## **OPERATION AND PARTS MANUAL**



# SP2 StreetPro SERIES MODEL SP2S13H20A SELF-PROPELLED PROFESSIONAL PAVEMENT SAW (HONDA GX390K1QWT2 GASOLINE ENGINE)

Revision #1 (05/17/10)



THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

## PARTS FINDER Search Website Search Website Search Website Search Website







Discount-Equipment.com is your online resource for quality parts & equipment.

Florida: 561-964-4949 Outside Florida TOLL FREE: 877-690-3101

## Need parts?

Click on this link: <a href="http://www.discount-equipment.com/category/5443-parts/">http://www.discount-equipment.com/category/5443-parts/</a> and choose one of the options to help get the right parts and equipment you are looking for. Please have the machine model and serial number available in order to help us get you the correct parts. If you don't find the part on the website or on one of the online manuals, please fill out the request form and one of our experienced staff members will get back to you with a quote for the right part that your machine needs.

We sell worldwide for the brands: Genie, Terex, JLG, MultiQuip, Mikasa, Essick, Whiteman, Mayco, Toro Stone, Diamond Products, Generac Magnum, Airman, Haulotte, Barreto, Power Blanket, Nifty Lift, Atlas Copco, Chicago Pneumatic, Allmand, Miller Curber, Skyjack, Lull, Skytrak, Tsurumi, Husquvarna Target, Stow, Wacker, Sakai, Mi-T-M, Sullair, Basic, Dynapac, MBW, Weber, Bartell, Bennar Newman, Haulotte, Ditch Runner, Menegotti, Morrison, Contec, Buddy, Crown, Edco, Wyco, Bomag, Laymor, EZ Trench, Bil-Jax, F.S. Curtis, Gehl Pavers, Heli, Honda, ICS/PowerGrit, IHI, Partner, Imer, Clipper, MMD, Koshin, Rice, CH&E, General Equipment, Amida, Coleman, NAC, Gradall, Square Shooter, Kent, Stanley, Tamco, Toku, Hatz, Kohler, Robin, Wisconsin, Northrock, Oztec, Toker TK, Rol-Air, APT, Wylie, Ingersoll Rand / Doosan, Innovatech, Con X, Ammann, Mecalac, Makinex, Smith Surface Prep,Small Line, Wanco, Yanmar



## **CALIFORNIA** — Proposition 65 Warning

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks.
- Cement and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: <u>ALWAYS</u> work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.





## **SILICOSIS WARNING**

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.





## RESPIRATORY HAZARDS

Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturers or suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by NIOSH/MSHA for the materials being used.

## **TABLE OF CONTENTS**

SP2S13H20A StreetPro S	aw	Honda Gx390k1qwt2	Engine
Proposition 65 Warning	2	Air Cleaner Assembly	74-75
Silicosis/Respiratory Warnings	3	Camshaft Assembly	
Table Of Contents	4	Carburetor Assembly	
Parts Ordering Procedures	5	Control Assembly	
Specifications	6	Crankcase Assembly	
Dimensions	7	Crankshaft Assembly	
Safety Message Alert Symbols	8-9	Cylinder Barrel Assembly	
Rules For Safe Operation	10-12	Cylinder Head Assembly	
Major Components	14	Fan Cover Assembly	90-91
13HP Honda Engine Components	15	Flywheel Assembly	92-93
General Information	16	Fuel Tank Assembly	94-95
Inspection	18-19	Ignition Coil Assembly	
Inspection -Blade	20	Muffler Assembly	
Inspection - Blade Placement		Piston Assembly	
Inspection -Guards, Covers & Belts	22	Recoil Stater Assembly	
Inspection - BeLts & Water Tank	23	Labels Assembly	
Manual Start-Up	24-25		
Shut-Down Procedures	26	Terms And Conditions Of Sale — Pa	arts 106
Operation	28-31	C	
Maintenance		X	
13HP Engine Wiring Diagram (Recoil Start)	37		
Troubleshooting (Engine)	38-39		
Troubleshooting (Blade)	40		
Explanation Of Code In Remarks Column	42		
Suggested Spare Parts	43		
Component Drawings			
Name Plate And Decals	44-45		
Under Carriage Assembly	46-47		
Blade Shaft Assembly	48-49		
Lifting Bale Assembly	50-51		
Console Assembly	52-53		
13hp Honda Engine Mount Assembly	54-55		
Engine Assembly			
Pointers And Covers Assembly	58-59		
Water System Assembly	60-61		
Blade Guard Assembly			
Manual Raise And Lower Assembly (20 In.).	64-65		
Battery Assembly	66-67		
Transmission Engage Lever Assembly	68-69		
Hydrostatic Transmission Assembly	70-71		
Hydrostatic Drive Assembly	72-73		

1	able 1. Specifications	
Model	SP2S13H20A	
Blade Capacity in. (mm)	20 in. (508 mm)	*5
Cutting Depth in. (mm)	7.5 in. (191 mm)	
Front Wheels in. (mm)	5 in. Dia x 2 in. Wide (127 mm x 51 mm)	
Rear Wheels in. (mm)	8 in. Dia x 2 in. Wide (203 mm x 51 mm)	. Y
Weight lbs. (kg)	280 lbs. (127 kg)	
Engine	Honda 13 HP GX390K1QWT2 Gasoline Engine	
		· I
Table 2. Engine Specifications		
Engine Model	Honda GX390K1QWT2	
	Air and all Antroles Cinale Culturales OLIV	

Table 2. Engine Specifications		
Engine Model	Honda GX390K1QWT2	
Engine Type	Air-cooled 4-stroke Single Cylinder OHV Horizontal Shaft Engine	
Bore x Stroke	3.5 in. x 2.5 in. (88 mm x 64 mm)	
Displacement	23.7 cu. in. (389 cc)	
Maximum Power Output	13 HP/3600 RPM	
Maximum Torque	19.5 ft-lbs. (2500 RMP) 2.7 kg-m (2500 RPM)	
Idle Speed	1400 ± 150 RPM	
Maximum No Load RPM	3600 ± 100 RPM	
<b>Specific Fuel Consumption</b>	1 gal./hr. (20.81 liters/hr.)	
Fuel Tank Capacity	1.72 gallons (6.5 liters)	
Crankcase Oil Capacity	2.32 pints (1.1 liters)	
Starting System	Recoil Start	
Spark Plug Gap	.028031 in. (0.70 - 0.78 mm)	
Air Cleaner	Cyclone Type	
Dry Weight	68.4 lbs. (31 kg)	
Dimensions (L x W x H)	15.0 x 17.7 x 17.4 in. (380 x 450 x 443 mm)	

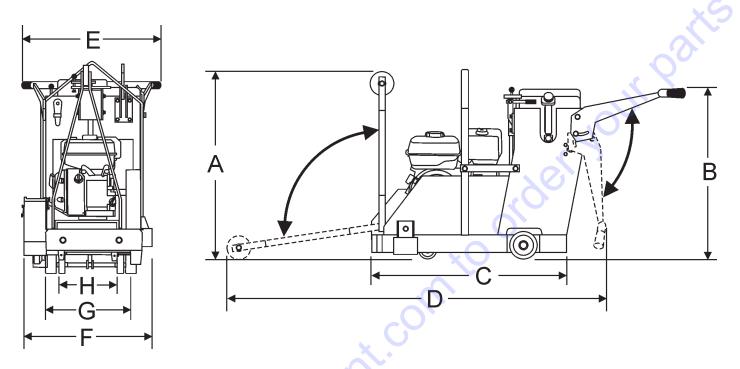


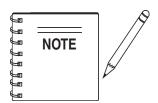
Figure 1. SP2S13H20A Dimensions

TABLE 3. DIMENSIONS		
REFERENCE LETTER	DESCRIPTION	DIMENSIONS IN. (MM)
А	Max Height (Handle Bars fully lowered & Front Pointer raised)	36 in. (914 mm.)
В	Max Handle Bar Height (fully raised)	40 in. (1016 mm.)
C	Max Length (Handle Bars & Front Pointer fully raised)	43 in. (1092 mm.)
D	Max Length (Handle Bars fully raised & Front Pointer lowered)	68 in. (1727 mm.)
E	Max Handle Bar Width	24 in. (610 mm.)
F	Max Width	24.5 in. (622 mm.)
G	Rear Wheel Base	16 in. (406 mm.)
Н	Front Wheel Base	14 in. (356 mm.)
Crated Dimension (L x W x H): 47 x 30 x 44 in. (1194 x 762 x 1118 mm)		

## **SAFETY MESSAGE ALERT SYMBOLS**

## FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the SP2S13H20A Saws. Depending on the power plant you have selected, please refer to the

engine manufacturers instructions for data relative to its safe operations.

Before using the SP2S13H20A Saw, ensure that the operating individual has read and understands all instructions in this manual.

## SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.



## DANGER

You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.



## WARNING

You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.



## CAUTION

You **CAN** be **INJURED** if you **DO NOT** follow these directions.

Potential hazards associated with SP2S13H20A Saw operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

## **HAZARD SYMBOLS**



## **Lethal Exhaust Gases**



Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



## **Explosive Fuel**



Gasoline is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids. **DO NOT** fill the fuel tank while the engine is running or hot. **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system. Store fuel in approved containers, in well-ventilated areas and away from sparks and flames. **NEVER** use fuel as a cleaning agent.



## **Burn Hazards**



Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. **NEVER** operate the engine with heat shields or heat guards removed.



## **Rotating Parts**



**NEVER** operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.

## **SAFETY MESSAGE ALERT SYMBOLS**



## **Accidental Starting**



## **Respiratory Hazard**



ALWAYS place the ON/OFF switch in the OFF position, remove key and/or disconnect the spark plug lead before servicing the engine or equipment. Ground the lead to prevent sparks that could ignite a fire.



**ALWAYS** wear approved respiratory protection.



## **Over Speed Conditions**



## Sight and Hearing hazard



**NEVER** tamper with the factory settings of the engine governor or settings. Personal injury and damage to the engine or equipment can result if operating in speed ranges above maximum allowable.



**ALWAYS** wear approved eye and hearing protection.



## **Guards and Covers In Place**

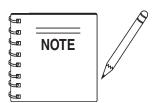


## **Equipment Damage Messages**



**NEVER** operate the saw without blade guards and covers in place. Adhere to safety guidelines ANSI American National Standards Institute, OSHA or other applicable local regulations. 30 to Discountification of the contract of the

Other important messages are provided throughout this manual to help prevent damage to your saw, other property, or the surrounding environment.



This saw, other property, or the surrounding environment could be damaged if you DO NOT follow instructions.

## **RULES FOR SAFE OPERATION**

### RULES FOR SAFE OPERATION

## **CAUTION**

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the SP2S13H20A Saw.

### **SAFETY**

- DO NOT operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- NEVER operate the saw without proper protective clothing, shatterproof glasses, steeltoed boots and other protective devices required by the job.













 NEVER operate this equipment when not feeling well due to fatigue, illness or taking medicine.



NEVER operate the saw under the influence or drugs or alcohol.



- NEVER use accessories or attachments, which are not recommended by or Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- ALWAYS check the saw for loosened hardware such as nuts and bolts before starting.

 NEVER touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing the saw.



- High Temperatures Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with hot! components can cause serious burns.
- The engine of this saw requires an adequate free flow of cooling air. NEVER operate the saw in any enclosed or



narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the saw's engine and may cause injury to people. Remember the saw's engine gives off **DEADLY** carbon monoxide gas.

- ALWAYS refuel in a well-ventilated area, away from sparks and open flames.
- ALWAYS use extreme caution when working with flammable liquids.
   When refueling, STOP the engine and allow it to cool.



 NEVER <u>smoke</u> around or near the machine. Fire or explosion could result from *fuel vapors*, or if fuel is spilled on a *hot!* engine.



- NEVER operate the saw in an explosive atmosphere where fumes are present or near combustible materials.
   An explosion or fire could result causing severe bodily harm or even death.
- Topping-off to filler port is dangerous, as it tends to spill fuel.
- NEVER use fuel as a cleaning agent.

## **RULES FOR SAFE OPERATION**

## **General Safety**

- ALWAYS read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- ALWAYS be sure the operator is familiar with proper safety precautions and operating techniques before using the saw.
- NEVER leave the machine unattended while running.
- Block the unit when leaving or when using on a slope.
- ALWAYS check to make sure that the operating area is clear before starting the engine.
- Maintain this equipment in a safe operating condition at all times.
- ALWAYS stop the engine before servicing, adding fuel and oil.
- NEVER run the engine without the air filter. Severe engine damage could occur.
- ALWAYS service air cleaner frequently to prevent carburetor malfunction.
- AVOID wearing jewelry or loose fitting clothing that may snag on the controls or moving parts, this can cause a serious injury.
- ALWAYS keep clear of rotating or moving parts while the saw is in operation.
- ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.
- NEVER use accessories or attachments which are not recommended by the manufacturer for this equipment.
   Damage to the equipment and/or injury to user may result.
- Keep all inexperienced and unauthorized people away from the equipment at all times.

## **WARNING**

**ALWAYS** check to make sure that the operating area is clear before starting the engine.



## **Diamond Blade Safety**

- Use appropriate steel centered diamond blades manufactured for use on saws.
- Examine blade flanges for damage, excessive wear and cleanliness before mounting blade. Blade should fit snugly on the shaft and against the inside/outside blade flanges.
- Ensure the blade is marked with an operating speed greater than the blade shaft speed of the saw.

## **WARNING**

**ALWAYS** inspect diamond blades before each use. The blade should exhibit no cracks, dings, or flaws in the steel centered core and/or rim. Center (arbor) hole must be undamaged and true.



- Only cut the material that is specified by the diamond blade.
   Read the specifications of the diamond blade to ensure the proper tool has been matched to the material being cut.
- ALWAYS keep blade guards in place. Exposure of the diamond blade must not exceed 180 degrees.
- Ensure that the diamond blade does not come into contact with the ground or surface during transportation. DO NOT drop the diamond blade on ground or surface.
- The engine governor is designed to permit maximum engine speed in a no-load condition. Speeds that exceed this limit may cause the diamond blade to exceed the maximum safe allowable speed.
- Ensure that the blade is mounted for proper operating direction.

## **RULES FOR SAFE OPERATION**

## **Maintenance Safety**

- NEVER lubricate components or attempt service on a running machine.
- ALWAYS allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and ALWAYS replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- DO NOT use food or plastic containers to dispose of hazardous waste.

## **Saw Transportation Safety**

- Use appropriate lifting equipment to ensure the safe movement of the saw.
- DO NOT use the handle bars and/or front pointer as lifting points.
- When transporting of the saw is required, place saw directly inside towing vehicle truck-bed and tie-down securely.
   NEVER tow saw directly behind towing vehicle.
- DO NOT use the saw on slopes or on extremely un-level surfaces. An engine tipped to extreme angles may cause oil to gravitate into the cylinder head making the engine start difficult.
- NEVER transport the saw with the blade mounted.

### **Emergencies**

 ALWAYS know the location of the nearest fire extinguisher.



 ALWAYS know the location of the nearest first aid kit.



• In emergencies ALWAYS know the location of the nearest phone or *keep a phone on the job site*. Also know the phone numbers of the nearest *ambulance*, *doctor* and *fire department*. This information will be invaluable in the case of an emergency.









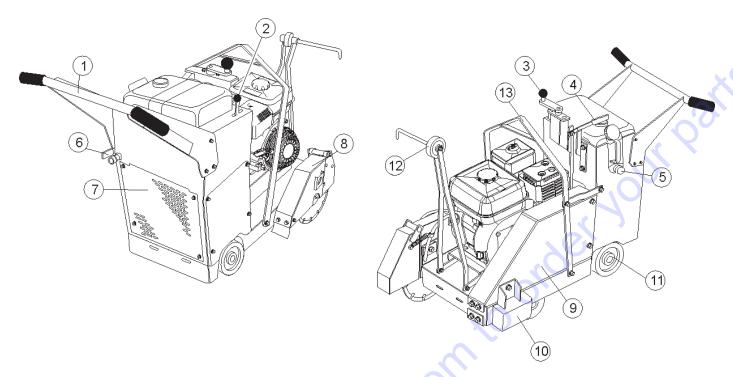


Figure 3. SP2S13H20A Saw Major Components

Figure 3 displays the location of the various operational control features of the SP2S13H20A pavement saw. Features are dependent on the specific model saw selected. The function of each console component or indicator is explained below:

- Handle Bars Used to steer and push the SP2S13H20A saw during cutting operations. The handle can be folded down for transportation.
- Forward/Reverse Speed Lever Controls forward and reverse speeds for self-propelled operation. Provides positive neutral for engine start. ALWAYS place transmission engage/disengage lever in the engage position before setting speed lever.
- Raise/Lower Crank Handle Physically orients saw (raises or lowers) depending on cranking direction (CW or CCW). Turning the handle *clockwise* lowers the saw, turning the saw counter-clockwise <u>raises</u> the saw.
- Transmission Engage/Disengage Lever Forward locking position engages transmission. Rear Locking position disengages transmission from rear axle and permits "free wheeling".
- 5. WaterTank A 5-gallon capacity water tank provides water for the saw blade during wet cutting applications.

- Water ON/OFF Valve ON position opens valve and permits water to flow from source through saw water hose.
   OFF position closes valve and halts the flow of water.
- 7. **Hydraulic Drive Transmission -** Controls the saw's forward and reverse movement by using the *forward/reverse speed lever*.
- 8. Saw Blade Guard Covers the saw blade during cutting operations & allows water hoses to be connected to the cover for wet cutting.
- Belt Cover Covers the drive shaft belt, engine pulley and the hydraulic transmission belt.
- 10. **Drive-Shaft Pulley Guard** Covers the drive shaft pulley.
- 11. **Rear Wheels** Allows the saw to be rolled across ground. The rear wheels are turned by the spline gears attached to the hydraulic transmission system.
- 12. **Pointer Arm** Front pointer wheel assists in straight tracking. Lifts up for storage and pivots down for use.
- 13. **Lifting Bale Kit** Allows for easy lifting and transporting the SP2S13H20A saw.

## 13HP HONDA ENGINE COMPONENTS

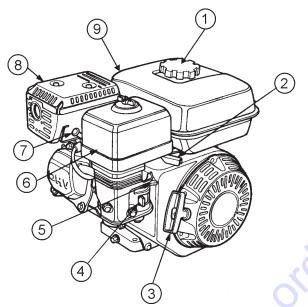


Figure 4. Engine Controls and Components (Honda GX390K1QWT2)

## **INITIAL SERVICING**

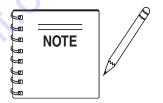
The engine (Figure 4) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturers Engine manual for instructions & details of operation and servicing.

 Fuel Filler Cap – Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tightened securely. DO NOT over fill.

## **WARNING**

Adding fuel to the tank should be accomplished only when the engine is stopped and has had an opportunity to cool down. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry.

- Throttle Lever Used to adjust engine RPM speed (lever advanced forward SLOW, lever back toward operator FAST).
- Recoil Starter (pull rope) Manual-starting method. Pull
  the starter grip until resistance is felt, then pull briskly and
  smoothly.
- 4. Fuel Valve Lever OPEN to let fuel flow, CLOSE to stop the flow of fuel.
- Choke Lever Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
- 6. **Air Cleaner** Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cannister to gain access to filter element.



Operating the engine without an air filter, with a damaged air filter, or a filter in need of replacement will allow dirt to enter the engine, causing rapid engine wear.

- 7. **Spark Plug** Provides spark to the ignition system. Set spark plug gap (HONDA) to 0.6 0.7 mm (0.028 0.031 inch). Clean spark plug once a week.
- Muffler Used to reduce noise and emissions. Engine components can generate extreme heat. To prevent burns, DO NOT touch these areas while the engine is running or immediately after operating. NEVER operate the engine with the muffler removed.

## **WARNING**

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operating. **NEVER** operate the engine with the muffler removed.



9. **Fuel Tank** – Holds unleaded gasoline. For additional information refer to engine owner's manual.

## GENERAL INFORMATION

### **Familiarization**

The SP2S13H20A saw is designed for *wet* or *dry* cutting of concrete or asphalt utilizing diamond blades. They have been engineered for general, industrial and high production flat cutting applications. The reinforced steel box frame design adds strength necessary to reduce vibrations while cutting. Minimizing vibrations enhances the performance of the blade and extends the life of the saw.

Heavy-duty front and rear axles, sturdy oversized wheels and industrial undercarriage assembly ensures accurate tracking and vears of reliable use.

