



Ranch Pro™

GAS/PETROL POST DRIVER OWNERS MANUAL

CE MODEL: 300001



TAKE SAFETY SERIOUSLY

This book contains important safety information.
Please read it carefully.



This owner's manual is considered a permanent part of the post driver and should remain with the post driver if resold, rented or loaned.

Your safety, and the safety of others, is very important. The proper and safe use of your Rhino® post driver is an important responsibility and should be taken seriously.

Keep this owner's manual available, so you can refer to it at any time. This owner's manual is considered a permanent part of the post driver and should remain with the post driver if resold.

The information and specifications included in this publication were in effect at the time of approval for printing. Rhino Tool Company, Inc. reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatever. No part of this publication may be reproduced without written permission from:

Rhino Tool Company

To help you make informed decisions about safety, you will find important safety information in a variety of forms, including:

- Safety Labels on the post driver
- Safety Messages Preceded by a safety alert symbol and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:



Immediate hazards that will result in severe personal injury or death.



Hazards or unsafe practices that could result in personal injury.



Hazards or unsafe practices that could result in injury, product or property damage.

- Safety Headings such as IMPORTANT SAFETY INFORMATION.
- Safety Section such as POST DRIVER SAFETY.
- Instructions how to use this post driver correctly and safely.

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INTRODUCTION

Congratulations on your selection of the Rhino® Ranch Pro™ post driver. We are certain that you will be pleased with your purchase. This post driver was built with the Honda GX35 engine. Honda supplies its own owner's manual that covers all the operator and service issues associated with the Honda engine. Please read this manual as closely as you do the Rhino manual. The success that you experience with this tool is dependent upon your knowledge and understanding of how to properly operate and care for the Honda engine installed on your new post driver.

As you read this manual, you will find information preceded by a NOTICE symbol. That information is intended to help you avoid damage to your post driver, other property, or the environment.

We suggest you read the warranty information fully and understand its coverage and your responsibilities of ownership. Fill out the warranty registration card or online registration to receive Rhino® Lifetime Impact Warranty. (See Page 20)

Please read and understand the Honda warranty policy. The Honda warranty is separate from the Rhino® warranty and is subject to its own coverage conditions and responsibility requirements. The warranty is a separate document and should have been included with the Honda owner's manual.

When your Rhino® Post Driver needs scheduled maintenance, the technical service staff here at Rhino Tool Company is standing by to assist you if you require assistance. Our fully trained staff can

ensure that you receive the correct service kit or direct you to the nearest Rhino Servicing Dealer.

If it is the engine that requires scheduled maintenance, keep in mind that your Honda service dealer is fully equipped and specially trained in servicing the Honda engine. Your Honda servicing dealer is dedicated to your satisfaction, and will be pleased to answer your questions and concerns.

Kindest Regards

The Rhino Tool Company Team



**Driven To
Perfection!**

The Rhino® Ranch Pro™ gas powered driver is designed to drive fence posts, ground rod, form pins, and other like items into the ground. Uses, other than those intended, can result in injury to the operator as well as those around the operator. Damage to the driver and to the surrounding area may result as well.

This post driver is intended for use by professional installers. Never allow children to operate this tool.

Most accidents can be prevented if you follow all instructions in this manual and on the post driver. The most common hazards are discussed below, along with the best method to protect yourself and others.

WARNING **UNDERGROUND UTILITIES:** Driving a post into an underground utility can be **EXTREMELY DANGEROUS**, exposing the operator and those around to potentially life threatening danger. Damage to surrounding property can also occur as a result of a post being driven into an underground utility. Be absolutely certain that

you are aware of all underground utilities in the area in which you intend to drive posts. Ensure that a certified locating service has identified all underground utilities prior to beginning your project. Failure to do so can be catastrophic. Underground utilities include but are not limited to: Electric, Gas, Telephone, Water, Sewer, TV Cable, Lawn Sprinklers, etc.

WARNING **GASOLINE:** Gasoline is **HIGHLY FLAMMABLE** and **EXPLOSIVE**. You can be burned or seriously injured when handling fuel.

WARNING **EXHAUST:** The exhaust from the engine contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas. Breathing carbon monoxide can cause unconsciousness or death. Never run the engine in a closed or even partly closed area where people may be present.

WARNING The engine exhaust from this product contains chemicals known to the State of

California to cause cancer, birth defects or other reproductive harm.

WARNING **ENGINE MAINTENANCE:**

Improperly maintaining the engine on this power tool, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

In accordance with the engine owner's manual, always perform a pre-operation inspection of the engine before each use and correct any problem.

WARNING **DRIVER MAINTENANCE:**

Improperly maintaining the driving mechanism on this power tool, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

In accordance with this manual, always perform a pre-operation inspection of the driving mechanism before each use and correct any problem.

POST DRIVER SAFETY

IMPORTANT SAFETY INFORMATION



WARNING

Do not lend or rent your post driver without the instruction manuals. Be sure that anyone using it understands the information contained in these manuals.



WARNING

Do not use this post driver for any purpose other than driving posts into the ground. Misuse may result in personal injury or property damage, including damage to the machine.



WARNING

Minors should never be allowed to use this power tool. Bystanders, especially children, and animals should not be allowed in the area where it is in use.



WARNING

NEVER let your power tool run unattended. When it is not in use, shut it off and make sure that unauthorized persons do not use it.



WARNING

Do not operate this post driver unless the operator is wearing safety glasses, safety shoes, hearing protection, gloves or any

other safety equipment advised by, ANSI, NIOSH, OSHA, or any other safety regulatory agency, or the employer or the owner of this post driver.

Hearing protection is required as the post driver emits noise at 100 dB level. Bystanders should, at a minimum, wear safety glasses and hearing protection while in the presence of this power tool during operation. If not wearing protective gear, bystanders should keep a distance of 20 feet (6.00m) from the post driver while in operation.



WARNING

Prolonged use of a power tool (or other machines) exposing the operator to vibrations may produce white finger disease (Raynaud's phenomenon) or carpal tunnel syndrome. These conditions reduce the hand's ability to feel and regulate temperature, produce numbness and burning sensations and may cause nerve and circulation damage and tissue necrosis.

