



M2964040F

MODEL NUMBER: 2964040

SERIAL NUMBER: _____

Owner's Manual

Operation, Maintenance and Safety Instructions

Commercial Road-Towable Brush Chipper

2964040 (610SD-10-87DD)

Make sure you completely read and understand this manual before using the brush chipper for the first time. If you have any questions, contact your retail or rental dealer or DOSKO Customer Service at 1-800-822-0295

WARNING

READ and UNDERSTAND this manual completely before using the chipper! Failure to properly operate, and maintain this chipper could result in *serious injury or death* to the operator or bystanders. All machines have hazards associated with their operation. This brush chipper has certain special hazards that you must be aware of. As an operator or owner you have a duty to be aware of these hazards and know preventive measures to avoid them. In particular, be aware of the following:

- Keep hands and feet away from inlet and discharge openings.
- Do not allow children under the age of 18 or untrained adults to operate.
- Wear eye protection and other personal protection against flying debris.
- Check that the chipper hood is secured and locked.
- Do not attempt to perform adjustments, declog or clean unit while engine is running.
- Make sure no children or bystanders are within 100 feet of chipping operation.
- Protect cars, windows and other objects within 100 feet from flying debris.
- Be aware of potential for carbon monoxide (CO) poisoning.
- Prevent fires/explosions from fueling by using precautions described.
- Avoid burns from engine by not touching hot exhaust.
- Avoid using in slippery, muddy, wet or icy conditions where falls may occur.

These and other hazards in the manual and summarized at the end under "Important Safety Information."

STOP!

ADD ENGINE OIL, FUEL & BATTERY: Your brush chipper comes fully assembled and requires only that you add engine oil to crankcase, fuel to tank, and a battery.

INSPECT COMPONENTS: Closely inspect to make sure no components are missing or damaged. See the "Receiving Your Unit" section for instructions on whom to contact to report missing or damaged parts.

Any Questions, Comments, Problems, or Parts Orders
Call your dealer or DOSKO Customer Service 1-800-822-0295

Hazard Signal Word Definitions

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

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Table of Contents

Part I. Introduction

About Your Brush Chipper	4
Safety Labels Locations	5
Receiving & Transporting:	
Initial Inspection	8
Towing Instructions	8

Part II. Operation

Operation:	
1. Pre-start Check List & Procedures	9
2. Starting/Feeding the Brush Chipper	14
3. Stopping the Engine	15
4. Feeding Material/Clearing Jam	16
5. Refueling on Site	17
6. Refueling at Service Stations	18
7. Storing the Brush Chipper	18

Part III. Maintenance and Repair

Maintenance (To be done by owner or Rental Dealer)	20
1. Knives and Feed Roller Blades	22
2. Belt and Sheave Care	27
3. Hydraulics	30
4. Automated Feed System	31
5. Maintenance Schedule	32
6. Bolt Torque Chart	33
7. Hydraulics Troubleshooting	34
8. Automated Feed System Troubleshooting	35
9. Trailer Wiring Diagram	37

Specifications	38
-----------------------------	----

Machine Component Identification	40
---	----

Parts Explosions	42
-------------------------------	----

Part IV: Summary of Important Safety Information

Summary of Important Safety Information	49
Special Safety Information on Static Electricity	53

Limited Warranty Policy	55
--------------------------------------	----

About Your Brush Chipper

Owner/Operator/Renter Training

Read and follow all instructions and safety precautions presented throughout this manual. A summary of important safety information can be found at the end of the manual. Keep this manual for reference and review. If the owner of this unit is different than the operator, give a copy of this manual to any operator.

Rental Companies

Check the storage tube on the trailer tongue of the unit to make sure the chipper and engine manuals are inside. All persons to whom you rent/loan this brush chipper must have access to these manuals. Advise all persons who will operate the machine to read them. You should also provide personal instruction on how to safely operate the brush chipper and remain available to answer any questions a renter/borrower might have. If videos are available, have renter watch training video.

Engine Instructions

Note: Several different engines may be used on your chipper depending on the particular model and date of manufacture. For detailed engine operation and maintenance information, always refer to the specific engine Owner's Manual furnished with the chipper.

Product Suitability

Your DOSKO brush chipper is designed to only chip wood. A chipper knife is mounted on a revolving flywheel and converts branches fed into the chipper hopper into "chips". Make sure you completely read and understand this manual before using the brush chipper for the first time.

Before using, the user shall determine the suitability of this product for the job it will be used for. The user assumes liability for any non-intended or misuse of the product.

As is common with all manufacturers, DOSKO is constantly improving its products. The specifications outlined herein, while believed to be accurate at publication, are subject to change without prior notice or obligation. Do not modify or alter this chipper. The purchaser and/or user shall assume the potential liability for any modification and/or alterations of this equipment from its original design and manufacture.

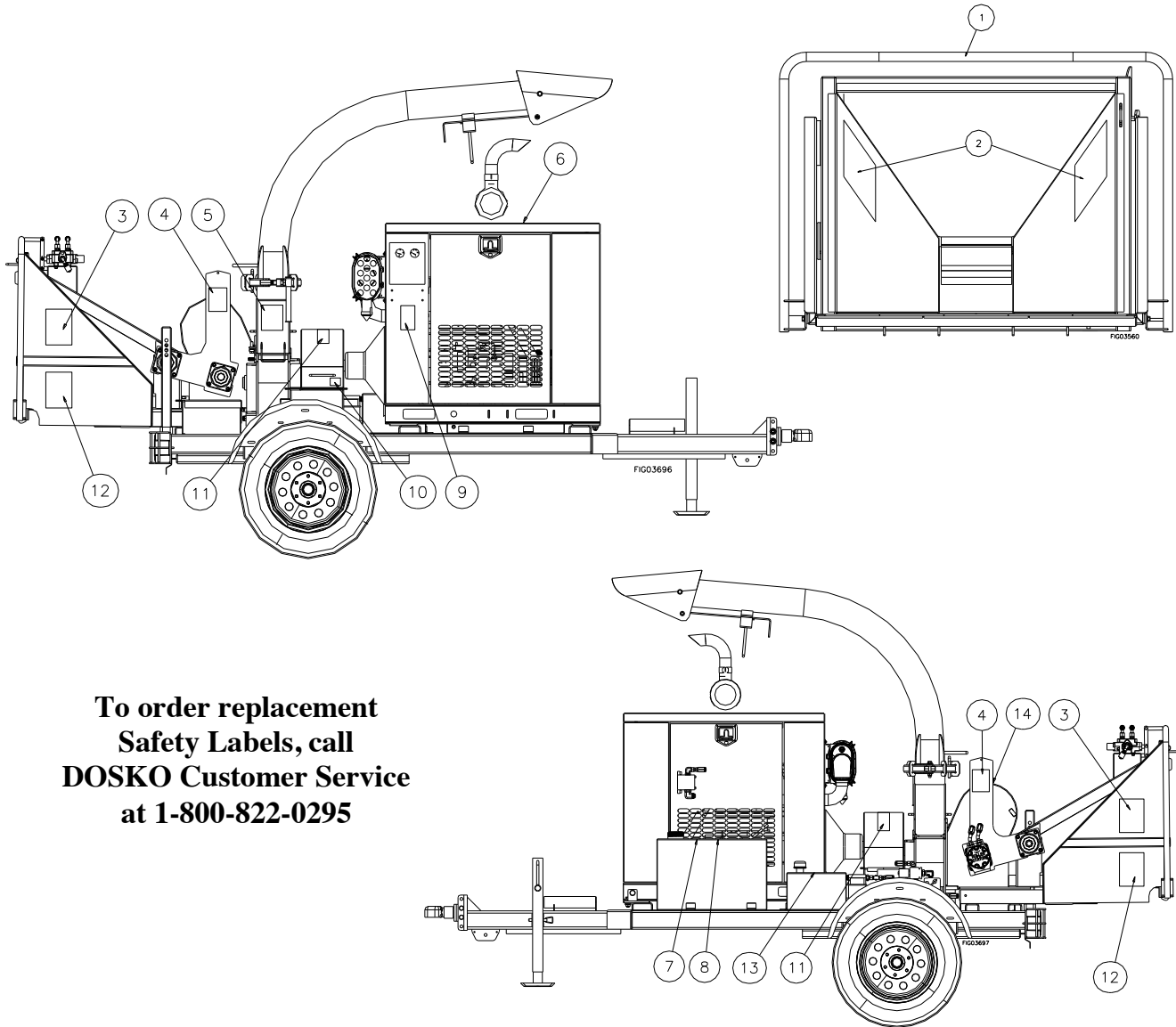
Contact your rental or retail dealer or DOSKO Customer Service at 1-800-822-0295 for any questions about the appropriate use of this brush chipper or about optional accessories.

Warranty Registration

Please fill out and submit the warranty registration card so that we may contact you with updated information regarding product literature, replacement parts, or safety information.

Safety Label Locations

The following safety labels appear on your chipper. These are warnings and instructions particularly important to proper safety and functionality. Other warnings and instructions also appear throughout this manual. Reading and understanding these labels below will expedite your safe use of the product. The labels on the machine will then serve to further remind you of important safety and operation procedures.



**To order replacement
Safety Labels, call
DOSKO Customer Service
at 1-800-822-0295**

⚠ WARNING: Replace Missing Labels

ALWAYS make sure safety labels are in place and in good condition. If a safety label is missing or not legible, order new labels.

Safety Labels

Reference #	Part #	Description	Qty
1	785180 decal kit	Safety Feed Control	1
2		Danger Infeed Moving Roller Hazard	2
3		General Precautions / Preparation	2
4		Danger Amputation Hazard	2
5		Warning Debris	1
8		Warning Fire Hazard	1
11		Warning Belt	2
12		Chipping Procedure	2
6	786635	Burn Hazard	1
7	785088	Diesel only	1
9	785071	Engine Operation	1
10	39259	CO Warning	1
13	785089	Hydraulic Fluid Only	1
14	786713	Pinch Point	1

6



1

**SAFETY FEED
CONTROL**

PULL TO FEED

PUSH TO STOP

PUSH FURTHER TO REVERSE



2



4



3



5



6

Safety Labels

7

DIESEL ONLY

9

Engine Operation:

1. Follow all Job Site, Equipment, and Operator Safety Precautions. Read owner's manual & all decals before operating.
2. Start Engine following engine manual directions. Allow proper warm up period at idle speed before bringing engine to full speed.
- 3A. Clutch Engagement (Deutz)
Engage clutch at 800 RPM.
- 3B. Clutch Engagement (Kubota)
Clutch will automatically engage at approximately 1450 RPM.
4. Bring engine throttle up slowly. Listen for any sounds of foreign material in chipper (metal clanging sounds).
5. Set Engine RPM :
A. Kohler & Honda engines: 3600 RPM
B. Kubota engine: 3150 RPM
C. Deutz engine: 2700 RPM
6. Engage Safety Feed Control - Follow the direction of the arrows on the safety feed control. Reverse the direction if a branch becomes stuck.
7. Speed Control - Turn the valve located next to the hydraulic tank to the right to slow the infeed roller. Turn it to the left to increase the infeed roller speed.

8



WARNING



Fuel Fire/Explosion Hazard Fuel is flammable and explosive.

Never fuel a running or hot engine.
Clean up fuel spills immediately.
Ensure there are no fuel leaks before starting.
Keep sources of sparks and flames away.
Hot exhaust may also ignite spilled fuel.
No smoking.
Keep a fire extinguisher nearby.

10

WARNING

POISONOUS GAS

This product's use gives off carbon monoxide, an odorless gas that can kill you.

- ONLY use outdoors and away from air intakes.
 - NEVER use inside homes, garages or sheds. EVEN IF you run a fan or open doors and windows.
- See product manual for more details.

PN 39259

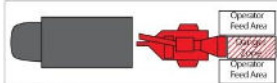
12



WARNING

Chipping Procedure

Operate this machine only after you have read the operator's manual, read and understood the labels, and have been thoroughly trained in safe operating procedures.
Follow the engine operation label for starting, operating and stopping in-feed and chipper components.
Wear recommended personal protective equipment.
Always stand to the side of the in-feed hopper per illustration.
Keep clothing away as limbs can snag your clothing and pull you into the rollers!
Always be positioned and prepared to activate safety feed control bar!
Check the materials to be chipped for any foreign objects, particularly metal tools.
Feed wood into rollers with larger end (butt-end) first. DO NOT reach into the infeed hopper for any reason.
Feed small wood debris with wooden push paddle, or throw material on top of big wood as it feeds, or throw it in the trash!
Do not walk in front of discharge chute while engine is operating.



Vine-Like Materials - Special Feeding Instructions

Vine-like materials are particularly hazardous because they can be rapidly and unexpectedly drawn into the hopper after being entangled in other brush. They can also entangle and draw the operator towards the hopper as well.
Cut vine-like material into 4 to 5 foot pieces before bringing to the hopper area.
Do not allow vine-like material to even lay piled near the in-feed hopper!

Other Precautionary Information

Battery

Batteries contain caustic acid, do emit explosive gases, and can cause electric shock.
There should be no smoking, sparks, or flames in the vicinity of the battery.
Follow operator manual instructions for charging or servicing battery.

Hydraulic Fluid

The chipper's hoses are part of the hydraulic system. The high fluid pressures and temperatures developed in this system can be hazardous. Hydraulic fluid escaping through even a pin-size hole opening can puncture skin & cause blood poisoning.
Inspect hydraulic system regularly for leaks, but do not check for leaks with any body part while system is pressurized.
Seek medical attention immediately if injured by escaping fluid.

Towing

Detailed towing instructions are given in the owner's manual. A few of those important instructions follow:

- * Never attempt to tow this chipper with less than 1/2 ton or larger truck.
- * Use only proper size hitch balls (2" diameter) for the tow coupler.
- * Safety cables must be used when towing.
- * Chipper wheel lug nuts must be regularly checked to be tight.
- * Never exceed 55 MPH, and always adjust to a safe towing speed in bad weather or road conditions.

Maintenance

Regular maintenance is required based on hours of operation. A schedule is provided within the owner's manual.
The following daily checks are required to prevent major damage to your chipper.

- * Engine Oil
- * Chipper Belt Tension
- * Condition of Hoses
- * Fuel Level
- * Hydraulic Oil Level



11



WARNING

Belt Entanglement Hazard

KEEP belt guard closed while operating.
BEFORE opening guard: remove ignition key, spark plug, and disconnect positive battery cable; disengage clutch (if applicable); & de-energize hydraulic system.

13

HYDRAULIC FLUID ONLY

14



CAUTION

PINCH POINT

Keep hands away.

Receiving and Transporting

Initial Inspection

You should inspect the brush chipper immediately after taking possession and before use.

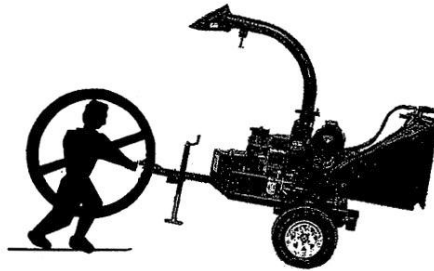
See the “Machine Component Identification” section of this manual for a diagram of the brush chipper and all its components.

If you have missing components, contact your retail or rental company or DOSKO Customer Service at 1-800-822-0295.

Towing Instructions

⚠ WARNING: Lifting Hazard

NEVER attempt to transport chipper by lifting tongue and moving unit on 2 wheels. The chipper weighs 4160 lbs. and attempting to lift or move it manually can cause serious back or other muscular-skeletal injuries. The chipper may also cause injuries to you or others by tipping over.



Be aware of your state’s legal requirements for towing and trailers (such as lighting, brakes, licensing and breakaway switches). Your towing vehicle capability must be matched to machine weight and type of hitch arrangement. Join brush chipper to vehicle using only a 2” ball. Be sure receiver on towing vehicle is bolted tightly. Choose a tow bar that will cause the chipper frame to set level during towing.

Before hooking chipper to towing vehicle:

- Rotate chipper discharge chute to forward position and lock in position with hitch pin.
- Raise the rear stabilizer leg before you adjust front jack for ball height.
- Be sure the jack stand is raised and removed before towing.
- Always close and lock safety coupler on ball.
- Connect safety cables in a cross pattern.
- Connect and check the electric cable for working stop, turning and brake lights.
- Be sure the brush chipper wheel lug nuts are fastened tightly, tire condition is good and air pressures are correct.

Before unhooking the chipper from the towing vehicle:

- Block both sides of both tires.
- Lower and pin rear stabilizer leg and lower jack stand.

⚠ WARNING: Final Check Before Towing

Before towing be sure safety coupler on ball is closed and locked, safety cables are hooked, and trailer electric is attached. **Tow brush chipper at a maximum safe speed of 55 mph.** DO NOT exceed.

Operation

1. Pre-start Check List & Procedures

WARNING: High Energy Machine

This is a high-powered machine. It has moving parts operating with high energy and at high speeds. Safe procedures must be used to avert serious injury or death. Unsafe operation will create serious hazards for you, as well as anyone else in the nearby area.