Additionally, the general weight-to-strength ration design of the frame and chassis assembly provides optimum weight distribution to keep the blade running true in the cut. A rugged blade shaft bearing assembly ensures minimal flutter and shaft harmonics providing the most advantageous condition for a diamond blade at operating speeds.

### **Power Plants**

The SP2S13H20A saw is generally classified in the industry as **LOW** to **MEDIUM** horsepower saws. This classification is particularly useful when selecting the proper diamond blade for an application.

The SP2S13H20A saw uses a *13 HP Honda GX390K1QWT2 gasoline engine* air-cooled, 4-stroke single cylinder, OVH rated at 3600 RPM. Blade rotation is v-belt driven. This is accomplished by connecting to the output shaft of the engine to an upper drive pulley. The lower drive pulley (Blade) is then connected to the upper drive pulley (Engine) by three V-belts. As the engine shaft rotates, so does the blade.

Refer to the engines Owner's Manual for the specific instructions regarding engine operation and maintenance practices.

## Console

An ergonomically designed control console allows the operator to easily understand and/or operate the adjustable handlebars, *Raise/Lower Crank Handle*, and *transmission engage/disengage lever*. Additionally, the console also provides forward/reverse controls.

## Manual Raise/Lower System

The SP2S13H20A saw uses an ACME thread, manual raise/lower assembly easily raises and lowers the blade and can lock into position to ensure a constant depth when cutting. See Table 6 for blade selection with respect to depth of cut.

## **Water System**

All saws provide a water direction system to provide cooling water to the diamond blade. This system consists of: a standard "garden hose" valve that connects to the water source (via hose) to the saw, an **ON/OFF** console water valve'

The 20-inch blade guard is designed with two 6-inch vinyl water tubes to direct water to the diamond blade.

## **Under Carriage System**

A jig welded heavy steel gauge under carriage assembly supports the saw in tracking, pivoting and stabilization. A rear axle supports two solid rubber cast hub wheels with roller bearings, grease fittings and locking collars. A front axle supports two solid rubber cast hub wheels with roller bearings, grease fittings and locking collars. The assembly pivots about two rocker blocks with bushings.

## **Blade Drive System**

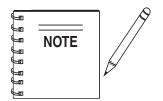
A rugged blade shaft assembly has been specifically designed to support the optimum distribution of torque from the engine shaft to the blade shaft, and to ensure minimal vibratory conditions on the tips of the shaft.

Balanced engine & blade shaft pulleys are connected to their respective shafts, 3 V-belts (13HP, 4 V-belts for 20HP models) connect to the engine pulley to the blade shaft pulley. The blade shaft is supported by two self-aligning pillow block bearings that are uniquely positioned on the most outboard portion of the reinforced frame.

The combination of pulley and blade shaft bearing positioning ensures minimal vibration & flutter to the ends of the blade shaft.

## Water System

The SP2S13H20A saw comes standard with a 20-inch hinged two piece, heavy steel gauge blade guard. The blade guard provides access for vinyl water tubes that supply optimum volume and dispersal of water for cooling and/or dust suppression.



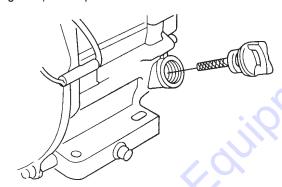
The SP2S13H20A saw is designed, engineered and manufactured with strict adherence to American National Standards Institute, Inc. (ANSI) guidelines B7.1 and B7.5

## **Before Starting**

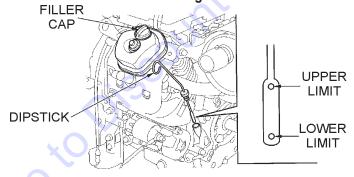
- 1. Read safety instructions at the beginning of manual.
- 2. Clean the saw, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.
- 3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
- 4. Check carburetor for external dirt and dust. Clean with dry compressed air.
- 5. Check fastening nuts and bolts for tightness.

## **Engine Oil Check**

- To check the engine oil level, place the saw on secure level ground with the engine stopped, and the diamond blade removed.
- 2. Remove the *filler cap/dipstick* from the engine oil filler hole (Figure 6) and wipe it clean.

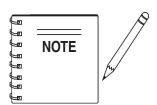


Honda GX390 engine shown



Honda GX620 engine shown Figure 6. Engine Oil Dipstick (Removal)

- 3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
- 4. If the oil level is low (Figures 6 and 7), fill to the edge of the oil filler hole with the recommended oil type (Table 4). Maximum oil capacity for the Honda GX390 engine is 2.32 pints (1.1 liters) and for the Honda GX620 engine it is 3.18 pints (1.50 liters).



Reference manufacturer engine manual for specific servicing instructions.

HONDA 13 HP engine shown.

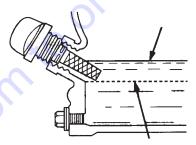


Figure 7. Engine Oil Dipstick (Oil Level)

Table 4. Oil Type		
Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10



## **Gasoline Check**



- 1. Remove the gasoline cap located on top of fuel tank.
- 2. Visually inspect to see if fuel level is low. If fuel is low, replenish with unleaded fuel.
- 3. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel.

## **Hydrostatic Transmission**

An EATON® Model 7 hydrostatic transmission (Figure 8) provides the power for the saw's propulsion system. The transmission drives a sprocket that directly connects the spline drive to the rear wheels. The **no load** forward/reverse speeds are approximately 80 ft/min.

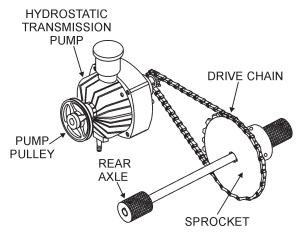


Figure 8. Hydrostatic Transmission

The transmission is factory filled with approved hydraulic fluid that has a viscosity equivalent to SAE 20W-20. Should additional servicing be required, the following hydraulic fluids are recommended:

- General Motors Dextron B
- Ford MM2C-33F
- Ford M2C-41A
- International harvester Hy-Tran Fluids

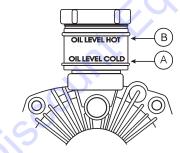


Figure 9. Transmission Reservoir

## CAUTION

**DO NOT** over fill the fluid reservoir (Figure 10). Note the level marks on the reservoir. *It is essential to reference the existing oil conditions (A) cold or (B) hot prior to operating the saw.* Overfilling the transmission with hydraulic fluid may cause the seals to *rupture* causing mechanical damage.

**Battery -** The 12-volt DC battery (Figure 10) is shipped **dry**, and will require a proper electrolyte level for operation.

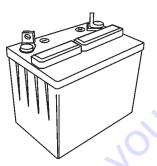


Figure 10. Battery

When servicing of the battery is required perform the following:

- A face shield and rubber gloves should be worn while handling and servicing battery's electrolyte.
- Disconnect battery terminal clamps, and remove the battery from the saw when servicing is required.
- DO NOT overfill the battery.

## **WARNING**

Electrolyte is an acid and must be handled with caution. Servicing instructions from the electrolyte manufacturer must **ALWAYS** be followed to ensure safety. Serious injury can result from careless handling and noncompliance to safety handling



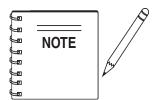
noncompliance to safety handling instructions.



Overfilling the battery may cause the electrolyte to overflow resulting in corrosion to nearby components. Immediately wash off any spilled electrolyte (battery acid).

Additionally, when connecting the positive (+) cable to the battery's positive (+)

terminal post, **DO NOT** allow contact of the wrench or any metallic part to come in contact with the battery's negative (-) terminal post. This may result in an electrical short circuit or an explosion.



Use only **distilled** water in the battery. Tap water can **reduce** the operating life of the battery.

## INSPECTION -BLADE

## **WARNING**

Failure to thoroughly inspect the diamond blade (Figure 11) for operational safety could result in damage to the blade, the saw, and may cause injury to the user or others in the operating area.

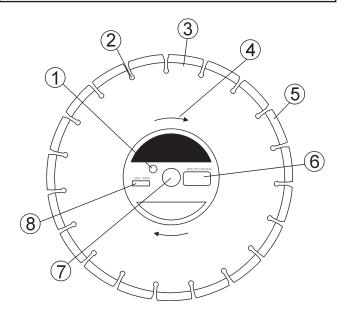
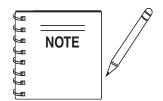


Figure 11. Diamond Blade

- Drive Pin Hole A commonly located hole on the diamond blade core that prevents operational blade slippage between the inner & outer blade flanges (collars). Inspect the diameter of the hole to ensure there is no distortion, and that a snug fit develops between the hole and drive pin.
- Stress Relief Holes (Gullets) Check the steel core for cracks that may have propagated from the slots and/or gullets. Cracks indicate extreme fatigue failure and if sawing continues, catastrophic failure will occur.
- 3. Edge Of The Steel Core Check the diameter edge for discoloration (blue oxidation) indicating an overheating condition caused by insufficient cooling water/air. Overheating of blades may lead to loss of core tension and/or increase the possibility for blade failure. Check to make sure the steel core's width is uniform about the rim of the blade, and not succumbing to an "under cutting" condition brought about by highly abrasive material or improper under cutting core protection.

- 4. **Directional Arrow** Check to ensure that the blade is oriented properly on the blade shaft for sawing. Reference the directional arrow in the blade and place it so the direction of rotation "downcuts" with the turn of the shaft.
- 5. Diamond Segment or Rim Ensure there are no cracks, dings, or missing portions of the diamond segment/rim. DO NOT use a blade that is missing a segment or a portion of the rim. Damaged and/or missing segments/ rims may cause damage to your saw, and injury to the user or others in the operating area.
- 6. Specifications Ensure that the blade specifications, size, and diameter properly match up to the sawing operation. Wet blades must have water to act as a coolant. Utilizing a diamond blade not matched properly to the task may result in poor performance and/or blade damage.
- 7. Arbor Hole It is essential that the arbor hole diameter properly matches the blade, and that it is free from distortions. Correct blade flanges (collars) must be used. The inside face of the flanges must be clean & free of debris. An out of round arbor condition will cause damage to the blade and the saw.
- 8. MAX RPM This RPM reference is the maximum safe operating speed for the blade selected. NEVER exceed the max RPM on the diamond blade. Exceeding the MAX RPM is dangerous, and may cause poor performance and may damage the blade.

## **INSPECTION - BLADE PLACEMENT**



The following steps should be accomplished before placing the diamond blade on the **blade shaft.** 

- Set the engine ON/OFF switch to the OFF position.
- Raise the saw to a high position by cranking the Raise/Lower handle in a counterclockwise direction.



- Use the Blade Nut Wrench & Blade Shaft Locking Wrench stored on the front section of the console to install the diamond blade.
- Reference Figure 12 (Diamond Blade Placement) when removing or installing the diamond blade.
- 1. **Blade Guard** Raise the front half of the blade guard to expose the blade shaft nut & outer flange.
- Blade Nut Wrench Remove the blade nut wrench (3) from the tool holder and unscrew the blade shaft nut (right-side). This nut loosens clockwise and tightens counterclockwise.

- Blade Nut Remove the blade nut (4). For reassembly,
   DO NOT over tighten the blade nut against the outer flange.
   Tighten blade nut approximately 45-50 ft-lbs/62-69 N/m.
- 4. Outside Blade Flange (Collar) Ensure that the flange face is clean and free of debris and is placed flush against the diamond blade (7). Check that the drive pin goes through the blade pin hole (6) and seats properly into the inner flange (8).
- 5. Blade Pin Hole Align this hole with the drive pin hole on the inner flange collar.
- 6. Diamond Blade Ensure that the proper blade has been selected for the job. Pay close attention to the directional arrow on the blade, clockwise for right-side cutting, counter-clockwise for left-side cutting. The arbor hole of the blade must match the 1" arbor of the blade shaft.
- 7. Inner Flange Collar This flange is fixed upon the blade shaft, and is manufactured with a drive pin hole. The inside surface of the flange must be free of debris and permit a tight closure on the surface of the blade.

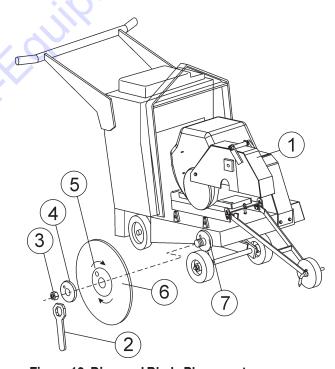


Figure 12. Diamond Blade Placement

## **INSPECTION - GUARDS, COVERS & BELTS**

### **Guards and Covers Check**

## **WARNING**

**NEVER** operate the saw without blade guards and covers (Figures 13, 14 and 15) in place. **DO NOT** operate with the front of the blade guard raised. The blade exposure



cannot exceed 180 degrees during operations. Adhere to the safety guidelines of the American National standards Institute (ANSI) B7.1 and B7.5.

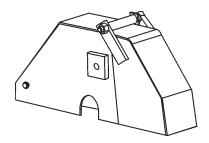


Figure 13. Blade Guard

## CHECK the following on the blade guard:

- Check to ensure the capacity of the blade guard matches the diameter of your diamond blade.
- Check that the guard seats firmly upon the bayonet fitting of the saw frame.
- Check that the spring tensioned front cover of the guard is firmly seated with the rear section of the guard, and there are no gaps.
- Check the fit of the water hoses in the sides of the blade guard. **NEVER** lift the blade guard while cutting.
- Check that the flood water tubes are clear and open. Test the water supply for pressure and flow (to both sides of the blade) before sawing operations.

## CHECK the following on the blade flange cover.

- Check that the flange cover seats firmly upon the bayonet fitting of the saw frame prior to operation.
- This flange cover is to be in place when cutting from either the right or left side of the saw.



Figure 14. Blade Flange Cover

### V-Belts and Covers

## **CAUTION**

**NEVER** attempt to check the V-belt with the engine running because severe injury can occur. Keep fingers, hands, hair and clothing away from all moving parts.



## V-belts Alignment and Tensioning

This saw is equipped with 3 premium V-belts (3 for 13HP models, 4 V-belts for 20HP models) that have been aligned and tensioned by factory personnel. All V-belts **MUST** be installed for proper operation of the saw. Failure to run the saw with less than the required number of belts may damage the saw or equipment.

Use the following procedure to check the alignment of V-belts:

1. Remove the bolts that secure the V-belt

cover (Figure 15) to the saw frame.

2. Check uniform parallelism (Figure 16) of V-belts and pulley (sheaves). Use a straight edge or machinists's square against both pulleys and adjust both pulleys until equally aligned.

Figure 15. V-Belt Cover

V-BELT

**COVER** 

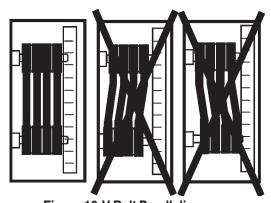


Figure 16. V-Belt Parallelism

## **INSPECTION - BELTS & WATER TANK**

3. Check V-belt tension (Figure 17) by using a tensionmeter (6.0 - 9.0 lbs.) against the inside belt at a mid point between the two pulleys, or by deflecting the center belt at a mid point 3/8" (10 mm) - 1/2" (13 mm).

CORRECT V-BELT TENSION 3/8 IN. (10 MM) TO 1/2 IN.(13 MM) WHEN DEPRESSED

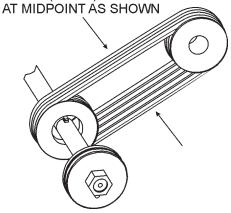


Figure 17. V-Belt Tension

- 4. DO NOT over or under tension the V-belts. Severe damage can occur to the saw and engine crank shaft if the belts are over tensioned. A decrease of power to the blade and poor performance will result if the belts are under tensioned (loose on pulleys).
- 5. If the V-belts becomes worn or loose, see Table 5 for replacement part numbers.

Table 5. V-Belts and Pulleys			
Part Name	Part Number	Qty	
V-Belt	16052	3	
Engine Pulley	23703-003	1	
Blade Shaft Pulley	25172-003	1	

### **Water Tank**

The SP2S13H20A Saw is equipped with a removable 5-gallon on-board water tank fitted in the top of the console which can be connected to the brass hose fitting on the rear of the operators console (Figure 18).

Before using the water tank, ensure it is filled to capacity and connected to the hose fitting to provide lubrication during cutting. An external water source can also be connected to the SP2S13H20A for extended wet cutting operations.

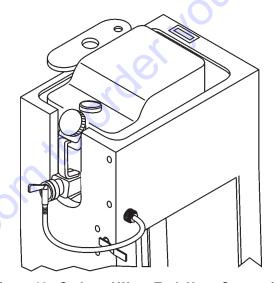


Figure 18. On-board Water Tank Hose Connection

## **CAUTION**

**DO NOT** attempt to operate the saw until the Safety, General Information and Inspection sections have been read and understood. Depending on engine manufacturer, operating steps may vary. See engine operating manual.

The following start-up procedure makes reference to a **HONDA** 13 HP Engine (Manual Start)



When the engine is running the cutting blade is **ALWAYS** *spinning*. Raise the blade high above the surface when maneuvering the saw. Damage to the blade and/or saw may occur if the blade strikes the pavement.



- 1. Ensure the diamond blade has been mounted correctly and that it is raised above the surface you are about to saw.
- For wet cutting operations, ensure the water tank is filled to capacity (5 gallons). Connect the water tank hose to the water system brass fitting on the rear of the console (Figure 18) and test for adequate water flow to the diamond blade before operation.
- Place the fuel valve lever (Figure 19) to the ON position.

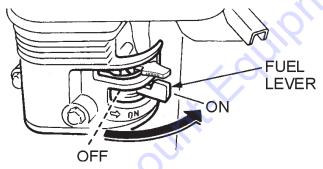


Figure 19. Fuel Valve Lever

4. Place the **Engine ON/OFF switch** (Figure 20) in the **ON** position.

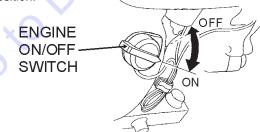
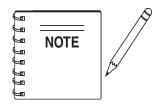


Figure 20. Engine ON/Off Switch



The **CLOSED** position of the choke lever enriches the fuel mixture for starting a **COLD** engine. The **OPEN** position provides the correct fuel mixture for normal operation after starting, and for restarting a warm engine.

5. If operating the SP2S13H20A in *cold weather conditions*, skip this step and proceed to step 6. Place the *Choke Lever* (Figure 21) in the **OPEN** position. Skip to step 7.

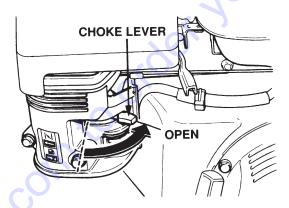


Figure 21. Choke Lever (Open Position)

6. If operating the SP2S13H20A in *cold weather conditions*, place the *Choke Lever* (Figure 22) in the CLOSED position.

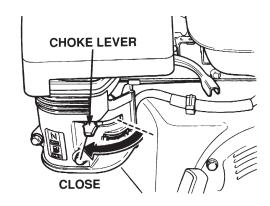


Figure 22. Choke Lever (Closed Position)

## **CAUTION**

The engine governor speed has been set at the factory. Changing the governor speed could damage the blade and/ or the saw.

## **MANUAL START-UP**

7. Place the *throttle lever* (Figure 23) halfway between **FAST** and **SLOW** for starting. All sawing is done at full throttle. The engine governor speed is factory set to ensure optimum blade operating speeds.

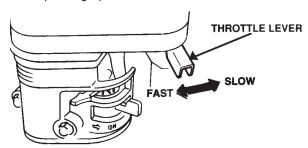


Figure 23. Throttle Lever

8. Grasp the starter grip (Figure 24) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.



- **DO NOT** pull the starter rope all the way to the end.
- DO NOT release the starter rope after pulling. Allow it to rewind as soon as possible.

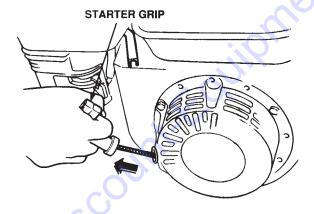


Figure 24. Starter Grip

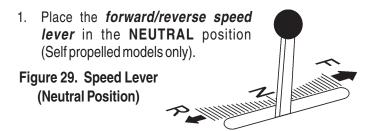
- If the engine has started, slowly return the choke lever (Figure 22) to the CLOSED position. If the engine has not started repeat steps 1 through 8.
- Before the saw is placed into operation, run the engine for several minutes. Check for fuel leaks, and noises that would associate with a loose guard and/or covers.
- 11. All sawing is done at full throttle. Your engine governor has been set at the factory to ensure an optimum speed setting.