Not all factors contributing to white finger disease are known, but cold weather,

smoking and diseases or physical conditions that affect blood vessels and blood transport, as well as high vibration levels and long periods of exposure to vibration are mentioned as factors in the development of white finger disease. In order to reduce the risk of white finger disease and carpal tunnel syndrome, please note the following:

- Ranch Pro™ has been designed with Rhino® CIS™ anti-vibration handles to reduce the transmission of vibrations created by the machine to the operator's hands. An anti-vibration system is recommended for those persons using power tools on a regular or sustained basis.
- The handle opposite the throttle handle has been fitted with an EPDM foam grip further dampening vibrations.
- Wear gloves and keep your hands warm.
- Ensure that the EPDM foam and the spring dampening system are in good working condition.

- Ensure the post driver has no loose components. Loose components lead to high vibration levels.
- Maintain a firm grip at all times, but do not squeeze the handles with constant, excessive pressure. Take frequent breaks.

All of the above mentioned precautions do not guarantee that you will not sustain white finger disease or carpal tunnel syndrome. Therefore, continual and regular users should closely monitor the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

WARNING DO NOT modify this power tool in any way.

CAUTION DO NOT put anything other than a post into the chuck on the driver.

CAUTION DO NOT operate your post driver unless it is on a post to be driven. Operation of the driver without it driving on a post could damage the power tool.



CAUTION SURROUNDINGS: This power tool emits noise at 100 Db or more, which may be disturbing to animals and livestock. Ensure prior to operation, that any livestock are cleared from the operational area to prevent a situation in which startled livestock become a safety hazard.

WARNING LABELS

If your post driver's warning label is marred or destroyed, replace it immediately. Simply contact your Rhino Tool Company representative to replace your warning label at no expense to you.

End of Life Cycle

When your Rhino® gas powered driver is coming to the end of its life cycle, destruction of the unit should be conducted according to international and local environmental regulations.

The gas powered post driver contains:

- Fuel
- Oil

- Rhino® Pro Series Lubricant
- Electric components
- Plastic-steel and aluminum components.

Specifications imperial (metric)

| | |
|----------------------|--|
| Overall Dimensions | 11 x 14 x 24.5 in. (279 x 355 x 622 mm) |
| Weight | 33.5 lb (15.2 kg) |
| Engine Configuration | 4-stroke, 35.8 cc |
| Performance | 1720 bpm |
| Fuel | Unleaded Gas, US 86 Octane (>Euro 91) |
| Fuel Capacity | 0.67 US qt. (0.63 ltr) |
| Engine Oil | SAE 10W-30 |
| Lubricant | Rhino® Pro Series Lubricant |
| Noise | ≤ 100 Db |
| Vibration | TBC |

OPERATING INSTRUCTIONS

Your Rhino® Ranch Pro™ Gas Powered Post Driver is an efficient and effective power tool designed and developed to tackle a difficult and time consuming task, driving posts.

It is very important to understand that your post driver is a powerful machine; it has to be to do the very difficult job it is designed to perform. With proper care and maintenance, your Rhino® Ranch Pro™ will give you many years of trouble free service.

You must read and understand your post driver operating instructions before using the post driver. It is also very important that you make sure all operators are trained to operate your post driver safely. If you or any operator doesn't understand any of the instructions in this manual, call Rhino Tool Company at 866-707-1808 or 309-853-5555 and we will answer any questions you may have, or visit our website at www.rhintool.com to locate your nearest Rhino dealer or distributor.

⚠ WARNING AVOID SERIOUS INJURY OR DEATH READ THIS MANUAL BEFORE USING YOUR POST DRIVER

Visually inspect your Ranch Pro™ Post Driver before use. The interior of the chuck tube should be checked for obstructions, damage or wear to the chuck tube and anvil inside. The outer surfaces of the driver should also be inspected for any defects. Do not use the Ranch Pro™ if there is any damage or wear until the damage or wear is corrected and repaired.

Check all fluid levels, i.e. engine oil and fuel and fill as needed as per manufacturer's specifications. (Fig. 1)

NOTE Proper oil level is essential to the proper operation of the post driver. Overfilling of the oil will result in loss of power and may cause permanent damage to the engine.

⚠ WARNING USE ALL RECOMMENDED SAFETY EQUIPMENT.

Rest the driver on a solid surface, i.e. tailgate, bench, or debris free solid ground and posture your body in a safe position. DO NOT start the driver anywhere but an open, well-ventilated area. It is recommended that the Ranch Pro™ only be used outdoors and never inside an enclosed building.

Starting the Engine:

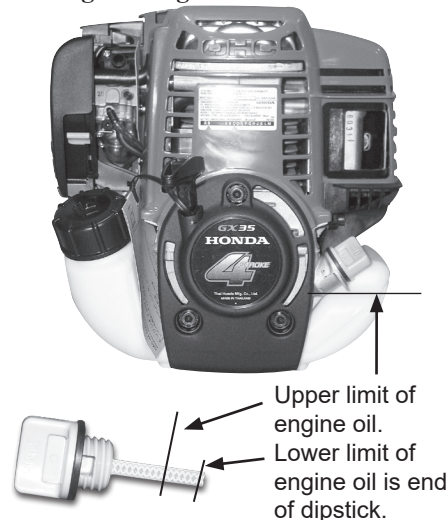


Fig. 1

OPERATING INSTRUCTIONS

To start a COLD engine, move the choke lever to the CLOSED position (**Fig. 3**). Lock the throttle by depressing the trigger and while the trigger is depressed, push in the button next to the thumb switch. Hold the button in and release the trigger. The throttle is now in the high idle position (**Fig. 2**).

To start a WARM engine, leave the choke lever in the OPEN position and do not lock the throttle into the high idle position.

Press the priming bulb repeatedly until fuel can be seen in the clear-plastic fuel return tube (**Fig. 4**).

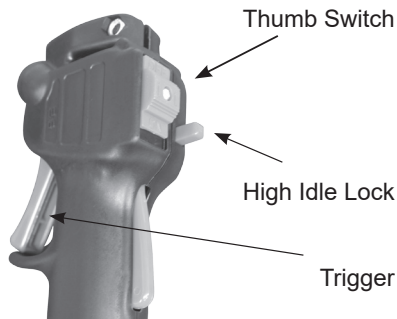


Fig. 2

Slide thumb switch on throttle handle down or into the ON position.

