



BFFW12

FLEX WING ROTARY CUTTER

OWNER'S OPERATION & PARTS MANUAL

For additional information, please see us at

www.badboycountry.com

Bad Boy, Inc.

102 Industrial Drive

Batesville, Arkansas 72501

TO THE DEALER

Assembly, initial lubrication, and verification of proper installation of this product is the responsibility of the Bad Boy dealer. Be familiar with the safety rules and instructions found in this manual. Ensure all items on the Dealer's Pre-Delivery and Delivery Checklists, in this Manual, are completed before releasing the cutter to the new owner. ***This cutter is sent from the factory without gearbox oil in the gearbox, or grease in the tail wheel.***

TO THE OWNER

Note: Anyone who operates your Bad Boy must first read this owner's manual. Although this cutter has been engineered with safety and reliability as the foremost concerns, there is no substitute for an informed and cautious operator. This manual should be viewed as a part of the equipment itself. If this manual is lost, destroyed, or otherwise rendered unreadable, obtain a duplicate immediately. A duplicate can be obtained on-line at www.badboycountry.com.

As with all machinery, this cutter requires periodic maintenance and should be kept free of debris buildup. Proper care will ensure many years of dependable service. Replacement parts should only be obtained from your Bad Boy dealer or through the website referenced above. Failure to utilize approved parts can be dangerous and will void the warranty.

LEA EL INSTRUCTIVO!

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

TABLE OF CONTENTS

SPECIFICATIONS.....	4
WARRANTY INFORMATION.....	5
DEALER INFORMATION.....	7
SAFETY RULES AND INFORMATION.....	9
GENERAL INFORMATION.....	13
OPERATION.....	14
OWNER SERVICE.....	18
TROUBLESHOOTING.....	24
CUTTER ASSEMBLY AND PARTS LIST.....	25
FASTENER TORQUE CHART.....	35

SPECIFICATIONS

Gear Box	Omni RCD-90, Omni RC-71, Omni RC-71R
Gear Box Mount	.375" Steel
Deck Thickness	10 GA
Skirt Thickness	.25"
Skid Shoes	.25" Replaceable
Tail Wheels	21x7 Foam Filled ASM Wheel
Stump Jumper	15 Spline, Standard Duty, Infinity Pan Style
Length (including Tail-Wheel)	190"
Total Width	154" (Including Skid Plates)
Overall Height	21.7"
Deck Height	9.5"
Cut Range	2" – 16"
Cutting Width	144"
Side Flex Range	90° Up – 22° Down (Below 0° Plane)
PTO Drive Shaft	Slip Clutch with CV U-Joint
Blades	17.6" x ½" x 2"
Tractor HP Range	35 - 60
Tractor PTO RPM	540
Cutting Capacity	2" Diameter
Blade Overlap	5.25"
Weight	2994 lbs.
Warranty	5 Year Limited - Gear Box, 1 Year Limited - Manufacturer Defect
Category	Drag
Suspension	(2) Rubber Isolators

WARRANTY

OWNER/OPERATOR'S RESPONSIBILITY

It is the owner and/or operator's responsibility to read the owner's manual before use. Failure to read the owner's manual is considered a misuse of this equipment.

It is the owner and/or operator's responsibility to inspect the product and to have any part(s) repaired or replaced before continued operation. Failure to do so could cause damage, excessive wear to other parts, or jeopardize operator safety.

LIMITED WARRANTY

Bad Boy Implements warrants to the original purchaser of any new Bad Boy Implement(s) that the equipment be free from defects in material and workmanship for a period of one (1) year from date of retail sale. Additionally, there is a (5) year limited warranty on the gear boxes.

At Bad Boy Implements request, the customer will make the defective part available for inspection by Bad Boy Implements and/or return the defective part to Bad Boy Implements. Transportation charges prepaid.

WHAT THIS WARRANTY DOES NOT COVER:

This warranty does not cover defects caused by depreciation or damage caused by wear, accidents, improper maintenance, improper use or abuse of the product, alterations, or failure to follow the instructions contained in the Owner's Manual for operation and maintenance.

Normal maintenance service and consumable items such as gearbox lubricant, blades, tire, or normal deterioration of exterior finish due to use or exposure.

Bad Boy Implements will not be responsible for the pickup and delivery of a machine for warranty purposes or inspection.

WARRANTY LIMITATION:

THERE IS NO OTHER EXPRESSED WARRANTY. ANY WARRANTY THAT MAY BE IMPLIED FROM THIS PURCHASE INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IS HEREBY LIMITED TO THE DURATION OF THIS WARRANTY AND TO THE EXTENT PERMITTED BY

LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

BAD BOY IMPLEMENTS WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES AND/OR EXPENSES IN CONNECTION WITH THE PURCHASE OR USE OF THE

IMPLEMENT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.

HOW TO OBTAIN SERVICE UNDER THIS WARRANTY:

Warranty service can be arranged by contacting the dealer where you purchased the implement or by contacting Bad Boy Implements at warranty@badboycutters.com

B. Warranty claims will not be reviewed or paid unless the warranty registration is received by Bad Boy Implements within 30 days of the retail purchase date.

Record the model number, serial number and date purchased. This information will be helpful obtaining parts or service if required.

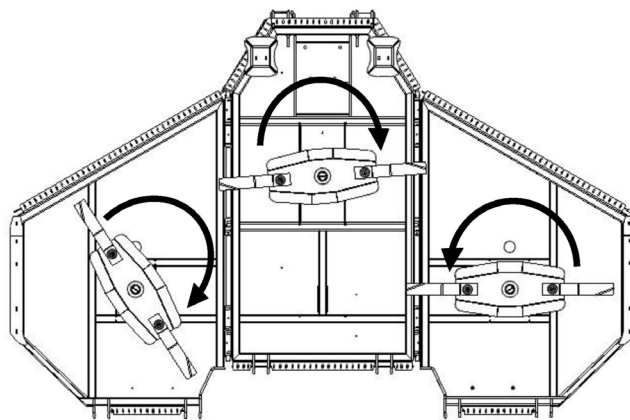
SERIAL NUMBER _____ DATE OF RETAIL SALE _____ PLACE OF PURCHASE _____

DEALER INFORMATION

PRE-DELIVERY CHECK LIST

It is the dealer's responsibility to fully assemble and inspect the cutter before the customer takes delivery of the unit. The following check list is provided as a memory aid to ensure all points are inspected. Check off the items below as they are completed.

- Check the torque of all bolts to be sure they meet the values given in the Fastener Torque Chart(pg.32)
- Check that the cotter pin is properly secured.
- Check the PTO shaft for proper installation.
- Check that the gearboxes are properly filled with gear oil and that no seals are leaking.
- Grease all lubrication points as shown in Lubrication (pgs. 19-20).
- Check that the blades have been properly installed. The cutting edge should lead toward the front center of the cutter as viewed from above.



Depicts the bottom of the unit.

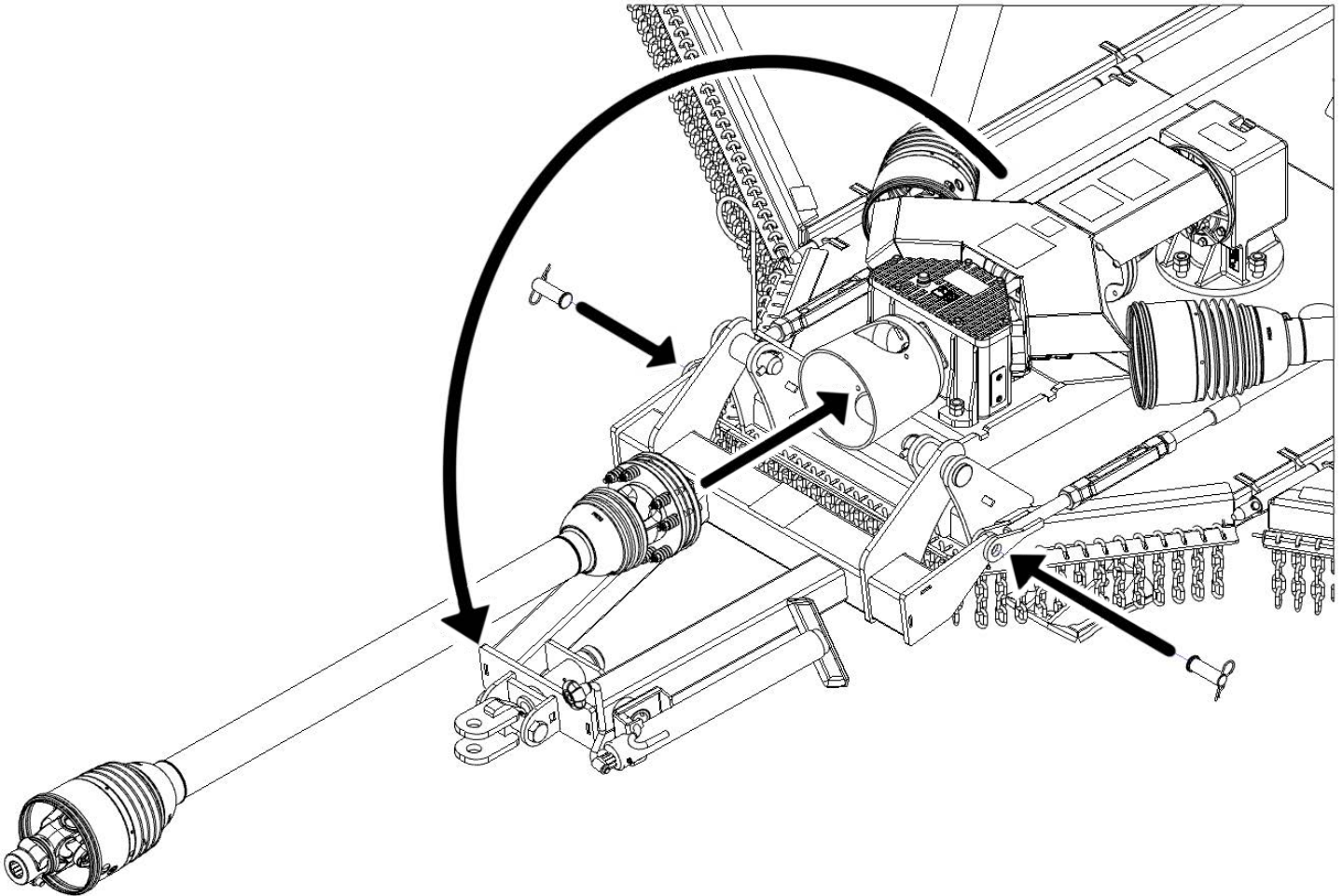
DELIVERY CHECKLIST

- Explain the importance of periodic inspections and lubrication to the customer.
- Present the Owner's Manual to the customer and request that the customer and all other users read the material before operation.
- Explain the importance of the safety rules.
- Explain the importance of the front ballasts. This unit weighs 2994 pounds; the customer needs to weigh the tractor and equipment to ensure at least 20% of the total weight is on the tractor's front wheels.
- Explain that if the unit is transported on or along a roadway, safety devices (such as reflector decals) should be utilized in order to alert motorists of the equipment's presence.