## **SHUT-DOWN PROCEDURES**

## **Stopping the Engine (13 HP Honda Engine)**

## **WARNING**

**NEVER** stop the engine while the blade is in the cut, except for extreme emergencies. A sudden stoppage of the engine at high speed while in a cut could damage the blade and/or saw, and may cause injury to the user or other in the operating area.



Place the *engine throttle lever* (Figure 30) in the SLOW position, and listen for the engine speed to decrease.

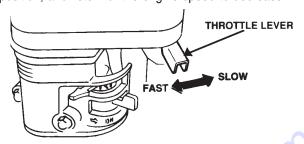


Figure 30. Throttle Lever

3. Turn the console *engine ON/OFF switch* (Figure 31) to the **OFF** position.

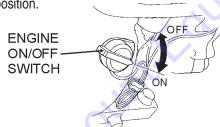


Figure 31. Engine ON/Off Switch (Off Position)

4. Place the fuel valve lever (Figure 32) to the **OFF** position.



Figure 32. Fuel Valve Lever (Off Position)

## **Emergency Stop Procedure**

1. Turn the console *engine ON/OFF switch* (Figure 31) to the OFF position.

## **A** CAUTION

**NEVER** stop the engine while cutting at high speeds, except for extreme emergencies. This can damage your SP2S13H20A Saw.

## Adjusting the Handle Bars

The SP2S13H20A has adjustable height handle bars. Before operating the saw, adjust the handle bar height to a comfortable working position:

1. Loosen the height adjustment bolts (Figure 35) on the handle bars until the handle bars can freely pivot.

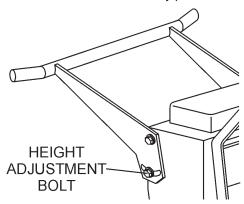


Figure 35. Handle Bar Adjustment Bolts

2. Move the handle bars (Figure 36) up or down to operators desired preference.

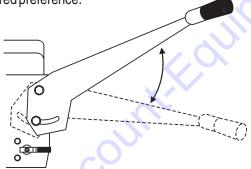


Figure 36. Handle Bar Height Adjustment

3. Tighten the height adjustment bolts to secure the handle bars in place.



To avoid losing control of the SP2S13H20A saw, be sure to fully tighten the adjustment bolts before operating the saw to prevent the bolts from loosening during cutting.

## **Adjusting the Blade Height**

The SP2S13H20A saw uses a manual *raise/lower crank handle* located on the console with **clockwise** rotation providing lowering action, and **counter-clockwise** rotation providing raising and lowering action (Figure 37).

To adjust the blade height:

- Pull upward on the raise/lower crank handle knob.
- 2. Rotate the crank handle **clockwise** to *lower the blade*. Rotate the crank handle **counter-clockwise** to *raise the blade* (Figure 37). The handle will stop rotating when the blade has been fully raised or lowered.

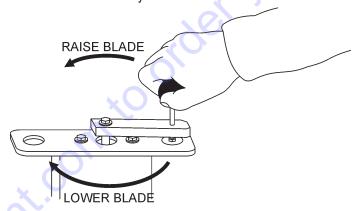
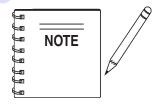


Figure 37. Blade Height Adjustment



When moving the saw around between cutting, fully raise the blade to avoid striking the ground with the blade.

## **Determining the Cut Depth**

When preparing to cut, your blade size determines the depth of the cut. See Table 6 to determine the proper blade size for your required cutting depth.

TABLE 6. BLADE SELECTION		
Diamond Blade Diameter (In.)	Depth of Cut	
12"	3-5/8"	
14"	4-5/8"	
16"	5-5/8"	
18"	6-5/8"	
20"	7-5/8"	

## **CAUTION**

**DO NOT** force the blade into the cut any faster than its designed tendency is effective cut and remove material. This can damage your blade and/or your machine.

## **Traveling During Cutting**

The SP2S13H20A saw has a hydrostatic transmission which mechanically propels the saw during cutting operations. To prepare the machine for self-propelled cutting:

Place the travel lever in the NEUTRAL position.

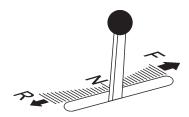


Figure 38. Transmission Engage/Disengage Lever (Neutral Position)

2. Lift the *transmission engage/disengage lever*, located on the console (Figure 39). Leaving the lever down disengages the transmission to allow for manual pushing during cutting or moving the machine around the job site.

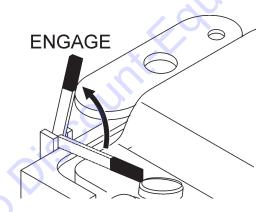


Figure 39. Transmission Engage/Disengage Lever (Engage Position)

 Move the *travel lever* towards the FORWARD position to increase forward travel speed during cutting (Figure 40). Placing the travel lever fully forward will move the saw at maximum speed.

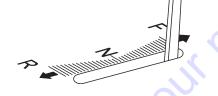


Figure 40. Transmission Engage/Disengage Lever (Forward Position)

When reverse movement is required, move the *travel lever* towards the **REVERSE** position (Figure 41). Placing the travel lever fully in reverse will move the saw backwards at its maximum reverse speed.

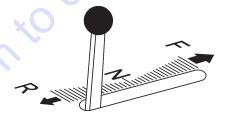
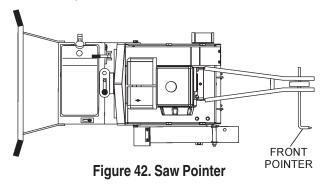


Figure 41. Transmission Engage/Disengage Lever (Reverse Position)

## **Saw Alignment**

The SP2S13H20A saw employs a front pointer (Figure 42) that has been precisely aligned with the diamond blade at the factory. Referencing the figure below, accurate tracking is accomplished by referencing the front pointer tip over the cut line. Precise saw direction is accomplished by slight operator pressure against the handle bars.



2. To reorient a pointer position, loosen the screw that secures the pointer bar to the shaft, adjust as necessary, and retighten the screw.

## Cutting



The operator **MUST** wear the appropriate protective



equipment and clothing while engaged in sawing. Failure to do so can result in **SERIOUS INJURY**.



DO NOT operate this machine without the Blade Guard or V-belt Guards in place. While the blade is spinning, DO NOT place hands, feet, or other body parts near the blade to avoid SERIOUS INJURY or DEATH.



When cutting, determine the required cutting depth and use an appropriately sized blade. Deep sawing is wasteful to the life of the blade.

The preferred method of sawing is to **Step Cut** in increments of 2" (51 mm). Step Cutting provides the optimum opportunity for the blade to cut fast and last longest.

## **Wet Cutting Operation**

- Connect hose from water source (on-board water tank or external water source) to the hose fitting connection (Figure 3) of the saw. The source pressure should be approximately 30-40 psi.
- 2. Ensure the vinyl water tubes are properly inserted into the blade guard holes and are clear of any obstructions.
- 3. Turn water source on (Figure 43).

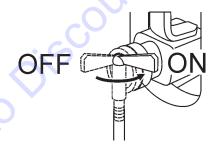


Figure 43. On-board Water Tank ON/OFF Valve

 Open the water system valve on the left side of the console by moving the lever to the ON position (Figure 44) and ensure the water is flowing equally to both sides of the diamond blade.



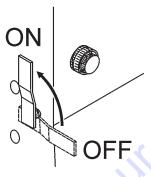


Figure 44. Water System ON/OFF Valve

5. Align the saw along the cut line utilizing the front pointer.

## **CAUTION**

**ALWAYS** saw in a straight line only. **SERIOUS DAMAGE** to the blade or saw may occur if the saw is twisted or forced to cut radius shapes.

 Slowly lower the diamond blade onto the cut line by cranking the *Raise/Lower handle* CLOCKWISE (Figure 37). When the handle can no longer be turned, the blade will be at its full rated depth.

## **WARNING**

If the water supply to your blade is interrupted, **STOP** cutting *immediately* to prevent damage to your blade and/or saw.

If the engine stalls for **ANY** reason during cutting, raise the blade out of the cut before restarting.

- 7. Follow steps 1-4 of the **Traveling During Cutting** section.
- 8. The rotation of the blade creates a tendency for the saw to slightly pull in a particular direction. To ensure a straight line of sawing, apply pressure against the appropriate side of the handle bar as you slowly advance the saw forward.

## **A** CAUTION

**DO NOT** force the blade into the cut any faster than its design will allow. This can damage your blade and/or your machine.

## **Dry Cutting Operation**

When dry cutting, follow steps 5-8 of the **Wet Cutting Operation** section.

## **Finishing A Cut**

- Raise the blade out of the cut by cranking the Raise/Lower handle COUNTER-CLOCKWISE (Figure 37). Raise the blade high enough out of the cut to clear the surface and allow the saw to be maneuvered.
- 2. Move the engine throttle lever to the idle (**SLOW**) position (Figure 30, 33).
- 3. Set the engine **ON/OFF** switch to the **OFF** position (Figure 31.34).
- 4. Place the water valve (Figure 44) in the **OFF** position (as required).



Engine components can generate **EXTREME** heat.

30 to Discounting



### **Diamond Blades**

Diamond blade sawing consists of cutting **WET** (using water to cool the blade) or **DRY** (using the circulating air to cool the blade).

Selecting the diamond blade **TYPE** and **GRADE** defines how the blade will perform both in cutting speed and blade life.

Selection of the proper diamond blade consists of:

- Determining WET or DRY cutting
- Material to be Cut
- Type of Saw Being Used
- Horsepower of Saw
- Hardness Characteristics of the Material
- Performance Expectations

Factors for sawing economy:

- Type of Blade
- Depth of Cut
- Sawing Speed
- Characteristics of the Material Being Cut
- Wet or Dry Sawing

## **Blade Speed**

A diamond blade's performance is directly connected to specific peripheral (rim) speeds.

The following shaft rotational speeds have been factory set to ensure optimum blade performance.

SP2S13H20A 20" Capacity - 2,800 RPM.



Operating saw blades at rotational speeds greater than those specified by the manufacture can cause blade damage, and may injure the user or others in the operating area.



### Maintenance



General maintenance practices are crucial to the performance and longevity of your saw. The extreme environments of sawing operations require routine cleaning, lubrication, belt tensioning, and inspection for wear and damage

The following procedures devoted to maintenance can prevent serious saw damage or malfunctioning. Before servicing or inspection, **ALWAYS** park the saw on a level surface with the blade removed, and the Console Engine **ON/OFF** switch & Engine **ON/OFF** switch in "**OFF**" position.



Some maintenance operations may require the engine to be run. Ensure that the maintenance area is well ventilated. Exhaust contains poisonous carbon monoxide gas that can cause of unconsciousness and may result in **DEATH.** 



### **General Cleanliness**

Clean the machine daily. Remove all dust and slurry build up. If the saw is steam cleaned, ensure that lubrication is accomplished AFTER steam cleaning operations.

### **General Engine Care**

## Engine check:

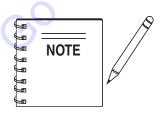
Check daily for any oil and/or fuel leakage, thread nut & bolt tightness, and overall cleanliness.

## Engine oil:

Check daily. Inspect with blade removed and saw frame level on a level surface. Keep the oil clean, and at the proper servicing level (Figure 8). **DO NOT** OVERFILL! SAE 10W-30 of SG is recommended for general use.

### Engine oil change:

Change engine oil the first month or 20 hours of operation. Then every 3 months/or 50 HOURS of operation. See Engine Owner's Manual for detailed information.



ALWAYS dispose of used oil in a responsible manner. Ensure that the disposition of all hazardous waste is handled properly. Call your Recycling Center for information about recycling engine oil.

### Engine air filter:

Clean air filter 2 to 3 times daily when **DRY** cutting. See Engine Owner's Manual for detailed information.

## Engine tank & strainer:

Clean every year/or 300 hours.

### **Fuel line:**

Replace every two years/or as necessary.

## Spark plug:

Clean/adjust every 6 months/or 100 hours. Replace every year/ or 300 hours.

## **Bearing Lubrication Care**

There are four grease points for the SP2S13H20A saw. [Use only Premium Lithium 12 based Grease, conforming to NLG1 Grade #2 consistency.]

## Rear Wheels (1):

Grease daily, see Undercarriage Assy., item 10

## Blade Shaft Bearings (2):

Grease daily, see Blade Shaft Assy., item 15

## Raise/Lower Adjust Tube (1):

Grease daily, see Raise/Lower Assy., item 2



When cutting **DRY**, lubricate blade shaft bearings 2 to 3 times daily. The grease can provide an added protective seal for the bearings.

### **General Transmission Care**

All SP2S13H20A model saws utilize spline gear wheel design coupled with an EATON Model 7 Hydrostatic Transmission that provides forward/reverse propulsion. The simple design of the system keeps maintenance to a minimum.

### **Transmission Reservoir Cup:**

Check every 8 hours of operation. When the transmission is *cold* (A), check oil level against the level indicator (see Figure 45).

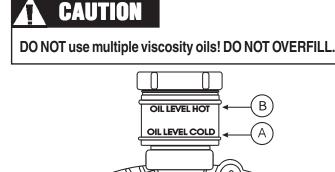


Figure 45. Transmission Reservoir

## Servicing:

The transmission reservoir is factory filled. Should servicing be required, use SAE20W-20, API classification (SE,CC,CD) or better, General Motors Dexron B, Ford M2C-33F, M2C-41A or International Harvester Hy-Tran fluids. For extreme *hot weather*, drain oil and refill with an oil having a viscosity of SAE30W-30 or SAE40W-40.

### **Drive Chain:**

Check every 50 hours. Periodically wipe the chain clean and re-lubricate with penetrating chain oil.

The drive chain may stretch requiring tension adjustments. To adjust the drive chain tension:

- 1. Loosen the (3) transmission attachment screws (Hydrostatic. Transmission Assy., item 2)
- 2. Pivot the transmission in the "*U"slots* of the *transmission mount* until the proper tension is achieved (Hydrostatic Transmission Assy., item 7).

NOTE

Excessive tension on the drive chain will reduce chain life.

## Spline Gear Wheels:

Check every 25 hours and clean as necessary. If the spline wheels **DO NOT** engage the *rear wheels* with sufficient pressure, slippage of the rear wheels may occur.

To adjust the **Spline Gear Assembly**:

1. Place the *transmission engage/disengage lever* in the **DISENGAGE** position (Figure 46).

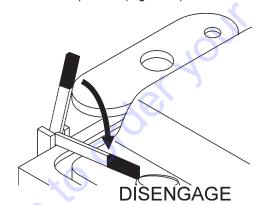


Figure 46. Transmission Engage/Disengage Lever (Disengage Position)

- 3. Loosen the linkage adjustment nut and **slightly** lengthen the linkage rod (see Transmission Engage Lever Assy., items 11 and 13).
- Move the transmission engage/disengage lever to the ENGAGE position to observe the proper spline-to-rearwheel contact.
- 5. Retighten the adjustment nut.

### **Drive V-Belt Check**

The V-Belts of the SP2S13H20A saw have been factory set utilizing precision standards. Operating the saw with less than the specified number of V-belts (See Table 5), or belts that are *slipping* or are **over-tensioned** will significantly diminish the performance of the saw, and may cause damage to the blade.

## Drive V-Belt(s) Replacement & Tension Adjustments

Reference Pointers and Covers Assembly, Blade Shaft Assembly, and Engine Mount Assembly for this operation.

- 1. Remove the *Belt Guard* (Pointers and Covers Assy., item 15), then loosen the tension of the V-Belts
- 2. Loosen the (4) 1-1/2" HHC screws (Engine Mount Assy., item 5).
- Loosen and back-off the Engine Mount Carriage Bolt (Engine Mount Assy., item 1) from the frame to permit the Engine Base Plate (Engine Mount Assy., item 9) to pivot.
- Pivot the Engine Base Plate to provide slack in the Drive Vbelts.
- 5. Remove/Replace the required V-belts (See Table 5).
- 6. Rotate the engine back into place and tighten the Engine Mount Carriage Bolt.
- 7. Adjust for the correct V-belt tension (See Figure 47).

CORRECT V-BELT TENSION 3/8 IN.
(10 MM) TO 1/2 IN.(13 MM) WHEN DEPRESSED
AT MIDPOINT AS SHOWN

Figure 47. V-Belt Adjustment/Tension

- 8. Retighten the (4) 1-1/2" HHC screws.
- 9. Replace all guards and covers.

# NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand gets caught between the V-belt and the clutch. Always use safety gloves.



## Adjust V-Belt Alignment/Replacement Pulleys

The V-belts and their respective pulleys have been professionally aligned at the factory. If there is a requirement to remove/replace or adjust the pulleys, proceed with the following instructions.

- Select the proper sized pulley both in outside diameter and arbor size. Use approved parts to ensure the component compatibility.
- 2. A change in Pulley diameters may require specifically sized V-Belts. Contact Discount-equipment to en-sure V-Belt compatibility.
- 3. Complete Drive V-Belt(s) Replacement steps (1 through 4)
- 3. Remove the V-Belts from around the Pulley(s).
- 4. Remove the set screws that secure the pulleys to the respective shafts (PTO shaft) for engine pulley or the (blade shaft) for the blade shaft pulley.
- Remove/replace the pulley by sliding it off the shaft.
- 6. Reorient the new pulley on the shaft, and ensure precise pulley alignment by utilizing an accurate straight edge (see Figures 48 and 49).
- 7. Replace/tighten set screws treated with a drop of **LOCTITE**Threadlocker 266.
- 8. Orient the proper replacement V-Belt(s) around the blade shaft pulley and engine pulley.
- 9. Reference steps 6-9 of the **Drive V-Belt(s) Replacement** steps.

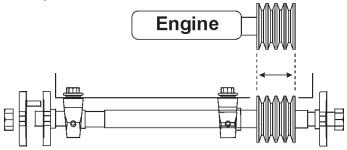


Figure 48. Pulley Alignment

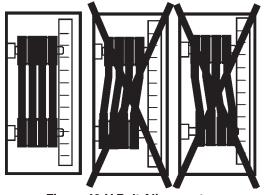


Figure 49. V-Belt Alignment

## **Blade Shaft Bearing Replacement**

The SP2S13H20A saw is supported by "tapped base lock collar (w/set screw)" self-aligning *Blade Shaft Bearings* (Figures 51 and 52). These heavy duty bearings support the 1-1/4 blade shaft, and have grease (zerk) points conveniently located for service.

- 1. It is recommended to replace both left & right bearings at the same time.
- Follow steps 1 thru 4 of Drive V-Belt(s) Replacement & Tension Adjustments.
- 3. Remove Drive V-belts.

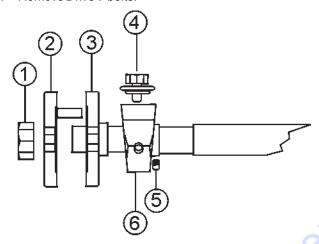


Figure 50. Blade Side Bearing (Right Side)

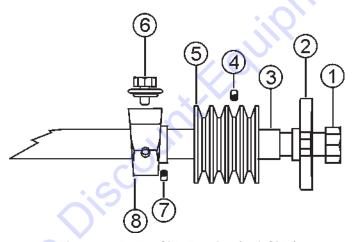


Figure 51. Pulley Side Bearing (Left Side)

Reference Figure 50 & Figure 51 for steps 4-9

- 4. Remove *Blade Hex Nuts* (Figures 50 & 51, item 1) and *Outside/Inside Blade Flanges* (Figures 50, item 2 & 3)
- Loosen set screws (Figure 51, item 4) and slide Pulley (Figure 51, item 5) off the Blade Shaft. Loosen Bearing set screw, remove Bearing Bolt (Figure 51, item 6) and slide the Blade Shaft Bearing (Figure 51, item 8) off the blade shaft.
- 6. Loosen **set screws** (Figure 50, item 5), remove **Bearing Bolt** (Figure 50, item 4) and slide the **Blade Shaft Bearing** (Figure 50, item 6) off the blade shaft.
- 7. Replace *Blade Shaft Bearings* and reassemble the Blade Shaft Assembly.
- 8. Re-tension Drive V-belts as shown in the Drive V-Belt(s) Replacement & Tension Adjustments section.
- 10. Replace all guards and covers.

