

# **TEMPEST**™

## **OWNER'S MANUAL**

VentMaster® Fire Rescue Saws  
HD Series Chainsaws



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## SAFETY GUIDE

Failure to follow the operating, maintenance and lubrication requirements set forth in this manual may result in serious personal injury or death and/or damage to equipment or property.

The following WARNING statements indicate potentially hazardous conditions for operators and equipment. Make certain that anyone who works on or around this tool has read and fully understands the safety precautions listed.

1. Carefully read this owner's manual and the power head manufacturer's manual before attempting to operate, service or disassemble any part of your *VentMaster® Fire Rescue Saw*.
2. **DO NOT** operate the unit when mentally or physically fatigued or impaired.
3. Stay away from rotating parts; avoid wearing loose jackets, shirts, and ties. Keep hands and feet away from moving parts.
4. Keep all unauthorized personnel at a safe distance from the saw.
5. Keep all guards in place. **DO NOT** make repairs while the unit is running. **DO NOT** operate if any guard is not in place.
6. Always wear eye protection. Loose debris can be picked up and flown in the air.
7. Hearing protection is required. Engine and cutting noise may exceed safe dB levels.
8. Gasoline is extremely flammable and is explosive under certain conditions. To prevent fire hazards, do not place flammable objects close to the engine.
9. Do not overfill the fuel tank. After refueling, make sure the tank cap is closed properly and secured. If any fuel is spilled, make sure the area is dry before starting the engine.
10. Never operate in an enclosed or confined area over prolonged periods of time. Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.
11. The muffler becomes very hot during operation and remains hot for some time after stopping the engine. Be careful not to touch the muffler while it is hot. To avoid severe burns or fire hazards, let the engine cool before transporting or storing the unit.
12. It is the sole responsibility of the owner/operator to develop procedures for proper use of the *VentMaster® Fire Rescue Saw* in accordance with generally accepted ventilation techniques as well as the organization's own operating procedures, before placing the unit into service.



## GENERAL INFORMATION

### SAW IDENTIFICATION

Each *VentMaster® Fire Rescue Saw* has a part number as well as a serial number. The part number identifies the type of unit (powerhead, bar length, etc.) while the serial number relates to information referencing the date of manufacture. This information is useful should it become necessary to contact the factory regarding your *VentMaster® Fire Rescue Saw*.

### SERIAL NUMBER LOCATIONS

The serial number is typically located on the right side of the engine cover.

Please write the Serial Number of your *VentMaster® Fire Rescue Saw* in the spaces below. This will aid us in identifying which model you have when assisting you.

Model (Part No.) \_\_\_\_\_

Date \_\_\_\_\_

Serial No. \_\_\_\_\_

### WARRANTY

Warranty information on your unit can be found on the back page of this manual. For further information, please contact Tempest Technology Corp.

# VENTMASTER® FIRE RESCUE CHAINSAW DATA

Model No.	Part No.	Bar	Engine	Dimensions (WxDxH)	Weight	Depth Gauge
572HD-20-DG .404	TV400-080	20"	5.8 HP, 70.6cc	37.00" x 12.50" x 12.50"	24 lbs.	●
576HD-20 .404	TV400-083	20"	5.8 HP, 70.6cc	37.00" x 12.50" x 12.50"	21.3 lbs.	
576HD-16-DG .404	TV400-081	16"	5.8 HP, 70.6cc	33.00" x 12.50" x 12.50"	23 lbs.	●
576HD-16 .404	TV400-084	16"	5.8 HP, 70.6cc	33.00" x 12.50" x 12.50"	20.3 lbs.	
365HD-20-DG .404	TV400-044	20"	4.9 HP, 71cc	37.00" x 12.50" x 12.75"	23 lbs.	●
365HD-20 .404	TV400-052	20"	4.9 HP, 71cc	37.00" x 12.50" x 12.75"	22 lbs.	
365HD-16-DG .404	TV400-043	16"	4.9 HP, 71cc	33.00" x 12.50" x 12.75"	22 lbs.	●
365HD-16 .404	TV400-053	16"	4.9 HP, 71cc	33.00" x 12.50" x 12.75"	21 lbs.	

NOTE: All models listed come equipped with the *Raptor Carbide Chain* (0.404 Pitch, 0.063 Gauge).

## OPERATING PROCEDURES

### PRE-OPERATION

#### VISUAL INSPECTION

After receiving and unpacking your saw, be sure to carefully inspect it for any damage that might have occurred during shipping. Should you find any damage: PLEASE NOTIFY TEMPEST TECHNOLOGY CORP. IMMEDIATELY AT +1 559.277.7577.

