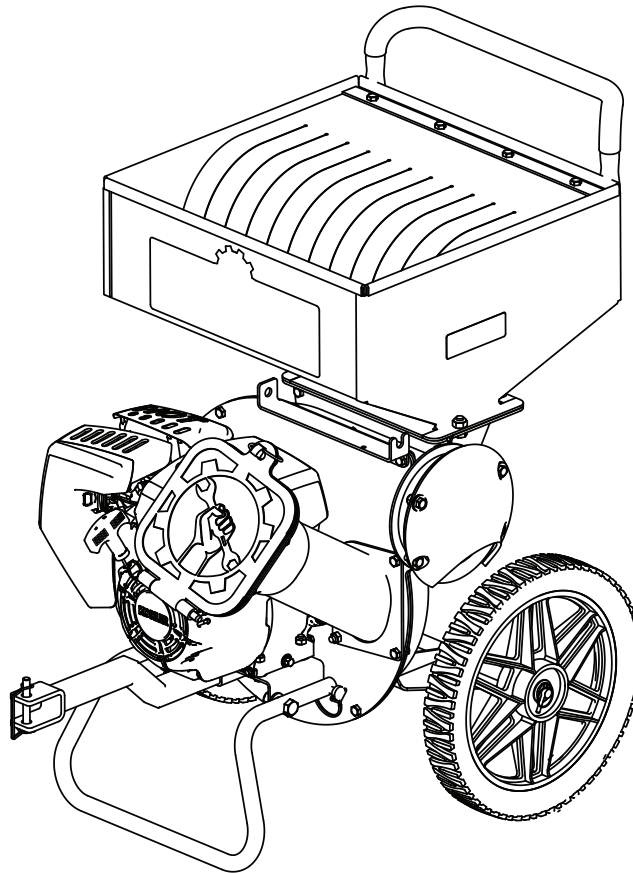




**DIRTY HAND
TOOLS**

3" Chipper/Shredder



MODEL # 106817

Operation Manual



This safety alert symbol identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury or death.

Part # 107162 Rev B



For Service or Questions

Call 1-877-487-8275

720-287-5182

www.dirtyhandtools.com

Dirty Hand Tools® is a brand of



FrictionlessWorld

1100 W 120th Ave, Suite 600
Westminster, CO 80234 • 720-287-5182

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Important Safety Information



WARNING

WARNING: Read and thoroughly understand all instructions and safety information before assembling or operating this chipper/shredder. Failure to do so may cause serious injury or death. Do not allow anyone to operate this chipper/shredder who has not read this manual. As with all power equipment, a chipper/shredder can be dangerous if assembled or used improperly. Do not operate this chipper/shredder if you have doubts or questions concerning safe operation.



Call our customer service department at **720-287-5182**, **1-877-487-8275**, or visit www.dirtyhandtools.com if you have any questions or concerns about the safe operation of this equipment.



DANGER

Intended Use

Do Not Use the chipper/shredder for any purpose other than chipping tree limbs and branches or shredding leaves and garden debris for which it was designed. Any other use is unauthorized and may result in serious injury or death.

Personal Protective Equipment

When operating this chipper/shredder it is essential that you wear safety gear including goggles or safety glasses, steel toed shoes and tight fitting gloves (no loose cuffs or draw strings). Always wear ear plugs or sound deafening headphones to protect against hearing loss when operating this chipper/shredder. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the chipper/shredder with bare feet. Do not wear loose clothing that might get caught in moving parts.



CAUTION

Read the entire Operation Manual before using this equipment!

California Proposition 65 Warning

Engine exhaust, some of its constituents and certain product components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.



**DIRTY HAND
TOOLS**

Important Safety Information

General Safety

Failure to follow warnings, cautions, assembly and operation instructions in the Operation Manual may result in serious injury or death.



DANGER

**READ THE OPERATION MANUAL BEFORE USE
SINGLE PERSON OPERATION ONLY!**

**THIS UNIT MEETS OR EXCEEDS
ANSI B71-6-2000 SAFETY STANDARDS**

- **Do not** permit children to operate this equipment at any time. Do not permit others that have not read and understood the complete Operation Manual to operate this equipment.
- Keep all people and pets a minimum of 10 feet away from the work area when operating this chipper/shredder.
- **Do not** operate the chipper/shredder when under the influence of alcohol, drugs or medication.
- **Do not** allow a person who is tired or otherwise impaired or not completely alert to operate the chipper/shredder.



DANGER

**THE CHIPPER SHREDDER HAS SPINNING BLADES
THAT CAN AMPUTATE HANDS AND FEET.
DO NOT PLACE HANDS OR FEET IN THE HOPPER OR
CHIPPER INLET, OR DISCHARGE CHUTE.**

This unit discharges debris at high speed. Always wear protective eyewear when operating. Keep all bystanders away a safe distance.

- **Always make sure the shredding chamber, shredder hopper, and chipper inlet are empty before starting.**
- **Never attempt to clear clogs from the chipper inlet, shredder hopper or discharge chute while the unit is running.**
- **Never use indoors or in a confined area.** The engine emits carbon monoxide which is an odorless and colorless poisonous gas.
- Handle fuel with care; it is highly flammable. Use an approved fuel container. **Never add fuel to a running engine or hot engine.**
- **Never fill fuel tank indoors.** Fill outdoors with extreme care.
- Replace gas cap securely and cleanup spilled fuel before restarting.
- Never make any adjustments while the engine is running.
- Never allow material to build up around the engine.
- Never allow material to build up in the discharge area.
- Always stand to the side of the chipper cone when feeding tree limbs and branches into the unit.
- Never operate the unit on a slope, or on a wet or slippery surface.
- Never leave the machine running unattended.

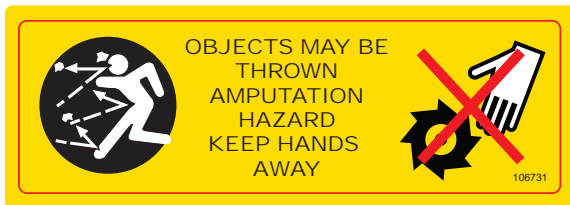
Important Safety Information

Safety Decals

Safety labels on the chipper/shredder are to remind you of important information while you are operating the unit. Make sure all safety warning decals are attached and in readable condition. Replace missing or defaced decals. Contact Dirty Hand Tools at **1-877-487-8275** for replacement decals.



106730 - Warnings Decal



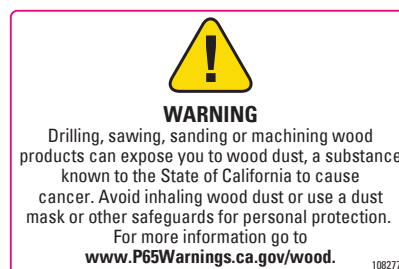
106731 - Amputation Hazard Decal



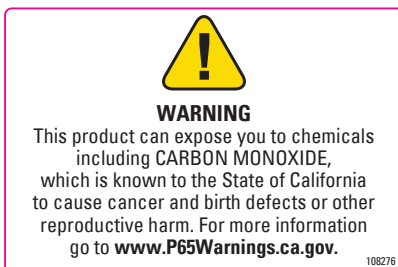
106732 - Sharp Blades Decal



108275 - Cancer Hazard Decal



108277 - Dust Hazard Decal



108276 - Repro Hazard Decal



106047 - Hot Surface Decal



101053 - Check Oil Decal

Assembly

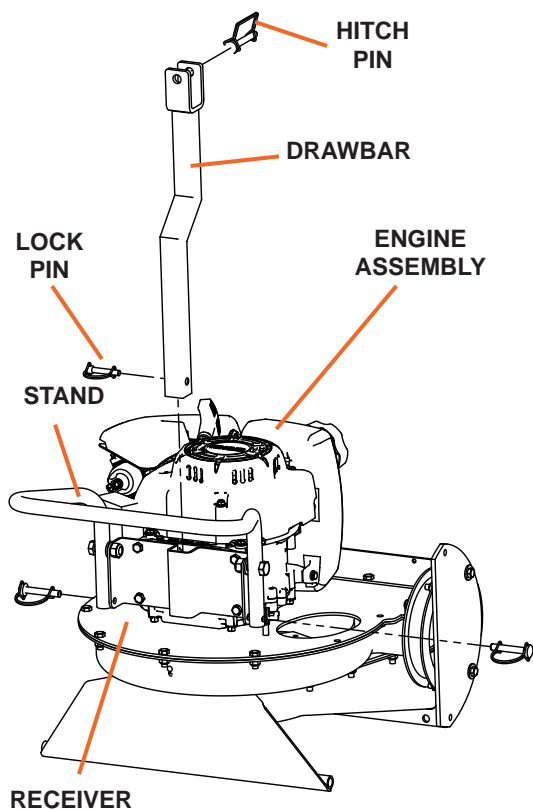


Figure 1

1. Deploy Stand (see Figure 1).

1. Set engine assembly on flat surface and swing the stand into position.
2. Insert the lock pins into the holes in the stand base to secure.
3. Fully insert the drawbar in the receiver and insert the lock pin.
4. Attach the hitch pin to the end of the drawbar.