CAUTION: Add Oil to New Engine

A new engine is shipped without oil. **Add engine crankcase oil to a new engine.** You must add the correct amount of oil to engine crankcase or engine will be damaged beyond repair.

Each time you get ready for a chipping session and before starting the engine you should do the following:

- Check hydraulic system
- Check/Add Engine Oil
- Fill Brush Chipper Fuel Tank
- Inspect Fuel System for Leaks
- Battery Installation
- Wear Personal Protection
- Establish Safe Working Area
- Check/Chock Tires
- Lower and Lock Rear Stabilization Leg
- Remove Hazardous Chipping Materials
- Choose Safe Discharge Direction
- Only Work During Daylight

Each of these procedures is discussed below.

Check hydraulic system

Check the hydraulic system carefully:

1. Visually inspect all hoses, tubing, clamps/fittings, pump, and cylinder for cracks, fraying, kinks, or other damage.
2. Check all components for oily residue, which may indicate a leak.

Do NOT operate the chipper if there is any indication of damage or oily residue. Small leaks in hydraulic lines can cause severe injuries and can also be an indication of catastrophic failure in the near future. The life of hydraulic hoses may be from a few months to a few years, depending on use and storage patterns.

WARNING: High Fluid Pressure

High fluid pressures and temperatures are developed in hydraulic chippers. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the chipper:

Operation	
	• Stop the engine, disconnect the spark plug, and move all control valve handles back and forth to relieve pressure before changing or adjusting hydraulic system components such as hoses, tubing, fittings or other components. • NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood. • NEVER adjust the pressure setting of the pump or valve. • If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.
Check/add oil	Check the oil level using the dipstick and add oil as needed daily. Using a funnel, add oil up to the FULL mark as measured on a fully inserted dipstick. (See engine Owner's Manual for oil type and capacity, and more detailed oil check/fill instructions.)  WARNING: Burn hazard Never open oil fill port while engine is running. Hot oil can spray over face and body.
Fill brush chipper fuel tank(s)	Check the fuel level in the chipper's fuel tank. The fuel tank capacity is 22 gallons. If needed, fill tank with fresh fuel from a portable container, after first reading the following warnings and instructions. Do NOT fill the fuel tank to the top. Fuel may spill when operating on a slope. Do NOT overfill the fuel tank. Allow at least 1" of empty space below the fill neck to allow for fuel expansion.  WARNING: Fuel fire/explosion hazard Fuel is highly flammable and explosive. Heat, sparks, and flames can ignite fuel vapors, which can become widespread during fueling. A flash fire ignition and/or explosion could result and cause serious injury or death. The following conditions could result in fuel ignition/explosion: • fuel vapor collection inside enclosures • static electric sparks • sparks from electric wiring, batteries, or running engines • sources of heat (such as a hot engine or exhaust) • open flames, including pilot lights

Operation	
Inspect Fuel System for Leaks	Inspect fuel system & check for leaks BEFORE starting chipper.  WARNING: Fuel leak hazard A leaking fuel line no matter how small can be the source of a fire or explosion when starting or operating the engine. Look for: Signs of leaks or deterioration, a chafed or spongy fuel hose, loose connections, loose or missing fuel hose clamps, or a damaged fuel tank. If the brush chipper is in an enclosed area and you smell fuel, DO NOT start engine! DO NOT light a match. DO NOT flip on an electrical switch. Exit area immediately leaving doors open and call fire department for assistance.
	Your chipper's engine is equipped with an electric starter, which requires the installation of a 12-volt marine starting battery (Group 24M). See engine owner's manual for battery rating. The battery is to be supplied by the customer and should be installed in the protective battery box located near the engine. (The inside dimensions of the battery box are 11-3/4" L x 7-1/8" W x 9-3/4" H). Follow the instructions detailed below for connecting and disconnecting the battery.  WARNING: Battery hazards Batteries are hazardous because they contain caustic acid, can emit explosive gases, and can cause electric shock. Caution must be exercised when making connections to a battery to avoid shock and contact with the acid, and to prevent any sparking that could lead to an explosion. ALWAYS follow the general battery safety rules and instructions listed below. General Battery Safety Rules • ALWAYS use eye protection when handling batteries. • NEVER smoke or work near sparks or other sources of ignition. • NEVER touch both battery terminals at the same time with your hand or any non-insulated tools. • If battery acid contacts skin or clothing, flush immediately with water and neutralize with baking soda. Connecting the battery Always connect the cables in the following sequence to avoid possible shock: 1. Find the battery cables located inside the battery box. 2. Connect the red cable to the positive (+) terminal of the battery. 3. Then connect the black cable to the negative (-) terminal of the battery. Disconnecting the battery Always disconnect cables in the following sequence to avoid possible shock. 1. First, disconnect the black cable from the negative (-) terminal of the battery. 2. Next, disconnect the red cable from the positive (+) terminal of the battery.

Operation

Wear Personal Protection

Use approved protective clothing and approved protective equipment when using the machine.

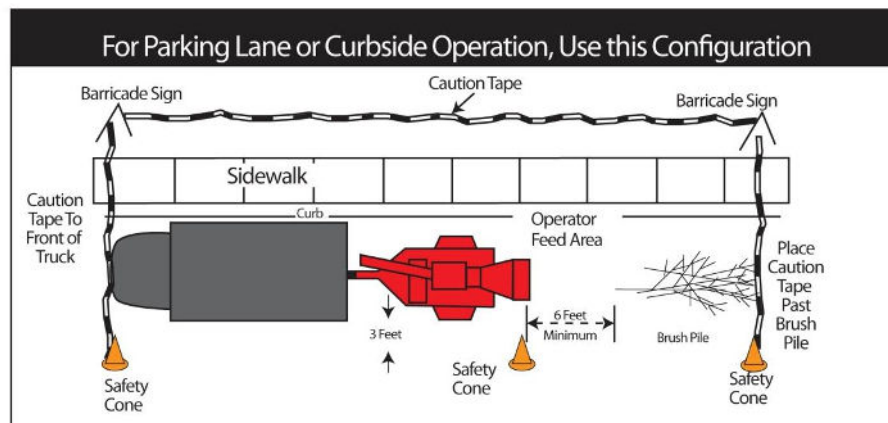
- Wear ANSI-approved and OSHA-compliant safety glasses with side shields or a full face shield, and a hard hat.
- Use of earplugs or another hearing protection device if working within 15-20 feet of the running brush chipper for longer than a few minutes. Hearing can be damaged from prolonged close-range exposure to the type of noise produced by this chipper.
- Wear long pants to protect legs from flying debris and hot engine.
- Wear gloves with no cuffs.
- Never wear jewelry or loose-fitting clothing when starting or operating the brush chipper or any mechanical device. Loose or dangling apparel, jewelry or hair can become entangled in moving parts.

Establish Safe Working Area

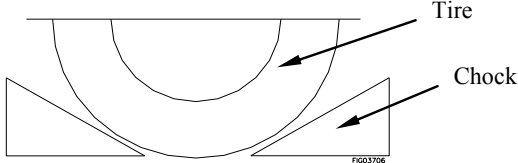
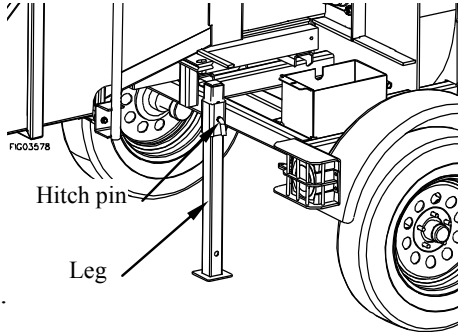
Layout a safe working area that best fits your project and/or situation by:

- Using safety tools such as barricade signs, safety cones and caution tape.
- Determining placement of equipment and brush pile (i.e. on or off the street) that will minimize interference with auto traffic.
- Keeping children, pets and onlookers at a safe distance.
- Determining direction for safe chipper discharge.

Use the example below as a proposed layout for street-side operation.



Operation

Tires	Make sure tires are fully inflated and in good repair if you will be towing the brush chipper. See tire sidewall for recommended tire pressure. ⚠ WARNING: • Do not over-inflate tires. Serious injury can occur if tire explodes. • When seating a bead after repair, do not exceed 30 PSI. Pressures higher than 30 PSI can cause the tire and wheel to rupture and explode. Block both sides of both tires. 
Lower Rear Stabilizing Leg	• Remove hitch pin from bottom hole in leg. • Lower leg. • Insert hitch pin through top hole in leg to secure. • Raise or lower jack until rear support leg makes solid contact with ground. • Chipper must be level for operation. 
Remove Hazardous Chipping Materials	Thoroughly inspect the area where you will be working and remove all foreign objects. Look for rope, wire, etc. and remove these objects before chipping. (Inserting these objects into the chipper could damage the machine and/or cause injury)
Choose Safe Discharge Direction	Make sure to position the discharge chute into a safe and restricted area. Keep yourself and others clear of the discharge opening at all times. Discharged materials are moving at a high rate of speed and can cause property damage and/or injuries to animals or pedestrians.
Work During Daylight Hours	Use the machine only in daylight or in well-lit conditions. Never operate the brush chipper after dark.

Operation

2. Starting/Feeding the Brush Chipper

Note: For detailed engine operation and maintenance information, always refer to the engine's Owner's Manual or control module Owner's Manual furnished with the chipper and stored on the chipper in the storage tube.

Starting

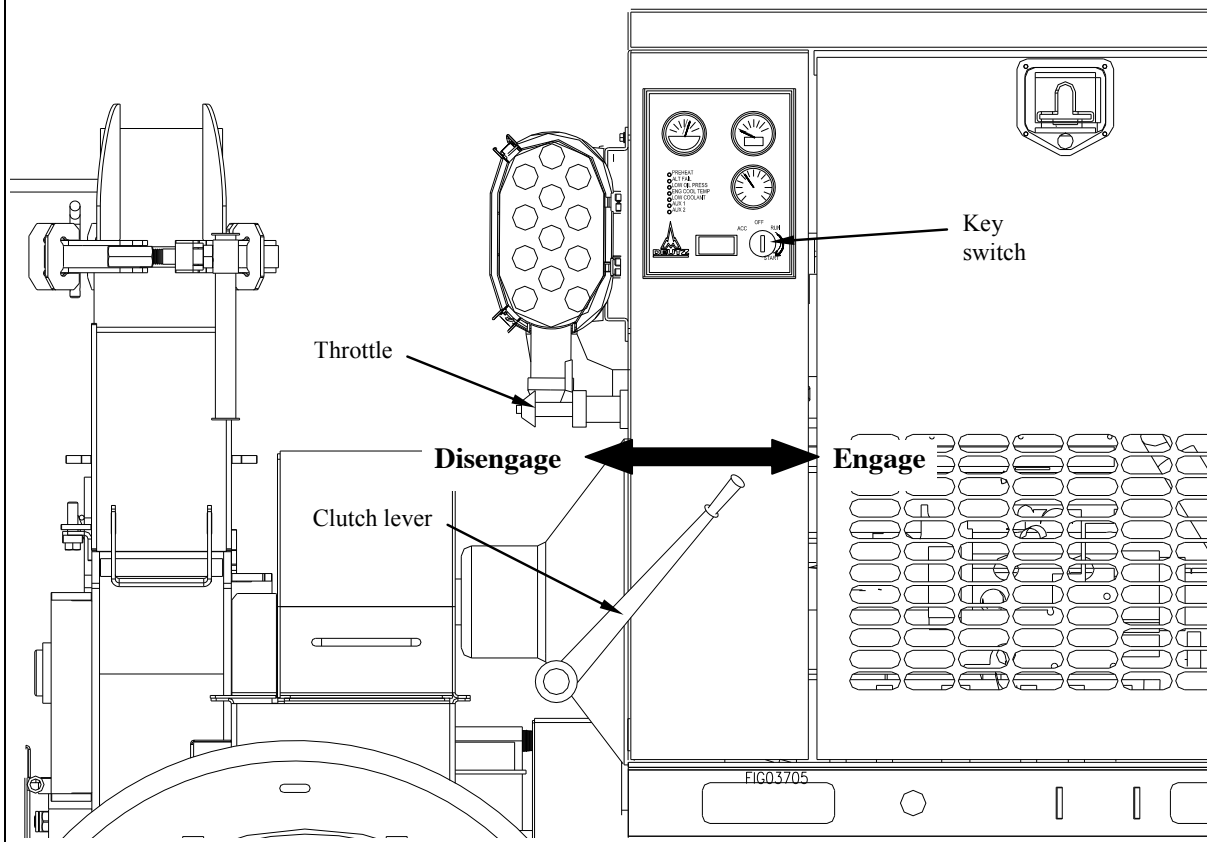
1. Turn throttle clockwise to slowest position.
2. Turn the key switch to RUN, then to the START position until the engine starts, then release.
3. The key will snap back to the RUN position and the engine should continue to run at approximately 800 rpm.

Engage Clutch

1. Grasp clutch lever and pull **SLOWLY** to engage clutch.

Warm-up Checks

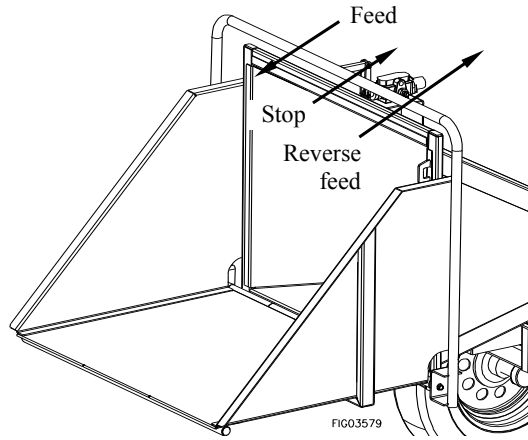
1. Slowly bring the engine throttle up by turning throttle counterclockwise.
2. Listen for any unusual metal to metal sounds as the chipper wheel is rotating.
3. Listen for any belt squealing indicating belt needs to be tightened or replaced.
4. (Unusual sounds may mean a need for repair or cleaning out foreign material stuck in chipper. STOP engine and refer to "Maintenance and Repairs" section of this manual)
5. If you don't hear any unusual sounds, slowly bring engine up to 2700 RPM.



Operation

Testing Safety Bar Control

A push or pull on the bar will change the direction of the hydraulic powered feed roller. **Pull to feed. Push to stop. Push farther to reverse feed.** Test that this bar is working properly.



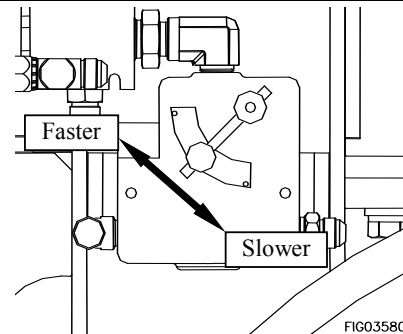
Large objects or body parts can push against the bar as they are drawn into the chipper; the chipper will stop and reverse the feed. This acts as an emergency safety device. However, this bar cannot be used to stop the engine or the chipper's knives.

Normal Operation

Operate the engine with the throttle in the FAST position. Proper chipping requires this fast revolution.

Intake Roller Speed Control

The speed control valve can adjust speeds from 0 to 150 feet per minute. By adjusting roller speeds you can increase or decrease the chip size. Turn the valve counterclockwise (to the right) to slow the in-feed roller speed. Turn the valve clockwise (to the left) to increase the in-feed roller speed.



Note: If chipping large diameter logs, the speed should be turned to the slowest setting.

Automated feed function

The chipper is equipped with an automated feed function. This feature will stop the in-feed roller if the chipper is overloaded and causes the engine to slow. Also, manually slowing the engine below 2300 RPM should cause the feed roller to stop turning. Checking that this function is working will allow you to efficiently utilize your chipper and minimize jamming.

3. Stopping the Engine

- Turn throttle clockwise slowly to decrease engine speed until RPM is at its minimum.
- Disengage clutch.
- Turn key to OFF position.
- Chipper knives will continue to rotate for over a minute.
- Allow the engine to cool for at least 5 minutes before moving to storage or transporting. A hot engine can be a fire hazard.

Operation

4. Feeding Material/ Clearing Jam

Feeding Material

⚠ DANGER: Amputation Hazard

Never place your hands, feet or any part of your body in the chipper hopper, discharge opening, or near any moving part while the machine is running. If a feeding problem should occur, shut the machine down and see Maintenance and Repair” section to address the problem.

⚠ WARNING: Feed brush from the side of the chute

Never stand directly in front of hopper opening. This will reduce the risk of you being caught and dragged into the machine.

⚠ WARNING: Flying Debris Hazard

Stones, chips, and debris can cause serious injury or property damage. Debris can fly 100 feet in any direction out of the chute and bounce off objects and hit operator, bystanders or breakable objects.

