

# **PGD1032**

140-FA Engine



# **PGD1032H**

Honda GX35 Engine



## Gasoline Post Driver

**Operator's Manual** 

# **Table of Contents**

Introduction	1
Getting to Know Your Driver	2
Safety Precautions	3
Preparation Before Use	4
Starting your Machine	
Operation	
Maintenance	
Before Each Use	8
First 10 Hours of Use	9
Engine Maintenance	9
Post Driver Maintenance	11
Warranty	13
Registration	14
Product Data Sheet – PGD1032	15
Product Data Sheet – PGD1032H	16
PGD1032 / PGD1032H Exploded View	17
PGD1032 / PGD1032H Parts List	18
Your Notes	19

## Introduction

Thank you for choosing Titan Post Drivers. We want you to achieve the best possible performance from your new post driver. This manual will help you do that in a safe manner. If you have any technical questions related to your post driver or need replacement parts, please see the dealer from whom you purchased your driver or visit our web site – www.titanpostdrivers.com. Before you get to work with your new driver, please follow the pre-use checklist below.

- Complete the warranty registration found in the Warranty section before using driver.
- Familiarize yourself with proper usage and care found in this manual.

The main purpose of the PGD1032H is for driving posts, stakes, and ground/earth rods into soil. The gasoline powered driver is intended for farm, ranch, and homeowners. The PGD1032H can be used to drive a variety of post, stakes, and rods measuring 1/2" to 3 1/8" in diameter.

 Note: The ability to successfully drive material into the ground is related to cross-sectional area (e.g., 1" solid rod will be more difficult to drive compared to 1" hollow pipe) and ground conditions (e.g., smooth dirt versus rocky ground, dry versus wet conditions).

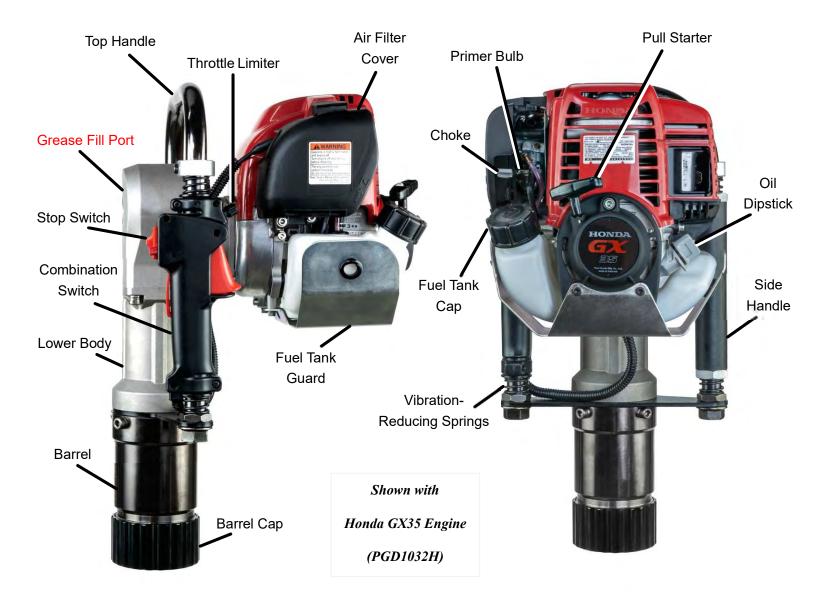
This post driver is powered by a Honda GX35 engine. The Honda operator's manual is provided to you along with this Titan Post Drivers operator's manual. Keep both manuals with your driver for reference by all operators. Follow all recommended maintenance for both the Titan Post Driver and the Honda engine.

Your Titan Post Driver comes with a one-year limited manufacturer's warranty (see *Warranty* section for more details). We suggest that you read the warranty information and fully understand its coverage and your responsibilities of ownership.

The Honda warranty is separate from the Titan Post Drivers warranty and is subject to its own coverage conditions and responsibilities of ownership. You can find the Honda warranty included with your Honda operator's manual. Please contact your local Honda service dealer for parts or technical questions related to your engine. <a href="https://engines.honda.com/dealer-locator">https://engines.honda.com/dealer-locator</a>

Please note that neither Titan nor Honda will warranty failure due to misuse – including, but not limited to improper maintenance, operator error, use in harsh environments, and failures due to falls, drops or external forces.