Note: Drawbar installation is optional for towing behind vehicle. The drawbar can install in two different positions depending upon the hitch height of the tow vehicle.

2. Attach Wheels (see Figure 2).

1. Tilt the engine assembly forward until it rests on the drawbar.
2. Slide the axle through the wheel bracket.
3. Position wheels on the axle using washers on both sides.
4. Insert lynch pins to secure wheels to the axle.

3. Attach Inlet Tube (see Figure 3).

1. Align inlet tube with stud bolt on the closure plate and secure with M8 nylock nut.
2. Fasten inlet tube to closure plate with M8 x 20 bolt and M8 nylock nuts in 2 places.
3. Attach lynch pin chain hole in rod support bracket.
4. Flex rubber discharge deflector to align holes and insert M8 x 20 bolts, washers and nylock nuts in 4 places.

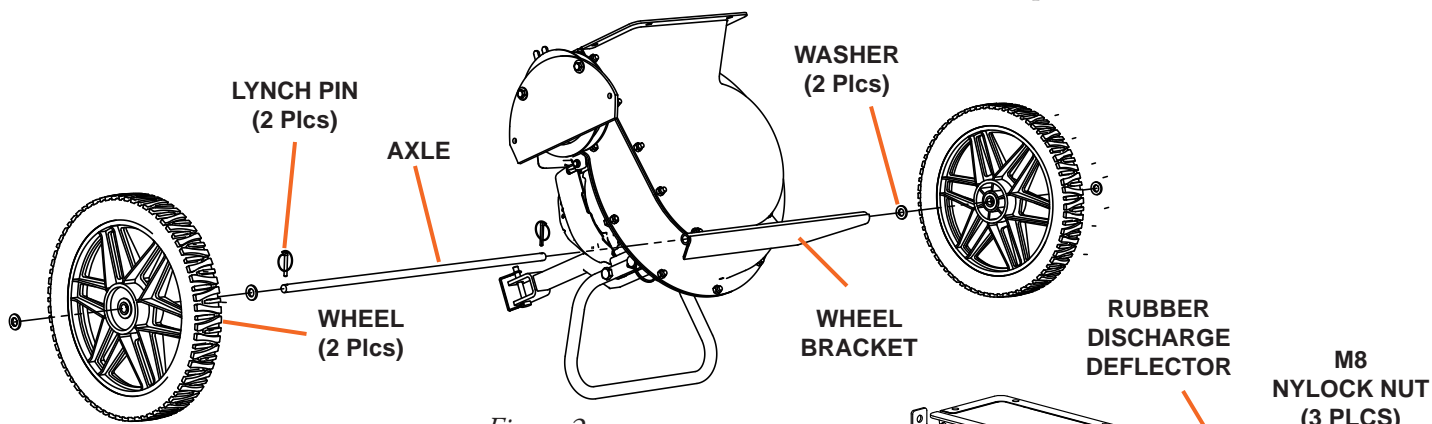


Figure 2

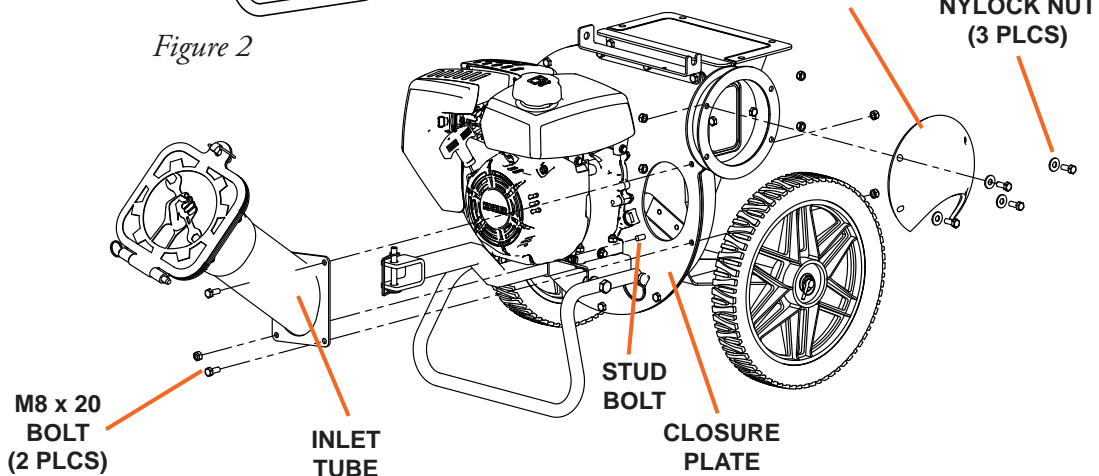


Figure 3

Assembly

4. Attach Hopper.

1. Position hopper on shredder inlet flange (see Figure 4).
2. Attach with four M10 x 20 Bolts and M10 Nylock nuts.

5. Install Shredder Safety Guard

1. Position the shredder guard inside the hopper (see Figure 5).
2. Attach using two M10 x 30 Bolts and M10 Nylock nuts.

6. Install Debris Collection Bag

1. Unfold bag support arm and lock into straight position as shown (see Figure 6).
2. Feed end of bag support arm into hole of the support bracket and rest in u-shaped slot.
3. Slide bag onto support arm, drawing the bag inlet over the discharge flange and tighten the draw string.

