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Safe Operation Practices

WARNING

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol.

HEED ITS WARNING!

Your Responsibility
Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

WARNING: Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

DANGER: This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 16 years old to operate this machine. Children 16 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. Keep bystanders, helpers, pets, and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
6. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
7. Do not put hands and feet near rotating parts or in the feeding chambers and discharge opening. Contact with the rotating impeller can amputate fingers, hands, and feet.
8. Never attempt to unclog either the feed intake or discharge opening, remove or empty bag, or inspect and repair the machine while the engine is running. Shut the engine off and wait until all moving parts have come to a complete stop. Disconnect the spark plug wire and ground it against the engine.

Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all rocks, bottles, cans, or other foreign objects which could be picked up or thrown and cause personal injury or damage to the machine.
2. Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes. Thrown objects which ricochet can cause serious injury to the eyes.
3. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Loose fitting clothes or jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals. Wear leather work gloves when feeding material in the chipper chute.
4. Before starting, check all bolts and screws for proper tightness to be sure the machine is in safe working condition. Also, visually inspect machine for any damage at frequent intervals.
5. Maintain or replace safety and instructions labels, as necessary.
6. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
   a. Use only an approved gasoline container.
   b. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
   c. Never fuel machine indoors.
   d. Never remove gas cap or add fuel while the engine is hot or running.
   e. Allow engine to cool at least two minutes before refueling.
   f. Never over fill fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide space for fuel expansion.
   g. Replace gasoline cap and tighten securely.
   h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
   i. Never store the machine or fuel container inside where there is an open flame, spark, or pilot light (e.g. furnace, water heater, space heater, clothes dryer, etc.)
   j. To reduce a fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
   k. Allow machine to cool at least 5 minutes before storing.

Operation

1. Do not put hands and feet near rotating parts or in the feeding chambers and discharge opening. Contact with the rotating impeller can amputate fingers, hands, and feet.
2. Before starting the machine, make sure the chipper chute, feed intake, and cutting chamber are empty and free of all debris.
3. Thoroughly inspect all material to be shredded and remove any metal, rocks, bottles, cans, or other foreign objects which could cause personal injury or damage to the machine.

l4. f it becomes necessary to push material through the shredder hopper, use a small diameter stick. Do not use your hands or feet.

l5. f the impeller strikes a foreign object or if your machine should start making an unusual noise or vibration, immediately shut the engine off. Allow the impeller to come to a complete stop. Disconnect the spark plug wire, ground it against the engine and perform the following steps:
   a. Inspect for damage.
   b. Repair or replace any damaged parts.
   c. Check for any loose parts and tighten to assure continued safe operation.

6. Do not allow an accumulation of processed material to build up in the discharge area. This can prevent proper discharge and result in kickback of material through the feed opening.
7. Do not attempt to shred or chip material larger than specified on the machine or in this manual. Personal injury or machine damage could result.
8. Never attempt to unclog either the feed intake or discharge opening while the engine is running. Shut the engine off, wait until all moving parts have stopped, disconnect the spark plug wire and ground it against the engine before clearing debris.
9. Never operate without the shredder hopper, chipper chute, or chute deflector properly attached to the machine. Never empty or change discharge bag while the engine is running.
10. Keep all guards, deflectors and safety devices in place and operating properly.
11. Keep your face and body back and to the side of the chipper chute while feeding material into the machine to avoid accidental kickback injuries.
12. Never operate this machine without good visibility or light.
13. Do not operate this machine on a paved, gravel or non-level surface.
14. Do not operate this machine while under the influence of alcohol or drugs.
15. Muffler and engine become hot and can cause a burn. Do not touch.
16. Never pick up or carry machine while the engine is running.

Maintenance & Storage

1. Never tamper with safety devices. Check their proper operation regularly.
2. Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage and repair, if needed.
3. Before cleaning, repairing, or inspecting, stop the engine and make certain the impeller and all moving parts have stopped. Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.
4. Do not change the engine governor settings or overspeed the engine. The governor controls the maximum safe operating speed of the engine.
5. Maintain or replace safety and instruction labels, as necessary.
6. Follow this manual for safe loading, unloading, transporting, and storage of this machine.
7. Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer, etc.
8. Always refer to the operator's manual for proper instructions on off-season storage.
9. If the fuel tank has to be drained, do this outdoors.
10. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM) and Three Way Catalyst (TWC) if so equipped.