Grasp the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown in (**Fig. 5**). Return the starter grip gently.

CAUTION Do not extend the starter rope to its full length as it can cause damage the recoil mechanism.

CAUTION An operator should never wrap the starter rope around their hand. This will cause serious injury.

NOTE Do not allow the starter grip to snap back against the

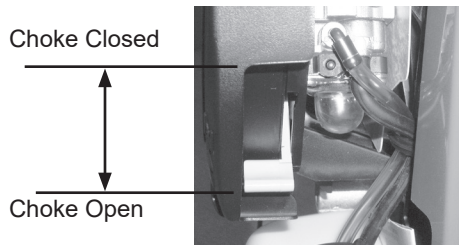


Fig. 3

engine. Return it gently to prevent damage to the starter.

If the choke lever was moved to the CLOSED position to start the engine, gradually move it to the open position as the engine warms up. As the engine warms up also release the high idle lock

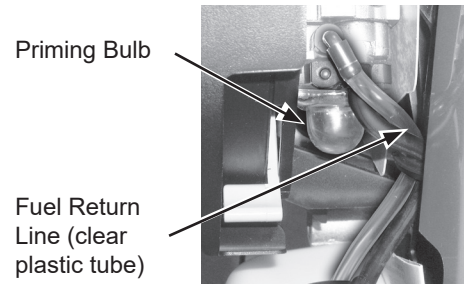


Fig. 4



Fig. 5 - Starter Grip

OPERATING INSTRUCTIONS

by slightly depressing the trigger and then immediately releasing it. Use caution as to not engage the clutch.

Hot Restart

If the engine is operated at higher ambient temperatures, then turned off and allowed to sit for a short time, it may not restart on the first pull. If necessary, use the following procedure: Failure to follow instructions can result in personal injury.



WARNING

**IMPORTANT
SAFETY
PRECAUTION**

Turn the engine switch to the OFF position before performing the following procedure. This will prevent the engine for starting and running at maximum speed when the throttle is in the MAX. speed position. If the engine starts with the throttle in the MAX. speed position, the post driver will operate at maximum power. This may result in personal injury and damage to the post driver.

1. Turn the engine switch on the post

driver to the OFF position.

2. Move the choke lever to the OPEN position.
3. Hold the throttle in the MAX speed position.
4. Pull the starter grip 3 to 5 times.

Follow the STARTING THE ENGINE procedure on the previous page and start the engine with the choke lever in the **OPEN** position.

Driving A Post:

Holding the post driver with your left hand on the foam grip and your right hand on the throttle will position the driver to direct the engine exhaust away from the

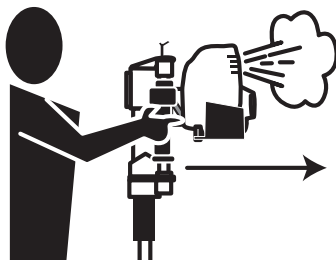


Fig. 6

operator (**Fig 6**). (See Exhaust Warning) Insert a post into the Ranch Pro™ making sure the end of the post to be driven is in the correct location on the ground. (**Fig. 7**) Position the driver aligned centered to the post. If not aligned properly, damage could be caused to the driver or the post.

Apply steady downward pressure to the handles and apply enough throttle to engage the clutch and hammer.

Once you are confident that the post is driving straight, apply full throttle to the

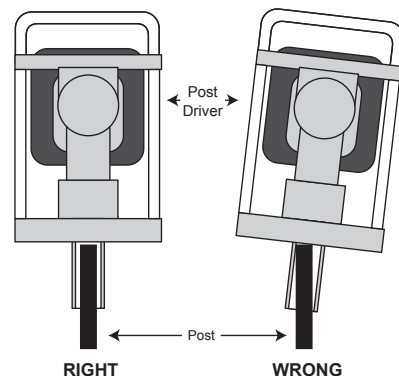


Fig. 7

OPERATING INSTRUCTIONS

driver until the post is driven to the desired depth.

Release the trigger dropping the engine RPM back to idle before removing from the post. When the engine has returned to idle, proceed to the next post repeating the previous method of driving a post.

Installing a Chuck Adapter

(Fig. 8) For driving up to 3/4" (19mm) ground rod, stakes, or anchors the Ranch Pro™ is designed with Rhino® Quick Lock Adapter System. Using the correct adapter will align the rod or post to the optimum striking position. This prevents damage

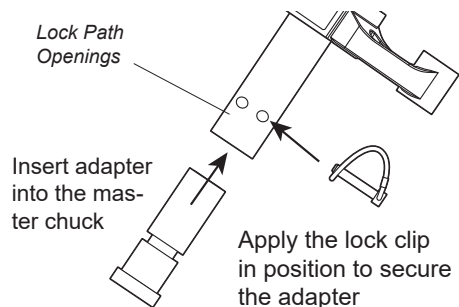


Fig. 8

to the driver. Simply insert the adapter inside the chuck tube and push the lock clip through lock path openings on the chuck. Then stretch the clip latch over the end of the pin to secure the adapter into place. See parts list to specify available 1" (25.4mm) adapter.

Maintenance of the Ranch Pro™

⚠ WARNING NEVER REFUEL WITH THE ENGINE HOT OR RUNNING

Never refuel your Ranch Pro™ with the engine hot or running as there is a possibility the flammable fumes from the gasoline can ignite, causing severe injury and/or damage to your post driver and surrounding area. Follow engine manufacturer's instructions for the refueling of the engine.

⚠ WARNING DO NOT OPEN CRANKCASE COVER WHILE ENGINE IS RUNNING.

With each use check the engine oil level, air filter, and all fasteners. If necessary, add oil, clean or replace the air filter and

tighten any loose nuts, bolts, or any other fastener.

Change engine oil as per engine manufacturer's specifications. Dispose of used oil in accordance with any local, state, or federal regulations.

To help insure years of operation, wipe down the Ranch Pro™ with a clean cloth after each days use.

Refer to the Service Instructions for more detail regarding maintenance of the post driver.

