

# PARTS AND OPERATION MANUAL



## CONCRETE SAW MODELS FS2 & FS2SP

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Revision #2 (06/26/06)



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**SERVICE DEPARTMENT/TECHNICAL ASSISTANCE:**  
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**P/N 25248**



# WARNING



## **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: ALWAYS 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.

## **HERE'S HOW TO GET HELP**

*PLEASE HAVE THE MODEL AND SERIAL NUMBER  
ON-HAND WHEN CALLING*

### ***PARTS DEPARTMENT***

*800-427-1244 or 310-537-3700*

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### ***SERVICE DEPARTMENT/TECHNICAL ASSISTANCE***

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### **NOTE**

*Specification and part number  
are subject to change without  
notice.*

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**Ordering parts has never been easier!  
Choose from three easy options:**



**Order via Internet (Dealers Only):**

Order parts on-line using Multiquip's SmartEquip website!

- View Parts Diagrams
- Order Parts
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If you have an MQ Account, to obtain a Username and Password, E-mail us at: [parts@multiquip.com](mailto:parts@multiquip.com).

To obtain an MQ Account, contact your District Sales Manager for more information.

Goto [www.multiquip.com](http://www.multiquip.com) and click on **Order Parts** to log in and save!

Use the *internet* and qualify for a **5% Discount** on *Standard orders* for all orders which include complete part numbers.\*

Note: Discounts Are Subject To Change



**Order via Fax (Dealers Only):**

All customers are welcome to order parts via Fax.

**Domestic (US) Customers dial:**  
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**Fax** your order in and qualify for a **3% Discount** on *Standard orders* for all orders which include complete part numbers.\*

Note: Discounts Are Subject To Change



**Order via Phone: Domestic (US) Dealers Call:**  
1-800-427-1244

**Non-Dealer Customers:**

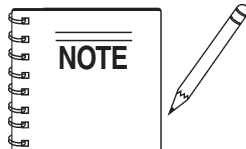
Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



**International Customers** should contact their local Multiquip Representatives for Parts Ordering information.

**When ordering parts, please supply:**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Dealer Account Number</li> <li><input type="checkbox"/> Dealer Name and Address</li> <li><input type="checkbox"/> Shipping Address (if different than billing address)</li> <li><input type="checkbox"/> Return Fax Number</li> <li><input type="checkbox"/> Applicable Model Number</li> <li><input type="checkbox"/> Quantity, Part Number and Description of Each Part</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Specify Preferred Method of Shipment:                     <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Fed Ex/UPS <input checked="" type="checkbox"/> DHL</li> <li><input type="checkbox"/> Priority One <input checked="" type="checkbox"/> Truck</li> <li><input type="checkbox"/> Ground</li> <li><input type="checkbox"/> Next Day</li> <li><input type="checkbox"/> Second/Third Day</li> </ul> </li> </ul> |
|--|--|



Unless otherwise indicated by customer, all orders are treated as *Standard Orders* and will ship within 24 hours. We will make every effort to ship *Air Shipments* the same day the order is received, if received prior to 2PM PST. *Stock Orders* must be noted on fax or web order form.

**WE ACCEPT ALL MAJOR CREDIT CARDS!**



# FS2/FS2SP CONCRETE SAW — 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.

### NOTE

This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the MQWhiteman FS2 and FS2SP Concrete 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 this Concrete 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 directions.



**WARNING:** You **CAN** be **KILLED** or **SERIOUSLY** injured if you do not follow directions.



**CAUTION:** You **CAN** be injured if you do not follow directions.

Potential hazards associated with Concrete Saw operations 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.

# FS2/FS2SP CONCRETE SAW — SAFETY MESSAGE ALERT SYMBOLS



## Accidental Starting



**OFF** **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.



## Respiratory Hazard



**ALWAYS** wear approved respiratory protection.



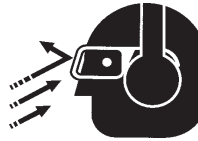
## Over Speed Conditions



**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.



## Sight and Hearing hazard



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



## Guards and Covers In Place



**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.



## Equipment Damage Messages

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

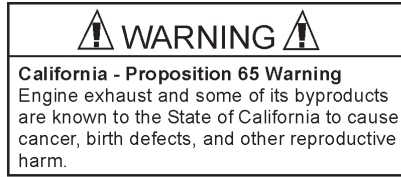
### NOTE

This concrete saw, other property, or the surrounding environment could be damaged if you do not follow instructions.

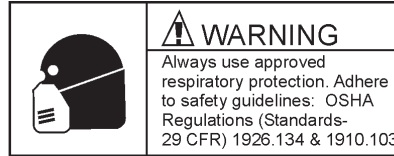
# FS2/FS2SP CONCRETE SAW — DECALS

## Machine Safety Decals

The FS2 and FS2SP Series concrete saws are equipped with a number of safety decals (Figure 1). These decals are provided for operator safety and maintenance information. The illustration below shows these decals as they appear on either concrete saw. Should any of these decals become unreadable, replacements can be obtained from you dealer. See pages 40 and 41 for decal placement.



P/N 15582



P/N 15580



P/N 15581



P/N 15579



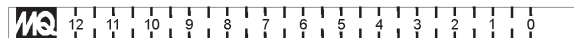
P/N 15577



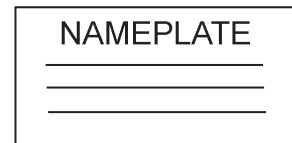
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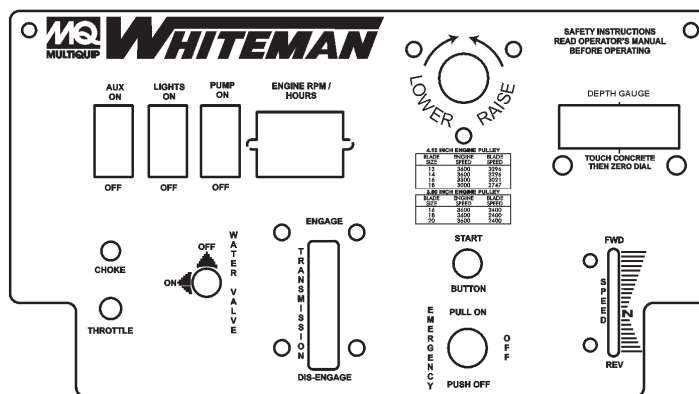
P/N 2942



P/N 15741



CONTACT MULTIQUIP  
SERVICE DEPT.



P/N 15429

Figure 1. FS2/FS2SP Decals



# FS2/FS2SP CONCRETE SAW — RULES FOR SAFE OPERATION

## WARNING:



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 MQ Whiteman FS2 or FS2SP Concrete Saws:

### GENERAL 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 this equipment without proper protective clothing, shatterproof glasses, steel-toed 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 this equipment under the influence of drugs or alcohol.



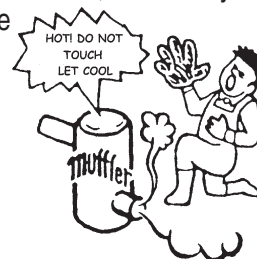
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.

- The manufacturer does not assume responsibility for any accident due to equipment modifications.

- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.

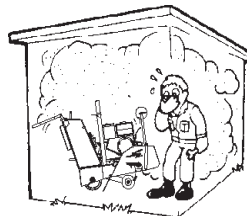
- **ALWAYS** check the machine for loosened threads or bolts before starting.

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or 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 section 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 or 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. **DO NOT** smoke 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 or near combustible materials. An explosion or fire could result causing severe *bodily harm or even death*.



- Topping-off to the **fuel** filler port is dangerous, as it tends to spill fuel.

- **NEVER** use fuel as a cleaning agent.

# FS2/FS2SP CONCRETE SAW — 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.
- Stop the engine when leaving the saw unattended.
- Block the unit when leaving or when using on a slope.
- Maintain this equipment in a safe operating condition at all times.
- **ALWAYS** stop the engine before servicing, adding fuel and oil.
- **NEVER** Run engine without air filter. Severe engine damage may occur.
- **ALWAYS** service air cleaner frequently to prevent carburetor malfunction.
- **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 Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **NEVER** operate this saw in areas that contain combustible material or fumes. Fire and/or explosions may result from errant sparks from the equipment.

## WARNING:



- **DO NOT** operate this equipment unless all guards and safety devices are attached and in place.

- Caution must be exercised while servicing this equipment. Rotating and moving parts can cause injury if contacted.
- Keep all inexperienced and unauthorized people away from the equipment at all times.
- Unauthorized equipment modifications will void all warranties.
- Test the **ON/OFF** switch before operating. The purpose of the switch is to shut down the engine.

## DIAMOND BLADE SAFETY

- Use appropriate steel centered diamond blades manufactured for use on concrete saws.
- **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.
- 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 that the blade is marked with an operating speed greater than the blade shaft speed of the saw.
- 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.

## SAW TRANSPORTATION SAFETY

- Use the lifting bail and appropriate lifting equipment to ensure the safe movement of the saw.
- **DO NOT** use the handle bars and/or front pointer as lifting points.
- **NEVER** tow the saw behind a vehicle.
- Ensure that both pointer bars are positioned appropriately to minimize their exposure during transportation.
- Safeguard against extreme saw attitudes relative to level. Engines tipped to extreme angles may cause oil to gravitate into the cylinder head making the engine difficult to start.
- **NEVER** transport the saw with the blade mounted.

# FS2/FS2SP CONCRETE SAW — RULES FOR SAFE OPERATION

## Emergencies

- **ALWAYS** know the location of the nearest *fire extinguisher* and *first aid kit*. Know the location of the nearest telephone. Also know the phone numbers of the nearest *ambulance*, *doctor* and *fire department*. This information will be invaluable in the case of an emergency.

## 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.

# FS2/FS2SP CONCRETE SAW — DIMENSIONS

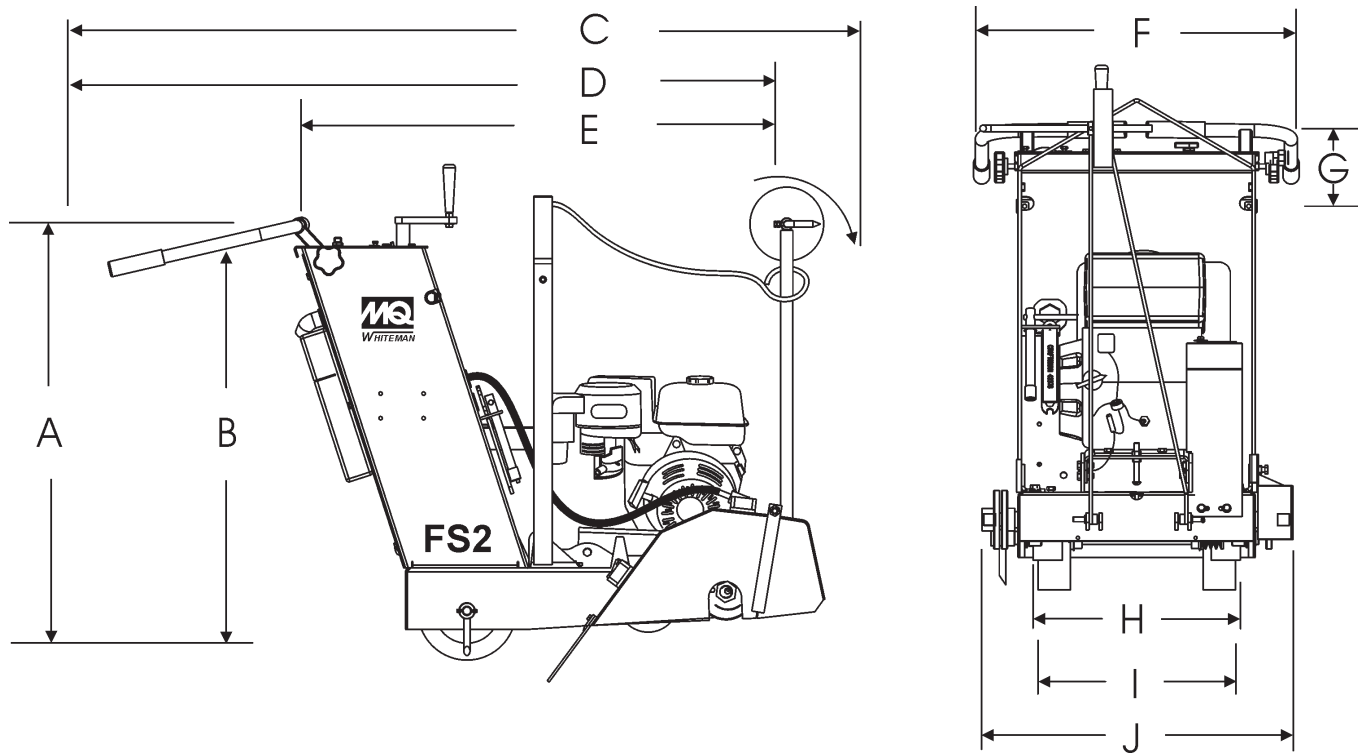


Figure 2. FS2/FS2SP Concrete Saw Dimensions

TABLE 1. DIMENSIONS

REFERENCE LETTER	DESCRIPTION	DIMENSION (MM)
A	Max Height (Handle Bars Fully Raised)	44" (1118)
B	Max Height (Handle Bars Fully Lowered)	35" (889)
C	Max Length (Handle Bars Fully Raised & Front Pointer Lowered)	98" (2489)
D	Max Length (Handle Bars Fully Raised & Front Pointer Raised)	70" (1778)
E	Max Length (Handle Bars Fully Lowered & Front Pointer Raised)	62" (1575)
F	Max Handle Bar Width	25" (635)
G	Max Handle Bar Deflection	14" (356)
H	Front Wheel Base	15" (381)
I	Rear Wheel Base	16" (406)
J	Max Width	25" (635)
Crated Dimension (L x W x H)		47" (1194) x 30" (762) x 44" (1118)

# FS2/FS2SP CONCRETE SAW — WEIGHTS

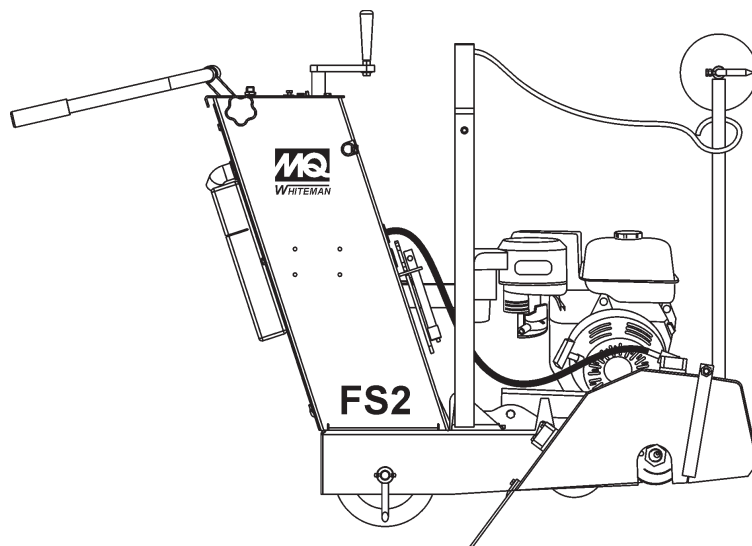


Figure 3. FS2/FS2SP Concrete Saw Weights

TABLE 2. WEIGHTS			
	SAW	DESCRIPTION	OPERATING WEIGHT Lbs. (kgs)
FS2	FS2-LE14	SAW, FS2, 14", PUSH, LESS ENGINE	190 (86)
	FS2-LE20	SAW, FS2, 20", PUSH, LESS ENGINE	195 (88)
	FS2-8K14	SAW, FS2, 14", PUSH, 8.5 HP KOHLER	265 (120)
	FS2-8K20	SAW, FS2, 20", PUSH, 8.5 HP KOHLER	270 (122)
	FS2-9H14	SAW, FS2, 14", PUSH, 9 HP HONDA	265 (120)
	FS2-9H20	SAW, FS2, 20", PUSH, 9 HP HONDA	270 (122)
	FS2-12K14	SAW, FS2, 14", PUSH, 12 HP KOHLER	270 (122)
	FS2-12K20	SAW, FS2, 20", PUSH, 12 HP KOHLER	275 (125)
	FS2-13H14	SAW, FS2, 14", PUSH, 13 HP HONDA	270 (122)
	FS2-13H20	SAW, FS2, 20", PUSH, 13 HP HONDA	275 (125)
	FS2-13HE14	SAW, FS2, 14", PUSH, 13 HP HONDA ELECTRIC START	280 (127)
	FS2-13HE20	SAW, FS2, 20", PUSH, 13 HP HONDA ELECTRIC START	285 (129)
FS2SP	FS2SP-13H14	SAW, FS2SP, 14", SELF PROPELLED, 13 HP HONDA	290 (132)
	FS2SP-13H20	SAW, FS2SP, 20", SELF PROPELLED, 13 HP HONDA	295 (134)
	FS2SP-13HE14	SAW, FS2, 14", SELF PROPELLED, 13 HP HONDA, ELECTRIC START	305 (138)
	FS2SP-13HE20	SAW, FS2, 20", SELF PROPELLED, 13 HP HONDA, ELECTRIC START	310 (141)
	FS2SP-20HE14	SAW, FS2SP, 14", SELF PROPELLED, 20 HP HONDA, ELECTRIC START	320 (145)
	FS2SP-20HE20	SAW, FS2SP, 20", SELF PROPELLED, 20 HP HONDA, ELECTRIC START	330 (150)
FS2/FS2SP OPTIONS	FS214-BG	BLADE GUARD KIT 14" W/PULLEYS BELTS AND MIST MANIFOLD FOR 8-13 HP	30 (14)
	FS220-BG	BLADE GUARD KIT 20" W/PULLEYS AND BELTS FOR 8-13 HP	25 (11)
	FS214-BG20HE	BLADE GUARD KIT 14" W/PULLEYS BELTS AND MIST MANIFOLD FOR 20 HP	30 (14)
	FS220-BG20HE	BLADE GUARD KIT 20" W/PULLEYS BELTS FOR 20 HP	35 (16)
	FS-WT	WATER TANK ASSEMBLY	20 (9)
	FS-LT	EXTERNAL LIGHT ASSEMBLY (ELECTRIC START ONLY)	10 (4.5)
	FS-WP	EXTERNAL ELECTRIC WATER PUMP ASSEMBLY (ELECTRIC START ONLY)	10 (4.5)

# FS2/FS2SP CONCRETE SAW — BASIC COMPONENTS

## BASIC COMPONENTS

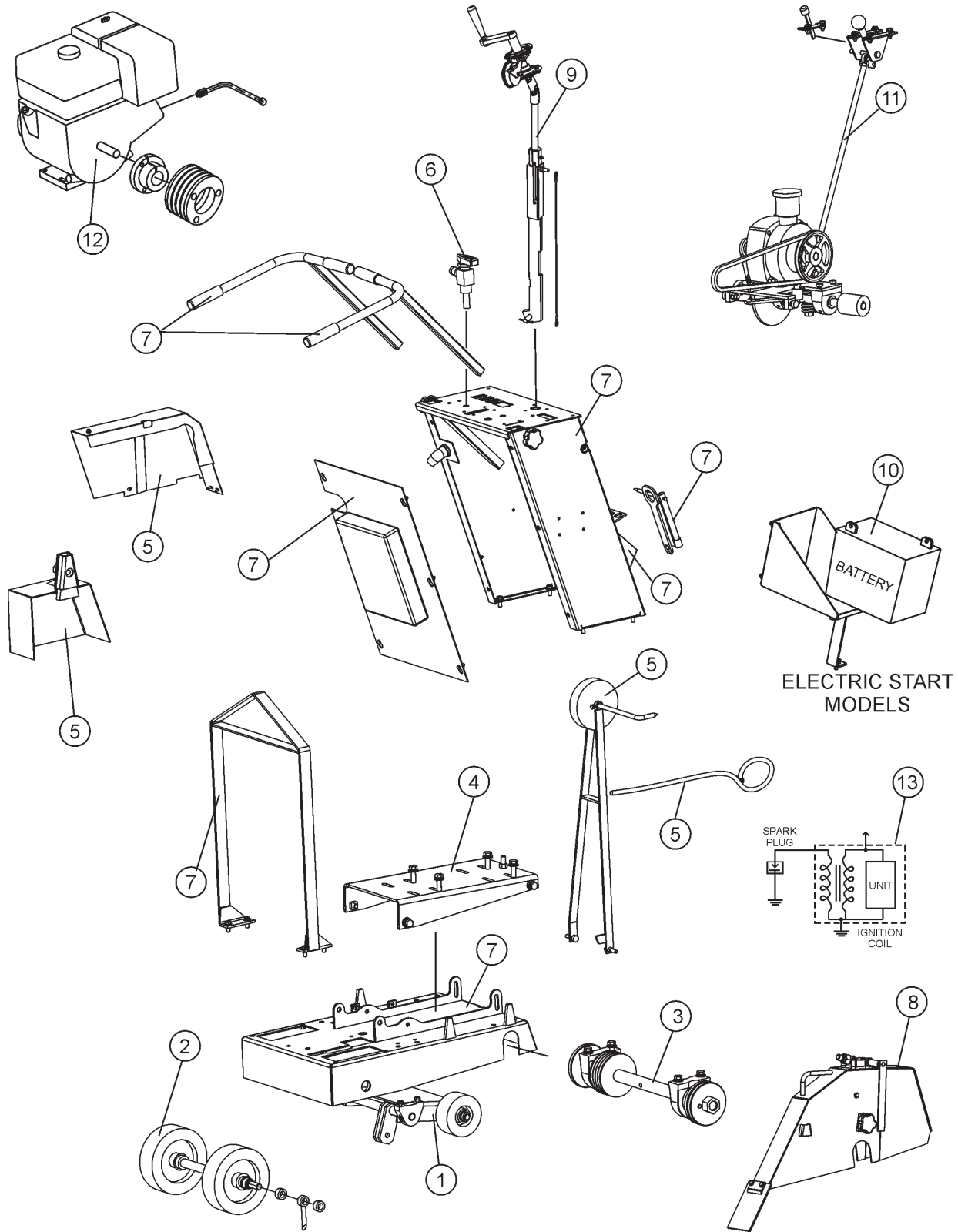


Figure 4. FS2/FS2SP Concrete Saw Basic Components

# FS2/FS2SP CONCRETE SAW — BASIC COMPONENTS

## MAJOR COMPONENTS

<b><u>NO</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>PAGE</u></b>
1	UNDER CARRIAGE ASSEMBLY	SEE PAGES 42-43
2	REAR AXLE	SEE PAGES 44-45
3	BLADE SHAFT ASSEMBLY	SEE PAGES 46-47
4	ENGINE MOUNT ASSEMBLY	SEE PAGES 48-49
5	POINTERS AND COVERS ASSEMBLIES	SEE PAGES 50-51
6	WATER SYSTEM ASSEMBLY	SEE PAGES 52-53
7	FS2/FS2SP BASIC PLATFORM ASSEMBLY	SEE PAGES 54-55
8	14-INCH BLADE GUARD ASSEMBLY	SEE PAGES 56-57
8	20-INCH BLADE GUARD ASSEMBLY	SEE PAGES 58-59
9	MANUAL RAISE/LOWER ASSEMBLY	SEE PAGES 60-61
10	BATTERY BOX ASSEMBLY (ELECTRIC START)	SEE PAGES 66-67
11	TRANSMISSION ASSEMBLY	SEE PAGES 68-69
12	GASOLINE ENGINE ASSEMBLIES	SEE PAGES 70-71
13	WIRING DIAGRAM	SEE PAGE 74