- **! IMPORTANT-** The gearbox was not filled with gear oil at the factory. It must be filled before the cutter can be placed into service (see Lubrication, pg. 14). Failure to fill the gearbox with the proper quantity of gear oil will result in damage to the gearbox.

Dealer Assembly Instructions

1. Rotate the Hitch Assembly into position.
2. Connect the Leveling Rods to the Front Hitch Assembly .
3. Attach the Series 6 10' PTO Shaft to the center RC-90 3 way box.



SAFETY RULES/INFORMATION

NOTE: Safety instructions are important! While these instructions may seem lengthy or redundant, they are presented for your safety.

- Safety alerts and symbols will appear throughout the manual to indicate potential hazards. When you see any of these symbols, be aware and read the instructions and or cautions carefully. Accidents can occur when vital information is unknown or ignored.

SAFETY WORDS

- The meaning of the different signal words as defined in this standard may be explained in collateral materials. The following artwork may be used for this purpose.



DANGER indicates a 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 death or serious injury



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



NOTICE is used to address practices not related to physical injury



Safety instruction (or equivalent) signs indicate specific safety-related instructions or procedures

SAFETY ALERT SYMBOLS



-Indicates the DANGER signal word.



-Indicates the WARNING signal word.



-Indicates the CAUTION signal word.



- Can indicate DANGER, WARNING, or CAUTION signal words

SAFETY RULES

Note:(Safety instructions are important!! While these instructions may seem lengthy or redundant, they are presented for your safety)

TRAINING

- Almost all accidents arising from the use of equipment such as this that has resulted in injury or death would have been avoided had instructions such as these been adhered to.
- If you do not understand any part of this manual, contact your dealer for assistance.
- Dangerous situations can arise quickly. Know your controls and how to stop the engine and attachment in an emergency. Fractions of a second can be extremely important.
- Do not allow anyone to operate the equipment without first requiring them to read this manual and giving proper instruction.
- Never allow children (< 16 years of age) or untrained persons to operate the equipment.

PREPARATION

- Check that all of the hardware is properly installed.
- Loose clothing can become caught in moving parts. Entanglement with the rotating PTO shaft is the #1 cause of death and injury with equipment such as this. Always wear relatively tight and belted clothing to reduce this risk.
- Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head. Wear a respirator or filter mask where appropriate.
- Make sure the cutter is properly secured, adjusted, lubricated, and in good operating condition.
- Make sure spring-activated locking pin slides freely and is seated firmly in tractor PTO spline groove.
- Connect PTO drive-line directly to power unit PTO shaft. Never use adapter sleeves or adapter shafts. Adapters can cause drive-line failures.
- Before starting power unit, check drive-line guards for damage. Do not operate without replacing any damaged guards. Ensure the guards rotate freely on the drive-line. If they do not, repair or replace bearings before operating the cutter.
- Tractor must be equipped with Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt. ALWAYS keep seat belt securely fastened. Falling off the tractor can, and does, result in death. Keep folding ROPS system in 'locked up' position at all times.
- Inspect guards before use. Replace if damaged. DO NOT OPERATE the cutter without guards in place.
- Accumulation of debris can present hazards. Remove accumulated debris from the cutter and tractor before use.
- Make sure all safety decals are installed and free from damage. Replace if damaged.
- A minimum of 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment, do not estimate.
- Inspect and clear the area of stones, branches, or other hard objects that might be thrown, causing injury or damage.



OPERATION

- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing the cutter.
- This machine is equipped with front and rear guards. DO NOT operate the machine without the guards in place.
- Never direct discharge toward people, animals, or property.
- Do not operate or transport equipment while under the influence of alcohol or drugs.
- Operate only in daylight or good artificial light.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- **NEVER ALLOW RIDERS ON POWER UNIT OR CUTTER!**
- Always sit in the tractor seat when operating controls or starting engine. Securely fasten seat belt, place the transmission in neutral, engage the brake, and ensure all other controls are disengaged before starting the tractor engine.
- Operate the tractor's PTO at 540 RPM. Do not exceed 540 RPM.
- Do not operate the PTO during transport.
- Look down and to the rear and make sure area is clear of people, animals, property, or foreign objects before operating in reverse. Children often do not understand the severity of the potential danger. A major portion of mower/cutter accidents involve children being ran over during reverse operation of the mower/cutter.
- Do not operate or transport on steep slopes.
- Do not stop, start, or change directions suddenly on slopes.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Watch for hidden hazards on the terrain during operation.
- Stop the tractor unit and the equipment immediately upon striking an obstruction. Turn the engine off and remove the key, inspect, and repair any damage before operation resumes.
- Leak down or failure of the mechanical or hydraulic system can cause equipment to drop.
- Make certain all movement of equipment components has stopped before exiting the tractor.



MAINTENANCE

- Before performing any service or maintenance, disconnect the drive-line from the tractor's PTO.
- Before working underneath the equipment, disconnect the drive-line, raise the cutter, and block the cutter securely. Hydraulic system leaking down and failure of mechanical or hydraulic system can cause equipment to drop.

- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing the equipment.
- Keep all persons away from the operator control area while performing adjustments, service, or maintenance.
- Do not modify or alter (or permit anyone else to modify or alter) the equipment or any of its components in any way.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.
- Make certain all movement of the equipment components has stopped before approaching for service.
- Frequently check the blades. They should be sharp, free of nicks and cracks, and securely fastened.
- Do not handle the blades with bare hands. Always use gloves. Careless or improper handling may result in serious injury.
- Your dealer can supply genuine replacement blades. Substitute blades may not meet original equipment specifications and may be dangerous.
- Check that the cotter pin and roll pin (gearbox output shaft and through the top of the tail-wheel shaft) are installed securely to ensure equipment is in a safe condition before placing the cutter into service.

STORAGE

- Disconnect the cutter driveshaft and secure it off of the ground. Raise the cutter to the desired height. Place blocks under the cutter skirt. Slowly lower the cutter onto the blocks.
- Disconnect the hydraulic line.
- Disconnect the front hitch section from the tractor and carefully drive the tractor away from the cutter.
- Before leaving the area, check to ensure the cutter is stable.
- Keep children and bystanders away from the storage area.

CHILDREN

Extremely tragic accidents can, and do, occur if the operator is not continually alert to the presence of children. Children are often attracted to machinery and the mowing activity. NEVER assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of responsible adult other than the operator.
- As this machine is capable of, and used for, cutting relatively tall grass, always be vigilant in monitoring the field ahead. Accidents in which children were obscured by tall grass and not easily seen by the operator have occurred with equipment of this type. The results are often life shattering for all involved. Be constantly aware during operation!
- Immediately turn the equipment off if a child enters the area.
- Never allow children to operate the equipment (<16 years of age).
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child

GENERAL INFORMATION



MANUAL PURPOSE

- The purpose of this manual is to assist you in operating and maintaining your cutter. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions are the product of extensive field experience, engineering data, accident reports, and statistical data. Although some information may be general in nature due to unknown and varying operating conditions, through experience and adherence to these instructions, you should be able to develop sound operating procedures suitable to your particular situation.
- The illustrations and data used in this manual were current at the time of printing, but due to possible running changes, your machine may vary slightly in detail. Bad Boy Cutters reserves the right to redesign and change the machines as necessary without notification.
- Throughout this manual, references are made to right and left sides of the equipment. These directions are determined by standing behind the equipment. Also, blades rotate to the front center of the cutter. The blade directions are as viewed from the top of the cutter.

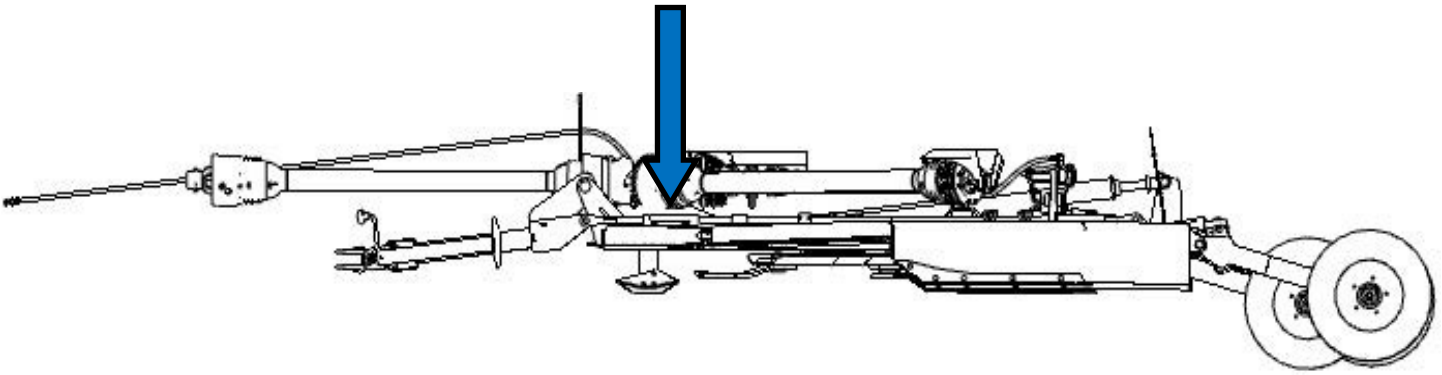
OPERATION

PRE-OPERATION CHECKLIST: Owner/Operators Responsibility

- Review and follow all safety rules (pages 9-12) and machine safety decals.
- Ensure the equipment is properly and securely attached to the tractor.
- Make sure drive-line spring-operated locking pin slides freely and is seated firmly in tractor PTO spline groove.
- Lubricate all of the grease fitting locations. Make sure the PTO shaft slip joints are lubricated.
- Check to be sure that the gear lube runs out of the small check plug on the side of the gearbox.
- Check that all of the hardware is properly installed and secured.
- Check that the blades are sharp, secure, free of cracks, and that the cutting edges are positioned to lead in the relative direction (as viewed from the top of the unit).
- If using shields or guards, check that they are properly installed and in good condition. Replace if damaged.
- Place tractor PTO and transmission in neutral before starting engine.
- Inspect area to be cut and remove stones, branches, or other hard objects that may be thrown and cause injury or damage.