SERVICE INSTRUCTIONS

Following the service requirements for the Ranch Pro™ will insure years of trouble free post driving. Always refer to the Honda GX35 manual for maintenance and service on the engine. The following instructions are for the Rhino® Ranch Pro™ specifically with general instructions for the Honda GX35. Before any service is preformed, remove the spark plug wire from the spark plug and ground it to the engine body to prevent any accidental start-up of the engine.

Each Use

1. Check engine oil level. Add SAE 10W-30 to top oil level off, if necessary.
2. Check engine air cleaner. If soiled, clean or replace.
3. Check crankshaft and piston lubrication. (See page 11 for instructions.)
4. Check all engine and post driver fasteners. Retighten to proper specifications if necessary. (See Bolt Torque Specifications on page 19)

First Month or 10 Hours Use of a New or Rebuilt Ranch Pro™

1. Change engine oil following the requirement for the Honda GX35. Dispose of used oil according to all local, state, and federal regulations.
2. Check crankshaft and piston lubrication. (See page 11 for instructions.)
3. Check all engine and post driver fasteners. Retighten to proper specifications if necessary.

Every 3 Months or 25 Hours of Use

1. Change engine oil following the requirement for the Honda GX35. Dispose of used oil according to all local, state, and federal regulations.
2. Replace air cleaner elements. This should be performed more often if operated in dusty areas.
3. Check crankshaft and piston lubrication. (See page 11 for instructions.)
4. Check all engine and post driver fasteners. Retighten to proper torque specifications if necessary. (See page 19)

Every 3 Months or 50 Hours of Use

1. Change engine oil following the requirement for the Honda GX35. Dispose of used oil according to all local, state, and federal regulations.
2. Replace air cleaner elements. This should be performed more often if operated in dusty areas.
3. Check crankshaft and piston lubrication. (See page 11 for instructions.)
4. Check all engine and post driver fasteners. Retighten to proper torque specifications if necessary. (See page 19)

Every 6 Months or 50 Hours of Use

1. Change engine oil following the requirement for the Honda GX35. Dispose of used oil according to all local, state, and federal regulations.
2. Replace air cleaner elements. This should be performed more often if operated in dusty areas.
3. Check crankshaft and piston lubrication. (See page 12 for instructions.)

SERVICE INSTRUCTIONS

4. Check all engine and post driver fasteners. Retighten to proper torque specifications if necessary. (See page 27.)

Every 12 Months or 100 Hours of Use

1. Change engine oil following the requirement for the Honda GX35. Dispose of used oil according to all local, state, and federal regulations.
2. Replace air cleaner elements. This should be performed more often if operated in dusty areas.
3. Check crankshaft and piston lubrication. (See page 11 for instructions.)
4. Remove and service the hammer and anvil. (See page 12 for instructions.)



Fig. 9 - Crankcase Cover

5. Check all engine and post driver fasteners. Retighten to proper torque specifications if necessary. (See page 19.)

Servicing Crankshaft and Piston Lubrication

(Fig. 9) The crankcase cover is designed for easy, “no tool” inspection and maintenance. To remove the cover, grip it tightly with your hand and twist it left (counterclockwise.)

CAUTION DO NOT USE A HAMMER OR WRENCHES TO LOOSEN THE COVER AS IT MAY CAUSE DAMAGE TO THE DRIVER.

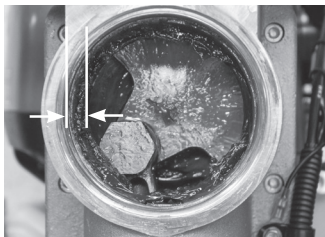


Fig. 10 - If ridge of Rhino® Pro Series Lubricant measures 1/8" or less, add a small amount. At maximum level it should measure 1/4".

Visually inspect the color and amount of Rhino® Pro Series Lubricant inside the crankcase. There should be a ring of Lubricant collected to the wall inside the crankcase. Should the depth of the ring from the wall inward measure 1/8" (3mm) or less (Fig. 10) this indicates the Rhino® Pro Series Lubricant is low. The maximum level should not be more than 1/4" (6mm). If the amount of Lubricant appears to be low, add a small amount of Rhino® Pro Series Lubricant. Use only Rhino approved Rhino® Pro Series Lubricant (p/n 300500.)

Rotate Crankshaft until crank pin is in 12:00 o'clock position.

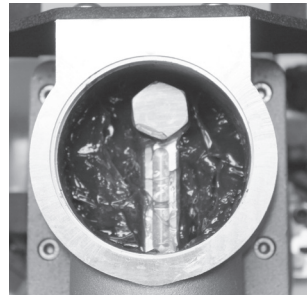


Fig. 11 - After completely cleaning out old Lubricant, add new Rhino® Pro Series Lubricant till level with the bottom edge of the crank pin head.

SERVICE INSTRUCTIONS



CAUTION

DO NOT OVER-FILL RHINO® PRO SERIES LUBRICANT AS IT CAN DAMAGE THE DRIVER AND THE HONDA ENGINE.

This is detailed in the section titled “Service of the Hammer and Anvil.”

In the event of complete removal of old Rhino® Pro Series Lubricant and adding fresh Rhino® Pro Series Lubricant (**Fig. 11**) rotate the crankshaft with connecting rod and crank pin until the crank pin is in the 12:00 position, then add Rhino® Pro Series Lubricant (p/n 300500). The level of Rhino® Pro Series Lubricant should be to the bottom of the crank pin. When the required service has been performed in the crankcase, inspect the o-ring seal and replace it on the crankcase cover. Position the crankcase cover on the Ranch Pro™ body carefully to start the threads and once in the thread groove, with your hand twist to the right (clock-wise) until it is securely in contact with the post driver body.

HAND TIGHTEN ONLY. DO NOT

OVERTIGHTEN. Do not use tools, such as a hammer or wrench, to tighten the crankcase cover as it will damage the driver.



CAUTION

Service of the Hammer and Anvil

The tools required for servicing the hammer and anvil are, a 9/64" hex wrench, a 1/4" hex wrench, a 7/8" deep well socket with handle, a torque wrench that reads in inch/pounds (Nm), and threadlocker.

Remove the four (4) bolts (p/n 300702-4) in the bottom of the lower driver body (p/n



Fig. 12 - View when Lower Driver Body removed.