# FS2/FS2SP CONCRETE SAW — CONSOLE COMPONENTS

Figure 5 displays the location of the various operational control features of the FS2/FS2SP saw. Features are dependent on the specific model saw selected. The function of each console component or indicator is explained below:

1. **Emergency Stop Button** – *Push* this stop button to stop the engine. Also acts as a fast and secure way to stop the engine in the event of an emergency.
2. **Transmission Engage/Disengage Lever** – Forward locking position engages transmission. Rear Locking position disengages transmission from rear axle and permits "free wheeling" (self-propelled models Only).
3. **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.
4. **Throttle Lever** – *Pull* the lever to increase engine RPM. *Push* lever to decrease engine RPM (electric start models only).
5. **Choke Lever** – *Pull* lever to assist when starting a cold engine. *Push* lever down after engine warms to disengage choke (electric start models).
6. **AUX Switch (Rocker)** – Auxiliary switch for future features (electric start models).
7. **Light Switch** – Push top of rocker switch to provide +12 VDC power (ON) to the external halogen light. Push bottom of rocker switch to remove (OFF) +12 VDC power from halogen light (electric start models).
8. **Pump On Switch** – Push top of rocker switch to provide (ON) +12 VDC power to the external water pump. Push bottom of rocker switch to remove (OFF) +12 VDC power from water pump (electric start models).
9. **Digital Tachometer/Hourmeter** – Indicates engine RPM and number of hours (operation) saw has been in use.
10. **Raise/Lower Crank Handle** – Physically orients saw (raises or lowers) depending on cranking direction (CW or CCW). One full turn equals 3/8". Turning the handle **clockwise** lowers the saw, turning the saw counter-clockwise raises the saw. The raise/lower crank handle is used in conjunction with the **depth feed gauge**.
11. **Start Button** – A spring loaded button, that when pressed actuates the engine start solenoid (electric start models only).
12. **Depth Feed Gauge** – Indicates the blade cutting depth in inches. To activate, first lower the blade via the **crank handle** until the blade **touches** the cutting surface. Then roll the depth feed dial until the face label reads **zero**.
13. **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 (self-propelled models only).
14. **Handle Bar Locking Knobs** – Loosen or tighten these two knobs when making adjustments to the handlebar(s). Turn handle(s) **counter-clockwise** to loosen and **clockwise** to tighten.

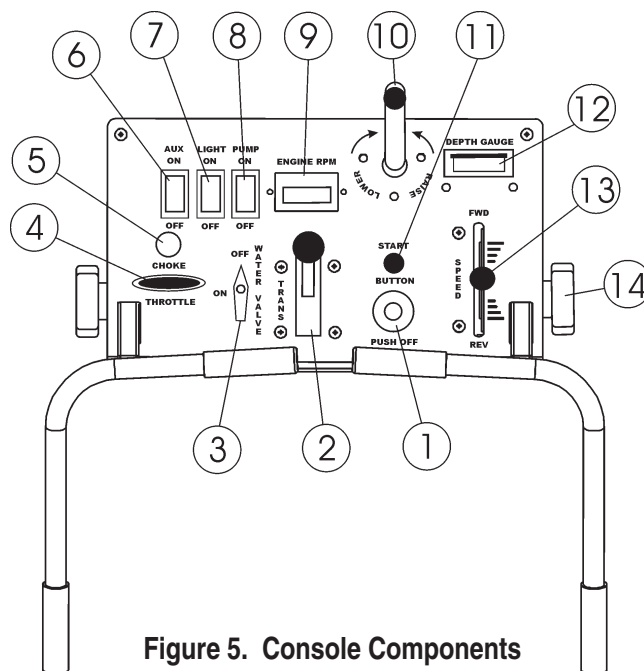
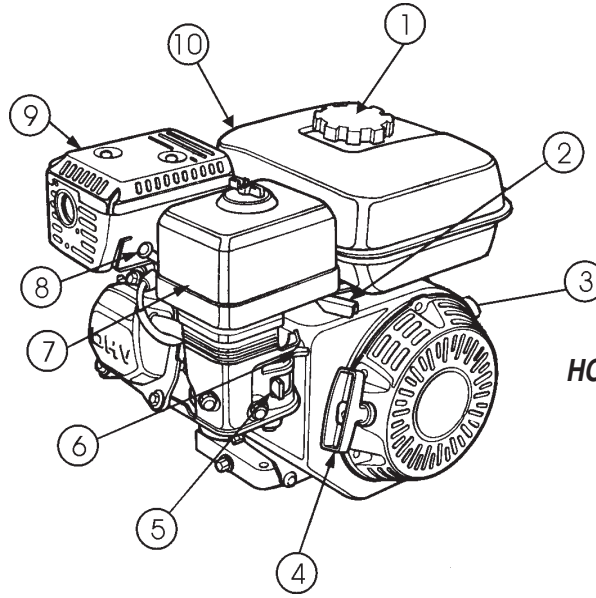


Figure 5. Console Components



# FS2/FS2SP CONCRETE SAW — BASIC ENGINE COMPONENTS



HONDA 13 HP engine shown.

Figure 6. Engine Controls and Components

## INITIAL SERVICING

The engine (Figure 6) 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.

1. **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.

2. **Throttle Lever** – Used to adjust engine RPM speed (lever advanced forward **SLOW**, lever back toward operator **FAST**).
3. **Engine ON/OFF Switch** – ON position permits engine starting, OFF position stops engine operations.
4. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.

5. **Fuel Valve Lever** – **OPEN** to let fuel flow, **CLOSE** to stop the flow of fuel.
6. **Choke Lever** – Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
7. **Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter canister to gain access to filter element.

### NOTE

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.

8. **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.
9. **Muffler** – Used to reduce noise and emissions.



### 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.

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

# FS2/FS2SP CONCRETE SAW — GENERAL INFORMATION

## FAMILIARIZATION

The MQ Whiteman FS2/FS2SP Series concrete saws are designed for wet or dry cutting utilizing diamond blades. They have been engineered for general, industrial and high production flat sawing applications. The exceptional performance of these saws centers around innovative features, top quality components, and committed attention to state-of-the-art manufacturing.

The reinforced heavy gauge steel frame and chassis assembly has been precisely jig welded to eliminate operational bending and/or flex that would lead to diminished blade performance. Additionally, the general weight-to-strength ratio design of the frame and chassis assembly provides for optimum weight distribution to keep the blade running true in the cut.

An innovative outboard blade shaft bearing assembly ensures minimal flutter and shaft harmonics providing the most advantageous condition for a diamond blade at operating speeds. Heavy duty front and rear axles, oversized reinforced wheels supported by roller wheel bearings and locking collars, and industrial under carriage assembly ensure accurate tracking and years of reliable use.

The positive locking Raise/Lower screw feed system with accurate depth gauge easily orients blade elevation, and will not permit blade creep during cutting operations.

A unique water plumbing system allows for independent orientation of either fluted floodwater to the blade for wet cutting applications or cones of aerosol mist (14" blade guard only) to diminish material dust cutting in situations where minimal water usage is necessary. Quick disconnect hose fittings are provided for quick and easy water orientation.

Operator control of the saw is safely accomplished with adjustable ergonomic handle bars, and a combination of conveniently oriented items on the console such as: Raise/Lower Crank Handle, Tachometer/Hourmeter, ON/OFF Water Valve, Depth Feed Gauge, and Emergency Engine ON/OFF switch. Additionally, for electric start and self-propelled models, the console also provides starting, power control and forward/reverse controls.

**All MQ Whiteman FS2/FS2SP saws are designed, engineered and manufactured with strict adherence to American National Standards Institute, Inc. (ANSI) guidelines B7.1 and B7.5.**

## POWER PLANTS

The FS2/FS2SP Series saws provides a variety of gasoline engine choices (Table 3). Selection of a specific engine, and its capacity measured in horsepower/torque, directly affects the performance of the diamond blade.

The FS2/FS2SP series saws are generally classified in the industry as a "**LOW** to **MEDIUM**" horsepower saws. This classification is particularly useful when selecting the proper diamond blade for an application. Refer to the engine **Owner's Manual** for specific instructions regarding engine operation and maintenance practices.

**TABLE 3. POWER PLANTS**

ENGINE MFR.	MODEL	HP	STARTING SYSTEM	AIR CLEANER	FUEL TANK GAL. (Liters)
KOHLER	COMMAND PA-951502	8.5	Manual	Cyclone Air Filtration	1.6 (6.1)
HONDA	GX-270 K1QC9 (558300)	9	Manual	Cyclone Air Filtration	1.6 (6.1)
KOHLER	COMMAND PA-951502	12	Manual	Cyclone Air Filtration	1.8 (6.8)
HONDA	GX-390 K1QC9	13	Electric	Cyclone Air Filtration	1.7 (6.4)
HONDA	GX-620 TXF2 (5844000)	20	Electric	Dry Cannister	1.7 (6.4)
KOHLER	COMMAND CH-20	20	Electric	Dry Cannister	1.7 (6.4)

# FS2/FS2SP CONCRETE SAW — GENERAL INFORMATION

## UNDER CARRIAGE SYSTEM

A jig welded heavy steel gauge under carriage assembly supports the saw in tracking, pivoting and stabilization. A 3/4" diameter rear axle supports two solid rubber (8" x 2-1/2" x 1") cast hub wheels with roller bearings, grease fittings and locking collars. A 3/4" diameter front axle supports two solid rubber (5" x 2" x 3/4") cast hub wheels with roller bearings, grease fittings and locking collars. The assembly pivots about two rocker blocks with bushings. See page 40.

## BLADE DRIVE SYSTEM

An innovative 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, and four V-belts connect the engine pulley to the blade shaft pulley. The 1- 1/4" diameter 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. The blade drive system has been designed for left and right hand cutting. See page 44.

## BLADE GUARD ASSEMBLY

The FS2/FS2SP comes standard with either a 14" or 20" hinged two-piece, heavy steel gauge blade guard.

Both blade guards provide zinc plated, fluted floodwater manifold assemblies that supply optimum volume and dispersal of water to both sides of the diamond blade for wet cutting. The sizable (6") fluted floodwater tubes resist clogging and are easily removed for maintenance.

The spray pattern and orientation, in conjunction with the design of the blade guard, provides exceptional dust suppression when cutting dry, and may also be desired when the job site requires minimal use of water.

The 14" blade guard is designed with an independent aerosol misting system to meet the challenges of minimal water sawing operations. The spray pattern and orientation of the two removable jet nozzles, in conjunction with the design of the 14" blade guard, provides exceptional dust suppression.

A quick disconnect hose and blade guard are easily removed for fast blade changes, and easily seats itself on the chassis bayonet fitting. The blade guard may be oriented for left or right hand cutting. See pages 54 and 56.

## WATER SYSTEM

All FS2 saws provide a water direction system to provide cooling water to the diamond blade. This system consist of : a standard "garden hose" valve that connects the water source (via hose) to the saw, an ON/OFF console water switch, water hose with quick disconnect manifold fittings, and either a 14" or 20" blade guard.

Both the 14" and 20" blade guards are designed with two 6" fluted water tubes to direct floodwater to the diamond blade. The 14" blade guard incorporates an independent water misting system that utilizes specifically positioned aerosol spray nozzles to support dust suppression when sawing in minimal water environments.

The misting spray (approximately 5 gallons/hour) requires a 35-45 psi water pressure for effective results.

## CONSOLE

An ergonomically designed control console allows the operator to easily understand and/or operate the adjustable handlebars, Raise/Lower Crank Handle, Tachometer/Hourmeter, ON/OFF Water Valve, Depth Feed Gauge, and Emergency Engine ON/OFF Switch. Additionally, for electric start and self-propelled models, the console also provides starting, power control and forward/reverse controls.

## MECHANICAL RAISE/LOWER SYSTEM

A positive locking mechanical raise and lower screw feed assembly supports elevation cycling operations. A crank raise/lower handle is located on the console with "**clockwise**" rotation providing lowering action, and "**counter-clockwise**" rotation providing raising action. An ACME precision screw and thread assembly provide accurate travel; while a spring loaded plunge ball system ensures positive height position locking.

An adjustable depth gauge assembly is synchronized with raise/lower handle rotations to accurately depict depth feed. See Table 4 for blade selection with respect to depth of cut. Blade orientation is referenced on the console's depth feed gauge.

TABLE 4. 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"

# FS2/FS2SP CONCRETE SAW — INSPECTION

## 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

1. 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 7) and wipe it clean.

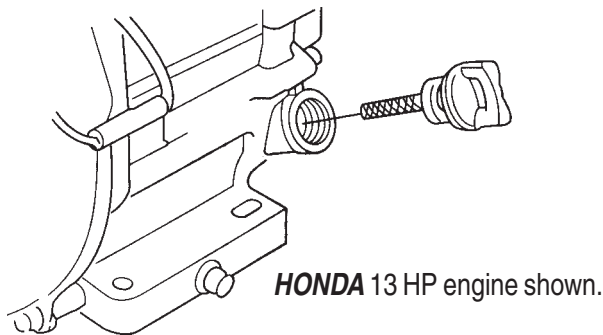


Figure 7. Engine Oil Dipstick (Removal)

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 (Figure 8), fill to the edge of the oil filler hole with the recommended oil type (Table 5). Maximum oil capacity is 400 cc.

### NOTE

Reference manufacturer engine manual for specific servicing instructions.

HONDA 13 HP engine shown.

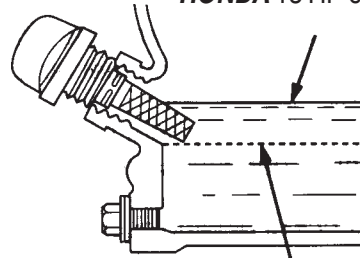


Figure 8. Engine Oil Dipstick (Oil Level)

### NOTE

Some engines used with the FS2/FS2SP Series concrete saws have an oil Alert System. This system will automatically stop the **engine** in the event of low oil level. **ALWAYS** be sure to check the engine oil level prior to starting the engine.

Table 5. 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

## Explosive Fuel

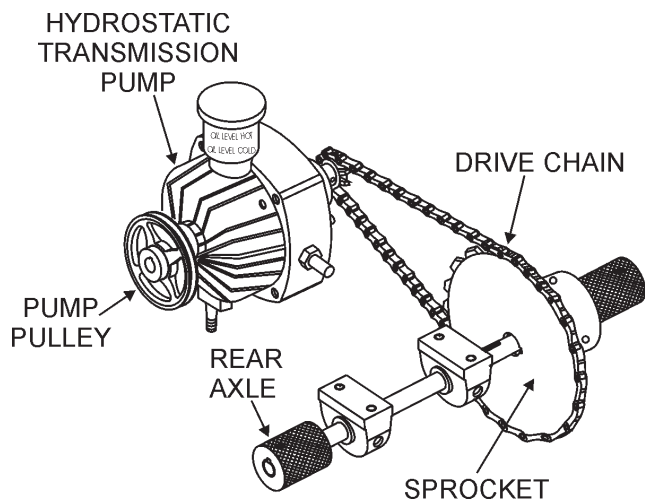


## Gasoline Check

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.

# FS2/FS2SP CONCRETE SAW — INSPECTION

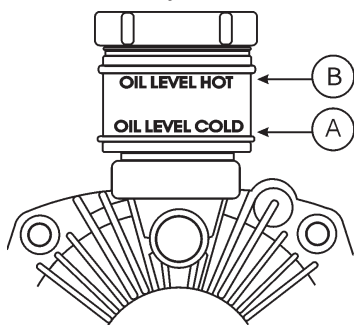
**Hydrostatic Transmission** - An EATON® Model 7 hydrostatic transmission (Figure 9) provides the power for the saw's propulsion system. The transmission drives a sprocket that directly connects the rear axle assembly via a drive chain. The "**no load**" forward/reverse speeds are approximately 80 ft/min (FS2SP models only).



**Figure 9. 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

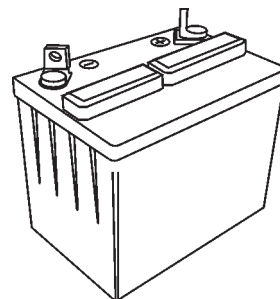


**Figure 10. Transmission Reservoir**

**NOTE**

**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 11) is shipped dry, and will require a proper electrolyte level for operation (electric start models only).



**Figure 11. 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 non-compliance to safety handling instructions.



**WARNING!**

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.



**NOTE**

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

## FS2/FS2SP CONCRETE SAW — INSPECTION -BLADE

### WARNING

Failure to thoroughly inspect the diamond blade (Figure 12) 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.

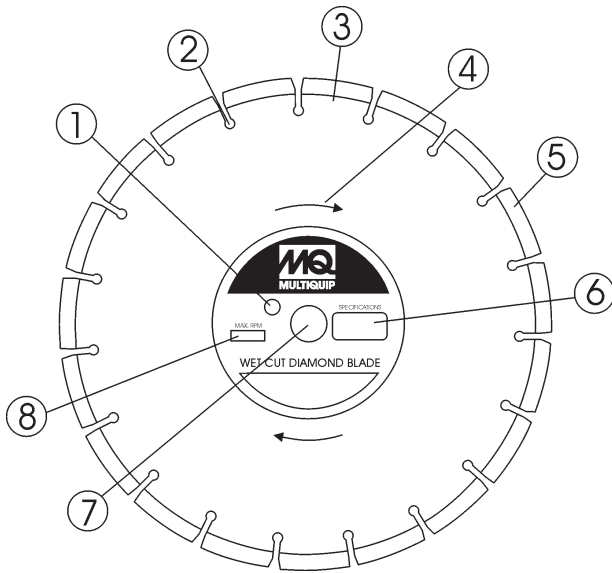


Figure 12. Diamond Blade

- 1. 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.
- 2. 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.

# FS2/FS2SP CONCRETE SAW — INSPECTION -BLADE PLACEMENT

## NOTE

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.
  - Place the console ON/OFF button in 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 13 (Diamond Blade Placement) when removing or installing the diamond blade.
1. **Blade Guard** – Unscrew the guard security knob and water hose quick disconnect fitting and remove blade guard (1) from its bayonet fitting and set it beside the saw.
  2. **Shaft Lock Tool** – Remove the **shaft lock tool** (2) from the tool holder and insert the pointed end through the front of the saw frame into the machined hole in the blade shaft. A conveniently placed opening on the front of the saw frame permits the use of the shaft lock tool. This tool inhibits the shaft from rotating when applying torque to the blade nut.
  3. **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**.
  4. **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.
  5. **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).
  6. **Blade Pin Hole** – Align this hole with the drive pin hole on the inner flange collar.
  7. **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.
  8. **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.