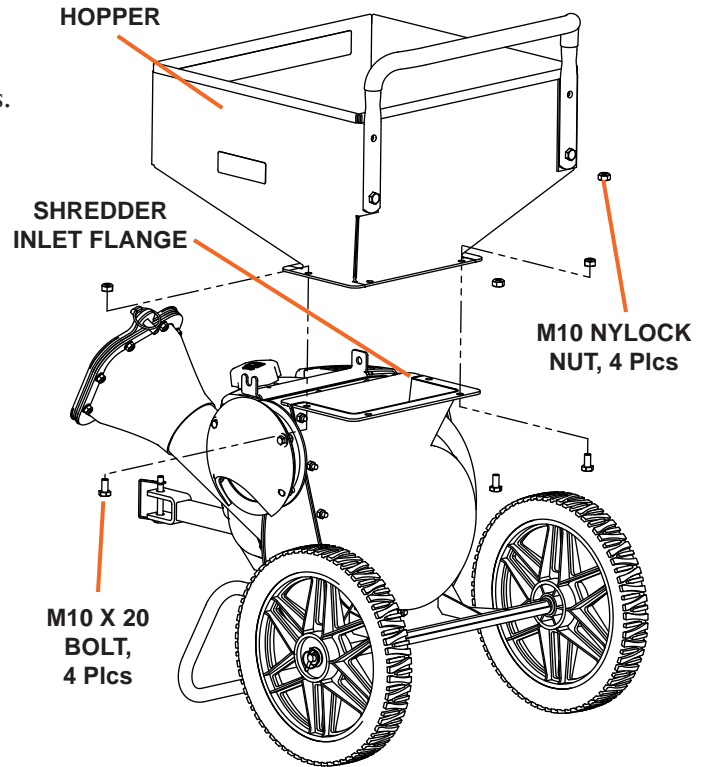


Figure 4

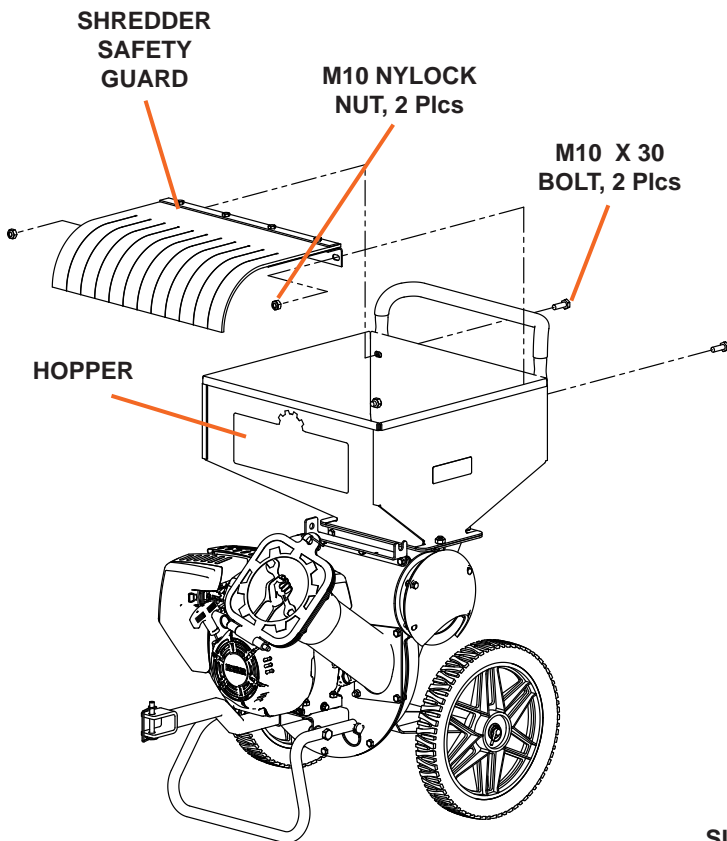


Figure 5

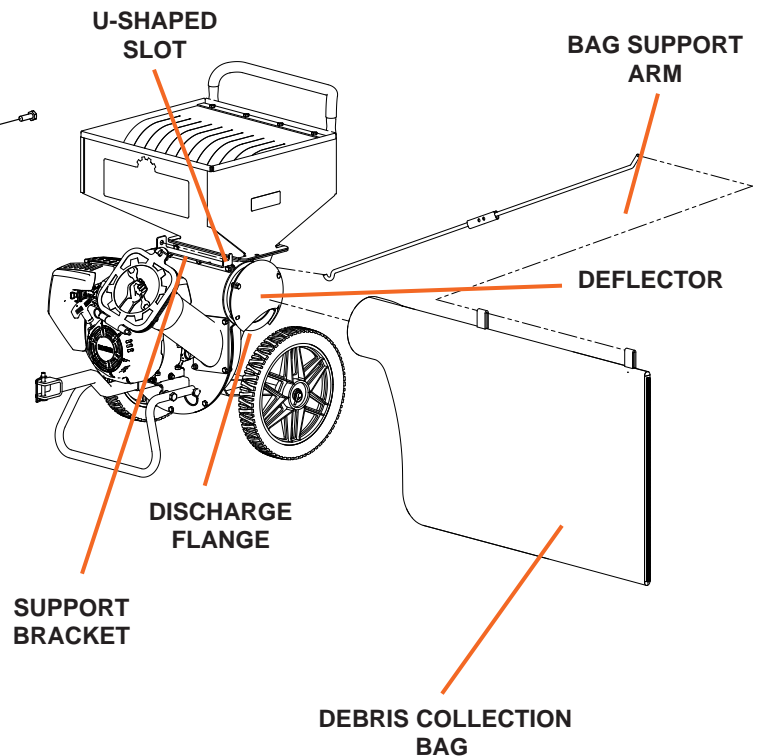
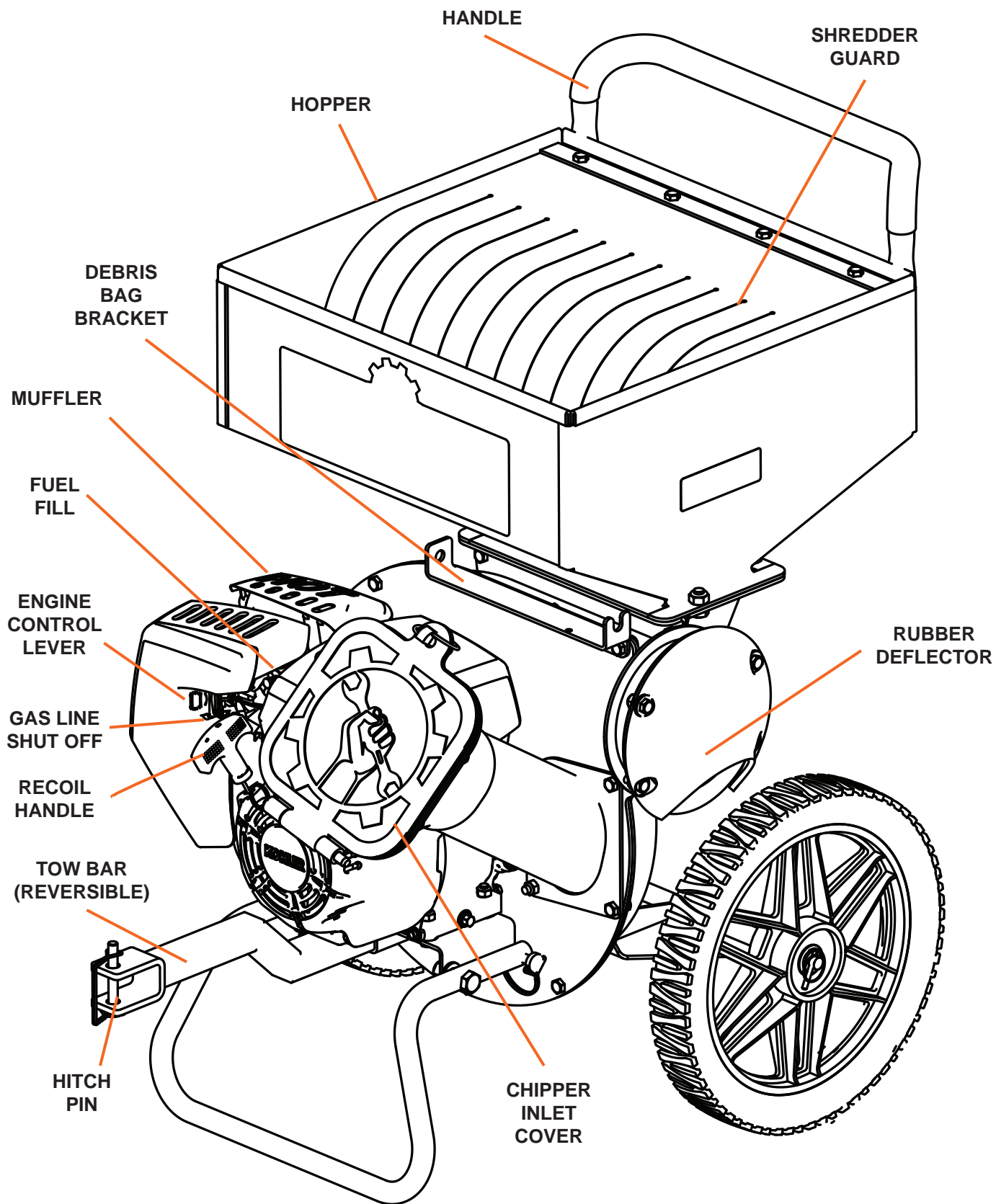


Figure 6

Chipper/Shredder Overview



Operating Precautions



CAUTION

READ, UNDERSTAND AND FOLLOW ALL OF THE PRECAUTIONS BELOW.

Always perform the pre-start checklist before starting the engine.

- **Never** operate the chipper/shredder without safety guards and covers in place.
- **Keep hands, feet, and clothing away from rotating parts. Keep clear of chipper/shredder tines at all times.**
- **Use extreme caution** when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- If a limb or branch becomes stuck in the chipper inlet or debris becomes clogged in the shredder hopper, **stop the engine**, remove the wire from the spark plug, manually remove the obstacle before restarting the engine.
- **Engine muffler will be hot** from operation. Do not touch it with bare skin or a severe burn may result.
- **Do not** run the engine indoors; exhaust fumes are deadly.
- **Do not** overload the chipper/shredder by trying to process too much debris at one time or force a limb in the chipper inlet that is a greater diameter than the machine's capacity.
- **Never** operate the chipper/shredder on slippery surfaces.
- Use only attachments and accessories approved by the manufacturer.
- **Never** operate the chipper/shredder without good visibility or adequate light.
- **Take precautions when leaving the machine unattended.** Stop the engine, wait for all moving parts to stop, and make certain guards and shields are in place.
- **Shut off the engine when leaving the operating position** for any reason. Wait for all moving parts to stop before attempting to dislodge debris, or limbs.
- The chipper/shredder blades are extremely sharp. Avoid contact with bare hands at all times.

Operation



**YOU MUST ADD ENGINE
OIL BEFORE STARTING
THE ENGINE.**



CAUTION

DO NOT ATTEMPT TO START ENGINE BEFORE ADDING OIL TO ENGINE

The engine is shipped from the factory without oil.

Use only the recommended weight of oil for a 4-cycle engine (See Engine Operation Manual).

NOTE: Upon start-up and shut-down, you may hear the metal-to-metal sound of the triangular hammers and J-hammers positioning themselves on the rotor. This is normal.

