

SKID-STEER / COMPACT TRACK LOADER  
**FORESTRY DISC MULCHER**

# OPERATOR'S MANUAL



[DIAMONDMOWERS.COM](http://DIAMONDMOWERS.COM)



## PRODUCT INFORMATION

Record the model and serial number of your unit here. When calling for warranty, service or parts, you may be asked to provide this information, in order to ensure fast, accurate service.

**MODEL:** 60"<sup>(1524mm)</sup> Forestry Disc Mulcher

**SERIAL NUMBER:** \_\_\_\_\_

Any failure to read, understand and follow the instructions found in this operator's manual could lead to serious injury. Operators who choose to operate this equipment without following instructions, or who choose to operate this equipment in a manner inconsistent with the recommendations set forth in this manual, do so at their own risk and assume the risk of injury. Diamond Mowers will not be liable for an owner or operator's loss, damage, or injury due to the misuse of the equipment, failure to understand the inherent risks, or inability to properly operate the equipment.

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Patents: D742421 : D731559  
Provisional Patents: 62/484,360 : 62/484,370

# — **WELCOME!** —

Thank you for choosing Diamond Mowers, and welcome to your Skid-Steer / Compact Track Loader Forestry Disc Mulcher. Before you begin operating, we encourage you to look through this manual to review the proper maintenance and operating techniques that will keep you, and your equipment, safe – while ensuring you the most productive Forestry Mulcher in the market.

We have nothing but respect and admiration for you. Our job at Diamond is to provide you with the toughest, most reliable and safest equipment that will allow you to do your job better. That also means being there when you need us.

## **CONTACT US:**

**Parts:** 888.960.0361 | [parts@diamondmowers.com](mailto:parts@diamondmowers.com)

**Warranty / Service:** 888.960.0364 | [warranty@diamondmowers.com](mailto:warranty@diamondmowers.com)

**Main Office:** 800.658.5561 | 605.977.3300

**Website:** [www.diamondmowers.com](http://www.diamondmowers.com) | **Email:** [info@diamondmowers.com](mailto:info@diamondmowers.com)

## **Your time is important to us.**

We guarantee that Genuine Diamond Parts will ship within 72-hours of the order being placed or the parts and shipping are free.

## **Your satisfaction is guaranteed.**

If you are not completely satisfied with your new Diamond in the first 30-days, we will buy it back. No questions asked.

## **Thanks again for choosing Diamond.**

If at any time your needs are not being met by our team, please feel free to call me direct.

A handwritten signature in black ink, appearing to read 'Tim Kubista', with a stylized flourish at the end.

Tim Kubista  
VP Sales & Marketing  
651.955.6665

# PRODUCT REGISTRATION

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## OWNER REGISTRATION

In your welcome packet you should have received a warranty registration form. Complete and return this form to our main office. It's a self-mailer, so no postage is required.

If you'd rather complete this info online, go to:

<http://info.diamondmowers.com/register-my-product>

Returning your registration information to Diamond will help us process any warranty claims quickly and efficiently – so you can get back to work, fast.

## TRANSFERRED OWNERSHIP

If you have acquired this Forestry Disc Mulcher from a previous owner, we encourage you to register your equipment online. By registering your Diamond Mowers unit, you'll stay informed on product advancements, offers and service alerts.

Register by going to: <http://info.diamondmowers.com/register-my-product>

We honor our equipment's warranty from the date it was put into service, no matter who's in charge of running it.

For any questions, contact our Warranty / Service team at:

888.960.0364 or 605.977.3300

[warranty@diamondmowers.com](mailto:warranty@diamondmowers.com)





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# INTENDED USE

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**This attachment is designed to be used on a high flow 32-45 GPM (122-171 LPM) machine for mowing and brush management applications.**

This includes:

- Cutting grass.
- Mulching brush.
- Cutting small trees up to 14" (356mm) to ground level.

This attachment should only be used in an area free of obstructions and bystanders. Any use on non-vegetative material, or in an area that is not clear of persons and property, is strictly prohibited. Any use outside of the aforementioned application is considered contrary to its intended use. Any damage that may occur as a result of misuse will void warranty as stated in Diamond Mowers' warranty policy.

## NOTICE

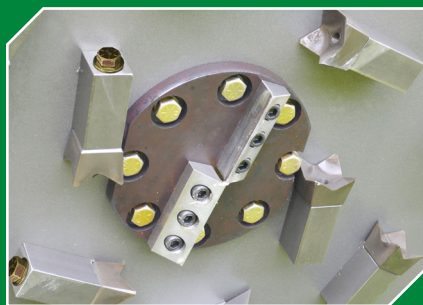
**Do not operate this unit without first reading the safety precautions and operating instructions in this manual.**

# TAKE A LOOK AROUND



## TEETH

Hardened steel teeth are used like an axe to slice into material, providing the most efficient cut.



## PLANER KNIVES

Located in the center of the disc, planer knives eliminate any dead zone in the cutting area.



## DISC

Acting like a flywheel, the disc stores centrifugal energy to cut and mulch, rather than using hydraulic power alone.



## DEFLECTOR SHIELD

Fully adjustable, the deflector shield can be opened to distribute debris quickly, or closed for more control in distributing the debris.



## PUSH BAR

The push bar helps to guide material away from the loader.



## HOSES

Shipped with quick couplers and a case drain line with both male and female ends.

## TAKE A LOOK AROUND



### INTAKE CHUTES

Your forestry head comes standard with two intake chute options. Pick which one is best for your terrain:



### NARROW CHUTE

Designed for single stem, taller trees without many lower branches.



### WIDE CHUTE

Designed with an open throat to feed larger, bushier trees efficiently.

### NOTICE

Your Forestry Disc Mulcher comes with both intake chutes installed. You **MUST** remove one of the two chutes before operating. Running your machine with both intake chutes attached will cause damage to the Forestry Disc Mulcher.

# GETTING STARTED



## MACHINE FLOW

Diamond's Forestry Disc Mulcher must be used on a high flow machine capable of 32-45 GPM (122-171 LPM) and have a case drain.

## SHATTER RESISTANT ENCLOSURE

A shatter resistant enclosure is **REQUIRED!** This product must not be used without a shatter resistant cab enclosure. Debris can fly back at the cab and cause injury.



## QUICK ATTACH

The Forestry Disc Mulcher will mount onto the front of the skid-steer / compact track loader quick attach plate in place of a bucket or other implements.



## QD COUPLERS

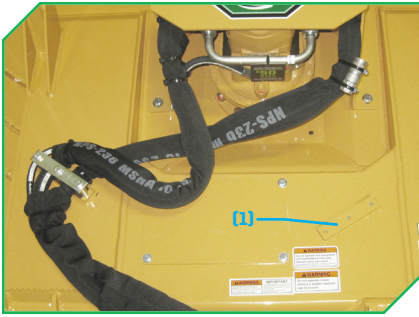
The case drain line must be properly connected or you will damage your hydraulic motor. The case drain line will come equipped with both male and female QD couplers.

- Install the QD coupler(s) that matches the machine.
- Attachment is shipped with 1/2" flat face connectors, which are a common size for most skid-steer / compact track loaders.
- Clean connections before attaching to prevent contamination.

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# GETTING STARTED

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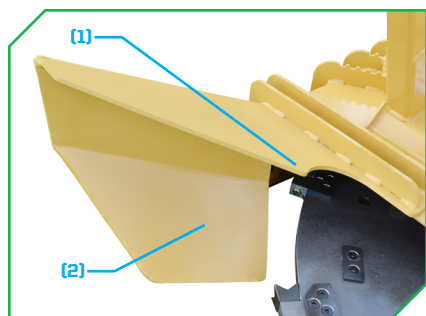


- Make sure the hose length outside of the bracket is long enough for the head to make a full range of motion, but not so long that the hose can pinch.
  - An additional hose bracket location [u](#) is provided. To move your hoses, unbolt the hoses and hose bracket from the current position and secure them to the alternate position.
- Start machine at low idle and verify that the disc is spinning in a clockwise direction as viewed from the operator's position.
  - If the pressure and return hoses are reversed, the disc will spin counter-clockwise resulting in damage.
- If this reversal occurs, either inverse the flow from your machine, or switch the QD couplers on the pressure and return hoses.



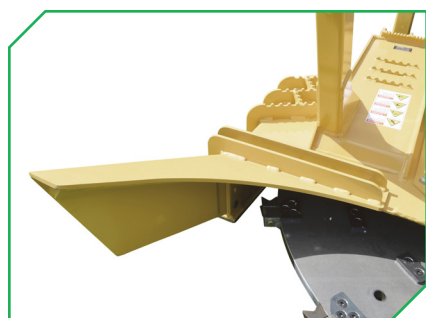
### PICK YOUR INTAKE CHUTE

Your forestry mulcher comes with both intake chutes installed. You **MUST REMOVE** one of the two chutes before operating.



**Narrow**

- **Narrow Intake Chute** - Designed for taller trees without many lower branches. This chute includes a hook (1) to help feed trees, and a ramp (2) to scoop material already on the ground into the head.



**Wide**

- **Wide Intake Chute** - Designed with a larger opening to feed larger, bushier trees more efficiently.

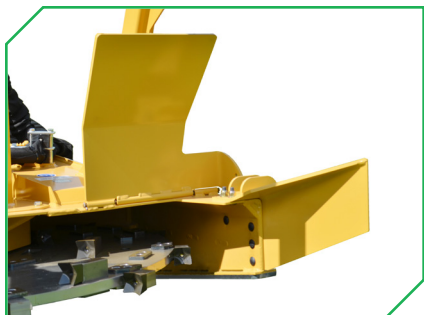
### NOTICE

Running your machine with **BOTH** intake chutes attached will cause damage to the Forestry Disc Mulcher!