300031). Use caution as the handle tubes (p/n 301232) have anti-vibration springs (p/n 610010-4) installed and they are under tension. When the lower driver body is removed, it should appear as shown in (**Fig. 12.**) The anvil o-ring retainer (p/n 300110) will sometimes be removed with the lower driver body or remain in place.

Remove the anvil o-ring cup (p/n 300090) and the anvil (p/n 300160). This can be easily accomplished by pushing a 1" dowel rod or hammer handle into the chuck tube from the opposite side. When the parts are removed, note the order and disassemble for inspection. Check the anvil for any wear. The anvil o-ring (p/n 300606) should be replaced at this time. Clean the

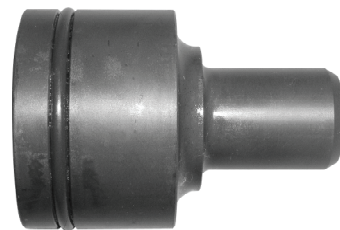


Fig. 13 - Anvil with O-ring in place.

SERVICE INSTRUCTIONS

anvil and carefully replace the anvil o-ring. (Fig 13).

Remove the large retainer o-ring seals (p/n 300604-2) and the large retainer (p/n 300100) from the anvil o-ring cup.

Inspect the large retainer. The large retainer o-ring seals should be replaced at this time. Replace the large retainer if there are any signs of damage or excessive wear.

The anvil o-ring retainer can be removed from the end of the cylinder in the post driver body (p/n 300015) by hand. Use caution as it can become sharp with use of the driver.

Remove the hammer (p/n 300080), piston and connecting rod assembly (p/n 300075)

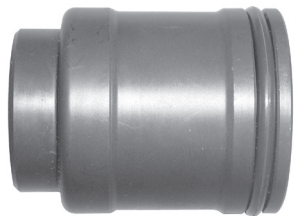


Fig. 14 - Small end of Hammer is toward the anvil.

by removing the crank pin (p/n 300050). Access to the crank pin is achieved by removing the crankcase cover, which is described in the section titled “Servicing Crankshaft and Piston Lubrication” shown in the previous pages of this manual. Remove the crank pin using the 7/8" deep well socket.



CAUTION

THE CRANK PIN HAS LEFT-HAND THREADS.

Use caution holding the connecting rod and crankshaft (p/n 300040). The connecting rod and crankshaft can be damaged. Use a small wood or plastic block to keep the crankshaft from rotating. When the crank pin is removed, the piston and connecting rod assembly, hammer can be

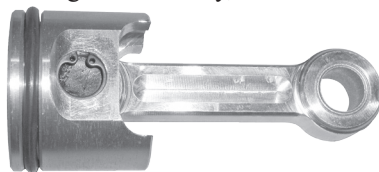


Fig. 15 - Piston with Connecting Rod and O-ring Seal in place.

removed by pushing the connecting rod down into the cylinder until it can be removed from the bottom of the post driver body. Note orientation of the hammer. The small end of the hammer is toward the anvil as shown in (Fig. 14.) Clean and inspect the hammer for damage or excessive wear. The hammer o-ring Seal should be replaced at this time.

Clean and inspect the piston and connecting rod. Insert the crank pin into the bearing on the connecting rod. If there is excessive play or side movement between the two, the connecting rod and piston assembly and possibly the crank pin should be replaced. Check the movement in the bearing in the piston side. If there is excessive play the connecting rod and piston assembly should be replaced. The piston o-ring seal (p/n 300600-2) should be replaced at this time. (Fig. 15.)

Clean and inspect the cylinder and crankcase for any damage or wear. Replace any damaged parts. Lubricate the cylinder, piston, and connecting rod with Rhino®

SERVICE INSTRUCTIONS

Pro Series Lubricant (p/n 300500).

IMPORTANT

RECOMMENDED THREADLOCKER PROCEDURE:

Clean any residue from the bolts and internal bolt threads with acetone or solvent. Apply threadlocker primer to the bolt holes and bolt threads and allow the primer to dry. Follow with an application of threadlocker to the bolt hole threads.

Follow threadlocker procedure for installing the crank pin. Insert the connecting rod, with the piston attached, into the cylinder. Push the piston up the cylinder until the bearing in the connection rod aligns with the threaded hole for the crank pin. Insert the Crank Pin through the bearing and start the threads into the Crankshaft by hand. These are **LEFT-HAND THREADS**. Tighten the crank pin using the 7/8" deep well socket. Torque to 360 inch/pounds (40.6 Nm).

(Fig. 10) Rotate crankshaft with connecting rod, piston and crankpin until the

crankpin is in the 12:00 o'clock position. If Lubricant has been completely removed add 2.75 oz or 81.32 ml of Rhino® Pro Series Lubricant (p/n 300500) or until level with the bottom of the crankpin head. **(See Caution: Do not overfill Lubricant on page 12)** Close the crankcase by placing the crankcase cover o-ring seal onto the crankcase cover. Place the crankcase cover onto the post driver body, start the thread, and twist to the right (clockwise) with your hand until it is secure against the post driver body. **(See Caution: Do Not Overtighten on page 12)**

Lubricate the cylinder and hammer with

Rhino® Pro Series Lubricant (p/n 300500). Insert the hammer into the cylinder, taking note of the small end to the anvil as shown in **(Fig. 13.)** Push the hammer into the cylinder making room to insert the anvil o-ring retainer. Apply Rhino® Pro Series Lubricant (p/n 300500) to the anvil o-ring retainer and place the small end into the cylinder. The Lubricant should hold it in place.

Lubricate with Rhino® Pro Series Lubricant (p/n 300500) and assemble the large retainer and the two (2) large retainer o-ring seals in the order shown in **Fig. 16** and assemble into the anvil o-ring cup.

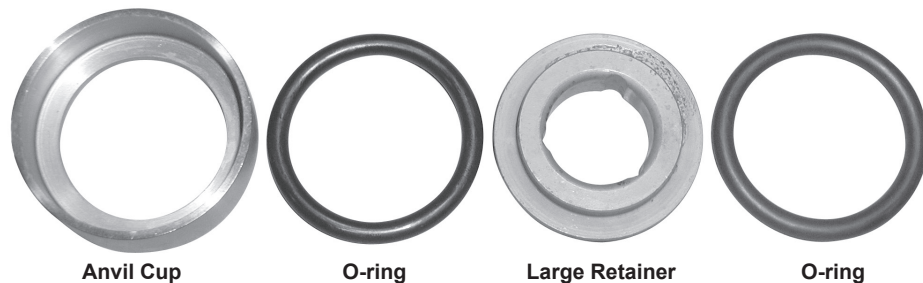


Fig. 16 - Insert O-ring into Anvil O-ring cup, then insert Large Retainer, followed by inserting the other O-ring.