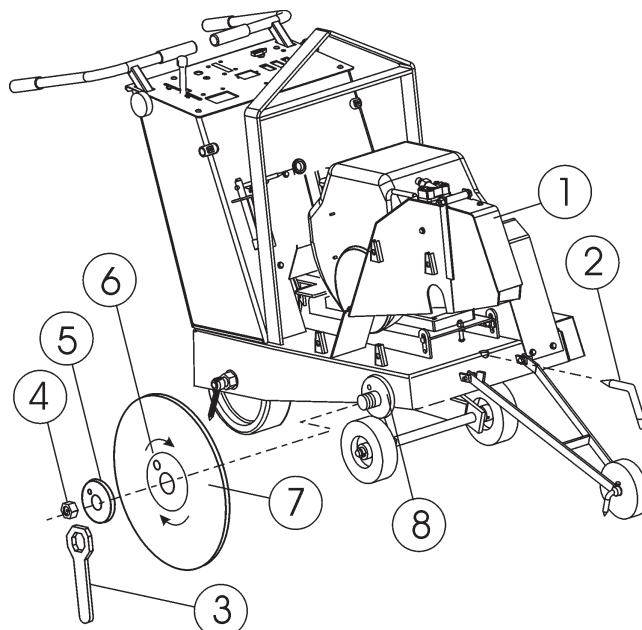


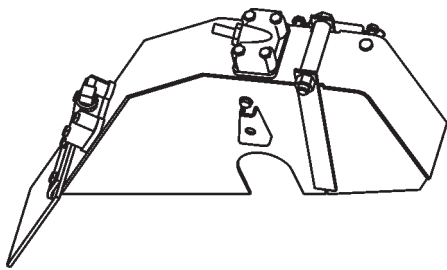
Figure 13. Diamond Blade Placement

# FS2/FS2SP CONCRETE SAW — INSPECTION -GUARDS, COVERS & BELTS

## Guards and Covers Check



**NEVER** operate the saw without blade guards and covers (Figures 14, 15 and 16) 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.**



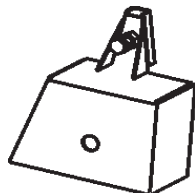
**Figure 14. Blade Guard**

**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 about the two water manifolds (14" guard). **NEVER** lift the blade guard while cutting.
- Check that the flood water tubes and water jets 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 15. Blade Flange Cover**

## V-Belts and Covers

### CAUTION:



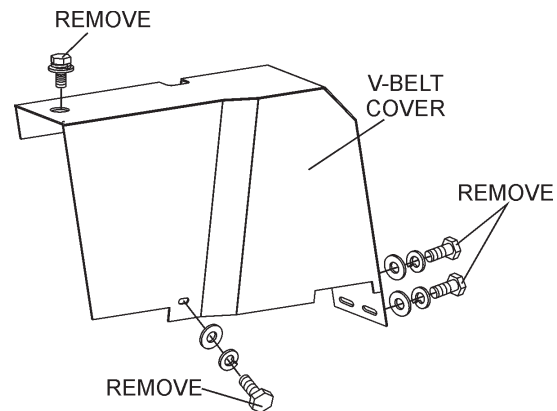
**NEVER** attempt to check the V-belt with the engine running because severe injury can occur. Keep fingers, hands, hair and clothing away from all moving parts.

### V-belts Alignment and Tensioning

This concrete saw is equipped with four premium V-belts that have been aligned and tensioned by factory personnel. All four V-belts **MUST** be installed for proper operation of the saw. Failure to run the saw with less than four belts may damage the saw or equipment.

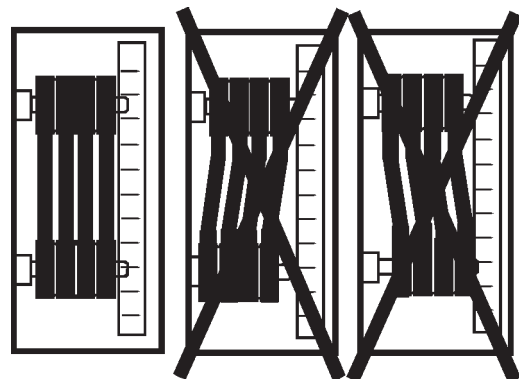
Use the following procedure to check the alignment of V-belts:

1. Remove the bolts that secure the V-belt cover (Figure 16) to the saw frame.



**Figure 16. V-Belt Cover**

2. Check uniform parallelism (Figure 17) of V-belts and pulley (sheaves). Use a straight edge or machinist's square against both pulleys and adjust both pulleys until equally aligned.



**Figure 17. V-Belt Parallelism**



# FS2/FS2SP CONCRETE SAW — INSPECTION -GUARDS, COVERS & BELTS

3. Check V-belt tension (Figure 18) 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 AT MIDPOINT AS SHOWN

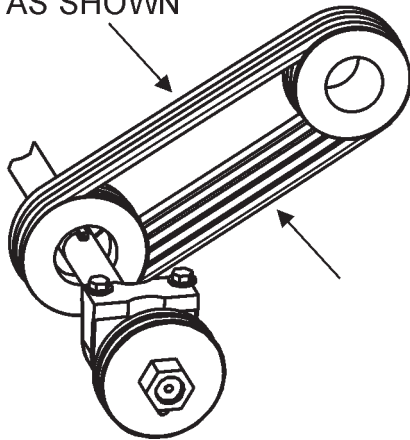


Figure 18. V-Belt Tension

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, replace them by using the following V-belt part numbers listed in Table 6.

Table 6. V-Belts and Pulleys			
Engine Size	V-Belt P/N	Pulley P/N	Blade Size
8.5 -13 HP Engine	15082 (4)	15420	14
	13249 (4)	15421	20
20 HP Engine	15897 (4)	15365	14
	15082 (4)	15366	20

# FS2/FS2SP CONCRETE SAW— INITIAL START-UP

## 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)**

1. Ensure the diamond blade has been mounted correctly and that it is raised above the surface you are about to saw.
2. Connect a hose (water source) to the water input port of the saw (see page 50, item 2, **Water System Assembly**), and test for adequate flood water [ 4 to 5 gallons per minute (15 to 19 LT/min)], and/or misting water [steady geometric aerosol spray at 40 psi].
3. Place the **fuel valve lever** (Figure 19) to the "ON" position.

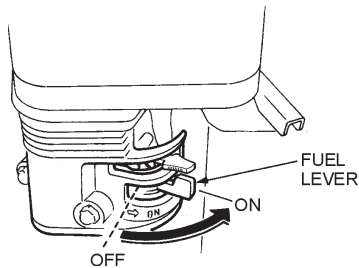


Figure 19. Fuel Valve Lever

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

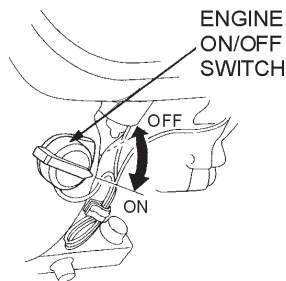


Figure 20. Engine ON/Off Switch

5. **PULL** the Console **Engine ON/OFF switch** (Figure 21) to the "PULL-ON" position.

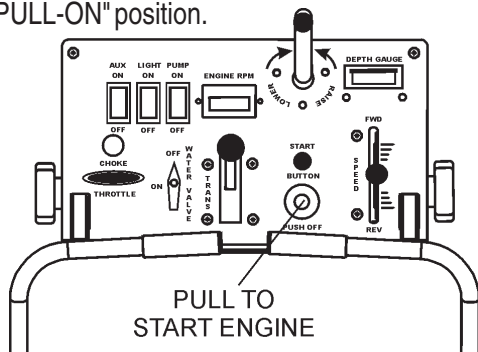


Figure 21. Console Engine ON/Off Switch

## NOTE

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.

6. Place the **Choke Lever** (Figure 22) in the "**OPEN**" position

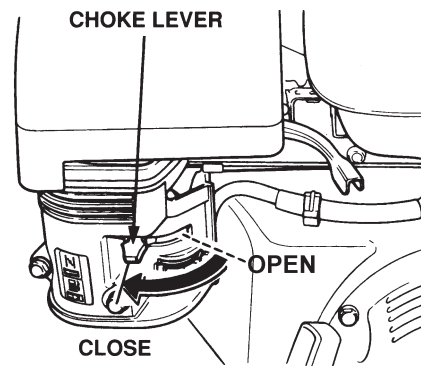


Figure 22. Choke Lever

## CAUTION:



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

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.

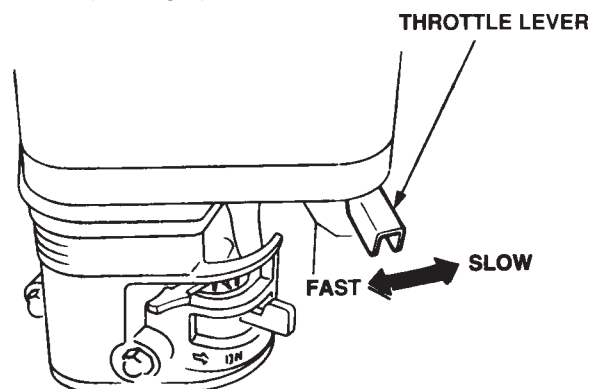


Figure 23. Throttle Lever

# FS2/FS2SP CONCRETE SAW — INITIAL START-UP

- 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.

## CAUTION:



- **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.

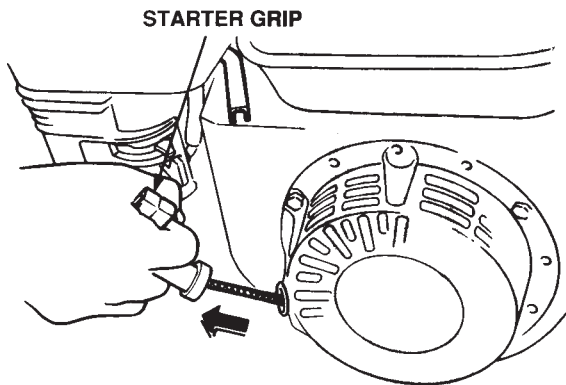


Figure 24. Starter Grip

- 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 5.
- 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.
- All sawing is done at full throttle. Your engine governor has been set at the factory to ensure an optimum speed setting.

## Stopping the Engine

**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 throttle lever (Figure 23) in the slow position, and listen for the engine speed to decrease.
- Push the console engine ON/OFF switch (Figure 21) to the "OFF" position.
- Place the engine ON/OFF switch (Figure 20) to the "OFF" position.
- Place the fuel valve lever (Figure 19) to the "OFF" position.

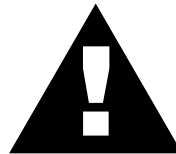
## Maneuvering The Saw



The blade is spinning whenever the engine is running.

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.

## CAUTION:



- **NEVER** stop the engine in the cut while working at high speeds, except for extreme emergencies.

# FS2/FS2SP CONCRETE SAW — OPERATION

## Saw Alignment

1. The FS2/FS2SP employs a front and rear pointer (Figure 25) that has been precisely aligned with the diamond blade at the factory. Referencing the figure below, accurate tracking is accomplished by referencing the front and rear pointer tips over the cut line. Precise saw direction is accomplished by slight operator pressure against the handle bars.

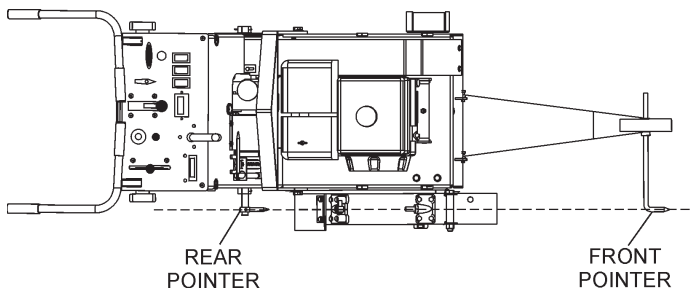


Figure 25. Saw Pointers (Front/Rear)

2. To reorient a pointer position, loosen the screw that secures the pointer bar to the shaft, adjust as necessary, and retighten the screw.
3. For operator comfort, ergonomically designed handle bars adjust by loosening two clamping knobs (Figure 5, item 14), and adjust to the desired height. Tighten the knobs back down when the desired height has been achieved.

## Wet Saw Operation

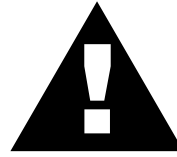


**The operator must wear the appropriate protective equipment and clothing while engaged in sawing.**

For wet sawing :

1. Connect hose from water source to the hose fitting connection (see page 50, item 2, **Water System Assembly**) of the saw. The source pressure should be approximately 30-40 psi.
2. Ensure the quick disconnect water hose fitting is connected to the Floodwater manifold of the blade guard.
3. Turn water source on.
4. Select the "ON" position (water Valve on the saw console), and ensure the proper flow and rate (4-6 gallons/minute) is equally directed to both sides of the diamond blade.
5. Align the saw along the cut line utilizing the front and rear pointers.

## CAUTION:



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

6. Slowly lower the diamond blade onto the cut line by cranking the Raise/Lower handle clockwise. When the blade "touches" the cutting surface, "zero-out" the depth feed gauge (Figure 5, item 12) by rolling the depth wheel until "0" is lined up with the slip mark. Slowly continue to lower the blade into the cut until the desired depth is achieved.

**If the water supply to your blade is interrupted - STOP sawing immediately.**

7. Set the sawing depth and saw only as job conditions and specifications require. 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 it's longest.
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 handle bar as you slowly advance the saw forward. **DO NOT force the blade into the cut any faster than its designed tendency is effective cut and remove the material.**

## For Misting Water Sawing:

**The Water Misting System** is designed to suppress the dust signature caused by dry sawing. The aerosol spray pattern and blade guard design greatly diminish the amount of dust that is created. The misting water also acts as an added coolant for the blade (14" blade guard only).

1. Ensure the **proper DRY CUTTING** Diamond Blade is selected for the job.
2. Connect hose from water source to the hose fitting connection (see page 50, item 2, **Water System Assembly**) of the saw. The source pressure should be approximately 30-40 psi.
3. Ensure the quick disconnect water hose fitting is connected to the Misting (bottom) manifold of the blade guard (14" only).
4. Turn Water source on.
5. Turn the **water valve** on the saw console to the "**ON**" position, and ensure the proper spray is equally directed inside the blade guard (approximately 30-45 psi water source pressure is required).

# FS2/FS2SP CONCRETE SAW — OPERATION

- Align the saw along the cut line utilizing the front and rear pointers.
- Slowly lower the diamond blade onto the cut line by cranking the Raise/Lower handle clockwise. When the blade “touches” the cutting surface, “zero-out” the depth feed gauge (Figure 5, item 12) by rolling the depth until “0” is lined up with the slip mark. Slowly continue to lower the blade into the cut until the desired depth is achieved.
- Set the sawing depth and saw only as job conditions and specifications require. Deep sawing is wasteful to the life of the blade and can negate the effectiveness of the water misting system to suppress dust. 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 it’s longest.
- 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 handle bar as you slowly advance the saw forward. **DO NOT force the blade into the cut any faster than its designed tendency is effective cut and remove the material.**

## WARNING

If the engine stalls for any reason during sawing, raise the blade out of the cut before restarting.



- The operator must recognize and adhere to the optimum speed that the saw advances while sawing. **DO NOT force the saw in the cut.** Observe the engine tachometer from time to time to get the feel for a smooth sawing pace relative to RPM.
- Factors for sawing economy:
  - Type of Blade
  - Depth of Cut
  - Sawing Speed
  - Characteristics of the Material Being Cut
  - Wet or Dry Sawing

## Finishing A Cut

- Raise the blade out of the cut by cranking the Raise/Lower handle counter-clockwise (Figure 5, item 10). Raise the blade high enough out of the cut to clear the surface and allow the saw to be maneuvered.
- Move the engine throttle lever to the idle (**SLOW**) position (Figure 20).

- Push the console engine ON/OFF button to the “**OFF**” position (Figure 5, item 1).
- Set the engine ON/OFF switch to the “**OFF**” position (Figure 6, item 3).
- Place the water valve (Figure 5, item 3) in the “**OFF**” position (as required).

## WARNING

Engine components can generate extreme heat.



## Diamond Blades and Blade Speed

- Diamond sawing consist 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

## 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.
  - FS2/FS2SP 14” Capacity-3,200 RPM.
  - FS2/FS2SP 20” Capacity-2,600 RPM.

## WARNING

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.



# FS2/FS2SP CONCRETE SAW — MAINTENANCE

## CAUTION:



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.



## WARNING

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.



## WARNING

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 Engine Care

1. **ENGINE CHECK:** Check daily for any oil and/or fuel leakage, thread nut & bolt tightness, and overall cleanliness.
2. **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.
3. **ENGINE OIL CHANGE:** Change engine oil the first month or 20 hours of operation. Then every 3 months/or 50 HOURS

### NOTE

**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.

4. **ENGINE AIR FILTER:** Clean air filter 2 to 3 times daily when DRY cutting. See Engine Owner's Manual for detailed information.
5. **ENGINE TANK & STRAINER:** Clean every year/or 300 hours.
6. **FUEL LINE:** Replace every two years/or as necessary.
7. **SPARK PLUG:** Clean/adjust every 6 months/or 100 hours. Replace every year/ or 300 hours.

## Bearing Lubrication Care

There are seven (7) grease points for the FS2 Push Model saw, and nine (9) grease points for the FS2SP Self-Propelled Model saw. [Use only Premium Lithium 12 based Grease, conforming to NLG1 Grade #2 consistency.]

1. **Front Wheels (2):** Grease daily, see page 42, item 8, Undercarriage Assembly.
2. **Rear Wheels (2):** Grease daily, see page 44, item 10, Rear Axle Assembly.
3. **Blade Shaft Bearings (2):** Grease daily, see page 46, item 1, Blade Shaft Assembly.
4. **Raise/Lower Adjust Tube (1):** Grease daily, see page 60, item 26, Raise/Lower Assembly.
5. **Transmission Shaft Bearings (2):** Grease weekly/or 25 hours, see page 70, item 28, Transmission Assembly (for self-propelled models only).

### NOTE

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 FS2SP Models 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.

1. **Transmission Reservoir Cup:** Check every 8 hours of operation. When the transmission is **cold** (A), check oil level against the level indicator (see Figure 26).

**DO NOT use multiple viscosity oils! DO NOT OVERFILL.**

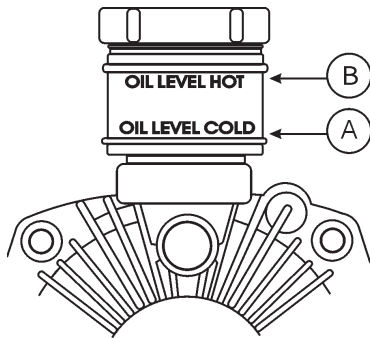


Figure 26. Transmission Reservoir

2. **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.

3. **Drive Chain:** Check every 50 hours. Periodically wipe the chain clean and relubricate with penetrating chain oil.

The drive chain may stretch requiring tension adjustments. Loosen the (3) transmission attachment screws (see page 68, item 11), and pivot the transmission in the “U” slots of the **transmission mount** until the proper tension is achieved. (see page 68, item 33). **EXCESSIVE TENSION ON THE DRIVE CHAIN WILL REDUCE CHAIN LIFE.**

4. **SPLINE GEARWHEELS:** 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**, place the transmission disengage lever in the **DISENGAGE** position. Remove the **rear console cover** (see page 52, item 19). Loosen the linkage adjustment nut and **slightly** lengthen the linkage rod (see page 68, items 12 and 13). Recycle the transmission **ENGAGE/DISENGAGE** lever to observe the proper spline-to-rear wheel contact. Retighten adjustment nut and return Rear Console Cover.

## 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.

1. Select the proper sized pulley both in outside diameter and arbor size. **Use approved Multiquip parts to ensure the component compatibility.**
2. A change in Pulley diameters may require specifically sized V-Belts. **Contact Multiquip Service Department to ensure V-Belt compatibility.**

## Complete Drive V-Belt(s) Replacement steps (1 through 7)

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.
5. 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 27 and 28).
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 the final stages of the **Drive V-Belt(s) Replacement** steps.