# GETTING STARTED

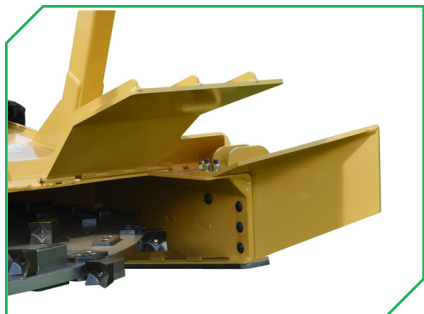
## ADJUST YOUR DEFLECTOR SHIELD

This adjustable shield helps control the direction of processed material.



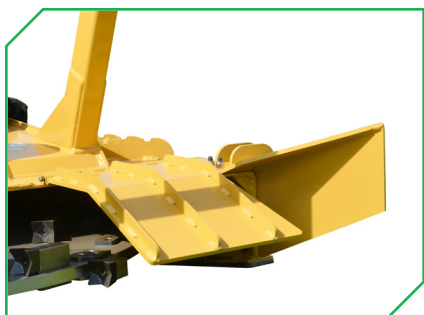
**Open**

- **Open** - Allows material to be dispersed quickly and efficiently, but provides less control over material output. This position may restrict visibility while in position.
  - **Removed** - Deflector shield may be removed to allow material to be dispersed quickly and efficiently, while maintaining full visibility.



**Middle**

- **Middle** - Allows material to be dispersed evenly, while providing some control on material output.



**Closed**

- **Closed** - Allows material to be dispersed into piles, while directing output to the ground. This position is less efficient than the open position.

## NOTICE

Do not use the deflector shield for pushing or moving material.  
Pushing material with the deflector shield will damage the shield.



# OPERATING YOUR FORESTRY MULCHER

Before you operate, note that the primary responsibility for safety on this equipment falls to the operator. Only trained individuals who have read and understood this manual should operate this unit.

If any portion of this manual is not understood, contact:  
Diamond Mowers' Service/Warranty at 888.960.0364 or 605.977.3300.

## SAFETY TIPS

Be sure to read all warnings carefully. They are included for your safety, and for the safety of others working with you.

### NOTICE

Indicates a property damage hazard *ONLY*, no *PERSONAL* injury.

### CAUTION

Indicates where *MINOR* injury *COULD* result if instructions are not followed.

### WARNING

Indicates where *SERIOUS* injury or death *COULD* result if instructions are not followed.

### DANGER

Indicates where *SERIOUS* injury or death *WILL* result if instructions are not followed.

- Always wear personal protective equipment (safety glasses, goggles, etc.), when operating.
- **DO NOT** operate this unit without a shatter resistant cab enclosure installed on your skid-steer / compact track loader; this unit will cause flying debris.
- Block off work area from bystanders, livestock, etc.
- Bystanders must keep a distance of 300ft/100m from the unit when operating.
- Forestry teeth are always sharp and can cause injury, even when not in motion.

CONTINUED ON NEXT PAGE

# OPERATING YOUR FORESTRY MULCHER

- **DO NOT** use extremities to dislodge debris from teeth or disc.
- Operate only from the operator's station.
- Hydraulic fluid is hot and will heat any exposed steel, hoses, motor, or spindle in its proximity.
- Route hoses correctly to ensure a full range of motion.
- Make certain hoses are out of the way of tires, tracks or the ground.
- Be certain the disc has come to a complete stop before exiting the cab.



## STOWED POSITION

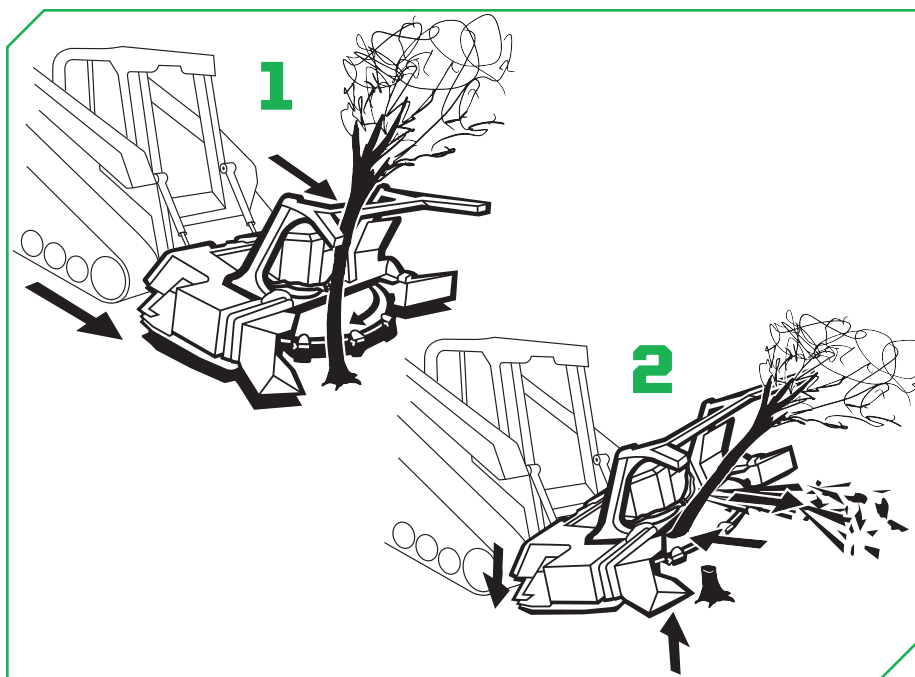
When transporting Diamond's Forestry Disc Mulcher between operations, make sure to protect it from collisions and accidental damages by placing it in the stowed position.

Failure to place the head in its stowed position could result in structural damage.

## DANGER

Contact with the disc, knives, and teeth while the disc is in motion will cause serious injury or death. The disc spins at a very high speed and can take several minutes to stop. Be sure all personnel are clear of the machine before engaging the Forestry Disc Mulcher.

## CUT AND FEED - TREES 2"-6" (51mm-152mm)

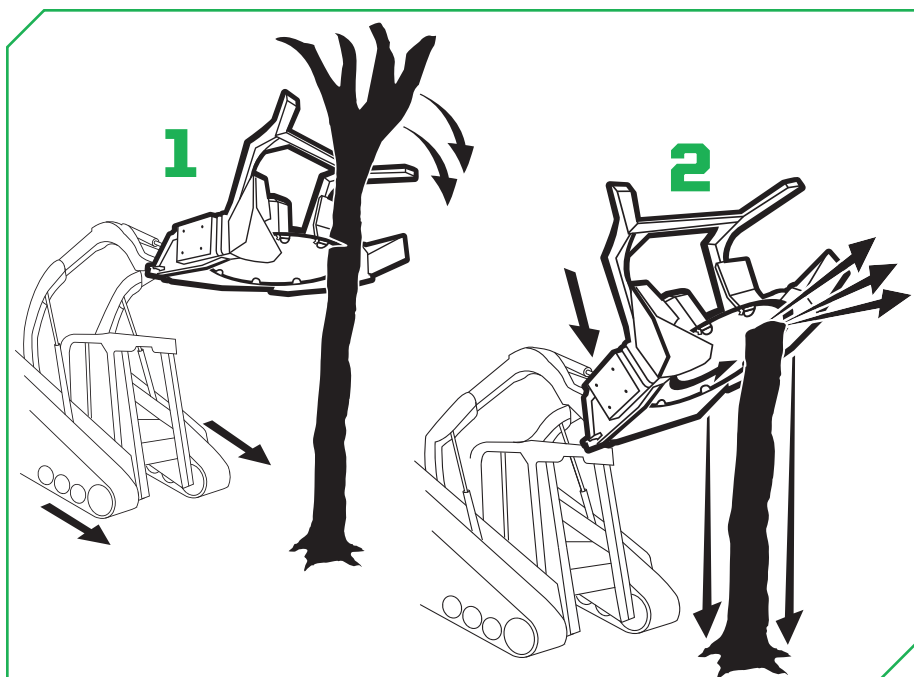


### Use to cut and mulch trees.

- 1** Cut with the right hand side of the disc so that the disc will feed material into the head.
  - **NOTE:** You will risk plugging the head if you use this technique on material larger than 6" (152mm) thick. If plugged, use a chain to dislodge material once the disc has stopped spinning.
- 2** Cut the tree at the bottom and scoop up the tree (like scooping a load of dirt into a bucket) while allowing the tree to fall into the narrow chute hook located at the top.
  - This hook feature will hold the tree in the right position for processing.
- The tree must be at the same angle as the disc in order to pull the tree in for mulching.

# OPERATING YOUR FORESTRY MULCHER

## VERTICAL MULCH - TREES 2"-10" (51mm-254mm)



**Use to mulch trees from the top down.**

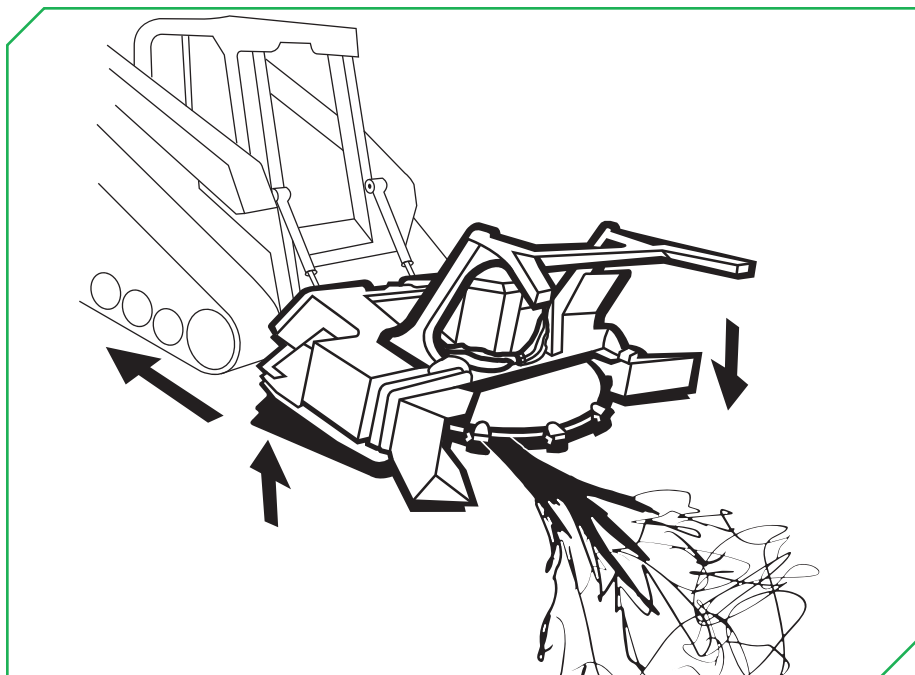
- 1 To top the tree** - Reach as high as possible. Use the left side of the disc to cut the top of the tree and push it away from the cutter head to mulch it later.
  - Make certain to allow enough recovery time for the disc to rebuild momentum.
- 2 Mulch the tree** - Angle the head back 45° and drop it as fast as possible keeping the tree on the left side of the disc throwing material away from the machine.

