

# STANLEY®

## GPV13 V SERIES HYDRAULIC POWER UNIT



**USER MANUAL**  
Safety, Operation and Maintenance





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## IMPORTANT

To fill out a Product Warranty Recording form, and for information on your warranty, visit [Stanleyhydraulic.com](http://Stanleyhydraulic.com) and select the Warranty tab.  
**(NOTE:** The warranty recording form must be submitted to validate the warranty).

**SERVICING:** This manual contains safety, operation, and routine maintenance instructions. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

## ⚠ WARNING

**SERIOUS INJURY OR DEATH COULD RESULT FROM THE IMPROPER REPAIR OR SERVICE OF THIS TOOL.**

**REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.**

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at (503-659-5660) and ask for a Customer Service Representative.



# SAFETY PRECAUTIONS

Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the equipment.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing general maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided in this manual.

In addition to this manual, read and understand safety and operating instructions in the Engine Operation Manual furnished with the power unit.

The GPV13 Hydraulic Power Unit will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the Power Unit. Failure to do so could result in personal injury or equipment damage.

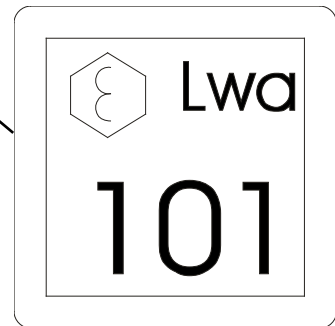


- Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Establish a training program for all operators to ensure safe operation.
- Do not operate the power unit unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, ear, head protection, and safety shoes at all times when operating the power unit and a hydraulic tool.
- Do not inspect or clean the power unit while it is running. Accidental engagement of the unit can cause serious injury.
- Always use hoses and fittings rated at 2500 psi/172 bar with a 4 to 1 safety factor. Be sure all hose connections are tight.
- Be sure all hoses are connected for correct flow direction to and from the tool being used.
- Do not inspect hoses and fittings for leaks by using bare hands. "Pin-hole" leaks can penetrate the skin.
- NEVER OPERATE THE POWER UNIT IN A CLOSED SPACE. Inhalation of engine exhaust can be fatal.
- Do not operate a damaged, improperly adjusted power unit.
- Never wear loose clothing that can get entangled in the working parts of the power unit.
- Keep all parts of your body away from the working parts of the power unit.
- Keep clear of hot engine exhaust.
- Do not add fuel to the power unit while the power unit is running or is still hot.
- Do not operate the power unit if gasoline odor is present.
- Do not use flammable solvents around the power unit engine.
- Do not operate the power unit within 3.3 ft/1 m of buildings, obstructions or flammable objects.
- Do not reverse tool rotation direction by changing fluid flow direction.
- Allow power unit engine to cool before storing in an enclosed space.
- Always keep critical tool markings, such as labels and warning stickers legible.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.
- Warning: Use of this tool on certain materials during demolition could generate dust potentially containing a variety of hazardous substances such as asbestos, silica or lead. Inhalation of dust containing these or other hazardous substances could result in serious injury, cancer or death. Protect yourself and those around you. Research and understand the materials you are cutting. Follow correct safety procedures and comply with all applicable national, state or provisional health and safety regulations relating to them, including, if appropriate arranging for the safe disposal of the materials by a qualified person.

# TOOL STICKERS & TAGS



**V SERIES**



<b>⚠ DANGER</b>		 <b>CE</b>
	Use in well ventilated areas only. Exhaust contains chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.	
	Contact with high pressure fluid at leak or burst resulting from improper handling, operation, or maintenance will cause oil injection to body.	
	Engine, exhaust, and other surfaces of tool may be hot. Avoid accidental contact with hot surfaces. Allow tool to cool before maintenance or storage.	
	All operators must read, understand, and follow ALL safety precautions and operating instructions found in owner's manual before operating tool.	

Safety Tag wire tied to power unit

DANGER
<ol style="list-style-type: none"> <li>FAILURE TO USE HYDRAULIC HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY. BEFORE USING HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE ON OR NEAR ELECTRICAL LINES BE SURE THE HOSE IS MAINTAINED AS NON-CONDUCTIVE. THE HOSE SHOULD BE REGULARLY TESTED FOR ELECTRIC CURRENT LEAKAGE IN ACCORDANCE WITH YOUR SAFETY DEPARTMENT INSTRUCTIONS.</li> <li>A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.             <ol style="list-style-type: none"> <li>DO NOT EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.</li> <li>DO NOT EXCEED RATED WORKING PRESSURE OF HYDRAULIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.</li> <li>CHECK TOOL HOSE COUPLERS AND CONNECTORS DAILY FOR LEAKS. DO NOT FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.</li> </ol> </li> </ol>
IMPORTANT
<p>READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.</p> <p>USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.</p> <p>TAG TO BE REMOVED ONLY BY TOOL OPERATOR.</p> <p>SEE OTHER SIDE</p>