SERVICE INSTRUCTIONS

Insert o-ring into anvil o-ring cup, then insert large retainer, followed by inserting the other o-ring.

Clean and inspect the chuck tube (p/n 300156) and lower driver body (p/n 300031) for any damage or excessive wear. Replace if necessary. Lubricate chuck tube with Rhino® Pro Series Lubricant (p/n 300500). Lubricate the anvil with Rhino® Pro Series Lubricant. Insert the anvil with new anvil o-ring into chuck tube, making certain that the anvil is seated into the chuck tube. Insert the anvil o-ring cup into the chuck tube. Replace the chuck tube o-ring (p/n 300608) and insert the chuck tube o-ring onto the chuck tube. It should look like (**Fig. 12**) on page 12.

Remove the handle tubes (p/n 301232) from the handle cups and remove and clean and lubricate with Rhino® Pro Series Lubricant (p/n 300500) all four (4) anti-vibration springs (p/n 610010-4.) Check all handle cups for wear. Clean and lubricate the upper and lower cups the handle tubes fit into with a small amount of Rhino®

Pro Series Lubricant (p/n 300500). Insert the anti-vibration springs into the handle tubes.

Assemble the handle tubes into the upper handle cups. Insert the chuck tube into the post driver body, taking care to insert the handle tubes into the handle cups on the lower driver body. When parts are inserted in the proper position, there will be resistance from the anti-vibration springs to seat the lower driver body on to the post driver body. This is normal.

Follow the threadlocker procedure on page 13. Insert and hand thread the four (4) lower body bolts through the lower driver body into the post driver body. Use a 1/4" hex wrench to tighten the bolts in a star pattern until the lower driver body is seated on the post driver body. Check for any misalignment or binding when joining the parts.

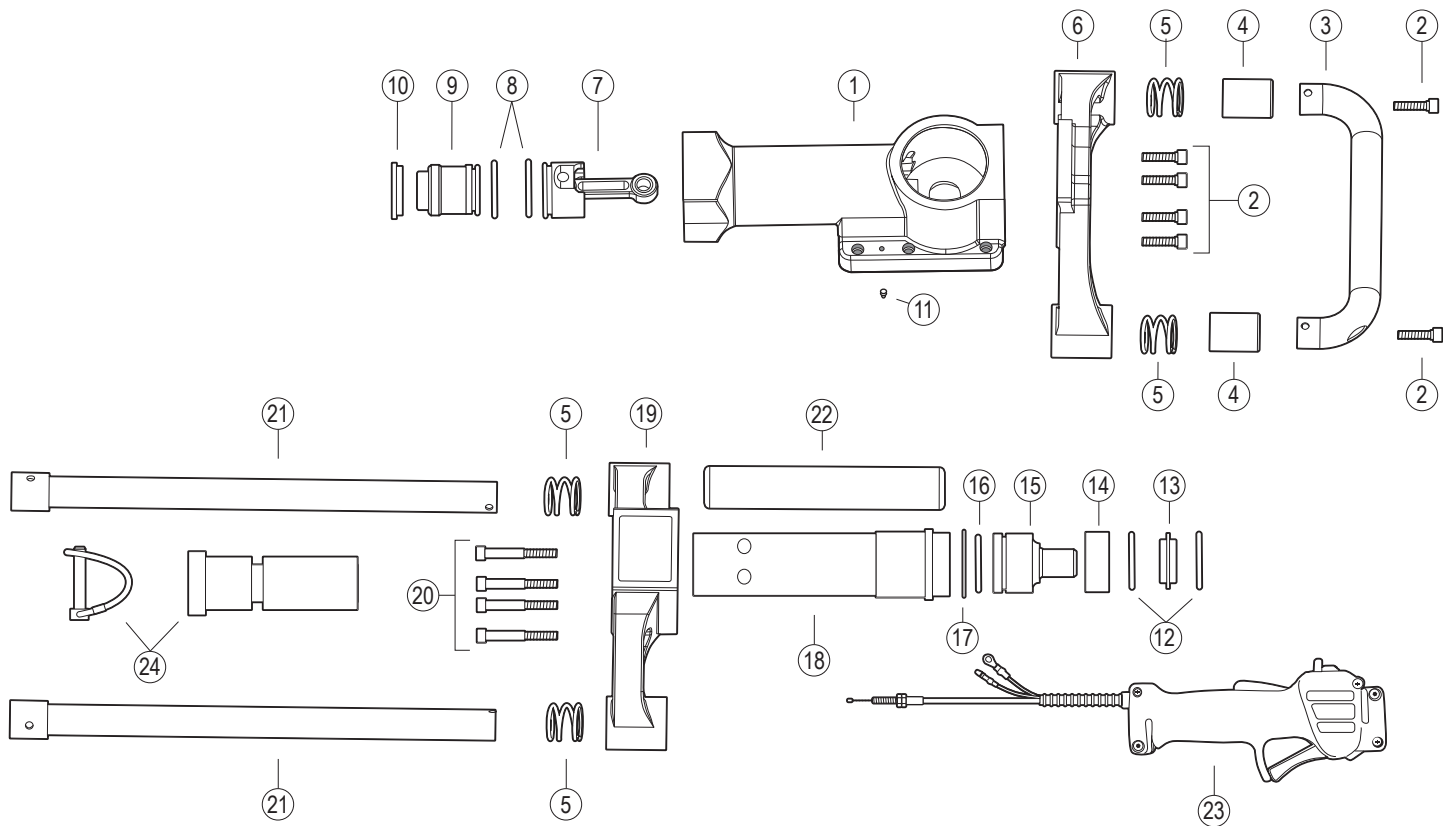
DO NOT USE EXCESSIVE FORCE.