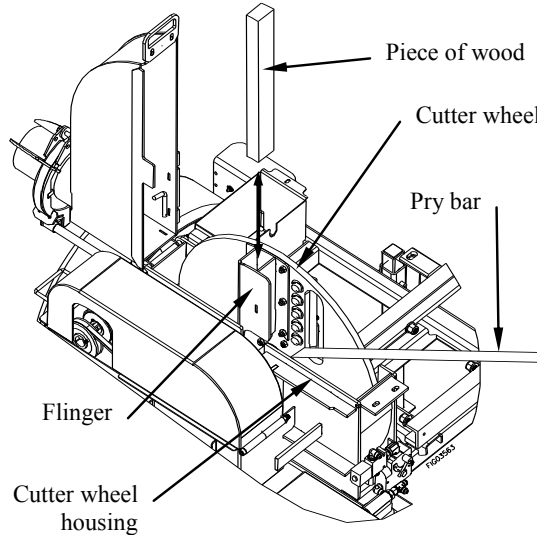
- The chipper is designed to accept wood only.
- Feed branches in butt end first to keep the chipper from getting jammed and to reduce the kickback of material.
- Let go of the material as soon as the feed roller or the knives get hold of it.
- Use a push stick to help feed small pieces and brush through the chipper to keep you at a distance from the machine’s moving parts. Do not push material into the chute with your hands or feet, pitch fork, etc. Lay shorter pieces on top of longer branches and feed them through the machine.
- Collect small materials such as leaves and twigs and put them with the chipped material instead of feeding them through the chipper.
- Do not force material into the chipper. If the machine does not chip well, the chipper knife may need to be sharpened or replaced, or the belts may need to be replaced or tightened.
- Overloading the chipper hopper will cause the rotor speed to decrease. If you hear the engine RPM decreasing, stop feeding material into the hopper until the material already in the machine is chipped and the engine has returned to full speed.
- Never allow an accumulation of processed material to build up in the discharge area as this will prevent proper discharge and can result in kickback from the chipper hopper.

Operation

Clearing Jam

⚠ WARNING: Shut Off Engine to Clear Jam

Before attempting to unclog debris or clear a jam: shut off the engine, disconnect battery cables, remove key, and wait for all moving parts to come to a complete stop.



1. Insert a piece of wood into flinger; push and pull to rotate cutter wheel and loosen blockage.
2. If piece of wood does not break jam, use pry bar to loosen blockage that may be between flingers, cutter wheel and housing

5. Refueling On Site

⚠ WARNING: Static Electric Spark Hazard

A static electric spark can explosively ignite fuel vapor, resulting in a flash fire that could cause serious injury or death. See attached description of Static Electric Spark Hazards.

⚠ WARNING: Hot Engines Can Ignite Fuel

- Turn engine off and allow to cool for at least five minutes before removing fuel cap.
- Remove brush chipper fuel cap.
- Add diesel through the fill opening:
 - Use only an UL listed portable fuel container to transfer fuel to chipper's tank.
 - Follow the safety warning and instructions below for avoiding static electric sparking.
- Clean up fuel spills /splashes immediately.
 - If possible, move the brush chipper away from spilled fuel on the ground.
 - Wipe up spilled fuel. Wait 5 minutes for fuel to evaporate before starting engine.
 - Fuel soaked rags are flammable and should be disposed of properly.
 - If fuel is spilled on your skin or clothes, change clothes and wash skin immediately.
- Replace fuel cap securely before starting engine.
- Store extra fuel in a cool, dry place in an UL listed, tightly sealed container.

Operation

6. Refueling at Service Stations

To avoid static electric sparking while filling the fuel tank at service stations:

- Never fill the chipper's fuel tank directly from the fuel pump without grounding it. The chipper's tank is not grounded and high velocity flow from the pump can cause static electricity build-up and eventual ignition of fuel vapors. Unless the chipper's fuel tank has been grounded, use an approved portable container to transfer fuel to the chipper's tank.
- Never fill a portable fuel container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed. ALWAYS place container on the ground to be filled.
- Keep fuel nozzle in contact with container while filling. Do not use a nozzle lock-open device.
- Use a portable container made of metal or conductive plastic. This is preferred because it dissipates electrical charges to ground more readily.

7. Storing the Brush Chipper

Short Term

- **Cool engine before storage.**
- **Clean the chipper.**
- **Inspect for worn or damaged parts.**
- **Choose a covered storage location.**
- **Prevent accidental starting.**

Additional Long Term Procedures

- **Perform pre-storage maintenance (see below)**
- **Plan on exercising the engine regularly unless the brush chipper is prepared for long-term storage.**

Short Term Storage Procedures

Cool engine	Let engine cool for at least five minutes before storing. A hot engine can be a fire hazard.
Clean chipper	Clean any dirt, debris and other foreign matter from the machine, hopper and discharge chute.
Inspect chipper	Inspect the machine for worn or damaged parts and tighten any nuts or screws that may have become loose.
Choose a storage location	Store the chipper in a location that is: • Clean and dry. • Away from sources of heat, open flames, sparks, or pilot lights, even if the chipper's fuel tank is empty. Residual fuel could ignite. • Away from extreme high or low temperatures. • Covered for extra protection
Remove key and/or battery (Long-Term Storage)	Remove key from starter and secure key in a safe location, or disconnect positive battery terminal from battery in order to ensure the brush chipper cannot be started in a storage location or by untrained persons or children.

Operation

Additional Long Term Storage Procedures

If you have been using your chipper regularly, this is a good time to perform your regular maintenance before storing your unit.

Perform pre-storage maintenance	• Change the oil. • Change the fuel filter. • Clean or replace the air filter. (see engine manual) • Lubricate all grease fittings (see “Maintenance & Repair: Lubrication”). • Check drive belt for wear and chipper knife, bed knife and feed roll blades for nicks and wear (see “Maintenance & Repair”).
Start brush chipper every 4 weeks	The brush chipper should be started regularly. At least every four weeks, start the engine and let it run for 10 to 15 minutes. Monthly exercising of the brush chipper will dry out any moisture that has accumulated. Moisture, old fuel, and dry mechanical parts cause deterioration and hard starting of stored engines.
Prepare engine for long term (seasonal) storage if needed	Refer to your Deutz engine manual for long term storage.
	⚠ WARNING: Fuel fire/explosion hazard
	Fuel is highly flammable and explosive. Drain the fuel into an approved container OUTDOORS and far away from open flame. NEVER store an engine with fuel in the tank indoors or in poorly ventilated spaces where fuel vapor can come in contact with: • static electric sparks • sparks from electric wiring, batteries, or running engines • sources of heat (such as a hot engine or exhaust) • open flames, including pilot lights

Maintenance and Repair

WARNING

ALWAYS shut off the engine, remove key from ignition, make sure the engine is cool, and positive battery terminal from the battery before cleaning, adjusting, or servicing the chipper. Make sure all guards and shields are replaced before using.

Maintenance safety rules	Read and follow these safety rules whenever you will be servicing the chipper: • Turn off chipper. Always turn off brush chipper, remove key from ignition and disconnect positive battery terminal from battery before working on the engine or brush chipper. • Replace guards/shields. Make sure all guards and shields are replaced after servicing the chipper. • Burns. Muffler may be hot even if unit is stopped. Allow unit to cool before servicing. • Repair. Major service, including the installation or replacement of parts, should be performed only by a qualified electrical service technician. Obtain factory approved parts from DOSKO at 1-800-822-0295. • Replacement parts. If a part needs replacement, only use factory approved repair parts. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the brush chipper and will void the warranty. • After servicing. Make sure all tools and wrenches have been removed. Start engine and run chipper at low RPM. Listen for any metal against metal noise or squealing noises from belts. If you should hear any foreign noise stop engine and solve problems. Re-start and slowly bring engine to full RPM and run for 10 minutes to assure that repair was successful.
Engine maintenance	Perform engine maintenance as specified in the engine owner's manual. Engine maintenance items include: • Lubrication • Oil and oil filter changing • Air filter check/replacement • Fuel filter check/replacement • Fuel tank cleaning.
Fuel system leak checks	Inspect the fuel system and check for leaks on a regular basis. Look for: signs of leaks or deterioration, chafed or spongy fuel hose, loose connections, loose or missing fuel hose clamps, damaged fuel tank

Maintenance and Repair

Checking and adjusting belt tension

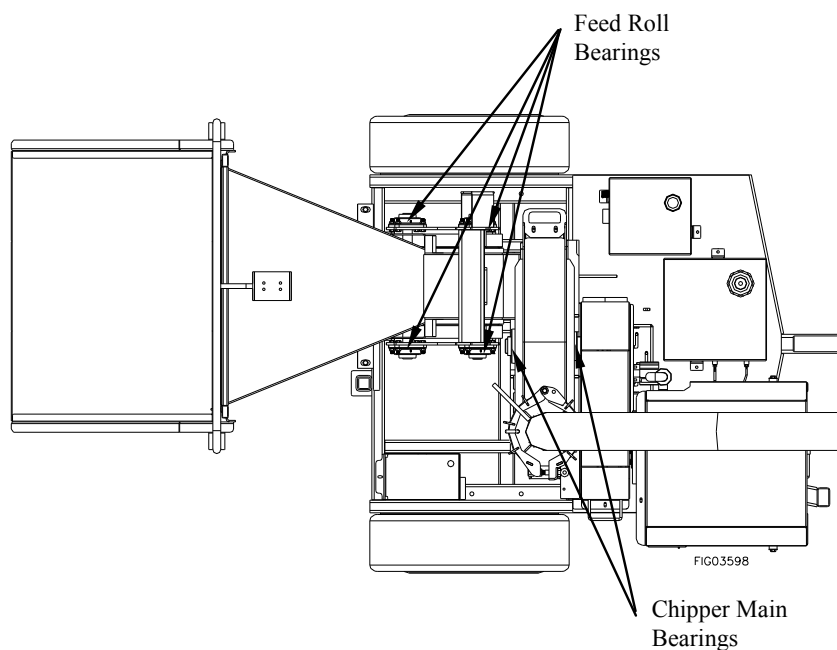
Drive Belts: Check and adjust according to instructions on pg. 27.

Lubrication

Your chipper was greased at the factory. The operator needs to lubricate the chipper main bearings and feed roll bearings periodically. Bearings should be greased weekly or every 10 hours of use.

There are two Chipper Main Bearings (in the front and rear).
There are four Feed Roll Bearings (2 on each side).

Note: Do not over grease. Too much grease will damage bearing seals.
Use EP-2 lithium base grease for bearings.



Maintenance and Repair

1. Feed Roller Blades and Knives

There are two blade systems that are key to your chipper operation. The first is called the feed roller blades. They grasp the incoming material and force it into the chipper cutting blades. The feed roller blades rotate at different speeds depending on how much material they are feeding into the chipper blades.

The second set of blades (or knives) are called the chipper wheel blades. These are mounted on the large spinning wheel which drives the blades (knives) past the incoming material at a high rate of speed and causes the “chipping” action. Routine inspection of the chipper and feed roll blade for sharpness will ensure the chipper is operating at full efficiency. Operating with a worn or damaged knives or blades will cause extreme stress and vibration to the machine and make chipping difficult for the operator.

While the chipper knives are made from the highest grade of chipper steel, which is heat treated and ground to a very sharp edge, their life is relative to what they chip. They may dull the first day or last for months. The life span depends on the amount of dirt and rocks that enter the chipper. Sometimes trees will have nails or wire embedded into the surface.

Knives should be checked for damage before each use. They should be turned or changed as necessary. Dull knives:

- Cause excessive fuel consumption.
- Cause unnecessary stress and strain on the machine.
- Produce poor quality chips.
- Reduce production rate slowing the feed rate.
- Actually wear further and faster.

To check or sharpen the feed roll blades, you will have to gain access to them by **accessing the feed roll assembly**.

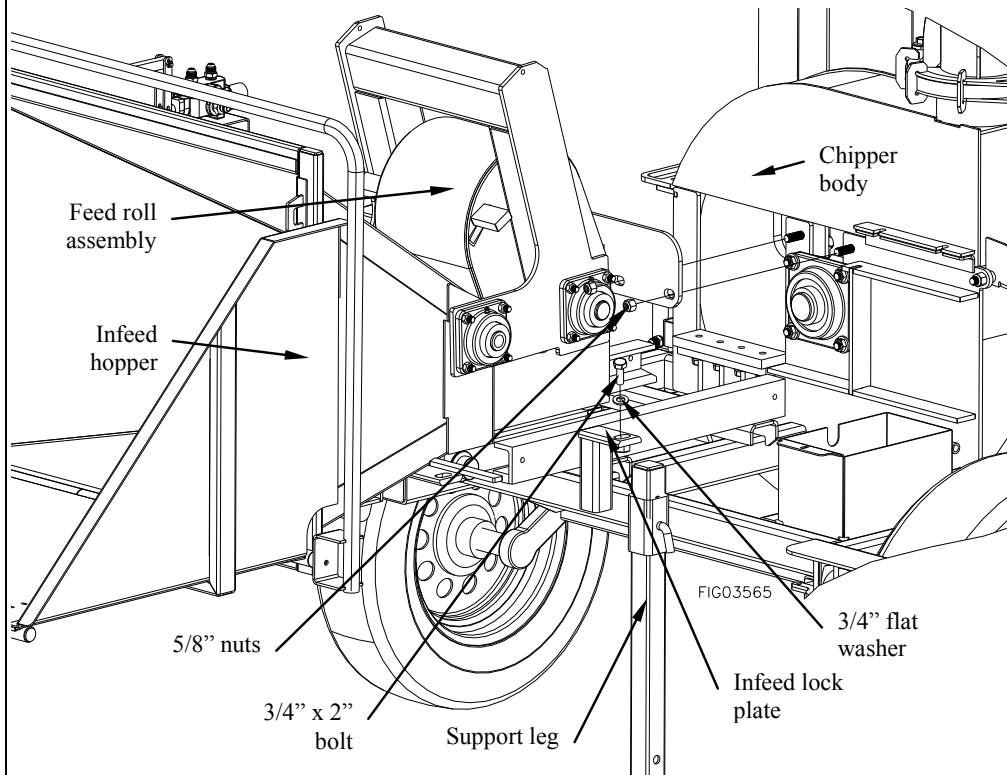
To check, turn or change the chipper wheel knives you will have to **remove the chipper deflector hood**.

Accessing Feed Roll Assembly

Accessing Feed Roll Assembly

- Lower and pin rear support leg. Raise or lower jack until rear support leg makes solid contact with ground. Chock tires.
- Remove (2) 5/8” nuts holding feed roll assembly to the chipper body.
- Remove (2) 3/4” x 2” bolts and (2) 3/4” flat washers on the infeed lock plates, on either side, holding it to the chipper frame.
- Slide the entire in-feed hopper backward, being careful of hoses.
- To close, reverse procedure. Be sure not to pinch hoses.
- Torque 5/8” nuts 112 ft. lbs
- Torque to 3/4” x 2” bolts to 130 ft. lbs

Maintenance and Repair



⚠ WARNING:

Check all chipper bolts and nuts to maintain proper torques. Always tighten bolts to our recommended torque. Refer to the “Bolt Torque Chart” in the Maintenance and Repair section. Do not attempt to operate chipper without doing so.

Sharpening Feed Roll Blades

Sharpen Feed Roll Blades

⚠ WARNING:

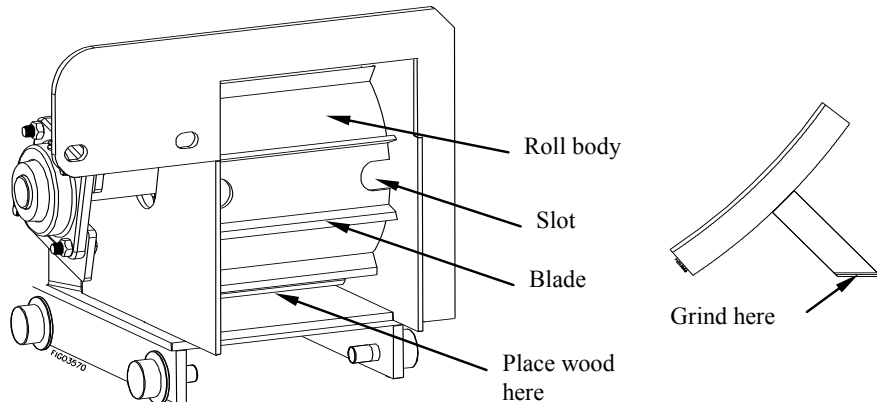
Wear protective equipment such as heavy-duty gloves, long-sleeve shirt, safety glasses and face shield while sharpening blades.

As the feed roll blades become dull they may be sharpened with a small hand grinder without being removed from the machine. To do this:

- Lower and pin rear support leg. Raise or lower jack until rear support leg makes solid contact with ground. Chock tires.
- Open chipper body by rolling away feed roll as described in section “Accessing Feed Roll Assembly”.
- Place a piece of wood under the feed roller to keep it from turning while sharpening blades.
- Grind the angled side of the blade only to a 45° angle, do not grind front face. NOTE: It is extremely important to consistently maintain the 45° angle for proper performance.
- Turn feed roller to get all blades.