DANGER
<ol style="list-style-type: none"> <li>DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KNEED, TORN OR DAMAGED HOSE.</li> <li>MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL. IN PORT SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED TO TOOL. "OUT" PORT REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN RESULT IN SEVERE PERSONAL INJURY.</li> <li>DO NOT CONNECT OPEN CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.</li> <li>BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.</li> <li>WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.</li> <li>TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR, MAINTENANCE AND SERVICE MUST ONLY BE PERFORMED BY AUTHORIZED AND PROPERLY TRAINED PERSONNEL.</li> </ol>
IMPORTANT
<p>READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.</p> <p>USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.</p> <p>TAG TO BE REMOVED ONLY BY TOOL OPERATOR.</p> <p>SEE OTHER SIDE</p>

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system. There are three types of hydraulic hose that meet this requirement and are authorized for use with Stanley Hydraulic Tools. They are:

**Certified non-conductive** — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *Hose labeled **certified non-conductive** is the only hose authorized for use near electrical conductors.*

**Wire-braided** (conductive) — constructed of synthetic rubber inner tube, single or double wire braid reinforcement, and weather resistant synthetic rubber cover. *This hose is **conductive** and must never be used near electrical conductors.*

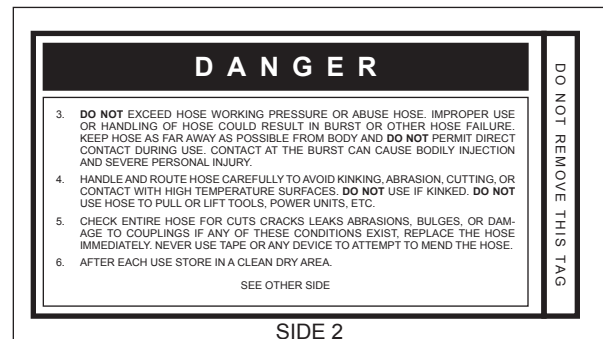
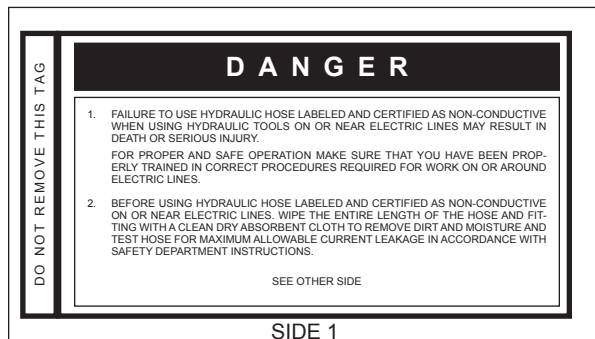
**Fabric-braided** (not certified or labeled non-conductive) — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical conductors.*

## HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hose purchased from Stanley Hydraulic tools. **DO NOT REMOVE THESE TAGS.**

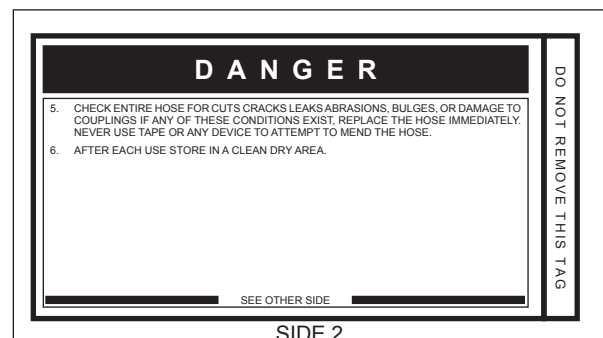
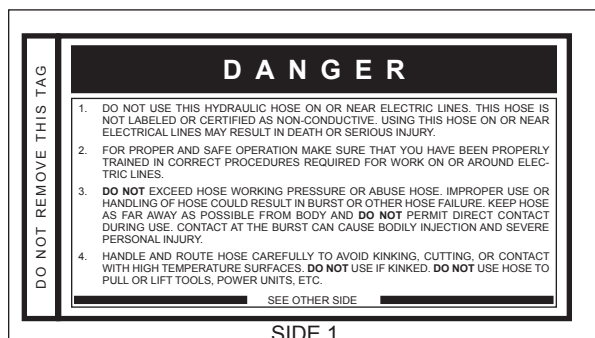
If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

### THE TAG SHOWN BELOW IS ATTACHED TO “CERTIFIED NON-CONDUCTIVE” HOSE



(Shown smaller than actual size)

### THE TAG SHOWN BELOW IS ATTACHED TO “CONDUCTIVE” HOSE.



(Shown smaller than actual size)

# HOSE RECOMMENDATIONS

## Tool to Hydraulic Circuit Hose Recommendations

The chart to the right shows recommended minimum hose diameters for various hose lengths based on gallons per minute (gpm)/liters per minute (lpm). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

This chart is intended to be used for hydraulic tool applications only based on Stanley Hydraulic Tools tool operating requirements and should not be used for any other applications.

All hydraulic hose must have at least a rated minimum working pressure equal to the maximum hydraulic system relief valve setting.