### **WARNING**

Be aware when cutting standing trees as there is a potential for treetops to fall onto the operator's cab.

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## GROUND PULL

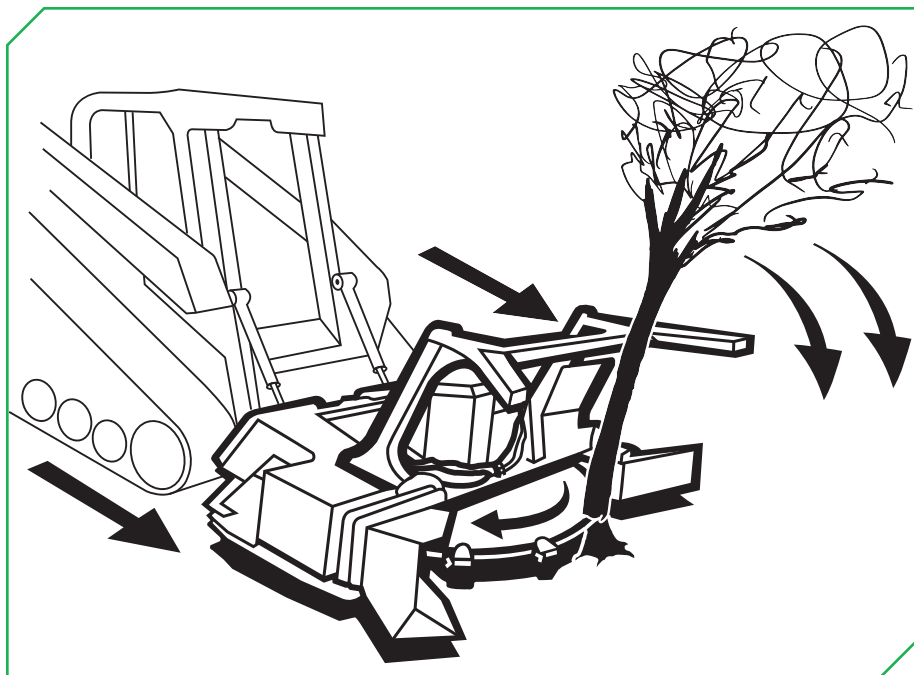


**Use to pull in and mulch debris laying on the ground.**

- Use the right side and bottom of the disc by lifting the front of the head slightly to suck branches or tree tops underneath the disc for mulching.
- Use the bottom of the disc to re-process material on the ground for a finer finish.

# OPERATING YOUR FORESTRY MULCHER

## CUT WITHOUT MULCH



### Use to cut tree without mulching.

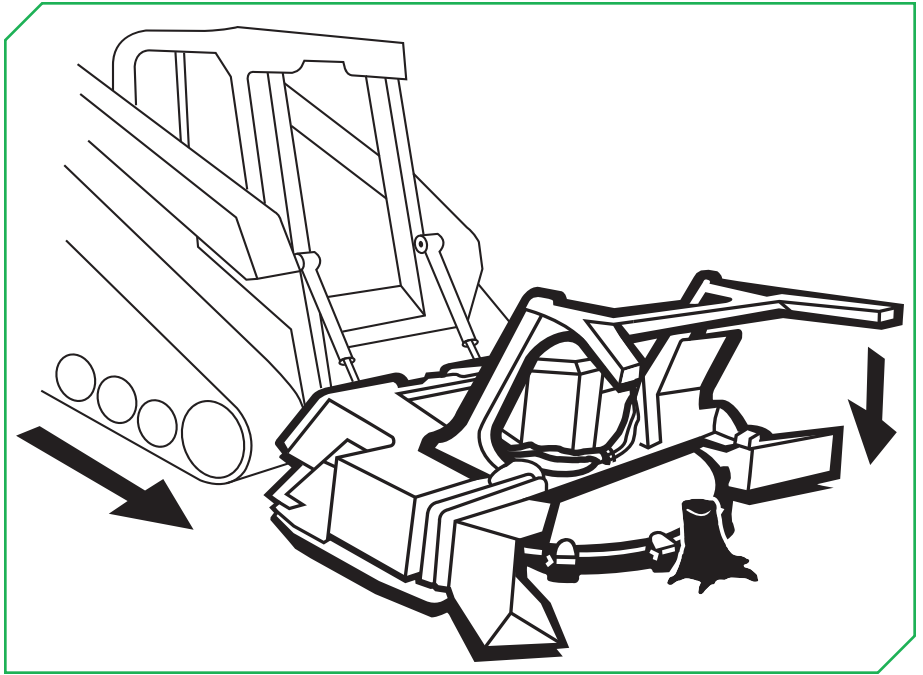
- Set your disc level and use the left hand side to cut and push the tree away from the machine.
  - This will act like a saw to cut the tree without mulching.
- For very large trees, notch it, similar to using a chainsaw, and then come to the other side to cut and drop the tree.
- Use your push bar to help direct the tree away from the machine.

### WARNING

Be aware when cutting standing trees as there is a potential for tree tops to fall onto the operator's cab.

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## STUMP CUT

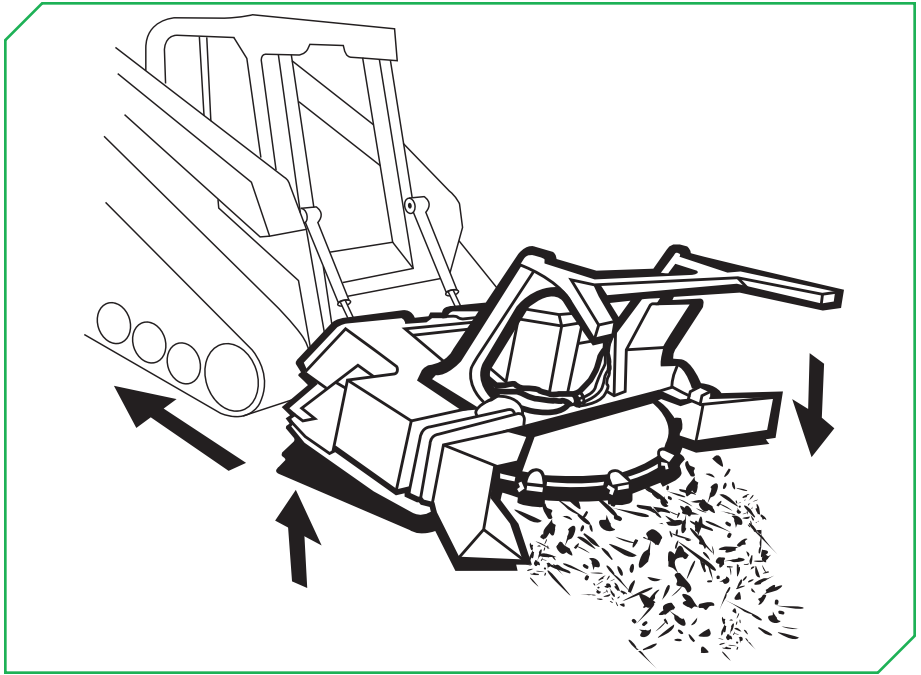


**Use to cut stumps at, or below ground level.**

- With the deck level, cut the stump low to the ground.
- Rebuild speed before proceeding with a stump cut.
- Lift up and point the nose down to the ground to allow the head to use the bottom teeth for mulching.
  - **NOTE:** The more you use the stump cut application, the more wear your teeth will incur.

# OPERATING YOUR FORESTRY MULCHER

## CLEANING & RE-PROCESSING



**Use to clean up branches and large debris. Re-processing the debris will provide a groomed finish.**

- Raise lift arms about 6" (152mm) and drop the front of the head for the leading edge to skim the ground.
- Back over the remaining debris for a more finished look.

For more tips, visit us online at [www.DiamondMowers.com](http://www.DiamondMowers.com)



# MAINTENANCE

Regular maintenance will make certain your unit stays productive and retains a long operating life. The following chart represents the minimum intervals recommended for inspection and maintenance.

## MAINTENANCE INTERVALS

PROCEDURE	10 HOURS/ DAILY	50 HOURS/ WEEKLY	500 HOURS/ ANNUALLY	AS NEEDED
DEFLECTOR SHIELD	Inspect			
DISC	Inspect			
EJECTION CHUTE	Inspect			
HYDRAULIC HOSE & FITTINGS	Inspect			
INTAKE CHUTE (NARROW/WIDE)	Inspect			
MOTOR BOLTS	Inspect			
MOTOR SHIELD		Inspect		
PLANER KNIVES	Inspect			Replace
PUSH BAR				Inspect
QD COUPLERS				Inspect
SHATTER RESISTANT ENCLOSURE	Inspect			Clean
SKID SHOES		Inspect		Replace
SPINDLE	Inspect		Change Oil	
SPINDLE BOLTS	Inspect			
TEETH	Inspect			Replace
TOOTH HOLDERS	Inspect			Replace

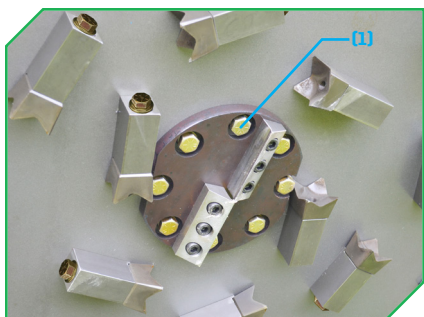
*When replacing parts, use Genuine Diamond Parts. Guaranteed to ship within 72-hours of your order being placed, or the parts and shipping are free.*  
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**Order online:** [www.diamondmowers.com](http://www.diamondmowers.com)

# MAINTENANCE



## DEFLECTOR SHIELD

- Deflector shield should be inspected every 10 hours or daily.
- Replace as necessary.