# **Getting to Know Your Driver**



## What's Included

Included with your driver are the following parts and accessories:

- Engine Oil (for initial fill)
- 75 Series Grease
- 1" / 1.75" / 2.5" Adapter Sleeves
- Tool Kit
- Carry Case

## **Safety Precautions**

- Operators: All operators must understand the safety precautions and operating procedures described in this
  owner's manual before using the PGD1032H post driver. Keep this operator's manual with the driver for
  reference by all operators. Never let children operate the driver.
- 2. **Call-Before-You-Dig**: Before driving any material, **contact 811** to verify that the worksite is free of underground utilities.
- 3. **PPE**: The operator must wear proper personal protective equipment (PPE) when operating the driver. This includes slip-resistant safety shoes, eye protection, ear protection, gloves, and suitable work clothes. A hard hat is recommended when lifting the driver overhead.
- 4. **PPE**: Bystanders should also wear PPE, especially eye and ear protection. Otherwise, bystanders should maintain adequate distance from the operating area to avoid injury.
- 5. Gasoline: Gasoline is highly flammable and explosive. Never refill the engine when it is hot or running, or near an open flame. Do not fill above the bottom of the fuel tank neck. If fuel spills out of the fuel tank and onto the engine, wait until the fuel completely evaporates before starting the driver. After refueling, fully tighten the fuel tank cap.
- 6. **Gasoline**: Gasoline vapors and exhaust fumes are toxic. Only refill and operate the driver in a well-ventilated environment to avoid exposure to vapors. To minimize exposure to exhaust fumes, hold the driver with the engine facing away from you during operation. Before transport, empty the fuel tank to avoid leaking gasoline and exposure to vapors.
- 7. **Vibration**: Excessive vibration can cause circulatory and neural damage in the hands. Symptoms include pain, numbness, coldness, and paleness in the fingers. All Titan post drivers have springs installed to mitigate vibration at the hand. If you experience these symptoms, stop using the post driver and seek medical attention. To reduce the effects of vibration:
  - Wear padded gloves
  - Do not excessively squeeze handles during use
  - Keep hands warm
  - Take frequent breaks
- 8. **Operation**: Only use the post driver for its intended use, as described in the *Introduction* section.
- 9. **Operation**: While operating the driver, do not smoke, eat, chat, or perform any other activity that can affect maintaining control over the driver.
- Operation: Maintain balance while handling and operating the driver. Always use two hands while operating the driver.
- 11. **Operation**: Do not engage the throttle except when the driver is firmly seated on a post. Failure to follow this can lead to 'dry fire' issues and will void your warranty.

- 12. **Maintenance**: Check the fuel tank for damage or leaks. If found, do not use the driver until the fuel tank is replaced. If damage occurs during use, immediately shut off the driver.
- 13. **Maintenance**: For a proper grip, keep the driver handles dry and clean.
- 14. Maintenance: Before every use, be sure to inspect your driver for loose hardware and tighten as needed.

## **Preparation Before Use**

### Add Engine Oil (initial use) / Check oil

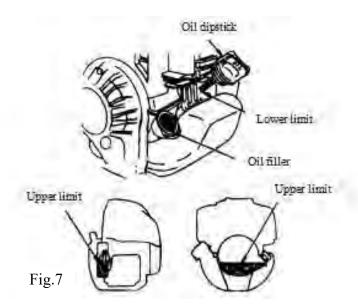
1. Add engine oil when new. Oil is drained from the engine after testing from factory.

**PGD1032H - Honda** suggests adding less than 3.4 US oz, then checking.

**PGD1032** (black engine) – For the FA-140 Engine, add 2.7 oz then check.

BOTH Engines - Add oil if required to fill to the bottom edge of the oil fill hole. Do NOT overfill.

- 2. Check engine oil before each use Place the engine horizontally, screw off the oil fill cap, check the oil level as shown in Figure 7, if the oil is low, add oil to reach the upper limit.
  - The dipstick should be placed on top of the threads, not threaded in when checking.