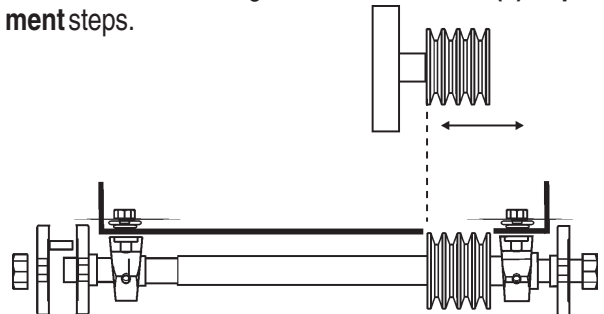


Figure 27. Pulley Alignment

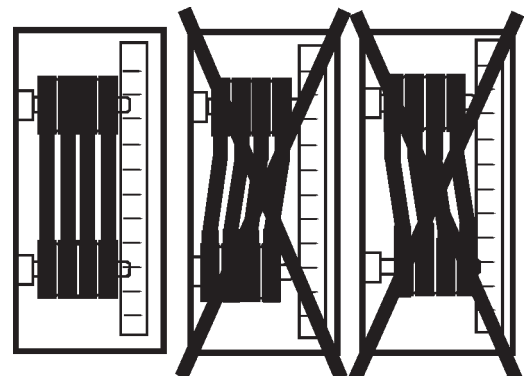
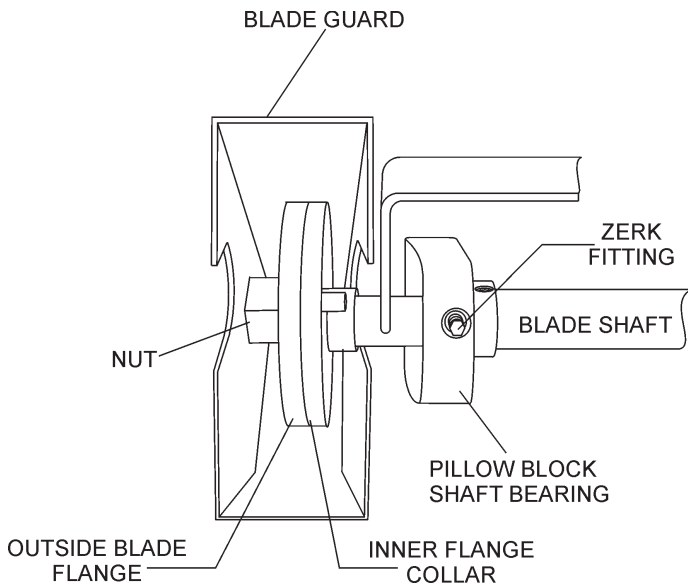


Figure 28. V-Belt Alignment

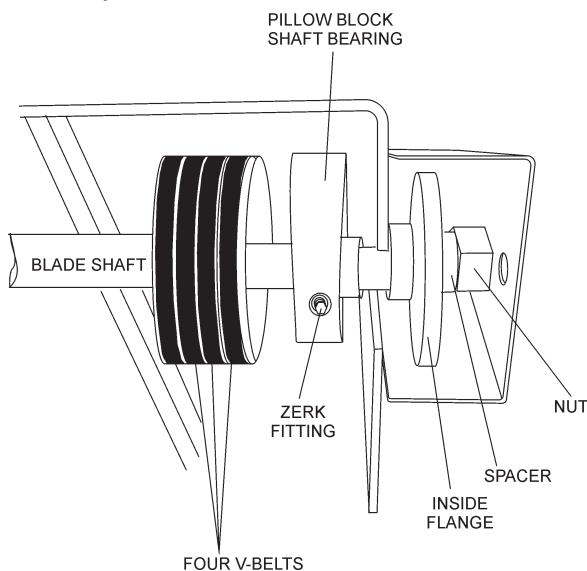
## Blade Shaft Bearing Replacement

The FS2/FS2SP is supported by “tapped base lock collar (w/set screw)” self-aligning blade shaft bearings. These heavy duty bearings support the 1-1/4 blade shaft, and have grease (zerk) points (Figures 29 and 30) conveniently located for service.



**Figure 29. Right-Side Shaft Bearing**

1. Reference pages 44 (*Blade Shaft Assembly*) and 46 (*Engine Mount Assembly*).
2. Its recommended to replace both left & right hand bearings collectively.



**Figure 30. Left-Side Shaft Bearing**

3. To loosen the tension on the four V-Belts perform the following:
  - Remove the **Belt Guard**, item, page 48, item 6 (Pointers and Covers Assembly)
  - Loosen the **Carriage Bolt**, page 46, item 7 (Engine Mount Assembly).
  - Loosen the **Hex Head Cap Screws**, page 46, item 4 (Engine Mount Assembly).
  - Rotate the engine down to provide slack in the V-Belts

## Replacement of the Blade Shaft Bearings

4. Perform the following to replace the blade shaft bearings:
  - Remove **blade flanges** (page 44, items 7 and 8, *Blade Shaft Assembly*) as required to permit the Shaft Bearing(s) to slide off the blade shaft.
  - Loosen/remove shaft bearing(s) **hex head cap screws**, page 44, item 11.
  - Loosen **set screw** on the blade shaft bearing collar.
  - Slide “old” bearing(s) off the blade shaft and replace with “new” bearing(s)- grease (zerk) fitting pointing forward, and the lock collar oriented to the “right” as you face the saw.
5. Loosely bolt the bearing(s) into place on the saw frame, then ensure the alignment by referencing past bearing positioning.
6. Tighten the **hex head cap screws**, page 44, item 11 to secure the shaft bearing (s) to the frame.
7. To complete the re-installation process, reverse the order of the above mentioned steps. For V-belt adjustment and tensioning see pages 31 (Figures 27 and 28) and 33 (Figure 32).



# FS2/FS2SP CONCRETE SAW — MAINTENANCE

## Drive V-Belt Check

Operating the saw with less than four (4) V-belts, or belts that are **slipping** or are **Over Tensioned** will significantly diminish the performance of the saw, and may cause damage to the blade.

1. The V-Belts of the FS2/FS2SP have been factory set utilizing precision standards.

## Drive V-Belt(s) Replacement

Reference Pointers and Covers Assembly (page 48), Blade Shaft Assembly (page 44), Engine Mount Assembly (page 46) for this operation.

1. Remove the Belt Guard (page 48, item 6), then loosen the tension of the V-Belts
2. Loosen the Engine Mount Carriage Bolt (page 46, item 7).
3. Loosen the (4) 1 1/2" HHC screws (page 46, item 4).
4. Rotate the engine down to provide slack in the V-Belts.
5. Loosen the (2) 3/4" HHC screws that support the Blade Shaft Bearings on the **right-side** of the saw (page 44, item 11, also see Figure 31).
6. Remove the (2) 3/4" HHC screws that secure the Blade Shaft Bearing on the **V-Belt side** of the saw (page 44, item 11, also see Figure 31).

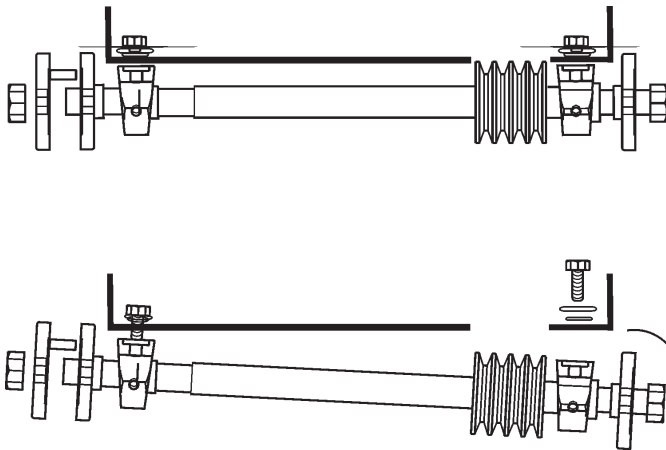


Figure 31. V-Belt Removal

7. Orient the blade shaft so the belt(s) to be replaced can slide off the blade shaft pulley and engine pulley.
8. Select the proper Multiquip replacement V-Belts (see page 45, item 12).
9. Remove the worn V-Belt(s).
10. Orient the proper replacement V-Belt(s) around the blade shaft pulley and engine pulley.
11. Replace and tighten the (4) 3/4" HHC screws that secure the Blade Shaft Bearings to the saw frame.

## Adjust V-Belt Tension

1. Tighten down the engine mount **carriage bolt** (page 46, item 7,) and monitor the tension on the belts.
2. Determine the proper tension (Figure 32) by using a tensionmeter against the inside belts at mid point between the two pulleys (6-9 lbs.), or by deflecting the center belts at mid point 3/8" (10 mm) to 1/2" (13 mm).

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

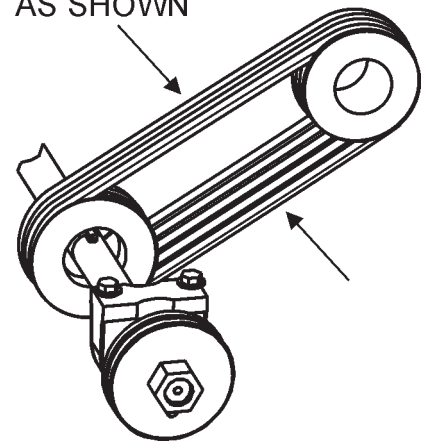


Figure 32. V-Belt Adjustment/Tension

3. Once the proper tension has been applied to the belts, tighten the (4) 1-1/2" HHC screws (page 46, item 4).
4. Replace and secure the **Belt Guard** (page 48, item 6).

## 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.

# FS2/FS2SP CONCRETE SAW — TROUBLESHOOTING (ENGINE)

**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.
Difficult to start, "fuel is available, and SPARK is present at the spark plug".	Console or engine ON/OFF switch is shorted?	Check switch wiring, replace switch.
	Ignition coil defective?	Replace ignition coil.
	Improper spark gap, points dirty?	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.
Difficult to start, "fuel is available, spark is present and compression is normal"	Wrong fuel type?	Flush fuel system, and replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	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.
No fuel present at carburetor.	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.
	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.

# FS2/FS2SP CONCRETE SAW — TROUBLESHOOTING (ENGINE)

**TABLE 7. ENGINE TROUBLESHOOTING (CONTINUED)**

SYMPTON	POSSIBLE CAUSE	SOLUTION
"Weak in power" compression is proper and does not misfire.	Air cleaner not clean?	Clean or replace air cleaner
	Improper level in carburetor?	Check float adjustment, re-build carbureator.
	Defective Spark plug?	Clean or replace spark plug.
	Defective Spark plug?	
"Weak in power" compression is proper but misfires.	Water in fuel system?	Flush fuel system, and replace with correct type of fuel.
	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
	Cooling fins dirty?	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.
	Spiral spring loose?	Replace spiral spring.

# FS2/FS2SP CONCRETE SAW — TROUBLESHOOTING (BLADE)

**TABLE 8. BLADE TROUBLESHOOTING**

SYMPTON	POSSIBLE CAUSE	SOLUTION
Blade slows or Stops cutting, still remains on blade.	Blade too hard for the material being cut.	Consult Dealer or Multiquip for correct blade. Try cutting very soft material (sandstone, silica brick, cinder block) to "Redress" the blade.
	Engine Torque diminished because of loose V-Belts.	Tighten and/or replace V-Belts.
	Insufficient Engine power.	Check Throttle setting. Check Engine horsepower.
	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 does not cut straight and/or true.	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 Dealer or Multiquip for information.
	Blade being used at improper RPM.	Ensure blade surface feet per minute speed (SFPM) is approximately 10,000 (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 discoloring, crackling and/or wearing excessively.	Blade too hard for the material being cut.	Consult Dealer or Multiquip for correct blade. Try cutting very soft material (sandstone, silica brick, cinder block) to "Redress" the blade.
	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 not receiving enough cooling water or air.	Ensure proper flow & volume of water is provided for wet cutting blades. Ensure sufficient cooling air is circulated about a dry cutting blade.
	Arbor 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 Dealer or multiquip for information.
	Excessive force applied to blade while cutting.	Do not force the blade in the cut. Apply a slow/steady pace to sawing.



# FS2/FS2SP SAW — EXPLANATION OF CODE IN REMARKS COLUMN

How to read the marks and remarks used in this parts book.

## Section 1: Items Found In the “Remarks” Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

## Section 2: Items Found In the “Remarks” Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

## Section 3: Items Found In the “Items Number” Column

All parts with same symbol in the number column, \*, #, +, %, or ■, belong to the same assembly or kit.

Note: If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

### NOTE

The contents of this parts catalog are subject to change without notice.

**FS2/FS2SP CONCRETE SAW — SUGGESTED SPARE PARTS**

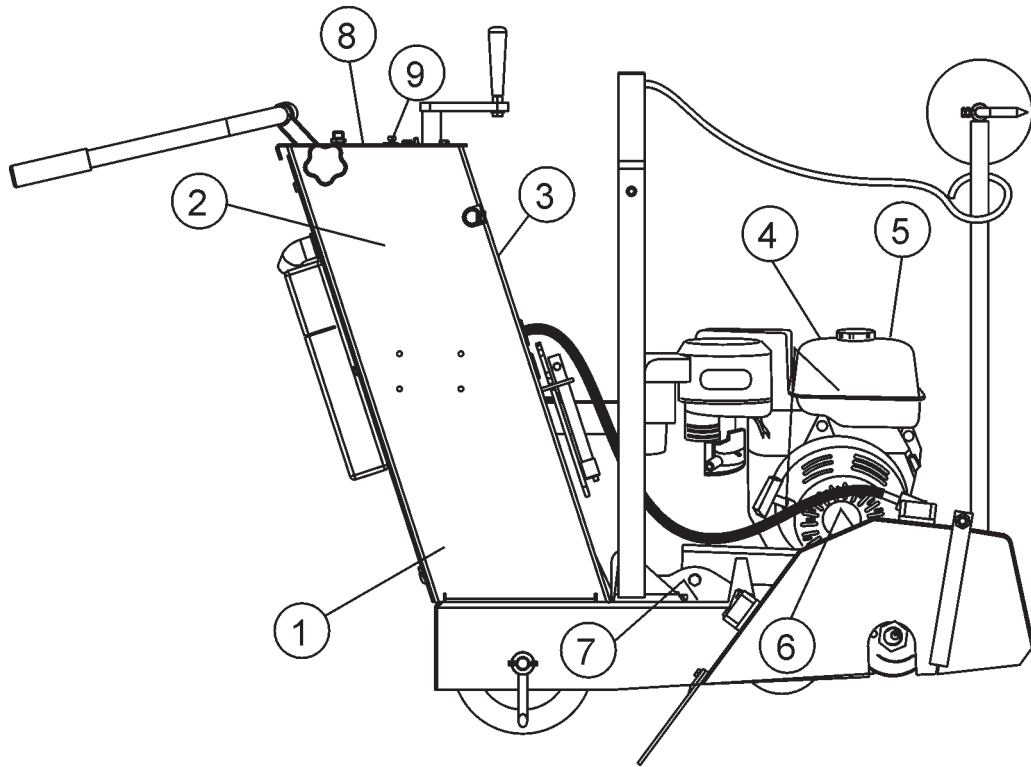
**FS2 CONCRETE SAW 1 TO 3 UNITS**

***1 to 3 Units***

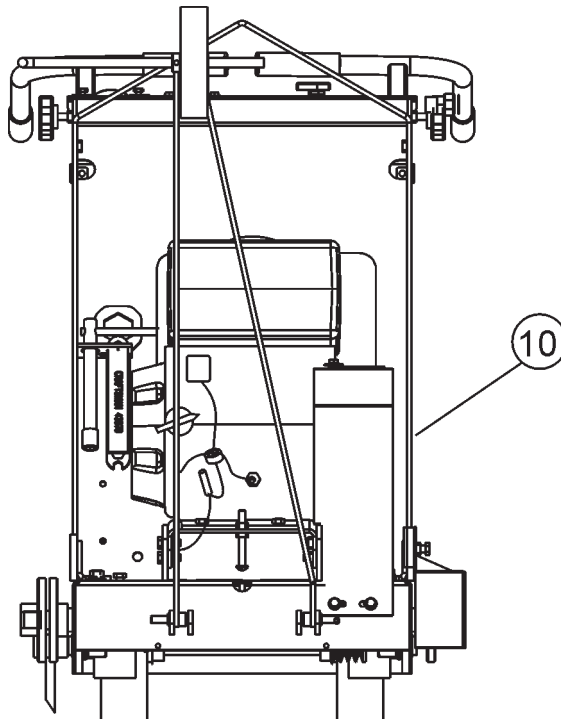
Qty. .... P/N ..... Description

# FS2/FS2SP CONCRETE SAW — NAME PLATE AND DECALS

NAME PLATE AND DECALS.



SEE DECAL ILLUSTRATIONS ON PAGE 8.





# FS2/FS2SP CONCRETE SAW — NAME PLATE AND DECALS

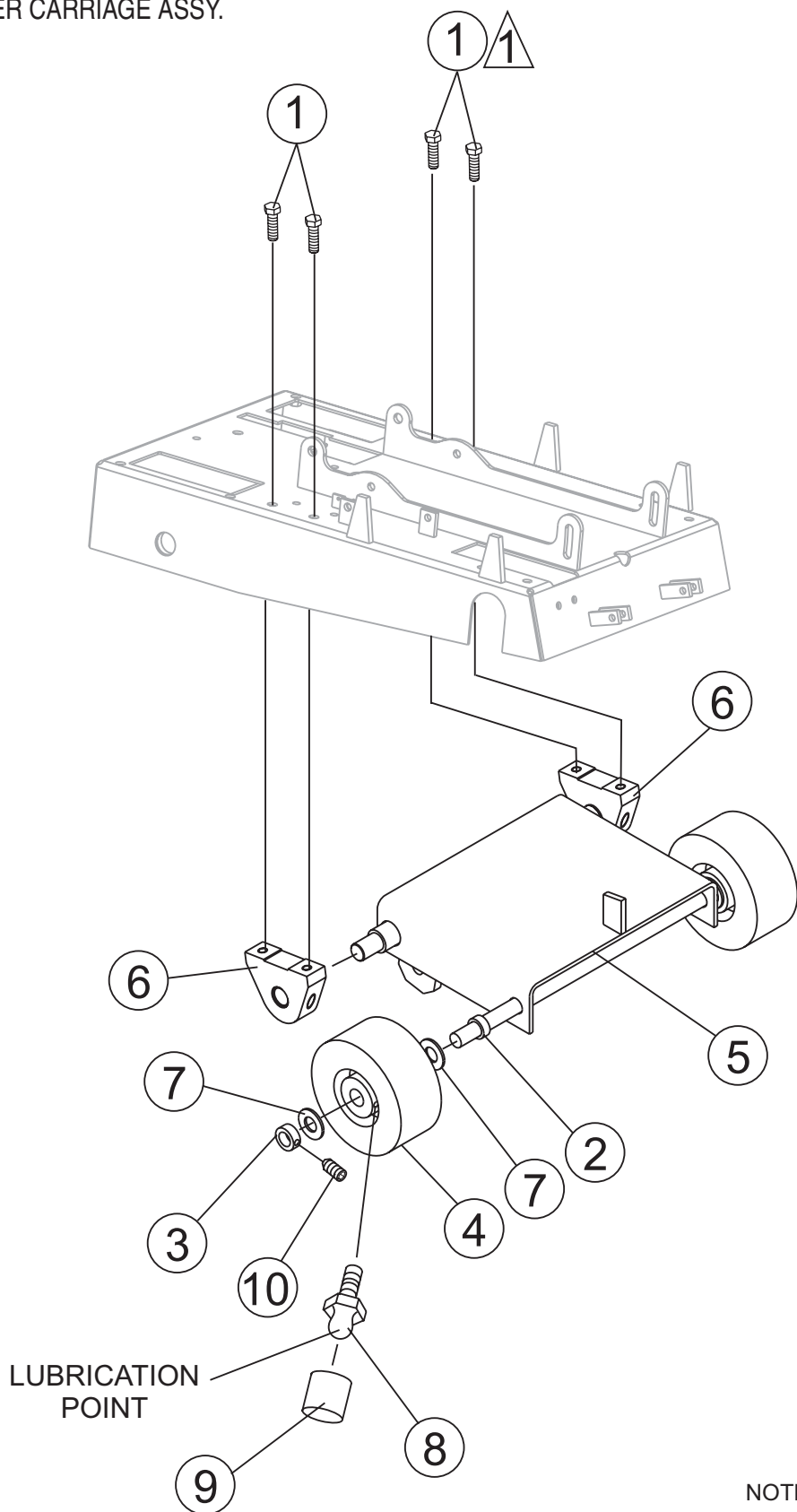
## NAME PLATE AND DECALS

NO	PART NO	PART NAME	QTY.	REMARKS
1*	15577	DECAL: FS2 (WHITE)	2	
2*	15579*	DECAL: MQ WHITEMAN 5.5" X 4"	2	
3	13118	DECAL: POWDER COATED	1	
4*	15582	DECAL: WARNING PROP. 65	1	
5*	15580	DECAL: WARNING RESPIRATORY	1	
6	15581	DECAL: WARNING BLADE GUARD	1	
7		PLATE: SERIAL NO. ....	1	..... CONTACT MQ SERVICE DEPT. W/MODEL & S/N
8*	15741	DEPTH GAUGE LINEAR SCALE	1	
9	15429	CONSOLE	1	
10*	2942	DECAL: MQ WHITEMAN 13"	1	
11	15269	DECAL: KIT FS2 .....	1	..... INCLUDES ITEMS W/*

SEE DECAL ILLUSTRATIONS ON PAGE 8.

# FS2/FS2SP CONCRETE SAW — UNDER CARRIAGE ASSY.

UNDER CARRIAGE ASSY.