#### CHAIN TENSION

Always ensure the saw's chain is tensioned properly before operation. To tension the chain, follow the directions below.

1. Shut off the engine, set upright and let the chain cool down.
2. Loosen the stud nuts that hold the guide bar onto the engine.
3. While holding the bar tip UP, adjust the chain tension screw to the position that allows the (cold) chain to pass freely around the bar.

NOTE: The chain should NOT hang down more than 1/8" below the bottom rail of the guidebar.

4. While holding the bar tip UP, tighten the nuts on the studs.
5. Before starting the saw, check the chain tension once again. If it is not correct, loosen the nuts and repeat the above.

Proper tension will extend the life of the chain and enhance its cutting performance.

#### LUBRICATION

Chainsaws require bar and chain lubrication during operation. Always ensure the correct amount and type of oil is used before starting your *VentMaster® Fire Rescue Saw*. Please see engine manufacturer's manual for details on proper lubrication.

### OPERATION

#### CHAIN SPEED

It is important to run saw at FULL THROTTLE when entering the cut, during the cut and exiting the cut (Release throttle only after full exit from cut).

### FORCING THE CUT

Always let the chain do the work. Do not put extreme pressure on chain while cutting. Excessive pressure causes the chain to slow down and can cause carbide tip failure also causing heat damage to the bar. Slow cutting could indicate chain needs sharpening.

### SHEET METAL AND FIBER GLASS

Always use the *KIS-40* depth gauge when cutting thin materials such as sheet metal, aluminum siding or fiberglass. The depth gauge can be set to expose 1/4" to 1/2" of the tip of bar and chain for cutting these materials. These thin materials will shake and vibrate when the bar and chain are inserted too deep and can cause carbide tip failure.

### MAINTENANCE

Keep engine clean and tuned properly per the engine manufacturer's specifications to maintain maximum engine speed/performance. Elements such as a dirty air filter can cause gradual power loss which can result in carbide chain tip failure.

## RAPTOR CARBIDE CHAIN CARE

While carbide chains are extremely durable, improper use and poor saw maintenance can cause chain damage and failure.

During operation, the chain will heat up and loosen on the bar. This is normal. After cooling, the chain will return to its original size. Chain stretch will continue throughout the chain's life. To ensure optimum chain life and performance, always ensure proper chain tension is set prior to use. To set the chain's tension, see the directions under Operating Procedures, Pre-Operation.

### NEW CHAIN BREAK-IN

When breaking in a new chain, run at low speed for two (2) minutes. Ensure that there is adequate oil lubrication to the bar and chain. Stop the engine and check chain tension again. If the chain has loosened, tighten it to the correct tension. Check after a few easy cuts and readjust if necessary. To set the chain's tension, see the appropriate directions under Operating Procedures, Pre-Operation.

NOTE: The drive sprocket should be changed every time a new chain is put on a saw.

### SHARPENING

- The Raptor carbide chain is ground at an angle of 29 degrees with 15 degrees on the vertical.
- Depth gauge settings: 25 to 30 thousandths of an inch. When the depth gauge is filed more than 30 thousandths of an inch, it increases the possibility for the carbide tip to break off.
- As a general rule, the depth gauges should be filed with each sharpening of the chain using a flat file and depth gauge tool.
- Carbide chain sharpening requires the use of specialized diamond-abrasive tools. "Flat facing" is done using a 1FF1 style diamond wheel. "Round facing" is done using an EZE-Lap diamond or a contoured diamond wheel.

### CHAIN REPAIR

Inspect chain after each use. When a chain has more than five cutters missing or heavily damaged, it is recommended the chain be taken out of service for repair. If two or more cutters in succession are missing or are damaged, the chain should be taken out of service for repair. Considerable damage could occur to the remaining cutters if chain is used.

Cutter replacement depends on overall condition of the rest of the cutters to determine if the chain should be repaired or replaced. As a general rule, if five or more cutters are missing or damaged it is more cost effective to replace the chain.

The drive sprocket should be changed every time a new chain is put on a saw. The cutting performance is diminished when a worn drive sprocket has a loose fit, causing "play" as the drive links of a new chain are pulled through. This can put premature wear on a new chain, causing product failure.

Tempest offers complimentary chain evaluation and optional chain repair/sharpening. Contact customer service at 800.346.2143 with questions regarding chain repair service.