**All hydraulic hose must meet or exceed specifications as set forth by SAE J517.**

Oil Flow		Hose Lengths		Inside Diameter		USE (Press/Return)	Min. Working Pressure	
GPM	LPM	FEET	METERS	INCH	MM		PSI	BAR
<b>Certified Non-Conductive Hose - Fiber Braid - for Utility Bucket Trucks</b>								
4-9	15-34	up to 10	up to 3	3/8	10	Both	2250	155
<b>Conductive Hose - Wire Braid or Fiber Braid -DO NOT USE NEAR ELECTRICAL CONDUCTORS</b>								
4-6	15-23	up to 25	up to 7.5	3/8	10	Both	2500	175
4-6	15-23	26-100	7.5-30	1/2	13	Both	2500	175
5-10.5	19-40	up to 50	up to 15	1/2	13	Both	2500	175
5-10.5	19-40	51-100	15-30	5/8	16	Both	2500	175
5-10.5	19-40	100-300	30-90	5/8	16	Pressure	2500	175
10-13	38-49	up to 50	up to 15	3/4	19	Return	2500	175
10-13	38-49	51-100	15-30	5/8	16	Both	2500	175
10-13	38-49	100-200	30-60	3/4	19	Pressure	2500	175
13-16	49-60	up to 25	up to 8	5/8	16	Pressure	2500	175
13-16	49-60	26-100	8-30	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175
				5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
				3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175

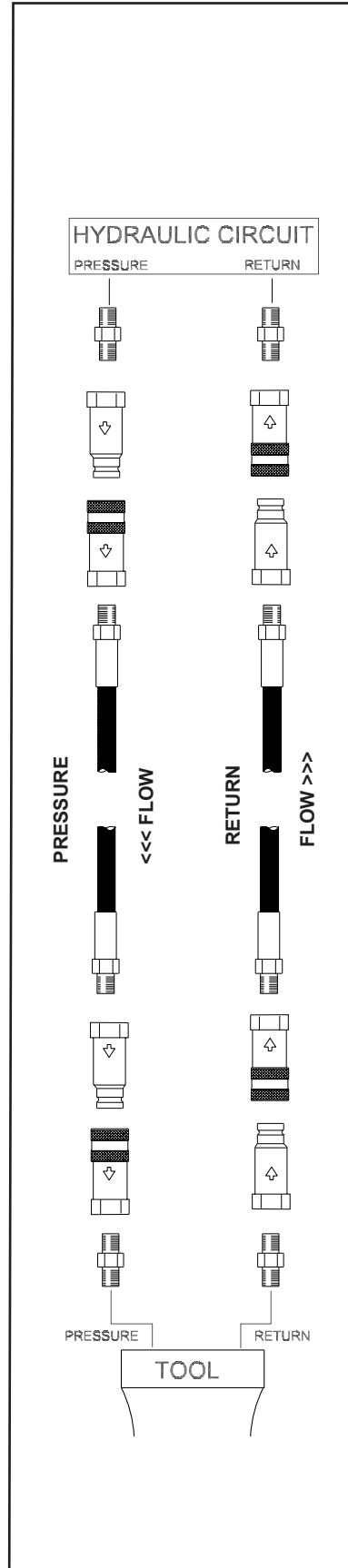


Figure 1. Typical Hose Connections



# HTMA / EHTMA REQUIREMENTS

## HTMA / EHTMA REQUIREMENTS

### HTMA

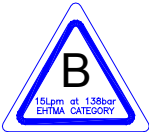




#### HYDRAULIC SYSTEM REQUIREMENTS

#### TOOL TYPE

	TYPE I	TYPE II	TYPE RR	TYPE III
Flow Range	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	9-10.5 gpm (34-40 lpm)	11-13 gpm (42-49 lpm)
Nominal Operating Pressure (at the power supply outlet)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)	2100-2250 psi (145-155 bar)
Maximum back pressure (at tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: (at min. operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
Temperature: Sufficient heat rejection capacity to limit max. fluid temperature to: (at max. expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)
<b>NOTE:</b> Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
Filter Min. full-flow filtration Sized for flow of at least: (For cold temp. startup and max. dirt-holding capacity)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)
Hydraulic fluid Petroleum based (premium grade, anti-wear, non-conductive) Viscosity (at min. and max. operating temps)	100-400 ssu*	100-400 ssu* (20-82 centistokes)	100-400 ssu*	100-400 ssu*
<b>NOTE:</b> When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				
*SSU = Saybolt Seconds Universal				

### EHTMA HYDRAULIC SYSTEM REQUIREMENTS

### CLASSIFICATION

					
Flow Range	3.5-4.3 gpm (13.5-16.5 lpm)	4.7-5.8 gpm (18-22 lpm)	7.1-8.7 gpm (27-33 lpm)	9.5-11.6 gpm (36-44 lpm)	11.8-14.5 gpm (45-55 lpm)
Nominal Operating Pressure (at the power supply outlet)	1870 psi (129 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2495 psi (172 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)

**NOTE:** These are general hydraulic system requirements. See tool specification page for tool specific requirements

# OPERATION

## PREPARATION FOR USE

Do not operate the power unit until you have read the *engine* operating and maintenance instructions manual furnished with the unit.

### 1. ENGINE CRANKCASE OIL LEVEL

Always check the engine oil level before starting the engine. Make sure the oil level is at the FULL MARK on the dipstick. Do not overfill. Use 4-stroke motor oil that meets or exceeds the requirements for API service classifications SJ or later as specified in the engine operating and maintenance manual. Refer to the engine manual for oil viscosity grade.

### 2. ENGINE FUEL LEVEL

Check the fuel level. If low, fill with unleaded gasoline with a minimum of pump octane of 86 or higher. Refer to the engine manual for details.

### 3. HYDRAULIC FLUID

Check the sight gauge on the hydraulic fluid reservoir for the proper fluid level. Use fluids meeting the following specifications.