Maintenance and Repair

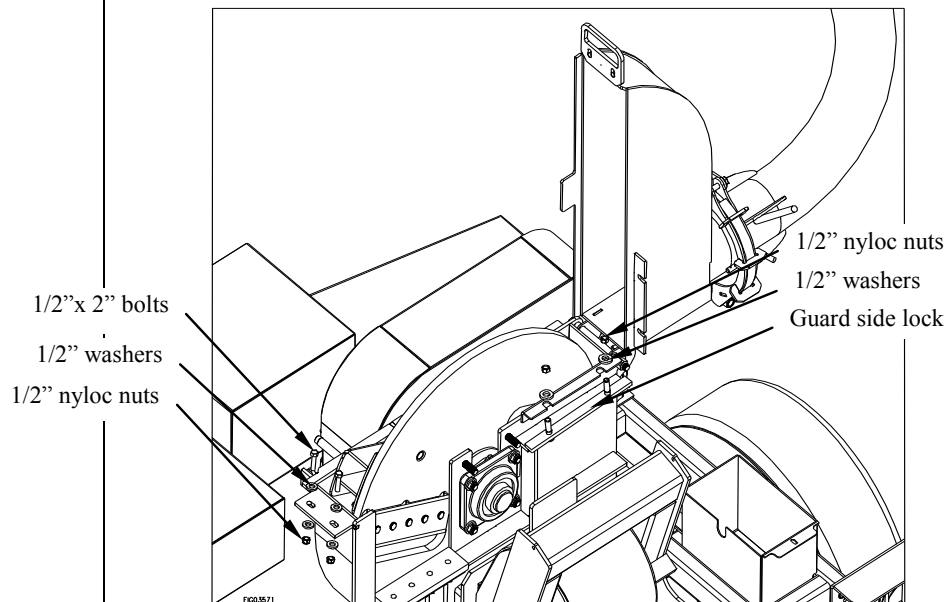
- Inspect feed roll bolts for tightness by looking thru slots in roll body.



Opening Chipper Deflector Hood

Open Chipper Deflector Hood

- This is a two-man operation.
- Lower and pin rear support leg. Raise or lower jack until rear support leg makes solid contact with ground. Chock tires.
- Discharge tube should face forward towards the tongue and be pinned so it will not rotate.
- Remove (2) 1/2" nyloc nuts, (2) 1/2" washers and Guard Side Lock.
- Remove (2) 1/2" x 2" bolts, (4) 1/2" washers and (2) 1/2" nyloc nuts on chipper deflector hood handle.
- One man lifts the handle from the left side, a second man positioned on the right side of the machine catches the chipper deflector hood/discharge tube and pulls it slowly to its stop position.
- To close the deflector hood, reverse the procedure.
- Reinstall bolts and torque to 65 ft. lbs.



Maintenance and Repair

Changing or Turning the Chipper Knives

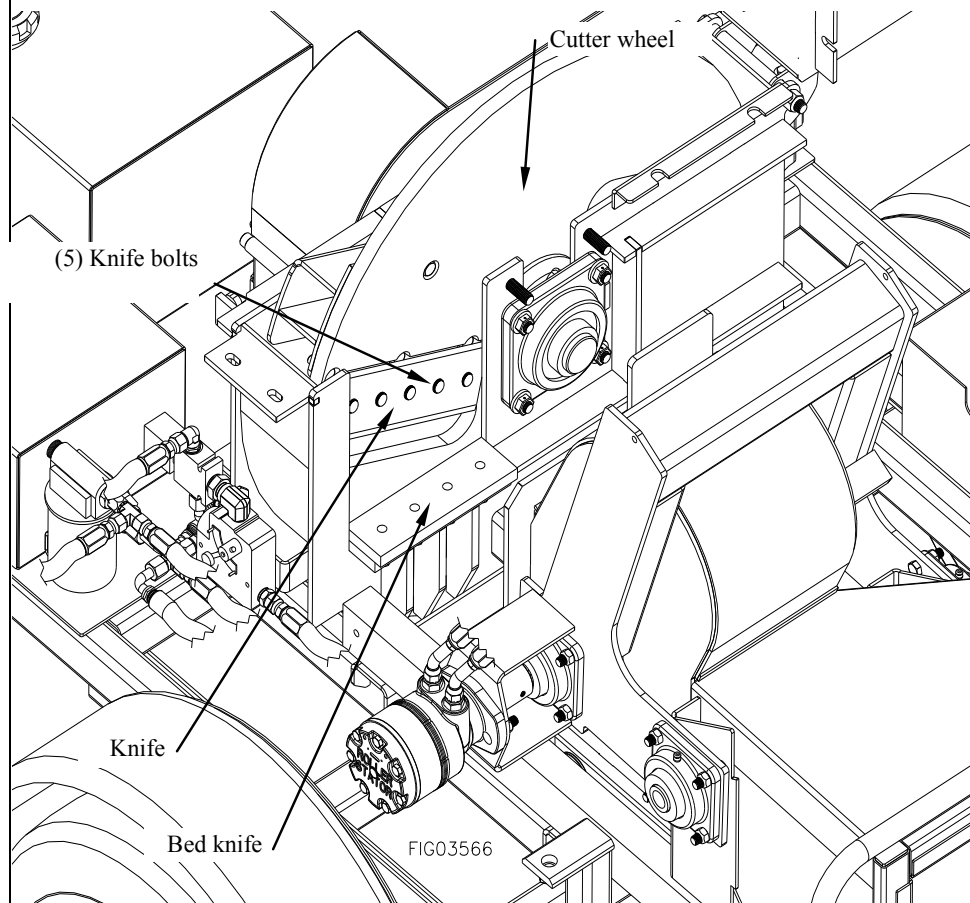
Changing Knives

To turn or change the knives:

⚠ CAUTION:

Wear gloves while changing knives.

- Loosen bolts with 1-1/8" impact or socket wrench.
- Remove first knife.
- Clean knife and knife pockets on disc.
- Turn the knife; or if it has nicks or damage, replace the knife.
- Install all 5 knife bolts before tightening bolts to 130 ft. lbs.
- Repeat the process for the second knife.



Maintenance and Repair

Adjust Bed Knife

After changing or turning knives, they will need to be re-adjusted to the bed knife plate to keep the bed knife properly adjusted for an efficient running chipper. If the gap is not set correctly, you will have excessive vibration when chipping and the knife will seem to be dull.

To adjust the bed knife:

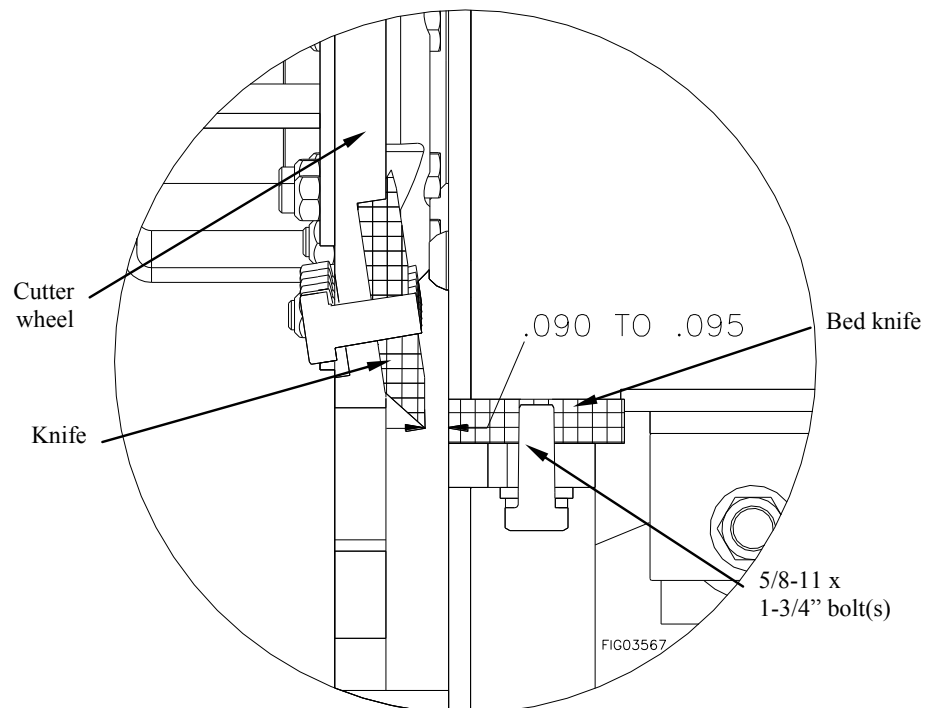
- Loosen bed knife using a impact or socket wrench just enough so it will move but still have a slight resistance.
- You can now slide it up or down (in or out) to achieve the correct gap setting.

Adjust bed knife to proper gap of .090 to .095 inch.

⚠ CAUTION: Adjust both knives

Since knives may vary from one to the other, check each knife gap with a knife gauge. Be sure to adjust to the closest knife.

When adjusted, tighten 5/8-11 x 1-3/4" bed knife bolts, to 112 ft. lbs. torque.

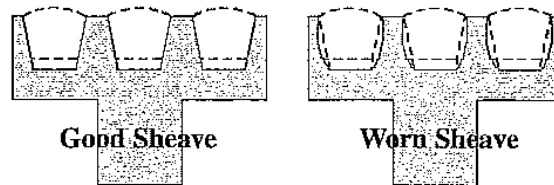


Maintenance and Repair

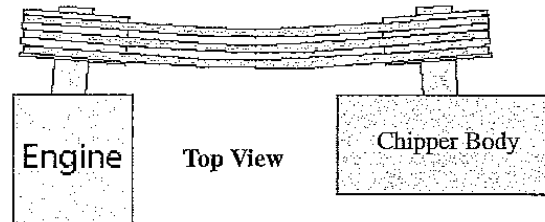
2. Belt and Sheave Care

Proper belt tension and sheave alignment is vital to brush chipper performance. Here are a few problems that can occur when belts and sheaves are not properly maintained or cared for.

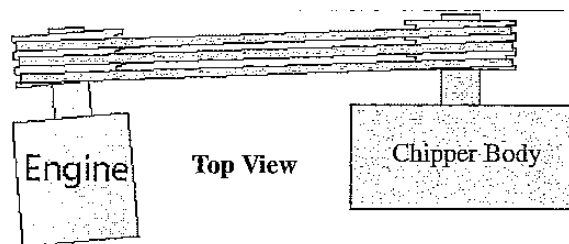
Loose Belt: A loose belt will slip and then glaze over. Once this happens the belt will not transmit power to the flywheel which can cause the chipper to clog and also cause excess sheave wear.



Over-tightened Belt: You can break the crankshaft of the engine or ruin the clutch (if equipped) from too much side load. Too much belt tension can cause premature bearing wear. When the belts are worn out from over-tightening they will only cause the sheaves to wear.



Misaligned Sheaves: When sheaves are not aligned properly the belts will glaze very quickly and slipping will occur. This will also cause the belt to bounce or vibrate causing damage to bearings, clutch (if equipped) and metal stress on the machine.

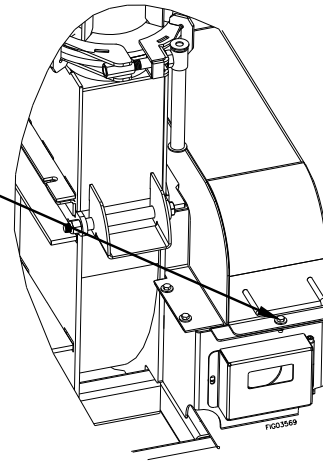


Maintenance and Repair

Chipper Belt Tension Adjustment

Note: Belt tension and alignment are inter-related. Do not adjust one without checking the other.

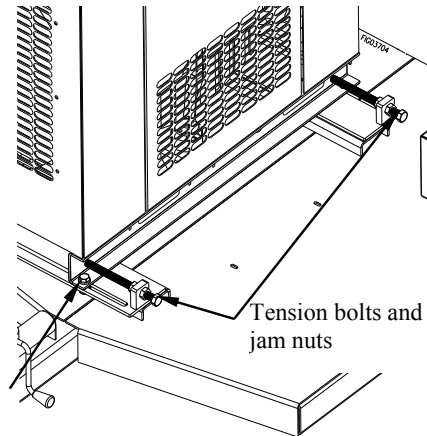
1. Open belt guard.
2. Remove (1) 5/16" x 1" bolt, (2) 5/16" washers, and (1) 5/16" nut.
3. Lift guard to vertical position until it rests against its stop.



4. Loosen all (4) engine mount bolts.
5. Loosen jam nuts on the tension bolts.
6. Turn tension bolts to move engine to the side.

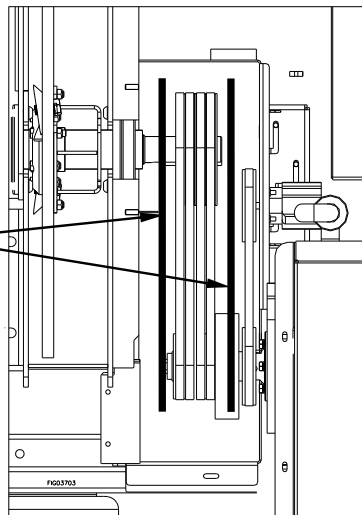
Note: Fuel tank has been removed illustrative purposes only.

Engine mount bolt



Note: Proper alignment is for the front and back of both sheaves (all 4 faces) to be in a straight line. Use a long straight edge to check alignment.

Straight edges



Maintenance and Repair

7. Check for proper belt tension (10.5lb force results in 0.25" deflection) using a belt tension gauge.
8. When belt tension is proper, retighten nut on tension bolt, and retighten engine mount nuts and bolts to 112 ft. lbs. torque.
9. Close belt guard.

⚠ WARNING:

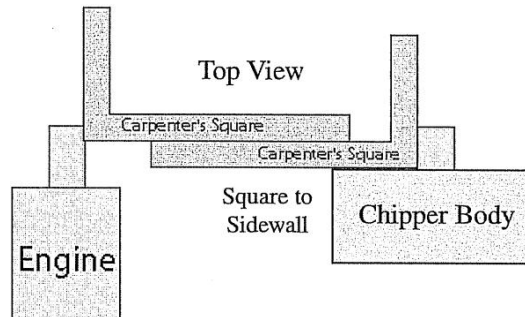
Do not operate the machine without making sure all guards are in place after servicing.

Note: New belts require a “break-in” period of approximately 2 hours. Readjustment may be necessary after “break-in.”

Note: Use only factory recommended belts. Contact your DOSKO dealer.

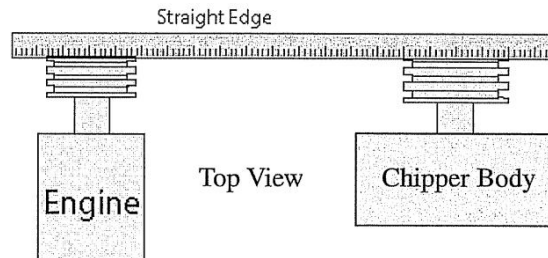
Sheave Installation & Alignment

Before installing sheaves, make sure the chipper shaft and engine shaft are clean and square or parallel to each other. This can be done by using two large contractor’s squares.



Assemble bushings into sheaves by leaving them loose, then slide them on the shafts and install the key. Be sure to consider belt guard and cover clearance.

Slide the sheaves on and off the shafts of the engine and chipper body as needed to make sure they are in line. Use a long straight edge to align them with each other.

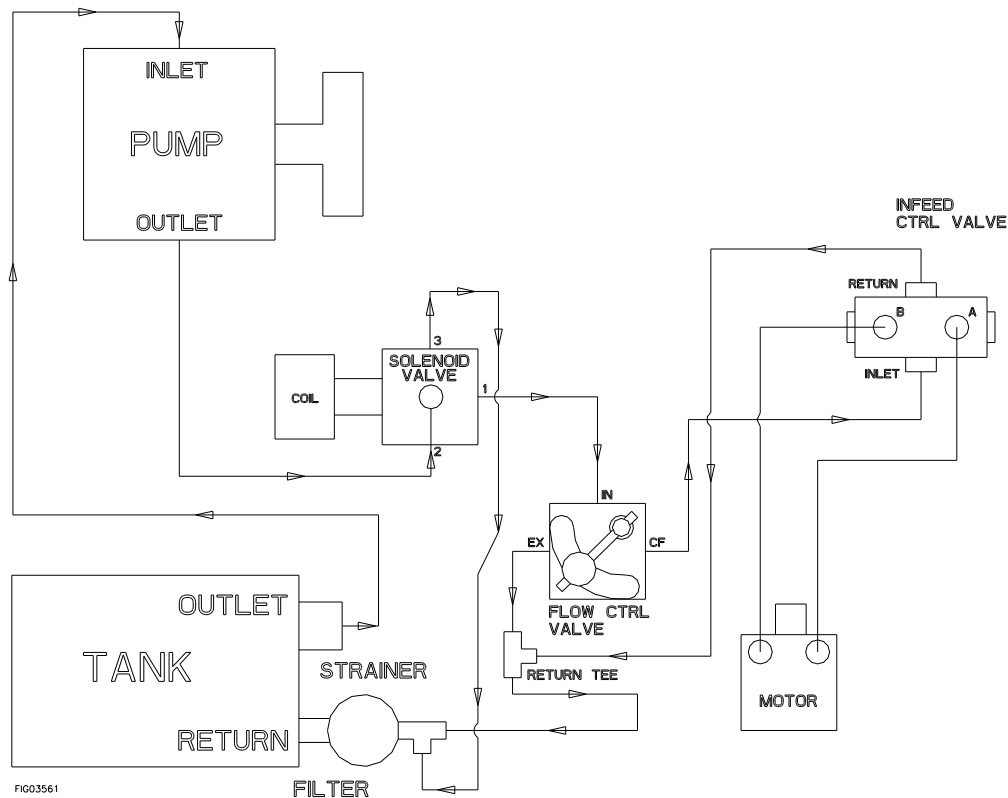


Tighten all setscrews evenly; chipper and engine sheave bushings should be torqued according to the chart on page 33.

