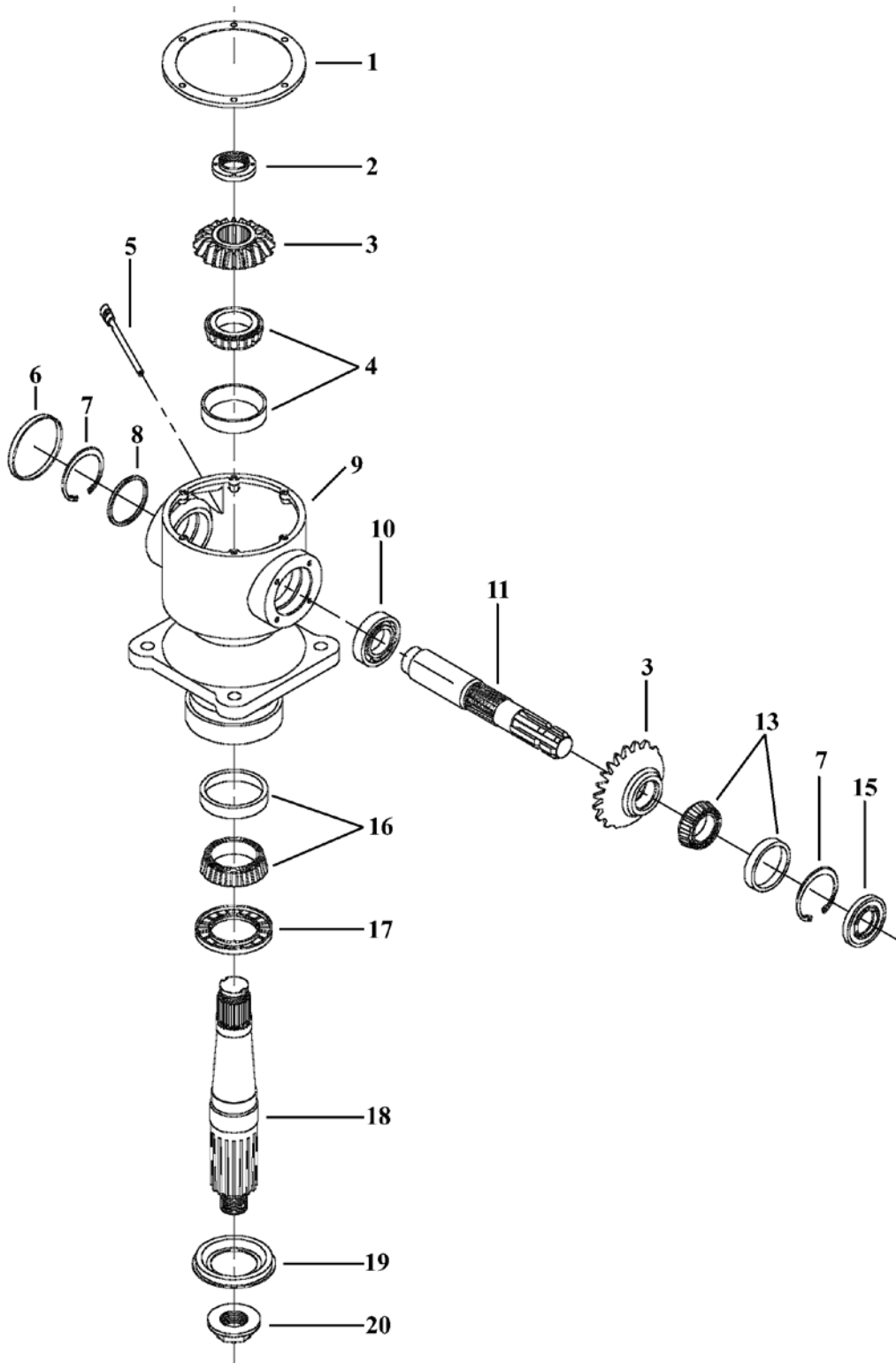
Deck Assembly (continued)