Chipper Operation

The chipper is designed to handle tree limbs and branches up to 3". The chipping knives also permit the processing of coarse organic matter like corn stalks. Tree branches must be inserted large-end first into the chipper inlet. Since occasional kick-backs may occur, always stand off to the side of the unit. Allow the self-feeding action of the unit to draw the sticks in.

NOTE: CHALK THE WHEELS BEFORE OPERATION!

Shredder Operation

The shredder is designed to shred light brush, leaves, and other soft but bulky organic waste. As material, no larger than 1/2 inch in diameter, is loaded into the shredder hopper it is pulled into the path of the triangular and J-hammers by air flow.

Operating Location

Select an area with firm, level ground, covered by dirt or grass. Do not operate on wet or slick surfaces, or near bystanders. Locate and organize the materials to be processed so that you don't have to walk in front of the inlet or discharge openings, and so you have adequate room to work safely.



CAUTION

DO NOT ALLOW DEBRIS TO COLLECT ON THE ENGINE.

**A DANGER OF FIRE OR DAMAGE
TO THE ENGINE MAY RESULT.**



Operation

Preparation for Operation

Fill Engine Crankcase with Oil

1. Add oil according to engine manual. Do not overfill. Use a clean, high quality detergent oil. Use no special additives with recommended oils. **Do not mix oil with gasoline.** Oil level must be full. Check the oil level by removing oil fill plug. Oil level should be up to the bottom of the fill plug opening (see Figure 7).
2. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.

Pre-Start Inspection

1. Make sure safety shields are in place and nuts & bolts are secure.
2. Check oil level in engine crankcase. See your engine manual for procedure and specifications.
3. Inspect air cleaner for cleanliness.
4. Check the fuel supply. Fill the fuel tank no closer than 1 inch from top of tank to provide space for expansion. See your engine manual for fuel recommendations.
5. Be sure spark plug wire is attached and spark plug is tightened securely.
6. Examine underneath and around engine for oil or fuel leaks.
7. Inspect fuel hoses for tightness and to ensure there is no fuel seepage.
8. Look for signs of engine damage.
9. Remove excessive debris from muffler area and air inlets near the recoil starter.

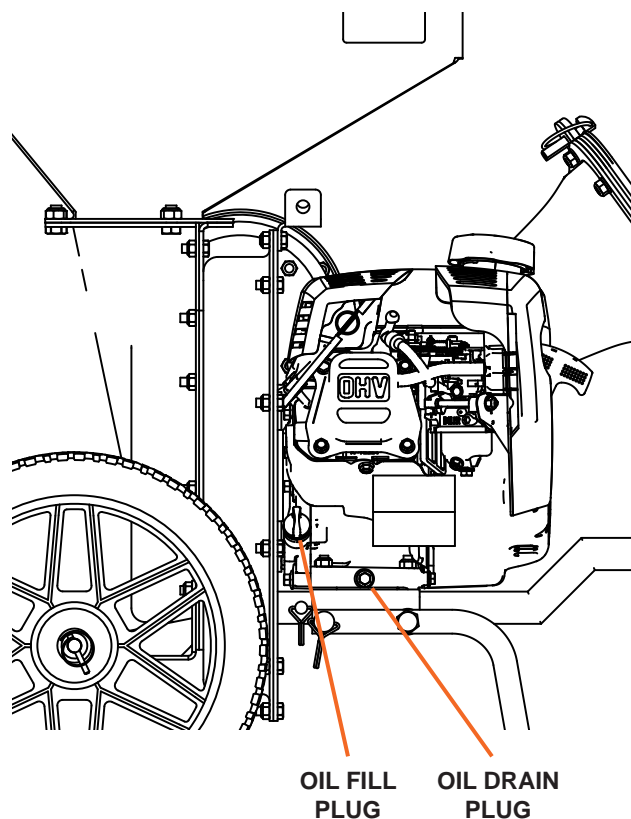
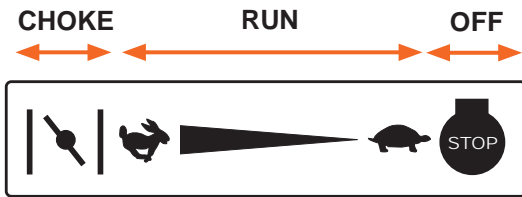


Figure 7

Operation



Starting the Engine

Turn fuel shut-off valve to ON position.

Cold Starts

1. Move the engine control lever to the left (choke) position (see Figure 8).
2. Pull recoil handle out slowly one time and allow to return normally.
3. Pull recoil handle out slowly but with force, and allow rope to return normally.

Note: You must overcome the inertia of the flywheel.

4. When engine starts, gradually move the engine control lever to the right (fast) wide open position to increase engine speed.

Restarting A Warm Engine

Restarting an engine that is already warm from previous running does not normally require use of the choke.

1. Move the engine control lever to “Run” position.
2. Pull the recoil handle out slowly but with force until engine starts. Allow rope to return normally. Repeat until engine starts.
3. Adjust the engine control lever speed to “fast” (wide open position) for best chipper/shredder operation.

Idle Speed

Use the “slow” position on the engine control lever to reduce stress on the engine when chipping or shredding is not being performed. Lowering the engine speed to “idle” will help extend the life of the engine, as well as conserve fuel and reduce the noise level of the equipment.

Operating Speed

For normal shredding and chipping, set the throttle lever to “fast”.

Shutting Down

1. To stop the engine at any time, move the engine control lever to the STOP position.

Note: Due to the inertia of the flywheel, extra time is required for the engine to fully stop.

2. Close fuel shut-off valve.

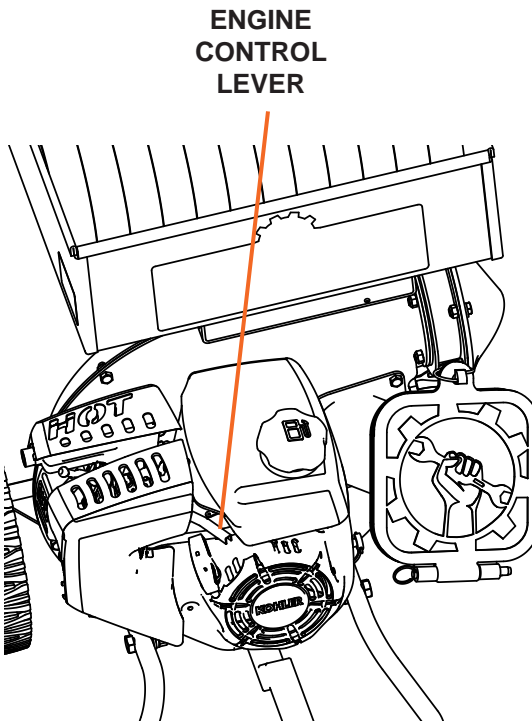


Figure 8

Operation

Chipping Recommendations

- Prune branches down close to the main branch to make feeding them into the chipper inlet easier.
- Large, hard, dried tree branches that resist chipping can be processed by rotating them as you alternately insert and retract them.
- Material conditions vary, sometimes exceeding the capacity of the equipment. If the material to be chipped is extremely hard, kicks back forcefully when being fed into the chipper inlet, or cannot be easily controlled, remove the material immediately and set it aside. Do not attempt to process these materials.
- If additional force is required to insert materials into the chipper, the blades probably need to be sharpened. Consult the Troubleshooting and Repair section of this manual, or see your authorized dealer.
- Maintain control of the materials you are feeding to prevent them from whipping around.
- Do not insert short pieces of material into the chipper inlet by hand. Use a larger piece of material to push them into the chipper inlet.

Shredding Recommendations

- Don't overload the shredder by dumping large volumes of material into the hopper opening.
- Alternate loads of wet and dry material to prevent the discharge from becoming plugged.
- Never use any object to force material into the shredding chamber. It could get caught in the shredding hammers, kick back, whip around, or cause injury to the operator.

OPERATION	TYPE OF MATERIAL	SIZE	METHOD
Shredding	Dry or moist organic material including leaves, plants, flowers, fruits, or vegetables.	Branches and twigs up to 1/2" diameter and 18" long.	Alternately chip or shred moist green waste with dry waste to avoid plugging of the discharge chute. Process at a feeding rate that allows the engine to maintain a high rate of speed.
Chipping	Long, thicker tree limbs or small bunches of smaller sticks grouped together for ease of handling.	Tree limbs and branches, or bundles of small sticks grouped for easier handling. Maximum diameter of approx. 3" (7.5 cm)	Bulky tree limbs should be pruned close to the main stem. Always use a shorter piece of wood to push end pieces into the chipper inlet. Never place hands inside the chipper inlet. Never chip very hard or used dimensional lumber (2x4's etc.) or other building materials. Never use the chipper to process pressure-treated wood products.