#### VISCOSITY (FLUID THICKNESS)

U.S.	METRIC
50 °F 450 SSU Maximum	10 °C 95 C.S.
100 °F 130-200 SSU	38 °C 27-42 C.S.
140 °F 85 SSU Minimum	60 °C 16.5 C.S. Min

**Pour Point:** -10°F/-23°C Minimum (for cold startup)

**Viscosity Index:** (ASTM D-2220) 140 Minimum

**Demulsibility:** (ASTM D-1401) 30 Minutes Maximum

**Flash Point:** (ASTM D-92) 340°F/171°C Minimum

**Rust Inhibition:** (ASTM D-665 A & B) Pass

**Oxidation:** (ASTM D-943) 1000 Hours Minimum

**Pump Wear Test:** (ASTM D-2882) 60 mg Maximum

The following fluids work well over a wide temperature range, allow moisture to settle out and resist biological growth that may occur in cool operating hydraulic circuits. These fluids are recommended by Stanley Hydraulic Tools. Other fluids that meet or exceed the specifications of these fluids may also be used.

- Chevron AW-MV-32
- Exxon "Univis" J-26
- Mobil D.T.E. 13
- Gulf "Harmony" AW-HVI-150-32
- Shell "Tellus" T-32

- Texaco "Rando" HD-AZ
- Union "Unax" AW-WR-32
- Terresolve EnviroLogic 132

## 4. HYDRAULIC CONNECTIONS

The recommended hose length is 25 ft/8 m with a 1/2 inch/12.7 mm inside diameter. The hoses must have a working pressure rating of at least 2500 psi/175 bar. Each hose end must have male thread ends compatible with HTMA or EHTMA (HYDRAULIC TOOL MANUFACTURERS ASSOCIATION) quick disconnect fittings (NPT type threads). (See Figure 3.)



Figure 2. Panel Control Valve

Facing the panel control valve (see Figure 2, the left male quick disconnect fitting is the PRESSURE FLUID OUT fitting, marked with "P". The right female quick disconnect fitting is the RETURN FLUID IN fitting, marked with "T".

### QUICK DISCONNECT COUPLERS

HTMA approved quick disconnect couplings are installed to hydraulic hoses so that the direction of oil flow is always from the male to the female quick disconnect as shown in Figure 3. Quick disconnect couplings and hose fittings are selected so that additional fittings such as reducer or adapter fittings are not required.

If adapter fittings are used, they must be approved steel hydraulic fittings meeting a minimum operating pressure rating of 2500 psi/172 bar. Do not use galvanized pipe fittings or black pipe fittings.

DO NOT OVERTIGHTEN THE FITTINGS.

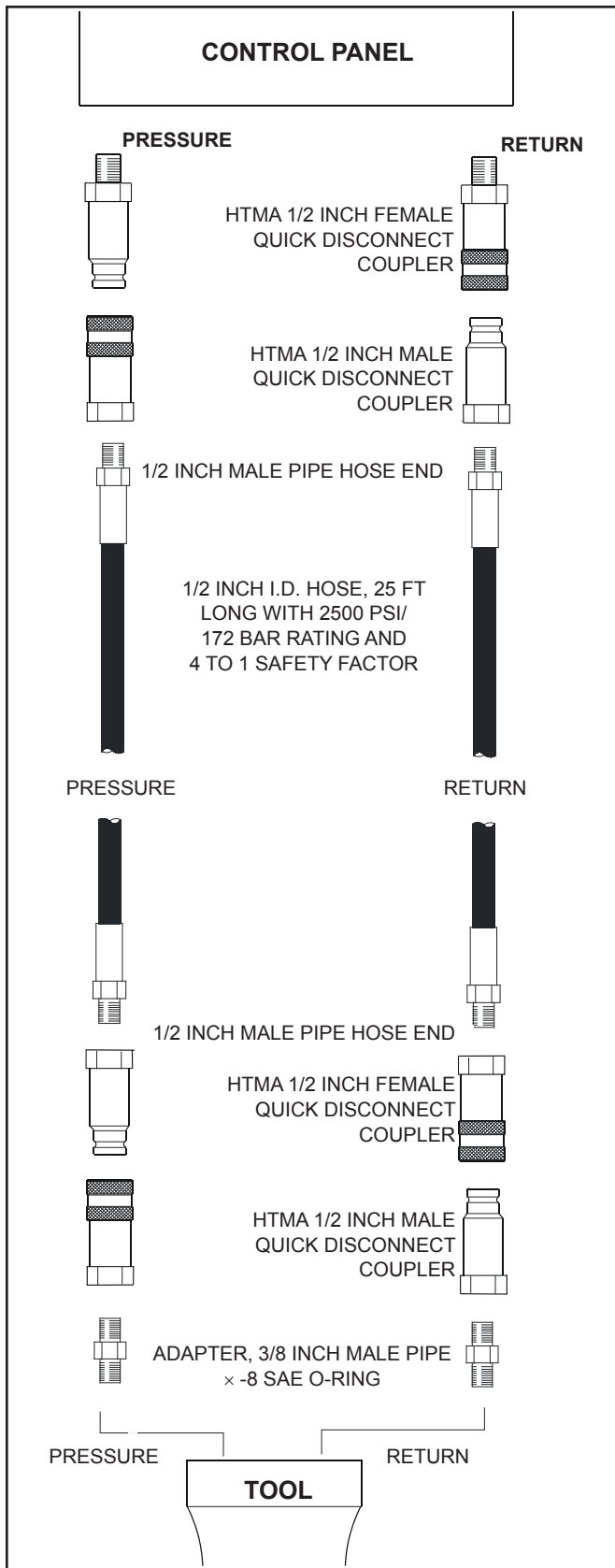


Figure 3. Hydraulic Connections

## CONTROLS

The power unit provides one circuit, with an oil flow of 5 gpm/20 lpm up to 2000 psi/140 bar GPV135H02 or 8 gpm/30 lpm up to 2000 psi/140 bar GPV138B02.