Ref. No.	Part No.	Qty.	Description
1	TC2-031	1	A-frame, tri-bend
2	232-0028	1	Bell shield assembly, complete
2A	700-232-0030	1	Plate, Guard, Driveshaft
2B	700-232-0031	1	Guard, Driveshaft
NP	HC56C12Z	3	Bolt, 3/8-16 x 3/4 HCS GR5, Qty 3
NP	LOC38Z	3	Washer, Lock 3/8 Zinc, Qty 3
3	BM-540	1	145 HP Gearbox 540 RPM
	BM-1000	1	145 HP Gearbox 1000 RPM
4	TC2-003	1	A-frame toggle
5	TC2-016	1	A-frame toggle spacer
6	TC-126	2	Category II lift pin with lynch pin
8	TC2-014	2	A-frame brace (2 req.)
9	6-006A	1	Deck weldment
10	BM-61	1	Blade carrier
11	T5-165NB	2	Blade bolt w/Nut
NP	T5-165S	var	Blade Bolt Shim, (used, in some cases, if blade is binding under blade bar)
12	TC-Wrench	1	Socket wrench (Fits Blade Bolt Socket)
13	T-2600-001	1	Removal tool
14	T5-004BS	1	165 Blade bolt socket
15	T5-054AS	1	145/165 Blade bar socket
16	T5-079NB	2	Blade, Large Hole - 2.75
17	MH-01	1	Manual container
18	6-012	1	Chain guard (front)
19	TC2-011	1	Cable 5/16" x 78" w/ Aluminum Stop
20	TC2-012	4	Aluminum Cable Stop
NP	1575	var	Cable Clamp for Field Repair of Chain Guard Cable
21	6-012-8	38	5/16" x 8 Long Link Plated Chain
21	6-012-6	11	5/16" x 6 Long Link Plated Chain
NP	TC-126A	var	7/16" lynch pin
NP	T5-165S	var	SHIM, .020, FOR T5-165NB
22	TC-165B WRENCH		Blade Bolt Head Wrench for T5-165NB Bolts