NOTES:

 USE LOCTITE 242 ON ITEM 1,  
SCREW, HHC 3/8-16 X 1-1/4

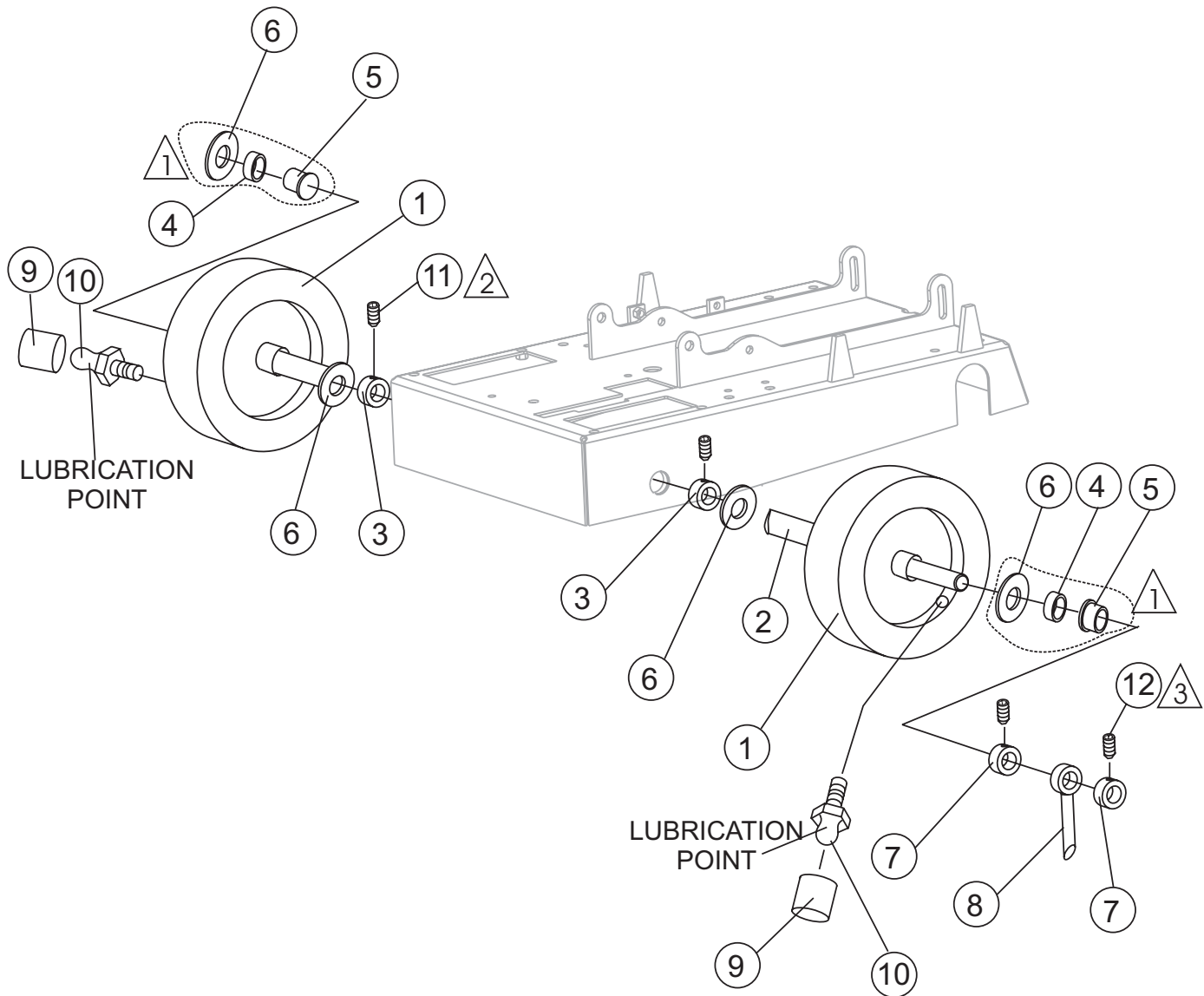
# FS2/FS2SP CONCRETE SAW — UNDER CARRIAGE ASSY.

## UNDER CARRIAGE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1023	SCREW, HHC 3/8 - 16 X 1-1/ 4	4	
2	15020	SPACER, .88 X .64 X .35L	2	
3	15028	SET COLLAR 5/8 DIA .....	2	INCLUDES ITEM W/*
4	15090	WHEEL, 5D X 2WX .6251D # 400 CAP	2	
5	15319	UNDERCARRIAGE W/A	1	
6	2079	ROCKER BLOCK, WITH BUSHING	2	
7	4684	WASHER, FLAT 5/8 SAE PLTD	4	
8	2621	ZERK FITTING	2	
9	1162A	CAP, ZERK FITTING	2	
10*		SET SCREW	2	

# FS2/FS2SP CONCRETE SAW — REAR AXLE ASSY.

REAR AXLE ASSY.



## NOTES:

- △ 1 ITEMS ARE PLACED ON INSIDE OF FRAME.
- △ 2 INCLUDED WITH SET COLLAR ITEM 3.
- △ 3 INCLUDED WITH SET COLLAR ITEM 7.

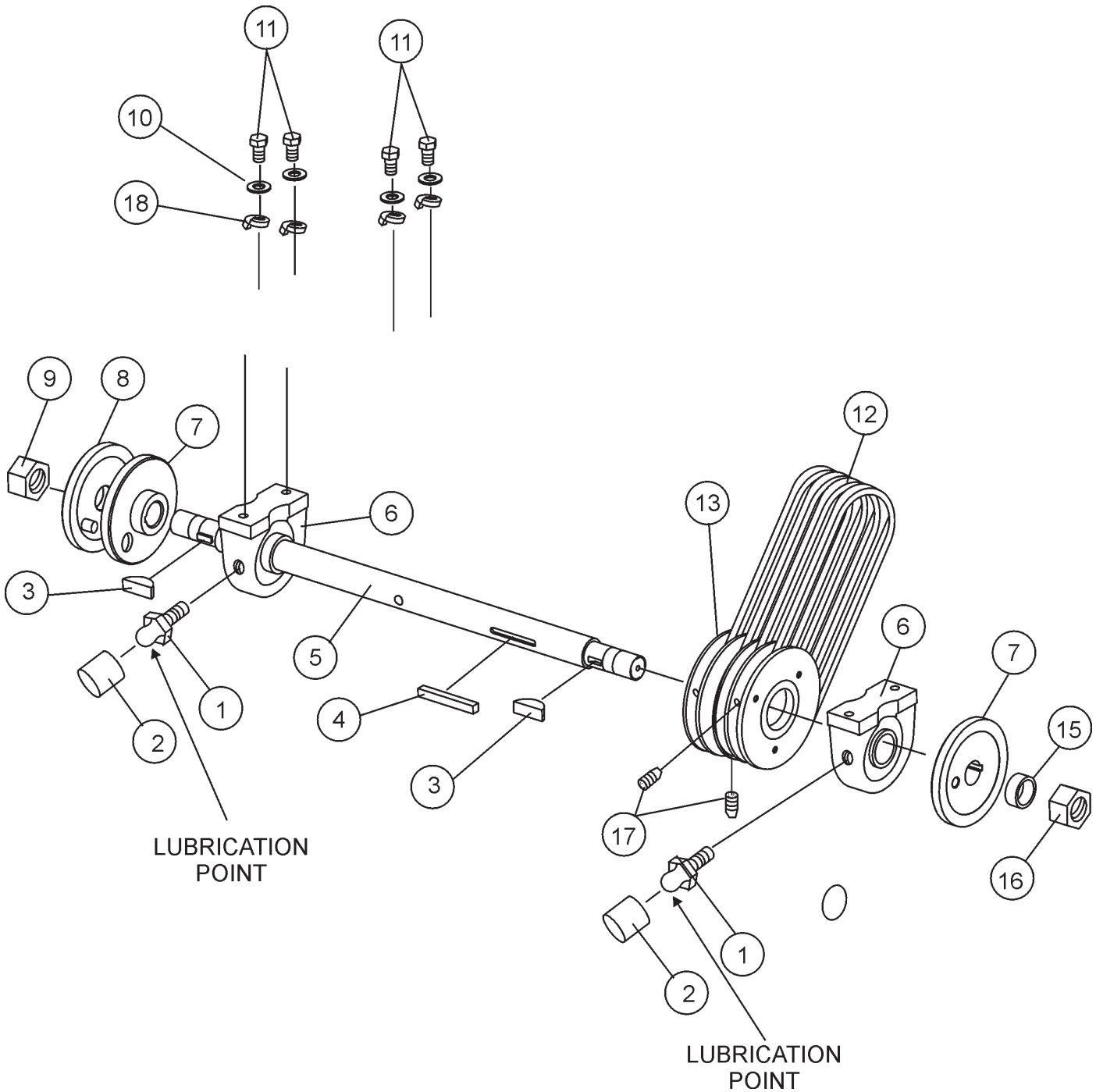
# FS2/FS2SP CONCRETE SAW — REAR AXLE ASSY.

15313 (RAISE AXLE ASM )

NO	PART NO	PART NAME	QTY.	REMARKS
1	15309	WHEEL, 8.0 OD X 1.0 1D X 2.5W	2	
2	15310	AXLE, REAR	1	
3	15311	COLLAR, SET 1.00 1.D.....	2	INCLUDES ITEM W/*
4	15312	SPACER, 1.0 X 0.44 PIPE, SCHED 40	2	
5	15314	BUSHING, FLG 1.25 OD X 1.00 1D X0.75	2	
6	3264	WASHER, FLAT 1" SAE	4	
7	3615	COLLAR SET 3/4 ID.....	2	INCLUDES ITEM W/#
8	15376	REAR POINTER W/A	1	
9	1162A	ZERK FITTING CAP	2	
10	2621	ZERK FITTING	2	
11*		SET SCREW	2	
12#		SET SCREW	2	

# FS2/FS2SP CONCRETE SAW — BLADE SHAFT ASSY.

BLADE SHAFT ASSY.



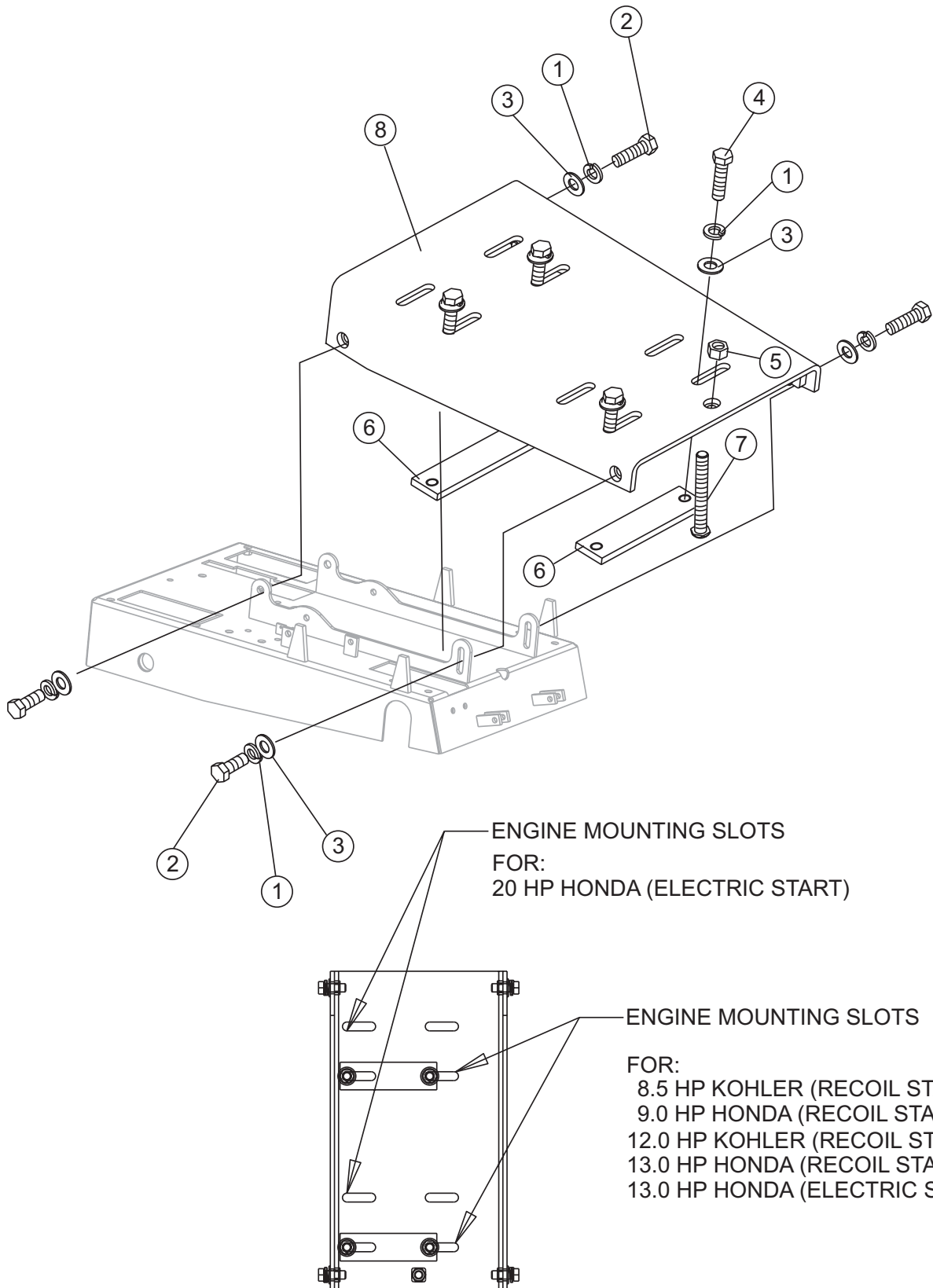
# FS2/FS2SP CONCRETE SAW — BLADE SHAFT ASSY.

## BLADE SHAFT ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	2621	ZERK FITTING	2	
2	1162A	CAP, ZERK FITTING	2	
3	15119	KEY, WOODRUFF #91, ANS1 #8061	2	
4	6059B	KEY, 1/4 SQ. X 2"	1	
5	15065	SHAFT, BLADE	1	
6	15066	BEARING, PILLOW BLOCK 1 1/4 BORE	2	
7	15063	FLANGE, BLADE INSIDE	2	
8	15012	FLANGE, DRIVEN ASSY.	1	
9	15093	NUT, 1-14-2B-LH	1	
10	0448	WASHER, FLAT 7 / 16 SAE	4	
11	15563	SCREW, HHC 7/16 -14 X 3/4	4	
12	15082	V-BELTS 3VX335 .....	4	8.5-13 HP ENGINE HONDA 14" BLADE
12	13249	V-BELTS 3VX315 .....	4	8.5-13 HP ENGINE HONDA 20" BLADE
12	15897	V-BELTS 3VX355 .....	4	20 HP ENGINE HONDA 14" BLADE
12	15082	V-BELTS 3VX335 .....	4	20 HP ENGINE HONDA 20" BLADE
13	15419	PULLEY, 1.25 HUB 4/3V4.50D .....	1	8.5-13 HP ENGINE HONDA 14" BLADE
13	15421	PULLEY, 4/3V3.00 X 1.000 ID/3L2.75 .....	1	8.5-13 HP ENGINE HONDA 20" BLADE
13	15365	PULLEY, 4/3V4.12 X 1.125 ID/3L2.75 .....	1	20 HP ENGINE HONDA 14" BLADE
13	15366	PULLEY, 4/3V3.00 X 1.125 ID/3L2.75 .....	1	20 HP ENGINE HONDA 20" BLADE
15	15148	SPACER, 1.320D X 1.051D X 0.53	1	
16	15092	NUT, 1-14-2B	1	
17	1528	SCREW, SHS 1/4-20 X 5/16 HDP	2	
18	2955	WASHER, LOCK 7/16 MED	4	

# FS2/FS2SP CONCRETE SAW — ENGINE MOUNT ASSY.

## ENGINE MOUNT ASSY.





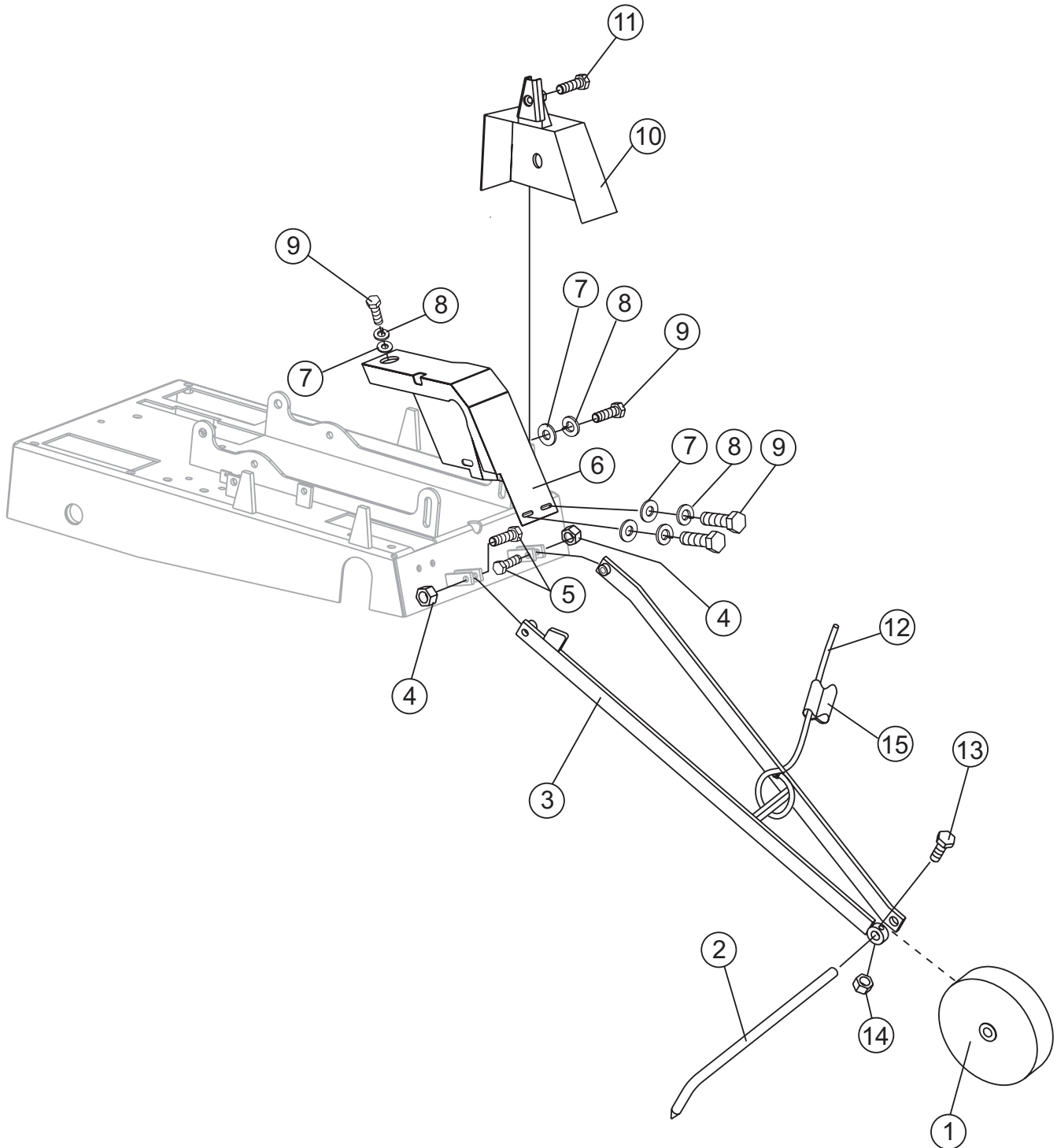
## FS2/FS2SP CONCRETE SAW — ENGINE MOUNT ASSY.

### MOUNT ENGINE

NO	PART NO	PART NAME	QTY.	REMARKS
1	0166A	WASHER, LOCK, 3/8 MED	8	
2	0205	SCREW, HHC 3/8 - 16 X 1	4	
3	10136	WASHER, FLAT 3/8 SAE	8	
4	1284	SCREW, HHC 3/8 - 16 X 1- 1/2	4	
5	1456	NUT, HEX FINISH 3/8 - 16	1	
6	15033	BAR THREADED	2	
7	15174	BOLT, CARRIAGE 3/8 - 16 X 3	1	
8	15306	MOUNT, ENGINE W/A	1	

# FS2/FS2SP CONCRETE SAW — POINTERS AND COVERS ASSY.

POINTERS AND COVERS ASSY.



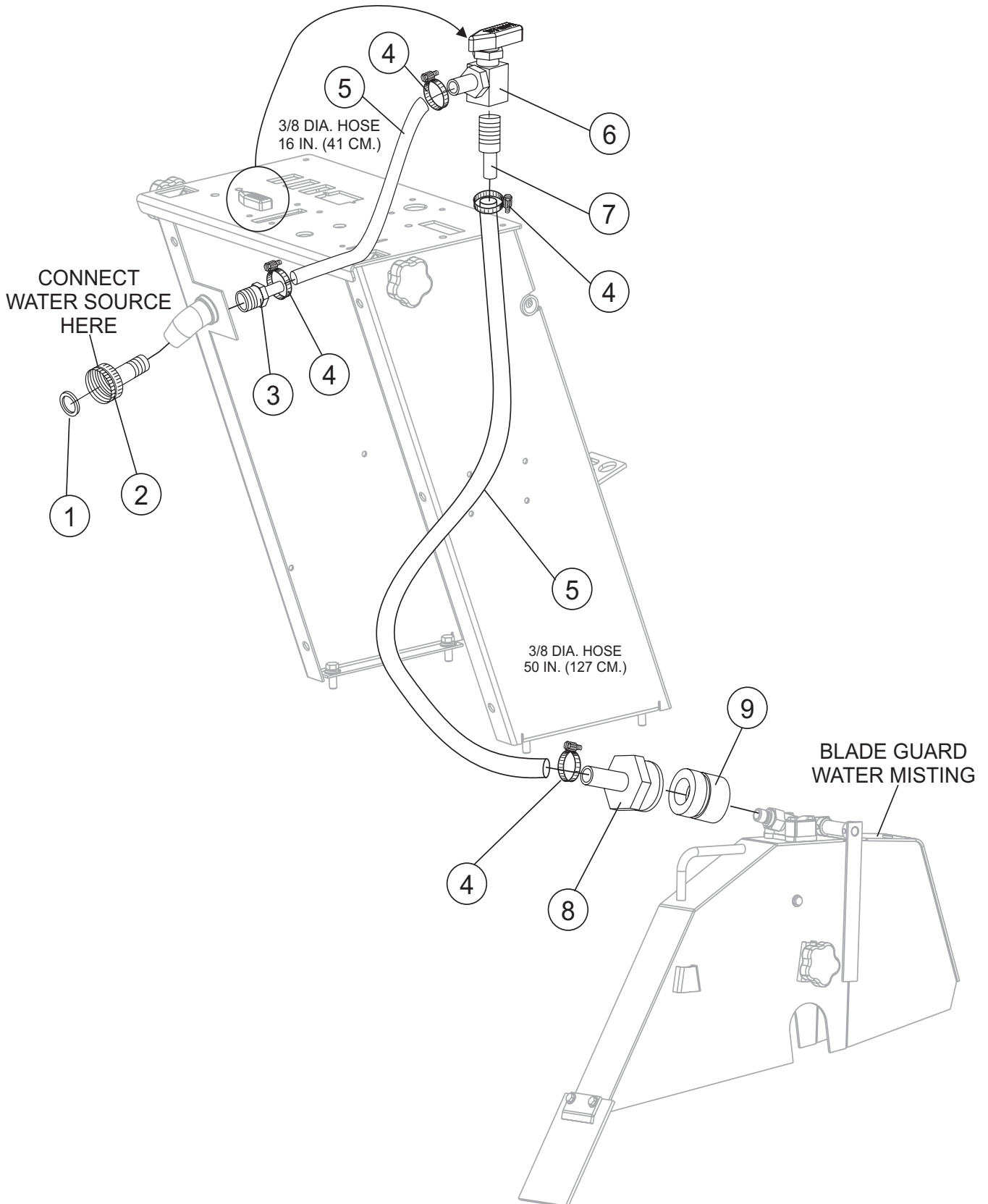
## FS2/FS2SP CONCRETE SAW — POINTERS AND COVERS ASSY.