## **MAINTENANCE**

## **Battery Maintenance**

Mishandling of the battery shortens the service life of the battery and adds to maintenance cost. When handling the battery do the following:

- Be careful not to let the battery electrolyte come in contact with your body or clothing.
- Always wear eye protection and rubber gloves, since the battery contains sulfuric acid which burns skin and eats through clothing.
- Always check the battery terminals periodically to ensure that they are in good condition.
- Use wire brush or sand paper to clean the battery terminals.
- Always check battery for cracks or any other damage.
   If white pattern appears inside the battery or paste has accumulated at the bottom, replace the battery.
- If the pump will not be in operation for a long period of time, store in cool dry place and check the battery charge level every month to maintain the performance of the battery.

 Check the battery regularly and make sure that each electrolyte level is to the bottom of the vent well (Figure 43). If necessary add only distilled water in a well-ventilated area.

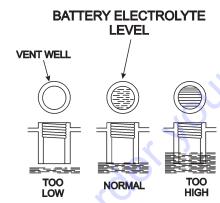


Figure 43. Battery Electrolyte Levels



## **13HP ENGINE WIRING DIAGRAM (RECOIL START)**

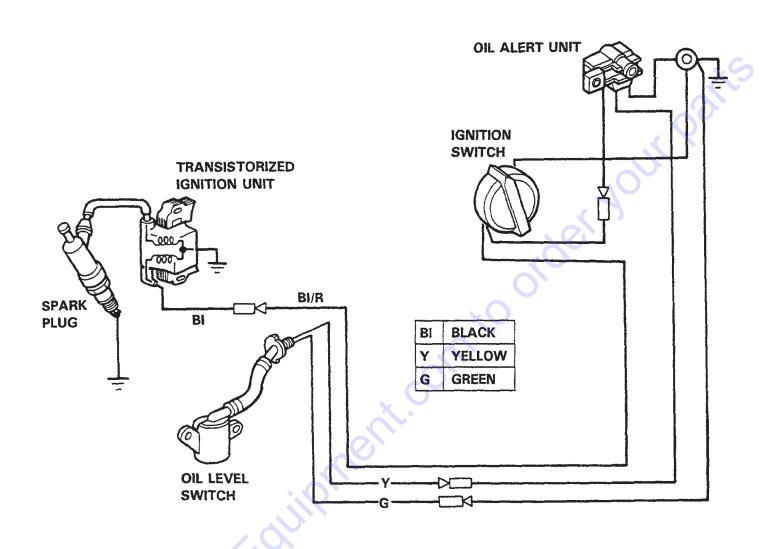


Figure 52. 13HP Honda Engine Wiring Diagram

## **TROUBLESHOOTING (ENGINE)**

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Engine Troubleshooting (Table 7) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult Discount-equipment.

TABLE 7. ENGINE TROUBLESHOOTING		
SYMPTON	POSSIBLE CAUSE	SOLUTION
Difficult to start, "fuel is available, but no SPARK at spark plug".	Spark plug bridging?	Check gap, insulation or replace spark plug.
	Carbon deposit on spark plug?	Clean or replace spark plug.
	Short circuit due to deficient spark plug insulation?	Check spark plug insulation, replace if worn.
	Improper spark plug gap?	Set to proper gap.
	Console or engine ON/OFF switch is shorted?	Check switch wiring, replace switch.
	Ignition coil defective?	Replace ignition coil.
Difficult to start, "fuel is available, and SPARK is present at the spark plug".	Improper spark gap, points dirtry?	Set correct spark gap and clean points.
	Condenser insulation worn or short circuiting?	Replace condenser.
	Spark plug wire broken or short circuiting?	Replace defective spark plug wiring.
	Wrong fuel type?	Flush fuel system, and replace with correct type of fuel.
Difficult to start, "fuel is available, spark is present and compression is normal"	Water or dust in fuel system?	Flush fuel system.
<b>//</b> C	Air cleaner dirty?	Clean or replace air cleaner.
Difficult to start, "fuel is available, spark is present and compression is low"	Suction/exhaust valve stuck or protruded?	Re-seat valves.
	Piston ring and/or cylinder worn?	Replace piston rings and or piston.
	Cylinder head and/or spark plug not tightened properly?	Torque cylinder head bolts and spark plug.
	Head gasket and/or spark plug gasket damaged?	Replace head and spark plug gaskets.
	Fuel not available in fuel tank?	Fill with correct type of fuel.
	Fuel cock does not open properly?	Apply lubricant to loosen fuel cock lever, replace if necessary.
No fuel present at carburetor.	Fuel filter clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

## **TROUBLESHOOTING (ENGINE)**

TABLE 7. ENGINE TROUBLESHOOTING (CONTINUED)		
SYMPTON	POSSIBLE CAUSE	SOLUTION
"Weak in power" compression is	Air cleaner not clean?	Clean or replace air cleaner
	Improper level in carburetor?	Check float adjustment, re-build carbureator.
proper and does not misfire.	Defective Spark plug?	Clean or replace spark plug.
	Defective Spark plug?	
	Water in fuel system?	Flush fuel system, and replace with correct type of fuel.
"Weak in power" compression is proper but misfires.	Dirty spark plug?	Clean or replace spark plug.
	Ignition coil defective?	Replace ignition coil.
Engine overheats.	Spark plug heat value improper?	Replace with correct type of spark plug.
	Correct type of fuel?	Replace with correct type of fuel
		Clean cooling fins.
Rotational speed fluctuates.	Governor adjusted correctly?	Adjust governor.
	Governor spring defective?	Replace governor spring.
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.
Recoil starter malfunction.	Recoil mechanism clogged with dust and dirt?	Clean recoil assembly with soap and water.
	Sprial spring loose?	Replace sprial spring.

# **TROUBLESHOOTING (BLADE)**

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Blade Troubleshooting (Table 8) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult Discount-equipment.

TABLE 8. BLADE TROUBLESHOOTING					
SYMPTON	POSSIBLE CAUSE	SOLUTION			
	Blade too hard for the material being cut.	Consult Discount-equipment for correct blade. Try cutting very soft material (sandstone, silica brick, cinder block) to "Redress" the blade.			
Diada alausa ay Okara ay Nisa akili	Engine Torgue diminished because of loose V-Belts.	Tighten and/or replace V-Belts.			
Blade slows or Stops cutting,still remains on blade.	Insufficent Engine power.	Check Throttle setting. Check Engine horespower.			
	Improper direction of rotation.	Check that the blade is oriented, and rotational arrow points in a "Down-Cutting" direction.			
	Blade is slipping on the blade shaft.	Check that the blade & flange pin is properly installed on the blade shaft (see Figure 10).			
	Blade being used on misaligned saw.	Check blade shaft bearings and alignment integrity.			
	Blade is excessively hard for the material being cut.	Check specifications of the blade with the material being cut. Consult Discount-equipment for information.			
Blade does not cut straight and/or true.	Blade being used at improper RPM.	Ensure blade surface feet per minute speed (SFPM) is approximately 6,000 (see Page 29).			
	Blade improperly mounted on arbor shoulders and flanges.	Ensure blade is properly affixed on the blade shaft.			
	Excessive force applied to blade while cutting.	Do not force the blade in the cut. Apply a slow/steady pace to sawing			
	Blade too hard for the material being cut.	Consult Discount-equipment for correct blade. Try cutting very soft material (sandstone, silica brick, cinder block) to "Redress" the blade.			
· cool	Blade improperly mounted on arbor shoulders and flanges.	Ensure blade is properly affixed on the blade shaft. Ensure the blade flanges are clean & free of debris.			
Blade discoloring, crackling and/or wearing excessively.	Blade not receiving enough cooling water or air.	Ensure proper flow & volume of water is provided for wet cutting blades. Ensure sufficent cooling air is circulated about a dry cutting blade.			
	Abor hole out of round	Ensure blade is properly affixed on the blade shaft.			
	Incorrect blade chosen for material being cut.	Check specifications of the blade with the material being cut. Consult Discount-equipment for information.			
	Excessive force applied to blade while cutting.	Do not force the blade in the cut. Apply a slow/steady pace to sawing.			

#### **EXPLANATION OF CODE IN REMARKS COLUMN**

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

#### **NOTICE**

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

#### SAMPLE PARTS LIST

<u>NO.</u>	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN	١ا	NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN	۷1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

#### NO. Column

**Unique Symbols** — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the "Remarks" column.

**Duplicate Item Numbers** — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

#### **NOTICE**

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

#### PART NO. Column

**Numbers Used** — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the "Remarks" Column.

#### QTY. Column

**Numbers Used** — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the "Remarks" Column.

#### **REMARKS Column**

Some of the most common notes found in the "Remarks" Column are listed below. Other additional notes needed to describe the item can also be shown.

**Assembly/Kit** — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

"INCLUDES ITEMS W/(unique symbol)"

**Serial Number Break** — Used to list an effective serial number range where a particular part is used.

Indicated by:

"S/N XXXXX AND BELOW"

"S/N XXXX AND ABOVE"

"S/N XXXX TO S/N XXX"

**Specific Model Number Use** — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

"XXXXX ONLY"

"NOT USED ON XXXX"

"Make/Obtain Locally" — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

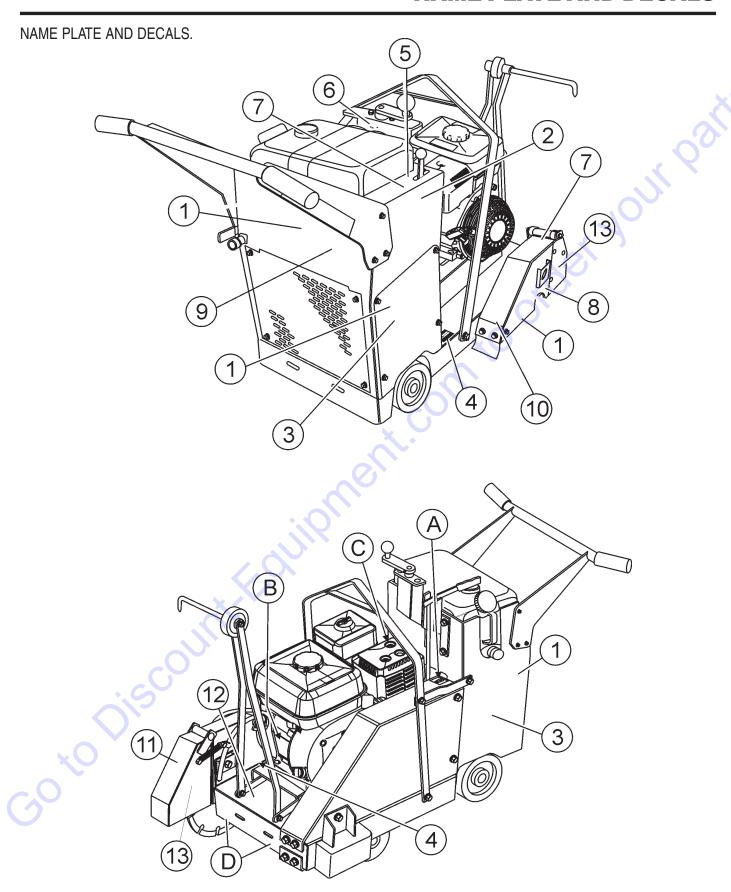
"Not Sold Separately" — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

#### SUGGESTED SPARE PARTS

# SP2S13H20A SAW (13HP SELF-PROPELLED)

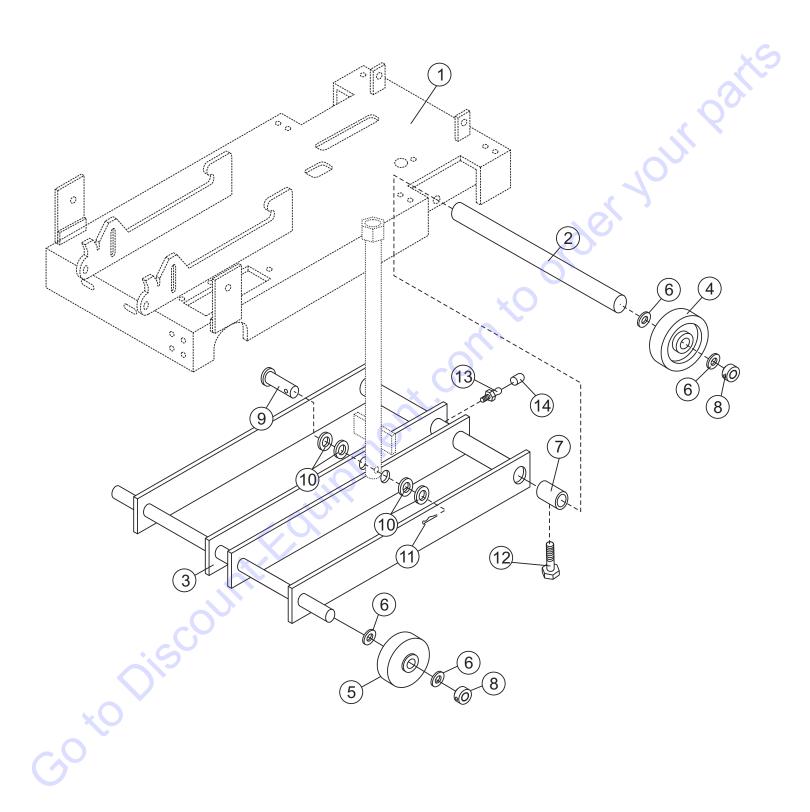
SP2S13H20A SAW	
(13HP SELF-PROPELLED) 1 to 3 Units	
Qty P/NDescription	
3 16052 V-BELTS, DRIVE 1 07055-051 V-BELTS, TRANSMISSION	
1 29013-001 WRENCH, BOX END 1-1/2 IN. 1 60087 ROPE, FRONT POINTER 1/4 IN.	, 00
2 15081 GRIPS, HANDLE BAR 1 IN.	
1 06922-003 BLADE SHAFT NUT, RIGHT SIDE 1 07038-016 BLADE SHAFT NUT, LEFT SIDE	100
1 26928-002 OUTER BLADE FLANGE 3 17210ZE3505 ELEMENT, AIR CLEANER	
3 9807956846 SPARK PLUG 1 17620ZH7023 CAP, FUEL TANK	
1 28462ZV7003 ROPE, RECOIL STARTER	
	20
So to Diescounti-Lor	
	S MANUAL — REV. #1 (05/17/10) — PAGE 43

# NAME PLATE AND DECALS



#### NAME PLATE AND DECALS

UNDER CARRIAGE ASSY.

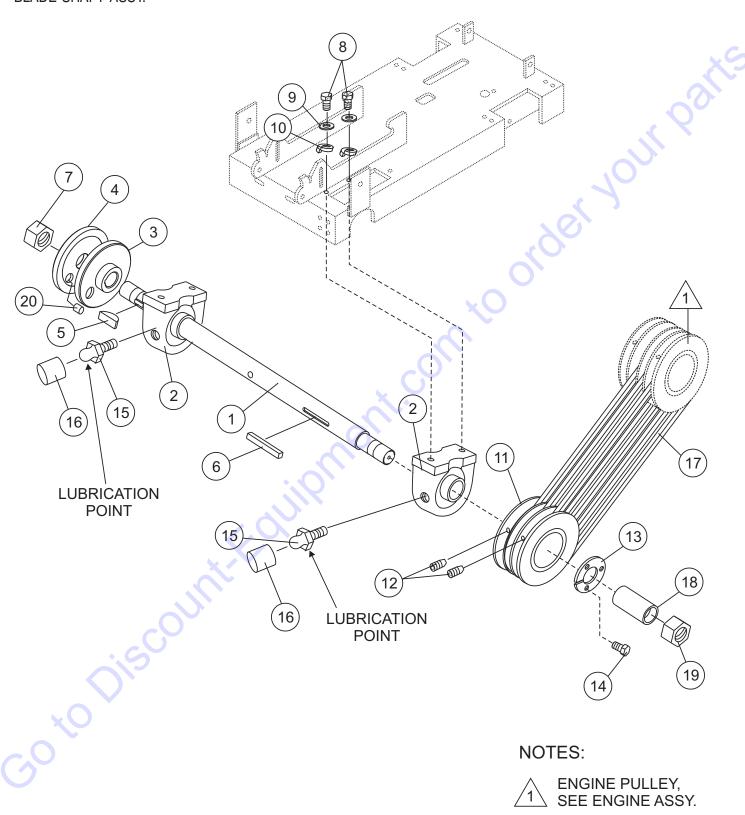


#### UNDER CARRIAGE ASSY.

UNDERCARRIAGE ASSY.
---------------------

NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14	PART NO 28777-352 28781-002 28782-351 28086-001 28085-001 8151 10065-090 25181-001 8081 0447 3216 0685 2621 1162 A	PART NAME FRAME ASSY. 16"/18"/20" AXLE, REAR & FRONT FRAME, UNDERCARRIAGEE ASSY. WHEEL, 8 X 2 .75 ROLLER BEARING REAR WHEEL, 5 X 2 .75 ROLLER BEARING FRONT WASHER, FLAT SAE 3/4 BEARING PLAIN COLLAR, SET 0.75 X 1.50 X .50, SPLIT PIN, CLEVIS 1/2 X 2-3/4 WASHER, FLAT SAE 1/2 PIN, COTTER 1/8D X 1 SCREW, SHS 5/16-18 X 5/16 ZERK, GREASE STR. 1/4-28 CAP, ZERK FITTING	QTY.  1  1  2  2  8  2  4  1  4  1  2  1	REMARKS
	Oisco!	nt. Equipped in the second in		
	SP2S13H20A	SAW — OPERATION AND PARTS MANUAL — RE	EV. #1 (05/	(17/10) — PAGE

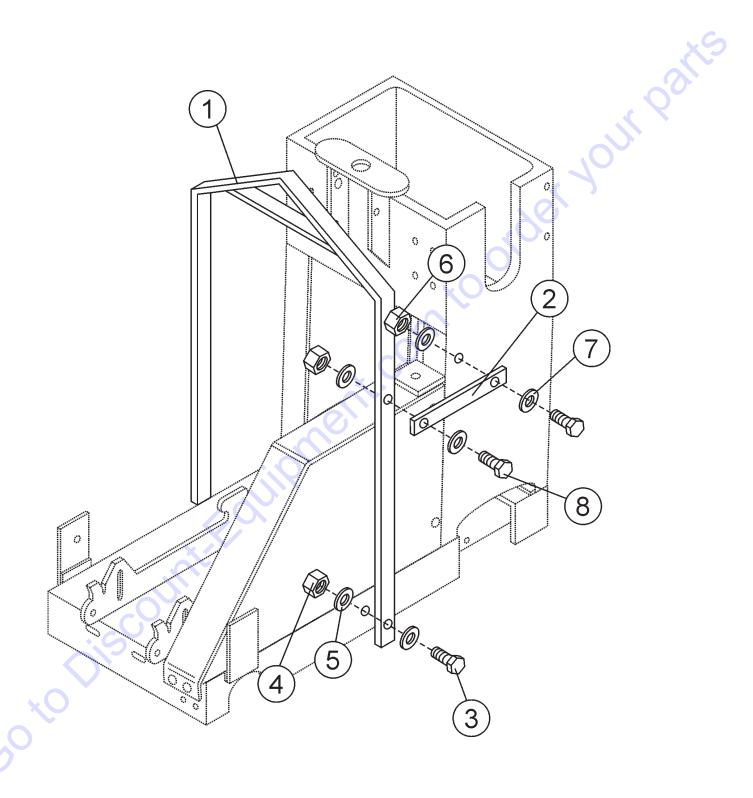
BLADE SHAFT ASSY.