## DISC

- Disc should be inspected every 10 hours or daily.
- Raise and secure the deck to inspect the disc for any cracks or other damage.
- Disc should be replaced if damage is found.

### If disc bolts are loose:

- Remove the bolts.  
Apply Loctite 262 (red) to the threads.
- Replace the bolts and torque to 212ft-lbs (287Nm).



## EJECTION CHUTE

- Ejection chute bolts and nuts should be inspected every 10 hours or daily.
- Torque hardware to 110ft-lbs (149Nm).
- Replace as necessary.



## HYDRAULIC HOSES & FITTINGS

- Hydraulic hoses and fittings should be inspected every 10 hours or daily.

### What to look for:

- Hydraulic fitting clamps and threaded connections for any hydraulic fluid.
  - If any leaks are observed, stop immediately to prevent damage to your machine.
- Hoses for any abrasions or cuts. Replace damaged or worn hoses.
- Attach hose wrap around critical points where hoses are likely pinched or rubbed.

## ⚠ CAUTION

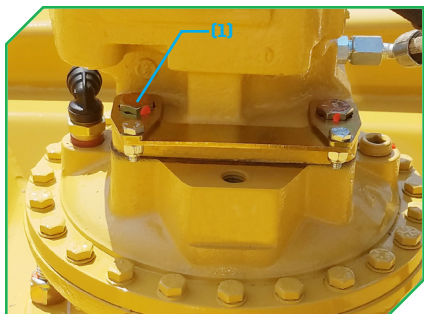
**DO NOT check for hydraulic leaks with your hands or any part of your body. Use a heavy piece of paper or cardboard to check areas that are not readily visible. Pressurized hydraulic fluid can penetrate the skin and lead to serious health risks.**



## INTAKE CHUTE (NARROW OR WIDE)

- Intake chute bolts and nuts should be inspected every 10 hours or daily.
- Torque hardware to 110ft-lbs (149Nm).
- Replace as necessary.

# MAINTENANCE



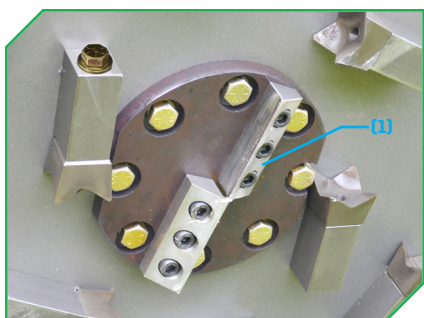
## MOTOR BOLTS

- Motor bolts (1) should be inspected every 10 hours or daily.
- Torque hardware to 110ft-lbs (149Nm).
- Verify locking tabs are in place.
- Assemble locking tabs to the U-shaped tab over the cab bolts with their hardware. Torque hardware to 75in-lbs (8.5Nm).



## MOTOR SHIELD

- Check for damage every 50 hours or weekly.
- Torque hardware to 75ft-lbs (102Nm).



## PLANER KNIVES

- Planer knives (1) should be inspected every 10 hours or daily.
- Inspect the planer knives for any cracks or damage.
- No sharpening required.
- Replace as necessary.

### **If planer bolts are loose:**

- Remove the bolts.
- Apply Loctite 262 (red) to the threads.
- Replace the bolts and torque to 110ft-lbs (149Nm).



### PUSH BAR

- Check for cracks.
- Repair as necessary.



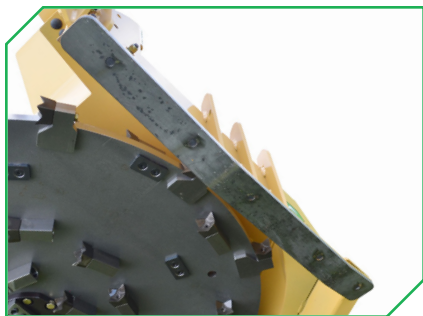
### QD COUPLERS

- Inspect connections for leaks, damage, etc.
- Replace as necessary.



### SHATTER RESISTANT ENCLOSURE

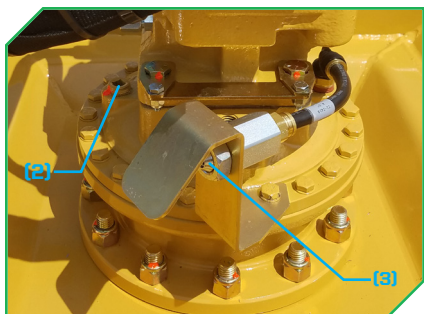
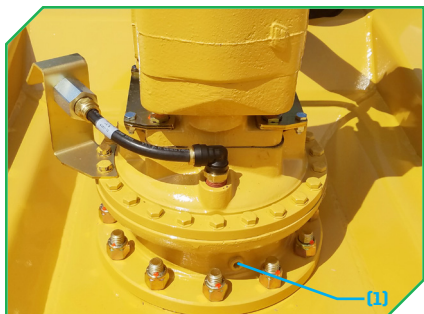
- **REQUIRED!** Debris can be thrown unexpectedly in any direction. Do not attempt to use this unit without proper protection.
- Clean only with mild soap and water using a sponge or soft cloth.
- Inspect every 10 hours or daily. Replace as needed.



### SKID SHOES

- Skid shoes should be inspected every 50 hours or weekly.
- Replace as necessary.

# MAINTENANCE

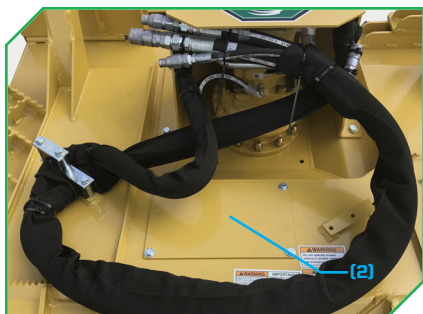
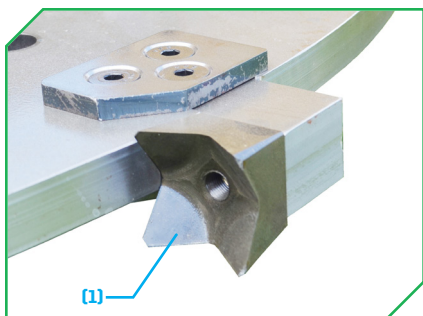


## SPINDLE

- Inspect topside of the cutting disc for oil.
  - If oil is present, the spindle's lower bearing seal may be damaged and will require replacement.
- The disc should rotate smoothly.
  - If excessive play is found, the spindle bearings are likely worn and will require replacement.
- Drain and replace oil annually or every 500 hours with 32oz of 75w90 synthetic gear oil.
  - Remove motor shield, drain plug <sup>(1)</sup> facing forwards, and fill plug <sup>(2)</sup> on opposite side facing operator.
  - Tilt head down/forward over oil catch pan until all oil stops draining, then replace drain plug.
  - Fill spindle with oil, then replace fill plug.
- Keep the pressure relief area <sup>(3)</sup> free of debris every 10 hours or daily.
  - **NOTE:** Oil leaking while operating indicates a motor seal failure.

## SPINDLE BOLTS

- Spindle bolts and nuts <sup>(4)</sup> must be inspected every 10 hours or daily.
- If bolts come loose, remove, apply Loctite 262 (red) to threads and reinstall.
- Torque hardware to 212ft-lbs (287Nm).



## TEETH

- Teeth (1) should be inspected every 10 hours or daily.
  - Inspect the teeth located on the disc for any cracks or damage.
  - Sharpen, rotate, or replace as necessary.
- Teeth are also located on the top of the disc and inside of the deck. These teeth can be reached via the access panel (2) located on the top, rear of the deck.
- **NOTE:** Reference the chart on the next page for tooth maintenance specifications.