Maintenance



WARNING

**BEFORE PERFORMING ANY MAINTENANCE
PROCEDURE STOP THE ENGINE, WAIT FIVE (5)
MINUTES TO ALLOW ALL PARTS TO COOL.**

**Disconnect the spark plug wire,
keeping it away from the spark plug.**

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual and the engine manufacturer's owner's manual for maintenance procedures.

Maintenance Checklist

Maintenance Procedure	Before Each Use	Every 25 Hours of Use	Every 100 Hours of Use
Check engine oil level. <i>Fill to correct level if necessary.</i>	X		
Clean debris from engine exterior and the air cleaner. <i>Cleaning the engine air inlets near the recoil starter is critical for proper air flow.</i>	X		
Check general equipment condition including guards, nuts, bolts, welds, etc.	X		
Check chipper inlet and shredder hopper. <i>These must be absolutely tight.</i>	X		
Inspect chipping knives and rotate shredding hammers.		X	
Check safety labels.	X		
Change the engine oil		X	
Clean/replace the air cleaner filter(s).			X
Replace spark plug			X



WARNING

BEFORE PERFORMING ANY MAINTENANCE STOP THE ENGINE & ALLOW ALL PARTS TO COOL.

**Disconnect the spark plug wire,
keeping it away from the spark plug.**

Engine Maintenance

Refer to the engine manual included with your equipment for information on engine maintenance.

1. Always check oil level before starting engine. Fill to correct level if necessary.
2. Change oil after first 5-8 hours of operation. Change oil while engine is warm. Refill with new oil of recommended grade.
3. Check spark plug yearly or every 50 hours of operation.
4. Clean/replace air cleaner filter(s).
5. Keep engine and parts clean.
6. Check engine and equipment often for loose nuts and bolts, keep these items tightened.
7. Check that the safety labels are in place and undamaged.
8. Check that the chipper inlet, shredder hopper, and discharge guards are in place, undamaged and secure.

Changing the Oil

Change oil while engine is warm.

1. Clean area around oil fill cap/dipstick and drain plug.
2. Remove drain plug and oil fill cap/dipstick. Drain oil completely.
3. Reinstall drain plug.
4. Fill crankcase with new oil, up to point indicated on fill cap/dipstick.
5. Reinstall oil fill cap/dipstick and tighten securely.
6. Dispose of used oil in accordance with local ordinances.

Maintenance

Clean Debris from Engine & Chipper

Check for dirt and debris before each use and every 100 hours. The engine requires air flow to cool itself and for combustion. Before each use, clean any debris from the unit especially from around the air shroud intake, air filter, and muffler. Every 100 hours, remove the engine air shroud and clean out any debris from the engine cooling fins. We recommend having this service performed by an authorized dealer.

Cleaning/Replacing the Air Filter(s)

NOTE: Operating engine with loose or damaged air cleaner components could cause premature wear and failure. Replace all bent or damaged components.

1. Unhook cover latch and remove air cleaner cover.
2. Remove and replace paper element.
3. Remove foam element; replace or wash in warm water with detergent. Rinse and allow to air dry, then replace.
4. Reinstall air cleaner cover and secure cover latch.

NOTE: Paper element cannot be blown out with compressed air.

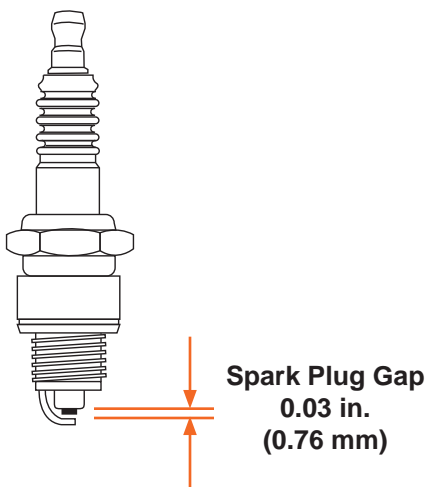
Breather Tube

Ensure both ends of breather tube are properly connected.

Servicing the Spark Plug

Clean out spark plug recess. Remove plug and examine for damage, cracks or discoloration. Clean dirty spark plug, reset the gap and replace in plug recess. Broken, cracked or chipped spark plugs should be replaced.

1. Check gap using wire feeler gauge. Adjust gap to 0.03" (0.76mm).
2. Install plug into cylinder head.
3. Torque plug to 20 ft. lb.



Maintenance

Shredding Hammer Rotation and Replacement

The cutting edges of the shredding hammers may eventually wear out requiring rotation of the hammer or replacement if all cutting edges have been dulled. Triangular hammers can be rotated twice after the first edge dulls, then flipped over once and rotated again for a total of 6 edges. J-hammers can be flipped over once for a total of two cutting edges.

To rotate the shredding hammers:

1. Turn the engine off and wait for all moving parts to stop.
2. Disconnect the spark plug wire.
3. Remove (4) M10 Bolts that attach Hopper Assy. Lift Hopper Assembly from Chipper/Shredder and set aside (see Figure 9).
4. Tilt Chipper/Shredder forward and rest on drawbar.
5. Remove (11) M8 Nylock Nuts that attach Shredder Housing to Chipper Shredder. Remove Wheel/Bracket Assembly, Shredder Housing and Shredder Interface Plate (see Figure 9).
6. Note the assembly sequence of the hardware used to secure the hammers. Using a 17mm wrench or socket remove the hex head bolts and related hardware (see Figure 10).
7. Inspect the hammers, spacers, and hardware. If the spacer shows signs of wear, replace it. Inspect and flip, or replace the hammers.
8. Reassemble the hammers, spacers, washers, and cap screws. Apply thread locker to each bolt prior to reassembly. Torque the hex head bolts to 30-35 ft. lbs. The J-hammers may be used facing in or out.
9. Repeat for all the hammers.

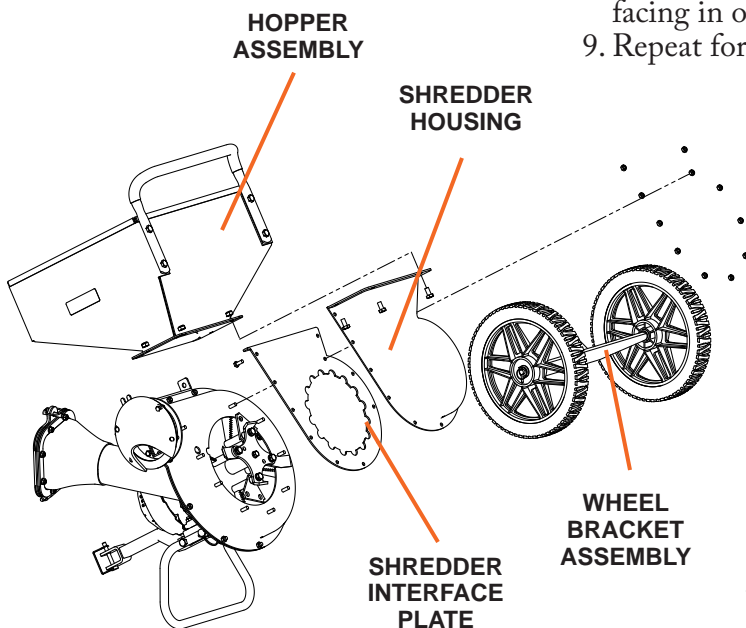


Figure 9

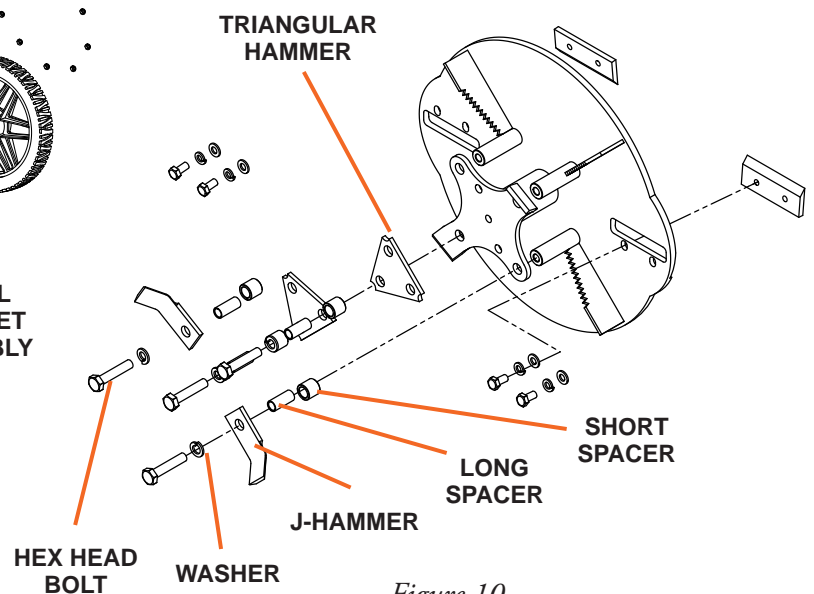


Figure 10

Maintenance

Chipping Knives Sharpening and Replacement

The chipping knives should be sharpened or replaced when tree limbs require extra force to feed into the chipper inlet. The chipping knives may be sharpened at a 35 degree angle until the distance between the edge of the blade bevel and the mounting hole is less than 1/16" (1.6mm), see Figure 11.

