RV06 ROCKER VALVE



Safety, Operation and Maintenance Manual

Focused on performance ™



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 tool and hose.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing 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 on page 3.

GENERAL SAFETY PRECAUTIONS

The RV06 Rocker Valve will provide safe and dependable service if operated according to instructions. Read and understand the safety precautions given in this manual and on the stickers and tags attached to the tool and hoses. Failure to do so can result in serious personal injury or equipment damage.

- All fittings, connectors, quick couplers and hoses used in the high pressure circuit must be capable of 10,000 psi/690 bar operation.
- All fittings, connectors, quick couplers and hoses must be leak-tight and in good condition.
- All fittings, connectors, quick couplers and hoses must be free of cracks dents or other damage.
- Do not use tightly coiled or twisted hoses.
- · Hoses should not be kinked, cut, swollen or heavily abraded at any point along their entire length.
- Damaged fittings, connectors, quick couplers and hoses may fail at or below their rated working pressure
 resulting in serious injury or death.
- Do not attempt to locate hydraulic leaks by feeling around hoses and fittings with bare OR gloved hands.
 Pin hole leaks can penetrate the skin (oil injection). To inspect for leaks, de-pressurize the system, (rocker
 valve, intensifier and power source) clean around the suspected area, pressurize the system and visually
 check for leaks. If possible the above procedure should be performed behind some type of shield
 (Lexan®).
- Use only hydraulic hoses labelled and certified non-conductive when using the rocker valve/intensifier on or near electric lines.
- Operators must start in a work area without bystanders. He/she must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Always wear safety equipment such as safety goggles, ear and head protection and safety shoes at all times when operating the tool.
- Do not operate the tool if it is damaged, improperly adjusted or not correctly assembled.
- Do not overreach. Maintain proper footing and balance at all times.
- Establish a training program for all operators to ensure safe operation.
- Do not operate the tool at fluid temperatures above 140° F/60° C. Operation at higher temperatures can
 cause higher than normal temperatures at the tool which can result in operator discomfort.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.

TOOL STICKERS AND TAGS



The stickers and tags attached to the tool prior to shipment from the factory are shown below. The pressures and flow rates specified must never be exceeded. All stickers and tags must be read and understood prior to operation of the tool.

The information listed on stickers and tags must be legible at all times. Always replace those that have become worn or damaged. They are available from your local Stanley distributor.



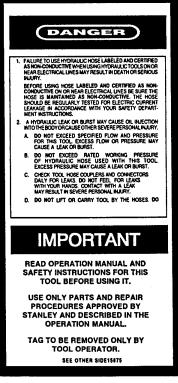
DANGER STICKER, HYDRAULIC HOSE

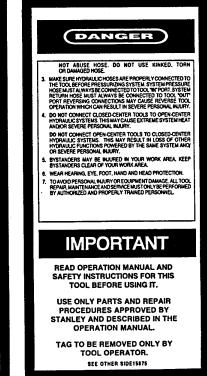


DANGER STICKER, ELECTRICAL

SAFETY TAGS

The safety tag at right is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.





SAFETY SYMBOLS

Safety symbols are used to emphasize all operator, maintenance and repair actions which, if not strictly followed, could result in a life-threatening situation, bodily injury or damage to equipment.



This safety symbol may appear on the tool. It is used to alert the operator of an action that could place him/her or others in a life threatening situation.



This safety symbol appears in these instructions to identify an action that could cause bodily injury to the operator or other personnel.

IMPORTANT

This safety symbol appears in these instructions to identify an action or condition that could result in damage to the tool or other equipment.

Always observe safety symbols. They are included for your safety and for the protection of the tool.

LOCAL SAFETY REGULATIONS			
Enter any local safety regulations here. Keep these instructions in an area accessible to the operator and maintenance personnel.			

EQUIPMENT PROTECTION AND CARE

IMPORTANT

In addition to the Safety Precautions on pages 1 thru 3 of this manual, observe the following for equipment protection and care.