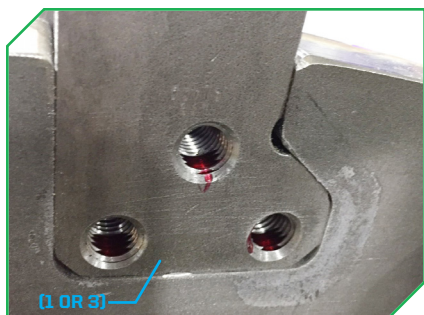
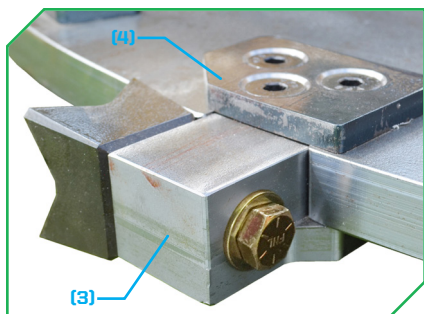
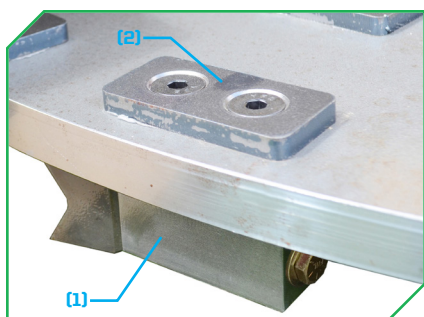
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# MAINTENANCE

## TEETH MAINTENANCE

LOOSE TEETH BOLTS	SHARPENING TEETH	ROTATING TEETH	REPLACING TEETH
<p>Use a torque wrench set to torque to 120ft-lbs (163Nm).</p> <p><b>DO NOT</b> over-torque as you could strip the threads and allow it to become loose.</p>	<p>Lightly sharpen the inside leading edge of the tooth with a 4" (102mm) angle grinder, equipped with a flap style-sanding disc.</p> <p><b>DO NOT</b> use a hard grinding disc. A hard grinding disc will rapidly wear away the hardened outer surface of the tooth.</p> <p>If the tooth will no longer take an edge, you will need to replace it - along with the corresponding tooth located on the opposite position of the disc to maintain balance.</p>	<p>The majority of cutting will be done with the teeth's two outside leading points. When these points are worn down to roughly 60% from sharpening or wear, they can be rotated 180° in their tooth holder to expose the fresh points.</p>	<p>Remove the bolts and flat washers.</p> <p>Replace the tooth.</p> <p>Using new hardware, hand-thread the bolts/washers or use an impact wrench set on low.</p> <p><b>DO NOT</b> use Loctite. Use a torque wrench set to torque to 120ft-lbs (163Nm).</p> <p><b>DO NOT</b> over-torque as your could strip the threads and allow it to become loose.</p> <p>Make certain to replace the corresponding tooth located in the opposite position of the disc to maintain balance.</p>





## TOOTH HOLDERS

- Tooth holders should be inspected every 10 hours or daily.
- Replacing/removing a tooth holder:
  - Apply localized heat to one side of the inner tooth holder (1) where it contacts the disc, or to the non-bolt side of the outer tooth holder (3) for 1-2 minutes with a hand torch.
  - With the assembly still hot, use a breaker-bar to free the bolts (5). Remove them with an impact wrench and discard.
  - Remove the retaining plate (2)(4) and discard.
- Replacing a tooth holder:
  - Clean all surfaces where the tooth holder contacts the disc, and all threaded surfaces (bolts, bolt holes) of any debris, oil, etc.
  - Apply Loctite 277 to the tooth holder (1)(2) bolt hole threads, covering 3-4 threads.
  - Apply Loctite 277 to the bolts (5) threads all the way around, covering 3-4 threads.
  - Assemble the tooth holder (1)(3), retaining plate (2)(4), and bolts (5).
    - Torque the bolts (5) to 110ft-lbs (149Nm).
    - **NOTE: Loctite 277 requires a full 24hr cure for full strength.**

## NOTICE

Failure to inspect and replace hardware at recommended intervals will cause damage to the machine and attachment.

# TROUBLESHOOTING

PROBLEM	POTENTIAL CAUSE	SOLUTION
<b>Disc Will Not Spin</b>	No hydraulic flow from skid-steer / compact track loader	Verify hydraulic flow from power unit.
	Failed splined insert	Replace splined insert. <ul style="list-style-type: none"><li>● Remove motor from spindle.</li><li>● Remove the spindle cover.</li><li>● Thread a 3/4-16 by 3" bolt into the insert base, forcing it out of the spindle.</li><li>● Replace spindle insert.</li><li>● Replace spindle cover. Torque spindle cover hardware to 45ft-lbs (61Nm).</li><li>● Replace motor and torque hardware to 110ft-lbs (149Nm).</li><li>● Replace lock tab hardware and torque to 75in-lbs (8.5Nm).</li></ul>
	Reversed flow from skid loader	After connecting the hoses to the machine, start machine at low idle and verify that the disc is spinning clockwise.
	Hydraulic motor shaft failure	Will require replacement. Contact Diamond Parts at 888.960.0361 or 605.977.3300.
	Material jammed	Dislodge material from disc by first disengaging the implement and backing up. This will typically clear the cutting head. If the cutting head does not clear, shut down the implement and rest the head on the ground. Clear the head manually. <ul style="list-style-type: none"><li>● <b>DO NOT</b> use extremities to dislodge debris from teeth or the disc.</li></ul>

CONTINUED ON NEXT PAGE

PROBLEM	POTENTIAL CAUSE	SOLUTION
<b>Large Trees Won't Process</b>	Skid-steer / compact track loader is operating on standard flow vs. high flow	Ensure skid-steer / compact track loader is on high flow. Disc running too slowly; allow sufficient time for disc to obtain full speed.
PROBLEM	POTENTIAL CAUSE	SOLUTION
<b>Excessive Vibration</b>	Disc to spindle hardware is loose	Tighten hardware <ul style="list-style-type: none"> <li>● Torque hardware to 212ft-lbs (287Nm).</li> </ul>
	Vegetation build up on disc	Clean disc to remove debris by first disengaging the implement and backing up. This will typically clear the cutting head. If the cutting head does not clear, shut down the implement and rest the head on the ground. After the disc has come to a complete stop, clear the head manually. <ul style="list-style-type: none"> <li>● <b>DO NOT</b> use extremities to dislodge debris from teeth or disc.</li> </ul>
	Missing cutting tooth	Replace tooth. <ul style="list-style-type: none"> <li>● Remove the bolts and flat washers. <ul style="list-style-type: none"> <li>○ <b>DO NOT</b> use Loctite.</li> </ul> </li> <li>● Replace the bolts/washers by hand-threading the bolts or use an electric impact wrench set on low. <ul style="list-style-type: none"> <li>○ <b>DO NOT</b> use Loctite.</li> </ul> </li> <li>● Torque to 120ft-lbs (163Nm). <ul style="list-style-type: none"> <li>○ <b>DO NOT</b> over-torque as you could strip the threads which could allow it to become loose.</li> </ul> </li> <li>● Make certain to replace the corresponding tooth located in the opposite position of the disc to maintain balance.</li> </ul>

CONTINUED ON NEXT PAGE

# TROUBLESHOOTING

PROBLEM	POTENTIAL CAUSE	SOLUTION
Excessive Vibration	Missing tooth holder	<p>Replace tooth holder.</p> <ul style="list-style-type: none"><li>● Clean all surfaces where the tooth holder contacts the disc, as well as all threaded surfaces (bolts, bolt holes) of any debris, oil, etc.</li><li>● Apply Loctite 277 to the tooth holder bolt hole threads, covering 3-4 threads.</li><li>● Apply Loctite 277 to the bolts threads all the way around, covering 3-4 threads.</li><li>● Assemble the tooth holder, retaining plate, and bolts.<ul style="list-style-type: none"><li>○ Torque the bolts to 110ft-lbs (149Nm).</li><li>○ NOTE: Loctite 277 requires a full 24hr cure for full strength.</li></ul></li></ul>
	Material stuck between teeth	<p>Clear vegetation.</p>
	Excessive play in spindle	<p>The disc should rotate smoothly.</p> <ul style="list-style-type: none"><li>● If excessive play is found, the spindle bearings are likely worn and will require replacement. Contact Diamond Parts at 888.960.0361 or 605.977.3300.</li></ul>

CONTINUED ON NEXT PAGE

PROBLEM	POTENTIAL CAUSE	SOLUTION
<b>Teeth Worn</b>	Need to sharpen teeth	<p>Lightly sharpen the inside leading edge of the tooth with a 4" (102mm) angle grinder, equipped with a flap style-sanding disc.</p> <ul style="list-style-type: none"> <li>● <b>DO NOT</b> use a hard grinding disc, as it will emit too much heat onto the tooth and ruin its hardness.</li> </ul> <p>Try to restore the points. If the tooth will no longer take an edge, you will need to replace it – along with the corresponding tooth located on the opposite position of the disc to maintain balance.</p>
PROBLEM	POTENTIAL CAUSE	SOLUTION
<b>Teeth Worn</b>	Need to rotate teeth	<p>The majority of cutting will be done with the teeth's two outside leading points.</p> <p>When these two points are worn down to roughly 60% from sharpening or wear, they can be rotated 180 degrees in their tooth holder to expose the fresh points.</p>
	Need to replace teeth	<p>Remove the bolts and flat washers.</p> <ul style="list-style-type: none"> <li>● <b>DO NOT</b> use Loctite.</li> </ul> <p>Replace the tooth.</p> <p>Using new hardware, hand-thread the bolts/washers or use an impact wrench set on low.</p> <ul style="list-style-type: none"> <li>● Use a torque wrench set to torque to 120ft-lbs (163Nm).</li> <li>● <b>DO NOT</b> over-torque as you could strip the threads and allow it to become loose.</li> </ul> <p>Make certain to replace the corresponding tooth located in the opposite position of the disc to maintain balance.</p>

For any questions, contact our **Warranty / Service team** at  
**888.960.0364 or 605.977.3300**