#### **BLADE SHAFT ASSY.**

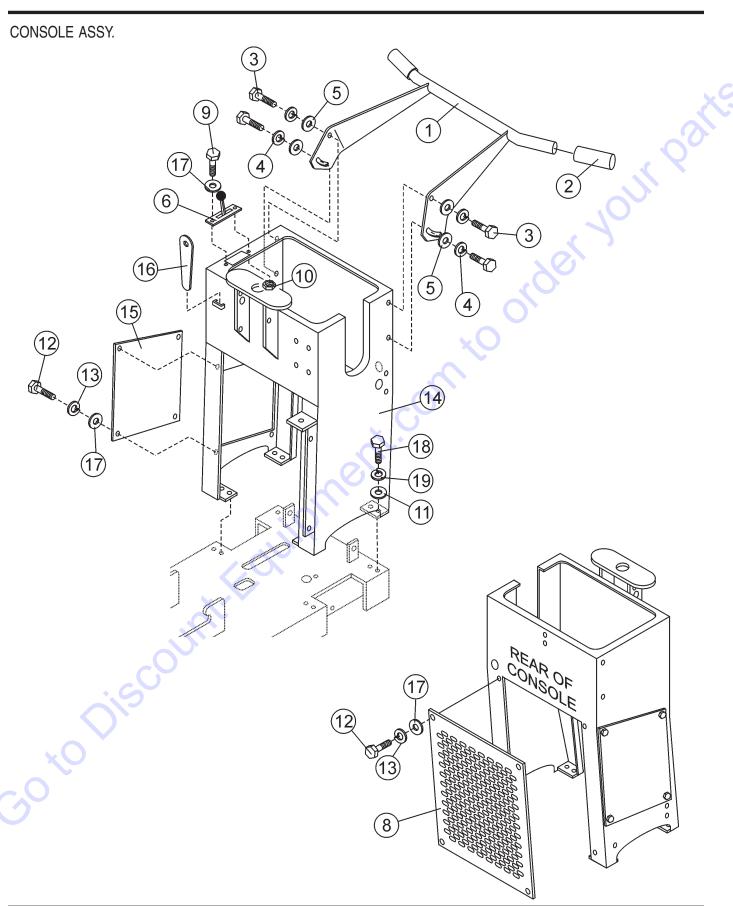
BLADE SHAFT ASSY.	
MO   PART NO   PART NAME   1   28807-002   SPINDLE, BLADE   1   28807-002   SPINDLE, BLADE   1   28807-002   FLANGE, BLADE   1   10   10   1   4   26928-002   FLANGE, BLADE OUTSIDE 1.0ID X5.00D X 56   1   26928-004   FLANGE, BLADE OUTSIDE 1.0ID X4.00D X 56   1   1   1   1   1   1   1   1   1	REMARKS

LIFTING BALE ASSY.



#### LIFTING BALE ASSY.

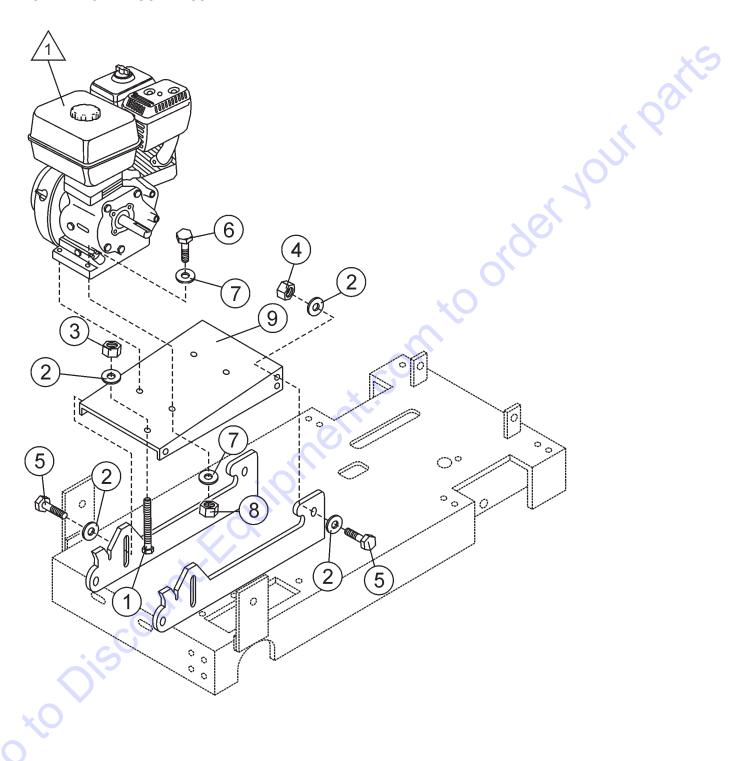
NG BALE ASSY.				
PART NO 28890-351 28890-352 28893-001 28893-002 0205 10133 10136 5283 0300 B 0202	PART NAME  13HP, LIFT BALE ASSY.  20HP, LIFT BAIL ASSY.  BRACE, 13HP BAIL  BRACE, 20HP BAIL  SCREW, HHC 3/8-16 X 1.0  NUT, NYLOC 3/8-16  WASHER, FLAT SAE 3/8  NUT, NYLOC 5/16-18  WASHER, FLAT SAE 5/16  SCREW, HHC 5/16-18 X 1 ZINC	QTY.  1  1  1  2  2  4  2  4	REMARKS	OK S
	anent.cor	×O		
Oisco	JINIL COLINY			
O				
	28890-351 28893-001 28893-002 0205 10133 10136 5283 0300 B 0202	28890-351 13HP, LIFT BALE ASSY. 28893-001 BRACE, 13HP BAIL 28893-002 BRACE, 20HP BAIL 0205 SCREW, HHC 3/8-16 X 1.0 10133 NUT, NYLOC 3/8-16 10136 WASHER, FLAT SAE 3/8 5283 NUT, NYLOC 5/16-18 0300 B WASHER, FLAT SAE 5/16 0202 SCREW, HHC 5/16-18 X 1 ZINC	28890-351 13HP, LIFT BALE ASSY. 1 28890-352 20HP, LIFT BAIL ASSY. 1 28893-001 BRACE, 13HP BAIL 1 28893-002 BRACE, 20HP BAIL 1 0205 SCREW, HHC 3/8-16 X 1.0 2 10133 NUT, NYLOC 3/8-16 2 10136 WASHER, FLAT SAE 3/8 4 5283 NUT, NYLOC 5/16-18 2 0300 B WASHER, FLAT SAE 5/16 4 0202 SCREW, HHC 5/16-18 X 1 ZINC 2	28890-351 13HP, LIFT BALE ASSY. 1 28890-352 20HP, LIFT BAIL ASSY. 1 28893-001 BRACE, 13HP BAIL 1 28893-002 BRACE, 20HP BAIL 1 0205 SCREW, HHC 3/8-16 X 1.0 2 10133 NUT, NYLOC 3/8-16 2 10136 WASHER, FLAT SAE 3/8 4 5283 NUT, NYLOC 5/16-18 2 0300 B WASHER, FLAT SAE 5/16 4 0202 SCREW, HHC 5/16-18 X 1 ZINC 2



PAGE 52 — SP2S13H20A SAW — OPERATION AND PARTS MANUAL — REV. #1 (05/17/10)

#### **CONSOLE ASSY.**

13HP HONDA ENGINE MOUNT ASSY.



# NOTES:



ENGINE SHOWN FOR MOUNTING PURPOSE ONLY ENGINE MAY NOT LOOK LIKE ILLUSTRATION

# PARTS FINDER Search Website Search Website Search Website Search Website







Discount-Equipment.com is your online resource for quality parts & equipment.

Florida: 561-964-4949 Outside Florida TOLL FREE: 877-690-3101

## Need parts?

Click on this link: <a href="http://www.discount-equipment.com/category/5443-parts/">http://www.discount-equipment.com/category/5443-parts/</a> and choose one of the options to help get the right parts and equipment you are looking for. Please have the machine model and serial number available in order to help us get you the correct parts. If you don't find the part on the website or on one of the online manuals, please fill out the request form and one of our experienced staff members will get back to you with a quote for the right part that your machine needs.

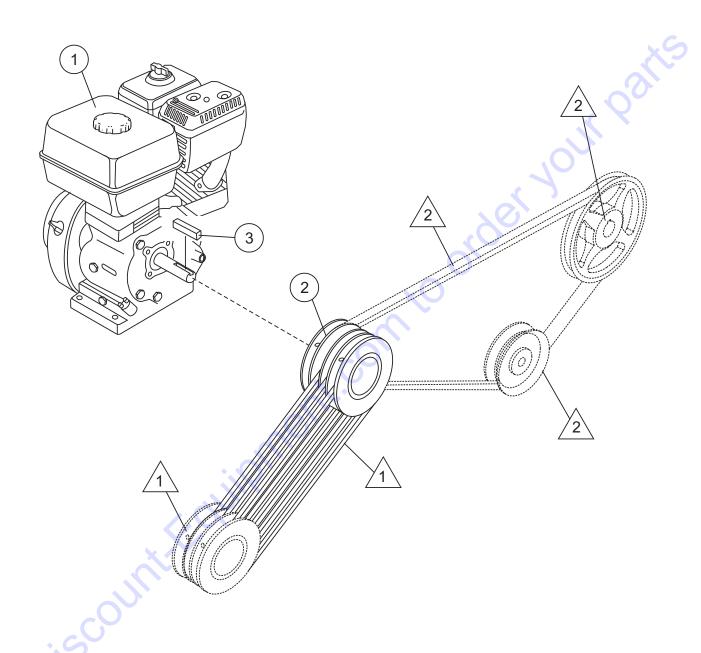
We sell worldwide for the brands: Genie, Terex, JLG, MultiQuip, Mikasa, Essick, Whiteman, Mayco, Toro Stone, Diamond Products, Generac Magnum, Airman, Haulotte, Barreto, Power Blanket, Nifty Lift, Atlas Copco, Chicago Pneumatic, Allmand, Miller Curber, Skyjack, Lull, Skytrak, Tsurumi, Husquvarna Target, Stow, Wacker, Sakai, Mi-T-M, Sullair, Basic, Dynapac, MBW, Weber, Bartell, Bennar Newman, Haulotte, Ditch Runner, Menegotti, Morrison, Contec, Buddy, Crown, Edco, Wyco, Bomag, Laymor, EZ Trench, Bil-Jax, F.S. Curtis, Gehl Pavers, Heli, Honda, ICS/PowerGrit, IHI, Partner, Imer, Clipper, MMD, Koshin, Rice, CH&E, General Equipment, Amida, Coleman, NAC, Gradall, Square Shooter, Kent, Stanley, Tamco, Toku, Hatz, Kohler, Robin, Wisconsin, Northrock, Oztec, Toker TK, Rol-Air, APT, Wylie, Ingersoll Rand / Doosan, Innovatech, Con X, Ammann, Mecalac, Makinex, Smith Surface Prep,Small Line, Wanco, Yanmar

#### 13HP HONDA ENGINE MOUNT ASSY.

#### 13HP HONDA ENGINE MOUNT ASSY.

PART NO 15868-032 0447 968011 10176 3214 9154 10136 10133 28804-351	PART NAME SCREW, SQHS 1/2-13 X 4, CUP PLAIN WASHER, FLAT SAE 1/2 NUT, HEX FINISH 1/2-13 NUT, NYLOC 1/2-13 SCREW, HHC 1/2-13 X 1 1/4 SCREW, HHC 3/8-16 X 1 3/4 WASHER, FLAT SAE 3/8 NUT, NYLOC 3/8-16 ENGINE BASE ASSY.	QTY. 1 9 1 4 4 4 8 4	REMARKS
isc	JUNTER		
	15868-032 0447 968011 10176 3214 9154 10136 10133 28804-351	15868-032 SCREW, SQHS 1/2-13 X 4, CUP PLAIN 0447 WASHER, FLAT SAE 1/2 968011 NUT, HEX FINISH 1/2-13 10176 NUT, NYLOC 1/2-13 3214 SCREW, HHC 1/2-13 X 1 1/4 9154 SCREW, HHC 3/8-16 X 1 3/4 10136 WASHER, FLAT SAE 3/8 10133 NUT, NYLOC 3/8-16 28804-351 ENGINE BASE ASSY.	15868-032 SCREW, SQHS 1/2-13 X 4, CUP PLAIN 0447 WASHER, FLAT SAE 1/2 9 968011 NUT, HEX FINISH 1/2-13 1 10176 NUT, NYLOC 1/2-13 4 3214 SCREW, HHC 1/2-13 X 1 1/4 4 9154 SCREW, HHC 3/8-16 X 1 3/4 4 10136 WASHER, FLAT SAE 3/8 8 10133 NUT, NYLOC 3/8-16 4 28804-351 ENGINE BASE ASSY. 1

ENGINE ASSY.



# NOTES:



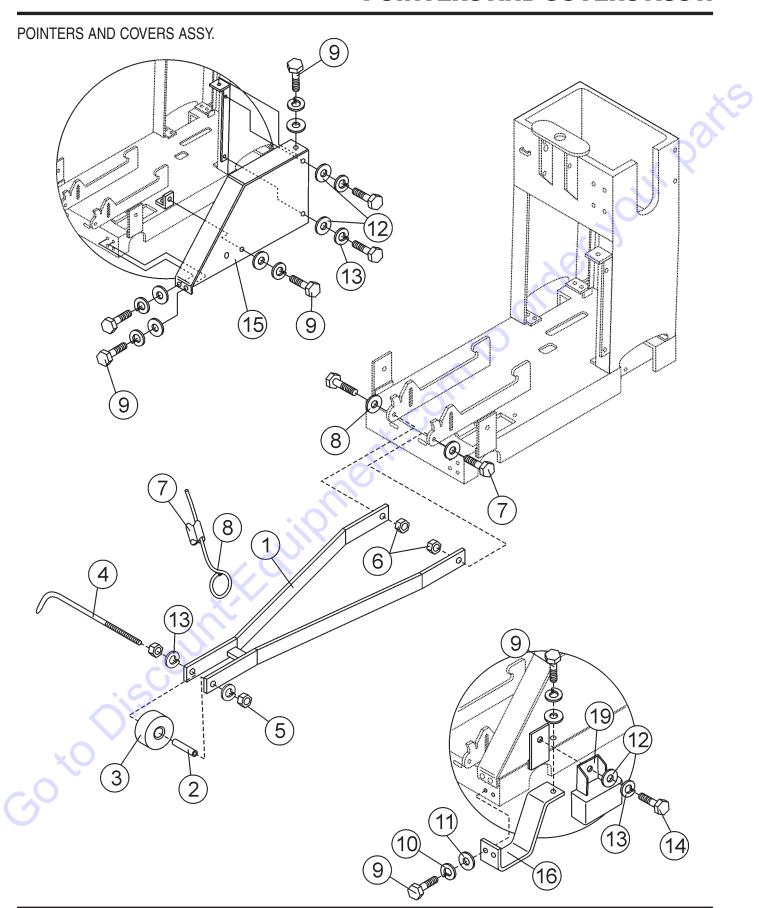
SEE BLADE SHAFT ASSY.



SEE HYDROSTATIC DRIVE ASSY.

			NE ASSY.	
REMARKS	<u>QTY.</u> 1 1 1	PART NAME ENGINE, HONDA 13HP, GX390K1QWT2 PULLEY, ENGINE 13 HP, 4F3V26X1 KEY 1/4" SQ. X 2, 1018 STOCK	PART NO 15103 23703-003 6059 B	NO 1 2 3
ser your par				
	o oko	×		
		in Menticonn		
		diipme		
		Junit-Eculii P	c	
			Oliso	×

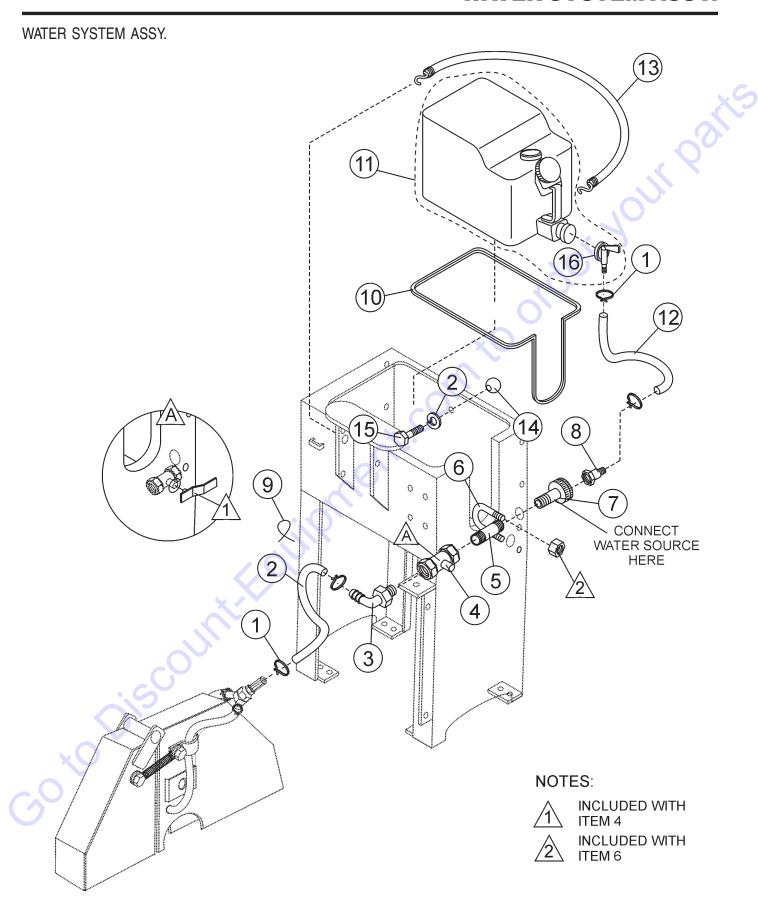
# **POINTERS AND COVERS ASSY.**



#### POINTERS AND COVERS ASSY.

#### POINTER AND COVERS ASSY.

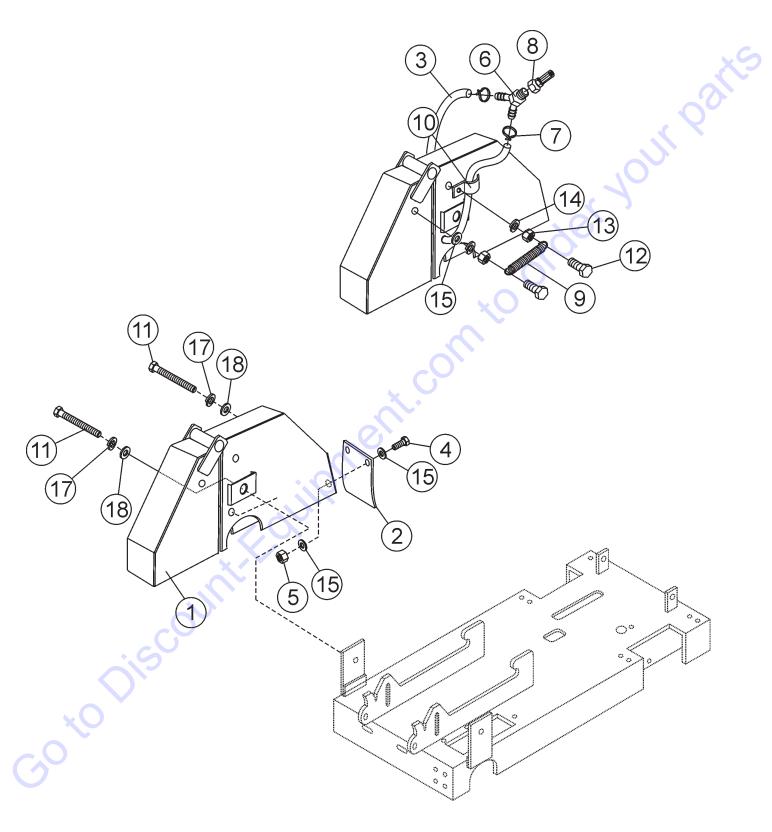
NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14	PART NO 28646-351 28649-001 28648-001 28647-001 1456 10133 15114 60087 0655 0161 C 0300 B 10136 0166 A 0205 28799-751	PART NAME BLADE GUIDE WELDMENT SPANNER BUSHING CSI WHEEL, 3.00 X 1.25 .50 ID POLY CSI POINTER NUT, HEX FINISH 3/8-16 NUT, NYLOC 3/8-16 SLEEVE, SASH ROPE, 1/4" NYLON, BRAIDED, WHITE SCREW, HHC 5/16-18 X 3/4 WASHER, LOCK 5/16 MED. WASHER, FLAT SAE 5/16 WASHER, FLAT SAE 3/8 WASHER, LOCK 3/8 MED. SCREW, HHC 3/8-16 X 1.0 BELT GUARD, - RED	QTY.  1  1  1  2  2  7  7  7  7  3  3  1	REMARKS
16 19	28835-001 29745-754	GUARD, PULLEY SPINDLE GUARD ASSY RED		
GO X	SP2S13H20A	SAW — OPERATION AND PARTS MANUAL –	_ RFV #1 (05/	/17/10 <b>)</b> — PAG



#### **WATER SYSTEM ASSY.**

NO PART NO PART NAME 1 12694-008 HOSE CLAMP, SPRING TYPE 7/8 O.D HOSE 4 2 23255-004 HOSE, WATER 1/2 X 37 1 3 23566-001 FITTING, PLASTIC 90 1/2MP X 1/2BARB 1 4 23259-001 VALVE, BALL 1/2 MPT BRASS NIBCO T585-70 1 5 23254-001 FITTING, NIPPLE 1/2MP X 2 GALV 1 6 16378-009 U-BOLT WNUTS 1 7 15544 FITTING, BRASS 1/2 PARE X 3/4 GRDN 1 8 24778-001 FITTING, BRASS 1/2 PARE X 3/4 GRDN 1 9 1662 TIE, CABLE TY-RAP BLACK 2 10 28861-501 TRIM KIT, WATER TANK RUBBER 1 11 28089-001 TANK, 5 GAL. WATER		R SYSTEM ASSY.			
aliphent.com	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12694-008 23255-004 23566-001 23259-001 23254-001 16378-009 15544 24778-001 1662 28861-501 28089-001 27040-001 28861-001 28860-001 06499-004	HOSE CLAMP, SPRING TYPE 7/8 O.D HOSE HOSE, WATER 1/2 X 37 FITTING, PLASTIC 90 1/2MP X 1/2BARB VALVE, BALL 1/2 MPT BRASS NIBCO T585-70 FITTING, NIPPLE 1/2MP X 2 GALV. U-BOLT W/NUTS FITTING, BRASS 1/2FP-3/4F GRDN., STR FITTING, BRASS 1/2 BARB X 3/4 GRDN TIE, CABLE TY-RAP BLACK TRIM KIT, WATER TANK RUBBER TANK, 5 GAL. WATER HOSE, 19 IN. VINYL WATER TANK CORD, TANK RETAINER KNOB HHCS 1/4-20 x 1/2	4 1 1 1 1 1 1 1 1 2	, your P
Discount: Falin Rent.	14 15	28860-001 06499-004	KNOB HHCS 1/4-20 x 1/2	1	
Oiscount. Follow			io Ment.		
Discolar de la color de la col			nt-Eaulie		
		Discol			
	6				

BLADE GUARD ASSY.