Removing/Replacing Chipper Blades

1. Turn engine off and wait for all parts to stop.
2. Disconnect spark plug wire (not shown).
3. Remove (4) M10 Bolts that attach Hopper Assembly. Lift Hopper Assembly from Chipper/Shredder and set aside (see Figure 9).
4. Tilt Chipper/Shredder forward and rest on drawbar.
5. Remove (11) M8 Nylock Nuts that attach Shredder Housing to Chipper Shredder. Remove Wheel/Bracket Assembly Shredder Housing and Shredder Interface Plate.
6. Rotate Flywheel to align Blade Attachment Bolts with access holes. Remove (2) M8 Bolts, Flat Washers and Split Lock Washers for each of the Chipper Blades. Reach through the Chipper Inlet Tube to remove the Chipper Blade. (See figure 12). Alternatively, the inlet tube may be removed for easier access.
7. Replace chipper blades applying thread locker to each bolt prior to reassembly.
8. Reassemble in reverse order. Tighten M8 hardware to 25 N-m (18 ft-lb) and M10 hardware to 50 N-m (36 ft-lb).

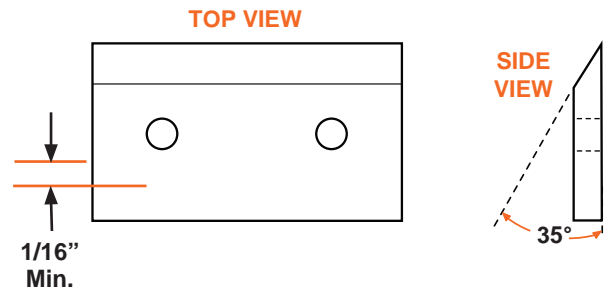


Figure 11

Order replacement blade Part # 106844 from Dirty Hand Tools.

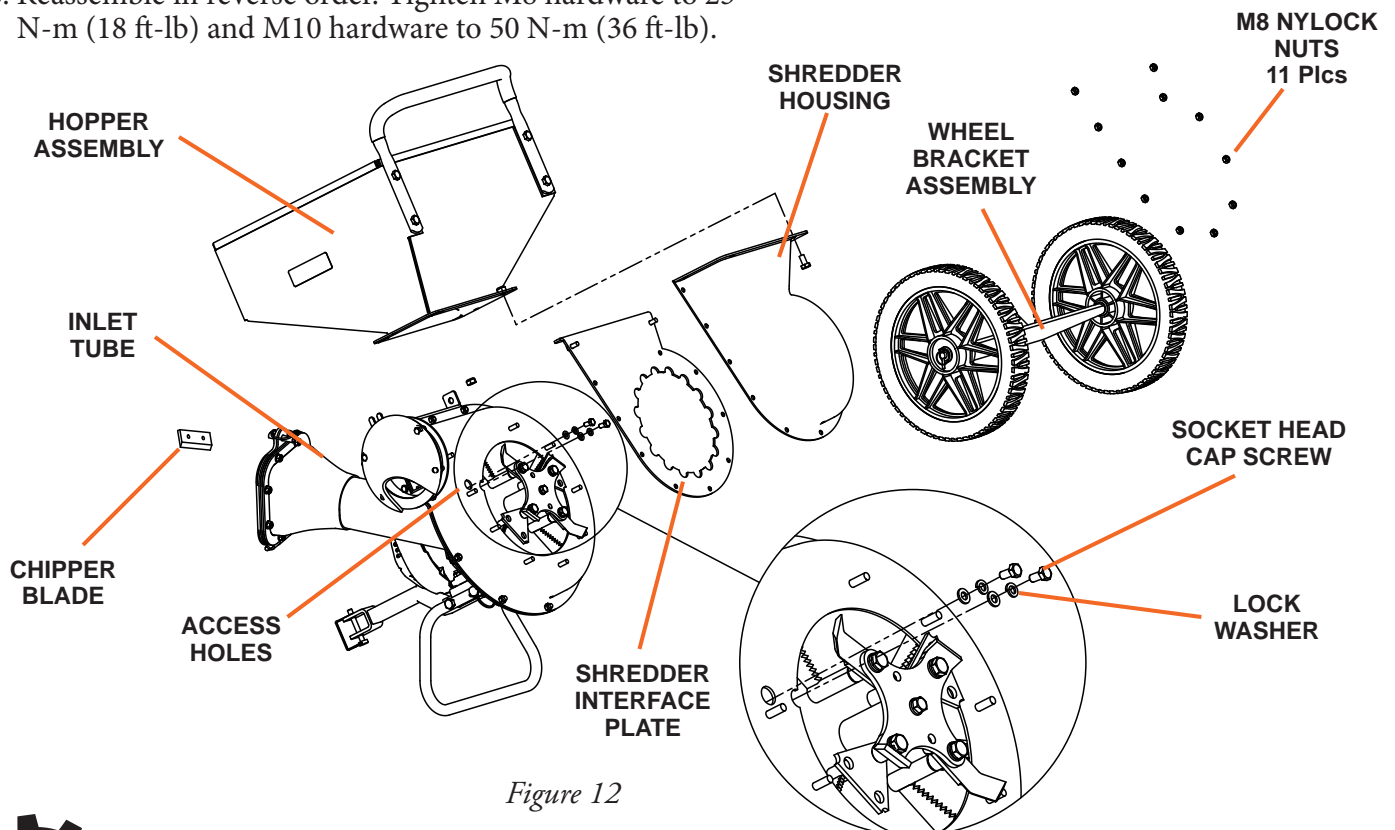
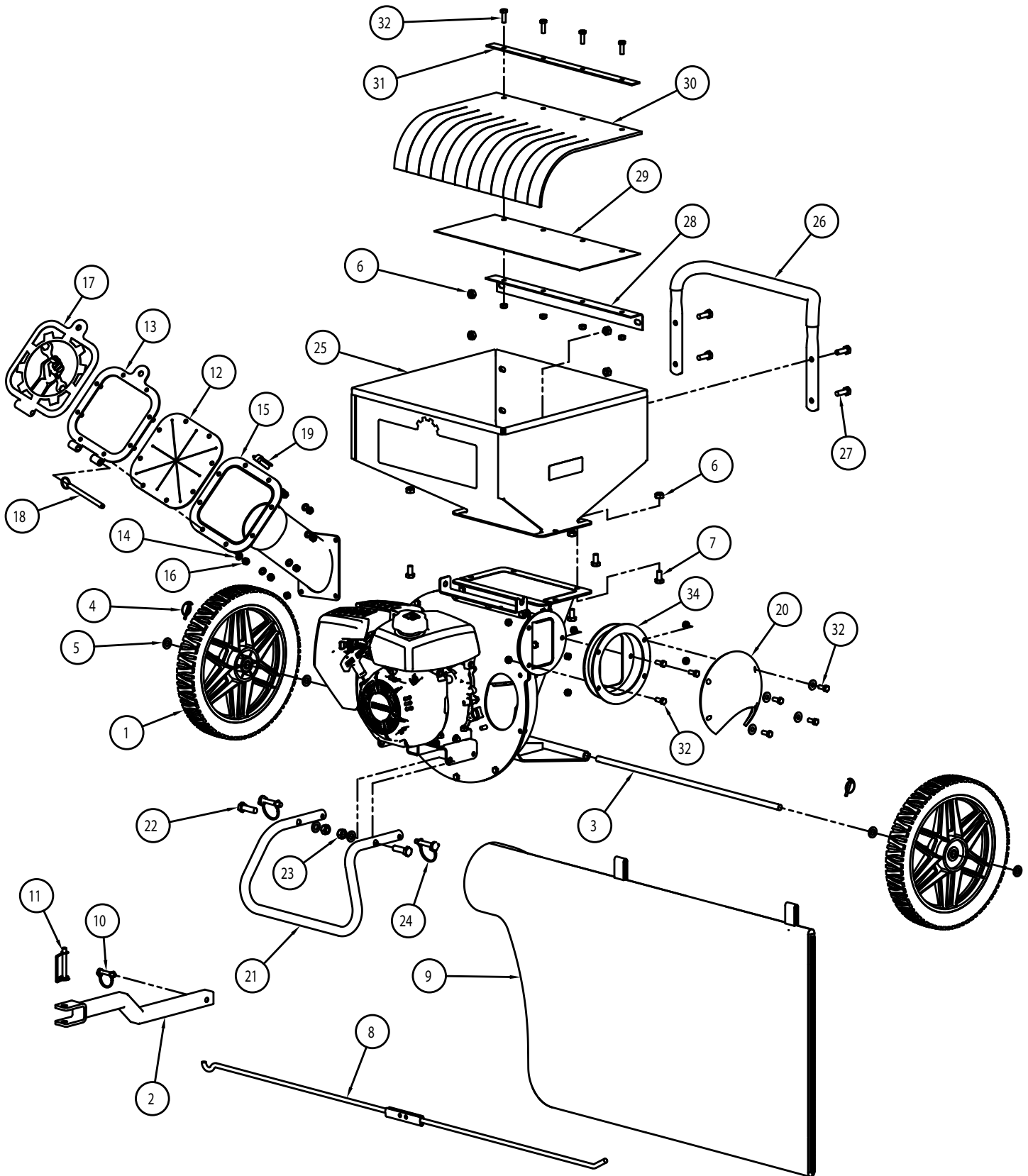