- 3. Replace after an initial 10 hours of use and every 50 hours thereafter or when oil appears dirty. See *Maintenance Section* for further details.
- 4. Use SAE 10W-30 engine oil. For extreme operating conditions, Honda recommends alternative oil, please see your Honda engine operator's manual for acceptable alternatives.

### **Install Adapter Sleeve**

Choose an adapter sleeve that is compatible with the post, stake or rod being driven. It is recommended to use the smallest compatible adapter sleeve. This will help ensure efficient energy transfer and keep the driven material in the center of the barrel. To install an adapter sleeve, simply remove the barrel cap, insert the sleeve, and reinstall/tighten the barrel cap. Try to limit use of the driver without the barrel cap installed, as this can cause permanent damage to the barrel threads. Always hand tighten the barrel cap before use.

 Using a driver without a suitable adapter sleeve can cause non-warrantable damage to the driver.

#### Add Fuel

 Never refill the engine with gasoline while the driver is running or hot, or near an open flame.

Please read the safety precautions regarding fuel in the Safety Precautions section.

- 1. Only use unleaded gasoline of 86 octane or greater.
- 2. Add fuel in the area away from open fire and well ventilated.
- 3. The gasoline engine should be cooled to the ambient temperature before refueling.
- 4. Do not over fill fuel tank. Do not fill past bottom of fuel tank neck. If fuel spills, wait until the fuel volatilizes completely before starting the machine.
- 5. Tighten the Fuel Cap after refueling.
- 6. The engine is a four-stroke engine do NOT mix fuel.

### **Inspection of Air filter**

- 1. Remove the air filter cover and check that the filter element is clean. If the filter element is dirty, clean or replace the filter element.
- 2. After inspection, install the air filter cover to its original position.

## **Starting your Machine**

- Ensure you are in a well-ventilated area to start and operate machine
- 1. Ensure on/off switch is in the down (ON) position.

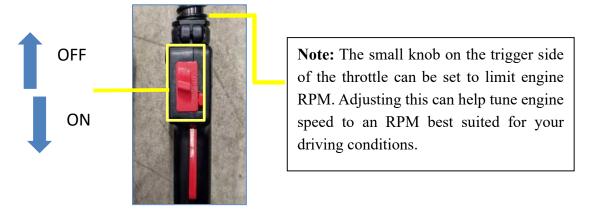


Figure 8: Start/Stop switch located on the throttle handle.

2. Before starting the driver, press the fuel priming pump several times until it is filled with fuel. Then, slide the choke to the ON [A] position as shown in Figure 9.

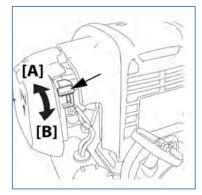


Figure 9: Choke ON (UP) / OFF (DOWN) position.

- 3. With one hand on the driver's upper handle, pull the starter grip, repeating until the engine starts. After the engine has idled for 30-60 seconds, slide the choke to the OFF [B] position as shown in Figure 9 above.
  - DO NOT OPERATE THE THROTTLE at high enough speeds to engage the clutch without first being placed on a post. Doing so will cause the internal parts of the driver to move and is considered DRY FIRING – which can cause internal damage.

## **Operation**

- 1. Verify you are clear of underground obstacles.
  - Ensure you are clear of utilities by calling 811 and reporting your planned activities.
- 2. Be sure to use all personal protective equipment as outlined in the Safety Precautions section.
- 3. Start the engine and allow the engine to warm up for 3 to 5 minutes before driving any posts.
- 4. Lift the driver onto the post, then ensure that the driver is level with the post and the post is centered in the barrel of the driver (see Figure 10).
  - To keep the driver square to the post, use the smallest compatible adapter sleeve for the post being driven.
     Keeping the impact post centered in the driver helps extend the life of the internal parts, as well as efficiently transfer the impact energy to the post.
- If the driver is not kept square to the post, damage can be done to the machine (specifically the barrel and/or the anvil) or the end of the post.