### POINTERS AND COVERS ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	15053	WHEEL, POINTER ARM	1	
2	15052	ROD, POINTER	1	
3	15889	POINTER, LOMG FRONT, W / A	1	
4	10133	NUT, NYLOC 3/8 - 16	2	
5	9154	SCREW, HHC 3/8 - 16 X 1- 3/4	2	
6	15248	BELT GUARD W/A	1	
7	0131A	SCREW, HHC 1/4 -20 X 3/4	4	
8	0181B	WASHER, LOCK 1/4 MED.	4	
9	0948	WASHER,FLAT 1/4 SAE	4	
10	15088	COVER, BLADE FLANGE W / A	1	
11	1023	SCREW, HHC 3/8 - 16 X 1 - 1/4	1	
12	15113	SASH, POINTER RETAINER	1	
13	0131A	SCREW, HHC 1/4 - 20 X 3/4	1	
14	0949	NUT, HEX FINISH 1/4 - 20	1	
15	15114	SLEEVE, SASH	1	

# FS2/FS2SP CONCRETE SAW — WATER SYSTEM ASSY.

## WATER SYSTEM ASSY.



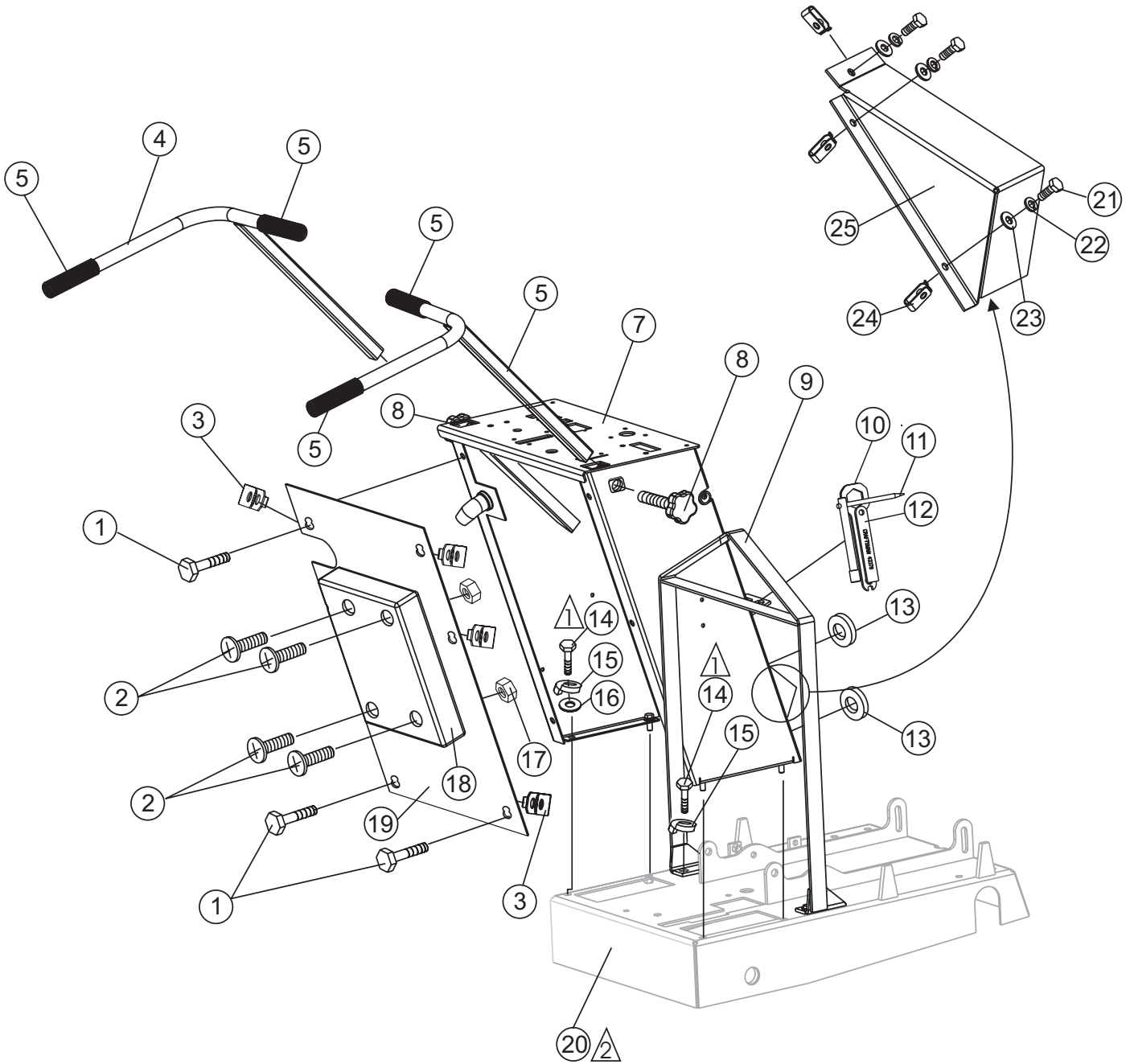
# FS2/FS2SP CONCRETE SAW — WATER SYSTEM ASSY.

## WATER SYSTEM ASSY.


NO	PART NO	PART NAME	QTY.	REMARKS
1	15546	GASKET, 3/4 HOSE GASKET / SCREEN	1	
2	15076	FITTING, STR 3/4 FEM HOSE X 1/2 MP	1	
3	15180	FITTING, DTR 6 BARB - 1/2 MP	1	
4	15538	CLAMP, WORM HOSE 7/16 - 11/16	4	
5	15181	HOSE 3/8 BLACK WATER 200 PSI	5.5 FT.	
6	15766	VALVE, 2 WAY 3/8 BARB X 3/8 MPT	1	
7	15767	FITTING, 6FPT - 6 BARB	1	
8	15768	FITTING, 6 BARB 3/4 MALE HOSE	1	
9	15769	FITTING, 3/4 HOSE QUICK REL FEMALE	1	


# FS2/FS2SP CONCRETE SAW — BASIC PLATFORM ASSY.

## BASIC PLATFORM ASSY.



### NOTES:

 USE LOCTITE 271 ON ITEM 13, SCREW, HHC 3/8-16 X 1

 REFERENCE PAGES 66 AND 67 FOR COMPLETE PARTS BREAK-DOWN FOR BARE PLATFORM ASSY. P/N 15409.

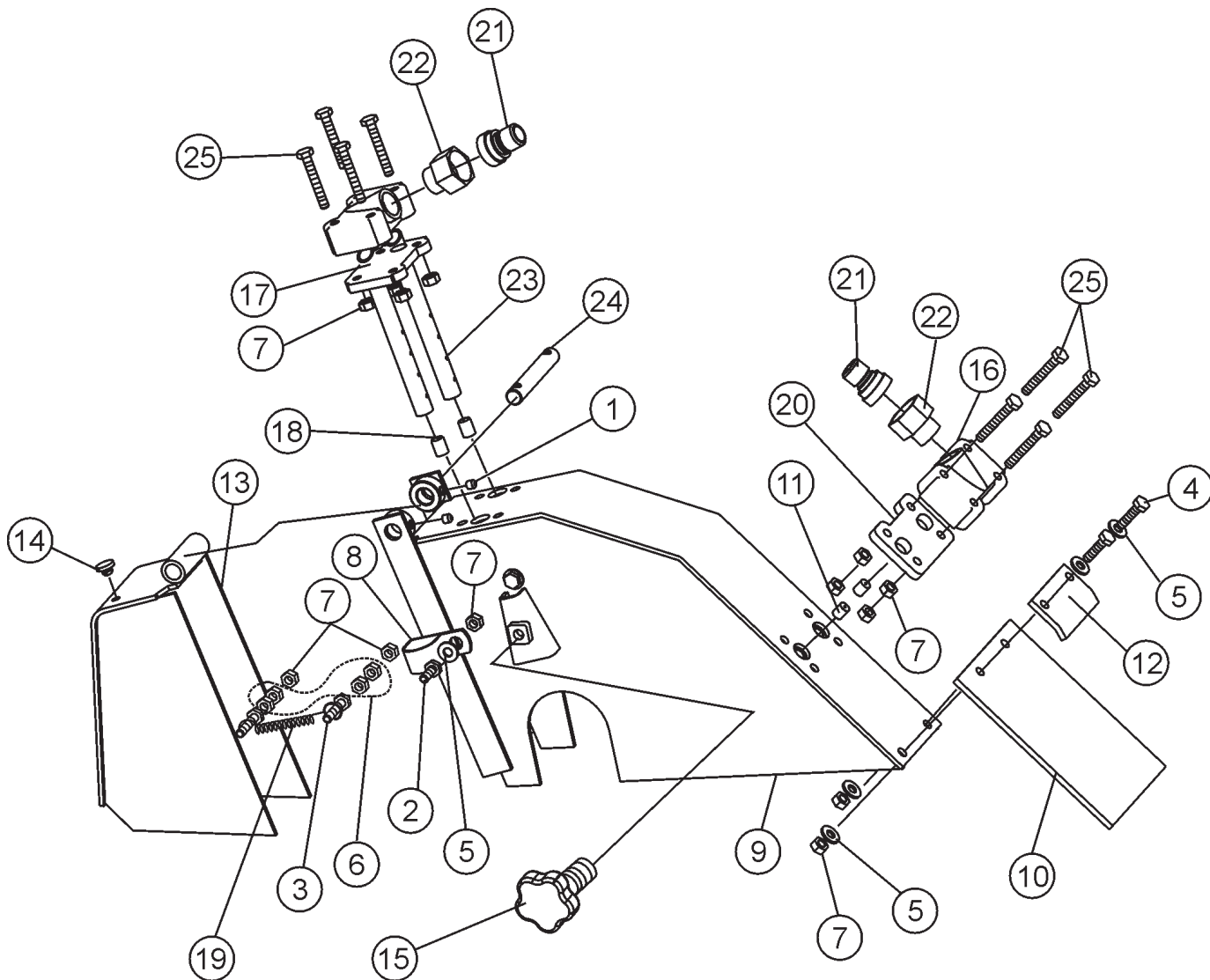
# FS2/FS2SP CONCRETE SAW — BASIC PLATFORM ASSY.

## BASIC PLATFORM ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11819	SCREW, HHC WASHER 1/4-20 X 3/4	1	
2	12287	SCREW, THP 1/4-20 X 3/4 SS	1	
3	11534	NUT U TYPE 1/4-20	6	
4	15701	HANDLEBAR, LEFT W / A	1	
5	15081	HANDLE GRIPS 1" DIA	4	
6	15702	HANDLEBAR, RIGHT W / A	1	
7	15317	CONSOLE W/A	1	
8	15503	KN0B, CONFORT GRIP	2	
9	15260	LIFTING BALE W/A	1	
10	15097	WRENCH, ALL PURPOSE	1	
11	15098	TOOL, SHAFT LOCK SOCKET W / A	1	
12	15138	WRENCH, 6" POCKET SOCKET	1	
13	15468	GROMMET 1.0 X 13 X 1.375	2	
14	0205	SCREW HHC 3/8-16 X 1	8	
15	0166A	WASHER, LOCK 3/8 MED	8	
16	10136	WASHER, FLAT 3/8 SAE	4	
17	10024	NUT, NYLOC 1/4-20	4	
18	29057	DOCUMENT BOX	1	
19	15280	COVER, REAR	1	
20	15409	PLATFORM W/A .....	1	..... SEE PAGES 66 AND 67
21	0131A	SCREW, HHC 1/4-20 X 3/4	3	
22	0181B	WASHER, LOCK 1/4 MED	3	
23	0948	WASHER, FLAT 1/4 SAE	3	
24	11534	NUT U TYPE 1/4-20	3	
25	15424	COVER, PUMP MOTOR	1	

# FS2/FS2SP CONCRETE SAW — BLADE GUARD 14-INCH ASSY.

BLADE GUARD 14-INCH ASSY.





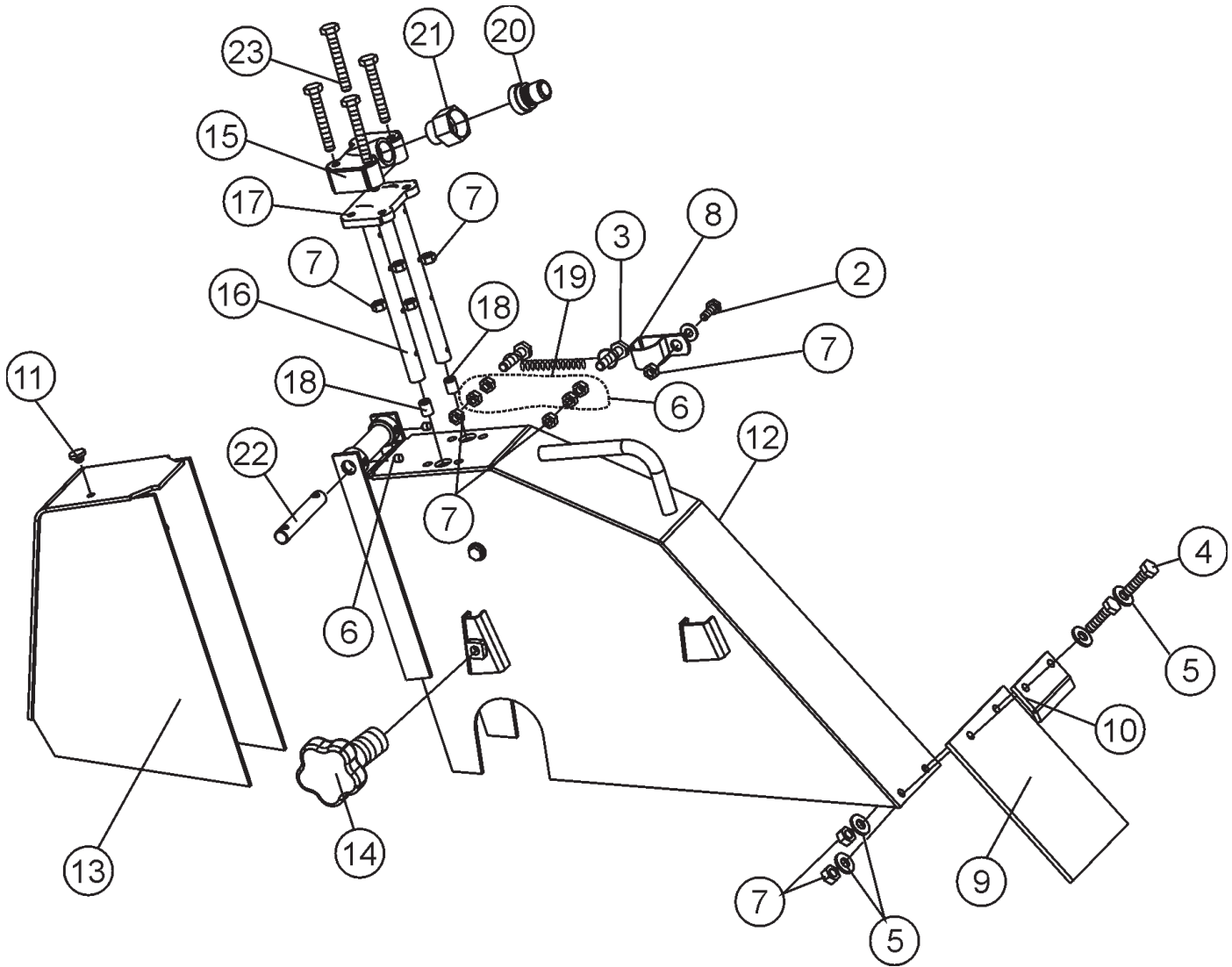
## FS2/FS2SP CONCRETE SAW — BLADE GUARD 14-INCH ASSY.

### BLADE GUARD 14-INCH ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	130A	SCREW, SHS 1/4-20 X 1/4	2	
2	131A	SCREW, SHS 1/4-20 X 3/4	2	
3	0424	SCREW, SHS 1/4-20 X 1-1/4	2	
4	0730	SCREW, SHS 1/4-20 X 1	2	
5	0948	WASHER, FLAT 1/4 SAE	6	
6	0949	NUT, HEX FINISH 1/4-20	4	
7	10024	NUT, NYLOC 1/4-20	14	
8	11505	CLAMP, HOSE SUPPORT 1/2 INCH LG	2	
9	15005	GUARD, BLADE 14" BODY W/A	1	
10	15043	FLAP, NEOPRENE WATER SHIELD	1	
11	15086	NOZZLE, 5 GPH 80 DEG. SPRAY ANGLE	2	
12	15096	ANGLE, SPLASH GUARD	1	
13	15151	GUARD, BLADE 14" DOOR W/A	1	
14	15161	STOP, RUBBER BUMPER	1	
15	15503	KNOB, COMFORT GRIP	1	
16	15504	MANIFOLD (CIPSA)	2	
17	15507	GASKET, MANIFOLD FLOOD	1	
18	15508	PLUG (CIPSA)	2	
19	15509	SPRING, CENTURY SPRING	1	
20	15562	GASKET, MANIFOLD	1	
21	15770	FITTING, 3/4 HOSE QUICK REL MALE	2	
22	15842	FITTING, 1/2 MP-3/4 F HOSE	2	
23	15867	TUBE, FLOOD 14"	2	
24	25023	PIN, HINGE 1/2 X 3.22	1	
25	26250	SCREW, HHC 1/4-20 X 1-3/4	8	

# FS2/FS2SP CONCRETE SAW — BLADE GUARD 20-INCH ASSY.

BLADE GUARD 20-INCH ASSY.



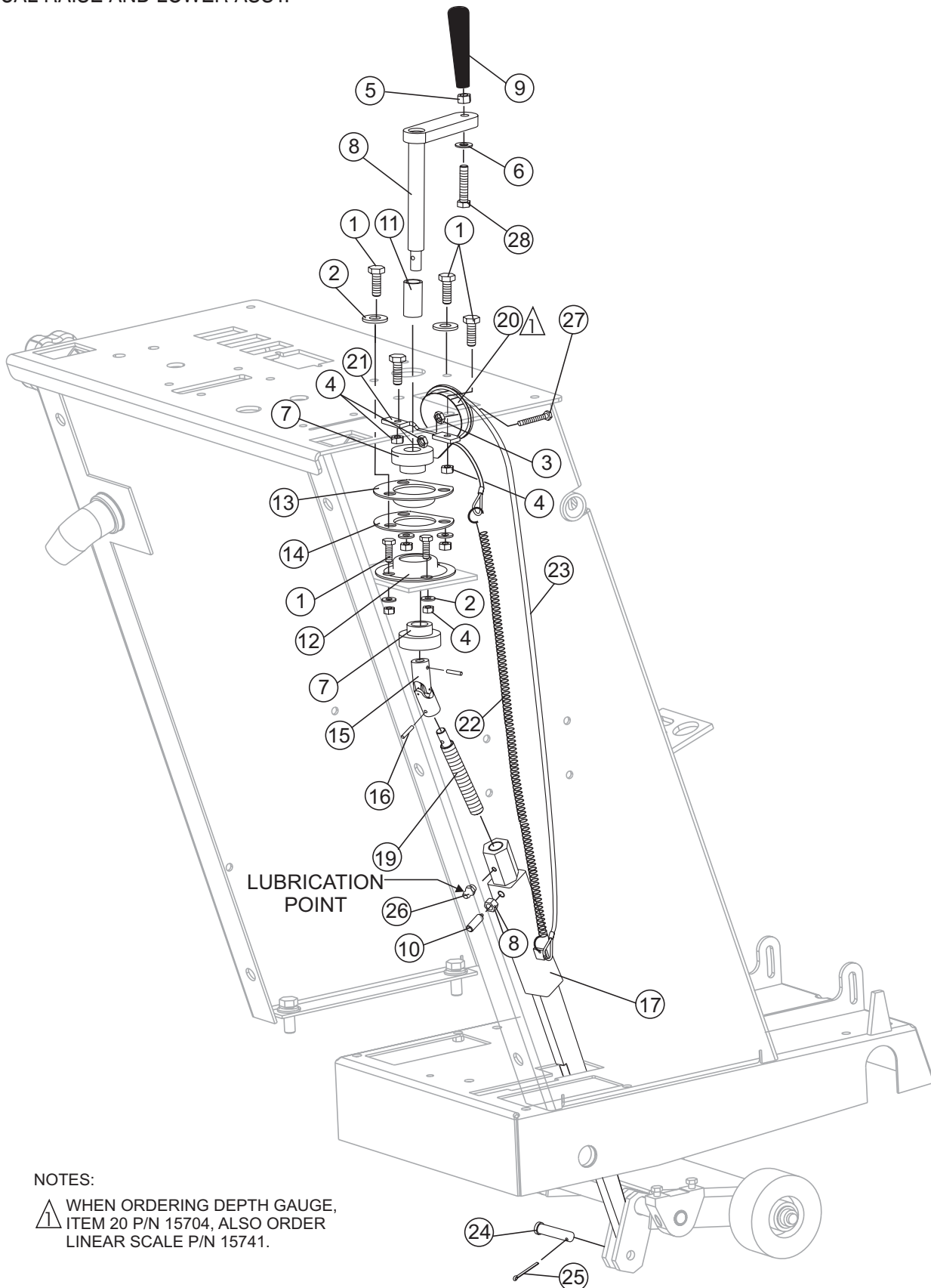
# FS2/FS2SP CONCRETE SAW — BLADE GUARD 20 -INCH ASSY.