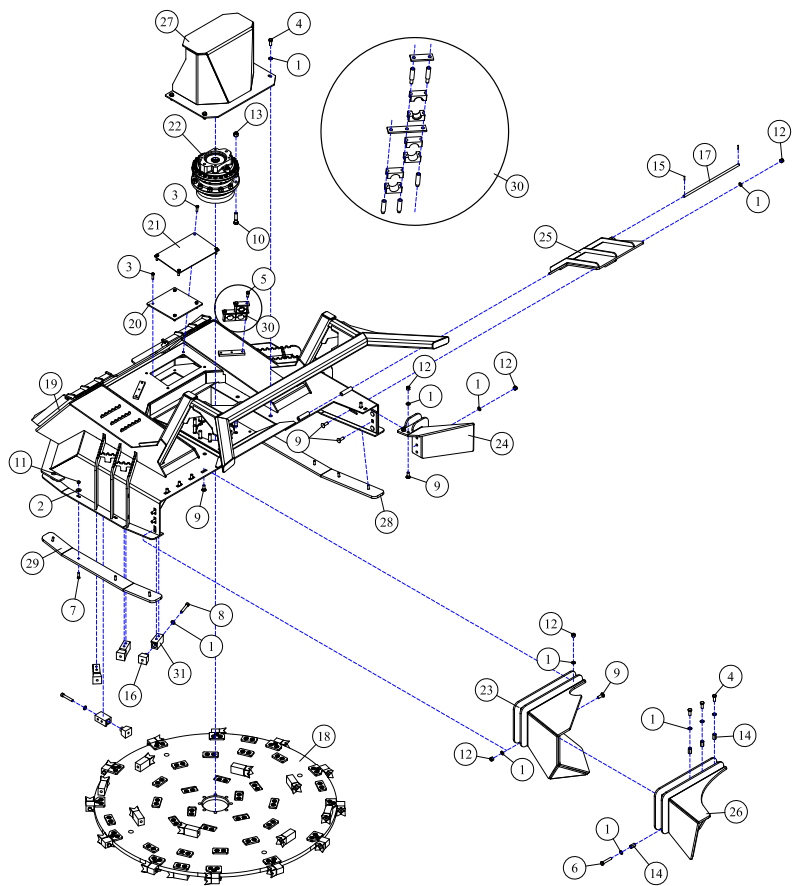
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# PARTS BOOK

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60”(1524MM) DECK

25-1666

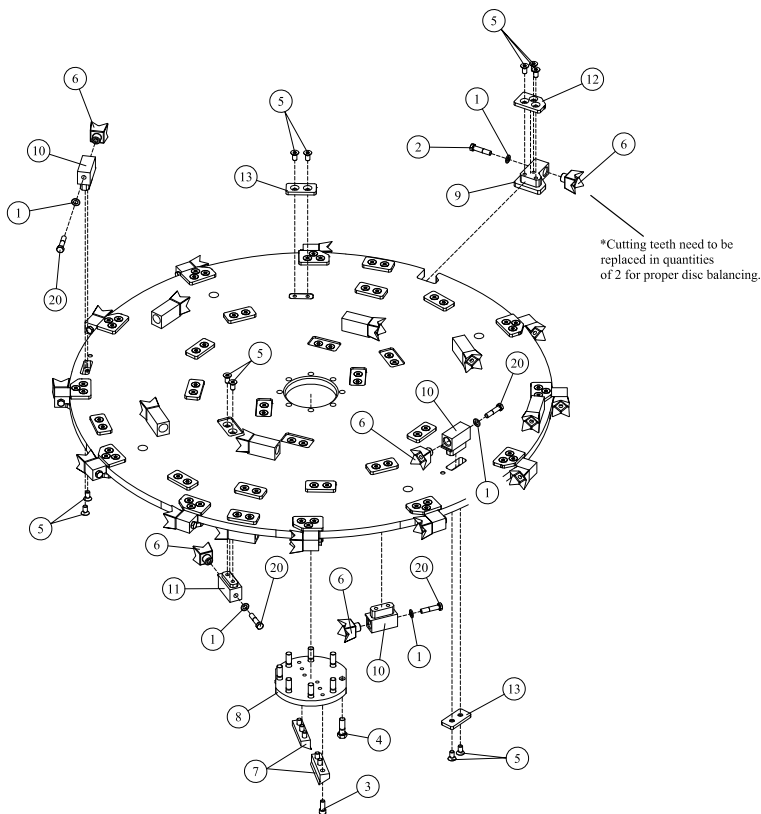


REF#	PARTS DESCRIPTION	REQ	PART #
1	1/2 SAE FLAT WASHER GR 8	25	11-0042
2	3/8 FLAT WASHER GR 8	9	11-0092
3	3/8 X 1 NC HEX CAPSCREW	8	11-0532
4	1/2 X 1-1/4 NC HEX CAP	7	11-0570
5	7/16 X 1 NC HEX CAPSCREW	3	11-0584
6	1/2 X 2-3/4 NC HEX CAP, GR 5	1	11-0636
7	3/8 X 1-1/4 NC PLOW BOLT	9	11-0804
8	1/2 X 3 NF SHCS	4	11-0929
9	1/2 X 1-3/4 NC CARRIAGE BOLT GR 8	13	11-0961
10	5/8 X 2-1/2 NC HEX CAPSCREW, GR 8	12	11-0971
11	3/8 NC HEX NUT	9	11-1001
12	1/2 NC NYLOCK NUT GR 8	13	11-1072
13	5/8 NC NYLOCK NUT GR 8	12	11-1073
14	1/2 X 1-1/4 NC COUPLING NUT	4	11-1077
15	ROLL PIN, 5/32 X 1	2	11-2054
16	FORESTRY TOOTH, STEEL	4	22-0019

REF#	PARTS DESCRIPTION	REQ	PART #
17	DEFLECTOR HINGE ROD	1	24-0213
18	WELD FREE D3 DISC COMPLETE	1	24-0283
19	SKID DECK	1	25-0204
20	LOWER ACCESS PORT COVER	1	31-0455
21	UPPER ACCESS PORT COVER	1	31-0537
22	SPINDLE ASSEMBLY	1	35-0093
23	NARROW CHUTE	1	41-1302
24	LEFT CHUTE	1	41-1303
25	DEBRIS DEFLECTOR	1	41-1305
26	WIDE CHUTE	1	41-1307
27	MOTOR GUARD	1	41-1461
28	LEFT SKID SHOE	1	42-0048
29	RIGHT SKID SHOE	1	42-0049
30	HOSE CLAMP	1	44-0351
31	FBC TOOTH HOLDER INSIDE	4	90-7035

60”(1524MM) DECK

25-1666 (Serial #23801+)



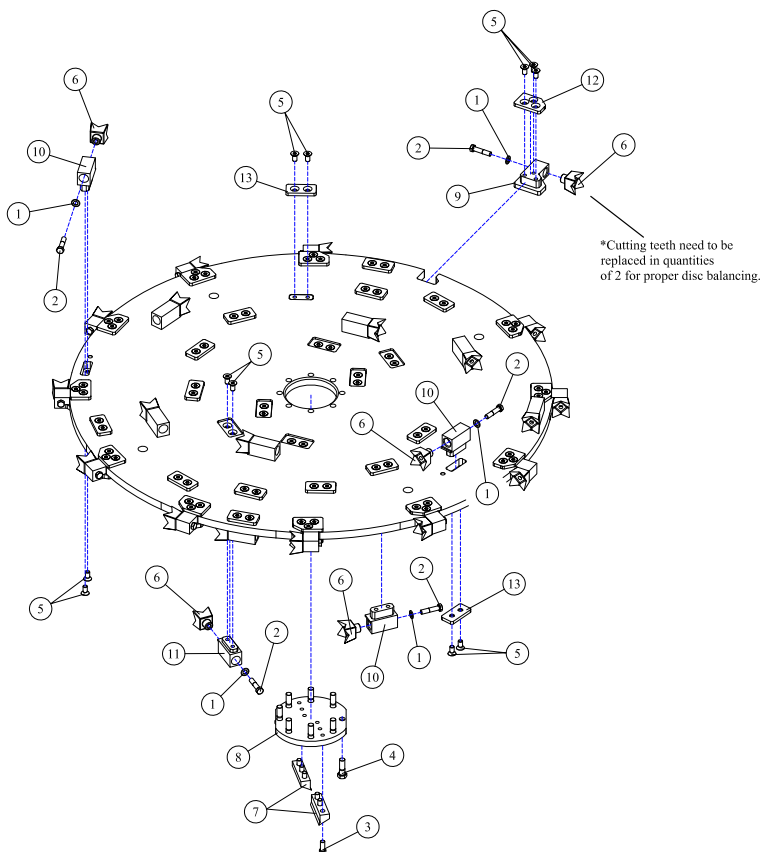
REF#	PARTS DESCRIPTION	REQ	PART #
1	1/2 SAE FLAT WASHER GR 8	44	11-0042
2	1/2 X 2-1/4 H.S. NF HEX CAP	12	11-0660
3	1/2 X 1-1/4 NC SHCS	6	11-0965
4	5/8 X 2 NC HEX CAPSCREW, GR 8	8	11-0970
5	1/2 X 1 FSHCS NC	100	11-1158
6	*FORESTRY TOOTH, STEEL	44	22-0019
7	FBC, CENTER PLANER	2	24-0192
8	FBS, BOLT PROTECTOR	1	24-0224
9	OUTER TOOTH HOLDER	12	90-7054
10	MIDDLE TOOTH HOLDER	24	90-7073
11	INNER TOOTH HOLDER	8	90-7074
12	OUTER TOOTH HOLDER COVER	12	P24-0270-12
13	COVER	32	P24-0270-13
14	<b>TOOTH KIT</b>		
	Includes 20 of part 6	1	44-0830
	Includes 50 of part 6	1	44-0831
15	<b>PLANER KIT</b>		
	Includes 6 of part 3	1	44-0853
	Includes 2 of part 7	1	44-0853

REF#	PARTS DESCRIPTION	REQ	PART #
16	LOCTITE 277, 10ML (NOT SHOWN)	1	24-0309
	To be used with parts 9, 10, & 11.		
17	<b>OUTER TOOTH HOLDER KIT</b>		
	Includes 3 of part 5	1	44-0835
	Includes 1 each of parts 9, 12, & 16	1	44-0835
18	<b>MIDDLE TOOTH HOLDER KIT</b>		
	Includes 2 of part 5	1	44-0862
	Includes 1 each of parts 10, 13, & 16	1	44-0862
19	<b>INNER TOOTH HOLDER KIT</b>		
	Includes 2 of part 5	1	44-0863
	Includes 1 each of parts 11, 13, & 16	1	44-0863
20	1/2 X 3-1/2 NF HEX CAP, GR 8	32	11-1628
21	<b>COMPLETE TOOTH KIT</b>		
	Includes 48 of part 1	1	44-0861
	Includes 12 of part 2	1	44-0861
	Includes 48 of part 6	1	44-0861
	Includes 36 of part 20	1	44-0861