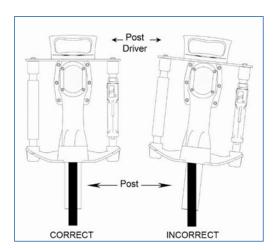


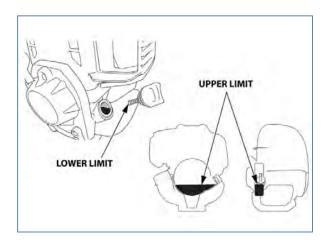
Figure 10: The driver should be kept level to the post during operation.

- 5. Pull down on the driver handles with approximately 10-20 pounds of force, gently engage the throttle until the driver begins to fully impact the post. Downforce helps to prevent bouncing and unnecessary energy loss.
  - Driving slowly initially will allow the grease in the gearbox to warm up and properly lubricate the internal components.
- 6. To turn OFF the engine, slide the STOP SWITCH UP (see Figure 8).

## **Maintenance**

### **Before Each Use**

1. Check the **engine oil** level with the driver in an upright position. Lying the driver down to check the oil will give you a false reading. Add SAE 10W-30 oil if necessary.



- 2. Check the **engine air filter**. If it is excessively dirty, clean it as described in the included Honda owner's manual. If it is damaged, replace it.
- 3. Check all **fasteners** and retighten if necessary. If you choose to reinstall any bolts with new Loctite, you must clean the fastener and hole threads with parts cleaner to remove any grease residue. The Loctite will not be effective if grease is present. Follow any torque requirements.
- 4. Visually check the **inside of the barrel** for any debris that may prevent the anvil from freely moving. If there is large debris, remove it by hand. If there is no large debris but the anvil does not move freely, spraying a penetrating oil like WD-40 around the anvil may help loosen any debris.
- 5. Check for oil or gasoline **leaks**. If oil or gasoline leaks are a result of damage to the engine, do not use the engine until the damaged parts are repaired or replaced.

### First 10 Hours of Use

- Check the gearbox grease. Procedure outlined in the Post Driver Maintenance section.
- After the first 10 hours of use, the engine oil **must be changed**. The steps to change the engine oil are:
  - 1. For proper drainage, ensure that the engine and engine oil are warm.
  - 2. Ensure that the fuel cap is fully tightened.
  - 3. Remove the oil dipstick from the oil fill hole and drain the oil into a sealable container so that it can be properly disposed of at a recycling center or service station.
  - 4. With the engine in the upright position, add SAE 10W-30 engine oil to the engine fill hole until it reaches the bottom edge of fill hole.
  - 5. Reinstall the oil dipstick and wipe up any spilled oil.

### **Engine Maintenance**

**PGD1032H HONDA -** Please see the Honda owner's manual included with your post driver for the full maintenance schedule of your Honda engine. The engine component maintenance steps that follow should also be followed.

If you are experiencing an issue with the Honda engine, please contact your local Honda dealer for parts and service. Titan Post Drivers does not carry the engine parts for Honda, nor does Titan Post Drivers determine the warranty, which is honored by Honda.

**PGD1032 FA-140 (Black Engine) –** Complete individual engine component maintenance as follows:

#### Air Filter

Check air filter regularly. Carbon deposit blocking the filter element of air filter will reduce power of the engine and service life. If the filter has too much soot deposit, clean it with warm water and detergent, and then wipe dry with dry cloth, and re-install. Filter should be replaced if damaged. In extremely dusty or dirty conditions, clean or replace the filter regularly.

#### Carburetor

To prevent fuel issues (gumming), when the machine is not used for more than one week, be sure to remove the fuel from the engine. To do this, empty gas into an approved container (in a well-ventilated area) and purge fuel from engine by pressing the primer bulb several times.

#### Spark Plug

To ensure normal operation of the engine, proper spark plug gap must be maintained. Remove carbon buildup with a wire brush. Proper gap of Spark Plug is 0.5-0.7 mm. See Figure 14

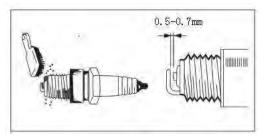


Figure 14

#### Muffler

After the muffler has cooled, remove dirt on or around muffler.

### Engine Cooling Fins

Regularly remove debris and dust on the cooling fins of the engine cylinder to ensure that the cylinder can dissipate heat. As the engine is air cooled, dirt and debris can effect the ability to cool and thus lead to failure if not properly maintained.