- Always store an idle rocker valve in a clean dry space, safe from damage or pilferage.
- Operate the rocker valve within its rated capacity.
- Do not use the rocker valve for applications for which it was not designed.
- Never connect or disconnect couplers or port connections with hydraulic pressure in the hose.
- Make sure the compression tool, cutter or lifting device attached to the rocker valve is capable of operation at 10,000 psi/690 bar.
- If the operating pressure of the compression tool, cutter or lifting device attached to the rocker valve is below 10,000 psi/690 bar, DO NOT USE IT.
- The intensifier used to power the rocker valve can usually be adjusted for lower operating pressures. This work should only be performed by a qualified hydraulic technician.
- Routinely check that all fasteners, fittings, connectors, quick couplers and hoses are tight.
- Always replace damaged or worn fasteners, fittings, connectors, quick couplers and hoses with parts
 recommended by Stanley Hydraulic Tools. The hydraulic hoses to the rocker valve must have a minimum
 working pressure of 10,000 psi/690 bar.
- All hoses must have oil resistant inner surface and an abrasion resistant outer covering. Whenever near
 electrical conductors only hoses labeled and certified as non-conductive should be used.
- Make sure all couplers are wiped clean before connection.
- The hydraulic circuit control valve must be in the "OFF" position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.

HYDRAULIC HOSE REQUIREMENTS

HOSE TYPES

Hydraulic hose types authorized for use with Stanley Hydraulic Tools are as follows:

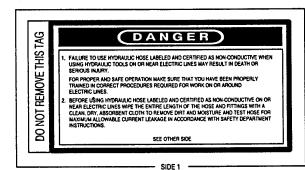
- 1 Labeled and certified non-conductive
- 2 Wire braided (conductive)
- 3 Fabric braided (not certified or labeled non-conductive)
- Hose I listed above is the only hose authorized for use near electrical conductors.
- Hoses 2 and 3 listed above are conductive and must never be used near electrical conductors.

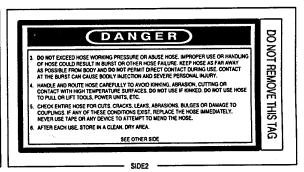
To help ensure your safety, the following DANGER tags are attached to all hoses purchased from Stanley Hydraulic Tools. DO NOT REMOVE THESE TAGS.

If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag can be obtained at no charge from your Stanley distributor.

CERTIFIED NON-CONDUCTIVE HOSE

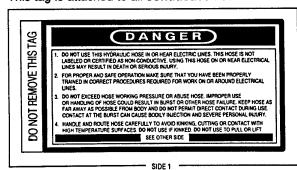
This tag is attached to all certified and labeled non-conductive hose.

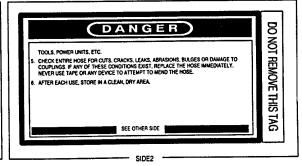




2 AND 3 WIRE- AND FABRIC-BRAIDED (NOT CERTIFIED OR LABELED NON-CONDUCTIVE)

This tag is attached to all conductive hose.





HOSE PRESSURE RATING

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system to which the RV06 is connected.

HYDRAULIC SYSTEM REQUIREMENTS

General Information

The RV06 Rocker Valve hydraulic system requirements are determined by the hydraulic pressure rating of the tool being controlled by the RV06. The following general rules apply when choosing a tool to match-up with the RV06.

- Whenever possible, Stanley Hydraulic Tools recommends that you use the Stanley IP16 Intensapress intensifier to power the RV06 and tools attached to it.
- Make sure the compression tool, cutter or lifting device attached to the rocker valve is capable of operation at 10,000 psi/690 bar.

- If the operating pressure of the compression tool, cutter or lifting device attached to the rocker valve is below 10,000 psi/690 bar, DO NOT USE IT with an intensifier or hydraulic supply adjusted to deliver 10,000 psi/690 bar.
- The intensifier used to power the rocker valve can usually be adjusted for lower operating pressures. This work should only be performed by a qualified hydraulic technician.
- If the intensifier pressure cannot be lowered to match the tool you are using, you must either use a tool rated at the available operating pressure or utilize an intensifier with the correct output pressure.
- If you are in doubt about the tool or intensifier you intend to use with the RV06, please contact Stanley Hydraulic Tools for assistance.