* NP = Not Pictured

Replacement Parts

145 HP Gearbox



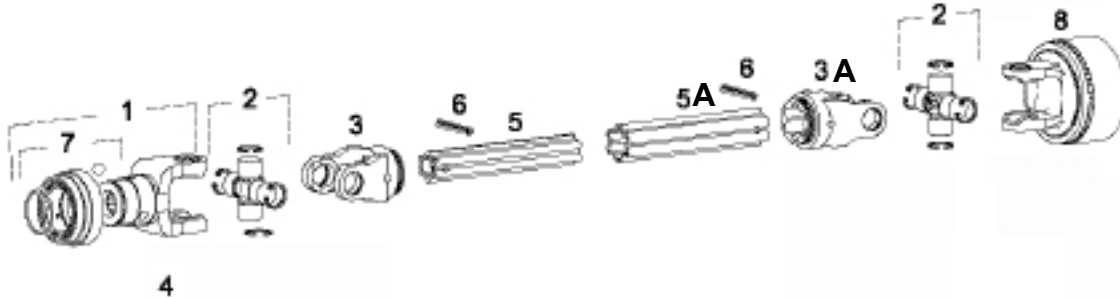
Replacement Parts

145 HP Gearbox (*continued*)

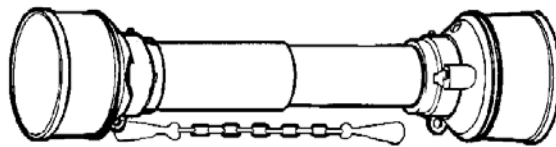
Ref. No.	Part No.	Description
1	T5-035	Cover plate
2	BM-110	Top output shaft nut
3	BM-104 BM-113	Gear set - 1000 RPM Gear set - 540 RPM
4	BM-111	Bearing set, top output shaft
5	T5-068	Vent plug (w/ dipstick)
6	BM-107	Rear seal plug
7	BM-103	Lock ring (2 req.)
8	BM-108	Shim kit
9	BM-105	Gearbox housing
10	BM-109	Bearing set, rear input shaft
11	BM-102 BM-115	Input shaft - 1-3/4" x 6 spline Input shaft - 1-3/4" x 20 spline
13	T5-060	Bearing set, front input shaft
15	BM-101	Seal, input
16	235-0032	Bearing Set, bottom output shaft
17	T5-065	Seal, output
18	BM-112	Output shaft, tapered
19	T5-048	Output seal guard
20	T5-054A	Nut, flanged, castellated
21	T5-050	Bolt, Hex Head (M10 x 20) for Top Plate
NP	T5-074T-25	Oil plug
22	T5-052	Cotter pin, 5/16" x 3"
NP	T5-LUBE	85-140 gearbox lubricant (1 QT)
NP	TC2-002	Bolt, Grade 8, Square Head, 3/4" x 3 3/4"

Replacement Parts

Drive Shaft / Slip Clutch



Ref. No.	Part No.	Description
1	T5-W36	Yoke, 1 3/8" x 6 Spline 540 RPM
2	T5-W4	U-Joint Kit (Cross & Bearing)
3	T5-W5	Inboard Yoke, Inner Profile
3A	T5-W7	Outboard Yoke, Outer Profile
4	T5-W36	Yoke with quick-disconnect pin kit, 540 RPM
5	236-0614	Inner Profile Tube
5A	236-0615	Outer Profile Tube
6	236-0612	Spring Pin, 10 x 90
7	T5-W2	ASG Connection Kit
8	236-0601	Friction Clutch 1 3/4" x 6 Spline Metric (540 RPM)
8	236-3005	Friction Clutch 1 3/4" x 20 Spline Metric (1000 RPM)
NP	236-0600	Drive Shaft Complete, 1-3/8"-6 x 1-3/4"-6 spline (540 RPM)
NP	236-3100	Drive Shaft Complete, 1-3/8"-21 x 1-3/4"- 20 spline (1000 RPM)



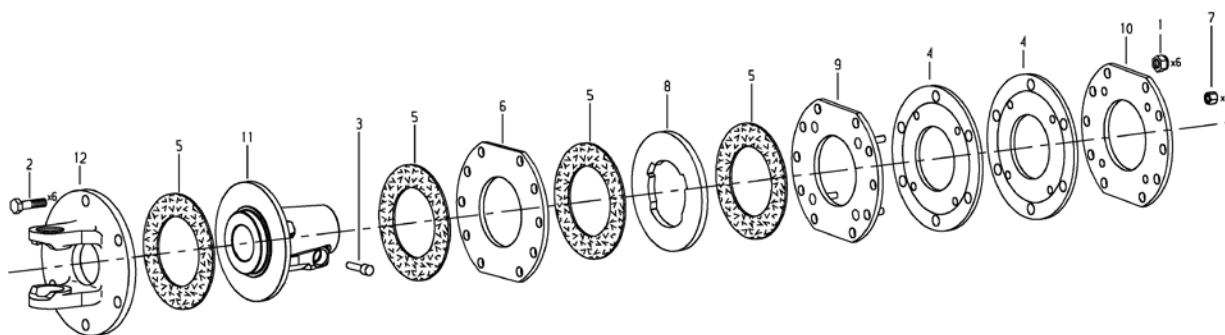
Part No.	Description
236-0610	Main DL: Complete shield assembly

Replacement Parts

Drive Shaft & Slip Clutch (*continued*)

Ref. No.	Part No.	Description
1	236-0636	Locknut M12
2	236-0638	Bolt M12 x 85
3	236-0634	Clamp Cone in #11 installation instructions below.
4	236-0642	Belleville Spring
5	236-1703	Friction Disc
6	236-1805	Drive Plate
7	236-0644	Hex Nut M8
8	236-0646	Drive Plate
9	236-0648	Thrust Plate
10	236-0650	Backup Plate
11	236-0652	Hub 1 3/4" x 6 Spline for 540 RPM
11	236-3110	Hub 1 3/4" x 20 Spline for 1000 RPM
12	236-0654	Flange Yoke
Assembly	236-0601	Friction Clutch 1 3/4" x 6 Spline Metric

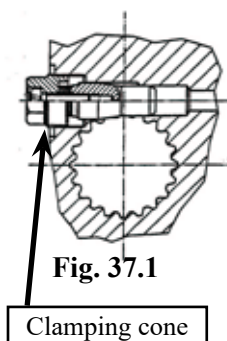
For Clutch Adjustment, see Page 25.