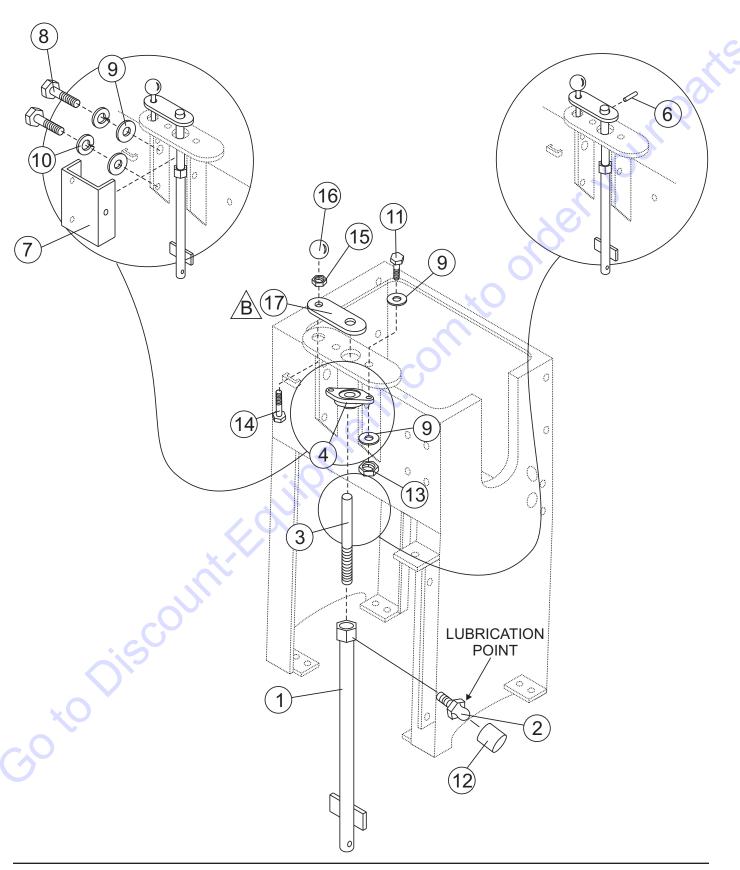


#### **BLADE GUARD ASSY.**

BLADE	GUARD ASSY.			
NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18	PART NO 29406-754 28729-002 60021 0131 A 10024 24642-001 12694-006 24778-001 18626-001 22129-001 21168 0424 0949 0181 B 0948 0166 A 10136	PART NAME BLADE GUARD W/A - RED GUARD, SPLASH BLADE HOSE, 3/8ID X 5/80D BRAIDED PVC "PAC" SCREW, HHC 1/4-20 X 3/4 NUT, NYLOC 1/4-20 Y-CONNECTOR 3/8 HOSE CLAMP, SPRING TYPE 3/4 O.D. HOSE FITTING, BRASS 1/2BARB X 3/4F GRDN SPRING TENSION, GUARD BLADE PIPE STRAP 3/8 SCREW, HHC 3/8-16 X 4.75 SCREW, HHC 1/4-20 X 1 1/4 NUT, HEX FINISH 1/4-20 PLATED WASHER, LOCK 1/4 MED. WASHER, FLAT SAE 1/4 WASHER, LOCK 3/8 MED. WASHER, FLAT SAE 3/8	QTY.  1 1.670 2 2 1 2 1 4 4 6 2 2	REMARKS
	SP2S13H20A S	AW — OPERATION AND PARTS MANUAL — RE	V.#1 (05/1	7/10) — PAGE

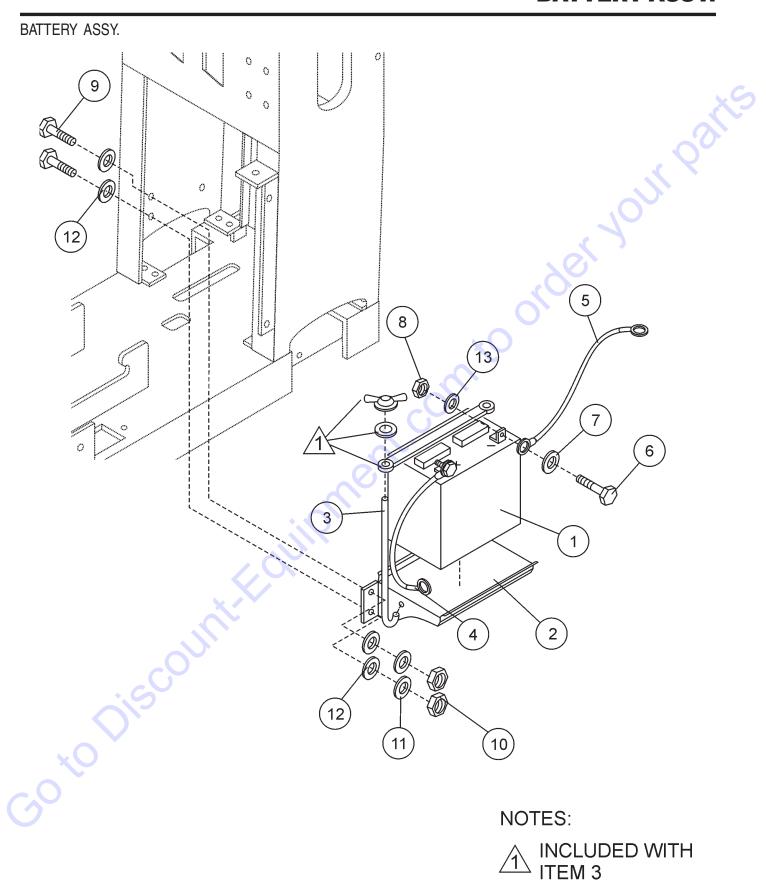
# MANUAL RAISE AND LOWER ASSY. (20 IN.)

MANUAL RAISE AND LOWER ASSY. (20 IN.)



# MANUAL RAISE AND LOWER ASSY. (20 IN.)

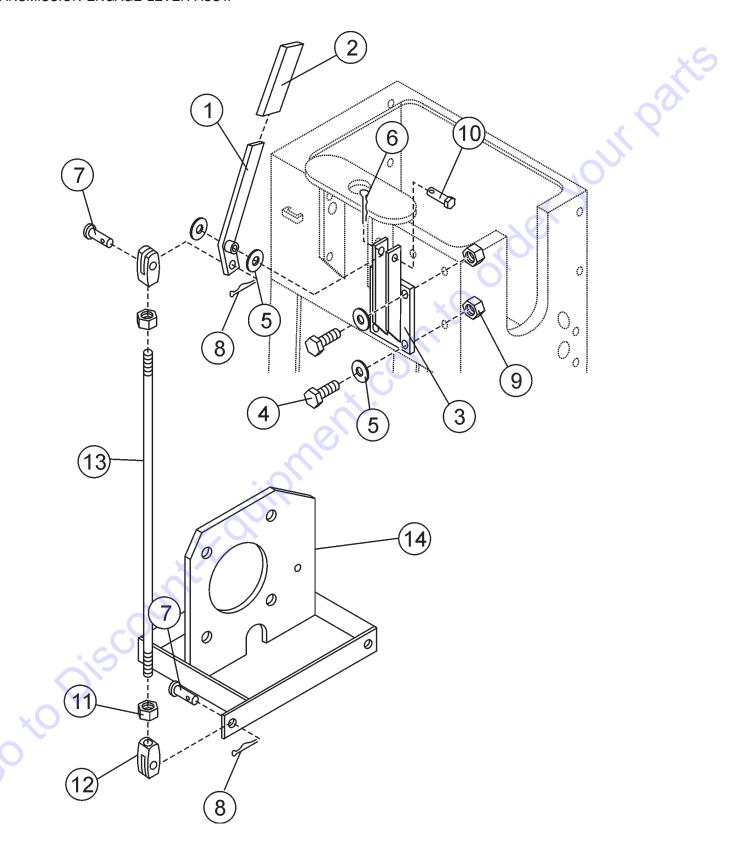
UAC	ON GOTTE W AGG 1. 20	DEADE	
NO 1 2 3 4 5 6 7 8 9	PART NO 28793-352 2621 28806-001 28083-001 28809-001 4568 28877-751 1579 0948	PART NAME  JACKPOST ASSY.  ZERK, GREASE STR. 1/4-28  JACKSCREW  BEARING, FLANGE  SPACER, JACKSCREW  PIN, ROLL 3/16 X 1  SCREW COVER ASSY., RED  SCREW, HHC 1/4-20 X 1/2  WASHER, FLAT SAE 1/4	QTY. REMARKS  1 1 1 1 1 1 1 1 3 7
10 11 12 13 14 15 16	0181 B 0730 1162 A 10024 1121 1876 4403 28808-002	WASHER, LOCK 1/4 MED. SCREW, HHC 1/4-20 X 1 CAP,GREASE ZERK, #2 NUT, NYLOC 1/4-20 SCREW, HHC 3/8-16 X 2 3/4 NUT, HEX JAM 3/8-16 CLASS 2B KNOB, SHIFT ARM-CRANK	3 2 1 2 1 1 1 1
		iphentic	
	ois co	JINIL COUNTY	
CO			
	SP2S13H20	DA SAW — OPERATION AND PARTS MAN	NUAL — REV. #1 (05/17/10) — PAG



#### **BATTERY ASSY.**

BALL	ERY ASSY.		
NO 1 2 3 4 5 6 7 8 9 10 11 12 13	PART NO 4671 28096-001 28095-401 28093-001 28094-001 0131 A 0948 0949 0655 0161 D 0161 C 0300 B 0181 B	PART NAME BATTERY, WET GR.U1, GT-X GOLD LA BRACKET BATTERY 1 BATTERY HOLD DOWN KIT 425-405 1 CABLE, BATTERY POS 6GA X 42" RING TONGUE 1 STRAP, GROUND 1 SCREW, HHC 1/4-20 X 3/4 WASHER, FLAT SAE 1/4 NUT, HEX FINISH 1/4-20 PLATED 2 SCREW, HHC 5/16-18 X 3/4 NUT, HEX FINISH 5/16-18 WASHER, LOCK 5/16 MED. 3 WASHER, FLAT SAE 5/16 WASHER, LOCK 1/4 MED. 2	REMARKS
		A.F. Olilon Properties	
COX	ODISCO		

TRANSMISSION ENGAGE LEVER ASSY.



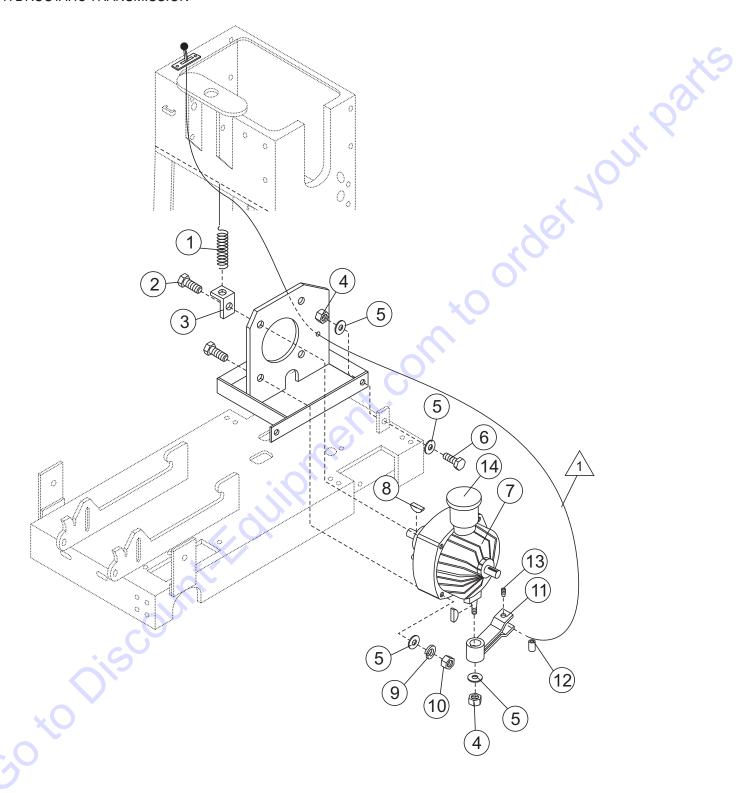
#### TRANSMISSION ENGAGE LEVER ASSY.

Ш\	<b>/</b> D	TDANG	NUCCION	ENGAGE	LEVER ASSY.	
Н١	(1).	IRAN	SIVIISSIUIV	FN(3A(3F	I F V F K ASS Y.	

NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14	PART NO 28825-351 3360 28822-351 0655 10136 6014 B 08326-005 07028-031 5283 08326-019 2199 08327-012 28830-001 28819-351	PART NAME LEVER ASSY. TRANS. ENGAGE GRIP, 1/4 X 1 BLACK MOUNT ASSY., LEVER RED SCREW, HHC 5/16-18 X 3/4 WASHER, FLAT SAE 3/8 PIN, COTTER 3/32D X 1.0 PIN, CLEVIS 5/16 X 1 O'ALL LENGHT PLATED PIN, COTTER 3/32D X 1/2 NUT, NYLOC 5/16-18 PIN, CLEVIS 3/8 X 2" USEABLE LENGHT NUT, HEX JAM 3/8-24 YOKE END, 3/8-24 X 2.50 ROD, TRANS. ENGINE TRANS. BRACKET ASSY.	QTY. 1 1 4 6 1 2 2 8 1 2 2 1	REMARKS
	CD2C12U20A C	AW ODERATION AND DARTO MANUAL DE	V #4 (05)	IZ/40\ BAOS
	372313N2UA 3	SAW — OPERATION AND PARTS MANUAL — RE	v.#I (UO/	1/10) — PAGE

# **HYDROSTATIC TRANSMISSION ASSY.**

#### HYDROSTATIC TRANSMISSION



NOTES:

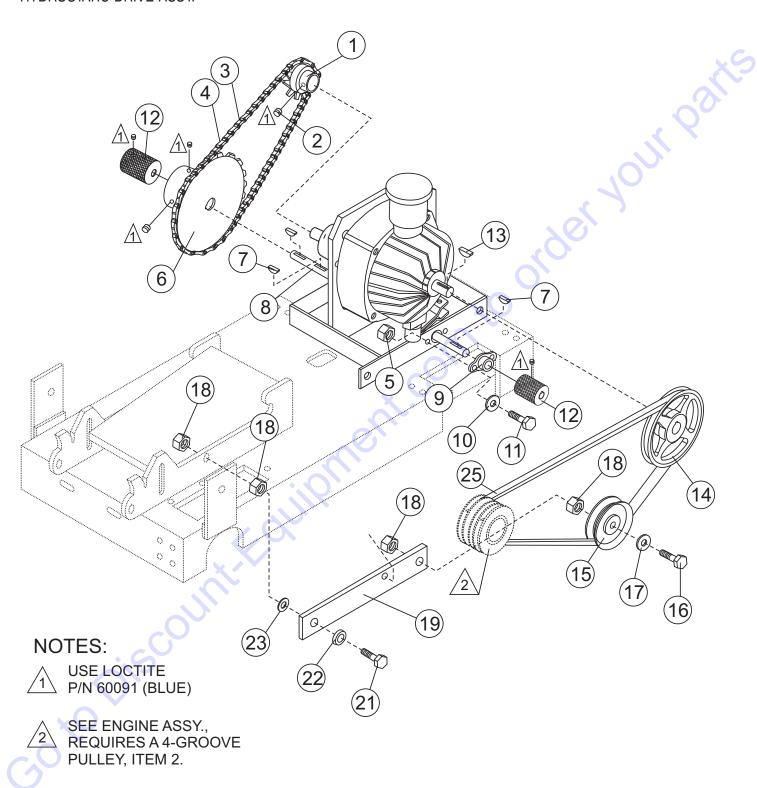
INCLUDED WITH ITEM 6, CONSOLE ASSY.

#### HYDROSTATIC TRANSMISSION ASSY.

I	H١	/D	R	$\Omega$	SI	ΑΤ	IC.	TR	ΔN	121	MI:	55	101	V	ASSY.	
- 1				$\mathbf{v}$		$\neg$	-1		$\neg$ ı	W C) I	VIII.	-	w	v	AUUI.	

NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14	PART NO 20559-001 1493 28836-001 10133 10136 1023 15354 1578 0166 A 1456 28828-351 28829-001 10450 103530-000	PART NAME  SPRING, EXT. 3.38FL X 710D X .105  SCREW, HHC 3/8-18 X 3.25  LINK, RETURN SPRING  NUT, NYLOC 3/8-16  WASHER, FLAT SAE 3/8  SCREW, HHC 3/8-16 X 1 1/4 GR 5  TRANSMISSION, HYD EATON  KEY, WOODRUFF #3  WASHER, LOCK 3/8 MED.  NUT, HEX FINISH 3/8-16  SHIFT ARM ASSY.  PIN, PIVOT  SCREW, SHS 10-32 X 1/4  CAP, TRANSMISSION	QTY. REMA  1 4 1 7 8 2 1 2 4 4 1 1	RKS
	cisco)	Jnt: Folilipment. com		
GO*		A SAW — OPERATION AND PARTS MANUAL –	– REV. #1 (05/17/10) —	- PAGE

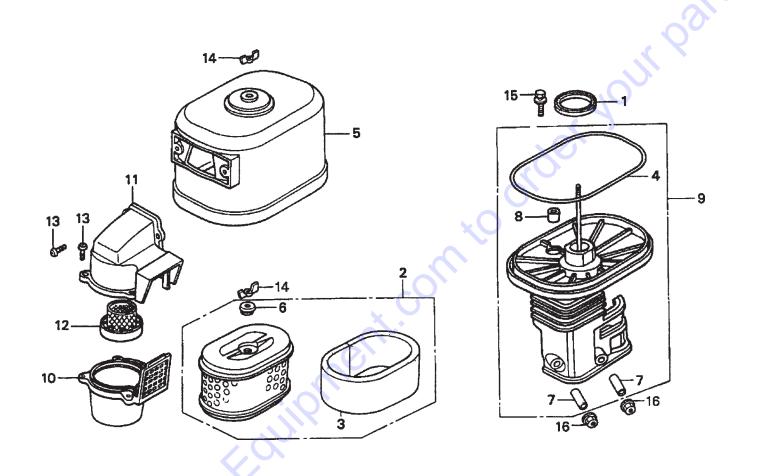
#### HYDROSTATIC DRIVE ASSY.