OPERATION

PREOPERATION PROCEDURES

CONNECT HOSES

- 1. If the RV06 is to be used on or near electrical lines, both of the hoses used to connect the RV06 to the intensifier must be labelled and certified non-conductive (Refer to page 5). Both pressure and return hoses must be rated for a minimum working pressure of 10,000 psi/690 bar.
- 2. Make certain that all fittings, connectors and quick couplers used to make connections with the RV06 and the intensifier are rated for 10,000 psi/690 bar.
- 3. It is a good practice to connect return hoses first and disconnect them last to minimize or avoid trapped pressure within the tool or hoses.
- 4. Wipe all hoses and couplers with a clean, lint free cloth before making connections.
- 5. Connect the hoses on the RV06 to the high pressure outlet and return port of the intensifier.
- 6. Observe the marking on the end of the RV06 and the intensifier: "P" is the pressure inlet port of the RV06 and should be connected to "P" (pressure outlet) port of the intensifier. The "T" (tank or return) port of the RV06 should be connected to the "T" port of the intensifier.
- 7. Tighten all connections securely.

CONNECTING A TOOL TO THE RV06

The RV06 can be used to control the actuation of both single and double-acting compression and crimping tools, cutters, high pressure lifting devices and rebar benders. Tool connection to the RV06 can be accomplished in three ways:

- 1. A combination of high pressure (10,000 psi/690 bar) hose and couplers.
- 2. High pressure (10,000 psi/690 bar) couplings only.

Note: In order to use couplings only, it is necessary that the spacing of the pressure and return ports of a double-acting tool align exactly with the pressure and return ports of the RV06.

3. High pressure (10,000 psi/690 bar) hose only.

The RV06 is ported at both ends with 1/4 in. female NPT ports. When using Teflon® tape as a sealant be careful not to allow the tape to enter the intensifier, RV06 or tools connected to the RV06. Contamination may disable the intensifier, RV06 or the tool.

CONNECTING A DOUBLE-ACTING TOOL (See Figure 1)

NOTE: A double-acting tool is any tool using hydraulic power for both the advance and retract modes. Connect the advance port of the tool to the advance port (marked "A") of the RV06. Connect the retract port of the tool to the retract port (marked "B") of the RV06.

CONNECTING A SINGLE-ACTING TOOL (See Figure 2)

NOTE: A single-acting tool is any tool using hydraulic power for the advance mode and a spring for the retract modes. Single-acting tools use a single connection to the RV06.

Single-acting tools connect to the RV06 in a way similar to double-acting tools. Only the advance port (marked "A") of the RV06 is used to connect to the tool. The return port (marked "B") is plugged with a 1/4 in. male NPT plug.

COLD WEATHER OPERATION

If the RV06 is to be used during cold weather, preheat the hydraulic fluid at low engine speed. When using the normally recommended fluids, fluid temperature should be at or above 50° F/10° C (400 ssu/82 centistokes) before use.

Damage to the hydraulic system or RV06 can result from use with fluid that is too viscous or thick.

OPERATING PROCEDURES

- Observe all safety precautions given in this manual.
- Refer to the applicable manual for the tool connected to the RV06.
- Activate the parent circuit to provide power to the intensifier. Pressure will now be available at the pressure port of the RV06.
- To advance the ram of the connected tool, press the forward end of the rocker arm.
- When the crimp or cut is complete, release the rocker arm and the RV06 will go to a "neutral" or "hold" position. The tool ram will remain stationary.
- To retract the tool ram, press the rear of the rocker arm. If the RV06 is connected to a double-acting tool the ram will retract under power. If the tool is single-acting, the ram will retract somewhat more slowly due to its spring return.