## BLADE GUARD 20-INCH ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	130A	SCREW, SHS 1/4-20 X 1/4	2	
2	131A	SCREW, SHS 1/4-20 X 3/4	2	
3	0424	SCREW, SHS 1/4-20 X 1-1/4	2	
4	0730	SCREW, SHS 1/4-20 X 1	2	
5	0948	WASHER, FLAT 1/4 SAE	6	
6	0949	NUT, HEX FINISH 1/4-20	4	
7	10024	NUT, NYLOC 1/4-20	10	
8	11505	CLAMP, HOSE SUPPORT 1/2 INCH LG	2	
9	15043	FLAP, NEOPRENE WATER SHIELD	1	
10	15096	ANGLE, SPLASH GUARD	1	
11	15161	STOP, RUBBER BUMPER	1	
12	15462	GUARD, BLADE 20" BODY W/A	1	
13	15463	GUARD, BLADE 20" DOOR W/A	1	
14	15503	KNOB, COMFORT GRIP	1	
15	15504	MANIFOLD (CIPSA)	1	
16	15506	TUBE, FLOOD	2	
17	15507	GASKET, MANIFOLD FLOOD	1	
18	15508	PLUG (CIPSA)	2	
19	15509	SPRING, CENTURY SPRING	1	
20	15770	FITTING, 3/4 HOSE QUICK REL MALE	1	
21	15842	FITTING, 1/2 MP-3/4 F HOSE	1	
22	25023	PIN, HINGE 1/2 X 3.22	1	
23	26250	SCREW, HHC 1/4-20 X 1-3/4	4	

# FS2/FS2SP CONCRETE SAW — MANUAL RAISE AND LOWER ASSY.

## MANUAL RAISE AND LOWER ASSY.



### NOTES:

- ⚠ WHEN ORDERING DEPTH GAUGE, ITEM 20 P/N 15704, ALSO ORDER LINEAR SCALE P/N 15741.

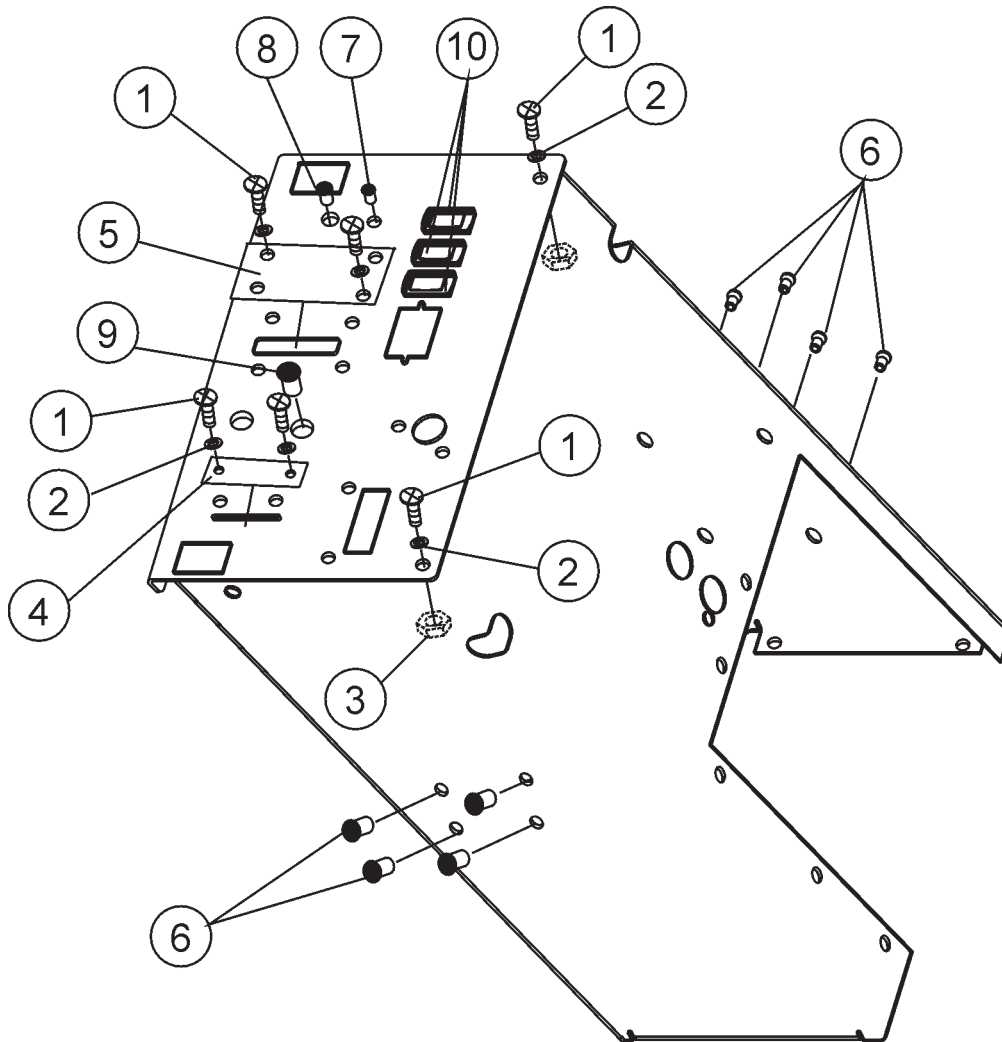
# FS2/FS2SP CONCRETE SAW — MANUAL RAISE AND LOWER ASSY.

## MANUAL RAISE AND LOWER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	0131A	SCREW, HHC 1/4 -20 X 3/4	8	
2	0948	WASHER, FLAT, 1/4 SAE	12	
3	0949	NUT, HEX FINISH 1/4- 20	1	
4	10024	NUT, NYLOC 1/4 - 20	9	
5	10133	NUT, NYLOC 3/8 - 20	1	
6	10136	WASHER, FLAT 3/8 SAE	1	
7	11149	BEARING, SB-204-12	2	
8	1456	NUT, HEX FINISH 3/8-16	1	
9	15050	KNOB, 3/8 - 16 X 2, 1" OD, 3.88L	1	
10	15054	PLUNGE, BALL	1	
11	15089	SPACER, DEPTH ADJUSTER	1	
12	15170	FLANGE, BEARING 47-3- MFM	1	
13	15188	FLANGE, BEARING 47-3- MFM, MOD	1	
14	15189	FLANGE, BEARING SUPPORT	1	
15	15238	U- JOINT	1	
16	15239	PIN SPRING 0.1875 X 1.00 HARDENED	2	
17	15290	RAISE / LOWER W/A	1	
18	15294	HANDLE, W / A	1	
19	15336	SCREW, ACME, LEFT HAND	1	
20	15704	GAUGE, DEPTH .....	1	..... ORDER LINEAR SCALE P/N 15741
21	15708	BRACKET, DEPTH GAUGE	1	
22	15717	SPRING, EXTENSION 5L X 0.25D X .0388	1	
23	15738	CABLE ASM, DEPTH GAUGE	1	
24	19988	PIN, CLEVIS 1/2 X 1.75 EFF	1	
25	2219	PIN, COTTER 1/8 X 1-1/2	1	
26	2621	ZERK, GREASE STR 1/4 - 28	1	
27	26385	SCREW, HHC 1/4 - 20 X 2-1/4 GRD 8	1	

# FS2/FS2SP CONCRETE SAW — PLUG KIT (PUSH) ASSY.

PLUG KIT (PUSH) ASSY.



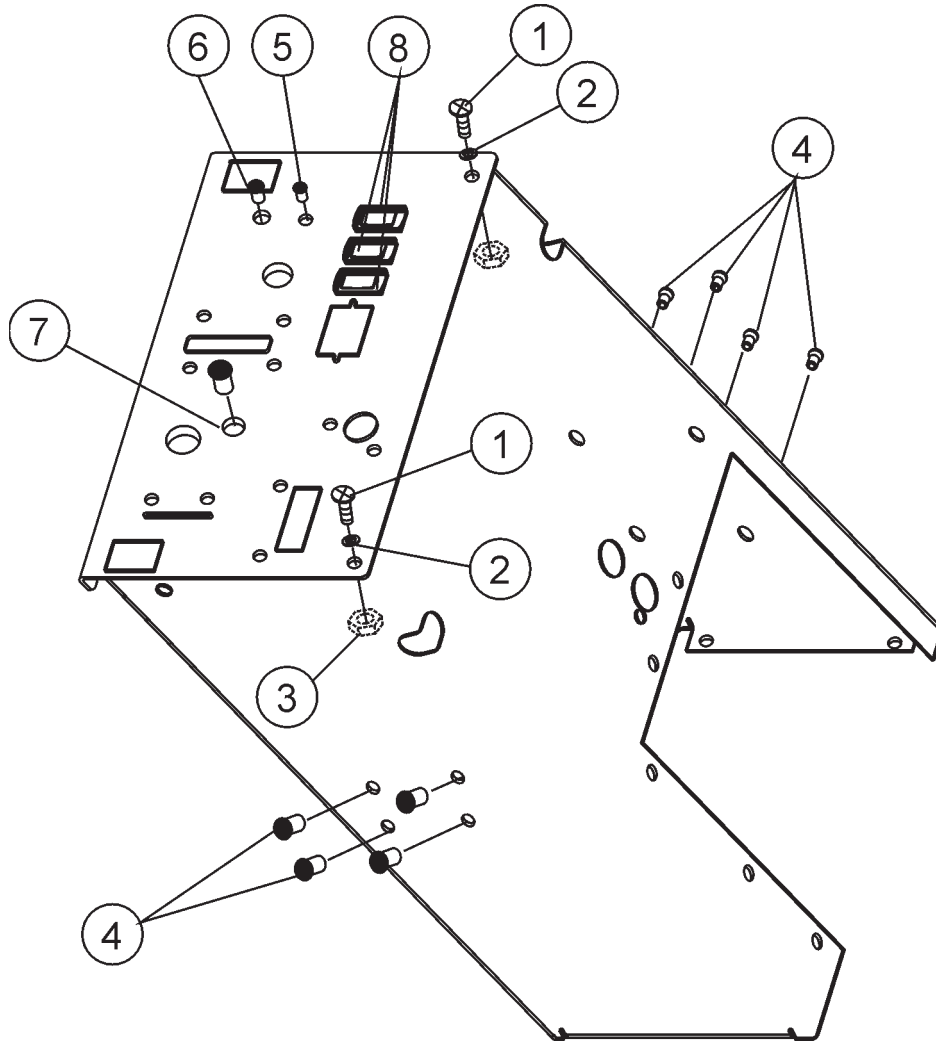
## FS2/FS2SP CONCRETE SAW — PLUG KIT (PUSH) ASSY.

### PLUG KIT (PUSH) ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	0916	SCREW, HHC RHM 1/4-20 X 3/4	8	
2	0948	WASHER, FLAT	8	
3	10024	NUT, NYLOC 1/4-20	8	
4	15208	COVER, PROPEL LEVEL FS2	1	
5	15339	COVER, FS2 ENGAGE HOLE	1	
6	15340	PLUG, 0.65 DIA X 14 GA, BLACK	8	
7	15341	PLUG, 0.44 DIA X 14 GA, BLACK	1	
8	15342	PLUG, 0.38 DIA X 14 GA, BLACK	1	
9	15345	PLUG, 0.28 DIA X 14 GA, BLACK	1	
10	15553	SWITCH, BLANK	3	

# FS2/FS2SP CONCRETE SAW — PLUG KIT (SELF PROPELLED) ASSY.

PLUG KIT (SELF PROPELLED) ASSY.





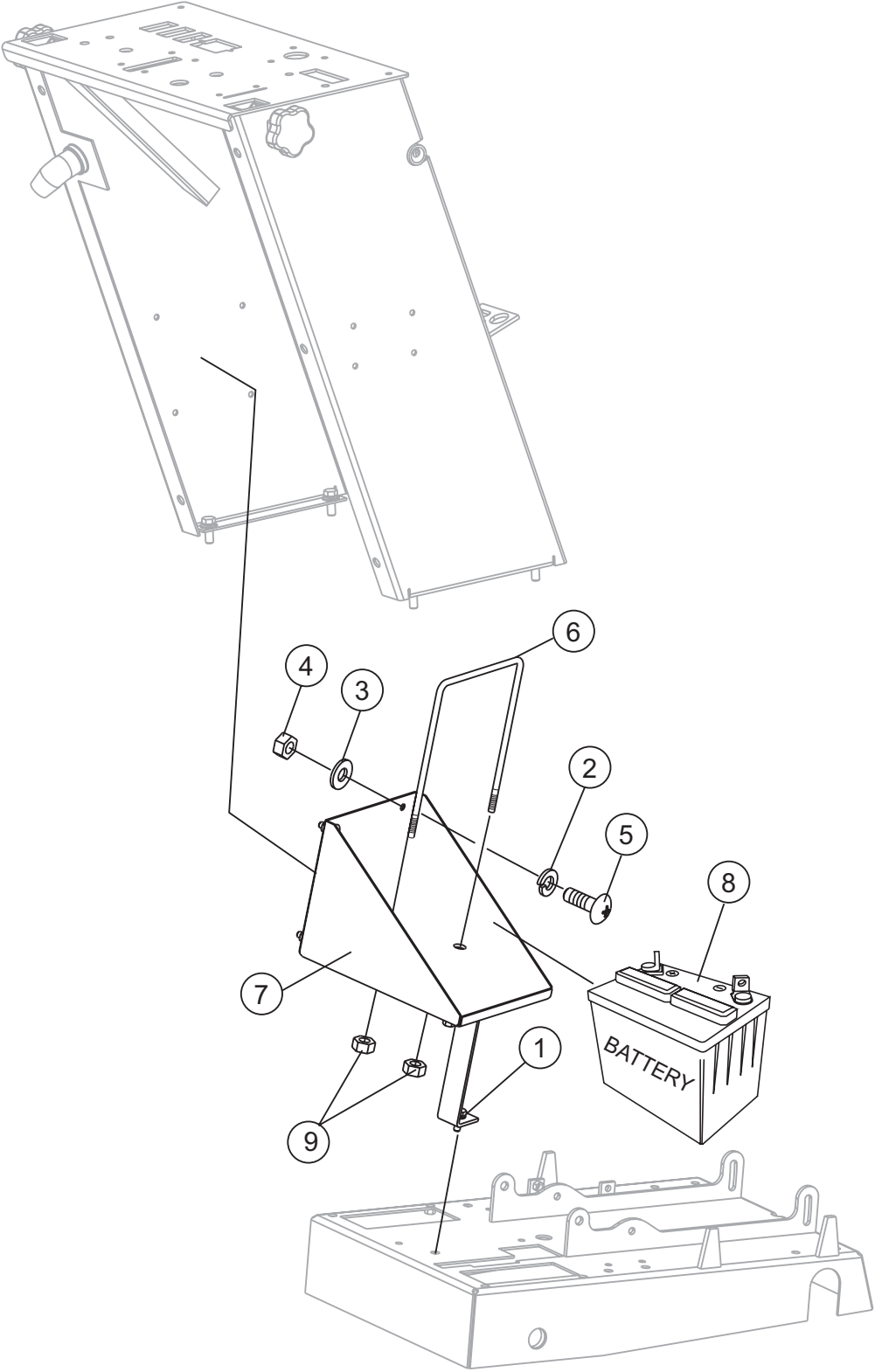
# FS2/FS2SP CONCRETE SAW — PLUG KIT (SELF PROPELLED) ASSY.

## PLUG KIT (SELF PROPELLED) ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	0916	SCREW, HHC RHM 1/4-20 X 3/4	2	
2	0948	WASHER, FLAT	2	
3	10024	NUT, NYLOC 1/4-20	2	
4	15340	PLUG, 0.65 DIA X 14 GA, BLACK	8	
5	15341	PLUG, 0.44 DIA X 14 GA, BLACK	1	
6	15342	PLUG, 0.38 DIA X 14 GA, BLACK	1	
7	15345	PLUG, 0.28 DIA X 14 GA, BLACK	1	
8	15553	SWITCH, BLANK	3	

# FS2/FS2SP CONCRETE SAW — BATTERY BOX ASSY.

BATTERY BOX ASSY.



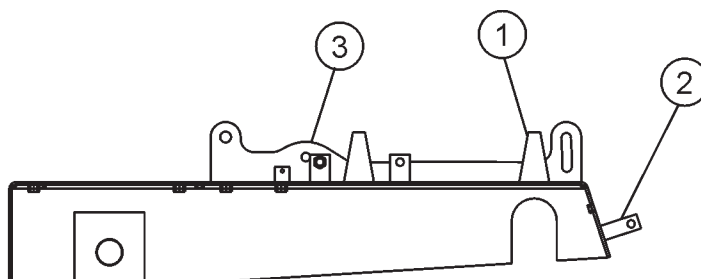
# FS2/FS2SP CONCRETE SAW — BATTERY BOX ASSY.

## BATTERY BOX ASSY.

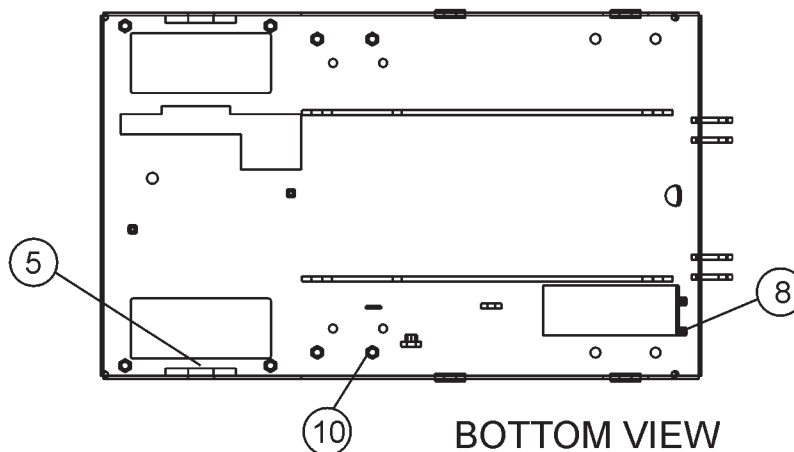
NO	PART NO	PART NAME	QTY.	REMARKS
1	0131A	SCREW, HHC 1/4-20 X 3/4	1	
2	0181B	WASHER, LOCK 1/4 MED	5	
3	0948	WASHER, FLAT 1/4 SAE	4	
4	10024	NUT, NYLOC 1/4-20	4	
5	12287	SCREW, THP 1/4-20 X 3/4 SS	4	
6	15237	U-BOLT 1/4-20 THREAD	1	
7	15273	BOX, BATTERY	1	
8	4671	BATTERY, GR. UI WET W/TAG	1	
9	XXXX	NUT	2	

# FS2/FS2SP CONCRETE SAW — PLATFORM (BARE) ASSY.

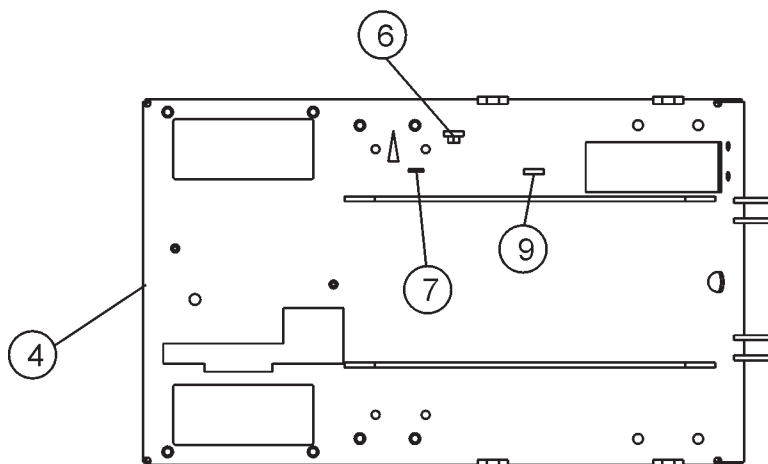
PLATFORM (BARE) ASSY.