## 60" (1524MM) DECK

### 25-1666 (Serial #23599-23800)

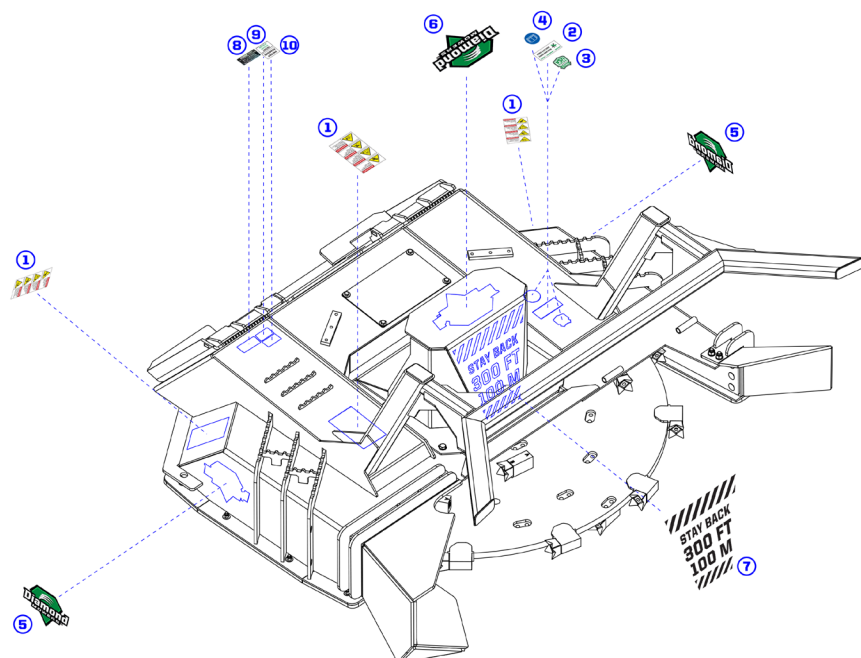


REF#	PARTS DESCRIPTION	REQ	PART #
1	1/2 SAE FLAT WASHER GR 8	44	11-0042
2	1/2 X 2-1/4 H.S. NF HEX CAP	44	11-0660
3	1/2 X 1-1/4 NC SHCS	6	11-0965
4	5/8 X 2 NC HEX CAPSCREW, GR 8	8	11-0970
5	1/2 X 1 FSHCS NC	100	11-1158
6	*FORESTRY TOOTH, STEEL	44	22-0019
7	FBC, CENTER PLANER	2	24-0192
8	FBS, BOLT PROTECTOR	1	24-0224
9	OUTER TOOTH HOLDER	12	90-7054
10	MIDDLE TOOTH HOLDER	24	90-7055
11	INNER TOOTH HOLDER	8	90-7056
12	OUTER TOOTH HOLDER COVER	12	P24-0270-12
13	COVER	32	P24-0270-13
14	<b>TOOTH KIT</b>		
	Includes 20 of part 6	1	44-0830
	Includes 50 of part 6	1	44-0831

REF#	PARTS DESCRIPTION	REQ	PART #
15	<b>PLANER KIT</b>		
	Includes 6 of part 3	1	44-0853
	Includes 2 of part 7	1	44-0853
16	LOCTITE 277, 10ML (NOT SHOWN)	1	24-0309
	To be used with parts 9, 10, & 11.		
17	<b>OUTER TOOTH HOLDER KIT</b>		
	Includes 3 of part 5	1	44-0835
	Includes 1 each of parts 9, 12 & 16	1	44-0835
18	<b>MIDDLE TOOTH HOLDER KIT</b>		
	Includes 2 of part 5	1	44-0836
	Includes 1 each of parts 10, 13 & 16	1	44-0836
19	<b>INNER TOOTH HOLDER KIT</b>		
	Includes 2 of part 5	1	44-0837
	Includes 1 each of parts 11, 13 & 16	1	44-0837

## DECAL IDENTIFICATION

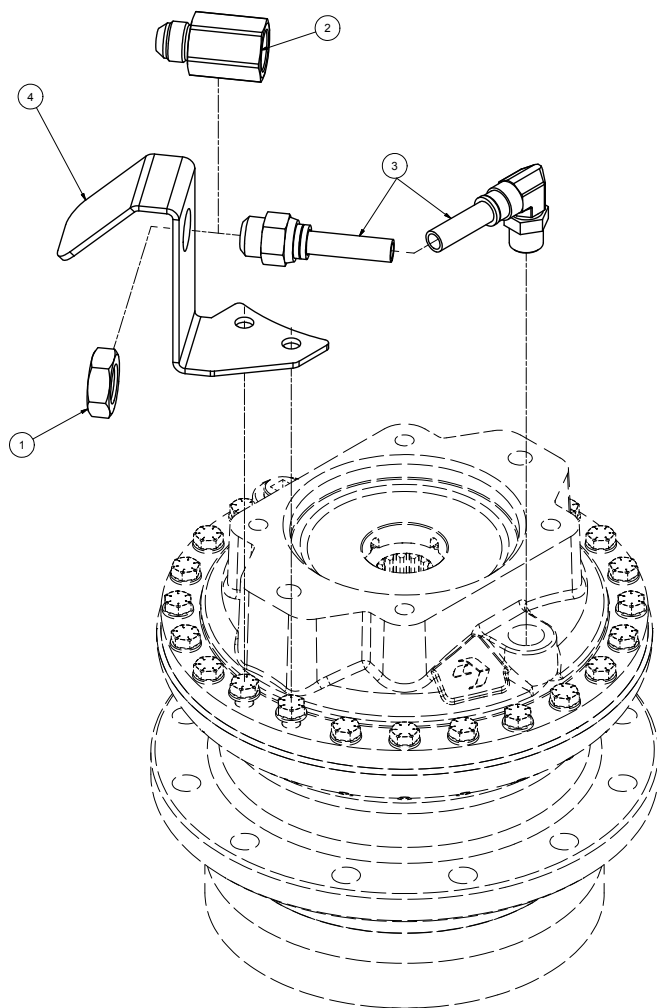
60" (1524mm) DECK



051118

- ① **PART #15-0056** - Decal Group (vertical) - QTY 3
- ② **PART #15-1016** - Warranty and Service - QTY 1
- ③ **PART #15-0055** - Made in the USA - QTY 1
- ④ **PART #15-0058** - Read Manual - QTY 1
- ⑤ **PART #15-0050** - Diamond Mowers Logo 7in - QTY 2
- ⑥ **PART #15-0052** - Diamond Mowers Logo 11in - QTY 1
- ⑦ **PART #15-0060** - Stay Back 300ft / 100m - QTY 1
- ⑧ **SERIAL NUMBER LABEL** - (not included in kit) - QTY 1
- ⑨ **PART #15-0065** - Patent Forestry 3 - QTY 1
- ⑩ **PART #15-0067** - Patent Pending - QTY 1

## PRESSURE RELIEF VALVE SPINDLE MOUNT

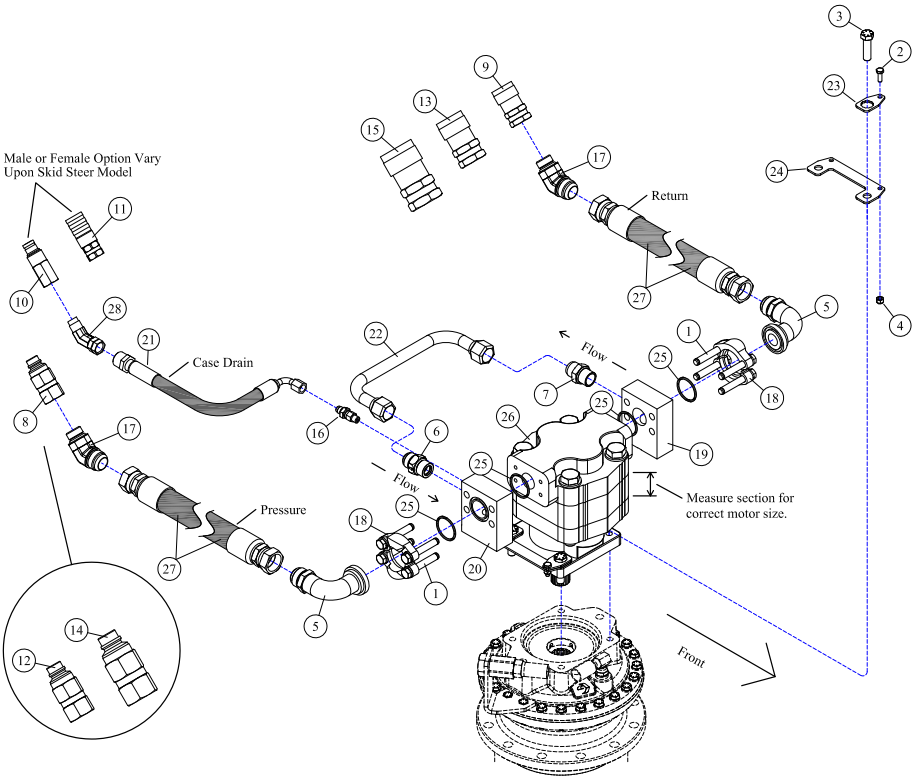


REF#	PARTS DESCRIPTION	REQ	PART#	TORQUE (ft-lbs)	TORQUE (Nm)
1	7/8 UNF JAM NUT	1	11-1159		
2	JEMTEC D3 SPINDLE RELIEF VALVE	1	21-1653		
3	HOSE 1/2 X 8 (5/8 JIC - 1/2 MP 90 DEG SWIVEL)	1	21-2419		
4	D3 RELIEF VALVE MOUNT	1	31-0688		