ATTACH THE CUTTER

- Attach the tongue to the Tractor.
- Attach the PTO. Ensure that the Driveline is the proper length (refer to page 15 for instructions to shorten the driveline).
- Attach the hydraulic line.
- On level ground, level the mowing deck by adjusting the leveling rod turnbuckles (location is indicated by the arrow below). This will help to ensure an even cut.

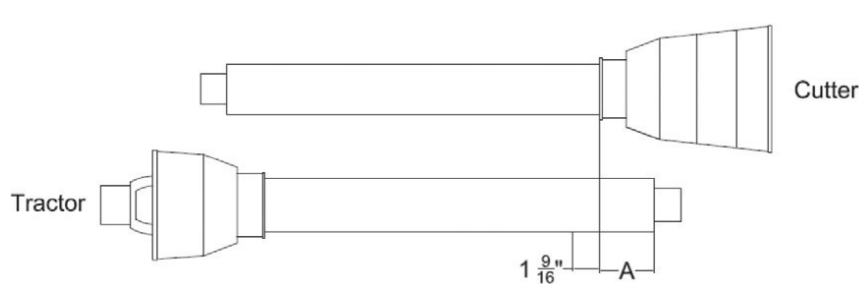


DRIVE-LINE ADJUSTMENT

- Attach the cutter to the tractor draw bar.
- Connect the hydraulic cylinder hose. Do not attach the drive line.
- Raise and lower the cutter to determine the minimum and maximum distance between the tractor PTO shaft and the gearbox input shaft. If the distance is too long, the drive-line will be too short for proper engagement; this can damage the drive-line during operation. If the distance is too short, please call your Bad Boy dealer for a longer drive-line.
- If the drive-line is too long, follow the instructions below for shortening the drive-line.

SHORTENING THE DRIVELINE

- Move the cutter up and down to find the shortest possible distance between tractor PTO shaft and gearbox input shaft.
- Separate the drive-line into its two halves and connect them to the tractor PTO and gearbox.
- Place the drive-line halves parallel to one another in order to find the necessary drive-line length reduction.
- Measure from the end of the shield (tractor half) to the base of the bell shield (cutter half; see figure below). This is measurement 'A' in the figure. Add 1- 9/16" to measurement 'A'.
- Using a hacksaw, cut the overall length from the end of the plastic, cylindrical drive-line shield (tractor half) as indicated in the figure.
- Place this cutoff portion of the shield against the metal shaft (of the same drive-line half) and use this as a guide. Mark and cut the metal shaft.
- Repeat for the other half of the drive.
- File and clean the cut ends of both drive halves.



NOTE: Connect the drive-line to the tractor PTO shaft, making sure the spring-activated locking pin slides freely and lock the drive-line to the PTO shaft. DO NOT use the tractor if proper drive-line engagement cannot be obtained through these methods



DRIVELINE INTERFERENCE CHECK

- Check for clearance between the drive-line and cutter deck.
- Make sure the drive-line will not bottom out at the shortest length and that it has at least 1/3 overlap at its longest length.

DRIVELINE INSTALLATION and REMOVAL (TRACTOR PTO)



INSTALLATION

- Push the spring-activated locking pin and at the same time, push the drive-line onto tractor PTO shaft until the locking pin is able to engage the shaft.
- Make sure the spring activated locking pin slides freely and is seated firmly into the tractor PTO spline groove.

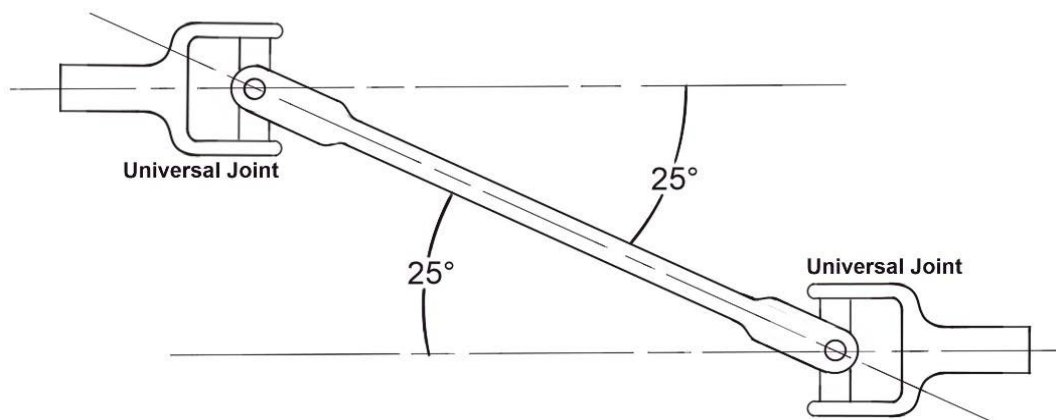
REMOVAL

- Hold the drive-line securely in position, push the spring-activated locking pin and slide the drive-line off of the tractor PTO shaft.

OPERATING TECHNIQUE

- Operating power for the cutter is provided by the tractor's PTO. Operate the PTO at 540 RPM (never exceed). Know how to stop the tractor and cutter quickly and safely in the event of an emergency.
- Engage the PTO at a low engine RPM. Engagement of the PTO at high engine RPM places the driveshaft and gearbox under extreme stress. After the PTO is engaged, raise the PTO speed to 540 RPM. Maintain this PTO speed throughout the cutting operation.
- Gearbox protection is provided by way of a slip-clutch. This allows the drive-line to 'slip' under excessive torsion loads. It is in this manner that the gearbox is isolated from potentially damaging shocks. Under abnormal torque loads, this model also provides protection to the drive-line itself. Slip-clutches require service to keep them fully functional. A neglected slip-clutch is akin to having no protection at all as they can lose their ability to slip.
- Move slowly into material. Adjust the tractor ground speed to provide a clean cut without lugging the tractor engine. Proper ground speed will depend on the terrain and the material's height, type, density, and moisture content. The operator will be able to determine appropriate ground speeds for different conditions. Normal ground speed ranges from between 2 and 5 mph.
- Under certain conditions, the tractor tires may push the grass down. This can result in an uneven cut. When this occurs, reduce your ground speed, but maintain the PTO at 540 RPM. Lowering your travel speed will allow the grass more time to rebound.

Maximum Working Angle



OWNER SERVICE



The information in this section is written for operators that possess basic mechanical skills. If you need help, your dealer has trained service technicians available. For your protection, read and follow the safety information in this manual.

- If you do not understand any part of this manual and need assistance, contact your dealer.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.



BLOCKING METHOD

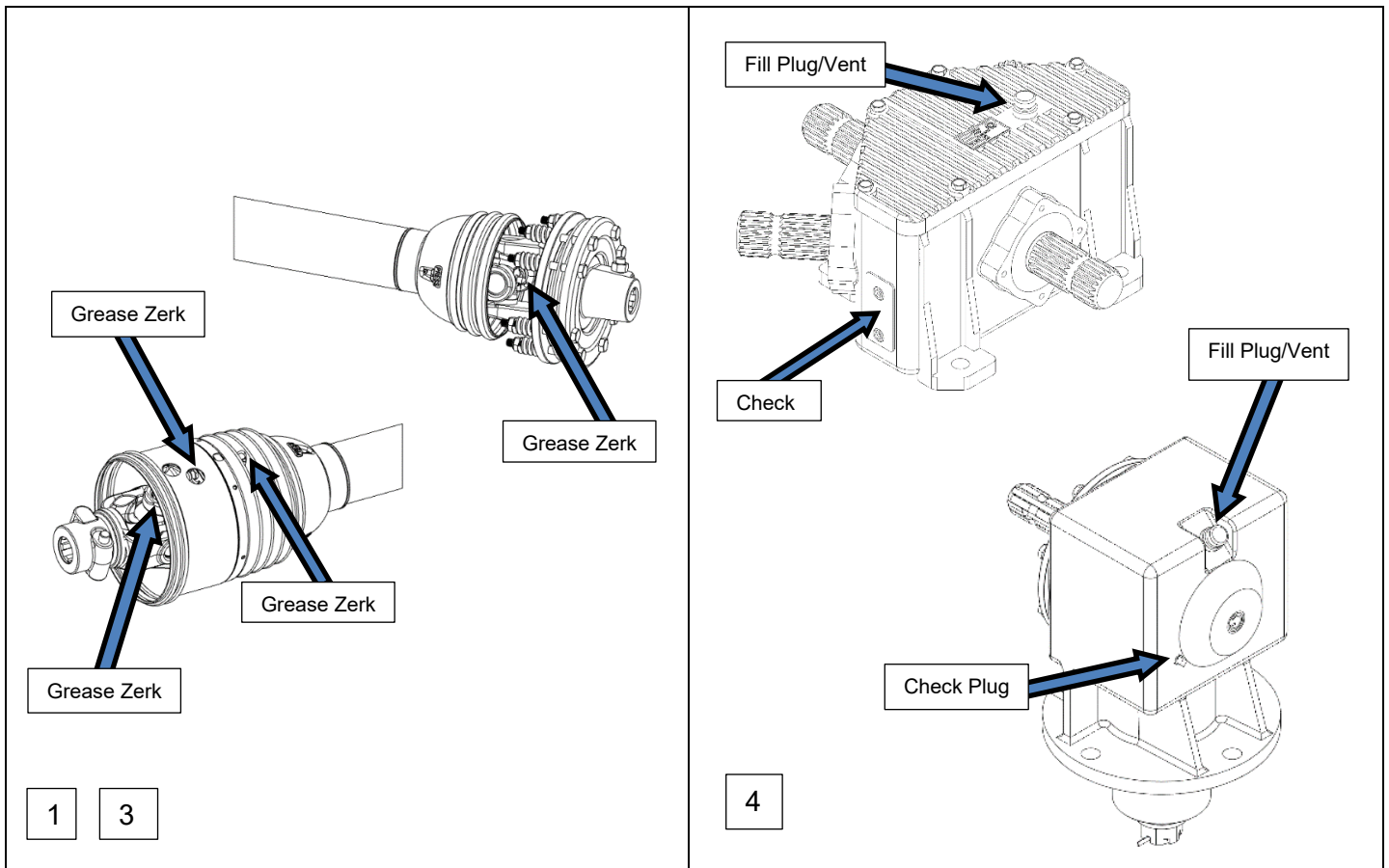
- Before performing any service or maintenance, disconnect the driveline from the tractor PTO.
- Never go underneath the equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any body part underneath the equipment or between movable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow the Operator's Manual instructions for working underneath and blocking requirements or have work done by a qualified dealer.