One hydraulic tool can be connected to the tool circuit. The circuit is activated by moving the control lever on the power unit to the **ON** position.

## THROTTLE CONTROL

The power unit is equipped with a manual throttle (See below).

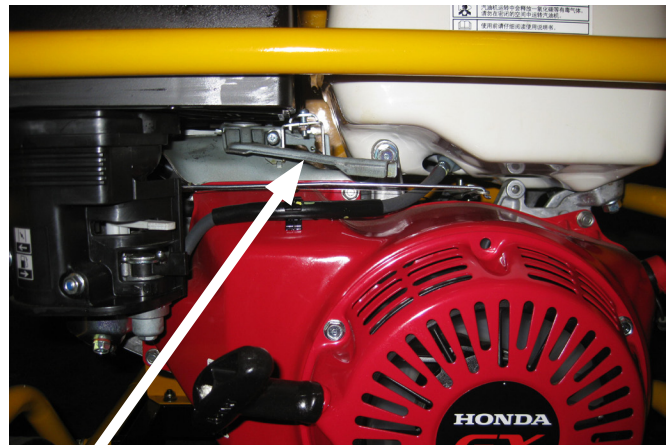


Figure 4. Throttle Control Lever Honda

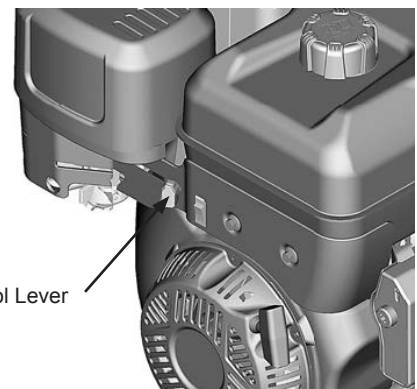
### MANUAL THROTTLE CONTROL HONDA

Engine speed is manually held at full throttle to maintain 5 gpm/20 lpm. When a tool is not being used move the lever to the idle position.

Manual full throttle control on the Honda engine is set by positioning the control lever (shown in Figure 4) to the far left.

### MANUAL THROTTLE CONTROL BRIGGS

The Briggs engine speed is manually held at full throttle to maintain 8 gpm/30 lpm (see below). When a tool is not being used move the lever to the idle position.



Briggs Throttle Control Lever

# OPERATION

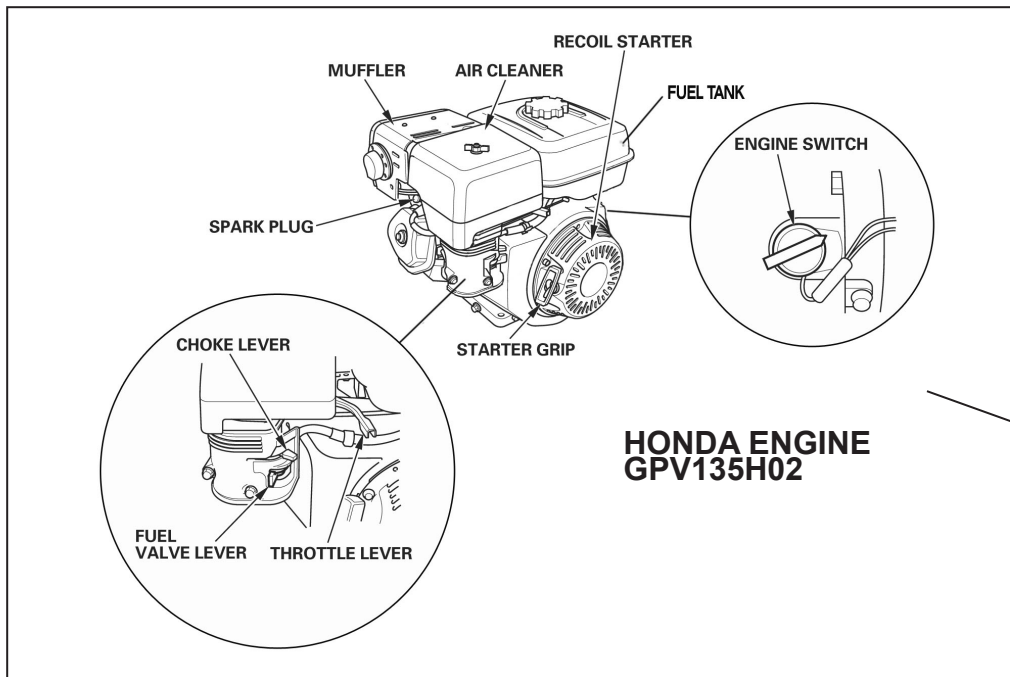
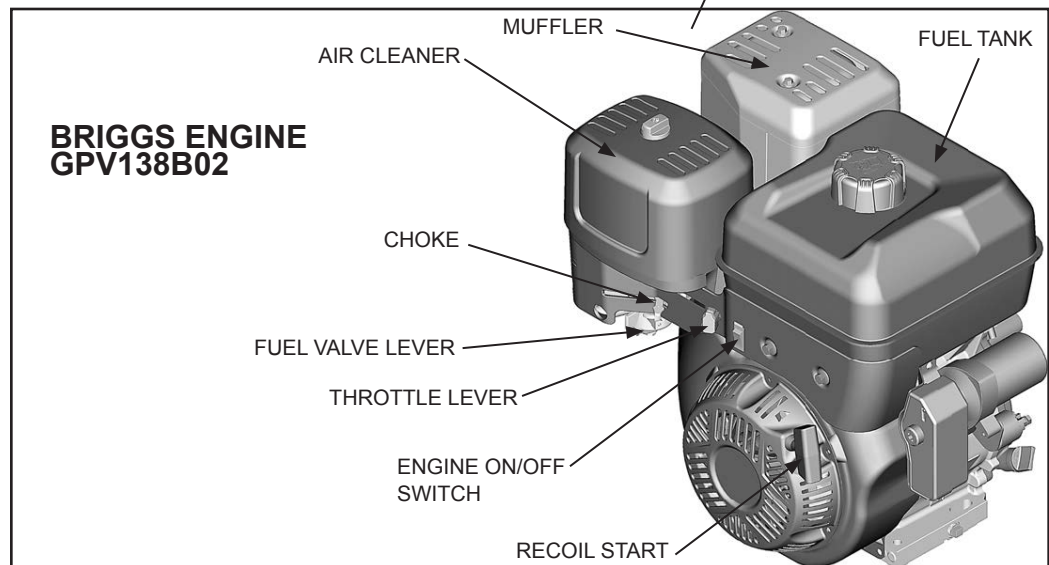