Tighten belts keeping sheaves properly aligned.

Maintenance and Repair

3. Hydraulics



The safety control bar is connected to the direction control valve causing the feed roll to turn forward, neutral or reverse.

The speed control valve is located next to the hydraulic tank.

Hydraulic Oil

Before opening the filler cap, wipe the top of the tank clean. Keep hydraulic oil level within 2 inches from the top. Do not overfill.

⚠ WARNING: Burn hazard

Never open oil fill port while engine is running. Hot oil can spray over face and body.

- Use a good grade anti-wear hydraulic fluid equivalent to ISO-32. Check with the oil manufacturer for severe hot or severe cold oil recommendations.
- Keep your hydraulic system clean.
- Replace oil yearly or immediately if it becomes contaminated and thoroughly clean the tank.
- Clean filter screen.
- Filter
- The spin-on type hydraulic filter must be changed after the first ten (10) hours of use, this allows for the initial system cleanout.
- Then change the filter after every 250 hours of use.

Maintenance and Repair

Pump	The hydraulic pump is driven directly from the engine so that the system is continuously under pressure when the engine is running.
Pressure Relief Valve	The system pressure is set for 2500 psi.  CAUTION: Do not raise the pressure relief beyond 2500 psi. Doing so would damage the motors.

4. Automated Feed System

The automated feed system monitors the engine shaft speed and automatically stops the feed roller before clogging occurs. The automated feed system will increase bearing, belt, and clutch life while reducing engine stress.

Normal Operation

- **ENGINE:** Bring the engine speed up slowly to operating speed of 2700 RPM. The feed roller will not turn until the engine exceeds 2400 RPM, then the feed roller will start automatically.
- The automated feed is always on, and in operation. The feed rollers will not turn if the chipper is not turning at proper speed.
- The automated feed may be by-passed by removing its fuse. If a failure occurs, you may want to do this. Chipping can continue; however the operator must monitor the material intake by using the forward, neutral, reverse bar located at the back of the hopper.

Maintenance and Repair

5. Maintenance Schedule

Make copies of the abbreviated check list

DAILY					
	Checked			Checked	
	Okay	Serviced		Okay	Serviced
1. Engine Oil	☐	☐	5. Air Cleaner	☐	☐
2. Chipper Belt Tension	☐	☐	6. Fuel Level	☐	☐
3. Condition of Knives	☐	☐	7. Hydraulic Oil Level	☐	☐
4. Radiator Screen	☐	☐			
Serviced By: _____			Date _____		
WEEKLY					
	Checked			Checked	
	Okay	Serviced		Okay	Serviced
1. Bed Knife Adjustment	☐	☐	DO NOT OVER GREASE		
2. Check Tail Lights & Brakes	☐	☐	5. Grease Chipper Bearings (2)	☐	☐
3. Tires and Lug Nuts	☐	☐	6. Grease Feed Roll Bearing (4)	☐	☐
4. Check for Loose Nuts, Bolts	☐	☐	7. Check Feed Roll Motor Couplings	☐	☐
Serviced By: _____			Date _____		
MONTHLY					
	Checked			Checked	
	Okay	Serviced		Okay	Serviced
1. Check Entire Hydraulic System for function & leaks	☐	☐	4. Check Swivel Clamp	☐	☐
2. Check Feed Roll Blades	☐	☐	5. Check Total hours for Engine Oil Change	☐	☐
3. Check Discharge Deflector	☐	☐	6. Check Total Hours for Hydraulic Oil Filter Change	☐	☐
Serviced By: _____			Date _____		

IMPORTANT:

If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the chipper.

**Contact DOSKO Customer Service at 1-800-822-0295
for any questions, problems, or parts orders.**

Maintenance and Repair

6. Bolt Torque Chart

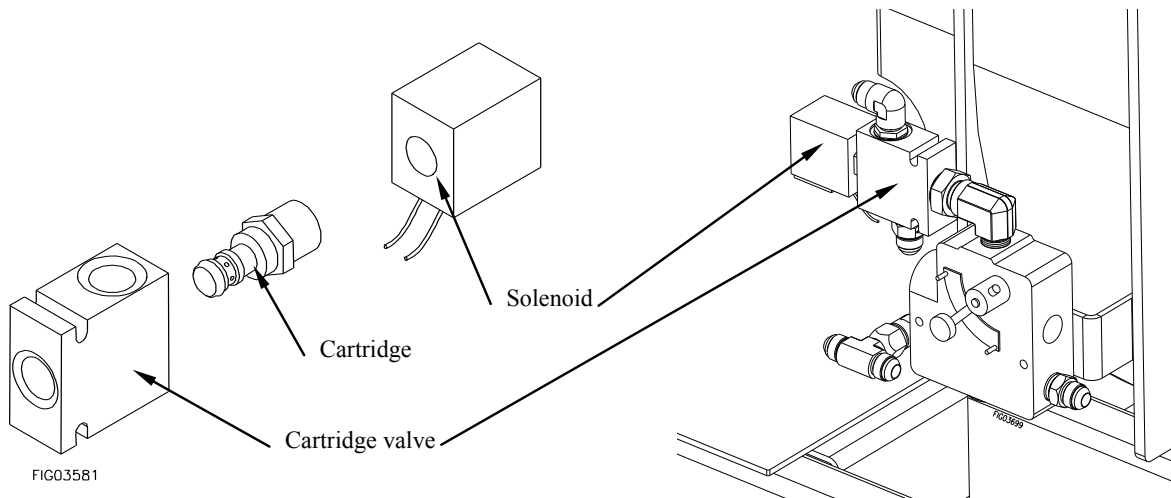
Bolt Size	Location	Bolt Grade	Torque, ft lbs.
3/4-10 NC	Roll Open Feed Roller	5	130
3/4-16 NF	Knife Bolts (5 each)	8	130
5/8-11 NC	Adjust Hitch to Tongue	8	112
5/8-11 NC	Feed Roll Shaft Bearings	5	112
5/8-11	Bed Knife (4 each)	5	112
1/2-20 NF	Wheel Lug Nuts	8	100
1/2-13 NC	Engine Hold Down Disks, Fan Blades	8	80
1/2-13 NC	Covers	5	80
3/8-16 NC	Hyd. Pump Mount & Fenders	5	37
5/16-18 NC	Flanges & Covers	5	20
5/8 Set Screw	Taper Bushing		67
1/2 Set Screw	Taper Bushing		36
7/16 Set Screw	Taper Bushing		23
3/8 Set Screw	Taper Bushing		15

Note: These values are based on clean, dry threads

Maintenance and Repair

7. Hydraulics Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Hydraulic oil hot or system running slow.	1. Low oil level.	Fill.
	2. Dirty oil filter.	Replace.
	3. Feed roll jammed.	Open roll away feel roll and clean.
	4. Damaged hose.	Replace.
	5. Pressure relief valve stuck open.	Call Dosko Customer Service @ 1-800-822-0295.
	6. Worn pump.	Call Dosko Customer Service @ 1-800-822-0295.
	7. Wrong hydraulic oil.	Clean and replace.
Feed roller turns slow or not at all.	1. Plugged suction line screen.	Clean.
	2. Pump belt slipping.	Tighten or replace.
	3. Feed control valve worn or not shifting properly.	Repair or replace.
	4. Plugged cartridge valve.	See below.
	5. Automated feed stopping feed roller.	See next page.



Suspect plugged cartridge valve.	1. Follow standard safety procedures: Always remove key from engine ignition and remove positive battery terminal from battery.
	2. Remove solenoid.
	3. Remove cartridge.
	4. Check for debris and wash cartridge with solvent (brake cleaner).
	5. Reassemble.

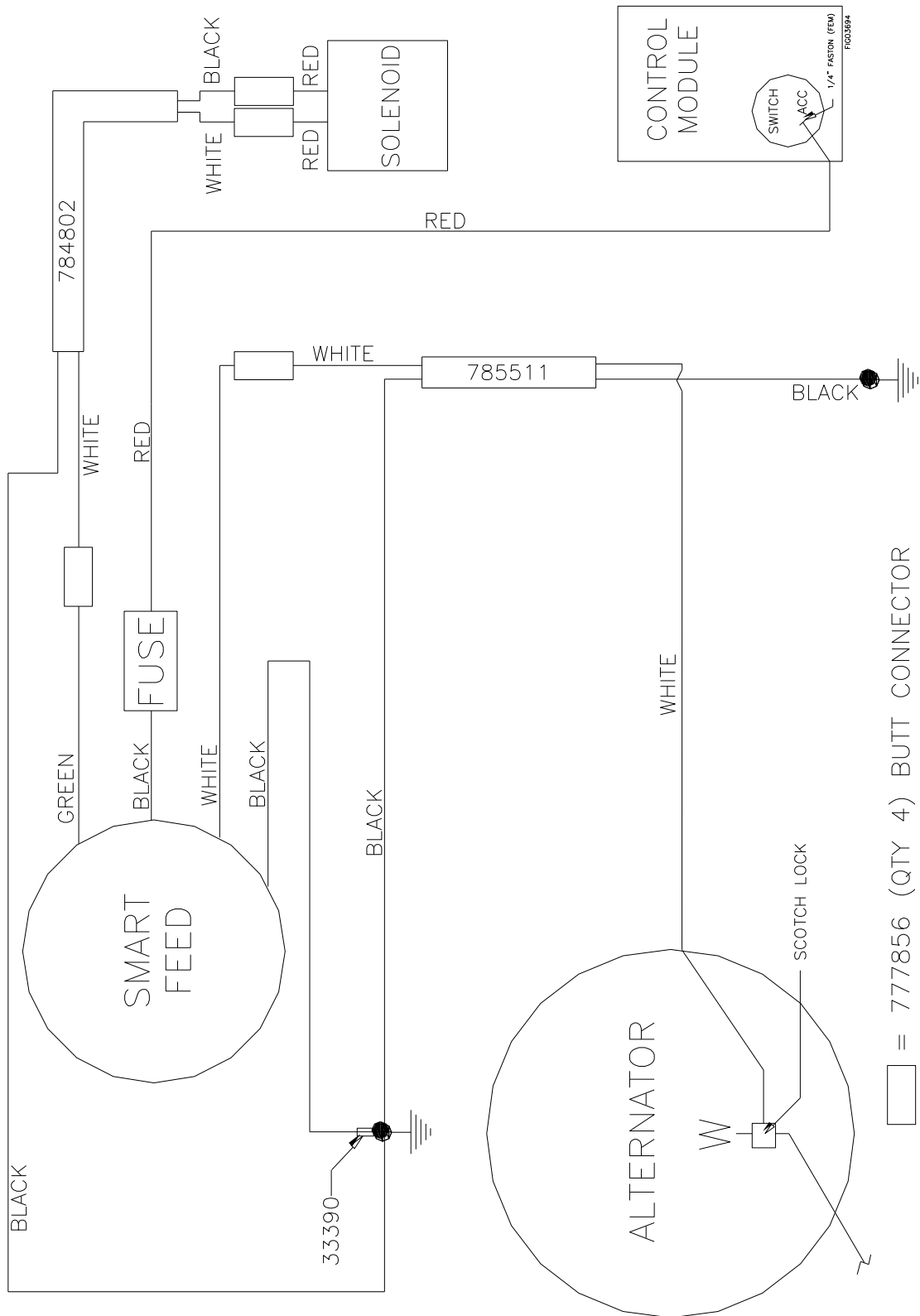
Maintenance and Repair

8. Automated Feed System Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Feed rollers will not turn.	1. No power to automated feed module	Check for loose wiring connections or blown fuse.
	2. Chipper not running at full speed	Set engine at 3600 RPM. (Use separate tach to check RPM)
	3. Forward/reverse feed control valve in neutral position	Set in forward direction (pull out).
	4. Sensor dirty	Clean sensor, ensuring correct spacing.
	5. Sensor out of adjustment	Set sensor to .015" from engine flywheel. See below
Automated feed will not operate – feed rollers keep turning.	1. Fuse blown	Replace fuse.
	2. Check for power to automated feed module	Measure 12 volts.
	3. Coil on cartridge valve not operating	Check for 12 volts at coil at full RPM. If power is present, replace coil.
	4. Wiring is damaged.	Replace

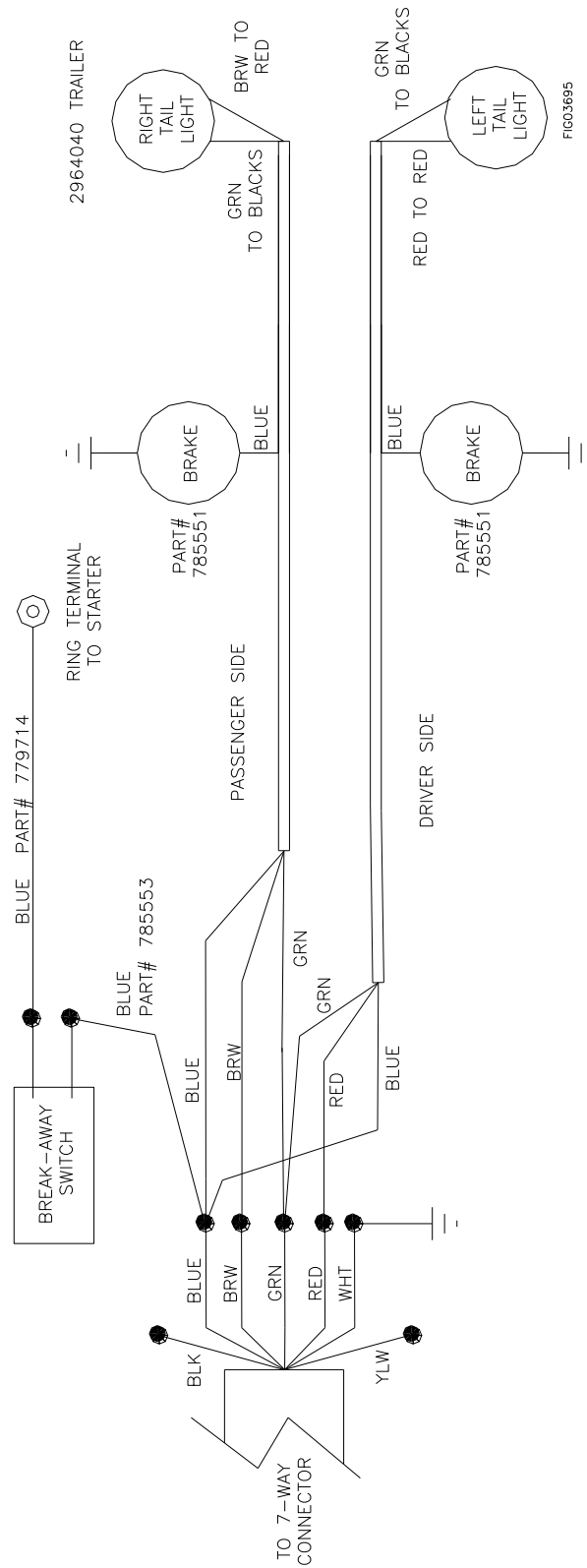
Maintenance and Repair

Automated Feed System Wiring Diagram



Maintenance and Repair

9. Trailer Wiring Diagram



Specifications

TRAILER AND FRAME	
Frame	2" x 4" rectangle tube
Sheet Decking	3/16" steel plate
Jack Stand	2,000-lb capacity
Hitch	2"
Tongue	4" x 4" square tube
Safety Cables	7000 lbs. Class 4
Axle	5000 lbs., rubber torsion suspension
Tires	15", load range D
Lights	Protected unitized 12 volts running, stop, turning, and license
Brakes	Electrical
Fenders	Removable 10 gauge complete with inner wall
Rear Stabilizer Leg	Adjustable
Fuel tank	22 gallon
Belt Guard	10 gauge material hinged for easy inspection
Belts	(4) Single groove belts
Battery Box	Lockable hinged cover
Width	78" outside fenders
Length	194" with the feed table in the opened position
Height	101" to the top of the deflector
Weight	4160 lbs.