#### HYDROSTATIC DRIVE ASSY.

NO         PART NO         PART NAME         QTY.         REMARKS           1         23227-001         SPROCKET, TRANSMISSION 12 TOOTH MACH         1           2         25039         SCREW, SHS 10-24 X 1/4         2           3         23231-503         CHAIN, ROLLER .375 PITCH X 21.75         1           4         10504-035         LINK, CHAIN         1           5         5283         NUT, NYLOC 5/16-18         8           6         28084-001         SPROCKET, 3548 X 3/4         1           7         0126         KEY, WOODRUFF #9         3           8         28832-001         JACKSHAFT         1           9         23284-001         BEARING, FLANGE .34SQ x 3/4ID         2           10         0300 B         WASHER, FLAT SAE 5/16         4           11         2623         SCREW, HHC 5/16-18 X 1-1/4         4           12         28831-001         GEAR, DRIVE         2           13         1578         KEY, WOODRUFF #3         1           14         28087-001         PULLEY MAGO Y 17MM         1	HYDROSTATIC DF	VE ASSY.	
15       25682-001       IDLER PULLEY       1         16       9154       SCREW, HHC 3/8-16 X 1 3/4       1         17       10136       WASHER, FLAT SAE 3/8       1         18       10133       NUT, NYLOC 3/8-16       4         19       23303-001       IDLER ARM       1         21       1284       SCREW, HHC 3/8-16 X 1 1/2       1         22       18574-004       WASHER, BELLEVILLE 3/8       1         23       28864-001       WASHER, FIBRE       1	NO         PART NO           1         23227-001           2         25039           3         23231-503           4         10504-035           5         5283           6         28084-001           7         0126           8         28832-001           9         23284-001           10         0300 B           11         2623           12         28831-001           13         1578           14         28087-001           15         25682-001           16         9154           17         10136           18         10133           19         23303-001           21         1284           22         18574-004           23         28864-001           25         07055-050           25         07055-051	PART NAME SPROCKET, TRANSMISSION 12 TOOTH MAG SCREW, SHS 10-24 X 1/4 CHAIN, ROLLER .375 PITCH X 21.75 LINK, CHAIN NUT, NYLOC 5/16-18 SPROCKET, 3548 X 3/4 KEY, WOODRUFF #9 JACKSHAFT BEARING, FLANGE .34SQ x 3/4ID WASHER, FLAT SAE 5/16 SCREW, HHC 5/16-18 X 1-1/4 GEAR, DRIVE KEY, WOODRUFF #3 PULLEY, MA60 X 17MM IDLER PULLEY SCREW, HHC 3/8-16 X 1 3/4 WASHER, FLAT SAE 3/8 NUT, NYLOC 3/8-16 IDLER ARM SCREW, HHC 3/8-16 X 1 1/2 WASHER, BELLEVILLE 3/8 WASHER, FIBRE V-BELT, TRANSMISISON 4L500	CH 1 2 1 1 8 1 3 1 2 4 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

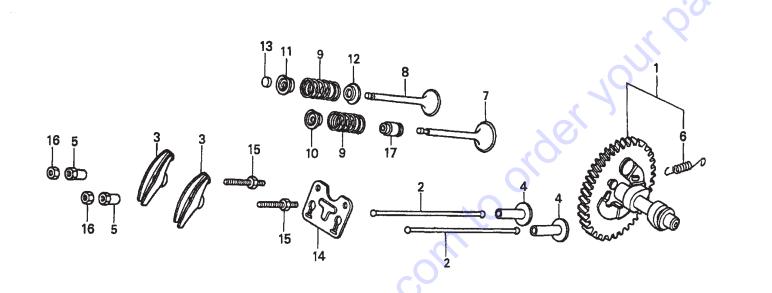
AIR CLEANER ASSY.



## HONDA GX390K1QWT2 ENGINE — AIR CLEANER ASSY.

AIR C	CLEANER ASSY.			
NO. 1 2 3* 4# 5 6* 7# 8# 9 10 11 12 13 14 15 16	PART NO. 16271ZE2000 17210ZE3505 17218ZE3505 17219HA2405 17230ZE3841 17232891000 17238ZE2310 17239ZE3840 17410ZE3840 17470ZE3841 17475ZE3841 17476ZE3841 90142MB0000 90325044000 90009ZE2003 0405006000	PART NAME GASKET, ELBOW ELEMENT, AIR CLEANER FILTER, OUTER SEAL, AIR CLEANER COVER COVER, AIR CLEANER (CYCLONE) GROMMET, AIR CLEANER COLLAR, AIR CLEANER COLLAR B, AIR CLEANER ELBOW, AIR CLEANER CASE, PRE AIR CLEANER CAP, PRE AIR CLEANER GUIDE, PRE AIR CLEANER SCREW, PAN 5X16.5 WINGNUT, TOOL BOX SETTING BOLT- WASHER 6X22 NUT, FLANGE 6MM	1 1 1 1 2	REMARKS INCLUDES ITEMS W
	Oiscoil	Mirkoliiphne		
,o``	CD2C12U20A	SAW — OPERATION AND PARTS MANU	AL DE	

CAMSHAFT ASSY.

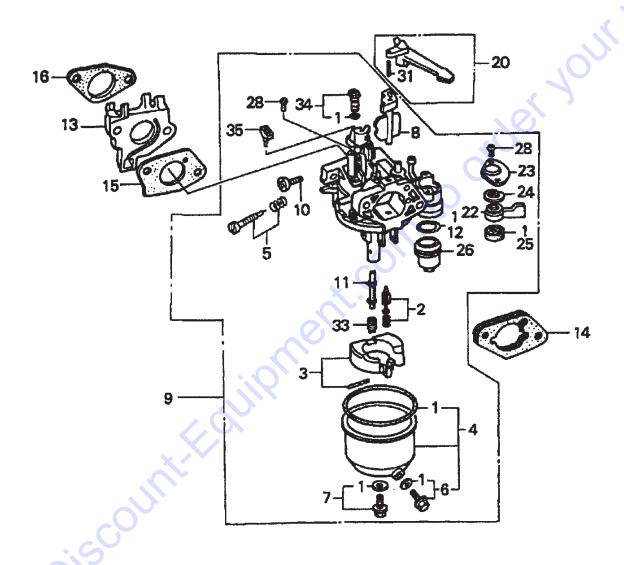


#### HONDA GX390K1QWT2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY			
	$\sim$ $^{\wedge}$	ALT AC	$\sim$
	L,A	4 C I A 2	7 Y

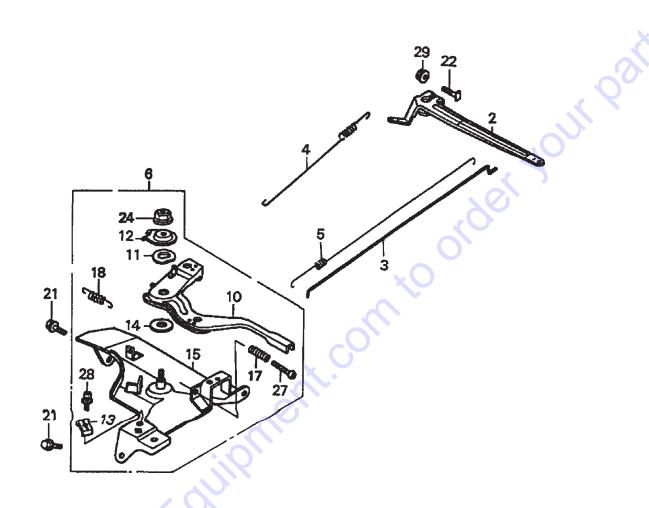
NO. 1 2 3 4 5 6* 7 8 9 10 11 12 13 14 15 16 17	PART NO. 14100ZF6W01 14410ZE3013 14431ZE2010 14441ZE2000 14451ZE1013 14568ZE1000 14711ZE3000 14751ZE2003 14771ZE2000 14773ZE2000 14775ZE2010 14781ZE2000 14791ZE2010 90012ZE0010 90206ZE1000 12209ZE8003	PART NAME CAMSHAFT ASSEMBLY	2 2 2 1 1 1 2	REMARKS INCLUDES ITEM W/*
	SP2S13H20A S	SAW — OPERATION AND PARTS MANU	AL — REV	7.#1 (05/17/10) — PAGE 7

CARBURETOR ASSY.



#### **HONDA GX390K1QWT2 ENGINE — CARBURETOR ASSY.**

CONTROL ASSY.



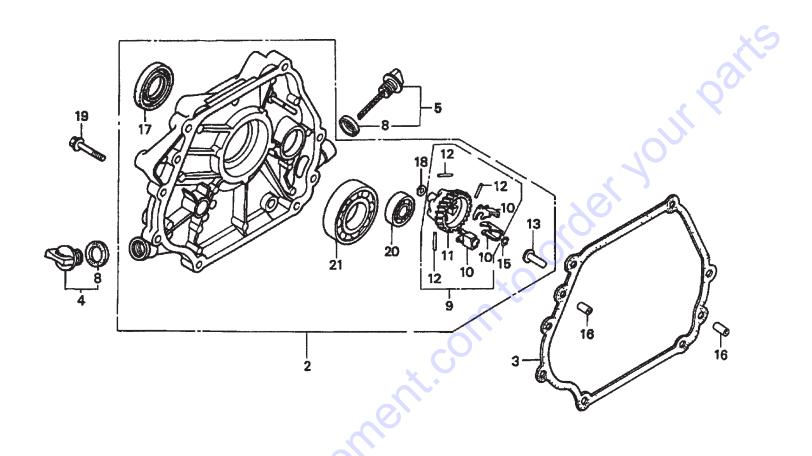
# **HONDA GX390K1QWT2 ENGINE — CONTROL ASSY.**

CONTROL ASSY.

NO. 2 3 4 5 6 10* 11* 12* 13* 14* 15* 17* 18* 21 22 24* 27* 28* 29	PART NO. 16551ZE3000 16555ZE3000 16561ZE3000 16562ZE3000 16570ZE3W20 16571ZE3W00 16574ZE1000 16575ZE2W00 16578ZE1000 16578ZE1000 16581ZE3W00 16584883300 16592883310 90013883000 90015ZE5010 90114SA0000 93500050320A 93500050160A 9405006000	PART NAME ARM, GOVERNOR ROD, GOVERNOR SPRING, GOVERNOR SPRING, THROTTLE RETURN CONTROL ASSY. (REMOTE) LEVER, CONTROL SPRING, LEVER WASHER, CONTROL LEVER HOLDER, CABLE SPACER, CONTROL LEVER BASE, CONTROL SPRING, CONTROL ADJUSTING SPRING, CABLE RETURN BOLT, FLANGE (6X12) (CT200) BOLT, GOVERNOR ARM NUT, SELF-LOCK (6MM) SCREW, PAN (5X32) SCREW, PAN (5X16) NUT, FLANGE (6MM)	QTY.  1  1  1  1  1  1  1  1  1  1  1  1  1	INCLUDES ITEMS W/*
GOX	SP2S13H20A S	SAW — OPERATION AND PARTS MA	NUAL — REV	/, #1 (05/17/10) — PAGE 81

# **HONDA GX390K1QWT2 ENGINE — CRANKCASE ASSY.**

CRANKCASE COVER ASSY.



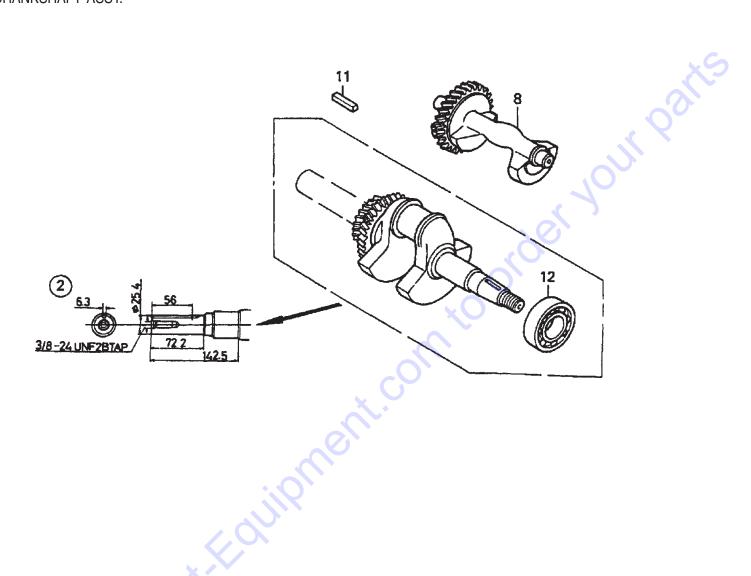
#### HONDA GX390K1QWT2 ENGINE — CRANKCASE ASSY.

CRANKCASE COVER ASSY.

_				
NO. 2 3 4 5 8# 9 10*+ 11*+ 12*+ 13* 15* 16 17* 18* 19 20* 21*	PART NO. 11300ZE3602 11381ZE3801 15600ZG4003 15600735003 15625ZE1003 16510ZE3000 16511ZE8000 16513ZE2000 16531ZE2000 16531ZOA000 90602ZE1000 90701HC4000 91201ZE3004 9410106800 957010804000 961006202000 961006207000	PART NAME COVER ASSY., CRANKCASE (Q-TYPE GASKET, CASE COVER CAP ASSY., OIL FILLER	1 1 1 2	INCLUDES ITEM W/#
G				
	SP2S13H20A S	AW — OPERATION AND PARTS MANUA	L — REV. #1 (05	5/17/10) — PAGE 83

#### HONDA GX390K1QWT2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

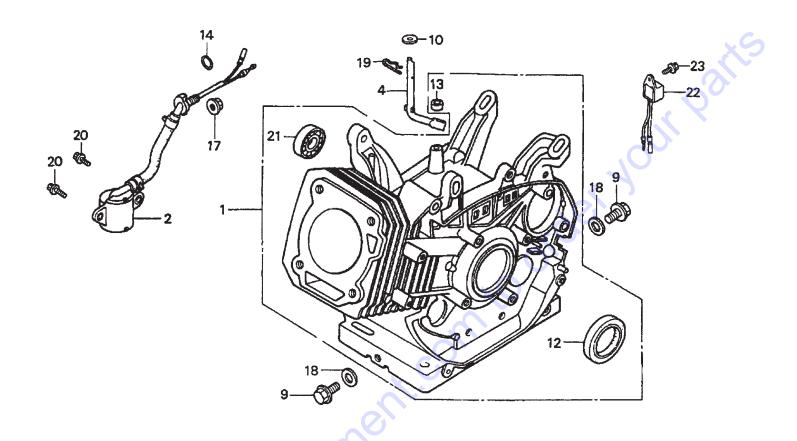


### HONDA GX390K1QWT2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT					
NO.     PART No.       2     13310ZF       8     13351ZF       11     90745ZF       12*     91001ZF	F6W10 C E3010 W	ART NAME RANKSHAFT (Q-TYPE) /EIGHT, BALANCER EY(6.3X6.3X43) EARING, RADIAL BALL (6	 1		-25
					6
				, 10	
				'96,	
				Olo	
			XO.		
		We.			
		ii0			
	X				
	?				
*O	SCOUNT				
0					

# HONDA GX390K1QWT2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.



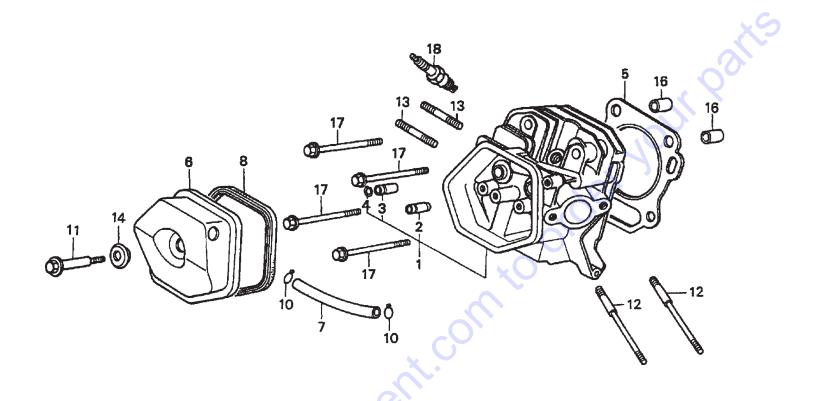
#### HONDA GX390K1QWT2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.

NO. 1 2 4 9 10 12* 13* 14 17 18 19 20 21* 22 23	PART NO. 12000ZF6W13 15510ZE2043 16541ZE3010 90131896650 90446KE1000 91201ZE3004 91201ZE9003 91353671003 9405010000 9410912000 9425110000 957010601200 961006202000 34150ZH7003 90013883000	PART NAME CYLINDER ASSY. (ALERT) SWITCH ASSY., OIL LEVEL SHAFT, GOVERNOR ARM BOLT, DRAIN PLUG WASHER (8.2X17X0.8) OIL SEAL (35X52X8) OIL SEAL (8X14X5) O-RING (13.5X1.5) (ARAI) NUT, FLANGE (10MM) WASHER, DRAIN PLUG (12MM) PIN, LOCK (10MM) BOLT, FLANGE (6X12) BEARING, RADIAL BALL (6202) ALERT UNIT, OIL BOLT, FLANGE (6X12) (CT200)	QTY 1 1 1	REMARKS INCLUDES ITEMS W/*
	Oiscour	r.F. Oliloment.		
		W — OPERATION AND PARTS MANU	AL — REV	.#1 (05/17/10) — PAGE 87

# HONDA GX390K1QWT2 ENGINE — CYLINDER HEAD ASSY.

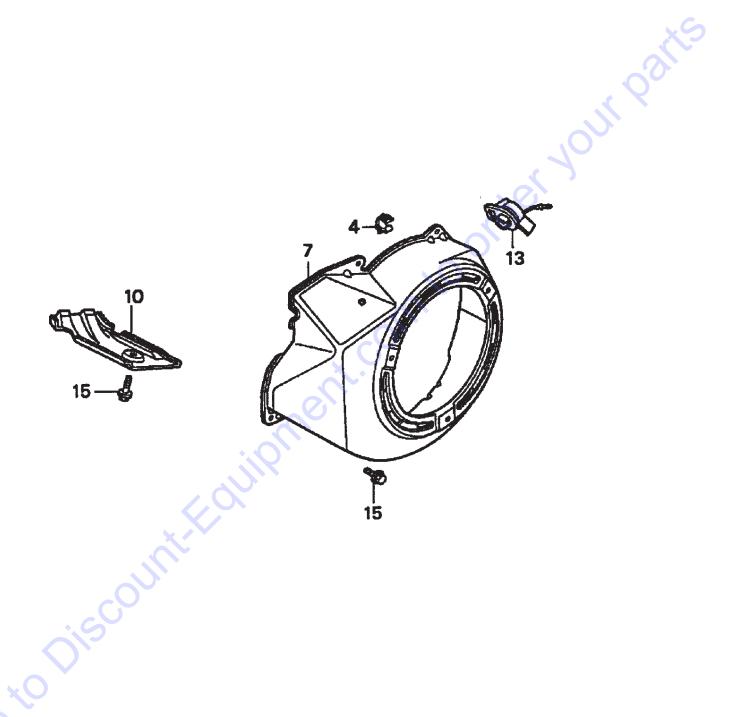
CYLINDER HEAD ASSY.