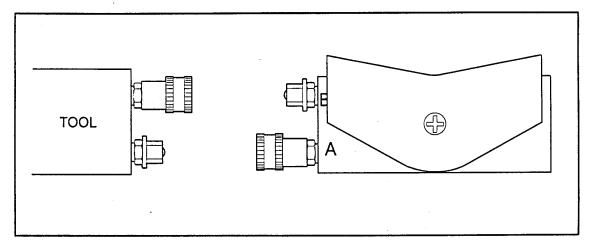


Figure 1. Connecting the RV06 to a double-acting tool

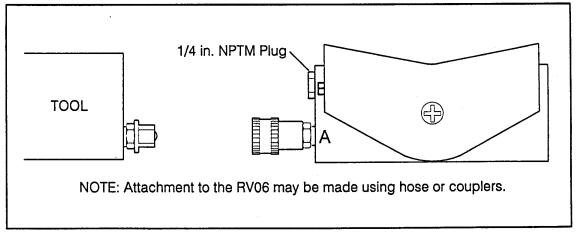


Figure 2. Connecting the RV06 to a single-acting tool

SERVICE INSTRUCTIONS

Good maintenance practices keep the RV06 on the job and increase its service life.

The most important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated hydraulic fluid causes rapid wear and/or failure of internal parts.

Follow the procedures contained in the HYDRAU-LIC SYSTEM REQUIREMENTS section of this manual to ensure peak performance from the tool.

Never disassemble the tool unless proper troubleshooting procedures have isolated the problem to an internal part. Then, disassemble the tool only to the extent necessary to replace the defective part. KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES.

Always determine and correct the cause of the problem prior to reassembly. Further wear and tool failure can result if the original cause is not corrected.

IMPORTANT

Unless otherwise specified, disconnect the control valve from the high-pressure hydraulic system before servicing.

Note: For orientation of the parts identified in the following procedures, refer to the parts location illustration at the rear of this manual.

PRIOR TO DISASSEMBLY

- If the control valve is attached to a head or tool, disconnect it.
- Clean exterior of the control valve.
- Provide a clean work area.
- Obtain Seal Kit, Part Number 14787, to replace all seals and specified back-up rings exposed during disassembly.
- Note orientation of seals and back-up rings before removing them. Install new parts in the same way. Seals are always to the pressure side of the seal gland.

PRIOR TO REASSEMBLY

- Clean all parts with a degreasing solvent.
- Ensure that all seals exposed during disassembly are replaced with new parts.
- Apply clean grease or o-ring lubricant to all parts during assembly.

CONTROL VALVE DISASSEMBLY

- 1. Remove the pressure and return hoses from the control valve.
- 2. Remove the two 1/4-20 x 1/4 Phillips head screws securing the rocker arm to the transfer disc assembly.
- 3. Remove the rocker arm by prying it off the transfer disc. At the end of the transfer disc with flats, place a mark to note disc positioning for reassembly.
- 4. Remove the adjusting nuts from the valve manifold and remove the push rods and springs.
- 5. Place the valve manifold in a soft-jaw vise. Using a pin wrench, remove the manifold cap from the valve manifold. Next remove the needle thrust bearing and race.
- 6. Remove the o-ring and back-up ring from the cap. Be careful not to damage the seal gland.
- Push the transfer disc from the manifold. Be careful not to damage the bores in the manifold.
- 8. Remove the grommets from the manifold. The springs under them will push the grommets out.
- Remove the o-rings and back-up rings from the grommets.
- 10. Remove the o-rings and back-up rings from the transfer disc shaft bore in the manifold. Be careful not to damage the seal glands
- 11. Using a screwdriver, remove the unloading valve from the tank port at system port end of the manifold.

CONTROL VALVE REASSEMBLY

- 1. Install the seals and back-up rings.
- 2. Install the grommet springs and grommets.
- 3. Install the transfer disc. Note the rotational position shown in figure 3 and the mark you made before removing the manifold cap.

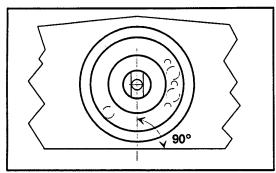


Figure 3. Transfer Disc Orientation in "OFF" Position.