ENGINE	
Make / Model	Deutz TD2011
Horsepower	87
Type of Fuel	Diesel – refer to your engine owner's manual for specific types
Cylinders	4
Bore and Stroke	96mm (3.8 in), 125mm (4.9 in)
Displacement	3.62 liter
Cooling medium	External water cooling

DISCHARGE CHUTE	
Swivel Ring	360° rotation, locking clamp for towing
Discharge Tube	Round, 6" diameter, 32" bend radius
Discharge Deflector	Adjustable from straight to 45° down
Adjustment Handle	Easy reach from ground

Specifications

CHIPPER HOUSING AND FLYWHEEL ASSEMBLY

Capacity	10" round wood, chipper opening 10" high x 10" wide
Side Walls	3/8" thick lower half through bearing support, 1/4" top half
Belly Band	1/4" thick
Shaft	3" diameter with integral bearing stops and hub
Cutter Wheel	Machined 32" diameter wheel, 1.5" thick
Knives	Two (2) 5/8" thick x 4" wide x 11" long threaded
Fan Blades	1/4" thick with cuff to hold cuttings
Bearings, Shaft	2-1/4" flanged SCM ball bearings
Bed Knife	4-sided (3/4" thick x 3" wide)

UPPER FEED ROLL

Housing	Rolls open for service of knives, bed knife, and feed roller
Housing Wall	1/4" plate
Housing Floor	3/8" plate
Feed Roller	12" diameter x 10" wide with 10 blades that can be sharpened.
Bearings, Shaft	1-1/2" diameter flanged ball bearings

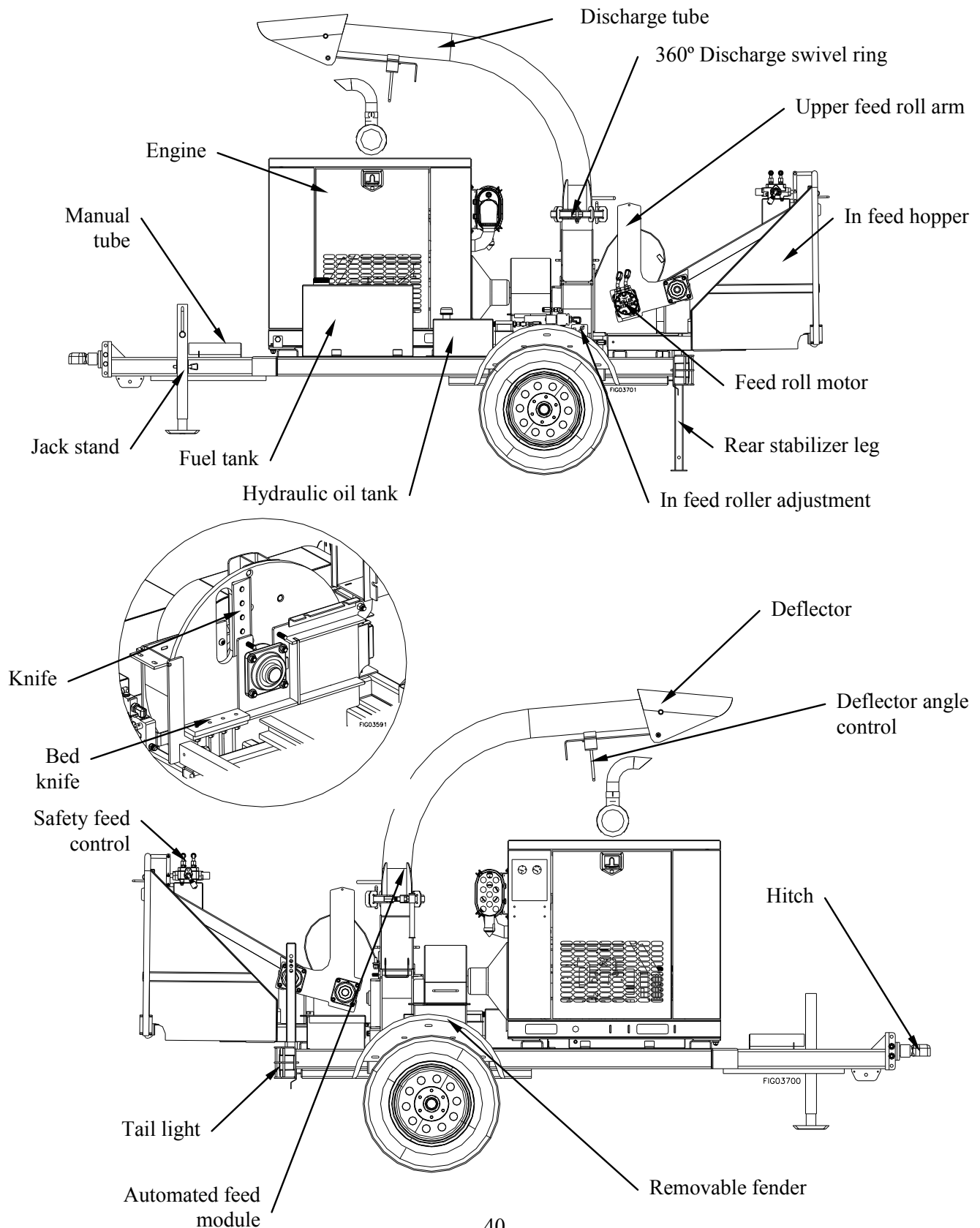
INFEED TABLE AND HOPPER

Hopper Material	10 gauge with reinforced bottom corner
Table Hinge	1" diameter, .12" wall hinge tube
Table Size	30" deep x 38" wide
Control Bar	1-1/4" diameter tube, directly connected to valve

HYDRAULIC SYSTEM

Pump	5.7 GPM drive by engine, system pressure – 2500 PSI
Motor, Upper	28 cubic inch at 11,269 in. lbs. torque
Control Valve	Mounted at top of the hopper with forward, neutral, reverse
Speed Control Valve	Variable speed from 0-150 fpm feed rate
Oil Tank	7 gallon with suction strainer
Filter	Cartridge type

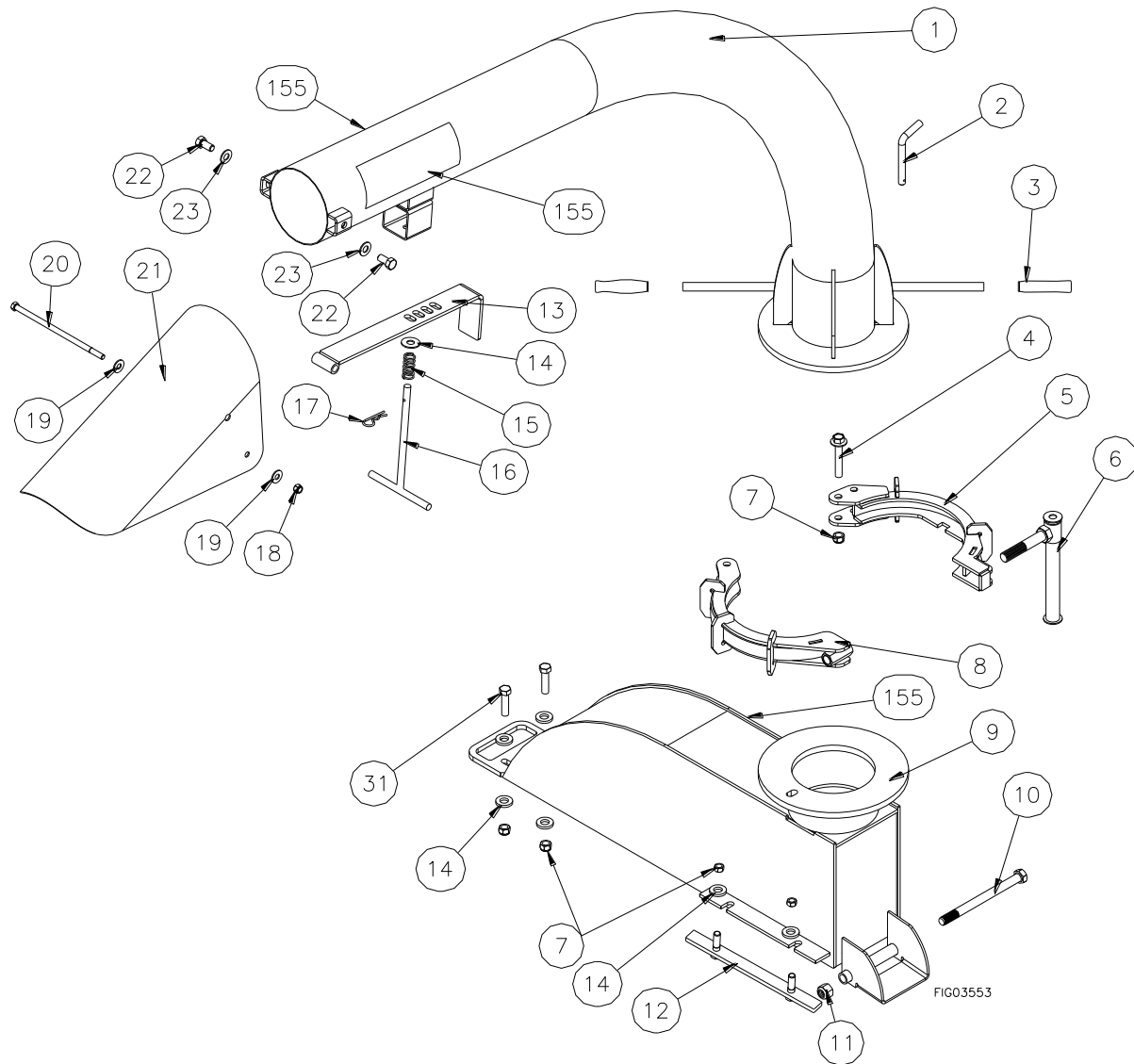
Machine Component Identification



Machine Component Identification

- **360° Discharge swivel ring** – Loosen to swing discharge chute in any direction. Tighten before chipping.
- **Bed knife** – Four sided, adjustable
- **Deflector** – Adjusts to control chip discharge from straight out to 45° down.
- **Deflector angle control** – Moves deflector for chip discharge.
- **Discharge tube** – Carries chipped material from cutting chamber to discharge outlet.
- **Engine** – Diesel engine operates at 2700 RPM.
- **Feed roll motor** – Turns infeed roller
- **Fuel tank** – 22 gallon capacity. Never fill directly from a fuel pump.
- **Hitch** – Fits 2” ball.
- **Hydraulic oil tank** - 7 gallon capacity.
- **In feed hopper** - Brush enters machine here.
- **In-feed Roller Adjustment** – Adjustable from 0-150 feet per second.
- **Jack stand** – Raise or lower as required to keep chipper level during operation.
- **Knives** – Reversible, through-hardened steel
- **Manual Tube** – Provides an on product location to store the owner’s manual.
- **Rear stabilizer leg** – Lower before chipping or maintenance procedures.
- **Removable fender** – Replaceable if damaged.
- **Safety feed control** – Pull to feed material into the knives, push to stop. Push further to reverse feed.
- **Automated feed system** - Monitors engine speed. Stops infeed roller if engine RPM drops below a preset value to prevent jams.
- **Tail light** – Protected; running, stop, turning, and license.
- **Upper feed roll arm** – Pivots to allow 10” diameter maximum logs.

Parts Explosions - Discharge Assembly - Rev F



Item	Part #	Description	Qty
1	785482	Discharge tube	1
2	785537	1/2" x 3" hitch pin	1
3	778459	Handle grip	2
4	82118	1/2" x 3" HHSF	1
5	785160	Clamp side 2	1
6	784313	Locking collar bolt	1
7	82037	1/2" nyloc nut	5
8	785158	Clamp side 1	1
9	785154	Cutting wheel guard	1
10	82333	5/8"-11 x 8" HHCS	1
11	82332	5/8"-11 nyloc nut	1
12	785156	Guard side lock	1

Item	Part #	Description	Qty
13	785480	Deflector adjustment	1
14	82122	1/2" USS flat washer	3
15	783539	Spring	1
16	783605	T-Handle	1
17	30312	Bridge pin	1
18	82027	3/8" nyloc nut	1
19	82028	3/8" USS flat washer	2
20	82326	3/8" x 9" HHCS	1
21	783600	Deflector/Chipper hood	1
22	82325	1/2"-13 x 1" HHCS	2
23	82038	1/2" SAE flat washer	2
31	82327	1/2"-13 x 2" HHCS	2
155	783543	Dosko decal	3

Parts Explosions - Cutter Wheel Assembly - Rev F

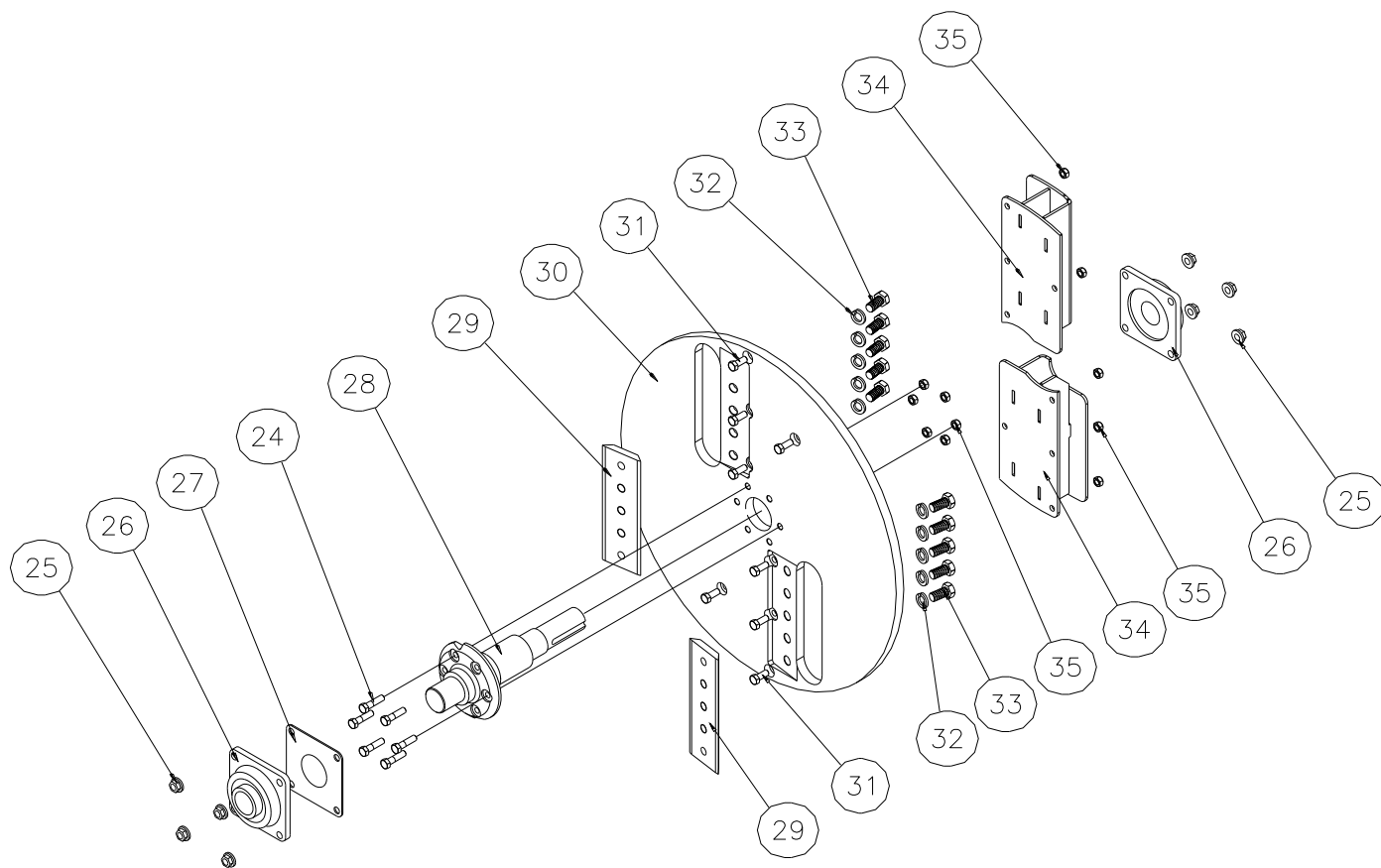
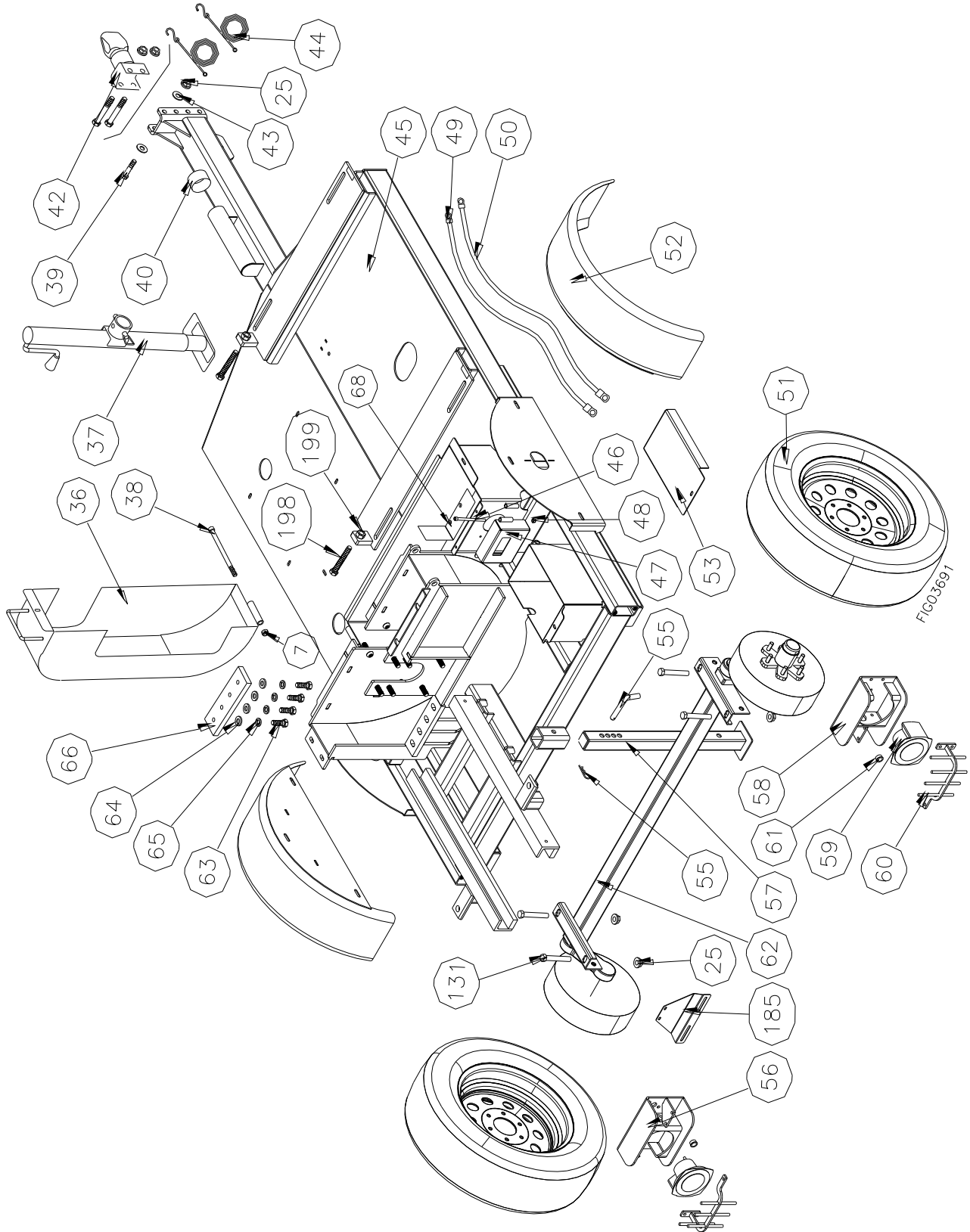