Figure 5.



Shown above (Figure 5) are the Honda and Briggs primary engine components referred to in this section. Become familiar with these components and read and understand the engine operation and maintenance manual before starting the engine and operating the power unit for the first time.

 **DANGER**

### Explosion and fire hazard.

Checking the engine fuel level or refueling the engine when it is hot or running can result in an explosion and/or fire that may result in death or serious injury.

Do not remove the fuel cap while the engine is running. Do not add fuel to the tank while the engine is hot. Do not fill the fuel tank to a point of overflowing.

## NOTICE

Before starting the engine, make sure the throttle control lever is at the far right or idle position.

## START-UP

1. Check the engine oil level.
2. Check the hydraulic oil level in power unit.
3. Check that the engine fuel tank is full.
4. Ensure the throttle control lever is at the far right or idle position.
5. Move the choke lever to the CLOSED position as shown in Figure 6. Honda pictured below, see figure 5 for Briggs choke location.

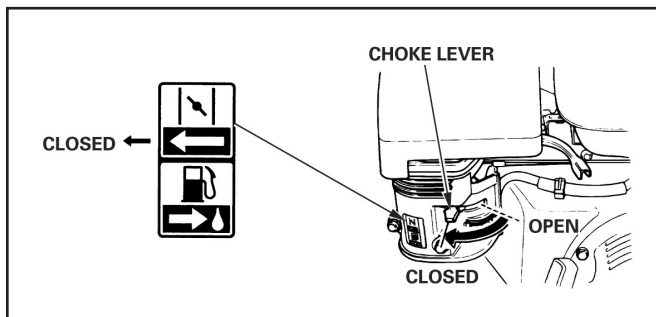


Figure 6. Choke Lever Honda

6. Move the fuel valve lever to the ON position as shown in Figure 7, see figure 5 for Briggs fuel valve location.

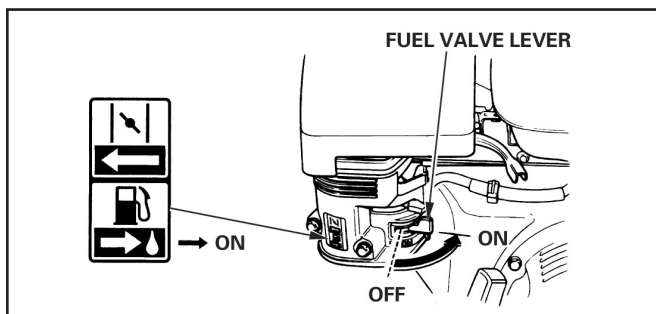


Figure 7. Fuel Lever Honda

7. Position the engine ON-OFF switch to the ON position as shown in Figure 8, see figure 5 for Briggs on/off switch location.