#### Engine oil

The Oil must be changed after 10 hours of initial use, and then every 6 months or 50 hours of operation.

To change the oil:

- 1. For proper drainage, ensure that the engine and engine oil are warm.
- 2. Ensure that the fuel cap is fully tightened.
- 3. Remove the oil dipstick from the oil fill hole and drain the oil into a sealable container so that it can be properly disposed of at a recycling center or service station.
- 4. With the engine in the upright position, add SAE 10W-30 engine oil to the engine fill hole until it reaches the bottom edge of fill hole.
- 5. Reinstall the oil dipstick and wipe up any spilled oil.



## **Post Driver Maintenance**

Proper care and maintenance will help ensure your driver is safe and ready to work when you need it!

### **Crankcase Grease**

- Only TITAN Approved grease can be used using incorrect grease will void warranty.
- Because the usage of this lubricant is a function of how much work is being done by the machine and the
  interval that it runs, you should CHECK GREASE REGULARLY. This is a consumable item and additional
  grease will be necessary. Failure to add grease or adding the wrong grease will lead to internal component
  damage and subsequent failure will NOT be covered under the warranty.
- It is NORMAL for grease/oil to appear inside the drive barrel. This is due to the lubricating effect of the grease in
  the gearbox. Over time, and as the driver heats up, the grease will liquify and work down into the lower chamber
  or barrel. Extended run times will liquify and consume more grease than short run intervals.
- Inspect regularly, for every 10-hrs of operation, expect to add about 2 tablespoons of grease. (See inspection method below)
- To Check/Add Grease:
  - Ensure driver is turned off
  - Clean outside surface of check port and remove check plug with supplied tool.
  - Obtain and use a 6-10" clean wire, rod, or plastic wire tie to dip into gearbox.
    - Clean tool remove debris and dirt from one leg of tool
    - Form the object like a "C"
    - Use tool to reach in and probe the bottom of the gearbox
    - Remove tool and inspect the grease residual on the tool
    - ½" 1" coverage on the end of the inspection tool is ideal
  - o If **yellow or tan** in color and feels smooth, this is ideal.
    - Add 1-2 tablespoons full of grease if less than about 1/2" is covered on the inspection tool (no more than about 1" should be covered)
  - If dark grey or dark brown, add additional grease, up to 2-tablespoons.
    - No more than about 1" of inspection tool should be covered.
  - o If black, you may be running with too little grease and the gearbox has heated enough to degrade the grease. If you can flush the grease, this is recommended. This requires removing the bottom section of the driver and if you are not comfortable in doing so, can be sent to a servicing center.
    Checking O-rings and adding more grease is necessary, but the driver may no longer function properly if the grease has substantially degraded.

 If gritty, a complete flush and O-ring replacement may be necessary. This is often the result of improper grease levels, running too hot and O-ring degradation. Possible internal damage has been done.
 Replacement gearboxes are available through dealers.



Figure 2 - Checking Grease

## **Other Inspections**

- Visually inspect the inside of the drive barrel. If dirty and gritty, clean with mild solvent and/or penetrating oil and rag. Excessive dirt and debris can work it's way into the hammer/impact area of the driver, reducing function and voiding warranty on internal parts.
- Improper use or lack of use of reducing sleeve can cause gauging, pitting, and deformation of drive barrel. This will lead to reduced performance.
- Replace any loose or broken parts quickly to avoid unnecessary downtime.

# Warranty

### Warranty Overview

Titan Post Drivers will warrant to the original purchaser, who purchases the equipment in new condition and in its original packaging from an authorized dealer, that its gas-powered post driver will be free from defects in workmanship and materials for a period of one (1) year. This warranty period will commence on the date of retail purchase by the original purchaser. This warranty is non-transferrable beyond the original purchaser. Titan Post Drivers provides no warranty on the Honda engine. This warranty is provided directly by Honda for a period of one (1) year commercial use or two (2) years normal use and will be honored at any local Honda dealer. Both the Titan Post Drivers warranty and the Honda warranty are non-transferrable beyond the original purchaser.