BLOCKING

- Make sure the cutter is approximately level. The working surface must be level and solid to properly support the jack stands while they are supporting the cutter.
- Use four jack stands with, at least, a **3 Ton** rating. These are the only approved blocking devices for this cutter.
- Place one jack stand under each corner of each section before working underneath the unit.
- Do not position the jack stands under wheels, axles, or wheel supports. Components can rotate and cause the cutter to fall.
- With the full cutter weight lowered onto the jack stands, test the blocking stability carefully, but vigorously, to ensure stability.
- If the cutter is attached to the tractor when blocking, set the brakes, remove the key, and block the cutter before working underneath. Also, securely chock the rear tractor wheels (both in front of and behind the wheels).

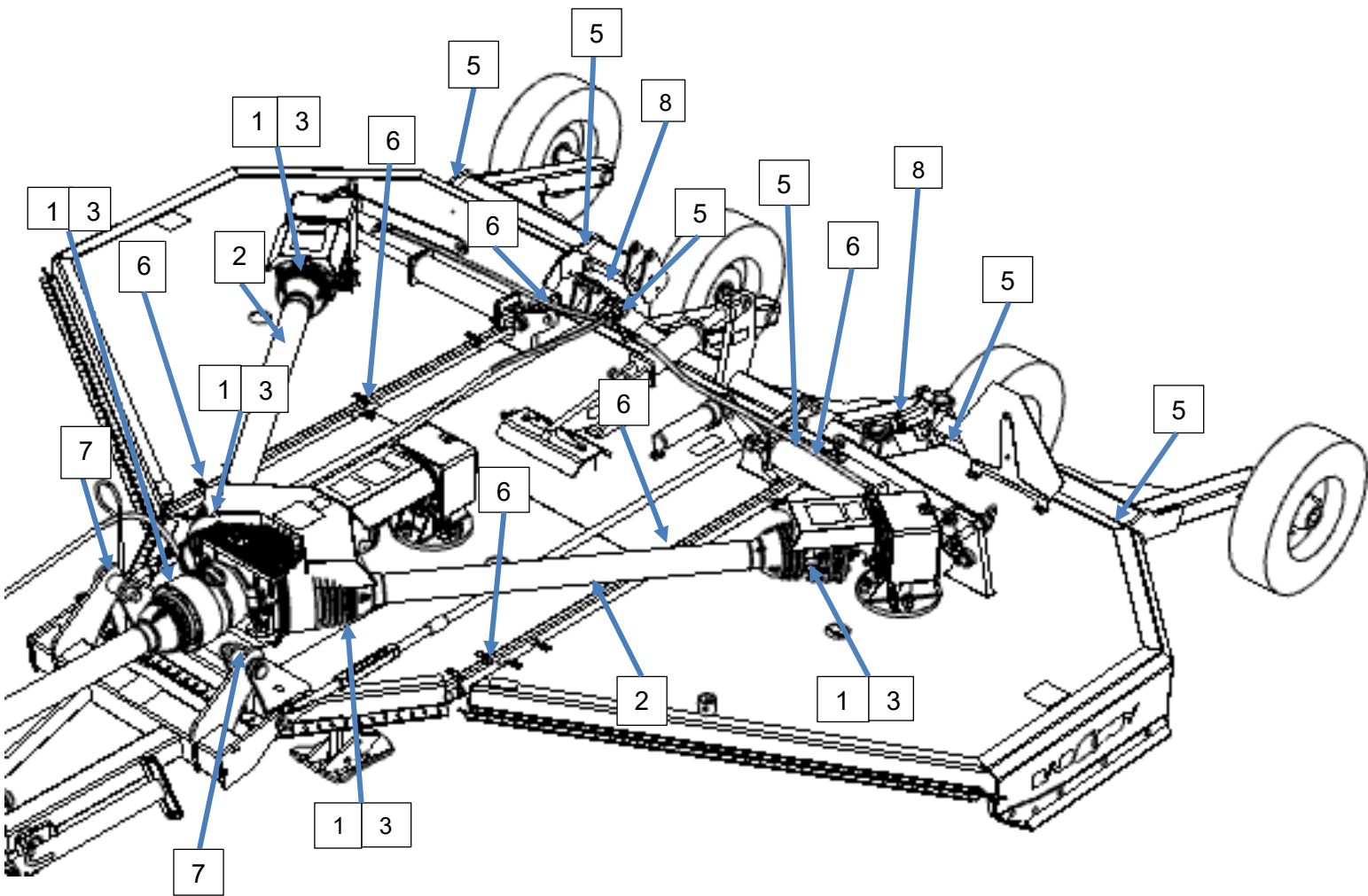
LUBRICATION

- Do not allow excess grease to collect on or around parts, particularly when operating in sandy areas.
- See the figures below for lubrication points and frequency of lubrication based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication.
- Use a lithium grease of #2 consistency with a MOLY (molybdenum disulfide) additive for all locations unless otherwise noted. Be sure to clean the fittings thoroughly before attaching the grease gun. One good pump from most guns is sufficient when the lubrication schedule is followed.
- Equipment is shipped without gear oil in the gearbox. Remove the check plug. Fill the gearbox until it starts to run out of the check plug; 75W-90 is recommended for ambient temperatures of -5F to 60F, 85W-140 is recommended for ambient temperatures of 40 F to 120 F. The oil level will be at the same level as the horizontal input shaft when filled properly. The check plug is designed to allow for oil level checks. If oil runs out of the hole when the plug is removed, the oil level is sufficient.

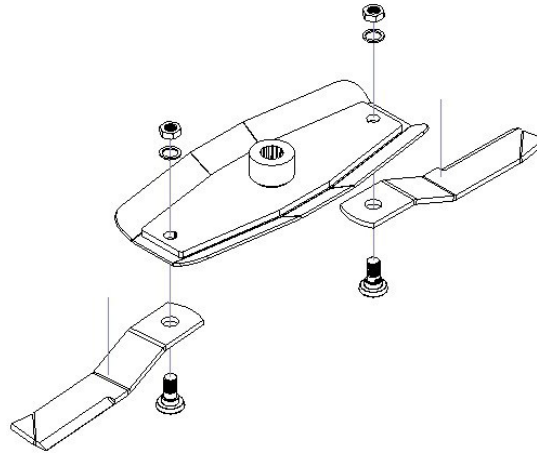


LUBRICATION POINTS

1. PTO shaft: front and rear U-joints (refer to previous page).....8 hours
2. PTO shaft: slip joint (apply grease to inner shaft)..... 8 hours
3. PTO shaft: plastic shield bearings (refer to previous page).....8 hours
4. Gearboxes (check the oil) (refer to previous page)..... Daily
5. Rear Hinges.....8 hours
6. Side Hinges(grease zerks located on the bottom side of the hinges).....8 hours
7. Front Hinges. 8 hours
8. Rear Turnbuckles.....8 hours



BLADE SERVICING/BLADE REMOVAL



 *If the blade bolt is seized in the stump jumper's crossbar and extreme force will be needed to remove it, support crossbar from below to prevent gearbox damage.*

- Disconnect the driveline from the tractor's PTO.
- Raise the cutter and block securely.
- Align the crossbar of the stump jumper with blade access hole in the cutter frame. Remove the blade's bolt, nut, and lock washer. Carefully drive the bolt out of the crossbar.
- Rotate and repeat for the second set of blades.

BLADE INSTALLATION

- Your dealer can supply genuine replacement blades. Substitute blades may not meet original equipment specifications and may be dangerous.
- Blade rotation for each side is toward the front center section when looking down on the cutter. Be sure to install the cutting edge to lead in rotation (see pg. 6 [view is from the bottom of the cutter]).
- Always replace or sharpen all of the blades at the same time. Failure to do this could result in an imbalance which can cause the cutter to vibrate violently.

- Inspect the blade bolts for nicks or gouges. If damage is found, replace the damaged blade bolt(s).
- Insert the blade bolt through the blade. The blade should swivel on the blade bolt; if it doesn't, determine the cause and correct it.
- Align the crossbar with the blade access hole in the cutter frame. Apply a liberal coating of an anti-seize product to the blade bolt and crossbar hole. Make sure the blade offset is away from the cutter. Push the blade bolt through the crossbar.
- Insert the lock washer and nut through blade access hole in the cutter deck. Install it on blade bolt and tighten to 645 ft-lbs. using a 1-11/16" socket.

BLADE SHARPENING

- Closely inspect the blades for cracks or nicks. If damage is found, replace blades in pairs.
- When sharpening the blades, grind the same amount on each blade to maintain balance. Replace blades in pairs. Unbalanced blades will cause excessive vibration, which can damage gearbox bearings.
- Sharpen both blades at the same time to maintain balance. Follow original sharpening pattern.
- Do not sharpen blade to a razor edge: leave at least a 1/16" blunt edge.
- Do not sharpen the back side of the blades.

SLIP-CLUTCH ADJUSTMENT

The slip-clutch (if equipped) is designed to slip so that the gearbox and the driveline are protected if the cutter blades strike an obstruction.

A new slip clutch or one that has been in storage over the winter may seize, rendering the shaft and gearbox completely unprotected. Before operating the cutter, make sure it will slip by performing the following operation:

- Turn the tractor off and remove the key.
- Loosen the nuts on the springs until the springs can rotate freely, yet remain secure on the bolts.
- Make in-line marks on the outer plates of the slip-clutch.
- Securely attach the cutter to the tractor and start the tractor.
- Engage the PTO for several seconds then quickly disengage it.
- Turn the tractor off and remove the key.
- The friction plates should have "slipped." If the marks made previously are no longer in-line with each other, this is the case.
- If the clutch does not slip, check assembly for oil, grease, and debris.
- Reassemble the clutch and tighten the bolts no more than 1 / 8 of a turn at a time until the desired setting of 1.15" spring length is reached." spring length is reached.
- If excessive slippage continues, check the lining plates for excessive wear. The slip plates are 1/8" thick when new. They should be replaced after 1/32" of wear.

SHIELDING REPAIR



- DANGER**
- This machine is equipped with front and rear guards.
 - **DO NOT** operate the machine without the guards in place.