Figure 12

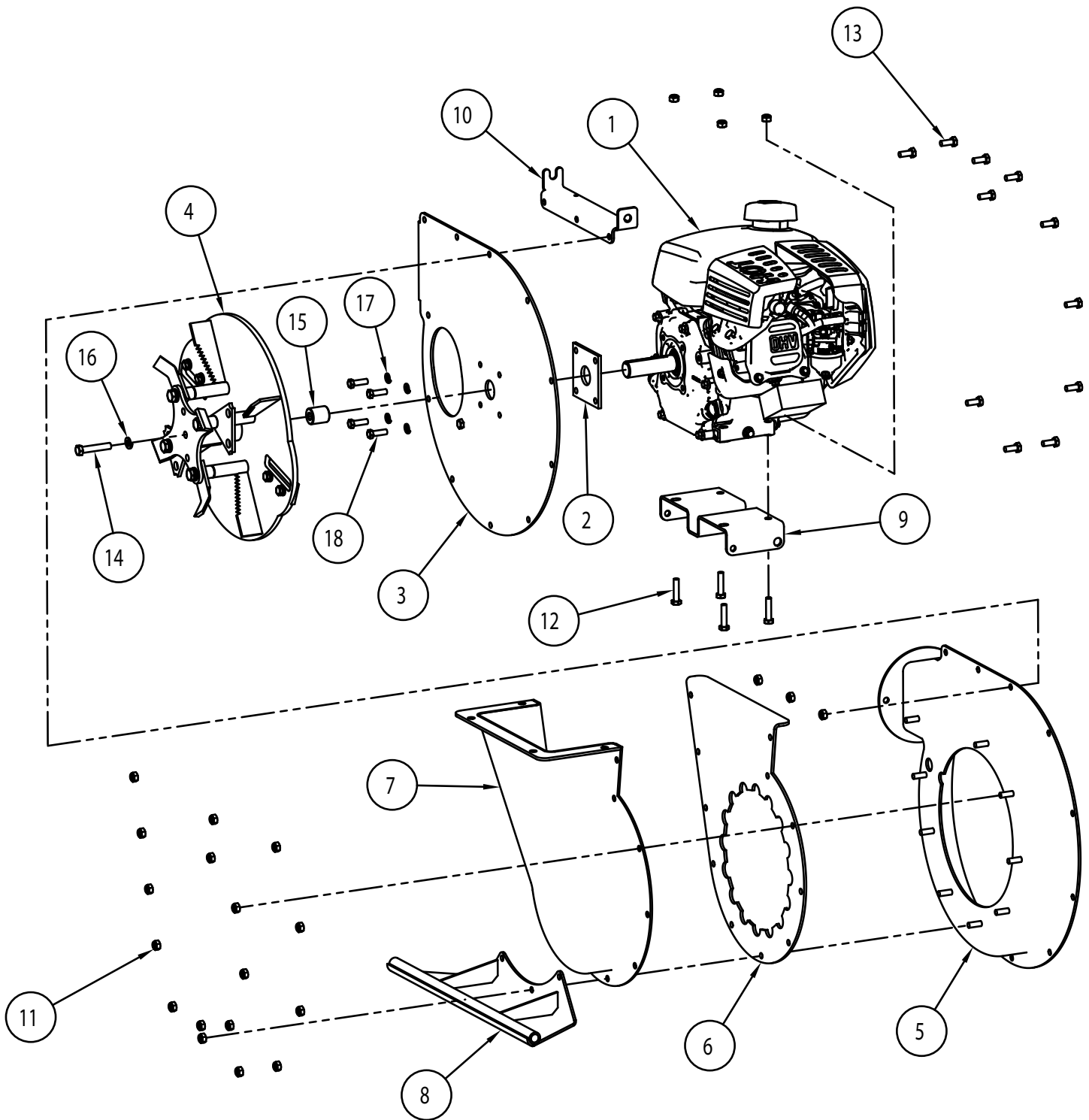
Chipper/Shredder Assembly



Chipper/Shredder Assembly Parts List

Item #	Part #	Description	Qty.
1	101094	Trimmer Wheel Assembly	2
2	106558	Drawbar	1
3	106535	Axle Rod	1
4	102342	Lynch Pin, 3/16" x 1"	2
5	100181	Flat Washer, M12	4
6	100068	Hex Nut, Nylock, M10 x 1.5	8
7	102973	Hex Bolt, M10 x 1.5 x 20mm	4
8	106593	Bag Support Assembly	1
9	106761	Fabric Debris Collection Bag	1
10	102476	Lock Pin, Round, 5/16" x 1-3/8"	1
11	102485	Lock Pin, Square, 3/8" x 2-1/4"	1
12	106543	Feed Tube Check, Rubber	1
13	106546	Feed Tube Hinge Bezel	1
14	100130	Flat washer, M8	8
15	106903	Simple Feed Tube, 3.5" x 4"	1
16	100128	Hex Nut, Nylock, M8 x 1.25	20
17	106547	Feed Cover	1
18	102333	Detent Pin, 3/8" x 4"	1
19	102349	Lynch Pin, w/Chain, 7/16" x 1-1/2"	1
20	107687	Rubber Deflector	1
21	106555	Foot Tube	1
22	106391	Hex Bolt, M12-1.75 x 40mm	2
23	100069	Hex Nut, Nylock, M12 x 1.75	2
24	102483	Lock Pin, Round, 3/8" x 1-3/4"	2
25	106552	Hopper	1
26	106553	Handle Bar	1
27	100165	Hex Bolt, M10-1.5 x 30mm	4
28	106861	Hopper Check Mount	1
29	106863	Hopper Check Support	1
30	106862	Hopper Check, Rubber	1
31	106864	Hopper Check retention	1
32	103901	Hex Bolt, M8 x 1.25 x 25mm	4
33	100128	Hex Nut, Nylock, M8 x 1.25	4
34	107691	Bag Flange	1