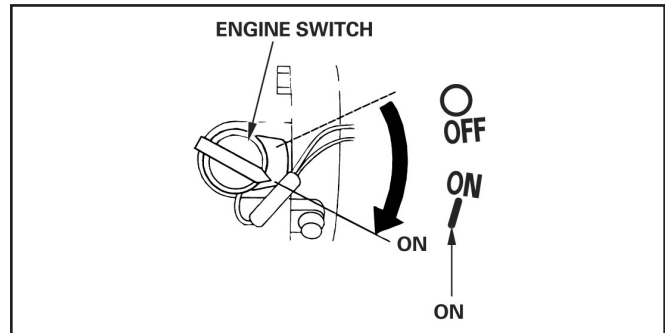


Figure 8. ON-OFF Switch Honda

8. Pull the starter grip on the recoil starter until you feel resistance. Then pull firmly upward. Do not allow the starter grip to snap back against the engine. Return it gently.
9. After the engine starts, allow it to warm up. Gradually adjust the choke until it is in the open position.
10. Connect hoses and the tool as described on pages 7 and 8.
11. Move the tool circuit control lever to the ON position.
12. When finished operating the tool, move the tool circuit control lever to the OFF position.

## COLD WEATHER STARTUP

1. Use the procedures described under START-UP and then follow the procedure below.
2. Hydraulic fluids are thicker in cold weather. Therefore, it is recommended that the engine be run at low idle long enough to bring the fluid temperature up to a minimum of 50 °F/10 °C.
3. If the tools and tool hoses are cold, it is recommended to allow hydraulic fluid to circulate through the tool hoses until warm before using the tool.

## SHUTDOWN

1. Ensure the tool circuit control lever is in the OFF position.
2. Allow the engine to idle for approximately one minute and move the engine switch to the OFF position.

# MAINTENANCE

## ENGINE MAINTENANCE

Follow the maintenance schedule and general maintenance instructions in the engine maintenance and operation manual furnished with the power unit. Also see maintenance schedule on pages 15 & 16.

## HYDRAULIC SYSTEM MAINTENANCE

- Check hydraulic fluid level daily. Add fluid per specifications in this manual. (See HYDRAULIC FLUID under the section titled OPERATION.)
- Remove condensed moisture from the hydraulic fluid by pumping the hydraulic fluid into a 5 gal/20 l container through the pressure hose. Make sure the engine is at idle when performing this procedure. When the hydraulic reservoir is empty turn the engine off immediately.
- Allow the fluid to sit long enough for the water to settle to the bottom of the container. Slowly pour the fluid back into the hydraulic tank, avoiding the water at the bottom of the container.
- Each day, check hydraulic lines and fittings for leaks, kinks, etc. Do not use your hand to perform this check.
- Change the hydraulic filter element every 100 hours of operation or 6 months whichever ever comes first. Change more often if cold, moist or dusty conditions exist.
- Check oil cooler for debris. Remove debris with air pressure.

## STORAGE

- Clean the unit thoroughly before storage. Do not use water pressure.
- Always store the unit in a clean and dry facility.
- If the unit will be stored for a prolonged period (over 30 days), add a fuel additive to the fuel tank to prevent the fuel from gumming. Run engine for a short period to circulate the additive.
- Replace crankcase oil with new oil.
- Remove the spark plug and pour approximately 1 ounce (30 ml) of engine oil into the cylinder. Replace the spark plug and crank the engine slowly to distribute the oil.
- Check hydraulic reservoir for water. If water is found, change the oil and circulate it through the tool hose and tool. (See HYDRAULIC SYSTEM MAINTENANCE earlier in this section).
- Disconnect tool hoses.

## HONDA ENGINE MAINTENANCE

### MAINTENANCE

### Maintenance Schedule

Regular Service Period		Each Use	First month or 20 Hrs	Every 3 months or 50 Hrs	Every 6 months or 100 Hrs	Every year or 300 Hrs
Perform at every indicated month or operating hour interval, whichever comes first.						
Engine	Engine Oil	Check Level	•			
		Change		•	•	
	Air Cleaner	Check	•			
		Clean			• (1)	
	Sediment Cup	Clean			•	
	Spark Plugs	Clean-Readjust			•	
	Spark Arrester (optional)	Clean			•	
	Valve Clearance	Check-Readjust				• (2)
	Fuel Tank and Strainer	Clean				• (2)
Fuel Line	Check (Replace if Necessary)	Every 2 years (2)				
Hydraulics	Hydraulic Fluid Level	Check	•			
	Hydraulic Fluid	Replace	Every 200 hours			
	Remove Condensed Moisture			•		
	Check For Leaks, Kinks, etc.		•			
	Hydraulic Fluid Filter	Replace			•	
	Hyd Fluid Cooler (Inspect & Clean as necessary)		Every 50 hours			

NOTE: (1) Service more frequently when used in dusty areas.

(2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

For additional maintenance information see the Honda engine operator's manual that was supplied with the power unit.

# MAINTENANCE

## BRIGGS & STRATTON ENGINE MAINTENANCE

### Maintenance Schedule

Regular Service Period		First 5 Hours	Every 8 Hours or Daily	Every 25 Hours or Annually	Every 50 Hours or Annually	Every 100 Hours or Annually	Annually Replace	
Perform at every indicated month or operating hour interval, whichever comes first.								
Engine	Engine Oil	Check Level	•					
		Change	•			•		
	Air Cleaner	Clean		• (1)			•	
	Pre Cleaner	Clean		• (1)			•	
	Air Cooling System	Clean					•(1)	
	Spark Plugs	Clean-Readjust					•	
	Finger Guard	Clean		•				
	Muffler & Controls	Clean	•					
Hydraulics	Hydraulic Fluid Level	Check	•					
	Hydraulic Fluid	Replace	Every 200 hours					
	Remove Condensed Moisture				•			
	Check For Leaks, Kinks, etc.		•					
	Hydraulic Fluid Filter	Replace				•		
	Hyd Fluid Cooler (Inspect & Clean as necessary)		Every 50 hours					

NOTE: (1) Service more frequently when used in dusty areas.