CHAIN SHIELDING

- Inspect the chain shielding after each day of operation and replace any broken or missing chains as required.

DRIVELINE SHIELDING

- Inspect for damaged covers and/or loose fasteners.

CLEANING

- After Each Use
- Remove large debris (clumps of dirt, grass, crop residue, etc.) from the machine.
- Inspect the machine and replace any worn or damaged parts.
- Replace any missing, damaged, or otherwise unreadable safety decals.

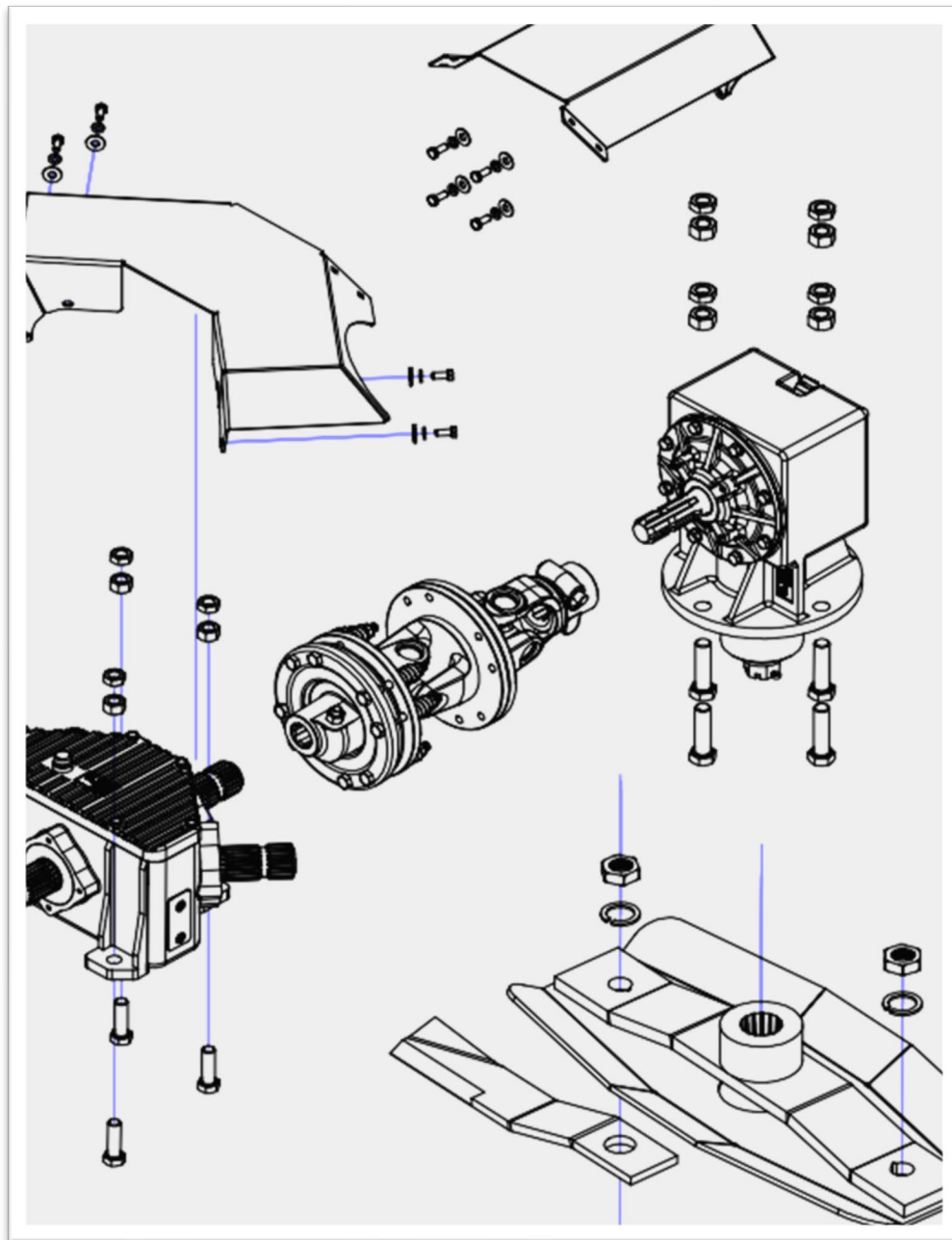
PERIODICALLY OR BEFORE EXTENDED STORAGE

- Clean large debris (clumps of dirt, grass, crop residue, etc.) from the machine.
- Remove the remainder using a low-pressure water spray.
 - Take extra care when spraying near safety decals. The water spray could penetrate under the decal and peel it off.
 - Be careful when spraying near any paint damage. The spray could remove more paint.
- Inspect the cutter and replace any worn or damaged parts. After an extended period of non-use, any damage to the cutter may be overlooked, or forgotten, when the machine is again put into service.
- Sand down scratches and the edges of areas of missing paint and coat with Bad Boy touch-up paint.
- Replace any missing, damaged, or otherwise unreadable decals.

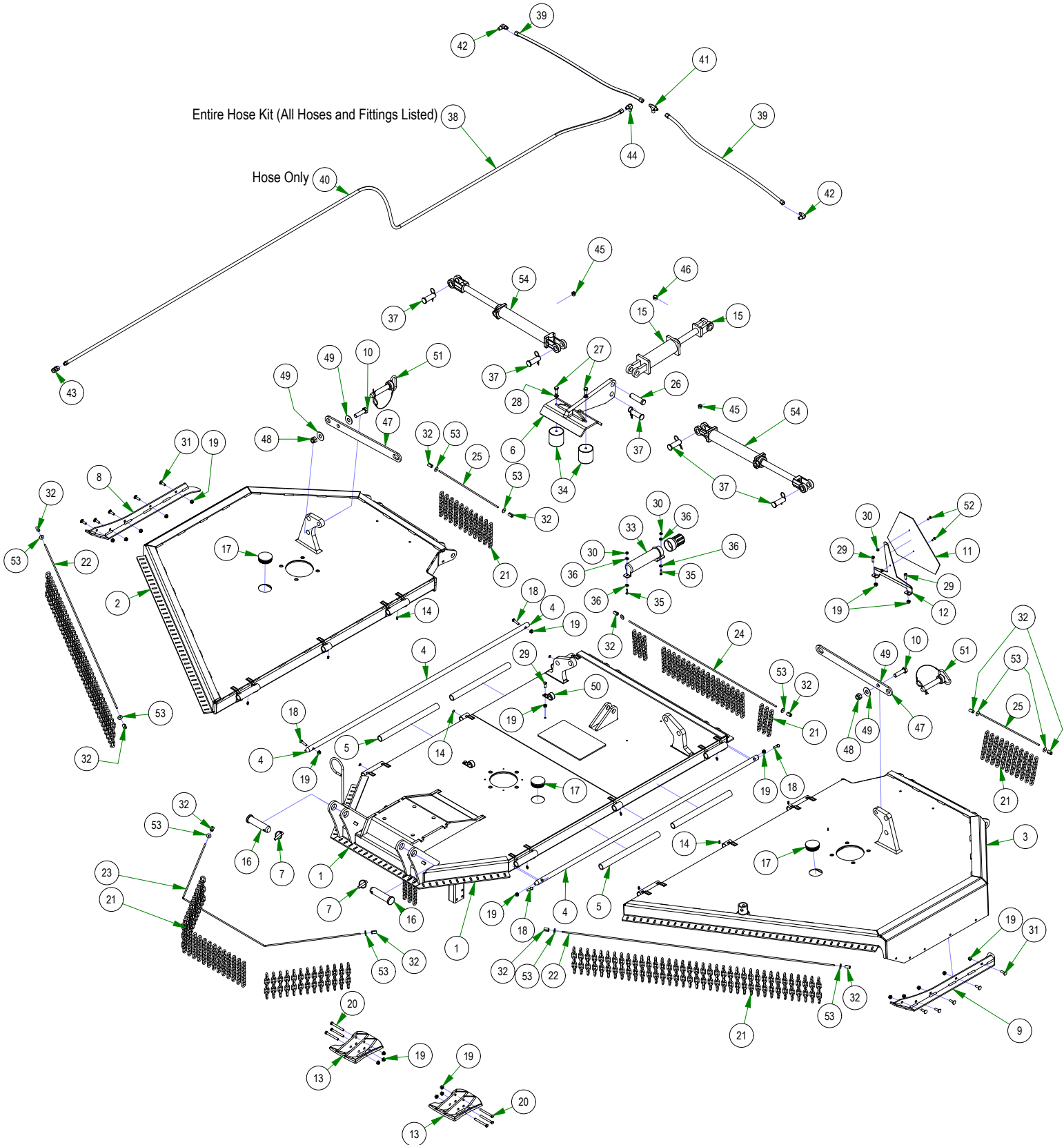
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Not cutting proficiently	Conditions too wet for mowing.	Allow grass to dry before mowing.
	Blades unable to cut grass pressed flat by the tractor.	Slow ground speed of the tractor but keep PTO running at 540 RPM.
	Dull Blades.	Sharpen or replace the blades.
	Cutter not level	Adjust level according to instructions.
	Carrier RPM too low	Adjust tractor to 540 RPM.
	Ground speed too fast	Slow ground speed.
	Material is too high and dense.	Reduce ground speed (maintaining 540 RPM tractor PTO) or make two passes. Raise the cutter for the first pass; then lower the cutter to desired height and cut perpendicular to the first passes.
	Grass is wet.	Allow grass to dry before mowing.
Excessive vibration.	Driveline/PTO bent	Replace driveline/PTO
	Infinity Pan Bent	Replace infinity pan
	Blades bent or broken	Replace the blades
	Blade are loose	Tighten the blade bolts
	Blades unequal in weight	Replace the blades
	Blade(s) do not swing freely	Free the blades to swing freely
	Loose bolts on blade and/or blade carrier Loose Gear Box bolts	Tighten or the bolts according to the provided fastener torque chart. Tighten or the bolts
Cutter will not cut all of the time.	Slip-clutch excessively slipping.	Adjust the slip-clutch according to the instructions under "SLIP-CLUTCH ADJUSTMENT" section of this manual.