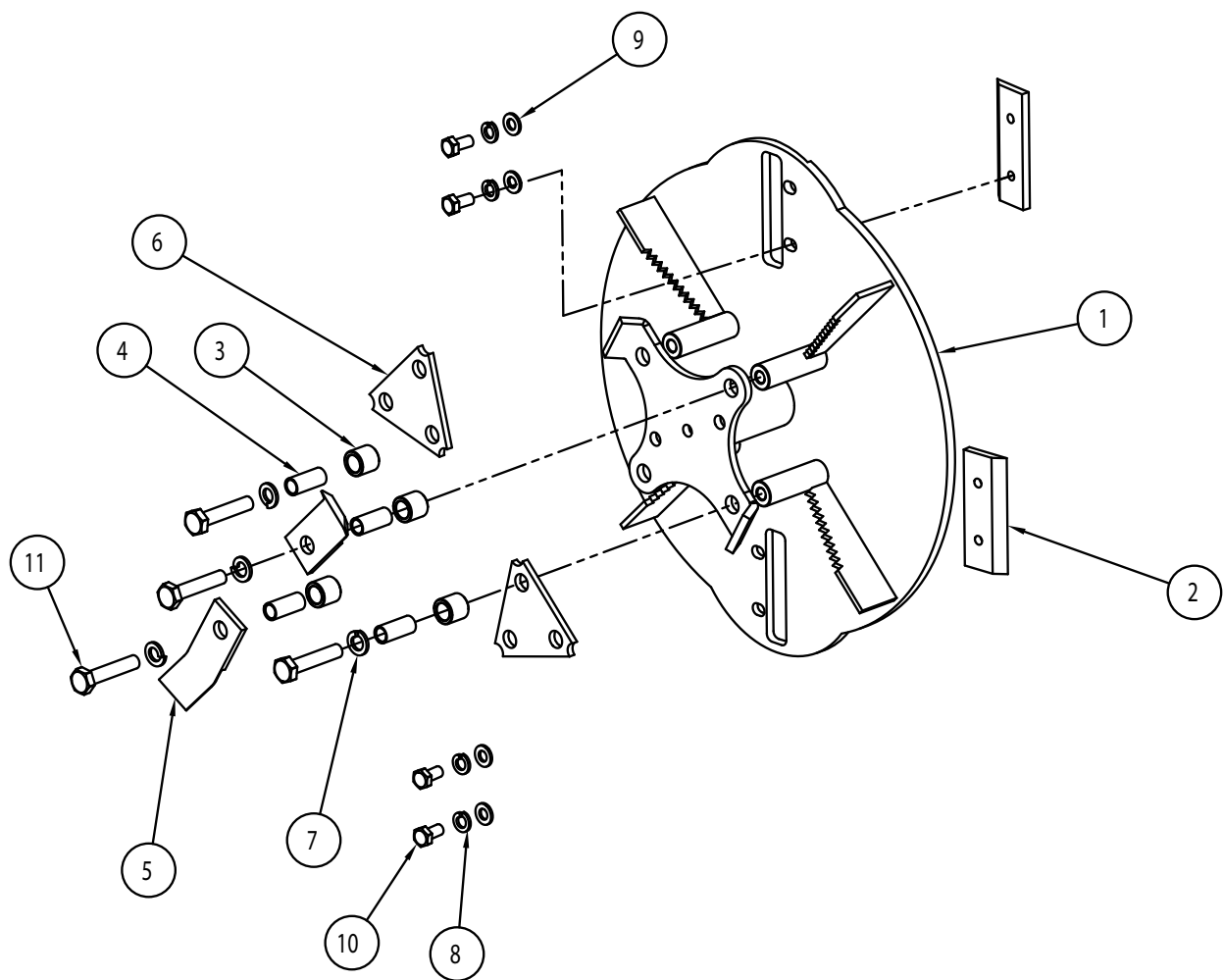
Engine and Housing Assembly



Engine and Housing Assembly Parts List

Item #	Part #	Description	Qty.
1	107140	Engine Kohler, RH265, 1" Shaft	1
2	106559	Engine Spacer	1
3	106906	Feed Tube Closure	1
4	106571	Flywheel Assembly	1
5	106518	Chipper Housing	1
6	106515	Shredder Interface	1
7	106514	Shredder Housing	1
8	106533	Axle Bracket	1
9	106556	Drawbar Bracket	1
10	106530	Bag Arm Bracket	1
11	100128	Hex Nut, Nylock, M8 x 1.25	27
12	106808	Hex Bolt, M8 x 1.25X35mm	4
13	100125	Hex Bolt, M8 x 1.25X20mm	11
14	100021	Hex Head Bolt, 3/8-24 x 2"	1
15	106842	Flywheel Spacer	1
16	100611	Lock Washer, 3/8	1
17	100127	Lock Washer, M8	4
18	100486	Hex Head Bolt, 5/16 x 1, Z5	4

Chipper Rotor Assembly



Chipper Rotor Assembly Parts List

Item #	Part #	Description	Qty.
1	106566	Flywheel	1
2	106844	3.5" Chipper Blade	2
3	106570	Flail Spacer	4
4	106572	Flail Bushing	4
5	106569	J-Flail	2
6	106568	Trident Flail	2
7	100089	Lock Washer, M10	4
8	100127	Lock Washer, M8	4
9	100130	Flat Washer, M8	4
10	104986	Hex Bolt, M8 x 1.25 x 16mm	4
11	104365	Hex Bolt, M10 x 1.5 x 50mm	4

Troubleshooting

PROBLEM	SOLUTION
Engine will not start	<ul style="list-style-type: none"> • Add gas to gas tank. • Connect spark plug wire to spark plug • Engine control lever must be at choke for a cold start
Engine runs rough, floods during operation	<ul style="list-style-type: none"> • Clean or replace air cleaner • Move choke to RUN position
Engine is hard to start	<ul style="list-style-type: none"> • Drain old fuel and replace with fresh. Use gas stabilizer at end of season • Make sure spark plug wire is securely attached to spark plug
Engine misses or lacks power	<ul style="list-style-type: none"> • Remove and clean fuel tank • Clean or replace air cleaner • Improper carburetor adjustment, take to authorized engine service center • Replace spark plug and adjust gap • Drain and refill gas tank and carburetor
Engine exhaust is black.	<ul style="list-style-type: none"> • Dirty air filter. Replace or clean air filter(s). • Choke closed. Open choke.
Engine runs but no material is discharged.	<ul style="list-style-type: none"> • Discharge chute clogged. Stop engine and clear obstruction and debris. • Engine not running at full speed. Move the Engine control lever to the fast position.
Excessive branch vibration when chipping materials. Extra force required to feed branches into chipper.	<ul style="list-style-type: none"> • Chipper knives dull. Sharpen or replace knives. • Tree limbs are extremely hard or dried out. Material is not suitable for chipping.
Unusual noise or vibration when chipping materials.	<ul style="list-style-type: none"> • Rotor overloaded with material. Allow unit to clear before adding more material to the hopper. • Hammers are broken, bent, or loose. Tighten or replace hammers as necessary. • Hammers frozen in place. Check for obstructions. Alternate damp and dry materials to avoid clogging.



WARNING

DO NOT STORE CHIPPER/SHREDDER IN UNVENTILATED AREA

where fuel fumes may reach flame, sparks, pilot lights or other ignition source.

Drain fuel outdoors away from any ignition sources.

Use only approved fuel containers.

Prepare for Storage

Follow the steps below to prepare your chipper/shredder for storage. Read your engine manual for detailed instructions on preparing the engine for storage.

1. Protect wheels and axles from rust: Remove lock pin and slide wheel off hub. Coat the axles lightly with axle grease. Slide wheel back on hub and insert lock pin.
2. Drain fuel system completely following engine manufacturer's instructions or add fuel stabilizer to prevent fuel from gumming up during extended storage period.
3. While engine is still warm, drain the oil from the engine. Refill with fresh oil of the recommended grade.
4. Clean external surfaces, engine and cooling fan.
5. Remove spark plug, pour one ounce of SAE 30 oil into spark plug hole.
6. Plug hole and pull starter cord slowly to distribute oil evenly in cylinder head area.
7. Reinstall spark plug. If there is any possibility of unauthorized use or tampering, remove the spark plug and store it in a safe place before storing the chipper/shredder unit.

Transporting

Always use the hopper handle and built-in wheels to move the chipper shredder. Never lift the unit using the fuel tank for support. If the unit must be lifted, always use at least two people, and always grip the unit securely using the foot stand and hopper handle.

Warranty & Specifications

IMPORTANT NOTICE

We, the manufacturer, reserve the right to change the product and/or specifications in this manual without notification. The manual is for information usage only and the pictures and drawings depicted herein are for reference only.

Warranty Repair and Service

Do not return this product to the store for warranty issues or repair. Call our customer service department at **720-287-5182**, **1-877-487-8275**, or visit www.dirtyhandtools.com for the location of the nearest service center.

Record the information below for future reference.

Model No. _____

Serial No. _____

Date of Purchase _____

Place of Purchase _____

Specifications

SKU/Part No.	106817
Description	3" Chipper/Shredder
Engine	Kohler RH265, 6.5 HP, 196cc*
Starting System	Manual, Recoil
Chipping Capacity	3" Diameter
Shredding Capacity	1/2"
Hopper Size	20" x 19" x 7"
Wheel Size	14" Diameter x 2" width
Debris Collection	3 Bushel Capacity, Detachable Bag
Debris Bag Size	42"L x 24"H (1064x600mm)
Frame	10 Gauge Steel
Dimensions	34"L x 24" W x 39.5" H (864x610x1080mm)
Shipping Weight	220 Lbs. (99.8kg)
Warranty	2 Year / 2 Year Limited Warranty

*As rated by engine manufacturer