Using a torque wrench set to 132 lb/in (14.9 Nm) for stainless bolts or 251 lb/in (28.4 Nm) for black oxide bolts, tighten to

the correct torque.

Perform a visual check of the post driver. Reconnect the spark plug wire to the spark plug. Check that the engine has the proper amount of oil. Start the engine using the proper procedure and test the post driver.

RHINO® RANCH PRO™ PARTS



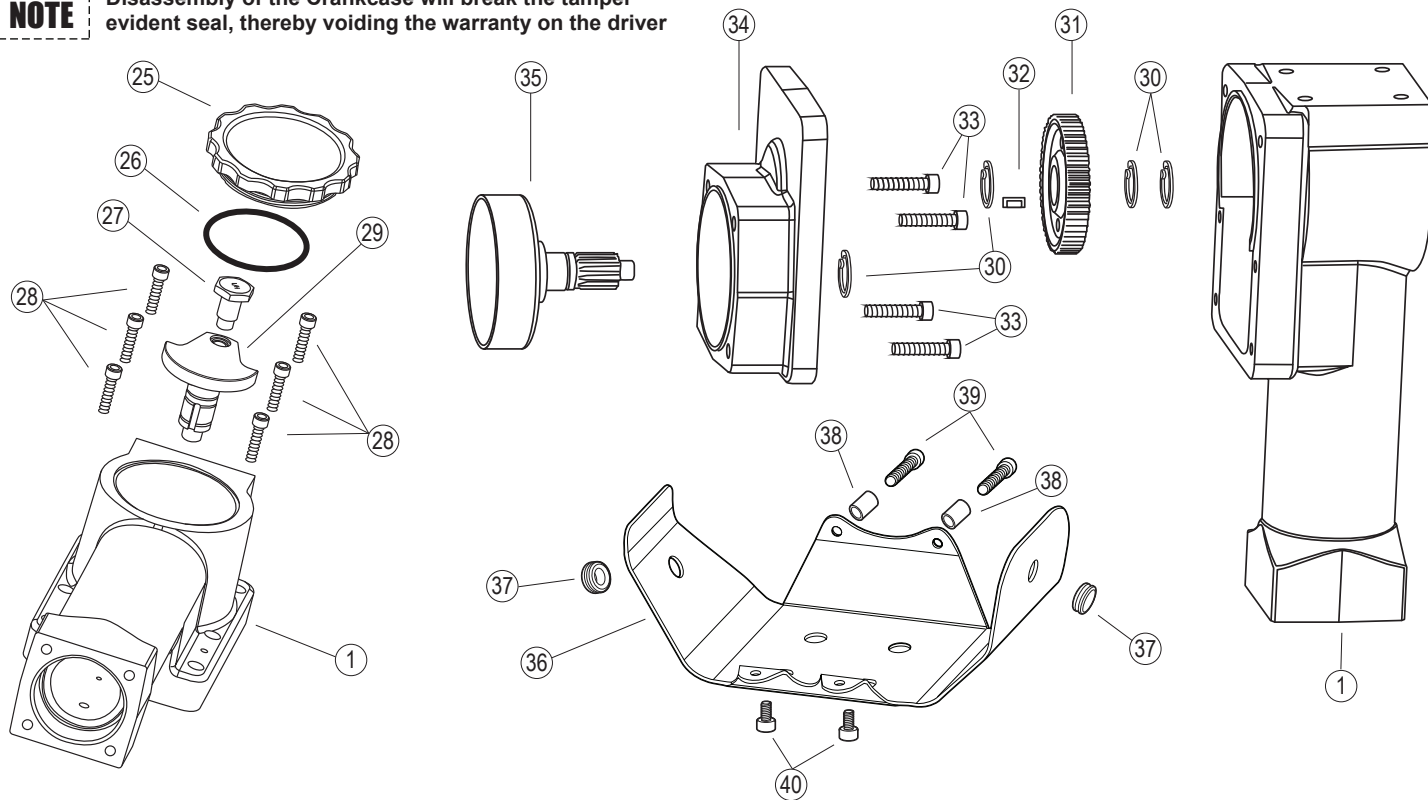
| No. | P/N | Description |
|-----|----------|---|
| 1 | 300015 | Post Driver Body with Cylinder and Bearings |
| 2 | 300715-4 | Top Handle Bolt Set (qty. of 4) |
| 3 | 301222 | Top Handle Assembly |
| 4 | 301221-2 | Handle Collar (qty. of 2) |
| 5 | 610010-4 | Handle Anti-Vibration Spring (qty. of 4) |
| 6 | 300214 | Top Handle Bracket |
| 7 | 300075 | Piston and Connecting Rod Assembly |
| 8 | 300600-2 | Piston O-ring Seal and Hammer O-ring Seal (qty. of 2) |
| 9 | 300080 | Hammer |
| 10 | 300110 | Anvil O-ring Retainer |
| 11 | 300712 | Ground Bolt |
| 12 | 300604-2 | Large Retainer O-ring Seal (qty. of 2) |

| No. | P/N | Description |
|-----|----------|---|
| 13 | 300100 | Large Retainer |
| 14 | 300090 | Anvil O-ring Cup |
| 15 | 300160 | Anvil |
| 16 | 300606 | Anvil O-ring |
| 17 | 300608 | Chuck Tube O-ring Seal |
| 18 | 300156 | Ranch Pro Chuck Tube |
| 19 | 300031 | Lower Driver Body |
| 20 | 300702-4 | Lower Body Bolts (qty. of 4) |
| 21 | 301232 | Pro Series Side Handle Assembly (qty. of 2) |
| 22 | 300221 | EPDM Handle Grip |
| 23 | 300250 | Throttle Control |
| 24 | 300897 | 1" Adapter with Lock Pin |

RHINO® RANCH PRO™ PARTS

NOTE

Disassembly of the Crankcase will break the tamper evident seal, thereby voiding the warranty on the driver