FIG03555

Item	Part #	Description	Qty
24	82388	1/2" x 2-3/4" HHCS	6
25	82288	5/8" Class G flange nut	8
26	785905	2-1/4", 4 bolt flange bearing	2
27	785898	Spacer, flange bearing	1
28	783609	Shaft	1
29	783608	Cutting knife	2
30	785828	Cutting wheel	1
31	82327	1/2"-13 x 2" HHCS	8
32	82041	3/4" Split lock washer	10
33	82389	3/4"-16 x 1-3/4" HHCS, GR 8	10
34	785417	Flinger	2
35	82249	1/2" Class C nut	14

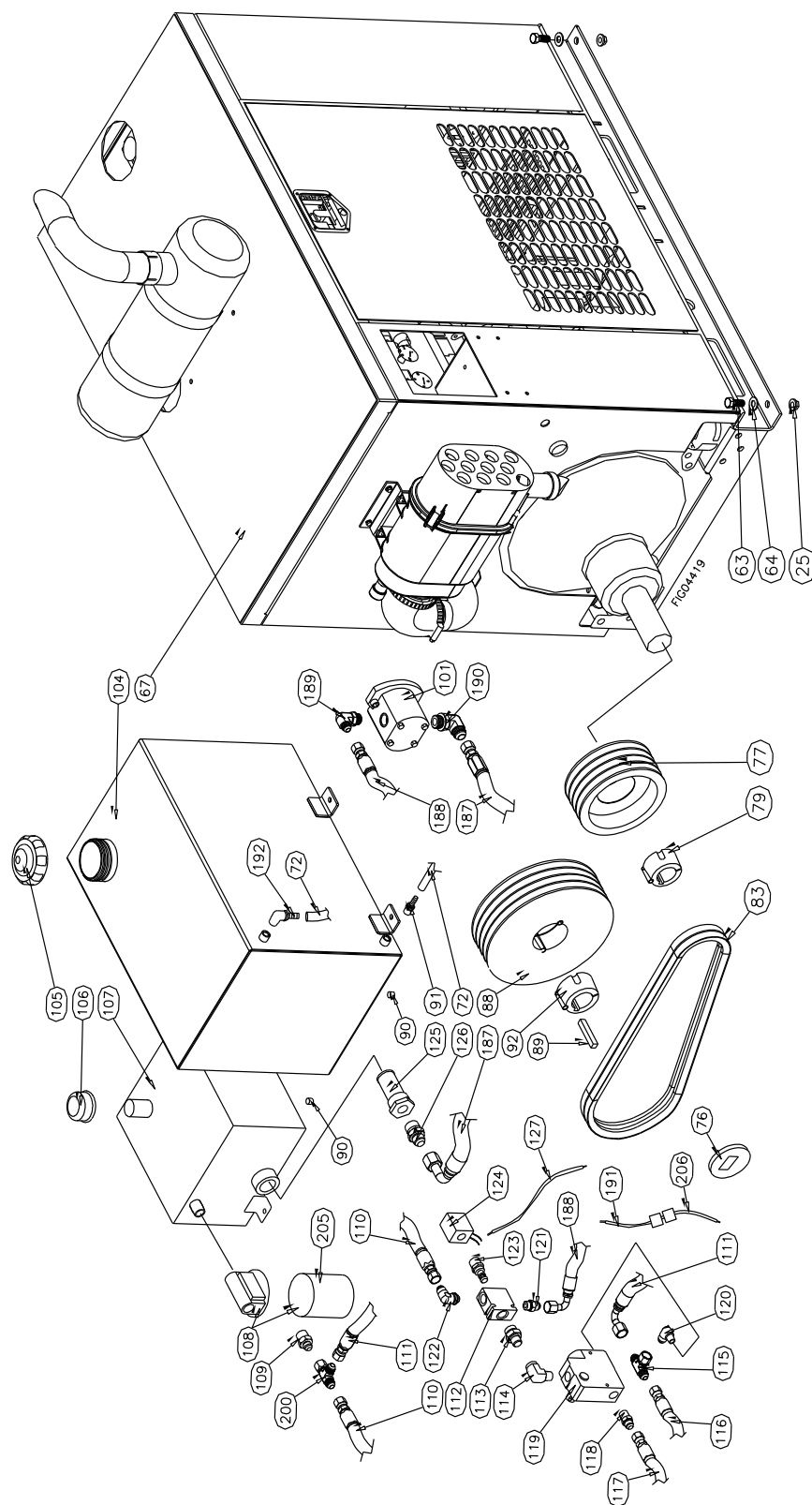
Parts Explosions - Trailer Assembly - Rev F



Parts Explosions - Trailer Assembly - Rev F

Item	Part #	Description	Qty
7	82037	1/2"-13 nyloc nut	2
25	82288	5/8"-11 Class G flange nut	4
36	785140	Belt guard cover	1
37	783897	Jack	1
38	82340	1/2"-13 x 8" Socket head CS	1
39	82352	5/8"-11 x 2" Button head CS	1
40	783815	2.5" x 1.5" black cap, vinyl	1
42	779702	Ball coupler, includes fasteners	1
43	82286	5/8" USS flat washer	2
44	779542	Safety cable (pair)	1
45	785904	Trailer	1
46	82356	5/16"-18 x 4.5" SHCS	1
47	785152	Automated feed module cover	1
48	82020	5/16" nyloc nut	1
49	783938	Battery cable, positive	1
50	783937	Battery cable, negative	1
51	785498	Wheel	2
52	783575	Fender	2
53	785174	Battery box lid	1
55	37459	5/8" bent hitch pin w/ bridge pin	1
56	789555	Left taillight mount	1
57	785176	Leg	1
58	789556	Right taillight mount	1
59	789590	Tail light kit	1
60	789558	Taillight cage	2
61	36290	Bushing	2
62	785197	Torsion axle, 5000lbs	1
63	82351	5/8"-11 x 1.75" HHCS	4
64	82350	5/8" SUW washer	4
65	82127	5/8" split lock washer	4
66	783760	Bed knife	1
68	785540	Belt guard patch plate	1
131	82338	5/8" x 3" HHCS	4
185	785562	License plate bracket	1
198	82387	3/4" x 8" HHSF (tension bolt)	2
199	82040	3/4"-10 hex nut (tension nut)	2
Personal Protection Equipment (not shown):			
n/a	174630	Reusable corded earplugs	1
	174653	Face shield	1
	174690	Safety eyewear	1
	8503	Safety gloves	1

Parts Explosions - Hydraulic / Drive System - Rev F

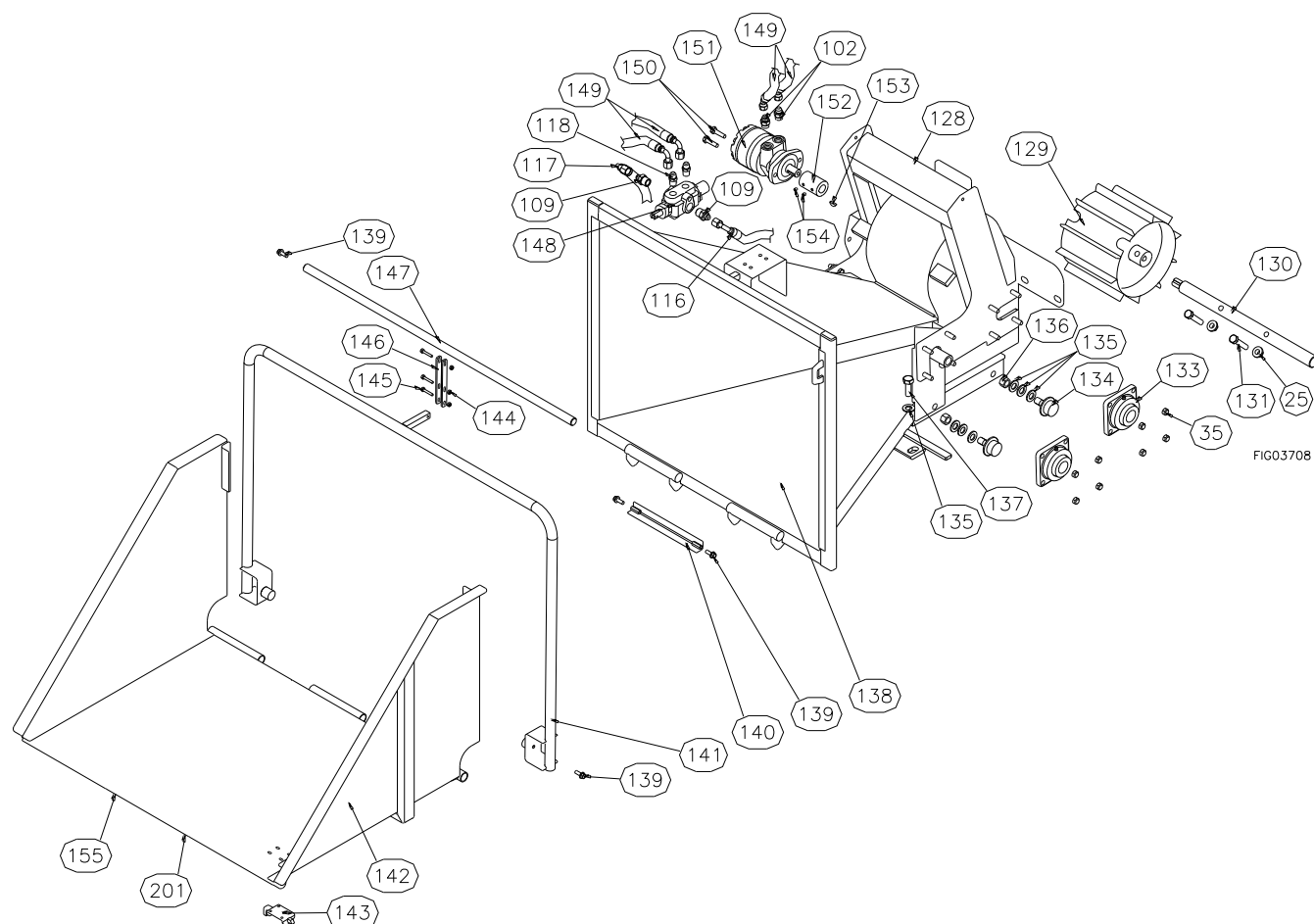


Parts Explosions - Hydraulic / Drive System - Rev F

Item	Part #	Description	Qty
25	82288	5/8" Class G flange nut	4
63	82351	5/8"-11 x 1-3/4" HHCS	4
64	82350	5/8" SUW washer	4
67	785289	Deutz TD2011, 87 hp diesel engine	1
72	777345	1/4" Fuel line (51" supply & 69" return)	10 ft
76	788817	Automated feed module	1
77	785415	Engine sheave	1
79	785414	Engine bushing, 2-1/4"	1
83	785412	BX58 belt	4
88	785413	Cutting wheel sheave	1
89	783740	1/2" x 1/2" x 3" key	1
90	777838	Hex plug	2
91	777340	1/4" Hose barb	1
92	784900	2" Cutting wheel bushing	1
101	785351	Hydraulic pump	1
104	785342	Diesel tank	1
105	785514	Fuel cap	1
106	405A	Breather cap	1
107	785150	Hydraulic tank	1
108	4020	20 GPM capacity filter assembly	1
109	783836	3/4" MPT x 3/4" JIC straight fitting	1
110	783852	1/2"x19" hose, 3/4"JIC x 3/4"JIC fitting	1
111	783853	1/2"x 24" hose, 3/4"JIC x 3/4" JIC90 fitting	4

Item	Part #	Description	Qty
112	783842	Flow valve body	1
113	783835	3/4" O-ring x 1/2" MPT straight fitting	1
114	5027	1/2" MPT x 1/2" FPT elbow	1
115	783832	3/4"JIC swivel run tee fitting	1
116	783851	1/2" x 86.5" hose, 3/4"JIC x 3/4" JIC90 fitting	1
117	783850	1/2" x 76" hose, 3/4"JIC x 3/4" JIC90 fitting	1
118	783837	1/2" MPT x 3/4" JIC straight fitting	1
119	783947	Flow controller	1
120	778705	1/2" MPT x 3/4" JIC elbow ftg	1
121	5389	3/4" O-ring x 3/4" JIC fitting	1
122	778557	3/4" O-ring x 3/4" JIC elbow fitting	1
123	783841	Flow valve cartridge	1
124	783843	Flow valve coil	1
125	4011	4" Suction strainer	1
126	783839	3/4" MPT x 1-1/6" JIC fitting	1
127	784802	Solenoid wire harness	1
187	785347	3/4" x 52" hose, 1-1/16"JICF x 1-1/16" JICF90 sleeved	1
188	785348	1/2"x 64" hose, 3/4" JIC x 3/4" JICF90 sleeved	1
189	785349	7/8"oring x 3/4"JIC elbow	1
190	777366	1-1/16"oring x 1-1/16"JIC elbow	1
191	785511	Wire harness	1
192	783212	1/4"MPT x 1/4" Hose barb elbow	1
200	785350	3/4" JIC swivel tee, branch	1
205	4021	20 GPM capacity filter only	1
206	789740	788817 Wiring Harness	1

Parts Explosions – Infeed Assembly - Rev F



Item	Part #	Description	Qty
128	785166	Infeed roller pivot	1
129	790042	Infeed roller	1
130	784297	Infeed roller shaft	1
25	82288	5/8" Class G flange nut	2
131	82338	5/8" x 3" HHCS	2
35	82249	1/2" Class C nut	16
133	786842	1-1/2", 4 bolt flange bearing	4
134	783752	Track roller	4
135	82042	3/4" flat washer	14
136	82341	3/4"-16 Nyloc nut	4
137	82337	3/4"-10 x 2" HHCS	2
138	790045	Infeed hopper	1
139	82023	3/8" x 1" HHSF	4
140	783532	Infeed hopper stop	1
141	783533	Control bar	1
142	785162	Infeed tray	1
143	784048	Latch	1
144	82062	#10-24 x 1-1/2" Phillips screw	1
	82065	#10-24 Nyloc Nut	1

Item	Part #	Description	Qty
145	82076	1/4"-20 x 1-3/4" HHSF	2
	82222	1/4" Nyloc Nut	2
146	789657	Valve linkage	2
147	783717	Hinge bar	1
148	789670	Valve	1
109	783836	3/4" MPT x 3/4" JIC strght ftg	2
117	783850	1/2" x 76" Hose, 3/4" JIC x 3/4" JIC90	1
118	783837	1/2"MPT x 3/4" JIC, strght ftg	2
149	783849	1/2" x 54" Hose, 3/4" JIC90 x 3/4" JIC45	2
150	82316	1/2" x 1-3/4" HHCS	2
151	783776	Hydraulic motor	1
102	783831	7/8"oring x 3/4" JIC strght ftg	2
152	783620	Coupler	1
153	784168	1/4" x 1/4" x 1" Key	1
154	82319	5/16-18 Set screw	2
116	783851	1/2" x 86.5" Hose, 3/4" JIC x 3/4" JIC90	1
155	783543	Dosko decal	1
201	785531	610SD decal	1

Summary of Important Safety Information

This section provides a summary of the various safety procedures and measures that have been presented throughout the manual. Keep this summary handy and refer to it to refresh your memory about how to safely use your chipper.