- 4. Install the thrust bearing in the manifold cap. Use a coating of heavy grease to hold the bearing in place while installing the cap.
- 5. Place the valve manifold in a soft-jaw vise.
- 6. Install the manifold cap into the valve manifold. Tighten using a pin wrench. Check that the transfer disc is free to move. If the transfer disc is bound, the thrust bearing is probably out of position. Remove the manifold cap and reinstall the thrust bearing.
- 7. Install the springs and push rods. Secure using the adjusting nuts. For now, hand tighten the adjusting nuts until flush with the valve manifold.
- 8. Spring the rocker arm over the ends of the transfer disc. Be sure the hole with the flats in the rocker arm are fitted over the transfer disc end with the flats.

- 9. Adjust the push rod adjusting nuts so that the rocker arm centers the transfer disc. The push rods should just stop against their adjusting nuts when the rocker arm centers the transfer disc. The transfer disc centers when the flats on the end of the disc are on a line perpendicular to the long flat side of the manifold. Check this using a small square. Fix the position of the adjusting nuts using a small amount of thread locking adhesive.
- 10. Install the 1/4-20 x 1/4 in. Phillips head screws in the transfer disc.
- 11. Apply thread sealant to the hose fittings and connect the pressure and return hoses. The return hose connects to the port nearest the rocker arm.

TO CHECK THE UNLOADING VALVE SETTING

- 1. Connect the control valve to high-pressure crimping head or cutting tool.
- 2. Install a 15,000 psi/1035 bar pressure gauge in the pressure line to the control valve.
- 3. Connect the control valve (with pressure gauge) to a high-pressure hydraulic system capable of delivering at least 6,000 psi/414 bar, but not more than 10,000 psi/690 bar.
- 4. Activate the high-pressure hydraulic system and operate the control valve to retract. Note the pressure at which the unloading valve relieves the retract pressure.
- 5. The unloading valve should relieve at 3,300-3,700 psi/228-355 bar. If the relief pressure is above 3,700 psi/255 bar, replace the valve. If the relief pressure is less than 3,300 psi/228 bar and you have had no difficulty retracting the tool, the valve need not be replaced. Otherwise, replace the unloading valve.

TROUBLESHOOTING

If symptoms of poor performance develop, the following chart can be used as a guide to correct the problem.

When diagnosing faults in operation of the control valve, always check that the high-pressure hydraulic power source is supplying the correct hydraulic flow and pressure to the control valve. Use a pressure gauge known to be accurate. Check the flow with the hydraulic fluid temperature at least 80° F/27° C.

PROBLEM	CAUSE	REMEDY
Not automatically returning to the "NEUTRAL" position.	valve to the intensifier may be restricted.	If hose is kinked, replace it.
		If hose has some obstruction in it, clear the hose or replace it.
		If hose coupler is obstructed, clean the coupler or replace it.
		Hose size may be too small for application. Replace with larger hose.
	If the tool is equipped with an equalizing valve, valve setting is lower than control valve unloading valve setting.	Test and reset tool equalizing valve.
	Dirt or debris causing push rod(s) to bind.	Clean thoroughly.
Tool will not advance.	High-pressure hydraulic system is not providing flow.	Inspect high-pressure hydraulic system for proper operation.
	Control valve reverse plumbed to high-pressure hydraulic system.	Check for proper connection.
	Transfer disc installed 180° out of correct position.	Inspect transfer disc installation and correct it, if necessary.

SPECIFICATIONS

ITEM	USA	METRIC	
Туре	Rocker (auto return)		
Weight	2.6 lb.	1.18 kg	
Length	5 1/8 in.	130 mm	
Width	2 in.	51 mm	
Pressure	10,000 psi	690 bar	
Porting	1/4 in. female NPT		

NOTE

Weights, dimensions, and operating specifications listed are subject to change without notice. Where specifications are critical to your application, please consult the factory.

WARRANTY

Hand held tools and their parts are warranted against defects in materials and workmanship for a period of 12 months from the date of purchase. Exceptions are cutting parts, steels and other parts not manufactured by Stanley (such as impact mechanisms, alternators, regulators and hoses), and parts subject to normal wear and tear (such as o-rings, saw blades, and other parts that become worn through normal use of the tool).