CUTTER ASSEMBLY & PARTS LIST



PARTS SECTION: MAIN ASSEMBLY

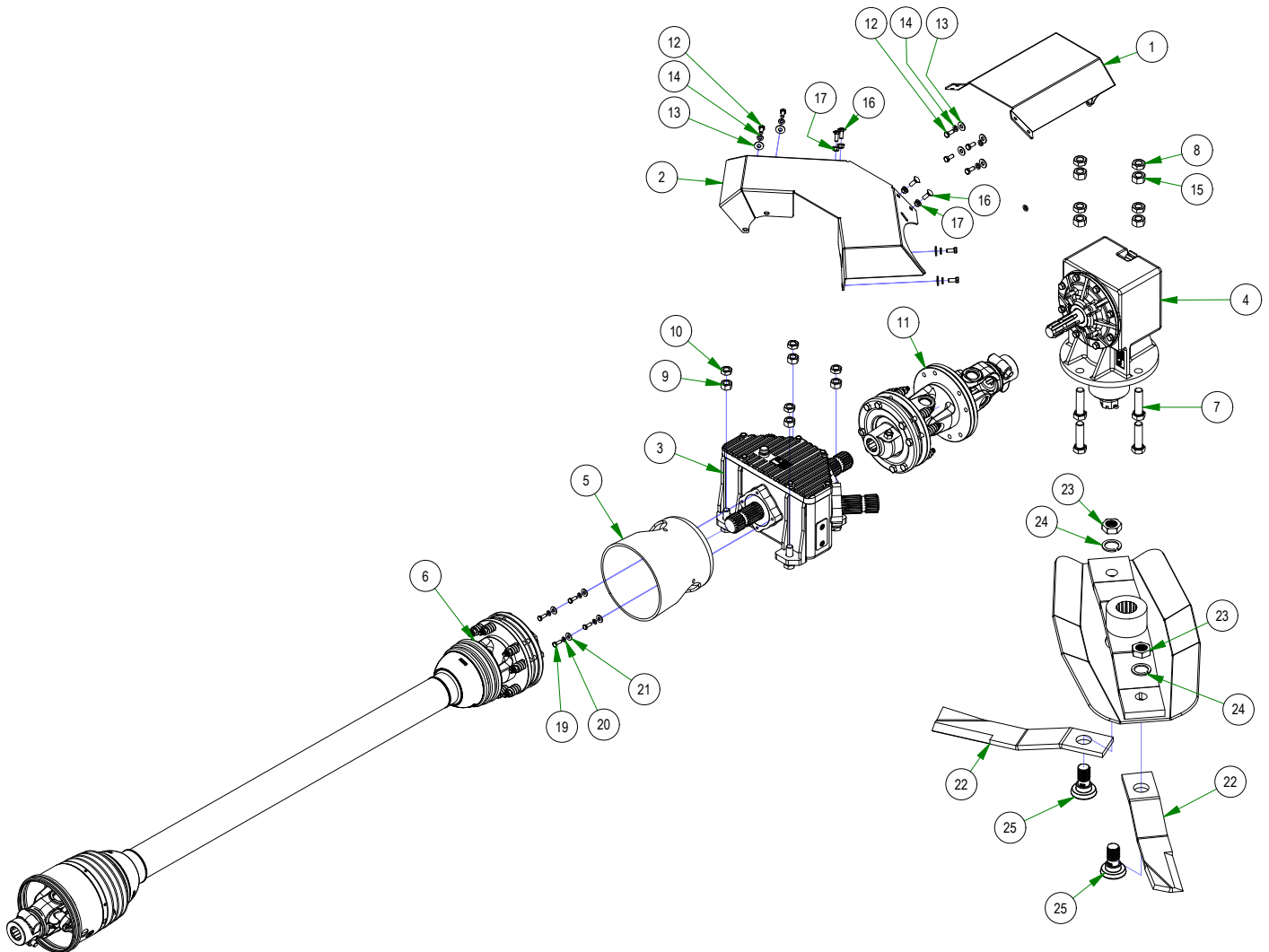


PARTS SECTION: MAIN ASSEMBLY

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	370-1000-00	BW12-mid tube frame	28	2	019-5007-00	1/2 SPLIT LOCKWASHER (GR.8) ZINC/YELLOW
2	1	370-1001-00	BW12-side tube frame RH	29	5	018-6049-00	3/8-16 X 1 GR 5 Hex Bolts Zinc
3	1	370-1002-00	BW12-side tube frame	30	4	013-2050-00	1/4-20 NYL INSERT FLANGE LOCKNUT ZINC
4	2	344-2016-00	1in. Hinge Rod	31	10	018-5043-00	3/8-16 X 1-1/4 CARRIAGE BOLT ZINC
5	4	382-0001-00	FW poly-spacer	32	12	358-0001-00	3/16" Stop Sleeve
6	1	350-4032-00	12' Buffer weldment V2	33	1	367-0001-00	Document Holder
7	2	340-0014-00	7/16"x2x Lynch pin	34	2	032-8999-00	Vibration Mount-Blue Dot
8	1	301-0052-00	BW12-Skid Weldment-long_RH	35	2	018-4007-00	1/4-20 X 1 HEX CAP SCREW (GR.5) ZINC
9	1	301-0049-00	BW12-Skid Weldment-long_LH	36	4	019-7040-00	1/4 USS FLAT WASHER (3/4 OD) ZINC
10	2	318-0021-00	3/4-10 X 2-3/4 Hex C/S (GR.8) ZC/YEL	37	5	344-2013-00	Cylinder Pin
11	1	391-0016-00	Safety Triangle	38	1	351-0003-00	12' Flex Wing Hydraulic Hose Kit
12	1	339-0277-00	BW- Safety Triangle Bracket	39	2	350-1175-00	39in x .375 5000psi Hyd Hose
13	2	301-0054-00	BW12- Center Skid	40	1	350-1176-00	180in x .375 5000psi Hyd Hose
14	12	024-3050-00	1/4 DRIVE-TYPE STRAIGHT GREASE FITTING (NO BALL) ZINC YELLOW	41	1	382-0002-00	.5in NPT-JIC -T- Fitting
15	1	350-0045-00	6in Stroke Tie Rod Cylinder	42	2	382-0005-00	.060 Restrictor -6NPT to -8MJIC 90 Fitting
16	2	344-2015-00	1.5in x 6in Cat 3 Draw Pin	43	1	382-0004-00	Quick Connect Coupler - Male Tip
17	3	314-0006-00	Cutter Blade Bolt Access Plug	44	1	382-0006-00	.047 Restrictor -8NPT to -8MJIC 90 Fitting
18	4	018-6012-00	3/8-16 X 1-1/2 HEX CAP SCREW (GR.5) ZINC	45	2	314-0036-00	3/8 NPT Breather Vent Plug
19	25	013-5202-00	3/8-16 NYLON INSERT FLANGE LOCKNUT (GR.F) ZINC	46	1	314-0037-00	1/2 NPT Breather Vent Plug
20	6	018-1010-00	3/8-16 X 3-1/2 HEX CAP SCREW (GR.5) ZINC	47	2	303-1041-00	Travel Lock Arm
21	161	347-0002-00	5 Link Chain	48	2	013-0023-00	3/4-10 NYLON INSERT LOCKNUT ZINC
22	2	364-0017-00	12' Flex Wing front_side_cable	49	4	319-0002-00	3/4 F/W USS (2" OD) ZC
23	1	364-0015-00	12' Flex Wing front_mid 01_cable	50	3	072-5000-00	Diesel Hydraulic Hose Clamp
24	1	364-0016-00	12' Flex Wing rear_mid 01_cable	51	2	344-2017-00	1 x 4.5 Draw Pln With Handle
25	2	364-0018-00	12' Flex Wing rear_side_cable	52	2	018-8052-00	1/4-20 X 3/4 HEX CAP SCREW (GR.5) ZINC
26	1	344-2014-00	1in x 3.2in usable Yellow Zinc Clevis Pin	53	12	319-0005-00	1/4 FENDER WASHER (1" OD) ZC
27	2	018-2080-00	1/2-13 X 1-1/4 HEX CAP SCREW (GR.5) ZINC	54	2	350-0052-00	2 x 12 Hydraulic Cylinder 2500 PSI