- Warranty shall pertain to parts or service offered by an authorized Titan Post Drivers dealer. Any defective part replaced at an authorized Titan Post Drivers location becomes the property of Titan Post Drivers.
- Shipping costs to transport the machine to the service center for warranty work will be the responsibility of the consumer.
- Titan Post Drivers will pay for return shipping to the customer within the Contiguous US.
- For warranty claims, contact Titan Post Drivers with proof of purchase date and your serial number.

### Limitations of Warranty

This limited warranty does not extend to any Titan Post Drivers product which has been misused, abused, improperly maintained, improperly repaired, or altered by an unauthorized person. Nor does this limited warranty cover any damage to machines or parts due to faulty installation of parts, faulty operation, or faulty maintenance. Plastic carrying cases and reducer sleeves are not covered under this warranty.

- Damage to components caused by operator error such as dry-fire or misfire will not be considered for warranty replacement or service.
- Cosmetic Damage caused by rough handling, operator error, or improper storage and handling will not be considered for warranty replacement or service.
- Excluded components that may need replacement or repair due to normal wear and tear, or lack of proper use/maintenance include:
- O-rings and seals
- Lost or stripped fasteners
- 3. Barrel of driver from incorrect use of machine
- Adapter sleeves/accessories

### Disclaimer of Warranty

Titan Post Drivers disclaims all liability for any implied warranties. Under no circumstances shall Titan Post Drivers be liable for any loss of business, revenues, profit, or indirect, incidental, special, or consequential damages or loss arising out of any defect in, or performance of, Titan Post Drivers products, howsoever caused. For warranty terms on your Honda GX35 engine, please refer to the separate warranty in the Honda manual provided with your post driver.

Honda has authorized the use of their Honda GX-Series engines on Titan Post Driver products. The Titan PGD1032H post driver has undergone and passed the appropriate testing for the Honda engine to be warranted directly by any authorized Honda dealer. You can find a local dealer here: http://engines.honda.com/dealerlocator.

## Registration

Please **scan the QR code** below to register your driver. You may also visit <u>www.Titanpostdrivers.com</u> and navigate to **registration**. If you cannot submit your warranty registration online, you may fill out a photocopy of the form below and mail it to:

Titan Post Drivers, 344 Kendall Road, Blairsville, PA 15717



Your Titan Gas-Powered Post Driver has a one-year warranty, with a limited lifetime warranty on the hammer. Please refer to your operator's manual for complete warranty details.

You MUST complete this registration within 30 days of purchase for the warranty to be valid. Warranty is non-transferrable.

Name:	
Oriver Serial Number: I	Engine Serial Number:
Place of Purchase:	Date of Purchase:
Visit us online at www.titanpostdrivers.com complete your warranty registration. Or, scan the QR code complete your warranty registration on your mobile device.	to III
somplete your warranty registration on your mobile device.	30.239.775.845

Complete and keep this card for your records.

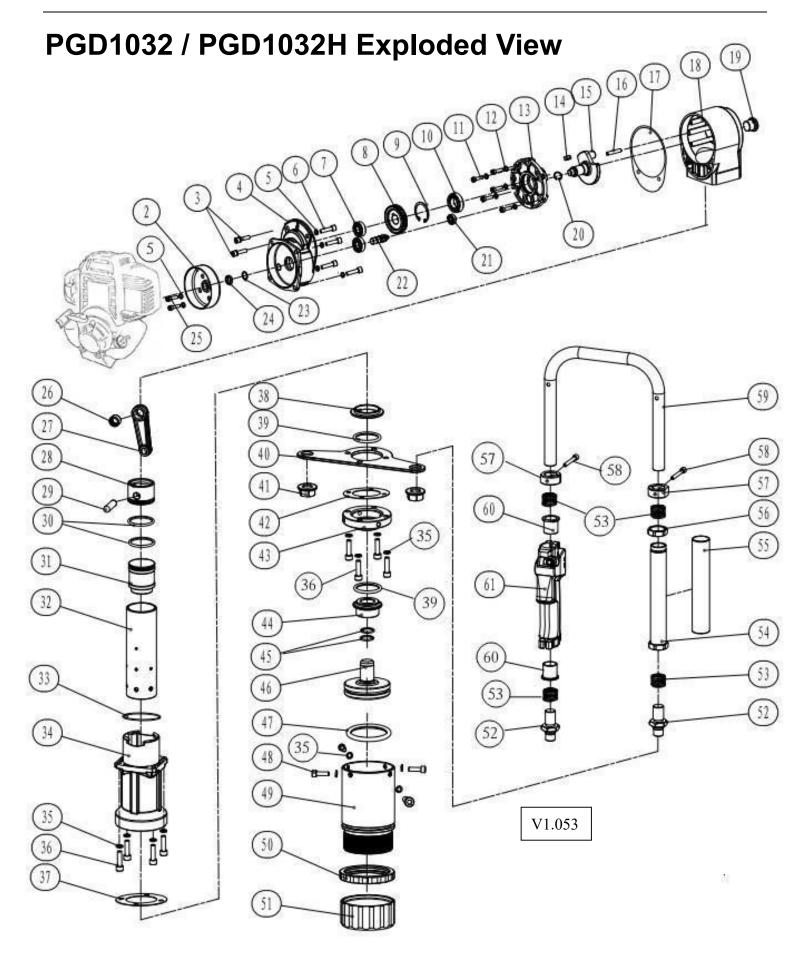
Your Honda engine can be serviced at any Honda dealer with proof of purchase.