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1	681-04006†	Upper Chipper Chute Assembly
2	681-04007†	Lower Chipper Chute Assembly
3	710-0106†	Hex Cap Screw, 1/4-20 x 1.25
4	710-0599	TT Screw, 1/4-20 x.5
5	712-3010	Hex Nut, 5/16-18
6	712-3027†	Hex Lock Nut 1/4-20
7	714-0104†	Cotter Pin
8	728-0175†	Pop Rivet
9	732-0306A†	Compression Spring,.531 x 1.75
10	735-0249A†	Chute Flap
11	736-0140†	Flat Washer
12	736-0242	Bell Washer.340 ID x.872 OD
13	736-0451	Washer,.320 ID x.93 OD
14	747-04163†	Lock Rod
15	749-1004†	Chipper Chute Support
16	781-04032†	Chipper Chute Hinge
17	781-0633†	Chute Flap Strip
18	681-04011	Shredder Hopper Assembly
19	710-0809	Hex Cap Screw, 1/4-20 x 1.250
20	710-0805	Hex Cap Screw, 5/16-18 x 1.50
21	712-04065†	Flange Lock Nut, 3/8-16
22	712-04063	Flange Lock Nut, 5/16-18
23	732-04167†	Torsion Spring
24	736-0182†	Spring Washer,.50 x 1.0 x.022
25	736-0326†	Flat Washer,.50 x 1.0 x.0125
26	738-0430†	Shoulder Screw, 3/8-16,.50 x.685
27	749-04103	Hopper Handle
28	749-04104	Tube Support
29	781-04007	Shredder Plate
30	781-04027	Hopper Support Bracket
31	781-04033	Inlet Guide
32	681-0117	Inner Flail Housing Assembly
33	681-0184A*	Frame Assembly
	681-0183A	Frame Assembly

34	681-04002	Outer Flail Housing Assembly
35	710-0157	Hex Cap Screw, 5/16-24 x.75
36	710-0502A	Hex Sems Screw, 3/8-16 x 1.25
37	710-0825	Hex Cap Screw, 1/4-20 x 3.75
38	710-3025	Hex Cap Screw, 5/16-18 x.625
39	726-0211	U-Nut, 5/16-18
40	736-0119	Lock Washer, 5/16
41	736-0170	Special Lock Washer, 5/16
42	750-0793	Hinge Spacer,.265 x.380 x 1.66
43	681-0048	Knob Assembly (Incl. ref.# 12 & 61)
	720-0170	Knob Only, 5/16-18
44	681-0094	Chute Deflector Assembly
45	711-0835	Clevis Pin,.50 x 4.62
46	714-0149B	Internal Cotter Pin
47	719-04070	Shredder Screen
48	726-0214	Push Cap, 5/8
49	734-1845	Wheel, 10 x 4 x 4
50	736-0366	Flat Washer,.625 x 1.0
51	738-0813	Axle, 22.47”
52	737-0195‡	Elbow Fitting
53	737-0132*	Oil Drain End Cap
54	737-0298*	Oil Drain Pipe
55	710-1254	Hex Cap Screw, 3/8-24 x 2.2
56	736-0217	Lock Washer, 3/8
57	736-0247	Flat Washer,.406 x 1.25
58	681-04009	Impeller Assembly
		(See page 13 for Impeller Parts)
59	736-0173	Flat Washer,.28 x.74 x.063
60	726-0233†	Push Nut,.25ID x.50OD
61	726-0201	Speed Nut,.3125ID
62	681-0095‡	Chipper Chute
63	712-04064	Nut, Flange, Lock, 5/16-18
—	664-04023	Debris Collection Bag (Not Shown)
—	723-0400	Safety Glasses (Not Shown)

† Model 424 & 425

‡ Model 414 Only

* Model 424 Only

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Parts List

MTD For A Growing World. GENUINE FACTORY PARTS

To order replacement parts, call the Customer Service Line at 1-800-648-6776, or visit www.troybilt.com.