For additional maintenance information see the Briggs & Stratton engine operator's manual that was supplied with the power unit.



## GENERAL

Tests and adjustments should be performed periodically to ensure the power unit is operating at maximum efficiency. Stanley Circuit Tester (Part Number 04182) is recommended. This tester can be used to isolate problems in both the engine and hydraulic system prior to any power unit disassembly.

## TESTING THE HYDRAULIC CIRCUIT

The following tests can be performed to ensure that the hydraulic pump is supplying the correct flow and pressure and that the system relief valve is operating properly.

During these tests, make sure the engine is warm and operating smoothly. If test results are not as specified, refer to the troubleshooting table in this section for possible causes.

## TESTING THE 5 GPM HTMA TYPE 1 OR 8 GPM HTMA TYPE II CIRCUIT

To test the circuit, proceed as follows:

1. Set the throttle control lever to the far left or full throttle position.
2. Connect the Stanley Circuit Tester across the hose ends (where the tool would normally be connected).
3. Fully open the tester restrictor valve (counterclockwise).
4. Start the engine and allow it to run until warm.
5. With the engine at full operating speed, the test flow gauge should read 4–6 gpm/15–23 lpm on GPV135H02 or 7–9 gpm/26–34 lpm on GPV138B02.
6. Slowly turn the restrictor valve clockwise while watching the pressure gauge. The flow rate should stay at 4–6 gpm/15–23 lpm as the pressure gauge reaches 1900–2000 psi/131–138 bar on GPV135H02 or 7–9 gpm/26–34 lpm as the pressure gauge reaches 1900–2000 psi/131–138 bar on GPV138B02.
7. At 1900–2000 psi/131–138 bar, the relief valve should begin to open. The pressure at which the relief valve just begins to open is commonly referred to as the “cracking pressure”. At the “cracking pressure,” the flow rate should start to drop because the relief valve is allowing fluid to bypass to the hydraulic reservoir. The “cracking pressure” is preset at the factory and if it is not within the above range, the relief valve must be re-set as follows:
  - a. The relief valve is located behind the dash panel in the valve manifold assembly. Use an open end or box end wrench to loosen the nut on the relief valve.
  - b. Use an Allen wrench to adjust the relief valve. Turn clockwise to raise the pressure and counterclockwise to reduce the pressure.
  - c. Tighten the nut and retest.

# TROUBLESHOOTING

Problem	Cause	Solution
Engine will not start.	No fuel.	Add fuel.
	Defective spark plug.	Remove plug, check gap, clean or replace.
Fluid blowing out of fluid reservoir vent.	Hydraulic tank overfilled.	Correct the fluid level.
	Pump suction leak.	Check suction connections. Tighten if necessary.
Hydraulic tool won't operate.	Incorrect hose connection to tool.	Make sure the tool hose circuit goes from left (pressure) fitting to tool and back to the right fitting (return). Fluid always flows from the male to female fittings.
	Quick disconnect fittings defective.	Detach from hose, connect set together and check for free flow.
	Hydraulic fluid level low.	Check for correct fluid level. Fill using the recommended fluid.
	Pump coupling defective.	With the engine not running, check the coupling between the pump and engine that it is engaged and is not damaged. Caution: Keep hands clear of rotating objects.
	Relief valve stuck open.	Adjust or replace valve.
	Suction hose kinked.	Make sure suction hose from fluid reservoir to pump inlet has a smooth curve.
	Tool is defective.	Refer to tool manual.

# SPECIFICATIONS

Engine: .....	GPV135H02 Honda 13hp, GPV138B02 Briggs and Stratton 13.5HP
Capacity (GPV135H02) Honda .....	15-24 lpm/4-6 gpm Circuit
Capacity (GPV138B02) Briggs .....	26-34 lpm/7-9 gpm Circuit
Pressure Range: (GPV135H02 and GPV138B02) .....	1015~2000 psi/70~140 bar
Length: (GPV135H02 and GPV138B02) .....	780 mm/30.7 in.
Width: (GPV135H02 and GPV138B02) .....	510 mm/20.1 in.
Height: (GPV135H02 and GPV138B02) .....	600 mm/23.6 in.
Weight: (GPV135H02 and GPV138B02) .....	75 kg/166 lb
HTMA/EHTMA	
Category (GPV135H02) .....	Type 1, EHTMA Class C
Category (GPV138B02) .....	Type II, EHTMA Class D
Flow Rate .....	20 lpm/5 gpm or 30 lpm/8 gpm
Nominal Pressure .....	103 bar/1500 psi
Max Pressure .....	155 bar/2250 psi
Sound Power Level .....	101 Lwa
Vibration Level .....	N/A

# **STANLEY®**

Hefei INTACA Science-Technology Development Co.,Ltd.  
Add: A-7 Building Gongtou-Liheng Industry Square, Western Section  
Fanhua Street(the Cross Wenshan Road),Hefei,Anhui,China  
Tel:0551-63498781/2/3 Fax:0551-63498780  
P.C.:230601  
<http://www.intaca.cn>