# **Product Data Sheet – PGD1032**

Driver Model	PGD1032
Engine Model	HUASHENG 140FA
Overall Driver Dimensions	520 mm × 255mm × 330mm (20-1/2" x 10" x 13")
Overall Driver Weight	14.8 kg (32.6 lb)
Max Drive Diameter	80mm (3.2 in)
Fuel Type	Unleaded Gasoline, up to 93 Octane
Engine Oil Type	SAE 10W-30
Engine Oil Capacity	0.08L (2.7 US oz)
Fuel Tank Capacity	0.65 L (0.17 US gal)
Displacement	37 cc
Net Power	0.87 kW (1.16 HP) at 6500 rpm
Max Net Torque	1.2 N-m (0.88 lbf-ft) at 5500 rpm
Engine Idle Speed	3000 ± 250 rpm
Fuel Consumption Rate	0.72 L/hr at 7000 rpm
Impact Frequency	700 to 1200 bpm
Impact Energy	20 – 45 J
Spark Plug Type	CMR7H
Starter Type	Recoil Pull Starter

# **Product Data Sheet – PGD1032H**

Driver Model	PGD1032H
Engine Model	Honda GX35
Overall Driver Dimensions	520 mm × 255mm × 330mm (20-1/2" x 10" x 13")
Overall Driver Weight	15.1 kg (33.4 lb)
Max Drive Diameter	80mm (3.2 in)
Fuel Type	Unleaded Gasoline, up to 93 Octane
Engine Oil Type	SAE 10W-30
Engine Oil Capacity	0.10 L (3 US oz)
Fuel Tank Capacity	0.63 L (0.166 US gal)
Displacement	35.8 cc
Net Power	1.0 kW (1.3 HP) at 7000 rpm
Max Net Torque	1.6 N-m (1.2 lbf-ft) at 5500 rpm
Engine Idle Speed	3100 ± 200 rpm
Fuel Consumption Rate	0.71 L/hr at 7000 rpm
Impact Frequency	800 - 1600 bpm
Impact Energy	20 – 45 J
Spark Plug Type	CM5H (NGK), CMR5H (NGK)
Starter Type	Recoil Pull Starter