CC Lock Installation Instructions

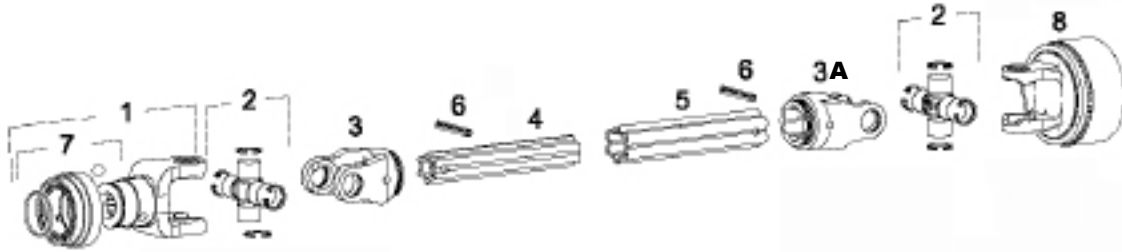
1. Clean and grease (do not over-grease) the connecting spline shaft. Do not grease or oil the threads of the clamping cone.
2. Slide yoke or clutch onto the connecting shaft. Make sure that the hole for the clamping cone is positioned above the annular groove on the connecting shaft. Start threads of clamping cone by hand, then tighten it to 75 lb-ft (100 N-m) of torque. While tightening, move the yoke or clutch back and forth in axial direction. Check tight and safe fit of yoke or clutch. A 17 mm socket will be needed to tighten the clamping cone.
3. After the first 8-10 hours of operation after installation, the clamping cone must be rechecked for tight and safe fit. The safe fit then needs to be checked at regular intervals during operation. Re-tighten clamping cone as necessary.
4. To disassemble, loosen clamping cone and remove it from the yoke or clutch. If the clamping cone cannot be removed by hand, it can be released from the opposite side by using a hammer and a pin punch.

Note: The clamping cone is serviced only as a complete assembly. Do not attempt to disassemble the clamping cone.



Replacement Parts

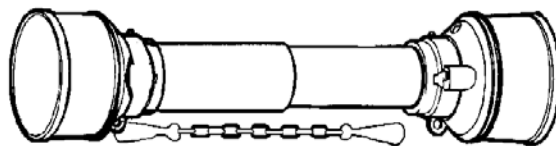
Drive Shaft & Slip Clutch 1000 RPM



Ref. No.	Part No.	Qty.	Description
1	T5-W1	1	Yoke with quick-disconnect pin kit, 1000 RPM 1 3/8" -21 Spl. ASG
2	T5-W4	2	U-Joint Kit (Cross & Bearing)
3	T5-W5	1	Inboard Yoke, Inner Profile
3a	T5-W7	1	Outboard Yoke, Outer Profile
4	236-0614	1	Inner Profile Tube
5	236-0615	1	Outer Profile Tube
6	236-0612	2	Spring Pin, 10 x 90
7	T5-W2	1	Quick Disconnect Kit 1 3/8"
8	236-3005	1	Friction Clutch 1 3/4" x 20 spline
NP	236-3100	1	Drive Shaft Complete, 1-3/8"-21 x 1-3/4"-20 spline

For Clutch Parts see Page 37, use 1000 RPM components.

Driveline Safety Shield



Part No.	Description
236-0610	Main DL: Complete shield assembly

Model: 672HD
This Manual for use with Serial Numbers
with 5th character of B
Example: S605B-1000

Version 2.10.0
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