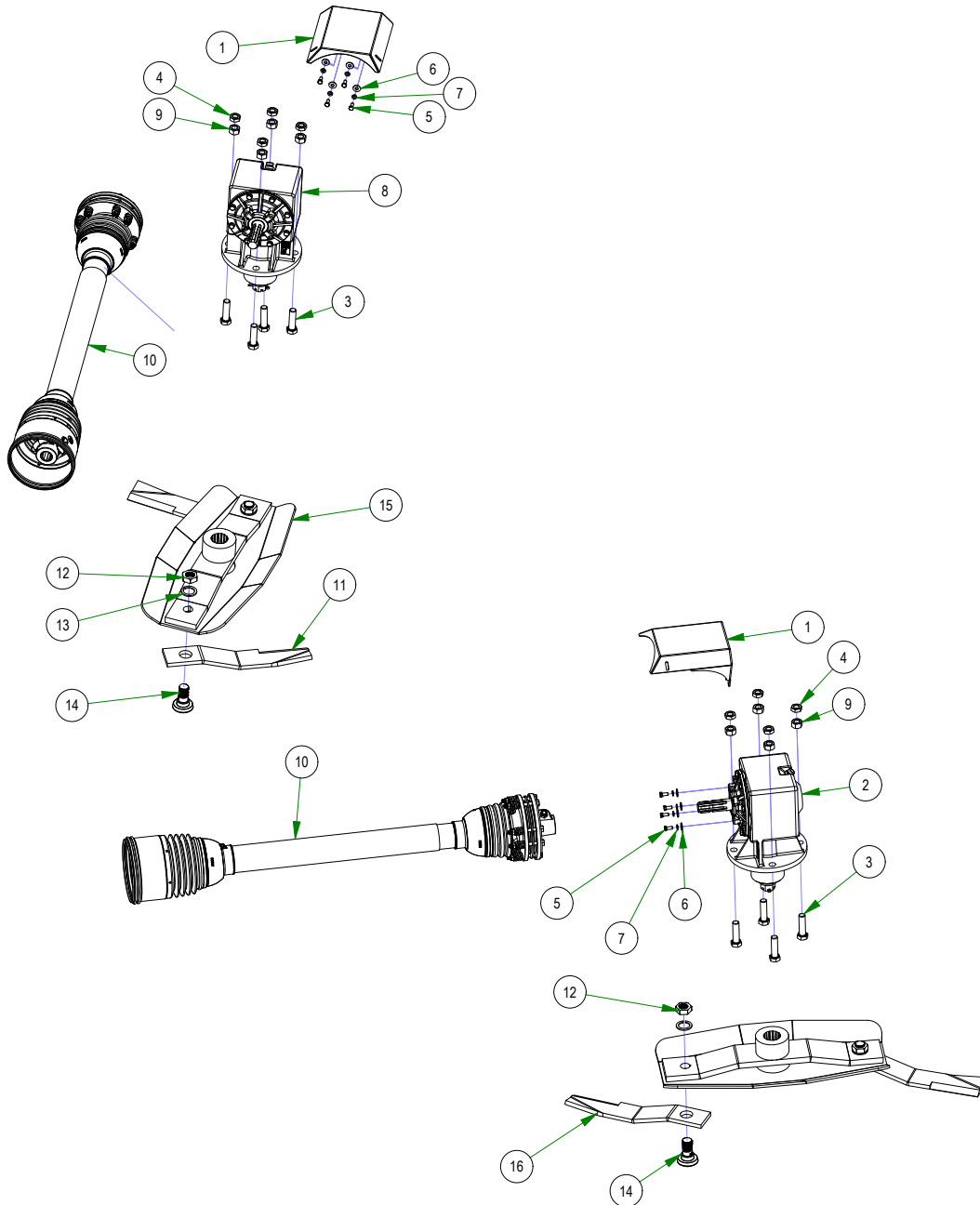
PARTS SECTION: DRIVELINE - CENTER SECTION

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	339-0232-00	FW Center Pulley Cover	14	8	019-8051-00	5/16 SPLIT LOCKWASHER ZINC
2	1	339-0233-00	FW Center Pulley Cover - Front piece	15	4	013-0014-00	3/4-10 HEX 2-WAY REVERSIBLE CENTER LOCKNUT ZINC
3	1	350-0048-00	Omni- RCD-90	16	4	018-8066-00	5/16-18 X 7/8 CARRIAGE BOLT ZINC
4	1	350-0005-00	RC-71	17	4	013-8049-00	5/16-18 NYLON INSERT FLANGE LOCKNUT ZINC
5	1	314-0007-00	10ft PTO Guard	18	4	318-0002-00	5/8X2 Coarse Grade 8 Hex Bolt
6	1	350-0025-00	Series 6 PTO Shaft	21	4	019-7040-00	1/4 USS FLAT WASHER (3/4 OD) ZINC
7	4	318-0021-00	3/4-10 X 2-3/4 Hex C/S (GR.8) ZC/YEL	19	4	018-8052-00	1/4-20 X 3/4 HEX CAP SCREW (GR.5) ZINC
8	4	313-0014-00	3/4 Jam Nut Grade 8	20	4	019-4008-00	1/4 SPLIT LOCKWASHER ZINC
9	4	313-0005-00	5/8-18 HEX 2-WAY REV CNTR L/N (GR.C) ZC/WX	26	1	337-0009-00	7FT infinity Stamp jumper
10	4	313-0016-00	5/8 Jam Nut - Fine	25	2	318-0001-01	Blade Bolt
11	1	350-0047-00	BBFW-Center PTO	23	2	318-0001-03	Blade Bolt Nut
12	8	018-8063-00	5/16-18 X 3/4 HEX CAP SCREW (GR.5) ZINC	24	2	318-0001-02	Blade Bolt Lock Washer
13	8	019-8044-00	5/16 USS FLAT WASHER (7/8 OD) ZINC	22	2	338-0003-00	4 Cutter Blade



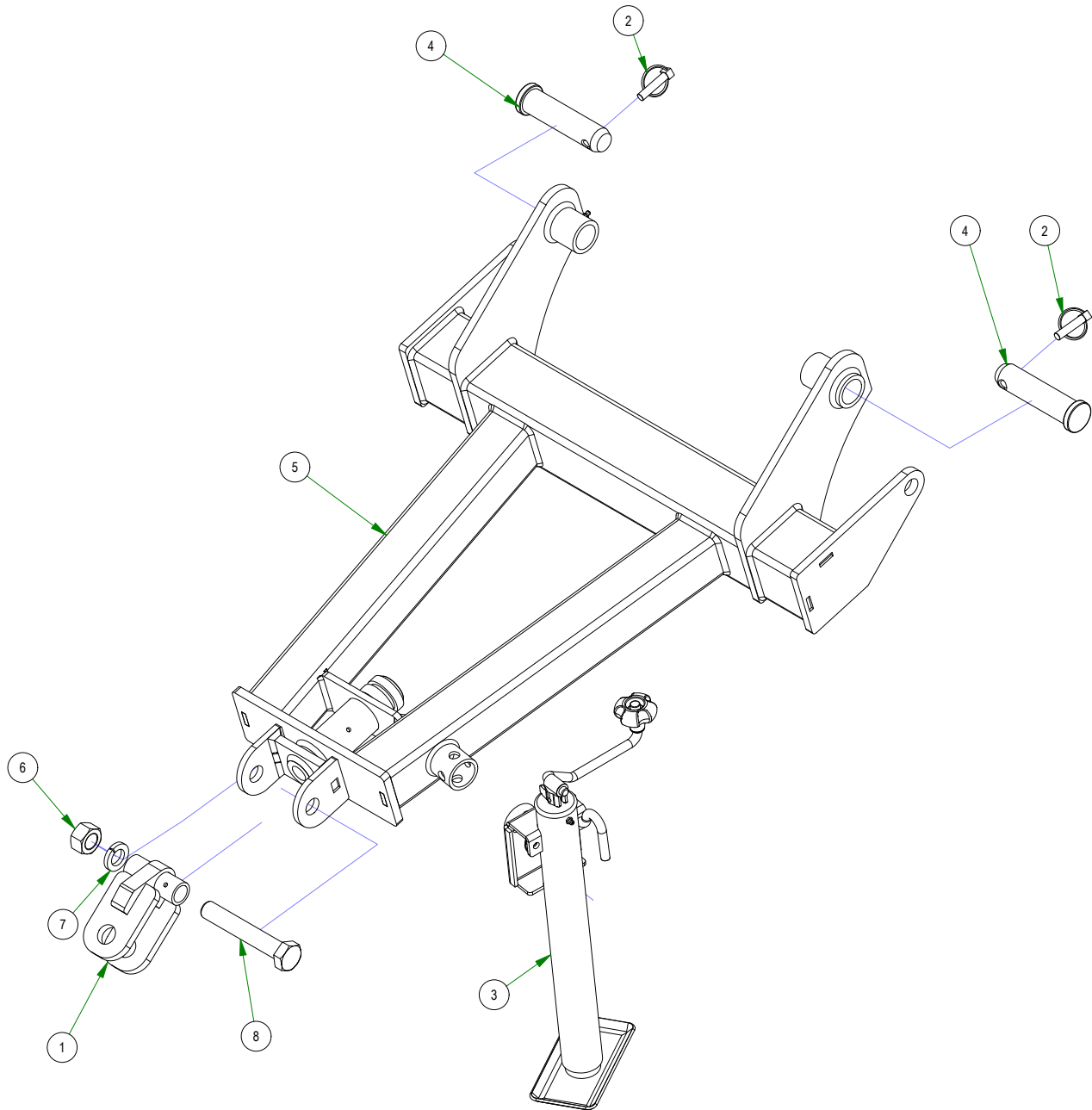
PARTS SECTION: LEFT AND RIGHT SIDES

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	339-0231-00	FW Side Pulley Cover	9	8	013-0014-00	3/4-10 HEX 2-WAY REVERSIBLE CENTER LOCKNUT ZINC
2	1	350-0005-00	RC-71	10	2	350-0050-00	6TR1000CS5S1HS2S1X_Omni Shaft_12ftFW
3	8	318-0021-00	3/4-10 X 2-3/4 Hex C/S (GR.8) ZC/YEL	16	2	338-0027-00	18in x .5in x 3in CW Cutter Blade
4	8	313-0014-00	3/4 Jam Nut Grade 8	15	2	337-0009-00	7FT infinity Stamp jumper
5	8	018-8063-00	5/16-18 X 3/4 HEX CAP SCREW (GR.5) ZINC	14	4	318-0001-01	Blade Bolt
6	8	019-8044-00	5/16 USS FLAT WASHER (7/8 OD) ZINC	12	4	318-0001-03	Blade Bolt Nut
7	8	019-8051-00	5/16 SPLIT LOCKWASHER ZINC	13	4	318-0001-02	Blade Bolt Lock Washer
8	1	350-0049-00	Omni RC-71R	11	2	338-0003-00	4 Cutter Blade