# PGD1032 / PGD1032H Parts List

Individua	al Service Parts		Handle	Kit - PGD32HDLKIT	
Parts No.		Qty	Key	Description	Qty
1	Honda GX35 Engine	1	40	Mounting Plate, Handle	1
19	Plug, M20-1.5	1	41	Hex Flange Nut, M18-1.5	2
51	Barrel Cap	1	52	Mounting Adapter, Formed Handle	2
61	Throttle Handle	1	53	Spring, Vibration-Reducing	4
N/A	1" Reducer Sleeve w/ O-Rings	1	54	Handle	1
N/A	1.75" Reducer Sleeve w/ O-Rings	1	55	Cushion, Handle	1
N/A	2.5" Reducer Sleeve w/ O-Rings	1	56	Nut, Handle	1
N/A	Reducer Sleeves Replacement O-Rings , 3 Pair	1 Pack	57	Clamping Shaft Collar	2
N/A	Grease, Special Internal	1	58	Socket Head Cap Screw, M6x35	2
			59	Formed Handle	1
Gearbox	Kit - PGD32GBKIT		60	Bushing, Throttle Handle	2
Key	Description	Qty			
2	Clutch Drum	1			
3	Socket Head Cap Screw, M6x25	2	Hardwa	re Kit - PGD32HWKIT	
4		1	Contract Association	Description	Oto
	Gearbox Housing, Clutch-Side	6	Key		Qty
5	Lock Washer, 6mm		3	Socket Head Cap Screw, M6x25	2
6	Socket Head Cap Screw, M6x18	4	5	Lock Washer, 6mm	4
7	Roller Bearing, 6001-2RS	2	6	Socket Head Cap Screw, M6x18	4
8	Helical Gear, Large	1	35	Lock Washer, 8mm	12
9	Snap Ring, 37mm	1	36	Socket Head Cap Screw, M8x40	8
10	Roller Bearing, 61904-2RS	1	48	Socket Head Cap Screw, M8x20	4
11	Socket Head Cap Screw, M5x25	5			
12	Lock Washer, 5mm	5	O-Ring/	Seal Kit - PGD32ORKIT	
13	Gearbox Housing, Crank-Side	1	Key	Description	Qty
14	Key Stock, 6mm x 6mm x 14mm	1	30	O-Ring, 42mm x 4mm	2
15	Crank Shaft	1	33	O-Ring, 65mm x 2.5mm	1
16	Locating Pin, 5mm x 25mm	1	37	Seal, Lower Body	1
17	Seal, Crank Housing	1	39	O-Ring, 43mm x 5mm	2
18	Crank Housing	1	42	Seal, Connecting Ring	1
19	Plug, M20-1.5	1	45	O-Ring, 26mm x 3mm	2
20	Snap Ring, 17mm	1	47	O-Ring, 77mm x 5mm	1
21	Roller Bearing, 607-2RS	1	NA	Grease, Special Internal	1
22	Helical Gear, Small	1			
23	Bushing	1	<b>Barrel A</b>	ssembly Kit - PGD32BAKIT	
24	Washer	1	Key	Description	Qty
25	Socket Head Cap Screw, M6x25	2	35	Lock Washer, 8mm	4
26	Needle Roller Bearing, NK142212	1	48	Socket Head Cap Screw, M8x20	4
27	Connecting Rod	1	49	Barrel	1
28	Piston	1	50	Ring, Rubber, Outer Barrel	1
29	Wrist Pin, Piston	1	51	Cap, Barrel	1
30	O-Ring, 42mm x 4mm	1	31	cap, barrer	-
30	O-Kilig, 42IIIII X 4IIIII	-	Lower B	ody/Cylinder Kit - PGD32BCKIT	
Jammer	/ Anvil Kit - PGD32HAKIT		66.7.7	Description	Oth
	Description	Oty	<i>Key</i> 32	Cylinder	Qty 1
Key		Qty			
30	O-Ring, 42mm x 4mm	1	33	O-Ring, 65mm x 2.5mm	1
31	Hammer	1	34	Lower Body	1
35	Lock Washer, 8mm	4	35	Lock Washer, 8mm	8
36	Socket Head Cap Screw, M8x40	4	36	Socket Head Cap Screw, M8x40	8
38	Retainer, Guide Ring, Shock	1	37	Gasket, Lower Body	1
39	O-Ring, 43mm x 5mm	2	38	Gasket, Cylinder	1
42	Seal, Connecting Ring	1	39	O-Ring 43 X 5	2
43	Connecting Ring, Lower Body to Barrel	1	42	Gasket, Body to Barrel	1
		1			
44	Locating Ring, Shock				
	O-Ring, 26mm x 3mm Anvil	2			

our Notes	
IODEL	
RIVER SERIAL NUMBER	
NGINE SERIAL NUMBER	
URCHASE DATE	
LACE OF PURCHASE	