# HONDA GX390K1QWT2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

NO. 1 2* 3* 4* 5 6 7 8 10 11 12 13 14 16 17 18 18	PART NO. 12200ZF6W01 12204ZE2306 12205ZE2305 12216ZE2300 12251ZF6W00 12310ZE3791 12315ZE3840 12391ZE2020 17316611000 90014ZE2000 90042ZE8000 92900080320E 90441ZE2010 9430112200 957011008000 9807955846 9807956846	PART NAME CYLINDER HEAD	QTY1	REMARKSINCLUDES ITEMS W/*
	SP2S13H20A S	AW — OPERATION AND PARTS MANUAL	— REV. #1 (0	5/17/10) — PAGE 89

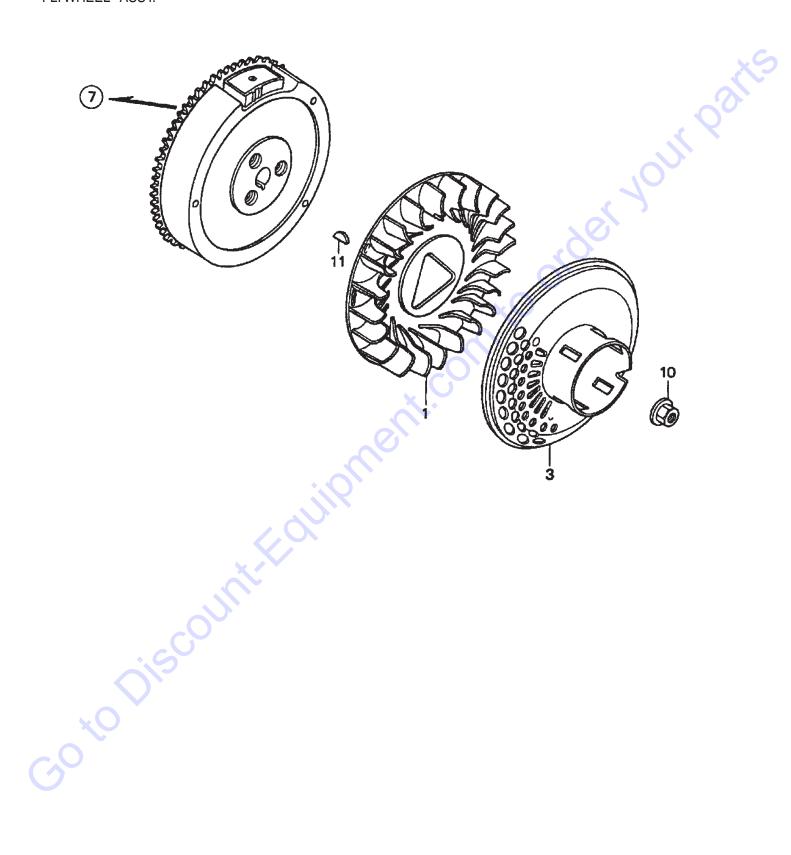


# **HONDA GX390K1QWT2 ENGINE — FAN COVER ASSY.**

<b>NO.</b> 4 7	PART NO. 16731ZE2003 19610ZE3010ZB	PART NAME CLIP, TUBE COVER, FAN *NH1* (BLACK)	<u>QTY.</u> 1 1	REMARKS
10 13 15	19631ZE3W00 36100ZH7003 90013883000	CLIP, TUBE COVER, FAN *NH1* (BLACK) SHROUD SWITCH ASSY., ENGINE STOP BOLT, FLANGE (6X12) (CT200)	1 1 6	
				10 <sup>1</sup> / <sub>1</sub>
			, de	
			x(O	
		colf		
		a enti-		
		iiPM		
		XXX		
	دون			
	Oiso			
\ ()	O			
	Oiscoli			

# **HONDA GX390K1QWT2 ENGINE — FLYWHEEL ASSY.**

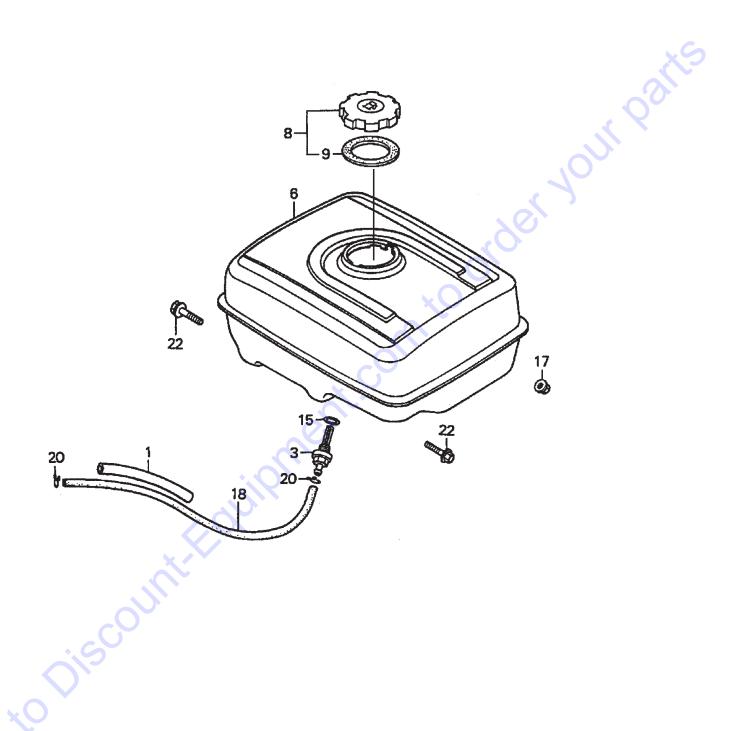
FLYWHEEL ASSY.



#### HONDA GX390K1QWT2 ENGINE — FLYWHEEL ASSY.

<u>NO.</u>	PART NO.	PART NAME	QTY.	<b>REMARKS</b>
1	19511ZE3000	FAN, COOLING PULLEY, STARTER (SCREEN GRID) FLYWHEEL NUT, SPECIAL (16MM) (1) KEY, SPECIAL WOODRUFF (25X18)	1	<u>i i Linai III O</u>
3 7	28450ZE3W11 31100ZE3701	PULLEY, STARTER (SCREEN GRID) FLYWHEEL	1 1	>
10 11	90201ZE3V00 90741ZE2000	NUT, SPECIAL (16MM) (1)	1	\natheref{O}_{\infty}
11	907412E2000	RET, SPECIAL WOODHOFF (23X16)	ı	4.6
				10
			.76	
			0	
		^*		
		<i>(9)</i>		
	Oliscoli	X		
	~O\			
	.50			
	$O_{I_2}$			
A				
X				

FUEL TANK ASSY.

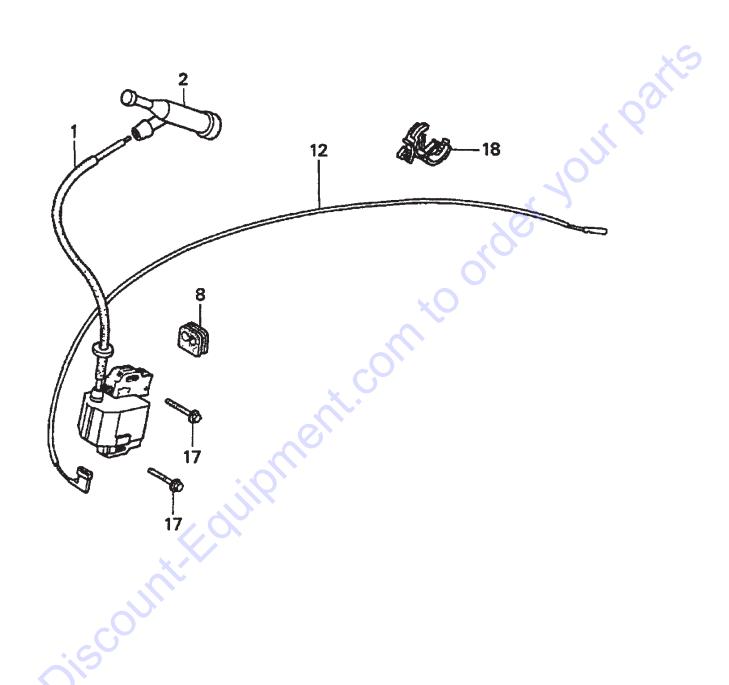


#### HONDA GX390K1QWT2 ENGINE — FUEL TANK ASSY.

	FUEL 7	TANK ASSY.			
	NO. 1 3 6 8 9* 15 17 18 20 22	PART NO. 16854ZH8000 16955ZE1000 17510ZE3010ZB 17620ZH7023 17631ZH7003 91353671003 9405008000 950014500360M 9500202080 957010802500	PART NAME RUBBER, SUPPORTER (107MM) JOINT, FUEL TANK TANK, FUEL *NH1* (BLACK) CAP, FUEL FILLER GASKET, FUEL FILLER CAP O-RING (13.5X1.5) (ARAI) NUT, FLANGE (8MM) BULK HOSE, FUEL (4.5X3000) (4.5X235) CLIP, TUBE (B8) BOLT, FLANGE (8X25)	QTY. 1 1 1 1 1 1 2 1 2 2	on be
			k.E.O.Jii.Prophi.com	off	
	×.	Oiscoul			
G		SP2S13H20A SA	AW — OPERATION AND PARTS MANUAL — RE	EV. #1 (05/	17/10) — PAGE 95

# HONDA GX390K1QWT2 ENGINE — IGNITION COIL ASSY.

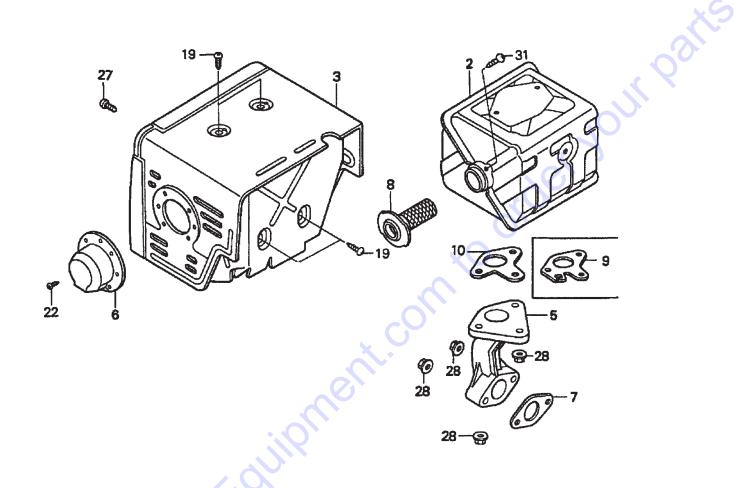
IGNITION COIL ASSY.



#### **HONDA GX390K1QWT2 ENGINE — IGNITION COIL ASSY.**

	TON COIL ASSY.			
NO. 1 2 8 12 17 18	PART NO. 30500ZF6W01 30700ZE1013 31512ZE2000 36101ZE2701 90015883000 90684ZA0601	PART NAME COIL ASSY., IGNITION CAP ASSY., NOISE SUPPRESSOR GROMMET, WIRE WIRE, STOP SWITCH (430MM) BOLT, FLANGE (6X28) CLIP, WIRE HARNESS	QTY. 1 1 1 1 2 1	REMARKS
			order	40
		, com	O	
		dilpineine		
		N. L. C.		
×	Oiscoli			
GO,	•			

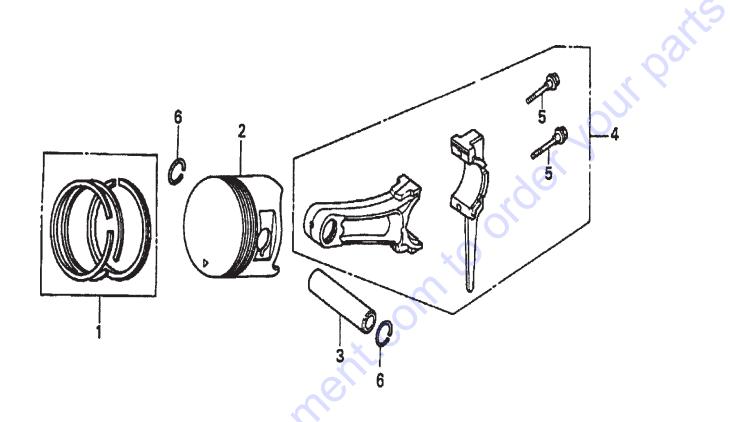
MUFFLER (1) ASSY.



#### **HONDA GX390K1QWT2 ENGINE — MUFFLER ASSY.**

NO. PART NO. PART NAME QTY. REMARKS  1 8310ZEZW61 MUFFLER 1 5 18330ZEZW00 PIPE, EX. 1 6 18331ZE3810 CAP, MUFFLER 1 7 18333ZF6W01 GASKET, EX. PIPE 1 8 1835SZEZW00 ARRESTER, SPARK (OPTIONAL) 1 9 18381ZEZW10 GASKET, MUFFLER (ARRESTER) (OPTIONAL) 1 10 18381ZEZW00 GASKET, MUFFLER (ARRESTER) (OPTIONAL) 1 19 90050ZE1000 SCREW, TAPPING (SX8) 4 22 9005ZE1000 SCREW, TAPPING (4X6) 3 27 90006ZE2000 SCREW, TAPPING (6X10) 1 28 9405008000 NUT, FLANGE (8MM) 5 31 90055ZE1000 SCREW, TAPPING (4X6) 1		SY.			
	3 18320ZE2 5 18330ZE2 6 18331ZE3 7 18333ZF6 8 18355ZE2 9 18381ZE2 10 18381ZE2 10 18381ZE2 19 90050ZE1 22 90055ZE1 27 90006ZE2 28 940500800	W61 MUFFLER PROTECTOR W000 PIPE, EX. B810 CAP, MUFFLE W01 GASKET, EX. W10 GASKET, MUI B800 GASKET, MUI B800 GASKET, MUI CO00 SCREW, TAPI	ER PIPE SPARK (OPTIONAL) FFLER (ARRESTER) (OPTION FFLER PING (5X8) PING (4X6) PING (6X10) E (8MM) PING (4X6)	1 1 1 1 1 1 NAL) 1 4 3 1 5	REMARKS
			onent.colli		

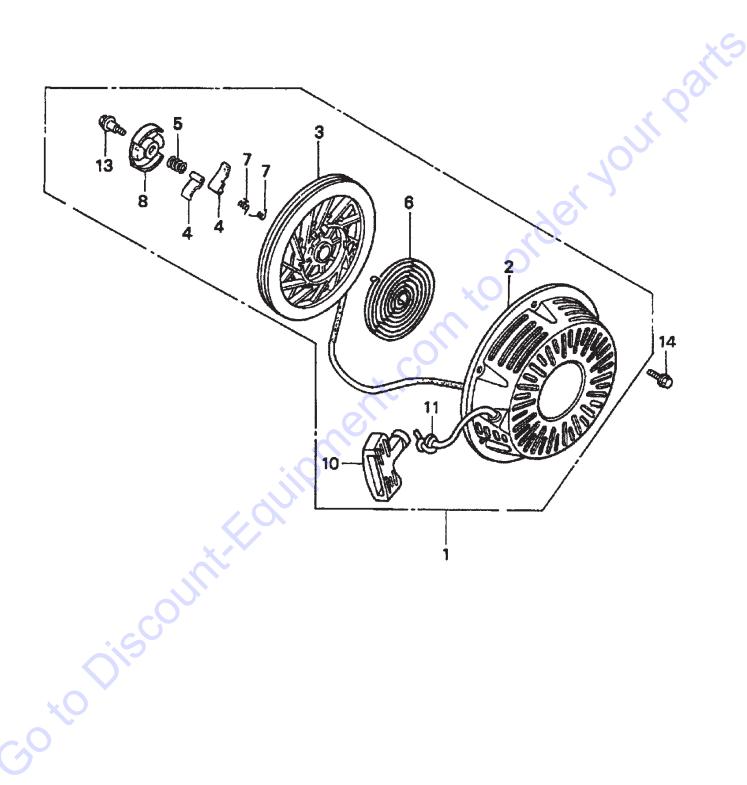
PISTON ASSY.



#### HONDA GX390K1QWT2 ENGINE — PISTON ASSY.

# **HONDA GX390K1QWT2 ENGINE — RECOIL STATER ASSY.**

RECOIL STARTER ASSY.

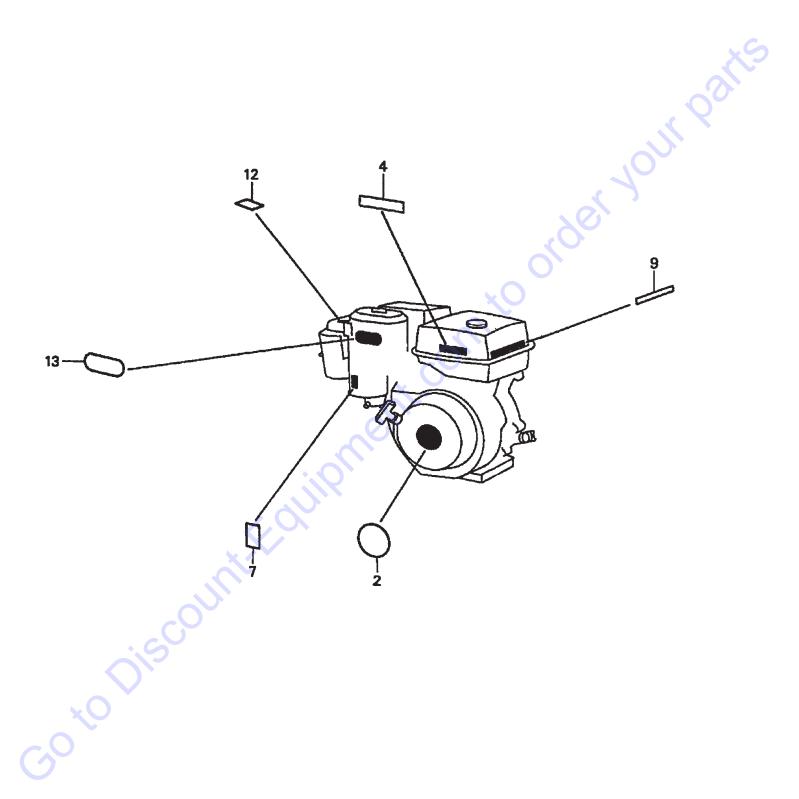


#### HONDA GX390K1QWT2 ENGINE — RECOIL STATER ASSY.

RECOIL	STARTER	ASSY
ILOUIL	OIALLE	7001.

NO. 1 2* 3* 4* 5* 6* 7* 8* 10* 11* 13*	PART NO. 28400ZE3W01ZB 28410ZE3W01ZB 28421ZE3W01 28422ZE2W01 28441ZE2W01 28442ZE2W01 28443ZE2W01 28444ZE2W01 28461ZE2W02 28462ZV7003 90004ZE2W01 90008ZE2003	PART NAME STARTER ASSY., RECOIL *NH1* (BLACK) CASE, RECOIL STARTER *NH1* (BLACK) PULLEY, RECOIL STARTER RATCHET, STARTER SPRING, FRICTION SPRING, STARTER RETURN SPRING, RATCHET RETAINER, SPRING GRIP, STARTER ROPE, RECOIL STARTER SCREW, CENTER BOLT, FLANGE (6X10)	QTY. REMARKS
X	Discolif		
G <sub>O</sub>		W — OPERATION AND PARTS MANUAL — R	EV. #1 (05/17/10) — PAGE 103

LABELS ASSY.



#### **HONDA GX390K1QWT2 ENGINE — LABELS ASSY.**

LABE	LS ASSY.			
NO. 2 4 7 9 12 13	PART NO. 87521ZF6W01 87522ZH9000 87528ZE2810 87532ZH8810 87534ZE1841 87535ZE1840	PART NAME EMBLEM LABEL, CAUTION MARK, CHOKE (EXTERNAL) MARK, OIL ALERT (E) LABEL, AIR CLEANER CAUTION MARK, AIR CLEANER SALES POINT	QTY. 1 1 1 1 1	REMARKS
		LABEL, AIR CLEANER CAUTION MARK, AIR CLEANER SALES POINT	io olyei	
		ionent.col		
		Nt.Folling		
×	Discoli			
GO				

# PARTS FINDER Search Website Search Website Search Website Search Website







Discount-Equipment.com is your online resource for quality parts & equipment.

Florida: 561-964-4949 Outside Florida TOLL FREE: 877-690-3101

#### Need parts?

Click on this link: <a href="http://www.discount-equipment.com/category/5443-parts/">http://www.discount-equipment.com/category/5443-parts/</a> and choose one of the options to help get the right parts and equipment you are looking for. Please have the machine model and serial number available in order to help us get you the correct parts. If you don't find the part on the website or on one of the online manuals, please fill out the request form and one of our experienced staff members will get back to you with a quote for the right part that your machine needs.

We sell worldwide for the brands: Genie, Terex, JLG, MultiQuip, Mikasa, Essick, Whiteman, Mayco, Toro Stone, Diamond Products, Generac Magnum, Airman, Haulotte, Barreto, Power Blanket, Nifty Lift, Atlas Copco, Chicago Pneumatic, Allmand, Miller Curber, Skyjack, Lull, Skytrak, Tsurumi, Husquvarna Target, Stow, Wacker, Sakai, Mi-T-M, Sullair, Basic, Dynapac, MBW, Weber, Bartell, Bennar Newman, Haulotte, Ditch Runner, Menegotti, Morrison, Contec, Buddy, Crown, Edco, Wyco, Bomag, Laymor, EZ Trench, Bil-Jax, F.S. Curtis, Gehl Pavers, Heli, Honda, ICS/PowerGrit, IHI, Partner, Imer, Clipper, MMD, Koshin, Rice, CH&E, General Equipment, Amida, Coleman, NAC, Gradall, Square Shooter, Kent, Stanley, Tamco, Toku, Hatz, Kohler, Robin, Wisconsin, Northrock, Oztec, Toker TK, Rol-Air, APT, Wylie, Ingersoll Rand / Doosan, Innovatech, Con X, Ammann, Mecalac, Makinex, Smith Surface Prep,Small Line, Wanco, Yanmar