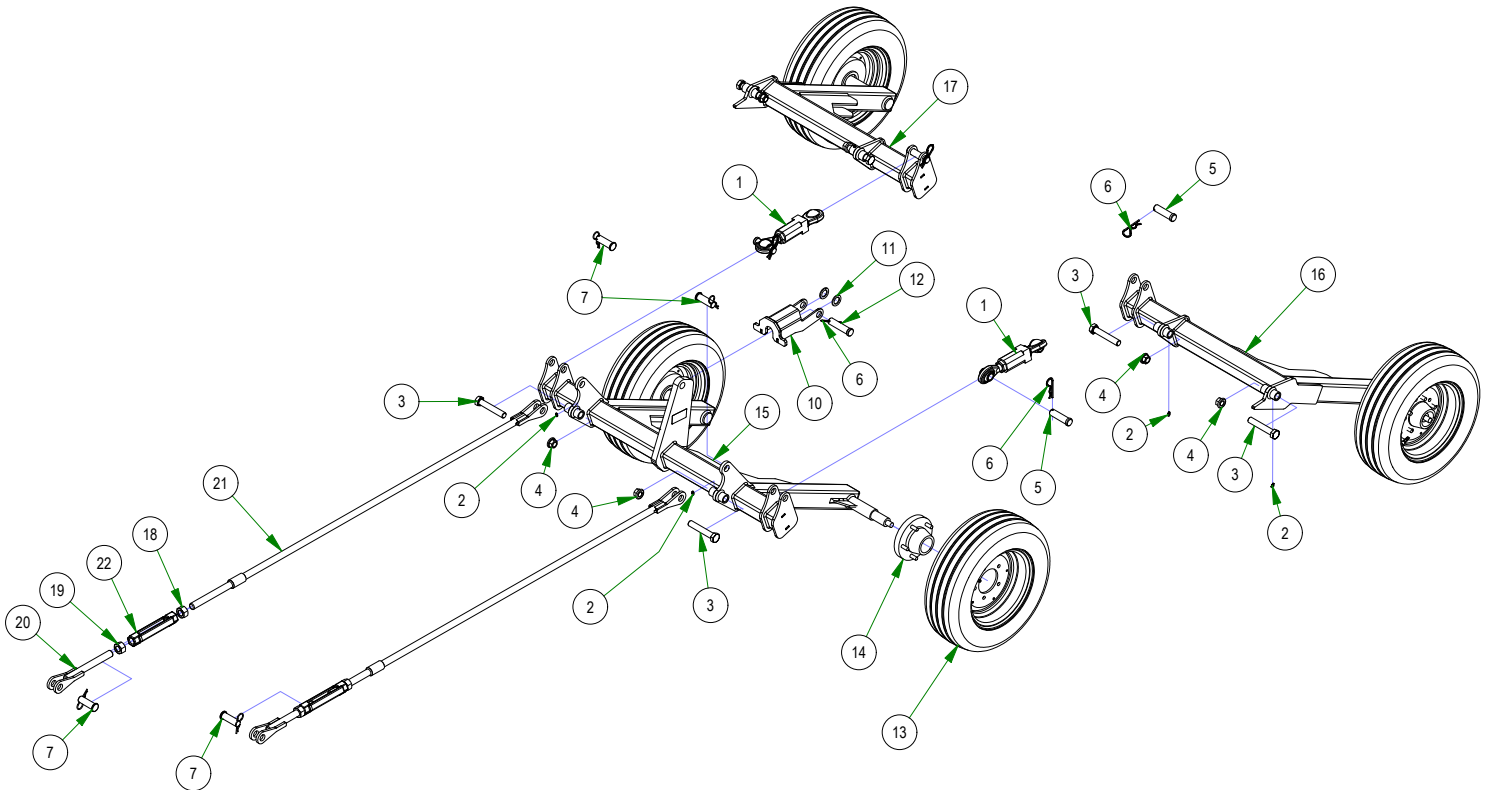
PARTS SECTION: TONGUE HITCH ASSEMBLY

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	339-0093-00	10ft Rotary Cutter Yoke Weldment	5	1	370-1003-00	Tounge Frame
2	2	340-0014-00	7/16"x2x Lynch pin	6	1	313-0022-00	1"-14 Grade 8 hex nut
3	1	338-0017-00	Swivel Jack Assembly	7	1	319-0009-00	1" SPLIT LOCKWASHER ZINC
4	2	344-2015-00	1.5in x 6in Cat 3 Draw Pin	8	1	318-0052-00	1-14 X 6 BOLT GR 8 ZC YELLOW



PARTS SECTION: TAILWHEELS AND LEVELING

Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	350-0046-00	Turnbuckle Assy AMC2	12	1	344-2018-00	1" x 4" Zinc-Plated Clevis Pin
2	6	024-3050-00	1/4 DRIVE-TYPE STRAIGHT GREASE FITTING (NO BALL) ZINC YELLOW	13	4	322-0025-00	ASM, WHEEL & TIRE 21 X 7.00
3	6	318-0030-00	7/8" X 5" Hex Bolt Gr 8	14	4	322-0010-00	10ft Rotary Cutter 2500lb Capacity Hub
4	6	313-0018-00	7/8" Flange Top Lock Nut	15	1	350-4025-00	Flex Wing center tailwheel weldment
5	4	344-2014-00	1in x 3.2in usable Yellow Zinc Clevis Pin	16	1	350-4031-00	Flex Wing left side tailwheel weldment
6	5	020-1001-00	Revolv Cotter Pin for 7/8" to 1" shank	17	1	350-4029-00	Flex Wing RIGHT side tailwheel weldment
7	4	344-2013-00	Cylinder Pin	18	2	313-0021-00	1"-8 Hex Nut RH GR5
8	1	391-0032-00	Grapple Pinch Point	19	2	313-0020-00	1"-8 Hex Nut LH GR5
9	1	319-0005-00	1/4 FENDER WASHER (1" OD) ZC	20	2	350-4018-01	10ft Rotary Cutter 12" leveling rod weldment
10	1	303-1042-00	BBFW_Rear Travel Lock	21	2	350-4033-00	BW12- 91in rod weldment
11	2	019-6029-00	1.140 ID X 1.750 OD X .132 THICK FLAT WASHER PLAIN	22	2	344-2012-00	10ft Rotary Cutter turnbuckle_body



PARTS SECTION: DECALS



391-0026-00
Warning Ship w/out Oil



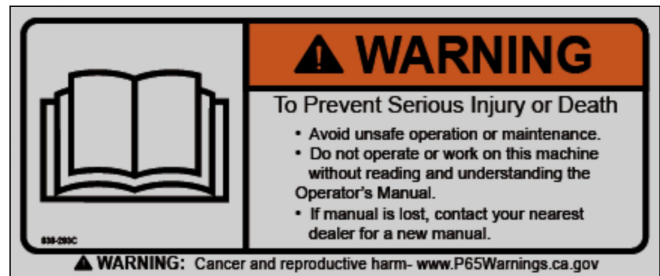
391-0031-00
Grapple High Pressure



391-0039-00
Disc Harrow Sharp Object



391-0032-00
Grapple Pinch Point



391-0037-00
Pallet Fork Manual



391-0042-00
EPA Build Date Punch Label



391-0043-00
Rotary Rotating

PARTS SECTION: DECALS



391-0041-00
 Rotary Warning



391-0030-00
 5 YR Gearbox Warranty



391-0040-00
 Made in the USA



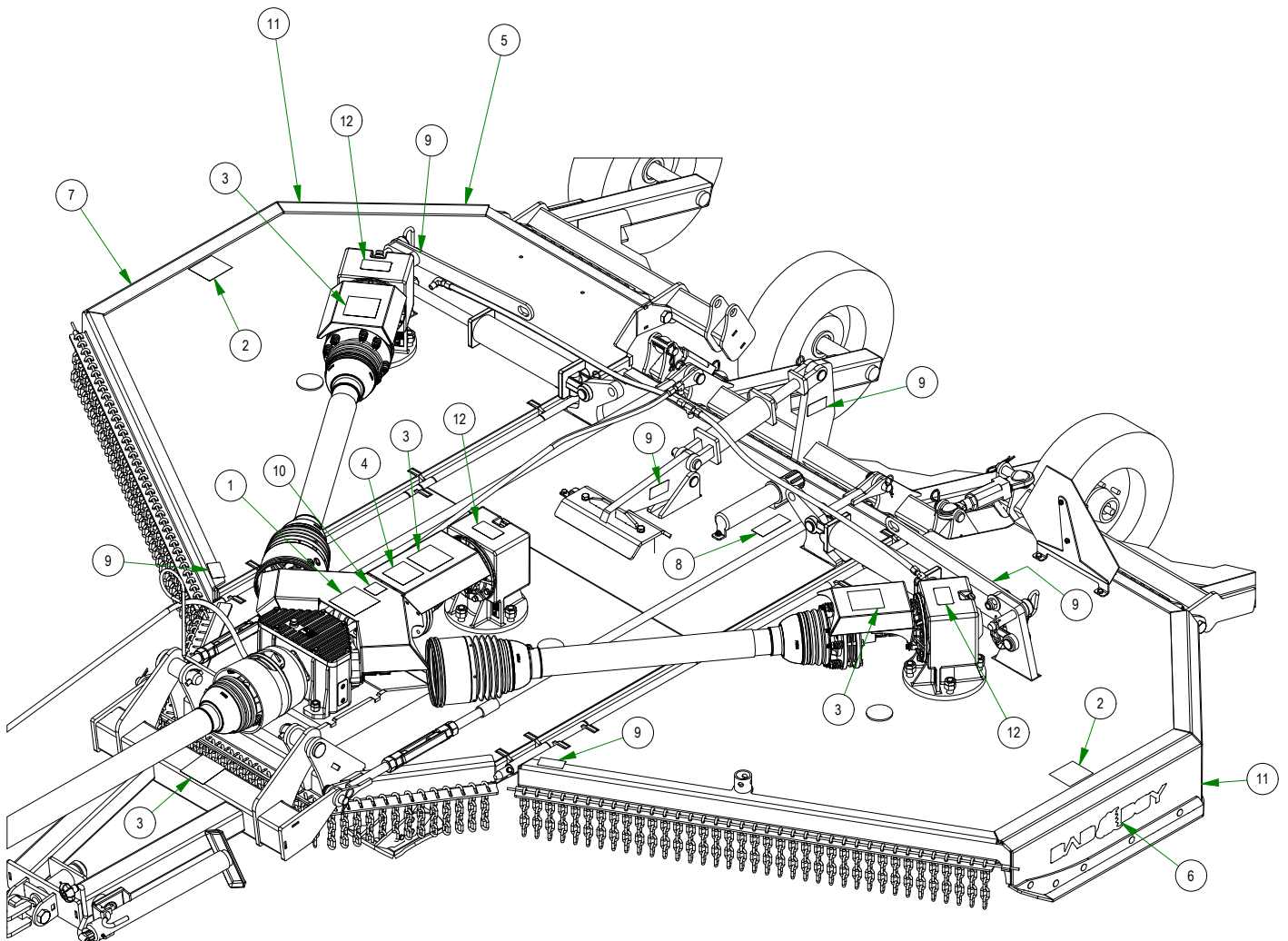
391-0055-00
 Bad Boy With Flying Bulldog Right 18.65"



391-0056-00
 Bad Boy With Flying Bulldog Left 18.65"

PARTS SECTION: DECAL LOCATION







Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	391-0041-00	Rotary Warning
2	2	391-0042-00	EPA Build Date Punch Label
3	4	391-0043-00	Rotary Rotating
4	1	391-0030-00	5 YR Gearbox Warranty
5	1	391-0040-00	Made in the USA
6	1	391-0056-00	Bad Boy With Flying Bulldog Left 18.65"
7	1	391-0055-00	Bad Boy With Flying Bulldog Right 18.65"
8	1	391-0037-00	Pallet Fork Manual
9	6	391-0032-00	Grapple Pinch Point
10	1	391-0031-00	Grapple High Pressure
11	2	391-0039-00	Disc Harrow Sharp Object
12	3	391-0026-00	Warning Ship w/out Oil



FASTENER TORQUE CHART

NOTICE: Torque values given in the above text assume an un-lubricated fastener. If using a lubricated fastener, reduce the torque (given in the previous text) by 25%.

Torque Values Chart for Common Bolt Sizes

Bolt Size (Inches) in-tpi ¹	Bolt Head Identification						Bolt Size (Metric) mm x pitch ⁴	Bolt Head Identification					
													
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							


¹ in-tpi = nominal thread dia .in inches-threads per inch

² N · m = newton-meters

³ ft-lb= foot pounds

⁴ mm x pitch = nominal thread dia. in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

BAD  BOY
— IMPLEMENTS —

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