SIDE VIEW



BOTTOM VIEW



TOP VIEW

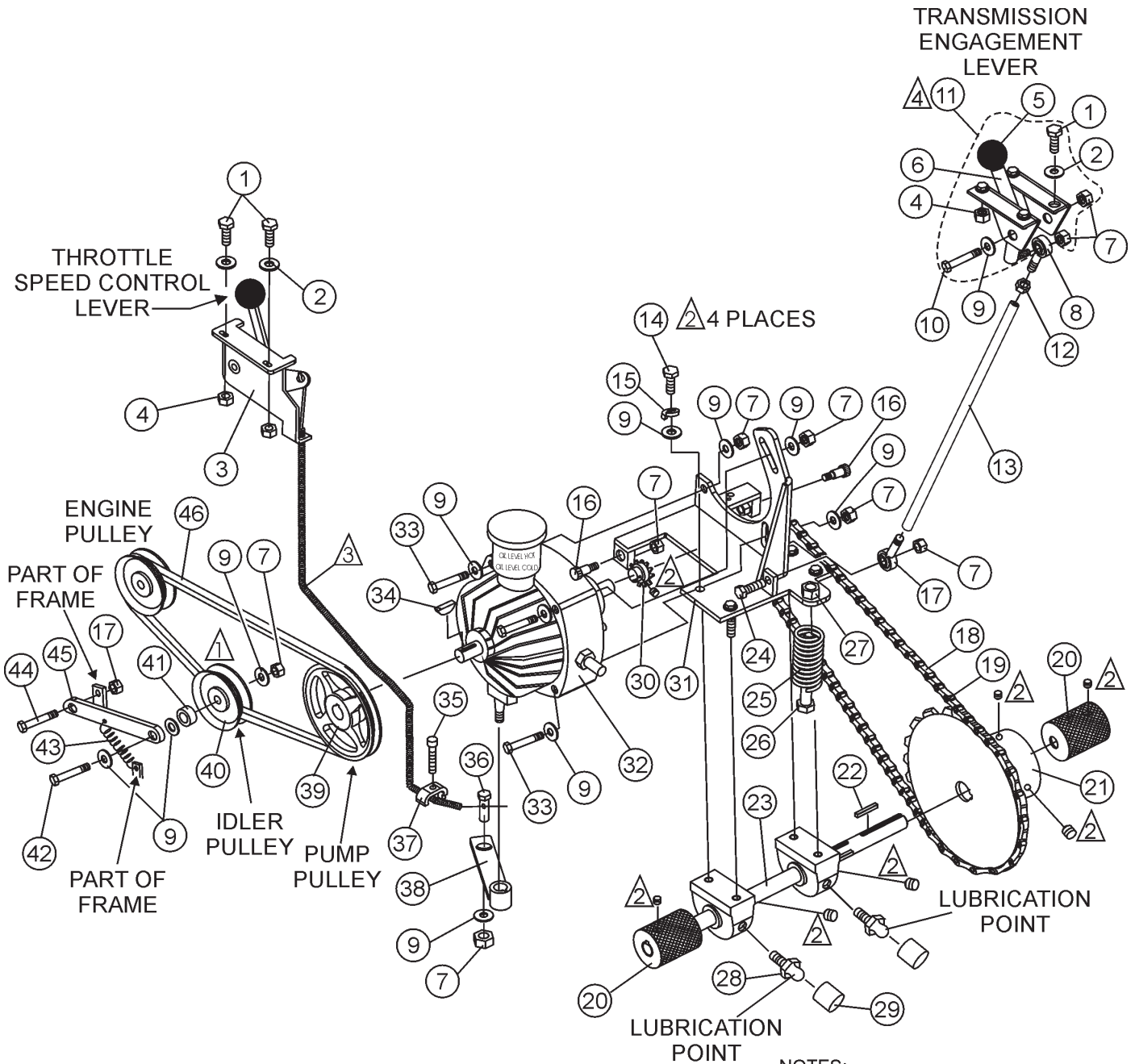
## FS2/FS2SP CONCRETE SAW — PLATFORM (BARE) ASSY.

### PLATFORM (BARE) ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	15035	MOUNT, BLADE GUARD BAYONET	4	
2	15069	MOUNT, FRONT POINTER	4	
3	15296	MOUNT, ENGINE/TRANS SIDE	2	
4	15303	PLATFORM	1	
5	15308	SUPPORT, REAR AXLE	2	
6	15453	PLATE, MOUNT, BELT COVER	1	
7	15455	TAB, SPRING IDLER	1	
8	15666	NUT, WELD 1/4-20, SQ NP	4	
9	15672	TAB, IDLER MOUNT	1	
10	20530	NUT, WELD, HEX LOCK 3/8-16	9	

# FS2/FS2SP CONCRETE SAW — TRANSMISSION ASSY.

## TRANSMISSION ASSY.



### NOTES:

- ⚠ **DO NOT** OVER TIGHTEN. IDLER PULLEY SHOULD BE FREE TO MOVE.
- ⚠ USE LOCTITE P/N 60091 (BLUE).
- ⚠ THROTTLE CABLE INCLUDED WITH HANDLE, ITEM 3.
- ⚠ ITEMS WITHIN DASHED LINES ARE FOR COMPLETE TRANSMISSION DISENGAGE LEVER ASSY. USE P/N 15193.

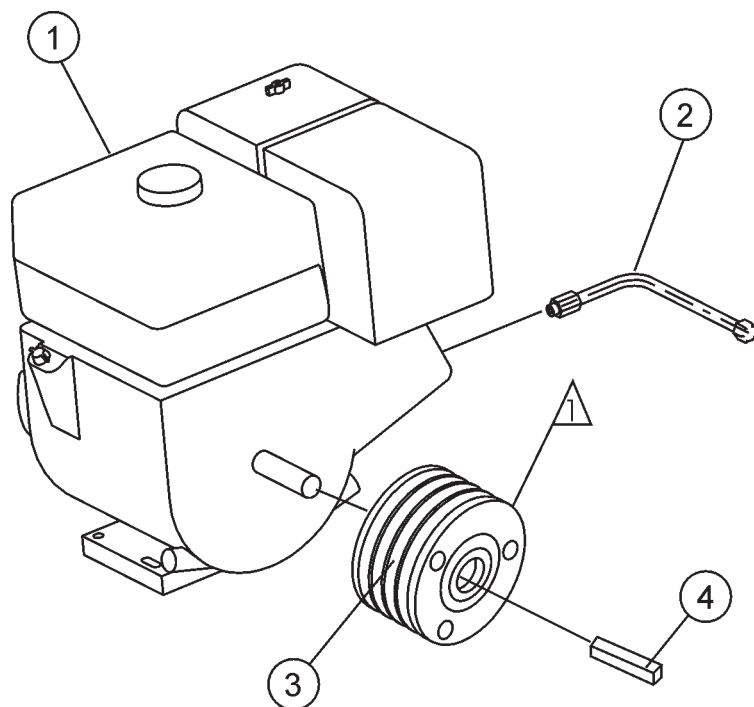
# FS2/FS2SP CONCRETE SAW — TRANSMISSION ASSY.

## TRANSMISSION ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	0131A	SCREW, SHS 1/4-20 X 1/4	6	
2*	0948	WASHER, FLAT	2	
3	15168	HANDLE, THROTTLE HYD. SPEED CTRL.	1	
4*	10024	NUT, NYLOC 1/4-20	2	
5*	4403	KNOB, CONTROL	1	
6*	15197	HANDLE, W/A TRANS. DISENGAGE	1	
7*	10133	NUT, NYLOC 3/8-16	10	
8	15187	ROD END, 3/8-24 MALE LH	1	
9*	10136	WASHER, FLAT 3/8 SAE	10	
10*	1493	SCREW, HHC 3/8-16 X 3-1/4	1	
11	15193	TRANSMISSION DISENGAGE ASSY.....	1	INCLUDES ITEMS W/*
12	5023B	NUT, HEX FINISH 3/8-24	1	
13	15275	ROD, 14.0 LENGTH 3/8-24 RH/LH FEMALE	1	
14	0205	SCREW, HHC 3/8-16 X 1	4	
15	0166A	WASHER, LOCK 3/8 MED	4	
16	25007	BOLT, SHOULDER 1/2 X 3/4 PLT	2	
17	2063	ROD END, 3/8-24 MALE RH	1	
18	15199	CHAIN, ROLLER #40, 51P	1	
19	15391	CONNECTOR LINK #40 CHAIN	1	
20	15330	GEAR, SPLINE 2.0 DIA X 2.5 L	2	
21	15145	SPROCKET 40 BS 36 X 3/4	1	
22	0627	KEY, SQUARE 3/16 X 1-1/4	3	
23	15329	SHAFT, TRANSMISSION 0.75 DIA X 15.8L	1	
24	1023	SCREW, HHC 3/8-16 X 1-1/4	1	
25	15196	SPRING, TRANS 1.22 X 3.00 80-100 LB/IN	1	
26	8087	SCREW, HHC 1/2-13 X4	1	
27	10176	NUT, NYLOC 1/2-13	1	
28	2621	ZERK FITTING	2	
29	1162A	CAP, ZERK FITTING	2	
30	15360	SPROCKET, 40BS10 X 17 MM X 1/8	1	
31	15327	MOUNT, TRANSMISSION W/A	1	
32	15354	TRANSMISSION, EATON MODEL 700-044	1	
33	1493	SCREW, HHC 3/8-16 X 3-1/4	3	
34	1578	KEY, WOODRUFF #3	2	
35	10018	SCREW, SHC 10-32 X 1	1	
36	15169	RETAINER, THROTTLE	1	
37	3455	CABLE CLAMP	1	
38	15395	CONTROL, PUMP W/A	1	
39	15146	PULLEY OK 50 X 17 -3/16 KEY	1	
40	10935	PULLEY, IDLER - EFSON - SEE EXT DE	1	
41	15454	SPACER IDLER	1	
42	1665	SCREW, HHC 3/8-16 X 2	1	
43	15788	SPRING, 2.5L X 0.5D X 0.0DD DIA	1	
44	1284	SCREW, HHC 3/8-16 X 1-1/2	1	
45	15452	ARM, IDLER	1	
46	15432	BELT, 3L ACCU-LINK.....	1	INSTRUCTION SHEET INCLUDED

# FS2/FS2SP CONCRETE SAW — ENGINE ASSY.

ENGINE ASSY.



## NOTES:

 USE LOCTITE 271 ON ALL SET SCREWS.



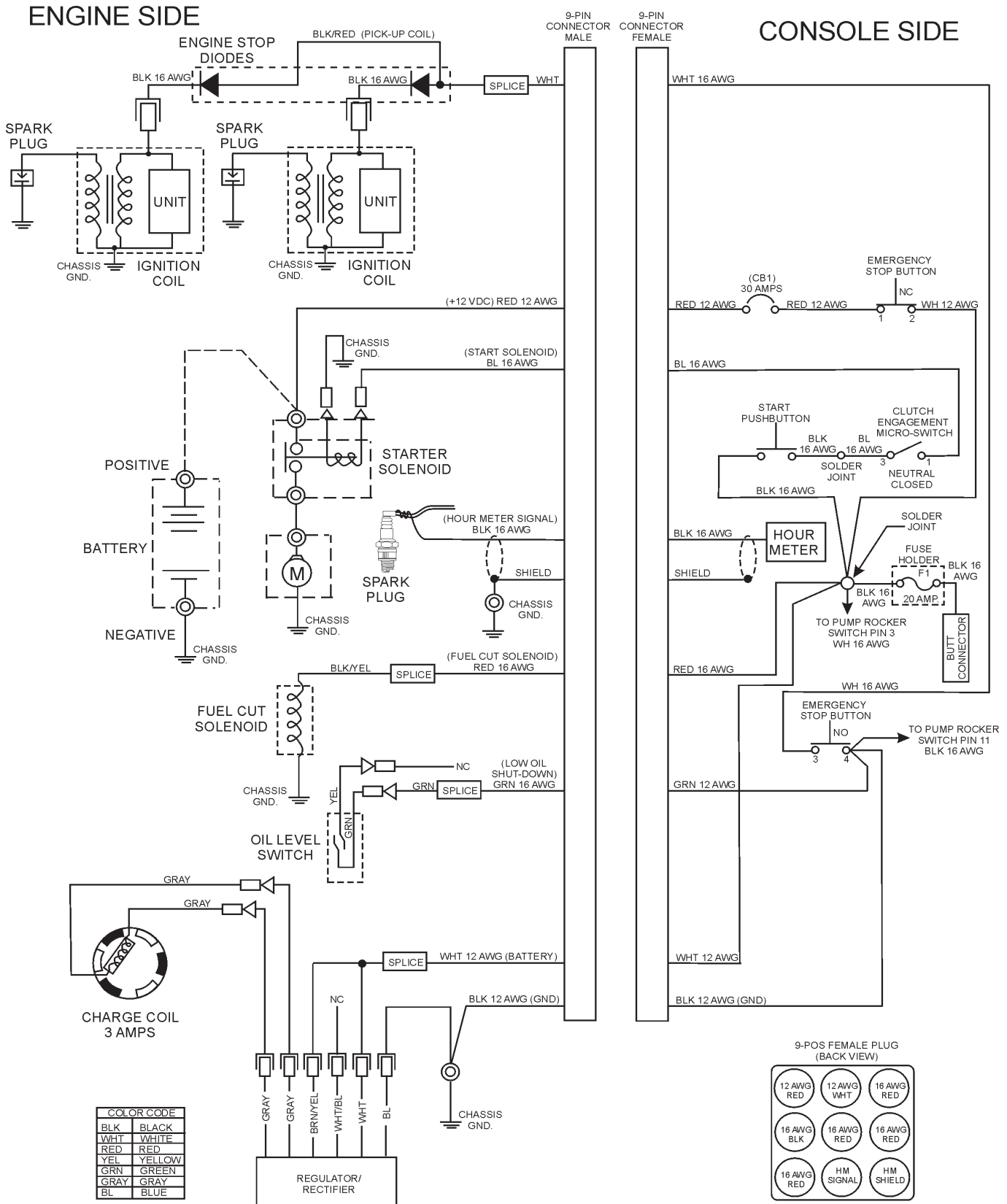
# FS2/FS2SP CONCRETE SAW — ENGINE ASSY.

## ENGINE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	15511	ENGINE, 8.5HP KOHLER COMMAND	1	
1	15101	ENGINE, 9HP HONDA GX270K1QXC9	1	
1	15243	ENGINE, 20HP HONDA GX620TXF2	1	
1	15103	ENGINE, 13HP HONDA GX390K1QXC9	1	
2	15535	OIL DRAIN ASSY.	1	
3	15059	PULLEY, TL 3V 4.12" OD	1	
4	6059B	KEY, 1/4"SQ. X 2"	1	

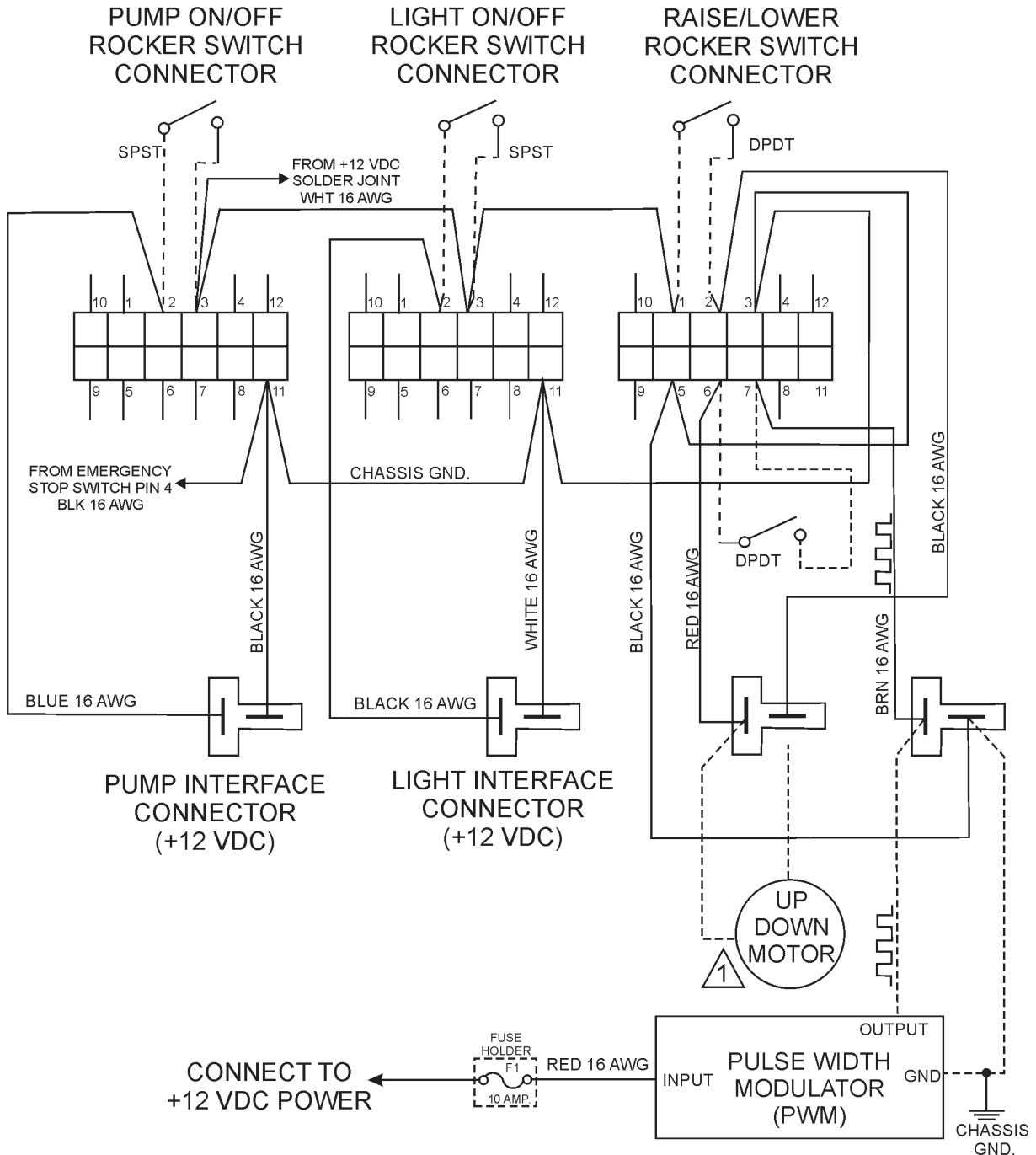
# FS2/FS2S CONCRETE SAW — WIRING DIAGRAM (ENGINE/CONSOLE)

## FS2/FS2SP ELECTRIC START WIRING DIAGRAM



# FS2/FS2S CONCRETE SAW — WIRING DIAGRAM ROCKER SWITCHES

## FS2/FS2SP ELECTRIC START WIRING DIAGRAM (ROCKER SWITCHES)



NOTES:  
 THE RAISE/LOWER (CUTTING BLADE) CAPABILITY IS AN OPTION. CONTACT MULTIQUIP SALES DEPT. REGARDING THIS FEATURE.

**PAYMENT TERMS**

Terms of payment for parts are net 30 days.

**FREIGHT POLICY**

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

**MINIMUM ORDER**

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

**RETURNED GOODS POLICY**

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
  - a. The parts numbers and descriptions must match the current parts price list.
  - b. The list must be typed or computer generated.
  - c. The list must state the reason(s) for the return.
  - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
  - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.
5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
  - a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
  - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
  - c. Any line item with an extended dealer net price of less than \$5.00.
  - d. Special order items.
  - e. Electrical components.
  - f. Paint, chemicals, and lubricants.
  - g. Decals and paper products.
  - h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

**PRICING AND REBATES**

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

**SPECIAL EXPEDITING SERVICE**

A \$35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

**LIMITATIONS OF SELLER'S LIABILITY**

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

**LIMITATION OF WARRANTIES**

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.



# PARTS AND OPERATION MANUAL

## **HERE'S HOW TO GET HELP**

*PLEASE HAVE THE MODEL AND SERIAL NUMBER  
ON-HAND WHEN CALLING*

### **PARTS DEPARTMENT**

*800-427-1244 or 310-537-3700*

*FAX: 800-672-7877 or 310-637-3284*

### **SERVICE DEPARTMENT/TECHNICAL ASSISTANCE**

*800-478-1244 or 310-537-3700*

*FAX: 310- 537-4259*

### **WARRANTY DEPARTMENT**

*888-661-4279, or 310-661-4279*

*FAX: 310- 537-1173*

### **MAIN**

*800-421-1244 or 310-537-3700*

*FAX: 310-537-3927*



#### **MULTIQUIP INC.**

POST OFFICE BOX 6254

CARSON, CA 90749

310-537-3700 • 800-421-1244

FAX: 310-537-3927

E-MAIL: [mq@multiquip.com](mailto:mq@multiquip.com)

WWW: [multiquip.com](http://multiquip.com)

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