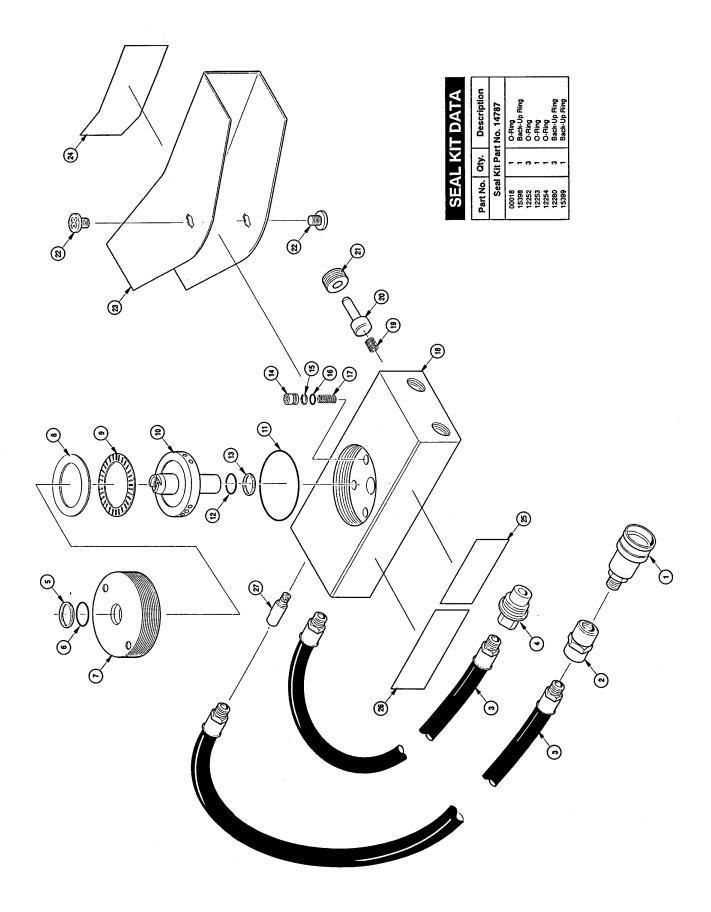
The Warranty Registration Card packed with the tool must be filled out and returned to Stanley upon receipt of the tool.

Stanley reserves the right to replace or repair only those parts that, under our examination, prove to have been defective at the time of purchase.

Shipping charges are prepaid by the customer unless otherwise authorized by Stanley.

The warranty is void if maximum flow and pressure ratings are exceeded.

There is no other warranty expressed or implied.



PARTS LIST

Item No.	Part No.	Qty.	Description	
1	05338	_	Body	
2	12838	1 1	Pipe Coupling, 1/4 NPT	
3	07040	2	Hose Assembly	
4	05337	1	Nipple	
5	15399	1	Back-Up Ring	
6	00018	1 1	O-Ring, 7/16 x 9/16 x 1/16 ⊙	
7	12227	1	Manifold Cap	
8	08019	1	Bearing Race	
9	08020	1	Needle Bearing	
10	18092	1	Transfer Disc	
11	12254	1	O-Ring, 1-3/4 x 1-7/8 x 1/16 ⊙	
12	12253	1	O-Ring, 3/8 x 1/2 x 1/16	
13	15398	1	Back-Up Ring	
14	12224	3	Manifold Grommet	
15	12280	3	Back-up Ring	
16	12252	3	O-Ring, 1/8 x 1/4 x 1/16 ⊙	
17	12255	3	Spring	
18	20239	1	Manifold	
19	12251	2	Spring	
20	21027	2	Push Rod	
21	12221	2 2	Adjusting Nut, Push Rod	
22	19592	2	Screw, Phillips Pan Hd 1/4-20 x 1/4	
23	20294	1 .	Rocker Arm	
24	12412	1	Danger Sticker, Electrical	
25	05153	1	Stanley Sticker	
26	12891	1	Danger Sticker, Hydraulic Hose	
27	12241	1	Unloading Valve Assembly	

NOTE: Use Part Number and Part Name when ordering.

O Denotes Part in Seal Kit.



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