# PARTS BOOK

## DRIVE ASSEMBLY: 32-45 GPM (122-171 LPM)

60" (1524mm) DECK



REF#	PARTS DESCRIPTION	REQ	PART #
1	7/16 X 3 NC HEX CAPSCREW (included with #19 & 20)	8	11-0587
2	1/4 X 3/4 NC HEX CAP	4	11-0588
3	1/2-20 X 1-3/4 H.S. NF HEX CAP GR 8	4	11-0664
4	1/4 NC NYLOCK NUT	4	11-1022
5	#20FLG X 1MJC-90DEG ADAPTER	2	21-1267
6	CHECK VALVE	1	21-1474
7	3/4 MORB X 3/4 MJC ADAPTER	1	21-1475
8	1/2 MALE QUICK COUPLER, FLAT FACE	1	21-1559
9	1/2 FEMALE QUICK COUPLER, FLAT FACE	1	21-1560
10	3/8 MALE QUICK COUPLER, FLAT FACE	1	21-1561
11	3/8 FEMALE QUICK COUPLER, FLAT FACE	1	21-1562
12	5/8 MALE QUICK COUPLER, FLAT FACE	1	21-1574
13	5/8 FEMALE QUICK COUPLER, FLAT FACE	1	21-1575
14	3/4 MALE QUICK COUPLER, FLAT FACE	1	21-1576
15	3/4 FEMALE QUICK COUPLER, FLAT FACE	1	21-1577
16	ADAPTER, 1/4MOR X 3/8MJC	1	21-1597

REF#	PARTS DESCRIPTION	REQ	PART #
17	ADAPTER, 1MJC-45DEG X 3/4MORB	2	21-1654
18	#20 FLANGE KIT (included with #19 & 20)	2	21-2105
19	CROSS OVER MANIFOLD KIT (includes #1, 18 & 25)	1	21-2180
20	TEE MANIFOLD KIT (includes #1, 18 & 25)	1	21-2181
21	HOSE 3/8 X 106 (3/8FJC 90DEG X 1/2MP)	1	21-4290
22	RUN-AROUND TUBE	1	28-0051
23	MOTOR BOLT LOCK TAB	4	31-0503
24	MOTOR BOLT LOCK BASE	2	31-0504
25	O-RING (included with #18, 19 & 20)	4	33-0013
26	<b>MOTOR</b>		
	M365, 2-1/4" GEAR SET, 2-3/4" SECT, 32-45 GAL/MIN	1	30-0524
27	<b>HOSE 1" (1EJC X 1EJC)</b>		
	"STANDARD", PRESSURE & RETURN 103"	2	21-4345
	"OPTIONAL UPGRADE" 4000 psi, PRESSURE 103"	1	21-4346
	"OPTIONAL UPGRADE" 4000 psi, RETURN 90"	1	21-4365
28	1/2MP X 1/2FP ADAPTER 45 DEG	1	21-1290

DIRECT DRIVE SPINDLE

35-0093

REF#	PARTS DESCRIPTION	REQ	PART #
1	BEARING-CONE (TOP)	1	10-0094
2	BEARING-CUP (TOP)	1	10-0095
3	BEARING-CONE (BOTTOM)	1	10-0096
4	BEARING-CUP (BOTTOM)	1	10-0097
5	BOLT-HEX HEAD	24	11-1611
6	WASHER-FLAT	24	11-1612
7	RING-RETAINING	1	11-1613
8	NUT-LOCK	1	11-1614
9	WASHER-LOCK	1	11-1615
10	SCREW-SKT HD CAP	6	11-1616
11	PIPE PLUG (TO COVER) (MAGNETIC)	1	21-1609
12	PIPE PLUG (TO COVER) (NON-MAGNETIC)	1	21-1610
13	PIPE PLUG (TO HUB) (MAGNETIC)	2	21-1611
14	WASHER-THRUST (TOP)	1	35-0096
15	COUPLING	1	35-0097
16	PLATE-KEEPER	1	35-0098
17	WASHER-THRUST (BOTTOM)	1	35-0099
**18	HUB	1	35-0100
19	SEAL-OIL	1	35-0101
*20	GUARD	1	35-0102
**21	SHAFT-OUTPUT	1	35-0103
22	COVER		
	C BASE (STANDARD)	1	35-0094
	D BASE (OPTIONAL)	1	35-0095

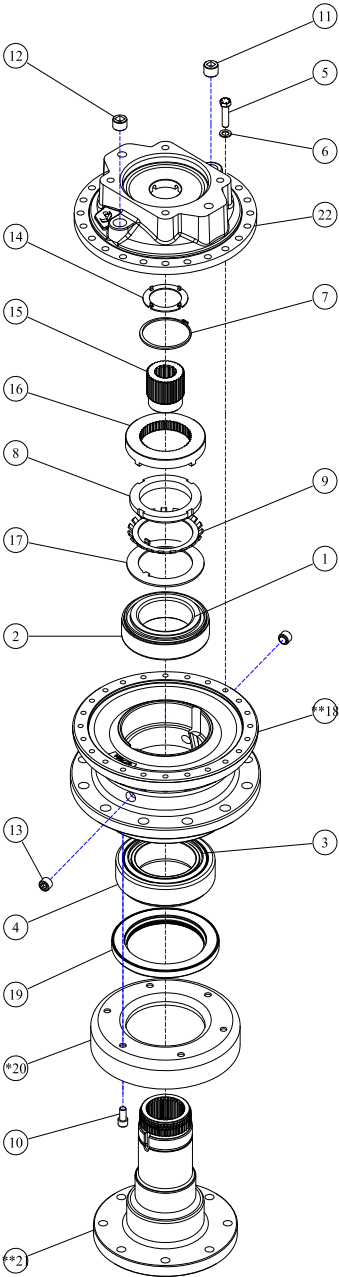
NOTE: WHEN ORDERING ANY ITEMS MARKED \* ABOVE,  
ALSO ORDER SERVICE KIT 33-0078

NOTE: WHEN ORDERING ANY ITEMS MARKED \*\* ABOVE,  
ALSO ORDER SERVICE KIT 33-0079

SERVICE KITS

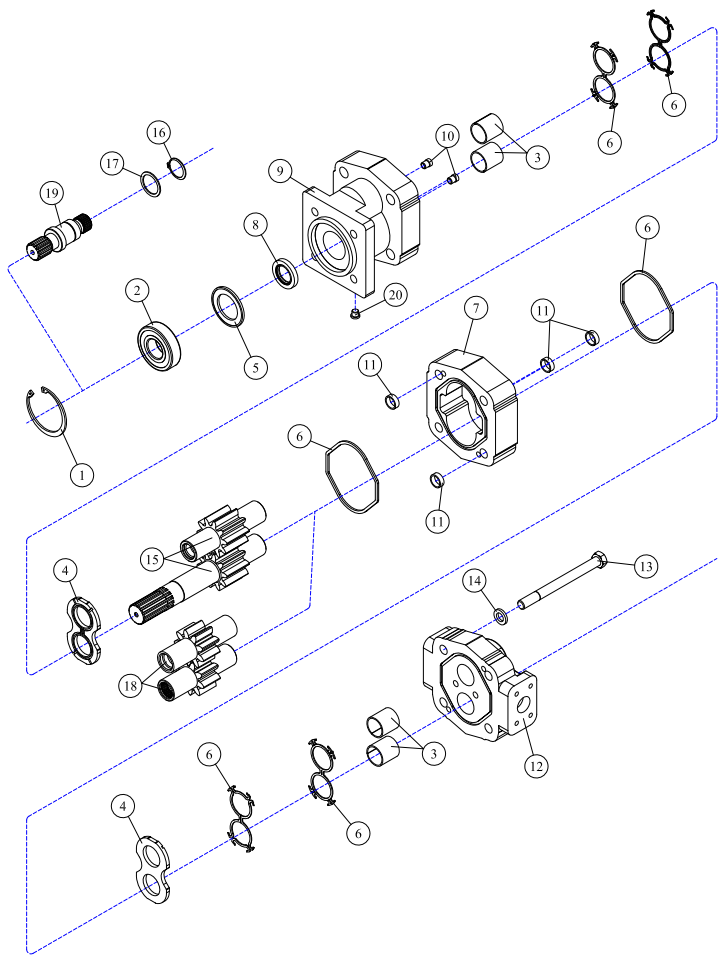
PART #	DESCRIPTION	INCLUDED ITEMS
33-0078	SEAL KIT	9, 19
33-0079	BEARING & SEAL KIT	1, 2, 3, 4, 9, 19
33-0080	COUPLER KIT	14, 15

KITS ALSO INCLUDE A TUBE OF SEALANT PART NO. 35-0104



MOTOR ASSEMBLY 30-0524

60" (1524mm) DECKS



REF#	PARTS DESCRIPTION	REQ	PART #
1	SNAP RING	1	30-1009
2	OUTBOARD BEARING	1	30-1010
3	BUSHING	4	30-1011
4	THRUST PLATE	2	30-1012
5	SEAL RETAINER	1	30-1017
6	M365 SEAL KIT	Avail	30-1021
7	2-1/4" M365 GEAR HOUSING	1	30-1026
8	SHAFT SEAL		
	150 PSI (included in M365 seal kit)	1	30-1210
	500 PSI	1	30-1156
9	SHAFT END COVER	1	30-1086
10	CHECK ASSEMBLY	2	30-1087
11	ALIGNMENT BUSHING	4	30-1090

REF#	PARTS DESCRIPTION	REQ	PART #
12	PORT END COVER	1	30-1091
13	STUD	4	Call
14	WASHER	4	30-1093
<b>GEAR SET OPTION A:</b>			
15	2-1/4" GEAR SET	1	30-1165
<b>GEAR SET OPTION B:</b>			
16	RETAINING RING	1	30-1019
17	WASHER	1	30-1020
18	2-1/4" GEAR SET	1	30-1025
19	CONTINENTAL SHAFT, SPLINED	1	30-1144
20	PLUG	1	30-1096
*	SEAL APPLICATOR TOOL (not shown)	Avail	30-1048

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15-1065  
FBS-MANUAL