RHINO® RANCH PRO™ PARTS

| No. | P/N | Name |
|-----|----------|--|
| 1 | 300015 | Post Driver Body with Cylinder and Bearings |
| 25 | 300132 | Crankcase Cover |
| 26 | 301617 | Crankcase Cover O-ring Seal |
| 27 | 300050 | Crank Pin |
| 28 | 300704-6 | Crankcase Bolts (qty. of 6) |
| 29 | 300040 | Crankshaft |
| 30 | 300782-4 | Retaining Ring for Crankshaft & Clutch Drum with Pinion Gear (qty. of 4) |
| 31 | 300200 | Gear |
| 32 | 300730 | Key |
| 33 | 300700-4 | Clutch Housing Bolts (qty. of 4) |
| 34 | 300025 | Clutch Housing with Bearings |
| 35 | 300120 | Clutch Drum with Pinion Gear |
| 36 | 300180 | Shroud |
| 37 | 300181-2 | Grommet (qty. of 2) |
| 38 | 300190-2 | Shroud Spacer (qty. of 2) |
| 39 | 300706-2 | Shroud Bolt (qty. of 2) |
| 40 | 300705-2 | Lower Shroud Bolt (qty. of 2) |
| | 300240 | Honda GX35 Engine |
| | 300800 | Ranch Pro Owner's Manual |
| | 300805 | Safety Label and Tag Set |

| No. | P/N | Name |
|-----------------------------------|--------------------|---|
| | Honda Engine Parts | Honda Engine Parts are Available from Your Local Honda Dealer |
| Accessories | | |
| 24 | 300897 | 1" Adapter with Lock Pin |
| | 301233 | Lower Handle Assembly (optional) |
| | 300500 | Rhino® Pro Series Lubricant |
| | 300508 | Service Kit for Ranch Pro™ |
| Bolt Torque Specifications | | |
| 2 | 300715-4 | Top Handle Bolt Set – 132.0 in/lbs (14.91 Nm) |
| 20 | 300702-4 | Lower Body Bolt Set– 132.0 in/lbs (14.91 Nm) |
| 27 | 300050 | Crank Pin (Left Hand Threads)– 360.0 in/lbs (40.6 Nm) |
| 28 | 300704-6 | Crankcase Bolt Set 75.0 in/lbs (8.5 Nm) |
| 33 | 300700-4 | Clutch Housing Bolt Set – 95.0 in/lbs (10.73 Nm) |
| 39 | 300706-2 | Shroud Bolt (2 per driver)– 56.4 in/lbs (6.37 Nm) |
| 40 | 300707-2 | Lower Shroud Bolt (2 per driver)– 56.4 in/lbs (6.37 Nm) |

RHINO® LIMITED WARRANTY GAS/ PETROL POST DRIVER



Warranty: Rhino Tool Company, Inc. ("Rhino") warrants to the original purchaser, purchasing the Equipment in new condition, in original packaging from an authorized dealer that its Gasoline Powered Post Driver will be free from defects in workmanship and materials (the "Limited Warranty"). The Limited Warranty shall survive for the lifetime

of the product with respect to the Hammer and Anvil components and for twelve (12) months with regard to all other components, excluding the Honda GX35 engine for which Rhino provides no warranty and for which the warranty provided by American Honda Motor Co., Inc. shall be the sole warranty applicable thereto. This Limited Warranty is non-transferable.

For Warranty Claims contact your dealer or distributor. Proof of purchase date and serial number is required. In the event of a warranty repair, the post driver should be returned to a Registered and Warranty Authorized Rhino Servicing Dealer. Rhino's obligation under this Limited Warranty is expressly limited to the repair or replacement, at Rhino's election, of such defective Gasoline Powered Post Driver, which is proved to be defective upon inspection by a Rhino-certified/authorized technician.

This Limited Warranty does not extend to a Gasoline Powered Post Driver which has been subject to misuse, neglect, or accident, nor does it extend to any Gasoline Powered Post Driver which has been repaired, altered, or serviced by unauthorized persons. This Limited Warranty does not cover any damage or adjustments required to any Gasoline Powered Post Driver if such damage or adjustment is caused by the use of supplies, parts, or attachments not sold or approved by Rhino

EXCEPT AS OTHERWISE PROVIDED HEREIN, RHINO DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES SHALL RHINO BE LIABLE FOR ANY LOSS OF BUSINESS, REVENUES, OR PROFIT OR OTHER INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS ARISING OUT OF ANY DEFECTS IN OR PERFORMANCE OF THE GASOLINE POWERED POST DRIVER, HOWSOEVER CAUSED.

To register your product:

Fill out and mail in registration card supplied with post driver

Or online visit:

<http://rhinotool.com/contact-support/warranty-information/>

| Symptom | Explanation/Procedure |
|---|---|
| Post lodged in the driver | <p>In the event that a driven post flares and becomes lodged within the chuck, follow these steps:</p> <ol style="list-style-type: none"> 1. Turn engine off. Remove the four 5/16" lower body bolts and separate the lower body casting from the driver body. 2. Slide the lower body casting down the post to expose the flared top of the post. With the proper cutting tool for the type of post, cut through the post below the flared portion. 3. Once the flared portion is removed, slide the lower body casting off the post and reassemble it to the driver. Please follow bolt tightening procedure and use threadlocker. |
| Drives post slow or sluggish engine performance: | <p>Typically this is resulting from improper driver storage or over-filling the oil causing the oil to seep into the combustion chamber. Position the driver vertically, remove the dipstick to check oil level. (See page 6) If you need to remove some oil, dispose of it properly.</p> <p>If oil is at proper level, follow the procedure listed in "Pull-start is frozen or hard to pull."</p> |
| Pull-start is frozen or hard to pull: | <p>This typically results from oil seeping into the combustion chamber from improper driver storage or overfilling the oil reservoir of the engine. Remove spark plug and pull hand grip several times until it pulls freely. Replace the spark plug. Check the oil level in oil reservoir to ensure proper level (page 6). Follow starting procedure. It is not unusual, for blue smoke to be emitted from the engine, let the engine run until smoke clears.</p> |
| Proper Storage: | <p>Do not lay horizontally on the driver side or resting on the engine. If the unit cannot be stored securely in the upright position, place the chuck on a flat surface, leaning toward the engine side until it is supported by the shroud and chuck. Position the driver on an angle with the top handle at the topmost point.</p> |
| Other problems or technical questions | <p>Other problems or technical questions: Document your serial number and contact Rhino Tool Company. Phone: 309.853.5555 or Toll Free 866-707-1808, Fax:309.856.5905, Email: service@rhinotool.com.</p> |



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