WARNING

Carefully read and make sure you understand the following safety information before using the chipper. Improper use or maintenance of the brush chipper can result in serious injury or death from amputation, lacerations, entanglement, burns, or fire/explosion. Damage can also occur to windows, siding, vehicles, and bystanders from chips and debris which can become projectiles.

Prohibition against Modifications

- **Never modify or alter the brush chipper in any way.** Modifications can create serious safety hazards and will also void the warranty.
- **Fuel/exhaust system.** Never modify the exhaust system, fuel tanks, or fuel lines. Carbon monoxide poisoning, fire, or explosion could result.
- **Engine.** Do not tamper with the engine's governor setting. Over-speeding the machine is dangerous and will cause damage to the engine and other moving parts of the chipper.
- **Guards.** Do not operate brush chipper unless all guards and cover shields, which prevent access to moving parts and entanglement and pinch points, are in place. Failure to guard the power transmission mechanisms may result in serious injury or death.

Safety – Before Use

General

- **Instruct operators.** The brush chipper owner or rental company must instruct all operators in safe brush chipper set-up and operation. Do not allow anyone to operate the brush chipper who has not read the Owner's Manual and been instructed on its safe use. Make sure Owner's manual is on the chipper.
- **Adults only.** Only trained adults should operate and service the chipper. Do not let children operate.
- **Under the influence.** Never operate, or let anyone else operate, the brush chipper while under the influence of alcohol, drugs, or medication.
- **Intended use.** Use this machine only for chipping wood. Do not use for other purposes, as unforeseen hazards or equipment damage may result.
- **Controls and safety labels.** Learn how to use the machine and its controls safely. Understand and follow all safety labels. Replace any labels that are missing or have become unreadable.
- **Weather.** Never use in foul, bad or questionable weather, which causes a slippery ground condition.

Getting Ready

- **Tripping.** Clear all brush and debris from work walking area to eliminate tripping hazards.
- **Flying debris.** Clear area of foreign objects such as wire, rope, etc. that could become caught in moving machine parts and ejected as a projectile. Inserting these objects into the chipper hopper could damage the flywheel and cause injury.
- **Operate OUTSIDE only – dangerous carbon monoxide exhaust!** Chippers give off carbon monoxide exhaust, a poisonous gas that can kill. You CANNOT smell it, see it, or taste it. ONLY run brush chipper outdoors and away from building air intakes. NEVER run brush chipper engine inside homes, garages, sheds, or other semi-enclosed spaces. These spaces can trap poisonous gases.
- **Cooling ventilation.** The brush chipper needs adequate, unobstructed flow of air to allow for proper cooling of engine and brush chipper. Do not allow debris to accumulate and block airflow.
- **Transporting.** During transporting, take precautions to make sure brush chipper will not tip over and cause a fuel leak hazard. Never move, load or transport the chipper while the engine is running or

Summary of Important Safety Information

flywheel is turning. Shut down the engine, wait for all moving parts to come to a complete stop and then wait five minutes before moving.

- **Hot exhaust - fires.** Exhaust from engine can be extremely hot and cause fire. Position muffler at least 7 feet from combustible objects during operation.
- **Spark Arrestor.** Equip engine with a spark arrestor if brush chipper will be used near any ignitable forest, brush or grassy land. Make sure you comply with applicable local, state and federal codes.
- **Fire extinguisher.** Keep a fire extinguisher rated “ABC” by the National Fire Protection Association nearby. Keep it properly charged and be familiar with its use.
- **Passengers.** Never carry passengers or allow people to sit on the chipper while it is running or being transported.

Personal Protective Equipment

- **Eye protection.** Wear ANSI approved eye protection and/or a full face shield when operating the chipper.
- **Hearing protection.** The use of ear-plugs or other hearing protection device is recommended for those in close proximity to the brush chipper while it is operating.
- **Head protection.** Wear a hard hat to protect your head from material that may be kicked out of the machine.
- **Hand protection.** Wear snug-fitting gloves. Do not wear gloves with loose cuffs.
- **Loose / dangling.** Loose or dangling apparel, jewelry or hair can become entangled in moving parts. Never wear jewelry or loose-fitting clothing when operating the chipper.
- **Long pants.** Wear long, heavy-duty pants to protect legs from ejected materials.
- **Sturdy Shoes.** Wear sturdy, non-slip shoes to help you keep a firm footing on the ground and reduce the risk of slipping and falling into the chipper. Do not use the machine while barefoot or wearing open sandals.

Fuel Safety

- **Fuel is highly flammable and explosive.** You can be burned or seriously injured when handling fuel. Use extreme care when handling fuel.
- **Fuel outdoors.** Fill fuel tank outdoors – never indoors. Fuel vapors can ignite if they collect inside an enclosure. Explosion can result.
- **Use approved container.** Never pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use an UL approved fuel container to transfer fuel to the engine.
- **Running / hot engine.** A running engine is hot enough to ignite fuel. Never add fuel or remove fuel cap if engine is running or still hot. Stop the engine and allow to cool at least five minutes before adding fuel.
- **Heat / flames / sparks.** Keep sources of heat, flame, or sparks away while adding fuel.
- **Don't overfill.** DO NOT overfill the fuel tank. Allow at least 1” of empty space below the fill neck to allow for fuel expansion.
- **Replace cap.** Replace fuel cap securely before starting engine.
- **Spills.** Clean up fuel spills immediately. Move brush chipper away from spilled fuel on the ground. Wipe fuel off engine and wait 5 minutes for excess fuel to evaporate before starting engine. Fuel soaked rags should be disposed of properly.
- **On skin / clothes.** If fuel is spilled on your skin or clothes, change clothes and wash skin immediately.
- **Inspect fuel system.** Check fuel system on a regular basis. Look for signs of leaks, deterioration, chafed or spongy fuel hose, loose or missing fuel hose clamps, damaged fuel tank, or a defective fuel shut-off valve. Do not start brush chipper until needed repairs have been completed.
- **Fuel storage.** Store fuel in a cool, dry place in an UL listed, tightly sealed container away from children.

Summary of Important Safety Information

Safety – During Use

- **Safety equipment / controls.** Always operate the brush chipper with all safety covers, guards, and barriers in place and in good working order, and all controls properly adjusted for safe operation.
- **Guard chipper discharge.** Never use the machine with the chipper hopper or discharge chute removed.
- **Controls.** Stay in the OPERATOR FEED AREA while actuating controls.
- **Know how to stop.** Be thoroughly familiar with proper use of the equipment and all brush chipper controls. Know how to stop the brush chipper quickly if needed by PUSHING safety bar towards hopper.
- **Feeding branches.** Never stand directly in front of the hopper opening. Stand to the curb side of the hopper infeed table when feeding brush into the chipper. Feed material only when chipper is operating at full operating speed.
- **Climbing on.** Never climb or sit on the chipper while it is running.
- **“Bounceback”.** Keep your face and body away from the chipper hopper in the event of accidental bounce back of any material.
- **Slipping/Falling.** Operating in slippery, muddy, wet or icy conditions could lead to losing your footing and slipping or falling.
- **Damaged.** Do not operate the brush chipper with damaged, missing, incorrectly adjusted, or broken parts.
- **Check for fuel leak before starting.** After opening fuel valve, smell for fuel before starting engine. If you smell fuel, DO NOT start engine. DO NOT light a match. DO NOT flip on an electrical switch. Exit area immediately and call fire department.
- **Carbon monoxide exhaust.** The running engine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. If you start to feel sick, dizzy, or weak while using the chipper, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.
- **Other exhaust dangers.** This product contains or emits chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Avoid inhalation of exhaust.
- **Smoking/sparks.** Never smoke near the running chipper, and never operate near sources of sparks or flames.
- **Hot muffler.** Never touch hot muffler or hot exhaust manifold. Exhaust and engine parts can be very hot and will burn you.
- **Machine’s moving parts.** Keep hands, feet, and apparel away from knives, belts, flywheel, and other moving parts. Never remove any drive belt or guard while the unit is operating. Contact with belt or knives will cause personal injury.
- **Refueling.** DO NOT refuel the engine until it has cooled at least five minutes.
- **Malfunction during operation.** Always shut the machine off if any unusual noise or vibration occurs.
- **Vibration.** Overexposure to machine vibration on a daily basis may lead to circulatory or nerve damage.
- **Adjusting / repairing.** Always turn off brush chipper and disconnect positive battery cable before working on the brush chipper to prevent accidental starting.

Safety – After use

- **Cool engine before storing.** Let engine cool for at least five minutes before storing. A hot engine can be a fire hazard.
- **Shut off fuel supply.** Make sure fuel shut-off valve is in the OFF position.
- **Prevent accidental starting.** When brush chipper is not in use, remove key from starter (electric start engines) and secure in a safe location, or disconnect positive battery terminal from battery in order to ensure that brush chipper cannot be started in a storage location or by untrained persons.

Summary of Important Safety Information

- **Storage location.** Store the brush chipper in a dry location away from sources of heat, open flames, sparks or pilot lights – such as water heaters, space heaters, furnaces, clothes dryers, or other fuel appliances – EVEN IF the chipper's fuel tank is empty. Residual fuel could ignite.
- **Operate engine regularly.** Operate chipper engine every four weeks to dry out moisture that accumulates in the windings. If brush chipper cannot be exercised on a regular basis, prepare brush chipper for long term storage.

Safety - Inspection/Maintenance

- **Inspect and maintain your brush chipper** on a regular basis and repair as needed to keep it in safe working condition:
- **Turn off chipper.** Always turn off brush chipper, remove key from ignition, remove positive battery terminal from battery – to prevent accidental starting before working on the engine or brush chipper.
- **Replace guards / shields.** Make sure all guards and shields are replaced after servicing the chipper.
- **Hydraulic system.** Check the hydraulic system (hoses, tubing, clamps/fittings, pump, and cylinder) carefully before each use. Do not operate the brush chipper with frayed, kinked, cracked or damaged hydraulic hoses, fittings, or tubing, or if oily residue is observed on any of the components. High fluid pressures and temperatures are developed in the brush chipper. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the brush chipper:
 - Do not remove the hydraulic oil dipstick when the engine is running. Hot oil can escape causing severe burns. Allow brush chipper to cool completely before removing hydraulic oil dipstick.
 - Do not adjust the pressure setting of the pump or valve.
 - Do not check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
 - Stop the engine, disconnect the spark plug, and move all control valve handles back and forth to relieve pressure before changing or adjusting hydraulic system components such as hoses, tubing, fittings or other components.
 - If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.
- **Burns.** Do not touch hot muffler. Muffler may be hot even if unit is stopped. Allow unit to cool before servicing.
- **Replacement parts.** If a part needs replacement, only use parts specified by the manufacturer. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the brush chipper and will void the warranty.

Special Safety Information on Static Electricity

Static electricity and filling fuel:

Static electricity can initiate from ungrounded fuel tanks or containers, from flowing fuel, and from persons carrying a static electric charge.

Static electricity can explosively ignite fuel vapors that are present during the fueling process, resulting in serious burns to all nearby persons. To avoid static electricity while fueling, certain steps must be followed before and during the fueling process in order to minimize and safely dissipate static charge build-up.

Filling Portable Containers at Service Stations:

Use a portable container to fill brush chipper tank. Never fill the chipper's fuel tank directly from the service station's fuel dispenser pump – the chipper's tank is not grounded and the high velocity flow of fuel from a fuel pump can cause static electric build-up. Use an approved portable container to transfer fuel to the chipper's tank.

- **Use a portable container made of metal or conductive plastic.** It will dissipate charge to ground more readily.
- **Fill container on the ground.** Never fill the portable fuel container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed. ALWAYS place container on the ground to be filled.
- **Touch a grounded metal object before starting.** Always dissipate static charge from your body before beginning the fueling process by touching a grounded metal object at a safe distance away from fuel sources.
- **Keep nozzle in contact with container.** Keep fuel dispenser nozzle in contact with the portable container at all times while filling at a service station. Do not use the nozzle lock-open device on the dispenser hose.

About static electricity and fueling

Many common objects can accumulate and retain a static electric charge. Objects made of non-conductive materials (e.g. plastics) easily accumulate and retain static electric charge, as can objects made of conductive material (e.g. metal, water) if they are not electrically grounded. The static electric charge on an object, such as a human body or plastic fuel tank/container, can reach as high as several thousand volts!

A static electric spark can be generated if the static electric charge stored on an object “jumps” to another, less charged object. Such a spark can ignite invisible fuel vapors that are present during fueling situations.

Typical sources of static electric hazards during fueling

The following objects can accumulate a static electric charge and cause an ignition spark in typical fueling situations:

Ungrounded tanks/containers. Any ungrounded fuel tank or container can accumulate a static electric charge as a result of contact with other objects or friction during transportation. This static electricity can discharge as a spark to the grounded fuel dispenser nozzle, as the nozzle is first brought close to the tank/container at the beginning of the fueling process.

Flowing fuel. Most people are not aware that fuel accumulates static electric charge while flowing through a hose or pipe. This charge then transfers to and accumulates in the fuel tank or container that is being filled. The total amount of charge accumulation depends on the amount of fuel pumped into the container, the speed with which it is pumped, and whether or not the tank/container is grounded. If sufficient static electric charge accumulates in the fuel tank or container during the fueling process, the tank/container may discharge a spark to the grounded fuel dispenser nozzle.

Persons. A person dispensing the fuel can carry a static electric charge on their body, typically resulting from contact with their car seat or electronics. The static electricity can discharge as a spark between that person's hand and either the grounded dispenser nozzle or the fuel tank opening.

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Limited Warranty Policy

August 2010

This warranty is limited to Dosko units distributed by Great Northern Equipment Distributing, Inc. 20195 South Diamond Lake Road, Rogers, MN and sold by dealers or distributors authorized to sell that product. The following warranty applies to Dosko units purchased at retail or placed into rental service on or after August 1st 2010.

Dosko warrants each Dosko unit to be free from defect in factory materials and workmanship for a period of 90 days from date of purchase or first rental. See limitations and time parameters stated below.

DOSKO SHALL NOT BE LIABLE FOR ANY IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ON ITS PRODUCTS AFTER THE 90-DAY PERIOD.

DOSKO WARRANTY ON ANY OF ITS PRODUCTS SHALL BE VOID IF THE PRODUCT HAS BEEN MODIFIED BY THE ADDITION OF PARTS OR THE DELETION OF PARTS. IN THIS EVENT, TO THE EXTENT PERMITTED BY FEDERAL, STATE OR LOCAL LAWS, DOSKO SHALL BE UNDER NO LIABILITY WHATSOEVER IN RESPECT TO ANY LOSS, DAMAGE, INJURY, OR EXPENSE ARISING FROM ANY DEFECTS IN ANY DOSKO PRODUCTS.

The warranty period, as explained in the Warranty Policy, is for 90 days from the original date of sale. The fact that our product is repaired, or parts are replaced during the original 90 day period, does not extend the expiration date of the original warranty due to any loss of time resulting from failures. This warranty shall not apply to any Dosko product which has been modified, repaired, or altered in such a manner as to affect its stability, performance or operation, nor which has been subjected to misuse, abuse, negligence or accident.

The owner is responsible for all regular maintenance as explained in the operator's manual. Neglect in regular maintenance or failure to replace normal wear items such as knives, bed knife, lubrication, oils, filters, belts, bearings, etc. may void warranty.

Your authorized Dosko dealer will repair or replace, any parts that are found to be defective within the warranty period. ALL WARRANTIES MUST BE PRE-APPROVED through Dosko warranty department prior to any work being done. Failure to do so will void warranty and reimbursement will not be permitted. Proof of purchase date must be provided.

In order to register for the warranty on your new Dosko unit, the dealer or rental owner should fill out and return to Dosko the enclosed warranty registration cards within ten (10) days after your purchase.

"No Warranty on Purchased Wear Parts"

Purchased wear parts (example: tires, battery, engine, belts, spark plugs, etc.) are not warranted by Dosko.

Description of Limited Warranty of Major Component Parts

Major component failures will be handled according to Manufacturers warranty statement. Problems and defects in the engine should be referred to your authorized engine repair dealer. Other major component failures will be handled according to appropriate manufacturers warranty statement otherwise 90 day warranty applies.

Limited Warranty of Frames/Fabrication

Dosko warrants any steel frame, tow bar, handlebar or chute for a period of two (2) years from original date of purchase to be free from defects.

DOSKO

Great Northern Equipment Distributing Inc.
20195 S. Diamond Lake Rd, Ste 100
Rogers, MN 55374
Made in USA